





ROTARY ACTUATORS

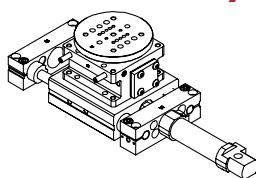
Rotary Actuators | Product Overview | DIRECTCONNECT™ Mounting Examples

Model	Stroke Range	Payload Range	Operating Environment	Special Features	Page GR-ROT#
 DRF	0°-180°	0.45-6.8 [1-15]	IP54. Clean Room Class 100, ISO 5	Compact rotary. Zero backlash ideal for precision end stop positioning. Multiple turntable options for tool mounting. DIRECTCONNECT	3
 DRG	0°-180°	0.2-3.6 [0.5-8]	IP54. Clean Room Class 100, ISO 5	Compact Rotary Shaft Payload Mounting. Multiple mounting options. DIRECTCONNECT	9
 RR-18 & 28	0°-180°	0.45-1.3 [1-3]	IP66 with Purge and Seal option. Clean Room Class 100,000, ISO 8	Compact Size. Flange Payload Mount. Full Torque at End of Stroke.	15
 RR-36 thru 76	0°-180°	3.6-91 [8-200]	IP55. Clean Room Class 100,000, ISO 9	Large Payload. Flange Payload Mount. Zero Backlash. Optional 4 port rotary manifold.	19

Modular DIRECTCONNECT™ Mounting Style Examples:

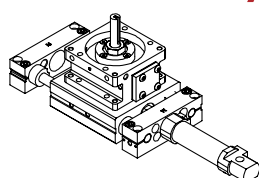
Products can be mounted in multiple positions. Refer to datasheet for complete info.

Slide to Rotary



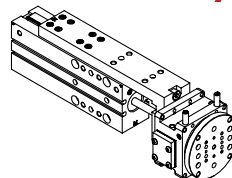
DLB Base Slide to DRF Rotary Actuator

Slide to Rotary



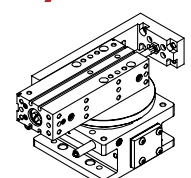
DLB Base Slide to DRG Rotary Actuator

Slide to Rotary



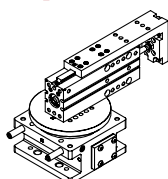
DLM Thruster Slide to DRF Rotary Actuator

Rotary to Slide



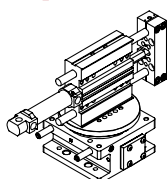
DRF Rotary Actuator to DLM Thruster Slide

Rotary to Slide



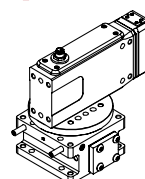
DRF Rotary Actuator to DLM Thruster Slide

Rotary to Slide



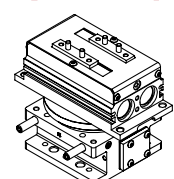
DRF Rotary Actuator to DLT Thruster Slide

Rotary to Gripper



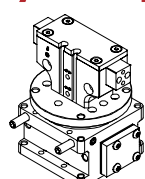
DRF Rotary Actuator to DPE Electric Gripper

Rotary to Gripper



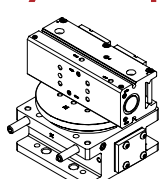
DRF Rotary Actuator to DPL Parallel Gripper

Rotary to Gripper



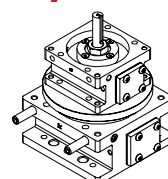
DRF Rotary Actuator to DPDL Parallel Gripper

Rotary to Gripper



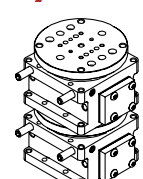
DRF Rotary Actuator to DPP Parallel Gripper

Rotary to Rotary



DRF Rotary Actuator to DRG Rotary Actuator

Rotary to Rotary



DRF Rotary Actuator to DRF Rotary Actuator



GR-ROT-1

Dimensions and technical information are subject to change without notice

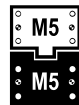
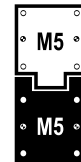
ROTARY ACTUATORS

Rotary Actuators | DIRECTCONNECT™ Mounting Compatibility Chart

DESTACO's DIRECTCONNECT™ technology, allows all components of the system—grippers, rotaries and slides—to be mounted together directly. Look for matching icons on product datasheets for mounting compatibility.

Note: The numbers in the cell represent the metric screw size and basic mounting pattern.

S=Square, R=Rectangle. ie; 5S = M5 Screw with square mounting pattern.



5S

5R

Catalog Models		Rotary Actuators		
		DRF-075,094	DRF-106	DRF-131
Base Slides	DLB-06,08			
	DLB-10,12,16	5R	5R	5R
	DLB-20,25		10R	10R
Thruster Slides	DLT-06,08	3R,3S	3R,3S	
	DLT-10,12,16	5R,5S	5R,5S	5R,5S
	DLT-20,25			10R,10S
	DLM-07	3R,3S	3R,3S	
	DLM-9,12	5R,5S	5R,5S	5R,5S
Rotary Actuators	DRF-075,094	5R	5R	5R
	DRF-106	5R	5R	10R
	DRF-131	5R	5R	10R
	DRG-074,094	5R	5R	5R
	DRG-106	5R	5R	10R
	DRG-131	5R	5R	10R
Grippers	DGC	5R	5R	5R
	DPG	5R	5R	5R
	DCT-12, 16, 20	3R	3R	
	DCT-25	5R	5R	5R
	DPDL-047,056	3R	3R	
	DPDL-088,125	5R	5R	5R
	DPDL-175,250			10R
	DPDS-047,056	3R	3R	
	DPDS-088,125	5R	5R	5R
	DPDS-175,250			10R
	DPL-25xx	5R	5R	5R
	DPL-32xx,40xx			10R
	DPP-10,14	3R	3R	
	DPP-20	5R	5R	5R
	DPP-28	5R	5R	10R
	DPW-250	3R	3R	
	DPW-375,500	5R	5R	5R
	G100-08,011	3R	3R	
	G100-18,25	5R	5R	5R
	DPE-200	5R	5R	5R
DPE-400			10R	

DRF SERIES

Rotary Actuators | Features and Benefits | How To Order

Features:

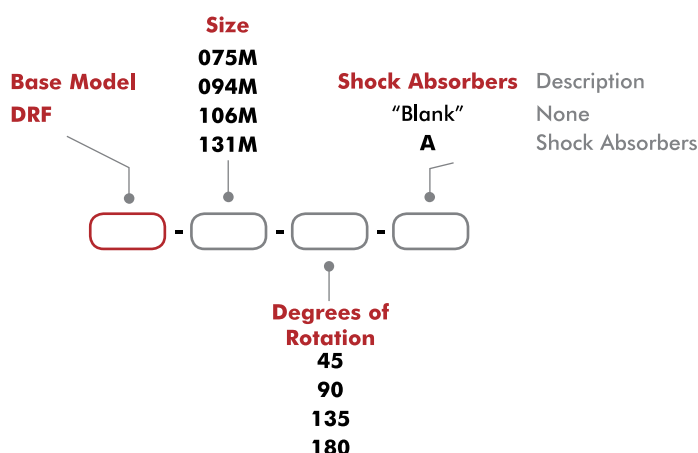
- Use for precision end stop positioning applications
- Zero Backlash Applications
- Full Torque at end of stroke
- Multiple turntable options for tool mounting
- Rotational adjustments of 45°, 90°, 135°, 180°
- Extremely rugged design for long term reliability
- Optional shock absorbers for end stop deceleration

Applications:

- Product loading
- Part orientation
- Heavy payloads compact space



How To Order



Accessories

Turntable Accessories	Model Numbers	Part Number	Qty/Unit
Blank Turntable	See Datasheet		1
DIRECTCONNECT™ Turntable	See Datasheet		1

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
NPN Magneto Resistive Sensor with Quick Disconnect*	All Models	OHSN-017	1-2
PNP Magneto Resistive Sensor with Quick Disconnect*	All Models	OHSP-017	1-2
NPN Magneto Resistive Sensor 90° Barrel with Quick Disconnect*	All Models	OHSN-011	1-2
PNP Magneto Resistive Sensor 90° Barrel with Quick Disconnect*	All Models	OHSP-011	1-2
Quick Disconnect 2 Meter Cable Length*	All Models	CABL-010	1-2
Quick Disconnect 5 Meter Cable Length*	All Models	CABL-013	1-2

Pneumatic Accessories	Model Numbers	Part Number	Qty/Unit
Fitting Push-in Straight G1/8, 6mm O.D. Tube	131M	PLFT-038	1-2
Fitting Push-in Straight G1/8, 8mm O.D. Tube	131M	PLFT-045	1-2
Flow Control Push-in 90° Elbow M5-6mm O.D. Tube**	075M, 094M, 106M	VLVF-008	1-2
Flow Control Push-in 90° Elbow G1/8-6mm O.D. Tube**	131M	VLVF-005	1-2

*Sensor and cable sold separately.

**Flow Controls recommended for most applications



GR-ROT-3

Dimensions and technical information are subject to change without notice

DRF SERIES

Rotary Actuators | Technical Specifications

Specifications	Units	075M	094M
Maximum Payload with Shocks (-A option)	kg [lb]	0.45 [1.0]	1.4 [3.0]
Maximum Payload without Shocks	kg [lb]	0.23 [0.5]	0.68 [1.5]
Maximum Payload Inertia with Shocks (-A option)	Nm sec ² [in-lbs sec ²]	1.8 X 10 ⁴ [0.0016]	1.3 X 10 ³ [0.0111]
Maximum Payload Inertia without Shocks	Nm sec ² [in-lbs sec ²]	9.0 X 10 ⁵ [0.0008]	6.3 X 10 ⁴ [0.0056]
Maximum Torque @ 100psi/7 bar	Nm [lbs-in]	0.9 [8.3]	1.9 [17.3]
Maximum Rotation		180°	
Pitch Diameter of Pinion	mm [in]	9.5 [0.375]	12.7 [0.500]
Weight with Shocks (-A option)	kg [lb]	0.34 [0.72]	0.64 [1.4]
Weight without Shocks	kg [lb]	0.24 [0.54]	0.50 [1.1]
Pressure Range	bar [psi]	3-7 [40-100]	
Ingress Protection Class (IP)		IP54	
Displacement (180°)	cm ³ [in ³]	5.1 [0.31]	9.0 [0.55]
Actuation Time (180° @ 100psi/7 bar)	sec	0.38	
Actuation Time (90° @ 100psi/7 bar)	sec	0.29	
Over Travel (each end)		1°-3°	
Temperature Range with Shocks (-A option)	°C [°F]	-0°~66° [-32°~150°]	
Temperature Range without Shocks	°C [°F]	-35°~82° [-30°~180°]	
End Stop Adjustability (each end)		23°	
Repeatability		±0.02°	
Valve required to actuate		4-way, 2-position	

Specifications	Units	106M	131M
Maximum Payload with Shocks (-A option)	kg [lb]	3.6 [8.0]	6.8 [15]
Maximum Payload without Shocks	kg [lb]	1.8 [4.0]	3.4 [7.5]
Maximum Payload Inertia with Shocks (-A option)	Nm sec ² [in-lbs sec ²]	4.7 X 10 ³ [0.0414]	1.1 X 10 ² [0.0970]
Maximum Payload Inertia without Shocks	Nm sec ² [in-lbs sec ²]	2.3 X 10 ³ [0.0207]	5.5 X 10 ³ [0.0485]
Maximum Torque @ 100psi/7 bar	Nm [lbs-in]	3.8 [33.2]	7.6 Nm [67.6]
Maximum Rotation		180°	
Pitch Diameter of Pinion	mm [in]	19.1 [0.750]	25.4 [1.000]
Weight with Shocks (-A option)	kg [lb]	1.4 [3.1]	3.1 [6.8]
Weight without Shocks	kg [lb]	1.1 [2.5]	2.9 [6.3]
Pressure Range	bar [psi]	3-7 [40-100]	
Ingress Protection Class (IP)		IP54	
Displacement (180°)	cm ³ [in ³]	19.0 [1.16]	34.6 [2.11]
Actuation Time (180° @ 100psi/7 bar)	sec	0.60	0.87
Actuation Time (90° @ 100psi/7 bar)	sec	0.45	0.68
Over Travel (each end)		1°-3°	
Temperature Range with Shocks (-A option)	°C [°F]	-0°~66° [-32°~150°]	
Temperature Range without Shocks	°C [°F]	-35°~82° [-30°~180°]	
End Stop Adjustability (each end)		23°	
Repeatability		±0.02°	
Valve required to actuate		4-way, 2-position	

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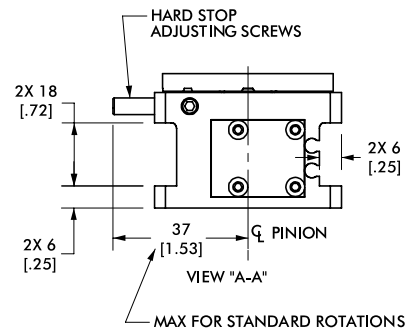
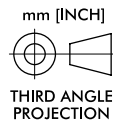
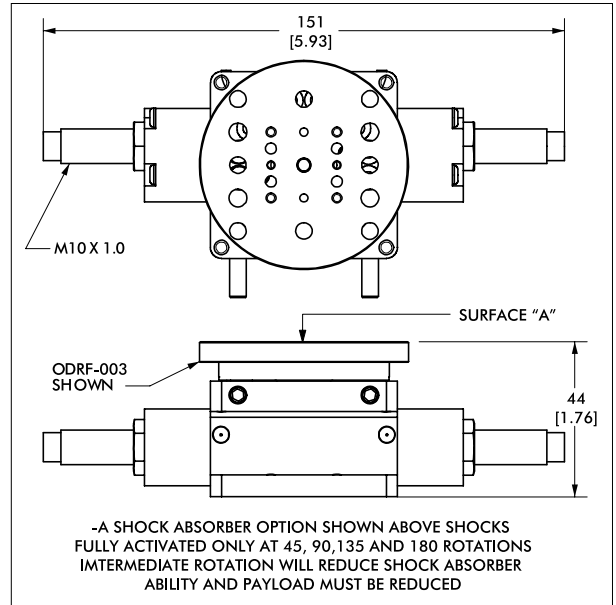
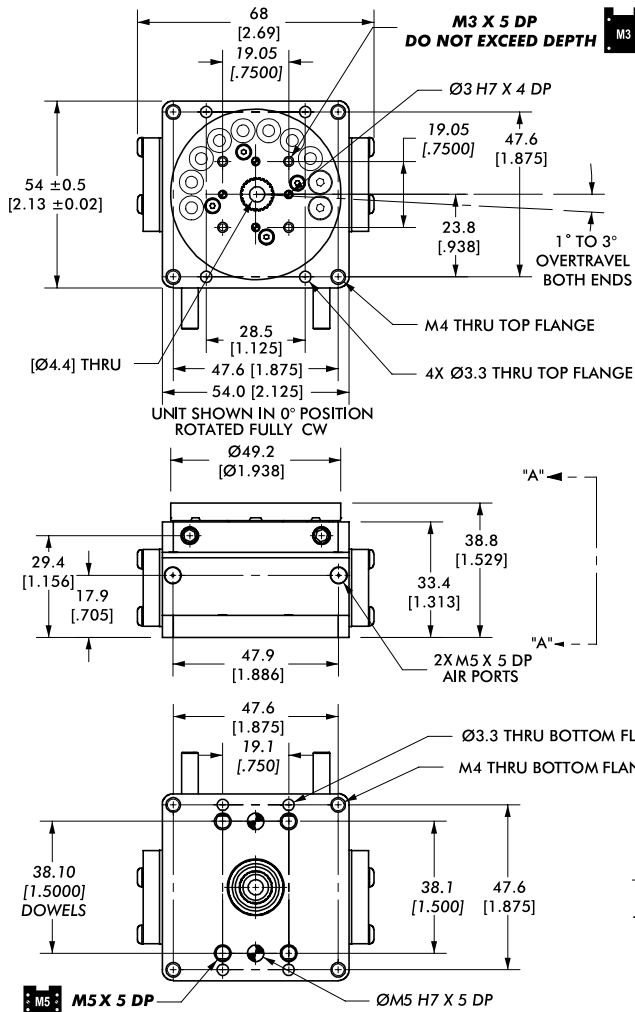
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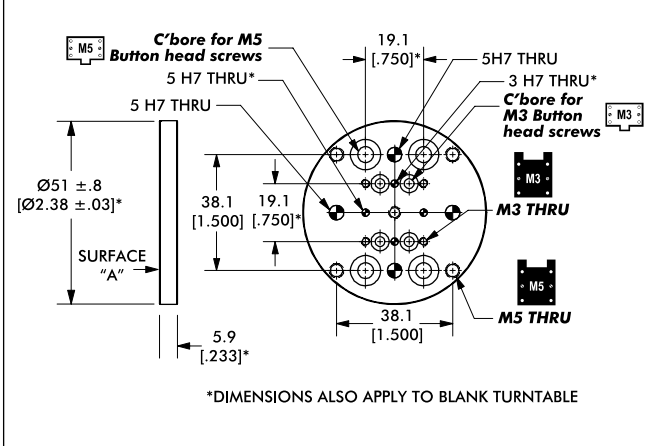
DRF-075M



