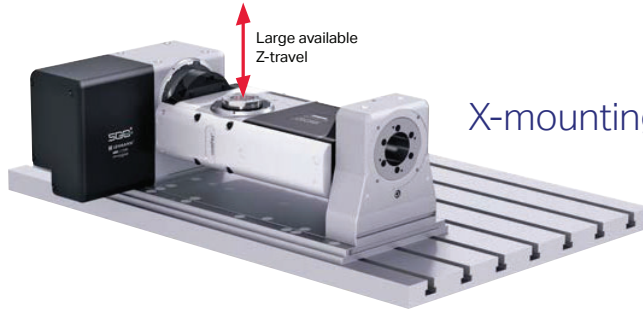


Very good accessibility, even with short tools

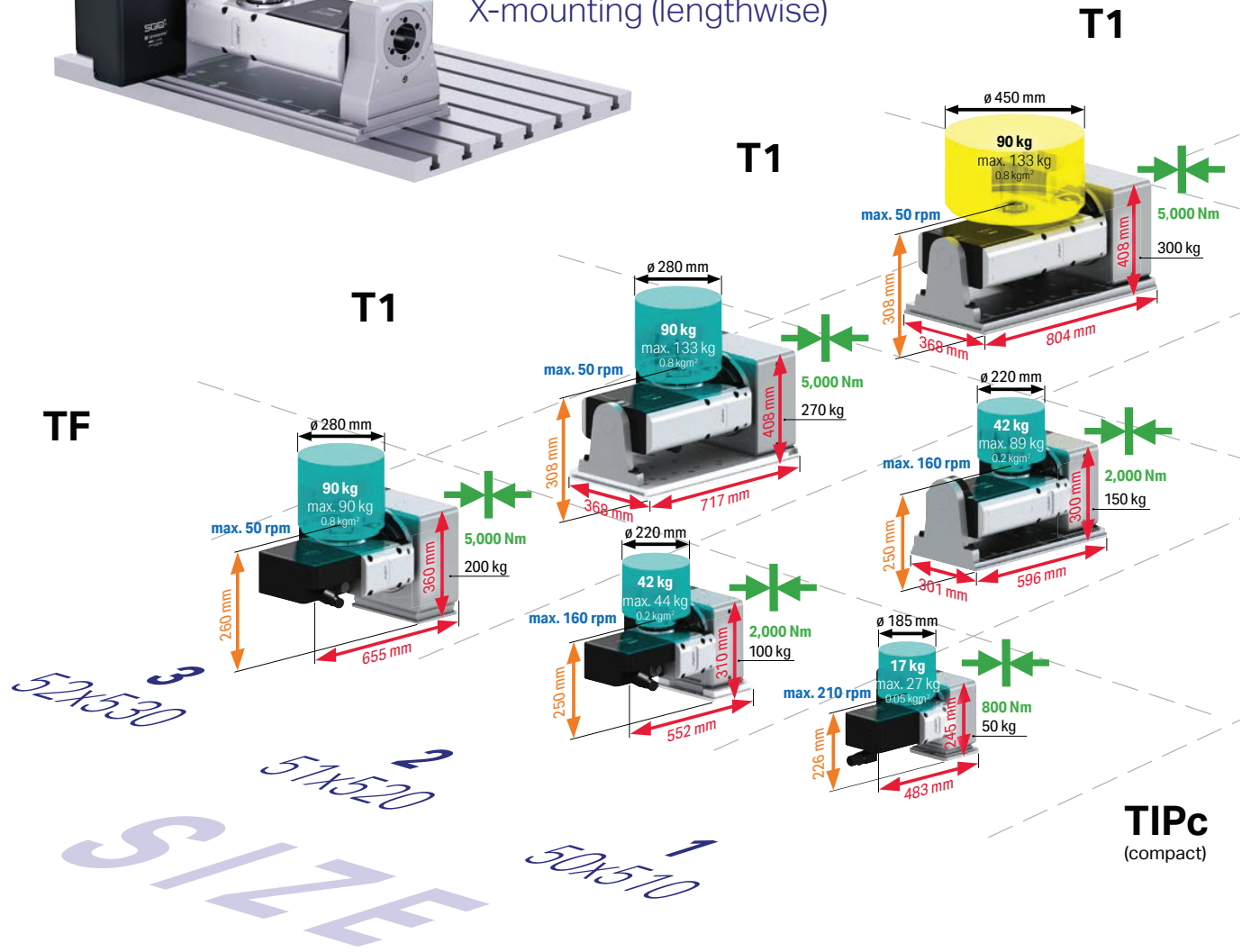
Y-mounting (crosswise)

