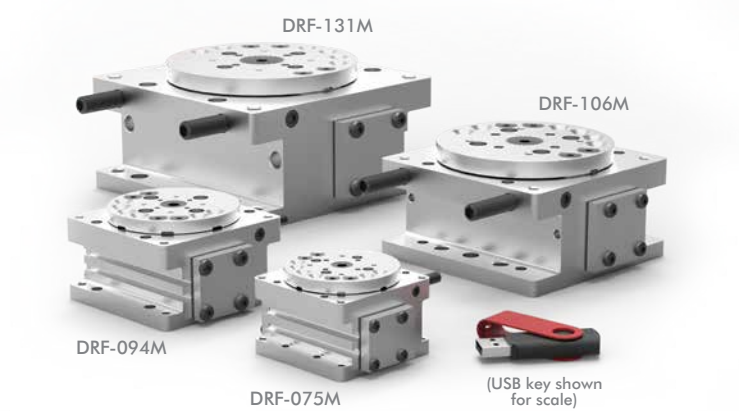
DRF SERIES

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

Base Model	Size	Shock Absorbers	Description
DRF	075M	"Blank"	None
	094M	A	Shock Absorbers
	106M		
	131M		

Degrees of Rotation: 45, 90, 135, 180

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

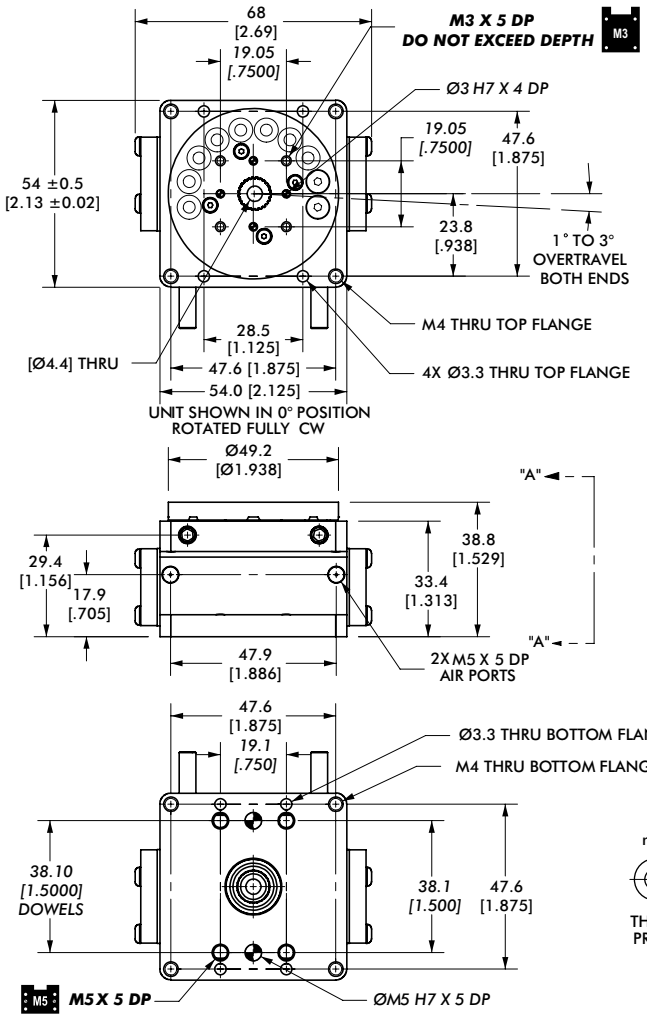
*Sensor and cable sold separately. **Flow Controls recommended for most applications

