

Selection Guide for CNC Rotary Tables ...



pl

+GF+

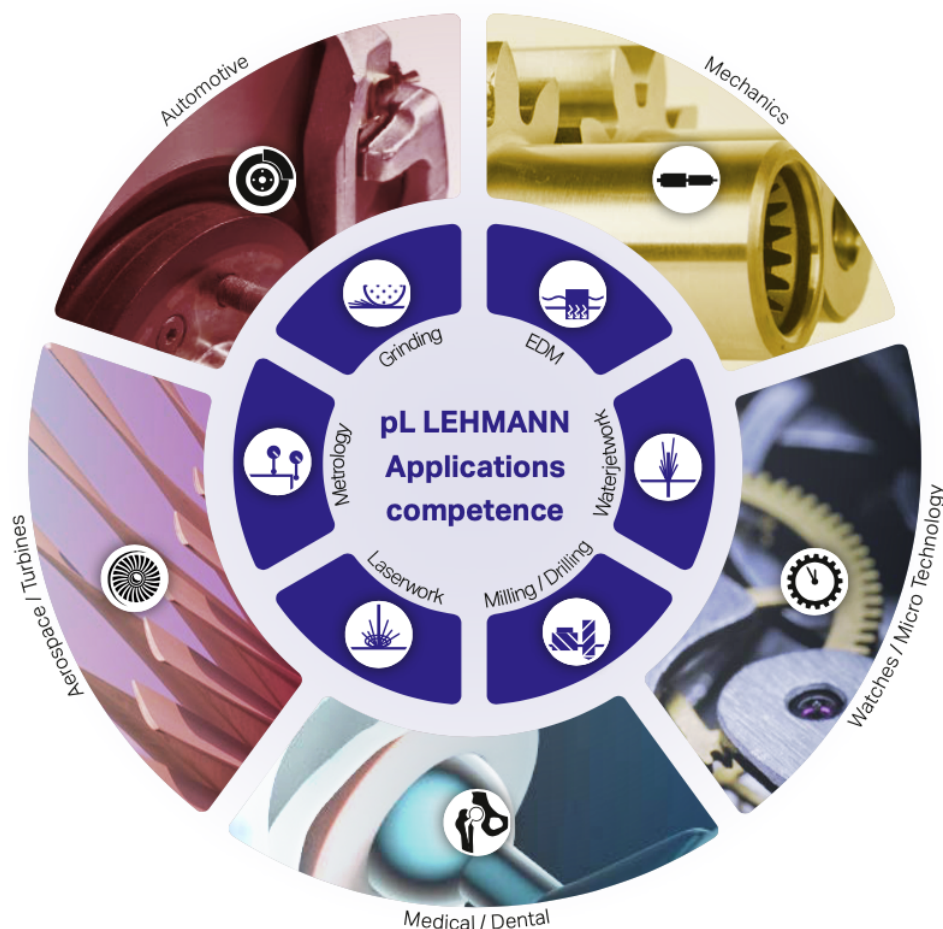
10/2018 | EN



... for Mikron-serie

Applications

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

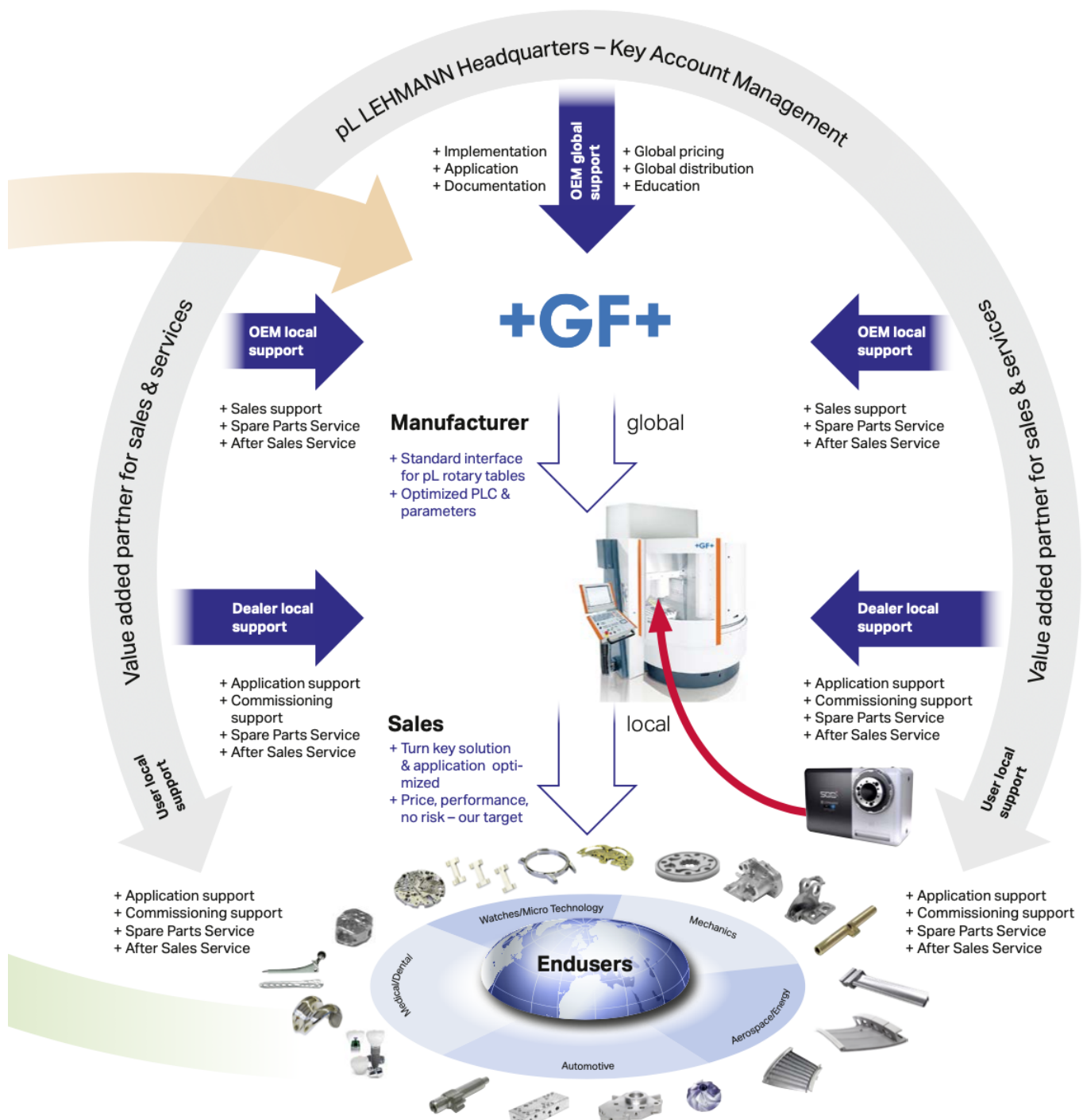


pL rotary tables in use: on over **40** different machine brands
and over **160** different machine models.

