



OUR PERFORMANCE
makes THE DIFFERENCE



**TORQUE TABLE
DDRCT 1400 –
THE NEW
GENERATION**

EXACT POSITIONING AND TURNING

DEMMELEER Turning and Rotary Tables



www.demmeler.com

INNOVATION +
PERFORMANCE

TECHNOLOGY FROM THE MARKET LEADER

Turning, milling, grinding, drilling – Positioning work pieces precisely and quickly

Ladies and gentlemen,
business partners and customers,

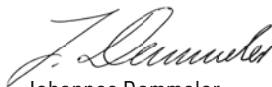
We are delighted to present our newly developed and proven rotary and rotary shifting tables in this catalogue. You can also find information on our 3-axis tilting tables that set benchmarks internationally. No matter whether positioning, interpolation or rapid turning – we have the right solution for your complex applications.

As a family-owned production company in the field of mechanical engineering, we have developed numerous in-house products besides contract manufacturing – especially in the area of large part machining. We opt 100% for Germany as a production location for our manufacturing – our company headquarters are in Heimerdingen, in the beautiful Allgäu. Economy that meets the highest quality requirements and a high degree of automation are extremely important to us.

Right from the word go, we have aimed to achieve the highest machining performance and precision in our manufacturing.

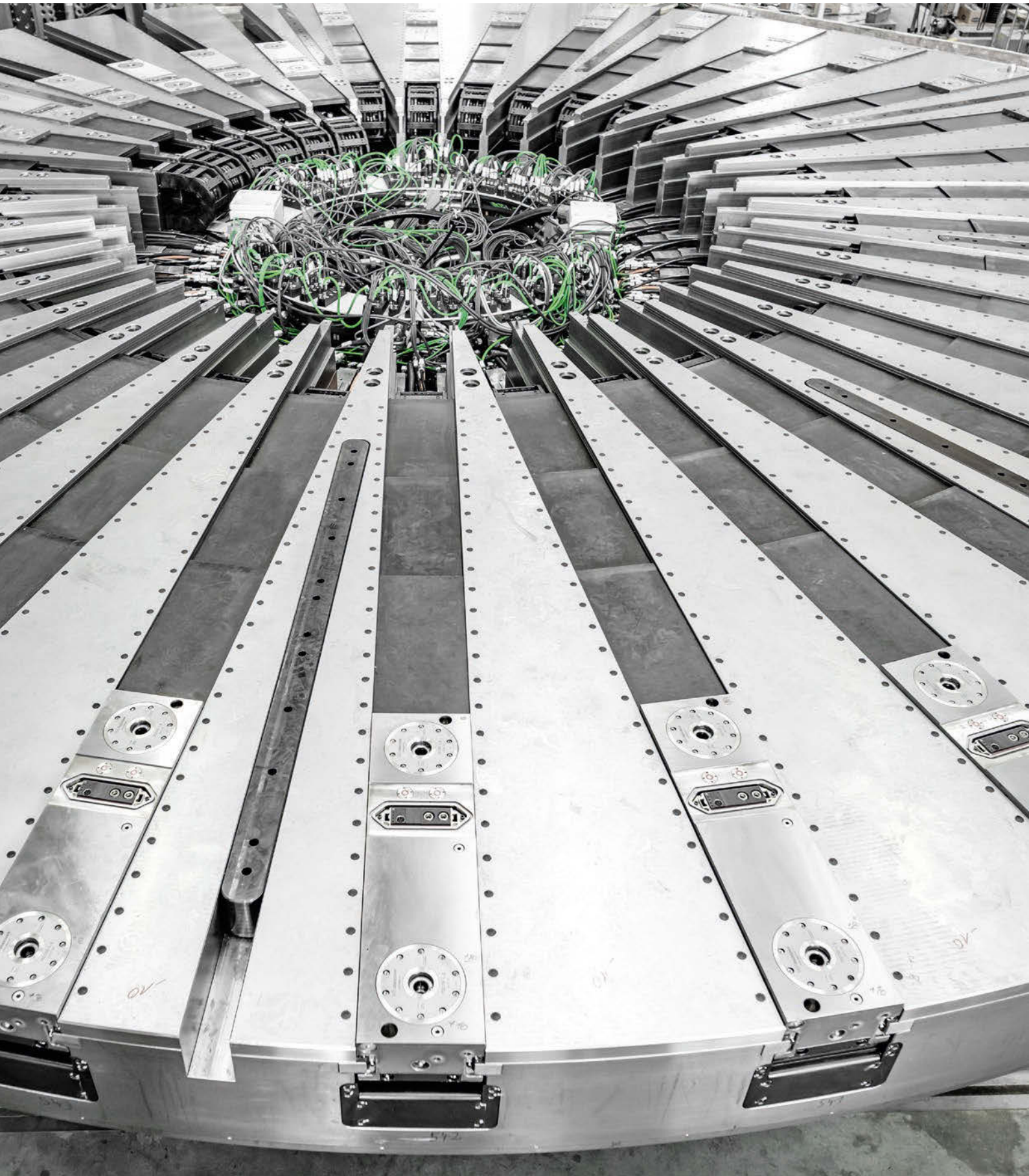
As a result, we initially developed the rotary and rotary sliding tables for our own production. Solid constructions, high dynamics and precision are always at the forefront. With this experience and over 750 projects realised successfully, we are a premium partner in the area of rotary and rotary sliding tables for all applications – milling, turning, grinding and drilling. We also set new standards in the market with our individual automation solutions. You can find our entire product portfolio on the following pages.

We hope you enjoy reading or "browsing" through our catalogue. Our experts will be pleased to advise if you have any questions or wish to discuss individual topics – because we see ourselves as your partner.



Johannes Demmeler
Executive Partner







DYNAMIC WORKP



OUR PERFORMANCE
makes THE DIFFERENCE

PIECE MACHINING





Precision as the key to success

The right solution for every application

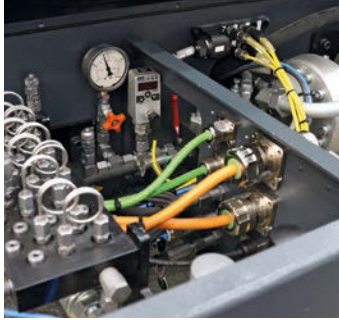
Our rotary, tilt and carousel rotary tables set a clear mark due to the extremely robust design as well as a high level of precision in the micrometre range, speed and repeatability.

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 750 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 axes 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 potential loading but rather 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 a 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 and 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.



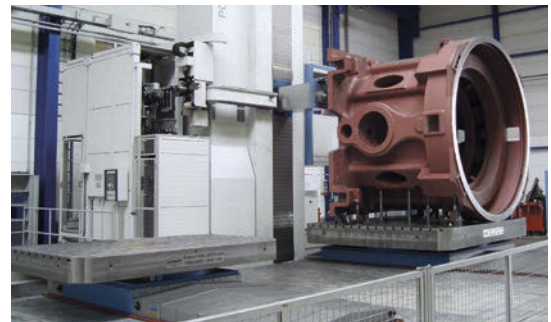
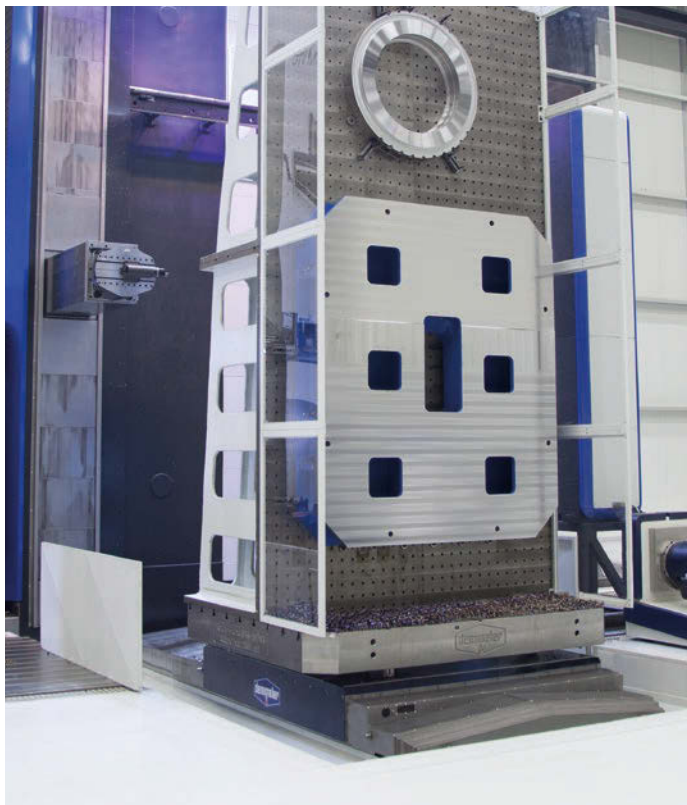
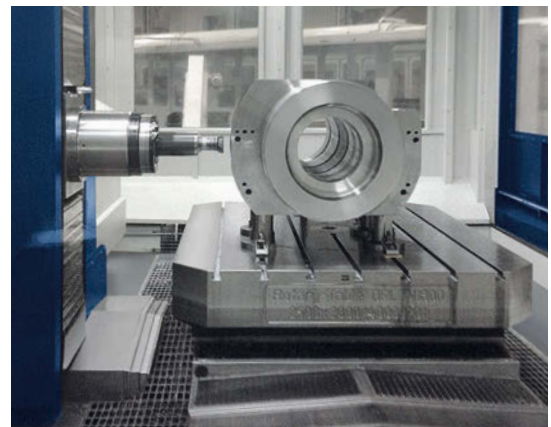
Sophisticated down to the smallest detail

- 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 available without a shifting axis as well as with a W-axis/V-axis.
- A central and easily accessible, integrated power box contains all the necessary regulation and control elements. The standardised interface allows for an easy connection and integration to the respective machine tool
- Integrated measuring systems in the highest precision, well-protected from additional covers and sealing air, ensure precise positioning



