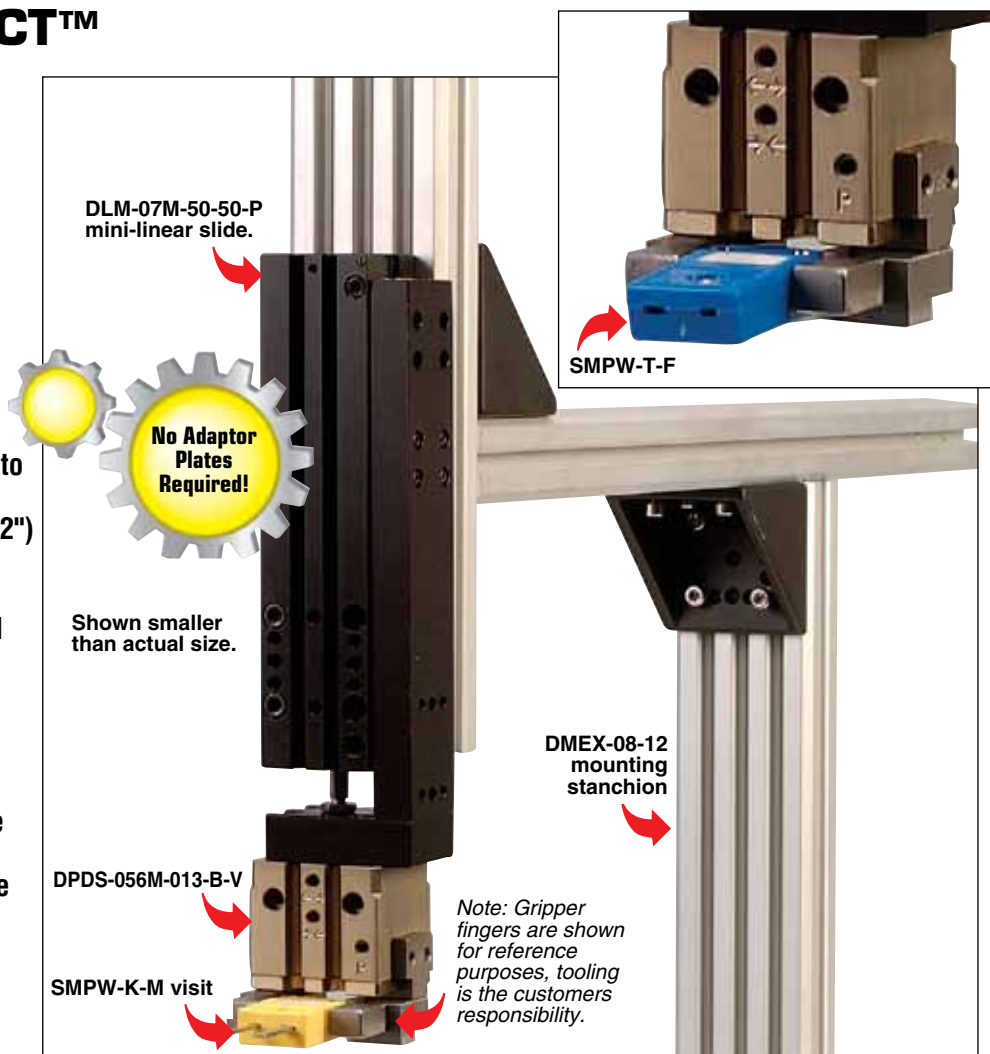


PNEUMATIC DUAL MOTION GRIPPERS DIRECTCONNECT™

DPDS Series

- Multiple Mounting Locations on Top and Back
- Multiple Air Port Locations are Standard
- Full Range Adjustable Magneto Resistive Sensors
- Accuracy of ± 0.05 mm (± 0.002 "")
- Repeatability of ± 0.03 mm (± 0.001 "")
- Grippers Can be Mounted and Operated in Any Orientation
- Up to 5 Million Cycles in Typical Applications
- Up to 10 Million with Maintenance
- Air Pressure Operating Range of 1.5 to 7 bar (20 to 100 psi)
- Temperature Operating Range -35 to 80°C (30 to 180°F)
- Required Air Supply Filter of 40 Micron or Better
- Requires a 4-Way, 2-Position Valve



PRODUCT FEATURES

Hard Coat Anodize

The body and bottom plate have hard-coat anodize 60RC with PTFE impregnation

Sensor Mounting Slots

Standard mounting slots for magneto resistive (sensors sold separately)

