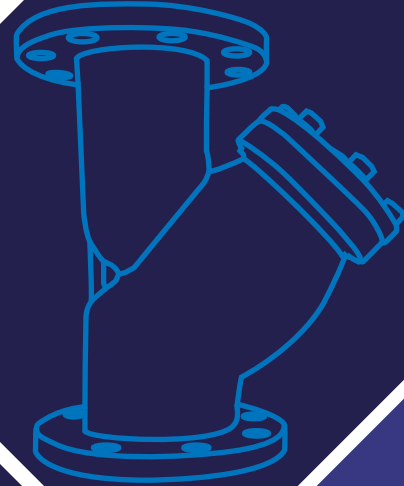
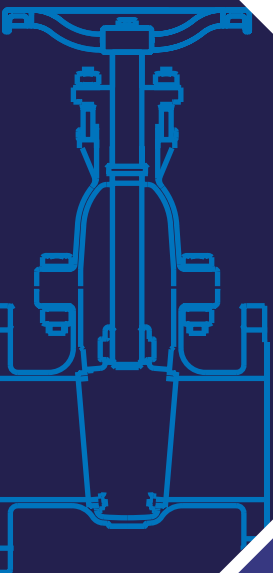




fivalco®

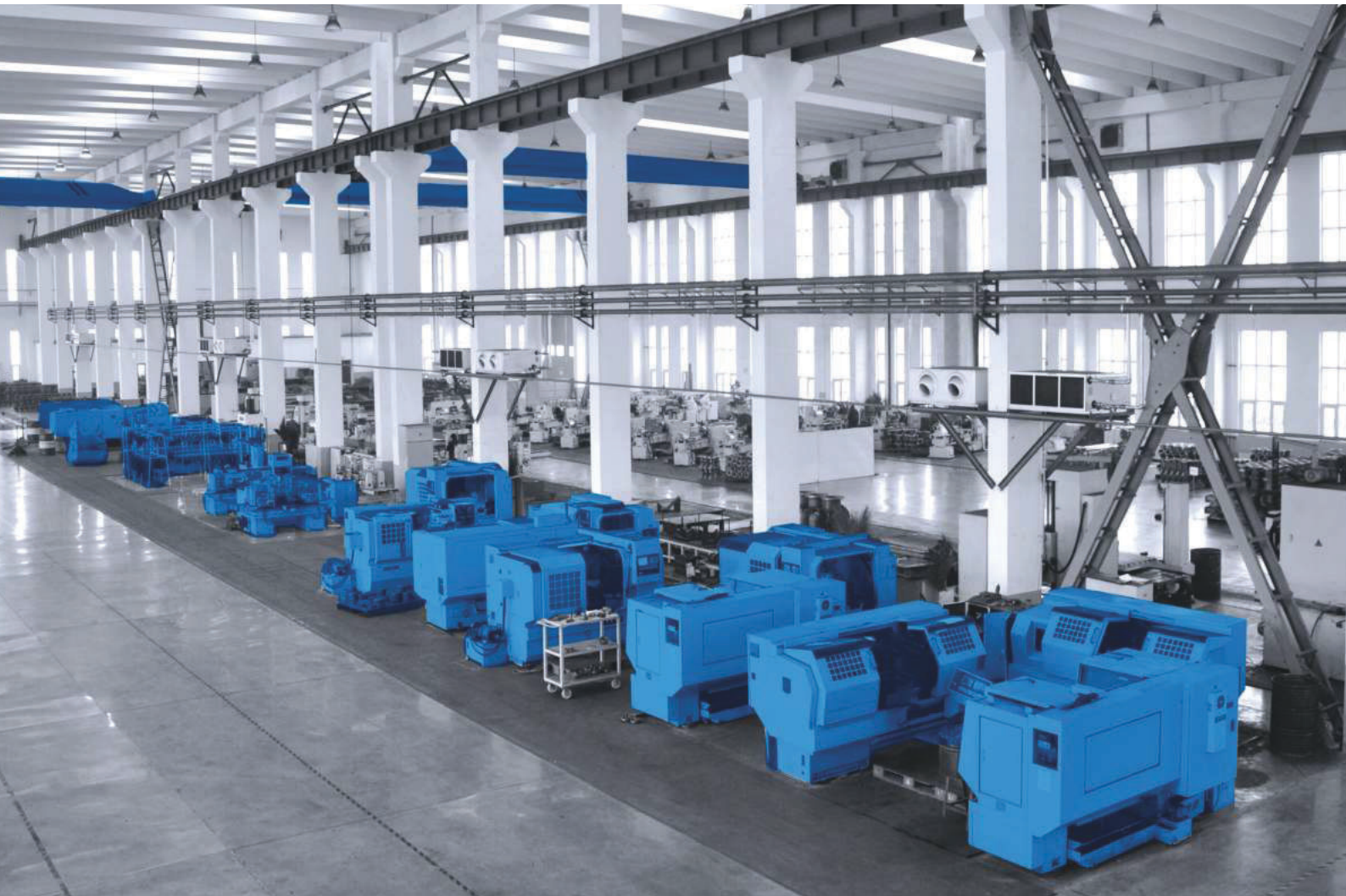


2026

PRODUCT CATALOGUE

MECHANICAL SERVICES & HVAC

A truly world class manufacturer serving Global Markets



A True Manufacturer

Fivalco is an inventor and leading manufacturer of superior flow control products. Our products are designed-tested and certified by the leading testing agencies, including the Underwriters Laboratories (UL), Factory Mutual (FM), Water Regulations Approval Scheme (WRAS), National Sanitation Foundation (NSF) and etc, based on a wide range of global standards.

Founded in 1985 by Sir Michael J.Graham in California, USA, we have dedicated ourselves to the production of critical flow control products, serving the critical Fire Protection, Heating, Ventilation & Air Conditioning (HVAC), General Process Industries, Water Supply & Water Treatment markets worldwide.

We operate from our main facilities utilising the latest manufacturing technologies and equipment available to produce world class flow control products. We strive to continue to provide the highest quality products to discerning customers at all times.

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An American brand trusted for over 40 years

The quality goes in before our name goes on 

U-Type Butterfly Valve PN16

F11U16



FEATURES & SPECIFICATIONS

- Higher strength for disc with pinned single shaft ensure optimal alignment
- Centrally mounted disc and hydrodynamic design minimize pressure loss
- Can be installed at horizontal or vertical pipe line
- Phenolic backed rubber seat is non-collapsible, stretch resistant and easily replaceable
- Excellent flow characteristic with flow in either direction
- Precision machining of disc for low operating torque
- Design conforms to BS EN 593 / BS 5155 / MSS SP-67 / API 609
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Water Supply Works, Water Treatment Plant, General Industries



TECHNICAL SPECIFICATIONS

Size	DN40 ... DN1000
Body Design	Wafer
Working Pressure	16bar
Shell Test Pressure (x1.5)	24bar
Seat Test Pressure (x1.1)	17.6bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR) 5°C ... 120°C (PTFE)
Suitable Media	Water
Operator	Lever, Wormgear, Electric Actuator
Connection	BS 4504 PN10 / PN16 EN1092-2 PN10 / PN16 JIS B2239 10K / 16K ANSI Class 125 / 150
Optional Accessories	Chain Wheel, Limit Switch

MATERIAL SPECIFICATIONS

Part	Material	Part	Material
Body	Ductile Iron	Stem	Stainless Steel 410
Disc	Ductile Iron Epoxy coated Ductile Iron Nylon coated Ductile Iron Aluminium Bronze Stainless Steel 304 Stainless Steel 316		Stainless Steel 316 (DN40 ... DN200)
Seat	EPDM NBR PTFE (Teflon) (DN50 ... DN150)	Taper Pin	Stainless Steel 416 (for Ductile Iron disc) Stainless Steel 316 (for SS304 / SS316 / ALBC disc)
		O-Ring	EPDM NBR
		Bushing	PTFE (DN40 ... DN600) Luberized Bronze (DN700 & above)
		Washer	Stainless Steel 304

WAFER BUTTERFLY VALVE

PN16 V1116

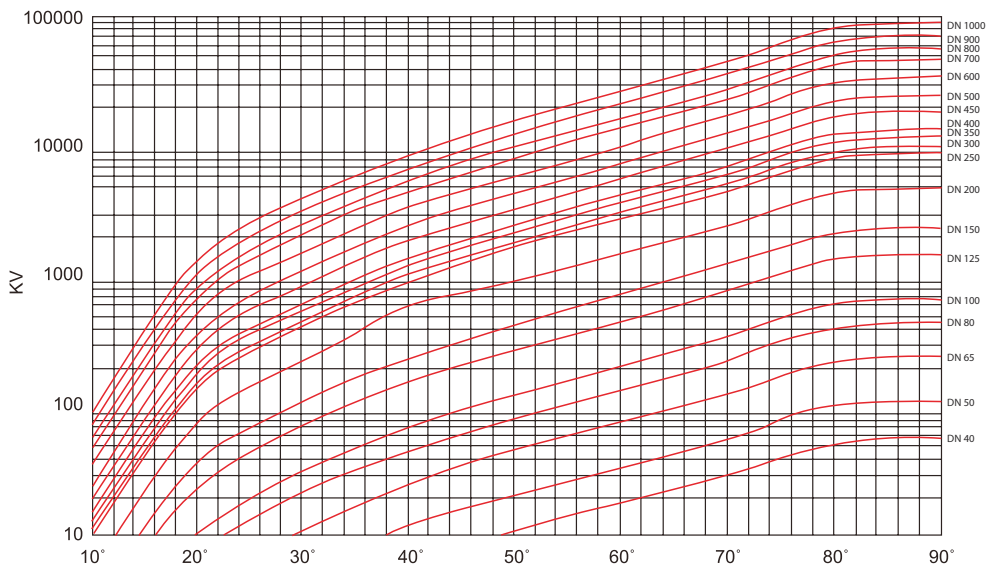


VALVE COEFFICIENT (FULL OPEN)

Cv = 1.17Kv

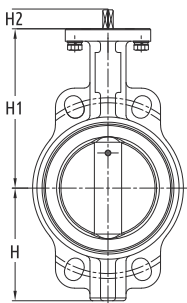
DN (mm)	40	50	65	80	100	125	150	200	250	300	350
DN (inch)	1½	2	2½	3	4	5	6	8	10	12	14
Cv	69	135	220	302	600	1022	1579	3136	5340	8250	11917

DN (mm)	400	450	500	600	700	750	800	900	1000
DN (inch)	16	18	20	24	28	30	32	36	40
Cv	16388	21705	27908	43116	49500	59800	68250	86375	119750



DIMENSIONS (VALVE BODY)

(mm)



DN (mm)	40	50	65	80	100	125	150	200	250	300	350
DN (inch)	1½	2	2½	3	4	5	6	8	10	12	14
H	66	68.6	76	95	110	129.4	142	176	212	248.5	272
H1	130	141.2	150.4	156.4	167.9	186.5	205.7	230.6	269.9	327.8	368
H2	15	15	19	19	19	19	19	25	27	27	40
L	33	42	44.5	44.5	51	54.5	54.5	59.6	67	75.5	75.5
L1	37	46.1	49.1	49.1	55.3	58.8	59.1	64.1	71.8	79.5	79.5

DN (mm)	400	450	500	600	700	750	800	900	1000
DN (inch)	16	18	20	24	28	30	32	36	40
H	333	364	389	459	521	554	591	650	713
H1	400	422	480	562	626	660	666	722	806
H2	52	52	64	70	95	95	95	130	130
L	102	114	127	-	-	-	-	-	-
L1	106.5	118.5	131.5	151	165	167	188	203	216

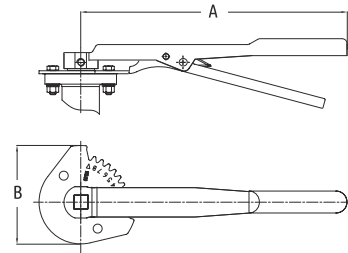
Note : Mono Flange for DN250 and above.

DIMENSIONS (VALVE OPERATOR)

Malleable Iron / Stainless Steel Lever
Stainless Steel SUS304 Top Indicator Plate

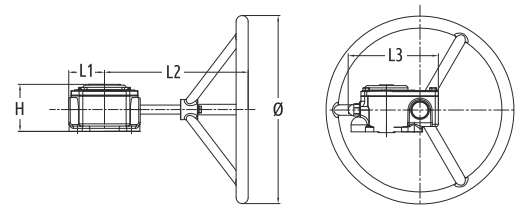
DN	(mm) (inch)	40-80	100-125	150	200-250	300
		1.5-3	4-5	6	8-10	12
	A	195	266	328	386	391
	B	95	109	109	164	164

(mm)



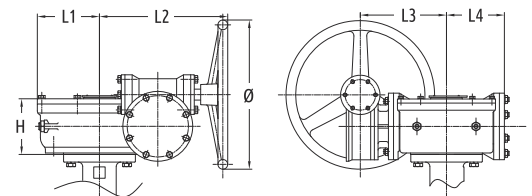
Ductile Iron 1-Stage Worm Gear and Handwheel (IP67 Protection)
Stainless Steel SUS410 Gear Box Shaft

VALVE DIAMETER	H	∅	L1	L2	L3
DN50 - DN80	51	150	34	160	106
DN100 - DN200	51	150	45	190	106
DN250 - DN300	62.5	250	47.5	260	123
DN350	65	300	62.5	270	154
DN400	90	300	70	320	175
DN450	90	400	70	320	175
DN500	97	400	93.5	370	214
DN600	97	500	93.5	370	214



Cast Iron 2-Stage Worm Gear and Handwheel
Carbon Steel Gear Box Shaft

VALVE DIAMETER	H	∅	L1	L2	L3	L4
DN700 - DN800	158	425	173	359	245	173
DN900 - DN1000	185	425	201	399	279	201



OPERATING TORQUE

Unit : N.m

DN	(mm) (inch)	40	50	65	80	100	125	150	200	250	300	350
		1½	2	2½	3	4	5	6	8	10	12	14
	Wet	15.1	15.1	17.2	23.1	39.8	61.9	102	192	323	490	625
	Dry	24.2	24.2	32.7	43.7	72.8	108	174	330	549	799	969

DN	(mm) (inch)	400	450	500	600	700	750	800	900	1000
		16	18	20	24	28	30	32	36	40
	Wet	846	1131	1431	2301	4253	4897	5600	6834	11603
	Dry	1307	1787	2288	3711	6380	7345	8400	10251	17405

FEATURES & SPECIFICATIONS

- Higher strength for disc with pinned single shaft ensure optimal alignment
- Centrally mounted disc and hydrodynamic design minimize pressure loss
- Can be installed at horizontal or vertical pipe line
- Phenolic backed rubber seat is non-collapsible, stretch resistant and easily replaceable
- Excellent flow characteristic with flow in either direction
- Precision machining of disc for low operating torque
- Design conforms to BS EN 593 / BS 5155 / MSS SP-67 / API 609
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Water Supply Works, Water Treatment Plant, General Industries

TECHNICAL SPECIFICATIONS

Size	DN50 ... DN600
Body Design	Wafer
Working Pressure	25bar
Shell Test Pressure (x1.5)	37.5bar
Seat Test Pressure (x1.1)	27.5bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)
Suitable Media	Water
Operator	Lever, Wormgear, Electric Actuator
Connection	BS 4504 PN25 EN1092-2 PN25 JIS B2239 20K ANSI Class 150
Optional Accessories	Chain Wheel, Limit Switch

MATERIAL SPECIFICATIONS

Part	Material
Body	Ductile Iron
Disc	Ductile Iron Epoxy coated Ductile Iron Nylon coated Ductile Iron Aluminium Bronze Stainless Steel 304 Stainless Steel 316
Seat	EPDM NBR
Stem	Stainless Steel 410 Stainless Steel 431

Part	Material
Taper Pin	Stainless Steel 316 Stainless Steel 416
Y-Ring	EPDM NBR
Bushing	PAP
Washer	Stainless Steel 304
Bolt	Stainless Steel 304
Sealing Set	Carbon Steel Galvanized
Sealing Gasket	PTFE
Socket Head Screw	Carbon Steel Galvanized

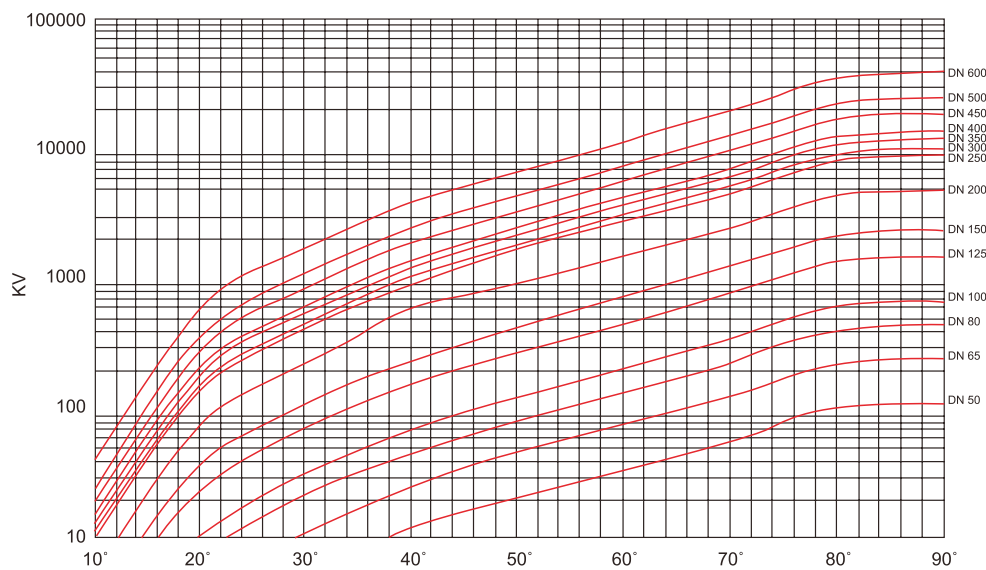


VALVE COEFFICIENT (FULL OPEN)

Cv = 1.17Kv

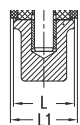
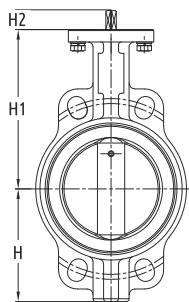
DN (mm)	50	65	80	100	125	150	200
DN (inch)	2	2½	3	4	5	6	8
Cv	135	220	302	600	1022	1579	3136

DN (mm)	250	300	350	400	450	500	600
DN (inch)	10	12	14	16	18	20	24
Cv	5340	8250	11917	16388	21705	27908	43116



DIMENSIONS (VALVE BODY)

(mm)



DN (mm)	50	65	80	100	125	150	200
DN (inch)	2	2½	3	4	5	6	8
H	72	78	95	108	123	138	168
H1	143	156	162	177	190	205	236
H2	22	22	22	25	25	25	25
L	43	46	46	52	56	56	60
L1	47	50	50	56	60	60	64

DN (mm)	250	300	350	400	450	500	600
DN (inch)	10	12	14	16	18	20	24
H	207	243	272	342	372	402	467
H1	267	308	368	400	422	480	562
H2	27	27	34	52	52	64	64
L	68	78	78	102	114	127	154
L1	72	82	82	107	119	133	160

Note : Mono Flange for DN250 and above.

WAFER BUTTERFLY VALVE

PN25 F1125

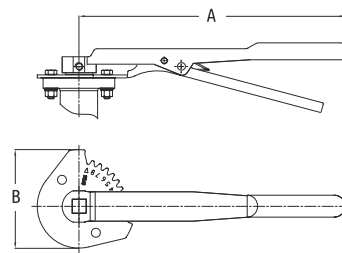


DIMENSIONS (VALVE OPERATOR)

Malleable Iron / Stainless Steel Lever
Stainless Steel SUS304 Top Indicator Plate

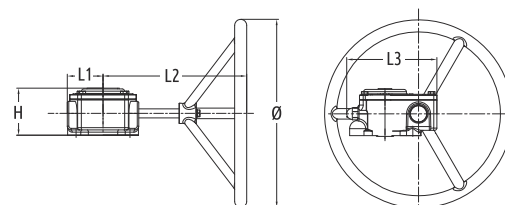
(mm)

DN	(mm)	50	65	80	100	125	150	200
	(inch)	2	2½	3	4	5	6	8
A		266	266	266	266	266	266	357
B		110	110	110	110	110	110	163



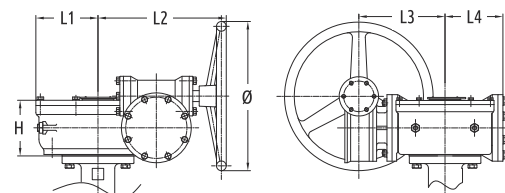
Cast Iron 1-Stage Worm Gear and Handwheel
Carbon Steel Gear Box Shaft

VALVE DIAMETER	H	∅	L1	L2	L3
DN50 - DN125	70	150	52	150	129
DN150 - DN200	80	280	75	208	171
DN250 - DN300	80	280	80	212	198
DN350	80	325	80	212	198
DN400	99	400	125	275	280



Cast Iron 2-Stage Worm Gear and Handwheel
Carbon Steel Gear Box Shaft

VALVE DIAMETER	H	∅	L1	L2	L3	L4
DN500	125	285	107	260	175	107
DN600	136	385	131	285	193	131



OPERATING TORQUE

Unit: N.m

DN	(mm)	50	65	80	100	125	150	200
	(inch)	2	2½	3	4	5	6	8
Wet		23.6	26.9	36.1	62.2	96.7	159.4	300.0
Dry		37.8	51.1	68.3	113.8	168.8	271.9	515.6

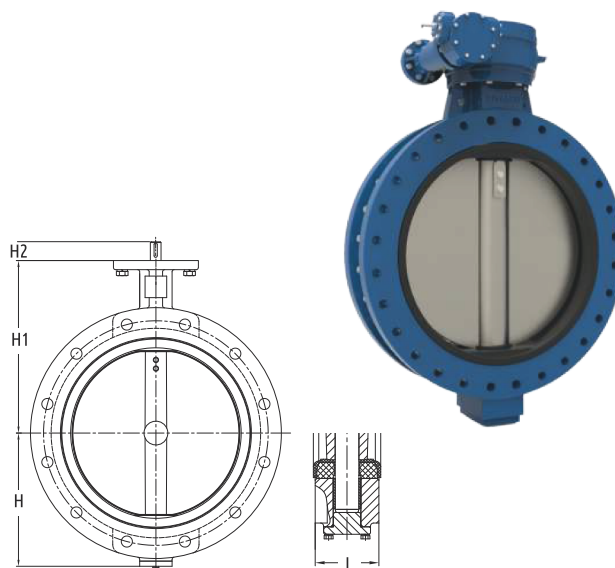
DN	(mm)	250	300	350	400	450	500	600
	(inch)	10	12	14	16	18	20	24
Wet		504.7	765.6	976.6	1321.9	1767.2	2235.9	3595.3
Dry		857.8	1248.4	1514.1	2042.2	2792.2	3575.0	5798.4

FEATURES & SPECIFICATIONS

- U-type double flange
- Comply with BS EN 593 / BS 5155 / MSS SP-67
- Flange drilled to BS 4504 PN16 / EN1092-2 PN16 / ANSI Class 150 / JIS10K / AS 2129 Table E (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Water Supply Works, Water Treatment Plant, General Industries

PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Test Pressure (x1.5)	24bar
Seat Test Pressure (x1.1)	17.6bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)
Suitable Media	Water, Oil & Gas



MATERIAL SPECIFICATIONS

Part	Material	Part	Material
Body	Ductile Iron	Bushing	Bronze
Disc	Ductile Iron Aluminium Bronze Stainless Steel 304 Stainless Steel 316		PTFE
Seat	EPDM NBR	Shaft	Stainless Steel 431
Washer	Spring Steel	Taper Pin	Stainless Steel 416 Stainless Steel 316
		O-Ring	EPDM NBR
		Bolt	Carbon Steel

DIMENSIONS

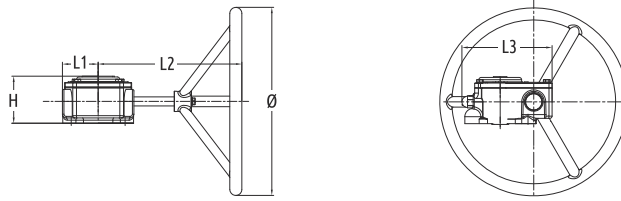
DN	(mm)	150	200	225	250	300	350	375	400	450	500
	(inch)	6	8	9	10	12	14	15	16	18	20
	H	133	175	190	201	242	263	313	309	337	371
	H1	226	260	275	292	337	368	375	400	422	480
	H2	30	34	34	34	34	40	52	52	52	64
	L	54.5	59.6	67	67	75.5	75.5	102	102	114	127

DN	(mm)	600	650	700	750	800	900	1000	1050	1100	1200
	(inch)	24	26	28	30	32	36	40	42	44	48
	H	459	475	521	554	591	650	698	770	790	855
	H1	562	540	626	660	666	722	806	865	820	938
	H2	70	70	95	95	95	130	130	150	150	150
	L	151	172	165	167	188	203	216	251	252.5	276

U-TYPE BUTTERFLY VALVE

PN16 F11U16

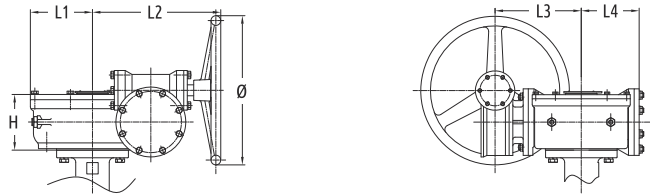
DIMENSIONS (VALVE OPERATOR)



Cast Iron 1-Stage Worm Gear and Handwheel Carbon Steel Gear Box Shaft

(mm)

VALVE DIAMETER	H	Ø	L1	L2	L3
DN150	50	150	36	160	102
DN200	61	250	45.5	220	121
DN250	61.5	250	62.5	260	121
DN300 - DN350	71	250	62.5	270	154
DN400 - DN450	91.5	400	75	320	177
DN500 - DN600	150	400	130	341	306



Cast Iron 2-Stage Worm Gear and Handwheel Carbon Steel Gear Box Shaft

VALVE DIAMETER	H	Ø	L1	L2	L3	L4
DN700 - DN800	158	425	173	359	245	173
DN900 - DN1100	185	425	201	399	279	201
DN1200	216	425	185	443	311	255

OPERATING TORQUE

Unit : N.m

DN	(mm)	150	200	225	250	300	350	375	400	450	500
	(inch)	6	8	9	10	12	14	15	16	18	20
	Wet	102	192	323	323	490	625	846	846	1131	1431
	Dry	174	330	549	549	799	969	1307	1307	1787	2288
DN	(mm)	600	650	700	750	800	900	1000	1050	1100	1200
	(inch)	24	26	28	30	32	36	40	42	44	48
	Wet	2301	4253	4253	4897	5600	6834	11603	11731	21840	16321
	Dry	3711	6380	6380	7345	8400	10251	17405	17596	21840	24482

FEATURES & SPECIFICATIONS

- Higher strength for disc with pinned single shaft ensure optimal alignment
- Centrally mounted disc and hydrodynamic design minimize pressure loss
- Can be installed at horizontal or vertical pipe line
- Phenolic backed rubber seat is non-collapsible, stretch resistant and easily replaceable
- Excellent flow characteristic with flow in either direction
- Precision machining of disc for low operating torque
- Design conforms to BS EN 593 / BS 5155 / MSS SP-67 / API 609
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Water Supply Works, Water Treatment Plant, General Industries



TECHNICAL SPECIFICATIONS

Size	DN40 ... DN1200
Body Design	Lugged
Working Pressure	16bar
Shell Test Pressure (x1.5)	24bar
Seat Test Pressure (x1.1)	17.6bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)
Suitable Media	Water
Operator	Lever, Wormgear, Electric Actuator
Connection	BS 4504 PN10 / PN16 EN1092-2 PN10 / PN16 JIS B2239 10K / 16K ANSI Class 125 / 150
Optional Accessories	Chain Wheel, Limit Switch

MATERIAL SPECIFICATIONS

Part	Material
Body	Ductile Iron
Disc	Ductile Iron
	Epoxy coated Ductile Iron
	Nylon coated Ductile Iron
	Aluminium Bronze
	Stainless Steel 304
Stainless Steel 316	
Seat	EPDM
	NBR

Part	Material
Stem	Stainless Steel 410
	Stainless Steel 316 (DN40 ... DN200)
Taper Pin	Stainless Steel 416 (for Ductile Iron disc)
	Stainless Steel 316 (for SS304 / SS316 / ALBC disc)
O-Ring	EPDM
	NBR
Bushing	PTFE (DN40 ... DN600)
	Luberized Bronze (DN700)
Washer	Stainless Steel 304

FULL LUG BUTTERFLY VALVE

PN16 V1216

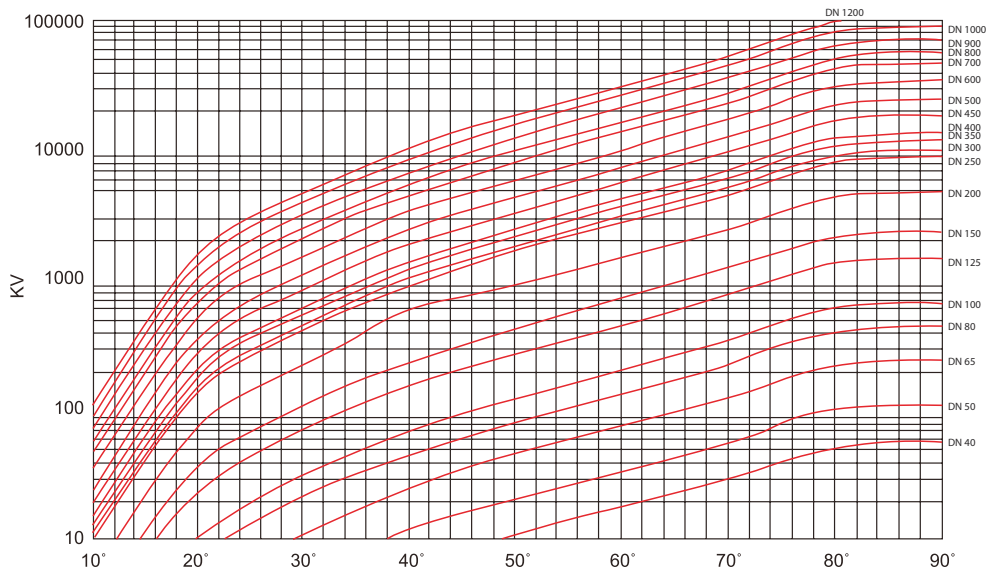


VALVE COEFFICIENT (FULL OPEN)

Cv = 1.17Kv

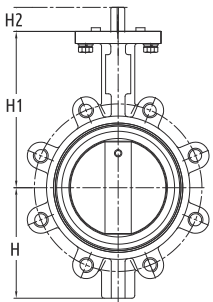
DN (mm)	40	50	65	80	100	125	150	200	250	300	350
DN (inch)	1½	2	2½	3	4	5	6	8	10	12	14
Cv	69	135	220	302	600	1022	1579	3136	5340	8250	11917

DN (mm)	400	450	500	600	700	750	800	900	1000	1200
DN (inch)	16	18	20	24	28	30	32	36	40	48
Cv	16388	21705	27908	43116	49500	59800	68250	86375	119750	154000



DIMENSIONS (VALVE BODY)

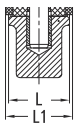
(mm)



DN (mm)	40	50	65	80	100	125	150	200	250	300	350
DN (inch)	1½	2	2½	3	4	5	6	8	10	12	14
H	66	68.6	76	95	110	129.4	142	176	212	248.5	269
H1	130	141.2	150.4	156.4	167.9	186.5	205.7	230.6	269.9	327.8	368
H2	22	22	22	22	25	25	25	25	27	27	40
L	33	42	44.5	44.5	51	54.5	54.5	59.6	67	75.5	75.5
L1	36.8	46.1	49.1	49.1	55.3	58.8	59.1	64.1	71.8	79.5	79.5

DN (mm)	400	450	500	550	600	650	700	800	900	1000	1200
DN (inch)	16	18	20	22	24	26	28	32	36	40	48
H	309	327	361	424	459	475	521	576	635	713	850
H1	400	422	480	533	562	540	626	666	722	806	938
H2	52	52	64	70	70	70	95	95	130	130	150
L	102	114	127	-	-	-	-	-	-	-	-
L1	106.5	118.5	131.5	151	156	172	165	188	203	216	276

Note : DN650 only available in ANSI Class 150 Flange.

