



OUR PERFORMANCE
makes THE DIFFERENCE

SMART
SYSTEMS.
FOR EFFICIENT
WORKING.

FLEXIBLE POSITIONING

DEMMELE Manipulators



ERGONOMIX
M 3000 –
THE NEW
GENERATION

www.demmeler.com

INNOVATION + PERFORMANCE

TECHNOLOGY FROM THE MARKET LEADER



3D CLAMPING SYSTEM

The modular system can no longer be 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. With our system we guarantee a high machining performance with long service life at the same time.

ROTARY TABLES / TOOL ARENAS / AUTOMATION

DEMMELE'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 areas are oriented to and contribute to this purpose.

CONTRACT MANUFACTURING

Dimensions up to 20 m in length, piece weight up to 100 t 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.



3D WELDING TABLES



CNC CLAMPING SYSTEM



ROTARY AND
TURNING TABLES



TOOL ARENAS



CONTRACT MANUFACTURING

Outstanding working environment with all the freedom you need



Ladies and gentlemen,
business partners and customers,

We are delighted to be able to present our up-to-date, newly developed range of handling devices to you in this catalogue.

As a family-run manufacturing company operating in the mechanical engineering field, we face new challenges every day in the worlds of welding, assembly and machining. At the same time, we are fully aware of our economic and social responsibilities in our dealings with our customers, partners and employees. We are absolutely committed to Germany as a centre of technology and we manufacture all our products at our headquarters in Heimertingen.

Alongside its many advantages, however, we are also aware of the challenges posed by our production location. High wage levels, a constantly ageing population, together with price and cost pressures, mean that continuous process optimization is essential. Of course, you, too, are also perfectly familiar with these issues. One reason for our great innovative strength and quality consciousness is that we use our products ourselves.

They form the basis for our business success. That is why we have developed our manipulators – just like all our other products – in the light of the following criteria:

- + Cut production costs
- + Improve quality
- + Enhance ergonomics
- + Improve safety at work

By using our products, you, too, can benefit from these four factors of success. Your customers and employees will tell you you have made the right decision!

I hope you enjoy reading and discovering our manipulator catalogue. If you have any questions or individual issues to discuss, our sales team will be delighted to advise you – wherever you are in the world! Because there is one thing we know for sure: “Our success depends on your success!”



Yours Johannes Demmeler
Managing Director Executive Partner

Our specialists in precise positioning

Work pieces to 40,000 kg lifting, turning, tilting



Ergonomix M

- Maximum work area with minimized footprint
- Low installation height
- Unique swivel range up to 180°
- Comfortable work
- High flexibility

Lifting / turning / tilting

Tilting from 0° to 180°

Bearing load up to 8,000 kg

From page 10

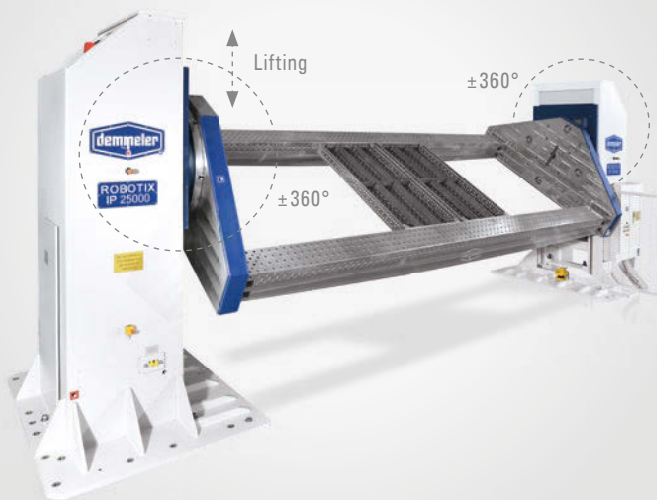


Robotix LP

- Enables positioning of work pieces with very high precision
- High repeat accuracy
- Two rotation axes and one lifting axis possible
- Suitable for integration in a robot cell

Lifting / Turning / Tilting Bearing load to 20,000 kg

From page 16

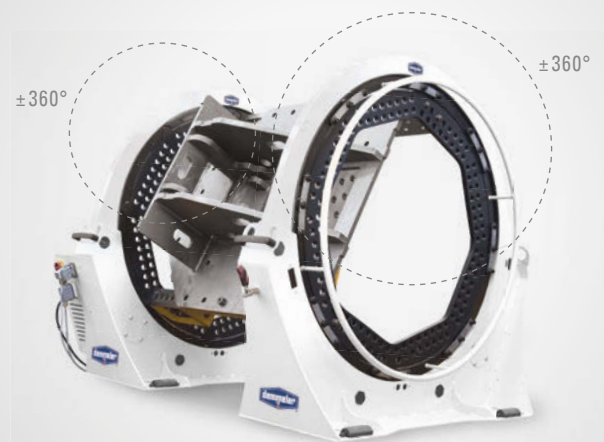


Robotix IP

- Flexible positioning of high-load work pieces
- Efficient manufacturing
- Comfortable work

Lifting / Turning / Tilting Bearing load to 40,000 kg

From page 20



Rotatorix R

- Flexible, form-fit fastening
- Manual or electric drive
- Optimized accessibility
- Simple loading

Turning

Bearing load 2,000 kg per reversible clamping device unit,
4,000 kg when using two units

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DEMMELE Manipulators

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 sequences
- Consistent quality with optional teaching function to save reproducible sequences

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 they 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 pieces, for example with a crane, is eliminated for a major reduction in non-productive time and a significant increase in productivity
- Higher melting deposition efficiency when welding as most seams can be performed in the optimal position (flat position)
- Higher work performance due to fatigue-free working position





Unlimited opportunities

Manipulators in tough everyday working conditions



Welding and assembly – Simple, rapid work piece positioning

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 extend the manipulator by the DEMMELER 3D Okto Table. This gives you a working surface that is precisely adapted to your work pieces. The fact that all locations are easily accessible simplifies welding, measuring and assembling.



