

# Selection Guide for CNC Rotary Tables ...



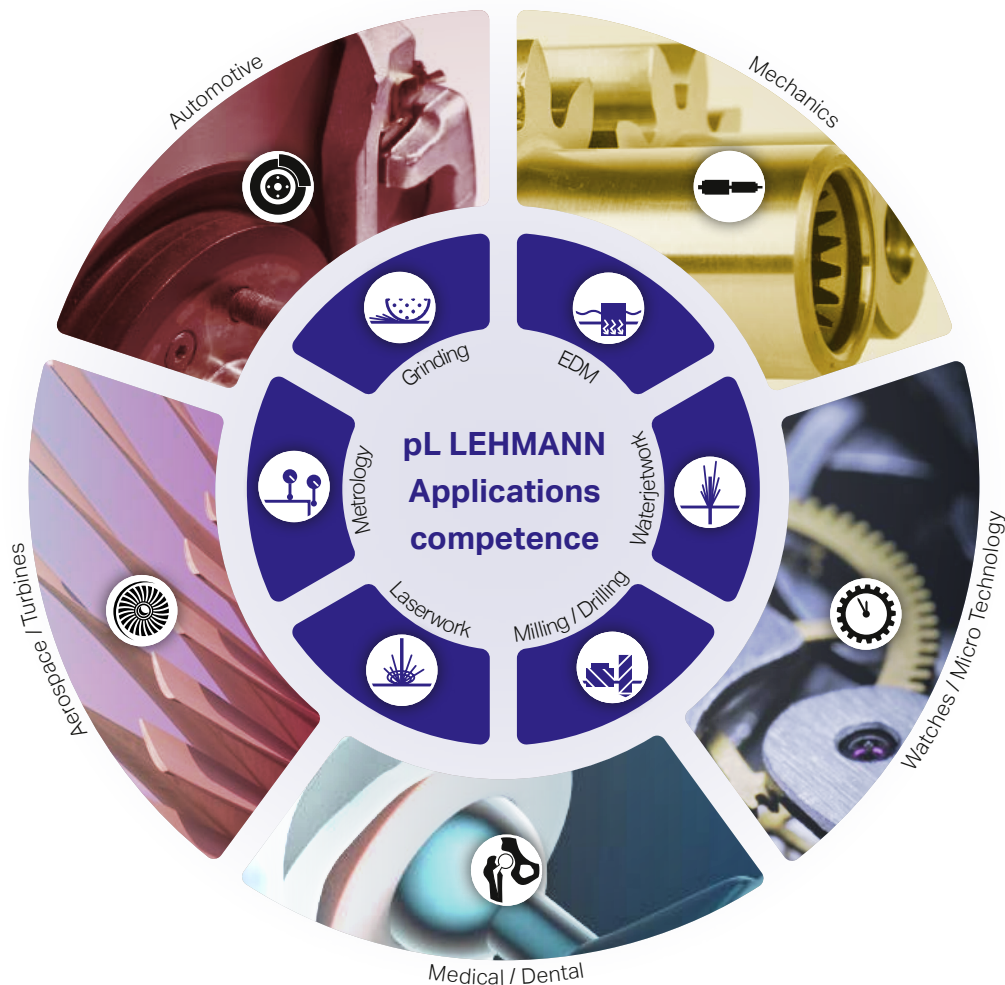
pl

**BFW**

10/2018 | EN

... for BMV-, Chandra-, Surya-,  
Dhruva-, HSTC- and Krypton-series

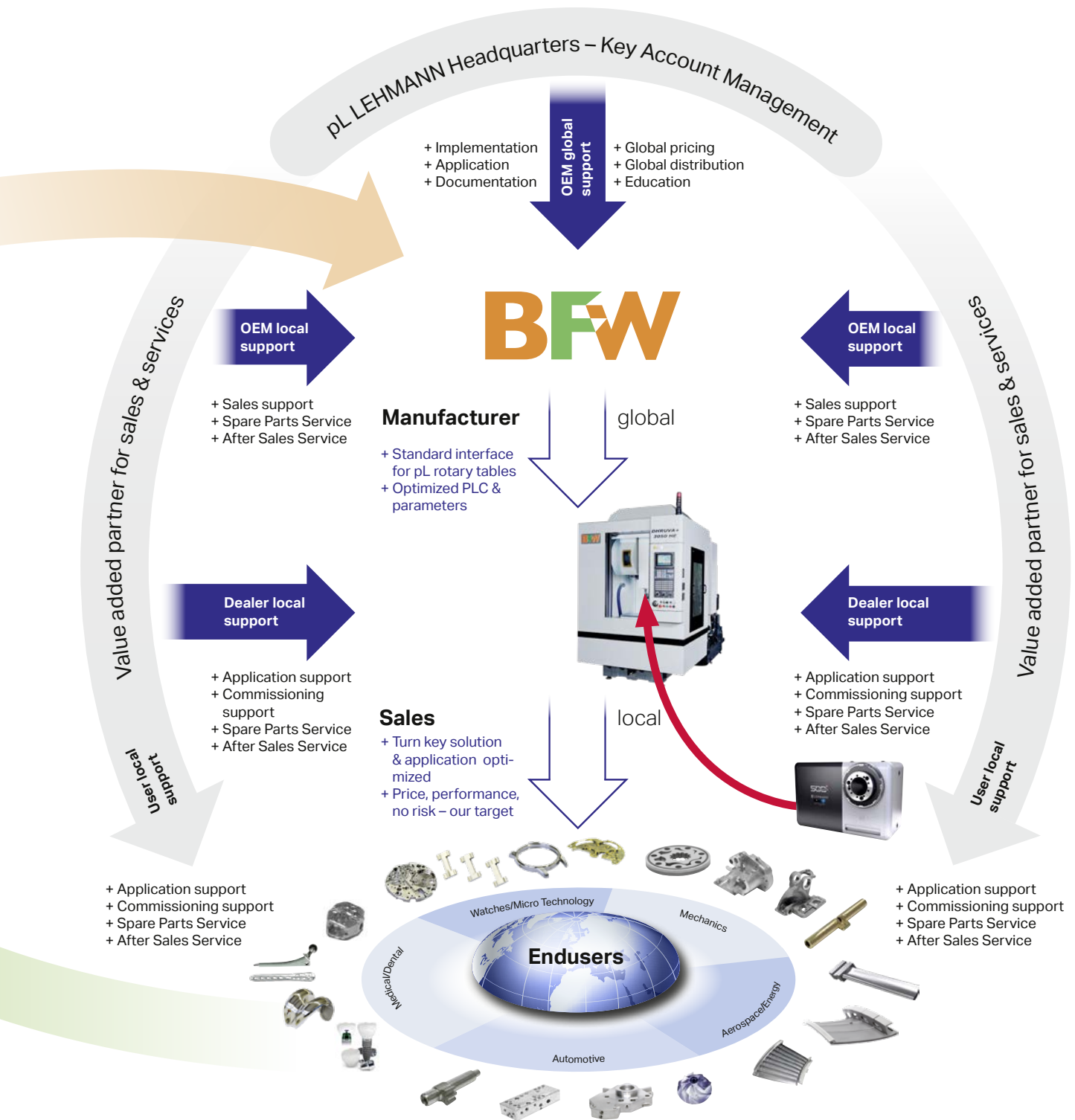
CNC rotary tables for economical manufacturing:  
pL LEHMANN has suitable and rational solutions for  
nearly every industry



