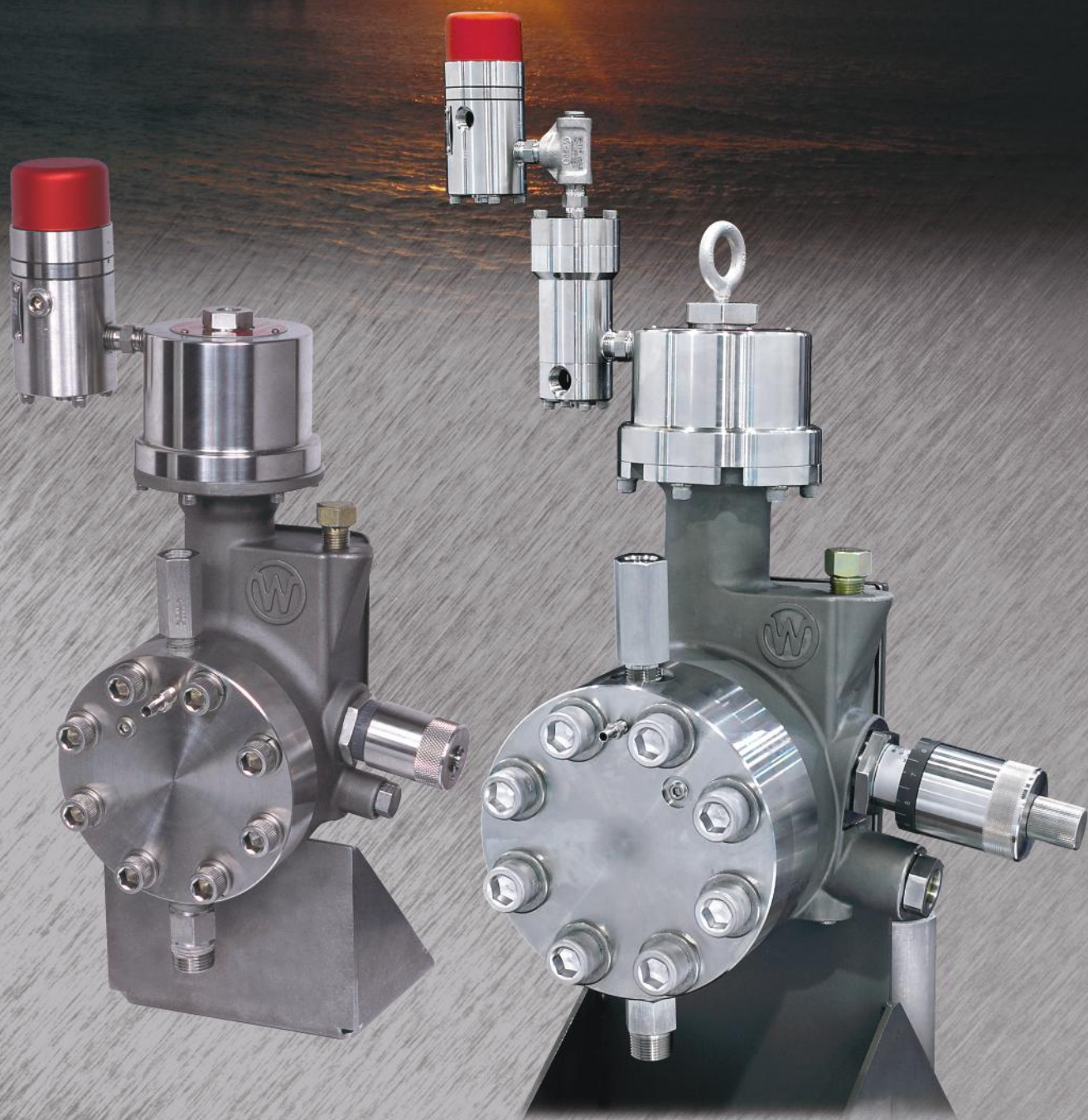


Hydraulically Actuated Diaphragm Pump

WILROY[®]



