

SERIES 80V (V-PORT)

HIGH PERFORMANCE BALL VALVE

3-PIECE DESIGN, FB

Sizes 1/4" - 4"

Full Bore

1/2" - 1"	PN100
1 1/4" - 2"	PN64
2 1/1" - 4"	PN50

Available in WCB / SS316 body

Threaded End	80V.100
Socket Weld End	80V.200
Butt Weld End	80V.300

Superior Live Loaded Packing System

ISO 5211 Mounting Pad **(Bracket Required)**

Blowout-Proof Stem

Dual Anti-Static Devices

Standard Seat

- 25% Carbon Filled PTFE (MG1241)
(max. 250 °C)

Seat Options

- TFM1600 (max. 230 °C)

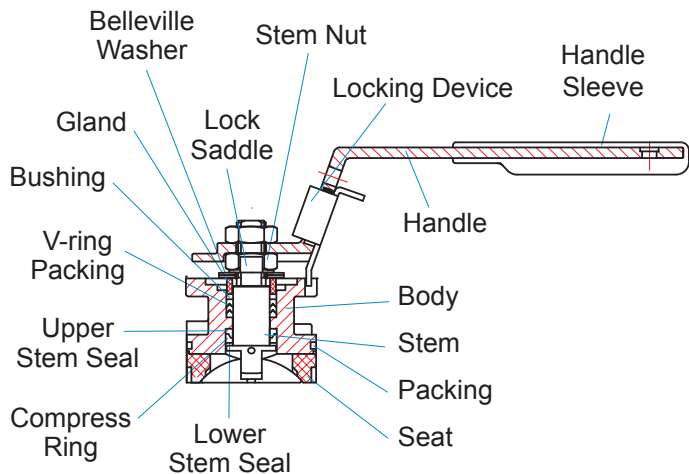
- 50% SS filled PTFE (GNP)
(max. 280 °C)

- PEEK (max. 300 °C)

Lockable Handle

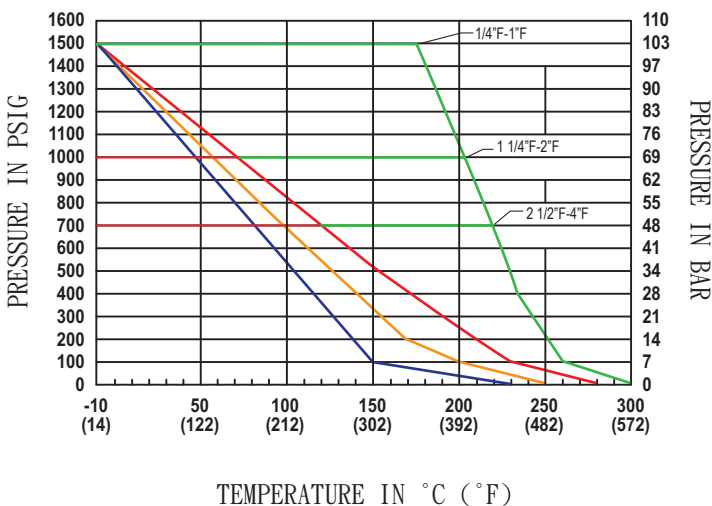


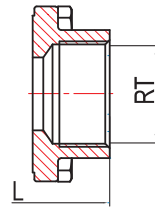
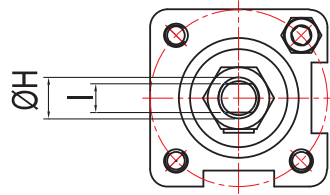
ValveWorks Series 80V (V-Port) 3-piece Ball Valve are one of the finest quality 3-piece valves in the market. The high quality investment casting feature a fully machined bore. The superior live-loaded packing system is accomplished with Belleville washers, "V" ring packing and a unique primary pyramidal stem seal. This advanced sealing system provides protection against stem leaks experienced by ordinary ball valve.