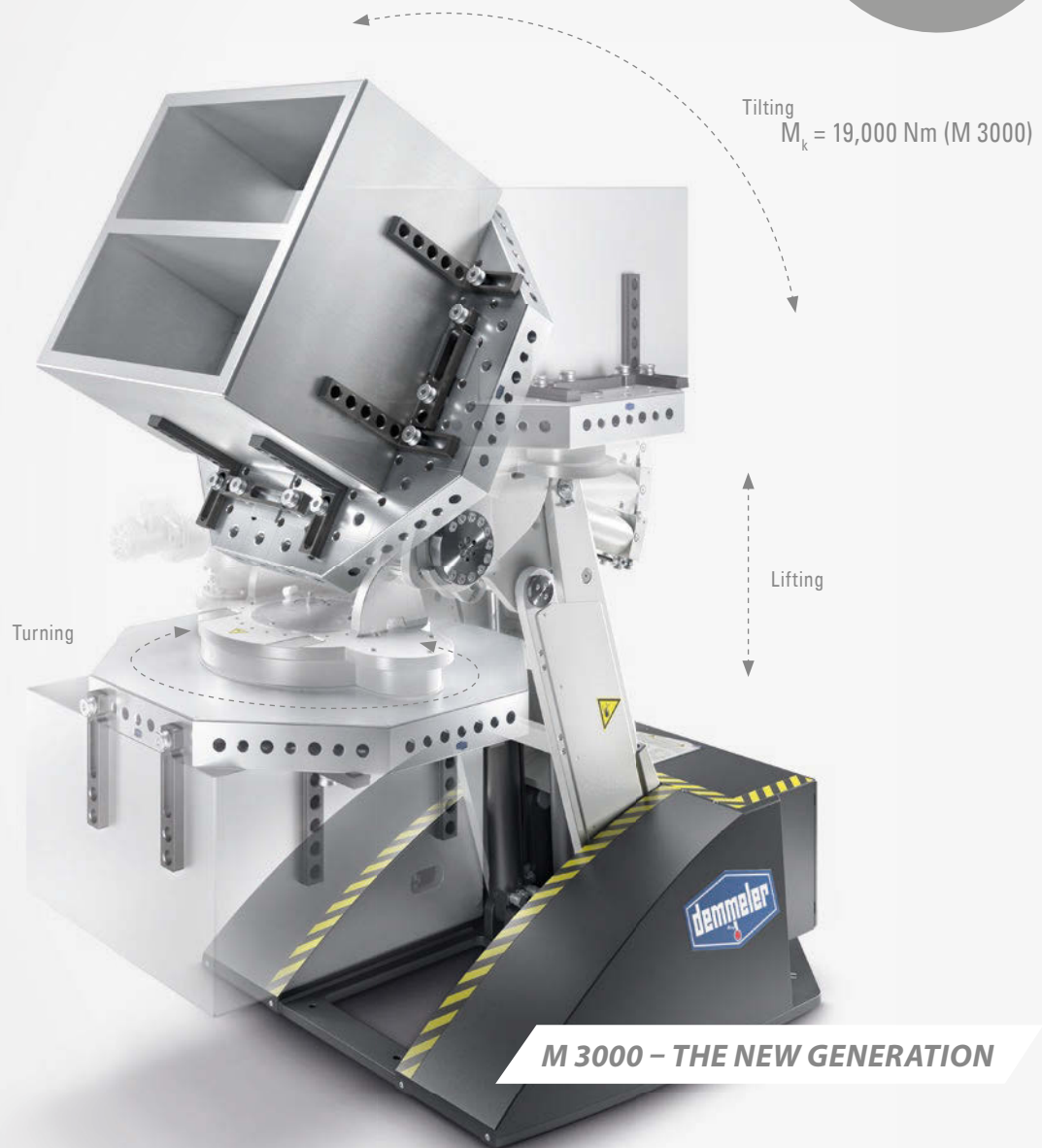
Since the tiltable manipulator can be adjusted in height and angle at the push of a button, you create an ergonomic working environment and avoid health problems for your employees with this handling device. The profitability and quality of your products are also increased significantly by using the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

2 | 3 | 4 | 8 tons

Manipulator Ergonomix M

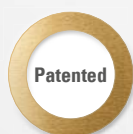
Outstanding flexibility during welding or assembly work thanks to swivel range of up to 180° as standard

Unique moment of tilt and torque.



Benefits

- Large work area
- Solid construction
- Low installation height
- Unique swivel range up to 180° as standard
- Comfortable working
- Greater flexibility
- Improved workplace safety
- Increased productivity



DEMMELEER Ergonomix M:
Winner of the German federal prize
for innovative performance in the trade



Limited space. Unlimited possibilities.

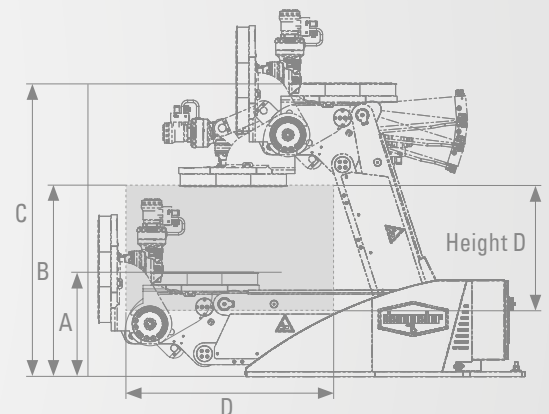
With the ingenious arrangement of the entire mechanism, the developers at DEMMELER were able to create a working space of unrivalled size combined with a small footprint for the Ergonomix M manipulator. The handling device consistently brings the highest payloads into the ideal position.

A special characteristic of the DEMMELER Ergonomix M product family is the large **swivel range of up to 180°**. This has the crucial advantage with many work pieces of being able to process them fully in one clamping cycle without turning them over. The excellent price-performance ratio of the DEMMELER products is the key feature.

Exact positioning

The movement axes bring your work piece to the desired position at the touch of a button, no matter how often the process step is repeated. To make things even easier, the manipulators can be optionally equipped with the optional teaching controller. You move to the various positions manually and save them. Then the manipulator repeats the programme as many times as you want. You thus improve your productivity and quality.

- At the same time, you eliminate repeated, time-consuming turning and rotating of the work piece, for example using a crane. This greatly reduces non-productive times and leads to significant increases in productivity.
- Higher melting deposition efficiency when welding as most seams can be performed in the optimal position (flat position).
- Simple, fast assembly in the optimum position using standard processes.



Ergonomix M basic model

THE NEW GENERATION

Description		M 2000 / V1250	M 2000 / V2500	M 3000	M 4000	M 8000
Bearing load (w/o worktop)	[kg]	2000	2000	3000	4000	8000
D=max. Interference area at 180° (w/o worktop) At height	[mm]	1000	1000	1000	1500	2000
	[mm]	650	650	650	520	600
Max. rotation speed	[RPM]	2	2	2	2	1.5
Min. rotation speed	[RPM]	0.75	0.2	0.2	0.2	0.2
Torque	[Nm]	1250	2500	3500	5000	10000
Tilt angle	[°]	180	180	180	180	180
Moment of tilt	[Nm]	8000	8000	19000	32000	64000
A=min. Height (w/o worktop)	[mm]	490	490	525	750	895
B=max. Height at 180° swivel angle	[mm]	970	970	960	983	1142
C=max. Height at 90° swivel angle	[mm]	1480	1480	1480	1680	1940
Pendant control panel		✓	✓	✓	✓	✓
10-speed control		✓	✓	✓	✓	✓
All axes adjustable via servo-hydraulic system		—	—	✓	—	—
Motors / rotary axis		1	2	1	2	2
Item no.		M02-02000-006	M02-02000-007	M03-03000-000	M04-04000-000	M08-08000-000

Specifications without worktop. Other equipment details on request.