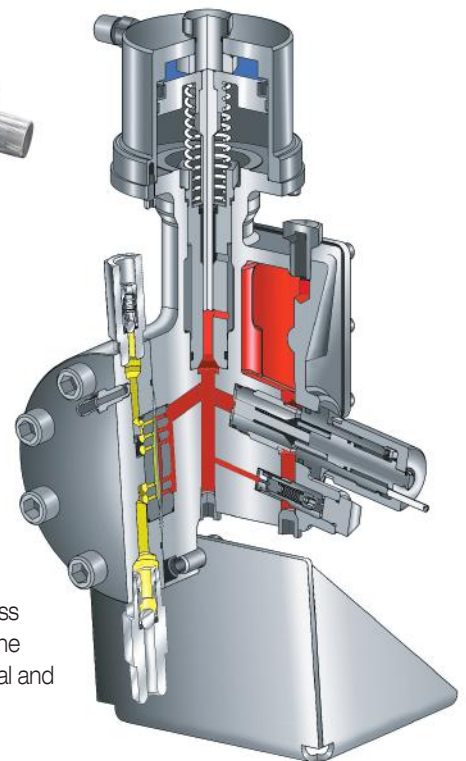
WILLIAMS
CHEMICAL METERING PUMPS

WILROY®

ATEX Approved
HYDRAULICALLY ACTUATED DIAPHRAGM PUMP

Williams and Milton Roy have combined technologies to design a pump blending the proven mRoy® hydraulic by-pass diaphragm design with the Williams “V” Series pump. The result is the low volume, high turndown characteristics of a pneumatic drive coupled with the chemical containment and high pressure capabilities of a hydraulically actuated diaphragm.

The *WILROY*® is a hydraulically actuated diaphragm pump which delivers chemical containment, low maintenance, overpressurization protection with unsurpassed accuracy and repeatability. We invite you to look at how we can meet your chemical injection needs with proven solutions from Williams Milton Roy.



