VALVEWERKZ

BALL VALVES

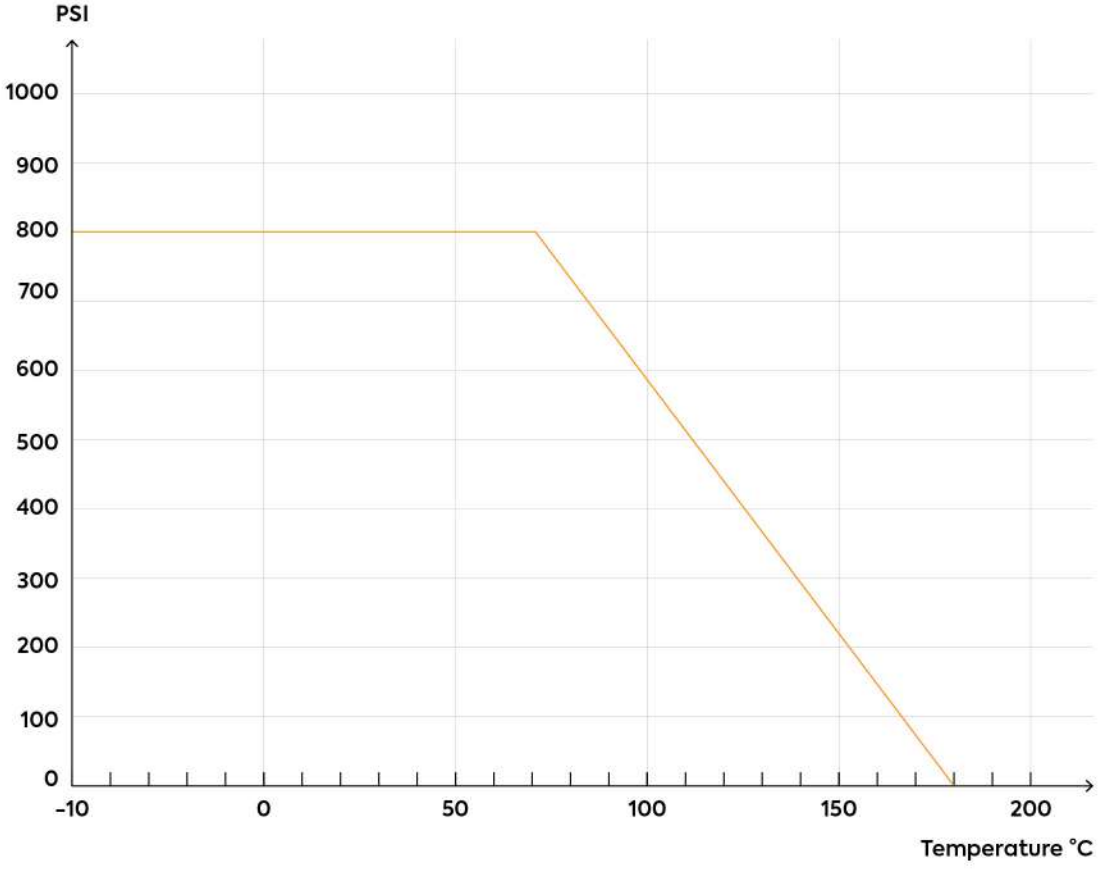
10 Series

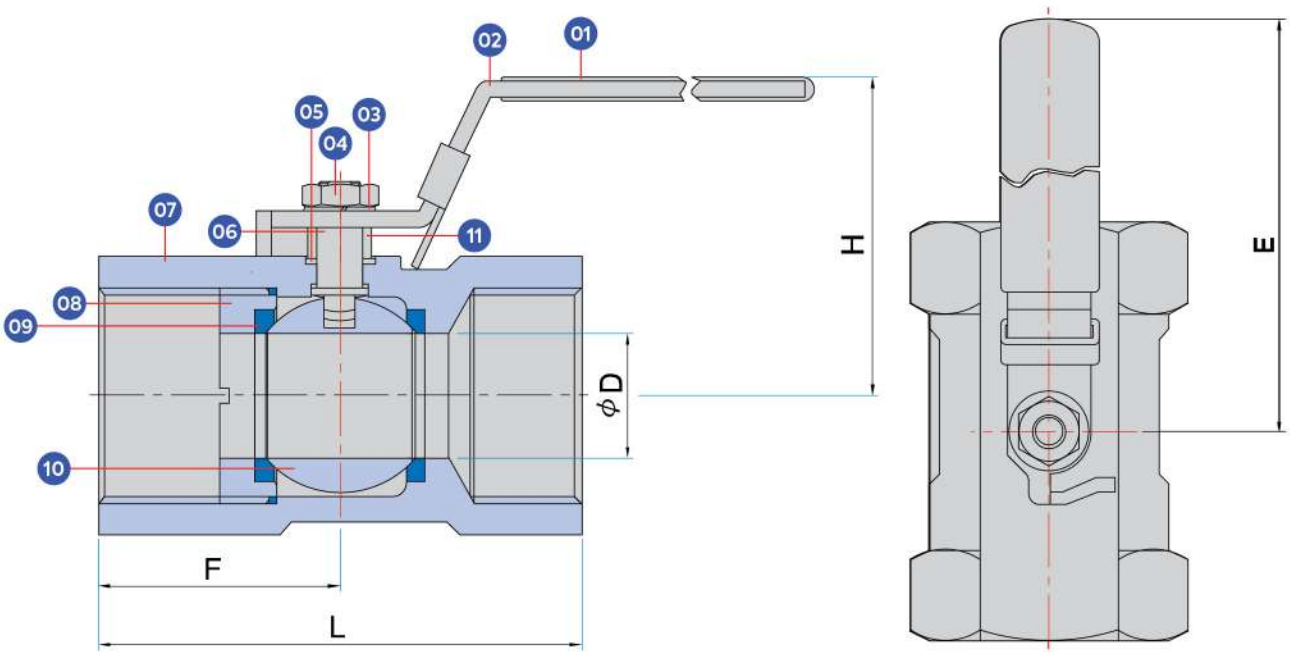
1-Piece Body Design

Reduced Bore
Sizes ¼" - 2"
800 WOG
Available in SS316 body only
Threaded End
Investment Casting
Compact Design
Blowout-Proof Stem
Standard Seat:
PTFE (max.180°C)
Lockable Handle

ValveWerkz 10 series ball valves feature a high quality investment casting body and ends. They are available ¼" - 2" threaded.

Pressure/Temperature Ratings





	Part Name	Material
1.	Handle Sleeve	VINYL
2.	Handle	SUS304
3.	Washer	SUS304
4.	Stem Nut	SUS304

	Part Name	Material
5.	Stem Packing	PTFE
6.	Stem	SUS316
7.	Body	SUS316
8.	Insert	SUS316

	Part Name	Material
9.	Seat	PTFE
10.	Ball	SUS316
11.	Bushing	SUS304

Dimensions(mm)

Size(Inch)	ØD	E	F	H	L	CV	Weight(kg)
¼"	5	61	19	31	39	6	0.07
⅜"	7	72	21	36	44	7	0.12
½"	9.2	85	27.5	41	56.5	10	0.19
¾"	12.5	85	30	44	59	19	0.27
1"	16	101	36	48	71	42	0.43
1 ¼"	20	101	40	54	78	60	0.72
1 ½"	25	125	42.5	65	83	125	0.87
2"	32	125	51	72	100	165	1.36

REQUEST FOR QUOTE

STEP 1
Find the model series

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STEP 3
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STEP 4
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STEP 5
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A sales engineer will be assigned to assist you.

Valve Coding Sheet
10 Series

01	02	03	04	05	06
S2	T	A			L

Body Material

Code	Material
S2	SS316

Seat Material

Code	Material
T	PTFE

Rating

Code	Rating
A	800WOG

Size

Code	Material
A	¼"
B	⅜"
C	½"
D	¾"
E	1"
F	1 ½"
G	2"

Connection

Code	Material
B	BSP
N	NPT

Operation

Code	Type
L	Lever

Your Valve Ordering Code:

10	01	02	03	04	05	06
	S2	T	A			L

Example:

10 Series - S2TABBL.
SS316 Material. PTFE Seat. Pressure Rating of 800WOG, ⅜ inch size. Connection Type of BSPT - Tappered. Lever Operating type.

*For special material or customisation, please refer to our sales engineer.

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Website: www.valvewerkz.com

20 Series

2-Piece Body Design

Full Bore

Sizes ¼" - 3"

1000 WOG

Available in SS316 body only

Threaded End

Investment Casting

Compact Design

Blowout-Proof Stem

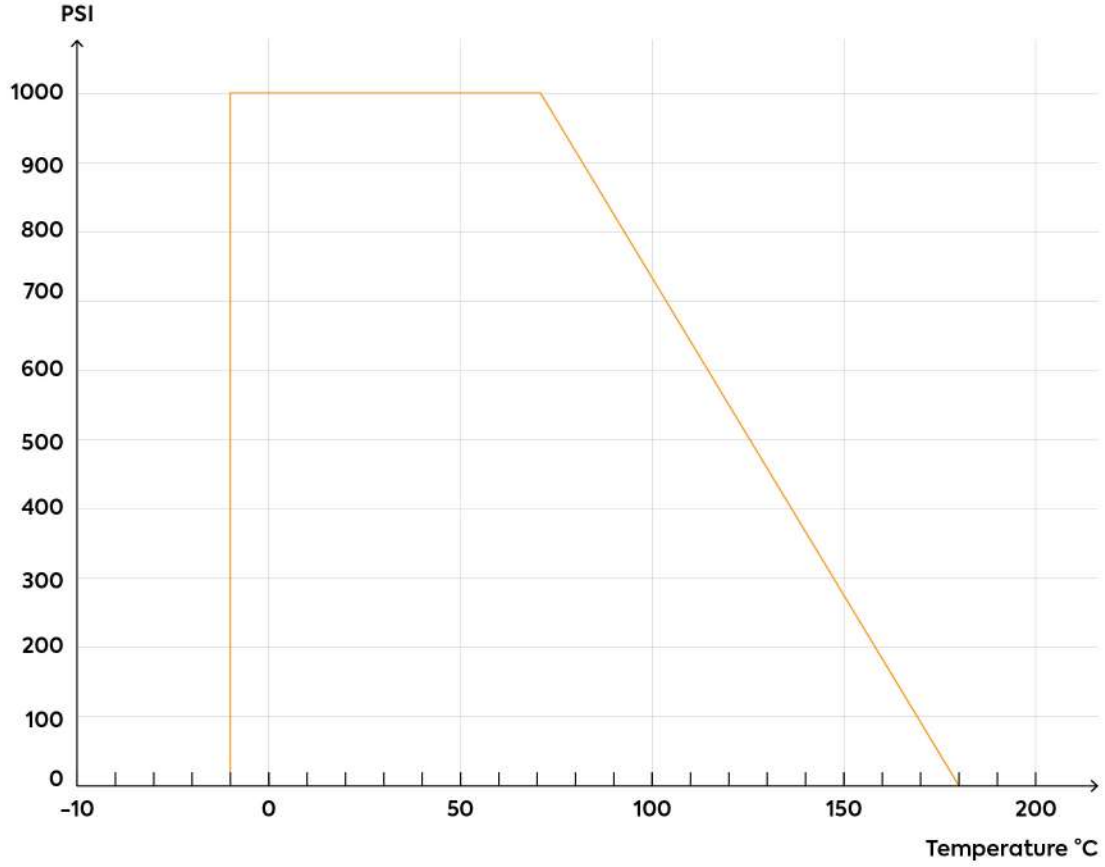
Standard Seat:

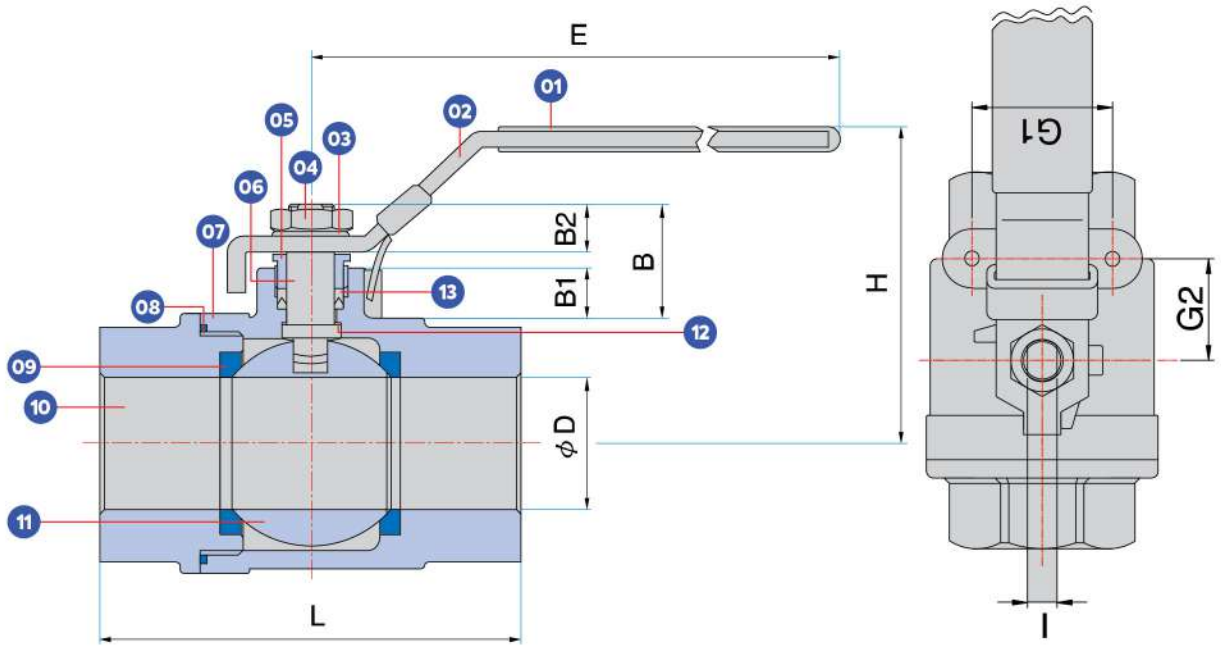
PTFE (max. 180°C)

Lockable Handle

ValveWerkz 20 series ball valves feature a high quality investment casting body and ends. They are available ¼" - 3" threaded.

Pressure / Temperature Ratings





	Part Name	Material
1.	Handle Sleeve	VINYL
2.	Handle	SUS304
3.	Washer	SUS304
4.	Stem Nut	SUS304
5.	Gland Nut	SUS304
6.	Stem	SUS304
7.	Body	SUS316

	Part Name	Material
8.	Body Seal	PTFE
9.	Seat	TFM1600
10.	End Cap	SUS316
11.	Ball	SUS316
12.	Stem Seal	PTFE
13.	Stem Packing	PTFE

Dimensions(mm)

Size(Inch)	B	B1	B2	ØD	E	H	I	L	G1	G2	CV	Weight(kg)
¼"	23.5	8.3	11	11.6	108	54	5	55.2	28	12.7	7	0.26
⅜"	23.5	8.3	11	12.5	108	54	5	55.2	28	12.7	8	0.26
½"	24.7	9.8	11	15	133	55	6.3	65.3	28	12.7	25	0.41
¾"	25.5	10.7	11	20	133	59	6.3	75.5	35	22.4	50	0.56
1"	30.4	11.6	14.8	25	153	70	8	88.7	35	22.4	80	0.90
1 ¼"	29.7	11.1	14.8	32	153	75	8	101.4	38.1	25.4	150	1.34
1 ½"	33	12	16	38	190	84	9.5	109.3	38.1	25.4	240	1.94
2"	30.7	9	16	50	190	92	9.5	124	38.1	25.4	460	3.00
2 ½"	48.5	15.7	23	65	247	128	12	159.3	55	35	820	6.70
3"	47.5	14	23	80	247	137	12	175.3	55	35	1250	9.06

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Valve Coding Sheet
20 Series

01	02	03	04	05	06
S2	T	A			L

Body Material

Code	Material
S2	SS316

Seat Material

Code	Material
T	PTFE

Rating

Code	Rating
A	1000WOG

Size

Code	Material
A	¼"
B	⅜"
C	½"
D	¾"
E	1"
F	1 ½"
G	2"
H	2 ½"
I	3"

Connection

Code	Material
B	BSP
N	NPT

Operation

Code	Type
L	Lever

Your Valve Ordering Code:

20	01	02	03	04	05	06
	S2	T	A			L

Example:

20 Series - S2TABBL.
SS316 Material. PTFE Seat. Pressure Rating of 1000WOG, ⅜ inch size. Connection Type of BSPT - Tappered. Lever Operating type.

*For special material or customisation, please refer to our sales engineer.

