

Selection Guide for CNC Rotary Tables ...



Bluetooth®

pl

YCM®

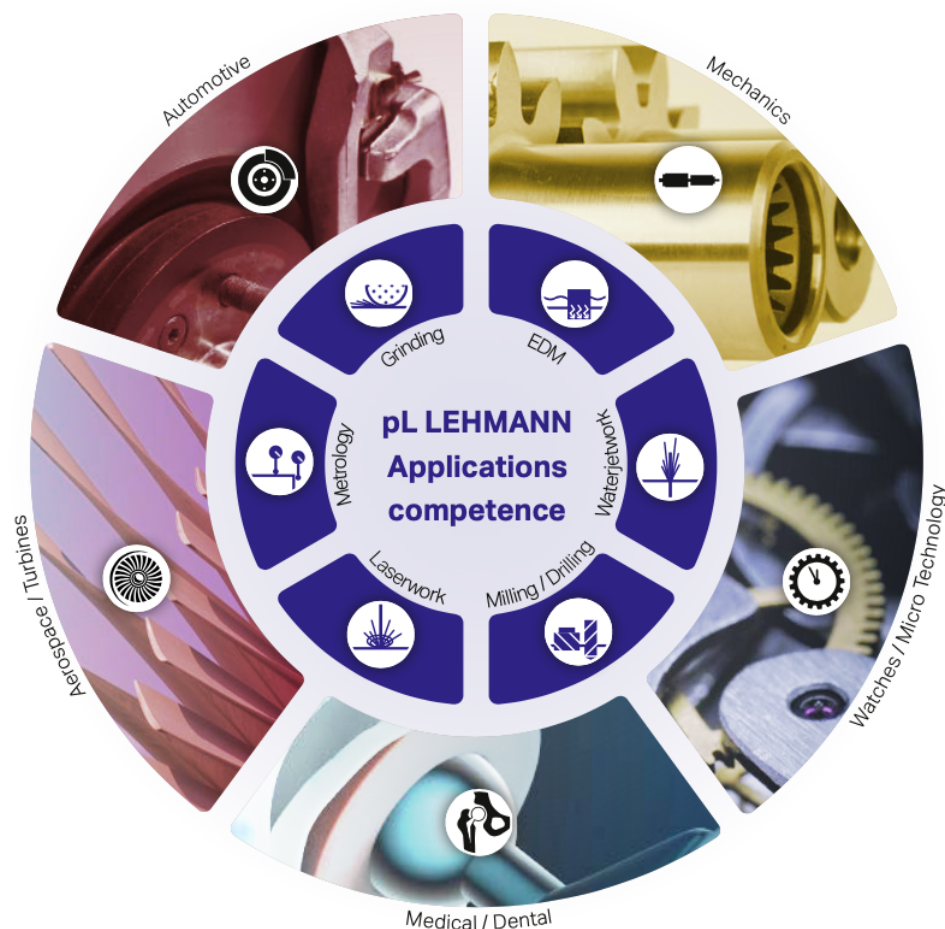
10/2018 | EN



... for DV-, FP-, FV-, NSV-, NT-, NXV-,
TV- and WV-series

Applications

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

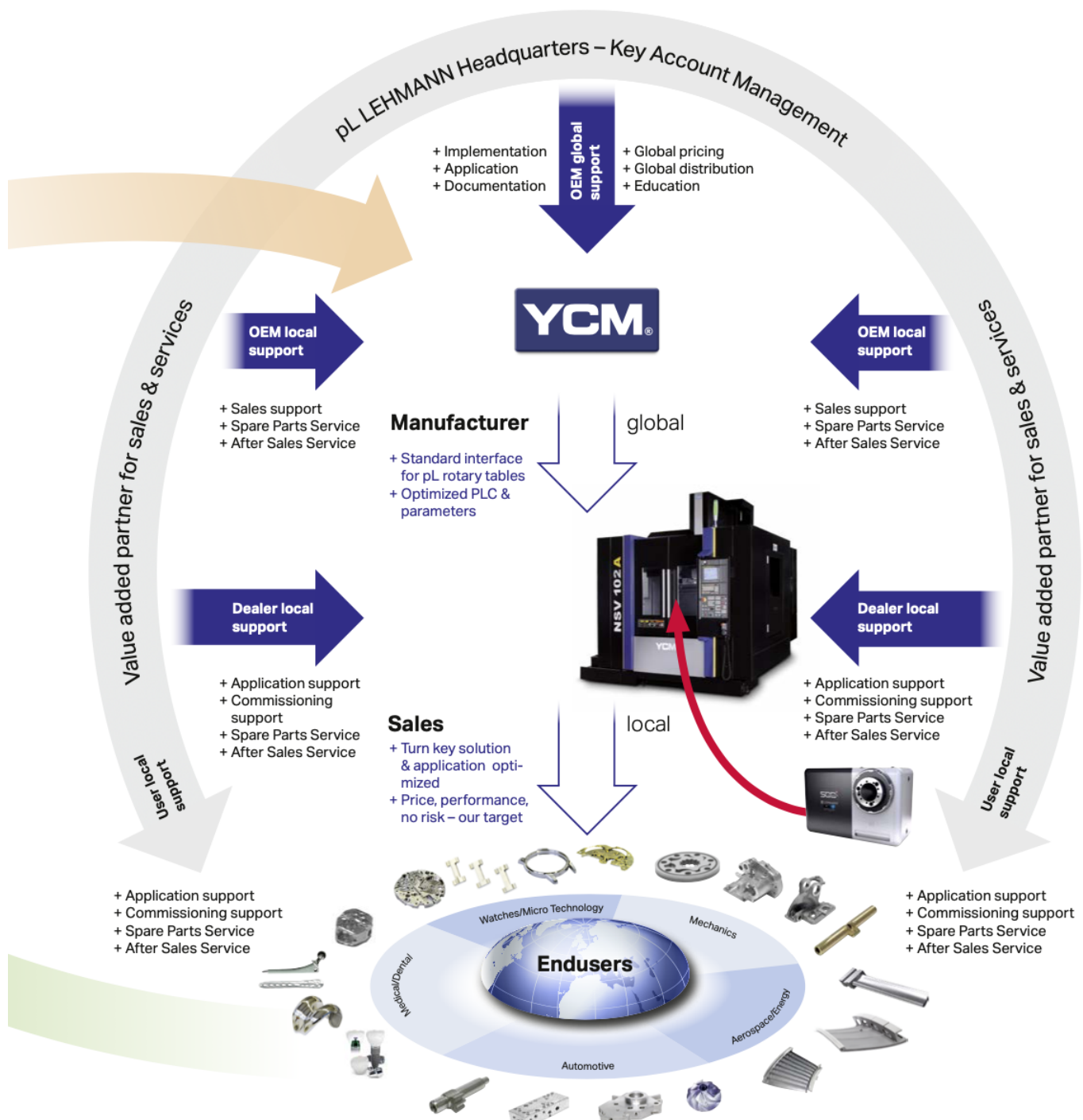


pL rotary tables in use: on over **40** different machine brands
and over **160** different machine models.

