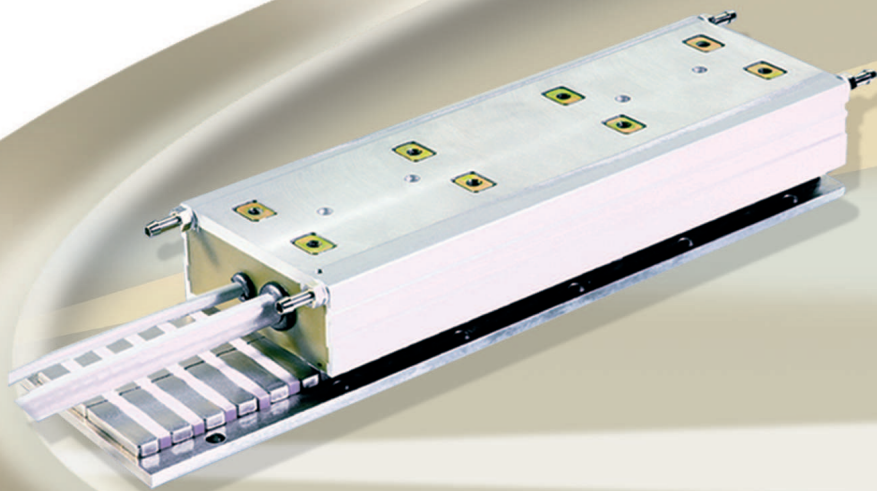


entraînement

MOTEURS LINEAIRES

m o t i o n

la force de la gamme !



transtechnik
servomécanismes

Tecnotion presents its full range of TB-motors

The TB-motor has the same outstanding properties as the other well-known iron core family members.

They stand out for their compact construction, superb force-weight ratio, excellent force-power consumption ratio, low attraction force, fast acceleration, high speed and submicron operational accuracy. They are available as stand-alone products and as integral parts of complete linear drive systems.

TB-motors are applied in:

- Positioning systems
- Pick-and-place systems
- Robotic processes
- Machine tools and for
- Visual inspection purposes



Specifications

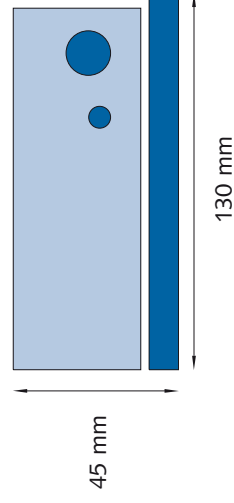
	Symbol	Unit	TB 12		TB 15		TB 30		TB 45	
			N	S	N	S	N	S	N	S
Motor type, max. voltage ph-ph			3-phase synchronous Ironcore, 600 Veff							
Ultimate Force 10°C/s	Fu	N	1800		2250		4500		6750	
Ultimate Current	Iu	Arms	13.0	26	13.5	33	26	66	39	99
Peak Force 6°C/s	Fp	N	1600		2000		4000		6000	
Peak Current	Ip	Arms	10.0	20	10.0	25	20	50	30	75
Continuous Force *	Fca	N	400..760		500..950		1000..1900		1500..2850	
Max. Continuous Current *	Ica	Arms	4.1	8.2	4.2	10.2	8.5	20	12.5	31
Max. Continuous Power Loss	Pc	W	430		550		1100		1650	
Maximum speed	Vmax	m/s	3	6	2.5	6	2.5	6	2.5	6
Motor Force Constant	K	N/Arms	186	93	225	93	225	93	225	93
Back EMF	Bemf	V / m/s	152	76	183	76	183	76	183	76
Motor Constant	S	N ² /W	1750		2150		4300		6450	
Magnet Pitch NN	τ	mm	24		24		24		24	
Resistance per phase	Rf	Ω	6.6	1.6	7.8	1.30	3.9	0.66	2.6	0.44
Induction per phase	Lf	mH	52	13	63	10.5	32	5.3	21	3.5
Electrical time constant	τe	ms	8		8		8		8	
Thermal Resistance	Rth	°C/W	0.16		0.13		0.065		0.043	
Thermal Time Constant	τ th	s	90		90		90		90	
Motor Attraction Force	Fa	N	3400		4000		8000		12000	
Length of Coil unit	L	mm	244		290		562		834	
Weight of Coil unit	M	kg	4.9		5.9		11.7		17.5	
Weight of Cables	m	kg/m	0.3		0.3		0.3		0.3	
Temperature Sensor			PTC 1kΩ and KTY 21							

* Depends on application: use of watercooling, cooling surface, air speed and ambient temperature.

