

KEYSTONE

Stainless steel hygienic butterfly valves.

- F250 for imperial tubing
- F251 for metric tubing

Features

- Keystone technology.
- Quarter turn operation.
- Isolation or regulation control.
- Equal percentage characteristics.
- Bi-directional capability.
- Fully machined 316L stainless steel body.
- Optional end connections.
- One-piece disc and stem assembly.
- High C_v slim profile disc.
- Integral valve position indicator.
- High grade seat material options.
- Combination dual or multi position handle assembly.
- High impact reinforced polymer handle with a stainless steel drive (full stainless steel option available).
- Integral padlocking as standard on manual valves.
- Maintenance friendly.
- Site repairable.
- Full range of optional accessories.



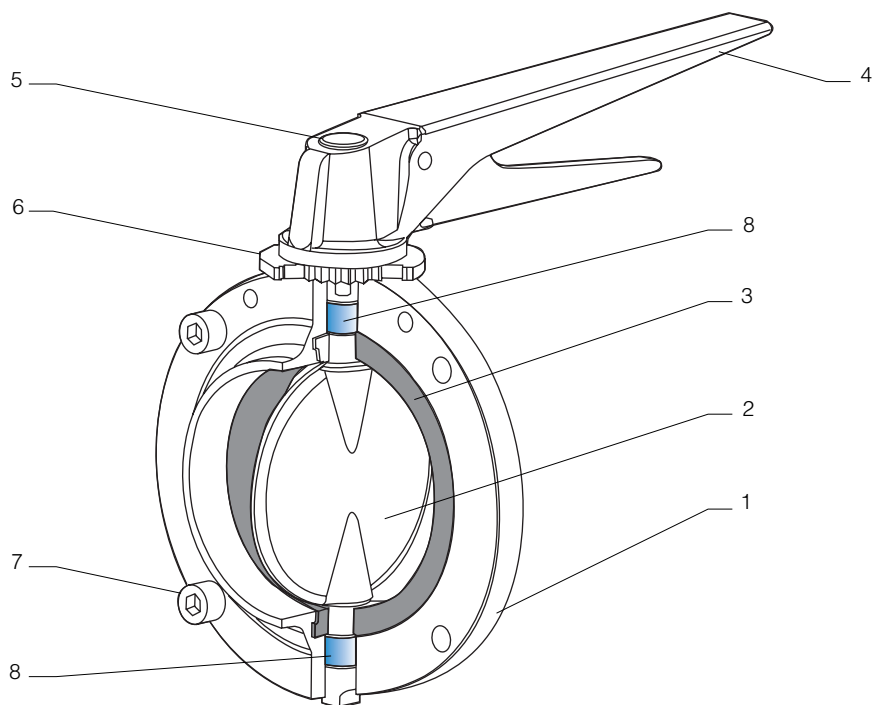
General Applications

A universal valve for isolation and control, in the food, dairy, brewing, pharmaceutical, beverage and chemical industries.

The Figure 250 and 251 are designed to be easily automated with any of Keystone's actuators and controls. From the Figure 257 Vertical Actuator and Figure 783 Electronic Control Head, to the Figure 790 or Figure 79S actuator.



Specifications



Technical Data

Max Product Pressure @ 20°C

1000 kPa (10 bar)

Recommended Working Pressure @ 20°C

600 kPa (6 bar)

