Selection Guide for CNC Rotary Tables ... ((*))







HASEGAWA

... for PM- and V3-series

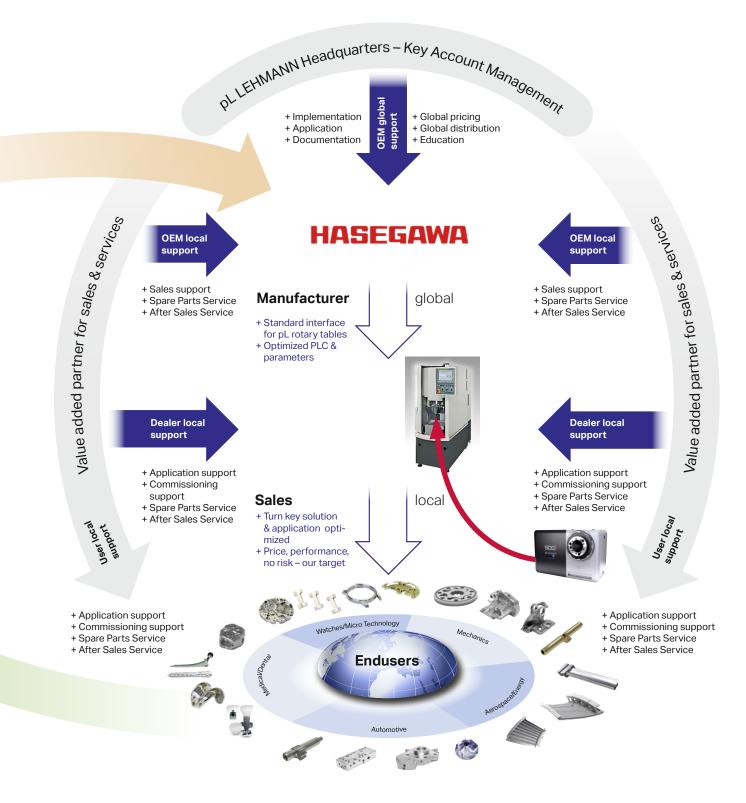
CNC rotary tables for economical manufacturing: pL LEHMANN has suitable and rational solutions for nearly every industry



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





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

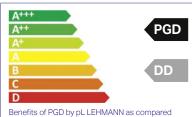






Rotary tables suitable for simultaneous operation!

Save energy



to Direct Drive: small servo, low power draw, no cooling system, and a significantly reduced energy consumption when machining with unclamped

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





Feed torque up to 850 Nm (provisional)

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 ø 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 crosswise clamping.

M-Series







Connectivity

Wireless monitoring, for operation & service

No adjust

Load change without parameter adjustment

Less cost

No cooling system, no hydraulics







A word from HASEGAWA:

«Size is not everything

We contribute to society by creating compact, high-speed and high precision machines. The expansion of the company must be linked to employee satisfaction. We maximize the advantages of smallness in enterprise, and we try to be a survival company.»

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

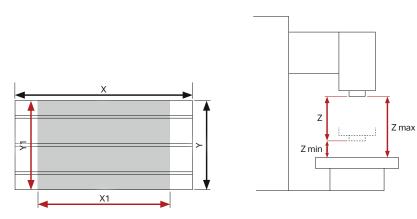


	Table dian	neter [mm]	Permissible		Tra	verse stroke [r	nm]		Table load **
	Х	Υ	overhang *	X1	Y1	Z	Zmin	Zmax	max [kg]
PM 150	300	260	40%	150	225	200	140	340	80
PM 250	350	260	40%	250	225	200	140	340	80
V3	670	250	40%	300	180	200	170	370	200
V3 TT	670	250	40%	300	180	200	120	320	50

^{*} 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.)

Table explanation for pp. 8-11

	EA-507	EA-510	EA-520	EA-530
	X2	X2	X2	X2
PM 150	58	42		

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.

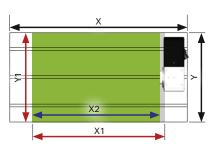


^{10 %} of the machine width Y with Y-clamping or 10 % of the table length X with X-clamping.)
** The recommended rotary tables do not exceed 50 % of the allowed table load.

