



# PNEUMATIC DUAL MOTION GRIPPERS DIRECTCONNECT™



DPDS Series  
Starts at  
**\$431**



- Multiple Mounting Locations on Top and Back
- Multiple Air Port Locations are Standard
- Full Range Adjustable Magneto Resistive Sensors
- Accuracy of  $\pm 0.05$  mm ( $\pm 0.002$ " )
- Repeatability of  $\pm 0.03$  mm ( $\pm 0.001$ " )
- 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

DLM-07M-50-50-P  
mini-linear slide,  
\$261, see  
[omegamation.com](http://omegamation.com)

No Adaptor  
Plates  
Required!

Shown smaller  
than actual size.

DPDS-056M-013-B-V,  
\$449

SMPW-K-M, \$1.75, see  
[omegamation.com](http://omegamation.com)



SMPW-T-F, \$2.25, see [omegamation.com](http://omegamation.com)

DMEX-08-12  
mounting  
stanchion,  
\$36, see  
[omegamation.com](http://omegamation.com)

Note: Gripper  
fingers are shown  
for reference  
purposes, tooling is  
the customers  
responsibility.

## 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

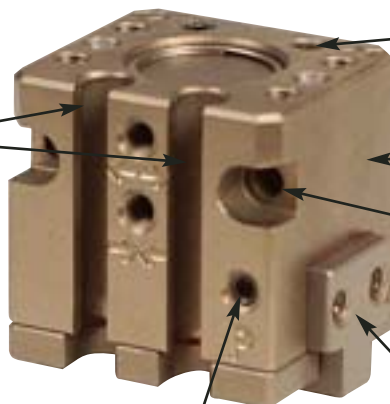
Jaws are supported throughout the length of the body

### 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

### 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

### Jaw Components

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

### Manifold Air Ports

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

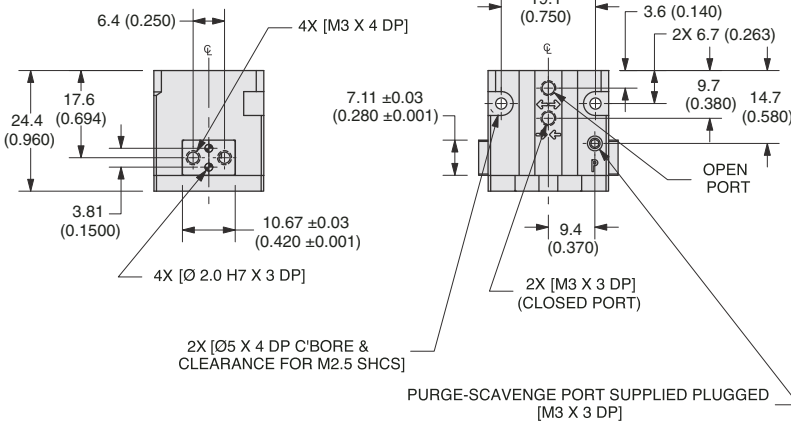
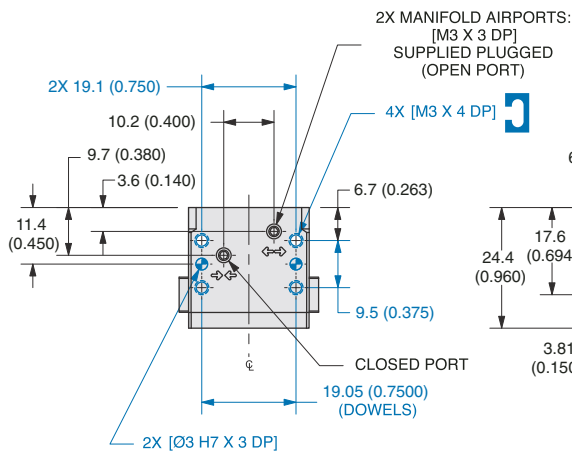
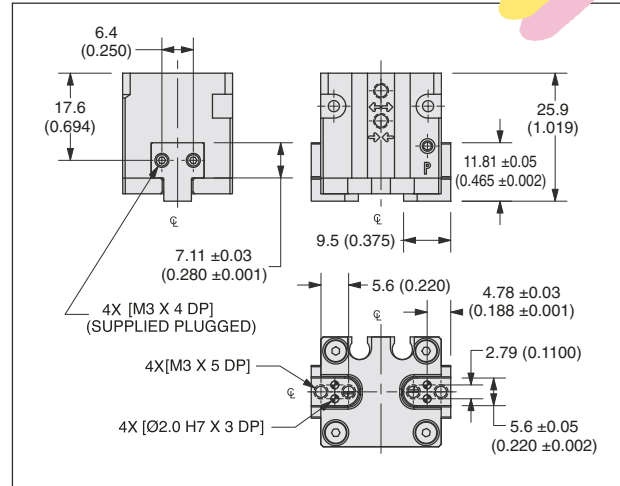
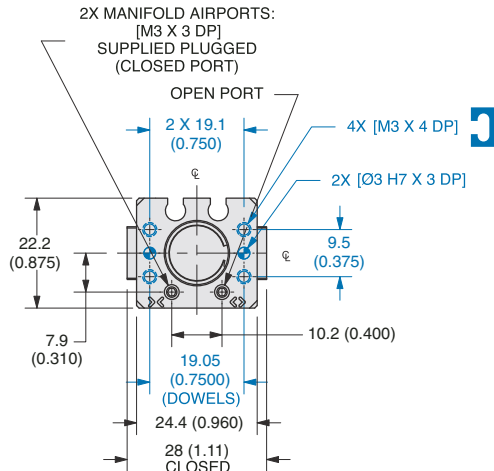
### Multiple Air Port Locations