Dimensions Magnetplates

Le	192 mm	288 mm
N	3	5
M5 bolts	8x	12x
Mass	10,5 kg/m	

Magnetplates can be butted together.



TECNOTION

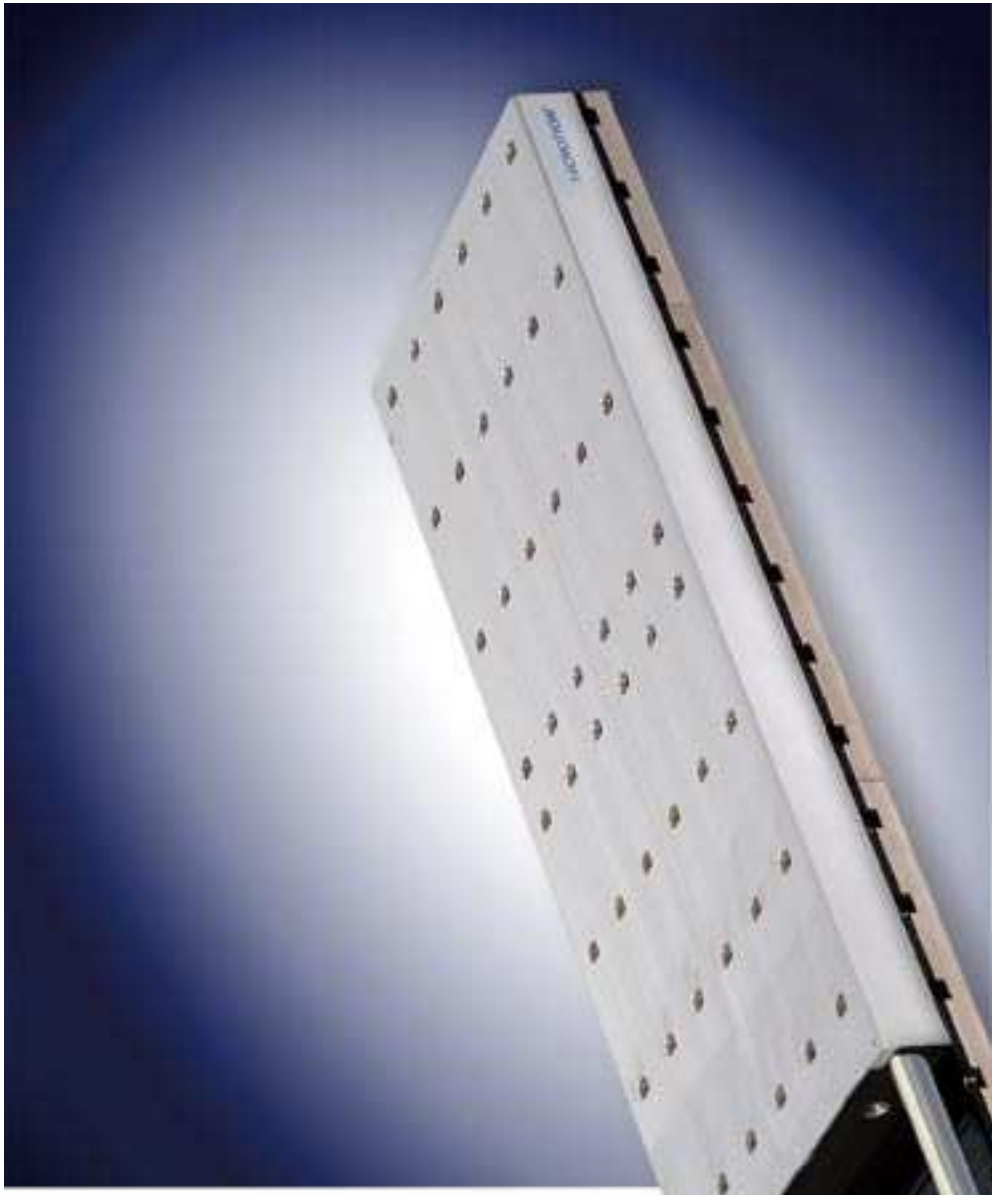
Tecnotion presents its full range of TG-motors

With the TG-motor Tecnotion extends its product range with the strongest iron core linear motor.