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



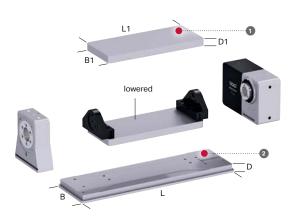
	EA-507 X2	EA-510 X2	EA-520 X2	EA-530 X2
PM 150	58	42		
PM 250	133	117		
V3	318	302		
V3 TT	318			



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

Clamping yokes for EA-type rotary tables





			EA-5	07	EA-	510		EA-520		EA-530		
	Sph	[mm]						210		21	8	
1 Clamping	Length L1	[mm]					600	700	800	800	1000	
yokes	Width B1	[mm]					270			270		
	Thickness D1	[mm]						40		4	0	
2 Base plates	Length L	[mm]					916	1016	1116	1172	1372	
	Width B	[mm]						301		36	88	
	Thickness D	[mm]						30		3	8	
Weights /	Weight (AI)	[kg]					40	45	52			
moments of	Weight (steel)	[kg]					117	130	152			
inertia (without rotary table, without	Mom. inert. (AI)	[kgm ²]					0.16	0.17	0.21	on red	quest	
counter bearing)	Mom. inert. (steel)	[kgm ²]					0.46	0.50	0.60			

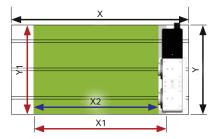
Explanations for pp. 8 to 11

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
		X	(2	
PM 150				
PM 250				
V3				
V3 TT				

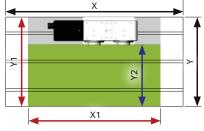
Y-mounting



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

M2-507	M2-510	M3-507	M3-510
	Y	2	
-11	-21	-11	
		Y	Y2

X-mounting



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

Machine combinations with T-type rotary tables

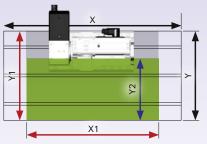
Y-mounting

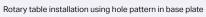


	TIP1c TF-507510 X2	TIP2c TF-510520 X2	TIP3c TF-520530 X2	TAP1c T1-507510 X2	TAP2c T1-510520 X2	TAP3c T1-520530 X2	TAP1 T1-507510 X2	TAP2 T1-510520 X2	TAP3 T1-520530 X2	TOP1 T1-507510 X2
PM 150	A2	ΛZ	AZ.	A2	A2	A2	A2	A2	AZ.	A2
PM 250										
V3										
V3 TT										

	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
	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
PM 150											
PM 250											
V3											
V3 TT											

