

Selection Guide for CNC Rotary Tables ...



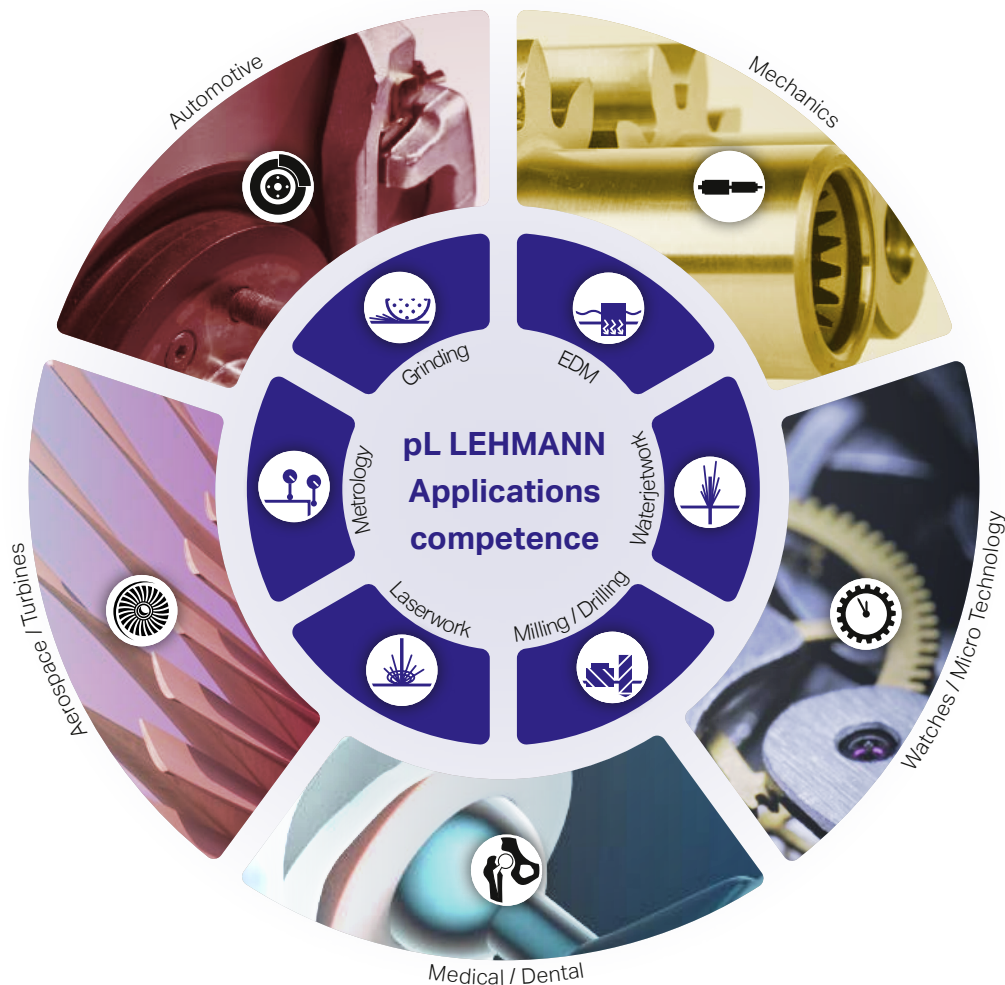
pl

Mazak

10/2018 | EN

... for FJV-, MTV-, NEXUS-, SMART-,
VCN-, VC-Primos- and VTC-series

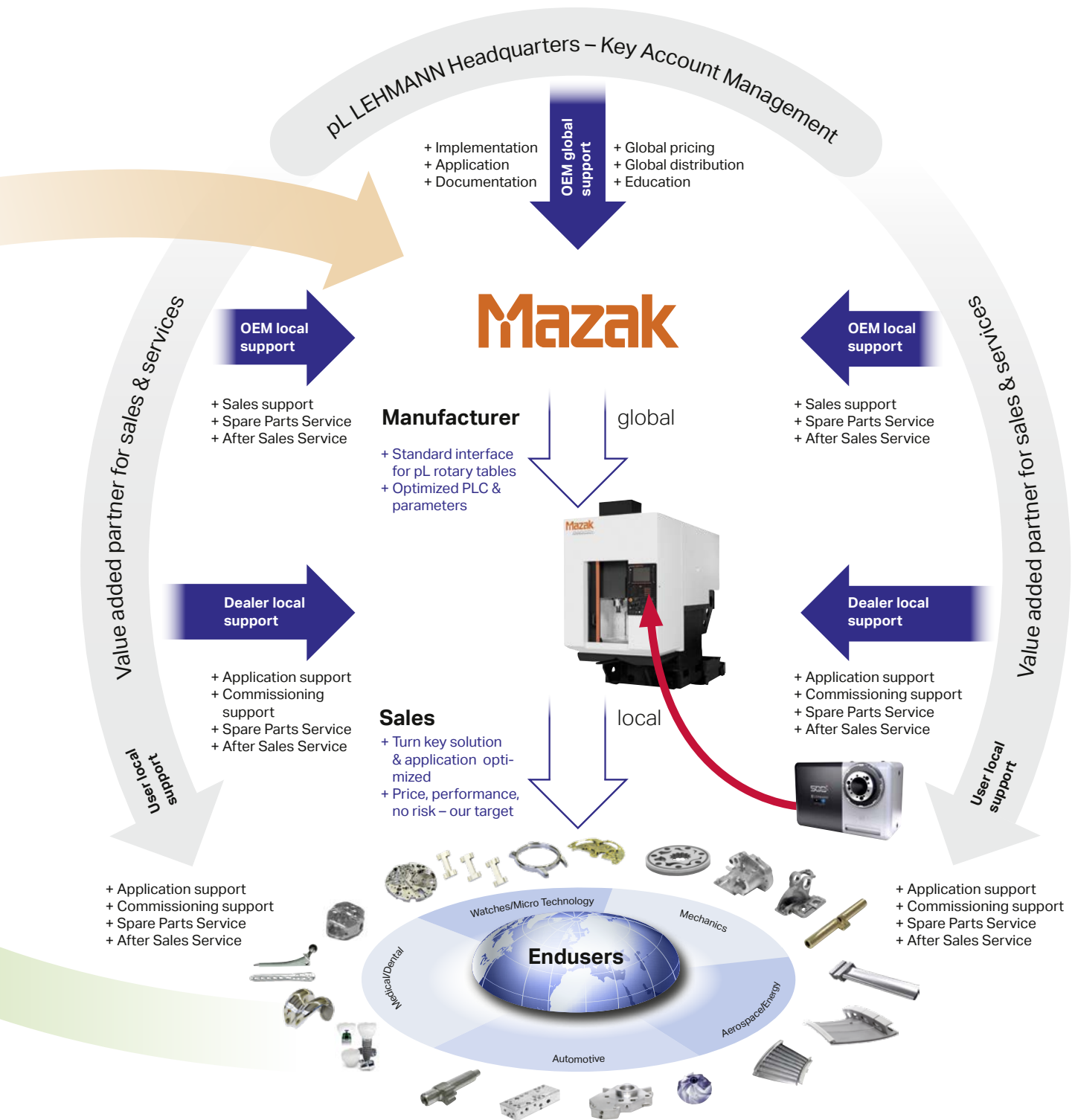
CNC rotary tables for economical manufacturing:
pL LEHMANN has suitable and rational solutions for
nearly every industry



