



***Valtek Mark Eight***  
*Control Valves*



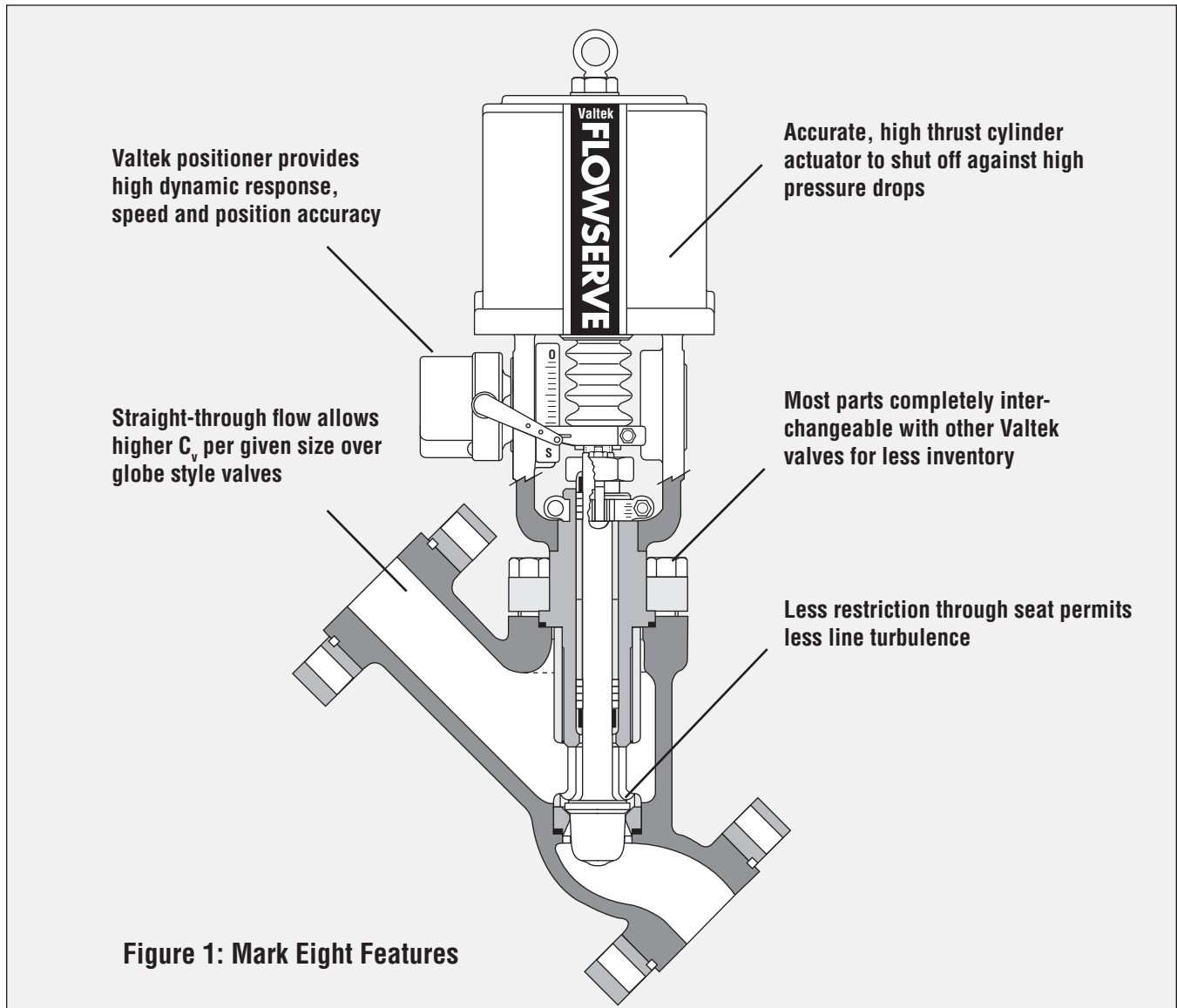
# Valtek Mark Eight Control Valves

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 the Valtek 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.





