



FIFFCO
agility to safe

ISO
9001:2015

CE



Product Catalog of
**MECHANICAL SERVICES
& HVAC**



About FIFFCO

FIFFCO GLOBAL LTD is one of the leading Fire Fighting equipment's manufacturer and supplier based on London, United Kingdom. "Agility to Safe", FIFFCO GLOBAL LTD is fundament their business to protect the man's life and property from fire disaster by manufacturing & supplying innovative and technological Fire Fighting safety solutions equipment's.

FIFFCO GLOBAL LTD is one of the leading Fire Fighting equipment's manufacturer and supplier based on London, United Kingdom. We found that the human being has to faced different challenges to exiting themselves from different disaster like fire. On the otherhand, worldwide most recent events have shown the high importance the fire safety industry. So, "Agility to Safe", FIFFCO GLOBAL LTD is rudiment their business to protect the man's life and property from fire disaster by manufacturing & trading innovative and technological Fire Fighting equipment's like Fire Protection Systems, Fire Hydrant Equipment's, Sprinkler Systems Equipment's, Fire Fighting Pump, Fire Alarms & Notification Systems, Fire Suppression System, Fire Fighting Foam Systems etc. With the most proficient and dedicat-ed team, FIFFCO GLOBAL LTD is always devoted to caring quality of products and services by complying updated and innovated technologies and ideas.

AWWA C504 DOUBLE FLANGE BUTTERFLY VALVE

FEATURES & SPECIFICATIONS

- Concentric double flange
- Comply with AWWA C504
- Flange drilled to ANSI Class 150

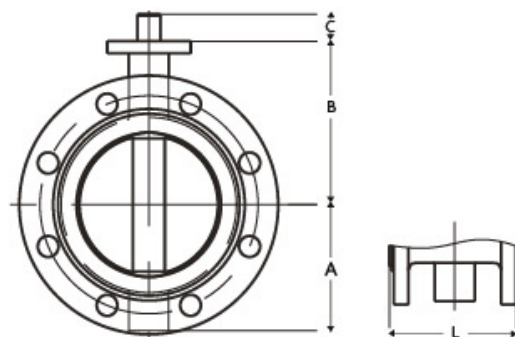
PRESSURE & TEMPERATURE RATINGS

Working Pressure	150 psi
Shell Testing Pressure	(x2.0) 300 psi
Seat Testing Pressure	(x1.1) 165 psi
Working Temperature	-4°F ... 203°F (EPDM) 14°F ... 176°F (NBR)
Suitable Media	Water, Oil & Gas



MATERIAL SPECIFICATIONS

Part	Material
Body	Ductile Iron
Disc	Ductile Iron Aluminium Bronze Stainless Steel 304 Stainless Steel 316
Shaft	Stainless Steel 410 Stainless Steel 431
Seat Ring	EPDM/NBR
O-Ring	EPDM/NBR
Bushing	Bronze



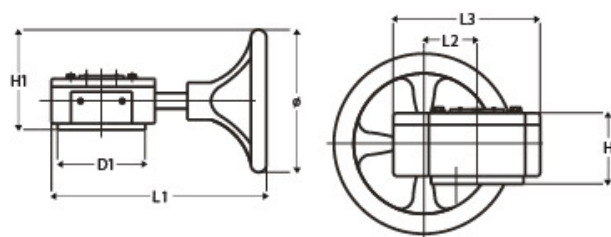
DIMENSIONS

DN	(mm)	80	100	150	200	250	300	350	400	450
	(inch)	3	4	6	8	10	12	14	16	18
A		3.82	4.69	6.14	7.36	8.2	9.86	11.42	12.63	13.52
B		5.16	5.91	7.09	8.27	9.67	10.83	12.91	14.8	16.01
C		1.18	1.18	1.26	1.57	1.97	1.97	1.97	2.76	3.35
L		5	5	5	6	8	8	8	8	8

DN	(mm)	500	600	750	900	1050	1150	1200	1350	1500
	(inch)	20	24	30	36	42	46	48	54	60
A		16.08	18.78	20.33	24.21	28.74	41.2	39.4	45.7	50.1
B		17.64	20.39	24.02	27.24	34.06	41.8	34.8	39.2	41.8
C		3.74	4.33	3.74	5	5.12	5.91	5.91	7.87	7.87
L		8	8	12	12	12	15	15	15	15

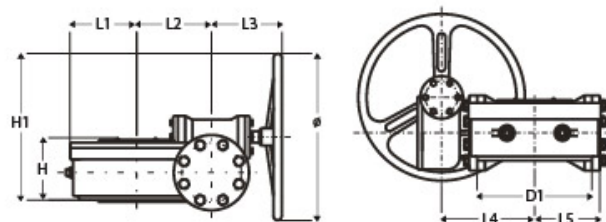
AWWA C504 DOUBLE FLANGE BUTTERFLY VALVE

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



VALVE DIAMETER	D1	ø	H	H1	L1	L2	L3
DN80	65	150	33	70	216	45	127
DN100 - DN150	90	150	33	70	216	45	127
DN200 - DN250	125	285	36	76	303	63.5	170
DN300 - DN350	125	285	40	79	300	80	190
DN400	175	385	79	232.5	300	80	190
DN450 - DN500	175	390	108	251	397/427	120	279

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



VALVE DIAMETER	D1	ø	H	H1	L1	L2	L3	L4	L5
DN400 - DN500	175	285	125	271	107	100	156	168	107
DN600 - DN650	210	285	125	271	107	100	156	168	107
DN700 - DN800	300	425	149	378	146	140	197	230	146
DN900 - DN1050	300	425	185	409	201	196	203	279	201
DN1100	350	425	185	409	201	196	203	279	201
DN1200	350	425	216	423	185	240	203	311	255
DN1400	415	510	267	553	208	345	258	435	355
DN1600	415	510	312	562	316	410	237	450	425
DN1800	475	510	326	570	360	460	237	466	475
DN2000	650	600	480	240	410	602	265	725	630
DN2200 - DN2400	800	600	570	240	442	696	364	742	726
DN2600 - DN3000	800	600	520	240	438	768	364	742	726

INSTALLATION & OPERATION GUIDE

1. Ensure sufficient space for valves for easy installation, operation, maintenance and replacement.
2. Verify the valves are suitable for the operating condition such as medium, operating pressure / temperature, etc.
3. Check the I.D. of the flange and pipe to ensure free disc movement.
4. Valves shall be mounted on flanges only after the counter flanges have been welded to pipe and cooled down to the atmospheric temperature. Welding heat may damage the rubber seat of the valves. Never weld the flanges with valves installed. No gasket is required for installation of rubber seated butterfly valves.
5. Position the valves carefully between flanges. Accurate centering between flanges is essential to prevent any damages and problems during operation.
6. Valves should be installed by placing bolts through the hole and tightening carefully, ensuring even contact between the flange and seat. Too tight of space may cause damages to the seat and should be avoided.
7. Cross tighten all the bolts diagonally to distribute the loads evenly over the valves.
8. Turning the valves to ensure sufficient disc clearance.
9. Valves equipped with manual operators must be operated manually. Excessive external force on the operation of valve may damage the valve and / or operator.
10. Blind flange with short pipe should be used for dead end installation.

DOUBLE FLANGE BUTTERFLY VALVE

FEATURES & SPECIFICATIONS

- Concentric double flange
- Comply with BS EN593 / BS 5155 (Double flange short body) / ISO 5752 / EN 558-1 Basic Series 13 (Double flange short body) / MSS SP-67
- Flange drilled to BS 4504 PN16 / EN1092-2 PN16 / ANSI Class 150 / JIS10K / AS 2129 Table E (Specify on order)

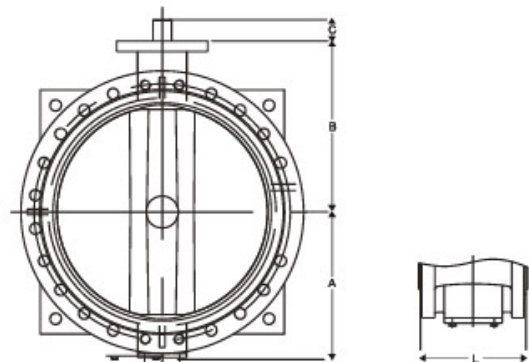


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing 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
Body	Ductile Iron
Disc	Ductile Iron Aluminum Bronze Stainless Steel 304 Stainless Steel 316
Stem	Stainless Steel 410 Stainless Steel 431
Seat Ring	EPDM/NBR
O-Ring	EPDM/NBR
Bushing	Bronze



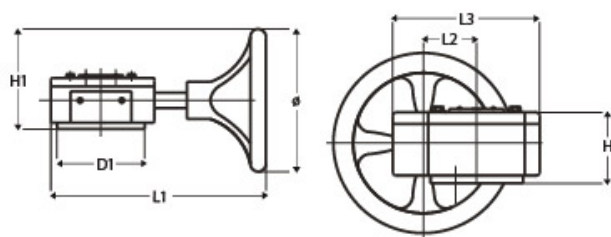
DIMENSIONS

DN		(mm)															
(mm)	(inch)	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	750
(mm)	(inch)	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	28	30
A		80	80	95	114	114	139	175	203	242	250	317	341	367	432	488	517
B		110	134	131	150	170	180	210	245	276	328	376	407	433	508	560	610
C		30	30	30	30	30	30	34	34	34	40	52	52	64	70	95	95
L		108	112	114	127	140	140	152	178	178	190	216	222	229	267	292	305

DN		(mm)															
(mm)	(inch)	800	900	1000	1200	1300	1350	1400	1500	1600	1800	2000	2200	2400	2600	2800	3000
(mm)	(inch)	32	36	40	48	52	54	56	60	64	72	80	88	96	104	112	120
A		544	615	669	794	968	1066	1066	950	1054	1164	1363	1445	1610	1795	1900	2040
B		620	692	735	917	990	1046	1000	1050	1150	1200	1360	1500	1650	1780	1900	2070
C		95	130	130	150	200	200	200	200	200	200	200	300	300	300	300	350
L		318	330	410	470	490	490	530	570	600	600	760	636/800	850	900	950	1000

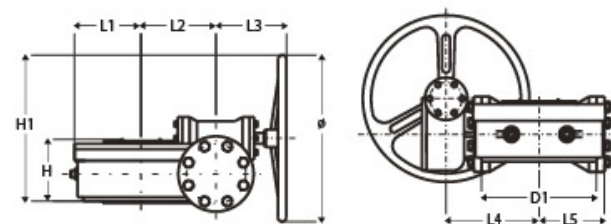
DOUBLE FLANGE BUTTERFLY VALVE

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



VALVE DIAMETER	D1	ø	H	H1	L1	L2	L3
DN50 - DN80	65	150	33	70	216	45	127
DN100 - DN150	90	150	33	70	216	45	127
DN200 - DN250	125	285	36	76	303	63.5	170
DN300 - DN350	125	285	40	79	300	80	190
DN400	175	385	79	232.5	300	80	190
DN450 - DN500	175	390	108	251	397/427	120	279

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



VALVE DIAMETER	D1	ø	H	H1	L1	L2	L3	L4	L5
DN400 - DN500	175	285	125	271	107	100	156	168	107
DN600	210	285	125	271	107	100	156	168	107
DN700 - DN800	300	425	149	378	146	140	197	230	146
DN900 - DN1050	300	425	185	409	201	196	203	279	201
DN1100	350	425	185	409	201	196	203	279	201
DN1200	350	425	216	423	185	240	203	311	255
DN1400	415	510	267	553	208	345	258	435	355
DN1600	415	510	312	562	316	410	237	450	425
DN1800	475	510	326	570	360	460	237	466	475
DN2000	650	600	480	240	410	602	265	725	630
DN2200 - DN2400	800	600	570	240	442	696	364	742	726
DN2600 - DN3000	800	600	520	240	438	768	364	742	726

INSTALLATION & OPERATION GUIDE

1. Ensure sufficient space for valves for easy installation, operation, maintenance and replacement.
2. Verify the valves are suitable for the operating condition such as medium, operating pressure / temperature, etc.
3. Check the I.D. of the flange and pipe to ensure free disc movement.
4. Valves shall be mounted on flanges only after the counter flanges have been welded to pipe and cooled down to the atmospheric temperature. Welding heat may damage the rubber seat of the valves. Never weld the flanges with valves installed. No gasket is required for installation of rubber seated butterfly valves.
5. Position the valves carefully between flanges. Accurate centering between flanges is essential to prevent any damages and problems during operation.
6. Valves should be installed by placing bolts through the hole and tightening carefully, ensuring even contact between the flange and seat. Too tight of space may cause damages to the seat and should be avoided.
7. Cross tighten all the bolts diagonally to distribute the loads evenly over the valves.
8. Turning the valves to ensure sufficient disc clearance.
9. Valves equipped with manual operators must be operated manually. Excessive external force on the operation of valve may damage the valve and / or operator.
10. Blind flange with short pipe should be used for dead end installation.

DOUBLE ECCENTRIC BUTTERFLY VALVE

FEATURES & SPECIFICATIONS

- Double eccentric double flange
- Comply with BS EN593 / BS 5155 / ISO 5752
- Flange drilled to EN1092-2 PN16 / ANSI Class 150 / JIS10K / AS 2129 Table E (Specify on order)

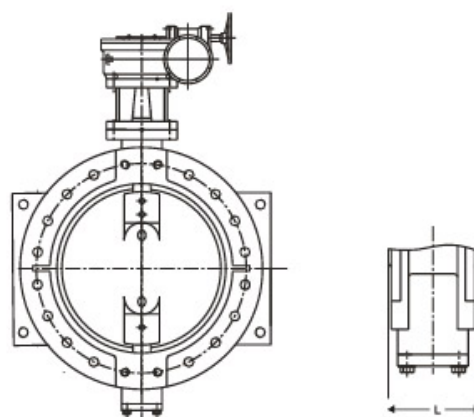
PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas



MATERIAL SPECIFICATIONS

Part	Material
Body	Ductile Iron
Disc	Ductile Iron
Shaft	Stainless Steel 410 Stainless Steel 431
Packing	Flexible Graphite
Seat Ring	Stainless Steel 304
Rubber Seals	EPDM/NBR



DIMENSIONS

		(mm)									
DN	(mm) (inch)	100	150	200	250	300	350	400	450	500	600
L	(Long)	190	210	230	250	270	290	310	330	350	390
L	(Middle)	127	140	152	165	178	190	216	222	229	267
L	(Short)	-	-	89	114	114	127	140	152	152	178

DOUBLE ECCENTRIC BUTTERFLY VALVE

FEATURES & SPECIFICATIONS

- Double eccentric double flange
- Comply with BS EN593 / BS 5155 / ISO 5752
- Flange drilled to EN1092-2 PN25 / ANSI Class 150 / JIS10K / AS 2129 Table E (Specify on order)

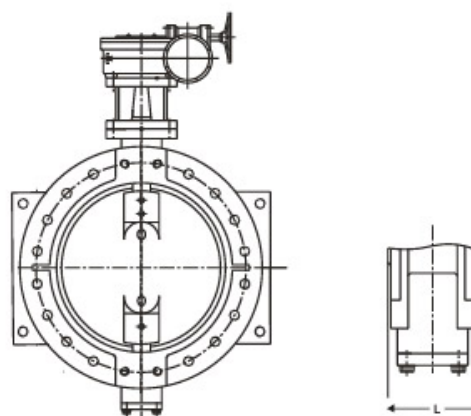
PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar
Shell Testing Pressure	(x1.5) 37.5bar
Seat Testing Pressure	(x1.1) 27.5bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas



MATERIAL SPECIFICATIONS

Part	Material
Body	Ductile Iron
Disc	Ductile Iron
Shaft	Stainless Steel 431
Packing	Flexible Graphite
Seat Ring	Stainless Steel 304
Rubber Seals	EPDM/NBR



DIMENSIONS

		(mm)									
DN	(mm) (inch)	100	150	200	250	300	350	400	450	500	600
L	(Long)	190	210	230	250	270	290	310	330	350	390
L	(Middle)	127	140	152	165	178	190	216	222	229	267
L	(Short)	-	-	89	114	114	127	140	152	152	178

WAFER BUTTERFLY VALVE

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
- Design conforms to BS EN 593 / BS 5155 / MSS SP-67 / API 609
- Precision machining of disc for low operating torque

TECHNICAL SPECIFICATIONS

Size	DN40...DN1200(PN16) DN50...DN600(PN25)
Body Design	Wafer
Working Pressure	16bar(DN40...DN1200) 25bar(Ductile Iron Body; DN50...DN600)
Shell Testing Pressure	x1.5 times
Seat Testing Pressure	x1.1 times
Working Temperature	-20°C ... 110°C (EPDM Seat) -10°C ... 80°C (NBR Seat) 5°C ... 120°C (PTFE Seat) -10°C ... 135°C (FPM Seat)
Applicable Medium	Water, Oil, Gas
Operator	Lever, Wormgear, Electric Actuator
Connection	EN1092-2 PN10 / PN16 / PN25, JIS B2239 10K / 16K / 20K, ANSI B16.1 Class 125 / 150 / 250
Optional Accessories	Chain Wheel, Limit Switch

MATERIAL SPECIFICATIONS

Part	Material
Body	Cast Iron
	Ductile Iron
	Stainless Steel 304
	Stainless Steel 316
Disc	Ductile Iron
	Aluminium Bronze
	Stainless Steel 304
	Stainless Steel 316
Seat	EPDM / NBR
	PTFE (Teflon) / FPM (Viton)



Part	Material
Stem	Stainless Steel 410
	Stainless Steel 431
	Stainless Steel 316
Taper Pin	Stainless Steel 316
	Stainless Steel 410
O-Ring	NBR
Bushing	PTFE (DN40 ... 600)
	Luberized Bronze (DN700 & above)

Note: Body material for PN25 shall be Ductile Iron

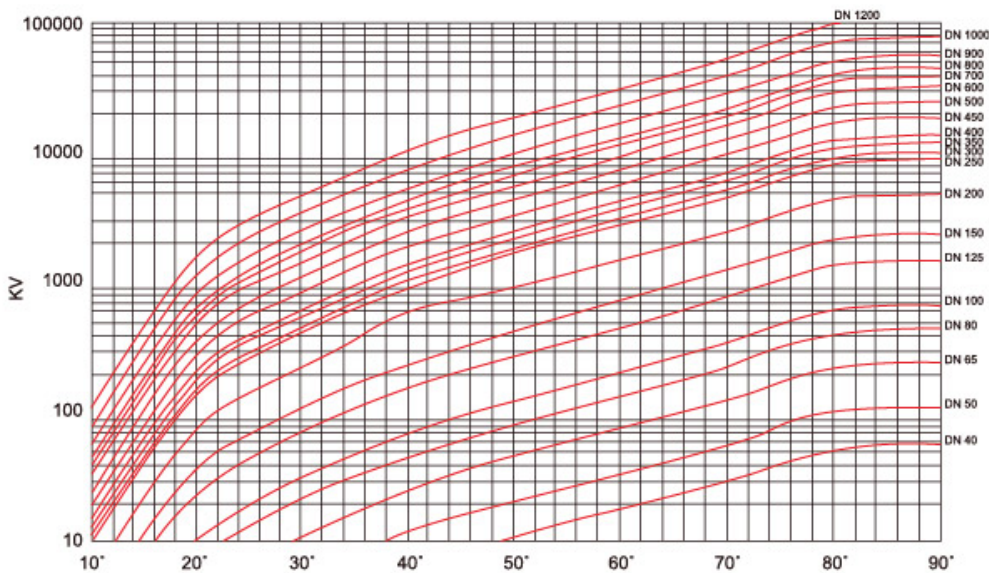
WAFER BUTTERFLY VALVE

VALVE COEFFICIENT (FULL OPEN)

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

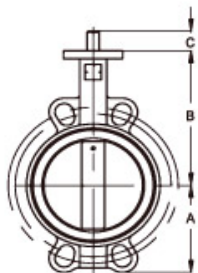
DN	(mm)	400	450	500	550	600	650	700	800	900	1000	1200
	(inch)	16	18	20	22	24	26	28	32	36	40	48
	Cv	16388	21705	27908	35170	43116	45620	49500	68250	86375	119750	154000

Cv = 1.17Kv

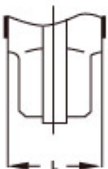


DIMENSIONS - VALVE BODY

(mm)



DN	(mm)	40	50	65	80	100	125	150	200	250	300	350	400
	(inch)	1½	2	2½	3	4	5	6	8	10	12	14	16
	A	66	68.6	76	99	119	129	142	176	209	248.5	272	333
	B	130	141.2	150.4	156.5	168	186.5	205.7	230.6	269.9	327.8	368	400
	C	22	22	22	22	25	25	25	25	27	27	40	52
	L	33	42	45	45	51	55	55	60	67	76	76	102



DN	(mm)	450	500	550	600	650	700	750	800	900	1000	1100	1200
	(inch)	18	20	22	24	26	28	30	32	36	40	44	48
	A	364	389	433	453	484	530	565	602	661	724	804	869
	B	422	480	533	562	540	626	660	666	722	806	820	938
	C	52	64	70	70	70	95	95	95	130	130	150	150
	L	114	127	151	151	172	165	167	188	203	216	252.5	276

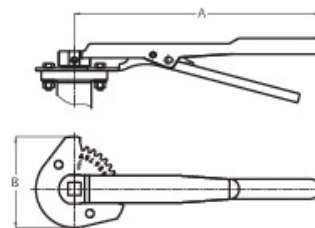
Note : Mono Flange for DN500 ... DN1200

WAFER BUTTERFLY VALVE

DIMENSIONS - VALVE OPERATOR

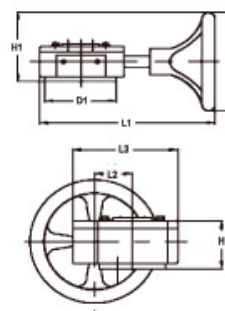
Malleable Iron / Stainless Steel Lever
Stainless Steel SUS304 Top Indicator Plate

DN	(mm) (inch)	PN16				PN25				(mm)
		40-80 1.5-3	100-125 4-5	150 6	200-300 8-12	40-80 1.5-3	100-125 4-5	150 6	200 8	
A		195	266	328	386	266	266	328	386	
B		95	109	109	164	95	109	109	164	



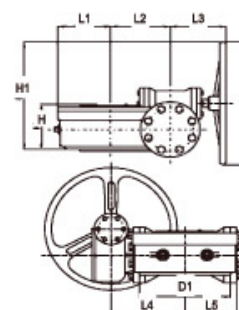
Cast Iron 1-Stage Worm Gear and Handwheel
Carbon Steel Gear Box Shaft

VALVE DIAMETER	PN16							PN25						
	D1	ø	H	H1	L1	L2	L3	D1	ø	H	H1	L1	L2	L3
DN40 - DN80	65	150	33	70	216	45	127	108	145	65	113	212	45	129
DN100 - DN150	90	150	33	70	216	45	127	108	145	65	113	212	45	129
DN200 - DN250	125	285	36	76	303	63.5	170	146	285	70	182	305	62	171
DN300 - DN350	125	285	40	79	300	80	190	165	285	77	182	300	85	198
DN400	175	385	79	232.5	300	80	190	165	285	77	182	300	85	198
DN450 - DN500	175	390	108	251	397/427	120	279	234	385	103	247	423	120	280



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

VALVE DIAMETER	PN16									PN25								
	D1	ø	H	H1	L1	L2	L3	L4	L5	D1	ø	H	H1	L1	L2	L3	L4	L5
DN600 - DN650	210	285	125	271	107	100	156	168	107	197	285	124	276	107	100	160	175	107
DN700 - DN800	300	425	149	378	146	140	197	230	146	300	425	158	373	173	162	197	244.5	173
DN900 - DN1050	300	425	185	409	201	196	203	279	201	300	425	149	378	146	140	197	230	146
DN1100	350	425	185	409	201	196	203	279	201	300	425	185	409	201	196	203	279	201
DN1200	350	425	216	423	185	240	203	311	255	350	425	216	423	185	240	203	311	255



INSTALLATION & OPERATION GUIDE

1. Ensure sufficient space for valves for easy installation, operation, maintenance and replacement.
2. Verify the valves are suitable for the operating condition such as medium, operating pressure / temperature, etc.
3. Check the I.D. of the flange and pipe to ensure free disc movement.
4. Valves shall be mounted on flanges only after the counter flanges have been welded to pipe and cooled down to the atmospheric temperature. Welding heat may damage the rubber seat of the valves. Never weld the flanges with valves installed. No gasket is required for installation of rubber seated butterfly valves.
5. Position the valves carefully between flanges. Accurate centering between flanges is essential to prevent any damages and problems during operation.
6. Valves should be installed by placing bolts through the hole and tightening carefully, ensuring even contact between the flange and seat. Too tight of space may cause damages to the seat and should be avoided.
7. Cross tighten all the bolts diagonally to distribute the loads evenly over the valves.
8. Turning the valves to ensure sufficient disc clearance.
9. Valves equipped with manual operators must be operated manually. Excessive external force on the operation of valve may damage the valve and / or operator.
10. Blind flange with short pipe should be used for dead end installation.