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



Overview and Facts

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

NEW
up to +30 %

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**

NEW
up to +30 %

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



DV30T



FP55LX



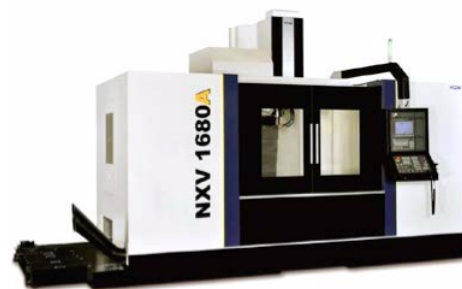
FV50T



NSV102A



NTV158B



NXV1680A



TV116B



WV108B

A word from YCM:

«High Performance – High Productivity

Since 1954, YCM machines have been recognized worldwide for superior precision, exceptional rigidity and outstanding reliability. YCM has a wide range of machine tools to meet today's manufacturing needs.»

Machine data

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

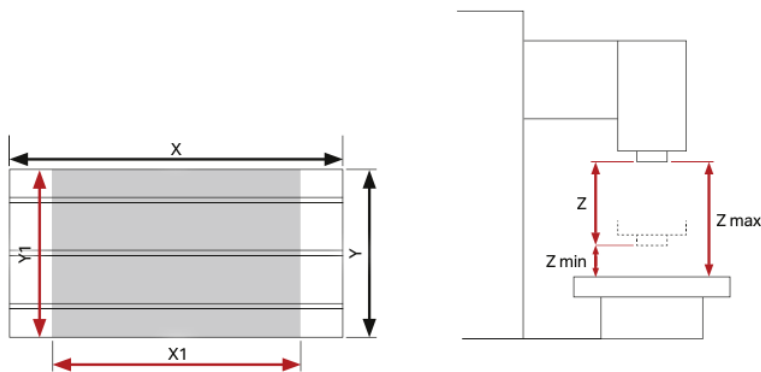


	Table diameter [mm]		Permissible overhang *	Traverse stroke [mm]					Table load **
	X	Y		X1	Y1	Z	Zmin	Zmax	max [kg]
DV30T	780	400	40%	300	350	320	190	510	250
FP55LX	700	510	10%	510	510	260	100	360	150
(N)FP66A(G)	800	510	10%	660	510	400	150	550	500
FP100A	1'200	700	10%	1'020	710	460	150	610	1'000
FV50T	650	400	10%	500	400	300	180	480	250
FV56(T)(A) / NXV560A	700	420	10%	560	410	450	110	560	300
FV56T-APC	560	410	10%	560	410	450	25	475	120
FV85A	1'000	520	40%	850	520	540	150	690	500
FV102A	1'120	520	10%	1'020	520	540	150	690	500
FV102A-APC	1'000	480	10%	1'020	520	540	30	570	400
FV125A	1'350	520	10%	1'270	520	540	105	645	1'000
NSV66A	840	560	10%	660	510	560	100	660	500
NSV102A(AM)	1'120	650	10%	1'020	600	600	100	700	1'000
NSV156A	1'630	650	10%	1'530	650	610	80	690	1'500
NTV158A(B)	1'650	760	10%	1'530	762	700	150	850	2'000
NXV1020A (AM)	1'120	520	10%	1'020	520	540	140	680	500
NXV1380A	1'430	760	10%	1'330	762	700	100	800	1'500
NXV1680A	1'730	760	10%	1'630	762	700	100	800	1'500
NXV1680B	1'730	860	10%	1'630	860	762	200	962	2'000
TV116B	1'200	600	10%	1'100	600	630	168	798	1'200
TV116B-APC	1'200	560	10%	1'100	600	630	75	705	600
TV146A(B)	1'500	600	10%	1'400	620	630	142	772	1'500
TV158B	1'700	860	10%	1'500	860	750	150	900	2'000
WV108A (B)	1'300	820	10%	1'120	762	700	150	850	1'200

* 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
DV30T	373	357	331	

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

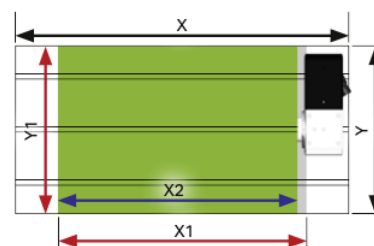


EA-510

EA-520

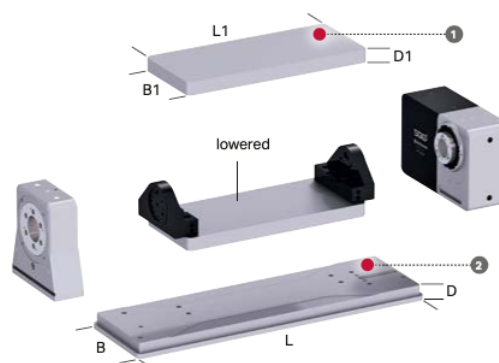
EA-530

	EA-507 X2	EA-510 X2	EA-520 X2	EA-530 X2
DV30T	373	357	331	
FP55LX	438	422	396	
(N)FP66A(G)	563	547	521	492
FP100A			901	872
FV50T	408	392	366	
FV56(T)(A) / NXV560A	463	447	421	
FV56T-APC	393	377		
FV85A	758	742	716	687
FV102A	903	887	861	832
FV102A-APC	843	827	801	
FV125A	1'143	1'127	1'101	1'072
NSV66A	583	567	541	512
NSV102A(AM)		887	861	832
NSV156A		1'397	1'371	1'342
NTV158A(B)			1'381	1'352
NXV1020A (AM)	903	887	861	832
NXV1380A			1'171	1'142
NXV1680A			1'471	1'442
NXV1680B				1'442
TV116B	983	967	941	912
TV116B-APC	983	967	941	912
TV146A(B)	1'283	1'267	1'241	1'212
TV158B				1'362
WV108A (B)				972