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

More space  
for workpiece and fixtures



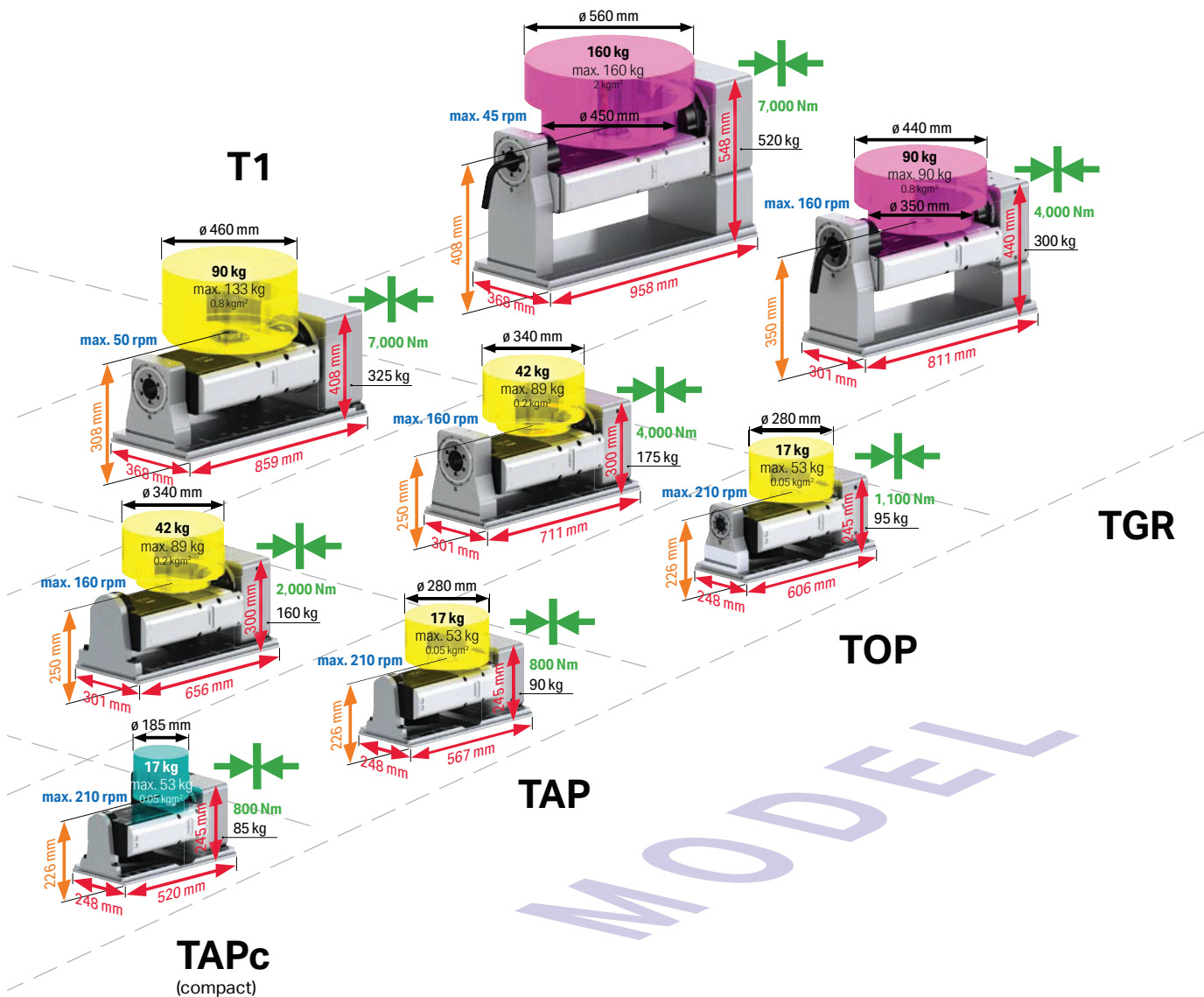
X-mounting (lengthwise)



- Overview, Applications
- System & Facts, smartBox
- Rotary tables
- SPZ, DDF, WMS
- MOT, KAB, WDF, CNC
- Aligning, GLA, RST, LOZ
- Service & Technology
- Tooling

### Facts

- Up to 150 % higher clamping torque in tilting axis
- Fewer variants – more solutions
- Larger workpiece  $\varnothing$  possible
- Spatially optimized arrangement of the dividing axis