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

Organization

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



Overview and Facts

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



Benefits of PGD by pL LEHMANN as compared to Direct Drive: small servo, low power draw, no cooling system, and a significantly reduced energy consumption when machining with unclamped rotary table.

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**

High torque

Feed torque up to
850 Nm (provisional)

Adaptability

Multifunctional
spindle HSK

Precision

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

Overview and Facts

Pneum. clamping
up to **7,000 Nm**

High clamp

NEW
up to +150 %

Large parts
up to **ø 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

Machine Overview



MIKRON HPM 1200 HD



MIKRON HSM 500



MIKRON MILL S 500



MIKRON VCE 600 Pro

A word from GF Mikron:

«Swiss design & quality»

We are the partner of choice to successful tool, mold and die makers, and to producers of high-value parts in fast-growing market segments. GFMS offers innovative Milling, EDM, Laser texturing, Automation, and Customer Services solutions. Talking to one expert is what we call «More efficiency,» and that's a big plus!»

Machine data

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

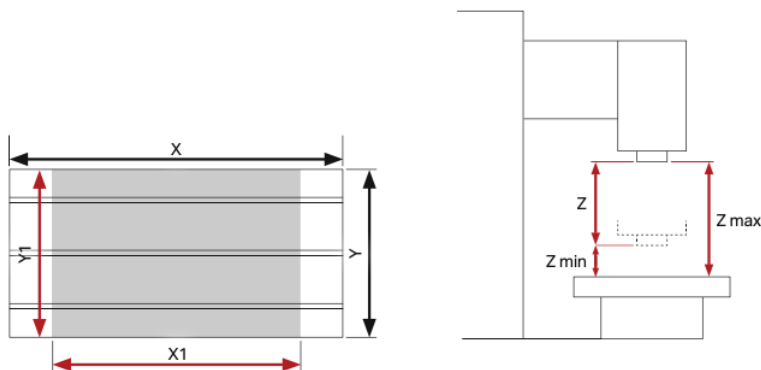


	Table diameter [mm]		Permissible overhang *	Traverse stroke [mm]					Table load ** max [kg]
	X	Y		X1	Y1	Z	Zmin	Zmax	
MIKRON HPM 600 HD	800	600	10%	600	600	500		500	500
MIKRON HPM 1200 HD	1'400	600	10%	1'200	600	500		500	1'200
MIKRON HSM 500	550	450	10%	500	450	350		350	200
MIKRON HSM 700	900	600	10%	700	600	500		500	800
MIKRON MILL S 500	550	450	10%	500	450	360		360	200
MIKRON MILL S 600	900	600	10%	600	600	500		500	500
MIKRON MILL S 800	900	600	10%	800	600	500		500	1'000
MIKRON VCE 600 Pro	710	510	10%	600	500	540	150	690	800
MIKRON VCE 800 Pro	990	560	10%	800	500	540	150	690	1'100
MIKRON VCE 1000 Pro	1'000	560	10%	1'020	560	600	135	735	1'350
MIKRON VCE 1200 Pro	1'220	620	10%	1'200	600	675	100	775	1'700
MIKRON VCE 1400 Pro	1'400	620	10%	1'400	650	675	100	775	1'700
MIKRON VCE 1600 Pro	1'700	850	10%	1'600	900	800	100	900	2'000

* 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
MIKRON HSM 500	358	342	316	

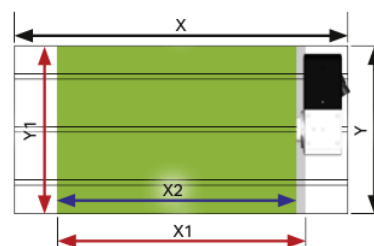
Wherever values are listed, the combination is recommended. Empty cells mean that a combination is not possible, because the rotary table is too large, or is not recommended, because the rotary table is disproportionately small or heavier than 50% of the table load.

Machine combinations with EA-type rotary tables

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

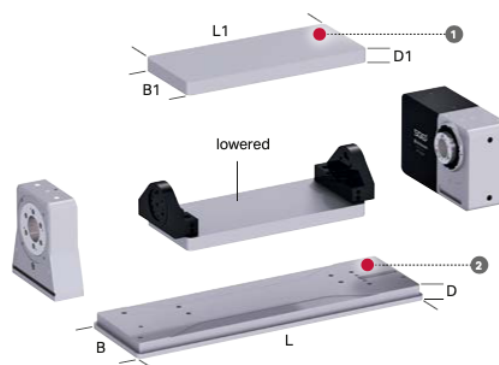


	EA-507 X2	EA-510 X2	EA-520 X2	EA-530 X2
MIKRON HPM 600 HD	533	517	491	462
MIKRON HPM 1200 HD	1'133	1'117	1'091	1'062
MIKRON HSM 500	358	342	316	
MIKRON HSM 700	633	617	591	562
MIKRON MILL S 500	358	342	316	
MIKRON MILL S 600	583	567	541	512
MIKRON MILL S 800	683	667	641	612
MIKRON VCE 600 Pro	488	472	446	417
MIKRON VCE 800 Pro	728	712	686	657
MIKRON VCE 1000 Pro	843	827	801	772
MIKRON VCE 1200 Pro	1'043	1'027	1'001	972
MIKRON VCE 1400 Pro	1'233	1'217	1'191	1'162
MIKRON VCE 1600 Pro				1'412