FULL LUG BUTTERFLY VALVE

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
- Design conforms to BS EN 593 / BS 5155 / MSS SP-67 / API 609
- Precision machining of disc for low operating torque



TECHNICAL SPECIFICATIONS

Size	DN40...DN700(PN16) DN50...DN600(PN25)
Body Design	Lugged
Working Pressure	16bar(DN40...DN700) 25bar(Ductile Iron Body; DN50...DN600)
Shell Testing Pressure	x1.5 times
Seat Testing Pressure	x1.1 times
Working Temperature	-20°C ... 110°C (EPDM Seat) -10°C ... 80°C (NBR Seat) 5°C ... 120°C (PTFE Seat) -10°C ... 135°C (FPM Seat)
Allicable Medium	Water, Oil, Gas
Operator	Lever, Wormgear, Electric Actuator
Connection	EN 1092-2 PN10 / PN16 / PN25 JIS B2239 10K / 16K / 20K ANSI B16.1 Class 125 / 150 / 250
Optional Accessories	Chain Wheel, Limit Switch

MATERIAL SPECIFICATIONS

Part	Material
Body	Cast Iron
	Ductile Iron
	Stainless Steel 304
	Stainless Steel 316
Disc	Ductile Iron
	Aluminium Bronze
	Stainless Steel 304
	Stainless Steel 316
Seat	EPDM / NBR
	PTFE (Teflon) / FPM (Viton)

Part	Material
Stem	Stainless Steel 410
	Stainless Steel 431
	Stainless Steel 316
Taper Pin	Stainless Steel 316
	Stainless Steel 410
O-Ring	NBR
Bushing	PTFE

Note: Body material for PN25 shall be Ductile Iron

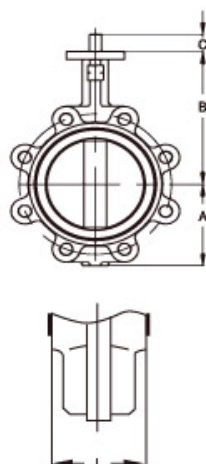
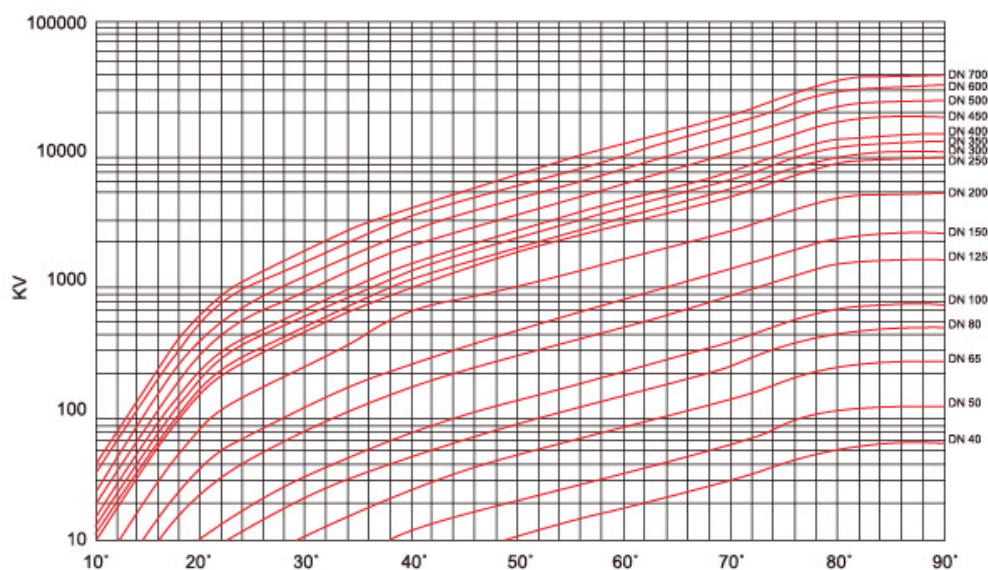
FULL LUG BUTTERFLY VALVE

VALVE COEFFICIENT (FULL OPEN)

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

DN (mm)	300	350	400	450	500	550	600	650	700
DN (inch)	12	14	16	18	20	22	24	26	28
Cv	8250	11917	16388	21705	27908	35170	43116	45620	49500

Cv = 1.17Kv



DIMENSIONS - VALVE BODY

DN (mm)	40	50	65	80	100	125	150	200	250
DN (inch)	1½	2	2½	3	4	5	6	8	10
A	66	68.6	76	99	119	129	142	176	209
B	130	141.2	150.4	156.5	168	186.5	205.7	230.6	269.9
C	15	15	19	19	19	19	19	25	32
L	33	42	45	45	51	55	55	60	67

DN (mm)	300	350	400	450	500	550	600	650	700
DN (inch)	12	14	16	18	20	22	24	26	28
A	248.5	267	309	327	389	433	453	484	530
B	327.8	368	400	422	480	533	562	540	626
C	32	40	52	52	64	70	70	70	95
L	76	76	102	114	127	151	151	172	165

Note : DN650 only available in ANSI Class 150 Flange.

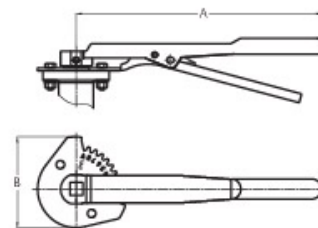
FULL LUG BUTTERFLY VALVE

DIMENSIONS - VALVE OPERATOR

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

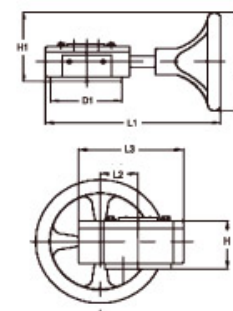
DN	(mm) (inch)	PN16				PN25			
		40-80 1.5-3	100-125 4-5	150 6	200-300 8-12	40-80 1.5-3	100-125 4-5	150 6	200 8
A		195	266	328	386	266	266	328	386
B		95	109	109	164	95	109	109	164

(mm)



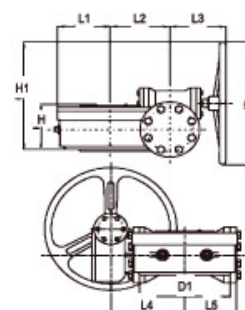
Cast Iron 1-Stage Worm Gear and Handwheel
Carbon Steel Gear Box Shaft

VALVE DIAMETER	PN16							PN25						
	D1	ø	H	H1	L1	L2	L3	D1	ø	H	H1	L1	L2	L3
DN40 - DN80	65	150	33	70	216	45	127	108	145	65	113	212	45	129
DN100 - DN150	90	150	33	70	216	45	127	108	145	65	113	212	45	129
DN200 - DN250	125	285	36	76	303	63.5	170	146	285	70	182	305	62	171
DN300 - DN350	125	285	40	79	300	80	190	165	285	77	182	300	85	198
DN400	175	385	79	232.5	300	80	190	165	285	77	182	300	85	198
DN450 - DN500	175	390	108	251	397/427	120	279	234	385	103	247	423	120	280



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

VALVE DIAMETER	PN16									PN25								
	D1	ø	H	H1	L1	L2	L3	L4	L5	D1	ø	H	H1	L1	L2	L3	L4	L5
DN600 - DN650	210	285	125	271	107	100	156	168	107	197	285	124	276	107	100	160	175	107
DN700 - DN800	300	425	149	378	146	140	197	230	146	300	425	158	373	173	162	197	244.5	173
DN900 - DN1050	300	425	185	409	201	196	203	279	201	300	425	149	378	146	140	197	230	146
DN1100	350	425	185	409	201	196	203	279	201	300	425	185	409	201	196	203	279	201
DN1200	350	425	216	423	185	240	203	311	255	350	425	216	423	185	240	203	311	255



INSTALLATION & OPERATION GUIDE

1. Ensure sufficient space for valves for easy installation, operation, maintenance and replacement.
2. Verify the valves are suitable for the operating condition such as medium, operating pressure / temperature, etc.
3. Check the I.D. of the flange and pipe to ensure free disc movement.
4. Valves shall be mounted on flanges only after the counter flanges have been welded to pipe and cooled down to the atmospheric temperature. Welding heat may damage the rubber seat of the valves. Never weld the flanges with valves installed. No gasket is required for installation of rubber seated butterfly valves.
5. Position the valves carefully between flanges. Accurate centering between flanges is essential to prevent any damages and problems during operation.
6. Valves should be installed by placing bolts through the hole and tightening carefully, ensuring even contact between the flange and seat. Too tight of space may cause damages to the seat and should be avoided.
7. Cross tighten all the bolts diagonally to distribute the loads evenly over the valves.
8. Turning the valves to ensure sufficient disc clearance.
9. Valves equipped with manual operators must be operated manually. Excessive external force on the operation of valve may damage the valve and / or operator.
10. Blind flange with short pipe should be used for dead end installation.

U-TYPE BUTTERFLY VALVE

FEATURES & SPECIFICATIONS

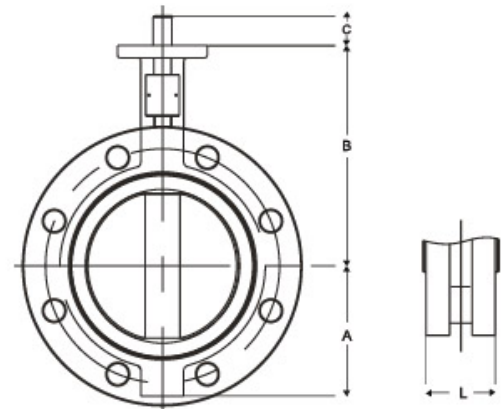
- U-type double flange
- Comply with BS EN593 / BS 5155 / ISO 5752 / MSS SP-67
- Flange drilled to EN1092-2 PN16 / ANSI Class 150 / JIS10K / AS 2129 Table E (Specify on order)

PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing 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
Body	Ductile Iron
Disc	Ductile Iron Aluminium Bronze Stainless Steel 304 Stainless Steel 316
Stem	Stainless Steel 410 Stainless Steel 431
Seat Ring	EPDM/ NBR
O-Ring	EPDM/ NBR
Bushing	Bronze



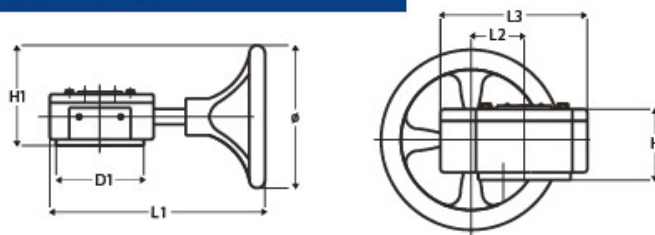
DIMENSIONS

DN	(mm)	150	200	225	250	300	350	375	400	450	500	550
	(inch)	6	8	9	10	12	14	15	16	18	20	22
A		133	175	190	201	242	267	320	316	344	380	432
B		226	260	275	292	337	368	375	400	422	480	533
C		30	34	34	34	34	40	52	52	52	64	70
L		55	60	67	67	76	76	102	102	114	127	151

DN	(mm)	600	650	700	750	800	900	1000	1050	1100	1200
	(inch)	24	26	28	30	32	36	40	42	44	48
A		468	484	530	564	602	661	724	784	804	869
B		562	540	626	660	666	722	806	865	820	938
C		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

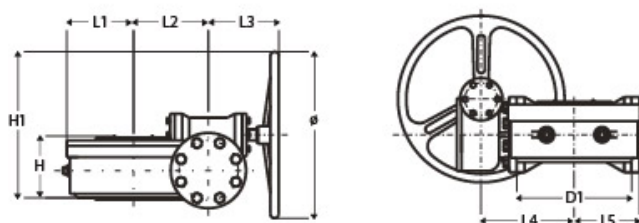
DIMENSIONS - VALVE OPERATOR



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

(mm)

VALVE DIAMETER	D1	∅	H	H1	L1	L2	L3
DN150	90	150	33	70	216	45	127
DN200 - DN250	125	285	36	76	303	63.5	170
DN300 - DN350	125	285	40	79	300	80	190
DN400	175	385	79	232.5	300	80	190
DN450 - DN500	175	390	108	251	397/427	120	279



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

VALVE DIAMETER	D1	∅	H	H1	L1	L2	L3	L4	L5
DN600	210	285	125	271	107	100	156	168	107
DN700 - DN800	300	425	149	378	146	140	197	230	146
DN900 - DN1050	300	425	185	409	201	196	203	279	201
DN1100	350	425	185	409	201	196	203	279	201
DN1200	350	425	216	423	185	240	203	311	255

INSTALLATION & OPERATION GUIDE

1. Ensure sufficient space for valves for easy installation, operation, maintenance and replacement.
2. Verify the valves are suitable for the operating condition such as medium, operating pressure / temperature, etc.
3. Check the I.D. of the flange and pipe to ensure free disc movement.
4. Valves shall be mounted on flanges only after the counter flanges have been welded to pipe and cooled down to the atmospheric temperature. Welding heat may damage the rubber seat of the valves. Never weld the flanges with valves installed. No gasket is required for installation of rubber seated butterfly valves.
5. Position the valves carefully between flanges. Accurate centering between flanges is essential to prevent any damages and problems during operation.
6. Valves should be installed by placing bolts through the hole and tightening carefully, ensuring even contact between the flange and seat.
7. Too tight or space may cause damages to the seat and should be avoided.
8. Valves equipped with manual operators must be operated manually. Excessive external force on the operation of valve may damage the valve and / or operator.
9. Cross tighten all the bolts uniformly to distribute the loads evenly over the valves.
10. Blind flange with short pipe should be used for dead end installation.

GROOVED END BUTTERFLY VALVE

FEATURES & SPECIFICATIONS

- Centrally mounted disc and hydrodynamic design minimise pressure loss
- EPDM coated disc for leak-free pipeline isolation
- Extended neck
- 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.

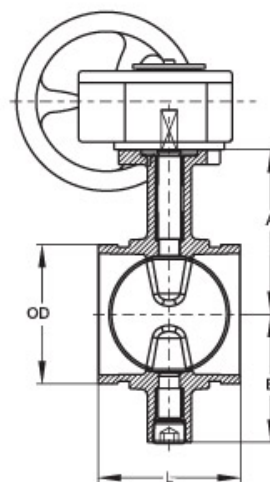


PRESSURE & TEMPERATURE RATINGS

Working Pressure	300psi
Shell Testing Pressure	(x1.5) 450psi
Seal Testing Pressure	(x1.1) 330psi
Working Temperature	-20°C ... 110°C (EPDM)
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

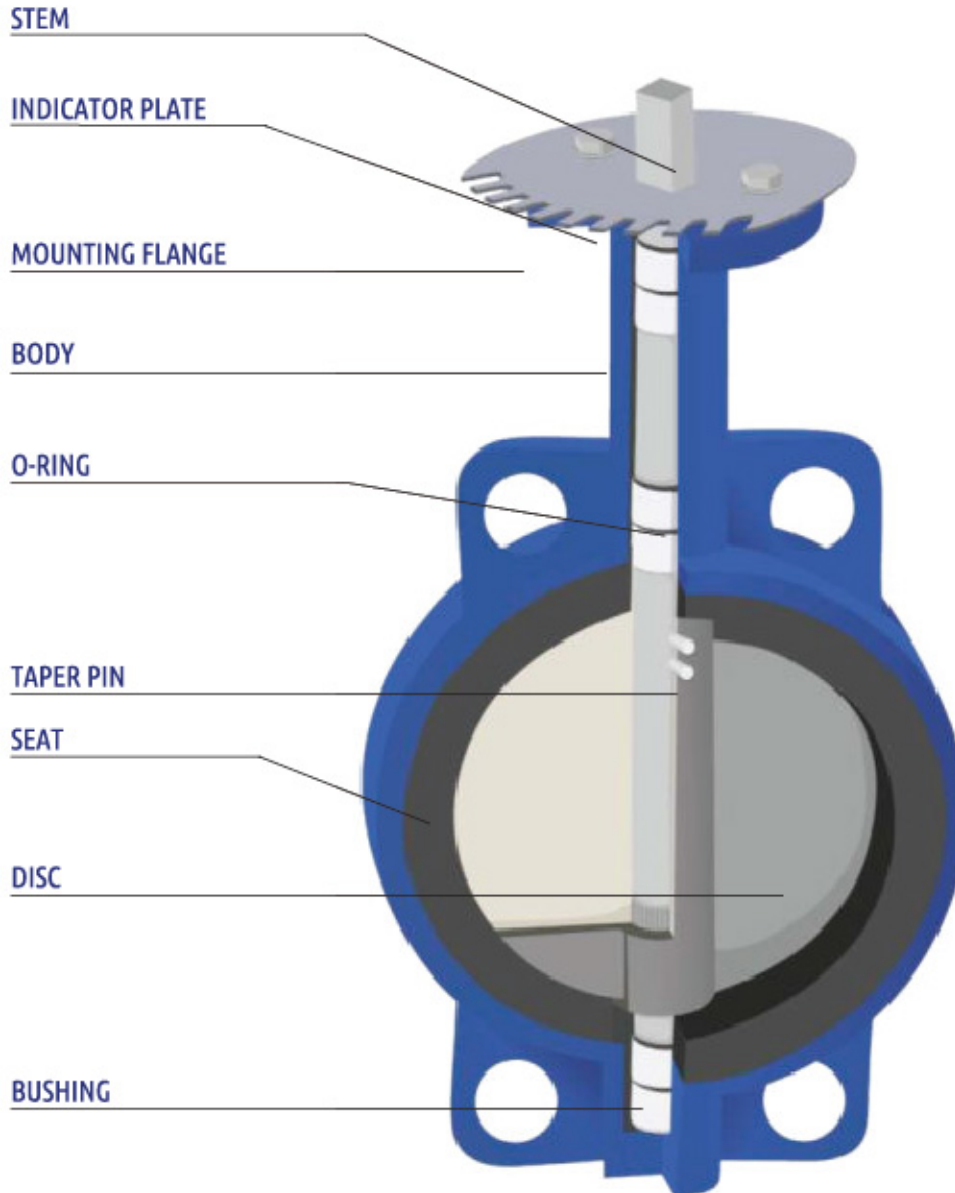
Part	Material
Body	Ductile Iron
Disc	Ductile Iron with EPDM Coating
Upper Stem	Stainless Steel 410/416/420
Lower Stem	Stainless Steel 410/416/420
Seat Ring	EPDM
O-Ring	EPDM
Bushing	PTFE Bronze
Gear Box	Cast Iron



