



Selection Guide for CNC Rotary Tables ...



Bluetooth®

pl

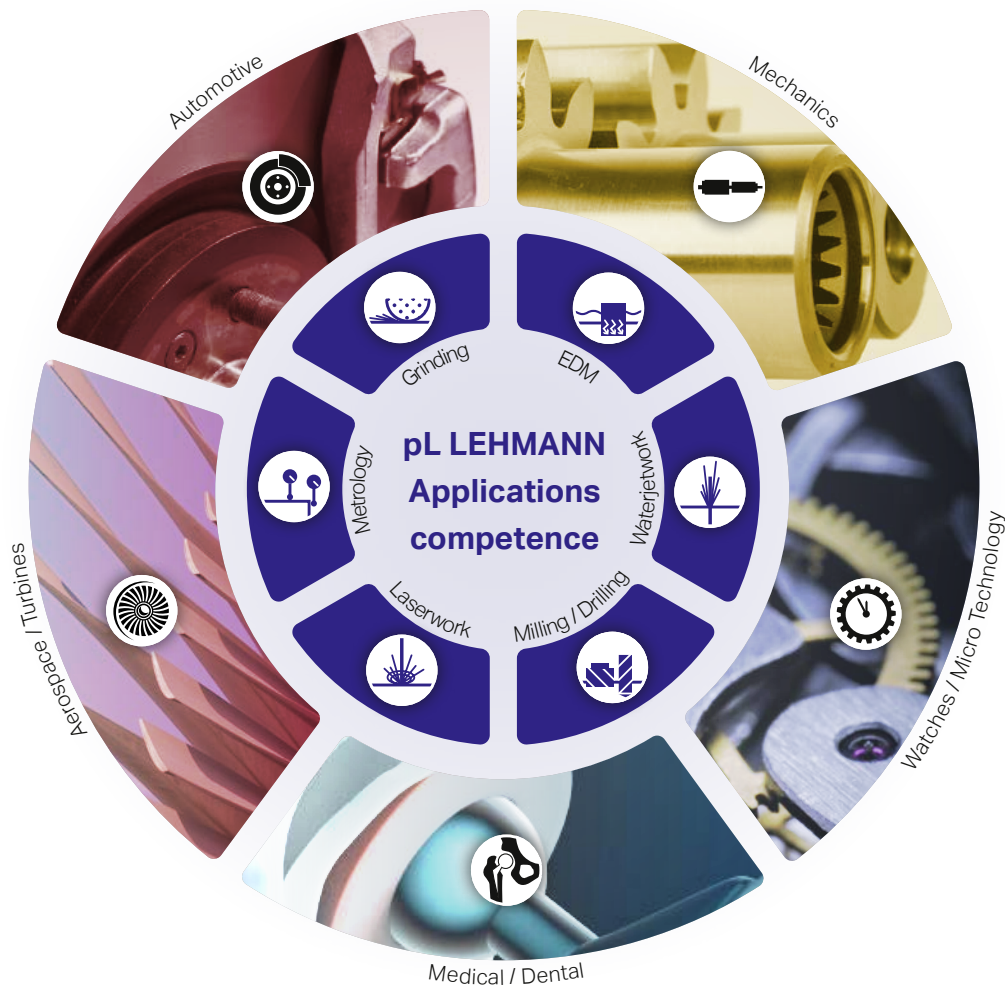


07/2020 | EN



... for vertical machining centers

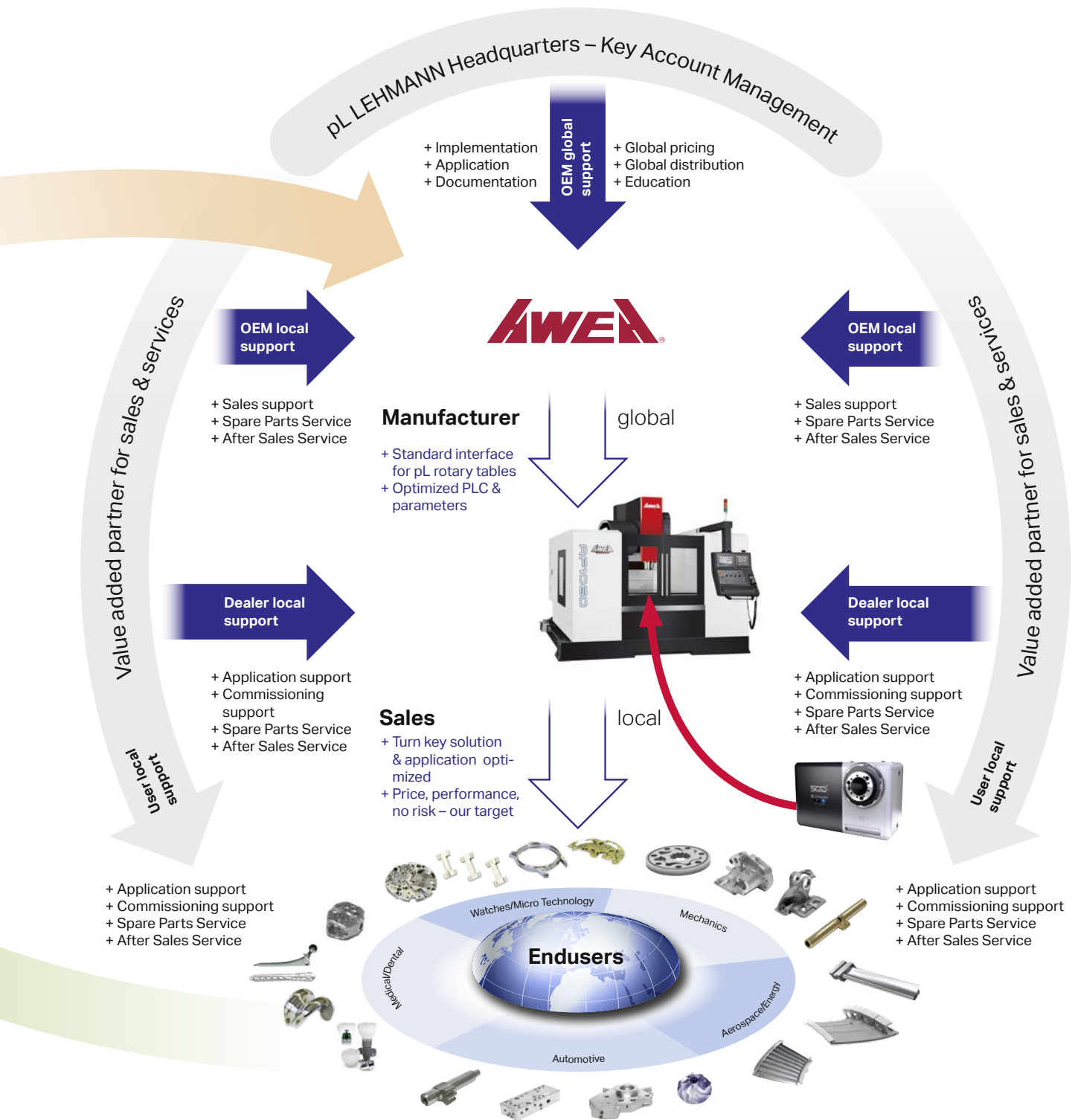
CNC rotary tables for economical manufacturing:
pL LEHMANN has suitable and rational solutions for
nearly every industry