Minimum Product Pressure @ 20°C

Full Vacuum

General Temperature Range

-10°C to 95°C

Maximum Static Temperature

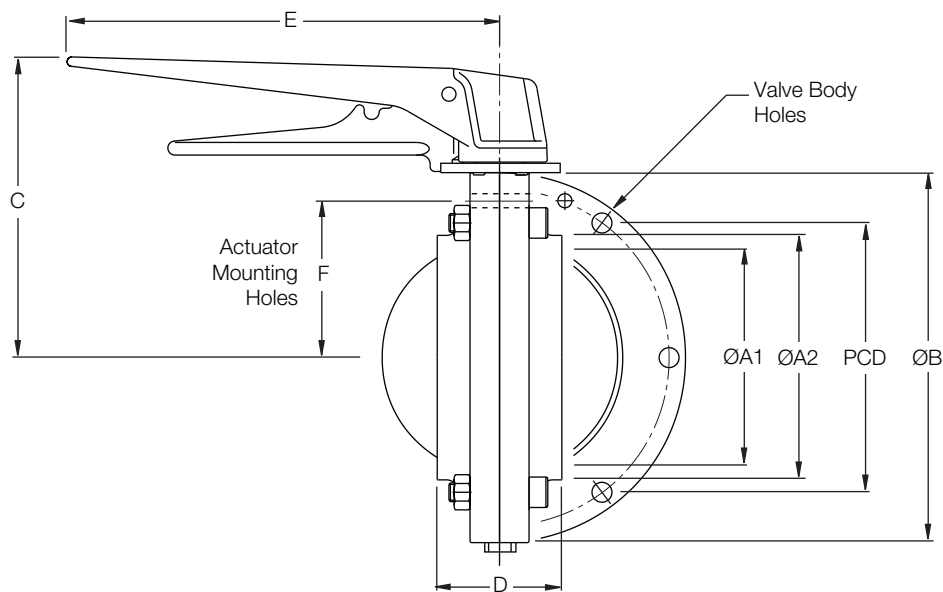
Silicon: 240°C
 Epdm: 120°C
 Nitrile: 100°C
 Viton®: 230°C

Note:

Although the various seat materials available can withstand temperatures above the 95°C stated for short periods of time, such as for sterilization and certain applications, the serviceability of these seats at elevated temperatures does vary depending on the media, pressure and other variables. Therefore, this is best determined from experience gained with the application concerned.

Parts List

No.	Description	Material	Standard
1	Body	316L SS	ASTM A276
2	Disc Stem	316 SS	ASTM A743 CF8M
3	Seat	Silicon (White) EPDM (Black) Nitrile (Black) Viton® (Red)	FDA FDA FDA –
4	Handle Assembly	High Impact Glass Reinforced Polymer or 304 SS	–
5	Handle Plug/Screw	Santoprene/304 SS	Commercial
6	Notch Plate	304 SS	ASTM A743 CF8
7	Body Fasteners	304 SS	ASTM A276
8	Bearings	PVDF	Commercial



F250 Imperial Valve Dimensions (mm)

Valve Size DN	Imperial	ØA1	ØA2	ØB	C	D	E	F	PCD	No. Holes	Hole Dia	Stem Conn.	Mass (kg)	Kv (Fully Open)
25	1"	22.3	25.8	69	83.5	50	185	26.5	59	4	6	8 mm sq.	0.7	17
40	1½"	35.0	38.5	79	88.5	50	185	31.5	69	4	6	8 mm sq.	0.8	64
50	2"	47.7	51.2	94	96.0	50	185	38.0	84	4	6	8 mm sq.	1.1	131
65	2½"	60.4	63.9	104	101.0	50	185	43.0	95	4	6	8 mm sq.	1.5	220
80	3"	73.1	76.6	124	112.0	60	185	50.0	111	4	8	10 mm sq.	2.0	333
100	4"	98.5	102.0	151	125.5	70	185	63.5	139	6	8	12 mm sq.	3.3	726
125	5"	125.0	123.0	127	198.0	71	266	90.4	177	6	10	15 mm sq.	7.5	1370
150	6"	148.4	153.0	223	183.5	80	266	98.5	207	6	10	15 mm sq.	8.2	2050

F251 Metric Valve Dimensions (mm)