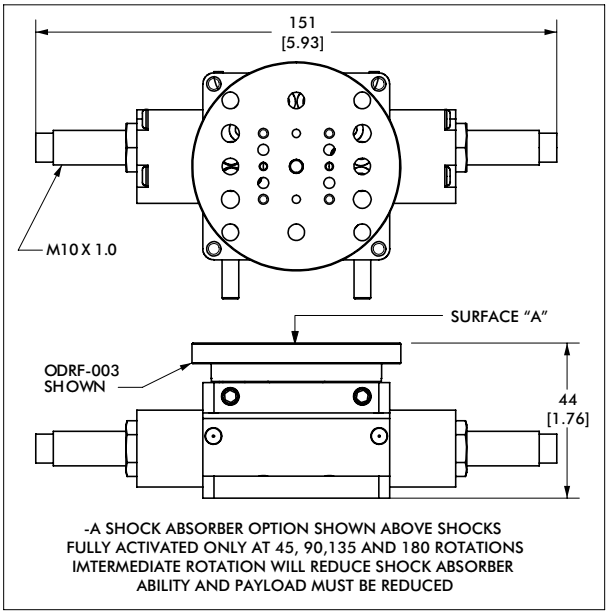
Specifications	Units	075M	094M
Maximum Payload with Shocks (**-A** option)	kg [lb]	0.45 [1.0]	1.4 [3.0]
Maximum Payload without Shocks	kg [lb]	0.23 [0.5]	0.68 [1.5]
Maximum Payload Inertia with Shocks (**-A** option)	Nm sec^2 [in-lbs sec^2]	1.8 X 10^4 [0.0016]	1.3 X 10^3 [0.0111]
Maximum Payload Inertia 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	

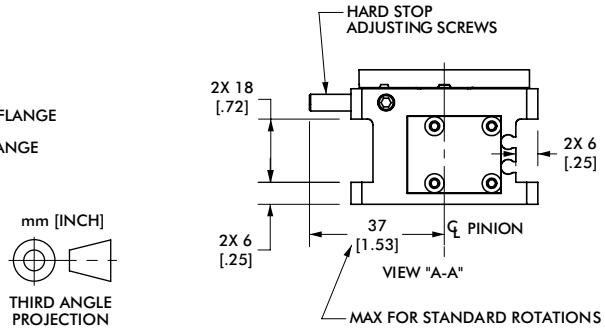
Specifications	Units	106M	131M
Maximum Payload with Shocks (**-A** option)	kg [lb]	3.6 [8.0]	6.8 [15]
Maximum Payload without Shocks	kg [lb]	1.8 [4.0]	3.4 [7.5]
Maximum Payload Inertia with Shocks (**-A** option)	Nm sec^2 [in-lbs sec^2]	4.7 X 10^3 [0.0414]	1.1 X 10^2 [0.0970]
Maximum Payload Inertia 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	

DRF-075M

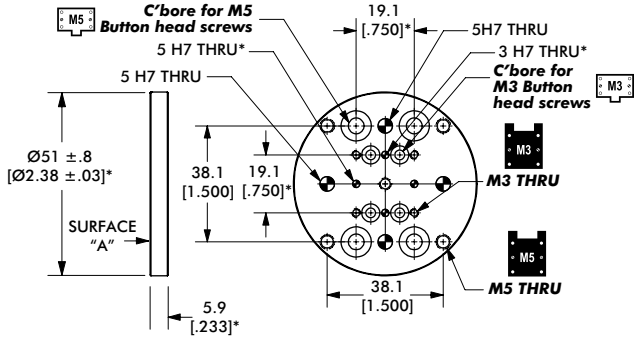
Rotary Actuators | Dimensions and Technical Specifications