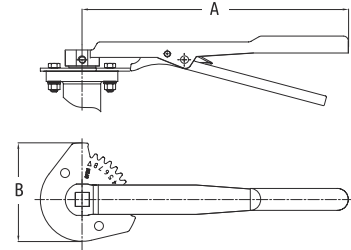


DIMENSIONS (VALVE OPERATOR)

Malleable Iron / Stainless Steel Lever
Stainless Steel SUS304 Top Indicator Plate

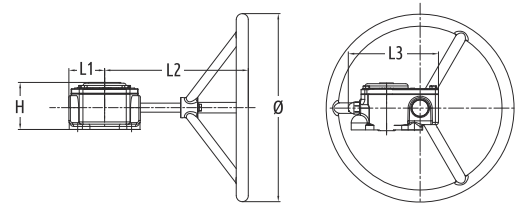
DN	(mm) (inch)	40-80	100-125	150	200-250	300
		1.5-3	4-5	6	8-10	12
	A	195	266	328	386	391
	B	95	109	109	164	164

(mm)



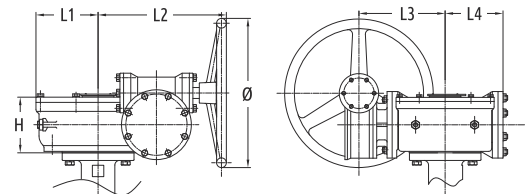
Ductile Iron 1-Stage Worm Gear and Handwheel (IP67 Protection)
Stainless Steel SUS410 Gear Box Shaft

VALVE DIAMETER	H	∅	L1	L2	L3
DN50 - DN80	51	150	34	160	106
DN100 - DN200	51	150	45	190	106
DN250 - DN300	62.5	250	47.5	260	123
DN350	65	300	62.5	270	154
DN400	90	300	70	320	175
DN450	90	400	70	320	175
DN500	97	400	93.5	370	214
DN600	97	500	93.5	370	214



Cast Iron 2-Stage Worm Gear and Handwheel
Carbon Steel Gear Box Shaft

VALVE DIAMETER	H	∅	L1	L2	L3	L4
DN700 - DN800	158	425	173	359	245	173
DN900 - DN1200	185	425	201	399	279	201



OPERATING TORQUE

DN	(mm) (inch)	40	50	65	80	100	125	150	200	250	300	350
		1½	2	2½	3	4	5	6	8	10	12	14
	Wet	15.1	15.1	17.2	23.1	39.8	61.9	102	192	323	490	625
	Dry	24.2	24.2	32.7	43.7	72.8	108	174	330	549	799	969

Unit: N.m

DN	(mm) (inch)	400	450	500	600	700	750	800	900	1000	1200
		16	18	20	24	28	30	32	36	40	48
	Wet	846	1131	1431	2301	4253	4897	5600	6834	11603	16321
	Dry	1307	1787	2288	3711	6380	7345	8400	10251	17405	24482

FULL LUG BUTTERFLY VALVE

PN25 F1225

FEATURES & SPECIFICATIONS

- Higher strength for disc with pinned single shaft ensure optimal alignment
- Centrally mounted disc and hydrodynamic design minimize pressure loss
- Can be installed at horizontal or vertical pipe line
- Phenolic backed rubber seat is non-collapsible, stretch resistant and easily replaceable
- Excellent flow characteristic with flow in either direction
- Precision machining of disc for low operating torque
- Design conforms to BS EN 593 / BS 5155 / MSS SP-67 / API 609
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Water Supply Works, Water Treatment Plant, General Industries

TECHNICAL SPECIFICATIONS

Size	DN50 ... DN600
Body Design	Lugged
Working Pressure	25bar
Shell Test Pressure (x1.5)	37.5bar
Seat Test Pressure (x1.1)	27.5bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)
Suitable Media	Water
Operator	Lever, Wormgear, Electric Actuator
Connection	BS 4504 PN25 EN1092-2 PN25 JIS B2239 20K ANSI Class 150
Optional Accessories	Chain Wheel, Limit Switch

MATERIAL SPECIFICATIONS

Part	Material
Body	Ductile Iron
Disc	Ductile Iron Epoxy coated Ductile Iron Nylon coated Ductile Iron Aluminium Bronze Stainless Steel 304 Stainless Steel 316
Seat	EPDM NBR
Stem	Stainless Steel 410 Stainless Steel 431

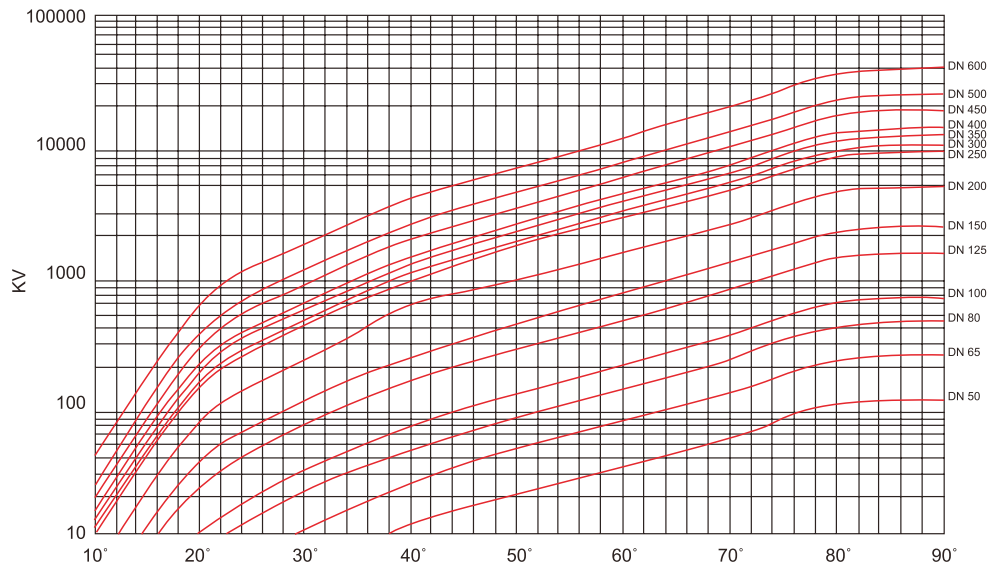
Part	Material
Taper Pin	Stainless Steel 316 Stainless Steel 416
Y-Ring	EPDM NBR
Bushing	PAP
Washer	Stainless Steel 304
Bolt	Stainless Steel 304
Sealing Set	Carbon Steel Galvanized
Sealing Gasket	PTFE
Socket Head Screw	Carbon Steel Galvanized



VALVE COEFFICIENT (FULL OPEN)

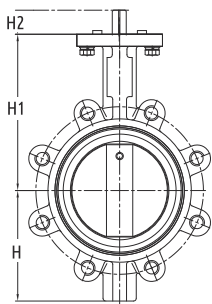
Cv = 1.17Kv

DN (mm)	50	65	80	100	125	150	200
(inch)	2	2½	3	4	5	6	8
Cv	135	220	302	600	1022	1579	3136
DN (mm)	250	300	350	400	450	500	600
(inch)	10	12	14	16	18	20	24
Cv	5340	8250	11917	16388	21705	27908	43116

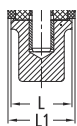


DIMENSIONS (VALVE BODY)

(mm)



DN (mm)	50	65	80	100	125	150	200
(inch)	2	2½	3	4	5	6	8
H	72	78	95	108	123	138	168
H1	143	156	162	177	190	205	236
H2	22	22	22	25	25	25	25
L	43	46	46	52	56	56	60
L1	47	50	50	56	60	60	64



DN (mm)	250	300	350	400	450	500	600
(inch)	10	12	14	16	18	20	24
H	207	243	285	342	372	402	467
H1	267	308	368	400	422	480	562
H2	27	27	34	52	52	64	64
L	68	78	78	102	114	127	154
L1	72	82	82	107	119	133	160

FULL LUG BUTTERFLY VALVE

PN25 F1225



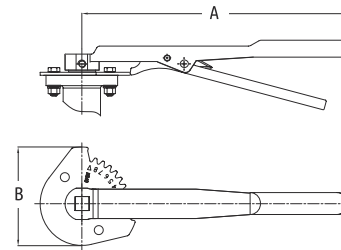
DIMENSIONS (VALVE OPERATOR)

Malleable Iron / Stainless Steel Lever

Stainless Steel SUS304 Top Indicator Plate

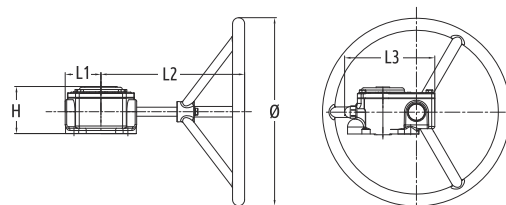
(mm)

DN	(mm)	50	65	80	100	125	150	200
	(inch)	2	2½	3	4	5	6	8
A		266	266	266	266	266	266	357
B		110	110	110	110	110	110	163



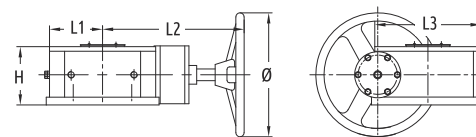
Cast Iron 1-Stage Worm Gear and Handwheel
Carbon Steel Gear Box Shaft

VALVE DIAMETER	H	∅	L1	L2	L3
DN50 - DN125	70	150	52	150	129
DN150 - DN200	80	280	75	208	171
DN250 - DN300	80	280	80	212	198
DN350	80	325	80	212	198
DN400	99	400	125	275	280
DN450	99	425	125	275	280



Cast Iron 2-Stage Worm Gear and Handwheel
Carbon Steel Gear Box Shaft

VALVE DIAMETER	H	∅	L1	L2	L3
DN500 - DN600	150	400	130	350	316



OPERATING TORQUE

Unit : N.m

DN	(mm)	50	65	80	100	125	150	200
	(inch)	2	2½	3	4	5	6	8
Wet		23.6	26.9	36.1	62.2	96.7	159.4	300.0
Dry		37.8	51.1	68.3	113.8	168.8	271.9	515.6

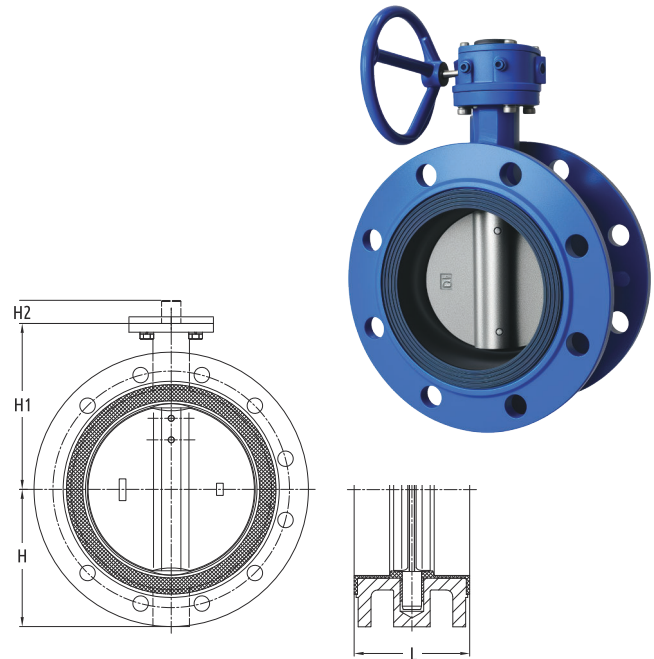
DN	(mm)	250	300	350	400	450	500	600
	(inch)	10	12	14	16	18	20	24
Wet		504.7	765.6	976.6	1321.9	1767.2	2235.9	3595.3
Dry		857.8	1248.4	1514.1	2042.2	2792.2	3575.0	5798.4

FEATURES & SPECIFICATIONS

- Concentric double flange
- Comply with BS EN 593 / BS 5155
- Higher strength for disc with pinned single shaft ensure optimal alignment
- Can be installed at horizontal or vertical pipe line
- Flange drilled to BS 4504 PN16 / EN1092-2 PN16 / ANSI Class 150 / JIS10K / AS 2129 Table E (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Water Supply Works, Water Treatment Plant, General Industries

PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Test Pressure (x1.5)	24bar
Seat Test Pressure (x1.1)	17.6bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)
Suitable Media	Water



MATERIAL SPECIFICATIONS

Part	Material	Part	Material
Body	Ductile Iron	Bushing	Bronze
Disc	Ductile Iron Aluminium Bronze Stainless Steel 304 Stainless Steel 316	Shaft	Stainless Steel 410 Stainless Steel 431
Seat	EPDM NBR	Taper Pin	Stainless Steel 416 Stainless Steel 316 (DN400 & above)
Washer	Spring Steel	O-Ring	EPDM NBR
Bolt	Carbon Steel	Y-Ring (DN400...DN600)	EPDM NBR
Gland	Carbon Steel	Screw	Carbon Steel

DIMENSIONS

DN (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
(inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
H	80	80	95	114	113	139	175	203	242	250	312	345	380	445
H1	110	134	131	150	170	180	210	245.5	276	328	376	406.6	433	507.5
H2	30	30	30	30	30	30	34	34	34	40	52	52	64	70
L	112	116	118	132	145	145	158	171	184	196	223	230	237	275

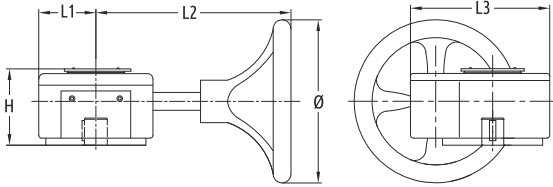
DN (mm)	700	750	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2200
(inch)	28	30	32	36	40	44	48	52	56	60	64	72	80	88
H	478	508	530	602	656	735	781	968	1055	1025	1041	1164	1350	1430
H1	560	610	620	692	735	813	917	990	1000	1060	1150	1200	1360	1500
H2	95	95	95	130	130	150	150	200	200	200	200	200	200	300
L	292	305	318	330	410	450	470	490	530	570	600	670	760	800

DOUBLE FLANGE BUTTERFLY VALVE

PN16 V13C16

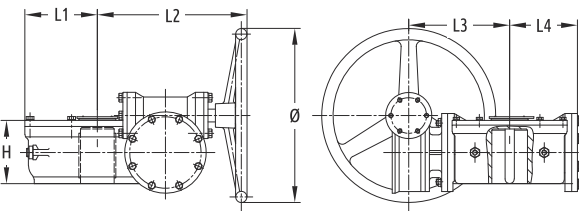
DIMENSIONS (VALVE OPERATOR)

Cast Iron 1-Stage Worm Gear and Handwheel Carbon Steel Gear Box Shaft



VALVE DIAMETER	H	Ø	L1	L2	L3
DN50 - DN150	70	150	52	118	129
DN200 - DN250	80	280	75	191	171
DN300 - DN350	80	280	80	186	198
DN400	99	400	125	303	280
DN450	99	400	125	350	280
DN500 - DN600	150	400	130	376	316

Cast Iron 2-Stage Worm Gear and Handwheel Carbon Steel Gear Box Shaft



VALVE DIAMETER	H	Ø	L1	L2	L3	L4
DN700 - DN800	158	425	173	359	245	173
DN900 - DN1100	185	425	201	399	279	201
DN1200	216	425	185	443	311	255
DN1300 - DN1400	267	510	208	603	435	355
DN1500 - DN1600	312	510	316	647	450	425
DN1800	326	510	360	697	466	475
DN2000	480	600	410	867	725	630
DN2200	570	600	442	1060	742	726

Note: Gearbox dimensions for DN1500 and above are indicative only and may be subject to change without prior notice.

OPERATING TORQUE

DN	(mm)	50	65	80	100	125	150	200	250	300	350
	(inch)	2	2½	3	4	5	6	8	10	12	14
	Wet	15.1	17.2	23.1	39.8	61.9	102	192	323	490	625
	Dry	24.2	32.7	43.7	72.8	108	174	330	549	799	969

DN	(mm)	400	450	500	600	700	750	800	900	1000
	(inch)	16	18	20	24	28	30	32	36	40
	Wet	846	1131	1431	2301	4253	4897	5600	6834	11603
	Dry	1307	1787	2288	3711	6380	7345	8400	10251	17405

DN	(mm)	1100	1200	1300	1400	1500	1600	1800	2000	2200
	(inch)	44	48	52	56	60	64	72	80	88
	Wet	21840	16321	37700	43329	59200	68250	92079	130000	182400
	Dry	21840	24482	37700	43329	59200	68250	92079	130000	182400

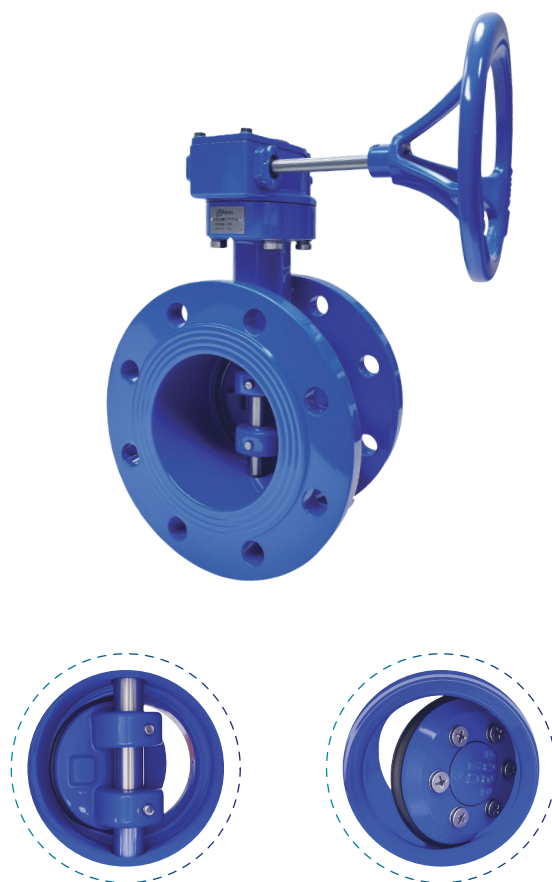
Note: Operation Torque for DN1400 and above are indicative only and may be subject to change without prior notice.

FEATURES & SPECIFICATIONS

- Double eccentric double flange
- Comply with BS 5155 / BS EN 593 / MSS SP-67
- Face-to-face dimension conforms to BS EN 558-1
- Flange drilled to EN1092-2 PN16 / EN1092-2 PN25 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Water Supply Works, Water Treatment Plant, General Industries

TECHNICAL SPECIFICATIONS

Size	DN100 ... DN2000	
Body Design	Double Eccentric Double Flange	
Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C	
Suitable Media	Water	
Operator	Wormgear	
Connection	EN1092-2 PN16 / PN25	
Optional Accessories	Chain Wheel	



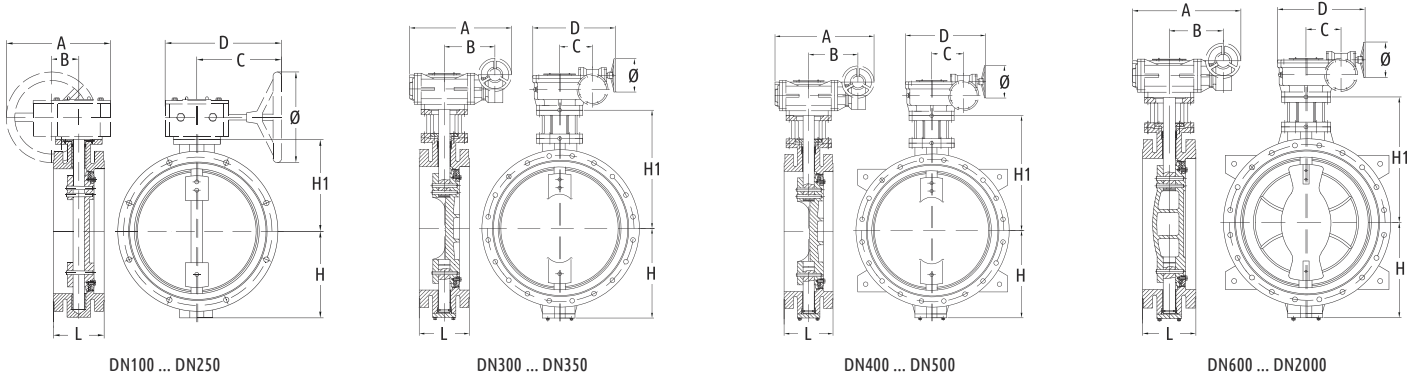
MATERIAL SPECIFICATIONS

Part	Material
Body	Ductile Iron
Disc	Epoxy Coated Ductile Iron Aluminium Bronze
Body Sealing Seat	Stainless Steel 304
Disc Sealing Seat	EPDM
Bolt	Stainless Steel 304
Gland	Ductile Iron
Taper Pin	Stainless Steel 420

Part	Material
Bushing	Steel
Shaft	Stainless Steel 410 Stainless Steel 431 (PN25)
Pressure Ring	Carbon Steel
O-Ring	EPDM
Worm Gear & Handwheel	Cast Iron
Chain Wheel	Carbon Steel Stainless Steel 304

DOUBLE ECCENTRIC BUTTERFLY VALVE

PN16 F13DE16
PN25 F13DE25



DIMENSIONS (PN16)

DN (mm) (inch)	100 4	150 6	200 8	250 10	300 12	350 14	400 16	450 18	500 20	600 24
H	114	148	175	213	246	286	335	350	385	448
H1	171	210	250	270	306	337	378	390	430	508
L (Middle)	127	140	152	165	178	190	216	222	229	267
L (Long)	190	210	230	250	270	290	310	330	350	390

DN (mm) (inch)	700 28	800 32	900 36	1000 40	1200 48	1400 56	1600 64	1800 72	2000 80
H	495	570	602	685	796	973	1112	1270	1360
H1	557	613	667	722	845	1028	1172	1350	1450
L (Middle)	292	318	330	410	470	530	600	670	760
L (Long)	430	470	510	550	630	710	790	-	-

DIMENSIONS (PN25)

DN (mm) (inch)	100 4	150 6	200 8	250 10	300 12	350 14	400 16	450 18
H	123	162	186	216	301	310	360	355
H1	178	213	260	293	458	481	530	545
L (Long)	190	210	230	250	270	290	310	330

DN (mm) (inch)	500 20	600 24	700 28	800 32	900 36	1000 40	1200 48
H	400	476	490	570	607	675	797
H1	632	686	736	750	862	910	1032
L (Long)	350	390	430	470	510	550	630

DIMENSIONS (VALVE OPERATOR)

VALVE DIAMETER	A	B	C	D	Ø
DN100	172	45	173	226	150
DN150 - DN200	288	63	238	313	300
DN250	310	78	225	307	300
DN300 - DN350	340	93	183	280	300
DN400 - DN450	434	181	94	357	300
DN500 - DN600	531	200	125	432	400
DN700 - DN800	574	228	140	501	400

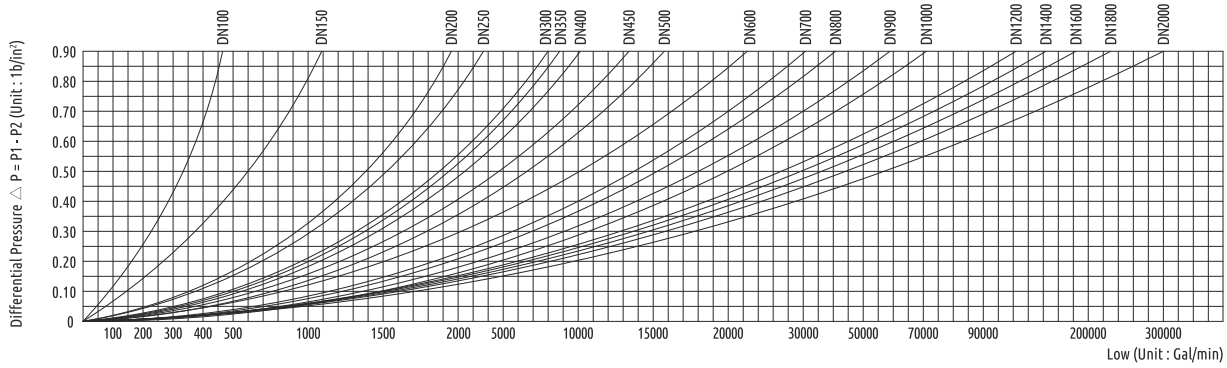
VALVE DIAMETER	A	B	C	D	Ø
DN900	638	243	162	547	450
DN1000 - DN1200	777	302	236	656	450
DN1400	1045	435	355	811	510
DN1600	1130	450	425	963	510
DN1800	1196	466	475	1057	510
DN2000	1682	747	630	1342	610

DOUBLE ECCENTRIC BUTTERFLY VALVE

PN16 F13DE16
PN25 F13DE25

VALVE COEFFICIENT (FULL OPEN)

Cv = 1.17Kv



DN (mm)	100	150	200	250	300	350	400	450	500	600
(inch)	4	6	8	10	12	14	16	18	20	24
Cv	471	1091	1895	3735	5593	7685	10030	13377	15788	23162

DN (mm)	700	800	900	1000	1200	1400	1600	1800	2000
(inch)	28	32	36	40	48	56	64	72	80
Cv	31870	41911	58169	71175	102845	142000	182000	225000	300000

OPERATING TORQUE (PN16)

Unit : N.m

DN (mm)	100	150	200	250	300	350	400	450	500	600
(inch)	4	6	8	10	12	14	16	18	20	24
	173	195	282	417	867	1300	1950	2275	3033	3792

DN (mm)	700	800	900	1000	1200	1400	1600	1800	2000
(inch)	28	32	36	40	48	56	64	72	80
	5200	6500	8125	13000	19500	33333	52500	70833	100000

OPERATING TORQUE (PN25)

Unit : N.m

DN (mm)	100	150	200	250	300	350	400	450
(inch)	4	6	8	10	12	14	16	18
	213	417	667	1250	1833	2083	3333	4167

DN (mm)	500	600	700	800	900	1000	1200
(inch)	20	24	28	32	36	40	48
	5000	6667	8333	12500	16667	20833	33333

GROOVED END BUTTERFLY VALVE

300PSI F17-300



FEATURES & SPECIFICATIONS

- Centrally mounted disc and hydrodynamic design minimise pressure loss
- EPDM coated disc for leak-free pipeline isolation
- Design comply with MSS SP-67
- Grooved dimensions to suit BS / ANSI / AWWA pipe sizes (Specify grooved type when ordering)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, General Industries



PRESSURE & TEMPERATURE RATINGS

Working Pressure	300psi
Shell Test Pressure (x1.5)	450psi
Seat Test Pressure (x1.1)	330psi
Working Temperature	-10°C ... 120°C
Suitable Media	Water

MATERIAL SPECIFICATIONS

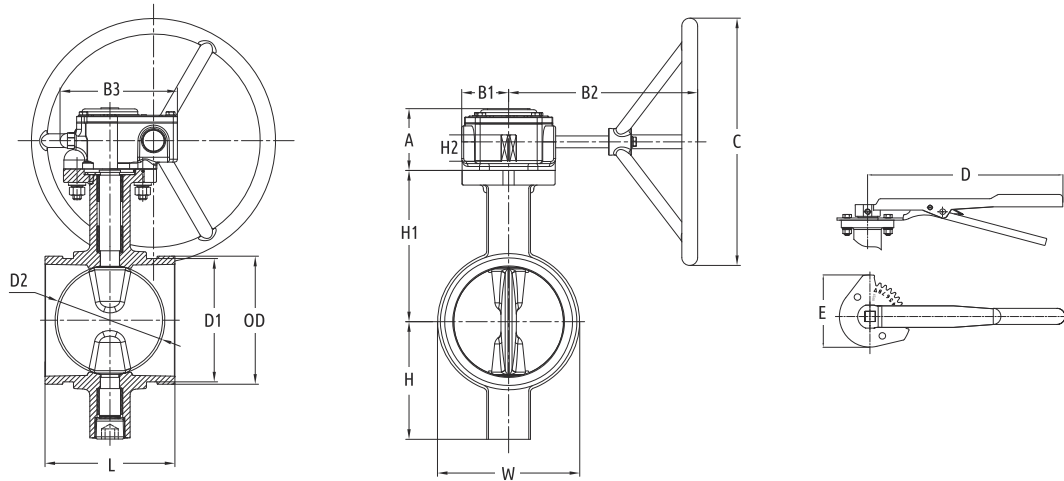
Part	Material
Body	Ductile Iron
Disc	Epoxy Coated Ductile Iron
Shaft	Stainless Steel 410
O-Ring	EPDM
Gland	Carbon Steel
Bushing	Aluminium Bronze

Part	Material
Washer	Aluminium Bronze
Screw and Plug	Galvanized Carbon Steel
Indicator Plate	Stainless Steel 430
Worm Gear and Handwheel	Cast Iron
Gear Box Shaft	Stainless Steel 410
Lever	Malleable Iron

OPERATING TORQUE

Unit : N.m

DN	(mm)	50	65	80	100	125	150	200	250	300
	(inch)	2	2½	3	4	5	6	8	10	12
	300psi	12	18	23	50	80	120	240	430	600

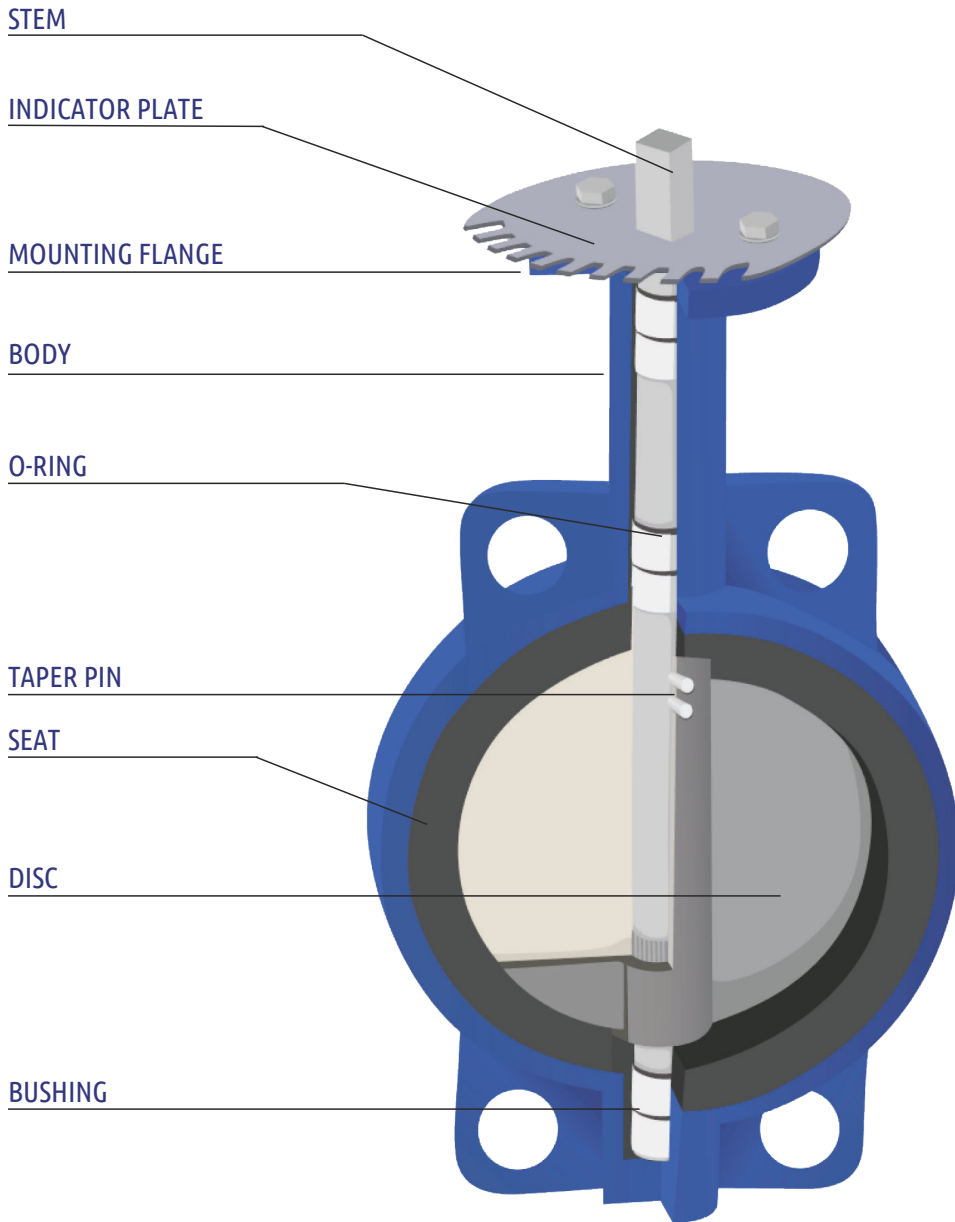


DIMENSIONS

(mm)

DN	(mm)	50	65	80	100	125	150	200	250	300
	(inch)	2	2½	3	4	5	6	8	10	12
L		84.5	98	98	116	149	147.6	134	160	165
H		72	78	85	105	128	140	170	205	258.3
H1		95	98	105	135	148	165	204	245	277.5
H2		30	30	30	30	30	30	34	34	34
W		72	88	98	127	156	185	235	292	332.5
OD		60.3	73/76.1	88.9	114.3	141.3/139.7	168.3/165.1	219.1	273	323.85
D1		57.15	68	85	110	136.8	164	214.4	268.28	318.29
D2		50.1	62	75.6	98.1	125.5	150.6	204.4	246	296.3
A		50	50	50	50.5	50.5	50.5	61	61.5	71
B1		36	36	36	45.5	45.5	45.5	45.5	62.5	62.5
B2		160	160	160	190	190	190	220	260	270
B3		102	102	102	102	102	102	121	121	154
C		150	150	150	150	150	150	250	250	250
D		266	266	266	266	266	226	357	357	357
E		110	110	110	110	110	110	163	163	163

FEATURES OF FIVALCO BUTTERFLY VALVE



Design conforms to BS EN 593 /
BS 5155 / MSS SP-67 / API 609

Can be installed at horizontal or
vertical pipe line

Excellent flow with characteristic
with flow in either direction

No gasket needed for installation

Higher strength for disc with pinned
single shaft ensure optimal alignment

Phenolic backed rubber seat is
non-collapsible, stretch resistant and
easily replaceable

Precision machining of disc
for low operating torque

Centrally mounted disc and
hydrodynamic design
minimize pressure loss

FEATURES & SPECIFICATIONS

- Non-rising stem
- Inside screw
- Bolted bonnet
- Resilient seat for pipeline isolation
- Durable fusion bonded epoxy coated
- Comply with BS 5163 (Type A) / EN 1074-2 (Type A)
- Square cap available upon request
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / BS 4504 PN25 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Water Supply Works, Water Treatment Plant, General Industries

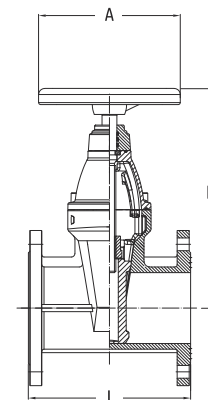


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-10°C ... 80°C	
Suitable Media	Water	

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Cover	Ductile Iron	BS EN1563 EN-GJS-450-10
Disc	EPDM coated DI	BS EN1563 EN-GJS-450-10
Stem Nut	Brass Ductile Iron	EN 12165 CW617N BS EN1563 EN-GJS-450-10
Stem	Stainless Steel 420	BS970 420S29
Card Block	Brass Carbon Steel	EN 12165 CW617N BS970 Part1 080A15
O-Ring	NBR	Commercial
Seal	EPDM	Commercial
Bolt	Carbon Steel	BS970 Part1 080A15
Handwheel	Ductile Iron	BS EN1563 EN-GJS-450-10



DIMENSIONS

DN (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
DN (inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	178	190	203	229	254	267	292	330	356	381	406	432	457	508
H (PN16)	224	228	272	314	365	405	515	600	667	783	900	995	1078	1242
H (PN25)	227	230	270	310	365	406	512	580	657	783	900	-	-	-
A	160	160	180	200	250	250	300	350	400	500	500	500	600	600

Notes : PN25 only available for size DN50 ... DN400.

OS&Y RESILIENT SEAT GATE VALVE

PN16 V23AR16
PN25 F23AR25



FEATURES & SPECIFICATIONS

- Rising stem, Outside Screw & Yoke (OS&Y)
- Bolted bonnet
- Resilient seat for pipeline isolation
- Durable fusion bonded epoxy coated
- Comply with BS 5163 (Type A) / EN 1074-2 (Type A)
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / BS 4504 PN25 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Water Supply Works, Water Treatment Plant, General Industries

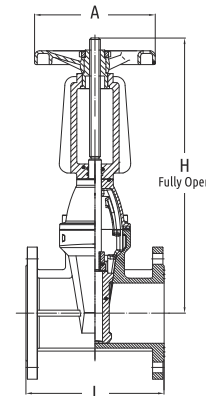


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-10°C ... 80°C	
Suitable Media	Water	

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Cover	Ductile Iron	BS EN1563 EN-GJS-450-10
Disc	EPDM coated DI	BS EN1563 EN-GJS-450-10
Stem Nut	Brass Ductile Iron	EN 12165 CW617N BS EN1563 EN-GJS-450-10
Stem	Stainless Steel 420	BS970 420S29
O-Ring	NBR	Commercial
Round Nut	Carbon Steel	BS970 Part1 080A15
Seal	EPDM	Commercial
Bolt	Carbon Steel	BS970 Part1 080A15
Bracket	Ductile Iron	BS EN1563 EN-GJS-450-10
Handwheel	Ductile Iron	BS EN1563 EN-GJS-450-10



DIMENSIONS

DN (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
DN (inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	178	190	203	229	254	267	292	330	356	381	406	432	457	508
H	353	383	455	526	672	713	935	1138	1237	1500	1710	1970	2175	2465
A	160	160	180	200	250	250	300	350	400	500	500	600	600	600

Notes : 1. WRAS approved only available for size DN50 ... DN300.
2. PN25 only available for size DN50 ... DN400.

FEATURES & SPECIFICATIONS

- Non-rising stem
- Inside screw
- Bolted bonnet
- Full bore port allows optimum and smooth flowing passage
- Fully encapsulated rubber disc
- Resilient seat for superior pipeline isolation
- Durable fusion bonded epoxy coated
- Handwheel or removable square key operated
- Designed to BS 5163 / BS EN 1074-2
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire- Protection, Cold Water Plumbing, Hot Water System, Water Supply Works, Water Treatment Plant, General Industries

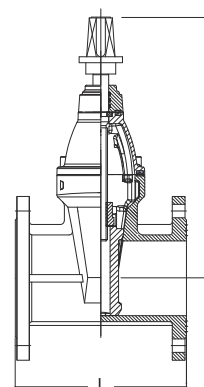


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Test Pressure (x1.5)	24bar
Seat Test Pressure (x1.1)	17.6bar
Working Temperature	-10°C ... 80°C
Suitable Media	Water

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Cover	Ductile Iron	BS EN1563 EN-GJS-450-10
Disc	EPDM coated DI	BS EN1563 EN-GJS-450-10
Stem Nut	Brass Ductile Iron	EN 12165 CW617N BS EN1563 EN-GJS-450-10
Stem	Stainless Steel 420	BS970 420S29
Card Block	Brass Carbon Steel	EN 12165 CW617N BS970 Part1 080A15
O-Ring	NBR	Commercial
Bolt	Carbon Steel	BS970 Part1 080A15
Gasket	EPDM	Commercial
Square Cap	Ductile Iron	BS EN1563 EN-GJS-450-10



DIMENSIONS

DN	(mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
	(inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L		178	190	203	229	254	267	292	330	356	381	406	432	457	508
H		263	275	304	341	398	440	535	627	702	885	970	1057	1155	1310

NRS METAL SEAT GATE VALVE

PN16 F23M16
PN25 F23M25

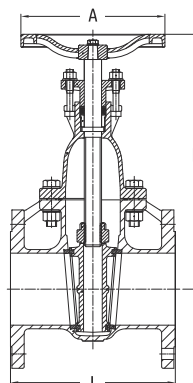


FEATURES & SPECIFICATIONS

- Non-rising stem
- Inside screw
- Bolted bonnet
- Metal seat design
- Durable fusion bonded epoxy coated
- Comply with BS 5150 / EN 1171
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / BS 4504 PN25 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Water Supply Works, Water Treatment Plant, General Industries.

PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-10°C ... 120°C	
Suitable Media	Water	



MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron (PN16) Cast Iron (PN25)	BS EN1563 EN-GJS-450-10 BS EN1561 EN-GJL-250
Disc	Ductile Iron (PN16) Cast Iron (PN25)	BS EN1563 EN-GJS-450-10 BS EN1561 EN-GJL-250
Stem	Stainless Steel 410	BS EN 10088 1.4021
Stem Nut	Brass Alloy	BS EN12164 CW720R
Sealing Ring	Graphite	
Bonnet	Ductile Iron (PN16) Cast Iron (PN25)	BS EN1563 EN-GJS-450-10 BS EN1561 EN-GJL-250
Bushing	Stainless Steel 304	BS970 304S15

Part	Material	Specification
Packing	Graphite	
Gland	Ductile Iron	BS EN1563 EN-GJS-450-10
Nut & Bolt	Stainless Steel 304 (PN16) Steel (PN25)	EN 10088-1 1.4301 BS970 Part1 080A15
Gasket	Stainless Steel 304	EN 10088-1 1.4301
Wedge Seal Ring	Brass	BS1400 LG2
Body Seal Ring	Brass	BS1400 LG2
Handwheel	Ductile Iron (PN16) Cast Iron (PN25)	BS EN1563 EN-GJS-450-10 BS EN1561 EN-GJL-250

DIMENSIONS (PN16)

DN (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
DN (inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	178	190	203	229	254	267	292	330	356	381	406	432	457	508
H	260	281	306	354	413	454	559	630	704	850	940	1039	1134	1280
A	160	160	200	200	250	250	280	370	370	460	460	460	640	900

DIMENSIONS (PN25)

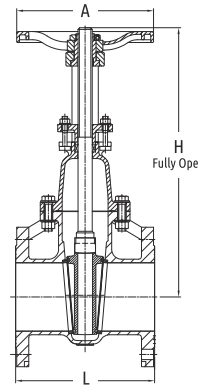
DN (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
DN (inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	177.8	190	203.2	228.6	254	266.7	292.1	330.2	355.6	381	406.4	432	457	508
H	302	332	335	423	485	545	644	769	860	987	1044	1148	1257	1418
A	178	178	200	254	300	300	348	400	457	560	560	610	610	765

FEATURES & SPECIFICATIONS

- Rising stem, Outside Screw & Yoke (OS&Y)
- Bolted bonnet
- Metal seat design
- Durable fusion bonded epoxy coated
- Comply with BS 5150 / EN 1171
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / BS 4504 PN25 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Water Supply Works, Water Treatment Plant, General Industries.

PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-10°C ... 120°C	
Suitable Media	Water	



MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron (PN16) Cast Iron (PN25)	BS EN1563 EN-GJS-450-10 BS EN1561 EN-GJL-250
Disc	Ductile Iron (PN16) Cast Iron (PN25)	BS EN1563 EN-GJS-450-10 BS EN1561 EN-GJL-250
Stem	Stainless Steel 410 (PN16) Brass (PN25)	BS970 420S29 BS2874 CZ122
Sealing Ring	Graphite	
Bonnet	Ductile Iron (PN16) Cast Iron (PN25)	BS EN1563 EN-GJS-450-10 BS EN1561 EN-GJL-250
Packing	Graphite	
Gland	Ductile Iron	BS EN1563 EN-GJS-450-10

Part	Material	Specification
Stem Nut	Brass Alloy	BS EN12164 CW720R
Washer	Brass	BS1400 LG2
Bolt	Stainless Steel 304 (PN16) Steel (PN25)	EN 10088-1 1.4301 BS970 Part1 080A15
Nut	Stainless Steel 201 (PN16) Steel (PN25)	EN 10088-2 1.4372 BS970 Part1 080A15
Screw	Stainless Steel 304	EN 10088-1 1.4301
Handwheel	Ductile Iron (PN16) Cast Iron (PN25)	BS EN1563 EN-GJS-450-10 BS EN1561 EN-GJL-250

DIMENSIONS (PN16)

DN	(mm)													
	50	65	80	100	125	150	200	250	300	350	400	450	500	600
(inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	178	190	203	229	254	267	292	330	356	381	406	432	457	508
H	325	369	438	507	617	728	920	1113	1292	1641	1828	2047	2246	2632
A	160	160	200	200	250	250	280	370	370	640	640	720	720	720

DIMENSIONS (PN25)

DN	(mm)													
	50	65	80	100	125	150	200	250	300	350	400	450	500	600
(inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	215.9	241.3	282.5	304.8	381	403.2	419.1	457	502	381	406	432	457	508
H	385	437	493	611	716	813	1023.5	1211	1386	1641	1828	2047	2246	2632
A	175	200	254	300	300	348	400	457	457	640	640	720	720	720

OS&Y S-PATTERN GLOBE VALVE

PN16 F33S16

FEATURES & SPECIFICATIONS

- Rising stem, Outside Screw & Yoke (OS&Y)
- Bolted bonnet
- Durable fusion bonded epoxy coated
- S-Pattern body construction design
- Design comply with DIN 3356 / EN 13789
- Face-to-face dimension to EN 588-1
- Flange drilled to EN 1092-2 PN16 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Sewerage & Water Treatment, General Industries.

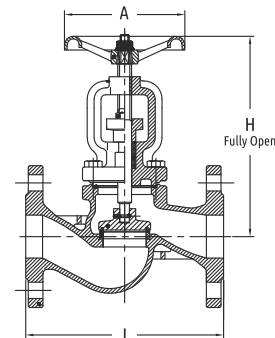


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Test Pressure (x1.5)	24bar
Seat Test Pressure (x1.1)	17.6bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Seat Ring	Stainless Steel 304	EN 10088-1 1.4301
Disc	Stainless Steel 420 (DN15...DN50) Ductile Iron (DN65...DN300)	EN 10088-1 1.4301 BS EN1563 EN-GJS-450-10
Steel Ball	Steel	EN10027-2 1.3505
Gasket	Graphite	
Packing	Graphite	
Stem	Stainless Steel 420	BS970 420S29
Nut	Steel	BS970 Part1 080A15
Bolt	Steel	BS970 Part1 080A15
Glander Follower	Ductile Iron	BS EN1563 EN-GJS-450-10
Bonnet	Ductile Iron	BS EN1563 EN-GJS-450-10
Washer	Steel	BS970 Part1 080A15
Handwheel	Cast Iron	BS EN1561 EN-GJL-250



DIMENSIONS

DN (mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
DN (inch)	½	¾	1	1¼	1½	2	2½	3	4	5	6	8	10	12
L	130	150	160	180	200	230	290	310	350	400	480	600	730	850
H	160	164	166	192	199	235	261	300	357	396	465	488	635	800
A	100	100	120	120	140	140	200	200	240	280	315	360	400	500

FEATURES & SPECIFICATIONS

- Quarter turn 2-piece body
- Full port design
- PTFE seat
- Stainless steel ball
- Painted body
- Face-to-face conforms to BS EN558-1 Series 14 (DN50 ... DN100) and BS EN558-1 Series 15 (DN125 ... DN200)
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, General Industries.

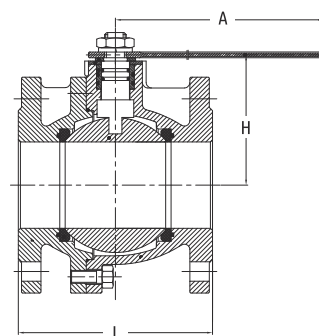


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Test Pressure (x1.5)	24bar
Seat Test Pressure (x1.1)	17.6bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	BS EN1561 EN-GJL-250
Bolt	Steel	BS970 Part1 080A15
Seat	Teflon	Commercial
Bonnet	Cast Iron	BS EN1561 EN-GJL-250
Ball	Stainless Steel 304	BS970 304S15
Stem	Stainless Steel 420	BS970 420S29
O-Ring	EPDM	Commercial
Sealed Part	Cast Brass	EN 1982 CC493K
Spacing Baffle	Steel	BS970 Part1 080A15
Gasket	Cast Brass	EN 1982 CC493K
Washer	Steel	BS970 060A67
Nut	Steel	BS970 Part1 080A15
Handle	Ductile Iron	BS EN1563 GJS-400-18



DIMENSIONS

DN (mm) DN (inch)	50	65	80	100	125	150	200
L	150	170	180	190	325	350	400
H	101	112	125	190	211	260	286
A	220	284	284	500	600	800	1000

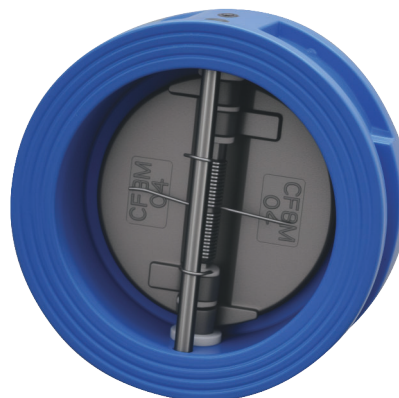
(mm)

WAFER DOUBLE DOOR CHECK VALVE

PN16 V51DD16
PN25 F51DD25

FEATURES & SPECIFICATIONS

- Spring loaded double door
- Rubber seat for non-slam effect
- Durable fusion bonded epoxy coated
- Comply with DIN 3202-F1
- Wafer connection to BS 4504 PN16 / EN 1092-2 PN16 / BS 4504 PN25 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Sewerage & Water Treatment, General Industries.

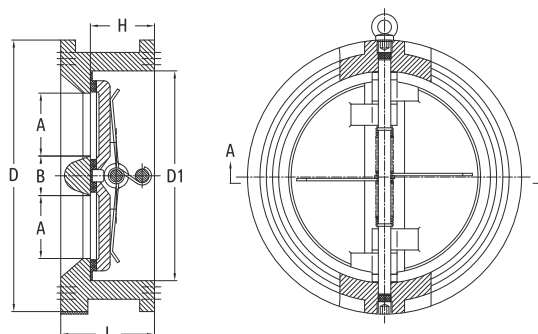


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C EPDM -10°C ... 80°C NBR	
Suitable Media	Water	

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Disc	Ductile Iron Stainless Steel 304 Stainless Steel 316 Aluminium Bronze	BS EN1563 EN-GJS-450-10 EN 10088-3 1.4301 EN 10088-3 1.4401 EN 1982 CuAl10Fe3
Sealing Ring	NBR EPDM	Commercial Commercial
Shaft	Stainless Steel 410	EN 10088-3 1.4006
Screw	Carbon Steel	BS970 Part1 080A15
Spring	Stainless Steel 316	EN 10088-3 1.4401
Gasket	PTFE	Commercial
Seat	NBR EPDM	Commercial Commercial



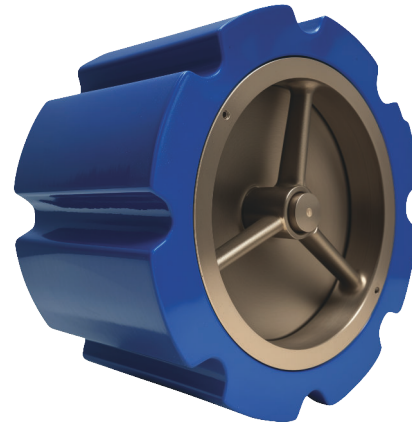
DIMENSIONS

DN (mm)	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800
DN (inch)	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	28	32
L	43	43	46	64	64	70	76	89	114	114	127	140	152	152	178	229	241
D (PN16)	91	103	123	142	157	192	218	268	328	380	444	495	554	616	724	806	905
D (PN25)	-	103	123	142	167	192	218	279	334	399	456	512	563	623	724	-	-
D (ANSI)	-	103	123	129	167	192	218	279	334	409	448	512	547	604	724	824	925
D1	65	65	80	94	117	145	170	224	265	310	360	410	450	505	624	722	825
A	12	12	21.5	22.5	32	43.5	51	70.5	90	108	125	148	161.5	188	234	-	-
B	16	16	17	25	24	28	32	41	40	44	48	54	62	62	70	-	-

Note : PN25 only available for size DN50 ... DN600.

FEATURES & SPECIFICATIONS

- Spring loaded
- Rubber seat ring for non-slam effect
- Durable fusion bonded epoxy coated
- Comply with MSS SP-125
- Wafer connection to BS 4504 PN16 / EN 1092-2 PN16 / BS 4504 PN25 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, General Industries.

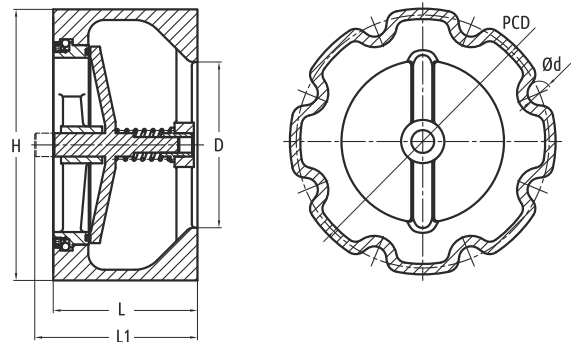


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C EPDM	
	-10°C ... 80°C NBR	
Suitable Media	Water	

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Disc	Stainless Steel 304	BS 3100 304C15
	Stainless Steel 316	EN 10088-1 1.4408
	Aluminium Bronze	EN 1982 CuAl10Fe3
Seat	Stainless Steel 304	BS 3100 304C15
Spring	Stainless Steel 316	EN 10088-1 1.4408
Bushing	Brass	BS1400 LG2
Steel Ball	Stainless Steel 440	EN 10088-3 1.4125
Seat Ring	EPDM NBR	Commercial Commercial
Screw	Stainless Steel 304	EN 10088-3 1.4301
	Stainless Steel 316	EN 10088-3 1.4408
Shaft (PN25, DN200 ... DN300)	Stainless Steel 304	BS970 304S15
	Stainless Steel 316	BS970 306S16
	Stainless Steel 410	BS970 410S21



DIMENSIONS

DN (mm) (inch)	50	65	80	100	125	150	200	250	300
H	110	136	152	177.8	220.7	247	339.7	403.6	415
L	66.7	73	79.4	101.6	117.5	139.7	165.1	210	286
L1	77	78	-	-	-	-	-	232	312
D	68	78	90	108	135	162	215.9	271	311
PCD (PN16)	120.7	139.7	152	180	210	240	295	355	400
Ød (PN16)	4-Ø19	4-Ø20	4-Ø19	8-Ø19	8-Ø20	8-Ø23	12-Ø24	12-Ø28	12-Ø23
PCD (PN25)	120.7	139.7	152.4	180	210	241.3	295	355	430
Ød (PN25)	4-Ø19	8-Ø20	4-Ø19	8-Ø19	8-Ø20	8-Ø23	12-Ø24	12-Ø28	16-Ø35

FOOT VALVE

PN16 F53F16
PN25 F53F25

FEATURES & SPECIFICATIONS

- Spring loaded
- Rubber seat ring for non-slam effect
- Perforated stainless steel screen
- Durable fusion bonded epoxy coated
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / BS 4504 PN25 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, General Industries.

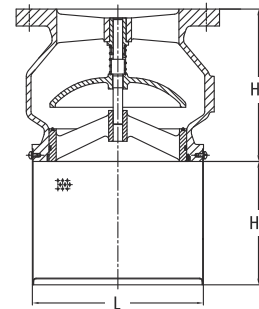


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C	
Suitable Media	Water	

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Seat	Ductile Iron Stainless Steel 304	BS EN1563 EN-GJS-450-10 BS 3100 304C15
Disc	Ductile Iron Stainless Steel 304	BS EN1563 EN-GJS-450-10 BS 3100 304C15
Stem	Stainless Steel 410 Stainless Steel 304	BS970 410S21 BS970 304S15
Spring	Stainless Steel 304	BS970 304S15
O-Ring	EPDM	Commercial
Screw	Stainless Steel 316	EN 10088-1 1.4408
Washer	Stainless Steel 316	EN 10088-1 1.4408
Screen	Stainless Steel 304	BS970 304S15
Bushing	Stainless Steel 304	BS970 304S15



DIMENSIONS

DN	(mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
	(inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
H1		133	140	152	185	216	229	257	293	362	400	448	476	524	610
H2		68	93	108	138	163	189	208	225	245	270	290	315	340	365
L		114	130	144	177	203	237	290	330	383	470	520	570	630	740

(mm)

FEATURES & SPECIFICATIONS

- Spring loaded
- Rubber seat ring for non-slam effect
- Durable fusion bonded epoxy coated
- Comply with MSS SP-125
- Flange drilled to EN 1092-2 PN16 / BS 4504 PN25 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, General Industries.

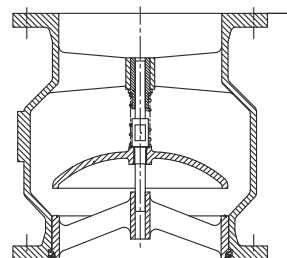
PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C	
Suitable Media	Water	



MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Disc	Ductile Iron Stainless Steel 304 Stainless Steel 316	BS EN1563 EN-GJS-450-10 BS 3100 304C15 BS 3100 316C16
Seat	Ductile Iron Stainless Steel 304 Stainless Steel 316+EPDM	BS EN1563 EN-GJS-450-10 BS 3100 304C15 BS 3100 316C16+EPDM
Bushing	Stainless Steel 304	BS970 304S15
Stem	Stainless Steel 410 Stainless Steel 304 Stainless Steel 316	BS970 410S21 BS970 304S15 BS970 316S16
Spring	Stainless Steel 304 Stainless Steel 316	EN 10088-1 1.4408 EN 10088-1 1.4301
O-Ring	EPDM	Commercial
Screw	Stainless Steel 304 Stainless Steel 316	EN 10088-1 1.4408 EN 10088-1 1.4301



DIMENSIONS

DN	(mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
	(inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L (PN16)		133	140	152	185	216	229	257	393	362	400	448	476.3	524	610
L (PN25)		133 ^{±2}	140 ^{±2}	152 ^{±2}	185 ^{±2}	216 ^{±2}	229 ^{±2}	257 ^{±2}	393 ^{±2}	362 ^{±2}	400 ^{±2}	448 ^{±2}	476.3 ^{±2}	524 ^{±2}	610 ^{±2}

SWING CHECK VALVE

PN16 F53S16
PN25 F53S25



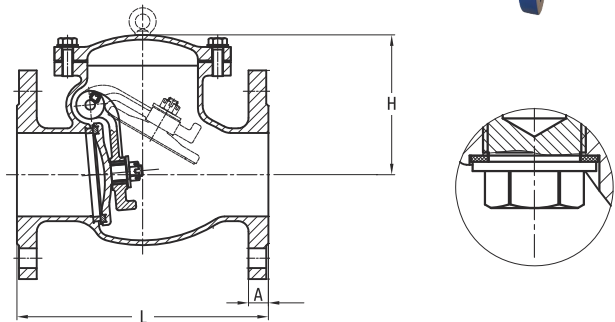
FEATURES & SPECIFICATIONS

- Bolted bonnet
- Durable fusion bonded epoxy coated
- Comply with BS 5153 / EN 12334 / MS SSP71
- Face to face dimension conforms to EN558-1 (Series 10)
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / BS 4504 PN25 / EN1092-2 PN25 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, General Industries.



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-10°C ... 120°C	
Suitable Media	Water	



MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron (DN50...DN300) Cast Iron (DN350...DN600)	BS EN1563 EN-GJS-450-10 BS EN1561 EN-GJL-250
Seat	Gunmetal	BS1400 LG2
Disc	Ductile Iron (DN50...DN300) Cast Iron (DN350...DN600)	BS EN1563 EN-GJS-450-10 BS EN1561 EN-GJL-250
Disc Ring	Gunmetal	BS1400 LG2
Hinge	Ductile Iron	BS EN1563 EN-GJS-450-10
Bushing	Brass	BS 2874 CZ121
Washer & Nut	Stainless Steel 304	EN 10088-1 1.4301
Split Pin	Stainless Steel 304	EN 10088-1 1.4301

Part	Material	Specification
Body Gasket	Graphite+SUS304	EN 10088-1 1.4301
Bonnet	Ductile Iron (DN50...DN300) Cast Iron (DN350...DN600)	BS EN1563 EN-GJS-450-10 BS EN1561 EN-GJL-250
Washer & Bolt	Carbon Steel	BS970 Part1 080A15
Stem	Stainless Steel 420	BS970 420S29
Plug	Stainless Steel 304	EN 10088-1 1.4301
Screw	Stainless Steel 304	EN 10088-1 1.4301
Gasket	EPDM	Commercial
O-Ring	EPDM	Commercial
Lifting Eye	Carbon Steel (DN150...DN300)	BS970 Part1 080A15

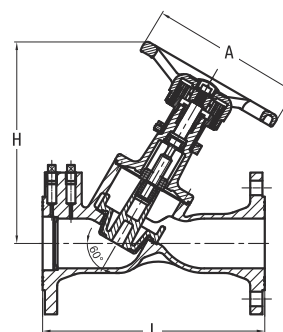
DIMENSIONS

(mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
(inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	203	216	241	292	330	356	495	622	698	787.4	914	914	1016	1219
H	123	133	134	162	188	264	304	360	379	560	589	645	702	812
D	165	185	200	220	250	285	340	405	460	520	580	640	715	840
D1	125	145	160	180	210	240	295	355	410	470	525	585	650	770
D2	99	118	132	156	184	211	266	319	370	429	480	548	609	720
Ød	4-Ø19	4-Ø19	8-Ø19	8-Ø19	8-Ø19	8-Ø23	12-Ø23	12-Ø28	12-Ø28	16-Ø28	16-Ø31	20-Ø31	20-Ø34	20-Ø37
A	19	19	19	19	19	19	20	22	24.5	36	38	40	42	48

Note : PN25 only available for size DN50 ... DN300.

FEATURES & SPECIFICATIONS

- Single unit Y-pattern globe valves incorporating fixed orifice plate flow measurement unit
- Fitted with a pair of measuring plugs
- High measurement accuracy of +/-5% across all opening settings
- Microset handwheel and presetting scale is readable from all directions
- Regulating and isolating functions
- Setting can be locked with allen key
- Comply with BS 7350 / BS EN 12266-1
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / BS 4504 PN25 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Applicable for hydronic balancing of heating and cooling systems



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-10°C ... 80°C	
Suitable Media	Water	

MATERIAL SPECIFICATIONS

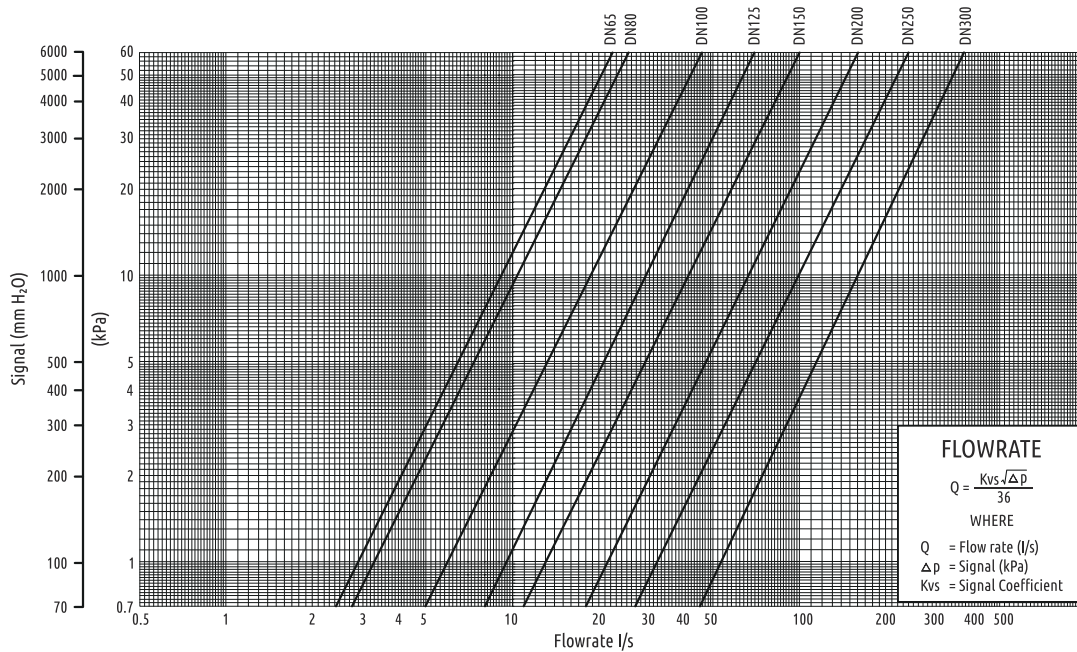
Part	Material	Specification	Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10	Stem	Stainless Steel 410 (DN65...DN300) Stainless Steel 431 (DN350...DN600)	BS970 410S21 BS970 431S29
Seal Gasket	EPDM	Commercial	Packing	PTFE+EPDM	Commercial
Disc	Ductile Iron+EPDM	BS EN1563 EN-GJS-450-10	Plug	Steel	BS970 Part1 080A15
Stem Nut	Brass	EN 12165 CW617N	Orifice	Brass (DN65...DN300) Stainless Steel 304 (DN350...DN600)	EN 12165 CW617N BS970 304S15
Cover	Ductile Iron	BS EN1563 EN-GJS-450-10	Bolt & Screws	Stainless Steel 304	BS970 304S15
Directed Circle	ABS		Gasket	Stainless Steel 304	BS970 304S15
Indicator	ABS		Indicator Cover	ABS	
Packing Gland	Brass (DN65...DN150) Ductile Iron (DN200...DN600)	EN 12165 CW617N BS EN1563 EN-GJS-450-10	Limit Indicator	Brass	EN 12165 CW617N
Handwheel	Ductile Iron	BS EN1563 EN-GJS-450-10			

DIMENSIONS & FLOW COEFFICIENT

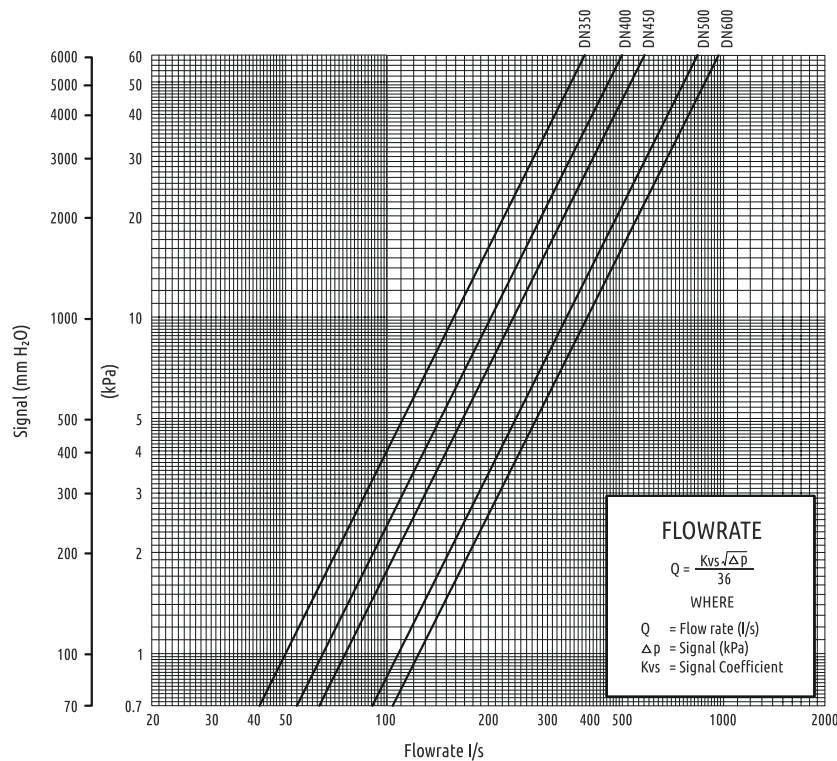
DN (mm) (inch)	65	80	100	125	150	200	250	300	350	400	450	500	600
L	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
H	263	268	300	328	340	525	572	686	681	965	972	1065	1180
A	200	200	240	290	290	350	420	420	420	640	640	640	640
Kvs (Fully Open)	104	116	213	333	476	768	1153	1743	1798	2338	2698	3708	4500
Handwheel Turns	8	8	8	8	8	12	12	18	18	24	24	24	24

FIXED ORIFICE DOUBLE REGULATING VALVE

PN16 F63F16
 PN25 F63F25



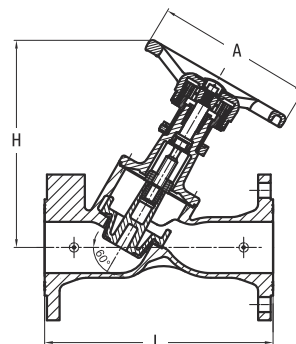
DN	(mm)	(inch)	Kvs
65	2½	104.00	
80	3	116.00	
100	4	213.00	
125	5	333.00	
150	6	476.00	
200	8	768.00	
250	10	1153.00	
300	12	1743.00	



DN	(mm)	(inch)	Kvs
350	14	1798.00	
400	16	2338.00	
450	18	2698.00	
500	20	3708.00	
600	24	4500.00	

FEATURES & SPECIFICATIONS

- Variable orifice single unit Y-pattern globe valves
- Fitted with a pair of measuring plugs
- Microset handwheel and presetting scale is readable from all directions
- Regulating and isolating functions
- Setting can be locked with allen key
- Comply with BS 7350 / BS EN 12266-1
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / BS 4504 PN25 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Applicable for hydronic balancing of heating and cooling systems



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-10°C ... 80°C	
Suitable Media	Water	

MATERIAL SPECIFICATIONS

Part	Material	Specification	Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10	Stem	Stainless Steel 410 (DN65...DN300) Stainless Steel 431 (DN350...DN600)	BS970 410S21 BS970 431S29
Seal Gasket	EPDM	Commercial	Packing	PTFE+EPDM	Commercial
Disc	Ductile Iron+EPDM	BS EN1563 EN-GJS-450-10	Plug	Steel	BS970 Part1 080A15
Stem Nut	Brass	EN 12165 CW617N	Orifice	Brass (DN65...DN300) Stainless Steel 304 (DN350...DN600)	EN 12165 CW617N BS970 304S15
Cover	Ductile Iron	BS EN1563 EN-GJS-450-10	Bolt & Screws	Stainless Steel 304	BS970 304S15
Directed Circle	ABS		Gasket	Stainless Steel 304	BS970 304S15
Indicator	ABS		Indicator Cover	ABS	
Packing Gland	Brass (DN65...DN150) Ductile Iron (DN200...DN600)	EN 12165 CW617N BS EN1563 EN-GJS-450-10	Limit Indicator	Brass	EN 12165 CW617N
Handwheel	Ductile Iron	BS EN1563 EN-GJS-450-10			

DIMENSIONS & FLOW COEFFICIENT

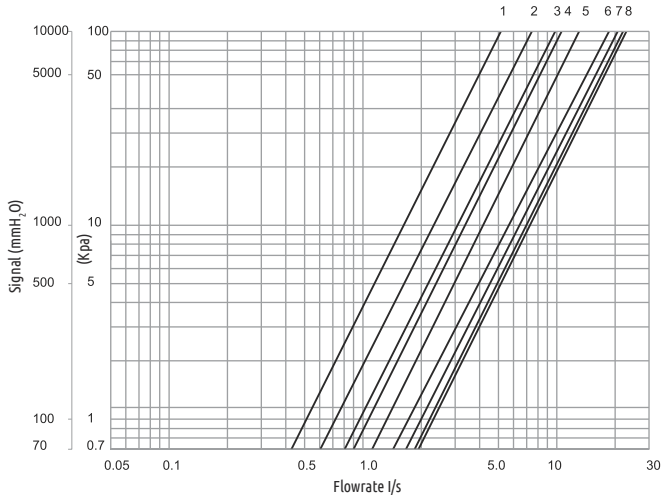
DN (mm) (inch)	65 2½	80 3	100 4	125 5	150 6	200 8	250 10	300 12	350 14	400 16	450 18	500 20	600 24
L	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
H	263	268	300	328	340	525	572	686	681	965	972	1065	1180
A	200	200	240	290	290	350	420	420	420	640	640	640	640
Flow Kv	83.8	119.5	178.7	272.7	380.0	608.0	1292.0	1791.0	1824.0	2098.0	2372.0	2640.0	4940.0
Head K	3.78	5.24	9.53	6.98	5.35	6.26	5.57	6.43	11.40	12.40	13.10	13.50	13.90

VARIABLE ORIFICE DOUBLE REGULATING VALVE

PN16 F63V16
PN25 F63V25

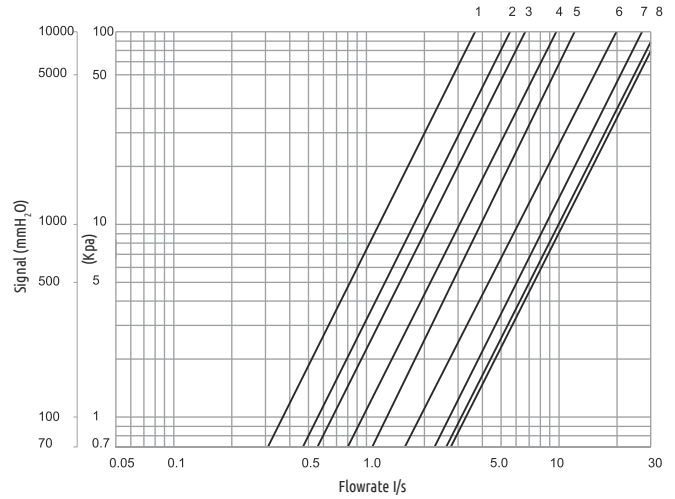


Size 2½" (DN 65)
Handwheel Setting (Number of turns)



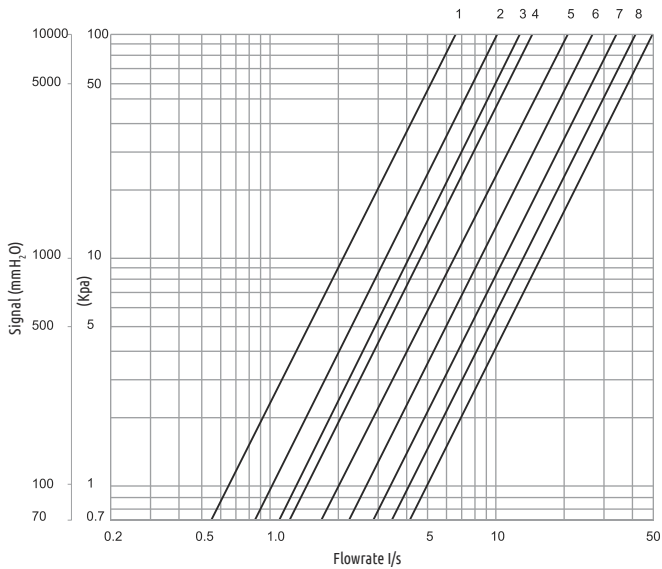
Handwheel Position	1	2	3	4	5
Kv Value	18.6	26.8	35.4	38.7	49.4
Handwheel Position	6	7	8	Fully Open	
Kv Value	65.5	74.6	80.2	83.8	

Size 3" (DN 80)
Handwheel Setting (Number of turns)



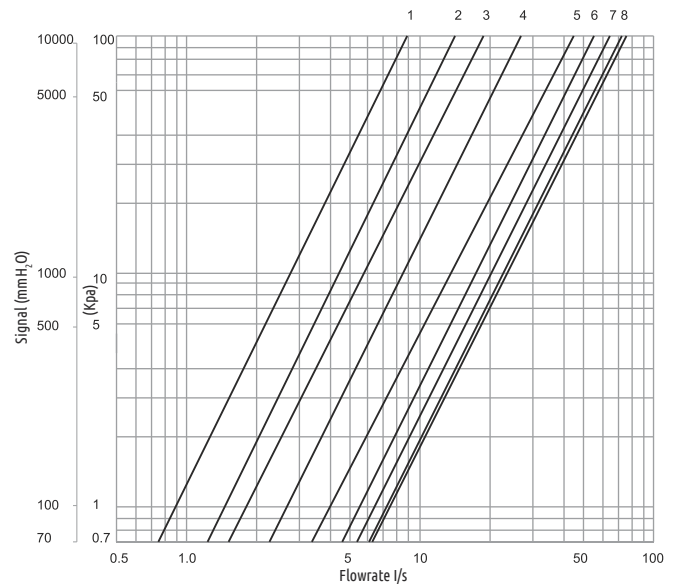
Handwheel Position	1	2	3	4	5
Kv Value	13.3	20.0	24.1	34.9	45.9
Handwheel Position	6	7	8	Fully Open	
Kv Value	71.6	98.8	113.7	119.5	

Size 4" (DN 100)
Handwheel Setting (Number of turns)



Handwheel Position	1	2	3	4	5
Kv Value	23.6	36.6	48.5	55.2	75.2
Handwheel Position	6	7	8	Fully Open	
Kv Value	97.9	123.9	149.4	178.7	

Size 5" (DN 125)
Handwheel Setting (Number of turns)

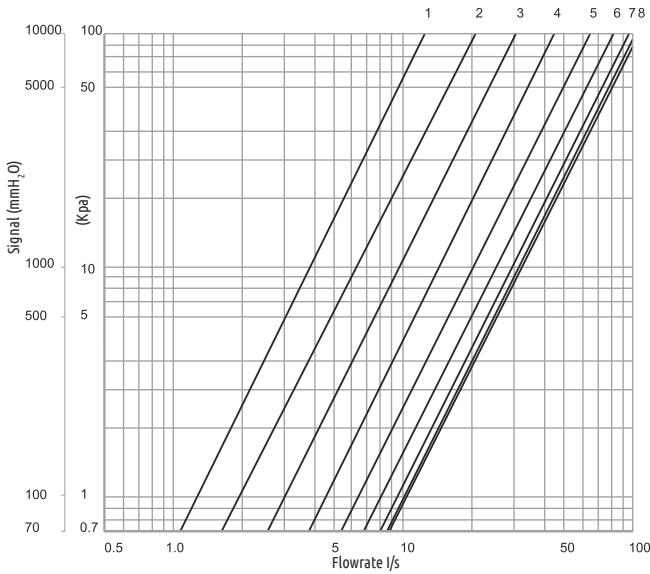


Handwheel Position	1	2	3	4	5
Kv Value	32.2	55.6	68.8	98.0	145.7
Handwheel Position	6	7	8	Fully Open	
Kv Value	199.1	231.7	260.5	272.7	

VARIABLE ORIFICE DOUBLE REGULATING VALVE

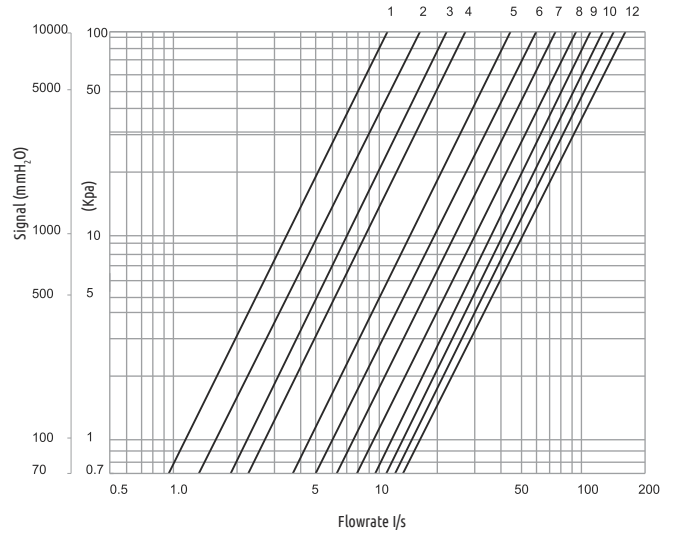
PN16 F63V16
PN25 F63V25

Size 6" (DN 150)
Handwheel Setting (Number of turns)