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:
Mazak 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

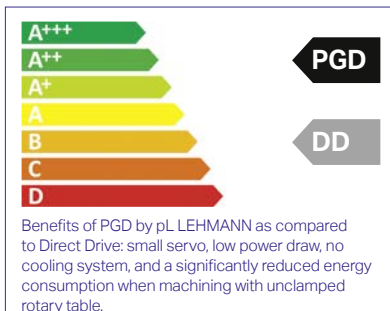
Heavy duty

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

Bluetooth®

Connectivity

Wireless monitoring,
for operation & service

No adjust

Load change without
parameter adjustment

Less cost

No cooling system,
no hydraulics



FJV-250



MTV-655/60



NEXUS 430A II HS

A word from Mazak:

«High Quality – Advanced – International

These values have underpinned the development of «world manufacturing» by offering machine tools that satisfy manufacturers' needs.

We will continue to take on new challenges as the world's top machine tool maker. It is a great honor to us that we contribute to the wealth of people's lives «anytime, anywhere» through manufacturing.»



SMART 530C



VCN-430A



VC-Primos 400 SG



VTC-530

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

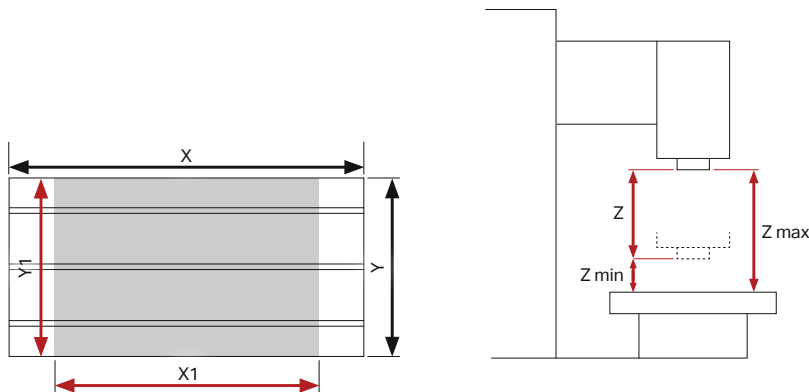


	Table diameter [mm]		Permissible overhang *	Traverse stroke [mm]					Table load ** max [kg]
	X	Y		X1	Y1	Z	Zmin	Zmax	
FJV-200 II	800	460	10%	660	410	410	150	560	350
FJV-250	1'200	550	10%	1'380	750	600	200	800	1'200
MTV-655/60	1'740	650	10%	1'600	650	650	200	850	1'000
NEXUS 430A II HS	900	430	10%	560	410	510	150	660	500
NEXUS 430B II HS	1'100	410	10%	760	410	510	150	660	1'000
NEXUS 530C II DM	1'300	550	10%	1'050	530	510	150	660	1'200
NEXUS 530C II HS	1'300	550	10%	1'050	530	510	150	660	1'200
NEXUS 700D II	1'740	700	10%	1'530	700	650	200	850	2'000
SMART 430A	900	430	10%	560	430	510	150	660	500
SMART 530C	1'300	550	10%	1'050	530	510	150	660	1'200
VCN-430A	900	430	10%	560	430	510	150	660	500
VCN-530(535)C	1'300	550	10%	1'050	530	510	150	660	1'200
VC-Primos 400 SG	600	400	10%	500	400	350	275	625	300
VC-Primos 400 SG APC	600	410	10%	500	400	350	225	575	200
VTC-200B II	1'460	510	10%	1'120	510	510	180	690	800
VTC-200C II	2'000	510	10%	1'660	510	510	180	690	1'000
VTC-300C II	2'000	760	10%	1'740	760	660	180	840	1'400
VTC-530	2'300	530	10%	1'740	530	510	180	690	1'000
VTC-560/25	3'000	560	10%	2'500	560	560	140	700	1'400
VTC-760	2'300	760	10%	1'740	760	660	240	900	1'400
VTC-800(820) /20SR	2'500	820	10%	2'000	800	720	140	860	1'700

* 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

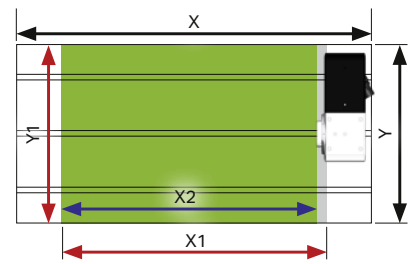
	EA-507 X2	EA-510 X2	EA-520 X2	EA-530 X2
FJV-200 II	563	547	521	

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

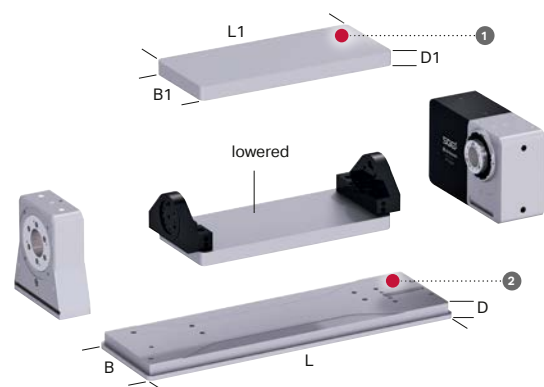


	EA-507 X2	EA-510 X2	EA-520 X2	EA-530 X2
FJV-200 II	563	547	521	
FJV-250	1'123	1'107	1'081	1'052
MTV-655/60		1'487	1'461	1'432
NEXUS 430A II HS	563	547	521	
NEXUS 430B II HS	763	747	721	
NEXUS 530C II DM	1'008	992	966	937
NEXUS 530C II HS	1'008	992	966	937
NEXUS 700D II			1'426	1'397
SMART 430A	563	547	521	
SMART 530C	1'008	992	966	937
VCN-430A	563	547	521	
VCN-530(535)C	1'008	992	966	937
VC-Primos 400 SG	383	367	341	
VC-Primos 400 SG APC	383	367	341	
VTC-200B II	1'123	1'107	1'081	1'052
VTC-200C II	1'663	1'647	1'621	1'592
VTC-300C II			1'661	1'632
VTC-530	1'853	1'837	1'811	1'782
VTC-560/25	2'583	2'567	2'541	2'512
VTC-760			1'811	1'782
VTC-800(820) /20SR				2'012



