



OUR PERFORMANCE
makes THE DIFFERENCE

DEMMELE COBOT WELDSPACE 4.0

Automated welding in shuttle operation

THE PROFESSIONAL
COBOT WELDING
AUTOMATION SOLUTION





OUR PERFORMANCE
makes THE DIFFERENCE

INVENTIONS BY DEMMELEER THAT REACH AROUND THE WORLD.

We have been setting innovative standards
in welding production for over 30 years.

1990

3D welding tables



2009

Manipulators



2021

NEW: COBOT WeldSpace 4.0*



www.demmeler.com

*COBOT WeldSpace 4.0. The new welding automation solution by DEMMELEER.



The professional cobot welding automation solution

Fast and professional entry into automated welding production.

In the future, advances in digitalisation and automation will also change the processes in welding production. Particularly in the manual welding of classic sheet metal components, the new technology, welding with collaborative robots, can relieve valuable skilled workers from tiring routine and repetitive tasks.

With the COBOT WeldSpace 4.0 from DEMMELER, even small and medium-sized companies are guaranteed a quick start in automated and professional welding production thanks to the fast commissioning and extremely simple programming. Whether individual parts, series or small batch sizes with a large variety of parts, you save time in welding and reworking. The fully equipped welding cell with welding robot and welding technology offers unique modularity and flexibility in the smallest possible space with a possible four workspaces SPACE A, A1-A2 and Space B. The COBOT WeldSpace 4.0 can be operated and programmed without welding expertise.

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The new COBOT WeldSpace 4.0 welding cell from DEMMELER comes with everything you need.

DEMMELER COBOT WeldSpace 4.0: The complete package for your quick and professional entry into automated welding

DEMMELER COBOT WeldSpace 4.0 **BASIC**

The most versatile welding automation solution with maximum efficiency and extremely simple operation as well as maximum environmental and operator protection.

Maximum flexibility and efficiency **BASIC**

Up to four workspaces Space A (optional A1-A2) + Space B with perfect accessibility from all sides and crane loading for set-up and workpiece change.

Unique programming and operating concept **BASIC**

With the DWSP concept, you can create complex welding programs intuitively without explicit programming knowledge.

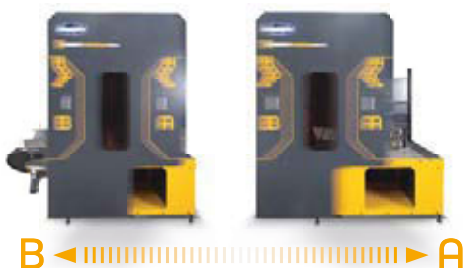
A



B

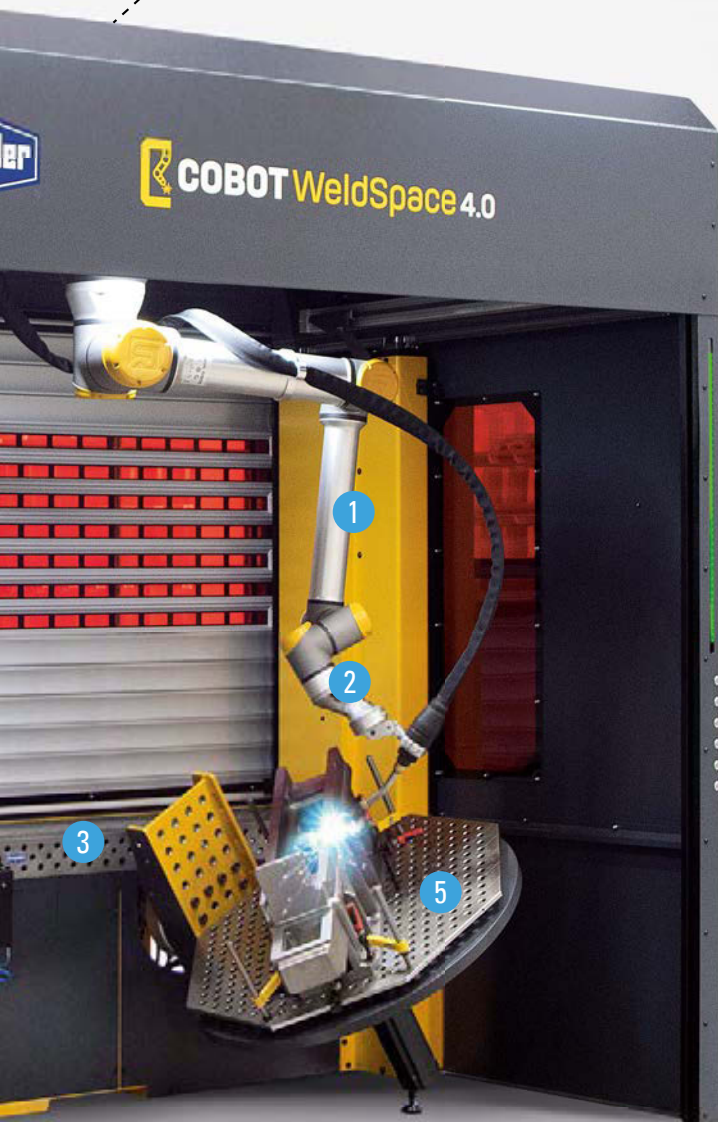
Main time parallel shuttle operation **BASIC**

Standard main time parallel shuttle operation between two 3 m² work areas Space A and Space B



Crane loading possible due to movable gantry **BASIC**

Simple loading of the workpieces for setup and reclamping also by crane



1 Universal Robots UR e-Series **BASIC**

Latest collaborative robot UR10e with six axes and force-torque sensor mounted overhead on gantry

2 DEMMELER WeldSpace programming and operating concept **BASIC**

With just three buttons on the multi-function handle almost everything can be programmed

3 DEMMELER 3D welding table **BASIC**

Optionally in all system sizes D16, D22 or D28 from DEMMELER

4 Integrated and professional high-performance welding system **OPTION**

Robot welding equipment optionally from the FRONIUS or EWM brands

5 Two-axis manipulator **OPTION**

Modular two-axis manipulator up to 500 kg payload for professional workpiece handling and circumferential seam welding with the rotary axis

6 Torch cleaning station **OPTION**

Optimised and reliable cleaning of the gas nozzle ensures a reliable welding process and increases system availability

BASIC Series equipment
OPTION Special equipment



7 Central control unit **BASIC**

The DWSP user interface guides you step by step to perfect welding results.

