

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

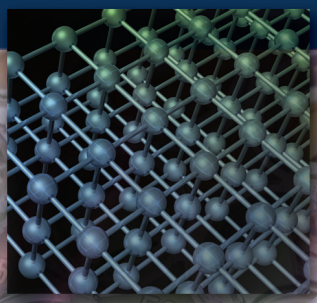
- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

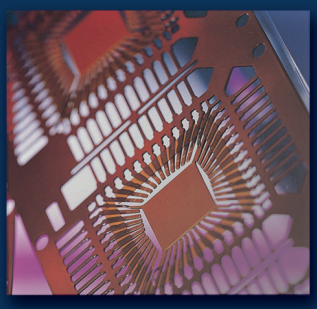
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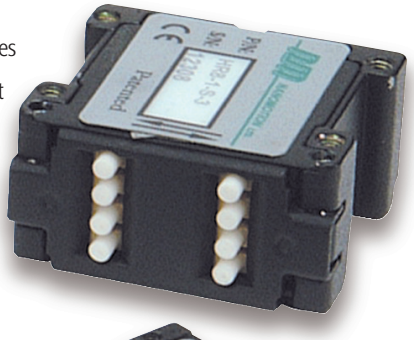




NANOMOTION

A Johnson Electric Company

Nanomotion's HR Series motors range in size from a single element (providing 0.4kg of force) to an eight element motor (providing 3.2kg of force). The HR series is capable of driving both linear and rotary stages. The HR series motors have a wide dynamic range of speed, from several microns per second to 250mm/sec and can easily mount to traditional low friction stages or other devices. The unique operating characteristics of the HR Series motors provide inherent braking and the ability to eliminate servo dither when in a static position.







CE Approved

Features

- Unlimited travel
- Wide dynamic velocity range– from 1µ/sec to 250mm/sec
- Excellent move & settle
- Step resolutions to 10nm
- No intrinsic magnetic field
- No external magnetic field sensitivity (for non-magnetic version)
- Vacuum versions available

Motor Performance Specifications

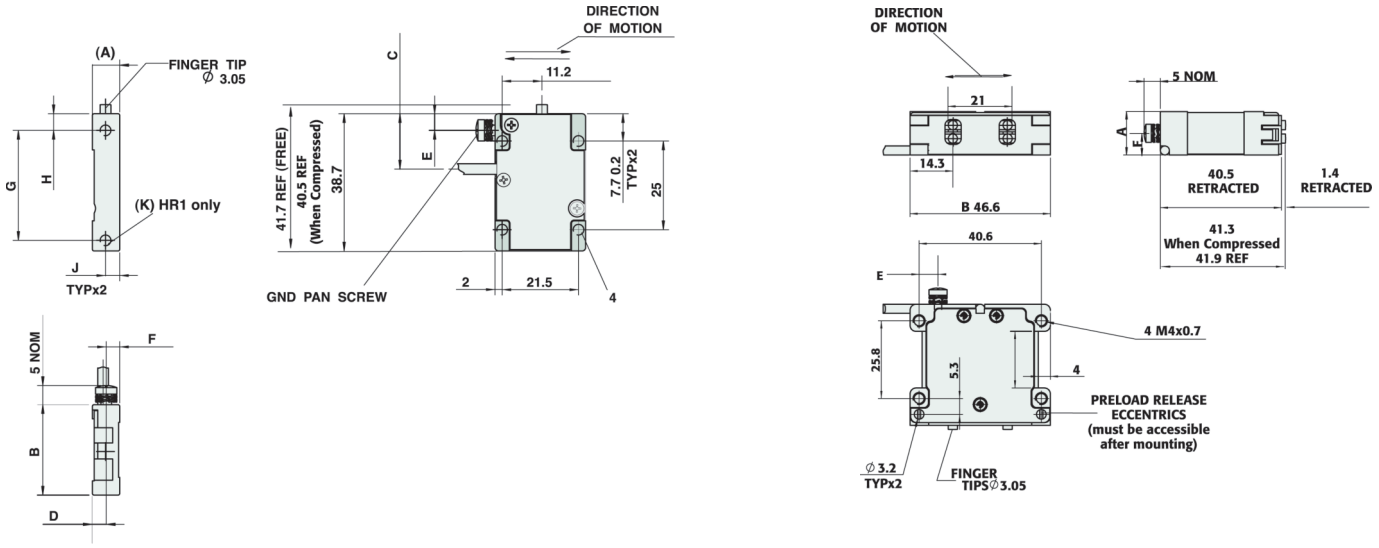
	max velocity (mm/sec)	dynamic stall force (N)	static hold force (N)	static stiffness (N/µ)	preload on stage (N)	Kf force constant (N/volt commanded)
HR1	250	4	3.5	1	18	.75
HR2	250	8	7	1.8	36	1.5
HR4	250	16	14	2.8	72	3
HR8	250	32	28	3.5	144	6

