

# IronHorse<sup>®</sup> DC Gearmotors

## Series MTG Gearmotors – 1/19 hp – 1/5 hp

### Model Overview

IronHorse DC gearmotors are manufactured in the U.S.A. by a leading motor supplier with over 65 years experience delivering high-quality motors and gearmotors to the demanding U.S. market. Our supplier does 100% dynamic testing of the gearmotors before shipment.

IronHorse DC gearmotors are designed for use on unfiltered SCR (Thyristor) type rectified AC input. They may also be used with PWM (pulse width modulated) type DC adjustable speed drives, and in across-the-line applications.



### Applications

- Conveyors
- Turntables
- Pick and place
- Indexers
- Small machinery
- Where reduced speed and/or increased torque are required

### General Features

- Available in 12, 24, and 90 VDC
- Available from 1/19 to 1/5 hp
- Available with parallel or right-angle gear shafts

### Gearmotor Features

- TENV enclosure
- IP40 environmental rating
- Class F insulation
- SCR rated
- Externally replaceable brushes
- Double-shielded bearings
- Dynamically balanced armature
- Reversible design
- 18-inch leads, or junction box with 8-inch Leads
- Replacement components are available
- Orientation restrictions vary depending on model. See illustrations for details
- Not intended for DC power generation
- UL recognized (E365956), CSA certified (259724), RoHS

## Replacement Parts for MTGP and MTGR DC Gearmotors

Replacement Parts for MTGP and MTGR Series DC Gearmotors *			
Part Number	Price	Description	For Gearmotors
<b><u>MTPM-BRUSH-4</u></b>	\$34.50	DC motor brushes, replacement, for 1/5 hp 12VDC or 24VDC MTGR and MTGP series DC gearmotors. Package includes one set of 2 brushes and 2 brush caps.	MTGx-P20-1Jxxx, MTGx-P20-1Kxxx
<b><u>MTPM-BRUSH-5</u></b>	\$26.00	DC motor brushes, replacement, for 12VDC or 24VDC MTGR and MTGP series DC gearmotors 1/7 hp and smaller. Package includes one set of 2 brushes and 2 brush caps.	MTGx-P06-1Jxxx, MTGx-P07-1Jxxx
<b><u>MTPM-BRUSH-6</u></b>	\$29.00	DC motor brushes, replacement, for 1/7 hp 90VDC or 180VDC MTGR and MTGP series DC gearmotors. Package includes one set of 2 brushes and 2 brush caps.	MTGx-P14-1Lxxx
<b><u>MTPM-BRUSH-7</u></b>	\$23.50	DC motor brushes, replacement, for 90VDC or 180VDC MTGR and MTGP series DC gearmotors 1/15 hp and smaller. Package includes one set of 2 brushes and 2 brush caps.	MTGx-P06-1Lxxx, MTGx-P05-1Lxxx
<b><u>MTGA-KIT-1</u></b>	\$45.00	DC motor spare parts kit, for certain MTGP and all MTGR series DC gearmotors as shown in dimension drawings P-B, R-A, & R-B. Includes: two metal brush cap covers, one terminal box, one 1/8 (0.125) inch shaft key and one 3/16 (0.187) inch shaft key.	MTGP-P14-1xxxx, MTGP-P20-1xxxx, MTGR-Pxx-1xxxx

\* These replacement parts also fit many AutomationDirect small-frame DC motors. Refer to the DC Motors section for small-frame motor application information.