Unlimited opportunities

Rotary tables from DEMMELER for all requirements



Outstanding technology plus impressive dimensioning

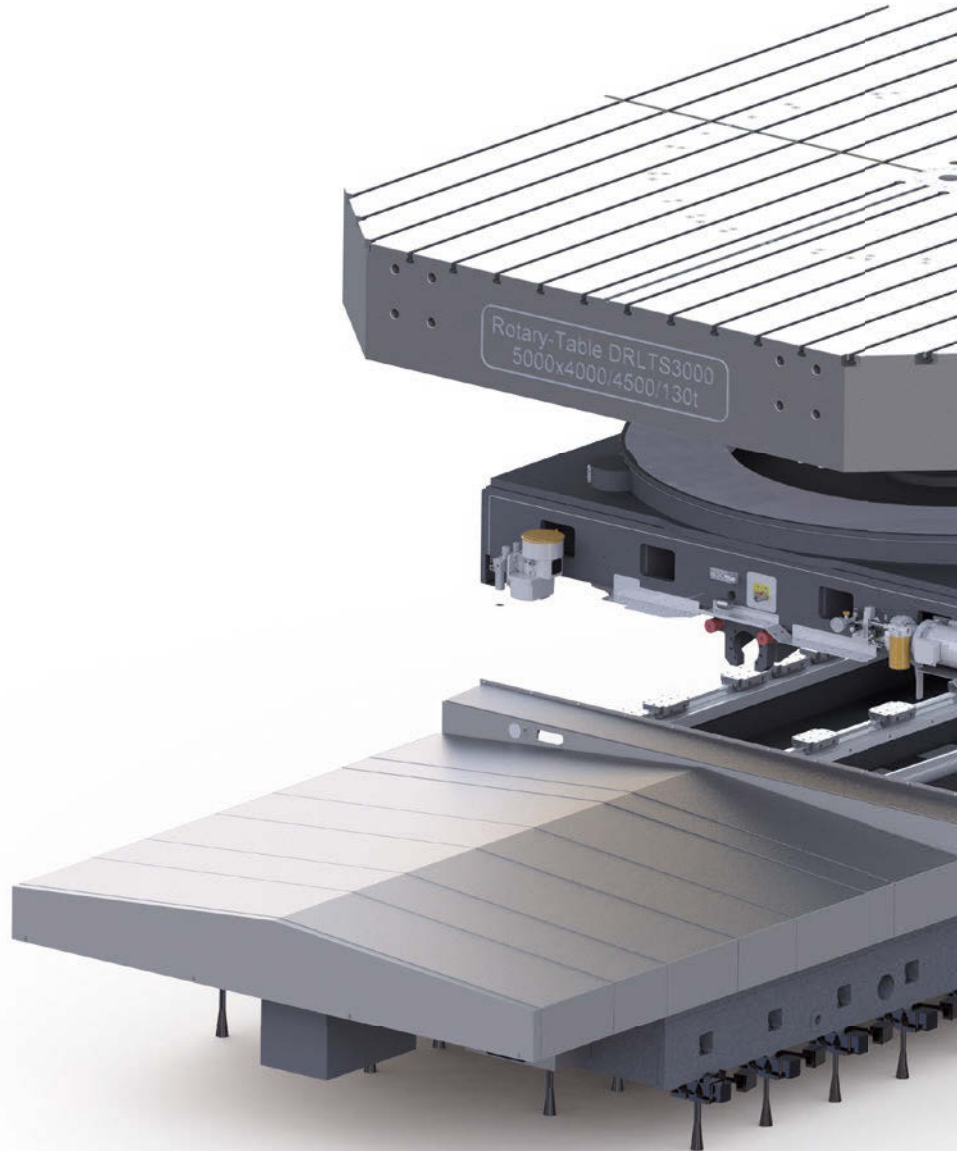
The assemblies at a glance

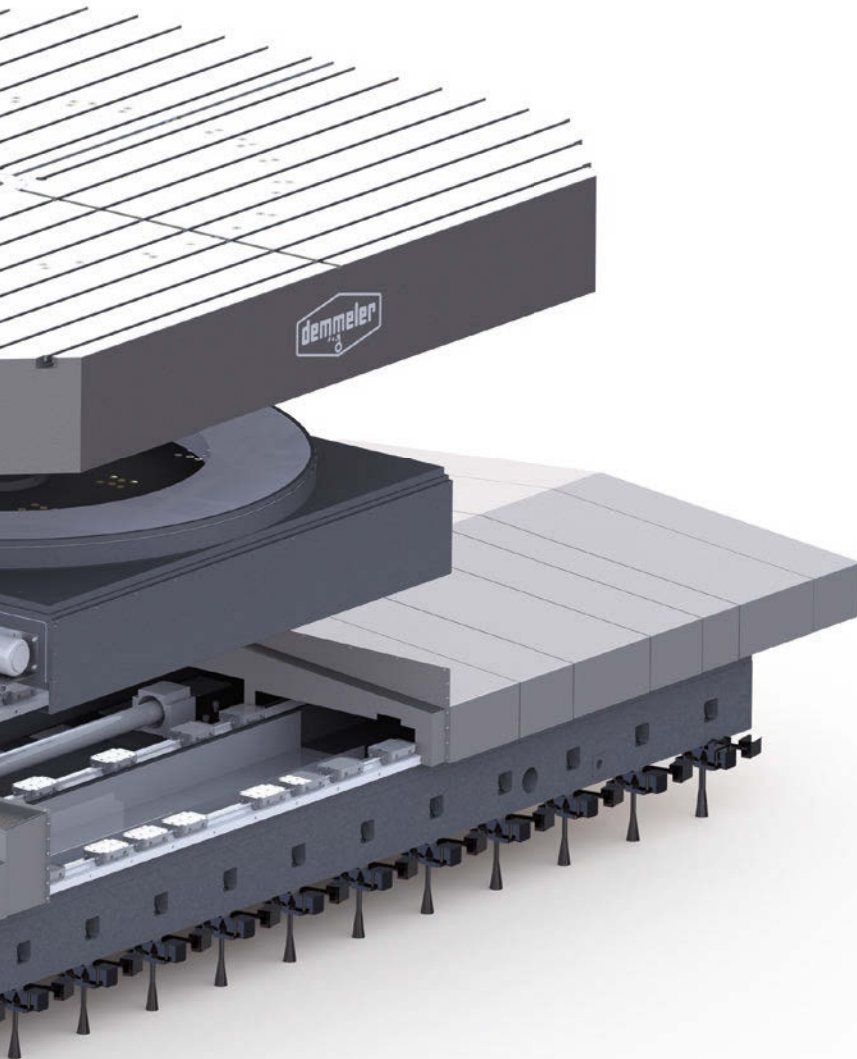
Linear carriage

- The generous hydrostatic bearing is designed for the maximum diameter in relation to the worktop
- The hydrostatic guide means there are no wearing surfaces making it ideally suitable for machining with the highest requirements and best accuracy
- The additional slide linings on the hydrostatic surface ensure reliable functionality and optimal emergency running properties
- The quiet, wear-free drive with maximum diameter is realised via an amply dimensioned external sprocket with play-free precision gears
- The integrated Duo-Drive-System (two electronically coupled servomotors) ensures excellent drive performance
- The rotary axis is designed for infinite positioning in every angle position as well as for track milling as a controlled NC axis
- A centrally located rotary encoder with the highest resolution (higher resolution via control possible) ensures high-precision angle positioning and perfect turning accuracy, even with very large workpieces
- The radial run-out accuracy in the μ range is ensured by the central arrangement of the pretensioned radial precision mounting
- Hydrostatic surrounds with integrated hydraulic clamping ensure maximum transmission of tilting and tangential moments. The generously dimensioned design of this clamping clamps the table non-positively – as a result, the outmoded design principle of a Hirth serration is far surpassed in regard to power transmission, thereby making it superfluous.

Interface to the machine

- Easy connection to and integration in the machine via central plug-in interface





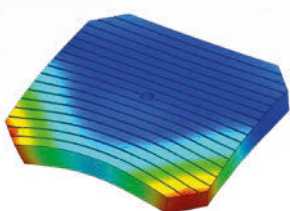
Worktop

- Highly ribbed and stable cast construction. The worktops are optionally available in high-quality grey or nodular cast iron
- Hardened centring adaption in the middle for holding devices and workpieces (0.005 mm radial run-out)
- Worktop axial run-out up to ± 0.01 mm (depending on size and type)
- Maximum drive and support diameter for highest precision
- Centric hydrostatic mounting minimises the deflection of the worktop
- Generous mechanical labyrinth seal to the carriage prevents harmful penetration by finest dirt particles and ensures a long production life
- Depending on customer requirements, media can be guided through infinitely either hydraulically, pneumatically or electrically via an optional central rotary transmission
- Optimisation of the worktop with FEM method is standard

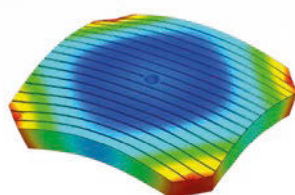


Highly ribbed and stable cast construction. The worktops are optionally available in high-quality grey or nodular cast iron.

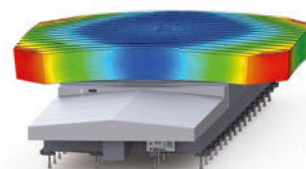
Optimised geometry via FEM method



Asymmetrical load



Symmetrical load



Bearing \varnothing = drive \varnothing

Ratio of bearing diameter to worktop size

The theoretical loading of your table is significantly higher than the value indicated. As a rule of thumb: It is not only the additional load that is decisive for durability and precision, but rather the largest possible bearing diameter in relation to the worktop size.

Guide bed and bearing types

The assemblies at a glance

Design versions of the guide bed

Our NC rotary tables are available in two versions. The N-version (Normal) is suitable for loads up to 250 t. A higher number of guides and more stable design of the carriage and guide bed enables loads up to 500 t with the S-version. The DEMMELER NC rotary tables are distinguished by the highest precision and rigidity and represent outstanding value for money. The version with hydrostatic linear axis also available ensures that our rotary tables also have the best damping properties.

N

N-version (Normal)

Rotary table with linear axis

- Loads up to 250 t
- 2 guideways

S

S-version (Heavy)

Rotary table with linear axis

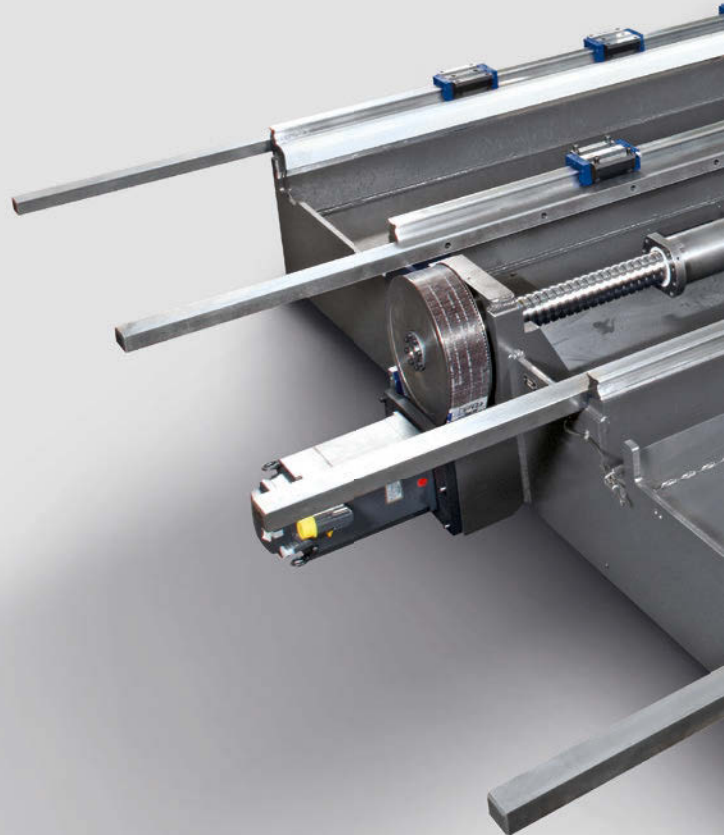
- Loads up to 500 t
- Up to 4 guideways
- Additional fasteners in centre

H

H-version (Hydrostatic)

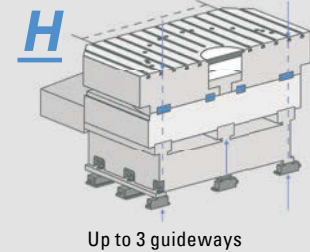
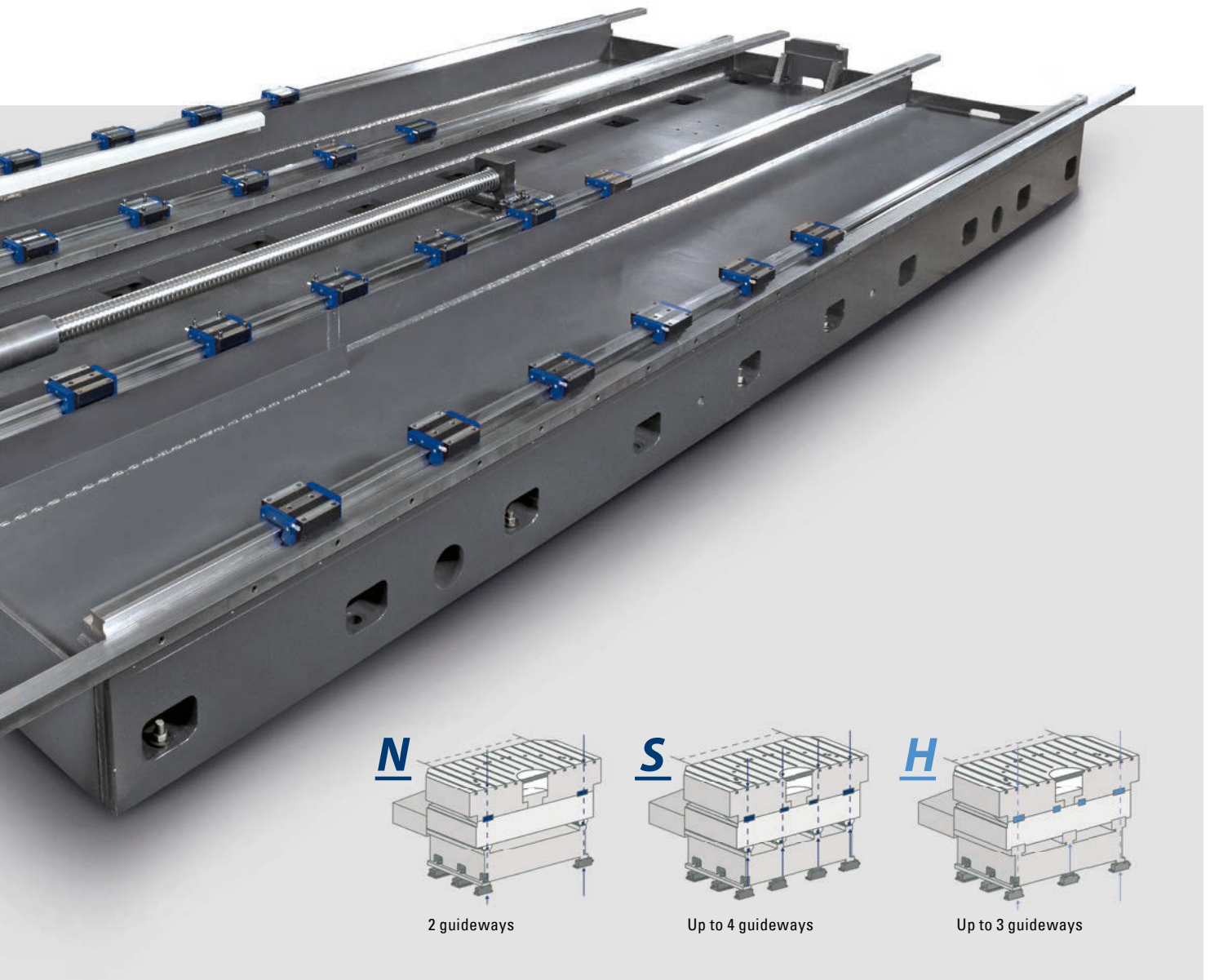
Rotary table with linear axis