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		

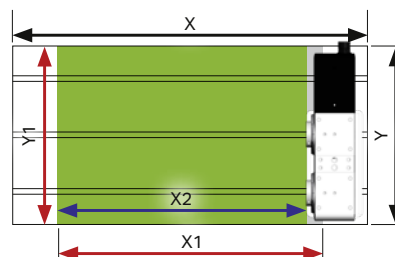
Explanations for pp. 8 to 11

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			
FJV-200 II	504			
FJV-250	1'064	1'054	1'064	
MTV-655/60	1'444	1'434	1'444	1'434
NEXUS 430A II HS	504			
NEXUS 430B II HS	704			
NEXUS 530C II DM	949	939	949	
NEXUS 530C II HS	949	939	949	
NEXUS 700D II	1'409	1'399	1'409	1'399
SMART 430A	504			
SMART 530C	949	939	949	
VCN-430A	504			
VCN-530(535)C	949	939	949	
VC-Primos 400 SG				
VC-Primos 400 SG APC	324			
VTC-200B II	1'064	1'054		
VTC-200C II	1'604	1'594		
VTC-300C II	1'644	1'634	1'644	1'634
VTC-530	1'794	1'784		
VTC-560/25	2'524	2'514	2'524	
VTC-760	1'794	1'784	1'794	1'784
VTC-800(820) /20SR	2'024	2'014	2'024	2'014

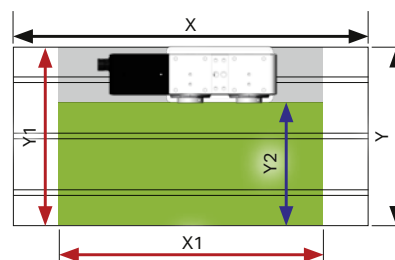
Y-mounting



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

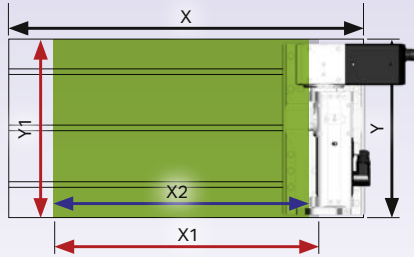
	M2-507	M2-510	M3-507	M3-510
	Y2			
FJV-200 II		199	209	199
FJV-250				414
MTV-655/60				
NEXUS 430A II HS		184	194	184
NEXUS 430B II HS			184	174
NEXUS 530C II DM				304
NEXUS 530C II HS				304
NEXUS 700D II				
SMART 430A		194	204	194
SMART 530C				304
VCN-430A		194	204	194
VCN-530(535)C				304
VC-Primos 400 SG	174	164	174	
VC-Primos 400 SG APC		169	179	
VTC-200B II				
VTC-200C II				
VTC-300C II				
VTC-530				
VTC-560/25				
VTC-760				
VTC-800(820) /20SR				

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

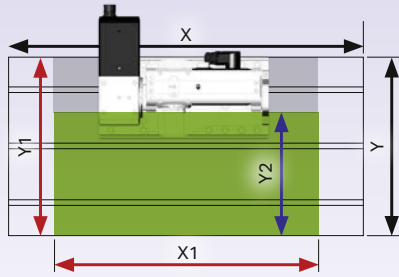


TOP1.2

	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
FJV-200 II	600									
FJV-250	1'160	1'116		1'120	1'100		1'120			
MTV-655/60	1'540	1'496	1'476	1'500	1'480	1'446	1'500	1'480		1'500
NEXUS 430A II HS	600									
NEXUS 430B II HS										
NEXUS 530C II DM	1'045	1'001		1'005	985		1'005			
NEXUS 530C II HS	1'045	1'001		1'005	985		1'005			
NEXUS 700D II	1'505	1'461	1'441	1'465	1'445	1'411	1'465	1'445		1'465
SMART 430A	600									
SMART 530C	1'045	1'001		1'005	985		1'005			
VCN-430A	600									
VCN-530(535)C	1'045	1'001		1'005	985		1'005			
VC-Primos 400 SG										
VC-Primos 400 SG APC										
VTC-200B II	1'160	1'116		1'120						
VTC-200C II	1'700	1'656		1'660						
VTC-300C II	1'740	1'696	1'676	1'700	1'680	1'646	1'700	1'680	1'646	1'700
VTC-530	1'890	1'846		1'850			1'850			
VTC-560/25	2'620	2'576		2'580	2'560		2'580			2'580
VTC-760	1'890	1'846	1'826	1'850	1'830	1'796	1'850	1'830	1'796	1'850
VTC-800(820) /20SR	2'120	2'076	2'056	2'080	2'060	2'026	2'080	2'060	2'026	2'080

	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
FJV-200 II											
FJV-250											
MTV-655/60	1'480		1'500			1'500					
NEXUS 430A II HS											
NEXUS 430B II HS											
NEXUS 530C II DM											
NEXUS 530C II HS											
NEXUS 700D II	1'445		1'465			1'465			1'465		
SMART 430A											
SMART 530C											
VCN-430A											
VCN-530(535)C											
VC-Primos 400 SG											
VC-Primos 400 SG APC											
VTC-200B II											
VTC-200C II											
VTC-300C II	1'680	1'646	1'700	1'680		1'700			1'700		
VTC-530											
VTC-560/25											
VTC-760	1'830	1'796	1'850	1'830		1'850			1'850		
VTC-800(820) /20SR	2'060	2'026	2'080	2'060		2'080	2'060		2'080		