# IronHorse<sup>®</sup> DC Gearmotors

## MTGP Parallel Shaft Gearmotors – 1/17 hp – 1/5 hp



### Selection and Specifications

Gearmotor Specifications – MTGP Series Parallel Shaft Gearmotors													
Part Number	Price	Voltage (VDC)	Motor HP	Speed (rpm)	Gear Ratio	F/L Torque (in-lb)	F/L Current (A) *	Shaft Dia (in)	Overhung Load (lb)	Axial/Thrust Load (lb)	Weight (lb)	Gearbox Features	Dimension Drawing #
<a href="#">MTGP-P06-1J008</a>	\$200.00	12	1/16	7.9	386:1	50	1.39	0.3125	50	None (not suitable for applications with axial/thrust loading)	4.0	<ul style="list-style-type: none"> <li>• Grease lubrication **</li> <li>• Sleeve bearings</li> <li>• 18-inch wiring leads</li> <li>• Face mounted</li> </ul>	P-A
<a href="#">MTGP-P06-1J024</a>	\$222.00			24	120:1	50	2.41						
<a href="#">MTGP-P06-1J034</a>	\$226.00			34	83:1	45	2.86						
<a href="#">MTGP-P06-1J050</a>	\$200.00			50	55:1	45	3.88						
<a href="#">MTGP-P06-1J097</a>	\$200.00			97	26:1	36	5.68						
<a href="#">MTGP-P06-1L008</a>	\$214.00	90	1/17	8.4	386:1	50	0.19	0.3125	50	None (not suitable for applications with axial/thrust loading)	4.0	<ul style="list-style-type: none"> <li>• Grease lubrication **</li> <li>• Sleeve bearings</li> <li>• 18-inch wiring leads</li> <li>• Face mounted</li> </ul>	P-A
<a href="#">MTGP-P06-1L012</a>	\$222.00			12	269:1	50	0.23						
<a href="#">MTGP-P06-1L037</a>	\$222.00			37	83:1	45	0.40						
<a href="#">MTGP-P06-1L055</a>	\$200.00			55	55:1	45	0.54						
<a href="#">MTGP-P06-1L114</a>	\$200.00			114	26:1	26	0.61						
<a href="#">MTGP-P14-1L026</a>	\$357.00	90	1/7	26	69:1	280	1.58	0.625	150	200	11.4	<ul style="list-style-type: none"> <li>• Oil lubrication **</li> <li>• Needle bearings</li> <li>• Junction box with 8-inch wiring leads</li> <li>• Face mounted or foot mounted</li> <li>• Designed to AGMA standards</li> </ul>	P-B
<a href="#">MTGP-P14-1L039</a>	\$357.00			39	46:1	189	1.59						
<a href="#">MTGP-P14-1L061</a>	\$347.00			61	30:1	130	1.59						
<a href="#">MTGP-P14-1L091</a>	\$347.00			91	20:1	86	1.58						
<a href="#">MTGP-P14-1L165</a>	\$347.00			165	11:1	47	1.57						
<a href="#">MTGP-P20-1J026</a>	\$367.00	12	1/5	26	69:1	280	12.60	0.625	150	200	11.4	<ul style="list-style-type: none"> <li>• Oil lubrication **</li> <li>• Needle bearings</li> <li>• Junction box with 8-inch wiring leads</li> <li>• Face mounted or foot mounted</li> <li>• Designed to AGMA standards</li> </ul>	P-B
<a href="#">MTGP-P20-1J037</a>	\$367.00			37	46:1	245	15.80						
<a href="#">MTGP-P20-1J056</a>	\$359.00			56	30:1	168	15.70						
<a href="#">MTGP-P20-1J084</a>	\$359.00			84	20:1	112	15.70						
<a href="#">MTGP-P20-1J154</a>	\$337.00			154	11:1	61	15.60						
<a href="#">MTGP-P20-1K018</a>	\$359.00	24	1/5	18	110:1	280	4.41	0.625	150	200	11.4	<ul style="list-style-type: none"> <li>• Oil lubrication **</li> <li>• Needle bearings</li> <li>• Junction box with 8-inch wiring leads</li> <li>• Face mounted or foot mounted</li> <li>• Designed to AGMA standards</li> </ul>	P-B
<a href="#">MTGP-P20-1K036</a>	\$359.00			36	46:1	245	7.89						
<a href="#">MTGP-P20-1K084</a>	\$355.00			84	20:1	112	7.87						
<a href="#">MTGP-P20-1K153</a>	\$355.00			153	11:1	61	7.81						

\* Current must be limited so that it does not exceed 125% of the gearmotor rated current.