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 ...), for new machines as well as
for retrofits

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



Up to 210 rpm
up to 0.21 sec / 90°

High speed GD

Extended travel in
Z- and X-direction

More space

High spindle load,
heavy-duty bearing

Heavy duty

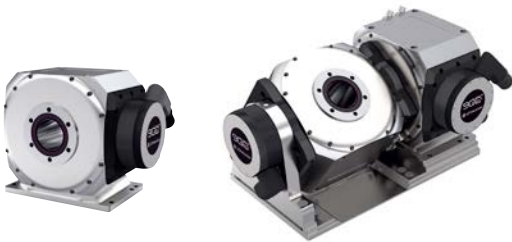
E-Series



EA-50x light only 12 kg



DD Series NEW



Request our
special catalog

High speed DD

up to 5'450 rpm

Adaptability

Multifunctional
spindle HSK

Precision

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

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**

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

M-Series



Bluetooth®



Connectivity

Wireless monitoring,
for operation & service

No adjust

Load change without
parameter adjustment

Less cost

No cooling system,
no hydraulics



AF 650



AF 760



AF 1060



BM 850



BM 1020



BM 1460

A word from AWEA:

«The ultimate machining power

AWEA Mechantronic Co., LTD, established in 1986, is now one of Taiwan's largest professional CNC machine manufacturers. The machine travel range spans from 510 mm all the way to 20,000 mm. Product line includes 5-axis, five-sided, vertical, horizontal, and other types of CNC machines. Especially for the large-scale bridge type machines, they are widely recognized by the global market and enjoy the «Bridge Mill Family» reputation.

In recent years, AWEA Mechantronic not only looks forward to the growth of revenue, but also strives to improve corporate social responsibility, emphasizing environmental protection, energy conservation, education, social welfare, and other aspects of contribution to the society.»

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

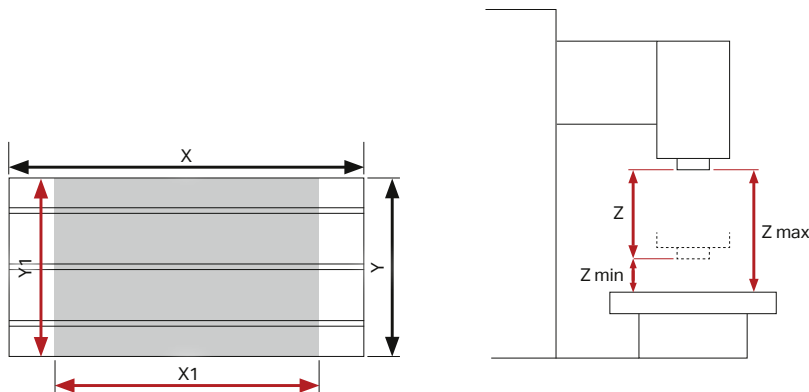


	Table diameter [mm]		Permissible overhang *	Traverse stroke [mm]					Table load ** max [kg]
	X	Y		X1	Y1	Z	Zmin	Zmax	
AF-510	610	400	10%	510	400	330	100	430	250
AF-610	700	450	10%	610	450	450	150	600	450
AF-650	750	510	10%	650	510	510	100	610	500
AF-760	860	510	10%	760	510	510	100	610	500
AF-860	1'000	600	40%	860	600	600	100	700	700
AF-1000	1'200	550	10%	1'020	550	635	100	735	700
AF-1060	1'200	600	10%	1'060	600	600	100	700	700
AF-1250	1'350	620	10%	1'250	620	620	100	720	1'000
AF-1400	1'500	800	10%	1'400	800	800	200	1'000	1'200
AF-1460	1'500	620	10%	1'400	620	620	100	720	1'000
AT-510	610	400	40%	510	400	350	100	450	250
AV-610	700	450	10%	610	450	450	150	600	450
AV-650	750	510	10%	650	510	510	100	610	500
AV-860	1'000	600	10%	860	600	600	100	700	700
AV-1000	1'200	550	10%	1'020	550	635	150	785	700
AV-1060	1'200	600	10%	1'060	600	600	100	700	700
AV-1250	1'350	620	10%	1'250	620	620	100	720	1'000
AV-1460	1'500	620	10%	1'400	620	620	100	720	1'000
BM-850	1'050	600	10%	850	600	600	125	725	850
BM-1020	1'120	600	10%	1'020	600	600	125	725	1'000
BM-1200	1'300	600	10%	1'200	600	600	125	725	1'200
BM-1400	1'500	800	10%	1'400	800	700	200	900	1'800
BM-1460	1'500	650	10%	1'400	600	600	125	725	1'400
BM-1600	1'700	800	10%	1'600	800	800	200	1'000	2'000
FM-45	800	450	10%					-	1'000

* 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

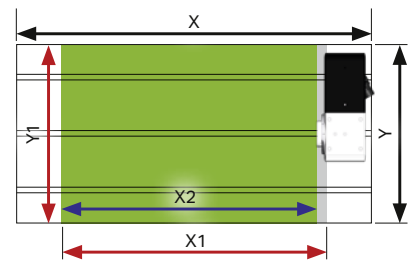
	EA-507 X2	EA-510 X2	EA-520 X2	EA-530 X2
AF-510	393	377	351	

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

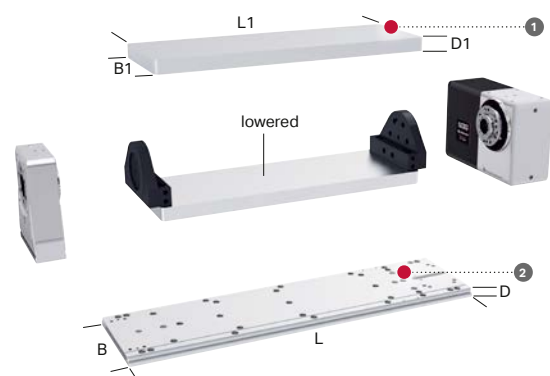


	EA-507 X2	EA-510 X2	EA-520 X2	EA-530 X2
AF-510	393	377	351	
AF-610	488	472	446	
AF-650	533	517	491	462
AF-760	643	627	601	572
AF-860	763	747	721	692
AF-1000	943	927	901	872
AF-1060	963	947	921	892
AF-1250	1'133	1'117	1'091	1'062
AF-1400			1'241	1'212
AF-1460	1'283	1'267	1'241	1'212
AT-510	393	377	351	
AV-610	488	472	446	
AV-650	533	517	491	462
AV-860	763	747	721	692
AV-1000	943	927	901	872
AV-1060	963	947	921	892
AV-1250	1'133	1'117	1'091	1'062
AV-1460	1'283	1'267	1'241	1'212
BM-850	783	767	741	712
BM-1020	903	887	861	832
BM-1200	1'083	1'067	1'041	1'012
BM-1400			1'241	1'212
BM-1460		1'267	1'241	1'212
BM-1600			1'441	1'412
FM-45	233	217	191	