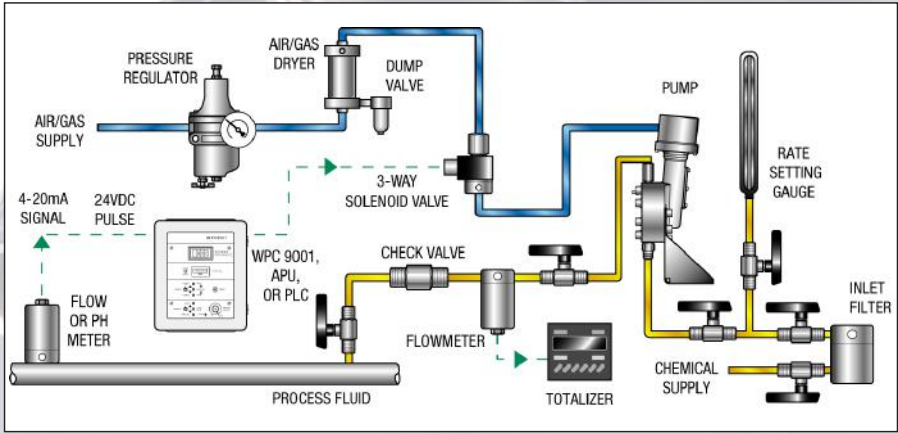
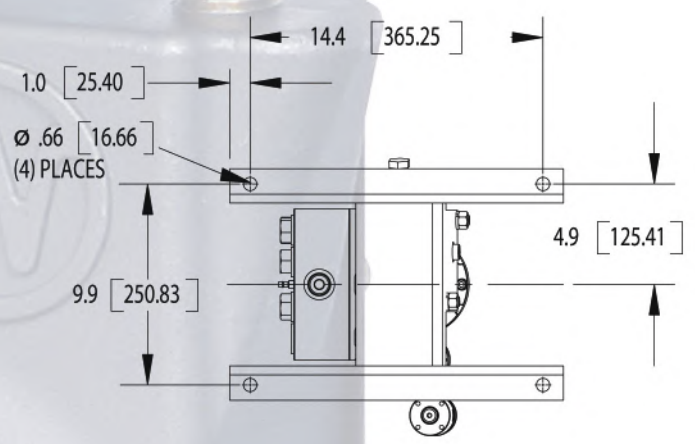
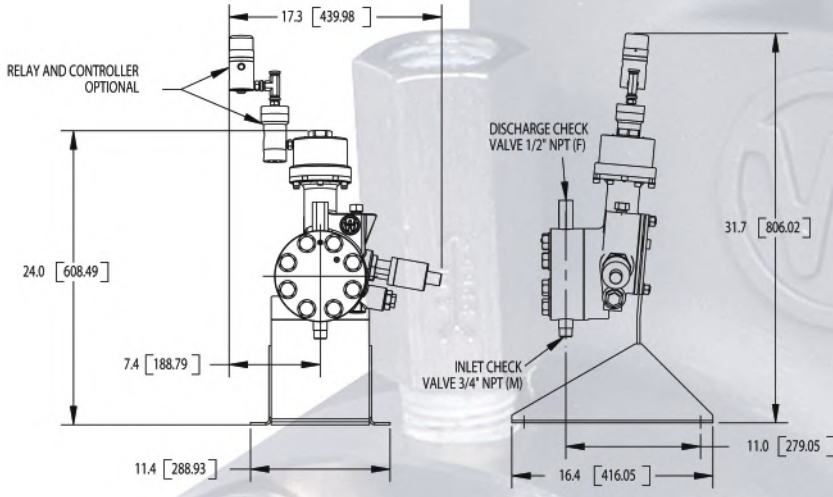
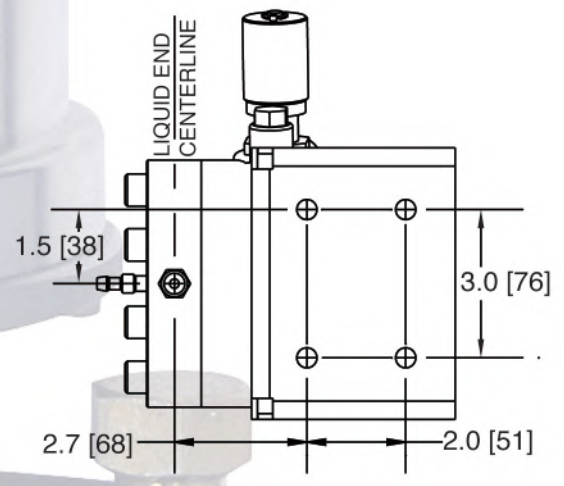
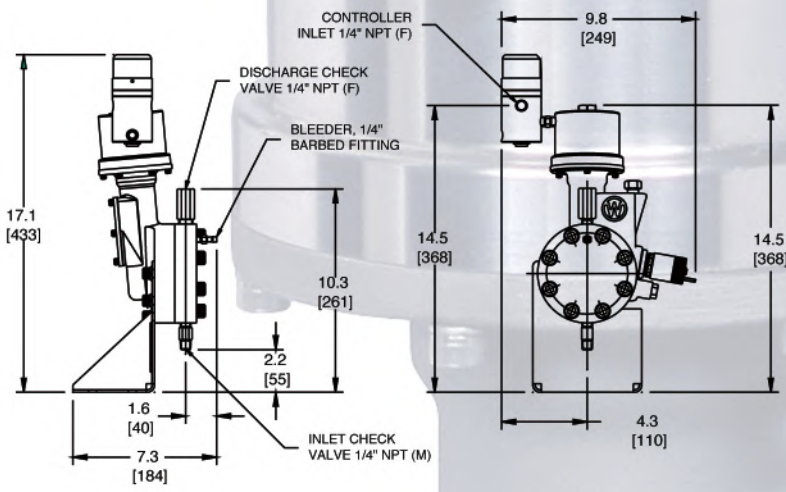
- 316 SS exposure
- Integral relief valve
- Maintenance-free hydraulic system
- Five sizes in two housing — Field reconfigurable
- Compact size for ease of installation
- Centralized design for ease of maintenance & operation
- Gylon® diaphragm for diverse compatibility
- Optimum chemical containment

Operation

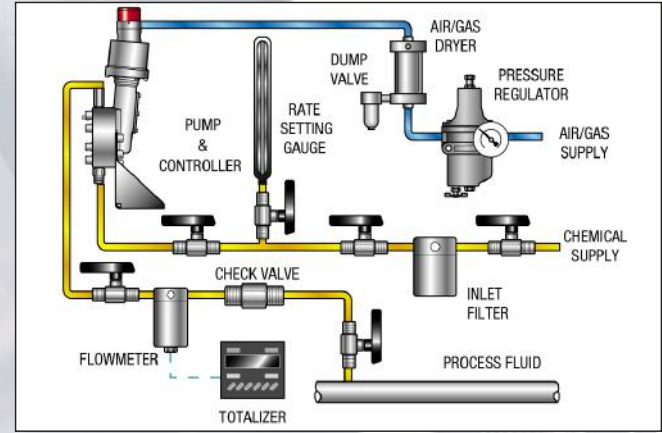
The WILROY Pump is available in four different plunger sizes from 1/4" (WILROY 2M) up to a 1.000" (WILROY 106). Operated by controller or solenoid, the pump is manufactured with a totally sealed hydraulic chamber, removable bore cartridge and integral air bleed mechanism. Along with a serviceable diaphragm, the pump's design assures relatively simple maintenance and operation. The WILROY's amplification ratio allows the pump to inject chemical against process fluids much greater than the air/gas supply pressure. The plunger displaces the hydraulic fluid in the intermediate chamber that in turn displaces the diaphragm. The diaphragm displaces the chemical and injects a precise amount of chemical into the process.