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

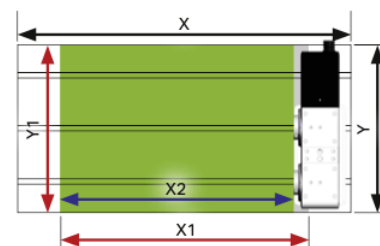
Explanations for pp. 8 to 11

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			
DV30T	314	304		
FP55LX	379	369		
(N)FP66A(G)	504	494		
FP100A	884	874	884	874
FV50T				
FV56(T)(A) / NXV560A	404			
FV56T-APC	334			
FV85A	699	689	699	689
FV102A	844	834		
FV102A-APC	784	774		
FV125A	1'084	1'074		
NSV66A	524	514	524	
NSV102A(AM)	844	834	844	834
NSV156A	1'354	1'344	1'354	1'344
NTV158A(B)	1'364	1'354	1'364	1'354
NXV1020A (AM)	844	834		
NXV1380A	1'154	1'144	1'154	1'144
NXV1680A	1'454	1'444	1'454	1'444
NXV1680B	1'454	1'444	1'454	1'444
TV116B	924	914	924	
TV116B-APC	924	914	924	
TV146A(B)	1'224	1'214	1'224	
TV158B	1'374	1'364	1'374	1'364
WV108A (B)	984	974	984	974

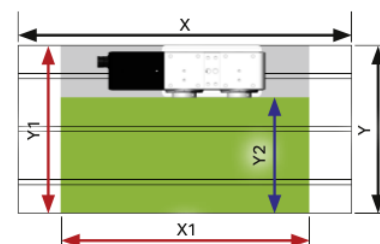
Y-mounting



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

	M2-507	M2-510	M3-507	M3-510
	Y2			
DV30T			149	139
FP55LX			284	
(N)FP66A(G)			284	274
FP100A				
FV50T	174	164	174	164
FV56(T)(A) / NXV560A		179	189	179
FV56T-APC				
FV85A				
FV102A			294	284
FV102A-APC			274	264
FV125A				284
NSV66A				299
NSV102A(AM)				
NSV156A				
NTV158A(B)				
NXV1020A (AM)			294	284
NXV1380A				
NXV1680A				
NXV1680B				
TV116B				364
TV116B-APC				344
TV146A(B)				
TV158B				
WV108A (B)				

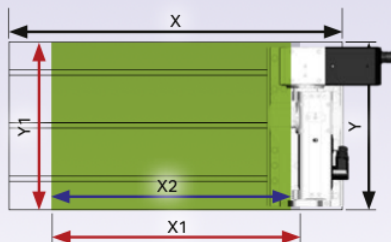
X-mounting



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



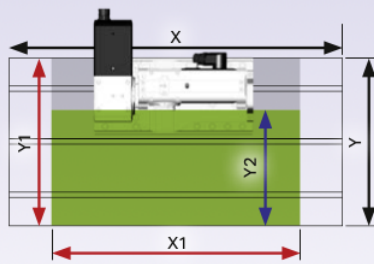
TOP1.2

	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
DV30T	410	366		370						
FP55LX	475									
(N)FP66A(G)	600	556		560						
FP100A	980	936	916	940	920	886	940	920		940
FV50T										
FV56(T)(A) / NXV560A										
FV56T-APC										
FV85A	795	751	731	755	735		755	735		755
FV102A	940	896		900			900			
FV102A-APC	880			840						
FV125A	1'180	1'136		1'140			1'140			
NSV66A	620	576		580	560		580			580
NSV102A(AM)	940	896	876	900	880	846	900	880		900
NSV156A	1'450	1'406	1'386	1'410	1'390	1'356	1'410	1'390		1'410
NTV158A(B)	1'460	1'416	1'396	1'420	1'400	1'366	1'420	1'400	1'366	1'420
NXV1020A (AM)	940	896		900			900			
NXV1380A	1'250	1'206	1'186	1'210	1'190	1'156	1'210	1'190	1'156	1'210
NXV1680A	1'550	1'506	1'486	1'510	1'490	1'456	1'510	1'490	1'456	1'510
NXV1680B	1'550	1'506	1'486	1'510	1'490	1'456	1'510	1'490	1'456	1'510
TV116B	1'020	976	956	980	960		980	960		980
TV116B-APC	1'020	976		980	960		980			980
TV146A(B)	1'320	1'276	1'256	1'280	1'260		1'280	1'260		1'280
TV158B	1'470	1'426	1'406	1'430	1'410	1'376	1'430	1'410	1'376	1'430
WV108A (B)	1'080	1'036	1'016	1'040	1'020	986	1'040	1'020	986	1'040

	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
DV30T											
FP55LX											
(N)FP66A(G)											
FP100A	920		940			940			940		
FV50T											
FV56(T)(A) / NXV560A											
FV56T-APC											
FV85A	735		755			755					
FV102A											
FV102A-APC											
FV125A											
NSV66A											
NSV102A(AM)	880		900			900					
NSV156A	1'390		1'410			1'410					
NTV158A(B)	1'400	1'366	1'420	1'400		1'420			1'420		
NXV1020A (AM)											
NXV1380A	1'190	1'156	1'210	1'190		1'210			1'210		
NXV1680A	1'490	1'456	1'510	1'490		1'510			1'510		
NXV1680B	1'490	1'456	1'510	1'490		1'510	1'490		1'510	1'490	
TV116B			980								
TV116B-APC											
TV146A(B)			1'280								
TV158B	1'410	1'376	1'430	1'410		1'430	1'410		1'430	1'410	

