

Selection Guide for CNC Rotary Tables ...



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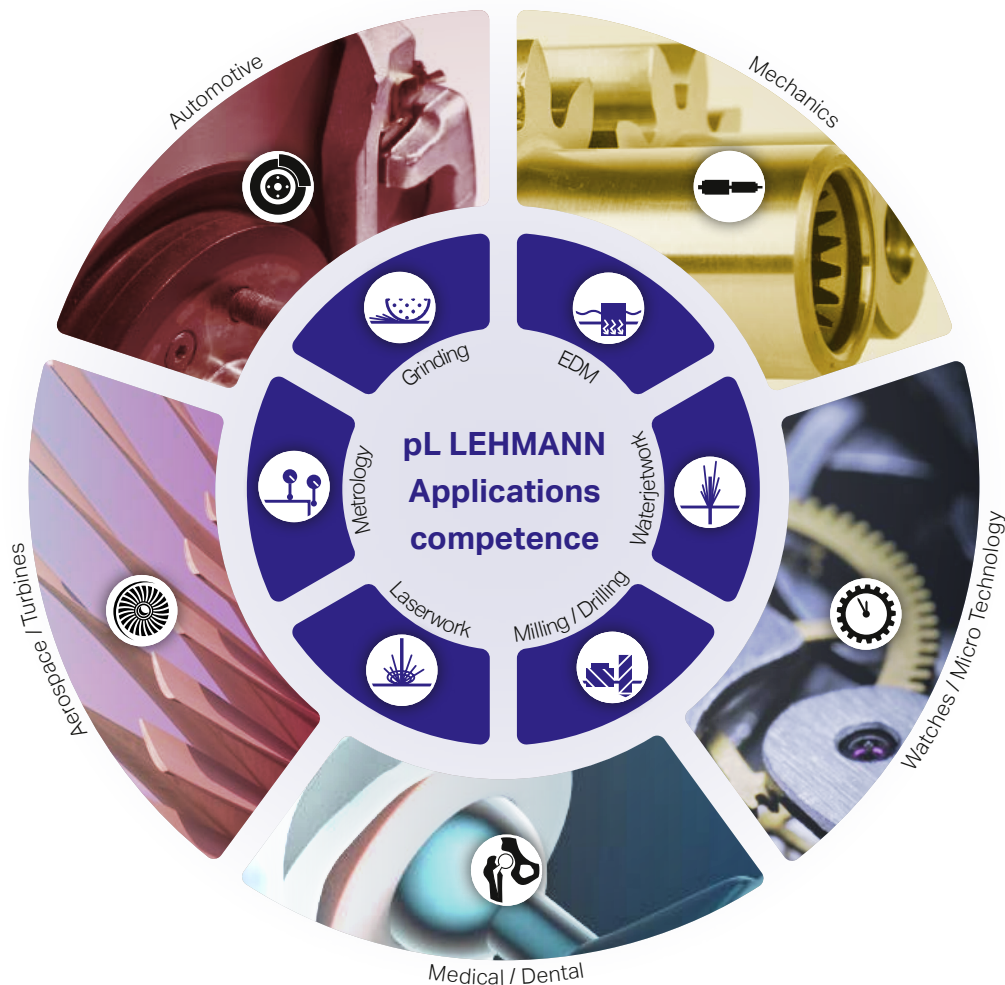


1/2019 | EN



... for VF-Mill- and VF-Rapid-series

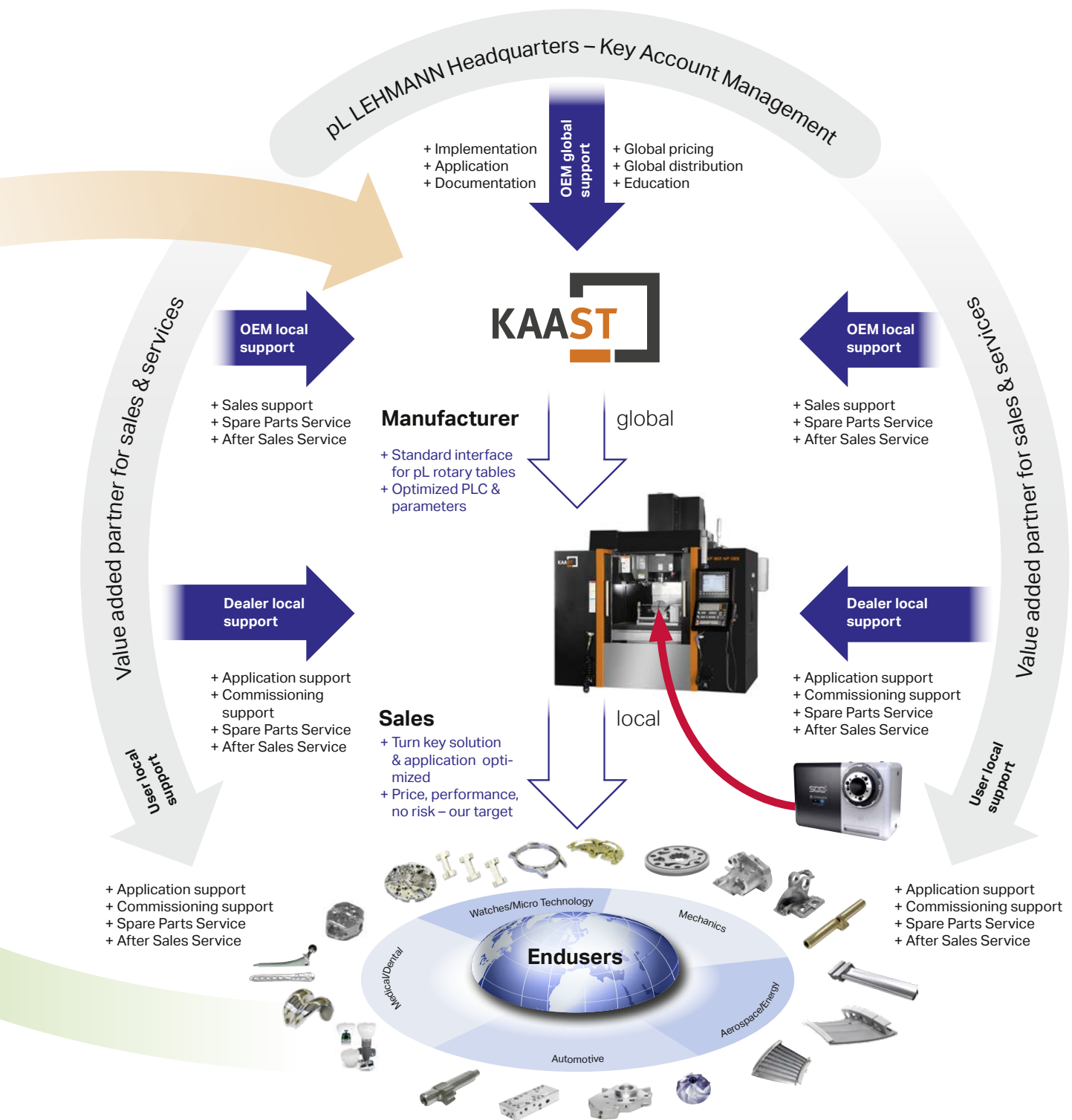
CNC rotary tables for economical manufacturing:
pL LEHMANN has suitable and rational solutions for
nearly every industry



pL rotary tables in use: on over **40** different machine brands
and over **160** different machine models.