DIMENSIONS

		(mm)									
DN	(mm) (inch)	50	65	80	100	125	150	200	250	300	
	A	95	98	105	135	148	165	204	245	277.5	
	B	78	78	85	105	128	140	170	205	258.3	
	L	84.5	98	98	116	149	147.1	133.5	160	165	
	OD	60.3	73.0/76.1	88.9	114.3	139.7/141.3	165.1/168.3	219.1	273	323.9	

FEATURES OF FIFFCO 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

NRS RESILIENT SEAT GATE VALVE

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)
- 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

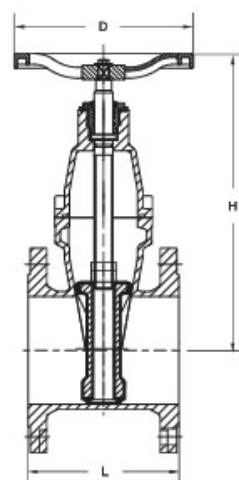
Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-20°C ... 110°C EPDM Seat -10°C ... 80°C NBR Seat
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Bonnet	Ductile Iron	EN-JS 1050
Disc	EPDM Coated DI	EN-JS 1050
Stem	Stainless Steel 420	EN 10088-3 1.4021
Stem Nut	Bronze	EN 1982 CC491K
Gland	Ductile Iron	EN-JS 1050
O-Ring	EPDM NBR	Commercial Commercial
Handwheel	Ductile Iron	EN-JS 1050
Handle	Bakelite	

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		203	230	276	311	364	413	503	615	692	882	956	1027	1106	1258
D		160	160	200	200	250	250	280	370	370	450	450	640	640	640



NRS RESILENT SEAT GATE VALVE

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)
- Flange drilled to 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

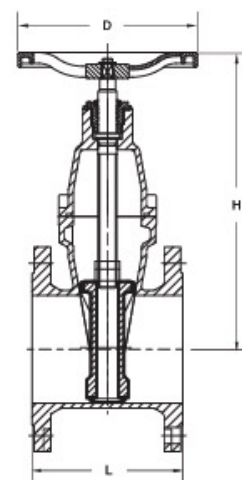
Working Pressure	25bar
Shell Testing Pressure	(x1.5) 37.5bar
Seat Testing Pressure	(x1.1) 27.5bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Bonnet	Ductile Iron	EN-JS 1050
Disc	EPDM Coated DI	EN-JS 1050
Stem	Stainless Steel 420	EN 10088-3 1.4021
Stem Nut	Bronze	EN 1982 CC491K
Gland	Ductile Iron	EN-JS 1050
O-Ring	EPDM NBR	Commercial Commercial
Handwheel	Ductile Iron	EN-JS 1050

DIMENSIONS

DN	(mm)	50	65	80	100	125	150	200	250	300
	(inch)	2	2½	3	4	5	6	8	10	12
L		178	190	203	229	254	267	292	330	356
H		203	230	276	311	364	413	503	615	692
D		160	160	200	200	250	250	280	370	370



NRS RESILIENT SEAT GATE VALVE

FEATURES & SPECIFICATIONS

- Non-rising stem
- Inside screw
- Bolted bonnet
- Resilient seat for pipeline isolation
- Painted body
- Comply with BS 5163 (Type B) / EN 1074-2 (Type B)
- 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

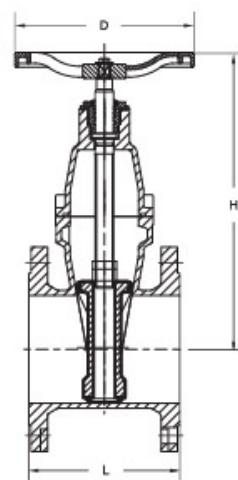
Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Bonnet	Ductile Iron	EN-JS 1050
Disc	EPDM Coated DI	EN-JS 1050
Stem	Stainless Steel 431	EN 10088-3 1.4057
Stem Nut	Aluminium Bronze	EN 1982 CC491K
Gland	Ductile Iron	EN-JS 1050
O-Ring	EPDM NBR	Commercial Commercial
Hand Wheel	Ductile Iron	EN-JS 1050

DIMENSIONS

DN	(mm)	50	65	80	100	125	150	200	250	300
	(inch)	2	2½	3	4	5	6	8	10	12
L		178	190	203	229	254	267	292	330	356
H		203	230	276	311	364	413	503	615	692
D		160	160	200	200	250	250	280	370	370



NRS RESILIENT SEAT GATE SLUICE VALVE

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)
- 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

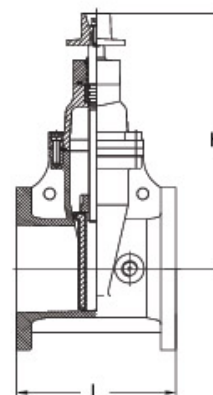
Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Bonnet	Ductile Iron	EN-JS 1050
Disc	EPDM Coated DI	EN-JS 1050
Stem	Stainless Steel 420	EN 10088-3 1.4021
Stem Nut	Bronze	EN 1982 CC491K
Gland	Ductile Iron	EN-JS 1050
O-Ring	EPDM NBR	Commercial Commercial

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		291	318	355	381	445	485	572	656	773	947	1022	1092	1171	1313



NRS RESILIENT SEAT GATE SLUICE VALVE

FEATURES & SPECIFICATIONS

- Non-rising stem
- Inside screw
- Bolted bonnet
- Resilient seat for pipeline isolation
- Painted body
- Comply with BS 5163 (Type B) / EN 1074-2 (Type B)
- 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

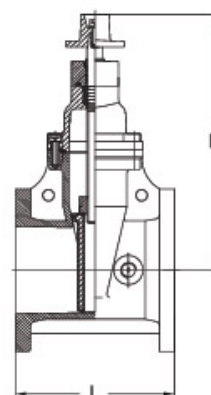
Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Bonnet	Ductile Iron	EN-JS 1050
Disc	EPDM Coated DI	EN-JS 1050
Stem	Stainless Steel 431	EN 10088-3 1.4057
Stem Nut	Aluminium Bronze	EN 1982 CC491K
Gland	Ductile Iron	EN-JS 1050
O-Ring	EPDM NBR	Commercial Commercial

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		291	318	355	381	445	485	572	656	773	947	1022	1092	1171	1313



OS&Y RESILIENT SEAT GATE VALVE

FEATURES & SPECIFICATIONS

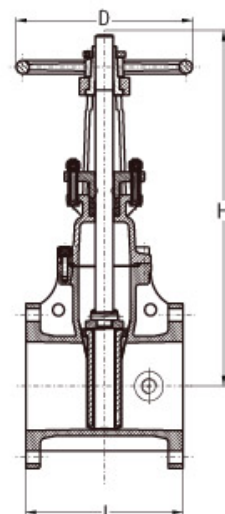
- Rising stem, Outside Screw & Yoke (OS&Y)
- Bolted bonnet
- Resilient seat for pipeline isolation
- Durable fusion bonded epoxy coated
- Comply with BS 5163 (Type A) / EN 1074-2 (Type A)
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, 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 Testing Pressure	(x1.5) 24bar
Seat Testing 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	Specification
Body	Ductile Iron	EN-JS 1050
Bonnet	Ductile Iron	EN-JS 1050
Disc	EPDM Coated DI	EN-JS 1050
Stem	Stainless Steel 420	EN 10088-3 1.4021
Stem Nut	Bronze	EN 1982 CC491K
Gland	Ductile Iron	EN-JS 1050
O-Ring	EPDM NBR	Commercial Commercial
Handwheel	Ductile Iron	EN-JS 1050



DIMENSIONS

		(mm)											
DN	(mm)	50	65	80	100	125	150	200	250	300	350	400	
	(inch)	2	2½	3	4	5	6	8	10	12	14	16	
	b	178	188	208	208	254	268	288	338	356	388	496	
	H (Open)	310	366	434	501	607	708	903	1096	1272	1486	1691	

OS&Y RESILENT SEAT GATE VALVE

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 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

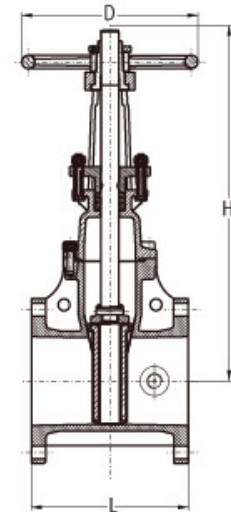
Working Pressure	25bar
Shell Testing Pressure	(x1.5) 37.5bar
Seat Testing Pressure	(x1.1) 27.5bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Bonnet	Ductile Iron	EN-JS 1050
Disc	EPDM Coated DI	EN-JS 1050
Stem	Stainless Steel 420	EN 10088-3 1.4021
Stem Nut	Bronze	EN 1982 CC491K
Gland	Ductile Iron	EN-JS 1050
O-Ring	EPDM NBR	Commercial Commercial
Handwheel	Ductile Iron	EN-JS 1050

DIMENSIONS

DN	(mm)	50	65	80	100	125	150	200	250	300	350	400
	(inch)	2	2½	3	4	5	6	8	10	12	14	16
	b	178	188	208	208	256	267	288	330	336	388	496
	H (Open)	310	366	434	501	607	708	903	1096	1272	1486	1691



OS&Y RESILIENT SEAT GATE VALVE

FEATURES & SPECIFICATIONS

- Rising stem, Outside Screw & Yoke (OS&Y)
- Bolted bonnet
- Resilient seat for pipeline isolation
- Painted body
- Comply with BS 5163 (Type B) / EN 1074-2 (Type B)
- 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

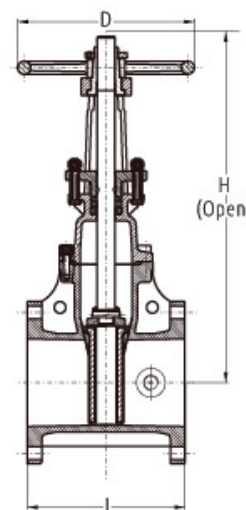
Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-20°C ... 110°C (EPDM) -10°C ... 80°C (NBR)
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Bonnet	Ductile Iron	EN-JS 1050
Disc	EPDM Coated DI	EN-JS 1050
Stem	Stainless Steel 431	EN 10088-3 1.4057
Stem Nut	Aluminium Bronze	EN 1982 CC491K
Gland	Ductile Iron	EN-JS 1050
O-Ring	EPDM NBR	Commercial Commercial
Handwheel	Ductile Iron	EN-JS 1050

DIMENSIONS

		(mm)								
DN	(mm)	50	65	80	100	125	150	200	250	300
	(inch)	2	2½	3	4	5	6	8	10	12
	L	178	190	203	229	254	267	292	330	356
	H (Open)	253	295	356	411	489	563	704	865	995
	D	160	200	200	200	250	250	280	370	370



NRS METAL SEAT GATE VALVE

FEATURES & SPECIFICATIONS

- Non-rising stem
- Inside screw
- Bolted bonnet
- Metal seat design
- Painted body
- Comply with BS 5150 / EN 1171
- 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.

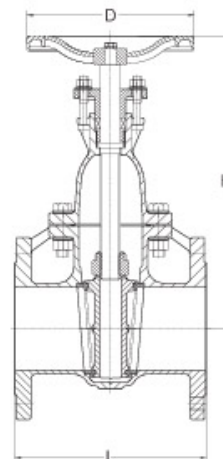


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	EN-JL 1040
Bonnet	Cast Iron	EN-JL 1040
Disc	Cast Iron	EN-JL 1040
Stem	Stainless Steel	BS970 420S37
Seat Ring	Bronze	
Packing	Graphite	Non-Asbestos
Handwheel	Ductile Iron	EN-JS 1050



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		253	295	356	411	489	563	704	865	995	850	940	1039	1134	1280
D		160	160	200	200	250	250	280	370	370	460	460	460	640	900

NRS METAL SEAT GATE VALVE

FEATURES & SPECIFICATIONS

- Non-rising stem
- Inside screw
- Bolted bonnet
- Metal seat design
- Painted body
- Comply with BS 5150 / EN 1171
- Flange drilled to 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.

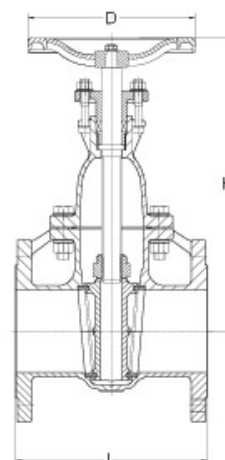


PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar
Shell Testing Pressure	(x1.5) 37.5bar
Seat Testing Pressure	(x1.1) 27.5bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Bonnet	Ductile Iron	EN-JS 1050
Disc	Ductile Iron	EN-JS 1050
Stem	Stainless Steel	BS970 420S37
Seat Ring	Bronze	
Packing	Graphite	Non-Asbestos
Handwheel	Ductile Iron	EN-JS 1050



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		253	295	356	411	489	563	704	865	995	850	940	1039	1134	1280
D		160	160	200	200	250	250	280	370	370	460	460	460	640	900

OS&Y METAL SEAT GATE VALVE

FEATURES & SPECIFICATIONS

- Rising stem, Outside Screw & Yoke (OS&Y)
- Bolted bonnet
- Metal seat design
- Painted body
- Comply with BS 5150 / EN 1171
- 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.

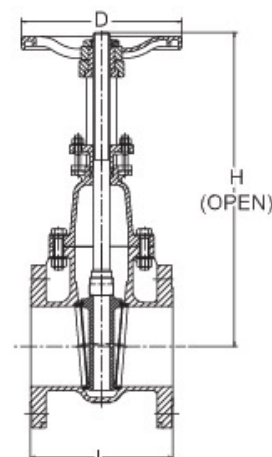


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	EN-JL 1040
Bonnet	Cast Iron	EN-JL 1040
Disc	Cast Iron	EN-JL 1040
Stem	Stainless Steel	BS970 420S37
Seat Ring	Bronze	
Packing	Graphite	Non-Asbestos
Handwheel	Ductile Iron	EN-JS 1050



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		253	295	356	411	489	563	704	865	995	1717	1908	1981	2235	2610
D		160	160	200	200	250	250	280	370	370	640	640	720	720	720

OS&Y METAL SEAT GATE VALVE

FEATURES & SPECIFICATIONS

- Rising stem, Outside Screw & Yoke (OS&Y)
- Bolted bonnet
- Metal seat design
- Painted body
- Comply with BS 5150 / EN 1171
- Flange drilled to 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.

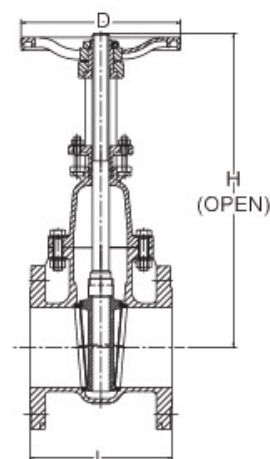


PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar
Shell Testing Pressure	(x1.5) 37.5bar
Seat Testing Pressure	(x1.1) 27.5bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Bonnet	Ductile Iron	EN-JS 1050
Disc	Ductile Iron	EN-JS 1050
Stem	Stainless Steel	BS970 420S37
Seat Ring	Bronze	
Packing	Graphite	Non-Asbestos
Handwheel	Ductile Iron	EN-JS 1050



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		253	295	356	411	489	563	704	865	995	1717	1908	1981	2235	2610
D		160	160	200	200	250	250	280	370	370	640	640	720	720	720

NRS METAL SEAT GATE VALVE

FEATURES & SPECIFICATIONS

- Non-rising stem
- Inside screw
- Bolted bonnet
- Metal seat design
- Painted body
- Comply with DIN 3352 (F4)
- 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.

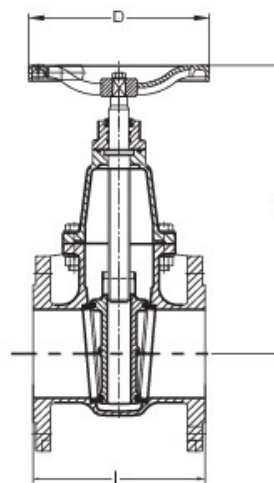


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	EN-JL 1040
Bonnet	Cast Iron	EN-JL 1040
Disc	Cast Iron	EN-JL 1040
Stem	Stainless Steel	BS970 420S37
Seat Ring	Bronze	
Packing	Graphite	Non-Asbestos
Handwheel	Ductile Iron	EN-JS 1050



DIMENSIONS

DN	(mm)	40	50	65	80	100	125	150	200	250	300	(mm)
	(inch)	1½	2	2½	3	4	5	6	8	10	12	
L		140	150	170	180	190	200	210	230	250	270	
H		245	255	277	304	332	388	455	538	629	730	
D		150	165	185	200	220	250	285	340	405	460	

OS&Y METAL SEAT GATE VALVE

FEATURES & SPECIFICATIONS

- Rising stem, Outside Screw & Yoke (OS&Y)
- Bolted bonnet
- Metal seat design
- Painted body
- Comply with DIN 3352 (F4)
- 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.

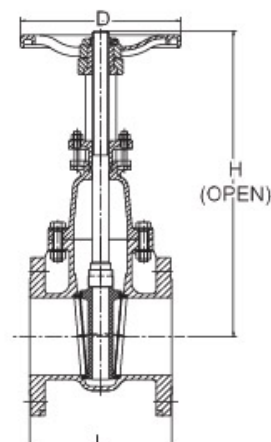


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	EN-JL 1040
Bonnet	Cast Iron	EN-JL 1040
Disc	Cast Iron	EN-JL 1040
Stem	Stainless Steel	BS970 420S37
Seat Ring	Bronze	
Packing	Graphite	Non-Asbestos
Handwheel	Ductile Iron	EN-JS 1050



DIMENSIONS

		(mm)									
DN	(mm)	40	50	65	80	100	125	150	200	250	300
	(inch)	1½	2	2½	3	4	5	6	8	10	12
L		140	150	170	180	190	200	210	230	250	270
H		244/295	254/315	294/371	331/424	385/500	457/598	545/711	683/901	1134/1508	1286/1715
D		150	165	185	200	220	250	285	340	405	460

OS&Y S-PATTERN GLOBE VALVE

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
- Face-to-face dimension to DIN 3202-F1
- 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.

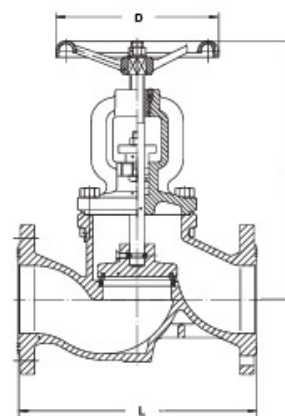


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	EN-JL 1040
Bonnet	Cast Iron	EN-JL 1040
Disc	Stainless Steel 420 (DN15...DN50) Cast Iron (DN65...DN300)	BS970 420S37 EN-JL 1040
Disc Ring	Stainless Steel 420	BS970 420S37
Seat Ring	Stainless Steel 420	BS970 420S37
Stem	Stainless Steel 420	BS970 420S37
Packing	Graphite	Non-Asbestos
Handwheel	Cast Iron	EN-JL 1040



DIMENSIONS

DN	(mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
	(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		161.5	169	187	223	233.5	261.5	293	341	381	419	485	569	634	801
D		100	100	120	120	140	140	200	200	240	280	315	360	400	400

OS&Y GLOBE VALVE

FEATURES & SPECIFICATIONS

- Rising stem, Outside Screw & Yoke (OS&Y)
- Bolted bonnet
- Durable fusion bonded epoxy coated
- Design comply with BS 5152 / EN 13789 / MSS SP-85
- 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

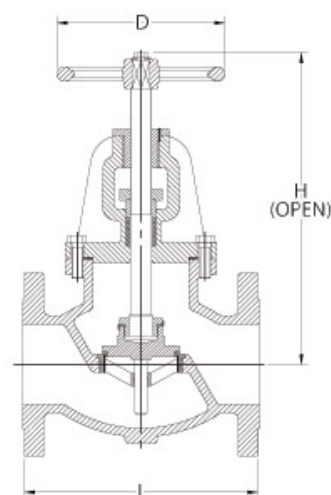
Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-20°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	EN-JL 1040
Bonnet	Cast Iron	EN-JL 1040
Disc	Cast Iron	EN-JL 1040
Seat Ring	Bronze	EN 1982 CC491K
Stem	Stainless Steel 420	EN 10088-3 1.4021
Packing	Graphite	Non-Asbestos
Handwheel	Cast Iron	EN-JL 1040

DIMENSIONS

DN	(mm)	50	65	80	100	125	150	200	250	300
	(inch)	2	2½	3	4	5	6	8	10	12
L		203	216	241	292	330	356	495	622	699
H		295	336	345	389	425	511	580	720	859
D		178	178	200	254	300	300	348	400	457



BALL VALVE

FEATURES & SPECIFICATIONS

- Quarter turn 2-piece body
- Full port design
- PTFE seat
- Stainless steel ball
- 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.

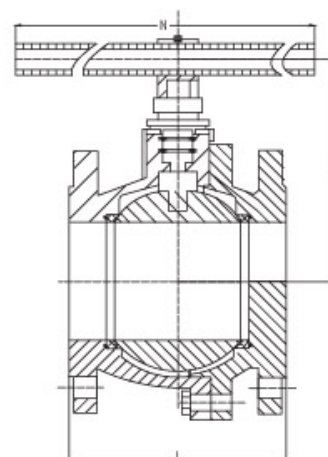


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	EN-JL 1040
Bonnet	Cast Iron	EN-JL 1040
Ball	Stainless Steel 304	EN 10088-3 1.4301
Seat	PTFE	
Shaft	Stainless Steel 420	EN 10088-3 1.4021
Handle	Carbon Steel	



DIMENSIONS

DN	(mm)	50	65	80	100	125	150	200	(mm)
	(inch)	2	2½	3	4	5	6	8	
	L	150	170	180	190	325	350	400	
	H	115	130	140	155	195	240	325	
	N	220	284	284	500	600	800	1000	

SILENT CHECK VALVE

FEATURES & SPECIFICATIONS

- Spring loaded
- Rubber seat ring for non-slam effect
- Durable fusion bonded epoxy coated
- Comply with BS EN 12334
- 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, General Industries.

