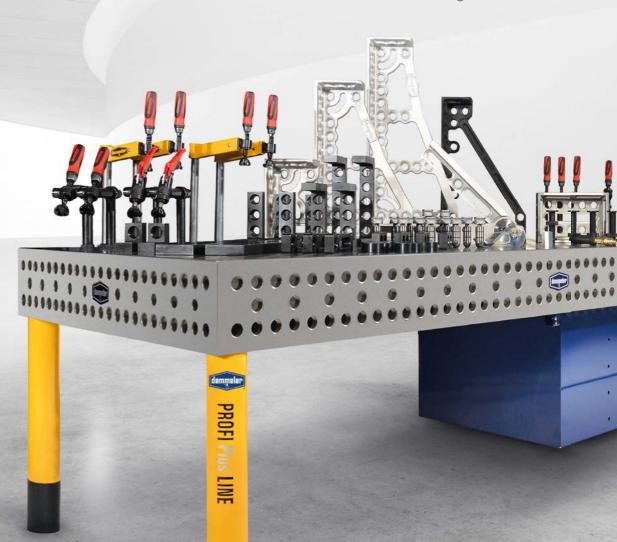




THE welding table



SMART SYSTEMS. FOR EFFICIENT WORKING.

# MODULAR CLAMPING SYSTEM

Original 3D worktable systems D28 | D22 | D16

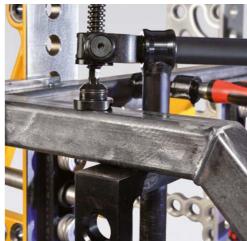
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# INNOVATION -PERFORMANCE

TECHNOLOGY FROM THE MARKET LEADER

#### 3D CLAMPING SYSTEM

The modular system can no longer replaced where processing, welding, assembly and measurement occurs. This fitting system is now an international industrial standard due to the tremendous application and combination possibilities.

#### **MANIPULATORS**

Welding and assembly in an optimal position. A good ergonomic workplace design allows more efficient and error-free workmanship, protecting staff against health hazards even during laborious tasks. The manipulators from DEMMELER offer preventive occupational safety and ensure a more efficient and safer working environment which, as a result, leads to improved quality in production. Whichever way you look at it, Demmeler manipulators are indispensable.

#### **CNC CLAMPING SYSTEM**

As the inventor of the 3D clamping system, we have revolutionised fixture construction in the areas of welding, assembly and straightening. We have received multiple awards as an innovation leader. With our global innovation "CNC - Clamping System", the DEMMELER clamping system for milling and turning centres, we now also support industrial machine manufacture. We place the utmost value on stiffness, damping properties as well as reproducibility and accuracy when developing and producing this system. The modularity allows you to clamp your work pieces (from lightweight to very heavy) very precisely and quickly. By paying particular attention to stiffness and damping properties, you also increase the quality of your work piece to be machined, thus protecting your machine technology and your tools.

# ROTARY TABLES / TOOL ARENAS / AUTOMATION

DEMMELER's automation systems are used wherever extremely efficient and high quality products are manufactured. As a quality leader, we deliver our robot-based tool changing systems as well as our carousel, rotary and rotary shifting tables worldwide. We place great importance on individual support and comprehensive service. We guarantee top quality and extreme precision. All area are oriented to and contribute to this purpose.

#### **CONTRACT MANUFACTURING**

Dimensions up to 20 m in length, piece weight up to 100 tonnes and tolerances in the micrometre range – all of these are parameters that have accompanied us for years and characterise us as a supplier of well-known machine tool manufacturers. The main focus of work here is on the production of basic components, such as X, Y and Z axes, machine beds, machine frames, portals and clamping floor plates, which are used in our customers' ultra-modern CNC machines.









TURNING AND ROTARY TABLES

**CONTRACT MANUFACTURING** 



# Optimise your production processes with us as an innovation leader, inventor and manufacturer.

A smooth and efficient production process is crucial to your company's success. The topics of "lowering production costs", "increasing quality" and "continuing to develop ergonomics" are and will always be important in remaining competitive. We see ourselves as a reliable and competent partner of our customers in the process. This drives us to continuously develop our products further and to advance new developments.

With us you will find the broadest product portfolio in the area of 3D clamping systems - perfectly tailored to your requirements. You therefore have the right solution for every one of your challenges!

#### YOUR BENEFITS IN FOCUS

- Premium quality at the best price-performance ratio
- The largest product portfolio in the 3D clamping systems area
- Award-winning in the areas of innovation and ergonomics



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Commercial registry number 13149
Managing director: Johannes Demmeler
Place of jurisdiction Memmingen
Local District Court of Memmingen / HRA 1151
VAT no. DE 812 035 092



# Dear business partners, Dear Ladies and Gentlemen,

In the company's over 55-year success story, we have always placed our product benefits for our customers at the focus of our activities. The philosophy in developing our innovations is always to make your work easier. So we are very proud of having created a standard for the industry with the invention of the 3D clamping system. Our products and our company have already received numerous awards, such as the TOP100 Award. However, it is important that you award us with your loyalty. It is our firm conviction: We are successful when you are successful!

The technology from DEMMELER is the basis for your success. Our drive is to support you in increasing the economic efficiency of your company. Our products help you to accelerate work flows, to produce in a consistently high quality and to ensure a high availability of your employees through the best work ergonomics. We ensure this with the highest quality, power of innovation and individuality. Already during the investment planning stage, we help you to find the best economic and technical solution. We ensure that you are successful across the entire service life with the robust "Made in Germany" products,

which can still be developed further. With our experts on site, the competent sales and development team in the plant and the experienced application consultants, we ensure your success with very high quality and safety standards. Even after installing our products in your value added chain, we are still there for you. You can always meet your changing requirements with modular systems.

We are happy to help you with any new questions and also benefit from your knowledge in the process. You're not just our customer. You are our partner. Our daily actions are aimed at making and developing successful long-term partnerships. We are there for you - with advice and action!

Sincerely, Johannes Demmeler Executive Partner

Lennuber



#### Company

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- **1961** Founded by Ludwig Demmeler with a focus on welding, turning and milling Construction of an industrial hall with 600 m² for the realization of turning and

1975

Extension of the business area to tables

Relocation of the site to Heimertingen hall with 2,500 m² 1990
Development of a new product clamping systems









#### **Tradition and Innovation**

The success story of our internationally successful family-owned company began when the 19-year old Ludwig Demmeler laid the foundation in 1961: In his small workshop, he worked as a subcontractor for nearby industrial businesses.

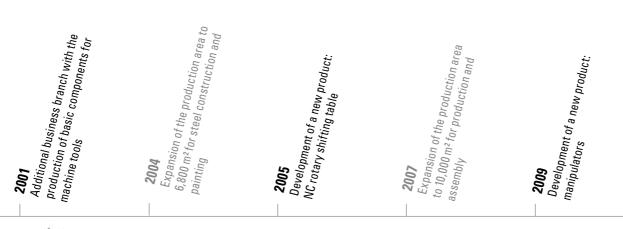
Already by 1990, DEMMELER set the standards on the market as the inventor of the 3D clamping system: Originally intended for the company's own production, the device system proved to be a quantum leap in metal processing and today is an international industrial standard due to the many possible applications and combinations.

DEMMELER, managed in the second generation by Johannes Demmeler as the managing director since 2001, operates on more than 40,000 m<sup>2</sup> of floor space. At the same time, we remain true to our roots in Allgäu. After the relocation in 1989, we have been producing our products exclusively in Heimertingen. This commitment was also recognised by the Bavarian Ministry of Economic Affairs, which honoured Ludwig Demmeler for his entrepreneurial achievements by awarding him the Federal Cross of Merit.

The company's growth was accompanied by several product developments, which were first produced only for their own production facilities. Put through their paces, we now deliver these products to customers worldwide. In addition to the 3D clamping system, these also include the turning, tilting and carousel rotary tables, as well as 3-axis manipulators, tool arenas and tool machine components.

We place great emphasis on the highest quality at a fair market price in the production of products. Extensive vertical integration combined with the most modern machines and highly automated processes allow us to live up to this claim. Our customers' success is the focus: A significant increase in productivity, improved quality in production, ergonomic working, even in difficult handling tasks, and enhanced safety in the workplace. These are the four principles under which we have always been working on new innovations. We were awarded with the TOP100 seal for this.

Innovative and quality leadership are at the centre of our brand image. It is our daily ambition to not only meet our customers' high requirements, but also to exceed them.





Hall expansion with an additional 6,500 m² hall floor space for assembly,

logistics and the painting area



# Precisely more work pieces up to 500 tonnes

Our rotary, tilt and carousel rotary tables set a clear mark due to the extremely robust design as well as a high level of precision in the micrometre range, speed and repeatability.

A suitable solution can be designed for every application case. We speak with our customers about requirements and work pieces, which are to be processed on the rotary tables. We create the right solution based on our experience from more than 600 projects. Our high-precision rotary tables can withstand a bearing load of up to 500 tonnes. If such masses are being moved, this requires high torques. If these masses need to be accelerated quickly, then they need to be braked quickly, and they need to be precisely positioned with accurate repeatability.

Whether a hydrostatic linear or rotary axis, roller bearing axles or also a combination with both, we have all the solutions in our portfolio. Hydrostatic guides help to avoid wear surfaces, for example at very high loads, and the tables are thus suitable for processing with the highest requirements and the highest accuracy. The best damping properties allow for longer tool lives and high-precision work piece processing. The decisive factor for the

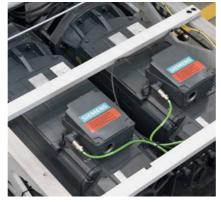
durability and precision of the rotary tables is not only the possible loading, but the largest possible bearing diameter in relation to the worktop size. The machine bed itself is very compact and space-saving. It is well-protected under the steel cover. All the necessary regulation and control elements are easily accessible in an power box located in the rotary table. Thanks to the standardised, plug-in-ready interface, the rotary table can easily be connected to all machine tools.

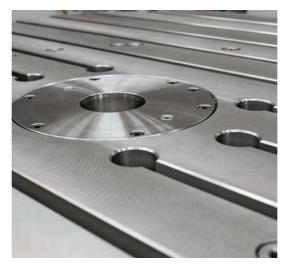
In addition to rotary tables for positioning work pieces for milling work (also in interpolation operation), patented tilting tables with additional axes, for example, are among the repertoire. Due to the standard angular adjustment of up to 10°, these are suitable for milling large an heavy components and, for example, are used in wind energy technology. Pallet changing systems are used to automate machining centres due to the multiple pallets and the ability to set up during main working hours. Thanks to a powerful drive train design, our carousel rotary table achieves very high machining torques, which makes a very good machining performance possible. In addition to the milling, it is also possible to turn and grind work pieces.











#### The right solution for every application

- The best technical values in terms of stability and accuracy with an excellent price-performance ratio
   We achieve this with our knowledge and our user experience with a high vertical integration
   The modular design makes it possible to realize different configurations depending on the customer requirements
   Possible tables loads up to 500 tonnes
   Working in the micrometre range, unmatched in the run-out, true running and repeatability
   Our NC rotary tables are excellent.

- a W-axis/V-axis.
- A central and easily accessible, integrated power box contains all the necessary
- Integrated measuring systems in the highest precision, well-protected from additional covers and sealing air, ensure precise positioning

# Welding and assembly in an optimal position

The size and bulkiness of work pieces often create difficulties during welding, because not all points can be seen well. However, an optimal overview is a prerequisite for clean and error-free work. Due to their dimensions, work pieces must be moved several times during the work process with a heavy device, usually with a crane. Reduce this safety risk with the manipulator from DEMMELER. The manipulator is a kind of lifting platform on which work pieces can be machined directly. You can add the DEMMELER 3D 'Okto table' to the manipulator for particularly large and bulky parts. This gives you a working surface that is precisely adapted to your work pieces. All locations are easily accessible and simplify welding, milling, measuring and assembling.

Since the tiltable manipulator can be adjusted in height and angle, you create an ergonomic working environment and avoid health problems for your employees with this handling device. The profitability and quality of your products also increase by using the manipulator. The manipulator allows for very precise work with an optimised welding sequence, which significantly reduces the welding distortion rate. In addition, simple and fast assembly is optimally possible with standard processes.



Unique swivel range up to 180 degrees.





#### **Excellent posture and maximum productivity**

#### Increase the quality level

- Working in the ideal position and at the ideal height
- · Less welding distortion through optimised welding

#### **Protection of health and safety**

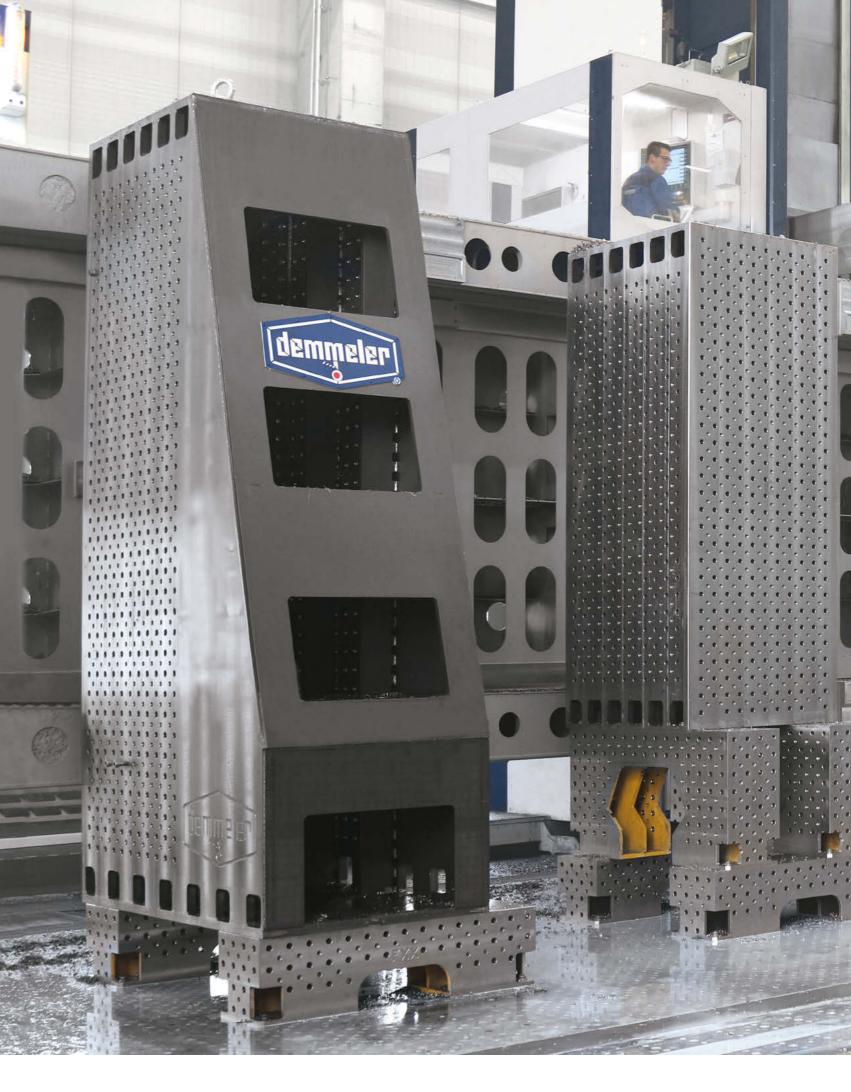
- Avoidance of overloading and poor posture, which means less staff absenteeism
   Ergonomically-optimised work environment
   Employees with physical constraints can perform tasks that you could not perform without the manipulator (possibly investment aid possible by means of funding)
   Dangerous handling of work pieces with a crane is
- significantly reduced

#### **Increased productivity**

- Multiple, time-consuming rotating and turning of the work
- Higher melting deposition efficiency when welding as
- Higher work performance due to optimal working position Fast and error-free assembly due to standard procedures









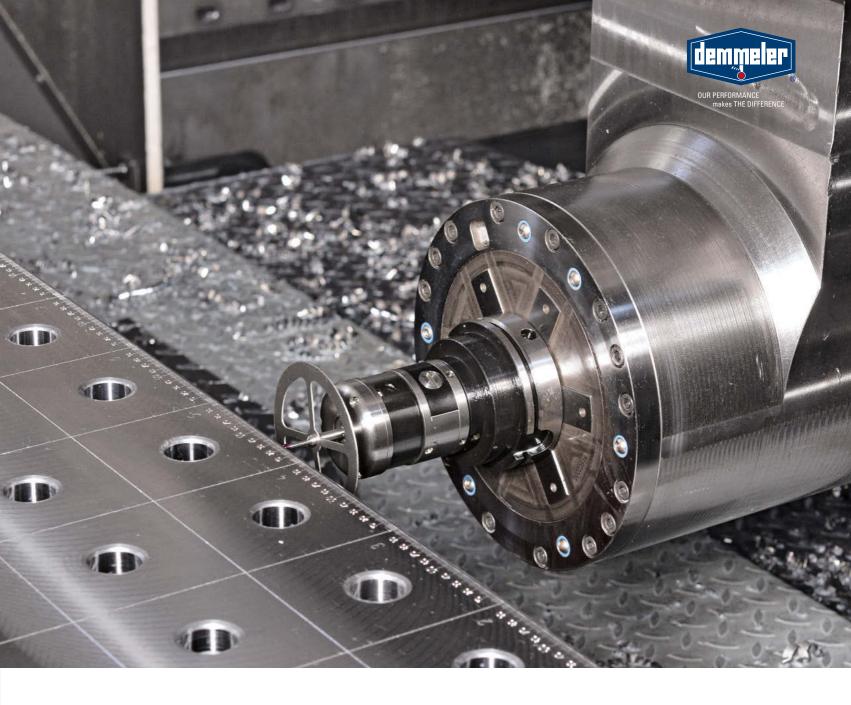
# The highest "made in Germany" quality



"Made in Germany" is now regarded as a seal of quality and a sign of quality. We develop and produce exclusively in Germany in order to continuously check and optimise our production processes, i.e. in order to ensure the high quality of our products.

Thanks to our steadily growing and highly specialised team, we ensure that our products will continue to meet the needs of our customers all over the world. The commitment of our employees has already resulted in a number of ground-breaking industry innovations.

The personal and professional development of our employees as well as the advancement of the next generation of young talent is crucial for us. We offer interested and committed graduates an attractive career entry with training with excellent prospects for the future. Trainees are involved in project work from the outset, obtaining an integrated overview from planning to development to production and assembly.



### Precision redefined

We set high standards for our production, since it forms the basis for our excellent quality products. Only the best is good enough. We only use materials from certified suppliers, which is a crucial requirement to consistently guarantee a consistently high production quality.

Ultimate precision is a key quality characteristic of our products. That is why we place the utmost value on the dimensional accuracy of all parts that leave our plant. We rely on the latest generation of measuring tools and test systems: 3D coordinate measuring machines, laser measuring systems and optical test equipment.

In addition, DEMMELER complies with the ISO certification DIN EN ISO 3834-2: 2006, comprehensive welding quality requirements in both serial and individual production. Using robotic systems makes it possible to produce large series components up to 26 m in length extremely efficiently and with great precision.

This all forms the framework for excellent services. Ultimately, however, each individual employee decides whether to use them or not based on economically decisive factors such as quality and reliability. We also owe our high standard to the experience and day-to-day commitment of our competent employees in all production departments.

#### Our innovations set new standards

Many companies launch innovations on the market. However, only a very few companies are successful at launching an innovation that has become a standard for the industry. And that's exactly what we did: DEMMELER 3D worktables and clamping systems have become state of the art. Thanks to the modular design with a perforated grid, our worktables can be used absolutely flexibly in specialised small businesses up to well-known large corporations.

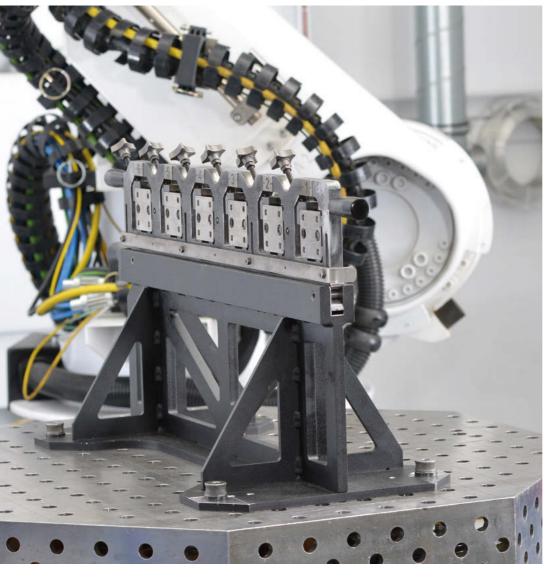
For us, success was never a reason to rest on our laurels, but a motivation to realise new ideas

nobody at first believed in. In the process, we always rely on our knowledge and our experience. We set the standard for the industry with smart products, which significantly increase efficiency and enhance work safety.

Our development engineers consider themselves pacesetters. They do not wait for new requirements of our customers. They observe the market, familiarising themselves with new technologies and methods. How can new process technologies from other sectors be used? Are there new or alternative materials that can

increase durability or reduce production times? What new insights have been gained regarding the ergonomic design of workstations? How can safety continue to be improved?

Our company history has always been characterised by innovations. We significantly increase efficiency and enhance work safety with smart products.





Awarded with the TOP100 seal in 2017, we are one of the most successful innovators in Germany.



# Market leadership with strategy and goals

We place great emphasis on the highest quality at a fair market price in the production of our products. We are firmly convinced that investing in a durable, competitive DEMMELER product is far more profitable than the initial savings when buying a cheap imitation.

Our strategy is confirmed by the fact that as a strong partner we are able to count many small and medium-sized trades companies as well as renowned international groups among our customer base.

The outstanding worldwide acceptance of our products and services confirms our commitment to the continued expansion of our unique market share in the worktable systems segment through tireless innovativeness for the benefit of our customers. We are proud to be often copied but never equalled!





We have received numerous awards for our 3D clamping systems and worktables. The system sizes D28, D22 and D16 can be connected to each other. This creates countless areas of application. Thanks to the modular concept, you can set up very complex and accurate fixtures quickly. You can achieve high economic efficiency with all systems for one-off components or series production parts.

Awards: Bavarian State Prize and German Federal Prize.







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Demmeler Maschinenbau

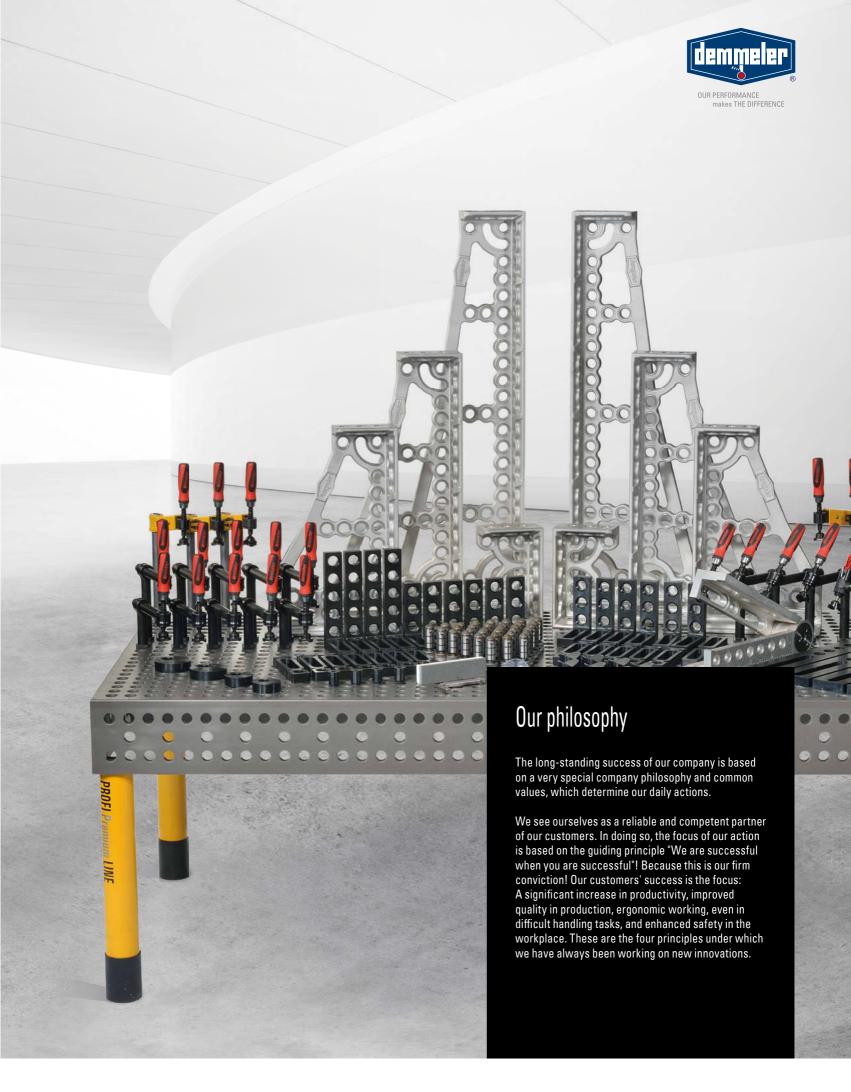
# Sustainability and future viability



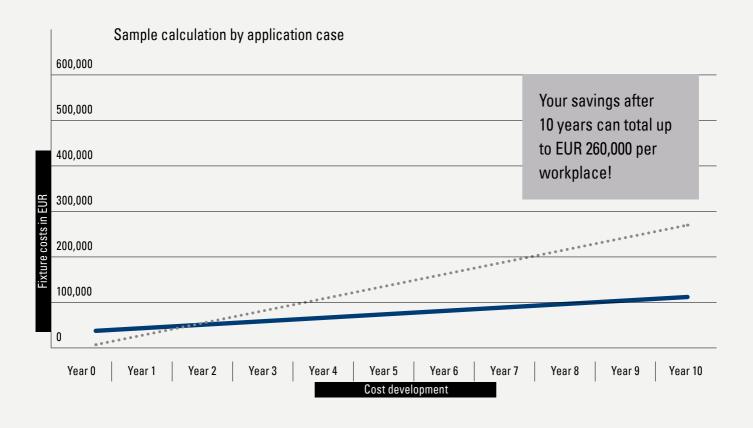
We are aware of the special responsibility for future generations, especially as a family-owned and operated business. Social and environmental sustainability are more important to us than short-term profit.

We support our employees so that they can take advantage of their opportunities for personal and professional development. In the process, DEMMELER creates room for development opportunities, self-initiative and offers stability: From the promotion of young talent for our trainees to an exciting work environment to a high level of employment security.

We protect our ecological environment by deliberately making our production processes as sustainable as possible. People are increasingly living off of fewer resources. DEMMELER relies on careful raw material selection as well as technical innovations. For example, the company is supplied with its own solar power thanks to its sophisticated energy supply.



### Long life, fast amortisation – that is our understanding of economic efficiency



#### LOWER PRODUCTION COSTS

With the acquisition of a clamping system from DEMMELER, you not only receive solid production equipment but also a reliable calculation base. Using your clamping system quickly pays off. And thanks to the long service life and guaranteed compatibility of the tools with each other, you enjoy reassuring planning reliability. The elaborate and costly storage of conventional fixtures is a thing of the past.

#### **INCREASE QUALITY**

With our modular system, you can set up your fittings exactly and quickly in a snap: Machine housings, racks, frames, cross members, mounting brackets, railings, stairs, gates, control cabinets, sheet metal coverings and much more can be quickly and conveniently clamped. With this system, you can set and fix the specified sizes for any work piece quickly and precisely. Your individual welded components are clamped at the corresponding faces or points during the tacking and welding process for optimum positioning.



#### WORKING COMFORTABLY

Ergonomics is an important topic to improve productivity and quality going forward, to prevent expensive downtime and to make production workstations attractive.

A good ergonomic workplace design allows more efficient and error-free workmanship, protecting your staff from health hazards even during laborious tasks. Welding / assembly processes can be carried out with less fatigue and with consistently high precision. Staff shortages caused by overloading and illnesses are also prevented.

#### **WORKPLACE SAFETY**

The size and bulkiness of work pieces often create difficulties during welding, because not all points can be seen well. However, an optimal overview is a prerequisite for clean and error-free work. Often, work pieces have to be moved several times during the work process. Because of the dimensions and weights with heavy equipment, this is usually done with a crane.

This safety risk is minimised thanks to our manipulators, a kind of lifting platform on which the work pieces can be machined directly. You can add the DEMMELER 3D 'Okto table' to our manipulators for particularly large and bulky parts. This gives you a working surface that is precisely adapted to your work pieces.



# Globally networked

With our worldwide distribution network, we are everywhere our solutions can contribute to more efficient production.

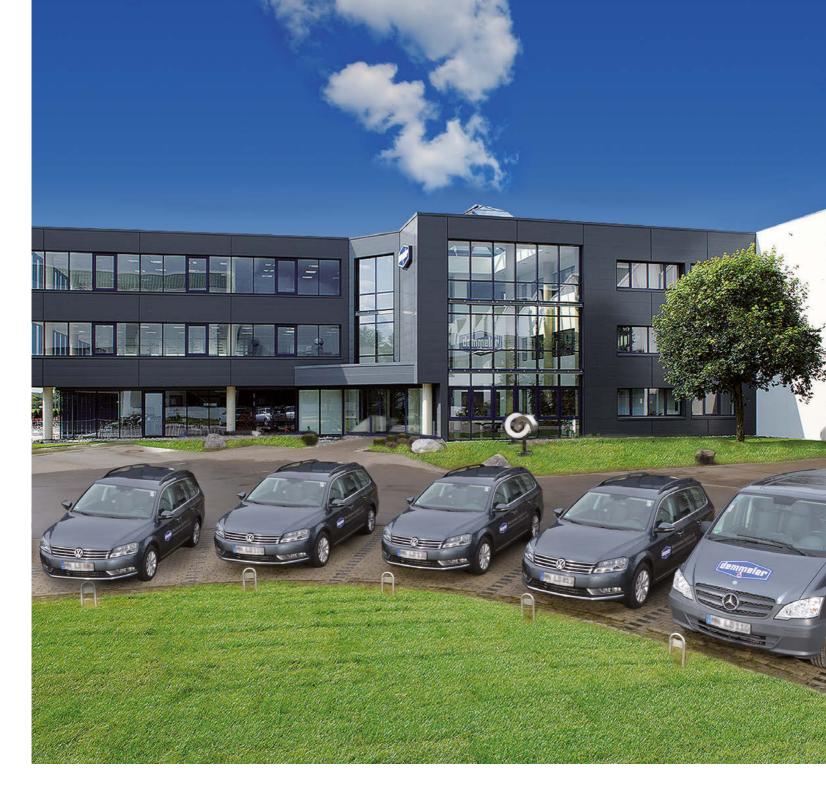
We use on-site consulting to develop tailor-made solutions in partnership with our customers.
Always according to the maxim: You have a need, we have the solution!

Our customers around the world benefit from our immense store of knowledge accumulated in numerous successful projects.



#### A RELIABLE PARTNER ON YOUR SIDE

Our worldwide sales and service representatives are always there for you. To contact one of our sales partners directly, visit our website at www.demmeler.com/distribution-partners.



# Our service: fast, competent and reliable

Already during the investment planning stage, we help you to find the best economic and technical solution. Our expert consultants on site, the competent sales and development team at the plant and our experienced application consultants are happy to support you. Even after installing our products in your value added chain, we are still there for you. Our modular systems can be adapted to your changing requirements at any time. We are happy to help you with any new questions and

also benefit from your knowledge in the process. We are there for you – with advice and action!

We offer a wide range of support services in addition to our technical and innovative solutions. Take advantage of our comprehensive services, from the service hotline to spare parts deliveries to direct on-site assembly. Short response times are a matter of course.



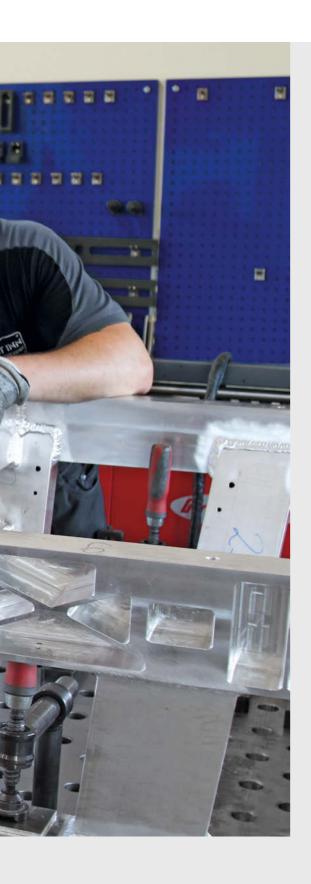


Best inn Metalltechnik GmbH & Co. KG Hauptstraße 40 93426 Roding-Mitterdorf/Germany



### Vehicle construction







# BEST inn is everything that a successful start-up company in the aluminium welding field should be

The managing directors Mr Eckl and Mr Breu can claim to have revolutionised prototype construction in the field of structures for electric vehicles. While in the past it was necessary to manufacture expensive moulds for one-off or small series and incur very high overhead costs, BEST inn employs welding technology to offer a highly economical solution. However, this demands considerable expertise. This is because the structures of electric vehicles have to be extremely precise and are subject to stringent quality requirements. Alongside the expert knowledge of the founders and their employees, top-quality operating equipment is also essential. DEMMELER's worktable systems and tooling help the company meet the most exacting quality standards. The modular clamping system greatly reduces equipment costs and its high precision ensures uniform high quality and minimum tolerances at all times. BEST inn has acquired an outstanding reputation among the leading automotive manufacturers. This is why Eckl and Breu's concept workshops attract not only leading developers from the automotive industry but also board members from the best-known vehicle manufacturers. A partnership that we can be proud of!

Demmeler Maschinenbau

23



DB Fahrzeuginstandhaltung GmbH Weilburger Str. 22 60326 Frankfurt/Germany

# Clearing the way for greater flexibility and preventive occupational safety



DB Fahrzeuginstandhaltung GmbH offers optimised solutions for the repair and maintenance of rail vehicle fleets. Alongside the modern technology infrastructure in its network of plants and its highly-qualified workforce, the company possesses many decades of know-how that make its range of products and services unique in Europe. Whether technical inspections, modernisation, component preparation or post-accident repairs: The company's expertise covers all maintenance and repair work at rail vehicles and components – from high-speed trains to light rail systems.

Assembling gear sets for urban trains demands flexibility. To ensure quick changeovers of equipment, heavy wheelsets and gearing weighing up to two tonnes must be positioned precisely and securely. Thanks to the large working space coupled with a small footprint, the DEMMELER Ergonomix® M manipulator is the ideal extension to the state-of-the-art production shops. The manipulator, which boasts both angular and height adjustment capabilities, consistently moves even the highest payloads into the ideal position, thus permitting an ergonomic working posture even during heavy handling operations. The assembly operations can be carried out without fatigue and with consistently high precision. Thanks to the patented swivel range of up to 180°, the work pieces can be fully assembled in one clamping cycle without additionally having to be turned over.



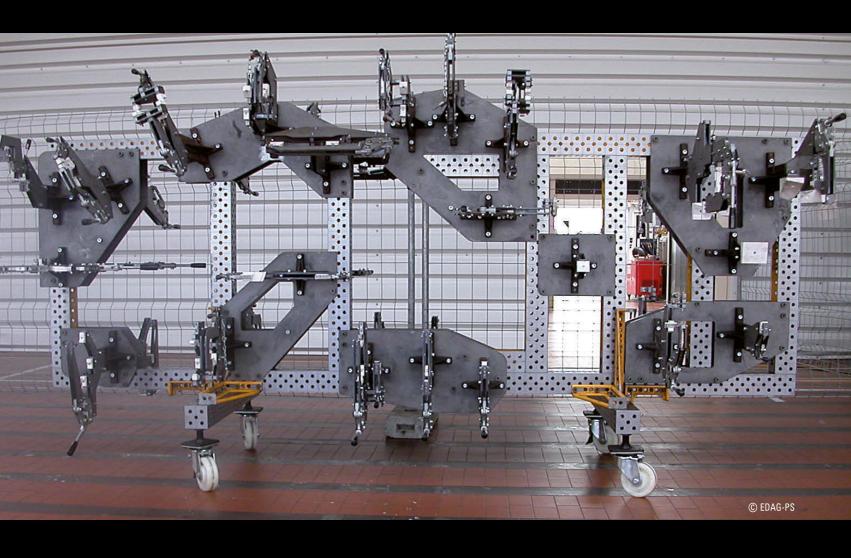






EDAG Production Solutions GmbH & Co. KG Reesbergstraße 1 36039 Fulda/Germany A subsidiary of EDAG Engineering AG

# Innovative tools for innovative solutions



# Automotive / fixture construction







EDAG ENGINEERING AG is a globally active development partner for automobile and rail vehicle manufacturers. The experts at EDAG pursue an integrated approach and, beyond conceiving vehicle prototypes, design the corresponding production facilities with the objective of providing effective solutions that optimise value creation.

Developing ideas that overcome existing paradigms, the way EDAG does, requires equipment that can follow these ideas for implementation. In other words: Flexible tradespeople need flexible tools.

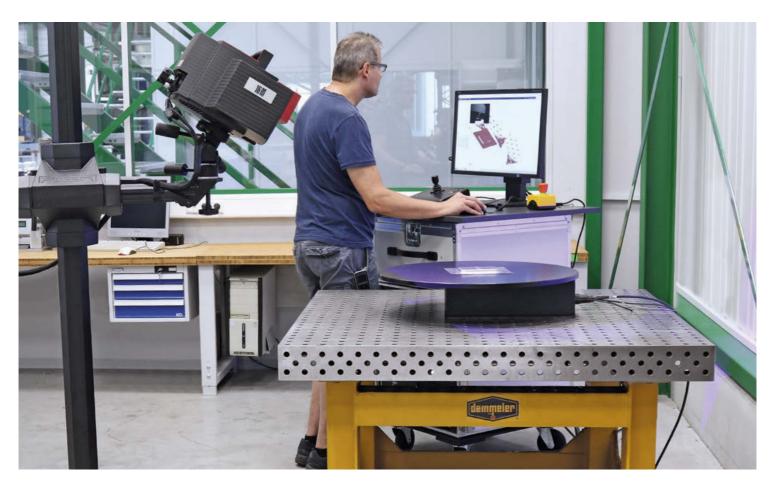
With the clamping and worktable solutions from DEMMELER, those in charge at EDAG have found the right workshop equipment for prototype building and plant construction. Especially since the DEMMELER development engineers are willing to explore new ideas and support customers along the way.



Demmeler Maschinenbau | 27



Edelstahl-Mechanik GmbH Gewerbepark Voralb Bannholzstr. 6 73037 Göppingen/Germany



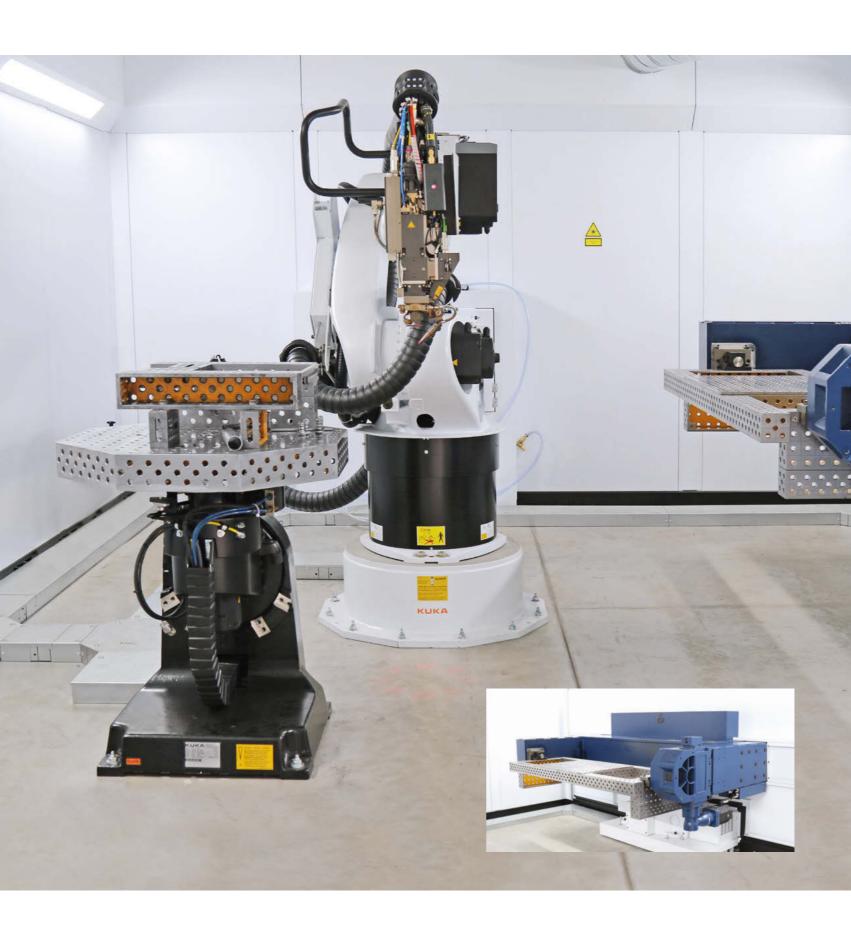


### Everything from a single source

Equipped with state-of-the-art machinery, Edelstahl-Mechanik GmbH is able to cover the entire range of sheet metalworking operations. The Göppingen-based company supplies a wide range of different industries and sectors. Alongside a variety of stainless steels, the company also undertakes the cutting, forming and conventional machining of steel, aluminium and other materials. Its aim is to offer a broad portfolio with a high level of vertical integration. From simple cuts to length through to complex assemblies including engineering services – all from a single source. In addition to all this, Edelstahl-Mechanik has also developed its own products. The company is considered to be one of the outstanding innovators in the field of smoking ovens. As a result, its products are found in mass-catering kitchens and Michelin-starred restaurants worldwide.

To perform its precision-welding operations, the company uses the modular 3D worktable and clamping system from DEMMELER. Oversize welded parts, for example for façade construction, are manufactured at large-scale welding stations. Using the DEMMELER track system, multiple 3D worktables are linked together to form a large working area of up to 24 x 4 m. The high-precision grid system, which is recessed into the floor, permits the exact arrangement of the worktables. In this way, Edelstahl-Mechanik GmbH achieves outstanding precision and reproducibility and is one of the market leaders in its sector.







Stahlbau Füss GmbH Riedstraße 23 72511 Hitzkofen/Germany A subsidiary of Peter Sikora GmbH & Co. KG



### General steel construction



# Flexible solutions for flexible steel construction

Stahlbau Füss produces steel structures of all kinds on over  $500 \, \text{m}^2$  of space. Hall construction for renowned industrial customers in the region is a focal point. Stairs, balconies and sophisticated custom structures are also produced for private applications. For municipal clients, Füss realises bicycle and pedestrian bridges among other things.

This broad service portfolio not only requires experienced planners and technicians but also machinery and equipment that is flexible enough so that railings can be produced one day, followed by supporting structures for halls the next.

Stahlbau Füss has been building on and with system tables and components from DEMMELER for many years. The sophisticated and flexible system of tables and accessories has proven itself many times over. Should the limits of feasibility nevertheless be encountered at times, the developers and consultants at DEMMELER are ready to contribute their technical expertise and experience, identifying possible solutions.

For sophisticated steel construction and the implementation of unusual ideas at marketable conditions, owner Peter Sikora at Stahlbau Füss counts on machinery and equipment from DEMMELER.





Demmeler Maschinenbau | 31



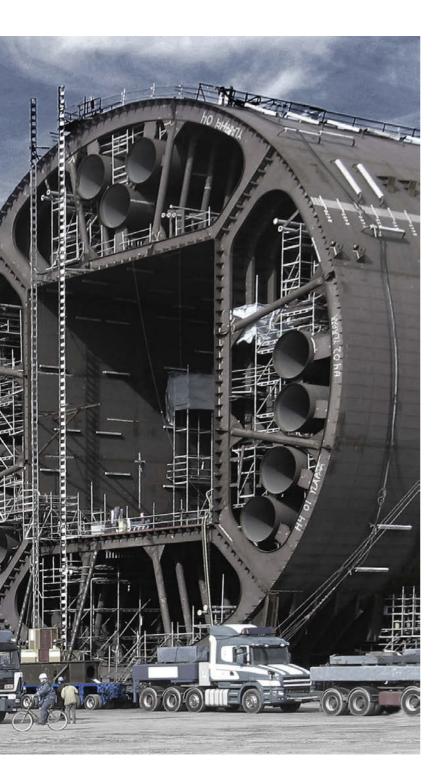
Goldhofer Aktiengesellschaft Donaustraße 95 87700 Memmingen/Germany

# **Goldhofer** – an eventful history



### Vehicle construction





The global player from the Allgäu looks back on a long company history defined by passion, experience and innovativeness in the field of road haulage, heavy-duty and special transport solutions. Goldhofer enjoys world renown thanks to the perfect integration of road, rail, marine and air transport. Efficiently and reliably mastering extreme challenges defines the company's day-to-day business.

BIG, BIGGER, GOLDHOFER – the Swabian company continuously pushes the limits of feasibility according to this motto. With modern design and production technologies, Goldhofer realises trendsetting and economical transport solutions ranging from trailers to semi-trailers, from aircraft tugs to modular heavy lorries.

Demmeler Maschinenbau | 33



Goldhofer Aktiengesellschaft Donaustraße 95 87700 Memmingen/Germany

## "Heavyweights" for heavy-duty applications













The vehicle components in Goldhofer products are true heavyweights. Manufacturing them requires clamping systems with extreme load capacities that are flexible in combination, mobile and can be positioned automatically. A task that literally cannot be taken lightly. Truly a challenge — even for us at DEMMELER as a manufacturing equipment supplier.

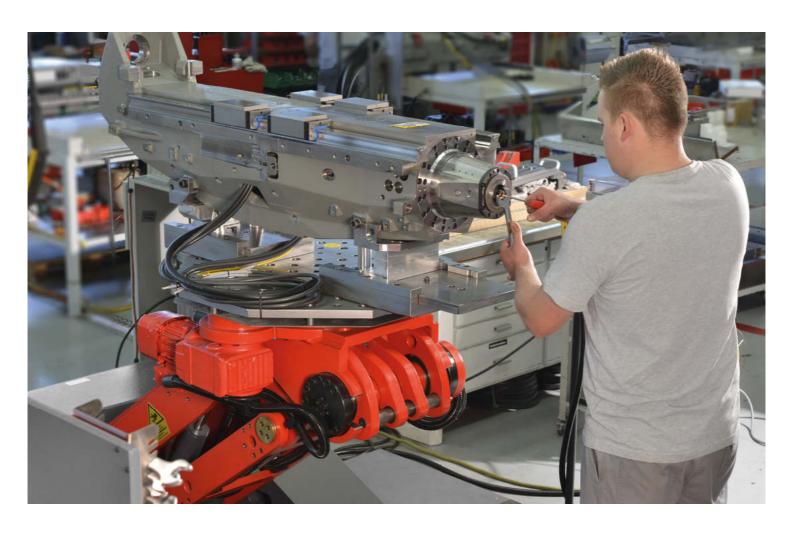
Goldhofer is one of the DEMMELER customers using the entire product range from simple worktables to shifting feet and rail systems to manipulators – respectively also in custom versions. Production at Goldhofer provides a quasi overview of the numerous possible applications for the DEMMELER solutions.

Demmeler Maschinenbau

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## Hermle – a name that stands for high-precision processing centres around the world!

With around 1000 highly motivated employees, Hermle is among the leading manufacturers of high-precision processing centres and automation solutions, assuming a leading national and international position.

Better machining is the Hermle slogan for optimised results. This is because the proverbial Hermle precision has made the company an important machine manufacturer in many industries. From large, complex components to miniature high-tech elements. From medical technology to the sport of racing, the Swabian manufacturer proves its know-how day after day.

Based on customer requirements and the concrete components being produced, Hermle also develops comprehensive solutions with perfectly harmonised tools, controllers and automation technologies.

DEMMELER Ergonomix® M makes work easier! Productivity, precision and innovation are key characteristics of all Hermle products.

Naturally this also applies to in-house production. The patented Ergonomix® M manipulator with a swivel range of 180° is capable of the reproducible positioning of components weighing up to 1.5 tons in assembly. Multiple, time-consuming rotating

and turning of the work pieces, for example with a crane, is eliminated for a major reduction in non-productive time. The proven DEMMELER worktable systems with ergonomic scissor lift are used in welding as well.

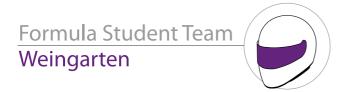
Mr. Hipp (Head of Marketing at Hermle) also emphasises that the manipulators relieve the workers of heavy handling tasks and enable working with an ergonomic posture. Assembly work can be carried out with less fatigue and consistently high precision. Excessive strain and missed time due to illness are prevented as well. Many good reasons that speak in favour of the DEMMELER manipulators.











Ravensburg-Weingarten University Formula Student | Gebäude H | Raum H060 Doggenriedstraße 88250 Weingarten/Germany









## Facing the new race season with "Stinger17"

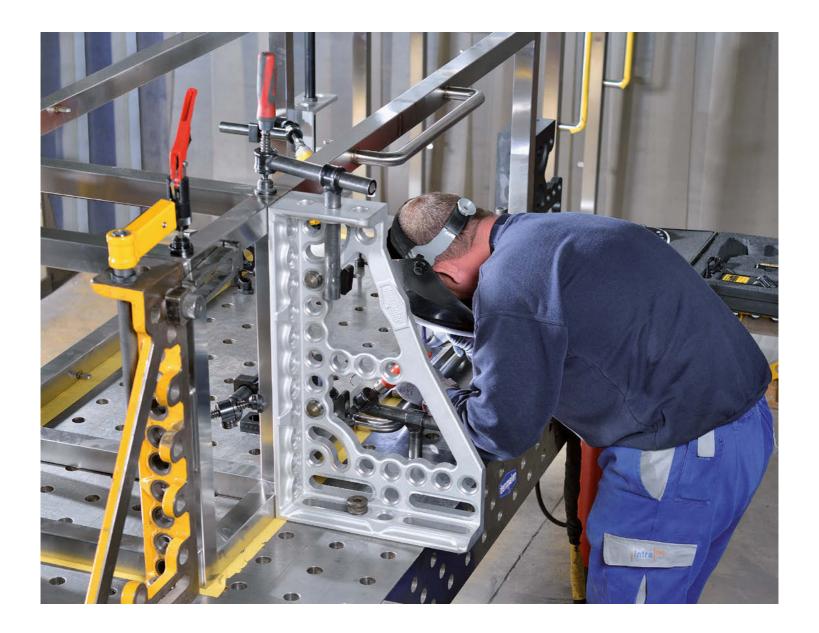
Over a period of many months, the students in the Formula Student Team Weingarten designed, engineered and built their new racing car, the "Stinger17". Now the vehicle has been officially presented for the 2017 season. The forthcoming competitions will show whether it can prove its worth against international competitors and, if possible, thoroughly outclass last year's model, the "Stinger 16", which has been the Formula Student Team Weingarten's most successful racing car to date.

Since 2008, this student project has combined theory and practice by getting the students to go beyond their learned knowledge and gather practical experience. Over the course of a year, they design and build their own racing car in accordance with precise rules. Experts from the world of motor sport as well as from the automotive and supply industries assess the overall package, consisting of engineering, costing, business plan and teamwork.

Since 2015, DEMMELER has been supporting this team, which consists of almost 70 students representing a huge variety of different disciplines. Using the modular 3D worktable and clamping system, the team manufactures the steel tubular grid structures for its racing cars precisely and efficiently. With the D16 system for light to medium applications, the flexible adaptation of the vehicle structure, which is further developed from season to season, poses no problem.

Demmeler Maschinenbau | 39





# Precision and efficiency in make-to-order and series production

Intratec Schmock GmbH from Weingarten in Upper Swabia focuses on the production of high-quality components for machine building and plant construction. The customers of the midsize enterprise come from a wide variety of industries. Solutions for the pharmaceuticals industry are on the agenda along with make-to-order production for generating plant construction or the series production of customer information terminals, for example for railway operating companies, or components for snow-making equipment in ski regions. The adaptability and scalability of the clamping system is crucial for make-to-order

## Machine building and plant construction









production. New, individual set-ups have to be realisable quickly and with the required precision. Efficiency along with the highest quality standards is also essential for series production. Here the use of DEMMELER 3D worktables is of crucial importance. The highest dimensional accuracy, including for repetitive process steps, and fast fitting of the work pieces form the basis of high-quality and economical production.

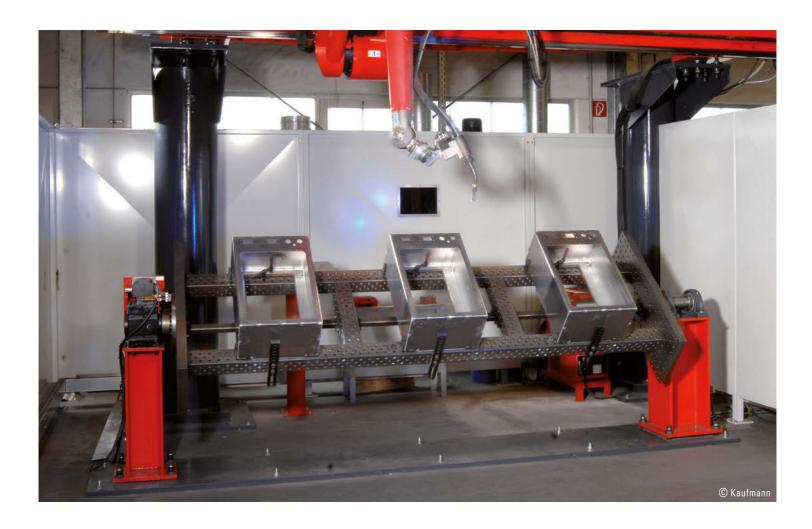
All technology aside, people also need to be considered. Occupational safety along with an ergonomic posture and workstations are key considerations here. DEMMELER clamping systems make a contribution here as well.

Demmeler Maschinenbau

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Kaufmann GmbH & Co. KG Im Brühl 9–11 67365 Schwegenheim/Germany



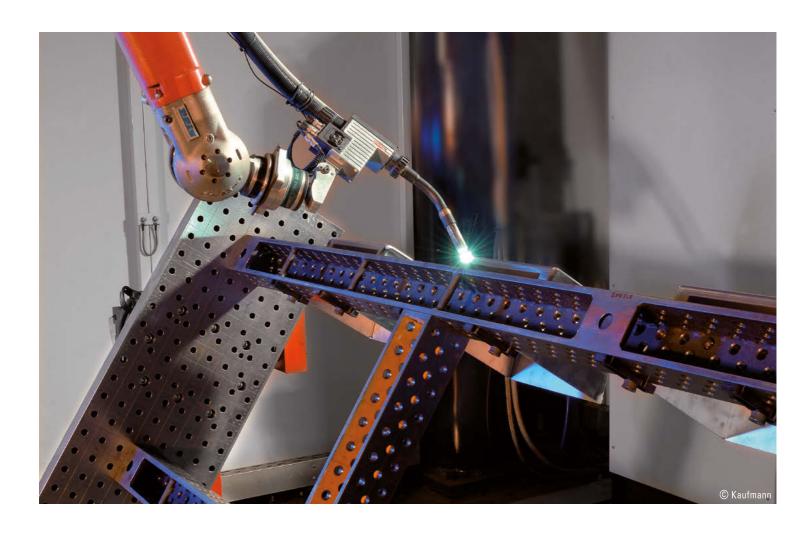
## Quality and speed are Kaufmann's special talents

Kaufmann GmbH & Co. KG in Schwengenheim/ Germany is active in two business areas: Electrical engineering and metals technology. More than 150 highly qualified employees make products for the rail industry, capital goods industry and the energy sector. Welding various materials such as steel, stainless steel and aluminium assumes an important role in the metalworking process chain. Over 40 tested and certified welding experts fabricate housings, air conditioning systems and driver's cabs for rail vehicles. For automatic and manual welding, the clamping systems and fixtures from DEMMELER are indispensable for production according to company management. For one thing, the wealth of DEMMELER accessories makes it possible to meet all customer requirements. For another, efficient production at marketable prices can only be realised thanks to the high-precision clamping system.

"Our customers expect all work to be completed on time, from prototype and sample construction to series production. The short setup and changeover times of our clamping tables give us a valuable competitive advantage here."

(Uwe Distler, Head of Metals Technology)











### Complex solutions require complex tools

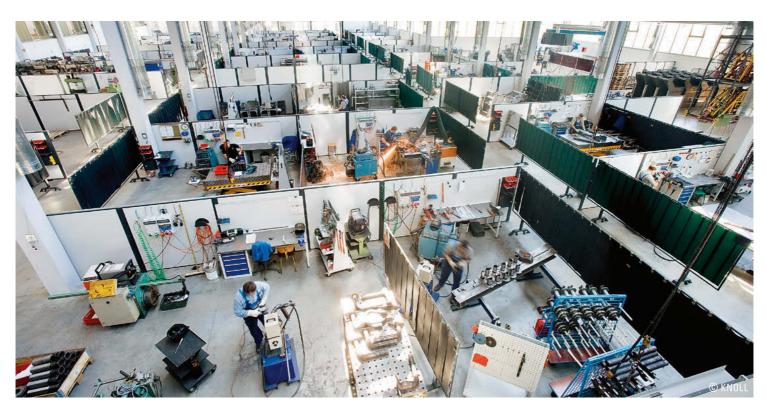


Innovative solutions and quality ensure the success of the company, thereby providing secure jobs for the 1,000 dedicated employees of KNOLL Maschinenbau GmbH in Bad Saulgau, Upper Swabia. From here the KNOLL products have been conquering the global markets in the mechanical engineering, automotive, chemicals, pharmaceuticals and food sectors for almost 50 years.

Knoll Maschinenbau is among the leading suppliers of conveying and filtering systems for chips and cooling lubricants in the field of metal processing. Displacement pumps are also used in the chemical and food industries, for example. Highly flexible assembly and transport systems complement the Knoll product portfolio. Complete plants and system solutions with central and decentral-

ised functions are realised with a comprehensive product range. Complex solutions require complex tools. Meeting individual customer requirements demands machinery and equipment that can be quickly adapted in terms of function and size. This is where the Demmeler clamping systems are of crucial importance. Since the various table types can be combined with each other and expanded as desired with numerous components, KNOLL is very flexible when it comes to the dimensions of individual components. Optimum positioning of the work piece not only makes work more accurate but also more effective. How important an ergonomic posture at work is for the employer and the operation does not even have to be mentioned. Demmeler solutions make a contribution to greater economic efficiency and better health as well.







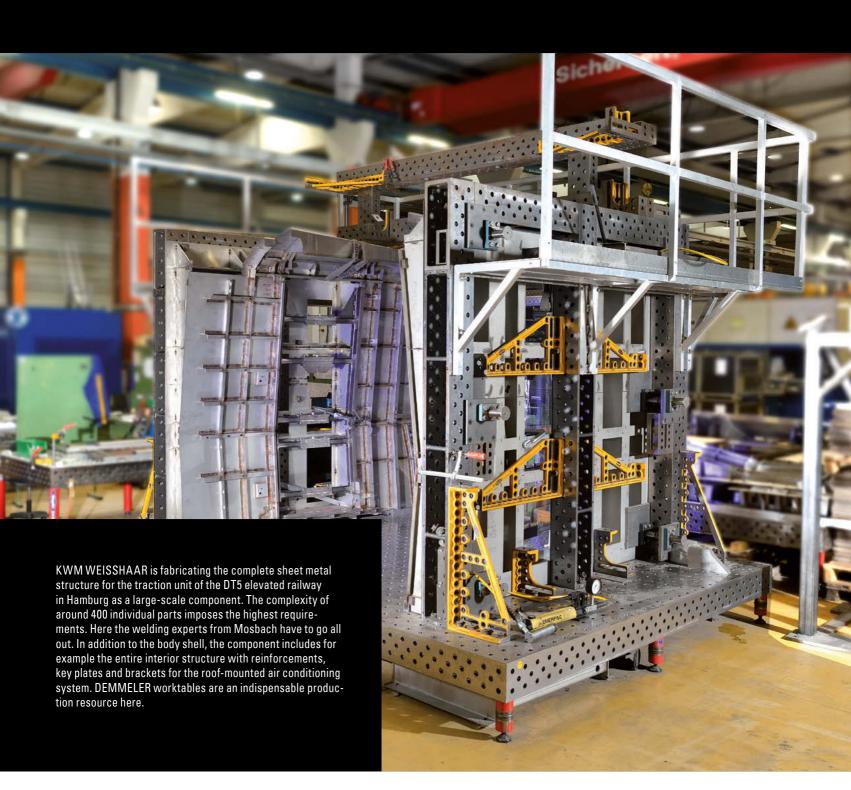




Prozesskette Blech

Engineering Blechbearbeitung Fügen & Schweißen Montage Logistik Weisshaar GmbH & Co. KG Corporate Group KWM Karl Weisshaar Ing. GmbH Sheet metalworking Zwingenburgstraße 6–8 74821 Mosbach/Germany

## We shape everything made of sheet metal.



### Rail vehicle construction / sheet metal working



KWM WEISSHAAR offers the entire process chain for sheet metal processing to its customers: Engineering, sheet metal processing, joining & welding, assembly and logistics. With more than 500 employees, the operation in Mosbach, Baden-Württemberg fabricates orders for the automotive industry, mechanical engineering, medical technology, electronics and environmental technology.

The construction of chassis elements for rail vehicles is a focal point of production. Here delicate side wall modules using rib-sheet construction are increasingly replacing the massive pillar-support structures of the old designs. This is due among other things to higher customer expectations for reduced energy consumption, similar to the automotive industry. (Quote: Andreas Bödi; Master Metalworker aluminium / steel / stainless steel).

In order to weld these complex assemblies to the exterior wall of the rail cars, they are fabricated and assembled on DEMMELER worktables. Minimal dimensional tolerances and the highest repeat accuracy are absolutely essential here. Since up to 50 variable design details have to be implemented for the various rail car components, the clamping system requires extremely versatile accessories that are flexible in application.

"The developers and consultants at DEMMELER are by our side with all their experience when we need them. Since all fixtures are in continuous use, the high wear resistance of all system components is an important quality factor for us." (Quote: Karl Weisshaar).

With more than 100 different worktables in total, DEMMELER practically forms the backbone of production at Weisshaar. Since the systems of different generations are compatible and can be combined with each other, the decision in favour of DEMMELER established the direction for the future and was meaningful not only from a technical but also from a business management perspective.





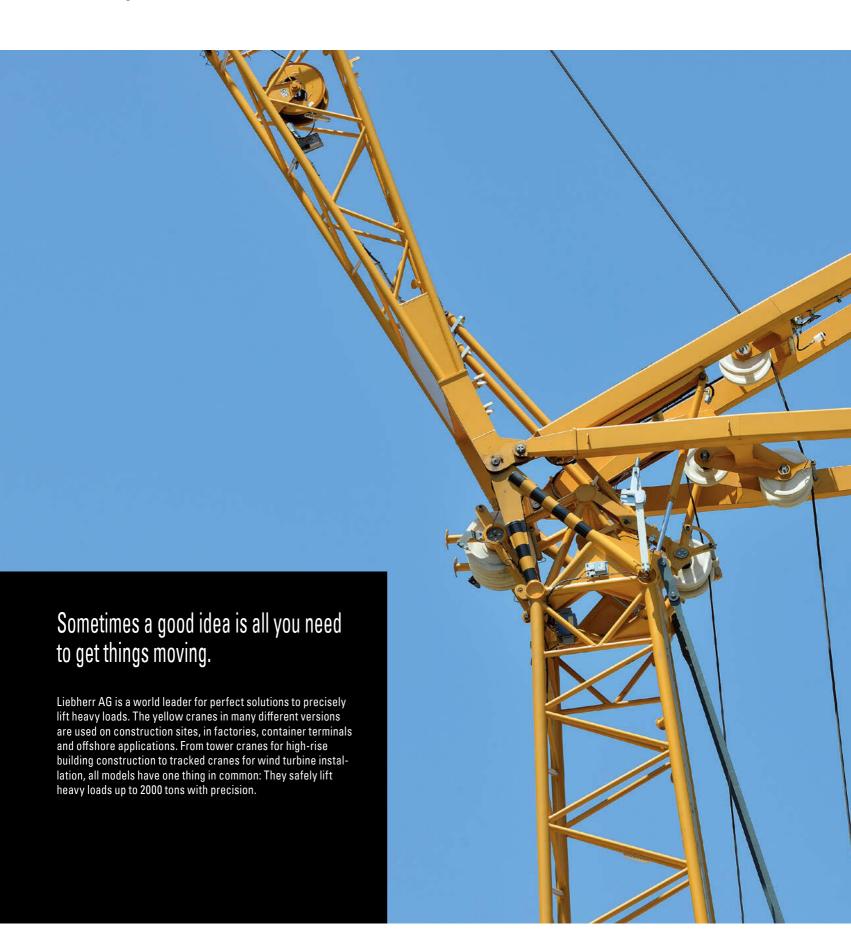




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## LIEBHERR

Liebherr Werk Nenzing GmbH Dr. Hans Liebherr Str. 6710 Nenzing /Austria









Liebherr Werk Nenzing GmbH Dr. Hans Liebherr Str. 6710 Nenzing /Austria

## Precisely moving heavy loads — a Liebherr and Demmeler speciality

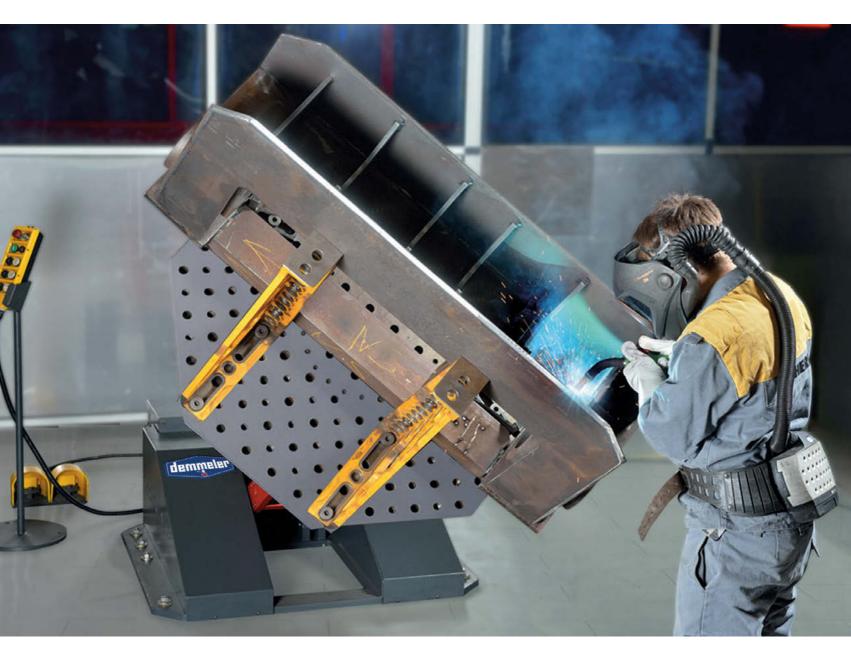


### Construction machines



When tons of weight hang on a hook, massively constructed crane components are essential. This is a tremendous challenge for the production of Liebherr cranes. Heavy work pieces must be moved effectively, safely and exactly. This is precisely what the Demmeler manipulators were designed to do. Not only do they enable an

effective manufacturing process, they also create an ergonomic workplace. An optimum working position prevents fatigue and thereby ensures quality – preventive occupational safety that pays off.



## LIEBHERR

Liebherr Werk Nenzing GmbH Dr. Hans Liebherr Str. 6710 Nenzing /Austria









Mauser + Co. GmbH Zeißstr. 5-7 71254 Ditzingen/Germany

### We are passionate about sheet metal

For four generations, Mauser + Co. GmbH has been all about sheet metal. Whether stainless steel, aluminium, cast aluminium or titanium – thanks to state-of-the-art welding technology, the DEMMELER 3D clamping system and experienced employees, this specialist for modern sheet metalworking is able to join together practically any material. The top priorities of the Ditzingen-based company are quality and reproducible precision. The challenge is to deliver ever better, reproducible welding results while simultaneously minimising production costs.

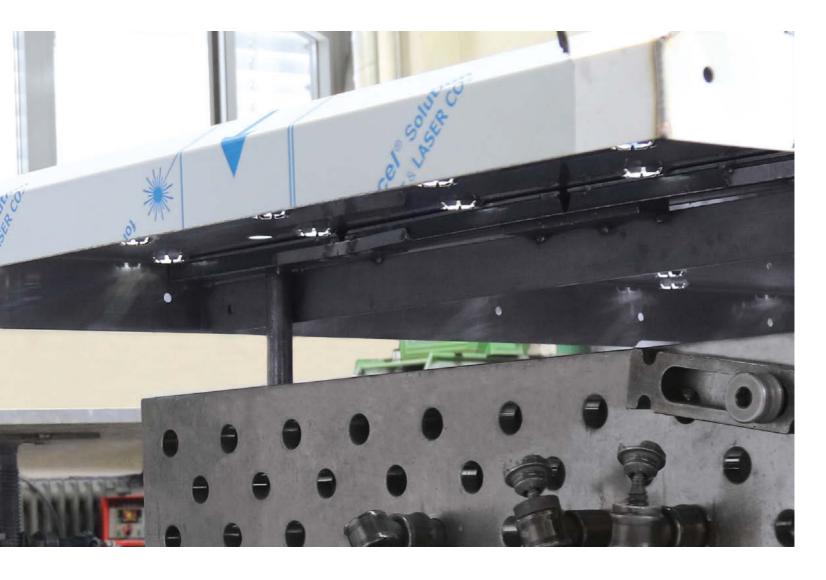
Traditionally, the company has always adopted new technologies at a very early stage. And this willingness to innovate has proved its worth. Thanks to the DEMMELER 3D clamping system, Mauser can respond flexibly to its customers' requests. Mauser is a much sought-after partner both for series contracts and for the manufacture of one-off parts. With DEMMELER's modular clamping system, the company is able to complete every manufacturing job – whether it involves welding, assembly or adjustment – efficiently and at top quality, even when highly complex parts are required. It is therefore ideally positioned to meet the demands of today and the needs of tomorrow. For Mauser, quality has always been and will continue to be the topmost priority.





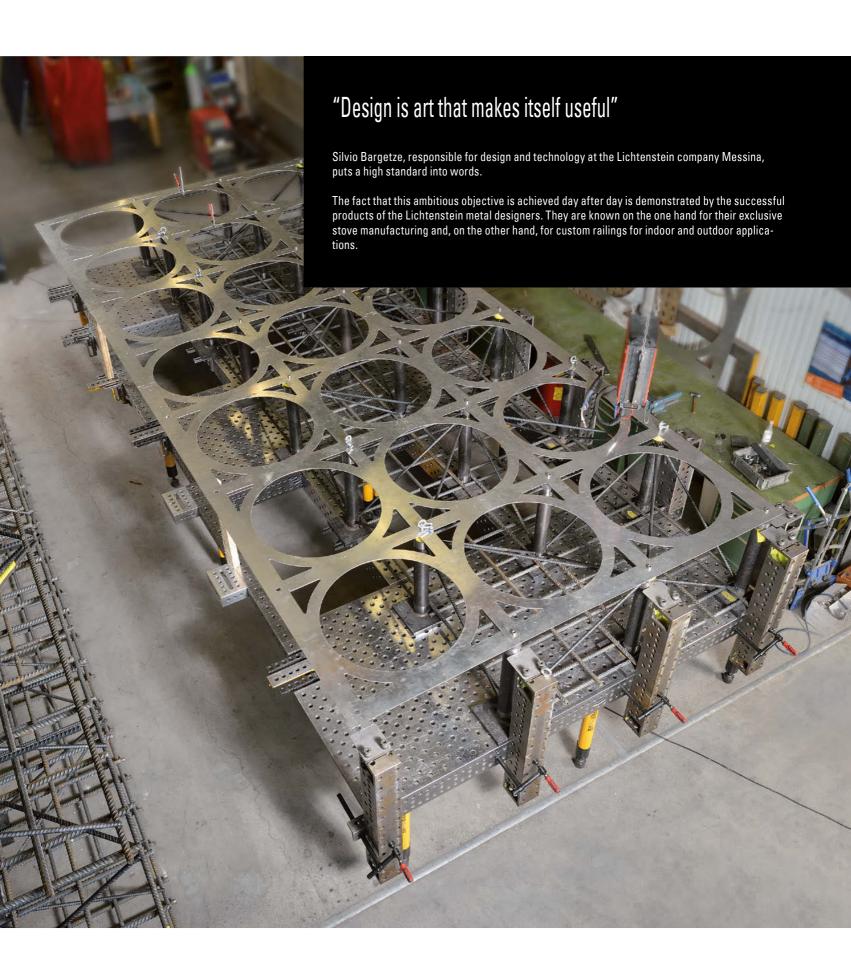


















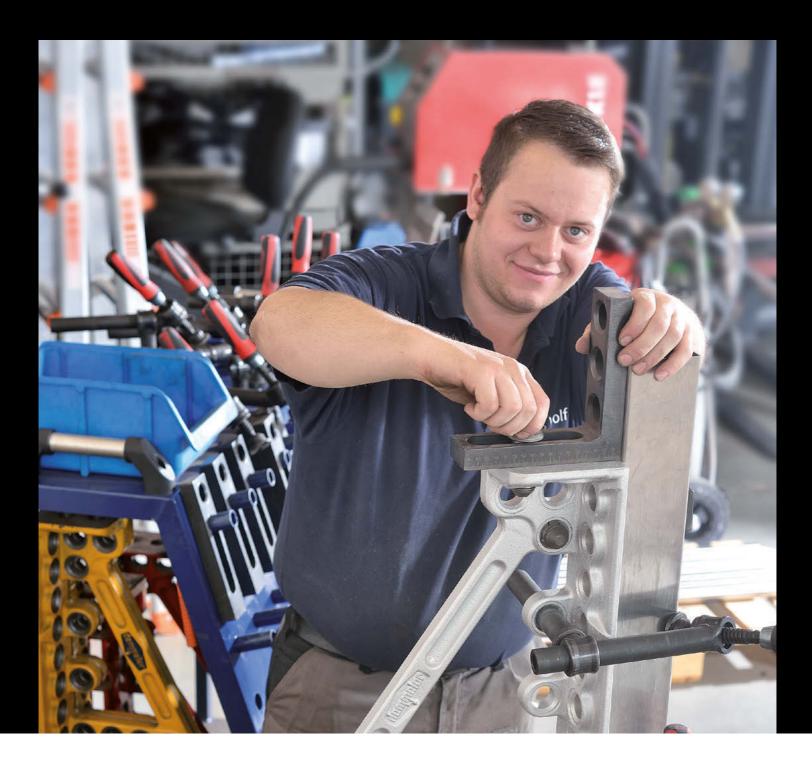
Realising unusual projects not only requires ideas but also equipment that makes their exact implementation possible. "Design limits and DIN standards place enough restrictions on our creativity already. We have to make sure that we are able to realise our full potential in production," Bargetze explains. That is why Messina counts on clamping systems from DEMMELER. They support any railing design, no matter how convoluted, and guarantee that the tightest tolerances are met thanks to their extreme dimensional accuracy.

Efficient production is also important in the high-priced segment of exclusive stoves in order to be competitive.



METALLBAU WOLF Andreas Wolf – Master Metalworker Färbebachstr. 7 88367 Hohentengen/Germany

## THE BEGINNING: Good training and a table from DEMMELER!



### Fitter's shop / metalworking



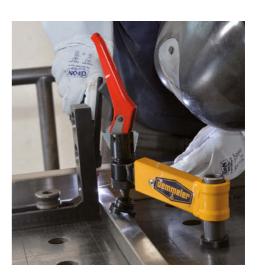
"DEMMELER FROM THE OUTSET – FOR ME, THERE IS NOTHING ELSE!" (Andreas Wolf, Master Metalworker)

In addition to stair railings, balconies and gates, Master Metalworker Andreas Wolf produces custom pieces for many different applications in his workshop. The variety of tasks is the best way to avoid a monotonous routine on the one hand. On the other hand, it puts the highest demands on the flexibility of people and production facilities. One grows with the task – which not only applies to people but also the workshop equipment. So it

really pays off to have an outfitter from day one who offers several system series, all of which are compatible with each other. The DEMMELER system grows with your company. A seemingly endless selection of accessories is just as important. It may even seem as though the tool developers at DEMMELER were able to foresee the ideas of planners and design engineers, since a tool already exists for any conceivable task.

















### Sheet metalworking





## Strong down to the last detail

More than 700 employees, 3 production sites in Germany, many years of experience and great innovative strengths: The SAMAG Group is strong right down to the last detail. Well-designed, durable machines, innovative procedures and detailed solutions based on wide-ranging engineering skills make the company a long-standing partner to the leading automotive manufacturers. Whether complex assemblies such as HGV chassis, bus rear-axle mounts or demanding cast and forged parts for engines and gears. All this is based on more than 140 years of experience coupled with state-of-the-art technologies.

At its site in Rottenbach, SAMAG Truck Components GmbH manufactures parts and components for trucks and special vehicles from practically all the best-known German manufacturers. When assembling systems such as load-bearing structures for swap body containers, the company relies on DEMMELER: Thank to the use of the Rotatorix® R 2000 / 950 manipulator, the structures can be continuously rotated about their own axis in just a single clamping cycle. This is the perfect way to achieve optimised work piece access, shorter clamping times, enhanced workplace safety and consistently high quality.



Pascal Selg Industrielle Metallverarbeitung Siemensstraße 2 88255 Baienfurt/Germany

## Everything under control

Metallverarbeitung Pascal Selg with its central position in Baienfurt near Ravensburg is a certified welding company as set out in EN 1090-2. In a separate area, the company machines all commonly used materials, from stainless steels or aluminium alloys and on to steel, in all types of products. It focuses on the high-quality machining and welding of components for customers from the plant construction, pharmaceuticals, foodstuffs and loose parts industries as well as on prototype construction, series manufacture and special parts production.



## Metalworking





At the same time, the company also designs and manufactures every aspect of lightweight steel constructions and railings for balconies and stairways. Selg places great emphasis on a high level of flexibility and customer proximity. This can be seen in the implementation of planning performed using modern CAD tools as well as in manufacturing operations that live up to its own expectations and are conducted in close cooperation with the customer.

In manufacturing its welded constructions, Selg prizes DEMMELER's wide-ranging portfolio of accessories such as the clamping and locating angles, corner modules, segmented grid plates, clamping equipment, supports and much more besides. These increase precision at the worktable and optimise the quality of the weld seams.

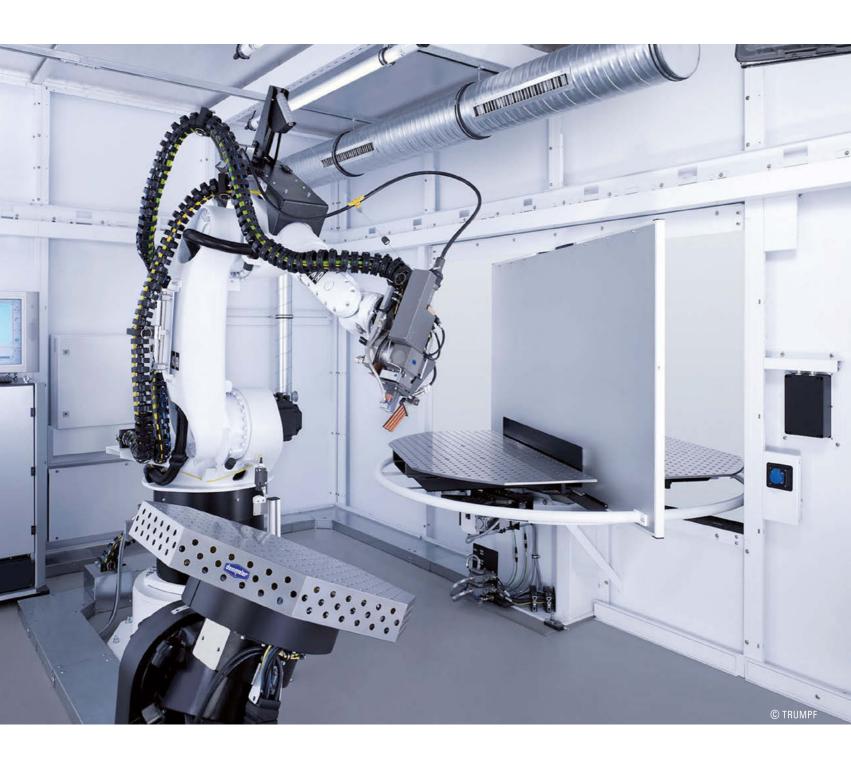




TRUMPF GmbH + Co. KG (Holding) 71252 Ditzingen/Germany Johann-Maus-Straße 2 71254 Ditzingen/Germany

## A good idea demands the right tools

A PRODUCT CAN ONLY WORK WITH THE PRECISION OF THE TOOL USED TO PRODUCE IT.