X-mounting

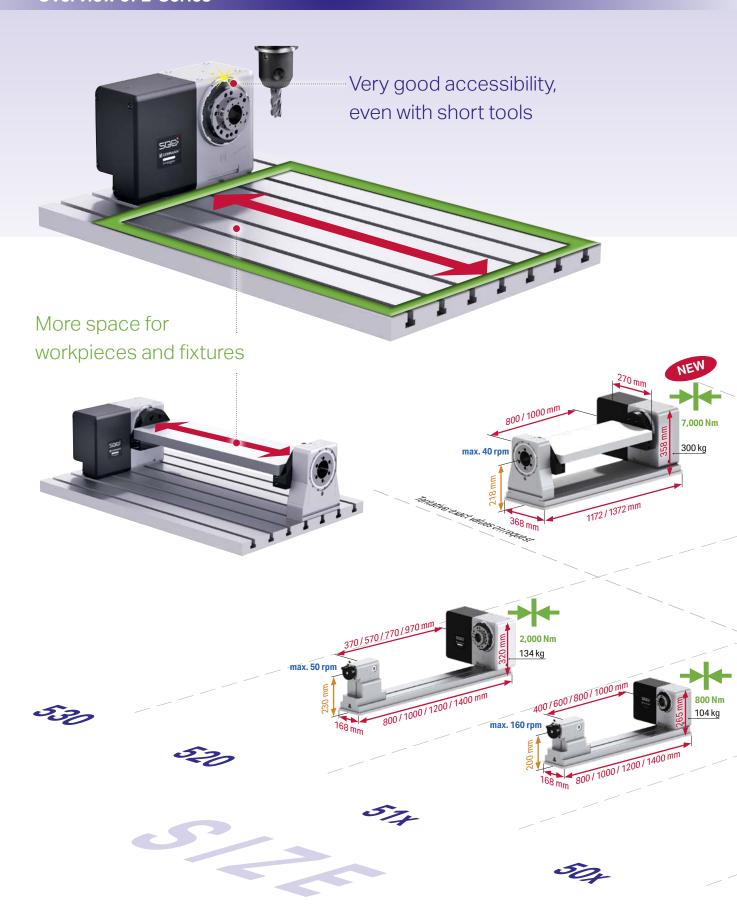






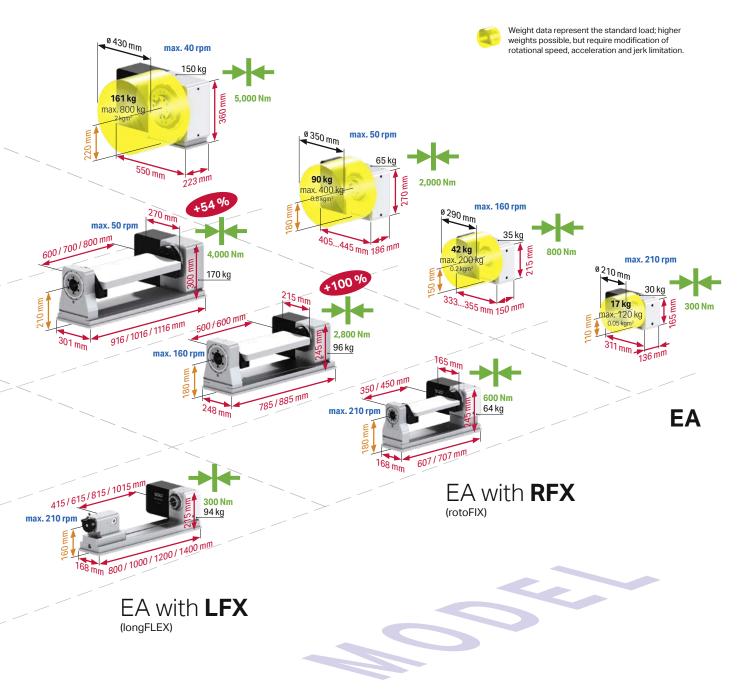
Y2 Y2<	_	TIP1c TF-507510	TIP2c TF-510520	TIP3c TF-520530	TAP1c T1-507510	TAP2c T1-510520	TAP3c T1-520530	TAP1 T1-507510	TAP2 T1-510520	TAP3 T1-520530	TOP1 T1-507510
PM 150 PM 250 V3 85 41 45 45 45 45											
V3 85 41 45 45	50										
V3 TT		85	41		45			45			45

	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
PM 150											
PM 250											
V3			45			45					
V3 TT											



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.

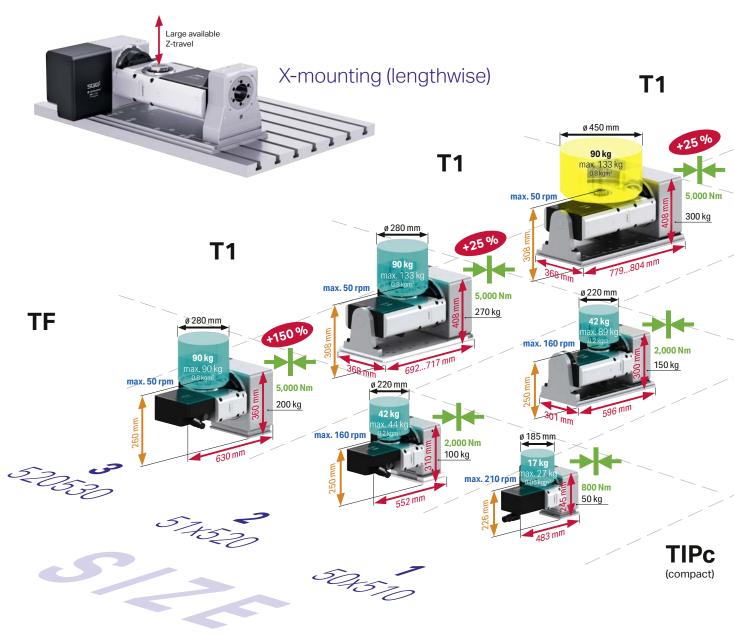


50x
 507 (standard) or 508 (high speed)
 51x
 510 (standard) or 511 (high speed)
 EA single-axis, single-spindle CNC rotary table