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

50x510	507510 (standard) or 508510 (high speed)
51x520	510520 (standard) or 511520 (high speed)
52x530	520530 (standard) or 521530 (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, Applications

System & Facts, smartBox

Rotary tables

SPZ, DDF, WMS

MOT, KAB, WDF, CNC

Aligning, GLA, RST, LOZ

Service & Technology

Tooling



\*optional

  = Dividing axis for High Series (high speed, high resistance)

			TF-507510 TIP1c	TF-508510 TIP1cs	TF-510520 TIP2c	TF-511520 TIP2cs	TF-520530 TIP3c	TF-521530 TIP3cs	
<b>Dimensions</b>	Swivel ø	mm	180		220		195		
	Swiveling range	degrees	90° +5°/-25° (optional 180° ±25°)						
	Center height	mm	180		210		220		
	Total weight	with motor kg	65		110		220		
	Center bore	Standard / increased mm	30		34		46 / 64		
<b>Bearing / Clamping</b>	Max. clamping torque	4 <sup>th</sup> axis	300	250	800	600	2,000	1,800	
		5 <sup>th</sup> axis	800		2,000		5,000		
	Max. spindle load	0°-30°	40		66		135		
		30°-90°	27		44		90		
		Standard load <sup>1)</sup>	17	12	42	21	90	61	
	Max. axial force	4 <sup>th</sup> axis	6		10		40		
		5 <sup>th</sup> axis	1,200		2,000		3,900		
Max. pull-out torque	4 <sup>th</sup> axis	2,000		3,900		10,400			
	5 <sup>th</sup> axis	2,000		3,900		10,400			
Max. moment of inertia	Standard load <sup>1)</sup>	kgm <sup>2</sup>	0.05		0.025		0.2		
	J max	kgm <sup>2</sup>	0.5		0.25		2		
	Feed torque max <sup>3)</sup>	Nm	120		70		250		
<b>Gear unit</b>	Limited torques due to eccentric loads (acting on the tilting axis) <sup>5)</sup>	4 <sup>th</sup> axis	40		110		280		
		5 <sup>th</sup> axis	40		110		280		
		without load	-12		-22		-44		
	Gear unit loading 5 <sup>th</sup> axis	with standard load	Nm	15	10	30	5	100	45
		M max	Nm	250		440		650	
	Indexing accuracy Pa	4 <sup>th</sup> axis <sup>2)</sup>	± arc sec	20/15		17/10		12/8	
		5 <sup>th</sup> axis (90°) <sup>4)</sup>	± arc sec	35/20	35/22	21/22	21/13	11/38	11/20
Repeat accuracy Ps average	4 <sup>th</sup> axis	± arc sec			2				
	5 <sup>th</sup> axis	± arc sec			2				
Max speed at standard load	4 <sup>th</sup> axis <sup>1)</sup>	min <sup>-1</sup>	111	210	80	160	50	100	
	5 <sup>th</sup> axis <sup>1)</sup>	min <sup>-1</sup>	70		40		25		
<b>Precision</b>	Radial run-out <sup>2)</sup>	on spindle ø			6 / 3				
	Axial run-out <sup>2)</sup>	at spindle end face			6 / 3				
	Parallelism <sup>2)</sup>	Spindle to base			10 / 5				

<sup>1)</sup> Mutually dependent; for individual drive motor data, see right side

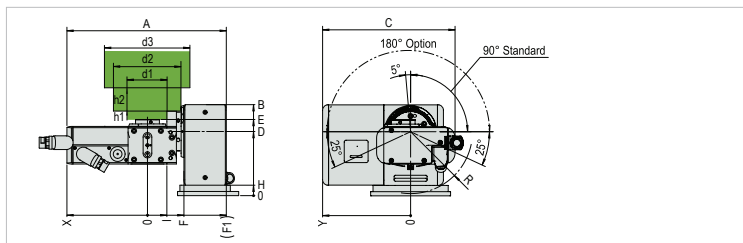
<sup>2)</sup> Standard / increased; for measuring method and validity of the values, please refer to p. 74, for optional angular position measuring systems, please refer to p. 76/77

<sup>3)</sup> Limit value for gear unit, at 1 rpm

<sup>4)</sup> Without load / with standard load 0°-90°

<sup>5)</sup> For torque calculation, see p. 112

## Dimensions



	A	A*	B	C	C*	D	E	F	F1	H	I	R	X	Y	Y*	d1	d2	d3	h1	h2
TIP1c	466	245	382	404	180	226	104	230	30	55	147	236	248	270		186	350		55	
TIP2c	512	534	310	444	469	220	260	122	264	40	65	173	248	295	320	128	220	226	30	95
TIP3c	630	655	360	554		220	260	155	335	40	90	195	295	390		178	282	326	66	166

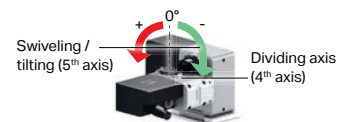
Dimensions with 508, 511 or 521 identical to 507510, 510520 and 520530.