X-mounting



Rotary table installation using hole pattern in base plate



TIP1



TAP1



TOP1.2

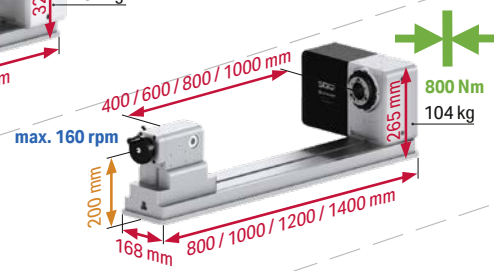
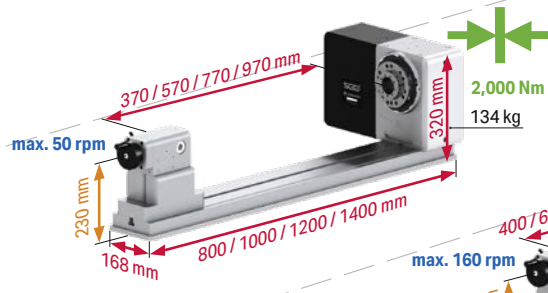
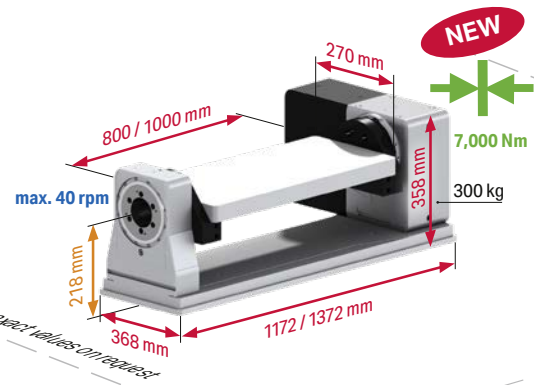
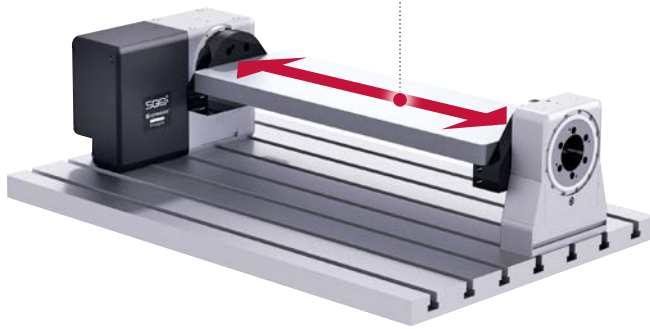
	TIP1c TF-507510 Y2	TIP2c TF-510520 Y2	TIP3c TF-520530 Y2	TAP1c T1-507510 Y2	TAP2c T1-510520 Y2	TAP3c T1-520530 Y2	TAP1 T1-507510 Y2	TAP2 T1-510520 Y2	TAP3 T1-520530 Y2	TOP1 T1-507510 Y2
FJV-200 II		261		265	245		265	245		265
FJV-250			456			426		460	426	480
MTV-655/60										
NEXUS 430A II HS		246	226	250	230		250	230		250
NEXUS 430B II HS			216		220	186	240	220	186	240
NEXUS 530C II DM						316		350	316	
NEXUS 530C II HS						316		350	316	
NEXUS 700D II										
SMART 430A		256	236	260	240		260	240		260
SMART 530C						316		350	316	
VCN-430A		256	236	260	240		260	240		260
VCN-530(535)C						316		350	316	
VC-Primos 400 SG	270	226		230	210		230			230
VC-Primos 400 SG APC	275	231		235			235			235
VTC-200B II									286	
VTC-200C II										
VTC-300C II										
VTC-530										
VTC-560/25										
VTC-760										
VTC-800(820) /20SR										

	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
FJV-200 II	245		265	245		265	245		265		
FJV-250	460	426	480	460	426	480	460	426	480	460	426
MTV-655/60					426		460	426		460	426
NEXUS 430A II HS	230		250	230		250	230		250	230	
NEXUS 430B II HS	220	186	240	220	186	240	220		240	220	
NEXUS 530C II DM	350	316	370	350	316	370	350	316	370	350	316
NEXUS 530C II HS	350	316	370	350	316	370	350	316	370	350	316
NEXUS 700D II					476		510	476		510	476
SMART 430A	240		260	240		260	240		260	240	
SMART 530C	350	316	370	350	316	370	350	316	370	350	316
VCN-430A	240		260	240		260	240		260	240	
VCN-530(535)C	350	316	370	350	316	370	350	316	370	350	316
VC-Primos 400 SG			230								
VC-Primos 400 SG APC			235								
VTC-200B II		286		320	286		320	286	340	320	286
VTC-200C II					286			286			286
VTC-300C II					536			536			536
VTC-530								306			306
VTC-560/25											
VTC-760								536			536
VTC-800(820) /20SR											586