pL competence: Integration in **all known** CNC control systems
(Fanuc, Siemens, Heidenhain, Haas, Winmax, Mitsubishi, Brother,
Mazatrol, Okuma ...), for new machines as well as for retrofits

Professional products from professional partners:
KAAST and pL LEHMANN provide
first-class service to common customers



NEW
up to +30 %

Up to **210 rpm**
up to **0.21 sec / 90°**

High speed

Extended travel in
Z- and X-direction

More space

High spindle load,
heavy-duty bearing

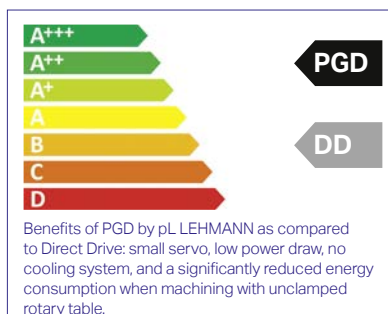
Heavy duty

E-Series



**Rotary tables suitable for
simultaneous operation!**

Save energy



Energy label at the left
An intuitive rating as consumption greatly depends on usage, and without any liability assumed, following the directives on energy labelling

**See main catalog
for more features**

NEW
up to +30 %

High torque

Feed torque up to
850 Nm (provisional)

Adaptability

Multifunctional
spindle HSK

Precision

On the workpiece, as
precise as **2 µm / 100 mm**

NEW
up to +150 %

Pneum. clamping
up to 7,000 Nm

High clamp

Large parts
up to $\varnothing$ 500

Big size

PGD backlash-free
long-life gear unit

No backlash

T-Series



**All base plates
made of steel**

NEW

with integrated hole pattern for
slot spacing of 100 and 125 mm,
integrated alignment system
lineFIX for lengthwise or cross-
wise clamping.

M-Series



NEW

Connectivity

Wireless monitoring,
for operation & service



No adjust

Load change without
parameter adjustment

Less cost

No cooling system,
no hydraulics



VF-Rapid Tap 48.12



VF-Mill HS Duo 1600



VF-Mill Eco 1000



VF-Mill Eco 1500



VF-Mill Eco 1580 Strong

A word from KAAST:

«We at KAAST have decided to cooperate with the company Lehmann for various reasons.

We want to offer our customers in the machining industry holistic and interesting solutions. With the VF-Mill series we offer three-axis machining centers, which can optionally be equipped with the Lehmann 4th or 5th axes. Up to 5-axis simultaneous parts can be manufactured with a very low investment sum!

The Lehmann axes have a high quality and precision with corresponding clamping forces and positioning accuracies. And the compact and space-saving design is another competitive advantage.

These are the convincing advantages that we see as a win-win situation for us and above all for our customers. We jump with Lehmann in the top class and can therefore also present our machines in the multi-axis range.»

The right machine/rotary table combination
for economical production: this Selection
Guide helps you make the right selection

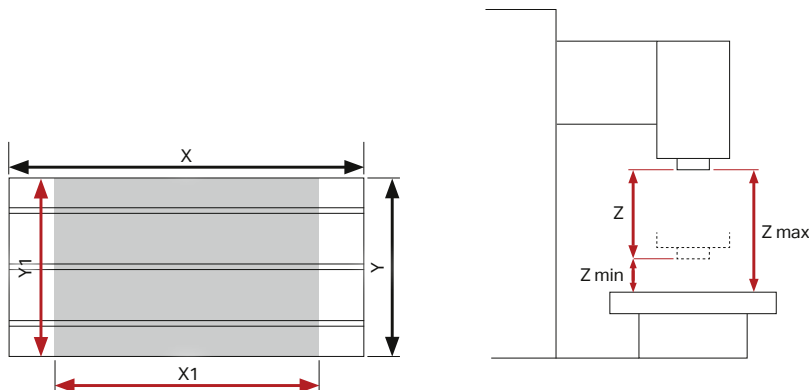


	Table diameter [mm]		Permissible overhang *	Traverse stroke [mm]					Table load ** max [kg]
	X	Y		X1	Y1	Z	Zmin	Zmax	
VF-Mill 2317 Duo	2'300	1'500	10%	2'300	1'600	800	240	1'040	8'000
VF-Mill 3025 Duo	2'100	3'000	10%	3'000	2'500	1'000	105	1'105	8'000
VF-Mill 3317 Duo	1'500	3'300	10%	3'300	1'600	800	240	1'040	10'000
VF-Mill 4025 Duo	2'100	4'000	10%	4'000	2'500	1'000	105	1'105	10'000
VF-Mill ECO 600	750	400	10%	600	400	450	80	530	350
VF-Mill ECO 900	1'000	500	10%	900	550	600	80	680	650
VF-Mill ECO 1000	1'100	500	10%	1'020	520	550	120	670	600
VF-Mill ECO 1100	1'200	550	10%	1'100	600	600	150	750	800
VF-Mill ECO 1155 Strong	1'200	600	10%	1'100	600	560	100	660	850
VF-Mill ECO 1300	1'400	600	10%	1'300	760	670	80	750	1'000
VF-Mill ECO 1500	1'700	600	10%	1'500	760	670	100	770	1'200
VF-Mill ECO 1890 Strong	1'900	900	10%	1'800	900	700	200	900	3'000
VF-Mill ECO Mini	650	300	40%	500	300	400	120	520	200
VF-Mill HP 760	900	420	10%	760	450	520	100	620	350
VF-Mill HP 1165	1'300	600	10%	1'100	650	600	150	750	800
VF-Mill HP 1365	1'500	650	10%	1'300	650	600	150	750	1'000
VF-Mill HS 650 Duo	600	500	10%	600	500	250	80	330	300
VF-Mill HS 1600 Duo	1'700	1'200	10%	1'600	1'300	600	200	800	3'000
VF-Rapid Tap 48.12	700	420	10%	600	400	300	150	450	350

* The recommended rotary tables can overhang the machine table by so many % (e.g. 10 % means: the rotary table length can be greater than dimension Y or X by max. 10 % of the machine width Y with Y-clamping or 10 % of the table length X with X-clamping.)

** The recommended rotary tables do not exceed 50 % of the allowed table load.

Table explanation for pp. 8–11

	EA-507 X2	EA-510 X2	EA-520 X2	EA-530 X2
VF-Mill ECO 600	508	492	466	

Wherever values are listed, the combination is recommended. Empty cells mean that a combination is not possible, because the rotary table is too large, or is not recommended, because the rotary table is disproportionately small or heavier than 50% of the table load.

