



*Valtek Mark Eight  
Control Valves*

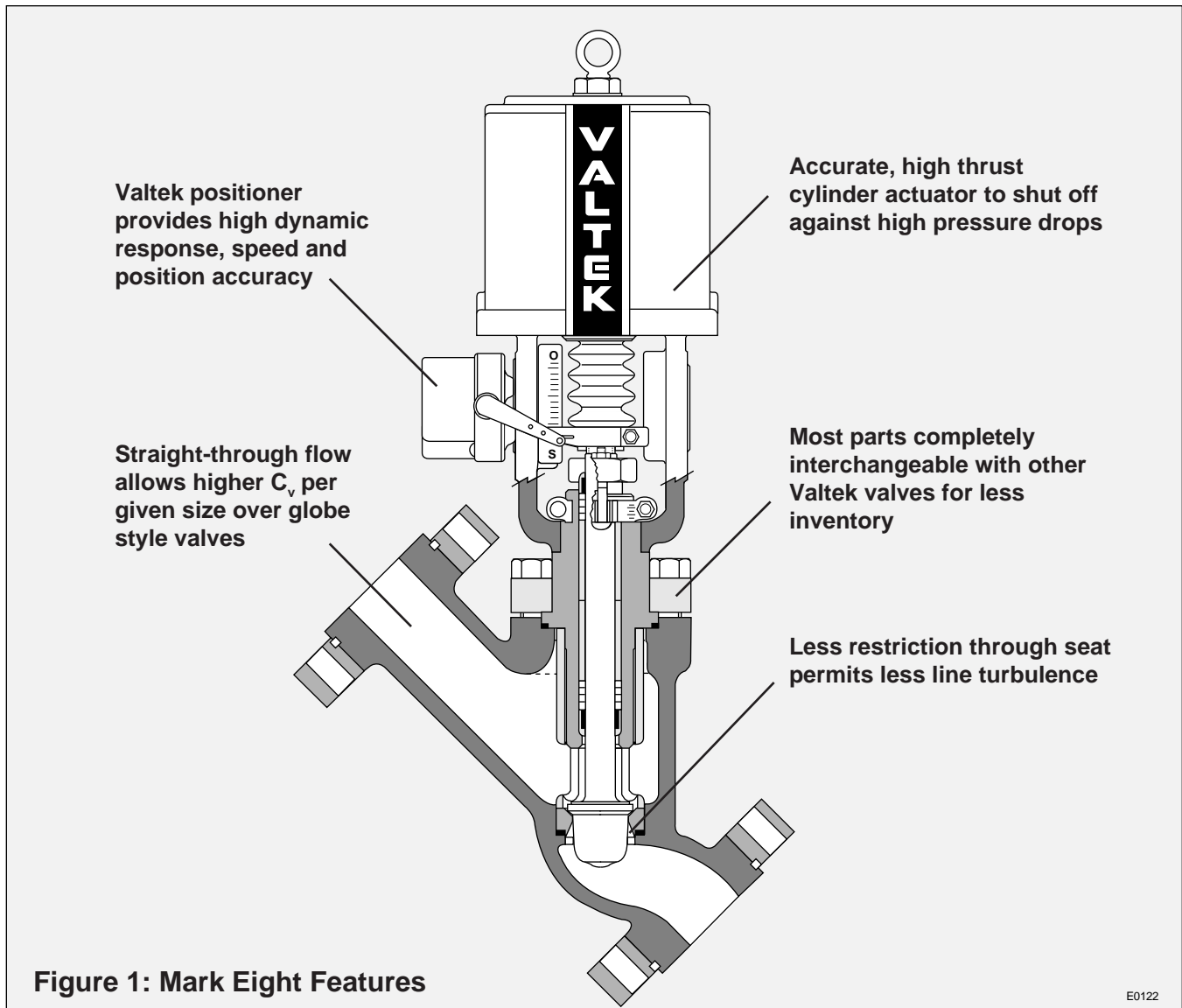
## Valtek Mark Eight Control Valves

The Valtek® Mark Eight™ control valve is designed with a unique “Y” style globe body that provides higher flow capacities and less process turbulence than conventional globe valves.

Because of its nearly straight-through flow passage, the “Y” style body is less flow restrictive than a normal globe-style body. This permits less pressure to be converted into velocity as the fluid passes through the seat, resulting in a lower valve recovery factor and higher capacity. Table I on page 3 gives nominal  $C_v$  values for Mark Eight valves.

Mark Eight’s straight-through design generates less valve and piping turbulence which significantly reduces harmful noise and vibration levels.