Very good accessibility, even with short tools

More space for workpieces and fixtures



530

520


51x

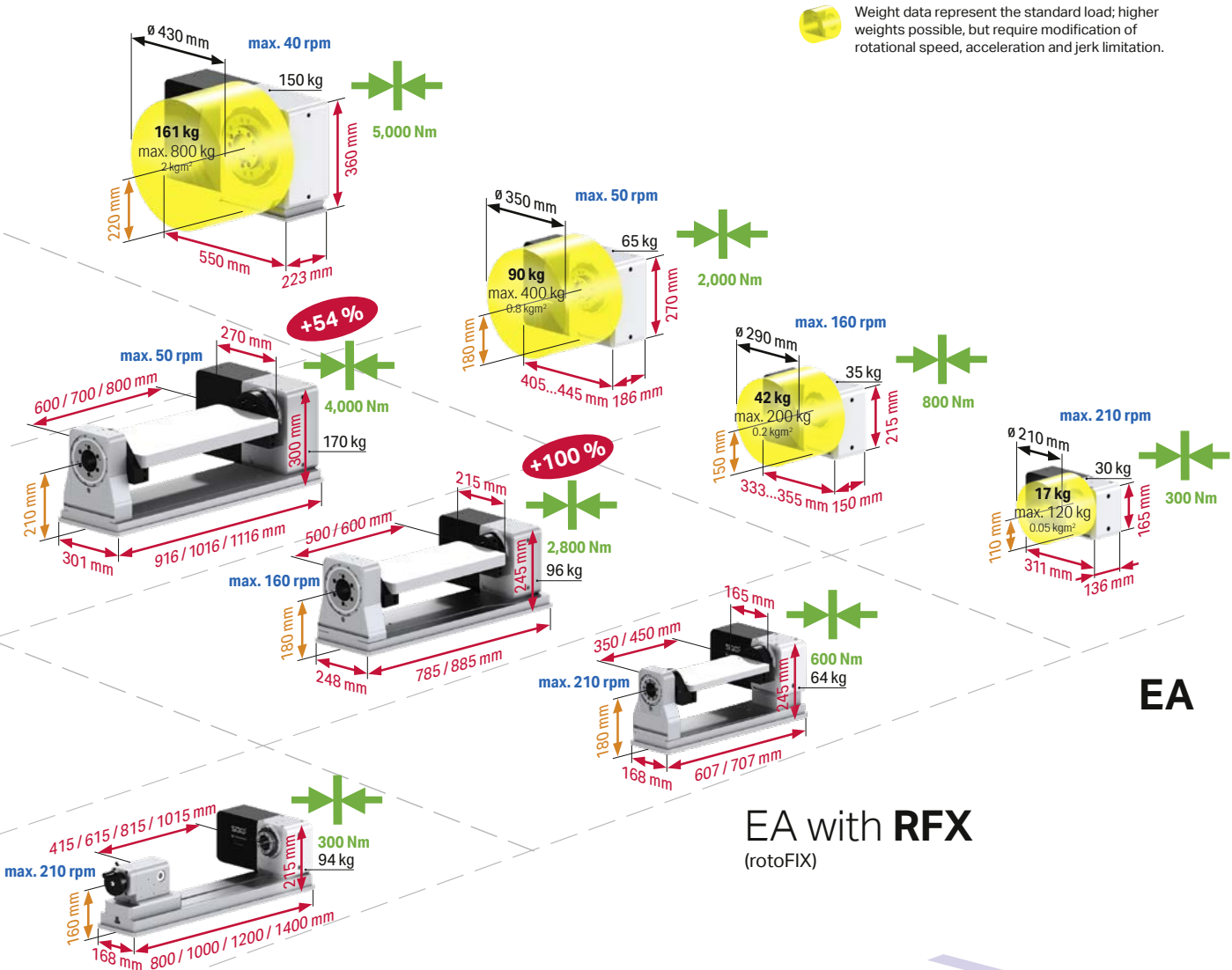
50x

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.



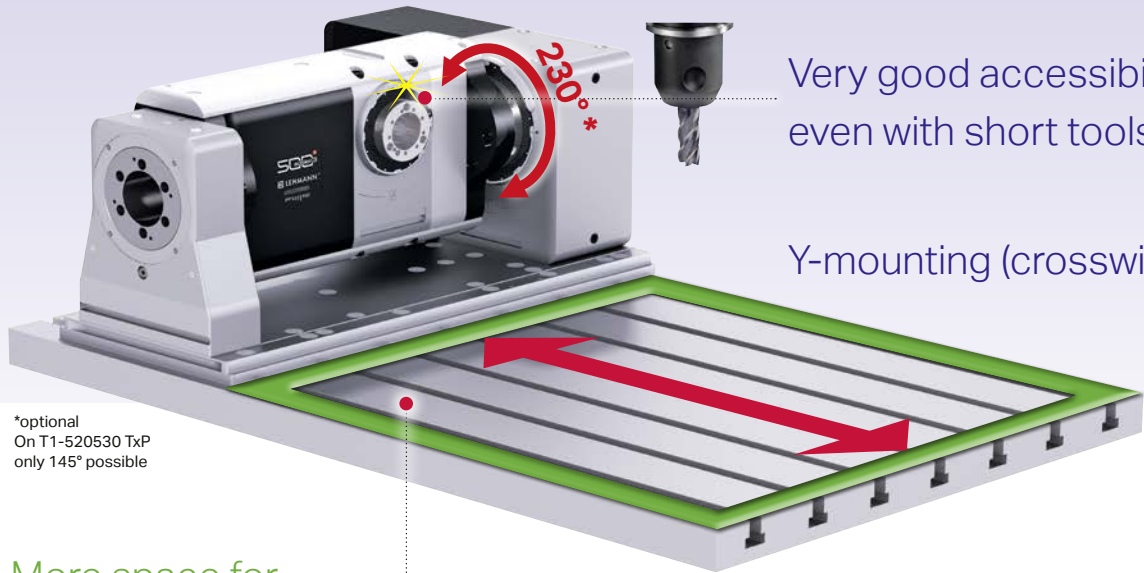
EA

EA with **RFX**
(rotoFIX)

EA with **LFX**
(longFLEX)

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

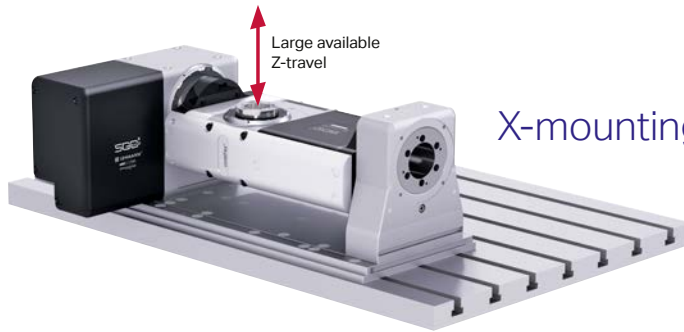


Very good accessibility, even with short tools

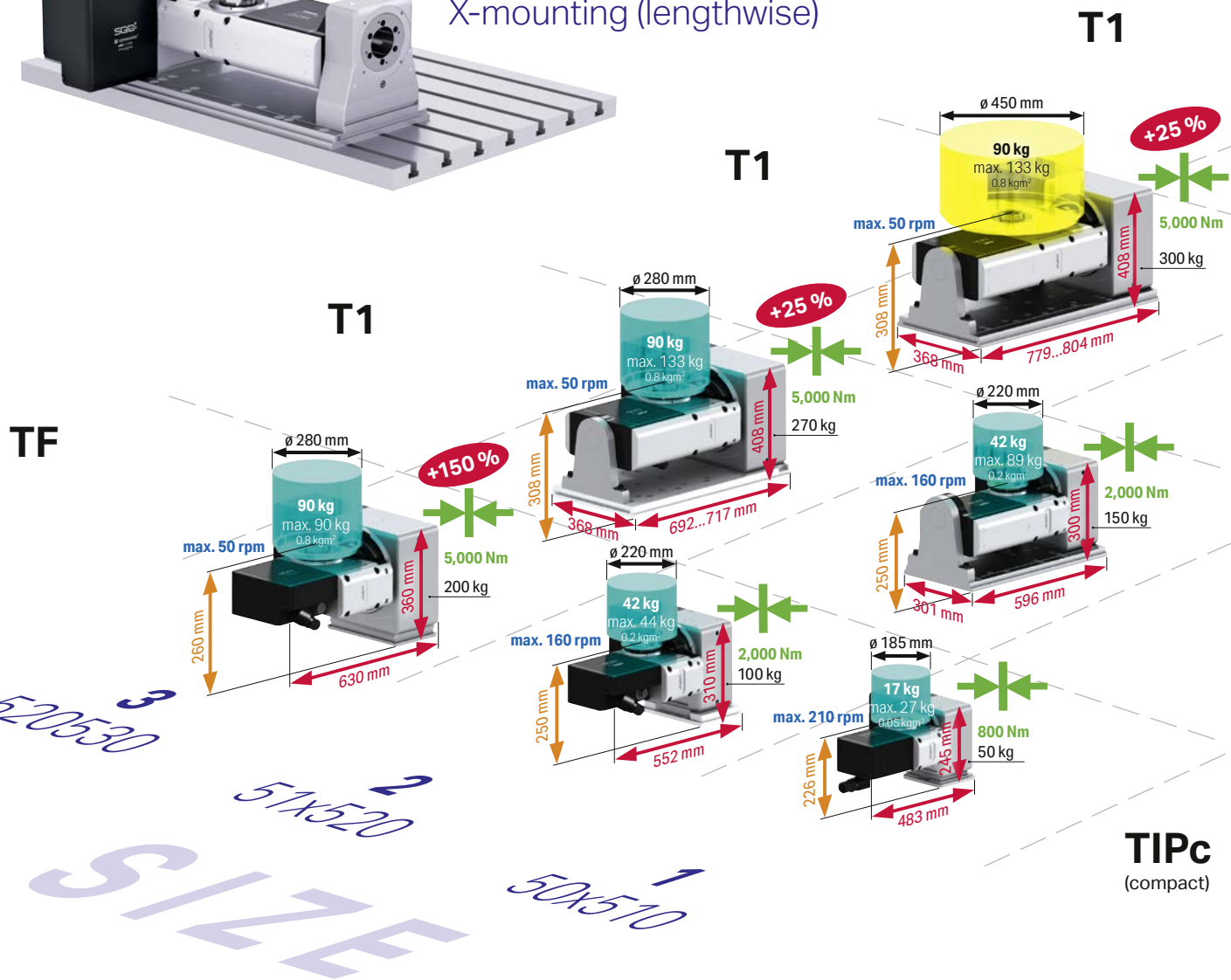
Y-mounting (crosswise)