Standard shuttle operation

Four workspaces with perfect accessibility from all sides

The standard shuttle operation between the SPACE A and SPACE B workspaces with optional subdivision of the SPACE A workspace into A1 and A2 enables set-up, reclamping and welding in parallel time.

SPACE B

SPACE A1

SPACE A2

Standard main time parallel shuttle operation

WELD SPACES

SPACE A



SPACE A



SPACE A1 / A2

Equipped with a DEMMELER 3D welding table 2400 x 1200 mm optionally with system D16, D22 or D28

The SPACE A workspace can optionally be divided into SPACE A1 and SPACE A2 by a partition wall.

LOADING
BY CRANE



SPACE A

SPACE B

2x 3m²
large working
areas

between SPACE A and SPACE B

SPACE B



SPACE B

Depending on requirements, the SPACE B workspace can be optionally equipped with another DEMMELER 3D welding table with a maximum size of 2,000 x 1,000 mm or with a two-axis manipulator with a payload of up to 500 kg. This enables highly productive welding in the flat position.

The cabins of the respective workspaces are closed during welding.



Unique programming and operating concept

The COBOT. Intuitive and easy to use.

Without many clicks, the DEMMELER WeldSpace programming and operating concept (DWSP) makes it possible to create professional welding programs quickly and easily. The user has full access to all relevant functions with just one control panel. Even employees without programming knowledge can easily learn to control the robot using the three buttons on the handle. By activating the Free-Drive function, the COBOT can be moved by hand to the place where welding is to be carried out. Intermediate waypoints and sections are also programmed in this way at the touch of a button. Via the DEMMELER COBOT interface, the operator can access and select the stored programs of the welding machine with all important parameters. The COBOT WeldSpace 4.0 control also comes with templates for optimised standard welding processes. This produces perfect and reproducible welds with significantly increased productivity.

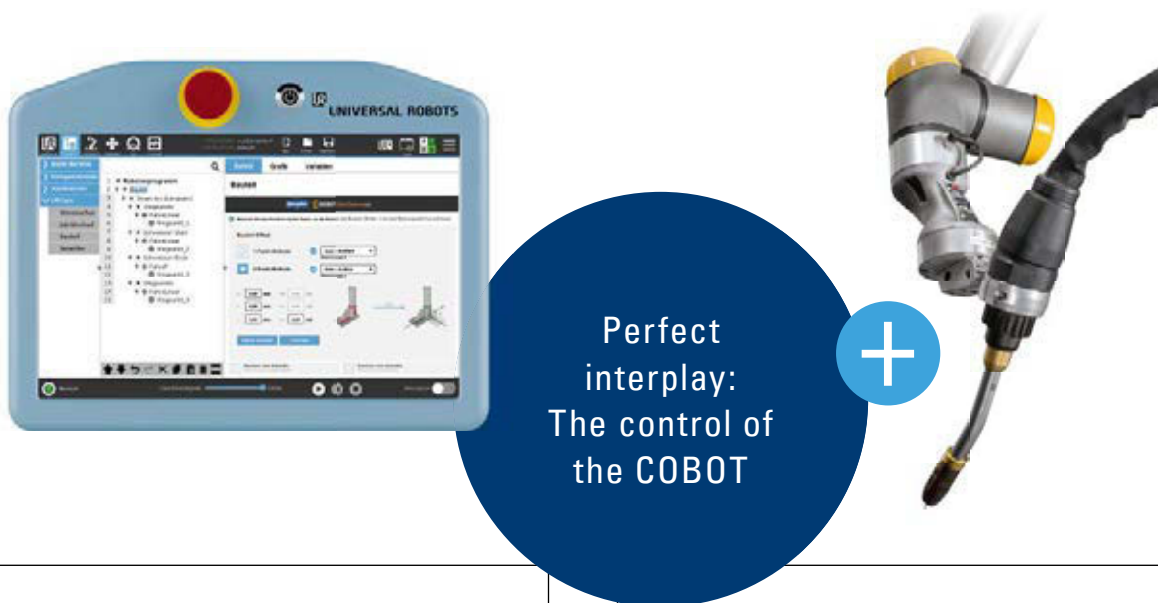
The COBOT UR10e from Universal Robots

The COBOT UR10e collaborative robot arm has everything that is important for robotic welding tasks. A generous reach of 1.30 m + handle and torch, adequate load capacity, maintenance-free technology and sophisticated technology. The combination of the free-drive function and the touch display makes the UR10e very easy to operate and program.

Interface between robot and human

The DWSP concept guides you step by step to the perfect welding result

The heart of the COBOT WeldSpace 4.0 is its ease of use. Developed by our welding experts the software is perfectly adapted to the robot and welding process. The new way to programming: by activating the Free-Drive function, the COBOT can be moved by hand to the place where welding is to be started and stopped. Intermediate waypoints and sections are also programmed. This allows you to create professional welding programs simply at the touch of a button. The welder has full access to all relevant functions of the welding system with only one control panel and can select, set and save parameters in the robot control.



All COBOT and welding parameters in one place






The intuitive user interface of the DEMMELER WeldSpace programming and operating concept (DWSP) for operating the COBOTS makes it easy to get started. Even employees without programming knowledge can easily learn to control the robot. All parameters relevant to welding must be selected, set and saved in the robot control.

The best settings for the power source, welding process and torch are always available. On the user interface of the DWSP, the operator has the option to access welding characteristics and parameters in the job library.

The multi-function handle: settings at the touch of a button

The multi-function handle is the interface between the robot and operator. Using the buttons on the handle, you move the robot and select certain actions. At the same time, you are supported by the DEMMELER assistance system.

-  **Red button:** Selection function button between movement and assistance modes. Display the Welding or Waypoint function.
-  **Blue button:** Selection of welding of tacking points and saving the next position point.
-  **Green button:** Free-drive button for guiding the robot.



Equipment options

Maximum flexibility with the equipment

Configuration option

Work table for basic cell

BASIS

The selection of the system size D28, D22 or D16 is freely selectable for Workspace A of the COBOT WeldSpace 4.0 basic cell.