Like Valtek’s Mark One globe valve, the Mark Eight features streamlined, constant area flow passages, top-entry trim, a four-way positioner, and a high thrust cylinder actuator. The Mark Eight is completely interchangeable with the Mark One except for the body, seat retainer, bonnet, and plug. The packing box, actuator, seat ring, flanges, and gaskets are all standard, off-the-shelf items for fast delivery and minimal parts inventory.



**Figure 1: Mark Eight Features**

E0122

# Valtek Mark Eight

## C<sub>v</sub> Data, Specifications

**Table I**  
**Mark Eight C<sub>v</sub>**

*(Flow Coefficients based upon standard, unbalanced full area trim at 100% open with equal percentage characteristic and flow over the plug.)*

Valve Size	ANSI Class			
	150-600	900	1500	2500
1	16	14	14	11
1½	40	36	36	24
2	64	66	66	42
3	167	145	145	95
4	297	250	250	155
6	607	625	550	360
8	950	1050	925	
10	1550	1650	1450	
12	2190	2300	2000	
14	2940	2800	2400	

**Note:** 16 and 18-inch C<sub>v</sub> data available upon request.

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**Table II: Body Specifications**

<b>Sizes</b>	1-18 inch thru ANSI class 600 1-12 inch thru ANSI class 2500
<b>Form</b>	“Y” style globe
<b>End Connections</b>	Separable flange, integral flange, NPT, socketweld, buttweld, Grayloc
<b>Materials</b>	Carbon steel, stainless steel, chrome-moly, bronze, alloy 20, monel, nickel, titanium, other castable materials
<b>Separable Flanges</b>	Carbon steel, 316 stainless steel, other materials as required.
<b>Bonnet Types</b>	Standard, extended, cold box, bellows seal
<b>Trim</b>	Equal percentage, linear or quick open characteristics; unbalanced or pressure-balanced; hard facing and soft seats available.

**Table III: Actuator Specifications**

<b>Types</b>	Double-acting cylinder w/fail-safe spring, manual handwheel
<b>Sizes</b>	Cylinder 25, 50, 100 sq. in. (standard) and 200, 300, 400, 500, 600 sq in.(optional); manual handwheel 9, 12, 18, 24 inch diameter
<b>Action</b>	Air-to-open, air-to-close (field reversible)
<b>Max. Working Pressure</b>	Cylinder, 150 psig / <b>10.3 Barg</b>
<b>Positioner</b>	Pneumatic with 3-15, 3-9, 9-15 psi ( <b>0-1, 0-0.6, 0.6-1 Bar</b> ) input signal; Electro-pneumatic with 4-20, 10-50 ma input signal; (other split ranges available upon request)
<b>Auxiliary Handwheels</b>	Side-mounted continuously-connected, top-mounted push only (limited opening)

# Valtek Mark Eight Dimensions

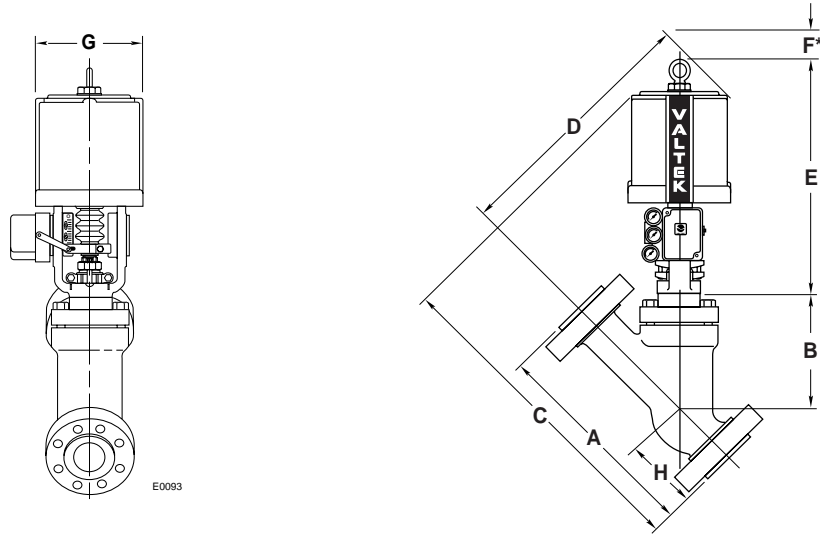
## Class 150 Dimensions (inches / mm)