3 standard airport locations (front, back, and top)

### DIRECTCONNECT™ Mounting Patterns

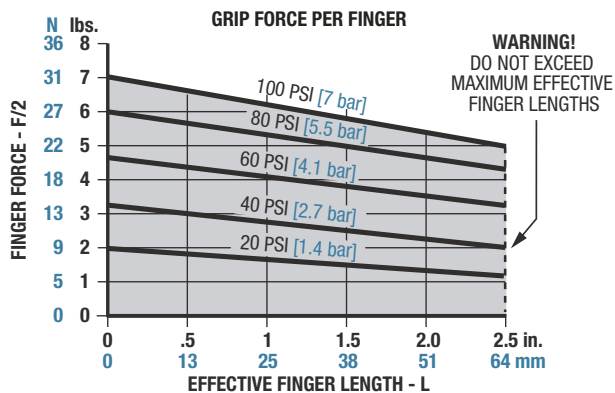
DIRECTCONNECT™ tapped and dowel mounting surfaces on top and back of body

# DPDS-047M DIRECTCONNECT™



Dimensions: mm (in)

## LOADING INFORMATION

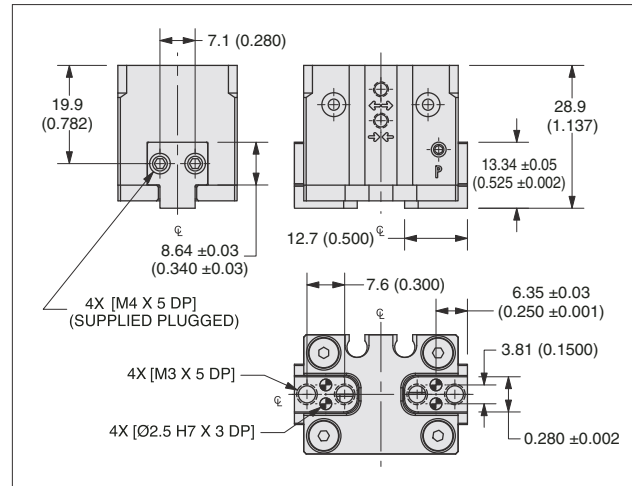
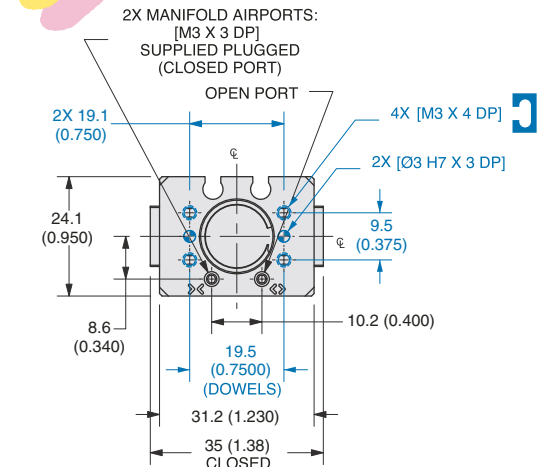