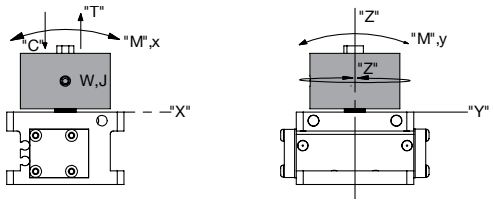
DIRECTCONNECT™ TURNTABLE DIMENSIONS



*DIMENSIONS ALSO APPLY TO BLANK TURNTABLE

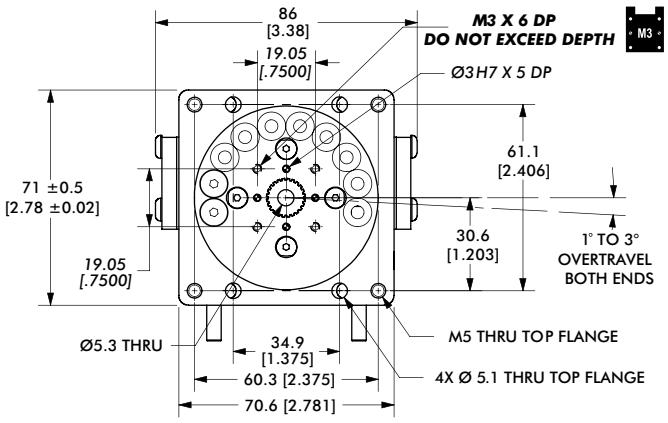
Rotary Accessories	Order #
Blank Turntable	ODRF-002
DIRECTCONNECT™ Turntable	ODRF-004

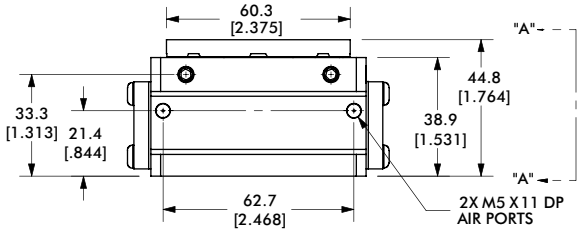
Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-210
Buna-N Shock Seal Repair Kit	SLKT-214

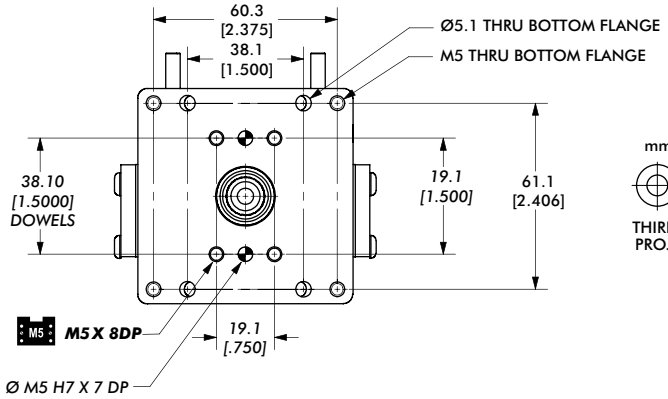


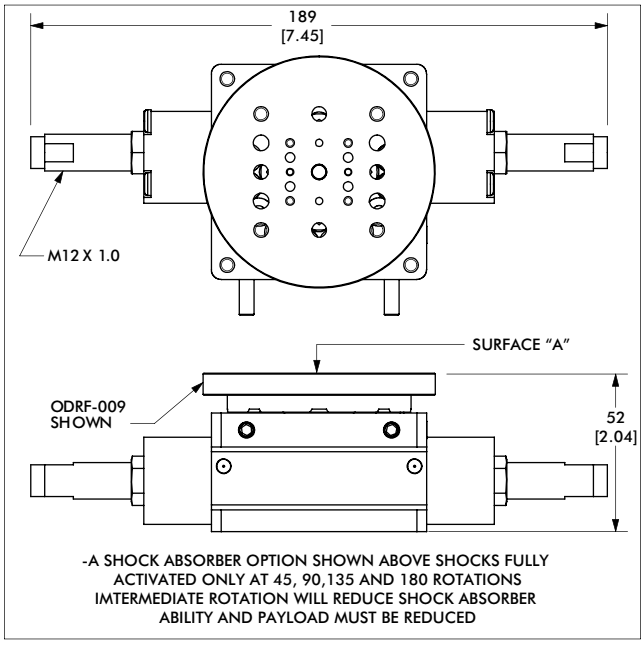
DRF-075M Loading Information	Static
Maximum Tensile **T**	44 N [10 lbs]
Maximum Compressive **C**	89 N [20 lbs]
Maximum Moment $\mathbf{M_x}$	2.3 Nm [20 in-lbs]
Maximum Moment $\mathbf{M_y}$	2.3 Nm [20 in-lbs]
Maximum Payload **W**	0.45 kg [1.0 lbs]
Maximum Inertia **J**	1.8×10^{-4} N-m-sec^2 [0.0016 in-lbs-sec^2]