Machine combinations with T-type rotary tables

X-mounting



Rotary table installation using hole pattern in base plate



TIP1



TAP1



TOP1.2

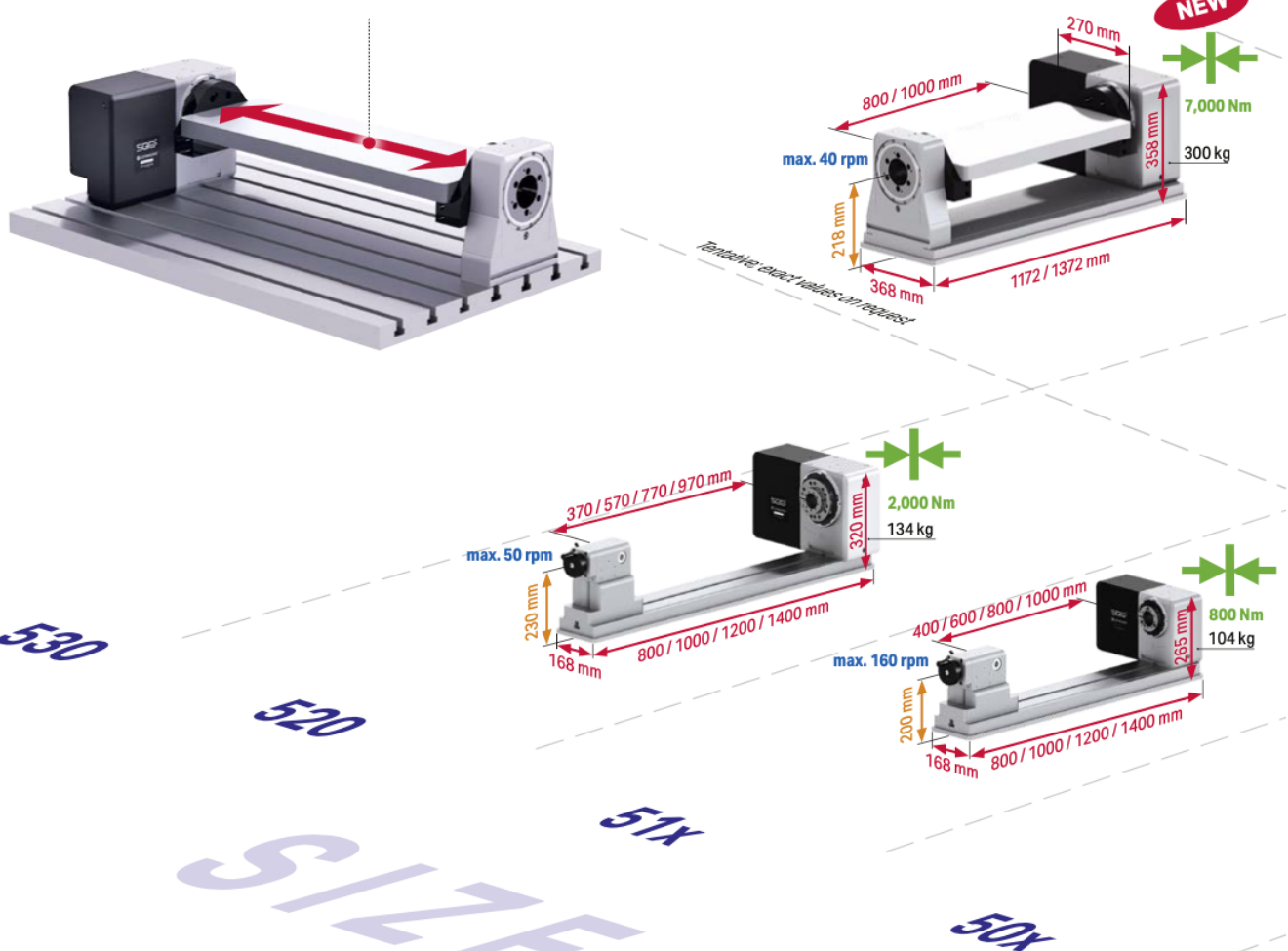
	TIP1c TF-507510 Y2	TIP2c TF-510520 Y2	TIP3c TF-520530 Y2	TAP1c T1-507510 Y2	TAP2c T1-510520 Y2	TAP3c T1-520530 Y2	TAP1 T1-507510 Y2	TAP2 T1-510520 Y2	TAP3 T1-520530 Y2	TOP1 T1-507510 Y2
DV30T							205			205
FP55LX										
(N)FP66A(G)			316		320		340	320		340
FP100A									481	
FV50T	270	226		230			230			230
FV56(T)(A) / NXV560A	285	241		245	225		245			245
FV56T-APC	280									
FV85A										
FV102A			326		330			330		350
FV102A-APC		326	306		310		330	310		330
FV125A						296			296	
NSV66A			341					345		
NSV102A(AM)									401	
NSV156A										
NTV158A(B)										
NXV1020A (AM)			326		330			330		350
NXV1380A										
NXV1680A										
NXV1680B										
TV116B						376			376	
TV116B-APC			386			356		390	356	
TV146A(B)									386	
TV158B										
WV108A (B)										

	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
DV30T			205			205			205		
FP55LX											
(N)FP66A(G)	320		340	320		340	320		340		
FP100A		481		515	481		515	481		515	481
FV50T			230			230					
FV56(T)(A) / NXV560A			245			245			245		
FV56T-APC											
FV85A				330			330		350	330	
FV102A	330		350	330		350	330		350	330	
FV102A-APC	310		330	310		330	310		330	310	
FV125A	330	296		330	296	350	330	296	350	330	296
NSV66A	345		365	345		365	345		365		
NSV102A(AM)		401		435	401		435	401	455	435	
NSV156A		426		460	426		460	426		460	426
NTV158A(B)					537		571	537		571	537
NXV1020A (AM)	330		350	330		350	330		350	330	
NXV1380A					537		571	537		571	537
NXV1680A					537		571	537		571	537
NXV1680B					636			636			636
TV116B	410	376		410	376	430	410	376	430	410	376
TV116B-APC	390		410	390	356	410	390	356	410	390	
TV146A(B)		386		420	386		420	386		420	386
TV158B					636			636			636