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:  
 BFW and pL LEHMANN provide  
 first-class service to common customers



NEW  
up to +30 %

Up to 210 rpm  
up to 0.21 sec / 90°

Extended travel in  
Z- and X-direction

High spindle load,  
heavy-duty bearing

**High speed**

**More space**

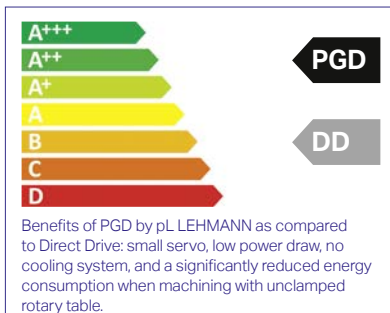
**Heavy duty**

## 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 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



BMV 35+



BMV 50



Chandra+



Dhruva 3050 HE



HSTC 4050



Krypton 5

A word from BFW:

«We exist to enable progress

We are a progress-first establishment. We do whatever it takes to enable progress by acquiring new technology to serve customers better and investing in an R&D Center to create next-gen technology. At BFW, we ensure progress at every step, with every innovation.»

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

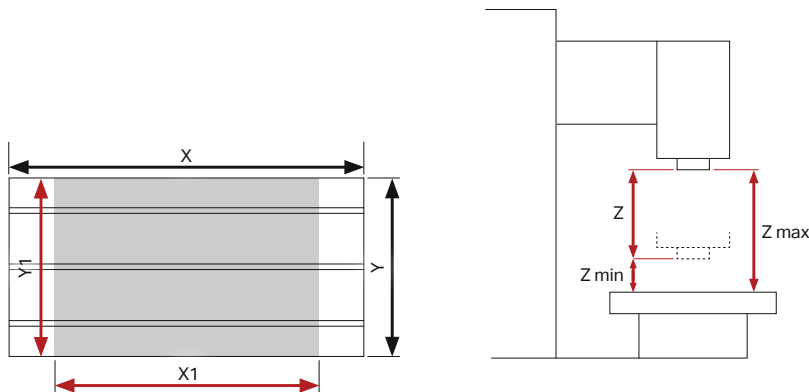


	Table diameter [mm]		Permissible overhang *	Traverse stroke [mm]					Table load ** max [kg]
	X	Y		X1	Y1	Z	Zmin	Zmax	
<b>BMV 35+ (Gaurav+)</b>	600	350	40%	450	350	350	150	500	350
<b>BMV 45+ (Agni+)</b>	900	450	10%	600	450	500	100	600	500
<b>BMV 45++ (Agni++)</b>	1'000	450	10%	800	450	500	100	600	600
<b>BMV 50</b>	1'000	510	10%	800	510	510	100	610	600
<b>BMV 51 (Vayu)</b>	1'000	510	10%	800	510	510	150	660	800
<b>BMV 60+ (Chakra+)</b>	1'250	600	10%	1'050	610	610	150	760	1'200
<b>BMV 60++ (Chakra++)</b>	1'450	600	10%	1'250	610	610	150	760	1'200
<b>BMV 65</b>	1'500	650	10%	1'280	700	650	150	800	1'200
<b>BMV 70 (Astra)</b>	1'700	710	10%	1'600	910	810	150	960	2'000
<b>Chandra+ / Surya+</b>	1'060	315	10%	800	350	380	75	455	300
<b>Dhruva 3050 HE</b>	650	400	10%	500	400	350	150	500	300
<b>Dhruva 3070 HE</b>	850	410	10%	500	400	350	150	500	300
<b>Dhruva 4050 HE</b>	650	400	10%	500	400	310	150	460	300
<b>Dhruva 4070 HE</b>	850	410	10%	700	400	310	150	460	300
<b>HSTC 3035</b>	630	350	40%	350	300	350	150	500	200
<b>HSTC 3050</b>	650	400	40%	500	400	350	150	500	250
<b>HSTC 3070</b>	850	410	40%	700	400	350	150	500	250
<b>HSTC 4050</b>	650	400	40%	500	400	310	150	460	250
<b>HSTC 4070</b>	850	410	40%	700	400	310	150	460	250
<b>Krypton 5</b>	850	500	10%	650	510	500	120	620	850
<b>Krypton 6</b>	1'200	600	10%	1'000	610	500	120	620	1'100

\* 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

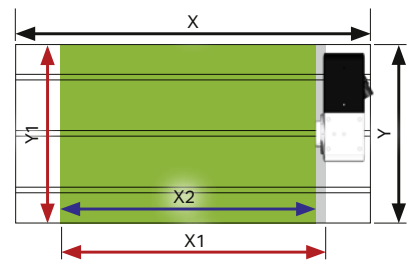
	EA-507 X2	EA-510 X2	EA-520 X2	EA-530 X2
<b>BMV 35+ (Gaurav+)</b>	358	342	316	

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.

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

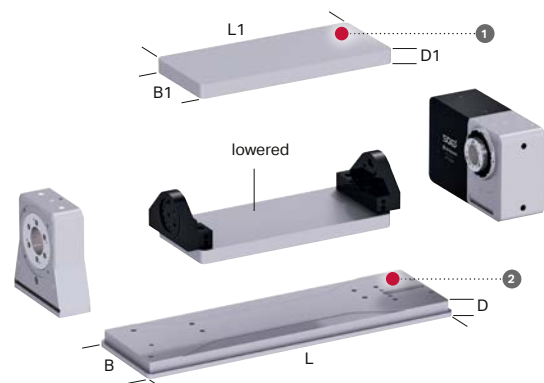


	EA-507 X2	EA-510 X2	EA-520 X2	EA-530 X2
BMV 35+ (Gaurav+)	358	342	316	
BMV 45+ (Agni+)	583	567	541	
BMV 45++ (Agni++)	733	717	691	
BMV 50	733	717	691	662
BMV 51 (Vayu)	733	717	691	662
BMV 60+ (Chakra+)	983	967	941	912
BMV 60++ (Chakra++)	1'183	1'167	1'141	1'112
BMV 65		1'207	1'181	1'152
BMV 70 (Astra)			1'441	1'412
Chandra+ / Surya+	763	747		
Dhruva 3050 HE	408	392	366	
Dhruva 3070 HE	508	492	466	
Dhruva 4050 HE	408	392	366	
Dhruva 4070 HE	608	592	566	
HSTC 3035	323	307	281	
HSTC 3050	408	392	366	
HSTC 3070	608	592	566	
HSTC 4050	408	392	366	
HSTC 4070	608	592	566	
Krypton 5	583	567	541	512
Krypton 6	933	917	891	862