Size (in.)	Actuator Size	A		B		C		E		F		G		H		J	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
1/2-1	25	8.0	203	3.0	76	18.9	480	3.9	100	15.9	404	14.3	363	5.0	127	6.5	165
1 1/2	25	10.0	254	3.8	95	20.4	518	3.9	100	16.7	424	14.3	363	6.0	152	6.5	165
2	25	13.0	330	4.5	114	21.9	556	3.9	100	17.4	442	14.3	363	7.0	178	6.5	165
3	50	16.0	406	4.8	121	28.4	721	4.8	122	23.7	602	20.1	511	8.8	224	9.1	232
4	50	20.4	518	7.0	178	32.6	828	4.8	122	25.6	650	20.1	511	11.5	292	9.1	232
6	50	25.5	648	9.0	229	37.3	947	4.8	122	28.3	719	20.1	511	5.4	137	9.1	232
8	100	34.0	864	13.0	330	50.6	1285	5.5	140	37.6	955	28.9	735	18.0	457	12.5	318
	200	34.0	864	13.0	330	52.8	1341	6.6	168	39.8	1011	29.6	751	18.0	457	17.5	445
10	100	34.0	864	14.5	368	53.7	1364	5.5	140	39.2	996	28.9	735	20.3	514	12.5	318
	200	34.0	864	14.5	368	55.9	1420	6.6	168	41.4	1052	29.6	751	20.3	514	17.5	445
12	100	45.0	1143	13.0	330	58.7	1491	5.5	140	42.7	1085	28.9	735	25.3	641	12.5	318
	200	45.0	1143	13.0	330	60.9	1547	6.6	168	44.9	1140	29.6	751	25.3	641	17.5	445
14	100	52.0	1321	18.0	457	64.1	1628	5.5	140	46.1	1171	28.9	735	30.0	762	12.5	318
	200	52.0	1321	18.0	457	66.3	1684	6.6	168	48.3	1227	29.6	751	30.0	762	17.5	445
16	100	60.0	1524	20.5	521	69.4	1763	5.5	140	48.9	1242	28.9	735	34.0	864	12.5	318
	200	60.0	1524	20.5	521	71.6	1819	6.6	168	51.1	1298	29.6	751	34.0	864	17.5	445
18	100	68.0	1727	21.5	546	73.2	1859	5.5	140	51.7	1313	28.9	735	38.0	965	12.5	318
	200	68.0	1727	21.5	546	75.5	1918	6.6	168	54.0	1372	29.6	751	38.0	965	17.5	445

## Class 300/600 Dimensions (inches / mm)

Size (in.)	Actuator Size	A		B		C		E		F		G		H		J	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
1/2-1	25	8.0	203	3.0	76	18.9	480	3.9	100	15.9	404	14.3	363	5.0	127	6.5	165
1 1/2	25	10.0	254	3.8	95	20.4	518	3.9	100	16.7	424	14.3	363	6.0	152	6.5	165
2	25	13.0	330	4.5	114	21.9	556	3.9	100	17.4	442	14.3	363	7.0	178	6.5	165
3	50	16.0	406	4.8	121	28.4	721	4.8	122	23.7	602	20.1	511	8.8	224	9.1	232
4	50	20.4	518	7.0	178	32.6	828	4.8	122	25.6	650	20.1	511	11.5	292	9.1	232
6	50	26.5	673	9.0	229	44.0	1118	5.5	140	35.0	889	27.9	710	15.4	391	12.5	318
	100	26.5	673	9.0	229	47.0	1194	6.6	168	38.0	965	29.6	751	15.4	391	17.5	445
8	100	34.0	864	13.0	330	50.6	1285	5.5	140	37.6	955	28.9	735	18.0	457	12.5	318
	200	34.0	864	13.0	330	52.8	1341	6.6	168	39.8	1011	29.6	751	18.0	457	17.5	445
10	100	38.0	965	14.5	368	53.7	1364	5.5	140	39.2	996	28.9	735	20.3	514	12.5	318
	200	38.0	965	14.5	368	55.9	1420	6.6	168	41.4	1052	29.6	751	20.3	514	17.5	445
12	100	45.0	1143	16.0	406	58.7	1491	5.5	140	42.7	1085	28.9	735	25.3	641	12.5	318
	200	45.0	1143	16.0	406	60.9	1547	6.6	168	44.9	1140	29.6	751	25.3	641	17.5	445
14	100	50.0	1270	18.0	457	69.9	1775	6.6	168	51.9	1318	32.5	826	28.3	718	21.8	552
	200	50.0	1270	18.0	457	85.6	2174	6.6	168	67.6	1717	51.7	1313	28.3	718	28.0	711
16	100	60.0	1524	20.5	521	75.2	1910	6.6	168	54.7	1389	32.5	826	34.0	864	21.8	552
	200	60.0	1524	20.5	521	94.8	2309	6.6	168	70.4	1788	51.7	1313	34.0	864	28.0	711
18	100	68.0	1727	21.5	546	79.0	2007	6.6	168	57.5	1461	32.5	826	38.0	965	21.8	552
	200	68.0	1727	21.5	546	94.8	2408	6.6	168	73.3	1862	51.7	1313	38.0	965	28.0	711