- Loads up to 500 t
- Up to 3 guideways
- Additional fasteners in centre



Guide bed

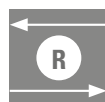
- Compact, space-saving, very stable machine bed. With two, three or four guideways corresponding to the loads.
- Linear guides have an economical grease lubrication
- In the heavy-duty version with up to 4 guideways, additional pretensioned fasteners in the centre of the machine bed ensure the highest table loads with the lowest deformation
- Compact, maintenance-friendly motors and the cable drag are located protected against dirt below the stable jet covers with corrugated plate
- The drive is realised via a generously dimensioned ball screw spindles for a process speed up to 25 m/min, maximum feed force up to 50 kN. Alternatively, a rack-and-pinion drive can be used relation to the feed force and travel path.
- The guide bed is available in different travel paths
- Distance-coded or absolute length measurement system for precise positioning accuracy in the μ range
- Safety switches as limit stops are integrated in the bed
- Table loads from 10 to 500 tonnes
- Travel paths from 1,000 to 10,000 mm (larger travel paths on request)
- Also available in version with hydrostatic mounting – for best damping properties and absence of wear



Bearing types



Rotary axis
roller bearings



Linear axis
roller bearings



Rotary axis
hydrostatic



Linear axis
hydrostatic

Various types of bearing are available, depending on wishes and requirements. We shall be pleased to advise you in the choice of correct mounting.

Combination of bearing types

TESTED



Rotary axis
hydrostatic



Linear axis
roller bearings

EFFICIENT



Rotary axis
roller bearings



Linear axis
roller bearings

ROBUST



Rotary axis
hydrostatic



Linear axis
hydrostatic

Highest precision in every position

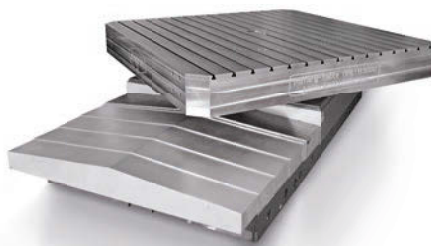
The series at a glance

Series designations, e.g.

DRTB = without linear axis / DRLTB = with linear axis

DRTB / DRLTB: Roller bearing rotary tables

Page 16



Rotary and rotary sliding tables with roller bearing rotary and linear axis

- Application field: **Milling and drilling**
- Functions: Highly-accurate positioning and interpolation
- Permissible workpiece weights: **Up to 60,000 kg**

DRT / DRLTH: Hydrostatically mounted rotary tables

Page 18-21



Rotary and rotary sliding tables with hydrostatically mounted rotary axis and roller bearing linear axis

- Application field: **Milling and drilling**
- Functions: Highly-accurate positioning and interpolation
- Hydrostatic version ensures best damping properties and high-precision machining
- Permissible workpiece weights: **Up to 500,000 kg**

DDRCT / DDRCLT: Carousel rotary tables with direct drive

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THE NEW GENERATION

Carousel rotary sliding table with direct drive with roller bearing rotary axis and roller bearing linear axis

- Application field: **Turning, grinding, milling, drilling**
- Functions: Rapid turning, highly-accurate positioning and high-precision interpolation
- Permissible workpiece weights: **Up to 20,000 kg**

DRAT / DRALT: Tilting tables

Page 28



Tilting tables with hydrostatically mounted rotary axis and roller bearing tilting and linear axis

- Application field: **Milling and drilling**, three further axes in addition to the machine tool
- Functions: Highly-accurate positioning and interpolation
- Permissible workpiece weights: **Up to 150,000 kg**
- Angular adjustment up to 10°

-
- + Linear axis mounted on roller bearings as standard
 - + Linear axis optionally hydrostatic
-

- Hydrostatic mounting:
- + very low wearing
 - + very high loads possible
 - + highest-precision surfaces attainable
 - + kind to tool and machine despite very high machining performance

DRCTB / DRCLTB: Roller bearing carousel rotary tables with Duo-Drive Page 22



Carousel rotary sliding table with Duo-Drive and roller bearing rotary and linear axis

- Application field: **Turning, grinding, milling, drilling**
- Functions: Rapid turning, highly-accurate positioning and interpolation
- Permissible workpiece weights: **Up to 60,000 kg**

DRCT / DRCLT: Hydrostatically mounted carousel rotary tables with Duo-Drive Page 24



Carousel rotary sliding table with Duo-Drive, hydrostatically mounted rotary axis and linear axis

- Application field: **Turning, grinding, milling, drilling**
- Functions: Rapid turning, highly-accurate positioning and high-precision interpolation > hydrostatic version ensures best damping properties and high-precision machining
- Permissible workpiece weights: **Up to 130,000 kg**

DRVT: Vertical rotary tables Page 32

Page 32



NC vertical rotary table

- Application field: **Milling, drilling**
- Functions: Clamping and machining on vertical worktops (optionally also horizontal use possible)
- Permissible workpiece weights: **Up to 100,000 kg**

DAT: Swivel tables Page 32

Page 32



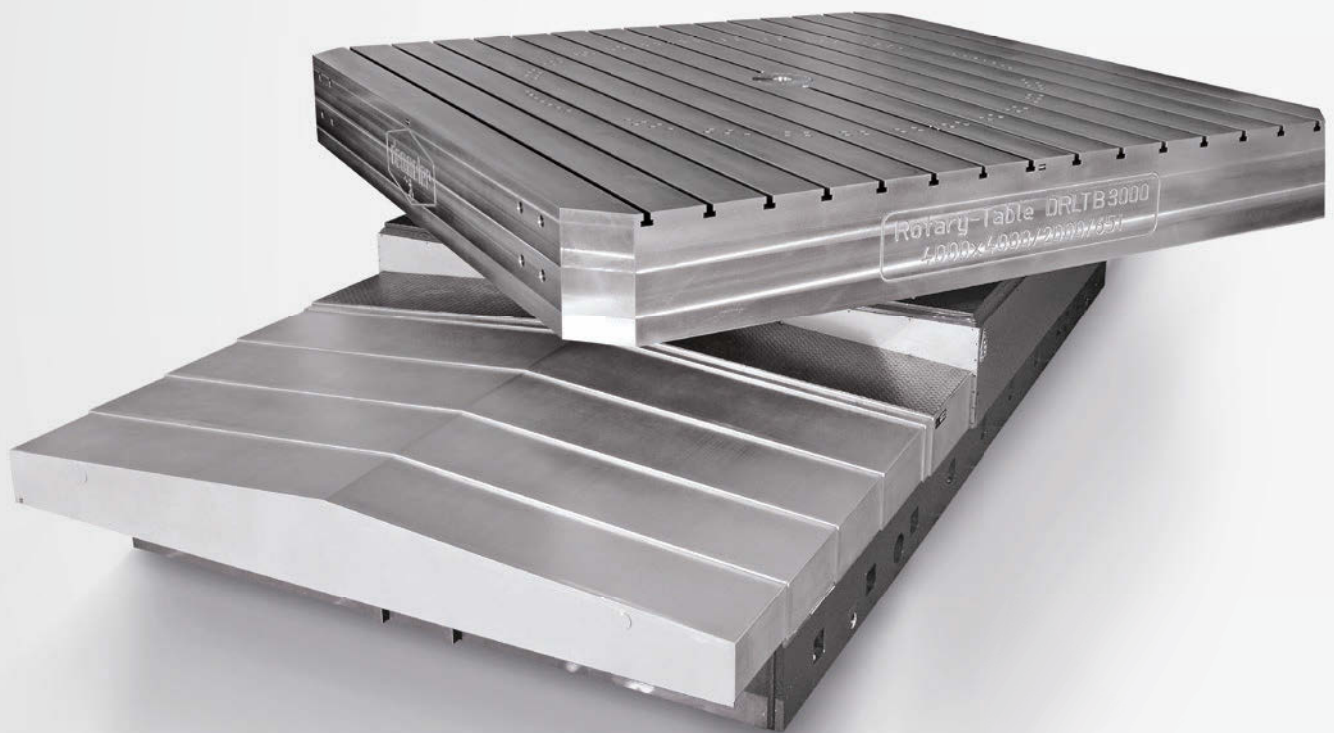
AUTOMATION

Swivel tables

- Application field: **Automation**
- Functions: Enable convenient clamping of workpieces on horizontal worktop. Processing in vertical worktop position
- Permissible workpiece weights: **Up to 50,000 kg**

Rotary and rotary sliding tables with roller bearing rotary axis and roller bearing linear axis

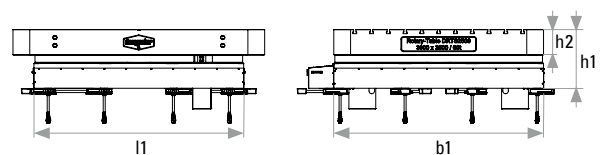
Series DRTB / DRLTB



	DR(L)TB 1200	DR(L)TB 1800	DR(L)TB 2500
b1	1200	1800	2500
l1	1450	1800	2500
l2	1650	2000	2700
l3	325	325	325
l4	1150	1325	1675
h1	750	800	800
h2	250	300	350
h3	1150	1200	1250

DIMENSIONS DRTB

The dimensional data represents approximate values. Worktop size in coordination with the customer. Other dimensions on request!



- Application field: **Milling and drilling**
- Functions: Highly-accurate positioning and interpolation
- All sizes also available with the proven DEMMELER linear axis
- Excellent value for money
- Low maintenance costs
- Generous design with high resilient roller bearings ensures a long service life



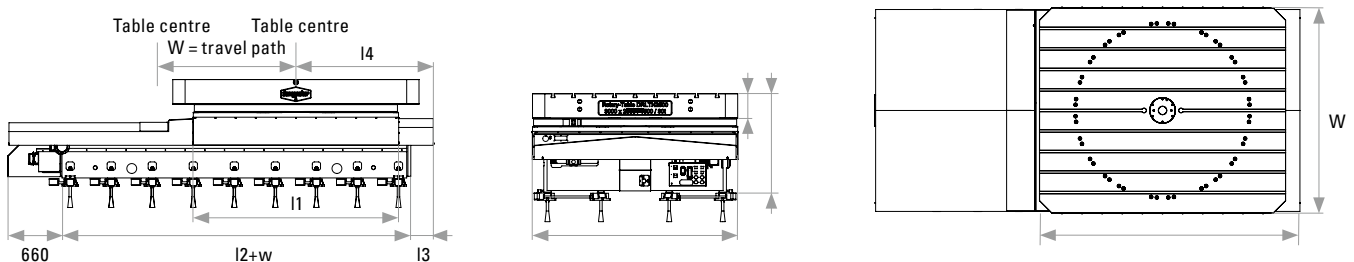
Series	DR(L)TB 1200	DR(L)TB 1800	DR(L)TB 2500
Rotary tables with roller bearing rotary axis DRTB			
Max. load in t	20	30	50
Worktop size from mm (L × W)	1200 × 1200	1800 × 1800	2500 × 2500
Diameter of external bearing in mm	970	1570	2270
Diameter of drive in mm	970	1570	2270
Speed max. in rpm (S1/S6)	6.8 / 10.8	4.2 / 6.7	2.9 / 4.6
Machining moment in Nm (S1/S6)	12,000 / 29,400	26,000 / 63,700	37,000 / 129,500
Tilting moment in Nm	80,000	122,500	140,000
Tangential moment, clamped in Nm	50,000	80,000	140,000
Axial run-out accuracy at bearing diameter in mm	0.015	0.015	0.015
Radial run-out accuracy in centre in mm	0.005	0.005	0.005

Rotary sliding tables with roller bearing rotary axis and roller bearing linear axis DRLTB			
W-axis in mm (w)	1000-3500	1000-3500	1500-4000
V max. linear axis in m/min	20	20	20
Feed force of linear axis in N	25,000	25,000	25,000
Number of guideways	2	2	4

Parts accuracy depending on relevant control to $\pm 1''$. Customer-specific requirements such as higher loads, machining moments or permissible mass moments of inertia can be tailored to requirements. Other values are available on request. Subject to technical changes and printing errors.