#### Machine tools



#### TRUMPF IS THE LEADING HIGH-TECH ENTERPRISE TO FOCUS ON LASER TECHNOLOGY.

Quality products that enjoy an excellent reputation around the world are manufactured in Ditzingen, Swabia. Applications for TRUMPF machine tools and lasers are used in a wide variety of industries, from the automobile industry to steel and sheet metal processing, aviation and aerospace to orthopaedics and medical technology.

TRUMPF places the emphasis on innovation and quality. This requires tools that are flexible in application with short changeover times.

With sophisticated technology and the comprehensive selection of accessories, which is compatible with existing equipment and always being expanded, manufacturing at TRUMPF would be unthinkable without Demmeler worktables.

The readiness of the Heimerting technicians to contribute their know-how, experience and ideas starting with the planning and design process is an invaluable competitive advantage.

### MINIMAL DIMENSIONAL TOLERANCES FOR HIGH-TECH PRODUCTS

Precision is an essential characteristic of all TRUMPF products. Which is why TRUMPF counts on Demmeler products in its manufacturing operations. Minimal dimensional tolerances of the Demmeler worktables throughout their service life and the efficient manufacturing possibilities of the versatile systems are fundamental requirements for high-quality production at competitive global market conditions.



Demmeler Maschinenbau

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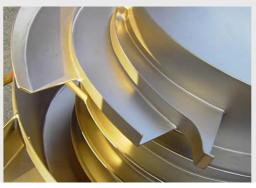


Zucker Edelstahlschmiede GmbH Süßwiesenstraße 4 74549 Wolpertshausen/Germany



# Motivated, flexible, close to the customer

The experts at Zucker process all common materials such as steel, stainless steel, aluminium and non-ferrous metals. The product portfolio includes high-quality industrial housings, complex structural components and elaborate sorting systems with the strictest hygiene technology requirements profile for the pharmaceuticals and food industries.





### Metalworking / food industry



### Premium tools for premium steel





Key success factors for Zucker are flexibility and proximity to the customer. This is achieved on the one hand through motivated, committed employees who proactively contribute their thoughts and experience in every production phase during the entire workflow – from the idea to the CAD implementation to manufacturing. On the other hand, flexibility is ensured by workshop equipment that can respond to individual customer requirements. Here the DEMMELER clamping systems make an important contribution.

Thanks to the varied and sophisticated selection of accessories, even unusual designs can be realised quickly and with minimum dimensional tolerances. DEMMELER worktables have proved themselves ideal for processing soft materials susceptible to scratching. Since weld spatter does not adhere to the premium surface and dirt is extremely easy to remove, flawless processing is readily possible. Thanks to the precise and straightforward handling of the tools, working quickly requires no wizardry. This allows Zucker to act on its maxim: fast, close to the customer, flexible and first-class.

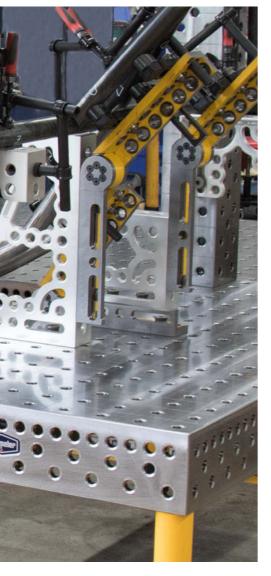
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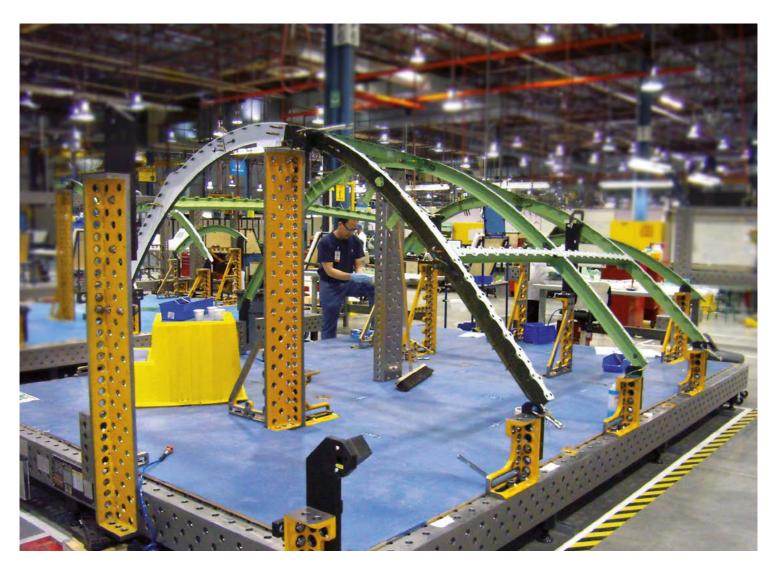








# Fixture construction /aircraft industry



The modular and precise DEMMELER 3D clamping system is ideal for aircraft construction applications. Ours is the most commonly used clamping system in the area of measuring and assembly fixtures.

The highest precision can be achieved easily and cost-effectively with even the largest dimensions.





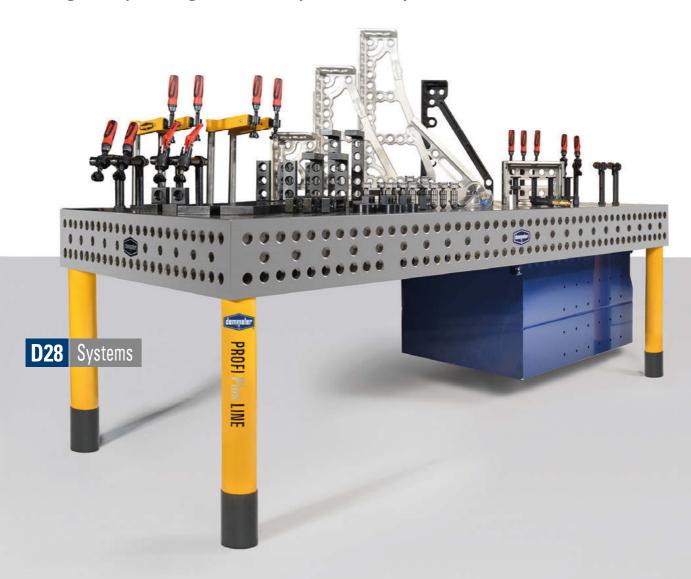


# 3D clamping system

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# The optimum 3D worktable for every application –

the intelligent system grids boost productivity



## D28 / For everyday, large welded constructions



## D28 PROFIPremiumLINE (PP)

- Grid 50 x 50 mm
- 3-hole drilling pattern in the table side plates, 50 mm grid in the top and bottom rows with additional 100 mm grid in the middle



### D28 PROFIPIUSLINE (PL)

- Diagonal grid 100 × 100 mm
- 3-hole drilling pattern in the table side plates, 50 mm grid in the top and bottom rows with additional 100 mm grid in the middle



## D28 ProfiEco Line (PE)

- Grid 100 x 100 mm
- 3-hole drilling pattern in the table side plates, 50 mm grid in the top row with additional 100 mm grid in the middle and bottom rows



### D28 HobbyLINE (H)

- Grid 100 x 100 mm
- Worktop approx. 25 mm high with system bores in a 100 mm x 100 mm grid





# **D16** / For delicate applications



## D16 PROFIPIusLINE (PL)

- Diagonal grid 50 × 50 mm
- 3-row bore pattern on the table side plates, 50 mm grid in the top, middle and bottom row



## D16 ProfiEco Line (PE)

- Grid 50 x 50 mm
- 3-row bore pattern on the table side plates, 50 mm grid in the top, middle and bottom row



**D22** Systems

# D22 / For light and medium-duty applications

Particularly suited for use in the automation field (thanks to very lightweight, robust versions in high-strength aluminium-titanium alloy)



## D22 PROFIPremiumLINE (PP)

- Grid 50 x 50 mm
- 3-row bore pattern on the table side plates, 50 x 50 mm diagonal grid



## D22 PROFIPIUSLINE (PL)

- Diagonal grid 100 × 100 mm
- 2-row bore pattern on the table side plates, 50 mm grid

# D28 3D clamping system overview

#### PROFIPremiumLINE (PP) 3D table

PAGE 90  PROFIPIusLINE (PL) 3D table

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PROFIEcoLINE (PE) 3D table

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HobbyLINE (H) worktop



3D measuring, assembly and adjustment table



Standard leg / telescoping leg / heavy-duty wheel / anchoring leg



**Scissor lift** 

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Holding frame / pivoting foot M 27

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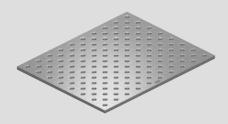
# D28 3D clamping system overview





28 Clamping and adapter plate

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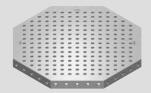
28 Clamping and adapter plate Okto AF

**PAGE 109** 



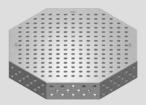
28 3D worktable Okto 100

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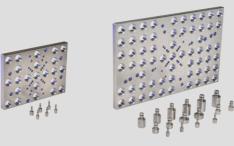
28 3D worktable Okto 200

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Adapter plate for flanges DIN 2632 / 2633 / 2634 / 2635

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Clamping plates for ANSI flanges (ANSI standard B 16.5)

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Flange plates in accordance with the JIS standard

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28 D28 sets



# 3D clamping system

Benefits of the D28 3D system tables





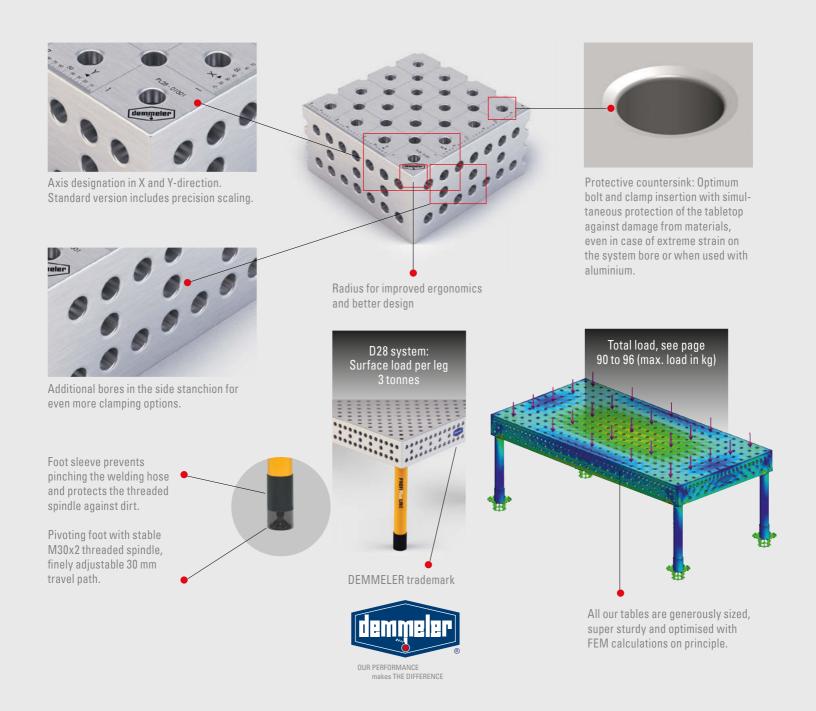




## Benefits of the D28 3D system tables

# The benefits of a 3D clamping system from DEMMELER!

With our 3D clamping system, you have the right solution for clamping and positioning work pieces near at hand. Optimum positioning of the work piece not only makes work more accurate but also much more effective. In particular, the intelligent system grids give you unlimited clamping capabilities.

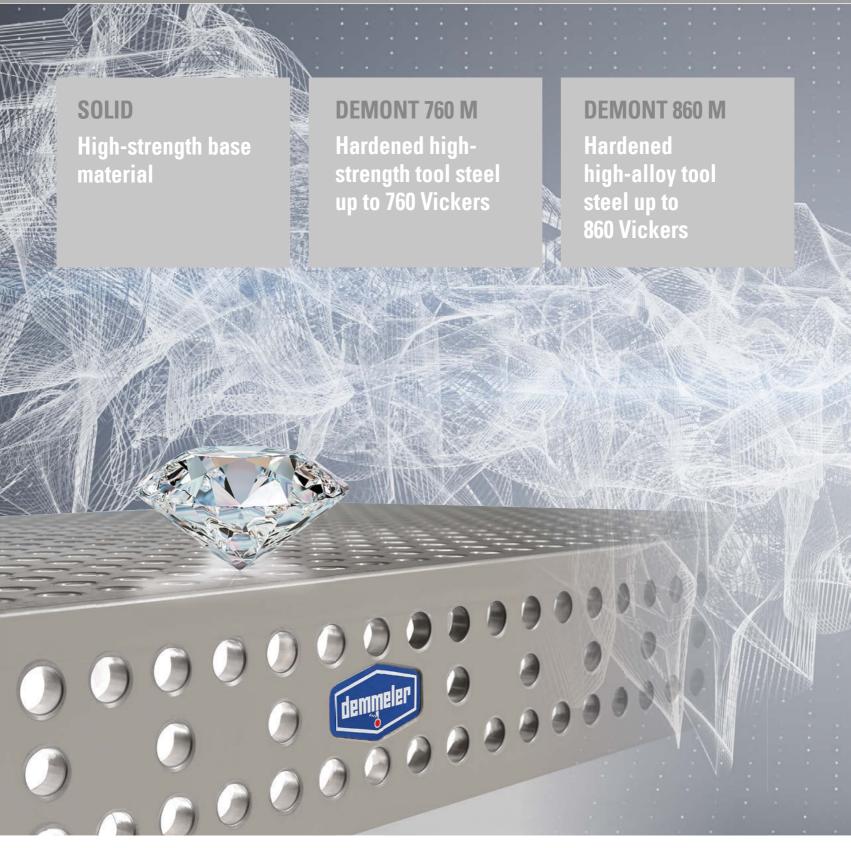


# 3D clamping system

The hardness of DEMMELER

Hardness comparison







DEMONT 860 M

Material properties

# THE hardness of DEMMELER – for the toughest requirements

- + Less wear
- + Protection against adherence of weld spatter
- + Extremely tough and durable
- + Optimum surface qualities

#### THE HARDNESS



DEMONT 860 M
DEMONT 760 M

#### DEMONT 860 M

Using a high-alloy base material for the worktop in combination with the special, optimised DEMMELERhardening process results in the best possible material characteristics. A hardness of up to 860 Vickers can be achieved. The combination of a high-alloy base material and special hardening process makes it possible to achieve the best possible worktable properties for extreme demands.

#### DEMONT 760 M

Stands for the combination of the specified base material and the new DEMMELER hardening process optimised especially for worktables. This results in outstanding material characteristics. A hardness of up to 760 Vickers can be achieved, reducing wear for an even longer service life of your worktable.

		DEMONT 860 M	DEMONT 760 M	SOLID
Load	high bearing loads	<b>****</b>	<b>***</b> *	<b>~~~~</b>
Evenness	for outstanding tool quality	<b>***</b>	<b>***</b>	<b>***</b>
Conductivity	for excellent welding results when using the ground connector	<b>***</b>	<b>***</b>	****
Base hardness	for high impact resistance	<b>****</b>	<b>***</b>	<b>~ ~ ~</b>
Surface hardness	resistant to weld spatter	<b>***</b>	<b>***</b>	$\Rightarrow \Rightarrow \Rightarrow$



# Planned down to the tiniest details – The 3D clamping system from DEMMELER

#### Welding results

When using the 3D clamping system, the optimum flow of electricity between the electrode / filler wire and ground connector is vitally important. That is why DEMMELER optimises the material properties of its worktables and accessories and guarantees outstanding precision for optimum form fits. Although hardened worktables are even more robust and better protected against weld spatter, the conductivity also falls slightly. Here again, DEMMELER has developed an optimum solution in the form of the DEMONT 760 M and DEMONT 860 M variants. In this way, DEMMELER provides optimum conditions for ideal welding results!

#### • DEMONT 760 M and DEMONT 860 M ①

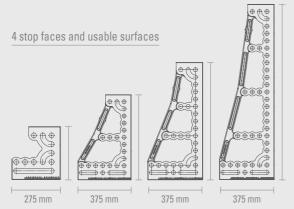
Very good conductivity for optimum welding results, extremely tough design and outstanding protection against weld spatter

#### • SOLID standard hardness 2

Excellent conductivity for optimum welding results, extremely tough design and high protection against weld spatter

# PROFIPremiumLINE clamping and locating angle

The aluminium-titanium design is lightweight enough to permit optimised, extremely simple handling. Only by using the patented PPC clamping pin is it possible to clamp the angles without causing wear. This permits an unlimited service life. The kidney-shaped 90° system groove makes continuous angle adjustment possible. The extended face plate and increased number of cross braces provide additional bores for clamping. The precision scaling makes adjustment much easier.



Corner heights, aluminiumtitanium 300, 600, 800 and 1200 mm

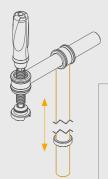
Corner heights, cast iron, hardened 300, 600 and 800 mm

Reinforcement in the corners with 90° system groove in kidney shape supports continuously variable use, also with angular adjustment









#### Screw clamp

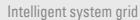
The DEMMELER screw clamps are constructed using round tubes. This makes them extremely tough and the greatest possible clamping forces are achieved. DEMMELER screw clamps can be extended on a modular basis – for example, use as a 270° screw clamp is possible. Using the performance screw clamp, it is also possible to clamp very high components with the same precision.

#### PPC bolts – The perfect connection

- Self-centring, force-locked and low-wear clamping
- Very quick to clamp and unclamp
- Force-locking through full-area contact
- Easy on materials
- Low susceptibility to dirt
- Extremely tough long service life guaranteed



Even force distribution across the polygon bolts also reduces bore hole wear compared to conventional bolts. The cone clamping system permits a bearing surface that is 100 times larger.



Thanks to the three-row hole pattern on the side stanchions, DEMMELER worktables can be extended on a modular basis – and offer outstanding stability, toughness and very high bearing capacity.



Additional bores in the side stanchion for even more clamping options

#### Pivoting leg

The extremely sold design ensures very high load-bearing capacity  $-3,000\,\mathrm{kg}$  per leg. The foot sleeve prevents pinching and reduces wear at the cable-hose assembly. This also provides a convenient way of using the ground connector. It also protects the threaded spindle against dirt and wear. Fine adjustments are possible and fixing is stable and simple.

Foot sleeves prevent pinching the welding hose and protect the threaded spindle against dirt.





#### Leg type variant overview









#### Standard leg

- Pivoting feet, ± 30 mm fine adjustable
- Sturdy M30 threaded spindle
- Foot sleeve protects the threaded spindle against dirt and prevents pinching the cable-hose assembly
- Also suitable as supporting leg in combination with overhung spacer block U-form, length 1 m and up
- Including countersunk M24 x 60 mounting screw
- Leg tube powder coated
- To order standard legs, see page 100

#### Telescoping leg

- Pivoting feet, ± 30 mm fine adjustable
- Sturdy M30 threaded spindle
- Foot sleeve protects the threaded spindle against dirt and prevents pinching the cable-hose assembly
- Telescope adjustment range 350 mm in 50-mm increments
- For flexible height adjustment of the worktable
- Including countersunk M24 x 60 mounting screw
- Leg tube powder coated
- To order telescoping legs, see page 100

#### Heavy-duty wheel

- Fine adjustable ± 30 mm
- Sturdy M30 threaded spindle
- Foot sleeve protects the threaded spindle against dirt and prevents pinching the cable-hose assembly
- Robust version
- With 360° caster
- Max. load capacity 600 kg
- Including countersunk M24 x 60 mounting screw
- Leg tube powder coated
- To order heavy duty wheels, see page 100

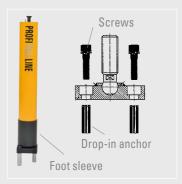
### Anchoring leg

- Fine adjustable ± 30 mm
- Sturdy M30 threaded spindle
- Foot sleeve protects the threaded spindle against dirt and prevents pinching the cable-hose assembly
- For firm attachment to the hall floor against tension, pressure and shifting (e.g. robot use)
- Includes M24 x 60 countersunk mounting screw and, for firm anchoring to the floor, 2 x drop-in anchor, 2 x cap screw M16 x 40
- Leg tube powder coated
- To order anchoring legs, see page 100













## The right leg for any application







#### Scissor lift

- Continuously variable height adjustment
- With safety shutdown board
- Fully adapted to 3D worktable D28
- Including hand control
- Power unit internal / external (depending on size)
- Available for D28
- To order scissor lift, see page 102

#### Holding frame

- Exact positioning of 3D worktables is possible using pivoting leg or in lengthwise and crosswise direction on the support and foundation track
- You will find further information on the product in the section on the track system, page 158
- Available for D28
- To order holding frames, see page 104

## Table leg for spacer block

- Connecting elements between spacer block U-form or 3D worktable and support and base rail
- Different setup heights can be adapted to the work piece by simply exchanging the table legs
- You will find detailed information on the product in the section on the track system, page 156
- Available for D28

## Shifting foot with casters

- Moving installed system components is possible without using hoisting equipment or a crane
- Different setup heights can be adapted to the work piece by simply exchanging the table legs
- Highest load capacity in the working position thanks to full surface support of the foot on the rail
- You will find detailed information on the product in the section on the track system, page 157
- Available for D28



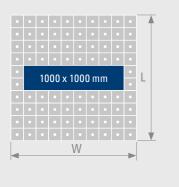


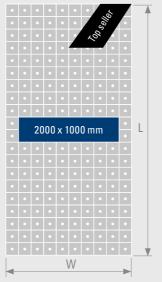


Attachment to system components



## D28 system table sizes



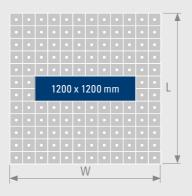




28	L in mm	W in mm	H in mm
20	1000	1000	200
	1200	800	200
	1200	1200	200
	1500	1000	200
	1500	1500	200
	2000	1000	200
	2000	2000	200
	2400	1200	200
	3000	1500	200
	4000	2000	200
	4800	2400	200
	Customer dimension*	Customer dimension	Customer dimension

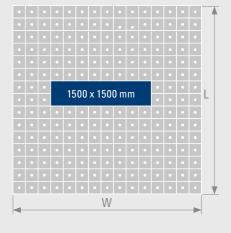
<sup>\*</sup>Custom dimensions and material (e. g. stainless steel) available on request!

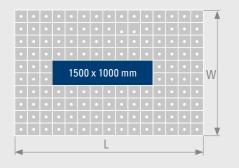








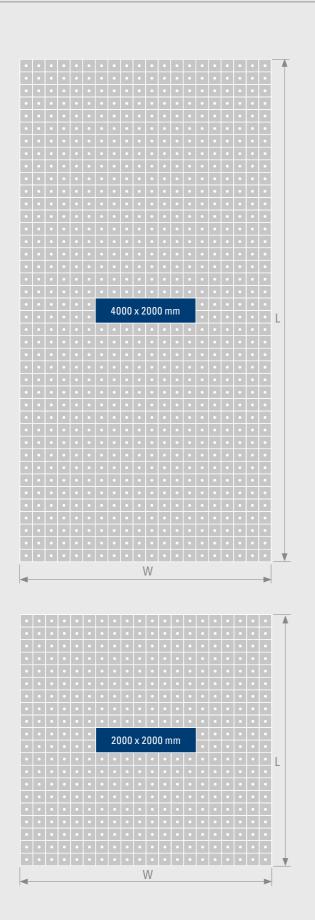


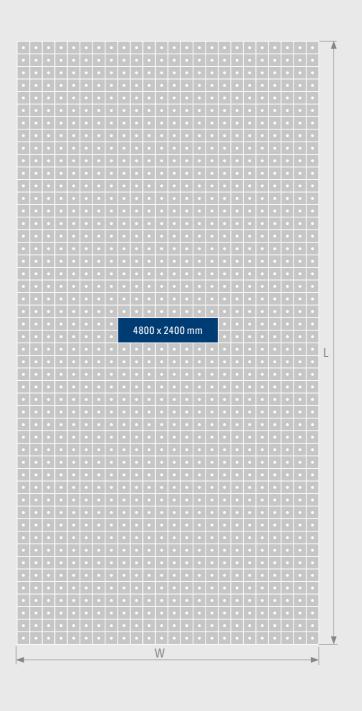






#### D28 system table sizes





For everyday, large welded constructions







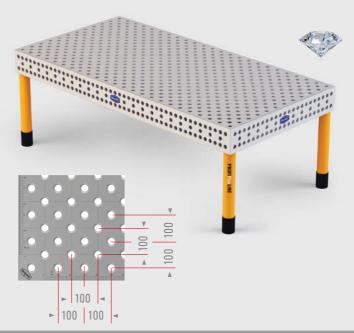
#### PROFIPremiumLINE (PP) 3D table

### PROFIPIusLINE (PL) 3D table

# Worktop with D28 system bores in a 50 mm x 50 mm grid



# Worktop with D28 system bores in diagonal 100 mm x 100 mm grid



#### Description: PROFIPremiumLINE ▼

- Worktop with D28 system bores in a 50 mm x 50 mm grid. This
  results in approx. 400 % more clamping options than PROFIEcoLINE
  and conventional worktables, and approx. 100 % more clamping
  options than PROFIPIusLINE
- 3-hole drilling pattern in the table side plates with D28 system bores, 50 mm grid in the top and bottom rows with additional 100 mm grid in the middle, which nearly doubles the expansion and clamping options
- All table sizes optionally available in hardened version, DEMONT 760 M and DEMONT 860 M, in up to 860 Vickers
- All system bores with new protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Precision scaling with millimetre graduation, also available with the DEMONT 760 M and DEMONT 860 M options
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo recessed in all 4 side plates
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly

#### Description: PROFIPIusLINE ▼

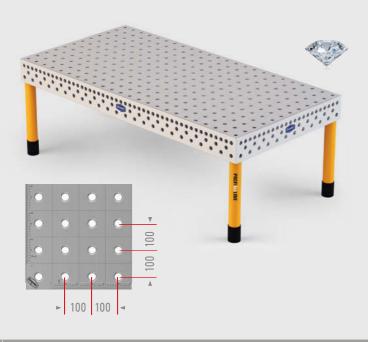
- Worktop with D28 system bores in a double 100 mm x 100 mm grid, resulting in approx. 80 % more clamping options than PROFIEcoLINE and conventional worktables
- 3-hole drilling pattern in the table side plates with D28 system bores, 50 mm grid in the top and bottom rows with additional 100 mm grid in the middle, which nearly doubles the expansion and clamping options
- All table sizes optionally available in hardened version, DEMONT 760 M and DEMONT 860 M, in up to 860 Vickers
- All system bores with new protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Precision scaling with millimetre graduation, also available with the DEMONT 760 M and DEMONT 860 M options
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo recessed in all 4 side plates
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly

#### PROFIEcoLINE (PE) 3D table

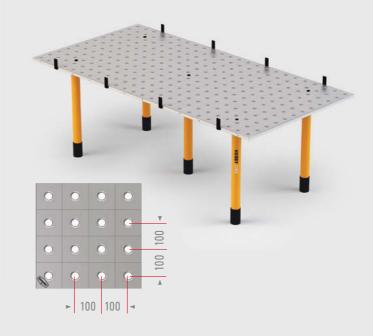
### HobbyLINE (H) worktop



Worktop with D28 system bores in a 100 mm x 100 mm grid



Worktop with D28 system bores in a 100 mm x 100 mm grid



#### **Description: PROFIEcoLINE** ▼

- Worktop with D28 system bores in a 100 mm x 100 mm grid
- 3-hole drilling pattern in the table side plates with D28 system bores,
   50 mm grid in the top row with additional 100 mm grid in the middle and in the bottom row, which greatly increases the expansion and clamping options
- All table sizes optionally available in hardened version, DEMONT 760 M and DEMONT 860 M, in up to 860 Vickers
- All system bores with new protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Precision scaling with millimetre graduation, also available with the DEMONT 760 M and DEMONT 860 M options
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo recessed in all 4 side plates
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly

#### **Description: HobbyLINE** ▼

- Cost-effective alternative for low loads
- Worktop approx. 25 mm high with D28 system bores in a 100 mm x 100 mm grid
- Accessories for E (EcoLINE), D (PlusLINE) and P (PremiumLINE) can be used on the worktop
- M8 threaded bores on all four sides of the worktop including 8 outer stops with screw
- All system bores with new protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Coordinate marking of the bores in the X and Y-direction
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly





## 3D measuring, assembly and adjustment table

Description of the table line 28

#### Worktop with precision scaling



#### Description: 3D measuring, assembly and adjustment table ▼

- Evenness 0.15 mm/m
- Outstanding precision for adjusting, measuring and assembling components
- Optimised outside table edges
- Incl. precision scaling / gridlines
- Hardened version DEMONT 860 M, up to 860 Vickers
- Improved table reinforcement through additional cross-ribs
- DEMMELER logo recessed in all 4 side plates

# PROFIPremiumLINE (PP) 3D table

Up to 400% more clamping options





Table without leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	1000	1000	200	290		
	1200	800	200	280		
	1200	1200	200	380		
	1500	1000	200	390		
	1500	1500	200	530		
	2000	1000	200	500		
	2000	2000	200	1000		
	2400	1200	200	710		
	3000	1500	200	1010		
	4000	2000	200	1780		
	4800	2400	200	2550		

Custom dimensions and material (e.g. stainless steel) available on request

Table with standard leg	Lin mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	1000	1000	850 ±30	324	12000	
	1200	800	$850 \pm 30$	314	12000	
	1200	1200	$850 \pm 30$	414	12000	
-	1500	1000	$850 \pm \! 30$	424	12000	
	1500	1500	$850 \pm \! 30$	564	12000	
	2000	1000	850 ±30	534	12000	
	2000	2000	$850 \pm 30$	1034	12000	
	2400	1200	850 ±30	744	12000	
	3000	1500	850 ±30	1061	18000	
	4000	2000	$850 \pm 30$	1831	18000	
	4800	2400	850 ±30	2644	33000	





## PROFIPremiumLINE (PP) 3D table







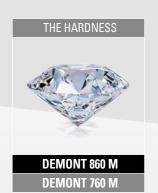






**DESCRIPTION** 

- Worktop with D28 system bores in a 50 mm x 50 mm grid. This results in approx. 400 % more clamping options than PROFIEcoLINE and conventional worktables, and approx. 100% more clamping options than PROFIPlusLINE
- · 3-hole drilling pattern in the table side plates with D28 system bores, 50 mm grid in the top and bottom rows with additional 100 mm grid in the middle, which nearly doubles the expansion and clamping options
- · All table sizes optionally available in new hardness, DEMONT 760 M and DEMONT 860 M, in up to 860 Vickers
- All system bores with new protective countersink, perfect design and ultimate functionality
- · Optimised outside table edges
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Precision scaling with millimetre graduation, also available with the DEMONT 760 M and DEMONT 860 M options
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo recessed in all 4 side plates
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly



Number of legs	SOLID	DEMONT 760 M hardened	DEMONT 860 M hardened
without legs	PP28-01001-000	PP28-01001-500	PP28-01001-700
without legs	PP28-11019-000	PP28-11019-500	PP28-11019-700
without legs	PP28-01056-000	PP28-01056-500	PP28-01056-700
without legs	PP28-01011-000	PP28-01011-500	PP28-01011-700
without legs	PP28-01031-000	PP28-01031-500	PP28-01031-700
without legs	PP28-01002-000	PP28-01002-500	PP28-01002-700
without legs	PP28-01006-000	PP28-01006-500	PP28-01006-700
without legs	PP28-01003-000	PP28-01003-500	PP28-01003-700
without legs	PP28-01004-000	PP28-01004-500	PP28-01004-700
without legs	PP28-01005-000	PP28-01005-500	PP28-01005-700
without legs	PP28-11085-000	PP28-11085-500	PP28-11085-700

Number of legs	SOLID	DEMONT 760 M hardened	DEMONT 860 M hardened	
4	PP28-01001-001	PP28-01001-011	PP28-01001-021	
4	PP28-11019-001	PP28-11019-011	PP28-11019-021	
4	PP28-01056-001	PP28-01056-011	PP28-01056-021	
4	PP28-01011-001	PP28-01011-011	PP28-01011-021	
4	PP28-01031-001	PP28-01031-011	PP28-01031-021	Selection list for
4	PP28-01002-001	PP28-01002-011	PP28-01002-021	other leg variants
4	PP28-01006-001	PP28-01006-011	PP28-01006-021	as of page 100.
4	PP28-01003-001	PP28-01003-011	PP28-01003-021	
6	PP28-01004-001	PP28-01004-011	PP28-01004-021	
6	PP28-01005-001	PP28-01005-011	PP28-01005-021	
11	PP28-11085-001	PP28-11085-011	PP28-11085-021	

# PROFIPIusLINE (PL) 3D table





Table without leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	1000	1000	200	310		
	1200	800	200	300		
	1200	1200	200	410		
	1500	1000	200	430		
	1500	1500	200	590		
	2000	1000	200	550		
	2000	2000	200	1050		
	2400	1200	200	790		
	3000	1500	200	1150		
	4000	2000	200	1980		
	4800	2400	200	2830		

Custom dimensions and material (e.g. stainless steel) available on request

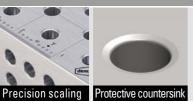
Table with standard leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	1000	1000	850 ±30	344	12000	
	1200	800	850 ±30	334	12000	
antitus.	1200	1200	850 ±30	444	12000	
	1500	1000	850 ±30	464	12000	
	1500	1500	850 ±30	624	12000	
	2000	1000	850 ±30	584	12000	
	2000	2000	850 ±30	1084	12000	
	2400	1200	850 ±30	824	12000	
	3000	1500	850 ±30	1201	18000	
	4000	2000	850 ±30	2031	18000	
	4800	2400	$850 \pm 30$	2925	33000	





## PROFIPIusLINE (PL) 3D table







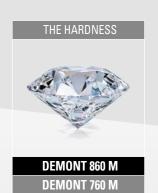






**DESCRIPTION** 

- Worktop with D28 system bores in a double 100 mm x 100 mm grid, resulting in approx. 80 % more clamping options than PROFIEcoLINE and conventional worktables
- 3-hole drilling pattern in the table side plates with D28 system bores, 50 mm grid in the top and bottom rows with additional 100 mm grid in the middle, which nearly doubles the expansion and clamping options
- All table sizes optionally available in new hardness, DEMONT 760 M and DEMONT 860 M, in up to 860 Vickers
- All system bores with new protective countersink, perfect design and ultimate functionality
- · Optimised outside table edges
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Precision scaling with millimetre graduation, also available with the DEMONT 760 M and DEMONT 860 M options
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo recessed in all 4 side plates
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly



Number of legs	SOLID	DEMONT 760 M hardened	DEMONT 860 M hardened
without legs	PL28-01001-000	PL28-01001-500	PL28-01001-700
without legs	PL28-11019-000	PL28-11019-500	PL28-11019-700
without legs	PL28-01056-000	PL28-01056-500	PL28-01056-700
without legs	PL28-01011-000	PL28-01011-500	PL28-01011-700
without legs	PL28-01031-000	PL28-01031-500	PL28-01031-700
without legs	PL28-01002-000	PL28-01002-500	PL28-01002-700
without legs	PL28-01006-000	PL28-01006-500	PL28-01006-700
without legs	PL28-01003-000	PL28-01003-500	PL28-01003-700
without legs	PL28-01004-000	PL28-01004-500	PL28-01004-700
without legs	PL28-01005-000	PL28-01005-500	PL28-01005-700
without legs	PL28-11085-000	PL28-11085-500	PL28-11085-700

Number of legs	SOLID	DEMONT 760 M hardened	DEMONT 860 M hardened	d
4	PL28-01001-001	PL28-01001-011	PL28-01001-021	
4	PL28-11019-001	PL28-11019-011	PL28-11019-021	
4	PL28-01056-001	PL28-01056-011	PL28-01056-021	
4	PL28-01011-001	PL28-01011-011	PL28-01011-021	
4	PL28-01031-001	PL28-01031-011	PL28-01031-021	Selection list for
4	PL28-01002-001	PL28-01002-011	PL28-01002-021	other leg variants
4	PL28-01006-001	PL28-01006-011	PL28-01006-021	as of page 100.
4	PL28-01003-001	PL28-01003-011	PL28-01003-021	
6	PL28-01004-001	PL28-01004-011	PL28-01004-021	
6	PL28-01005-001	PL28-01005-011	PL28-01005-021	
11	PL28-11085-001	PL28-11085-011	PL28-11085-021	

# PROFIEcoLINE (PE) 3D table





Table without leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	1000	1000	200	330		
	1200	800	200	310		
	1200	1200	200	430		
	1500	1000	200	450		
	1500	1500	200	610		
	2000	1000	200	570		
	2000	2000	200	1100		
	2400	1200	200	820		
	3000	1500	200	1180		
	4000	2000	200	2090		
	4800	2400	200	2980		

Custom dimensions and material (e.g. stainless steel) available on request

Table with standard leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	1000	1000	$850 \pm 30$	364	12000	
	1200	800	$850 \pm \! 30$	344	12000	
	1200	1200	$850 \pm 30$	464	12000	
	1500	1000	$850 \pm \! 30$	484	12000	
	1500	1500	$850 \pm \! 30$	644	12000	
	2000	1000	$850 \pm \! 30$	604	12000	
	2000	2000	$850 \pm 30$	1134	12000	
· ·	2400	1200	850 ±30	854	12000	
	3000	1500	850 ±30	1231	18000	
	4000	2000	$850 \pm \! 30$	2141	18000	
	4800	2400	$850 \pm 30$	3074	33000	





## PROFIEcoLINE (PE) 3D table













**DESCRIPTION** 

- Worktop with D28 system bores in a 100 mm x 100 mm grid
- 3-hole drilling pattern in the table side plates with D28 system bores, 50 mm grid in the top row with additional 100 mm grid in the middle and in the bottom row, which nearly doubles the expansion and clamping options
- All table sizes optionally available in new hardness, DEMONT 760 M and DEMONT 860 M, in up to 860 Vickers
- All system bores with new protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Precision scaling with millimetre graduation, also available with the DEMONT 760 M and DEMONT 860 M options
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo recessed in all 4 side plates
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly



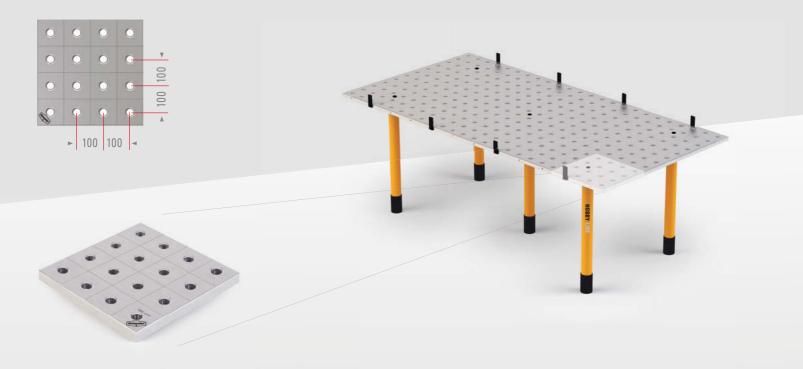
I)	1	M	0	N	Ц	86	60	V	
D	đ	И	0	١	Τ	76	60	N	

Number of legs	SOLID	DEMONT 760 M hardened	DEMONT 860 M hardened
without legs	PE28-01001-000	PE28-01001-500	PE28-01001-700
without legs	PE28-11019-000	PE28-11019-500	PE28-11019-700
without legs	PE28-01056-000	PE28-01056-500	PE28-01056-700
without legs	PE28-01011-000	PE28-01011-500	PE28-01011-700
without legs	PE28-01031-000	PE28-01031-500	PE28-01031-700
without legs	PE28-01002-000	PE28-01002-500	PE28-01002-700
without legs	PE28-01006-000	PE28-01006-500	PE28-01006-700
without legs	PE28-01003-000	PE28-01003-500	PE28-01003-700
without legs	PE28-01004-000	PE28-01004-500	PE28-01004-700
without legs	PE28-01005-000	PE28-01005-500	PE28-01005-700
without legs	PE28-11085-000	PE28-11085-500	PE28-11085-700

Number of legs	SOLID	DEMONT 760 M hardened	DEMONT 860 M hardened	l
4	PE28-01001-001	PE28-01001-011	PE28-01001-021	
4	PE28-11019-001	PE28-11019-011	PE28-11019-021	
4	PE28-01056-001	PE28-01056-011	PE28-01056-021	
4	PE28-01011-001	PE28-01011-011	PE28-01011-021	
4	PE28-01031-001	PE28-01031-011	PE28-01031-021	Selection list for
4	PE28-01002-001	PE28-01002-011	PE28-01002-021	other leg variants
4	PE28-01006-001	PE28-01006-011	PE28-01006-021	as of page 100.
4	PE28-01003-001	PE28-01003-011	PE28-01003-021	
6	PE28-01004-001	PE28-01004-011	PE28-01004-021	
6	PE28-01005-001	PE28-01005-011	PE28-01005-021	
11	PE28-11085-001	PE28-11085-011	PE28-11085-021	

# HobbyLINE (H) worktable





On request the table is also available in a stainless steel version!

Table without leg	L in mm	W in mm	H in mm	~ Weight of table in kg   Max. load in kg	
	1000	1000	25	180	
	1200	800	25	180	
	1200	1200	25	260	
	1500	1000	25	270	
	2000	1000	25	360	
	2400	1200	25	510	

Custom dimensions and material (e. g. stainless steel) available on request

Table with standard leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	1000	1000	850 ±30	204	600	
	1200	800	$850 \pm 30$	204	600	
	1200	1200	$850 \pm 30$	284	600	
	1500	1000	$850 \pm 30$	300	600	
	2000	1000	$850 \pm 30$	390	600	
	2400	1200	850 ±30	540	600	

Standard leg single	H in mm	Weight of table leg in kg	Item no.
PROFF TO LINE	826 ±30 fine	6	PL16-10010-005





## HobbyLINE (H) worktable







#### **DESCRIPTION**

- · Cost-effective alternative for low loads
- Worktop approx. 25 mm high with D28 system bores in a 100 mm x 100 mm grid
- Accessories for E (EcoLINE), D (PlusLINE) and P (PremiumLINE) can be used on the worktop
- M8 threaded bores on all four sides of the worktop including 8 outer stops with screw
- · All system bores with new protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Table legs with fine adjustment, round design with pivoting foot
- · Foot sleeve to protect the cable-hose assembly

Number of legs	SOLID	
without legs	H28-01001-000	
without legs	H28-11019-000	
without legs	H28-01056-000	
without legs	H28-01011-000	
without legs	H28-01002-000	
without legs	H28-01003-000	

Numt	er of legs	SOLID	
4		H28-01001-001	
4		H28-11019-001	0 1 2 2 2
4		H28-01056-001	Selection list for
5		H28-01011-001	other leg variants as of page 100.
5		H28-01002-001	as of page 100.
5		H28-01003-001	

3D measuring, assembly and adjustment table





Table without leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	2000	1000	200	610		
	2400	1200	200	890		
	3000	1500	200	1300		
Table with standard leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	2000	1000	850 ±30	644	12000	
	2400	1200	850 ±30	924	12000	
	3000	1500	850 ±30	1351	18000	





## 3D measuring, assembly and adjustment table



#### DESCRIPTION

- Evenness 0.15 mm/m
- Outstanding precision for adjusting, measuring and assembling components
- Optimised outside table edges
- Incl. precision scaling / gridlines
- Hardened version DEMONT 860 M, up to 860 Vickers
- Improved table reinforcement through additional cross-ribs
- DEMMELER logo recessed in all 4 side plates



Number of legs	SOLID	DEMONT 860 M hardened	
without legs	M28-01002-000	M28-01002-700	
without legs	M28-01003-000	M28-01003-700	
without legs	M28-01004-000	M28-01004-700	
Number of legs	SOLID	DEMONT 860 M hardened	
4	M28-01002-001	M28-01002-021	Selection list for
4	M28-01003-001	M28-01003-021	other leg variants
6	M28-01004-001	M28-01004-021	as of page 100.

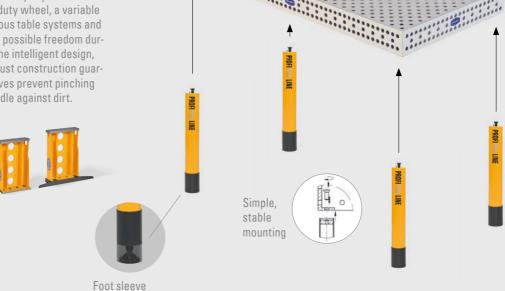
## Ordering summary for table legs

## D28 system 3D welding tables with suitable standard legs

### Legs you can rely on.

Efficient working guaranteed! Starting with the finely adjustable standard leg and on through the mobile heavy-duty wheel, a variable selection of table legs are available for the various table systems and permit any application. This offers you greatest possible freedom during your manufacturing operations. Thanks to the intelligent design, the legs can be fixed simply and stably. The robust construction guarantees a long service life. To this end, foot sleeves prevent pinching the welding hose and protect the threaded spindle against dirt.

As of page 156, you will find the right legs for mounting your system on the DEMMELER track system.



### Ordering example:



2. From the current page, select the leg you want in the corresponding quantity, which results in order item no. 2: e.g. 4x PL28-10010-001



## The right table legs for any application

System	Standard leg	Telescoping leg	Heavy-duty wheel	Anchoring leg	Scissor lift*
	28	28	28	28	28
PROFIPremiumLINE	•	•	•	•	•
PROFIPIusLINE	•	•	•	•	•
PROFIEcoLINE	•	•	•	•	•
HobbyLINE	•	•	•	•	•

<sup>\*</sup>You will find more detailed information on the scissor lift and order options on page 102.



# Standard leg / telescoping leg / heavy-duty wheel / anchoring leg

Standard leg			Quantity		28		
		For table size	Legs	Item number	H in mm		Max. load in kg
PROFI WAS LINE		1000x1000 1200x800 1200x1200 1500x1000 1500x1500 2000x1000 2000x2000 2400x1200	4	PL28-10010-000	650*1 ± 30	8.5	3000
		3000x1500	6				
		4000x2000					
Talassaning lan		4800x2400	11		20		
Telescoping leg		For table size	Quantity	Item number	28   H in mm	Weight in kg	Max. load in kg
PROFI Pless LINE	Adjustable height Grid 50 mm	1000x1000 1200x800 1200x1200 1500x1000 1500x1500 2000x1000 2000x2000 2400x1200 3000x1500	Legs 4	PL28-10010-001	550 to 900 ± 30	12	3000
		4000x2000					
Harmadata ahaal		4800x2400	11		00		
Heavy-duty wheel		For table size	Quantity Legs	Item number	28 H in mm		Max. load in kg
PROFI Page LINE		1000x1000 1200x800 1200x1200 1500x1000 1500x1500 2000x1000 2000x2000 2400x1200	4	(2x) PL28-10010-002*2 + (2x) PL28-10010-003*3	650*1 ±30	12 11	600
	Wheel with brake*2 Wheel without brake*3	3000x1500	6	(2x) PL28-10010-002*2 + (4x) PL28-10010-003*3		12	
		4000×2000				11	
		4800x2400	11	(2x) PL28-10010-002*2 + (9x) PL28-10010-003*3		12 11	
Anchoring leg			Quantity		28		
	Screws	For table size	Legs	Item number	H in mm	Weight in kg	Max. load in kg
PROFI Plus LINE		1000x1000 1200x800 1200x1200 1500x1000 1500x1500 2000x1000 2000x2000 2400x1200	4	PL28-10010-004	650*1 ± 30	11	3000
	Drop-in anchor	3000x1500	6				
		4000×2000 4800×2400	11				
_							

## Scissor lift

- Continuously variable height adjustmentWith safety shutdown board
- Fully adapted to 3D worktable
- Including hand control
- Power unit internal / external (depending on size)



#### Description 🔺

## ORDERING EXAMPLE:

(1) On page 90 - 98, select the desired worktop, which results in order item no. 1:



e.g. 1 x PL28-01003-700

(2) From the existing page, select the corresponding scissor lift, which results in order item no. 2:



e.g. 1 x 00000629

The two order item numbers make up your order to DEMMELER.



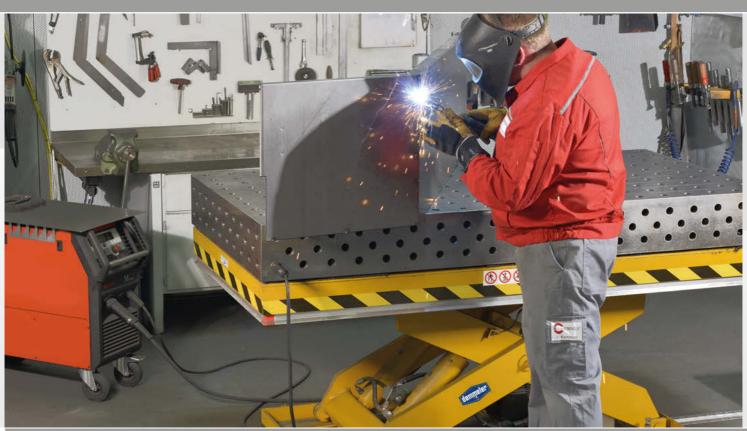
e.g. 1 x PL28-01003-700 e.g. 1 x 00000629

Scissor lift				28		
For table size	Load capacity	H in mm	Item number	Weight in kg		
1000x1000	1 to - table weight	385-1310	00016008	155		
1200x800	1 to - table weight	200-900	00090594	300		
1200x1200	2 to - table weight	200-900	00041421	530		
1500x1000	2 to - table weight	200-1000	00040820	500		
1500x1500	2 to - table weight	280-1080	00002460	620		
2000x1000	2 to - table weight	230-1230	00000628	650		
2000x2000	2 to - table weight	280-1280	00090591	950		
2400x1200	2 to - table weight	260-1560	00000629	810		
3000x1500	3 to - table weight	350-1950	00000627	1000		
4000x2000	5 to - table weight	460-2060	00019552	2100		
4800x2400	6 to - table weight	460-2060	00090601	2100		





Scissor lift



Application ▲ ▼





The scissor lift lift is also available in other dimensions or with a different payload on request.

# Holding frame

- Exact positioning of 3D worktables in lengthwise and crosswise direction on the support and base rail is possible
- Very stable version for extremely high loads
  You will find suitable worktops on page 154



Also compatible with:



Description ▲ Application ▼







Setup in lengthwise / crosswise direction

Table size	Track width	Н	Weight in kg	Max. load in kg	Item no.
1000 / 1000	1000/1000	600	158	15000	PL00-02004-000
1200 / 1200					
1500 / 1000					
1500 / 1500					
2000 / 1000					
2000/2000					
2400 / 1200	2000/1000	600	229	15000	PL00-02004-001
3000 / 1500					
4000/2000					
4000/2000	4000/2000	600	516	20000	PL00-02004-002
4800/2400	4000/2000				

Other sizes by request!





Pivoting foot M 27

### For D28 system bores (not for table leg corners)

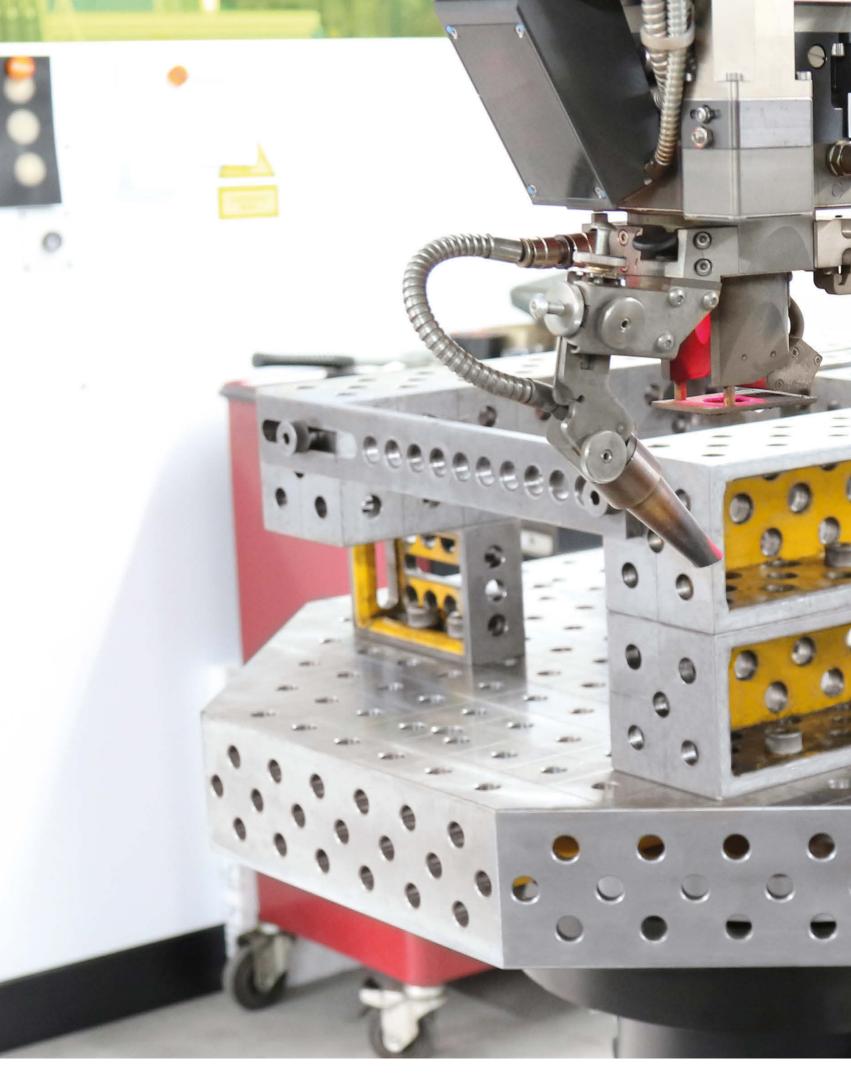
- This leg spindle can be used in any system 28 system bore. For example, to set the holding frame or other system elements onto pivoting feet.
- Scope of delivery: Sturdy M27 threaded spindle with ball head, pivoting foot disc and 2 x M27 nuts



### Description 🛦 Application



28	A in mm	B Ø in mm	C Ø in mm	Item no.
20	140	M27	78	D28-10010-000





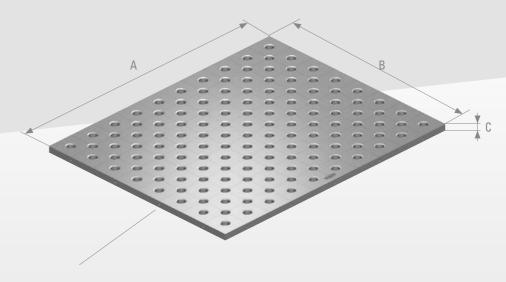
# Clamping and adapter plates



Clamping and adapter plate

The miniature worktable with grid lines

• Used in combination with 3D worktables and welding positioners



M8 thread on all sides, e. g. for stops included

Other dimensions on request

Description 🛦

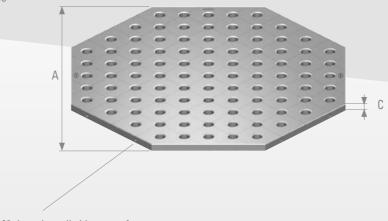




### Clamping and adapter plate Okto AF

### The miniature worktable with grid lines

 Used in combination with 3D worktables and welding positioners



M8 thread on all sides, e. g. for stops included

Other dimensions on request

Description 🔺

28	A in mm	C in mm	~ Weight in kg	Description	Item no.
20	AF 600	25	55	Diagonal grid 100 x 100	D28-02001-201
	AF800	25	95	Diagonal grid 100 x 100	D28-02001-202
	AF 1000	25	145	Diagonal grid 100 x 100	D28-02001-203

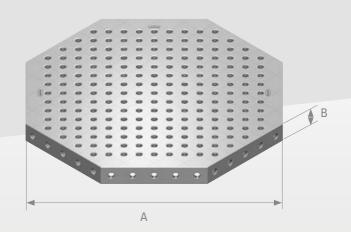


### Okto 100 3D worktable

- Preferred use with manipulators in robot cells
- Numerous clamping possibilities on all nine clamping surfaces
- With diagonal grid 100x100

#### THE FOLLOWING ADDITIONAL OPTIONS ARE POSSIBLE ON REQUEST:

- High-strength aluminium-titanium alloy for ~ 60 % weight reduction and ~ 10 % higher bending strength
- With special connection drilling pattern, adapted to the face plate of your manipulator (please include manipulator type and drawing of the face plate with enquiry - can be offered for a surcharge!)
- Prepared for table legs

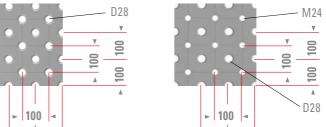


We can also supply the worktable with 100x100 diagonal grid with M24 thread

#### Description ▲ Application ▼

### Diagonal grid 100x100 ▼





	• • •
0 0 C	V
9 7 9	190
<del>-</del> 8 - 0 0	- 8 - 6
9 9 5	00
	A =
A	^
100	D28
► 100 <b>◄</b>	► 100 <b> </b>
▶ 100   100   ◄	► 100 100 <b>◄</b>
	l l

28	A in mm	B in mm	Description	Item no.
20	AF 600	100	Diagonal grid 100 x 100	PL28-11008-001
	AF 800	100	Diagonal grid 100 x 100	PL28-01013-001
	AF 1000	100	Diagonal grid 100 x 100	PL28-01038-001
	AF 1200	100	Diagonal grid 100 x 100	PL28-01020-001
	AF 1400	100	Diagonal grid 100 x 100	PL28-01087-001
	AF 1500	100	Diagonal grid 100 x 100	PL28-01059-001
	AF 1600	100	Diagonal grid 100 x 100	PL28-11036-001
	AF 1800	100	Diagonal grid 100 x 100	PL28-01049-001
	AF 2000	100	Diagonal grid 100 x 100	PL28-01058-001
	AF3000	100	Diagonal grid 100 x 100	PL28-12010-001



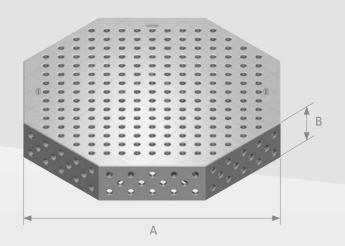


3D worktable Okto 200

- Preferred use with manipulators in robot cells
- Numerous clamping possibilities on all nine clamping surfaces
- With diagonal grid 100x100

#### THE FOLLOWING ADDITIONAL OPTIONS ARE POSSIBLE ON REQUEST:

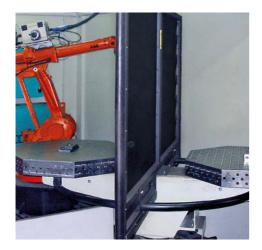
- High-strength aluminium-titanium alloy for ~ 60 % weight reduction and ~ 10 % higher bending strength
- With special connection drilling pattern, adapted to the face plate of your manipulator (please include manipulator type and drawing of the face plate with enquiry - can be offered for a surcharge!)
- Prepared for table legs

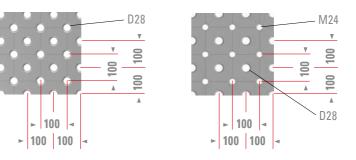


We can also supply the worktable with 100x100 diagonal grid with M24 thread

#### Description ▲ Application ▼

### Diagonal grid 100 x 100 ▼





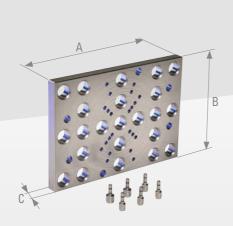
28	A in mm	B in mm	Description	Item no.
20	AF 600	200	Diagonal grid 100 x 100	PL28-11008-000
	AF 800	200	Diagonal grid 100 x 100	PL28-01013-000
	AF 1000	200	Diagonal grid 100 x 100	PL28-01038-000
	AF 1200	200	Diagonal grid 100 x 100	PL28-01020-000
	AF 1400	200	Diagonal grid 100 x 100	PL28-01087-000
	AF 1500	200	Diagonal grid 100 x 100	PL28-01059-000
	AF 1600	200	Diagonal grid 100 x 100	PL28-11036-000
	AF 1800	200	Diagonal grid 100 x 100	PL28-01049-000
	AF 2000	200	Diagonal grid 100 x 100	PL28-01058-000
	AF 3000	200	Diagonal grid 100 x 100	PL28-12010-000

Other dimensions on request



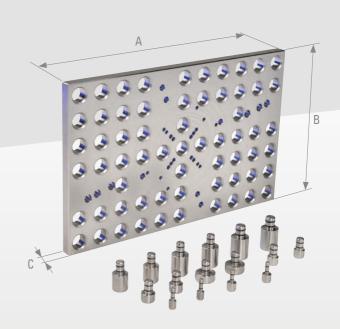
### Adapter plate for flanges

### Adapter plate for flanges DIN 2632 / 2633 / 2634 / 2635



Marking of the hole circles

D28-02005-000



Marking of the hole circles

D28-02006-000

### **Description** ▼

- DIN 2633 nominal diameters DN 15 DN 200
- DIN 2632 nominal diameters DN 200
- Incl. attachment bolts:

2 x Ø 13.8 mm

2 x Ø 17.8 mm

2 x Ø 21.8 mm

### **Description ▼**

- DIN 2632 nominal diameters DN 200 DN 400
- DIN 2633 nominal diameters DN 15 DN 400
- DIN 2634 nominal diameters DN 200 DN 400
- DIN 2635 nominal diameters DN 50 DN 400
- Incl. attachment bolts:

#### DIN 2633 / 2632

28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.	
20	350	250	25	12	Incl. attachment bolts	D28-02005-000	

#### DIN 2632 / 2633 / 2634 / 2635

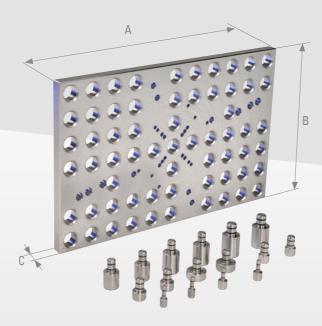
28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	550	350	25	30	Incl. attachment bolts	D28-02006-000





### Clamping plates for ANSI flanges (ANSI standard B 16.5)

### Ingenious - the right plate for your flange



Marking of the hole circles

### **Description ▼**

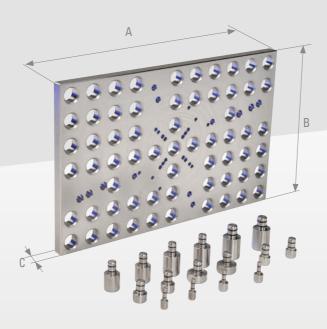
- All clamping plates including attachment bolts
- For pipe flanges can be quickly and precisely set out on the hole circle and attached with the D28-08001-000 quick release skewer. In addition, D28 system bores serve to hold the clamping elements of the system
- Attachment bolts are included in the scope of delivery
- Clamping plate for other flanges on request

### Application `



28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	350	250	25	12	150 lbs - 1/2" - 08"	D28-02005-011
	350	250	25	12	300 lbs - 1/2" - 08"	D28-02005-012
	350	250	25	12	600 lbs - 1/2" - 06"	D28-02005-013
	550	350	25	30	150 lbs - 1/2" - 14"	D28-02006-026
	550	350	25	30	300 lbs - 1/2" - 14"	D28-02006-024
	550	350	25	30	600 lbs - 1/2" - 14"	D28-02006-025

Clamping plates for flanges as per JIS standard



Marking of the hole circles

### Application 🔻



28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	350	250	25	12	JIS 5K - DN 10 - DN 225	D28-02005-018
	550	350	25	30	JIS 5K - DN 10 - DN 450	D28-02006-034
	350	250	25	12	JIS 10K - DN 10 - DN 225	D28-02005-019
	550	350	25	30	JIS 10K - DN 10 - DN 450	D28-02006-005
	350	250	25	12	JIS 16K/20K - DN 10 - DN 200	D28-02005-020
	550	350	25	30	JIS 16K/20K - DN 10 - DN 400	D28-02006-035
	350	250	25	12	JIS 30K - DN 10 - DN 200	D28-02005-021
	550	350	25	30	JIS 30K - DN 10 - DN 350	D28-02006-036
	350	250	25	12	JIS 40K - DN 10 - DN 150	D28-02005-022
	550	350	25	30	JIS 40K - DN 10 - DN 350	D28-02006-037
	350	250	25	12	JIS 63K - DN 10 - DN 150	D28-02005-023
	550	350	25	30	JIS 63K - DN 10 - DN 350	D28-02006-038



PROFIPremiumLINE set 710 (System 28)

Item number: P28-52000-710 (46-piece)



Quantity 🔻	Item no. ▼	Item description ▼
1	P28-03002-000	PP clamping and locating angle, right 300x275 mm, hardened
1	P28-03002-001	PP clamping and locating angle, left 300x275 mm, hardened
4	PE28-03001-000	Clamping and locating angle 175x175x50 mm (bore / oblong hole)
4	D28-05001-010	Universal stop with scale 225x50x25 mm
2	D28-05003-000	Stop-strip L 500 - 500x100x25 mm
4	D28-05015-000	Displacement stop - 150x50x25 mm, scale on both sides
12	D28-06025-000	PPC bolt / short - Ø 28-0.02, AF 14, full surface support for optimum force transmission
6	D28-06009-000	Stop and positioning bolt Ø 28 / 40x74 mm
2	D28-07002-000	Compensating swing clamp 200 mm with spindle
4	D28-07005-000	Screw clamp 180° with spindle - vertical tube 220 mm
4	D28-07009-033	Performance-clamp incl. spindle - vertical tube 250 mm, angle-adjustable +-50°
1	D28-10002-000	Round brush Ø 28x260 mm, with protective cap
1	D00-10016-001	Extraction tool - 250x40 mm, AF 14





PROFIPremiumLINE set 720 (System 28)

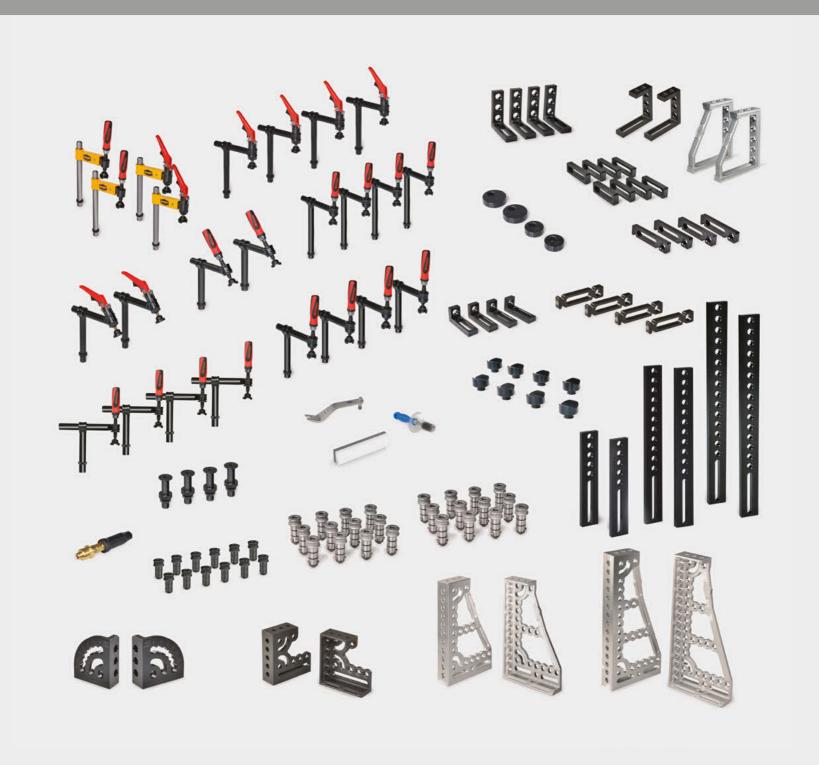
Item number: P28-52000-720 (77-piece)



Quantity $\blacktriangledown$	ltem no. ▼	Item description ▼
1	P28-03002-000	PP clamping and locating angle, right 300x275 mm, hardened
1	P28-03002-001	PP clamping and locating angle, left 300x275 mm, hardened
1	P28-03003-002	PP clamping and locating angle, aluminium-titanium, right 600x375 mm
1	P28-03003-003	PP clamping and locating angle, aluminium-titanium, left 600x375 mm
4	PE28-03001-000	Clamping and locating angle 175x175x50 mm (bore / oblong hole)
2	D28-03001-005	Clamping and locating angle / small 175x75x50 mm, scale on both sides
2	PP28-03001-017	Clamping and locating angle 250x300x50x150 mm, aluminium-titanium (bore / bore / oblong hole)
4	D28-05001-010	Universal stop with scale 225x50x25 mm
2	D28-05003-000	Stop-strip L 500 - 500x100x25 mm
2	D28-05003-001	Stop-strip L 800 - 800x100x25 mm
2	D28-05013-001	Locating disk Ø 100 - stop dimension 25-75 mm, continuous
4	D28-05015-000	Displacement stop - 150x50x25 mm, scale on both sides
20	D28-06025-000	PPC bolt / short - Ø 28-0.02, AF 14, full surface support for optimum force transmission
10	D28-06009-000	Stop and positioning bolt Ø 28 / 40x74 mm
2	D28-07002-000	Compensating swing clamp 200 mm with spindle
4	D28-07005-014	Screw clamp 180° with spindle - vertical tube 350 mm
4	D28-07005-033	Screw clamp 180° with spindle - vertical tube 500 mm
2	D28-07009-011	Variable screw clamp 45° with adjusting screw - vertical tube 350 mm
4	D28-07009-033	Performance-clamp incl. spindle - vertical tube 250 mm, angle-adjustable +-50°
2	D28-09001-005	Spacer set with thread - Ø 50x125 mm, height compensation 22-105 mm, continuous
1	D28-10002-000	Round brush Ø 28x260 mm, with protective cap
1	D00-10007-000	Bench stone 200x50x25 mm, 2-sided
1	D00-10016-001	Extraction tool - 250x40 mm, AF 14

PROFIPremiumLINE set 730 (System 28)

Item number: P28-52000-730 (122-piece)







### PROFIPremiumLINE set 730 (System 28)

Item number: P28-52000-730 (122-piece)

Quantity $\blacktriangledown$	Item no. ▼	Item description ▼
1	P28-03002-000	PP clamping and locating angle, right 300x275 mm, hardened
1	P28-03002-001	PP clamping and locating angle, left 300x275 mm, hardened
1	P28-03003-002	PP clamping and locating angle, aluminium-titanium, right 600x375 mm
1	P28-03003-003	PP clamping and locating angle, aluminium-titanium, left 600x375 mm
4	PE28-03001-000	Clamping and locating angle 175x175x50 mm (bore / oblong hole)
1	P28-03004-000	PP clamping and locating angle, aluminium-titanium, right 800x375 mm
1	P28-03004-001	PP clamping and locating angle, aluminium-titanium, left 800x375 mm
4	D28-03001-005	Clamping and locating angle / small 175x75x50 mm, scale on both sides
2	PP28-03001-017	Clamping and locating angle 250x300x50x150 mm, aluminium-titanium (bore / bore / oblong hole)
2	PL28-03001-015	Clamping and locating angle 225x200x50x125 mm, hardened (bore / bore / oblong hole)
1	D28-05013-011	PP angle bracket, right 200x200x75 mm, hardened
1	D28-05013-012	PP angle bracket, left 200x200x75 mm, hardened
4	D28-05001-001	Universal stop / large with plunger 225x50x25 mm
4	D28-05001-010	Universal stop with scale 225x50x25 mm
2	D28-05003-000	Stop-strip L 500 - 500x100x25 mm
2	D28-05003-001	Stop-strip L 800 - 800x100x25 mm
2	D28-05003-008	Stop-strip L 1000 - 1000x100x25 mm
2	D28-05013-000	Locating disk Ø 75 - stop dimension 25-50 mm, continuous
2	D28-05013-001	Locating disk Ø 100 - stop dimension 25-75 mm, continuous
8	D28-05015-000	Displacement stop - 150x50x25 mm, scale on both sides
24	D28-06025-000	PPC bolt / short - Ø 28-0.02, AF 14, full surface support for optimum force transmission
12	D28-06009-000	Stop and positioning bolt Ø 28 / 40x74 mm
2	D28-07001-001	Compensating swing clamp 150 mm with quick-action clamping cylinder
2	D28-07002-000	Compensating swing clamp 200 mm with spindle
4	D28-07005-014	Screw clamp 180° with spindle - vertical tube 350 mm
4	D28-07005-015	Screw clamp 180° with quick-action clamping cylinder - vertical tube 350 mm
4	D28-07005-033	Screw clamp 180° with spindle - vertical tube 500 mm
2	D28-07009-011	Variable screw clamp 45° with adjusting screw - vertical tube 350 mm
2	D28-07009-012	Variable screw clamp 45° with quick-action clamping cylinder - vertical tube 350 mm
4	D28-07009-033	Performance-clamp incl. spindle - vertical tube 250 mm, angle-adjustable +-50°
4	D28-09001-005	Spacer set with thread - Ø 50x125 mm, height compensation 22-105 mm, continuous
8	D28-09003-000	V-block locations blackened steel, Ø 58 mm - 130° - for tubes up to Ø 70 mm
1	D28-10002-000	Round brush Ø 28x260 mm, with protective cap
1	D00-10007-000	Bench stone 200x50x25 mm, 2-sided
1	D00-10009-000	Ground connector D16/D28 - for cable 50-70 mm², load up to 500 A
1	D00-10016-001	Extraction tool - 250x40 mm, AF 14

DEMMELER welding and clamping systems are modular and flexible. All sets and accessories can be used at all the 3D worktables within the system. In this way, for example, it is possible to use the accessories from the PROFIPremium set at a PROFIPIusLINE table. What is more, you can individually assemble or supplement your sets with the large selection of Demmeler accessories!

