

MPA Micro Pump Pneumatic



General

The MPA micro pump is a pneumatically operated miniature piston pump used to deliver lubricant in small, metered quantities. This pump has applications in lubricating cutting tools during various machining operations including drilling, reaming, thread forming and broaching. There are 3 products in the family; a single injector pump, a 3-way injector pump with individual actuation and a 3-way injector pump with group actuation. The units may be combined to form a manifold of 12 outlets maximum.



MPA 5107831E



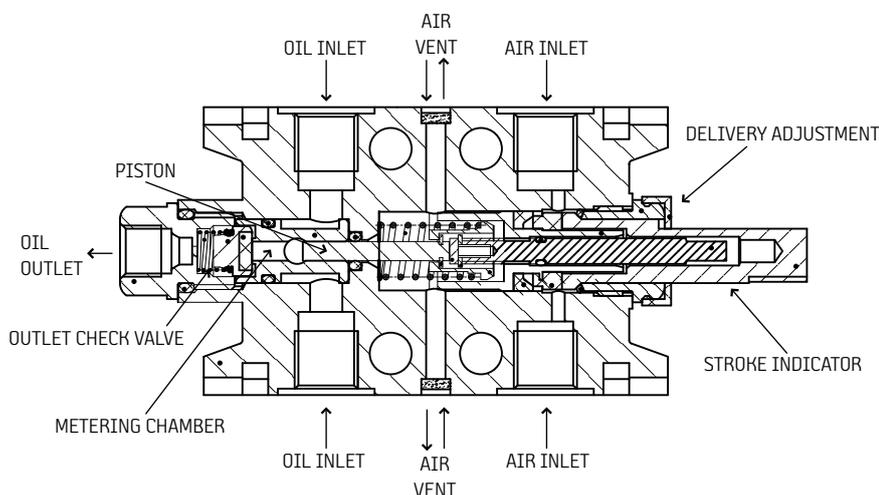
MPA 5107811E

Technical Data

Supply Air Pressure	44 - 103 psi (3-7 bar)
Discharge	0 to 0.03 cc
Cycle Frequency	60 strokes/min max
Max Pressure Ratio	15 : 1
Oil Inlet Pressure	Max 44 psi (3 bar)
Operating Temperature	32 °F - 176 °F (0 °C - 80 °C)
Lubricant Viscosity	Oil from 10 - 1100 cSt
Oil Inlet & Air Inlet	1/8BSPP
Oil Outlet	MBX1

Operation

Oil is supplied to the unit, either gravity fed from a reservoir, or under pressure from another pump to a maximum of 43psi (3 bar). Compressed Air is supplied to the unit and actuated using a 3/2 solenoid valve (for the 3-way injector unit with individual actuation, 3 solenoid valves are necessary). As pressurised air is fed to the injector, the piston moves forward and forces the oil in the metering chamber out through the check valve. The air behind the piston is displaced out through the air vent. De-actuating the 3/2 solenoid valve enables the main spring to return the piston to its original position and allows oil to be drawn into the metering chamber once more. Air is drawn in through the air vent to prevent a vacuum being created. The metered volume may be adjusted by rotating the adjustment nut.



Refer to the following documents:

+ Brochure #151:
Fittings Catalog

How to Order

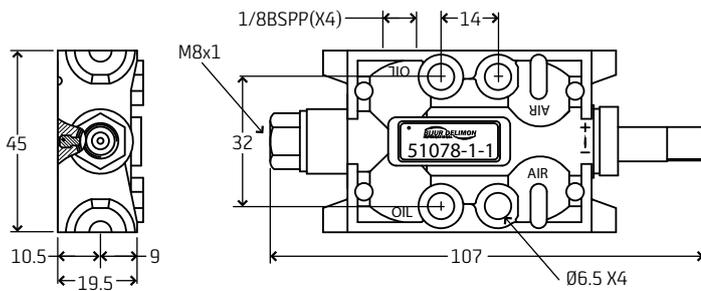
Name	Part #	
MPA Single Injector	5107811E	
MPA 3-Way Injector - Group Actuation	5107831E	
MPA 3-Way Injector - Individual Actuation	5107832E	
Reservoirs	70 cc	533251E
	320 cc	533252E
	400 cc	533253E
	1 Liter	533254E