The theoretical loading of our tables is significantly higher. As a rule of thumb: It is not only the additional load that is decisive for durability and precision, but rather the largest possible bearing diameter in relation to the worktop size.

DIMENSIONS DRLTB



Rotary and rotary sliding tables with hydrostatically mounted rotary axis and roller bearing linear axis

Series DR(L)TN / DR(L)TS

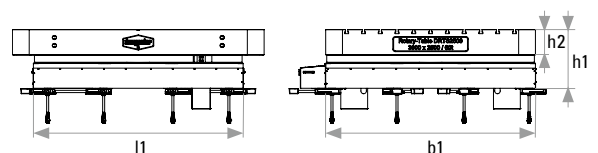
- Application field: **Milling and drilling**
- Functions: Highly-accurate positioning and high-precision interpolation
- Hydrostatic version of the rotary axis ensures best damping properties and high-precision machining
- Thanks to hydrostatic bearing:
 - very low wearing
 - very high loads possible
 - kind to tool and machine despite very high machining performance

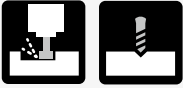


	DR(L)T 1200	DR(L)T 1800	DR(L)T 2500	DR(L)T 3000	DR(L)T 4000	DR(L)T 5000
b1	1200	1800	2500	3000	4000	5000
l1	1450	1800	2500	3000	4000	5000
l2	1650	2000	2700	3200	4300	5500
l3	325	325	325	400	450	500
l4	1150	1325	1675	2000	2550	3100
h1	750	800	800	900	1000	1200
h2	250	300	300	350	400	500
h3	1100	1200	1200	1400	1600	1900

DIMENSIONS OF DR(T)N/S

The dimensional data represents approximate values. Worktop size in coordination with the customer. Other dimensions on request!





**THE NEW
GENERATION**

Series	DR(L)TN 1800	DR(L)TN 2500	DR(L)TN 2800	DR(L)TN 4000	DR(L)TN 5000
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Rotary tables with hydrostatically mounted rotary axis DRTN – Normal version

Max. load in t	20	45	90	180	300
Worktop size from mm (W × L)	1800 × 1800	2500 × 2500	3000 × 3000	4000 × 4000	5000 × 5000
Diameter of hydrostatics, outer in mm	1570	2270	2570	3870	4870
Diameter of hydrostatics, centre in mm	–	–	–	2200	2450
Diameter of hydrostatics, inner in mm	450	450	450	450	450
Speed max. in rpm (S1/S6)	4.2 / 6.7	2.9 / 4.6	2.3 / 3.6	1.8 / 2.8	1.4 / 2.4
Diameter of drive in mm	1570	2270	2770	3870	4870
Tilting moment in Nm	122,500	140,000	175,000	225,000	325,000
Tangential moment, clamped in Nm	80,000	140,000	240,000	340,000	440,000
Machining moment in Nm (S1/S6)	26,000 / 63,700	37,000 / 129,500	60,000 / 150,000	80,000 / 200,000	100,000 / 250,000
Axial run-out accuracy at bearing diameter in mm	0.015	0.015	0.015	0.02	0.025
Radial run-out accuracy in centre in mm	0.005	0.005	0.005	0.005	0.005

Rotary sliding tables with hydrostatically mounted rotary axis and roller bearing linear axis DRLTN – Normal version

W-axis in mm (w)	1000-3500	1500-4000	1500-6000	1500-6000	1500-6000
V max. linear axis in m/min	20	20	10	8	5
Feed force of linear axis in N	25,000	25,000	25,000	50,000	50,000
Number of guideways	2	4	3	4	4

Series	DR(L)TS 1800	DR(L)TS 2500	DR(L)TS 3000	DR(L)TS 4000	DR(L)TS 5000
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Rotary tables with hydrostatically mounted rotary axis DRTS – Heavy version

Max. load in t	40	60	130	250	400
Worktop size from mm (W × L)	1800 × 1800	2500 × 2500	3000 × 3000	4000 × 4000	5000 × 5000
Diameter of hydrostatics, outer in mm	1570	2270	2770	3870	4870
Diameter of hydrostatics, centre in mm	–	–	–	2200	2450
Diameter of hydrostatics, inner in mm	450	450	450	450	450
Speed max. in rpm (S1/S6)	3.4 / 5.4	2.4 / 3.8	1.9 / 3.0	1.4 / 2.2	1.1 / 1.7
Diameter of drive in mm	1570	2270	2770	3870	4870
Tilting moment in Nm	175,000	200,000	250,000	300,000	400,000
Tangential moment, clamped in Nm	80,000	140,000	240,000	340,000	440,000
Machining moment in Nm (S1/S6)	32,000 / 112,000	46,000 / 161,000	75,000 / 187,500	100,000 / 250,000	125,000 / 312,500
Axial run-out accuracy at bearing diameter in mm	0.015	0.015	0.015	0.02	0.025
Radial run-out accuracy in centre in mm	0.005	0.005	0.005	0.005	0.005

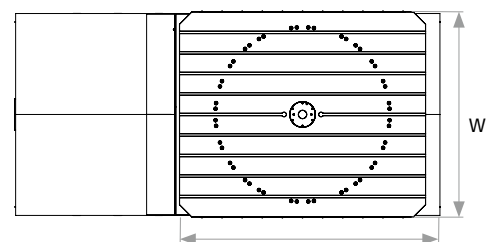
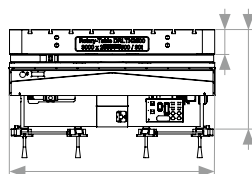
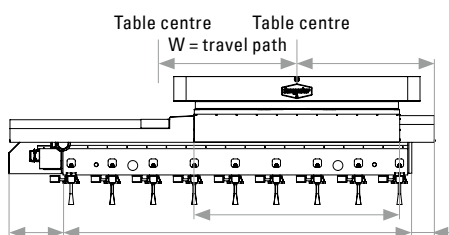
Rotary sliding tables with hydrostatically mounted rotary axis and roller bearing linear axis DRLTS – Heavy version

W-axis in mm (w)	1000-3500	1500-4000	1500-6000	1500-6000	1500 / 6000
V max. linear axis in m/min	20	20	10	8	5
Feed force of linear axis in N	25,000	25,000	25,000	50,000	50,000
Number of guideways	4	4	4	4	4

Parts accuracy depending on relevant control to $\pm 1''$. Customer-specific requirements such as higher loads, machining moments or permissible mass moments of inertia can be tailored to requirements. Other values are available on request. Subject to technical changes and printing errors.

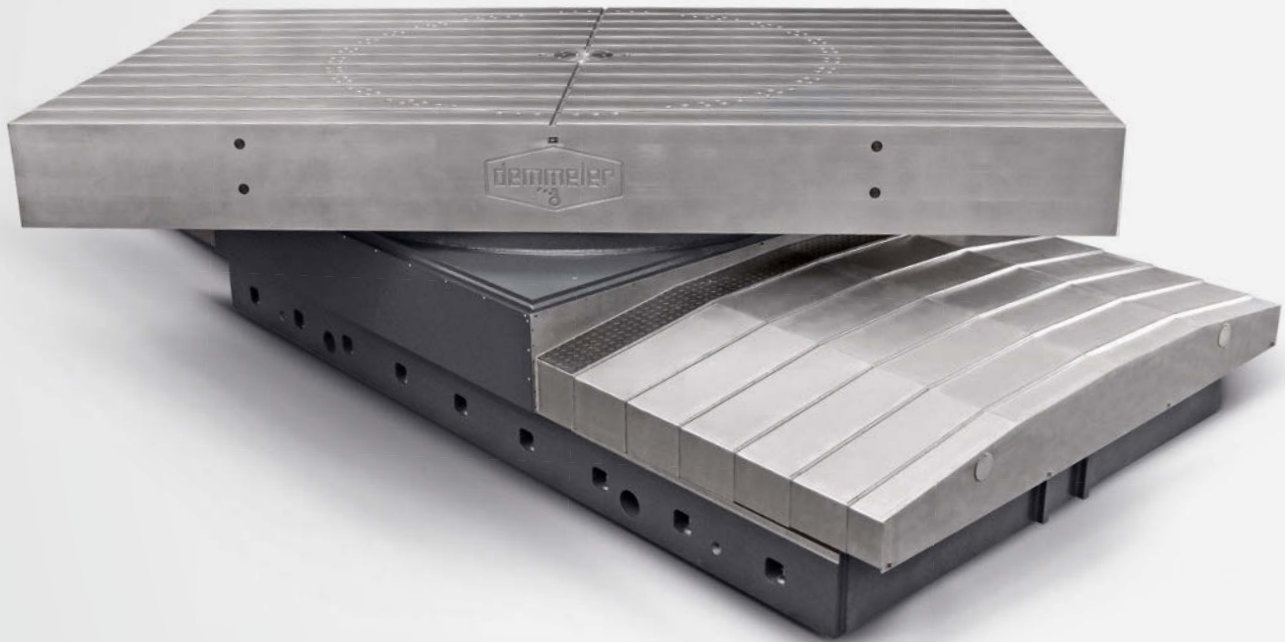
The theoretical loading of our tables is significantly higher. As a rule of thumb: It is not only the additional load that is decisive for durability and precision, but rather the largest possible bearing diameter in relation to the worktop size.

DIMENSIONS DRLTN/S



Rotary sliding tables with hydrostatically mounted rotary and linear axis

Series DRLT **H**



+ Linear axis hydrostatic as standard

The hydrostatics are reliably protected from dirt and emulsion with two covers. The guides are wide and stable in design.



	DRLTH 2500	DRLTH 3000	DRLTH 4000	DRLTH 5000
b1	2500	3000	4000	5000
l1	2500	3000	4000	5000
l2	2700	3200	4300	5500
l3	325	400	450	500
l4	1675	2000	2550	3100
h1	800	900	1000	1200
h2	300	350	400	500
h3	1200	1400	1600	1900

The dimensional data represents approximate values. Worktop size in coordination with the customer. Other dimensions on request!

