



## High Temp Type K-1 Series

**2-Way • Cast 316 Stainless Steel CF8M Valve Bodies**  
**Velvetrol® Internal Piston Pilot Operated**  
**High Temp Solenoid Valves**  
**Normally Closed or Normally Open**

**For High Temp Applications:** Steam | Hot Water | Hot Air | Hot Oils

**Pressures:** 5psi minimum to 400psi maximum | Full Port

**Temperature:** -40°F to 450°F | Class H Coils

**Mounting:** Install in horizontal line with coil upright and on top (unless ordered with -76 vertical mounting option)

**Pipe Sizes:** 1/8" – 2" NPT • Full Port

**Normally Closed or Normally Open**

<b>Service Ratings</b>	Complete pricing, service & electrical ratings are shown on the List Price Schedule. Valves will be furnished for 5-150 PSI and 120 VAC unless otherwise specified.	
<b>Normally Closed</b>		<b>Normally Open</b>
<b>K-1-3T</b>	Steam, Hot Water, Hot Air, Hot Oils (400SSU or 30SAE) Steam: 5-150psi or 10-200psi Hot Water, Air, Oils: 5-150psi or 10-400psi (Normally Open: 5-150psi or 10-300psi) 450° Max Fluid Temp, Class H Coils 12, 24, 120, 240 & 480 VAC 12, 24, 32, 48, 115, 230 VDC 26 Watts Max	<b>KR-1-3T</b>
<b>Add: -2</b>	Explosion Proof Coil Housing – meets Class 1 Div 2, Class 1 Group D, Class 2 Group E, F, G NEMA 7 Explosion Proof. Also meets NEMA 4 Watertight/Corrosive Resistant & NEMA 5 Dusttight. Previously identified as "-24" and "-25".	<b>Add: -2</b>
<b>Add: -81, -84</b>	-81 Factory Slow Close Option (Reduces Water Hammer) -84 Factory Quick Close Option	<b>Add: -81, -84</b>
<b>Add: -76</b>	Spring Loaded Pilot for vertical mounting. Limitations apply. Consult factory.	<b>Add: -76</b>
<b>Add: -SW</b>	Pipe Connection: -SW (Socket Weld)	<b>Add: -SW</b>

### Construction:

- **Class H Coils** are watertight/corrosive resistant, molded of filled polyester with 18" leads and ½" conduit connector.
- **Bodies** are rated to 1000 PSI and cast in CF8M 316 Stainless Steel.
- **Plunger Tubes** are Stainless Steel silver soldered to the SS bonnet.
- **Piston Assemblies** are Stainless Steel with filled Teflon™ **piston rings**, Stainless Steel **expanders**, and Teflon™ **seat discs**.
- **Seat Screw** seats are Teflon™ (-3T).
- **Pilot Valves** are 430 FR Stainless Steel. **Piston springs** are Stainless Steel.
- **1/8"-1"**: Globe style body with **union bonnet**.
- **1-1/4" – 2"**: Globe style body with **bolt-down bonnet**.

### Specials:

- Slow Close (-81) or Quick Close (-84) factory settings available at no charge.
- Spring-loaded pilot (-76) for vertical mounting available. Limitations apply. Consult factory.
- Teflon™ coated pistons & other special assemblies available.
- Non-standard coils available with voltage, wattage, and lead wire length to your specifications.