\* Capacities are per set of jaws and are not simultaneous.

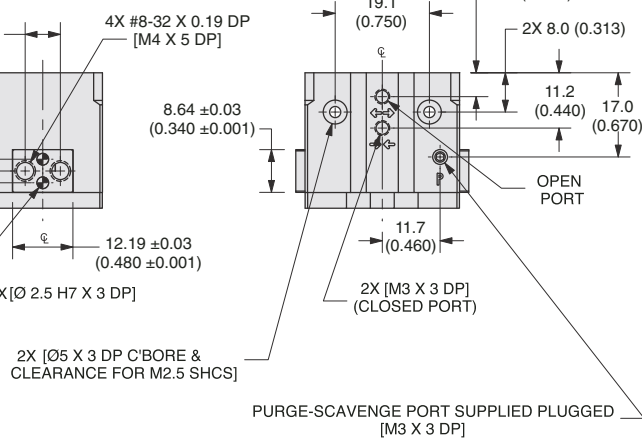
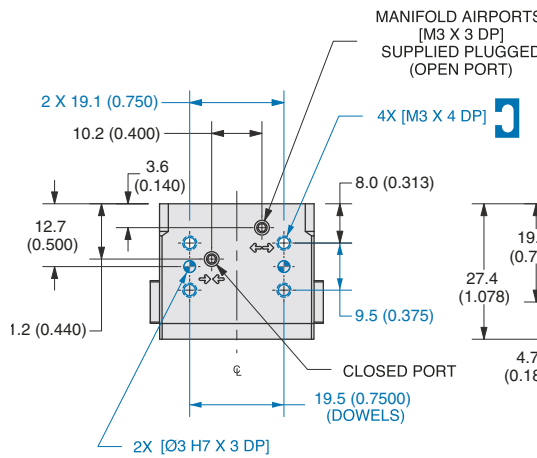
LOADING CAPACITY†		
DPDS-047M		
Maximum Tensile <b>T</b>	134 N (30 lb)	27 N (6 lb)
Maximum Compressive <b>C</b>	223 N (50 lb)	45 N (10 lb)
Maximum Moment <b>M<sub>x</sub></b>	2 Nm (20 in-lb)	0.6 Nm (5 in-lb)
Maximum Moment <b>M<sub>y</sub></b>	2 Nm (20 in-lb)	0.6 Nm (5 in-lb)
Maximum Moment <b>M<sub>z</sub></b>	2 Nm (20 in-lb)	0.6 Nm (5 in-lb)
DPDS-047M-B (BOTTOM JAW MOUNTING OPTION)		
Maximum Tensile <b>T</b>	107 N (24 lb)	22 N (5 lb)
Maximum Compressive <b>C</b>	178 N (40 lb)	36 N (8 lb)
Maximum Moment <b>M<sub>x</sub></b>	2 Nm (16 in-lb)	0.5 Nm (4 in-lb)
Maximum Moment <b>M<sub>y</sub></b>	2 Nm (16 in-lb)	0.5 Nm (4 in-lb)
Maximum Moment <b>M<sub>z</sub></b>	2 Nm (16 in-lb)	0.5 Nm (4 in-lb)



