

DAWSONS-TECH[®]

OVER 35 YEARS OF EXPERIENCE

INSTRUMENTATION BALL VALVES



***Most Cost Effective, World Class Quality
Flow Control Components for Wide Range
of Industries and Applications***

THE COMPANY

DAWSONS-TECH is an ISO 9001:2015 certified manufacturing company offers wide range of **Consistent and Reliable World Class Quality Flow Control Components** used in Fluid / Gas Control systems in a wide range of Industries.

MANUFACTURING :

DAWSONS-TECH established its comprehensive state of art manufacturing and testing facility installing various CNC Turning Centre and CNC Turnmill Centre, Vertical Machining Centre, etc. with the highly motivated and dedicated team of employees in place. This facilitate us to design and manufacture our product range under stringent quality checks and measurements that ensures **"A TOTAL CUSTOMER SATISFACTIONS WITH ZERO DEFECT PRODUCTS"**.

QUALITY :

DAWSONS-TECH persues not only performance of its products but also ensures **"TOTAL QUALITY CONTROL MANAGEMENT SYSTEMS IN ACCORDANCE TO ISO 9001:2015"** which is achieved by alerting and educating each and every employee, the importance of quality and by implementing the quality control procedures at every stage of production to final inspection from incoming raw material to finish products.

		
OUR CAPABILITIES	CERTIFICATIONS	DEMAND IN INDUSTRIES
<ul style="list-style-type: none"> • Over 35 Years of Experience • Excellent Technical Knowledge • Latest Design Equipment's & Software • Modern Manufacturing Facilities • Highly Motivated Team of Employees • Excellent Inspection Facilities • Product Performance Testing Facilities 	<ul style="list-style-type: none"> • ISO 9001-2015 • PED 2014/68/EU • ASTM F1387-19 • MSS SP-99-2016a • Helium Leak Test • Hydro Static Proof Test • Pneumatic Proof Test 	<ul style="list-style-type: none"> • Original Equipment Manufacturers • Chemical & Petrochemical • Oil & Gas • Power • Compressed Natural Gas (CNG) • Pharmaceutical • Semiconductor
	B E N E F I T S <ul style="list-style-type: none"> • High Quality • Proven Design for Leak Free Connections • Effective Operations 	<ul style="list-style-type: none"> • High Efficiency • Technical Expertise • Prompt Reply • Maximum Flexibility • Maximum Safety in Operation • Substantial Cost Saving

RESEARCH & DEVELOPMENT :

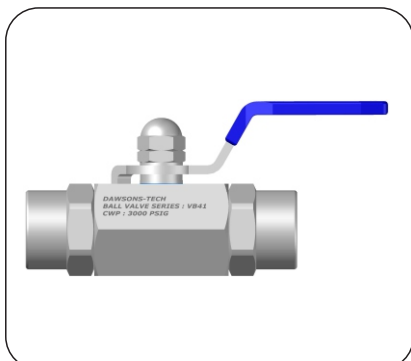
With our long experience, expertise and continues Research & Development with incorporation of advanced technology and high-tech cutting-edge machineries, **DAWSONS-TECH** is committed to constant upgradation and expand its product range to meet the requirements of its customer to their entire satisfaction at every time.

CUSTOMER SATISFACTION :

We strive to achieve total customer satisfaction and continuously work to set higher goals to provide the reliable quality, timely delivery of our products and prompt services in the best interest of our customers with very competitive price.

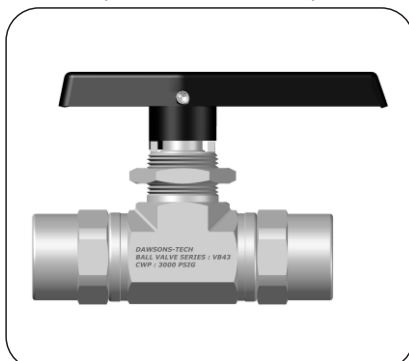
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Two Way Ball Valve
Series : VB41



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Two Way Ball Valve Series : VB43
(Panel Mountable)



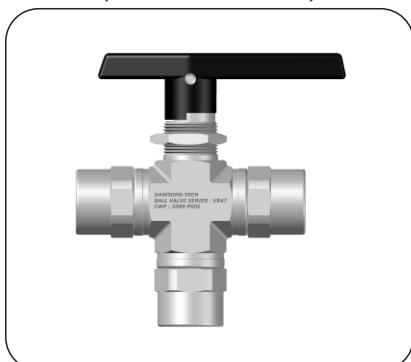
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Angle Ball Valve Series : VB45
(Panel Mountable)



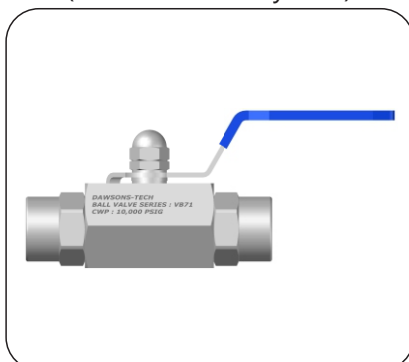
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Three Way Ball Valve Series : VB47
(Panel Mountable)



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Two Way Ball Valve Series : VB71
(With Live Load System)



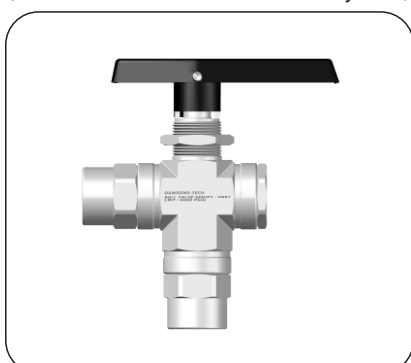
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Two Way Ball Valve Series : VB81
(Panel Mountable with Live Load System)



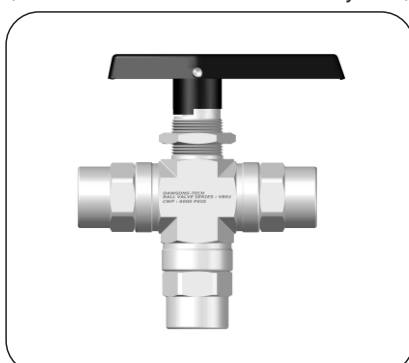
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Angle Ball Valve Series : VB87
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(Panel Mountable with Live Load System)



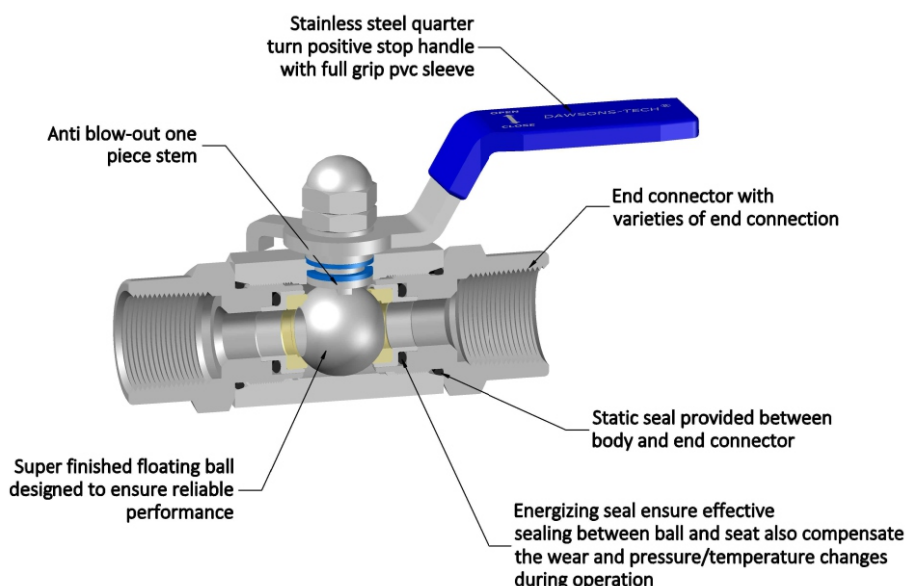
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DAWSONS-TECH Ball Valves Series : VB41 Three Piece bi-directional Flow Ball Valves offers medium pressure rating UPTO 3000 PSIG (206 Bar).

'O' Ring energized PTFE / PEEK Ball Seat ensure 100% bubble tight shut off and continuous repeatable performance.

Features / Benefits :

- Available in Material SS316
- Material Traceable to certified material test report
- Three-piece body design, on / off service with two way pattern
- Low torque actuation Bi-directional flow
- Floating Ball design, 'O' Ring energizing Ball Seat
- Quarter turn positive stop handle
- Every Valve is pressure tested



Product Range and Operating Parameters :

Pressure Rating	: UPTO 3000 PSIG (206 Bar) at CWP with PTFE Seat and Fluorocarbon / PTFE 'O' Ring
Temperature Rating	: -54°C to 180°C (depending on 'O' Ring Material)
Tube End Connection	: Fractional : 1/4" to 1" Tube OD Metric : 6mm to 25mm Tube OD
Pipe Threads	: 1/4" to 1" Male / Female BSP / BSPT / NPT

Applications :

- Hydraulic
- Gas
- Instrument Air Lines
- General Plant Service

Type Test Approvals :

The design of **DAWSONS-TECH** Ball Valves Series : VB41 have been tested to Hydrostatic Proof and Burst Test in accordance with MSS SP-99-2016a Clause 5.5 & 5.6.

Testing :

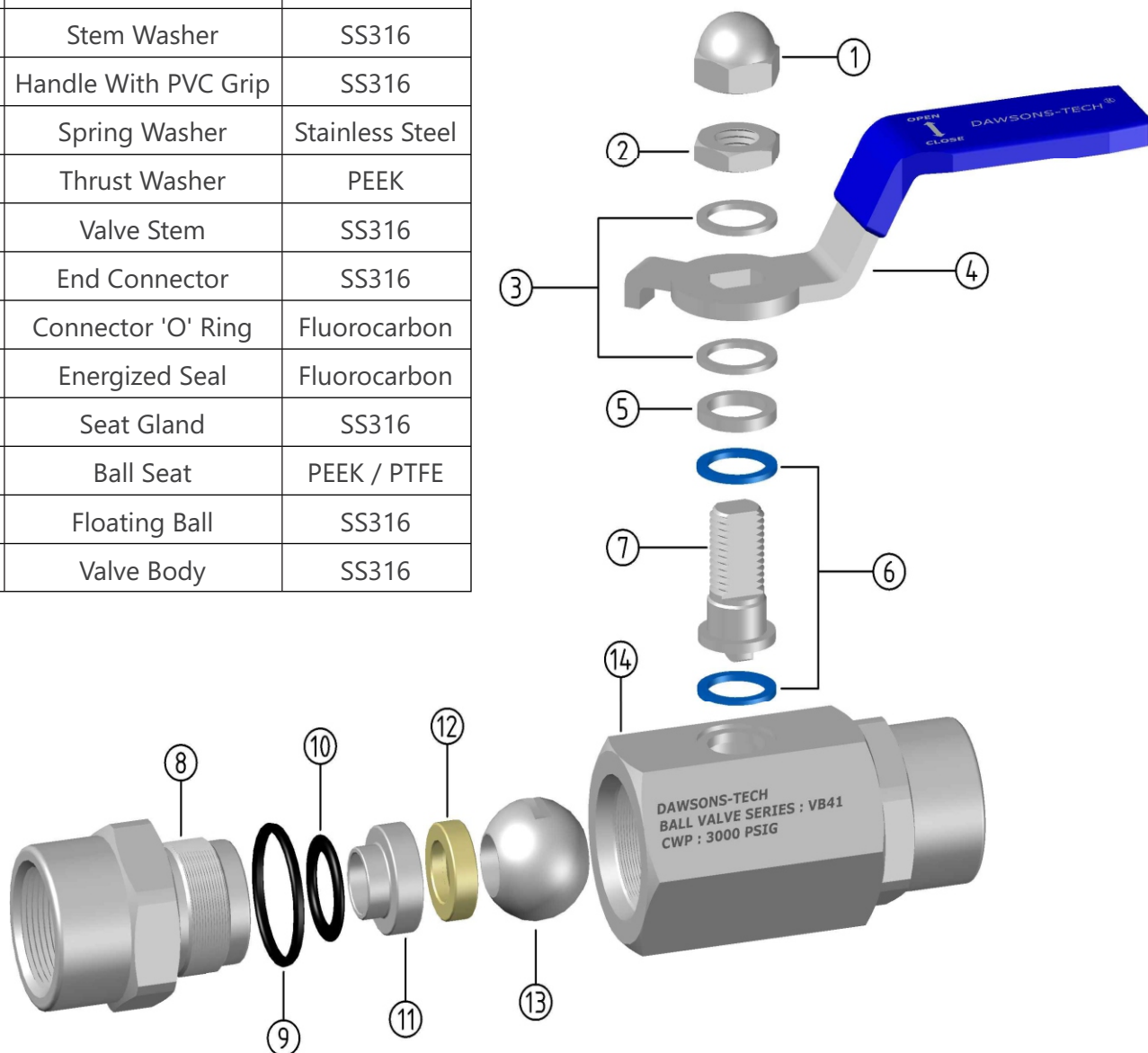
- Standard Test : Each Valve is pressure tested with Nitrogen at 1000 PSIG (69 Bar) for leakage at the seat and packing.
- Optional Hydrostatic Test : This test is performed with De-ionized water at 1.5 times the working pressure.

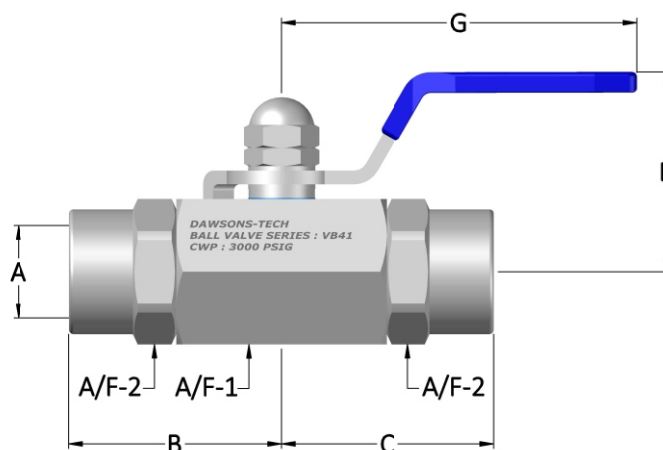
Certification :

The certificate to 3.1 acc. to EN10204 for Valve Body Material and pressure test will be provided on request.