Equipment for the Ergonomix M

Work without compromise right from the very start

To allow you to enjoy maximum benefit from the many capabilities and advantages of your Ergonomix M, we have a range of accessory equipment for you to use. Thanks to these solutions, you will save valuable time and be able to work more comfortably and with less effort.

① Operation with pendant control panel

- Potentiometer – enabling reproducible speed settings
- Axis activation at the touch of a button
- Cable length 5 m

② Controller in the control cabinet

- Master switch
- Compact construction
- Housing integrated in the manipulator

③ Operation with foot pedal

- Foot switch to control the rotation axis of the manipulator by pressing the pedal for left / right rotation
- Foot switch with emergency stop function. Pressing the pedal down all the way stops movement of the rotation axis immediately (panic function)
- The enabling button does not have to be pressed while controlling the rotation axis with the foot switch

④ Teach controller

- Up to 100 programmes with 50 positions each
- Operation via touchscreen
- Start movement by pressing the enabling button
- Offline programming possible
- Editing programmes in a text editor possible
- Data transfer per USB interface
- 10" display

You can move to the positions manually with the buttons and save specific positions in the work piece programme using the teach controller by pressing buttons. This results in a consistent movement sequence from one position to the next. Several different work piece programmes can be stored and called up as needed.



Optimum extension capabilities

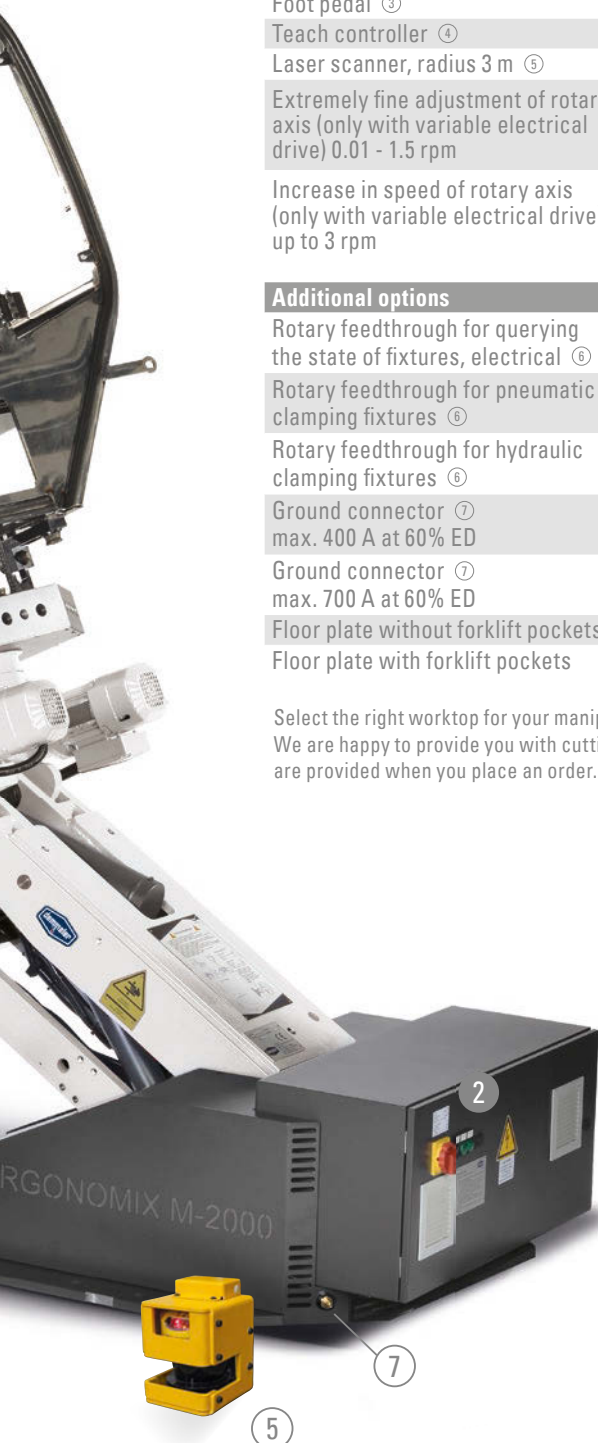
Control options	M 2000 / V1250	M 2000 / V2500	M 3000	M 4000	M 8000
Foot pedal ③	Z00-01002-021	Z00-01002-021	Z00-03000-000	Z00-01002-021	Z00-01002-021
Teach controller ④	Z00-01001-008	Z00-01001-008	Z00-03000-003	Z00-01001-011	Z00-01001-012
Laser scanner, radius 3 m ⑤	Z00-01010-001	Z00-01010-001	Z00-03000-006	Z00-01010-001	Z00-01010-001
Extremely fine adjustment of rotary axis (only with variable electrical drive) 0.01 - 1.5 rpm	–	Z00-01002-022	–	Z00-01002-022	Z00-01002-022

Increase in speed of rotary axis (only with variable electrical drive) up to 3 rpm	–	Z00-01002-031	–	Z00-01002-031	Z00-01002-031
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Additional options	M 2000 / V1250	M 2000 / V2500	M 3000	M 4000	M 8000
Rotary feedthrough for querying the state of fixtures, electrical ⑥	Z00-01004-005	Z00-01004-005	Z00-03000-007	Z00-01004-005	Z00-01004-005
Rotary feedthrough for pneumatic clamping fixtures ⑥	Z00-01004-008	Z00-01004-008	Z00-03000-008	Z00-01004-008	Z00-01004-008
Rotary feedthrough for hydraulic clamping fixtures ⑥	Z00-01004-009	Z00-01004-009	Z00-03000-009	Z00-01004-009	Z00-01004-009
Ground connector ⑦ max. 400 A at 60% ED	Z00-01000-002	Z00-01000-002	Z00-03000-002	Z00-01000-008	Z00-01000-003
Ground connector ⑦ max. 700 A at 60% ED	Z00-01000-009	Z00-01000-009	Z00-01000-012	Z00-01000-013	Z00-01000-014
Floor plate without forklift pockets	00068212	00068212	Z00-03000-004	00097630	–
Floor plate with forklift pockets	00091670	00091670	Z00-03000-005	00106030	–

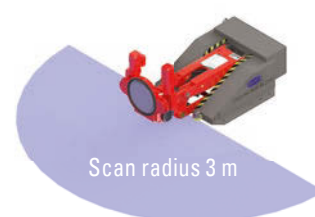
Select the right worktop for your manipulator from our extensive selection. See also p. 14-15. It is not included in the scope of delivery. We are happy to provide you with cutting data / connection data for customer clamping elements. All load data for the installation location are provided when you place an order.