# DPDS-056 DIRECTCONNECT™

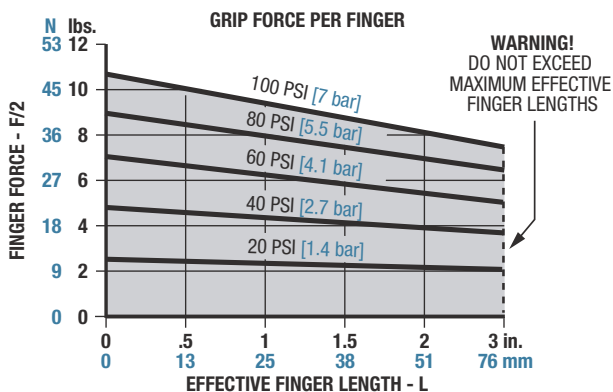


Dimensions: mm (in)



PURGE-SCAVENGE PORT SUPPLIED PLUGGED [M3 X 3 DP]

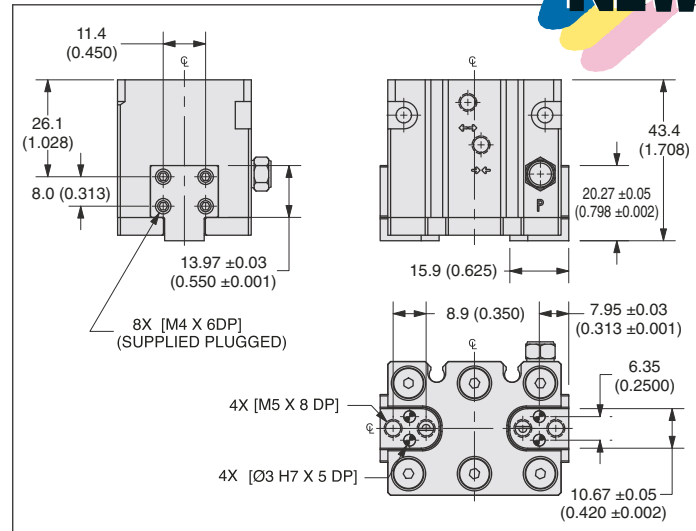
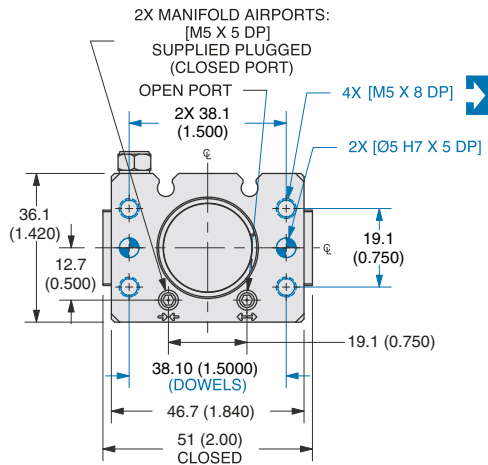
## LOADING INFORMATION