For further details about the rotary tables, see p. 12 and higher or refer to the main catalog

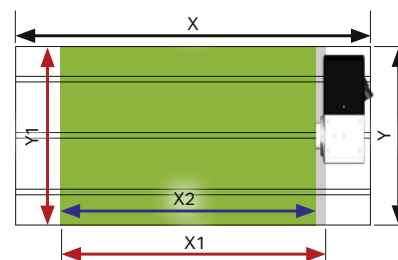


EA-510

EA-520

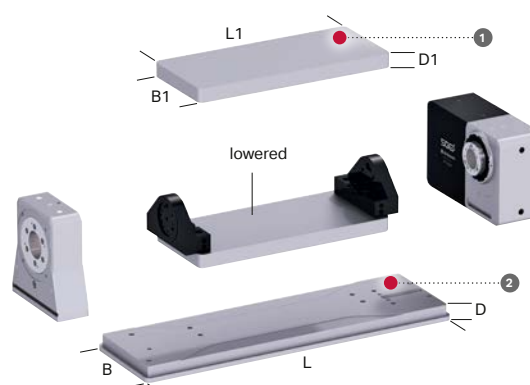
EA-530

	EA-507 X2	EA-510 X2	EA-520 X2	EA-530 X2
VF-Mill 2317 Duo				
VF-Mill 3025 Duo				
VF-Mill 3317 Duo				
VF-Mill 4025 Duo				
VF-Mill ECO 600	508	492	466	
VF-Mill ECO 900	783	767	741	712
VF-Mill ECO 1000	893	877	851	822
VF-Mill ECO 1100	983	967	941	912
VF-Mill ECO 1155 Strong	983	967	941	912
VF-Mill ECO 1300	1'183	1'167	1'141	1'112
VF-Mill ECO 1500	1'433	1'417	1'391	1'362
VF-Mill ECO 1890 Strong				1'612
VF-Mill ECO Mini	408	392	366	
VF-Mill HP 760	663	647	621	
VF-Mill HP 1165	1'033	1'017	991	962
VF-Mill HP 1365		1'217	1'191	1'162
VF-Mill HS 650 Duo	433	417	391	
VF-Mill HS 1600 Duo				
VF-Rapid Tap 48.12	483	467	441	



Rotary table installation with pL clamping claws in accordance with the operating manual

Clamping yokes for EA-type rotary tables



			EA-507		EA-510		EA-520			EA-530	
1 Clamping yokes	Sph	[mm]	190		180		210			218	
	Length L1	[mm]	350	450	500	600	600	700	800	800	1000
	Width B1	[mm]	165		215		270			270	
2 Base plates	Thickness D1	[mm]	20		35		40			40	
	Length L	[mm]	622	722	785	885	916	1016	1116	1172	1372
	Width B	[mm]	168		248		301			368	
Weights / moments of inertia (without rotary table, without counter bearing)	Thickness D	[mm]	30		30		30			38	
	Weight (Al)	[kg]	10	12	23	28	40	45	52	on request	
	Weight (steel)	[kg]	29	34	66	80	117	130	152		
	Mom. inert. (Al)	[kgm ²]	0.02	0.02	0.06	0.07	0.16	0.17	0.21		
	Mom. inert. (steel)	[kgm ²]	0.04	0.05	0.17	0.21	0.46	0.50	0.60		

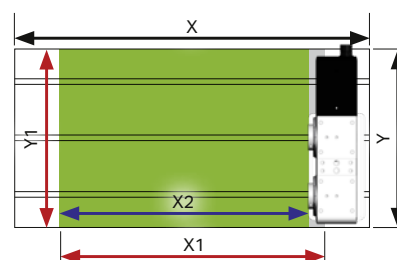
Explanations for pp. 8 to 11

The recommendations are for information purposes only. We recommend that you verify the effective dimensions prior to ordering. Modifications on the machine can lead to collisions and affect the dimensions X2 and Y2.



	M2-507	M2-510	M3-507	M3-510
	X2			
VF-Mill 2317 Duo				
VF-Mill 3025 Duo				
VF-Mill 3317 Duo				
VF-Mill 4025 Duo				
VF-Mill ECO 600				
VF-Mill ECO 900	724	714		
VF-Mill ECO 1000	834	824		
VF-Mill ECO 1100	924	914	924	
VF-Mill ECO 1155 Strong	924	914	924	
VF-Mill ECO 1300	1'124	1'114	1'124	
VF-Mill ECO 1500	1'374	1'364	1'374	
VF-Mill ECO 1890 Strong	1'624	1'614	1'624	1'614
VF-Mill ECO Mini				
VF-Mill HP 760	604			
VF-Mill HP 1165	974	964	974	
VF-Mill HP 1365	1'174	1'164	1'174	1'164
VF-Mill HS 650 Duo	374	364		
VF-Mill HS 1600 Duo				1'414
VF-Rapid Tap 48.12	424			

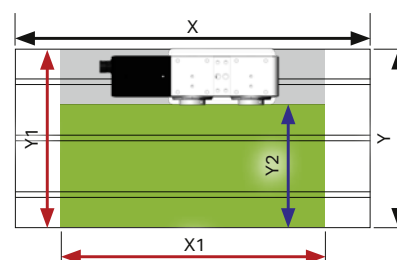
Y-mounting



Rotary table installation with pL clamping claws in accordance with the operating manual

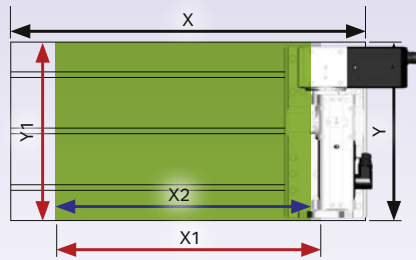
	M2-507	M2-510	M3-507	M3-510
	Y2			
VF-Mill 2317 Duo				
VF-Mill 3025 Duo				
VF-Mill 3317 Duo				
VF-Mill 4025 Duo				
VF-Mill ECO 600	174	164	174	164
VF-Mill ECO 900			299	289
VF-Mill ECO 1000			284	274
VF-Mill ECO 1100				339
VF-Mill ECO 1155 Strong				364
VF-Mill ECO 1300				
VF-Mill ECO 1500				
VF-Mill ECO 1890 Strong				
VF-Mill ECO Mini	74	64	74	
VF-Mill HP 760		199	209	199
VF-Mill HP 1165				389
VF-Mill HP 1365				
VF-Mill HS 650 Duo			274	
VF-Mill HS 1600 Duo				
VF-Rapid Tap 48.12		174	184	174

X-mounting



Rotary table installation with pL clamping claws in accordance with the operating manual

Y-mounting



Rotary table installation using hole pattern in base plate



TIP1



TAP1

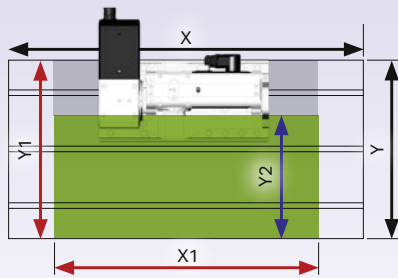


TOP1.2

	TIP1c TF-507510 X2	TIP2c TF-510520 X2	TIP3c TF-520530 X2	TAP1c T1-507510 X2	TAP2c T1-510520 X2	TAP3c T1-520530 X2	TAP1 T1-507510 X2	TAP2 T1-510520 X2	TAP3 T1-520530 X2	TOP1 T1-507510 X2
VF-Mill 2317 Duo									2'076	
VF-Mill 3025 Duo										
VF-Mill 3317 Duo										
VF-Mill 4025 Duo										
VF-Mill ECO 600										
VF-Mill ECO 900	820	776		780						
VF-Mill ECO 1000	930	886		890						
VF-Mill ECO 1100	1'020	976		980	960		980			
VF-Mill ECO 1155 Strong	1'020	976	956	980	960		980	960		980
VF-Mill ECO 1300	1'220	1'176	1'156	1'180	1'160		1'180	1'160		1'180
VF-Mill ECO 1500	1'470	1'426	1'406	1'430	1'410		1'430	1'410		1'430
VF-Mill ECO 1890 Strong	1'720	1'676	1'656	1'680	1'660	1'626	1'680	1'660	1'626	1'680
VF-Mill ECO Mini										
VF-Mill HP 760										
VF-Mill HP 1165	1'070	1'026	1'006	1'030	1'010		1'030	1'010		1'030
VF-Mill HP 1365	1'270	1'226	1'206	1'230	1'210	1'176	1'230	1'210		1'230
VF-Mill HS 650 Duo	470	426		430						
VF-Mill HS 1600 Duo			1'456			1'426		1'460	1'426	1'480
VF-Rapid Tap 48.12										