rotoFIX modular clamping yoke system longFLEX modular shaft clamping system

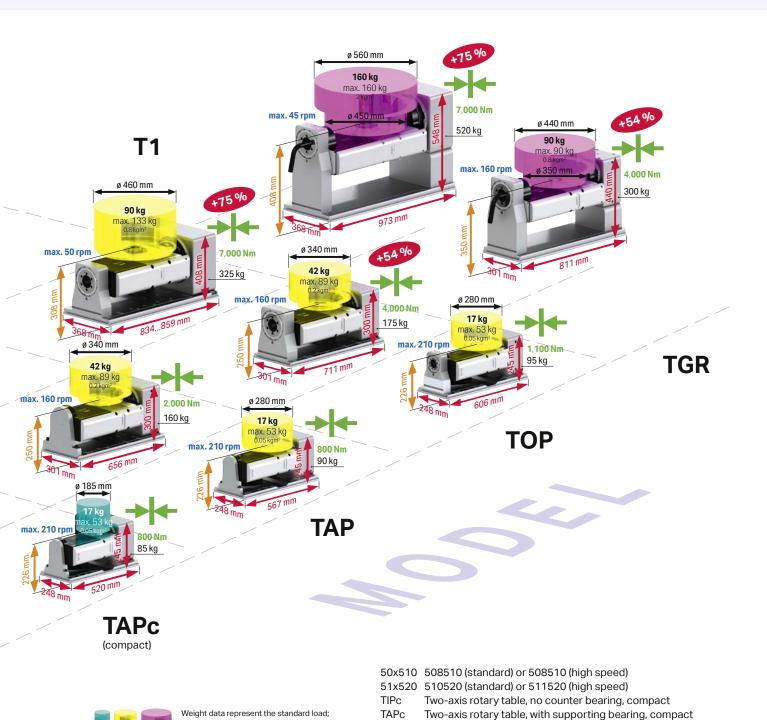






News in brief

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



PI LEHMANN®

TAP

TOP

TGR

Two-axis rotary table, with supporting bearing

specifically for grinding applications

Two-axis rotary table, with clamped counter bearing

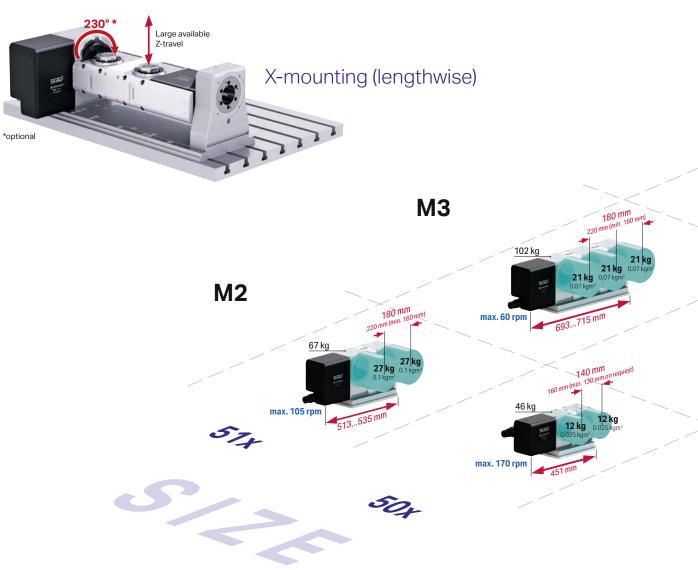
Two-axis rotary table, with clamped counter bearing,

higher weights possible, but require

modification of rotational speed,

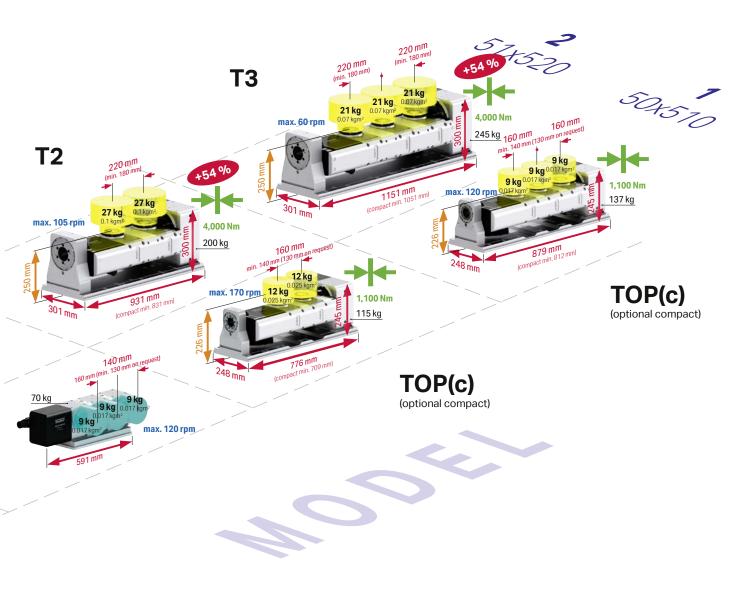
acceleration and jerk limitation.





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



CAPTO clamping (on request)



EA-507 with CAPTO retrofit kit



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



After Sales

eShop

Service points in 25 countries PTSE Spare parts worldwide by

In-field support by

flying doctors

Services from A to Z

Sales & Post **Sales**

- Specified offers for each machine
- Wide range of workpiece clamping systems
- Standardized interfaces

Commissioning

- Parameter lists
- Machine-specific commissioning instructions
- User manual
- Partner kit
- On-site support



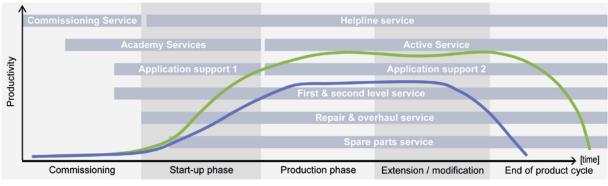
Pre Sales

- First class literature
- Application drawings 2D
- 3D models
- Example of applications



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.





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