Note: All motor performance data is based on using Nanomotion ceramic motors and amplifiers.
All dimensions in mm

Environmental

Operating Temperature:	0 to 50˚C
Storage:	-20˚C to +70˚C
Humidity:	0 to 80%, non condensing
-V Vacuum Motors:	to 10-7 torr after bake out
-U Ultra-high Vacuum Motors:	to 10-10 torr after bake out
Max Bake Out Temperature:	120˚C for -V motors, 140˚C for -U motors

Dimensions (European View)



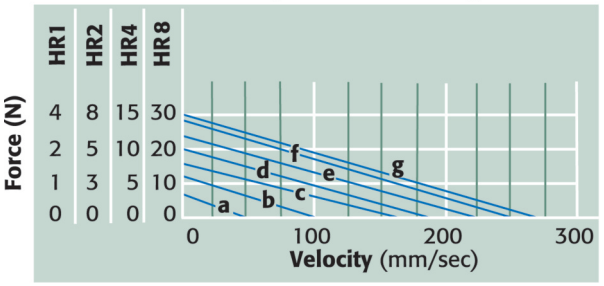
	A motor height	B motor width	C cable exit	D	E gnd screw	F gnd screw	G side mtg	H side mtg	J side mtg	K screw type	motor weight (grams)
HR1-1-S	8	25.7	15.6	4.7	4.7	3.8	31	4.7	4	M3x0.5	30
HR1-1-V	8	25.7	15.6	4.7	4.7	3.8	31	4.7	4	M3x0.5	20
HR1-1-U	7.7	25.5	NA	NA	4	4	NA	NA	NA	NA	20
HR2-1-S	12.7	25.7	15.6	9.7	4.7	6	NA	NA	NA	NA	60
HR2-1-V	12.7	25.7	15.6	9.7	4.7	6	NA	NA	NA	NA	40
HR2-1-U	12.7	25.5	NA	NA	4	6	NA	NA	NA	NA	40
							Terminal Mtg for U motors				
HR4-1-S	14.4	46.6	Bottom Back	9.3	7.2	NA	NA	NA	NA	73	
HR4-1-V	14.4	46.6	Left or Right	9.3	7.2	NA	NA	NA	NA	73	
HR4-1-U	14.9	46.6	NA	NA	NA	NA	NA	NA	6	NA	73
HR8-1-S	23.3	46.6	Bottom Back	9	12	NA	NA	NA	NA	170	
HR8-1-V	23.3	46.6	Left or Right	9	12	NA	NA	NA	NA	120	
HR8-1-U	23.8	46.6	NA	NA	NA	NA	NA	NA	12	NA	120

Note: All dimensions in mm
-S motors are Standard
-V motors are Vacuum Rated to 10-7 Torr (use VN for Vacuum & Non-Magnetic)
-U motors are Vacuum Rated to 10-10 Torr and are Non-Magnetic
-N motors are Non-Magnetic, for MRI environments

Envelope of Performance

curve	25˚C duty cycle	25˚C max. continuous operation time	50˚C duty cycle	50˚C max. continuous operation time	Vacuum duty cycle	Vacuum max. continuous operation time
a	100%	–	100%	–	100%	–
b	100%	–	100%	–	44%	184
c	100%	–	92%	137	26%	107
d	100%	–	62%	93	17%	72
e	78%	67 seconds	47%	70	13%	55
f	56%	67 seconds	33%	50	9%	39
g	50%	67 seconds	30%	45	8%	35

Force vs. Velocity at various work regimes



Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

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