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205S Series

2-Piece Body Design

Reduced Bore

Sizes ¼" - 2"

2000 WOG

Available in SS316 body only

Threaded End

Investment Casting

Compact Design

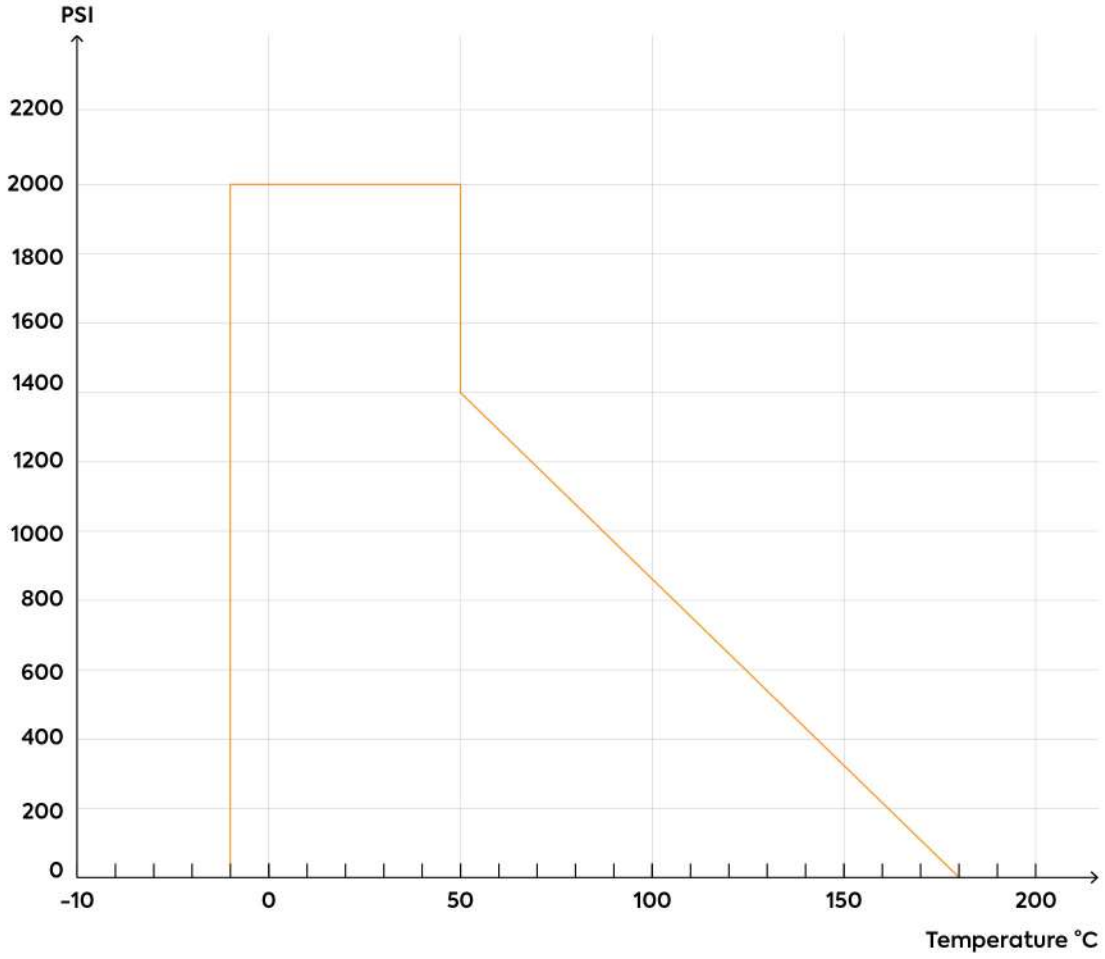
Blowout-Proof Stem

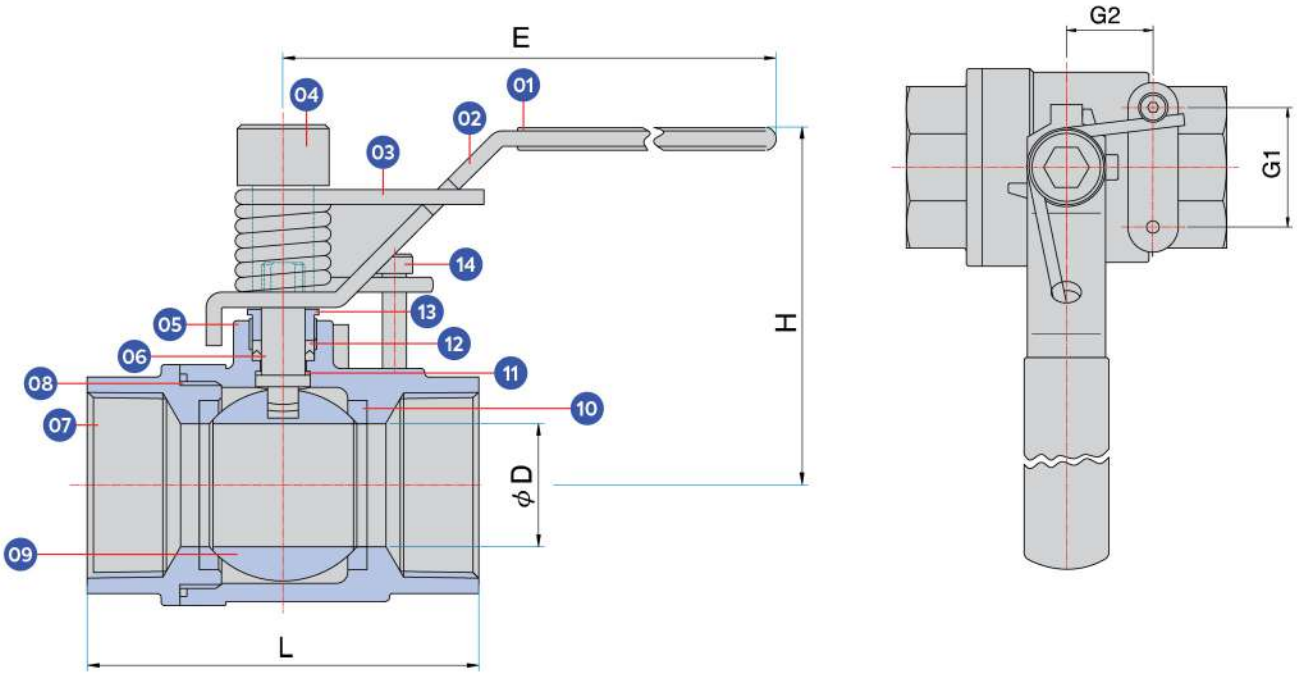
Standard Seat:
PTFE (max. 180°C)

Spring Return Handle

ValveWerkz 205S series ball valves feature a high quality investment casting body and ends. They are available ¼" - 2" with threaded.

Pressure/Temperature Ratings





	Part Name	Material
1.	Handle Sleeve	VINYL
2.	Handle	SUS304
3.	Spring	Steel
4.	Bolt	Steel
5.	Body	SUS316
6.	Stem	SUS316
7.	End Cap	SUS316

	Part Name	Material
8.	Body Seal	PTFE
9.	Ball	SUS316
10.	Seat	TFM1600
11.	Stem Seal	PTFE
12.	Stem Packing	PTFE
13.	Gland Nut	SUS304
14.	Stopper Bolt	Steel

Dimensions(mm)

Size(Inch)	ØD	E	H	L	G1	G2	CV	Weight(kg)
¼"	9.5	119	58	52	28	12.7	6	0.29
⅜"	9.5	119	58	52	28	12.7	7	0.29
½"	12.7	119	61	62	28	12.7	10	0.35
¾"	15	137	70	69	35	22.4	19	0.52
1"	20	137	73	84	35	22.4	42	0.76
1 ¼"	25	177	86	90	38.1	25.4	60	1.24
1 ½"	32	177	92	104	38.1	25.4	125	1.66
2"	38	216	104	117	38.1	25.4	165	2.34

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Valve Coding Sheet
205S Series

01	—	02	—	03	—	04	—	05	—	06
S2		T		A						L

Body Material

Code	Material
S2	SS316

Seat Material

Code	Material
T	PTFE

Rating

Code	Rating
A	2000WOG

Size

Code	Material
A	¼"
B	⅜"
C	½"
D	¾"
E	1"
F	1 ½"
G	2"

Connection

Code	Material
B	BSP
N	NPT

Operation

Code	Type
L	Lever

Your Valve Ordering Code:

205S	—	01	02	03	04	05	06
		S2	T	A			L

Example:

205S Series - S2TACBL reduced bore.
SS316 Material. PTFE Seat. Pressure Rating of 2000WOG, ½ inch size. Connection Type of BSPT – Tappered. Lever Operating type.

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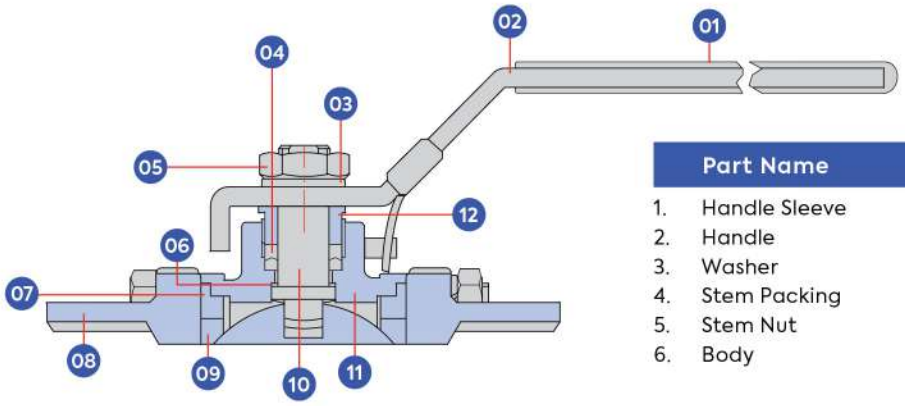
50 Series

3-Piece Body Design

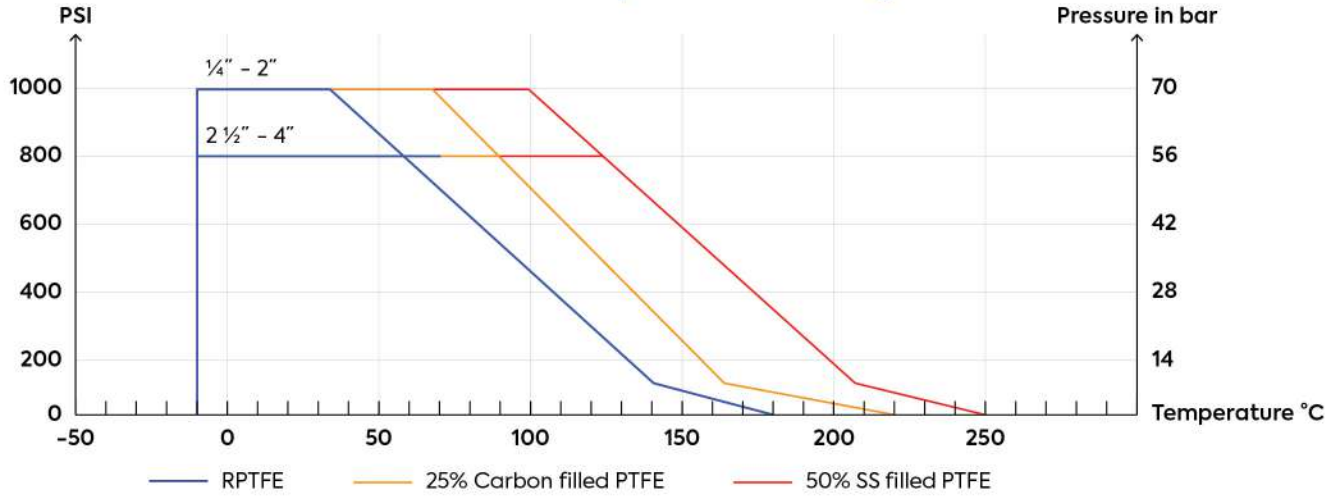
Full Bore
Sizes ¼" - 4"
1000 WOG
WCB / SS316 body
Threaded End, Socket Weld End, Butt Weld End
Superior Live Loaded Packing System
Blowout-Proof Stem
Dual Anti-Static Device
Standard Seat:
RPTFE (max. 180°C)
Seat Options:
25% Carbon filed (max. 220°C)
50% SS filled (max. 240°C)
Lockable Handle

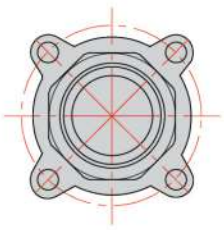
ValveWerkz 50 series ball valves feature a high quality investment casting body and ends. They are available ¼" - 4" with threaded, socket weld and butt weld ends. Superior leak protection is, accomplished by using a live-loaded packing system including Belleville washers and double "V" ring packing.



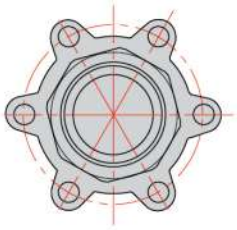
Part Name			
1.	Handle Sleeve	7.	Joint Gasket
2.	Handle	8.	Body Seal
3.	Washer	9.	Seat
4.	Stem Packing	10.	Stem
5.	Stem Nut	11.	Body
6.	Body	12.	Gland Nut

Pressure / Temperature Ratings

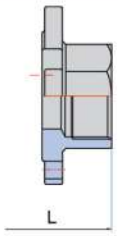




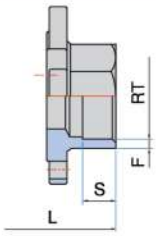
¼" - 2"



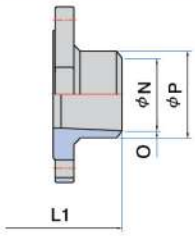
2 ½" - 4"



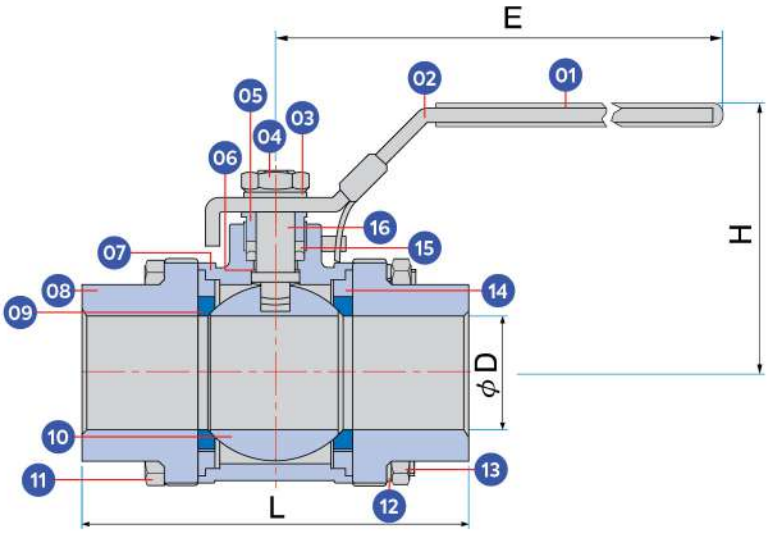
Threaded End

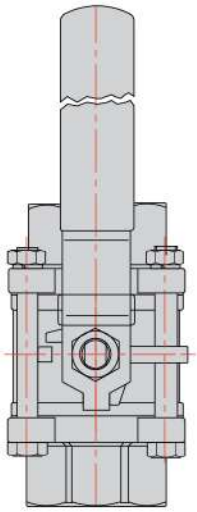


Socket Weld End



Butt Weld End





	Part Name	Material
1.	Handle Sleeve	VINYL
2.	Handle	SUS304
3.	Washer	SUS304
4.	Stem Nut	SUS304
5.	Gland Nut	SUS304
6.	Stem Seal*	PTFE

	Part Name	Material
7.	Body	SUS316 / WCB
8.	End Cap	SUS316 / WCB
9.	Seat*	RPTFE
10.	Ball	SUS316
11.	Bolt	SUS304
12.	Washer	SUS304

	Part Name	Material
13.	Bolt Nut	SUS304
14.	Joint Gasket*	PTFE
15.	Stem Packing*	PTFE
16.	Stem	SUS316

*Spare Parts available in Repair Kit. Please refer to page 59 for more details.

Dimensions(mm)

Size	ØD	E	F	H	S	L	L1	LE	ØN	ØN1	O	ØP	ØP1	RT	CV	Weight(kg)
¼"	11.6	103	3.6	54	11	59	61	223	11.6	11.6	1	18	15	14.2	7	0.34
⅜"	12.5	103	2	54	11	59	61	223	12.5	14	1	18	17	17.7	8	0.32
½"	15	133	2	55	12	69	69	225	17	15.6	1	22.7	21	21.9	15	0.56
¾"	20	133	2.6	59	14	78	78	225	22.5	20.7	1	27.7	26.8	27.2	10	0.72
1"	25	153	3.2	70	14	84	84	244	26	25.8	1	33.5	34.4	33.9	70	1.02
1 ¼"	32	153	4.05	75	15	104	104	253	34.4	33.3	1	42.2	43.4	42.7	110	1.5
1 ½"	38	191	3.7	84	17	119	119	258	41.5	40.5	1	48.8	49.8	48.8	250	2.38
2"	50	191	4.35	92	19	131	131	275	53	51.5	1	61	61	61.3	400	3.54
2 ½"	65	247	5.75	128	21	162	162	332	65.8	68	1	77	77	74	600	7.12
3"	80	247	5.25	137	25	182	182	351	81	81	1	91	91	90	1100	12.3
4"	100	295	5.7	173	30	230	230	360	102	101	1	115	115	115.6	2000	19.65

The information provided in this document is intended for informational purposes only and is subject to change without notice.

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Valve Coding Sheet
50 Series

01	—	02	—	03	—	04	—	05	—	06
				A						L

Body Material

Code	Material
C1	WCB
S2	SS316

Seat Material

Code	Material
T	RPTFE
M	25% Carbon Filled PTFE
G	50% SS Filled PTFE

Rating

Code	Rating
A	1000WOG

Size

Code	Material
A	¼"
B	⅜"
C	½"
D	¾"
E	1"
F	1 ¼"
G	1 ½"
H	2"
I	2 ½"
J	3"
K	4"

Connection

Code	Material
B	BSP
N	NPT
S	Socket Weld
W	Butt Weld
X	Others (To be specified)

Operation

Code	Type
L	Lever

Your Valve Ordering Code:

50	—	01	02	03	04	05	06
				A			L

Example:

50 Series - S2TABBL.
SS316 Material. RPTFE Seat. Pressure Rating of 1000WOG, ⅜ inch size. Connection Type of BSPT - Tappered. Lever Operating type.

*For special material or customisation, please refer to our sales engineer.