Rotary Actuators | Dimensions and Technical Specifications

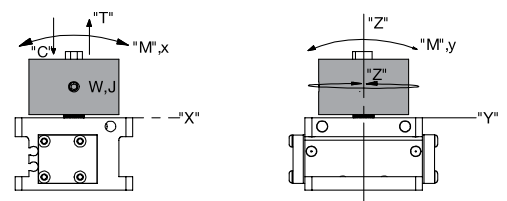


DIRECTCONNECT™ TURNTABLE DIMENSIONS



Rotary Accessories	Order #
Blank Turntable	ODRF-002
DIRECTCONNECT™ Turntable	ODRF-004

Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-210
Buna-N Shock Seal Repair Kit	SLKT-214



DRF-075M Loading Information	Static
Maximum Tensile T	44 N [10 lbs]
Maximum Compressive C	89 N [20 lbs]
Maximum Moment M_x	2.3 Nm [20 in-lbs]
Maximum Moment M_y	2.3 Nm [20 in-lbs]
Maximum Payload W	0.45 kg [1.0 lbs]
Maximum Inertia J	1.8 X 10 ⁻⁴ N-m-sec ² [0.0016 in-lbs-sec ²]

Note: Higher payloads and inertia possible with external shocks and stops.

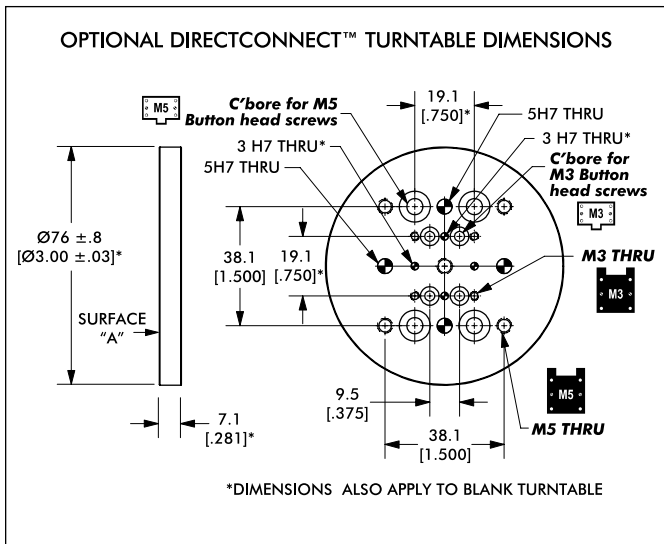
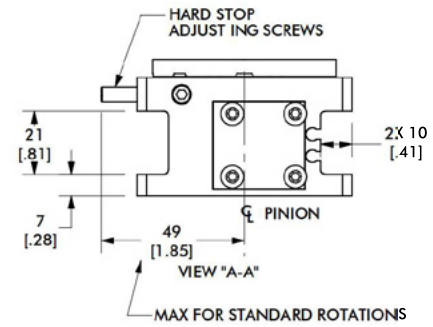
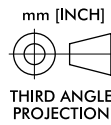
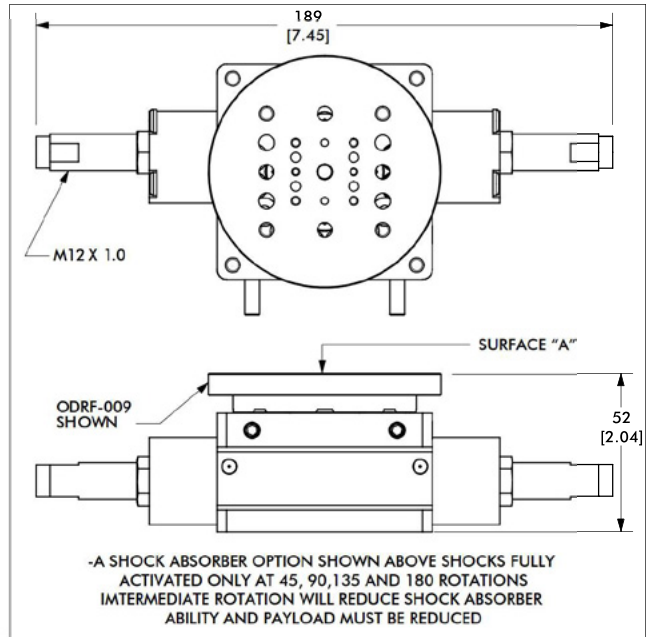
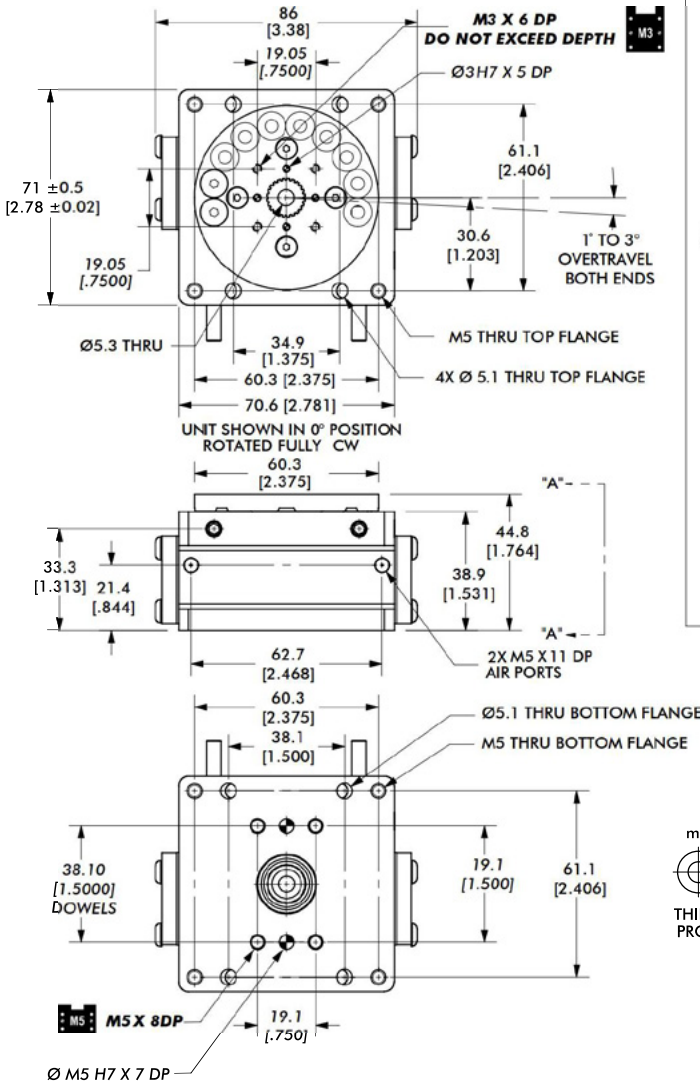
Dimensions and technical information are subject to change without notice



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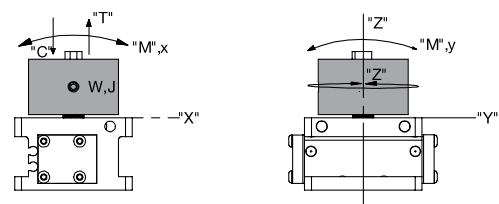


Rotary Actuators | Dimensions and Technical Specifications



Rotary Accessories	Order #
Blank Turntable	ODRF-008
DIRECTCONNECT™ Turntable	ODRF-010

Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-216
Buna-N Rotational Adjustment Seal Kit	SLKT-219



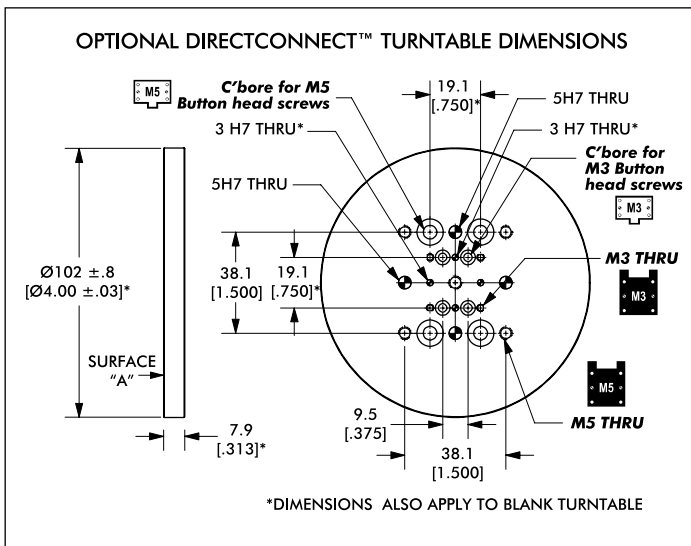
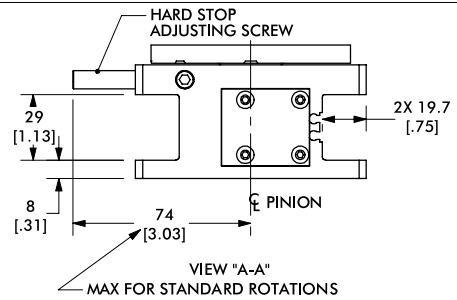
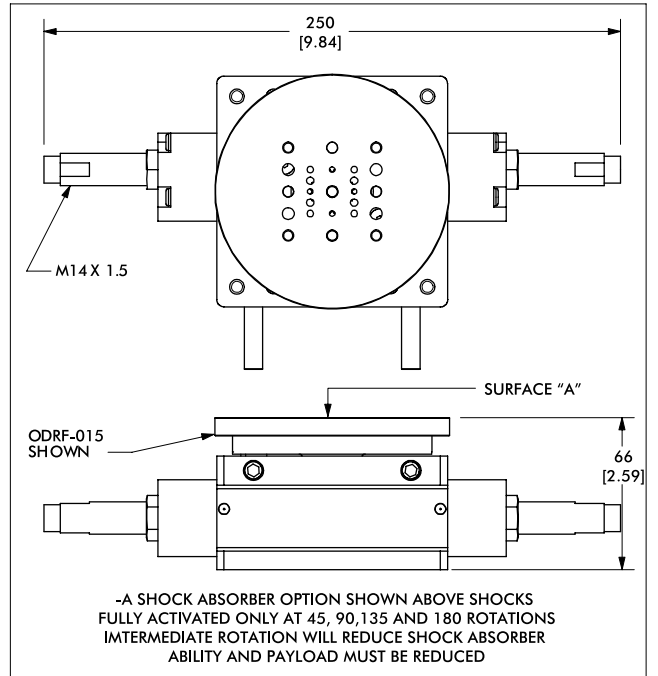
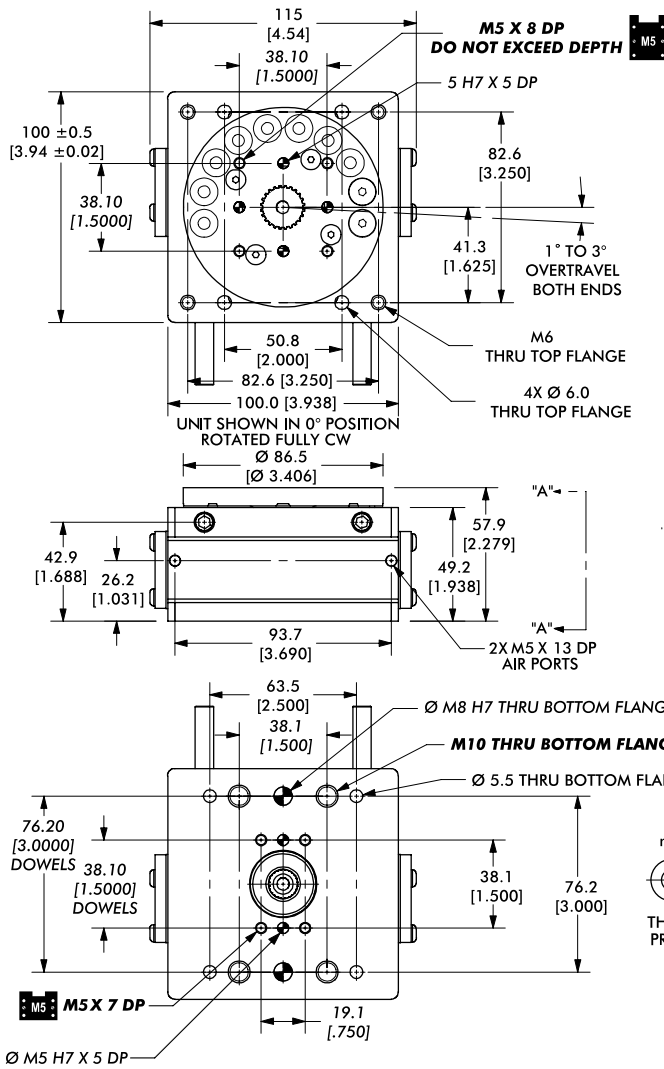
DRF-094M Loading Information	Static
Maximum Tensile T	67 N [15 lbs]
Maximum Compressive C	133 N [30 lbs]
Maximum Moment M_x	5.6 Nm [50 in-lbs]
Maximum Moment M_y	5.6 Nm [50 in-lbs]
Maximum Payload W	1.4 kg [3 lbs]
Maximum Inertia J	1.3 X 10 ⁻³ N-m-sec ² [0.0111 in-lbs-sec ²]

Note: Higher payloads and inertia possible with external shocks and stops.