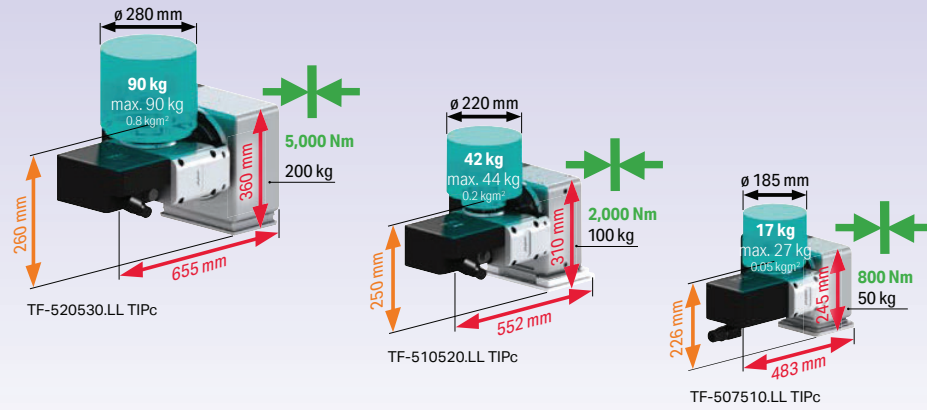
\*With large motor (option)

## Important information

### Center height increase (option)

Depending on the accessories involved (clamping cylinder, rotary union, angular position measuring system...), a center height increase (dimension D) is required. (See page for respective accessory)





**Drive data**

(based on standard load cube shown on pp. 110/111)