Dowel Holes

Slip fit dowel pin holes in body and jaws

Extremely Rugged Design

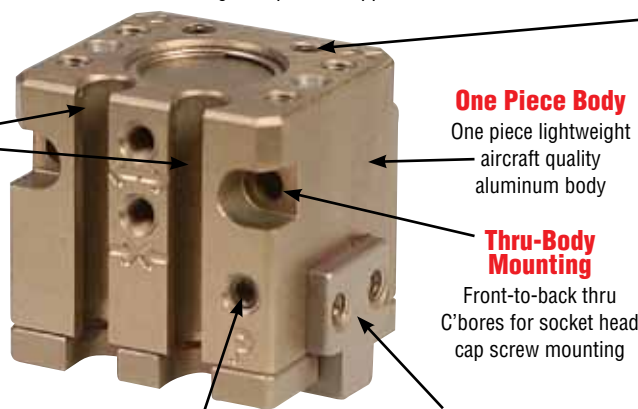
Jaws are supported throughout the length of the body

Corrosion Resistant Hardware (-S) or Clean Room (-CR) Options

Both options have stainless and brass hardware. Clean room option uses clean room grade greases

High Temperature

Optional FKM seals are available for high temperature applications



Purge/Scavenge Port

Used with a vacuum for clean room environments or positive pressure with harsh environments

Jaw Components

Hardened and precision ground steel for minimum jaw play with hard plating for wear resistance and long life

One Piece Body

One piece lightweight aircraft quality aluminum body

Thru-Body Mounting

Front-to-back thru C'bores for socket head cap screw mounting

Manifold Air Ports

Back and top air ports can be O-ring manifold sealed to eliminate air lines

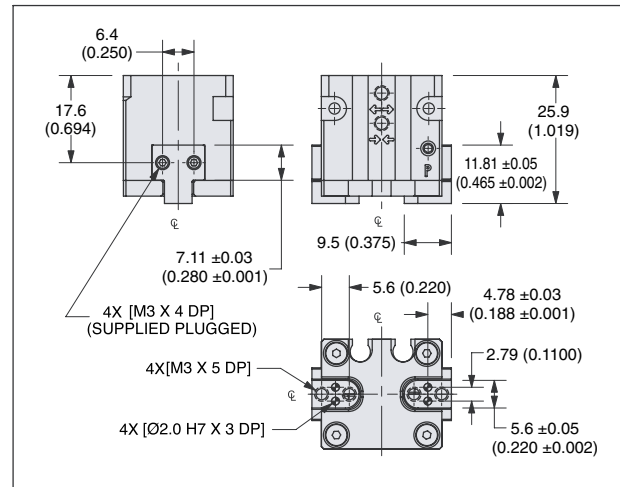
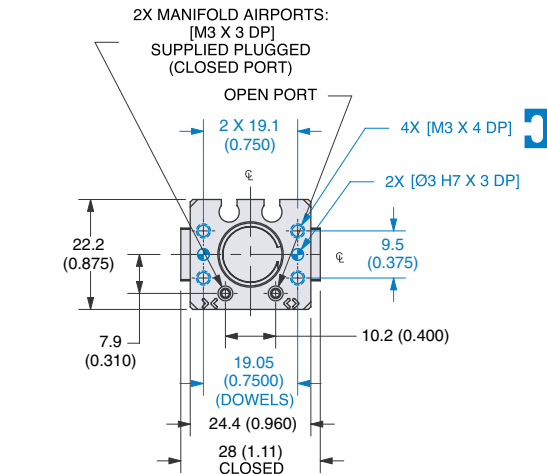
Multiple Air Port Locations

3 standard air port locations (front, back, and top)

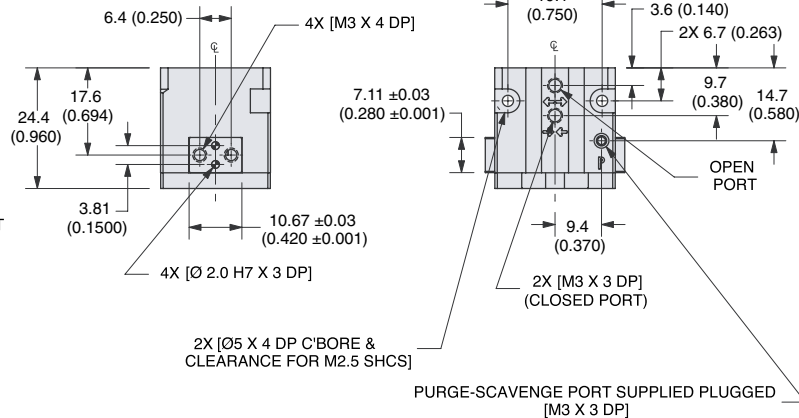
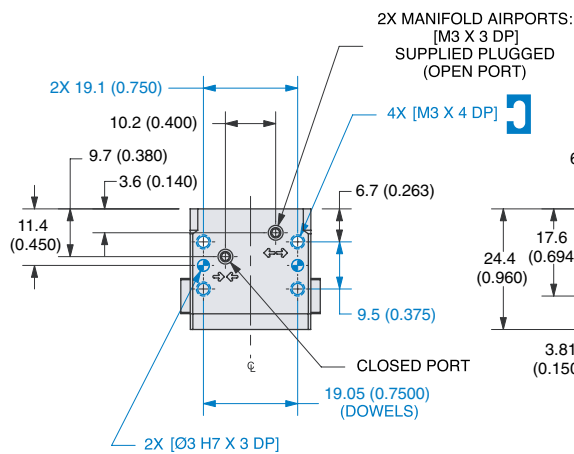
DIRECTCONNECT™ Mounting Patterns