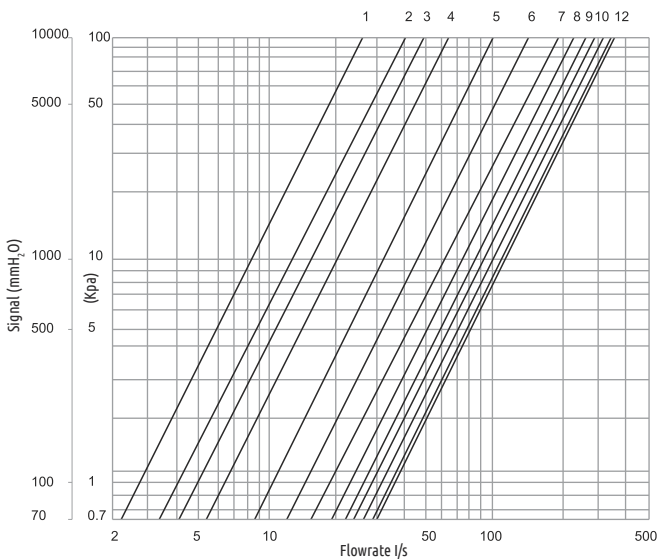
Handwheel Position	1	2	3	4	5
Kv Value	48	75	110	162	233
Handwheel Position	6	7	8	Fully Open	
Kv Value	294	346	371	380	

Size 8" (DN 200)
Handwheel Setting (Number of turns)



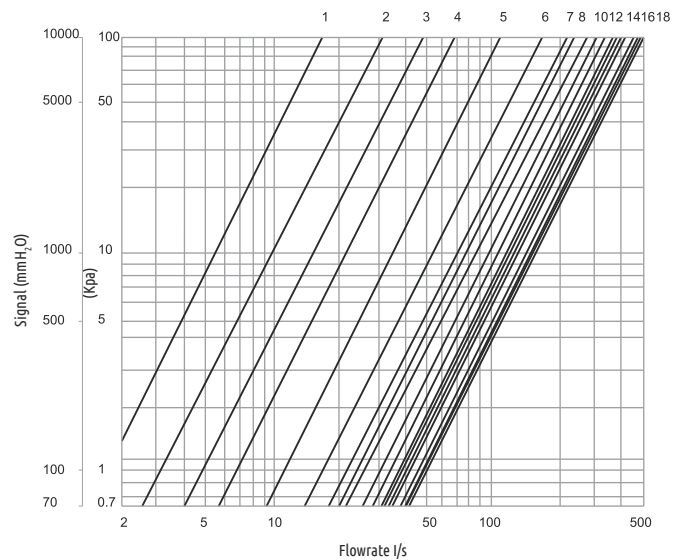
Handwheel Position	1	2	3	4	5	6
Kv Value	41	61	81	99	161	215
Handwheel Position	7	8	9	10	11	Fully Open
Kv Value	271	339	412	482	546	608

Size 10" (DN 250)
Handwheel Setting (Number of turns)



Handwheel Position	1	2	3	4	5	6	
Kv Value	97	146	177	232	368	543	
Handwheel Position	7	8	9	10	11	12	Fully Open
Kv Value	695	832	960	1045	1151	1249	1292

Size 12" (DN 300)
Handwheel Setting (Number of turns)



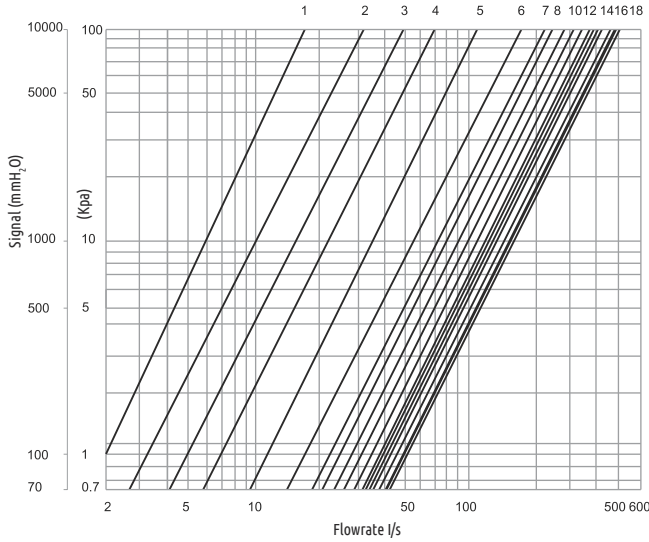
Handwheel Position	1	2	3	4	5	6	7	8	9	10
Kv Value	63	113	174	245	397	628	792	873	1002	1112
Handwheel Position	11	12	13	14	15	16	17	18	Fully Open	
Kv Value	1223	1331	1383	1444	1505	1639	1707	1730	1791	

VARIABLE ORIFICE DOUBLE REGULATING VALVE

PN16 F63V16
PN25 F63V25

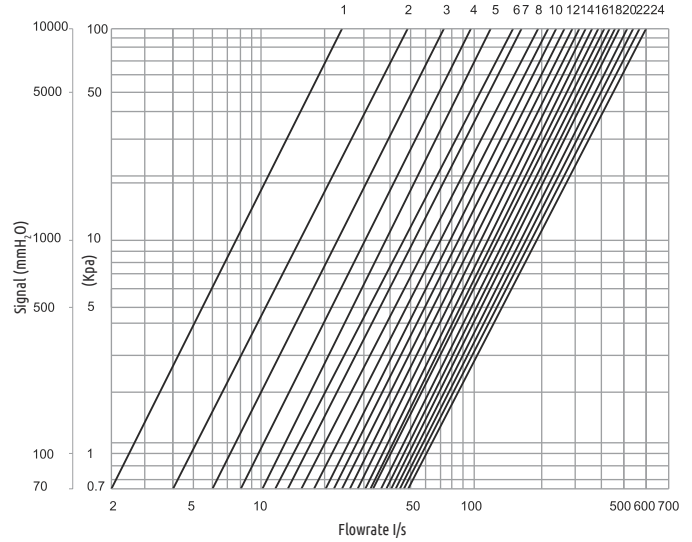


Size 14" (DN 350)
Handwheel Setting (Number of turns)



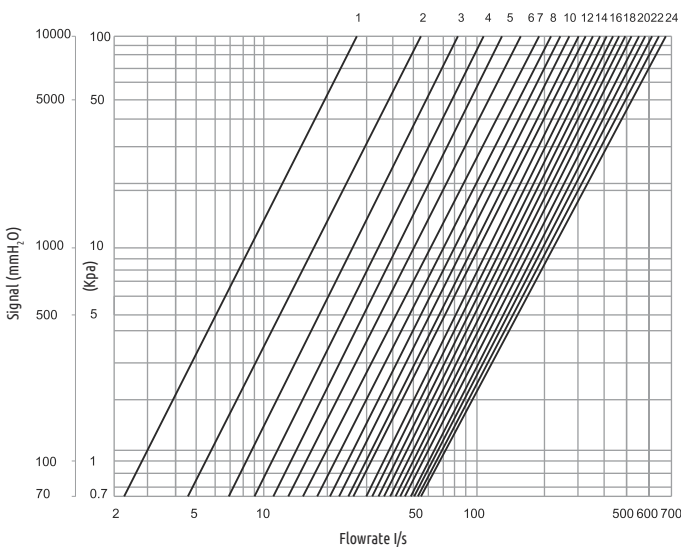
Handwheel Position	1	2	3	4	5	6	7	8	9	10
Kv Value	64	115	177	250	404	639	807	889	1020	1132
Handwheel Position	11	12	13	14	15	16	17	18	Fully Open	
Kv Value	1246	1355	1409	1470	1533	1669	1739	1762	1824	

Size 16" (DN 400)
Handwheel Setting (Number of turns)



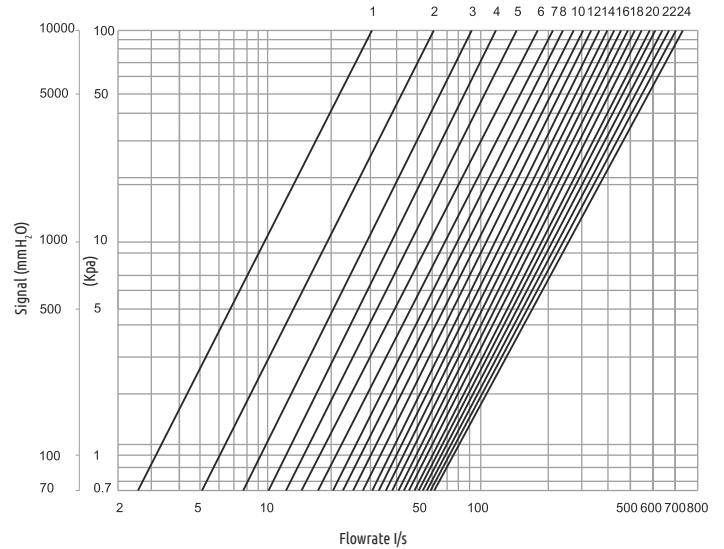
Handwheel Position	1	2	3	4	5	6	7	8		
Kv Value	87	175	262	350	437	525	612	699		
Handwheel Position	9	10	11	12	13	14	15	16		
Kv Value	787	874	962	1049	1136	1224	1311	1399		
Handwheel Position	17	18	19	20	21	22	23	24		
Kv Value	1486	1574	1661	1748	1836	1923	2011	2098		

Size 18" (DN 450)
Handwheel Setting (Number of turns)



Handwheel Position	1	2	3	4	5	6	7	8		
Kv Value	99	198	296	395	494	593	692	791		
Handwheel Position	9	10	11	12	13	14	15	16		
Kv Value	889	988	1087	1186	1285	1384	1482	1581		
Handwheel Position	17	18	19	20	21	22	23	24		
Kv Value	1680	1779	1878	1977	2075	2174	2273	2372		

Size 20" (DN 500)
Handwheel Setting (Number of turns)

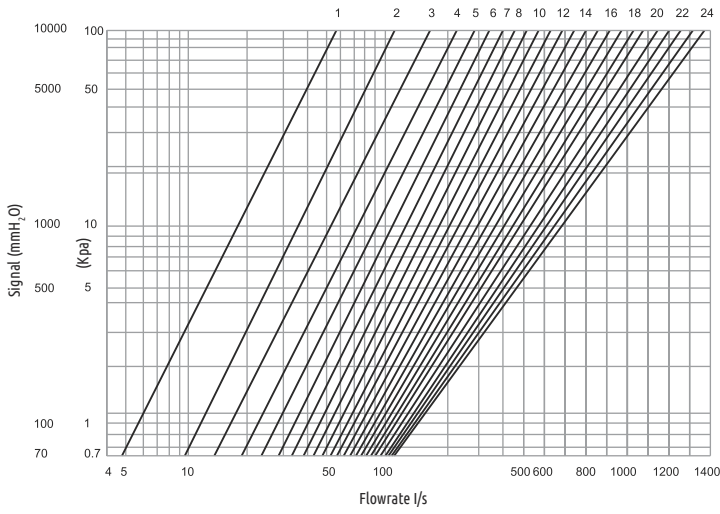


Handwheel Position	1	2	3	4	5	6	7	8		
Kv Value	110	220	330	440	550	660	770	880		
Handwheel Position	9	10	11	12	13	14	15	16		
Kv Value	990	1100	1210	1320	1430	1540	1650	1760		
Handwheel Position	17	18	19	20	21	22	23	24		
Kv Value	1870	1980	2090	2200	2310	2420	2530	2640		

VARIABLE ORIFICE DOUBLE REGULATING VALVE

PN16 F63V16
 PN25 F63V25

Size 24" (DN 600)
 Handwheel Setting (Number of turns)



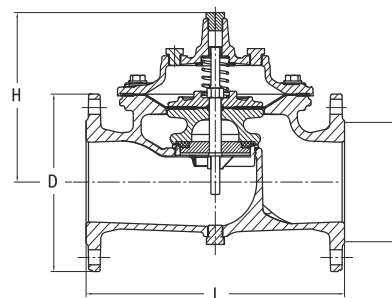
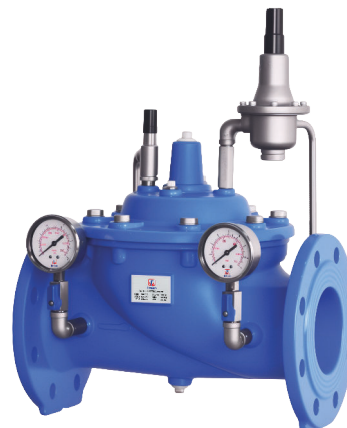
Handwheel Position	1	2	3	4	5	6	7	8
Kv Value	206	412	617	823	1029	1235	1441	1647
Handwheel Position	9	10	11	12	13	14	15	16
Kv Value	1852	2058	2264	2470	2676	2882	3087	3293
Handwheel Position	17	18	19	20	21	22	23	24
Kv Value	3499	3705	3911	4117	4322	4528	4734	4940

PRESSURE REDUCING VALVE

PN16 F6316-PPR
 PN25 F6325-PPR

FEATURES & SPECIFICATIONS

- Automatic reduces the higher inlet pressure to a steady lower downstream pressure, regardless of fluctuating demand or varying upstream pressure
- Pilot-operated regulator capable of holding downstream pressure to a pre-determined limit. The main valve and pilot valve will close when the downstream pressure exceeds the setting of the control pilot
- Full bore globe pattern design for superior control characteristic
- Nylon reinforced diaphragm for long-lasting performance
- Durable fusion bonded epoxy coated
- Design comply with EN 1074-5
- Flange drilled to EN 1092-2 PN16 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)	
Suitable Media	Water	
Setting Range	1 ... 12bar	

MATERIAL SPECIFICATIONS

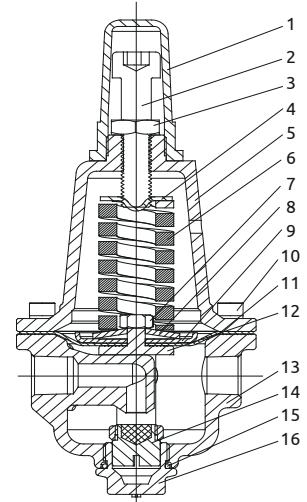
Part	Material	Specification	Part	Material	Specification
Body	Ductile Iron	EN-JS 1050	Seat Retainer	Stainless Steel 304	EN 10088-3 1.4301
Bonnet	Ductile Iron	EN-JS 1050	Spring	Stainless Steel 304	EN 10088-3 1.4301
Plug	Stainless Steel 304	EN 10088-3 1.4301	Diaphragm	Nylon Reinforced Rubber	EPDM + Nylon Fabric
Stem	Stainless Steel 304	EN 10088-3 1.4301	Seal Ring	Rubber	EPDM
Seat	Stainless Steel 304	EN 10088-3 1.4301	O-Ring	Rubber	NBR

DIMENSIONS

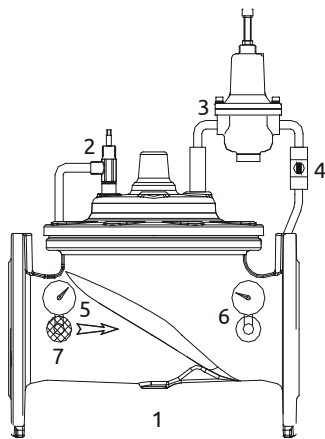
DN	(mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
	(inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L		230	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
H		165	195	225	230	240	240	430	545	605	550	710	720	825	885
D		165	185	200	220	250	285	340	405	460	520	580	640	715	840
A		99	118	132	156	184	211	266	319	370	429	480	548	609	720

PILOT VALVE SPECIFICATION

No.	Description	Material	No.	Description	Material
1	Cap	ABS Plastic	10	Screw	Stainless Steel 304
2	Adjusting Screw	Stainless Steel 304	11	Diaphragm	Nylon Reinforced EPDM
3	Jam Nut	Stainless Steel 304	12	Yoke	Stainless Steel 304
4	Spring Table	Stainless Steel 304	13	Body	Stainless Steel 304
5	Bonnet	Stainless Steel 304	14	Disc	Stainless Steel 304 + EPDM
6	Spring	Spring Steel	15	O-Ring	NBR
7	Nut	Stainless Steel 304	16	Plug	Stainless Steel 304
8	Spring Table	Spring Steel			
9	Fixing Holder	Stainless Steel 304			

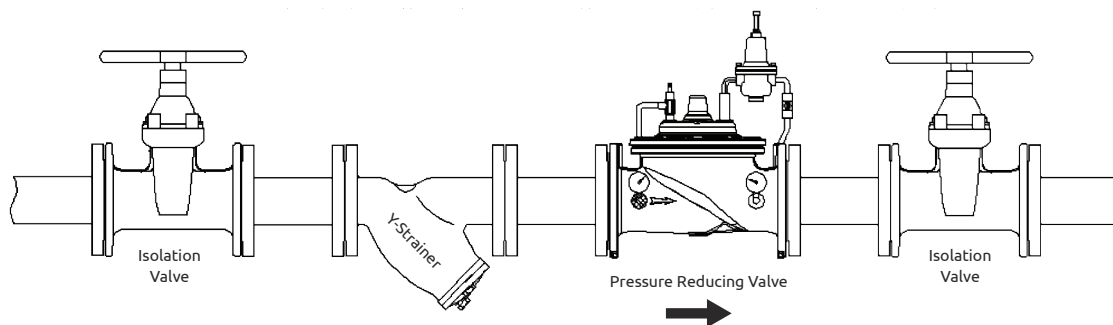


VALVE COMPOSITION



1	Main Valve
2	Needle Valve
3	Pilot Valve (P200)
4	Ball Valve
5	Inlet Pressure Gauge
6	Outlet Pressure Gauge
7	Strainer

TYPICAL CONNECTION



PRESSURE REDUCING VALVE WITH LOW FLOW BY-PASS

PN16 F6316-PPR-LF



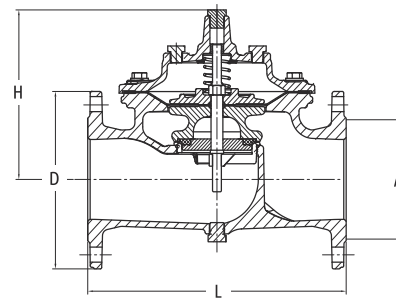
FEATURES & SPECIFICATIONS

- Automatic reduces the higher inlet pressure to a steady lower downstream pressure, regardless of fluctuating demand or varying upstream pressure
- The low flow by-pass lets a small amount of fluid pass through to keep the pressure steady when demand is low. This stop the valve from constantly turning on and off
- Pilot-operated regulator capable of holding downstream pressure to a pre-determined limit. The main valve and pilot valve will close when the downstream pressure exceeds the setting of the control pilot
- Full bore globe pattern design for superior control characteristic
- Nylon reinforced diaphragm for long-lasting performance
- Durable fusion bonded epoxy coated
- Design comply with EN 1074 -5
- Flange drilled to EN 1092-2 PN16 / ANSI Class 150 (Specify on order)



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Test Pressure (x1.5)	24bar
Seat Test Pressure (x1.1)	17.6bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)
Suitable Media	Water
Setting Range	1 ... 12bar



MATERIAL SPECIFICATIONS

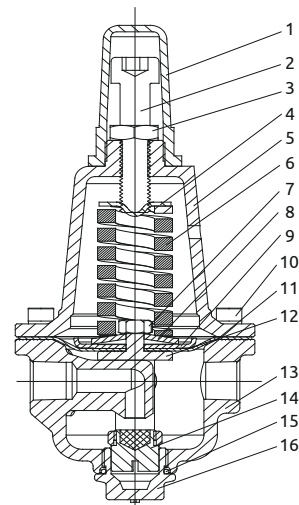
Part	Material	Specification	Part	Material	Specification
Body	Ductile Iron	EN-JS 1050	Seat Retainer	Stainless Steel 304	EN 10088-3 1.4301
Bonnet	Ductile Iron	EN-JS 1050	Spring	Stainless Steel 304	EN 10088-3 1.4301
Plug	Stainless Steel 304	EN 10088-3 1.4301	Diaphragm	Nylon Reinforced Rubber	EPDM + Nylon Fabric
Stem	Stainless Steel 304	EN 10088-3 1.4301	Seal Ring	Rubber	EPDM
Seat	Stainless Steel 304	EN 10088-3 1.4301	O-Ring	Rubber	NBR

DIMENSIONS

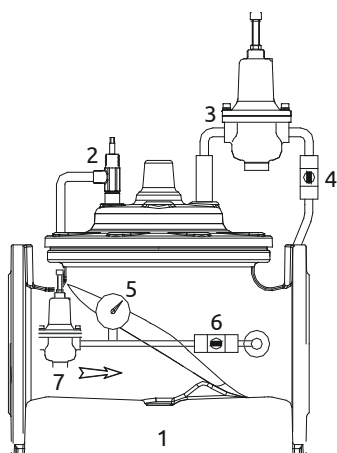
DN (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
DN (inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	230	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
H	165	195	225	230	240	240	430	545	605	550	710	720	825	885
D	165	185	200	220	250	285	340	405	460	520	580	640	715	840
A	99	118	132	156	184	211	266	319	370	429	480	548	609	720

PILOT VALVE SPECIFICATION

No.	Description	Material	No.	Description	Material
1	Cap	ABS Plastic	10	Screw	Stainless Steel 304
2	Adjusting Screw	Stainless Steel 304	11	Diaphragm	Nylon Reinforced EPDM
3	Jam Nut	Stainless Steel 304	12	Yoke	Stainless Steel 304
4	Spring Table	Stainless Steel 304	13	Body	Stainless Steel 304
5	Bonnet	Stainless Steel 304	14	Disc	Stainless Steel 304 + EPDM
6	Spring	Spring Steel	15	O-Ring	NBR
7	Nut	Stainless Steel 304	16	Plug	Stainless Steel 304
8	Spring Table	Spring Steel			
9	Fixing Holder	Stainless Steel 304			

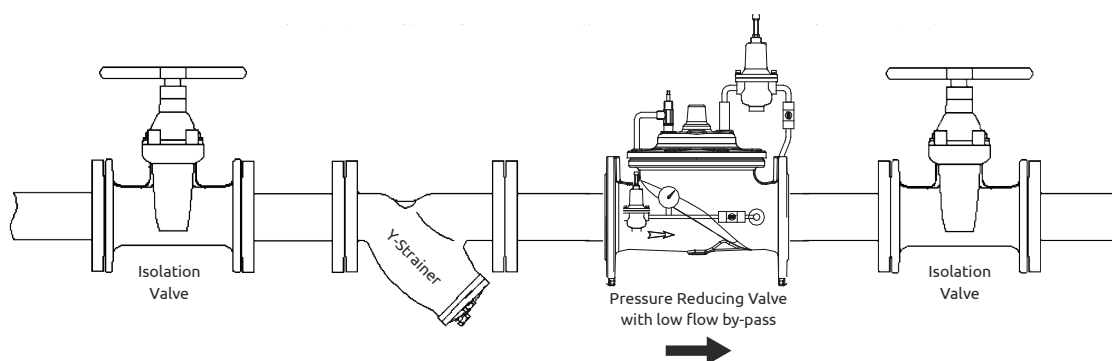


VALVE COMPOSITION



1	Main Valve
2	Needle Valve
3	Pilot Valve (P200)
4	Ball Valve
5	Pressure Gauge
6	Ball Valve
7	By-pass

TYPICAL CONNECTION



PRESSURE RELIEF VALVE

PN16 F6316-PSR
 PN25 F6325-PSR

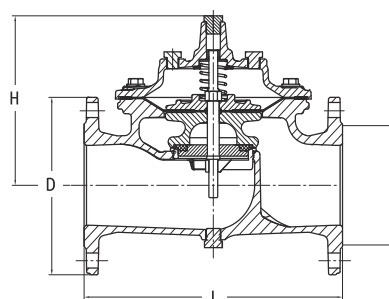
FEATURES & SPECIFICATIONS

- Pressure relief valve operates whenever the system pressure exceeds the preset pressure of the pilot, the valve will immediately open to release excess pressure
- Keep the system in a safety environment
- Full bore globe pattern design for superior control characteristic
- Nylon reinforced diaphragm for long-lasting performance
- Durable fusion bonded epoxy coated
- Design comply with EN 1074 -5
- Flange drilled to EN 1092-2 PN16 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)	
Suitable Media	Water	



MATERIAL SPECIFICATIONS

Part	Material	Specification	Part	Material	Specification
Body	Ductile Iron	EN-JS 1050	Seat Retainer	Stainless Steel 304	EN 10088-3 1.4301
Bonnet	Ductile Iron	EN-JS 1050	Spring	Stainless Steel 304	EN 10088-3 1.4301
Plug	Stainless Steel 304	EN 10088-3 1.4301	Diaphragm	Nylon Reinforced Rubber	EPDM + Nylon Fabric
Stem	Stainless Steel 304	EN 10088-3 1.4301	Seal Ring	Rubber	EPDM
Seat	Stainless Steel 304	EN 10088-3 1.4301	O-Ring	Rubber	NBR

DIMENSIONS

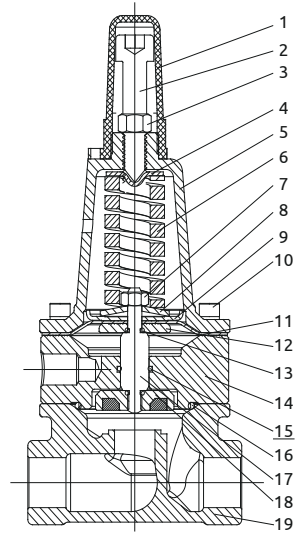
DN	(mm)														
	50	65	80	100	125	150	200	250	300	350	400	450	500	600	
(inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	
L	230	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450	
H	165	195	225	230	240	240	430	545	605	550	710	720	825	885	
D	165	185	200	220	250	285	340	405	460	520	580	640	715	840	
A	99	118	132	156	184	211	266	319	370	429	480	548	609	720	

PRESSURE RELIEF VALVE

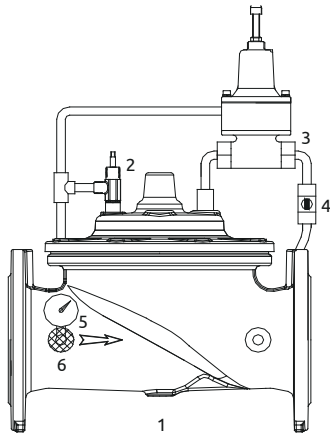
PN16 F6316-PSR
PN25 F6325-PSR

PILOT VALVE SPECIFICATION

No.	Description	Material	No.	Description	Material
1	Cap	ABS Plastic	11	Diaphragm	Nylon Reinforced + EPDM
2	Adjusting Screw	Stainless Steel 304	12	Gasket	Stainless Steel 304
3	Jam Nut	Stainless Steel 304	13	O-Ring	NBR
4	Spring Table	Stainless Steel 304	14	Internal Body	Stainless Steel 304
5	Bonnet	Stainless Steel 304	15	O-Ring	NBR
6	Spring	Spring Steel	16	O-Ring	NBR
7	Nut	Stainless Steel 304	17	Stem	Stainless Steel 304
8	Spring Table	Spring Steel	18	Disc	Stainless Steel 304 + EPDM
9	Fixing Holder	Stainless Steel 304	19	Body	Stainless Steel 304
10	Screw	Stainless Steel 304			

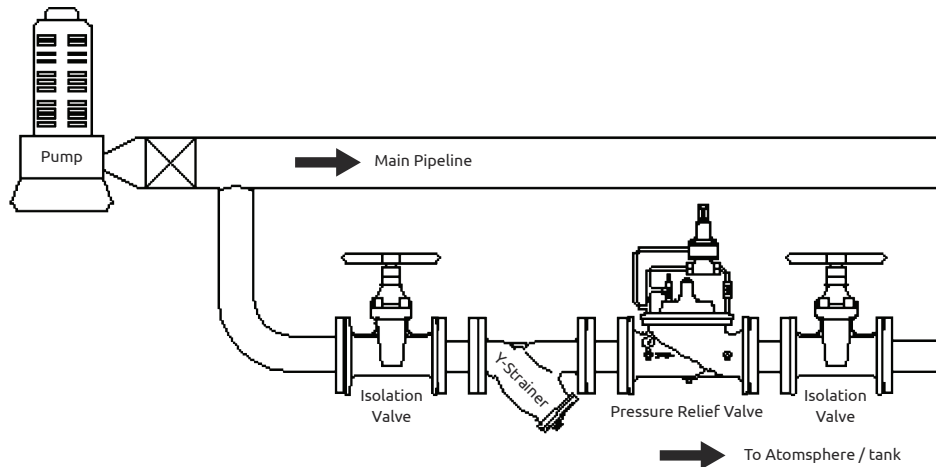


VALVE COMPOSITION



- 1 Main Valve
- 2 Needle Valve
- 3 Pilot Valve (P200)
- 4 Ball Valve
- 5 Inlet Pressure Gauge
- 6 Strainer

TYPICAL CONNECTION



SURGE ANTICIPATING VALVE

PN16 F6316-PSA
 PN25 F6325-PSA

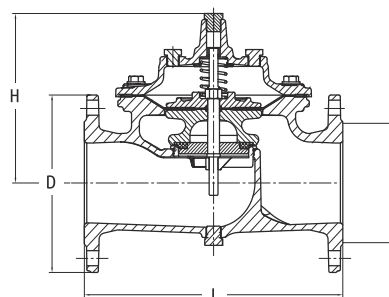
FEATURES & SPECIFICATIONS

- Senses to open at low pressure before surge and quick relief high pressure wave
- Pre-open function eliminates the surge with pump abrupt stoppage
- The high pressure pilot opens the valve to releases excessive system pressure
- Full bore globe pattern design for superior control characteristic
- Nylon reinforced diaphragm for long-lasting performance
- Durable fusion bonded epoxy coated
- Design comply with EN 1074 -5
- Flange drilled to EN 1092-2 PN16 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)	
Suitable Media	Water	



MATERIAL SPECIFICATIONS

Part	Material	Specification	Part	Material	Specification
Body	Ductile Iron	EN-JS 1050	Seat Retainer	Stainless Steel 304	EN 10088-3 1.4301
Bonnet	Ductile Iron	EN-JS 1050	Spring	Stainless Steel 304	EN 10088-3 1.4301
Plug	Stainless Steel 304	EN 10088-3 1.4301	Diaphragm	Nylon Reinforced Rubber	EPDM + Nylon Fabric
Stem	Stainless Steel 304	EN 10088-3 1.4301	Seal Ring	Rubber	EPDM
Seat	Stainless Steel 304	EN 10088-3 1.4301	O-Ring	Rubber	NBR

DIMENSIONS

DN (mm) (inch)	(mm)													
	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L	230	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
H	165	195	225	230	240	240	430	545	605	550	710	720	825	885
D	165	185	200	220	250	285	340	405	460	520	580	640	715	840
A	99	118	132	156	184	211	266	319	370	429	480	548	609	720

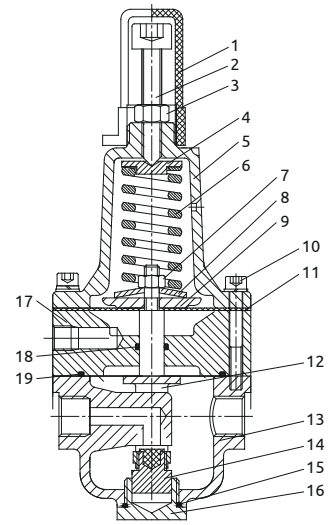
SURGE ANTICIPATING VALVE

PN16 F6316-PSA

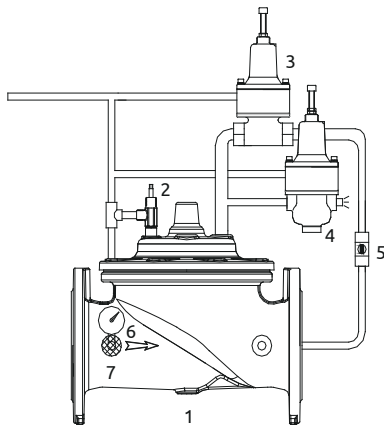
PN25 F6325-PSA

PILOT VALVE SPECIFICATION

No.	Description	Material	No.	Description	Material
1	Cap	ABS Plastic	11	Diaphragm	Nylon Reinforced + NBR
2	Adjusting Screw	Stainless Steel 304	12	Yoke	Stainless Steel 304
3	Jam Nut	Stainless Steel 304	13	Body	Stainless Steel 304
4	Spring Table	Stainless Steel 304	14	Disc	Stainless Steel 304 + EPDM
5	Bonnet	Stainless Steel 304	15	O-Ring	NBR
6	Spring	Spring Steel	16	Plug	Stainless Steel 304
7	Nut	Stainless Steel 304	17	Internal Body	Stainless Steel 304
8	Spring Table	Spring Steel	18	O-Ring	NBR
9	Fixing Holder	Stainless Steel 304	19	O-Ring	NBR
10	Screw	Stainless Steel 304			

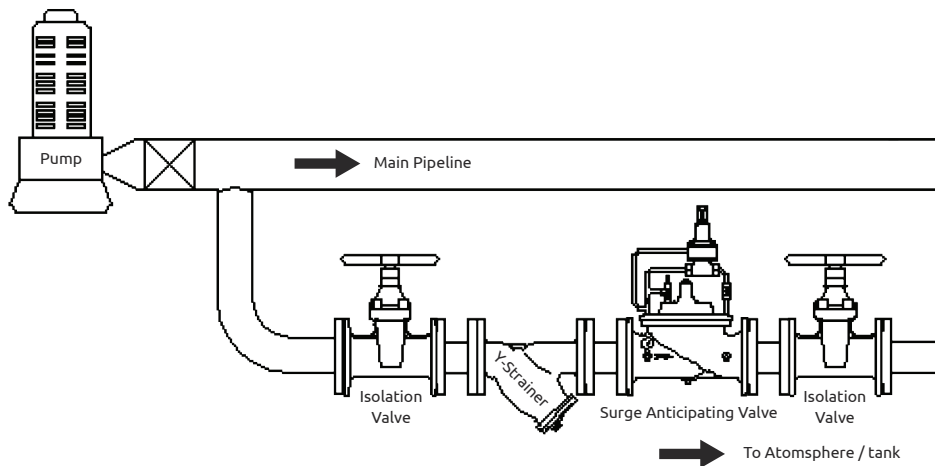


VALVE COMPOSITION



- 1 Main Valve
- 2 Needle Valve
- 3 Pilot Valve (P500)
- 4 Pilot Valve (P20A)
- 5 Ball Valve
- 6 Inlet Pressure Gauge
- 7 Strainer

TYPICAL CONNECTION



PRESSURE DIFFERENTIAL VALVE

PN16 F6316-PPD

PN25 F6325-PPD

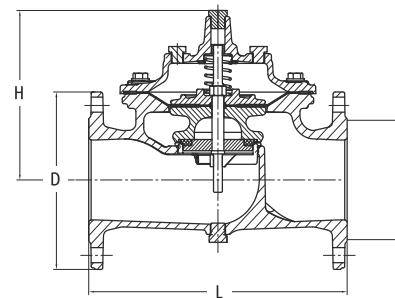
FEATURES & SPECIFICATIONS

- The pressure differential valve will open against the system pressure differential whenever exceeds the pilot setting
- Full bore globe pattern design for superior control characteristic
- Nylon reinforced diaphragm for long-lasting performance
- Durable fusion bonded epoxy coated
- Design comply with EN 1074 -5
- Flange drilled to EN 1092-2 PN16 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)	
Suitable Media	Water	



MATERIAL SPECIFICATIONS

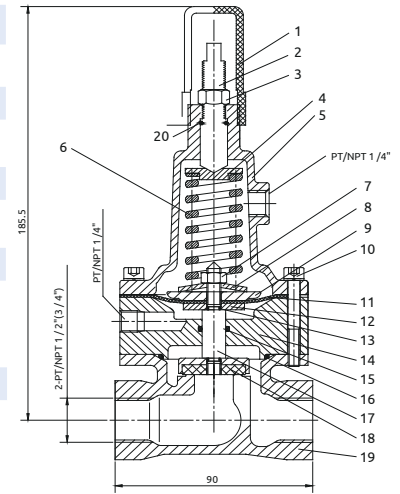
Part	Material	Specification	Part	Material	Specification
Body	Ductile Iron	EN-JS 1050	Seat Retainer	Stainless Steel 304	EN 10088-3 1.4301
Bonnet	Ductile Iron	EN-JS 1050	Spring	Stainless Steel 304	EN 10088-3 1.4301
Plug	Stainless Steel 304	EN 10088-3 1.4301	Diaphragm	Nylon Reinforced Rubber	EPDM + Nylon Fabric
Stem	Stainless Steel 304	EN 10088-3 1.4301	Seal Ring	Rubber	EPDM
Seat	Stainless Steel 304	EN 10088-3 1.4301	O-Ring	Rubber	NBR