Rotary table installation with p.L. 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]	140		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		
	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		on request

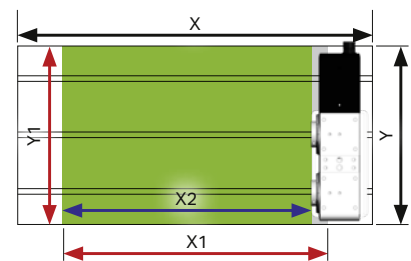
Explanations for pp. 8 to 11

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			
AF-510				
AF-610	429			
AF-650	474	464		
AF-760	584	574		
AF-860	704	694	704	694
AF-1000	884	874	884	
AF-1060	904	894	904	
AF-1250	1'074	1'064	1'074	
AF-1400	1'224	1'214	1'224	1'214
AF-1460	1'224	1'214	1'224	
AT-510	334	324		
AV-610	429			
AV-650	474	464		
AV-860	704	694	704	
AV-1000	884	874	884	
AV-1060	904	894	904	
AV-1250	1'074	1'064	1'074	
AV-1460	1'224	1'214	1'224	
BM-850	724	714	724	
BM-1020	844	834	844	
BM-1200	1'024	1'014	1'024	
BM-1400	1'224	1'214	1'224	1'214
BM-1460	1'224	1'214	1'224	1'214
BM-1600	1'424	1'414	1'424	1'414
FM-45	174			

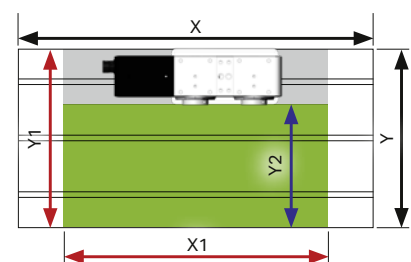
Y-mounting



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

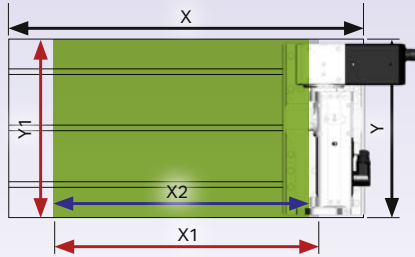
	M2-507	M2-510	M3-507	M3-510
	Y2			
AF-510	174	164	174	
AF-610		214	224	214
AF-650			284	274
AF-760			284	274
AF-860				
AF-1000				314
AF-1060				364
AF-1250				384
AF-1400				
AF-1460				
AT-510			174	
AV-610		214	224	214
AV-650			284	274
AV-860				364
AV-1000				314
AV-1060				364
AV-1250				384
AV-1460				
BM-850				364
BM-1020				364
BM-1200				364
BM-1400				
BM-1460				
BM-1600				
FM-45		-11	-1	-11

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

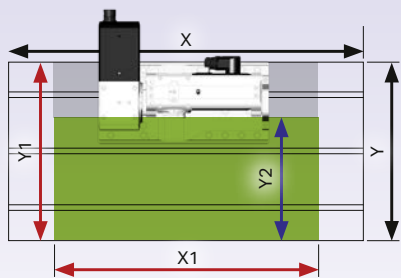


TOP1.2

	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
AF-510										
AF-610	525									
AF-650	570	526		530						
AF-760	680	636		640						
AF-860	800	756	736	760	740	706	760	740	706	760
AF-1000	980	936		940	920		940			
AF-1060	1'000	956	936	960	940		960	940		960
AF-1250	1'170	1'126	1'106	1'130	1'110		1'130	1'110		1'130
AF-1400	1'320	1'276	1'256	1'280	1'260	1'226	1'280	1'260	1'226	1'280
AF-1460	1'320	1'276	1'256	1'280	1'260		1'280	1'260		1'280
AT-510	430	386		390						
AV-610	525									
AV-650	570	526		530						
AV-860	800	756	736	760	740		760	740		760
AV-1000	980	936		940	920		940			
AV-1060	1'000	956	936	960	940		960	940		960
AV-1250	1'170	1'126	1'106	1'130	1'110		1'130	1'110		1'130
AV-1460	1'320	1'276	1'256	1'280	1'260		1'280	1'260		1'280
BM-850	820	776	756	780	760		780	760		780
BM-1020	940	896	876	900	880		900	880		900
BM-1200	1'120	1'076	1'056	1'080	1'060		1'080	1'060		1'080
BM-1400	1'320	1'276	1'256	1'280	1'260	1'226	1'280	1'260	1'226	1'280
BM-1460	1'320	1'276	1'256	1'280	1'260	1'226	1'280	1'260		1'280
BM-1600	1'520	1'476	1'456	1'480	1'460	1'426	1'480	1'460	1'426	1'480
FM-45	270									

	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
AF-510											
AF-610											
AF-650											
AF-760											
AF-860	740	706	760	740		760			760		
AF-1000											
AF-1060			960								
AF-1250			1'130								
AF-1400	1'260	1'226	1'280	1'260		1'280	1'260		1'280		
AF-1460			1'280								
AT-510											
AV-610											
AV-650											
AV-860			760								
AV-1000											
AV-1060			960								
AV-1250			1'130								
AV-1460			1'280								
BM-850			780								
BM-1020			900								
BM-1200			1'080								
BM-1400	1'260	1'226	1'280	1'260		1'280	1'260		1'280		
BM-1460	1'260		1'280			1'280					
BM-1600	1'460	1'426	1'480	1'460		1'480	1'460		1'480		
FM-45											

