

***tyco***

---

***Cash Valve***

**K SERIES**

---

**BACK PRESSURE  
VALVES**

SERIAL NO.  
MAX. WORKING  
RANGE  
SET

MADE IN U.S.A.

ISSUED - JANUARY 2000  
CAVMC-0517-US-0208  
ISO 9001 Certified

# DIRECT ACTING BACK PRESSURE VALVES

## K-5, K-5C 5 - 150 psi, DIRECT ACTING, ANGLE BACK PRESSURE VALVES

### APPLICATION/FEATURES

The Cash Valve Types K-5 and K-5C are high capacity angle bypass regulators or back pressure control valves capable of handling flows of up to 200 gallons per minute in the larger sizes. System pressure to be regulated is connected to the bottom inlet.

Excess flow that is to be returned to the tank, pump suction or simply piped to a drain, is connected to the side outlet. See typical installation sketch.

Types K-5 and K-5C are suitable for pump systems of all kinds and are intended for use with water and other fluids, especially oil of all grades. Not for steam service.

These valves can also be used to maintain a certain pressure difference

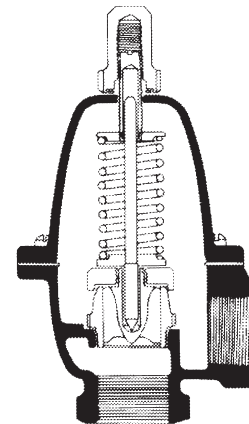
across the valve. Type K-5C differs from Type K-5 in that it is fitted with a silicone rubber seat disc rather than a metal seat to provide for those applications where tight shut-off is required.

Available in 1", 1 1/4", 1 1/2" and 2" sizes, Types K-5 and K-5C are designed for systems having a maximum operating temperature of 300°F that require pressure control from 5 psi to 150 psi.

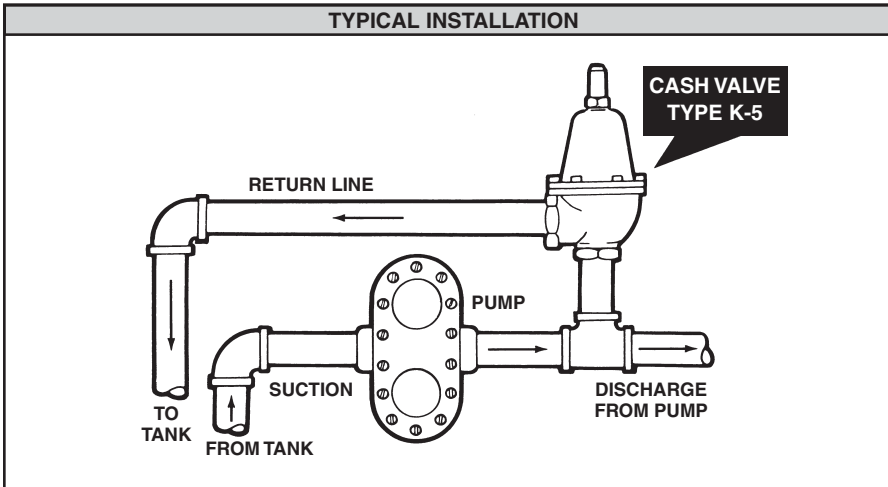
Both valves are fitted with a closing cap over the adjusting screw to discourage unauthorized tampering with the set pressure and seal against leakage.



TYPE K-5



TYPE K-5 INTERIOR

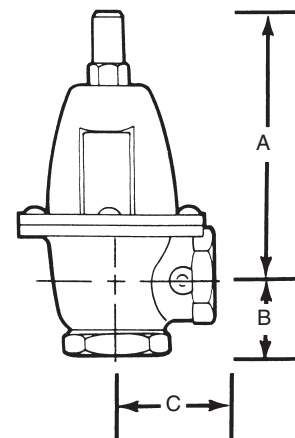


### CONSTRUCTION/SPECIFICATIONS

Cash Valve Types K-5 and K-5C incorporate bronze bodies and internal trim, a brass spring chamber, stainless steel adjustment spring, and high temperature gaskets.