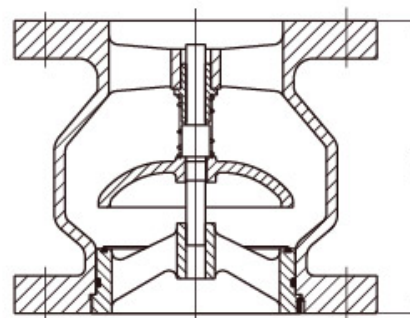


PRESSURE & TEMPERATURE RATINGS

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

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Disc	Ductile Iron	EN-JS 1050
	Stainless Steel 304	EN 10088-3 1.4301
	Aluminium Bronze	EN 1982 CB491K
Seat	Ductile Iron	EN-JS 1050
	Stainless Steel 304	EN 10088-3 1.4301
	Aluminium Bronze	EN 1982 CB491K
Seat Ring	EPDM / NBR	
Stem	Stainless Steel 410	EN 10088-3 1.4006
Spring	Stainless Steel 304	EN 10088-3 1.4301
Bushing	Gunmetal	EN 1982-2008 GC CC491K



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		133	140	152	185	216	216	257	393	362	400	448	476	524	610

SILENT CHECK VALVE

FEATURES & SPECIFICATIONS

- Spring loaded
- Rubber seat ring for non-slam effect
- Durable fusion bonded epoxy coated
- Comply with BS EN 12334
- Flange drilled to 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.

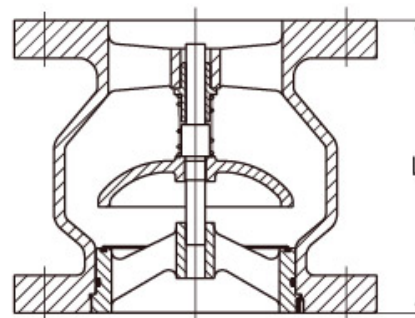


PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar
Shell Testing Pressure	(x1.5) 37.5bar
Seat Testing Pressure	(x1.1) 27.5bar
Working Temperature	-20°C ... 110°C (EPDM Seat Ring) -10°C ... 80°C (NBR Seat Ring)
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Disc	Ductile Iron	EN-JS 1050
	Stainless Steel 304	EN 10088-3 1.4301
	Aluminium Bronze	EN 1982 CB491K
Seat	Ductile Iron	EN-JS 1050
	Stainless Steel 304	EN 10088-3 1.4301
	Aluminium Bronze	EN 1982 CB491K
Seat Ring	EPDM / NBR	
Stem	Stainless Steel 410	EN 10088-3 1.4006
Spring	Stainless Steel 304	EN 10088-3 1.4301
Bushing	Gunmetal	EN 1982-2008 GC CC491K



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		133	140	152	185	216	216	257	393	362	400	448	476	524	610

SWING CHECK VALVE

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 / 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

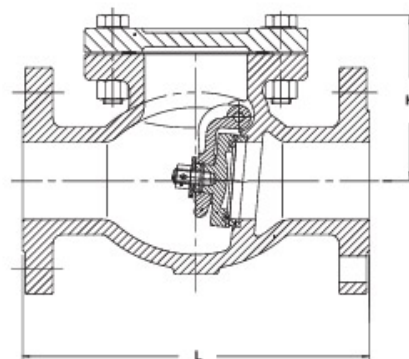
Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron(DN50...DN250)	EN-JS 1050
	Cast Iron (DN300...DN600)	EN-JL 1040
Bonnet	Cast Iron	EN-JL 1040
Disc	Ductile Iron(DN50...DN250)	EN-JS 1050
	Cast Iron(DN300...DN600)	EN-JL 1040
Seat Ring	Gunmetal	EN 1982-2008 GC CC491K
Disc Ring	Gunmetal	EN 1982-2008 GC CC491K
Hanger	Ductile Iron	EN-JS 1050
Gasket	Graphite	

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		203	216	241.5	292	330	355.5	495.5	622.5	698.5	787.5	914	914	1016	1219
H		112	132	141	162	192	211	270	316	357	560	589	645	702	812



DOUBLE DOOR WAFER CHECK VALVE

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 / 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.

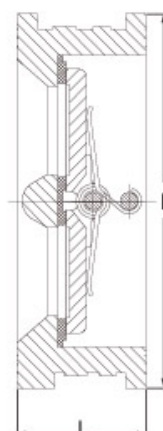


PRESSURE & TEMPERATURE RATINGS

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

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	EN-JL 1040
	Ductile Iron	EN-JS 1050
	Stainless Steel 304	BS970 304C15
	Stainless Steel 316	BS970 316C16
Disc	Ductile Iron	EN-JS 1050
	Aluminium Bronze	EN 1982 CC491K
	Stainless Steel 304	BS970 304C15
	Stainless Steel 316	BS970 316C16
Stem	Stainless Steel 316	BS970 316S16
Seat Ring	EPDM / NBR	Commercial
Spring	Stainless Steel 304	BS970 304S15
	Stainless Steel 316	BS970 316S16



DIMENSIONS

DN	(mm)	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900
	(inch)	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	28	32	36
L		43	43	46	64	64	70	76	89	114	114	127	140	152	152	178	229	241	241
D		102	107	127	142	162	192	218	273	328	380	439	490	554	616	724	820	930	1048

DOUBLE DOOR WAFER CHECK VALVE

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 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.

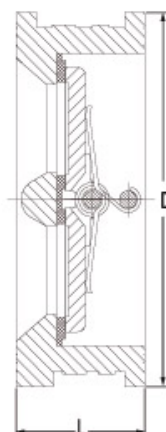


PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar
Shell Testing Pressure	(x1.5) 37bar
Seat Testing Pressure	(x1.1) 27.5bar
Working Temperature	-20°C ... 110°C (EPDM Seat Ring) -10°C ... 80°C (NBR Seat Ring)
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Disc	Ductile Iron	EN-JS 1050
	Aluminium Bronze	EN 1982 CC491K
	Stainless Steel 304	BS970 304C15
	Stainless Steel 316	BS970 316C16
Stem	Stainless Steel 316	BS970 316S16
Seat Ring	EPDM / NBR	Commercial
Spring	Stainless Steel 304	BS970 304S15
	Stainless Steel 316	BS970 316S16



DIMENSIONS

DN	(mm)	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
	(inch)	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L		43	43	46	64	64	70	76	89	114	114	127	140	152	152	178
D		102	107	127	142	167	192	222	282	339	399	456	513	563	623	724

SILENT WAFER CHECK VALVE

FEATURES & SPECIFICATIONS

- Spring loaded
- Rubber seat ring for non-slam effect
- Durable fusion bonded epoxy coated
- Comply with BS 5153 / EN 12334 / MS SSP71
- Wafer connection 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.

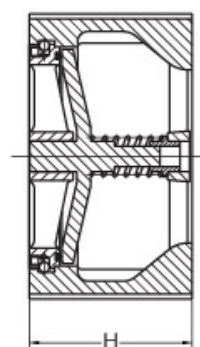
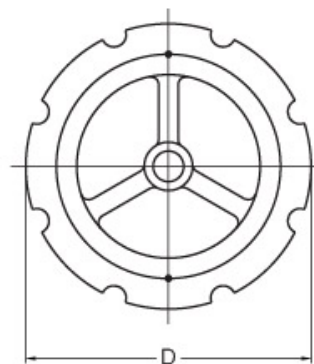


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Shell Testing Pressure	(x1.5) 24bar
Seat Testing 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	Specification
Body	Cast Iron	EN-JL 1040
	Ductile Iron	EN-JS 1050
Disc	Ductile Iron	EN-JS 1050
	Stainless Steel 304	EN 10088-3 1.4301
	Aluminium Bronze	EN 1982 CC491K
Seat	Ductile Iron	EN-JS 1050
	Stainless Steel 304	EN 10088-3 1.4301
	Aluminium Bronze	EN 1982 CC491K
Seat Ring	EPDM / NBR	
Stem	Stainless Steel 410	EN 10088-3 1.4006
Spring	Stainless Steel 304	EN 10088-3 1.4301
Bushing	Gunmetal	EN 1982-2008 GC CC491K



DIMENSIONS

DN	(mm)	50	65	80	100	125	150	200	250	300	350
	(inch)	2	2½	3	4	5	6	8	10	12	14
D		110	136	152	178	221	248	340	404	415	484
H		67	73	80	102	118	140	165	210	286	350

SILENT WAFER CHECK VALVE

FEATURES & SPECIFICATIONS

- Spring loaded
- Rubber seat ring for non-slam effect
- Durable fusion bonded epoxy coated
- Comply with BS 5153 / EN 12334 / MS SSP71
- Wafer connection to 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.

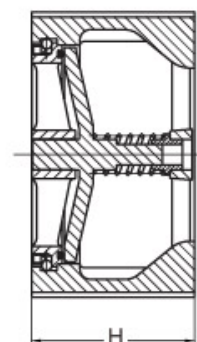
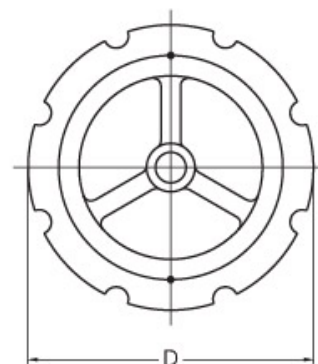


PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar
Shell Testing Pressure	(x1.5) 37.5bar
Seat Testing Pressure	(x1.1) 27.5bar
Working Temperature	-20°C ... 110°C EPDM -10°C ... 80°C NBR
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	EN-JL 1040
	Ductile Iron	EN-JS 1050
Disc	Ductile Iron	EN-JS 1050
	Stainless Steel 304	EN 10088-3 1.4301
	Aluminium Bronze	EN 1982 CC491K
Seat	Ductile Iron	EN-JS 1050
	Stainless Steel 304	EN 10088-3 1.4301
	Aluminium Bronze	EN 1982 CC491K
Seat Ring	EPDM / NBR	
Stem	Stainless Steel 410	EN 10088-3 1.4006
Spring	Stainless Steel 304	EN 10088-3 1.4301
Bushing	Gunmetal	EN 1982-2008 GC CC491K



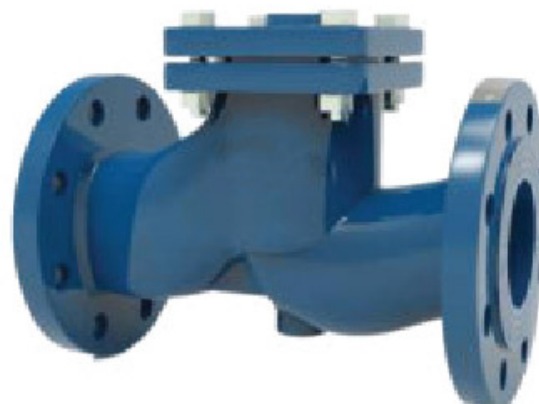
DIMENSIONS

DN	(mm)	50	65	80	100	125	150	200	250	300	350
	(inch)	2	2½	3	4	5	6	8	10	12	14
D		110	136	152	178	221	248	340	404	415	484
H		67	73	80	102	118	140	165	210	286	350

LIFTING CHECK VALVE

FEATURES & SPECIFICATIONS

- Spring loaded
- Bolted bonnet
- Painted body
- Face-to-face dimension conforms to DIN 3202 F1 series
- 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 Testing Pressure	(x1.5) 24bar
Seat Testing Pressure	(x1.1) 17.6bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	EN-JL 1040
Bonnet	Cast Iron	EN-JL 1040
Disc/Stem	Stainless Steel	BS970 420S37
	Cast Iron	EN-JL 1040
Disc Ring	Stainless Steel	BS970 420S37
Seat Ring	Stainless Steel	BS970 420S37
Gasket	Graphite	Non-Asbestos
Spring	Stainless Steel	BS970 304S15
Bushing	Brass	EN 12165 W603N

DIMENSIONS

DN	(mm) (inch)	(mm)													
		15	20	25	32	40	50	65	80	100	125	150	200	250	300
		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	64	68	81	95	100	113	128	148	162	190	220	260	318	378

FOOT VALVE

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 / ANSI Class 150 (Specify on order)
- Applicable for Building Services, Air-Conditioning, Fire Protection, Cold Water Plumbing, Hot Water System, General Industries.

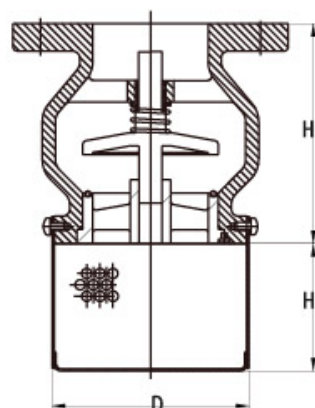


PRESSURE & TEMPERATURE RATINGS

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

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JL1050
Disc	Ductile Iron	EN-JL1050
	Stainless Steel 304	EN 10088-3 1.4301
	Aluminium Bronze	EN 1982 CB491K
Seat	Ductile Iron	EN-JL1050
	Stainless Steel 304	EN 10088-3 1.4301
	Aluminium Bronze	EN 1982 CB491K
Seat Ring	EPDM/NBR	
Spring	Stainless Steel 304	EN 10088-3 1.4301
Screen	Stainless Steel 304	EN 10088-3 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
H1		133	140	152	185	216	229	257	393	362	400	448	476	524	610
H2		68	93	108	138	163	189	208	225	245	270	290	315	340	365
D		114	130	144	177	203	237	290	330	383	470	520	570	630	740

FOOT VALVE

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 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.

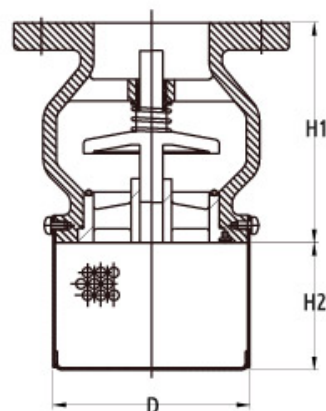


PRESSURE & TEMPERATURE RATINGS

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

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Disc	Ductile Iron	EN-JS 1050
	Stainless Steel 304	EN 10088-3 1.4301
	Aluminium Bronze	EN 1982 CB491K
Seat	Ductile Iron	EN-JS 1050
	Stainless Steel 304	EN 10088-3 1.4301
	Aluminium Bronze	EN 1982 CB491K
Seat Ring	EPDM/NBR	
Spring	Stainless Steel 304	EN 10088-3 1.4301
Screen	Stainless Steel 304	EN 10088-3 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
H1		133	140	152	185	216	229	257	393	362	400	448	476	524	610
H2		68	93	108	138	163	189	208	225	245	270	290	315	340	365
D		114	130	144	177	203	237	290	330	383	470	520	570	630	740

FIXED ORIFICE DOUBLE REGULATING VALVE

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
- Flange drilled to BS 4504 PN16 / EN 1092-2 PN16 / ANSI Class 150 (Specify on order)
- Comply with BS 7350
- Applicable for hydronic balancing of heating and cooling systems

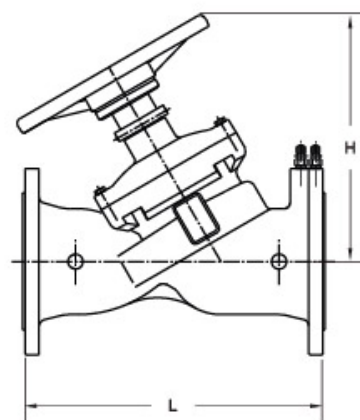


PRESSURE & TEMPERATURE RATINGS

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

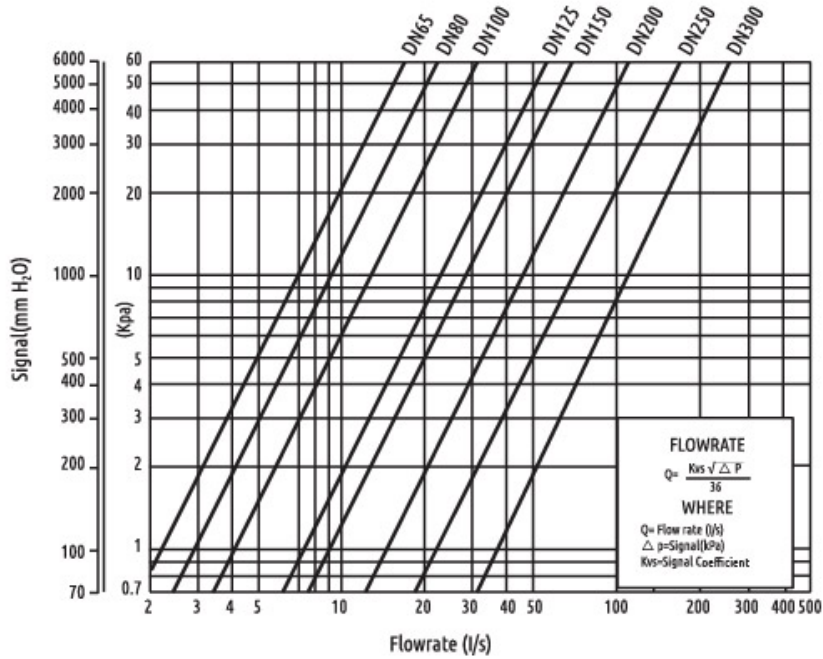
Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Bonnet	Ductile Iron	EN-JS 1050
Stem	Stainless Steel 410 (DN65 ... DN300) Stainless Steel 431 (DN350 ... DN600)	EN 10088-3 1.4006 EN 10088-3 1.4057
Balancing Cone	Ductile Iron	EN-JS 1050
Disc	EPDM coated DI	EN-JS 1050
Gland	Brass (DN65 ... DN150) Ductile Iron (DN200 ... DN600)	EN 12165 CW617N EN-JS 1050
Gland Nut	Brass	EN 12165 CW617N
Orifice Insert	DZR Brass	EN 12165 CW602N
Measuring Plug	DZR Brass	EN 12165 CW602N
Handwheel	Ductile Iron	EN-JS 1050
Packing	Graphite	Non-Asbestos



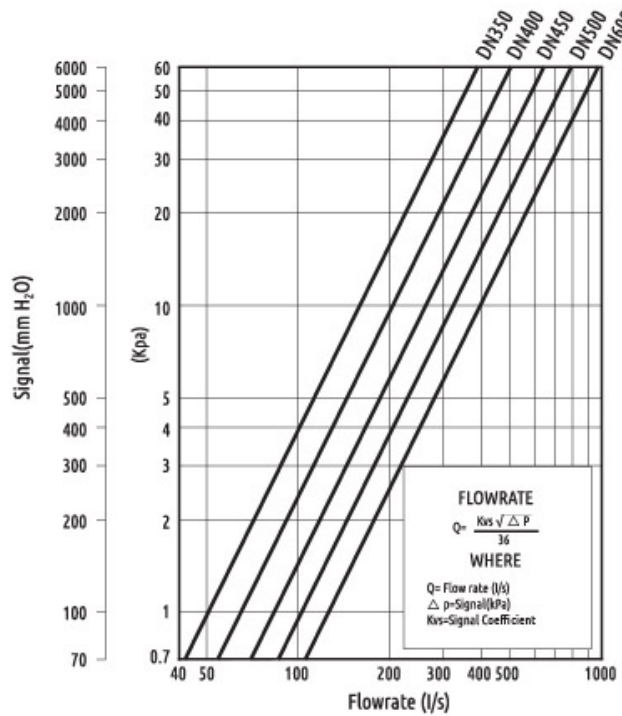
DIMENSIONS & FLOW COEFFICIENT

DN	(mm)	65	80	100	125	150	200	250	300	350	400	450	500	600
	(inch)	2½	3	4	5	6	8	10	12	14	16	18	20	24
	L	290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
	H	265	270	310	340	340	537	570	690	685	965	1020	1065	1180
	D	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



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



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

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.

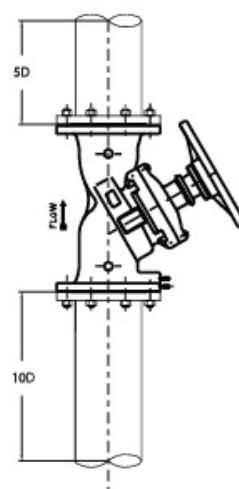
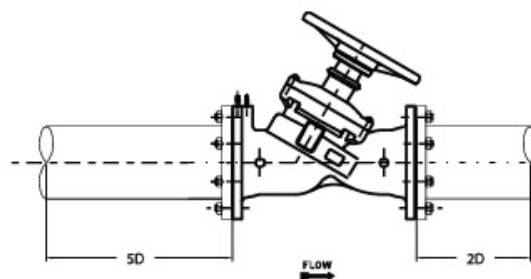
To achieve flow measurement accuracy, it is essential that the piping on the inlet and outlet of the valve is straight and has a minimum length equivalent to 5 Diameters (5D) inlet and 2 Diameters (2D) outlet as shown. If the valve is install at the discharge side of a pump set, it is essential that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

Gaskets must be used and assembled between valve and flanges. This will ensure the installation is concentric with pipe line and better accuracy is obtained.

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, push the limitation ring at the scales at the bottom of the handwheel, tighten the screw using the hexagon wrench.

Valve must not be lifted by holding the handwheel.



