

Metric Double Acting *M 9 D [Stroke] [Mounting]*

Standard Strokes (mm): 12.5, 25, 37.5, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300 (*Custom strokes also available*)

Mounting Options: (N) Nose Mount, (U) Universal Mount, (S) Front & Rear Stud Mount, (D) Double Rod

Use external stops. Do not bottom out the piston under pressure as it can damage the unit!

Dimensional

Bore Diameter: 9.3 mm

Piston Area (Push Direction): 67.7 mm²

Piston Area (Pull Direction): 60 mm²

Rod Diameter: 3.2 mm

Output: Double acting (push and pull)

Push Force (N) = Supply pressure (MPa) x 67.7
47.4 N maximum at 0.7 MPa

Pull Force (N) = Supply pressure (MPa) x 60
42 N maximum at 0.7 MPa

Piston Friction: 2% of load typical (without side load)

Supply: Clean, Dry Unlubricated Air

Pressure Range: Full vacuum to 0.7 MPa

Minimum pressure required for actuation: <0.0035 MPa

Filtration: 5-micron particle filter (coalescing filter recommended)

Leak

Piston Leak <1.16 standard L/min at 0.34 MPa

Rod Seal Leak <2.2 standard L/min 0.34 MPa

Environment

Temperature Range: -20 °C to +100 °C (standard configuration)
-40 °C to +150 °C (extreme temperature configuration)

Mass

(N) Nose Mount

Total Mass (g) = 31.5 + (0.39 x stroke)

Moving Mass (g) = 4.82 + (0.063 x stroke)

(U) Universal Mount, (S) Front & Rear Stud Mount

Total Mass (g) = 35.6 + (0.39 x stroke)

Moving Mass (g) = 4.82 + (0.063 x stroke)

(D) Double Rod

Total Mass (g) = 51.3 + (0.45 x stroke)

Moving Mass (g) = 8.75 + (0.127 x stroke)

Mounting

Cylinder Nut Torque: 2.6 to 3.4 N•m

Cylinder Nut Torque (U Option): 1.1 to 2.3 N•m

Note: Apply tightening/support wrench to the end being mounted only.