SYSTEM D28

SYSTEM D22

SYSTEM D16

Professional welding equipment integrated into the WeldSpace control system

OPTION



Welding power source for robot applications from FRONIUS

TPS400 i water-cooled Item No. 00200728 or

TPS400 i water-cooled CMT Item No. 00201304

CMT Welding Package Item No. 00201340



Welding power source for robot applications from EWM

EWM Phoenix 505 Expert 2.0 TDM Item No. 00200676 or

EWM Phoenix 405 Expert 2.0 TDM Item No. 00201455

EWM control panel RCX Expert 2.0 Rob 5 m Item No. 00200695

DEMMELE programming and operating concept Software options

OPTION



DWSP software option base shift Item No. 00201674

DWSP software option line seam Item No. 00201676

DWSP software option shuttle Item No. 00201677

Additional options

OPTION



Operating panel terminal

Item No. 00153455

Cable bridge 2 m

Item No. 00201113



Torch cleaning station „R1“

Item No. 00201320



MobiAirClean D1

Item No. 00161037

Optional accessory: Welding equipment

Workspace extension SPACE A1 / A2

OPTION



Roller shutter doors + partition wall

SPACE A

**SPACE A equipped with
Workspace A1 / A2 extension set:**

**Roller shutter doors 3 and 4 + Partition wall +
4x fixing bolts depending on worktable
D28, D22 or D16**

Workspace A1 / A2 extension set for D28:
Item No. 00201313

Workspace A1 / A2 extension set for D22:
Item No. 00201311

Workspace A1 / A2 extension set for D16:
Item No. 00162716

Workspace extension SPACE B

OPTION



Two-axis manipulator

SPACE B

**SPACE B equipped with:
Two-axis manipulator for
work table D28, D22 or D16**

Item No. (D28) 00161956

Item No. (D22) 00161953

Item No. (D16) 00200923

+

**Suitable clamping plate
SW8-D28, SW8-D22 or SW8-D16**

Item No. (D28) 00162810

Item No. (D22) 00162811

Item No. (D16) 00151601

or

For the 3D welding table in Space B
you can choose from the entire range
of the DEMMELER 3D welding table and
clamping system up to a maximum table
size of 2,000 x 1,000 mm.



3D working table

SPACE B



Original 3D clamping
systems and
welding tables

Optional: Workspace extensions

BASIC

COBOT WeldSpace 4.0 / Basic cell

The basic equipment



CE

COBOT WeldSpace 4.0 / Basic cell

Dimensions	2,650 x 1,780 (2,705 mm) x 2,725 mm
Weight	Approx. 1,700 kg

Electrical data

Feed-in	3x 400 V / N / PE
Frequency	50 Hz
Operating voltage	400 V
Control voltage	24 V DC
External fuse protection	24 V DC
Rated current	Max. 32 A slow-blow (up to 400 A welding current, up to 500 A welding current 1x 32 A, 16 A slow-blow)

Workspace SPACE A

Dimensions	2,300 x 865 x 1,100 mm
Typical workpiece size	Workpiece size depends on workpiece geometry and welding torch accessibility
Max. load	3,000 kg

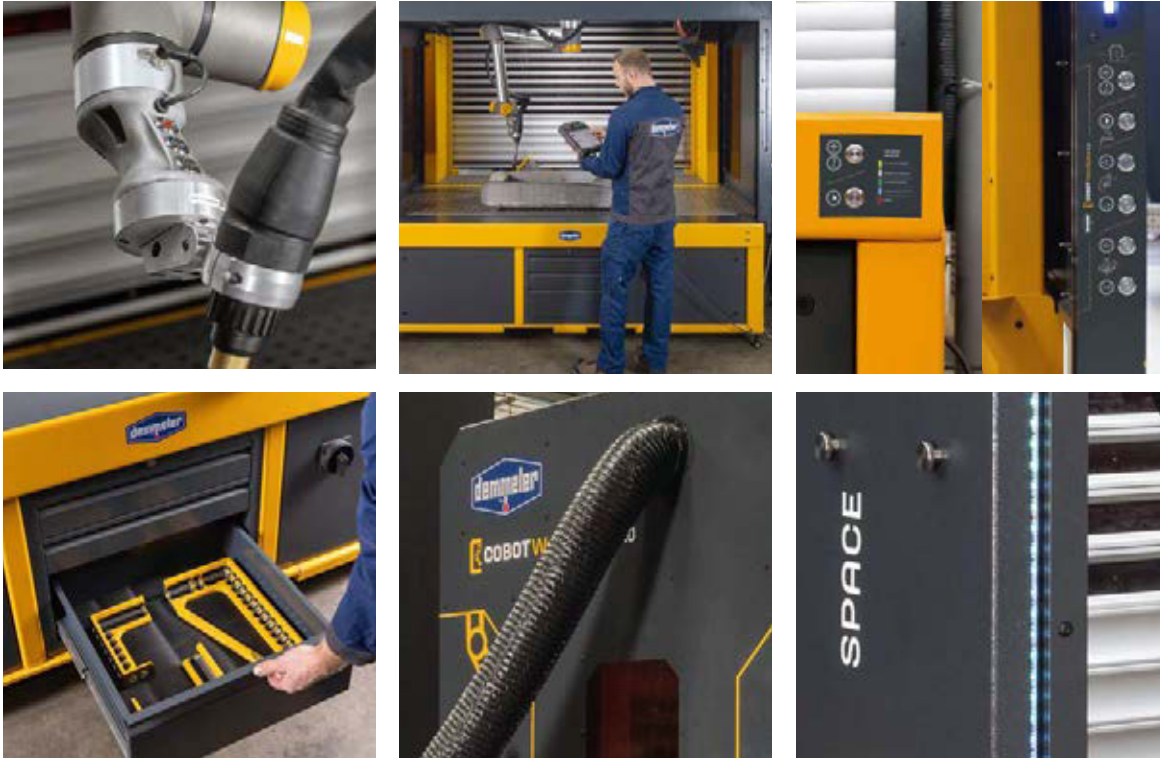
COBOT UR10e Series

Type	Collaborating industrial robot arm
Number of axes	6
Load capacity	10 kg
Weight	33.5 kg
Joint rotation	± 0.05 mm
Working radius (ceiling mounting)	1,300 mm
Repeatability	± 0.05 mm

Workspace SPACE B

Dimensions	2,300 x 865 x 1,100 mm
Typical workpiece size	Workpiece size depends on workpiece geometry and welding torch accessibility
Max. load	Floor load

Item no.	00161443
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- ⊕ Ready-to-operate cell with 2 large workspaces Space A and Space B
- ⊕ Automatically moving protective enclosure with 2 roller shutter doors (aluminium armour with viewing elements made of protective welding glass)
- ⊕ Collaborating welding robot UR10e (mounted overhead). Not to be confused with the approx. € 6,000 cheaper UR10 (old model). The UR10e offers the highest accuracy and reliability with maximum sensitivity. Relieve human labour from dirty, dangerous and monotonous work and increase productivity by saving time.
- ⊕ UR control panel
- ⊕ DEMMELER Weldspace Programming and Operating Concept (DWSP). Specially developed software with many functions which – together with the innovative 3-button handle – makes the creation of complex welding programs child's play. The software guides the operator intuitively through the menu and with the 3-button handle, waypoints and spot welds can be

transferred directly into the program. Levels can also be selected on the 3-button handle to facilitate exact positioning at the desired point. Other functions such as FREEDRIVE (free movement of all axes), LIN (movement in one plane) and ROT (rotate around the ToolCenter-Point TCP) are a matter of course. An extensive job library that can be expanded at any time, in which parameters and characteristic curves for typical welding applications are stored, leads to the perfect welding result.

