Planar Water-Cooling Voice Coil Motor

Features

- Integrated water-cooling module, with high cooling efficiency, reliability, and long lifetime
- Extremely high thrust density, extremely low surface temperature rise, with higher continuous force and peak force
- Applicable for vacuum

Applications

- Vacuum equipment
- Healthcare
- Semiconductor equipment
- Automotive

Description

This motor adopts combination design, integrating ultra-thin water-cooling plates with high cooling efficiency into the planar voice coil motor, achieving high thrust density and low surface temperature rise. Vacuum environment applicable as well.

Technical Specifications

	WVCM155-12	WVCM310-12
Travel range	±6 mm	±6 mm
Clearance of side of coil	3 mm	3 mm
Continuous force	155 N	310 N
Peak force	320 N	640 N
Force constant	40.6 N/A	81.2 N/A
Back EMF constant	40.6 V/(m/s)	81.2 V/(m/s)
Electrical resistance	4.92 ohms	9.84 ohms
Electrical inductance	4.02 mH	8 mH
Electrical time constant	0.82 ms	0.82 ms
Continuous current	3.82 A	3.82 A
Continuous power	71.72 W	143.6 W
Peak current	7.88 A	7.88 A
Peak power	305.5 W	611 W
Drive voltage	48 V	96 V
Motor constant	18.3 Sqrt(N^2/W)	25.88 Sqrt(N^2/W)
Min. flow	1.2 L/min	1.2 L/min
Pressure drop	1.5 Bar	1.5 Bar
Weight of coil assembly	2370 g	2770 g
Weight of field assembly	5608 g	11770 g