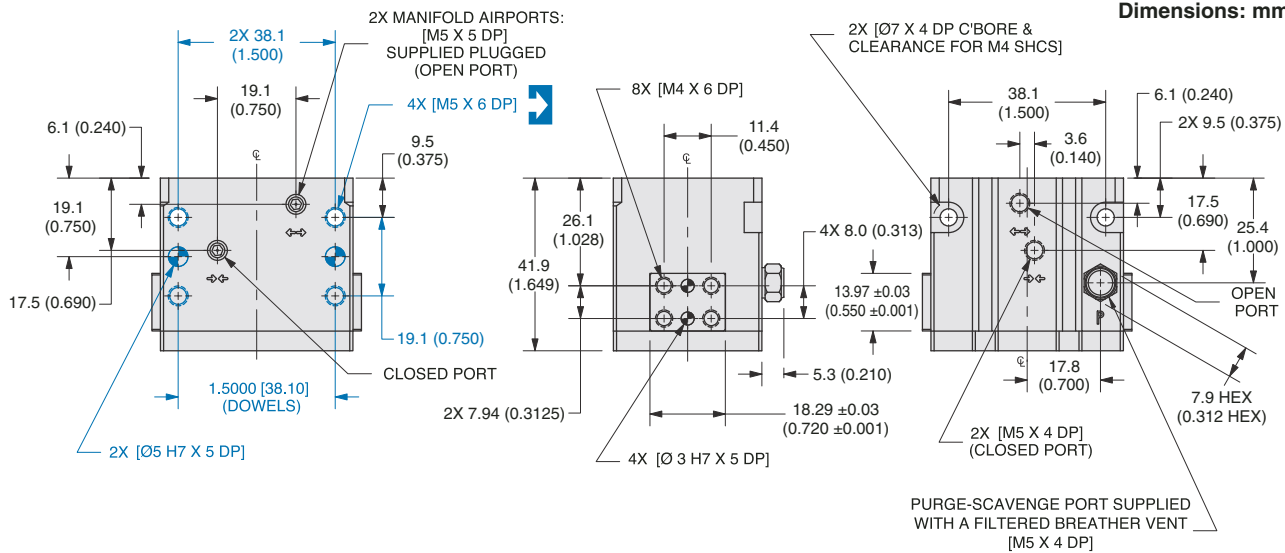
\* Capacities are per set of jaws and are not simultaneous.

LOADING CAPACITY*		
DPDS-056M		
Maximum Tensile <b>T</b>	267 N (60 lb)	45 N (10 lb)
Maximum Compressive <b>C</b>	401 N (90 lb)	67 N (15 lb)
Maximum Moment <b>M<sub>x</sub></b>	5 Nm (40 in-lb)	0.8 Nm (7 in-lb)
Maximum Moment <b>M<sub>y</sub></b>	5 Nm (40 in-lb)	0.8 Nm (7 in-lb)
Maximum Moment <b>M<sub>z</sub></b>	5 Nm (40 in-lb)	0.8 Nm (7 in-lb)
DPDS-056M-B (BOTTOM JAW MOUNTING OPTION)		
Maximum Tensile <b>T</b>	214 N (48 lb)	36 N (8 lb)
Maximum Compressive <b>C</b>	320 N (72 lb)	53 N (12 lb)
Maximum Moment <b>M<sub>x</sub></b>	4 Nm (32 in-lb)	1 Nm (6 in-lb)
Maximum Moment <b>M<sub>y</sub></b>	4 Nm (32 in-lb)	1 Nm (6 in-lb)
Maximum Moment <b>M<sub>z</sub></b>	4 Nm (32 in-lb)	1 Nm (6 in-lb)

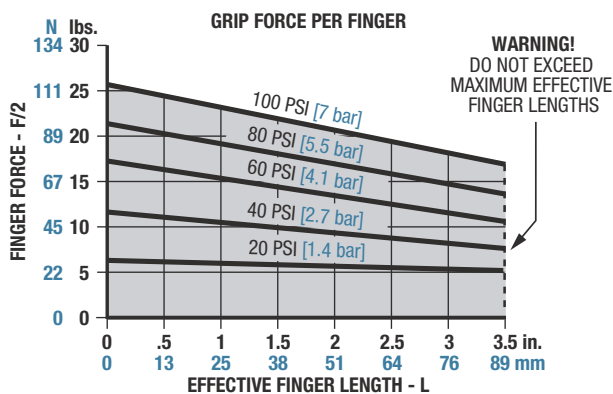
# DPDS-088M DIRECTCONNECT™



Dimensions: mm (in)

