

MAX-AIR QUARTER-TURN GEARING



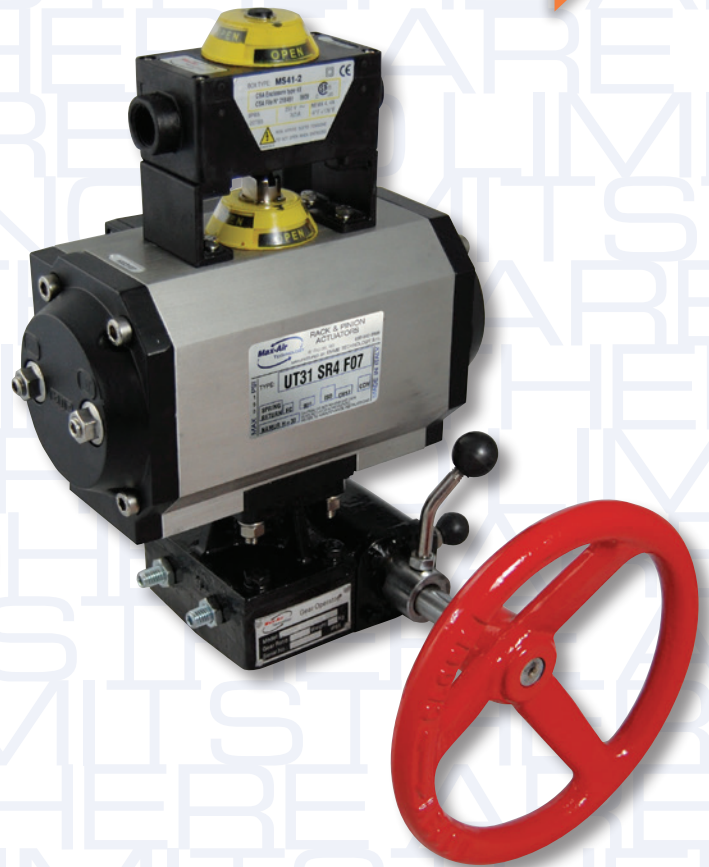
QUARTER-TURN GEARING OPTIONS



MANUAL AND DECLUTCHABLE GEAR OPERATORS

GENERAL OVERVIEW

Max-Air Technology offers two types of gear operators for use with quarter-turn valves; a manual gear, and a declutchable gear. Both types are designed with a broad output torque range, and are generally designed for use with ISO 5211 valve mounting interfaces. For the declutchable gear, an ISO 5211 interface is standard for the actuator and valve connections. Both units come standard with female double square output drives which directly couple to square valve stems, or quickly adapt to smaller square drives, or double-D and keyed drives, when possible, through the use of adapter bushings. With their standard black epoxy paint and iron or stamped steel hand wheels, these gears are well suited for general industrial service applications.



AVAILABLE OPTIONS

CHAIN WHEELS

Standard or hammer blow chain wheels can be provided and installed per customer requirements.

SQUARE OPERATING NUTS

AWWA 2 inch square operating nuts can be provided and installed on customer request.

LOCKOUT DEVICE

A lockout device suitable for "lock out/tag out" requirements can be provided if required.

EXTENSIONS

The input shaft extensions with floor stands and stem extensions can be provided per customer request.

MANUAL GO SERIES TECHNICAL DATA

DESCRIPTION

The manual gear operator line is designed to provide an alternative to lever handles and other types of manual actuation for small and mid-range valve sizes with operating torques up to 146,000 in-lbs. Gear operators increase safety in high flow rate applications and provide for more secure and positive positioning in throttling applications. These worm gear style operators provide secure and accurate positioning of quarter turn valves for open/closed or throttling applications.

FEATURES & BENEFITS

COMPACT DESIGN

The MAX-AIR GO Series gear box provides a versatile economic solution for quarter-turn valve operation.

