

## SOLENOID VALVES

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**1/8"-3" NPT  
 TYPES Q-230  
 & QR-230**

2-WAY – CAST BRONZE BODIES - PACKLESS  
 VELVETROL® INTERNAL PISTON PILOT OPERATED  
 SAFETY SOLENOID VALVES FOR HAZARDOUS LOCATIONS  
 NORMALLY CLOSED OR NORMALLY OPEN - FULL PORT  
 PETROLEUM BASED FLUIDS



- ★ FOR: CLASS1, GROUP D FOR GASOLINE, DIESEL FUEL, #1 AND #2 FUEL OIL
- ★ PRESSURES: 5 PSI DIFFERENTIAL MINIMUM TO 150 PSI MAXIMUM
- ★ TEMPERATURE: 77°F. MAX. AMBIENT TEMP. CLASS F, 220°F MAX FLUID
- ★ MOUNTING: INSTALL IN HORIZONTAL LINE WITH COIL UPRIGHT AND ON TOP

<b>SIZES 1/8" - 3" NPT FULL PORT</b>		
★ <b>SERVICE RATINGS</b>	Complete Pricing, Service & Electrical Ratings shown in the List Price Schedule. Valves will be furnished for 5-100 PSI and 120 VAC Unless Otherwise Specified.	
NORMALLY CLOSED--		--NORMALLY OPEN
<b>TYPE Q-230</b> (Up to 2")	5-100 PSI, 77°F. Max. Fluid, 77°F. Max. Ambient, Class F 120, 240, 480 VAC 60 Hz, 14 Watts Max.	<b>N/A</b>
<b>TYPE Q4-230</b>	5-150 PSI, 300°F. Max. Fluid, Class F 12, 24, 120, 240, 480 VAC 60 Hz 6, 12, 24, 48, 115, 230 VDC	<b>TYPE QR-230</b>
<b>ADD -81, -84</b>	-81 SLOW CLOSE (REDUCES WATER HAMMER) -84 QUICK CLOSE (BOTH FACTORY SETUPS)	<b>ADD -81, -84</b>

- ★ **CONSTRUCTION:**  
 CLASS F COILS are Waterproof, Fungusproof, Molded of Filled Polyester with 18" Leads, inside an Enamel Painted Cast Iron NEMA 7 COIL HOUSING with a 1/2" NPT Conduit Connector.  
 BODIES are Globe Style with Union Bonnets, rated to 400 psi, Cast in Bronze. PISTON SPRINGS are Stainless Steel.  
 BONNET ASSEMBLIES are 304 SS TUBES, Brass BONNETS, and Brass TUBE PLUGS silver soldered together.  
 PISTON ASSEMBLIES are Brass with Filled PTFE PISTON RINGS and SS EXPANDERS.  
 SEAT DISCS and PILOT DISC are Fluorocarbon.  
 PILOT ASSEMBLIES are 416 SS ARMATURE with a 316 SS PILOT POINT and 316 SS PINS.

See List Price Schedule for "Terms and Conditions of Sale"

## PERFORMANCE, ORDERING AND INSTALLATION GUIDE

**ORDERING DATA**--SPECIFY PIPE SIZE, TYPE, FLUID, OPERATING PRESSURE, TEMPERATURE RANGE, ELECTRICAL SPECIFICATIONS, BACK PRESSURE (IF ANY).

**FLOW CHARACTERISTICS**--SEE FLOW CURVES IN BULLETIN 5-FL, OR Cv FACTORS LISTED BELOW AND IN BULLETIN CP-1.

**OPERATION**--PISTON PILOT OPERATED. MINIMUM PRESSURE DROP OF 5 PSI ( $\Delta P$ ) IS REQUIRED ACROSS VALVE FOR OPERATION.

**MOUNTING**--MOUNT IN HORIZONTAL LINE WITH COIL VERTICAL AND ON TOP. INSTALL 40 MESH STRAINER (NOT LARGER) AHEAD OF VALVE. CHECK FOR PROPER COIL VOLTAGE. MAKE SURE THAT THE FLOW ARROW ON VALVE BODY IS POINTING IN THE DIRECTION OF FLOW.

**SERVICING**--SOLENOID VALVES SHOULD BE FREQUENTLY CHECKED FOR OPERATION, CLEANLINESS, & INTERNAL WEAR - REPAIR KITS ARE FACTORY AVAILABLE --GIVE SIZE, TYPE, SERIAL NUMBER OR OPERATING DATA (VOLTAGE, PRESSURE, ETC.)