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PROFIPremiumLINE set 740 (System 28)

Item number: P28-52000-740 (158-piece)







### PROFIPremiumLINE set 740 (System 28)

Item number: P28-52000-740 (158-piece)

0	Itam was w	How described w
Quantity $\blacktriangledown$	Item no. ▼	Item description ▼
4	Dan 02002 000	DD starrain and to sating a such sight 200, 275 was bounded
1	P28-03002-000	PP clamping and locating angle, right 300x275 mm, hardened
1	P28-03002-001	PP clamping and locating angle, left 300x275 mm, hardened
1	P28-03003-002	PP clamping and locating angle, aluminium-titanium, right 600x375 mm
1	P28-03003-003	PP clamping and locating angle, aluminium-titanium, left 600x375 mm
4	PE28-03001-000	Clamping and locating angle 175x175x50 mm (bore / oblong hole)
1	P28-03004-000	PP clamping and locating angle, aluminium-titanium, right 800x375 mm
1	P28-03004-001	PP clamping and locating angle, aluminium-titanium, left 800x375 mm
1	P28-03009-000	PP clamping and locating angle, aluminium-titanium, right 1200x375 mm
1	PL28-03009-001	PP clamping and locating angle, aluminium-titanium, left 1200x375 mm
4	D28-03001-005	Clamping and locating angle / small 175x75x50 mm, scale on both sides
2	PL28-03001-015	Clamping and locating angle 200x225 mm, hardened (bore / bore / oblong hole)
2	PP28-03001-017	Clamping and locating angle 250x300x50x150 mm, aluminium-titanium (bore / bore / oblong hole)
1	P28-05013-011	PP angle bracket, right 200x200x75 mm, hardened
1	P28-05013-012	PP angle bracket, left 200x200x75 mm, hardened
1	D28-03007-004	Universal pivot and tilt angle aluminium-titanium, right (0-225°)
1	D28-03007-005	Universal pivot and tilt angle aluminium-titanium, left (0-225°)
4	D28-05001-001	Universal stop / large with plunger 225x50x25 mm
4	D28-05001-010	Universal stop with scale 225x50x25 mm
2	D28-05003-000	Stop-strip L 500 - 500x100x25 mm
2	D28-05003-001	Stop-strip L 800 - 800x100x25 mm
2	D28-05003-008	Stop-strip L 1000 - 1000x100x25 mm
2	D28-05013-000	Locating disk Ø 75 - stop dimension 25-50 mm, continuous
2	D28-05013-001	Locating disk Ø 100 - stop dimension 25-75 mm, continuous
8	D28-05015-000	Displacement stop - 150x50x25 mm, scale on both sides
36	D28-06025-000	PPC bolt/short - Ø 28-0.02, AF 14, full surface support for optimum force transmission
4	D28-06026-000	PPC bolt / long - Ø 28-0.02, AF 14, full surface support for optimum force transmission
16	D28-06009-000	Stop and positioning bolt Ø 28 / 40x74 mm
2	D28-07001-001	Compensating swing clamp 150 mm with quick-action clamping cylinder
2	D28-07002-000	Compensating swing clamp 200 mm with spindle
4	D28-07005-014	Screw clamp 180° with spindle - vertical tube 350 mm
4	D28-07005-015	Screw clamp 180° with quick-action clamping cylinder - vertical tube 350 mm
4	D28-07005-033	Screw clamp 180° with spindle - vertical tube 500 mm
2	D28-07009-011	Variable screw clamp 45° with adjusting screw - vertical tube 350 mm
2	D28-07009-012	Variable screw clamp 45° with quick-action clamping cylinder - vertical tube 350 mm
4	D28-07009-033	Performance-clamp incl. spindle - vertical tube 250 mm, angle-adjustable +-50°
4	D28-07009-035	Performance clamp with quick-action clamping cylinder - vertical tube 250 mm, angle-adjustable +-50°
4	D28-09001-000	Spacer set 11 pieces - Ø 50x125 mm, height compensation 5-100 mm increment 1 mm
4	D28-09001-005	Spacer set with thread - Ø 50x125 mm, height compensation 22-105 mm, continuous
8	D28-09003-000	V-block locations blackened steel, Ø 58 mm - 130° - for tubes up to Ø 70 mm
1	D28-10002-000	Round brush Ø 28x260 mm, with protective cap
1	D00-10005-000	Pump bottle with 1 litre Öko anti-spatter spray
1	D00-10007-000	Bench stone 200x50x25 mm, 2-sided
1	D28-10008-000	Ball end hex wrench AF 14x150 mm
1	D00-10009-000	Ground connector D16/D28 - for cable 50-70 mm², load up to 500 A
1	D00-10016-001	Extraction tool - 250x40 mm, AF 14
1	D28-11001-000	Accessory cart - WxDxH = 1000x650x1010 mm, 4 casters
I	D28-13050-000	Power screwdriver set in carrying case



PROFIPIusLINE set 710 (System 28)

Item number: D28-52000-710 (44-piece)





Depicted set also available with PPC bolts instead of PC bolts: Item no. D28-52000-711  $\,$ 

Quantity 🔻	ltem no. ▼	Item description ▼
4	PE28-03001-000	Clamping and locating angle 175x175x50 mm (bore / oblong hole)
2	PE28-03008-000	Clamping and locating angle 275x175x50 mm
4	D28-05001-000	Universal stop / large 225x50x25 mm
2	D28-05009-000	Universal stop L 300 - 300x50x25 mm
4	D28-05015-000	Displacement stop - 150x50x25 mm, scale on both sides
12	D28-06001-000	PC-bolt / short - Ø 28-0.02, AF 14, clamping range 41-47 mm, 25/200 kN
6	D28-06009-000	Stop and positioning bolt Ø 28 / 40x74 mm
4	D28-07002-000	Compensating swing clamp 200 mm with spindle
4	D28-07009-000	Variable screw clamp 45° with adjusting screw - vertical tube 220 mm
1	D28-10002-000	Round brush Ø 28x260 mm, with protective cap
1	D00-10016-001	Extraction tool - 250x40 mm, AF 14





PROFIPIusLINE set 720 (System 28)

Item number: D28-52000-720 (81-piece)



Depicted set also available with PPC bolts instead of PC bolts: ltem no. D28-52000-721  $\,$ 

Quantity $\blacktriangledown$	Item no. ▼	Item description ▼
4	PE28-03001-000	Clamping and locating angle 175x175x50 mm (bore / oblong hole)
2	D28-03001-005	Clamping and locating angle / small 175x75x50 mm, scale on both sides
2	PL28-03002-000	Clamping and locating angle, right 300x275 mm
2	PL28-03002-001	Clamping and locating angle, left 300x275 mm
2	PE28-03008-000	Clamping and locating angle 275x175x50 mm
2	D28-05001-000	Universal stop / large 225x50x25 mm
4	D28-05003-000	Stop-strip L 500 - 500x100x25 mm
4	D28-05009-000	Universal stop L 300 - 300x50x25 mm
2	D28-05013-001	Locating disk Ø 100 - stop dimension 25-75 mm, continuous
4	D28-05015-000	Displacement stop - 150x50x25 mm, scale on both sides
20	D28-06001-000	PC-bolt / short - Ø 28-0.02, AF 14, clamping range 41-47 mm, 25/200 kN
10	D28-06009-000	Stop and positioning bolt Ø 28 / 40x74 mm
2	D28-07001-000	Compensating swing clamp 150 mm with spindle
2	D28-07002-000	Compensating swing clamp 200 mm with spindle
4	D28-07005-000	Screw clamp 180° with spindle - vertical tube 220 mm
4	D28-07005-014	Screw clamp 180° with spindle - vertical tube 350 mm
2	D28-07008-000	Variable screw clamp 90° - vertical tube 260 mm
4	D28-07009-000	Variable screw clamp 45° with adjusting screw - vertical tube 220 mm
2	D28-09001-000	Spacer set 11 pieces - Ø 50x125 mm
1	D28-10002-000	Round brush Ø 28x260 mm, with protective cap
1	D00-10007-000	Bench stone 200x50x25 mm, 2-sided
1	D00-10016-001	Extraction tool - 250x40 mm, AF 14

PROFIPIusLINE set 730 (System 28)

Item number: D28-52000-730 (120-piece)





Depicted set also available with PPC bolts instead of PC bolts: Item no. D28-52000-731  $\,$ 





PROFIPIusLINE set 730 (System 28)

Item number: D28-52000-730 (120-piece)

0	Itam was W	16-m december 200
Quantity $ extstyle  extst$	ltem no. ▼	Item description ▼
4	PE28-03001-000	Clamping and locating angle 175x175x50 mm
4	D28-03001-005	Clamping and locating angle / small 175x75x50 mm, scale on both sides
1	PL28-03002-000	Clamping and locating angle, right 300x275 mm
1	PL28-03002-001	Clamping and locating angle, left 300x275 mm
1	PL28-03003-000	Clamping and locating angle, right 600x375 mm
1	PL28-03003-001	Clamping and locating angle, left 600x375 mm
4	PE28-03008-000	Clamping and locating angle 275x175x50 mm
4	D28-05001-000	Universal stop / large 225x50x25 mm
2	D28-05003-000	Stop-strip L 500 - 500x100x25 mm
2	D28-05003-001	Stop-strip L 800 - 800x100x25 mm
4	D28-05009-000	Universal stop L 300 - 300x50x25 mm
2	D28-05013-000	Locating disk Ø 75 - stop dimension 25-50 mm, continuous
2	D28-05013-001	Locating disk Ø 100 - stop dimension 25-75 mm, continuous
2	D28-05013-010	Angle-setting template, scale on both sides, 0 - 90°, 15°, 30°, 45°, 60°
4	D28-05015-000	Displacement stop - 150x50x25 mm, scale on both sides
24	D28-06001-000	PC-bolt / short - Ø 28-0.02, AF 14, clamping range 41-47 mm, 25/200 kN
2	D28-06002-000	PC-bolts / long - Ø 28-0.02, AF 14, clamping range 66-72 mm, 25/200 kN
12	D28-06009-000	Stop and positioning bolt Ø 28 / 40x74 mm
2	D28-07001-000	Compensating swing clamp 150 mm with spindle
2	D28-07002-000	Compensating swing clamp 200 mm with spindle
4	D28-07005-000	Screw clamp 180° with spindle - vertical tube 220 mm
4	D28-07005-014	Screw clamp 180° with spindle - vertical tube 350 mm
4	D28-07005-015	Screw clamp 180° with quick-action clamping cylinder - vertical tube 350 mm
4	D28-07008-000	Variable screw clamp 90° - vertical tube 260 mm
4	D28-07009-000	Variable screw clamp 45° with adjusting screw - vertical tube 220 mm
4	D28-07009-011	Variable screw clamp 45° with adjusting screw - vertical tube 350 mm
2	D28-09001-000	Spacer set 11 pieces - Ø 50x125 mm
2	D28-09001-005	Spacer set with thread - Ø 50x125 mm
8	D28-09003-000	V-block locations blackened steel, Ø 58 mm - 130° - for tubes up to Ø 70 mm
1	D28-10002-000	Round brush Ø 28x260 mm
1	D00-10007-000	Bench stone 200x50x25 mm
1	D00-10009-000	Ground connector D16/D28 - for cable 50-70 mm², load up to 500 A
1	D00-10016-001	Extraction tool - 250x40 mm, AF 14

PROFIPlusLINE set 740 (System 28)

Item number: D28-52000-740 (168-piece)





Depicted set also available with PPC bolts instead of PC bolts: Item no. D28-52000-741  $\,$ 





PROFIPIusLINE set 740 (System 28)

Item number: D28-52000-740 (168-piece)

Quantity 🔻	Item no. ▼	Item description ▼
	DE00 00004 000	
3	PE28-03001-000	Clamping and locating angle 175x175x50 mm (bore / oblong hole)
	D28-03001-005	Clamping and locating angle / small 175x75x50 mm, scale on both sides
	PL28-03002-000	Clamping and locating angle, right 300x275 mm
	PL28-03002-001	Clamping and locating angle, left 300x275 mm
	PL28-03003-000	Clamping and locating angle, right 600x375 mm
	PL28-03003-001	Clamping and locating angle, left 600x375 mm
	PL28-03004-000	Clamping and locating angle, right 800x375 mm
	PL28-03004-001	Clamping and locating angle, left 800x375 mm
	D28-03007-000	Universal pivot and tilt angle, right (0-225°), 475x100x100 mm
ŀ	PE28-03008-000	Clamping and locating angle 275x175x50 mm
}	D28-05001-000	Universal stop / large 225x50x25 mm
2	D28-05003-000	Stop-strip L 500 - 500x100x25 mm
2	D28-05003-001	Stop-strip L 800 - 800x100x25 mm
2	D28-05003-008	Stop-strip L 1000 - 1000x100x25 mm
2	D28-05006-000	Multi-clamping and support tower Ø 55 mm - height 1000 mm
2	D28-05007-000	Compensating clamping arm with short boring spindle - location Ø 55 mm, 20 kN clamping force, AF14
ŀ	D28-05009-000	Universal stop L 300 - 300x50x25 mm
2	D28-05013-000	Locating disk Ø 75 - stop dimension 25-50 mm, continuous
2	D28-05013-001	Locating disk Ø 100 - stop dimension 25-75 mm, continuous
1	D28-05015-000	Displacement stop - 150x50x25 mm, scale on both sides
36	D28-06001-000	PC-bolt / short - Ø 28-0.02, AF 14, clamping range 41-47 mm, 25/200 kN
1	D28-06002-000	PC-bolts / long - Ø 28-0.02, AF 14, clamping range 66-72 mm, 25/200 kN
16	D28-06009-000	Stop and positioning bolt Ø 28 / 40x74 mm
2	D28-07001-000	Compensating swing clamp 150 mm with spindle
1	D28-07002-000	Compensating swing clamp 200 mm with spindle
ŀ	D28-07005-000	Screw clamp 180° with spindle - vertical tube 220 mm
ŀ	D28-07005-014	Screw clamp 180° with spindle - vertical tube 350 mm
ŀ	D28-07005-015	Screw clamp 180° with quick-action clamping cylinder - vertical tube 350 mm
1	D28-07005-033	Screw clamp 180° with spindle - vertical tube 500 mm
ļ.	D28-07008-000	Variable screw clamp 90° - vertical tube 260 mm
1	D28-07009-000	Variable screw clamp 45° with adjusting screw - vertical tube 220 mm
1	D28-07009-011	Variable screw clamp 45° with adjusting screw - vertical tube 350 mm
)	D28-07018-000	2P. clamping bridge with 2 ball pins and 2 steel clamping pads - Ø 170x35x35 mm
1	D28-09001-000	Spacer set 11 pieces - Ø 50x125 mm, height compensation 5-100 mm increment 1 mm
	D28-09001-005	Spacer set with thread - Ø 50x125 mm, height compensation 22-105 mm, continuous
	D28-09003-000	V-block locations blackened steel, Ø 58 mm - 130° - for tubes up to Ø 70 mm
	D28-10002-000	Round brush Ø 28x260 mm, with protective cap, for cleaning the system bore
	D00-10005-000	Pump bottle with 1 litre Öko anti-spatter spray
	D00-10007-000	Bench stone 200x50x25 mm, 2-sided, for maintaining the system surfaces
	D28-10008-000	Ball end hex wrench AF 14x150 mm
	D00-10009-000	Ground connector D16/D28 - for cable 50-70 mm², load up to 500 A
	D00-10016-001	Extraction tool - 250x40 mm, AF 14
	D28-11001-000	Accessory cart - WxDxH = 1000x650x1010 mm, 4 casters

DEMMELER welding and clamping systems are modular and flexible. All sets and accessories can be used at all the 3D worktables within the system. In this way, for example, it is possible to use the accessories from the PROFIEco set at a PROFIPIusLINE table. What is more, you can individually assemble or supplement your sets with the large selection of Demmeler accessories!

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PROFIEcoLINE set 710 (System 28)

Item number: E28-52000-710 (32-piece)





Depicted set also available with PC or PPC bolts instead of ECOLine bolts: Set with PC bolts: Item no. E28-52000-711 or set with PPC bolts: Item no. E28-52000-712

Quantity 🔻	Item no. ▼	Item description ▼
- Laumerey	Trom not	Nom accompliant
4	PE28-03001-000	ECO clamping and locating angle 175x175x50 mm
4	E28-05001-000	ECO universal stop / large 225x50x25 mm
2	E28-05002-000	ECO universal stop / small 100x50x25 mm
2	E28-05013-001	ECO locating disk 25-75 mm
12	E28-06001-000	ECOLine bolts / short - Ø 28x95 mm
6	E28-07005-000	ECO screw clamp 180° with spindle
1	E28-10002-000	ECO round brush Ø 30 mm
1	E28-10008-000	ECO ball-head Allen key AF 8





PROFIEcoLINE set 720 (System 28)

Item number: E28-52000-720 (52-piece)

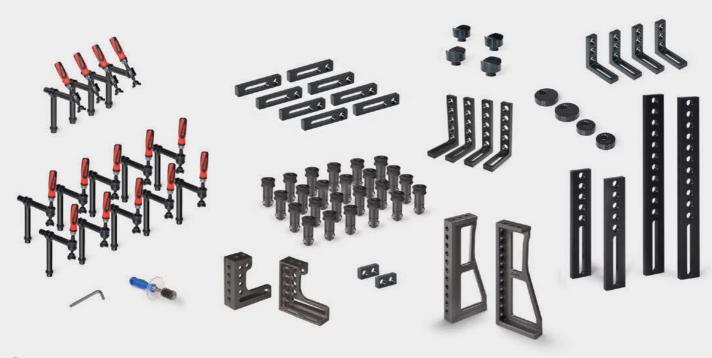


Depicted set also available with PC or PPC bolts instead of ECOLine bolts: Set with PC bolts: Item no. E28-52000-721 or set with PPC bolts: Item no. E28-52000-722

Quantity $\blacktriangledown$	Item no. ▼	Item description ▼
4	PE28-03001-000	ECO clamping and locating angle 175x175x50 mm
1	PL28-03002-000	Clamping and locating angle, right 300x275 mm
1	PL28-03002-001	Clamping and locating angle, left 300x275 mm
2	PE28-03008-000	ECO clamping and locating angle 275x175x50 mm
4	E28-05001-000	ECO universal stop / large 225x50x25 mm
2	E28-05002-000	ECO universal stop / small 100x50x25 mm
2	E28-05003-000	ECO stop-strip L 500 - 500x100x25 mm
2	E28-05013-000	ECO locating disk 25-50 mm
2	E28-05013-001	ECO locating disk 25-75 mm
18	E28-06001-000	ECOLine bolts / short - Ø 28x95 mm
8	E28-07005-000	ECO screw clamp 180° with spindle
4	E28-07009-000	ECO variable screw clamp 45° with spindle
1	E28-10002-000	ECO round brush Ø 28 mm
1	E28-10008-000	ECO ball-head Allen key AF 8

PROFIEcoLINE set 730 (System 28)

Item number: E28-52000-730 (74-piece)





Depicted set also available with PC or PPC bolts instead of ECOLine bolts: Set with PC bolts: Item no. E28-52000-731 or set with PPC bolts: Item no. E28-52000-732

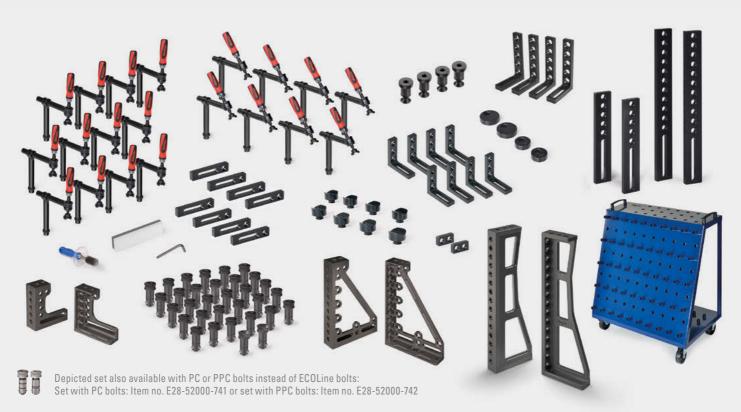
Quantity $\blacktriangledown$	Item no. ▼	Item description ▼
4	PE28-03001-000	ECO clamping and locating angle 175x175x50 mm
1	PL28-03002-000	Clamping and locating angle, right 300x275 mm
1	PL28-03002-001	Clamping and locating angle, left 300x275 mm
1	PE28-03003-000	PE clamping and locating angle, right 600x275x80 mm
1	PE28-03003-001	PE clamping and locating angle, left 600x275x80 mm
4	PE28-03008-000	ECO clamping and locating angle 275x175x50 mm
8	E28-05001-000	ECO universal stop / large 225x50x25 mm
2	E28-05002-000	ECO universal stop / small 100x50x25 mm
2	E28-05003-000	ECO stop-strip L 500 - 500x100x25 mm
2	E28-05003-001	ECO stop-strip L 800 - 800x100x25 mm
2	E28-05013-000	ECO locating disk 25-50 mm
2	E28-05013-001	ECO locating disk 25-75 mm
24	E28-06001-000	ECOLine bolts / short - Ø 28x95 mm
10	E28-07005-000	ECO screw clamp 180° with spindle
4	E28-07009-000	ECO variable screw clamp 45° with spindle
4	E28-09003-000	ECO V-block locations Ø 58 mm - 130° - for tubes up to Ø 70 mm
1	E28-10002-000	ECO round brush Ø 28 mm
1	E28-10008-000	ECO ball-head Allen key AF 8





PROFIEcoLINE set 740 (System 28)

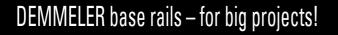
Item number: E28-52000-740 (104-piece)



Quantity <b>V</b>	ltem no. ▼	Item description ▼
8	PE28-03001-000	Clamping and locating angle 175x175x50 mm
1	PL28-03002-000	Clamping and locating angle, right 300x275 mm
1	PL28-03002-001	Clamping and locating angle, left 300x275 mm
1	PL28-03003-000	Clamping and locating angle, right 600x375 mm
1	PL28-03003-001	Clamping and locating angle, left 600x375 mm
1	PE28-03004-000	PE clamping and locating angle, right 800x275x80 mm
1	PE28-03004-001	PE clamping and locating angle, left 800x275x80 mm
4	PE28-03008-000	Clamping and locating angle 275x175x50 mm
8	E28-05001-000	ECO universal stop / large 225x50x25 mm
2	E28-05002-000	ECO universal stop / small 100x50x25 mm
2	E28-05003-000	ECO stop-strip L 500 - 500x100x25 mm
2	E28-05003-001	ECO stop-strip L 800 - 800x100x25 mm
2	E28-05013-000	ECO locating disk 25-50 mm
2	E28-05013-001	ECO locating disk 25-75 mm
32	E28-06001-000	ECOLine bolts / short - Ø 28x95 mm
4	E28-06003-000	ECO connecting bolt with screw and washer - Ø 28x45 mm
12	E28-07005-000	ECO screw clamp 180° with spindle
8	E28-07009-000	ECO variable screw clamp 45° with spindle
8	E28-09003-000	ECO V-block locations Ø 58 mm - 130° - for tubes up to Ø 70 mm
1	E28-10002-000	ECO round brush Ø 28 mm
1	E28-10008-000	ECO ball-head Allen key AF 8
1	E28-10007-000	ECO bench stone
1	E28-11001-000	ECO accessory cart







Our flexible clamping system grows with your tasks. The modular structure of the base rail system offers you the greatest possible freedom for the production of bigger than normal components.

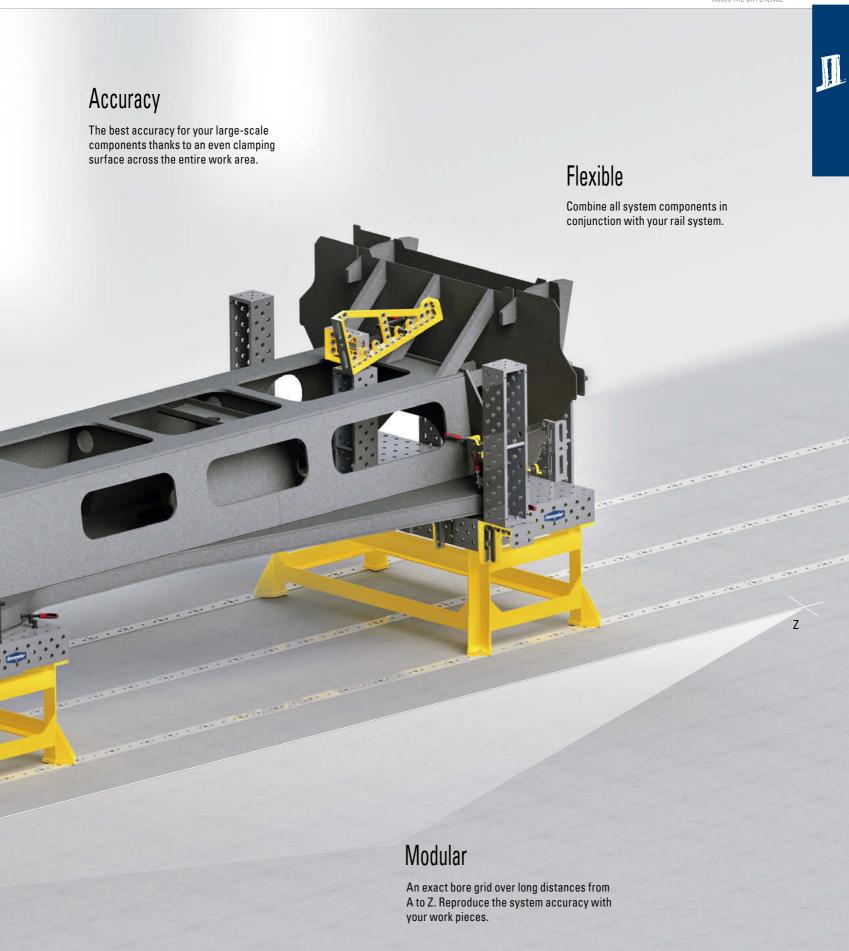
A grid system of any size adapted to your product portfolio can be installed in your production hall. This provides you with a level installation surface over the entire area, including grid bores.

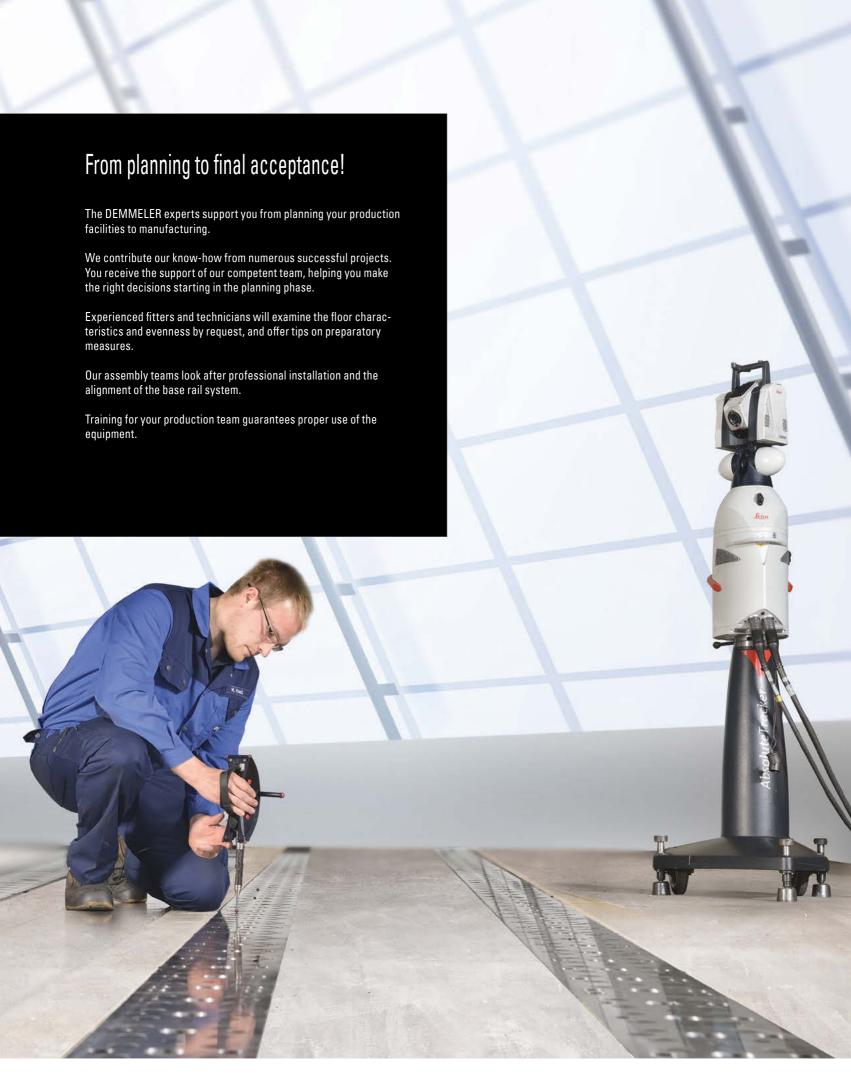
The rail system is installed according to your requirements. Several versions are available to you, for example overfloor or underfloor installation. The advantage of underfloor installation is that the entire work area around the rail system is accessible for persons and vehicles. This accessibility makes work easier, reduces the risk of accidents and thereby boosts safety and increases efficiency in manufacturing.

You have access to the comprehensive selection of DEMMELER accessories to set up your clamping fixtures on the rail system.











Full service

### DEMMELER - your partner for the entire project





### Project implementation in detail

You can count on our experience with countless projects

## Planning, installation and acceptance - everything from one source!

 $Requirements\ are\ coordinated\ with\ the\ customer\ in\ close\ cooperation\ with\ our\ technicians\ and\ distribution\ partners.$ 

By request we manage the entire project for a turnkey solution.

Alternatively you can also implement specific assembly sections yourself.

Give us the task, we develop the right solution for you!

1.

#### INVENTORY

- Inventory of the floor characteristics
- Determination of local conditions (accessibility, transport etc.) using a checklist
- Establishing the configuration and implementation of the rail system

2.

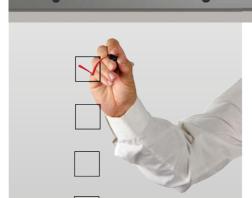
#### **PREPARATION**

- For example, floor preparation for underfloor installation
- Milling grooves according to the installation situation

3.

#### **ASSEMBLY**

- Highly accurate templates are used for an exact installation.
- We loan you an assembly set with templates free of charge if you want to install the system yourself.
- Mounting materials (set of screws, dowels and shims) are included in the scope of delivery for the base rail.
- As a rule of thumb, the installation time is about one hour per running metre.



With implementation by DEMMELER

Costs by request.



With implementation by DEMMELER

Costs by request.



With implementation by DEMMELER

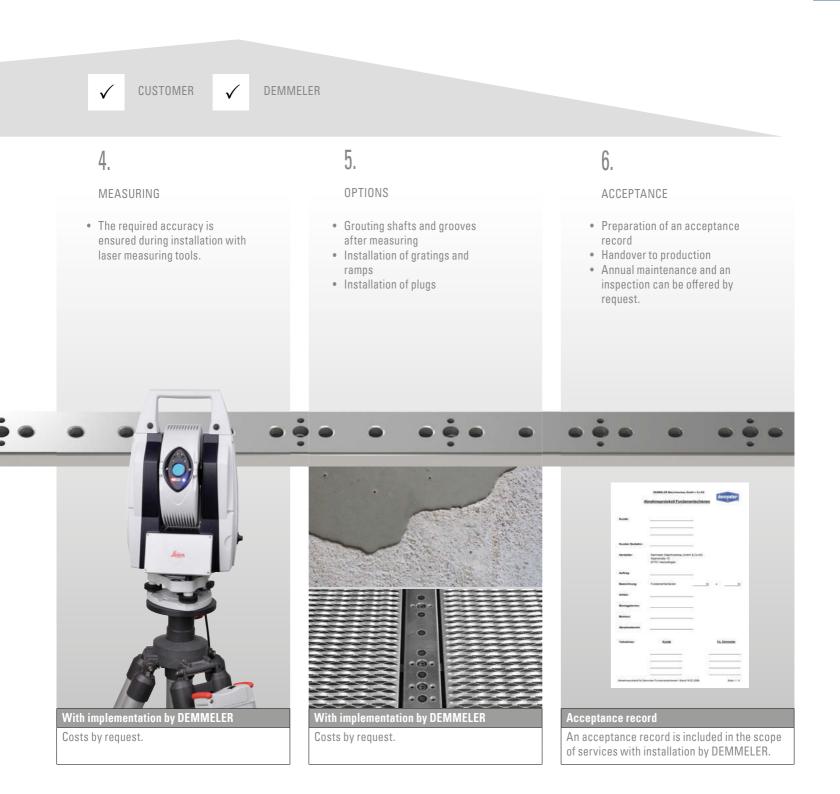
Costs by request.



Project implementation in detail

# 

### You decide who does what!

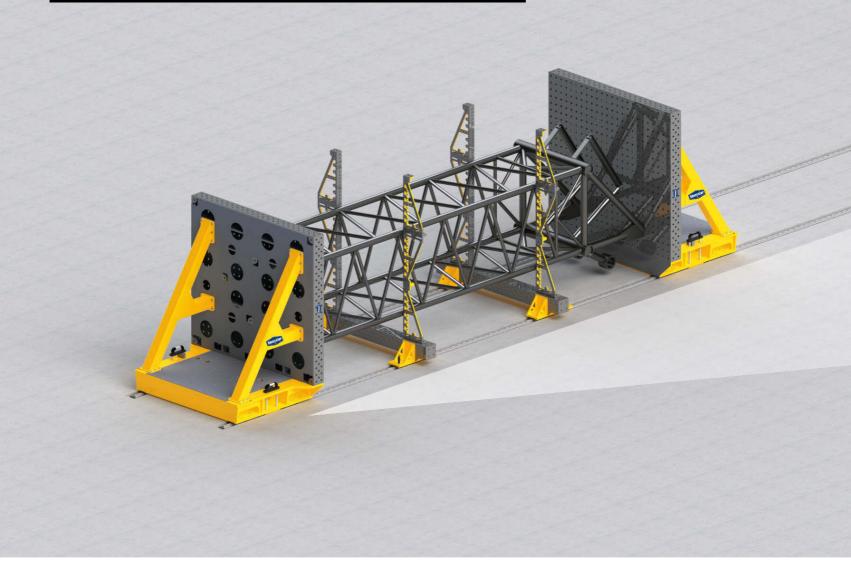


# For projects beyond the edge of the table

Those who think in big dimensions like the company Liebherr need equipment that offers numerous possibilities.

With the flexible base rail system, DEMMELER is the ideal partner for the crane manufacturer of world renown. Thanks to modular expandability, the base rail system is suitable for the production of components with a length of 80 metres and more. The highest accuracy of fit is guaranteed thanks to minimal tolerances. This not only makes the trouble-free final assembly of the individual elements on the construction site easier, it also guarantees safe and smooth operation of the cranes.

Thanks to the sophisticated displacement system, the setup times for different types of components are reduced. With the comprehensive selection of accessories, an endless number of fixtures can be realised quickly and safely.

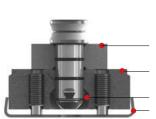




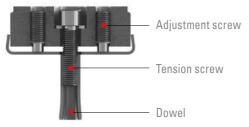


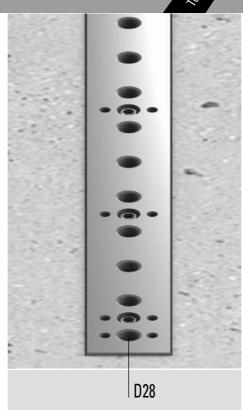
# Support and base rail

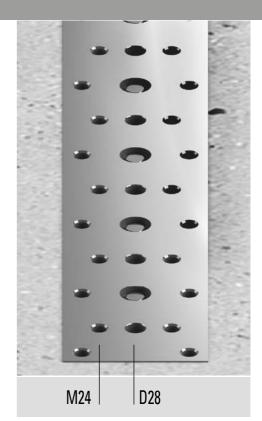
# Support and base rail XL



System component Support and base rail System bore Shim







Area of application	Overfloor / underfloor	Overfloor / underfloor
Description	Setup of a modular system grid over large distances is possible     Exact reference level over the entire work area     Precise positioning with D28 bores in a 100 mm grid     Suitable for all standard applications	Setup of a modular system grid over very large distances is possible Exact reference level over the entire work area Precise positioning with D28 bores and M24 threads in a 200 mm grid Suitable for very heavy-duty and all standard applications Approx. 80% higher bearing load than the standard support and base rail
Combination	All system components can be used with the bore hole grid	All system components can be used with the bore hole grid
Grid	• D28 system bores every 100 mm	D28 system bores every 200 mm     M24 threaded bores every 200 mm
Dimensions	• Cross-section approx. 120 x 40 mm For details, see page 148	Cross-section approx. 200 x 50 mm For details, see page 149
Special features	<ul> <li>Use of shifting feet and holding frames is possible</li> <li>System components and 3D worktables can also be set up directly on the rail</li> <li>Easy shifting of the system components without using a crane thanks to shifting feet</li> <li>Anchoring to the floor with dowel system</li> <li>Incl. screw set, dowels and shims</li> </ul>	<ul> <li>Use of table leg for spacer block and holding frames is possible</li> <li>System components and 3D worktables can also be set up directly on the rail</li> <li>Anchoring to the floor with dowel system</li> <li>Incl. screw set, dowels and shims</li> </ul>



Support and base rail, LINEAR

Base rail, ROUND

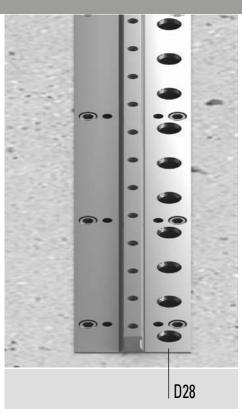
Support and base rail, DUO

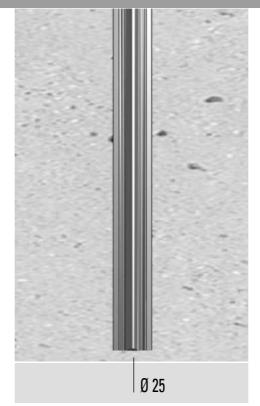
### Shifting possible under load! T

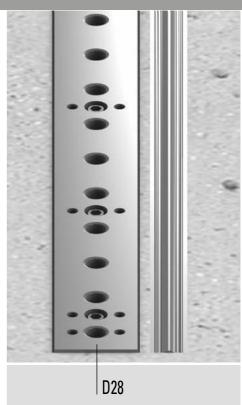
# Shifting possible under load!

## Shifting possible under load!









Overf	 	 
	<b>4</b>	ш

#### Setup of a modular system grid over large distances is possible

- Exact reference level over the entire work area
- Shifting the system components after setup is possible even under load
- Setting out superstructures in the system grid is supported for exact positioning

#### Underfloor

- Setup of a traversing range over very long distances is possible
- Exact reference level over the entire work area
- Shifting the system components after setup is possible even under load
- Continuously variable positioning of superstructures
- Pinning bores for positioning in end positions / work areas possible

#### Underfloor

- Setup of a traversing range over long distances is possible
- Exact reference level over the entire work
- Shifting the system components after setup is possible even under load
- Precise positioning with D28 bores in a 100 mm grid
- Continuously variable positioning of

- · Setup of system components possible indirectly using legs or frames
  - D28 system bores every 100 mm Continuous without bore hole grid
- Setup of system components possible indirectly using legs or frames
- D28 system bores every 100 mm

- Cross-section approx. 160 x 40 mm For details, see page 150
- Suitable for example for pallet changeover systems on robot cells
- Hardened and ground version of the profile guide
- Tip-resistance thanks to wrap-around guide
- Easy shifting of the system components including work piece without a crane
- Anchoring to the floor with dowel system
- Incl. screw set, dowels and shims
- Shifting possible under load!

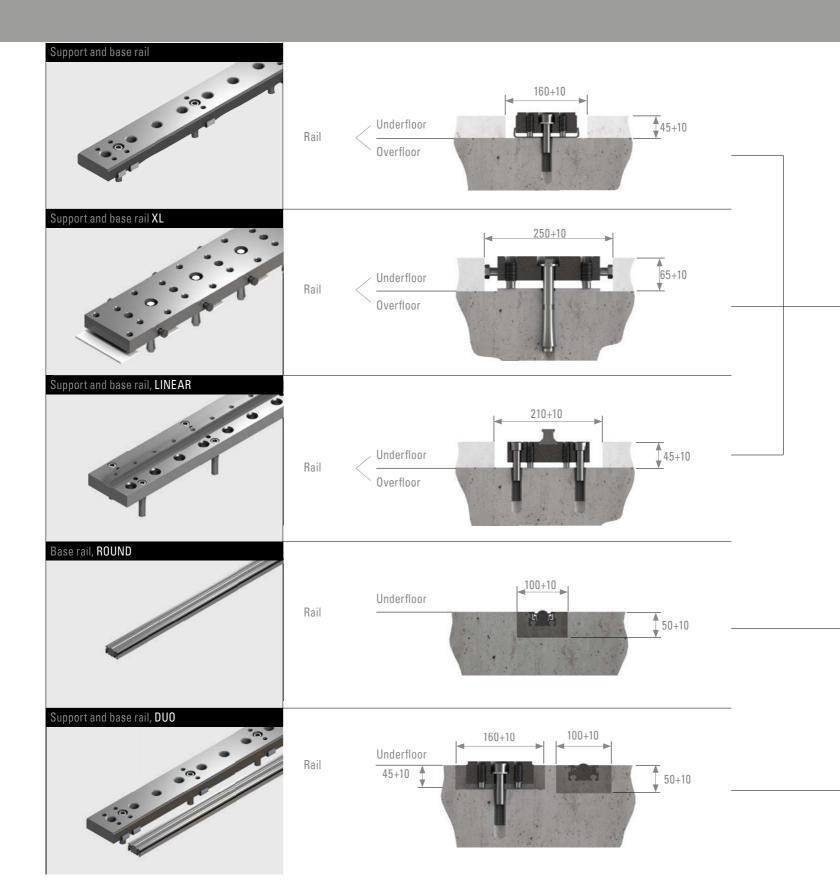
- Cross-section approx.  $50 \times 50 \text{ mm}$ For details, see page 151
- Suitable for example for pallet changeover systems on robot cells
- Hardened and ground version of the guide shaft
- Easy shifting of the system components including work piece without a crane
- Anchoring by means of casting in the floor
- Installation flush with the floor, no tripping
- Scope of delivery includes installation templates
- Shifting possible under load!

- superstructures
- · All system components can be used with the bore hole grid
- In addition, continuous without bore hole grid Cross-section approx. 120 x 40 mm Base rail
- Cross-section approx. 50 x 50 mm, round rail, see page 152
- Suitable for example for pallet changeover systems on robot cells
- Hardened and ground version of the guide
- Easy shifting of the system components including work piece without a crane
- Anchoring using dowel system and casting in the floor
- Includes screw set, dowels and shims
- Shifting possible under load!



Rail type

#### Installation type

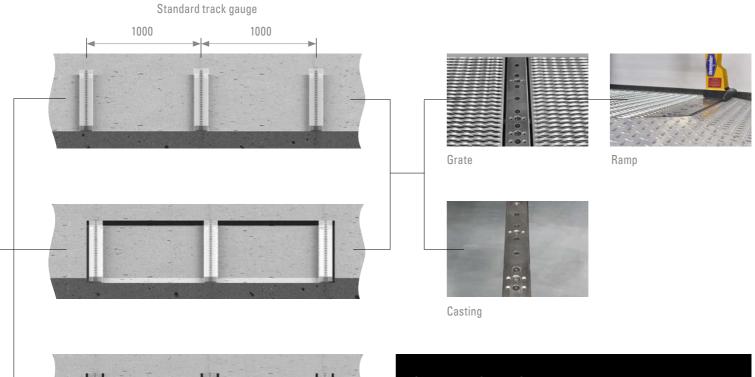


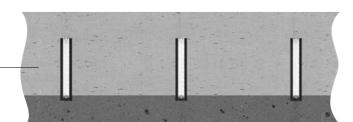


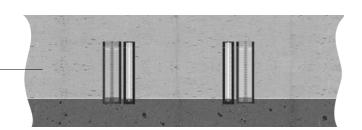
Hall floor versions

Equipment options \*









#### GENERAL INFORMATION:

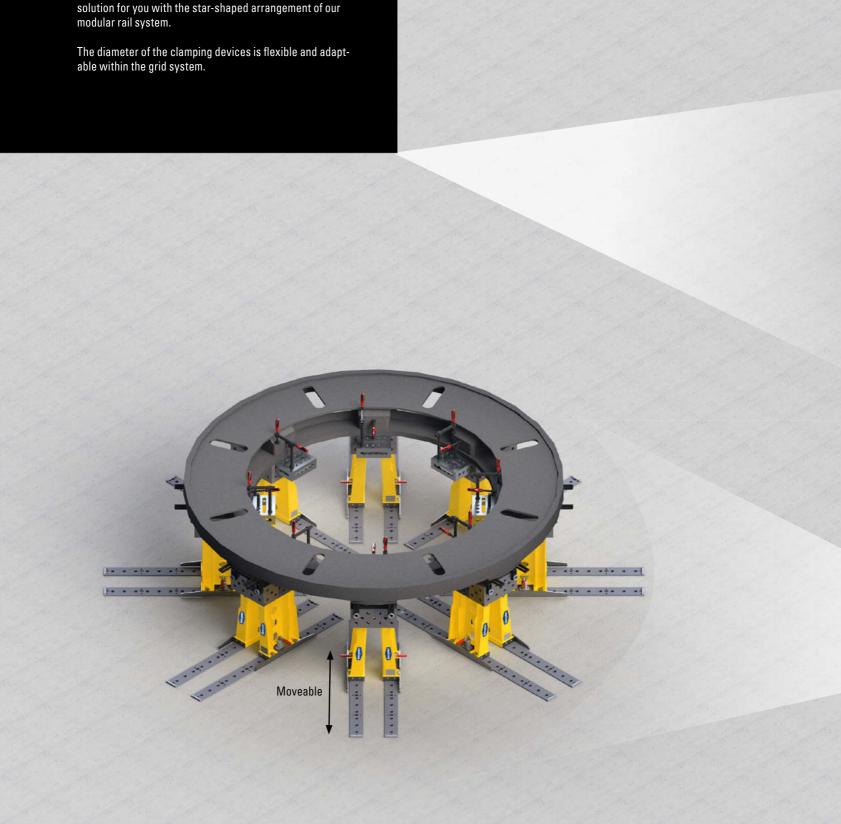
- Standard track gauge preferably 1000 mm. Customer-specific dimensions possible with consultation.
- The number of tracks can be tailored to your requirements.
- Preferred lengths 3000 mm / 6000 mm. Other lengths for the support and base rail are also available on request.
- Base rails have to be closed with adhesive tape or cover caps on the underside before casting to prevent the casting material from rising up into the system bores.
- Mounting materials such as the set of screws, dowels and shims are included in the scope of delivery.
- Please observe internal safety directives for handling
- · Always secure the components to prevent tipping
- Persons are never permitted underneath suspended loads

145

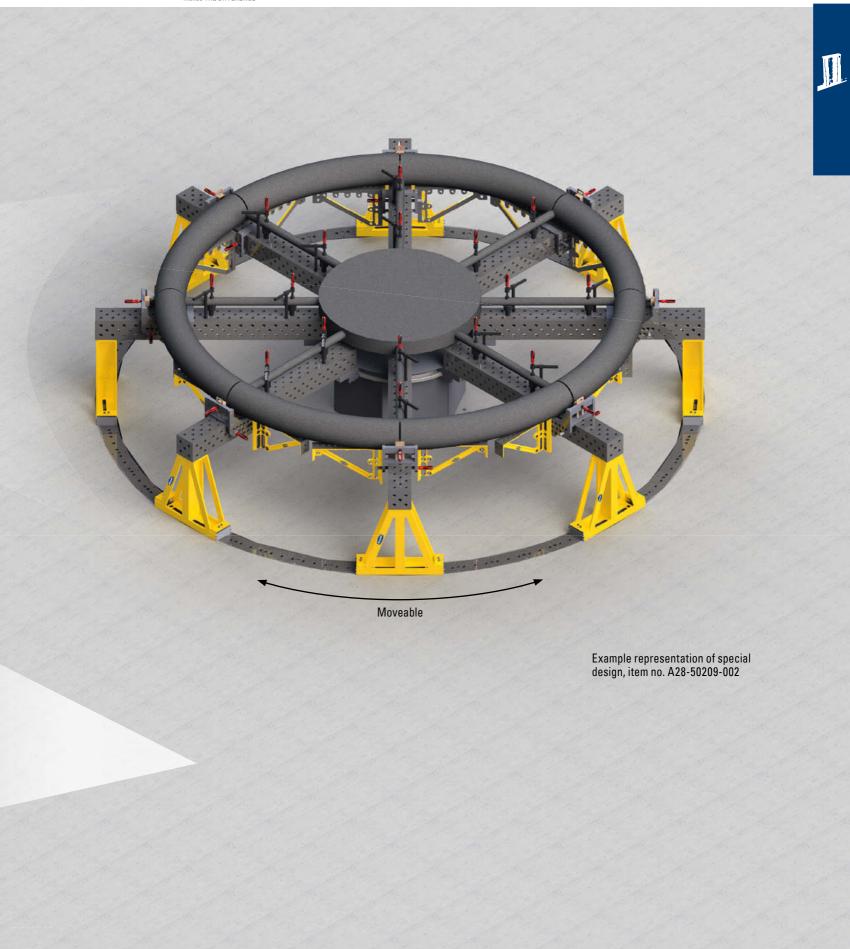
<sup>\*</sup> Equipment options on request!

# To make things run smoothly!

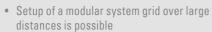
If your work pieces are round or circular, we have the right solution for you with the star-shaped arrangement of our







# Support and base rail



- Exact reference level over the entire work area
- Precise positioning with D28 bores in a 100 mm arid
- Suitable for all standard applications
- Screw set, dowels and shims included in the scope of delivery
- Bearing load per metre up to 16 tons
- Allowable tensile load in crack-free concrete
   1.0 ton per dowel



#### Also compatible with:

Table leg for spacer block	Shifting foot	Holding frame	3D table / system components

#### Description ▲ Application ▼







L in mm	B in mm	H in mm approx.	Approx. weight in kg	Item no.
1000	120	40	35	D28-02003-067
2000	120	40	70	D28-02003-068
3000*	120	40	105	D28-02003-069
4000	120	40	140	D28-02003-070
5000	120	40	175	D28-02003-071
6000*	120	40	210	D28-02003-072

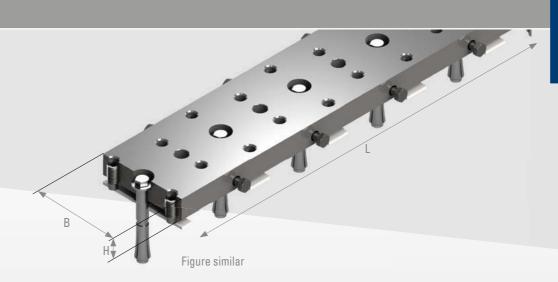
<sup>\*</sup>Preferred lengths / Other lengths available by request!



# Support and base rail XL



- Setup of a modular system grid over very large distances is possible
- Exact reference level over the entire work area
- Precise positioning with D28 bores in a 200 mm grid
- Suitable for very heavy-duty and all standard applications
- Screw set, dowels and shims included in the scope of delivery
- Bearing load per metre up to 30 tons
- Approx. 80% higher bearing load than the standard support and base rail
- Allowable tensile load in crack-free concrete 1.8 tons per dowel



#### Also compatible with:

Table leg for spacer block	Shifting foot	Holding frame	3D table / system components

#### Description ▲ Application ▼



L in mm	B in mm	H in mm approx.	Approx. weight in kg	Item no.
3000	200	50	230	P28-02003-000
6000	200	50	460	P28-02003-001

Other lengths available by request!

# Support and base rail, LINEAR

- Setup of a modular system grid over large distances is possible
- Exact reference level over the entire work area
- Shifting the system components after setup is possible even under load
- Tip-resistance thanks to wrap-around guide
- Hardened and ground version of the profile guide
- Setting out superstructures in the system grid is supported for exact positioning
- Screw set, dowels and shims included in the scope of delivery
- Bearing load per metre up to 16 tons
- Allowable tensile load in crack-free concrete 1.0 ton per dowel



Also compatible with:

#### **Guiding carriage**



Description ▲ Application ▼

Application ▼





L in mm	B in mm	H in mm	Approx. weight in kg	Item no.
3000	160	40	135	D28-02007-000
6000	160	40	270	D28-02007-001

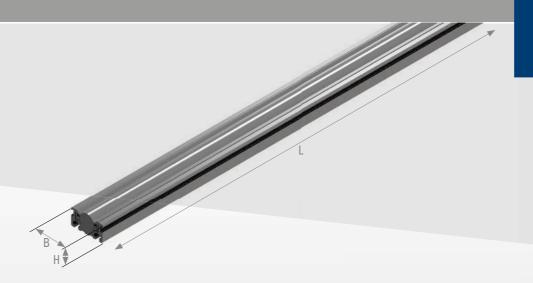
Other lengths available by request!



## Base rail, ROUND



- Setup of a traversing range over long distances is possible
- Exact reference level over the entire work area
- Shifting the system components after setup is possible even under load
- Continuously variable positioning of superstructures
- Ideal for pallet changeover systems
- Pinning bores for positioning in end positions / work areas, can be integrated in the floor
- Bearing load per metre up to 10 tons



Also compatible with:

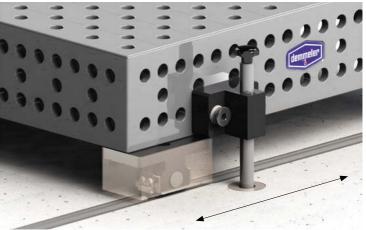
#### **Guiding wagon**



#### Description ▲ Application ▼

#### Application ▼





L in mm	B in mm	H in mm	Approx. weight in kg	Item no.
1000	54	48	8	D28-02008-000
2000	54	48	16	D28-02008-001
3000	54	48	24	D28-02008-002

Other lengths available by request!

# Support and base rail, DUO

- Setup of a traversing range over long distances is possible
- Exact reference level over the entire work area
- Shifting the system components after setup is possible even under load
- Precise positioning with D28 bores in a 100 mm grid
- Continuously variable positioning of superstructures
- Screw set, dowels and shims included in the scope of delivery
- Bearing load per metre up to 20 tonnes (depending on the number of guiding wagons)
- Allowable tensile load in crack-free concrete
   1.0 ton per dowel



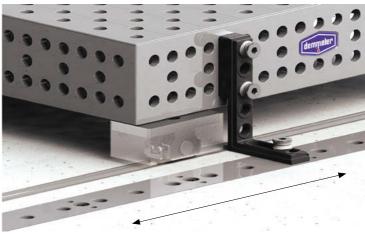
#### Also compatible with:

Table leg for spacer block	Shifting foot	Holding frame	3D table / system components	Guiding wagon

Description 🔺 Application 🔻







L in mm	Description	Item no.
3000		D28-02003-069 + D28-02008-002
6000	2 piece	D28-02003-072 + D28-02008-002



Accessories

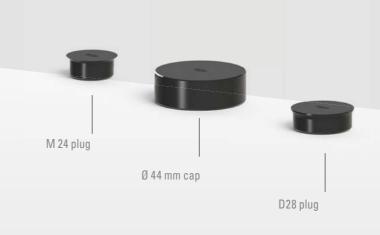
## 23301163

# Rubber mat / cover plate

## Plug



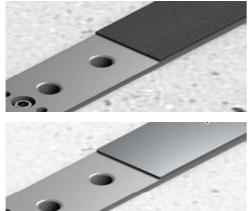
• Protects the system bores against dirt. Easy to remove with the D28-10003-002 magnet.



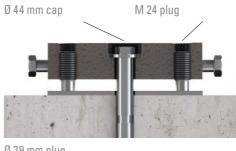
#### Application \

#### Application lacktrian

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 $\emptyset$  39 mm plug



D28 plug

Support and base rail	Item no.
Rubber mat 1000 mm	00092901
Cover plate 1000 mm	00092904

Plug	Item no.
D28 plug	D28-10003-006
10x D28 plugs	D28-10003-007
Magnet for D28 plug Ø 32 mm	D28-10003-002
Ø 39 mm plug	00092929
Support and base rail XL	Item no.
Ø 44 mm cap	00023584
M24 cap	00068955

# Foot type variant - ordering

# Equip the **PP / PL** and **PE** table with holding frame, leg for spacer block or shifting foot!

#### NOTE:

Since the tables have additional bores on the underside to attach these leg versions, you have to select the table with the corresponding article number from the chart below!



<b>PROFIP</b> re	PROFIPremiumLINE (PP)							
L in mm	W in mm	H in mm	Weight	Solid	Hardened	Hardened		
			in kg		DEMONT 760 M	DEMONT 860 M		
1000	1000	200	290	PP28-01001-007	PP28-01001-017	PP28-01001-027		
1200	1200	200	380	PP28-01056-007	PP28-01056-017	PP28-01056-027		
1500	1000	200	390	PP28-01011-007	PP28-01011-017	PP28-01011-027		
1500	1500	200	530	PP28-01031-007	PP28-01031-017	PP28-01031-027		
2000	1000	200	500	PP28-01002-007	PP28-01002-017	PP28-01002-027		
2000	2000	200	1000	PP28-01006-007	PP28-01006-017	PP28-01006-027		
2400	1200	200	710	PP28-01003-007	PP28-01003-017	PP28-01003-027		
3000	1500	200	1010	PP28-01004-007	PP28-01004-017	PP28-01004-027		
4000	2000	200	1780	PP28-01005-007	PP28-01005-017	PP28-01005-027		
4800	2400	200	2550	PP28-11085-007	PP28-11085-017	PP28-11085-027		



<b>PROFIPI</b> u	PROFIPIUSLINE (PL)							
L in mm	W in mm	H in mm	Weight	Solid	Hardened	Hardened		
			in kg		DEMONT 760 M	DEMONT 860 M		
1000	1000	200	310	PL28-01001-007	PL28-01001-017	PL28-01001-027		
1200	1200	200	410	PL28-01056-007	PL28-01056-017	PL28-01056-027		
1500	1000	200	430	PL28-01011-007	PL28-01011-017	PL28-01011-027		
1500	1500	200	590	PL28-01031-007	PL28-01031-017	PL28-01031-027		
2000	1000	200	550	PL28-01002-007	PL28-01002-017	PL28-01002-027		
2000	2000	200	1050	PL28-01006-007	PL28-01006-017	PL28-01006-027		
2400	1200	200	790	PL28-01003-007	PL28-01003-017	PL28-01003-027		
3000	1500	200	1150	PL28-01004-007	PL28-01004-017	PL28-01004-027		
4000	2000	200	1980	PL28-01005-007	PL28-01005-017	PL28-01005-027		
4800	2400	200	2830	PL28-11085-007	PL28-11085-017	PL28-11085-027		



<b>PROFIEc</b>	PROFIEcoLINE(PE)							
L in mm	W in mm	H in mm	Weight	Solid	Hardened	Hardened		
			in kg		DEMONT 760 M	DEMONT 860 M		
1000	1000	200	330	PE28-01001-007	PE28-01001-017	PE28-01001-027		
1200	1200	200	430	PE28-01056-007	PE28-01056-017	PE28-01056-027		
1500	1000	200	450	PE28-01011-007	PE28-01011-017	PE28-01011-027		
1500	1500	200	610	PE28-01031-007	PE28-01031-017	PE28-01031-027		
2000	1000	200	570	PE28-01002-007	PE28-01002-017	PE28-01002-027		
2000	2000	200	1100	PE28-01006-007	PE28-01006-017	PE28-01006-027		
2400	1200	200	820	PE28-01003-007	PE28-01003-017	PE28-01003-027		
3000	1500	200	1180	PE28-01004-007	PE28-01004-017	PE28-01004-027		
4000	2000	200	2090	PE28-01005-007	PE28-01005-017	PE28-01005-027		
4800	2400	200	2980	PE28-11085-007	PE28-11085-017	PE28-11085-027		



# Holding frame / leg for spacer block / shifting foot

#### ORDERING EXAMPLE:

(1) Select the desired worktop on page 154, which results in order article no. 1:

(2) From the existing page, select the leg you want in the corresponding quantity, which results in order article no. 2:

The two order article numbers make up your order to DEMMELER.



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e.g. 1 x PL28-01002-007

e.g. 4 x D00-10017-000

e.g. 1 x PL28-01002-007 e.g. 4 x D00-10017-000







Leg for spacer bloc	Leg for spacer block (for all table sizes)						
Leg width	Leg height	Number of legs	Item no.	Weight in kg per leg	Max. load in kg (per leg)		
200	200	4	D00-10017-000	14	3500		
200	400	4	D00-10017-001	19	3500		
200	600	4	D00-10017-002	24	3500		
400	200	4	D00-10017-010	24	3500		
400	400	4	D00-10017-011	33	3500		
400	600	4	D00-10017-012	41	3500		



Shifting foot (for	Shifting foot (for all table sizes)							
Leg width	Leg height	Number of legs	Item no.	Weight in kg per Shifting foot	Max. load in kg (per leg)			
200	200	4	D00-10017-025	18	3500			
200	400	4	D00-10017-026	24	3500			
200	600	4	D00-10017-027	29	3500			
400	200	4	D00-10017-028	33	3500			
400	400	4	D00-10017-029	41	3500			
400	600	4	D00-10017-030	50	3500			

# Table leg for spacer block

- Connecting elements between spacer block U-form or 3D worktable and support and base rail
   Different setup heights can be adapted to the work
- piece by simply exchanging the table legs
   Includes 2x fitted shoulder screws M12-16 H8x30 for
- attachment on system components



Also compatible with:



Description ▲ Application

Leg versions







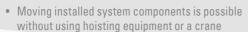
Leg width	Leg height	Weight per leg in kg	Max. load per leg in kg	Item no.
200	200	14	3500	D00-10017-000
200	400	19	3500	D00-10017-001
200	600	22	3500	D00-10017-002
400	200	22	3500	D00-10017-010
400	400	33	3500	D00-10017-011
400	600	41	3500	D00-10017-012

Other heights by request! Observe internal safety directives when repositioning the system components!



## Shifting foot with casters





- Different setup heights can be adapted to the work piece by simply exchanging the table legs
- Highest load capacity in the working position thanks to full-faced support of the foot on the rail
- Tilt safety device included in the scope of delivery
- Includes 2x fitted shoulder screws M12-16 H8x30 for attachment on system components
- Observe stability when moving system components



Also compatible with:



#### Description 🛦 Application 🔻









Roller

Tilt safety device

Leg width	Leg height	Weight per leg in kg	Max. load per leg in kg	Item no.
200	200	18	3500	D00-10017-025
200	400	24	3500	D00-10017-026
200	600	29	3500	D00-10017-027
400	200	33	3500	D00-10017-028
400	400	41	3500	D00-10017-029
400	600	50	3500	D00-10017-030

Other heights by request! Observe internal safety directives when repositioning the system components!

# Holding frame

- Exact positioning of 3D worktables in lengthwise and crosswise direction on the support and base rail is possible
- Very stable version for extremely high loads



Also compatible with:



Description ▲ Application ▼

Application abla





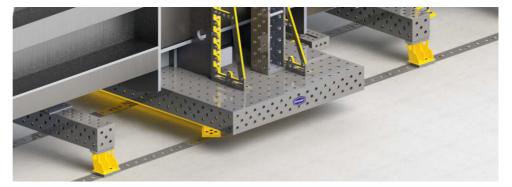


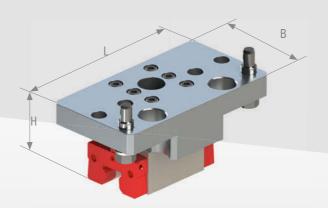
Table size	Lane width	Н	Weight in kg	Max. load in kg	Item no.
1000 / 1000					
1200 / 1200	1000/1000	600	158	15000	PL00-02004-000
1500 / 1000	1000/1000	000	130	13000	PLUU-U2UU4-UUU
1500 / 1500					
2000 / 1000		600	229	15000	PL00-02004-001
2000 / 2000					
2400 / 1200	2000/1000				
3000 / 1500					
4000/2000					
4000/2000	4000/2000	600	E10	20000	PL00-02004-002
4800 / 2400	4000/2000	000	516	20000	FLUU-U2UU4-UU2



## Shifting possible under load!



- Tip-resistance thanks to wrap-around guide
  Stripper prevents accumulation of dirt on the rolling element
- Cladding plate included in the scope of deliveryShifting possible under load



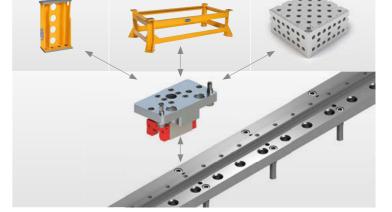
Also compatible with:



#### Description 🛦 Application 🤻

Application \





Guiding carriage including cladding plate

			Maximum load in kg		
L in mm	B in mm	Н	Static	Dynamic	Item no.
200	110	100	3870	8440	D28-10018-000
400	110	100	7740	16880	D28-10018-001

Observe internal safety directives when repositioning the system components!

# Guiding wagons

## Shifting possible under load!

- Superstructures can be shifted even under load
- Extremely smooth-running thanks to ball bearings
- Roller in hardened version
- High bearing load thanks to robust design
- Cladding plate included in the scope of delivery
- Observe stability while moving system components
- · Shifting possible under load



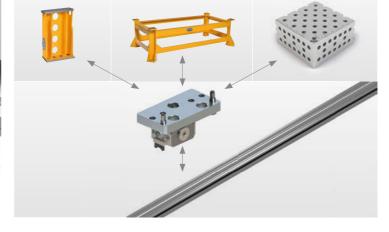
Also compatible with:



#### Description ▲ Application ▼







Guiding wagon including cladding plate

L in mm	B in mm	H in mm	Max. load in kg per guiding wagon	Item no.
200	110	100	1640	D28-10019-000
400	110	100	3280	D28-10019-001

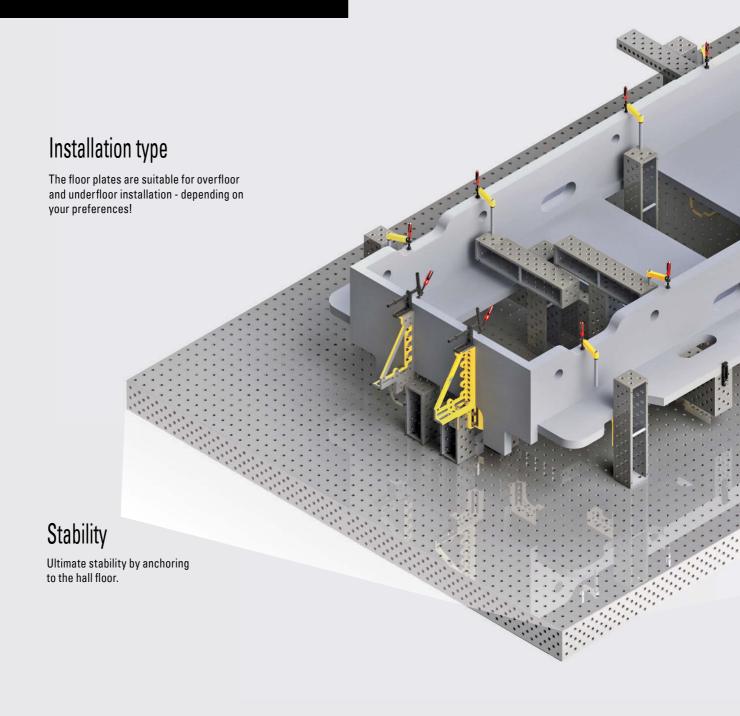
Observe internal safety directives when repositioning the system components!



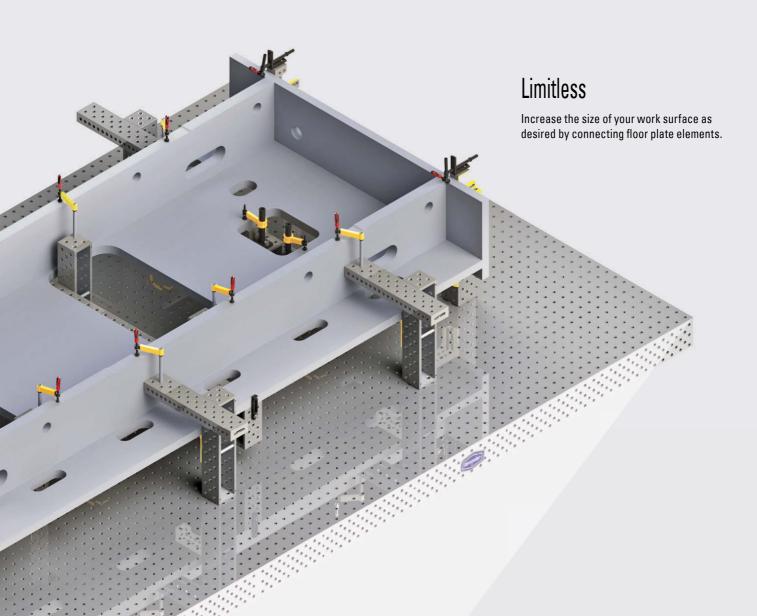


# Transforming the hall floor into a stress field

With the permanently installed floor plates, you can transform your hall into a giant clamping system. Ideal for large and heavy work pieces.







# Complexity

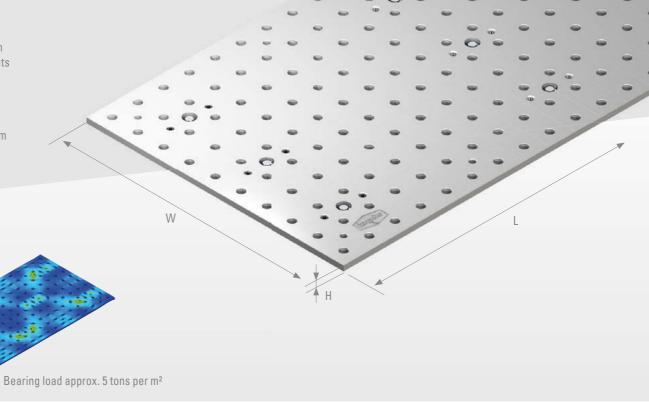
Continuous clamping surface with system grid for large, complex set-ups.



# Clamping floor plate

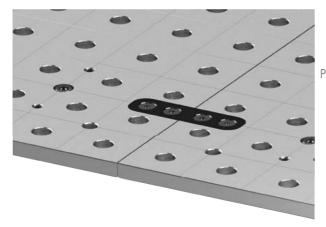


- Various grid types optionally possible
- Includes screw set, dowels and shims
- 100 x 100 mm grid, D28 system bores
- Allowable tensile load in crack-free concrete approx.
   1.0 ton per dowel



#### Description ▲ Application ▼

#### Overfloor / underfloor





Connection / expansion of individual elements.

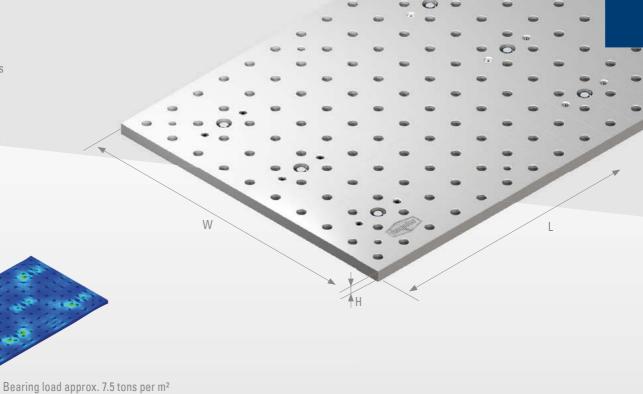
L in mm	W in mm	H in mm approx.	Item no.
1000	1000	23	D28-02010-000
1200	1200	23	D28-02010-001
1500	1000	23	D28-02010-002
1500	1500	23	D28-02010-003
2000	1000	23	D28-02010-004
2400	1200	23	D28-02010-005
3000	1500	23	D28-02010-006
4000	2000	23	D28-02010-007



# Clamping floor plate XL



- Two-dimensional grid system for large, complex components
- Various grid types optionally possible
- Includes screw set, dowels and shims
- 100 x 100 mm grid, D28 system bores
- Allowable tensile load in crack-free concrete approx.
   1.8 tons per dowel



#### Description ▲ Application ▼

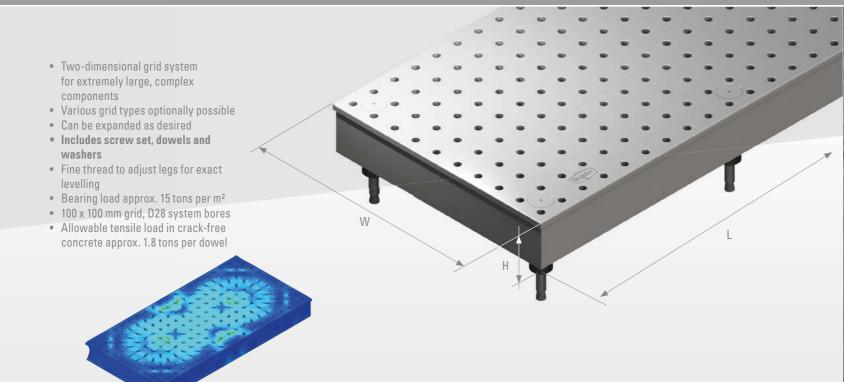
#### Overfloor / underfloor



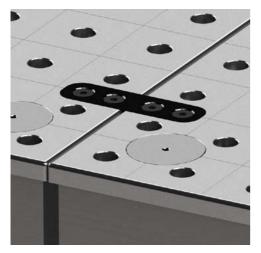
Connection / expansion of individual elements.

L in mm	W in mm	H in mm approx.	Item no.
1000	1000	37	D28-02011-000
1200	1200	37	D28-02011-001
1500	1000	37	D28-02011-002
1500	1500	37	D28-02011-003
2000	1000	37	D28-02011-004
2400	1200	37	D28-02011-005
3000	1500	37	D28-02011-006
4000	2000	37	D28-02011-007

# Clamping floor plate ProfiLINE



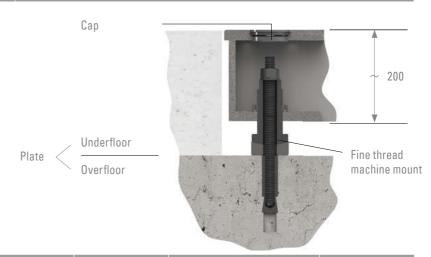
#### Description ▲ Application ▼



Bearing load approx. 15 tons per  $m^2$ 

Connection / expansion of individual elements.

#### Overfloor / underfloor

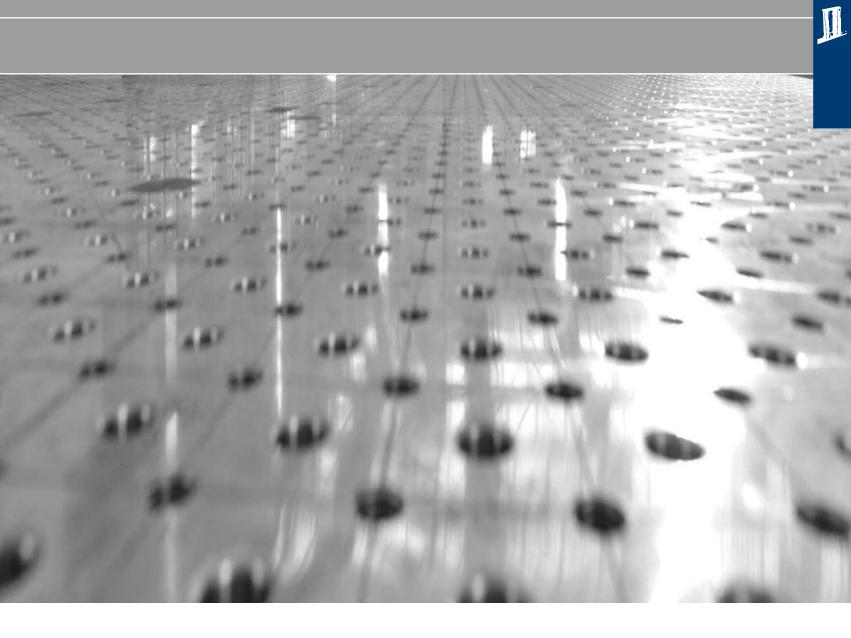


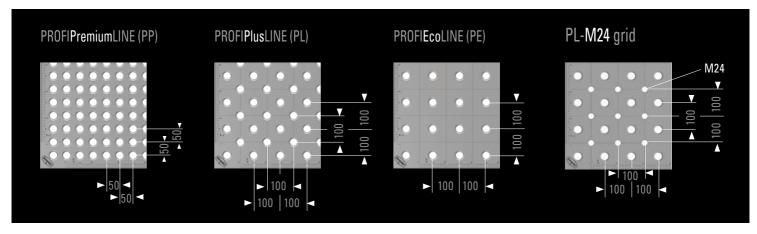
L in mm	W in mm	H in mm	Item no.
1000	1000	200	D28-02012-000
1200	1200	200	D28-02012-001
1500	1000	200	D28-02012-002
1500	1500	200	D28-02012-003
2000	1000	200	D28-02012-004
2400	1200	200	D28-02012-005
3000	1500	200	D28-02012-006
4000	2000	200	D28-02012-007



**Grid options** 











# Bolts - overview

PPC bolt, short PPC bolt, long PPC countersunk head bolt, short **PAGE 174 PAGE 175** PAGE 176 PC-bolt, short PC-bolt, long **PPC-countersunk bolt, long** PAGE 177 **PAGE 178** PAGE 179 Power screwdriver PC-countersunk bolt / short PC-countersunk bolt, long **PAGE 181 PAGE 182** PAGE 183 FCP-bolts with handle **ECOLine bolt, short** Stop and positioning bolt PAGE 184 PAGE 185 PAGE 186



#### Connecting bolt, short with screw

28 Connecting bolt, long with screw

28 Connecting bolt, short with collar

PAGE 187

**PAGE 187** 

PAGE 188







28 Adapter for PC-bolt

28 Reduction plate for clamping tube

**PAGE 189** 

**PAGE 190** 





# The perfect connection

Self-centring, force-locked and low-wear clamping – possible thanks to the original DEMMELER clamping bolt

# **Patented**No. 2569548

# Very high-speed clamping and unclamping of

the clamping elements

# Form-fitting through full-area contact

with the reciprocal surface

#### **Reduces material wear**

even when aluminium and plastic elements are used – no system bore deformation



#### Low susceptibility to dirt

because sensitive parts such as clamp threads etc. are fully encapsulated by 0-rings

#### **Extremely robust**

made from high-quality hardened steel, maximum precision thanks to grinding

#### Long service life guaranteed

in everyday applications



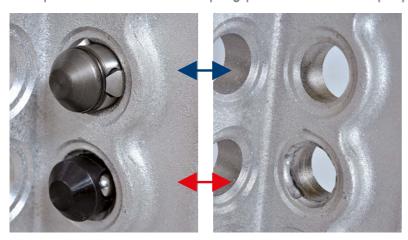


The PPC bolt meets all expectations!





# Comparison between clamping pins and the new polygon bolt from DEMMELER



Using the PPC bolt prevents serious damage to the bores that can be caused by clamping pins, for example with aluminium-titanium blocks.

CONE INSTEAD OF BALLS – MORE FORCE, LESS WEAR

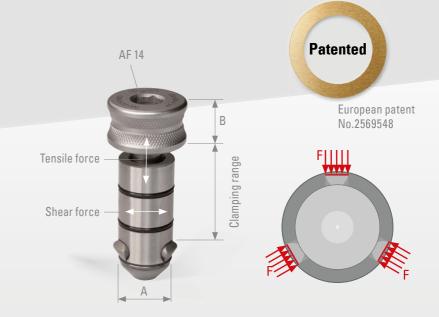
Thanks to the new cone clamping system of the DEMMELER PPC bolt, the bearing surface is 100 times larger. This results in much higher contact pressure, therefore securing work pieces more reliably. Even force distribution also reduces bore hole wear compared to conventional bolts.

## PPC bolt, short





- Highest clamping force with large stroke. Polygon expansion elements are full-faced, force-locked, and exactly self-centring, thereby reducing the surface load
- Self-locking
- Easy on materials
- Straightforward, fast and safe handling
- Low susceptibility to dirt
- DEMMELER system lock for DEMMELER power screwdriver for inserting and tightening as well as loosening and pulling
- With marking grooves for DEMMELER power screwdriver
- High-quality hardened steel, maximum precision thanks to grinding
- O-ring prevents simultaneous rotation while tightening and cleans the system bore at the same time



Description ▲ Application ▼

Minimum clamping range ▼

Maximum clamping range ▼







The specified loads must not be exceeded when using the clamping pins.

The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

28	Clamping range	Ø A in mm	B in mm	~ Weight in kg	Design	Item no.
20	41-47	28-0.02	24	0.5	tensile force: max. 25 kN shear force: max. 200 kN	D28-06025-000
					tightening torque: 70 Nm	



# PPC bolt, long



Bauart geprüft

- Highest clamping force with large stroke. Polygon expansion elements are full-faced, force-locked, and exactly self-centring, thereby reducing the surface load
- Self-locking
- Easy on materials
- Straightforward, fast and safe handling
- Low susceptibility to dirt
- DEMMELER system lock for DEMMELER power screwdriver for inserting and tightening as well as loosening and pulling
- With marking grooves for DEMMELER power screwdriver
- High-quality hardened steel, maximum precision thanks to grinding
- O-ring prevents simultaneous rotation while tightening and cleans the system bore at the same time

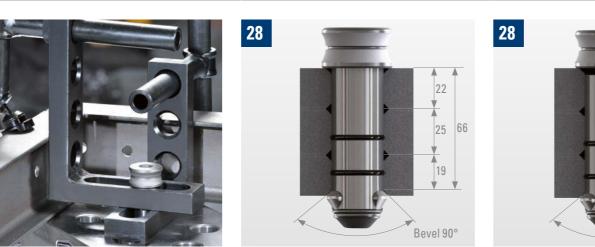




Description ▲ Application ▼

Minimum clamping range 🔻

Maximum clamping range ▼



28 25 72 25 72 22 V

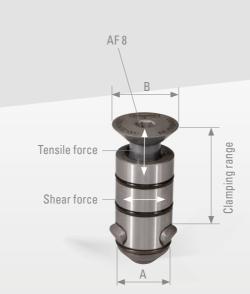
The specified loads must not be exceeded when using the clamping pins.

The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

2	Q	Clamping range	Ø A in mm	B in mm	~ Weight in kg	Design	Item no.
	.0	66-72	28-0.02	24	0.6	tensile force: max. 25 kN shear force: max. 200 kN	D28-06026-000
						tightening torque: 70 Nm	

# PPC countersunk head bolt, short

- Made especially for Demmeler power screwdriver
- Used for simultaneous clamping of two system components
- Easy, comfortable clamping through optimised force distribution in the expansion segments
- Minimal susceptibility to dirt due to polygon shape
- Standard with Demmeler for a long service life: high-strength, hardened and ground
- With optimum force distribution, Demmeler opens up a new dimension of application possibilities
- Countersunk head bolts may only be used in bores but not in oblong holes





European patent No.2569548

Description ▲ Application ▼

Minimum clamping range 🔻

Maximum clamping range ▼









The specified loads must not be exceeded when using the clamping pins.

The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

28 Clamping range	Ø A in mm	Ø B in mm	~ Weight in kg	Design	Item no.
41-47	28-0.02	32	0.3	tensile force: max. 10 kN shear force: max. 200 kN tightening torque: 50 Nm	D28-06027-000



### PPC-countersunk bolt, long



- Made especially for Demmeler power screwdriver
- Used for simultaneous clamping of two system components
- Connecting element for all system components on tables, perforated plates etc. or for special fixtures
- Easy, comfortable clamping through optimised force
- distribution in the expansion segments
- Minimal susceptibility to dirt due to polygon shape
- Standard with Demmeler for a long service life: highstrength, hardened and ground
- With optimum force distribution, Demmeler opens up a new dimension of application possibilities
- Countersunk head bolts may only be used in bores but not in oblong holes





Description 🔺

Minimum clamping range 🔻

Maximum clamping range ▼









The specified loads must not be exceeded when using the clamping pins.

The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

28	Clamping range	Ø A in mm	ØB in mm	~ Weight in kg	Design	Item no.
20	66-72	28-0.02	32	0.6	tensile force: max. 10 kN shear force: max. 200 kN	D28-06028-000
					tightening torque: 50 Nm	

#### PC-bolt, short





- · Connecting element for all system components on tables, perforated plates etc. or for special fixtures
- Very fast connection with simultaneous large stroke
- Very high clamping force due to planetary gear effect and by avoiding a double thread
- · Force-fit and form-fitting, O-ring for self-centring connection
- · With clamping range



The specified loads must not be exceeded when using the clamping pins. The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

#### Description ▲ Our ideas ▼

#### Minimum clamping range 🔻

#### Maximum clamping range ▼

tightening torque: 70 Nm



- · Highest clamping force with large stroke using Allen key with double hexagonal AF 14 or with torque wrench
- Ergonomically shaped bolt head with recessed grip for fast one-hand operation
- High-quality hardened steel, maximum precision thanks to grinding
- O-rings prevent simultaneous rotation while tightening and clean the system bore at the same time
- 5 clamping balls, mechanically secured against falling out, to ensure even clamping





28	Clamping range	Ø A in mm	B in mm	~ Weight in kg	Design	Item no.
20	41-47	28-0.02	20	0.40	tensile force: max. 25 kN	D28-06001-000
					shear force: max 200 kN	

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### PC-bolt, long







- · Connecting element for all system components on tables, perforated plates etc. or for special fixtures
- Very fast connection with simultaneous large stroke
- Very high clamping force due to planetary gear effect and by avoiding a double thread
- Force-fit and form-fitting, O-ring for self-centring connection
- · With clamping range



The specified loads must not be exceeded when using the clamping pins. The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

#### Description ▲ Functional principle ▼

Minimum clamping range 🔻

Maximum clamping range 🔻

Turning the ergonomically shaped bolt head causes the balls of the patented PC-bolt to make point contact with the bevel on the underside of the worktable. Continued turning clamps the original DEMMELER PC-bolt.





28	Clamping range	Ø A in mm	B in mm	~ Weight in kg	Design	Item no.
20	63-72	28-0.02	20	0.50	tensile force: max. 25 kN	D28-06002-000

shear force: max. 200 kN

tightening torque: 70 Nm

Power screwdriver with quick-change coupling for the PPC bolt





### The power screwdriver including accessory package

- Cordless impact screwdriver with defined torque, including exchangeable lithium-ion battery and charger
- Quick-change coupling to hold the PPC bolts and accessories
- Socket for tightening and loosening the short boring spindles of screw clamps etc., fits quick-change coupling
- Cleaning plate Ø 125 mm for fast cleaning of the tabletop, adapter fits quick-change coupling
- $\bullet$  Round brush attachment Ø 28 mm for efficient cleaning of the system bores, fits quick-change coupling
- Practical carrying case for all accessories

Quantity	Description	Item no.
1	Cordless screwdriver (incl. 1 charger + 2 batteries)	00072273
1	Round brush attachment Ø28*	D28-10002-001
1	Fast connector for PPC bolts*	00105155
1	Socket adapter AF 14 to AF 13*	00074097
1	Cleaning plate Ø125*	00074053
1	Plastic case*	00072479
1	3M Velour polishing pad Ø127*	00082427
1	Fast assembling set, complete*	00066667

<sup>\*</sup> Only available in the set

Description ▲ Application ▼



#### **Application ▼**









28

Quantity

Design

Item no.