ISO MOUNTING FLANGES

Equipped with integral mounting flange according to ISO 5211 standards for easy, compact and cost-effective gear operated valve assembly.

ISO VALVE CONNECTION

Double square connection according to ISO 5211 standards with adapters available for a wide variety of valve stem drives.

TORQUE RANGE

Wide torque range from 1300 in-lbs to 146,000 in-lbs

DURABILITY

Epoxy-coated housing and hand wheel in addition to weather-resistant enclosures allow the GO Series gear operator to stand up in harsh environments.

TEMPERATURE RANGE

Wide temperature range from -40°F to 500°F (-40°C to 260°C) with corresponding high and low temperature gaskets and grease.

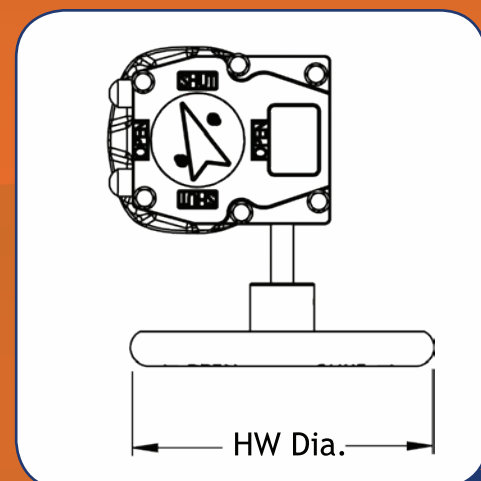
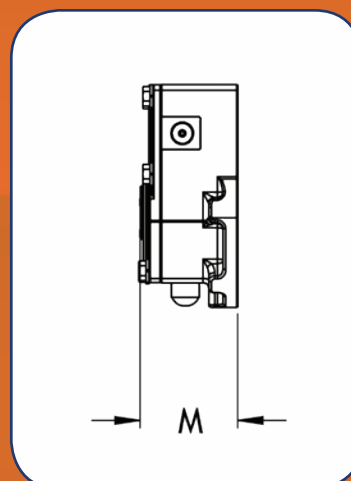
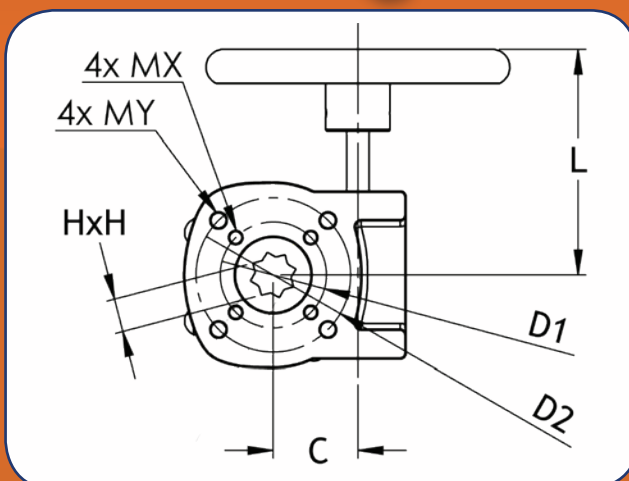


Model	Gear Ratio	Input Torque (in-lbs)	Output Torque (in-lbs)*	Hand Wheel Diameter (in)	Weight (lbs)	Rim Pull (lbs)*
GO-01-ISO	40:1	160	1330	6	2.8	27
GO-02-ISO	37:1	195	2200	6	5.6	33
GO-03-ISO	42:1	400	4425	10	11.5	40
GO-04-ISO	42:1	800	8850	12	22.2	67
GO-05-ISO	60:1	975	15900	16	40.8	61
GO-06-ISO	68:1	1460	30090	16	78.1	91
GO-07-ISO	88:1	1460	39825	16	101.0	91
GO-08-ISO	184:1	1330	69900	16	171.0	83
GO-09-ISO	250:1	1330	89395	16	238.0	83
GO-10-ISO	720:1	1330	146030	20	408.0	67

*These values are maximums and do not correspond to actual valve-gear assemblies.