DIRECTCONNECT™ tapped and dowel mounting surfaces on top and back of body

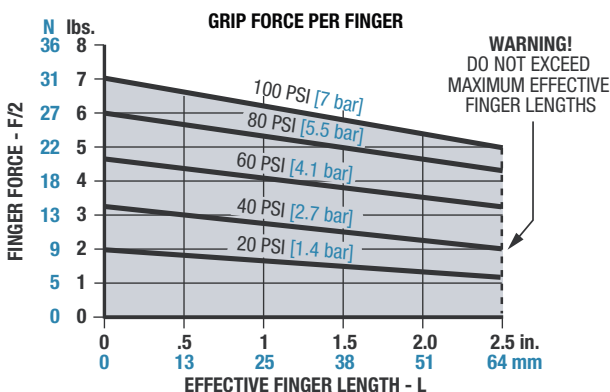
DPDS-047M DIRECTCONNECT™



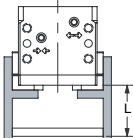
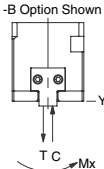
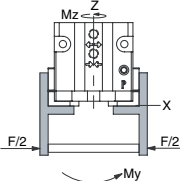
Dimensions: mm (inch)



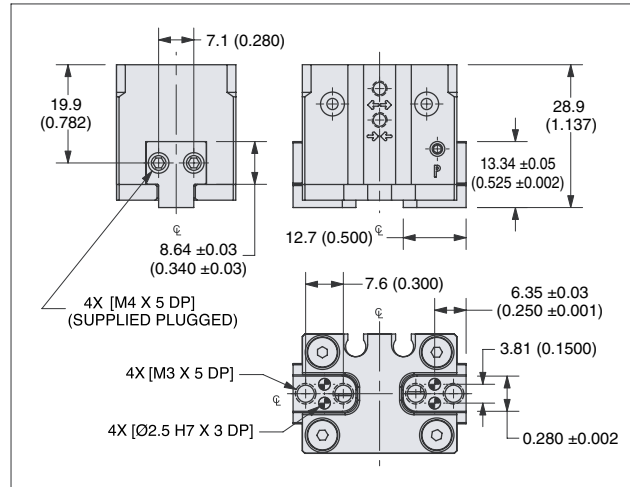
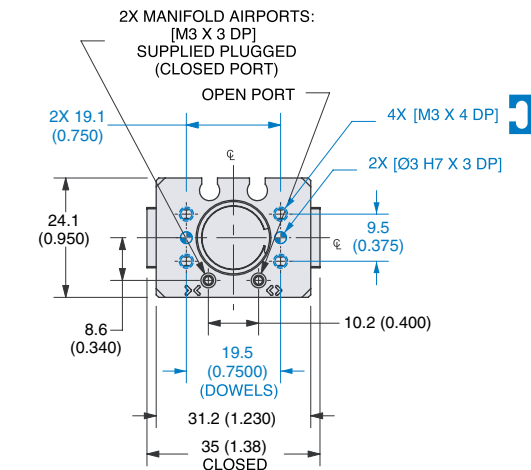
LOADING INFORMATION