Power screwdriver D28-13050-000



### PC-countersunk bolt, short



Bauart geprüft

- Countersunk bolt head (no interfering edges)Only for connecting bores (no oblong holes)
- Clamping by means of Allen key AF 8 or torque wrench
- Countersunk head bolts may only be used in bores but not in oblong holes



The specified loads must not be exceeded when using the clamping pins. The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

**Description** ▲ **Application** ▼

Minimum clamping range ▼

Maximum clamping range ▼









28	Clamping range
20	41-47

Ø A in mm 28-0.02

31.6

~ Weight in kg 0.25

ensile force: max	. 10	k٨
shear force: max.	200	k١
ightening torque.	50	Nm

Item no. D28-06004-000

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### PC-countersunk bolt, long



**Bauart** geprüft



- Only for connecting bores (no oblong holes)
- Clamping by means of Allen key AF 8 or torque wrench
- For simultaneous clamping of two system components on top of each other on the worktable
- Countersunk head bolts may only be used in bores but not in oblong holes



28

66

22

25

19

Bevel 90°

The specified loads must not be exceeded when using the clamping pins. The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

#### Description 🔺

#### Minimum clamping range 🔻

#### Maximum clamping range 🔻





28	Clamping range	Ø A in mm	Ø B in mm	~ Weight in kg	Design	Item no.
20	66-72	28-0.02	31.6	0.36	tensile force: max. 10 kN	D28-06005-000

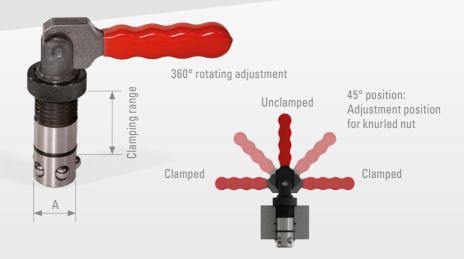
shear force: max. 200 kN

tightening torque: 50 Nm



### FCP-bolts with handle

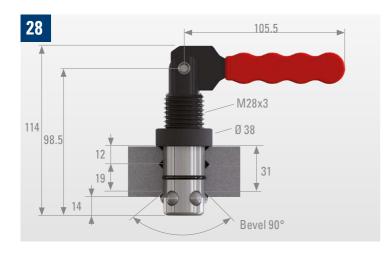
- Connecting element for all system components on tables, perforated plates etc. or for special fixtures
- Defined adjustment position and optimum implementation to ensure constant maximum clamping force
- High closing and shear force
- Used without additional tools
- For quick clamping of the system components

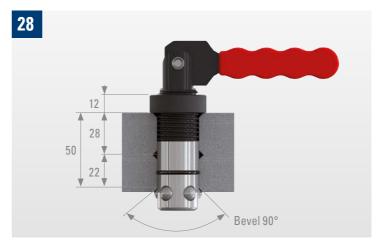


Description 🔺

Minimum clamping range ▼

Maximum clamping range 🔻





28	Clamping range	Ø A in mm	~ Weight in kg	Item no.
20	31 - 50	28-0.01	0.62	D28-06007-000



# ECOLine bolt, short



- Connecting element for system components
   For clamping one system component on the worktable or to connect 2 system components
- Simple version without clamping range



Description 🔺

Clamping range, minimum 🔻

Clamping range, maximum 🔻





28	Clamping range	Ø A in mm	B in mm	~ Weight in kg	Item no.
20	41-44	28 -0.02	20	0.44	E28-06001-000

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# Stop and positioning bolts

- For marking the system components
   For fixation e.g. of blocks and stops, cost-effective replacement for a second clamping pin
- Blackened
- Also suitable as adapter for system 16 screw clamps thanks to D16 system bore in the head



Description 🔺

Application **V** 



28	Ø A in mm	Ø B in mm	C in mm	D in mm	~ Weight in kg	Item no.
20	28	40	74	23	0.4	D28-06009-000



#### Connection bolt, short with screw

### Connecting bolt, long with screw



- For use as long-term connection
- With self-centring countersunk head on both sides
- Suitable for system bores
- Clamping with Allen key AF 10
- Ideal for connecting worktables with U-spacers etc.
- Blackened



- For use as long-term connection
- With self-centring countersunk head on both sides
- Suitable for system bores
- Clamping with Allen key AF 10
- For connecting three system components or two system components on the worktable
- Blackened



#### Description ▲ Application ▼



28	A in mm	Ø B in mm	~ Weight in kg	Item no.
20	35.5	28	0.18	D28-06003-000

28	A in mm	Ø B in mm	~ Weight in kg	Item no.
20	60	28	0.26	D28-06006-000



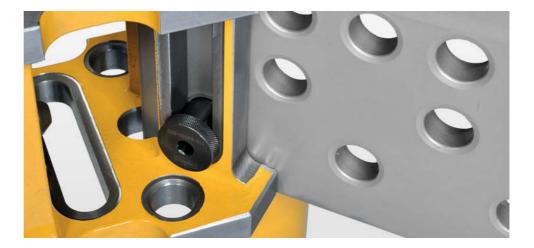
# Connecting bolt, short with collar

- For use as long-term connection
   For connecting two system components
   Suitable for system bore / oblong hole
   Clamping with Allen key AF 10



Description 🔺

Application **V** 



28	A in mm	Ø B in mm	C in mm	~ Weight in kg	Item no.
20	35	28	10	0.26	D28-06003-003



# Adapter for PC-bolt D16 to D28



- Interface between system D28 and D16
   Fully compatible with system D28 and D16
   Force-fit and form-fitting with 0-ring, self-centring connection
- 0-ring prevents simultaneous rotation while tightening
- O-ring cleans the system bore



#### Description ▲ Application ▼



#### Application ▼



#### Application abla



Adapter for PC-bolt D28 to D16

28	Ø A in mm	B in mm	~ Weight in kg	Item no.
20	20.5	28-0.02	0.05	D00-06010-002

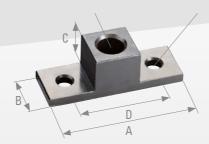


# Reduction plate for clamping tubes D28 to D16 / D22 to D28

• Interface between system 28 and system 16 or system 28 and system 22

System bore D28

System bore D16 or D22



#### Description ▲ Application ▼



Reduction plate for clamping tubes D28 to D16

A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
150	50	50	100	1.04	D00-06015-000

Reduction plate for clamping tubes D22 to D28

A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
150	50	50	100	1.2	D00-06015-001



# Spacer block overview

Spacer block U-form Steel

**PAGE 196** 



**PAGE 198** 



**PAGE 199** 



Spacer block C-form Aluminium-titanium

PAGE 200



Spacer block C-form Steel

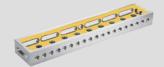
PAGE 201



28 Spacer block L-form

PAGE 202







28 Connection angle

PAGE 203



PAGE 204

Console
Aluminium-titanium

PAGE 205







Console
Aluminium-titanium

PAGE 206

Cast iron

PAGE 207

Corner module, aluminium-titanium

PAGE 208











#### 28 Clamping track





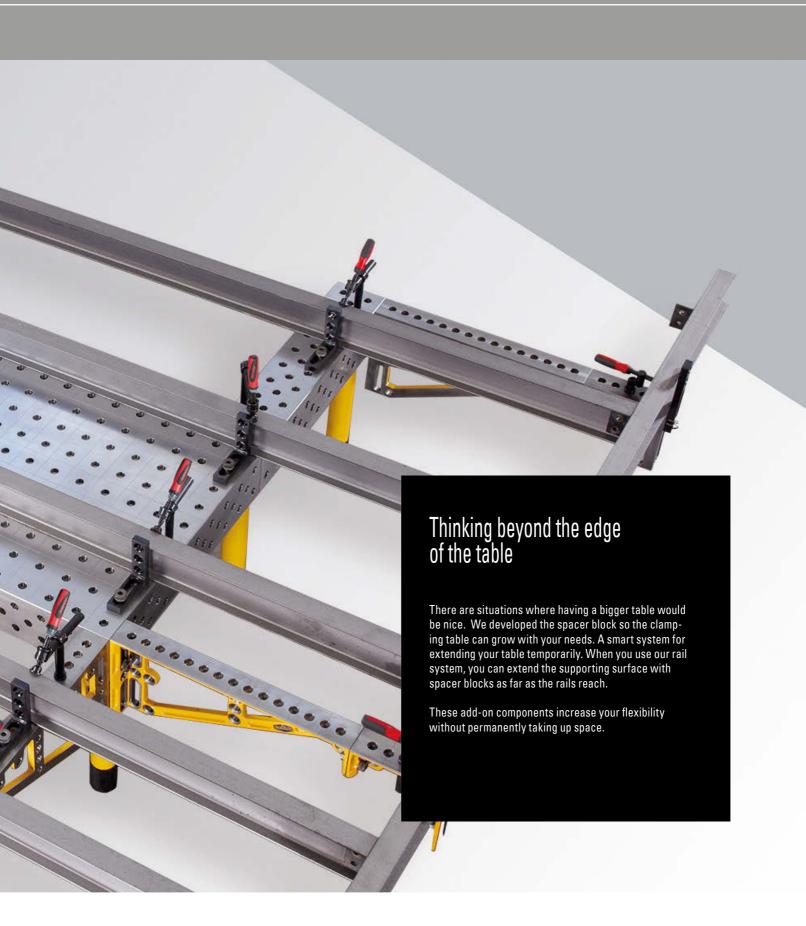
# Spacer block

Setup with spacer block





Setup with spacer block



# Spacer block U-form, steel

28					Face sides Diagonal grid	Face sides Diagonal grid hardened	Face sides Bore/oblong hole	Face sides Bore/oblong hole hardened
A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.	Item no.	Item no.	Item no.
500	200	200	55	Diagonal grid 100x100	D28-04002-000	D28-04002-500	P28-04002-000	P28-04002-500
1000	200	200	102	Diagonal grid 100x100	D28-04002-001	D28-04002-501	P28-04002-001	P28-04002-501
1200	200	200	120	Diagonal grid 100x100	D28-04002-018	D28-04002-518	P28-04002-018	P28-04002-518
1500	200	200	150	Diagonal grid 100x100	D28-04002-002	D28-04002-502	P28-04002-002	P28-04002-502
2000	200	200	200	Diagonal grid 100x100	D28-04002-003	D28-04002-503	P28-04002-003	P28-04002-503
2400	200	200	235	Diagonal grid 100x100	D28-04002-032	D28-04002-532	P28-04002-032	P28-04002-532
3000	200	200	285	Diagonal grid 100x100	D28-04002-004	D28-04002-504	P28-04002-004	P28-04002-504
4000	200	200	374	Diagonal grid 100x100	D28-04002-005	D28-04002-505	P28-04002-005	P28-04002-505
500	400	200	81	Diagonal grid 100x100	D28-04002-211	D28-04002-511	P28-04002-211	P28-04002-511
1000	400	200	149	Diagonal grid 100x100	D28-04002-222	D28-04002-522	P28-04002-222	P28-04002-522
1200	400	200	174	Diagonal grid 100x100	D28-04002-223	D28-04002-523	P28-04002-223	P28-04002-523
1500	400	200	215	Diagonal grid 100x100	D28-04002-224	D28-04002-524	P28-04002-224	P28-04002-524
2000	400	200	272	Diagonal grid 100x100	D28-04002-225	D28-04002-525	P28-04002-225	P28-04002-525
2400	400	200	320	Diagonal grid 100x100	D28-04002-226	D28-04002-526	P28-04002-226	P28-04002-526
3000	400	200	400	Diagonal grid 100x100	D28-04002-227	D28-04002-527	P28-04002-227	P28-04002-527
4000	400	200	526	Diagonal grid 100x100	D28-04002-228	D28-04002-528	P28-04002-228	P28-04002-528
Other din	nensions or	n request						



- Optimum application on rail system (page 148) in combination with D00-10017-xxx (page 156-157). Also to build a frame using D28-06003-000 connecting bolts
- For use as a table extension; length 1 m and up, option to mount additional PL28-10010-xxx supporting leg in combination with 00060364 or 00060369 mounting plate
- Application: 5-sided
- Bore spacing for fitted shoulder screws, bottom, matched to base rail width 1000, 2000, 3000 and 4000
- Spacer blocks with hardened surfaces are protected against weld spatter adhesion, thus reducing wear







Both face sides 200 x 200 mm with diagonal grid



Optional both face sides 200 x 200 mm with bore / oblong hole



open side

Both face sides 400 x 200 mm with diagonal grid



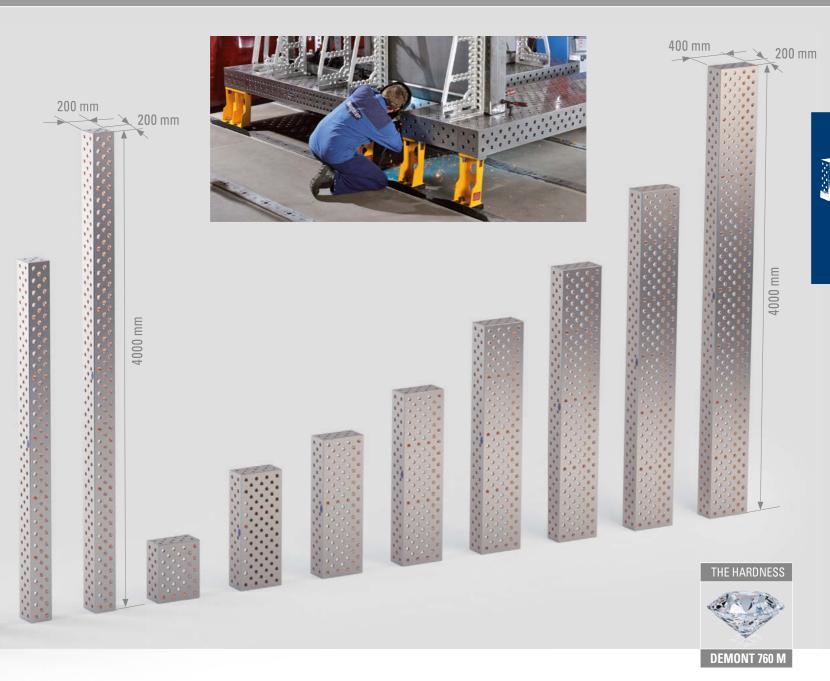
Open side

Optionally both face sides 400 x 200 mm with bore/oblong hole





# Spacer block U-form, steel



Fitted bores with M12 thread to attach the D00-10017-xxx\*1 table legs (see figure above) or the 00060364 / 00060369 mounting plate with fitted shoulder screws

\*1 see page 156-157





### Spacer block U-form, aluminium-titanium

- Optimum application on rail system (page 148) in combination with D00-10017-xxx (page 156-157). Also to build a frame (see figure to the right) using D28-06003-000 connecting bolts
- For use as a table extension
  Option to mount Option to mount additional PL28-10010-xxx supporting leg in combination with 00060364 mounting plate
- Application: 5-sided
- Bore spacing for fitted shoulder screws, bottom, matched to base rail width 1000 (for length of 1000 mm)
- With grid lines



#### Description ▲ ▼

Fitted bores with M12 thread to attach the table legs for spacer block / shifting foot PL28-10017-xxx\*1 or the 00060364 mounting plate with fitted shoulder screws

\*1 see page 156-157

#### Application \



28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	500	200	200	20	Diagonal grid 100x100	D28-04002-270
	1000	200	200	35	Diagonal grid 100x100	D28-04002-271

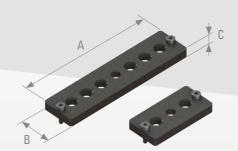


# Mounting plate for spacer block U-form

- Mounting plate for spacer block U-form D28-04002-xxx
- For supporting leg attachment PL28-10010-xxx from 1 m length
- incl. 2x fitted shoulder screws M12-16 H8x30

2x fitted bores for fitted shoulder screws

Bore for supporting leg PL28-10010-xxx (page 100) Other bores are D28 system bores





Description 🔺

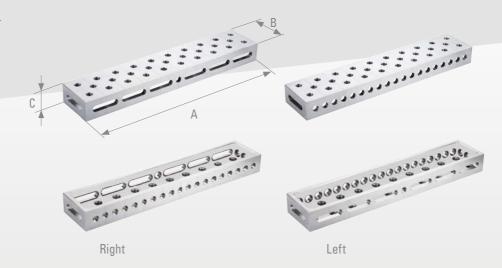
Application ▼



28	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
20	200	100	25	3.6	00060364
	400	100	25	7	00060369

# Spacer block C-form, aluminium-titanium

- High-strength aluminium-titanium alloy for approx. 60 % weight reduction
- Approx. 10 % higher bending strength compared to cast iron
- Table extension between two 3D worktables with the help of D28-06003-000 connecting bolts, permanent screw connection
- Connection of system components
- As table stop
- Continuously adjustable with oblong holes
- Application: 5-sided
- With grid lines



Description 🔺

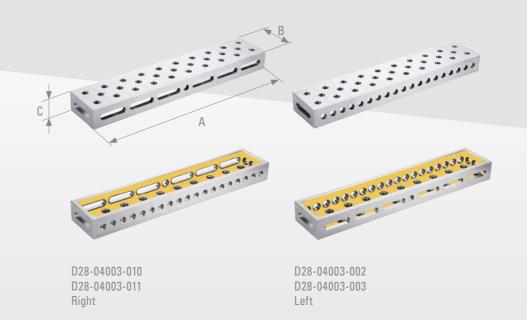
28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	500	200	100	11	Diagonal grid 100x100, left	D28-04003-024
	500	200	100	11	Diagonal grid 100x100, right	D28-04003-025
	1000	200	100	19	Diagonal grid 100x100, left	D28-04003-026
	1000	200	100	19	Diagonal grid 100x100, right	D28-04003-027



# Spacer block C-form, steel

### With grid lines

- Table extension between two 3D worktables with the help of D28-06003-000 connecting bolts,
- permanent screw connection
- Connection of system components
- As table stop
- Continuously adjustable with oblong holes
- Application: 5-sided
- With grid lines

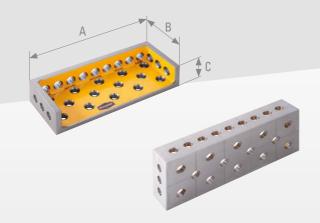


Description 🔺

28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	500	200	100	31	Right	D28-04003-010
	500	200	100	31	Left	D28-04003-002
	1000	200	100	58	Right	D28-04003-011
	1000	200	100	58	Left	D28-04003-003

# Spacer block L-form

- Table extension / table connection several 3D worktables
- Third axis for expansion as clamping tower or laterally as exact table stop
- Connection of system components Application: 4-sided
- Approx. 25 kg per 500 mmWith grid lines



#### Description 🔺 Application



#### Application ▼

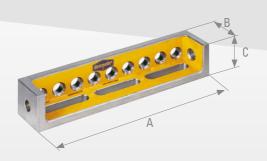


28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	500	200	100	26	Diagonal grid 100x100	D28-04001-000
	1000	200	100	52	Diagonal grid 100x100	D28-04001-001



### Connection angle

- Used as a bridge between clamping and locating angles or 3D worktables
- As stop-strip or table expansion, 4-sided application
- For use in confined available space
- Numerous application possibilities with system bores and oblong holes
- With grid lines





Description 🔺

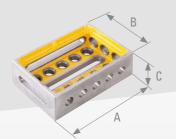
Application ▼



28	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
20	500	100	100	15	D28-04004-000

### Consoles, cast iron

- Five full clamping sides with system bores result in numerous application possibilities
- As connecting elements between various system components
- Highly versatile in combination
- Through system bore
   Through system bore
   Variable displacement with oblong hole
   Of one piece for high stability and durability
   Use as console or extension
- Powder-coated
- With grid lines





Right



Left



Description 🔺

Application ▼



28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	300	200	100	16.00	Right	D28-03005-001
	300	200	100	16.00	Left	D28-03005-004



### Console, aluminium-titanium

### Higher strength with less weight

- High-strength aluminium-titanium alloy for approx. 60 % weight reduction and approx. 10 % higher bending strength compared to cast iron
- Five full clamping sides enable numerous clamping possibilities
- Variable displacement with oblong holes
- Anodised





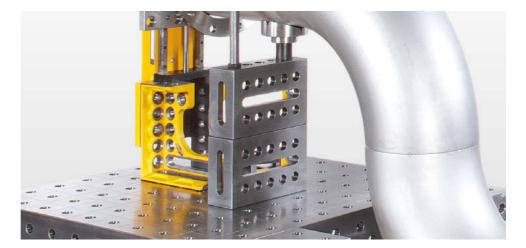






Description 🔺

Application  $\blacktriangledown$ 



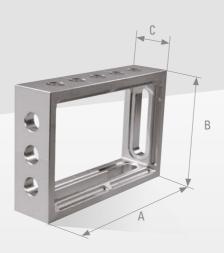
28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	300	200	100	5.80	Right	D28-03005-011
	300	200	100	5.80	Left	D28-03005-012





### Console, aluminium-titanium

Console in high-strength aluminium-titanium alloy, 4-sided application, 6 sides machined, with oblong hole as well as grid bores both in X-Y direction. Extremely variable. The precision scaling in the X and Y-directions meets all needs.



Description 🔺

Application **V** 

Application ▼





28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	300	200	75	3.1	Right	D28-03005-014



# Corner module, cast iron

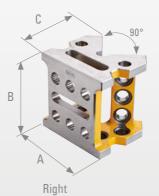
### Diagonal table expansion

- Diagonal table expansion
   Flexible in application as V-block, support, stop and more











Left

Description 🔺

Application abla



28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	200	200	170	13	Right	D28-04005-000
	200	200	170	13	Left	D28-04005-003





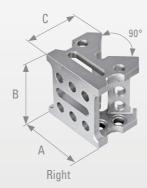
### Corner module, aluminium-titanium

#### Diagonal table expansion

- High-strength aluminium-titanium alloy for approx.
   60 % weight reduction and approx.
   10 % higher bending strength compared to cast iron
- Diagonal table expansion
- Flexible in application as V-block, support, stop and more









#### Description ▲ Application ▼



With the DEMMELER corner modules, long profiles and girders can be clamped even on smaller worktables – corner module positioned in the corner and extended with two angles. You get maximum expansion options for clamping.

28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	200	200	170	4.9	Right	D28-04005-004
	200	200	170	4.9	Left	D28-04005-005



### Clamping track

- 6 clamping sides
- 3 rows of system bores, 100 x 100 gridWith grid lines





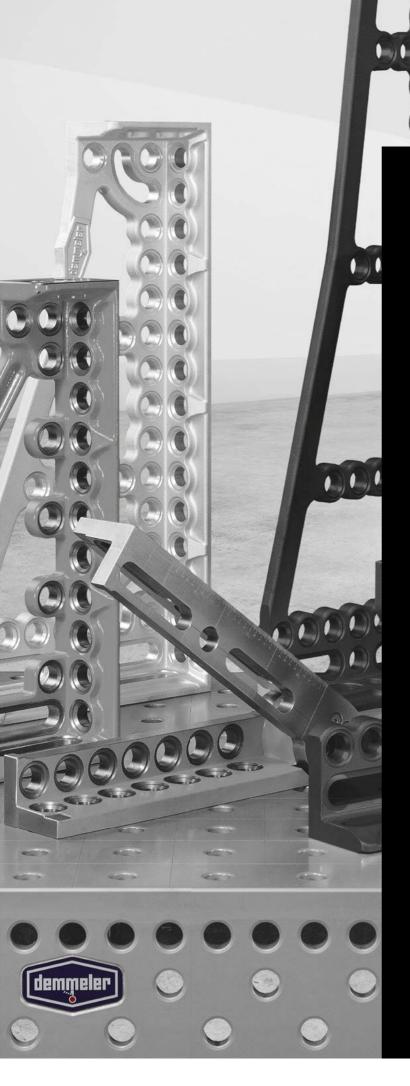
Versions ▼



28	A in mm	B in mm	~ Weight in kg	Description	Item no.
	1000	100	49	Grid 100 x 100	D28-04010-001
	2000	100	97	Grid 100 x 100	D28-04010-002
	3000	100	145	Grid 100 x 100	D28-04010-003









# Clamping and locating angle

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# Clamping and locating angle overview

PROFIPremiumLINE
Clamping and locating angle
aluminium-titanium 300

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PROFIPremiumLINE
Clamping and locating angle
aluminium-titanium 600

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PROFIPremiumLINE
Clamping and locating angle
aluminium-titanium 800

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PROFIPremiumLINE
Clamping and locating angle
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PROFIPremiumLINE
Clamping and locating angle
hardened casting 600

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PROFIPremiumLINE
Clamping and locating angle
hardened casting 800

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PROFIPIUSLINE
Clamping and locating angle
aluminium-titanium 600

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PROFIPIUSLINE
Clamping and locating angle
aluminium-titanium 800

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PROFIPIUSLINE
Clamping and locating angle
aluminium-titanium 1200

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PROFIPIUSLINE
Clamping and locating angle
hardened casting 300

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# Clamping and locating angle overview

PROFIPIUSLINE
Clamping and locating angle
hardened casting 600

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PROFIEcoLINE
Clamping angle
hardened casting 600

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Universal pivot and tilt angle aluminium-titanium

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Clamping and locating angle bore / oblong hole

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PROFIPIUSLINE
Clamping and locating angle
hardened casting 800

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PROFIEcoLINE
Clamping angle
hardened casting 800

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Clamping and locating angle small bore / bore

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Clamping and locating angle oblong hole / oblong hole

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PROFIPremiumLINE
Clamping and locating angle 2000

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Universal pivot and tilt angle, steel

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Clamping and locating angle small bore / oblong hole

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Clamping and locating angle bore / bore

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# Clamping and locating angle overview

Clamping and locating angle 200 Clamping and locating angle 300 Clamping and locating angle 300x250 bore / bore / oblong hole bore / bore / oblong hole aluminium-titanium PAGE 238 PAGE 239 PAGE 240 Angle bracket Clamping and locating angle, large Angle bracket bore / oblong hole PAGE 242 PAGE 243 PAGE 244 Flat angle trim Universal stop small Displacement stop PAGE 245 PAGE 246 PAGE 247 **EcoLINE** universal stop small **EcoLINE** universal stop large Universal stop large with precision scaling PAGE 248 PAGE 249 PAGE 250



# Clamping and locating angle overview

Universal stop large with plunger

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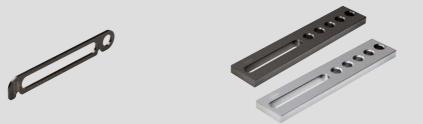
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Universal stop Large with plunger

PAGE 253

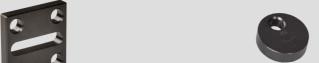
28 Contour stop 28 Stop-strip 28 Angle-setting template

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28 Adapter plate 28 Locating disk

PAGE 257 PAGE 258



PP \( \Sigma \) PE = 100% compatible

Thus, for example, a PP angle can be used on a PE table.

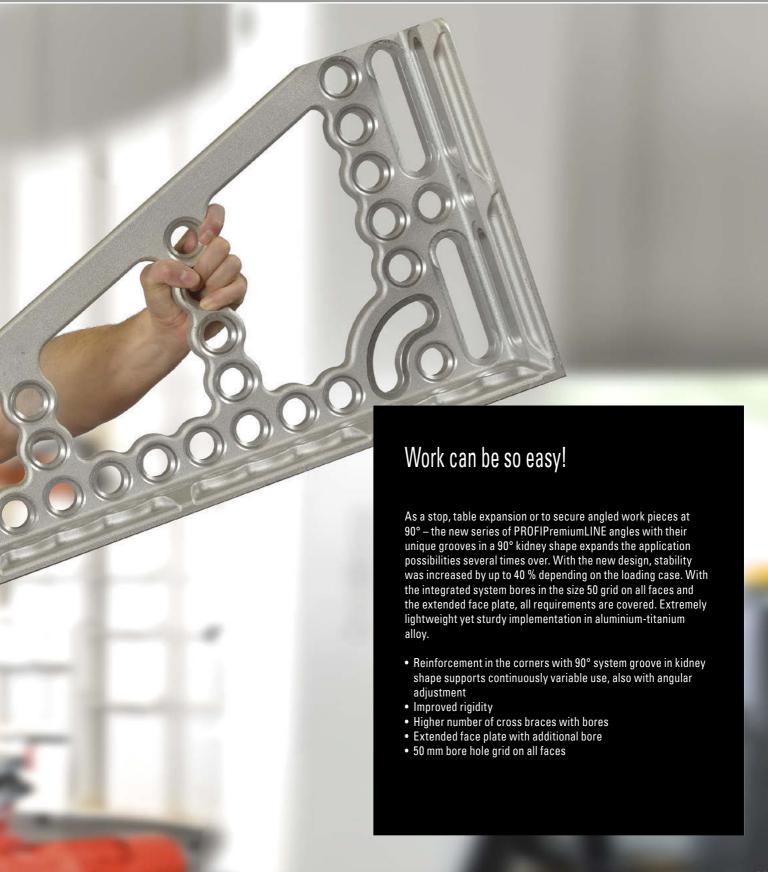


# Clamping and locating angle

Work can be so easy!

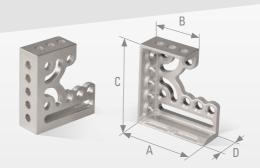






### PROFIPremiumLINE

- Reinforcement in the corners with 90° system groove in kidney shape supports continuously variable use, also with angular adjustment
- 40% better rigidity
- Extended face plate with additional bore
- 50 mm bore hole grid on all faces
- 4 stop faces / usable surfaces
- D28 bore hole grid with 50 mm spacing
- 2x system groove 200 mm
- 2x system groove in 90° kidney shape
- · With precision scaling
- Anodised



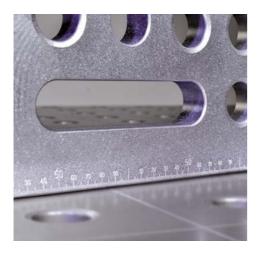
Right P28-03002-002

P28-03002-003

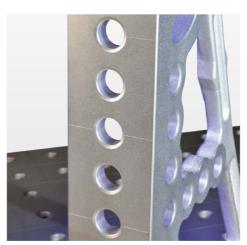
#### Description ▲ Application ▼

### Application ▼

#### Protective countersink ▼



1 mm precision scaling



With grid lines



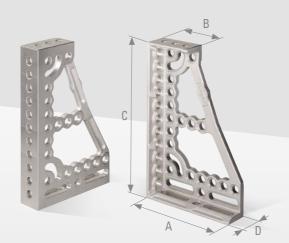
Optimum bolt and clamp insertion with simultaneous protection of the tabletop against damage from materials, even in case of extreme strain on the system bore or when used with aluminium.

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	275	180	300	100	5	Right	P28-03002-002
	275	180	300	100	5	Left	P28-03002-003



### PROFIPremiumLINE

- Reinforcement in the corners with 90° system groove in kidney shape supports continuously variable use, also with angular adjustment
- 40% better rigidity
- Higher number of cross braces with bores
- Extended face plate with additional bore
- 50 mm bore hole grid on all faces
- 4 stop faces / usable surfaces
- D28 bore hole grid with 50 mm spacing
- 4x system groove 100 mm
- 2x system groove in 90° kidney shape
- With precision scaling
- Anodised





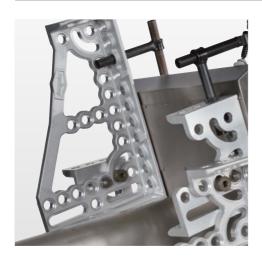
Right P28-03003-002

P28-03003-003

### Description ▲ Application ▼

### Application ▼

#### Application \





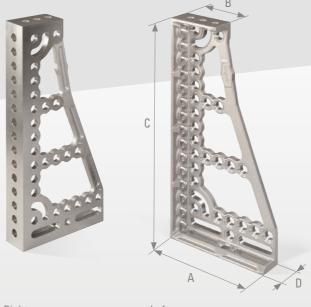


28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	375	180	600	100	9.3	Right	P28-03003-002
	375	180	600	100	9.3	Left	P28-03003-003

219

# PROFIPremiumLINE

- Reinforcement in the corners with 90° system groove in kidney shape supports continuously variable use, also with angular adjustment
- 40% better rigidity
- Higher number of cross braces with bores
- Extended face plate with additional bore
- 50 mm bore hole grid on all faces
- 4 stop faces / usable surfaces
- D28 bore hole grid with 50 mm spacing
- 4x system groove 100 mm
- 2x system groove in 90° kidney shape
- With precision scaling
- Anodised



Right P28-03004-000

Left P28-03004-001

### Description 🛦







28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	375	180	800	100	11.5	Right	P28-03004-000
	375	180	800	100	11.5	Left	P28-03004-001



### PROFIPremiumLINE

- Reinforcement in the corners with 90° system groove in kidney shape supports continuously variable use, also with angular adjustment
- 40% better rigidity
- Higher number of cross braces with bores
- Extended face plate with additional bore
- 50 mm bore hole grid on all faces
- 4 stop faces / usable surfaces
- D28 bore hole grid with 50 mm spacing
- 4x system groove 100 mm
- 2x system groove in 90° kidney shape
- · With precision scaling
- Anodised



### Description ▲ Application ▼

### Application ▼





28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	375	180	1200	100	15.3	Right	P28-03009-000
	375	180	1200	100	15.3	Left	P28-03009-001

221

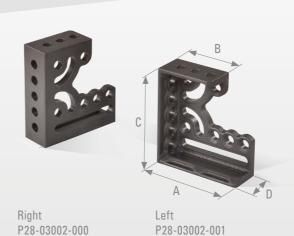
Clamping and locating angle hardened casting 300

# PROFIPremiumLINE



As a stop, table expansion or to secure angled work pieces at 90° – the new generation of PROFIPremiumLINE angles with their unique grooves in a 90° kidney shape expands the a pplication possibilities several times over. With the new design, stability was increased by up to 40 % depending on the loading case.

With the integrated system bores in the size 50 grid on all faces and the extended face plate, all requirements are covered. High-quality casting material available in DEMONT 760 M. With precision scaling.



Description 🔺



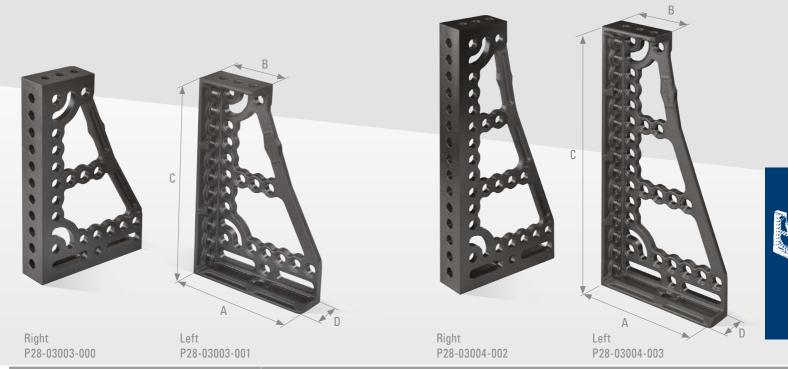
28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	275	180	300	100	13.3	Right	P28-03002-000
	275	180	300	100	13.3	Left	P28-03002-001



Clamping and locating angle casting hardened 600

Clamping and locating angle hardened casting 800

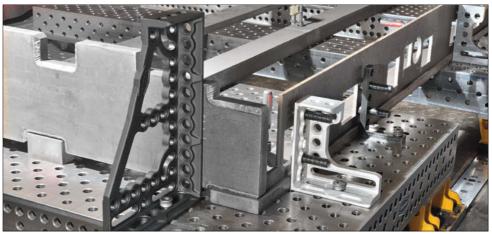
# PROFIPremiumLINE



### Application ▼

### Application ▼





### Clamping and locating angle 600

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	375	180	600	100	25	Right	P28-03003-000
	375	180	600	100	25	Left	P28-03003-001

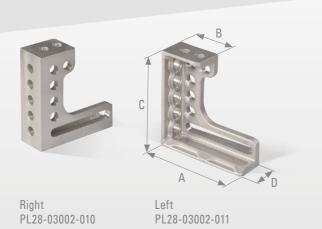
#### Clamping and locating angle 800

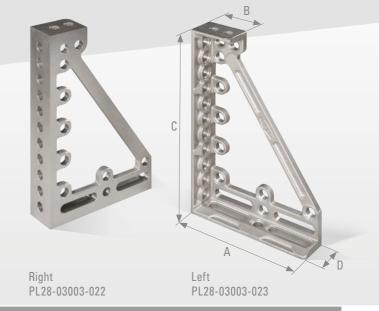
	1 0	0 0					
28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	375	180	800	100	30.7	Right	P28-03004-002
	375	180	800	100	30.7	Left	P28-03004-003

Clamping and locating angle aluminium-titanium 600

### **PROFIPIUSLINE**

- High-strength aluminium-titanium alloy for ~ 60 % weight reduction and ~ 10 % higher bending strength
- Very easy to handle compared to cast iron
- Ordering in pairs (left and right) is recommended
- With precision scaling
- Anodised





#### **Description** ▲ **Application** ▼

Application ▼





Clamping and locating angle aluminium-titanium 300

20	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	275	130	300	100	4.2	Right	PL28-03002-010
	275	130	300	100	4.2	Left	PL28-03002-011

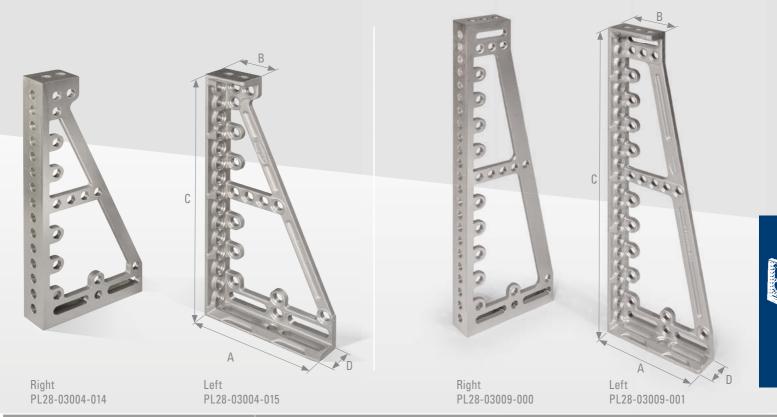
Clamping and locating angle aluminium-titanium 600

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	375	130	600	100	7.5	Right	PL28-03003-022
	375	130	600	100	7.5	Left	PL28-03003-023



Clamping and locating angle aluminium-titanium 1200

# PROFIPIusLINE



### Application ▼

### Application ▼





#### Clamping and locating angle aluminium-titanium 800

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	375	130	800	100	9.5	Right	PL28-03004-014
	375	130	800	100	9.5	Left	PL28-03004-015

#### Clamping and locating angle aluminium-titanium 1200

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	375	130	1200	100	14	Right	PL28-03009-000
	375	130	1200	100	14	Left	PL28-03009-001

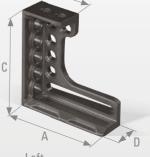
Clamping and locating angle hardened casting 300

### **PROFIPIUSLINE**



- · Continuous adjustment and locking
- Three full clamping sides with system bores
- · With oblong holes for continuous adjustment
- Incl. precision scaling to adjust the stop dimensions
- Improved sliding behaviour through the combination of cast iron on steel
- · Grid lines reduce the setup time
- · With face plate for additional superstructures
- · Hardened casting: ultimate stability and ductility
- For use e.g. as a tall stop or table extension
- Ordering in pairs is recommended
- with precision scaling and clamping strip
- With grid lines





Right PL28-03002-000

Left PL28-03002-001

### Description 🔺

### Application ▼



#### Clamping and locating angle 300

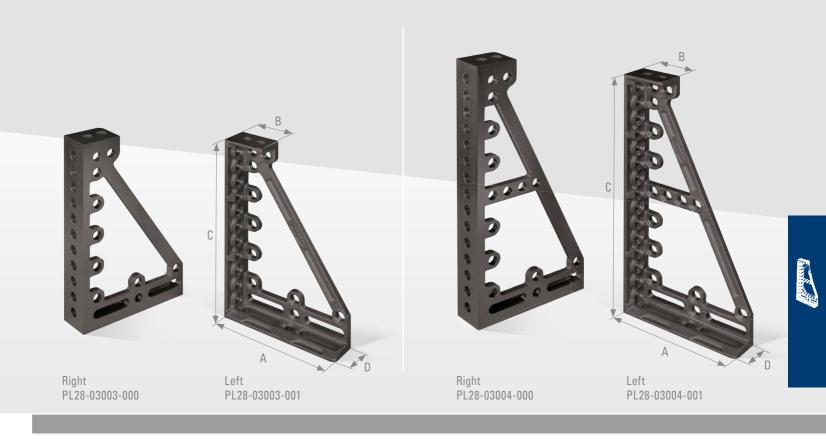
28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	275	130	300	100	11.4	Right	PL28-03002-000
	275	130	300	100	11.4	Left	PL28-03002-001



Clamping and locating angle casting hardened 600

Clamping and locating angle casting hardened 800

# PROFIPIusLINE



### Clamping and locating angle 600

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	375	130	600	100	19.9	Right	PL28-03003-000
	375	130	600	100	19.9	Left	PL28-03003-001

### Clamping and locating angle 800

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	375	130	800	100	24.5	Right	PL28-03004-000
	375	130	800	100	24.5	Left	PL28-03004-001

Clamping and locating angle 2000

# PROFIPremiumLINE

For very large and heavy applications, extremely sturdy version with system bores on all sides in double 100 size grid.

### Description ▲ Application ▼





28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
20	600	200	2000	200	272	D28-50099-008

Other dimensions on request



Clamping and locating angle hardened casting 600

Clamping and locating angle casting hardened 800



**PROFIEcoLINE** 



### **Description** ▼

- ECO series Reduced to the essentials, yet tremendously flexible. Designed
  for all common stop and clamping applications with system bores in a size
  50 grid and 3 usable stop faces, yet truly affordable. The solution for anyone
  who just doesn't need more.
- Hardened casting
- Cost-effective version
- Three supporting surfaces
- With precision scaling
- In the face plate

#### PROFIEcoLINE clamping and locating angle hardened casting 600

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	275	190	600	80	19	Right	PE28-03003-000
	275	190	600	80	19	Left	PE28-03003-001

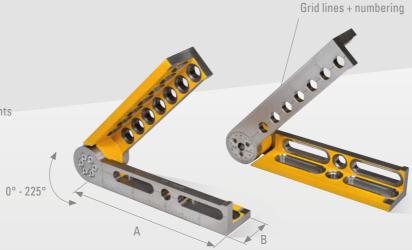
#### PROFIEcoLINE clamping and locating angle hardened casting 800

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	275	190	800	80	24	Right	PE28-03004-000
	275	190	800	80	24	Left	PE28-03004-001

# Universal pivot and tilt angle

### Continuous tilt from 0° to 225°

- Continuously adjustable from 0° to 225° with precision scaling
- Hydromechanical clamping:
  - >> absolutely maintenance-free
  - >> Holding force up to 1600 Nm torque
- Can be combined with other system components
- · Horizontal and vertical use possible
- Powder-coated
- With precision scaling

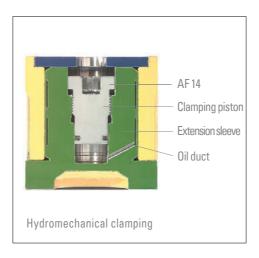


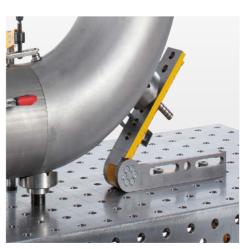
Right D28-03007-000

Left D28-03007-003

Description 🔺

Sectional view ▼





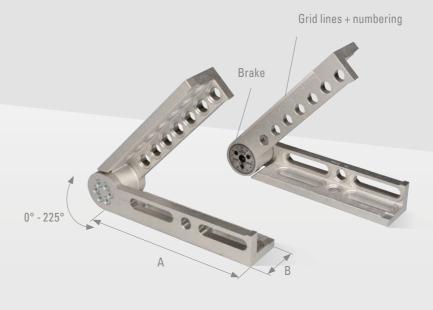
28 Air	n mm	B in mm	~ Weight in kg	Description	Item no.
425	)	100	22	Right	D28-03007-000
425		100	22	Left	D28-03007-003



# Universal pivot and tilt angle aluminium-titanium

### Continuous tilt from 0° to 225°

- High-strength aluminium-titanium alloy for approx.
   60 % weight reduction and approx.
   10 % higher bending strength compared to cast iron
- Continuously adjustable from 0° to 225° with precision scaling
- Hydromechanical clamping:
   >> absolutely maintenance-free
   >> Holding force up to 1600 Nm torque
- Can be combined with other system components
- Horizontal and vertical use possible
- Anodised
- With precision scaling





Left D28-03007-005

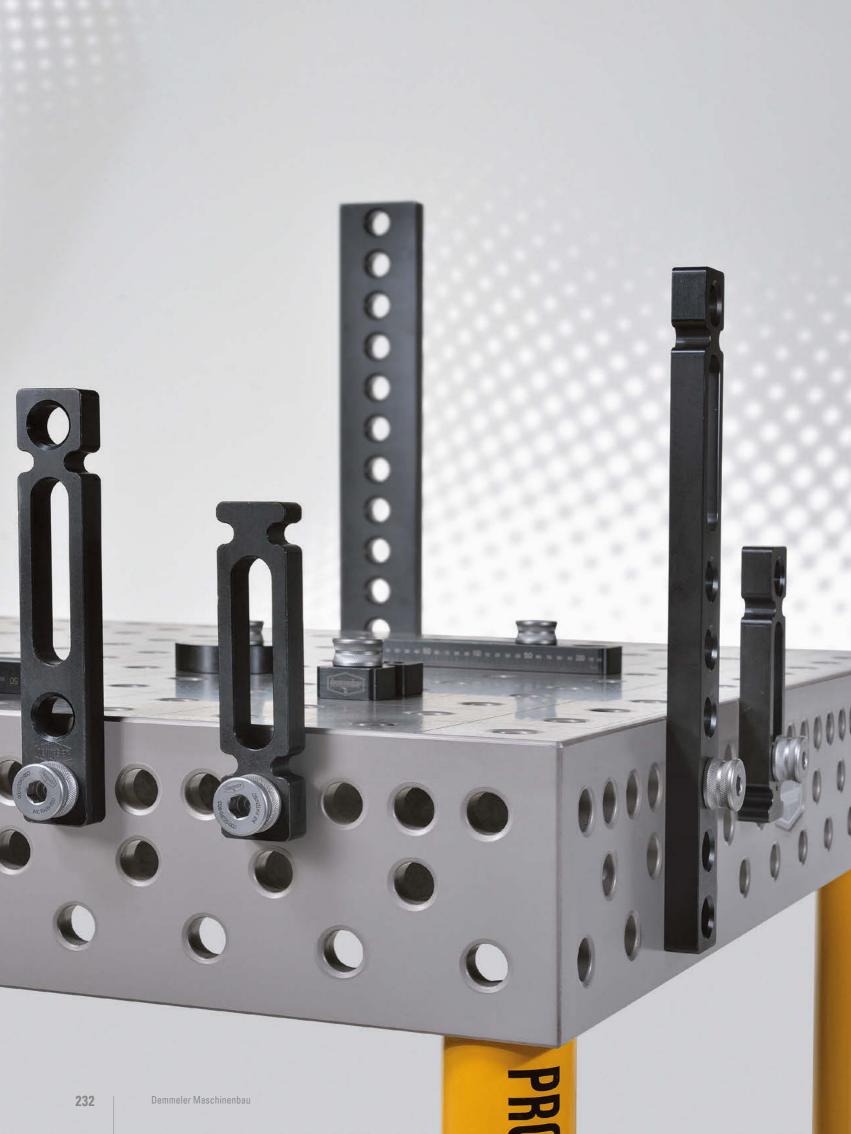
### Description ▲ Application ▼







28	A in mm	B in mm	~ Weight in kg	Description	Item no.
20	425	100	9	Right	D28-03007-004
	425	100	9	Left	D28-03007-005



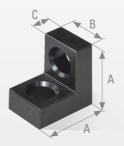


# Clamping and locating angle small bore / bore



PROFIPIusLINE

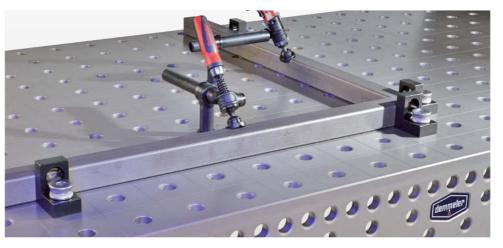
- Ideal for confined spaces
   Continuously adjustable support surfaces e.g. in combination with D28-03001-003 (page 236)
- Steel, hardened





### Description ▲ Application ▼





28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	75	50	25	0.98	Steel, hardened	D28-03001-008

Clamping and locating angle small bore / oblong hole

# PROFIPIusLINE



- Dimension adjustment using grid lines
- on 3D worktable possible

  Continuous adjustment and locking via oblong hole
- Ideal for confined spaces
- Combination bore / oblong hole
- Steel, hardened
- · Precision scaling on both sides



Description 🔺







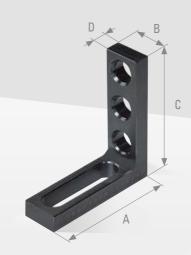
28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	175	50	75	25	1.40	Steel, hardened	D28-03001-005



# Clamping and locating angle bore / oblong hole

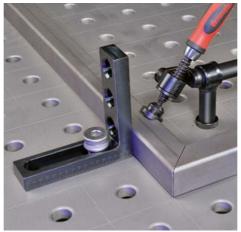
# PROFIPIusLINE

- Combination system bores / oblong hole for numerous clamping possibilities
- · Hardened casting
- Two full angle surfaces, therefore can be used from both sides
- Dimension adjustment using grid lines on 3D worktable possible
- Compatible with all clamping and locating angles so that the oblong hole can be used to form a height-adjustable support
- Precision scaling on both sides



### Description ▲ Application ▼







Two full angle surfaces - therefore usable on both sides

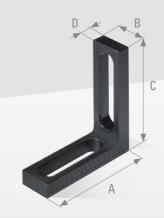
28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	175	50	175	25	1.8	Hardened casting	PE28-03001-000

Clamping and locating angle oblong hole / oblong hole

# PROFIPIusLINE



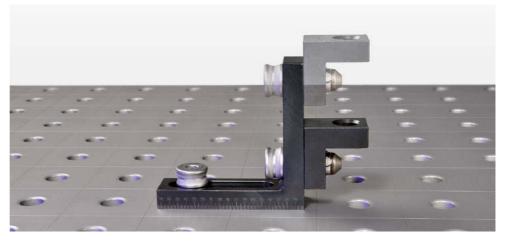
- Dimension adjustment using grid lines on 3D worktable possible
- Continuous adjustment and locking
- Ideal for confined spaces
- Hardened casting
- Precision scaling on both sides



### Description ▲ Application ▼









# Clamping and locating angle bore / bore

# PROFIPIusLINE

- Dimension adjustment using grid lines on 3D worktable possible
   Ideal for confined spaces

- Hardened castingPrecision scaling on both sides





### Description ▲ Application ▼





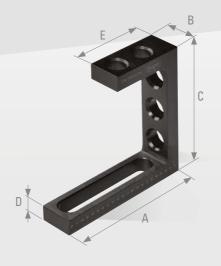
28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	175	50	175	25	2.1	Hardened casting	D28-03001-004

Clamping and locating angle 200 bore / bore / oblong hole

### **PROFIPIUSLINE**



- Extended face plate with two bores in the face plate
- Extended mounting plate with oblong hole 150 therefore moveable on 50 mm grid
- Precision scaling on both sides
- Hardened casting



### **Description** ▲ ▼

Application ▼

Double bore in size 50 grid on the face plate and mounting plate with 150 mm oblong hole. This makes it possible to change the angle using the oblong hole without changing holes. The precision scaling on both sides makes adjustment much easier.



28	A in mm	B in mm	C in mm	D in mm	E in mm	~ Weight in kg	Description	Item no.
20	225	50	200	25	125	2.8	Hardened casting	PL28-03001-015

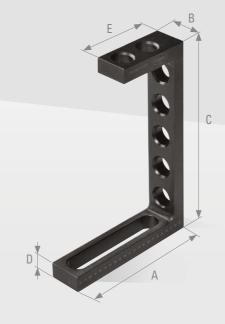


Clamping and locating angle 300 bore / bore / oblong hole

# PROFIPIusLINE

- Extended face plate with two bores in the face plate
   Mounting plate with oblong hole 100
   Precision scaling on both sides

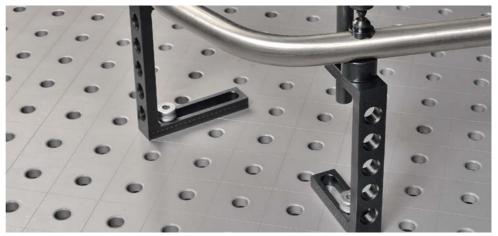
- Hardened casting





### Description ▲ Application ▼





28	A in mm	B in mm	C in mm	D in mm	E in mm	~ Weight in kg	Description	Item no.
20	175	50	300	25	125	3.2	Hardened casting	PL28-03001-016

# PROFIPIusLINE

- Extended face plate with two bores in the face plate
- Extended mounting plate with oblong hole 150 therefore moveable on 50 mm grid
- With precision scaling

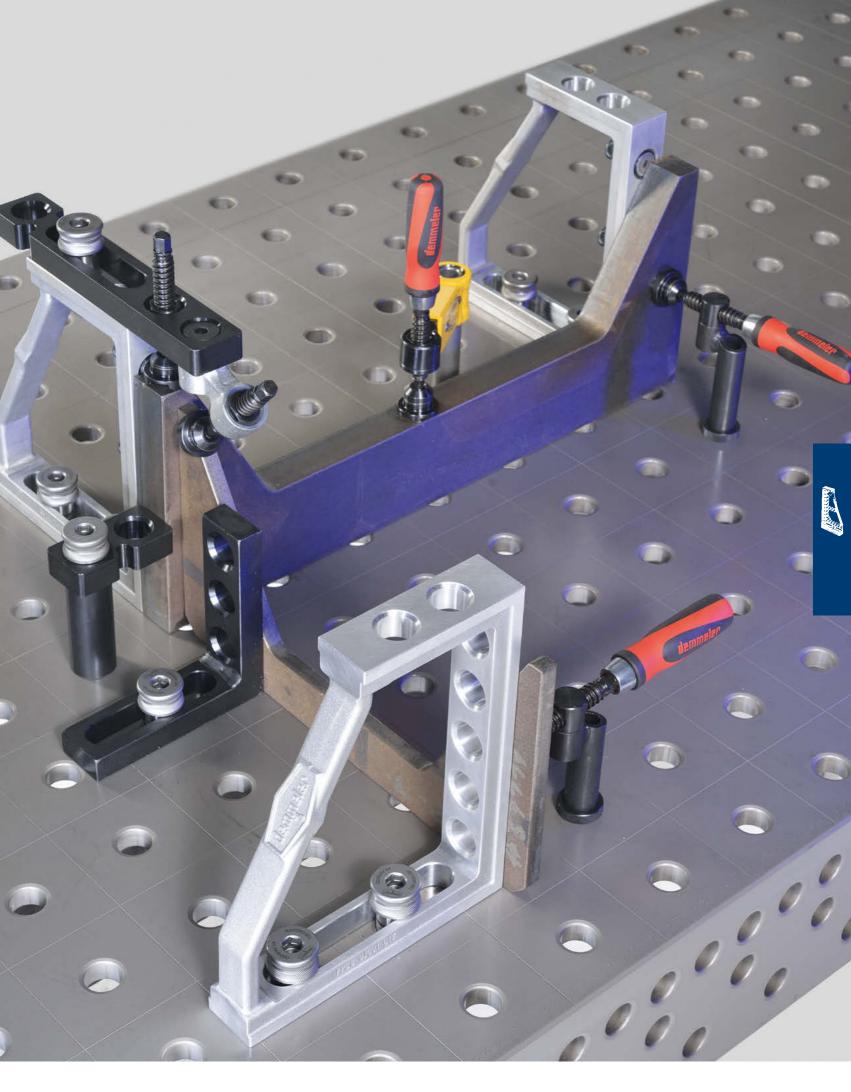


### Description ▲ Application ▼





28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
	250	50	300	150	1.8	PP28-03001-017





Clamping and locating angle large bore / oblong hole

### PROFIEcoLINE



- Combination system bores / oblong hole for numerous clamping possibilities
- Precision scaling on both sides
- Two full angle surfaces, therefore can be used from both sides
- Dimension adjustment using grid lines on 3D worktable possible
- Compatible with all clamping and locating angles so that the oblong hole can be used to form a height-adjustable support
- Hardened casting



### Description ▲ Application ▼







28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
20	175	50	275	25	2.4	Hardened casting	PE28-03008-000



# Angle bracket

# PROFIPIusLINE

- The new angle bracket with an incredible range of applications. Only as a stop, or for clamping angled parts. With our combination of freely adjustable angle setting, 15° increments form-fitting or as 90° stop, you will always find the right solution
- With precision scaling
- Steel, hardened







P28-05013-012

Right P28-05013-011

### Description ▲ Application ▼







28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	200	200	75	7.3	Right	P28-05013-011
	200	200	75	7.3	Left	P28-05013-012



Angle bracket

Strong connection of work pieces



- Highly robust stop and locking angle for work pieces and system components
- Direct connection of 3D worktable and
  hase rail
- Steel, hardened



Description 🔺

Application ▼



Connection to base rail possible

28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	150	75	25	2.90	Steel, hardened	D28-50003-000





Flat angle trim

- Full locating surfaces inside and outside Numerous possibilities thanks to oblong holes and
- Continuously moveable with oblong holes
- Steel, hardened





Description 🔺

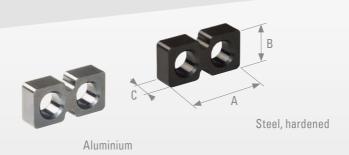


28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	375	500	25	12	Steel, hardened	D28-03006-000

Universal stop small



- Preferred use in confined work areas
- · Also usable for corner connections thanks to notching



Description 🛦



28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	100	50	25	0.64	Steel, hardened	D28-05002-000
	100	50	25	0.23	Aluminium	D28-05002-010



Displacement stop

# Precision scaling on both sides

- Precision scaling on both sidesContinuously adjustable with scale on both sides





### Description 🛦



28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	150	50	25	0.9	Steel, hardened	D28-05015-000
	150	50	25	0.28	Aluminium	D28-05015-003

# EcoLINE universal stop small



- Preferred use in confined work areas
- Simple version
- Steel, hardened



### Description ▲ Application ▼





28	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
20	100	50	25	0.72	E28-05002-000



### EcoLINE universal stop large

- Combination system bore / oblong hole for numerous clamping possibilities
   Simple version without scale
- With precision scaling
- Steel, hardened





### Description ▲ Application ▼

#### Application ▼



28	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
20	225	50	25	1.40	E28-05001-000

249

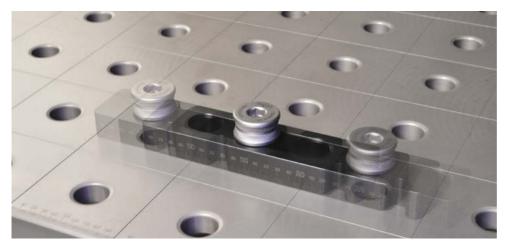
### Universal stop large with precision scaling



- Combination system bore / oblong hole for numerous clamping possibilities
- Incl. 1 mm precision scaling



#### Description ▲ Application ▼



#### **Description ▼**

- Fine adjustable with precision scaling possible using grid lines
- 360° adjustable position
- Additional notch for attachment, ideal as corner stop
- Continuous adjustment via oblong hole

28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	225	50	25	1.32	Steel, hardened	D28-05001-010
	225	50	25	0.47	Aluminium	D28-05001-021





### Universal stop large

- Combination system bore / oblong hole for numerous clamping possibilities

  • With PC-bolt in table hole pattern 5-sided locking
- and fixation in 25 mm grid

  360° adjustable position in 45° increments

  Continuous adjustment via oblong hole

- With precision scaling

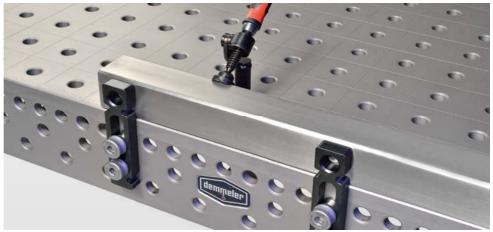






#### Description ▲ Application ▼





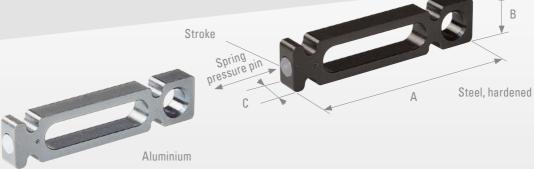
28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	225	50	25	1.2	Steel, hardened	D28-05001-000
	225	50	25	0.44	Aluminium	D28-05001-022

Universal stop large with plunger

### Exact fixation of the work pieces

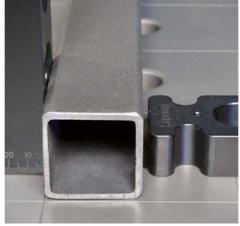


- Like universal stop large
- With additional spring pressure pin especially for clamping sheet metal and moulded parts, so that no additional fixation of work pieces is necessary
- Large stroke 3.5 mm
- With precision scaling



#### Description ▲ Application ▼







28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	225	50	25	1.2	Steel, hardened	D28-05001-001
	225	50	25	0.45	Aluminium	D28-05001-020



Universal stop L 165 / L 300 / L 500

- Larger stop range than universal stop large
- Three or seven system boresFor bridging larger bearing surfaces
- As lateral stop for large beams
- With precision scaling



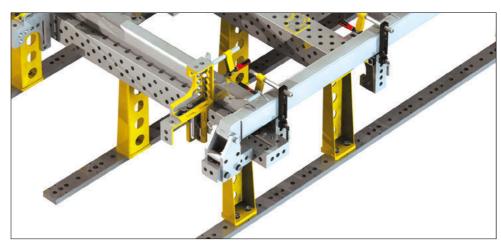




#### Description ▲ Application ▼







For bridging larger distances

28	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
20	300	50	25	1.8	Steel, hardened	D28-05009-000
	500	50	25	3.22	Steel, hardened	D28-05009-008
	300	50	25	0.63	Aluminium	D28-05009-013
	500	50	25	1.14	Aluminium	D28-05009-014

### Contour stop

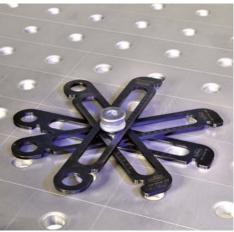
### With 1 mm precision scaling

- Serves as stop element for light work pieces
   Clamping via PC-bolt and spacer washer of the spacer set
   Cost-effective
- With 1 mm precision scaling



#### Description ▲ Application ▼



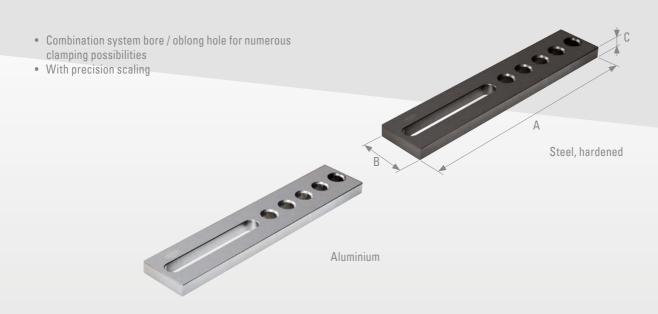


4	28	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
Ľ	20	325	50	6	0.85	D28-05016-000



Stop-strip







#### Description ▲ ▼

- Very long and sturdy version with large bearing surfaces for large components or long distances.
- Continuous adjustment via oblong hole
- Combination system bore / oblong hole for numerous clamping possibilities

28	A in mm	B in mm	C in mm	Description	~ Weight in kg	Item no.
20	500	100	25	Steel, hardened	8.00	D28-05003-000
	800	100	25	Steel, hardened	13.00	D28-05003-001
	1000	100	25	Steel, hardened	16.48	D28-05003-008
	500	100	25	Aluminium	2.78	D28-05003-016
	800	100	25	Aluminium	4.57	D28-05003-017
	1000	100	25	Aluminium	5.76	D28-05003-018

### Angle-setting template

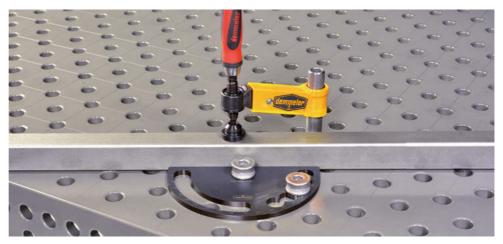
### Precision scaling on both sides



- The angle-setting template is flexible in application with the 1° precision scaling on both sides
- Continuous 0°-90°
- Fixed setting out 0-60°(15° increments)
- r = Radius 125 mm
- Steel, hardened



Description 🔺



Fixed setting out in 15° increments (0° - 60°) and continuous 0° - 90°

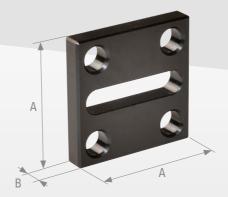
28	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
20	250	150	12	1.2	D28-05013-010





## Adapter plate

- As interface between 3D system and individual components, i.e. for welding / screwing on special customer elements
- Steel, hardened





### Description 🛦

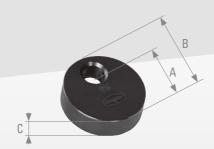


28	A in mm	B in mm	~ Weight in kg	Item no.
20	150	25	3.2	D28-05010-000

## Locating disk



- Can be used as stop or support
  Fixation with PC-bolt or connecting bolt
  Continuous adjustment by turning (adjustment path A)
- Low space requirements



### Description 🔺



20	A in mm	B in mm	C in mm	Description	~ Weight in kg	Item no.
20	50	75	25	Steel, hardened	0.7	D28-05013-000
	75	100	25	Steel, blackened	1.3	E28-05013-000
	75	100	25	Steel, hardened	1.3	D28-05013-001



## Supports - overview

28 Spacer set

PAGE 262



8 Adjustment V-block



V-block locations with arbour for tube diameter up to 100 mm

PAGE 267



V-block locations with arbour for tube diameter up to 400 mm

PAGE 270



28 Spacer set with thread

PAGE 263



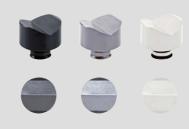
28 Taper fitting Ø58 mm

PAGE 265



V-block locations for tube diameter up to 70 mm

PAGE 268



28 Adjustable spacer / threaded support

PAGE 271



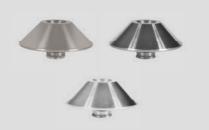
28 Taper fitting with thread

PAGE 263



28 Taper fitting Ø110 mm

PAGE 266



V-block locations with arbour for tube diameter up to 180 mm

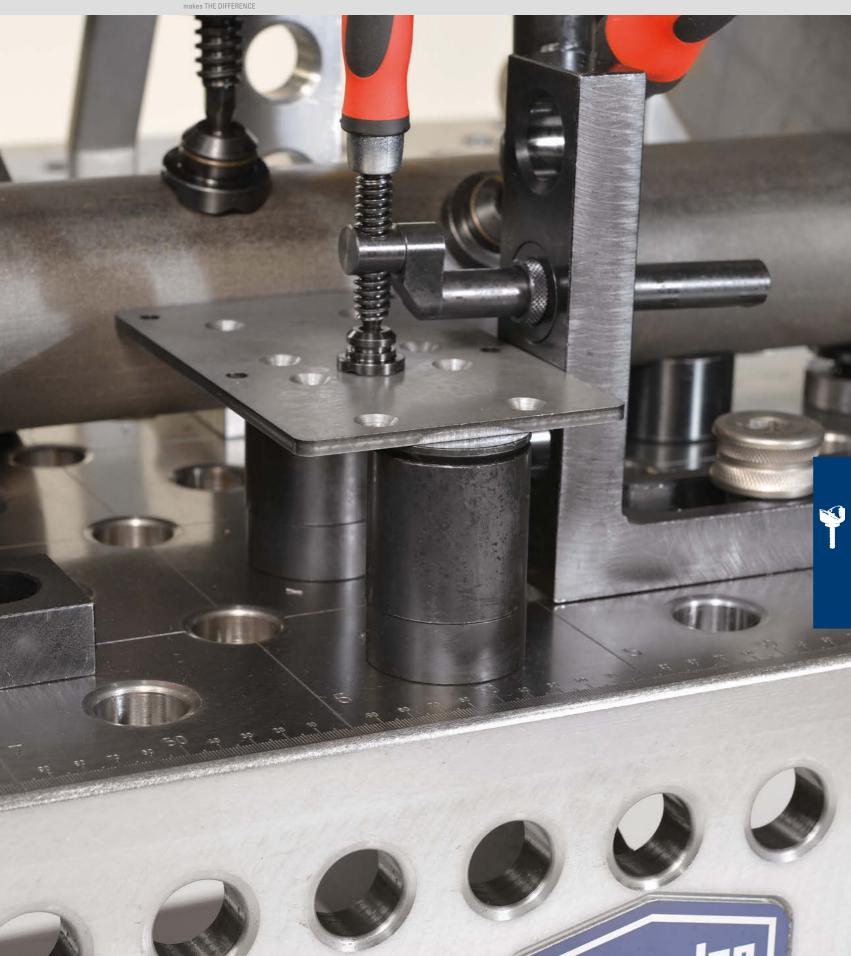
PAGE 269



Adapters/reduction plate for clamping tubes







### Spacer set

### Height compensation in mm range

- For 5-100 mm height compensation on the respective support surface
- Smallest increment 1 mm
- Includes 1/10 inch disk (2.54 mm)
- With dimensions of the compensating disks
- Support mandrel fitting each system bore 28
- Self-locking with O-Ring
- On the top of the support mandrel M12 thread for customer-specific elements available on request
- Support prisms consisting of: Individual support mandrel + bearer sleeves L1-L50 + V-block location (as of page 268)



#### Description ▲ Details ▼

 Exact positioning of height via bearer sleeves in various lengths or with continuously adjustable threaded spacer set (see D28-09001-005, page 263)

28	A in mm	Ø B in mm	~ Weight in kg	Description	Item no.
20	120+5	28	1.96	11-piece spacer set	D28-09001-000
	120+5	28	0.60	individual support mandrel	00043256
	1	50	0.02	bearer sleeve L1	00000132
	2	50	0.02	bearer sleeve L2	00000131
	2.5	50	0.02	bearer sleeve L2.5	00003933
	3	50	0.04	bearer sleeve L3	00000130
	4	50	0.04	bearer sleeve L4	00000129
	5	50	0.04	bearer sleeve L5	00000128
	10	50	0.08	bearer sleeve L10	00000127
	20	50	0.20	bearer sleeve L20	00000126
	40	50	0.40	bearer sleeve L40	00000125
	50	50	0.48	bearer sleeve L50	00000124



### Spacer set with thread

### Taper fitting with thread

#### Height compensation, continuous

### Tube diameter range Ø5 - Ø55 mm

- As support surface on system components or directly on the table
- Adjustment path 22-105 mm continuous
- With 0.1 mm precision scaling
- Max. load capacity 500 kg
- Blackened
- Includes counter nut M28



- Taper fitting for M12 threaded bolt
- to hold tubes on the interior diameter combined with spacer set item no.: D28-09001-005
- Securing work piece using reference bores
- Also for use as point support
- Diameter range Ø5 Ø55 mm



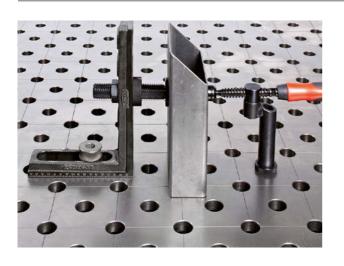
Steel, hardened D28-09003-017

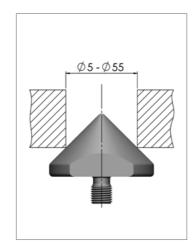
Stainless steel D28-09003-018

Aluminium D28-09003-019

### Description ▲ Application ▼

#### Description ▲ Application ▼







28	A in mm	Ø B in mm	~ Weight in kg	Item no.
20	120+5	50	approx. 0.8	D28-09001-005

28	A in mm	Ø B in mm	~ Weight in kg	Angle	Description	Item no.
20	35	58	0.34	90°	Steel, hardened	D28-09003-017
	35	58	0.34	90°	Stainless steel	D28-09003-018
	35	58	0.12	90°	Aluminium	D28-09003-019

## Adjustment V-block

- Eccentric setting via sliding plate
  Flexible angle adjustment from 180 to 90°
  Height secured with clamping bush
  Synchronous adjustment via toothing



Description 🛦



28	A in mm	B in mm	~ Weight in kg	Description	Item no.
20	200	100	1.4	Adjustment V-block	D28-09015-000



Taper fitting Ø58 mm

### For interior tube diameter Ø5 - Ø55 mm

- Pressure and contact taper to hold tubes by the interior diameter
- Screwed in with countersunk head screw
- Diameter range Ø5 Ø55 mm





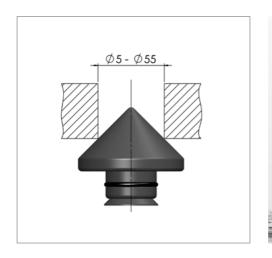


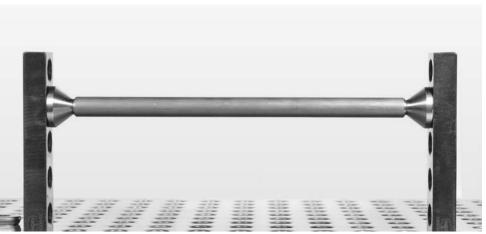
Steel, hardened D28-09003-011

Stainless steel D28-09003-012

Aluminium D28-09003-013

### Description 🛦





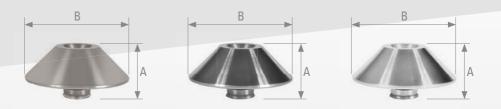
28	A in mm	Ø B in mm	~ Weight in kg	Angle	Description	Item no.
20	35	58	0.37	90°	Steel, hardened	D28-09003-011
	35	58	0.37	90°	Stainless steel	D28-09003-012
	35	58	0.13	90°	Aluminium	D28-09003-013



### Taper fitting Ø110 mm

### For interior tube diameter $\emptyset$ 50 - $\emptyset$ 105 mm or exterior diameter $\emptyset$ 10 - $\emptyset$ 30 mm

- Pressure and contact taper to hold tubes at the interior or exterior diameter
- Screwed in with countersunk head screw
- Diameter range inside: Ø50 Ø105 mm
- Diameter range outside: Ø10 Ø30 mm

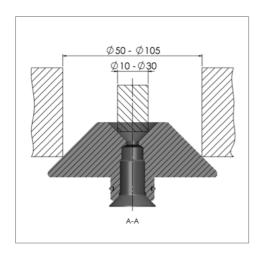


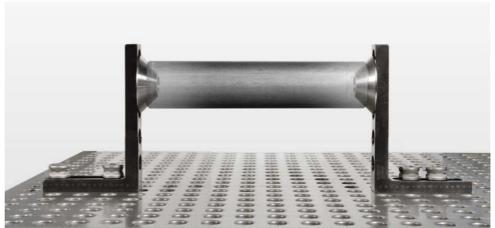
Steel, hardened D28-09003-014

Stainless steel D28-09003-015

Aluminium D28-09003-016

### Description 🛦





28	A in mm	Ø B in mm	~ Weight in kg	Angle	Description	Item no.
20	35	110	1.44	90°	Steel, hardened	D28-09003-014
	35	110	1.44	90°	Stainless steel	D28-09003-015
	35	110	0.49	90°	Aluminium	D28-09003-016



### V-block locations with arbour for tube diameter up to 100 mm

### With double V-block

- With threaded support tower
- For tube diameter up to 100 mm
- Also suitable for rectangular tubes
- Double V-block for more possibilities













Steel, blackened D28-09004-000

Stainless steel D28-09004-003 POM D28-09004-001

### Description 🛦

Height adjustment via bearer sleeves for arbour (page 262) or continuous adjustment using spacer set with thread D28-09001-005 (page 263) or with adjustable spacer D28-09009-000 (page 271)



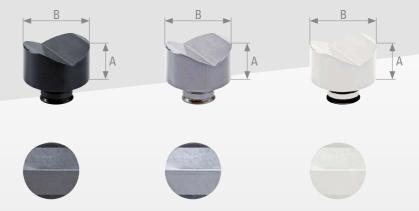
28	A in mm	ØB in mm	C in mm	~ Weight in kg	Angle	Description	Item no.
20	180	80	60	2.16	90/90°	Steel, blackened	D28-09004-000
	180	80	60	2.18	90/90°	Stainless steel	D28-09004-003
	180	80	60	0.88	90 / 90°	POM	D28-09004-001



## V-block locations for tube diameter up to 70 $\mbox{mm}$

### Precise holding of tube elements

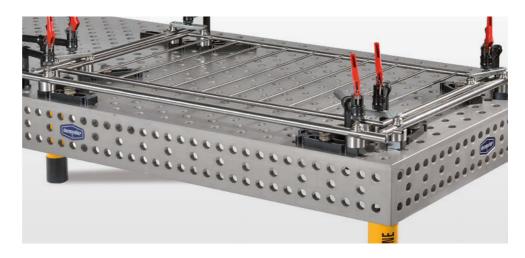
- Screwed in with countersunk head screw For tube diameter up to 70 mm



Steel, blackened D28-09003-000

Stainless steel D28-09003-002 POM D28-09003-001

Description 🛦



28	A in mm	Ø B in mm	~ Weight in kg	Angle	Description	Item no.
20	35	58	0.68	130°	Steel, blackened	D28-09003-000
	35	58	0.70	130°	Stainless steel	D28-09003-002
	35	58	0.14	130°	POM	D28-09003-001



### V-block locations with arbour for tube diameter up to 180 mm

### Precise holding of tube elements

- With threaded support tower
- For tube diameter up to 180 mm
- Double V-block for more possibilities
- Height adjustment via bearer sleeves for arbour (page 262) or continuous adjustment using spacer set with thread D28-09001-005 (page 263) or with adjustable spacer D28-09009-000 (page 271)











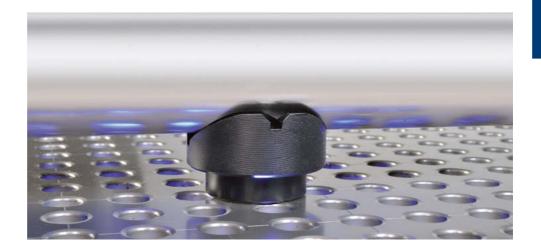


Steel, blackened D28-09005-000

Stainless steel D28-09005-002

POM D28-09005-001

#### Description 🛦



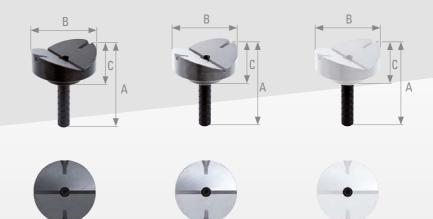




### V-block locations with arbour for tube diameter up to 400 mm

### Precise holding of tube elements

- With threaded support tower
- For tube diameter up to 400 mm
- Double V-block for more possibilities
- Height adjustment via bearer sleeves for arbour (page 262) or continuous adjustment using spacer set with thread D28-09001-005 (page 263) or with adjustable spacer D28-09009-000 (page 271)



Steel, blackened D28-09006-000

Stainless steel D28-09006-002

POM D28-09006-001

Description 🛦



28	A in mm	Ø B in mm	C in mm	~ Weight in kg	Angle	Description	Item no.
20	190	140	70	5.22	140/90°	Steel, blackened	D28-09006-000
	190	140	70	5.30	140/90°	Stainless steel	D28-09006-002
	190	140	70	1.32	140/90°	POM	D28-09006-001



### Adjustable spacer / threaded support

- Support continuously adjustable from 75 to 95 mm
- Especially well suited for V-block locations with arbourFor direct insertion in the adjustable spacer
- Stops etc. with PC-bolt can also be clamped in the system bore



Description 🛦

Application ▼







With adjustment path A D28-09009-000

## Supports

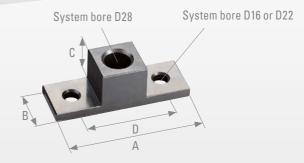
### Adapters

### Reduction plate for clamping tubes

- Used to hold Ø 16 mm screw clamps in D28 system bores
- D16 quick-action clamping cylinder can be used in system D28
- Can be used as support or stop simultaneously
- Threaded bushing for D28 screw clamp
- Note: If bolts are used then long D16 bolts are required



 Interface between D28 and D16 or D22



Description 🔺

Description 🔺

#### Adapter D28 to D16

28	A in mm	Ø B in mm	C in mm	D in mm	~ Weight in kg	Item no.
20	30	28	16	25	0.10	D00-06012-000

Reduction plate for clamping tubes D28 to D16

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
20	150	50	50	100	1.04	D00-06015-000

Reduction plate for clamping tubes D28 to D22

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
20	150	50	50	100	1.2	D00-06015-001



• Clamb	Q
Olulip	J

- Quick release skewer
- Pneumatic toggle clamp
- Magnetic clamp

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# Clamps - overview D28

**Compensating swing clamp Compensating swing clamp Compensating swing clamp** with spindle with quick-action clamping cylinder with short boring spindle PAGE 280 PAGE 281 PAGE 282 Performance screw clamp Performance screw clamp Performance screw clamp with spindle with quick-action clamping cylinder with short boring spindle PAGE 284 **PAGE 285 PAGE 286** Multi-clamping and support tower Screw clamp 180° Compensating clamping arm with spindle with short boring spindle **PAGE 287 PAGE 287** PAGE 288 Screw clamp 180° Screw clamp 180° Variable screw clamp 90° with quick-action clamping cylinder with short boring spindle **PAGE 290 PAGE 291 PAGE 292** 



Variable screw clamp 45° with adjusting screw

PAGE 293

Variable screw clamp 45° with quick-action clamping cylinder

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Variable screw clamp 45° with short boring spindle

PAGE 295



Adjustment screw

PAGE 296

with bushing and clamping pads



**Short boring spindle** with bushing and clamping pads

**PAGE 296** 



Quick-action clamping cylinder with clamping pads

PAGE 297



Adapter for PC-bolts

**PAGE 297** 



Plunger and contact piece / clamping pad with V-block

**PAGE 298** 

Plunger and contact piece



Plunger and contact piece / clamping pad with taper

PAGE 300



Clamping pad blackenend steel -doubleside / Adjusting spindle

PAGE 301











Clamping pad Blank

PAGE 302

Clamping pad

with ball form



















## Clamps - overview D28

**Reduction plate for clamping** tube adapter tube for PS-bolts

> PAGE 304 PAGE 305

2P. Clamping bridge with 2 steel clamping pads

PAGE 306

**VARIO** stop ring for round screw clamp tubes

PAGE 307











Clamping tube

PAGE 307

Angle bushing 90°

**PAGE 308** 

Angle bushing 45°

**PAGE 308** 



Angle bushing 90° with precision scaling

**PAGE 309** 



Angle bushing 45° with precision scaling

**PAGE 309** 



Adapter-tube

PAGE 310



**Extension sleeve** 

PAGE 311



**Ball clamp bushing** with countersunk head

PAGE 311



Toggle clamp with threaded bushing









Toggle clamp with adapter

PAGE 313



PAGE 314

2-point clamp with adaptor

PAGE 315



**Vertical toggle clamp** 

with adaptor and countersunk screw

Vertical toggle clamp

Horizontal toggle clamp with universal stop

PAGE 318

with universal stop

**PAGE 317** 



Pneumatic toggle clamp S

Pneumatic toggle clamp XL

**PAGE 319** 

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PAGE 320

PAGE 321



Adapter for toggle clamps

with countersunk screw

Manifold with hand valve



Pressure force booster

**Magnetic clamp** 

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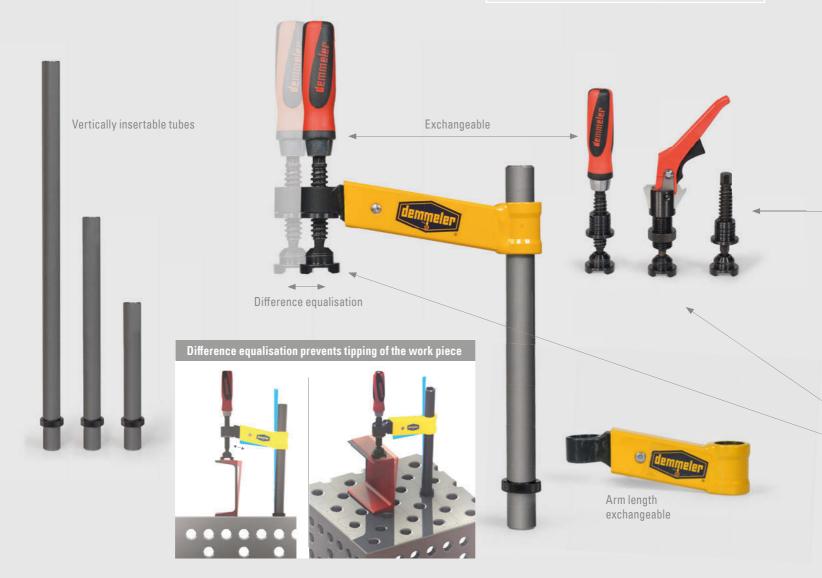


### Configure your clamps

## Flexible down to the details

Thanks to the modular system, the clamps adapt perfectly to the respective clamping situation. Select from various materials for the clamping pad and different spindle lengths, also for small installation spaces. The latch lever makes quick and precise clamping possible even with one hand. With three different tube lengths and exchangeable arms, you can handle any clamping task.