DIMENSIONS

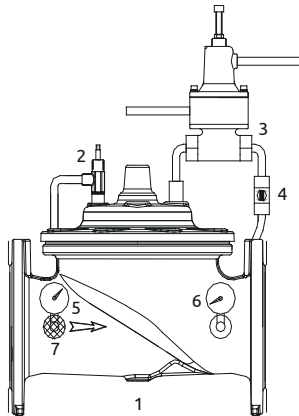
DN	(mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
	(inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L		230	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
H		165	195	225	230	240	240	430	545	605	550	710	720	825	885
D		165	185	200	220	250	285	340	405	460	520	580	640	715	840
A		99	118	132	156	184	211	266	319	370	429	480	548	609	720

PILOT VALVE SPECIFICATION

No.	Description	Material	No.	Description	Material
1	Cap	ABS Plastic	12	Gasket	Stainless Steel 304
2	Adjusting Screw	Stainless Steel 304	13	O-Ring	NBR
3	Jam Nut	Stainless Steel 304	14	Internal Body	Stainless Steel 304
4	Spring Table	Stainless Steel 304	15	O-Ring	NBR
5	Bonnet	Stainless Steel 304	16	O-Ring	NBR
6	Spring	Spring Steel	17	Stem	Stainless Steel 304
7	Nut	Stainless Steel 304	18	Disc	Stainless Steel 304 + EPDM
8	Spring Table	Spring Steel	19	Body	Stainless Steel 304
9	Fixing Holder	Stainless Steel 304	20	O-Ring	NBR
10	Screw	Stainless Steel 304			
11	Diaphragm	Nylon Reinforced + EPDM			

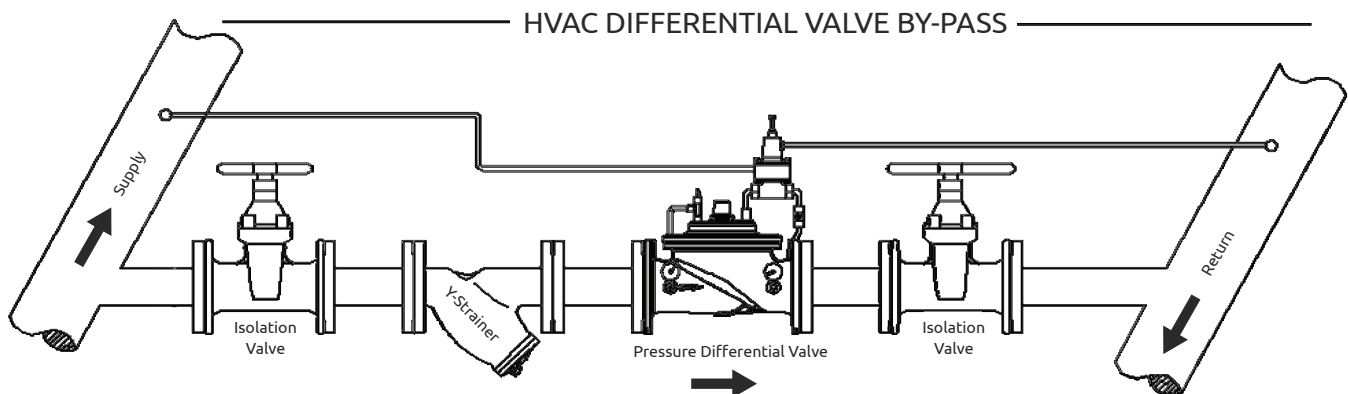


VALVE COMPOSITION



- 1 Main Valve
- 2 Needle Valve
- 3 Pilot Valve P800
- 4 Ball Valve
- 5 Inlet Pressure Gauge
- 6 Outlet Pressure Gauge
- 7 Strainer

TYPICAL CONNECTION



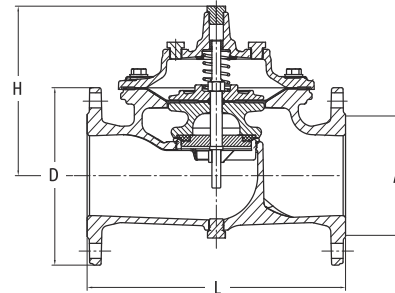
FLOW CONTROL VALVE

PN16 F6316-FCV
PN25 F6325-FCV



FEATURES & SPECIFICATIONS

- Maintain constant flow, regardless of fluctuations of system pressure
- The flow rate is adjustable at the pilot, it senses the pressure differential across an orifice plate mounted in the valve outlet flange
- Whenever the system pressure changes, the pilot responds and modulate the main valve to maintain the desired flow
- Full bore globe pattern design for superior control characteristic
- Nylon reinforced diaphragm for long-lasting performance
- Durable fusion bonded epoxy coated
- Design comply with EN 1074 -5
- Flange drilled to EN 1092-2 PN16 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)	
Suitable Media	Water	

MATERIAL SPECIFICATIONS

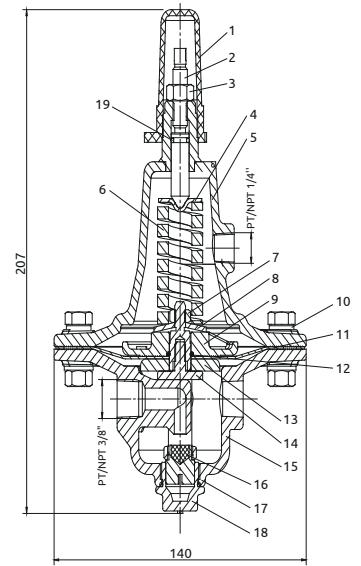
Part	Material	Specification	Part	Material	Specification
Body	Ductile Iron	EN-JS 1050	Seat Retainer	Stainless Steel 304	EN 10088-3 1.4301
Bonnet	Ductile Iron	EN-JS 1050	Spring	Stainless Steel 304	EN 10088-3 1.4301
Plug	Stainless Steel 304	EN 10088-3 1.4301	Diaphragm	Nylon Reinforced Rubber	EPDM + Nylon Fabric
Stem	Stainless Steel 304	EN 10088-3 1.4301	Seal Ring	Rubber	EPDM
Seat	Stainless Steel 304	EN 10088-3 1.4301	O-Ring	Rubber	NBR

DIMENSIONS

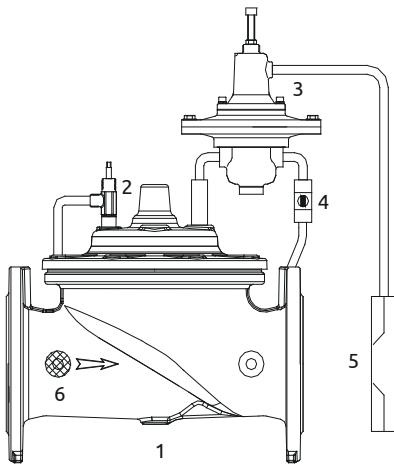
DN (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
DN (inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	230	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
H	165	195	225	230	240	240	430	545	605	550	710	720	825	885
D	165	185	200	220	250	285	340	405	460	520	580	640	715	840
A	99	118	132	156	184	211	266	319	370	429	480	548	609	720

PILOT VALVE SPECIFICATION

No.	Description	Material	No.	Description	Material
1	Cap	ABS Plastic	11	Diaphragm	Nylon Reinforced + EPDM
2	Adjusting Screw	Stainless Steel 304	12	O-Ring	NBR
3	Jam Nut	Stainless Steel 304	13	Gasket	Stainless Steel 304
4	Spring Table	Stainless Steel 304	14	Stem	Stainless Steel 304
5	Bonnet	Stainless Steel 304	15	Body	Stainless Steel 304
6	Spring	Spring Steel	16	Disc	Stainless Steel 304 + EPDM
7	Nut	Stainless Steel 304	17	O-Ring	NBR
8	Spring Table	Spring Steel	18	Plug	Stainless Steel 304
9	Fixing Holder	Stainless Steel 304	19	O-Ring	NBR
10	Screw	Stainless Steel 304			

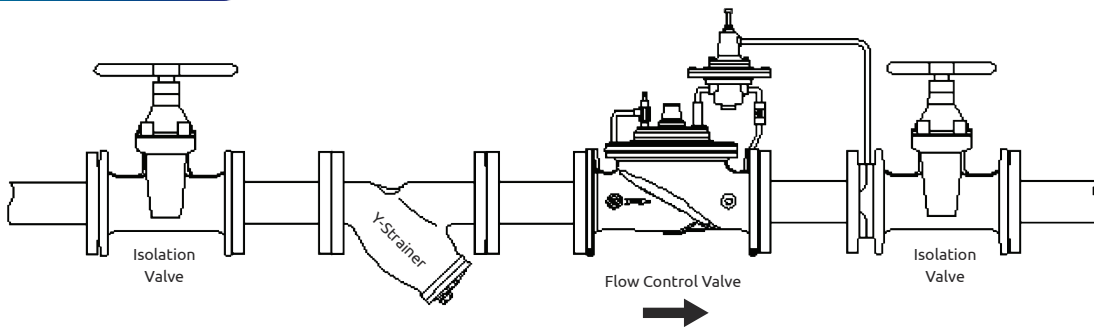


VALVE COMPOSITION



- 1 Main Valve
- 2 Needle Valve
- 3 Pilot Valve (P400)
- 4 Ball Valve
- 5 Orifice Kit
- 6 Strainer

TYPICAL CONNECTION



MODULATING FLOAT VALVE

PN16 F6316-FMC
PN25 F6325-FMC

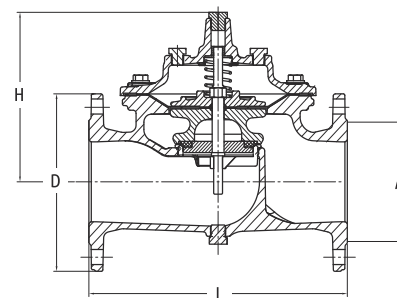
FEATURES & SPECIFICATIONS

- Control and maintain water level at the desired level
- Accurate and repeatable level control
- Stainless steel of rod & ball float
- Full bore globe pattern design for superior control characteristic
- Nylon reinforced diaphragm for long-lasting performance
- Durable fusion bonded epoxy coated
- Design comply with EN 1074 -5
- Flange drilled to EN 1092-2 PN16 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)	
Suitable Media	Water	



MATERIAL SPECIFICATIONS

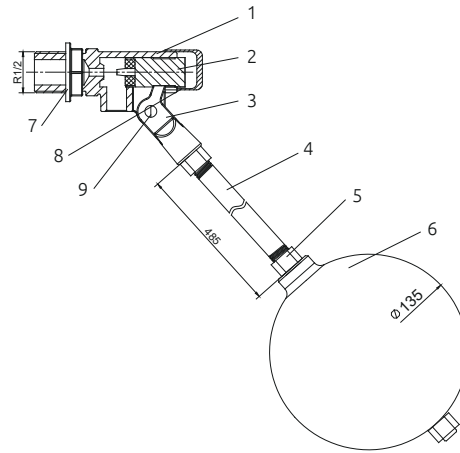
Part	Material	Specification	Part	Material	Specification
Body	Ductile Iron	EN-JS 1050	Seat Retainer	Stainless Steel 304	EN 10088-3 1.4301
Bonnet	Ductile Iron	EN-JS 1050	Spring	Stainless Steel 304	EN 10088-3 1.4301
Plug	Stainless Steel 304	EN 10088-3 1.4301	Diaphragm	Nylon Reinforced Rubber	EPDM + Nylon Fabric
Stem	Stainless Steel 304	EN 10088-3 1.4301	Seal Ring	Rubber	EPDM
Seat	Stainless Steel 304	EN 10088-3 1.4301	O-Ring	Rubber	NBR

DIMENSIONS

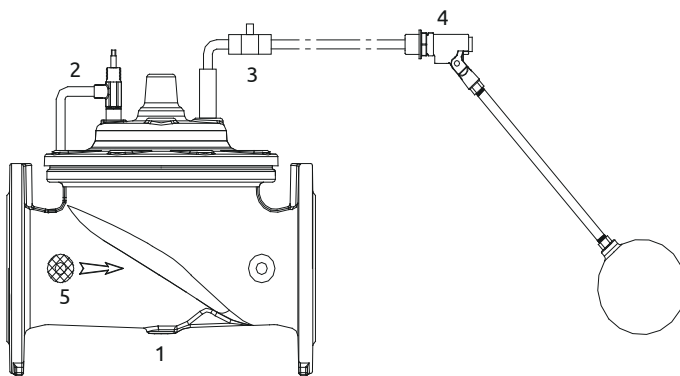
DN (mm) (inch)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L	230	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
H	165	195	225	230	240	240	430	545	605	550	710	720	825	885
D	165	185	200	220	250	285	340	405	460	520	580	640	715	840
A	99	118	132	156	184	211	266	319	370	429	480	548	609	720

PILOT VALVE SPECIFICATION

No.	Description	Material
1	Body	Stainless Steel 304
2	Disc	Stainless Steel 304 + EPDM
3	Yoke	Stainless Steel 304
4	Rod	Stainless Steel 304
5	Nut	Stainless Steel 304
6	Float	Stainless Steel 304
7	Jam Nut	Stainless Steel 304
8	Bonnet	Stainless Steel 304
9	Screw	Stainless Steel 304

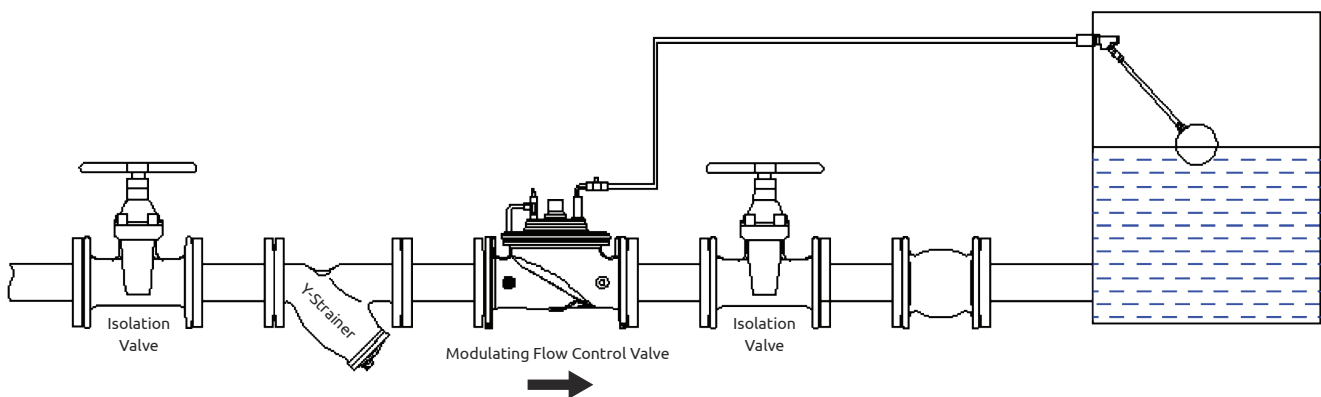


VALVE COMPOSITION



- | | |
|---|-------------------------|
| 1 | Main Valve |
| 2 | Needle Valve |
| 3 | Ball Valve |
| 4 | Ball Float Valve (P100) |
| 5 | Strainer |

TYPICAL CONNECTION

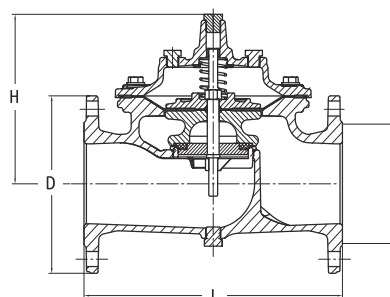


BI-LEVEL FLOAT VALVE

PN16 F6316-FBF
 PN25 F6325-FBF

FEATURES & SPECIFICATIONS

- Non-modulating type
- Accurate and repeatable level control
- Stainless steel rod & ball float
- Full bore globe pattern design for superior control characteristic
- Nylon reinforced diaphragm for long-lasting performance
- Durable fusion bonded epoxy coated
- Design comply with EN 1074 -5
- Flange drilled to EN 1092-2 PN16 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)	
Suitable Media	Water	

MATERIAL SPECIFICATIONS

Part	Material	Specification	Part	Material	Specification
Body	Ductile Iron	EN-JS 1050	Seat Retainer	Stainless Steel 304	EN 10088-3 1.4301
Bonnet	Ductile Iron	EN-JS 1050	Spring	Stainless Steel 304	EN 10088-3 1.4301
Plug	Stainless Steel 304	EN 10088-3 1.4301	Diaphragm	Nylon Reinforced Rubber	EPDM + Nylon Fabric
Stem	Stainless Steel 304	EN 10088-3 1.4301	Seal Ring	Rubber	EPDM
Seat	Stainless Steel 304	EN 10088-3 1.4301	O-Ring	Rubber	NBR

DIMENSIONS

DN	(mm)														
	50	65	80	100	125	150	200	250	300	350	400	450	500	600	
(inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	
L	230	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450	
H	165	195	225	230	240	240	430	545	605	550	710	720	825	885	
D	165	185	200	220	250	285	340	405	460	520	580	640	715	840	
A	99	118	132	156	184	211	266	319	370	429	480	548	609	720	

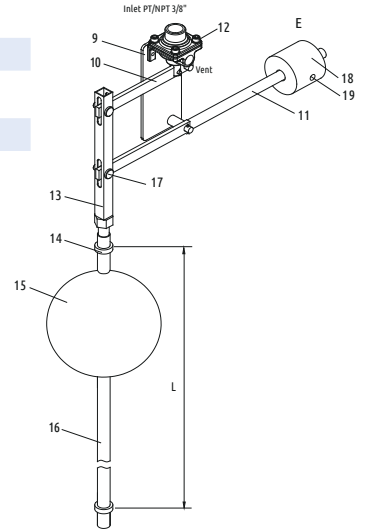
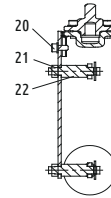
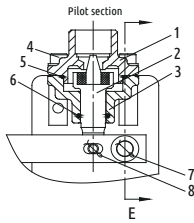
BI-LEVEL FLOAT VALVE

PN16 F6316-FBF

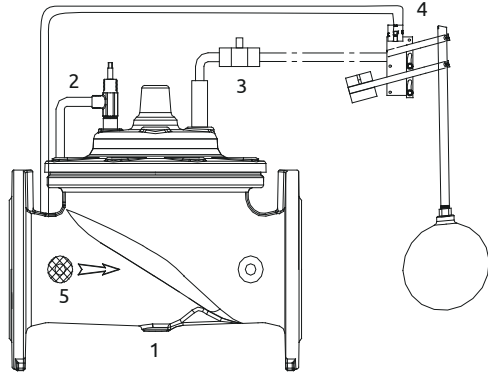
PN25 F6325-FBF

PILOT VALVE SPECIFICATION

No.	Description	Material	No.	Description	Material
1	Bonnet	Stainless Steel 304	16	Low rod	Stainless Steel 304
2	Disc	Stainless Steel 304 + EPDM	17	Pin roll & split pin	Stainless Steel 304
3	Body	Stainless Steel 304	18	Weight	Stainless Steel 304
4	Bolt + Washer	Stainless Steel 304	19	Set screw	Stainless Steel 304
5	O-Ring	NBR	20	Nut + Washer	Stainless Steel 304
6	O-Ring	NBR	21	Nut	Stainless Steel 304
7	Split pin	Stainless Steel 304	22	Roller	Stainless Steel 304
8	Split pin	Stainless Steel 304			
9	Plate	Stainless Steel 304			
10	Bar 1	Stainless Steel 304			
11	Bar 2	Stainless Steel 304			
12	Screw	Stainless Steel 304			
13	Up rod	Stainless Steel 304			
14	Stop collar	Stainless Steel 304			
15	Float	Stainless Steel 304			

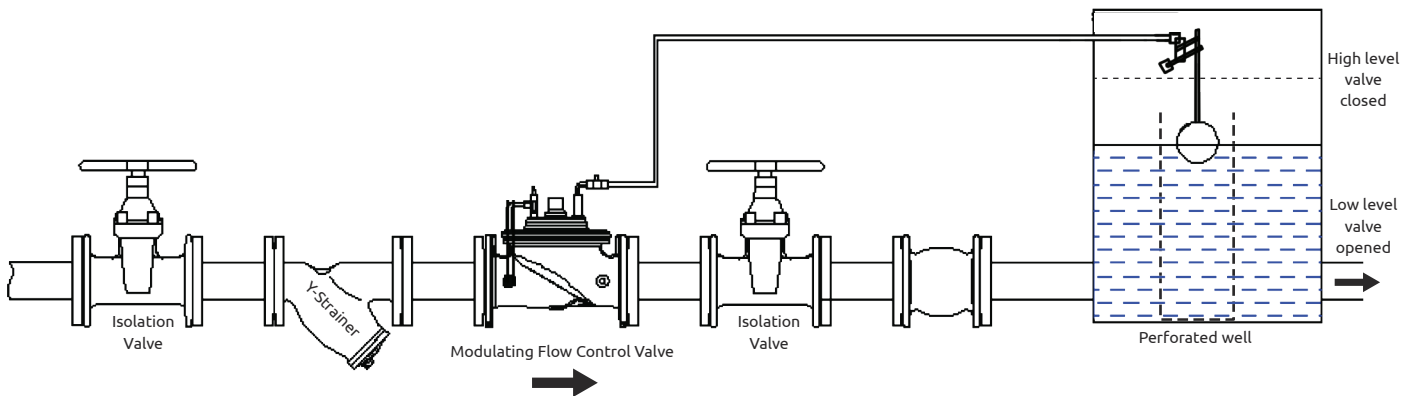


VALVE COMPOSITION



- 1 Main Valve
- 2 Needle Valve
- 3 Ball Valve
- 4 Bi-Level Float
- 5 Strainer

TYPICAL CONNECTION



SOLENOID CONTROL VALVE

PN16 F6316-FSC
PN25 F6325-FSC



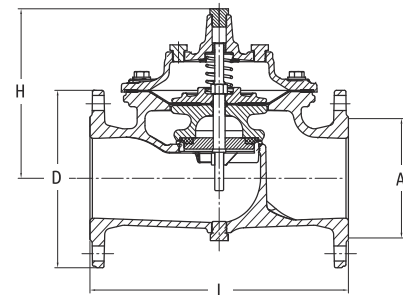
FEATURES & SPECIFICATIONS

- Energized to open or close the valve
- Full bore globe pattern design for superior control characteristic
- Nylon reinforced diaphragm for long-lasting performance
- Durable fusion bonded epoxy coated
- Design comply with EN 1074 -5
- Flange drilled to EN 1092-2 PN16 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Shell Test Pressure (x1.5)	24bar	37.5bar
Seat Test Pressure (x1.1)	17.6bar	27.5bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)	
Suitable Media	Water	
Setting Range	1 ... 12bar	



MATERIAL SPECIFICATIONS

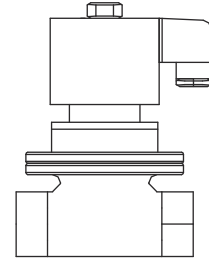
Part	Material	Specification	Part	Material	Specification
Body	Ductile Iron	EN-JS 1050	Seat Retainer	Stainless Steel 304	EN 10088-3 1.4301
Bonnet	Ductile Iron	EN-JS 1050	Spring	Stainless Steel 304	EN 10088-3 1.4301
Plug	Stainless Steel 304	EN 10088-3 1.4301	Diaphragm	Nylon Reinforced Rubber	EPDM + Nylon Fabric
Stem	Stainless Steel 304	EN 10088-3 1.4301	Seal Ring	Rubber	EPDM
Seat	Stainless Steel 304	EN 10088-3 1.4301	O-Ring	Rubber	NBR

DIMENSIONS

DN (mm) (inch)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L	230	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
H	165	195	225	230	240	240	430	545	605	550	710	720	825	885
D	165	185	200	220	250	285	340	405	460	520	580	640	715	840
A	99	118	132	156	184	211	266	319	370	429	480	548	609	720

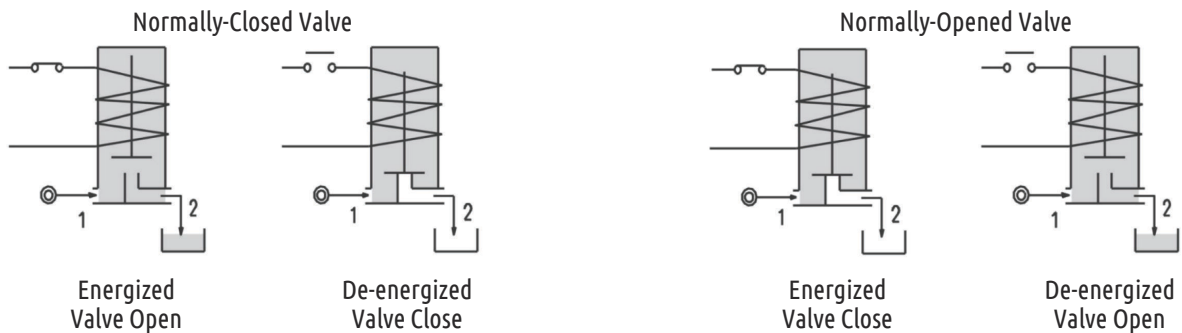
SOLENOID VALVE SPECIFICATION

Medium Temperature	-5°C ... 80°C (NBR Sealing)
Working Pressure	0 ... 8bar
Working Voltage	AC220V ... AC240V, AC110V 50/60Hz 22VA, DC24/12V 13W
Protection	IP65
Motor	H Degree
Working Type	Semi direct acting
Body Material	Brass / Stainless Steel 316
Seal Material	NBR (Options EPDM, Viton)
Interface Thread	G type / NPT

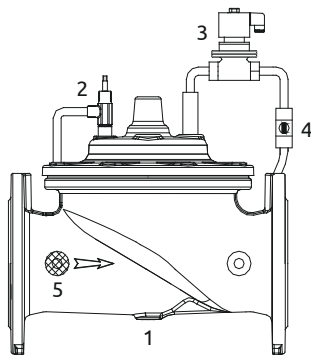


NORMALLY-CLOSED AND NORMALLY-OPENED DIAGRAM

Note : Please indicate Normally-Closed or Normally-Open while placing the order.

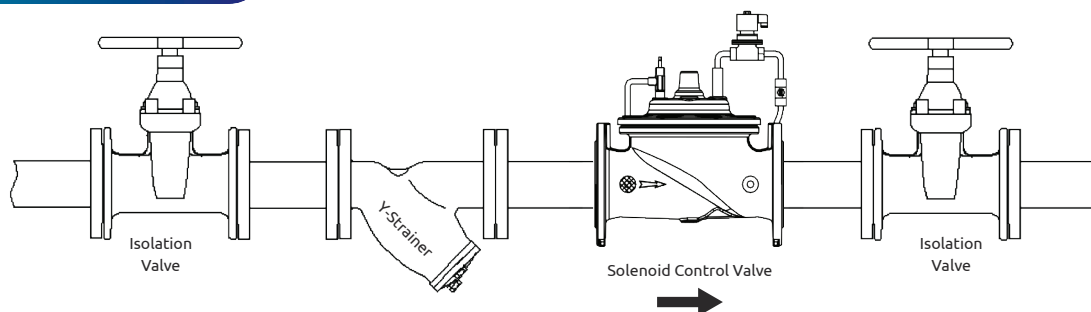


VALVE COMPOSITION



- | | |
|---|----------------|
| 1 | Main Valve |
| 2 | Needle Valve |
| 3 | Solenoid Valve |
| 4 | Ball Valve |
| 5 | Strainer |

TYPICAL CONNECTION



BASKET TYPE STRAINER

PN16 F73B16

FEATURES & SPECIFICATIONS

- Filter the particles and debris that may be carried by process fluid in the pipeline
- Bolted cover
- Stainless steel perforated screen
- Durable fusion bonded epoxy coated
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, Sewerage & Water Treatment, General Industries

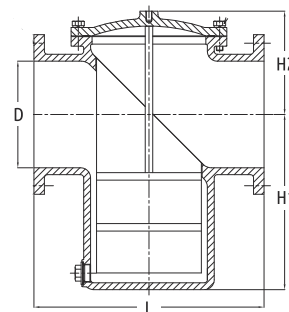


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Test Pressure (x1.5)	24bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Cover	Ductile Iron	BS EN1563 EN-GJS-450-10
Bolt	Stainless Steel 304	EN 10088-1 1.4301
Spring Washer	Stainless Steel 304	EN 10088-1 1.4301
Screen	Stainless Steel 304	BS970 304S15
Plug	Stainless Steel 304	EN 10088-1 1.4301
Gasket	EPDM	Commercial



SCREENS DATA

Size(mm)	Hole Dia.(mm)	Mesh
50 ... 80	1.5	104
100 ... 350	3.0	40
400	3.0	12
450 ... 600	5.0	12

DIMENSIONS

DN (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
DN (inch)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	206	210	250	292	334	376	472	511	680	768.4	842	842	842	1054
H1	131	155	192	203	217	232	291.5	335	403	585	590	590	600	974
H2	87	93	103	126	146	165	221.5	268	340	345	390	420	510	515
D	50	64	76	100	127	152	203	254	305	356	406	456	506	606
Hole plug dia.	¾"NPT	¾"NPT	¾"NPT	¾"NPT	¾"NPT	¾"NPT	¾"NPT	¾"NPT	¾"NPT	¾"NPT	G2"A	G2"A	G2"A	G2"A

Note : 1. Hole plug diameter available in BSPT (Specify on order).

2. G2"A is a 2-inch BSPP parallel thread, external type, tighter tolerance class (ISO 228-1).

FEATURES & SPECIFICATIONS

- Filter the particles and debris that may be carried by process fluid in the pipeline
- Bolted cover with drain plug
- Stainless steel perforated screen
- Durable fusion bonded epoxy coated
- Comply with DIN 3202-F1 / BS EN 558-1
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / BS 4504 PN25 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, Sewerage & Water Treatment, General Industries

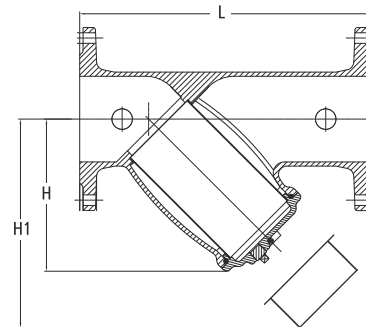


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Test Pressure (x1.5)	24bar	37.5bar
Working Temperature	-10°C ... 120°C	
Suitable Media	Water	

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Bonnet	Ductile Iron	BS EN1563 EN-GJS-450-10
Hex Bolt	Carbon Steel	BS970 Part1 080A15
Hex Nut	Carbon Steel	BS970 Part1 080A15
Plug	Stainless Steel 201 (DN50...DN300) Stainless Steel 304 (DN350...DN600) Steel (PN25)	EN 10088-1 1.4372 EN 10088-1 1.4301 BS970 080A35
O-Ring	EPDM / NBR	Commercial
Screen	Stainless Steel 304	BS970 304S15



DIMENSIONS (PN16)

DN (mm)	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
DN (inch)	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	200	230	290	310	350	350	480	600	730	850	980	1100	1200	1250	1450
H	93	110	135	155	190	255	290	335	428	470	625	685	746	845	984
H1	155	165	205	230	295	350	400	510	665	745	940	1230	1110	1550	1560
Hole plug dia.	R1 ¾"	R1 ¾"	R1 ¾"	R1 ¾"	R1 ¾"	R1 ¾"	R1 ¾"	R1 ½"	R1 ½"	R1 ½"	R1 ¾"	R1 ¾"	R1 ¾"	R1 ¾"	R1 1"

Note : R1 thread is a tapered external thread (BSPT, in accordance with ISO 7-1 / EN 10226).

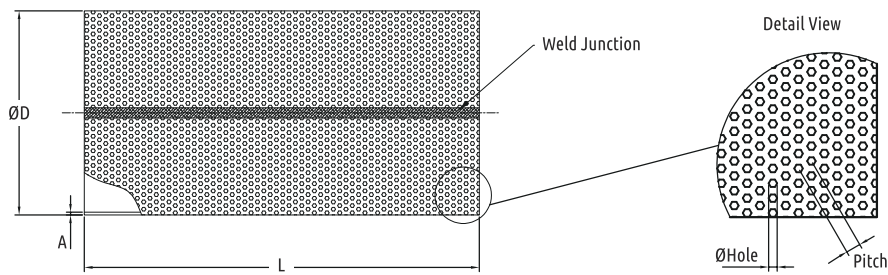
DIMENSIONS (PN25)

DN (mm)	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
DN (inch)	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	-	230	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
H	-	160	180	215	235	275	305	390	540	680	740	845	840	908	1078
H1	-	250	285	330	365	425	480	610	915	1110	1210	1380	1310	1440	1740
Hole plug dia.	-	G1"	G1"	G1"	G1½"	G1½"	G1½"	G2"	G2"	G2"	G2"	G2"	G2"	G2"	G2"

Note : G thread is a parallel internal thread (BSPP, in accordance with ISO 228-1)

Y-TYPE STRAINER

PN16 V73Y16
PN25 F73Y25



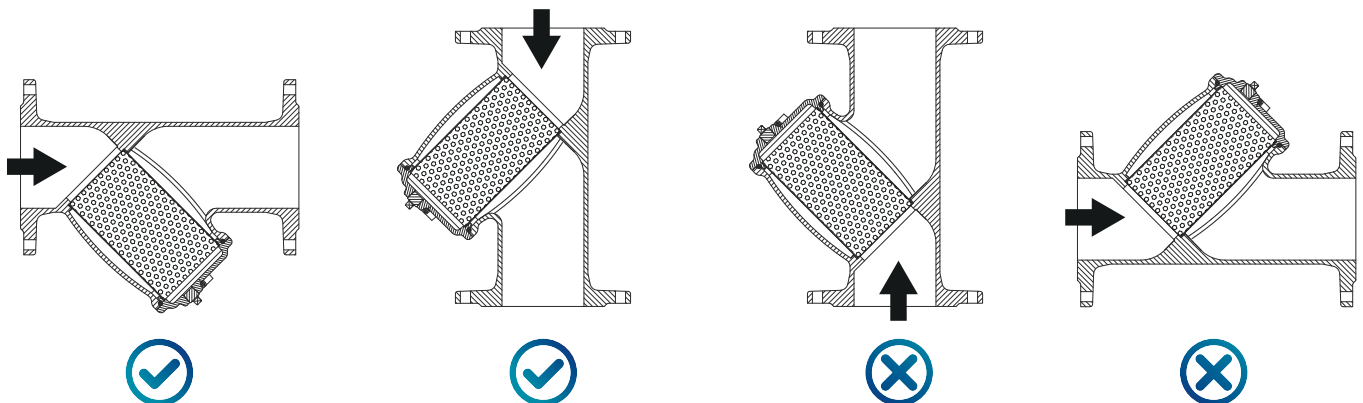
SCREEN DATA (PN16)

DN (mm)	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
DN (inch)	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	86	99	120.5	128.5	169.5	205	224	289.5	386	416	520	580	597	696	822
ØD	40	48	64	79	98.5	124	150.5	201	249	298	367.5	412	460	510	610
A	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.2	1.2	1.2	1.4	1.8	1.8	1.8	1.8
ØHole	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Pitch	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.0	5.0	5.0	5.0	5.5	5.5	5.5	5.5
Mesh (N/in ²)	104	104	104	104	104	104	104	26	26	26	26	22	22	22	22

SCREEN DATA (PN25)

DN (mm)	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
DN (inch)	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L	-	119	134	149	175	199	224	284	434	555	606	686	682	746	930
ØD	-	61.5	78.5	89.5	106	137.5	160	210	258	308	362	412	456	506	606
A	-	0.8	0.8	0.8	0.8	0.8	1	1.2	1.2	1.2	1.4	1.8	1.8	1.8	1.8
ØHole	-	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Pitch	-	2.5	2.5	2.5	2.5	2.5	2.5	5	5	5	5	5.5	5.5	5.5	5.5
Mesh (N/in ²)	-	104	104	104	104	104	104	26	26	26	26	22	22	22	22

INSTALLATION ANGLE



FEATURES & SPECIFICATIONS

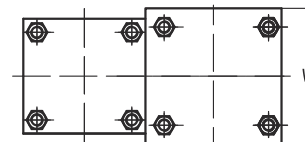
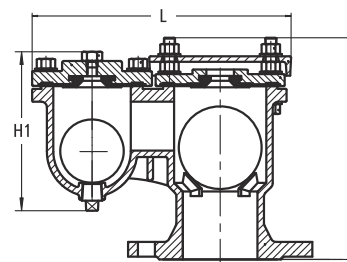
- Comply with BS EN 1074-4
- Capable to withstand hydrostatic pressure of 24 bar without any sign of leakage
- Flange drilled to BS 4504 PN 16 / EN 1092-2 PN 16 / ANSI Class 150 (Specify on order)

PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Test Pressure (x1.5)	24bar
Seat Test Pressure (x1.1)	17.6bar
Working Temperature	-10°C ... 100°C
Suitable Media	Water

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Float Ball	ABS Plastic	BS EN ISO 2580
Bolt	Steel	BS970 Part1 080A15
Ball Seal Orifice	EPDM	Commercial
Orifice Cover	Ductile Iron	BS EN1563 EN-GJS-450-10
Cap	Ductile Iron	BS EN1563 EN-GJS-450-10
Nut	Steel	BS970 Part1 080A15
Washer	Steel	BS970 Part1 080A15
Screw Plug	Brass	EN 12165 CW617N
Gasket	Ductile Iron	BS EN1563 EN-GJS-450-10