# 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	34.8	33	33	24
1½	34.8	33	33	24
2	63	60	60	44
3	149	142	142	103
4	259	246	246	180
6	555	527	527	385
8	910	865	865	
10	1450	1378	1378	
12	2080	1976	1976	

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

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**Table II: Body Specifications**

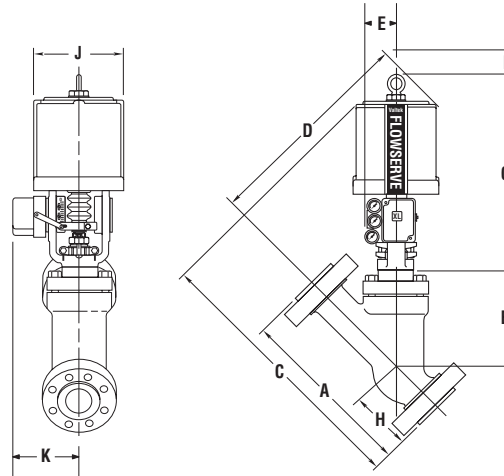
<b>Sizes</b>	1-18 inch thru ANSI class 600 1-12 inch thru ANSI class 2500
<b>Form</b>	“Y” style globe
<b>End Connections</b>	Separable flange, integral flange, NPT, socketweld, buttweld, Grayloc
<b>Materials</b>	Carbon steel, stainless steel, chrome-moly, bronze, alloy 20, monel, nickel, titanium, other 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		D		E		F		G		H		J		K	
½-1	25	8.0	203	3.0	76	18.9	480	15.9	404	3.9	100	2.5	64	14.3	363	5.0	127	6.5	165	7.4	188
1½	25	10.0	254	3.8	95	20.4	518	16.7	424	3.9	100	4	102	14.3	363	6.0	152	6.5	165	7.4	188
2	25	13.0	330	4.5	114	21.9	556	17.4	442	3.9	100	4.5	114	14.3	363	7.0	178	6.5	165	7.4	188
3	50	16.0	406	4.8	121	28.4	721	23.7	602	4.8	122	5.8	147	20.1	511	8.8	224	9.1	232	6.6	168
4	50	20.4	518	7.0	178	32.6	828	25.6	650	4.8	122	7.5	191	20.1	511	11.5	292	9.1	232	6.6	168
6	50	25.5	648	9.0	229	37.3	947	28.3	719	4.8	122	10	254	20.1	511	5.4	137	9.1	232	6.6	168
8	100	34.0	864	13.0	330	50.6	1285	37.6	955	5.5	140	12	305	28.9	735	18.0	457	12.5	318	10.4	264
	200	34.0	864	13.0	330	52.8	1341	39.8	1011	6.6	168	12	305	29.6	751	18.0	457	17.5	445	10.4	264
10	100	34.0	864	14.5	368	53.7	1364	39.2	996	5.5	140	12	305	28.9	735	20.3	514	12.5	318	10.4	264
	200	34.0	864	14.5	368	55.9	1420	41.4	1052	6.6	168	12	305	29.6	751	20.3	514	17.5	445	10.4	264
12	100	45.0	1143	13.0	330	58.7	1491	42.7	1085	5.5	140	13	330	28.9	735	25.3	641	12.5	318	10.4	264
	200	45.0	1143	13.0	330	60.9	1547	44.9	1140	6.6	168	13	330	29.6	751	25.3	641	17.5	445	10.4	264
14	100	52.0	1321	18.0	457	64.1	1628	46.1	1171	5.5	140	13	330	28.9	735	30.0	762	12.5	318	10.4	264
	200	52.0	1321	18.0	457	66.3	1684	48.3	1227	6.6	168	13	330	29.6	751	30.0	762	17.5	445	10.4	264
16	100	60.0	1524	20.5	521	69.4	1763	48.9	1242	5.5	140	13	330	28.9	735	34.0	864	12.5	318	10.4	264
	200	60.0	1524	20.5	521	71.6	1819	51.1	1298	6.6	168	13	330	29.6	751	34.0	864	17.5	445	10.4	264
18	100	68.0	1727	21.5	546	73.2	1859	51.7	1313	5.5	140	13	330	28.9	735	38.0	965	12.5	318	10.4	264
	200	68.0	1727	21.5	546	75.5	1918	54.0	1372	6.6	168	13	330	29.6	751	38.0	965	17.5	445	10.4	264