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	
	Thickness D1	[mm]	20		35		40		40	
2 Base plates	Length L	[mm]	622	722	785	885	916	1016	1116	1172 1372
	Width B	[mm]	168		248		301		368	
	Thickness D	[mm]	30		30		30		38	
Weights / moments of inertia (without rotary table, without counter bearing)	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	

Machine combinations with M-type rotary tables

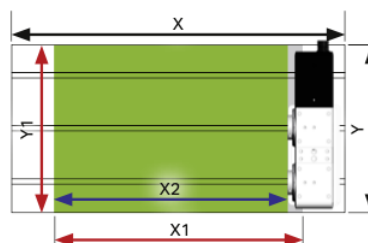
Explanations for pp. 8 to 11

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			
MIKRON HPM 600 HD	474	464	474	
MIKRON HPM 1200 HD	1'074	1'064	1'074	
MIKRON HSM 500	299			
MIKRON HSM 700	574	564	574	
MIKRON MILL S 500	299			
MIKRON MILL S 600	524	514	524	
MIKRON MILL S 800	624	614	624	
MIKRON VCE 600 Pro	429	419		
MIKRON VCE 800 Pro	669	659	669	
MIKRON VCE 1000 Pro	784	774	784	
MIKRON VCE 1200 Pro	984	974	984	
MIKRON VCE 1400 Pro	1'174	1'164	1'174	
MIKRON VCE 1600 Pro	1'424	1'414	1'424	1'414

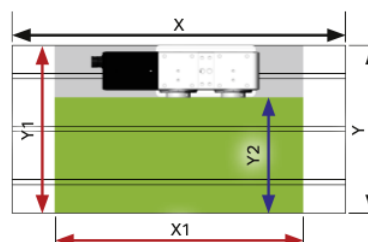
Y-mounting



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

	M2-507	M2-510	M3-507	M3-510
		Y2		
MIKRON HPM 600 HD				364
MIKRON HPM 1200 HD				
MIKRON HSM 500		214	224	
MIKRON HSM 700				364
MIKRON MILL S 500		214	224	
MIKRON MILL S 600				364
MIKRON MILL S 800				364
MIKRON VCE 600 Pro			279	269
MIKRON VCE 800 Pro				294
MIKRON VCE 1000 Pro				324
MIKRON VCE 1200 Pro				374
MIKRON VCE 1400 Pro				
MIKRON VCE 1600 Pro				

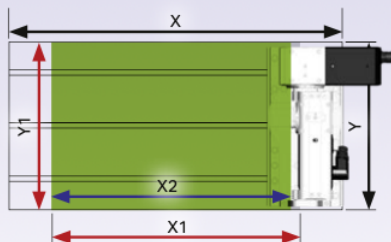
X-mounting



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

Machine combinations with T-type rotary tables

Y-mounting



Rotary table installation using hole pattern in base plate



TIP1



TAP1



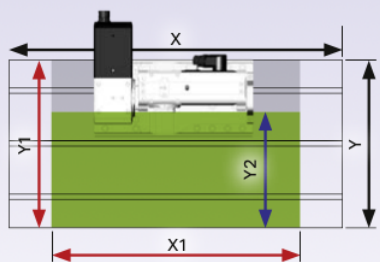
TOP1.2

	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
MIKRON HPM 600 HD	570	526	506	530	510		530	510		530
MIKRON HPM 1200 HD	1'170	1'126	1'106	1'130	1'110		1'130	1'110		1'130
MIKRON HSM 500	395									
MIKRON HSM 700	670	626	606	630	610		630	610		630
MIKRON MILL S 500	395									
MIKRON MILL S 600	620	576	556	580	560		580	560		580
MIKRON MILL S 800	720	676	656	680	660		680	660		680
MIKRON VCE 600 Pro	525	481		485						
MIKRON VCE 800 Pro	765	721		725	705		725			725
MIKRON VCE 1000 Pro	880	836		840	820		840			840
MIKRON VCE 1200 Pro	1'080	1'036	1'016	1'040	1'020		1'040	1'020		1'040
MIKRON VCE 1400 Pro	1'270	1'226	1'206	1'230	1'210		1'230	1'210		1'230
MIKRON VCE 1600 Pro	1'520	1'476	1'456	1'480	1'460	1'426	1'480	1'460	1'426	1'480

	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
MIKRON HPM 600 HD			530								
MIKRON HPM 1200 HD			1'130								
MIKRON HSM 500											
MIKRON HSM 700			630								
MIKRON MILL S 500											
MIKRON MILL S 600			580								
MIKRON MILL S 800			680								
MIKRON VCE 600 Pro											
MIKRON VCE 800 Pro											
MIKRON VCE 1000 Pro											
MIKRON VCE 1200 Pro			1'040								
MIKRON VCE 1400 Pro			1'230								
MIKRON VCE 1600 Pro	1'460	1'426	1'480	1'460		1'480	1'460		1'480	1'460	