MATERIAL OF CONSTRUCTIONS :

Sr. No.	Part Description	Material
1	Locking Dome Nut	SS316
2	Lock Nut	SS316
3	Stem Washer	SS316
4	Handle With PVC Grip	SS316
5	Spring Washer	Stainless Steel
6	Thrust Washer	PEEK
7	Valve Stem	SS316
8	End Connector	SS316
9	Connector 'O' Ring	Fluorocarbon
10	Energized Seal	Fluorocarbon
11	Seat Gland	SS316
12	Ball Seat	PEEK / PTFE
13	Floating Ball	SS316
14	Valve Body	SS316




STANDARD CONFIGURATION DIMENSIONS

End Connection		Dimensions in mm								Dawsons-Tech Part No.
Type	Size-A	Orifice (mm)	Cv	B	C	E	G	A/F-1	A/F-2	
Female NPT	1/4"	6.3	2.34	35.0	35.0	39.7	87.0	27.0	22.2	VB41-FF4N
	3/8"	8.2	4.30	36.4	36.4	40.0	101.0	28.57	23.8	VB41-FF6N
	1/2"	10.2	6.42	46.5	46.5	48.5	101.0	31.75	27.0	VB41-FF8N
	3/4"	12.2	12.45	50.0	50.0	50.8	101.0	33.3	31.75	VB41-FF12N
	1"	16.0	17.35	59.0	59.0	58.5	101.0	41.27	41.27	VB41-FF16N
Male NPT	1/4"	6.3	2.34	38.1	38.1	39.7	87.0	27.0	22.2	VB41-MM4N
	3/8"	8.2	4.30	43.0	43.0	40.0	101.0	28.57	23.8	VB41-MM6N
	1/2"	10.2	6.42	49.4	49.4	48.5	101.0	31.75	25.4	VB41-MM8N
	3/4"	12.2	12.45	52.7	52.7	50.8	101.0	33.3	28.57	VB41-MM12N
	1"	16.0	17.35	62.9	62.9	58.5	101.0	41.27	38.1	VB41-MM16N
Male x Female NPT	1/4"	6.3	2.34	38.1	35.0	39.7	87.0	27.0	22.2	VB41-MF4N
	3/8"	8.2	4.30	43.0	36.4	40.0	101.0	28.57	23.8	VB41-MF6N
	1/2"	10.2	6.42	49.4	46.5	48.5	101.0	31.75	27.0	VB41-MF8N
	3/4"	12.2	12.45	52.7	50.0	50.8	101.0	33.3	31.75	VB41-MF12N
	1"	16.0	17.35	62.9	59.0	58.5	101.0	41.27	41.27	VB41-MF16N
Female BSP	1/4"	6.3	2.34	35.0	35.0	39.7	87.0	27.0	22.2	VB41-FF4RG
	3/8"	8.2	4.30	38.0	38.0	40.0	101.0	28.57	23.8	VB41-FF6RG
	1/2"	10.2	6.42	44.0	44.0	48.5	101.0	31.75	27.0	VB41-FF8RG
	3/4"	12.2	12.45	48.7	48.7	50.8	101.0	33.3	28.57	VB41-FF12RG
	1"	16.0	17.35	61.6	61.6	58.5	101.0	41.27	41.27	VB41-FF16RG
Fractional Tube Fittings	1/4"	4.8	1.20	37.0	37.0	39.7	87.0	27.0	22.2	VB41-TT4
	3/8"	6.3	2.34	40.6	40.6	40.0	101.0	28.57	23.8	VB41-TT6
	1/2"	10.2	6.42	42.0	42.0	48.5	101.0	31.75	25.4	VB41-TT8
	3/4"	12.2	12.45	45.3	45.3	50.8	101.0	33.3	28.57	VB41-TT12
	1"	16.0	17.35	53.0	53.0	58.5	101.0	41.27	38.1	VB41-TT16
Metric Tube Fittings	6mm	4.2	0.92	37.8	37.8	39.7	87.0	27.0	22.2	VB41-TT6M
	8mm	6.3	2.34	37.8	37.8	39.7	87.0	27.0	22.2	VB41-TT8M
	10mm	8.2	4.30	41.6	41.6	40.0	101.0	28.57	23.8	VB41-TT10M
	12mm	10.2	6.42	42.5	42.5	48.5	101.0	31.75	25.4	VB41-TT12M
	16mm	12.2	12.45	46.0	46.0	50.8	101.0	33.3	28.57	VB41-TT16M
	25mm	16.0	17.35	53.0	53.0	58.5	101.0	41.27	38.1	VB41-TT25M

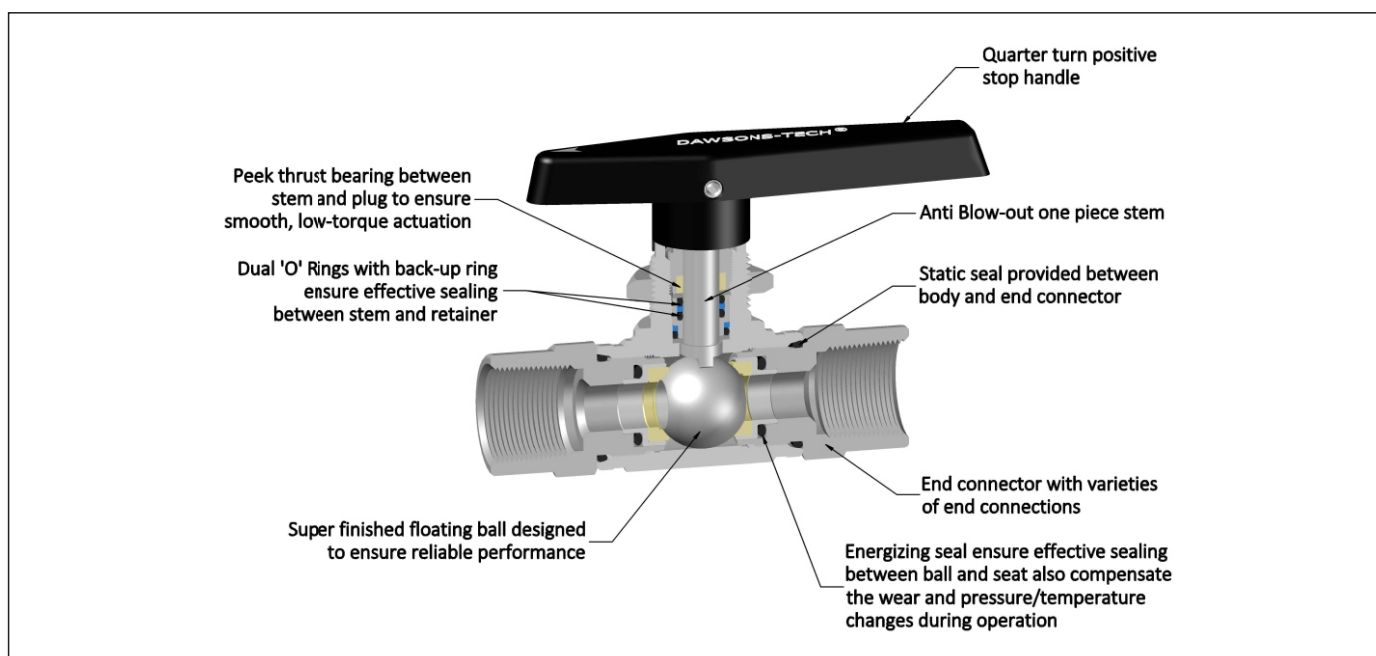
Dimensions are for reference only and subject to change.

DAWSONS-TECH Ball Valves Series : VB43 Three Piece bi-directional Flow Ball Valves offers medium pressure rating UPTO 3000 PSIG (206 Bar).

'O' Ring energized PTFE / PEEK Ball Seat ensure 100% bubble tight shut off and continuous repeatable performance.

Features / Benefits :

- Available in Material SS316
- Material Traceable to certified material test report
- Three-piece body design, on / off service with two way pattern
- Low torque actuation Bi-directional flow
- Panel mountable design 'O' Ring energizing Ball Seat
- Quarter turn positive stop handle
- Every Valve is pressure tested



Product Range and Operating Parameters :

Pressure Rating	: UPTO 3000 PSIG (206 Bar) at CWP with PTFE Seat and Fluorocarbon / PTFE 'O' Ring
Temperature Rating	: -54°C to 180°C (depending on 'O' Ring Material)
Tube End Connection	: Fractional : 1/8" to 3/4" Tube OD Metric : 3mm to 16mm Tube OD
Pipe Threads	: 1/8" to 3/4" Male / Female BSP / BSPT / NPT

Applications :

- Hydraulic
- Gas
- Instrument Air Lines
- General Plant Service

Type Test Approvals :

The design of **DAWSONS-TECH** Ball Valves Series : VB43 have been tested to Hydrostatic Proof and Burst Test in accordance with MSS SP-99-2016a Clause 5.5 & 5.6.

Testing :

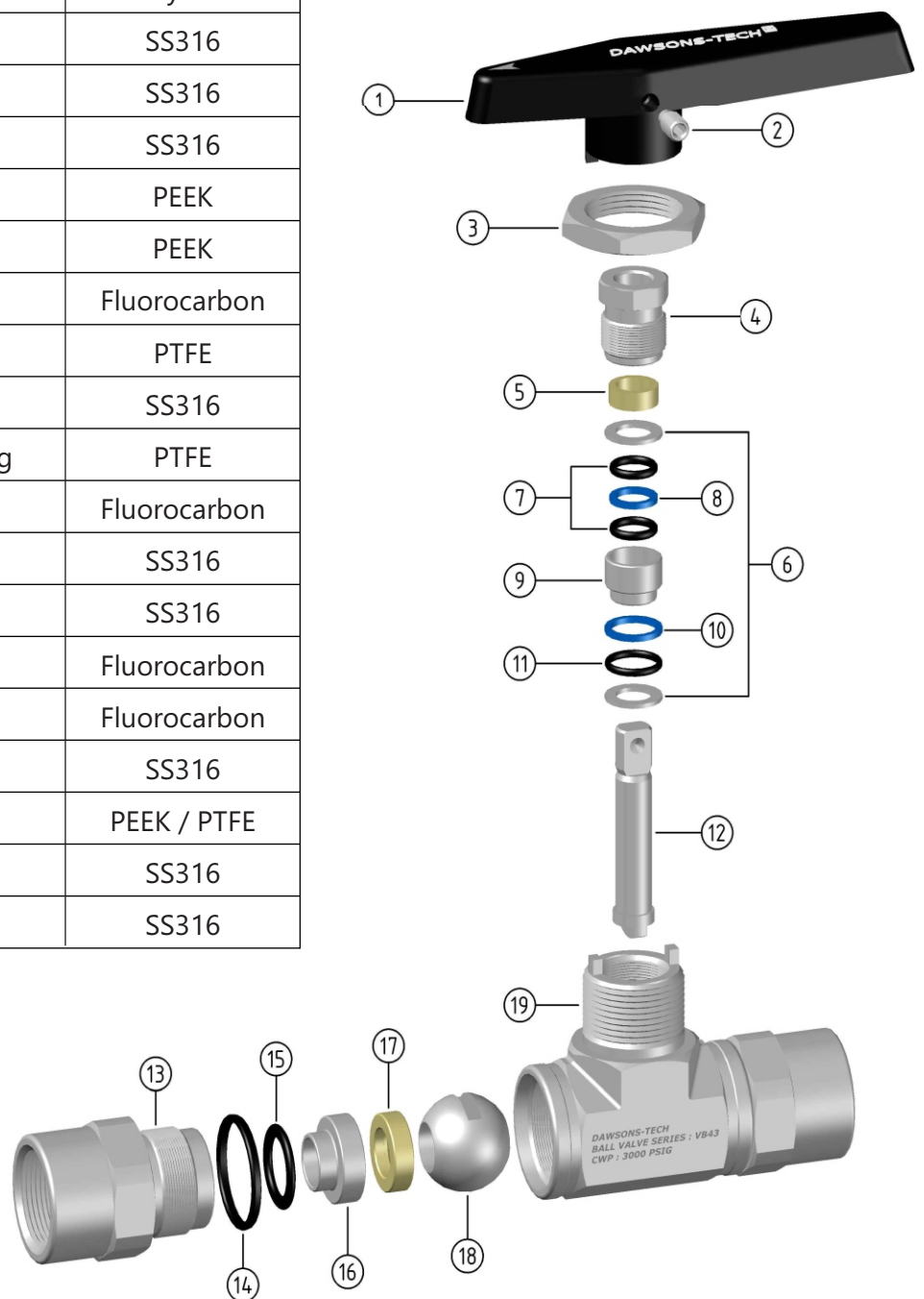
- Standard Test : Each Valve is pressure tested with Nitrogen at 1000 PSIG (69 Bar) for leakage at the seat and packing.
- Optional Hydrostatic Test : This test is performed with De-ionized water at 1.5 times the working pressure.

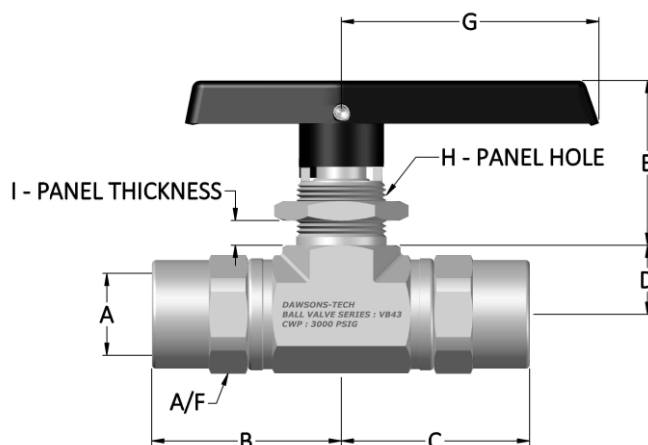
Certification :

The certificate to 3.1 acc. to EN10204 for Valve Body Material and pressure test will be provided on request.

MATERIAL OF CONSTRUCTIONS :

Sr. No.	Part Description	Material
1	Handle With Brass Insert	Nylon
2	Grub Screw	SS316
3	Panel Nut	SS316
4	Packing Nut	SS316
5	Stem Bearing	PEEK
6	Stem Washer	PEEK
7	Stem 'O' Ring	Fluorocarbon
8	Stem Back-up Ring	PTFE
9	Stem Seal Retainer	SS316
10	Retainer Back-up Ring	PTFE
11	Retainer 'O' Ring	Fluorocarbon
12	Valve Stem	SS316
13	End Connector	SS316
14	Connector 'O' Ring	Fluorocarbon
15	Energized Seal	Fluorocarbon
16	Seat Gland	SS316
17	Ball Seat	PEEK / PTFE
18	Floating Ball	SS316
19	Valve Body	SS316