SCAN FOR ONLINE ORDERING FORM

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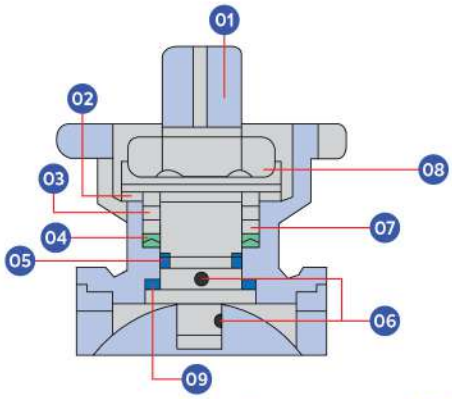
Website: www.valvewerkz.com

90 Series

3-Piece Body Design

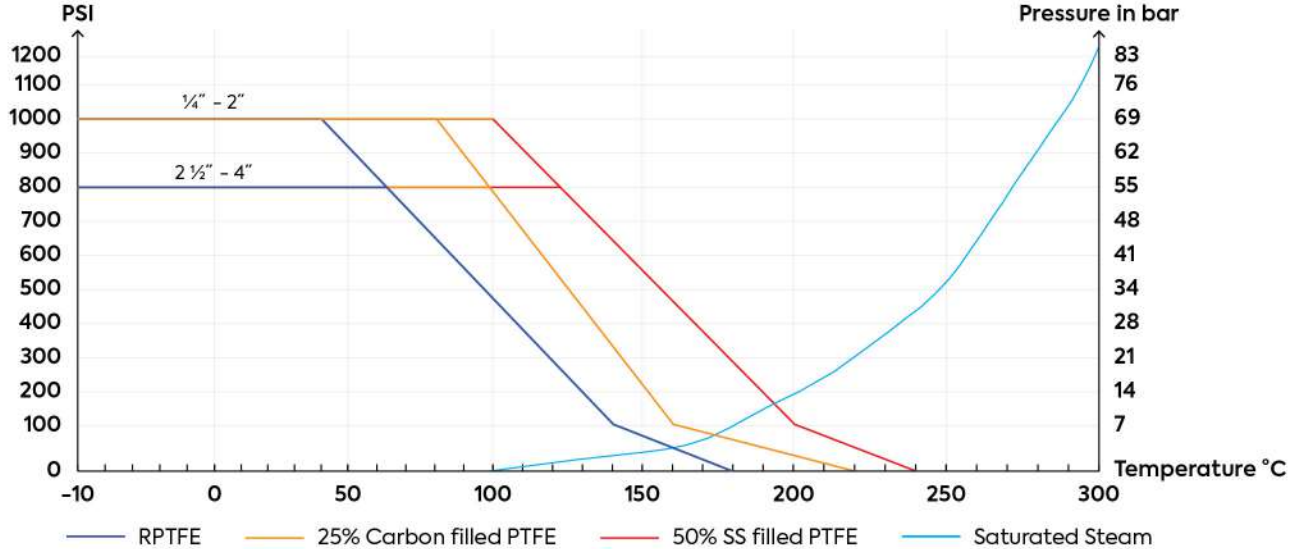
Full Bore
Sizes ¼" - 4"
PN64 ¼" - 2" PN50 2 ½" - 4"
SS316 body
Threaded End, Socket Weld End, Butt Weld End
Super Live Load Loaded Packing System
Blowout-Proof Stem
Dual Anti-Static Device
ISO 5211 Direct Mounting Pad
Standard Seat: RPTFE (max. 180°C)
Seat Options: 25% Carbon filed PTFE (max. 220°C) 50% SS filled PTFE (max. 240°C)
Lockable Handle

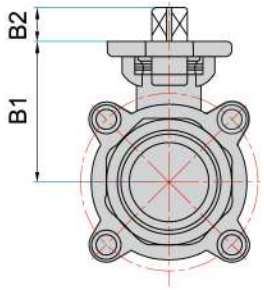
ValveWerkz 90 series ball valves feature a high quality investment cast body and ends. They are available ¼" - 4" with threaded, socket weld, and butt weld ends. Superior leak protection is accomplished by using a live-loaded packing system including Belleville washers and double "V" ring packing.



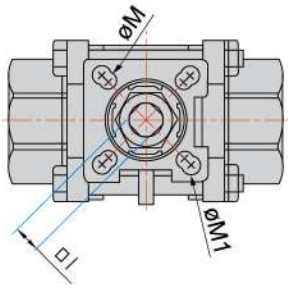
	Part Name
1.	Lock Saddle
2.	Belleville Washer
3.	Gland
4.	V-Ring
5.	Compress Ring & Lower/Stem Seal
6.	Anti-Static Devices
7.	Bushing
8.	Stem Nut
9.	O-Ring

Pressure / Temperature Ratings

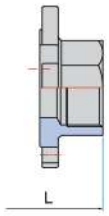




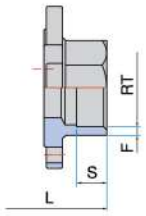
¼" - 2"



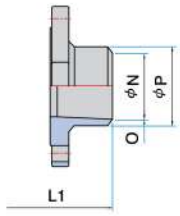
2 ½" - 4"



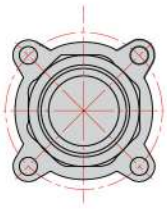
Threaded End



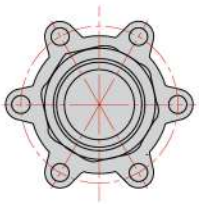
Socket Weld End



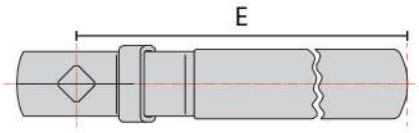
Butt Weld End

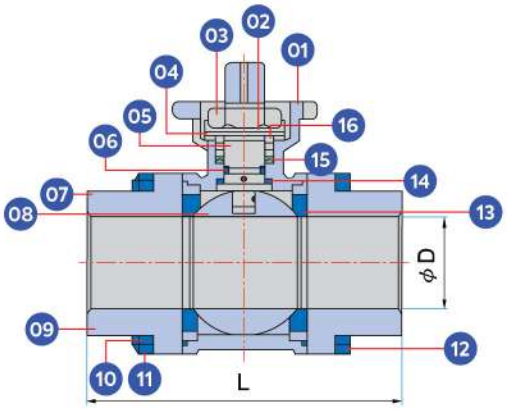


¼" - 2"



2 ½" - 4"



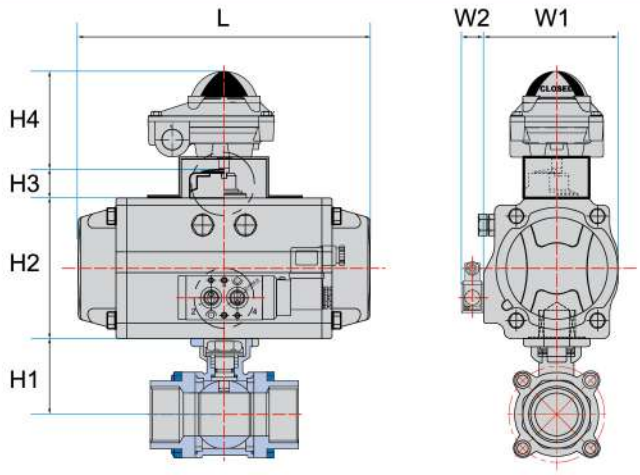


	Part Name	Qty	Material
1.	Body	1	SUS316 / WCB
2.	Belleville Washer	2	SUS301
3.	Stem Nut	1	SUS304
4.	Gland	1	SUS304
5.	Stem	1	SUS316
6.	Stem Seal*	1	RPTFE
7.	Joint Gasket*	2	RPTFE
8.	Ball	1	SUS316
9.	End Cap	1	SUS304
10.	Bolt Nut	2	SUS316 / WCB
11.	Washer	*	SUS304
12.	Bolt	*	SUS304
13.	Seat*	2	TFM1600
14.	O-Ring	1	PTFE
15.	V-Ring Packing*	1 Set	PTFE
16.	Bushing*	1	50% S.S. Powder filled PTFE

*Spare Parts available in Repair Kit.
Please refer to page 59 for more details.

Dimensions(mm)

Size(Inch)	B1	B2	ØD	E	F	ØM	ØM1	I	L	L1	O	ØP	RT	ISO 5211	CV	Weight(kg)
¼"	40.2	9	11.6	136	3.6	5.5	5.5	9	60	70	1	18	14.2	F03, F04	7	0.62
⅜"	40.2	9	12.5	136	2	5.5	5.5	9	60	70	1	18	17.7	F03,F04	8	0.64
½"	40.2	9	15	136	2	5.5	5.5	9	69	69	1	22.7	21.9	F03, F04	15	0.68
¾"	43.4	9	20	136	2.6	5.5	5.5	9	78	78	1	27.7	27.2	F03, F04	40	0.78
1"	52	11	25	152	3.2	6.5	6.5	11	84	84	1	33.5	33.9	F04, F05	70	1.18
1 ¼"	56.5	11	32	152	5.35	6.5	6.5	11	110	104	1	42.2	42.7	F04, F05	110	1.62
1 ½"	65.7	15.5	36	190	5.7	6.5	8.5	14	120	119	1	48.8	48.8	F05, F07	250	2.7
2"	73.95	15.5	50	190	6.1	8.5	8.5	14	140	131	1	61	61.3	F05, F07	400	3.9
2 ½"	93	16.5	65	287	7.15	9	11	17	185	190	1	78	74	F07, F10	600	8.89
3"	102	16.5	80	304	7.6	9	11	17	205	220	1	90.7	90	F07, F10	1100	12.4
4"	132	21.5	100	440	7.85	N/A	11	22	230	270	1	115.8	115.6	F10	2000	21.69



Pneumatic Actuator (Double Acting)

DN(mm)	Size(Inch)	Torques	Actuator	H1	H2	H3	H4	W1	W2	L	Weight(kg)
8	¼"	5	HP-50	40.20	73.00	20.00	90.00	72.00	29.50	144.00	2.24
10	⅜"	5	HP-50	40.20	73.00	20.00	90.00	72.00	29.50	144.00	2.26
15	½"	5	HP-50	40.20	73.00	20.00	90.00	72.00	29.50	144.00	2.30
20	¾"	7	HP-50	43.40	73.00	20.00	90.00	72.00	29.50	144.00	3.02
25	1"	12	HP-50	52.00	73.00	20.00	90.00	72.00	29.50	144.00	3.42
32	1 ¼"	17	HP-63	56.50	87.00	20.00	90.00	85.00	29.50	163.00	4.38
40	1 ½"	22	HP-63	65.70	87.00	20.00	90.00	85.00	29.50	163.00	5.46
50	2"	26	HP-66	73.95	87.00	20.00	90.00	85.00	29.50	202.00	7.38
65	2 ½"	40	HP-75	93.00	104.00	20.00	90.00	96.00	29.50	210.00	12.97
80	3"	50	HP-88	102.00	116.00	20.00	90.00	108.00	29.50	247.00	17.78
100	4"	90	HP-100	132.00	128.00	20.00	90.00	123.00	29.50	268.00	28.77

The selection of the actuators are based on the below conditions:

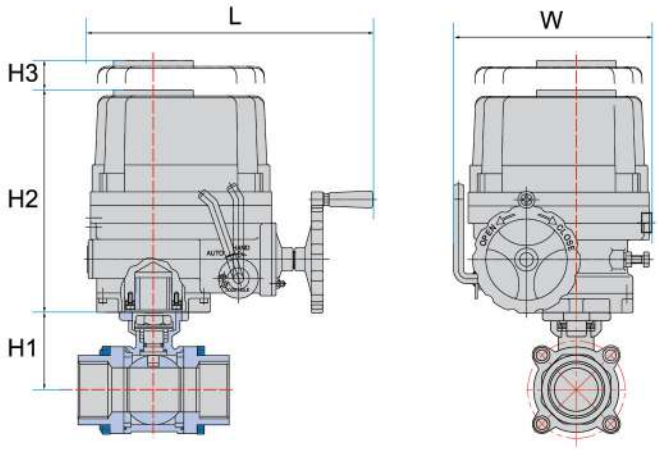
- Air Supply Pressure : 5.5 bar
- Operating Pressure : 10 bar
- Safety Factor : 30%

Pneumatic Actuator (Single Acting)

DN(mm)	Size(Inch)	Torques	Actuator	H1	H2	H3	H4	W1	W2	L	Weight(kg)
8	¼"	5	HP-50S (S11)	73.00	20.00	90.00	90.00	72.00	29.50	144.00	2.96
10	⅜"	5	HP-50S (S11)	73.00	20.00	90.00	90.00	72.00	29.50	144.00	2.98
15	½"	5	HP-50S (S11)	73.00	20.00	90.00	90.00	72.00	29.50	144.00	3.02
20	¾"	7	HP-63S (S11)	87.00	20.00	90.00	90.00	85.00	29.50	163.00	3.73
25	1"	12	HP-63S (S11)	87.00	20.00	90.00	90.00	85.00	29.50	202.00	4.89
32	1 ¼"	17	HP-75S (S11)	104.00	20.00	90.00	90.00	96.00	29.50	210.00	6.06
40	1 ½"	22	HP-88S (S11)	116.00	20.00	90.00	90.00	108.00	29.50	247.00	8.70
50	2"	26	HP-88S (S11)	116.00	20.00	90.00	90.00	108.00	29.50	247.00	9.90
65	2 ½"	40	HP-100S (S11)	128.00	30.00	90.00	90.00	123.00	29.50	268.00	16.83
80	3"	50	HP-115S (S11)	146.00	30.00	90.00	90.00	141.00	29.50	316.00	23.81
100	4"	90	HP-145S (S11)	179.00	30.00	90.00	90.00	172.00	29.50	414.00	39.09

The selection of the actuators are based on the below conditions:

- Air Supply Pressure : 5.5 bar
- Operating Pressure : 10 bar
- Safety Factor : 30%
- Air to Open, Spring to Close



Electric Actuator

DN(mm)	Size(Inch)	Torques	Actuator	H1	H2	H3	W	L	Weight(kg)
8	¼"	5	HQ-004	40.20	124.30	N/A	88.60	166.60	2.90
10	⅜"	5	HQ-004	40.20	124.30	N/A	88.60	166.60	2.92
15	½"	5	HQ-004	40.20	124.30	N/A	88.60	166.60	2.96
20	¾"	7	HQ-004	43.40	124.30	N/A	88.60	166.60	3.06
25	1"	12	HQ-004	52.00	124.30	N/A	88.60	166.60	3.46
32	1 ¼"	17	HQ-004	56.50	124.30	N/A	88.60	166.60	3.90
40	1 ½"	22	HQ-004	65.70	124.30	N/A	88.60	166.60	4.98
50	2"	26	HQ-006	73.95	137.00	N/A	105.00	126.00	7.98
65	2 ½"	40	HQ-008	93.00	235.00	120.00	170.00	258.00	17.37
80	3"	50	HQ-010	102.00	235.00	120.00	170.00	258.00	20.88
100	4"	90	HQ-015	132.00	268.00	160.00	229.00	338.00	39.37

The selection of the actuators are based on the below conditions:

- Air Supply Pressure : 5.5 bar
- Operating Pressure : 10 bar
- Safety Factor : 30%

REQUEST FOR QUOTE

STEP 1
Find the model series

STEP 2
Define the specification/ valve code

STEP 3
Fill up ordering sheet (back of the brochure) or Scan the QR code below

STEP 4
Submit your order via our website or contact your local partner

STEP 5
Prepare for confirmation and delivery

*For further assistance with placing your order, please contact your local partner.
A sales engineer will be assigned to assist you.

Valve Coding Sheet
90 Series

01	02	03	04	05
S2				

Body Material

Code	Material
S2	SS316

Seat Material

Code	Material
T	RPTFE
M	25% Carbon Filled PTFE
G	50% SS Filled PTFE

Pressure Rating/Size

Code	Pressure	Size
A	PN64	¼"
B	PN64	⅜"
C	PN64	½"
D	PN64	¾"
E	PN64	1"
F	PN64	1 ¼"
G	PN64	1 ½"
H	PN64	2"
I	PN50	3"
J	PN50	4"

Connection

Code	Material
B	BSP
N	NPT
S	Socket Weld
W	Butt Weld
X	Others (To be specified)

Operation

Code	Type
L	Lever
D	Double Acting Pneumatic Actuated
S	Single Acting Pneumatic Actuated
E	Electric Actuated

Your Valve Ordering Code:

90	01	02	03	04	05
	S2				

Example:

90 Series - S2TABL reduced bore.
SS316 Material. RPTFE Seat. Pressure Rating of PN64, ⅜ inch size. Connection Type of BSPT – Tappered. Lever Operating type.

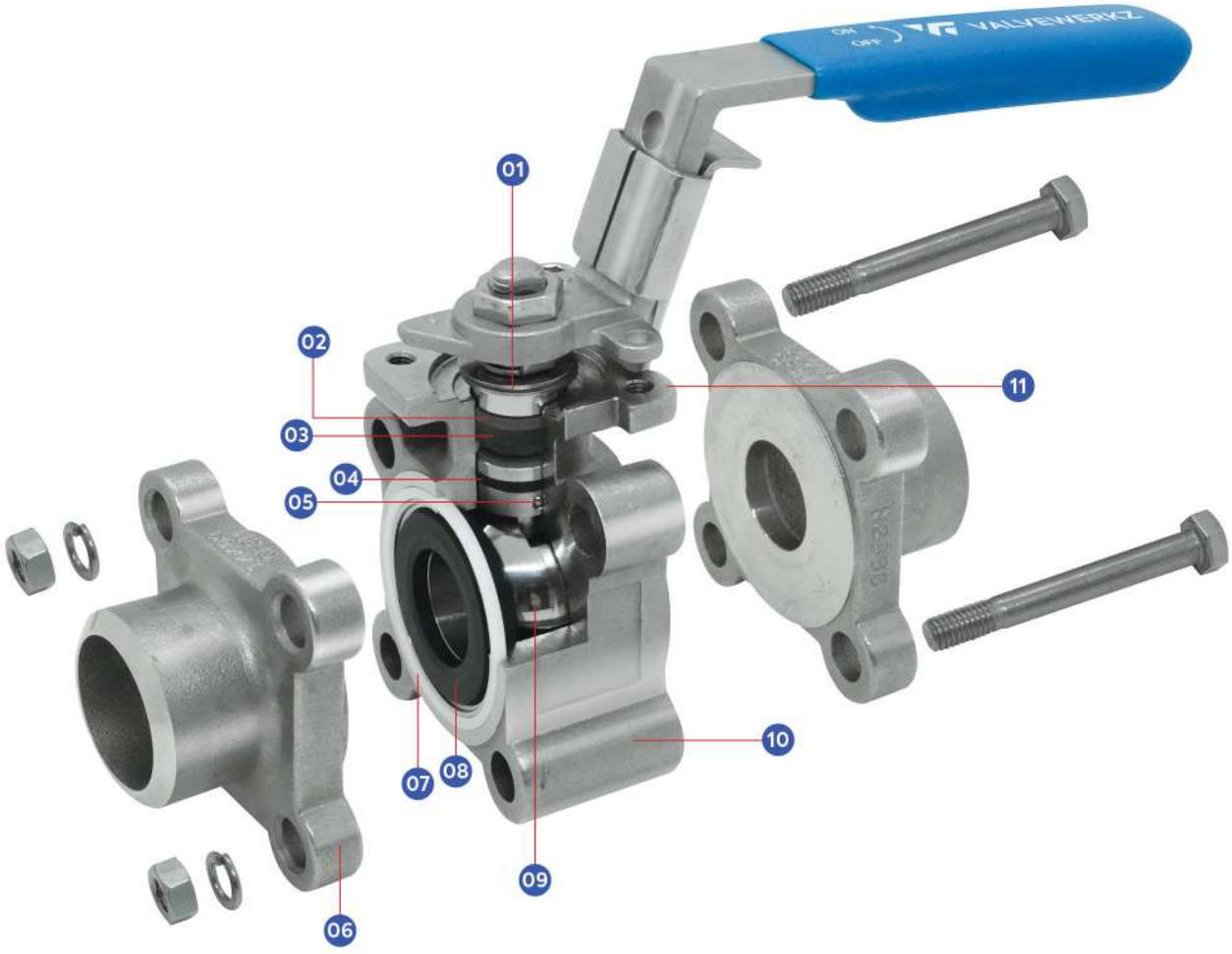
*For special material or customisation, please refer to our sales engineer.