● Series equipment ○ Special equipment



⑦ Ground connector

Ground connector for feeding the welding ground from the table to the interface next to the control cabinet, including sliding contact and quick coupling. Dinse connection 400 A at 60% ED, optional 700 A at 60% ED.



⑤ Laser scanner

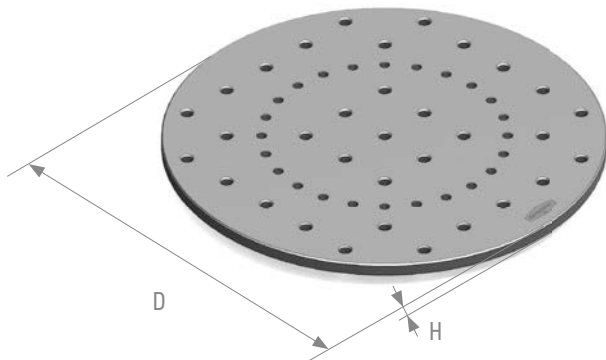
- Personnel and component protection
- Scan radius 3 m (other ranges on request)
- Clearing after area infraction by key-operated switch integrated in the control cabinet door
- Safety zone status display in control cabinet door

⑥ Rotary feedthroughs

- Rotary feedthrough for querying the state of fixtures, electrical, 10 signals, teaching controller or controller in premises required
- Rotary feedthrough for pneumatic clamping equipment on worktop, pneumatic, 1-channel
- Rotary feedthrough for hydraulic clamping equipment on worktop, hydraulic, 1-channel

Optional clamping solutions

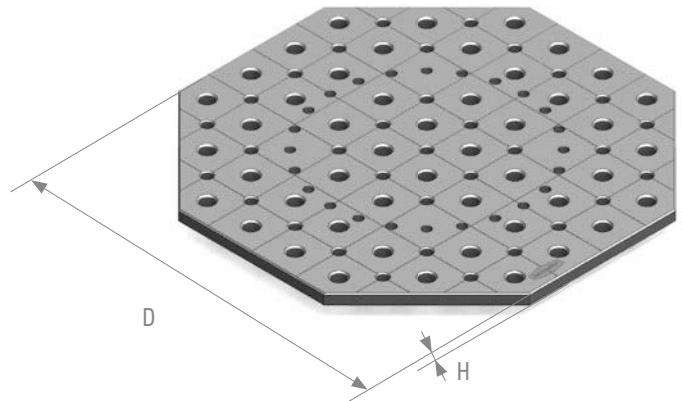
Worktops and 3D Worktables



Worktops with Thread M24

- Worktop with Thread M24
- Includes protective plate on the underside as collision protection

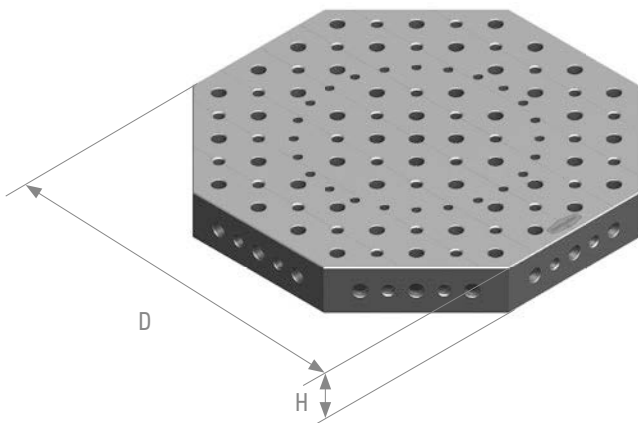
Type	D*	H*	Weight in kg	Grid	Item no.
M2000	ø 800	25	110	100x100	00059396
M3000	ø 1000	25	210	100x100	00117028
M4000	ø 1000	30	210	100x100	00071838
M8000	ø 1500	45	700	100x100	00064406



Clamping and Adapter Plates

- Clamping and Adapter Plate with D28 system bores in 100 x 100 mm grid and M24 thread in diagonal grid
- Includes cover plate on the underside as collision protection

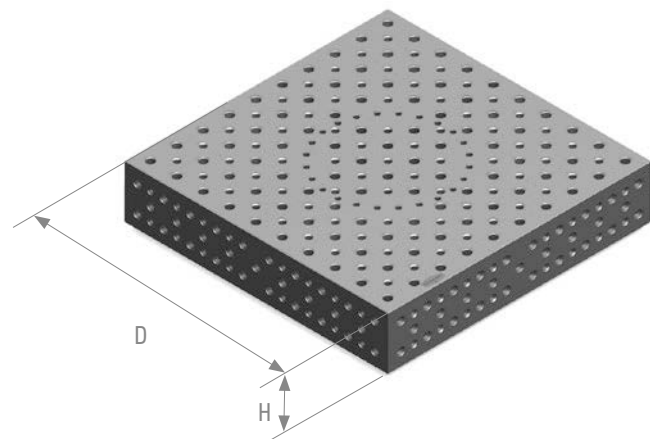
Type	D*	H*	Weight in kg	Grid	Item no.
M2000	AF 800	25	120	100x100	D28-02001-221
M3000	AF 1000	25	270	100x100	D28-02001-471
M4000	AF 1000	30	270	100x100	D28-02001-255
M8000	AF 1500	45	620	100x100	D28-02001-251



3D Worktable Okto

- 3D Worktable Okto with D28 system bores in 100 x 100 mm grid and M24 thread in diagonal grid
- Includes cover plate on the underside as collision protection

Type	D*	H*	Weight in kg	Grid	Item no.
M2000	AF 800	100	155	100x100	D28-01013-032
M3000	AF 1000	100	380	100x100	D28-01038-064
M4000	AF 1000	100	380	100x100	D28-01038-028
M8000	AF 1500	200	770	100x100	D28-12009-003



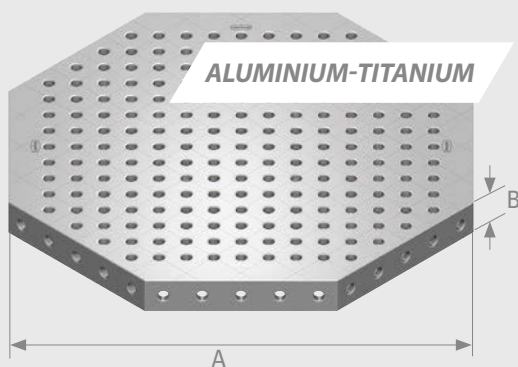
3D Work and Welding Table

- 3D Worktable with D28 system bores in 100 x 100 mm grid and M24 thread in diagonal grid
- Includes cover plate on the underside as collision protection

Type	D*	H*	Weight in kg	Grid	Item no.
M2000	1000x1000	200	355	100x100	D28-01001-132
M3000	1200x1200	200	540	100x100	D28-01056-064
M4000	1200x1200	200	540	100x100	D28-01056-053
M8000	1500x1500	200	675	100x100	D28-01031-071