*optional
On T1-520530 TxP
only 145° possible

More space for workpiece and fixtures

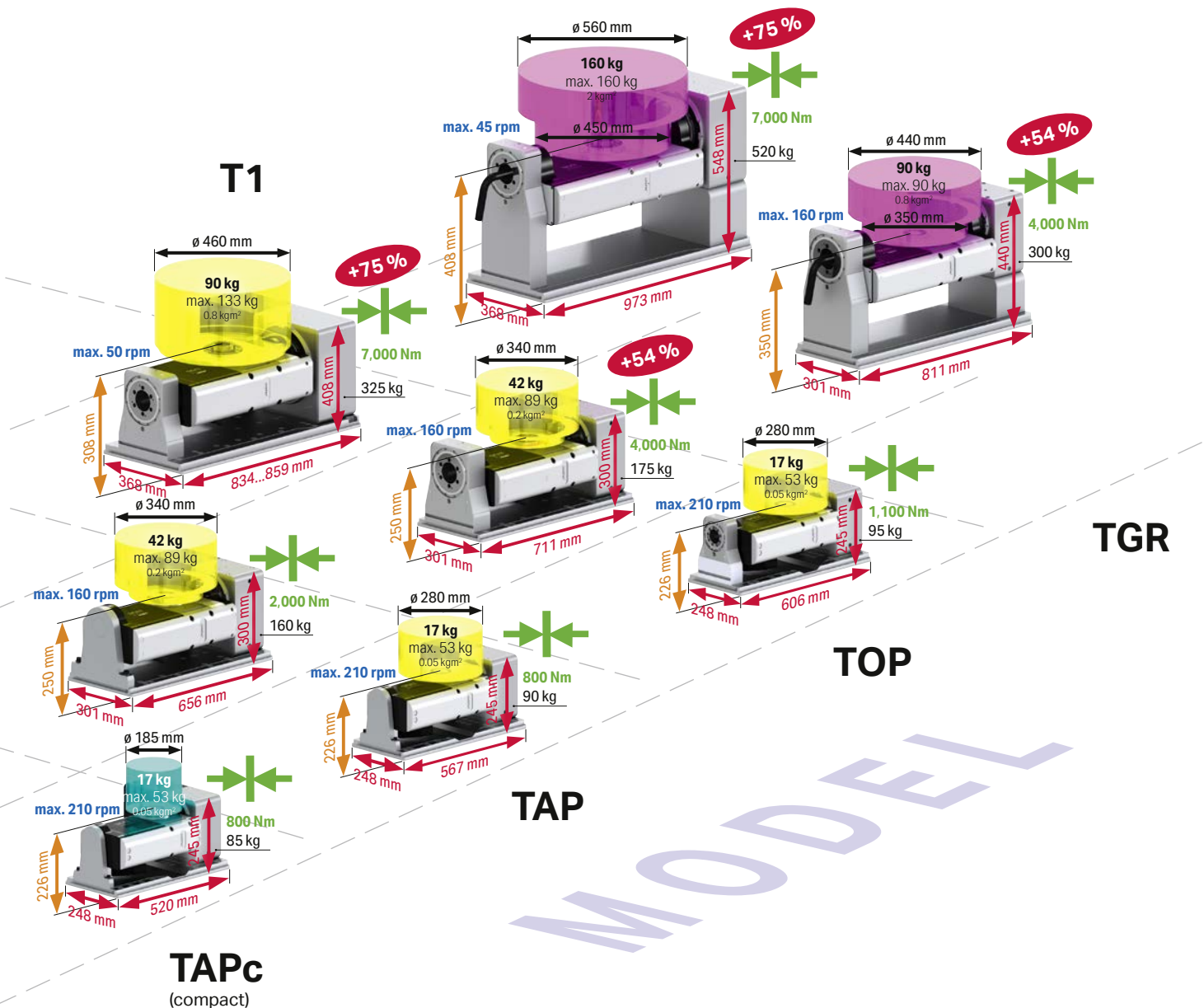


X-mounting (lengthwise)