Model	L (in)	M (in)	C (in)	Output Shaft (mm)	Valve Mounting					
				HxH	D1 (in)	4xMX	ISO	D2 (in)	4xMY	ISO
GO-01-ISO	3.9	2.12	1.69	11	1.97	M5	F05	2.76	M8	F07
GO-02-ISO	5.8	2.25	2.49	17	2.76	M8	F07	-	-	-
GO-03-ISO	8.4	2.51	2.38	22	2.76	M8	F07	4.02	M10	F10
GO-04A-ISO	8.3	3.08	2.63	27	4.02	M10	F10	5.51	M16	F14
GO-04B-ISO	8.3	3.08	2.63	27	4.92	M12	F12	-	-	-
GO-05A-ISO	11.1	3.42	3.49	46	4.92	M12	F12	6.50	M20	F16
GO-05B-ISO	11.1	3.42	3.49	46	5.51	M16	F14	-	-	-
GO-06A-ISO	13.5	3.86	4.98	46	6.50	M20	F16	-	-	-
GO-06B-ISO	13.5	3.86	4.98	46	5.51	M16	F14	-	-	-
GO-07-ISO	14.4	3.99	6.05	46	6.50	M20	F16	10.00	M16	F25
GO-08-ISO	18.7	5.16	1.97	CALL	6.50	M20	F16	10.00	M16	F25
GO-09-ISO	19.9	6.54	3.74	CALL	10.00	M16	F25	11.73	M20	F30
GO-10-ISO	26.6	6.22	9.45	CALL	10.00	M16	F25	11.73	M20	F30

MANUAL GEAR DIMENSIONS



DECLUTCHABLE PV01 SERIES FEATURES

FEATURES & BENEFITS

COMPACT DESIGN

The MAX-AIR PV01-GOJ series declutchable gear box is lightweight and compact in size.

ISO MOUNTING FLANGES

Equipped with integral mounting flange according to ISO 5211 standards for easy and cost-effective mounting to both valves and actuators.

ISO VALVE DRIVE CONNECTION

Female double square drive connection according to ISO 5211 standard on both the valve and actuator sides.

TORQUE RANGE

Wide torque range from 2600 in-lbs to 53,000 in-lbs

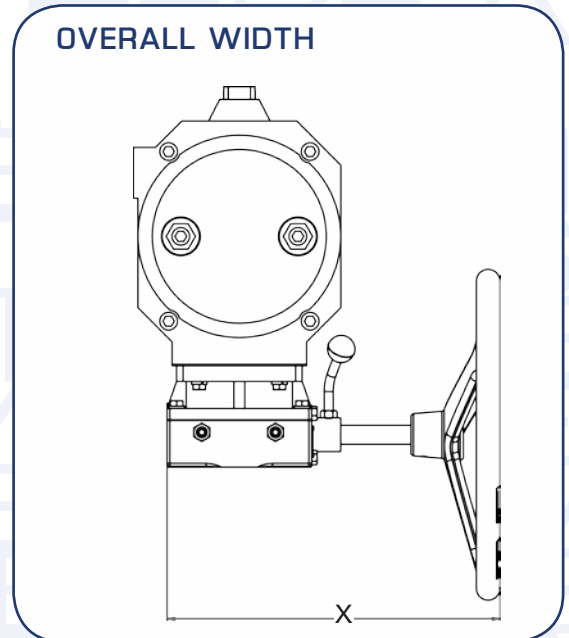
VERSATILITY

Suitable for both double-acting and spring-return applications.