SCAN FOR ONLINE ORDERING FORM

Tel: +65 6909 1221
Email: enquiry@valvewerkz.com
Website: www.valvewerkz.com

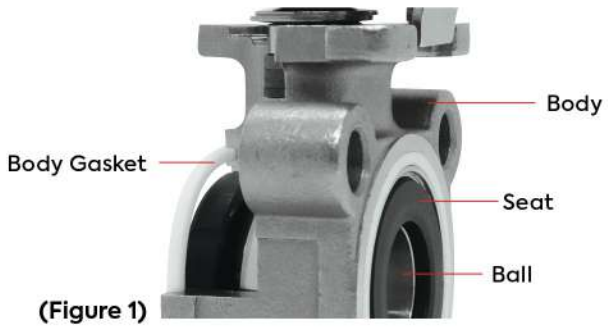
80 SERIES - HIGH PERFORMANCE

The ball valve consists of a body, end caps, and a ball. The ball is connected to the stem and rotates 90 degrees to enable on-off functionality. It is primarily used for pipeline on-off control and emergency shut-off applications. When equipped with a V-port ball, it can also be used for precise flow adjustment.

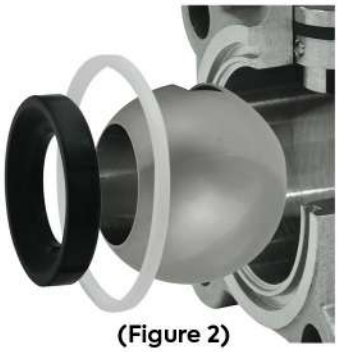


	Part Name
1.	Belleville Washer
2.	Bushing
3.	V-Ring Packing
4.	Upper and Lower Stem Seal
5.	Dual Anti-Static Device
6.	End Cap

	Part Name
7.	Body Gasket
8.	Seat
9.	Ball
10.	Body
11.	ISO 5211 Mounting Pad



(Figure 1)



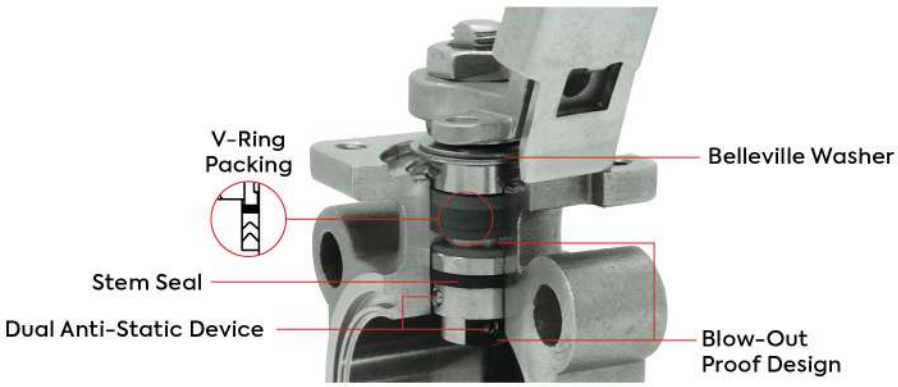
(Figure 2)

1. **Low Operating Torque**
   The seat provides elastic cushioning during ball rotation, ensuring smooth, uniform torque without jamming. (Figure 1)

2. **Reliable Sealing**
   Once the valve is closed, the seat maintains a tight seal through self-sealing under media pressure. (Figure 2)

3. **Extended Service Life**
   The elastic seat features a long pre-compression stroke, offering high wear compensation for longer durability.

4. **Cold Flow Control Design**
   The seat's trimming and wrapping structure supports non-contact areas of the ball and seat. This design prevents cold flow deformation and enables high-pressure performance. (Figure 1)



(Figure 3)

5. **Blow-Out Prevention**
   The stem includes an integral shoulder design to prevent blow-out and leakage. (Figure 3)

6. **Anti-Static Protection**
   The anti-static design reduces the risk of safety hazards caused by static electricity. (Figure 3)

7. **Effective Stem Sealing**
   An O-Ring on the valve stem offers excellent self-sealing capability, effectively sealing the valve cavity. (Figure 3)

8. **Dual Stem Sealing**
   Designed to meet TA-LUFT emission control standards for enhanced sealing reliability. (Figure 3)

9. **Self-Adjusting Packing**
   Two pre-loaded Belleville washers allow for automatic packing adjustment, minimising the need for re-tightening in low-leakage applications. (Figure 3)

10. **Precision Engineering**
    ValveWerkz's valve designs integrate advanced CNC machining, structural optimisation, and precise component sizing — all tailored to meet strict cobarny specifications. This ensures high usability and maximised service life.

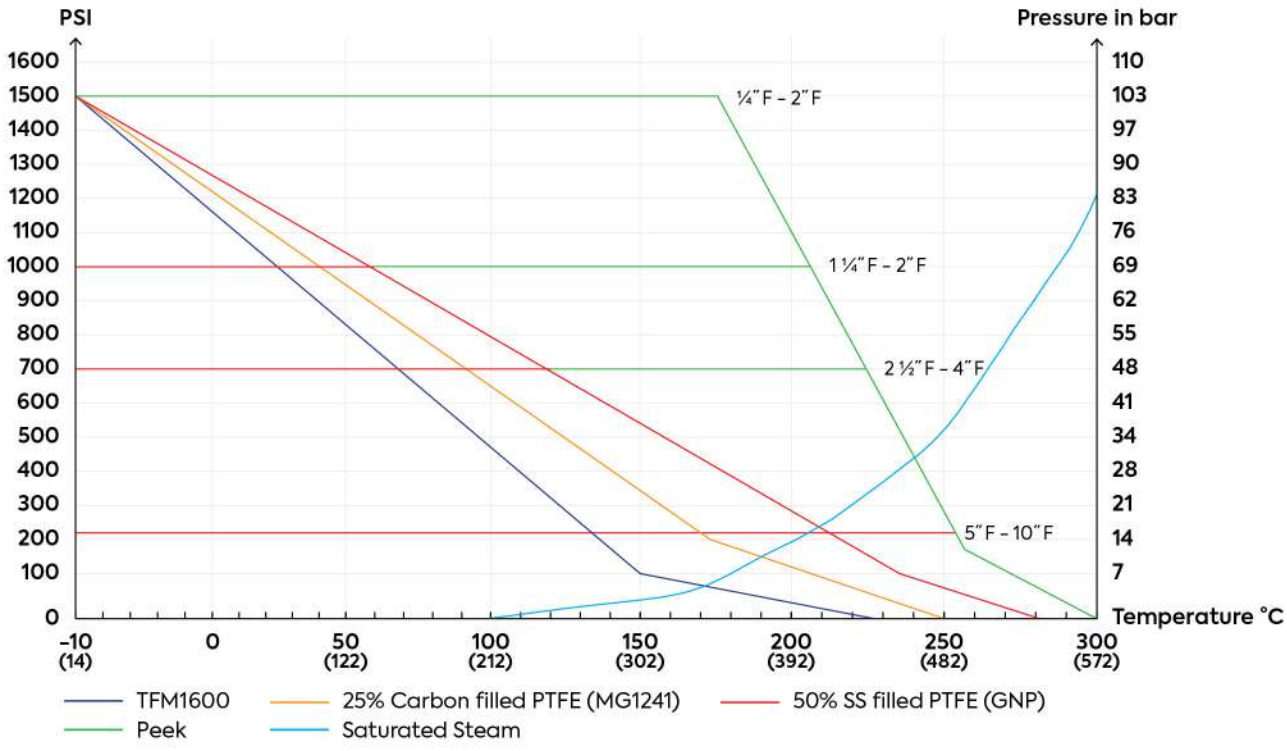
80 Series

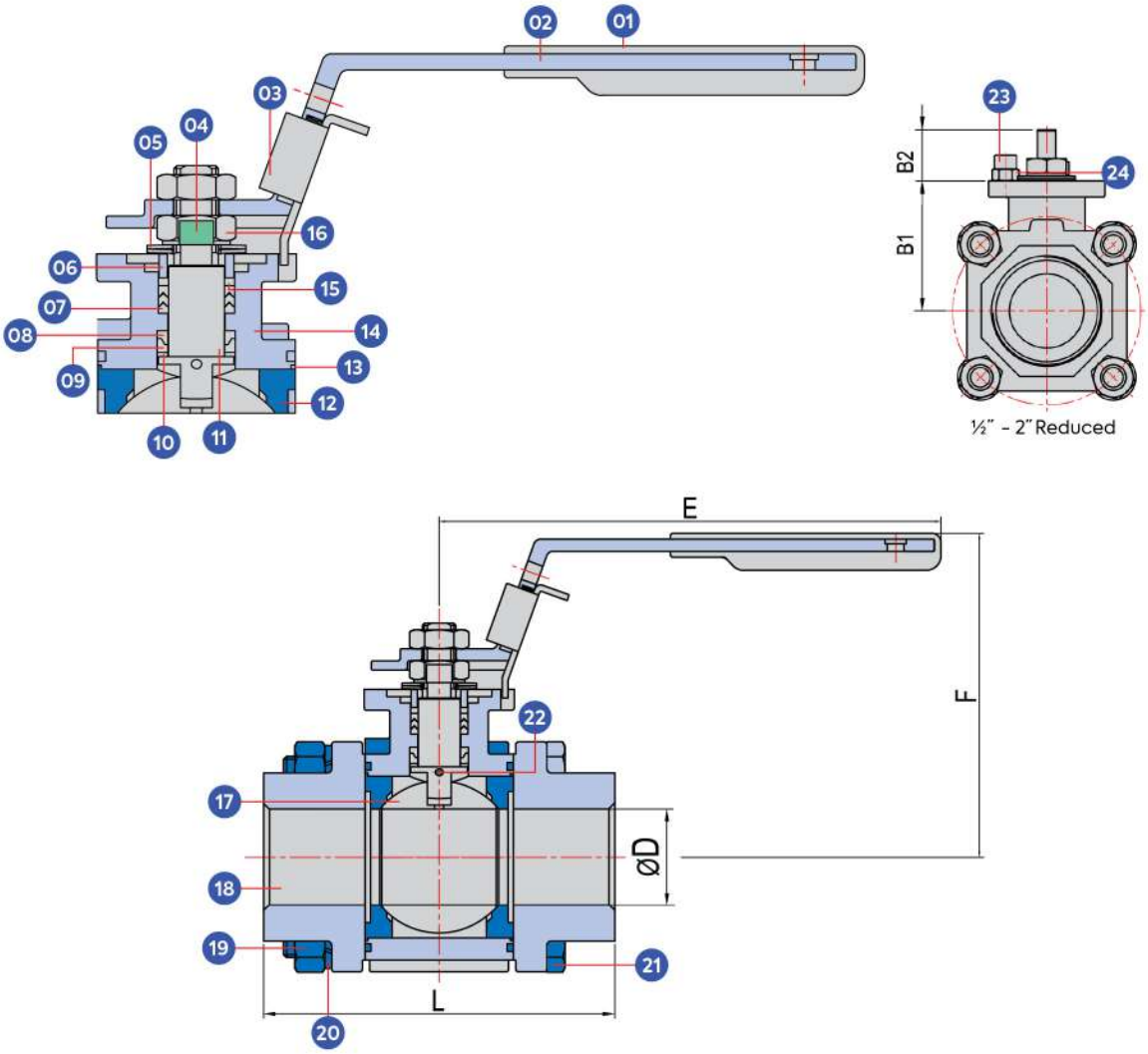
3-Piece Body Design

Reduced Bore / Full Bore
Sizes ½" - 10"
½" - 1 ¼" PN100
1 ½" - 2 ½" PN64
3" - 4" PN50
5" - 10" PN16
WCB / SS316 body
Threaded End (½" - 4")
Socket Weld End (½" - 4")
Butt Weld End (½" - 10")
Superior Live Loaded Packing System
ISO 5211 Mounting Pad (Bracket Required)
Blowout-Proof Stem
Dual Anti-Static Devices
Standard Seat: 25% Carbon Filled PTFE - max. 250°C
Seat Options: RPTFE - max. 230°C 50% SS Filled PTFE - max. 280°C PEEK - max. 300°C
Lockable Handle (½" - 4")
Gearbox (5" - 10")

ValveWerkz 80 series 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

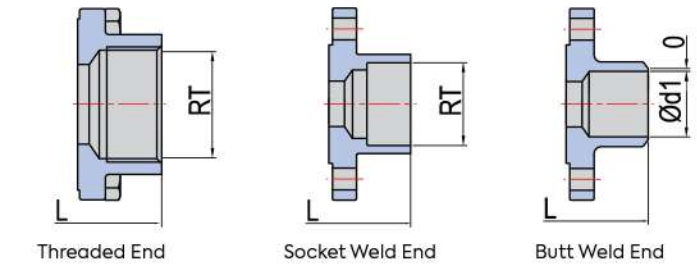




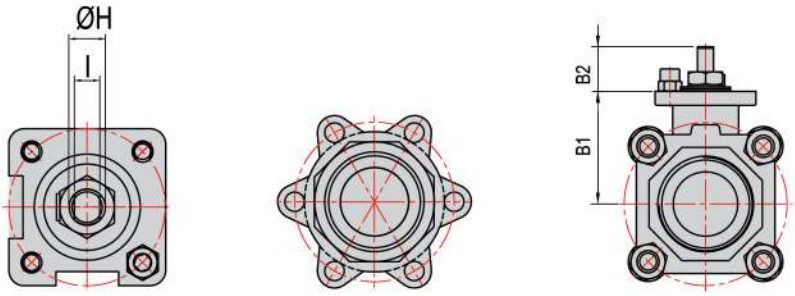
	Part Name	Material
1.	Handle Sleeve	VINYL
2.	Handle	SUS304
3.	Locking Device	SUS304
4.	Lock Saddle	SUS304
5.	Belleville Washer	SUS304
6.	Gland	SUS304
7.	V-Ring Packing*	MG1241
8.	Upper Stem Seal*	TFM4215
9.	Compress Ring*	SUS316
10.	Lower Stem Seal*	50% S.S. Powder Filled PTFE
11.	Stem	SUS316
12.	Seat*	RPTFE / 50% SS Filled PTFE / 25% Carbon Filled PTFE / PEEK

	Part Name	Material
13.	Packing*	PTFE
14.	Body	SUS316 / WCB
15.	Bushing	50% S.S. Powder Filled PTFE
16.	Stem Nut	SUS304
17.	Ball	SUS316
18.	End Cap	SUS316 / WCB
19.	Bolt Nut	SUS304
20.	Washer	SUS304
21.	Bolt	SUS304
22.	Anti-Static Device	Stainless Steel
23.	Stop Pin	SUS304
24.	Stop Pin Nut	SUS304

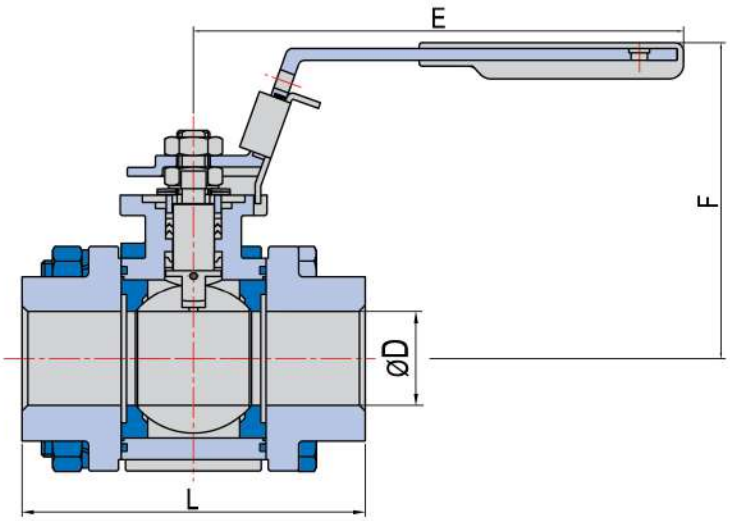
*Spare Parts available in Repair Kit. Please refer to page 59 for more details.



Threaded End | Socket Weld End | Butt Weld End



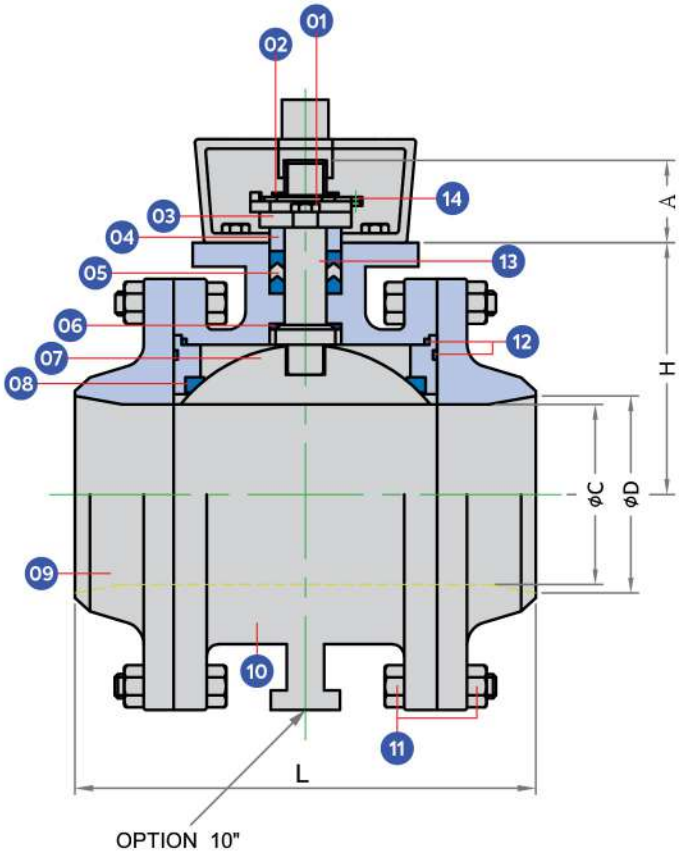
2 ½" - 4" Reduced | ½" - 2" Full



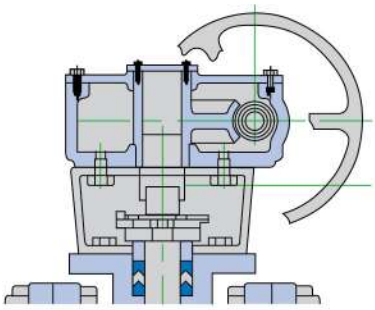
Dimensions(mm)

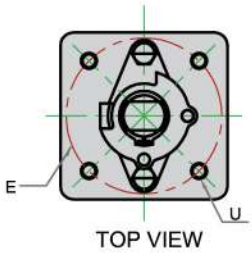
DN(mm)	Size	DN(mm)	Size	B1	B2	ØD	ØD1	E	F	ØH	I	L	O	RT	ISO5211	RB	FB	Weight(kg)
Full Bore		Reduced Bore																
8	¼"	-	-	27.7	12.7	12.7	9.5	120.0	66.0	8.0	5.0	66.8	0.5	14.1	F03	-	7.0	0.5
10	⅜"	15	½"	27.7	12.7	12.7	15.8	120.0	66.0	8.0	5.0	66.8	0.5	17.5	F03	10.0	8.0	0.6
15	½"	20	¾"	38.1	15.0	15.0	21.0	134.0	84.0	9.7	6.3	71.0	0.5	22.4	F04	19.0	25.0	0.9
20	¾"	25	1"	41.8	20.0	20.0	26.6	134.0	88.0	9.7	6.3	96.5	0.5	27.4	F04	42.0	50.0	1.4
25	1"	32	1 ¼"	51.6	21.4	25.4	35.1	167.0	98.0	11.2	8.0	109.0	0.5	34.2	F05	60.0	80.0	2.1
32	1 ¼"	40	1 ½"	55.9	21.7	32.0	41.2	167.0	101.0	11.2	8.0	117.0	0.5	43.0	F05	125.0	150.0	2.8
40	1 ½"	50	2"	66.2	25.6	28.0	53.0	204.0	117.0	16.0	9.5	128.3	1.0	49.0	F07	165.0	240.0	4.1
50	2"	65	2 ½"	75.4	25.2	50.8	68.4	204.0	125.0	16.0	9.5	141.5	1.0	61.1	F07	260.0	460.0	5.9
65	2 ½"	80	3"	89.4	42.7	65.0	77.8	250.0	165.0	22.3	17.0	174.0	1.6	77.1	F10	440.0	820.0	10.2
80	3"	100	4"	101.2	39.4	76.0	102.5	250.0	174.0	22.3	17.0	193.0	1.6	90.2	F10	780.0	1,250.0	15.8
100	4"	-	-	131.5	21.5	100.0	102.3	250.0	-	SQ22	17.0	240.0	1.6	115.5	F10	-	2,300.0	22.5

The information provided in this document is intended for informational purposes only and is subject to change without notice.