DRF-106M

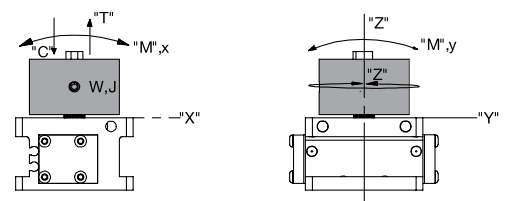


Rotary Actuators | Dimensions and Technical Specifications



Rotary Accessories	Order #
Blank Turntable	ODRF-014
DIRECTCONNECT™ Turntable	ODRF-016

Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-222
Buna-N Shock Seal Repair Kit	SLKT-225



DRF-106M Loading Information	Static
Maximum Tensile T	111 N [25 lbs]
Maximum Compressive C	89 N [50 lbs]
Maximum Moment M_x	8.5 Nm [75 in-lbs]
Maximum Moment M_y	8.5 Nm [75 in-lbs]
Maximum Payload W	3.6 kg [8 lbs]
Maximum Inertia J	4.7 X 10 ⁻³ N-m-sec ² [0.0414 in-lbs-sec ²]

Note: Higher payloads and inertia possible with external shocks and stops.

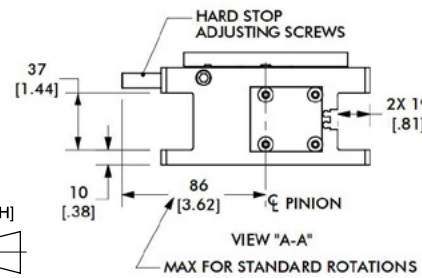
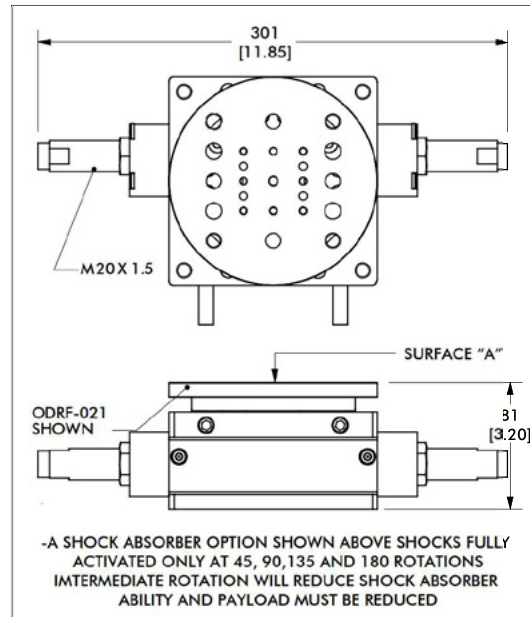
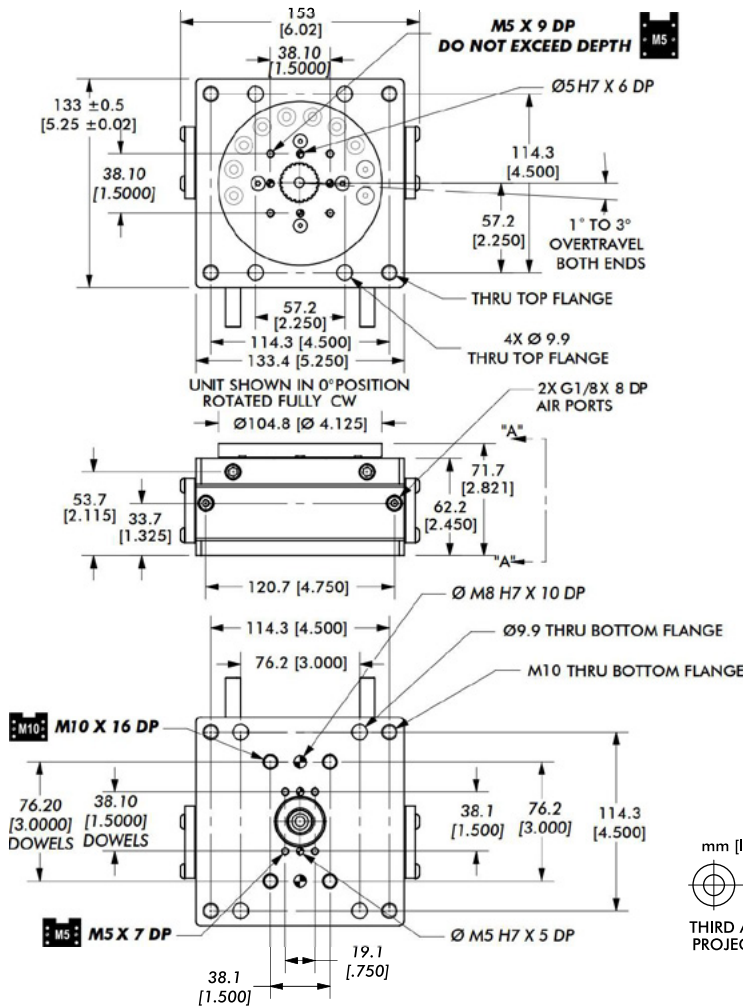
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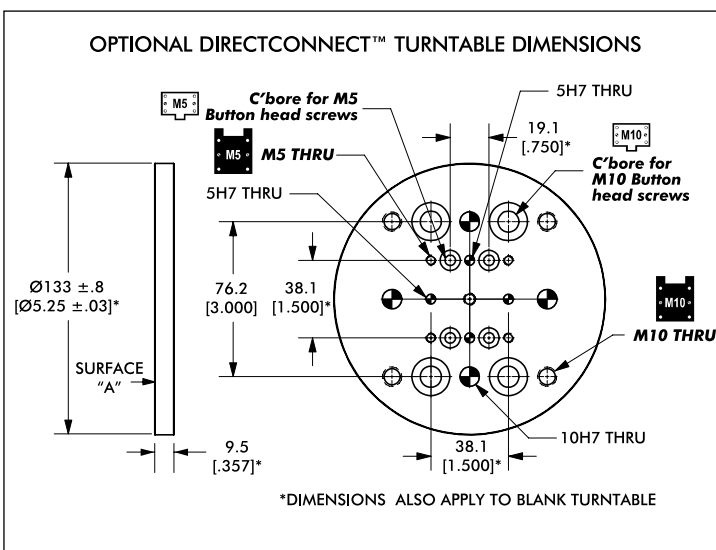
GR-ROT-7



Rotary Actuators | Dimensions and Technical Specifications

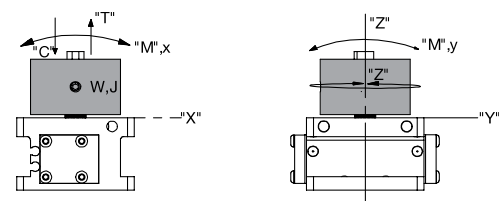


mm [INCH]
THIRD ANGLE PROJECTION



Rotary Accessories	Order #
Blank Turntable	ODRF-020
DIRECTCONNECT™ Turntable	ODRF-022

Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-228
Buna-N Rotational Adjustment Seal Kit	SLKT-232



DRF-131M Loading Information	Static
Maximum Tensile T	222 N [50 lbs]
Maximum Compressive C	445 N [100 lbs]
Maximum Moment M_x	11.3 Nm [100 in-lbs]
Maximum Moment M_y	11.3 Nm [100 in-lbs]
Maximum Payload W	3.4 kg [7.5 lbs]
Maximum Inertia J	5.5 X 10 ⁻³ N-m-sec ² [0.0485 in-lbs-sec ²]

Note: Higher payloads and inertia possible with external shocks and stops.

Dimensions and technical information are subject to change without notice

GR-ROT-8



DRG SERIES

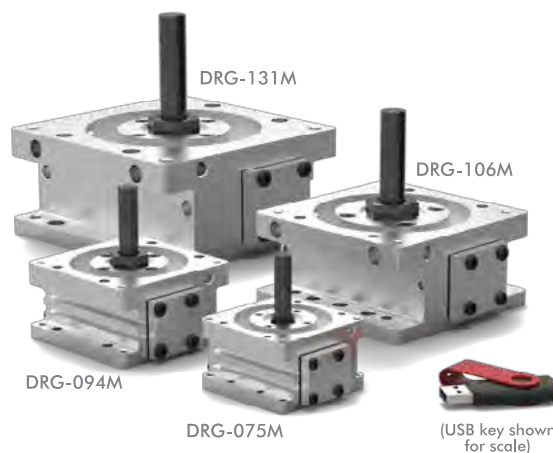
Rotary Actuators | Features and Benefits | How To Order

Features:

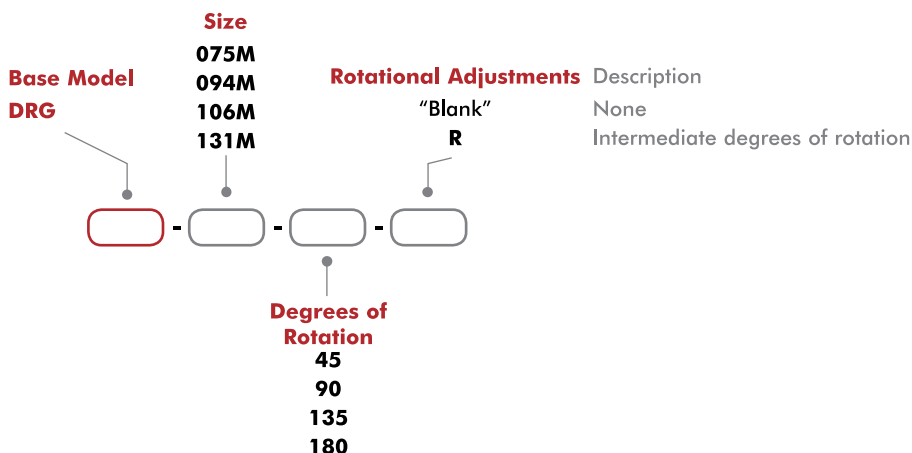
- Shaft output design for low precision end stop positioning applications
- Full Torque at end of stroke
- Metric Keyway on shaft for coupling payload
- Multiple mounting configurations
- -R option allows for rotational adjustment beyond 45°, 90°, 135°, 180°
- Extremely rugged design for long term reliability
- Optional shock absorbers for end stop deceleration

Applications:

- Torque generator
- Diverter gates
- Ejection stations



How To Order



Accessories

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
NPN Magneto Resistive Sensor with Quick Disconnect*	All Models	OHSN-017	1-2
PNP Magneto Resistive Sensor with Quick Disconnect*	All Models	OHSP-017	1-2
NPN Magneto Resistive Sensor 90° Barrel with Quick Disconnect*	All Models	OHSN-011	1-2
PNP Magneto Resistive Sensor 90° Barrel with Quick Disconnect*	All Models	OHSP-011	1-2
Quick Disconnect 2 Meter Cable Length*	All Models	CABL-010	1-2
Quick Disconnect 5 Meter Cable Length*	All Models	CABL-013	1-2

Pneumatic Accessories	Model Numbers	Part Number	Qty/Unit
Fitting Push-in 90° Elbow G1/8, 6mm O.D. Tube	131M	PLFT-042	1-2
Fitting Push-in 90° Elbow G1/8, 8mm O.D. Tube	131M	PLFT-048	1-2
Fitting Push-in Straight G1/8, 6mm O.D. Tube	131M	PLFT-038	1-2
Fitting Push-in Straight G1/8, 8mm O.D. Tube	131M	PLFT-045	1-2
Flow Control Push-in 90° Elbow M5-6mm O.D. Tube**	075M, 094M, 106M	VLVF-008	1-2
Flow Control Push-in 90° Elbow G1/8-6mm O.D. Tube**	131M	VLVF-005	1-2

*Sensor and cable sold separately. **Flow Controls recommended for most applications



GR-ROT-9

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DRG SERIES

Rotary Actuators | Technical Specifications

Specifications	Units	075M	094M
Maximum Payload	kg [lb]	0.23 [0.5]	0.68 [1.5]
Maximum Payload Inertia	Nm sec ² [in-lbs sec ²]	9.0 X 10 ⁵ [0.0008]	6.3 X 10 ⁴ [0.0056]
Maximum Torque @ 100psi/7 bar	Nm [lbs-in]	0.9 [0.83]	1.9 Nm [17.3]
Maximum Rotation		180°	
Pitch Diameter of Pinion	mm [in]	9.5 [0.375]	12.7 [0.500]
Weight with rotational adjuster (-R option)	mm [in]	0.33 [0.72]	0.54 [1.2]
Weight without rotational adjuster	mm [in]	0.24 [0.52]	0.45 [1.0]
Pressure Range	bar [psi]	3-7 [40-100]	
Ingress Protection Class (IP)		IP54	
Displacement (180°)		5.1 [0.31]	9.0 [0.55]
Actuation Time (180° @ 100psi/7 bar)	sec	0.38	
Actuation Time (90° @ 100psi/7 bar)	sec	0.29	
Temperature Range	°C [°F]	-35°~82° [-30°~180°]	
End Stop Adjustability (-R option)	°C [°F]	23°	
Over Travel (each end)		1°-3°	
Valve required to actuate		4-way, 2-position	

Specifications	Units	106M	131M
Maximum Payload	kg [lb]	1.8 [4]	3.5 [7.5]
Maximum Payload Inertia	Nm sec ² [in-lbs sec ²]	2.3 X 10 ³ [0.0207]	5.5 X 10 ³ [0.0485]
Maximum Torque @ 100psi/7 bar	Nm [lbs-in]	3.8 [33.2]	7.6 [68]
Maximum Rotation		180°	
Pitch Diameter of Pinion	mm [in]	19.1 [0.750]	25.4 [1.000]
Weight with rotational adjuster (-R option)	mm [in]	1.2 [2.7]	2.5 [5.6]
Weight without rotational adjuster	mm [in]	1.1 [2.5]	2.4 [5.4]
Pressure Range	bar [psi]	3-7 [40-100]	
Ingress Protection Class (IP)		IP54	
Displacement (180°)		19.0 [1.16]	34.6 [2.11]
Actuation Time (180° @ 100psi/7 bar)	sec	0.60	0.87
Actuation Time (90° @ 100psi/7 bar)	sec	0.45	0.68
Temperature Range	°C [°F]	-35°~82° [-30°~180°]	
End Stop Adjustability (-R option)	°C [°F]	23°	
Over Travel (each end)		1°-3°	
Valve required to actuate		4-way, 2-position	