DIMENSIONS

DN	(mm)	40	50	65	80	100	125	150	200	250
	(inch)	1½	2	2½	3	4	5	6	8	10
L		224	273	273	283	302	353	353	433	491
H		187	214	214	244	270	323	323	401	450
H1		121	177	177	177	177	177	177	222	222
W		122	146	146	156	173	226	226	280	340

DOUBLE ORIFICE AIR VALVE

PN16 F93D16

FEATURES & SPECIFICATIONS

- Comply with BS EN 1074-4
- Large venting capacity
- Capable to withstand hydrostatic pressure of 24 bar without any sign of leakage
- Flange drilled to BS 4504 PN 16 / EN 1092-2 PN 16 / ANSI Class 150 (Specify on order)

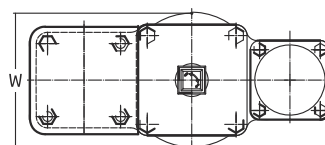
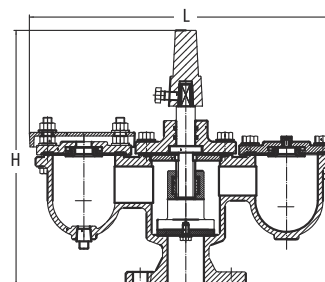


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Test Pressure (x1.5)	24bar
Seat Test Pressure (x1.1)	17.6bar
Working Temperature	-10°C ... 100°C
Suitable Media	Water

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Screw	ABS Plastic	BS EN ISO 2580
Float Ball	ABS Plastic	BS EN ISO 2580
Orifice Gasket	EPDM	Commercial
Ball Seal Orifice	EPDM	Commercial
Orifice Cover	Ductile Iron	BS EN1563 EN-GJS-450-10
Bolt & Nut	Steel	BS970 Part1 080A15
Washer	Steel	BS970 Part1 080A15
Cap	Ductile Iron	BS EN1563 EN-GJS-450-10
Disc Seat Ring	EPDM	Commercial
Washer	Ductile Iron	BS EN1563 EN-GJS-450-10
Disc	Ductile Iron	BS EN1563 EN-GJS-450-10
Stem Nut	Bronze	EN 1982 GC CC491K
Stem Supporter	Ductile Iron	BS EN1563 EN-GJS-450-10
Stem	Stainless Steel 410	EN 10088-3 1.4006
O-Ring	EPDM	Commercial



DIMENSIONS

DN (mm) DN (inch)	50	80	100	150	200
L	418	454	492	595	698
H	351	375	419	440	475
W	165	200	220	285	340

(mm)

FEATURES & SPECIFICATIONS

- Anti corrosion treatment for internal parts to prevent from the valve rusting
- Large venting capacity
- Air tight
- Available in 15, 20 & 25mm inlet diameter threaded BSPT

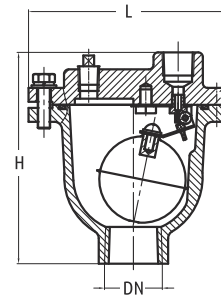
PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Test Pressure (x1.5)	24bar	37.5bar
Working Temperature	-20°C ... 120°C	
Suitable Media	Water	



MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	BS EN1563 EN-GJS-450-10
Plug	Stainless Steel 304	EN 10088-3 1.4301
Bonnet	Ductile Iron	BS EN1563 EN-GJS-450-10
Sealing Seat	Bronze	EN 1982 GC CC491K
Sealing Washer	Viton EPDM	BS EN ISO 1629 Commercial
Sealing Plug	Viton	BS EN ISO 1629
Yoke	Stainless Steel 304	EN 10088-3 1.4301
Pin	Stainless Steel 304	EN 10088-3 1.4301
Arm	Stainless Steel 304	EN 10088-3 1.4301
Bolt	Steel	BS970 Part1 080A15
Screw	Stainless Steel 304	EN 10088-3 1.4301
Snap Ring	Stainless Steel 201	EN 10088-3 1.4372
O-Ring	Viton EPDM	BS EN ISO 1629 Commercial
Ball	Stainless Steel 304	EN 10088-3 1.4301
Spring Washer	Steel	BS970 Part1 080A15
Flat Washer	Steel	BS970 Part1 080A15



DIMENSIONS

DN		Inlet	Outlet	Orifice	L	H
mm	inch					
15	½	15	15	1.6	134	140
20	¾	20	15	1.6	134	140
25	1	25	15	1.6	134	140

(mm)



*We deliver quality product packages
and solutions at nano speed*

FEATURES & SPECIFICATIONS

- Threaded bonnet
- Solid wedge disc
- Non-rising stem
- Integral seat
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries

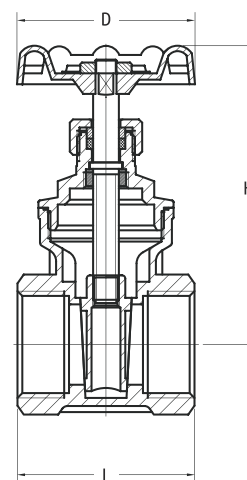


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar WOG Non-Shock 8.6bar Saturated Steam
Shell Test Pressure (x1.5)	24bar Hydrostatic
Seat Test Pressure (x1.1)	17.6bar Hydrostatic 5.5bar Air
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Brass	EN 12165 CW617N
Bonnet	Brass	EN 12165 CW617N
Disc	Brass	EN 12165 CW617N
Stem	Brass	EN 12165 CW617N
Packing	PTFE	
Packing Nut	Brass Rod	EN 12165 CW617N
Gland	Brass Rod	EN 12165 CW617N
Handwheel	Cast Iron	EN-JL 1040
Gasket	PTFE	



DIMENSIONS

DN (mm)	15	20	25	32	40	50	65	80	100
DN (inch)	½	¾	1	1¼	1½	2	2½	3	4
L	45	49	55	62	64	72	88	98	107
H	75	83	94	111	124	144	186	209	255
D	53	53	58	72	72	78	96	110	130

FEATURES & SPECIFICATIONS

- Threaded bonnet
- Solid wedge disc
- Non-rising stem
- Integral seat
- Dezincification (DZR) copper alloy body
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries

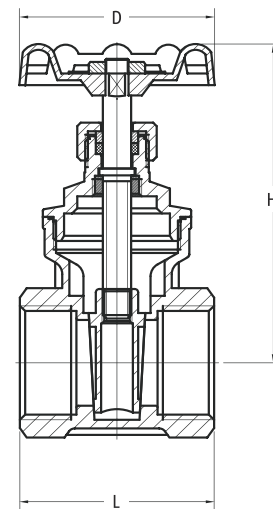


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar WOG Non-Shock 8.6bar Saturated Steam
Shell Test Pressure (x1.5)	24bar Hydrostatic
Seat Test Pressure (x1.1)	17.6bar Hydrostatic 5.5bar Air
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	DZR Brass	EN 12165 CW602N
Bonnet	DZR Brass	EN 12165 CW602N
Disc	DZR Brass	EN 12165 CW602N
Stem	DZR Brass	EN 12165 CW602N
Packing	PTFE	
Packing Nut	Brass Rod	EN 12165 CW617N
Gland	Brass Rod	EN 12165 CW617N
Handwheel	Cast Iron	EN-JL 1040
Gasket	PTFE	



DIMENSIONS

DN	(mm)	15	20	25	32	40	50	65	80	100
	(inch)	½	¾	1	1¼	1½	2	2½	3	4
	L	45	49	55	62	64	72	88	98	107
	H	75	83	94	111	124	144	186	209	255
	D	53	53	58	72	72	78	96	110	130

(mm)

FEATURES & SPECIFICATIONS

- Threaded bonnet
- Solid wedge disc
- Non-rising stem
- Integral seat
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries

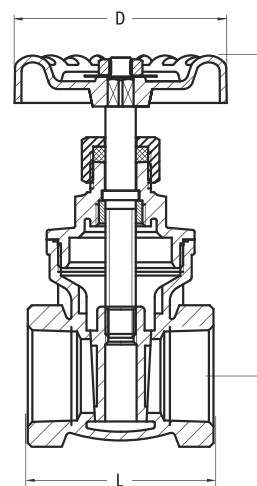


PRESSURE & TEMPERATURE RATINGS

Working Pressure	20bar WOG Non-Shock 10bar Saturated Steam
Shell Test Pressure (x1.5)	30bar Hydrostatic
Seat Test Pressure (x1.1)	22bar Hydrostatic 5.5bar Air
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Bronze	EN 1982 GC CC491K
Bonnet	Bronze	EN 1982 GC CC491K
Disc	Bronze	EN 1982 GC CC491K
Stem	Brass Rod	EN 12165 CW617N
Packing	PTFE	
Packing Nut	Brass Rod	EN 12165 CW617N
Gland	Brass Rod	EN 12165 CW617N
Handwheel	Aluminium (DN15 ... DN50) Cast Iron (DN65 ... DN100)	
Gasket	Non-Asbestos	



DIMENSIONS

DN (mm) (inch)	15	20	25	32	40	50	65	80	100
	½	¾	1	1¼	1½	2	2½	3	4
L	43	49	54	62	65	75	88	106	125
H	77	90	103	115	129	151	189	212	262
D	50	56	63	70	80	92	96	127	148

BRONZE RISING STEM GATE VALVE

PN32 F2G32R

FEATURES & SPECIFICATIONS

- Threaded bonnet
- Solid wedge disc
- Rising stem
- Integral seat
- Comply with BS 5154 / MSS SP-80
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries

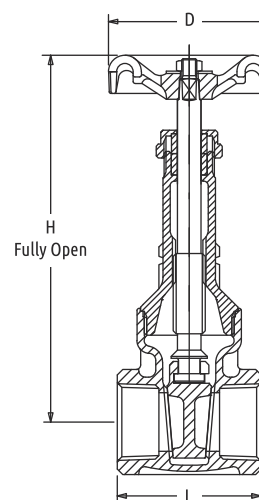


PRESSURE & TEMPERATURE RATINGS

Working Pressure	32bar WOG Non-Shock
Shell Test Pressure (x1.5)	48bar Hydrostatic
Seat Test Pressure (x1.1)	35bar Hydrostatic
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Bronze	BS EN 1982 CC491K
Bonnet	Bronze	BS EN 1982 CC491K
Disc	Bronze	BS EN 1982 CC491K
Stem	Bronze	BS EN 1982 CC491K
Packing Ring	Asbestos Free	
Packing Nut	Brass	BS EN 12165 CW602N
Gland	Brass	BS EN 12165 CW602N
Handwheel	Aluminium	



DIMENSIONS

DN (mm) (inch)	15 ½	20 ¾	25 1	32 1¼	40 1½	50 2	(mm)
L	51	55	63	71	73	83	
H	129	159	189	219	246	301	
D	53	71	71	78	90	108	

FEATURES & SPECIFICATIONS

- Threaded bonnet
- Swivel disc
- Rising stem
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries

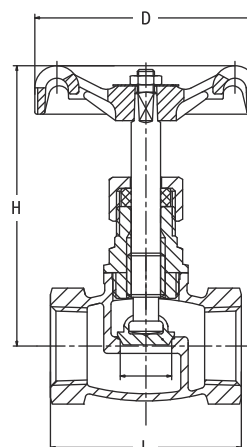


PRESSURE & TEMPERATURE RATINGS

Working Pressure	20bar WOG Non-Shock 10bar Saturated Steam
Shell Test Pressure (x1.5)	30bar Hydrostatic
Seat Test Pressure (x1.1)	22bar Hydrostatic 5.5bar Air
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Bronze	EN 1982 GC CC491K
Bonnet	Bronze	EN 1982 GC CC491K
Disc	Brass (DN15 ... DN25)	EN 12165 CW602N
	Bronze (DN32 ... DN50)	EN 1982 GC CC491K
Stem	Brass	EN 12165 CW617N
Packing	PTFE	
Packing Nut	Brass Rod	EN 12165 CW617N
Gland	Aluminium	
Handwheel	Brass Rod	EN 12165 CW617N
Gasket	Non-Asbestos	



DIMENSIONS

DN (mm) (inch)	15	20	25	32	40	50	(mm)
	½	¾	1	1¼	1½	2	
L	49	56	66	74	85	100	
H	71	73	87	95	110	124	
D	50	56	63	70	80	92	

BRASS BALL VALVE

PN25 F4B25

FEATURES & SPECIFICATIONS

- Quarter turn opening
- Bubble tight close-off
- Blow-out proof stem
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries

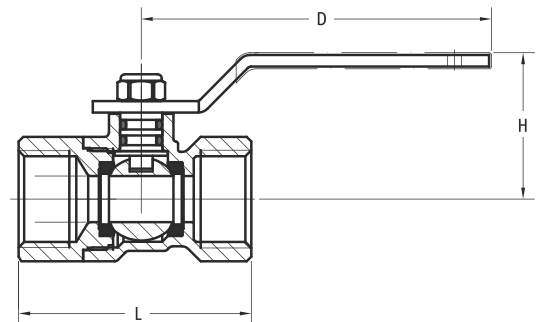


PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar WOG Non-Shock 10bar Saturated Steam
Shell Test Pressure (x1.5)	37.5bar Hydrostatic
Seat Test Pressure (x1.1)	27.5bar Hydrostatic 5.5bar Air
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Brass	EN 12165 CW617N
Ball	Chrome Plated Brass	EN 12165 CW617N
Stem	Brass	EN 12165 CW617N
Seat	PTFE	
Seat Retainer	Brass	EN 12165 CW617N
Packing	PTFE	
Gland Nut	Brass	EN 12165 CW617N
Lever Nut	Stainless Steel	
Lever	PVC Covered mild steel	



DIMENSIONS

DN (mm)	10	15	20	25	32	40	50	(mm)
DN (inch)	3/8	1/2	3/4	1	1 1/4	1 1/2	2	
L	46	50.5	59.5	67	78	88	99	
H	33	33	40	44	58	63	76	
D	76	76	94	94	120	120	152	

FEATURES & SPECIFICATIONS

- Full bore design
- Quarter turn opening
- Bubble tight close-off
- Blow-out proof stem
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries

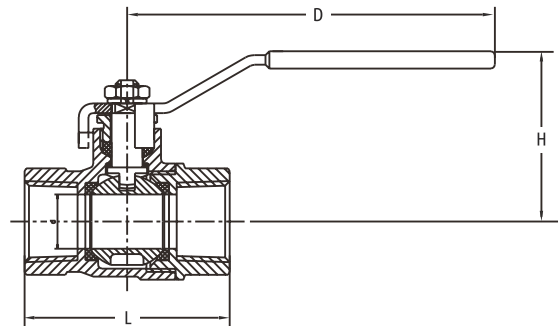


PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar WOG Non-Shock 10bar Saturated Steam
Shell Test Pressure (x1.5)	37.5bar Hydrostatic
Seat Test Pressure (x1.1)	27.5bar Hydrostatic 5.5bar Air
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Bronze	EN 1982 GC CC491K
Ball	Chrome Plated Brass	EN 12165 CW617N
Stem	Brass	EN 12165 CW617N
Seat	PTFE	
Seat Retainer	Bronze	EN 1982 GC CC491K
Packing	PTFE	
Gland Nut	Brass	EN 12165 CW617N
Lever	PVC Covered Mild Steel	



DIMENSIONS

DN	(mm)	15	20	25	32	40	50	65	80	100
	(inch)	½	¾	1	1¼	1½	2	2½	3	4
L		54	61	71	85	92	114	134	152	182
H		50	53	57	67	72	82	118	132	150
D		95	110	110	137	137	160	220	270	280

BRASS LIFT CHECK VALVE

PN16 F5B16L

FEATURES & SPECIFICATIONS

- Vertical lift
- In-line design
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries

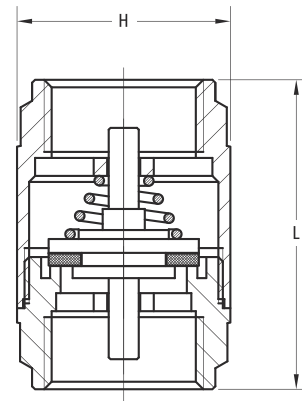


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar WOG Non-Shock 8.6bar Saturated Steam
Shell Test Pressure (x1.5)	24bar Hydrostatic
Seat Test Pressure (x1.1)	17.6bar Hydrostatic 5.5bar Air
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Brass	EN 12165 CW617N
Bonnet	Brass	EN 12165 CW617N
Disc	Brass	EN 12165 CW617N
Stem	Brass	EN 12165 CW617N
Seat	NBR	
Spring	Stainless Steel 304	EN 3506 1.4567



DIMENSIONS

DN (mm) (inch)	15	20	25	32	40	50	(mm)
L	48.5	53.5	61.5	69.5	72	83.5	
H	31	37	45	58.5	63.5	80	

FEATURES & SPECIFICATIONS

- Vertical lift
- In-line design
- Comply with BS 5154
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries

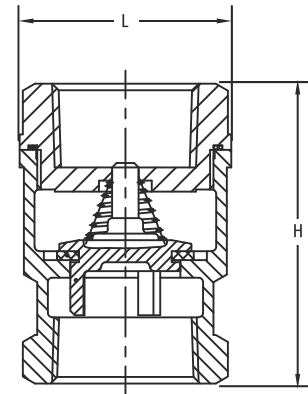


PRESSURE & TEMPERATURE RATINGS

Working Pressure	20bar WOG Non-Shock 10bar Saturated Steam
Shell Test Pressure (x1.5)	30bar Hydrostatic
Seat Test Pressure (x1.1)	22bar Hydrostatic 5.5bar Air
Working Temperature	-10°C ... 110°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Bronze	EN 1982 GC CC491K
Bonnet	Bronze	EN 1982 GC CC491K
Disc	Bronze	EN 1982 GC CC491K
Seat	NBR	
Spring	Stainless Steel 304	EN 3506 1.4567
Gasket	PTFE	



DIMENSIONS

DN (mm)	15	20	25	32	40	50
DN (inch)	½	¾	1	1¼	1½	2
L	33	41	47	58	70	82
H	53	60	68	79	85	98

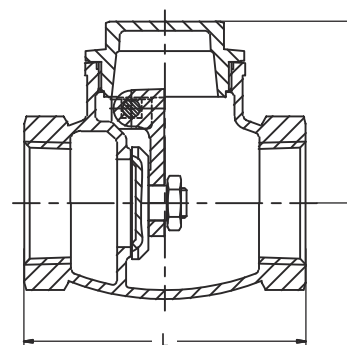
(mm)

BRASS SWING CHECK VALVE

PN16 F5B16S

FEATURES & SPECIFICATIONS

- Swing disc
- Integral seat
- Threaded cap
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar WOG Non-Shock 8.6bar Saturated Steam
Shell Test Pressure (x1.5)	24bar Hydrostatic
Seat Test Pressure (x1.1)	17.6bar Hydrostatic 5.5bar Air
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Brass	EN 12165 CW617N
Cap	Brass	EN 12165 CW617N
Disc	Brass	EN 12165 CW617N
Hinge	Brass	EN 12165 CW617N
Hinge Pin	Stainless Steel 304	EN 10888-3 1.4301
Hinge Nut	Brass	EN 12165 CW617N
Gasket	PTFE	

DIMENSIONS

DN (mm) DN (inch)	15 ½	20 ¾	25 1	32 1¼	40 1½	50 2	(mm)
L	52.5	60.5	72	82	95	107	
H	34	37	42	50	58	68	

FEATURES & SPECIFICATIONS

- Swing disc
- Integral seat
- Threaded cap
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries

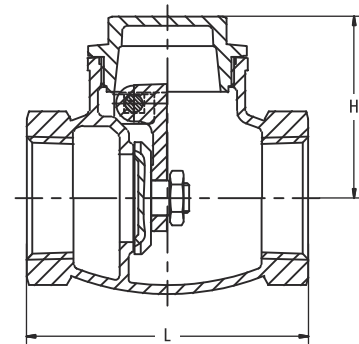


PRESSURE & TEMPERATURE RATINGS

Working Pressure	20bar WOG Non-Shock 10bar Saturated Steam
Shell Test Pressure (x1.5)	30bar Hydrostatic
Seat Test Pressure (x1.1)	22bar Hydrostatic 5.5bar Air
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Bronze	EN 1982 GC CC491K
Cap	Bronze	EN 1982 GC CC491K
Disc	Bronze	EN 1982 GC CC491K
Hinge	Brass	EN 12165 CW617N
Hinge Pin	Stainless Steel 420	EN 10088-3 1.4021
Hinge Nut	Brass	EN 12165 CW617N
Gasket	Non-Asbestos	



DIMENSIONS

DN (mm) DN (inch)	15	20	25	32	40	50	65	80	100
	½	¾	1	1¼	1½	2	2½	3	4
L	58	66	76	88	96	112	136	147	180
H	37	43	49	57.5	63	72	85	93	110

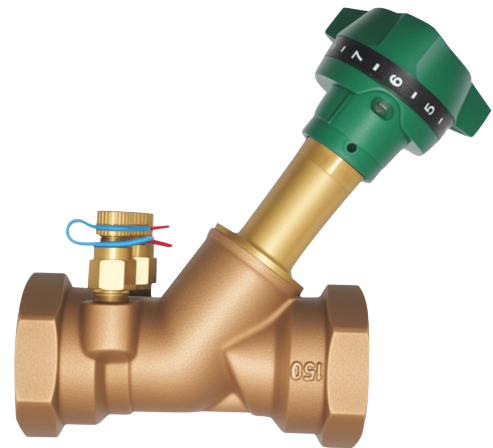
Notes : WRAS only available for DN15 ... DN50

BRONZE FIXED ORIFICE DOUBLE REGULATING VALVE

PN25 F6G25

FEATURES & SPECIFICATIONS

- Single unit Y-pattern globe valve incorporating fixed orifice plate flow measurement unit
- Fitted with a pair of measuring plugs
- High measurement accuracy of +/-5% across all opening settings
- Microset handwheel and presetting scale is readable from all directions
- Regulating and isolating functions
- Threaded to BS EN 10226-1 (ISO 7)
- Comply with BS 7350
- Applicable for hydronic balancing of heating and cooling systems

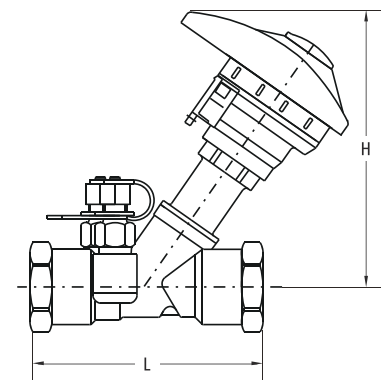


PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar
Shell Test Pressure (x1.5)	37.5bar
Seat Test Pressure (x1.1)	27.5bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water

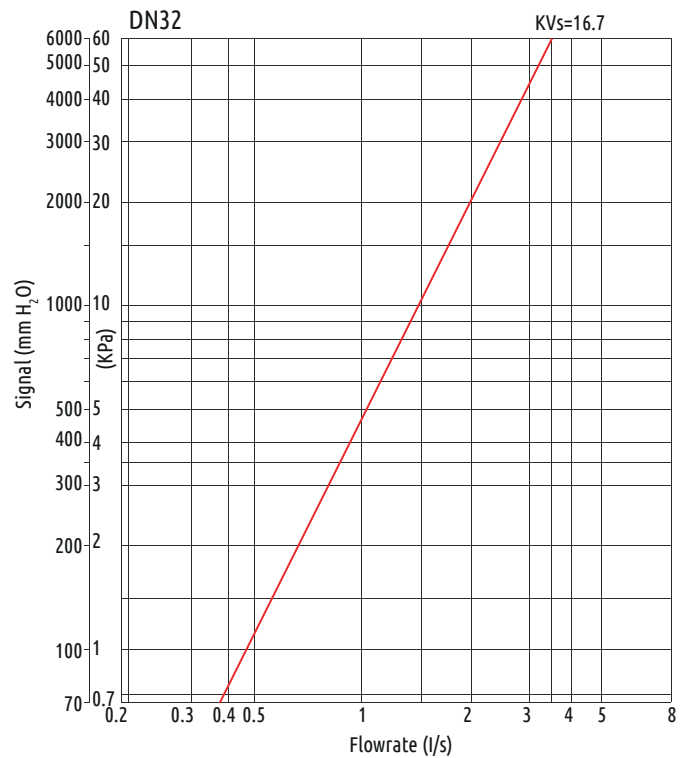
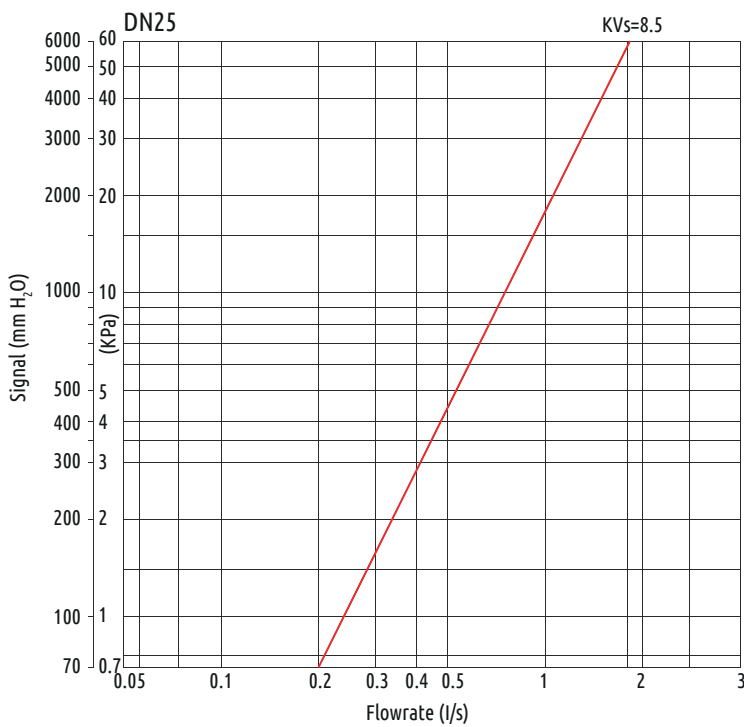
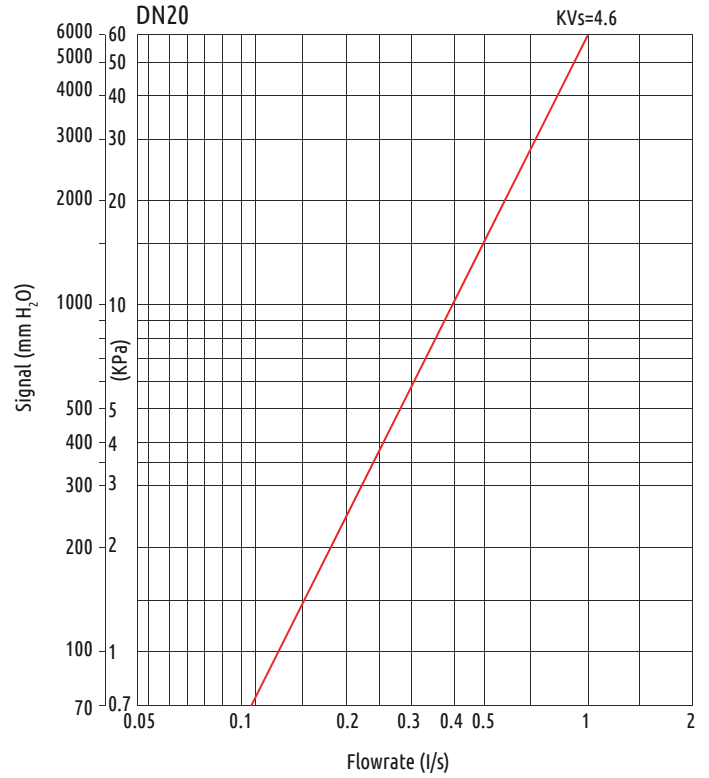
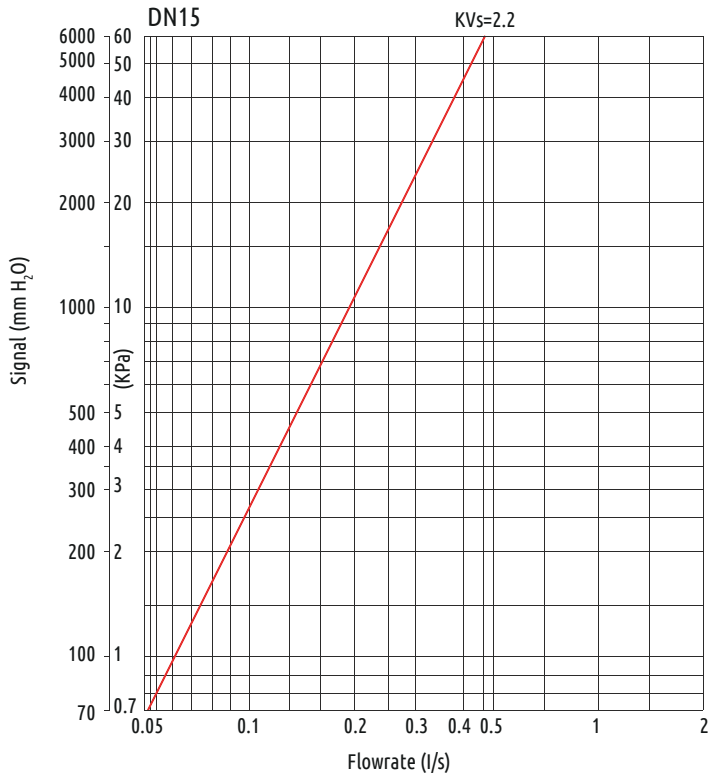
MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Bronze	EN 1982 CC491K
Bonnet	DZR Brass (DN15 ... DN32)	EN 12165 CW602N
	Bronze (DN40 ... DN50)	EN 1982 CC491K
Stem	DZR Brass	EN 12165 CW602N
Balancing Cone	DZR Brass	EN 12165 CW602N
Disc	DZR Brass (DN15 ... DN20)	EN 12165 CW602N
	DZR Brass + PTFE (DN25 ... DN50)	EN 12165 CW602N
Disc Retaining Ring	DZR Brass	EN 12165 CW602N
Orifice Insert	DZR Brass	EN 12165 CW602N
Measuring Plug	DZR Brass	EN 12165 CW602N
Handwheel	DZR Brass	EN 12165 CW602N
O-Ring	EPDM	



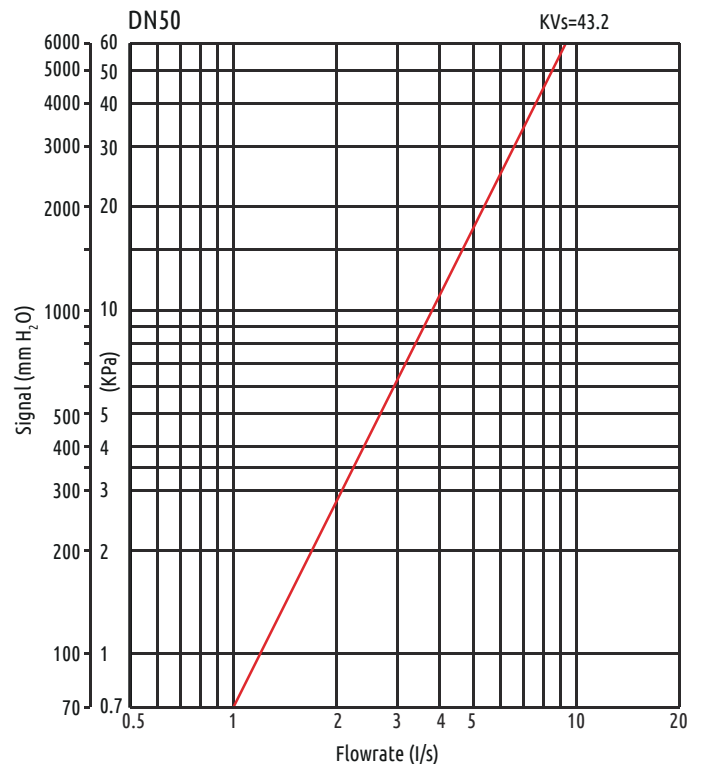
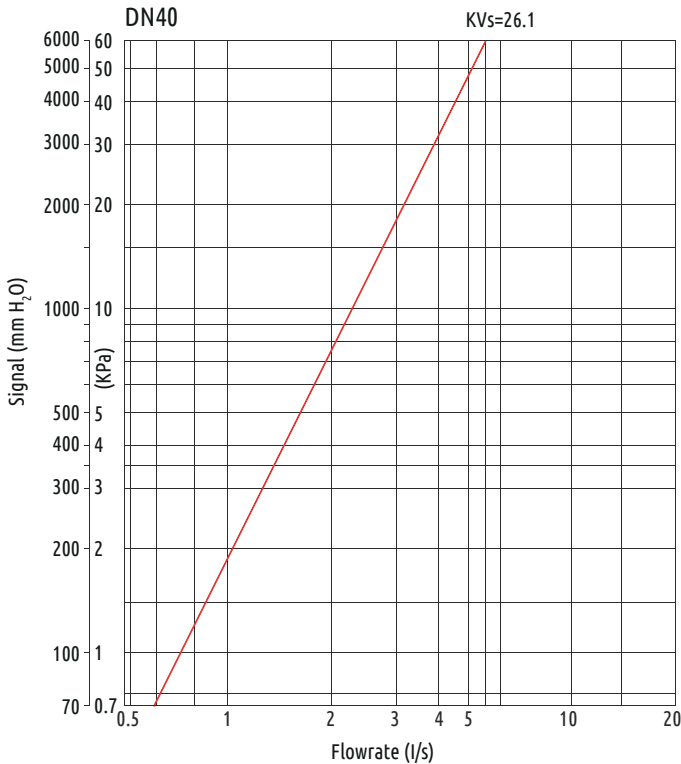
DIMENSIONS & FLOW COEFFICIENT

DN (mm)	15	20	25	32	40	50	(mm)
DN (inch)	½	¾	1	1¼	1½	2	
L	87	96	100	114	125	146	
H	113	114	135	136	151	152	
Kvs (Fully Open)	2.2	4.6	8.5	16.7	26.1	43.2	
Handwheel Turns	4	4	4	4	4	4	



BRONZE FIXED ORIFICE DOUBLE REGULATING VALVE

PN25 F6G25



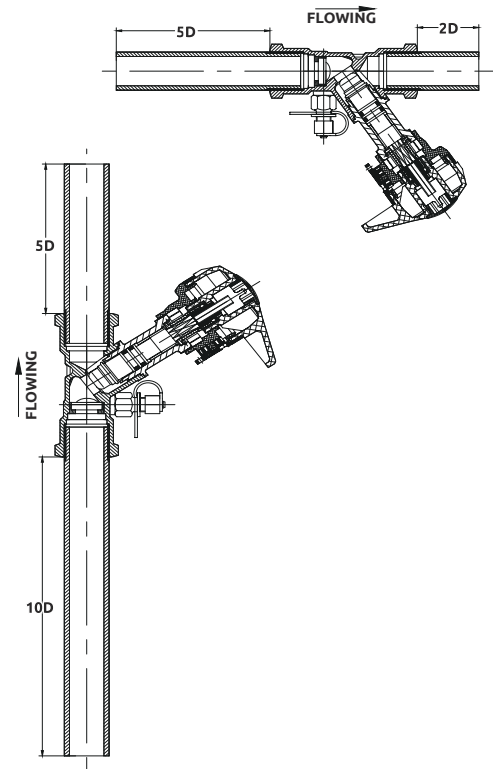
INSTALLATION & OPERATION GUIDE

Install the Double Regulating Valve in the pipe line by ensuring the arrow marking on the valve is same direction as piping flow.

To achieve flow measurement accuracy, it is essential that the piping on the inlet and outlet of the valve is straight and has a minimum length equivalent to 5 times Diameter inlet and 2 times Diameters outlet as shown. If the valve is install at the discharge of a pump set, it is essential that the straight pipe length between pump outlet and valve has a minimum length of 10 times Diameters.

Design flow is achieved by pre-setting valve's opening position, which could be read from scales at the handwheel. Contact your local distributor for information on electronic commissioning meter.

To lock the pre-setting of the valve, remove the cap at the top of the handwheel. Tighten the screw using a hexagon wrench and reassemble the cap.

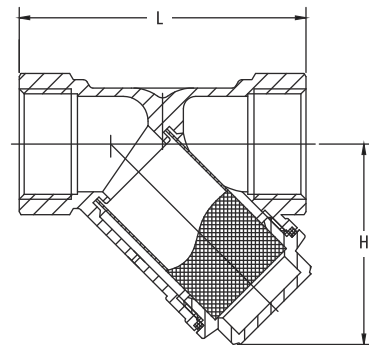


FEATURES & SPECIFICATIONS

- Y-Pattern body
- Threaded cap
- Stainless steel mesh
- Threaded to EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, General Industries

PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar WOG Non-Shock 8.6bar Saturated Steam
Testing Pressure (x1.5)	24bar Hydrostatic
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas



MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Brass	EN 12165 CW617N
Cap	Brass	EN 12165 CW617N
Screen	Stainless Steel 304	EN 1449 304S31
Gasket	Non-Asbestos	

DIMENSIONS

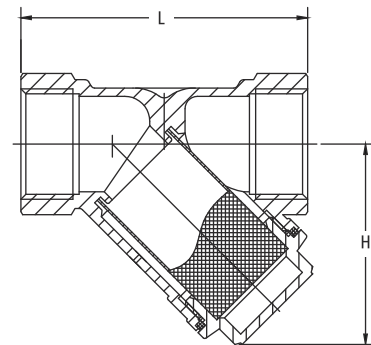
DN (mm) (inch)	15	20	25	32	40	50	65	80	100	(mm)
	½	¾	1	1¼	1½	2	2½	3	4	
L	56	69	82	90	101	123	176	201	250	
H	41	48	58	66	74	92	136	146	189	

DZR BRASS Y-TYPE STRAINER

PN16 F7Z16

FEATURES & SPECIFICATIONS

- Y-Pattern body
- Threaded cap
- Stainless steel mesh
- Dezincification (DZR) copper alloy body and cap
- Threaded to EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, General Industries.