		Motors 4 <sup>th</sup> /5 <sup>th</sup>	Feed* [Nm]		Speed [rpm]		Cycle time*** [sec]				
			4 <sup>th</sup>	5 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>	
MAVILOR / MOVINOR **	TF-507510 TIP1c	BLS-072/BLS-072	120	230	111	70	0.26	0.43	0.39	0.64	
	TF-508510 TIP1c	BLS-072/BLS-072	70	230	210	70	0.23	0.43	0.29	0.64	
	TF-510520 TIP2c	BLS-072/BLS-073	250	425	80	45	0.30	0.50	0.49	0.83	
	TF-510520 TIP2c	BLS-072/LN-098	250	440	80	40	0.30	0.50	0.49	0.87	
	TF-511520 TIP2c	BLS-072/BLS-073	150	425	160	45	0.23	0.50	0.31	0.83	
FANUC	TF-511520 TIP2c	BLS-072/LN-098	150	440	160	40	0.23	0.50	0.31	0.87	
	TF-520530 TIP3c	BLS-073/LN-098	440	650	50	25	0.41	0.89	0.71	1.49	
	TF-521530 TIP3c	LN-098/ LN-098	220	650	90	25	0.27	0.74	0.43	1.34	
	TF-507510 TIP1c	B1 is/α2 (HV)is	80	110	66.7	45	0.30	0.49	0.53	0.83	
	TF-508510 TIP1c	B1 is/α2 (HV)is	55	110	130	45	0.25	0.49	0.36	0.83	
	TF-510520 TIP2c	α2 (HV)is/α2 (HV)is	120	195	55	29	0.36	0.66	0.63	1.18	
	TF-510520 TIP2c	α2 (HV)is/α4 (HV)is	120	335	55	30	0.36	0.64	0.63	1.14	
	TF-511520 TIP2c	α2 (HV)is/α2 (HV)is	85	195	100	29	0.24	0.66	0.39	1.18	
	TF-511520 TIP2c	α2 (HV)is/α4 (HV)is	85	335	100	30	0.24	0.64	0.39	1.14	
	TF-520530 TIP3c	α2 (HV)is/α4 (HV)is	210	395	33	20	0.54	0.94	0.99	1.69	
YASKAWA SGM7J	TF-520530 TIP3c	α4 (HV)is/α8 (HV)is****	355	650	33	25	0.56	0.89	1.01	1.49	
	TF-521530 TIP3c	α4 (HV)is/ α4 (HV)is	220	355	60	22	0.37	0.84	0.62	1.52	
	TF-507510 TIP1c	SGM7J 06/08	120	180	66	60	0.30	0.44	0.53	0.69	
	TF-508510 TIP1c	SGM7J 06/08	70	180	133	60	0.22	0.44	0.33	0.69	
	TF-510520 TIP2c	SGM7J 08/08	195	315	66.6	38	0.32	0.54	0.55	0.94	
YASKAWA SGMJV	TF-511520 TIP2c	SGM7J 08/08	135	315	133	38	0.22	0.54	0.33	0.94	
	TF-521530 TIP3c	on request									
	TF-507510 TIP1c	SGMJV 04/08	115	180	66.7	60	0.30	0.44	0.53	0.69	
	TF-508510 TIP1c	SGMJV 04/08	70	180	130	60	0.22	0.44	0.33	0.69	
	TF-510520 TIP2c	SGMJV 08/08	195	315	66.7	38	0.32	0.54	0.55	0.94	
MITSUBISHI	TF-511520 TIP2c	SGMJV 08/08	140	315	133	38	0.21	0.54	0.32	0.94	
	TF-520530 TIP3c	SGMJV/EV 08/15	335	650	40	25	0.46	0.89	0.84	1.49	
	TF-521530 TIP3c	SGMJV/EV 08/15	220	650	80	25	0.28	0.74	0.46	1.34	
	TF-507510 TIP1c	HG56/75	120	170	60	45	0.32	0.49	0.57	0.83	
	TF-508510 TIP1c	HG56/75	70	170	110	45	0.22	0.49	0.36	0.83	
SANYO	TF-510520 TIP2c	HG-(H)75/(H)105	185	430	50	30	0.37	0.59	0.67	1.09	
	TF-511520 TIP2c	HG-(H)75/(H)105	130	430	100	30	0.24	0.59	0.39	1.09	
	TF-520530 TIP3c	HG-(H)105/(H)104	440	650	32	20	0.54	0.94	1.01	1.69	
	TF-521530 TIP3c	HG-(H)105/(H)104	220	650	60	22	0.34	0.82	0.59	1.50	
	TF-507510 TIP1c	R2Ax 06040/08075	120	185	66.7	60	0.30	0.44	0.52	0.69	
SIEMENS	TF-508510 TIP1c	R2Ax 06040/08075	70	185	130	60	0.22	0.44	0.33	0.69	
	TF-510520 TIP2c	R2Ax 08075/08075	210	245	66.7	40	0.32	0.54	0.55	0.92	
	TF-511520 TIP2c	R2Ax 08075/08075	145	245	130	40	0.22	0.54	0.34	0.92	
	TF-510520 TIP2c	1FK2204/1FK2205	150	425	65	30	0.33	0.59	0.56	1.09	
	TF-511520 TIP2c	1FK2204/1FK2205	105	425	130	30	0.22	0.59	0.33	1.09	
TF-520530 TIP3c	1FK2205/1FK2206	425	650	33	25	0.53	0.74	0.98	1.34		
TF-520530 TIP3c	1FK7042/1FK7062	435	650	50	25	0.44	0.77	0.74	1.37		
TF-521530 TIP3c	1FK2205/1FK2206	220	650	65	25	0.30	0.74	0.53	1.34		
TF-521530 TIP3c	1FK7042/1FK7062	220	650	90	25	0.27	0.74	0.43	1.34		

\* At 1 rpm; for more, please refer to p. 116  
 \*\* for Siemens / Heidenhain  
 \*\*\* Without clamping; for times, please refer to p. 130  
 \*\*\*\* not with 35IB

For calculation of load, forces and torques, please see p. 112

**Important information**

- The limit values as set out in the corresponding parameter list take precedence over the data and information provided in the main catalog (due to motor, drive enhancement and the respective machine CNC)
- Motor-independent data are optimum values at operating temperature
- Further details are available at [www.lehmann-rotary-tables.com](http://www.lehmann-rotary-tables.com), under Download / Commissioning



Labyrinth seal (cutaway view)  
 Recommended for:  
 • Grinding operations  
 • High coolant pressures  
 • Extremely fine abrasive particles