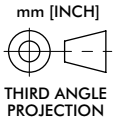
Note: Higher payloads and inertia possible with external shocks and stops.

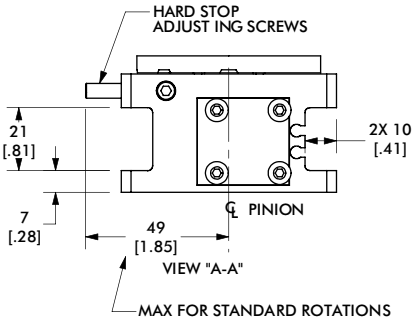




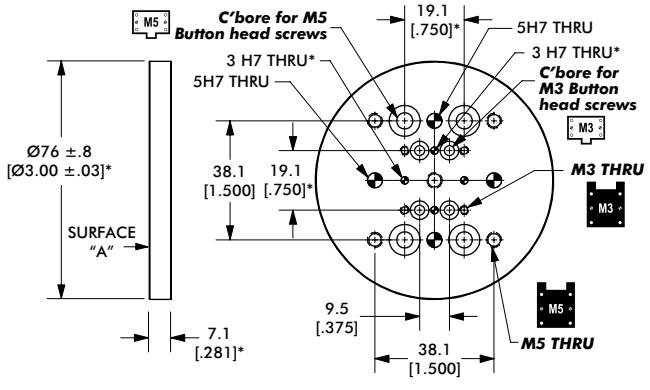








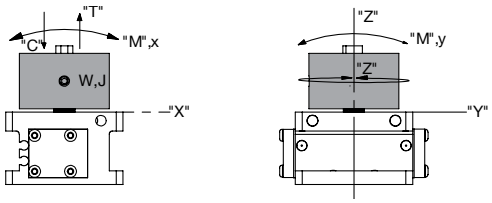
OPTIONAL DIRECTCONNECT™ TURNTABLE DIMENSIONS



*DIMENSIONS ALSO APPLY TO BLANK TURNTABLE

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

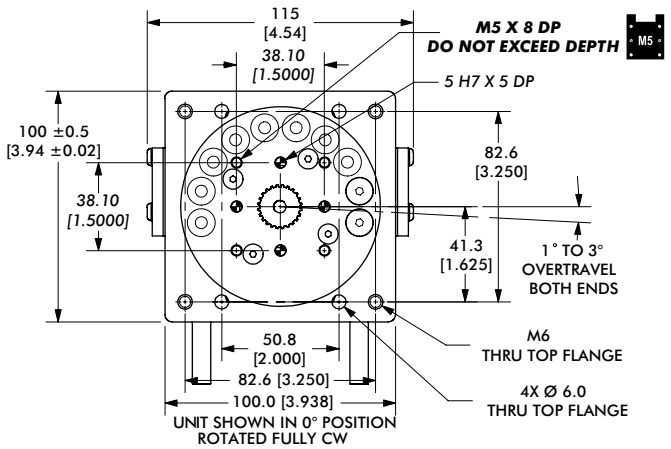


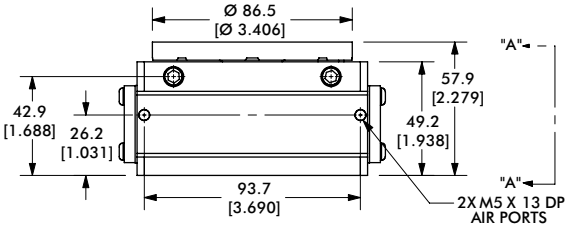
DRF-094M Loading Information	Static
Maximum Tensile **T**	67 N [15 lbs]