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar WOG Non-Shock 8.6bar Saturated Steam
Testing Pressure (x1.5)	24bar Hydrostatic
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	DZR Brass	EN 12165 CW602N
Cap	DZR Brass	EN 12165 CW602N
Screen	Stainless Steel 304	EN 1449 304S31
Gasket	Non-Asbestos	

DIMENSIONS

DN (mm) DN (inch)	15 ½	20 ¾	25 1	32 1¼	40 1½	50 2	65 2½	80 3	100 4
L	56	69	82	90	101	123	176	201	250
H	41	48	58	66	74	92	136	146	189

(mm)

FEATURES & SPECIFICATIONS

- Y-Pattern body
- Threaded cap
- Stainless steel mesh
- Threaded to EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, General Industries.

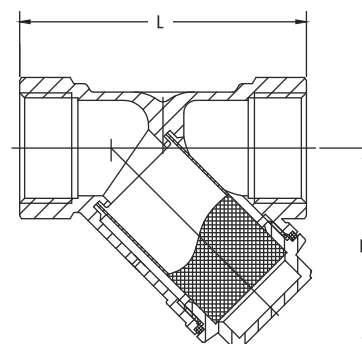


PRESSURE & TEMPERATURE RATINGS

Working Pressure	20bar WOG Non-Shock 10bar Saturated Steam
Testing Pressure (x1.5)	30bar Hydrostatic
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Bronze	EN 1982 GC490K
Cap	Bronze	EN 1982 GC490K
Screen	Stainless Steel 304	EN 1449 304S31
Gasket	PTFE	



DIMENSIONS

DN (mm) DN (inch)	15 ½	20 ¾	25 1	32 1¼	40 1½	50 2	(mm)
L	58.5	70.5	88	96.5	107	126	
H	41	50	59	69	76	96	

FEATURES & SPECIFICATIONS

- Threaded bonnet
- Threaded to EN 10226-1 (ISO 7)
- Size Range : 15mm (½"), 20mm (¾"), 25mm (1")

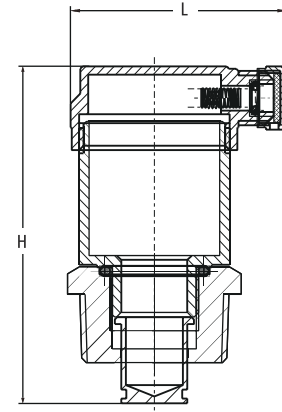


PRESSURE & TEMPERATURE RATINGS

Working Pressure	10bar Water Non-Shock
Testing Pressure (x1.5)	15bar Hydrostatic
Working Temperature	-10°C ... 70°C
Suitable Media	Water

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Brass	EN 12165 CW614N
Disc	Brass	EN 12165 CW614N
Stem	Brass	EN 12165 CW614N
Cap	Brass	EN 12165 CW614N
Gasket	NBR	
Air Cap	Brass	EN 12165 CW614N
Connector	Brass	EN 12165 CW614N
Core	Brass	EN 12165 CW614N



DIMENSIONS

DN	(mm)	15	20	25
	(inch)	½	¾	1
L		50	50	50
H		68	68	68

(mm)

... continue to provide one stop flow control solutions for the building sector ... not only ON/OFF, but also Control valves



SINGLE SPHERE RUBBER FLEXIBLE JOINT

PN16 F83SJ16
 PN25 F83SJ25

GENERAL

- Absorbs and reduces vibration and shock in the system
- Absorbs the stress generated by the expansion and compression of the pipe line
- Provides flexibility to the system as allowance connection and installation error
- Excellent resistance against pressure
- Control rods available upon request

FEATURES

- Molded and vulcanised in hydraulic presses
- Solid carbon steel internal reinforcing ring
- With BS 4504 PN16 / BS 4504 PN25 / EN 1092-2 PN16 / EN 1092-2 PN25 / ANSI Class 150 floating flanges (Specify on order)

APPLICATIONS

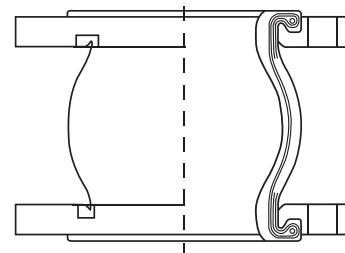
- Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Sewerage & Water Treatment, Marine Services, General Industries
- Suitable for suction and discharge within specify working pressure



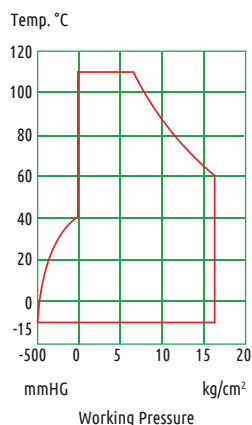
MATERIAL SPECIFICATIONS

Part	Material
Flanges	Ductile Iron (DN40 ... DN300)
	Carbon Steel
	Stainless Steel 304
	Stainless Steel 316
Reinforcing Ring	Carbon Steel
Inner Rubber	EPDM
Outer Rubber	EPDM
Reinforcing Cord	Nylon
Control Rod	Mild Steel

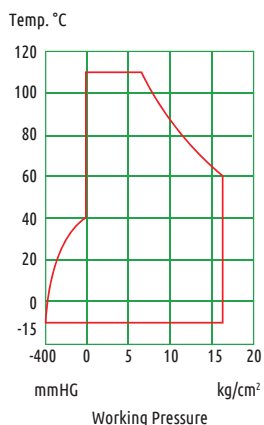
Notes : PN25 only available for carbon steel flanges.



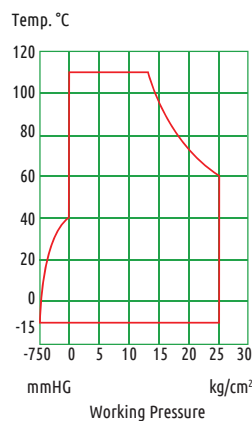
OPERATING PRESSURE & TEMPERATURE



F83SJ16
 DN25 ... DN300
 Burst Pressure 48bar



F83SJ16
 DN350 ... DN600
 Burst Pressure 48bar



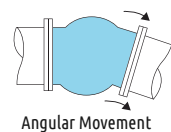
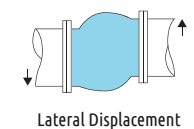
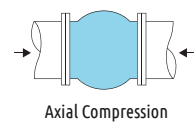
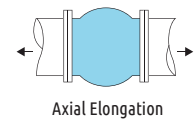
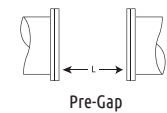
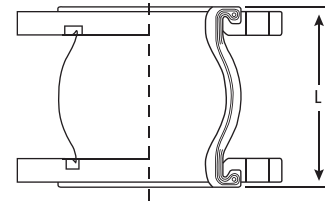
F83SJ25
 DN25 ... DN200
 Burst Pressure 60bar



F83SJ25
 DN250 ... DN300
 Burst Pressure 60bar

DIMENSIONS AND MOVEMENTS

Diameter		Dimension	Pre-Gap	Allowable Movements(mm)			
mm	inch	L(mm)	L(mm)	Axial Elongation (mm)	Axial Compression (mm)	Lateral Displacement (mm)	Angle of Deflection (°)
25	1	130	125-135	9	12	12	12
32	1¼	150	145-155	9	15	15	15
40	1½	150	145-155	9	15	15	15
50	2	150	145-155	9	15	15	15
65	2½	150	145-155	9	15	15	15
80	3	150	145-155	9	15	15	15
100	4	150	145-155	9	16	15	15
125	5	150	145-155	9	16	15	15
150	6	150	145-155	9	16	15	10
200	8	150	145-155	9	16	15	10
250	10	200	195-205	15	20	20	10
300	12	200	195-205	15	20	20	10
350	14	200	195-205	15	20	20	10
400	16	200	195-205	15	20	20	10
450	18	200	195-205	15	20	20	10
500	20	200	195-205	15	20	20	10
600	24	265	260-270	16	28	28	10



USE OF CONTROL UNITS WITH RUBBER FLEXIBLE JOINTS

A control unit assembly is an accessory of two or more control rod units (limit rods, tie rods or compression sleeves) placed between the flanges across a flexible joint to minimize possible destruction caused by excessive motion of a pipeline. When used in this manner, control units are an additional safety factor which can minimize possible damage to the adjacent equipment.

A control unit is strongly recommended to use when:

- In case that proper anchoring cannot be provided
- In case that it is hard to withstand the line thrusts generated by internal pressure or wide temperature fluctuations
- In case that the anticipated elongation, compression and lateral movement are more than the design, pre-gap and/or installation tolerance
- In case that the anticipated angle of deflection is more than the design and/or installation tolerance.

RECOMMENDED QUANTITY FOR CONTROL RODS

DN (mm)	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
DN (inch)	1	1¼	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
Quantity (PN16)	N/A	2	2	2	2	2	2	2	2	2	3	3	4	4	4	4	4
Quantity (PN25)	N/A	2	2	2	2	2	2	2	2	3	4	4	-	-	-	-	-

DOUBLE SPHERE RUBBER FLEXIBLE JOINT

PN16 F83DJ16
 PN25 F83DJ25

GENERAL

- Absorbs and reduces vibration and shock in the system
- Absorbs the stress generated by the expansion and compression of the pipe line
- Provides flexibility to the system as allowance connection and installation error
- Excellent resistance against pressure
- Control rods available upon request

FEATURES

- Molded and vulcanised in hydraulic presses
- Solid carbon steel internal reinforcing ring
- With BS 4504 PN16 / BS 4504 PN25 / EN 1092-2 PN25/ EN 1092-2 PN16 / ANSI Class 150 floating flanges (Specify on order)

APPLICATIONS

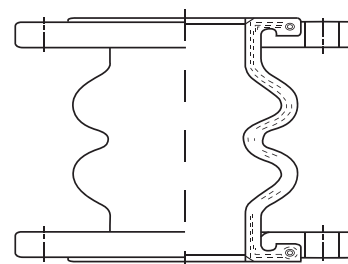
- Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Sewerage & Water Treatment, Marine Services, General Industries
- Suitable for suction and discharge within specify working pressure



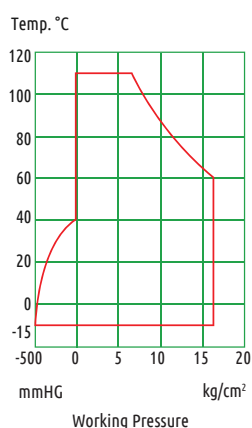
MATERIAL SPECIFICATIONS

Part	Material
Flanges	Ductile Iron (DN40 ... DN300)
	Carbon Steel
	Stainless Steel 304
	Stainless Steel 316
Reinforcing Ring	Carbon Steel
Inner Rubber	EPDM
Outer Rubber	EPDM
Reinforcing Cord	Nylon
Control Rod	Mild Steel

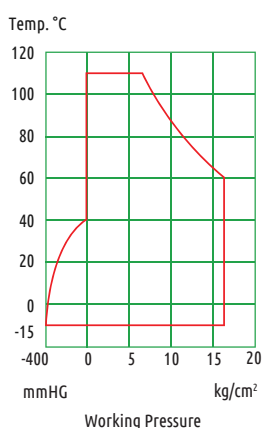
Notes : PN25 only available for carbon steel flanges.



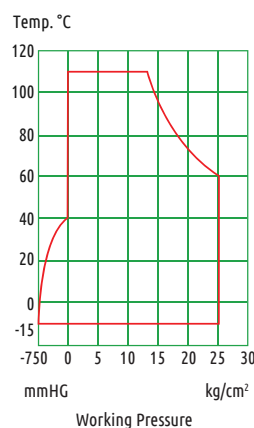
OPERATING PRESSURE & TEMPERATURE



F83DJ16
 DN32 ... DN300
 Burst Pressure 48bar



F83DJ16
 DN350 ... DN600
 Burst Pressure 48bar



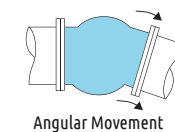
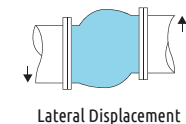
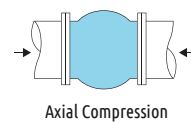
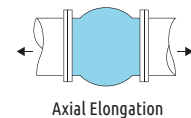
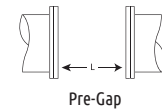
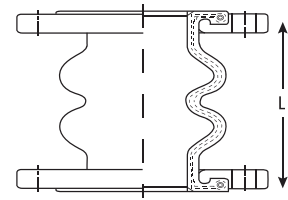
F83DJ25
 DN32 ... DN200
 Burst Pressure 60bar



F83DJ25
 DN250 ... DN300
 Burst Pressure 60bar

DIMENSIONS AND MOVEMENTS

Diameter		Dimension		Allowable Movements(mm)			
mm	inch	L(mm)	Pre-Gap L(mm)	Axial Elongation (mm)	Axial Compression (mm)	Lateral Displcement (mm)	Angle of Deflection (°)
32	1¼	175	170-180	20	30	45	30
40	1½	175	170-180	20	30	45	30
50	2	175	170-180	20	30	45	30
65	2½	175	170-180	25	50	45	30
80	3	175	170-180	25	50	45	30
100	4	225	220-230	35	50	35	30
125	5	225	220-230	35	50	35	30
150	6	225	220-230	35	50	35	30
200	8	325	320-330	35	50	30	30
250	10	325	320-330	35	50	30	15
300	12	325	320-330	35	50	30	15
350	14	345	340-350	25	40	28	10
400	16	345	340-350	25	40	28	10
450	18	345	340-350	25	40	28	10
500	20	345	340-350	25	40	28	10
600	24	345	340-350	25	40	28	10



USE OF CONTROL UNITS WITH RUBBER FLEXIBLE JOINTS

A control unit assembly is an accessory of two or more control rod units (limit rods, tie rods or compression sleeves) placed between the flanges across a flexible joint to minimize possible destruction caused by excessive motion of a pipeline. When used in this manner, control units are an additional safety factor which can minimize possible damage to the adjacent equipment.

A control unit is strongly recommended to use when:

- In case that proper anchoring cannot be provided
- In case that it is hard to withstand the line thrusts generated by internal pressure or wide temperature fluctuations
- In case that the anticipated elongation, compression and lateral movement are more than the design, pre-gap and/or installation tolerance
- In case that the anticipated angle of deflection is more than the design and/or installation tolerance.

RECOMMENDED QUANTITY FOR CONTROL RODS

DN (mm) (inch)	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Quantity (PN16)	N/A	2	2	2	2	2	2	2	2	2	3	3	4	4	4	4	4
Quantity (PN25)	N/A	2	2	2	2	2	2	2	2	3	4	4	-	-	-	-	-

DOUBLE SPHERE RUBBER FLEXIBLE JOINT

PN16 F85DJ16
PN25 F85DJ25

GENERAL

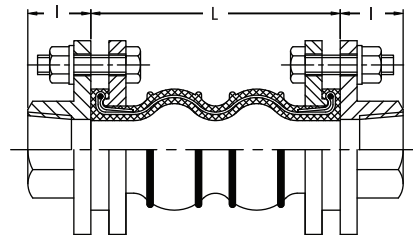
- Absorbs and reduces vibration and shock in the system
- Absorbs the stress generated by the expansion and compression of the pipe line
- Provides flexibility to the system as allowance connection and installation error
- Excellent resistance against pressure

FEATURES

- Molded and vulcanised in hydraulic presses
- Solid carbon steel internal reinforcing ring
- 3-pin ductile iron screwed connection to EN10226-1 (ISO 7)

APPLICATIONS

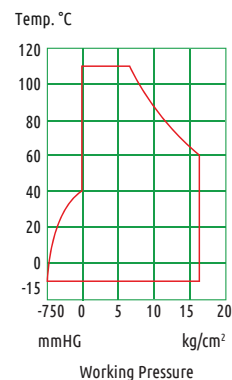
- Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, General Industries
- Suitable for suction and discharge within specify working pressure



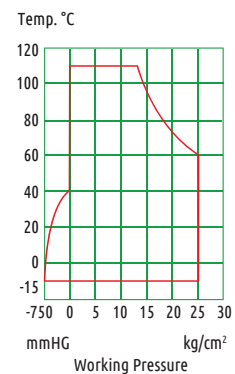
MATERIAL SPECIFICATIONS

Part	Material
Union Flange	Ductile Iron
Bolt	Mild Steel
Nut	Mild Steel
Washer	Mild Steel
Inner Rubber	EPDM
Outer Rubber	EPDM
Reinforcing Cord	Nylon
Union Edge	Malleable Iron

OPERATING PRESSURE & TEMPERATURE



F85DJ16
DN15 ... DN50
Burst Pressure 48bar



F85DJ25
DN15 ... DN50
Burst Pressure 60bar

DIMENSIONS AND MOVEMENTS

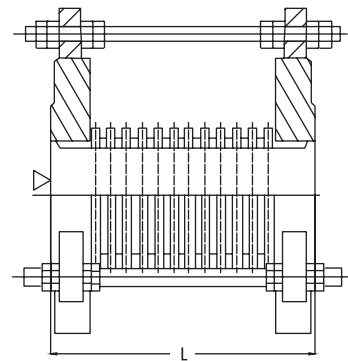
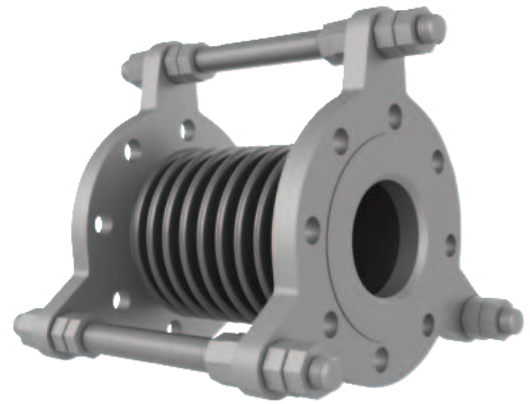
Diameter		Dimension		Allowable Movements(mm)			
mm	inch	L (mm)	I (mm)	Axial Elongation (mm)	Axial Compression (mm)	Lateral Displacement (mm)	Angle of Deflection (°)
15	½	120	30	10	15	15	30
20	¾	120	30	10	15	15	30
25	1	120	30	10	15	15	30
32	1¼	175	35	10	15	15	30
40	1½	175	35	10	15	15	30
50	2	175	40	10	15	15	30

FEATURES & SPECIFICATIONS

- Flange drilled to BS 4504 PN16 / BS EN 1092-2 PN16 / BS 4504 PN25 / BS EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Stainless Steel 304 sleeve and bellow
- Equipped with shipping rod

APPLICATIONS

- Designed to absorb piping thermal expansion or contraction
- To accommodate vibration, reduce noise, relief stress and prevent system shock
- Suitable for applications such as pumps, compressors and other mechanical equipment
- Applicable to Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing & Sanitary, Hot Water System, General Industries



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Testing Pressure (x1.5)	24bar	37.5bar
Working Temperature	Maximum 220°C	
Suitable Media	Water, Air, Steam, Oil, Gas	

MATERIAL SPECIFICATIONS

Part	Material
Flange	Carbon Steel
	Stainless Steel 304
Bellow	Stainless Steel 304
Sleeve	Stainless Steel 304
Shipping Rod	Carbon Steel

DIMENSIONS AND MOVEMENTS

		(mm)									
DN	(mm)	20	25	32	40	50	65	80	100	125	
	(inch)	¾	1	1¼	1½	2	2½	3	4	5	
	L	120	120	120	150	150	150	150	200	200	
	Axial Movement	15	15	15	15	15	20	20	20	20	
DN	(mm)	150	200	250	300	350	400	450	500	600	
	(inch)	6	8	10	12	14	16	18	20	24	
	L	200	250	250	250	250	300	300	300	300	
	Axial Movement	20	20	20	20	20	20	20	20	20	

FLEXIBLE HOSE

PN16 F83MH16
PN25 F83MH25

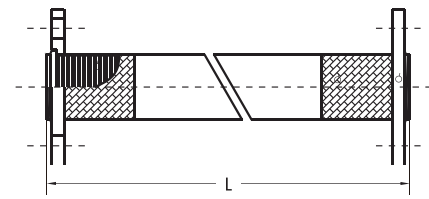
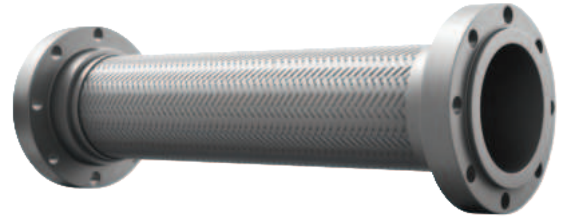


SPECIFICATIONS

- Flange drilled to BS 4504 PN16 / BS EN 1092-2 PN16 / BS 4504 PN25 / BS EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Stainless Steel 304 internal bellow and external braiding

APPLICATIONS

- Designed to compensate for piping misalignment and movement
- To accommodate vibration, reduce noise, relief stress and prevent system shock
- Suitable for applications such as pumps, compressors and other mechanical equipment
- Applicable to Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing & Sanitary, Hot Water System, General Industries



PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Test Pressure (x1.5)	24bar	37.5bar
Working Temperature	Maximum 220°C	
Suitable Media	Water, Air, Steam, Oil, Gas	

MATERIAL SPECIFICATIONS

Part	Material
Ring	Carbon Steel
Bellow	Stainless Steel 304
Braiding	Stainless Steel 304
Flange	Carbon Steel Stainless Steel 304

DIMENSIONS AND MOVEMENTS

										(mm)
DN	(mm)	20	25	32	40	50	65	80	100	125
	(inch)	¾	1	1¼	1½	2	2½	3	4	5
L		300	300	300	300	300	300	300	300	300
Lateral Movement		33	33	33	33	33	32	32	26	20
DN	(mm)	150	200	250	300	350	400	450	500	600
	(inch)	6	8	10	12	14	16	18	20	24
L		300	300	300	300	300	400	500	500	500
Lateral Movement		18	9	7	4	3.1	2.8	2.5	2.2	1.9

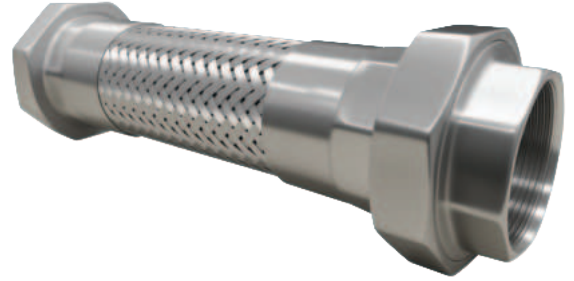
Notes : PN25 only available for size DN20 ... DN350.
Other length available on request.

SPECIFICATIONS

- Threaded to BS EN 10226-1 (ISO 7)
- Stainless Steel 304 internal tube and external braiding

APPLICATIONS

- Designed to compensate for piping misalignment and movement
- To accommodate vibration, reduce noise, relief stress and prevent system shock
- Suitable for applications such as pumps, compressors and other mechanical equipment
- Applicable to Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing & Sanitary, Hot Water System, General Industries

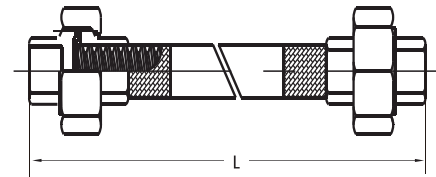


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar	25bar
Test Pressure (x1.5)	24bar	37.5bar
Working Temperature	Maximum 220°C	
Suitable Media	Water, Air, Steam, Oil, Gas	

MATERIAL SPECIFICATIONS

Part	Material
Union Screw	Carbon Steel
	Stainless Steel 304
Union Nut	Carbon Steel
	Stainless Steel 304
Gasket	Fiber
Flexible Tube	Stainless Steel 304
Braiding	Stainless Steel 304



DIMENSIONS AND MOVEMENTS

DN	(mm)	15	20	25	32	40	50	(mm)
	(inch)	½	¾	1	1¼	1½	2	
	L	300	300	300	300	300	300	
	Lateral Movement	25	25	25	20	15	20	

Note : Other length available on request.

GENERAL SERVICE PRESSURE GAUGE

FP11
FP12



FEATURES & SPECIFICATIONS

- Economical, designed for general services
- Dual scale pressure units reading
- Bottom or center back socket connection
- Suitable for medium which is non-corrosive to brass
- Design conforms to EN837-1
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, General Industries



SPECIFICATIONS

Dial Size	4" (100mm) / 6" (150mm)
Case	Steel, Black
Bezel	Steel
Socket	Brass
Connection	FP11 - 3/8" Bottom Entry FP12 - 1/2" Center Back Entry
Connection Standard	BSPT
Lens	Glass
Pointer	Aluminium, Black
Scale Unit	Dual Scale in bar & psi
Bourdon Tube	Phosphor Bronze
Movement	Brass
Working Pressure	Maximum 75% of Full Scale Value
Process Temperature	-10°C ... 65°C
Accuracy	+/- 3-2-3% ANSI/ASME Grade B
Protection	IP 52

PRODUCT IDENTIFICATION CODE

		FP11	-	100	x	10	.	0/16
Type / Model	Bottom connection	FP11						
	Center back connection	FP12						
Dial	100mm (4")			100				
	150mm (6")			150				
Connection	10mm (3/8")					10		
	15mm (1/2")					15		
Pressure Range	-760mmHg...0; -30inHg...0							V/00
	-760mmHg...4bar; -30inHg...60psi							C/04
	0...7bar ; 0...100psi							0/07
	0...10bar ; 0...150psi							0/10
	0...16bar ; 0...230psi							0/16
	0...20bar ; 0...300psi							0/20
	0...30bar ; 0...430psi							0/30

FEATURES & SPECIFICATIONS

- Stainless steel casing and internal bourdon tube
- Dual scale pressure units reading
- Able to withstand an aggressive environment and medium
- Glycerin filled for system or equipment with excessive pulsating pressure, shock and vibration
- Design conforms to EN837-1
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, General Industries



SPECIFICATIONS

	FP21	FP22
Dial Size	4" (100mm) / 6" (150mm)	4" (100mm) / 6" (150mm)
Case	Stainless Steel 304	Stainless Steel 304
Bezel	Stainless Steel 304	Stainless Steel 304
Socket	Brass	Stainless Steel 316
Connection	3/8" Bottom Entry	1/2" Bottom Entry
Connection Standard	BSPT	BSPT
Lens	Polycarbonate	Toughened Glass
Pointer	Aluminium, Black	Aluminium, Black
Scale Unit	Dual Scale in bar & psi	Dual Scale in bar & psi
Bourdon Tube	Phosphor Bronze	Stainless Steel 316
Movement	Brass	Stainless Steel 316
Working Pressure	Maximum 75% of Full Scale Value	Maximum 75% of Full Scale Value
Process Temperature	0°C ... 60°C	0°C ... 60°C
Accuracy	+/- 1.6% of Full Scale Value	+/- 1.0% of Full Scale Value
Protection	IP 65	IP 65
Filling Liquid	Glycerin	Glycerin

PRODUCT IDENTIFICATION CODE

	FP22	-	100	x	10	.	0/16
Type / Model	Stainless Steel Casing and Brass Socket		FP21				
	Stainless Steel Casing and Socket		FP22				
Dial	100mm (4")				100		
	150mm (6")				150		
Connection	10mm (3/8")					10	
	15mm (1/2")					15	
Pressure Range	-760mmHg...4bar; -30inHg...60psi						C/04
	0...7bar ; 0...100psi						0/07
	0...10bar ; 0...150psi						0/10
	0...16bar ; 0...230psi						0/16
	0...20bar ; 0...300psi						0/20
	0...30bar ; 0...430psi						0/30

STAINLESS STEEL PRESSURE GAUGE

FP31
FP32



FEATURES & SPECIFICATIONS

- Stainless steel casing and bezel
- Dual scale pressure units reading
- Able to withstand an aggressive environment and medium
- Glycerin filled for system or equipment with excessive pulsating pressure, shock and vibration
- Design conforms to EN837-1
- Oil-free processing treatment option available
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, General Industries



SPECIFICATIONS

	FP31	FP32
Dial Size	2½" (65mm) / 4" (100mm)	2½" (65mm) / 4" (100mm)
Case	Stainless Steel 304	Stainless Steel 304
Bezel	Stainless Steel 304	Stainless Steel 304
Socket	Brass	Stainless Steel 316
Connection	BSPT ¼" for 2½" Dial BSPT ⅜" for 4" Dial	BSPT ¼" for 2½" Dial BSPT ½" for 4" Dial
Lens	Polycarbonate	Polycarbonate
Pointer	Aluminium, Black	Aluminium, Black
Scale Unit	Dual Scale in bar & psi	Dual Scale in bar & psi
Bourdon Tube	Phosphor Bronze	Stainless Steel 316
Movement	Brass	Stainless Steel 304
Working Pressure	Maximum 75% of Full Scale Value	Maximum 75% of Full Scale Value
Process Temperature	0°C ... 60°C	0°C ... 100°C
Accuracy	+/- 1.6% of Full Scale Value	+/- 1.6% of Full Scale Value
Protection	IP 65	IP 65
Filling Liquid	Glycerin	Glycerin

PRODUCT IDENTIFICATION CODE

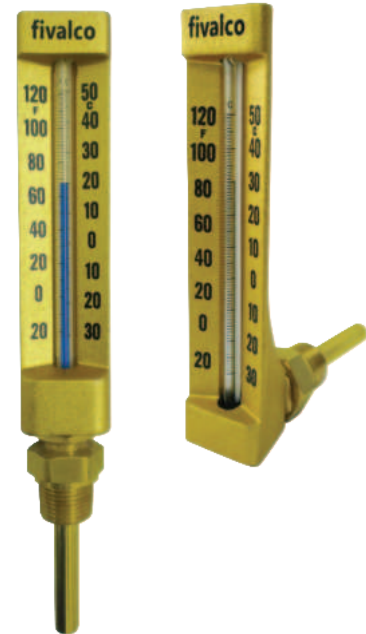
	FP31	-	100	x	10	.	0/16
Type / Model	Stainless Steel Casing and Brass Socket	FP31					
	Stainless Steel Casing and Socket	FP32					
Dial	65mm (2½")		065				
	100mm (4")		100				
Connection	6mm (¼")					06	
	10mm (⅜")					10	
	15mm (½")					15	
Pressure Range	-760mmHg...4bar; -30inHg...60psi						C/04
	0...7bar ; 0...100psi						0/07
	0...10bar ; 0...150psi						0/10
	0...16bar ; 0...230psi						0/16
	0...20bar ; 0...300psi						0/20
	0...30bar ; 0...430psi						0/30

FEATURES & SPECIFICATIONS

- Straight bottom or 90° angle back insertion
- Organic blue liquid filled for easy reading
- Dual scale reading in °C and °F
- Equipped with brass / stainless steel thermowell
- Suitable for water, steam, oil within thermometer range
- Design conforms to DIN 16195
- Applicable for Building Services, Air-Conditioning, Refrigeration, Heating System, General Industries

SPECIFICATIONS

Casing Length	6" (150mm)
Stem Length	2½" (65mm) 4" (100mm) 6" (150mm)
Casing Material	Aluminium, Anodized Gold
Stem Material	Brass Stainless Steel
Thermowell Connection	½" BSPT
Tube	Glass Cushioned
Filling	Organic Liquid in Blue
Scale Reading	Celsius (°C) & Fahrenheit (°F)
Operating Pressure	700psi
Ambient Temperature	-30°C ... 100°C
Accuracy	+/-2% of Full Scale Value
Protection	IP 65



PRODUCT IDENTIFICATION CODE

		FT11	-	150	x	065	.	0/50
Type / Model	Straight	FT11						
	90° Angle	FT12						
Casing Length	150mm (6")			150				
Stem Length	65mm (2½")					06		
	100mm (4")					10		
	150mm (6")					15		
Temperature Range	0...50°C ; 30°F...120°F							0/50
	0...120°C ; 30°F...250°F							0/120
	0...200°C ; 30°F...390°F							0/200
	-30°C...50°C ; -20°F...120°F							030/50
	-40°C...40°C ; -40°F...110°F							040/40

BI-METAL THERMOMETER

FT21
FT22

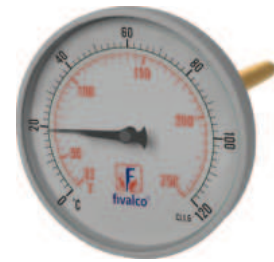


FEATURES & SPECIFICATIONS

- Center back or bottom connection
- Bi-metallic coil sensing element for reliable readings
- Dual scale reading in °C and °F
- Adjustable bulb
- Equipped with brass pocket thermowell
- Suitable for water, steam, oil within thermometer range
- Design conforms to EN 13190
- Applicable for Building Services, Air-Conditioning, Refrigeration, Heating System, General Industries

SPECIFICATIONS

Dial Size	3" (80mm) 4" (100mm)
Stem Length (Including Thread)	2½" (65mm) 4" (100mm) 6" (150mm)
Case	Zinc Plated Steel
Bezel	FT21 - Zinc Plated Steel FT22 - Stainless Steel 304
Lens	Glass
Bulb	Copper Alloy
Stem	Brass
Connection	FT21 - ½" BSPT/NPT Bottom FT22 - ½" BSPT/NPT Center Back
Accuracy	+/- 1.6% of Full Scale Value
Protection	IP43



PRODUCT IDENTIFICATION CODE

		FT21	-	100	x	065	.	0/120
Type / Model	Bottom Connection	FT21						
	Center Back Connection	FT22						
Dial Size	3" (80mm)			080				
	4" (100mm)			100				
Stem Length	2½" (65mm)					065		
	4" (100mm)					100		
	6" (150mm)					150		
Temperature Range	0°C...120°C ; 30°F ... 250°F							0/120
	-30°C...50°C ; -20°F ... 120°F							030/50
	-40°C...40°C ; -40°F ... 110°F							040/40

FEATURES & SPECIFICATIONS

- Adjustable pivot that allows the movements of an angle of up to 180°
- Green spirit-filled liquid, mercury free
- Magnifying lens tube for easy reading
- Dual scale reading in Celsius (°C) and Fahrenheit (°F)
- Equipped with brass / stainless steel removable thermowell
- Design conforms to DIN 16195
- Applicable for Building Services, Air-Conditioning, Heating System, General Industries

SPECIFICATIONS

Casing Length	9" (228mm)
Stem Length	3½" (89mm) 6" (150mm)
Casing	Black V-shaped aluminium
Lens	Glass, Magnifying lens tube
Stem Material	Aluminium
Thermowell Material	Brass Stainless Steel 304 Stainless Steel 316
Thermowell Connection	¾" NPT
Connection	Swivel nut with 1¼" - 18 NEP Thread
Scale Reading	Celsius (°C) & Fahrenheit (°F)
Ambient Temperature	-30°C ... 100°C
Accuracy	+/- 1.0% of Full Scale Value
Protection	IP42



PRODUCT IDENTIFICATION CODE

		FT31	-	228	x	150	.	0/120
Type / Model	Adjustable Angle / Brass	FT31						
	Adjustable Angle / SUS 304	FT32						
	Adjustable Angle / SUS 316	FT33						
Casing Length	9" (228mm)			228				
Stem Length	3½" (89mm)					089		
	6" (150mm)					150		
Temperature Range	0 ... 120°C ; 30 ... 250°F							0/120
	0 ... 140°C ; 30 ... 300°F							0/140
	-10°C ... 80°C ; 20 ... 180°F							010/80
	-15°C ... 45°C ; 0 ... 120°F							015/45
	-40°C ... 40°C ; -40 ... 110°F							040/40

FEATURES & SPECIFICATIONS

- Adjustable pivot that allows the movements of an angle up to 90°
- Bi-metallic coil sensing element for reliable readings
- Dual scale temperature reading in Degree Celsius (°C) and Fahrenheit (°F)
- Glycerin filled for system or equipment with excessive shock and vibration (Optional, upon request)
- Design conforms to EN 13190
- Oil-free processing treatment option available
- Applicable for Building Services, Air-Conditioning, Refrigeration, Heating System, General Industries



SPECIFICATIONS

Dial Size	3" (80mm) 4" (100mm) 5" (125mm)
Stem Length (Including Thread)	2½" (65mm) 4" (100mm) 6" (150mm) 9" (225mm) 12" (300mm)
Case	Stainless Steel 304
Bezel	Stainless Steel 304
Lens	Glass
Stem	Stainless Steel 304 Stainless Steel 316
Connection	½" BSPT / NPT
Accuracy	+/- 1.0% of Full Scale Value (without thermowell) +/- 1.6% of Full Scale Value (with thermowell)
Protection	IP54 - without liquid filled IP65 - with liquid filled

PRODUCT IDENTIFICATION CODE

		FT41	-	080	x	065	.	0/120
Type / Model	Adjustable Angle	FT41						
Dial Size	3" (80mm)			080				
	4" (100mm)			100				
	5" (125mm)			125				
Stem Length	2½" (65mm)					065		
	4" (100mm)					100		
	6" (150mm)					150		
	9" (225mm)					225		
	12" (300mm)					300		
Temperature Range	0°C ... 120°C ; 30°F ... 250°F							0/120
	0°C ... 200°C ; 30°F ... 390°F							0/200
	-20°C ... 60°C ; -4°F ... 140°F							020/60
	-30°C ... 50°C ; -20°F ... 120°F							030/50
	-40°C ... 40°C ; -40°F ... 110°F							040/40