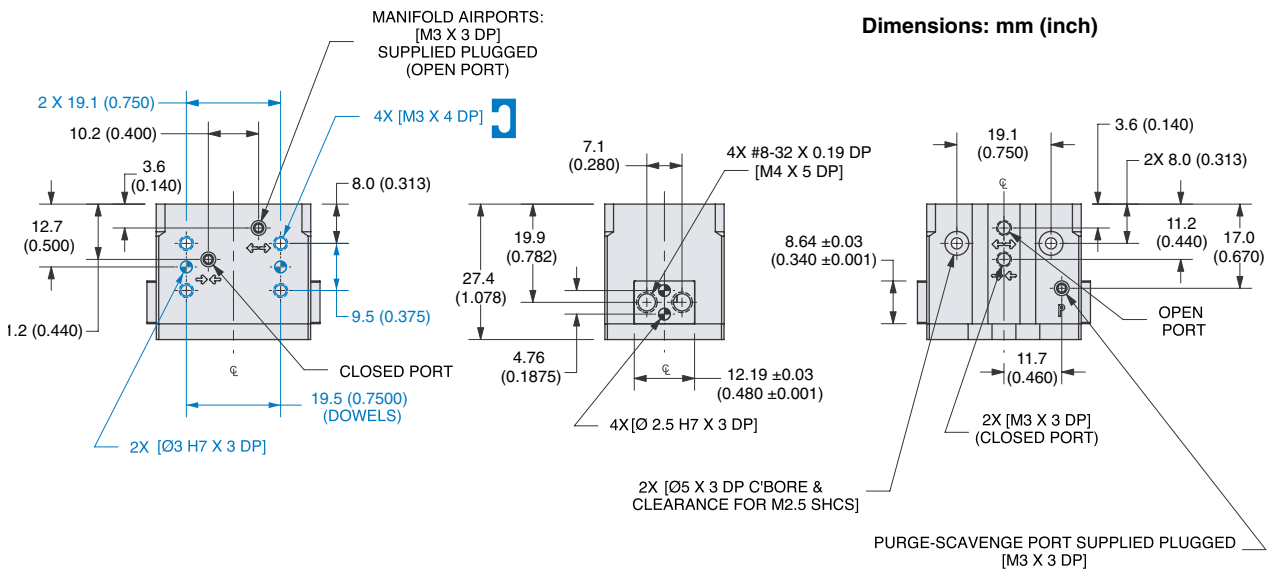
† Capacities are per set of jaws and are not simultaneous.

		
LOADING CAPACITY†		
DPDS-047M		
Maximum Tensile T	134 N (30 lb)	27 N (6 lb)
Maximum Compressive C	223 N (50 lb)	45 N (10 lb)
Maximum Moment Mx	2 Nm (20 inch-lb)	0.6 Nm (5 inch-lb)
Maximum Moment My	2 Nm (20 inch-lb)	0.6 Nm (5 inch-lb)
Maximum Moment Mz	2 Nm (20 inch-lb)	0.6 Nm (5 inch-lb)
DPDS-047M-B (BOTTOM JAW MOUNTING OPTION)		
Maximum Tensile T	107 N (24 lb)	22 N (5 lb)
Maximum Compressive C	178 N (40 lb)	36 N (8 lb)
Maximum Moment Mx	2 Nm (16 inch-lb)	0.5 Nm (4 inch-lb)
Maximum Moment My	2 Nm (16 inch-lb)	0.5 Nm (4 inch-lb)
Maximum Moment Mz	2 Nm (16 inch-lb)	0.5 Nm (4 inch-lb)

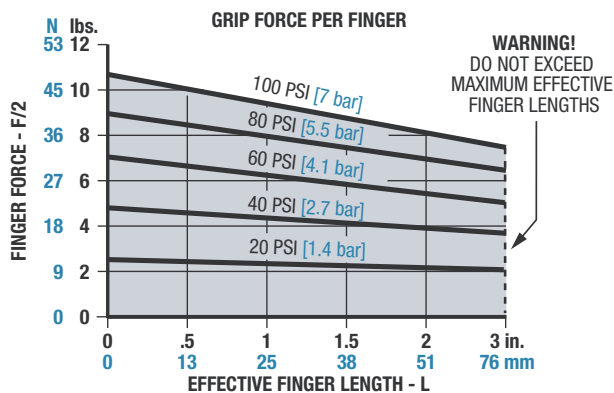
DPDS-056 DIRECTCONNECT™



Dimensions: mm (inch)



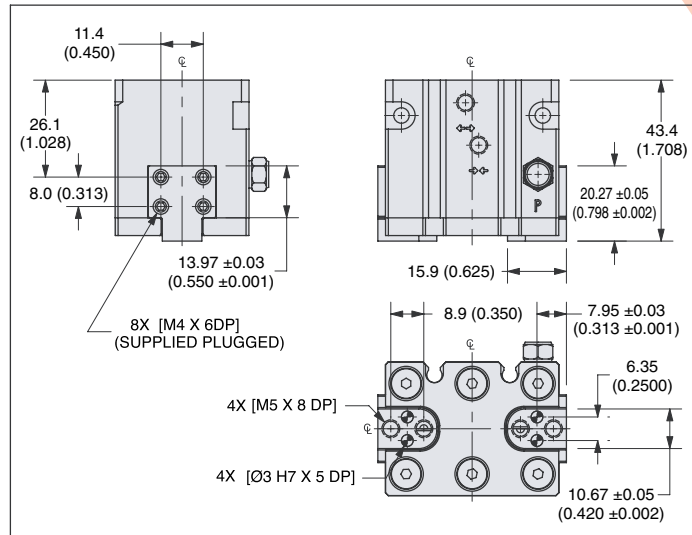
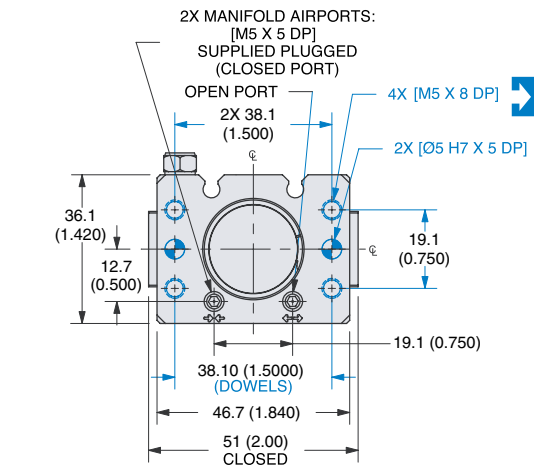
LOADING INFORMATION