- ⊕ Safety and enabling switch
- ⊕ Smart Toolbox with three lockable drawers
- ⊕ Forklift pockets for easy transport
- ⊕ Gas bottle holder for up to 2 gas bottles
- ⊕ Connection options for a central hall exhaust system on the left or right side and twice at the top of the unit
- ⊕ Light-emitting diode strips on all side corners visualise processes and machine states
- ⊕ 3D work tables available in the versions D16, D22 and D28

The basic equipment for quick commissioning

BASIC

Configuration options for SPACE A

Choose your system size for
the work table in SPACE A

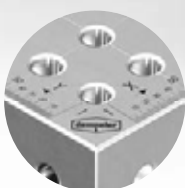


**Worktop
in the system
sizes D28,
D22 and D16
selectable**

SYSTEM D28

SYSTEM D22

SYSTEM D16



Precision scaling

Axis designation in
x and y-direction.
Standard version
includes precision
scaling.



Protective countersink

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.



COBOT WeldSpace 4.0 3D welding table D28 PL



- Only in combination with 00161443 base cell
- Hardened version DEMONT 760 M
- Worktop with D28 system bores in a 100 mm x 100 mm double grid
- All system bores with protective countersink and ultimate functionality
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Precision scaling with millimetre graduation
- Coordinate marking of the bores in the X and Y-direction
- Incl. mounting kit for COBOT WeldSpace 4.0
- Sheet metal claddings

Dimensions	2,400 × 1,200 × 200 mm
Weight	824 kg
Item no.	00162637

COBOT WeldSpace 4.0 3D welding table D22 PL



- Only in combination with 00161443 base cell
- Hardened version DEMONT 760 M
- Worktop with D22 system bores in a 100 mm x 100 mm diagonal grid
- All system bores with protective countersink and ultimate functionality
- Improved table reinforcement through additional cross-ribs
- Continuous gridlines in X and Y-direction, 100 mm spacing
- Precision scaling with millimetre graduation
- Coordinate marking of the bores in the X and Y-direction
- Incl. mounting kit for COBOT WeldSpace 4.0
- Sheet metal claddings

Dimensions	2,400 × 1,200 × 150 mm
Weight	535 kg
Item no.	00162638

COBOT WeldSpace 4.0 3D welding table D16 PE



- Only in combination with 00161443 base cell
- Hardened version DEMONT 760 M
- Worktop with D16 system bores in a 50 mm x 50 mm grid
- All system bores with protective countersink and ultimate functionality
- 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
- Incl. mounting kit for COBOT WeldSpace 4.0
- Sheet metal claddings

Dimensions	2,400 × 1,200 × 100 mm
Weight	347 kg
Item no.	00162639

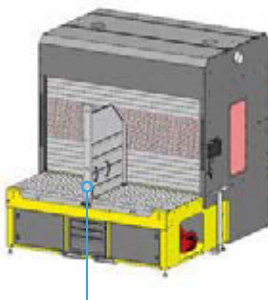


OPTION Equipment option for SPACE A

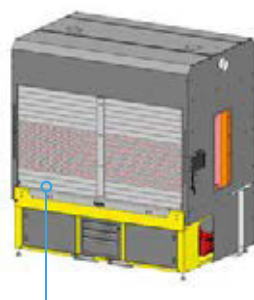
Extension of SPACE A into SPACE A1 / A2

With this extension set, the Space A workspace can optionally be divided centrally into two workspaces Space A1 and Space A2. This makes it possible to operate the welding cell in 3-station mode, which again significantly increases the productivity of the system. The easy to install partition is automatically recognised by the control system and the program structure for the COBOT accordingly.

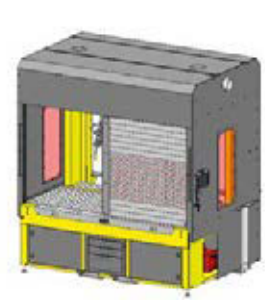
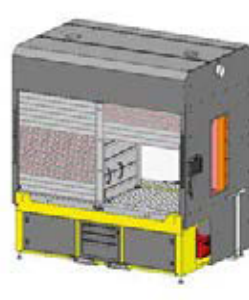
The operator creates an individual welding program for each workspace, whereby the sequence in which he creates the programs is irrelevant. In automatic mode, the operator only acknowledges the set-up process in the respective workspace and the intelligent control system processes the individual welding programs according to the FIFO principle. When the partition is removed, the full width of the Space A workspace can be used again.



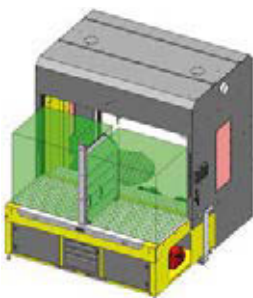
Partition wall



Additional roller shutter doors 3 and 4 with viewing elements



Workspace A1 / A2 extension set



- 2 additional roller shutter doors (aluminium armour with viewing elements made of welding protection glass) for workspaces A1 and A2
- Easy-to-install partition wall (dimensions: 935 × 150 × 1,300 mm, weight: 10 kg)
- Automatic detection of the partition wall by the control system

Set components:

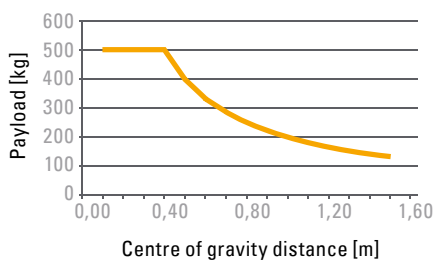
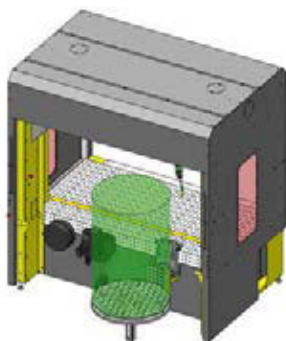
- 1x set of roller shutter doors 3 and 4
- 1x partition wall
- 4x PPC or PC bolts, depending on the system size of the worktable