DOUBLE ACTING ACTUATORS

Actuator Model	Gear Model	X (in)	Y (in)
UT/MT16	PV01-GOJ26	8.98	8.20
UT/MT17	PV01-GOJ26	8.98	8.20
UT/MT21	PV01-GOJ26	8.98	9.06
UT/MT26	PV01-GOJ26	8.98	9.06
UT/MT31	PV01-GOJ26	8.98	9.81
UT/MT36	PV01-GOJ26	8.98	11.15
UT/MT41	PV01-GOJ38	10.40	11.15
UT/MT46	PV01-GOJ38	10.40	11.62
UT/MT51	PV01-GOJ54	11.03	13.44
UT/MT56	PV01-GOJ54	11.03	13.44
UT/MT61	PV01-GOJ80A	12.81	17.02
UT/MT66	PV01-GOJ80A	12.81	17.02
UT/MT71	PV01-GOJ78	13.80	18.17
UT/MT76	PV01-GOJ78	13.80	18.17

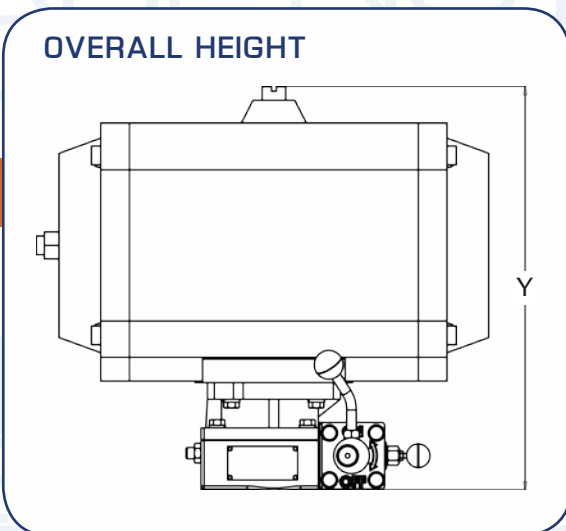
OVERALL WIDTH



SPRING RETURN ACTUATORS

Actuator Model	Gear Model	X (in)	Y (in)
UT/MT16	PV01-GOJ26	8.98	8.20
UT/MT17	PV01-GOJ26	8.98	8.20
UT/MT21	PV01-GOJ26	8.98	9.06
UT/MT26	PV01-GOJ26	8.98	9.06
UT/MT31	PV01-GOJ26	8.98	9.81
UT/MT36	PV01-GOJ26	8.98	11.15
UT/MT41	PV01-GOJ26	8.98	11.15
UT/MT46	PV01-GOJ38	10.40	11.62
UT/MT51	PV01-GOJ38	10.40	13.20
UT/MT56	PV01-GOJ38	10.40	13.20
UT/MT61	PV01-GOJ54	11.03	15.68
UT/MT66	PV01-GOJ54	11.03	15.68
UT/MT71	PV01-GOJ78	13.80	18.17
UT/MT76	PV01-GOJ78	13.80	18.17

OVERALL HEIGHT



Note: UT and MT models differ slightly in height. The dimensions shown are maximum heights.

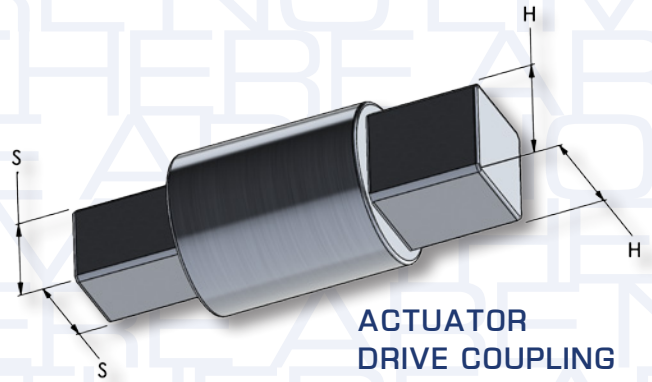
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www.max-airtechnology.com

DECLUTCHABLE TECHNICAL DATA

DESCRIPTION

The Max-Air Technology declutchable gear operators are used to create a manual override option for actuated valves. When these units are mounted in between a valve and actuator, they are left in the declutched position to allow for normal valve/actuator operation. If needed in the case of the failure of air or electrical power, the gear can be engaged and manually operated to move the valve to the required position. This is a function most commonly used with pneumatic actuators, whether double acting or spring return. In some instances it can also be used with hydraulic, electric, or electro-hydraulic units but these applications must be reviewed by the factory to determine whether it is appropriate.