### Performance, Ordering, and Installation Guide

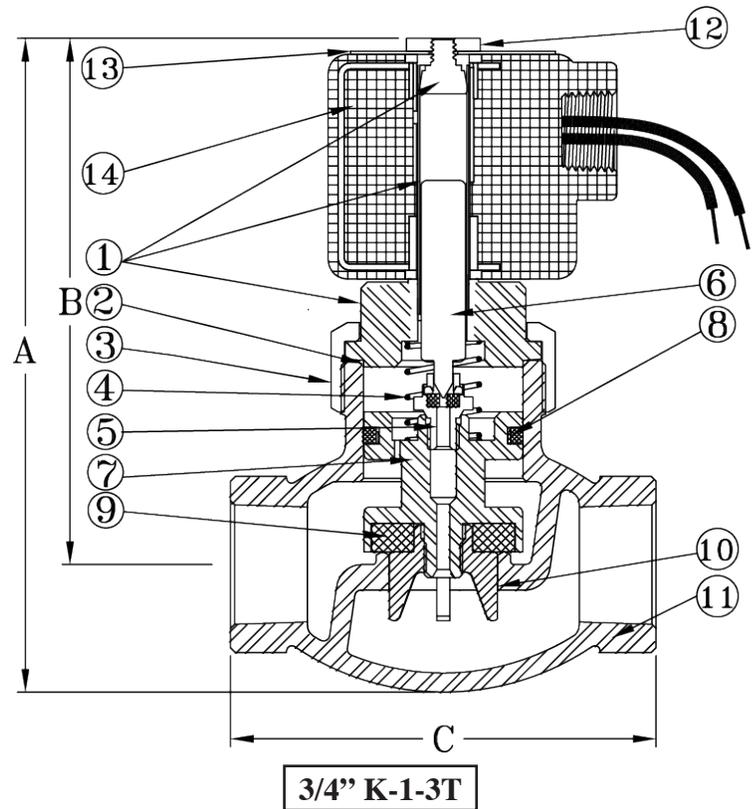
**Ordering Data:** Specify the pipe size, type, fluid, operating pressure, temperature range, electrical specifications, and backpressure (if any).

**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 5psi or 10psi ( $\Delta P$ ), depending on pressure rating, is required across valve for operation.

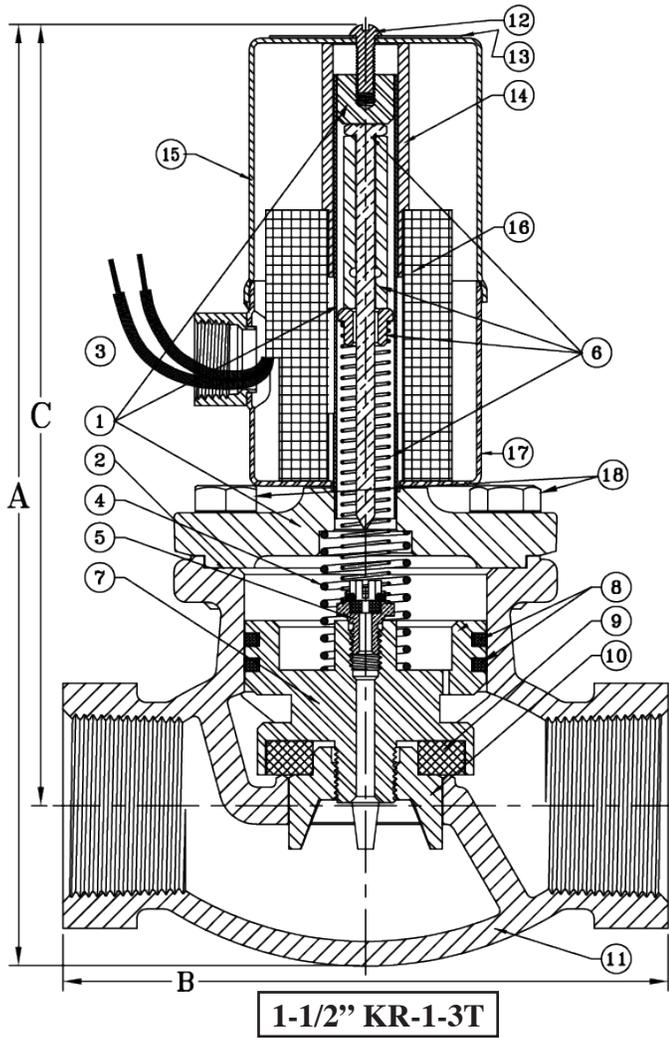
**Mounting:** Mount in horizontal line with coil vertical ( $\pm 7^\circ$ ) and on top (unless ordered with -76 spring loaded pilot for vertical mounting). Install 40 mesh strainer (not larger) ahead of the valve. Check for proper coil voltage. Make sure that the flow arrow on the valve body is pointing in the direction of flow.

**Servicing:** Solenoid valves should be frequently checked for operation, cleanliness, and internal wear. Repair Kits are factory available – be sure to specify size, type, serial number or operating data, voltage, pressure, etc.)