Dimensions per workspace	1,000 × 865 × 1,100 mm
Max. load per workspace	1,500 kg
Item No. (extension set for D28)	00201313
Item No. (extension set for D22)	00201311
Item No. (extension set for D16)	00162716

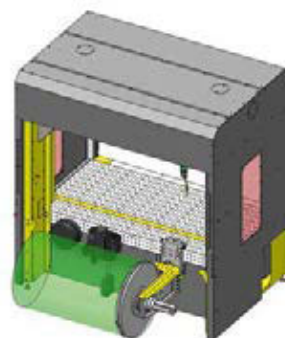
OPTION**Equipment option for SPACE B**

Optimally position workpieces weighing up to 500 kg in the flat position with the two-axis manipulator

With the new two-axis manipulator, it is possible to position workpieces weighing up to 500 kg in an optimal flat position. This eliminates the time-consuming reclamping of workpieces and, thanks to the rotary axis (axis 2) of the manipulator, uniform circumferential seams can also be welded without any problems. The manipulator is fully integrated into the DEMMELER Weldspace programming and operating concept (DWSP). Simultaneous movement of the manipulator and robot axes is not possible with the COBOT. Programming is carried out in the simplest way by teaching the waypoints or by entering them in the graphic user interface of the teach panel.

Manipulator torque: 2000 Nm
(for both axes)**Max. workpiece size**

Max. workpiece size
Axis of rotation:
Diameter: 850 mm
Length: 1,500 mm



Max. workpiece size
Pivot axis:
Diameter: 850 mm
Length: 1,500 mm



The actual available working range depends on factors such as accessibility of the workpiece, torch length, etc. and can therefore be considerably less.



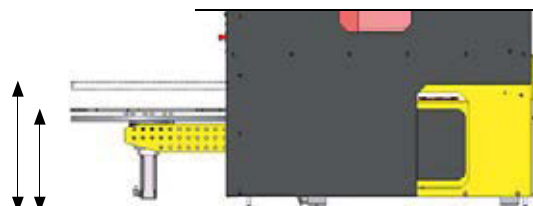
COBOT WeldSpace 4.0 Two-Axis Manipulator

- Powerful and fast 2-axis manipulator with high repeatability for ideal positioning of the workpieces
- Height-adjustable in the grid (rotation axis), thus centre of gravity can be changed
- Mounting for clamping plates D28, D22, D16
- Console always with system bores D16
- Clamping plate galvanically isolated
- Extensive range of Demmeler accessories
- Earth feed via double sliding contacts up to 500 A

Axis 1 manipulator speed	5 min ⁻¹ – 0.01 min ⁻¹ (in 0.02 min ⁻¹ increments)
Axis 2 manipulator speed	5 min ⁻¹ – 0.01 min ⁻¹ (in 0.02 min ⁻¹ increments)
Axis 1 (swivel axis)	±190°
Axis 2 (axis of rotation)	±360°
Max. payload	500 kg
Weight	175 kg
Max. workpiece diameter	850 mm (with 360° rotation)
Max. workpiece length	1,500 mm
Max. torque	2000 Nm
Item No. (2-axis manipulator for work table D28)	00161956
Item No. (2-axis manipulator for work table D22)	00161953
Item No. (2-axis manipulator for work table D16)	00200923

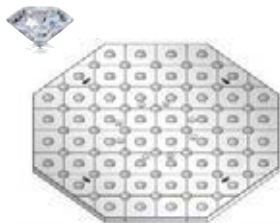
Axis 2 can be attached to the grid plate at different heights. Adjustable path: 150 mm.

580 – 730 mm



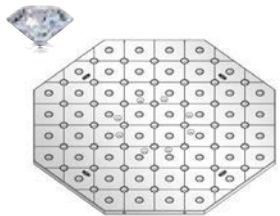
OPTION**Configuration option for two-axis manipulator**

Choose your clamping plate D16, D22 or D28 for the two-axis manipulator

**COBOT WeldSpace 4.0 Clamping Plate D28**

- Worktop with D16 system bores in a 100 mm × 100 mm diagonal grid
- Continuous gridlines in X and Y-direction, 100 mm spacing
- M8 threaded holes on the side
- Hardened version DEMONT 760 M
- Matched to 2-axis manipulator

Dimensions	SW800 × 25 mm
Weight	95 kg
Item no.	00162810

COBOT WeldSpace 4.0 Clamping Plate D22

- Worktop with D16 system bores in a 100 mm × 100 mm diagonal grid
- Continuous gridlines in X and Y-direction, 100 mm spacing
- M8 threaded holes on the side
- Hardened version DEMONT 760 M
- Matched to 2-axis manipulator

Dimensions	SW800 × 17.5 mm
Weight	67 kg
Item no.	00162811

COBOT WeldSpace 4.0 Clamping Plate D16

- Worktop with D16 system bores in a 50 mm × 50 mm diagonal grid
- Continuous gridlines in X and Y-direction, 50 mm spacing
- M8 threaded holes on the side
- Hardened version DEMONT 760 M
- Matched to 2-axis manipulator

Dimensions	SW800 × 12 mm
Weight	43 kg
Item no.	00151601

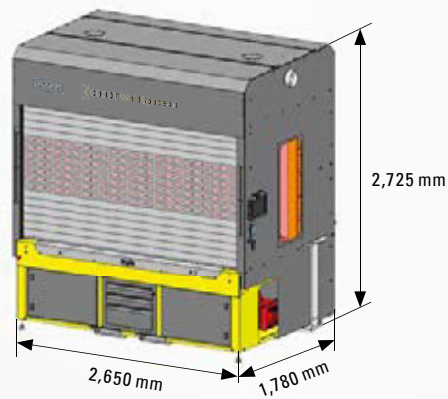


Dimensions of base cell / workspaces

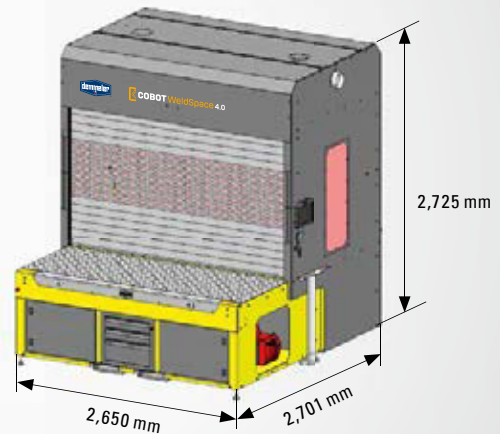
Maximum accessibility and compact design