### Configure your clamps



#### • Secure locking mechanism:

The locking mechanism ensures controlled, fast and vibration-proof clamping.

#### Ultimate stability:

Enables the even build-up of clamping force with large power reserves. The self-centring support and pressure piece clamps the work piece and can be exchanged.

- The powder-coated clamping lever features a highly ergonomic shape and swivels 360° degrees to circumvent all interfering edges. The plastic-coated, non-slip release lever ensures a secure grip while loosening the clamp.
- Large stroke: 9 mm



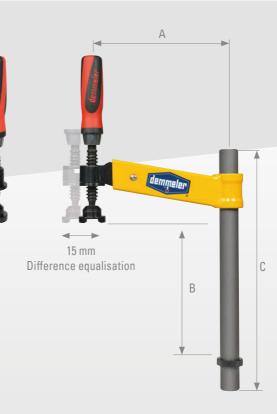
### Compensating swing clamp with spindle

### For profiles that tend to tip





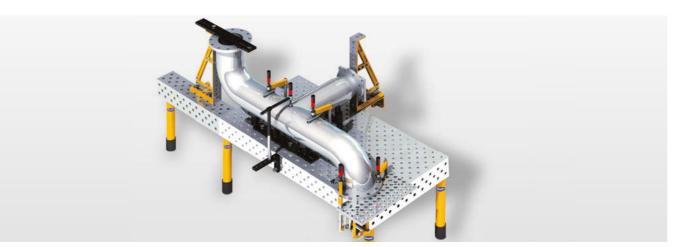
- With difference equalisation for accurately oriented and positioned work piece clamping
- With stop ring for height fixation
- Exchangeable actuator (e.g. spindle, short boring spindle or quick-action clamping cylinder)
- Clamping pad can be exchanged for clamping other materials such as stainless steel – the D28-07018-000 clamping bridge can also be used
- New standard clamping pad added value for your screw clamps
- Exchangeable clamping tubes, available in different lengths



Description 🔺

Application ▼

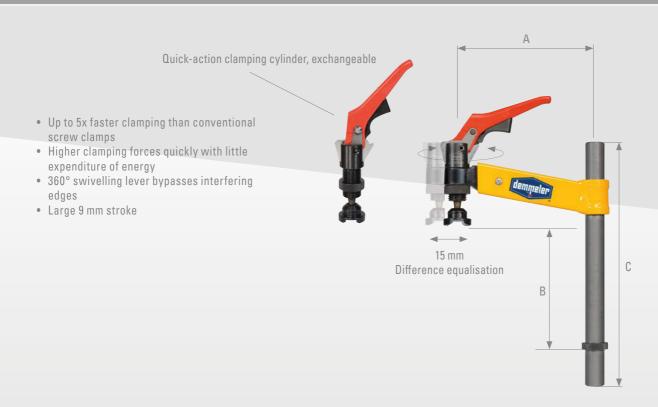
Exchangeable spindle



28	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
20	150	max. 280	350	2.62	D28-07001-000
	200	max. 280	350	2.88	D28-07002-000



## Compensating swing clamp with quick-action clamping cylinder



### Description ▲ Application ▼





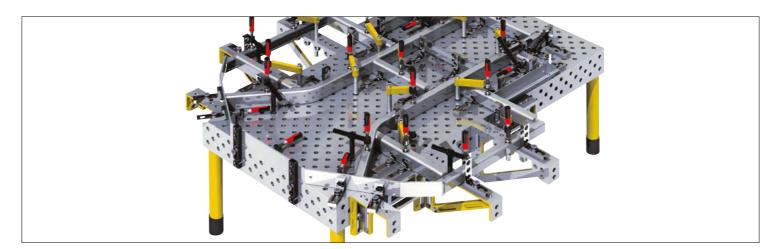


28	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
20	150	max. 280	350	2.92	D28-07001-001
	200	max. 280	350	3.12	D28-07002-001

## Compensating swing clamp with short boring spindle

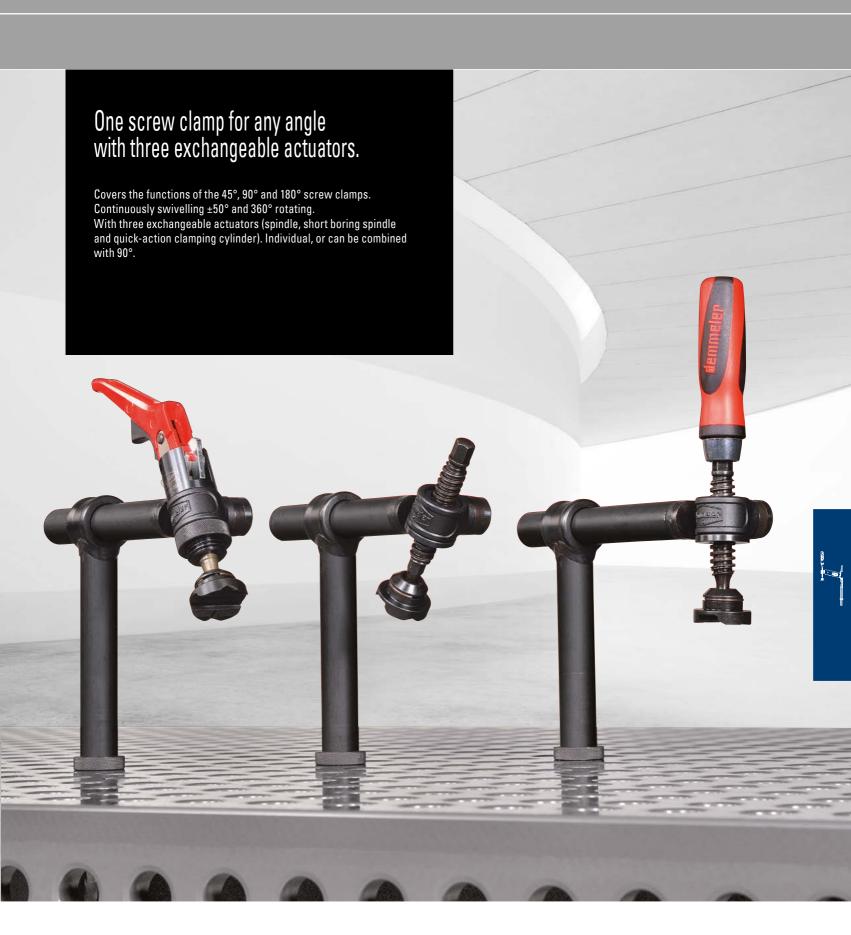


Description 🔺



28	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
20	150	max. 280	350	2.54	D28-07001-002
	200	max. 280	350	2.74	D28-07002-002



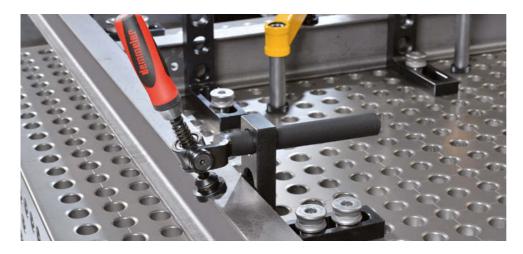


### Performance screw clamp with spindle

### A screw clamp for any angle with three exchangeable actuators



#### Description ▲ Application ▼



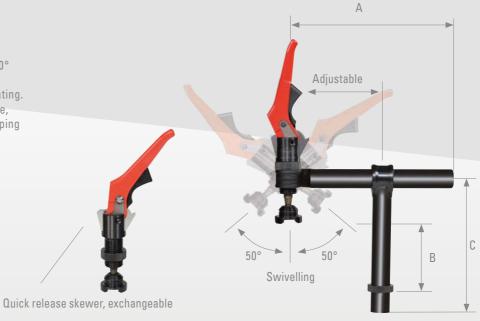


28	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	240	max. 180	270	2.9	D28-07009-033



## Performance screw clamp with quick-action clamping cylinder

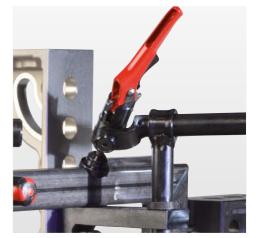
- Covers the functions of the 45°, 90° and 180° screw clamps
- Continuously swivelling ±50° and 360° rotating.
- · With three exchangeable actuators (spindle, short boring spindle and quick-action clamping
- Up to 5x faster clamping than conventional screw clamps
- Higher clamping forces quickly with little expenditure of energy



#### Description ▲ Application ▼







28	A ir
20	240

## Performance screw clamp with short boring spindle

- $\bullet$  Covers the functions of the 45°, 90° and 180° screw clamps
- Continuously swivelling ±50° and 360° rotating
- With three exchangeable actuators (spindle, short boring spindle and quick-action clamping
- Operation with open-end wrench AF 13
   Entire clamping mechanism is exchangeable



Exchangeable spindle

#### Description ▲ Application ▼

#### ▼ Application





28	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
20	240	max. 180	270	2.2	D28-07009-034

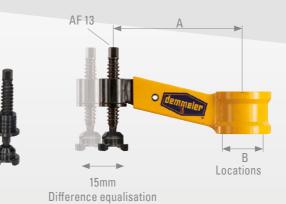


## Compensating clamping arm with short boring spindle for heavy work pieces

#### Multi-clamping and support tower

- With difference equalisation for distortionfree work piece clamping
- Used in combination with multi-clamping and support tower
- Very heavy model
- Suitable for pre-tensioning heavy work pieces
- Fast and secure clamping
- Large adjustment range through combination with multi-clamping and support tower (see below)
- Clamping force ~ 20 kN
- Powder-coated

Exchangeable spindle





#### Description ▲ Application ▼

#### Compensating clamping arm 🔺

#### Multi-clamping and support tower ▲ Description ▼



- For compensating clamping arm with hexagonal
- Bolts to the table
- Very sturdy version
- Can be combined with other system components such as stops thanks to system bores
- Blackened

Compensating clamping arm

28	A in mm	B in mm	~ Weight in kg	Item no.
20	180	55	2.26	D28-05007-000

Multi-clamping and support tower

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
20	150	55	200	100	4.00	D28-05004-003
	150	55	350	100	5.30	D28-05004-000
	150	55	700	100	8.38	D28-05005-000
	150	55	1000	100	11.00	D28-05006-000

# Screw clamp 180° with spindle

## With adjustable, sturdy round tube



- Each tube can be used individually
- Adjustable projectionCan be inserted through system bores, eliminating avoidable interfering edges
- Highest force transmission with sturdy round tubes
- Entire clamping mechanism is exchangeable



Description 🔺



28	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
20	220	max. 190	270	2.80	D28-07005-000
	220	max. 270	350	3.10	D28-07005-014
	220	max. 420	500	3.80	D28-07005-033



Screw clamp 180° with spindle

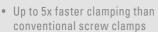




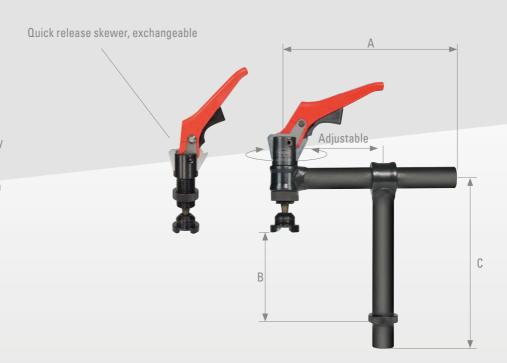


## Screw clamp 180° with quick-action clamping cylinder

## With adjustable, sturdy round tube

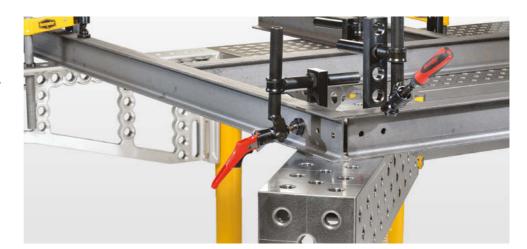


- Higher clamping forces quickly with little expenditure of energy
- 360° swivelling lever bypasses interfering edges
- · Highest force transmission with sturdy round tubes
- Entire clamping mechanism is exchangeable
- Large 9 mm stroke



#### Description ▲ Benefits of the clamping cylinder ▼ Application ▼

- Secure locking mechanism: The locking mechanism ensures controlled, fast and vibration-proof clamping
- Ultimate stability: Enables the even build-up of clamping force with large power reserves. The self-centring support and pressure piece clamps the work piece and can be exchanged
- The powder-coated clamping lever features a highly ergonomic shape and swivels 360° degrees to circumvent all interfering edges. The plastic-coated, non-slip release lever ensures a secure grip while loosening the clamp
- · Large stroke: 9 mm

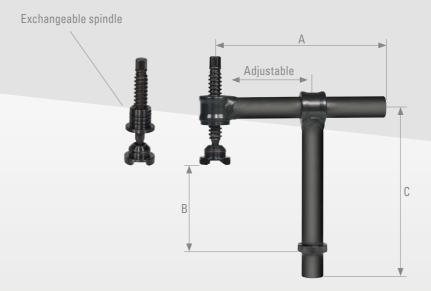


28	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
20	220	max. 190	270	2.50	D28-07005-001
	220	max. 270	350	2.80	D28-07005-015
	220	max. 420	500	3.40	D28-07005-041



## Screw clamp 180° with short boring spindle

- Highest force transmission with sturdy round tubes
- Operation with open-end wrench AF 13
- Highly recommended for confined spaces
- Each tube can be used individually.
  Entire clamping mechanism is exchangeable



#### Description ▲ Application ▼



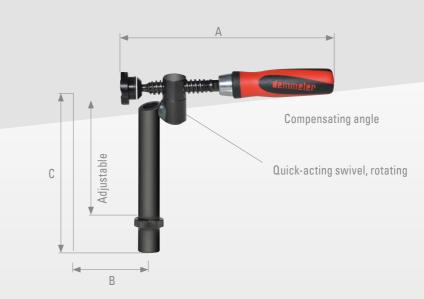


28	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
20	220	max. 190	270	2.10	D28-07005-002
	220	max. 270	350	2.30	D28-07005-016
	220	max. 420	500	3.00	D28-07005-036

## Variable screw clamp 90°



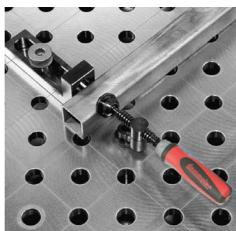
- Pressure direction 90° to the system
- Spindle stroke ~ 70 mm
- 180° quick-acting swivel with ball stop in the joint
- With stop ring for height fixation
- Use of clamping bridges possible
- Highest force transmission with sturdy round tube
- 180° quick-acting swivel with ball stop in the joint
- With stop ring for height fixation
- Clamping pad exchangeable



#### Description ▲ Application ▼

#### Application ▼



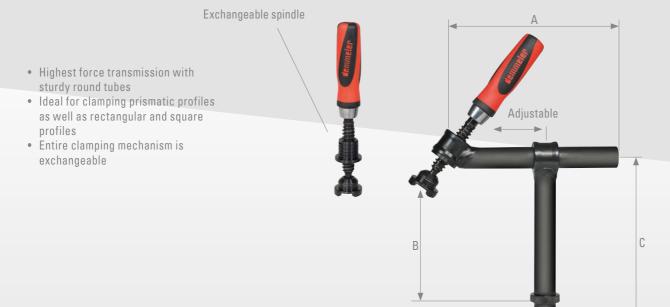




28	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
20	250	max. 100	220	1.22	D28-07008-000
	250	max. 100	350	1.65	D28-07008-010
	250	max. 100	500	2.08	D28-07008-012



## Variable screw clamp 45° with spindle



#### Description 🔺







28	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
20	220	max. 190	270	2.80	D28-07009-000
	220	max. 270	350	3.00	D28-07009-011
	220	max. 420	500	3.70	D28-07009-026

## Variable screw clamp 45° with quick-action clamping cylinder

## With adjustable, sturdy, rotating round tube

- Up to 5x faster clamping than conventional screw clamps
- Higher clamping forces quickly with little expenditure of energy
- 360° swivelling lever bypasses interfering edges
- Highest force transmission with sturdy round tubes
- Entire clamping mechanism is exchangeable
- Large 9 mm stroke



#### Description ▲ Application ▼





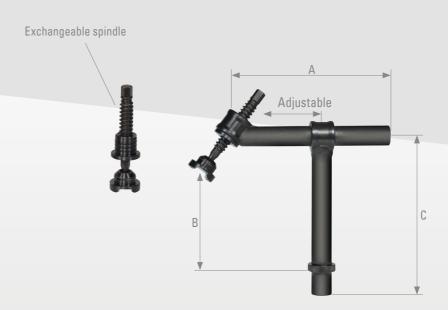
28	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
20	220	190	270	2.50	D28-07009-001
	220	270	350	2.70	D28-07009-012
	220	420	500	3.20	D28-07009-027



## Variable screw clamp 45° with short boring spindle

## With adjustable, sturdy, rotating round tube

- Highest force transmission with
- sturdy round tubes
   Operation with open-end wrench
- Highly recommended for confined
- Entire clamping mechanism is exchangeable



#### Description ▲ Application ▼





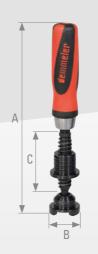
28	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
20	220	190	270	2.10	D28-07009-002
	220	270	350	2.30	D28-07009-013
	220	420	500	3.00	D28-07009-028



Adjustment screw with bushing and clamping pads

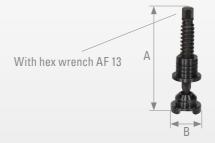
Short boring spindle with bushing and clamping pads

- High-quality 2-component plastic handle
- Long threaded spindle
- Threaded bushing works with any system bore
- Exchangeable clamping pad (plastic, stainless steel - see page 298)
- Suitable to pretension work pieces



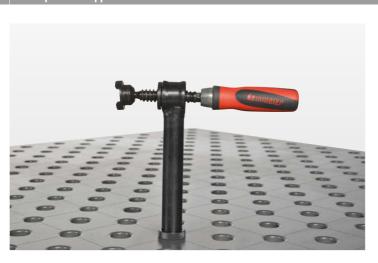
Clamping pad with cross prism

- Highly recommended for confined spaces
- Operation with open-end wrench AF 13
- Direct use in system bores possible
- Ideal to pretension work pieces



Clamping pad with cross prism

#### Description ▲ Application ▼



#### **Description** ▲ **Application** ▼



28	A in mm	Ø B in mm	C in mm	~ Weight in kg	Item no.
20	~ 255	40	70	0.5	D28-07020-000

28	A in mm	Ø B in mm	~ Weight in kg	Item no.
20	138	40	0.36	D28-07022-000



Quick-action clamping cylinder with clamping pads

## Adapter for PC-bolts D28 to D16

- Up to 5x faster clamping than conventional screw clamps
- The locking mechanism ensures controlled, fast and vibration-proof clamping
- Higher clamping forces quickly with little expenditure of energy
- Large 9 mm stroke
- The self-centring support and pressure piece clamps the work piece and can be exchanged
- The powder-coated clamping lever features a highly ergonomic shape
- The plastic-coated, non-slip release lever ensures a secure grip while loosening the clamp



Clamping pad with cross prism

- Used to hold Ø 16 mm screw clamps in D28 system bores
- D16 quick-action clamping cylinder can be used in system D28
- Can be used as support or stop simultaneously
- Threaded bushing for D28 screw clamp



#### Description ▲ Application ▼

#### **Description** ▲ **Application** ▼

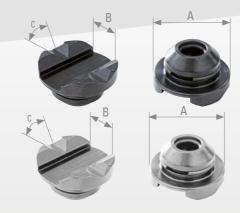


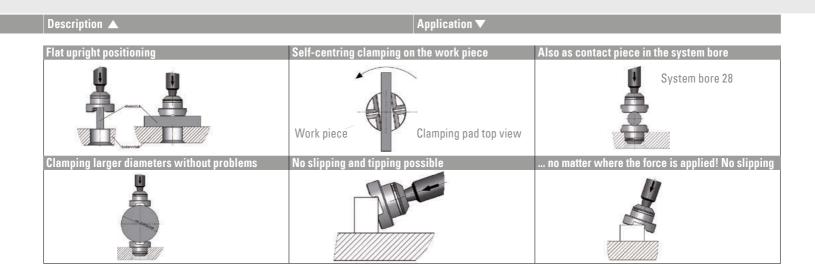
28	A in mm	Ø B in mm	C in mm	~ Weight in kg	Item no.
20	~ 105+9	40	70	0.88	D28-07021-004

28	A in mm	Ø B in mm	C in mm	D in mm	~ Weight in kg	Item no.
20	30	28	16	25	0.10	D00-06012-000

Plunger and contact piece / clamping pad with V-block

• Clamping pad with V-block





Plunger and contact piece / clamping pad with V-block

28	A in mm	B in mm	C in °	Description	Qty.	Item no.
20	40	15.5	120	Steel, blackened	1 piece	D28-07011-022
	40	15.5	120	Steel, blackened	10 piece	D28-07011-023
	40	15.5	120	Aluminium	1 piece	D28-07011-025
	40	15.5	120	Aluminium	10 piece	D28-07011-026



## Plunger and contact piece

- Lightning-fast replacement: no tools, no screws
  O-ring prevents dirt from getting into the joint
- Produced in various materials
- Exact work piece support thanks to pendulum compensation
- With cross prism for clamping round / rectangular tubes
- Can also be used as a support in any system bore



Description 🔺

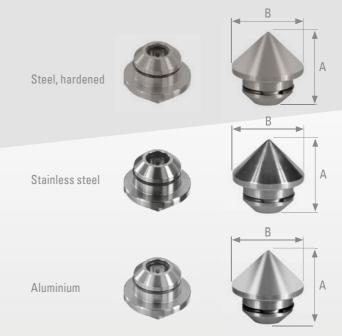


28	A in mm	Ø B in mm	~ Weight in kg	Description	Item no.
20	22	40	0.10	Steel, blackened	D28-07011-000
	22	40	0.10	Stainless steel	D28-07011-001
	22	40	0.018	POM	D28-07011-002

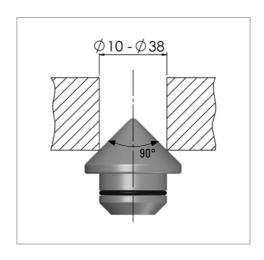
## Plunger and contact piece with taper

- Lightning-fast replacement: no tools, no screws
  O-ring prevents dirt from getting into the joint
  Produced in various materials

- Exact work piece support thanks to pendulum compensation
- With 90° taper to clamp tubes on the interior diameter Ø10 - Ø58 mm



#### Description 🔺





28	A in mm	Ø B in mm	~ Weight in kg	Angle	Description	Item no.
20	40	40	0.16	90°	Steel, hardened	D28-07011-027
	40	40	0.16	90°	Stainless steel	D28-07011-028
	40	40	0.16	90°	Aluminium	D28-07011-029



## Clamping pad blackenend steel -doubleside

## Adjusting spindle

- Lightning-fast replacement: no tools, no screws
  O-ring prevents dirt from getting into the joint
- Exact work piece support thanks to pendulum compensation
- With cross prism for clamping round / rectangular tubes
- Can also be used as a support in any system bore
- Double-sided application



- For adjusting a continuous support
- Clamping in hard to reach positions



SW8

Adjusting spindle

#### Description ▲ Application ▼







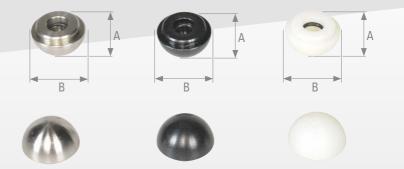
28	A in mm	B in mm	~ Weight in kg	Item no.
20	25	40	0.11	D28-07011-010

20	A in mm	B in mm	~ Weight in kg	Item no.
20	255	28	0.64	D28-09008-000

# Clamping pad with ball form

- Lightning-fast replacement: no tools, no screws
  O-ring prevents dirt from getting into the joint
  Produced in various materials

- With ball, specially for clamping corner profiles
- Clamping pad compensates angle errors
   Exact work piece support thanks to pendulum compensation



#### Description ▲ Application ▼



28	A in mm	Ø B in mm	~ Weight in kg	Description	Item no.
20	21	35	0.09	Steel, blackened	D28-07011-004
	21	35	0.09	Stainless steel	D28-07011-005
	21	35	0.014	POM	D28-07011-006
	21	35	0.035	Aluminium	D28-07011-020





Clamping pad blank

- For customer-specific adaptation
- Locations for Demmeler system screw clamps already included
- Steel, blackened



Description 🔺



28	A in mm	ØBinmm	~ Weight in kg	Description	Item no.
20	35	50	0.32	Steel, blackened	D28-07014-000

# Clamps - accessories / replacement parts

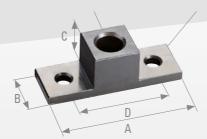


Reduction plate for clamping tubes D28 to D16 / D22 to D28

 Interface between system 28 and system 16 or system 28 and system 22

System bore D28

System bore D16 or D22



#### Description ▲ Application ▼



Reduction plate for clamping tubes  ${\rm D28}\,{\rm to}\,{\rm D16}$ 

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
20	150	50	50	100	1.04	D00-06015-000

Reduction plate for clamping tubes D28 to D22

28	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
20	150	50	50	100	1.2	D00-06015-001



## Adapter for PC-bolt D28 to D16

- Interface between system D28 and D16
- Fully compatible with system D28 and D16
- Force-fit and form-fitting with O-ring, self-centring connection
- O-ring prevents simultaneous rotation while tightening
- O-ring cleans the system bore

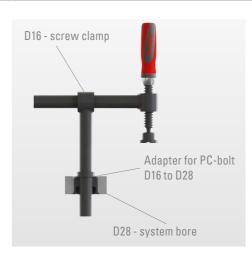


#### Description ▲ Application ▼

#### Application ▼



#### Application ▼



Adapter for PC-bolt D28 to D16

28	A in mm	Ø B in mm	~ Weight in kg	Item no.
20	20.5	28-0.02	0.05	D00-06010-002

## 2P. 2P clamping bridge with 2 clamping pads, steel

- Two clamping points simultaneously
- Clamping in hard to reach positions
- · Simultaneous clamping of more than one component
- Clamping of uneven surfaces with pendulum compensation
- Clamping pad distance displaceable with self-locking ball pins
- Exchangeable clamping pad
- For attachment to any ball holder
- Very sturdy design
- Scope of delivery: Clamping bridge, 2 ball pins and 2 clamping pads (steel)

#### OUR IDEAS - YOUR BENEFITS!

- Two clamping points
- · Clamping uneven surfaces or 2 different heights
- Clamping pad exchangeable
- Adjustable clamping width
- Galvanised

Displaceable clamping points

Suitable for screw clamp spindle



#### Description ▲ Application ▼

#### Round tubes or flat stock ▼

#### Clamping bridge ▼









VARIO stop ring for round screw clamp tubes

## Clamping tube

- For height fixation of screw clamps
- Included in the scope of delivery for all round tube screw clamps



- Precision clamping tube to fit all system bores
- e.g. for compensating swing clamps (starting on page 280)



Description ▲ Application ▼

Description 🔺



28	A in mm	Ø B in mm	~ Weight in kg	Item no.
20	10	28	0.034	D28-07003-000

,	A in mm	Ø B in mm	~ Weight in kg	Item no.
)	200	28	0.57	D28-07004-000
	350	28	1.00	D28-07004-001
	600	28	1.70	D28-07004-002
	1000	28	2.85	D28-07004-003



Angle bushing 90°

Angle bushing 45°

- Can be used as corner stop
- Axis distance 50 mm

- Can be used as corner stop
- Axis distance 50 mm





Description 🔺

Description ▲ Application ▼



28	A in °	Ø B in mm	~ Weight in kg	Item no.
20	90	28	0.28	D28-07034-000

28	A in °	Ø B in mm ~ Weight in kg		Item no.
20	45	28	0.26	D28-07035-000



## Angle bushing 90°

## Angle bushing 45°

#### with precision scaling in 15° increments

#### with precision scaling in 15° increments

- User-friendly 360° precision scaling
- Especially handy in combination with toggle clamps (starting on page 312)
- Can also be used in combination with short or normal spindle with threaded bushing
- Axis distance 38 mm



- User-friendly 360° precision scaling
- Especially handy in combination with toggle clamps (starting on page 312)
- Can also be used in combination with short or normal spindle with threaded bushing
- Axis distance 38 mm



#### Description ▲ Application ▼

Description 🔺



28	A in mm	Ø B in mm	~ Weight in kg	Item no.
20	38	28	0.31	D28-07034-010

28	A in mm	ØB in mm	~ Weight in kg	Item no.
20	38	28	0.31	D28-07035-010

## Adapter-tube

- Extension of support and clamping points
  Adaptable with screw clamp tube
  Clamping on both sides possible with PC-bolt



#### Description ▲ Application ▼

#### Adapter-tube 200 mm with screw clamp ▼





28	A in mm	Ø B in mm	~ Weight in kg	Item no.
20	100	28 / 40	0.36	D28-09010-000
	200	28 / 40	0.6	D28-09010-001
	300	28 / 40	0.85	D28-09010-002



## Extension sleeve

## Ball clamp bushing with countersunk head

- As connecting piece between two clamping tubes
  As connecting piece between screw clamp and clamping tube
- Blackened



- High-quality stainless steel pressure pistonSelf-locking in any position with 0-ring
- 4 mm stroke
- 120 N clamping force



## Description ▲ Application ▼

Description ▲ Application ▼





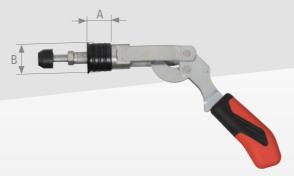
28	A in mm	Ø B in mm ~ Weight in kg		Item no.
20	100	28/34	0.36	D28-07010-000

28	A in mm	Ø B in mm	Description	Item no.
20	43	28	with countersunk head	D28-07017-010



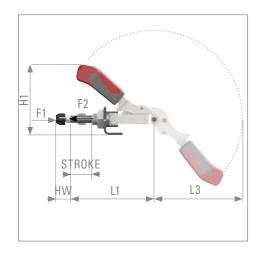
## Toggle clamp with threaded bushing with large stroke 32 mm

- Long toggle clamp guide with mounting thread and nut
   Ergonomic, oil-resistant handle with large grip and soft component
- With tempered, galvanised clamping screw
  Includes threaded bushing for use in any system bore
- Toggle clamp galvanised and passivated, adapter blackened



For all D28 system bores

#### Description ▲ Toggle clamp ▼



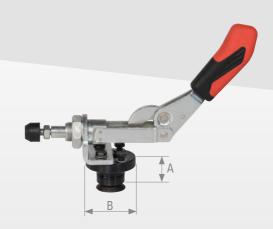


28 A in mm		BØ in i	BØ in mm ~ Weight in kg		Item no.		
20	30	28	0.	4		D28-08000-000	)
	Toggle clamp data						
28	H1	L1	L3	HW	STROKE	F1 in kN	F2 in kN
20	110	140	129	22 to 35	32	2.5	2.5



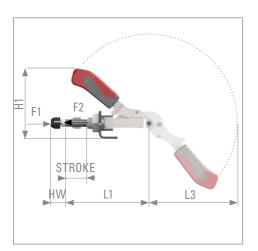
## Toggle clamp with adapter and countersunk screw

- Long toggle clamp guide with mounting thread and nut
   Ergonomic, oil-resistant handle with large grip and soft
- With tempered, galvanised clamping screw
- 32 mm stroke
- With adapter and countersunk screw to fit any system bore
- Toggle clamp galvanised and passivated, adapter blackened
- · With universal stop for indirect locations, therefore continuously adjustable



#### Description ▲ Toggle clamp ▼

#### Application ▼





28	A in mm	BØ in mm	Description	~ Weight in kg	Item no.
20	27	50	Thread spacing = 32x20 mm	0.74	D28-08002-000

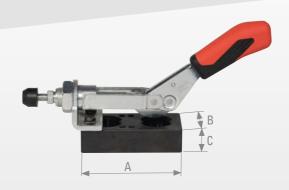
Toggle clamp data

28	H1	L1	L3	HW	STROKE	F1 in kN	F2 in kN
20	110	140	129	22 to 35	32	2.5	2.5



## Universal toggle clamp

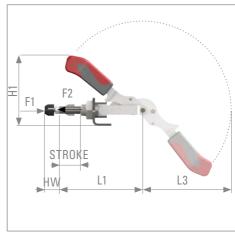
- Long toggle clamp guide with mounting thread and nut
  Ergonomic, oil-resistant handle with large grip and soft
- With tempered, galvanised clamping screw
- 32 mm stroke
- Includes universal stop with thread for displacing the
- Toggle clamp galvanised and passivated, stop blackened



#### Description ▲ Application ▼



#### Toggle clamp ▼



28	A in mm	B in mr	n l	C in mm	~ Weight in	ı kg	Item no	).
20	100	50		25	1.08		D28-08	001-010
Toggle clamp data								
28	H1	L1	L3	HW	STROKE	F1 in kI	V	F2 in kN
20	110	140	129	22 to 35	32	2.5		2.5



## 2-point clamp with adaptor

- Positioning and clamping in one process step
   Explanation: The combination clamp converts the movement
   of the lever arm to a horizontal and vertical clamping movement, so the work piece is positioned and clamped simultaneously for tremendous potential savings.
- Robust and stable design
- Easy removal of the work piece by fully retracting the clamping arm
- With adapter to fit any system bore Continuously adjustable
- Toggle clamp galvanised and passivated, adapter blackened

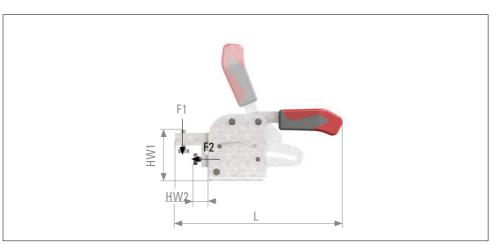


Description ▲ Application ▼

2-point clamp with adapter ▼

Adapter ▼





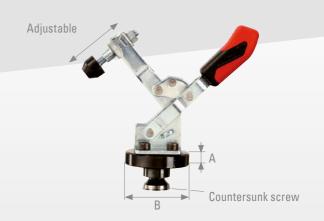
28	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
20	100	70	30	1.8	D28-08007-000
	Data - 2-point c	lamp with adapto			

28	H1	H2	L1	HW1	HW2	F1 in kN	F2 in kN
20	94	87	219	30 to 40	10 to 20	2	2



## Vertical toggle clamp with adaptor and countersunk screw

- With open support arm and horizontal leg
   Ergonomic, oil-resistant handle with large grip and soft component
- Safety clamping piece with finger protection
- Captive clamping screw at clamping arm end
- With adapter and countersunk screw to fit any system bore
- Clamping range 0-50 mm
- Toggle clamp galvanised and passivated, adapter blackened
- With universal stop for indirect locations, therefore continuously



Description ▲ Vertical toggle clamp ▼

 $\equiv$ 





28	A in mm	BØ in mm	Description	~ Weight in kg	Item no.
20	27	50	Thread spacing = 32x20 mm	0.74	D28-08001-000

Data - vertical toggle clamp

28	H1	L1	L2	HW	F1 in kN	F2 in kN
20	186	112		2 to 11		2.5



## Vertical toggle clamp with universal stop

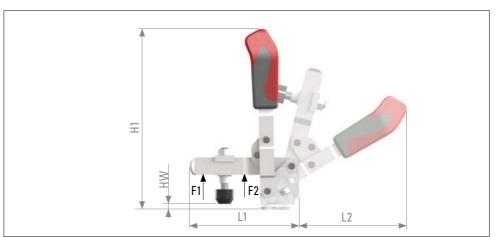
- With open support arm and horizontal leg
- Greased bearing points
- Ergonomic, oil-resistant handle with large grip and soft component
- Safety clamping piece with finger protection
- Captive clamping screw at clamping arm end
- Clamping range 0-50 mm
- Includes universal stop with thread for displacing the vertical toggle clamp
- Toggle clamp galvanised and passivated, adapter blackened



#### Description ▲ Application ▼

#### Vertical toggle clamp ▼



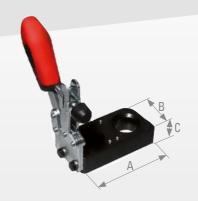


28	<b>A in mm</b> 100	B in mm 50	C in mm 25	~ Weight in kg 0.98		Item no. D28-08003-010		
Data - vertical toggle clamp								
28	H1	L1	L2	HW	F1 in k	N	F2 in kN	
20	186	112	112	2 to 11	1.1		2.5	



## Horizontal toggle clamp with universal stop

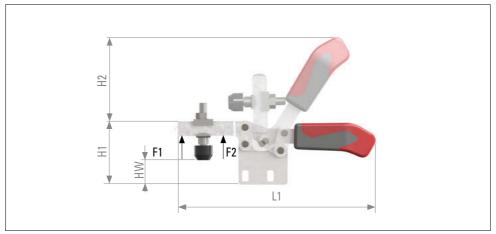
- With open support arm and vertical leg
- Greased bearing points
- Ergonomic, oil-resistant handle with large grip and soft component
- With captive clamping screw
- Includes universal stop with thread for displacing the horizontal toggle clamp
- Toggle clamp galvanised and passivated, stop blackened



#### Description ▲ Application ▼

#### Horizontal toggle clamp 🔻





28	A in mm	B in mm	C in mm	~ Weight in k	g Item i	
	100	50	25	0.98	D28-0	08002-010
	Data - hori	zontal togg	le clamp			
28	H1	L1	L2	HW	F1 in kN	F2 in kN
20	65	86	206	14.5 to 26	1.8	2.5



## Adapter for toggle clamps with countersunk screw

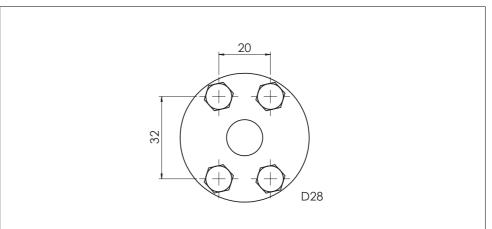
- Adapter to fit conventional quick release skewers
   Scope of delivery: 1 x adapter, 4 x Allen screw M6 x 12, 1 x countersunk screw M16 x 30



#### Description ▲ Application ▼

#### Adapter for toggle clamps with countersunk screw ▼







## Pneumatic toggle clamp S

## Automate your clamping system

- Single-action pneumatic cylinder
- With compression spring retraction and 3/2-way valve!
- Fits all D28 bores
- Stroke 30 mm

#### Force:

 $F_6 = 41 \text{ N}$  at 6 bar

 $F_8 = 117 \text{ N at 8 bar}$ 

 $F_{10} = 193 \text{ N} \text{ at } 10 \text{ bar}$ 

 $F_{20} = 573 \text{ N at } 20 \text{ bar}$   $F_{30} = 953 \text{ N at } 30 \text{ bar}$   $F_{40} = 1146 \text{ N at } 40 \text{ bar}$ 

• Recommended accessory, pressure force booster page 323



#### Description 🔺



28	A in mm	Ø B in mm	C in mm	Item no.	
20	159	28	34	D28-13010-000	



# Pneumatic toggle clamp XL

- Single-action pneumatic cylinder
- With compression spring retraction and 3/2-way valve!
- Fits D28 bore with quick adjustment and 35 mm grid
- Stroke 40 mm

#### Force:

 $F_6 = 680 \text{ N}$  at 6 bar

 $F_8 = 931 \text{ N}$  at 8 bar

 $F_{10} = 1182 \text{ N} \text{ at } 10 \text{ bar}$  $F_{20} = 2364 \text{ N}$  at 20 bar  $F_{40} = 4728 \text{ N}$  at 40 bar



#### Description ▲ Application ▼



#### Application ▼





# Manifold with hand valve

- 10-connection valve block with 1/8" non-return valve
- Hand valve: 3/2-way valve 1/8"
- Includes 20 m hose



Description 🔺

Application ▼



28	A in mm	BØin mm	C in mm	Item no.
20	130	40	25	D28-13020-000

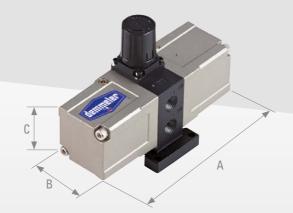




Pressure force booster

 For doubling or quadrupling the pneumatic clamping force:
 Pressure booster 2: 1 max. 20 bar
 Pressure force booster 4: 1 max. 41 bar

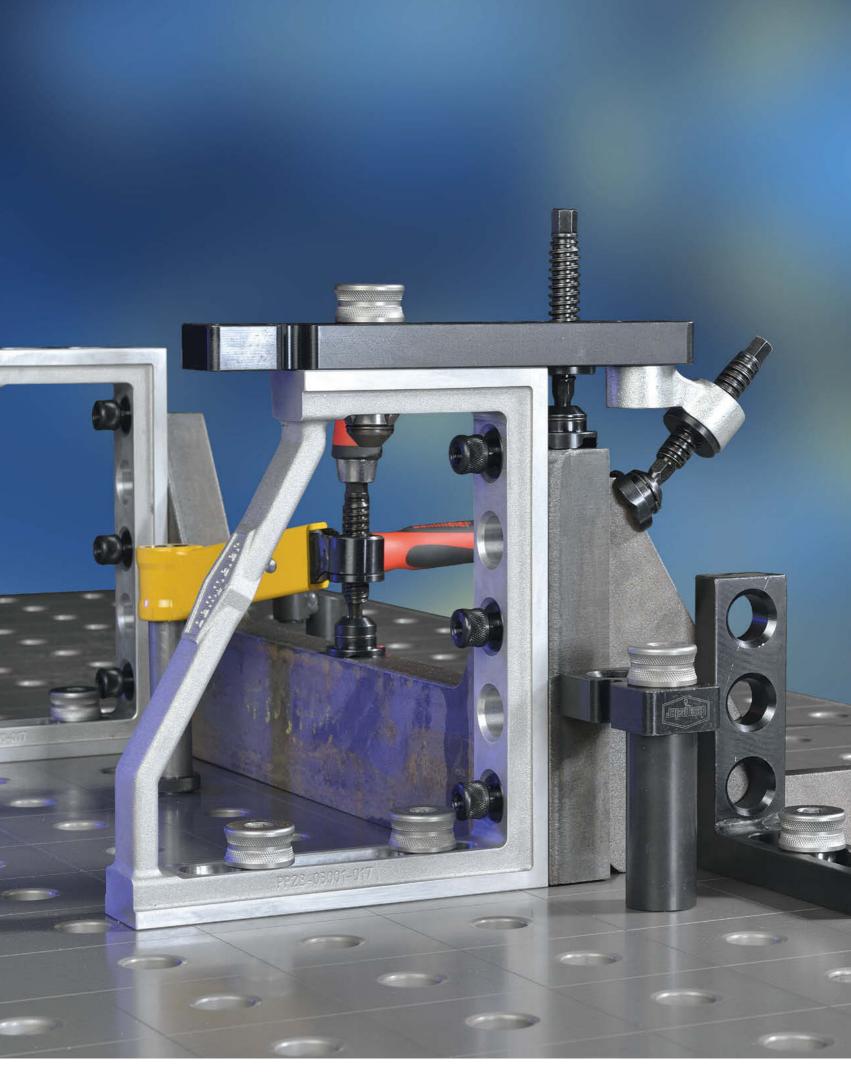
• Includes couplings and hoses



Description 🔺



28	A in mm	B in mm	C in mm	Description	Item no.
20	150	50	65	2:1	D28-13020-001
	200	150	140	4:1	D28-13020-002





# System 28 magnetic clamp

- Direct use in all system boresHolding force ~ 70 N

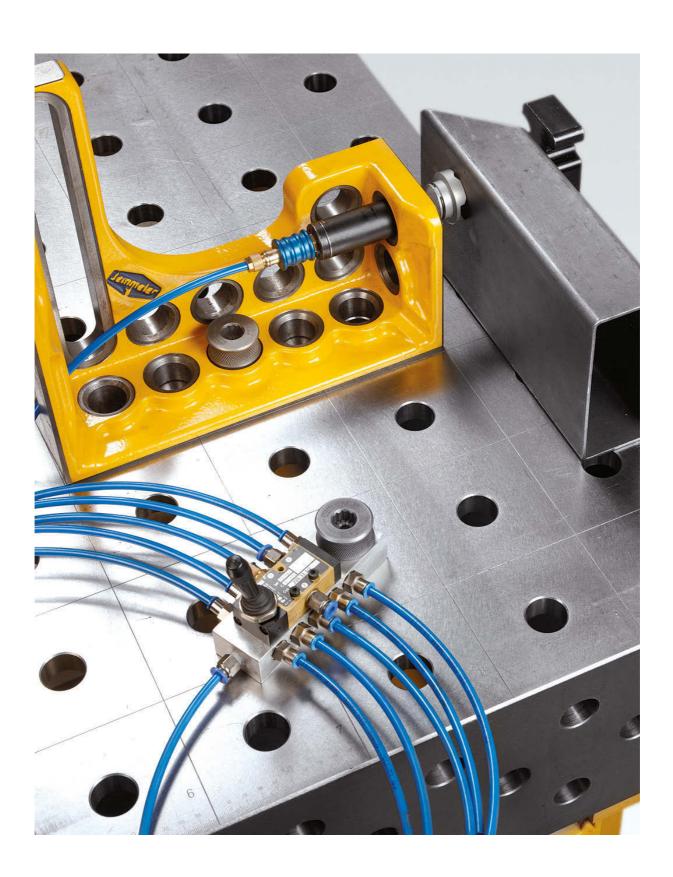




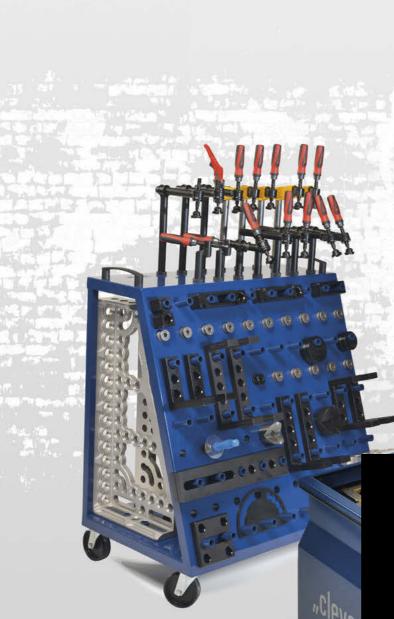




28	A in mm	Ø B in mm	C in mm	~ Weight in kg	Item no.
20	24	28	25	0.16	D28-13001-002
	47	28	25	0.26	D28-13001-003









# Table accessories

Table accessories overview	328
Accessory cart D28	33
Tarpaulin for accessory cart D28	
Accessory wall D28	
"clever toolbox" D28	33
D28 transport ring	33
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Allen key D28	33
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Ground connector	342
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Tarpaulin	34
Pump bottle with worktable system protective spray	34
Worktable system protective spray in a canister	34



# Table accessories overview







**Ground connector** 

Bench stone

PAGE 342

PAGE 343





Worktable tarpaulin

Pump bottle with protective spray

PAGE 343

PAGE 344





Protective spray in a canister

PAGE 344





# Accessory cart D28

- Establishes a tidy and orderly workstation
  Faster access to the system components
  Large angles are safely and conveniently stored inside the cart
- Fast to transport thanks to four sturdy 360° swivelling casters, one of them locking.



Description ▲ Application ▼

Application ▼





System components not included

28	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
20	~ 1000	~ 650	~ 1010	60	D28-11001-000



# Tarpaulin for accessory cart

# Accessory wall, to mount on the wall or table

- Very sturdy tarpaulin
- Protects your accessory cart against dirt and wetness
- Firmly sewn at the corners
- Front with 2 robust zippers for removal The front can be removed without the entire tarpaulin
- For accessory cart D28-11001-000





#### Description ▲ Application ▼

#### Description ▼ Application ▲

- Establishes a tidy and orderly workstation
- The accessory wall can either be mounted on the table with 2x D28-06001-000 PC-bolts (see page 178) or on the wall.

System components not included

28	A in mm	B in mm	C in mm	Item no.
20	-	-	-	D28-11001-020

#### System components not included

20	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
20	~ 1010	1000	~ 105	45	D28-11001-010

"clever toolbox"

To make sure your tools are always where you need them!



28	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
20	980	780	520	65	D28-11001-015

From a table size of 1000 x 1000 n
------------------------------------

28		Item no.
20	Locking pins, bottom	D28-11001-018

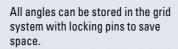


"clever toolbox"

#### Organise your system



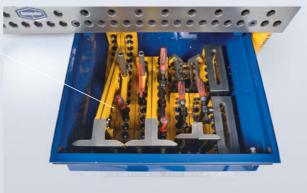
The "clever toolbox" can be mounted on all four sides and has a load capacity of up to 170 kg. Thanks to its ground clearance (10 cm), the "clever box" is readily accessible. The protective plate integrated under the table protects against dirt and weld spatter.





Bolt magazine and universal box, removable and mobile. Not included in the scope of delivery!







D28-11001-023



28		Item no.
20	Bolt magazine	D28-11001-016
	Universal box	D28-11001-017

Locking pins, side

#### D28 transport ring

- For fast, easy and safe transportation of all heavy system components (e.g. worktable)
- Attachment with 2x PPC bolts / PC-bolts (D28-06001-000; D28-06025-000 (28)



	Max. Transport weight in [t] with different attachment methods					
Transport ring	<u></u>	<u></u>				
Tilt angle	0°	0°	0° - 45°			
Number of transport rings	1	2	2			
D28 system	1.8 t	3.6 t	2.4 t			

- D00-10001-000 transport ring must be attached with at least 2x PPC / PC-bolts!
- Max. tightening torque D28: 70 Nm (Bolts are not included in the scope of delivery of the transport ring).
- Countersunk head bolts may not be used!
- Transport ring may only be used for DEMMELER 3D systems!
- Internal operating instructions must be observed!
- Only undamaged Transport ring and PPC / PC-bolts may be used!
- The transport ring must be fastened centrally on the worktop. When using two transport rings, these must be fastened centrally and symmetrically on the worktop. The maximum diagonal pull may not exceed 45° here (see warnings).
- The general regulations for means of transport have to be observed when using the transport ring!
- Depending on the application, the load capacity may be significantly reduced.
- Loads may only be applied to the transport ring in the ring plane! Do not exceed the load capacity!
- Do not allow personnel to stand underneath suspended loads.
- · Observe the warnings on the transport ring!

28	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
20	200	120	129	4.7	D28-10001-001



# Assembly lever

# Clamping and releasing made easy

- Suitable for clamping and releasing D28-06001-000 PS-bolts and PPC-bolts D28-06025-000
- For easy removal of PC-bolts and PPC bolts
- Handle simultaneously used for pre-centring





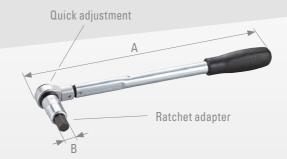


28	A in mm	B in mm	~ Weight in kg	Item no.
20	250	45	0.72	D00-10016-001

# Torque wrench

# Clamping and releasing made easy

- Pre-set to 70 Nm (28), for controlled tightening of the PC-bolt, avoiding damage to the system bore and bolt by overtightening
- Includes 1 x ratchet adapter, adjustable (left/right) 1/2" and 2 x sockets AF 8 and 14





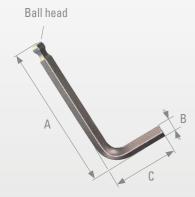
28	A in mm	B in mm	~ Weight in kg	Item no.
20	348	AF 8 / AF 14	0.76	D28-10015-000
	212	AF4/AF8	0.52	D16-10015-000



# Allen key with cross-handle

- For PC-bolt and compensating clamp arm with hexagonal
   Good accessibility due to additional ball head

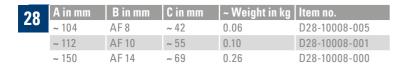
• Ergonomic handle for optimum tightening





Description 🛦

Description 🔺

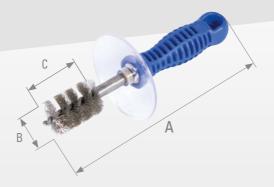


28	A in mm	B in mm	~ Weight in kg	Item no.
20	150	AF8	0.12	D28-10008-004
	200	AF 10	0.18	D28-10008-003



# Round brush

- For cleaning the system boresWith splash guard





28	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
20	200	28	45	0.12	D28-10002-000

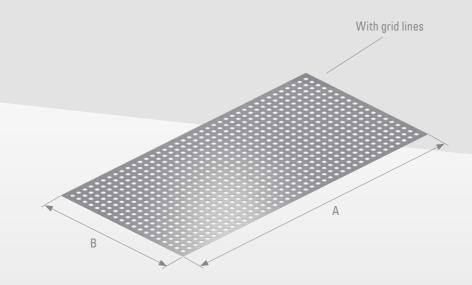




# Protective plate for worktable

# Especially for PROFIPremiumLine (PP) tables

- The protective plate are especially well suited for stainless steel welding
   With 50 x 50 mm grid
- Incl. grid lines
- t=3





28	A in mm	B in mm	Description	Item no.
20	1000	1000	Stainless steel	PP28-50021-001
	1000	1000	Aluminium	PP28-50021-002
	1200	800	Stainless steel	PP28-50021-017
	1200	800	Aluminium	PP28-50021-018
	1200	1200	Stainless steel	PP28-50021-003
	1200	1200	Aluminium	PP28-50021-004
	1500	1000	Stainless steel	PP28-50021-005
	1500	1000	Aluminium	PP28-50021-006
	1500	1500	Stainless steel	PP28-50021-007
	1500	1500	Aluminium	PP28-50021-008
	2000	1000	Stainless steel	PP28-50021-009
	2000	1000	Aluminium	PP28-50021-010
	2000	2000	Stainless steel	PP28-50021-019
	2000	2000	Aluminium	PP28-50021-020
	2400	1200	Stainless steel	PP28-50021-011
	2400	1200	Aluminium	PP28-50021-012
	3000	1500	Stainless steel	PP28-50021-013
	3000	1500	Aluminium	PP28-50021-014
	4000	2000	Stainless steel	PP28-50021-015
	4000	2000	Aluminium	PP28-50021-016
	4800	2400	Stainless steel	PP28-50021-021
	4800	2400	Aluminium	PP28-50021-022

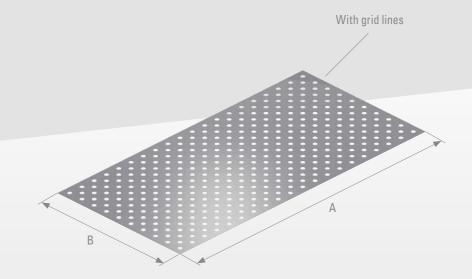


# Protective plate for worktable

# Especially for PROFIPIusLINE (PL) tables

- The protective plate are especially well suited for stainless steel welding.
   with diagonal grid 100 × 100 mm

- Incl. grid linesSystem 28 t=3



Description 🔺

28	

A in mm	B in mm	Description	Item no.
1000	1000	Stainless steel	P28-50021-001
1000	1000	Aluminium	P28-50021-002
1200	800	Stainless steel	P28-50021-017
1200	800	Aluminium	P28-50021-018
1200	1200	Stainless steel	P28-50021-003
1200	1200	Aluminium	P28-50021-004
1500	1000	Stainless steel	P28-50021-005
1500	1000	Aluminium	P28-50021-006
1500	1500	Stainless steel	P28-50021-007
1500	1500	Aluminium	P28-50021-008
2000	1000	Stainless steel	P28-50021-009
2000	1000	Aluminium	P28-50021-010
2000	2000	Stainless steel	P28-50021-019
2000	2000	Aluminium	P28-50021-020
2400	1200	Stainless steel	P28-50021-011
2400	1200	Aluminium	P28-50021-012
3000	1500	Stainless steel	P28-50021-013
3000	1500	Aluminium	P28-50021-014
4000	2000	Stainless steel	P28-50021-015
4000	2000	Aluminium	P28-50021-016
4800	2400	Stainless steel	P28-50021-021
4800	2400	Aluminium	P28-50021-022

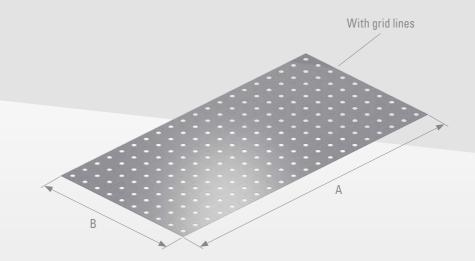




# Protective plate for worktable

# Especially for PROFIEcoLINE tables (PE)

- The protective plate are especially well suited for stainless steel welding
- With 100 x 100 mm grid
- Incl. grid linesSystem 28 t=3



#### Description 🔺

28	A in mm	B in mm	Description	Item no.
20	1000	1000	Stainless steel	D28-50021-012
	1000	1000	Aluminium	D28-50021-019
	1200	800	Stainless steel	D28-50021-028
	1200	800	Aluminium	D28-50021-029
	1200	1200	Stainless steel	D28-50021-020
	1200	1200	Aluminium	D28-50021-013
	1500	1000	Stainless steel	D28-50021-018
	1500	1000	Aluminium	D28-50021-008
	1500	1500	Stainless steel	D28-50021-007
	1500	1500	Aluminium	D28-50021-011
	2000	1000	Stainless steel	D28-50021-005
	2000	1000	Aluminium	D28-50021-003
	2000	2000	Stainless steel	D28-50021-030
	2000	2000	Aluminium	D28-50021-031
	2400	1200	Stainless steel	D28-50021-010
	2400	1200	Aluminium	D28-50021-006
	3000	1500	Stainless steel	D28-50021-014
	3000	1500	Aluminium	D28-50021-015
	4000	2000	Stainless steel	D28-50021-021
	4000	2000	Aluminium	D28-50021-022
	4800	2400	Stainless steel	D28-50021-032
	4800	2400	Aluminium	D28-50021-033





#### Ground connector

- Fits any system bore
- 100 % contact, therefore no overheating of the ground cable >> High efficiency factor
- For cable cross-section 50 70 mm², for loads up to 355 A at 100 % duty cycle, 400 A at 60 % duty cycle
- Simple and safe installation (without interfering edges)
- Compatible with common ground cables



Description 🛦

Application ▼





A in mm	B in mm	C in mm	~ Weight in kg	Item no.
-	-	-	0.34	D00-10009-000



# Tarpaulin for your original DEMMELER 3D worktable

# Protected against dirt

• To care for the system surfaces of worktables and system components

- Very sturdy tarpaulin
  Protects your table against dirt and wetness
  Firmly sewn at the corners





Description ▲ Application ▼





A in mm	B in mm	C in mm	~ Weight in kg	Item no.
200	50	25	0.56	D00-10007-000

A in mm	Binmm	C in mm	Description	Item no.
1000	1000	200	Tarpaulin for table	D00-10030-000
1200	800	200	Tarpaulin for table	D00-10030-008
1200	1200	200	Tarpaulin for table	D00-10030-001
1500	1000	200	Tarpaulin for table	D00-10030-002
1500	1500	200	Tarpaulin for table	D00-10030-003
2000	1000	200	Tarpaulin for table	D00-10030-004
2000	2000	200	Tarpaulin for table	D00-10030-009
2400	1200	200	Tarpaulin for table	D00-10030-005
3000	1500	200	Tarpaulin for table	D00-10030-006
4000	2000	200	Tarpaulin for table	D00-10030-007
4800	2400	200	Tarpaulin for table	D00-10030-010

Pump bottle with worktable system protective spray

Worktable system protective spray in a canister

- Pressurised, sturdy version
- Includes anti-spatter spray for welding table systems
- Capacity: 1 litre
- Attention: Cannot be diluted with water!

#### ADVANTAGES FOR YOU:

- Prevents the adhesion of weld spatter on the surface
- Temporary corrosion protection for approx. one day
- Good cleaning effect
- Not combustible
- No chlorinated hydrocarbons
- Biodegradable
- Silicone-free



#### Properties:

- Parting agent for welding thin and/or pre-heated sheets and for multi-layer welding
- Protection for worktables, system components, welding nozzles and other welding accessories

#### Areas of application:

 For welding VA materials, steel and other metals



Description ▲ Application ▼

Description 🔺



A in mm	B in mm	Description	Item no.
280	100	without welding spray	D00-10004-000
280	100	with 1 litre welding spray	D00-10005-000

A in mm	B in mm	Description	Item no.
230	200	5 litre canister	D00-10006-000
310	200	10 litre canister	D00-10006-001
400	350	30 litre canister	D00-10006-002



# 







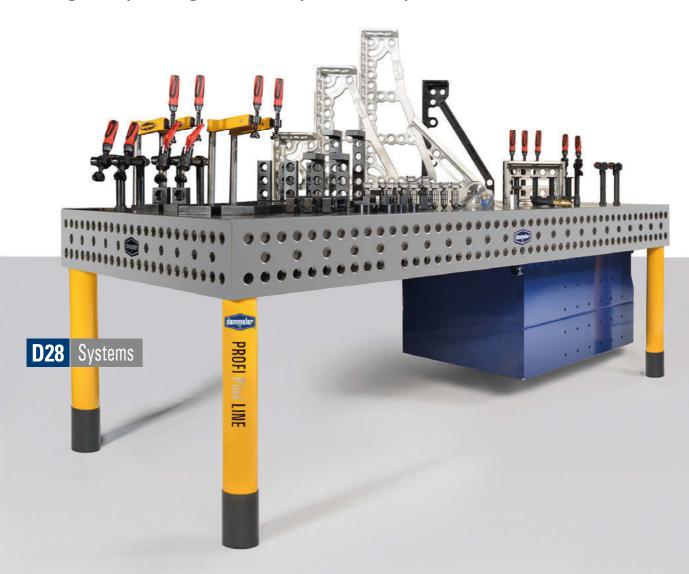






# The optimum 3D worktable for every application –

the intelligent system grids boost productivity



# D28 / For everyday, large welded constructions



## D28 PROFIPremiumLINE (PP)

- Grid 50 x 50 mm
- 3-hole drilling pattern in the table side plates, 50 mm grid in the top and bottom rows with additional 100 mm grid in the middle



#### D28 PROFIPIUSLINE (PL)

- Diagonal grid 100 × 100 mm
- 3-hole drilling pattern in the table side plates, 50 mm grid in the top and bottom rows with additional 100 mm grid in the middle



#### D28 ProfiEco Line (PE)

- Grid 100 x 100 mm
- 3-hole drilling pattern in the table side plates, 50 mm grid in the top row with additional 100 mm grid in the middle and bottom rows



#### D28 HobbyLINE (H)

- Grid 100 x 100 mm
- Worktop approx. 25 mm high with system bores in a 100 mm x 100 mm grid





# D16 / For delicate applications



# D16 PROFIPIUSLINE (PL) - Diagonal grid 50 × 50 mm

- 3-row bore pattern on the table side plates, 50 mm grid in the top, middle and bottom row



# D16 ProfiEco Line (PE)

- Grid 50 x 50 mm
- 3-row bore pattern on the table side plates, 50 mm grid in the top, middle and bottom row



**D22** Systems

# D22 / For light and medium-duty applications

Particularly suited for use in the automation field (thanks to very lightweight, robust versions in high-strength aluminium-titanium alloy)



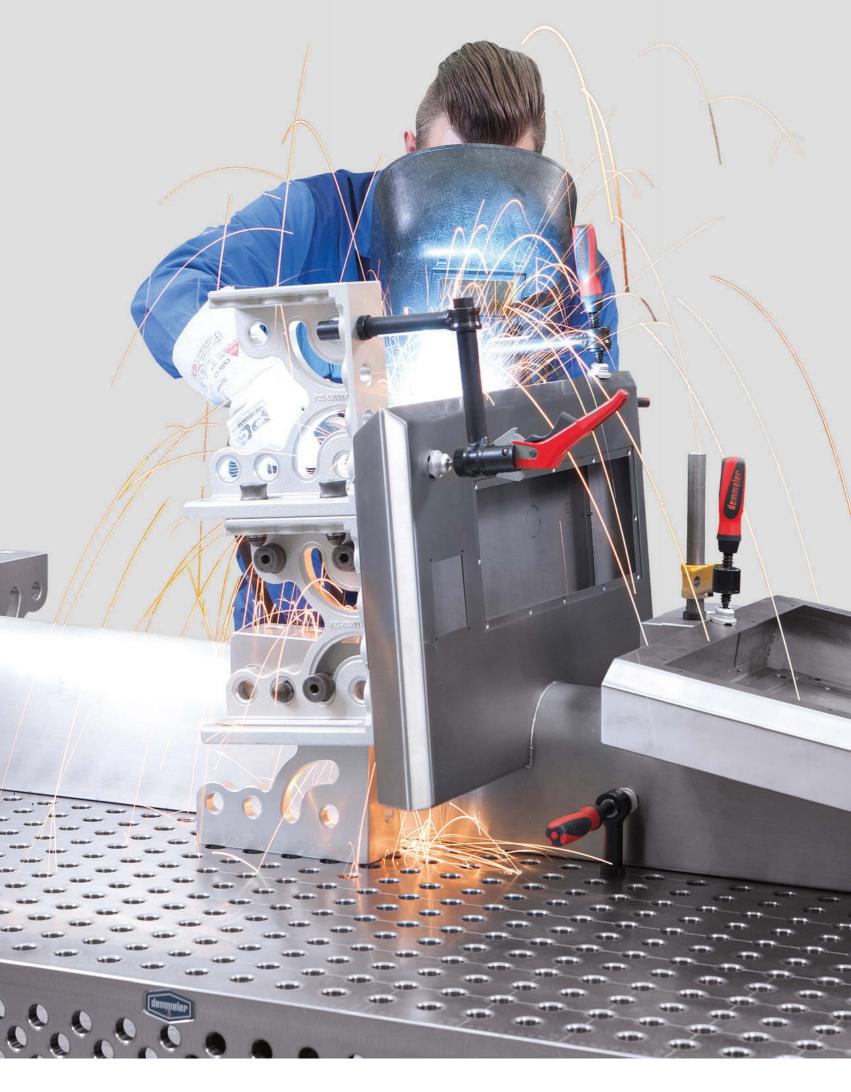
# D22 PROFIPremiumLINE (PP)

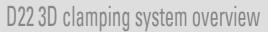
- Grid 50 x 50 mm
- 3-row bore pattern on the table side plates, 50 x 50 mm diagonal



#### D22 PROFIPIUSLINE (PL)

- Diagonal grid  $100 \times 100$  mm
- 2-row bore pattern on the table side plates, 50 mm grid









#### 22 PROFIPremiumLINE (PP) 3D table

PAGE 364

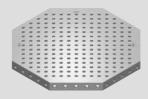
22 PROFIPIusLINE (PL) aluminium-titanium 3D table

PAGE 368



22 3D Okto 100 worktable

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PAGE 378

PROFIPIUSLINE (PL) 3D table



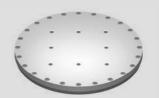
22 Standard leg / telescoping leg / heavy-duty wheel / anchoring leg

PAGE 370



22 Adapter plate

PAGE 375



# 3D clamping system

Benefits of the D22 3D system tables



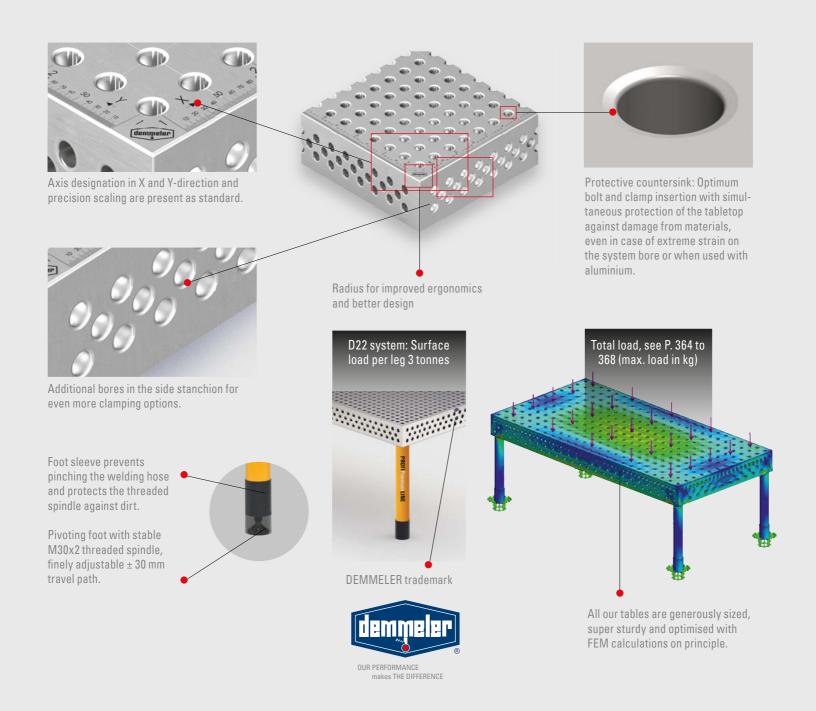




## Benefits of the D22 3D system tables

# The benefits of a 3D clamping system from DEMMELER!

With our 3D clamping system, you have the right solution for clamping and positioning work pieces near at hand. Optimum positioning of the work piece not only makes work more accurate but also much more effective. In particular, the intelligent system grids give you unlimited clamping capabilities.

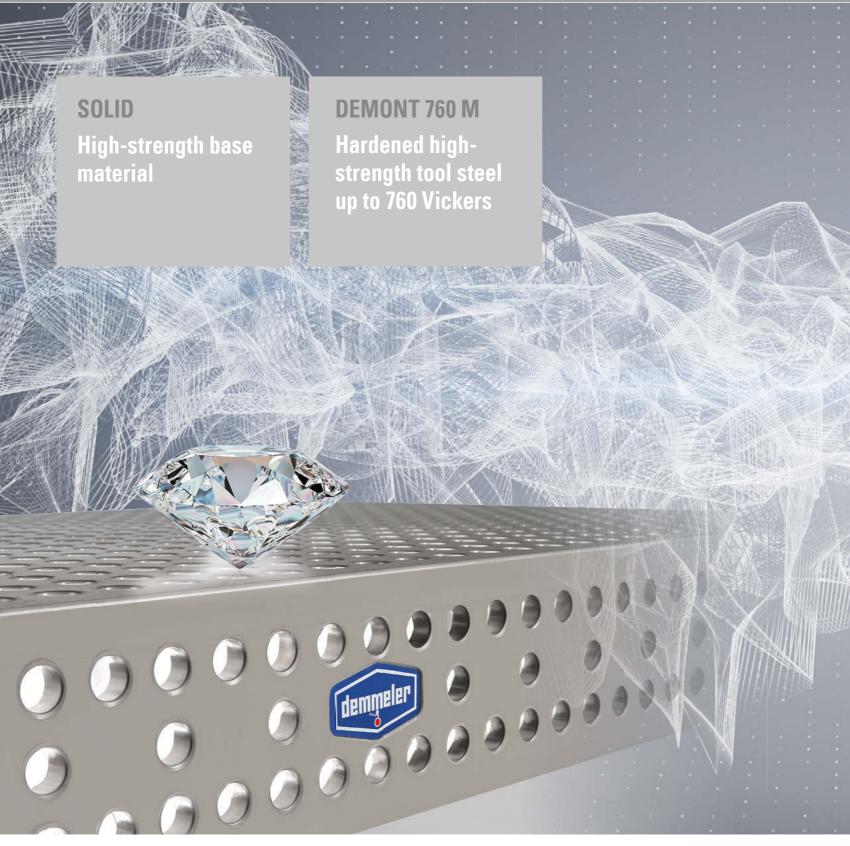


# 3D clamping system

The HARDNESS of DEMMELER

Hardness comparison







DEMONT 760 M

Material properties

# THE hardness of DEMMELER – for the toughest requirements

- + Less wear
- + Protection against adherence of weld spatter
- + Extremely tough and durable
- + Optimum surface qualities

## DEMONT 760 M

Stands for the combination of the specified base material and the new DEMMELER hardening process optimised especially for worktables. This results in outstanding material characteristics. A hardness of up to 760 Vickers can be achieved, reducing wear for an even longer service life of your worktable.





DEMONT 760 M

		DEMONT 760 M	SOLID
Load	high bearing loads	****	<b>***</b> *
Evenness	for outstanding tool quality	<b>***</b>	<b>***</b>
Conductivity	for excellent welding results when using the ground connector	<b>***</b>	****
Base hardness	for high impact resistance	<b>***</b>	<b>~ ~ ~</b>
Surface hardness	resistant to weld spatter	<b>***</b>	<b>**</b>

= adequate

# Planned down to the tiniest details – The 3D clamping system from DEMMELER

#### Welding results

When using the 3D clamping system, the optimum flow of electricity between the electrode / filler wire and ground connector is vitally important. That is why DEMMELER optimises the material properties of its worktables and accessories and guarantees outstanding precision for optimum form fits. Although hardened worktables are even more robust and better protected against weld spatter, the conductivity also falls slightly. Here again, DEMMELER has developed an optimum solution in the form of the DEMONT 760 M variants. In this way, DEMMELER provides optimum conditions for ideal welding results!

#### • DEMONT 760 M ①

Very good conductivity for optimum welding results, extremely tough design and outstanding protection against weld spatter

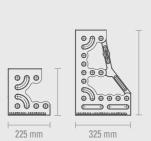
#### • SOLID standard hardness 2

Excellent conductivity for optimum welding results, extremely tough design and high protection against weld spatter

# PROFIPremiumLINE clamping and locating angle

The aluminium-titanium design is lightweight enough to permit optimised, extremely simple handling. Only by using the patented PPC clamping pin is it possible to clamp the angles without causing wear. This permits an unlimited service life. The kidney-shaped 90° system groove makes continuous angle adjustment possible. The extended face plate and increased number of cross braces provide additional bores for clamping. The precision scaling makes adjustment much easier.

#### 4 stop faces and usable surfaces



225 mm

Corner heights, aluminiumtitanium 250, 500, 750 mm

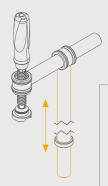
Reinforcement in the corners with 90° system groove in kidney shape supports continuously variable use, also with angular adjustment







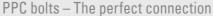




#### Screw clamp

The DEMMELER screw clamps are constructed using round tubes. This makes them extremely tough and the greatest possible clamping forces are achieved. DEMMELER screw clamps can be extended on a modular basis – for example, use as a 270° screw clamp is possible.

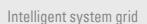
Using the performance screw clamp, it is also possible to clamp very high components with the same precision.



- Self-centring, force-locked and low-wear clamping
- Very quick to clamp and unclamp
- Force-locking through full-area contact
- Easy on materials
- Low susceptibility to dirt
- Extremely tough long service life guaranteed



Even force distribution across the polygon bolts also reduces bore hole wear compared to conventional bolts. The cone clamping system permits a bearing surface that is 100 times larger.



Thanks to the hole pattern on the side stanchions, DEMMELER worktables can be extended on a modular basis – and offer outstanding stability, toughness and very high bearing capacity.



Additional bores in the side stanchion for even more clamping options

#### Pivoting leg

The extremely sold design ensures very high load-bearing capacity – 3,000 kg per leg. The foot sleeve prevents pinching and reduces wear at the cable-hose assembly. This also provides a convenient way of using the ground connector. It also protects the threaded spindle against dirt and wear. Fine adjustments are possible and fixing is stable and simple.

Foot sleeves prevent pinching the welding hose and protect the threaded spindle against dirt.





#### Leg type variant overview



#### Standard leg

- Pivoting feet, ± 30 mm finely adjustable
- Sturdy M30x2 threaded spindle
- Foot sleeve protects the threaded spindle against dirt and prevents pinching the cable-hose assembly
- Also suitable as supporting leg in combination with overhung spacer block U-form, length 1 m and up
- Including countersunk M24 x 60 mounting screw
- Leg tube powder coated
- To order standard legs, see page 370

#### Telescoping leg

- Pivoting feet, ± 30 mm finely adjustable
- Sturdy M30x2 threaded spindle
- Foot sleeve protects the threaded spindle against dirt and prevents pinching the cable-hose assembly
- Telescope adjustment range 350 mm in 50-mm increments
- For flexible height adjustment of the worktable
- Including countersunk M24 x 60 mounting screw
- Leg tube powder coated
- To order telescoping legs, see page 370

### Heavy-duty wheel

- Finely adjustable ± 30 mm
- Sturdy M30x2 threaded spindle
- Foot sleeve protects the threaded spindle against dirt and prevents pinching the cable-hose assembly
- Robust version
- With 360° caster
- Max. load capacity 600 kg
- Including countersunk M24 x 60 mounting screw
- Leg tube powder coated
- To order heavy duty wheels, see page 370

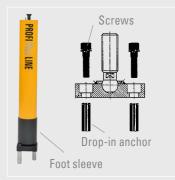
#### Anchoring leg

- Finely adjustable ± 30 mm
- Sturdy M30x2 threaded spindle
- Foot sleeve protects the threaded spindle against dirt and prevents pinching the cable-hose assembly
- For firm attachment to the hall floor against tension, pressure and shifting (e.g. robot use)
- Includes M24 x 60 countersunk mounting screw and, for firm anchoring to the floor, 2 x drop-in anchor, 2 x cap screw M16 x 40
- Leg tube powder coated
- To order anchoring legs, see page 370

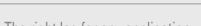














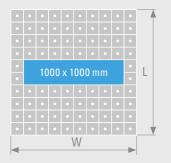
# 3D clamping system

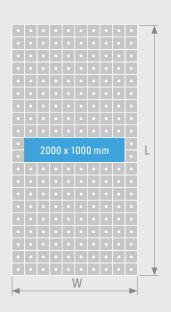


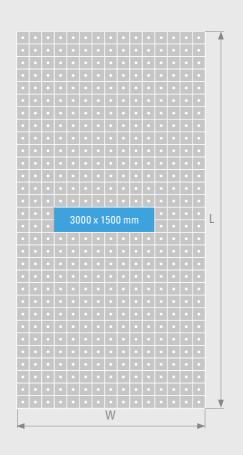




#### D22 system table sizes











22	L in mm	W in mm	H in mm
	1000	1000	150
	2000	1000	150
	2400	1200	150
	3000	1500	150

Custom dimensions and materials (e. g. stainless steel) available on request!