Maximum Compressive **C**	133 N [30 lbs]
Maximum Moment $\mathbf{M_x}$	5.6 Nm [50 in-lbs]
Maximum Moment $\mathbf{M_y}$	5.6 Nm [50 in-lbs]
Maximum Payload **W**	1.4 kg [3 lbs]
Maximum Inertia **J**	1.3 X 10^{-3} N-m-sec^2 [0.0111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

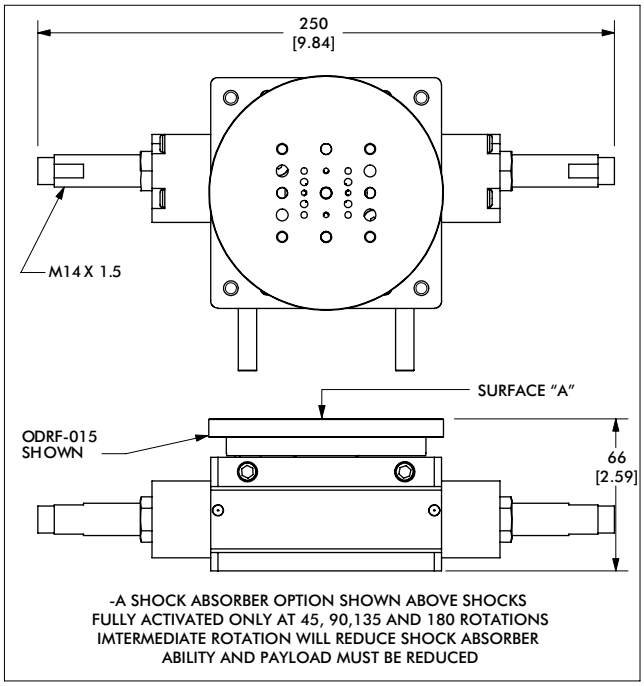
Note: Higher payloads and inertia possible with external shocks and stops.

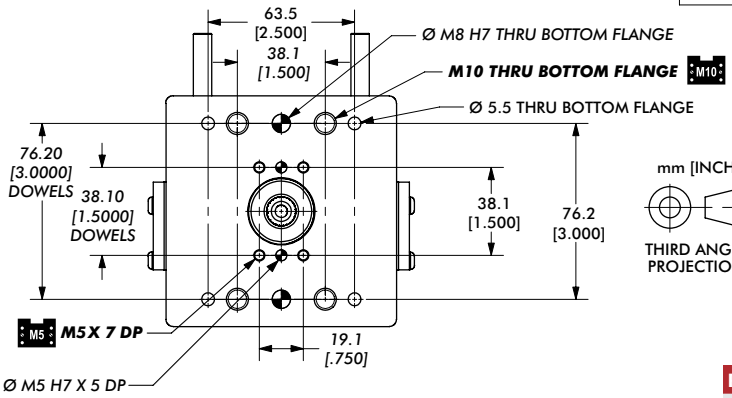
DRF-106M

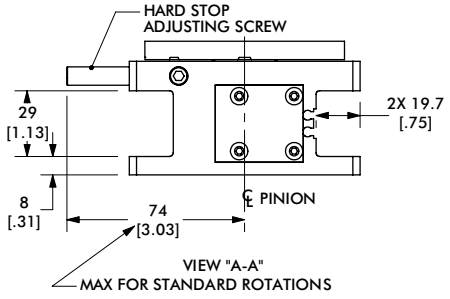
Rotary Actuators | Dimensions and Technical Specifications