The compact construction and minimized height of the TG-motor make it easy to build the TG-motor in any system that requires maximum power.

The TG-motor stands out for its fully integrated water-cooling system, superb heat performance, minimal attraction force between magnets and coils and excellent motor constant.

For optimal protection of the magnet tracks they are cast into epoxy resin.



Specifications

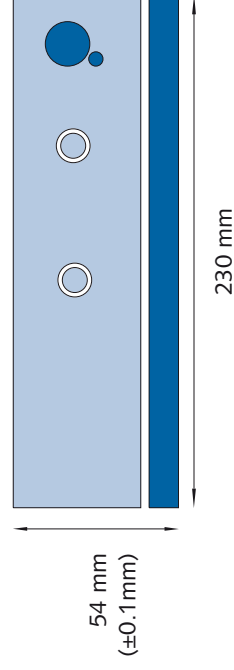
	Symbol	Unit	TG 15 S	TG 30 S	TG 45 S
Motor type, max. voltage ph-ph			3-phase synchronous Ironcore, 600 Veff		
Ultimate Force 10°C/s	Fu	N	4250	8500	12750
Ultimate Current	Iu	Arms	33	65	98
Peak Force 6°C/s	Fp	N	3780	7560	11340
Peak Current	Ip	Arms	25	50	75
Continuous Force watercooled	Fcw	N	1950	3900	5850
Continuous Current watercooled	Icw	Arms	11.1	22	33
Continuous Force aircooled*	Fca	N	900..1900	1800..3800	2700..4700
Max. Continuous Power Loss	Pc	W	1200	2400	3600
Maximum speed	Vmax	m/s	3	3	3
Motor Force Constant	K	N/Arms	176	176	176
Back EMF	Bemf	V / m/s	143	143	143
Motor Constant	S	N ² /W	4200	8400	12600
Magnet Pitch NN	τ	mm	24	24	24
Resistance per phase	Rf	Ω	2.44	1.22	0.81
Induction per phase	Lf	mH	20	10	6.7
Electrical Time Constant	τe	ms	8	8	8
Thermal Resistance	Rth	°C/W	0.06	0.03	0.02
Thermal Time Constant	τ th	s	78	78	78
Motor Attraction Force	Fa	N	8000	16000	24000
Length of Coil unit	L	mm	296	568	840
Weight of Coil unit	M	kg	12	23	34
Weight of Cables	m	kg/m	0.4	0.4	0.4
Watercooling Flow	Φw	l/min	6	9	12
Watercooling Pressure	Pw	bar	1.2	2	3
Temperature Sensors			PTC 1kΩ and KTY 21		

* Depends on application: use of watercooling, cooling surface, air speed and ambient temperature.

Dimensions Magnetplates

Le	192 mm	288 mm
N	3	5
M6 bolts	8x	12x
Mass	28 kg/m	

Magnetplates can be butted together.



TECNOTION

Tecnotion presents its full range of TL-motors

Since their introduction in 1999 the range of Tecnotion's TL-linear motors is rapidly growing. Engineers from all over Europe prefer the TL-motors to optimise the linear movements in precision equipment and production processes. The TL-motors stand out for their compact construction, lightweight, low attraction force, fast acceleration, high speed and micron operational accuracy. They are available as stand-alone products and as integral parts of complete linear drive systems.