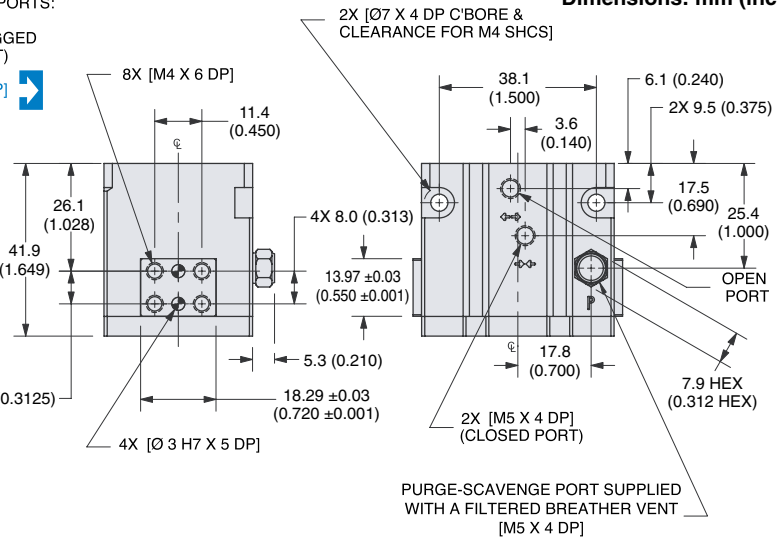
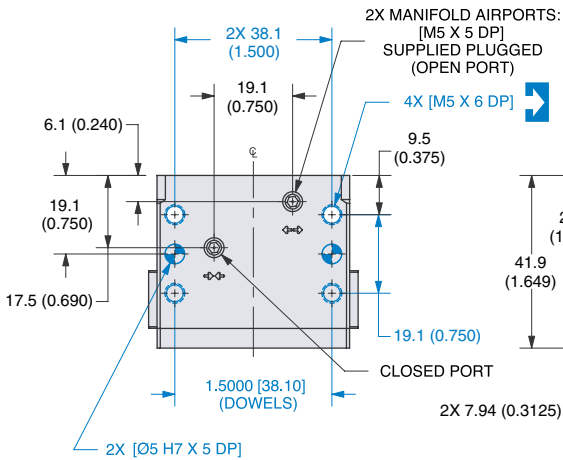
* Capacities are per set of jaws and are not simultaneous.

	-B Option Shown	
	Y	X
	T C	Mx
	F/2	F/2
	Mz	My
LOADING CAPACITY†	STATIC	DYNAMIC
DPDS-056M		
Maximum Tensile T	267 N (60 lb)	45 N (10 lb)
Maximum Compressive C	401 N (90 lb)	67 N (15 lb)
Maximum Moment Mx	5 Nm (40 inch-lb)	0.8 Nm (7 inch-lb)
Maximum Moment My	5 Nm (40 inch-lb)	0.8 Nm (7 inch-lb)
Maximum Moment Mz	5 Nm (40 inch-lb)	0.8 Nm (7 inch-lb)
DPDS-056M-B (BOTTOM JAW MOUNTING OPTION)		
Maximum Tensile T	214 N (48 lb)	36 N (8 lb)
Maximum Compressive C	320 N (72 lb)	53 N (12 lb)
Maximum Moment Mx	4 Nm (32 inch-lb)	1 Nm (6 inch-lb)
Maximum Moment My	4 Nm (32 inch-lb)	1 Nm (6 inch-lb)
Maximum Moment Mz	4 Nm (32 inch-lb)	1 Nm (6 inch-lb)

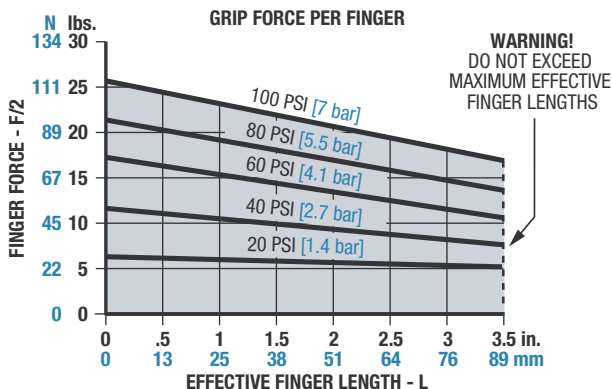
DPDS-088M DIRECTCONNECT™



Dimensions: mm (inch)