SPECIFICATIONS

- Taper threaded to BS EN 10226-2 (ISO7-1)
- 1000 insertion style pressure / temperature test plug are fitted as standard to Flow Measurement Device and regulation valves

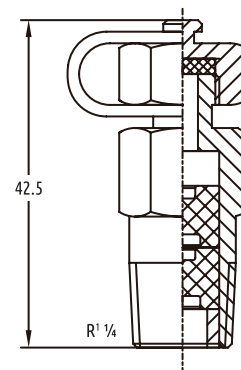


TEMPERATURE / PRESSURE RATINGS

Temperature (°C)	-10 to 100
Pressure (Bar)	25

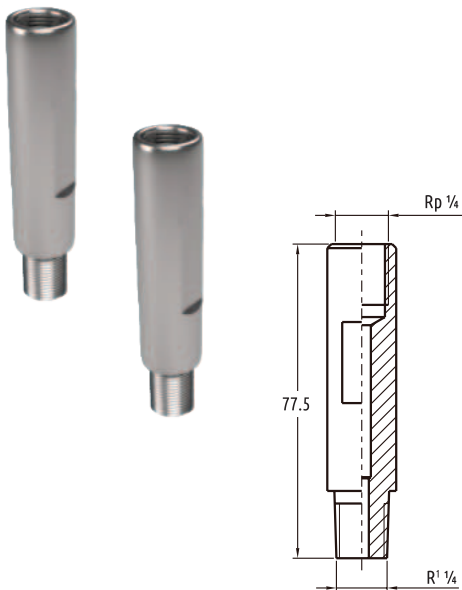
MATERIALS

Part	Material	Specification
Cap	Brass	BSEN12165 CW602N
Cap Washer	EPDM	
Body	Brass	BSEN12165 CW602N
Tie	Polypropylene	
Seal	EPDM	
Retaining Ring	Brass	BSEN12165 CW602N



EXTENSION TUBE

Fig No.: FET06



SPECIFICATIONS

- Taper threaded to BS EN 10226-2 (ISO7-1)

TEMPERATURE / PRESSURE RATINGS

Temperature (°C)	-10 to 100
Pressure (Bar)	25

MATERIALS

Part	Material
Extension Tube	Stainless Steel

MEASUREMENT ORIFICE PLATE

PN16 F60P
PN25 F60P

FEATURES & SPECIFICATIONS

- Stainless steel wafer design orifice plate suitable for BS4504 PN16 / BS4504 PN25 / EN1092-2 PN16 / EN1092-2 PN25 / ANSI Class 150 flange connection (Specify on order)
- Complete with extension tubes and fitted with pressure test plugs
- Accuracy of flow measurement at normal velocities is +/-5%

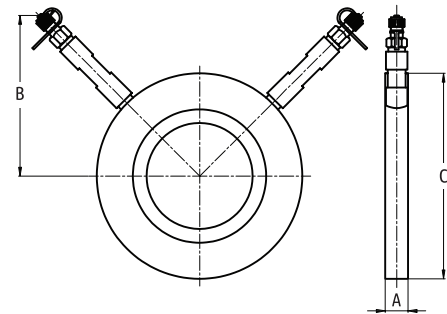


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar / 25bar
Working Temperature	-10°C ... 120°C

MATERIAL SPECIFICATIONS

Part	Material
Orifice Plate	Stainless Steel
Extension Tubes	Stainless Steel
Pressure Test Plugs	Brass



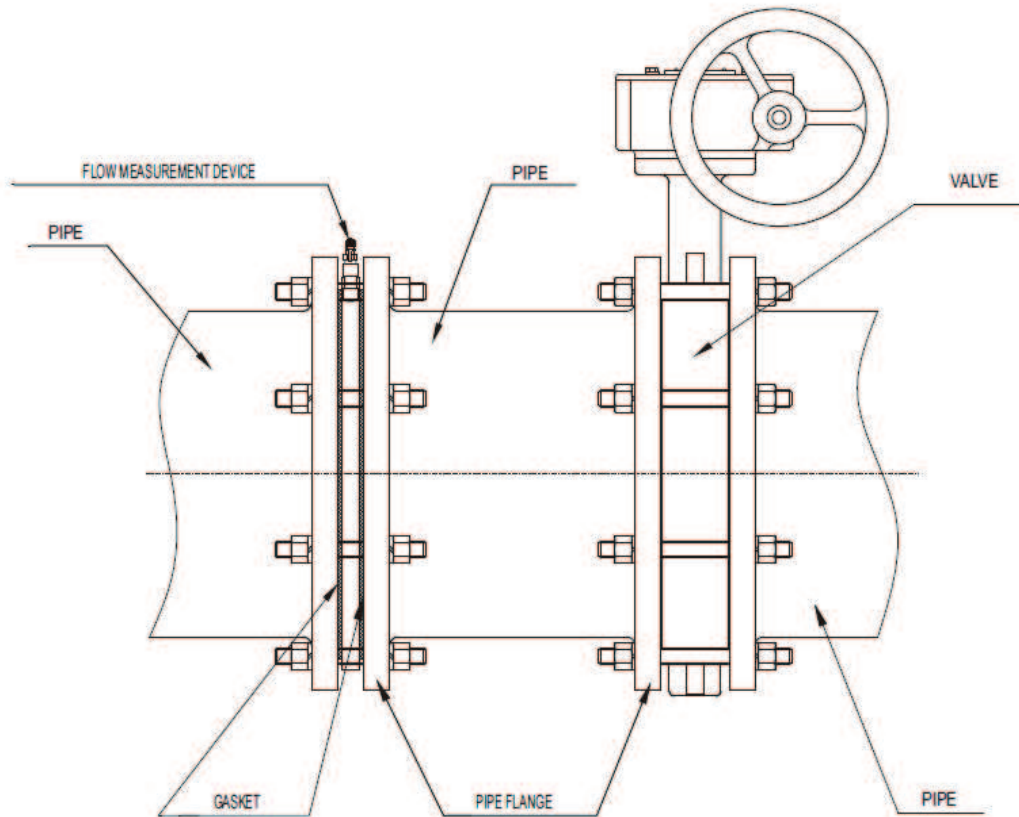
DIMENSIONS

mm	DN inch	Face-to-face A (mm)	Centre-to-top B (mm)	Outside Diameter C (mm)		Headloss (K)	Flow Coefficient (Kvs)
				PN16	PN25		
65	2½	18	112	127	127	1.6	104
80	3	18	118	142	142	1.4	116
100	4	18	125	162	168	1.4	213
125	5	18	135	192	194	1.3	333
150	6	18	145	218	224	1.7	476
200	8	18	165	273	284	1.8	768
250	10	18	185	329	340	1.8	1153
300	12	18	205	384	400	1.4	1743
350	14	21	222	444	457	2.5	1875
400	16	21	240	495	514	2.5	2582
450	18	21	261	555	564	2.5	3270
500	20	21	283	617	624	2.5	4079
600	24	25	325	734	731	2.5	4938

MEASUREMENT ORIFICE PLATE

PN16 F6OP

PN25 F6OP



INSTALLATION

The F6OP can be mounted between valve and / or pipe flanges conforming to BS 4504 / BS EN 1092-2 / ANSI Class standards with PN16 or PN25 ratings. The outside diameter ensures a proper alignment when installed between PN16 flanges and PN25 flanges up to 80mm in size.

For PN25 flanges in sizes 100mm and above, ensure the device is properly centered with the mating flanges during assembly.

APPLICATION

F6OP can be used as a single unit or close coupled to other regulating or isolating valves to provide accurate flow measurement.

APPLICATIONS

The **FIVALCO EFM / EOM** Series is a quarter-turn electric actuator designed to regulate valves such as butterfly valves and ball valves. Equipped with a moisture-proof heater, over-torque protection, and motor overheat protection, this actuator delivers reliable and high-precision performance across a wide range of industrial applications, including HVAC systems, water treatment plants, power generation, and industrial water services.

FEATURES

- Single-phase 230 VAC and 24 VAC / DC power supply while maintaining low energy consumption
- Manual or electric switching and a clutch-free design, allowing manual override via the handwheel
- Designed with an interchangeable spline sleeve to fit a wide range of valve stem, and a rotatable, replaceable ISO 5211 mounting flange to support versatile installation options
- To ensure safe operation, the actuator is equipped with a temperature sensor that monitors for overheating and activates an automatic shut-off in case of a jam
- Equipped with IP67-rated protection and a durable aluminum alloy housing coated with epoxy powder (IP68 is available on request)



SPECIFICATIONS

Housing Material	Aluminium Alloy	Space Heater	5W (230VAC) moisture-proof heater
External Coating	Epoxy Coating	Stall Protection	Motor overheat protection
Protection Class	IP67 IP68 (available on request)	Manual Override	Handwheel
Noise	Less than 75 decibels within 1 meter	Connection	Compliant with ISO5211
Operating Time	11 ... 143 sec	Motor Specifications	Standard F-class motor with 135°C thermal protector H-class motor (available on request)
Limit Switch	2 each for open and close	Vibration Resistance	Conforms to JB / T8219
Torque Switch	1 each for open and close (Only applicable for OEM series)		

SPECIFICATIONS - ON-OFF TYPE

Torque Range	35 ... 8000 Nm
Ambient Temperature	-25°C ... 70°C -40°C ... 60°C (available on request)
Working Duty	S2-15min, not more than 600 starts per hour
Control Signal	230VAC (±10%)
Feedback Signal	Dry contact
Power Supply	230VAC (±10%), 50Hz, 1-phase 230VAC / 415VAC (±10%), 50Hz, 3-phase * Single-phase only applicable to EFM series.

SPECIFICATIONS - MODULATING TYPE

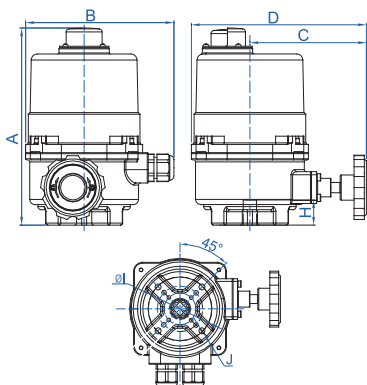
Torque Range	35 ... 8000 Nm
Ambient Temperature	-25°C ... 70°C
Working Duty	S4-50%, not more than 600 starts per hour (optional up to 1200 starts per hour)
Control Signal	2-10VDC / 0-10VDC / 4-20mA (selectable)
Feedback Signal	2-10VDC / 0-10VDC / 4-20mA (selectable)
Power Supply	230VAC (±10%), 50Hz, 1-phase 24VAC/DC (available on request)

PERFORMANCE

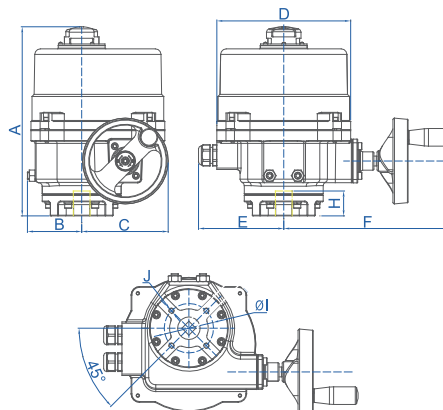
Model Number	Type	Power Supply	Max Output Torque (N*m)	Operating Time (seconds)	Flange ISO5211	Drive Square Size
EFM1-H	On-Off Modulating	24VAC/DC / 230VAC-1ph	35	11	F05	9x9
EFMA-H	On-Off Modulating	24VAC/DC / 230VAC-1ph	50	15	F07	11x11
EOM2	On-Off Modulating	24VAC/DC / 230VAC-1ph	100	19	F07	11x11
EOM2	On-Off Modulating	24VAC/DC / 230VAC-1ph	100	19	F07	14x14
EOM3	On-Off Modulating	24VAC/DC / 230VAC-1ph	200	39	F07	14x14
EOM3A	On-Off Modulating	24VAC/DC / 230VAC-1ph	300	39	F07	17x17
EOM4	On-Off Modulating	24VAC/DC / 230VAC-1ph	400	39	F10	22x22
EOM5	On-Off Modulating	24VAC/DC / 230VAC-1ph	600	39	F10	22x22
EOM6	On-Off Modulating	24VAC/DC / 230VAC-1ph	800	47	F10	22x22
EOM7	On-Off Modulating	24VAC/DC / 230VAC-1ph	1000	47	F10	22x22
EOM7A	On-Off Modulating	230VAC-1ph	1300	47	F14	27x27
EOM8	On-Off Modulating	230VAC-1ph	1700	47	F14	27x27
EOM8A	On-Off Modulating	230VAC-1ph	2000	34	F14	36x36
EOM9	On-Off Modulating	230VAC-1ph	2300	47	F14	36x36
EOM10	On-Off Modulating	230VAC-1ph	3500	76	F16	36x36
EOM10	On-Off Modulating	230VAC-1ph	3500	76	F16	46x46
EOM11	On-Off Modulating	230VAC-1ph	5000	105	F16	46x46
EOM12	On-Off Modulating	230VAC-1ph	8000	143	F25	Ø63.35x71.35key
EOM12	On-Off Modulating	230VAC-1ph	8000	143	F25	Ø75x84key

ELECTRIC ACTUATOR

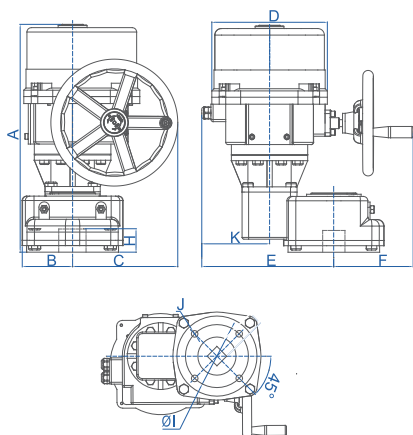
EFM / EOM SERIES QUARTER-TURN ACTUATOR



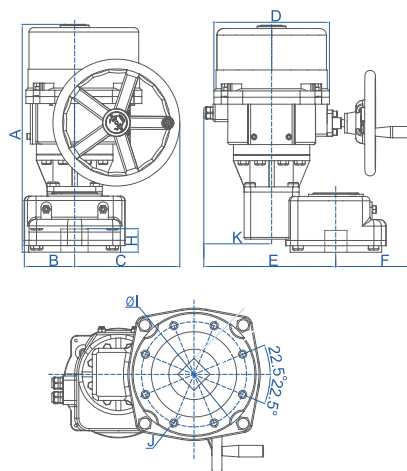
EFM1-H ... A-H



EOM2 ... 9



EOM10 ... 11



EOM12

DIMENSIONS

Model	A	B	C	D	E	F	H	ØI	J	Weight (kg)
EFM1-H/A-H	192/212	145±2	113.5	172	-	-	20	36/50/70	4-M5/M6/M8	3.6/3.8
EOM2/3/3A	268	79±2	123	190	123±2	243±2	35	70/102	4-M8	11
EOM4/5/6/7/7A	327	109±2	187	232	146±2	280±2	55	102/125	4-M10/M12	22
EOM8/8A/9	378	128	242	267	162.5	333	65	125/140	4-M12/M16	36
EOM10/11	532	118	242	267	308	186	85	140/165	4-M16/M20	76
EOM12	549	160	242	267	343	160	130	254	8-M16	107

(mm)

PRODUCT IDENTIFICATION CODE - EFM SERIES

Code Position	Description	Code Options EFM1-H-O-dB-K2
Model	EFM	EFM
Torque Code	1-H (Refer Performance Table)	1-H
Action	O - On/Off I - Modulating	O I
Power Supply	d - 230VAC g - 24VAC/DC	d g
Housing Colour	B - Black	B
Input Signal	K2 - (Active + Passive) Position Feedback (On/Off Actuator) K3F - (Active + Passive) Position 4-20mA Feedback (On/Off Actuator) T1 - 0-10VAC (Modulating Actuator) T2 - 2-10VAC (Modulating Actuator) T3 - 4-20mA (Modulating Actuator)	K2 K3F T1 T2 T3
Feedback Signal	T1 - 0-10VAC (Modulating Actuator) T2 - 2-10VAC (Modulating Actuator) T3 - 4-20mA (Modulating Actuator)	T1 T2 T3

PRODUCT IDENTIFICATION CODE - EOM SERIES

Code Position	Description	Code Options EOM2-Ic-dB-T1-T2
Model	EOM	EOM
Torque Code	2 (Refer Performance Table)	2
Action	Oc - On/Off Ic - Modulating	Oc Ic
Power Supply	d - 230VAC g - 24VAC/DC	d g
Housing Colour	B - Black	B
Input Signal	K2 - (Active + Passive) Position Feedback (On/Off Actuator) K3F - (Active + Passive) Position 4-20mA Feedback (On/Off Actuator) T1 - 0-10VAC (Modulating Actuator) T2 - 2-10VAC (Modulating Actuator) T3 - 4-20mA (Modulating Actuator)	K2 K3F T1 T2 T3
Feedback Signal	T1 - 0-10VAC (Modulating Actuator) T2 - 2-10VAC (Modulating Actuator) T3 - 4-20mA (Modulating Actuator)	T1 T2 T3

SMC actuators can be controlled individually or collectively. It can be operated locally or via a remote controller. In addition to the basic models, there are other models such as Explosion-proof (Explosion-proof Grade dIIBT4), Integral, Integral Explosion-proof, Radiation-proof, Auto-Regulation, Two-Wire, Two-Speed Control, etc. Various actuators of different protection classes such as Water-Resistant, MarineType, Fire-Proof are available on request. With a wide range of selection, SMC series of actuators are able to meet various requirements.

SPECIFICATIONS

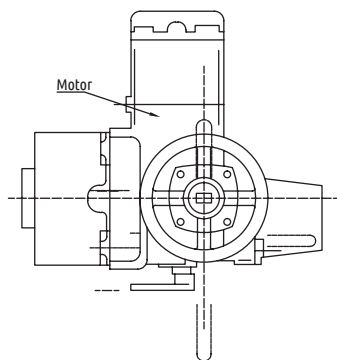
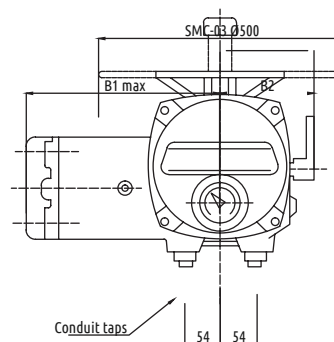
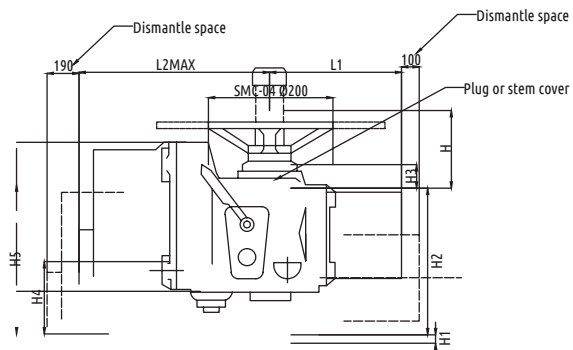
Ambient Temperature	-20°C ... 55°C
Relative Humidity	Max. 90%
Sea Level Height	Max.1000m
Working Conditions	Without flammable, explosive, corrosive medium
Protection Class	IP 65 (IP68 for Submarine type, to specify when order)
Power Supply	380V - 50Hz 380V - 60Hz 415V - 50Hz 415V - 60Hz

Note : Other power supply available upon request.

PERFORMANCE

Model	Output Torque (N*m)	Output Speed (r/min)	Motor (kw)	Stall Current (A)	Time for 90° Turn (S)	Weight (kg)
SMC-04 / H0BC	450	1	0.12	5	15	74
	600	1	0.20	8	15	74
SMC-04 / H1BC	1100	1	0.30	10	15	90
SMC-03 / H1BC	2000	1	0.40	13	15	120
SMC-03 / H2BC	3000	0.5	0.40	13	30	140
	3000	1	0.60	23	15	140
SMC-00 / H3BC	7800	0.5	1.10	25	30	220
	7800	1	1.50	31	15	220
SMC-0 / H4BC	10000	0.5	1.50	31	30	320
	17500	0.3	1.50	31	45	320
SMC-1 / H5BC	12500	1	2.20	42	15	520
	27000	0.3	2.20	42	45	520
SMC-2 / H6BC	42000	0.3	3.00	55	45	780
	50000	0.25	4.00	75	50	780
SMC-3 / H6BC	63500	0.3	5.50	92	40	1100

SMC-04 & SMC-03

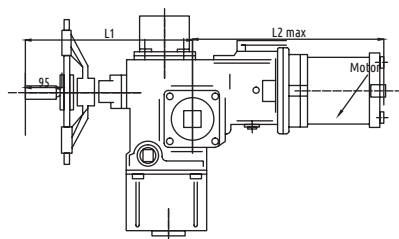
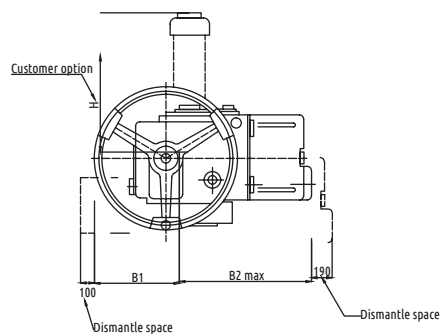
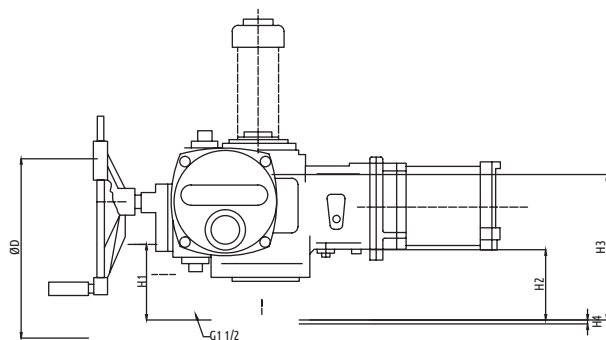


DIMENSIONS

(mm)

Model	L1	L2	B1	B2	H1	H2	H3	H4	H5
SMC-04	185	346	243	140	3	212	35	108	213
SMC-03	202	373	387	198	3	259	43	134	239

SMC-00, SMC-0, SMC-1 & SMC-2



DIMENSIONS

(mm)

Model	L1	L2	B1	B2	H1	H2	H3	H4	D
SMC-00	392	519	251	364	123	115	253	4	305
SMC-0	410	529	273	367	153	132	285	5	305
SMC-1	429	623	304	393	168	148	310	5	305
SMC-2	457	697	333	418	184	158	358	5	458

CODIFICATION

IRON VALVES

Previous Figure No.	Current Figure No.	Enhanced Figure No. (PN16)	Enhanced Figure No. (PN25)	Full Description	Series	Connection	Type	
2316/2325/F1116	V11/F11	V1116	F1125	Wafer Butterfly Valve	V1/F1	1 Wafer Type	U U-Type	
2616	F11U	F11U16	-	U-type Butterfly Valve				
2516/F1216	V12/F12	V1216	F1225	Full Lug Butterfly Valve		Butterfly Valve	2 Lug Type	
2110	F13A	-	-	AWWA C504 Double Flange Butterfly Valve			A AWWA	
2116/F13C16	V13	V13C16	-	Concentric Double Flange Butterfly Valve			3 Flange Type	C Concentric
29200/29300/F13E	F13DE	F13DE16	F13DE25	Double Eccentric Butterfly Valve			DE Double Eccentric	
	F13TE	F13TE16	-	Triple Eccentric Butterfly Valve			TE Triple Eccentric	
	F17	F17-300	-	Groove Butterfly Valve	7 Groove Type			
3216A/F23A16	V23A/F23A	V23A16	F23A25	NRS Resilient Seat Gate Valve	V2/F2	Gate Valve	A BS 5163 Type A, NRS	
3216AR/F23AR16	V23AR/F23AR	V23AR16	F23AR25	OS&Y Resilient Seat Gate Valve			AR BS 5163 Type A, OS&Y	
3216AS/F23AS16	V23AS	V23AS16	-	NRS Resilient Seat Gate Sluice Valve			AS BS 5163 Type A, Sluice	
3216B	F23B	F23B16	-	NRS Resilient Seat Gate Valve			B BS 5163 Type B, NRS	
3216BS	F23BS	F23BS16	-	NRS Resilient Seat Gate Sluice Valve			BS BS 5163 Type B, Sluice	
3316	F23F4	F23F416	-	NRS Metal Seat Gate Valve			F4 DIN 3352-F4, NRS	
	F23F4R	F23F4R16	-	OS&Y Metal Seat Gate Valve			F4R DIN 3352-F4, OS&Y	
3116/3125	F23M	F23M16	F23M25	NRS Metal Seat Gate Valve			3 Flange Type	M Metal Seat, NRS
3116R	F23MR	F23MR16	F23MR25	OS&Y Metal Seat Gate Valve				MR Metal Seat, OS&Y
6116	F33S	F33S16	-	OS&Y S-Pattern Globe Valve				S S-Pattern
6216	F33R	F33R16	-	OS&Y Round Body Globe Valve	F3	Globe Valve	R Round Body	
	F33B	-	-	OS&Y Bellow Seal Globe Valve			B Bellow Seal	
4116	F43O	-	-	1-Piece Body Ball Valve	F4	Ball Valve	O 1-Piece Body	
	F43D	F43D16	-	2-Piece Body Ball Valve			D 2-Piece Body	
	F43T	-	-	3-Piece Body Ball Valve			T 3-Piece Body	
5316/5325	V51DD/F51DD	V51DD16	F51DD25	Wafer Double Door Check Valve	F5	1 Wafer Type	DD Double Door	
	F51N	F51N16	F51N25	Wafer Type Silent Check Valve			N Silent Type	
1116/1125	F53F	F53F16	F53F25	Foot Valve	Check Valve	F Foot Type		
5516/5525	F53N	F53N16	F53N25	Silent Check Valve		N Silent Type		
5216	F53P	F53P16	-	Lifting Check Valve		P Lifting Type		
5116/5125	F53S	F53S16	-	Swing Check Valve		S Swing Type		
1916/1925	F63F	F63F16	F63F25	Fixed Orifice Double Regulating Valve		F6	Control Valve	F Fixed Type
	F63V	F63V16	F63V25	Variable Orifice Double Regulating Valve	V Variable Type			
	F63	F6316-PPR	F6325-PPR	Pressure Reducing Valve				
	F63	F6316-PPR-LF	F6325-PPR-LF	Pressure Reducing Valve with Low Flow By-Pass				
	F63	F6316-PSR	F6325-PSR	Pressure Relief Valve				
	F63	F6316-PSA	F6325-PSA	Surge Anticipating Valve	3 Flange Type			
	F63	F6316-PPD	F6325-PPD	Pressure Differential Valve				
	F63	F6316-FCV	F6325-FCV	Flow Control Valve				
	F63	F6316-FMC	F6325-FMC	Modulating Float Valve				
	F63	F6316-FBF	F6325-FBF	Bi-Level Float Valve				
	F63	F6316-FSC	F6325-FSC	Solenoid Control Valve				
		F73B	F73B16	-	Basket Type Strainer			F7
7116/7125/F73Y16	V73Y/F73Y	V73Y16	F73Y25	Y-Type Strainer			Y Y-Pattern	
	F93S	F93S16	-	Single Orifice Air Valve	F9	Air Valve	S Single Orifice	
	F93D	F93D16	-	Double Orifice Air Valve			D Double Orifice	
9716/9725	F95	F9516	F9525	Automatic Air Vent	5	Thread Type		

COPPER VALVES

Previous Figure No.	Current Figure No.	Enhanced Figure No.	Full Description	Series	Body Material	Pressure Rating	Type
3B16	F2B16	F2B16	Brass NRS Gate Valve	F2 Gate Valve	B Brass	16 PN16	
3Z16	F2Z16	F2Z16	DZR Brass NRS Gate Valve		Z DZR Brass	16 PN16	
3G20	F2G20	F2G20	Bronze NRS Gate Valve		G Bronze	20 PN20	
3G32R	F2G32R	F2G32R	Bronze Rising Stem Gate Valve	F3 Globe Valve	G Bronze	32 PN32	R OS&Y
6G20	F3G20R	F3G20R	Bronze Rising Stem Globe Valve		G Bronze	20 PN20	R OS&Y
4B25	F4B25	F4B25	Brass Ball Valve	F4 Ball Valve	B Brass	25 PN25	
4G25	F4G25	F4G25	Bronze Ball Valve		G Bronze	25 PN25	
5B16L	F5B16L	F5B16L	Brass Lift Check Valve	F5 Check Valve	B Brass	16 PN16	L Lift Type
5B16S	F5B16S	F5B16S	Brass Swing Check Valve		B Brass	16 PN16	S Swing Type
5G20L	F5G20L	F5G20L	Bronze List Check Valve		G Bronze	20 PN20	L Lift Type
5G20S	F5G20S	F5G20S	Bronze Swing Check Valve	G Bronze	20 PN20	S Swing Type	
1G25	F6G25	F6G25	Bronze Fixed Orifice Double Regulating Valve	F6 Control Valve	G Bronze	25 PN25	
7B16	F7B16	F7B16	Brass Y-Type Strainer	F7 Strainer	B Brass	16 PN16	
7Z16	F7Z16	F7Z16	DZR Brass Y-Type Strainer		Z DZR Brass	16 PN16	
7G20	F7G20	F7G20	Bronze Y-Type Strainer		G Bronze	20 PN20	
9B16	F9B10	F9B10	Brass Air Vent	F9 Air Valve	B Brass	10 PN10	

PIPING

Previous Figure No.	Current Figure No.	Enhanced Figure No. (PN16)	Enhanced Figure No. (PN25)	Full Description	Series	Connection	Type	
FTFH/FTFHH	F83MH	F83MH16	F83MH25	Flexible Hose	F8 Hose & Joint	3 Flange Type	MH Metal Hose	
UTFH/UTFHH	F85MH	F85MH16	F85MH25	Flexible Hose		5 Thread Type	MH Metal Hose	
8816/8825	F83MJ	F83MJ16	F83MJ25	Expansion Joint				MJ Metal Joint
8116/8125	F83SJ	F83SJ16	F83SJ25	Single Sphere Rubber Flexible Joint				SJ Single Sphere Joint
	F83SJ-I	F83SJ-I	F83SJ-I	Single Sphere Rubber Flexible Joint			3 Flange Type	I For Indonesia Used
8216/8225	F83DJ	F83DJ16	F83DJ25	Double Sphere Rubber Flexible Joint				DJ Double Sphere Joint
	F83DJ-I	F83DJ-I	F83DJ-I	Double Sphere Rubber Flexible Joint				I For Indonesia Used
8716/8725	F85DJ	F85DJ16	F85DJ25	Double Sphere Rubber Flexible Joint				DJ Double Sphere Joint
	F85DJ-I	F85DJ-I	F85DJ-I	Double Sphere Rubber Flexible Joint			5 Thread Type	I For Indonesia Used

INSTRUMENTS

Previous Figure No.	Current Figure No.	Enhanced Figure No.	Full Description	Series	Type	
P101	FP11	FP11	General Service Pressure Gauge	FP Pressure Gauge	11 General, Steel Type, Bottom Entry	
	FP12	FP12	General Service Pressure Gauge		12 General, Steel Type, Center Back Entry	
P201	FP21	FP21	Stainless Steel Pressure Gauge		21 Stainless Steel Type, Bottom Entry	
P202	FP22	FP22	Stainless Steel Pressure Gauge		22 Stainless Steel Type, Center Back Entry	
P301	FP31	FP31	Stainless Steel Pressure Gauge		31 Stainless Steel Type, Bottom Entry	
P302	FP32	FP32	Stainless Steel Pressure Gauge		32 Stainless Steel Type, Center Back Entry	
T110	FT11	FT11	V-Line Glass Thermometer		FT Thermometer	11 Straight Type
T120	FT12	FT12	V-Line Glass Thermometer			12 Angle Type
T210	FT21	FT21	Bi-Metal Thermometer	21 Bi-Metal Bottom Connection		
T220	FT22	FT22	Bi-Metal Thermometer	22 Bi-Metal Center Back Connection		
T310	FT31	FT31	Adjustable Angle Glass Thermometer	31 Adjustable Angle, Brass Thermowell		
T320	FT32	FT32	Adjustable Angle Glass Thermometer	32 Adjustable Angle, SS304 Thermowell		
T330	FT33	FT33	Adjustable Angle Glass Thermometer	33 Adjustable Angle, SS316 Thermowell		
T410	FT41	FT41	Adjustable Angle Bi-Metal Thermometer	41 Adjustable Angle, Stainless Steel Type, Bottom Entry		
1000ET	FET06	FET06	Extension Tube	FET Extension Tube	06 Connection 6mm	
1000TP	FTP06	FTP06	Temperature/Pressure Test Plug	FTP Test Plug	06 Connection 6mm	
1000OP	F6OP	F6OP	Measurement Orifice Plate	F6 Control Valve	OP Orifice Plate	

FIVALCO ORDERING CODE

Example :

Fivalco Wafer Butterfly Valve PN16 - Ductile Iron Body, Ductile Iron Disc, EPDM Seat, Stainless Steel 316 Stem, PN16 Connection, Lever Type, Size 150mm c/w Neumax QT15 On/Off Actuator

F1 **1** **16** - **11** **11** **80** **51** **P16** **L** **.150** +**QT15**

Series	Connection	Type	Pressure Rating	Body Material	Disc	Seat	Stem	Connection	Operator	Valve Diameter	Accessory
F1 Butterfly Valve	1 Wafer Type 2 Lugged Type 3 Flanged Type 5 Threaded Type 7 Grooved Type 8 Sanitary Clamp 9 Sanitary Butt Welded	A AWMA C Concentric E Eccentric U U-Type M BS 5150, Metal Seat MR BS 5150, Metal Seat, OS&Y A BS 5163 Type A, NRS B BS 5163 Type B, NRS AR BS 5163 Type A, OS&Y BR BS 5163 Type B, OS&Y AS BS 5163 Type A, Sluice BS BS 5163 Type B, Sluice F4 DIN 3352-F4, NRS F4R DIN 3352-F4, OS&Y	10 PN10 16 PN16 20 PN20 25 PN25 32 PN32 64 PN64 150 150psi 200 200psi 250 250psi 300 300psi 365 365psi	10 Cast Iron 10e Epoxy Coated CI 11 Ductile Iron 11b NBR Coated DI 11e Epoxy Coated DI 11h Halar Coated DI 11m EPDM Coated DI 33 Aluminium Bronze 50 Stainless Steel 304 51 Stainless Steel 316 51e Epoxy Coated SS316 51h Halar Coated SS316 57 Duplex Stainless Steel 60 Carbon Steel 66 Mild Steel	10 Cast Iron 11 Ductile Iron 11b NBR Coated DI 11e Epoxy Coated DI 11h Halar Coated DI 11n Nylon Coated DI 33 Aluminium Bronze 50 Stainless Steel 304 51 Stainless Steel 316 51e Epoxy Coated SS316 51h Halar Coated SS316 51m EPDM Coated SS316 57 Duplex Stainless Steel	11 Ductile Iron 36 Brass 37 DZR Brass 38 Bronze 50 Stainless Steel 304 51 Stainless Steel 316 80 EPDM 80w White EPDM 81 NBR 82 Neoprene 87 Silicone 88 PTFE 89 FPM 90 Chloroprene 91 Hypalon	50 Stainless Steel 304 51 Stainless Steel 316 52 Stainless Steel 410 53 Stainless Steel 420 54 Stainless Steel 431 57 Duplex Stainless Steel 59 Monel	P10 PN10 P16 PN16 P25 PN25 J10 JIS10K J16 JIS20K J20 JIS20K A125 ANSI125 A150 ANSI150 A300 ANSI300 UF Universal Flange	L Lever G Gear B Bare Shaft E Electric Actuator	xxx (mm)	To Specify
F3 Globe Valve		S S-Pattern B Bellow Seal R Round Body									
F4 Ball Valve		O 1-Piece Body D 2-Piece Body T 3-Piece Body									
F5 Check Valve		S Swing Type DD Double Door N Silent Type P Lifting Type F Foot Valve									
F6 Control Valve		F Fixed Orifice V Variable Orifice									
F7 Strainer		B Basket Type Y Y-Pattern									
F8 Pipings		MH Metal Hose SJ Single Sphere joint DJ Double Sphere Joint MJ Metal Joint									
F9 Air Valve		S Single Orifice D Double Orifice									



FIVALCO WARRANTY STATEMENT

Fivalco's products are designed, engineered and manufactured within its specification of intended use, under the highest quality control possible. Commitment on quality and performance is always at the top of our agenda.

Fivalco warrants that for a period of thirty six (36) months following delivery, the Fivalco products will perform in accordance with published specifications, and will be free from defects in material or workmanship provided that the products are stored and installed in accordance with recommendations in our catalogues.

Fivalco's obligation shall be to replace any product found to be defective in design, material or workmanship during the warranty period. Fivalco shall not be obligated to refund the purchase price and other liabilities on monetary compensation, nor shall it be obligated to pay for any labor or costs associated with the removal of the defective products or the reinstallation of those products. No warranty coverage will be provided for products that have been altered and / or used for a purpose other than that for which they were designed or installed contrary to Fivalco's guidelines.



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