Dimensions of base cell

Enclosure closed state:
2,650 × 1,780 × 2,725 mm



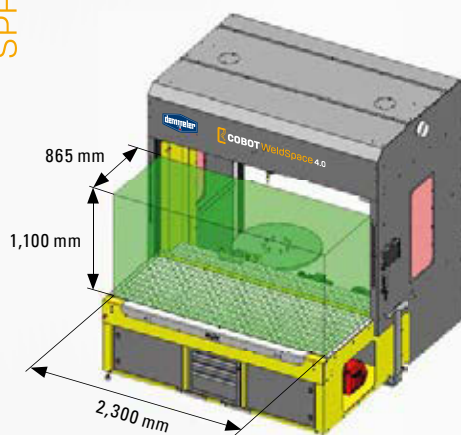
Enclosure movement:
2,650 × 2,701 × 2,725 mm



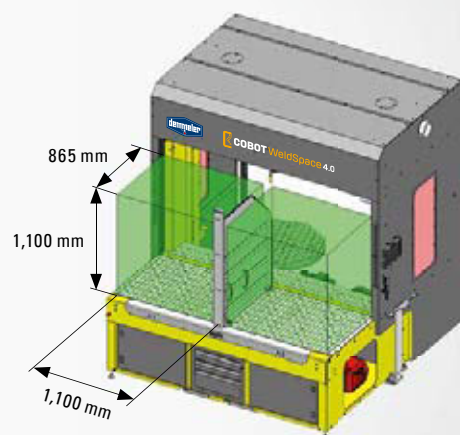
Dimensions of workspaces A / A1-A2

SPACE A

Size of workspace SPACE A:
2,300 × 865 × 1,100 mm

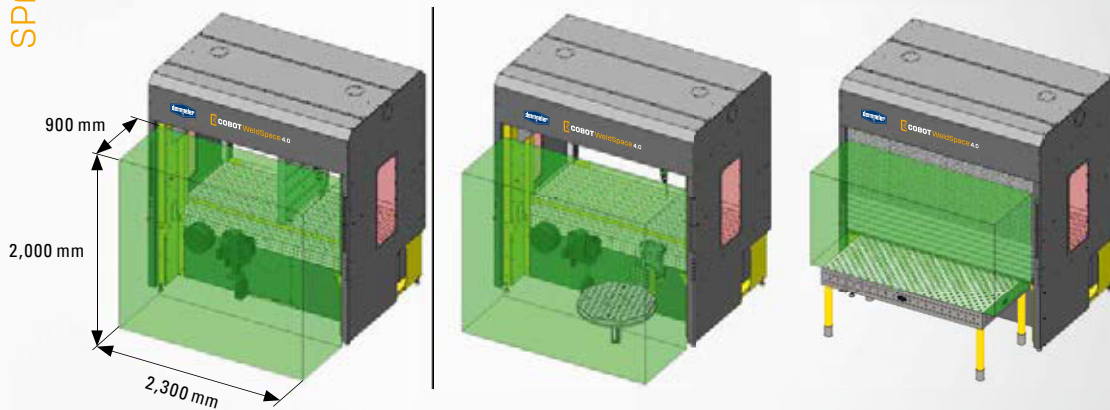


Workspace SPACE A1-A2:
1,100 × 865 × 1,100 mm

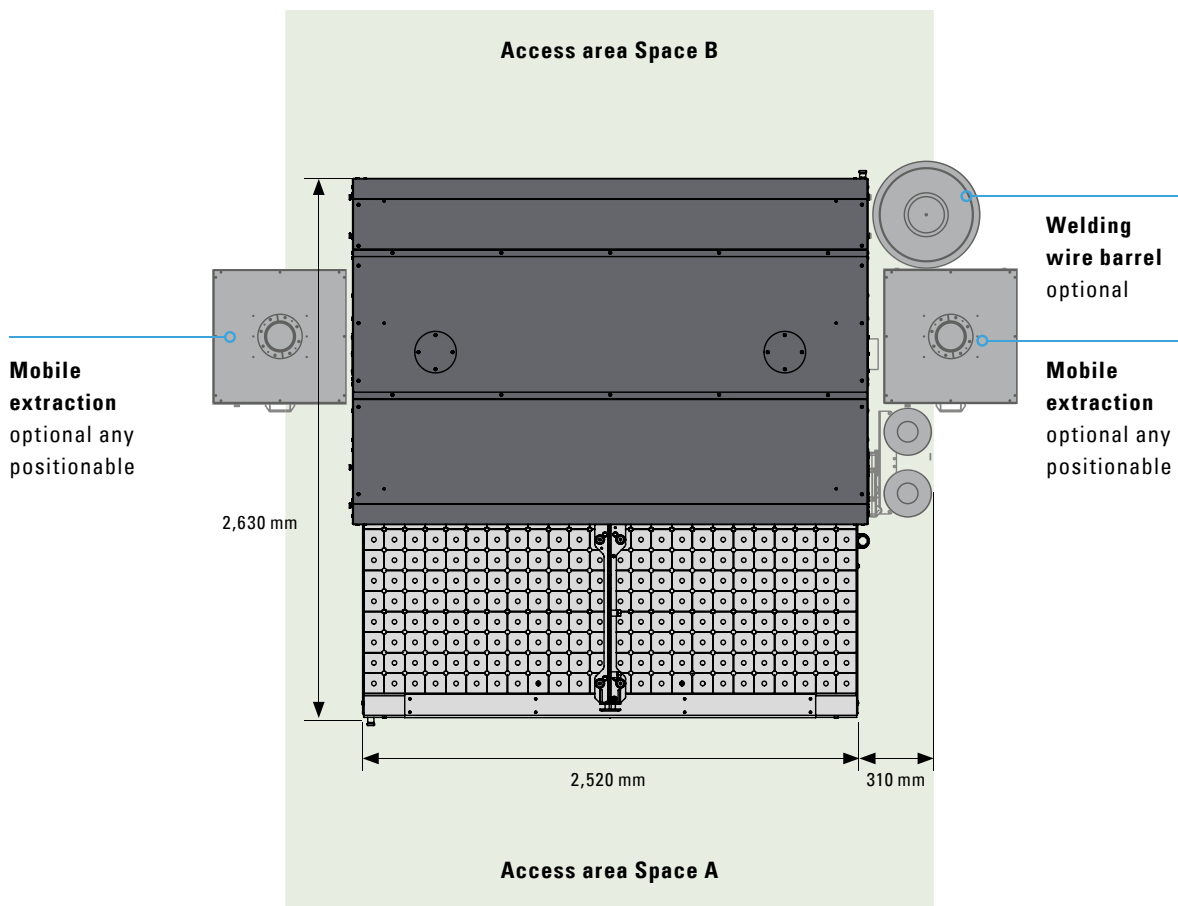


SPACE B

Size of workspace SPACE B depending on equipment:
max. 2,300 × 900 × 2,000 mm



Dimensions of workspaces B



OPTION**Welding equipment option:**

Perfectly coordinated welding processes

The FRONIUS TPS400i is a universal genius. It has been redesigned from the ground up. This has decisively improved the welding properties, the communication between humans and machines optimised, and handling has been perfected. Superb welding properties with new arc processes, a low-spatter, extremely stable short arc process (optional LSC welding package), as well as a fast and safe pulse process are the most outstanding features of this welding system. The modular design and the possibility of upgrades via the Internet or USB stick allows the user to adapt the welding system to his needs. A simple and intuitive user interface helps the user to achieve a perfect welding result every time. The welding system is integrated in the table substructure to save space – only one main switch and power connection for the cell with welding system.

- ⊕ MIG/MAG welding system 400 A with excellent welding properties
- ⊕ Can be retrofitted at any time with optional welding packages (LSC / PMC / CMT)
- ⊕ Water-cooled
- ⊕ High-quality torch
- ⊕ Modular design – thus upgradeable up to 600 A
- ⊕ Robust touch display at the power source
- ⊕ Job selection via teach panel
- ⊕ Extensive job library
- ⊕ Integration of the welding system in the underframe

COBOT WeldSpace 4.0 welding system Fronius TPS400i 400A water-cooled

- Welding system designed for the Cobot WeldSpace 4.0
- Current source TPS 400i Pulse, current range 400 A
- Welding package: Standard welding package, Pulse welding package
- Interface for Cobot WeldSpace 4.0
- Recirculating cooler CU 1100i
- Intermediate hose assembly
- Wire feeder W25i
- Hose assembly
- Torch body MTB 400i R / 22° / L241 / H50
- Torch holder for Cobot UR10e

Mains voltage	3x 400 V
Mains fuse protection	35 A slow-blow
Mains voltage tolerance	± 15%
Mains frequency	50 / 60 Hz
Cos Phi	0.99
Welding current range MIG / MAG	3 - 400 A
Welding current at 10 min/ 40°C	40% 400 A / 60% 360 A / 100% 320 A
Output voltage MIG / MAG	14.2 - 34.0 V
Open-circuit voltage	73 V
Protection class	IP23
EMC emission class	A
Item No. TPS400i 400A water-cooled	00200728
Item No. TPS400i 400A water-cooled CMT	00201304

Other Fronius welding systems on request. Please contact us.

EWM welding equipment enables a technological edge in all welding processes, which is characterised by high efficiency, conservation of resources as well as sustainability in welding. Thanks to the modular design, you can adapt your welding system flexibly and easily to your needs at any time. All innovations such as forceArc, coldArc, or rootArc are included in the system. The welding system is integrated in the table substructure to save space – only one main switch and power connection for the entire cell with welding system.