	TOP2 T1-510520 X2	TOP3 T1-520530 X2	TAP1c.2 T1-507510 X2	TAP2c.2 T1-510520 X2	TAP3c.2 T1-520530 X2	TAP1.2 T1-507510 X2	TAP2.2 T1-510520 X2	TAP3.2 T1-520530 X2	TOP1.2 T2-507510 X2	TOP2.2 T2-510520 X2	TOP3.2 T2-520530 X2
VF-Mill 2317 Duo		2'076		2'110	2'076		2'110	2'076		2'110	2'076
VF-Mill 3025 Duo											
VF-Mill 3317 Duo											
VF-Mill 4025 Duo											
VF-Mill ECO 600											
VF-Mill ECO 900											
VF-Mill ECO 1000											
VF-Mill ECO 1100											
VF-Mill ECO 1155 Strong			980								
VF-Mill ECO 1300			1'180								
VF-Mill ECO 1500			1'430								
VF-Mill ECO 1890 Strong	1'660	1'626	1'680	1'660		1'680	1'660		1'680	1'660	
VF-Mill ECO Mini											
VF-Mill HP 760											
VF-Mill HP 1165			1'030								
VF-Mill HP 1365	1'210		1'230			1'230					
VF-Mill HS 650 Duo											
VF-Mill HS 1600 Duo	1'460	1'426	1'480	1'460	1'426	1'480	1'460	1'426	1'480	1'460	1'426
VF-Rapid Tap 48.12											

X-mounting



Rotary table installation using hole pattern in base plate



TIP1



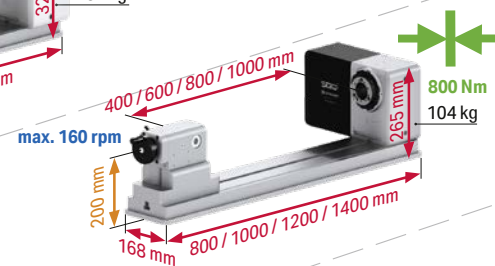
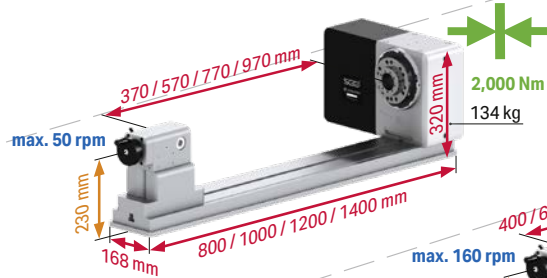
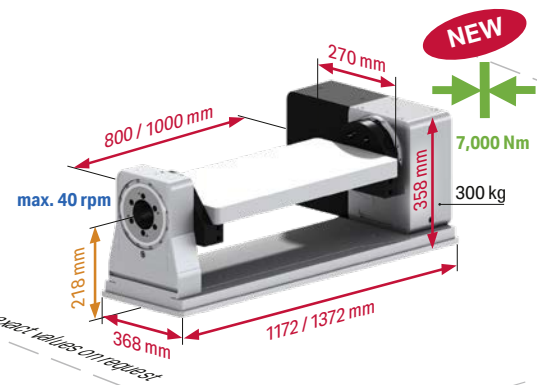
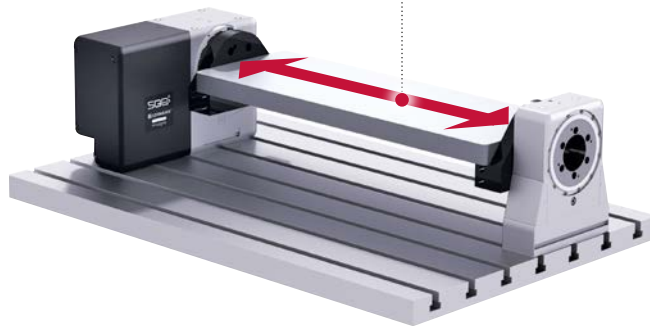
TAP1



TOP1.2

	TIP1c TF-507510 Y2	TIP2c TF-510520 Y2	TIP3c TF-520530 Y2	TAP1c T1-507510 Y2	TAP2c T1-510520 Y2	TAP3c T1-520530 Y2	TAP1 T1-507510 Y2	TAP2 T1-510520 Y2	TAP3 T1-520530 Y2	TOP1 T1-507510 Y2
VF-Mill 2317 Duo										
VF-Mill 3025 Duo										
VF-Mill 3317 Duo									2'226	
VF-Mill 4025 Duo										
VF-Mill ECO 600	270	226		230	210		230	210		230
VF-Mill ECO 900			331		335	301	355	335	301	355
VF-Mill ECO 1000			316		320	286	340	320	286	340
VF-Mill ECO 1100			381			351		385	351	405
VF-Mill ECO 1155 Strong						376			376	
VF-Mill ECO 1300									456	
VF-Mill ECO 1500										
VF-Mill ECO 1890 Strong										
VF-Mill ECO Mini	170	126		130			130			130
VF-Mill HP 760	305	261		265	245		265	245		265
VF-Mill HP 1165						401			401	
VF-Mill HP 1365									426	
VF-Mill HS 650 Duo					310		330			330
VF-Mill HS 1600 Duo										
VF-Rapid Tap 48.12	280	236		240	220		240	220		240

	TOP2 T1-510520 Y2	TOP3 T1-520530 Y2	TAP1c.2 T1-507510 Y2	TAP2c.2 T1-510520 Y2	TAP3c.2 T1-520530 Y2	TAP1.2 T1-507510 Y2	TAP2.2 T1-510520 Y2	TAP3.2 T1-520530 Y2	TOP1.2 T2-507510 Y2	TOP2.2 T2-510520 Y2	TOP3.2 T2-520530 Y2
VF-Mill 2317 Duo											
VF-Mill 3025 Duo					2'526			2'526			2'526
VF-Mill 3317 Duo		2'226		2'260	2'226		2'260	2'226		2'260	2'226
VF-Mill 4025 Duo					3'026			3'026			3'026
VF-Mill ECO 600	210		230	210		230			230		
VF-Mill ECO 900	335	301	355	335		355	335		355	335	
VF-Mill ECO 1000	320		340	320	286	340	320		340	320	
VF-Mill ECO 1100	385	351	405	385	351	405	385	351	405	385	351
VF-Mill ECO 1155 Strong	410	376		410	376	430	410	376	430	410	376
VF-Mill ECO 1300	490	456		490	456	510	490	456	510	490	456
VF-Mill ECO 1500					456		490	456		490	456
VF-Mill ECO 1890 Strong					676			676			676
VF-Mill ECO Mini			130			130					
VF-Mill HP 760	245		265	245		265	245		265	245	
VF-Mill HP 1165	435	401		435	401	455	435	401	455	435	401
VF-Mill HP 1365		426		460	426		460	426		460	426
VF-Mill HS 650 Duo			330								
VF-Mill HS 1600 Duo											
VF-Rapid Tap 48.12	220		240			240			240		