Dimensions and technical information are subject to change without notice

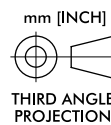
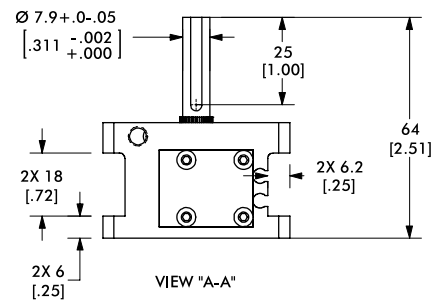
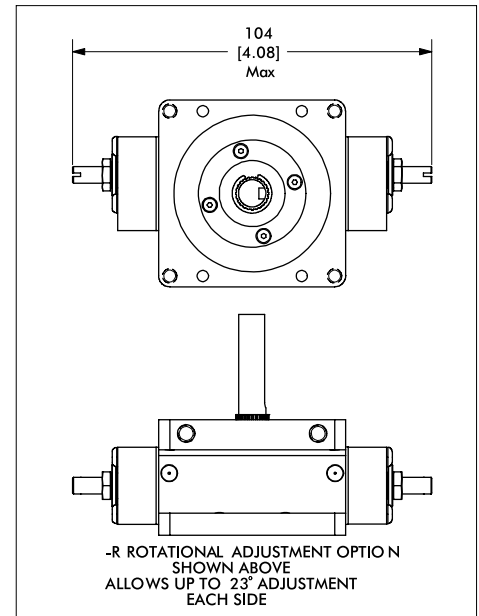
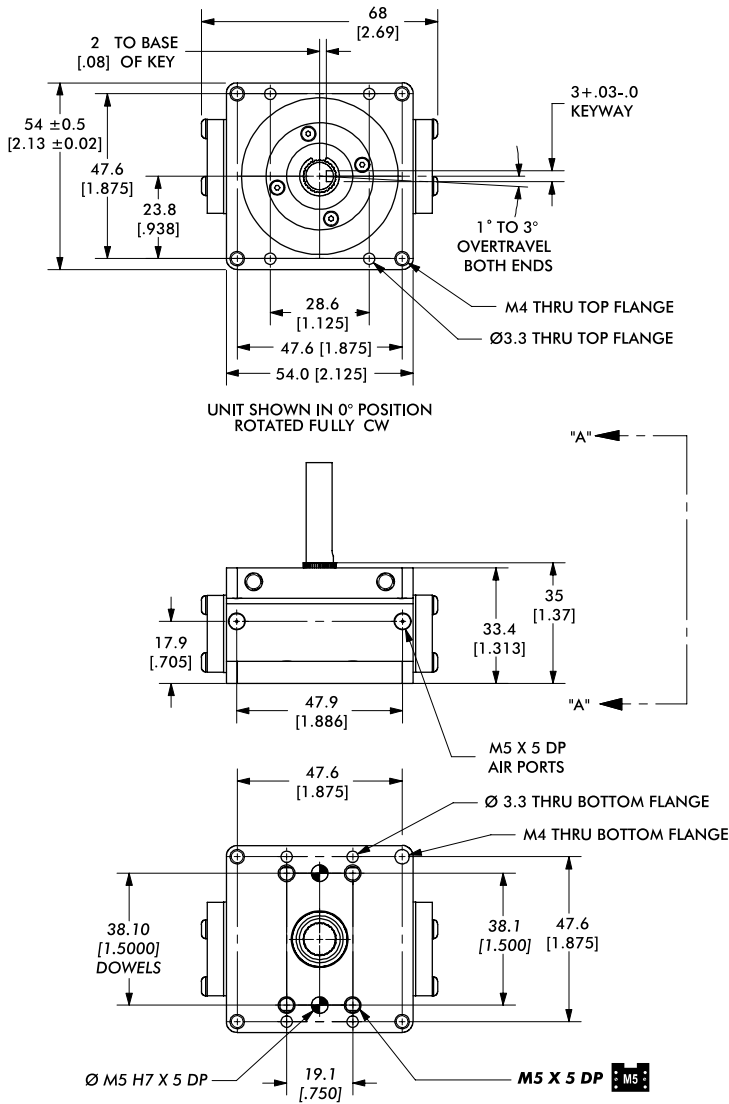
GR-ROT-10



DRG-075M

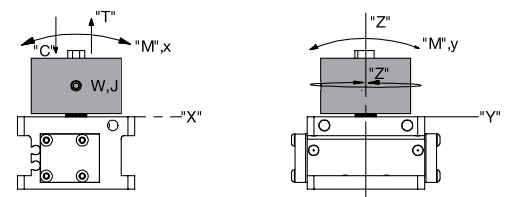


Rotary Actuators | Dimensions and Technical Specifications



Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-210
Buna-N Rotational Adjustment Seal Kit	SLKT-212

Loading Information



DRG-075M Loading information	Static
Maximum Tensile T	44 N [10 lbs]
Maximum Compressive C	89 N [20 lbs]
Maximum Moment M_x	2.3 Nm [20 in-lbs]
Maximum Moment M_y	2.3 Nm [20 in-lbs]
Maximum Payload W	0.23 kg [0.5 lbs]
Maximum Inertia J	9.0 X 10 ⁻⁵ N-m-sec ² [0.0008 in-lbs-sec ²]

Note: Higher payloads and inertia possible with external shocks and stops.

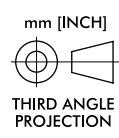
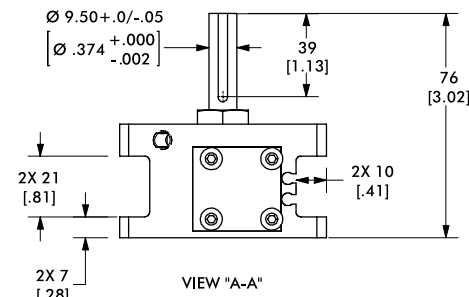
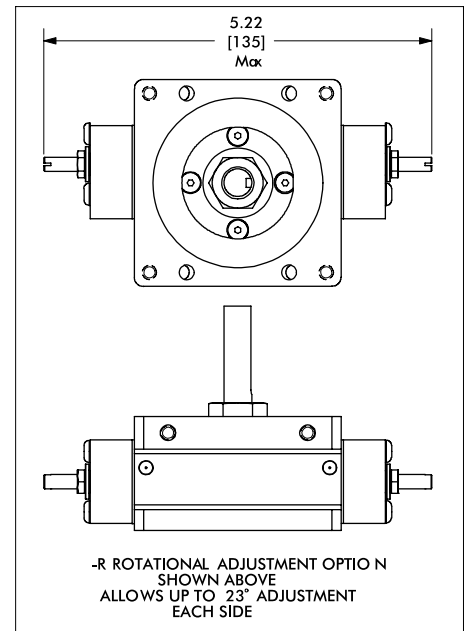
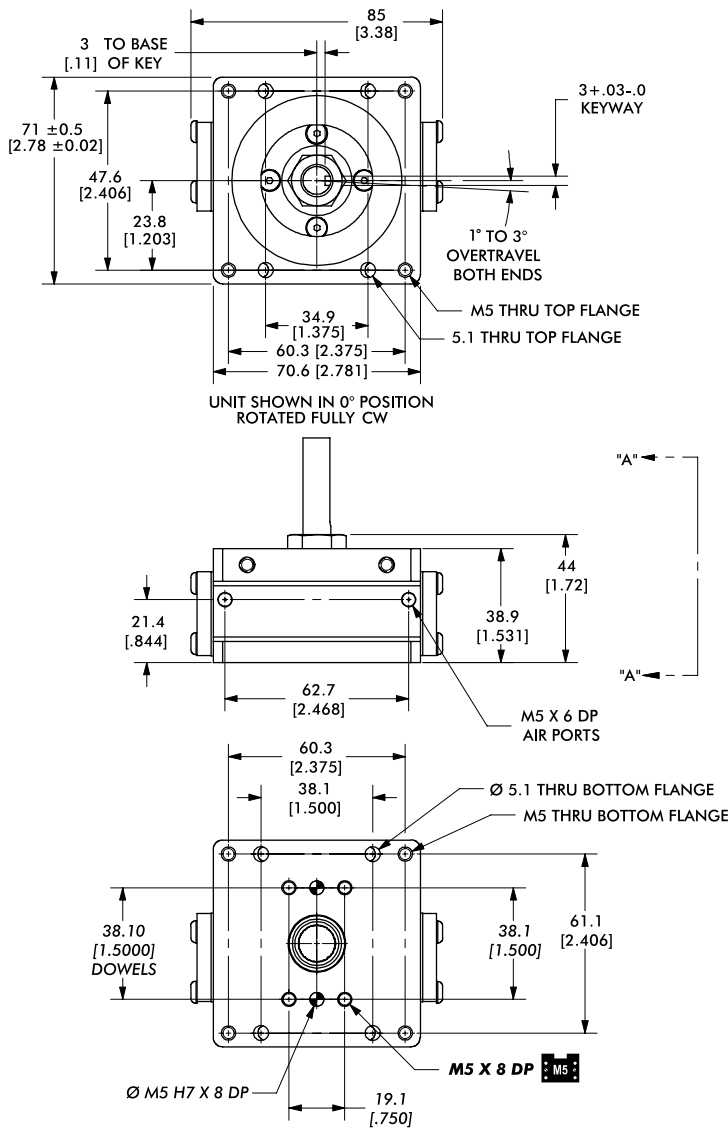
Dimensions and technical information are subject to change without notice



GR-ROT-11

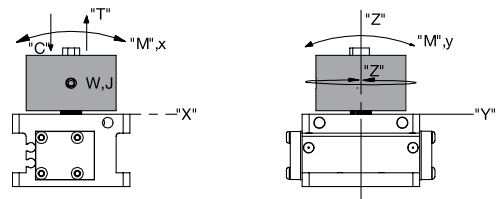


Rotary Actuators | Dimensions and Technical Specifications



Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-216
Buna-N Rotational Adjustment Seal Kit	SLKT-218

Loading Information



DRG-094M Loading Information	Static
Maximum Tensile T	67 N [15 lbs]
Maximum Compressive C	133 N [30 lbs]
Maximum Moment M_x	5.6 Nm [50 in-lbs]
Maximum Moment M_y	5.6 Nm [50 in-lbs]
Maximum Payload W	0.68 kg [1.5 lbs]
Maximum Inertia J	6.3 X 10 ⁻⁴ N-m-sec ² [0.0056 in-lbs-sec ²]

Note: Higher payloads and inertia possible with external shocks and stops.

Dimensions and technical information are subject to change without notice

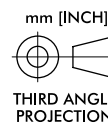
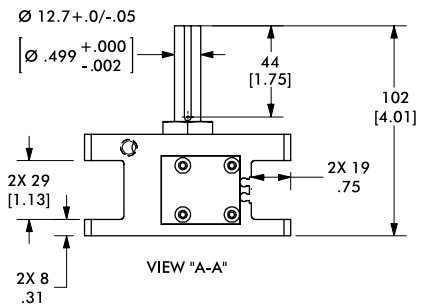
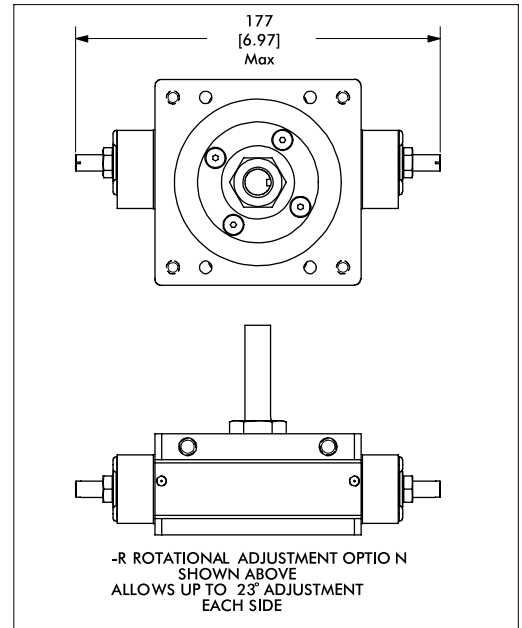
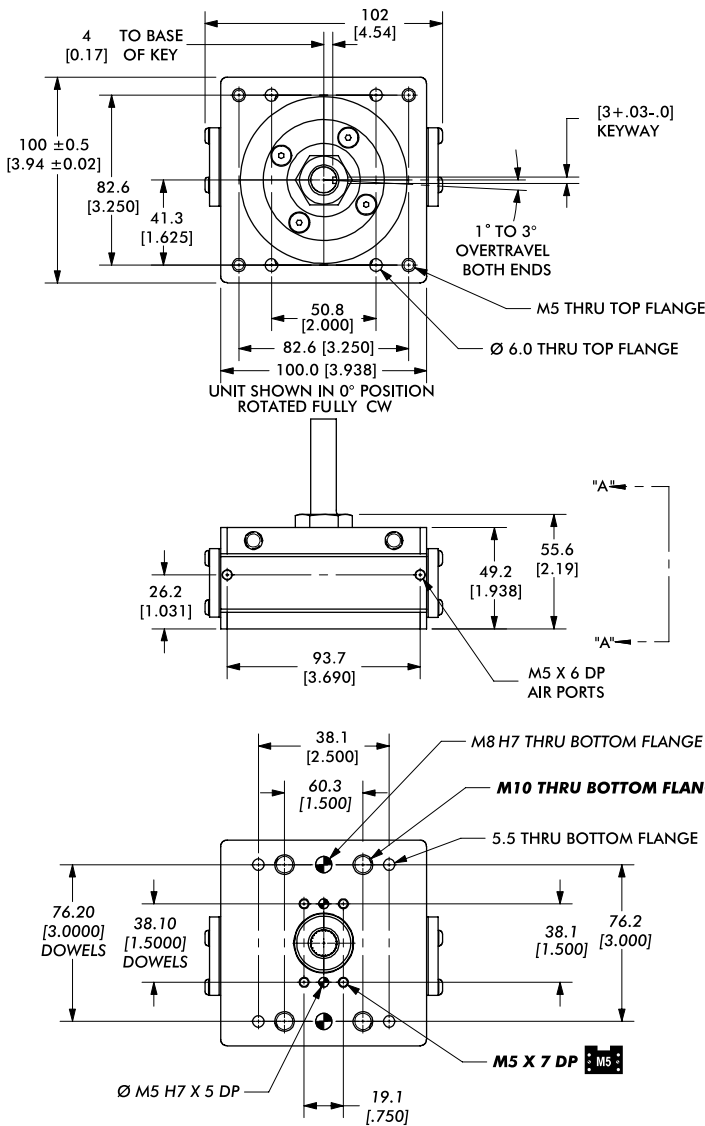
GR-ROT-12



DRG-106M

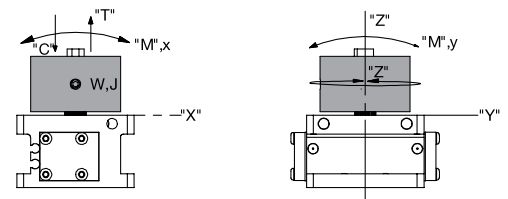


Rotary Actuators | Dimensions and Technical Specifications



Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-222
Buna-N Rotational Adjustment Seal Kit	SLKT-224

Loading Information



DRG-106M Loading Information	Static
Maximum Tensile T	111 N [25 lbs]
Maximum Compressive C	222 N [50 lbs]
Maximum Moment M_x	8.5 Nm [75 in-lbs]
Maximum Moment M_y	8.5 Nm [75 in-lbs]
Maximum Payload W	1.8 kg [4 lbs]
Maximum Inertia J	2.3 X 10 ⁻³ N-m-sec ² [0.0207 in-lbs-sec ²]

Note: Higher payloads and inertia possible with external shocks and stops.