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

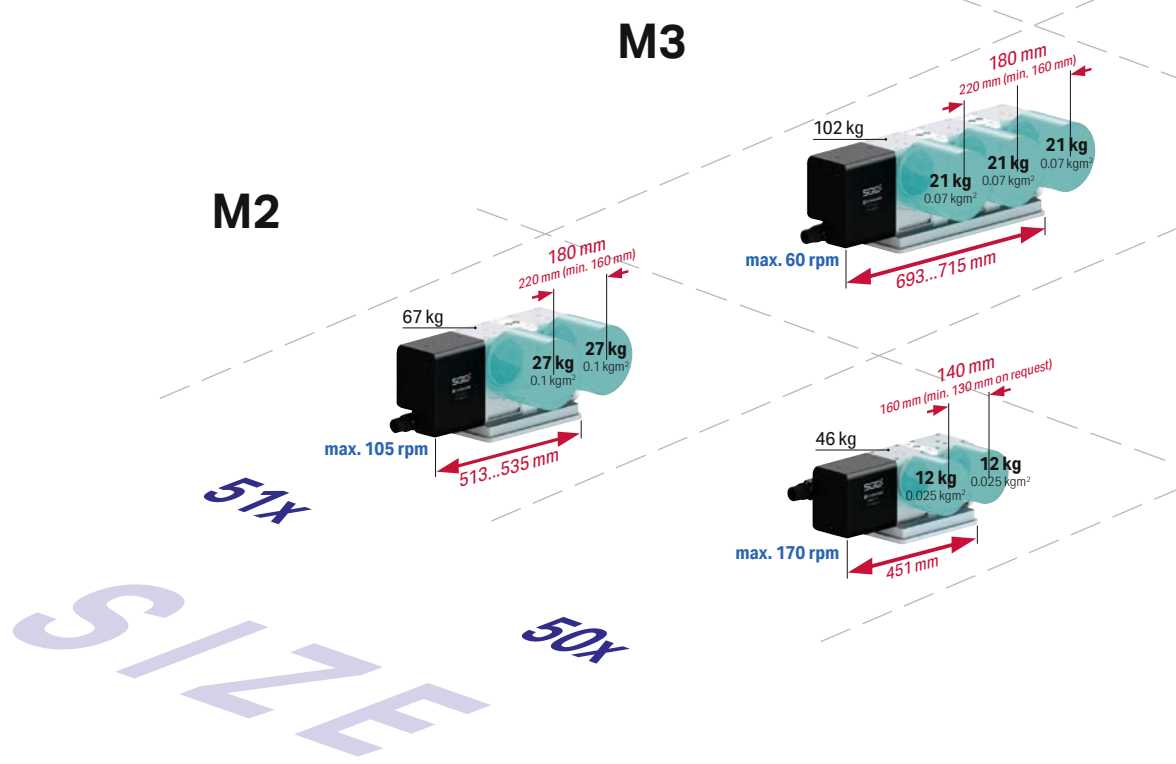


Weight data represent the standard load; higher weights possible, but require modification of rotational speed, acceleration and jerk limitation.

- 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

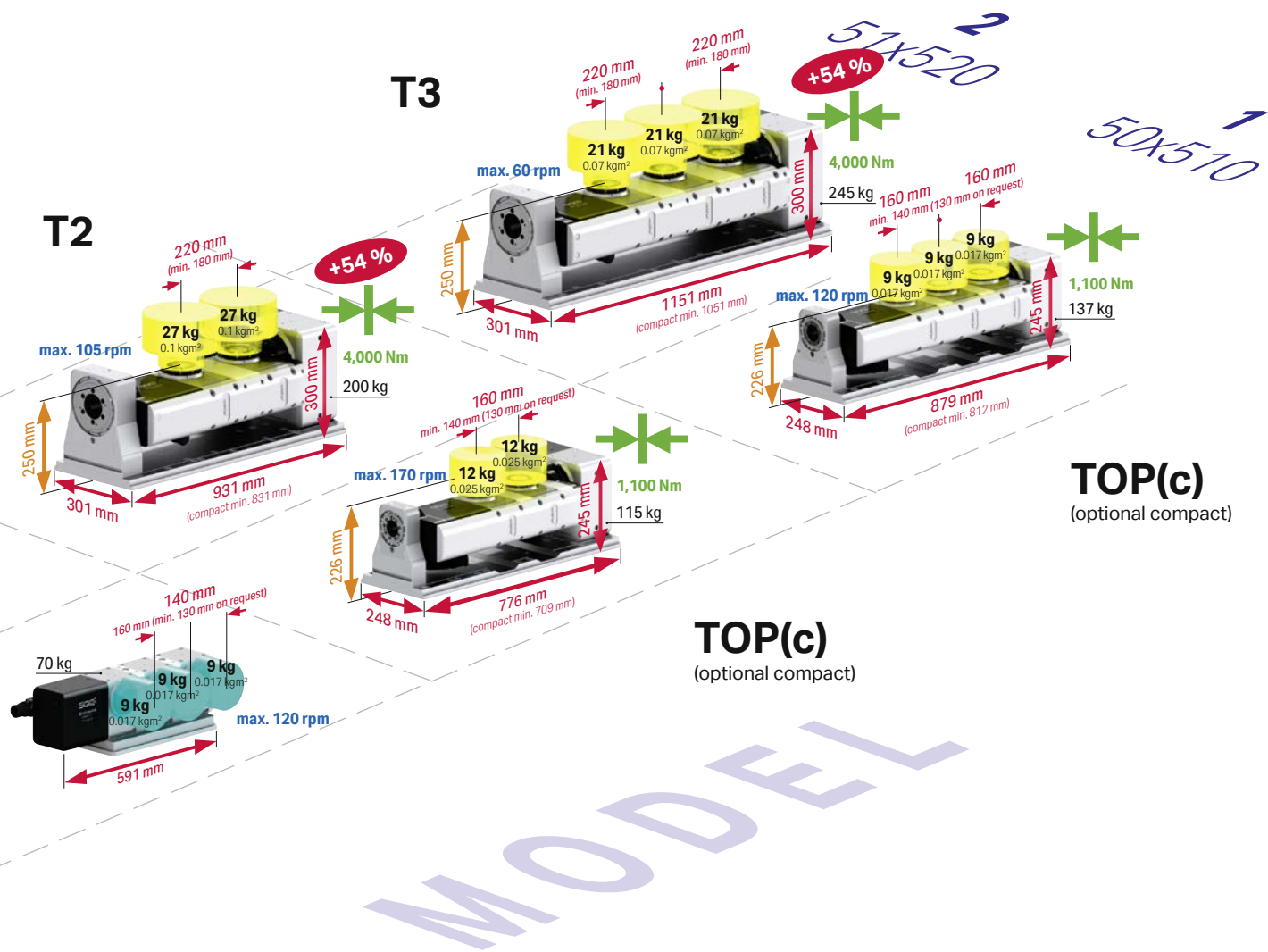


More space for workpiece and fixtures



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 ± 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)