Machine combinations with T-type rotary tables

X-mounting



Rotary table installation using hole pattern in base plate



TIP1



TAP1



TOP1.2

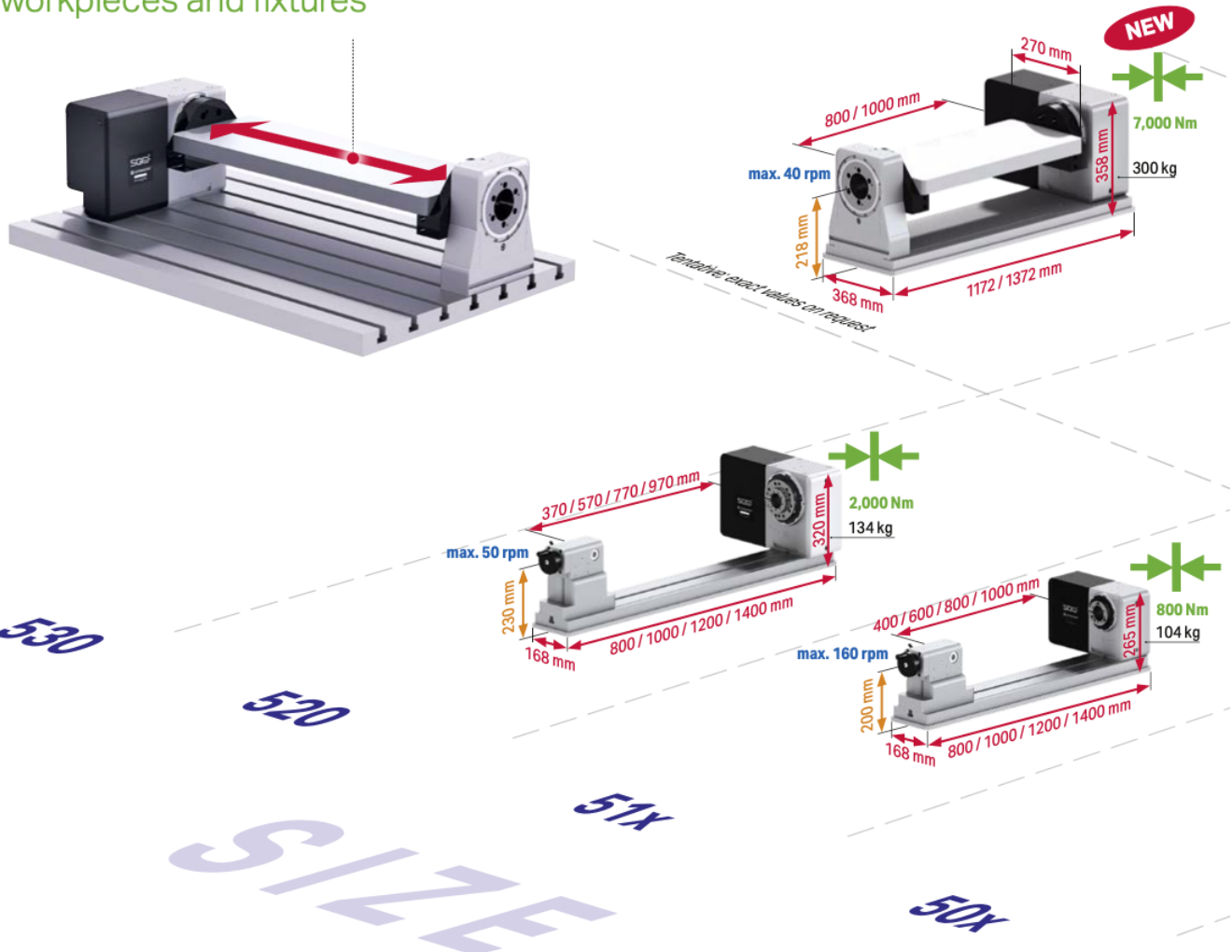
	TIP1c TF-507510 Y2	TIP2c TF-510520 Y2	TIP3c TF-520530 Y2	TAP1c T1-507510 Y2	TAP2c T1-510520 Y2	TAP3c T1-520530 Y2	TAP1 T1-507510 Y2	TAP2 T1-510520 Y2	TAP3 T1-520530 Y2	TOP1 T1-507510 Y2
MIKRON HPM 600 HD										
MIKRON HPM 1200 HD									376	
MIKRON HSM 500		276		280			280			
MIKRON HSM 700						376			376	
MIKRON MILL S 500		276		280			280			
MIKRON MILL S 600										
MIKRON MILL S 800						376			376	
MIKRON VCE 600 Pro			311		315	281	335	315	281	335
MIKRON VCE 800 Pro			336			306		340	306	
MIKRON VCE 1000 Pro			366			336		370	336	
MIKRON VCE 1200 Pro						386			386	
MIKRON VCE 1400 Pro									411	
MIKRON VCE 1600 Pro										

	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
MIKRON HPM 600 HD	410			410		430	410		430		
MIKRON HPM 1200 HD	410	376		410	376	430	410	376	430	410	376
MIKRON HSM 500											
MIKRON HSM 700	410	376		410		430	410		430	410	
MIKRON MILL S 500											
MIKRON MILL S 600	410			410		430	410		430	410	
MIKRON MILL S 800	410	376		410		430	410		430	410	
MIKRON VCE 600 Pro	315		335			335			335		
MIKRON VCE 800 Pro	340	306	360	340		360	340		360	340	
MIKRON VCE 1000 Pro	370	336	390	370		390	370		390	370	
MIKRON VCE 1200 Pro	420	386		420	386	440	420	386	440	420	386
MIKRON VCE 1400 Pro	445	411		445	411	465	445	411	465	445	411
MIKRON VCE 1600 Pro					651			651			651