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

Size (in.)	Actuator Size	A		B		C		D		E		F		G		H		J		K	
½-1	25	8.0	203	3.0	76	18.9	480	15.9	404	3.9	100	2.5	64	14.3	363	5.0	127	6.5	165	7.4	188
1½	25	10.0	254	3.8	95	20.4	518	16.7	424	3.9	100	4	102	14.3	363	6.0	152	6.5	165	7.4	188
2	25	13.0	330	4.5	114	21.9	556	17.4	442	3.9	100	4.5	114	14.3	363	7.0	178	6.5	165	7.4	188
3	50	16.0	406	4.8	121	28.4	721	23.7	602	4.8	122	5.8	147	20.1	511	8.8	224	9.1	232	6.6	168
4	50	20.4	518	7.0	178	32.6	828	25.6	650	4.8	122	7.5	191	20.1	511	11.5	292	9.1	232	6.6	168
6	50	26.5	673	9.0	229	44.0	1118	35.0	889	5.5	140	10	254	27.9	710	15.4	391	12.5	318	6.6	168
	100	26.5	673	9.0	229	47.0	1194	38.0	965	6.6	168	12	305	29.6	751	15.4	391	17.5	445	10.4	264
8	100	34.0	864	13.0	330	50.6	1285	37.6	955	5.5	140	12	305	28.9	735	18.0	457	12.5	318	10.4	264
	200	34.0	864	13.0	330	52.8	1341	39.8	1011	6.6	168	12	305	29.6	751	18.0	457	17.5	445	10.4	264
10	100	38.0	965	14.5	368	53.7	1364	39.2	996	5.5	140	12	305	28.9	735	20.3	514	12.5	318	10.4	264
	200	38.0	965	14.5	368	55.9	1420	41.4	1052	6.6	168	13	330	29.6	751	20.3	514	17.5	445	10.4	264
12	100	45.0	1143	16.0	406	58.7	1491	42.7	1085	5.5	140	13	330	28.9	735	25.3	641	12.5	318	10.4	264
	200	45.0	1143	16.0	406	60.9	1547	44.9	1140	6.6	168	13	330	29.6	751	25.3	641	17.5	445	10.4	264
14	100	50.0	1270	18.0	457	69.9	1775	51.9	1318	6.6	168	13	330	32.5	826	28.3	718	21.8	552	10.4	264
	200	50.0	1270	18.0	457	85.6	2174	67.6	1717	6.6	168	13	330	51.7	1313	28.3	718	28.0	711	10.4	264
16	100	60.0	1524	20.5	521	75.2	1910	54.7	1389	6.6	168	13	330	32.5	826	34.0	864	21.8	552	10.4	264
	200	60.0	1524	20.5	521	94.8	2309	70.4	1788	6.6	168	13	330	51.7	1313	34.0	864	28.0	711	10.4	264
18	100	68.0	1727	21.5	546	79.0	2007	57.5	1461	6.6	168	13	330	32.5	826	38.0	965	21.8	552	10.4	264
	200	68.0	1727	21.5	546	94.8	2408	73.3	1862	6.6	168	13	330	51.7	1313	38.0	965	28.0	711	10.4	264



