

## **Tecnotion presents its full range of UM-motors**

Tecnotion's linear UM-motors are based upon the ironless principle. They stand out for their great dynamics and for the fact that they show no 'cogging'.

For the production of the UM-motors, Tecnotion applies the unique knowledge and manufacturing techniques the company has developed in close cooperation with its partners within the Philips organisation.

The result is a range of high quality and very reliable linear motors which are available on competitive conditions.



## Specifications

	Symbol	Unit	UM 3		UM 6		UM 9		UM 12		
			N	S	N	S	N	S	N	S	
Motortype, max. voltage ph-ph			3-phase synchronous Ironless, 300Veff								
Peak Force (temp. rise 20°C/s) magnet @25°C	Fp	N	100		200		300		400		
Peak Current	Ip	Arms	2.8	5.0	5.5	10.0	8.3	15.0	11.0	20.0	
Continuous force* coils @110°C	Fc	N	22..29		44..58		66..87		88..116		
Maximum Continuous Current coils @110°C	Ic	Arms	0.8	1.5	1.6	2.9	2.4	4.4	3.2	5.8	
Max. Continuous Power loss All coils	Pc	W	47		95		142		190		
Maximum speed @300V	vmax	m/s	10	18	10	18	10	17	10	16	
Motor Force Constant	K	N/Arms	36.3	19.9	36.3	19.9	36.3	19.9	36.3	19.9	
Back EMF phase-phase peak	Bemf	V / m/s	30	16	30	16	30	16	30	16	
Motor Constant coils@25°C	S	N <sup>2</sup> /W	24		48		71		95		
Magnet Pitch NN	τ	mm	30								
Resistance per phase coils@25°C	Rf	Ω	18.5	5.5	9.3	2.8	6.2	1.8	4.6	1.4	
Induction per phase	Lf	mH	6	1.8	3	0.9	2	0.6	1.5	0.4	
Electrical time constant coils@25°C	τe	ms	0.35		0.35		0.35		0.35		
Thermal Resistance	Rth	°C/W	1.8		0.90		0.60		0.45		
Motor Attraction Force	Fa	N	0								
Length of Coil unit	L	mm	78		138		198		258		
Weight of Coil unit Ex cable	M	gr	84		162		240		318		
Weight of Cable	m	gr/m	80								
Temperature Sensor			PTC 1kΩ and KTY 21								

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

# TECNOTION®

This leaflet gives you the UM's vital technical data. For additional information, please contact

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### Dimensions Magnettracks

Le	90 mm	120 mm	390 mm
M4 bolts	3	4	13
Mass	4.8 kg/m		

Magnetplates can be butted together.