DN125 - DN250



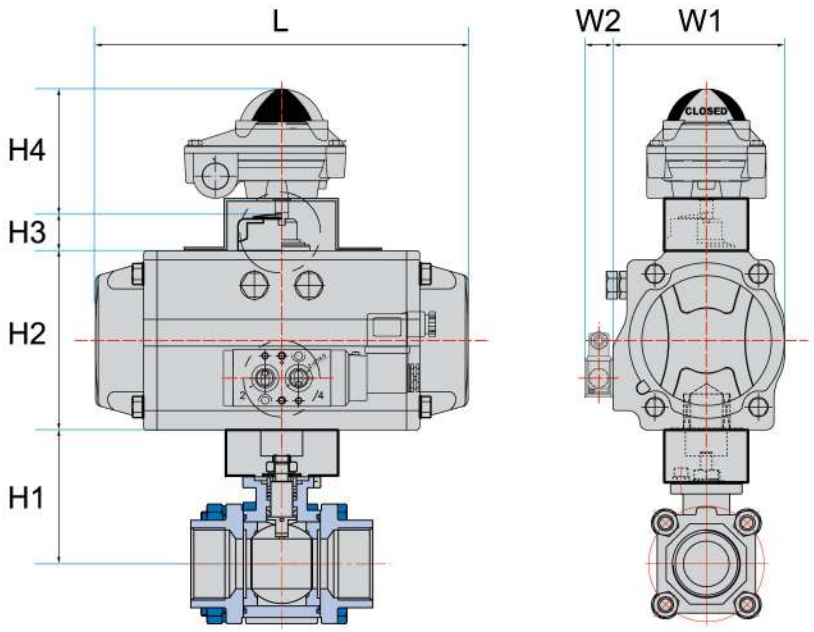


	Part Name	Material
1.	Snap Ring	SS304
2.	Gland Bolt	SS304
3.	Gland	A351 GR.CF8
4.	Gland Bush	SS304
5.	Packing	PTFE
6.	Stem Seal	25% Carbon Filled PTFE
7.	Ball	SS316/ SS304

	Part Name	Material
8.	Ball Seat	RPTFE / 50% SS Filled PTFE / 25% Carbon Filled PTFE / PEEK
9.	Body	SS316/ WCB
10.	Butt Weld End Cap	SS316/ WCB
11.	Bolt & Nut	B8/8 / B7/2h
12.	Gasket	PTFE
13.	S2 Stem	SS316
14.	Stop Plate	SS304

Dimensions(mm)

DN(mm)	Size	DN(mm)	Size	ØD		ØC		L		H	A	E	U	L		Weight(kg)	
FB		RB		FB	RB	FB	RB	FB	RB					FB	RB	FB	RB
-	-	125	5"	-	125.0	-	100.0	-	289.0	134.0	45.0	102.0	0.5	-	1,700	-	56.0
125	5"	150	6"	-	150.0	100.0	125.0	303.6	303.6	140.0	63.0	102.0	0.5	1,700	2,705	68.0	104.0
150	6"	200	8"	-	200.0	125.0	150.0	344.0	344.0	172.5	69.0	125.0	0.5	2,705	4,600	125.0	153.0
200	8"	250	10"	-	247.6	150.0	200.0	372.0	372.0	224.0	86.0	125.0	0.5	4,600	9,900	184.0	263.0
250	10"	-	-	-	-	200.0	-	520.0	-	267.0	86.0	125.0	0.5	9,900	-	316.0	-

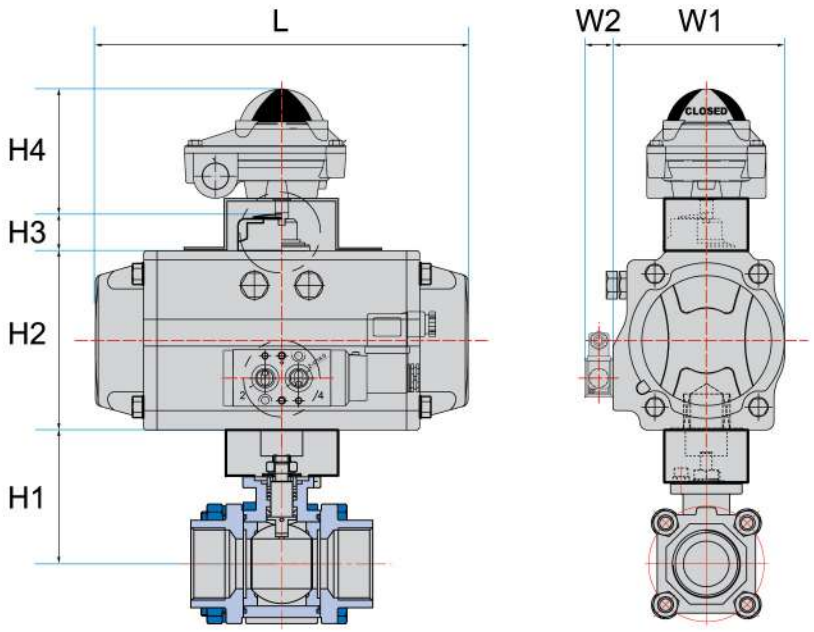


Pneumatic Actuator (Double Acting)

DN(mm)	Size	DN(mm)	Size	Torques	Actuator	H1	H2	H3	H4	W1	W2	L	Weight(kg)
FB		RB											
8	¼"	8	¼"	5.3	HP-50	66.7	73	20	90	72	29.5	144	3.01
10	⅜"	10	⅜"	5.3	HP-50	66.7	73	20	90	72	29.5	144	3.15
15	½"	15	½"	5.3	HP-50	77.1	73	20	90	72	29.5	144	3.38
20	¾"	20	¾"	7.8	HP-50	80.8	73	20	90	72	29.5	144	3.92
25	1"	25	1"	10.1	HP-50	91.6	73	20	90	72	29.5	144	4.56
32	1 ¼"	32	1 ¼"	13.1	HP-63	95.9	87	20	90	85	29.5	163	5.32
40	1 ½"	40	1 ½"	20.9	HP-66	106.2	87	20	90	85	29.5	202	7.19
50	2"	50	2"	29.7	HP-66	115.4	104	20	90	96	29.5	210	9.74
65	2 ½"	65	2 ½"	64.4	HP-88	157.4	116	20	90	108	29.5	247	14.61
80	3"	80	3"	84.5	HP-100	169.2	128	20	90	123	29.5	268	24.16
100	4"	100	4"	110.0	HP-115	199.5	146	20	90	141	29.5	316	30.86
125	5"	125	5"	375.0	HP-160	179.0	179	30	90	172	29.5	414	89.10
150	6"	150	6"	405.0	HP-160	203.0	196	30	90	190	29.5	467	146.10
200	8"	200	8"	510.0	HP-180	241.5	221	30	90	206	29.5	497	213.00
250	10"	250	10"	1,320.0	HP-211	290.0	256	30	90	236	29.5	504	369.00

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

*Compatible with various actuator types.

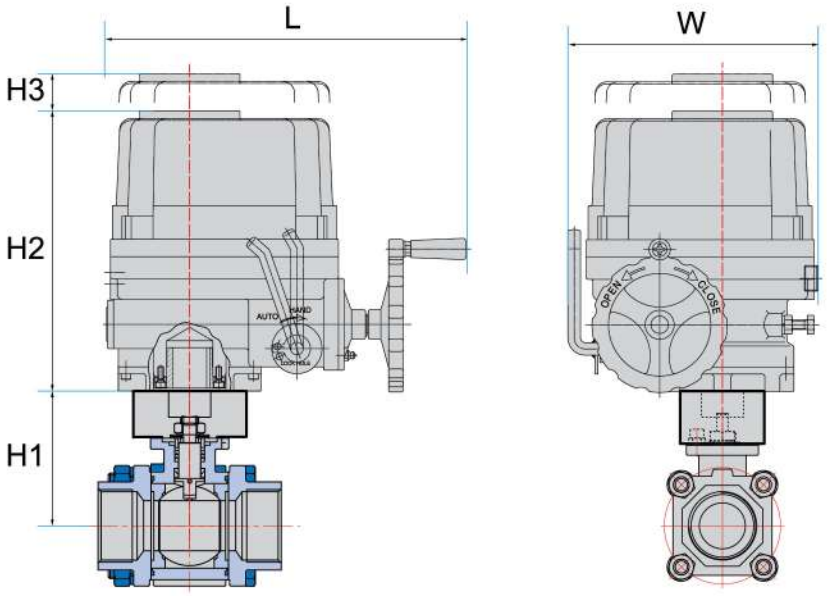


Pneumatic Actuator (Single Acting)

DN(mm)	Size	DN(mm)	Size	Torques	Actuator	H1	H2	H3	H4	W1	W2	L	Weight(kg)
FB		RB											
8	¼"	-	-	5.3	HP-63S (S11)	66.7	87	20	90	85	29.5	163	3.72
10	⅜"	15	½"	5.3	HP-63S (S11)	66.7	87	20	90	85	29.5	163	3.86
15	½"	20	¾"	5.3	HP-63S (S11)	77.1	87	20	90	85	29.5	163	4.09
20	¾"	25	1"	7.8	HP-66S (S11)	80.8	87	20	90	85	29.5	202	4.63
25	1"	32	1 ¼"	10.1	HP-75S (S11)	91.6	87	20	90	85	29.5	202	6.03
32	1 ¼"	40	1 ½"	13.1	HP-75S (S11)	95.9	104	20	90	96	29.5	210	6.79
40	1 ½"	50	2"	20.9	HP-88S (S11)	106.2	116	20	90	108	29.5	247	8.87
50	2"	65	2 ½"	29.7	HP-100S (S11)	115.4	128	20	90	123	29.5	268	12.26
65	2 ½"	80	3"	64.4	HP-125S (S11)	157.4	159	20	90	151	29.5	347	18.47
80	3"	100	4"	84.5	HP-145 (S11)	169.2	179	20	90	172	29.5	414	31.28
100	4"	125	5"	110.0	HP-145 (S11)	199.5	179	30	90	172	29.5	414	41.18
125	5"	150	6"	375.0	HP-200 (S11)	179.0	247	30	90	227	29.5	555	114.10
150	6"	200	8"	405.0	HP-211 (S11)	203.0	256	30	90	236	29.5	669	192.10
200	8"	250	10"	510.0	HP-212 (S11)	241.5	256	30	90	236	29.5	1,022	290.20
250	10"	-	-	1,320.0	-	290.0	-	-	-	-	-	-	-

The selection of the actuators are based on the below conditions:
- Air Supply Pressure : 5.5 bar
- Operating Pressure : 10 bar
- Safety Factor : 30%
- Air to Open, Spring to Close

*Compatible with various actuator types.



Electric Actuator

DN(mm)	Size	DN(mm)	Size	Torques	Actuator	H1	H2	H3	W	L	Weight(kg)
FB		RB									
8	¼"	-	-	5.3	HQ-004	66.7	124.3	-	88.6	166.6	3.05
10	⅜"	15	½"	5.3	HQ-004	66.7	124.3	-	88.6	166.6	3.19
15	½"	20	¾"	5.3	HQ-004	77.1	124.3	-	88.6	166.6	3.42
20	¾"	25	1"	7.8	HQ-004	80.8	124.3	-	88.6	166.6	3.96
25	1"	32	1 ¼"	10.1	HQ-004	91.6	124.3	-	88.6	166.6	4.60
32	1 ¼"	40	1 ½"	13.1	HQ-004	95.9	124.3	-	88.6	166.6	5.36
40	1 ½"	50	2"	20.9	HQ-006	106.2	137.0	-	88.6	126.0	6.71
50	2"	65	2 ½"	29.7	HQ-006	115.4	235.0	-	105.0	126.0	10.34
65	2 ½"	80	3"	64.4	HQ-015	157.4	235.0	-	105.0	338.0	14.61
80	3"	100	4"	84.5	HQ-020	169.2	268.0	160	229.0	338.0	34.76
100	4"	-	-	110.0	HQ-020	199.5	268.0	160	229.0	338.0	41.46

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

*Compatible with various actuator types.

REQUEST FOR QUOTE

STEP 1
Find the model series

STEP 2
Define the specification/ valve code

STEP 3
Fill up ordering sheet (back of the brochure) or Scan the QR code below

STEP 4
Submit your order via our website or contact your local partner

STEP 5
Prepare for confirmation and delivery

*For further assistance with placing your order, please contact your local partner.
A sales engineer will be assigned to assist you.

Valve Coding Sheet
80 Series

01 — 02 — 03 — 04 — 05 — 06

Design

Code	Material
F	Full Bore
R	Reduced Bore

Body Material

Code	Material
C1	WCB
S2	SS316

Seat Material

Code	Material
T	PTFE
M	25% Carbon Filled PTFE
G	50% SS Filled PTFE
P	Peek

Pressure Rating/Size

Code	Pressure	Size
A	PN100	½"
B	PN100	¾"
C	PN100	1"
D	PN100	1 ¼"
E	PN64	1 ½"
F	PN64	2"
G	PN64	2 ½"
H	PN50	3"
I	PN50	4"
J	PN16	5"
K	PN16	6"
L	PN16	8"
M	PN16	10"

Connection

Code	Material
B	BSP
N	NPT
S	Socket Weld
W	Butt Weld
X	Others (To be specified)

Operation

Code	Type
L	Lever
D	Double Acting
S	Pneumatic Actuated Single Acting
E	Pneumatic Actuated Electric Actuated

Your Valve Ordering Code:

80 — 01 02 03 04 05 06

Example:

80 Series - RS2TABL reduced bore.
Reduced Bore. SS316 Material. PTFE Seat. Pressure Rating of PN100, ½ inch size.
Connection Type of BSPT – Tappered. Lever Operating type.

*For special material or customisation, please refer to our sales engineer.

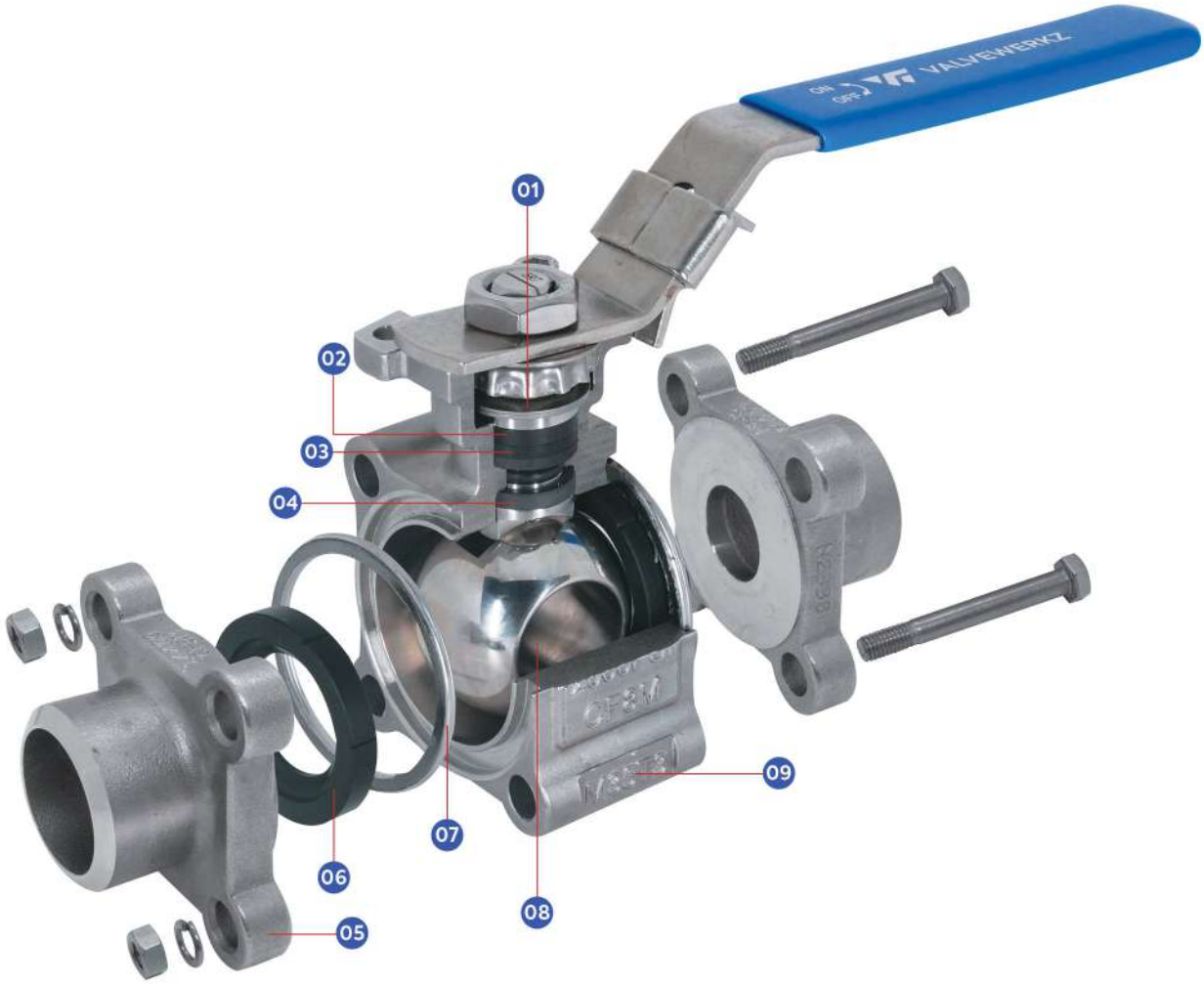
SCAN FOR ONLINE ORDERING FORM

Tel: +65 6909 1221
Email: enquiry@valvewerkz.com
Website: www.valvewerkz.com

81FS SERIES - HIGH PERFORMANCE

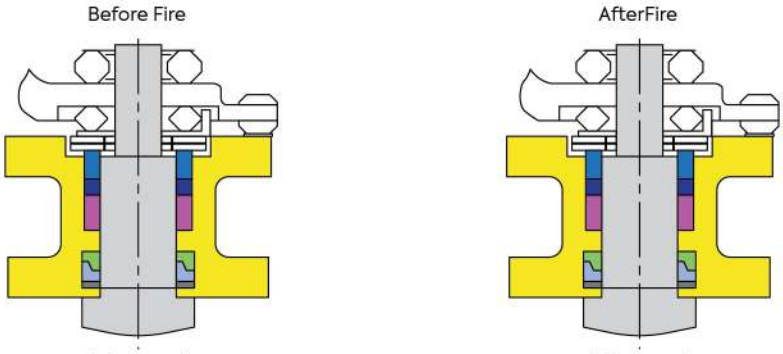
Fire Tested To API 607 4th Edition On ValveWerkz 81FS Soft-Seated 3pc Ball Valve

Plant fires are serious concern for soft-seated ball valve especially when the flammable fluids or dangerous gases are in service. The possible flammable fluid leakage during the fire consequently increases the fire magnitude and worsens the situation.