STANDARD CONFIGURATION DIMENSIONS

End Connection		Dimensions in mm										Dawsons-Tech Part No.
Type	Size-A	Orifice (mm)	Cv	B	C	D	E	G	H	I	A/F	
Female NPT	1/8"	4.2	0.92	30.0	30.0	8.6	34.5	30.0	14.8	4.0	14.27	VB43-FF2N
	1/4"	6.3	2.34	37.7	37.7	13.5	38.2	38.0	19.5	6.3	22.2	VB43-FF4N
	3/8"	8.2	4.30	36.4	36.4	15.3	39.0	38.0	19.5	6.3	23.8	VB43-FF6N
	1/2"	10.2	6.42	46.5	46.5	16.0	46.0	63.5	22.7	9.5	27.0	VB43-FF8N
	3/4"	12.2	12.45	50.0	50.0	18.6	44.5	63.5	22.7	9.5	31.5	VB43-FF12N
Male NPT	1/8"	4.2	0.92	31.6	31.6	8.6	34.4	30.0	14.8	4.0	14.27	VB43-MM2N
	1/4"	6.3	2.34	42.7	42.7	13.5	38.2	38.0	19.5	6.3	22.2	VB43-MM4N
	3/8"	8.2	4.30	43.0	43.0	15.3	39.0	38.0	19.5	6.3	23.8	VB43-MM6N
	1/2"	10.2	6.42	49.4	49.4	16.0	46.0	63.5	22.7	9.5	27.0	VB43-MM8N
	3/4"	12.2	12.45	52.7	52.7	18.6	44.5	63.5	22.7	9.5	28.57	VB43-MM12N
Male x Female NPT	1/8"	4.2	0.92	31.6	31.6	8.6	34.5	30.0	14.8	4.0	14.27	VB43-MF2N
	1/4"	6.3	2.34	42.7	42.7	13.5	38.2	38.0	19.5	6.3	22.2	VB43-MF4N
	3/8"	8.2	4.30	43.0	43.0	15.3	39.0	38.0	19.5	6.3	23.8	VB43-MF6N
	1/2"	10.2	6.42	49.4	49.4	16.0	46.0	63.5	22.7	9.5	27.0	VB43-MF8N
	3/4"	12.2	12.45	52.7	52.7	18.6	44.5	63.5	22.7	9.5	28.57	VB43-MF12N
Fractional Tube Fittings	1/8"	2.2	0.21	31.0	31.0	8.6	34.5	30.0	14.8	4.0	14.27	VB43-TT2
	1/4"	4.2	0.92	32.8	32.8	8.6	34.5	38.0	19.5	6.3	22.2	VB43-TT4
	3/8"	6.3	2.34	40.4	40.4	13.5	38.2	38.0	19.5	6.3	23.8	VB43-TT6
	1/2"	10.2	6.42	42.0	42.0	16.0	46.0	63.5	22.7	9.5	27.0	VB43-TT8
	3/4"	12.2	12.45	45.3	45.3	18.6	44.5	63.5	22.7	9.5	28.57	VB43-TT12
Metric Tube Fittings	3mm	2.0	0.21	31.0	31.0	8.6	34.5	30.0	14.8	4.0	14.27	VB43-TT3M
	6mm	4.2	0.92	32.8	32.8	8.6	34.5	30.0	14.8	4.0	14.27	VB43-TT6M
	8mm	6.3	2.34	39.6	39.6	13.5	38.2	38.0	19.5	6.3	22.2	VB43-TT8M
	10mm	8.2	4.30	41.6	41.6	15.3	39.0	38.0	19.5	6.3	23.8	VB43-TT10M
	12mm	10.2	6.42	42.5	42.5	16.0	46.0	63.5	22.7	9.5	27.0	VB43-TT12M
	16mm	12.2	12.45	46.0	46.0	18.6	44.5	63.5	22.7	9.5	28.57	VB43-TT16M
Metal Gasket Face Seal	1/4"	4.5	1.03	34.3	34.3	8.6	34.5	30.0	14.8	4.0	14.27	VB43-GFS4
	1/2"	9.5	5.57	42.5	42.5	16.0	46.0	63.5	22.7	9.5	27.0	VB43-GFS8
'O' Ring Face Seal	1/4"	4.5	1.03	37.6	37.6	8.6	34.5	30.0	14.8	4.0	14.27	VB43-ORF4
	1/2"	9.5	5.57	48.8	48.8	16.0	46.0	63.5	22.7	9.5	27.0	VB43-ORF8

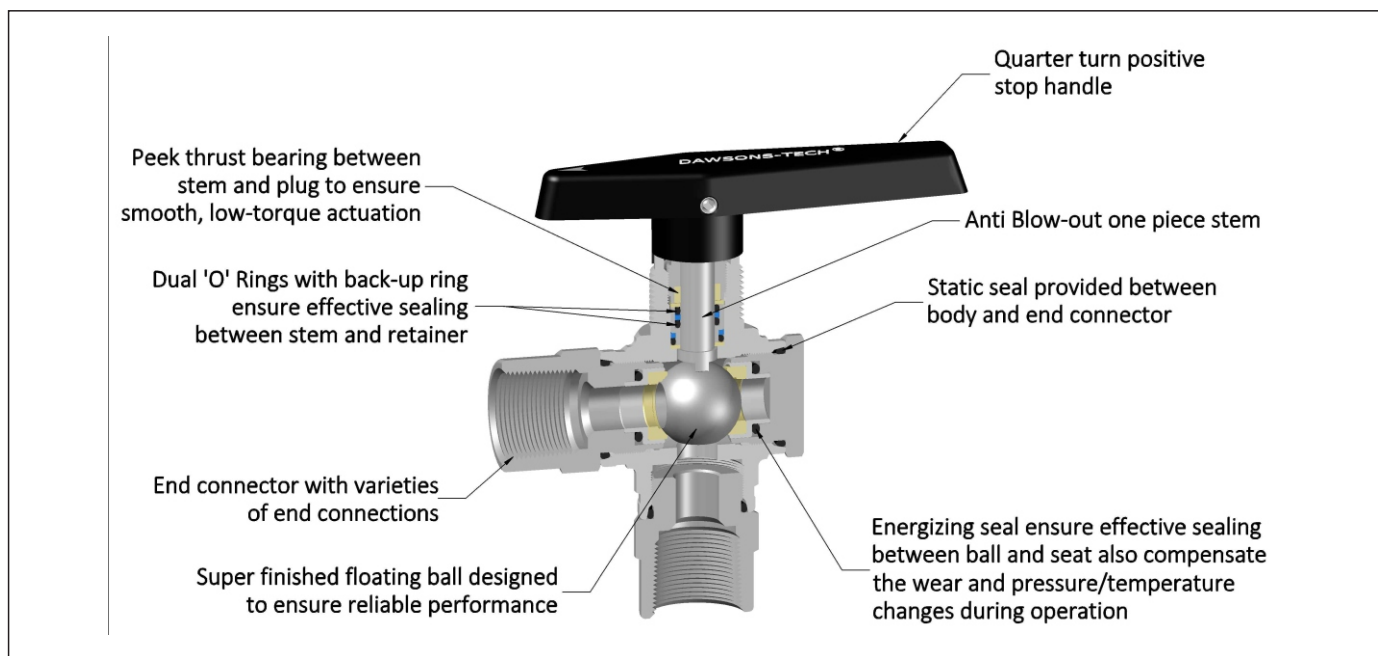
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DAWSONS-TECH Ball Valves Series : VB45 Angle Ball Valves offers medium pressure rating UPTO 3000 PSIG (206 Bar).

'O' Ring energized PTFE / PEEK Ball Seat ensure 100% bubble tight shut off and continuous repeatable performance.

Features / Benefits :

- Available in Material SS316
- Material Traceable to certified material test report
- Three-piece body design, on / off service with two way pattern
- Low torque actuation Bi-directional flow
- Panel mountable design
- Floating Ball Design, 'O' Ring energizing Ball Seat
- Quarter turn positive stop handle
- Every Valve is pressure tested



Product Range and Operating Parameters :

Pressure Rating	: UPTO 3000 PSIG (206 Bar) at CWP with PTFE Seat and Fluorocarbon / PTFE 'O' Ring
Temperature Rating	: -54°C to 180°C (depending on 'O' Ring Material)
Tube End Connection	: Fractional : 1/8" to 3/4" Tube OD Metric : 3mm to 16mm Tube OD
Pipe Threads	: 1/8" to 3/4" Male / Female BSP / BSPT / NPT

Applications :

- Hydraulic
- Gas
- Instrument Air Lines
- General Plant Service

Type Test Approvals :

The design of **DAWSONS-TECH** Ball Valves Series : VB45 have been tested to Hydrostatic Proof and Burst Test in accordance with MSS SP-99-2016a Clause 5.5 & 5.6.

Testing :

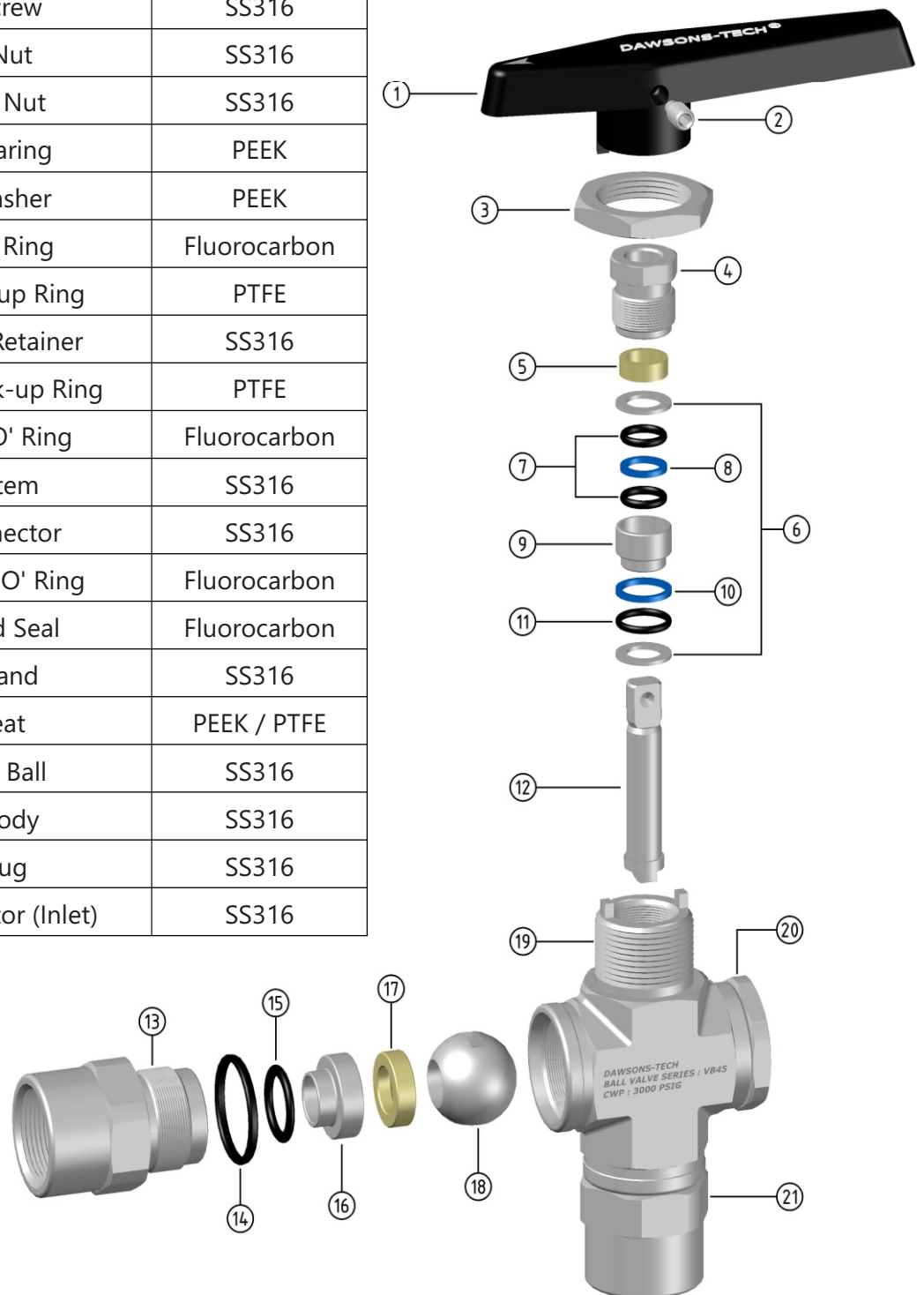
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- Optional Hydrostatic Test : This test is performed with De-ionized water at 1.5 times the working pressure.

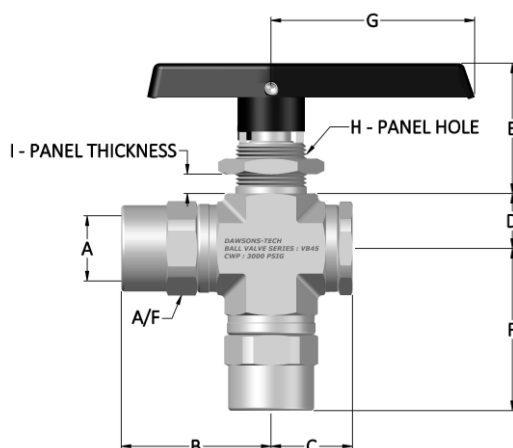
Certification :

The certificate to 3.1 acc. to EN10204 for Valve Body Material and pressure test will be provided on request.

MATERIAL OF CONSTRUCTIONS :

Sr. No.	Part Description	Material
1	Handle With Brass Insert	Nylon
2	Grub Screw	SS316
3	Panel Nut	SS316
4	Packing Nut	SS316
5	Stem Bearing	PEEK
6	Stem Washer	PEEK
7	Stem 'O' Ring	Fluorocarbon
8	Stem Back-up Ring	PTFE
9	Stem Seal Retainer	SS316
10	Retainer Back-up Ring	PTFE
11	Retainer 'O' Ring	Fluorocarbon
12	Valve Stem	SS316
13	End Connector	SS316
14	Connector 'O' Ring	Fluorocarbon
15	Energized Seal	Fluorocarbon
16	Seat Gland	SS316
17	Ball Seat	PEEK / PTFE
18	Floating Ball	SS316
19	Valve Body	SS316
20	End Plug	SS316
21	End Connector (Inlet)	SS316





STANDARD CONFIGURATION DIMENSIONS

End Connection		Dimensions in mm											Dawsons-Tech Part No.
Type	Size-A	Orifice (mm)	Cv	B	C	D	E	F	G	H	I	A/F	
Female NPT	1/8"	4.2	0.92	30.0	21.0	8.6	34.5	31.5	30.0	14.8	4.0	14.27	VB45-FF2N
	1/4"	6.3	2.34	37.7	26.0	13.5	38.2	38.7	38.0	19.5	6.3	22.2	VB45-FF4N
	3/8"	8.2	4.30	36.4	26.5	15.3	39.0	40.2	38.0	19.5	6.3	23.8	VB45-FF6N
	1/2"	10.2	6.42	46.5	27.8	16.0	46.0	50.2	63.5	22.7	9.5	27.0	VB45-FF8N
	3/4"	12.2	12.45	50.0	30.5	18.6	44.5	53.7	63.5	22.7	9.5	31.5	VB45-FF12N
Male NPT	1/8"	4.2	0.92	31.6	21.0	8.6	34.4	33.0	30.0	14.8	4.0	14.27	VB45-MM2N
	1/4"	6.3	2.34	42.7	26.0	13.5	38.2	43.7	38.0	19.5	6.3	22.2	VB45-MM4N
	3/8"	8.2	4.30	43.0	26.5	15.3	39.0	46.9	38.0	19.5	6.3	23.8	VB45-MM6N
	1/2"	10.2	6.42	49.4	27.8	16.0	46.0	53.0	63.5	22.7	9.5	27.0	VB45-MM8N
	3/4"	12.2	12.45	52.7	30.5	18.6	44.5	56.5	63.5	22.7	9.5	28.57	VB45-MM12N
Fractional Tube Fittings	1/8"	4.2	0.21	31.0	21.0	8.6	34.5	32.6	30.0	14.8	4.0	14.27	VB45-TT2
	1/4"	6.3	0.92	32.8	26.0	13.5	38.2	34.3	38.0	19.5	6.3	22.2	VB45-TT4
	3/8"	8.2	2.34	40.4	26.5	15.3	39.0	41.4	38.0	19.5	6.3	23.8	VB45-TT6
	1/2"	10.2	6.42	42.0	27.8	16.0	46.0	45.7	63.5	22.7	9.5	27.0	VB45-TT8
	3/4"	12.2	12.45	45.3	30.5	18.6	44.5	49.0	63.5	22.7	9.5	28.57	VB45-TT12
Metric Tube Fittings	3mm	2.0	0.21	31.0	21.0	8.6	34.5	32.6	30.0	14.8	4.0	14.27	VB45-TT3M
	6mm	4.2	0.92	32.8	21.0	8.6	34.5	34.3	30.0	14.8	4.0	14.27	VB45-TT6M
	8mm	6.3	2.34	39.6	21.0	13.5	38.2	40.7	38.0	19.5	6.3	22.2	VB45-TT8M
	10mm	8.2	4.30	41.6	26.5	15.3	39.0	45.5	38.0	19.5	6.3	23.8	VB45-TT10M
	12mm	10.2	6.42	42.5	27.8	16.0	46.0	46.2	63.5	22.7	9.5	27.0	VB45-TT12M
	16mm	12.2	12.45	46.0	30.5	18.6	44.5	49.7	63.5	22.7	9.5	28.57	VB45-TT16M
Metal Gasket Face Seal	1/4"	4.5	1.03	34.3	21.0	8.6	34.5	41.7	30.0	14.8	4.0	14.27	VB45-GFS4
	1/2"	9.5	5.57	42.5	27.8	16.0	46.0	52.7	63.5	22.7	9.5	27.0	VB45-GFS8
'O' Ring Face Seal	1/4"	4.5	1.03	37.6	21.0	8.6	34.5	58.2	30.0	14.8	4.0	14.27	VB45-ORF4
	1/2"	9.5	55.7	55.7	27.8	16.0	46.0	47.0	63.5	22.7	9.5	27.0	VB45-ORF8

Dimensions are for reference only and subject to change.

