

# iDP Valves

## 2-Port 390/391 Series

### Proportional Diaphragm Isolation Valve



**Humphrey**

Introducing Humphrey 390/391 series iDP valves. These 2-way inert proportional valves are engineered to control flow of aggressive liquids and gases in harsh environments. The flexible diaphragm-poppet design isolates the solenoid from media penetration, while the inert body material ensures long life and sustained performance.

#### FEATURES

- Offering EPDM or Viton® elastomers ensures multi-levels of chemical protection.
- Flow output proportional to current input.
- Inert wetted materials provide broad chemical compatibility.
- Standard pressures of 10, 20 and 40 PSI \*
- Flow rates: 0-80 SLPM air or 0-1.5 SLPM water \*
- Encapsulated coil for operation in wet environments.
- Fluid temperature capable – up to 203°F (95°C)
- 100% factory calibrated and tested.

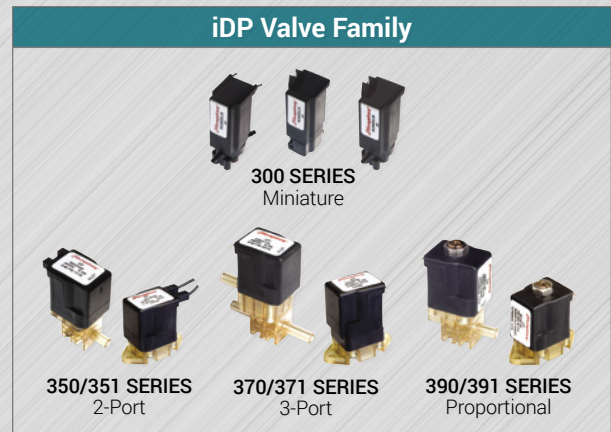
\* Consult factory for custom calibration possibilities.



**390**  
2-Port  
Inline, Direct Piping



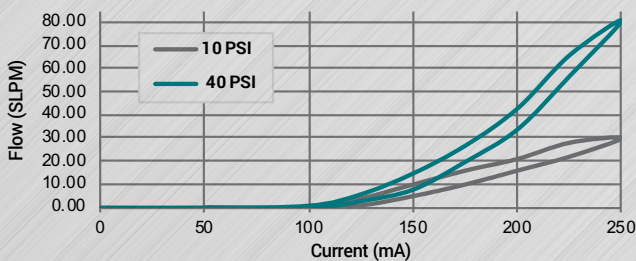
**391**  
2-Port  
Manifold Mount



#### iDP Valve Family



#### IDP 390, IDP 391 Optimized for Pressure Flow vs Current



**ACCESS ONLINE CATALOG**  
Obtain 3D CAD Download, CAD Viewer,  
2D Dimensional Drawings, Product Images,  
DataSheet PDFs, Product Accessories



## How to Order

### iDP 390/391 Series

390	3	1	5	10	39031510
<b>MODEL</b> 390: Inline 391: Manifold	<b>BODY/SEALS</b> 3: Radel®-EPDM 4: Radel®-Viton®GF	<b>BODY STYLE (IN-OUT)</b> 0: Manifold (No Barbs) 1: Barb-Barb 5: 8mm-8mm (5/16") (Quick Disconnect)	<b>COIL TYPE &amp; ORIENTATION</b> (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°	<b>PRESSURE SETTING</b> 10: 10 PSI 20: 20 PSI 40: 40 PSI	<b>ORDER EXAMPLE</b>

\* Manifold Options

# iDP Valves

## 2-Port 390/391 Series

SPECIFICATIONS	IDP 390	IDP 391
TYPE OF OPERATION	Direct Solenoid, Media Separated	
FUNCTION	2-Way, Normally Closed	
MEDIA	Aggressive Liquids (Gases)	
WETTED PARTS: BODY AND SEALS (DIAPHRAGM-POPPET)	Radel®, Viton®GF or EPDM	
PRESSURE RANGE – PSI (BAR)	Vacuum to 40 PSI (2.76) <i>Consult factory for higher pressure.</i>	
PIPING TYPE	Inline, Direct Piping	Manifold Mount
INTERNAL VOLUME: BARB BODY	Unactuated Under Poppet: 0.026in <sup>3</sup> Actuated: 0.062in <sup>3</sup>	--
INTERNAL VOLUME: 8MM MALE BODY	Unactuated Under Poppet: 0.026in <sup>3</sup> Actuated: 0.074in <sup>3</sup>	--
WATER FLOW @ 40 PSI (TYP)	1.5 SLPM	
AIR FLOW @ 40 PSI (TYP)	80 SLPM	
FLUID TEMPERATURE	-20°C to 95°C	
AMBIENT TEMPERATURE	-20°C to 65°C	
PORT SIZE	5/16" Barb; 8mm Quick Disconnection	--
ELECTRICAL ENTRY	Spade Terminals or Lead Wires	
VOLTAGE	24VDC	
VOLTAGE TOLERANCE	±10%	
POWER CONSUMPTION (WATTS)	8.3	
WEIGHT	0.42 lbs	