Part Name	Part Name
1. Belleville Washer	6. Seat
2. Bushing	7. Body Gasket
3. V-Ring Packing	8. Ball
4. Upper and Lower Stem Seal	9. Body
5. End Cap	

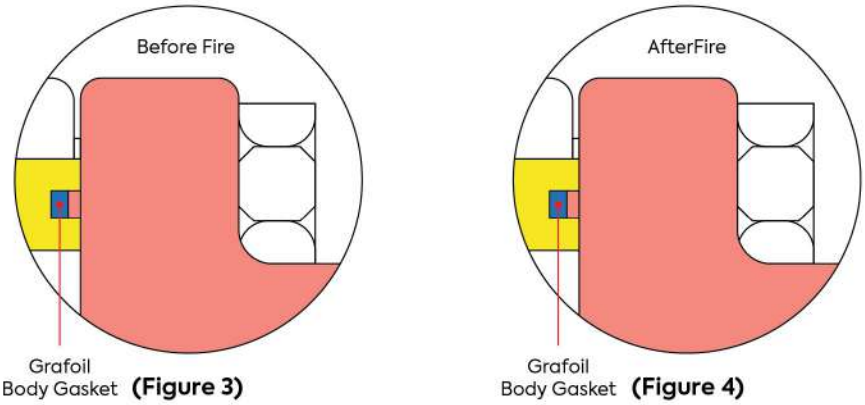
Grafoil Stem Seal



(Figure 1) **(Figure 2)**

ValveWerkz 81FS series ball valves are designed to be fire safe to minimize both external and internal fluid leakage after plant fires due to:

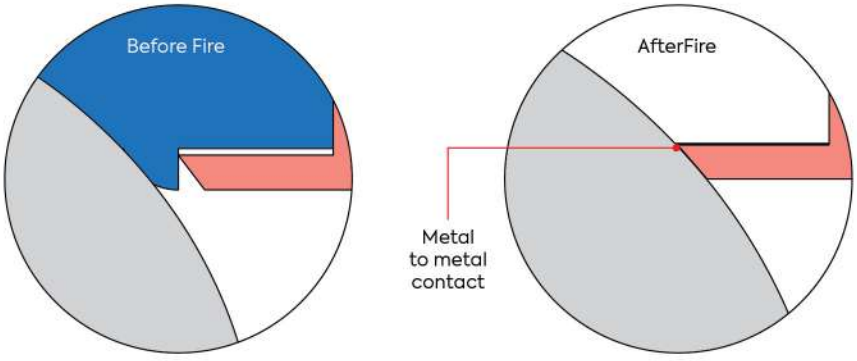
Contact between ball and end cap fire safe lip for through leakage prevention. During a fire, the soft seats are destroyed and the ball is free to move to downstream to form metal to metal contact between the ball and the end cap fire safe lip. This lip is integral part of the end connection which has very tight clearance with the ball. (See fig. #1 and #2)



(Figure 3) **(Figure 4)**

To maintain the integrity between end cap and body, our independent end cap bolts are screwed to body instead of using through bolts to attach the end caps and center section of the valve. It eliminates the end cap bolts from thermal expansion and contraction resulted from the fire and make fire resistance grafoil body gasket (encapsulated to body groove) to function as the way it should be and prevent the line fluid permeation and resultant leakage to external. (See fig. #3 and #4)

Stem packing, seal arrangement remain unaffected due to grafoil material for fire resistance. (See fig. #5 and #6)



(Figure 5) **(Figure 6)**

81FS Series

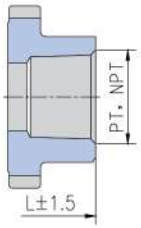
3-Piece Body Design

Full Bore / Reduced Bore	
Carbon Steel, SS304, SS316	
SS316	
CPTFE TFM4215 + 50% SS	TFM4215 PEEK
Threaded End (¼" - 4") Socket Weld End (¼" - 4") Butt Weld End (¼" - 10")	
Full Bore DN8 (¼") to DN100 (4") Reduced Bore DN15(½") to DN100 (4")	
Pneumatic Actuator (Single Acting / Double Acting) Electric Actuator	
Cv = 9.2 to Cv = 1020	
Full Bore 2000psi 1500psi 1000psi	 ¼" - 1" 1 ¼" - 2" 2 ½" - 4"
Reduced Bore 2000psi 1500psi 1000psi	 ½" - 1" 1 ¼" - 2" 2 ½" - 4"

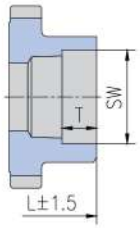
The 81FS series fire-safe ball valves have passed fire tests in accordance with API 607. These valves are ideal for transporting petroleum products, flammable, or hazardous materials, and are also widely applicable in general and corrosive environments. The materials of the 81FS series valves can meet the requirements of NACE MR0103 and, with special treatment, can be used in oxygen or high-vacuum environments. The valves comply with ANSI, API, BS, and MSS standards. The standard fire-safe valve features a carbon steel body and 316 stainless steel construction and other alloys. Available seat materials include CPTFE, TFM4215, TFM4215+50%SS, and PEEK, suitable for applications involving chemicals, petrochemicals, acids, alkalis, and steam.

Dimensions(mm)

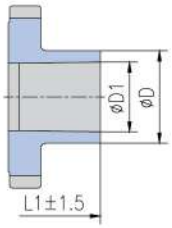
DN(mm)	Size	DN(mm)	Size	SW		T		BW		D1		L	L2	H	H1	H2	W	d	D
FB		RB		FB	RB	FB	RB	FB	RB	FB	RB								
8	¼"	-	-	14.6	-	9.5	-	14.0	-	11.5	-	75	24.5	73	42.5	8	134	12	54.0
10	⅜"	15	½"	19.0	22.2	9.5	9.5	17.2	21.7	12.6	15.0	75	24.5	73	42.5	8	134	12	54.0
15	½"	20	¾"	22.2	27.6	9.5	12.5	21.7	27.2	15.0	20.5	75	24.5	73	42.5	8	134	12	54.0
20	¾"	25	1"	27.6	34.3	12.5	12.5	27.2	34.0	20.5	25.7	85	31.5	78	46.5	8	134	12	62.5
25	1"	32	1 ¼"	34.3	43.1	12.5	12.5	34.0	42.7	25.7	34.4	105	41.5	96	58.5	12	165	15	71.0
32	1 ¼"	40	1 ½"	43.1	49.2	12.5	12.5	42.7	48.6	34.4	40.3	111	48.5	100	62.5	12	165	15	80.0
40	1 ½"	50	2"	49.2	61.7	12.5	16.0	48.6	60.5	40.3	51.3	127	56.3	125	78.0	15	215	22	94.0
50	2"	65	2 ½"	61.7	74.4	16.0	16.0	60.5	76.3	51.3	67.1	143	71.5	135	88.0	15	215	22	112.5
65	2 ½"	80	3"	74.4	90.3	16.0	16.0	76.3	88.9	67.1	80.0	185	86.5	148	109.0	19	300	25	139.0
80	3"	100	4"	90.3	115.7	16.0	19.0	88.9	116.0	80.0	103.1	205	100.0	155	117.5	19	370	25	162.0
100	4"	-	-	115.7	-	19.0	-	116.0	-	103.1	-	240	127.0	171	133.5	19	500	25	193.0



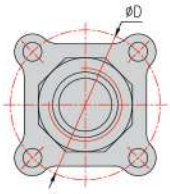
Threaded End



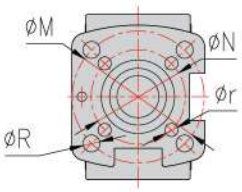
Socket Weld End



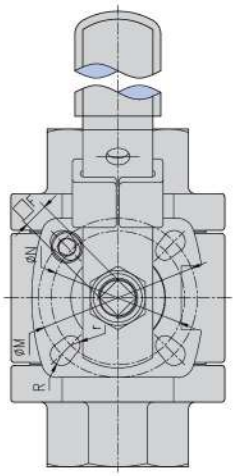
Butt Weld End

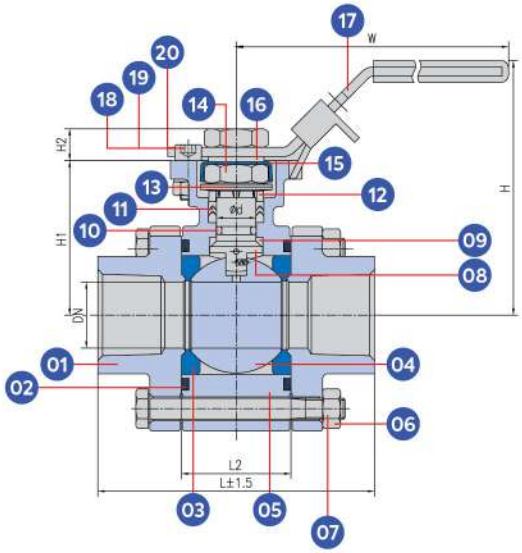


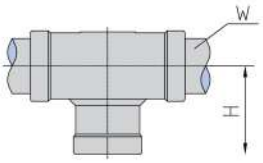
2 ½" - 4" Reduced



DN40F - DN100F
DN50R - DN100R



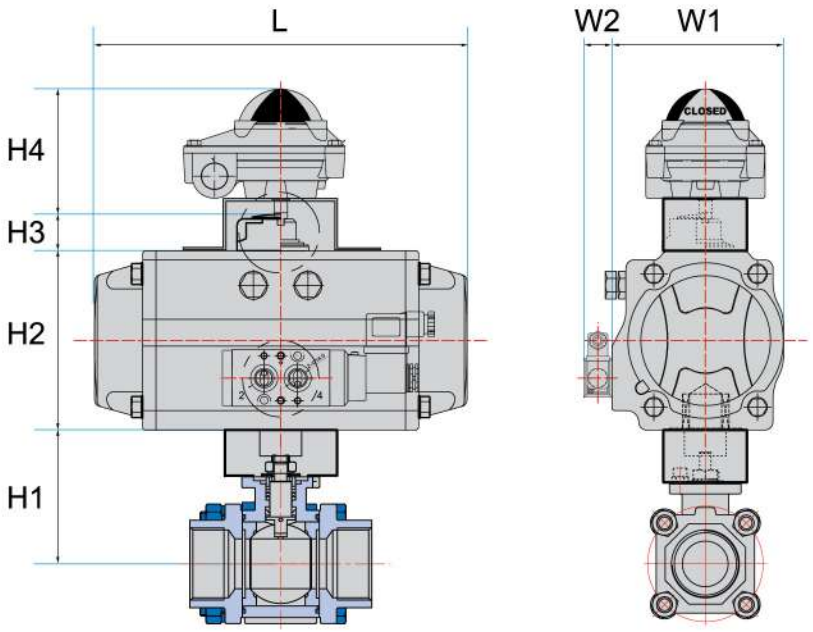




DN65F - DN100F
DN80R - DN100R

*Spare Parts available in Repair Kit. Please refer to page 60 for more details.

	Part Name	Material		
		Thread / SW | BW	Thread / SW | BW	Thread / SW | BW
1.	End Cap	A351 CF8 | A351 CF8	A351 CF8M | A351 CF3M	A216 WCB | A216 WCB
2.	Gasket	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite
3.	Seat	CPTFE	TFM4215	TFM4215 + 50%SS PEEK
4.	Ball	SS304	SS316	SS304
5.	Body	A351 CF8	A351 CF8M	A216 WCB
6.	Bolt	A2–70	A2–70	A2–70
7.	Nut	A2–70	A2–70	A2–70
8.	Stem	SS304	SS316	SS304
9.	Stem Washer	RPTFE	RPTFE	RPTFE
10.	O-Rings	Viton	Viton	Viton
11.	Packing	Graphite	Graphite	Graphite
12.	Gland	SS304	SS304	SS304
13.	Belleville Washer	SS301	SS301	SS301
14.	Nut	A2–70	A2–70	A2–70
15.	Stop Lock Cap	SS304	SS304	SS304
16.	Washer	SS304	SS304	SS304
17.	Handle	SS304	SS304	SS304
18.	Stop Bolt	A2–70	A2–70	A2–70
19.	Washer	SS304	SS304	SS304
20.	Nut	A2–70	A2–70	A2–70



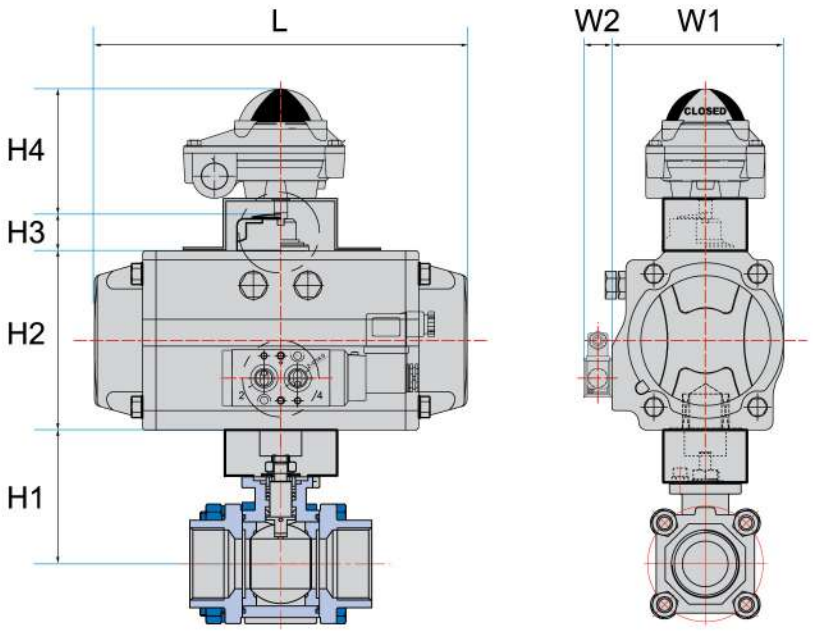
Pneumatic Actuator (Double Acting)

DN(mm)	Size	DN(mm)	Size	Torques	Actuator	H1	H2	H3	H4	W1	W2	L
FB		RB										
8	¼"	-	-	7.8	HP-050	42.5	73	20	90	72	29.5	144
10	⅜"	15	½"	7.8	HP-050	42.5	73	20	90	72	29.5	144
15	½"	20	¾"	13.0	HP-050	42.5	73	20	90	72	29.5	144
20	¾"	25	1"	16.9	HP-063	42.5	87	20	90	85	29.5	163
25	1"	32	1 ¼"	23.4	HP-066	58.5	87	20	90	85	29.5	202
32	1 ¼"	40	1 ½"	39.0	HP-066	62.5	87	20	90	85	29.5	202
40	1 ½"	50	2"	45.5	HP-075	78.0	104	20	90	96	29.5	210
50	2"	65	2 ½"	52.0	HP-088	88.0	116	20	90	108	29.5	247
65	2 ½"	80	3"	91.0	HP-100	109.0	128	20	90	123	29.5	268
80	3"	100	4"	123.5	HP-115	117.5	146	20	90	172	29.5	316
100	4"	-	-	182.0	HP-115	133.5	146	20	90	172	29.5	316

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

*Compatible with various actuator types.

Note: For fire safe ball valves, explosion proof limit switch and solenoid valve may be required.



