



Mooney* Pilots and Accessories



imagination at work

Mooney* Pilots

Series 20*, 20H, and 20L

The Series 20 Flowgrid* pilot is a reversible pressure-control regulator designed primarily for use as a control pilot with unloading-type pilot systems for pressure-reducing (PRV), backpressure (BPV or Relief), and differential-pressure (DPV) applications. The Series 20 pilot is designed for both gas and liquid applications.

| | |
|--------------|---|
| Series 20 | Brass construction with 3 to 450 psig (0.21 to 31 bar) control pressure range |
| Series 20H | High pressure brass construction with a 200 to 900 psig (14 to 62 bar) control pressure range |
| Series 20S | Stainless steel construction with a 3 to 450 psig (0.21 to 31 bar) control pressure range |
| Series 20HS | High pressure, stainless steel construction with a 200 to 900 psig (14 to 62 bar) control pressure range. |
| Series 20L-B | Bronze construction with 5 i.w.c. to 8 psig (12 mbar to 0.55 bar) control pressure range |
| Series 20L-A | Aluminum construction with 5 i.w.c. to 8 psig (12 mbar to 0.55 bar) control pressure range |














Other features include:

- Easy removal of the cartridge permits quick disassembly and assembly which is universal to all pilots.
- Reversing valve stem converts pressure reducing to back pressure
- Pressure boost feature
- Ease of spring change
- Cap cover protects adjusting screw
- Sealed spring case
- Flexibility with six different springs to cover pressure settings from 3 psi to 900 psig (0.21 to 62 bar)
- Convert Series 20 to 20H with a high pressure diaphragm kit



Specifications

| | 20 & 20H Pilot |
|--|----------------------------------|
| Max Inlet Pressure | 1,500 psig (103 bar) |
| Max Loading Connection Pressure | 1,500 psig (103 bar) |
| Max Outlet Pressure | 1,500 psig (103 bar) |
| Set Pressure Range | |
| Standard Pilot | 3 psi - 450 psig (0.21 - 31 bar) |
| HP Pilot | 200 - 900 psig (14 - 62 bar) |
| Max Emergency Sensing Pressure | 1,000 psig (69 bar) |
| Max Spring Housing Pressure | 1,000 psig (69 bar) |
| Temperature Range | -20°F to 150°F (-29°C to 66°C) |
| Capacity | 0.17 0.15 |
| C _g max | 11.2 9.6 |
| C _v max | 0.29 0.25 |
| C ₁ | 38 38 |

| Spring Color | Series 20 Pilot | Outlet Pressure Range |
|---|-----------------|------------------------------|
|  White | 20L | 5-15 i.w.c. (12 - 37 mbar) |
|  Brown | 20L | 10-40 i.w.c. (25 - 100 mbar) |
|  Yellow | 20L | 1-3 psig (0.07 - 0.21 bar) |
|  Orange | 20L | 2-5 psig (0.14 - 0.34 bar) |
|  Gray | 20L | 4-8 psig (0.28 - 0.55 bar) |
|  Red | 20 | 3-12 psig (0.21 - 0.83 bar) |
|  Cadmium | 20 | 10-40 psig (0.69 - 2.8 bar) |
|  Blue | 20 | 25-90 psig (1.7 - 6.2 bar) |
|  Purple | 20 | 60-200 psig (4.1 - 13.8 bar) |
|  Black | 20 | 100-260 psig (6.9 - 18 bar) |
|  White/Green | 20 | 200-450 psig (13.8 - 31 bar) |
|  Black | 20HP | 200-520 psig (13.8 - 37 bar) |
|  White/Green | 20HP | 400-900 psig (28 - 62 bar) |

Pilot available in:
20L Aluminum & Bronze, 20 Brass and SST,
20H Brass and SST

| | Type 24 Restricting Valve | Type 30 Filter | Type 26 Inspirator |
|--------------------------|---------------------------------|---------------------------------|---------------------------------|
| Pressure Rating | 1,500 psig (103 bar) | 1,500 psig (103 bar) | 1,500 psig (103 bar) |
| Temperature Range | -20°F to 150° F (-29°C to 66°C) | -40°F to 175° F (-40°C to 79°C) | -20°F to 150° F (-29°C to 66°C) |
| Max. Differential | 1,500 psig (103 bar) | 1,500 psig (103 bar) | 1,500 psig (103 bar) |
| Flow Coefficient | Large Std. | | 4.0 |
| C _g min | 1.60 .75 | | |
| C _g max | 7.3 5.8 | | |
| C _g | | 19 | |
| C ₁ | | 35 | |
| C _v | 0.18 | .54 | |
| Filter Element | 10 Micon | | |
| Material | SST & Steel | Aluminum. Steel & SST | Steel |

Mooney Filters

Type 30*, 30A, 30S

The Mooney filter is designed to remove particulates in the pilot supply that could effect the restrictor or variable orifice in the pilot. The filter can be used in a variety of gas and liquid applications.



Mooney Restrictor

Type 24* and 24S

The Mooney restrictor is an integral part of a pilot system for the Flowgrid regulator. It is usually located in the pilot supply and affects the response rate, stability, and sensitivity of the regulator. The restrictor is available in both steel and stainless steel construction with a stainless steel rotor. The Type 24 and 24S restrictor can be used in many liquid and gas applications.



Mooney Inspirator

Type 26* Inspirator

The use of the Type 26 inspirator in place of the Type 24 restrictor maximizes flow through the Flowgrid valve at times when the pressure differential across the valve falls below the published valve minimum differential pressure for full capacity. The Type 26 inspirator incorporates a special nozzle design that reduces the loading (spring case) pressure to a value below the outlet pressure allowing the valve to fully open even when the pressure differential is very small. The inspirator acts like a differential amplifier with a gain of approximately 3.



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