**ACTUATOR
DRIVE COUPLING**



Model	Gear Ratio	Input Torque (in-lbs)	Output Torque (in-lbs)*	Hand Wheel Diameter (in)	Weight (lbs)	Rim Pull (lbs)*
PV01-GOJ26	26:1	620	2600	8	11.0	78
PV01-GOJ38	38:1	530	4400	8	33.0	66
		660	5300	10		66
		780	6100	12		65
PV01-GOJ54	54:1	880	8800	12	37.5	73
		1000	10500	12		83
PV01-GOJ80A	80:1	970	14000	12	48.5	81
		1200	17740	16		75
PV01-GOJ78	78:1	1700	27400	24	88.0	71
PV01-GOJ320	320:1	1550	53100	20	264.0	78

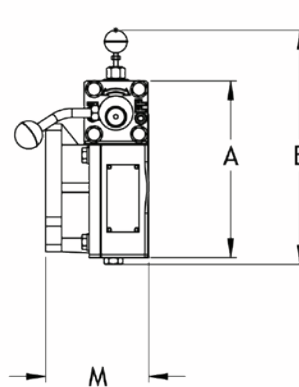
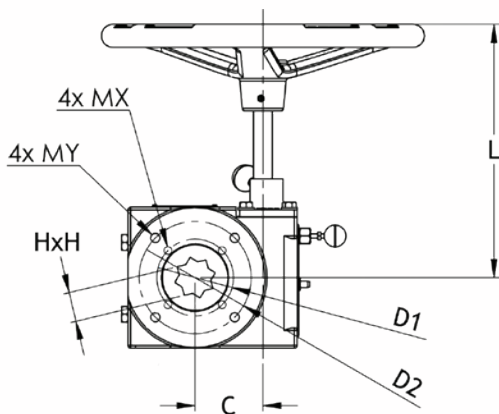
*These values are maximums and do not correspond to actual valve-gear assemblies.

Model	L (in)	B (in)	A (in)	M (in)	Actuator Coupling	Valve Coupling	Mounting (Actuator** or Valve)					
					□S (mm)	□H (mm)	D1 (in)	4xMX	ISO	D2 (in)	4xMY	ISO
PV01-GOJ26	7.62	7.14	5.26	3.47	14	17	1.97	M6	F05	2.76	M8	F07
PV01-GOJ38	9.12	7.78	6.14	3.48	22	27	2.76	M8	F07	4.02	M10	F10
PV01-GOJ54	9.30	9.60	8.80	3.70	27 or 36	36	4.92	M12	F12	-	-	-
PV01-GOJ80A	10.50	12.80	11.00	5.01	36 or 46	46	4.92	M12	F12	6.50	M20	F16
PV01-GOJ78	13.10	13.80	12.60	5.10	46	46	6.50	M20	F16	-	-	-

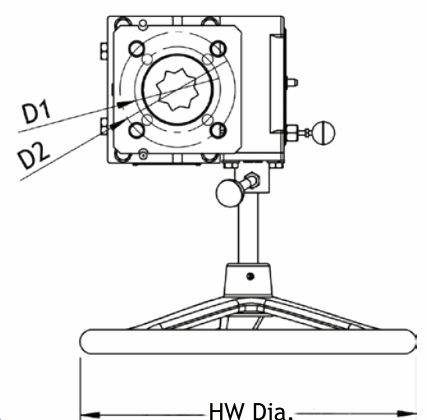
** A drive coupling is available for each unit to connect the actuator to the gear operator.