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



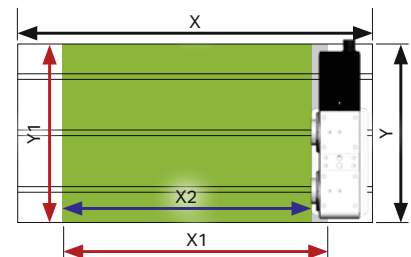
## Explanations for pp. 8 to 11

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
	<b>X2</b>			
BMV 35+ (Gaurav+)	299			
BMV 45+ (Agni+)	524			
BMV 45++ (Agni++)	674			
BMV 50	674	664		
BMV 51 (Vayu)	674	664		
BMV 60+ (Chakra+)	924	914	924	
BMV 60++ (Chakra++)	1'124	1'114	1'124	
BMV 65	1'164	1'154	1'164	1'154
BMV 70 (Astra)	1'424	1'414	1'424	1'414
Chandra+ / Surya+				
Dhruva 3050 HE				
Dhruva 3070 HE	449			
Dhruva 4050 HE				
Dhruva 4070 HE	549			
HSTC 3035	264			
HSTC 3050	349	339		
HSTC 3070	549	539		
HSTC 4050	349	339		
HSTC 4070	549	539		
Krypton 5	524	514		
Krypton 6	874	864	874	

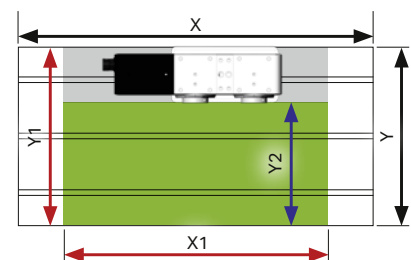
## Y-mounting



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

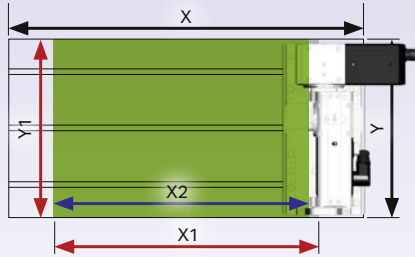
	M2-507	M2-510	M3-507	M3-510
	<b>Y2</b>			
BMV 35+ (Gaurav+)		114	124	
BMV 45+ (Agni+)		214	224	214
BMV 45++ (Agni++)		214	224	214
BMV 50			284	274
BMV 51 (Vayu)			284	274
BMV 60+ (Chakra+)				369
BMV 60++ (Chakra++)				
BMV 65				
BMV 70 (Astra)				
Chandra+ / Surya+			107	97
Dhruva 3050 HE	174	164	174	164
Dhruva 3070 HE		169	179	169
Dhruva 4050 HE	174	164	174	164
Dhruva 4070 HE		169	179	169
HSTC 3035		89	99	
HSTC 3050			174	164
HSTC 3070			179	169
HSTC 4050			174	164
HSTC 4070			179	169
Krypton 5			279	269
Krypton 6				369

## 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

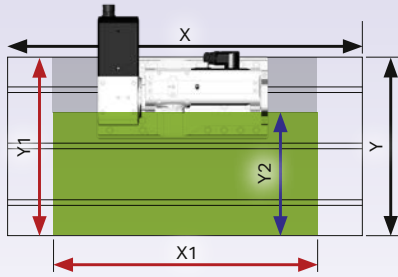


TOP1.2

	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
BMV 35+ (Gaurav+)	395									
BMV 45+ (Agni+)	620									
BMV 45++ (Agni++)	770									
BMV 50	770	726		730						
BMV 51 (Vayu)	770	726		730						
BMV 60+ (Chakra+)	1'020	976	956	980	960		980	960		980
BMV 60++ (Chakra++)	1'220	1'176	1'156	1'180	1'160		1'180	1'160		1'180
BMV 65	1'260	1'216	1'196	1'220	1'200	1'166	1'220	1'200		1'220
BMV 70 (Astra)	1'520	1'476	1'456	1'480	1'460	1'426	1'480	1'460	1'426	1'480
Chandra+ / Surya+										
Dhruva 3050 HE										
Dhruva 3070 HE										
Dhruva 4050 HE										
Dhruva 4070 HE										
HSTC 3035	360									
HSTC 3050	445	401		405						
HSTC 3070	645	601		605			605			
HSTC 4050	445	401		405						
HSTC 4070	645	601		605			605			
Krypton 5	620	576		580						
Krypton 6	970	926	906	930	910		930	910		930

	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
BMV 35+ (Gaurav+)											
BMV 45+ (Agni+)											
BMV 45++ (Agni++)											
BMV 50											
BMV 51 (Vayu)											
BMV 60+ (Chakra+)			980								
BMV 60++ (Chakra++)			1'180								
BMV 65	1'200		1'220			1'220					
BMV 70 (Astra)	1'460		1'480			1'480			1'480		
Chandra+ / Surya+											
Dhruva 3050 HE											
Dhruva 3070 HE											
Dhruva 4050 HE											
Dhruva 4070 HE											
HSTC 3035											
HSTC 3050											
HSTC 3070											
HSTC 4050											
HSTC 4070											
Krypton 5											
Krypton 6			930								

