

NEW

TECNOTION[®]

direct drive in motion

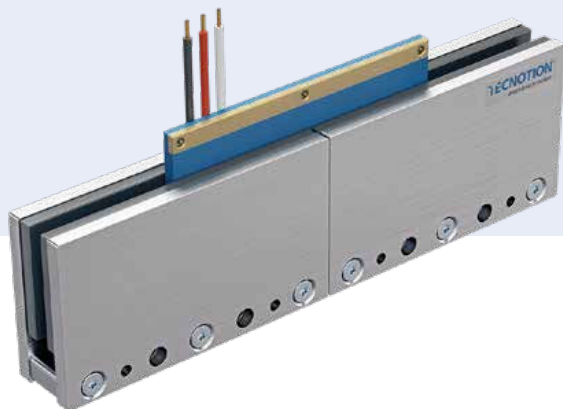
Unano series

Minimal space. Maximum impact

Bring unmatched precision to compact setups

Our latest innovation in motor technology - the Unano ironless linear motor series deliver high precision, smooth and powerful performance in one of the smallest form factors on the market. Engineered for systems where space is tight but high power cannot be compromised. It's ideal for compact, sensitive, or highly accurate applications, such as metrology and inspection stages, microscopy tables, flying probe axis, and multi-carrier stages.

- Ultra compact design at just 12.5mm thickness
- Top-tier precision and reliability
- Superior accuracy
- Available in 17mm, 34mm and 51mm coil lengths



Direct drive motors

- Ironless design for smooth, cogging-free operation
- No wear for long-term reliability
- Direct drive for ultimate control and zero backlash
- Quiet and clean
- Designed to outperform Piezo and spindle motors
- Combine accuracy at all speeds

Ironless Unano series

Built with integration in mind! Whether you're designing a new medical device, enhancing test equipment, or optimizing automation stages, this motor fits right in — bringing precision and performance to your application.



Optimized R_{th}

Flying leads

Flexible wire management

NdFeB magnets

Continuous force range

F_c 2.6 - 7.8 N

Ultimate force range

F_u 5.1 - 15.3 N

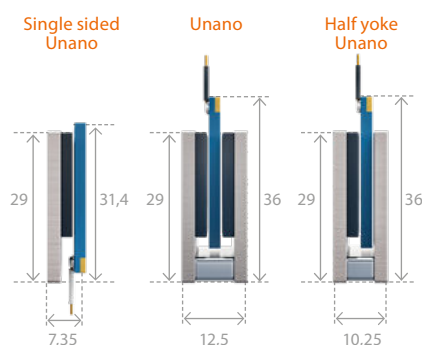
Extremely low weight

Three motor options

Available as 3 & 6 & 9 coil motors

Flexible design

Do you need a different form factor? Our flexible design can be tailor-made for your application



	Parameter	Remarks	Symbol	Unit	UnanoA3	UnanoA6	UnanoA9
Performance	Motor type, max voltage ph-ph	3-phase synchronous	U_{max}	$V_{ac,rms}$ (V_{dc})	N, 48 (68)		
	Peak force @ 25 K/s increase	magnets @ 25°C	F_p	N	5.1	10.2	15.3
	Continuous force ¹	coils @ 100°C	F_c	N	2.6	5.2	7.8
	Maximum speed ²	@ U_{max} @ F_c	v_{max}	m/s	57.1	26.5	16.3
	Motor force constant	$I \leq I_c$	K_f	N/A _{rms}	1.15	2.3	3.45
	Motor constant	coils @ 25°C	S	N ² /W	0.76	1.55	2.34
Electrical	Peak current	magnets @ 25°C	I_p	A _{rms}	4.44		
	Continuous current ¹	coils @ 100°C	I_c	A _{rms}	2.24		
	Back EMF ph-ph _{peak}		K_e	V_{dc} /m/s	0.94	1.88	2.82
	Resistance per phase	coils @ 25°C ex. cable	R_{ph}	Ω	0.58	1.14	1.70
	Induction per phase		L_{ph}	μH	66.7	133.3	200.1
	Electrical time constant		τ_e	ms	0.12		
Thermal	Continuous power loss ¹	coils @ 100°C	P_c	W	11.2	22.4	33.6
	Thermal resistance	coils to mount. sfc.	R_{th}	K/W	6.70	3.35	2.23
	Thermal time constant		τ_{th}	s	16.1		
	Temperature sensor				None		
Mechanical	Coil unit mass	ex. cables	m	g	4.7	10	15
	Coil unit length	ex. cables	L	mm	17.5	34.3	51.1
	Motor attraction force	rms @ 0 A	F_a	N	0		
	Magnet pitch NN		τ	mm	8.4		
	Cable mass	all cables		g/m	3		
	Cable type	length 0.3 m	d	mm (AWG)	1.3 (26)		
	Bending radius static	minimum	r	mm	13		