X-mounting



Rotary table installation using hole pattern in base plate



TIP1



TAP1



TOP1.2

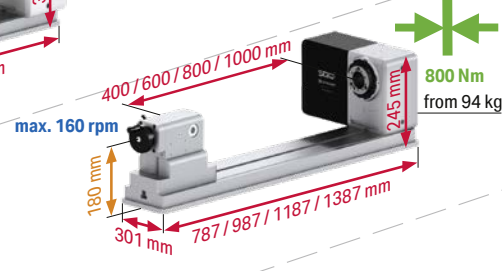
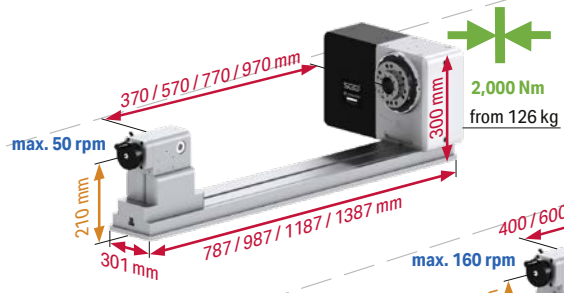
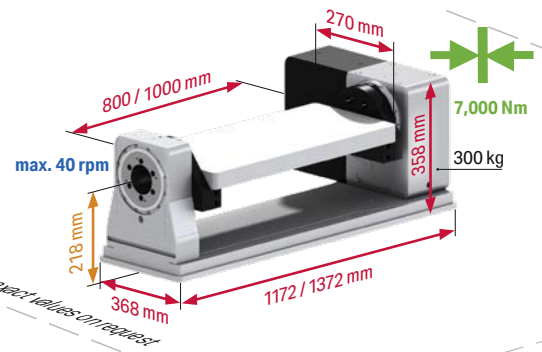
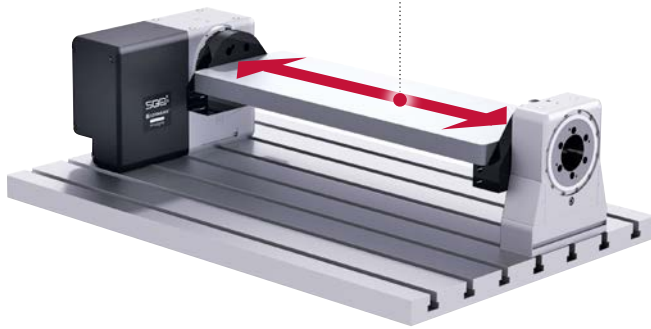
	TIP1c TF-507510 Y2	TIP2c TF-510520 Y2	TIP3c TF-520530 Y2	TAP1c T1-507510 Y2	TAP2c T1-510520 Y2	TAP3c T1-520530 Y2	TAP1 T1-507510 Y2	TAP2 T1-510520 Y2	TAP3 T1-520530 Y2	TOP1 T1-507510 Y2
AF-510	270	226		230			230			230
AF-610		276	256	280	260		280	260		280
AF-650			316		320		340	320		340
AF-760			316		320		340	320		340
AF-860										
AF-1000			356			326		360	326	380
AF-1060						376			376	
AF-1250						396			396	
AF-1400										
AF-1460									396	
AT-510							230			230
AV-610		276	256	280	260		280	260		280
AV-650			316		320		340	320		340
AV-860						376			376	
AV-1000			356			326		360	326	380
AV-1060						376			376	
AV-1250						396			396	
AV-1460									396	
BM-850						376			376	
BM-1020						376			376	
BM-1200						376			376	
BM-1400										
BM-1460									401	
BM-1600										
FM-45		51	31	55	35	1	55	35	1	55

	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
AF-510			230								
AF-610	260		280			280			280		
AF-650	320		340	320		340			340		
AF-760	320		340	320		340			340	320	
AF-860							410			410	
AF-1000	360	326	380	360	326	380	360	326	380	360	326
AF-1060	410	376		410	376	430	410	376	430	410	376
AF-1250	430	396		430	396	450	430	396	450	430	396
AF-1400					576			576		610	576
AF-1460		396		430	396		430	396		430	396
AT-510			230								
AV-610	260		280			280			280		
AV-650	320		340	320		340			340		
AV-860	410	376		410		430	410		430	410	
AV-1000	360	326	380	360	326	380	360	326	380	360	326
AV-1060	410	376		410	376	430	410	376	430	410	376
AV-1250	430	396		430	396	450	430	396	450	430	396
AV-1460		396		430	396		430	396		430	396
BM-850	410	376		410	376	430	410		430	410	
BM-1020	410	376		410	376	430	410	376	430	410	
BM-1200	410	376		410	376	430	410	376	430	410	376
BM-1400					576			576		610	576
BM-1460		401		435	401		435	401		435	401
BM-1600					576			576		610	576
FM-45	35	1	55	35		55	35		55		



Very good accessibility, even with short tools

More space for workpieces and fixtures



530

520


51x

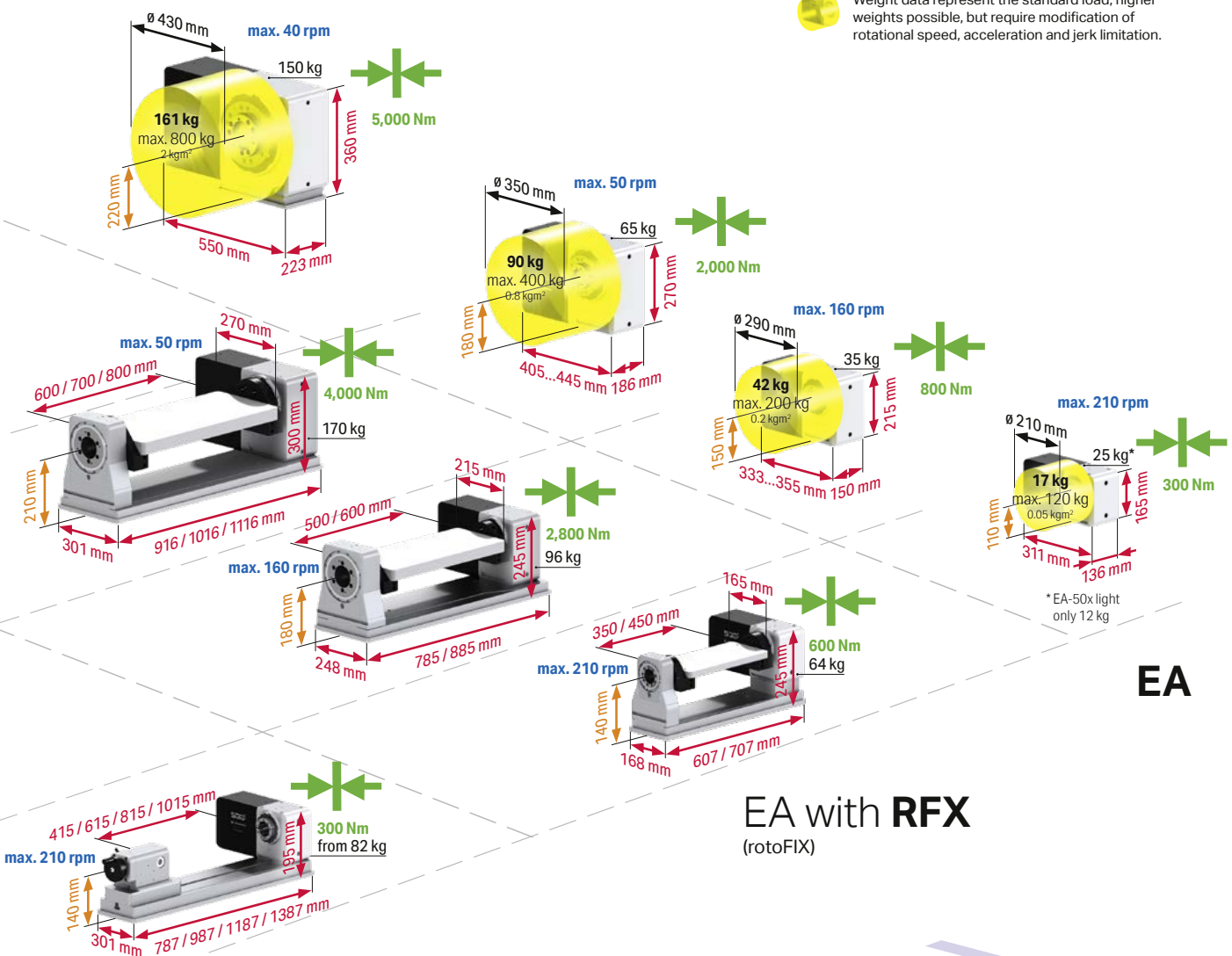
50x

SIZE

Facts

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.