## X-mounting



Rotary table installation using hole pattern in base plate



TIP1



TAP1



TOP1.2

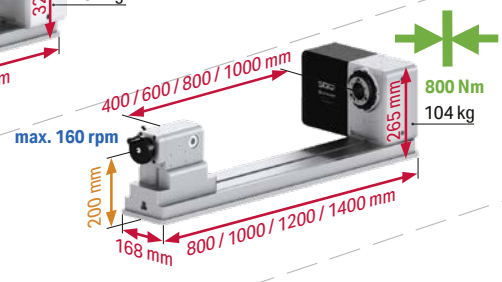
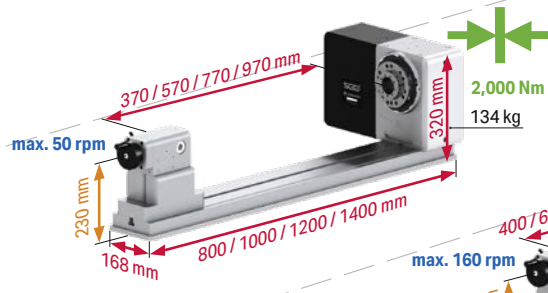
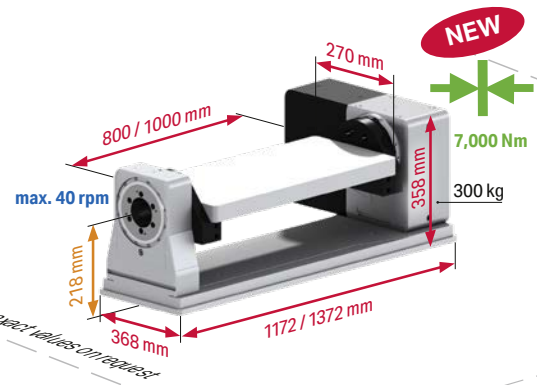
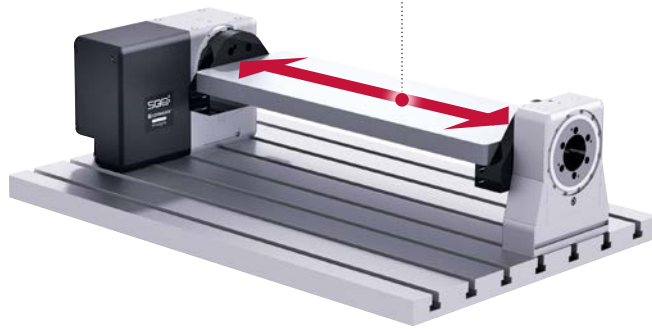
	TIP1c TF-507510	TIP2c TF-510520	TIP3c TF-520530	TAP1c T1-507510	TAP2c T1-510520	TAP3c T1-520530	TAP1 T1-507510	TAP2 T1-510520	TAP3 T1-520530	TOP1 T1-507510
	Y2	Y2	Y2	Y2	Y2	Y2	Y2	Y2	Y2	Y2
BMV 35+ (Gaurav+)		176		180	160		180	160		180
BMV 45+ (Agni+)		276	256	280	260		280	260		280
BMV 45++ (Agni++)		276	256	280	260	226	280	260	226	280
BMV 50			316		320	286	340	320	286	340
BMV 51 (Vayu)			316		320	286	340	320	286	340
BMV 60+ (Chakra+)						381			381	
BMV 60++ (Chakra++)									381	
BMV 65									451	
BMV 70 (Astra)										
Chandra+ / Surya+		159			143		163			163
Dhruva 3050 HE	270	226		230	210		230			230
Dhruva 3070 HE	275	231		235	215		235			235
Dhruva 4050 HE	270	226		230	210		230			230
Dhruva 4070 HE	275	231		235	215		235			235
HSTC 3035		151			155		155			155
HSTC 3050							230			230
HSTC 3070										235
HSTC 4050							230			230
HSTC 4070										235
Krypton 5			311		315	281	335	315	281	335
Krypton 6						381			381	

	TOP2 T1-510520	TOP3 T1-520530	TAP1c.2 T1-507510	TAP2c.2 T1-510520	TAP3c.2 T1-520530	TAP1.2 T1-507510	TAP2.2 T1-510520	TAP3.2 T1-520530	TOP1.2 T2-507510	TOP2.2 T2-510520	TOP3.2 T2-520530
	Y2	Y2	Y2	Y2	Y2	Y2	Y2	Y2	Y2	Y2	Y2
BMV 35+ (Gaurav+)			180								
BMV 45+ (Agni+)	260		280	260		280	260		280	260	
BMV 45++ (Agni++)	260		280	260		280	260		280	260	
BMV 50	320		340	320		340	320		340	320	
BMV 51 (Vayu)	320	286	340	320		340	320		340	320	
BMV 60+ (Chakra+)	415	381		415	381	435	415	381	435	415	381
BMV 60++ (Chakra++)		381		415	381		415	381	435	415	381
BMV 65		451		485	451		485	451		485	451
BMV 70 (Astra)					586		620	586		620	586
Chandra+ / Surya+			163	143		163			163		
Dhruva 3050 HE			230			230					
Dhruva 3070 HE			235	215		235			235		
Dhruva 4050 HE			230			230					
Dhruva 4070 HE			235	215		235			235		
HSTC 3035			155								
HSTC 3050			230			230					
HSTC 3070			235			235			235		
HSTC 4050			230			230					
HSTC 4070			235			235			235		
Krypton 5	315	281	335	315		335	315		335	315	
Krypton 6	415	381		415	381	435	415	381	435	415	381