\*\* Permanently lubricated.

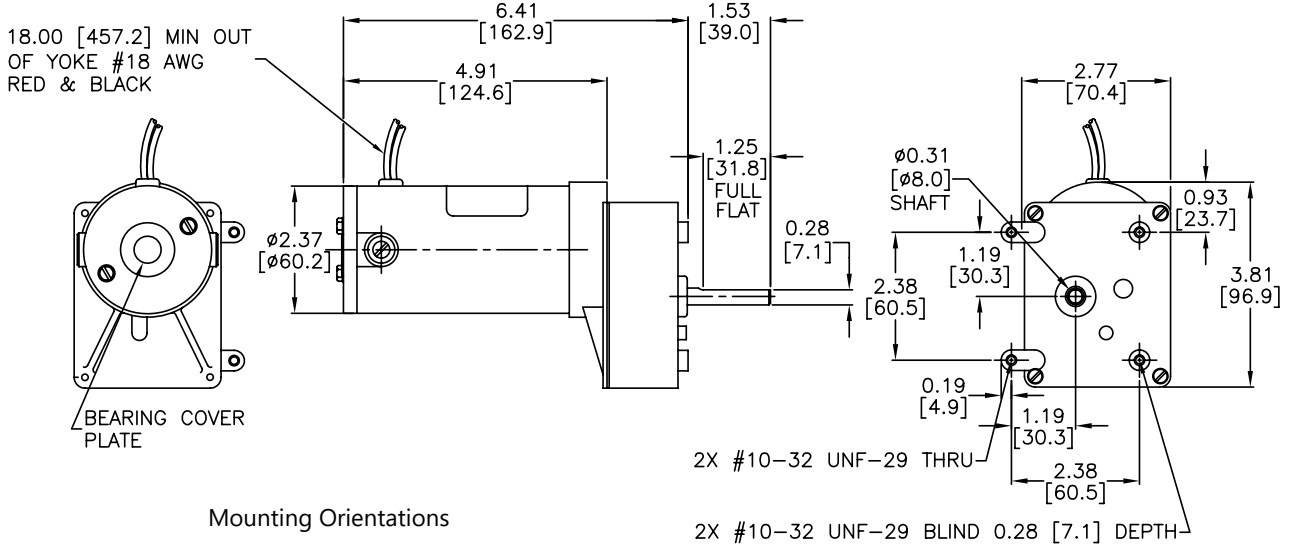
Replacement parts are available, as shown in "Replacement Parts for MTGP and MTGR DC Gearmotors" subsection.

# IronHorse® DC Gearmotors

## MTGP Parallel Shaft Gearmotors – 1/17 hp – 1/5 hp

### Dimensions (in [mm])

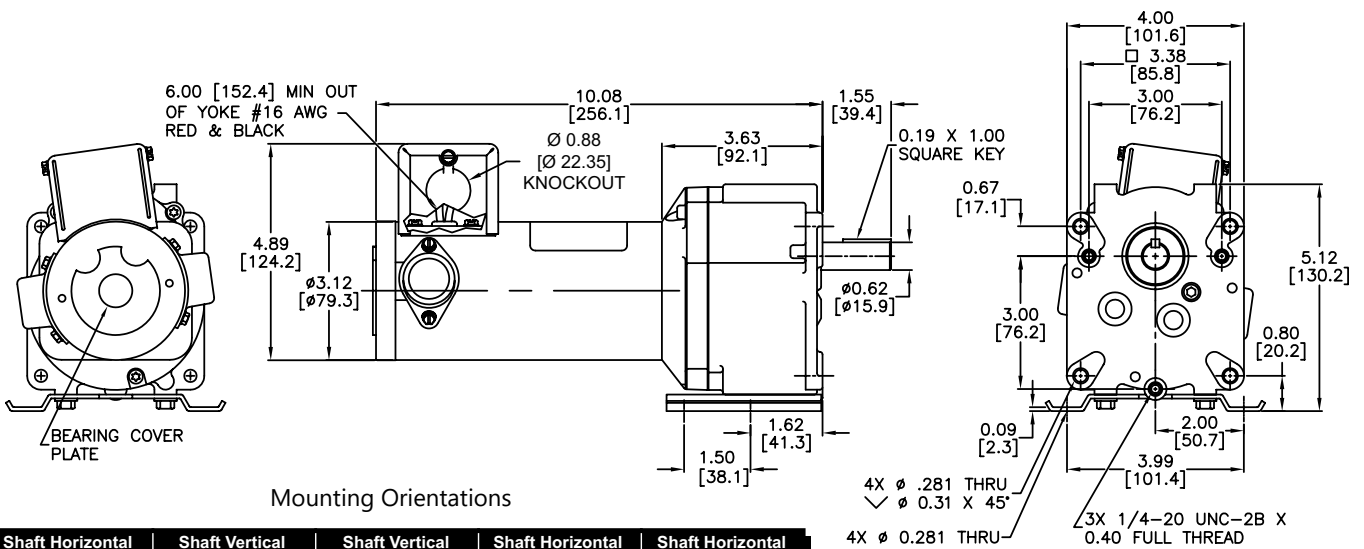
#### Dimension Drawing # P-A



Mounting Orientations

Shaft Horizontal Rightside Up	Shaft Vertical Down	Shaft Vertical Up	Shaft Horizontal Upside Down	Shaft Horizontal Base Rolled 90°

#### Dimension Drawing # P-B

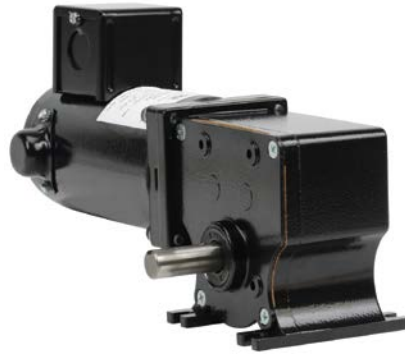


Mounting Orientations

Shaft Horizontal Rightside Up	Shaft Vertical Down	Shaft Vertical Up	Shaft Horizontal Upside Down	Shaft Horizontal Base Rolled 90°

# IronHorse® DC Gearmotors

## MTGR Right Angle Gearmotors – 1/19 hp – 1/5 hp



### Selection and Specifications

Gearmotor Specifications – MTGR Series Right-Angle Shaft Gearmotors														
Part Number	Price	Voltage (VDC)	Motor HP	Speed (rpm)	Gear Ratio	F/L Torque (in-lb)	F/L Current (A) *	Shaft	Overhung Load (lb)	Axial/Thrust Load (lb)	Weight (lb)	Gearbox Features	Dimension Drawing #	
<a href="#">MTGR-P05-1L038</a>	\$343.00	90	1/19	38	50:1	42	0.68	dual shaft 0.5 in diameter	200	150	8.3	<ul style="list-style-type: none"> <li>• Grease lubrication **</li> <li>• Ball bearings</li> <li>• Junction box with 8-inch wiring leads</li> <li>• Face or Foot mounted</li> <li>• Single worm</li> </ul>	R-A	
<a href="#">MTGR-P05-1L053</a>	\$343.00			53	36:1	33	0.68							
<a href="#">MTGR-P05-1L093</a>	\$343.00			93	20.5:1	23	0.68							
<a href="#">MTGR-P05-1L132</a>	\$343.00			132	14.5:1	17	0.67							
<a href="#">MTGR-P05-1L197</a>	\$343.00			197	9.75:1	12	0.68							
<a href="#">MTGR-P07-1J036</a>	\$275.00	12	1/15	36	50:1	50	5.69	dual shaft 0.5 in diameter	200	150	8.3	<ul style="list-style-type: none"> <li>• Grease lubrication **</li> <li>• Ball bearings</li> <li>• Junction box with 8-inch wiring leads</li> <li>• Face or Foot mounted</li> <li>• Single worm</li> </ul>	R-A	
<a href="#">MTGR-P07-1J084</a>	\$275.00			84	20.5:1	34	6.78							
<a href="#">MTGR-P07-1J177</a>	\$275.00			177	9.75:1	18	6.78							
<a href="#">MTGR-P14-1L022</a>	\$355.00	90	1/7	22	82:1	280	1.41	single shaft 0.625 in diameter	150	200	14.4	<ul style="list-style-type: none"> <li>• Double shielded ball bearings</li> <li>• Junction box with 8-inch wiring leads</li> <li>• Foot mounted</li> <li>• Bevel gears</li> <li>• 80 – 90% efficient</li> <li>• Can be backdriven ***</li> </ul>	R-B	
<a href="#">MTGR-P14-1L040</a>	\$357.00			40	44:1	185	1.64							
<a href="#">MTGR-P14-1L064</a>	\$382.00			64	28:1	116	1.65							
<a href="#">MTGR-P14-1L077</a>	\$355.00			77	23:1	97	1.65							
<a href="#">MTGR-P14-1L178</a>	\$355.00	24	1/5	178	10:1	44	1.64	single shaft 0.625 in diameter	150	200	14.4	<ul style="list-style-type: none"> <li>• Double shielded ball bearings</li> <li>• Junction box with 8-inch wiring leads</li> <li>• Foot mounted</li> <li>• Bevel gears</li> <li>• 80 – 90% efficient</li> <li>• Can be backdriven ***</li> </ul>	R-B	
<a href="#">MTGR-P20-1K023</a>	\$363.00			23	82:1	280	5.64							
<a href="#">MTGR-P20-1K039</a>	\$359.00			39	44:1	263	8.74							
<a href="#">MTGR-P20-1K075</a>	\$363.00			75	23:1	137	8.72							
<a href="#">MTGR-P20-1K174</a>	\$363.00			174	10:1	63	8.75							

\* Current must be limited so that it does not exceed 125% of the gearmotor rated current.

\*\* Permanently lubricated.

\*\*\* Not intended for DC power generation.

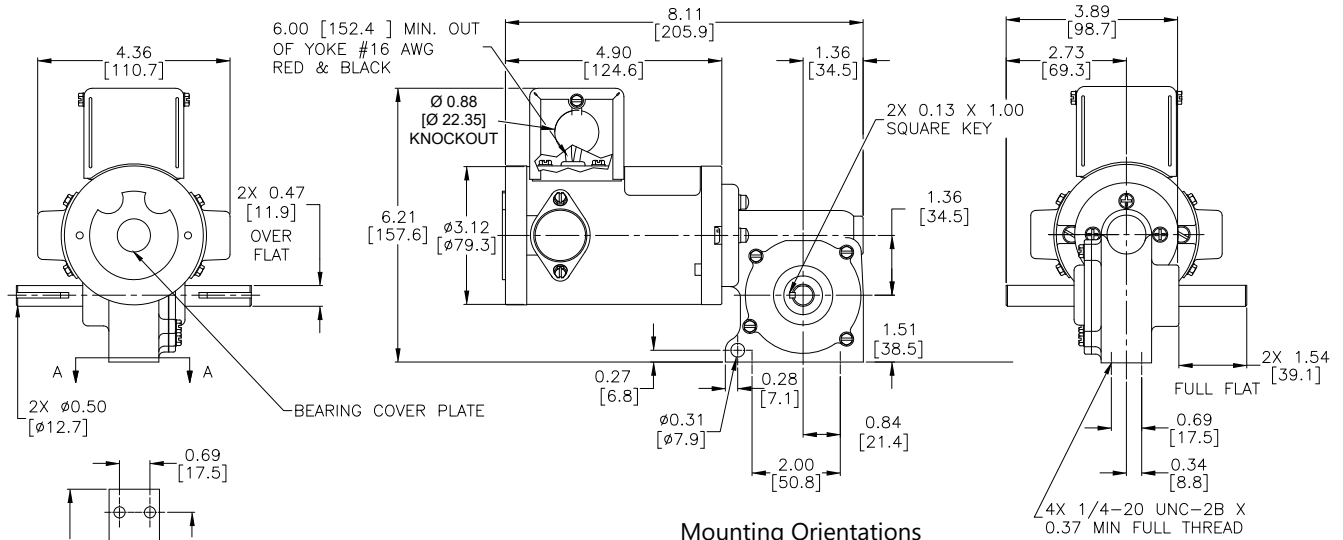
Replacement parts are available, as shown in "Replacement Parts for MTGP and MTGR DC Gearmotors" subsection.

# IronHorse<sup>®</sup> DC Gearmotors

## MTGR Right Angle Gearmotors – 1/19 hp – 1/5 hp

**Dimensions (in [mm])**

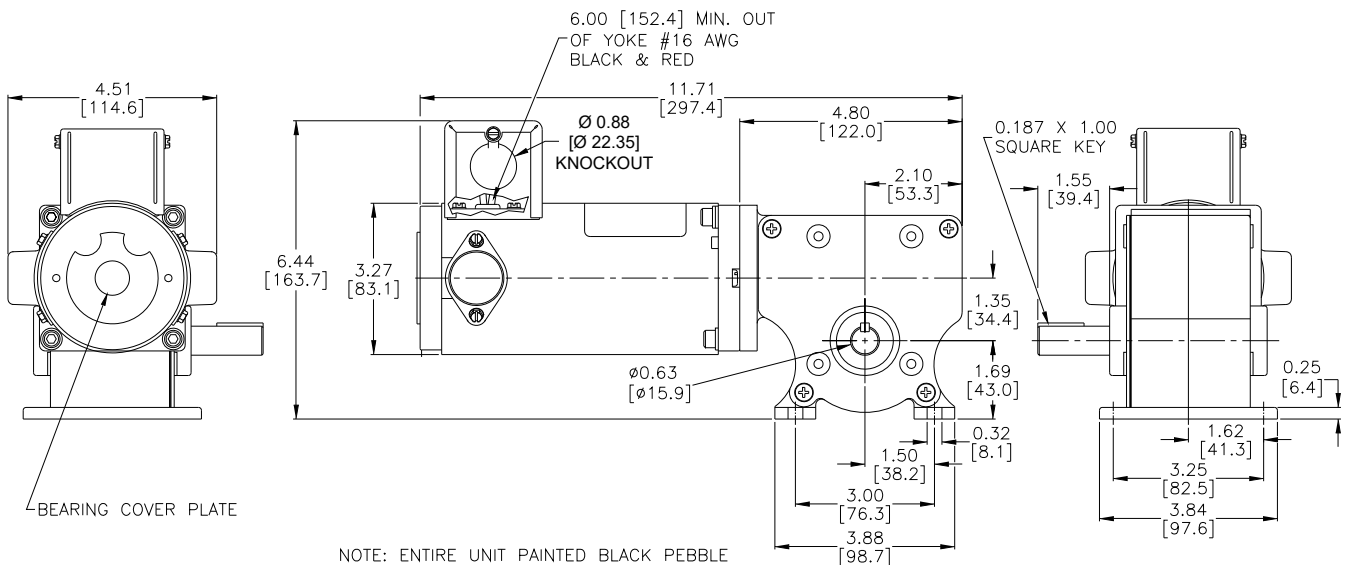
**Dimension Drawing # R-A**



Mounting Orientations

Shaft Horizontal Rightside Up	Shaft Vertical Up/Down Motor Horizontal	Shaft Horizontal Motor Vertical & Above	Shaft Horizontal Motor Vertical & Below	Shaft Horizontal Upside Down

**Dimension Drawing # R-B**



NOTE: ENTIRE UNIT PAINTED BLACK PEBBLE

The Only Acceptable Orientation is Shown in the Above Illustration