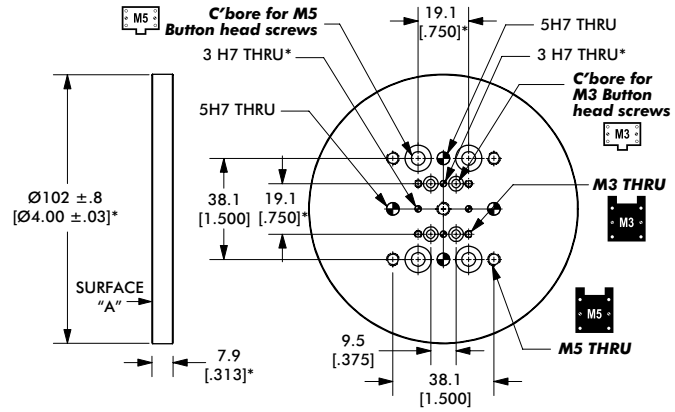








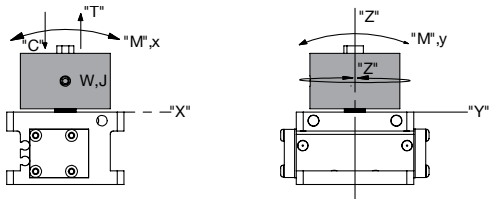
OPTIONAL DIRECTCONNECT™ TURNTABLE DIMENSIONS



*DIMENSIONS ALSO APPLY TO BLANK TURNTABLE

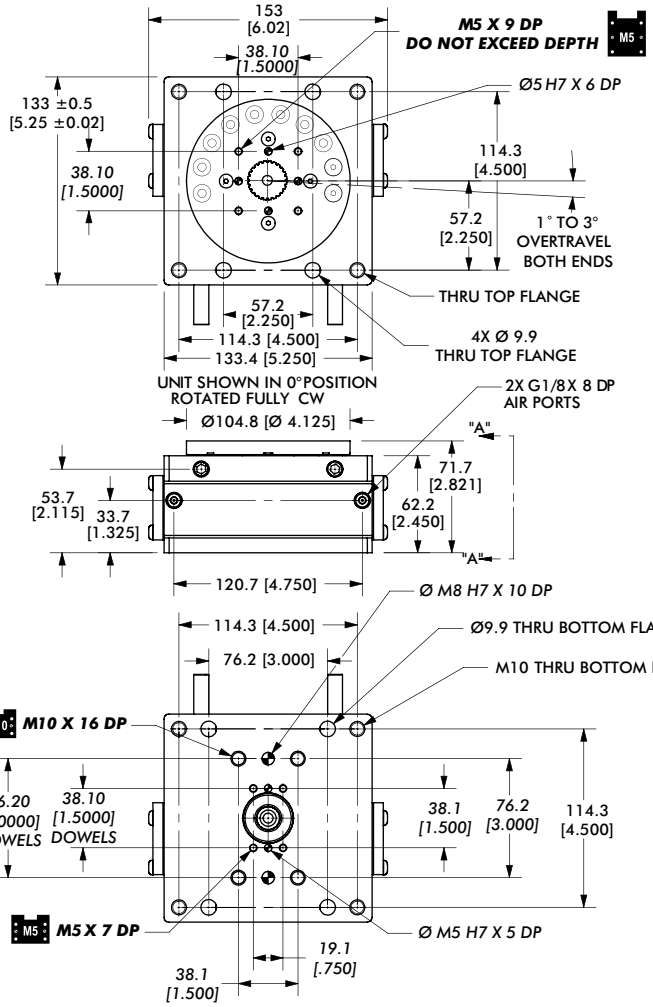
Rotary Accessories	Order #
Blank Turntable	ODRF-014
DIRECTCONNECT™ Turntable	ODRF-016