TYPE K-5, K-5C SPRING RANGES			
SIZE	ADJUSTMENT RANGE (psi)		
1"	5-20	15-65	60-150
1 1/4"	5-35	30-75	70-150
1 1/2"	5-30	25-70	65-150
2"	5-20	15-70	65-150

TYPE	SIZE	DIMENSIONS			SHIPPING WEIGHT (lbs.)
		A	B	C	
K-5	1"	5 5/8"	1 1/2"	2"	4 1/8
	1 1/4"	6 19/32"	1 25/32"	2 7/16"	8
	1 1/2"	6 11/16"	2"	2 1/2"	8
	2"	7 9/16"	2 1/4"	3"	14



TYPE K-5

## SPECIFICATIONS (Continued)

TYPE K-5, K-5C WATER CAPACITY INFORMATION (gpm)								
SET PRESSURE † (psi)	1"		1 1/4"		1 1/2"		2"	
	10% Rise	20% Rise	10% Rise	20% Rise	10% Rise	20% Rise	10% Rise	20% Rise
10	21	24	28	35	32	40	38	60
15	26	32	38	44	43	52	52	76
20	29	37	48	57	53	68	60	94
30	34	45	58	67	63	76	78	110
40	38	50	70	78	74	92	86	122
50	40	53	76	86	82	102	94	132
60	43	56	82	98	88	116	102	140
75	48	63	88	107	98	128	118	158
100	52	67	102	120	106	140	136	176
125	56	70	108	128	116	160	152	188
150	60	72	118	138	124	170	184	200

† Set Pressures are based upon valve discharge into an atmospheric pressure return line.  
 If return line pressure is significantly higher than atmospheric pressure, then consult factory for capacity information.

## K-10 15 - 600 psi, PISTON TYPE ANGLE BACK PRESSURE VALVE

### APPLICATION

The Cash Valve Type K-10 back pressure relief valves sacrifice nothing in quality or dependability, yet are priced at a satisfying competitive level. Totally enclosed and physically small, these high capacity valves are especially well suited for use on hydraulic systems of all kinds, such as hydraulic pumping units where a predetermined pump discharge pressure must be maintained on a machine tool hydraulic mechanism.

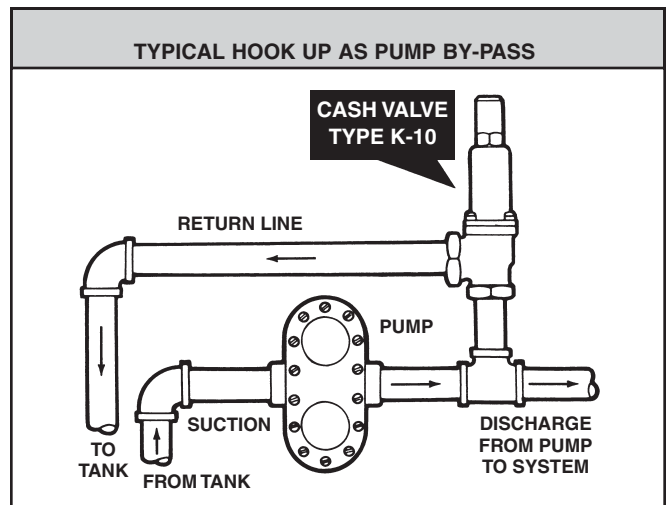
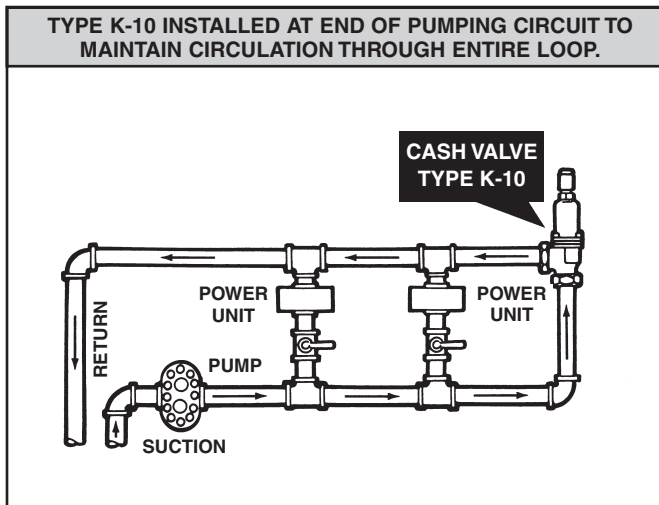
They are suitable for any system requiring automatic regulation of a pump discharge pressure.