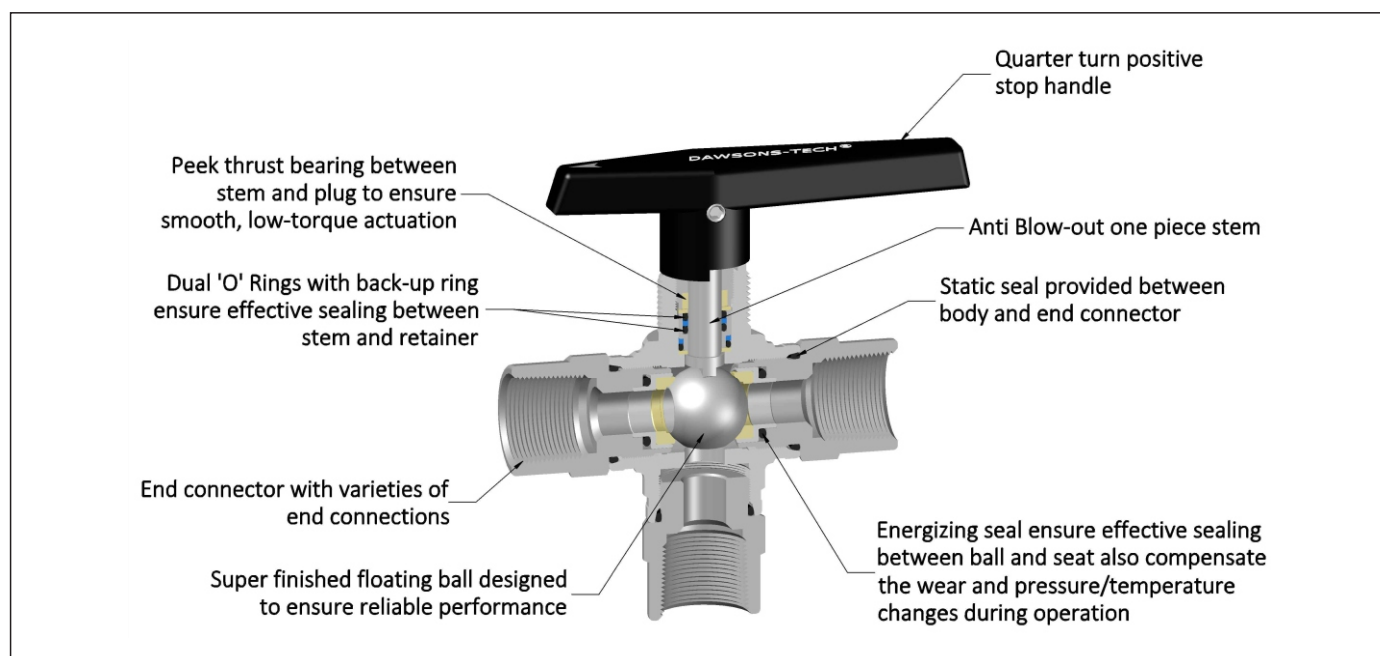
THREE WAY BALL VALVES SERIES : VB47

DAWSONS-TECH Three Way Ball Valves Series : VB47 offers medium pressure rating UPTO 3000 PSIG (206 Bar).

'O' Ring energized PTFE / PEEK Ball Seat ensure continuous repeatable performance. These Valves can be used as diverting or selecting valves for Fluid / Gas utilized in Process and Instrumentation.

Features / Benefits :

- Available in Material SS316
- Material Traceable to certified material test report
- Three-piece body design, on / off service with two way pattern
- Low torque actuation Bi-directional flow
- Panel mountable design 'O' Ring energizing Ball Seat
- Quarter turn positive stop handle
- Every Valve is pressure tested



Product Range and Operating Parameters :

Pressure Rating	: UPTO 3000 PSIG (206 Bar) at CWP with PTFE Seat and Fluorocarbon / PTFE 'O' Ring
Temperature Rating	: -54°C to 180°C (depending on 'O' Ring Material)
Tube End Connection	: Fractional : 1/8" to 3/4" Tube OD Metric : 3mm to 16mm Tube OD
Pipe Threads	: 1/8" to 3/4" Male / Female BSP / BSPT / NPT

Applications :

- Hydraulic
- Gas
- Instrument Air Lines
- General Plant Service

Type Test Approvals :

The design of **DAWSONS-TECH** Three Way Ball Valves Series : VB47 have been tested to Hydrostatic Proof and Burst Test in accordance with MSS SP-99-2016a Clause 5.5 & 5.6.

Testing :

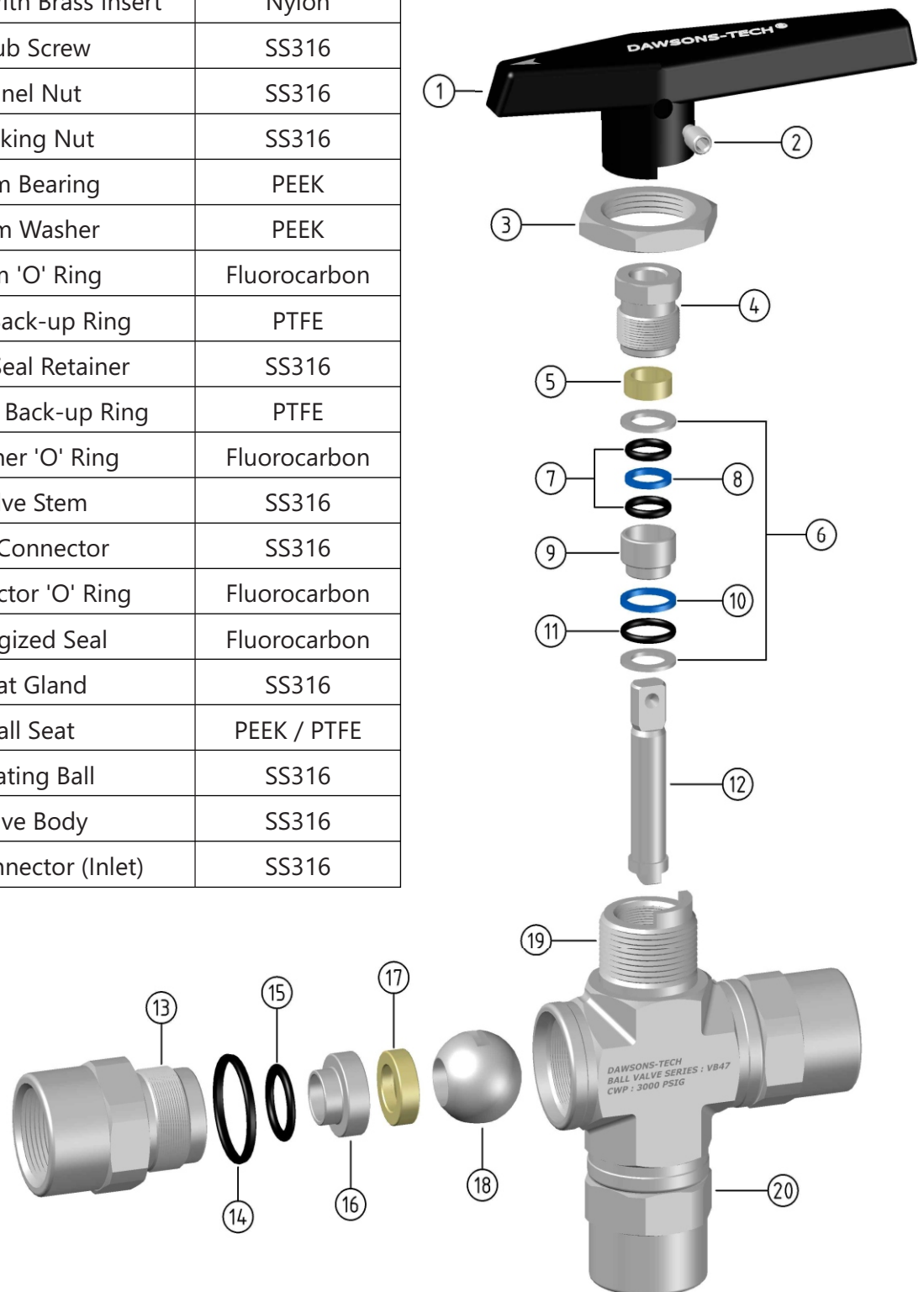
- Standard Test : Each Valve is pressure tested with Nitrogen at 1000 PSIG (69 Bar) for leakage at the seat and packing.
- Optional Hydrostatic Test : This test is performed with De-ionized water at 1.5 times the working pressure.

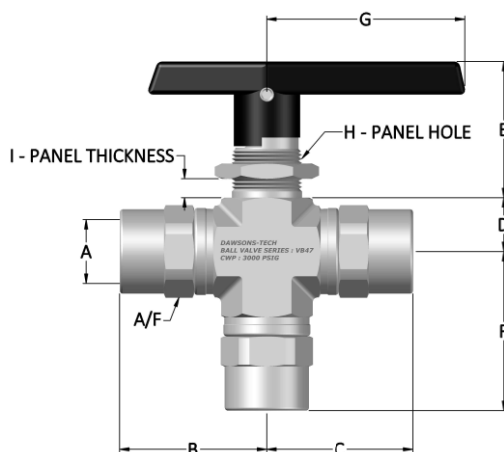
Certification :

The certificate to 3.1 acc. to EN10204 for Valve Body Material and pressure test will be provided on request.

MATERIAL OF CONSTRUCTIONS :

Sr. No.	Part Description	Material
1	Handle With Brass Insert	Nylon
2	Grub Screw	SS316
3	Panel Nut	SS316
4	Packing Nut	SS316
5	Stem Bearing	PEEK
6	Stem Washer	PEEK
7	Stem 'O' Ring	Fluorocarbon
8	Stem Back-up Ring	PTFE
9	Stem Seal Retainer	SS316
10	Retainer Back-up Ring	PTFE
11	Retainer 'O' Ring	Fluorocarbon
12	Valve Stem	SS316
13	End Connector	SS316
14	Connector 'O' Ring	Fluorocarbon
15	Energized Seal	Fluorocarbon
16	Seat Gland	SS316
17	Ball Seat	PEEK / PTFE
18	Floating Ball	SS316
19	Valve Body	SS316
20	End Connector (Inlet)	SS316





STANDARD CONFIGURATION DIMENSIONS

End Connection		Dimensions in mm											Dawsons-Tech Part No.
Type	Size-A	Orifice (mm)	Cv	B	C	D	E	F	G	H	I	A/F	
Female NPT	1/8"	4.2	0.92	30.0	30.0	8.6	34.5	31.5	30.0	14.8	4.0	14.27	VB47-FF2N
	1/4"	6.3	2.34	37.7	37.7	13.5	38.2	38.7	38.0	19.5	6.3	22.2	VB47-FF4N
	3/8"	8.2	4.30	36.4	36.4	15.3	39.0	40.2	38.0	19.5	6.3	23.8	VB47-FF6N
	1/2"	10.2	6.42	46.5	46.5	16.0	46.0	50.2	63.5	22.7	9.5	27.0	VB47-FF8N
	3/4"	12.2	12.45	50.0	50.0	18.6	44.5	53.7	63.5	22.7	9.5	31.5	VB47-FF12N
Male NPT	1/8"	4.2	0.92	31.6	31.6	8.6	34.4	33.0	30.0	14.8	4.0	14.27	VB47-MM2N
	1/4"	6.3	2.34	42.7	42.7	13.5	38.2	43.7	38.0	19.5	6.3	22.2	VB47-MM4N
	3/8"	8.2	4.30	43.0	43.0	15.3	39.0	46.9	38.0	19.5	6.3	23.8	VB47-MM6N
	1/2"	10.2	6.42	49.4	49.4	16.0	46.0	53.0	63.5	22.7	9.5	27.0	VB47-MM8N
	3/4"	12.2	12.45	52.7	52.7	18.6	44.5	56.5	63.5	22.7	9.5	28.57	VB47-MM12N
Fractional Tube Fittings	1/8"	4.2	0.92	31.0	31.0	8.6	34.5	32.6	30.0	14.8	4.0	14.27	VB47-TT2
	1/4"	6.3	2.34	32.8	32.8	13.5	38.2	34.3	38.0	19.5	6.3	22.2	VB47-TT4
	3/8"	8.2	4.30	40.4	40.4	15.3	39.0	41.4	38.0	19.5	6.3	23.8	VB47-TT6
	1/2"	10.2	6.42	42.0	42.0	16.0	46.0	45.7	63.5	22.7	9.5	27.0	VB47-TT8
	3/4"	12.2	12.45	45.3	45.3	18.6	44.5	49.0	63.5	22.7	9.5	28.57	VB47-TT12
Metric Tube Fittings	3mm	2.0	0.21	31.0	31.0	8.6	34.5	32.6	30.0	14.8	4.0	14.27	VB47-TT3M
	6mm	4.2	0.92	32.8	32.8	8.6	34.5	34.3	30.0	14.8	4.0	14.27	VB47-TT6M
	8mm	6.3	2.34	39.6	39.6	13.5	38.2	40.7	38.0	19.5	6.3	22.2	VB47-TT8M
	10mm	8.2	4.30	41.6	41.6	15.3	39.0	45.5	38.0	19.5	6.3	23.8	VB47-TT10M
	12mm	10.2	6.42	42.5	42.5	16.0	46.0	46.2	63.5	22.7	9.5	27.0	VB47-TT12M
	16mm	12.2	12.45	46.0	46.0	18.6	44.5	49.7	63.5	22.7	9.5	28.57	VB47-TT16M
Metal Gasket Face Seal	1/4"	4.5	1.03	34.3	34.3	8.6	34.5	41.7	30.0	14.8	4.0	14.27	VB47-GFS4
	1/2"	9.5	5.57	42.5	42.5	16.0	46.0	52.7	63.5	22.7	9.5	27.0	VB47-GFS8
'O' Ring Face Seal	1/4"	4.5	1.03	37.6	37.6	8.6	34.5	38.2	30.0	14.8	4.0	14.27	VB47-ORF4
	1/2"	9.5	5.57	48.8	48.8	16.0	46.0	47.0	63.5	22.7	9.5	27.0	VB47-ORF8

Dimensions are for reference only and subject to change.

Features and Benefits of DAWSONS-TECH Ball Valves

Having Live Load PEEK Seat :

DAWSONS-TECH High Pressure Ball Valves Series : VB71, VB81, VB87 & VB91 have been very carefully designed with live loaded PEEK Seat to provide reliable leak-tight performance and also to compensate for wear and pressure / temperature changes during its operations. These Valves are most suitable to be used in Fluid / Gas Control Systems in a wide range of industries for pressure rating UPTO 413 Bar (6000 PSIG) for thousands of operating cycles depending on specific site application variables like pressure, temperature, Fluid / Gas media and various level of contaminations.

THE BUILT-IN FEATURES OF THE VALVES MAKE THEM MORE ADAPTABLE FOR SEVERE APPLICATION DEMANDS.

High Pressure Ball Valves Series : VB71, VB81, VB87 & VB91 having Live Loaded PEEK Seats are undoubtedly superior Valves in performance when compared with conventional design without live loaded Ball Seats.