Recommended for automation solutions,
robotics applications and use on manipulators



3D Okto 100 Worktable

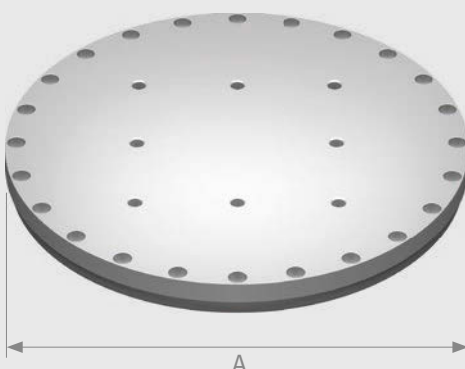
- Preferred use with manipulators in robot cells
- Numerous clamping possibilities on all nine clamping surfaces
- In the D22 bore grid 100x100
- Diagonal boring in M16 version
- High-strength aluminium-titanium alloy for ~ 60 % weight reduction and ~ 10 % higher bending strength
- Together with Adapter 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)

A*	B*	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

- 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
- Including mounting screws

A*	Description	Item no.
AF 600	Adapter Plate for table AF 600	00116157
AF 800	Adapter Plate for table AF 800	00116159
AF 1000	Adapter Plate for table AF 1000	00116160

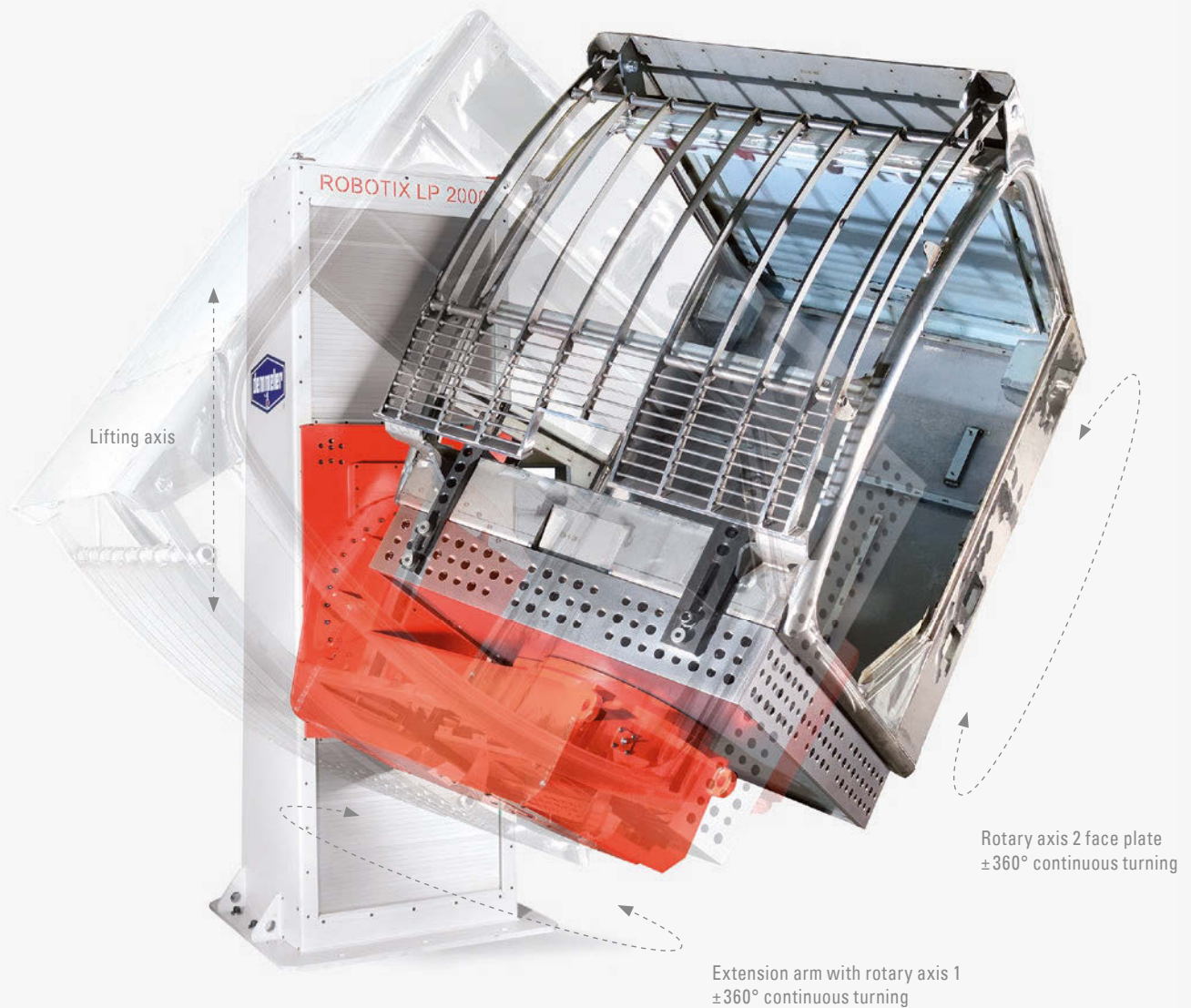


*Specifications in mm

1.5 | 3 | 6 | 10 | 20 tons

Manipulators Robotix LP

So that hard work doesn't feel hard



The models in the DEMMELER Robotix LP series of manipulators

Our Robotix LP series excels thanks to a range of unmissable strengths, for example a compact construction and versatility in operation. The models vary in their equipment and the available accessories. Irrespective of the solution you choose: You can be sure that every model will provide outstanding performance in compact format – just as you would expect from DEMMELER.

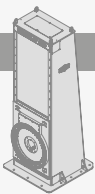


Benefits

- Enables positioning of work pieces with very high precision
- High repeat accuracy
- Two rotation axes and one lifting axis
- Suitable for integration in a robot cell
- Solid construction
- Lifting axis via servo-hydraulic system, speed continuously adjustable

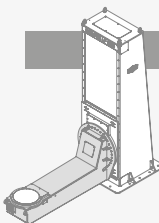


1 | Robotix basic device



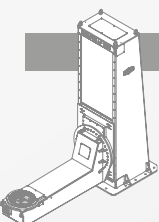
Description	Unit	IP 1500	IP 3000	IP 6000	IP 10000	IP 20000
Bearing load (without worktop)	kg	1500	3000	6000	10000	20000
Lifting axis:						
> Drive		servo-hydraulic	servo-hydraulic	servo-hydraulic	servo-hydraulic	servo-hydraulic
> Lifting speed	m/min	2	2	1.5	1.5	1
> Max. lifting height	mm	1200	1500	2000	2200	2450
> Minimum height	mm	360	640	820	1050	1050
> Maximum height	mm	1560	2140	2820	3250	3500
Rotary axis 1 / tilt axis:						
> Min. - max. speed	RPM	0.2 - 1.4	0.2 - 1.4	0.2 - 1.0	0.2 - 1.0	0.2 - 1.0
> Angle of rotation	°	±360 cont.	±360 cont.	±360 cont.	±360 cont.	±360 cont.
> Torque	Nm	4000	12000	20000	24000	50000
Pendant control panel		✓	✓	✓	✓	✓
Item no.		I01-01000-100	I03-01000-100	I06-01000-100	I10-01000-100	I20-01000-100