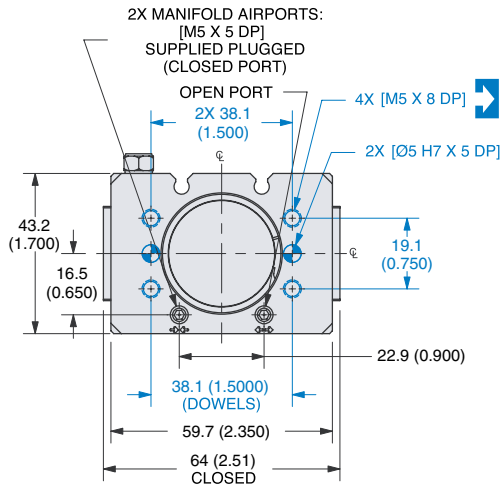
LOADING INFORMATION



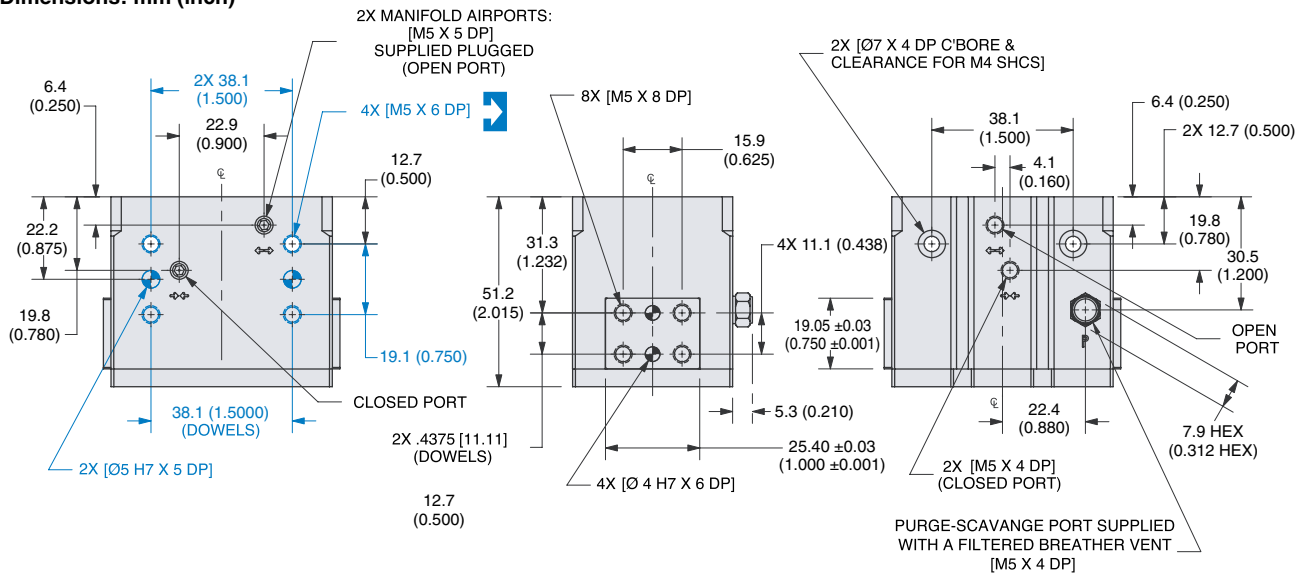
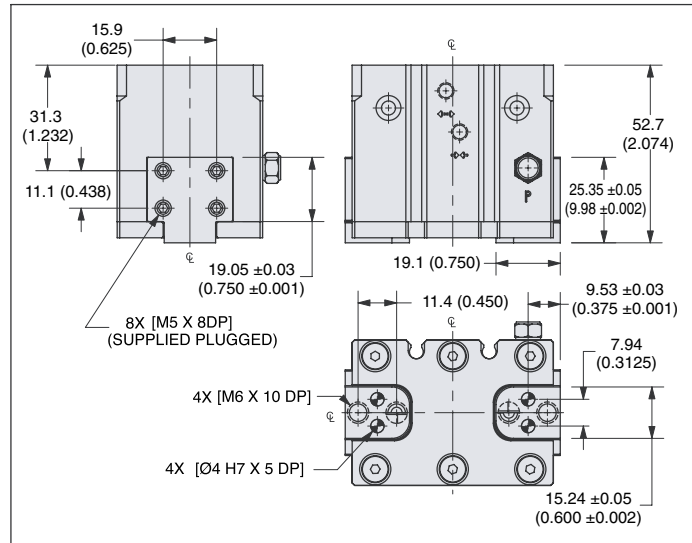
* Capacities are per set of jaws and are not simultaneous.