The following factors will guide you to determine the best choice of above series Ball Valves.

Longer Performance Life :

The live loaded PEEK Seat provide reliable leak-tight and continuous repeatable performance and also compensate for wear and pressure / temperature changes during its operations resulting increase its cycle life, reducing the down time & maintenance cost.

Pressure Rating UPTO 413 Bar (6000 PSIG) :

The live loaded PEEK Seat protects from damage and wear during its operations at high pressure and also prevents Ball from embedding in the Seats. In addition to this, the end connection Retainer supports the Seats from deformation.

Pressure and Temperature Combination :

Ball Valves Series : VB71, VB81, VB87 & VB91 with live loaded PEEK Seat can be used in severe applications with working pressure UPTO 413 Bar (6000 PSIG) at temperature 121°C (250°F).

For Low Differential Pressure :

The live loaded PEEK Seat design have a leak tightness even at low upstream pressure, which may not possible with conventional design.

Low Actuation Torque :

The live loaded PEEK Seats design and stem sealing system reduces the operation / actuation torque at high pressure.

Fluid / Gas Applications :

Ball Valves Series : VB71, VB81 VB87 & VB91 are designed with live loaded PEEK Seat and stem sealing system provides safe and reliable performance in hazardous media. The live loaded PEEK Seats compensates the seat wear, also it can reduce the need of disassemble system containing hazardous media for maintenance.

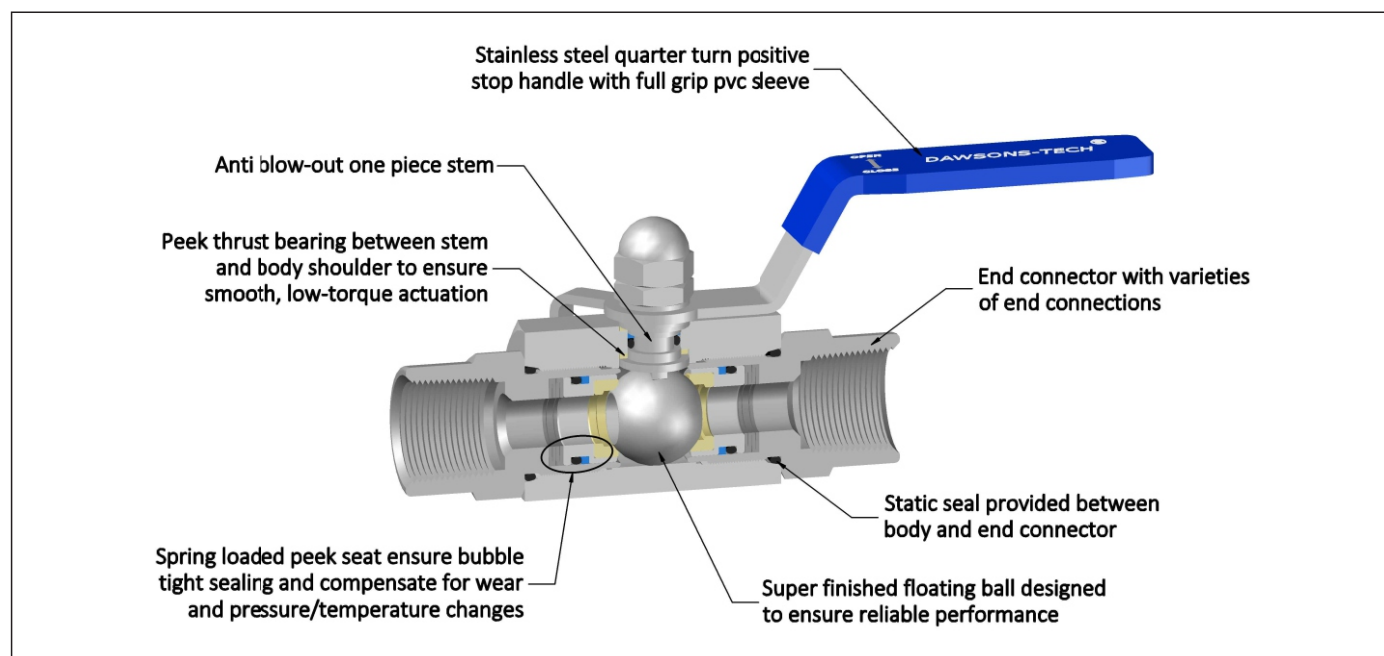
Extensive range of End Connections :

DAWSONS-TECH offers an extensive range of end connection types and size combinations. We provide standard as well as customized end connection of Ball Valves to suit customers applications / needs.

DAWSONS-TECH Ball Valves Series : VB71 with live loaded PEEK Seat provides repeated leak tight shut off and also compensate for wear and pressure / temperature fluctuations during its operations. These Valves are most suitable to be used in Fluid / Gas Control System in wide range of industrial segments.

Features / Benefits :

- Available in Material SS316
- Three-piece design
- Low torque actuation Bi-directional flow
- Live loaded PEEK Seat
- Floating Ball design
- Quarter turn positive stop handle
- Every Valve is pressure tested



Product Range & Operating Parameters :

- Pressure Rating : UPTO 680 Bar (10,000 PSIG) at CWP with PTFE packing, PEEK Seat and Fluorocarbon 'O' Ring
- Temperature Rating : -54°C to 180°C (depending on 'O' Ring Material)
- End Connections : Fractional 1/4" to 1" Tube OD
Metric 6mm to 25mm Tube OD
- Pipe Threads : 1/4" to 1" Male / Female BSP / BSPT / NPT

Applications :

- Hydraulic
- Gas
- Instrument Air Lines
- High Pressure Instrument Lines
- General Plant Service

Type Test Approvals :

The design of **DAWSONS-TECH** High Pressure Ball Valves Series : VB71 have been tested for Hydrostatic Proof and Burst Test in accordance with MSS SP-99-2016a Clause 5.5 & 5.6.

Testing :

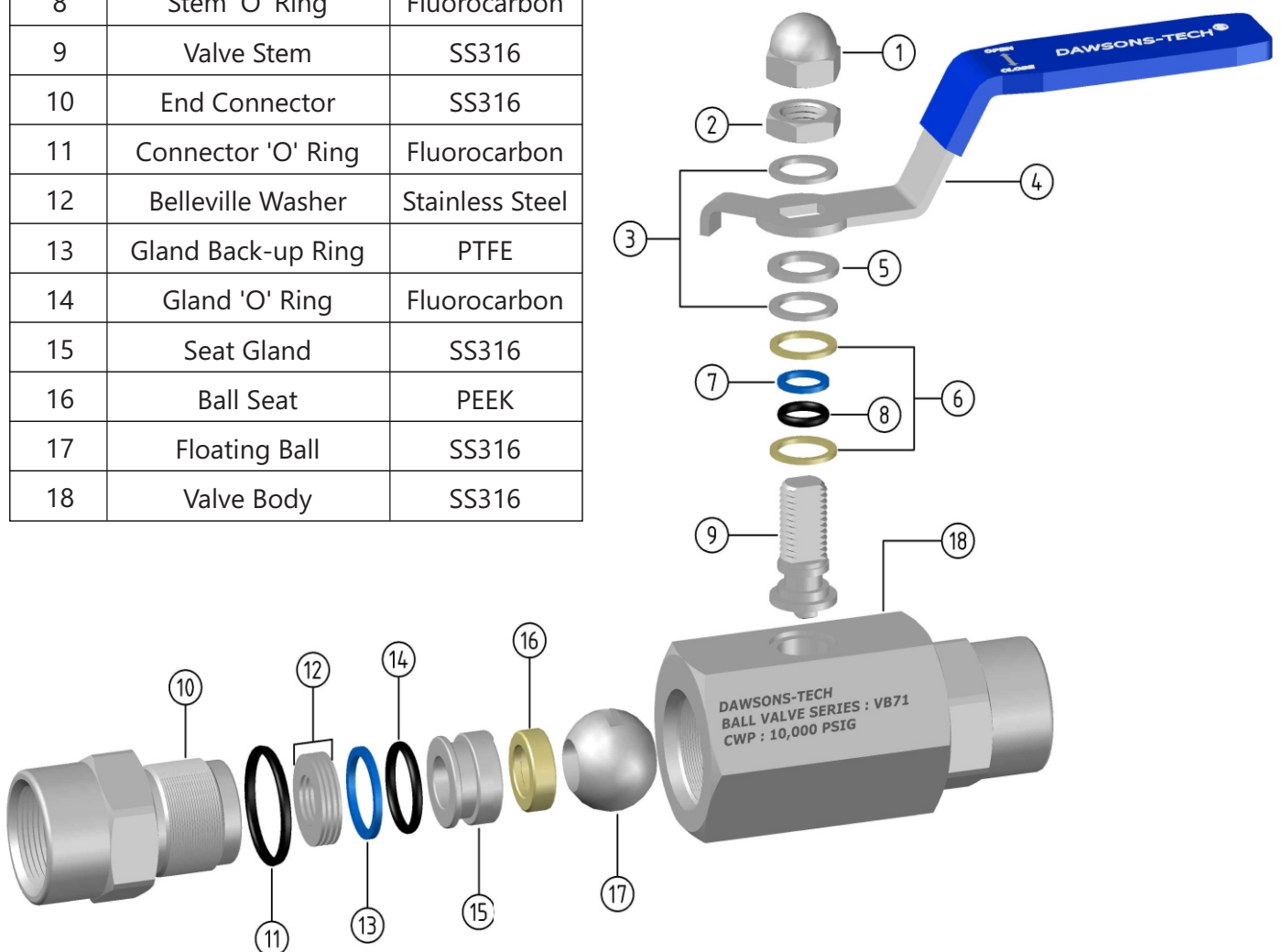
- Standard Test : Each Valve is Pressure tested with Nitrogen at 1000 PSIG (69 Bar) for leakage at the seat and packing.
- Optional Hydrostatic Test : This test is performed with De-ionized water at 1.5 times the working pressure.

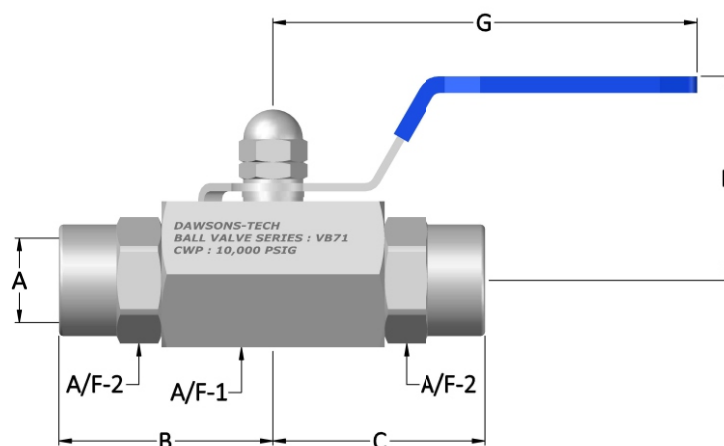
Certification :

The certificate to 3.1 acc. to EN10204 for Valve Body Material and pressure test will be provided on request.

MATERIAL OF CONSTRUCTIONS :

Sr. No.	Part Description	Material
1	Locking Dome Nut	SS316
2	Lock Nut	SS316
3	Washer	SS316
4	Handle With PVC Grip	SS316
5	Spring Washer	Stainless Steel
6	Thrust Washer	PEEK
7	Stem Back-up Ring	PTFE
8	Stem 'O' Ring	Fluorocarbon
9	Valve Stem	SS316
10	End Connector	SS316
11	Connector 'O' Ring	Fluorocarbon
12	Belleville Washer	Stainless Steel
13	Gland Back-up Ring	PTFE
14	Gland 'O' Ring	Fluorocarbon
15	Seat Gland	SS316
16	Ball Seat	PEEK
17	Floating Ball	SS316
18	Valve Body	SS316





STANDARD CONFIGURATION DIMENSIONS

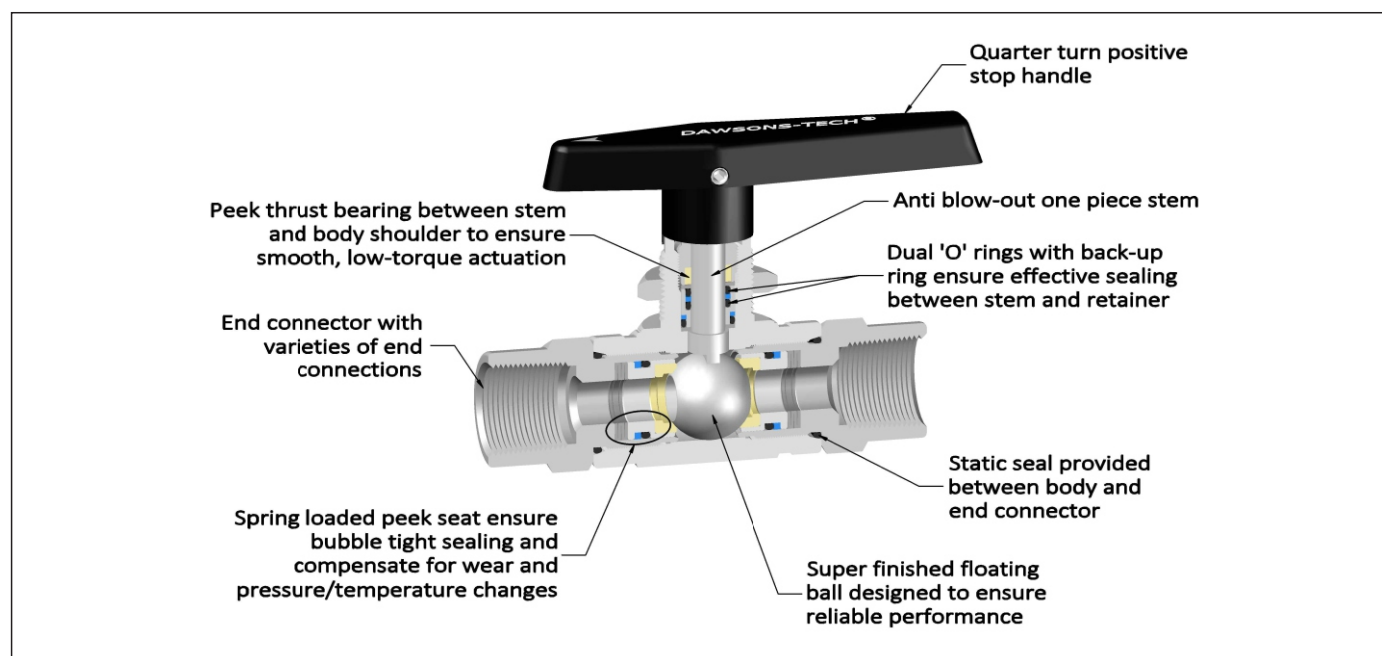
End Connection		Dimensions in mm								Dawsons-Tech Part No.
Type	Size-A	Orifice (mm)	Cv	B	C	E	G	A/F-1	A/F-2	
Female NPT	1/4"	6.3	2.34	35.0	35.0	42.0	87.0	28.57	22.2	VB71-FF4N
	3/8"	8.2	4.30	36.4	36.4	46.0	101.0	31.75	25.4	VB71-FF6N
	1/2"	10.2	6.42	46.5	46.5	48.0	101.0	34.93	27.0	VB71-FF8N
	3/4"	12.2	12.45	50.0	50.0	50.0	101.0	38.1	31.75	VB71-FF12N
	1"	16.0	17.35	59.0	59.0	53.0	101.0	44.4	41.27	VB71-FF16N
Male NPT	1/4"	6.3	2.34	38.1	38.1	42.0	87.0	28.57	22.2	VB71-MM4N
	3/8"	8.2	4.30	43.0	43.0	46.0	101.0	31.75	25.4	VB71-MM6N
	1/2"	10.2	6.42	49.4	49.4	48.0	101.0	34.93	27.0	VB71-MM8N
	3/4"	12.2	12.45	52.7	52.7	50.0	101.0	38.1	31.75	VB71-MM12N
	1"	16.0	17.35	62.9	62.9	53.0	101.0	44.4	41.27	VB71-MM16N
Male x Female NPT	1/4"	6.3	2.34	38.1	35.0	42.0	87.0	28.57	22.2	VB71-MF4N
	3/8"	8.2	4.30	43.0	36.4	46.0	101.0	31.75	25.4	VB71-MF6N
	1/2"	10.2	6.42	49.4	46.5	48.0	101.0	34.93	27.0	VB71-MF8N
	3/4"	12.2	12.45	52.7	50.0	50.0	101.0	38.1	31.75	VB71-MF12N
	1"	16.0	17.35	62.9	59.0	53.0	101.0	44.4	41.27	VB71-MF16N
Female BSP	1/4"	6.3	2.34	35.0	35.0	42.0	87.0	28.57	22.2	VB71-FF4RG
	3/8"	8.2	4.30	38.0	38.0	46.0	101.0	31.75	25.4	VB71-FF6RG
	1/2"	10.2	6.42	44.0	44.0	48.0	101.0	34.93	27.0	VB71-FF8RG
	3/4"	12.2	12.45	48.7	48.7	50.0	101.0	38.1	31.75	VB71-FF12RG
	1"	16.0	17.35	61.6	61.6	53.0	101.0	44.4	41.27	VB71-FF16RG
Fractional Tube Fittings	1/4"	4.8	1.20	37.0	37.0	42.0	87.0	28.57	22.2	VB71-TT4
	3/8"	6.3	2.34	40.6	40.6	46.0	101.0	31.75	25.4	VB71-TT6
	1/2"	10.2	6.42	42.0	42.0	48.0	101.0	34.93	27.0	VB71-TT8
	3/4"	12.2	12.45	45.3	45.3	50.0	101.0	38.1	31.75	VB71-TT12
	1"	16.0	17.35	53.0	53.0	53.0	101.0	44.4	41.27	VB71-TT16
Metric Tube Fittings	6mm	4.2	0.92	37.8	37.8	42.0	87.0	28.57	22.2	VB71-TT6M
	8mm	6.3	2.34	37.8	37.8	42.0	87.0	28.57	22.2	VB71-TT8M
	10mm	8.2	4.30	41.6	41.6	46.0	101.0	31.75	25.4	VB71-TT10M
	12mm	10.2	6.42	42.5	42.5	48.0	101.0	34.93	27.0	VB71-TT12M
	16mm	12.2	12.45	46.0	46.0	50.0	101.0	38.1	31.75	VB71-TT16M
	25mm	16.0	17.35	53.0	53.0	53.0	101.0	44.4	41.27	VB71-TT25M