Overview of E-Series



More space for workpieces and fixtures



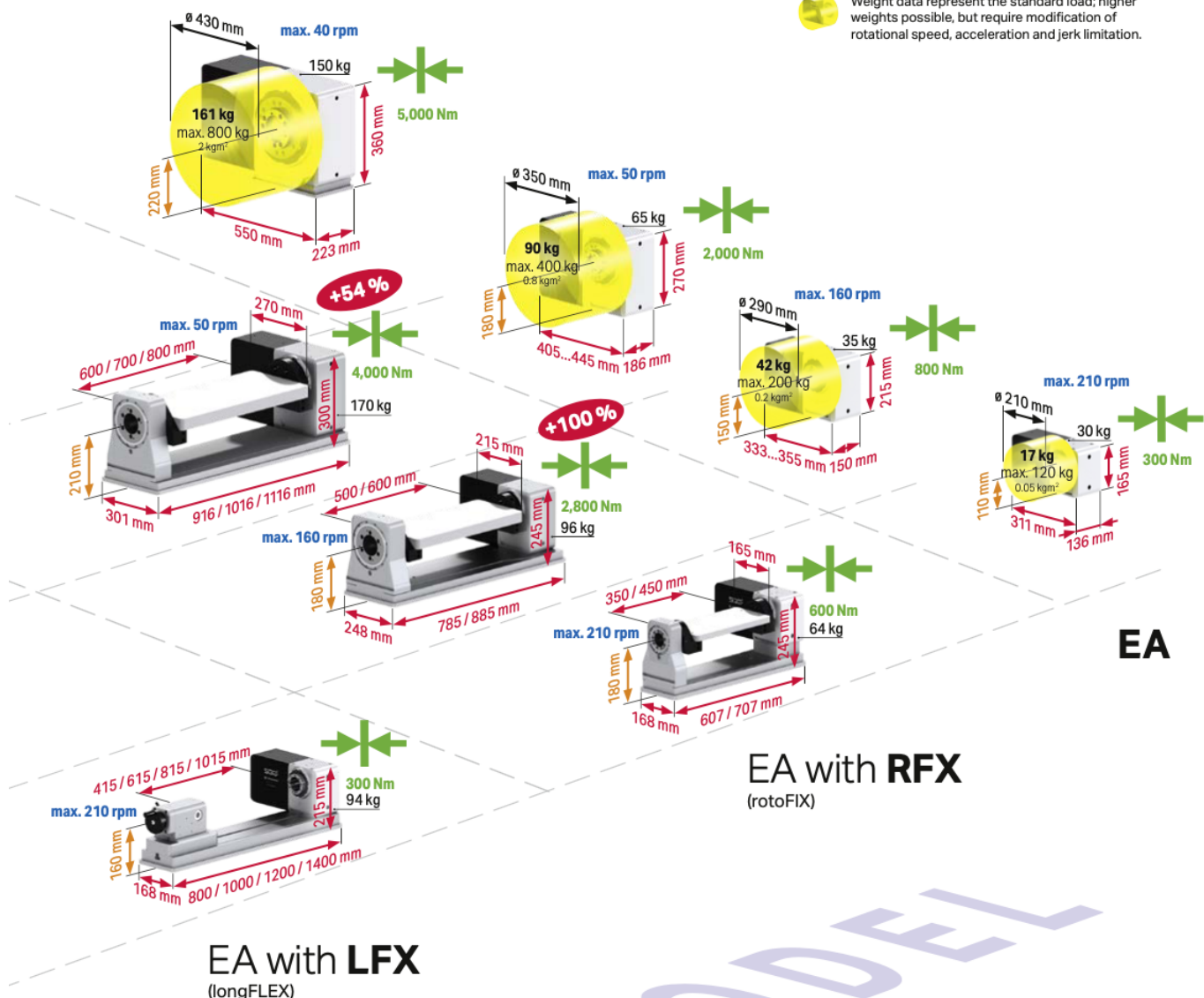
Overview of E-Series

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.

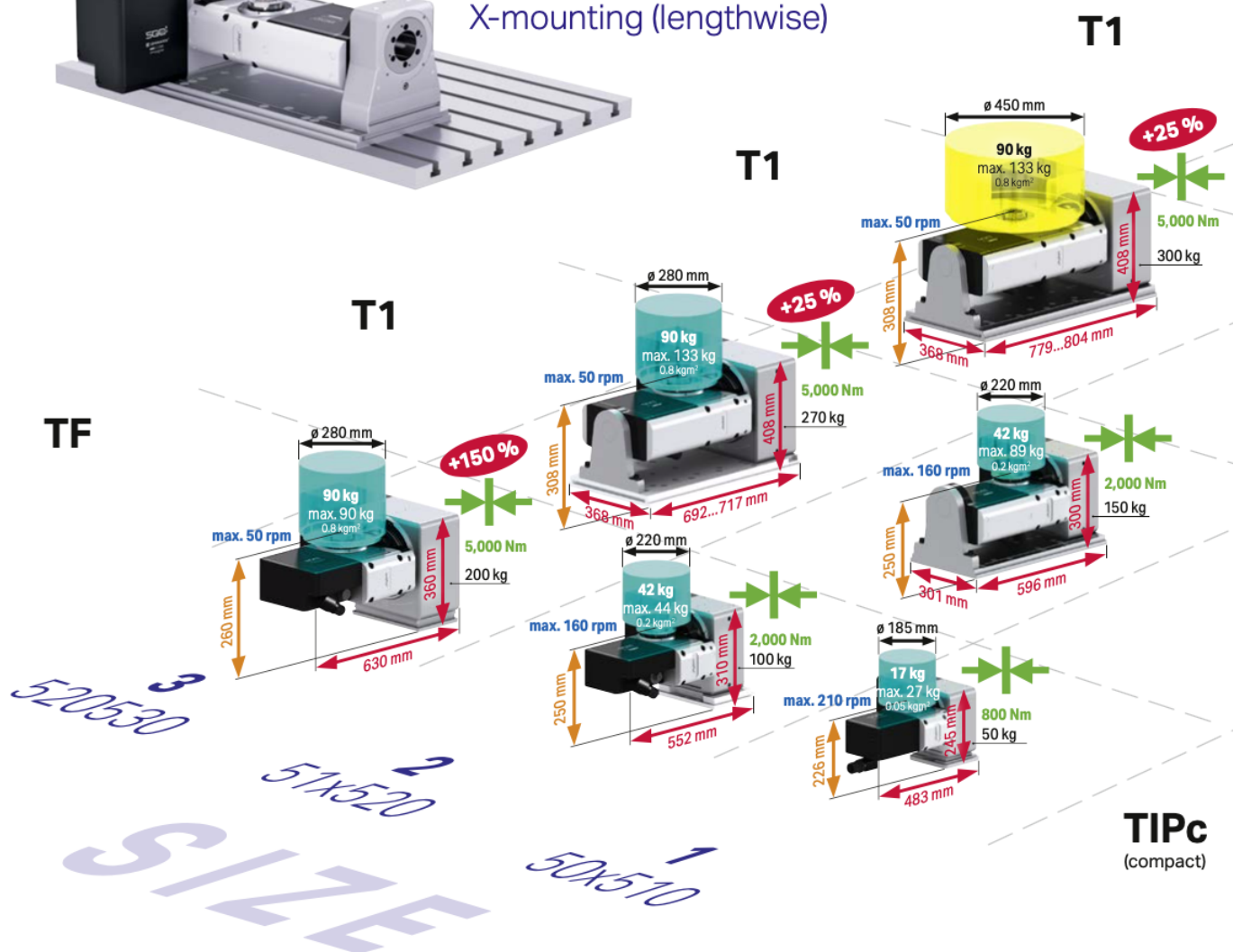


50x	507 (standard) or 508 (high speed)
51x	510 (standard) or 511 (high speed)
EA	single-axis, single-spindle CNC rotary table
rotoFIX	modular clamping yoke system
longFI FX	modular shaft clamping system