Very good accessibility, even with short tools

More space for workpieces and fixtures



530

520


51x

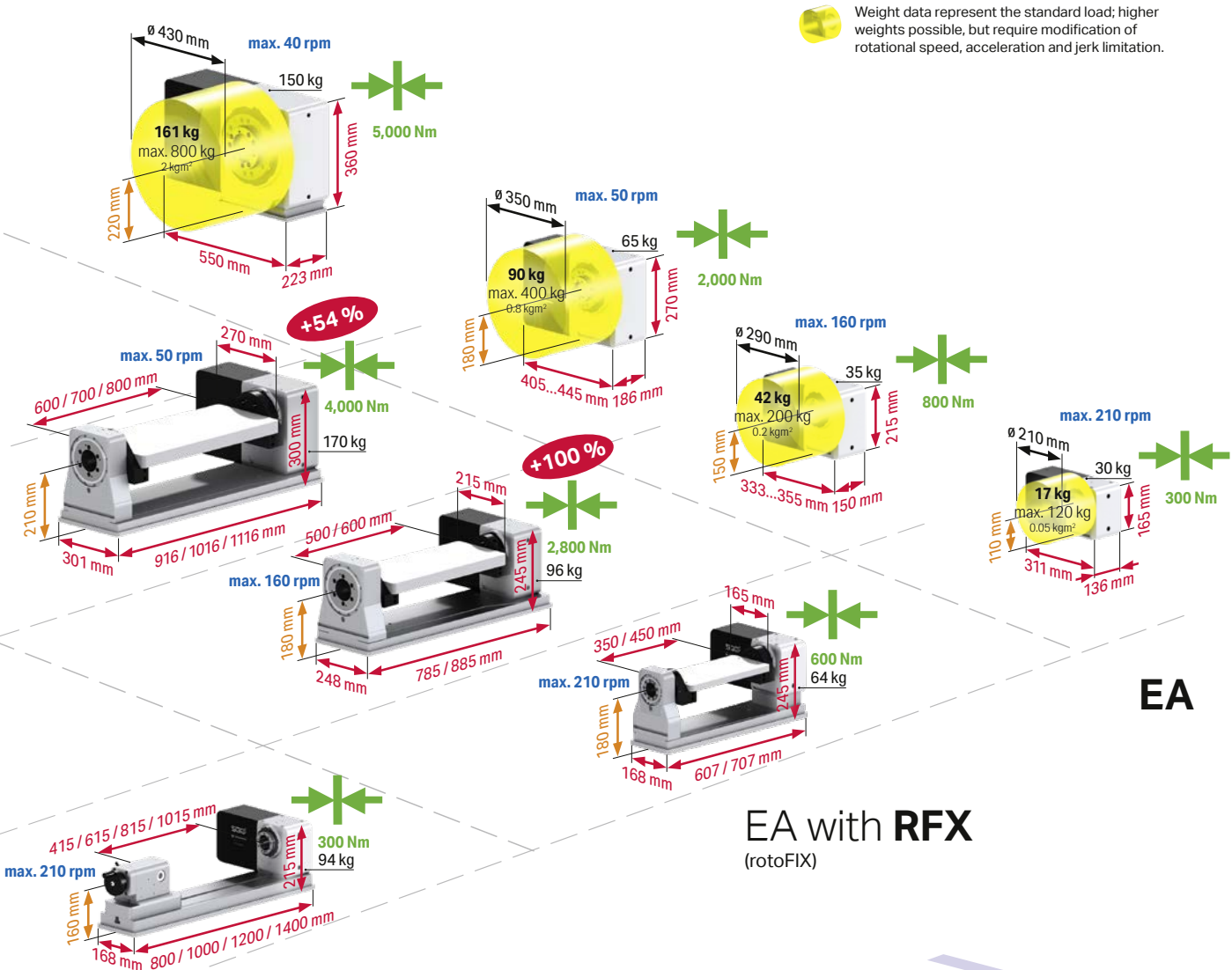
50x

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.

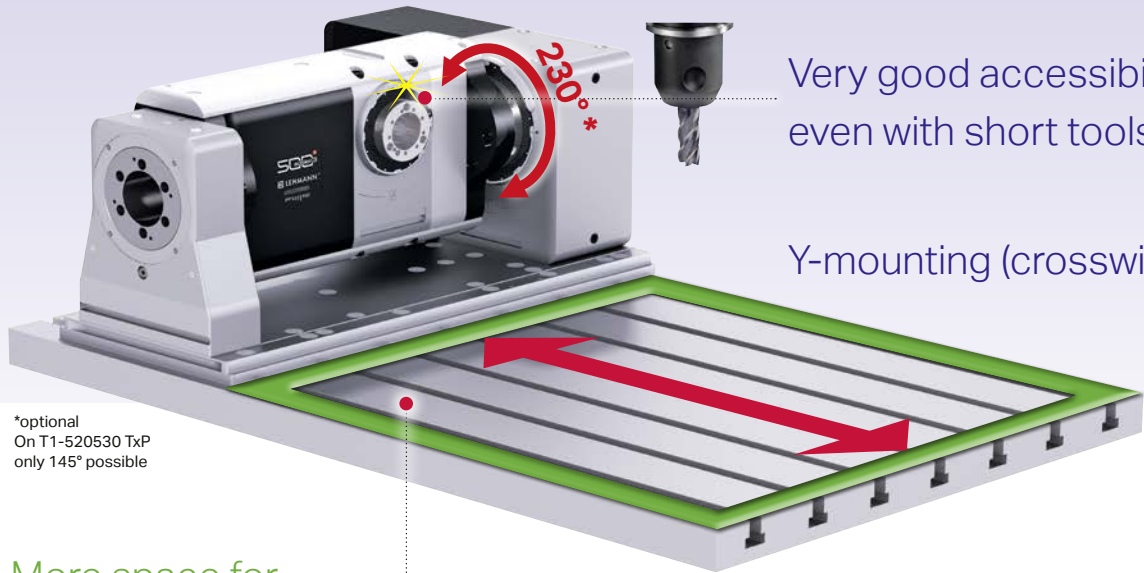


EA with **LFX**  
(longFLEX)

EA with **RFX**  
(rotoFIX)

MODEL

- 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

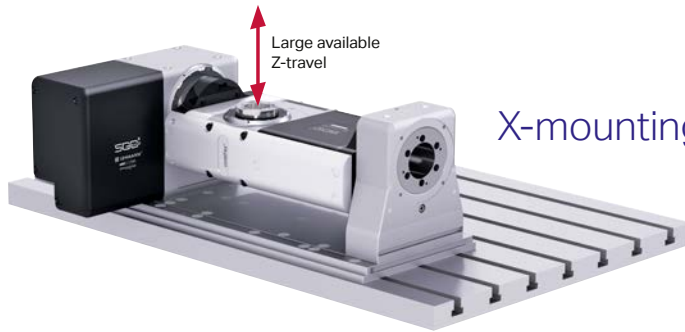


Very good accessibility, even with short tools

Y-mounting (crosswise)

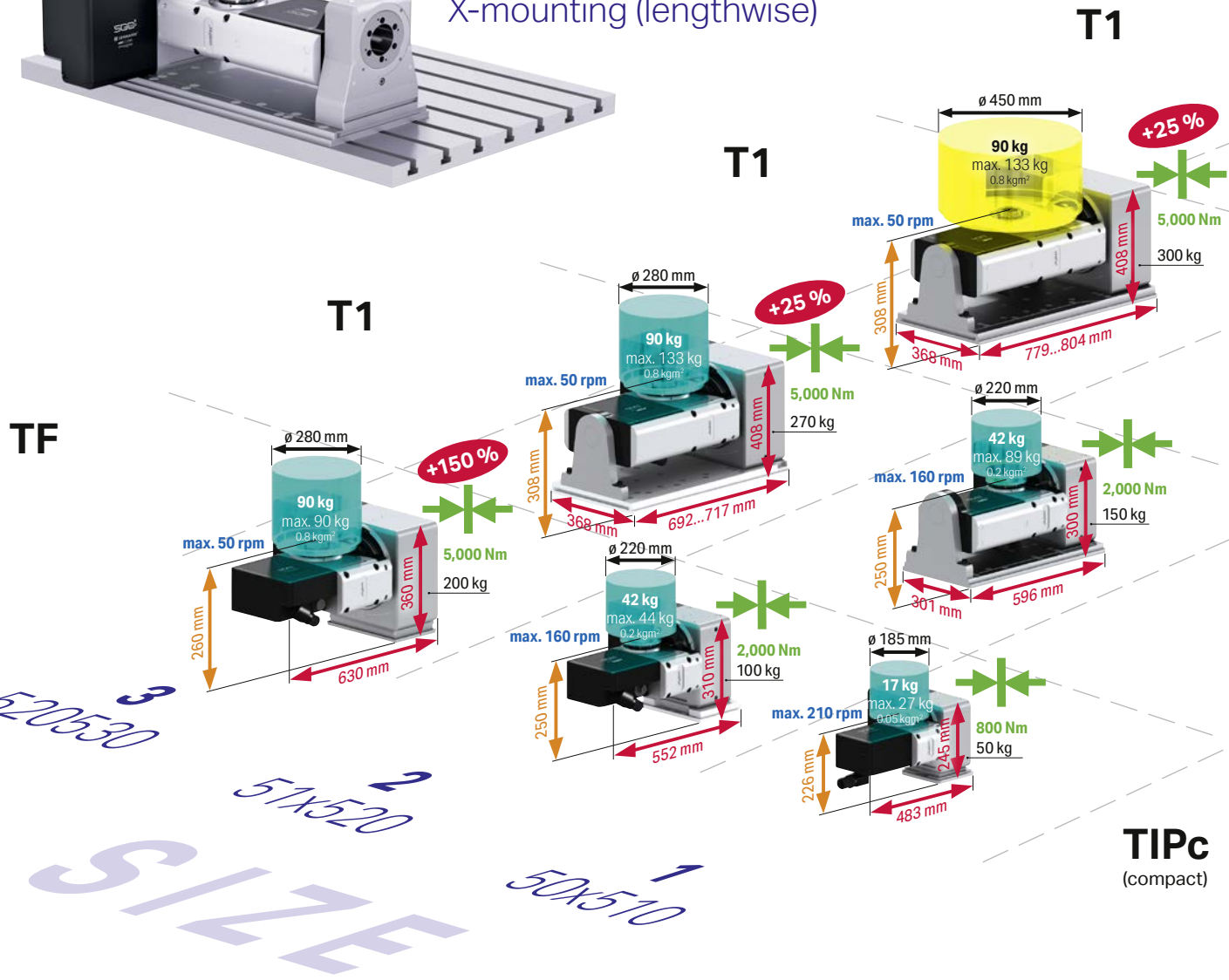
\*optional  
On T1-520530 TxP  
only 145° possible