	STATIC	DYNAMIC
LOADING CAPACITY†		
DPDS-088M		
Maximum Tensile T	614 N (138 lb)	111 N (25 lb)
Maximum Compressive C	1224 N (275 lb)	111 N (25 lb)
Maximum Moment Mx	14 Nm (120 inch-lb)	2 Nm (20 inch-lb)
Maximum Moment My	14 Nm (120 inch-lb)	2 Nm (20 inch-lb)
Maximum Moment Mz	14 Nm (120 inch-lb)	2 Nm (20 inch-lb)
DPDS-088M-B (BOTTOM JAW MOUNTING OPTION)		
Maximum Tensile T	490 N (110 lb)	89 N (20 lb)
Maximum Compressive C	979 N (220 lb)	89 N (20 lb)
Maximum Moment Mx	11 Nm (96 inch-lb)	2 Nm (16 inch-lb)
Maximum Moment My	11 Nm (96 inch-lb)	2 Nm (16 inch-lb)
Maximum Moment Mz	11 Nm (96 inch-lb)	2 Nm (16 inch-lb)

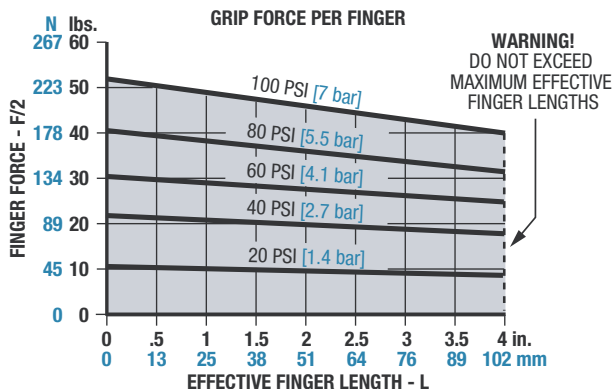
DPDS-125M DIRECTCONNECT™



Dimensions: mm (inch)



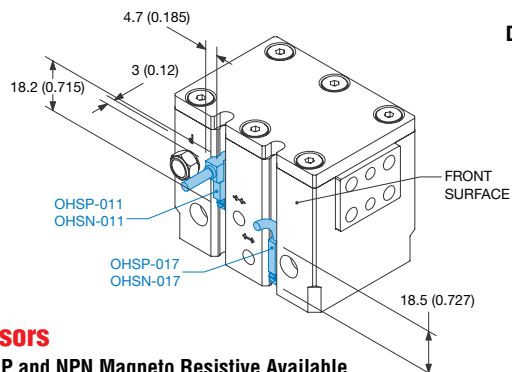
LOADING INFORMATION



* Capacities are per set of jaws and are not simultaneous.

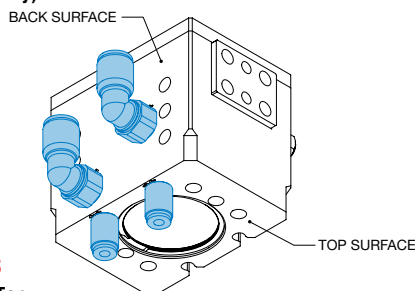
LOADING CAPACITY†		
	STATIC	DYNAMIC
DPDS-125M		
Maximum Tensile T	2225 N (500 lb)	289 N (65 lbs)
Maximum Compressive C	4228 N (950 lb)	289 N (65 lbs)
Maximum Moment Mx	48 Nm (425 inch-lb)	8 Nm (70 inch-lb)
Maximum Moment My	48 Nm (425 inch-lb)	8 Nm (70 inch-lb)
Maximum Moment Mz	48 Nm (425 inch-lb)	8 Nm (70 inch-lb)
DPDS-125M-B (BOTTOM JAW MOUNTING OPTION)		
Maximum Tensile T	1780 N (400 lb)	231 N (52 lbs)
Maximum Compressive C	3382 N (760 lb)	231 N (52 lbs)
Maximum Moment Mx	38 Nm (340 inch-lb)	6 Nm (56 inch-lb)
Maximum Moment My	38 Nm (340 inch-lb)	6 Nm (56 inch-lb)
Maximum Moment Mz	38 Nm (340 inch-lb)	6 Nm (56 inch-lb)