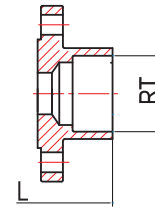
• Pressure/Temperature Ratings

- TFM1600
- 25% Carbon filled PTFE (MG1241)
- 50% SS filled PTFE (GNP)
- PEEK

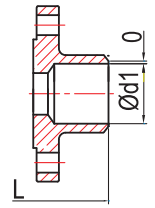




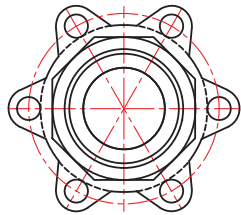
MODEL 80V.100
THREADED
END



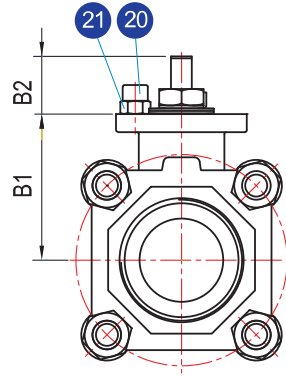
MODEL 80V.200
SOCKET WELD
END



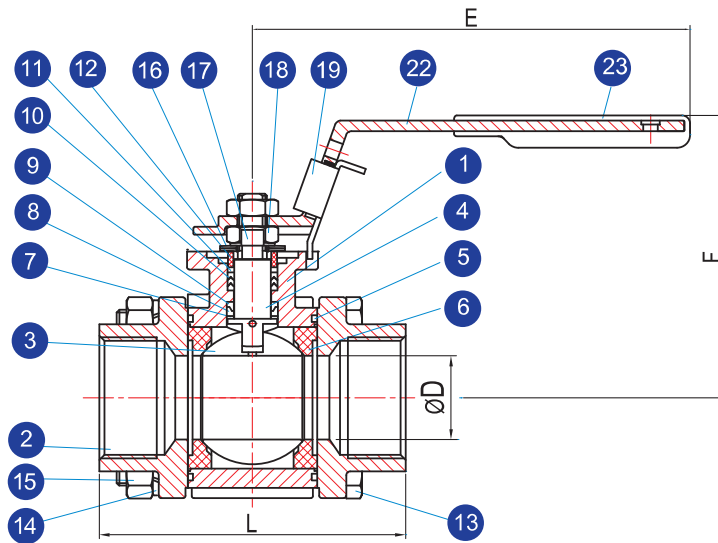
MODEL 80V.300
BUTT WELD
END



2" - 4" FULL



1/4" - 1 1/2"



• MATERIALS LIST

NO.	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL	SUS316
4	STEM	SUS316
5	PACKING	PTFE
6	SEAT	MG1241
7	LOWER STEM SEAL	50% S.S. Powder Filled PTFE
8	COMPRESS RING	SUS316
9	UPPER STEM SEAL	TFM4215
10	V-RING PACKING	MG1241
11	BUSHING	50% S.S. Powder Filled PTFE
12	GLAND	SUS304
13	BOLT	SUS304
14	WASHER	SUS304
15	BOLT NUT	SUS304
16	BELLEVILLE WASHER	SUS304
17	LOCK SADDLE	SUS304
18	STEM NUT	SUS304
19	LOCKING DEVICE	SUS304
20	STOP PIN	SUS304
21	STOP PIN NUT	SUS304
22	HANDLE	CF8
23	HANDLE SLEEVE	VINYL

• DIMENSIONS (mm)