Dimensions are for reference only and subject to change.

DAWSONS-TECH Ball Valves Series : VB81 with Live Loaded PEEK Seat provides repeated leak tight shut off and also compensate for wear and Pressure / Temperature fluctuations during its operations. This Valves are most suitable to be used in Fluid / Gas Control System in wide range of Industrial Segments.

Features / Benefits :

- Available in Material SS316
- Three-piece design with Panel mounting body
- Low torque actuation Bi-directional flow
- Live loaded PEEK Seat
- Floating Ball design
- Quarter turn positive stop handle
- Every Valve is pressure tested



Product Range & Operating Parameters :

- Pressure Rating : UPTO 413 Bar (6000 PSIG) at CWP with PTFE packing, PEEK Seat and Fluorocarbon 'O' Ring
- Temperature Rating : -54°C to 180°C (depending on 'O' Ring Material)
- End Connections : Fractional 1/4" to 3/4" Tube OD
Metric 6mm to 16mm Tube OD
- Pipe Threads : 1/4" to 3/4" Male / Female BSP / BSPT / NPT

Applications :

- Hydraulic
- Gas
- Instrument Air Lines
- High Pressure Instrument Lines
- General Plant Service

Type Test Approvals :

The design of **DAWSONS-TECH** Ball Valves Series : VB81 have been tested for Hydrostatic Proof and Burst Test in accordance with MSS SP-99-2016a Clause 5.5 & 5.6.

Testing :

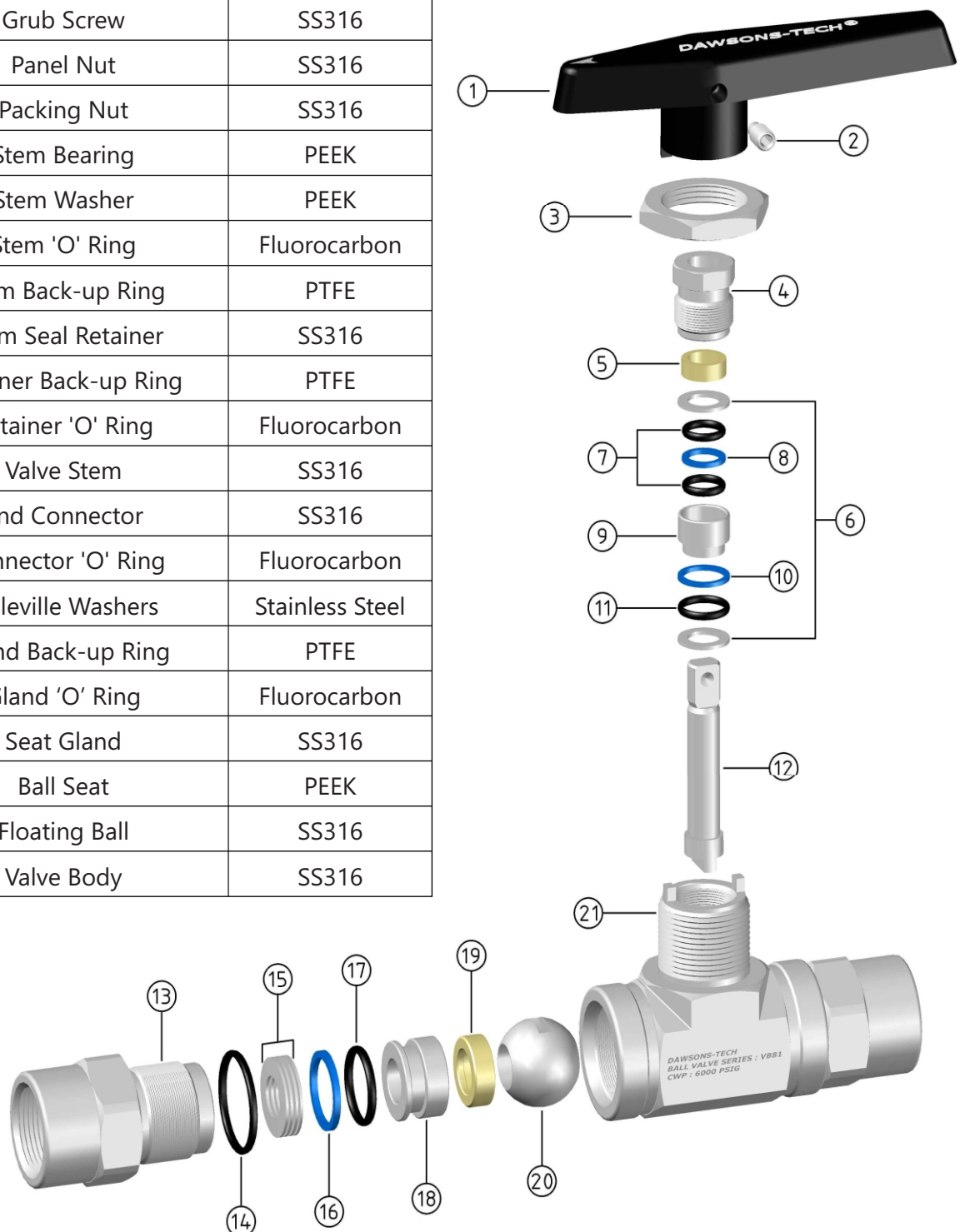
- Standard Test : Each Valve is pressure tested with Nitrogen at 1000 PSIG (69 Bar) for leakage at the seat and packing.
- Optional Hydrostatic Test : This test is performed with De-ionized water at 1.5 times the working pressure.

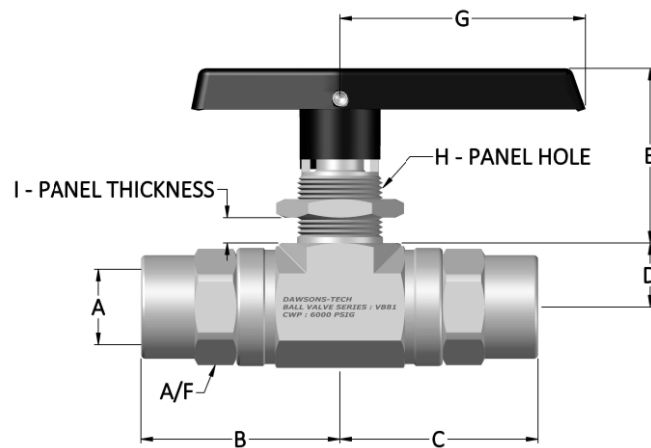
Certification :

The certificate to 3.1 acc. to EN10204 for Valve Body Material and pressure test will be provided on request.

MATERIAL OF CONSTRUCTIONS :

Sr. No.	Part Description	Material
1	Handle With Brass Insert	Nylon
2	Grub Screw	SS316
3	Panel Nut	SS316
4	Packing Nut	SS316
5	Stem Bearing	PEEK
6	Stem Washer	PEEK
7	Stem 'O' Ring	Fluorocarbon
8	Stem Back-up Ring	PTFE
9	Stem Seal Retainer	SS316
10	Retainer Back-up Ring	PTFE
11	Retainer 'O' Ring	Fluorocarbon
12	Valve Stem	SS316
13	End Connector	SS316
14	Connector 'O' Ring	Fluorocarbon
15	Belleville Washers	Stainless Steel
16	Gland Back-up Ring	PTFE
17	Gland 'O' Ring	Fluorocarbon
18	Seat Gland	SS316
19	Ball Seat	PEEK
20	Floating Ball	SS316
21	Valve Body	SS316





STANDARD CONFIGURATION DIMENSIONS

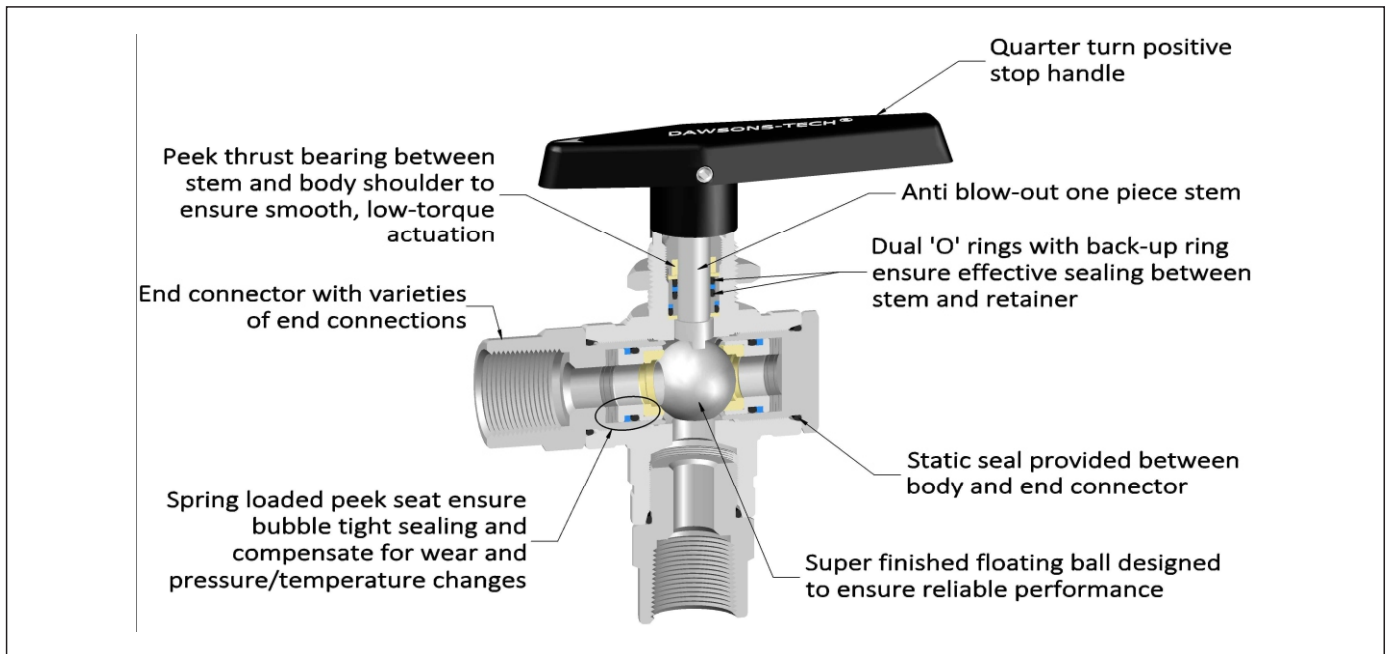
End Connection		Dimensions in mm										Dawsons-Tech Part No.
Type	Size-A	Orifice (mm)	Cv	B	C	D	E	G	H	I	A/F	
Female NPT	1/8"	4.2	0.92	31.9	31.9	8.6	34.5	30.0	14.8	4.0	14.27	VB81-FF2N
	1/4"	6.3	2.34	39.6	39.6	13.5	38.2	38.0	19.5	6.3	22.2	VB81-FF4N
	3/8"	8.2	4.30	42.8	42.8	15.3	39.0	38.0	19.5	6.3	23.8	VB81-FF6N
	1/2"	10.2	6.42	51.3	51.3	16.0	46.0	63.5	22.7	9.5	27.0	VB81-FF8N
	3/4"	12.2	12.45	53.6	53.6	18.6	44.5	63.5	22.7	9.5	31.5	VB81-FF12N
Male NPT	1/8"	4.2	0.92	33.7	33.7	8.6	34.4	30.0	14.8	4.0	14.27	VB81-MM2N
	1/4"	6.3	2.34	42.0	42.0	13.5	38.2	38.0	19.5	6.3	22.2	VB81-MM4N
	3/8"	8.2	4.30	46.2	46.2	15.3	39.0	38.0	19.5	6.3	23.8	VB81-MM6N
	1/2"	10.2	6.42	55.2	55.2	16.0	46.0	63.5	22.7	9.5	27.0	VB81-MM8N
	3/4"	12.2	12.45	57.4	57.4	18.6	44.5	63.5	22.7	9.5	28.57	VB81-MM12N
Male x Female NPT	1/8"	4.2	0.92	33.7	33.7	8.6	34.5	30.0	14.8	4.0	14.27	VB81-MF2N
	1/4"	6.3	2.34	42.0	42.0	13.5	38.2	38.0	19.5	6.3	22.2	VB81-MF4N
	3/8"	8.2	4.30	46.2	46.2	15.3	39.0	38.0	19.5	6.3	23.8	VB81-MF6N
	1/2"	10.2	6.42	55.2	55.2	16.0	46.0	63.5	22.7	9.5	27.0	VB81-MF8N
	3/4"	12.2	12.45	57.4	57.4	18.6	44.5	63.5	22.7	9.5	28.57	VB81-MF12N
Fractional Tube Fittings	1/8"	2.2	0.21	33.0	33.0	8.6	34.5	30.0	14.8	4.0	14.27	VB81-TT2
	1/4"	4.2	0.92	34.7	34.7	8.6	34.5	38.0	19.5	6.3	22.2	VB81-TT4
	3/8"	6.3	2.34	40.2	40.2	13.5	38.2	38.0	19.5	6.3	23.8	VB81-TT6
	1/2"	10.2	6.42	47.9	47.9	16.0	46.0	63.5	22.7	9.5	27.0	VB81-TT8
	3/4"	12.2	12.45	50.0	50.0	18.6	44.5	63.5	22.7	9.5	28.57	VB81-TT12
Metric Tube Fittings	3mm	2.0	0.21	33.0	33.0	8.6	34.5	30.0	14.8	4.0	14.27	VB81-TT3M
	6mm	4.2	0.92	34.7	34.7	8.6	34.5	30.0	14.8	4.0	14.27	VB81-TT6M
	8mm	6.3	2.34	39.8	39.8	13.5	38.2	38.0	19.5	6.3	22.2	VB81-TT8M
	10mm	8.2	4.30	44.0	44.0	15.3	39.0	38.0	19.5	6.3	23.8	VB81-TT10M
	12mm	10.2	6.42	47.9	47.9	16.0	46.0	63.5	22.7	9.5	27.0	VB81-TT12M
	16mm	12.2	12.45	50.4	50.4	18.6	44.5	63.5	22.7	9.5	28.57	VB81-TT16M
Metal Gasket Face Seal	1/4"	4.5	1.03	36.2	36.2	8.6	34.5	30.0	14.8	4.0	14.27	VB81-GFS4
	1/2"	9.5	5.57	48.5	48.5	16.0	46.0	63.5	22.7	9.5	27.0	VB81-GFS8
'O' Ring Face Seal	1/4"	4.5	1.03	39.5	39.5	8.6	34.5	30.0	14.8	4.0	14.27	VB81-ORF4
	1/2"	9.5	5.57	54.5	54.5	16.0	46.0	63.5	22.7	9.5	27.0	VB81-ORF8

Dimensions are for reference only and subject to change.