FIXED ORIFICE DOUBLE REGULATING VALVE

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
- Flange drilled to BS 4504 PN25 / EN 1092-2 PN25 / ANSI Class 150 (Specify on order)
- Comply with BS 7350
- Applicable for hydronic balancing of heating and cooling systems

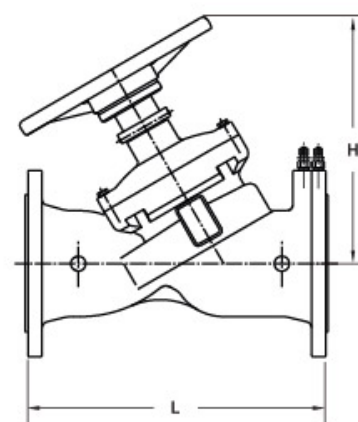


PRESSURE & TEMPERATURE RATINGS

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

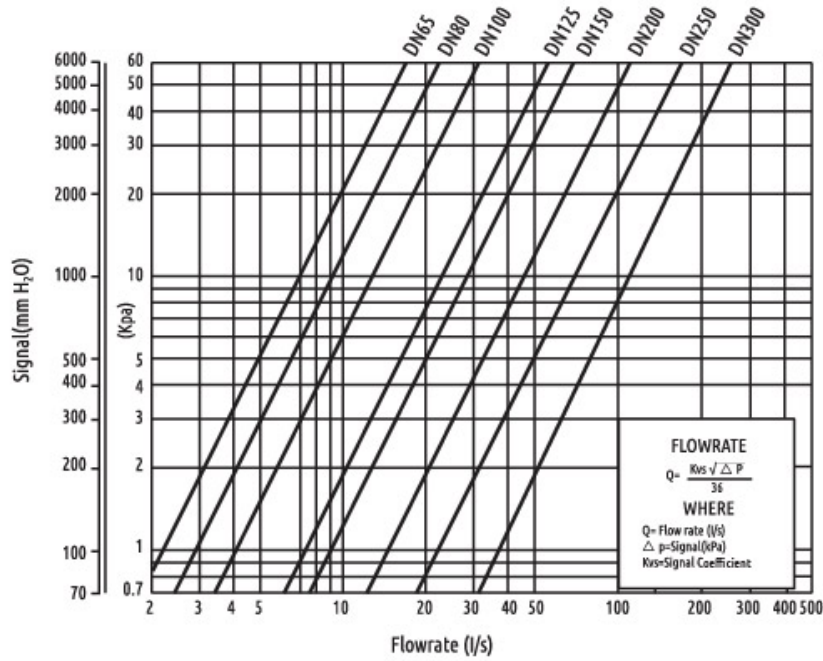
Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Bonnet	Ductile Iron	EN-JS 1050
Stem	Stainless Steel 410 (DN65 ... DN300) Stainless Steel 431 (DN350 ... DN600)	EN 10088-3 1.4006 EN 10088-3 1.4057
Balancing Cone	Ductile Iron	EN-JS 1050
Disc	EPDM coated DI	EN-JS 1050
Gland	Brass (DN65 ... DN150) Ductile Iron (DN200 ... DN600)	EN 12165 CW617N EN-JS 1050
Gland Nut	Brass	EN 12165 CW617N
Orifice Insert	DZR Brass	EN 12165 CW602N
Measuring Plug	DZR Brass	EN 12165 CW602N
Handwheel	Ductile Iron	EN-JS 1050
Packing	Graphite	Non-Asbestos



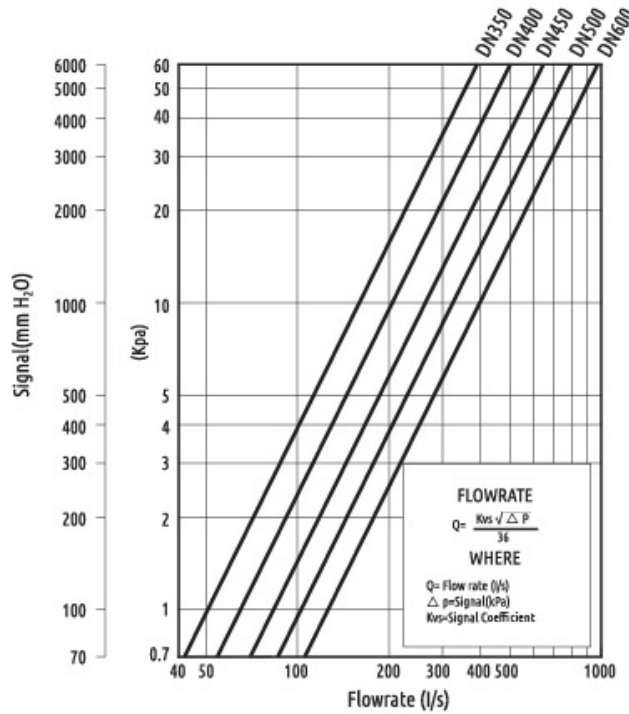
DIMENSIONS & FLOW COEFFICIENT

DN	(mm)	65	80	100	125	150	200	250	300	350	400	450	500	600
	(inch)	2½	3	4	5	6	8	10	12	14	16	18	20	24
L		290	310	350	400	480	600	730	850	980	1100	1200	1250	1450
H		265	270	310	340	340	537	570	690	685	965	1020	1065	1180
D		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



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



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

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.

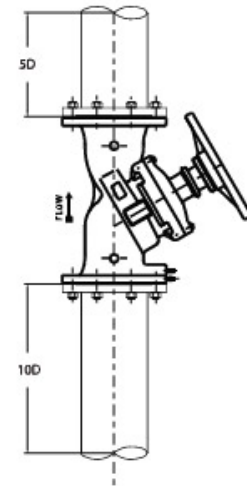
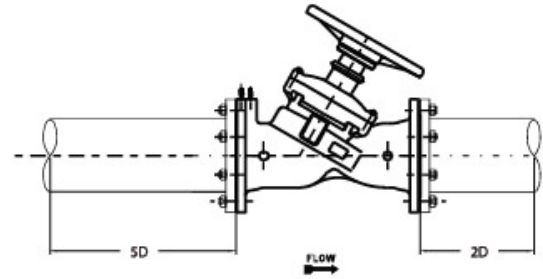
To achieve flow measurement accuracy, it is essential that the piping on the inlet and outlet of the valve is straight and has a minimum length equivalent to 5 Diameters (5D) inlet and 2 Diameters (2D) outlet as shown. If the valve is install at the discharge side of a pump set, it is essential that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

Gaskets must be used and assembled between valve and flanges. This will ensure the installation is concentric with pipe line and better accuracy is obtained.

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, push the limitation ring at the scales at the bottom of the handwheel, tighten the screw using the hexagon wrench.

Valve must not be lifted by holding the handwheel.



Y-TYPE STRAINER

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 / 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

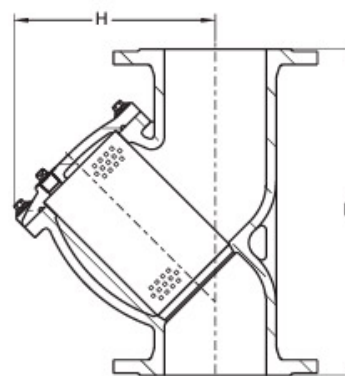
Working Pressure	16bar
Testing Pressure	(x1.5) 24bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Cover	Ductile Iron	EN-JS 1050
Screen	Stainless Steel 304	EN10088-3 1.4301
Blow-Off Plug	Stainless Steel 304 (DN50 ... DN400) Carbon Steel (DN450 ... DN600)	

SCREENS DATA

DN(mm)	Hole Dia. (mm)	Hole / inch ²
50...150	1.5	104
200...350	2.5	26
400...600	3.5	22



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	124	137	152	205	244	269	341	455	476	725	820	838	908	1078
	Hole Plug Dia.	10	10	10	10	10	10	15	15	15	20	20	50	50	50

Y-TYPE STRAINER

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 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

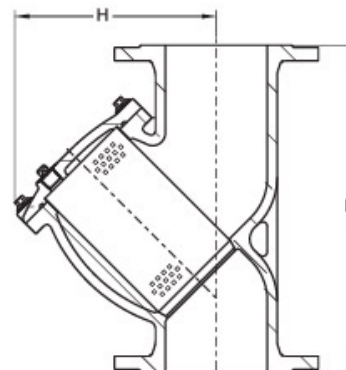


PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar
Testing Pressure	(x1.5) 37.5bar
Working Temperature	-10°C ... 120°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Cover	Ductile Iron	EN-JS 1050
Screen	Stainless Steel 304	EN10088-3 1.4301
Blow-Off Plug	Stainless Steel 304 (DN50 ... DN400) Carbon Steel (DN450 ... DN600)	



SCREENS DATA

DN(mm)	Hole Dia. (mm)	Hole / inch ²
50...150	1.5	104
200...350	2.5	26
400...600	3.5	22

DIMENSIONS

DN	(mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
	(inch)	2½	2	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		124	137	152	205	244	269	341	455	476	725	820	838	208	1078
Hole Plug Dia.		10	10	10	10	10	10	15	15	15	20	20	50	50	50

BASKET TPE STRAINER

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

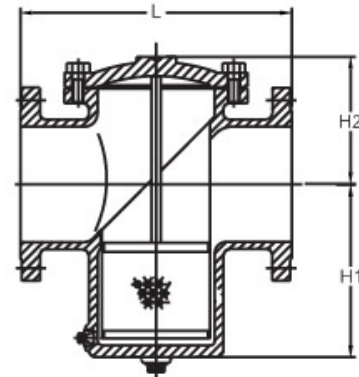


PRESSURE & TEMPERATURE RATINGS

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

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	EN-JL 1040
Cover	Ductile Iron	EN-JS 1050
	Cast Iron	EN-JL 1040
Screen	Stainless Steel 304	EN10088-3 1.4301
Blow-Off Plug	Carbon Steel	
Gasket	Graphite/Teflon	Commercial



SCREENS DATA

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

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		207	210	251	292	334	378	472	511	680	769	842	842	842	1054
H1		135	155	190	205	219	235	295	335	405	585	590	590	600	1175
H2		90	95	105	117	146	165	215	325	355	345	390	420	510	515

BASKET TPE STRAINER

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 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

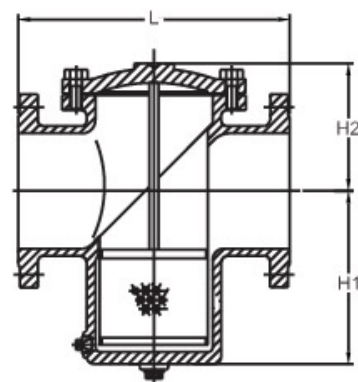


PRESSURE & TEMPERATURE RATINGS

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

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Cover	Ductile Iron	EN-JS 1050
	Cast Iron	EN-JL 1040
Screen	Stainless Steel 304	EN10088-3 1.4301
Blow-Off Plug	Carbon Steel	
Gasket	Graphite / Teflon	Commercial



SCREENS DATA

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

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		207	210	251	292	334	378	472	511	680	769	842	842	842	1054
H1		135	155	190	205	219	235	295	335	405	585	590	590	600	1175
H2		90	95	105	117	146	165	215	325	355	345	390	420	510	515

(mm)

AUTOMATIC AIR VENT

FEATURES & SPECIFICATIONS

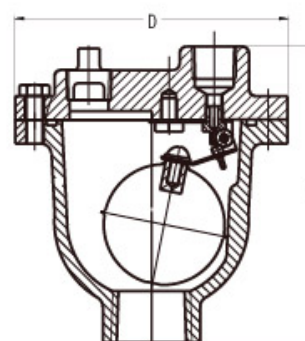
- Anti corrosion treatment for internal parts to prevent from the valve rusting
- Large venting capacity
- Air tight
- Available in 15, 20 & 25mm inlet diameter threaded BSPT

PRESSURE & TEMPERATURE RATINGS

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

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Cast Iron	EN-JL 1040
Cover	Cast Iron	EN-JL 1040
Lever	Stainless Steel 304	EN 10088-3 1.4301
Seat Ring	Stainless Steel 304	EN 10088-3 1.4301
Float	Stainless Steel 304	EN 10088-3 1.4301
Float Arm	Stainless Steel 304	EN 10088-3 1.4301
Orifice Button	FPM (Viton)	Commercial



DIMENSIONS

DN		Inlet	Outlet	Orifice	D	H
mm	inch					
15	½	15	15	1.6	125	145
20	¾	20	15	1.6	125	145
25	1	25	15	1.6	125	145

INSTALLATION GUIDE

1. Air vent shall be installed vertically with allowance of within 5" from the horizontal pipe line.
2. A ball valve shall be installed at the inlet for maintenance and servicing.
3. Copper tube to be connected from the outlet of the air vent up to drainage ditch.

AUTOMATIC AIR VENT

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

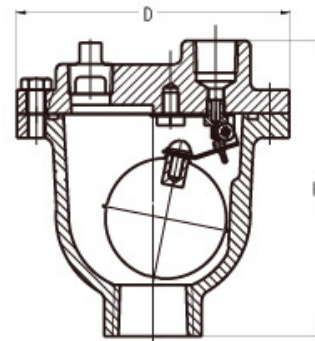
PRESSURE & TEMPERATURE RATINGS

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



MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Cover	Ductile Iron	EN-JS 1050
Lever	Stainless Steel 304	EN 10088-3 1.4301
Seat Ring	Stainless Steel 304	EN 10088-3 1.4301
Float	Stainless Steel 304	EN 10088-3 1.4301
Float Arm	Stainless Steel 304	EN 10088-3 1.4301
Orifice Button	FPM (Viton)	Commercial



DIMENSIONS

DN		Inlet	Outlet	Orifice	D	H
mm	inch					
15	½	15	15	1.6	125	145
20	¾	20	15	1.6	125	145
25	1	25	15	1.6	125	145

(mm)

INSTALLATION GUIDE

1. Air vent shall be installed vertically with allowance of within 5" from the horizontal pipe line.
2. A ball valve shall be installed at the inlet for maintenance and servicing.
3. Copper tube to be connected from the outlet of the air vent up to drainage ditch.

OREFIC AIR VALVE

FEATURES & SPECIFICATIONS

- Comply with JKR 20200-0043-99
- 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)

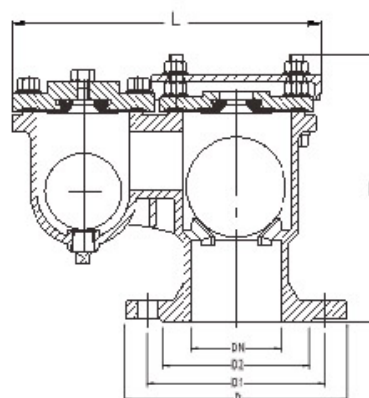


PRESSURE & TEMPERATURE RATINGS

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

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Orifice Cover	Ductile Iron	EN-JS 1050
Air Release Nipple	Brass	EN 12165 CW603N
Screw Plug	Brass	EN 12165 CW603N
Float Ball	ABS (ISO2580)	Commercial
Ball Seal Orifice	EPDM	Commercial
Gasket	EPDM	Commercial
Dust Cap	Ductile Iron	EN-JS 1050



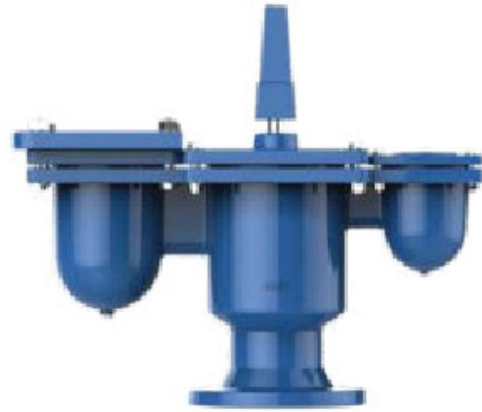
DIMENSIONS

DN	(mm) (inch)	40	50	65	80	100	125	150	200	250
		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
	D	150	165	185	200	220	250	285	340	405
	D1	110	125	145	160	180	210	240	295	355
	D2	84	99	118	132	156	184	211	266	319

DOUBLE OREFIC AIR VALVE

FEATURES & SPECIFICATIONS

- Comply with JKR 20200-0043-99
- 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)

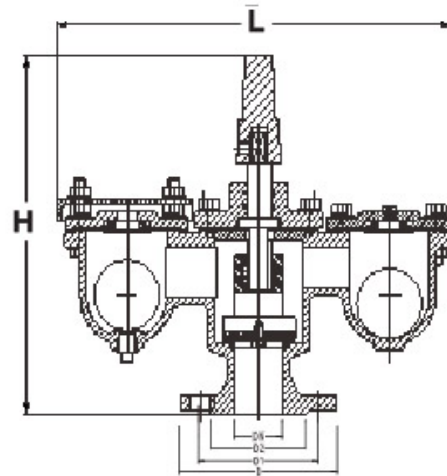


PRESSURE & TEMPERATURE RATINGS

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

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Ductile Iron	EN-JS 1050
Orifice Cover	Ductile Iron	EN-JS 1050
Air Release Nipple	Brass	EN 12165 CW603N
Screw Plug	Brass	EN 12165 CW603N
Float Ball	ABS (ISO2580)	Commercial
Ball Seal Orifice	EPDM	Commercial



DIMENSIONS

DN	(mm) (inch)	50 2	80 3	100 4	150 6	200 8
L		418	454	492	595	698
H		351	375	419	440	475
D		165	200	220	285	340
D1		125	160	180	240	295
D2		99	132	156	211	266

(mm)

BRASS NRS GATE VALVE

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

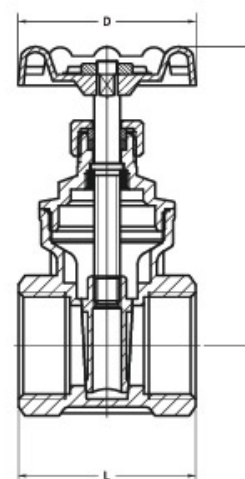
Working Pressure	16bar WOG Non-Shock 8.6bar Saturated Steam
Shell Testing Pressure	(x1.5) 24bar Hydrostatic
Seat Testing Pressure	(x1.1) 17.6bar Hydrostatic 5.5bar Air
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Brass	EN 12165 CW617N
Bonnet	Brass	EN 12165 CW617N
Disc	Brass	EN 12165 CW617N
Stem	Brass Rod	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
	(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



DZR BRASS NRS GATE VALVE

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

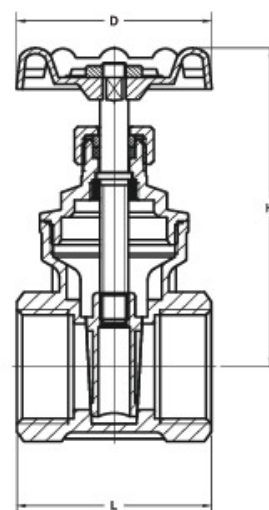
Working Pressure	16bar WOG Non-Shock 8.6bar Saturated Steam
Shell Testing Pressure	(x1.5) 24bar Hydrostatic
Seat Testing Pressure	(x1.1) 17.6bar Hydrostatic 5.5bar Air
Working Temperature	-10°C ... 170°C
Suitable Media	Water, Oil & Gas

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	(mm)
	(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	



BRONZE NRS GATE VALVE

FEATURES & SPECIFICATIONS

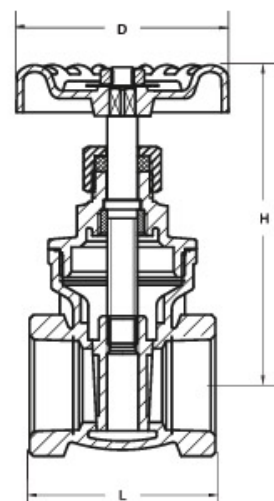
- Threaded bonnet
- Solid wedge disc
- Non-rising stem
- Integral seat
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries.

PRESSURE & TEMPERATURE RATINGS

Working Pressure	20bar WOG Non-Shock 10bar Saturated Steam
Shell Testing Pressure	(x1.5) 30bar Hydrostatic
Seat Testing 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)	15	20	25	32	40	50	65	80	100
	(inch)	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

FEATURES & SPECIFICATIONS

- Rising stem
- Threaded bonnet
- Solid wedge disc
- 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 32bar WOG Non-Shock
10bar Saturated Steam

Shell Testing Pressure (x1.5) 48bar Hydrostatic

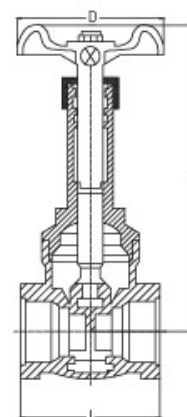
Seat Testing Pressure (x1.1) 35bar Hydrostatic
5.5bar Air

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	DZR Brass	BS EN 12165 CW602N
Stem Bush	DZR Brass	BS EN 12165 CW602N
Packing Nut	Brass Rod	BS EN 12165 CW614N
Packing	PTFE	
Handwheel	Aluminium	



DIMENSIONS

DN	(mm)	15	20	25	32	40	50
	(inch)		½	¾	1	1¼	1½
L		43	49	54	62	65	75
H		112	125	143	170	198	233
D		50	56	63	70	80	92

(mm)

BRONZE RISING STEM GLOBE VALVE

FEATURES & SPECIFICATIONS

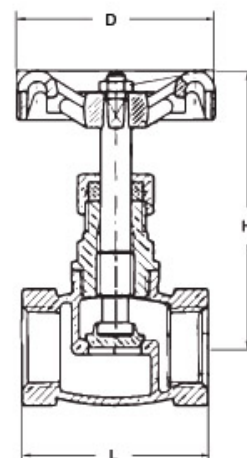
- Threaded bonnet
- Swivel disc
- Rising stem
- Threaded to EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries.