Overview of E-Series



More space for
workpieces and fixtures



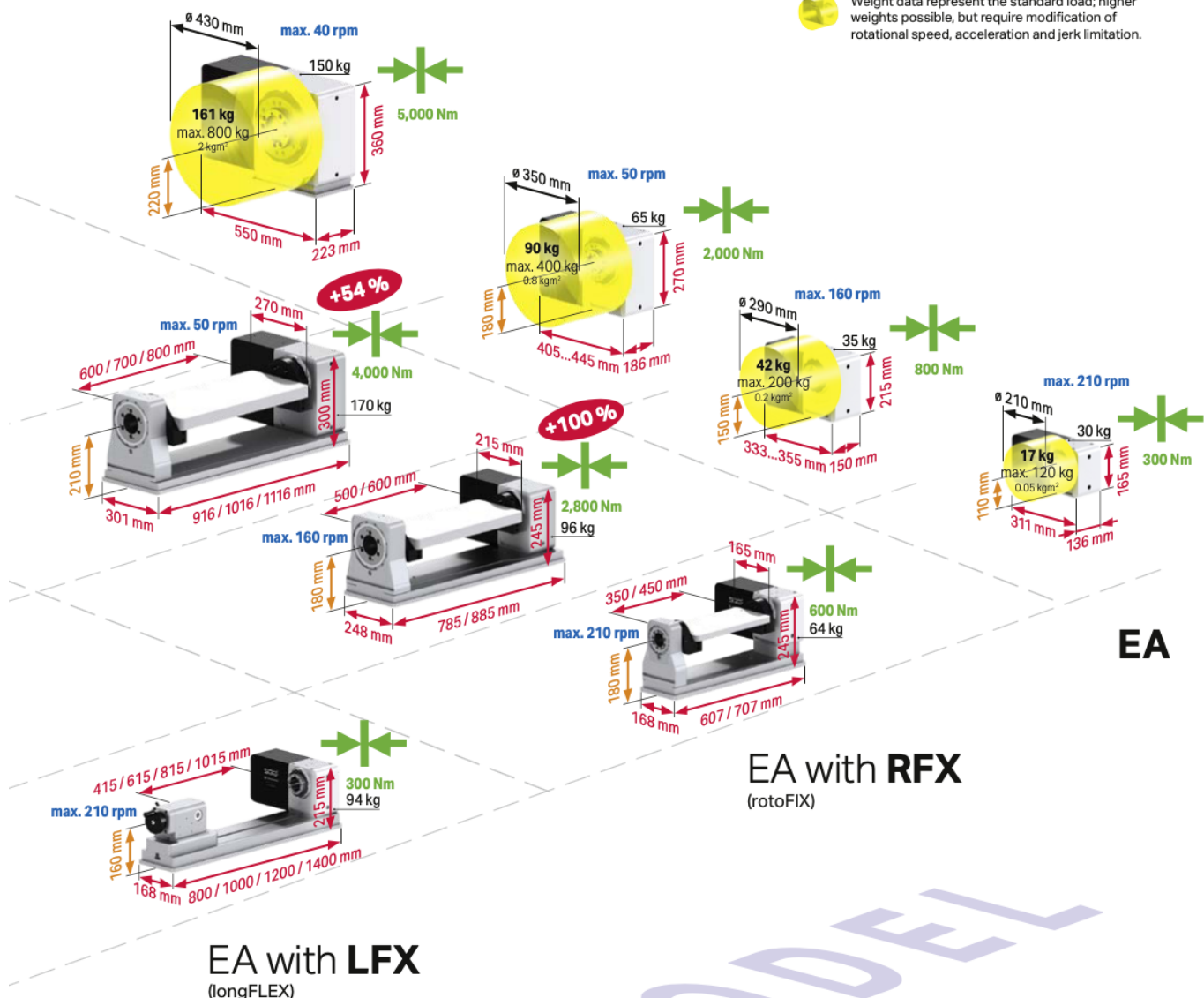
Overview of E-Series

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.