DAWSONS-TECH Angle Ball Valves Series : VB87 with Live Loaded PEEK Seat provides repeated leak tight shut off and also compensate for wear and Pressure / Temperature fluctuations during its operations.

Features / Benefits :

- Available in Material SS316
- Material Traceable to certified material test report
- Three-piece body design, on / off service with two way pattern
- Low torque actuation Bi-directional flow
- Live Loaded PEEK Seat
- Panel mountable design
- Floating Ball Design
- Quarter turn positive stop handle
- Every Valve is pressure tested



Product Range and Operating Parameters :

Pressure Rating	: UPTO 6000 PSIG (413 Bar) at CWP with PTFE packing, PEEK Seat and Fluorocarbon 'O' Ring
Temperature Rating	: -54°C to 180°C (depending on 'O' Ring Material)
Tube End Connection	: Fractional : 1/8" to 3/4" Tube OD Metric : 3mm to 16mm Tube OD
Pipe Threads	: 1/8" to 3/4" Male / Female BSP / BSPT / NPT

Applications :

- Hydraulic
- Gas
- Instrument Air Lines
- General Plant Service
- High Pressure Instrument Lines

Type Test Approvals :

The design of **DAWSONS-TECH** Ball Valves Series : VB87 have been tested to Hydrostatic Proof and Burst Test in accordance with MSS SP-99-2016a Clause 5.5 & 5.6.

Testing :

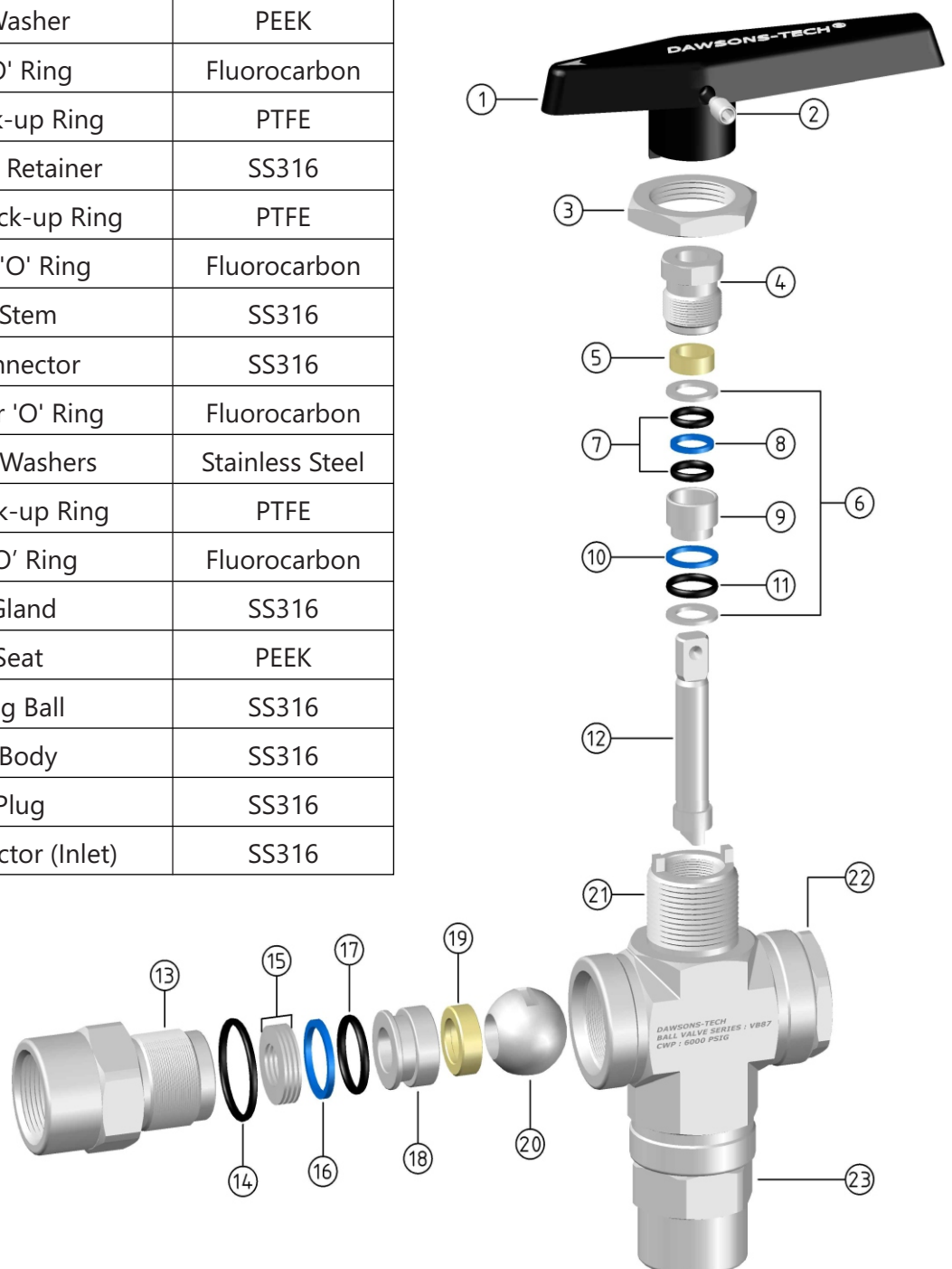
- Standard Test : Each Valve is pressure tested with Nitrogen at 1000 PSIG (69 Bar) for leakage at the seat and packing.
- Optional Hydrostatic Test : This test is performed with De-ionized water at 1.5 times the working pressure.

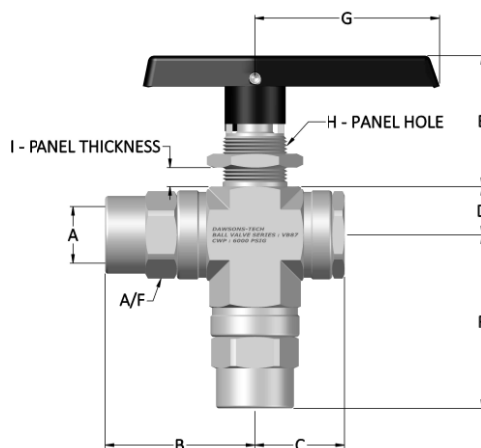
Certification :

The certificate to 3.1 acc. to EN10204 for Valve Body Material and pressure test will be provided on request.

MATERIAL OF CONSTRUCTIONS :

Sr. No.	Part Description	Material
1	Handle With Brass Insert	Nylon
2	Grub Screw	SS316
3	Panel Nut	SS316
4	Packing Nut	SS316
5	Stem Bearing	PEEK
6	Stem Washer	PEEK
7	Stem 'O' Ring	Fluorocarbon
8	Stem Back-up Ring	PTFE
9	Stem Seal Retainer	SS316
10	Retainer Back-up Ring	PTFE
11	Retainer 'O' Ring	Fluorocarbon
12	Valve Stem	SS316
13	End Connector	SS316
14	Connector 'O' Ring	Fluorocarbon
15	Belleville Washers	Stainless Steel
16	Gland Back-up Ring	PTFE
17	Gland 'O' Ring	Fluorocarbon
18	Seat Gland	SS316
19	Ball Seat	PEEK
20	Floating Ball	SS316
21	Valve Body	SS316
22	End Plug	SS316
23	End Connector (Inlet)	SS316




STANDARD CONFIGURATION DIMENSIONS

End Connection		Dimensions in mm											Dawsons-Tech Part No.
Type	Size-A	Orifice (mm)	Cv	B	C	D	E	F	G	H	I	A/F	
Female NPT	1/8"	4.2	0.92	30.0	23.2	8.6	34.5	34.3	30.0	14.8	4.0	14.27	VB87-FF2N
	1/4"	6.3	2.34	37.7	26.0	13.5	38.2	43.8	38.0	19.5	6.3	22.2	VB87-FF4N
	3/8"	8.2	4.30	36.4	28.8	15.3	39.0	46.0	38.0	19.5	6.3	23.8	VB87-FF6N
	1/2"	10.2	6.42	46.5	31.5	16.0	46.0	54.6	63.5	22.7	9.5	27.0	VB87-FF8N
	3/4"	12.2	12.45	50.0	33.6	18.6	44.5	58.0	63.5	22.7	9.5	31.5	VB87-FF12N
Male NPT	1/8"	4.2	0.92	31.6	23.2	8.6	34.4	36.0	30.0	14.8	4.0	14.27	VB87-MM2N
	1/4"	6.3	2.34	42.7	26.0	13.5	38.2	46.2	38.0	19.5	6.3	22.2	VB87-MM4N
	3/8"	8.2	4.30	43.0	28.8	15.3	39.0	49.2	38.0	19.5	6.3	23.8	VB87-MM6N
	1/2"	10.2	6.42	49.4	31.5	16.0	46.0	58.5	63.5	22.7	9.5	27.0	VB87-MM8N
	3/4"	12.2	12.45	52.7	33.6	18.6	44.5	62.0	63.5	22.7	9.5	28.57	VB87-MM12N
Fractional Tube Fittings	1/8"	4.2	0.21	33.0	23.2	8.6	34.5	35.2	30.0	14.8	4.0	14.27	VB87-TT2
	1/4"	6.3	0.92	34.7	26.0	13.5	38.2	37.0	38.0	19.5	6.3	22.2	VB87-TT4
	3/8"	8.2	2.34	40.2	28.8	15.3	39.0	44.4	38.0	19.5	6.3	23.8	VB87-TT6
	1/2"	10.2	6.42	47.9	31.5	16.0	46.0	51.2	63.5	22.7	9.5	27.0	VB87-TT8
	3/4"	12.2	12.45	50.0	33.6	18.6	44.5	54.5	63.5	22.7	9.5	28.57	VB87-TT12
Metric Tube Fittings	3mm	2.0	0.21	31.0	23.2	8.6	34.5	35.2	30.0	14.8	4.0	14.27	VB87-TT3M
	6mm	4.2	0.92	32.8	23.2	8.6	34.5	37.2	30.0	14.8	4.0	14.27	VB87-TT6M
	8mm	6.3	2.34	39.6	26.0	13.5	38.2	44.0	38.0	19.5	6.3	22.2	VB87-TT8M
	10mm	8.2	4.30	41.6	28.8	15.3	39.0	47.0	38.0	19.5	6.3	23.8	VB87-TT10M
	12mm	10.2	6.42	42.5	31.5	16.0	46.0	51.6	63.5	22.7	9.5	27.0	VB87-TT12M
	16mm	12.2	12.45	46.0	33.6	18.6	44.5	55.0	63.5	22.7	9.5	28.57	VB87-TT16M
Metal Gasket Face Seal	1/4"	4.5	1.03	34.3	23.2	8.6	34.5	37.2	30.0	14.8	4.0	14.27	VB87-GFS4
	1/2"	9.5	5.57	42.5	31.5	16.0	46.0	51.6	63.5	22.7	9.5	27.0	VB87-GFS8
'O' Ring Face Seal	1/4"	4.5	1.03	37.6	23.2	8.6	34.5	37.2	30.0	14.8	4.0	14.27	VB87-ORF4
	1/2"	9.5	55.7	55.7	31.5	16.0	46.0	58.5	63.5	22.7	9.5	27.0	VB87-ORF8

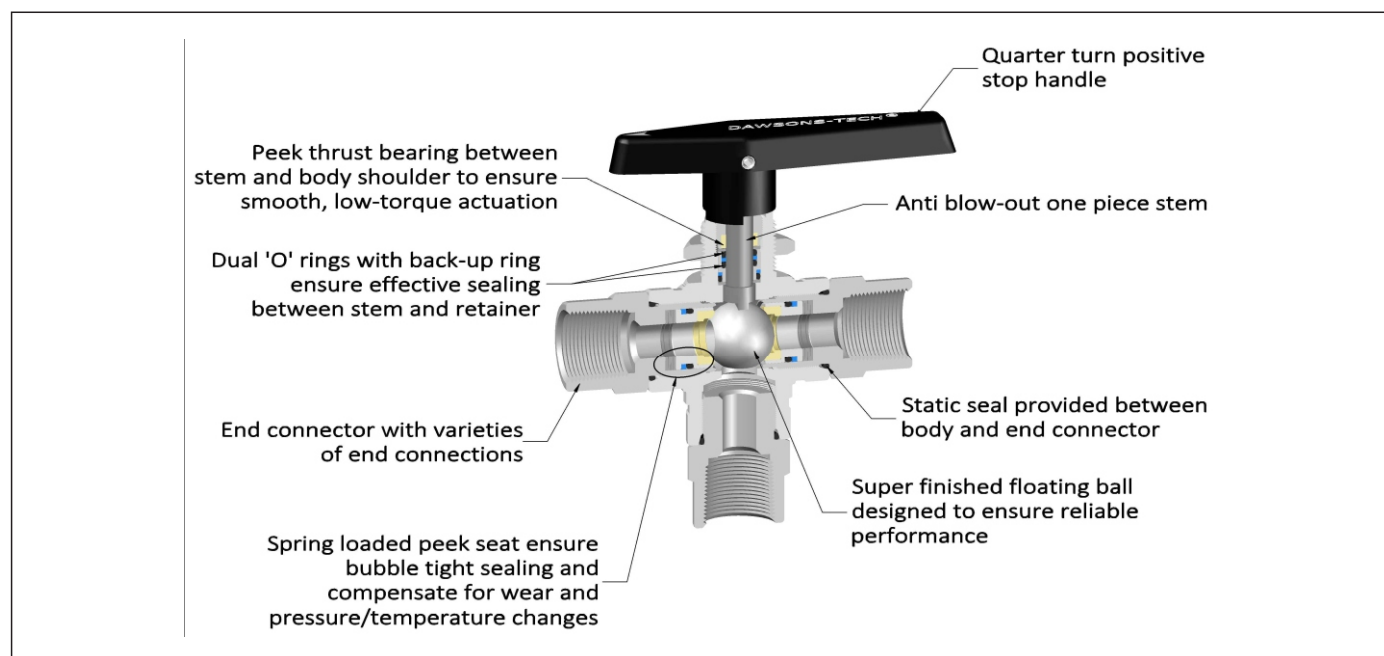
Dimensions are for reference only and subject to change.