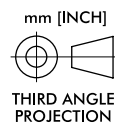
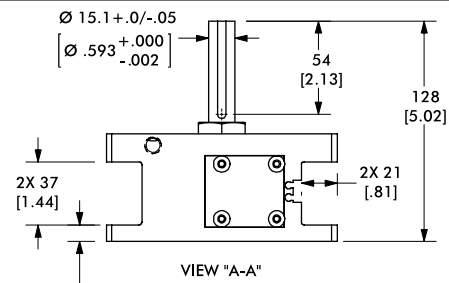
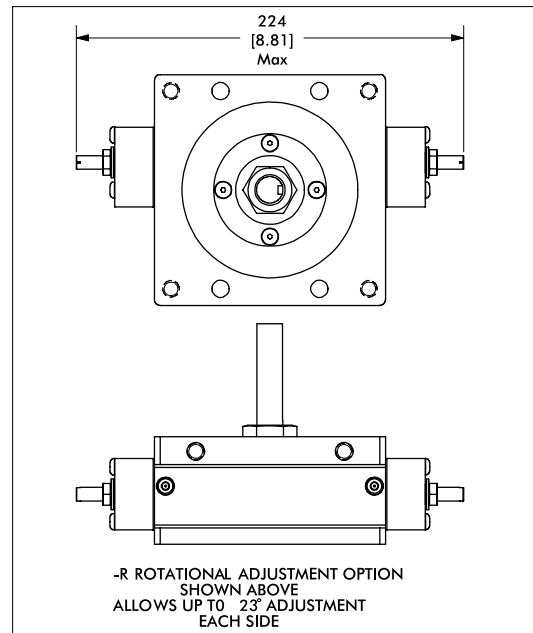
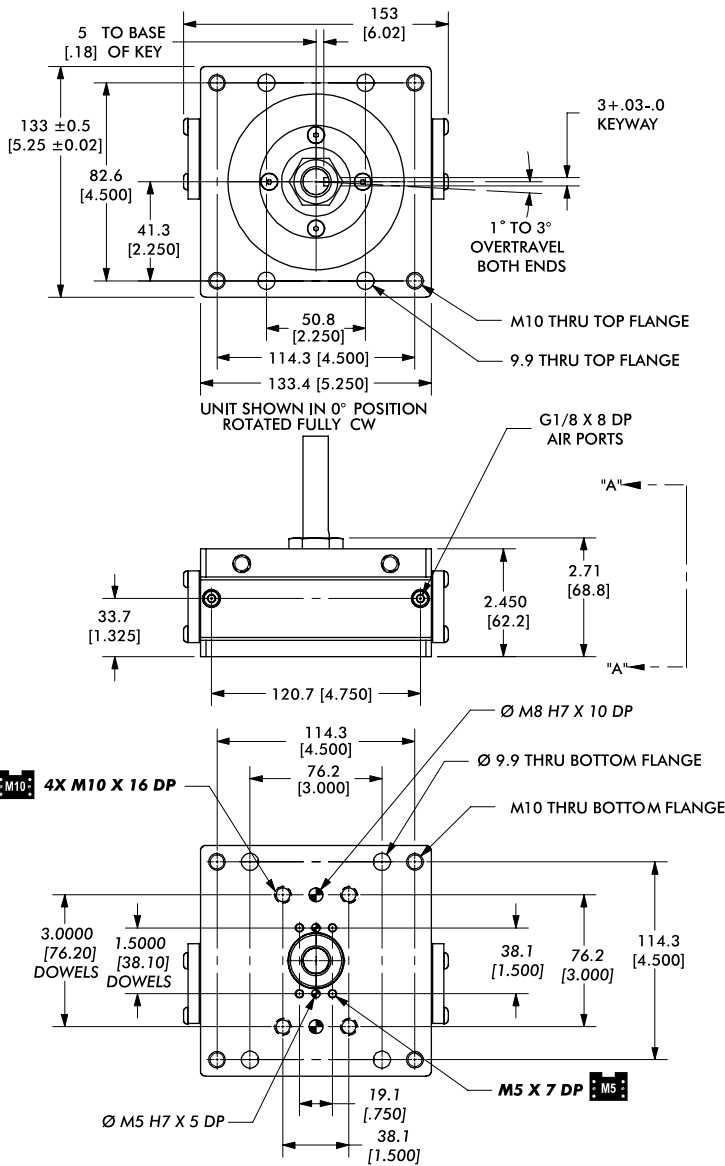


GR-ROT-13

Dimensions and technical information are subject to change without notice

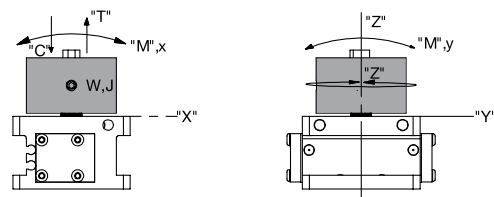


Rotary Actuators | Dimensions and Technical Specifications



Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-228
Buna-N Rotational Adjustment Seal Kit	SLKT-230

Loading Information



DRG-131M	Static
Maximum Tensile T	222 N [50 lbs]
Maximum Compressive C	445 N [100 lbs]
Maximum Moment M_x	11.3 Nm [100 in-lbs]
Maximum Moment M_y	11.3 Nm [100 in-lbs]
Maximum Payload W	3.4 kg [7.5 lbs]
Maximum Inertia J	5.5 X 10 ⁻³ N-m-sec ² [0.0485 in-lbs-sec ²]

Note: Higher payloads and inertia possible with external shocks and stops.

Dimensions and technical information are subject to change without notice

GR-ROT-14



RR LIGHT-DUTY SERIES SERIES

Rotary Actuators | Features and Benefits | How To Order

Features:

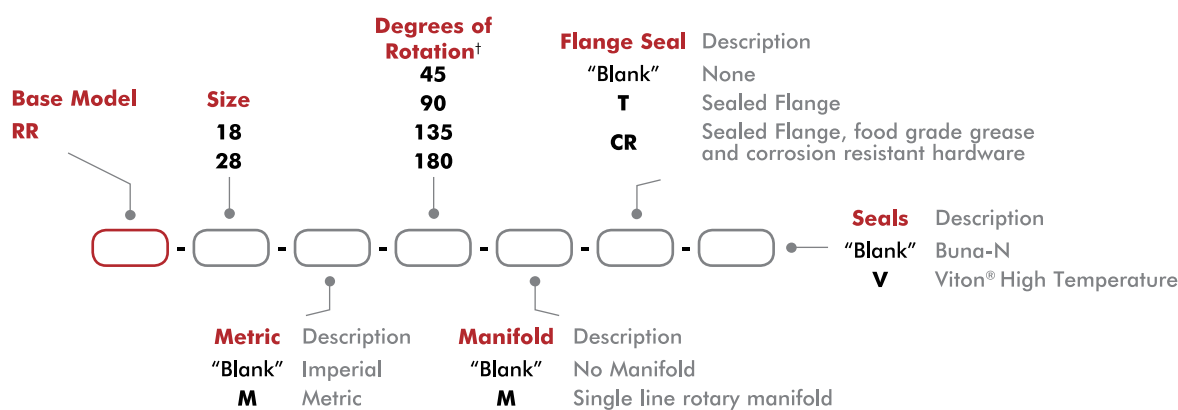
- Ultra-thin profile for tight space applications
- Preloaded bearings for high repeatability rotary actuation
- Zero backlash and slip fit dowel pins for precision applications
- Built-in adjustable hard-stops
- Optional manifold eliminates twisted airlines
- **CR-** Clean room option or for use in harsh environment applications

Applications:

- Precision rotary positioning
- Medical applications
- OEM machines



How To Order



†Consult factory for intermediate degrees of rotation.

Accessories

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
Sensor Mounting Kit (mounts 2 sensors)	All Models	OSMK-024	1
NPN Inductive Sensor with Quick Disconnect*	All Models	OISN-014	1-2
PNP Inductive Sensor with Quick Disconnect*	All Models	OISP-014	1-2
Quick Disconnect 2 Meter Cable Length*	All Models	CABL-010	1-2
Quick Disconnect 5 Meter Cable Length*	All Models	CABL-013	1-2

Pneumatic Accessories	Model Numbers	Part Number	Qty/Unit
M3 Plumbing Fitting Push-In for 3mm OD Tube	All Models	PLFT-021	2
M3 Plumbing Fitting Barb for 2mm ID Tube	All Models	PLFT-022	2
#10-32 Flow Control (Imperial)	All Models	VLVF-007	2
M5 Flow Control	All Models	VLVF-008	2

*Sensor and cable sold separately.



GR-ROT-15

Dimensions and technical information are subject to change without notice

RR LIGHT-DUTY SERIES SERIES

Rotary Actuators | Technical Specifications

Specifications	Units	18	28
Maximum Payload	kg [lb]	0.45 [1.0]	1.36 [3.0]
Maximum Payload Inertia	Nm sec ² [in-lbs sec ²]	0.000181 [0.0016]	0.001255 [0.0111]
Maximum Rotation		180°	
Maximum Torque Mid-Stroke @ 100psi/7 bar	Nm [lbs-in]	0.7 [6.5]	2.5 [22]
Maximum Torque End Stroke @ 100psi/7 bar			
Pitch Diameter of Pinion	mm [in]	8.46 [0.333]	12.7 [0.50]
Weight	kg [lb]	0.22 [0.48]	0.65 [1.44]
Pressure Range	bar [psi]	2-7 [30-100]	
Ingress Protection Class (IP)		IP66	
Displacement (180°)	cm ³ [in ³]	3.37 [0.205]	11.4 [0.69]
Temperature Range (Buna-N seals)	°C [°F]	-35°~80° [-30°~180°]	
Temperature Range (Viton® seals)	°C [°F]	-30°~150° [-20°~300°]	
Actuation Time (180° @ 100psi/7 bar)	sec	0.30	0.35
Actuation Time (90° @ 100psi/7 bar)	sec	0.25	0.30
End Stop Repeatability		±0.02°	
End Stop Adjustability		23°	
Over Travel (each end)		4°	8°
Valve required to actuate		4-way, 2-position	

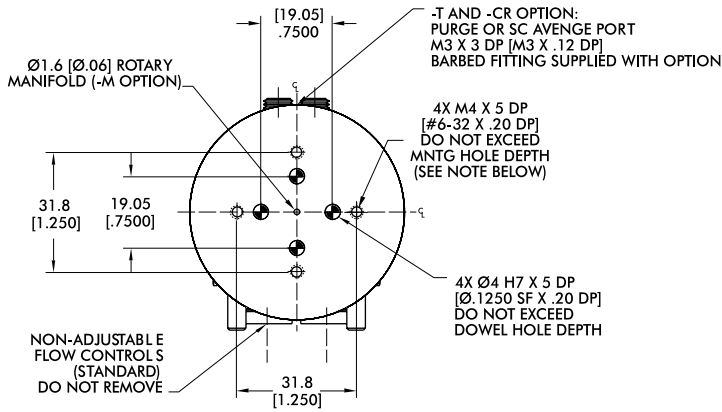
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GR-ROT-16

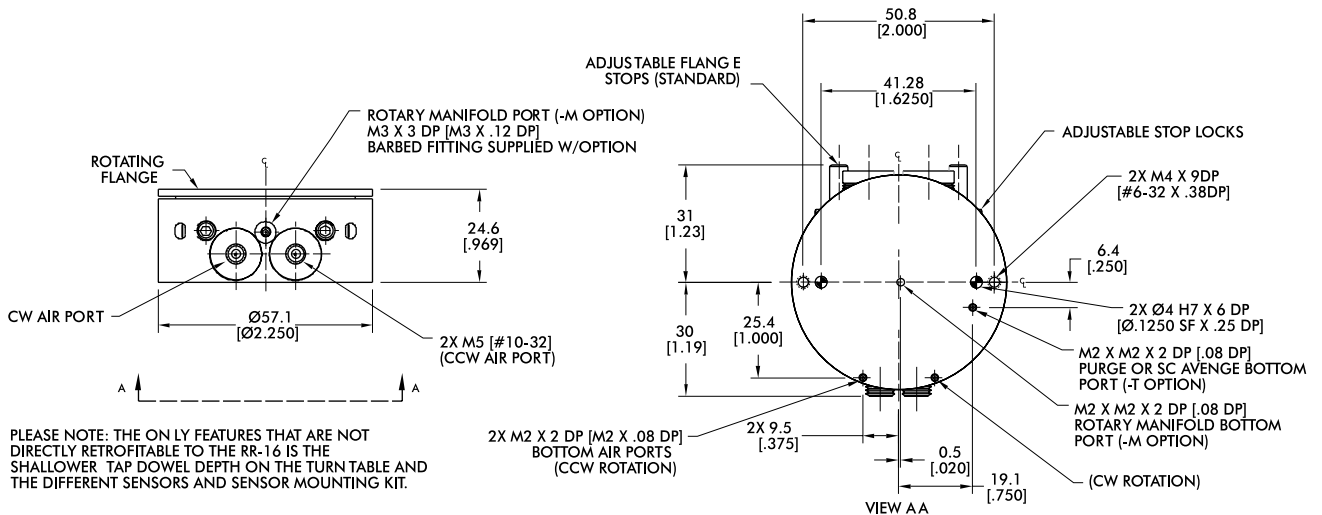


RR-18

Rotary Actuators | Dimensions and Technical Specifications

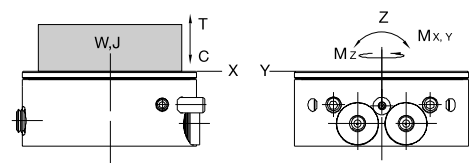


UNIT SHOWN IN 0° POSITION ROTATED FULLY CW



Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-173
Viton® Seal Repair Kit	SLKT-173V
Viton® Bottom Air Port Manifold Seal Kit	SLKT-174V

Loading Information



RR-18 Loading Information	Static
Maximum Tensile T	222 N [50 lbs]
Maximum Compressive C	1112 N [250 lbs]
Maximum Moment M_x	11 Nm [100 in-lbs]
Maximum Moment M_y	11 Nm [100 in-lbs]
Maximum Payload W	0.45 kg [1 lbs]
Maximum Inertia J	0.000181 N-m-sec ² [0.0016 in-lbs-sec ²]

Note: Higher payloads and inertia possible with external shocks and stops.