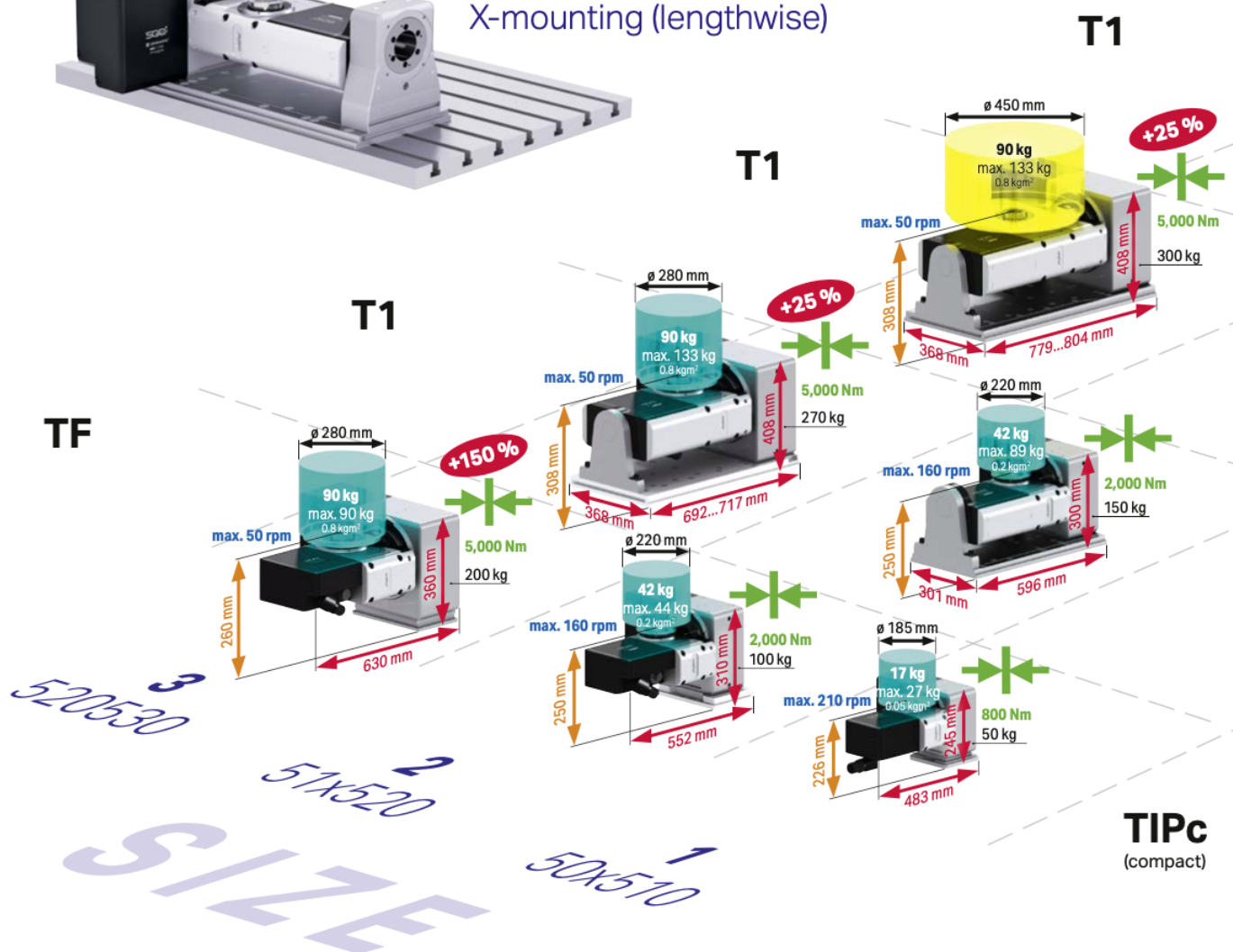


50x	507 (standard) or 508 (high speed)
51x	510 (standard) or 511 (high speed)
EA	single-axis, single-spindle CNC rotary table
rotoFIX	modular clamping yoke system
longFI FX	modular shaft clamping system