**Accessories**

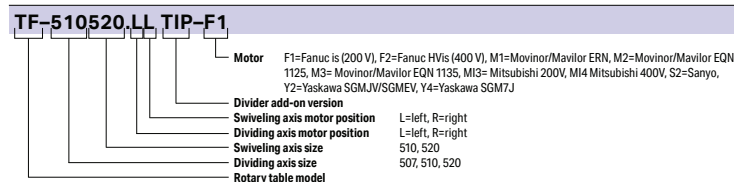
Motor, cable, angular position measuring system and pL CNC starting at p. 76.  
 Accessories starting at p. 68

**Options**

Item no.	Description
GET.5xx-GEN	Increased gear precision <sup>1)</sup>
GEO.5xx-GEN	Incr. geometric precision, ½ standard tolerance
SPI.5xx-Lab <sup>2)</sup>	Spindle seal with labyrinth, integrated sealing air pressure control
SWB.510-180	Tilting range increase from 90° to 180° (with overshoot to max. 230°)
SWB.520-180	
SWB.530-180	

<sup>1)</sup> incl. lower radial and axial run-out of 0.003 mm  
<sup>2)</sup> for 507/510: HSK and ripas clamping not possible manually, GET.5xx-GEN and GEO.5xx-GEN only partly possible (lower radial and axial run-out cannot always be achieved)

**Item no.**



**Suitable alignment elements**

Item no.	Designation	Slot width	Weight [kg]
AUR.St-12		12g6	0.07
AUR.St-14	Alignment	14g6	0.07
AUR.St-16	T-slot nuts, 1 pair	16g6	0.07
AUR.St-18		18g6	0.07

Overview Applications  
 System & Facts, smartBox  
 Rotary tables  
 SPZ, DDF, WMS  
 MOT, KAB, WDF, CNC  
 Aligning, GLA, RST, LOZ  
 Service & Technology  
 Tooling





\*optional

  = High Series  
(high speed, high resistance)

			TF-508511 TIP1cs	TF-511521 TIP2cs	
<b>Dimensions</b>	Swivel ø	mm	180	220	
	Swiveling range	degrees	90° +5°/-25° (optional 180° ±25°)		
	Center height	mm	180	210	
	Total weight	with motor	kg	65	110
<b>Bearing / Clamping</b>	Center bore	Standard / increased	mm	30	34
	Max. clamping torque	4 <sup>th</sup> axis	Nm	250	600
		5 <sup>th</sup> axis	Nm	600	1,800
	Max. spindle load	0°-30°	kg	40	66
		30°-90°	kg	27	44
		Standard load <sup>1)</sup>	kg	12	21
	Max. axial force	4 <sup>th</sup> axis	kN	6	10
	Max. pull-out torque	4 <sup>th</sup> axis	Nm	1,200	2,000
		5 <sup>th</sup> axis	Nm	2,000	3,900
	Max. moment of inertia	Standard load <sup>1)</sup>	kgm <sup>2</sup>	0.025	0.07
J max		kgm <sup>2</sup>	0.25	0.7	
Feed torque max <sup>3)</sup>	4 <sup>th</sup> axis	Nm	70	150	
	5 <sup>th</sup> axis	Nm	130	210	
Limited torques due to eccentric loads (acting on the tilting axis) <sup>5)</sup>		Nm	30	45	
<b>Gear unit</b>	Gear unit loading 5 <sup>th</sup> axis	without load	Nm	-12	-22
		with standard load	Nm	10	5
		M max	Nm	150	230
	Indexing accuracy Pa	4 <sup>th</sup> axis <sup>2)</sup>	± arc sec	20/15	17/10
		5 <sup>th</sup> axis (90°) <sup>4)</sup>	± arc sec	35/22	21/13
	Repeat accuracy Ps average	4 <sup>th</sup> axis	± arc sec		2
5 <sup>th</sup> axis		± arc sec		2	
Max speed at standard load	4 <sup>th</sup> axis <sup>1)</sup>	min <sup>-1</sup>	210	160	
	5 <sup>th</sup> axis <sup>1)</sup>	min <sup>-1</sup>	80	50	
<b>Precision</b>	Radial run-out <sup>2)</sup>	on spindle ø	µm	6 / 3	
	Axial run-out <sup>2)</sup>	at spindle end face	µm	6 / 3	
	Parallelism <sup>2)</sup>	Spindle to base	µm/100 mm	10 / 5	

<sup>1)</sup> Mutually dependent; for individual drive motor data, see right side