Optional Diaphragm Rupture Detection

The WILROY® diaphragm liquid ends are, by design, leakproof and durable. In some applications however, added assurance is desired to protect the pump internals from extremely hostile chemicals, or protect the process from potential contamination by hydraulic fluids, or to provide additional containment of the chemicals from being released to the environment.



FlowTracking Controller Configuration

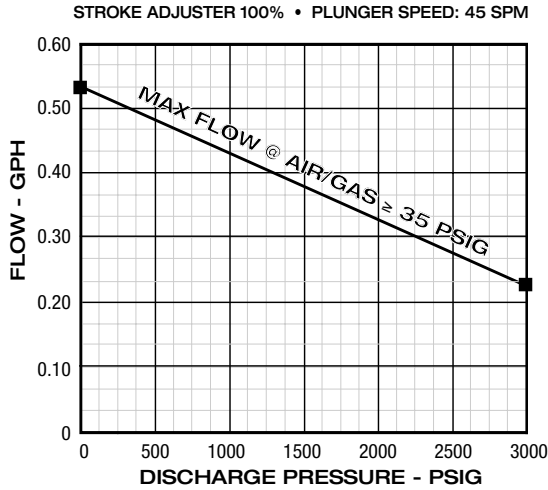


Standard Pneumatic Controller Configuration

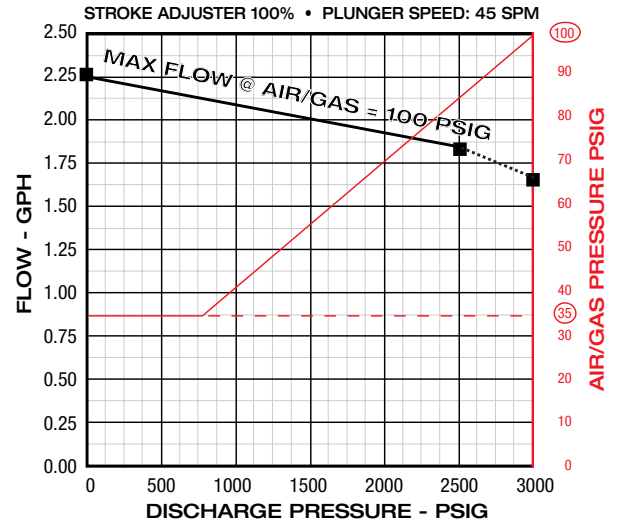
Wilroy A & B Performance Characteristics

| Model Weight | Maximum Volume @500PSI GPH / LPH | Volume Per Stroke CC | Stroke Length INCH | Strokes Per Minute (Range) | Max Discharge Pressure PSIG / BARG | Max Air Consumption | | lbs/Kg |
|--------------------|-------------------------------------|-------------------------|-----------------------|----------------------------|---------------------------------------|---------------------|-------------|------------|
| | | | | | | @100 PSIG | @6.9 BAR | |
| | | | | | | SCF Per Day | SCM Per Day | |
| WILROY® 2M | 5.54/2.04 | .8 | 1 | 1-45 | 3000/207 | 2068 | 59 | 27/12.2 |
| WILROY® 5M | 2.25/8.51 | 3.2 | 1 | 1-45 | 3000/207 | 2068 | 59 | 27/12.2 |
| WILROY® 754 | 5.0/18.9 | 7.3 | 1 | 1-45 | 2500/172 | 3548 | 101 | 121.5/55.1 |
| WILROY® 104 | 8.2/31.0 | 11.5 | 1 | 1-45 | 1600/207 | 3548 | 101 | 121.5/55.1 |
| WILROY® 106 | 7.8/29.5 | 11.0 | 1 | 1-45 | 3000/207 | 7190 | 203 | 137/62.1 |