Overview of T-Series



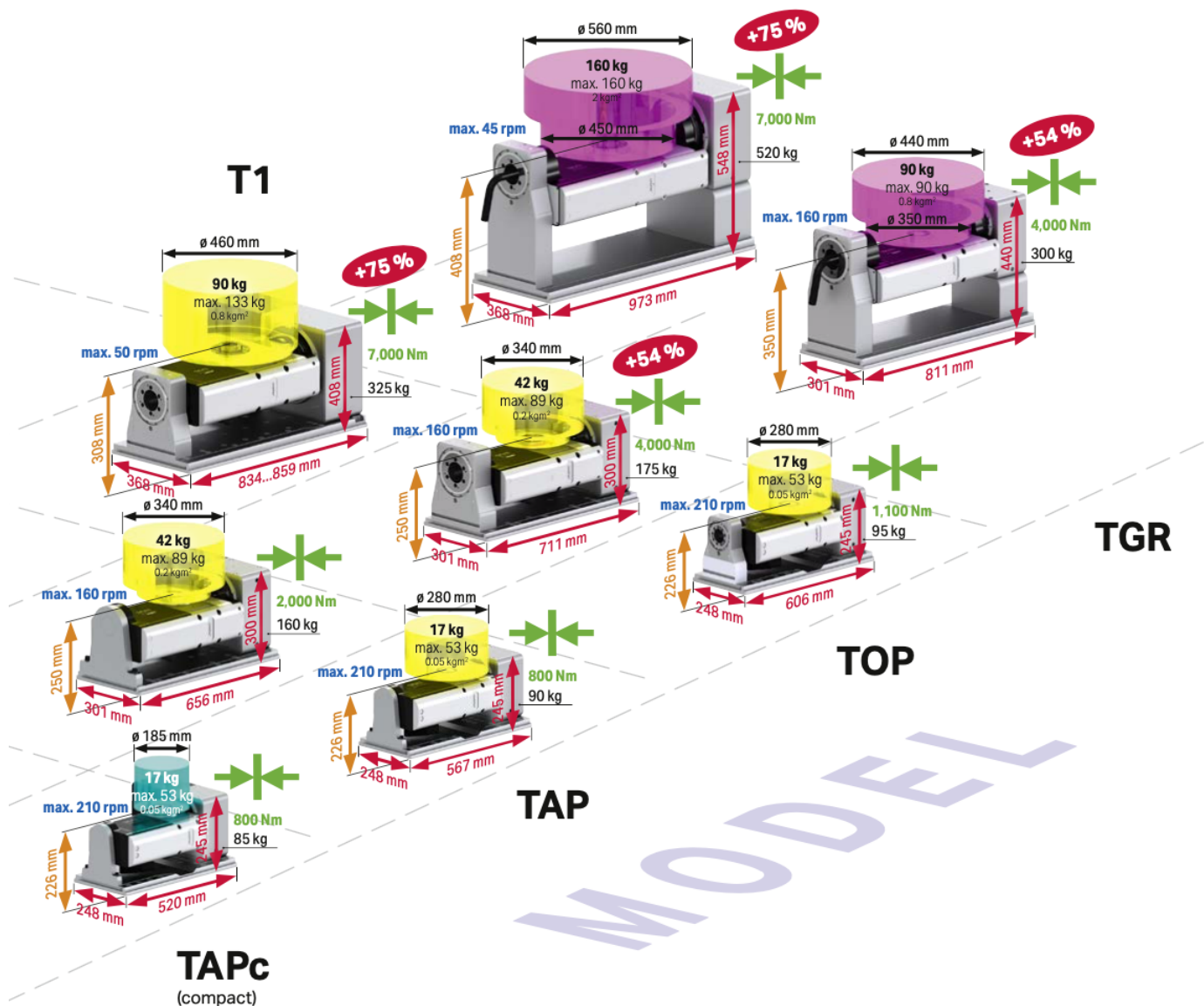
More space for
workpiece and fixtures



Overview of T-Series

News in brief

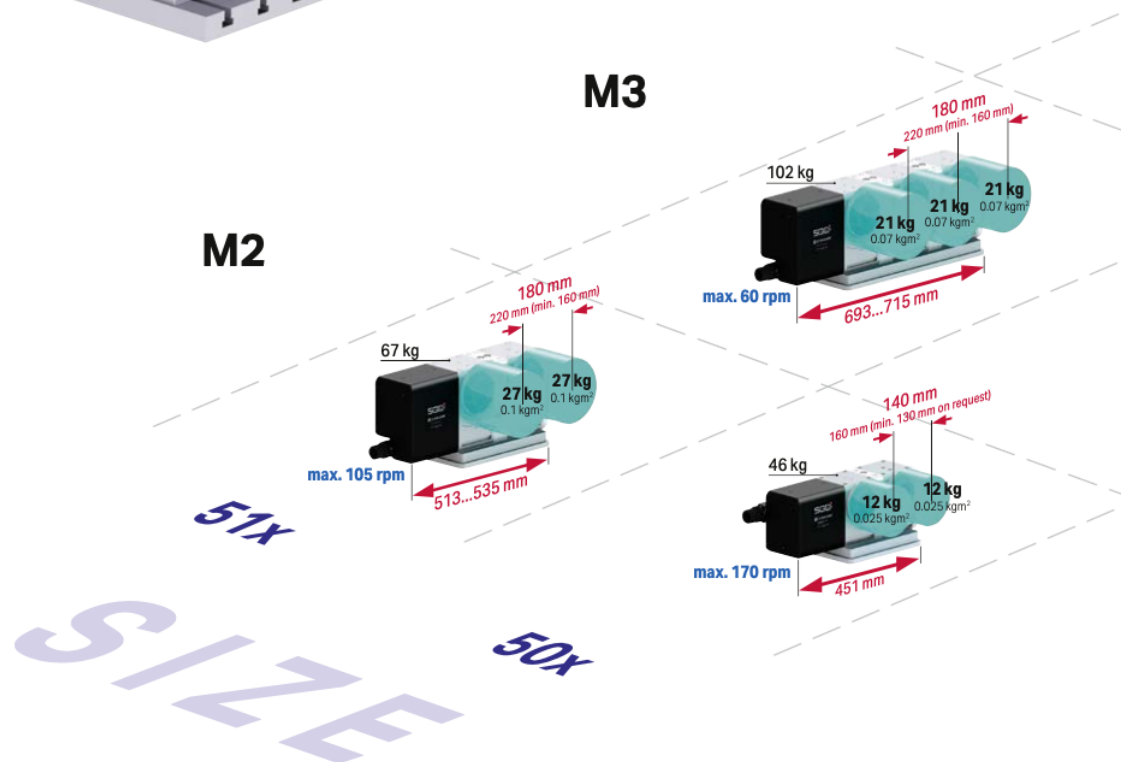
1. Up to **150 %** higher clamping torque in tilting axis
2. Fewer variant – more solution
3. Larger workpiece $\varnothing$ possible
4. Spatially optimized arrangement of the dividing axis



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

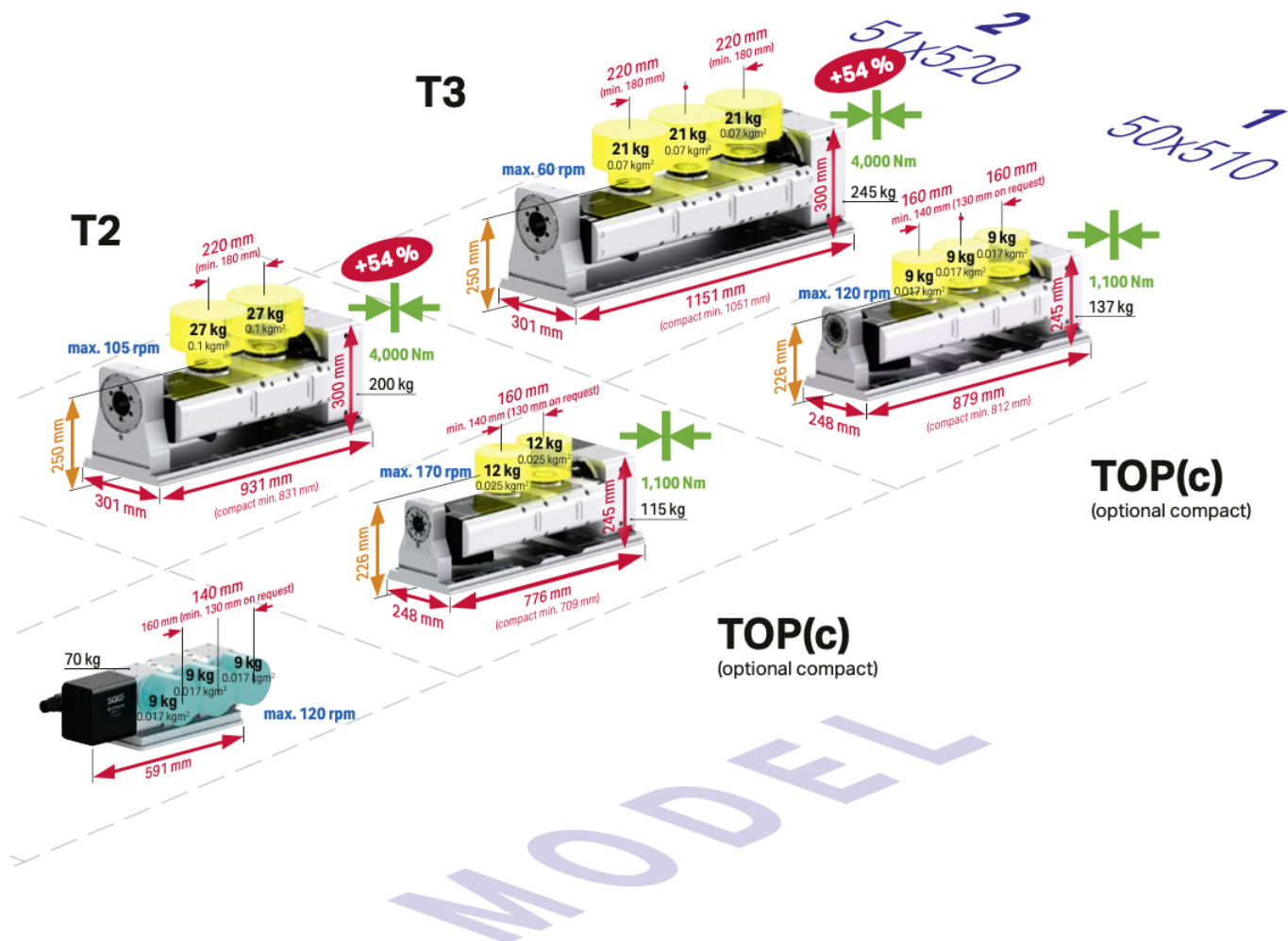
Overview of M-Series



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)