SIZE	B1	B2	øD	øD1	E	F	øH	I	L	O	RT	ISO 5211	CV	Weight (kg)
1/2"	DN15	38.1	15	15	15.8	134	84	9.7	6.3	71.0	0.5	F04	25	0.87
3/4"	DN20	41.8	20	20	21	134	88	9.7	6.3	96.5	0.5	F04	50	1.41
1"	DN25	51.6	21.4	25.4	26.6	167	98	11.2	8.0	109.0	0.5	F05	80	2.05
1 1/4"	DN32	55.9	21.7	32	35.1	167	101	11.2	8.0	117.0	0.5	F05	150	2.75
1 1/2"	DN40	66.2	25.6	38	41.2	204	117	16.0	9.5	129.3	1.0	F07	240	4.10
2"	DN50	75.4	25.2	50.8	53	204	125	16.0	9.5	141.5	1.0	F07	460	5.93
2 1/2"	DN65	89.4	42.7	65	68.4	250	165	22.3	17.0	174.0	1.6	F10	820	10.20
3"	DN80	101.2	39.4	76	77.8	250	174	22.3	17.0	193.0	1.6	F10	1250	15.80
4"	DN100	131.5	21.5	100	102.3	250	SQ22	17.0	240	1.6	115.5	F10	2300	22.50

• CONTROL FREAK

At the heart of every ValveWorks 80V is the Vari-ball. The profile of the V-ball determines the flow characteristic of the valve and can be changed to suit the application. 10°, 30°, 60° and 90° V-balls are the most commonly used, but several other profiles are readily available. The Linear-V is a slot in the ball that can be machined for precise flow requirements. The Filler-V is used when you need maximum flow for filling followed by precise flow to accurately control the levels. The High Turndown-V maximizes flow in the open position, and provides fine flow control when the valve is partially closed. The transition between high flow and fine control with the Vari-V is extremely smooth.



• Linear-V

is a slot in the ball that can be machined for precise flow requirements



• Filler-V

is used when you need maximum flow for filling, followed by precise flow to accurately control the levels

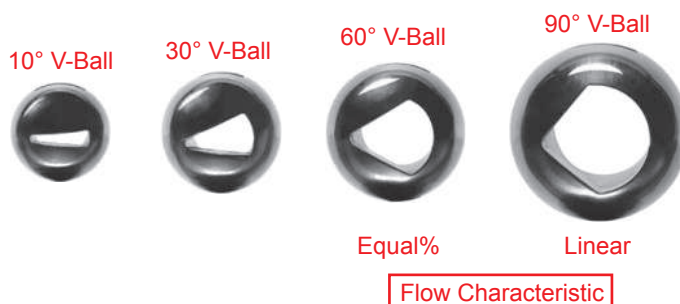


• High Turndown-V

maximizes flow in the open position, and provides fine flow control when the valve is partially closed

• FREE SPIRIT

Custom V-balls are available for applications that possess specific flow requirements which can not be met with the standard V-balls. Using Computational Fluid Dynamics (CFD), we can create a V-ball with a specific profile to fit any application. Anti-cavitation trim is also available.