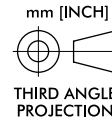
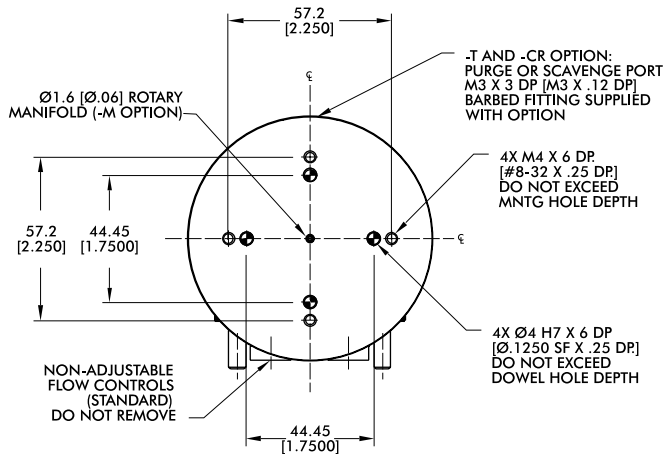
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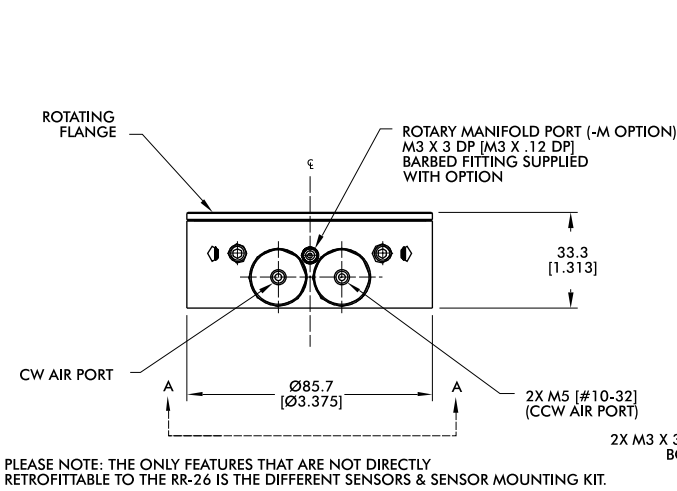
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RR-28

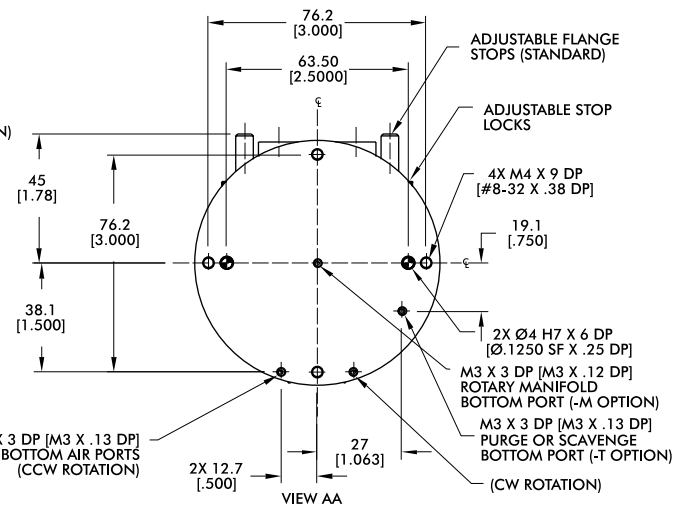
Rotary Actuators | Dimensions and Technical Specifications



UNIT SHOWN IN 0° POSITION ROTATED FULLY CW

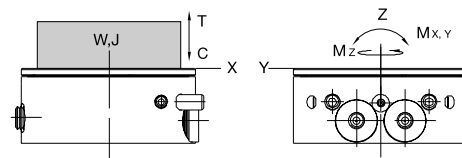


PLEASE NOTE: THE ONLY FEATURES THAT ARE NOT DIRECTLY RETROFITTABLE TO THE RR-26 IS THE DIFFERENT SENSORS & SENSOR MOUNTING KIT.



Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-175
Viton® Seal Repair Kit	SLKT-175V
Viton® Bottom Air Port Manifold Seal Kit	SLKT-176V

Loading Information



RR-28 Loading Information	Static
Maximum Tensile T	334 N [75 lbs]
Maximum Compressive C	2224 N [500 lbs]
Maximum Moment M_x	28 Nm [250 in-lbs]
Maximum Moment M_y	28 Nm [250 in-lbs]
Maximum Payload W	1.36 kg [3 lbs]
Maximum Inertia J	0.001255 N-m-sec ² [0.0111 in-lbs-sec ²]

Note: Higher payloads and inertia possible with external shocks and stops.

Dimensions and technical information are subject to change without notice

GR-ROT-18



RR MEDIUM-DUTY SERIES SERIES

Rotary Actuators | Features and Benefits | How To Order

Features:

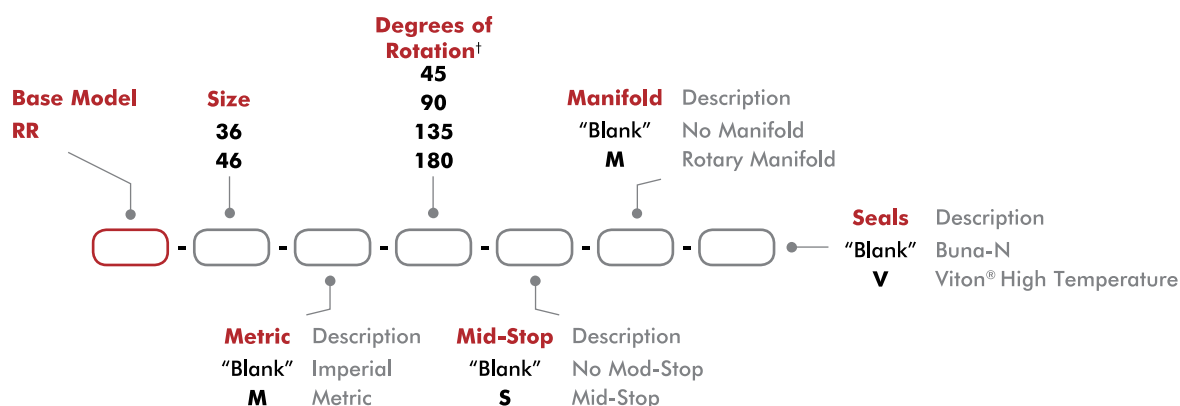
- Low profile, high capacity for tight space applications
- Mount payload directly to flange without additional support
- Preloaded bearings for high repeatability rotary actuation
- Zero backlash and slip fit dowel pins for precision applications
- Built-in adjustable hard-stops and shock absorbers
- Adjustable flow controls
- Optional manifold eliminates twisted airlines
- 3 position rotary with option mid-stop

Applications:

- Precision rotary positioning
- Part orientation
- Load and unload



How To Order



†Consult factory for intermediate degrees of rotation.

Accessories

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
Sensor Mounting Kit (mounts 2 sensors)	All Models	OSMK-024	1
NPN Inductive Sensor with Quick Disconnect*	All Models	OISN-014	1-2
PNP Inductive Sensor with Quick Disconnect*	All Models	OISP-014	1-2
Quick Disconnect 2 Meter Cable Length*	All Models	CABL-010	1-2
Quick Disconnect 5 Meter Cable Length*	All Models	CABL-013	1-2

*Sensor and cable sold separately.



GR-ROT-19

Dimensions and technical information are subject to change without notice

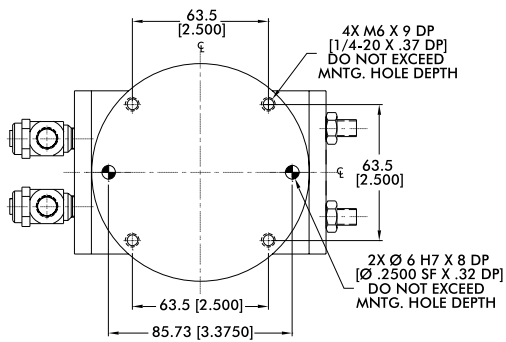
RR MEDIUM-DUTY SERIES SERIES

Rotary Actuators | Technical Specifications

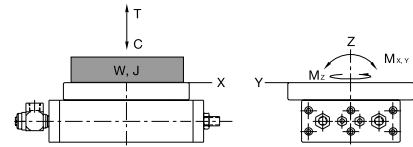
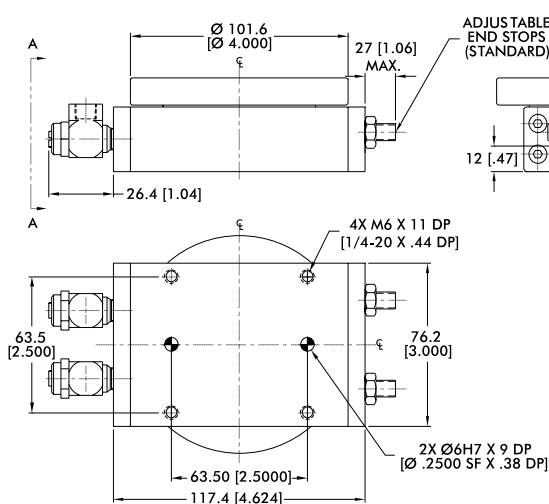
Specifications	Units	36	46
Maximum Payload	kg [lb]	3.6 [8.0]	6.8 [15]
Maximum Payload Inertia	Nm sec ² [in-lbs sec ²]	0.00468 [0.0414]	0.01096 [0.0970]
Maximum Rotation		180°	
Maximum Torque Mid-Stroke @ 100psi/7 bar	Nm [lbs-in]	7.4 [65]	14 [122]
Maximum Torque End-Stroke @ 100psi/7 bar	Nm [lbs-in]	3.7 [32]	7 [61]
Weight (base unit)	kg [lb]	1.3 [2.9]	2.3 [5]
Weight Adder for Mid-Position Stop	kg [lb]	0.18 [0.4]	0.19 [0.42]
Weight Adder for Rotary Manifold	kg [lb]	0.04 [0.1]	0.17 [0.38]
Pressure Range	bar [psi]	3-7 [40-100]	
Ingress Protection Class (IP)		IP55	
Displacement (180°)	cm ³ [in ³]	33.6 [2.05]	63.18 [3.855]
Displacement of Mid-Position Stop	cm ³ [in ³]	19.66 [1.200]	35.95 [2.194]
Temperature Range (Buna-N seals)	°C [°F]	-0°~66° [32°~150°]	
Temperature Range (Viton® seals)			
Actuation Time (180° @ 100psi/7 bar)	sec	0.35	0.41
Actuation Time (90° @ 100psi/7 bar)	sec	0.2	0.36
End-Stop Repeatability		±0.02°	
Mid-Stop Repeatability		±0.5°	
End-Stop Adjustability		60°	
Over Travel (each end)		4°	
Valve required to actuate		4-way, 2-position	
Valve required to actuate Mid-Stop		3-way, 2-position	

RR-36

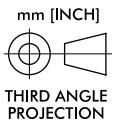
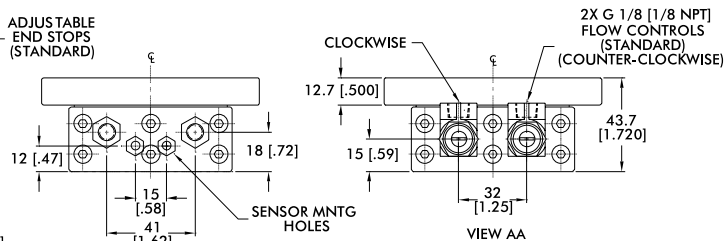
Rotary Actuators | Dimensions and Technical Specifications



UNIT SHOWN IN 0° POSITION ROTATED FULLY CW

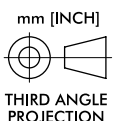
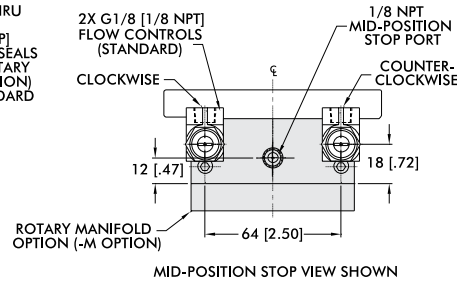
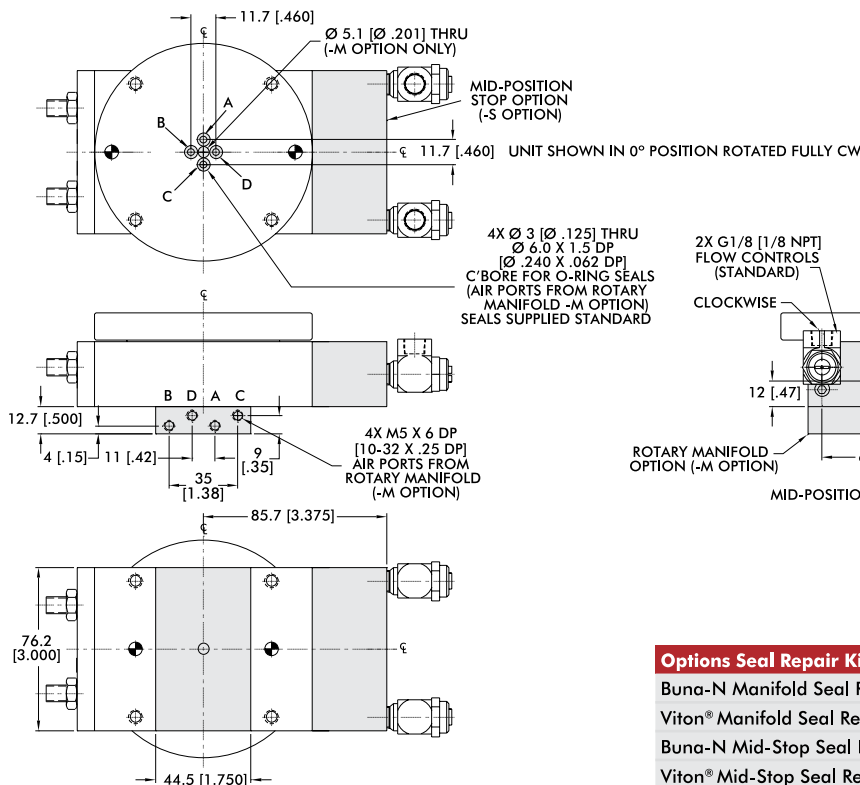


RR-36 Loading information	Static
Maximum Tensile T	2445 N [100 lbs]
Maximum Compressive C	2224 N [500 lbs]
Maximum Moment M_x	34 Nm [300 in-lbs]
Maximum Moment M_y	34 Nm [300 in-lbs]
Maximum Payload W	3.64 kg [8 lbs]
Maximum Inertia J	0.00468 N-m-sec ² [0.0414 in-lbs-sec ²]