Accessories:

- + Connector Kit: p.n. 52674
Includes: 2-Orings, 2-Bolts,
2 Connection Caps & 2-Nuts
- + Closure Plug: p.n. 28516-2

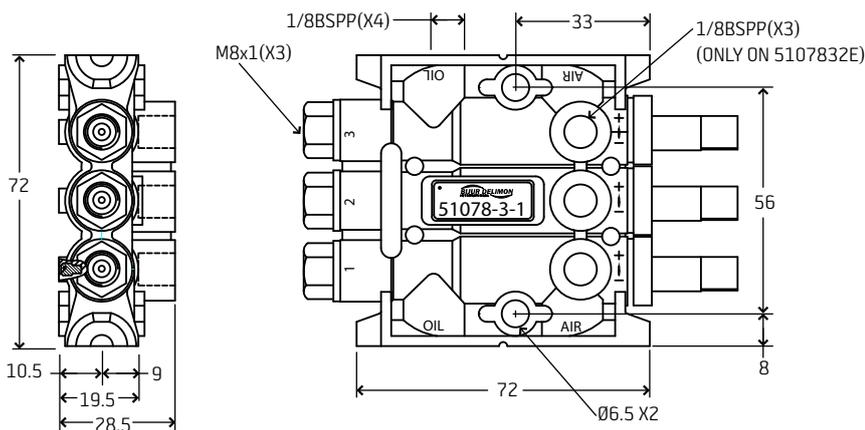
Dimensions

5107811E

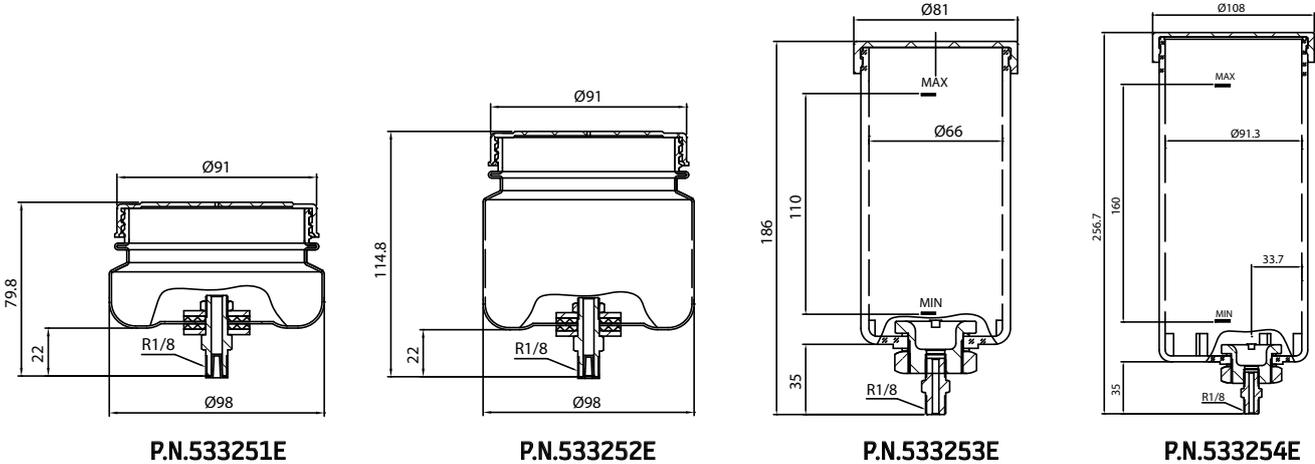


Note: Dimensions are in millimeters.

5107831E & 5107832E



RESERVOIRS



TYPICAL INSTALLATION USING 1-WAY AND 3-WAY INJECTORS 5107831E & 5107832E