Pneumatic Actuator (Single Acting)

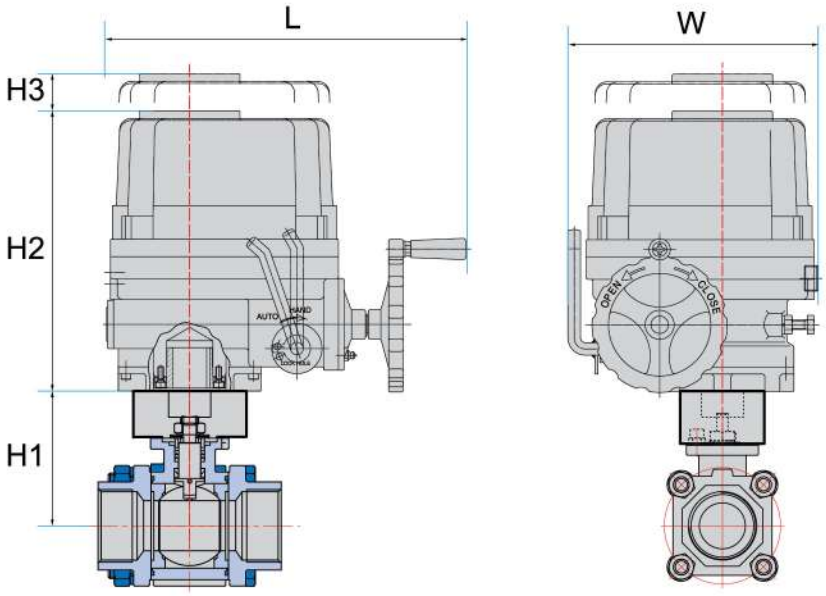
DN(mm)	Size	DN(mm)	Size	Torques	Actuator	H1	H2	H3	H4	W1	W2	L
FB		RB										
8	¼"	-	-	7.8	HP-63S	42.5	87	20	90	85	29.5	163
10	⅜"	15	½"	7.8	HP-63S	42.5	87	20	90	85	29.5	163
15	½"	20	¾"	13.0	HP-63S	42.5	87	20	90	85	29.5	163
20	¾"	25	1"	16.9	HP-75S	42.5	104	20	90	96	29.5	210
25	1"	32	1 ¼"	23.4	HP-100S	58.5	128	20	90	123	29.5	268
32	1 ¼"	40	1 ½"	39.0	HP-100S	62.5	128	20	90	123	29.5	268
40	1 ½"	50	2"	45.5	HP-100S	78.0	128	20	90	123	29.5	268
50	2"	65	2 ½"	52.0	HP-115S	88.0	146	20	90	141	29.5	316
65	2 ½"	80	3"	91.0	HP-125S	109.0	159	20	90	151	29.5	347
80	3"	100	4"	123.5	HP-145S	117.5	179	30	90	172	29.5	414
100	4"	-	-	182.0	HP-145S	133.5	179	30	90	172	29.5	414

The selection of the actuators are based on the below conditions:

- Air Supply Pressure : 5.5 bar
- Operating Pressure : 10 bar
- Safety Factor : 30%
- Seat : RPTFE
- Air to Open, Spring to Close

*Compatible with various actuator types.

Note: For fire safe ball valves, explosion proof limit switch and solenoid valve may be required.



Electric Actuator

DN(mm)	Size	DN(mm)	Size	Torques	Actuator	H1	H2	H3	W	L
FB		RB								
8	¼"	-	-	5.3	HQ-004	42.5	124	-	89	117
10	⅜"	15	½"	5.3	HQ-004	42.5	124	-	89	117
15	½"	20	¾"	5.3	HQ-004	42.5	124	-	89	117
20	¾"	25	1"	7.8	HQ-004	42.5	124	-	89	117
25	1"	32	1 ¼"	10.1	HQ-004	58.5	124	-	89	117
32	1 ¼"	40	1 ½"	13.1	HQ-006	62.5	139	-	105	126
40	1 ½"	50	2"	20.9	HQ-006	78.0	139	-	105	126
50	2"	65	2 ½"	29.7	HQ-006	88.0	139	-	105	126
65	2 ½"	80	3"	64.4	HQ-010	109.0	235	120	170	258
80	3"	100	4"	84.5	HQ-015	117.5	268	160	229	338
100	4"	-	-	110.0	HQ-020	133.5	268	160	229	338

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

*Compatible with various actuator types.

Note: For fire safe ball valves, explosion proof limit switch and solenoid valve may be required.

REQUEST FOR QUOTE

STEP 1
Find the model series

STEP 2
Define the specification/ valve code

STEP 3
Fill up ordering sheet (back of the brochure) or Scan the QR code below

STEP 4
Submit your order via our website or contact your local partner

STEP 5
Prepare for confirmation and delivery

*For further assistance with placing your order, please contact your local partner.
A sales engineer will be assigned to assist you.

Valve Coding Sheet
81FS Series

01 — 02 — 03 — 04 — 05

Body Material

Code	Material
C1	WCB
S2	SS316

Seat Material

Code	Material
T	PTFE
M	25% Carbon Filled PTFE
G	50% SS Filled PTFE
P	Peek

Pressure Rating/Size

Code	Pressure	Size
A	PN100	½"
B	PN100	¾"
C	PN100	1"
D	PN100	1 ¼"
E	PN64	1 ½"
F	PN64	2"
G	PN64	2 ½"
H	PN50	3"
I	PN50	4"
J	PN16	5"
K	PN16	6"
L	PN16	8"
M	PN16	10"

Connection

Code	Material
B	BSP
N	NPT
S	Socket Weld
W	Butt Weld
X	Others (To be specified)

Operation

Code	Type
L	Lever
D	Double Acting
S	Pneumatic Actuated Single Acting
E	Pneumatic Actuated Electric Actuated

Your Valve Ordering Code:

81FS — 01 02 03 04 05

Example:

81FS Series - S2TABL reduced bore.
SS316 Material. PTFE Seat. Pressure Rating of PN100, ½ inch size. Connection Type of BSPT – Tappered. Lever Operating type.

*For special material or customisation, please refer to our sales engineer.

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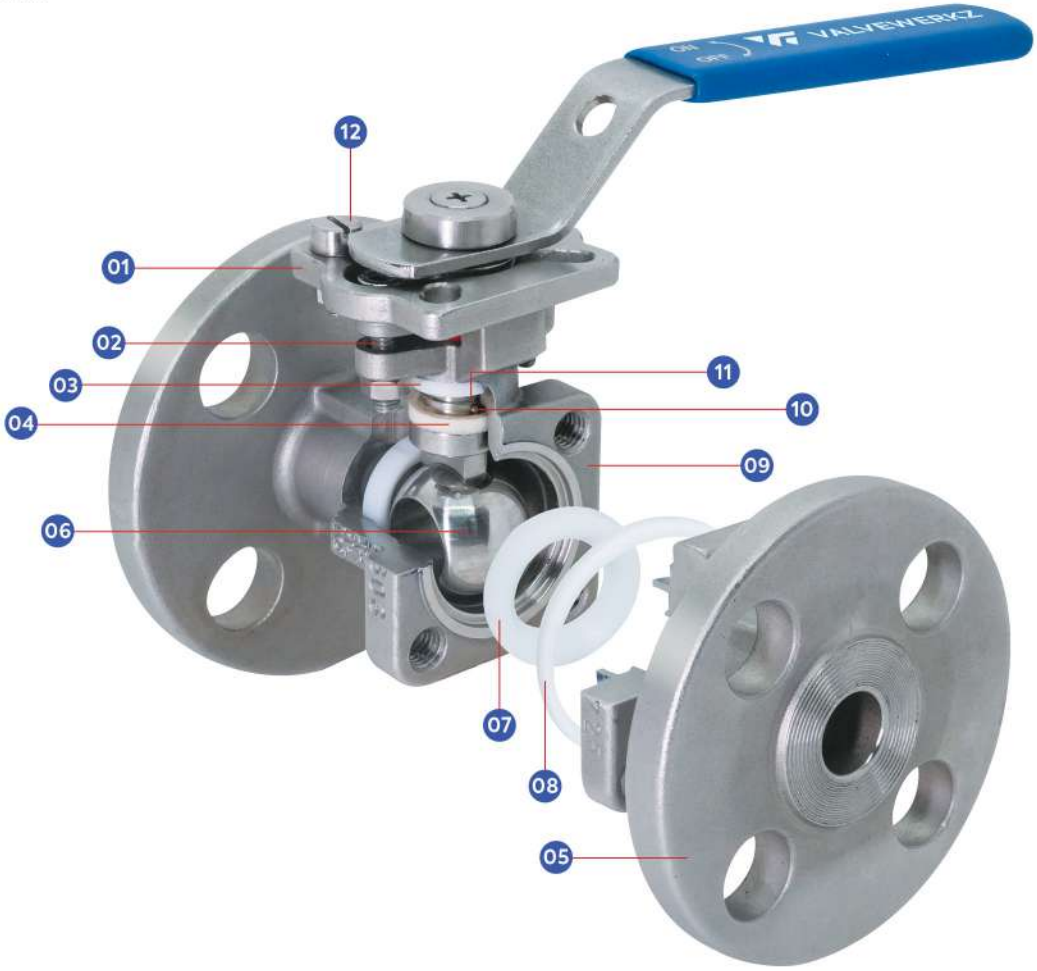
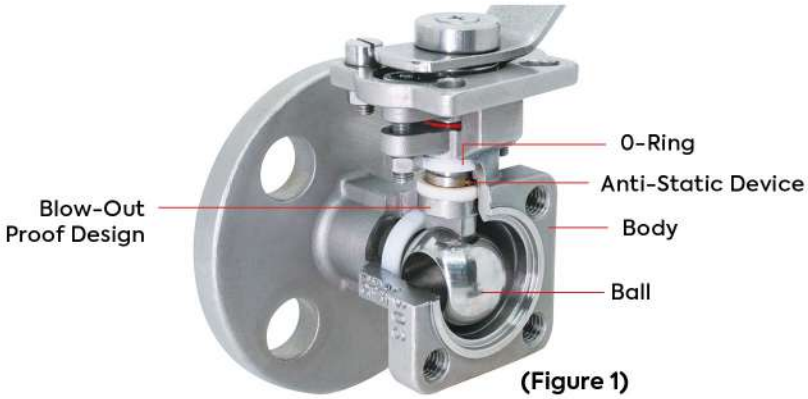
Website: www.valvewerkz.com

203 SERIES - FLANGE BALL VALVE

The pressing plate-type ball valve consists of a body, end cap, and a ball. The ball is connected to the stem and rotates 90 degrees to enable on-off functionality. It is primarily used for on-off control and emergency shut-off in pipelines. When equipped with a V-port ball, it can also regulate flow for precise adjustment.



Part Name	Part Name	Part Name
1. ISO5211 Direct Mounting Pad	5. End Cap	9. Body
2. Adjusting Bolt	6. Ball	10. Anti-Static Device
3. V-Ring Packing	7. Seat(Pressure Relief Groove)	11. Belleville Washer
4. O-Ring	8. Body Gasket	12. Stop Lock Block



(Figure 1)

1. **Blow-Out Prevention**
   The stem features an integral shoulder design to prevent blow-out and leakage. (Figure 1)
2. **Anti-Static Safety**
   An anti-static design helps to eliminate safety risks caused by static electricity. (Figure 1)

(Figure 2)

3. **Effective Stem Sealing**
   The O-ring on the stem provides reliable self-sealing performance to contain the medium. (Figure 2)
4. **Misoperation Prevention**
   A dedicated limit device is included to prevent accidental or incorrect valve operation. (Figure 2)
5. **Fire-Safe Seal Design**
   The metal-to-metal sealing structure prevents external leakage and offers flame resistance for enhanced safety.

The contact between the ball and the valve body. **(Figure 3)**

Note:
The main valve body is sealed with non-leak PTFE gaskets.

For fire-safe applications, flexible graphite may be used as a secondary seal to enhance fire resistance.

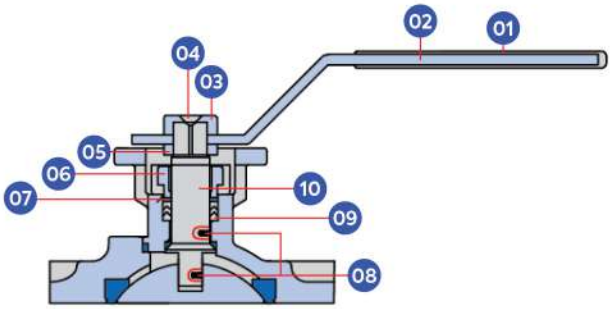
6. **Dual Stem Sealing**
   Designed to meet TA-LUFT emission control standards, providing enhanced sealing reliability. (Figure 3)
7. **Self-Adjusting Belleville Washers**
   Two pre-loaded Belleville washers reduce the need for re-tightening in low-leakage applications by maintaining consistent packing compression. (Figure 1)
8. **Adjustable Hidden Gland**
   Stem packing can be tightened to stop the leakage from stem without removing the actuator from the valve. (Figure 2)

203 Series

2-Piece Body Design

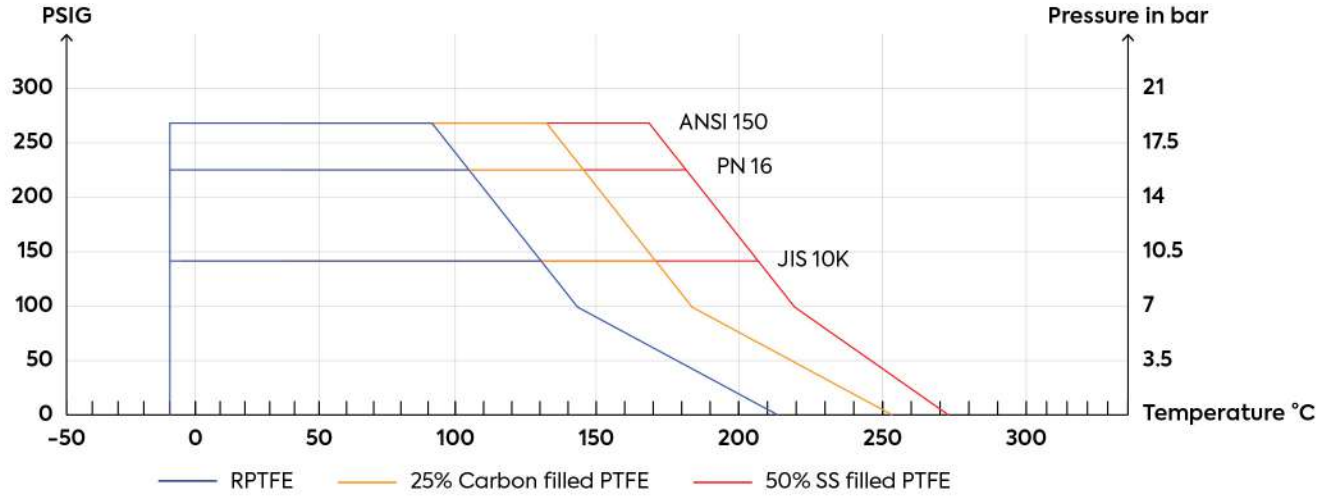
Full Bore
Sizes ¼" - 6"
WCB / SS304 / SS316
203AU ANSI (ANSI 150 / ANSI 300)
203AD DIN (PN16 / PN40)
203AJ JIS (JIS-10K / JIS-20K)
Superior Live Loaded Packing System
ISO 5211 Direct Mounting Pad
Blowout-Proof Stem
Dual Anti-Static Device (Ball-Stem-Body)
Standard Seat: 25% Carbon Filled PTFE (max. 250°C)
Seat Options: RPTFE (max. 210°C) 50% SS Filled PTFE (max. 270°C)
Patent Pending Product
Fire Safe Design

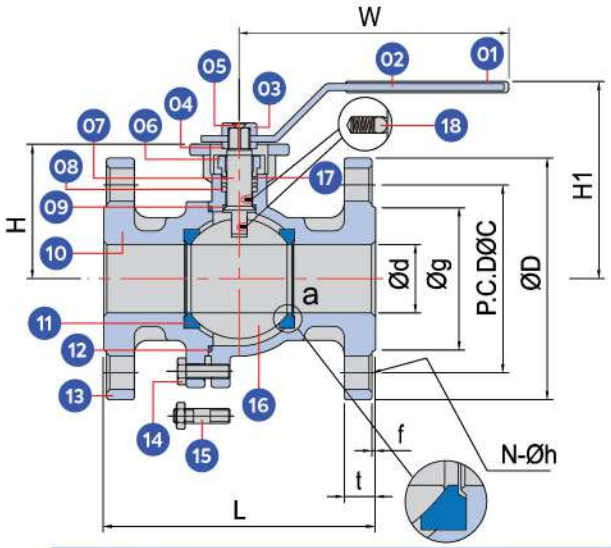
ValveWerkz 203 series flanged ball valves feature a split body design. The high-quality investment castings feature a fully machined bore. The superior llive-loaded packing system (includes) Belleville washers, "V" ring packing, and a unique primary pyramidal stem seal. This advanced sealing system provides protection against stem leaks experienced by ordinary ball valves.

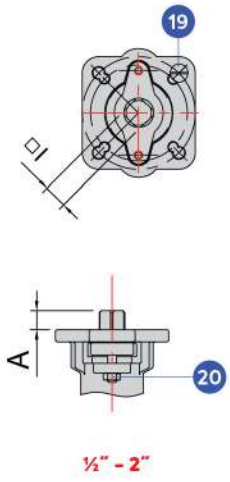


	Part Name		
1.	Handle Sleeve	6.	Gland
2.	Handle	7.	Bushing
3.	Stem Washer	8.	Anti-Static Device
4.	Handle Bolt	9.	V-Ring Packing
5.	Handle Washer	10.	Stem

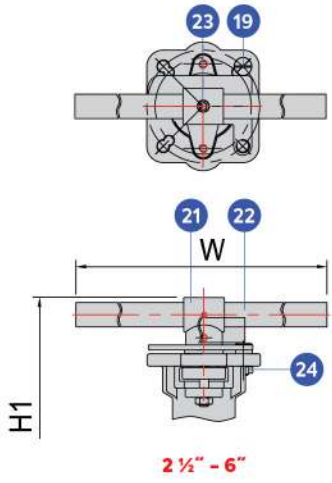
Pressure / Temperature Ratings







½" - 2"



2 ½" - 6"

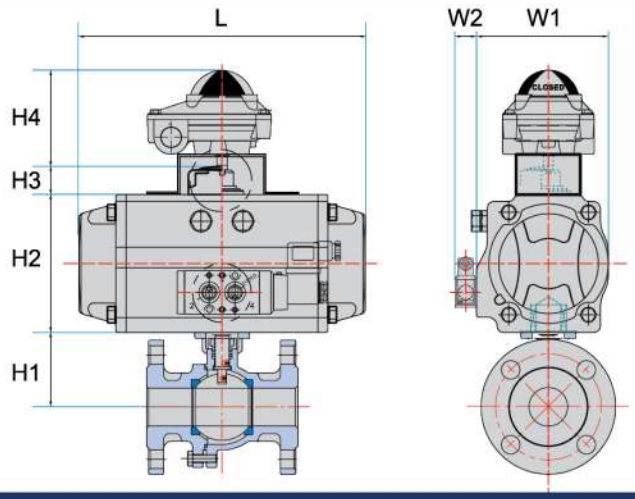
	Part Name	Material
1.	Handle Sleeve (½" - 2")	VINYL
2.	Handle (½" - 2")	SUS304
3.	Stem Washer (½" - 2")	SUS304
4.	Handle Washer (½" - 2")	SUS304
5.	Handle Bolt	SUS304
6.	Gland	SUS304
7.	Stem	SUS316
8.	V-Ring Packing	50% SS/50%
9.	Stem Seal	RPTFE
10.	Body	WCB / CF8 / CF8M
11.	Body Seat	PTFE
12.	Packing	PTFE

	Part Name	Material
13.	End Cap	WCB / SS304 / SS316
14.	Bolt (½" - 2")	SUS304
15.	Stud & Nut (2 ½" - 6")	SUS304
16.	Ball	SS304 / SS316
17.	Bushing	SUS304
18.	Anti-Static Device	Stainless Steel
19.	Stop Pin	SUS304
20.	Stud & Nut	SUS304
21.	Handle Adapter (2 ½" - 6")	SUS304
22.	Pipe Handle (2 ½" - 6")	SUS304
23.	Handle Bolt (½" - 2")	SUS304
24.	Stop Pin Nut	SUS304

*Spare Parts available in Repair Kit. Please refer to page 60 for more details.