Valve Size	1a	1b	2	3	4	5	6a	6b	7	8	9	10	11	12	13	14	15	16	17
	N. C. Bonnet Assembly	N. O. Bonnet Assembly	Bonnet Ring	Piston Spring	Seat Screw	Piston Assembly	N. C. Pilot Assembly	N. O. Pilot Assembly	Piston Only	Piston Ring & Expander	Seat Disc	Guide Nut	Body	Coil Screw	Nameplate	Coil	Bonnet Seal	Coil Endplates	Coil Spring
	Q230	QR230	ALL	ALL	ALL	ALL	Q230	QR-230	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	Q230	QR230
1/8	4032XP	4032RXP	N/A	37-14	415-31V	4073VV	22-1	32R-6	402	57	36-12V	406	400-8	9	4434	Consult Factory or the List Price Schedule	2-121V	113	37-2
1/4	4032XP	4032RXP	N/A	37-14	415-31V	4073VV	22-1	32R-6	402	57	36-12V	406	400-4	9	4434		2-121V	113	37-2
3/8	4032XP	4032RXP	N/A	37-14	415-31V	4073VV	22-1	32R-6	402	57	36-12V	406	400-1	9	4434		2-121V	113	37-2
1/2	4032XP	4032RXP	N/A	37-14	415-31V	4073VV	22-1	32R-6	402	57	36-12V	406	400-2	9	4434		2-121V	113	37-2
3/4	4132XP	4132RXP	N/A	37-3	415-31V	4173VV	22-1	32R-6	412	159	36-34V	416	410	9	4434		2-125V	113	37-2
1	4232XP	4232RXP	428	37-3	415-31V	4273VV	22-1	32R-6	422	58	36-1V	429	420	9	4434		N/A	113	37-2
1-1/4	4332XP	4332RXP	438	37-2	415-31V	4373VV	22-1	32R-6	432	434	36-114V	439	430	9	4434		N/A	113	37-2
1-1/2	4432XP	4432RXP	448	37-2	415-31V	4473VV	22-1	32R-6	442	93	36-112V	449	440	9	4434		N/A	113	37-2
2	4532XP	4532RXP	458	37-2	415-31V	4573VV	22-1	32R-6	452	176	36-2V	459	450	9	4434		2-40V	113	37-2
2-1/2	4632XP	4632RXP	468	37-2	415-31V	4673VV	24-1	32R-7	462	102	36-212V	469	460	9	4434		2-42V	113	37-2
3	4732XP	4732RXP	478	37-2	415-31V	4773VV	24-1	32R-7	472	474	36-3V	479	470	9	4434	2-46V	113	37-2	

N.C. XP Cover	N.O. XP Cover	Bolts	Washers	XP Base	Cv	Valve Size	Normally Closed			
							A	B	C	Ship Weight
							(in)	(in)	(in)	(lbs)
Q230	QR230	ALL	ALL	ALL	ALL	1/8	7	6.19	2.75	7
42NC	42NO	9-4	46-3	41A	1.3	1/4	7	6.19	2.75	7
42NC	42NO	9-4	46-3	41A	2.1	3/8	7	6.19	2.75	7
42NC	42NO	9-4	46-3	41A	2.3	1/2	7	6.19	2.75	7
42NC	42NO	9-4	46-3	41A	3.9	3/4	7.38	6.38	3.25	8
42NC	42NO	9-4	46-3	41A	5.1	1	7.63	6.44	3.81	9
42NC	42NO	9-4	46-3	41A	11.6	1-1/4	8.38	6.88	4.25	10
42NC	42NO	9-4	46-3	41A	12.1	1-1/2	8.88	7.25	4.88	12
42NC	42NO	9-4	46-3	41A	26	2	9.81	7.69	5.88	17
42NC	42NO	9-4	46-3	41A	48	2-1/2	10.13	8.25	7	22
42NC	42NO	9-4	46-3	41A	75	3	11.19	8.38	8.25	31

The Explosionproof housing is constructed of two (2) machined, enamel painted sand-cast gray iron parts bolted together, threaded onto the bonnet assembly and rigidly cemented in place. Once assembled the housing will *not* rotate. NEMA 4, NEMA 5, or NEMA 7 ratings are available with this housing.

Valve Size	Normally Open			
	A	B	C	Ship Weight
(in)	(in)	(in)	(in)	(lbs)
1/8	8.13	7.31	2.75	8
1/4	8.13	7.31	2.75	8
3/8	8.13	7.31	2.75	8
1/2	8.13	7.31	2.75	8
3/4	8.50	7.50	3.25	9
1	8.75	7.56	3.81	10
1-1/4	9.50	8.00	4.25	11
1-1/2	10.00	8.38	4.88	13
2	10.94	8.81	5.88	18
2-1/2	11.25	9.38	7	22
3	12.31	9.50	8.25	31

**Physical Dimensions**

**Physical Dimensions**