DECLUTCH GEAR DIMENSIONS

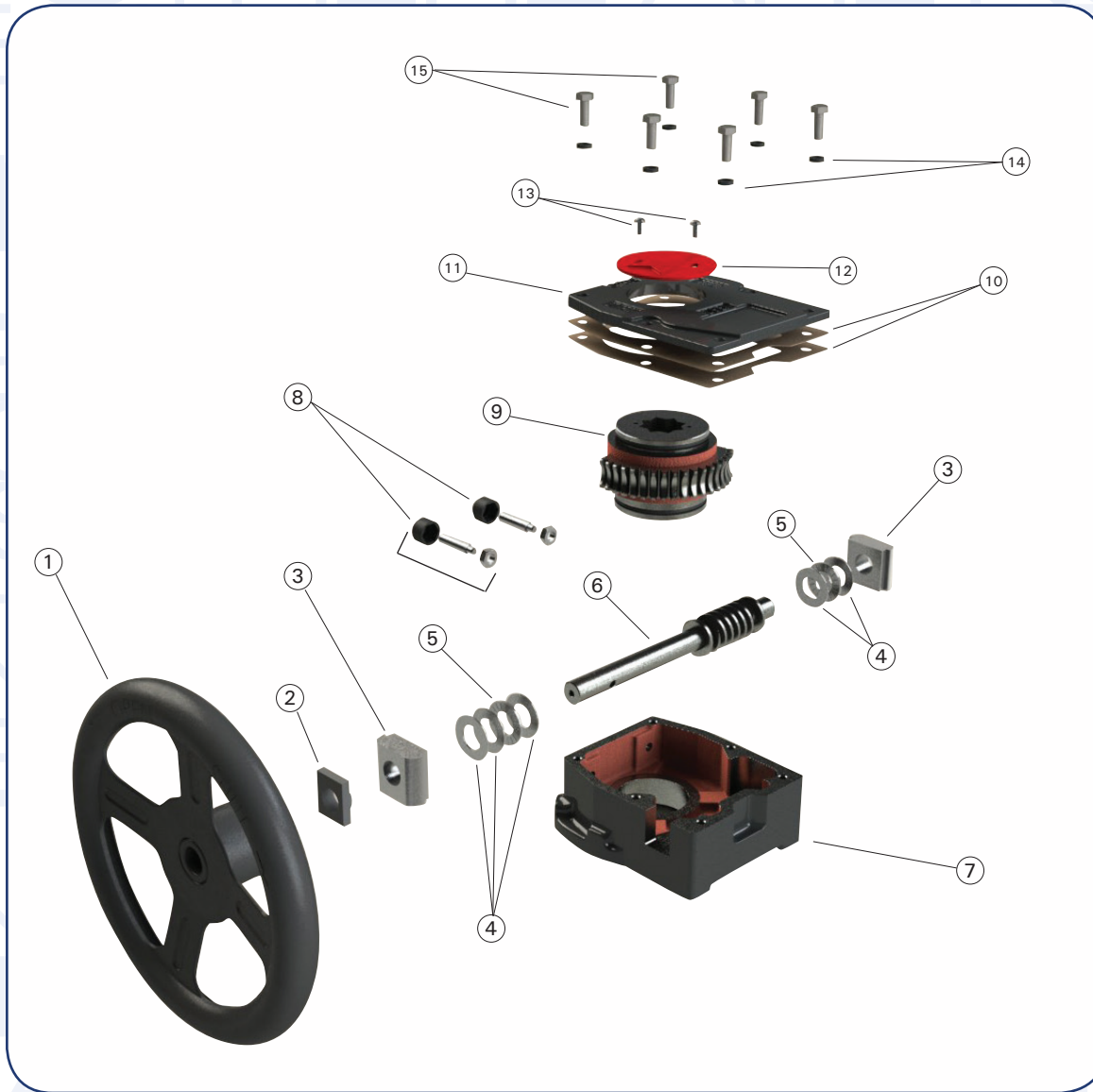
VALVE MOUNTING



ACTUATOR MOUNTING



MANUAL EXPLODED VIEW



LOW TEMP SERVICE
For temperatures below -4°F down to -40°F, special low temperature seals and lubricant must be used.