# Valtek Mark Eight Dimensions

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

Size (in.)	Actuator Size	A		B		C		D		E		F		G		H		J		K	
½-1	25	12.0	305	5.0	127	25.2	640	20.2	513	3.9	100	3.6	91	14.3	363	11.0	279	6.5	165	7.4	188
1½	50	15.0	381	5.5	140	31.4	798	25.9	658	4.8	122	5.6	142	20.1	511	12.0	305	9.1	232	6.6	168
2	50	18.0	457	6.0	152	33.0	838	27.0	686	4.8	122	6.1	155	20.1	511	13.5	343	9.1	232	6.6	168
3	100	22.0	559	7.0	178	42.8	1087	35.8	909	5.5	140	8.4	213	28.9	735	15.5	394	12.5	318	10.4	264
	200	22.0	559	7.0	178	45.0	1143	38.0	965	6.6	168	8.4	213	29.6	751	15.5	394	17.5	445	10.4	264
4	100	26.0	660	8.0	203	45.2	1148	37.2	945	5.5	140	9.7	246	28.9	735	17.8	451	12.5	318	10.4	264
	200	26.0	660	8.0	203	47.5	1207	39.5	1003	6.6	168	9.7	246	29.6	751	17.8	451	17.5	445	10.4	264
6	100	35.0	889	12.0	305	52.8	1341	40.8	1036	6.6	168	12.2	310	28.9	735	22.5	572	17.5	318	10.4	264
	200	35.0	889	12.0	305	55.0	1397	43.0	1092	6.6	168	12.2	310	29.6	751	22.5	572	12.5	445	10.4	264
8	100	40.0	1016	14.5	368	58.5	1486	44.0	1118	6.6	168	16.7	424	28.9	735	27.0	686	12.5	318	10.4	264
	200	40.0	1016	14.5	368	60.7	1542	46.2	1173	6.6	168	16.7	424	29.6	751	27.0	686	17.5	445	10.4	264
10	100	48.0	1219	17.0	432	64.2	1631	47.2	1199	6.6	168	18.3	465	28.9	735	31.5	800	12.5	318	10.4	264
	200	48.0	1219	17.0	432	66.4	1687	49.4	1255	6.6	168	18.3	465	29.6	751	31.5	800	17.5	445	10.4	264
12	100	56.0	1422	19.5	495	75.6	1920	56.1	1425	6.6	168	19.4	493	32.5	826	36.0	914	21.8	552	10.4	264
	200	56.0	1422	19.5	495	91.4	2322	71.9	1826	6.6	168	19.4	493	51.7	1313	36.0	914	28.0	711	10.4	264

## Class 2500 Dimensions (inches/mm)

Size (in.)	Actuator Size	A		B		C		D		E		F		G		H		J		K	
½	25	12.0	305	5.0	127	25.2	640	20.2	513	3.9	100	3.6	91	14.3	363	11.0	279	6.5	165	7.4	188
1	25	15.0	381	5.5	140	27.5	699	22.0	559	3.9	100	3.6	91	14.3	363	13.5	343	6.5	165	7.4	188
1½	50	18.0	457	6.0	152	32.6	828	26.6	676	4.8	122	5.6	142	18.0	457	15.0	381	9.1	232	6.6	168
2	50	21.0	533	6.5	165	34.1	866	27.6	701	4.8	122	6.1	155	18.0	457	16.5	419	9.1	232	6.6	168
3	100	24.0	610	7.2	183	41.8	1062	31.2	792	5.5	140	8.4	213	28.9	735	19.0	483	12.5	318	10.4	264
	200	24.0	610	7.2	183	48.0	1219	40.5	1029	6.6	168	8.4	213	29.6	751	19.0	483	17.5	445	10.4	264
4	100	29.0	737	8.0	203	48.1	1222	40.1	1019	5.5	140	10.7	272	28.9	735	21.5	546	12.5	318	10.4	264
	200	29.0	737	8.0	203	50.3	1278	42.3	1074	6.6	168	13.6	345	29.6	751	21.5	546	17.5	445	10.4	264
6	100	38.0	965	13.0	330	56.6	1438	43.6	1107	6.6	168			28.9	735	26.5	673	12.5	318		
	200	38.0	965	13.0	330	58.8	1494	45.8	1163	6.6	168			29.6	751	26.5	673	17.5	445		
8	100	48.0	1219	15.5	394	63.0	1600	47.5	1207	6.6	168			28.9	735	32.0	813	12.5	318		
	200	48.0	1219	15.5	394	65.2	1656	49.7	1262	6.6	168			29.6	751	32.0	813	17.5	445		
10	100	56.0	1422	18.0	457	74.8	1900	56.8	1443	6.6	168			32.5	826	37.0	940	21.8	552		
	200	56.0	1422	18.0	457	90.6	2301	72.6	1844	6.6	168			51.7	1313	37.0	940	28.0	711		
12	100	64.0	1626	20.5	521	81.6	2073	61.1	1552	6.6	168			32.5	826	43.0	1092	21.8	552		
	200	64.0	1626	20.5	521	97.3	2471	76.8	1951	6.6	168			51.7	1313	43.0	1092	28.0	711		



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