Overview of T-Series



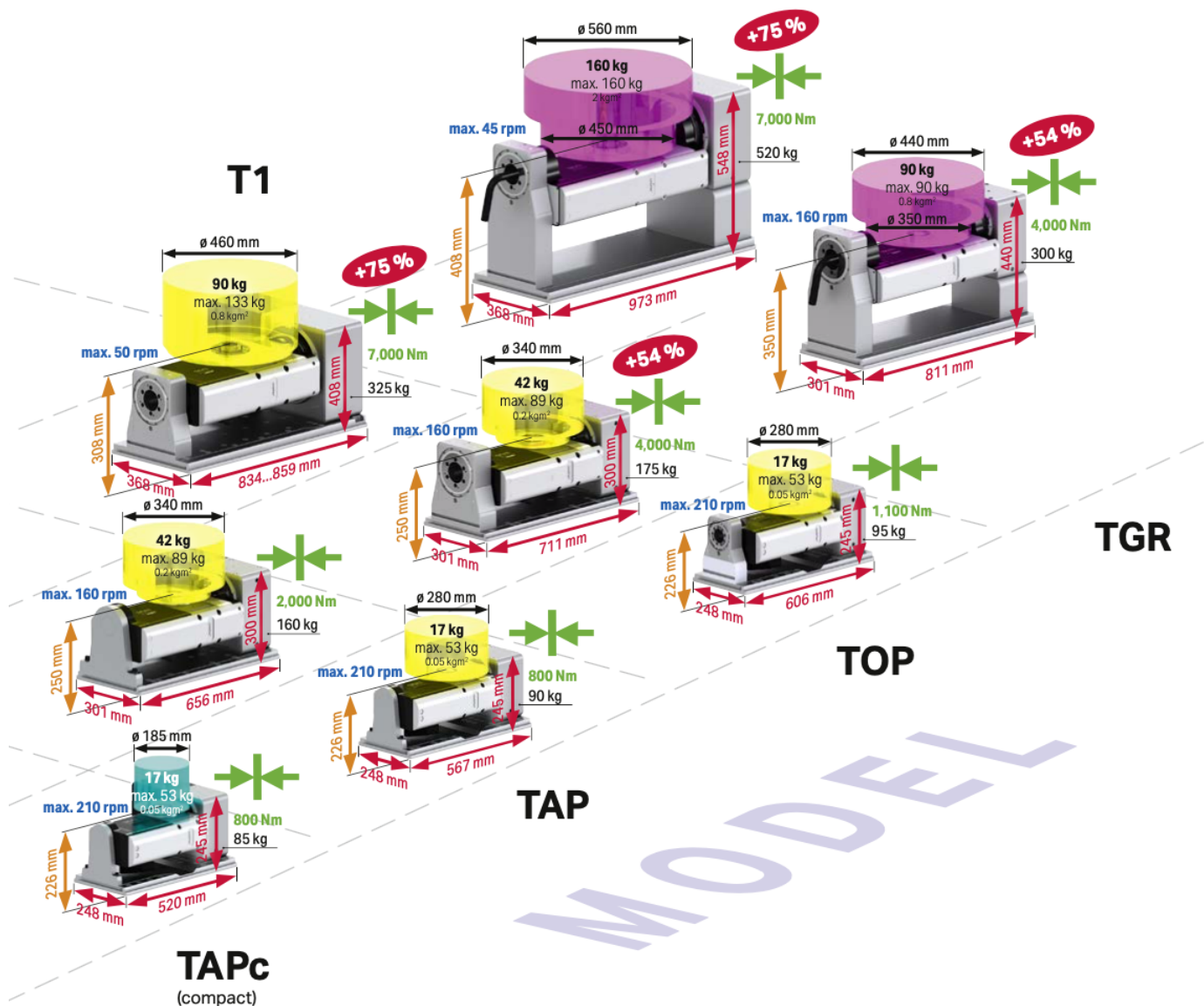
More space for
workpiece and fixtures



Overview of T-Series

News in brief

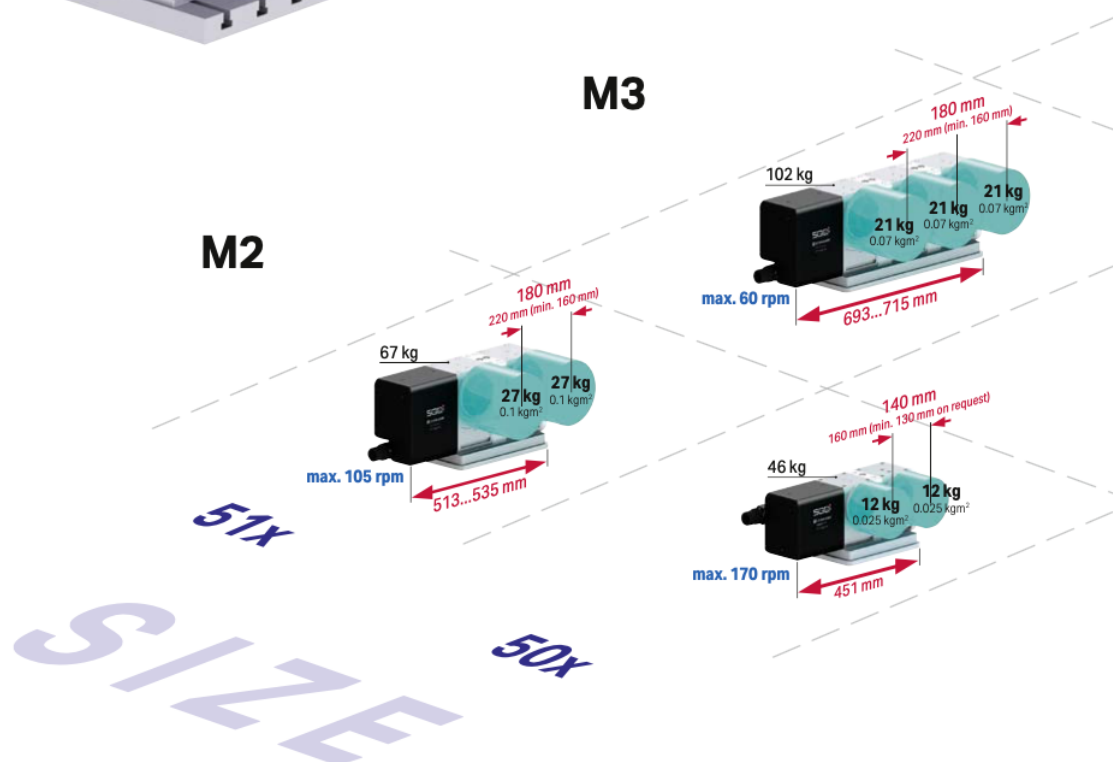
1. Up to **150 %** higher clamping torque in tilting axis
2. Fewer variant – more solution
3. Larger workpiece $\varnothing$ possible
4. Spatially optimized arrangement of the dividing axis