More space for workpiece and fixtures



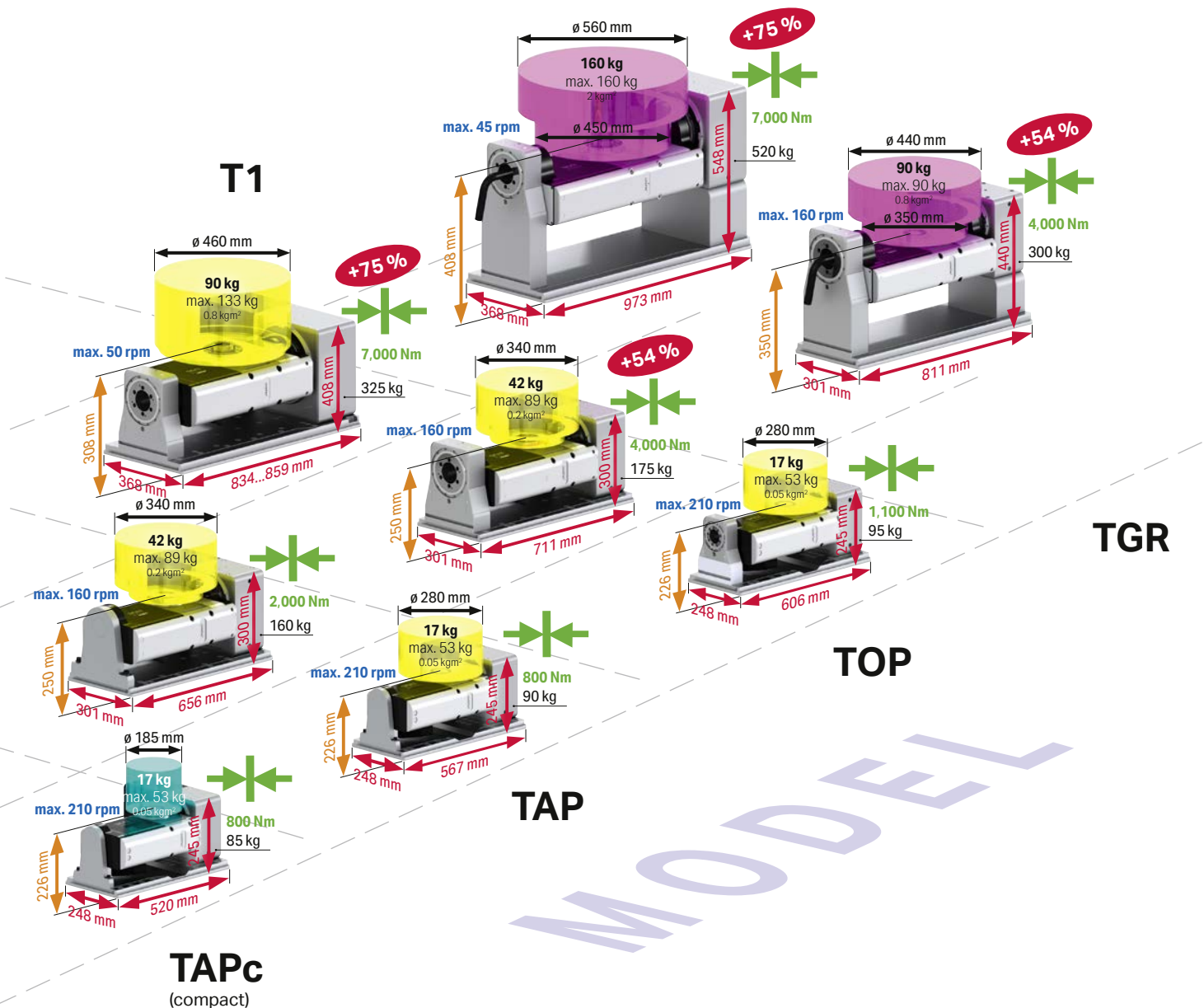
X-mounting (lengthwise)