• VARI-V CONTROL VALVE C_v VALUES

Valve Size	Vari-V	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	Non Vari-V ball C _v 's
1/2"	10°	2.95	2.36	1.94	1.53	1.19	0.84	0.51	0.36	0.00	0.00	23
	30°	5.76	3.99	3.15	2.22	1.46	0.89	0.51	0.32	0.02	0.00	
	60°	10.13	6.93	4.56	3.18	2.02	1.32	0.73	0.33	0.03	0.00	
	90°	15.28	9.83	6.29	4.10	2.57	1.58	0.84	0.34	0.03	0.00	
3/4"	10°	4.27	3.55	2.70	2.13	1.55	1.19	0.66	0.37	0.03	0.00	45
	30°	8.43	6.45	4.88	3.51	2.18	1.49	0.79	0.38	0.03	0.00	
	60°	16.84	11.09	7.59	5.12	3.17	2.09	0.95	0.41	0.03	0.00	
	90°	27.63	17.52	11.28	6.70	4.14	2.47	1.29	0.46	0.03	0.00	
1"	10°	5.88	4.97	4.25	3.28	2.14	1.74	1.06	0.84	0.22	0.00	77
	30°	12.34	9.86	7.50	5.36	3.89	2.41	1.63	0.95	0.24	0.00	
	60°	26.91	17.37	12.47	8.19	5.45	3.45	2.16	0.97	0.26	0.00	
	90°	40.62	26.78	17.96	11.74	7.48	4.49	2.55	1.09	0.28	0.00	
1 1/4"	10°	10.24	6.87	6.86	5.22	3.73	2.86	2.23	1.19	0.52	0.00	126
	30°	20.10	16.09	12.17	8.66	6.09	4.22	2.55	1.67	0.56	0.00	
	60°	39.26	27.25	19.36	13.11	8.82	5.60	3.25	1.75	0.56	0.00	
	90°	70.96	44.32	29.44	18.79	11.83	7.44	4.51	2.32	0.75	0.00	
1 1/2"	10°	12.76	11.06	7.65	5.94	5.21	3.50	2.41	0.89	0.00	0.00	192
	30°	28.60	22.35	15.23	11.38	8.30	5.48	2.46	1.37	0.46	0.00	
	60°	55.73	40.16	26.54	17.53	11.87	7.31	3.07	1.59	0.34	0.00	
	90°	96.99	62.87	38.90	24.95	15.69	9.73	5.46	2.37	0.62	0.00	
2"	10°	21.53	16.98	16.01	12.47	10.07	5.26	4.43	2.37	0.79	0.00	358
	30°	47.47	37.46	27.32	20.75	14.12	9.65	6.53	3.05	1.15	0.00	
	60°	92.06	69.69	49.08	31.92	21.36	13.98	8.52	4.21	1.31	0.00	
	90°	173.40	110.49	73.44	48.50	29.56	18.56	11.54	5.13	1.44	0.00	
2 1/2"	10°	35.16	29.35	24.60	19.68	14.70	10.63	7.63	3.85	1.32	0.00	611
	30°	79.21	63.94	49.22	34.32	25.24	15.90	9.98	4.98	2.16	0.00	
	60°	150.59	107.54	80.65	52.93	34.89	22.72	14.87	6.44	2.02	0.00	
	90°	253.06	180.69	119.78	84.32	50.76	32.69	21.11	11.67	1.79	0.00	
3"	10°	47.02	32.65	26.34	19.84	15.89	12.27	7.97	3.98	1.81	0.00	858
	30°	105.15	80.57	58.10	42.90	29.96	19.58	12.14	5.04	1.96	0.00	
	60°	190.26	136.08	112.14	82.22	54.10	27.60	15.80	13.54	1.43	0.00	
	90°	388.90	235.03	157.48	99.49	64.78	38.40	22.20	11.64	2.10	0.00	
4"	10°	58.97	52.74	43.58	33.52	25.93	18.16	11.12	7.42	3.66	0.00	1512
	30°	160.29	131.67	100.78	72.91	53.71	35.10	19.49	10.73	3.90	0.00	
	60°	332.17	243.98	174.60	118.86	81.15	51.80	24.79	15.34	6.48	0.00	
	90°	652.17	401.89	262.88	170.63	111.42	73.39	43.49	24.32	7.20	0.00	
6"	10°	148.0	112.0	91.0	76.0	55.0	40.0	30.0	19.0	7.4	0.00	3664
	30°	367.0	286.0	205.0	146.0	104.0	70.0	47.0	25.0	9.0	0.00	
	60°	816.0	588.0	414.0	272.0	177.0	110.0	67.0	34.0	10.0	0.00	
	90°	1292.0	890.0	581.0	382.0	234.0	145.0	88.0	45.0	14.4	0.00	

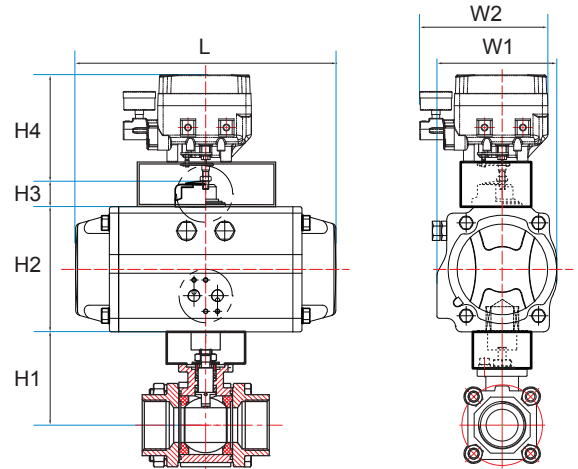
Valve Automation with HKC



• Pneumatic Actuator - Double Acting c/w E/P Rotary Positioner (4-20mA control)