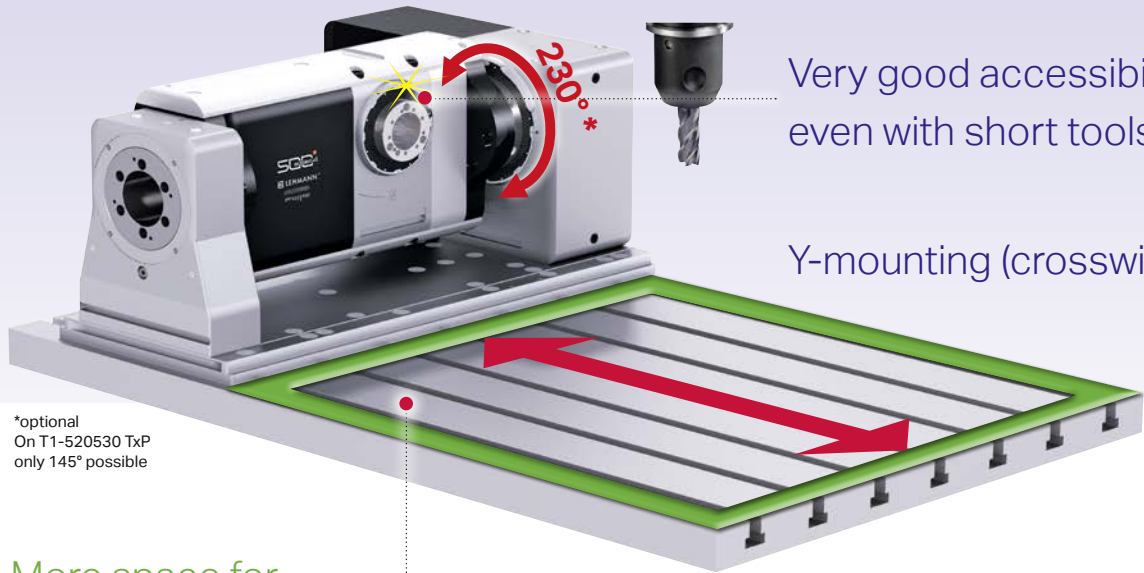
EA

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

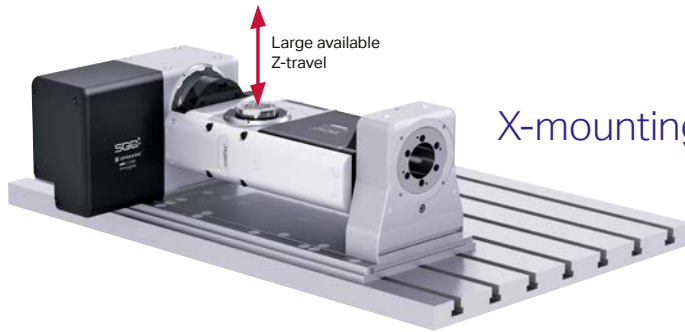


Very good accessibility, even with short tools

Y-mounting (crosswise)

*optional
On T1-520530 TxP
only 145° possible

More space for workpiece and fixtures



Large available Z-travel

X-mounting (lengthwise)