PRESSURE & TEMPERATURE RATINGS

Working Pressure	20bar WOG Non-Shock 10bar Saturated Steam
Shell Testing Pressure	(x1.5) 30bar Hydrostatic
Seat Testing 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) Bronze (DN32...DN50)	EN 12165 CW602N EN 1982 GC CC491K
Stem	Brass	EN 12165 CW617N
Packing	PTFE	
Packing Nut	Brass Rod	EN 12165 CW617N
Gland	Aluminium	EN 12165 CW617N
Handwheel	Brass Rod	
Gasket	Non Asbestos	



DIMENSIONS

DN	(mm)	15	20	25	32	40	50
	(inch)	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

(mm)

BRASS BALL VALVE

FEATURES & SPECIFICATIONS

- Threaded body cap
- Blow-out proof stem
- 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 25bar WOG Non-Shock
10bar Saturated Steam

Shell Testing Pressure (x1.5) 37.5bar Hydrostatic

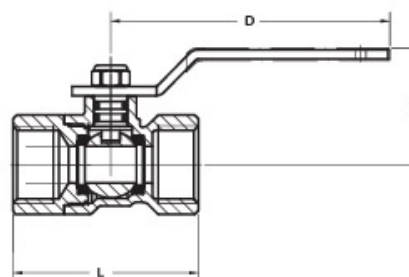
Seat Testing Pressure (x1.1) 27.5bar Hydrostatic
5.5bar Air

Working Temperature -10°C ... 170°C

Suitable Media Water, Oil & Gas

MATERIAL SPECIFICATIONS

Part	Material	Specification
Body	Brass	EN 12165 CW617N
Ball	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
Level Nut	Stainless Steel	
Lever	PVC Covered mild steel	



DIMENSIONS

DN	(mm)	10	15	20	25	32	40	50
	(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

(mm)

BRASS BALL VALVE

FEATURES & SPECIFICATIONS

- Threaded body cap
- Blow-out proof stem
- Threaded to BS EN 10226-1 (ISO 7)
- Applicable to Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries.

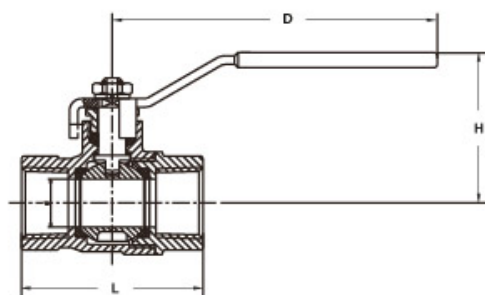
PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar WOG Non-Shock 10bar Saturated Steam
Shell Testing Pressure	(x1.5) 37.5bar Hydrostatic
Seat Testing 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	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	(mm)
	(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

FEATURES & SPECIFICATIONS

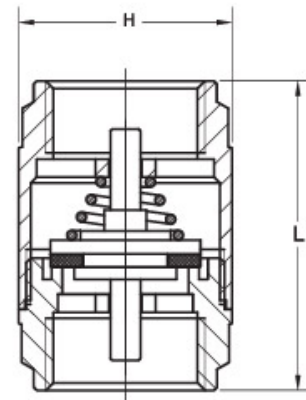
- Vertical lift
- In-line design
- Threaded to EN 10226-1 (ISO 7)
- Applicable for Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Hot Water System, General Industries.

PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar WOG Non-Shock 8.6bar Saturated Steam
Shell Testing Pressure	(x1.5) 24bar Hydrostatic
Seat Testing 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)	15	20	25	32	40	50
	(inch)	½	¾	1	1¼	1½	2
	L	48.5	53.5	61.5	69.5	72	83.5
	H	31	37	45	58.5	63.5	80

(mm)

BRASS SWING CHECK VALVE

FEATURES & SPECIFICATIONS

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

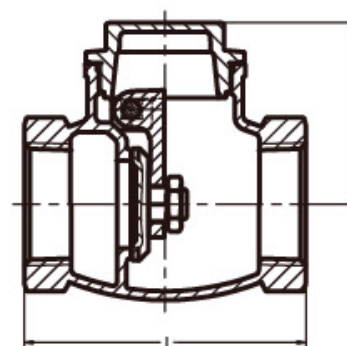


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar WOG Non-Shock 8.6bar Saturated Steam
Shell Testing Pressure	(x1.5) 24bar Hydrostatic
Seat Testing 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)	15	20	25	32	40	50
	(inch)	½	¾	1	1¼	1½	2
	L	52.5	60.5	72	82	95	107
	H	34	37	42	50	58	68

(mm)

BRONZE SWING CHECK VALVE

FEATURES & SPECIFICATIONS

- Swing disc
- Integral seat
- Threaded 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 20bar WOG Non-Shock
10bar Saturated Steam

Shell Testing Pressure (x1.5) 30bar Hydrostatic

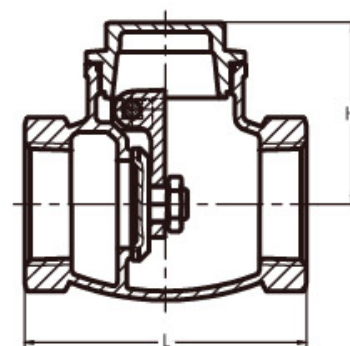
Seat Testing Pressure (x1.1) 22bar Hydrostatic
5.5bar Air

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)	15	20	25	32	40	50	65	80	100
	(inch)	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

(mm)

BRONZE FIXED ORIFICE DOUBLE REGULATING VALVE

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 EN 10226-1 (ISO 7)
- Comply with BS 7350
- Applicable for hydronic balancing of heating and cooling systems

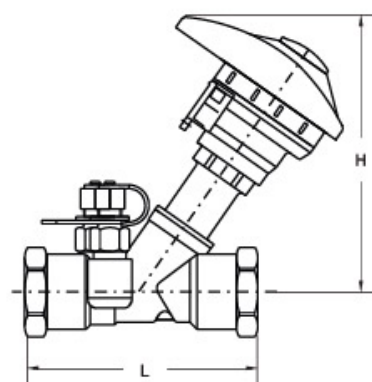


PRESSURE & TEMPERATURE RATINGS

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

MATERIAL SPECIFICATIONS

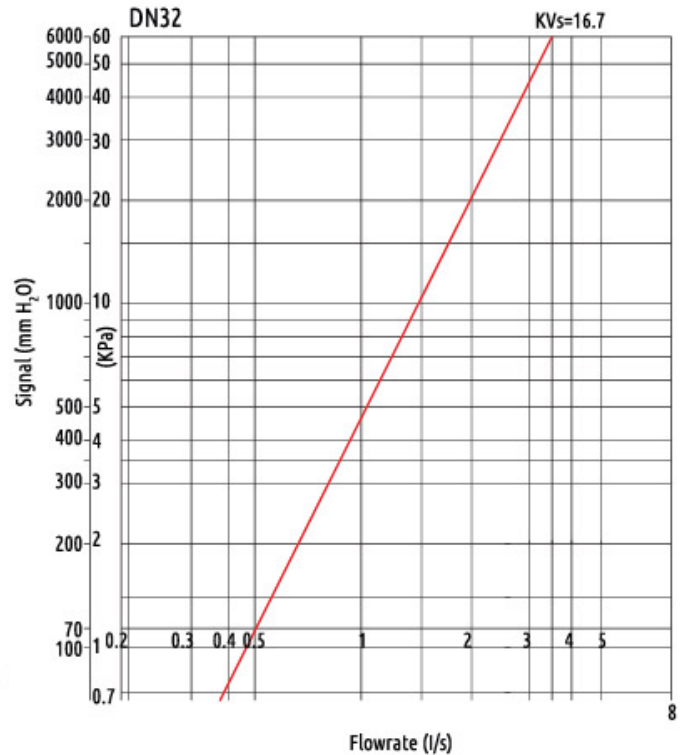
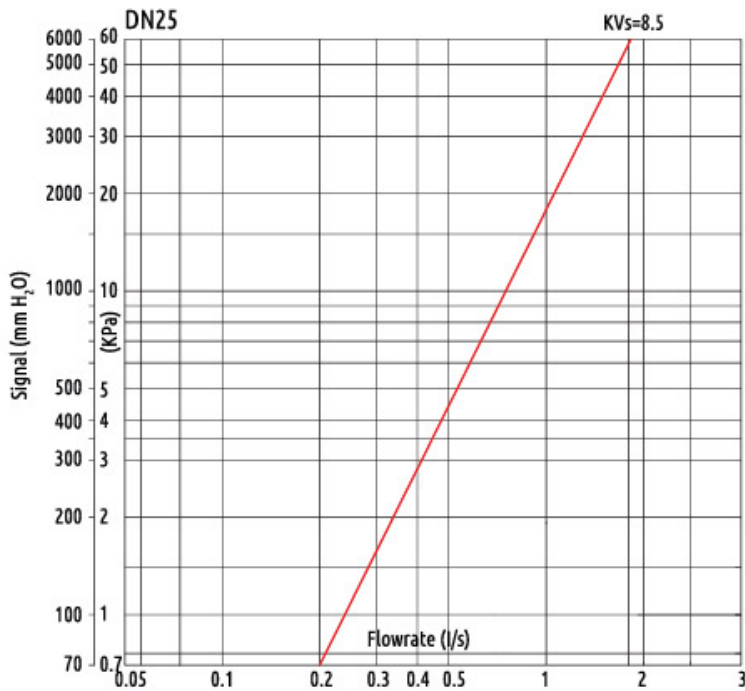
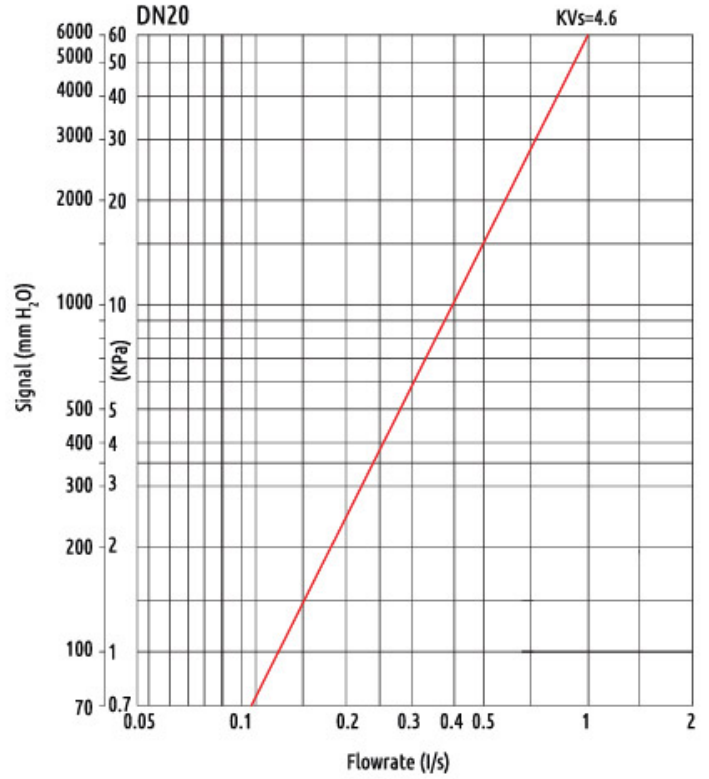
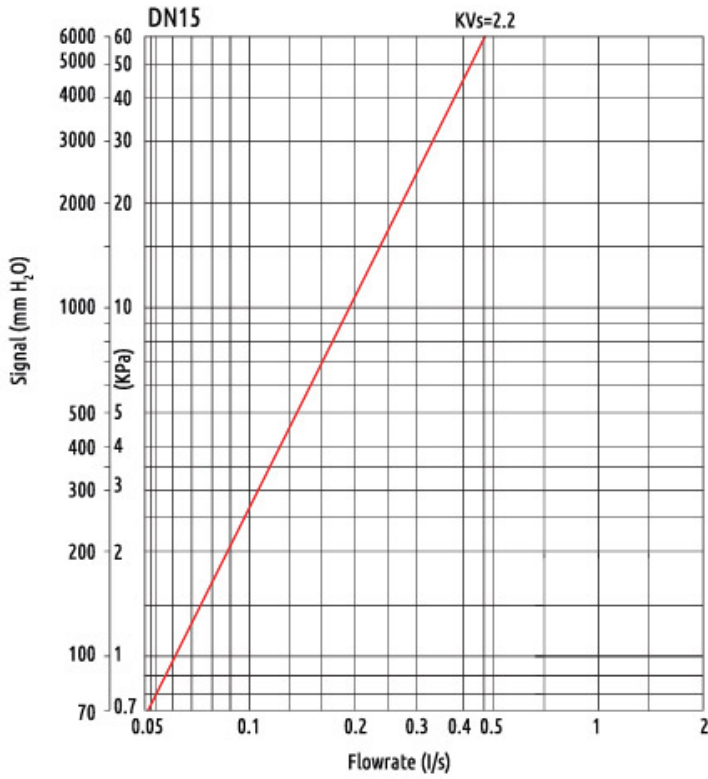
Part	Material	Specification
Body	Bronze	EN 1982 CC491K
Bonnet	DZR Brass (DN15 ... DN32) Bronze (DN40 ... DN50)	EN 12165 CW602N EN 1982 CC491K
Stem	DZR Brass	EN 12165 CW602N
Balancing Cone	DZR Brass	EN 12165 CW602N
Disc	DZR Brass (DN15 ... DN20) DZR Brass+PTFE (DN25 ... DN50)	EN 12165 CW602N EN 12165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



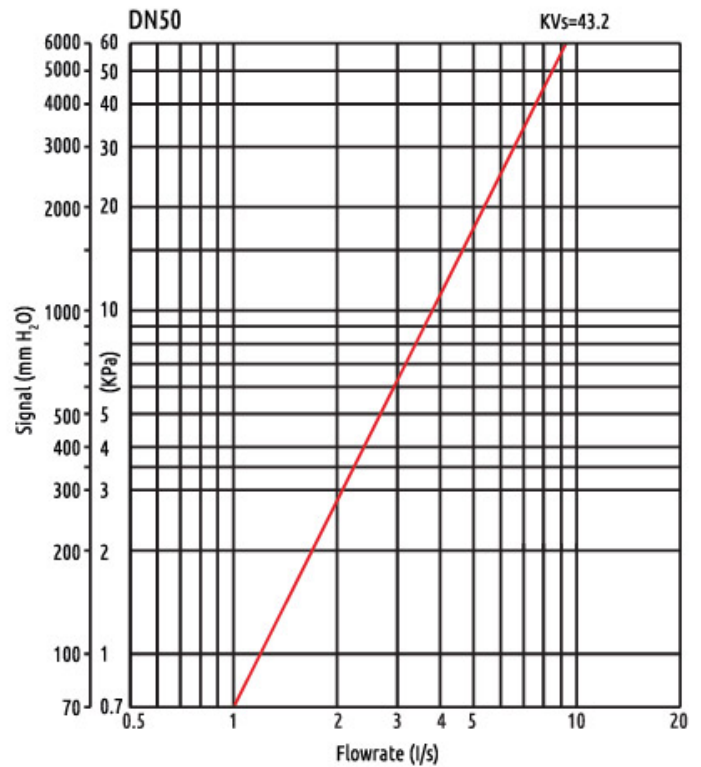
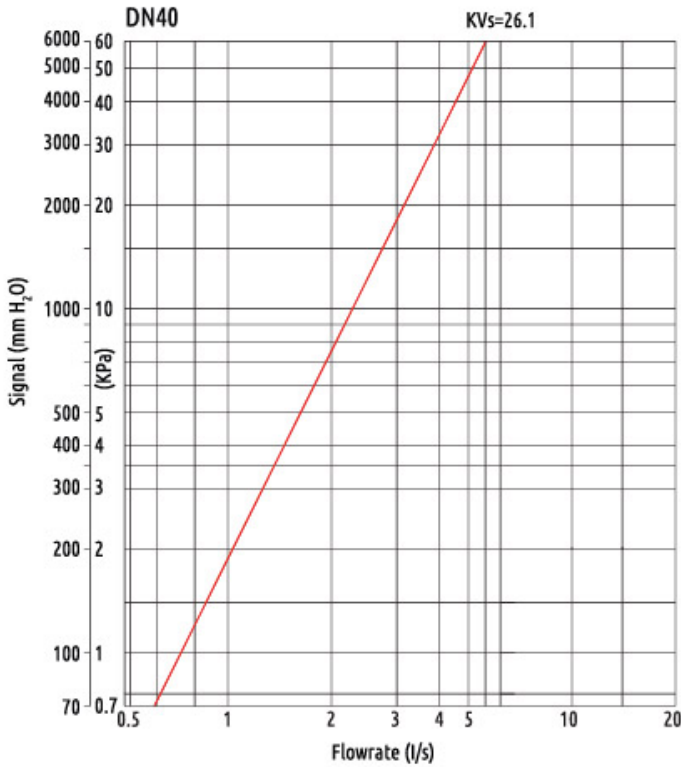
DIMENSIONS & FLOW COEFFICIENT

DN	(mm)	15	20	25	32	40	50	(mm)
	(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



BRONZE FIXED ORIFICE DOUBLE REGULATING VALVE



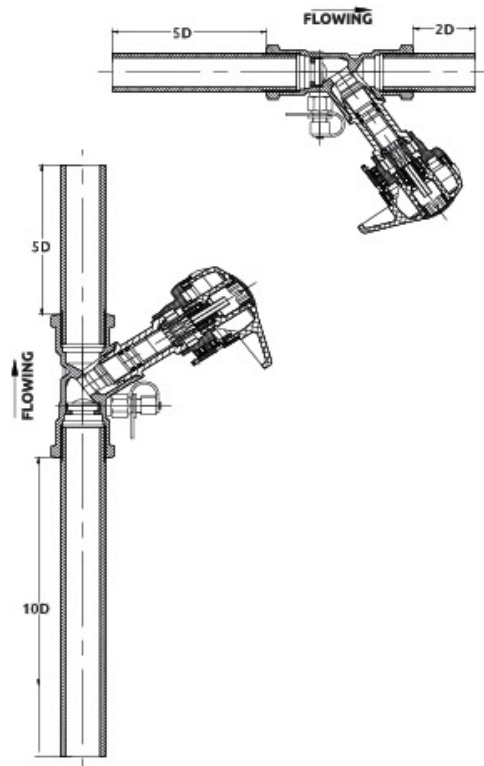
INSTALLATION & OPERATION GUIDE

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 side 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.



BRASS Y-TYPE STRAINER

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.

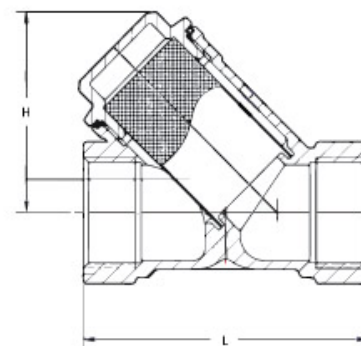


PRESSURE & TEMPERATURE RATINGS

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)	15	20	25	32	40	50	65	80	100	(mm)
	(inch)	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

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.

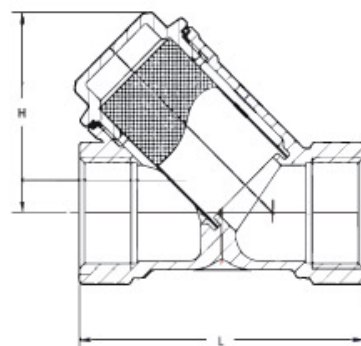


PRESSURE & TEMPERATURE RATINGS

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)	15	20	25	32	40	50	65	80	100	(mm)
	(inch)	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	

BRONZE Y-TYPE STRAINER

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.