Flow Performance Graph for Wilroy® 2M

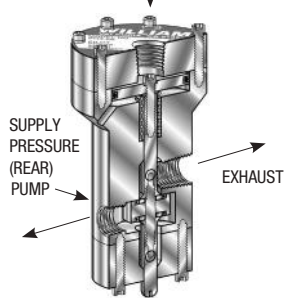


Flow Performance Graph for Wilroy® 5M

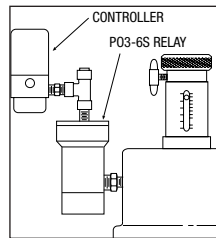


PNEUMATIC RELAYS

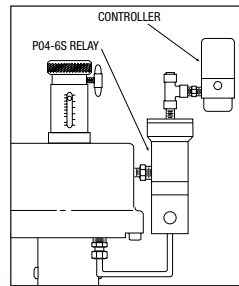
PILOT PULSES FROM CONTROLLER



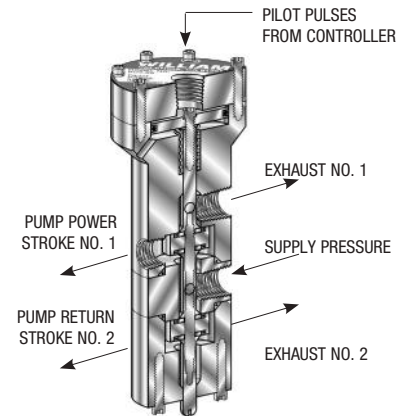
SINGLE ACTING P03-6S



PUMP INSTALLATION
WRB754, WRB104



PUMP INSTALLATION
WRB106



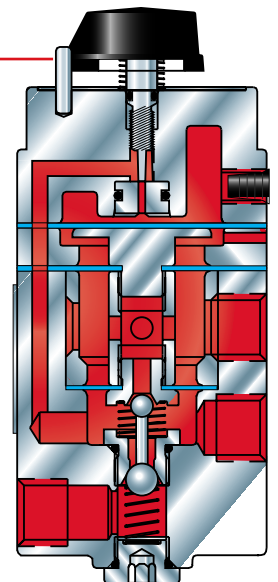
DOUBLE ACTING P04-6S

The PNEUMATIC RELAY is a pilot operated valve designed to provide the higher air or gas flow rates necessary for PNEUMATIC DRIVE CYLINDER diameters greater than 3 inches. The PNEUMATIC RELAY is actuated by the pulses produced by the CONTROLLER. A single acting PNEUMATIC RELAY is used with pumps that have return springs as illustrated to the upper left. The air or gas pressure is required to return the PISTON-PLUNGER ASSEMBLY on the CRP1000V800. Therefore a double acting PNEUMATIC RELAY is required, illustrated to upper right.

Oscillamatic®

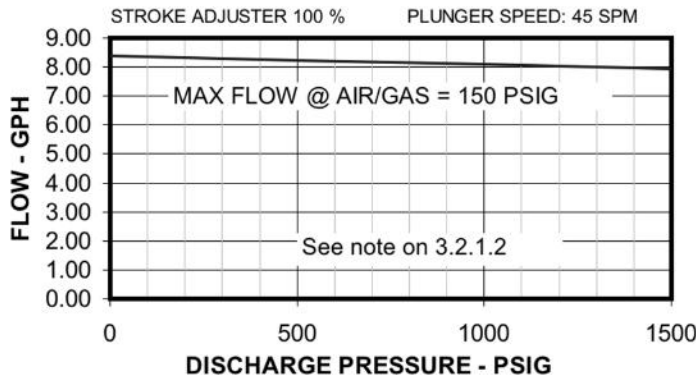
PNEUMATIC CONTROLLERS

Featuring our latest addition to the Williams line - the MK XIIA controller which combines the corrosion resistance of 316 SS with the diaphragm-style spool design for ease of maintenance. The Williams "Oscillamatic" controllers are unique and precise pneumatic instruments. These units are designed to operate any pneumatic metering pumps or instrument requiring pilot pulses. The controllers accept a constant supply of air or gas pressure which produces pneumatic output pulses. The output signal is manually adjusted by a control rate valve. The controller, installed on the metering pump, provides the most accurate and reliable pneumatic control available today.