K-10 angle type back pressure relief valves are intended for service with water, other liquids and light fuel oils. Not for steam service.

Type K-10 valves are available in 1/4" to 1 1/4" sizes and are designed for systems which require pressure control from 15 to 600 psi. Maximum system temperature is 450°F.



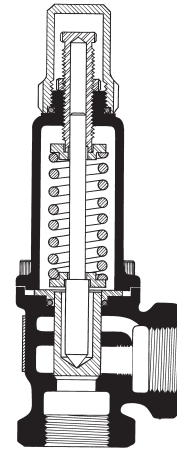
TYPE K-10



# PISTON TYPE BACK PRESSURE VALVES

## FEATURES

- Sizes: 1/4", 3/8", 1/2", 3/4", 1", and 1 1/4"
- Fitted with female threaded connections, bottom inlet, side outlet. Valves may be operated in any position. Install valve by connecting bottom inlet into line where back pressure is to be held. Connect side outlet to bypass return line. All fluid in excess of valve pressure setting will now be automatically relieved or bypassed to maintain correct pump discharge (system) pressure.
- Balanced Piston Design: Type K-10 incorporates a balanced piston which means that they are substantially unaffected by pressures or pressure changes in the outlet lines, assuring constant control over pump discharge pressure.
- The K-10 features smooth, quiet performance. A long pressure spring provides maximum sensitivity.
- The rugged but simple design lends itself to easy maintenance and repair. The valves can be completely disassembled without removing them from the line.



TYPE K-10 INTERIOR

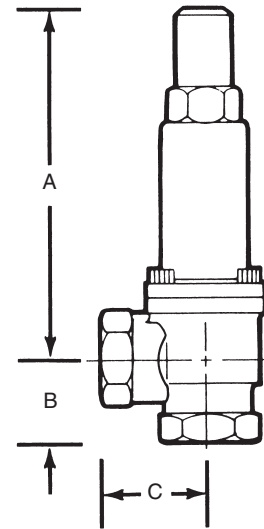
## CONSTRUCTION/SPECIFICATIONS

The Cash Valve Type K-10 valve incorporates a brass closing cap, a stainless steel pressure spring,

a heavy bronze body, stainless steel trim and single seat.

TYPE K-10 SPRING RANGES				
SIZE	ADJUSTMENT RANGES (psi)			
1/4"	15-30 / 25-75	50-140	100-300	200-600
3/8"	15 -30 / 25-75	50-140	100-300	200-600
1/2"	15-75	50-150	100-300	200-600
3/4"	15-75	50-150	100-300	200-600
1"	15-75	50-150	100-300	200-600
1 1/4"	15-75	50-150	100-300	200-600

TYPE	SIZE	DIMENSIONS			SHIPPING WEIGHT (lbs.)
		A	B	C	
K-10	1/4"	4 1/4"	3 1/32"	1 1/4"	1 1/4
	3/8"	4 1/4"	3 1/32"	1 1/4"	1 1/4
	1/2"	5 5/8"	1 3/8"	1 5/8"	4
	3/4"	5 5/8"	1 3/8"	1 5/8"	4 1/2
	1"	7 7/8"	1 7/8"	2 1/4"	8 1/2
	1 1/4"	7 7/8"	1 7/8"	2 1/4"	9