Valve Size DN	Imperial	ØA1	ØA2	ØB	C	D	E	F	PCD	No. Holes	Hole Dia	Stem Conn.	Mass (kg)	Kv (Fully Open)
25	1"	26	29.9	74	86.0	50	185	29.0	63	4	6	8 mm sq.	0.8	19
32	1¼"	32	35.2	79	88.5	50	185	31.5	69	4	6	8 mm sq.	0.7	41
40	1½"	38	41.2	87	92.5	50	185	35.5	76	4	6	8 mm sq.	0.9	69
50	2"	50	54.4	99	98.5	50	185	40.5	89	4	6	8 mm sq.	1.4	137
65	2½"	66	70.4	123	111.5	50	185	49.5	109	4	8	10 mm sq.	2.5	263
80	3"	81	85.4	138	119.0	54	185	57.0	124	4	8	10 mm sq.	3.0	381
100	4"	100	104.4	158	129.0	54	185	67.0	144	6	8	12 mm sq.	4.5	689
125	5"	125	132.4	198	166.0	74	266	90.4	177	6	10	15 mm sq.	7.5	1370
150	6"	150	156.4	223	183.5	80	266	98.5	207	6	10	15 mm sq.	8.2	2050

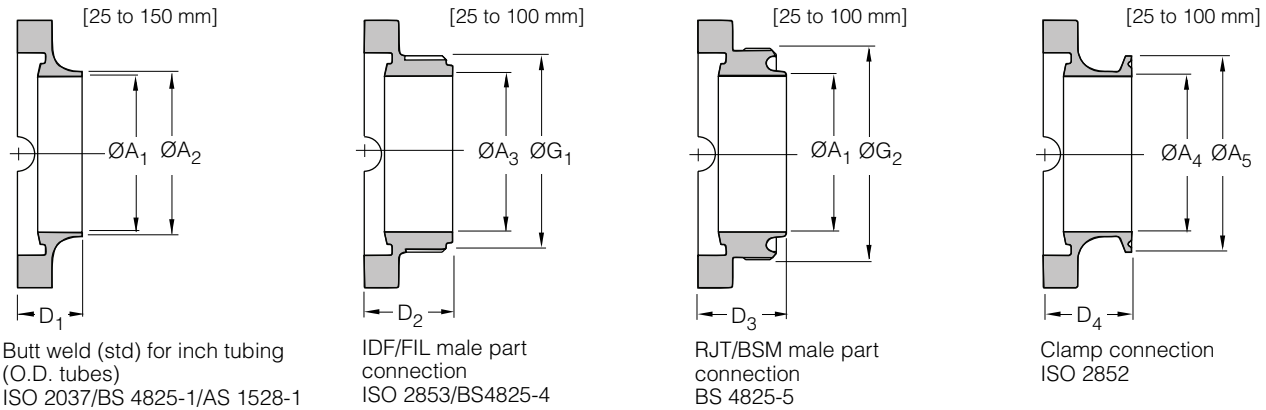
Notes:

Dimensions "D" and "A2", shown above, are for the butt weld configuration only. For other types of connections, refer to attached End Connection data.

Dimension "E" is the maximum clearance length for either handle.

Masses shown are for bare shafted butt weld valves only.