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

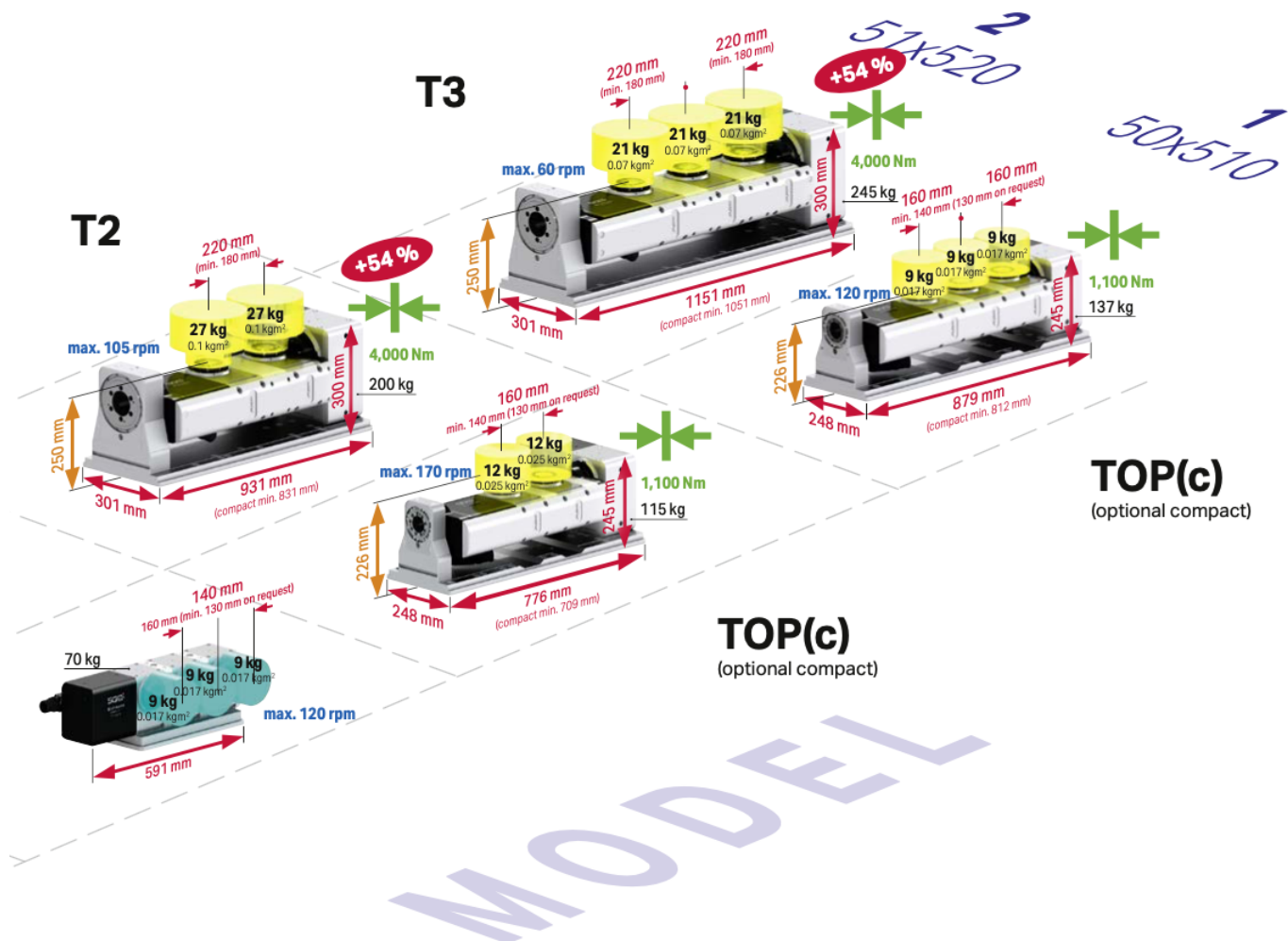
Overview of M-Series



Overview of M-Series

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

Spindle System Accessories

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



FA-507 with ripas auto and ripas adapter

CAPTO clamping (on request)