DN (mm)	Size (inch)	Torques	Actuator	H1	H2	H3	H4	W1	W2	L	Weight (kg)
8	1/4"	5.3	HP-50	66.70	73.00	20.00	90.00	72.00	29.50	144.00	3.01
10	3/8"	5.3	HP-50	66.70	73.00	20.00	90.00	72.00	29.50	144.00	3.15
15	1/2"	5.3	HP-50	77.10	73.00	20.00	90.00	72.00	29.50	144.00	3.38
20	3/4"	7.8	HP-50	80.80	73.00	20.00	90.00	72.00	29.50	144.00	3.92
25	1"	10.1	HP-50	91.60	73.00	20.00	90.00	72.00	29.50	144.00	4.56
32	1 1/4"	13.1	HP-63	95.90	87.00	20.00	90.00	85.00	29.50	163.00	5.32
40	1 1/2"	20.9	HP-66	106.20	87.00	20.00	90.00	85.00	29.50	202.00	7.19
50	2"	29.7	HP-66	115.40	104.00	20.00	90.00	96.00	29.50	210.00	9.74
65	2 1/2"	64.4	HP-88	157.40	116.00	20.00	90.00	108.00	29.50	247.00	14.61
80	3"	84.5	HP-100	169.20	128.00	20.00	90.00	123.00	29.50	268.00	24.16
100	4"	110.00	HP-115	199.50	146.00	20.00	90.00	141.00	29.50	316.00	30.86

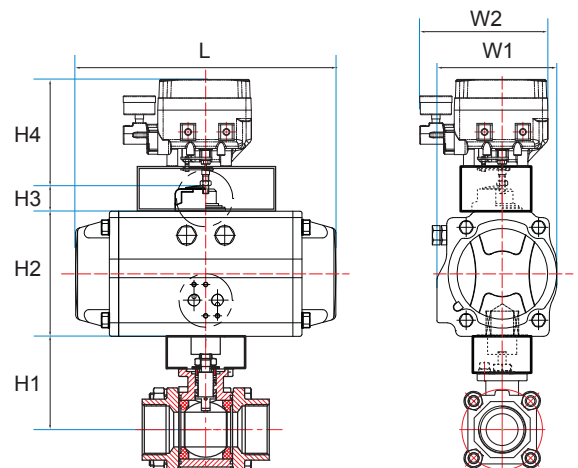
The selection of the actuators are based on below condition:-
 - Air Supply Pressure : 5.5 bar
 - Operating Pressure : 10 bar
 - Safety Factor : 30%



• Pneumatic Actuator - Single Acting c/w E/P Rotary Positioner (4-20mA control)

DN (mm)	Size (inch)	Torques	Actuator	H1	H2	H3	H4	W1	W2	L	Weight (kg)
8	1/4"	5.3	HP-63S (S11)	66.70	87.00	20.00	90.00	85.00	29.50	163.00	3.72
10	3/8"	5.3	HP-63S (S11)	66.70	87.00	20.00	90.00	85.00	29.50	163.00	3.86
15	1/2"	5.3	HP-63S (S11)	77.10	87.00	20.00	90.00	85.00	29.50	163.00	4.09
20	3/4"	7.8	HP-66S (S11)	80.80	87.00	20.00	90.00	85.00	29.50	202.00	4.63
25	1"	10.1	HP-66S (S11)	91.60	87.00	20.00	90.00	85.00	29.50	202.00	6.03
32	1 1/4"	13.1	HP-75S (S11)	95.90	104.00	20.00	90.00	96.00	29.50	210.00	6.79
40	1 1/2"	20.9	HP-88S (S11)	106.20	116.00	20.00	90.00	108.00	29.50	247.00	8.87
50	2"	29.7	HP-100S (S11)	115.40	128.00	20.00	90.00	123.00	29.50	268.00	12.26
65	2 1/2"	64.4	HP-125S (S11)	157.40	159.00	20.00	90.00	151.00	29.50	347.00	18.47
80	3"	84.5	HP-145S (S11)	169.20	179.00	20.00	90.00	172.00	29.50	414.00	31.28
100	4"	110.00	HP-145S (S11)	199.50	179.00	30.00	90.00	172.00	29.50	414.00	41.18