TYPE K-10

# PISTON TYPE BACK PRESSURE VALVES

## SPECIFICATIONS (Continued)

TYPE K-10 WATER CAPACITY INFORMATION (gpm)												
SET PRESSURE† (psi)	INLET SIZES											
	1/4"		3/8"		1/2"		3/4"		1"		1 1/4"	
	10% Rise	20% Rise	10% Rise	20% Rise	10% Rise	20% Rise	10% Rise	20% Rise	10% Rise	20% Rise	10% Rise	20% Rise
15	1.0	2.5	1.0	2.5	1.5	3.5	1.5	3.5	3.0	6.0	3.0	6.0
20	1.5	4.0	1.5	4.0	2.5	5.0	2.5	5.0	4.0	8.0	4.0	8.0
30	2.5	6.0	2.5	6.0	3.5	7.0	3.5	7.0	5.0	12.0	5.0	12.0
50	3.0	9.0	3.0	9.0	5.0	11.0	5.0	11.0	6.5	17.5	6.5	17.5
75	3.5	11.0	3.5	11.5	6.0	14.0	6.0	14.0	8.5	23.5	8.5	23.5
100	4.0	11.5	4.0	14.5	7.0	15.0	7.0	17.0	10.0	27.0	10.0	27.0
125	4.5	11.5	4.5	17.0	7.5	16.0	7.5	19.0	11.5	30.0	11.5	30.0
150	5.0	11.5	5.0	19.5	8.0	22.0	8.0	22.0	13.0	34.0	13.0	34.0
200	5.5	11.5	5.5	20.0	9.0	24.0	9.0	24.0	15.0	40.0	15.0	40.0
250	6.0	11.5	6.0	20.0	9.7	26.0	9.7	26.0	17.0	47.0	17.0	47.0
300	7.0	11.5	7.0	20.0	10.5	28.0	10.5	28.0	19.0	54.0	19.0	54.0
400	8.0	11.5	8.0	20.0	11.5	30.0	11.5	31.5	23.0	63.0	23.0	63.0
600	10.0	11.5	10.0	20.0	14.5	30.0	14.5	37.0	28.0	65.0	28.0	77.0

† Set Pressures are based upon valve discharge into an atmospheric pressure return line. If return line pressure is significantly higher than atmospheric pressure, then consult factory for capacity information.

# PISTON TYPE BACK PRESSURE VALVES

## **K-15** 25 - 1500 psi, PISTON TYPE ANGLE BACK PRESSURE VALVE

### APPLICATION

The Cash Valve Type K-15 is a piston type back pressure valve that has been designed for pressures up to 1500 psi. The Type K-15 is especially well suited for bypass applications on high pressure pumps or any system requiring automatic regulation of a pump discharge pressure... oil burning equipment, rams, presses and lifts. The K-15 also has many applications in the chemical and process field as well as

the car wash industry. It is suitable for water or other liquids and light fuel oil. Not for steam service.

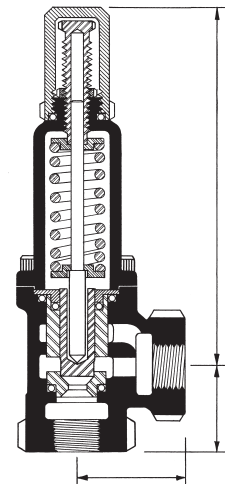
The Type K-15 valve is available in 1/4" to 3/4" sizes and is designed for systems which require pressure control from 25 to 1500 psi. For systems having maximum temperatures of 450°F.