F250 Imperial Valve – Available End Connections

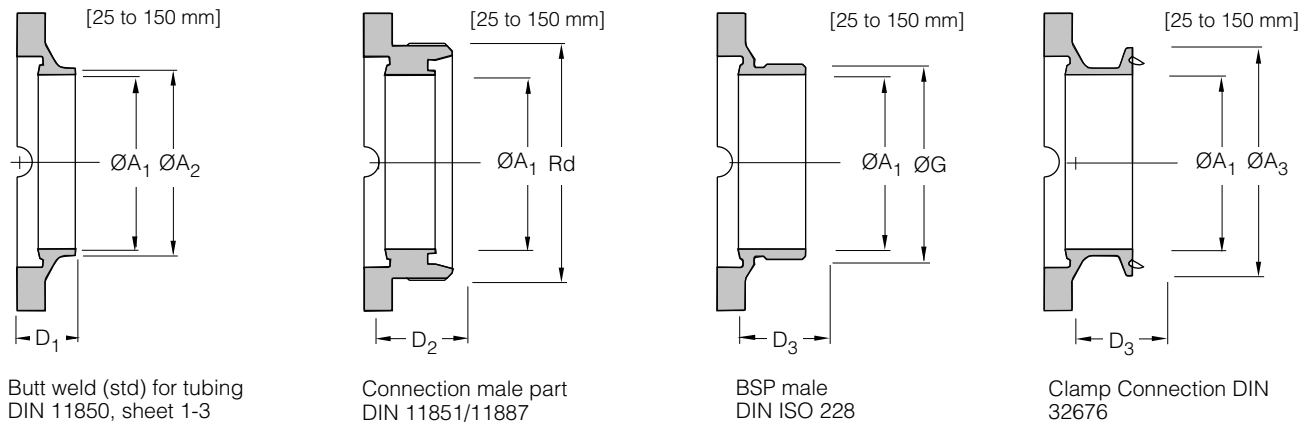


Dimensions [mm]

DN	Imperial	ØA ₁	ØA ₂	ØA ₃	ØA ₄	ØA ₅	ØG ₁	ØG ₂	D ₁	D ₂	D ₃	D ₄
25	1"	22.3	25.8	23.0	23.0	50.5	IDF 1"	RJT 1"	25	46	51	37
40	1 1/2"	35.0	38.5	35.6	35.6	50.5	IDF 1 1/2"	RJT 1 1/2"	25	46	51	37
50	2"	47.7	51.2	47.7	47.7	64.0	IDF 2"	RJT 2"	25	46	51	37
65	2 1/2"	60.4	63.9	59.4	60.4	77.5	IDF 2 1/2"	RJT 2 1/2"	25	46	51	37
80	3"	73.1	76.6	72.2	73.1	91.0	IDF 3"	RJT 3"	30	51	56	42
100	4"	98.5	102.0	98.5	98.0	119.0	IDF 4"	RJT 4"	35	56	61	50
150	6"	148.4	153.0	-	153.0	-	-	-	40	69	66	55

Note: BSM modified version is available upon request, deduct 4.7 mm from dimension D3.

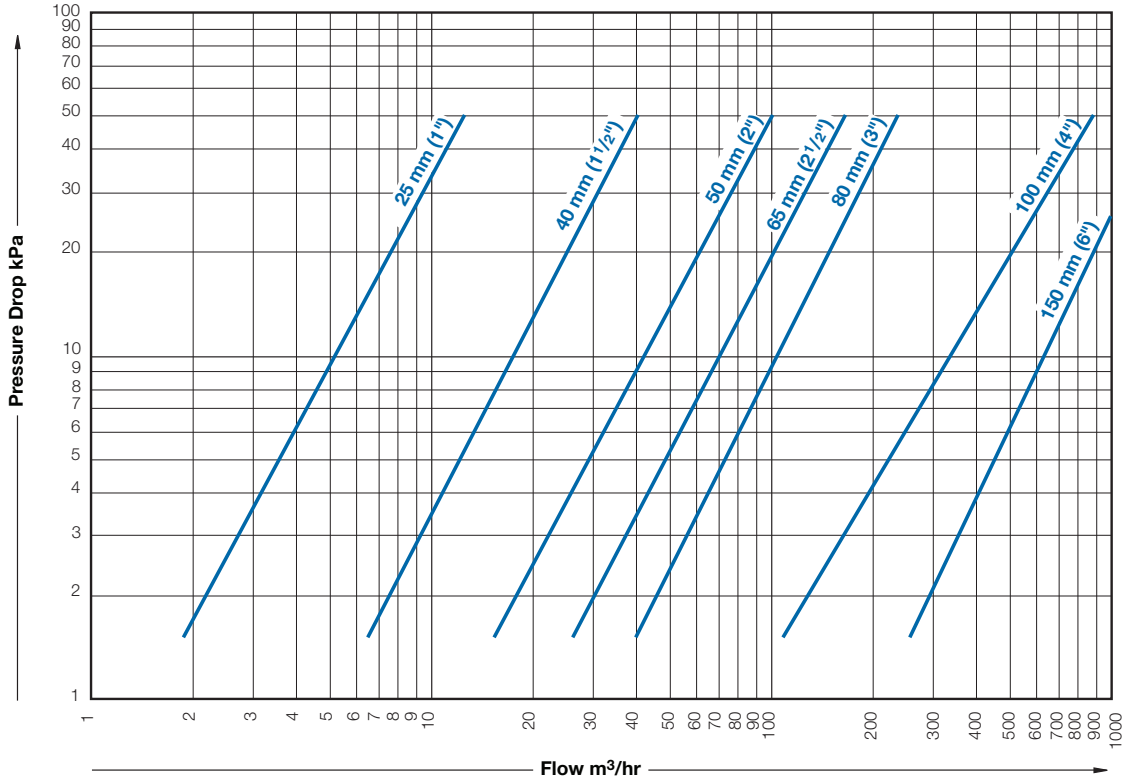
F251 Metric Valve – Available End Connections