T1



### 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

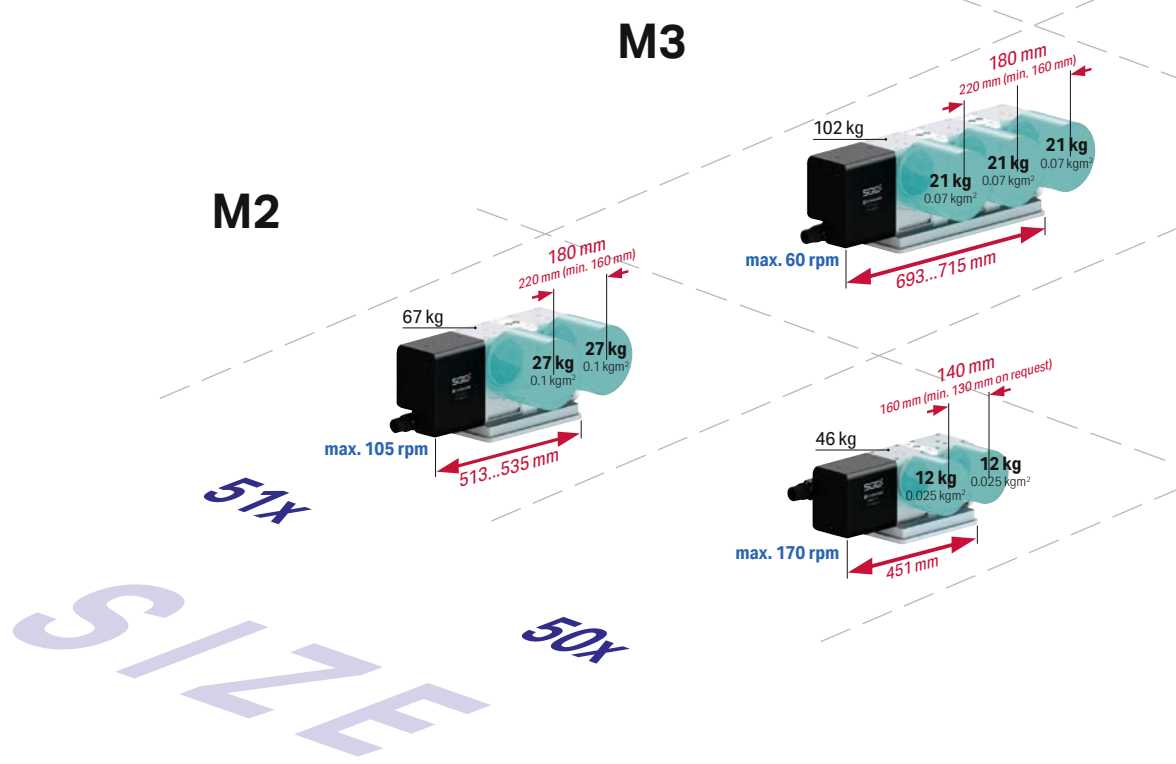


Weight data represent the standard load; higher weights possible, but require modification of rotational speed, acceleration and jerk limitation.

- 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



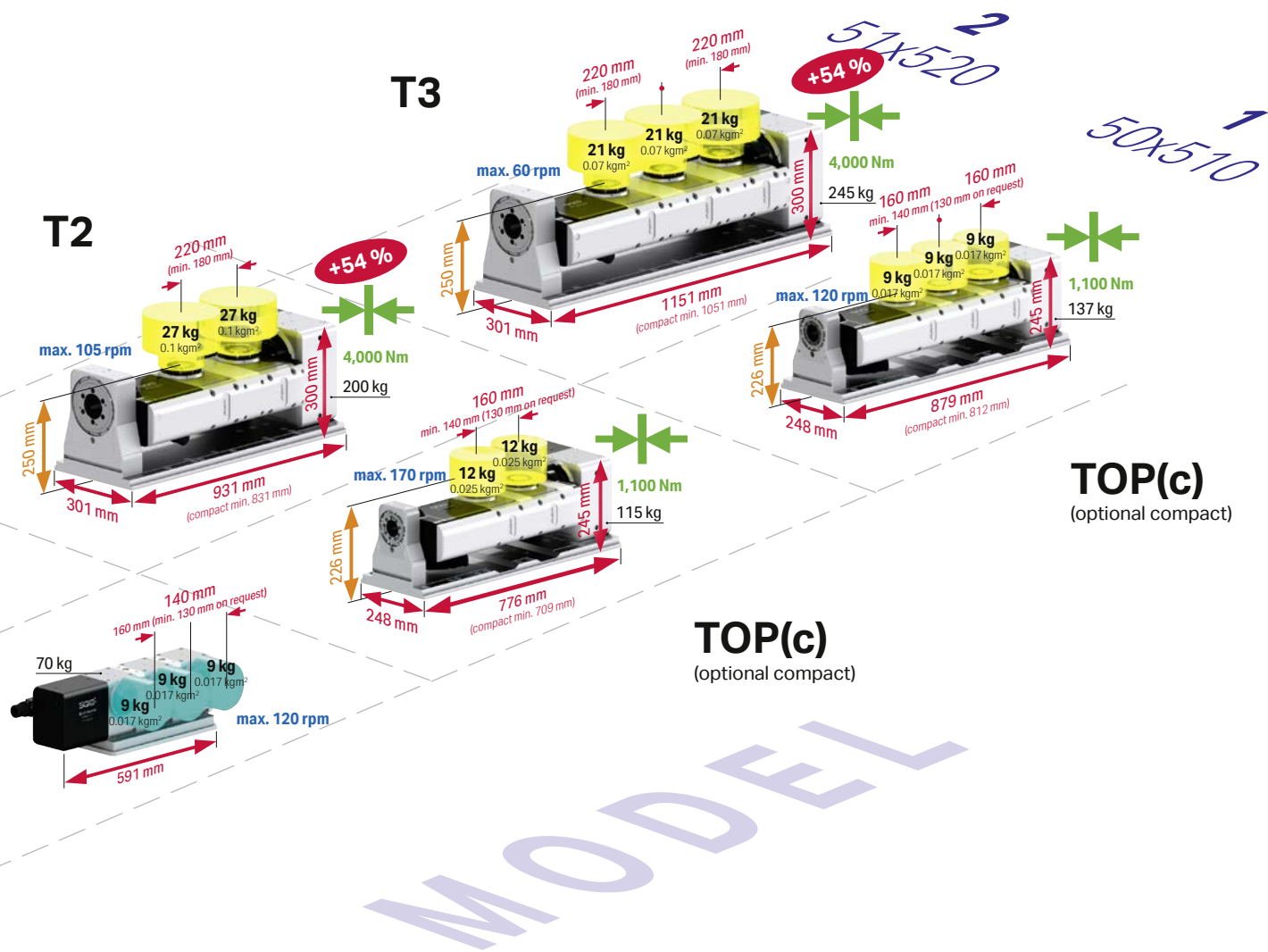
More space for workpiece and fixtures





### 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  $\pm 1$  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)