Specifications

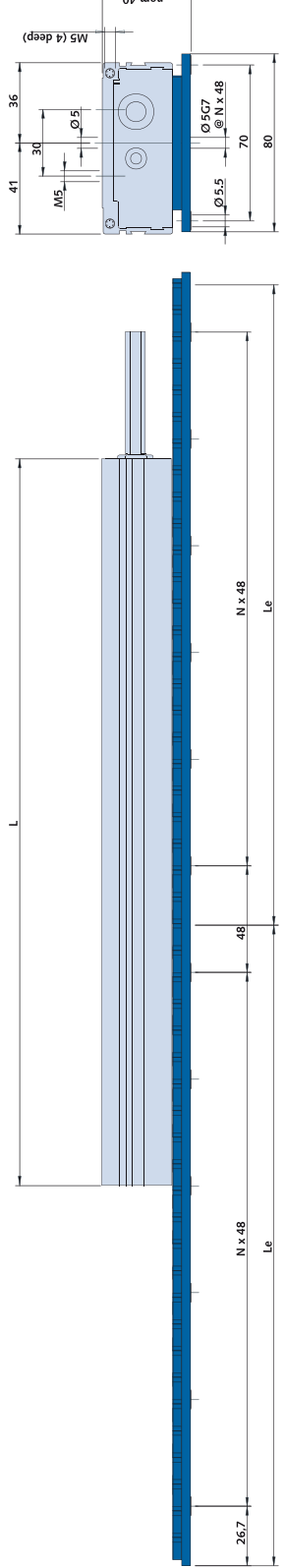
	Coils/Current	Symbol	Unit	TL 6		TL 12		TL 15		TL 18		TL 24			
				N	S	N	S	N	S	N	S	N	S		
Motor type, max voltage ph-ph				3-phase synchronous Ironcore, 600 Veff											
Ultimate Force	10°C/s	Fp	N	450	900	1125	1350	1800							
Ultimate Current		Ip	Arms	6.5	13	26	33	41	26	41	26	52			
Peak Force	6°C/s	Fp	N	400	800	1000	1200	1600							
Peak Current		Ip	Arms	5.0	10	20	25	31	20	31	20	40			
Continuous Force watercooled	coils @100°C	Fcw	N	210	420	525	630	840							
Continuous Current watercooled		Icw	Arms	2.3	4.5	9.1	4.7	11.4	6.8	14.0	9.0	18			
Continuous Force aircooled*	coils @100°C	Fca	N	100..200	200..400	250..500	300..600	400..800							
Max. Continuous Power Loss	all coils	Pc	W	155	310	370	453	620							
Maximum speed	@560V	Vmax	m/s	5	10	5	10	5	10	5	10	5			
Motor Force Constant	I < 0.6 Ip	K	N/Arms	93	46	93	46	112	46	93	44.9	93			
Back EMF		Bemf	V / m/s	76	38	76	38	91	38	76	37	76			
Motor Constant	coils @25°C	S	N ² /W	370	740	970	1140	1480							
Magnet Pitch NN		τ	mm	24	24	24	24	24							
Resistance per phase	coils @25°C	Rf	Ω	7.8	2.0	3.9	1.0	4.3	0.75	2.5	0.59	1.9			
Induction per phase	I < 0.6 Ip	Lf	mH	60	15	30	7.5	35	6.5	19	4	15			
Electrical time constant	coils @25°C	τe	ms	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5			
Thermal Resistance		Rth	°C/W	0.48	0.24	0.24	0.20	0.16	0.16	0.16	0.16	0.12			
Thermal Time Constant	minimum	τ th	s	77	77	77	77	77	77	77	77	77			
Motor Attraction Force		Fa	N	900	1700	2000	2850	3400							
Length of Coil unit		L	mm	146	244	290	336	468							
Weight of Coil unit		Mc	kg	1.5	2.6	3.2	3.8	5.1							
Weight of Cables		m	gr/m	180	180	180	180	300							
Watercooling flow	@25°C	Φw	l/min	0.7	1.4	1.8	2.2	2.9							
Watercooling pressuredrop		ΔPw	bar	1	2	2	2	3							
Temperature Sensor				PTC 1kΩ and KTY 21											

* Depends on application: cooling surface, air speed and ambient temperature.

Dimensions Magnetplates

Le	192 mm	288 mm
N	3	5
M5 bolts	8x	12x
Mass	3.8 kg/m	

Magnetplates can be butted together.