530

520

51x

50x

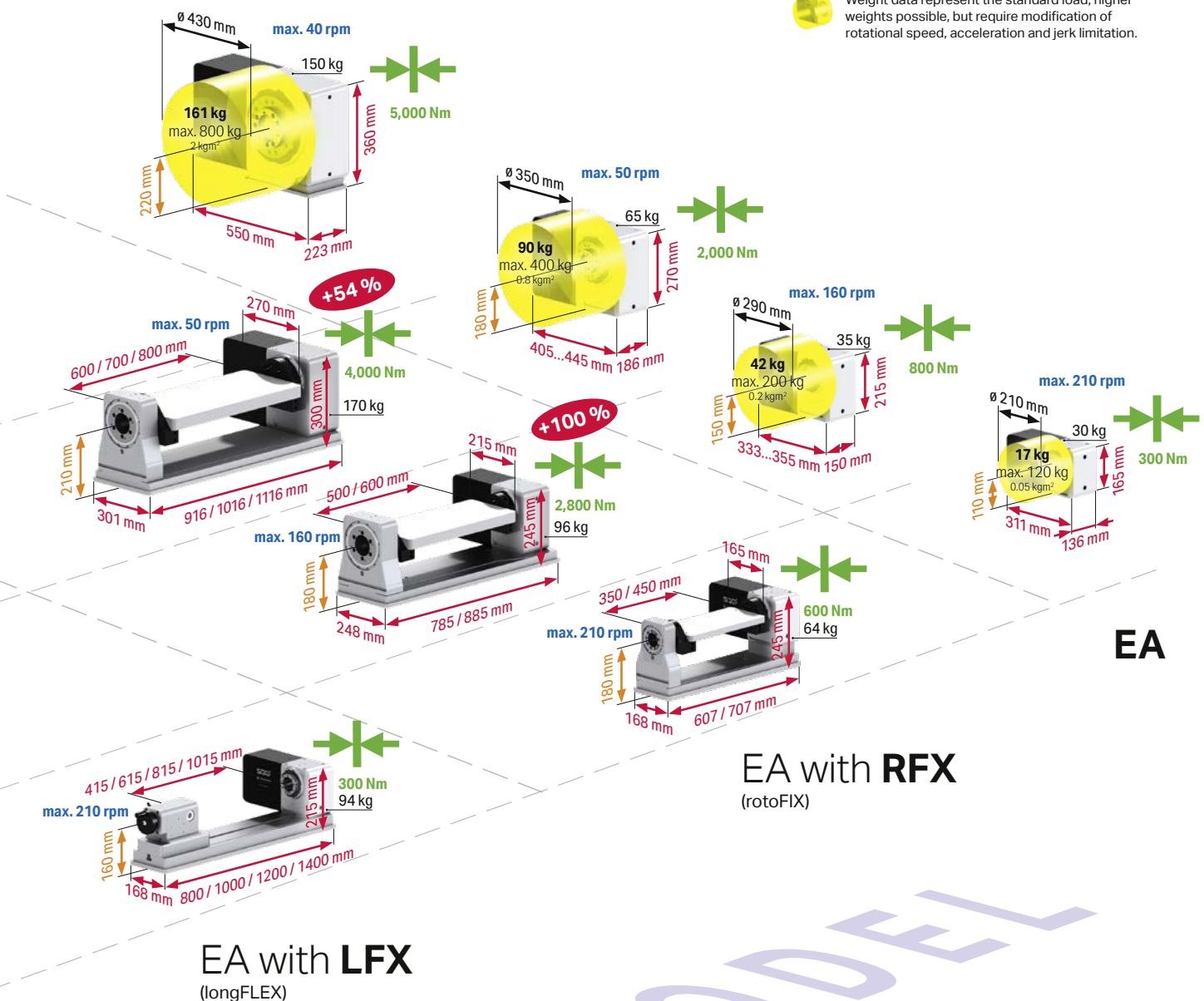
SIZE

News in brief

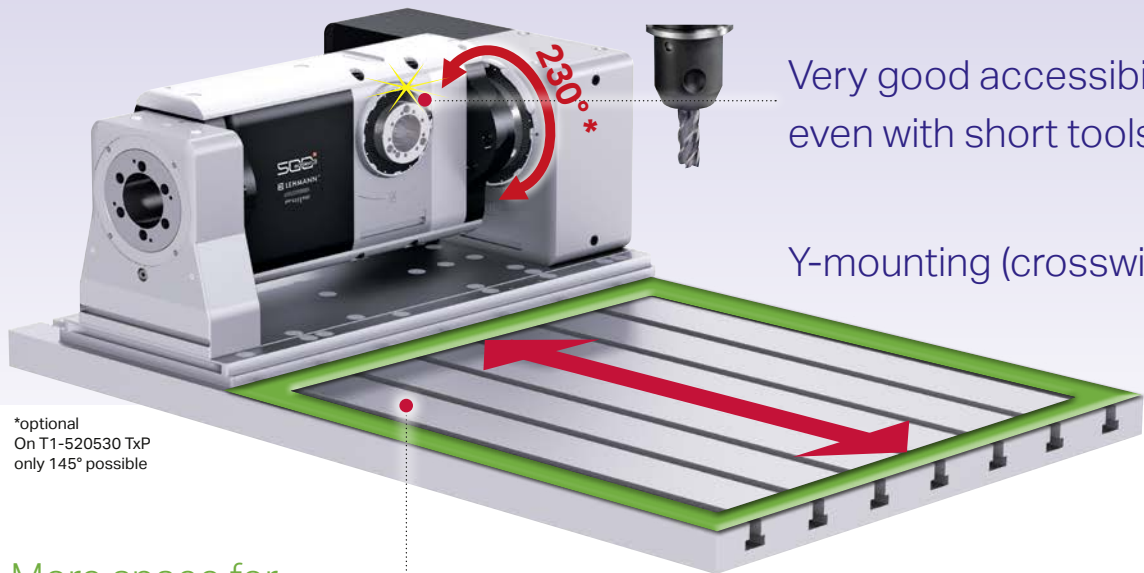
1. High speed up to **210 rpm**
2. Feed torque up to **850 Nm** (tentative)
3. Steel base plates with hole pattern (suitable for slot spacing of 100 and 125 mm)
4. Cycle time **90°** as fast as **0.21 sec.**



Weight data represent the standard load; higher weights possible, but require modification of rotational speed, acceleration and jerk limitation.



50x	507 (standard) or 508 (high speed)
51x	510 (standard) or 511 (high speed)
EA	single-axis, single-spindle CNC rotary table
rotoFIX	modular clamping yoke system
longFLEX	modular shaft clamping system

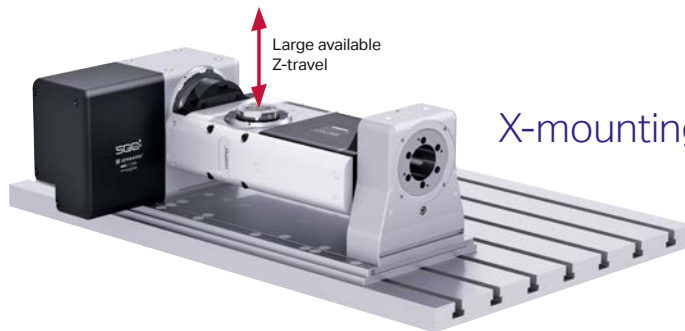


Very good accessibility,
even with short tools

Y-mounting (crosswise)