# Valtek Mark Eight Dimensions



**Class 900/1500 Dimensions (inches / mm)**

E0092

Size (in.)	Actuator Size	A		B		C		E		F		G		H		J	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
1/2-1	25	12.0	305	5.0	127	25.2	640	3.9	100	20.2	513	14.3	363	11.0	279	6.5	165
	1 1/2	15.0	381	5.5	140	31.4	798	4.8	122	25.9	658	20.1	511	12.0	305	9.1	232
2	50	18.0	457	6.0	152	33.0	838	4.8	122	27.0	686	20.1	511	13.5	343	9.1	232
	100	22.0	559	7.0	178	42.8	1087	5.5	140	35.8	909	28.9	735	15.5	394	12.5	318
3	200	22.0	559	7.0	178	45.0	1143	6.6	168	38.0	965	29.6	751	15.5	394	17.5	445
	100	26.0	660	8.0	203	45.2	1148	5.5	140	37.2	945	28.9	735	17.8	451	12.5	318
4	200	26.0	660	8.0	203	47.5	1207	6.6	168	39.5	1003	29.6	751	17.8	451	17.5	445
	100	35.0	889	12.0	305	52.8	1341	6.6	168	40.8	1036	28.9	735	22.5	572	17.5	318
6	200	35.0	889	12.0	305	55.0	1397	6.6	168	43.0	1092	29.6	751	22.5	572	12.5	445
	100	40.0	1016	14.5	368	58.5	1486	6.6	168	44.0	1118	28.9	735	27.0	686	12.5	318
8	200	40.0	1016	14.5	368	60.7	1542	6.6	168	46.2	1173	29.6	751	27.0	686	17.5	445
	100	48.0	1219	17.0	432	64.2	1631	6.6	168	47.2	1199	28.9	735	31.5	800	12.5	318
10	200	48.0	1219	17.0	432	66.4	1687	6.6	168	49.4	1255	29.6	751	31.5	800	17.5	445
	100	56.0	1422	19.5	495	75.6	1920	6.6	168	56.1	1425	32.5	826	36.0	914	21.8	552
12	200	56.0	1422	19.5	495	91.4	2322	6.6	168	71.9	1826	51.7	1313	36.0	914	28.0	711

**Class 2500 Dimensions (inches / mm)**

Size (in.)	Actuator Size	A		B		C		E		F		G		H		J	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
1/2-1	25	12.0	305	5.0	127	25.2	640	3.9	100	20.2	513	14.3	363	11.0	279	6.5	165
	1 1/2	15.0	381	5.5	140	27.5	699	3.9	100	22.0	559	14.3	363	13.5	343	6.5	165
1 1/2	50	18.0	457	6.0	152	32.6	828	4.8	122	26.6	676	18.0	457	15.0	381	9.1	232
	2	21.0	533	6.5	165	34.1	866	4.8	122	27.6	701	18.0	457	16.5	419	9.1	232
3	100	24.0	610	7.2	183	41.8	1062	5.5	140	31.2	792	28.9	735	19.0	483	12.5	318
	200	24.0	610	7.2	183	48.0	1219	6.6	168	40.5	1029	29.6	751	19.0	483	17.5	445
4	100	29.0	737	8.0	203	48.1	1222	5.5	140	40.1	1019	28.9	735	21.5	546	12.5	318
	200	29.0	737	8.0	203	50.3	1278	6.6	168	42.3	1074	29.6	751	21.5	546	17.5	445
6	100	38.0	965	13.0	330	56.6	1438	6.6	168	43.6	1107	28.9	735	26.5	673	12.5	318
	200	38.0	965	13.0	330	58.8	1494	6.6	168	45.8	1163	29.6	751	26.5	673	17.5	445
8	100	48.0	1219	15.5	394	63.0	1600	6.6	168	47.5	1207	28.9	735	32.0	813	12.5	318
	200	48.0	1219	15.5	394	65.2	1656	6.6	168	49.7	1262	29.6	751	32.0	813	17.5	445
10	100	56.0	1422	18.0	457	74.8	1900	6.6	168	56.8	1443	32.5	826	37.0	940	21.8	552
	200	56.0	1422	18.0	457	90.6	2301	6.6	168	72.6	1844	51.7	1313	37.0	940	28.0	711
12	100	64.0	1626	20.5	521	81.6	2073	6.6	168	61.1	1552	32.5	826	43.0	1092	21.8	552
	200	64.0	1626	20.5	521	97.3	2471	6.6	168	76.8	1951	51.7	1313	43.0	1092	28.0	711

## Valtek Mark Eight

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