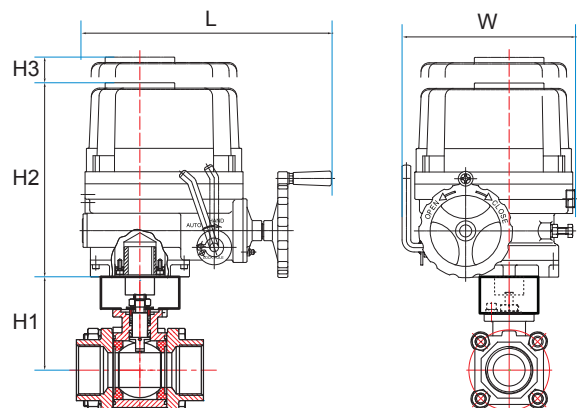
The selection of the actuators are based on below condition:-
 - Air Supply Pressure : 5.5 bar
 - Operating Pressure : 10 bar
 - Safety Factor : 30%



• Electric Actuator c/w PCU Card (4-20mA control)

DN (mm)	Size (inch)	Torques	Actuator	H1	H2	H3	W	L	Weight (kg)
8	1/4"	5.3	HQ-005	66.70	124.30		88.60	166.60	3.05
10	3/8"	5.3	HQ-005	66.70	124.30		88.60	166.60	3.19
15	1/2"	5.3	HQ-005	77.10	124.30		88.60	166.60	3.42
20	3/4"	7.8	HQ-005	80.80	124.30		88.60	166.60	3.96
25	1"	10.1	HQ-005	91.60	124.30		88.60	166.60	4.60
32	1 1/4"	13.1	HQ-005	95.90	124.30		88.60	166.60	5.36
40	1 1/2"	20.9	HQ-005	106.20	137.00		88.60	126.00	6.71
50	2"	29.7	HQ-006	115.40	235.00		105.00	126.00	10.34
65	2 1/2"	64.4	HQ-015	157.40	235.00		105.00	338.00	14.61
80	3"	84.5	HQ-020	169.20	268.00	160.00	229.00	338.00	34.76
100	4"	110.00	HQ-020	199.50	268.00	160.00	229.00	338.00	41.46

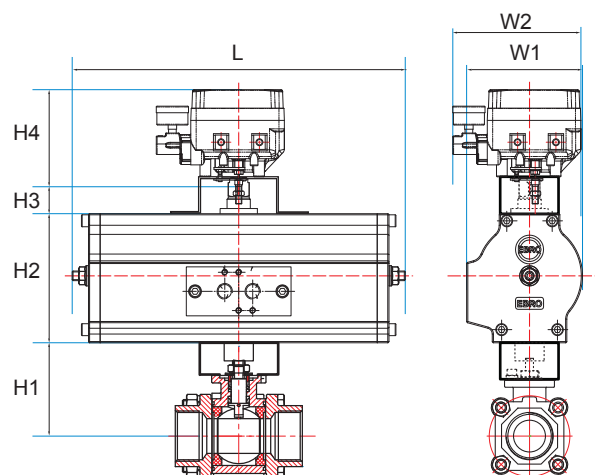
The selection of the actuators are based on below condition:-
 - Operating Pressure : 10 bar
 - Safety Factor : 50%