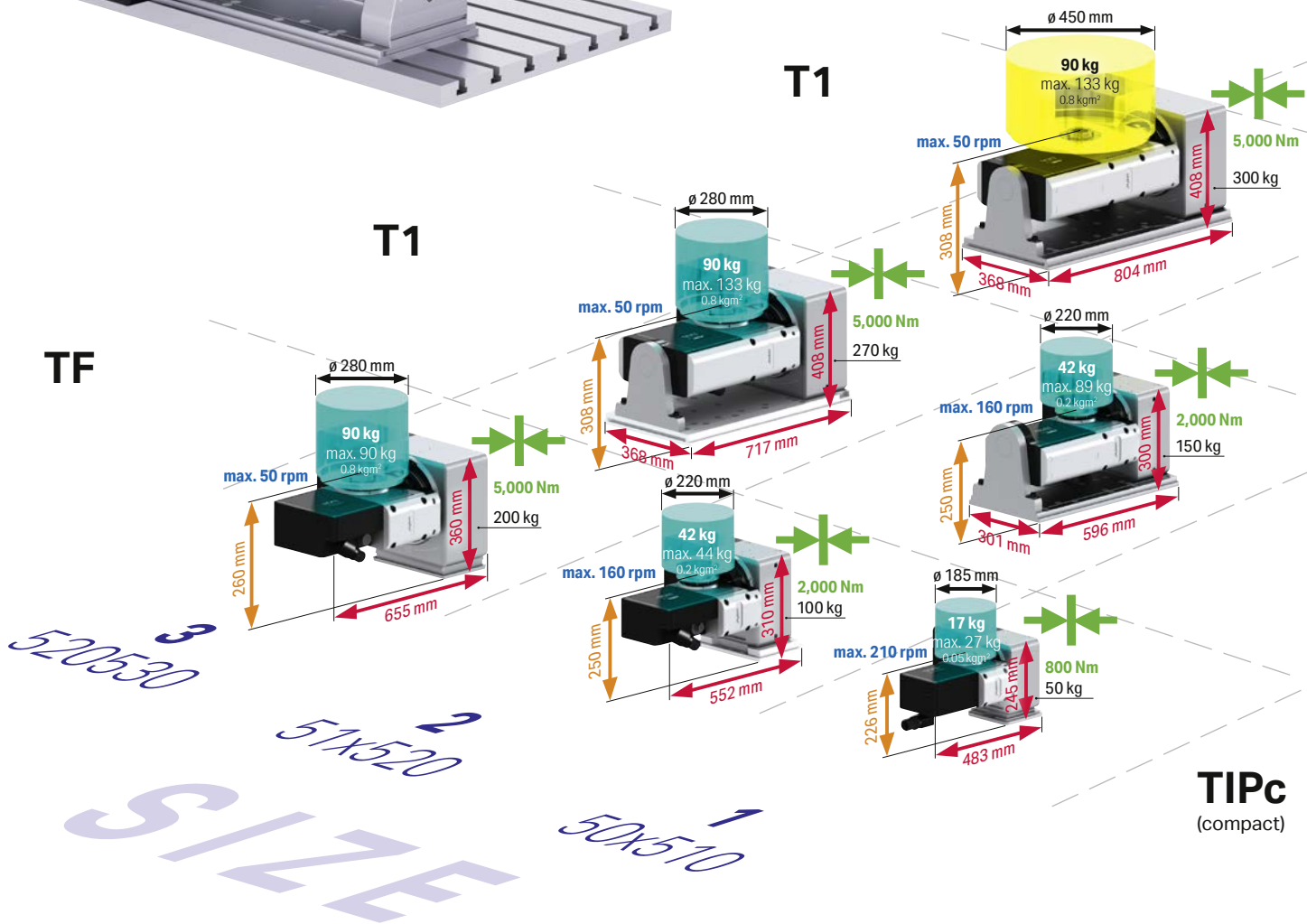
T1

T1

T1

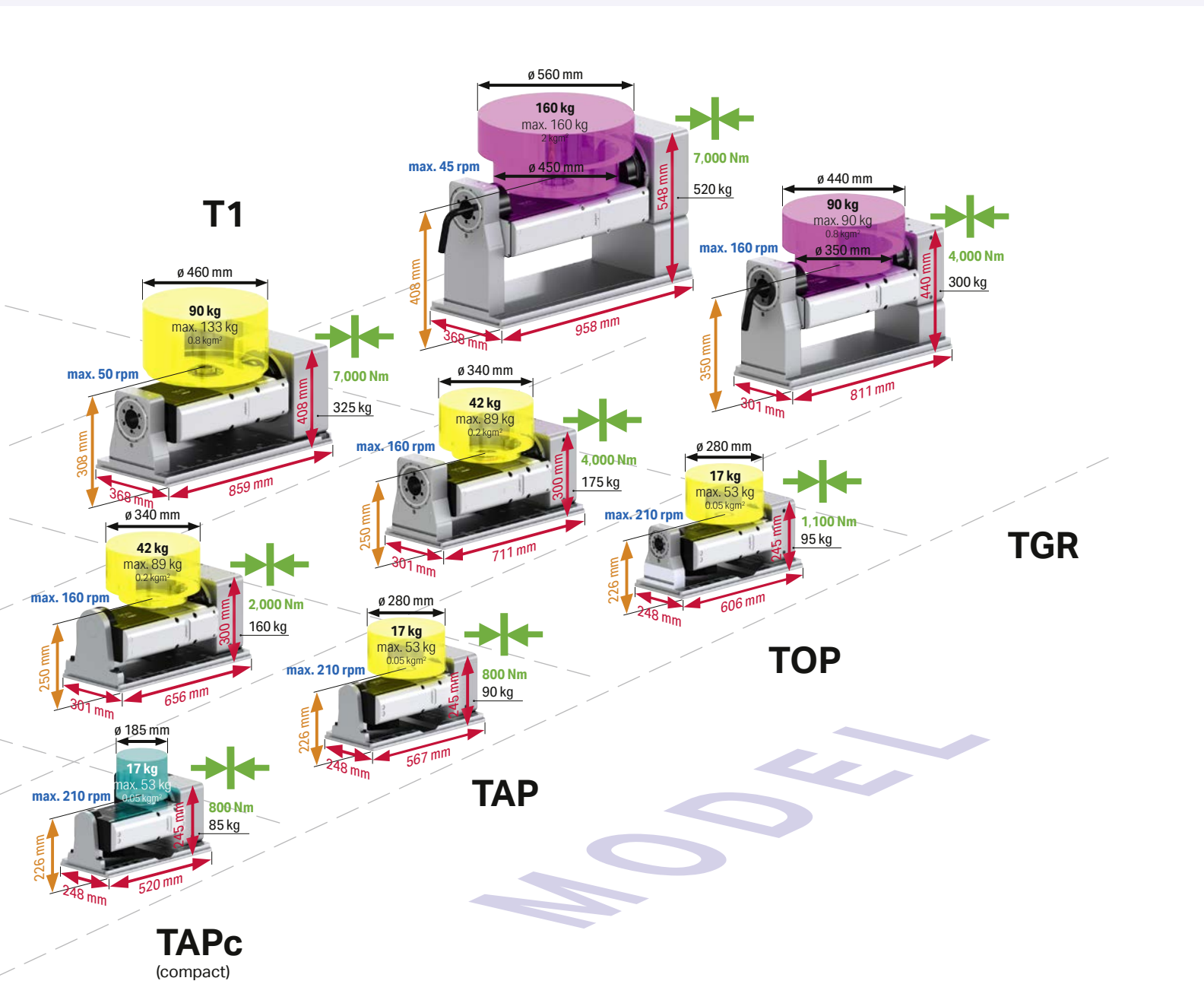
TF

TIPc
(compact)



Facts

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

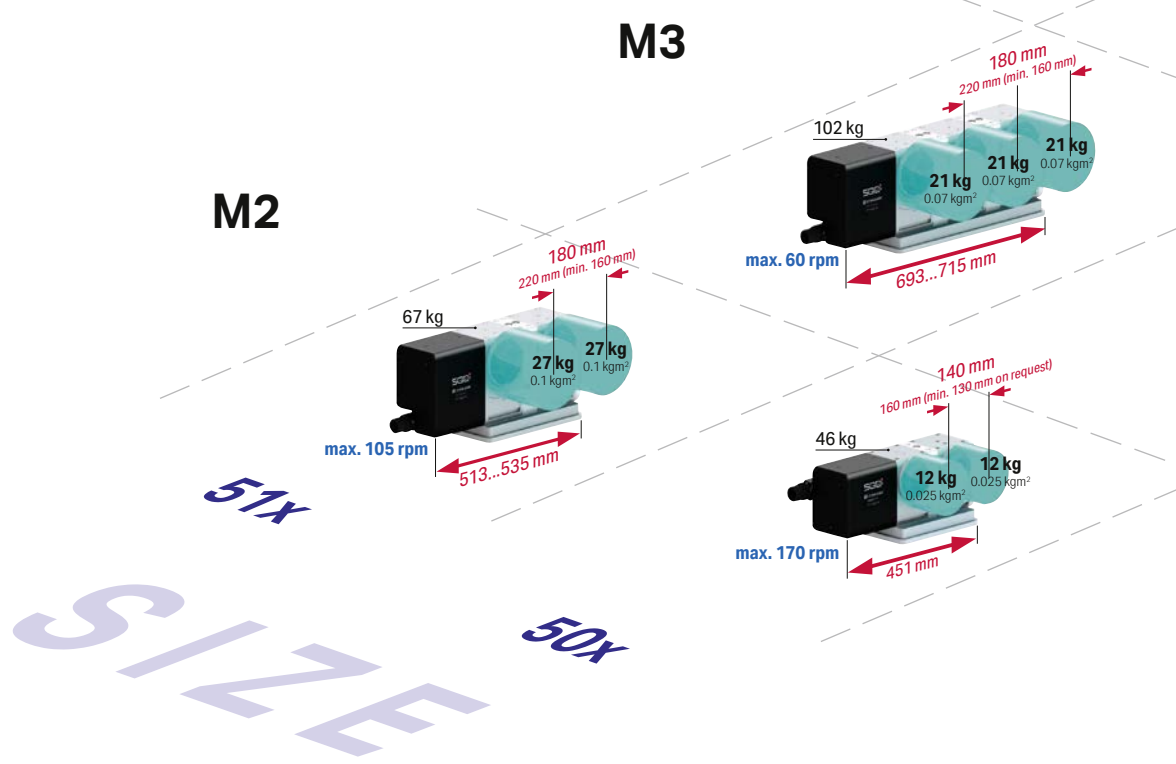


Weight data represent the standard load; higher weights possible, but require modification of rotational speed, acceleration and jerk limitation.