### MEDIA COMPATIBILITY\*

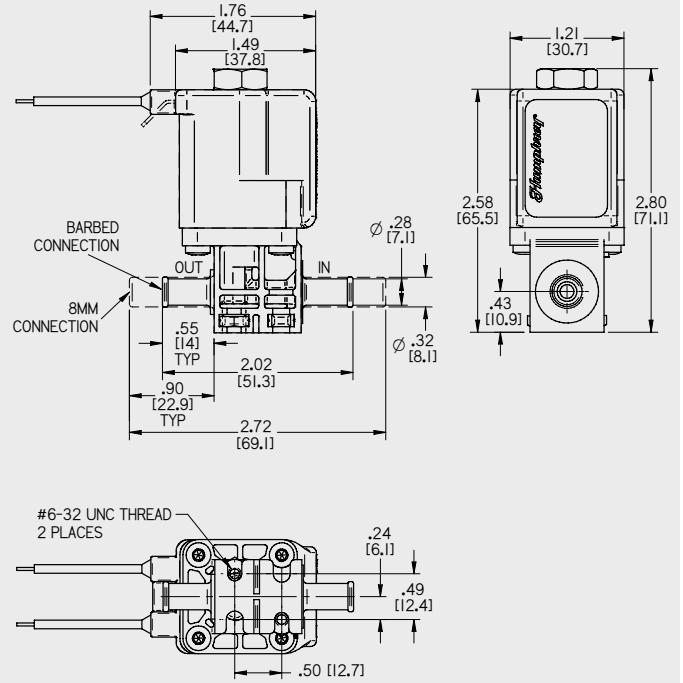
- Citric Acid
- Formaldehyde
- Biological Solutions
- Sodium Hypochlorite
- Dextrose/Sugars
- Dialysate
- Hydrogen Peroxide
- Acetic Acid
- Bleach/Lye
- Most aggressive medias

### APPLICATIONS & MARKETS

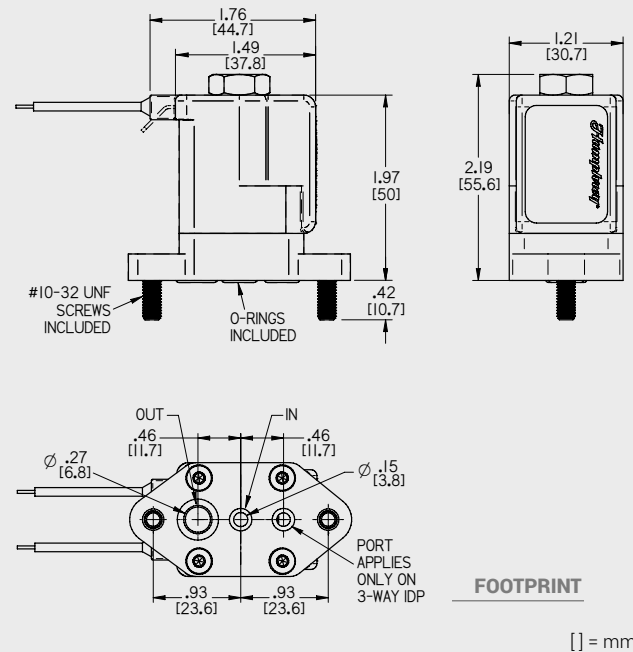
- Kidney Dialysis
- Diagnostic Systems
- Environmental Monitoring
- Food and Beverage
- Gaseous Flow Control
- Water Purification
- Clinical Equipment Waste Systems
- Ratio Control of Mixing Multiple Liquids
- Dosing Additives for Process Control

## DIMENSIONAL DRAWINGS

### 390 SERIES



### 391 SERIES



[ ] = mm

**RECOMMENDED MATING ELECTRICAL CONNECTION**

**Spade Size:** 1/4 inch Terminal  
**Lead Wires:** Connect to 20 AWG x 24" length

Certified: ISO 9001:2015