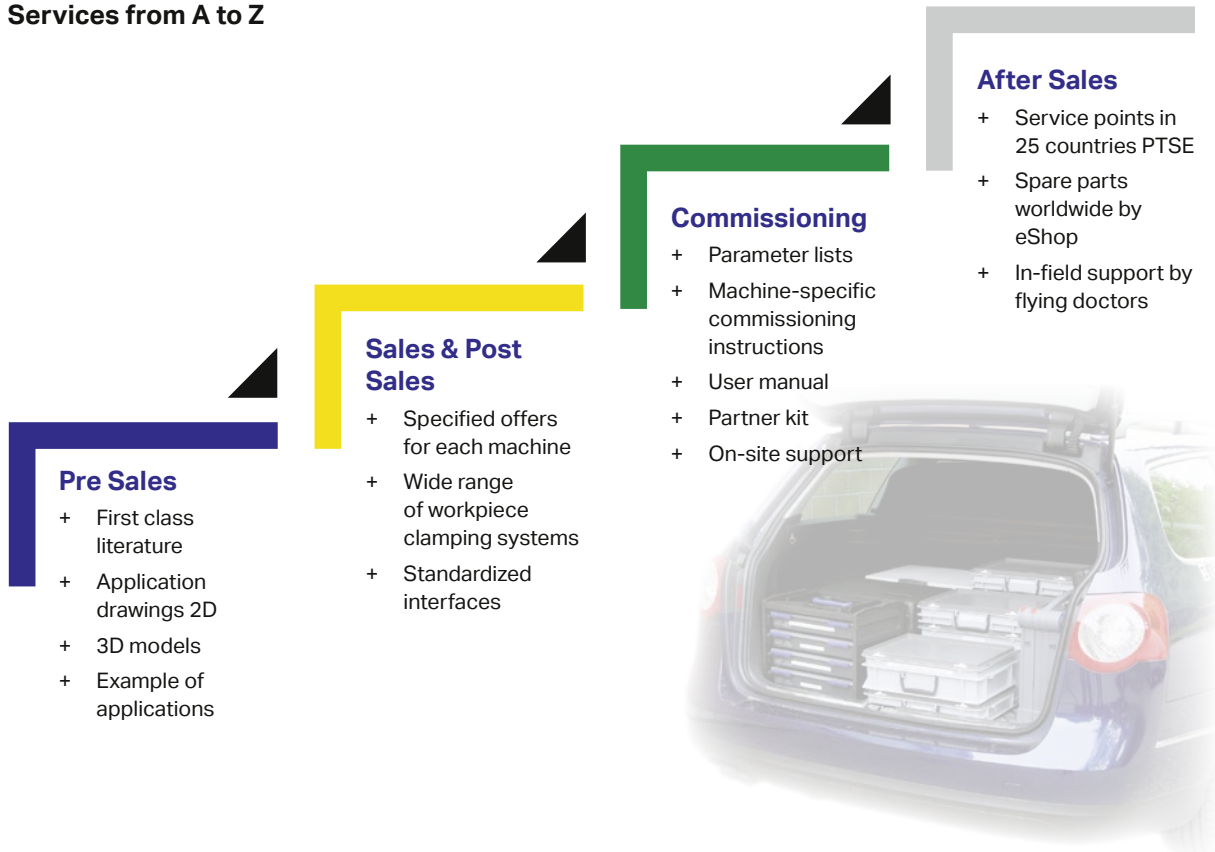


EA-507 with CAPTO retrofit kit

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

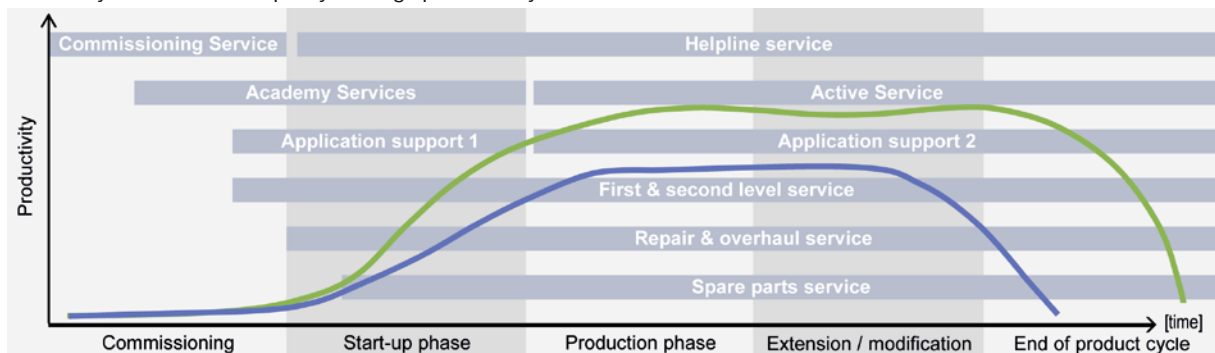


**Services from A to Z**



**Increase productivity – Extend lifecycle**

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



— Productivity with LifeCycle service products from pL LEHMANN  
 — Productivity without service support

For more information please see [www.lehmann-rotary-tables.com](http://www.lehmann-rotary-tables.com).



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#### Representatives / Agencies

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

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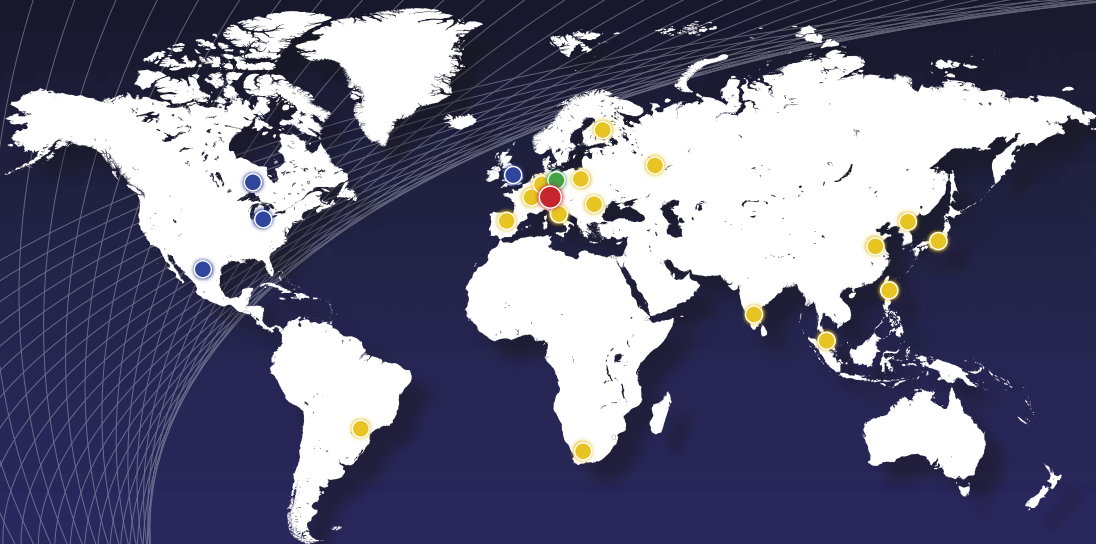
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- Mexico
- USA

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

##### Africa

- South Africa



● Headquarters    ● direct sales partner    ● pL Solutions® partner    ● value added reseller & partner

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