Multi-role instrument gearhead

MRIG series

The MRIG series gearheads have been designed for use in heavy duty instrumentation or light duty industrial drive application. The combination of a hardened metal spur gear train coupled with a precision die-cast housing results in a robust design with a high torque transmission capability.

MRIG has been designed to fit a wide range of motors including:

- high torque reversible ac synchronous types
- permanent magnet & hybrid stepper motors
- dc servo motors with optional brake, encoder or tachogenerator.
- brushless dc motors



Robust construction with built motor mounting flexibility

A key feature of the MRIG design is it's ability to accept standard motor shafts without the need for modification. This enables a wide range of motors including NEMA size 23 stepper motors to be fitted directly to the unit while dc and brushless servo motors are fitted using a simple mounting adapter. Gear strength is a key feature of the MRIG design. The use of steel gears and pinions with carefully selected hardness grades ensures a high torque transmission capacity and long life while a robust precision diecast metal housing offers excellent protection in industrial installations.

In it's standard form MRIG gearheads are provided with heavy duty sleeve bearing on the output shaft, ball bearings being available to special order

Standard Gear ratios

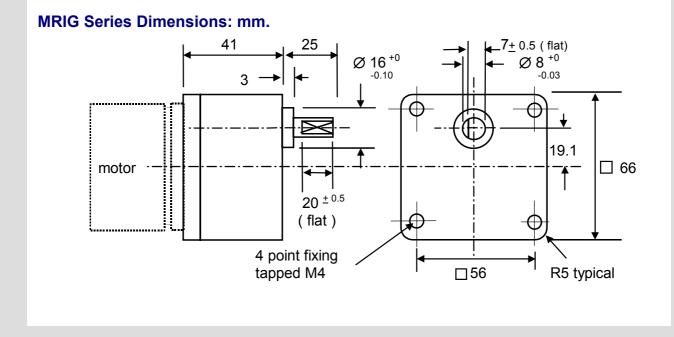
Fast-track delivery of the following ratios is ensured by the maintenance of comprehensive stock levels. Geared motor combinations based on the MRIG gearhead series are assembled in our fast response assembly cell to provide our customers with fast delivery to meet their changing demands.

Order Code	Gear ratio	Number of stages	Direction of rotation**	Efficiency	Maximum continuous output torque
MRIG02 *	5:1	3	opposite	72%	1.5 Nm
MRIG06 *	25:2	3	opposite	72%	2.5 Nm
MRIG11 *	25:1	4	same	65%	4.0 Nm
MRIG17 *	50:1	4	same	65%	4.0 Nm
MRIG22 *	100:1	5	opposite	58%	4.0 Nm
MRIG23 *	125:1	5	opposite	58%	5.0 Nm
MRIG27 *	250:1	6	same	52%	6.0 Nm
MRIG34 *	500:1	6	same	52%	7.0 Nm

Note: * Add 'S' for standard Sleeve Bearings on Output shaft 'B' for ball bearings

* Direction of rotation of output compared to input





General Specification

Maximum Peak Output torque Maximum continuous output power Maximum motor input shaft diameter Style 1 Motor mounting Style 2 Motor mounting Suitable motors Maximum recommended continuos input speed Gear & pinion material Housing Bearings Sleeve bearings throughout Ball race bearings on output Maximum axial load	 7 Nm 25 watts 6.35 mm direct to backplate via adapter ac synchronous motors stepper motors dc servo motors Brushless dc motors 2500 rpm metal throughout precision metal diecasting MRIGS types MRIGB types 80 N (MRIGS types) 150 N (MRIGB types)
Maximum radial load (@ centre of shaft) Lubrication	: 80 N(MRIGS types) :160 N(MRIGB types) :grease