DAWSONS-TECH Ball Valves Series : VB91 with Live Loaded PEEK Seat provides repeated leak tight shut off and also compensate for wear and pressure / temperature fluctuations during its operations. This Valves are most suitable to be used in Fluid / Gas Control System in wide range of industrial segments. This Valves can be used for diverting the flow of Fluid / Gas utilized in industries like Process and Instrumentation. The Three-way Ball Valves are designed to inlet the media through the bottom port and direct it out from any of the two outlet ports. These Valves are also used to inlet the media from either of two inlet side ports and divert it through a single bottom outlet port.



Features / Benefits :

- Available in Material SS316
- 180° Low Torque Actuation
- Live loaded PEEK Seat
- Panel Mounting and Floating Ball design
- Every Valve is pressure tested



Product Range & Operating Parameters :

- Pressure Rating : UPTO 413 Bar (6000 PSIG) at CWP with PTFE packing, PEEK Seat and Fluorocarbon 'O' Ring
- Temperature Rating : -54°C to 180°C (depending on 'O' Ring Material)
- End Connections : Fractional 1/4" to 3/4" Tube OD
Metric 6mm to 16mm Tube OD
- Pipe Threads : 1/4" to 3/4" Male / Female BSP / BSPT / NPT

Applications :

- Hydraulic
- Gas
- Instrument Air Lines
- High Pressure Instrument Lines
- General Plant Service

Type Test Approvals : The design of **DAWSONS-TECH** Ball Valves Series : VB91 have been tested for Hydrostatic Proof and Burst Test in accordance with MSS SP-99-2016a Clause 5.5 & 5.6.

Testing :

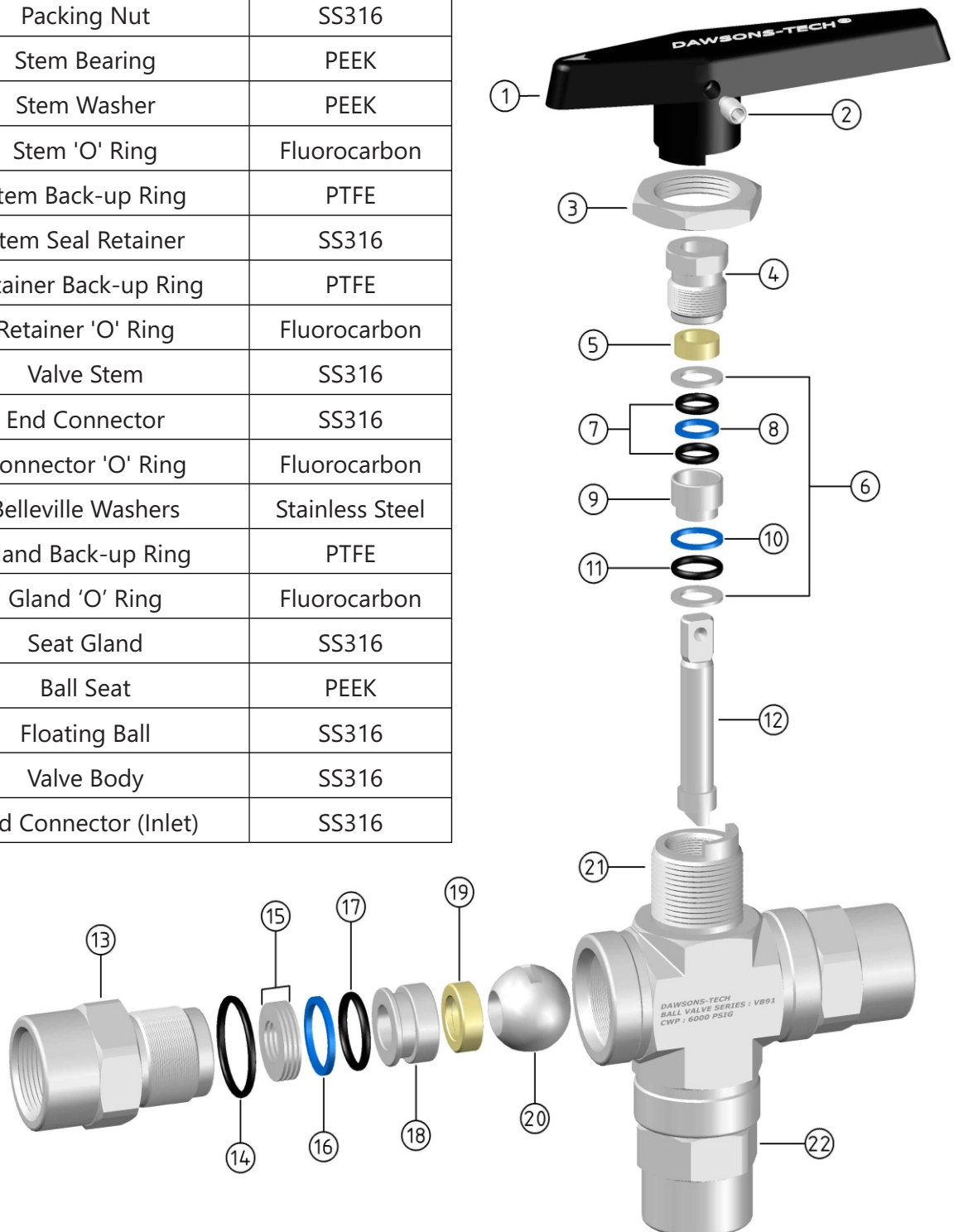
- Standard Test : Each Valve is pressure tested with Nitrogen at 1000 PSIG (69 Bar) for leakage at the seat and packing.
- Optional Hydrostatic Test : This test is performed with De-ionized water at 1.5 times the working pressure.

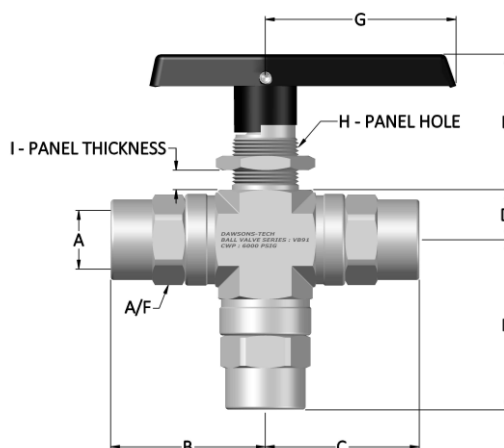
Certification :

The certificate to 3.1 acc. to EN10204 for Valve Body Material and pressure test will be provided on request.

MATERIAL OF CONSTRUCTIONS :

Sr. No.	Part Description	Material
1	Handle With Brass Insert	Nylon
2	Grub Screw	SS316
3	Panel Nut	SS316
4	Packing Nut	SS316
5	Stem Bearing	PEEK
6	Stem Washer	PEEK
7	Stem 'O' Ring	Fluorocarbon
8	Stem Back-up Ring	PTFE
9	Stem Seal Retainer	SS316
10	Retainer Back-up Ring	PTFE
11	Retainer 'O' Ring	Fluorocarbon
12	Valve Stem	SS316
13	End Connector	SS316
14	Connector 'O' Ring	Fluorocarbon
15	Belleville Washers	Stainless Steel
16	Gland Back-up Ring	PTFE
17	Gland 'O' Ring	Fluorocarbon
18	Seat Gland	SS316
19	Ball Seat	PEEK
20	Floating Ball	SS316
21	Valve Body	SS316
22	End Connector (Inlet)	SS316





STANDARD CONFIGURATION DIMENSIONS

End Connection		Dimensions in mm											Dawsons-Tech Part No.
Type	Size-A	Orifice (mm)	Cv	B	C	D	E	F	G	H	I	A/F	
Female NPT	1/8"	4.2	0.92	31.9	31.9	8.6	34.5	34.3	30.0	14.8	4.0	14.27	VB91-FF2N
	1/4"	6.3	2.34	39.6	39.6	13.5	38.2	43.8	38.0	19.5	6.3	22.2	VB91-FF4N
	3/8"	8.2	4.30	42.8	42.8	15.3	39.0	46.0	38.0	19.5	6.3	23.8	VB91-FF6N
	1/2"	10.2	6.42	51.3	51.3	16.0	46.0	54.6	63.5	22.7	9.5	27.0	VB91-FF8N
	3/4"	12.2	12.45	53.6	53.6	18.6	44.5	58.0	63.5	22.7	9.5	31.5	VB91-FF12N
Male NPT	1/8"	4.2	0.92	33.7	33.7	8.6	34.4	36.0	30.0	14.8	4.0	14.27	VB91-MM2N
	1/4"	6.3	2.34	42.0	42.0	13.5	38.2	46.2	38.0	19.5	6.3	22.2	VB91-MM4N
	3/8"	8.2	4.30	46.2	46.2	15.3	39.0	49.2	38.0	19.5	6.3	23.8	VB91-MM6N
	1/2"	10.2	6.42	55.2	55.2	16.0	46.0	58.5	63.5	22.7	9.5	27.0	VB91-MM8N
	3/4"	12.2	12.45	57.4	57.4	18.6	44.5	62.0	63.5	22.7	9.5	28.57	VB91-MM12N
Fractional Tube Fittings	1/8"	4.2	0.21	33.0	33.0	8.6	34.5	35.2	30.0	14.8	4.0	14.27	VB91-TT2
	1/4"	6.3	0.92	34.7	34.7	13.5	38.2	37.0	38.0	19.5	6.3	22.2	VB91-TT4
	3/8"	8.2	2.34	40.2	40.2	15.3	39.0	44.4	38.0	19.5	6.3	23.8	VB91-TT6
	1/2"	10.2	6.42	47.9	47.9	16.0	46.0	51.2	63.5	22.7	9.5	27.0	VB91-TT8
	3/4"	12.2	12.45	50.0	50.0	18.6	44.5	54.5	63.5	22.7	9.5	28.57	VB91-TT12
Metric Tube Fittings	3mm	2.0	0.21	33.2	33.2	8.6	34.5	35.2	30.0	14.8	4.0	14.27	VB91-TT3M
	6mm	4.2	0.92	35.0	35.0	8.6	34.5	37.2	30.0	14.8	4.0	14.27	VB91-TT6M
	8mm	6.3	2.34	39.8	39.8	13.5	38.2	44.0	38.0	19.5	6.3	22.2	VB91-TT8M
	10mm	8.2	4.30	44.0	44.0	15.3	39.0	47.0	38.0	19.5	6.3	23.8	VB91-TT10M
	12mm	10.2	6.42	47.9	47.9	16.0	46.0	51.6	63.5	22.7	9.5	27.0	VB91-TT12M
	16mm	12.2	12.45	50.4	50.4	18.6	44.5	55.0	63.5	22.7	9.5	28.57	VB91-TT16M
Metal Gasket Face Seal	1/4"	4.5	1.03	36.2	36.2	8.6	34.5	37.2	30.0	14.8	4.0	14.27	VB91-GFS4
	1/2"	9.5	5.57	48.5	48.5	16.0	46.0	51.6	63.5	22.7	9.5	27.0	VB91-GFS8
'O' Ring Face Seal	1/4"	4.5	1.03	39.5	39.5	8.6	34.5	37.2	30.0	14.8	4.0	14.27	VB91-ORF4
	1/2"	9.5	55.7	54.5	54.5	16.0	46.0	58.5	63.5	22.7	9.5	27.0	VB91-ORF8

Dimensions are for reference only and subject to change.

ORDERING INFORMATION :

For Example : PART NO. VB71-FF8N-SSKV (TWO-WAY BALL VALVES SERIES : VB71)

Valve Series	End Connection Type Port 1 / Port 2	End Connection Size	Pipe Thread Type	Material of Construction	Ball Seat	Seal Material
VB71	FF	8	N	SS	K	V
1	2	3	4	5	6	7

For Example : PART NO. VB81-TT8-SSKV (TWO-WAY BALL VALVES SERIES : VB81)

Valve Series	End Connection Type Port 1 / Port 2	End Connection Size	Pipe Thread Type	Material of Construction	Ball Seat	Seal Material
VB81	TT	8	-	SS	K	V
1	2	3	4	5	6	7

For Example : PART NO. VB91-TTT4-SSKV (THREE-WAY BALL VALVES SERIES : VB91)

Valve Series	End Connection Type Port 1 / Port 2 / Port 3	End Connection Size	Pipe Thread Type	Material of Construction	Ball Seat	Seal Material
VB91	TTT	4	-	SS	K	V
1	2	3	4	5	6	7

1) Valve Series	VB41
	VB43
	VB45
	VB47
	VB71
	VB81
	VB87
	VB91

2) End Connection Type	T : Tube OD
	GFS : Metal Gasket Face Seal
	ORF : 'O' Ring Face Seal
	F : Female
	M : Male

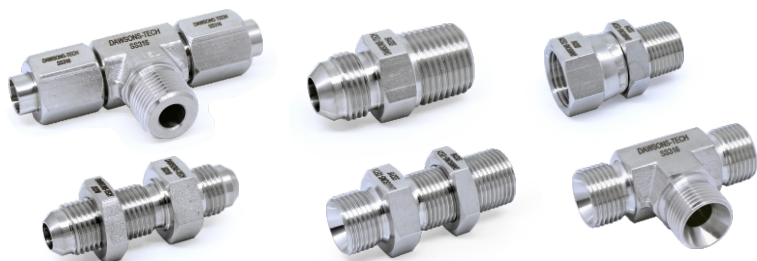
3)	End Connection Size Tube Fittings			
	Fractional Tube		Metric Tube	
	2	1/8"	3m	3mm
	4	1/4"	6m	6mm
	6	3/8"	8m	8mm
	8	1/2"	10m	10mm
	12	3/4"	12m	12mm
	16	1"	22m	22mm
			25m	25mm
	Pipe End Connection Size		2	1/8"
			4	1/4"
			6	3/8"
			8	1/2"
			12	3/4"
			16	1"

4) End Connection Thread Type	N : NPT
	RT : BSPT
	RG : BSP (Female)

5) Material	SS : SS316
	SSL : SS316L
	CS : Carbon Steel

6) Valve Seat	T : PTFE
	K : PEEK

7) 'O' Ring	V : Fluorocarbon
	R : Nitrile
	E : EPDM
	Z : Neoprene



37° Flare Fittings / BSP 60° Cone Fittings



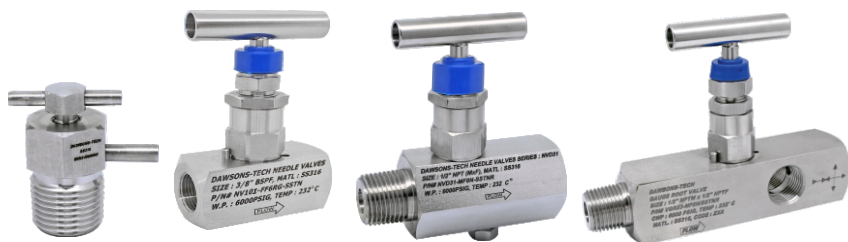
**Precision Threaded / Socket /
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High Purity Fittings



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Instrumentation Valves



Gauge Cock & Accessories



High Pressure Ball Valves



Check Valves



Quick Connect Couplings to ISO 16028 & ISO 7241-1 Series B



Customized Fittings and Valves

NOTES : _____

[illegible]



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LLPIN: AAN-0434

Catalogue No. VB-21