*optional
On T1-520530 TxP
only 145° possible

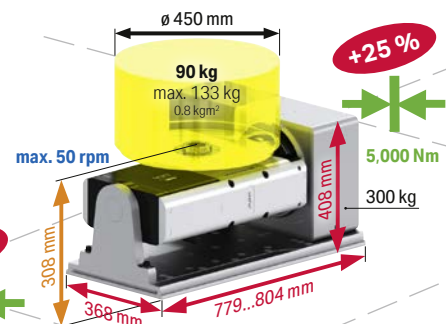
More space for
workpiece and fixtures



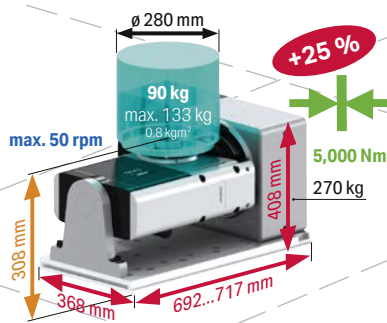
X-mounting (lengthwise)

T1

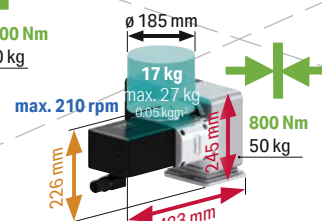
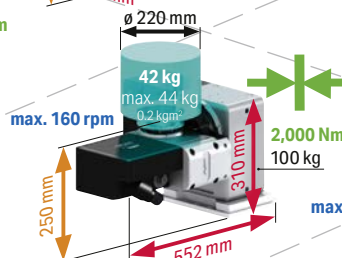
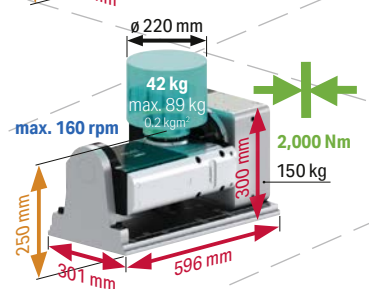
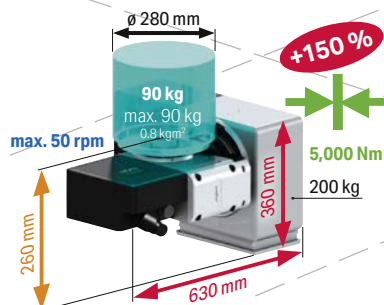
T1



T1



TF



TIPc
(compact)