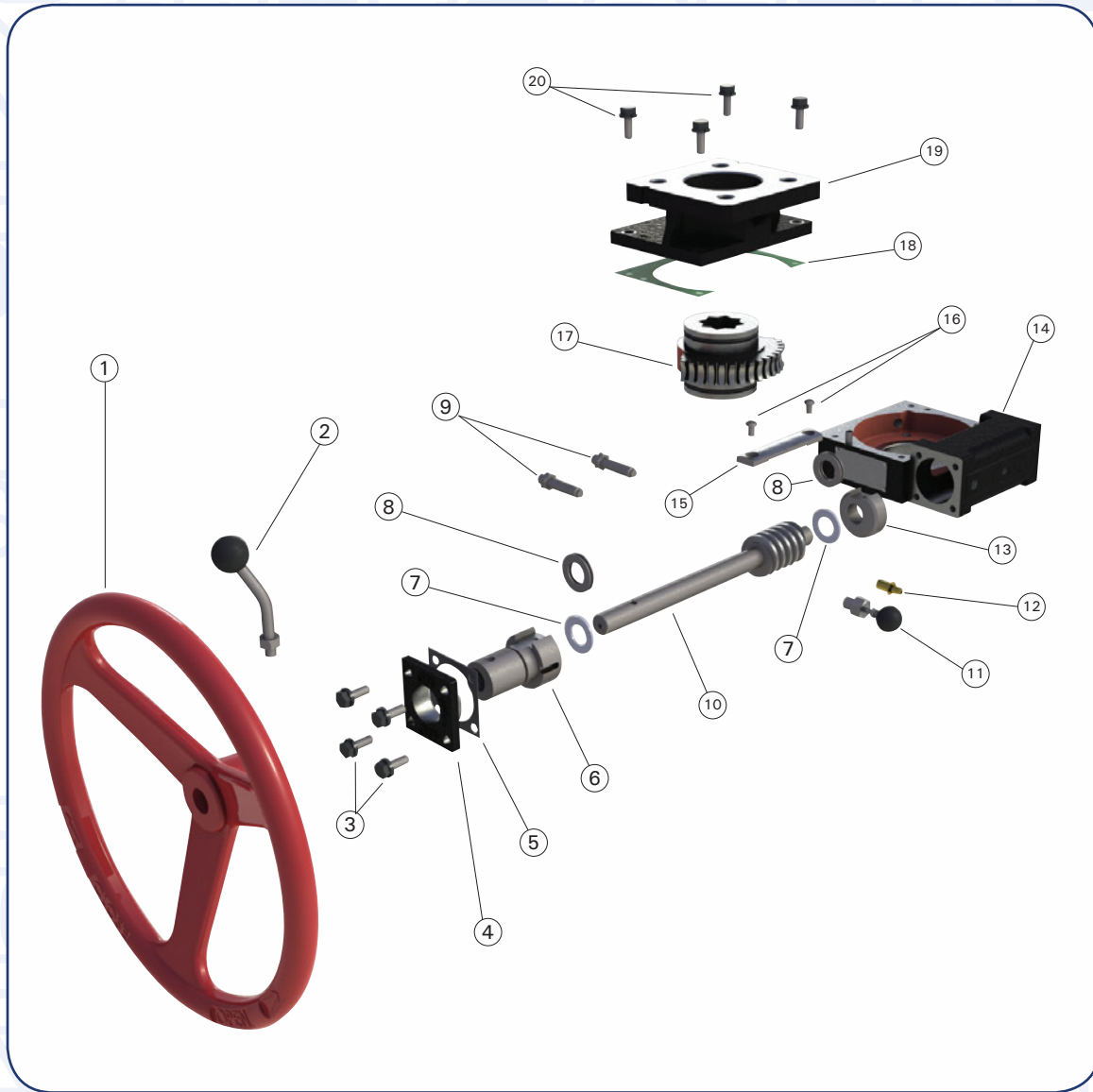
STANDARD SERVICE
Actuators come standard with BUNA-N seals, which are good for normal temperature ranges of -4°F to 176°F.