- 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

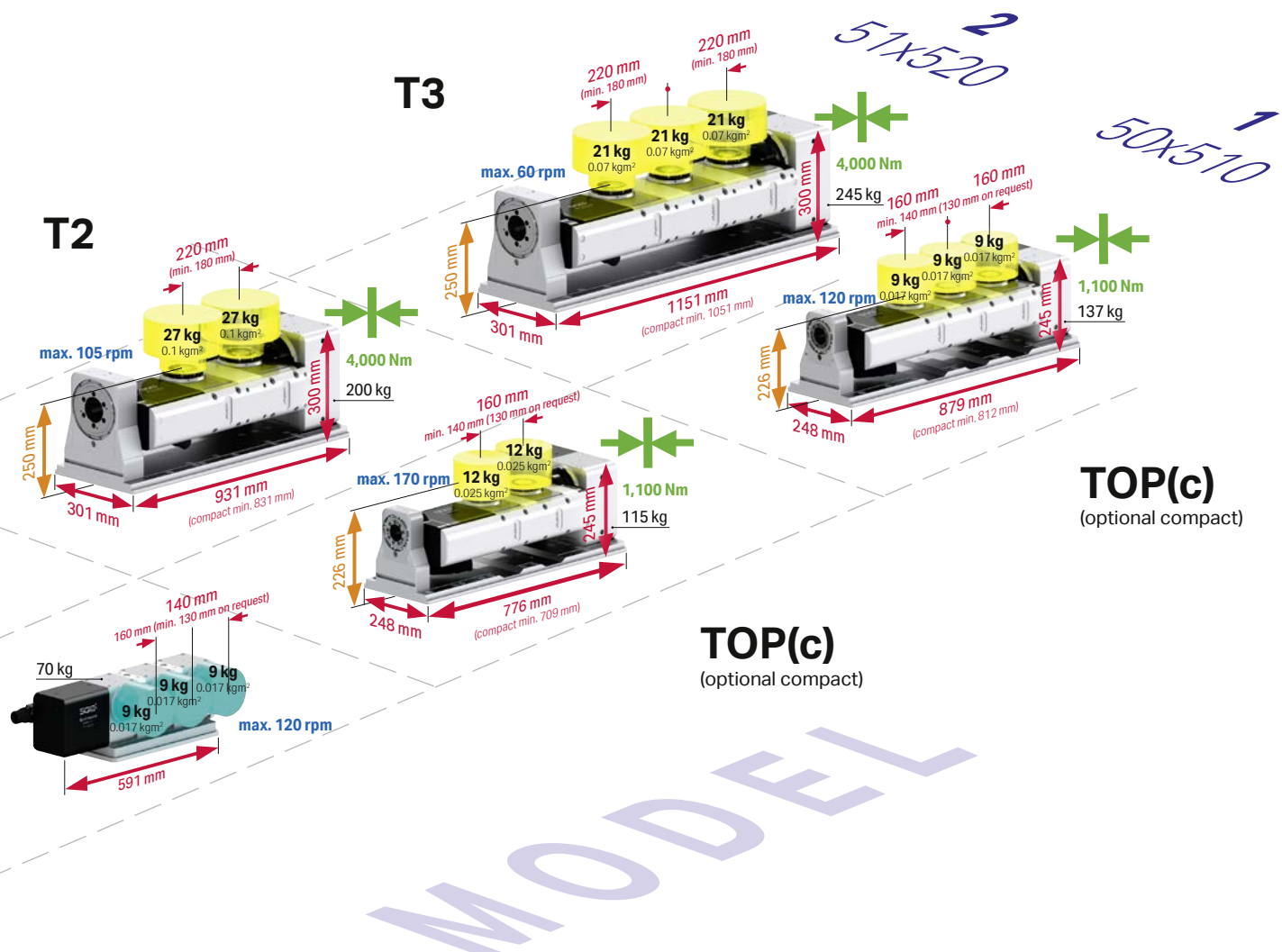


More space for workpiece and fixtures



Facts

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



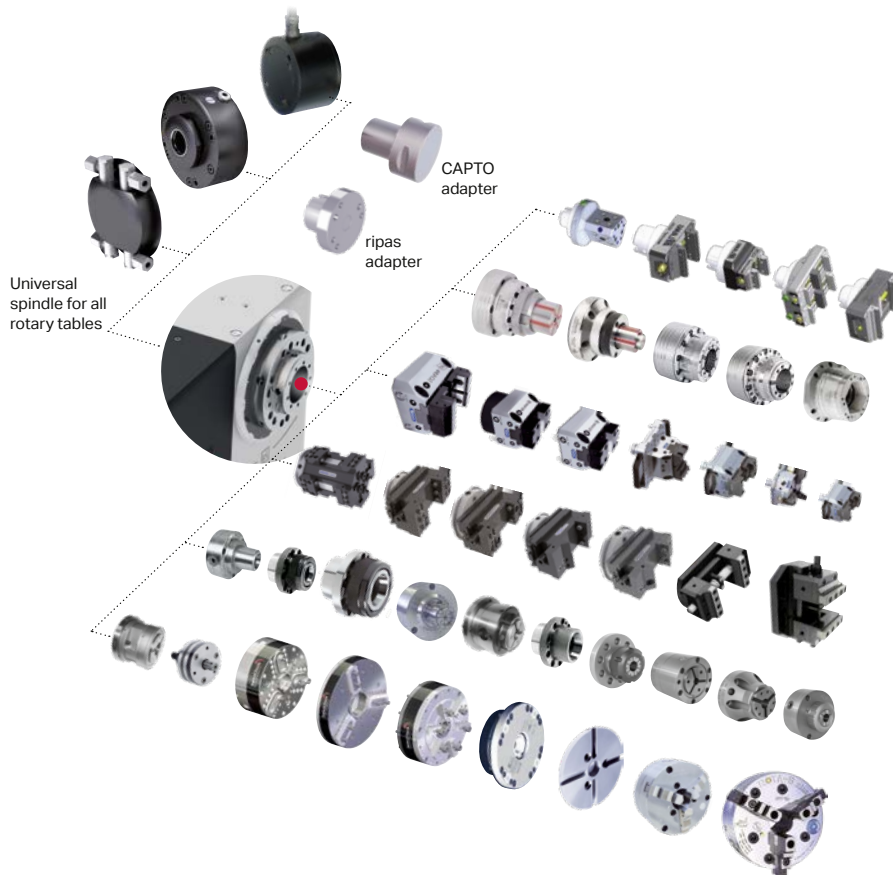
Weight data represent the standard load; higher weights possible, but require modification of rotational speed, acceleration and jerk limitation.