2 | Extension arm option



Description	Unit	LP 1500	LP 3000	LP 6000	LP 10000	LP 20000
Extension arm for Robotix		Z01-01000-000	Z03-01000-000	Z06-01000-000	Z10-01000-000	Z20-01000-000
> Maximum interference area diameter	mm	3000	4000	5000	5500	6500

3 | Rotary axis 2 on extension arm option



Description	Unit	LP 1500	LP 3000	LP 6000	LP 10000	LP 20000
Rotary axis 2		Z01-01000-001	Z03-01000-001	Z06-01000-001	Z10-01000-001	Z20-01000-001
> Min. - max. speed	RPM	0.2 - 1.4	0.2 - 1.4	0.2 - 1.4	0.2 - 1.4	0.2-0.75
> Angle of rotation	°	360	360	360	360	360
> Torque	Nm	2500	5000	10000	15000	40000
> D=max. interference area	mm	3000	4000	5000	6000	6000

Adapter plates for L-manipulators on request (see page 14/15 for version).
Other equipment details on request.

Equipment for the Robotix series

Stress-free work from the very beginning

THE NEW GENERATION

① Operation with pendant control panel

- Potentiometer – enabling reproducible speed settings
- Axis activation at the touch of a button
- Cable length 5 m

② Additional controller at the control console

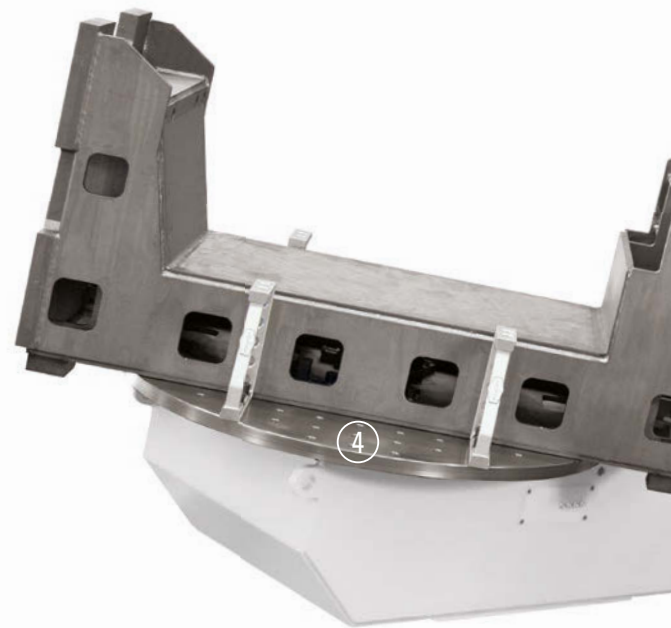
- Master switch
- Compact construction
- Housing integrated in the manipulator

③ Laser scanner

- Personnel and component protection
- Scan radius 3 m (other ranges on request)
- Clearing after area infraction by key-operated switch integrated in the control cabinet door
- Safety zone status display in control cabinet door

④ Rotary feedthroughs

- Rotary feedthrough for querying the state of fixtures, electrical, 10 signals, teaching controller or controller in premises required
- Rotary feedthrough for pneumatic clamping equipment on worktop, pneumatic, 1-channel
- Rotary feedthrough for hydraulic clamping equipment on worktop, hydraulic, 1-channel



Control options	LP 1500	LP 3000	LP 6000	LP 10000	LP 20000
Controller at control console ②	Z01-01000-100	Z03-01000-100	Z06-01000-100	Z10-01000-100	Z20-01000-100
Laser scanner ③	Z01-01000-101	Z03-01000-101	Z06-01000-101	Z10-01000-101	Z20-01000-101
Teaching controller ⑥	Z01-01000-102	Z03-01000-102	Z06-01000-102	Z10-01000-102	Z20-01000-102
Connection as additional robot axis	Z01-01000-103	Z03-01000-103	Z06-01000-103	Z10-01000-103	Z20-01000-103

● Series equipment ○ Special equipment



⑤ Ground connector

Ground connector for feeding the welding ground from the table/fixture setup to the interface next to the control cabinet, including sliding contact and quick coupling.

⑥ Teach controller

- Up to 100 programmes with 50 positions each
- Touch screen operation
- Start movement by pressing the enabling button
- Offline programming possible
- Editing programmes in a text editor possible
- Data transfer per USB interface
- 10" display

You can move to the positions manually with the buttons and save specific positions in the work piece programme using the teach controller by pressing buttons. This results in a consistent movement sequence from one position to the next. Several different work piece programmes can be stored and called up as needed.



Additional options	LP 1500	LP 3000	LP 6000	LP 10000	LP 20000
Rotary feedthrough for querying the state of fixtures, electrical ④	Z01-01000-104	Z03-01000-104	Z06-01000-104	Z10-01000-104	Z20-01000-104
Rotary feedthrough for pneumatic clamping fixtures ④	Z01-01000-105	Z03-01000-105	Z06-01000-105	Z10-01000-105	Z20-01000-105
Rotary feedthrough for hydraulic clamping fixtures ④	Z01-01000-106	Z03-01000-106	Z06-01000-106	Z10-01000-106	Z20-01000-106
Ground connector for welding device ⑤	Z01-01000-107	Z03-01000-107	Z06-01000-107	Z10-01000-107	Z20-01000-107