Dimensions [mm]

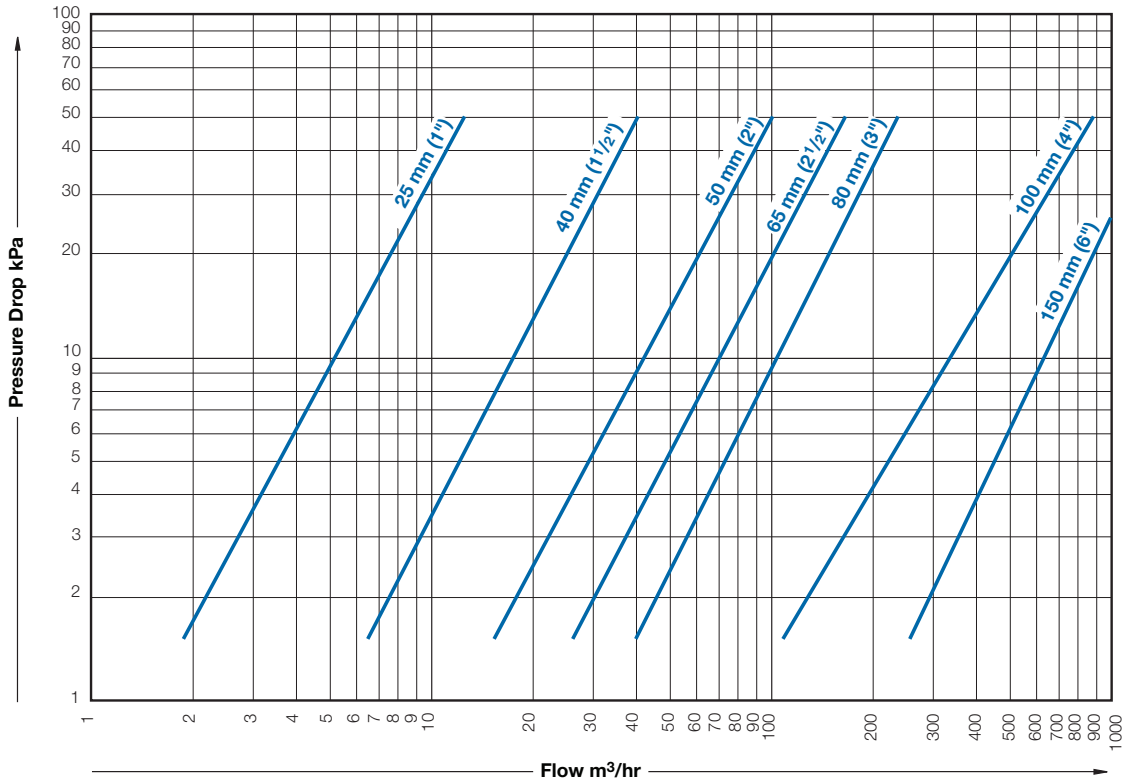
DN	Imperial	ØA ₁	ØA ₂	ØA ₃	ØG ₁	D ₁	D ₂	D ₃	Rd
25	1"	26	29.2	50.5	G 1"	25	37	34	Rd 52 x 1/6"
32	1 1/4"	32	35.2	50.5	G 1 1/4"	25	37	34	Rd 58 x 1/6"
40	1 1/2"	38	41.2	50.5	G 1 1/2"	25	37	34	Rd 65 x 1/6"
50	2"	50	54.4	64	G 2"	25	37	34	Rd 78 x 1/6"
65	2 1/2"	66	70.4	91	G 2 1/2"	25	41	37	Rd 95 x 1/6"
80	3"	81	85.4	106	G 3"	27	45	41	Rd 110 x 1/4"
100	4"	100	104.4	119	G 4"	27	45	41	Rd 130 x 1/4"
125	5"	125	132.4	155	-	37	58	50	Rd 160 x 1/4"
150	6"	150	156.4	183	-	40	66	55	Rd 190 x 1/4"