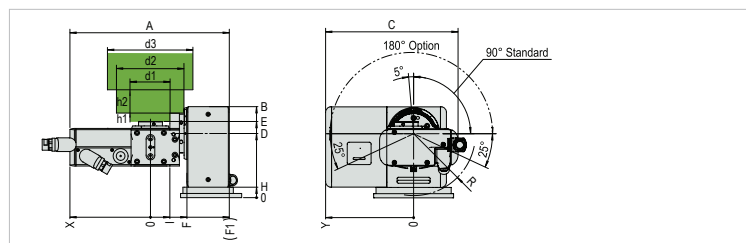
<sup>2)</sup> Standard / increased; for measuring method and validity of the values, please refer to p. 74, for optional angular position measuring systems, please refer to p. 76/77

<sup>3)</sup> Limit value for gear unit, at 1 rpm

<sup>4)</sup> Without load / with standard load 0°-90°

<sup>5)</sup> For torque calculation, see p. 112

## Dimensions



	A	A*	B	C	C*	D	E	F	F1	H	I	R	X	Y	Y*	d1	d2	d3	h1	h2
TIP1c	466	245	382	404	180	226	104	230	30	55	147	236	248	270		186	350		55	
TIP2c	512	534	310	444	469	220	260	122	264	40	65	173	248	295	320	128	220	226	30	95

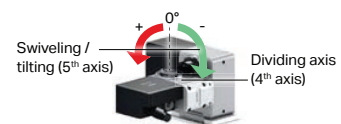
Dimensions with 508, 511 or 521 identical to 507510, 510520 and 520530.

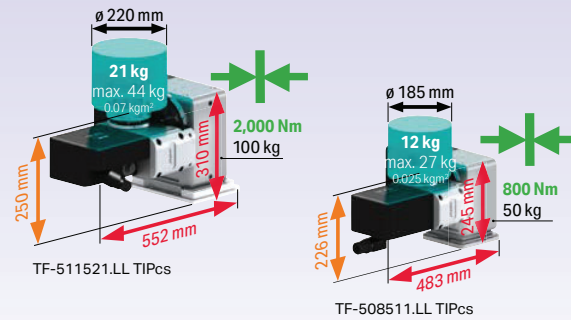
\*With large motor (option)

## Important information

### Center height increase (option)

Depending on the accessories involved (clamping cylinder, rotary union, angular position measuring system...), a center height increase (dimension D) is required. (See page for respective accessory)





**Drive data**

(based on standard load cube shown on pp. 110/111)

		Motors 4 <sup>th</sup> /5 <sup>th</sup>	Feed* [Nm]		Speed [rpm]		Cycle time*** [sec]			
			4 <sup>th</sup>	5 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>
MAVILOR / MOVINOR**	TF-507511 TIP1c	BLS-072/BLS-072	120	130	111	80	0.26	0.38	0.39	0.37
	TF-508511 TIP1c	BLS-072/BLS-072	70	130	210	80	0.23	0.38	0.29	0.57
	TF-510521 TIP2c	BLS-072/BLS-073	250	210	80	50	0.30	0.44	0.49	0.74
FANUC	TF-510521 TIP2c	BLS-072/LN-098	250	210	80	50	0.30	0.44	0.49	0.74
	TF-511521 TIP2c	BLS-072/BLS-073	150	210	160	50	0.23	0.44	0.31	0.74
	TF-511521 TIP2c	BLS-072/LN-098	150	210	160	50	0.23	0.44	0.31	0.74
	TF-507511 TIP1c	B1 is/α2 (HV)is	80	75	66.7	60	0.30	0.49	0.53	0.74
	TF-508511 TIP1c	B1 is/α2 (HV)is	55	75	130	60	0.25	0.49	0.36	0.74
	TF-510521 TIP2c	α2 (HV)is/α2 (HV)is	120	120	55	45	0.36	0.34	0.63	0.87
	TF-510521 TIP2c	α2 (HV)is/α4 (HV)is	120	210	55	50	0.36	0.44	0.63	0.74
	TF-511521 TIP2c	α2 (HV)is/α2 (HV)is	85	120	100	45	0.24	0.54	0.39	0.87
	TF-511521 TIP2c	α2 (HV)is/α4 (HV)is	85	210	100	50	0.24	0.44	0.39	0.74
YASKAWA SGM7J	TF-507511 TIP1c	SGM7J 06/08	120	120	66	70	0.30	0.30	0.53	0.61
	TF-508511 TIP1c	SGM7J 06/08	70	120	133	70	0.22	0.30	0.33	0.61
	TF-510521 TIP2c	SGM7J 08/08	195	205	66.6	50	0.32	0.44	0.55	0.74
YASKAWA SGMJV	TF-511521 TIP2c	SGM7J 08/08	135	205	133	50	0.22	0.44	0.33	0.74
	TF-507511 TIP1c	SGMJV 04/08	115	120	66.7	70	0.30	0.39	0.53	0.61
	TF-508511 TIP1c	SGMJV 04/08	70	120	130	70	0.22	0.39	0.33	0.61
YASKAWA SGMJV	TF-510521 TIP2c	SGMJV 08/08	195	205	66.7	50	0.32	0.44	0.55	0.76
	TF-511521 TIP2c	SGMJV 08/08	140	205	133	50	0.21	0.44	0.32	0.76
	TF-507511 TIP1c	HG56/75	120	115	60	60	0.32	0.41	0.57	0.66
MITSUBISHI	TF-508511 TIP1c	HG56/75	70	115	110	60	0.22	0.41	0.36	0.66
	TF-510521 TIP2c	HG-(H)75/(H)105	185	210	50	50	0.37	0.44	0.67	0.74
	TF-511521 TIP2c	HG-(H)75/(H)105	130	210	100	50	0.24	0.44	0.39	0.74
SANYO	TF-507511 TIP1c	R2Ax 06040/08075	120	125	66.7	80	0.30	0.38	0.52	0.57
	TF-508511 TIP1c	R2Ax 06040/08075	70	125	130	80	0.22	0.38	0.33	0.57
	TF-510521 TIP2c	R2Ax 08075/08075	210	155	66.7	50	0.32	0.46	0.55	0.76
SIE-MENS	TF-511521 TIP2c	R2Ax 08075/08075	145	155	130	50	0.22	0.46	0.34	0.76
	TF-510521 TIP2c	1FK2204/1FK2205	150	210	65	50	0.33	0.44	0.56	0.76
	TF-511521 TIP2c	1FK2204/1FK2205	105	210	130	50	0.22	0.44	0.33	0.76