3 | 6 | 12 | 20 | 40 tons

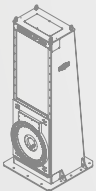
Manipulator Robotix IP

When you have something big in mind

Stress-free assembly and efficient welding

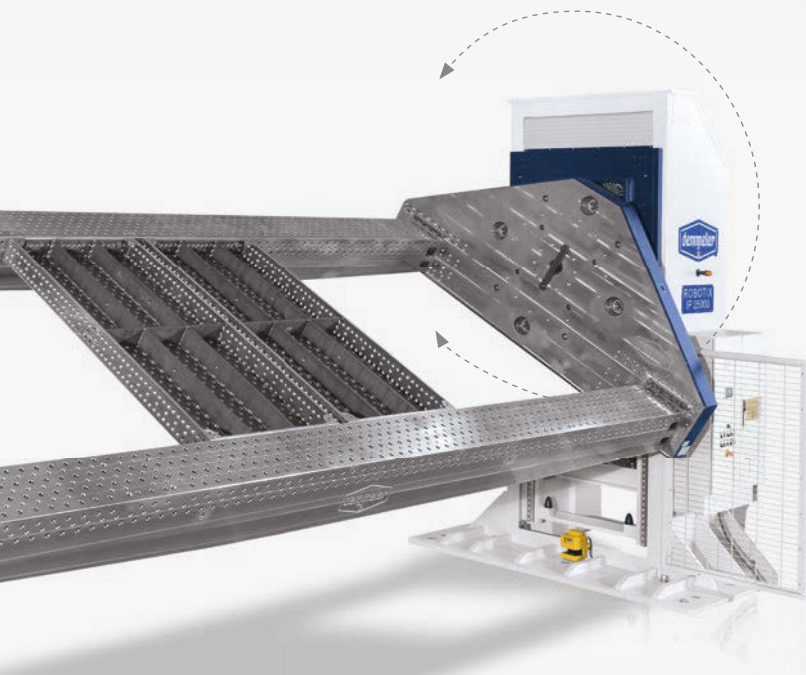
Those who think in big dimensions need equipment that offers numerous possibilities. With the Robotix IP manipulator, you can position your work pieces flexibly, manufacture efficiently and work ergonomically. In a relaxed posture, a welding seam can be welded far more exactly. Optimum positioning of the work piece also enables an ideal production process: No flowing of the welding material. We offer the right product for you out of numerous solutions.

Lifting axis

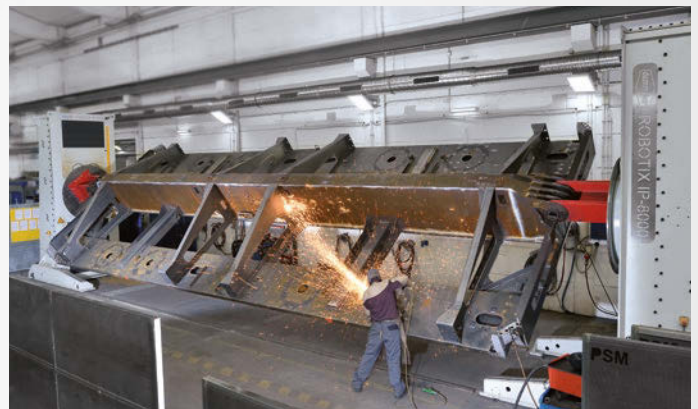


Robotix basic device

Description	Unit	IP 1500	IP 3000	IP 6000	IP 10000	IP 20000
Bearing load (without worktop)	kg	1500	3000	6000	10000	20000
Lifting axis:						
> Drive		servo-hydraulic	servo-hydraulic	servo-hydraulic	servo-hydraulic	servo-hydraulic
> Lifting speed	m/min	2	2	1.5	1.5	1
> Max. lifting height	mm	1200	1500	2000	2200	2450
> Minimum height	mm	360	640	820	1050	1050
> Maximum height	mm	1560	2140	2820	3250	3500
Rotary axis 1 / tilt axis:						
> Min. - max. speed	RPM	0.2 - 1.4	0.2 - 1.4	0.2 - 1.0	0.2 - 1.0	0.2 - 1.0
> Angle of rotation	°	±360 cont.	±360 cont.	±360 cont.	±360 cont.	±360 cont.
> Torque	Nm	4000	12000	20000	24000	50000
Pendant control panel		✓	✓	✓	✓	✓
Item no.		I01-W1000-100	I03-W1000-100	I06-W1000-100	I10-W1000-100	I20-W1000-100



Rotation axis
 $\pm 360^\circ$ continuous turning



Optional equipment

Control options	IP 1500	IP 3000	IP 6000	IP 10000	IP 20000
Teaching controller	Z01-W1000-102	Z03-W1000-102	Z06-W1000-102	Z10-W1000-102	Z20-W1000-102
Controller at control console	Z01-W1000-100	Z03-W1000-100	Z06-W1000-100	Z10-W1000-100	Z20-W1000-100
Laser scanner	Z01-W1000-101	Z03-W1000-101	Z06-W1000-101	Z10-W1000-101	Z20-W1000-101
Connection as additional robot axis	Z01-W1000-103	Z03-W1000-103	Z06-W1000-103	Z10-W1000-103	Z20-W1000-103
Counterpiece for rotary axis 1	Z01-W1000-108	Z03-W1000-108	Z06-W1000-108	Z10-W1000-108	Z20-W1000-108

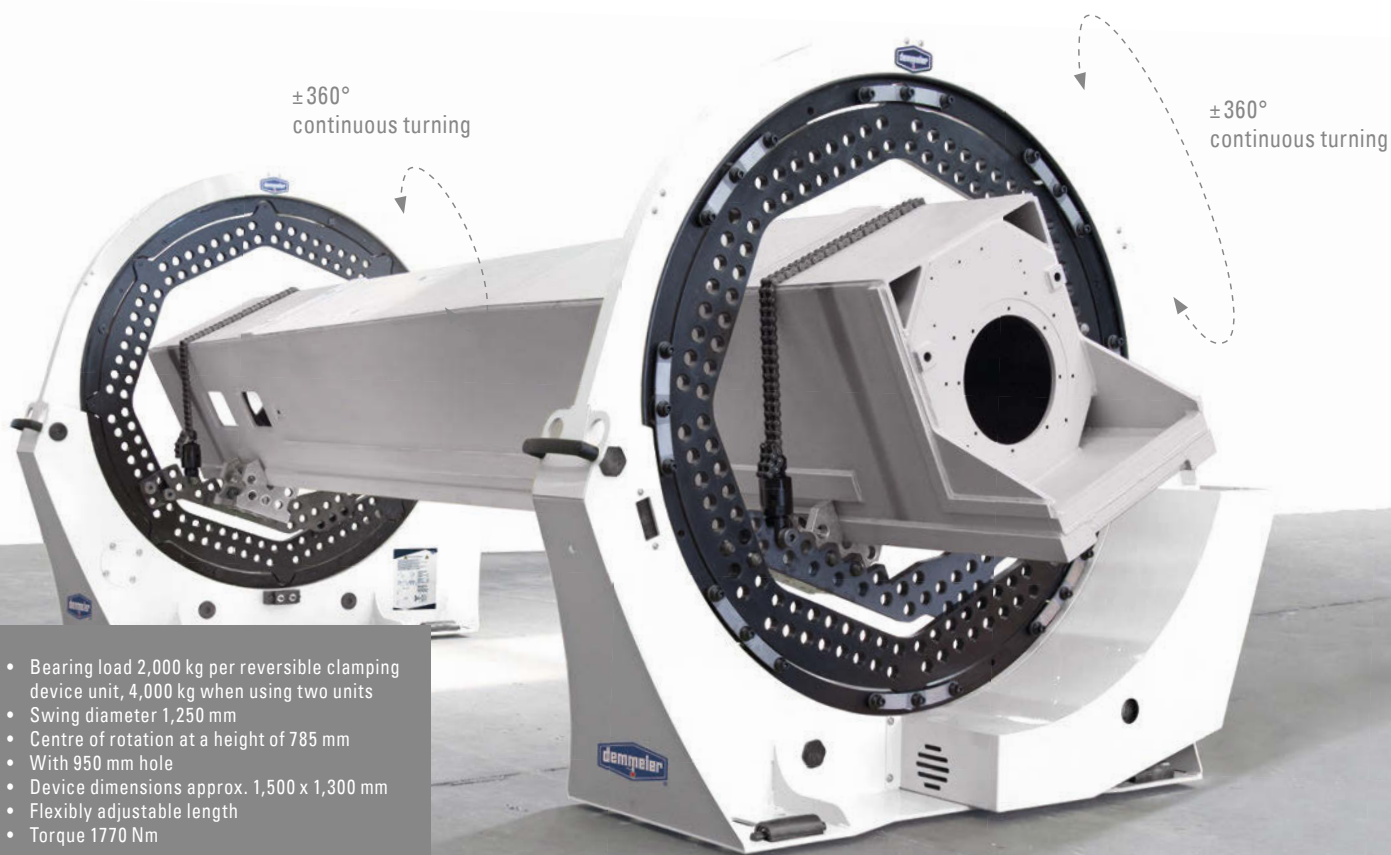
Positioning options	IP 1500	IP 3000	IP 6000	IP 10000	IP 20000
Preparation for assembly on DEMMELER track system for each lifting column	Z01-W1000-109	Z03-W1000-109	Z06-W1000-109	Z10-W1000-109	Z20-W1000-109
DEMMELER track system (per metre)	D28-W2003-000	D28-W2003-000	D28-W2003-000	D28-W2003-000	D28-W2003-000