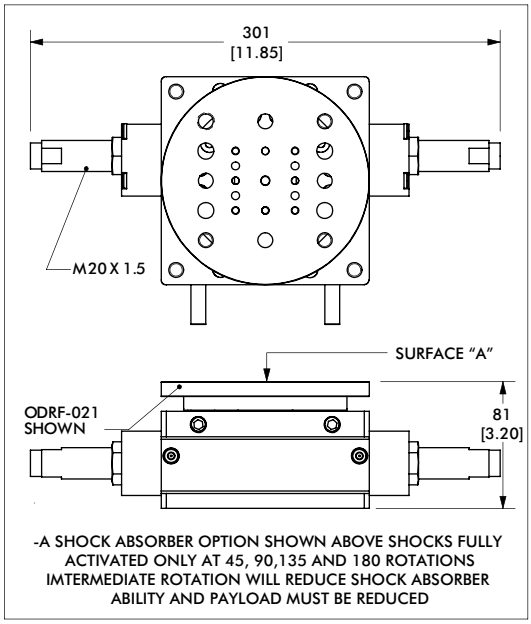
Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-222
Buna-N Shock Seal Repair Kit	SLKT-225

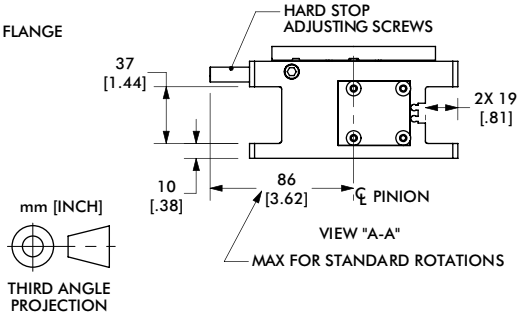


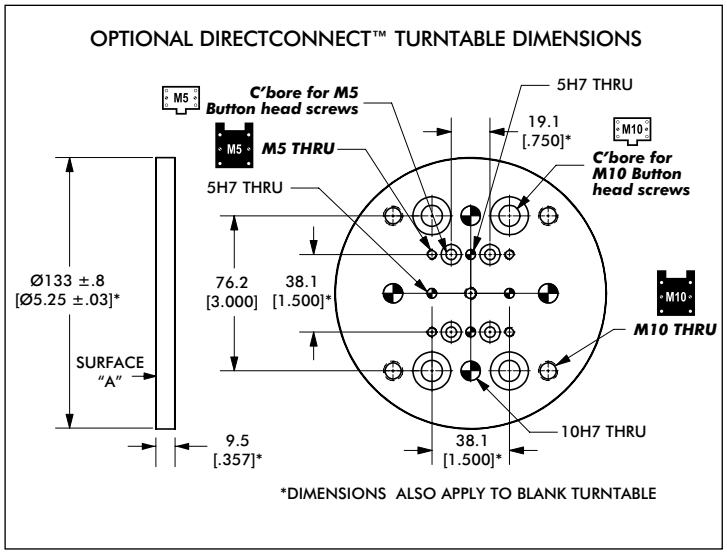
DRF-106M Loading Information	Static
Maximum Tensile **T**	111 N [25 lbs]
Maximum Compressive **C**	89 N [50 lbs]
Maximum Moment M_x	8.5 Nm [75 in-lbs]
Maximum Moment M_y	8.5 Nm [75 in-lbs]
Maximum Payload **W**	3.6 kg [8 lbs]
Maximum Inertia **J**	4.7×10^{-3} N-m-sec^2 [0.0414 in-lbs-sec^2]

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



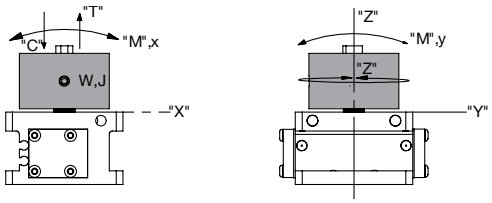






Rotary Accessories	Order #
Blank Turntable	ODRF-020
DIRECTCONNECT™ Turntable	ODRF-022

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 $\mathbf{M_x}$	11.3 Nm [100 in-lbs]
Maximum Moment $\mathbf{M_y}$	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.