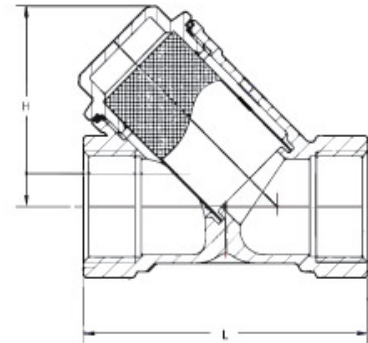


PRESSURE & TEMPERATURE RATINGS

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

BRASS AIR VENT

FEATURES & SPECIFICATIONS

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

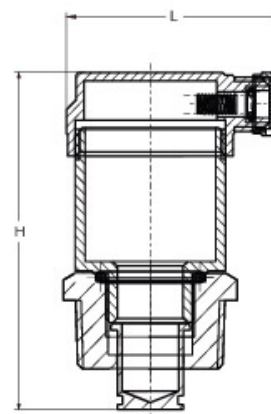
PRESSURE & TEMPERATURE RATINGS

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

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

SINGLE SPHERE RUBBER FLEXIBLE JOINT

GENERAL

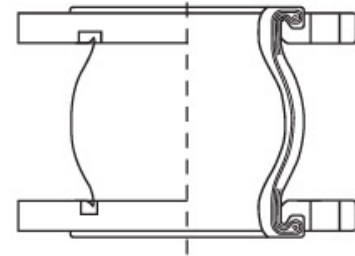
- Absorbs and reduces vibration and shock in the system
- Absorbs the stress generated by the expansion and compression of the pipe line
- Provides flexibility to the system as allowance connection and installation error
- Excellent resistance against pressure
- Control rods available upon request

FEATURES

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

APPLICATIONS

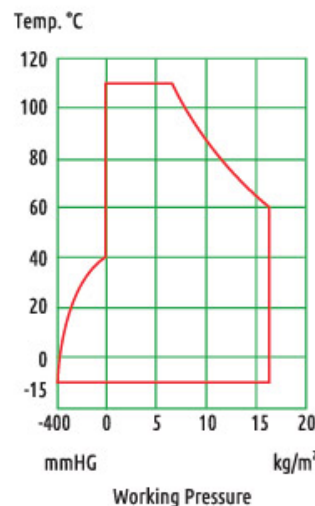
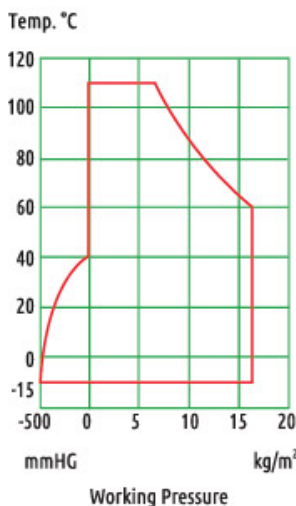
- Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Sewerage & Water Treatment, Marine Services, General Industries
- Suitable for suction and discharge within specify working pressure



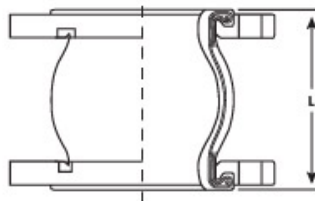
MATERIAL SPECIFICATIONS

Part	Material
Flanges	Ductile Iron (DN25 ... DN300) Carbon Steel (DN350 ... DN600)
Reinforcing Ring	Carbon Steel
Inner Rubber	EPDM
Outer Rubber	EPDM
Reinforcing Cord	Nylon
Control Rod	Mild Steel

OPERATING PRESSURE & TEMPERATURE

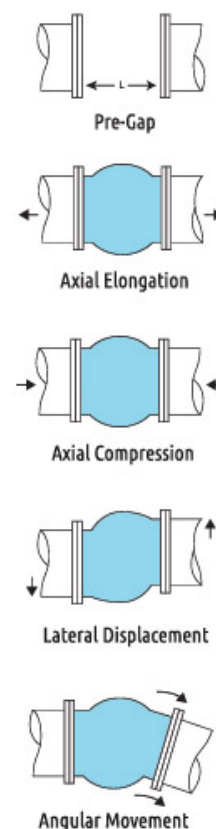


SINGLE SPHERE RUBBER FLEXIBLE JOINT



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
	(inch)	1	1¼	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
Quantity		N/A	2	2	2	2	2	2	2	2	2	3	3	4	4	4	4	4

SINGLE SPHERE RUBBER FLEXIBLE JOINT

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 PN25 / EN 1092-2 PN25 / ANSI Class 150 floating flanges (Specify on order)

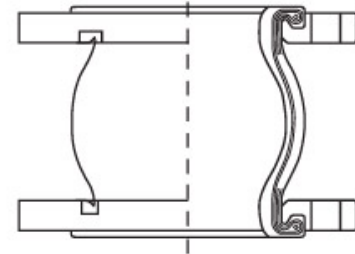
APPLICATIONS

- 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

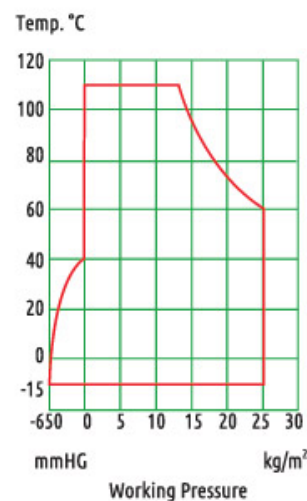


MATERIAL SPECIFICATIONS

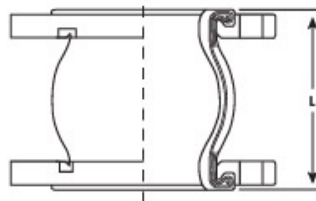
Part	Material
Flanges	Carbon Steel
Reinforcing Ring	Carbon Steel
Inner Rubber	EPDM
Outer Rubber	EPDM
Reinforcing	Nylon
Control Rod	Mild Steel



OPERATING PRESSURE & TEMPERATURE

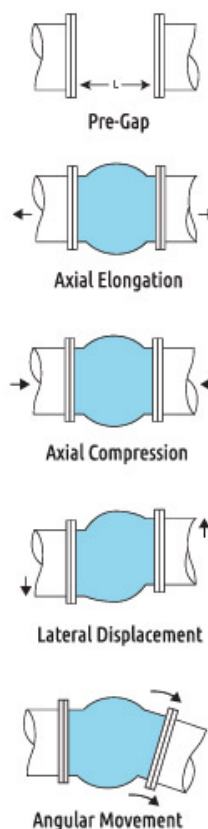


SINGLE SPHERE RUBBER FLEXIBLE JOINT



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



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
(inch)	1	1¼	1½	2	2½	3	4	5	6	8	10	12
Quantity	N/A	2	2	2	2	2	2	2	2	3	4	4

DOUBLE SPHERE RUBBER FLEXIBLE JOINT

GENERAL

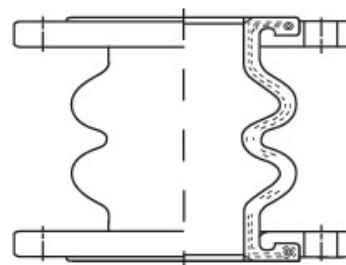
- Absorbs and reduces vibration and shock in the system
- Absorbs the stress generated by the expansion and compression of the pipe line
- Provides flexibility to the system as allowance connection and installation error
- Excellent resistance against pressure
- Control rods available upon request

FEATURES

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

APPLICATIONS

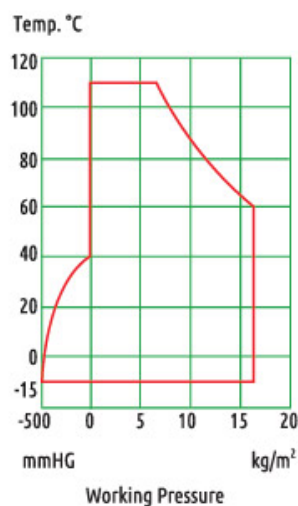
- Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Sewerage & Water Treatment, Marine Services, General Industries
- Suitable for suction and discharge within specify working pressure



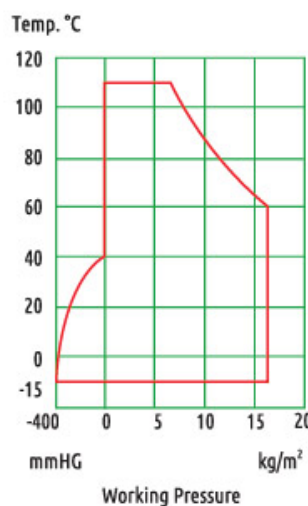
MATERIAL SPECIFICATIONS

Part	Material
Flanges	Ductile Iron (DN32 ... DN300) Carbon Steel (DN350 ... DN600)
Reinforcing Ring	Carbon Steel
Inner Rubber	EPDM
Outer Rubber	EPDM
Reinforcing Cord	Nylon
Control Rod	Mild Steel

OPERATING PRESSURE & TEMPERATURE

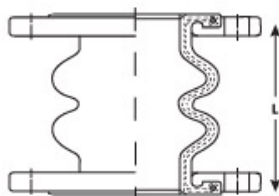


F83DJ16
DN32 ... DN300
Burst Pressure 48bar



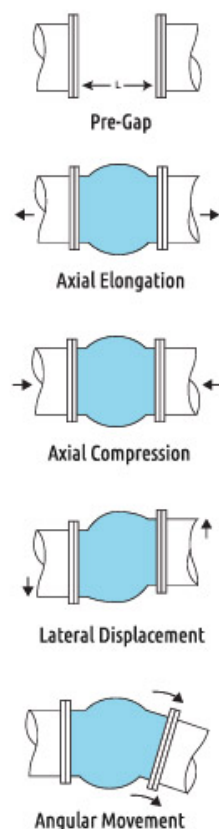
F83DJ16
DN350 ... DN600
Burst Pressure 48bar

DOUBLE SPHERE RUBBER FLEXIBLE JOINT



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

DOUBLE SPHERE RUBBER FLEXIBLE JOINT

GENERAL

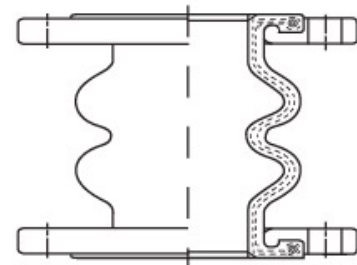
- Absorbs and reduces vibration and shock in the system
- Absorbs the stress generated by the expansion and compression of the pipe line
- Provides flexibility to the system as allowance connection and installation error
- Excellent resistance against pressure
- Control rods available upon request

FEATURES

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

APPLICATIONS

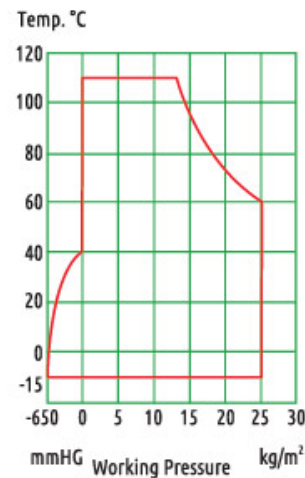
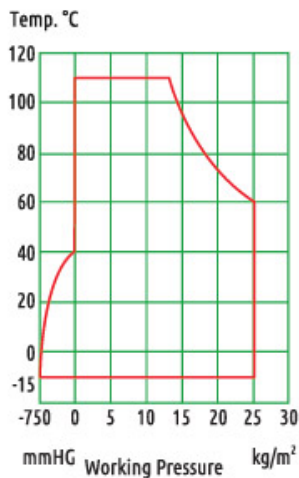
- Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, Sewerage & Water Treatment, Marine Services, General Industries
- Suitable for suction and discharge within specify working pressure



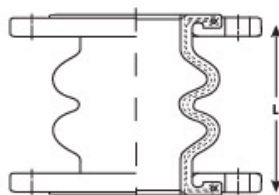
MATERIAL SPECIFICATIONS

Part	Material
Flanges	Carbon Steel
Reinforcing Ring	Carbon Steel
Inner Rubber	EPDM
Outer Rubber	EPDM
Reinforcing Cord	Nylon
Control Rod	Mild Steel

OPERATING PRESSURE & TEMPERATURE

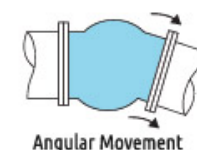
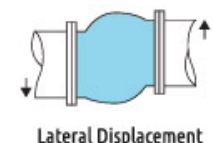
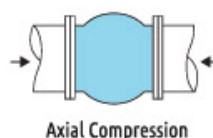
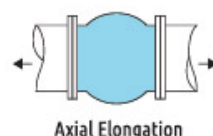
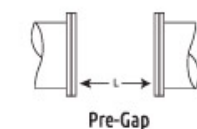


DOUBLE SPHERE RUBBER FLEXIBLE JOINT



DIMENSIONS AND MOVEMENTS

Diameter		Dimension	Pre-Gap L(mm)	Allowable Movements(mm)			
mm	inch	L(mm)		Axial Elongation (mm)	Axial Compression (mm)	Lateral Displacement (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



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
DN (inch)	1	1¼	1½	2	2½	3	4	5	6	8	10	12
Quantity	N/A	2	2	2	2	2	2	2	2	3	4	4

DOUBLE SPHERE RUBBER FLEXIBLE JOINT

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

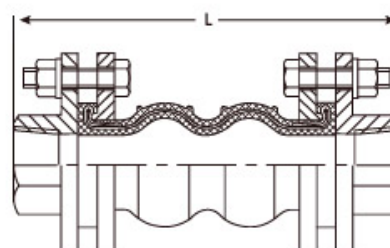


FEATURES

- 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

DIMENSIONS AND MOVEMENTS

Diameter			Dimension L(mm)	Allowable Movements(mm)			
mm	inch	Axial Elongation (mm)		Axial Compression (mm)	Lateral Displacement (mm)	Angle of Deflection (°)	
15	½	180	10	15	15	30	
20	¾	180	10	15	15	30	
25	1	180	10	15	15	30	
30	1 ¼	245	10	15	15	30	
50	2	255	10	15	15	30	

DOUBLE SPHERE RUBBER FLEXIBLE JOINT

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

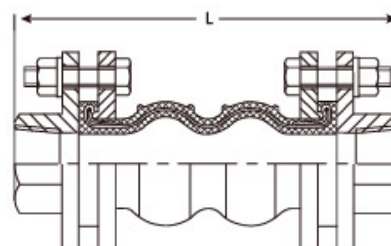


FEATURES

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

APPLICATIONS

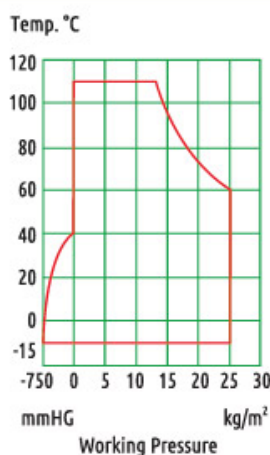
- Building Services, Air-Conditioning, Fire-Protection, Cold Water Plumbing, General Industries
- Suitable for suction and discharge within specify working pressure



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



F85DJ25
DN15 ... DN50
Burst Pressure 60bar

DIMENSIONS AND MOVEMENTS

Diameter		Dimension L(mm)	Allowable Movements(mm)			
mm	inch		Axial Elongation (mm)	Axial Compression (mm)	Lateral Displacement (mm)	Angle of Deflection (°)
15	½	180	10	15	15	30
20	¾	180	10	15	15	30
25	1	180	10	15	15	30
30	1 ¼	245	10	15	15	30
50	2	255	10	15	15	30

EXPANSION JOINT

FEATURES & SPECIFICATIONS

- Flange drilled to BS 4504 PN16 / BS EN 1092-2 PN16 / 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.

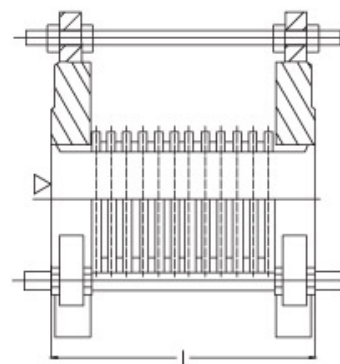


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Test Pressure	(x1.5) 24bar
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	

EXPANSION JOINT

FEATURES & SPECIFICATIONS

- Flange drilled to 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.

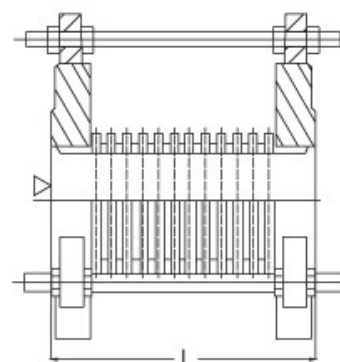


PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar
Test Pressure	(x1.5) 37bar
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	170	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	260	300	300	300	300
	Axial Movement	20	20	20	20	20	20	20	20	20

FLEXIBLE HOSE

SPECIFICATIONS

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

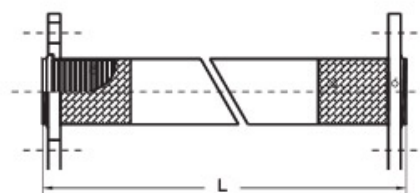
APPLICATIONS

- 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
Test Pressure	(x1.5) 24bar
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

DN	(mm)	20	25	32	40	50	65	80	100	125	150	200	250	300	(mm)
	(inch)	¾	1	1¼	1½	2	2½	3	4	5	6	8	10	12	
	L	300	300	300	300	300	300	300	300	300	300	300	300	300	
	Lateral Movement	33	33	33	33	33	32	32	26	20	18	9	7	4	

Noted: Special length available on request.

FLEXIBLE HOSE

SPECIFICATIONS

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

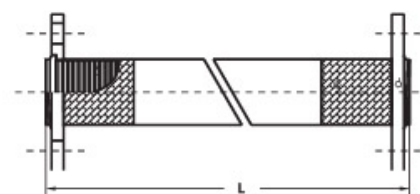
APPLICATIONS

- 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	25bar
Test Pressure	(x1.5) 37bar
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	150	200	250	300
	(inch)	¾	1	1¼	1½	2	2½	3	4	5	6	8	10	12
	L	300	300	300	300	300	300	300	300	300	300	300	300	300
	Lateral Movement	30	30	30	30	30	30	30	25	20	20	10	5	5

Note : Special length available on request.

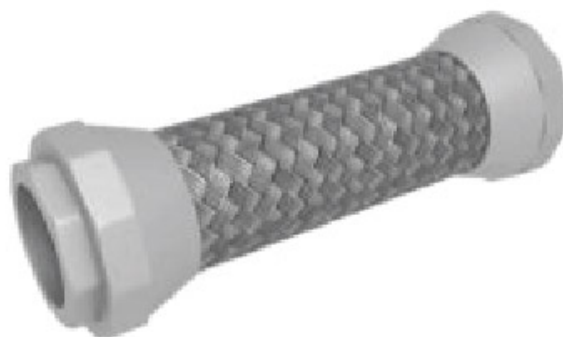
FLEXIBLE HOSE

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.

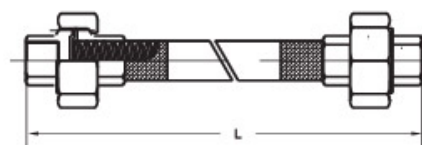


PRESSURE & TEMPERATURE RATINGS

Working Pressure	16bar
Test Pressure	(x1.5) 24bar
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
	(inch)	½	¾	1	1¼	1½	2
L		300	300	300	300	300	300
Lateral Movement		25	25	25	20	15	20

Note : Special length available on request.

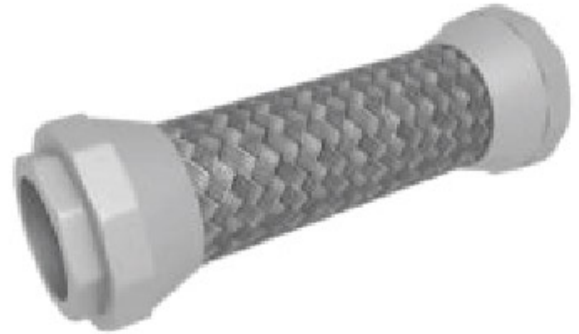
FLEXIBLE HOSE

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.

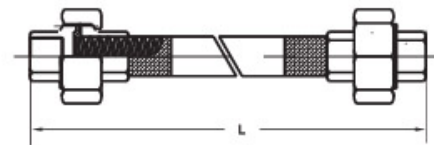


PRESSURE & TEMPERATURE RATINGS

Working Pressure	25bar
Test Pressure	(x1.5) 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 : Special length available on request.

GENERAL SERVICE PRESSURE GAUGE

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
- 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

STAINLESS STEEL PRESSURE GAUGE

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
- 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

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
- 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

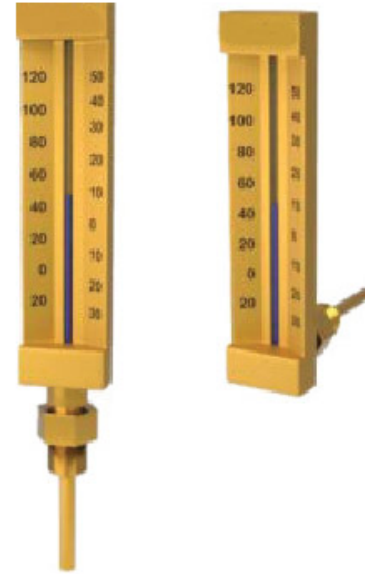
V-LINE GLASS THERMOMETER

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
- 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

BE-METAL THERMOMETER

FEATURES & SPECIFICATIONS

- Center back or bottom connection
- Bi-metallic coil sensing element for reliable readings
- Dual scale reading in °C and °F
- Equipped with brass thermowell
- Suitable for water, steam, oil within thermometer range
- 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

DIMENSIONS AND MOVEMENTS

		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

ADJUSTABLE ANGLE GLASS THERMOMETER

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
- 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	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



DIMENSIONS AND MOVEMENTS

		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
	-20°C ... 15°C ; 0 ... 60°F							020/15
	-20°C ... 50°C ; 0 ... 120°F							020/50
	-40°C ... 40°C ; -40 ... 110°F							040/40

ADJUSTABLE ANGLE BI-METAL THERMOMETER

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)
- 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
Connection	½" BSPT / NPT
Accuracy	+/- 1.0% of Full Scale Value

DIMENSIONS AND MOVEMENTS

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

PRESSURE/TEMPERATURE TEST PLUG

SPECIFICATIONS

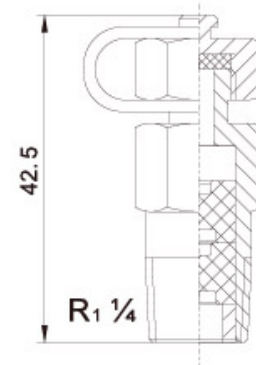
- Taper threaded to BS EN 10226-2 (ISO7-1)
- 1000 insertion style pressure / temperature test plug are fitted as standard to Flow Measurement Device and regulation valves

TEMPERATURE / PRESSURE RATINGS

Temperature (°C)	-10 to 100	110	120
Pressure (Bar)	25	25	25

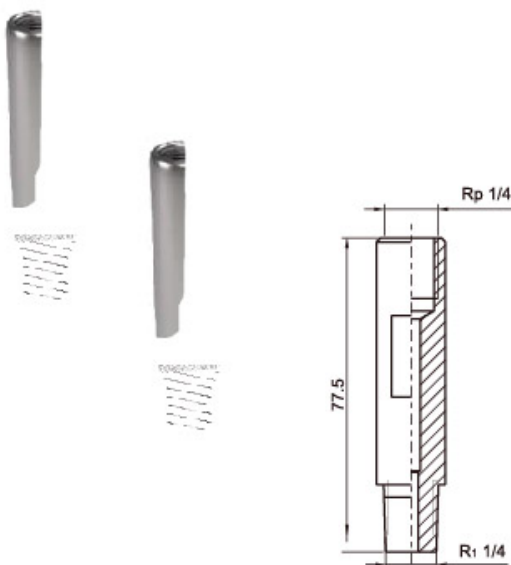
MATERIALS

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	110	120
Pressure (Bar)	25	25	25

MATERIALS

Part	Material
Extension Tube	Stainless Steel

MEASUREMENT ORIFICE PLATE

FEATURES & SPECIFICATIONS

- Stainless steel wafer design orifice plate suitable for BS4504 PN16 / BS4504 PN25 / EN1092-2 PN16 / EN1092-2 PN25 flange connection
- 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

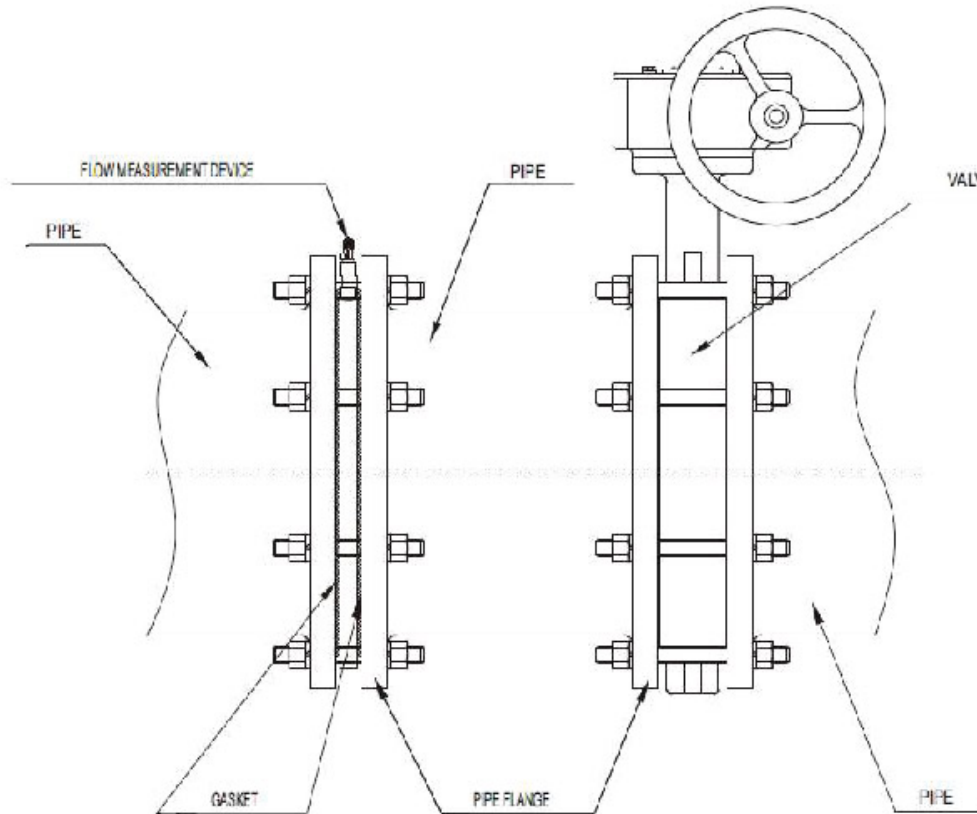
Part	Material
Orifice Plate	Stainless Steel
Extension Tubes	Stainless Steel
Pressure Test Plugs	Brass



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



INSTALLATION

The F6OP can be mounted between valve and / or pipe flanges to BS 4504 / BS EN 1092-2 having PN16 or PN25 ratings. The outside diameter ensures a proper alignment when installed between PN16 flanges and PN25 flanges up to 80mm size. When assembling between PN25 flanges sizes 100mm and larger, ensure the device has been correctly centered with the mating flanges.

