



tyco

Cash Valve

E-55 SERIES

**PRESSURE
REGULATORS
FOR WATER & AIR**

ISSUED - AUGUST 2000
CAVMC-0510-US-0208
ISO 9001 Certified

HIGH CAPACITY PRESSURE REGULATING VALVES

E-55 HIGH CAPACITY AND ACCURATE REGULATION

APPLICATION

Due to its exceptional design features, the Type E-55 pressure regulator will handle high and variable flow rates that are beyond the limitations of ordinary regulators and still maintain unusually close regulation of the downstream pressure.

The Type E-55 regulator is suitable for service on air, water, oil, gases (except steam) and fluids not corrosive to brass. It is particularly suitable for water systems of all kinds and various hydraulic and pneumatic systems that require a regulator with exceptional accuracy.

Available in 1/2" thru 2" sizes, the Type E-55 regulator is designed for systems having a maximum inlet pressure of 400 psi and allows delivery pressures to be adjusted from a maximum of 300 psi to a minimum of 25 psi depending on the adjusting spring used. Refer to the Spring Range Table under Specifications for additional information. The maximum system operating temperature must not exceed 180°F.

FEATURES

A wide range of features contribute to make the Type E-55 an outstanding regulator.

BALANCED PISTON DESIGN:

The Type E-55 is furnished with a fully balanced piston assembly; the upper and lower sections of the piston have the same cross section area and are

exposed to the same outlet pressure conditions. The balanced piston design allows the pressures pushing upward and downward on the piston to be equal, producing more sensitive operation while providing for closer regulation over wide fluctuations in the inlet pressure and assuring quiet performance.

ACCURATE REGULATION AT HIGH FLOW RATES:

A unique feature of the Type-55 regulator is its increased sensitivity to changes in the rate of flow which is accomplished through the use of an aspirating nozzle in the valve outlet. The velocity of the flow through the nozzle produces an aspirating action (suction) that reduces the pressure below the diaphragm, permitting a wider valve opening and higher capacity without sacrificing accuracy of regulation.

INBUILT STRAINER SCREEN:

An inbuilt MoneI® strainer screen protects the working parts and is easily removed for cleaning by removing the bottom plug.

CRYOGENIC SERVICE:

Optional construction is available for the Type E-55 regulator to enable it to be used in handling cold fluids or gases. For more information, write for Data Sheet.

SIMPLICITY OF DESIGN:

The simple design of the Type E-55 regulator lends itself to easy maintenance and repair.



TYPE E-55

TYPE	SIZE	VALVE CONNECTIONS	MAXIMUM INLET PRESSURE	ADJUSTMENT RANGE	MAXIMUM OPERATING TEMP. (°F)
E-55	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"	Threaded	400	25-300	180

HIGH CAPACITY PRESSURE REGULATING VALVES

Construction

PART DESCRIPTION	MATERIALS	PART DESCRIPTION	MATERIALS
Body	Bronze	Seat Disc	BUNA-N
Spring Chamber	Bronze	Piston	Brass
Adjusting Spring	Steel plated	O-ring	BUNA-N
Pressure Plate	Brass	Strainer Screen	Monel®
Diaphragm	BUNA-N nylon reinforced	Bottom Plug	Bronze
Body Seat	Stainless Steel		

Specifications

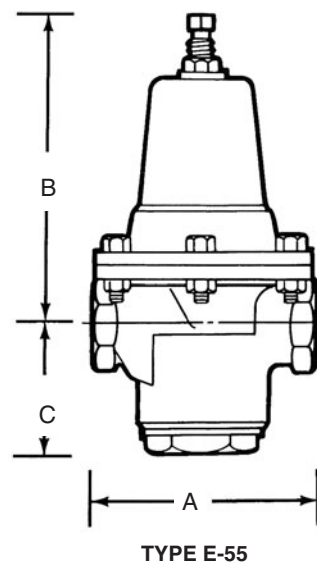
SIZE	SPRING RANGE ADJUSTMENT (PSI)				
1/2", 3/4", 1"	15-50	25-80	50-110	75-195	100-250
1 1/4", 1 1/2", 2"	15-25	25-50	40-100	75-150	100-300*

* 100-250 range for 1 1/4", 1 1/2" and 2" sizes available.

Note: Adjustable range varies with use of closing cap; consult factory.

Dimensions

SIZE	DIMENSIONS			SHIPPING WEIGHT (LBS)
	A	B	C	
1/2"	4"	7 1/4"	2 1/4"	6
3/4"	4"	7 1/4"	2 1/4"	6
1"	4"	7 1/4"	2 1/4"	6
1 1/4"	5 5/8"	11 1/8"	3 1/4"	17
1 1/2"	5 5/8"	11 1/8"	3 1/4"	17
2"	5 5/8"	11 1/8"	2 7/8"	17



The amount of air or fluid any regulator will pass is governed by two factors: (1) pressure differential (difference between the inlet and outlet set

pressure), and (2) fall-off (or droop). Outlet pressure fall-off drops slightly with increased flow (initially slight, increasing with higher flow). The rates

of flow stated on the following charts are based on assumed conditions, which may be considered average for a given installation.

Water Capacity (gpm)

VALVE VARIATION SIZE	P ₂ (psi)	DIFFERENTIAL PRESSURE P ₁ -P ₂ (psi)						
		10	25	50	75	100	150	200 or more
1/2"	5	4	9	13	16	18	18	18
	10	7	12	16	17			
3/4"	5	5	10	17	22	28	33	35
	10	9	14	20	25			
1"	5	6	11	19	24	32	38	43
	10	10	15	22	28			
1 1/4"	5	18	38	60	80	95	109	120
	10	40	56	73	85			
1 1/2"	5	20	40	70	90	107	124	140
	10	43	62	82	95			
2"	5	25	50	80	100	120	140	
	10	52	74	94	109			

Air Capacity (scfm)

VALVE VARIATION SIZE	P ₂ (psi)	DIFFERENTIAL PRESSURE P ₁ -P ₂ (psi)						
		10	25	50	75	100	150	200 or more
1/2"	5	22	61	88	133	150	186	206
	10	38	81	108	142			
3/4"	5	27	68	115	183	234	341	400
	10	48	95	135	208			
1"	5	32	74	129	200	267	393	492
	10	54	101	149	233			
1 1/4"	5	97	257	406	667	792	1126	1373
	10	215	379	494	709			
1 1/2"	5	107	271	474	751	892	1281	1602
	10	231	420	555	792			
2"	5	134	338	542	834	1000	1446	1830
	10	279	500	636	909			

HIGH CAPACITY PRESSURE REGULATING VALVES

HOW TO ORDER

To order, specify Cash Valve type by specific series designation (i.e. Type E Series) and the end connection, if applicable. Also state the following:

1. Valve pipe size
2. Fluid to be controlled
3. Inlet pressure
4. Outlet pressure setting and range
5. Maximum required flow rate
6. System operating emperature

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