\* At 1 rpm; for more, please refer to p. 116  
 \*\*\* Without clamping; for times, please refer to p. 130

\*\* for Siemens / Heidenhain

For calculation of load, forces and torques, please see p. 112

**Important information**

- The limit values as set out in the corresponding parameter list take precedence over the data and information provided in the main catalog (due to motor, drive enhancement and the respective machine CNC)
- Motor-independent data are optimum values at operating temperature
- Further details are available at [www.lehmann-rotary-tables.com](http://www.lehmann-rotary-tables.com), under Download / Commissioning



Labyrinth seal (cutaway view)

- Recommended for:
- Grinding operations
  - High coolant pressures
  - Extremely fine abrasive particles

**Accessories**

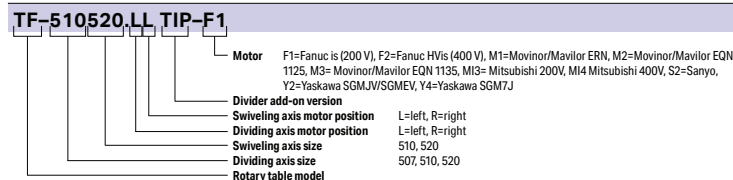
Motor, cable, angular position measuring system and pL CNC starting at p. 76. Accessories starting at p. 68

**Options**

Item no.	Description
<b>GET.5xx-GEN</b>	Increased gear precision <sup>1)</sup>
<b>GEO.5xx-GEN</b>	Incr. geometric precision, ½ standard tolerance
<b>SPI.5xx-Lab <sup>2)</sup></b>	Spindle seal with labyrinth, integrated sealing air pressure control
<b>SWB.510-180</b>	Tilting range increase from 90° to 180° (with overshoot to max. 230°)
<b>SWB.520-180</b>	
<b>SWB.530-180</b>	

<sup>1)</sup> incl. lower radial and axial run-out of 0.003 mm  
<sup>2)</sup> for 507/510: HSK and ripas clamping not possible manually, GET.5xx-GEN and GEO.5xx-GEN only partly possible (lower radial and axial run-out cannot always be achieved)

**Item no.**



**Suitable alignment elements**

Item no.	Designation	Slot width	Weight [kg]
<b>AUR.St-12</b>		12g6	0.07
<b>AUR.St-14</b>	Alignment T-slot nuts,	14g6	0.07
<b>AUR.St-16</b>	1 pair	16g6	0.07
<b>AUR.St-18</b>		18g6	0.07

Overview Applications

System & Facts, smartBox

Rotary tables

SPZ DDF, WMS

MOT, KAB, WDF, CNC

Aligning, GLA, RST, LOZ

Service & Technology

Tooling