### Parts Details

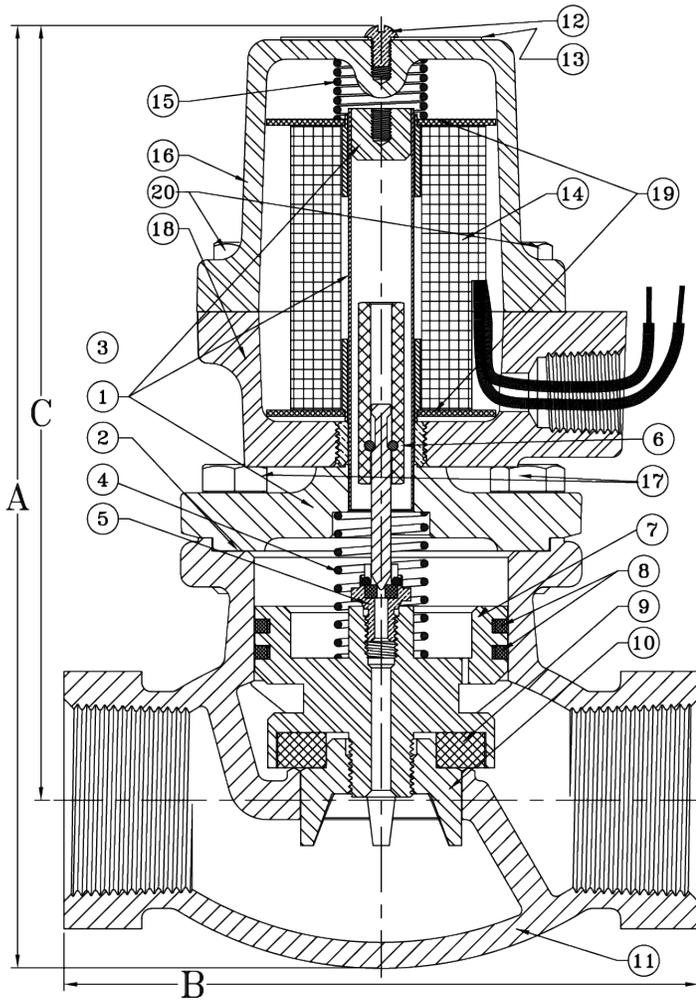
1	Bonnet Assembly
2	Bonnet Seal (N/A 1/8" - 1")
3	Bonnet Ring (N/A 1-1/4" - 2")
4	Piston Spring
5	Seat Screw
6	Pilot Valve
7	Piston
8	Piston Ring & Expander
9	Seat Disc
10	Guide Nut
11	Body
12	Coil Nut
13	Name Plate
14	Coil



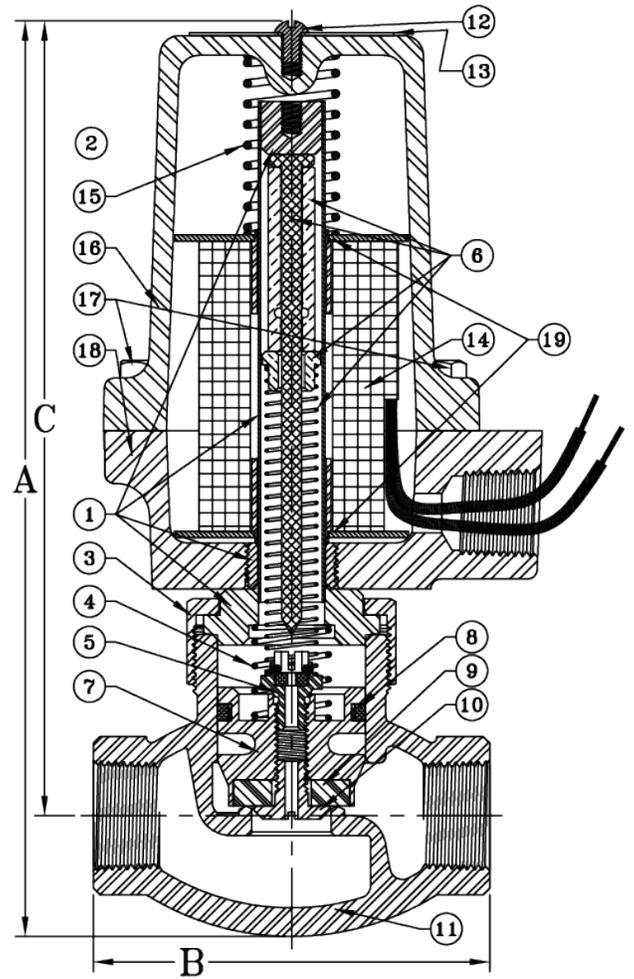
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1	Bonnet Assembly
2	Bonnet Seal (N/A 1/8" - 1")
3	Bonnet Ring (N/A 1-1/4" - 2")
4	Piston Spring
5	Seat Screw
6	Pilot Assembly
7	Piston
8	Piston Ring & Expander
9	Seat Disc
10	Guide Nut
11	Body
12	Coil Screw
13	Nameplate
14	Nip
15	Coil Cover
16	Coil
17	Coil Can
18	Bonnet Bolts (x4)