- Application field: **Milling and drilling**
- Functions: Highly-accurate positioning and high-precision interpolation
- Hydrostatic version of both axes ensures best damping properties and high-precision machining
- Thanks to hydrostatic bearing:
 - very low wearing
 - very high loads possible
 - kind to tool and machine despite very high machining performance
- The best damping properties allow for longer tool lives and highest surface quality
- Hydrostatic surroundings
- Hydraulic clamping in the linear and rotary axis
- Highest rigidity of the entire system

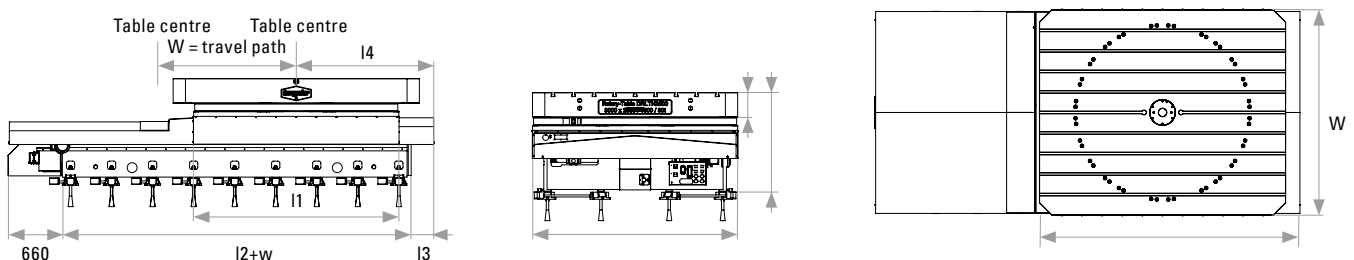


Series	DRLTH 2500	DRLTH 3000	DRLTH 4000	DRLTH 5000
Rotary sliding tables with hydrostatically mounted rotary and linear axis DRLTH				
Max. load in t	80	150	300	500
Worktop size from mm (L × W)	2500 × 2500	3000 × 3000	4000 × 4000	5000 × 5000
Diameter of hydrostatics, outer in mm	2270	2770	3770	4770
Diameter of hydrostatics, centre in mm	–	–	2200	2450
Diameter of hydrostatics, inner in mm	450	450	450	450
Speed max. in rpm (S1/S6)	2.4 / 3.8	1.9 / 3.0	1.4 / 2.2	1.1 / 1.7
Diameter of drive in mm	2270	2770	3770	4770
Tilting moment in Nm	200,000	250,000	300,000	400,000
Tangential moment, clamped in Nm	140,000	240,000	340,000	440,000
Machining moment in Nm (S1/S6)	46,000 / 161,000	75,000 / 187,500	100,000 / 250,000	125,000 / 312,500
W-axis in mm (w)	1500-4000	1500-6000	1500-6000	1500-6000
V max. linear axis in m/min	20	10	8	5
Feed force of linear axis in N	25,000	25,000	50,000	50,000
Number of guideways	2	3	3	4
Axial run-out accuracy at bearing diameter in mm	0.015	0.015	0.02	0.025
Radial run-out accuracy in centre in mm	0.005	0.005	0.005	0.005

Parts accuracy depending on relevant control to $\pm 1''$. Customer-specific requirements such as higher loads, machining moments or permissible mass moments of inertia can be tailored to requirements. Other values are available on request. Subject to technical changes and printing errors.

The theoretical loading of our tables is significantly higher. As a rule of thumb: It is not only the additional load that is decisive for durability and precision, but rather the largest possible bearing diameter in relation to the worktop size.

DIMENSIONS DRLTH



Carousel rotary sliding table with Duo-Drive and roller bearing rotary and linear axis

Series DRCTB / DRCLTB

- Application field: **Turning, grinding, milling and drilling**
- Functions: Rapid turning, highly-accurate positioning and interpolation



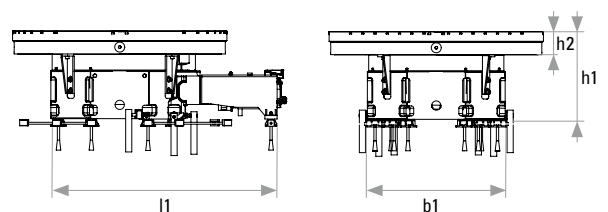
- + Linear axis mounted on roller bearings as standard
- + Linear axis optionally hydrostatic



	DRCTB 1800	DRCTB 2500	DRCLTB 1800	DRCLTB 2500
b1	1800	2500	2270	3000
l1	2960	3300	1800	2500
l2	-	-	2000	2700
l3	-	-	335	335
l4	-	-	1450	1690
h1	1150	1275	-	-
h2	300	300	300	300
h3	-	-	1300	1425
D	2500	300	2500	3000

DIMENSIONS DRCTB

The dimensional data represents approximate values. Worktop size in coordination with the customer. Other dimensions on request!





Series	Without manual gearbox		With manual gearbox	
	DRC(L)TB 1800	DRC(L)TB 2500	DRC(L)TB 1800	DRC(L)TB 2500

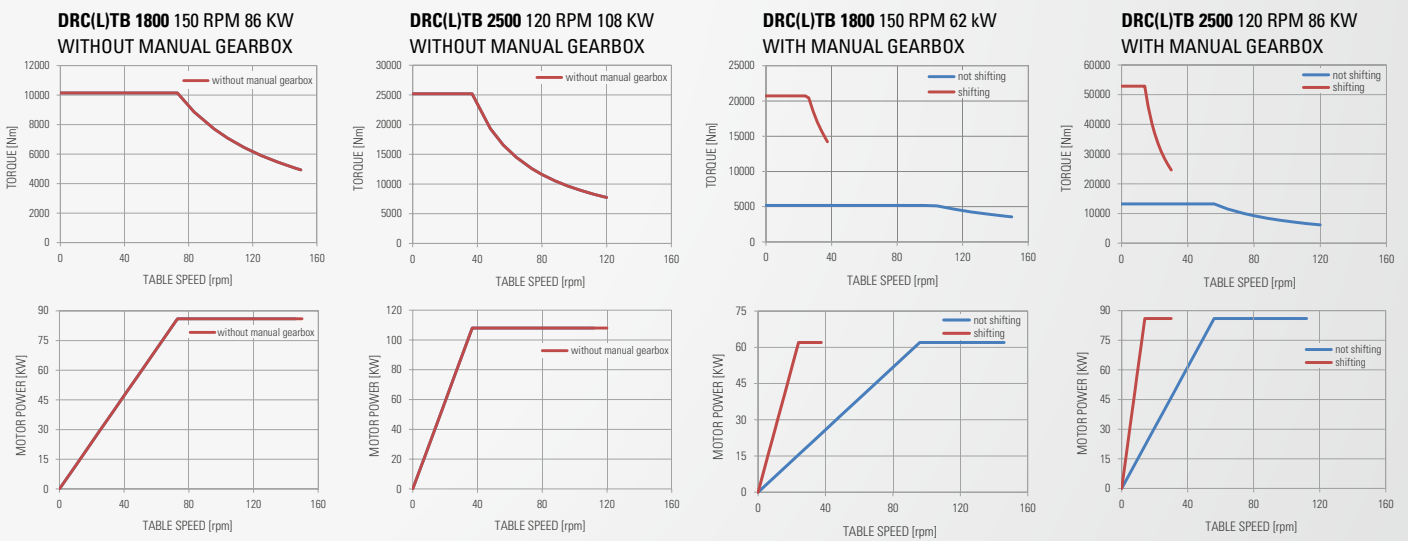
Carousel rotary sliding table with Duo-Drive and roller bearing rotary axis DRCTB

Max. load in t	20	30	20	30
Worktop size from \varnothing mm (D)	2500	3000	2500	3000
Max. speed in rpm. 1:1/1:4 (with and without gear reduction shifting)	150	120	150/37	120/30
Tilting moment in Nm	122,500	140,000	122,500	140,000
Tangential moment, clamped in Nm	80,000	140,000	80,000	140,000
Machining moment in Nm 1:1/1:4 (with and without gear reduction shifting)	10,200	25,200	5200/20,800	13,500/52,869
Axial run-out accuracy at bearing diameter in mm	0.015	0.015	0.015	0.015
Radial run-out accuracy in centre in mm	0.005	0.005	0.005	0.005

Carousel rotary sliding table with Duo-Drive and roller bearing rotary axis and linear axis DRCLTB

W-axis in mm (w)	1000-5000	1500-6000	1000-5000	1500-6000
V max. linear axis in m/min	20	20	20	20
Feed force of linear axis in N	25,000	25,000	25,000	25,000
Number of guideways	2	3	2	3

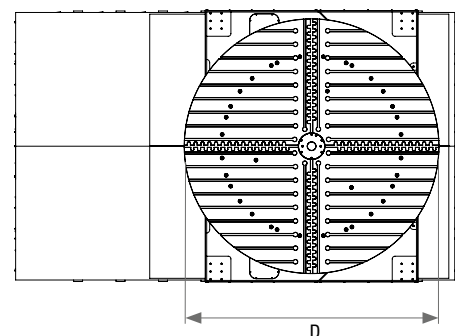
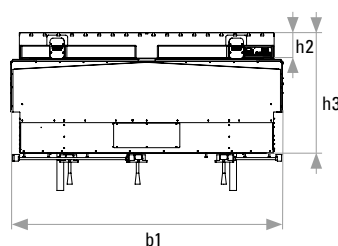
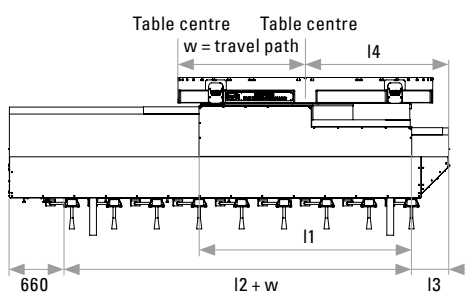
Performance diagrams



Parts accuracy depending on relevant control to $\pm 1''$. Customer-specific requirements such as higher loads, machining moments or permissible mass moments of inertia can be tailored to requirements. Other values are available on request. Subject to technical changes and printing errors.

The theoretical loading of our tables is significantly higher. As a rule of thumb: It is not only the additional load that is decisive for durability and precision, but rather the largest possible bearing diameter in relation to the worktop size.

DIMENSIONS DRCLTB



Carousel rotary sliding table with Duo-Drive, hydrostatically mounted rotary axis and roller bearing linear axis

Series DRCT / DRCLT

- Application field: **Turning, grinding, milling and drilling**
- Functions: Rapid turning, highly-accurate positioning and high-precision interpolation
 > hydrostatic version ensures best damping properties and high-precision machining

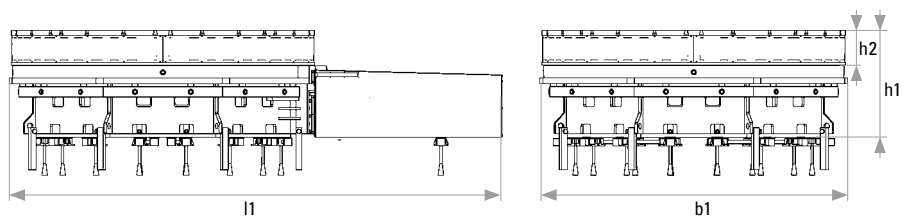


- + Linear axis mounted on roller bearings as standard
- + Linear axis optionally hydrostatic

	DRCT (DRCLT) 3000	DRCT (DRCLT) 4000
b1	3000 (3250)	4000 (4500)
l1	5500 (3250)	6500 (4500)
l2	-(3100)	-(4100)
l3	-(525)	-(550)
l4	-(2075)	-(2700)
h1	1400 (-)	1500 (-)
h2	400 (475)	500 (500)
h3	-(1565)	-(1650)
D	3000 (4300)	5000 (5000)

DIMENSIONS DRCT

The dimensional data represents approximate values. Worktop size in coordination with the customer. Other dimensions on request!





Series	Without manual gearbox		With manual gearbox	
	DRC(L)T 3000	DRC(L)T 4000	DRC(L)T 3000	DRC(L)T 4000

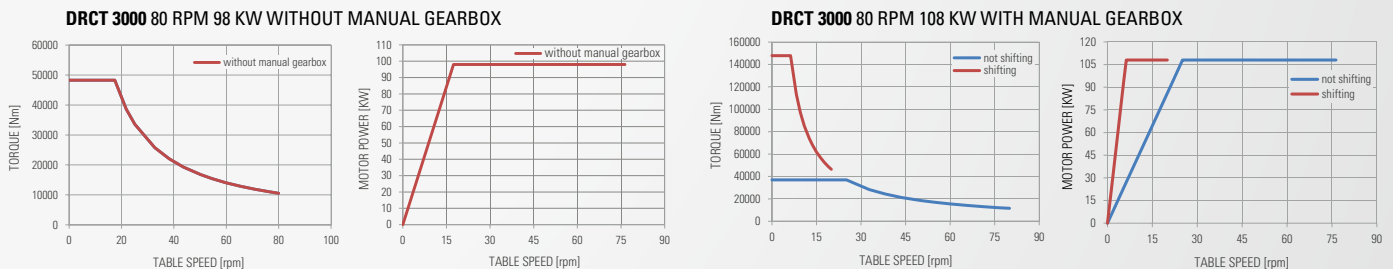
Carousel rotary sliding table with Duo-Drive and hydrostatically mounted rotary axis DRCT

Max. load in t	70	150	70	150
Worktop size from ø mm (D)	3000	4000	3000	4000
Max. speed in rpm. 1:1/1:4 (with and without gear reduction shifting)	80	70	80/20	70/19
Tilting moment in Nm	175,000	225,000	175,000	225,000
Tangential moment, clamped in Nm	240,000	340,000	240,000	340,000
Machining moment in Nm 1:1/1:4 (with and without gear reduction shifting)	48,000	82,000	37,000/148,000	82,000/320,000
Axial run-out accuracy at bearing diameter in mm	0.015	0.015	0.015	0.015
Radial run-out accuracy in centre in mm	0.005	0.005	0.005	0.005

Carousel rotary sliding table with Duo-Drive and hydrostatically mounted rotary axis and linear axis DRCLT

W-axis in mm (w)	1500-6000	1500-6000	1500-6000	1500-6000
V max. linear axis in m/min	10	10	10	10
Feed force of linear axis in N	25,000	25,000	25,000	25,000
Number of guideways	4	4	4	4

Performance diagrams (DRC(L)T 4000 available on request)

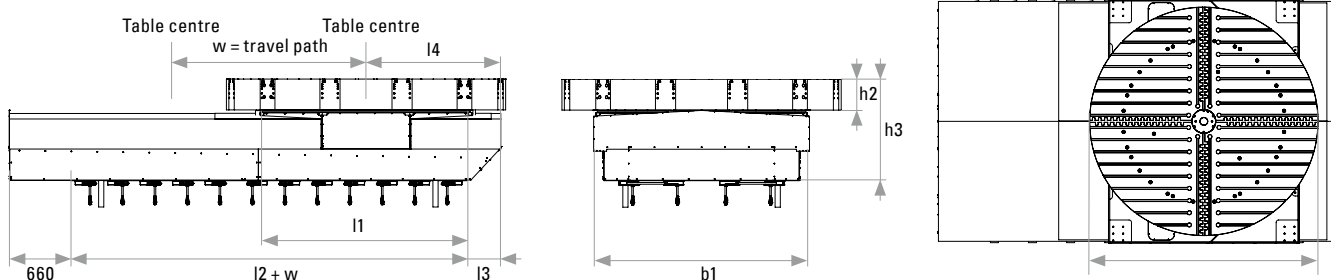


Larger tables available on request.