520530

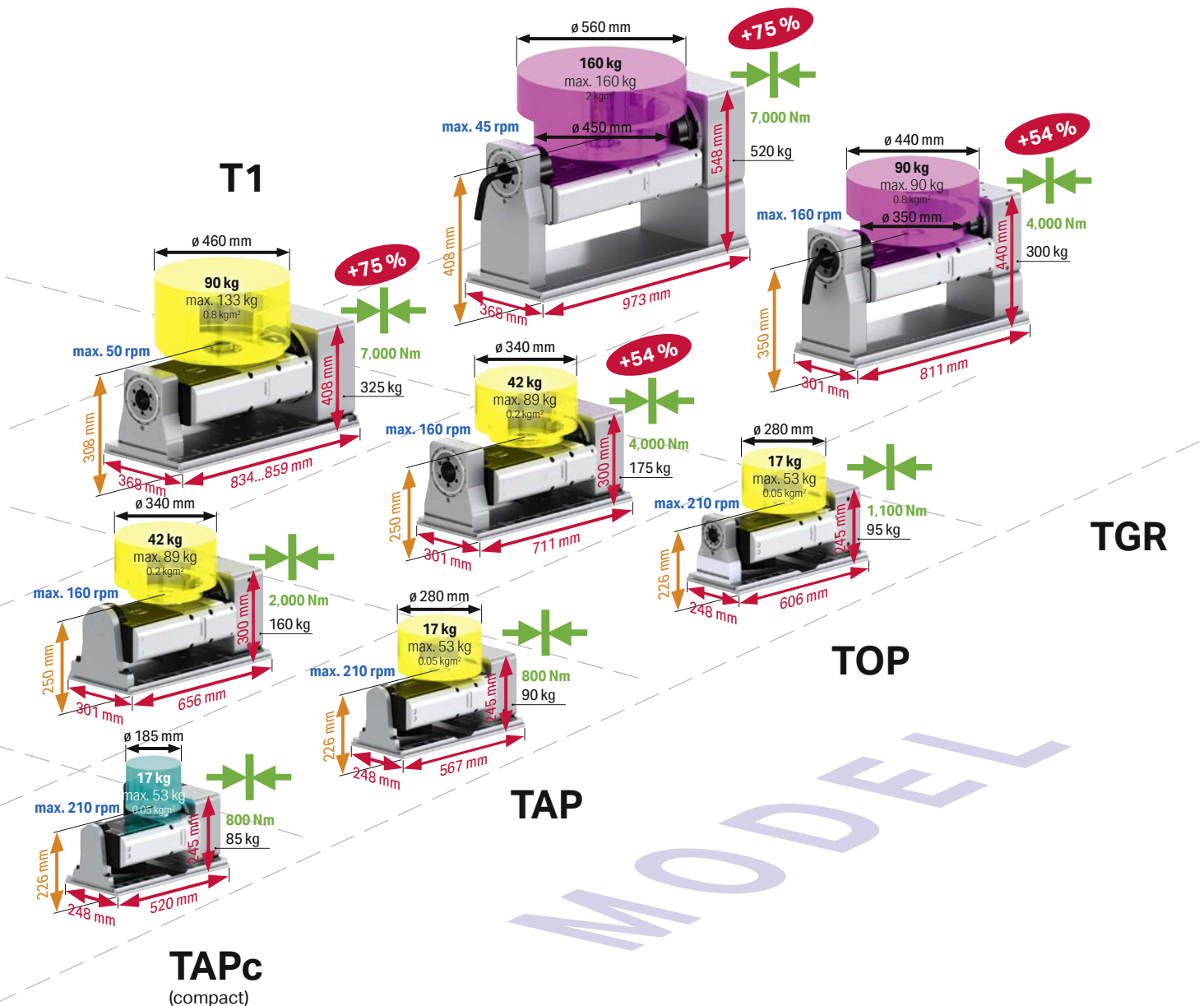
51x520

SIZE

50x510

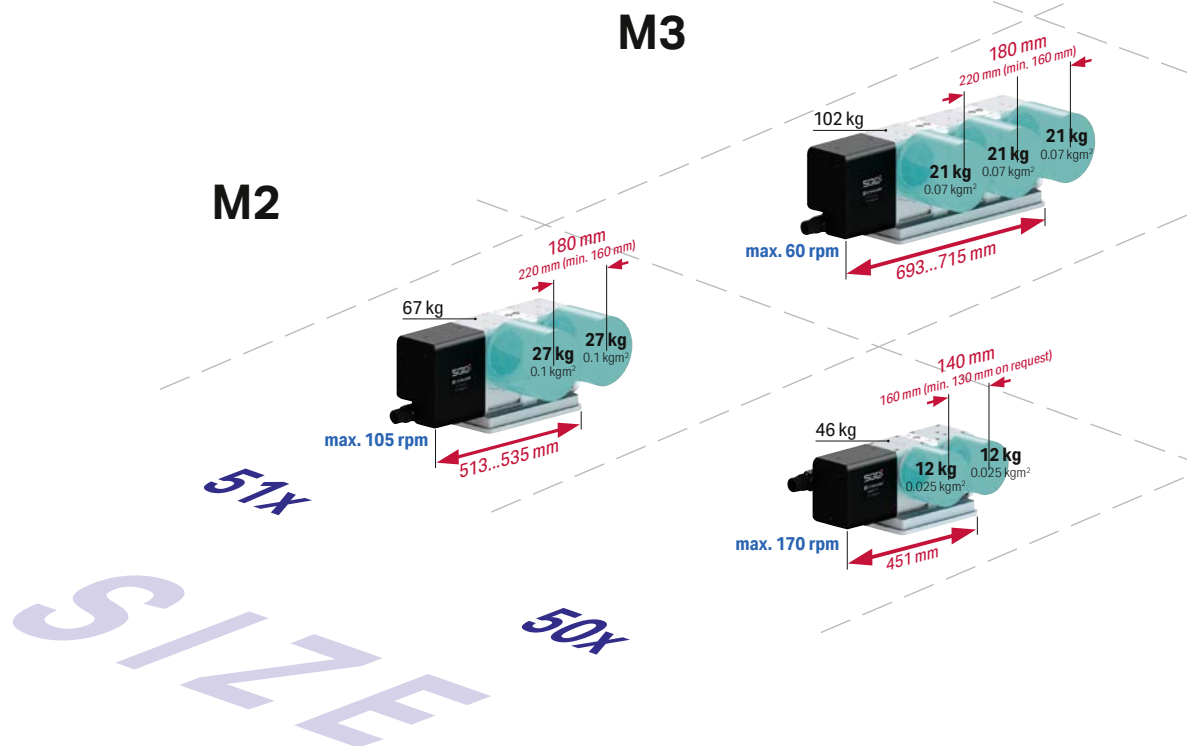
News in brief

1. Up to **150 %** higher clamping torque in tilting axis
2. Fewer variant – more solution
3. Larger workpiece $\varnothing$ possible
4. Spatially optimized arrangement of the dividing axis



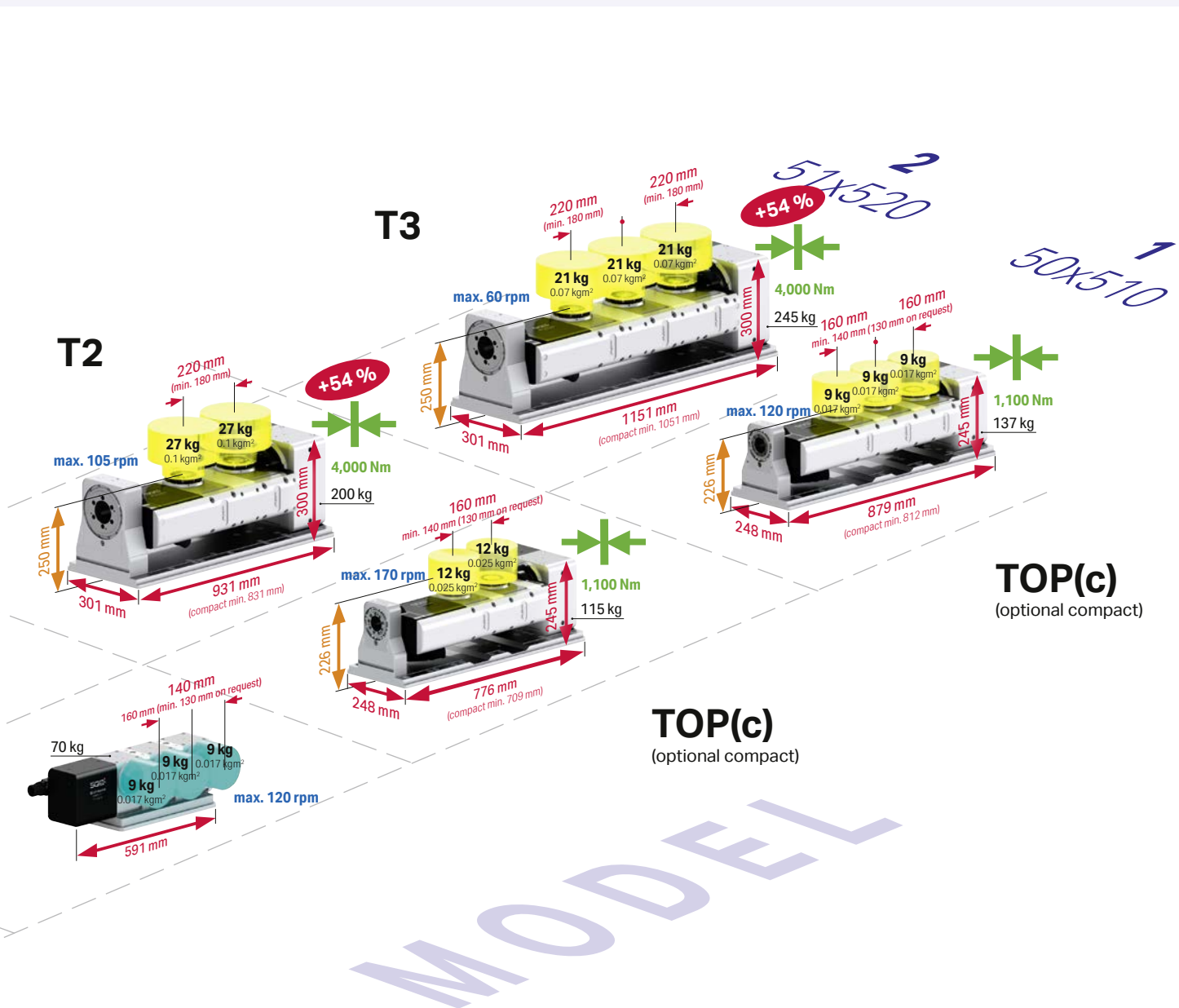
Weight data represent the standard load; higher weights possible, but require modification of rotational speed, acceleration and jerk limitation.

50x510	508510 (standard) or 508510 (high speed)
51x520	510520 (standard) or 511520 (high speed)
TIPc	Two-axis rotary table, no counter bearing, compact
TAPc	Two-axis rotary table, with supporting bearing, compact
TAP	Two-axis rotary table, with supporting bearing
TOP	Two-axis rotary table, with clamped counter bearing
TGR	Two-axis rotary table, with clamped counter bearing, specifically for grinding applications



News in brief

1. Up to **54 %** higher clamping torque in tilting axis
2. Fewer variant – more solution
3. Spindle distance min. **130 mm**
4. Spatially optimized arrangement of the dividing axis



Weight data represent the standard load; higher weights possible, but require modification of rotational speed, acceleration and jerk limitation.

- 50x 507 (standard) or 508 (high speed)
- 51x 510 (standard) or 511 (high speed)
- M2 Single-axis, multi-spindle rotary table, 2-position
- M3 Single-axis, multi-spindle rotary table, 3-position
- T2 Two-axis multi-spindle rotary table, 2-position
- T3 Two-axis multi-spindle rotary table, 3-position

Extremely wide assortment for workpiece clamping.
Standardized interface in front and rear: maximum universality

Spindle accessories in rear

- + Rotary unions **up to 250 bar**
- + Clamping cylinder **23 kN at 120 bar**
- + Angular position measuring systems **as precise as ± 1 arcsec**



Spindle accessories in front



Tailstock and counter bearing



ripas zero point clamping system



EA-507 with ripas auto and ripas adapter

CAPTO clamping (on request)