APPLICATION

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

ELECTRIC ACTUATOR



BASE FEATURES

The case is processed by means of aluminum die-casting technology and precision machining technique.

Light weight and small size, outer surface is treated through flame plating technique to give an excellent appearance.

Easy to adjust the end position of stroke control and set torque switch and reliable on control.

High accuracy of driving medium, ball bearings are fitted at all rotating positions, high efficiency of whole machine and negligible noise.

Driving of the output shaft is carried out through worm gear and can be self-locked at any position.

There is an mechanical adjustable stop for valve and position control.

The manual/electric declutch is of semi-automation and electric-priority to ensure safe and reliable operation.

Possessing ideal outdoor performance.

Various flange connection modes, there is a valve stem adapter in the inner of output shaft, easy to mount and dismount.

Selected Function.

4-20mA DC valve position feedback signal.

Increasing electric block with automatic adjusting function.

Increasing limit switch to give passive control contacts.

Performing integral control, possessing local/remote-control shifting function and opening, closing and stop at local control functions.

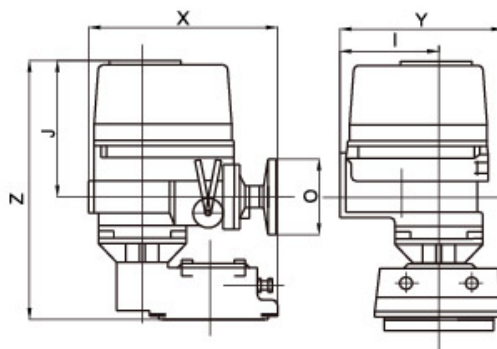
Fitted with heat protection element for electric motor.

Fitted with space heater in the inner of electric control cave.

Turn angle of output shaft is more or less than 90°.

Other special function requirement.

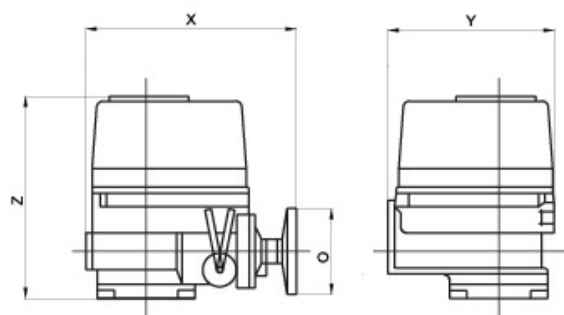
ELECTRIC ACTUATOR



DIMENSIONS

(mm)

Type	QT03	QT04	QT06	QT09	QT15	QT19	QT28	QT38	QT50	QT60	QT80	QT100
Flange	F05	F05	F07	F07	F07	F07	F10	F10	F10	F10	F05	F10
ISO5211	F07	F07			F10	F10	F12	F12	F12	F14	F14	F14
X	241	241	241	241	272	272	290	290	290	331	331	331
O	200	200	200	200	250	250	350	350	350	350	350	350
Z	256	256	256	256	263	263	298	298	298	342	342	342
Y	208	208	208	208	239	239	274	274	274	306	306	306
Output Torque(N*m)	30	40	60	90	150	190	280	380	500	600	800	1000
Output Speed(r/min)	0.9	0.9	0.9	0.9	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5
Reference Power(kw)	0.01	0.01	0.02	0.03	0.04	0.04	0.04	0.06	0.09	0.09	0.18	0.2
Rated Current(A)	0.2	0.2	0.25	0.3	0.8	0.8	0.8	1.2	1.6	1.6	3.2	3.6



DIMENSIONS

(mm)

Type	QT150	QT200	QT250
Flange	F16	F16	F16
ISO5211	F14	F14	F14
Z	505	505	505
J	264	264	264
H	241	241	241
X	357	357	357
O	350	350	350
T	132	132	132
Y	323	323	323
Output Torque(N*m)	1500	2000	2500
Output Speed(r/min)	0.2	0.2	0.17

ELECTRIC ACTUATOR

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 dII BT4), Integral, Integral Explosion-proof, Radiation-proof, Auto-Regulation, Two-Wire, Two-Speed Control, etc. Various actuators of different protection classes such as Water-Resistant, Marine Type, Fire-Proof are available on request. With a wide range of selection, SMC series of actuators are able to meet various requirements.

SPECIFICATIONS

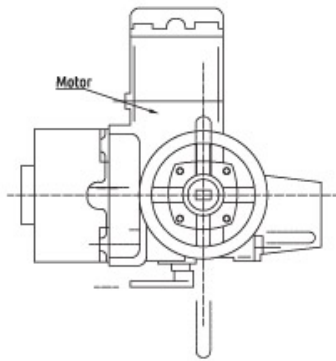
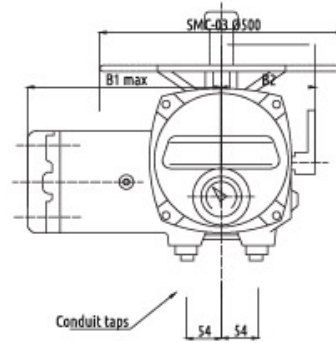
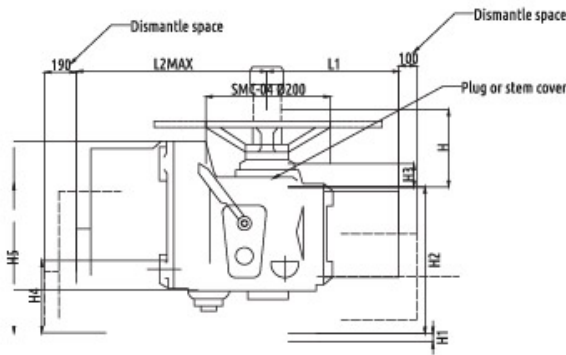
Ambient Temperature	-20°C ... 55°C
Relative Humidity	Max. 90%
Sea Level Height	Max. 1000m
Working Conditions	Without flammable, explosive, corrosive medium
Protection Class	IP 65 (IP68 for Submarine Type, To Specify When Order)
Power Supply	380V, 50Hz

PERFORMANCE

Model	Output Torque (N*m)	Thrust Allowed (kN)	Max. Stem Diameter (mm)	Output Speed (r/min)	Motor (kw)
SMC-04				20	0.2
				35	0.3
SMC-03				18	0.4
				27	0.6
SMC-00				24	1.1
				42	1.5
SMC-0				18	1.5
				31	2.2
SMC-1				12	2.2
				18	3
SMC-2				10	3
				18	4

ELECTRIC ACTUATOR

SMC-04 & SMC-03

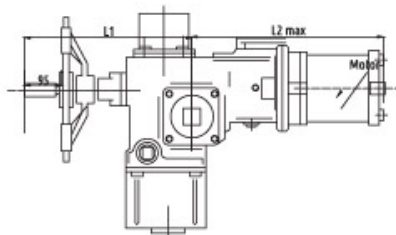
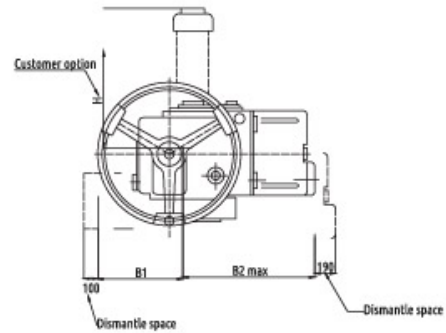
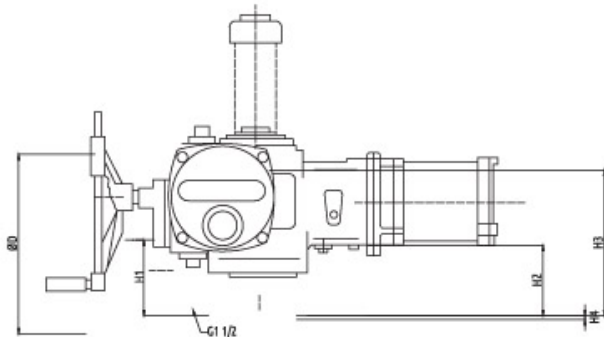


DIMENSIONS

(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

Iron Valves

Previous Fig. No.	Current Fig. No.	Enhanced Fig. No. (PN16)	Enhanced Fig. No. (PN25)	Full Description	Series	Connection	Type
2316/2325	F11	F1116	F1125	Wafer Butterfly Valve		1 Wafer Type	
2616	F11U	F11U16		U-Type Butterfly Valve			U U-Type
2516	F12	F1216	F1225	Full Lug Butterfly Valve		2 Lug Type	
2116	F13	F13C16		Concentric Double Flange Butterfly Valve	F1 - Butterfly Valve		C Concentric
2110	F13A	F13A-150		AWWA C504 Double Flange Butterfly Valve		3 Flange Type	A AWWA
29200/29300	F13E	F13E16	F13E25	Double Eccentric Butterfly Valve			E Eccentric
3116/3125	F17	F17-300		Groove Butterfly Valve		7 Groove Type	
3116R	F23	F23M16	F23M25	NRS Metal Seat Gate Valve			M BS 5150 Metal Seat
3216A	F23R	F23MR16	F23MR25	OS&Y Metal Seat Gate Valve			MR BS 5150 Metal Seat, OS&Y
3216B	F23A	F23A16	F23A25	NRS Resilient Seat Gate Valve			A BS 5163 Type A, NRS
3216AR	F23B	F23B16		NRS Resilient Seat Gate Valve			B BS 5163 Type B, NRS
3216BR	F23AR	F23AR16	F23AR25	OS&Y Resilient Seat Gate Valve	F2 - Gate Valve	3 Flange Type	AR BS 5163 Type A, OS&Y
3216AS	F23BR	F23BR16		OS&Y Resilient Seat Gate Valve			BR BS 5163 Type B, OS&Y
3216BS	F23AS	F23AS16		NRS Resilient Seat Gate Sluice Valve			AS BS 5163 Type A, NRS, Sluice
3316	F23BS	F23BS16		NRS Resilient Seat Gate Sluice Valve			BS BS 5163 Type B, NRS, Sluice
	F23F4	F23F416		NRS Metal Seat Gate Valve			F4 DIN 3352-F4, NRS
	F23RF4	F23RF416		OS&Y Metal Seat Gate Valve			F4R DIN 3352-F4, OS&Y
	F33B	F33B16		OS&Y Bellow Seal Globe Valve			B Bellow Seal
6116	F33S	F33S16		OS&Y S-Pattern Globe Valve	F3 - Globe Valve	3 Flange Type	S S-Pattern
6216	F33R	F33R16		OS&Y Round Body Globe Valve			R Round Body
4116	F43	F43O16		1-piece Body Ball Valve			O 1-Piece Body
		F43D16		2-piece Body Ball Valve	F4 - Ball Valve	3 Flange Type	D 2-Piece Body
		F43T16		3-piece Body Ball Valve			T 3-Piece Body
5316/5325	F51DD	F51DD16	F51DD25	Wafer Double Door Check Valve		1 Wafer Type	DD Double Door
5516/5525	F51N	F51N16	F51N25	Wafer Type Silent Check Valve			N Silent Type
5116/5125	F53N	F53N16	F53N25	Silent Check Valve	F5 - Check Valve	3 Flange Type	N Silent Type
5216	F53S	F53S16		Swing Check Valve			S Swing Type
	F53P	F53P16		Lifting Check Valve			P Lifting Type
1116/1125	F53F	F53F16	F53F25	Foot Valve			F Foot Valve
1916/1925	F63F	F63F16	F63F25	Fixed Orifice Double Regulating Valve	F6 - Control Valve	3 Flange Type	F Fixed Orifice
	F73B	F73B16	F73B25	Basket Type Strainer	F7 - Strainer	3 Flange Type	B Basket Type
7116/7125	F73Y	F73Y16	F73Y25	Y-Type Strainer			Y Y-Pattern
	F93S	F93S16		Single Orifice Air Valve		3 Flange Type	S Single Orifice
	F93D	F93D16		Double Orifice Air Valve	F9 - Air Vent / Air Valve	5 Female Threaded Ends	D Double Orifice
9716/9725	F95	F9516	F9525	Automatic Air Vent			

Hoses & Joints

Previous Fig. No.	Current Fig. No.	Enhanced Fig. No. (PN16)	Enhanced Fig. No. (PN25)	Full Description	Series	Connection	Type
FTFH/FTFHH	F83H	F83MH16	F83MH25	Flexible Hose		3 Flange Type	MH Metal Hose
UTFH/UTFHH	F85H	F85MH16	F85MH25	Flexible Hose		5 Female Threaded Ends	MH Metal Hose
8816/8825	F83MJ	F83MJ16	F83MJ25	Expansion Joint		3 Flange Type	MJ Metal Joint
8116/8125	F83SJ	F83SJ16	F83SJ25	Single Sphere Rubber Flexible Joint	F8 Hose & Joint	3 Flange Type	SJ Single Sphere Joint
8216/8225	F83DJ	F83DJ16	F83DJ25	Double Sphere Rubber Flexible Joint		3 Flange Type	DJ Double Sphere Joint
8716/8725	F85DJ	F85DJ16	F85DJ25	Double Sphere Rubber Flexible Joint		5 Female Threaded Ends	DJ Double Sphere Joint

Copper Valves

Previous Fig. No.	Current Fig. No.	Enhanced Fig. No.	Full Description	Series	Body Material	Pressure Rating	Type
3B16	F2B16	F2B16	Brass NRS Gate Valve		B Brass	16 PN16	
3Z16	F2Z16	F2Z16	DZR Brass NRS Gate Valve	F2 - 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		G Bronze	32 PN32	R OS&Y
6G20	F3G20R	F3G20R	Bronze Rising Stem Globe Valve	F3 - 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		B Brass	16 PN16	L Lift Type
5B16S	F5B16S	F5B16S	Brass Swing Check Valve	F5 - Check Valve	B Brass	16 PN16	S Swing Type
5G20L	F5G20L	F5G20L	Bronze Lift 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		B Brass	16 PN16	
7Z16	F7Z16	F7Z16	DZR Brass Y-Type Strainer	F7 - 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 Vent	B Brass	10 PN10	

Piping Specialties

Previous Fig. No.	Current Fig. No.	Enhanced Fig. No.	Full Description	Series	Type
P101	FP11	FP11	General Service Pressure Gauge		11 General, Steel Type, Brass Connection, Bottom Entry
	FP12	FP12	General Service Pressure Gauge		12 General, Steel Type, Brass Connection, Center Back Entry
P201	FP21	FP21	Stainless Steel Pressure Gauge		21 Stainless Steel Type, Brass Connection, Bottom Entry
P202	FP22	FP22	Stainless Steel Pressure Gauge	FP - Pressure Gauge	22 Stainless Steel Type, Stainless Steel Connection, Bottom Entry
P301	FP31	FP31	Stainless Steel Pressure Gauge		31 Stainless Steel Type, Brass Connection, Bottom Entry
P302	FP32	FP32	Stainless Steel Pressure Gauge		32 Stainless Steel Type, Stainless Connection, Bottom Entry
T110	FT11	FT11	V-Line Glass Thermometer		11 Straight
T120	FT12	FT12	V-Line Glass Thermometer		12 Angle
T210	FT21	FT21	Bi-Metal Thermometer		21 Bi-Metal Bottom Connection
T220	FT22	FT22	Bi-Metal Thermometer	FT - Thermometer	22 Bi-Metal Center Back Connection
T310	FT31	FT31	Adjustable Angle Glass Thermometer		31 Adjustable Angle, Brass Stem
T320	FT32	FT32	Adjustable Angle Glass Thermometer		32 Adjustable Angle, SUS304 Stem
T330	FT33	FT33	Adjustable Angle Glass Thermometer		33 Adjustable Angle, SUS316 Stem
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 - Temperature/Pressure Test Plug	06 Connection 6mm
1000OP	F6OP	F6OP	Measurement Orifice Plate	F6 - Control Valve	OP Orifice Plate

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

Series	Connection	Type	Pressure Rating	Body/Material	Disc	Seat	Stem	Connection	Operator	Valve Diameter	Accessory
F1	1		16 -	10	11	80	51	P16	L	.150	+QT15
F1 Butterfly Valve	1	A ANWA	10 PN10	10 Cast Iron	10 Ductile Iron	11 Ductile Iron	50 Stainless Steel 304	P10 PN10	L Lever	xxx mm	To Specify
	2	C Concentric	16 PN16	10e Epoxy Coated Cast Iron	11 Ductile Iron	36 Brass	51 Stainless Steel 316	P16 PN16	G Gear		
F2 Gate Valve	3	E Eccentric	20 PN20	11 Ductile Iron	11b NBR Coated	37 DZR Brass	52 Stainless Steel 410	P25 PN25	B Bare Shaft		
	4	U U-Type	25 PN25	11h Halar Coated	Ductile Iron	38 Bronze	53 Stainless Steel 420	J10 JIS10K	E Electric Actuator		
F3 Globe Valve	5	M 85 5129 Metal Seat, OS&W	150 150psi	Ductile Iron	Epoxy Coated	50 Stainless Steel	54 Stainless Steel 431	J16 JIS16K			
	6	MR 85 5129 Metal Seat, OS&W	200 200psi	11m EPDM Coated	Ductile Iron	304	57 Duplex Stainless Steel	J20 JIS20K			
	7	A 85 5163 Type A, NRS	250 250psi	Ductile Iron	11h Halar Coated	51 Stainless Steel	A125 ANSI125	A150 ANSI150			
	8	B 85 5163 Type B, NRS	300 300psi	Aluminum Bronze	Ductile Iron	316	59 Monel	A150 ANSI150			
	F4 Ball Valve	AR 85 5163 Type A, OS&W	50	Stainless Steel 304	11n Nylon Coated	80 EPDM	UF Universal Flange (Selected Standard)				
		BR 85 5163 Type B, OS&W	51e Epoxy Coated	50 Stainless Steel 316	Ductile Iron	80w White EPDM					
	F5 Check Valve	AS 85 5163 Type A, NRS	51h Halar Coated	51 Stainless Steel 316	Aluminum Bronze	81 NBR					
		BS 85 5163 Type B, NRS	51e Epoxy Coated	51 Stainless Steel 316	Stainless Steel 304	82 Neoprene					
		F4 DIN 3332-F4, NRS	57 Duplex Stainless Steel	51m EPDM Coated	Stainless Steel 316	87 Silicone					
		F4R DIN 3332-F4, OS&W	60 Carbon Steel	57m EPDM Coated	90 Chloroprene	88 PTFE					
S S-Pattern		66 Mild Steel	57 Duplex Stainless Steel	91 Hypalon	89 FPM						
B Below Seal											
R Round Body											
O 1-Piece Body											
D 2-Piece Body											
T 3-Piece Body											
F6 Control Valve	S Swing Type										
	DD Double Door										
	N Silent Type										
	P Lifting Type										
	F Foot Valve										
	F Fixed Orifice										
	V Variable Orifice										
	F7 Strainer					B Basket Type					
						V Y-Pattern					
	F8 Hose & Joint					MH Metal Hose					
SJ Single Sphere Joint											
DJ Double Sphere Joint											
F9 Air/Vent/Air Valve	MJ Metal Joint										
	S Single Orifice										
D Double Orifice											

The above specifications and materials are for reference only and some may not be available for this series. Please contact local distributor or sales representative for selection of material.

Head Quarter

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