Rod Nut Torque: 0.34 to 0.68 N•m

*Note: Use pin in Ø1.1 hole to resist tightening torque. **DO NOT USE PLIERS!***

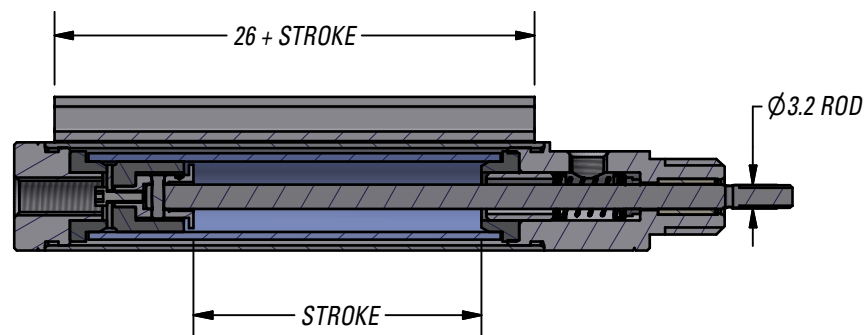
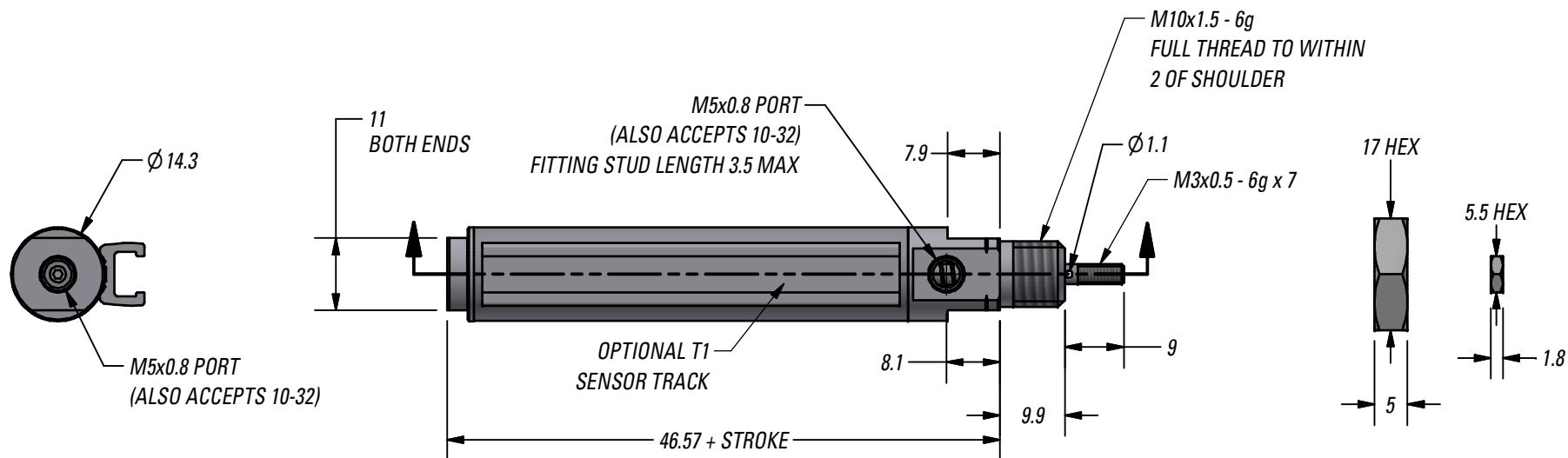
Sensors

Proximity switches: GL series sensors mount in T tracks and switch on when the piston magnet is detected.

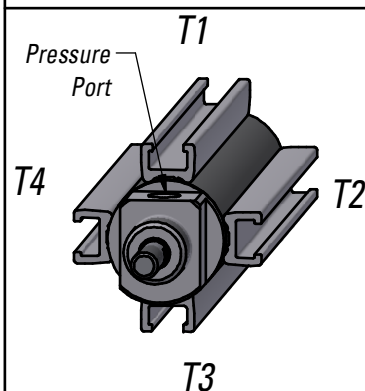
Position feedback: GX series sensors mount in T tracks and output a signal proportional to the position of the piston.

Cycle Life

The very long cycle life of this product depends on how the cylinder is used as well as the requirements of your application. Leak will increase as the piston and rod seal wear with high number of cycles. High loads and especially high side loads along with cycling can increase friction. Typically, cylinders will last from 1 to 25 million cycles before they are replaced.



Sensor Track Locations



STROKE	PART NUMBER
12.5	M 9 D 12.5 N
25.0	M 9 D 25.0 N
37.5	M 9 D 37.5 N
50.0	M 9 D 50.0 N
75.0	M 9 D 75.0 N
100.0	M 9 D 100.0 N
125.0	M 9 D 125.0 N
150.0	M 9 D 150.0 N
175.0	M 9 D 175.0 N
200.0	M 9 D 200.0 N
225.0	M 9 D 225.0 N
250.0	M 9 D 250.0 N
275.0	M 9 D 275.0 N
300.0	M 9 D 300.0 N

ADDITIONAL OPTIONS

- 1a. Want a magnet attached to the piston and also want sensor mounting tracks? Add any combination of tracks, T1, T2, T3, T4
Example: M9D37.5NT1T3
OR
1b. Only want a magnet attached to the piston? Add "M" to the end of the part number
Example: M9D37.5NM
2. Add "-ET" after all other options for extreme temperature option.

Airpot® 35 LOIS ST NORWALK CT 06851 US		203-846-2021 www.airpot.com
PART M9 D - N		REV 1102AF
AIRPEL, METRIC MODEL 9	UNITS IN mm	 3RD ANGLE PROJECTION