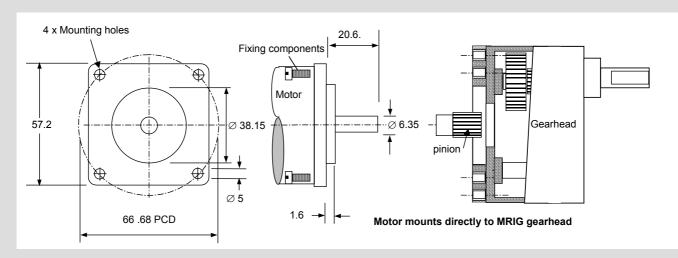


Multi-role instrument gearhead

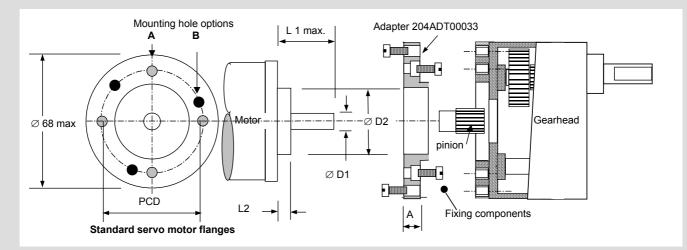
MRIG series

Fitting typical NEMA size 23 hybrid stepper motor

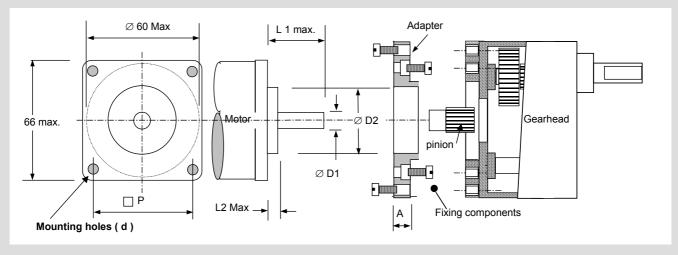
dimensions: mm



Mounting motors with round flange using adapter



Mounting motors with square flange using adapter





Multi-role instrument gearhead

MRIG series

Fitting the pinion to the motor

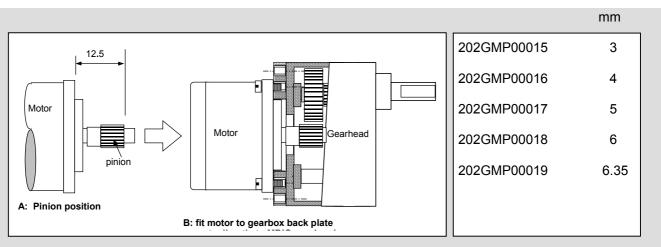
A : The pinion is positioned motor shaft as shown

Note : The dimension 12.5 mm is the distance from the mounting face of the motor or the adapter when used. Retain using Loctite 638

B: Mount the motor to the rear plate of the gearbox using the appropriate set of tapped mounting holes

Pinion Options:

Order Code Bore Diameter



Standard adapter options for motors with round flanges:

Dimensions mm

Adapter		204ADT03372	204ADT00033	204ADT00033
Adapter thickness	А	3.5	7	7
Motor details				
Mounting holes	d	4 x M3	3 x M4	4 x M4
Mounting hole PCD	PCD	28	50	38.89
Motor register diameter	Ø D2	18	28	25
Max register length	L2			
Suitable motors		9904 120 15	M66 Series	M540
		9904 120 16	BLDC58	M586
Special fitting tool required		None	None	204MSC00002

Standard adapter options for motors with square or two point fixing flanges:

Adapter		204ADT00005	204ADT00002	204ADT03678
Adapter thickness	A	3.5	N/A	4.5
Motor details				
Mounting holes	d	2 x M3 studs	2 x 4.4	4 x M4
		or 4 x M3	or 4 x 4.4	
Distance between centres	П Р	31	56 or	
Mounting hole PCD	PCD		66.6	40
Motor register diameter	Ø D2	22	12	25
Max register length	L2	2	1.6	6
Suitable motors		17HS series	9904 111 35	M1440 Pittman
			9904 112 35	(round motor
			9904 111 36	flange converted
			9904 112 36	to square using
			MV82 series	adapter shown)
			MV86 series	
Special fitting tool required		None	None	None