ACCESSORY MOUNTING TECHNICAL DATA



Sensors

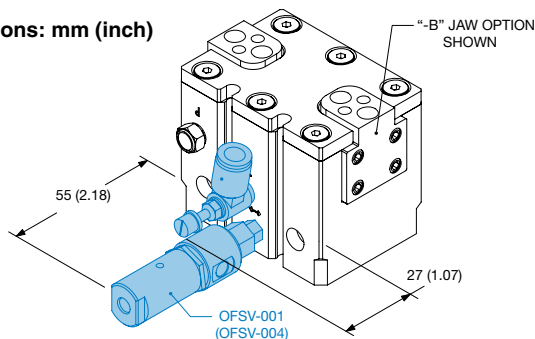
- PNP and NPN Magneto Resistive Available
- Sensors Are Slot Mounted, No Mounting Kits Required
- Simple Adjustment with Slotted Screw Driver
- Built-In LED for Ease of Positioning and Troubleshooting
- Low Profile Underflush Sensor Version or 90° Wire Exit Sensor Version
- Available with 2 or 5 m (6.6 or 16') Quick Disconnect Mating Cable (Order Separately)



Manifold O-Ring Seals

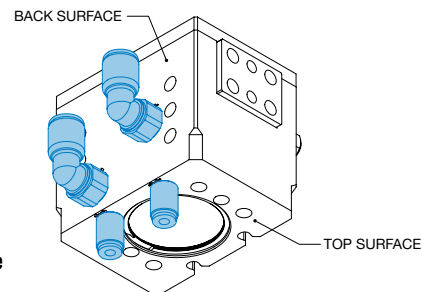
- Can Be Used to Seal Front, Top, or Back Air Ports and Front Purge/Scavenge Port
- Seals in Manifold Kit are FKM
- O-Ring C'Bores in Customer's Mounting Plate Must Be: $\varnothing 7.4 \text{ mm } (\varnothing .290") \times 1.52 \pm 0.05 \text{ mm } (0.060 \pm 0.002") \text{ Deep}$
- Kit is Supplied with All Seals, Plugs, and Wrenches Needed

Dimensions: mm (inch)



Plumbing Fittings

- Adjustable Flow Controls:
 - Have Thumb Screw Adjust with Locking Nut for Adjusting Actuation Time
 - Visit OMEGA for Airline Fittings
- Failsafe Valve for Applications:
 - Where it is Critical that the Part Being Gripped Not Be Dropped if Air Pressure is Lost
 - Can Mount Directly to Gripper or In-Line with Plumbing to Gripper
 - M5 Air Port
- Consult Factory for Additional Plumbing Fittings



Multiple Air Port Locations

- 3 Standard M5 Air Port Locations (Front, Top, and Back Surface)
- Top and Back Air Ports are Plugged as Standard

To Order

MODEL NO.*	STROKE	GRIP FORCE	WEIGHT
DPDS-047M-009-B-V	2.4 mm (0.09")	62 N (14 lb)	0.04 kg (0.086 lb)
DPDS-047M-013-B-V	3.2 mm (0.13")	62 N (14 lb)	0.04 kg (0.086 lb)
DPDS-056M-013-B-V	3.2 mm (0.13")	98 N (22 lb)	0.07 kg (0.155 lb)
DPDS-056M-019-B-V	4.8 mm (0.19")	98 N (22 lb)	0.07 kg (0.155 lb)
DPDS-088M-019-B-V	4.8 mm (0.19")	222 N (50 lb)	0.23 kg (0.51 lb)
DPDS-088M-025-B-V	6.4 mm (0.25")	222 N (50 lb)	0.23 kg (0.51 lb)
DPDS-125M-019-B-V	4.8 mm (0.19")	445 N (100 lb)	0.46 kg (1.03 lb)
DPDS-125M-025-B-V	6.4 mm (0.25")	445 N (100 lb)	0.46 kg (1.03 lb)

* Sensor and cable sold separately.

ACCESSORIES

MODEL NO.	QUANTITY	DESCRIPTION
OHSP-011	1 or 2	PNP magneto resistive sensor (90°) with quick disconnect
OHSN-011	1 or 2	NPN magneto resistive sensor (90°) with quick disconnect
OHSP-017	1 or 2	PNP magneto resistive sensor with quick disconnect
OHSN-017	1 or 2	NPN magneto resistive sensor with quick disconnect
CABL-010	1 or 2	Quick disconnect cable [2 m (6.6') long]
CABL-013	1 or 2	Quick disconnect cable [5 m (16') long]
SLKT-197V	1	Manifold o-ring seal kit (models 047M and 056M only)
SLKT-199V	1	Manifold o-ring seal kit (models 088M and 125M only)
OFSV-004	1	Fail safe valve (models 088M and 125M only)

Ordering Example: DPDS-056M-B-019-V, dual gripper DirectConnect™, 4.8 mm (0.19") stroke, OHSP-011, two PNP sensors with quick disconnect, two CABL-010, quick disconnect 2 m (6.6') cables, and one SLKT-197V, manifold kit.