Parts accuracy depending on relevant control to $\pm 1''$. Customer-specific requirements such as higher loads, machining moments or permissible mass moments of inertia can be tailored to requirements. Other values are available on request. Subject to technical changes and printing errors.

The theoretical loading of our tables is significantly higher. As a rule of thumb: It is not only the additional load that is decisive for durability and precision, but rather the largest possible bearing diameter in relation to the worktop size.

DIMENSIONS DRCLT



Carousel rotary sliding table with direct drive with roller bearing rotary axis and roller bearing linear axis

Series DDRCT / DDRCLT

- Application field: **Turning, grinding, milling and drilling**
- Maximum dynamics, precision and economy
- No mechanical transmission elements, hence no transmission losses
- Low maintenance costs
- Absolute absence of drive play
- High system rigidity
- Dynamic control and very high positioning accuracy
- High power densities ("power from speed") possible
- Nominal torque over a wide speed range
- Compact construction
- Tremendous value for money

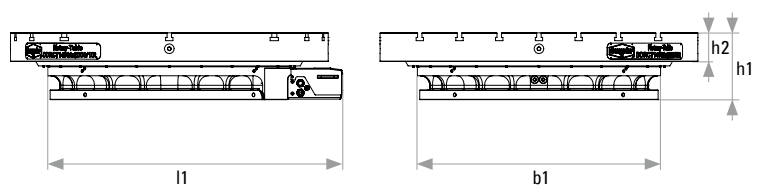


- + Linear axis mounted on roller bearings as standard
- + Linear axis optionally hydrostatic

	DDRCT 1400 Typ1	DDRCT 1400 Typ2
b1	1530	1530
l1	2230	1860
l2	1650	1650
l3	325	325
l4	1150	1150
h1	420	420
h2	180	180
h3	1100	1100

DIMENSIONS DDRCT 1400

The dimensional data represents approximate values. Worktop size in coordination with the customer. Other dimensions on request!





Series	DDRCT 1400 Type 1	DDRCT 1400 Type 2
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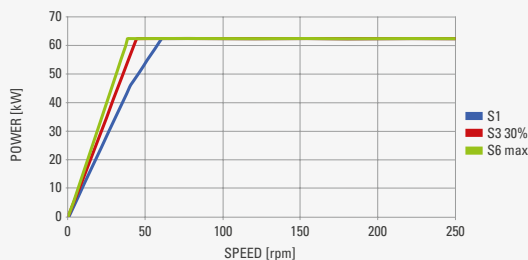
Carousel rotary sliding table with direct drive with roller bearing rotary axis DDRCT

Max. load in t	20	20
Worktop size \varnothing mm (D)	1,500 – 3,000	1,500 – 3,000
Bearing diameter in mm	1,350	1,350
Speed max.	250	60
Diameter of drive in mm	1,350	1,350
Tilting moment in Nm	50,000	50,000
Tangential moment, clamped in Nm	30,000	30,000
Machining moment in Nm (S1/S6)	11,000/14,800	11,000/14,800
Axial run-out accuracy at bearing diameter in mm	0.015	0.015
Radial run-out accuracy in centre in mm	0.005	0.005
Repeat positioning accuracy according to VDI DGQ 3441	$\pm 3''$	$\pm 3''$
Mass moment of inertia	2,500 kg/m ²	2,500 kg/m ²
Acceleration without loading	300°/sec ²	300°/sec ²
Acceleration with maximum loading	200°/sec ²	200°/sec ²

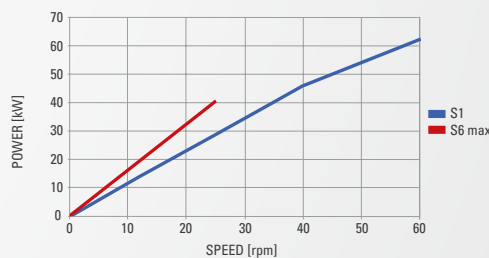
Carousel rotary sliding table with direct drive with roller bearing rotary axis and roller bearing linear axis DDRCLT

V max. linear axis in m/min	20	20
Positioning accuracy of linear axis	0.02	0.02
Feed force of linear axis in N	25,000	25,000
Number of guideways in roller bearing linear axis	2	2

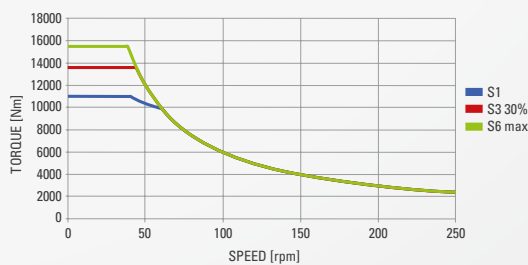
PERFORMANCE DIAGRAM TYPE 1



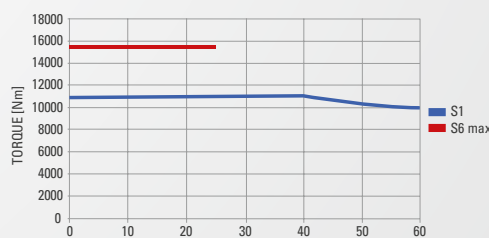
PERFORMANCE DIAGRAM TYPE 2



TORQUE DIAGRAM TYPE 1



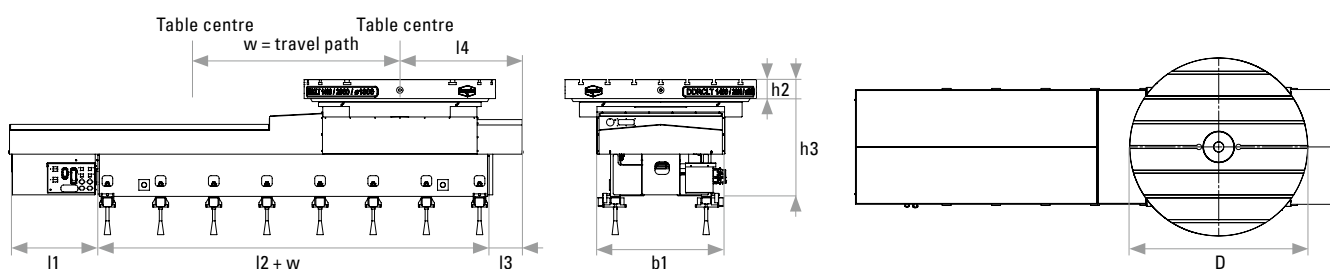
TORQUE DIAGRAM TYPE 2



Parts accuracy depending on relevant control to $\pm 1''$. Customer-specific requirements such as higher loads, machining moments or permissible mass moments of inertia can be tailored to requirements. Other values are available on request. Subject to technical changes and printing errors.

The theoretical loading of our tables is significantly higher. As a rule of thumb: It is not only the additional load that is decisive for durability and precision, but rather the largest possible bearing diameter in relation to the worktop size.

DIMENSIONS DDRCLT 1400



Tilting tables with hydrostatically mounted rotary axis and roller bearing tilting and linear axis

Series DRAT / DRALT



- + Linear axis mounted on roller bearings as standard
- + Linear axis optionally hydrostatic

	DRA(L)T 2500	DRA(L)T 3000	DRA(L)T 4000
b1	2500	3000	4000
l1	2500	3000	4000
l2	2700	3200	4300
l3	325	400	450
l4	1675	2000	2550
h1	800	900	1000
h2	300	350	400
h3	1200	1400	1600

The dimensional data represents approximate values. Worktop size in coordination with the customer. Other dimensions on request!

- Application field: **Milling and drilling**
Three further axes in addition to the machine tool
- The main application involves machining rotor hubs for wind turbine generators and similar components
- Angular adjustment as standard up to 10° (on request up to 90° possible)
- Proven principles with controlled, infinite servo-axes
- Also available without sliding axis



Series	DRA(L)T 2500	DRA(L)T 3000	DRA(L)T 4000
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Tilting tables with hydrostatically mounted rotary axis and roller bearing tilting axis DRAT

Max. load in t	60	100	150
Angular adjustment	10°	10°	10°
Worktop size from mm (W × L)	2500 × 2500	3000 × 3000	4000 × 4000
Diameter of hydrostatics, outer in mm	2270	2770	3770
Diameter of hydrostatics, centre in mm	–	–	2200
Diameter of hydrostatics, inner in mm	450	450	450
Speed max. in rpm (S1/S6)	2.4 / 3.8	1.9 / 3.0	1.4 / 2.2
Diameter of drive in mm	2270	2770	3770
Tilting moment in Nm	200,000	250,000	300,000
Tangential moment, clamped in Nm	140,000	240,000	340,000

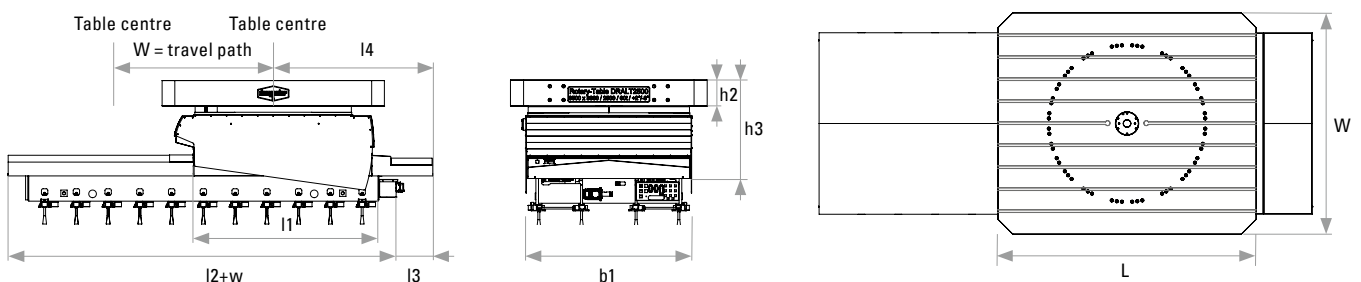
Tilting tables with hydrostatically mounted rotary axis and roller bearing tilting axis and linear axis DRALT

W-axis in mm (w)	1500-4000	1500-6000	1500-6000
V max. linear axis in m/min	20	10	8
Feed force of linear axis in N	25,000	25,000	50,000
Number of guideways	4	4	4

Parts accuracy depending on relevant control to $\pm 1''$. Customer-specific requirements such as higher loads, machining moments or permissible mass moments of inertia can be tailored to requirements. Other values are available on request. Subject to technical changes and printing errors.

The theoretical loading of our tables is significantly higher. As a rule of thumb: It is not only the additional load that is decisive for durability and precision, but rather the largest possible bearing diameter in relation to the worktop size.