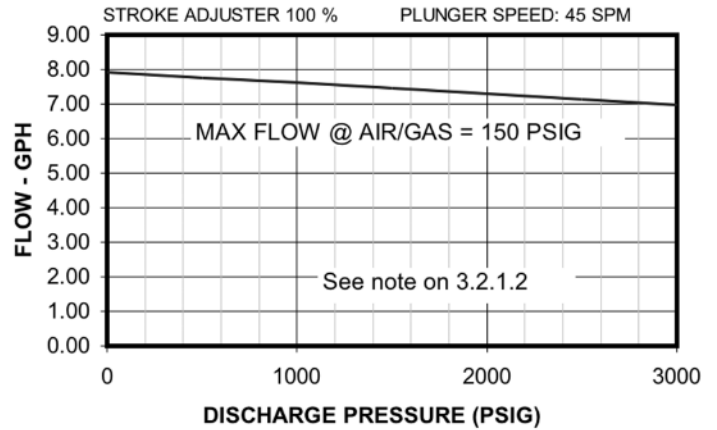


| MODELS | SUPPLY RANGE PSI | BAR | BODY MATERIAL | STROKE SPM | ELASTOMERS AVAILABLE | SPOOL STYLE |
|----------------|---------------------|---------|-------------------|---------------|-------------------------|-------------|
| MK XIIA | 30-100 | 2.0-6.9 | 316 SS | 1-45 | NEOPRENE | DIAPHRAGM |
| MK VII | 50-90 | 3.4-6.2 | ANODIZED ALUMINUM | 1-45 | NEOPRENE VITON® | DIAPHRAGM |
| MK II | 25-65 | 1.7-4.5 | ANODIZED ALUMINUM | 1-45 | NEOPRENE VITON® | DIAPHRAGM |

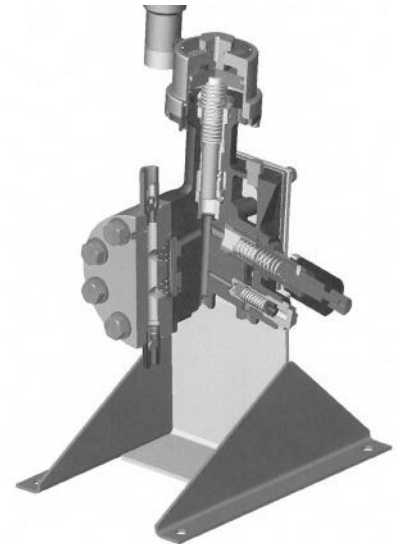
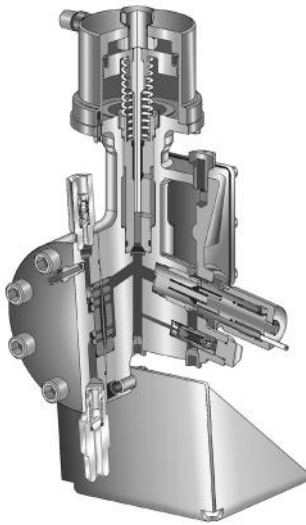
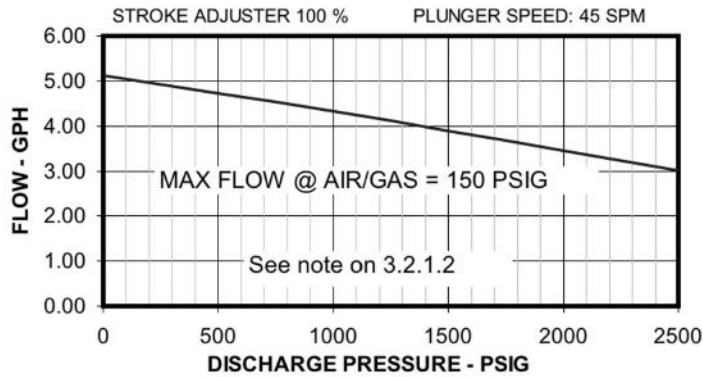
Flow Performance Graph for Wilroy® 104



Flow Performance Graph for Wilroy® 106



Flow Performance Graph for Wilroy® 754



PART MODEL NUMBER

WRB 1 - 11 104M NN SE BB

WRA 1: 316 SS | **Model**
WRB 1: 316 SS | **Construction**

NN: None | **Control**
11: MK | **Method**

- 2M:** .250" Plunger with 316 SS Micrometer Knob
- 5M:** .500" Plunger with 316 SS Micrometer Knob
- 754:** .750" Plunger, 4" Air Cylinder w/ 316 SS Micrometer
- 104:** 1.000" Plunger, 4" Air Cylinder w/ 316 SS Micrometer
- 106:** 1.000" Plunger, 6" Air Cylinder w/ 316 SS Micrometer

Plunger Configuration

Base Selection | **NN:** None
BB: Base

Connections | **SE:** NPT

- 2M:** 1/4" NPT (F) Discharge, 1/4" NPT (M) Suction
- 5M:** 1/4" NPT (F) Discharge, 1/2" NPT (M) Suction
- 754:** 1/2" NPT (F) Discharge, 3/4" NPT (M) Suction
- 104:** 1/2" NPT (F) Discharge, 3/4" NPT (M) Suction
- 106:** 1/2" NPT (F) Discharge, 3/4" NPT (M) Suction

Diaphragm Rupture Detection

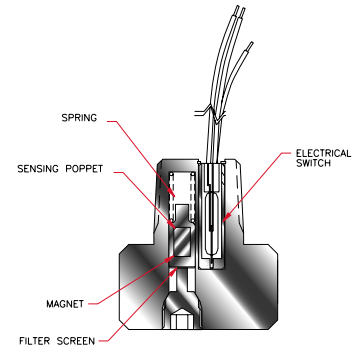
- NN:** None
- C5:** Rupture Detection Bracket & Gauge
- SN:** Rupture Detection Gauge & Nema 4 Switch
- S7:** Rupture Detection Gauge & Nema 7 Switch

WFS6704 MICRO FLOW SWITCH

For Detecting Increases & Decreases in Flow Rates



- Explosion Proof
Class I, Division 1&2,
Groups A, B, C, D
Class II, Division 1&2,
Groups E, F, G
- Fully Field Adjustable
- Operates in Any Orientation
- Miniature Compact Size
- Operating Temperature
-40° F to +300° F (-40° C to +150° C)
- Operating Pressure 3000 PSIG (207 bar)
- Corrosion Resistant 316 Stainless Steel
- Shock & Vibration Resistant
- 1/4" NPT Connections



| DRUM GAUGES Liquid Level/Injection Rate Gauge | |
|--|--------------------------|
| MODELS | MATERIALS |
| C779WS | Carbon Steel |
| C779WS-V | Carbon Steel - Vented |
| C779WS-SS | Stainless Steel |
| C779WS-SS-V | Stainless Steel - Vented |
| 30216-CS-V-GPD-S | Carbon Steel |
| 30216-S6-V-GPD-S | Stainless Steel |

| PCV125 AL Pressure Regulator | | |
|---------------------------------|------------|---------------|
| SENSITIVITY | FLOW RATES | MAX. PRESSURE |
| 0.1 PSI | 20SCFM | 250 PSI |
| 0.689kPa | .566m3/min | 1724 kPa |



| AIR OR GAS DRYER-FILTERS Complete with Manual Drain Valve | | |
|--|------------|---------------|
| MODELS | FLOW RATES | MAX. PRESSURE |
| J-150 | 40SCFM | 150 PSI |
| J-500 | 40SCFM | 500 PSI |



| LIQUID CHEMICAL FILTERS 316 Stainless Steel | | |
|--|------------------------------|--|
| MODELS | CONNECTION FILTER ELEMENT | OPTIONAL FILTER ELEMENT |
| LCF-10-25 | 1/4" NPT 25 micron, Std | 1, 2, 8 microns or 100 mesh stainless steel screen |
| LCF-15-25 | 1/2" NPT 25 micron, Std | |

| AUTOMATIC DUMP VALVES Used with the Air or Gas Dryer-Filters | | |
|---|---------|---------------|
| MODELS | BOWL | MAX. PRESSURE |
| ADV-150-A | Plastic | 150 PSI |
| ADV-250-A | Steel | 250 PSI |



201 Ivyland Road • Ivyland, PA 18974 USA
(800) 235-3421 • (215) 293-0415 • Fax: (215) 293-0498
E-mail: info@williamspumps.com

www.williamspumps.com
www.miltonroy-americas.com

Distributed by:

