

100 Series

METAL CONTROL VALVES

The powerful and reliable metal valves of the 100 Series display remarkable hydraulic performance and provide impeccable control of irrigation systems.



Long-lasting
performance



Versatility



High
durability

/ Benefits & Features

- **Long-lasting performance** High flow capacity and very low head losses achieved by a flexible diaphragm that provides a wide water passage throughout the valve's hydrodynamic body
- **Versatility** The valves are available in globe and angle shapes, with an extensive selection of materials, a full range of control functions, and various end connections
- **High durability** Long life and easy inline maintenance accomplished by structural simplicity and the use of high-quality materials that can withstand the harshest conditions

/ Specifications & Recommendations

- Maximum Pressure – 16 bar (230psi) and 25 bar (365psi)
- Minimum Recommended flow – 1m³/h (5gpm)
- Minimum Operating Pressure – 0.4 bar (6psi)*

* Available with low pressure diaphragm

→ Hydraulic Performance

Shape		Straight														Angle						
Diameter	inch	¾	1	1½	2	2½	3R*	3	4	6	8R*	8	10	12	14	16	1½	2	3R*	3	4	6
	mm	20	25	40	50	65	80	80	100	150	200	200	250	300	350	400	40	50	80	80	100	150
Flow rate factor**	Kv	17	17	65	95	95	95	170	220	600	670	800	1250	1900	1900	2600	60	90	90	150	200	570
	Cv	20	20	75	110	110	110	200	255	695	775	925	1445	2195	2195	3005	70	105	105	175	230	660

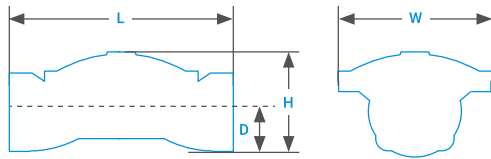
* R: Reduced, 3R: 323", 8R: 868" **

Note: In order to calculate the head loss at any desired flow rate, use the following equation: Head loss = (Flow rate/Flow rate factor)²

→ Technical Dimensions

Straight Flow, Threaded Connection

Diameter		inch	¾	1	1½	2	2½	3R	3
		mm	20	25	40	50	65	80	80
Height	H	mm / inch	43 / 1.69	52 / 2.05	93 / 3.66	115 / 4.53	118 / 4.65	126 / 4.96	135 / 5.31
Width	W	mm / inch	68 / 2.68	68 / 2.68	112 / 4.41	112 / 4.41	200 / 7.87		
Length	L	mm / inch	115 / 4.53	120 / 4.72	170 / 6.69	188 / 7.4	219 / 8.62	225 / 8.86	316 / 12.44
	D	mm / inch	20 / 0.79	24 / 0.94	33 / 1.3	42 / 1.65	46 / 1.81	54 / 2.13	53 / 2.09
Weight		kg / lbs	1 / 2.2		2.2 / 4.9	3.2 / 7	3.6 / 7.9	4.5 / 9.9	11 / 24

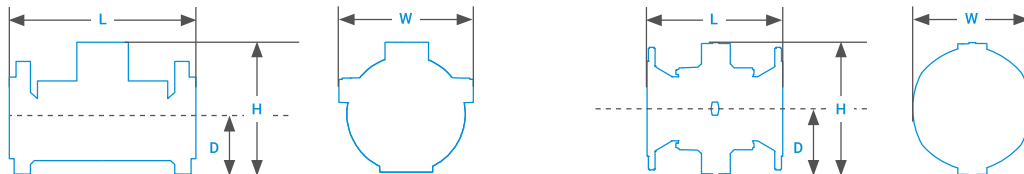


Straight Flow, Flanged Connection - Standard models 16 bar (250psi)

Diameter		inch	1½	2	2½	3R	3	4	6	8R	8	10	12	14
		mm	40	50	65	80	80	100	150	200	200	250	300	350
Height	H	mm/inch	153 / 6.02	166 / 6.54	185 / 7.28	202 / 7.95	200 / 7.87	230 / 9.06	314 / 12.36	350 / 13.78	400 / 15.75	445 / 17.52	495 / 19.49	495 / 19.49
Width	W	mm/inch	76.5 / 3.01	166 / 6.54	185 / 7.28	200 / 7.87	200 / 7.87	230 / 9.06	300 / 11.8	365 / 14.4	365 / 14.4	440 / 17.3	490 / 19.3	530 / 20.9
Length	L	mm/inch	186 / 7.32	200 / 7.87	214 / 8.43	200 / 7.87	285 / 11.22	305 / 12.01	390 / 15.35	385 / 15.16	460 / 18.11	535 / 21.06	580 / 22.83	580 / 22.83
	D	mm/inch	76.5 / 3.01	85 / 3.35	92.5 / 3.64	105 / 4.13	105 / 4.13	110 / 4.33	145 / 5.71	170 / 6.69	170 / 6.69	205 / 8.07	240 / 9.45	270 / 10.6
Weight	Cast Iron	kg/lbs	5.8 / 13	7.2 / 15.8	10.3 / 22.7	11 / 24.3	17 / 37.5	22 / 48.5	46 / 101	50 / 110	80 / 176	117 / 258	156 / 344	182 / 401
	Duct. Iron		6.2 / 14	7.7 / 17	10.3 / 22.7	11.8 / 26	18.2 / 40.1	24 / 53	49 / 108	54 / 119	86 / 190	125 / 276	167 / 368	172 / 379
	Bronze		6.5 / 14.3	8 / 17.6			19 / 42	24 / 53	51 / 112		89 / 196	131 / 289	147 / 324	180 / 397

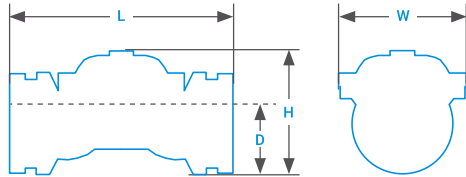
Straight Flow, Flanged Connection - High Pressure models 25 bar (360psi)

Diameter		inch	2	14.5 / 322 TH	2½	3	4	6	8	10	16	18	20	24
		mm	50	50	65	80	100	150	200	250	400	450	500	600
Height	H	mm/inch	169 / 6.65	120 / 6.65	185 / 7.28	237 / 9.33	263 / 10.35	378 / 14.88	481 / 18.94	546 / 21.5	830 / 32.68	830 / 32.68	970 / 38.19	970 / 38.19
Width	W	mm/inch	175 / 6.9	175 / 6.9	185 / 7.28	200 / 7.87	260 / 10.24	320 / 12.6	400 / 15.75	495 / 19.49	830 / 32.68	830 / 32.68	980 / 38.58	980 / 38.58
Length	L	mm/inch	228 / 8.98	250 / 8.98	233 / 9.18	310 / 12.2	356 / 14.02	436 / 17.17	530 / 20.87	636 / 25.04	709 / 27.91	715 / 28.15	900 / 35.43	900 / 35.43
	D	mm/inch	85 / 3.35	42 / 1.65	92.5 / 3.64	105 / 4.13	120 / 4.72	150 / 5.91	180 / 7.09	215 / 8.46	310 / 12.2	340 / 13.39	490 / 19.29	490 / 19.29
Weight		kg / lbs	10 / 22	6 / 13	14.5 / 32	30 / 66.1	38 / 83.8	75 / 165.3	123 / 271	190 / 419	433 / 955	460 / 1014	674 / 1486	696 / 1534



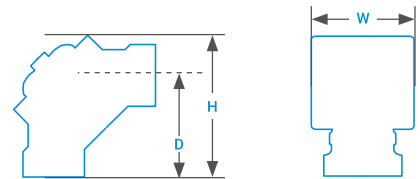
Straight Flow, Grooved Connection

Diameter		inch	1½	2	3R	3	4	6
		mm	40	50	80	80	100	150
Height	H	mm / inch	81 / 3.19	100 / 3.94	120 / 4.72	124 / 4.88	133 / 5.24	250 / 9.84
Width	W	mm / inch	93 / 3.66	112 / 4.41	112 / 4.41	200 / 7.87	194 / 7.64	300 / 11.81
Length	L	mm / inch	177 / 6.97	190 / 7.48	201 / 7.91	286 / 11.26	317 / 12.48	392 / 15.43
	D	mm / inch	26 / 1.02	33 / 1.3	47 / 1.85	47 / 1.85	60 / 2.36	82 / 3.23
Weight		kg / lbs	1.8 / 4	2.6 / 5.7	3 / 6.6	11 / 24.3	12 / 26.4	31 / 68.3



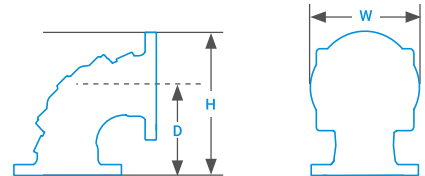
Angle Flow, Threaded Connection

Diameter		inch	1½	2	3R	3
		mm	40	50	80	80
Height	H	mm / inch	110 / 4.33	136 / 5.35	165 / 6.5	239 / 9.41
Width	W	mm / inch	93 / 3.66	112 / 4.41	112 / 4.41	200 / 7.87
	D	mm / inch	75 / 2.95	90 / 3.54	114 / 4.49	145 / 5.71
Weight		kg / lbs	1.7 / 3.7	2.4 / 5.3	3.6 / 7.9	10.8 / 23.8



Angle Flow, Flanged Connection

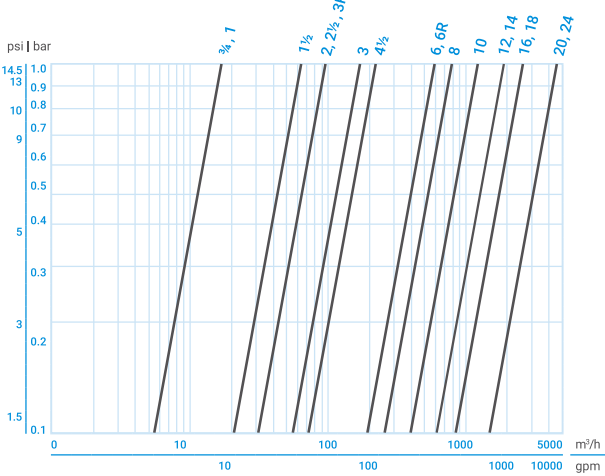
Diameter		inch	3	4	6
		mm	80	100	150
Height	H	mm / inch	278 / 10.9	300 / 11.8	380 / 15
Width	W	mm / inch	200 / 7.87	230 / 9.06	300 / 11.8
	D	mm / inch	174 / 6.85	185 / 7.28	230 / 9.06
Weight		kg / lbs	18 / 39.7	21 / 46.3	45 / 99.2



Angle Flow, Grooved Connection

Diameter		inch	3	4
		mm	80	100
Height	H	mm / inch	240 / 9.45	250 / 9.84
Width	W	mm / inch	200 / 7.87	200 / 7.87
	D	mm / inch	170 / 6.69	185 / 7.28
Weight		kg / lbs	10.5 / 23.1	11.5 / 25.4

→ Head Loss



→ Material Specifications

#	Part	Material	*Optional
1	Body	Cast iron	Ductile iron, bronze, stainless steel
2	Bonnet	Cast iron	Ductile iron, bronze, stainless steel
3	Diaphragm**	Natural rubber	NBR, EPDM, neoprene
4	Spring	SST 302	SST 316

* Optional parts for special resistance

** Wide selection of pressure ranges