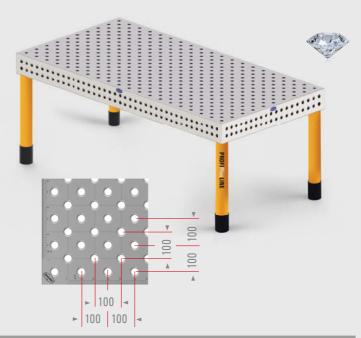
#### PROFIPremiumLINE (PP) 3D table

#### PROFIPIusLINE (PL) 3D table

# Worktop with D22 system bores in a 50 mm x 50 mm grid



# Worktop with D22 system bores in a 100 mm x 100 mm diagonal grid



#### Description: PROFIPremiumLINE ▼

- D22 table plate with system bores in a 50 mm × 50 mm grid. This
  results in 200 % more clamping options than with PROFIPIusLINE
- 3-hole drilling pattern in the table side plates with D22 system bores in the  $50\times50$  mm diagonal grid. This doubles the expansion and clamping options
- All table dimensions are available as an option with the hardened DEMONT 760 M version with hardness of up to 760 Vickers
- All system bores with protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Precision scaling with millimetre division, also available with the DEMONT 760 M option
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo displayed on all 4 sides of the side plate
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly

#### Description: PROFIPIusLINE

- Worktop with D22 system bores in a 100 mm × 100 mm diagonal grid
- 2-hole drilling pattern in the table side plates with D22 system bores in 50 mm grid
- All table dimensions are available as an option with the hardened DEMONT 760 M version with hardness of up to 760 Vickers
- All system bores with protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Precision scaling with millimetre division, also available with the DEMONT 760 M option
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo displayed on all 4 sides of the side plate
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly

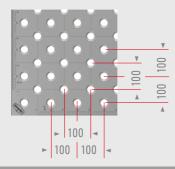


### PROFIPIusLINE (PL) aluminium-titanium 3D table

Description of the D22 table line

# Worktop with D22 system bores in a 100 mm x 100 mm diagonal grid





#### Description: PROFIPIusLINE aluminium-titanium

- Worktop with D22 system bores in a 100 mm × 100 mm diagonal grid
- 2-hole drilling pattern in the table side plates with D22 system bores in 50 mm grid
- All system bores with new protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing (for rectangular tables)
- Precision scaling with millimetre divisions (for rectangular tables)
- Coordinate marking of the bores in the X and Y-direction (for rectangular tables)
- DEMMELER logo displayed on all 4 sides of the side plate
- Prepared for DEMMELER table legs
- Adapter plate available for connection to existing manipulator or robot, see page 375

# PROFIPremiumLINE (PP) 3D table

Grid 50 x 50 mm





Table without leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	1000	1000	150	200		
	2000	1000	150	350		
	2400	1200	150	500		
	3000	1500	150	735		

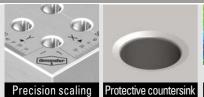




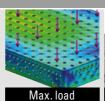




### PROFIPremiumLINE (PP) 3D table













#### **DESCRIPTION**

- D22 table plate with system bores in a 50 mm x 50 mm grid. This results in 200 % more clamping options than with PROFIPIusLINE
- 3-hole drilling pattern in the table side plates with D22 system bores in 50 x 50 mm diagonal grid. This doubles the expansion and clamping options
- All table dimensions are available as an option with the DEMONT 760 M hardness of up to 760 Vickers
- · All system bores with protective countersink, perfect design and ultimate functionality
- · Optimised outside table edges
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Precision scaling with millimetre division, also available with the DEMONT 760 M option
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo displayed on all 4 sides of the side plate
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly



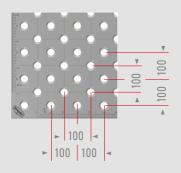
Number of legs	SOLID	DEMONT 760 M hardened
without legs	PP22-01001-000	PP22-01001-500
without legs	PP22-01002-000	PP22-01002-500
without legs	PP22-01003-000	PP22-01003-500
without legs	PP22-01004-000	PP22-01004-500

1	Number of legs	SOLID	DEMONT 760 M hardened	
4	4	PP22-01001-001	PP22-01001-011	0 1 1 (
4	4	PP22-01002-001	PP22-01002-011	Selection list for
4	4	PP22-01003-001	PP22-01003-011	other leg variants as of page 370
6	6	PP22-01004-001	PP22-01004-011	as of page 370

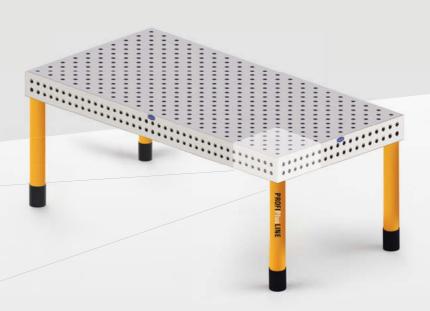
# PROFIPIusLINE (PL) 3D table

## Diagonal grid 100 × 100 mm









 $\label{lem:custom} \textbf{Custom dimensions and material (e.\ g.\ stainless\ steel)}\ available\ on\ request$ 



L in mm	W in mm	H in mm	~ Weight of table in kg   Max. load in kç	
1000	1000	150	210	
2000	1000	150	375	
2400	1200	150	535	
3000	1500	150	785	



L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
1000	1000	850 ±30	244	12000	
2000	1000	$850 \pm 30$	409	12000	
2400	1200	$850 \pm 30$	569	12000	
3000	1500	850 ±30	836	18000	





### PROFIPIusLINE (PL) 3D table













**DESCRIPTION** 

- Worktop with D22 system bores in a 100 mm × 100 mm diagonal grid
- 2-hole drilling pattern in the table side plates with D22 system bores in 50 mm grid
- All table dimensions are available as an option in the DEMONT 760 M hardness of up to 760 Vickers
- · All system bores with new protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Precision scaling with millimetre division, also available with the DEMONT 760 M option
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo displayed on all 4 sides of the side plate
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly



DI	-MA	NIT 7	en i	V.
	-17,710.01		4 - 1	11/1

Number of legs	SOLID	DEMONT 760 M hardened
without legs	PL22-01001-000	PL22-01001-500
without legs	PL22-01002-000	PL22-01002-500
without legs	PL22-01003-000	PL22-01003-500
without legs	PL22-01004-000	PL22-01004-500

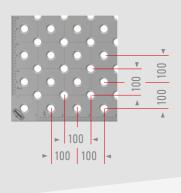
Numb	er of legs SOLID	DEMONT 760 M hardened		
4	PL22-01001-0	01 PL22-01001-011		
4	PL22-01002-	001 PL22-01002-011		ction list for
4	PL22-01003-	001 PL22-01003-011		r leg variants page 370
6	PL22-01004-	001 PL22-01004-011	as 01	page 370

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# 3D-Tisch PROFIPlusLINE (PL) aluminium-titanium 3D table

THE ORIGINAL

## Diagonal grid 100 × 100 mm



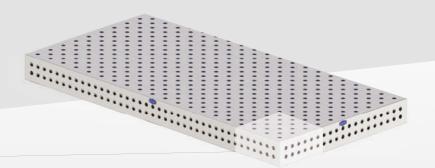




Table without leg	L in mm	W in mm	H in mm	~ Weight of table in kg   Max. load in kg	
	1000	1000	150	75	
	2000	1000	150	130	







### PROFIPIusLINE (PL) aluminium-titanium 3D table

### Recommended for automation solutions and robotics applications









#### **DESCRIPTION**

- Worktop with D22 system bores in a 100 mm × 100 mm diagonal grid
- · 2-hole drilling pattern in the table side plates with D22 system bores in 50 mm grid
- · All system bores with new protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing (for rectangular tables)
- Precision scaling with millimetre divisions (for rectangular tables)
- Coordinate marking of the bores in the X and Y-direction (for rectangular tables)
- DEMMELER logo displayed on all 4 sides of the side plate
- Prepared for DEMMELER table legs
- Adapter plate available for connection to existing manipulator or robot, see page 375

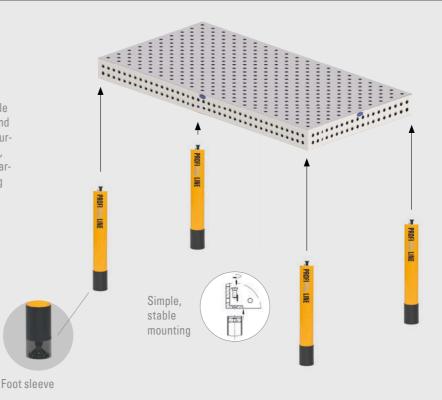
Number of legs	Aluminium-titanium
without legs	PL22-01001-003
without legs	PL22-01002-003

### Ordering summary for table legs

#### D22 system 3D welding tables with suitable standard legs

#### Legs you can rely on.

Efficient working guaranteed! Starting with the finely adjustable standard leg and on through the mobile heavy-duty wheel, a variable selection of table legs are available for the various table systems and permit any application. This offers you greatest possible freedom during your manufacturing operations. Thanks to the intelligent design, the legs can be fixed simply and stably. The robust construction guarantees a long service life. To this end, foot sleeves prevent pinching the welding hose and protect the threaded spindle against dirt.



#### Ordering example:

1. On page 364 - 368, select the desired worktop, resulting in order item no. 1: e.g. 1x PL22-01002-000



2. From the current page, select the leg you want in the corresponding quantity, which results in order item no. 2: e.g. 4x PL22-10010-001



3. Together the two order item numbers result in your order to DEMMELER.
e.g. 1x PL22-01002-000
+ e.g. 4x PL22-10010-001



#### The right table legs for any application

Cuctom	Standard leg	Telescoping leg	Heavy-duty wheel	Anchoring leg
System	22	22	22	22
PROFIPremiumLINE	•	•	•	•
PROFIPIusLINE	•	•	•	•





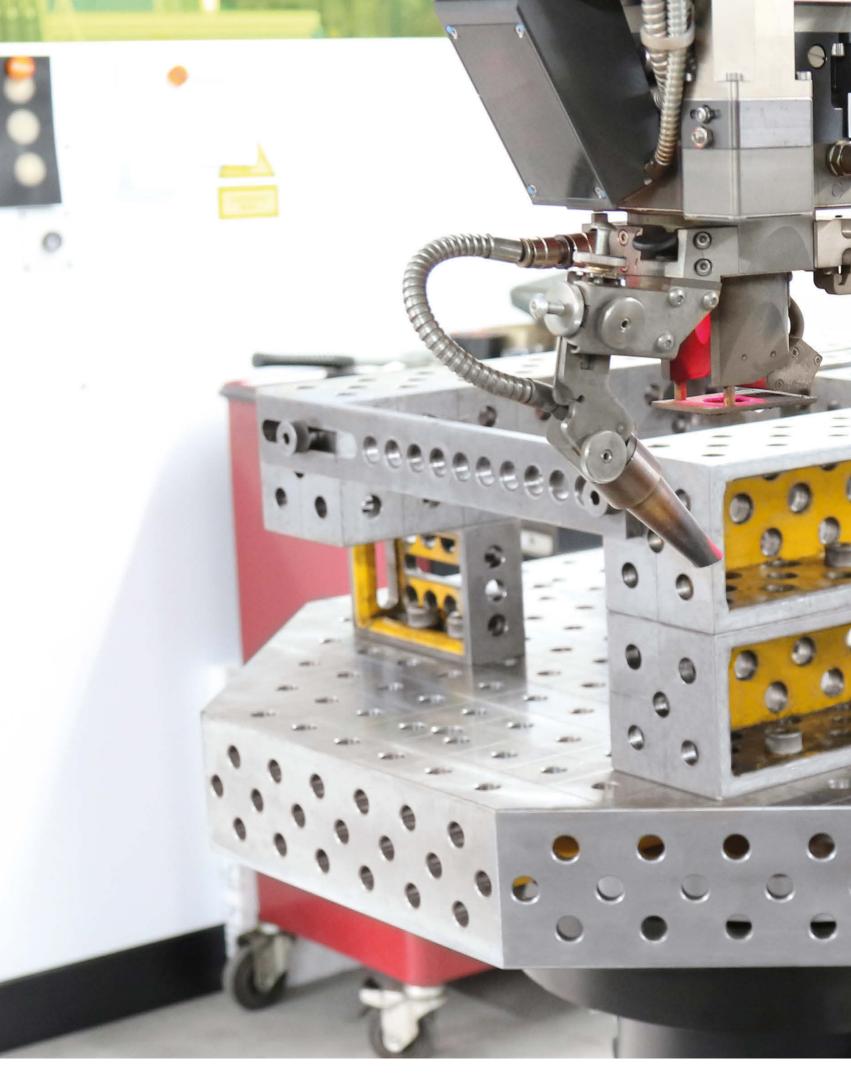
# Standard leg / telescoping leg / heavy-duty wheel / anchoring leg

Standard leg		Quantity		22		
	For table size	Legs	Item number	H in mm	Weight in kg	Max. load in kg
<u> </u>	1000×1000					
PROF	2000x1000	4	PL22-10010-000	700 ± 30	8.5	3000
PROFI Page	2400x1200		PL22-10010-000	700 ± 30	0.5	3000
LINE	3000×1500	6				
Н						
Finely adjust pivoting foot						

Telescoping	g leg			Quantity		22		
			For table size	Legs	Item number	H in mm	Weight in kg	Max. load in kg
<u></u> —			1000x1000					
•	1		2000x1000	4	DI 22 10010 001	600 to 950	12	3000
			2400x1200		PL22-10010-001	± 30	12	3000
		<b>1</b>	3000x1500	6				
PROFI Plus LINE	Н	Adjustable height Grid 50 mm						
		Finely adjustable pivoting foot						

Heavy-duty wheel			Quantity		22		
		For table size	Legs	Item number	H in mm	Weight in kg	Max. load in kg
		1000x1000		(2x) PL22-10010-002*1		12	
<u>.T</u>		2000x1000	4	+			
PRO		2400x1200		(2x) PL22-10010-003*2	700 ±30	11	600
PROFI Plas LINE		3000×1500	C	(2x) PL22-10010-002*1	700 ±30	12	000
LINE .		2000X1200	6	(4x) PL22-10010-003*2		11	
H	*1 wheel with brake *2 wheel without						

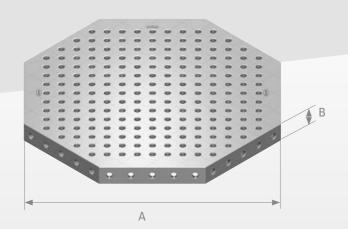
Anchoring leg			Quantity		22		
T		For table size	Legs	Item number	H in mm	Weight in kg	Max. load in kg
<b>≥</b>	Screws	1000x1000		PL22-10010-004	700 ± 30 11		
PROFI Plus	/ <del>ch</del>	2000x1000	4			3000	
S		2400x1200			700 ± 30	11	3000
E		3000x1500	6				
Н							
	Drop-in anchor						





### Okto 100 3D worktable

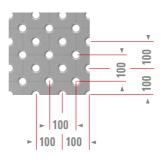
- Preferred use with manipulators in robot cells
- Numerous clamping possibilities on all nine clamping surfaces
- In the D22 bore grid 100x100
- Diagonal boring in M16 version
- High-strength aluminium-titanium alloy for  $\sim 60$  % weight reduction and  $\sim 10$  % higher bending strength
- Together with adapter plate, with special connection drilling pattern, adapted to the face plate of your manipulator (please include manipulator type and drawing of the face plate with enquiry)



#### Description ▲ Application ▼

#### Diagonal grid 100 x 100 ▼





22	A in mm	B in mm	Description	Item no.
	AF 600	100	Diagonal grid 100 x 100	PL22-11008-001
	AF 800	100	Diagonal grid 100 x 100	PL22-01013-001
	AF 1000	100	Diagonal grid 100 x 100	PL22-01038-001

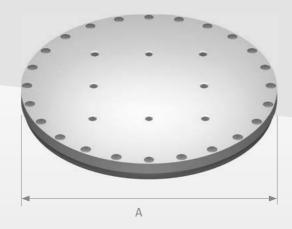




Adapter plate

## Recommended for automation solutions and robotics applications

- Interface element for adaptation of Okto 100 D22 3D worktable to welding robot or manipulator
  • Interface hole pattern produced in accordance
- with customer's wishes
- Incl. mounting screws



Description 🛦

22 A in	mm Descr	iption	Item no.
AF 6	300 Adapt	er plate for table AF 600	00116157
AF 8	300 Adapt	er plate for table AF 800	00116159
AF 1	1000 Adapt	er plate for table AF 1000	00116160





# PROFIPlusLINE set 710 (System 22)

Item number: D22-52000-710 (26-piece)



Quantity 🔻	Item no. ▼	Item description ▼
10	E22-06025-000	EcoLINE bolt/short – Ø 22, AF 6, clamping range 32-33.5 mm
4	D22-05015-000	Displacement stop $-100 \times 50 \times 18$ mm, scale on both sides
4	D22-05001-000	Universal stop /size $225 \times 50 \times 18 \text{ mm}$
2	D22-05009-000	Universal stop L 300 - 300 $\times$ 50 $\times$ 18 mm
4	D22-07005-000	Variable screw clamp 180° with spindle – vertical pipe 250 mm
1	D22-10002-000	Round brush Ø 22 with protective cap, for cleaning the system bore
1	D22-10016-001	Extraction tool – 250 × 45 mm, AF 10

 $You \ can \ individually \ assemble \ or \ supplement \ your \ sets \ with \ the \ large \ selection \ of \ DEMMELER \ accessories!$ 





PROFIPIusLINE set 720 (System 22)

Item number: D22-52000-720 (57-piece)

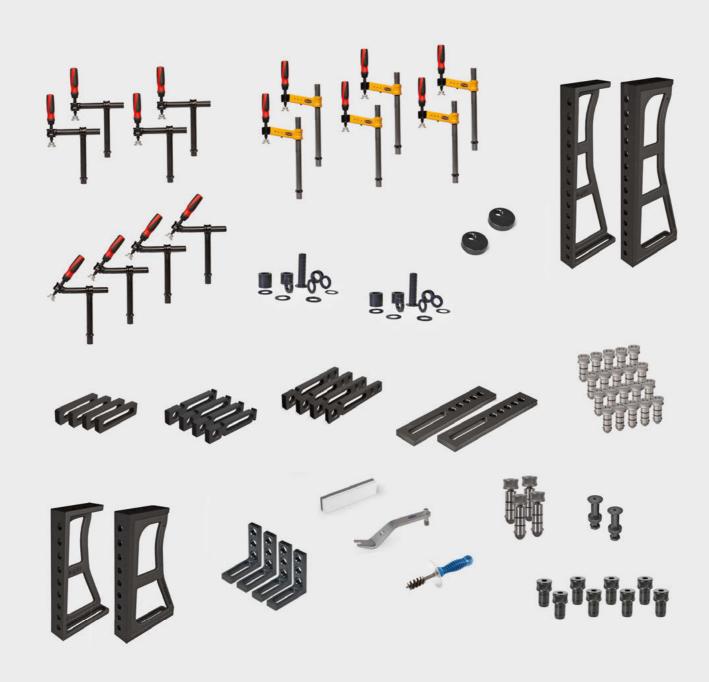


Quantity <b>V</b>	Item no. ▼	Item description ▼
16	E22-06025-000	EcoLINE bolt/short – Ø 22, AF 6, clamping range 32-33.5 mm
6	D22-06009-000	Stop and positioning bolts $\emptyset$ 22/31 $\times$ 52 mm
2	D22-09001-005	Spacer set with thread – $\emptyset$ 45 × 125 mm, height compensation 22-105 mm, continuous
2	D22-05013-000	Stop washer Ø 75 – stop dimension 25-50 mm, continuous
2	D22-09001-000	Spacer set 11 pieces – $\emptyset$ 50 × 125 mm, height compensation 5-100 mm increment 1 mm
4	D22-05015-000	Displacement stop $-150 \times 50 \times 18$ mm, scale on both sides
4	D22-05009-000	Universal stop L $300-300\times50\times18$ mm
4	PE22-03001-000	Clamping and locating angle 175 x 175 mm (bore/oblong hole)
2	D22-05003-000	Stop strip L 500 × 100 × 18 mm
4	D22-07009-000	Variable screw clamp 45° with spindle – vertical pipe 250 mm
4	D22-07005-000	Variable screw clamp 180° with spindle – vertical pipe 250 mm
4	D22-07001-000	Compensating swing clamp 180° with spindle – vertical pipe 300 mm
1	D22-10002-000	Round brush Ø 22 with protective cap, for cleaning the system bore
1	D22-10016-001	Extraction tool $-250 \times 45$ mm, AF 10
1	D00-10007-000	Bench stone $200 \times 50 \times 25 \text{ mm}$

 $You \ can \ individually \ assemble \ or \ supplement \ your \ sets \ with \ the \ large \ selection \ of \ DEMMELER \ accessories!$ 

PROFIPlusLINE set 730 (System 22)

Item number: D22-52000-730 (77-piece)







# PROFIPIusLINE set 730 (System 22)

## Item number: D22-52000-730 (77-piece)

Quantity <b>V</b>	Item no. ▼	Item description ▼
4	D22-06026-000	PPC bolt/long – Ø 22, AF 10, clamping range 49–-52 mm
20	E22-06025-000	EcoLINE bolt/short – Ø 22, AF 6, clamping range 31-34 mm
8	D22-06009-000	Stop and positioning bolts Ø 22/31 × 52 mm
2	D22-09001-005	Spacer set with thread $-$ Ø 45 $\times$ 125 mm, height compensation 22-105 mm, continuous
2	D22-05013-000	Stop washer Ø 75 – stop dimension 25-50 mm, continuous
2	D22-09001-000	Spacer set 11 pieces – $\emptyset$ 50 × 125 mm, height compensation 5-100 mm increment 1 mm
4	D22-05015-000	Displacement stop $-150 \times 50 \times 18$ mm, scale on both sides
4	D22-05001-000	Universal stop /size $225 \times 50 \times 18$ mm
4	PE22-03001-000	Clamping and locating angle 175 x 175 mm (bore/oblong hole)
4	D22-05009-000	Universal stop L $300 - 300 \times 50 \times 18 \text{ mm}$
2	D22-05003-000	Stop strip L 500 – 500 × 100 × 18 mm
4	D22-07009-000	Variable screw clamp 45° with spindle – vertical pipe 250 mm
4	D22-07005-000	Variable screw clamp 180° with spindle – vertical pipe 250 mm
6	D22-07001-000	Compensating swing clamp 180° with spindle – vertical pipe 300 mm
1	D22-10002-000	Round brush Ø 22 with protective cap, for cleaning the system bore
1	D22-10016-001	Extraction tool – 250 × 45 mm, AF 10
1	D00-10007-000	Bench stone $200 \times 50 \times 25$ mm
1	PE22-03003-000	Clamping and locating angle H 500, DEMONT 760 M Black Edition, hardened casting, right
1	PE22-03003-001	Clamping and locating angle H 500, DEMONT 760 M Black Edition, hardened casting, left
1	PE22-03004-000	Clamping and locating angle H 750, DEMONT 760 M Black Edition, hardened casting, right
1	PE22-03004-001	Clamping and locating angle H 750, DEMONT 760 M Black Edition, hardened casting, left

You can individually assemble or supplement your sets with the large selection of DEMMELER accessories!





# Bolts - overview

PPC bolt, long PPC bolt, short PPC countersunk head bolt, short PAGE 388 PAGE 389 PAGE 390 **PPC-countersunk bolt, long** ECOLine bolt, short **ECOLine bolt, long** PAGE 391 **PAGE 392** PAGE 393 Stop and positioning bolt Connection bolt / short **Connecting bolt, long** with screw with screw PAGE 394 PAGE 395 PAGE 396 Adapter D22 to D16 Interface plate D22 to D28 **PAGE 397 PAGE 398** 





# The perfect connection

Self-centring, force-locked and low-wear clamping – possible thanks to the original DEMMELER clamping bolt



# Very high-speed clamping and unclamping of

the clamping elements



with the reciprocal surface

#### Reduces material wear

even when aluminium and plastic elements are used – no system bore deformation



### Low susceptibility to dirt

because sensitive parts such as clamp threads etc. are full encapsulated by O-rings

#### **Extremely robust**

made from high-quality hardened steel, maximum precision thanks to grinding

### Long service life guaranteed

in everyday applications



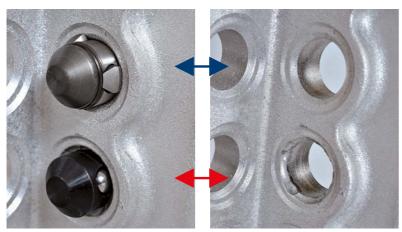
The PPC bolt meets all expectations!







# Comparison between clamping pins and the new polygon bolt from DEMMELER



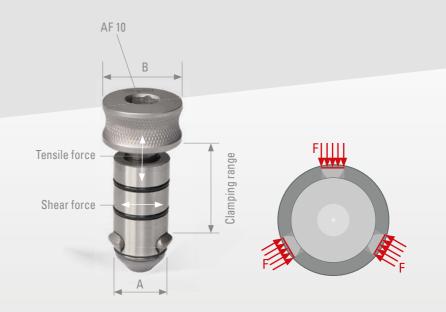
Using the PPC bolt prevents serious damage to the bores that can be caused by clamping pins, for example with aluminium-titanium blocks.

CONE INSTEAD OF BALLS – MORE FORCE, LESS WEAR

Thanks to the new cone clamping system of the DEMMELER PPC bolt, the bearing surface is 100 times larger. This results in much higher contact pressure, therefore securing work pieces more reliably. Even force distribution also reduces bore hole wear compared to conventional bolts.

### PPC bolt, short

- Highest clamping force with large stroke. Polygon expansion elements are full-faced, force-locked, and exactly self-centring, thereby reducing the surface load
- Self-locking
- Easy on materials
- Straightforward, fast and safe handling
- Low susceptibility to dirt
- High-quality hardened steel, maximum precision thanks to grinding
- O-ring prevents simultaneous rotation while tightening and cleans the system bore at the same time



Description ▲ Application ▼

Minimum clamping range ▼

Maximum clamping range ▼



19

15

Bevel 90°

34







The specified loads must not be exceeded when using the clamping pins. Avoid the induction of welding voltages, unfavourable leverage ratios and impacts during use.

22	Clamping range	Ø A in mm	B in mm	~ Weight in kg	Design	Item no.
	31-34	22-0.02	31	0.25	tensile force: max. 18 kN shear force: max. 100 kN tightening torque: 25 Nm	D22-06025-000



## PPC bolt, long



- Highest clamping force with large stroke. Polygon expansion elements are full-faced, force-locked, and exactly self-centring, thereby reducing the surface load
- Self-locking
- Easy on materials
- Straightforward, fast and safe handling
- Low susceptibility to dirt
- High-quality hardened steel, maximum precision thanks to grinding
- O-ring prevents simultaneous rotation while tightening and cleans the system bore at the same time



Description 🔺

Minimum clamping range 🔻

Maximum clamping range 🔻







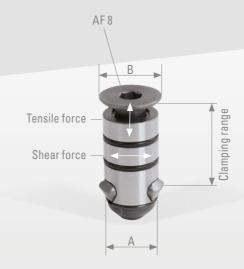
The specified loads must not be exceeded when using the clamping pins.

Avoid the induction of welding voltages, unfavourable leverage ratios and impacts during use.

22	Clamping range	Ø A in mm	B in mm	~ Weight in kg	Design	Item no.
	49-52	22-0.02	31	0.3	tensile force: max. 18 kN shear force: max. 100 kN tightening torque: 25 Nm	D22-06026-000

## PPC countersunk head bolt, short

- Used for simultaneous clamping of two system components
- Easy, comfortable clamping through optimised force distribution in the expansion segments
- Minimal susceptibility to dirt due to polygon shape
- Standard with Demmeler for a long service life: high-strength, hardened and ground
- With optimum force distribution, Demmeler opens up a new dimension of application possibilities
- Countersunk head bolts may only be used in bores but not in oblong holes



Description 🔺

Minimum clamping range ▼

Maximum clamping range ▼





The specified loads must not be exceeded when using the clamping pins.

The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

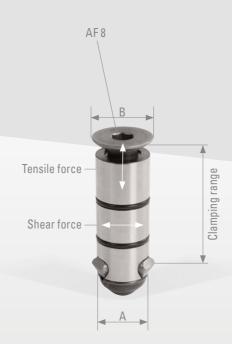
22	Clamping range	Ø A in mm	Ø B in mm	~ Weight in kg	Design	Item no.
	31-34	22	25	0.2	tensile force: max. 4 kN shear force: max. 100 kN tightening torque: 15 Nm	D22-06027-000



### PPC-countersunk bolt, long



- Used for simultaneous clamping of three system components
- Connecting element for all system components on tables, perforated plates etc. or for special fixtures
- Easy, comfortable clamping through optimised force distribution in the expansion segments
- Minimal susceptibility to dirt due to polygon shape
- Standard with Demmeler for a long service life: high-strength, hardened and ground
- With optimum force distribution, Demmeler opens up a new dimension of application possibilities
- Countersunk head bolts may only be used in bores but not in oblong holes



Description 🔺

Minimum clamping range 🔻

Maximum clamping range ▼







The specified loads must not be exceeded when using the clamping pins. The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

22	Clamping range	Ø A in mm	Ø B in mm	~ Weight in kg	Design	Item no.
	49-52	22	25	0.2	tensile force: max. 4 kN shear force: max. 100 kN tightening torque: 15 Nm	D22-06028-000

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## ECOLine bolt, short

- Connecting element for system components
- For clamping one system component onto the welding table or for connecting 2 system components
- Simple version without expanded clamping range



Description 🔺

Minimum clamping range 🔻

Maximum clamping range 🔻





The specified loads must not be exceeded when using the clamping pins. Avoid the induction of welding voltages, unfavourable leverage ratios and impacts during use.

22	Clamping range	Ø A in mm	Ø B in mm	~ Weight in kg	Design	Item no.
	32-33.5	22	31		tensile force: max. 18 kN shear force: max. 100 kN tightening torque: 15 Nm	E22-06025-000



## ECOLine bolt, long



- Connecting element for system components
- For clamping one system component onto the welding table or for connecting 2 system
- Simple version without expanded clamping range



Description 🔺

Minimum clamping range 🔻

Maximum clamping range 🔻







The specified loads must not be exceeded when using the clamping pins. Avoid the induction of welding voltages, unfavourable leverage ratios and impacts during use.

22	Clamping range	Ø A in mm	Ø B in mm	~ Weight in kg	Design	Item no.
	50-51.5	22	31	0.3	tensile force: max. 18 kN shear force: max. 100 kN tightening torque: 15 Nm	E22-06026-000

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## Stop and positioning bolts

- For marking the system components
   For fixation e.g. of blocks and stops, cost-effective replacement for a second clamping pin
- Also suitable as adapter for system 16 screw clamps thanks to D16 system bore in the head



Description 🔺

Application  $\blacktriangledown$ 



22	Ø A in mm	Ø B in mm	C in mm	D in mm	~ Weight in kg	Item no.
	22	31	52	19	0.2	D22-06009-000



## Connection bolt, short with screw



- For use as long-term connection
  With self-centring countersunk head on both sides
  Suitable for system bores

- Clamping with Allen key AF 8
  Ideal for connecting worktables with U-spacers etc.
- Blackened



Description 🔺



22	A in mm	Ø B in mm	~ Weight in kg	Item no.
	28.75	22	0.1	D22-06003-000

## Connection bolt, long with screw

- For use as long-term connection
  With self-centring countersunk head on both sides
  Suitable for system bores
- Clamping with Allen key AF 8
- For connecting three system components or two system components on the worktable
- Blackened



### Description 🔺



22	A in mm	Ø B in mm	~ Weight in kg	Item no.	
	48	22	0.2	D22-06006-000	



## Adapter D22 to D16



- Interface between system D22 and D16
  Fully compatible with system D22 and D16
- Force-fit and form-fitting with O-ring, self-centring connection
  O-ring prevents simultaneous rotation while tightening
- O-ring cleans the system bore



#### Description ▲ Application ▼



### Application abla



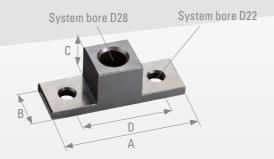


22	A in mm	Ø B in mm	~ Weight in kg	Item no.	
	23	22	0.04	D00-06012-009	



## Interface plate D22 to D28

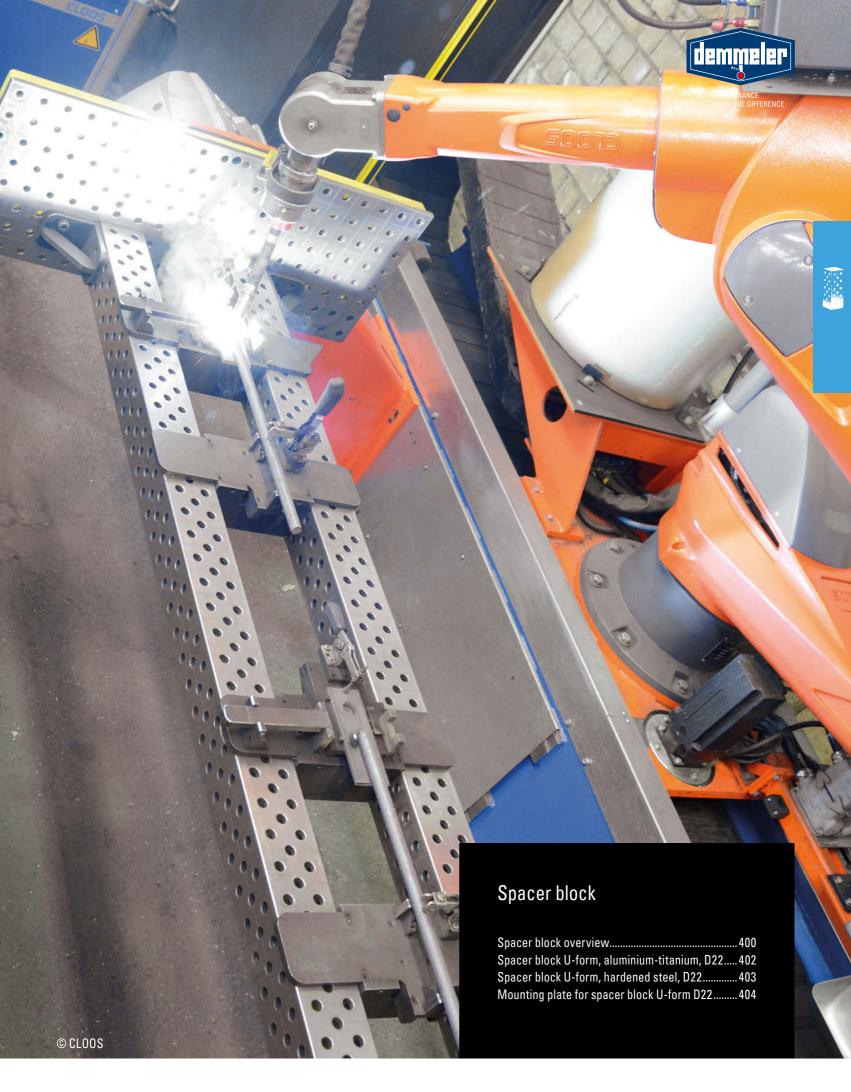
- Interface between D28 and D22
- To also make it possible to use system components from the D28 system such as V-blocks



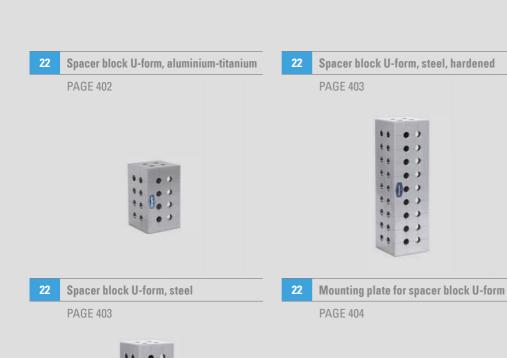
Description 🔺



22	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
_	150	50	50	100	1.2	D00-06015-001



## Spacer block overview







There are situations where having a bigger table would be nice. We developed the spacer block so the clamping table can grow with your needs. A smart system for the temporary expansion of your table. When you use our rail system, you can extend the supporting surface with spacer blocks as far as the rails reach

These add-on components increase your flexibility without permanently taking up space.





## Spacer block U-form, aluminium-titanium

## Recommended for automation solutions and robotics applications

- Up to ¾ lighter than steel but nevertheless still stable
- Also suitable for use in robot cells
- Clamping surface: 5-sided
- Grid lines
- Grid 50 × 50 mm



#### Description 🛦



22	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	250	150	150	6.5	50x50 grid	D22-04002-016
	500	150	150	11.5	50x50 grid	D22-04002-017
	1000	150	150	20.5	50x50 grid	D22-04002-018



## Spacer block U-form, steel, hardened steel



Description 🔺



22	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.	Item no.
	250	150	150	17	50x50 grid	D22-04002-000	D22-04002-019
	500	150	150	30	50x50 grid	D22-04002-001	D22-04002-020
	1000	150	150	55	50x50 grid	D22-04002-002	D22-04002-021

Steel, hardened

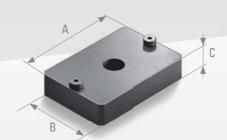
Steel

## Mounting plate for spacer block U-form

- Mounting plate for spacer block U-form D22-04002-xxx
- For supporting leg/table leg PL22-10010-xxx from 1 m length
- incl. 2x fitted shoulder screws M8 10h8x30

2x fitted bores for fitted shoulder screws

Bore for supporting leg PL22-10010-xxx (page 370)



Description 🔺

Application lacktrian



22	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	95	95	50	0.6	00108898



## Clamping and locating angle overview

**PROFIPremiumLINE Clamping and locating angle** aluminium-titanium 250

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PAGE 411



**PROFIEcoLINE Clamping and locating angle** hardened cast iron 500

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Clamping and locating angle, small bore / bore

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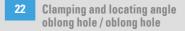


Clamping and locating angle, small

bore / oblong hole

Clamping and locating angle bore / oblong hole

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PAGE 417



**Clamping and locating angle** bore / bore

PAGE 418



**Clamping and locating angle** 300x250 aluminium-titanium

**PAGE 419** 

Universal stop large

PAGE 420







## Clamping and locating angle overview

22 Universal stop large with precision scaling

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PAGE 422

Universal stop
L 300

PAGE 423







22 Universal stop small 22 Displacement stop

22 Stop strip

PAGE 424 PAGE 424

424 PAGE 425







22 Locating disk

PAGE 426

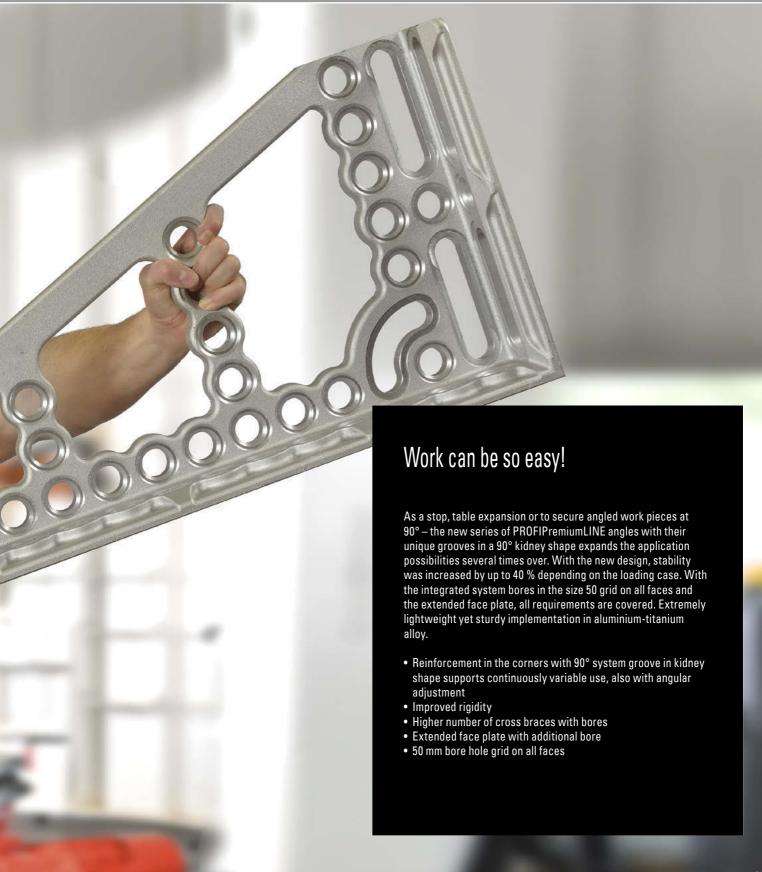


# Clamping and locating angle

Work can be so easy!





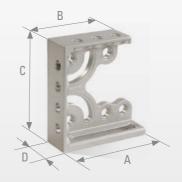


### Clamping and locating angle aluminium-titanium 250

### PROFIPremiumLINE

- Reinforcement in the corners with 90° system groove in kidney shape supports continuously variable use, also with angular adjustment
- 40% better rigidity
- Extended face plate with additional bore
- 50 mm bore hole grid on all faces
- 4 stop faces / usable surfaces
- D22 bore hole grid with 50 mm spacing
- 2x system groove in 90° kidney shape
- · With precision scaling
- Anodised



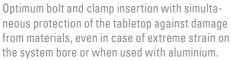


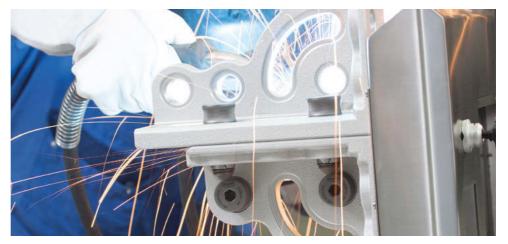
Right P22-03002-002

Left P22-03002-003

#### Description ▲ Protective countersink ▼





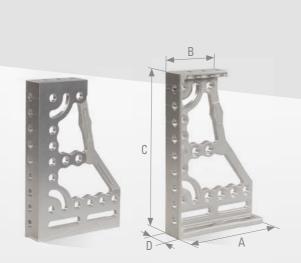


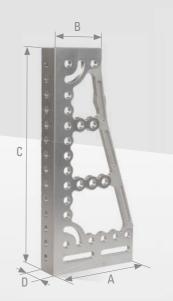
22	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	225	180	250	80	3.3	Right	P22-03002-002
	225	180	250	80	3.3	Left	P22-03002-003



Clamping and locating angle aluminium-titanium 500

Clamping and locating angle aluminium-titanium 750







Right P22-03003-002

Left P22-03003-003

Right P22-03004-000

Left P22-03004-001

#### Application ▼





#### Clamping and locating angle aluminium-titanium 500

22	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	325	180	500	80	6.4	Right	P22-03003-002
	325	180	500	80	6.4	Left	P22-03003-003

#### Clamping and locating angle aluminium-titanium 750

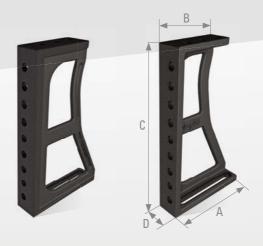
22	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	325	180	750	80	8.3	Right	P22-03004-000
	325	180	750	80	8.3	Left	P22-03004-001

Clamping and locating angle casting hardened 500

### PROFIEcoLINE



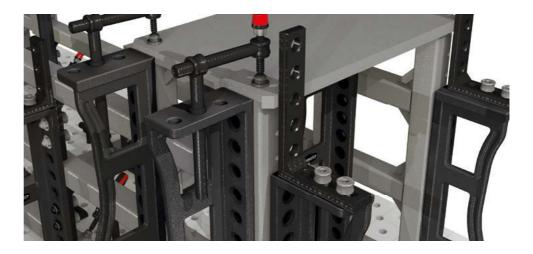
- DEMONT 760 M Black Edition Hardened casting
- The Eco series. Reduced to the essentials, yet tremendously flexible. Designed for all common stop and clamping applications with system bores in a size 50 grid and 3 usable stop faces, yet truly affordable. The solution for anyone who just doesn't need more
- Cost-effective version
- Three supporting surfaces
- With precision scaling



Right PE22-03003-000

Left PE22-03003-001

#### Description 🔺



22	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	275	175	500	80	13.5	Right	PE22-03003-000
	275	175	500	80	13.5	Left	PE22-03003-001



Clamping and locating angle, hardened casting 750

### **PROFIEcoLINE**

- DEMONT 760 M Black Edition Hardened casting
- The Eco series. Reduced to the essentials, yet tremendously flexible. Designed for all common stop and clamping applications with system bores in a size 50 grid and 3 usable stop faces, yet truly affordable. The solution for anyone who just doesn't need more
- Cost-effective version
- Three supporting surfaces
- With precision scaling





Left PE22-03004-001

#### Description 🔺

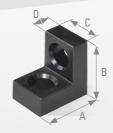
22	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	275	175	750	80	18.5	Right	PE22-03004-000
	275	175	750	80	18.5	Left	PE22-03004-001

Clamping and locating angle 75 x 75 mm (bore/bore)

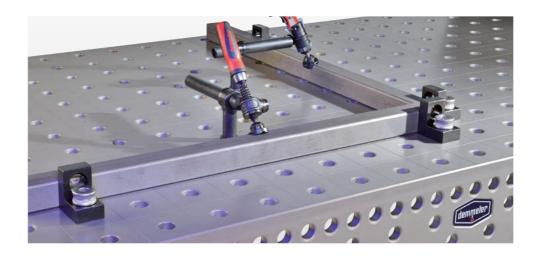
## PROFIPIusLINE



- Ideal for confined spaces
- Continuously adjustable support surfaces, for example in combination with D22-03001-003 (page 417)
- Steel, hardened



Description 🔺



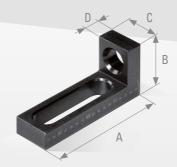
22	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	75	75	50	18	0.9	Steel, hardened	D22-03001-008



Clamping and locating angle 175 x 75 mm bore/oblong hole

## PROFIPIusLINE

- Dimension adjustment using grid lines on 3D worktable possible
- Continuous adjustment and locking via oblong hole
- Ideal for confined spaces
- Combination bore / oblong hole
- Steel, hardened
- With precision scaling on both sides



Description 🛦



22	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	175	75	50	18	1.1	Steel, hardened	D22-03001-005

Clamping and locating angle 175 x 175 mm bore/oblong hole

### **PROFIPIUSLINE**



- Combination system bores / oblong hole for numerous clamping possibilities.
- · Steel, hardened
- Two full angle surfaces, therefore can be used from both sides
- Dimension adjustment using grid lines on 3D worktable possible
- Compatible with all clamping and locating angles so that the oblong hole can be used to form a height-adjustable support
- · Precision scaling on both sides



Description 🔺





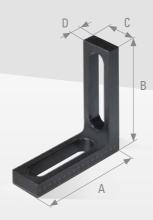
22	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	175	175	50	18	1.7	Steel, hardened	PE22-03001-000



Clamping and locating angle  $175 \times 175 \text{ mm}$  oblong hole/oblong hole

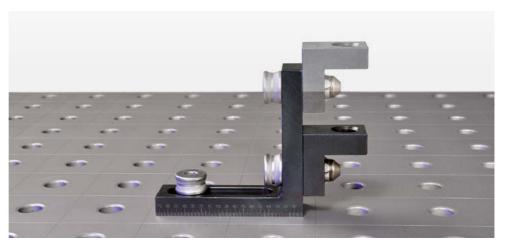
### PROFIPIusLINE

- Dimension adjustment using grid lines on 3D worktable possible
- Continuous adjustment and locking
- Ideal for confined spaces
- Steel, hardened
- Precision scaling on both sides



### Description 🔺





3	22	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
		175	175	50	18	1.5	Steel, hardened	D22-03001-003

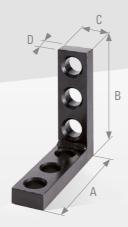


Clamping and locating angle 175 x 175 mm (bore/bore)

## PROFIPIUSLINE



- Ideal for confined spaces
- Steel, hardened



### Description 🔺





22	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	175	175	50	18	1.8	Steel, hardened	D22-03001-004



Clamping and locating angle 300 x 250 mm aluminium-titanium

## PROFIPIusLINE

- Extended face plate with two bores in the face plate
- Extended mounting plate with oblong hole 150 therefore moveable on 50 mm grid
- Precision scaling on both sides



### Description **A**





22 A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
250	300	50	150	1.7	Aluminium-titanium	PP22-03001-017

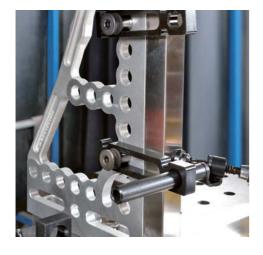
Universal stop, large, L 225



- Combination system bore / oblong hole for numerous clamping possibilities
- 360° adjustable position in 45° increments
- Continuous adjustment via oblong hole
- Steel, hardened
- With precision scaling



#### Description 🔺



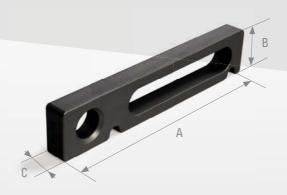


22	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	225	50	18	1.0	Steel, hardened	D22-05001-000



## Universal stop large

- Combination system bore / oblong hole for numerous clamping possibilities
- Precision scaling
- Steel, hardened
- With precision scaling



#### Description 🛦

#### Application ▼



Setting out with bores in 25 mm grid

- Fine adjustable with precision scaling possible using grid lines
- 360° adjustable position
- Additional notch for attachment, ideal as corner stop
- Continuous adjustment via oblong hole

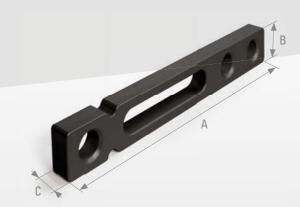
22	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	225	50	18	1.1	Steel, hardened	D22-05001-010

Universal stop, large, L 300

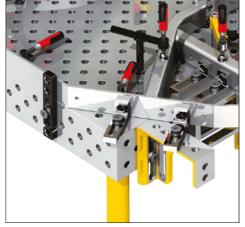
### With precision scaling



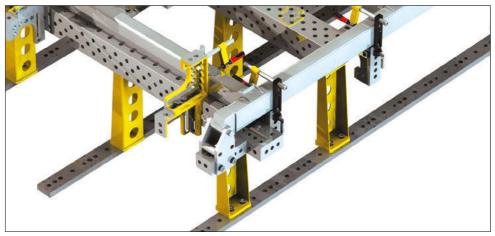
- Larger stop range than universal stop large
- Three system bores
- For bridging larger bearing surfaces
  As lateral stop for large beams
- Steel, hardened
- With precision scaling



#### Description **A**



As lateral stop



For bridging larger distances

22	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	300	50	18	1.5	Steel, hardened	D22-05009-000





Universal stop, L 500

- Larger stop range than universal stop large
- Seven system bores
- For bridging larger bearing surfaces
- As lateral stop for large beams
- With precision scaling
- Steel, hardened





22	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	500	50	18	3.3	Steel, hardened	D22-05009-008

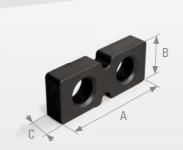
Universal stop, small, L 100

Displacement stop, L 150



- Preferred use in confined work areas
- Simple version
- · Steel, hardened

- Precision scaling on both sides
- Continuously adjustable with scale on both sides
- Steel, hardened





#### Description ▲ Application ▼

Description ▲ Application ▼





Universal stop, small, L 100

22	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	100	50	18	0.55	Steel, hardened	D22-05002-000

Displacement stop, L 150

22	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	150	50	18	0.7	Steel, hardened	D22-05015-000





Stop strip, L 500

- Very long and sturdy version with large bearing surfaces for large components or long distances
- Continuous adjustment via oblong hole
- Combination system bore / oblong hole for numerous clamping possibilities
- Steel, hardened
- With precision scaling





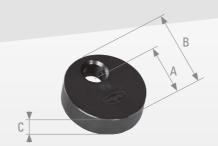


22	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	500	100	18	6.0	Steel, hardened	D22-05003-000



## Locating disk

- Can be used as stop or support
- Attached with a connecting boltContinuous adjustment by turning (adjustment path A)
- Low space requirements
- Precision scaling
- Steel, hardened



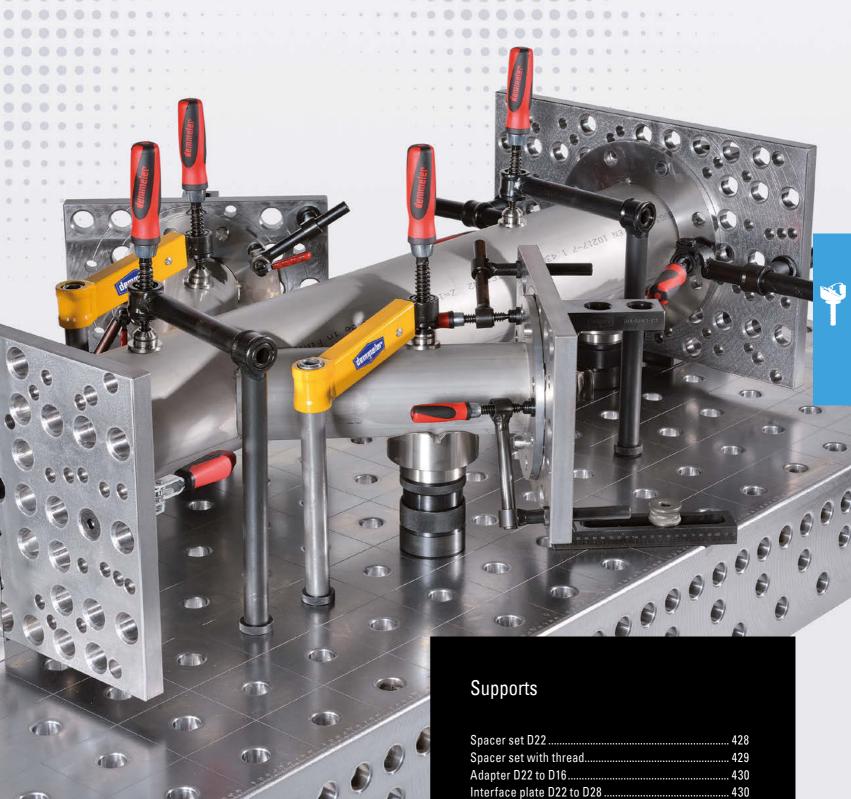
Description 🛦



22	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	50	75	20	0.6	Steel, hardened	D22-05013-000







of Th

## Spacer set 11 pieces

### Height compensation in mm range

- For 5-100 mm height compensation on the respective support surface
- Smallest increment 1 mm
- Includes 1/10 inch disk (2.54 mm)
- With dimensions of the compensating disks
- Support mandrel fits system bore 22
- Self-locking with O-Ring



#### Description ▲ Details ▼

 Exact positioning to your height via bearer sleeves in various lengths or with continuously adjustable threaded spacer set

22	A in mm	Ø B in mm	~ Weight in kg	Description	Item no.
	120+5	28	2	11-piece spacer set	D22-09001-000
	5	22	0.38	individual support mandrel	00097259
	1	50	0.01	bearer sleeve L1	00097269
	2	50	0.02	bearer sleeve L2	00097268
	2.5	50	0.03	bearer sleeve L2.5	00097267
	3	50	0.04	bearer sleeve L3	00097266
	4	50	0.05	bearer sleeve L4	00097265
	5	50	0.06	bearer sleeve L5	00097264
	10	50	0.12	bearer sleeve L10	00097263
	20	50	0.24	bearer sleeve L20	00097262
	40	50	0.47	bearer sleeve L40	00097261
	50	50	0.59	bearer sleeve L50	00097260



## Spacer set with thread

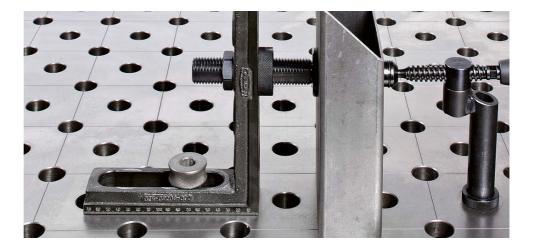
## Height compensation, continuous

- As support surface on system components or directly on the table
- Adjustment path 22-105 mm continuous
- With 0.1 mm precision scaling
- Max. load capacity 500 kg
- Blackened
- Includes counter nut M22





Description 🔺



22	A in mm	Ø B in mm	~ Weight in kg	Item no.
	120+5	45	0.8	D22-09001-005

Adapter for PC-bolts D22 to D16

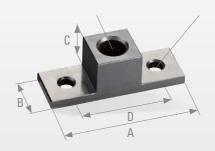
Interface plate D22 to D28

- Used to hold Ø 16 mm screw clamps in D22 system bores
- D16 quick-action clamping cylinder can be used in system D22
- Used to insert F16 bolts in D22 system bore

• Interface between system D28 and D22



System bore D28 System bore D22



Description 🔺

Description 🔺

Adapter D22 to D16

 A in mm
 Ø B in mm
 ~ Weight in kg
 Item no.

 23
 22
 0.04
 D00-06012-009

Interface plate D22 to D28

22	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
	150	50	50	100	1.2	D00-06015-001



# D22 clamps overview

Compensating swing clamp with spindle

PAGE 437



Compensating swing clamp with short boring spindle

PAGE 439



Screw clamp 180°
with quick-action clamping cylinder

PAGE 441



Variable screw clamp 45° with adjusting screw

PAGE 443



Compensating swing clamp
with quick-action clamping cylinder

PAGE 438



Screw clamp 180° with spindle

PAGE 440



Screw clamp 180° with short boring spindle

PAGE 442



Variable screw clamp 45° with quick-action clamping cylinder

PAGE 444





Variable screw clamp 45° with short boring spindle

PAGE 445



22 Short boring spindle with bushing and clamping pads

PAGE 446



Threaded bushing D22

PAGE 447



22 Interface plate D22 to D28

PAGE 449



Adjustment screw with bushing and clamping pads

PAGE 446



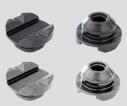
Quick-action clamping cylinder with clamping pads

PAGE 447



Plunger and contact piece / clamping pad with V-block

PAGE 448



Adapter D22 to D16

PAGE 450

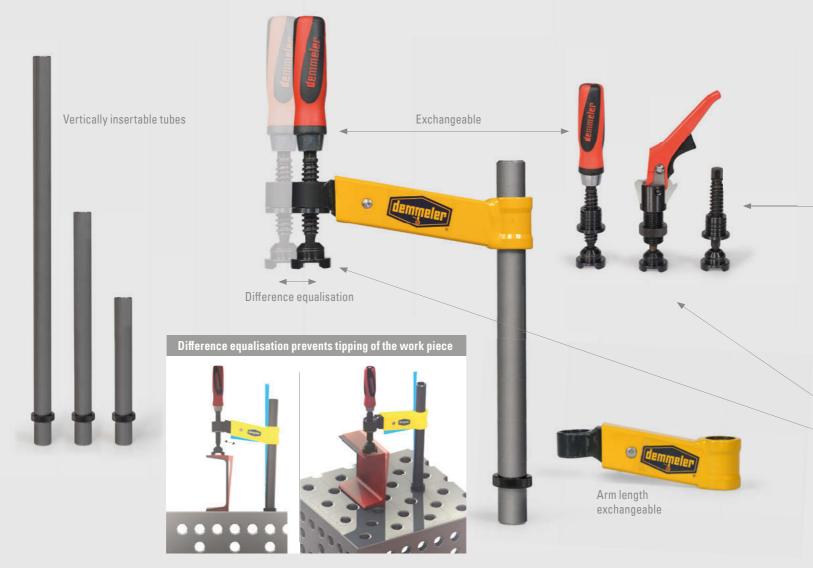


## Configure your clamps

## Flexible down to the details

Thanks to the modular system, the clamps adapt perfectly to the respective clamping situation. Select from various materials for the clamping pad and different spindle lengths, also for small installation spaces. The latch lever makes quick and precise clamping possible even with one hand. With three different tube lengths and exchangeable arms, you can handle any clamping task.







## Configure your clamps

• Secure locking mechanism:

The locking mechanism ensures controlled, fast and vibration-proof clamping.

- Ultimate stability:
- Enables the even build-up of clamping force with large power reserves. The self-centring support and pressure piece clamps the work piece and can be exchanged.
- The powder-coated clamping lever features a highly ergonomic shape and swivels 360° degrees to circumvent all interfering edges. The plastic-coated, non-slip release lever ensures a secure grip while loosening the clamp.
- Large stroke: 9 mm







## Compensating swing clamp with spindle

## For profiles that tend to tip



Exchangeable spindle

Description 🔺

Application ▼

equalisation

В

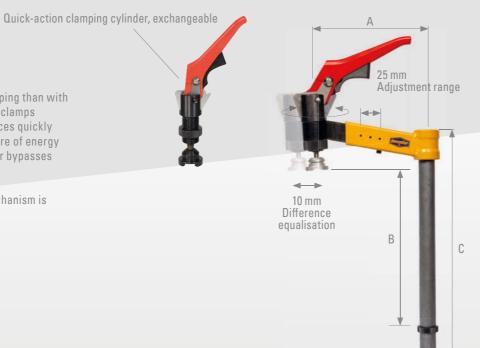


22	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	125-150	max 210	300	1 5	D22-07001-000

## Compensating swing clamp with quick-action clamping cylinder

• Up to 5x faster clamping than with conventional screw clamps

- Higher clamping forces quickly with little expenditure of energy
- 360° swivelling lever bypasses interfering edges
- Large strokeEntire clamping mechanism is exchangeable



Description 🔺

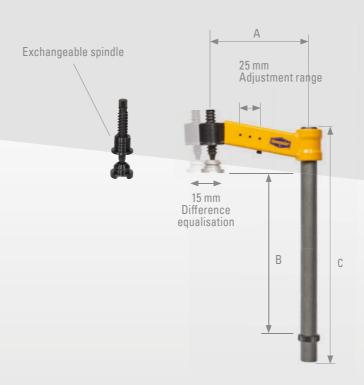


22	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	125-150	max. 210	300	1.8	D22-07001-001

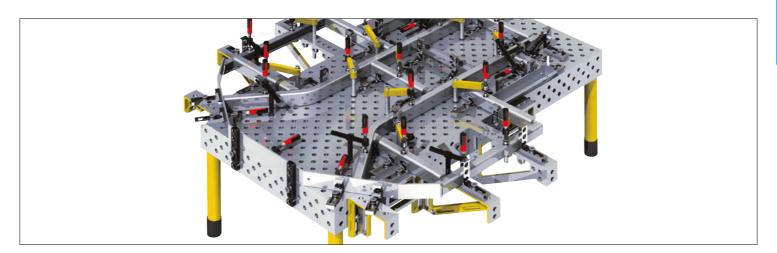


## Compensating swing clamp with short boring spindle

- Clamping with open-end wrench AF 10
   Highly recommended for confined spaces



#### Description ▲ Application ▼



22	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	125-150	max. 210	300	1.3	D22-07001-002

## Screw clamp 180° with spindle

## With adjustable, sturdy round tube



#### Description ▲ Application ▼







22	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	175	max. 200	300	1.2	D22-07005-000

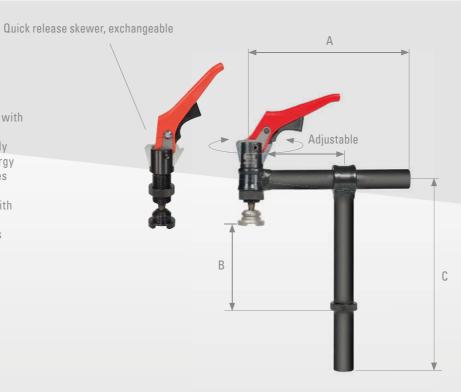


## Screw clamp 180° with quick-action clamping cylinder

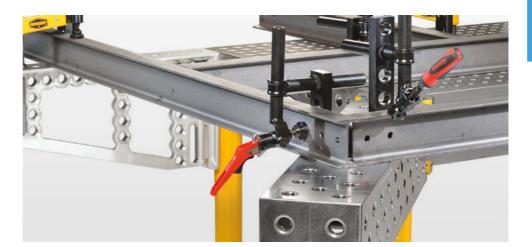
## With adjustable, sturdy round tube



- Higher clamping forces quickly with little expenditure of energy
- 360° swivelling lever bypasses interfering edges
- Highest force transmission with sturdy round tubes
- Entire clamping mechanism is exchangeable
- Large stroke



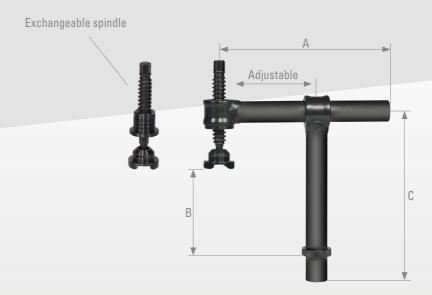
Description 🔺



22	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	175	max. 200	300	1.5	D22-07005-001

## Screw clamp 180° with short boring spindle

- Highest force transmission with sturdy round tubes
- Operation with open-end wrench AF 10
- Highly recommended for confined spaces
- Each tube can be used individually.
- Entire clamping mechanism is exchangeable



#### Description 🔺







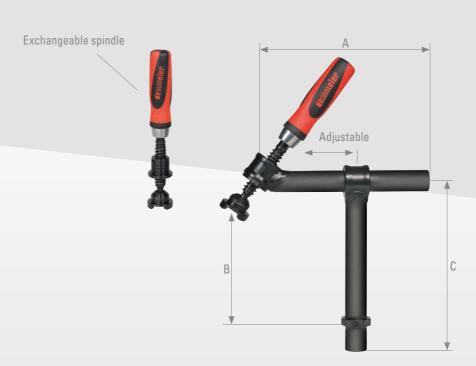
22	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	175	max. 200	300	2.10	D22-07005-004



## Variable screw clamp 45° with spindle

#### Highest force transmission with sturdy round tubes

- Ideal for clamping prismatic profiles as well as rectangular and square profiles
- Entire clamping mechanism is exchangeable



#### Description ▲ Application ▼







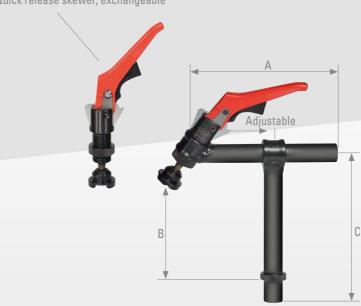
22	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	175	max. 200	300	1.2	D22-07009-000

## Screw clamp 45° with quick-action clamping cylinder

## With adjustable, sturdy, rotating round tube

#### Quick release skewer, exchangeable

- Up to 5x faster clamping than with conventional screw clamps
- Higher clamping forces quickly with little expenditure of energy
- 360° swivelling lever bypasses interfering edges
- Highest force transmission with sturdy round tubes
- Entire clamping mechanism is exchangeable
- Large stroke



Description 🔺



22	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
22	175	max. 200	300	1.5	D22-07009-001



## Variable screw clamp 45° with short boring spindle

## With adjustable, sturdy, rotating round tube

- Highest force transmission with sturdy round tubes
- Operation with open-end wrench AF 10
- Highly recommended for confined spaces
- Entire clamping mechanism is exchangeable



#### Description ▲ Application ▼





22	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	175	max. 200	300	2.10	D22-07009-004

Spindle with bushing and clamping pad

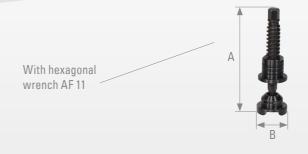
Short boring spindle with bushing and clamping pad

- High-quality 2-component plastic handle
- Long threaded spindle
- Threaded bushing works with any system bore
- Exchangeable clamping pad (see page 448 ff)
- Suitable to pretension work pieces



Clamping pad with cross prism

- Highly recommended for confined spaces
- Operation with open-end wrench AF 11
- Direct use in system bores possible
- Ideal to pretension work pieces

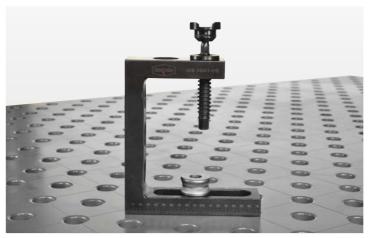


Clamping pad with cross prism

#### Description ▲ Application ▼



#### **Description** ▲ **Application** ▼



22	A in mm	Ø B in mm	C in mm	~ Weight in kg	Item no.
	200	32	70		D22-07020-001

22	A in mm	Ø B in mm	~ Weight in kg	Item no.
	110	32	0.2	D22-07022-000



Quick-action clamping cylinder with clamping pad

Threaded bushing D22

- Up to 5x faster clamping than conventional screw clamps
- The locking mechanism ensures controlled, fast and vibration-proof clamping
- Higher clamping forces quickly with little expenditure of energy
- Large 9 mm stroke
- The self-centring support and pressure piece clamps the work piece and can be exchanged
- The powder-coated clamping lever features a highly ergonomic shape
- The plastic-coated, non-slip release lever ensures a secure grip while loosening the clamp



Clamping pad with cross prism



#### Description ▲ Application ▼

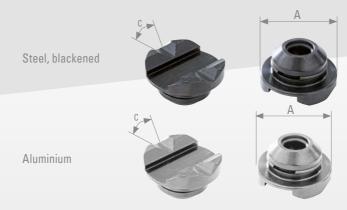


22	A in mm	Ø B in mm	~ Weight in kg	Item no.
	25		0.6	D22-07021-000

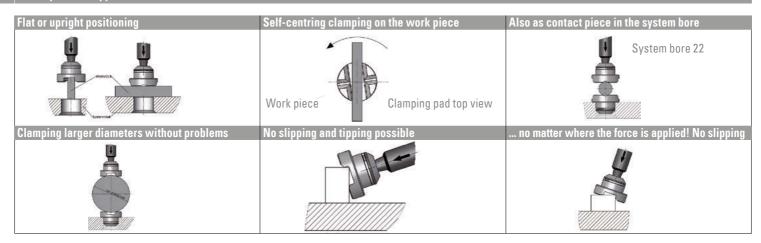
22	A in mm	Ø B in mm	C in mm	D in mm	~ Weight in kg	Item no.
	28.5	22	14	25	0.07	D22-06012-000

Plunger and contact piece / clamping pad with V-block

• Clamping pad with V-block



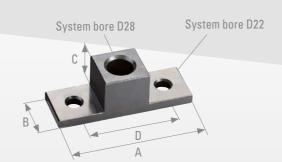
#### Description ▲ Application ▼



22	A in mm	C in °	Description	Quantity	Item no.
	32	120	Steel, blackened	1 units	D22-07011-001
	32	120	Aluminium	1 units	D22-07011-000

## Interface plate D22 to D28

- Interface between D28 and D22
- To also make it possible to use system components from the D28 system such as V-blocks



Description 🔺

Application 🔻



A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
150	50	50	100	1.2	D00-06015

22

D00-06015-001

## Adapter D22 to D16

- Interface between system D22 and D16
- Fully compatible with system D22 and D16
   Force-fit and form-fitting with 0-ring, self-centring connection
- O-ring prevents simultaneous rotation while tightening
- O-ring cleans the system bore



#### Description ▲ Application ▼



#### Application abla





22	A in mm	Ø B in mm	~ Weight in kg	Item no.
	23	22	0.04	D00-06012-009

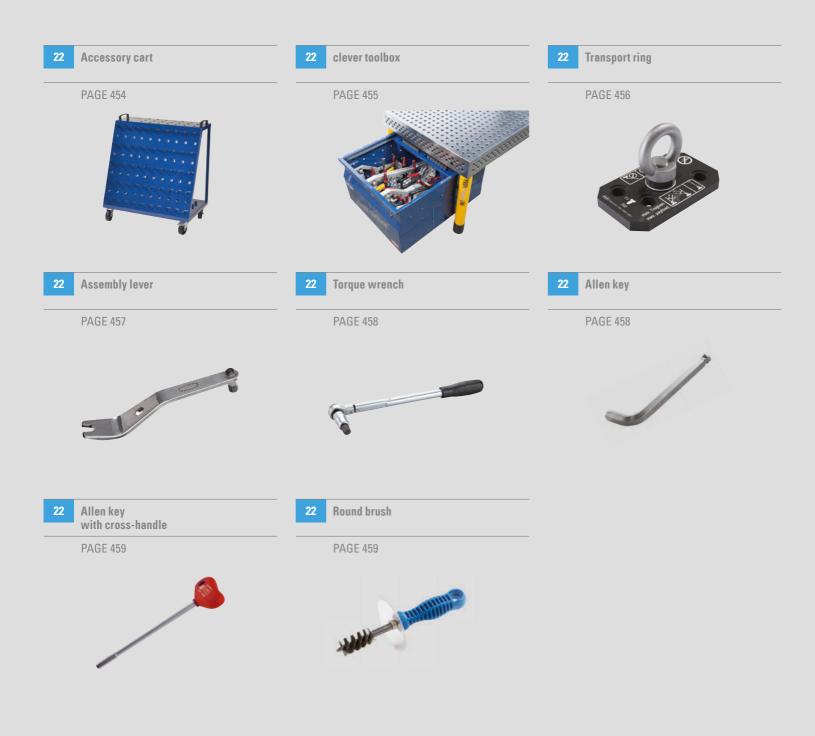






Table accessories overview	
Accessory cart D22	454
"clever toolbox" D22	455
Transport ring D22	456
Assembly lever D22	457
Torque wrench D22	458
Allen key D22	458
Allen key with cross-handle D22	459
Round brush D22 mm	459
Ground connector	
Bench stone	461
Tarpaulin	461
Pump bottle with worktable system protective spray	462
Worktable system protective spray in a canister	462

## Table accessories overview







**Ground connector** 

Bench stone

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Worktable tarpaulin

Pump bottle with protective spray

PAGE 461

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Protective spray in a canister

PAGE 462





## Accessory cart D22

- Establishes a tidy and orderly workstation
   Faster access to the system components
   Large angles are safely and conveniently stored inside the cart.
   Fast to transport thanks to four sturdy 360° swivelling casters, one of them locking.



Description ▲ Application ▼

Application ▼







System components not included

22	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	800	503	1068	55	D22-11001-000



"clever toolbox"

- An ingeniously-designed extendible accessory box
- Saves space and time, protects tools and can be locked
  The "clever toolbox" can be mounted on all four sides and has a load capacity of up to 170 kg
- The "clever toolbox" is easy to access thanks to its ground clearance (10 cm)
- The protective plate integrated under the table protects it from dirt and weld spatter



Description 🛦

Application ▼



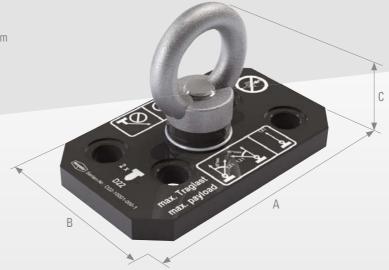


From a table size of 1000 x 1000 mm

22	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	980	780	520	65	D22-11001-015

## Transport ring D22

- For fast and safe transport of all system components (e.g. welding table)
   Attachment with 2 x PPC holts
- Attachment with 2 x PPC bolts (D22-06025-000 or E22-06025-000)



Description 🔺	Note ▼

Max. transport weight in [t] with different attachment methods						
Transport ring	<u></u>					
Tilt angle	0°	0°	0° - 45°			
Number of transport rings	1	2	2			
D22 system	1.8 t	3.6 t	2.4 t			

- Transport ring D00-10001-000 must always be attached with at least 2 x PPC bolts.
- Max. tightening torque D22: 25 Nm (Bolts are not included in the scope of delivery of the transport ring).
- Countersunk head bolts may not be used!
- Only use transport ring for DEMMELER 3D systems.
- Internal operating instructions must be observed!
- Only undamaged transport ring and PPC bolts may be used!
- The transport ring must be fixed centrally on the worktop. If two transport rings are used, these must be fixed symmetrically in the middle of the worktop. The maximum diagonal pulling angle must not exceed 45° (see warning notes).
- The general regulations for means of transport have to be observed when using the transport ring!
- Depending on the application, the load capacity may be significantly reduced.
- Loads may only be applied to the transport ring in the ring plane! Do not exceed the load capacity!
- Do not allow personnel to stand underneath suspended loads.
- Observe the warning notes on the transport ring!

22	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	200	120	130	4.1	D22-10001-000



## Assembly lever

## Clamping and releasing made easy

- Suitable for clamping and releasing D22 PPC bolts
   For easy removal of D22
- PPC bolts
- Handle simultaneously used for pre-centring



Description 🛦 Application ▼



		р:	30/ 11/1	Tr.
22	A in mm	R IN MM	~ Weight in kg	Item no.
	250	45	0.72	D22-10016-001

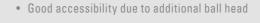


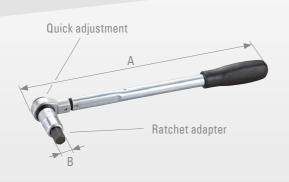


Torque wrench Allen key

## Clamping and releasing made easy

- Pre-set to 25 Nm for controlled tightening of PPC bolts, avoiding damage to the system bore and bolt by overtightening
- Includes 1 x ratchet adapter, adjustable (left/right) and 2 x sockets AF 8







Description ▲ Application ▼

Description 🛦



22	A in mm	B in mm	~ Weight in kg	Item no.
	348	AF6/AF8	0.8	D22-10015-000

22	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	~ 112	AF 10	~ 55	0.10	D22-10008-001



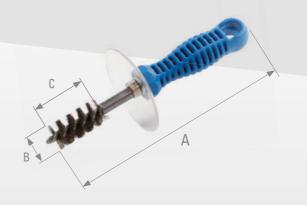
## Allen key with cross-handle

## Round brush

• Ergonomic handle for optimum tightening



- For cleaning the system boresWith splash guard



Description 🛦

Description ▲ Application ▼





22	A in mm	B in mm	~ Weight in kg	Item no.
	200	AF 10	0.18	D22-10008-003

22	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	200	22	50	0.12	D22-10002-000

#### Ground connector

- Fits any system bore
- 100 % contact, therefore no overheating of the ground cable >> High efficiency factor
- For cable cross-section 50 70 mm<sup>2</sup>, for loads up to 355 A at 100 % duty cycle, 400 A at 60 % duty cycle
- Simple and safe installation (without interfering edges)
- Compatible with common ground cables



Description 🛦





A in mm	B in mm	C in mm	~ Weight in kg	Item no.
-	-	-	0.34	D00-10009-000



## Tarpaulin for your original DEMMELER 3D worktable

## Protected against dirt

- To care for the system surfaces of worktables and system components
  - demineler
- Very sturdy tarpaulin
  Protects your table against dirt and wetness
  Firmly sewn at the corners



#### Description ▲ Application ▼

#### Description ▲ Application ▼





A in mm	B in mm	C in mm	~ Weight in kg	Item no.
200	50	25	0.56	D00-10007-000

A in mm	B in mm	C in mm	Description	Item no.
1000	1000	200	Tarpaulin for table	D00-10030-000
2000	1000	200	Tarpaulin for table	D00-10030-004
2400	1200	200	Tarpaulin for table	D00-10030-005
3000	1500	200	Tarpaulin for table	D00-10030-006

Pump bottle with worktable system protective spray

Worktable system protective spray in a canister

- Pressurised, sturdy version
- Includes anti-spatter spray for welding table systems
- Capacity: 1 litre
- Attention: Cannot be diluted with water!