F250 Pressure Drop / Flow Rates Graph



Note:
This chart is based on an F250 valve fully open, using water @ 20°C.

F251 Pressure Drop / Flow Rates Graph



Note:
This chart is based on an F251 valve fully open, using water @ 20°C.

Typical Specifying Sequence

Example:	050	F250	255	CLP/RJT	H8S
Valve Size, inches [mm]					
025	1" [DN25]				
032	1.25" [DN32]				
040	1.5" [DN40]				
050	2" [DN50]				
065	2.5" [DN65]				
080	3" [DN80]				
100	4" [DN100]				
125	5" [DN125]				
150	6" [DN150]				

Figure

F250 - Imperial tubing wafer style butterfly valve

F251 - Metric tubing wafer style butterfly valve

Trim	Seat	Body	Disc	Bearing
255	EPDM	304L	316L	PVDF
256	Silicon	304L	316L	PVDF
257	Nitrile	304L	316L	PVDF
258	Viton®	304L	316L	PVDF
259	Viton®	316L	316L	PVDF
262	EPDM	316L	316L	PVDF
263	Silicon	316L	316L	PVDF
264	Nitrile	316L	316L	PVDF

End Connections

Weld Ends

BW - Butt Weld

BWD - Butt Weld

PAP - BW Extension Tube 101.6 mm Long

WAF - Wafer valve and BW flanges

WBO - Wafer valve without flanges

Clamp Ends

CLF - Clamp Ends (Fabricated)

CLP - Clamp (Machined)

DCL - DIN Clamp End, DIN sizing

ILN - I Line, Male Spigot

Thread Ends

BSP - Internal Thread (BSPT)

DIN Tube DIN - DIN Thread (Fabricated)

HEX - Hexagonal Nut and Liner, RJT

HXM - Hexagonal Nut and Liner Mod, RJT

IDF - BS/ISO/Japanese Standard

NPT - NPT Taper Thread (Fabricated)

NPF - NPT Taper Thread

RJF - RJT Male part (Fabricated)

RJL - RJT Male part Long (Machined)

RJM - RJT Male part (Machined) (BSM) Modified Spigot

RJT - RJT Male part Machined

RND - Round Nut and Liner, RJT

SMS - SMS Male part, External Thread 6 TPI (Machined)

SMF - SMS Male part, External Thread 6 TPI (Fabricated)

Extended Definer

H7P - F397 Polymer Handle

H7S - F397 304 Stainless Handle

H8S - F398 304 Stainless Handle

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