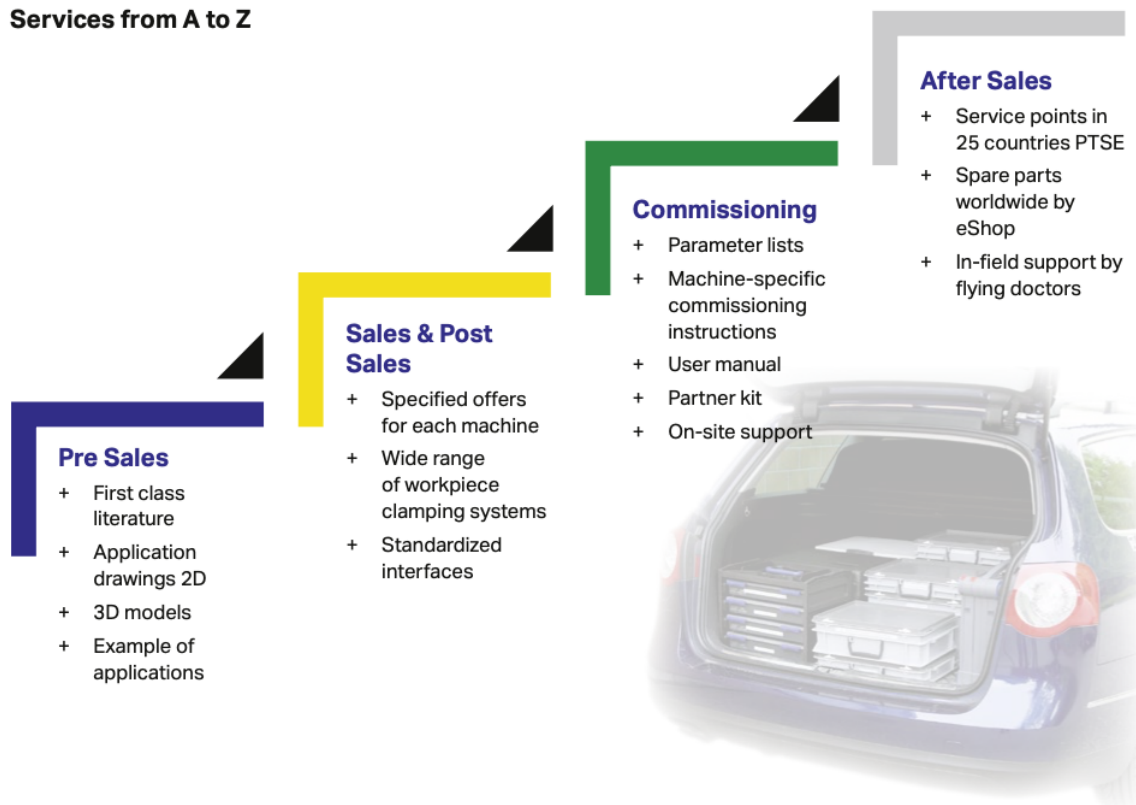
FA-507 with CAPTO retrofit kit

Sales and Service

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

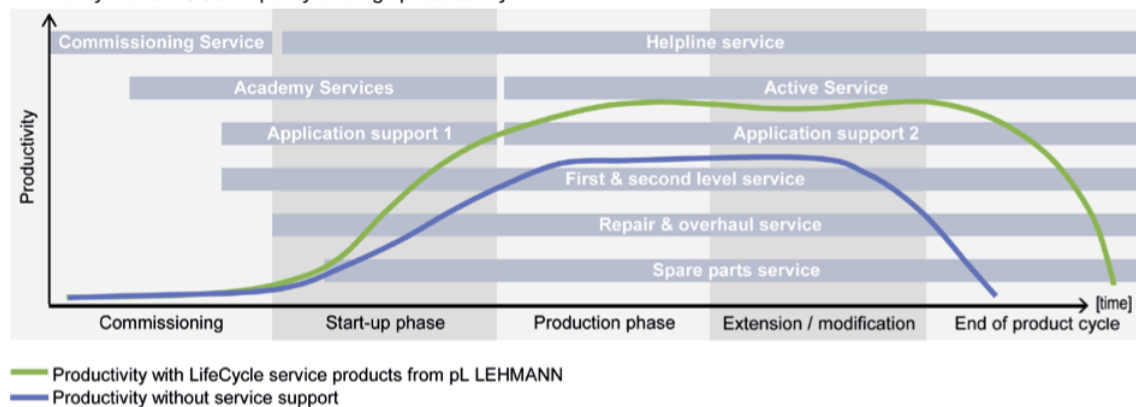


Services from A to Z



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



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- Benelux
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- Finland
- France
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- Hungary (vacant)
- Italy
- Norway
- Poland
- Portugal
- Russia
- Slovenia
- Spain
- Sweden
- Turkey
- UK

America

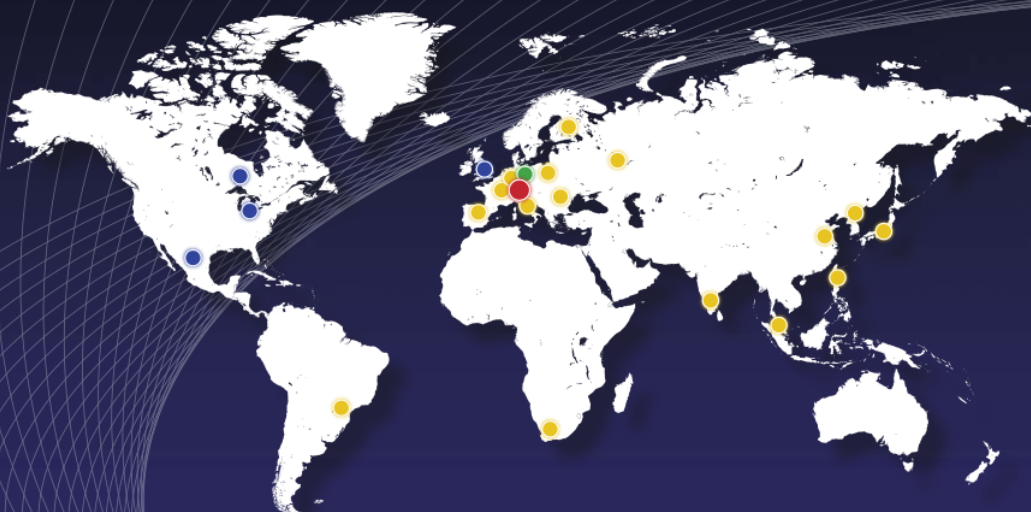
- Brazil
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- China
- India
- Japan
- Malaysia
- Singapore
- South Korea
- Taiwan
- Thailand
- Vietnam

Africa

- South Africa



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