Valve Size	Cv Factor	Standard Valve Dimensions							
		Normally Closed				Normally Open			
		A	B	C	Weight (lbs.)	A	B	C	Weight (lbs.)
1/8"	1.1	6.03	2.63	5.34	3	7.03	2.63	6.34	4
1/4"	2.1	6.03	2.63	5.34	3	7.03	2.63	6.34	4
3/8"	3.2	6.03	2.63	5.34	3	7.03	2.63	6.34	4
1/2"	3.9	6.75	3.13	5.88	4	7.75	3.13	6.88	4
3/4"	7.5	7.02	3.75	5.88	4	8.02	3.75	6.88	5
1"	9.9	7.44	4.16	6.19	5	8.44	4.16	7.19	5
1-1/4"	23.0	8.56	6.13	6.94	11	9.56	6.13	7.94	12
1-1/2"	25.0	8.56	6.13	6.94	11	9.56	6.13	7.94	12
2"	45.0	9.38	6.45	7.39	17	10.38	6.45	8.39	17

\*Also for -3B, -3EP, and -3T Valves



**1-1/2" K-1-3T-2**



**3/4" KR-1-3T-2**

**Parts Details**

1	Bonnet Assembly
2	Bonnet Seal (N/A 1/8"-1")
3	Bonnet Seal (N/A 1-1/4"-2")
4	Piston Spring
5	Seat Screw
6	Pilot Valve
7	Piston
8	Piston Ring & Expander
9	Seat Disc
10	Disc Screw or Guide Nut
11	Body
12	Coil Screw
13	Name Plate
14	Coil
15	Coil Spring
16	XP Cover
17	Body Bolts & Washers (x4)
18	Base
19	End Plates
20	XP Housing Bolts and Washers (x4)

**Parts Details**

1	Bonnet Assembly
2	Bonnet Seal (N/A 1/8"-1")
3	Bonnet Seal (N/A 1-1/4"-2")
4	Piston Spring
5	Seat Screw
6	Pilot Valve
7	Piston
8	Piston Ring & Expander
9	Seat Disc
10	Disc Screw or Guide Nut
11	Body
12	Coil Screw
13	Name Plate
14	Coil
15	Coil Spring
16	XP Cover
17	Body Bolts & Washers (x4)
18	Base
19	End Plates

**Physical Dimensions for -2 XP  
Normally Closed Valves**

Size	A	B	C	Weight
1/8	6.56	2.63	5.88	7 lbs.
1/4	6.56	2.63	5.88	7 lbs.
3/8	6.56	2.63	5.88	7 lbs.
1/2	7.30	3.13	6.44	7 lbs.
3/4	7.56	3.75	6.44	8 lbs.
1	8.00	4.16	6.75	9 lbs.
1-1/4	9.10	6.13	7.50	15 lbs.
1-1/2	9.10	6.13	7.50	15 lbs.
2	9.92	6.45	7.94	20 lbs.

**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. Also meets Watertight NEMA 4, NEMA 5, and NEMA 7 ratings with this housing.**

**Physical Dimensions for -2 XP  
Normally Open Valves**

Size	A	B	C	Weight
1/8	7.69	2.63	7.00	8 lbs.
1/4	7.69	2.63	7.00	8 lbs.
3/8	7.69	2.63	7.00	8 lbs.
1/2	8.41	3.13	7.54	8 lbs.
3/4	8.68	3.75	7.54	9 lbs.
1	9.10	4.16	7.85	10 lbs.
1-1/4	10.22	6.13	8.60	16 lbs.
1-1/2	10.22	6.13	8.60	16 lbs.
2	110.4	6.45	9.05	21 lbs.