- ⊕ Modular MIG/MAG inverter welder, impulse, with separate wire feeder
- ⊕ Expert 2.0 control with intuitive user guidance via LCD display and plain text display of all welding parameters and functions
- ⊕ Equipped with EWM Synergic characteristics for force-Arc, forceArc puls, rootArc, rootArc puls and superPuls
- ⊕ Continuously adjustable arc dynamics
- ⊕ Integrated into the Demmeler WeldSpace 4.0 programming and operating concept
- ⊕ Job selection directly via teach panel in the robot program
- ⊕ Extensive pre-installed job library
- ⊕ Excellent multi-matrix welding properties
- ⊕ Very good torch cooling and thus cost-savings are possible on torch wear parts of the welding cell

COBOT WeldSpace 4.0 welding system EWM Phoenix 505 / 405 water-cooled



- Welding system designed for the Cobot WeldSpace 4.0
- Current source Phoenix 505 Expert 2.0 puls MM TDM MIG/MAG multi-process pulse welder with multi-matrix technology, current range 500 A
- Welding package: forceArc, forceArc puls, rootArc, rootArc puls, superPuls
- Industrial bus interface for Cobot WeldSpace 4.0
- Cooling module with Cool50-2U40 centrifugal pump / coolant 5l KF 23E-5
- Intermediate hose assembly, water-cooled
- Wire feeder for automated applications, water-cooled, EZA M drive 4 Rob 2X
- Hose assembly, water-cooled SP RMT W KON 400CM EZA
- Torch neck RMT 45° RMT551W 45°
- Adapter flange, torch holder for Cobot UR10e
- Gas nozzle GN TR23 / contact tip 1.2 mm, CT CUCRZR D = 1.2 mm
- Optionally available: RCX Expert 2.0 Rob (5 m) control panel. With this panel, parameters and characteristic curves can be adjusted directly, especially during the welding process

	EWM Phoenix 505	EWM Phoenix 405
Mains voltage	3x 400 V	3x 400 V
Mains voltage tolerance	±25 %	±25 %
Mains fuse	3x 32 A slow-blow	3x 32 A slow-blow
Welding current range MIG / MAG	5 - 500 A	5 - 400 A
Duty cycle 40°C	500 A / 60%, 430 A / 100%	400 A / 100%
Rec. generator power	33.2 kVA	23.2 kVA
Open-circuit voltage	79 V	79 V
Protection class	IP23	IP23
EMC emission class	A	A
Standards	IEC 60974-1, -10CL.A	IEC 60974-1, -10CL.A
Item no.	00200676	00201455
Item No. EWM operating panel (optional)	00200695	00200695



OPTION DWSP software options:

These tools simplify the work steps

COBOT WeldSpace DWSP Base shift software option

This function is used to move or rotate individual seams or even entire workpieces and to have these programs executed at a different location. At the same time, you can also use this function to copy and move complete programs. The function can be used to program workpieces once and execute them several times (weld several identical workpieces). Please note that the seam and programming shift depends on the kinematics and hose guidance of the robot.

Item No. 00201674

COBOT WeldSpace DWSP Line seam software option

With this tool, you can create line seams or tack seams by entering the weld seam length and the gap, even circularly, without much programming effort.