#### ADVANTAGES TO YOU:

- Prevents the adhesion of weld spatter on the surface
- Temporary corrosion protection for approx. one day
- Good cleaning effect
- Not combustible
- No chlorinated hydrocarbons
- Biodegradable
- Silicone-free



#### Properties:

- Parting agent for welding thin and/or pre-heated sheets and for multi-layer welding
- Protection for worktables, system components, welding nozzles and other welding accessories

#### Areas of application:

 For welding VA materials, steel and other metals



Description ▲ Application ▼

Description 🔺



A in mm	B in mm	Description	Item no.
280	100	Without welding spray	D00-10004-000
280	100	With 1 litre welding spray	D00-10005-000

A in mm	B in mm	Description	Item no.
230	200	5 litre canister	D00-10006-000
310	200	10 litre canister	D00-10006-001
400	350	30 litre canister	D00-10006-002



# D16

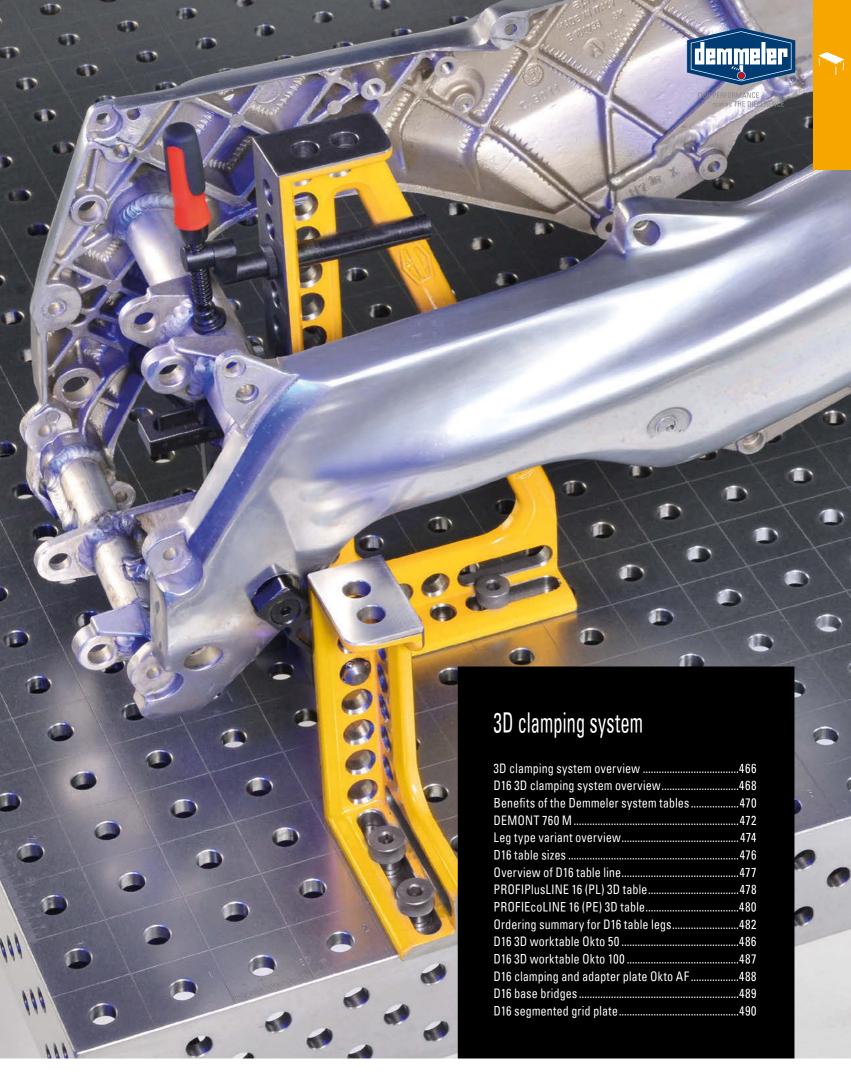




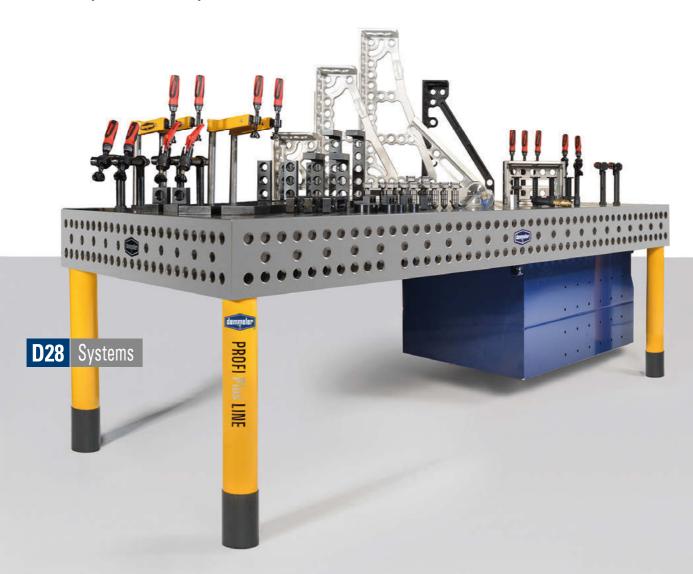








# **The optimum 3D worktable for every application –** the intelligent system grids boost productivity



### D28 / For everyday, large welded constructions



### D28 PROFIPremiumLINE (PP)

- Grid 50 x 50 mm
- 3-hole drilling pattern in the table side plates, 50 mm grid in the top and bottom rows with additional 100 mm grid in the middle



### D28 PROFIPIUSLINE (PL)

- Diagonal grid 100 × 100 mm
- 3-hole drilling pattern in the table side plates, 50 mm grid in the top and bottom rows with additional 100 mm grid in the middle



### D28 ProfiEco Line (PE)

- Grid 100 x 100 mm
- 3-hole drilling pattern in the table side plates, 50 mm grid in the top row with additional 100 mm grid in the middle and bottom rows



#### D28 HobbyLINE (H)

- Grid 100 x 100 mm
- Worktop approx. 25 mm high with system bores in a 100 mm x 100 mm grid







### D16 / For delicate applications



# D16 PROFIPIUSLINE (PL) - Diagonal grid 50 × 50 mm

- 3-row bore pattern on the table side plates, 50 mm grid in the top, middle and bottom row



### D16 ProfiEco Line (PE)

- Grid 50 x 50 mm
- 3-row bore pattern on the table side plates, 50 mm grid in the top, middle and bottom row



**D22** Systems

### D22 / For light and medium-duty applications

Particularly suited for use in the automation field (thanks to very lightweight, robust versions in high-strength aluminium-titanium alloy)



### D22 PROFIPremiumLINE (PP)

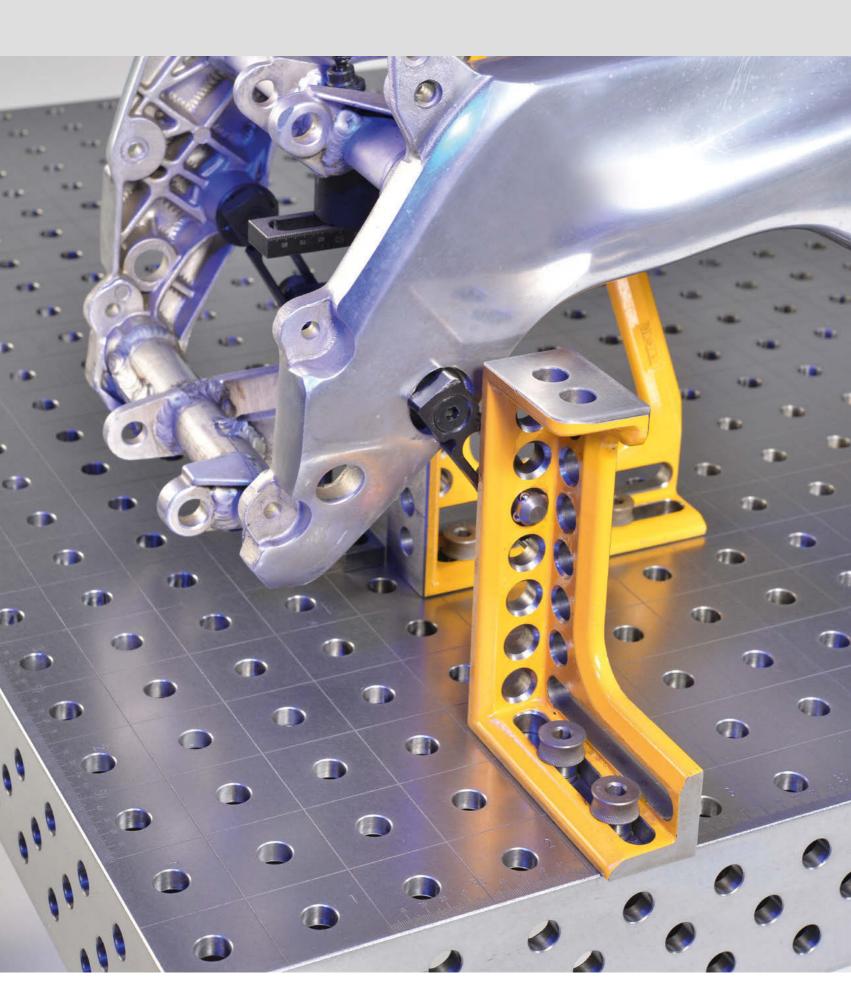
- Grid 50 x 50 mm
- 3-row bore pattern on the table side plates, 50 x 50 mm diagonal



### D22 PROFIPIUSLINE (PL)

- Diagonal grid 100 × 100 mm
- 2-row bore pattern on the table side plates, 50 mm grid

# D16 3D clamping system overview



## D16 3D clamping system overview



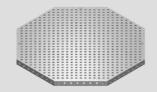




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3D worktable Okto 50

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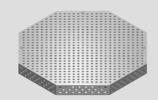


16 3D table PROFIEcoLINE (PE)



16 3D worktable Okto 100

PAGE 487



16 Standard leg / telescoping leg / heavy-duty wheel / anchoring leg

PAGE 482



Clamping and adapter plate
Okto AF

PAGE 488



16 Base bridges

PAGE 489



16 Segmented grid plate

PAGE 490



16 D16 sets

**PAGE 492** 



# 3D clamping system

Benefits of the D16 3D system tables





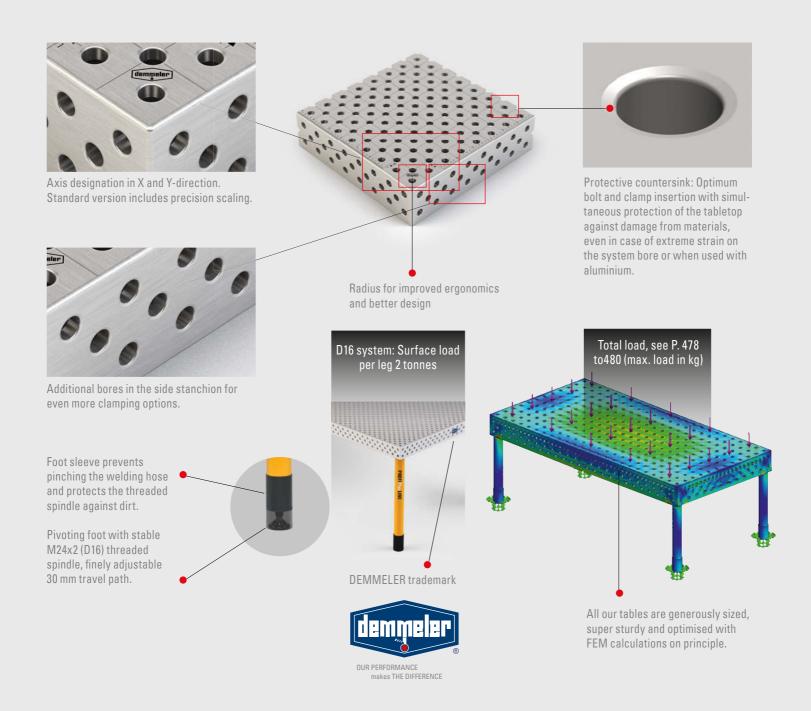




Benefits of the D16 3D system tables

### The benefits of a 3D clamping system from DEMMELER!

With our 3D clamping system, you have the right solution for clamping and positioning work pieces near at hand. Optimum positioning of the work piece not only makes work more accurate but also much more effective. In particular, the intelligent system grids give you unlimited clamping capabilities.

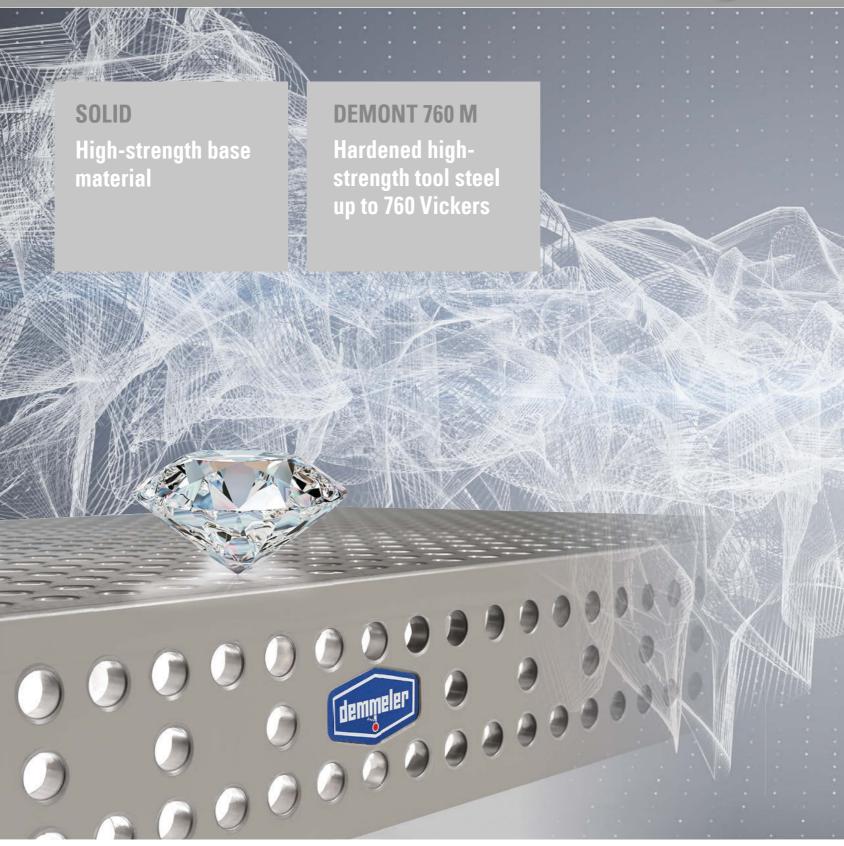


# 3D clamping system

The hardness of DEMMELER

Hardness comparison







DEMONT 760 M

Material properties

### THE hardness of DEMMELER – for the toughest requirements

- + Less wear
- + Protection against adherence of weld spatter
- + Extremely tough and durable
- + Optimum surface qualities

#### DEMONT 760 M

Stands for the combination of the specified base material and the new DEMMELER hardening process optimised especially for worktables. This results in outstanding material characteristics. A hardness of up to 760 Vickers can be achieved, reducing wear for an even longer service life of your worktable.





DEMONT 760 M

		DEMONT 760 M	SOLID
Load	high bearing loads	****	<b>***</b> *
Evenness	for outstanding tool quality	<b>**</b> *	<b>***</b> *
Conductivity	for excellent welding results when using the ground connector	***	****
Base hardness	for high impact resistance	~~~	<b>~~~</b>
Surface hardness	resistant to weld spatter	~ ~ ~ ~	<b>~~~</b>

= adequate

#### Leg type variant overview









#### Standard leg

- Pivoting feet, ± 30 mm fine adjustable
- Sturdy M24 x 2 threaded spindle
- Foot sleeve protects the threaded spindle against dirt and prevents pinching the cable-hose assembly
- Also suitable as supporting leg in combination with overhung spacer block U-form, length 1 m and up
- Including countersunk M24 x 60 mounting screw
- Leg tube powder coated
- To order standard legs, see page 482

#### Telescoping leg

- Pivoting feet, ± 30 mm fine adjustable
- Sturdy M24 x 2 threaded spindle
- Foot sleeve protects the threaded spindle against dirt and prevents pinching the cable-hose assembly
- Telescope adjustment range 350 mm in 50-mm increments
- For flexible height adjustment of the worktable
- Including countersunk M24 x 60 mounting screw
- Leg tube powder coated
- To order telescoping legs, see page 482

#### Heavy-duty wheel

- Fine adjustable ± 30 mm
- Sturdy M24 x 2 threaded spindle
- Foot sleeve protects the threaded spindle against dirt and prevents pinching the cable-hose assembly
- · Robust version
- · With 360° caster
- Max. load capacity 600 kg
- Including countersunk M24 x 60 mounting screw
- Leg tube powder coated
- To order heavy duty wheels, see page 482

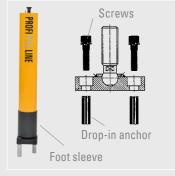
### Anchoring leg

- Fine adjustable ± 30 mm
- Sturdy M24 x 2 threaded spindle
- Foot sleeve protects the threaded spindle against dirt and prevents pinching the cable-hose assembly
- For firm attachment to the hall floor against tension, pressure and shifting (e.g. robot use)
- Includes M24 x 60 countersunk mounting screw and, for firm anchoring to the floor, 2 x drop-in anchor, 2 x cap screw M16 x 40
- Leg tube powder coated
- To order anchoring legs, see page 482





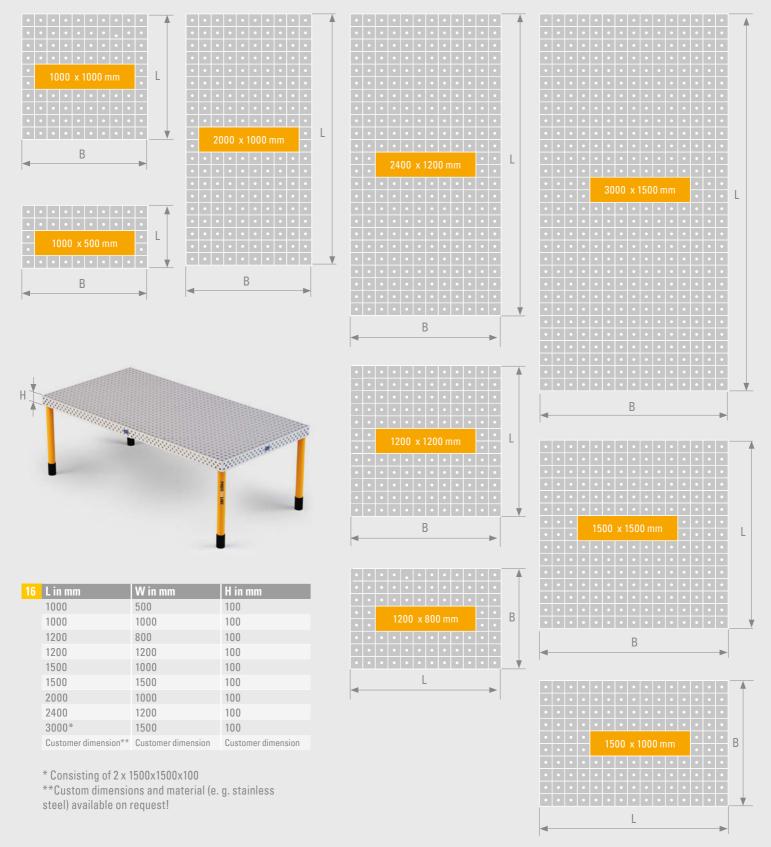




The right leg for any application



### D16 system table sizes





### PROFIPIusLINE (PL) 3D table

### PROFIEcoLINE (PE) 3D table

### Description of the D16 table line

### Worktop with D16 system bores in diagonal 50 mm x 50 mm grid



### Worktop with D16 system bores in a 50 mm x 50 mm grid



#### Description: PROFIPIusLINE

- Worktop with D16 system bores in a diagonal 50 mm x 50 mm grid, resulting in approx. 80% more clamping options than PROFIEcoLINE and conventional worktables
- 3-hole drilling pattern in the table side plates with D16 system bores in 50 x 50 mm diagonal grid
- All table sizes optionally available in hardened version, DEMONT 760 M in up to 760 Vickers
- All system bores with new protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Continuous gridlines in X and Y-direction, 50 mm spacing
- Precision scaling with millimetre graduation
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo recessed in all 4 side plates
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly

#### **Description: PROFIEcoLINE**

- Worktop with D16 system bores in a 50 mm x 50 mm grid
- 3-hole drilling pattern in the table side plates with D16 system bores in 50 x 50 mm diagonal grid
- All table sizes optionally available in hardened version, DEMONT 760 M in up to 760 Vickers
- All system bores with new protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- Continuous gridlines in X and Y-direction, 50 mm spacing
- Precision scaling with millimetre graduation
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo recessed in all 4 side plates
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly





Table without leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	1000	500	100	70		
	1000	1000	100	119		
	1200	800	100	123		
	1200	1200	100	162		
	1500	1000	100	179		
	1500	1500	100	253		
	2000	1000	100	223		
	2400	1200	100	326		
	3000*	1500	100	506		

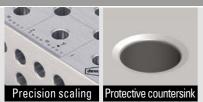
 ${\it Custom\ dimensions\ and\ material\ (e.\ g.\ stainless\ steel)\ available\ on\ request}$ 

Table with standard leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg
	1000	500	$850\pm30$	104	8000
	1000	1000	$850 \pm 30$	154	8000
	1200	800	$850 \pm \! 30$	154	8000
	1200	1200	$850 \pm \! 30$	194	8000
	1500	1000	$850 \pm \! 30$	204	8000
•	1500	1500	$850 \pm 30$	274	8000
	2000	1000	$850 \pm \! 30$	264	8000
and the second	2400	1200	$850 \pm 30$	364	8000
	3000*	1500	$850 \pm 30$	548	16000

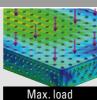




### PROFIPIusLINE (PL) 3D table





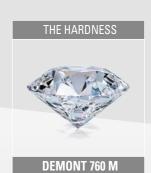






**DESCRIPTION** 

- Worktop with D16 system bores in a double 50 mm x 50 mm grid, resulting in approx. 80 % more clamping options than PROFIEcoLINE and conventional worktables
- 3-row bore pattern on the table side plates with D16 system bores, 50 mm grid in the top, middle and bottom row
- All table sizes optionally available in new hardness, DEMONT 760 M in up to 760 Vickers
- All system bores with new protective countersink, perfect design and ultimate functionality
- · Optimised outside table edges
- Continuous gridlines in X and Y-direction, 50 mm spacing
- Precision scaling with millimetre division, also available with the DEMONT 760 M option
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo recessed in all 4 side plates
- Table legs with fine adjustment, round design with pivoting foot
- · Foot sleeve to protect the cable-hose assembly



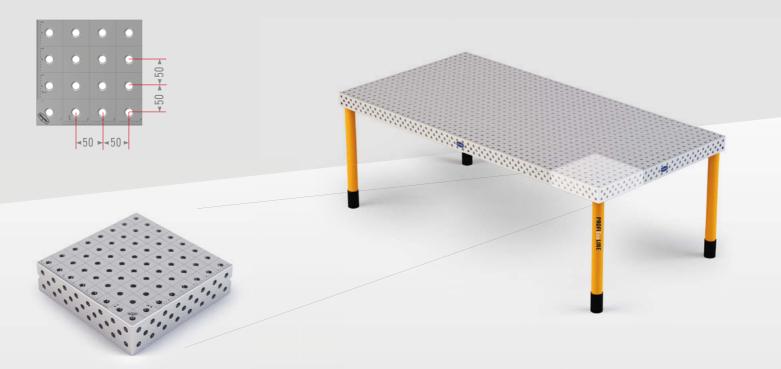
Number of legs	SOLID	DEMONT 760 M hardened
without legs	PL16-01000-000	PL16-01000-500
without legs	PL16-01001-000	PL16-01001-500
without legs	PL16-11019-000	PL16-11019-500
without legs	PL16-01056-000	PL16-01056-500
without legs	PL16-01017-000	PL16-01017-500
without legs	PL16-01011-000	PL16-01011-500
without legs	PL16-01002-000	PL16-01002-500
without legs	PL16-01003-000	PL16-01003-500
without legs	PL16-01004-000	PL16-01004-500

Number of legs	SOLID	DEMONT 760 M hardened	
4	PL16-01000-001	PL16-01000-011	
4	PL16-01001-001	PL16-01001-011	
4	PL16-11019-001	PL16-11019-011	
4	PL16-01056-001	PL16-01056-011	Selection list for
4	PL16-01017-001	PL16-01017-011	other leg variants as
4	PL16-01011-001	PL16-01011-011	of page 482
4	PL16-01002-001	PL16-01002-011	
4	PL16-01003-001	PL16-01003-011	
8	PL16-01004-001	PL16-01004-011	

\* Consisting of 2 x 1500x1500x100

### PROFIEcoLINE (PE) 3D table





On request the tab	le is also a	vailable in	other materials
--------------------	--------------	-------------	-----------------

Table without leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	1000	500	100	74		
	1000	1000	100	127		
	1200	800	100	131		
	1200	1200	100	173		
	1500	1000	100	190		
	1500	1500	100	270		
	2000	1000	100	238		
	2400	1200	100	347		
	3000*	1500	100	540		

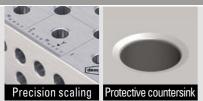
Custom dimensions and material (e.g. stainless steel) available on request

Table with standard leg	L in mm	W in mm	H in mm	~ Weight of table in kg	Max. load in kg	
	1000	500	850 ±30	109	8000	
	1000	1000	$850 \pm 30$	164	8000	
	1200	800	$850 \pm 30$	164	8000	
	1200	1200	$850 \pm 30$	204	8000	
•	1500	1000	$850 \pm \! 30$	214	8000	
•	1500	1500	$850 \pm 30$	284	8000	
•	2000	1000	$850 \pm 30$	274	8000	
	2400	1200	$850 \pm 30$	384	8000	
	3000*	1500	$850 \pm 30$	568	16000	





### PROFIEcoLINE (PE) 3D table











**DESCRIPTION** 

- Worktop with D16 system bores in a 50 mm x 50 mm grid
- 3-row bore pattern on the table side plates with D16 system bores, 50 mm grid in the top, middle and bottom row
- All table sizes optionally available in new hardness, DEMONT 760 M in up to 760 Vickers
- · All system bores with new protective countersink, perfect design and ultimate functionality
- Optimised outside table edges
- · Continuous gridlines in X and Y-direction, 50 mm spacing
- Precision scaling with millimetre division, also available with the DEMONT 760 M option
- Coordinate marking of the bores in the X and Y-direction
- DEMMELER logo recessed in all 4 side plates
- Table legs with fine adjustment, round design with pivoting foot
- Foot sleeve to protect the cable-hose assembly



DEMONT 760 M
--------------

Number of legs	SOLID	DEMONT 760 M hardened
without legs	PE16-01000-000	PE16-01000-500
without legs	PE16-01001-000	PE16-01001-500
without legs	PE16-11019-000	PE16-11019-500
without legs	PE16-01056-000	PE16-01056-500
without legs	PE16-01017-000	PE16-01017-500
without legs	PE16-01011-000	PE16-01011-500
without legs	PE16-01002-000	PE16-01002-500
without legs	PE16-01003-000	PE16-01003-500
without legs	PE16-01004-000	PE16-01004-500

	00110		
Number of legs	SOLID	DEMONT 760 M hardened	
4	PE16-01000-001	PE16-01000-011	
4	PE16-01001-001	PE16-01001-011	
4	PE16-11019-001	PE16-11019-011	
4	PE16-01056-001	PE16-01056-011	Selection list for
4	PE16-01017-001	PE16-01017-011	other leg variants as
4	PE16-01011-001	PE16-01011-011	of page 482
4	PE16-01002-001	PE16-01002-011	
4	PE16-01003-001	PE16-01003-011	
8	PE16-01004-001	PE16-01004-011	

<sup>\*</sup> Consisting of 2 x 1500x1500x100

### Ordering summary for table legs

### D16 system 3D welding tables with suitable standard legs



- Foot sleeve prevents pinching the welding hose and protects the threaded spindle against dirt
- Pivoting foot with stable M24x2 threaded spindle
- Finely adjustable 30 mm travel path





### Ordering example:



- 2. From the current page, select the leg you want in the corresponding quantity, which results in order item no. 2: e.g. 4x PL16-10010-001
- 3. The two order item numbers make up your order to DEMMELER.
  e.g. 1x PL16-01002-000
  + e.g. 4x PL16-10010-001

### The right table legs for any application

Custom	Standard leg	Telescoping leg	Heavy-duty wheel	Anchoring leg
System	16	16	16	16
PROFIPIUSLINE	•	•	•	•
PROFIEcoLINE	•	•	•	•





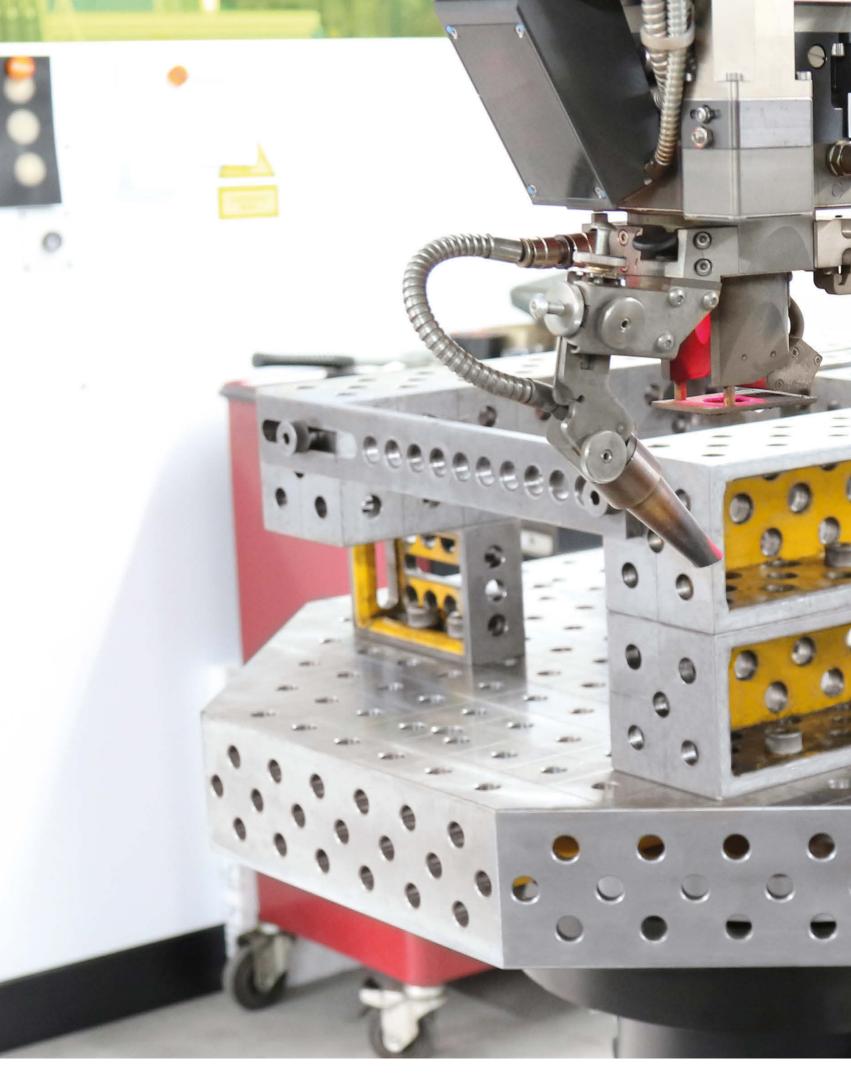
### Standard leg / telescoping leg / heavy-duty wheel / anchoring leg

Standard leg	g			Quantity		10	5	
			For table size	Legs	Item number	H in mm	Weight in kg	Max. load in kg
			1000x500					
PRO	<b>A</b>		1000x1000					
PROFI Plus			1200x800					
			1200x1200	Л				
-			1500x1000	4	PL16-10010-000	$750 \pm 30$	6	2000
	Н		1500x1500					
			2000x1000					
		E. 1	2400x1200					
		Finely adjustable pivoting foot	3000x1500	6				
	_	pivotilig loot						

Telescoping	leg			Quantity		16	j	
			For table size	Legs	Item number	H in mm	Weight in kg	Max. load in kg
<u></u> —			1000x500					
•	1		1000x1000					
			1200x800					
-		<b>A</b>	1200x1200	4				
PROFI			1500x1000	4	PL16-10010-001	550 to 900	7	2000
Plus	Н	Adjustable height	1500x1500			± 30		
		Grid 50 mm	2000x1000					
		<b>*</b>	2400x1200					
		Finely adjustable pivoting foot	3000x1500	6				

Heavy-duty wheel		Quantity		16	;	
	For table size	Legs	Item number	H in mm	Weight in kg	Max. load in kg
	1000x500					
	1000x1000					
<b>□</b>	1200x800					
PROFI	1200x1200	4	(2x) PL16-10010-002*1		9	
Plus	1500x1000	4	+ (2x) PL16-10010-003*2		8	
E	1500x1500		(2X)1 L10-10010-003	750 ±30	0	300
Н	2000x1000					
	2400x1200					
Wheel with heales*1	3000×1500	6	(2x) PL16-10010-002*1		9	
Wheel with brake*1 Wheel without	3000×1300	0	(4x) PL16-10010-003*2		8	

Anchoring leg		Quantity		16	5	
	For table size	Legs	Item number	H in mm	Weight in kg	Max. load in kg
Screws	1000×500					
Screws	1000×1000					
	1200x800					
	1200x1200	Л				
	1500×1000	4	PL16-10010-004	$750 \pm 30$	8	2000
H	1500x1500					
	2000x1000					
	2400×1200					
Drop-in anchor	3000x1500	6				
<b>→</b>						



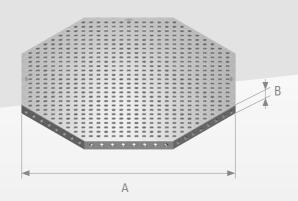


### 3D Okto 50 worktable

- Preferred use with manipulators in robot cells
- Numerous clamping possibilities on all nine clamping surfaces
- With diagonal grid 50x50

#### THE FOLLOWING ADDITIONAL OPTIONS ARE POSSIBLE ON REQUEST:

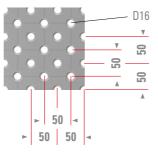
- High-strength aluminium-titanium alloy for  $\sim$  60 % weight reduction and  $\sim$  10 % higher bending strength
- With special connection drilling pattern, adapted to the face plate of your manipulator (please include manipulator type and drawing of the face plate with enquiry - can be offered for a surcharge!)
- Prepared for table legs

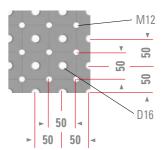


#### Description ▲ Application ▼

Diagonal grid 50x50 ▼







We can also supply the worktable with 50x50 diagonal grid with M12 thread

16	A in mm	B in mm	Description	Item no.
	AF 600	50	Diagonal grid 50 x 50	PL16-01009-001
	AF 800	50	Diagonal grid 50 x 50	PL16-01008-001
	AF 1000	50	Diagonal grid 50 x 50	PL16-01024-001
	AF 1200	50	Diagonal grid 50 x 50	PL16-01070-001



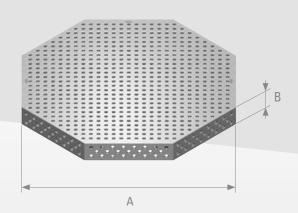


3D Okto 100 worktable

- Preferred use with manipulators in robot cells
- · Numerous clamping possibilities on all nine clamping surfaces
- With diagonal grid 50x50

#### THE FOLLOWING ADDITIONAL OPTIONS ARE POSSIBLE ON REQUEST:

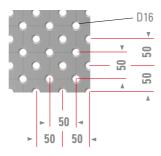
- High-strength aluminium-titanium alloy for ~ 60 % weight reduction and ~ 10 % higher bending strength
- With special connection drilling pattern, adapted to the face plate of your manipulator (please include manipulator type and drawing of the face plate with enquiry - can be offered for a surcharge!)
- Prepared for table legs

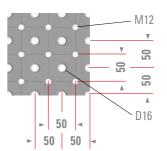


#### Description ▲ Application ▼

#### Diagonal grid 50x50 ▼







We can also supply the worktable with 50x50 diagonal grid with M12 thread

Description

AF 000	100	Diagonal grid 50 x 50	FL10-01009-000	
AF 800	100	Diagonal grid 50 x 50	PL16-01008-000	
AF 1000	100	Diagonal grid 50 x 50	PL16-01024-000	
AF 1200	100	Diagonal grid 50 x 50	PL16-01070-000	

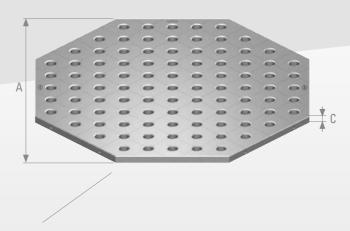
16 A in mm B in mm

Item no.

### Clamping and adapter plate Okto AF

### The miniature worktable with grid lines

• Used in combination with 3D worktables and welding positioners



M8 thread on all sides, e. g. for stops included

Other dimensions on request

Description 🔺

16	A in mm	C in mm	~ Weight in kg	Description	Item no.
	AF 400	12	11	Diagonal grid 50 x 50	D16-02100-106
	AF 600	12	25	Diagonal grid 50 x 50	D16-02100-107
	AF 800	12	45	Diagonal grid 50 x 50	D16-02100-108

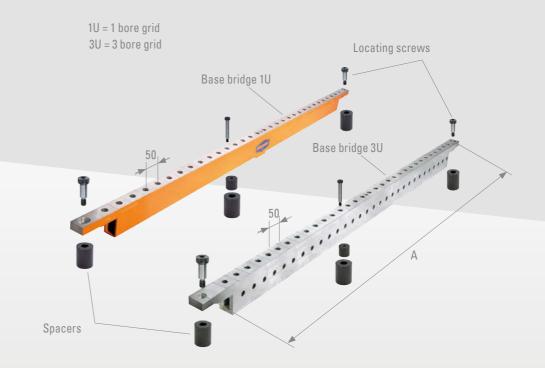




Base bridges

### Powerful in application on 3D laser machines

- Specially for use on laser machines (e. g. Trumpf Lasercell 105, 1005, 6005, 7040) designed
- In combination with segmented grid plate D16-02100-000 for many clamping options
- Direct holding of clamping components possible
- Incl. assembly accessories such as locating screws and spacers for mounting on the laser machine
- Grid lines every 50 mm, system bores every 50 mm



Spacers and locating screws depending on the version. Figure similar  $\ensuremath{\,^{\circ}}$ 

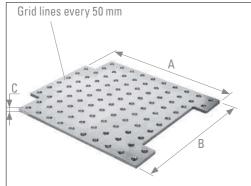
Description 🔺

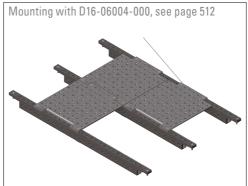
16	A in mm	~ Weight in kg	Description	Item no.
	1000	7	1 bore grid, for Trumpf Lasercell 1000	D16-04100-002
	1366	16	1 bore grid, for Trumpf Lasercell 105	D16-04100-010
	1500	17	1 bore grid, for Trumpf Lasercell 7000	D16-04100-049
	1682	20	1 bore grid, for Trumpf Lasercell 1005	D16-04100-009
	2182	24	1 bore grid, for Trumpf Lasercell 6005	D16-04100-013
	1500	17	1 bore grid, for Trumpf Lasercell 7040	D16-04100-027
	1366	30	3 bore grid, for Trumpf Lasercell 105	D16-04100-008
	1682	36	3 bore grid, for Trumpf Lasercell 1005	D16-04100-005
	2000	22	1 bore grid, for Trumpf Lasercell 7020	D16-04100-036
	2000	22	1 bore grid, for Trumpf Lasercell 7000	D16-04100-050
	2182	48	3 bore grid, for Trumpf Lasercell 6005	D16-04100-012
	1500	30	3 bore grid, for Trumpf Lasercell 7040	D16-04100-026

Other dimensions also available on request.

### Segmented grid plate







Segmented grid plates mounted on base bridges D16-04100-xxx enable a continuous floor plate

- Highly flexible clamping options with 50 mm grid
- Nesting the contours inside each other enables a continuous clamping field
- Especially for use in combination with base bridges on 3D laser machines

16	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	548	498	12	22	Grid 50 x 50	D16-02100-000



### PROFIPIusLINE set 155 (System 16)

Item number: D16-52000-155 (39-piece)



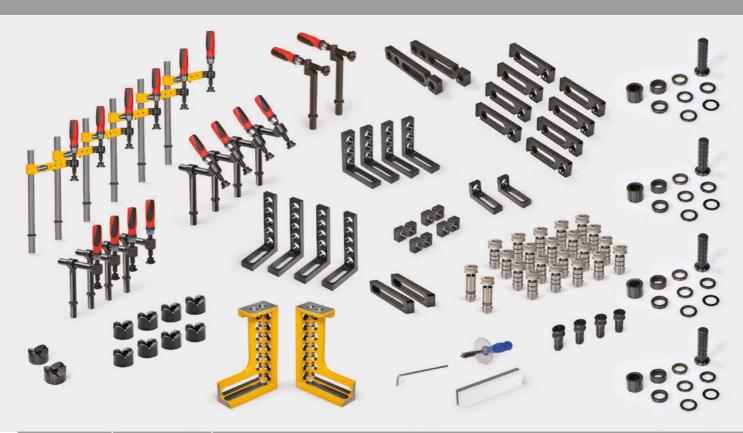
Quantity 🔻	ltem no. ▼	Item description ▼
2	D16-05002-000	Universal stop / small / L55
6	D16-05001-004	Universal stop with scale / L115
2	D16-05009-000	Universal stop / 165
2	D16-03001-002	Clamping and locating angle bore / oblong hole / H 37.5
4	D16-03001-000	Clamping and locating angle bore / oblong hole / H 90
2	D16-09001-000	Spacer set 9 pieces
10	D16-06001-000	PC-bolt/short
4	D16-07001-000	Compensating swing clamp 180° with spindle
2	D16-07005-000	Screw clamp 180° with spindle
2	D16-07008-000	Variable screw clamp 90° with adjusting screw
1	D16-10008-000	Ball end hex wrench AF8
1	D16-10002-000	Round brush 16 mm
1	D00-10007-000	Bench stone





PROFIPIusLINE set 255 (System 16)

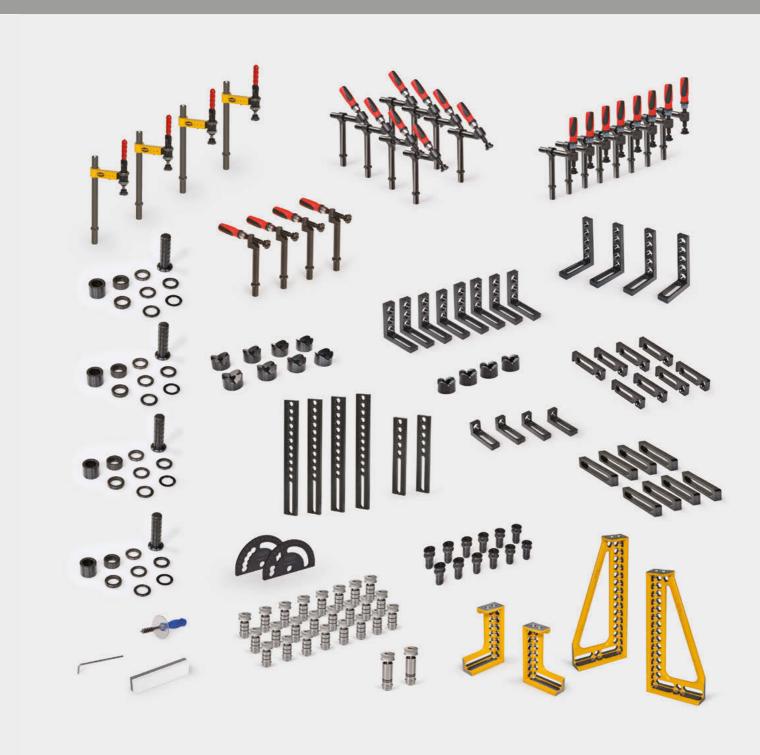
Item number: D16-52000-255 (87-piece)



Quantity $\blacktriangledown$	ltem no. ▼	Item description ▼
4	D16-05002-000	Universal stop / small / L55
8	D16-05001-004	Universal stop with scale / L115
2	D16-05015-000	Displacement stop / L150
2	D16-05009-000	Universal stop / L165
2	D16-03001-002	Clamping and locating angle bore / oblong hole / H 37.5
4	D16-03001-000	Clamping and locating angle bore / oblong hole / H 90
4	D16-03008-000	Clamping and locating angle H140
1	D16-03002-000	Clamping and locating angle, right, casting 200
1	D16-03002-001	Clamping and locating angle, left, casting 200
4	D16-09001-000	Spacer set 9 pieces
8	D16-09004-000	V-block locations blackened steel up to 70 mm tubes
2	D16-09003-000	V-block locations blackened steel up to 140 mm tubes
20	D16-06001-000	PC-bolt/short
2	D16-06002-000	PC-bolt / long
4	D16-06009-000	Stop and positioning bolt
6	D16-07001-000	Compensating swing clamp 100 mm with spindle
4	D16-07005-000	Screw clamp 180° with spindle
2	D16-07008-000	Variable screw clamp 90°
4	D16-07009-000	Variable screw clamp 45° with adjusting screw
1	D16-10008-000	Ball end hex wrench AF8
1	D16-10002-000	Round brush 16 mm
1	D00-10007-000	Bench stone

### PROFIPIusLINE set 720 (System 16)

Item number: D16-52000-720 (125-piece)







PROFIPIusLINE set 720 (System 16)

Item number: D16-52000-720 (125-piece)

Quantity $\blacktriangledown$	ltem no. ▼	Item description ▼
8	D16-03001-000	Clamping and locating angle 90x90x25 mm (bore / oblong hole)
4	D16-03001-002	Clamping and locating angle / small 90x37.5x25 mm, scale on both sides
1	D16-03002-00	Clamping and locating angle, right 200x137.5x50 mm
1	D16-03002-00	Clamping and locating angle, left 200x137.5x50 mm
1	D16-03003-00	Clamping and locating angle, right 400x187.5x50 mm
1	D16-03003-00	Clamping and locating angle, left 400x187.5x50 mm
4	D16-03008-00	Clamping and locating angle 140x90x25 mm
8	D16-05001-004	Universal stop with scale - 115x25x12 mm
2	D16-05003-00	O Stop-strip L 250 - 250x50x12 mm
4	D16-05003-00	1 Stop-strip L 400 - 400x50x12 mm
2	D16-05013-010	Angle-setting template, scale on both sides, 0 - 90°, 15°, 30°, 45°, 60°
8	D16-05015-000	Displacement stop - 150x25x12 mm
24	D16-06001-000	PC-bolt / short - Ø 16-0.01, AF 8, clamping range 20-24 mm, 10/50 kN
2	D16-06002-00	D PC-bolt / long - Ø 16-0.01, AF 8, clamping range 32-36 mm, 10/50 kN
12	D16-06009-00	Stop and positioning bolt Ø 16 / 25x37
4	D16-07001-001	Compensating swing clamp with quick-action clamping cylinder
8	D16-07005-00	Screw clamp 180° with spindle - vertical tube 130 mm
4	D16-07008-00	O Variable screw clamp 90°
8	D16-07009-00	Variable screw clamp 45° with adjusting screw - vertical tube 130 mm
4	D16-09001-000	Spacer set 9 pieces - Ø 25x60 mm
8	D16-09003-00	V-block locations blackened steel, Ø 80 mm - 120°/90° - for tubes up to Ø 140 mm
4	D16-09004-00	0 V-block locations blackened steel, Ø 58 mm - 120°/90° - for tubes up to Ø 70mm
1	D16-10002-000	Round brush Ø 16x260 mm, with protective cap
1	D00-10007-000	Bench stone 200x50x25 mm, 2-sided
1	D16-10008-000	Ball end hex wrench AF 8x104 mm

### PROFIPIusLINE set 355 (System 16)

Item number: D16-52000-355 (161-piece)







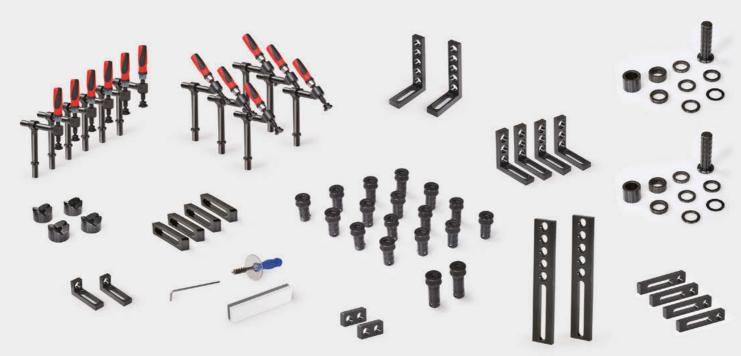
PROFIPIusLINE set 355 (System 16)

Item number: D16-52000-355 (161-piece)

Quantity	▼ Item no. ▼	Item description ▼
		·
4	D16-05002-000	Universal stop / small / L55
14	D16-05001-004	Universal stop with scale / L115
6	D16-05015-000	Displacement stop L150
6	D16-05009-000	Universal stop L165
4	D16-05003-001	Stop-strip L400
4	D16-03001-002	Clamping and locating angle bore / oblong hole / H 37.5
12	D16-03001-000	Clamping and locating angle bore / oblong hole / H 90
4	D16-03008-000	Clamping and locating angle H140
1	D16-03002-000	Clamping and locating angle, right, casting 200
1	D16-03002-001	Clamping and locating angle, left, casting 200
1	D16-03004-000	Clamping and locating angle, right, casting 600
1	D16-03004-001	Clamping and locating angle, left, casting 600
1	D16-03005-001	Console right casting
1	D16-03007-000	Universal pivot and tilt angle, right
4	D16-09001-000	Spacer set 9 pieces
8	D16-09004-000	V-block locations blackened steel up to 70 mm tubes
4	D16-09003-000	V-block locations blackened steel up to 140 mm tubes
34	D16-06001-000	PC-bolt/short
4	D16-06002-000	PC-bolt / long
4	D16-06004-000	PC-countersunk bolt / short
6	D16-06009-000	Stop and positioning bolt
2	D16-06003-000	Connection bolt / short with screw
12	D16-07001-000	Compensating swing clamp 100 mm with spindle
8	D16-07005-000	Screw clamp 180° with spindle
2	D16-07008-000	Variable screw clamp 90°
6	D16-07009-000	Variable screw clamp 45° with adjusting screw
1	D16-09008-000	Adjusting spindle
1	D16-11001-000	Accessory cart
1	D16-10008-000	Ball end hex wrench AF8
1	D16-10008-001	Ball end hex wrench AF6
1	D16-10008-002	Ball end hex wrench AF4
1	D16-10002-000	Round brush 16 mm
1	D00-10007-000	Bench stone

PROFIEcoLINE set 200 (System 16)

Item number: E16-52000-200 (59-piece)



Depicted set also available with PC bolts instead of ECOLine bolts: Item no. E16-52000-201

Quantity 🔻	ltem no. ▼	Item description 🔻
4	E16-03001-000	ECO clamping and locating angle H = 90
2	E16-03001-002	ECO clamping and locating angle H = 37.5
2	E16-03008-000	ECO clamping and locating angle H = 140
4	E16-05001-000	ECO universal stop, large
2	E16-05002-000	ECO universal stop, small
2	E16-05003-000	ECO stop strip 250 mm
4	E16-05015-000	ECO displacement-stop
16	E16-06001-000	ECOLine bolt / short
2	E16-06002-000	ECOLine bolt / long
6	E16-07005-000	ECO screw clamp 180° with spindle
6	E16-07009-000	ECO variable screw clamp 45° with spindle
2	E16-09001-000	ECO spacer set 9 pieces
4	E16-09003-000	ECO V-block locations blackened steel
1	E16-10002-000	ECO round brush 16 mm
1	E00-10007-000	ECO bench stone
1	E16-10008-000	ECO Ball end hex wrench AF 5





PROFIEcoLINE set 710 (System 16)

Item number: E16-52000-710 (29-piece)

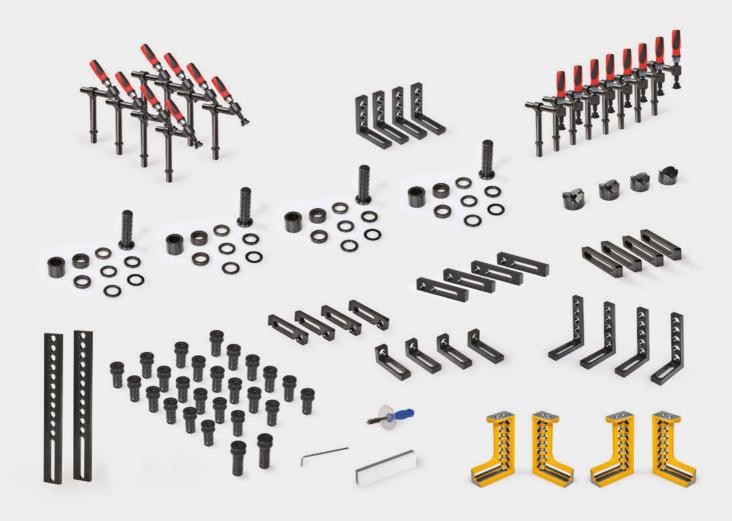


Depicted set also available with PC bolts instead of ECOLine bolts: Item no. E16-52000-711

Quantity <b>V</b>	ltem no. ▼	Item description 🔻
4	E16-03001-000	ECO clamping and locating angle 90 x 90 x 25 mm
2	E16-03001-002	ECO clamping and locating angle 90 x 37.5 x 25 mm
2	E16-05002-000	ECO universal stop / small L55
4	E16-05001-000	ECO universal stop / large L115
4	E16-07005-000	Screw clamp 180° with spindle
2	E16-07009-000	Variable screw clamp 45° with adjusting screw
1	D16-10002-000	Round brush ø 16 mm
1	D16-10007-000	Bench stone
1	E16-10008-000	Hexagonal wrench AF 5
8	E16-06001-000	ECO clamping pin / short

PROFIEcoLINE set 720 (System 16)

Item number: E16-52000-720 (79-piece)





Depicted set also available with PC bolts instead of ECOLine bolts: Item no. E16-52000-721  $\,$ 





PROFIEcoLINE set 720 (System 16)

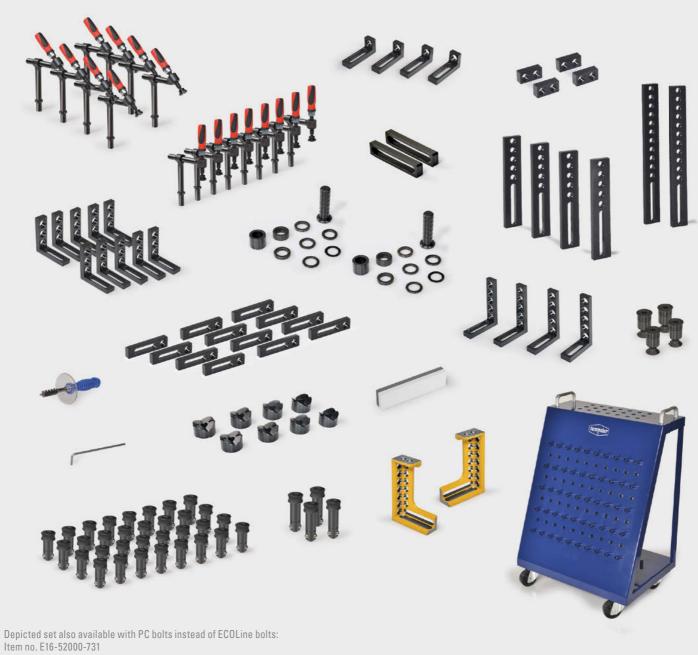
Item number: E16-52000-720 (79-piece)

Quantity $ extstyle  extst$	ltem no. ▼	ltem description ▼
4	E16-03001-000	ECO clamping and locating angle 90x90x25 mm
2	E16-03002-000	ECO clamping and locating angle, right 200x137.5 mm
2	E16-03002-001	ECO clamping and locating angle, left 200x137.5 mm
4	E16-03001-002	ECO clamping and locating angle / small 90x37.5x25 mm
4	E16-03008-000	ECO clamping and locating angle 140x90x25 mm
4	E16-05001-000	ECO universal stop / large 115x25x12 mm
2	E16-05003-001	ECO stop-strip L 400 - 400x50x12 mm
4	E16-05015-000	ECO displacement stop L 150 - 150x25x12 mm
24	E16-06001-000	ECOLine bolt / short Ø 16x50 mm
2	E16-06002-000	ECOLine bolt / long Ø 16x65 mm
8	E16-07005-000	ECO screw clamp 180° with spindle
8	E16-07009-000	ECO variable screw clamp 45° with spindle
4	E16-09001-000	ECO spacer set 9 pieces - Ø 25x60 mm
4	E16-09003-000	ECO V-block locations blackened steel Ø 80 mm Ø 120° for tubes up to Ø 140 mm
1	E16-10002-000	ECO round brush Ø 16 mm
1	E16-10007-000	ECO bench stone
1	E16-10008-000	ECO ball-head Allen key AF 5x120 mm

DEMMELER welding and clamping systems are modular and flexible. All sets and accessories can be used at all the 3D worktables within the system. In this way, for example, it is possible to use the accessories from the PROFIEco set at a PROFIPIusLINE table. What is more, you can individually assemble or supplement your sets with the large selection of Demmeler accessories!

PROFIEcoLINE set 730 (System 16)

Item number: E16-52000-730 (114-piece)









PROFIEcoLINE set 730 (System 16)

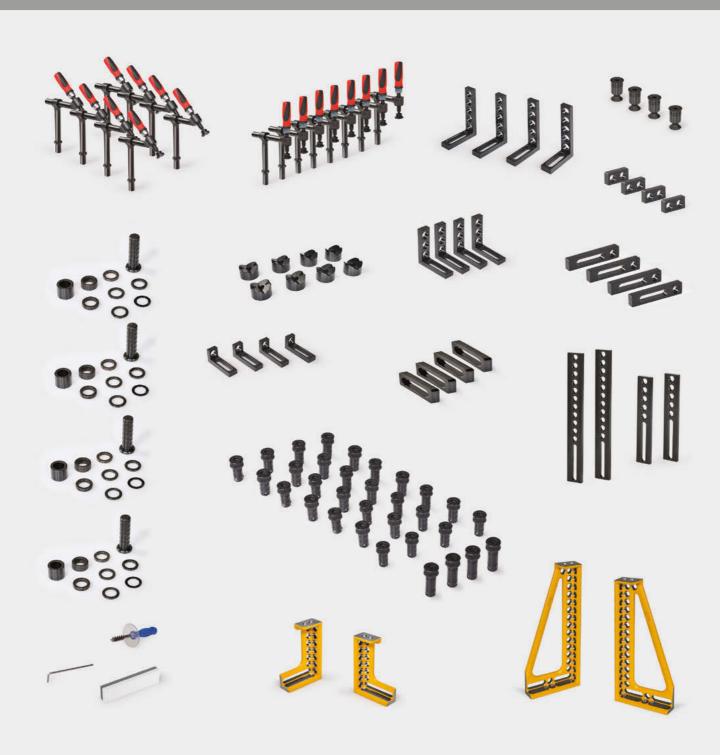
Item number: E16-52000-730 (114-piece)

Quantity $ extstyle  extst$	ltem no. ▼	Item description ▼
4	E16-03008-000	ECO clamping and locating angle 140 x 90 x 25 mm
10	E16-03001-000	ECO clamping and locating angle 90 x 90 x 25 mm
4	E16-03001-002	ECO clamping and locating angle 90 x 37.5 x 25 mm
1	E16-03002-000	ECO clamping and locating angle R 200 x 137.5 x 50 mm
1	E16-03002-001	ECO clamping and locating angle L 200 x 137.5 x 50 mm
4	E16-05002-000	ECO universal stop / small L55
12	E16-05001-000	ECO universal stop / large L115
2	D16-09001-000	Spacer set 9 pieces
2	E16-05015-000	ECO displacement-stop L150
4	D16-05003-000	Stop strip 250 mm
2	D16-05003-001	Stop strip 400 mm
8	E16-07005-000	Screw clamp 180° with spindle
8	E16-07009-000	Variable screw clamp 45° with adjusting screw
8	D16-09003-000	V-block location ø 80 mm
1	D16-10002-000	Round brush ø 16 mm
1	D00-10007-000	Bench stone
1	E16-10008-000	Hexagonal wrench AF5
4	D16-06003-000	Connection bolt / short
4	E16-06002-000	ECO clamping pin / long
32	E16-06001-000	ECO clamping pin / short
1	D16-11001-002	Accessory cart D16

DEMMELER welding and clamping systems are modular and flexible. All sets and accessories can be used at all the 3D worktables within the system. In this way, for example, it is possible to use the accessories from the PROFIEco set at a PROFIPIusLINE table. What is more, you can individually assemble or supplement your sets with the large selection of Demmeler accessories!

PROFIEcoLINE set 300 (System 16)

Item number: E16-52000-300 (99-piece)





Depicted set also available with PC bolts instead of ECOLine bolts: Item no. E16-52000-301





PROFIEcoLINE set 300 (System 16)

Item number: E16-52000-300 (99-piece)

Quantity $\blacktriangledown$	Item no. ▼	Item description ▼
	_	
4	E16-03001-000	ECO clamping and locating angle H = 90
4	E16-03001-002	ECO clamping and locating angle H = 37.5
1	E16-03002-000	ECO clamping and locating angle casting 200
1	E16-03002-001	ECO clamping and locating angle casting 200
1	E16-03003-000	ECO clamping and locating angle casting 400
1	E16-03003-001	ECO clamping and locating angle casting 400
4	E16-03008-000	ECO clamping and locating angle H = 140
4	E16-05001-000	ECO universal stop, large
4	E16-05002-000	ECO universal stop, small
2	E16-05003-000	ECO stop strip 250 mm
2	E16-05003-001	ECO stop strip 400 mm
4	E16-05015-000	ECO displacement-stop
28	E16-06001-000	ECOLine bolt / short
4	E16-06002-000	ECOLine bolt / long
4	E16-06003-000	ECO connecting bolt / short
8	E16-07005-000	ECO screw clamp 180° with spindle
8	E16-07009-000	ECO variable screw clamp 45° with spindle
4	E16-09001-000	ECO spacer set 9 pieces
8	E16-09003-000	ECO V-block locations blackened steel
1	E16-10002-000	ECO round brush 16 mm
1	E16-10007-000	ECO bench stone
1	E16-10008-000	ECO Ball end hex wrench AF 5

DEMMELER welding and clamping systems are modular and flexible. All sets and accessories can be used at all the 3D worktables within the system. In this way, for example, it is possible to use the accessories from the PROFIEco set at a PROFIPIusLINE table. What is more, you can individually assemble or supplement your sets with the large selection of Demmeler accessories!





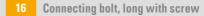
## Bolts - overview

PC-bolt, short PC-bolt, long PAGE 510 PAGE 511 PC-countersunk bolt, short PC-countersunk bolt, long PAGE 512 PAGE 513 ECOLine bolt, long ECOLine bolt, short PAGE 514 PAGE 515 Stop and positioning bolt Connecting bolt, short with collar PAGE 516 PAGE 517



16 Connecting bolt, short with screw

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16 Adapter for PC-bolt

PAGE 520

16 Reduction plate for clamping tube

PAGE 520









- Connecting element for all system components on tables, perforated plates etc. or for special fixtures
- Very fast connection with simultaneous large stroke
- Very high clamping force due to planetary gear effect and by avoiding a double thread
- Force-fit and form-fitting, O-ring for self-centring connection
- With clamping range



The specified loads must not be exceeded when using the clamping pins.

The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

#### Description ▲ Functional principle ▼

- Highest clamping force with large stroke using Allen key with double hexagonal AF 8 or with torque wrench
- Ergonomically shaped bolt head with recessed grip for fast one-hand operation
- High-quality hardened steel, maximum precision thanks to grinding
- O-rings prevent simultaneous rotation while tightening and clean the system bore at the same time
- 4 clamping balls, mechanically secured against falling out, to ensure even clamping

#### Minimum clamping range 🔻



#### Maximum clamping range ▼



16	Clamping range	Ø A in mm	B in mm	~ Weight in kg	Design	Item no.
	22 -24	16-0.01	12	0.08	tensile force: max. 10 kN shear force: max. 50 kN tightening torque: 20 Nm	D16-06001-000



PC-bolt, long



Bauart geprüft

- Used for simultaneous clamping of two system components
- Connecting element for all system components on tables, perforated plates etc. or for special fixtures
- · Very fast connection with simultaneous large stroke
- Very high clamping force due to planetary gear effect and by avoiding a double thread
- Force-fit and form-fitting, O-ring for self-centring connection
- · With clamping range



The specified loads must not be exceeded when using the clamping pins.

The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

#### Description ▲ ▼

Turning the ergonomically shaped bolt head causes the balls of the patented PC-bolt to make point contact with the bevel on the underside of the worktable. Continued turning clamps the original DEMMELER PC-bolt.

#### Minimum clamping range 🔻



#### Maximum clamping range 🔻



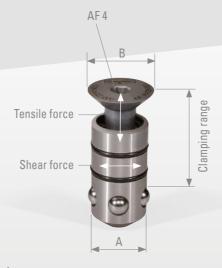
16	Clamping range	Ø A in mm	B in mm	~ Weight in kg	Design	Item no.
	34-36	16-0.01	12	0.10	tensile force: max. 10 kN shear force: max. 50 kN	D16-06002-000
					tightening torque: 20 Nm	

#### PC-countersunk bolt, short



Bauart geprüft

- Countersunk bolt head (no interfering edges)
  Only for connecting bores (no oblong holes)
  Clamping by means of Allen key AF 4 or torque wrench
- Countersunk head bolts may only be used in bores but not in oblong holes



The specified loads must not be exceeded when using the clamping pins. The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

Description ▲ Application ▼

Minimum clamping range 🔻

Maximum clamping range 🔻









16	Clamping range	Ø A in mm	Ø B in mm	~ Weight in kg	Design	Item no.
	22-24	16-0.01	19	0.04	tensile force: max. 3 kN shear force: max. 50 kN tightening torque: 10 Nm	D16-06004-000



#### PC-countersunk bolt, long



**Bauart** geprüft

- Countersunk bolt head (no interfering edges)
- Only for connecting bores (no oblong holes)
- Clamping by means of Allen key AF 4 or torque wrench
- For simultaneous clamping of two system components on top of each other on the worktable
- Countersunk head bolts may only be used in bores but not in oblong holes



The specified loads must not be exceeded when using the clamping pins. The discharge of welding voltages, unfavourable leverage and impacts have to be avoided.

#### Description 🔺

#### Minimum clamping range 🔻

#### Maximum clamping range 🔻









16 Clamping range	Ø A in mm	Ø B in mm	~ Weight in kg	Design	Item no.
34-36	16-0.01	19	0.06	tensile force: max. 3 kN shear force: max. 50 kN tightening torque: 10 Nm	D16-06005-000

### ECOLine bolt, short

- Connecting element for system components
   For clamping one system component on the worktable or to connect 2 system components
- Simple version without clamping range



Description 🔺

Clamping range 🔻



16	Clamping range	Ø A in mm	B in mm	~ Weight in kg	Item no.
	22	16 -0.01	12	0.08	E16-06001-000



## ECOLine bolt, long



- Connecting element for system components
   For clamping 2 system components on the worktable or to connect 3 system components
- Simple version without clamping range



Description 🔺

Clamping range 🔻



16	Clamping range	Ø A in mm	B in mm	~ Weight in kg	Item no.
	34	16	12	0.08	E16-06002-000

## Stop and positioning bolts

- For marking the system components
   For fixation e.g. of blocks and stops, cost-effective replacement for a second clamping pin
  • Blackened



Description 🔺

Application ▼



16	Ø A in mm	Ø B in mm	C in mm	D in mm	~ Weight in kg	Item no.
	16	23	37	12	0.09	D16-06009-000



### Connecting bolt, short with collar



- For use as long-term connection
   For connecting two system components
   Suitable for system bore / oblong hole
   Clamping with Allen key AF 6



Description 🔺

Application  $\blacktriangledown$ 



16	A in mm	Ø B in mm	C in mm	~ Weight in kg	Item no.
	22	16	5	0.05	D16-06003-002

### Connection bolt, short with screw

- For use as long-term connection
- With self-centring countersunk head on both sides
- Suitable for system bores
- Clamping with Allen key AF 6
- Ideal for connecting worktables with U-spacers etc.
- Blackened



Description 🔺

16 A in mm	Ø B in mm	~ Weight in kg	Item no.
17	16	0.025	D16-06003-000



## Connecting bolt, long with screw



- For use as long-term connection
  With self-centring countersunk head on both sides
  Suitable for system bores

- Clamping with Allen key AF 6
   For connecting three system components or two system components on the worktable
- Blackened



#### Description ▲ Application ▼



16	A in mm	Ø B in mm	~ Weight in kg	Item no.
	25	16	0.04	D16-06006-000

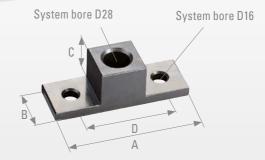
#### Adapter for PC-bolt D16 to D28

#### Reduction plate for clamping tubes D28 to D16

- Interface between system D28 and D16
- Fully compatible with system D28 and D16
- Force-fit and formfitting with 0-ring, self-centring connection
- 0-ring prevents simultaneous rotation while tightening
- · O-ring cleans the system bore



• Interface between system 28 and system 16



Description ▲ Application ▼

Application 🔻

Application \







Adapter for PC-bolt D16 to D28

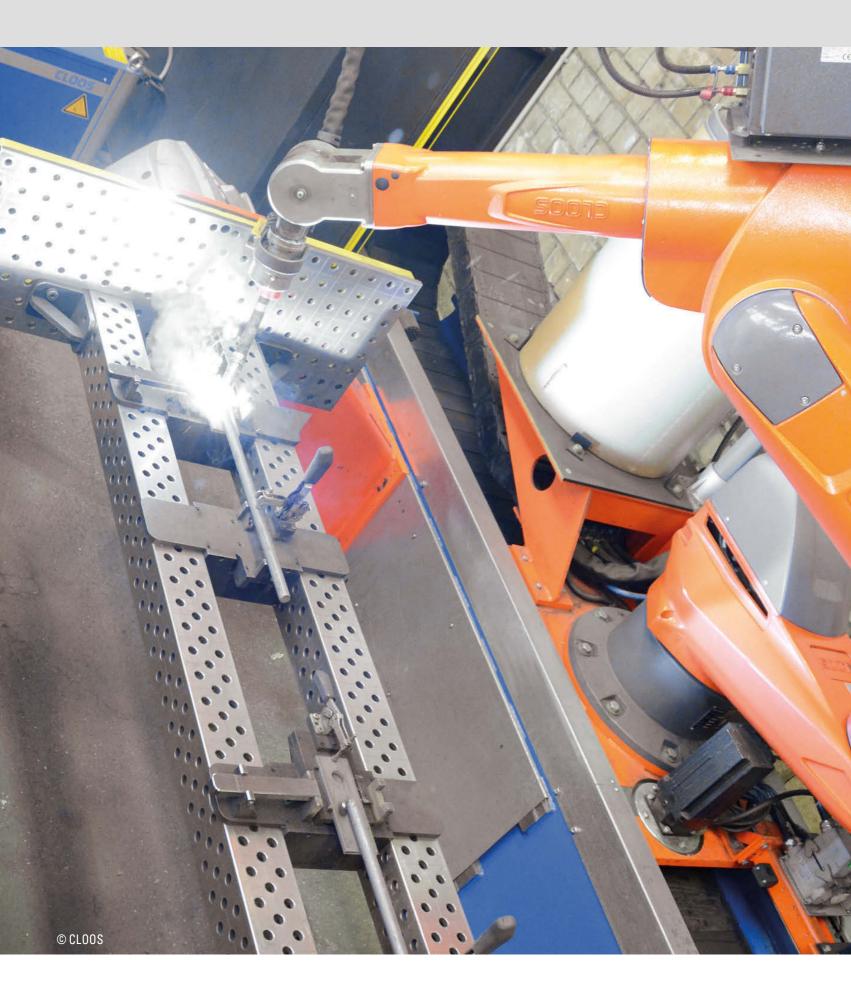
16 Ø A in mm ~ Weight in kg D00-06010-002 20.5

Reduction plate for clamping tubes D28 to D16

16	A in mm	B in mm	C in mm	D in mm	~Weight in kg	Item no.
	150	50	50	100	1.04	D00-06015-000



# Spacer block overview



## Spacer block overview





PAGE 527

16 Console Cast iron

16 Console Aluminium-titanium

PAGE 528

PAGE 529







Corner module,

16 Clamping block

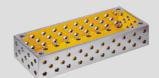
Mounting plate for spacer block
U-form

PAGE 530

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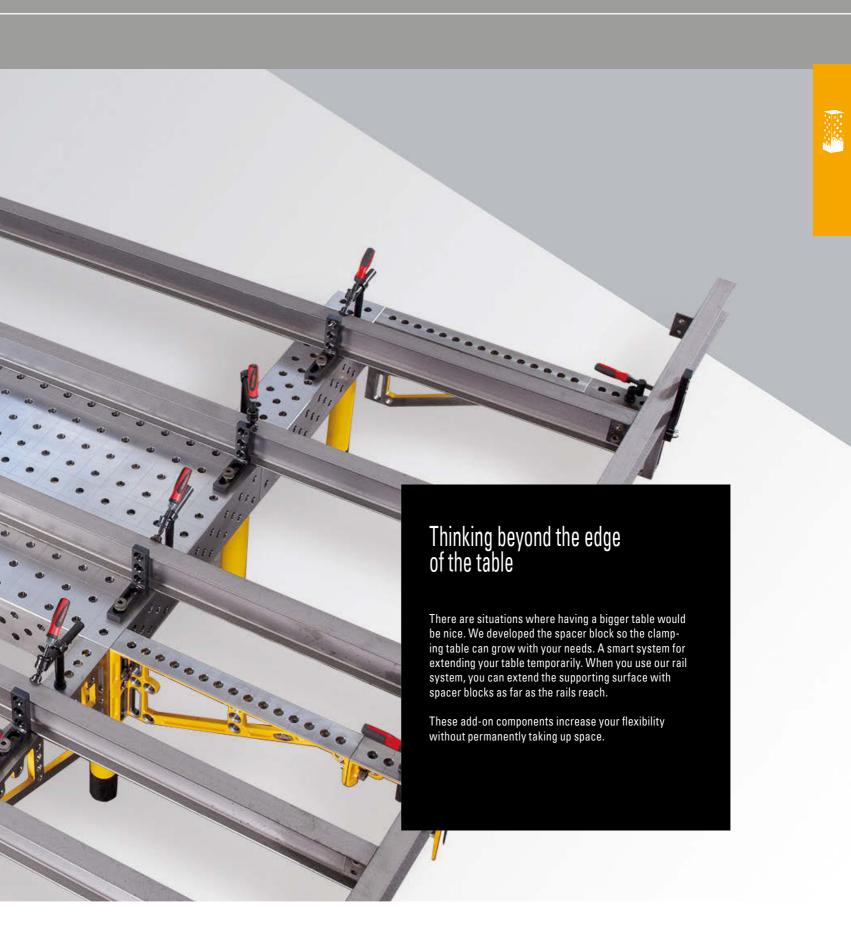
## Spacer block

Setup with spacer block





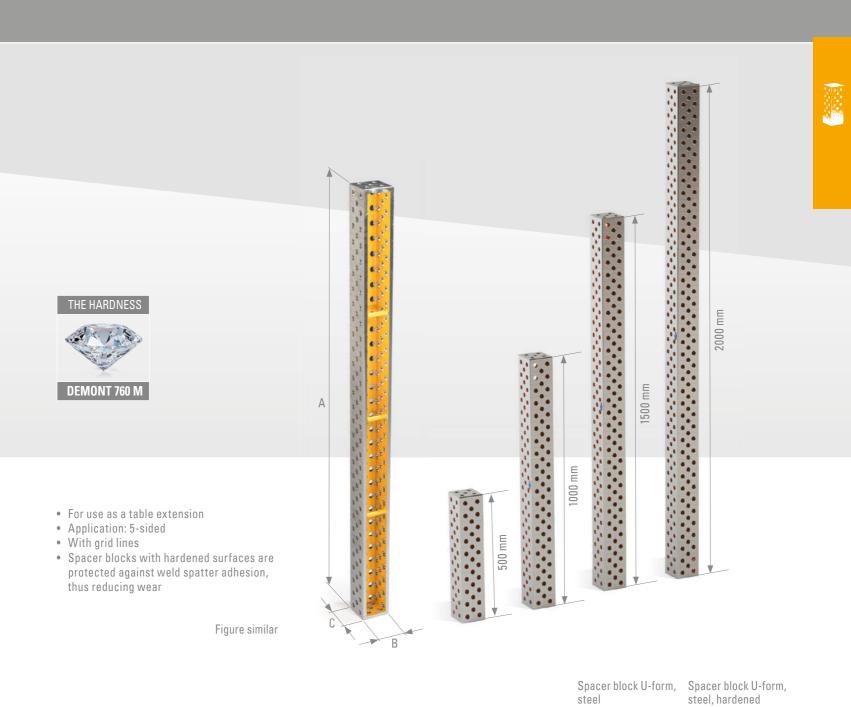
Setup with spacer block







### Spacer block U-form, steel



Item no. Item no.
D16-04002-000 D16-04002-300
D16-04002-001 D16-04002-301
D16-04002-002 D16-04002-302
D16-04002-003 D16-04002-303
D16-04003-026 D16-04003-326
D16-04003-070 D16-04003-304
D16-04003-071 D16-04003-323
D16-04003-065 D16-04003-365
)

Other dimensions on request

#### Consoles, cast iron

- Five full clamping sides with system bores result in numerous application possibilities
- As connecting elements between various system components
- Highly versatile in combination
- Through system bore
   Variable displacement with oblong holes
   Of one piece for high stability and durability
   Use as console or extension
- Powder-coated
- With grid lines

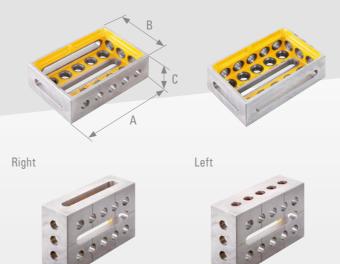


Figure similar

Description 🔺

Application **V** 

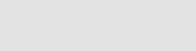


16	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	150	100	50	2.10	Right	D16-03005-001
	150	100	50	2.10	Left	D16-03005-004



#### Console, aluminium-titanium

#### Higher strength with less weight



- High-strength aluminium-titanium alloy for approx. 60 % weight reduction and approx. 10 % higher bending strength compared to cast iron
- Five full clamping sides enable numerous clamping possibilities
- Variable displacement with oblong holes
- Anodised





Right



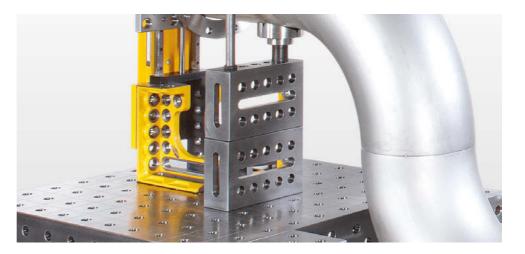




Figure similar

Description 🔺

Application abla



1	6 A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	150	100	50	0.78	Right	D16-03005-010
	150	100	50	0.78	Left	D16-03005-012



### Corner module, cast iron

- Diagonal table expansion
   Flexible in application as V-block, support, stop and more





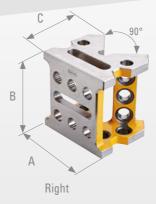




Figure similar

Description 🛦

Application abla



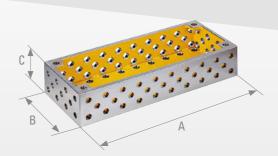
16	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	100	100	85	1.9	Right	D16-04005-000
	100	100	85	1.9	Left	D16-04005-003



### Clamping block



- Application: 5-sided
   Third axis for expansion as clamping tower or laterally as exact table stop
- Connection of system components
  With grid lines





Description 🔺

Application extstyle ex

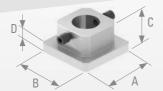


16	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	500	200	100	19	50x50 grid	D16-04010-000
	500	500	100	39	50x50 grid	D16-04011-000

Other dimensions on request

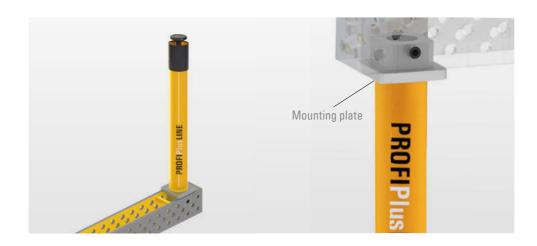
## Mounting plate for spacer block U-form

- Mounting plate for spacer block U-form D16-04002-xxx and D16-04003-000
- For supporting leg attachment PL16-10010-xxx
- Incl. 2x mounting bolts



Description 🛦

Application  $\blacktriangledown$ 



16	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
	95	95	50	15	0.7	00097469



## Clamping and locating angle overview

**PROFIPIUSLINE PROFIPIUSLINE PROFIPIUSLINE** Clamping and locating angle cast iron 200 **Clamping and locating angle** Clamping and locating angle cast iron 400 cast iron 600 PAGE 537 PAGE 538 **PAGE 539** Universal pivot and tilt angle, Clamping and locating angle, Clamping and locating angle, small bore / bore small bore / oblong hole PAGE 540 PAGE 541 PAGE 542 **Clamping and locating angle Clamping and locating angle** Clamping and locating angle bore / oblong hole oblong hole / oblong hole bore / bore PAGE 543 PAGE 544 PAGE 545 Clamping and locating angle, large Flat angle trim Universal stop small bore / oblong hole PAGE 546 **PAGE 547** PAGE 548