TYPE K-15 OUTSIDE

### FEATURES

- Small and compact: Available in 1/4", 3/8", 1/2", and 3/4" sizes.
- K-15 angle type valves incorporate female threaded connections; bottom inlet, side outlet, and may operate in any position. Refer to K-10 features for typical valve installations.
- The K-15 features a replaceable stainless steel seat and piston providing longer valve life at minimal cost.
- Five pressure control ranges available - from 25 to 1500 psi. See Spring Range Table under Specifications.
- The K-15 incorporates a long, sensitive adjustment spring.
- Smooth, quiet performance.
- Rugged but simple design incorporated into each K-15 back pressure valve lends itself to easy maintenance and repair. All major repairs can be made without removing the valve from the line.
- Closing cap over the top adjusting screw discourages unauthorized tampering with the set pressure.



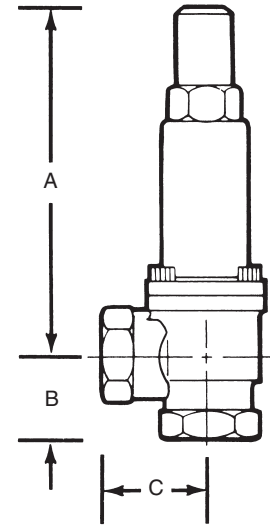
TYPE K-15 INTERIOR

## SPECIFICATIONS

TYPE K-15 SPRING RANGES					
SIZE	ADJUSTMENT RANGE (psi)				
1/4" & 3/8"	25-75	20-150	100-300	150-800	600-1500
1/2" & 3/4"	25-150	20-200	100-700	150-800	600-1500

TYPE	SIZE	DIMENSIONS			SHIPPING WEIGHT (lbs)
		A	B	C	
K-15	1/4"	4 1/4"	3 1/32"	1 1/4"	1 3/8
	3/8"	4 1/4"	3 1/32"	1 1/4"	1 3/8
	1/2"	5 5/8"	1 3/8"	1 5/8"	3
	3/4"	5 5/8"	1 3/8"	1 5/8"	3

TYPE K-15 WATER CAPACITY INFORMATION (gpm)									
SET PRESSURE† (psi)	1/4"		3/8"		1/2"		3/4"		
	10% Rise	20% Rise	10% Rise	20% Rise	10% Rise	20% Rise	10% Rise	20% Rise	
25	0.5	1.0	0.5	1.0	0.7	1.3	0.7	1.3	
50	0.6	1.3	0.6	1.3	1.8	4.0	1.8	4.0	
100	1.0	4.0	1.0	4.0	3.3	8.0	3.3	8.0	
150	1.5	7.0	1.5	7.0	4.3	11.0	4.3	11.0	
250	3.0	7.0	4.0	12.0	7.0	15.0	7.0	16.5	
500	6.0	7.0	8.0	12.0	11.0	20.0	11.0	23.0	
750	7.0	7.0	12.0	12.0	16.0	20.0	16.0	33.5	
1000	7.0	7.0	12.0	12.0	20.0	20.0	20.0	33.5	
1500	7.0	7.0	12.0	12.0	20.0	20.0	29.0	33.5	



† Set Pressures are based upon valve discharge into an atmospheric pressure return line. If return line pressure is significantly higher than atmospheric pressure, then consult factory for capacity information.

## HOW TO ORDER

To order, specify Cash Valve type by specific designation

(i.e. Type K-5, K-5C, K-10, K-15).

Also state the following:

1. Valve size
2. Service (water, air, oil, etc.)
3. Set pressure and pressure range.
4. Maximum required flow rate
5. System operating temperature

# K SERIES BACK PRESSURE VALVES

---

Cash Valve  
953 Old U.S. Highway 70  
Black Mountain, NC 28771  
Phone: 800-879-2042 • 828-669-3710  
Fax: 800-879-2057 • 828-669-0586  
CAVMC-0517-US-0208

*Tyco Valves & Controls*  
[www.cashvalve.com](http://www.cashvalve.com)