HIGH TEMP SERVICE
For extremely high temperature service, special high temperature seals and lubricant must be used. Temperature ranges up to 500°F can be accommodated with our specially manufactured actuator units.



Item	Description	Qty	Materials	Item	Description	Qty	Materials
1	Hand Wheel	1	Steel or Cast Iron	9	Segment Gear	1	Ductile Iron
2	Shaft Gasket	1	Poly-fiber	10	Cover Gaskets	2	Poly-fiber
3	Shaft Holders	2	Plated Carbon Steel	11	Cover	1	Cast Iron
4	Shaft Washers	5	Plated Carbon Steel	12	Indicator	1	Plated Steel
5	Shaft Bearings	2	Plated Carbon Steel	13	Indicator Screws	2	Plated Carbon Steel
6	Worm Shaft	1	Plated Carbon Steel	14	Cover Plate Bolt O rings	6	BUNA-N
7	Body	1	Cast Iron	15	Cover Plate Bolts	6	Plated Carbon Steel
8	Travel Stops	2	Plated Carbon Steel				

DECLUTCHABLE EXPLODED VIEW



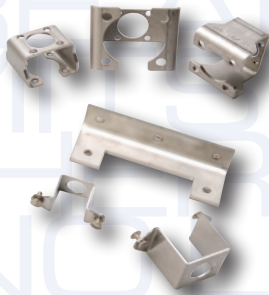
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Item	Description	Qty	Materials	Item	Description	Qty	Materials
1	Hand Wheel	1	Cast Iron	11	Locking Pin	1	Plated Carbon Steel
2	On/Off Lever	1	Plated Carbon Steel	12	Grease Fitting	1	Brass
3	Shaft Holder Bolts	4	Plated Carbon Steel	13	Eccentricity Sleeve Cap	1	Plated Carbon Steel
4	Shaft Holder	1	Cast Iron	14	Body	1	Cast Iron
5	Shaft Gasket	1	Poly-fiber	15	Shaft Plate	1	Plated Carbon Steel
6	Eccentricity Shaft	1	Plated Carbon Steel	16	Shaft Plate Screws	2	Plated Carbon Steel
7	Shaft Bearing	2	Plated Carbon Steel	17	Segment Gear	1	Ductile Iron
8	Shaft Washer	4	Plated Carbon Steel	18	Flange Gasket	1	Poly-fiber
9	Travel Stops	2	Plated Carbon Steel	19	Mounting Flange	1	Cast Iron
10	Worm Shaft	1	Plated Carbon Steel	20	Mounting Flange Bolts	4	Plated Carbon Steel

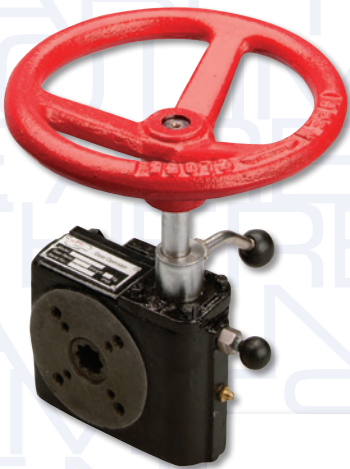
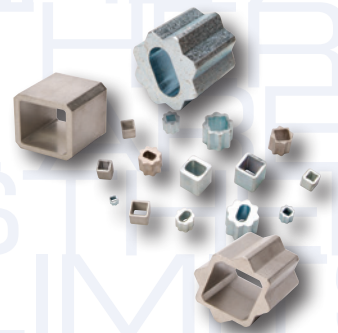


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