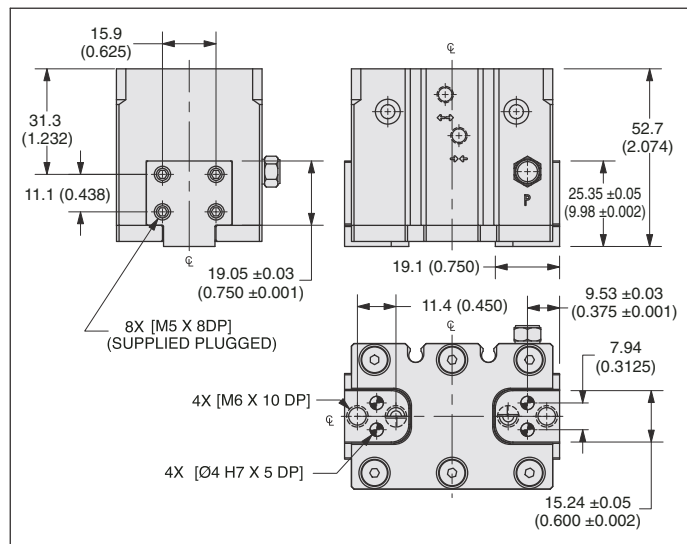


## LOADING INFORMATION



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

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



Dimensions: mm (in)

2X MANIFOLD AIRPORTS:  
[M5 X 5 DP]  
SUPPLIED PLUGGED  
(OPEN PORT)

4X [M5 X 6 DP]

6.4 (0.250)

2X 38.1 (1.500)

22.9 (0.900)

12.7 (0.500)

22.2 (0.875)

19.8 (0.780)

38.1 (1.500) (DOWELS)

2X [Ø5 H7 X 5 DP]

19.1 (0.750)

CLOSED PORT

2X .4375 [11.11] (DOWELS)

12.7 (0.500)

8X [M5 X 8 DP]

15.9 (0.625)

31.3 (1.232)

51.2 (2.015)

4X [Ø 4 H7 X 6 DP]

5.3 (0.210)

25.40 ±0.03 (1.000 ±0.001)

19.05 ±0.03 (0.750 ±0.001)

4X 11.1 (0.438)

2X [Ø7 X 4 DP C'BORE & CLEARANCE FOR M4 SHCS]

38.1 (1.500)

4.1 (0.160)

6.4 (0.250)

2X 12.7 (0.500)

19.8 (0.780)

30.5 (1.200)

OPEN PORT

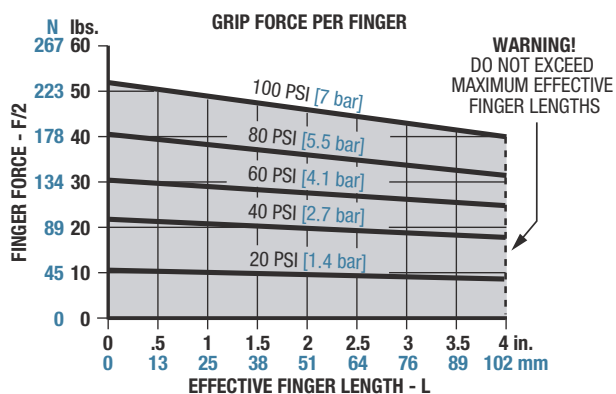
7.9 HEX (0.312 HEX)

22.4 (0.880)

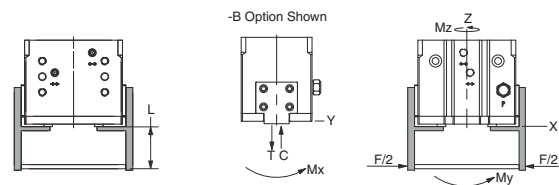
2X [M5 X 4 DP] (CLOSED PORT)

PURGE-SCAVANGE PORT SUPPLIED WITH A FILTERED BREATHER VENT [M5 X 4 DP]

## LOADING INFORMATION



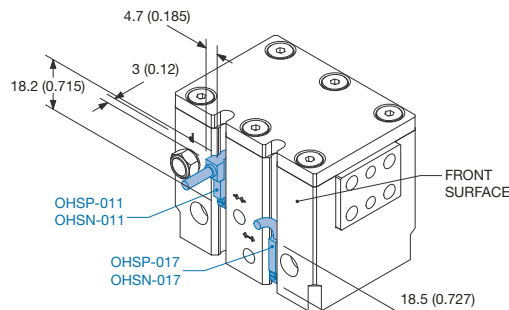
<sup>†</sup> Capacities are per set of jaws and are not simultaneous.