Base Unit Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-016
Viton® Seal Repair Kit	SLKT-016V

Options Dimensions



Options Seal Repair Kits		Order #
Buna-N Manifold Seal Repair Kit	-M	SLKT-061
Viton® Manifold Seal Repair Kit	-M-V	SLKT-061V
Buna-N Mid-Stop Seal Repair Kit	-S	SLKT-062
Viton® Mid-Stop Seal Repair Kit	-S-V	SLKT-062V

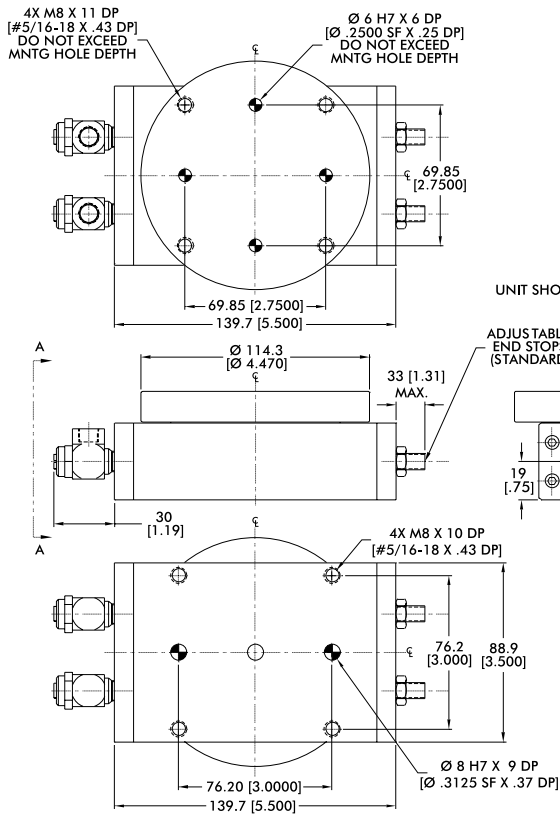
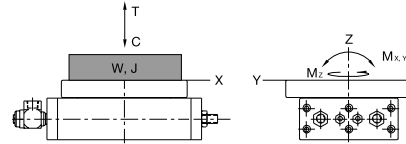


GR-ROT-21

Dimensions and technical information are subject to change without notice

RR-46

Rotary Actuators | Dimensions and Technical Specifications

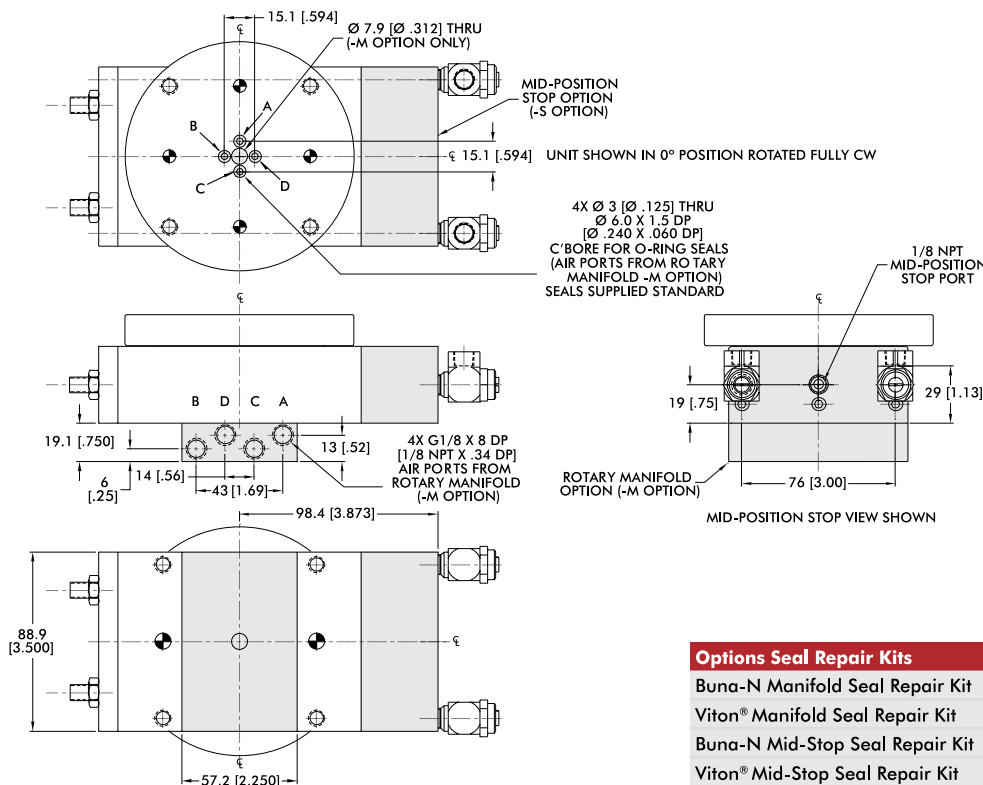


RR-46 Loading Information	Static
Maximum Tensile T	890 N [200 lbs]
Maximum Compressive C	4448 N [1000 lbs]
Maximum Moment M_x	57 Nm [500 in-lbs]
Maximum Moment M_y	57 Nm [500 in-lbs]
Maximum Payload W	6.8 kg [15 lbs]
Maximum Inertia J	0.01096 N-m-sec ² [0.0970 in-lbs-sec ²]

UNIT SHOWN IN 0° POSITION ROTATED FULLY CW

Base Unit Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-017
Viton® Seal Repair Kit	SLKT-017V

Options Dimensions



Options Seal Repair Kits		Order #
Buna-N Manifold Seal Repair Kit	-M	SLKT-067
Viton® Manifold Seal Repair Kit	-M-V	SLKT-067V
Buna-N Mid-Stop Seal Repair Kit	-S	SLKT-068
Viton® Mid-Stop Seal Repair Kit	-S-V	SLKT-068V

Dimensions and technical information are subject to change without notice

GR-ROT-22



RR HEAVY-DUTY SERIES

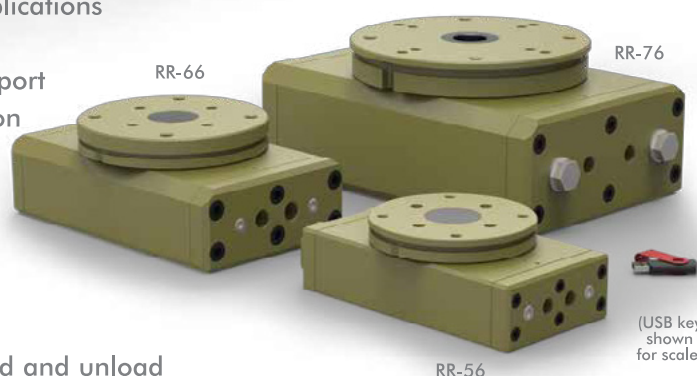
Rotary Actuators | Features and Benefits | How To Order

Features:

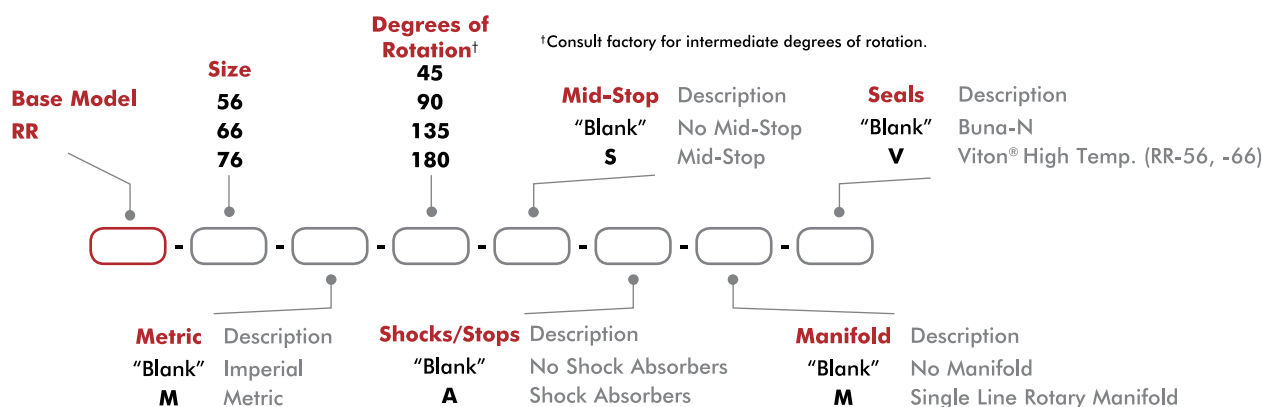
- Compact large capacity, high torque for tight space applications
- Use in heavy duty industrial and foundry applications
- Mount payload directly to flange without additional support
- Preloaded bearings for high repeatability rotary actuation
- Zero backlash & precision slip fit dowel pins
- Adjustable flow controls
- Optional manifold eliminates twisted airlines
- 3 position rotary with option mid-stop

Applications:

- Large torque application
- Foundry applications
- Load and unload



How To Order



Accessories

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
Inductive Sensor Mounting Kit (mounts 2 sensors)	-56, -66	OSMK-075	1
Inductive Sensor Mounting Kit (mounts 2 sensors)	-76	OSMK-096	1
Magneto Resistive Sensor Mounting Kit (mounts 2 sensors)	-56, -66	OSMK-069	1
NPN Inductive Sensor with Quick Disconnect*	-56, -66	OISN-011	1-2
PNP Inductive Sensor with Quick Disconnect*	-56, -66	OISP-011	1-2
NPN Inductive Sensor with Quick Disconnect*	-76	OISN-017	1-2
PNP Inductive Sensor with Quick Disconnect*	-76	OISP-017	1-2
NPN Magneto Resistive Sensor with Quick Disconnect*	-56, -66	OHSN-017	1-2
PNP Magneto Resistive Sensor with Quick Disconnect*	-56, -66	OHSP-017	1-2
Quick Disconnect 2 Meter Cable Length*	-56, -66	CABL-010	1-2
Quick Disconnect 5 Meter Cable Length*	-56, -66	CABL-013	1-2
Quick Disconnect 2 Meter Cable Length*	-76	CABL-014	1-2
Quick Disconnect 5 Meter Cable Length*	-76	CABL-018	1-2

Pneumatic Accessories	Model Numbers	Part Number	Qty/Unit
1/4 NPT Flow Controls (Imperial)	-56	VLVF-009	2
G 1/4 BSPP Flow Controls	-56	VLVF-010	2
3/8 Flow Control (Imperial)	-66, -76	VLVF-011	2
G 3/8 BSPP Flow Control	-66, -76	VLVF-012	2
Adapter 1/8 NPT to G 1/8	-76	PLFT-028	1
Adapter 3/8 NPT to G 3/8	-76	PLFT-029	1

* Sensor and cable sold separately.



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Dimensions and technical information are subject to change without notice

RR HEAVY-DUTY SERIES

Rotary Actuators | Technical Specifications

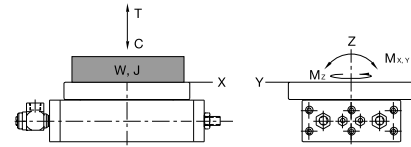
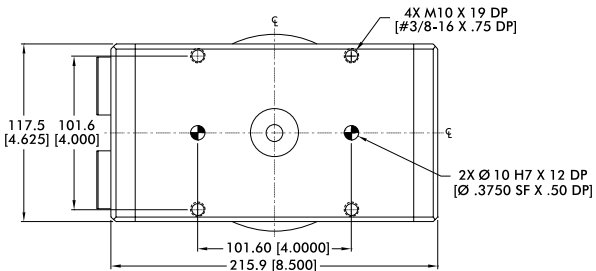
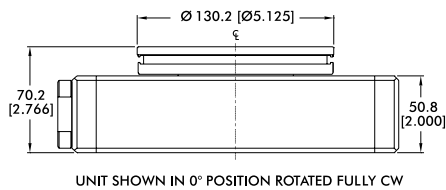
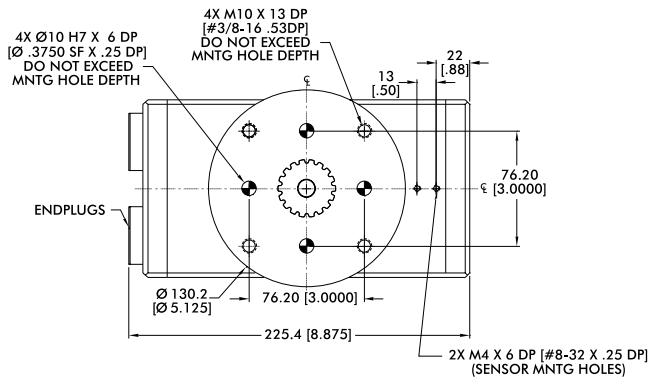
Specifications	Units	56	66	76
Maximum Payload [†]	kg [lb]	13.6 [30]	34 [75]	91 [200]
Maximum Payload Inertia [†]	Nm sec ² [in-lbs sec ²]	0.02880 [0.2549]	0.11584 [1.0251]	0.5596 [4.95]
Maximum Rotation		180°		
Maximum Torque Mid-Stroke @ 100psi/7 bar	Nm [lbs-in]	35 [311]	82 [728]	215 [1900]
Maximum Torque End-Stroke @ 100psi/7 bar	Nm [lbs-in]	17 [155]	41 [364]	107 [950]
Weight (base unit)	kg [lb]	5.3 [11.6]	11.8 [26]	24 [53]
Weight Adder for Mid-Position Stop	kg [lb]	0.82 [1.8]	0.82 [1.8]	3.8 [8.3]
Weight Adder for Rotary Manifold	kg [lb]	0.54 [1.2]	0.36 [0.82]	2.0 [4.2]
Pressure Range	bar [psi]	3-7 [40-100]		
Ingress Protection Class (IP)		IP55		
Displacement	cm ³ [in ³]	160.1 [9.77]	375 [22.8]	1026 [62.6]
Displacement of Mid-Position Stop	cm ³ [in ³]	90.16 [5.502]	60.32 [2.375]	885 [54]
Temperature Range (Buna-N seals)	°C [°F]	0°~66° [-32°~150°]		
Temperature Range (Viton® seals)				
Actuation Time (180° @ 100psi/7 bar)	sec	0.48	0.70	1.4
Actuation Time (90° @ 100psi/7 bar)	sec	0.40	0.50	0.8
End-Stop Repeatability		±0.02°		
Mid-Stop Repeatability		±0.5°		
End-Stop Adjustability*		30°	20°	
Over Travel (each end)		4°		
Valve required to actuate		4-way, 2-position		
Valve required to actuate Mid-Stop		3-way, 2-position		

[†]Max. payload based on -A shock option.

*Any adjustment of the End Stop Adjustment Screw must be accompanied by an equal adjustment of the Shock Absorbers to prevent bottoming of the pistons against the Shock Absorbers.