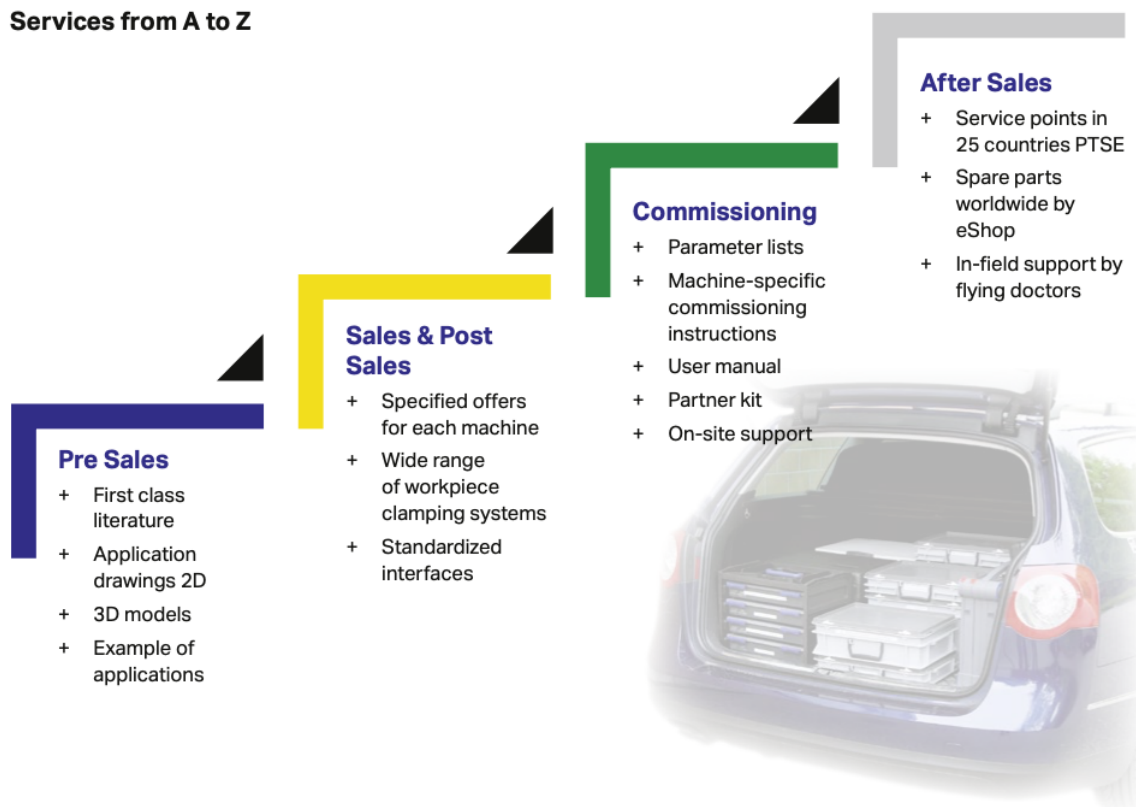
FA-507 with CAPTO retrofit kit

Sales and Service

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

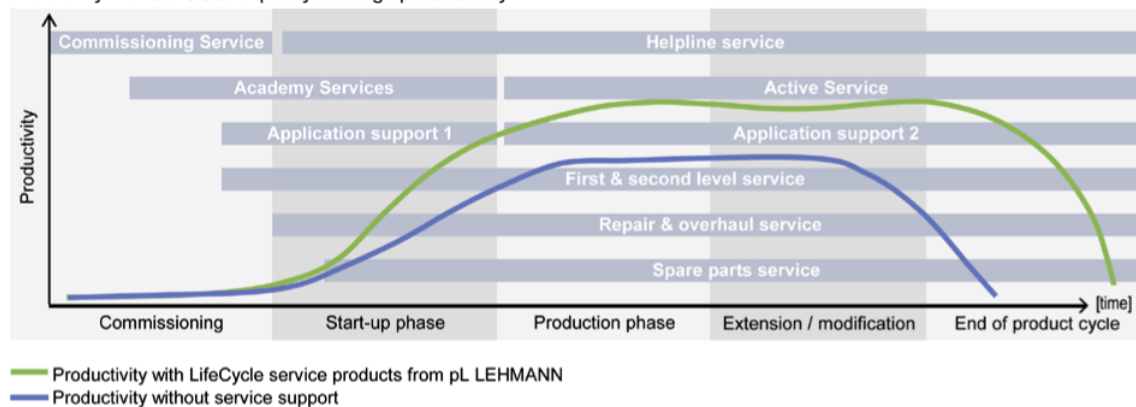


Services from A to Z



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



ROTARY TABLES · PRECISION TECHNOLOGY · SOFTWARE

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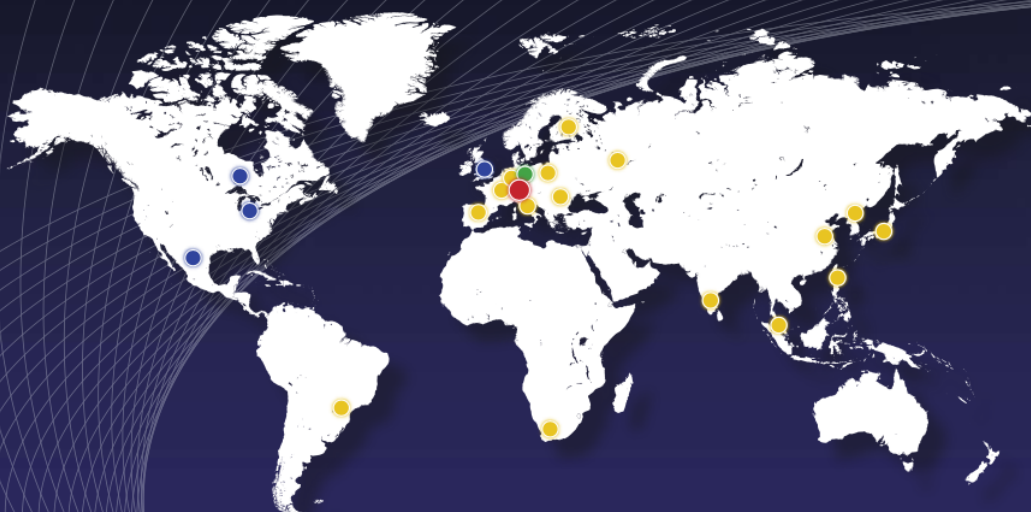
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Subject to change / Edition: 10/2018