Tecnotion presents its full range of TM-motors

The TM-motor is the smallest of the Tecnotion family of iron core motors. It has the same outstanding properties as the other motors in this family.

The TM-motors stand out for their compact construction, lightweight, low attraction force, fast acceleration, high speed and micron operational accuracy. They are available as stand-alone products and as integral parts of complete linear drive systems.

Now available with 2m flexcable.



Specifications

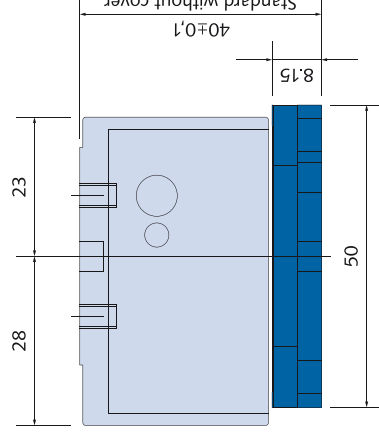
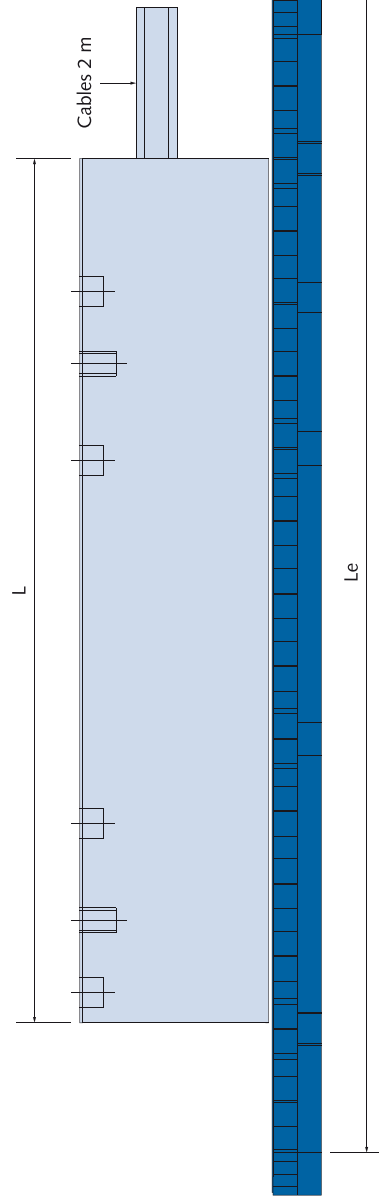
	Symbol	Unit	TM 3 S	TM 6 S
Motor type, max. voltage ph-ph				
Ultimate Force 10°C/s	Fu	N	120	240
Ultimate Current	Iu	Arms	3.9	7.9
Peak Force 6°C/s	Fp	N	105	210
Peak Current	Ip	Arms	3.0	6.0
Continuous Force aircooled*	Fca	N	30..60	60..120
Max. Continuous Current*	Ica	Arms	1.6	3.1
Max. Continuous Power Loss	Pc	W	55	110
Maximum speed	Vmax	m/s	8	8
Motor Force Constant	K	N/Arms	39	39
Back EMF	Bemf	V / m/s	32	32
Motor Constant	S	N ² /W	90	180
Magnet Pitch NIN	τ	mm	24	24
Resistance per phase	Rf	Ω	5.6	2.8
Induction per phase	Lf	mH	35	18
Electrical time constant	τe	ms	6.5	6.5
Thermal Resistance	Rth	°C/W	1.4	0.70
Thermal Time Constant	τ th	s	75	75
Motor Attraction Force	Fa	N	270	490
Length of Coil unit	L	mm	93	143
Weight of Coil unit	M	gr	550	900
Weight of Cables	m	gr/m	150	150
Temperature Sensor			PTC 1kΩ and KTY 21	

* Depends on application: cooling surface, air speed and ambient temperature.

Dimensions Magnetplates

Le	96 mm	144 mm	384 mm
M5 bolts	4x	6x	16x
Mass	2.1 kg/m		

Magnetplates can be butted together.





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