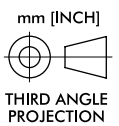
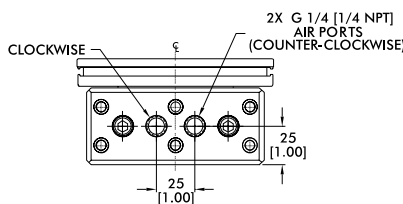
RR-56

Rotary Actuators | Dimensions and Technical Specifications



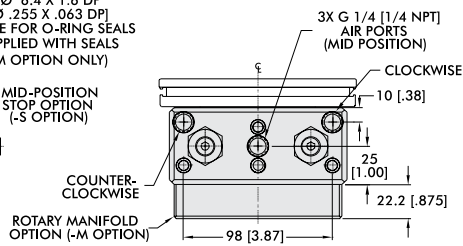
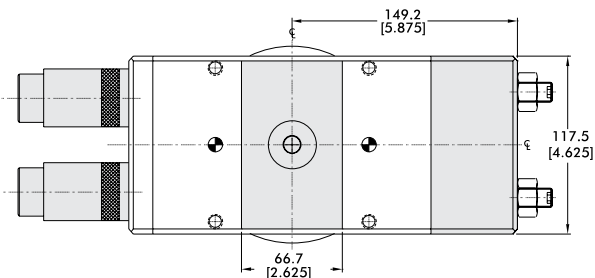
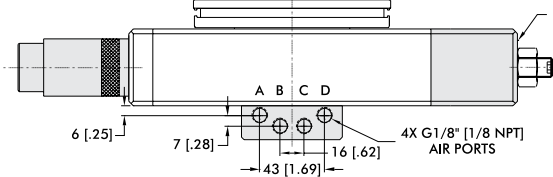
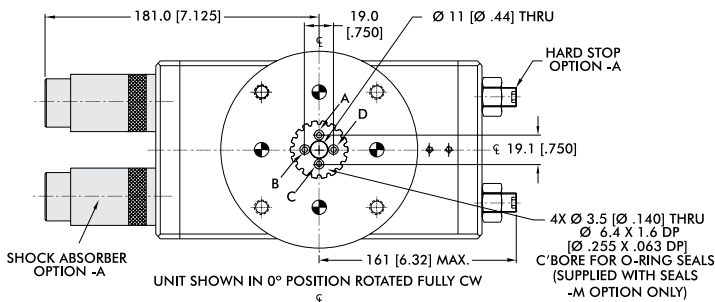
RR-56 Loading information	Static
Maximum Tensile T	3559 N [800 lbs]
Maximum Compressive C	8896 N [2000 lbs]
Maximum Moment M_x	113 Nm [1000 in-lbs]
Maximum Moment M_y	113 Nm [1000 in-lbs]
Maximum Payload Wⁱ	13.64 kg [30 lbs]
Maximum Inertia Jⁱ	0.0288 N-m-sec ² [0.2549 in-lbs-sec ²]

ⁱ Max. payload based on -A shock option.

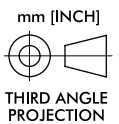


Base Unit Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-124
Viton® Seal Repair Kit	SLKT-124V

Options Dimensions



MID-POSITION STOP VIEW SHOWN



Options Seal Repair Kits	Order #
Buna-N Manifold Seal Repair Kit	-M SLKT-126
Viton® Manifold Seal Repair Kit	-M-V SLKT-126V
Buna-N Mid-Stop Seal Repair Kit	-S SLKT-127
Viton® Mid-Stop Seal Repair Kit	-S-V SLKT-127V
Buna-N Shock Seal Repair Kit	-A SLKT-125
Viton® Shock Seal Repair Kit	-A-V SLKT-125V

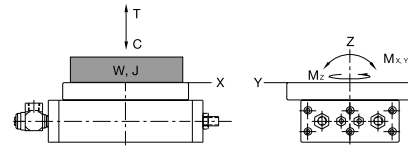


GR-ROT-25

Dimensions and technical information are subject to change without notice

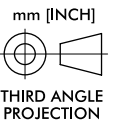
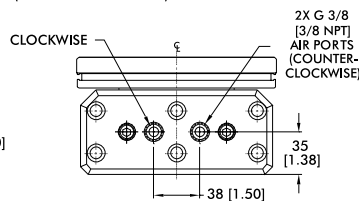
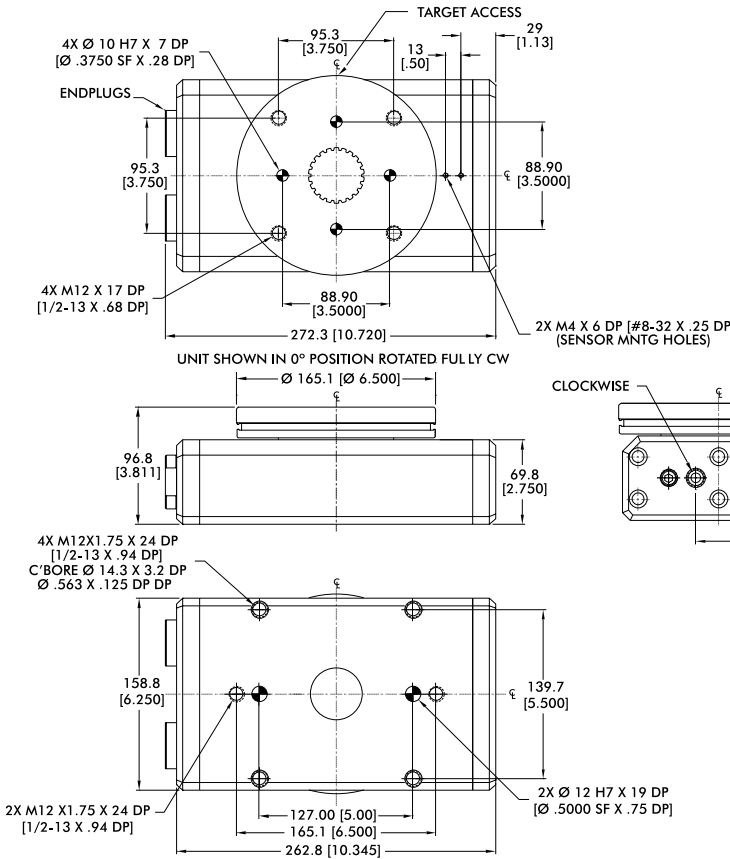
RR-66

Rotary Actuators | Dimensions and Technical Specifications



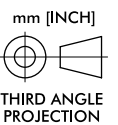
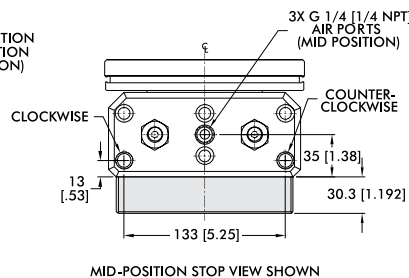
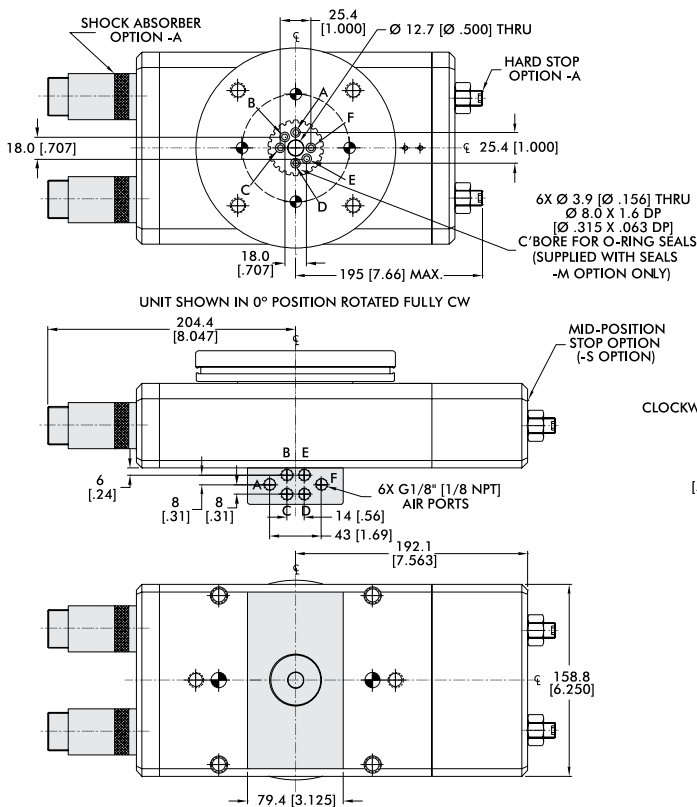
RR-66 Loading Information	Static
Maximum Tensile T	4448 N [1000 lbs]
Maximum Compressive C	15569 N [3500 lbs]
Maximum Moment M_x	226 Nm [2000 in-lbs]
Maximum Moment M_y	226 Nm [2000 in-lbs]
Maximum Payload W[†]	34 kg [75 lbs]
Maximum Inertia J[†]	0.1158 N-m-sec ² [1.025 in-lbs-sec ²]

[†]Max. payload based on -A shock option.



Base Unit Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-128
Viton® Seal Repair Kit	SLKT-128V

Options Dimensions



Options Seal Repair Kits	Order #
Buna-N Manifold Seal Repair Kit	-M SLKT-130
Viton® Manifold Seal Repair Kit	-M-V SLKT-130V
Buna-N Mid-Stop Seal Repair Kit	-S SLKT-131
Viton® Mid-Stop Seal Repair Kit	-S-V SLKT-131V
Buna-N Shock Seal Repair Kit	-A SLKT-129
Viton® Shock Seal Repair Kit	-A-V SLKT-129V

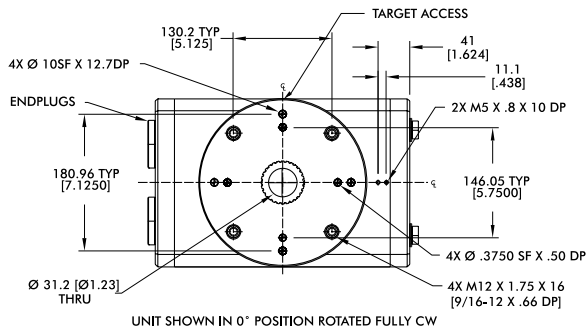
Dimensions and technical information are subject to change without notice

GR-ROT-26

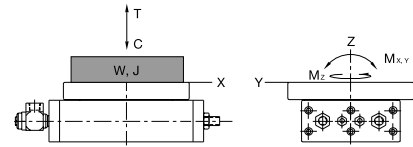
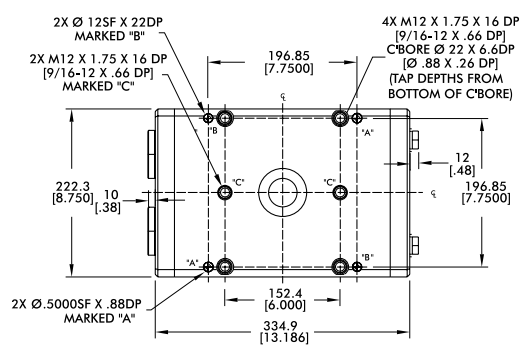
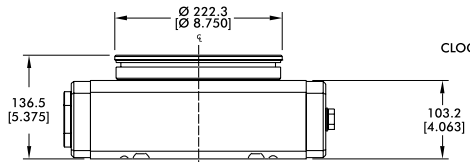


RR-76

Rotary Actuators | Dimensions and Technical Specifications

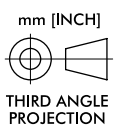
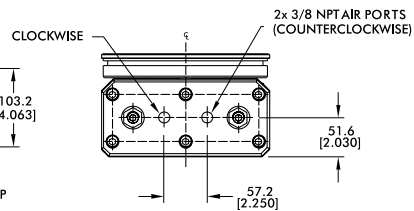


UNIT SHOWN IN 0° POSITION ROTATED FULLY CW



RR-76 Loading Information	Static
Maximum Tensile T	8896 N [2000 lbs]
Maximum Compressive C	20017 N [4500 lbs]
Maximum Moment M_x	452 Nm [4000 in-lbs]
Maximum Moment M_y	452 Nm [4000 in-lbs]
Maximum Payload W[†]	91 kg [200 lbs]
Maximum Inertia J[†]	0.5596 N-m-sec ² [4.952 in-lbs-sec ²]

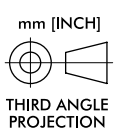
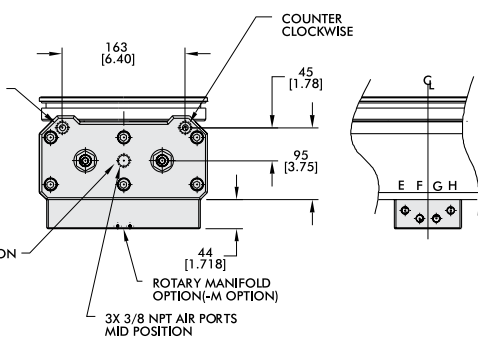
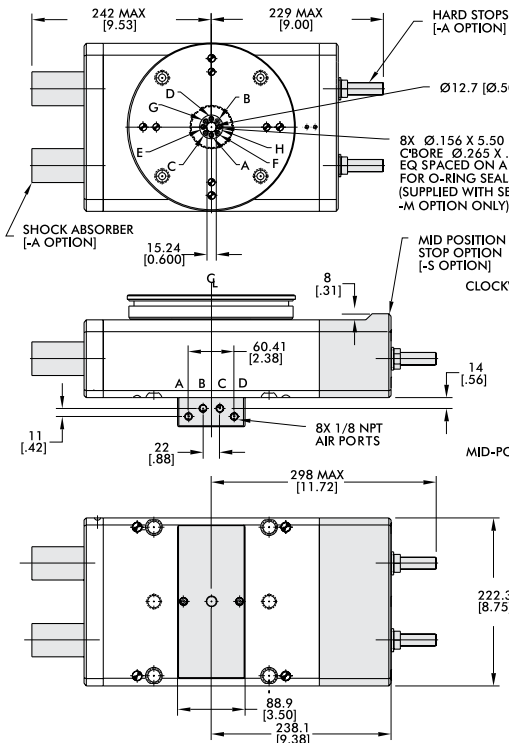
[†]Max. payload based on -A shock option.



Note: Shock Absorbers "Option -A" are recommended for all applications. All specifications provided are with this option.

Base Unit Seal Repair Kits	Order #
Viton® Seal Repair Kit	SLKT-167V

Options Dimensions



Options Seal Repair Kits		Order #
Viton® Manifold Seal Repair Kit	-M	SLKT-169V
Viton® Mid-Stop Seal Repair Kit	-S	SLKT-168V
Buna-N Shock Seal Repair Kit	-A	SLKT-179



GR-ROT-27

Dimensions and technical information are subject to change without notice

ROTARY ACTUATORS

Notes

Dimensions and technical information are subject to change without notice

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