## Clamping and locating angle overview

16 Displacement stop	16 EcoLINE Universal stop small	16 EcoLINE Universal stop large
PAGE 549	PAGE 550	PAGE 551
	33	16
Universal stop large with precision scaling	16 Universal stop large	16 Universal stop large with plunger
PAGE 553	PAGE 553	PAGE 554
4 6		
Universal stop L 165	16 Contour stop	16 Stop-strip
PAGE 555	PAGE 556	PAGE 557
66-36		1,5,5,5
16 Adapter plate	16 Angle-setting template	
PAGE 557	PAGE 558	
4 4	(C)	
	8	

# Clamping and locating angle

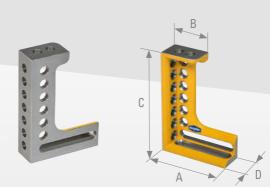




## Clamping and locating angle cast iron 200

### PROFIPIusLINE

- · Continuous adjustment and locking
- Three full clamping sides with system bores
- With oblong holes for continuous adjustment
- Improved sliding behaviour through the combination of cast iron on steel
- Grid lines reduce the setup time
- With face plate for additional superstructures
- Special casting: ultimate stability and ductility
- Powder-coated
- For use e.g. as a tall stop or table extensionOrdering in pairs is recommended
- With grid lines and precision scaling



Right D16-03002-000 Left D16-03002-001

#### Description 🛦

#### Application ▼



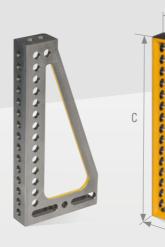
#### Clamping and locating angle 200

16 A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
137.5	75	200	50	1.7	Right	D16-03002-000
137.5	75	200	50	1.7	Left	D16-03002-001

## Clamping and locating angle cast iron 400

### **PROFIPIUSLINE**

- · Continuous adjustment and locking
- Three full clamping sides with system bores
- With oblong holes for continuous adjustment
- Improved sliding behaviour through the combination of cast iron on steel
- Grid lines reduce the setup time
- With face plate for additional superstructures
- · Special casting: ultimate stability and ductility
- Powder-coated
- For use e.g. as a tall stop or table extensionOrdering in pairs is recommended
- With grid lines and precision scaling





D16-03003-000

D16-03003-001

Description 🔺



16	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	187.5	75	400	50	4	Right	D16-03003-000
	187.5	75	400	50	4	Left	D16-03003-001



# Clamping and locating angle cast iron 600

### PROFIPIusLINE

- · Continuous adjustment and locking
- Three full clamping sides with system bores
- · With oblong holes for continuous adjustment
- Improved sliding behaviour through the combination of cast iron on steel
- Grid lines reduce the setup time
- With face plate for additional superstructures
- · Special casting: ultimate stability and ductility
- Powder-coated
- For use e.g. as a tall stop or table extensionOrdering in pairs is recommended
- With grid lines and precision scaling



D16-03004-000

D16-03004-001

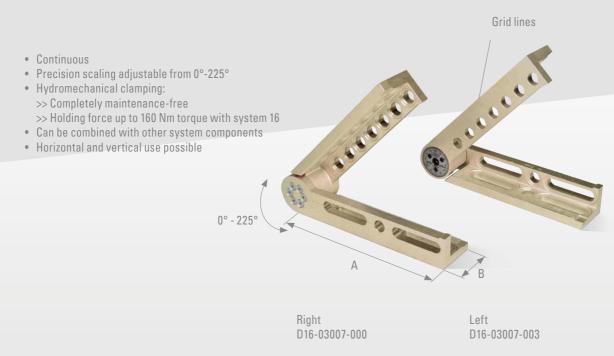
#### Description 🔺



16 A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
187.5	75	600	50	5.4	Right	D16-03004-000
187.5	75	600	50	5.4	Left	D16-03004-001

## Universal pivot and tilt angle

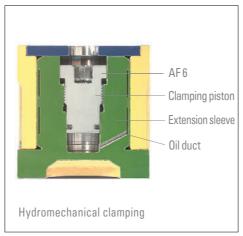
### Continuous tilt from 0° to 225°



Description ▲ Sectional view ▼









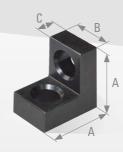
16	A in mm	B in mm	~ Weight in kg	Description	Item no.
	225	50	3	Right	D16-03007-000
	225	50	3	Left	D16-03007-003



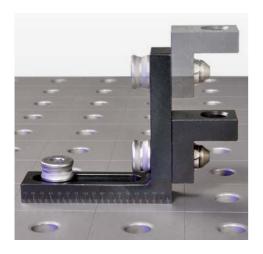
# Clamping and locating angle small bore / bore

## PROFIPIusLINE

- Ideal for confined spaces
   Continuously adjustable support surfaces e.g. in combination with D16-03001-003 (page 544)
- Blackened



#### Description ▲ Application ▼





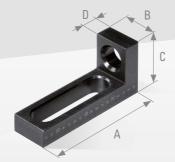
16	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	37.5	25	12	0.12	Steel, blackened	D16-03001-008

# Clamping and locating angle small bore / oblong hole

### PROFIPIusLINE

- Dimension adjustment using grid lines on 3D worktable possible
- on 3D worktable possible

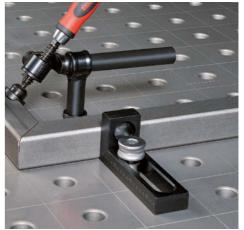
  Continuous adjustment and locking via oblong hole
- Ideal for confined spaces
- Combination bore / oblong hole
- Blackened
- · Precision scaling on both sides



Description 🔺







16	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	90	25	37.5	12	0.16	Steel, blackened	D16-03001-002



## Clamping and locating angle bore / oblong hole

### PROFIPIusLINE

- Combination system bores / oblong hole for numerous clamping possibilities
- Blackened
- Dimension adjustment using grid lines on 3D worktable possible
- Compatible with all clamping and locating angles so that the oblong hole can be used to form a height-adjustable support
- Precision scaling on both sides



#### Description 🔺





Two full angle surfaces – therefore usable on both sides

16	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	90	25	90	12	0.24	Steel, blackened	D16-03001-000



# Clamping and locating angle oblong hole / oblong hole

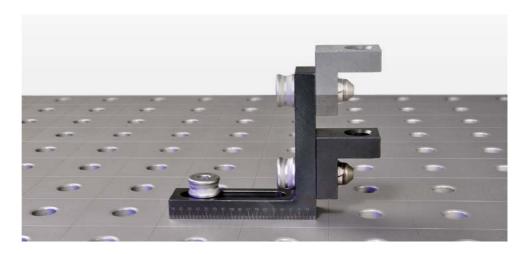
### PROFIPIusLINE

- Dimension adjustment using grid lines on 3D worktable possible

  Continuous adjustment and locking
- Ideal for confined spaces
- Blackened
- Precision scaling on both sides



Description 🔺



16	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	90	25	90	12	0.20	Steel, blackened	D16-03001-003



# Clamping and locating angle bore / bore

## PROFIPIusLINE

- Dimension adjustment using grid lines on 3D worktable possible
   Ideal for confined spaces
- Blackened
- Precision scaling on both sides



#### Description ▲ Application ▼





16	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	90	25	90	12	0.28	Steel, blackened	D16-03001-004

# Clamping and locating angle large bore / oblong hole

### PROFIEcoLINE

- Combination system bores / oblong hole for numerous clamping possibilities
- Precision scaling on both sides
- Two full angle surfaces, therefore can be used from both sides
- Dimension adjustment using grid lines on 3D worktable possible
- Compatible with all clamping and locating angles so that the oblong hole can be used to form a height-adjustable support
- Blackened



#### Description ▲ Application ▼





16	A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Description	Item no.
	90	25	140	12	0.32	Steel, blackened	D16-03008-000





# Flat angle trim

- Full locating surfaces inside and outside Numerous possibilities thanks to oblong holes and system bores
- Continuously moveable with oblong holes
- Blackened



Description 🔺

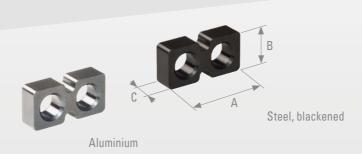


16	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	187.5	250	12	1.46	Steel, blackened	D16-03006-000



# Universal stop small

- Preferred use in confined work areas
- · Also usable for corner connections thanks to notching



Description 🛦



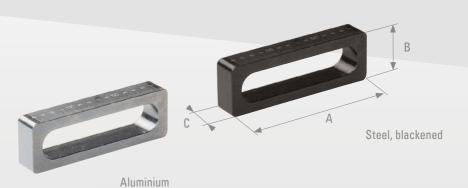
16	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	55	25	12	0.08	Steel, blackened	D16-05002-000
	55	25	12	0.03	Aluminium	D16-05002-010



Displacement stop

## Precision scaling on both sides

- Precision scaling on both sidesContinuously adjustable with scale on both sides







16 A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
150	25	12	0.18	Steel, blackened	D16-05015-000
150	25	12	0.06	Aluminium	D16-05015-001



# EcoLINE universal stop small

- Preferred use in confined work areas
- Simple version



#### Description ▲ Application ▼





16	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	55	25	12	0.08	E16-05002-000



# EcoLINE universal stop large

- Combination system bore / oblong hole for numerous clamping possibilities
- Simple version
- With precision scaling



#### Description ▲ Application ▼





16	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	115	25	12	0.16	E16-05001-000

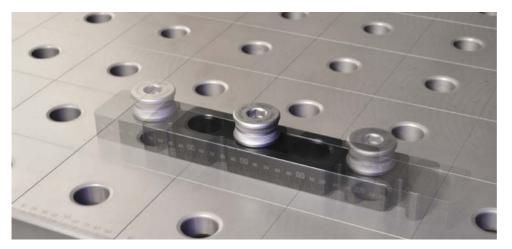


## Universal stop large with precision scaling

- Combination system bore / oblong hole for numerous clamping possibilities
- With precision scaling



#### Description ▲ Application ▼



#### Our idea — the benefits to you▼

- Fine adjustable with precision scaling possible using grid lines
- 360° adjustable position
- Additional notch for attachment, ideal as corner stop
- Continuous adjustment via oblong hole

16	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	115	25	12	0.14	Steel, blackened	D16-05001-004
	115	25	12	0.05	Aluminium	D16-05001-012



## Universal stop large

- Combination system bore / oblong hole for numerous clamping possibilities
- 360° adjustable position in 45° increments
- Continuous adjustment via oblong hole
- With precision scaling





#### Description lacktriangle Application lacktriangle





16	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	115	25	12	0.14	Steel, blackened	D16-05001-000
	115	25	12	0.05	Aluminium	D16-05001-010



# Universal stop large with plunger

### Exact fixation of the work pieces

- Like universal stop large
- With additional spring pressure pin especially for clamping sheet metal and moulded parts, so that no additional fixation of work pieces is necessary
- Stroke 2.0 mm
- With precision scaling





#### Description ▲ Application ▼







16	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	115	25	12	0.14	Steel, blackened	D16-05001-001
	115	25	12	0.05	Aluminium	D16-05001-011



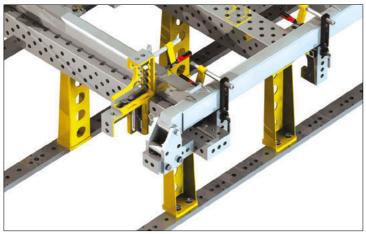
# Universal stop L 165

- Larger stop range than universal stop large
- Three system bores
  For bridging larger bearing surfaces
  As lateral stop for large beams
  With precision scaling





#### Description ▲ Application ▼







16	A in mm	B in mm	C in mm	~ Weight in kg	Description	Item no.
	165	25	12	0.22	Steel, blackened	D16-05009-000
	165	25	12	0.07	Aluminium	D16-05009-010

## Contour stop

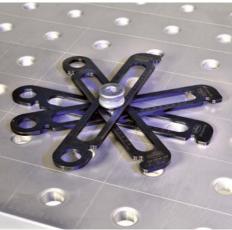
### With 1 mm precision scaling

- As support and stop element for light work pieces
   Clamping via PC-bolt and spacer washer of the spacer set
   Cost-effective
- With 1 mm precision scaling



#### Description ▲ Application ▼



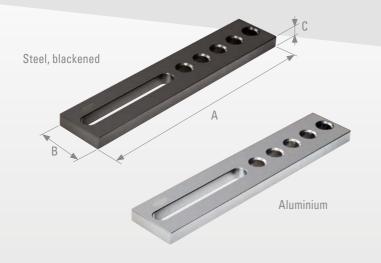


16	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	187.5	25	6	0.1	D16-05016-000

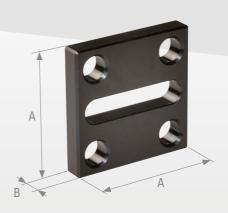


Stop-strip Adapter plate

- Combination system bore / oblong hole for numerous clamping possibilities
- With precision scaling



• As interface between 3D system and individual components, i.e. for welding / screwing on special customer elements



#### Description ▲ ▼

- Very long and sturdy version with large bearing surfaces for large components or long distances
- Continuous adjustment via oblong hole
- Combination system bore / oblong hole for numerous clamping possibilities

#### Description ▲ Application ▼



#### Adapter plate

16	A in mm	B in mm	~ Weight in kg	Item no.
	75	12	0.36	D16-05010-000

#### Stop-strip

16	A in mm	B in mm	C in mm	Description	~ Weight in kg	Item no.
	250	50	12	Steel, blackened	0.90	D16-05003-000
	400	50	12	Steel, blackened	1.48	D16-05003-001
	250	50	12	Aluminium	0.3	D16-05003-010
	400	50	12	Aluminium	0.5	D16-05003-011



## Angle-setting template

### Precision scaling on both sides

• The angle-setting template is flexible in application with the 1° precision scaling on both sides

• Continuous 0°-90°

• Fixed setting out 0-60°(15° increments)

• r = Radius 75 mm



#### Description ▲ Application ▼



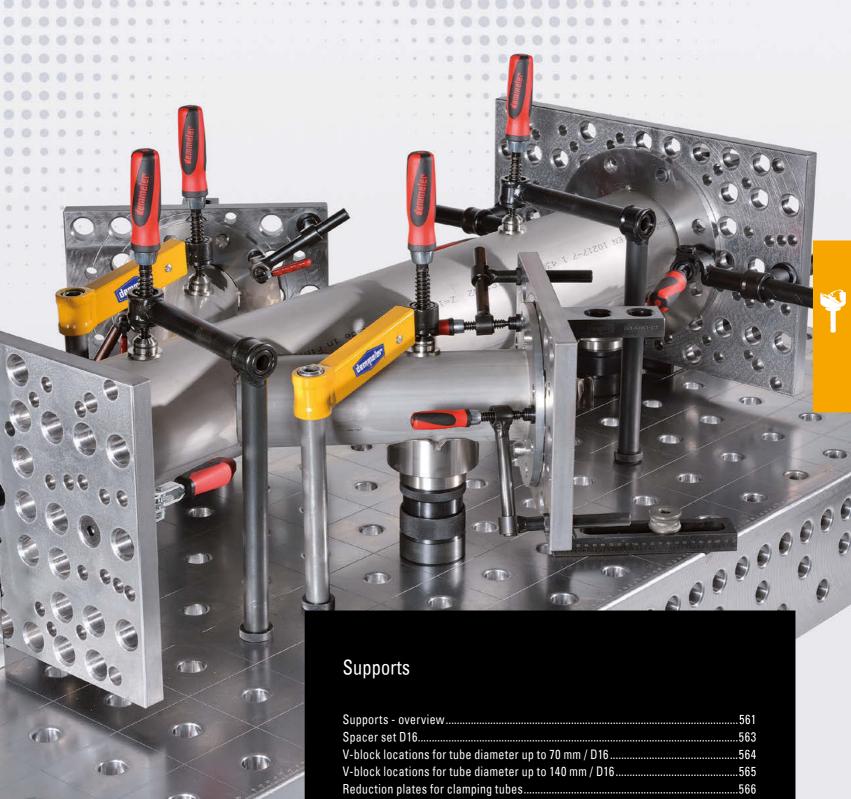
Fixed setting out in 15° increments (0° - 60°) and continuous 0° - 90°

#### Angle-setting template

16	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	150	87.5	12	0.45	D16-05013-010







(1 B)







16 Spacer set 10 pieces

V-block locations for tube diameter up to 70 mm

V-block locations for tube diameter up to 140 mm

PAGE 563



PAGE 564











PAGE 565











16 Reduction plate

PAGE 566





# Supports





Spacer set

### Height compensation in mm range

- For 5-50 mm height compensation on the respective support surface
- Smallest increment 1 mm
- Includes 1/10 inch disk (2.54 mm)
- With dimensions of the compensating disks
- Support mandrel fitting each system bore 16
- Self-locking with O-Ring
- On the top of the support mandrel M8 thread for customer-specific elements available on request
- Support prisms consisting of: Individual support mandrel + bearer sleeves L1-L20





#### Description ▲ Details ▼

 Exact positioning to your desired height via bearer sleeves of different lengths

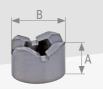
16	A in mm	Ø B in mm	~ Weight in kg	Description	Item no.
	55+5	16	0.220	9-piece spacer set	D16-09001-000
	55+5	16	0.100	individual support mandrel	00059333
	1	25	0.004	bearer sleeve L1	00000403
	2	25	0.008	bearer sleeve L2	00000402
	2.5	25	0.010	bearer sleeve L2.5	00003934
	3	25	0.015	bearer sleeve L3	00000401
	4	25	0.010	bearer sleeve L4	00000400
	5	25	0.010	bearer sleeve L5	00000399
	10	25	0.020	bearer sleeve L10	00000398
	20	25	0.040	bearer sleeve L20	00000397

# V-block locations for tube diameter up to 70 mm

### With double V-block

- Screwed in with PC-bolt
- For tube diameter up to 70 mm
- With double V-block for more possibilities
- Also suitable for rectangular tubes













Steel, blackened D16-09004-000

Stainless steel D16-09004-002 POM D16-09004-003

### Description 🛦



16	A in mm	Ø B in mm	~ Weight in kg	Angle	Description	Item no.
	35	50	0.36	120 / 90°	Steel, blackened	D16-09004-000
	35	50	0.38	120/90°	Stainless steel	D16-09004-002
	35	50	0.06	120 / 90°	POM	D16-09004-003

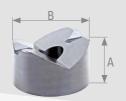


# V-block locations for tube diameter up to 140 mm

### With double V-block

- Screwed in with PC-bolt
- For tube diameter up to 140 mm
  Double V-block for more possibilities
- Also suitable for rectangular tubes













Steel, blackened D16-09003-000

Stainless steel D16-09003-002 POM D16-09003-003

### Description 🛦



16	A in mm	Ø B in mm	~ Weight in kg	Angle	Description	Item no.
	50	80	1.46	120 / 90°	Steel, blackened	D16-09003-000
	50	80	1.46	120/90°	Stainless steel	D16-09003-002
	50	80	0.22	120 / 90°	POM	D16-09003-003



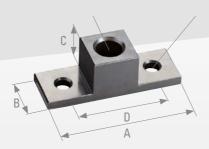
# Supports

# Reduction plate for clamping tubes

 Interface between D28 and D16

System bore D28

System bore D16



Description 🛦

Application ▼



Reduction plate for clamping tubes D28 to D16  $\,$ 

16	A in mm	W in mm	C in mm	D in mm	~ Weight in kg	Item no.
	150	50	50	100	1.04	D00-06015-000



# Clamps and quick release skewers

Compensating swing clamp with spindle D16	. 573
Compensating swing clamp with quick-action clamping cylinder D16	. 574
Compensating swing clamp with short boring spindle D16	. 57
Screw clamp 180° with spindle D16	. 576
Screw clamp 180° with quick-action clamping cylinder D16	. 57
Screw clamp 180° with short boring spindle D16	. 578
Variable screw clamp 90° D16	. 579
Variable screw clamp 45° with spindle D16	. 580
Variable screw clamp 45° with quick-action clamping cylinder D16	. 58′
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Spindle with bushing and clamping pad	. 583
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Clamping tube D16	. 590
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Vertical toggle clamp with adaptor and countersunk screw D16	. 595
Adapter for quick release skewers with countersunk screw D16	. 596

# D16 clamping system overview







16 Quick-action clamping cylinder with clamping pads

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16 Clamping pad in ball form

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VARIO stop ring for round screw clamp tubes

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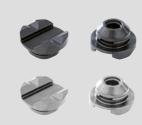
Toggle clamp with adapter

PAGE 594



Plunger and contact piece / clamping pad with V-block

PAGE 585



16 Adjusting spindle

**PAGE 588** 



16 Clamping tube / adapter tube



Vertical toggle clamp
with adaptor and countersunk screw

PAGE 595



16 Plunger and contact piece

PAGE 586



16 Clamping pad blank

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Adapter for PC-bolts / reduction plate for clamping tubes

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Adapter for quick release skewers with countersunk screw

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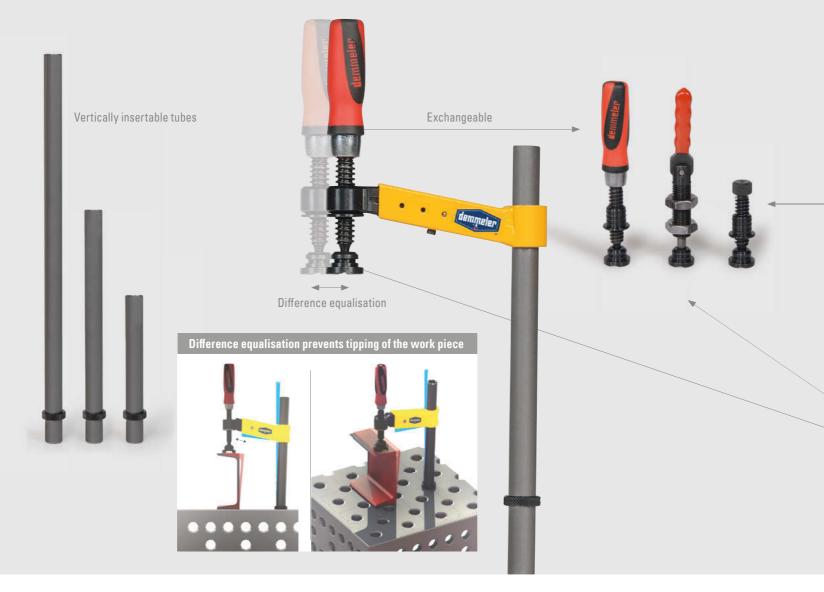


### Configure your clamps

# Flexible down to the details

Thanks to the modular system, the clamps adapt perfectly to the respective clamping situation. Select from various materials for the clamping pad and different spindle lengths, also for small installation spaces. The latch lever makes quick and precise clamping possible even with one hand. With three different tube lengths and exchangeable arms, you can handle any clamping task.





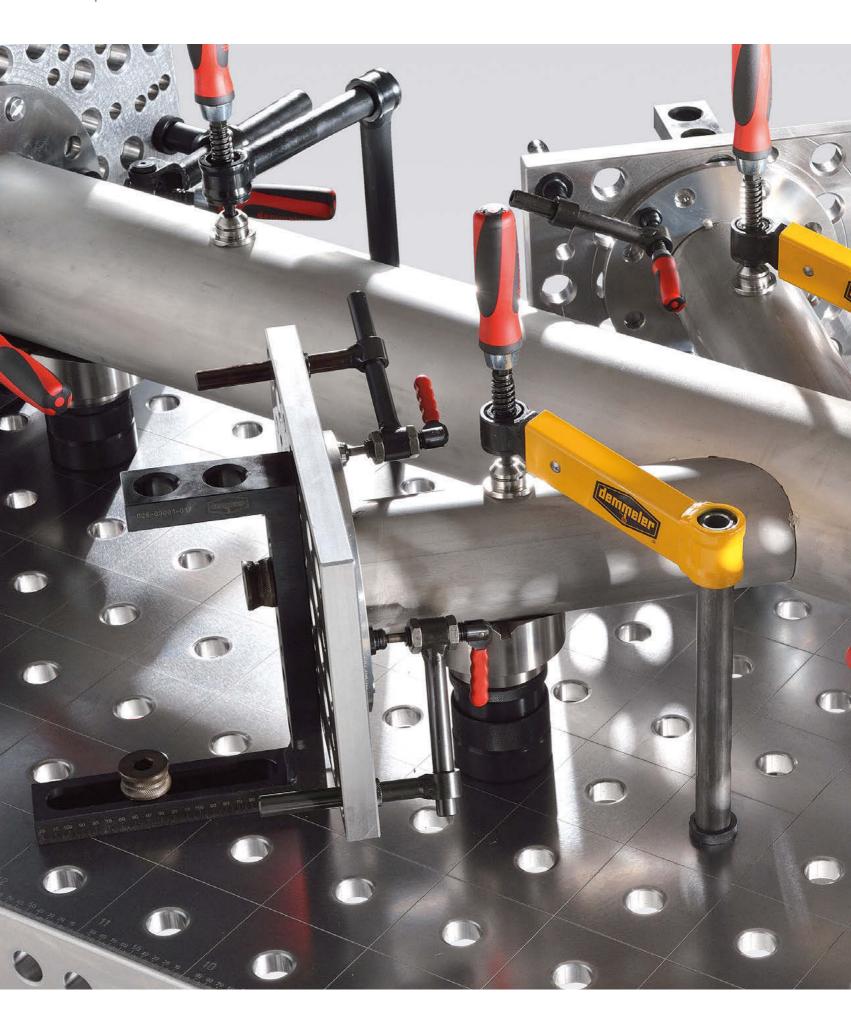


# Configure your clamps

- Ultimate stability:
  - Enables the even build-up of clamping force with large power reserves. The self-centring support and pressure piece clamps the work piece and can be exchanged.
- The powder-coated clamping lever features a highly ergonomic shape and swivels 360° degrees to circumvent all interfering edges.
- Large stroke: 3.5 mm



# Clamps





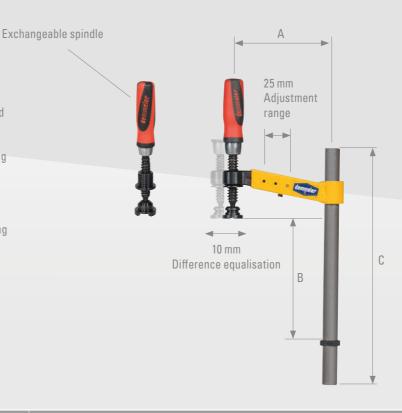
#### Compensating swing clamp with spindle

# Topseller

#### For profiles that tend to tip



- With difference equalisation for accurately oriented and positioned work piece clamping
- With stop ring for height fixation
- Exchangeable actuator (e.g. spindle, short boring spindle or quick-action clamping cylinder)
- Clamping pad can be exchanged for clamping other materials such as stainless steel
- New standard clamping pad added value for your screw clamps
- Exchangeable clamping tubes, available in different lengths



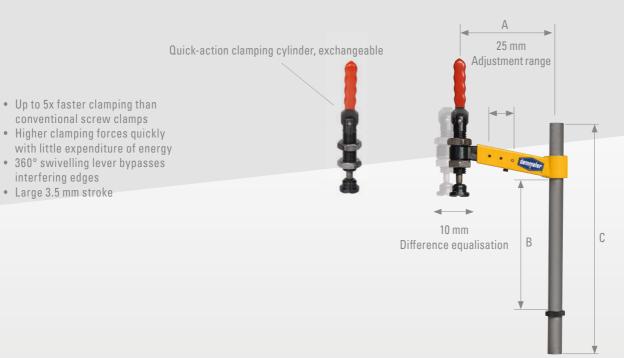
Description 🔺

Application ▼



16	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	100-125	max. 200	250	0.66	D16-07001-000

# Compensating swing clamp with quick-action clamping cylinder



Description 🔺

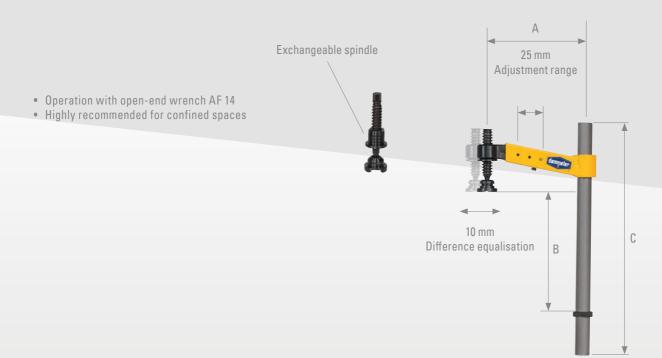
Application **V** 



16	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	100-125	max. 200	250	0.68	D16-07001-001

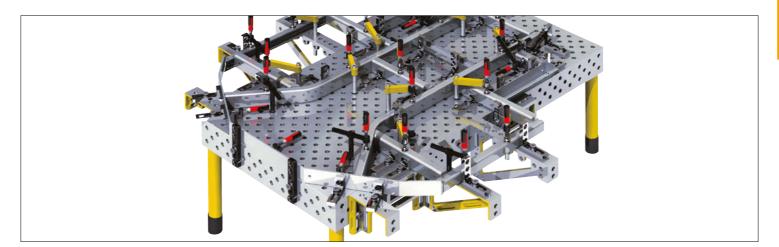


# Compensating swing clamp with short boring spindle



Description 🔺

Application ▼



16	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	100-125	max. 200	250	0.6	D16-07001-002

Exchangeable spindle

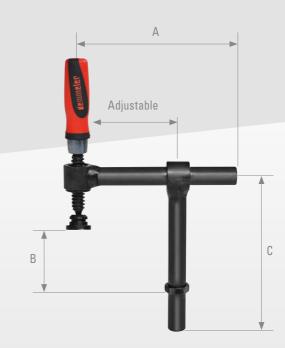
# Screw clamp 180° with spindle

# With adjustable, sturdy round tube





- Adjustable projection
  Can be inserted through system bores, eliminating avoidable interfering edges
- Highest force transmission with sturdy round tubes
- Entire clamping mechanism is exchangeable







16	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	130	max. 90	130	0.52	D16-07005-000

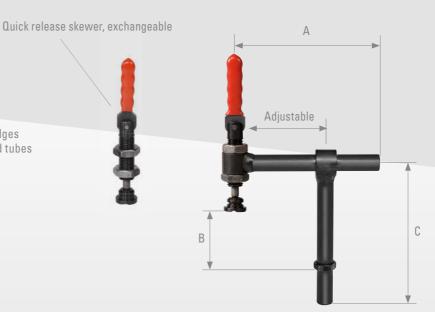


#### Screw clamp 180° with quick-action clamping cylinder

#### With adjustable, sturdy round tube



- Higher clamping forces quickly with little expenditure of energy
- 360° swivelling lever bypasses interfering edges
- Highest force transmission with sturdy round tubes
- Entire clamping mechanism is exchangeable
- Large 3.5 mm stroke



#### Description ▲ Benefits of the clamping cylinder ▼

- Ultimate stability:
   Enables the even build-up of clamping force
   with large power reserves. The self-centring
   support and pressure piece clamps the work
   piece and can be exchanged.
- The coated clamping lever features a highly ergonomic shape and swivels 360° degrees to circumvent all interfering edges.
- Large stroke: 3.5 mm

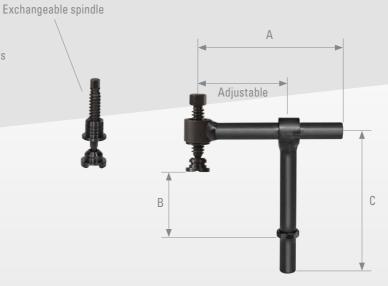
#### Application 🔻



16	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	130	max 90	130	0.58	D16-07005-001

# Screw clamp 180° with short boring spindle

- Highest force transmission with sturdy round tubes
   Operation with open-end wrench AF 14
   Highly recommended for confined spaces
- Each tube can be used individually
- Entire clamping mechanism is exchangeable





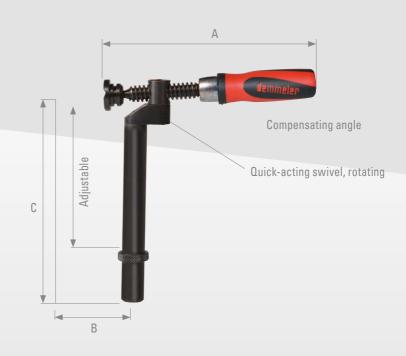


16	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	130	max. 90	130	0.50	D16-07005-002

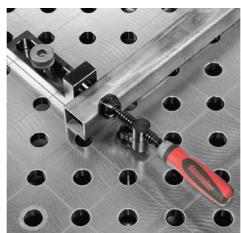
# Variable screw clamp 90°



- Pressure direction 90° to the system bore
- Spindle stroke ~ 30 mm
- 180° quick-acting swivel with ball stop in the joint
- With stop ring for height fixation
- Use of clamping bridges possible
  Highest force transmission with sturdy round tube
- Clamping pad exchangeable









16	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	150	max. 40	150	0.30	D16-07008-000

# Variable screw clamp 45° with spindle

- Highest force transmission with sturdy round tubes
   Ideal for clamping prismatic profiles as well as rectangular and square profiles
   Entire clamping mechanism is
- exchangeable





Description 🔺

Application ▼







16	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	130	max. 90	130	0.50	D16-07009-000

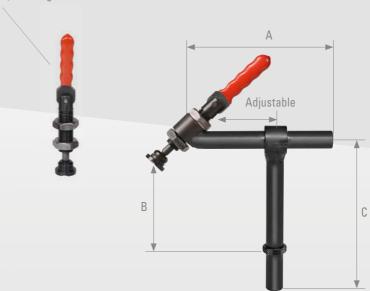


# Variable screw clamp 45° with quick-action clamping cylinder

#### With adjustable, sturdy, rotating round tube

#### Quick release skewer, exchangeable

- Up to 5x faster clamping than with conventional screw clamps
- Higher clamping forces quickly with little expenditure of energy
- 360° swivelling lever bypasses interfering edges
- Highest force transmission with sturdy round tubes
- Entire clamping mechanism is exchangeable
- Large 3.5 mm stroke



Description 🔺

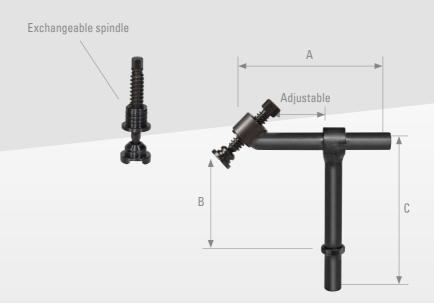
16	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	130	90	130	0.58	D16-07009-001

# Variable screw clamp 45° with short boring spindle

# With adjustable, sturdy, rotating round tube

- Highest force transmission with sturdy round tubes
   Operation with open-end wrench AF 14
   Highly recommended for confined spaces

- Entire clamping mechanism is exchangeable









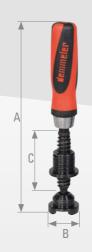
16	A in mm	B clamping width in mm	C in mm	~ Weight in kg	Item no.
	130	90	130	0.46	D16-07009-002



#### Spindle with bushing and clamping pad

# Short boring spindle with bushing and clamping pads

- High-quality 2-component plastic handle
- Long threaded spindle
- Threaded bushing works with any system bore
- Exchangeable clamping pad (plastic, stainless steel - see page 585 ff)
- Suitable to pretension work pieces



Clamping pad with cross prism

- Highly recommended for confined spaces
- Operation with open-end wrench AF 14
- Direct use in system bores possible
- Ideal to pretension work pieces

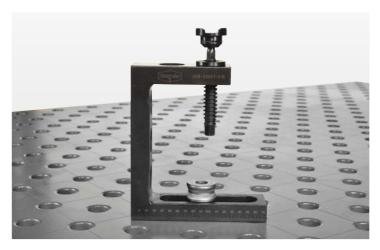
With hexagonal wrench AF 14



Clamping pad with cross prism

#### Description ▲ Application ▼





16	A in mm	Ø B in mm	C in mm	~ Weight in kg	Item no.
	~ 148	22	45	0.14	D16-07020-000

16	A in mm	Ø B in mm	~ Weight in kg	Item no.
	70	22	0.1	D16-07022-000

# Quick-action clamping cylinder with clamping pad

- Up to 5x faster clamping than conventional screw clamps
- Higher clamping forces quickly with little expenditure of energy
- Large 3.5 mm stroke
- The self-centring support and pressure piece clamps the work piece and can be exchanged



Clamping pad with V-block



16	A in mm	Ø B in mm	C in mm	~ Weight in kg	Item no.
	~ 80+3	22	30	0.18	D16-07021-000



Plunger and contact piece / clamping pad with V-block

• Clamping pad with V-block





Flat or upright positioning	Self-centring clamping on the work piece	Also as contact piece in the system bore
Notice to the state of the stat	Work piece Clamping pad top view	System bore 16
Clamping larger diameters without problems	No slipping and tipping possible	no matter where the force is applied! No slipping

16	A in mm	B in mm	C in °	Description	Quantity	ltem no.
	22	8	120	Steel, blackened	1 units	D16-07011-015
	22	8	120	Steel, blackened	10 units	D16-07011-016

# Plunger and contact piece

- Lightning-fast replacement: no tools, no screws
  O-ring prevents dirt from getting into the joint
  Produced in various materials

- Exact work piece support thanks to pendulum compensation
- With cross prism for clamping round / rectangular tubes
  Can also be used as a support in any system bore



Description 🔺

Application 🔻



16	A in mm	Ø B in mm	~ Weight in kg	Description	Item no.
	13	22	0.019	Steel, blackened	D16-07011-000
	13	22	0.019	Stainless steel	D16-07011-001
	13	22	0.004	POM	D16-07011-002

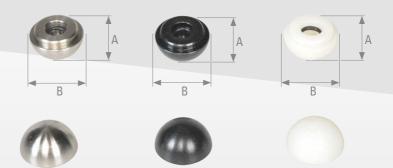




# Clamping pad in ball form

- Lightning-fast replacement: no tools, no screws
  O-ring prevents dirt from getting into the joint
  Produced in various materials

- With ball, specially for clamping corner profiles
- Clamping pad compensates angle errors
- Exact work piece support thanks to pendulum compensation





16	A in mm	Ø B in mm	~ Weight in kg	Description	Item no.
	14	20	0.018	Steel, blackened	D16-07011-005
	14	20	0.018	Stainless steel	D16-07011-006
	14	20	0.004	POM	D16-07011-007
	14	20	0.007	Aluminium	D16-07011-012

# Adjusting spindle

- For adjusting a continuous
- support

  Clamping in hard to reach positions





16	A in mm	B in mm	~ Weight in kg	Item no.
	180	16	0.18	D16-09008-000



# Clamping pad blank

# VARIO stop ring for round screw clamp tubes

- For customer-specific adaptation
- Locations for Demmeler system screw clamps already included
- Steel, blackened



- For height fixation of screw clamps
- Included in the scope of delivery for all round tube screw clamps



#### Description 🔺

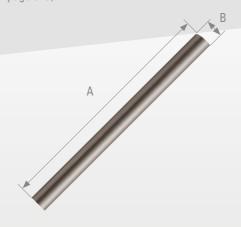


16	A in mm	Ø B in mm	~ Weight in kg	Description	Item no.
	25	22	0.05	Steel, blackened	D16-07014-000

16	A in mm	Ø B in mm	~ Weight in kg	Item no.
	6	16	0.006	D16-07003-000

# Clamping tube

- Precision clamping tube to fit all system bores
- e.g. for compensating swing clamps (starting on page 573)



Description 🔺

16	A in mm	Ø B in mm	~ Weight in kg	Item no.
	125	16	0.15	D16-07004-000
	250	16	0.30	D16-07004-001
	600	16	0.72	D16-07004-002
	1000	16	1.20	D16-07004-003

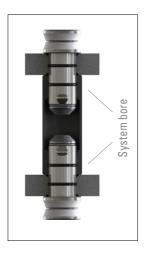
- Extension of support
- and clamping points

  Adaptable with screw clamp tube
- Clamping on both sides possible with PC-bolt



Description 🔺

Adapter-tube 200 mm with screw clamp ▼





16	A in mm	Ø B in mm	~ Weight in kg	Item no.
	100	16 / 28	0.34	D16-09010-000
	200	16 / 28	0.76	D16-09010-001
	300	16 / 28	1.18	D16-09010-002

591

# Adapter for PC-bolt D16 to D28

- Interface between system D28 and D16
- Fully compatible with system D28 and D16
- Force-fit and form-fitting with O-ring, self-centring connection
- O-ring prevents simultaneous rotation while tightening
- O-ring cleans the system bore



#### Description 🔺

#### Application ▼





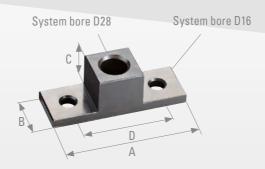
#### Adapter for PC-bolt D16 to D28

Ø A in mm	B in mm	~ Weight in kg	Item no.
20.5	28-0.02	0.05	D00-06010-002



Reduction plate for clamping tubes D28 to D16

 Interface between system 28 and system 16



Description ▲ Application ▼



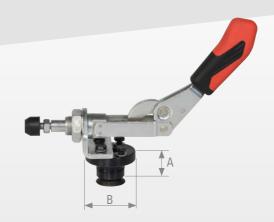
Reduction plate for clamping tubes D28 to D16

A in mm	B in mm	C in mm	D in mm	~ Weight in kg	Item no.
150	50	50	100	1.04	D00-06015-000

# Toggle clamp with adapter

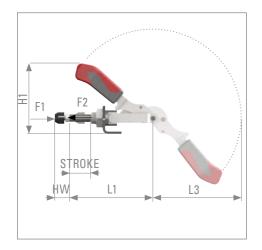
- Long toggle clamp guide with mounting thread and nut
   Ergonomic, oil-resistant handle with large grip and soft component
   With tempered, galvanised clamping screw

- With adapter and countersunk screw to fit any system bore
- Toggle clamp galvanised and passivated, adapter blackened
- With universal stop for indirect locations, therefore continuously adjustable



#### Description ▲ Toggle clamp ▼

#### Application ▼





16	A in mm	BØ in mm	Descr	iption		~ Weight i	n kg	Item no.
	15	38	Threa	Thread spacing = 24x16 mm		0.22 D16-080		D16-08002-000
	Toggl	e clamp dat	a					
	16	H1	L1	L3	HW	STROKE	F1 in kN	N F2 in kN
	f	30	91	72	12 - 20	20	1	1





#### Vertical toggle clamp with adaptor and countersunk screw

- With open support arm and horizontal leg
- Ergonomic, oil-resistant handle with large grip and soft component
- Safety clamping piece with finger protection
- Captive clamping screw at clamping arm end
- With adapter and countersunk screw to fit any system bore
- Clamping range 0-25 mm
- Toggle clamp galvanised and passivated, adapter blackened
- With universal stop for indirect locations, therefore continuously adjustable



#### Description ▲ Vertical toggle clamp ▼

# F1 F2

#### Application ▼



16	A in mm	BØ in mm	Description	~ Weight in kg	Item no.
	15	38	Thread spacing 24x16 mm	0.22	D16-08001-000

Data - vertical toggle clamp								
	16	H1	L1	L2	HW	F1 in kN	F2 in kN	
		98.5	61	59	-4 - 2	0.6	1.1	

# Adapter for quick release skewers with countersunk screw

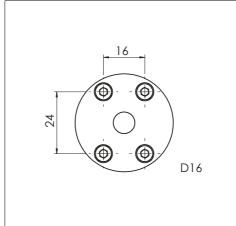
- Adapter to fit conventional quick release skewers
   Scope of delivery: 1 x adapter 4 x cap screw M4 x 10 1 x countersunk screw M10 x 20



Description ▲ Application ▼

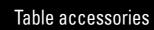
Adapter for quick release skewers with countersunk screw ▼





16	A in mm	BØ in mm	~ Weight in kg	Description	Item no.
	15	38	0.08	Thread spacing 24 x 16 mm	D16-08005-000





Accessory cart D16	600
Tool trolley system 16	
Transport ring D16	602
Torque wrench D16	603
Allen key D16	603
Round brush D16 mm	604
Protective plate for PROFIPlusLINE (PL) worktable D16	605
Protective plate for PROFIEcoLINE (PE) worktable D16	606
Ground connector	608
Bench stone	609
Tarpaulin	609
Pump bottle with worktable system protective spray	610
Worktable system protective spray in a canister	610

# Table accessories overview

16 Accessory cart

PAGE 600



16 Transport ring

PAGE 602



16 Allen key

PAGE 603

PAGE 605



16 Protective plate for worktable PL

16 Tool trolley

PAGE 601



16 Torque wrench

PAGE 603



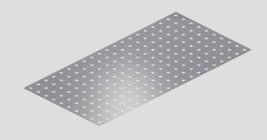
16 Round brush

PAGE 604



16 Protective plate for worktable PE

PAGE 606







**Ground connector** 

Bench stone

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PAGE 609





Worktable tarpaulin

Pump bottle with protective spray

PAGE 609

PAGE 610





Protective spray in a canister

PAGE 610





# Accessory cart D16

- Tidy arrangement of your system components
  Safe and practical storage of large angles
  Fast to move with 4 sturdy swivelling casters
  Low centre of gravity through ideal positioning of the clamping tools



Description ▲ Application ▼

Application ▼







System components not included

16	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	~ 600	~ 450	~ 870	35	D16-11001-002



Tool trolley D16

- Establishes a tidy and orderly workstation
   Faster access to the system components
   Protects against dirt with four closed locking

- Drawers, mobile on four casters, two of them swivelling and locking



Description ▲ Application ▼

Application ▼





System components not included

16	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	740	560	970	-	D16-11001-000

#### Transport ring D16

- For fast and safe transport of all system components (e.g. welding table)
- Fixing using 2 PC-bolts (D16-06001-000)



Description **A** 

Note ▼

	Max. transport weight in [t] with different attachment methods							
Transport ring		<u></u>						
Tilt angle	0°	0°	0° - 45°					
Number of transport rings	1	2	2					
D16 system	0.7 t	1.4 t	1.0 t					

- Transport ring D00-10001-000 must always be attached with at least 2 x PC-bolts.
- Max. tightening torque D16: 20 Nm (Bolts are not included in the scope of delivery of the transport ring).
- Countersunk head bolts may not be used!
- Transport ring may only be used for DEMMELER 3D systems!
- Internal operating instructions must be observed!
- Only undamaged transport ring and PC-bolts may be used!
- The transport ring must be fixed centrally on the worktop.
   If two transport rings are used, these must be fixed symmetrically in the middle of the worktop. The maximum diagonal pulling angle must not exceed 45° (see warning notes).
- The general regulations for means of transport have to be observed when using the transport ring!
- Depending on the application, the load capacity may be significantly reduced.
- Loads may only be applied to the transport ring in the ring plane!
   Do not exceed the load capacity!
- Do not allow personnel to stand underneath suspended loads.
- Observe the warning notes on the transport ring!

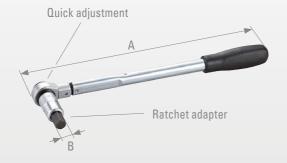
16	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	200	120	84	2.8	D16-10001-001



Torque wrench

#### Clamping and releasing made easy

- Pre-set to 20 Nm for controlled tightening of PC-bolts, avoiding damage to the system bore and bolt by over-tightening
   Includes 1 x ratchet adapter, adjustable (left/right) and 3/8"
- and 2 x sockets AF4 and AF8
- For PC-bolt and compensating clamp arm with hexagonal
   Good accessibility due to additional ball head





Description ▲ Application ▼

Description 🛦



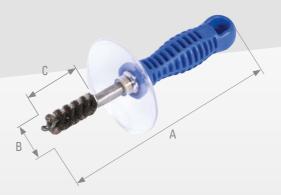
16	A in mm	B in mm	~ Weight in kg	Item no.
	212	AF4/AF8	0.52	D16-10015-000

16	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	~ 71	AF4	~ 25	0.01	D16-10008-002
	~ 94	AF6	~ 38	0.02	D16-10008-001
	~ 104	AF8	~ 42	0.06	D16-10008-000
	~ 75	AF5	~ 35	0.02	E16-10008-000



# Round brush

- For cleaning the system boresWith splash guard





16	A in mm	B in mm	C in mm	~ Weight in kg	Item no.
	200	16	45	0.10	D16-10002-000

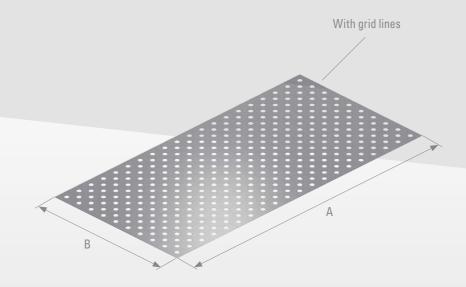




# Protective plate for worktable

# Especially for PROFIPIusLINE (PL) tables

- The protective plate are especially well suited for stainless steel welding
- With diagonal grid 50 × 50 mm
- Incl. grid lines
- t=2



#### Description 🛦

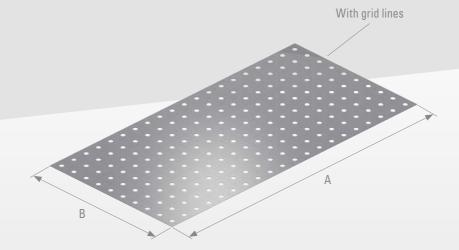


16	A in mm	B in mm	Description	Item no.
	1000	1000	Stainless steel	PL16-50030-000
	1000	1000	Aluminium	PL16-50030-001
	1200	800	Stainless steel	PL16-50030-012
	1200	800	Aluminium	PL16-50030-013
	1200	1200	Stainless steel	PL16-50030-002
	1200	1200	Aluminium	PL16-50030-003
	1500	1000	Stainless steel	PL16-50030-004
	1500	1000	Aluminium	PL16-50030-005
	1500	1500	Stainless steel	PL16-50030-006
	1500	1500	Aluminium	PL16-50030-007
	2000	1000	Stainless steel	PL16-50030-008
	2000	1000	Aluminium	PL16-50030-009
	2400	1200	Stainless steel	PL16-50030-010
	2400	1200	Aluminium	PL16-50030-011

# Protective plate for worktable

# Especially for PROFIEcoLINE tables (PE)

- The protective plate are especially well suited for stainless steel welding
   With 50 x 50 mm grid
- Incl. grid lines
- t=2



Description 🛦

16	A in mm	B in mm	Description	Item no.
	1000	1000	Stainless steel	D16-50030-000
	1000	1000	Aluminium	D16-50030-008
	1200	800	Stainless steel	D16-50030-017
	1200	800	Aluminium	D16-50030-018
	1200	1200	Stainless steel	D16-50030-009
	1200	1200	Aluminium	D16-50030-004
	1500	1000	Stainless steel	D16-50030-010
	1500	1000	Aluminium	D16-50030-011
	1500	1500	Stainless steel	D16-50030-012
	1500	1500	Aluminium	D16-50030-013
	2000	1000	Stainless steel	D16-50030-005
	2000	1000	Aluminium	D16-50030-014
	2400	1200	Stainless steel	D16-50030-001
	2400	1200	Aluminium	D16-50030-015







# Table accessories

#### Ground connector

- Fits any system bore
- 100 % contact, therefore no overheating of the ground cable >> High efficiency factor
- For cable cross-section 50 70 mm<sup>2</sup>, for loads up to 355 A at 100 % duty cycle, 400 A at 60 % duty cycle
- Simple and safe installation (without interfering edges)
- Compatible with common ground cables



Description 🛦

Application ▼





A in mm	B in mm	C in mm	~ Weight in kg	Item no.
-	-	-	0.34	D00-10009-000



## Tarpaulin for your original DEMMELER 3D worktable

## Protected against dirt

• To care for the system surfaces of worktables and system components

- Very sturdy tarpaulin
  Protects your table against dirt and wetness
  Firmly sewn at the corners





## Description ▲ Application ▼

Description ▲ Application ▼





A in mm	B in mm	C in mm	~ Weight in kg	Item no.
200	50	25	0.56	D00-10007-000

A in mm	Binmm	C in mm	Description	Item no.
1000	1000	200	Tarpaulin for table	D00-10030-000
1200	800	200	Tarpaulin for table	D00-10030-008
1200	1200	200	Tarpaulin for table	D00-10030-001
1500	1000	200	Tarpaulin for table	D00-10030-002
1500	1500	200	Tarpaulin for table	D00-10030-003
2000	1000	200	Tarpaulin for table	D00-10030-004
2400	1200	200	Tarpaulin for table	D00-10030-005
3000	1500	200	Tarpaulin for table	D00-10030-006



## Pump bottle with worktable system protective spray

## Worktable system protective spray in a canister

- Pressurised, sturdy version
- Includes anti-spatter spray for welding table systems
- Capacity: 1 litre
- Attention: Cannot be diluted with water!

#### ADVANTAGES TO YOU:

- Prevents the adhesion of weld spatter on the surface
- Temporary corrosion protection for approx. one day
- Good cleaning effect
- Not combustible
- No chlorinated hydrocarbons
- Biodegradable
- Silicone-free



#### Properties:

- Parting agent for welding thin and/or pre-heated sheets and for multi-layer welding
- Protection for worktables, system components, welding nozzles and other welding accessories

#### Areas of application:

 For welding VA materials, steel and other metals



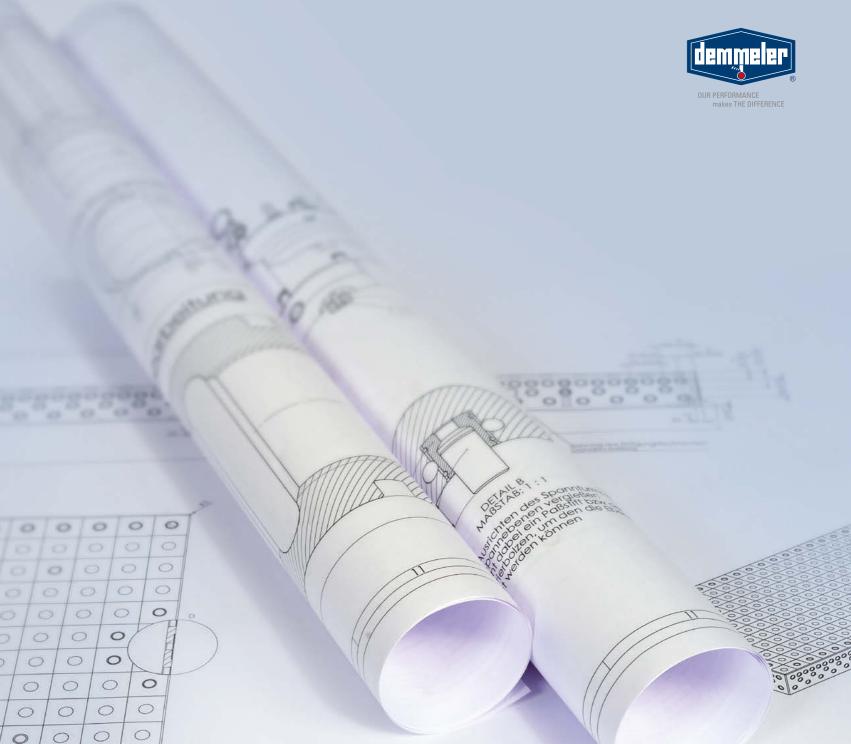
#### Description ▲ Application ▼

Description 🛦



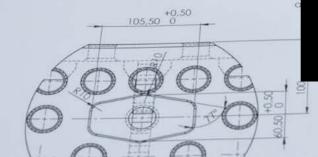
A in mm	B in mm	Description	Item no.
280	100	Without welding spray	D00-10004-000
280	100	with 1 litre welding spray	D00-10005-000

A in mm	B in mm	Description	Item no.
230	200	5 litre canister	D00-10006-000
310	200	10 litre canister	D00-10006-001
400	350	30 litre canister	D00-10006-002



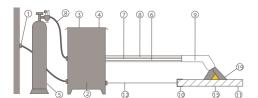
# Technical appendix

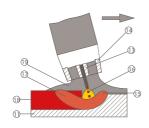
Gas-shielded metal-arc welding (GMAW; MIG/MAG)	612
Adjustment range of the TIG power source	613
Purpose of the inert gas	614
Classification of inert gas welding methods	614
Classification of inert gas for joint welding	615
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Manual arc welding - welding positions according to EN 287 / EN ISO 6947	617
Welding method codes	618
Welding symbols for welded joints	619



### Gas-shielded metal-arc welding (GMAW; MIG/MAG)

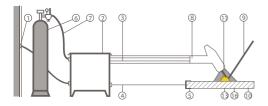
### Tungsten inert gas welding

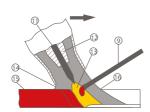




All information, drawings and tables without guarantee

- Mains connection
- Welding power source
- Spooled wire electrode
- Wire feeding system
- Inert gas cylinder with pressure reducer and gas meter
- Welding current supply
- 7. Wire electrode
- 8. Inert gas supply
- 9. Welding torch
- 10. Work piece clamp
- Work piece 11.
- 12. Welding current return
- 13. Contact tube
- 14. Inert gas nozzle
- 15. Arc
- 16. Droplet transfer 17. Weld pool
- 18. Solid welding material
- 19. Inert gas layer





All information, drawings and tables without guarantee

- Mains connection
- Welding power source
- Cable-hose assembly with welding current and inert gas supply
- Welding current return
- Work piece clamp
- Inert gas cylinder with pressure reducer and gas meter
- 7. Inert gas hose
- Welding torch 8.
- Welding rod
- Work piece
- Tungsten electrode
- 12. Clamping sleeve and power supply line
- 13. Arc
- 14. Liquid welding material
- 15. Solid welding material
- 16. Inert gas layer

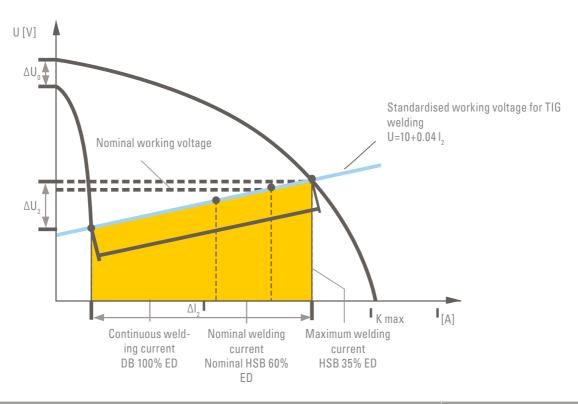
* AT	TENTION -	thorium	oxide	contains	quantities
of	radioactive	materia			

ABBREVIATION	MAIN OXIDE	PROPORTION IN %	CODECOLOUR
	None	-	
WCe 20	Cerium oxide	1.8 to 2.2	
WLa 10	Lanthanum oxide	0.8 to 1.2	
WLa 15	Lanthanum oxide	1.3 to 1.7	
WLa 20	Lanthanum oxide	1.8 to 2.2	
WTh 10*	Thorium oxide	0.8 to 1.2	
WTh 20*	Thorium oxide	1.7 to 2.2	
WTh 30*	Thorium oxide	2.8 to 3.2	
WZr 3	Zirconium oxide	0.15 to 0.5	
WZr 8	Zirconium oxide	0.7 to 0.9	

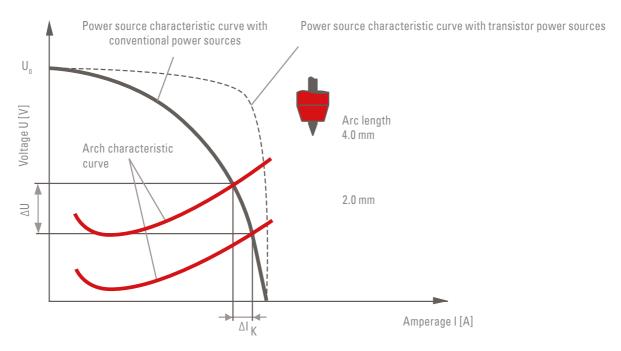


## Adjustment range of the TIG power source

### Adjustment range of a TIG power source with sharply falling characteristic curve



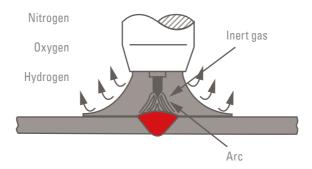
Power source characteristic curve, arc characteristic curve and operating points for TIG welding



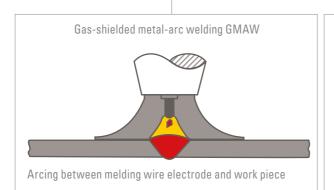
All information, drawings and tables without guarantee

## Purpose of the inert gas

## Classification of inert gas welding methods



#### Inert gas welding





Arcing between non-melting tungsten electrode and work piece

Metal active gas welding MAG Characteristic number 135, 136 (with tubular covered electrode) Tungsten inert gas welding TIG Characteristic number 141

Metal inert gas welding MIG Characteristic number 131 Plasma arc welding PAW Characteristic number 15



# Classification of inert gas for joint welding according to DIN EN ISO 14175

Code designation		Component in percent by volume							
Main	Subgroup	Oxidising		Inert	Inert		Slow responding		
group	Sungroup	CO <sub>2</sub>	02	Ar	He	H <sub>2</sub>	N <sub>2</sub>		
	1			100					
l	2				100				
	3			Rest	0.5≤He≤95				
	1	0.5≤CO <sub>2</sub> ≤5		Rest <sup>a)</sup>		0.5≤H <sub>2</sub> ≤5			
V/I/a	2	0.5≤CO <sub>2</sub> ≤5		Rest <sup>a)</sup>					
VI1	3	-	0.5≤0 <sub>2</sub> ≤3	Rest <sup>a)</sup>					
	4	0.5≤CO <sub>2</sub> ≤5	0.5≤0 <sub>2</sub> ≤5	Rest <sup>a)</sup>					
	0	5 <co<sub>2≤15</co<sub>	-	Rest <sup>a)</sup>					
	1	15 <co<sub>2≤25</co<sub>		Rest <sup>a)</sup>					
	2	2	3<0 <sub>2</sub> ≤10	Rest <sup>a)</sup>					
	3	0.5≤CO <sub>2</sub> ≤5	3<0 <sub>2</sub> ≤10	Rest <sup>a)</sup>					
M2	4	5 <co₂≤15< td=""><td>0.5≤0<sub>2</sub>≤3</td><td>Rest<sup>a)</sup></td><td></td><td></td><td></td></co₂≤15<>	0.5≤0 <sub>2</sub> ≤3	Rest <sup>a)</sup>					
	5	5 <co<sub>2≤15</co<sub>	3<0 <sub>2</sub> ≤10	Rest <sup>a)</sup>					
	6	15 <co<sub>2≤25</co<sub>	0.5≤0 <sub>2</sub> ≤3	Rest <sup>a)</sup>					
	7	15 <co<sub>2≤25</co<sub>	3<0 <sub>2</sub> ≤10	Rest <sup>a)</sup>					
	1	25 <co₂≤50< td=""><td>-</td><td>Rest<sup>a)</sup></td><td></td><td></td><td></td></co₂≤50<>	-	Rest <sup>a)</sup>					
	2	-	10<0 <sub>2</sub> ≤15	Rest <sup>a)</sup>					
VI3	3	15 <co<sub>2≤25</co<sub>	2<0 <sub>2</sub> ≤10	Rest <sup>a)</sup>					
	4	5 <co<sub>2≤25</co<sub>	10<0 <sub>2</sub> ≤15	Rest <sup>a)</sup>					
	5	25 <co<sub>2≤50</co<sub>	10<0 <sub>2</sub> ≤15	Rest <sup>a)</sup>					
_	1	100	-						
C	2	Rest	0.5 < 0, < 30						
_	1		b	Rest <sup>a)</sup>		0.5≤H <sub>2</sub> ≤15			
R	2			Rest <sup>a)</sup>		15≤H <sub>2</sub> ≤50			
	1					for	100		
	2			Rest <sup>a)</sup>			0.5≤N <sub>2</sub> ≤5		
N	3			Rest <sup>a)</sup>			5≤N <sub>2</sub> ≤50		
	4			Rest <sup>a)</sup>		0.5≤H <sub>2</sub> ≤10	0.5≤N <sub>2</sub> ≤5		
	5					0.5≤H <sub>2</sub> ≤50	Rest		
)	1		100			5			

<sup>&</sup>lt;sup>a)</sup> For this classification, argon can be partly or entirely replaced with helium. <sup>b)</sup> Two mixed gases with the same Z classification cannot be exchanged.

# Welding joint

The welding joint is the area where the components are joined to each other by welding. Joint types can be differentiated by structural arrangement as shown here.					
	Butt joint	The parts lie in one plane with their face sides touching			
	Lap joint	The parts lie on top of each other parallel. They overlap.			
	Parallel joint	The parts lie on top of each other parallel. One plate is fully covered by another.			
	T-joint	The parts are positioned so that the face side of one part contacts another.			
	Double-T joint	The face side of each of two parts lying in one plane contacts a third part lying between them at right angles.			
	Corner joint	Two parts contact each other at any angle > 30° (corner).The face side of both plates are welded.			
	Multiple joint	Three or more parts contact each other at any angle.			
	Scarfjoint	The end of one part contacts another at an angle.			

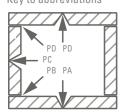


# Manual arc welding - welding positions according to EN 287 / EN ISO 6947

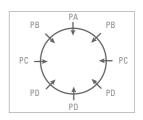
Fillet welds				
	PA	Flat position ASME 1F		
	PG	Vertical down ASME 3Fd	position	
	PD	Horizontal-ove ASME 4F	erhead position	
	РВ	Horizontal-vertical position ASME 2F		
	PF	Vertical position ASME 3Fuu		
	РВ	Pipe Pipe axis Weld	rotated horizontal horizontal-vertical	
	PB	Pipe Pipe axis Weld	fixed vertical horizontal-vertical	
	PF	Pipe Pipe axis Weld	fixed horizontal vertical	
	PG	Pipe Pipe axis Weld	fixed horizontal Vertical down	
	PD	Pipe Pipe axis Weld	fixed vertical horizontal-overhead	

Butt joints		
	PC	Horizontal position ASME 2G
	PA	Flat position ASME 1G
	PD	Overhead position ASME 4G
	PF	Vertical position ASME 3Gu
	PG	Vertical down position ASME 3Gd
	PA	Pipe rotated Pipe axis horizontal Flat weld
	PF	Pipe fixed Pipe axis horizontal Vertical weld
	PC	Pipe fixed Pipe axis vertical Horizontal weld
	PG	Pipe fixed Pipe axis horizontal Vertical down weld
	H-L 045	Variable axis Pipe fixed Pipe axis tilted Vertical weld

Key to abbreviations



PA	Horizontal welding of butt joints in flat position	PC	Horizontal position
		PD	Horizontal-overhead position
РВ	Horizontal welding of fillet welds	PD	Overhead position
		PF	Vertical up position
		PG	Vertical down position



All information, drawings and tables without guarantee

# Designations

# Welding method codes

Welding	Welding method codes			
G	Gas fusion welding			
Е	Manual arc welding			
SAW	Submerged arc welding			
SMAW	Shielded metal arc welding			
GSAW	Gas-shielded metal arc welding			
GMAW	Gas metal arc welding			
MIG	Metal inert gas welding			
MAG	Metal active gas welding			
GTAW	Gas tungsten arc welding			

Welding	Welding method codes			
WIG	Tungsten inert gas welding			
PAW	Plasma arc welding			
AHW	Atomic hydrogen welding			
USW	Ultrasonic welding			
FRW	Friction welding			
FOW	Forge welding			
D	Diffusion welding			
PGW	Pressure gas welding			
CW	Cold pressure welding			

### Supplementary symbols for surface seams according to DIN 1912 (excerpt) and ISO 2553

Additional symbols surface shape			
	Hollow (concave)		
	Flat (usually refinished flat)		
	Curved (convex)		
	Sealing bead (opposing position)		

Supplementary symbols course and type of seam				
	Circular seam			
	Assembly seam			



# Welding symbols for welded joints

Welding symbol	Welding seam	Illustration	Welding symbol	Welding seam	Illustration
	Edge-formed seam Flange edge			I-seam Square groove	
	Double I-seam Double square groove		V	V-seam V groove	
<b>X</b>	VU-seam VU groove		X	Double V-seam Double V groove	
	HV-seam Bevel groove			Double HV-seam Double bevel groove	
Y	Y-seam Y groove		<b>X</b>	Double Y-seam Double Y groove	
Y	HY-seam J groove			Double HY-seam Double J groove	
Y	U-seam U groove		7	Double U-seam Double U groove	
V P	J-seam/HU-seam/Jot-seam J groove		K	Double J-seam Double J groove	
	Fillet weld Fillet			Double fillet weld Double fillet	
	Pitting seam Plug or slot			Spot welding Spot or projection	
-	Continuous weld Seam		<u> </u>	Steep side seam	
	Edge-joint weld		=	Surface joint	
	Deposit welding Surfacing		2	Folded seam	
	Circular fillet weld with seam thickness 5			Circular fillet weld	
5 3x10 (20)	Interrupted fillet weld with seam thickness 5, 3 individual seams, individual seam length 10, seam spacing 20		5 5x100 7(50) 4 5x100 7(50)	Offset, interrupted fillet weld, seam thickness 5 or 4 on the counter sur- face, 5 individual seams respectively, individual seam length 100, seam spacing 50	

# Standards

# Overview of standards for fusion welding

### Quality requirements for fusion welding

DIN EN IS03834-1 to -5, DIN FB CEN ISO/TR 3834-6

Non-destructive testing	
Qualifications for personnel	DIN EN 473 (ISO 9712)
Rules for ZIP	DIN EN 12062 (ISO 17635)
Visual inspection	DIN EN 970 (ISO 17637)
Ultrasound inspection	DIN EN 1714 (ISO 17640)
Penetration test	DIN EN 571-1; DIN EN ISO 3452-5, -6
Magnetic particle test	DIN EN ISO 17638
Eddy current test	DIN EN 1711 (ISO 17643)
Hardness test	DIN EN 1043-1, -2 (ISO 9015-1, -2)
Time of flight diffraction (TOFD) method	E DIN EN ISO 10863, DIN EN 583-6
Phrased array	E DIN EN 16018

Destructive testing	
Transverse tensile test	DIN EN 895 (ISO 4136)
Longitudinal tensile test	DIN EN 876 (ISO 5178)
Crosswise tensile test	DIN EN ISO 9018
Bending test	DIN EN 910 (E DIN EN ISO 5173)
Fracture test	DIN EN 1320 (ISO 9017)
Notched bar impact test	DIN EN 875 (ISO 9016)
Hardness test	DIN EN 1043-1, -2 (ISO 9015-1, -2)
Microscopic and macroscopic tests	DIN EN 1321 (ISO 17639)
Etching for microscopic and macroscopic tests	DIN V 1739 (ISO/TR 16060)
Hot crack test method	DIN EN ISO 17641-1, -2, -3
Cold crack test method	DIN EN ISO 17642-1, -2, -3
Ferrite proportion test	DIN EN ISO 8249.17655





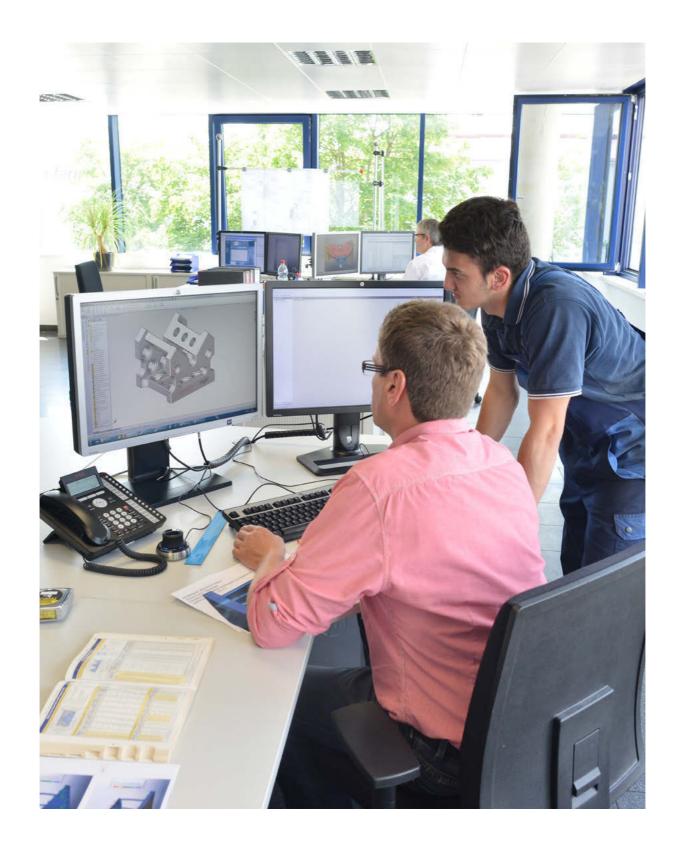
Terms, definitions	
Symbolic representation	DIN EN 22553
Method and no.	DIN EN ISO 4063
Metal welding terms	DIN EN 14610 (ISO857-1, -2)
Terms and definitions	DIN FB CEN/TR 14599 DIN FB ISO/TR 25901
Multilingual designation with illustrations	DIN EN 1792, DIN EN ISO 17659
Welding positions	DIN EN ISO 6947 DIN V 2308 (CEN/TR 14633)
Welding tolerances	DIN EN ISO 13920

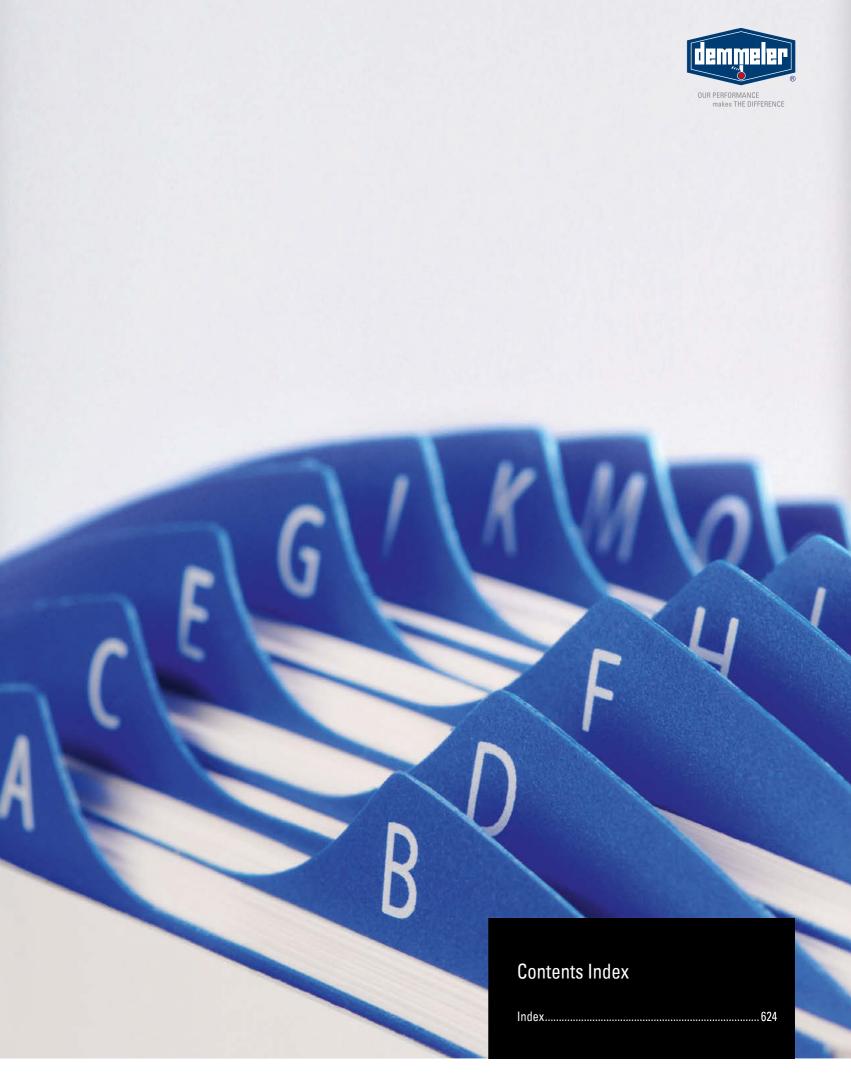
Other standards	
Welder's qualification test, copper	DIN EN ISO 9606-3
Welder's qualification test, nickel	DIN EN ISO 9606-4
Welder's qualification test, titanium	DIN EN ISO 9606-5
Welder's qualification test, cast iron	E DIN EN 287-6
Gas welding instruction	DIN EN ISO 15609-2
Welding procedure qualification, copper	DIN EN ISO 15614-6
Welding procedure qualification, nickel	DIN EN ISO 15614-1
Welding procedure qualification, titanium	DIN EN ISO 15614-5
Welding procedure qualification, cast iron	DIN EN ISO 15614-3
Welding procedure qualification, build-up welding	DIN EN ISO 15614-7
Welding procedure qualification, welding tubes in tube plates	DIN EN ISO 15614-8
Welding procedure qualification, production welding of cast steel	DIN EN ISO 11970
Welding cast iron	DIN EN 1011-8
Welding of plating	DIN EN 1011-5

Exemption criteria for ZIP				
	Steel	Aluminium		
VT	DIN EN ISO 5817 DIN EN ISO 100			
RT	DIN EN 12517-1 (ISO 16075-1)	DIN EN 12517-2		
UT	DIN EN 1712, 1713, E DIN EN ISO 22825, DIN EN 15617 (for TOFD)			
PT	(E DIN EN ISO 23277)			
MT	DIN EN ISO 23278			
НТ	DIN EN ISO 18265			

Welding additives	
General product standard	DIN EN 13479
QA requirements for production	DIN EN 12074
Technical delivery terms and conditions	DIN EN ISO 544
Guidelines for procurement	DIN EN ISO 14344
Test methods and QA	DIN EN 14532-1, -2, -3; DIN EN ISO 15792-1, -2, -3
Test methods	DIN EN ISO 15792-1, -2, -3 DIN EN ISO 684714372, 8249, 3690 DIN EN ISO 22401
Tungsten electrodes	DIN EN ISO 6848
Additives for hard coating	DIN EN 14700
Additives for cast iron	DIN EN ISO 1071

	Unalloyed/fine- grained steel	High-strength steel	High-tempera- ture steel	Stainless steel	Nickel /	Copper/	Aluminium/	Titanium /
Welding rods (E)	DIN EN ISO 2560	DIN EN 757 (ISO 18275)	DIN EN ISO 3580	DIN EN 1600 (ISO3581)	DIN EN ISO 14172			
Wire electrodes (GMAW)	DIN EN ISO 14341	DIN EN ISO 16834	DIN EN ISO 21952	DIN EN ISO 14343	DIN EN ISO 18274	DIN EN ISO 24373	DIN EN ISO 18273	DIN EN ISO 24034
Rod/wire (TIG)	DIN EN ISO 636	DIN EN ISO 16834	DIN EN ISO 21952	DIN EN ISO 14343	DIN EN ISO 18274	DIN EN ISO 24373	DIN EN ISO 18273	DIN EN ISO 24034
Wire (SAW)	DIN EN 756 (E DIN EN ISO 14171)	DIN EN ISO 26304	DIN EN ISO 24598	DIN EN ISO 14343	DIN EN ISO 18274			
Powder (SAW)	DIN EN 760 (E D	IN EN ISO 14174)						
Filler wire (GMAW)	DIN EN ISO 17632	DIN EN ISO 18276	DIN EN ISO 17634	DIN EN ISO 17633				
Autogenous rod (G)	DIN EN 12536		DIN EN 12536					
Inert gas	DIN EN ISO 14175, DIN EN 1089-3							





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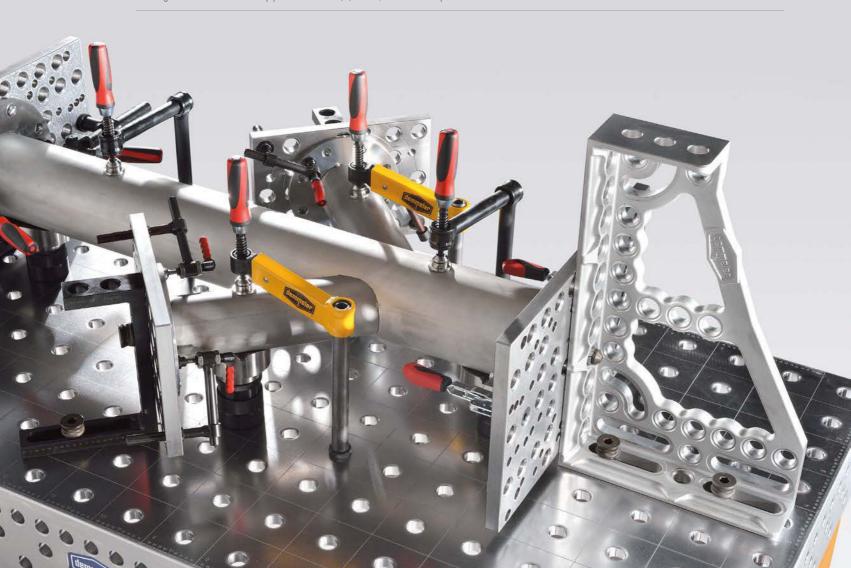
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