With the Cobot, you only have to teach the start point and end point of the weld seam, the tool takes care of the division of the line welds or tacking points.

Item No. 00201676

COBOT WeldSpace DWSP Weave welding software option

With this tool you create perfect weave seams – linearly as well as circularly. Simply teach the start and end points with the Cobot and define the amplitude and frequency to define the weave seam. This function can be used, for example, to create larger weld seams in one layer or to bridge gap seams.

Item No. 00201677

OPTION Additional option torch cleaning:

Process reliability during welding

The attributes of the state-of-the-art Demmeler torch cleaning station are maximum reliability, long service life, environmental friendliness and occupational safety. Optimum and reliable cleaning of the gas nozzle ensures a reliable welding process and increases system availability. In addition, process reliability during automated welding through preventative torch cleaning, wire cutting and anti-spatter protection brings about a noticeable increase in the productivity of your COBOTWeldSpace.

1. Torch cleaning

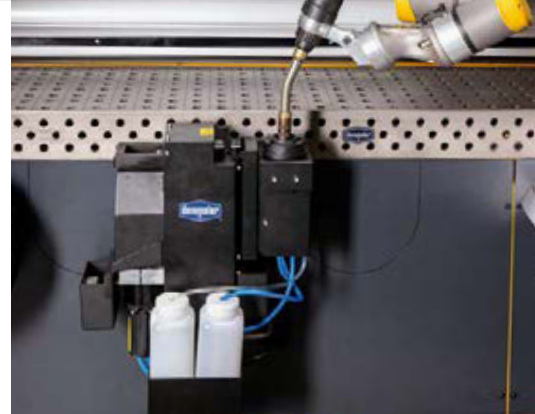
- ⊕ Cutter, specially adapted to the welding torch
- ⊕ Clamping prisms for each gas nozzle diameter – no adjustments
- ⊕ Powerful, high-quality air motor for powerful cleaning
- ⊕ Complete dirt and dust protection

2. DAV wire cutter

- ⊕ Strong, reliable cutter
- ⊕ Sharp cut for safe arc starting
- ⊕ Hardened cutting blade for long service life

3. Spraying unit

- ⊕ Activated by the robot movement – no output necessary
- ⊕ Highly efficient spray function
- ⊕ Low consumption
- ⊕ Excess anti-splash agent is collected in a container
- ⊕ Fully protected for a clean environment and safe work areas



COBOT WeldSpace 4.0 Torch Cleaning Station R1



Air consumption	Approx. 400 l/min
Nominal pressure	6 bar
Working pressure	6-8 bar
Max. wire diameter at 6 bar	1.6 mm solid wire
Control voltage	24 V DC
Power consumption	2.8 W
Operating voltage	10-30 V DC
Continuous current	Max. 100 mA
Power consumption	Approx. 14 mA (4 V)
Item No.	00201320

OPTION Additional option control panel terminal:

The perfect shelf for the control panel

With this terminal, you always have the perfect storage space for the control panel and the enabling switch where you need them. The extra heavy design prevents tipping over and with the brakes on each castor the terminal stays where you need it.

COBOT WeldSpace 4.0 Control panel terminal



- 4 swivel castors with brakes
- Extra-heavy base plate
- Bracket for UR control panel
- Bracket for enabling switch

Dimensions	400 × 400 × 1,150 mm
Weight	100 kg
Item No.	00153455

OPTION**Additional option welding fume extraction:**

Mobile filter unit for welding fume extraction

Mobile welding fume filter „MobiAirClean D1“ with depth filter cassette, tested according to dust class „M“ (separation efficiency > 99.9 %) for the extraction of welding fumes on your COBOT WeldSpace 4.0. The integrated baffle separation system separates sparks and coarse particles before they hit the filter cassette. This relieves the depth filter cassette, extends the filter service life and thus saves follow-up costs. Thanks to the highly efficient EC fan a particularly low noise level and minimal power consumption are achieved. The extraction system is integrated into the control system of the welding cell and only runs – with a certain run-on time – if the Cobot is also actually welding. This reduces energy consumption to a minimum.

Advantages for you

- ⊕ Robust workmanship made of sheet steel for a long service life
- ⊕ Integrated baffle plate for coarse dirt
- ⊕ Low noise
- ⊕ Suitable for continuous operation
- ⊕ Compact and handy design
- ⊕ Easy and low-dust disposal of the collected material through drawer
- ⊕ Dust class M filter cassette
- ⊕ Quiet and energy-saving operation due to EC technology
- ⊕ Operating hours counter



COBOT WeldSpace 4.0 Welding Fume Extraction MobiAirClean D1



- **Fan unit:**
 - Clean-air side high-performance EC fan
 - High energy efficiency with comparatively low power consumption
 - Optimum airflow
- **Filter unit:**
 - Integrated baffle plate to protect the filter cassette from direct dust impact, thus extending the service life and durability of the filter.
 - Depth filter cassette tested according to dust class „M“, separation rate at least 99.9%
 - Additional pre-filters to increase the service life
 - Removable sheet metal cover on the front allows for easy maintenance and quick filter change

Dimensions	Approx. 700 × 700 × 1,000 mm
Weight	100 kg
Motor	0.85 kW, 230 V, 50/60 Hz
Max. volume flow	950 m³/h
Averaged sound pressure level	68.5 dB (A)
Number of filters	1 piece + 2 pre-filters
Filter area	13.57 m²
Item No.	0161037

Service & Training



As a DEMMELER customer we offer all-round service for the highest production reliability, maintenance and repair. In the first year you receive remote maintenance for your new system included.

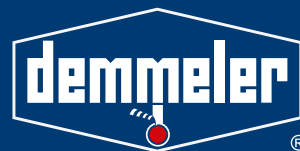
We train your employees at our premises or, if required, at your premises.

If you would like individual advice on our products and services or would like to contact us, please do not hesitate to get in touch.

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OUR PERFORMANCE
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3D CLAMPING SYSTEMS
MANIPULATORS
COBOT WELDSPACE 4.0
NC ROTARY TABLES
TOOL ARENAS
CONTRACT MANUFACTURING



PREMIUM QUALITY
MADE IN GERMANY



SERVICE EXPERTISE AT DEMMELER

Thanks to reliable design and construction, our products require minimum service and after-sales support. Nevertheless, a service hotline, worldwide spare parts delivery and direct on-site assembly at the customer's premises worldwide are part of our range of services..

WE ARE HERE FOR YOU:

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