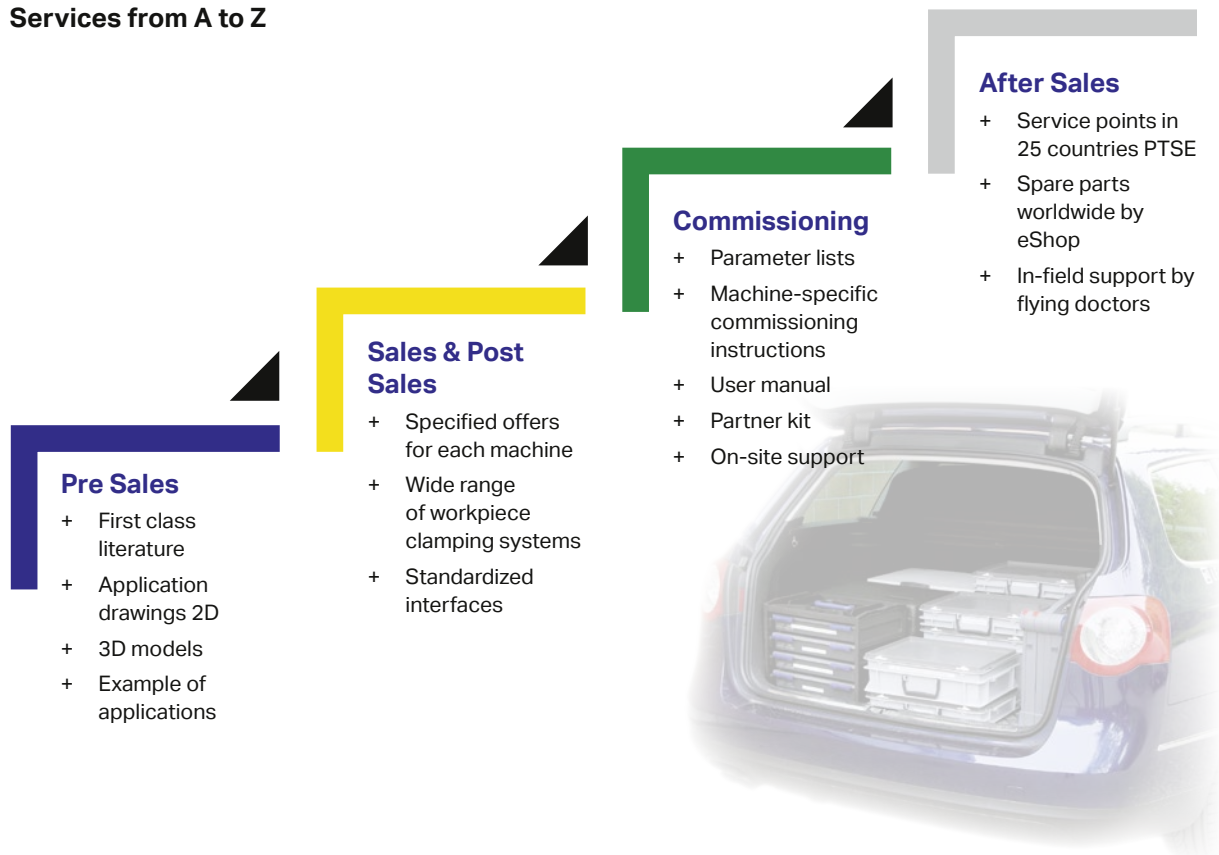


EA-507 with CAPTO retrofit kit

Present in over 20 countries: from sales consultation to the final service

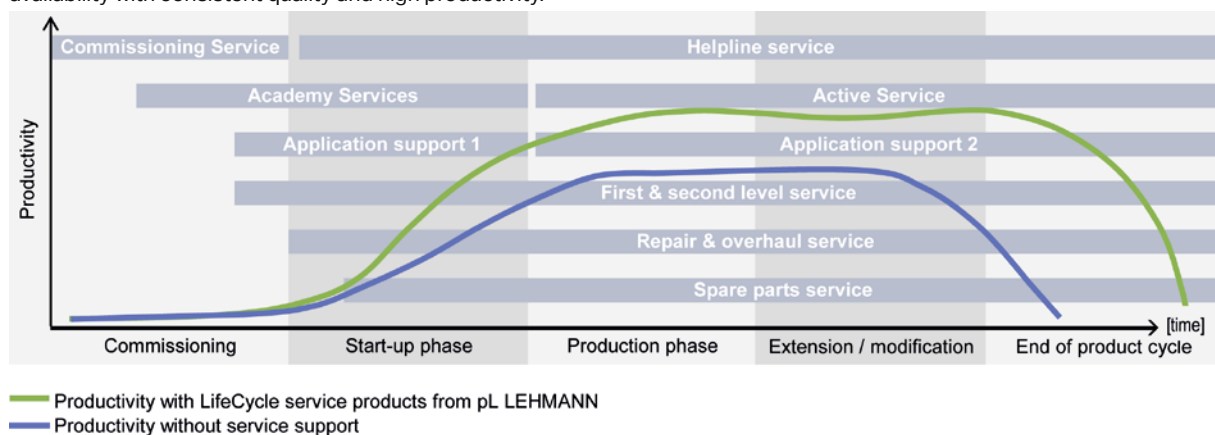


Services from A to Z



Increase productivity – Extend lifecycle

Comprehensive and professional services throughout the product life cycle – maximum availability with consistent quality and high productivity.



For more information please see www.lehmann-rotary-tables.com.



ROTARY TABLES · PRECISION TECHNOLOGY · SOFTWARE

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- Finland
- France
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- Hungary (vacant)
- Italy
- Norway
- Poland
- Portugal
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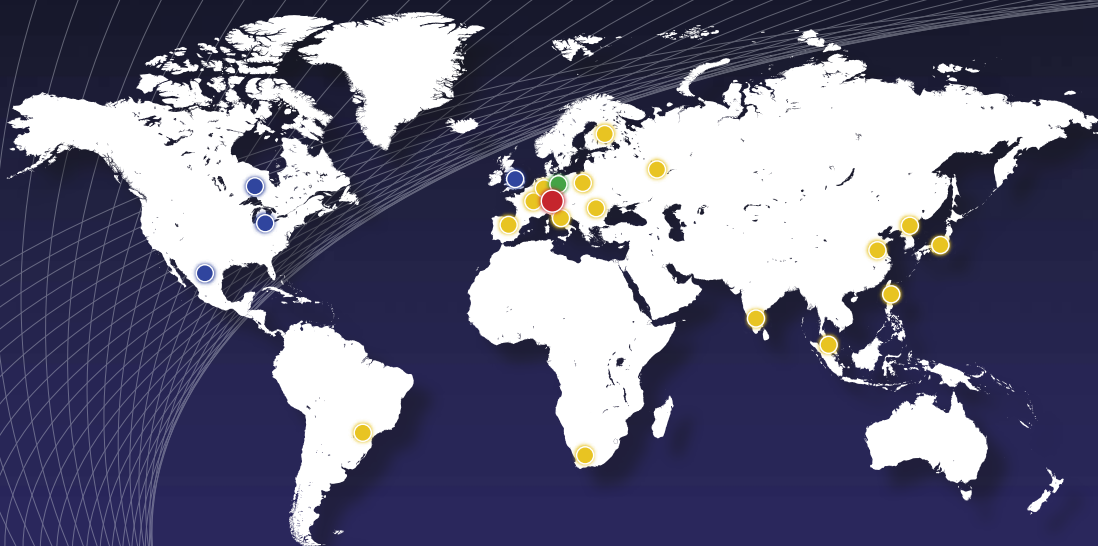
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● Headquarters ● direct sales partner ● pL Solutions® partner ● value added reseller & partner

More information (address, telephone number...) at www.lehmann-rotary-tables.com