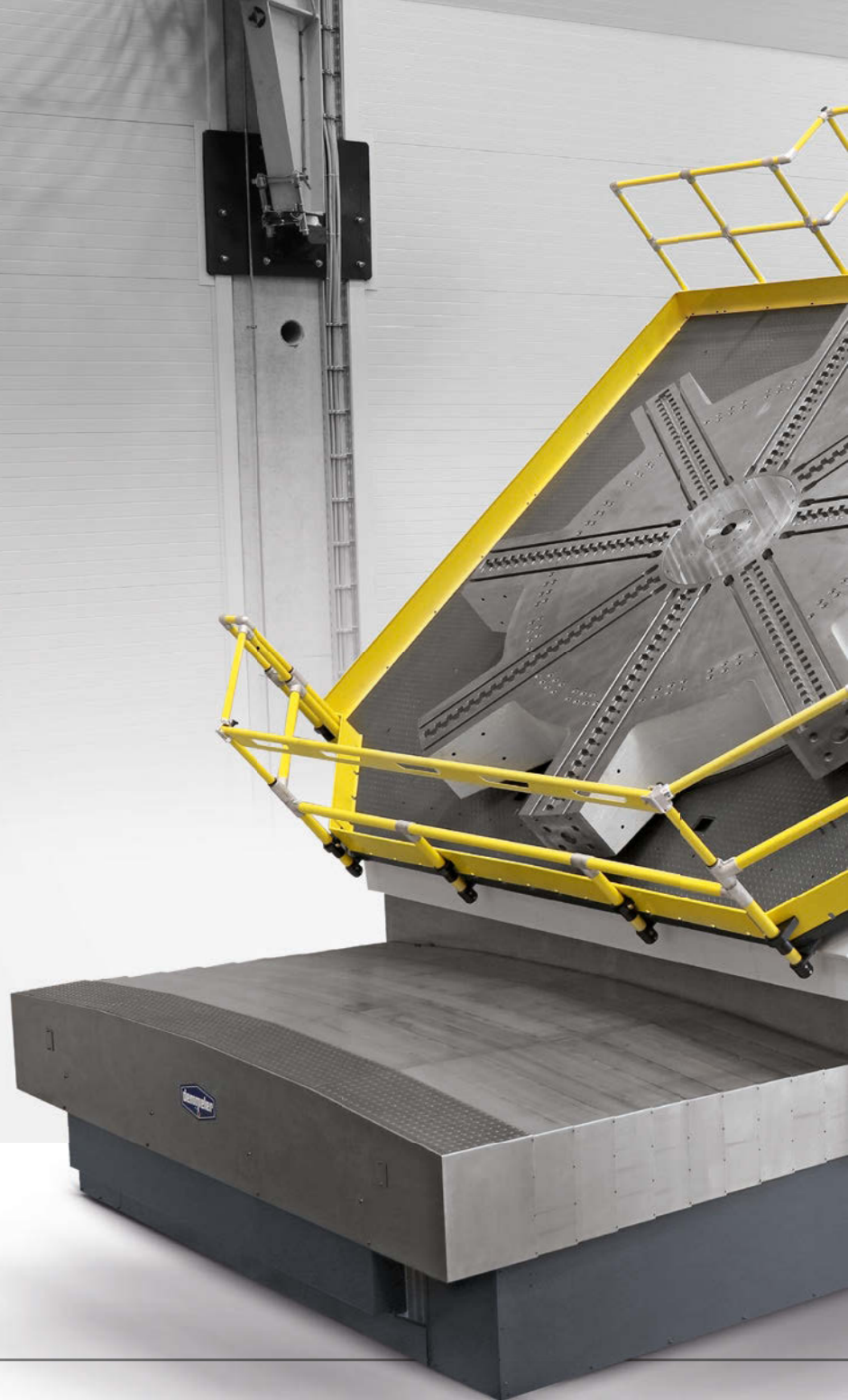
DIMENSIONS DRA(L)T



Special project

DEMMELER Carousel Rotary Table with linear axes and 60° tilting table top

- Application field: **Milling, drilling and turning**
Three further axes in addition to the machine tool
- The main application involves the precise machining of large and complex components
- Angular adjustment up to 60°
- Controlled, infinite servo-axes



DEMMELER Rotary Table with linear axes and tilting table top DRALT 3000/Ø4200/3500/150t/+60°

Specifications

Table top Ø 4,200 mm

Concentric centre bored hole - Ø 100 H7/30 mm deep

Permissible central table load capacity
150,000 kg (0° - Position / Positioning Mode)
100,000 kg (0° - 60° Position / Tilting Mode)

Large dimensioned bearing / Outer diameter - approximately 2,770 mm

Drive of the rotary axis via two motors 2 x 64 KW (128 KW) (Duo-drive, motors are supplied with the table)

Drive diameter - approximately 2,800 mm

Rotating speed 0 - 20 revolutions/min (0° - Position / Positioning Mode)

Rotating speed 0 - 2 revolutions/min (0° - 60° Position / Tilting Mode)

Tangential moment in clamped condition - approximately 240,000 Nm

Tangential moment for cylindrical milling - approximately 30,000 Nm

Permissible tilting moment - approximately 350,000 Nm

Measuring system rotary encoder RCN 8580

Flat running accuracy on D 2,770 mm ±0.025 mm

0°–60°
POSITION /
TILTING MODE:
MAX. LOAD
100,000 KG



Platform secured by telescopic barrier.

- True running accuracy of the centre bored hole ± 0.01 mm
- Included with mechanical $+60^\circ$ positioning system / Precision $\pm 0.005^\circ$ at 100 t load
- The angle adjustment is made by two synchronized units driven by servomotors (synchronous working), motors included
- Two absolute rotary encoders mounted in Tilting Axis for angle adjustment
- Tilting speed approximately $6^\circ / \text{min}$
- Tubes internally of the Rotary-Table would be done with steel-tubes (no hoses)
- Linear axis traverse 3,500 mm
- Large dimensioned linear guide systems for rolling element bearings with 4 guide ways
- Driven by precision re-circulating ball screw and servo motor (motor supplied with the table)
- Axis traverse rate – infinitely variable 0 – 10,000 mm/min
- Feed force 40,000 N
- Linear measuring system – Heidenhain LS 187C including air pressure connection point
- Accuracy of repeatability (Ps average) 0,005 mm
- Positional accuracy 0,01 mm/1,000 mm
- Scale of Linear Axis would be adjustet and calibrated with Laser measurement

NC vertical rotary table

Series DRVT

- Application field: **Milling and drilling**
- Clamping and machining on vertical worktops
- Loads up to 100 t possible
- Worktop size up to approx. 6500 mm
- Optimal cutting removal
- Stable mounting



NC vertical rotary table DRVT

Series	DRVT 1200	DRVT 1800	DRVT 2500	DRVT 3000	DRVT 4000	DRVT 5000
Max. load in t	8	16	20	50	70	100
Worktop size from mm	1200 × 1200	1800 × 1800	2500 × 2500	3000 × 3000	4000 × 4000	6500 × 6500
Diameter of external bearing in mm	1000	1600	2350	2700	3600	4500
Speed max. in rpm (S1/S6)	6.8 / 10.8	4.2 / 6.7	2.9 / 4.6	2.3 / 3.6	1.8 / 2.8	1.4 / 2.4
Diameter of drive in mm	1000	1600	2350	2700	3600	4500
Tilting moment in Nm	80,000	122,500	140,000	175,000	225,000	325,000
Tangential moment, clamped in Nm	50,000	80,000	140,000	240,000	340,000	440,000
Machining moment in Nm (S1/S6)	12,000 / 42,000	26,000 / 63,700	37,000 / 129,500	60,000 / 150,000	80,000 / 200,000	100,000 / 250,000
Axial run-out accuracy at bearing diameter in mm	0.02	0.02	0.025	0.025	0.03	0.03
Radial run-out accuracy in centre in mm	0.01	0.01	0.01	0.01	0.01	0.01

Parts accuracy depending on relevant control to $\pm 1''$. Customer-specific requirements such as higher loads, machining moments or permissible mass moments of inertia can be tailored to requirements. Other values are available on request. Subject to technical changes and printing errors.

The theoretical loading of our tables is significantly higher. As a rule of thumb: It is not only the additional load that is decisive for durability and precision, but rather the largest possible bearing diameter in relation to the worktop size.

Swivel tables

Series DAT

- Application field: **Automation**
- Functions: Enable convenient clamping of workpieces on horizontal worktop. Processing in vertical worktop position
- Optimal cutting removal
- **Version customised to your requirements**



AUTOMATION



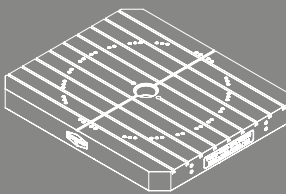
Variable selection of table options

Components and options (on request)

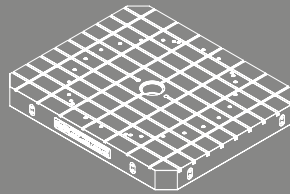
Worktop variants

We supply worktops with the following specifications as standard:

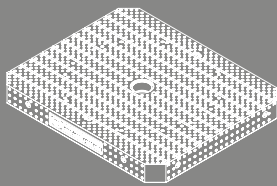
- 1x alignment groove 28H7 centre
 - Clamping grooves 28H12 according to DIN 650 with 250 mm spacing
 - Centring hole centre \varnothing 100H7 / 30 mm deep
- Customer-specific groove designs, cross and star grooves as well as divergent centring holes can be provided at extra expense



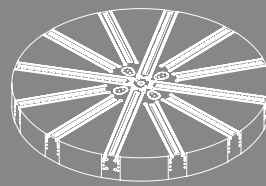
Worktop with T-grooves
in various dimensions and qualities



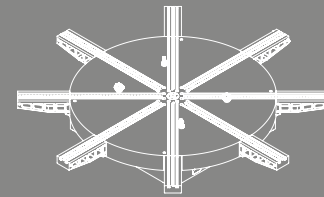
Worktop with centre grooves
can be designed as alignment grooves
with highest accuracy



Worktop with hole grid
suitable for the DEMMELER
3D clamping system for machining



Round worktop
e.g. for carousel rotary tables with star
grooves and grooves for claw boxes



Special worktops
possible on request



Rotary encoders / Measuring systems

- Absolute measuring systems
- Various accuracies e.g. rotary encoder RCN 8580 (32,786 lines), length measurement system Heidenhain LS 187C including sealing air connection
- Available for different controls on request

Rotary transmissions

- Electric up 100 A
- Hydraulic, pneumatic, vacuum
- Combinations possible

Hole variants

- Depending on the size of the rotary table, a central hole is available in various diameters, also large diameters are possible on request
- Shafts can protrude through the rotary table into the base

Additional clamping carriages

- The linear carriages can be equipped with additional clamping carriages
- For highest machining forces

Indexing, supporting and clamping units

- Additional supporting and clamping units for greater stability and precision
- Support including blow-off units
- Transmission of large tangential moments possible

Special designs

DEMMELER can also find the right solution for your application quickly and efficiently.