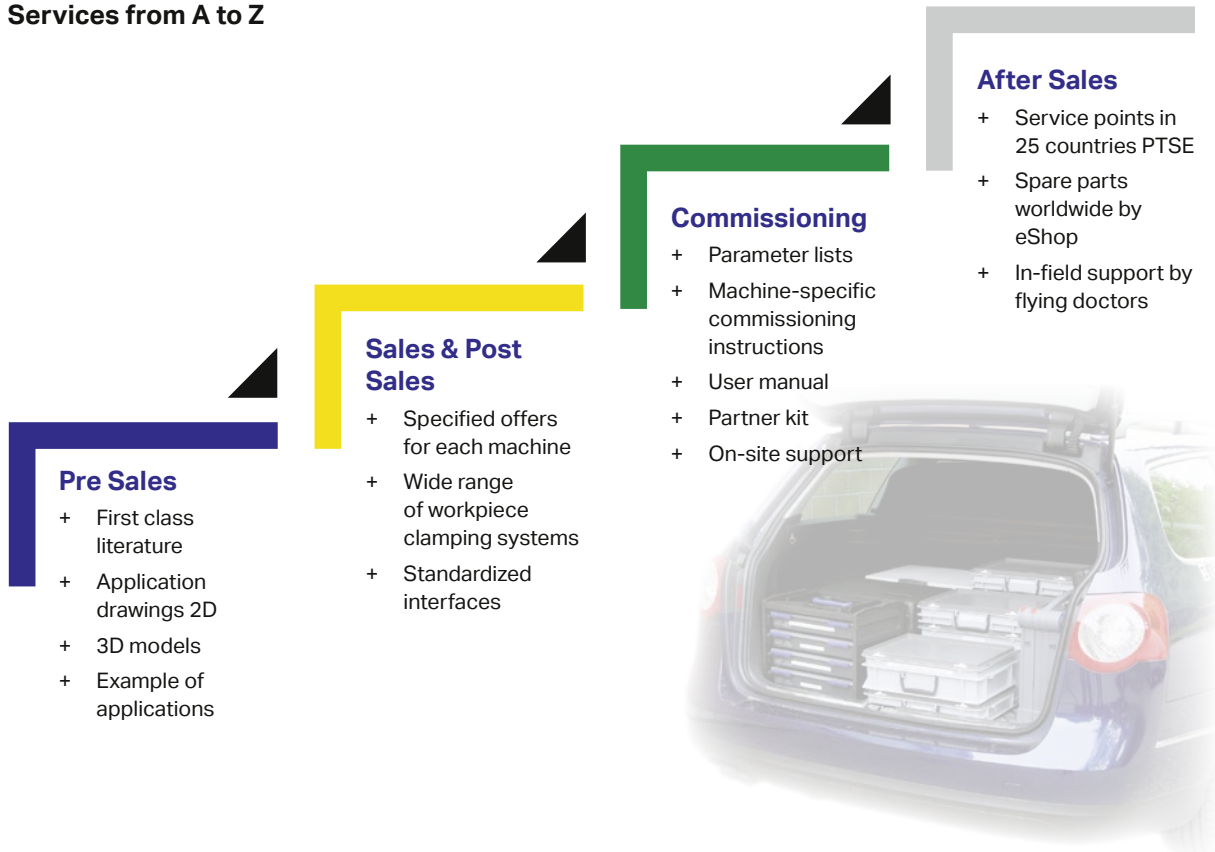


EA-507 with CAPTO retrofit kit

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

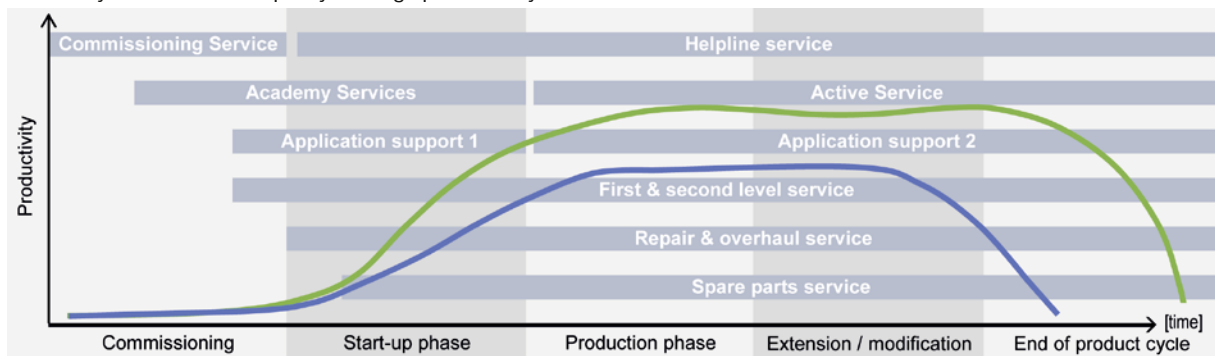


Services from A to Z



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

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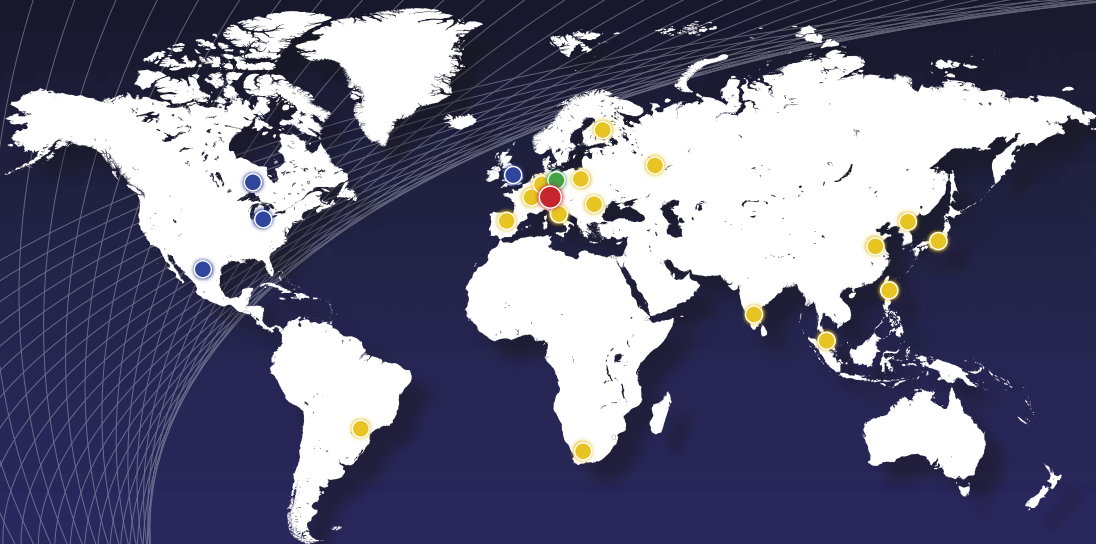
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