Additional options	IP 1500	IP 3000	IP 6000	IP 10000	IP 20000
Rotary feedthrough for querying the state of fixtures, electrical	Z01-W1000-104	Z03-W1000-104	Z06-W1000-104	Z10-W1000-104	Z20-W1000-104
Rotary feedthrough for pneumatic clamping fixtures	Z01-W1000-105	Z03-W1000-105	Z06-W1000-105	Z10-W1000-105	Z20-W1000-105
Rotary feedthrough for hydraulic clamping fixtures	Z01-W1000-106	Z03-W1000-106	Z06-W1000-106	Z10-W1000-106	Z20-W1000-106
Ground connector for welding device	Z01-W1000-107	Z03-W1000-107	Z06-W1000-107	Z10-W1000-107	Z20-W1000-107

Up to 4 tons

Reversible Clamping Device Rotatorix® R

360° work piece machining



Continuous rotation of growing or asymmetrical work pieces of up to 4,000 kg around their own axes

With the Rotatorix® R 2000 / 950, when using two reversible clamping devices, work pieces of up to 4,000 kg can be continuously rotated round their own axis to enable a worker to easily access them from all sides. Each work piece can be manually or electrically rotated – mainly for growing or asymmetrical work pieces – which means less strain on the worker's back. Not only does this prevent overloading and symptoms of fatigue, but it also enables access to the work area, eliminating the need for dangerous and time-consuming turning of the work piece by crane. In addition, the best possible quality can also be obtained as, thanks to optimised welding sequences, less welding distortion is produced on the work pieces. The Rotatorix® also increases deposition efficiency. The system is based on the D28 clamping system.

Rotatorix® with frequency-controlled drive on a DEMMELER foundation track system for work pieces of varying lengths





Rotatorix® R 2000 / 950 basic device

The reversible clamping device is available in several versions to ensure the best conditions for each application. So, for example, both assemblies can be equipped with rollers for perfect flexibility, or one assembly can be fitted with rollers while the other is fixed to the floor with plugs. The DEMMELER rail system is also available in a version with guide rollers. Individual work pieces are clamped either by means of a standard brace with an attachment chain or using individual braces which are specially designed for the respective requirements. Where drive options are concerned, the possibilities range from manual drives and highly accurate frequency-controlled drives to the connection of an additional robot axis.

Rotatorix® R 2000 / 950 basic device consisting of one reversible clamping unit. Turning unit for 360° continuous rotation of growing, symmetrical and asymmetrical work pieces

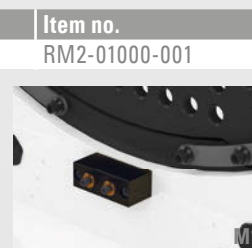
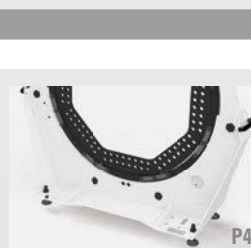
Item no. R02-01000-001

Equipment options

Item	Drive options	Item no.
A1	Manual drive , comprises a rotation unit for manual operation and clamp	RA2-01000-002
A2	Motorised drive for electrically-driven rotation of work pieces with set rotation speeds including control panel and confirm key	RA2-01000-003
A3	Frequency-controlled drive for electrically-driven rotation of work pieces with infinitely variable rotation speeds controlled by potentiometer, for example, for circular welding. Includes a control panel and confirm key.	RA2-01000-001
A4	Drive with arrangement for integrating the Rotatorix® as an external robot axis , mainly for circular welding (e.g. for robots of type ABB, Cloos, Kuka, Fanuc, etc.)	RA2-01000-004
A5	Foot switch for rotating the work pieces with pre-set speed – in combination with the motorised drive	RA2-01000-005
A6	Confirm key for rotating the work pieces with pre-set speed for use in the customer's own protective enclosure – in combination with the motorised drive	RA2-01000-006



Item	Positioning options	Item no.
P1	For perfectly flexible positioning (manual adjustment) of an assembly on a level factory floor, comprising 4 rollers	RP2-01000-001
P2	For using an assembly on a Demmeler foundation track system, comprising 4 rollers and 4 x D28 PPC bolts	RP2-01000-002
P3	For attaching an assembly in position, comprising 4 floor anchors	RP2-01000-003
P4	For partially attaching an assembly in position, comprising 4 adjustable feet	RP2-01000-004



Item	Additional options	Item no.
M1	Ground connection, D28 system for welding device (load up to 500 A)	RM2-01000-001

Item	Positioning options	Item no.
V1	1 x brace including 2 x D28 PPC bolts for attaching the brace	RV2-01000-001
V2	1 x chain tensioner including chain and plastic protection caps	RV2-01000-002



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3D WELDING TABLES



CNC CLAMPING SYSTEM



ROTARY AND
 TURNING TABLES



TOOL ARENAS



CONTRACT MANUFACTURING