- 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

NEW

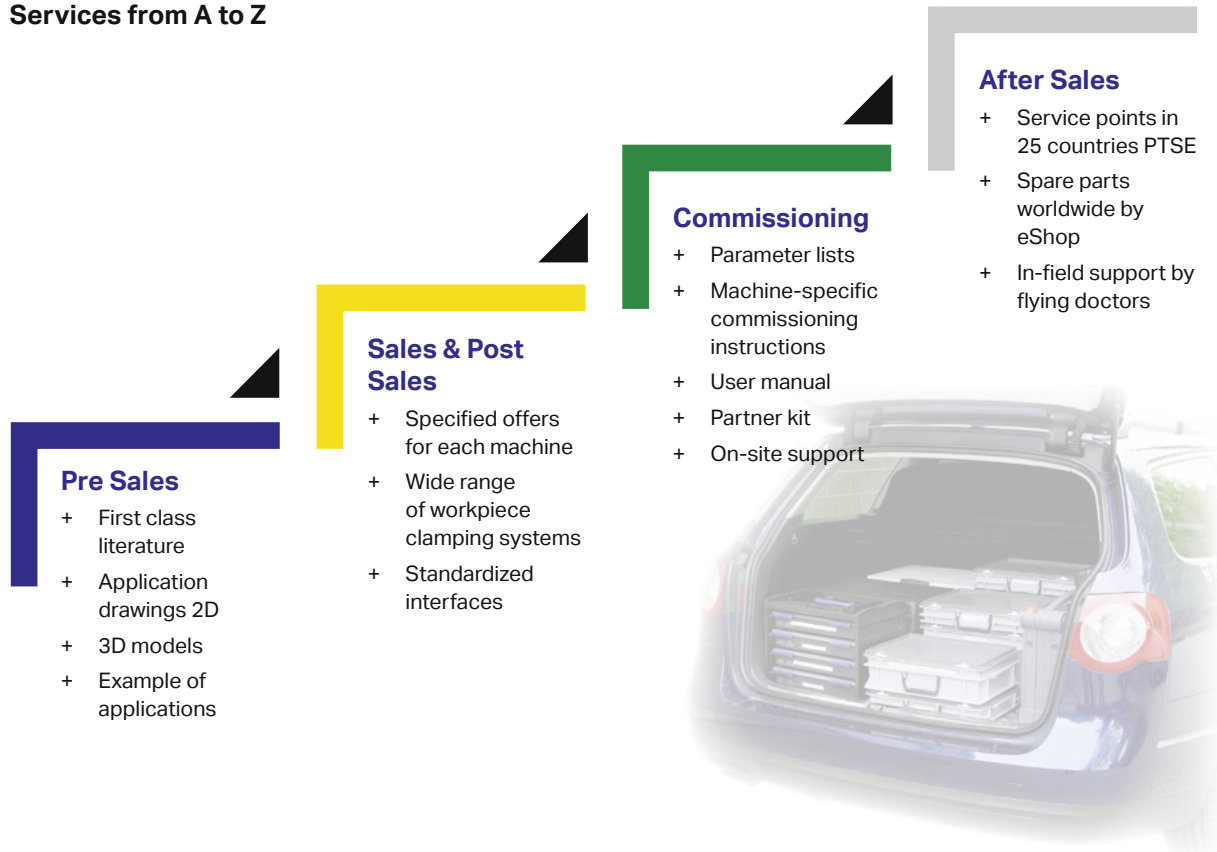


EA-507 with CAPTO retrofit kit

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

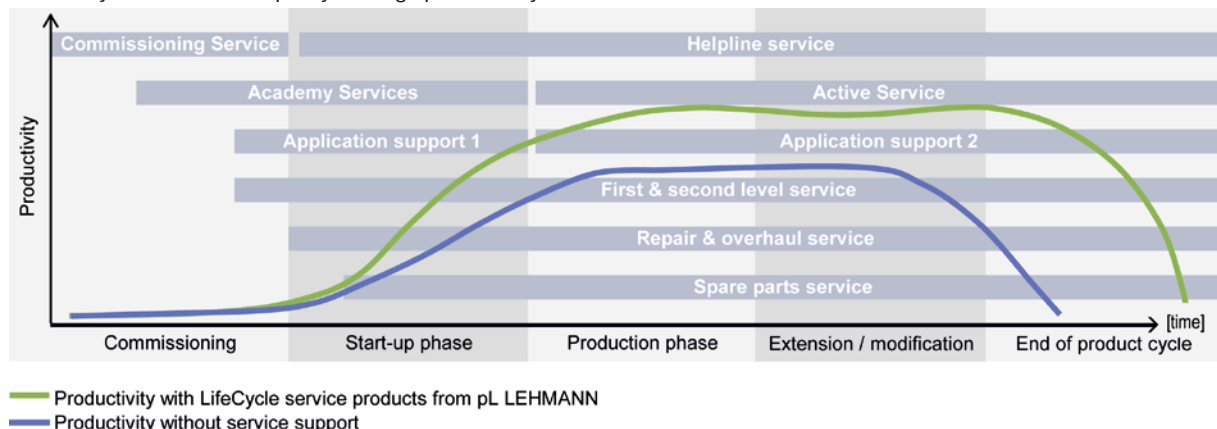


Services from A to Z



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.



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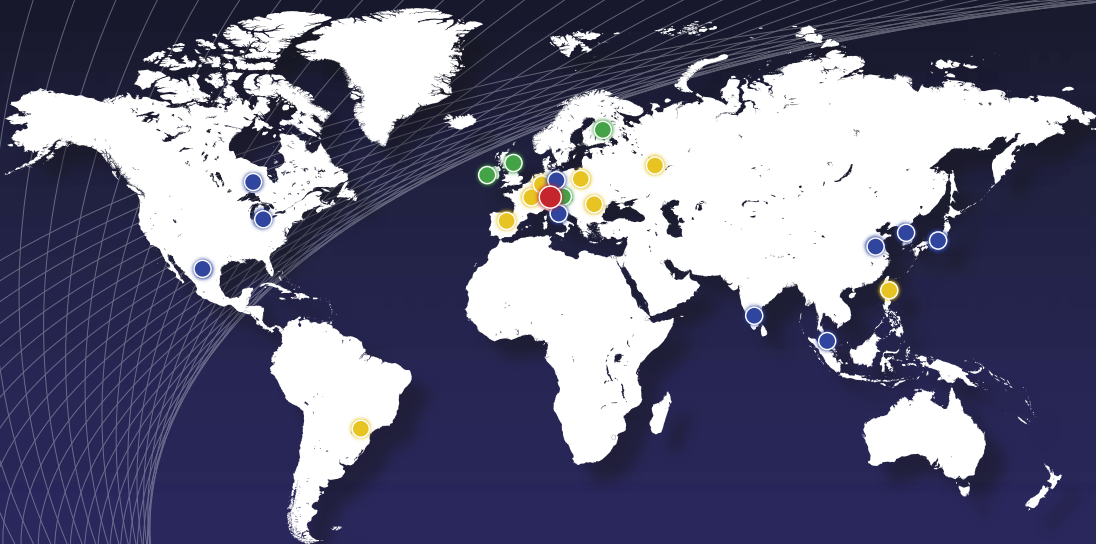
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More information (address, telephone number...) at www.lehmann-rotary-tables.com