• Pneumatic Actuator - Double Acting c/w E/P Rotary Positioner (4-20mA control)

DN (mm)	Size (inch)	Torques	Actuator	H1	H2	H3	H4	W1	W2	L	Weight (kg)
8	1/4"	5.3	EB 4.1-SYD	66.70	66.00	30.00	90.00	57.00	29.50	148.00	2.95
10	3/8"	5.3	EB 4.1-SYD	66.70	66.00	30.00	90.00	57.00	29.50	148.00	3.09
15	1/2"	5.3	EB 4.1-SYD	77.10	66.00	30.00	90.00	57.00	29.50	148.00	3.32
20	3/4"	7.8	EB 4.1-SYD	80.80	66.00	30.00	90.00	57.00	29.50	148.00	3.86
25	1"	10.1	EB 4.1-SYD	91.60	66.00	30.00	90.00	57.00	29.50	148.00	4.50
32	1 1/4"	13.1	EB 4.1-SYD	95.90	66.00	30.00	90.00	57.00	29.50	148.00	5.26
40	1 1/2"	20.9	EB 5.1-SYD	106.20	77.00	30.00	90.00	72.00	29.50	174.00	6.61
50	2"	29.7	EB 5.1-SYD	115.40	77.00	30.00	90.00	72.00	29.50	174.00	9.04
65	2 1/2"	64.4	EB 6.1-SYD	157.40	91.00	30.00	90.00	88.00	29.50	224.00	13.31
80	3"	84.5	EB 6.1-SYD	169.20	91.00	30.00	90.00	88.00	29.50	224.00	21.16
100	4"	110.0	EB 8.1-SYD	199.50	108.00	30.00	90.00	100.00	29.50	258.00	28.96

The selection of the actuators are based on below condition:-
 - Air Supply Pressure : 5.5 bar
 - Operating Pressure : 10 bar
 - Safety Factor : 30%



• Pneumatic Actuator - Single Acting c/w E/P Rotary Positioner (4-20mA control)

DN (mm)	Size (inch)	Torques	Actuator	H1	H2	H3	H4	W1	W2	L	Weight (kg)
8	1/4"	5.3	EB 5.1-SYS (50)	66.70	77.00	30.00	90.00	72.00	29.50	280.00	4.25
10	3/8"	5.3	EB 5.1-SYS (50)	66.70	77.00	30.00	90.00	72.00	29.50	280.00	4.39
15	1/2"	5.3	EB 5.1-SYS (50)	77.10	77.00	30.00	90.00	72.00	29.50	280.00	4.62
20	3/4"	7.8	EB 5.1-SYS (50)	80.80	77.00	30.00	90.00	72.00	29.50	280.00	5.16
25	1"	10.1	EB 5.1-SYS (50)	91.60	77.00	30.00	90.00	72.00	29.50	280.00	5.80
32	1 1/4"	13.1	EB 5.1-SYS (50)	95.90	77.00	30.00	90.00	72.00	29.50	280.00	6.56
40	1 1/2"	20.9	EB 6.1-SYS (50)	106.20	91.00	30.00	90.00	88.00	29.50	351.00	7.91
50	2"	29.7	EB 6.1-SYS (50)	115.40	91.00	30.00	90.00	88.00	29.50	351.00	9.74
65	2 1/2"	64.4	EB 10.1-SYS (50)	157.40	128.00	30.00	90.00	122.00	29.50	557.00	17.91
80	3"	84.5	EB 10.1-SYS (50)	169.20	128.00	30.00	90.00	122.00	29.50	557.00	30.66
100	4"	110.0	EB 10.1-SYS (50)	199.50	128.00	30.00	90.00	122.00	29.50	557.00	37.36

The selection of the actuators are based on below condition:-
 - Air Supply Pressure : 5.5 bar
 - Operating Pressure : 10 bar
 - Safety Factor : 30%