LOADING CAPACITY†	STATIC	DYNAMIC
<b>DPDS-125M</b>		
Maximum Tensile <b>T</b>	2225 N (500 lb)	289 N (65 lbs)
Maximum Compressive <b>C</b>	4228 N (950 lb)	289 N (65 lbs)
Maximum Moment <b>M<sub>x</sub></b>	48 Nm (425 in-lb)	8 Nm (70 in-lb)
Maximum Moment <b>M<sub>y</sub></b>	48 Nm (425 in-lb)	8 Nm (70 in-lb)
Maximum Moment <b>M<sub>z</sub></b>	48 Nm (425 in-lb)	8 Nm (70 in-lb)
<b>DPDS-125M-B (BOTTOM JAW MOUNTING OPTION)</b>		
Maximum Tensile <b>T</b>	1780 N (400 lb)	231 N (52 lbs)
Maximum Compressive <b>C</b>	3382 N (760 lb)	231 N (52 lbs)
Maximum Moment <b>M<sub>x</sub></b>	38 Nm (340 in-lb)	6 Nm (56 in-lb)
Maximum Moment <b>M<sub>y</sub></b>	38 Nm (340 in-lb)	6 Nm (56 in-lb)
Maximum Moment <b>M<sub>z</sub></b>	38 Nm (340 in-lb)	6 Nm (56 in-lb)

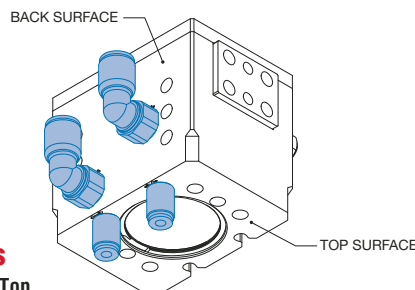


# ACCESSORY MOUNTING TECHNICAL DATA



## Sensors

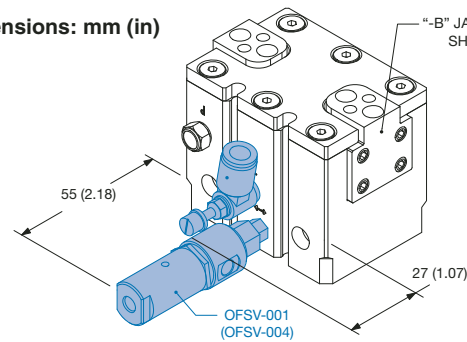
- PNP and NPN Magneto Resistive Available
- Sensors Are Slot Mounted, No Mounting Kits Required
- Simple Adjustment with Slotted Screw Driver
- Built-In LED for Ease of Positioning and Troubleshooting
- Low Profile Underflush Sensor Version or 90° Wire Exit Sensor Version
- Available with 2 or 5 m (6 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:  $\varnothing 7.4 \text{ mm } (\varnothing .290") \times 1.52 \pm 0.05 \text{ mm } (0.060 \pm 0.002")$  Deep
- Kit is Supplied with All Seals, Plugs, and Wrenches Needed

Dimensions: mm (in)

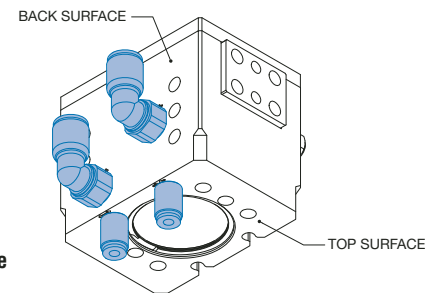


## Plumbing Fittings

- Adjustable Flow Controls:
  - Have Thumb Screw Adjust with Locking Nut for Adjusting Actuation Time
  - See C-67 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 (Specify Model Number)

