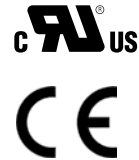




PowerSTAR[®]



712 Series Gearmotor Guide

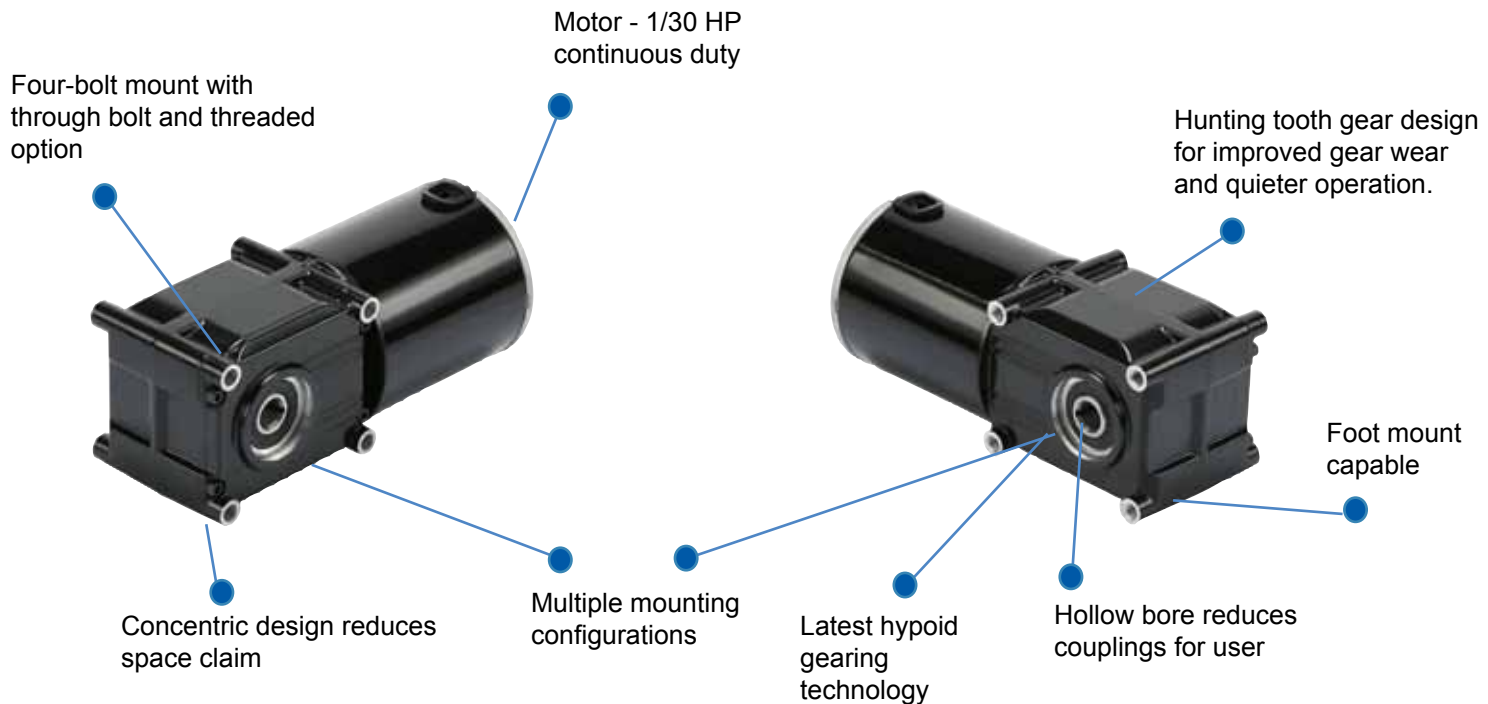
Best-in-Class Right Angle Hypoid Gearmotors

- Compact size
- Advanced hypoid gearing technology for improved energy efficiency
- Maximum power density means a compact profile without compromising performance
- Exclusive PowerSTAR[®] EP lubricant for extended life
- Ground gearing provides whisper quiet operation, low backlash precision
- Custom options available
- Perfect for light conveyors and packaging equipment

New Hypoid Gear Technology from Bison

The new right-angle design PowerSTAR® 712 series gearmotor combines the latest technology in hypoid gearing with Bison's long-established reputation of providing best-in-class power transmission solutions under our Robusticity® design philosophy. The PowerSTAR 712 series features hypoid gearing manufactured using technology exclusive to Bison to offer several operational advantages:

- Higher torque capability
- Up to 4X more efficient than traditional technology right angle gearmotors
- Quieter operation
- Unmatched energy efficiency
- Smaller size for compact applications



PowerSTAR's 712 series product offering includes single & three-phase motor options on their 712 series gearbox for all 14 standard ratios offering output torque from 10-240 in-lbs. Other frame sizes and gearing packages coming soon.

Bison's right-angle PowerSTAR 712 gearmotor is ideally suited to drive higher torque at improved efficiencies in packaging, light industrial or other light-to-medium conveying applications, saving the end user on power consumption and cost.

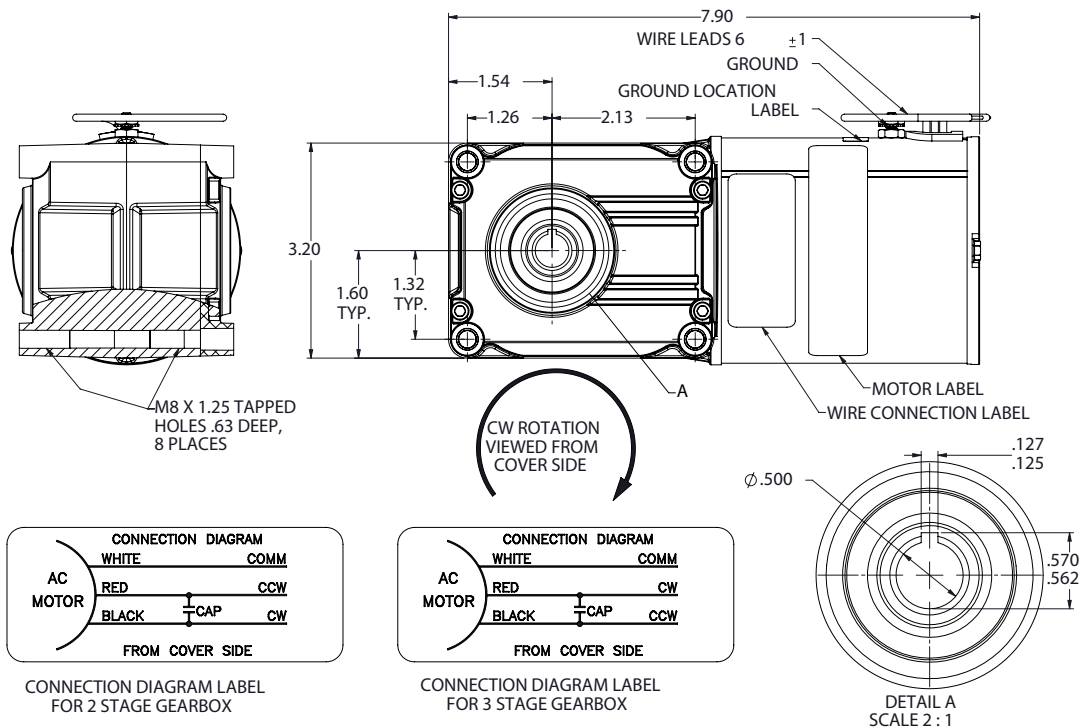
Maximum Efficiency Right-angle Gearmotors 712 115V Single Phase

PowerSTAR® 712 Series 115V single phase right-angle gearmotor offers up to 240 in-lbs of torque running continuously for reliable and energy efficient operation.

712 Series 1PH 115V Gearmotor - TENV*

Part Number	Speed (RPM)	Torque (in-lbs)	Input HP	Gear Ratio	Stages	Amps
026-712A0010	163	10	1/30	10	2	0.4
026-712A0015	108	15	1/30	15	2	0.4
026-712A0020	81	20	1/30	20	2	0.4
026-712A0030	54	30	1/30	30	2	0.4
026-712A0040	41	40	1/30	40	2	0.4
026-712A0050	33	50	1/30	50	2	0.4
026-712A0060	27	60	1/30	60	2	0.4
026-712A0080	20	80	1/30	80	3	0.4
026-712A0100	16	100	1/30	100	3	0.4
026-712A0120	14	120	1/30	120	3	0.4
026-712A0150	11	150	1/30	150	3	0.4
026-712A0180	9.3	180	1/30	180	3	0.4
026-712A0200	8.1	200	1/30	200	3	0.4
026-712A0240	6.8	240	1/30	240	3	0.4

*Capacitors required - Please reference Part Number: 225-712-0001



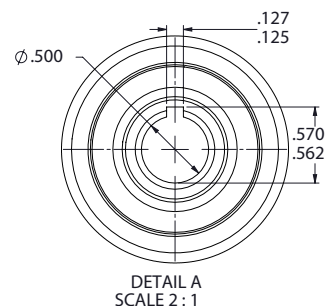
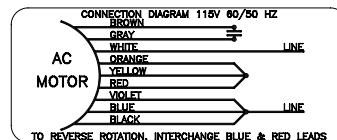
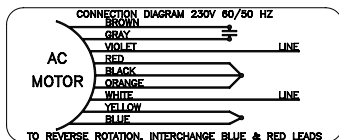
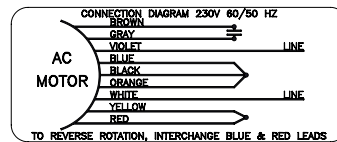
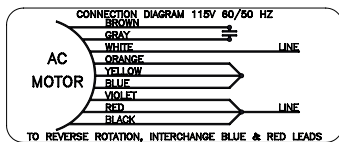
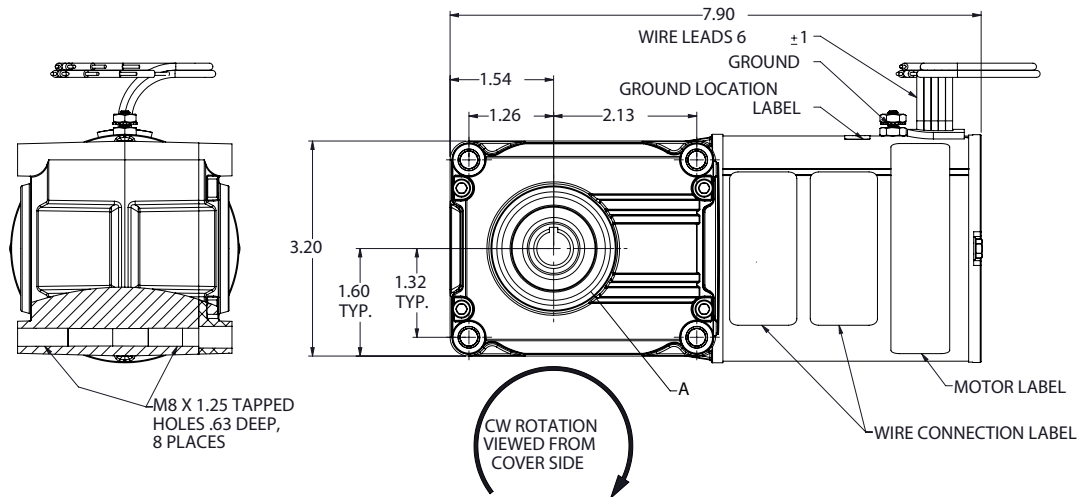
Maximum Efficiency Right-angle Gearmotors 712 115/230V Single Phase Dual Voltage/Dual Frequency

PowerSTAR® 712 Series 115/230V dual voltage/dual frequency single phase right-angle gearmotor offers up to 240 in-lbs of torque running continuously for reliable and energy efficient

712 Series 1PH 115/230V Dual Voltage/Dual Frequency Gearmotor - TENV*

Part Number	Rated Speed (RPM)		Torque (in-lbs)		Input HP	Gear Ratio	Stages	Rated Current 115V		Rated Current 230V	
	50	60	50	60				50	60	50	60
026-712E0010	132	163	12	10	1/30	10	2	0.5	0.45	0.3	0.3
026-712E0015	88	108	17	15	1/30	15	2	0.5	0.45	0.3	0.3
026-712E0020	66	81	22	20	1/30	20	2	0.5	0.45	0.3	0.3
026-712E0030	44	54	32	30	1/30	30	2	0.5	0.45	0.3	0.3
026-712E0040	33	41	42	40	1/30	40	2	0.5	0.45	0.3	0.3
026-712E0050	26	33	52	50	1/30	50	2	0.5	0.45	0.3	0.3
026-712E0060	22	27	62	60	1/30	60	2	0.5	0.45	0.3	0.3
026-712E0080	17	20	82	80	1/30	80	3	0.5	0.45	0.3	0.3
026-712E0100	13	16	105	100	1/30	100	3	0.5	0.45	0.3	0.3
026-712E0120	11	14	125	120	1/30	120	3	0.5	0.45	0.3	0.3
026-712E0150	8.8	11	155	150	1/30	150	3	0.5	0.45	0.3	0.3
026-712E0180	7.3	9.3	185	180	1/30	180	3	0.5	0.45	0.3	0.3
026-712E0200	6.6	8.1	205	200	1/30	200	3	0.5	0.45	0.3	0.3
026-712E0240	5.5	6.8	245	240	1/30	240	3	0.5	0.45	0.3	0.3

*Capacitors required - Please reference Part Number: 225-712-0002



CONNECTION DIAGRAM LABEL FOR 2 STAGE GEARBOX

CONNECTION DIAGRAM LABEL FOR 3 STAGE GEARBOX

Maximum Efficiency Right-angle Gearmotors

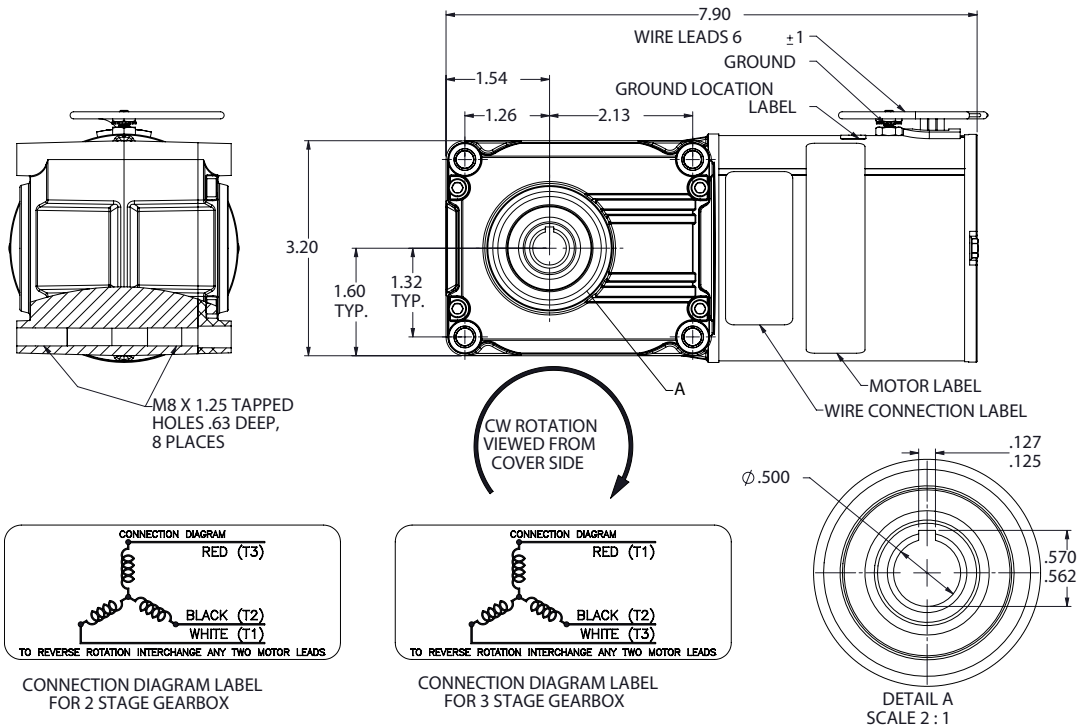
712 230V Three-Phase Inverter Duty

PowerSTAR® 712 Series 230V three-phase right-angle inverter duty gearmotor offers up to 240 in-lbs of torque running continuously for reliable and energy efficient operation.

712 Series 3PH 230V Gearmotor - TENV*

Part Number	Speed (RPM)			Torque (in-lbs)			Input HP	Gear Ratio	Stages	Rated Current 230V (Amps)		
	6Hz	60Hz	90Hz	6Hz	60Hz	90Hz				6Hz	60Hz	90Hz
027-712G0010	16.7	167	251	10	10	6.7	1/30	10	2	0.28	0.3	0.21
027-712G0015	11.2	111	167	15	15	10	1/30	15	2	0.28	0.3	0.21
027-712G0020	8.4	84	126	20	20	13	1/30	20	2	0.28	0.3	0.21
027-712G0030	5.6	56	84	30	30	20	1/30	30	2	0.28	0.3	0.21
027-712G0040	4.2	42	63	40	40	27	1/30	40	2	0.28	0.3	0.21
027-712G0050	3.4	34	50	50	50	34	1/30	50	2	0.28	0.3	0.21
027-712G0060	2.8	28	42	60	60	40	1/30	60	2	0.28	0.3	0.21
027-712G0080	2.1	21	31	80	80	54	1/30	80	3	0.28	0.3	0.21
027-712G0100	1.7	17	25	100	100	67	1/30	100	3	0.28	0.3	0.21
027-712G0120	1.4	14	21	120	120	80	1/30	120	3	0.28	0.3	0.21
027-712G0150	1.1	11	17	150	150	101	1/30	150	3	0.28	0.3	0.21
027-712G0180	0.9	9.3	14	180	180	121	1/30	180	3	0.28	0.3	0.21
027-712G0200	0.8	8.4	13	200	200	134	1/30	200	3	0.28	0.3	0.21
027-712G0240	0.7	7.0	10.5	240	240	161	1/30	240	3	0.28	0.3	0.21

Consult factory for accessories



Capacitors

PowerSTAR Capacitors for Single Phase Units ONLY

Part Number	Series	MFD	Voltage	HP
225-712-0001	712 - 115V	5	220	1/30
225-712-0002	712 - 115/230V	6	250	1/30



Bison's variable frequency drives are fully compatible with PowerSTAR® and feature a lightweight, plastic NEMA 4X enclosure, an isolated front end, minimum speed adjustment potentiometer (POT), output voltage doubling, DC injection braking and automatic manual restart when power is restored.

Bison Variable Frequency AC Drive NEMA 4X

Part Number	170-543-0004	Input Voltage VAC	115 or 230V Single Phase
HP Rating	up to 1	Output Current Max	4.0 AMPS
Output Frequency	0-120 Hz	Enclosure	NEMA 4X

Note: Capacitors are for Single-phase units ONLY. Capacitors are required but sold separately.

Inverter Drive



Customs and Other PowerSTAR Options

Metric companion sizes are available for all imperial sizes of 720, 725 and 730 series.

Metric Part Numbering:

Standard PowerSTAR Part Number

026-725A0180 - Standard 725 Series 115 Single Phase 180 Ratio

Companion Metric Part Number

026M725A0180 - Metric 725 Series 115 Single Phase 180 Ratio



Metric Sizes

720 Series = 20 mm Hollow Shaft ID
 725 Series = 25 mm Hollow Shaft ID
 730 Series = 30 mm Hollow Shaft ID

Seeking a PowerSTAR solution that isn't in the catalog? Bison Gear and Engineering can provide custom solutions to specific applications. Consult with our application team today! Examples of custom options include:

- Custom Motor Sizes
- DC Option
- Custom Mounting Components

Note: Metric and custom options are subject to special lead times. Minimum order quantities may apply. Consult Bison for more information.

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For orders received before 12PM CST



SNS signifies a model number that is available, but now has a lead time with a minimum order quantity



Robusticity - There's a simple philosophy behind the design of every Bison product: start with the highest quality components and then, through better design and manufacturing techniques, maximize the throughput those components can produce. Higher quality components means more dependable performance, fewer field failures, up to 200% more torque than typical - leading to a lower cost per inch-pound of torque, a more compact product and longer service life.

Engineering Excellence - We take pride that we are Bison Gear and Engineering. With more than 35% of our staff being an accredited engineer, we are committed to maintaining the engineering excellence needed to meet and exceed our customers' expectations. So whether you need a standard unit or custom design, Bison has the engineering capability to provide optimized designs for your application needs.

Customer Service - Our dedicated staff of inside customer service representatives and outside technical sales team means that Bison is always available to assist our customers with quick response to their immediate needs.

Flexible Manufacturing - Whether the need is a lot or just a few at a time, Bison's lean optimized manufacturing floor is able to rapidly respond to the needs of our customers. Our factory is equipped with state-of-the-art manufacturing equipment, allowing us to get the products out the door and into the hands of the customer faster.

Corporate Responsibility - At Bison, we uphold our responsibility to our associates and our community. With our continued education programs (G.E.A.R) and our MSSC training center, we provide our associates with a pathway for advancement and a long-lasting career in manufacturing. Through BisonCares, our 401c organization, we contribute to a number of local and national charities and manage several programs to give back to the community.

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