Dimensions(mm)

Size(Inch)		A	W	H	H1	□I	L	Ød	Øg	ØC	ØD	t	f	Øh	N	ISO 5211	CV	Weight(kg)
½"	10K PN16 150LB	8	130	50.5	79.5	9	108 115 108	15	51 45 35	70 65 60.3	95 95 89	12.5 16 11.2	1 2 1.6	15 14 16	4	F03 F04	15	1.87
¾"	10K PN16 150LB	8	130	53.8	82.8	9	117 120 117	20	56 58 42	75 75 69.9	100 105 98.4	14.5 18 12.7	1 2 1.6	15 14 16	4	F03 F04	45	2.33
1"	10K PN16 150LB	9.5	168	64.5	96.5	11	127 125 127	25	67 68 50.8	90 85 79.4	125 115 108	14.3 18 11.5	1 2 1.6	19 14 16	4	F04 F05	85	3.68
1½"	10K PN16 150LB	9.5	168	70	102	11	140 130 140	32	76 77 64	100 100 88.9	135 140 117	16 18 13	2 3 1.6	19 18 16	4	F04 F05	150	4.76
1 ½"	10K PN16 150LB	14	221	77	110	14	165 140 165	40	81 87 73	105 110 98.5	140 150 127	16.5 18 14.5	2 3 1.6	19 18 16	4	F05 F07	275	5.91
2"	10K PN16 150LB	14	221	85.3	118	14	178 150 178	50	96 102 92	120 125 120.7	155 165 152.4	16.5 18 15.9	2 3 1.6	19 18 19	4	F05 F07	460	7.82
2 ½"	10K PN16 150LB	17	495	111.5	172	17	190 170 190	65	116 122 104.8	140 145 139.7	175 185 177.8	18.7 18 17.6	2 3 1.6	19 18 19	4	F07 F10	700	13.97
3"	10K PN16 150LB	17	495	120.5	181	17	203 180 203	80	126 137 127	150 160 152.4	185 200 190.5	19 20 19.5	2 3 1.6	19 18 19	4	F07 F10	1100	17.03
4"	10K PN16 150LB	22	595	145	206	22	229 190 229	100	151 157 157.2	175 180 190.5	210 220 228.6	19 20 23.9	2 3 1.6	19 18 19	8 8 4	F10	2200	25.27
5"	10K PN16 150LB	27	600	178.5	250	27	365 325 356	125	182.7 187 185.7	210 210 125.9	250 250 254	20 22 23.9	2 3 1.6	23 18 22.4	8	F12 F14	3500	49.67
6"	10K PN16 150LB	27	800	196	267	27	394 350 394	150	215 212 215.9	240 240 214.3	280 285 279	22 22 25.4	2 3 1.6	23 22 22.4	8	F12 F14	5150	70.61



Pneumatic Actuator (Double Acting)

DN(mm)	Size(Inch)	Torques	Actuator	H1	H2	H3	H4	W1	W2	L	Weight(kg)
15	½"	3.3	HP-35	50.5	49	20	90	54	29.5	126	3.49
20	¾"	5.4	HP-50	58.3	73	20	90	72	29.5	144	3.95
25	1"	6.6	HP-50	58.3	73	20	90	72	29.5	144	5.92
32	1 ¼"	13.2	HP-63	77	85	20	90	85	29.5	159	7
40	1 ½"	16.4	HP-63	77	85	20	90	85	29.5	159	7
50	2"	19.6	HP-63	85.3	87	20	90	85	29.5	163	10.58
65	2 ½"	30	HP-75	104	104	20	90	114	29.5	190	17.45
80	3"	36	HP-75	104	104	20	90	114	29.5	190	22.41
100	4"	87	HP-115	145	146	20	90	141	29.5	316	32.35
125	5"	120	HP-145	177.6	178	20	90	172	29.5	414	59.75
150	6"	150	HP-145	196	179	20	90	172	29.5	414	80.69

The selection of the actuators are based on the below conditions:

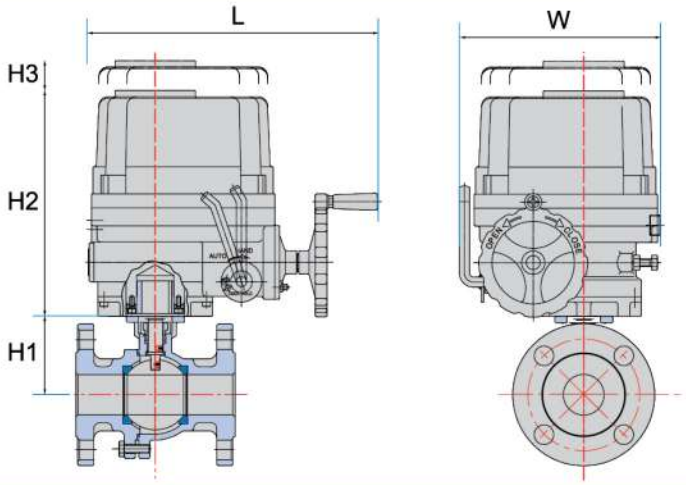
- Air Supply Pressure : 5.5 bar
- Operating Pressure : 10 bar
- Safety Factor : 30%

Pneumatic Actuator (Single Acting)

DN(mm)	Size(Inch)	Torques	Actuator	H1	H2	H3	H4	W1	W2	L	Weight(kg)
15	½"	3.3	HP-50S (S11)	50.5	73	20	90	72	29.5	144	4.82
20	¾"	5.4	HP-63S (S11)	58.3	87	20	90	85	29.5	163	5.28
25	1"	6.6	HP-63S (S11)	64.5	87	20	90	85	29.5	163	6.63
32	1 ¼"	13.2	HP-75S (S11)	70	104	20	90	96	29.5	180	9.2
40	1 ½"	16.4	HP-75S (S11)	77	104	20	90	96	29.5	180	10.35
50	2"	19.6	HP-88S (S11)	85.3	116	20	90	108	29.5	247	13.82
65	2 ½"	30	HP-100S (S11)	110	128	20	90	128	29.5	268	21.91
80	3"	36	HP-100S (S11)	120.5	128	20	90	123	29.5	268	27.45
100	4"	87	HP-145S (S11)	145	179	30	90	172	29.5	414	42.67
125	5"	144	HP-160S (S11)	177.5	196	30	90	190	29.5	467	70.28
150	6"	150	HP-160S (S11)	196	196	30	90	190	29.5	467	97.64

The selection of the actuators are based on the below conditions:

- Air Supply Pressure : 5.5 bar
- Operating Pressure : 10 bar
- Safety Factor : 30%
- Air to Open, Spring to Close



Electric Actuator

DN(mm)	Size(Inch)	Torques	Actuator	H1	H2	H3	W	L	Weight(kg)
15	½"	3.3	HQ-004	50.5	124.3	N/A	88.6	166.6	4.15
20	¾"	5.4	HQ-004	53.8	124.3	N/A	88.6	166.6	4.61
25	1"	6.6	HQ-004	64.5	124.3	N/A	88.6	166.5	5.92
32	1 ¼"	13.2	HQ-004	70	124.3	N/A	88.6	166.6	7.04
40	1 ½"	16.4	HQ-004	77	124.3	N/A	88.6	166.6	8.19
50	2"	19.6	HQ-004	85.3	124.3	N/A	88.6	166.6	10.5
65	2 ½"	32.1	HQ-006	111	137	N/A	105	168	16.68
80	3"	36	HQ-006	120.5	137	N/A	105	126	21.11
100	4"	87	HQ-015	145	268	160	160	338	42.95
125	5"	144	HQ-030	177.5	304	180	180	368	70.75
150	6"	150	HQ-030	196	304	180	180	368	93.69

The selection of the actuators are based on the below conditions:

- Air Supply Pressure : 5.5 bar
- Operating Pressure : 10 bar
- Safety Factor : 30%

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STEP 1
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Fill up ordering sheet (back of the brochure) or Scan the QR code below

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A sales engineer will be assigned to assist you.

Valve Coding Sheet
203 Series

01	—	02	—	03	—	04	—	05	—	06
								F		

Body Material

Code	Material
C1	WCB
S1	SS304
S2	SS316

Seat Material

Code	Material
T	RPTFE
M	25% Carbon Filled PTFE
G	50% SS Filled PTFE

Rating

Code	Rating
A	ANSI 150
B	ANSI 300
C	PN16
D	PN40
E	JIS-10K
F	JIS-20K

Size

Code	Size
A	½"
B	¾"
C	1"
D	1 ¼"
E	1 ½"
F	2"
G	2 ½"
H	3"
I	4"
J	5"
K	6"
L	8"

Connection

Code	Material
F	Flanged End

Operation

Code	Type
L	Lever
D	Double Acting Pneumatic Actuated
S	Single Acting Pneumatic Actuated
E	Electric Actuated

Your Valve Ordering Code:

203	—	01	02	03	04	05	06
						F	

Example:

203 Series - S2TABFL full bore.
SS316 Material. RPTFE Seat. Pressure Rating of ANSI 150, ¾ inch size. Flanged End Connection.
Lever Operating type.

*For special material or customisation, please refer to our sales engineer.

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Website: www.valvewerkz.com

Repair Kits

Repair Kits Available

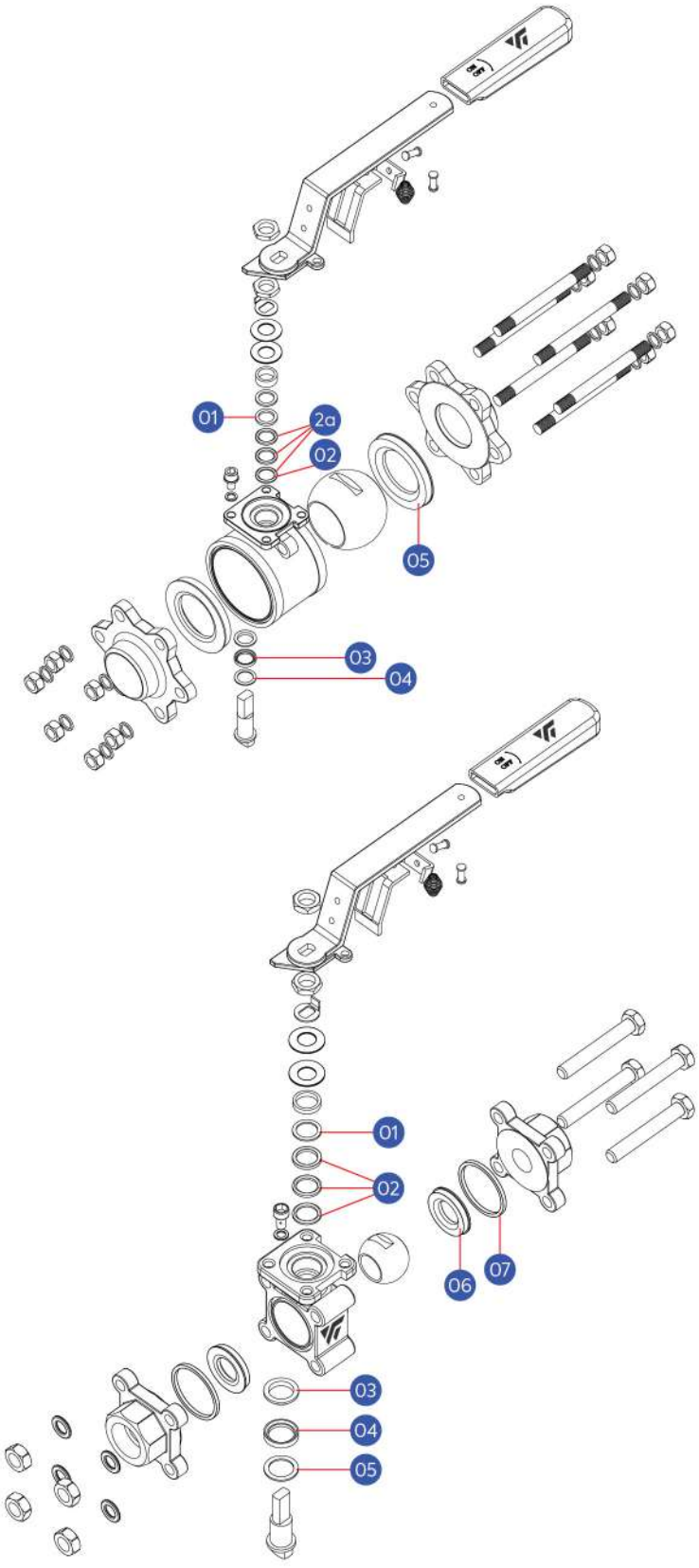
Extend the life of your valves with ready-to-order repair kits. Swap out critical parts like bushings, seals, and seats on-site without replacing the whole valve. It's faster, more economical, and keeps your operations moving.

50 & 90 Series

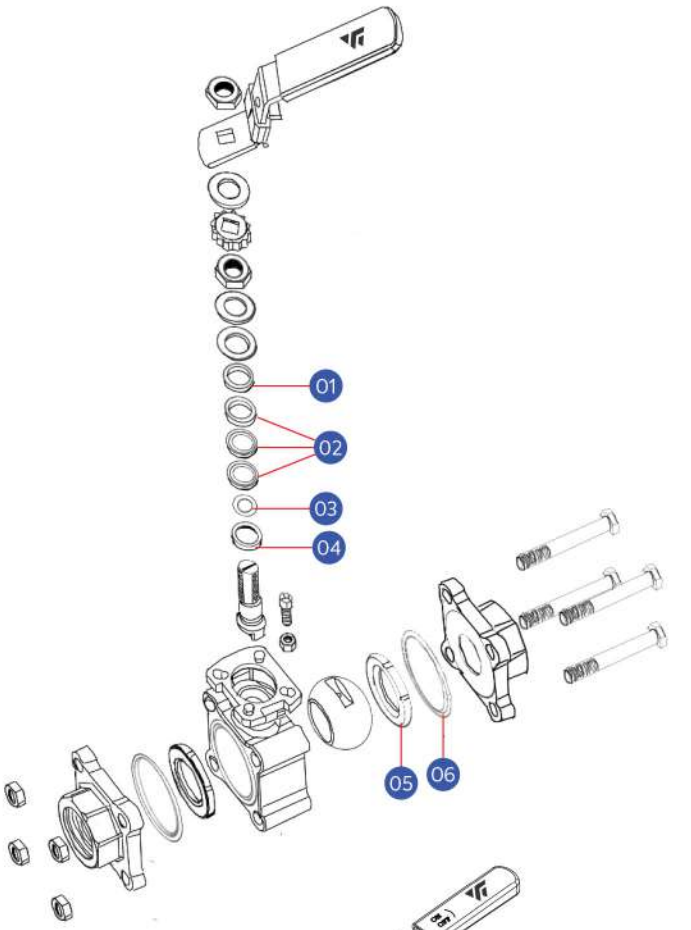
	Part Name	Qty
	50 Series	
1.	Bushing	-
2.	Packing	1
3.	Stem Seal	1
4.	O-Ring Packing	1
5.	Seat	2
	90 Series	
1.	Bushing	1
2a.	V-Ring Packing	1 Set (3 pcs)
3.	Stem Seal	1
4.	O-Ring Packing	1
5.	Seat	2

80 Series

	Part Name	Qty
1.	Bushing	1
2.	V-Ring Packing	1 Set (3 pcs)
3.	Upper Stem Seal	1
4.	Compress Ring	1
5.	Stem Seal	1
6.	Seat	2
7.	Body Gasket	2

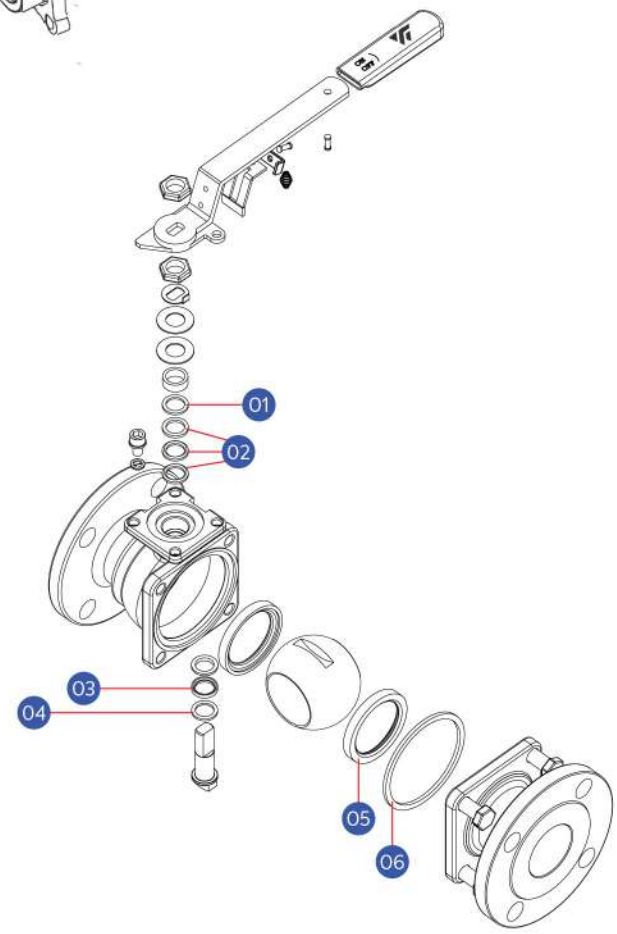


Repair Kits



81FS Series

	Part Name	Qty
1.	Compress Ring	1
2.	V-Ring Packing	1 Set (3 pcs)
3.	O-Ring	1
4.	Stem Washer	1
5.	Seat	2
6.	Body Gasket	2



203 Series

	Part Name	Qty
1.	Bushing	1
2.	V-Ring Packing	1 Set (3 pcs)
3.	Compress Ring	1
4.	Stem Seal	1
5.	Seat	2
6.	Body Gasket	1