Our deliveries for
standard components:

SIEMENS

HEIDENHAIN

FANUC

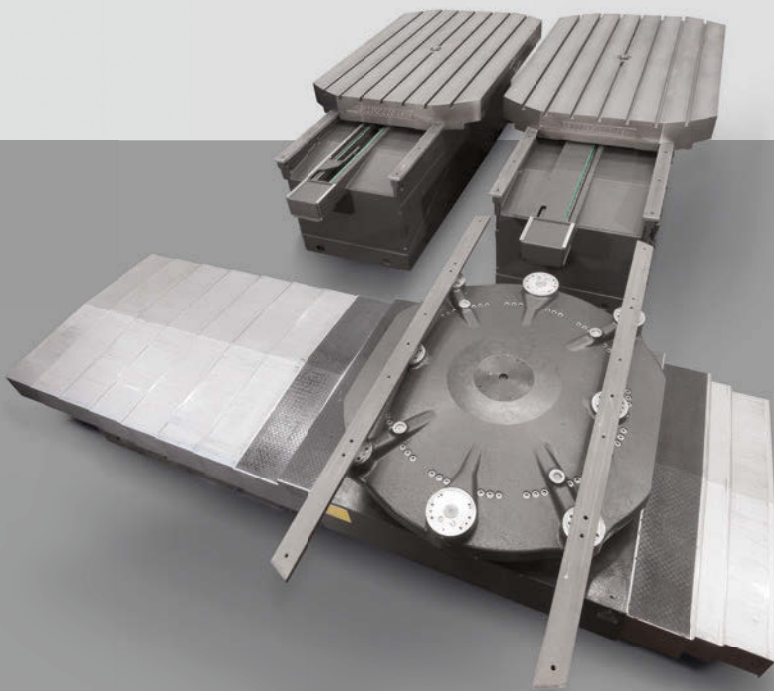
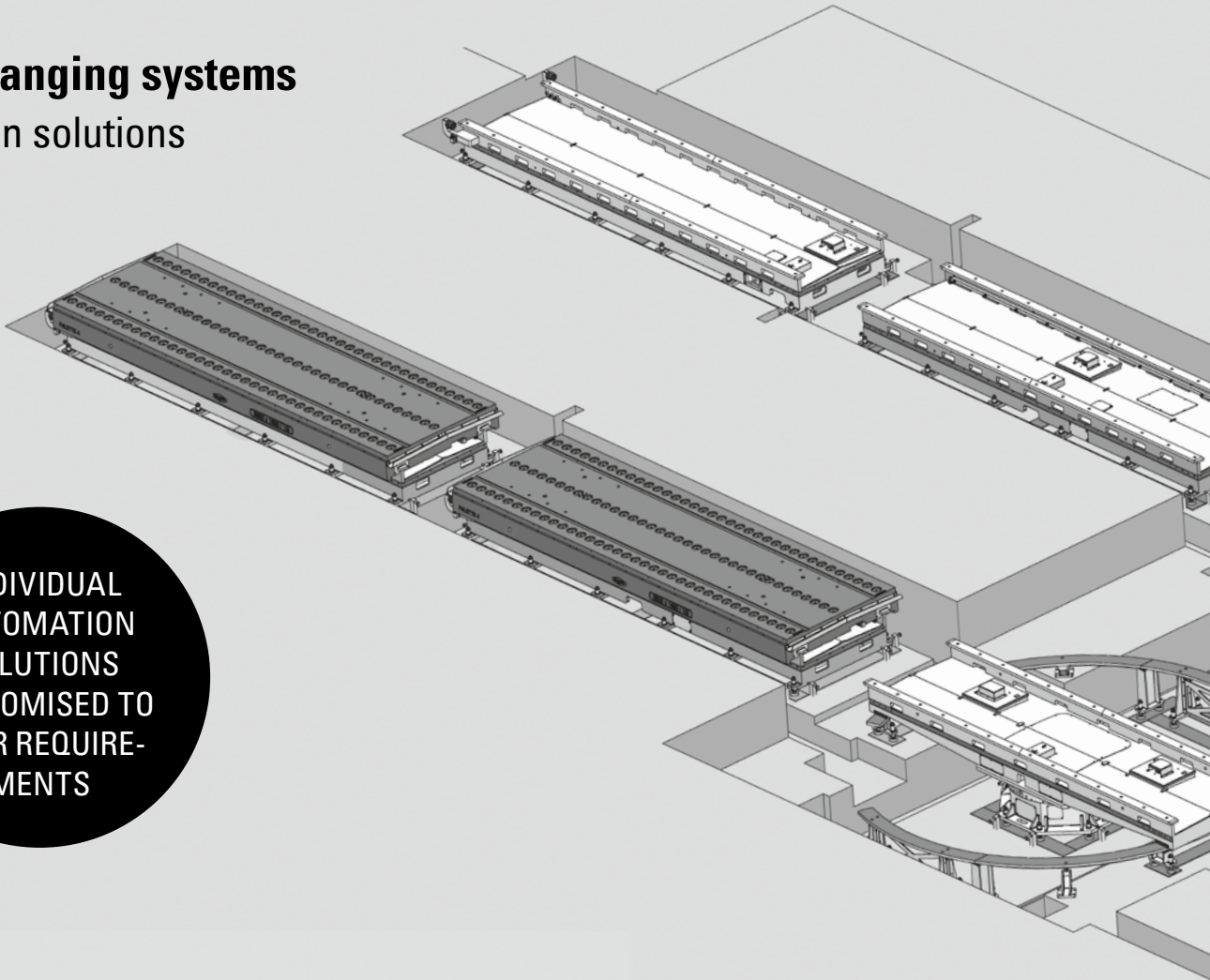


SCHNEEBERGER
LINEAR TECHNOLOGY

Pallet changing systems

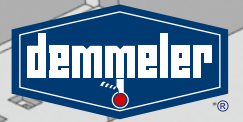
Automation solutions

INDIVIDUAL
AUTOMATION
SOLUTIONS
CUSTOMISED TO
YOUR REQUIRE-
MENTS

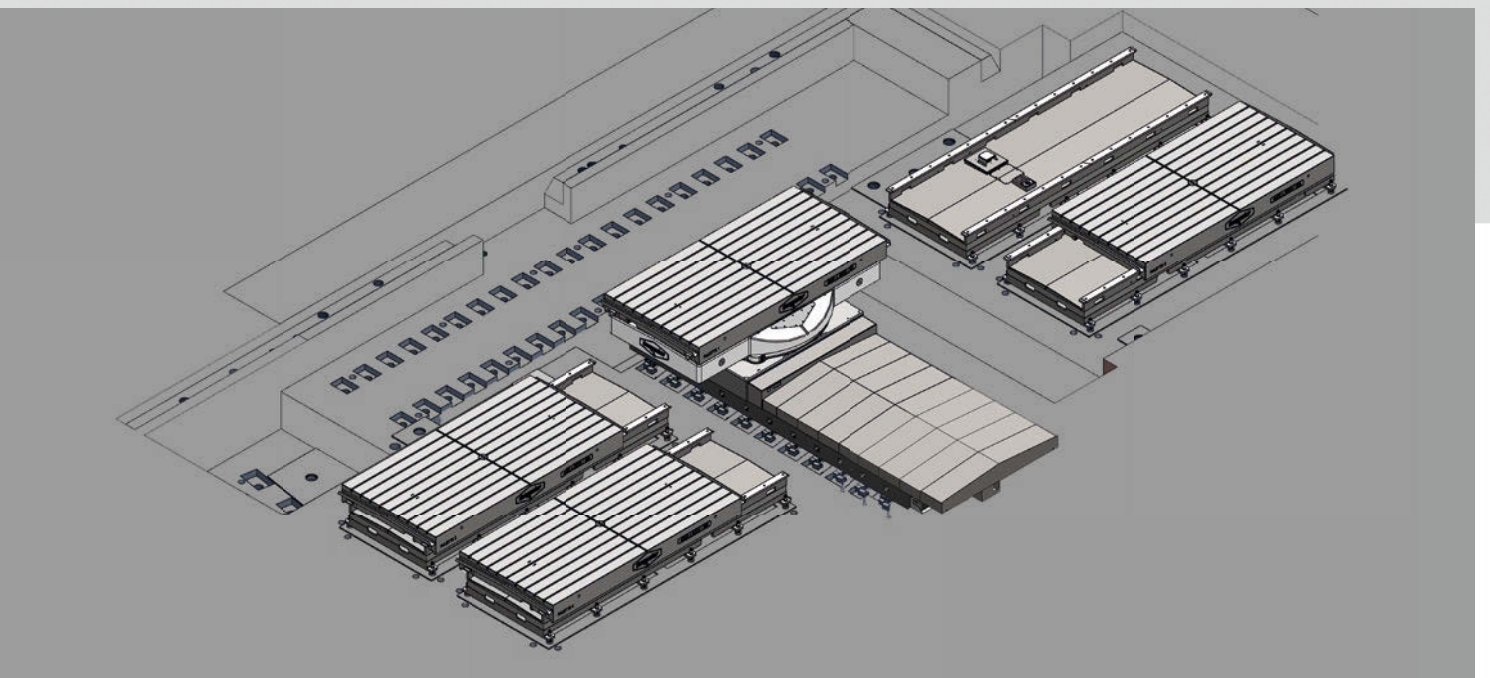
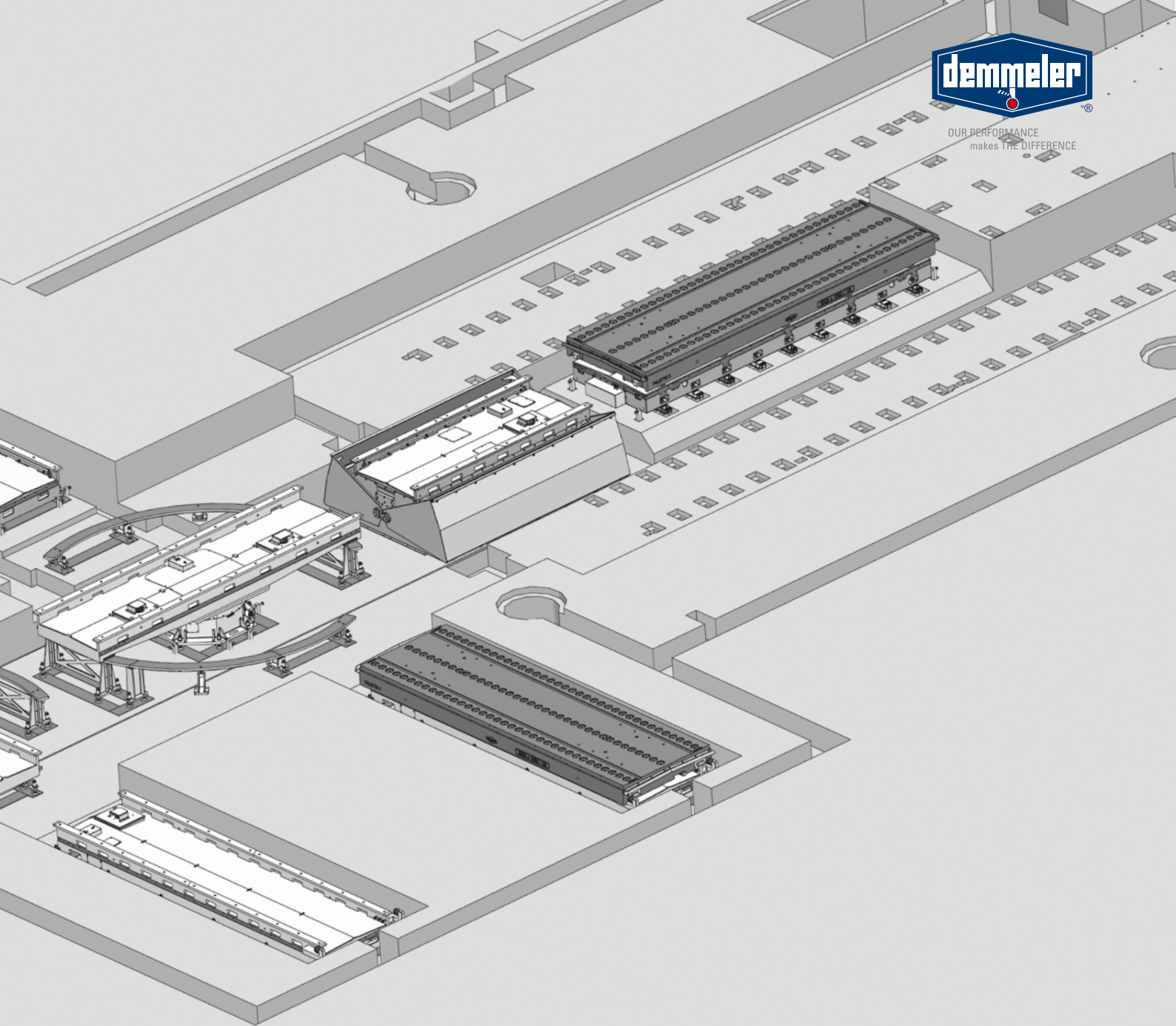


Variable selection of options

- Increase the flexibility and cost-effectiveness of your processing machine with an automation solution from DEMMELER
- Displacement axis of 1,000 m – 5,000 m (Further travel length possible on request)
- Number of pallets from 2 – 10 pieces possible
- Payloads up to 60 t (Higher loads on request)
- Pallet size from 1,500 x 1,500 mm – 6,000 x 3,000 mm possible (Further dimensions available on request)
- Groove dimensions, hole variants etc. possible according to customer requirements



OUR PERFORMANCE
makes THE DIFFERENCE





OUR PERFORMANCE
makes THE DIFFERENCE

3D WELDING TABLES
MANIPULATORS
NC ROTARY AND TURNING TABLES
TOOL ARENAS
CONTRACT MANUFACTURING



PREMIUM QUALITY
MADE IN GERMANY



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