## MOST POPULAR MODELS HIGHLIGHTED!

MODEL NO.*	PRICE	STROKE	GRIP FORCE	WEIGHT
DPDS-047M-009-B-V	\$431	2.4 mm (0.09")	62 N (14 lb)	0.04 kg (0.086 lb)
DPDS-047M-013-B-V	431	3.2 mm (0.13")	62 N (14 lb)	0.04 kg (0.086 lb)
DPDS-056M-013-B-V	449	3.2 mm (0.13")	98 N (22 lb)	0.07 kg (0.155 lb)
DPDS-056M-019-B-V	449	4.8 mm (0.19")	98 N (22 lb)	0.07 kg (0.155 lb)
DPDS-088M-019-B-V	579	4.8 mm (0.19")	222 N (50 lb)	0.23 kg (0.51 lb)
DPDS-088M-025-B-V	579	6.4 mm (0.25")	222 N (50 lb)	0.23 kg (0.51 lb)
DPDS-125M-019-B-V	694	4.8 mm (0.19")	445 N (100 lb)	0.46 kg (1.03 lb)
DPDS-125M-025-B-V	694	6.4 mm (0.25")	445 N (100 lb)	0.46 kg (1.03 lb)

\* Sensor and cable sold separately.

## ACCESSORIES

MODEL NO.	PRICE	QUANTITY	DESCRIPTION
OHSP-011	\$63	1 or 2	PNP magneto resistive sensor (90°) with quick disconnect
OHSN-011	63	1 or 2	NPN magneto resistive sensor (90°) with quick disconnect
OHSP-017	63	1 or 2	PNP magneto resistive sensor with quick disconnect
OHSN-017	63	1 or 2	NPN magneto resistive sensor with quick disconnect
CABL-010	23	1 or 2	Quick disconnect cable [2 m (6') long]
CABL-013	26	1 or 2	Quick disconnect cable [5 m (16') long]
SLKT-197V	24	1	Manifold o-ring seal kit (models 047M and 056M only)
SLKT-199V	26	1	Manifold o-ring seal kit (models 088M and 125M only)
OFSV-004	58	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, \$449, OHSP-011, two PNP sensors with quick disconnect, \$126, two CABL-010, quick disconnect 2 m (6') cables, \$46 and one SLKT-197V, manifold kit, \$24, \$449 + 63 x 2 + 23 x 2 + 24 = \$645.

# omega.co.uk®

*Your One-Stop Source for Process Measurement and Control!*

Freephone 0800 488 488 | International +44(0) 161 777 6622 | Fax +44(0) 161 777 6622 | Sales@omega.co.uk

**www.omega.co.uk**



#### UNITED STATES

[www.omega.com](http://www.omega.com)

1-800-TC-OMEGA  
Stamford, CT.

#### CANADA

[www.omega.ca](http://www.omega.ca)

Laval(Quebec)  
1-800-TC-OMEGA

#### GERMANY

[www.omega.de](http://www.omega.de)

Deckenpfronn, Germany  
0800-8266342

#### UNITED KINGDOM

[www.omega.co.uk](http://www.omega.co.uk)

Manchester, England  
0800-488-488  
+44-(0)161-777-6611

#### FRANCE

[www.omega.fr](http://www.omega.fr)

0800-466-342

#### BENELUX

[www.omega.nl](http://www.omega.nl)

0800-099-33-44



## ***More than 100,000 Products Available!***

### • Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders, Relative Humidity Measurement Instruments, PT100 Probes, PT100 Elements, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples, Thermowells and Head and Well Assemblies, Transmitters, Thermocouple Wire, RTD Probes

### • Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

### • pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

### • Data Acquisition

Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers, Plug-in Cards, Signal Conditioners, USB, RS232, RS485, Ethernet and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

### • Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Pressure Transmitters, Strain Gauges, Torque Transducers, Valves

### • Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters