

Humphrey iDP

390 SERIES

Proportional Diaphragm Isolation Valve

PRODUCT FEATURES

- Flow increase proportional to current increase
- Inert wetted materials provide broad chemical compatibility
- Max pressure: 40 PSI (2.76 bar) standard – Consult factory for higher pressure applications
- Flow rates: 0 – 80 SLPM air or 0 – 1.5 LPM water
- Integral diaphragm-poppet isolates flow path from solenoid
- Encapsulated coil for operation in wet environments
- Suitable for high fluid temperatures – up to 203°F (95°C)
- Individual testing insures reliability and repeatability
- Porting and mounting design flexibility



390
2-Port
Inline



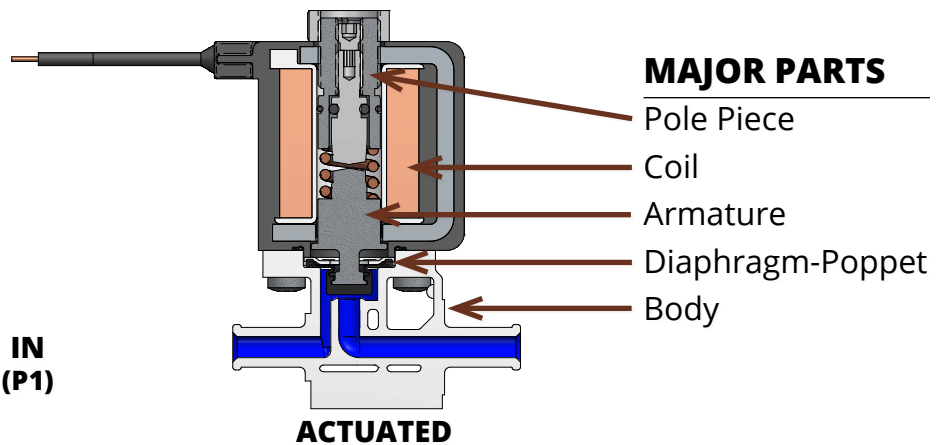
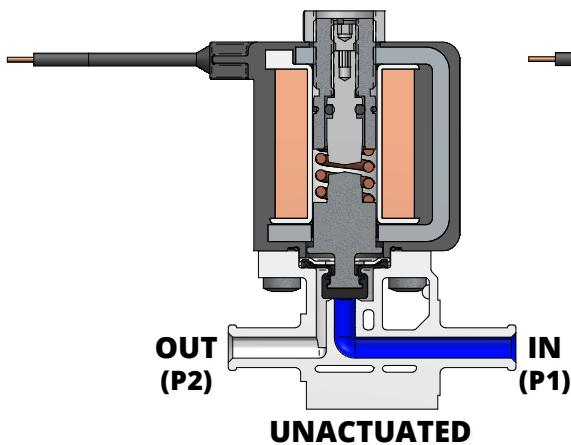
391
2-Port
Manifold

TYPICAL FLUIDS*

Biological solutions
Dialysate
Renaline®
Formaldehyde

Saline
Dextrose/Sugars
Hydrogen Peroxide
Citric Acid

Acetic Acid
Sodium Hypochlorite
**Consult factory for assistance.*



MAJOR PARTS

- Pole Piece
- Coil
- Armature
- Diaphragm-Poppet
- Body

HOW TO ORDER

Humphrey iDP 390 SERIES



390
2-Port Inline



391
2-Port Manifold

390

BASE MODEL
390 - Inline
391 - Manifold

2

**MATERIAL
(BODY-SEALS)**
1. Ultem®-EPDM
2. Ultem®-Viton®GF
3. Radel®-EPDM*
4. Radel®-Viton®GF*

1

BODY STYLE (IN-OUT)
0. Manifold (No Barbs)
1. Barb-Barb
5. 8mm-8mm (5/16")
(Quick Disconnect)

5

**COIL TYPE & ORIENTATION
(IN RELATION TO
OUT/P2 PORT)**

1. 1/4" Spade Terminal/
Standard*
3. 1/4" Spade Terminal/
Rotate 180°
5. Lead Wire/Standard*
7. Lead Wire/Rotate 180°

10

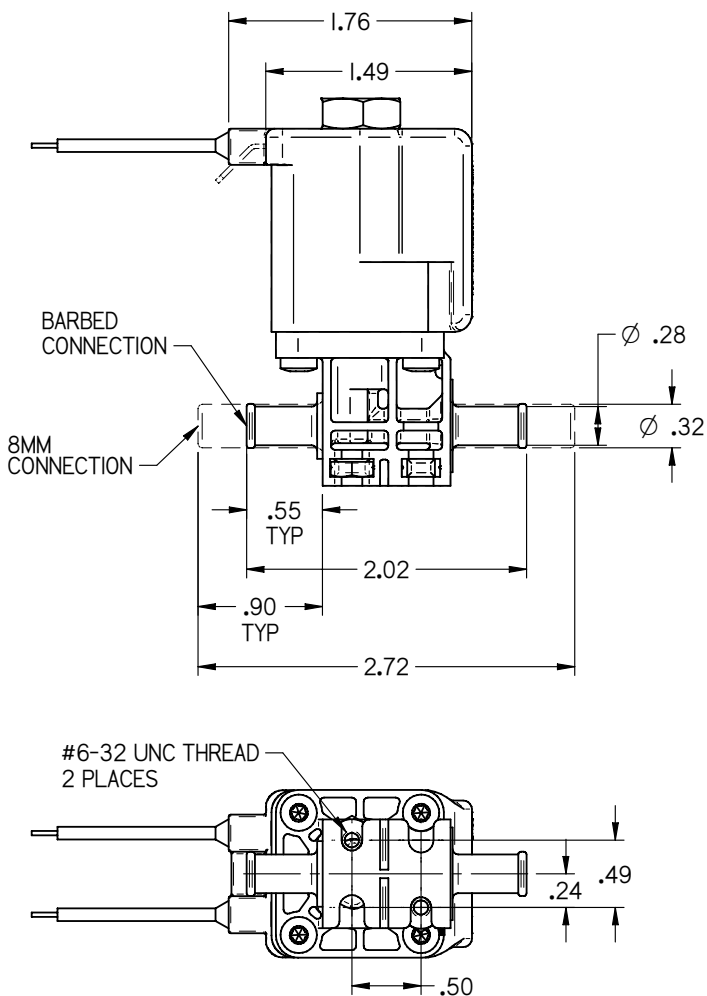
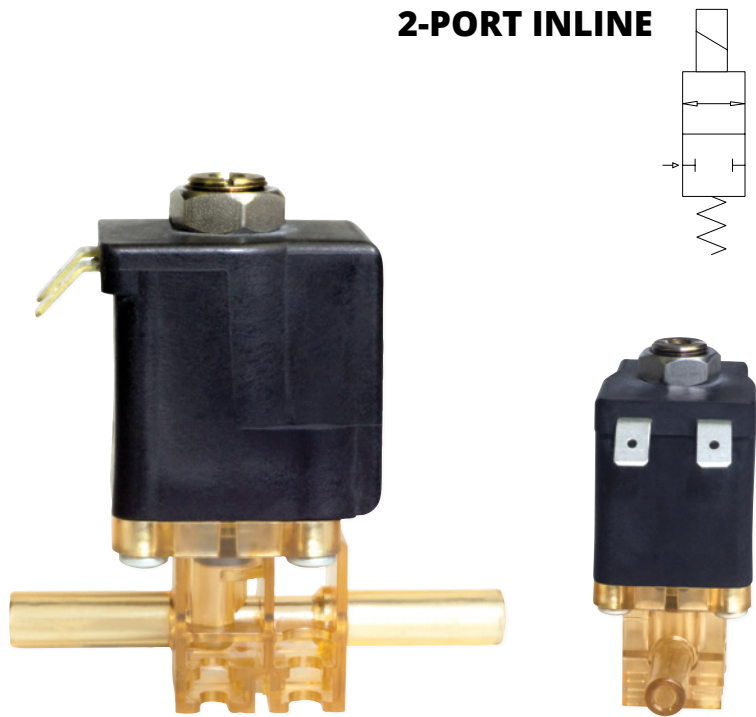
Order Example:
39021510

**PRESSURE
SETTING**
10. 10 PSI
20. 20 PSI
40. 40 PSI

* Manifold Options

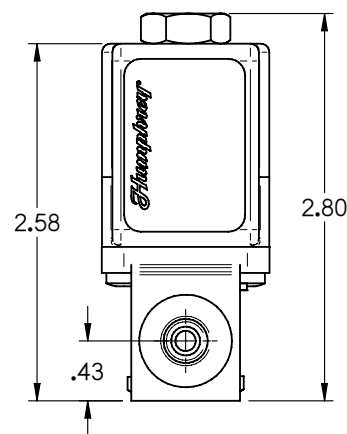
Humphrey iDP

2-PORT INLINE

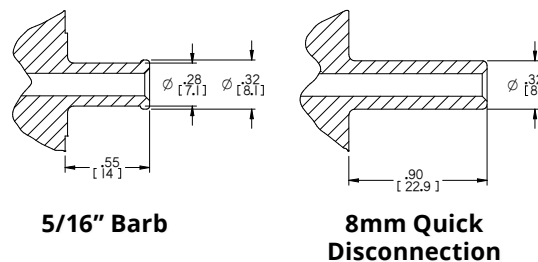


Humphrey 390 SERIES SPECIFICATIONS

Valve Function:	Normally Closed
Wetted Parts (Body & Diaphragm-Poppet):	Ultem® or Radel® and Viton®GF or EPDM
Number of Ports:	2
Type of Operation:	Direct Solenoid, Media Separated
Piping Type:	Inline, Direct Piping
Media:	Aggressive Liquids (Gasses)
Internal Volume (Barb Body):	Unactuated Under Poppet: 0.026in ³ Actuated: 0.062in ³
Internal Volume (8mm Male Body):	Unactuated Under Poppet: 0.026in ³ Actuated: 0.074in ³
Max Flow (Water) @ 40 PSI:	1.5 LPM
Max Flow (Air) @ 40 PSI:	80 LPM
Pressure Range:	Vacuum to 40 PSI
Fluid Temp Range:	-20°C to 95°C
Ambient Temp Range:	-20°C to 65°C
Port Size:	5/16" Barb; 8mm Quick Disconnection
Electrical Entry:	Spade Terminals or Lead Wires
Voltage:	24VDC
Operating Current Range:	0-250 mA
Voltage Tolerance:	±10%
Power Consumption:	8.3W
Weight:	0.42 lbs



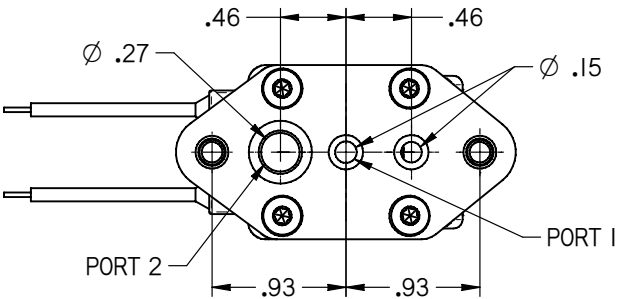
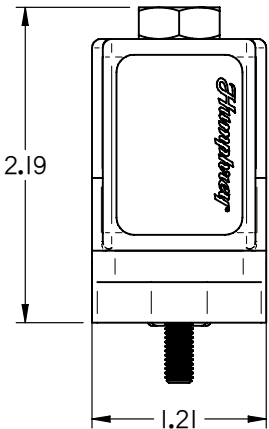
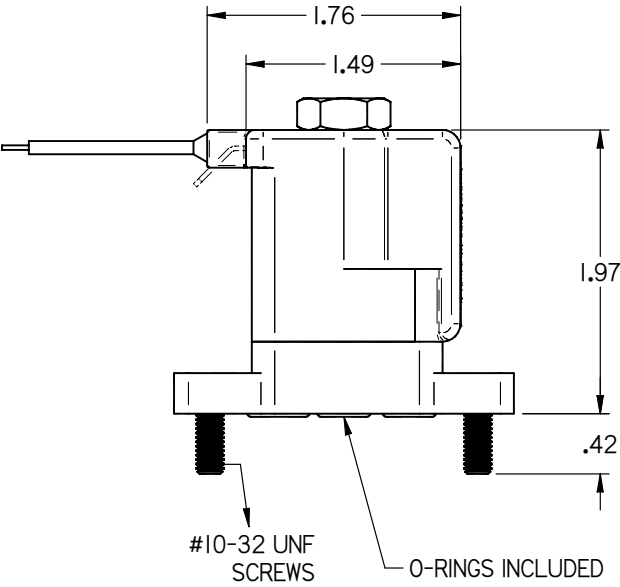
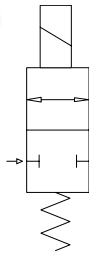
BODY STYLE OPTIONS



RECOMMENDED MATING ELECTRICAL CONNECTION:
Spade Size: 1/4 inch Terminal
Lead Wires: Connect to 20 AWG x 45" length

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2-PORT MANIFOLD

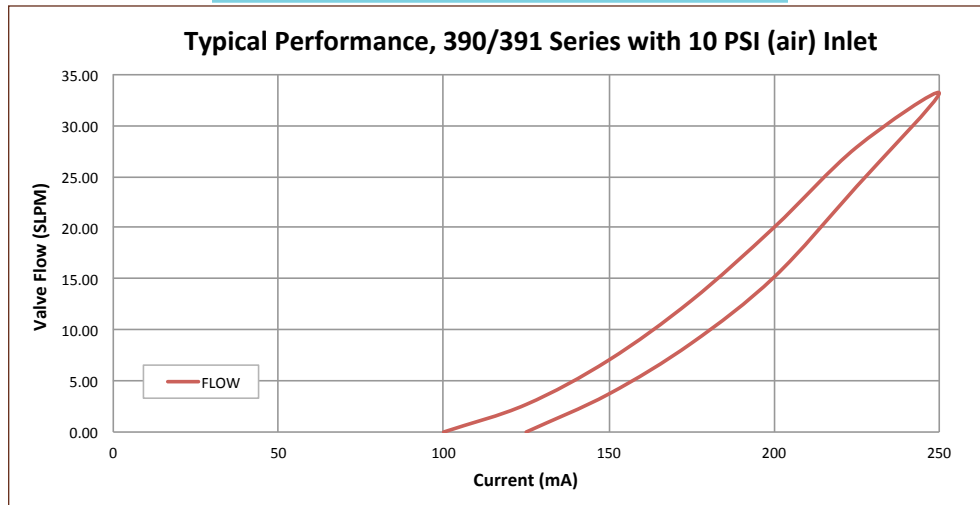


Humphrey 391 SERIES SPECIFICATIONS

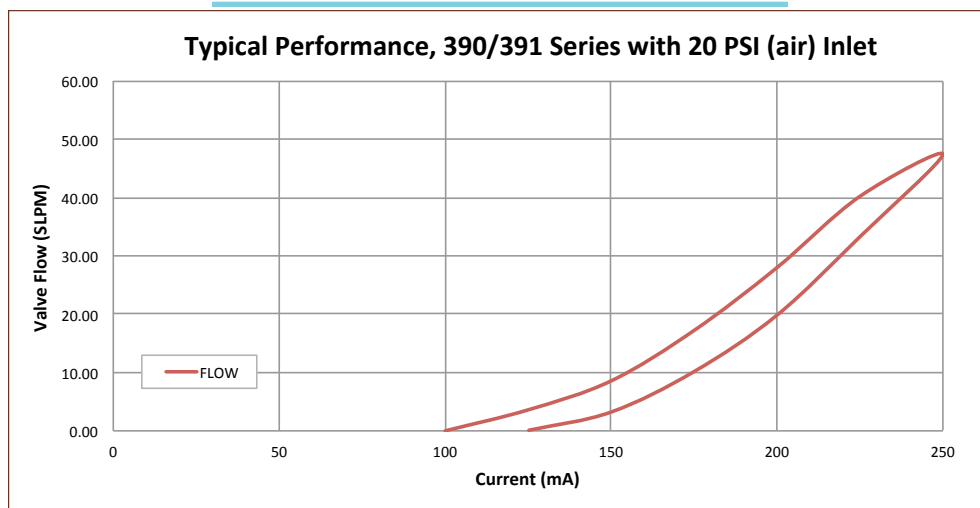
Valve Function:	Normally Closed
Wetted Parts (Body & Diaphragm-Poppet):	Ultem® or Radel® and Viton®GF or EPDM
Number of Positions:	2
Type of Operation:	Direct Solenoid, Media Separated
Piping Type:	Manifold
Media:	Aggressive Liquids (Gasses)
Max Flow (Water) @ 40 PSI:	1.5 LPM
Max Flow (Air) @ 40 PSI:	80 LPM
Pressure Range:	Vacuum to 40 PSI
Fluid Temp Range:	-20°C to 95°C
Ambient Temp Range:	-20°C to 65°C
Electrical Entry:	Spade Terminals or Lead Wires
Voltage:	24VDC
Operating Current Range:	0-250 mA
Voltage Tolerance:	±10%
Power Consumption:	8.3W
Weight:	0.42 lbs

RECOMMENDED MATING ELECTRICAL CONNECTION:
Spade Size: 1/4 inch Terminal
Lead Wires: Connect to 20 AWG x 45" length

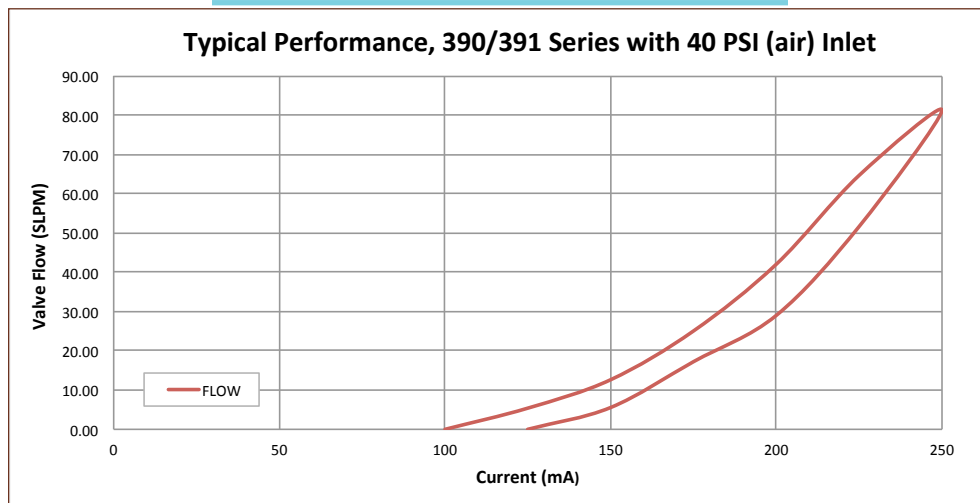
10 PSI SET



20 PSI SET



40 PSI SET



390/391 series valves are 100% factory calibrated and tested utilizing pneumatic DAQ driven system. This process insures a more stringent evaluation and precision calibration utilizing higher fidelity pneumatic instrumentation.