

Climate
Control

IMI TA

TA BBV LF

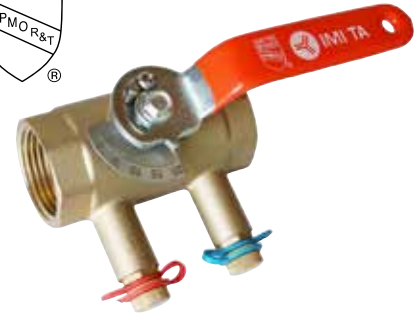


Manual balancing valves

Manual balancing ball valve – Lead free, size 1/2" - 2",
NSF/ANSI 61 and NSF/ANSI 372 certified

TA BBV LF

IMI TA Series BBV LF, Lead Free Manual Balancing Ball Valve is a manual throttling and shut-off valve that contains an adjustable memory stop handle. This valve is made from lead free brass to be certified to NSF/ANSI 61 and NSF/ANSI 372 for domestic hot water systems.



Key features

Blowout proof stem

Adjustable memory stop handle

Vinyl coated grip handle with adjustable memory stop for shut-off and presetting.

Commercial hot water compliant

The valves are tested at 180°F to be commercial hot water compliant.

Technical description

Application:

Heating, cooling and tap water systems.

Functions:

Balancing
Measuring
Shut-off

Dimensions:

1/2" - 2"

Pressure class:

400 psi (28 bar)

Flow range:

The flow (q_{max}) can be set within the range:

Size	Flow range [gpm]	
	Threaded NPT	Solder SWT
1/2"	0.38 - 5.30	0.36 - 5.13
3/4"	0.94 - 12.48	1.07 - 11.61
1"	1.56 - 19.30	1.24 - 19.20
1 1/4"	2.11 - 30.5	2.20 - 30.6
1 1/2"	2.68 - 45.4	2.61 - 44.5
2"	6.18 - 85.0	6.30 - 83.0

Flow accuracy: $\pm 15\%$.

Temperature:

Max. working temperature: 248°F (120°C)
Min. working temperature: -4°F (-20°C)

Material:

Body: HPb59-2, equivalent to UNS C69300.
O-rings: Peroxide cured EPDM suitable for service with propylene and ethylene glycol mixtures up to 50% by volume in water, Shore A durometer rating of 70 ± 5 points.

Blowout proof stem and ball: Stainless steel.

Ball retainer: HPb59-2, equivalent to UNS C69300.

Ball seats: PTFE.

Valve handle: Zinc plated low carbon steel with a vinyl dip.

Indexing handle with adjustable memory stop: Zinc plated carbon steel.

Positioning pin and dial scale:

UNS S30400.

Marking:

Body: Flow direction arrow.

Handle: IMI TA, IAPMO certification logo, label for size.

Connection:

- Internal NPT
- Solder SWT

Approvals:

Approved by IAPMO

NSF/ANSI 61 certified

NSF/ANSI 372 certified

Function

IMI TA Series BBV LF, Lead Free Manual Balancing Ball Valve, is a manual throttling and shut-off valve that contains an adjustable memory stop handle. The adjustable memory stop

handle permits a preset to a fixed open position and then closed for service without disturbing valve setting. Position 20 indicate fully open valve and position 0 indicate fully closed valve.

Measuring points

Measuring point are self-sealed. Remove the cap and insert the probe through the seal.

Extended measuring point are available as option, see "Accessories".

Sizing

When Δp and design flow is known, calculate the Cv by using the formula provided. Select the valve size so the setting will be approximately 75% of total opening.

$$Cv = 1.52 \frac{q}{\sqrt{\Delta p}} \quad q \text{ in GPM, } \Delta p \text{ in ft WG}$$

$$Cv = \frac{q}{\sqrt{\Delta p}} \quad q \text{ in GPM, } \Delta p \text{ in psi}$$

Cv values

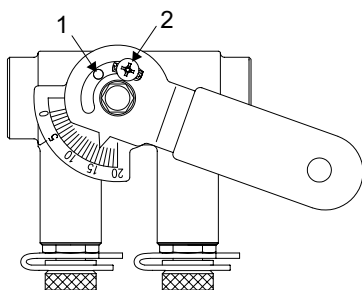
Threaded NPT version

Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
1/2"	0.00	0.03	0.08	0.14	0.21	0.43	0.71	1.10	1.63	2.58	2.83
3/4"	0.03	0.12	0.23	0.32	0.50	0.92	1.63	2.61	3.76	5.89	6.67
1"	0.03	0.18	0.36	0.58	0.83	1.54	2.54	3.90	5.73	8.86	10.32
1 1/4"	0.03	0.16	0.45	0.74	1.13	2.21	3.80	5.95	8.65	13.25	16.31
1 1/2"	0.00	0.17	0.51	0.95	1.43	3.03	5.41	8.91	13.02	20.1	24.3
2"	0.06	0.60	1.34	2.33	3.30	6.45	11.13	17.77	26.1	40.4	45.3

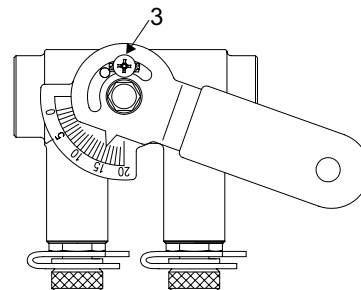
Solder SWT version

Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
1/2"	0.00	0.03	0.07	0.13	0.19	0.37	0.58	0.93	1.50	2.51	2.74
3/4"	0.06	0.17	0.29	0.42	0.57	1.00	1.62	2.59	3.77	5.93	6.21
1"	0.00	0.09	0.25	0.48	0.66	1.29	2.29	3.56	5.30	7.80	10.29
1 1/4"	0.02	0.18	0.47	0.79	1.18	2.26	3.84	5.97	8.68	12.84	16.38
1 1/2"	0.06	0.13	0.44	0.88	1.40	2.97	5.34	8.88	13.02	20.4	23.8
2"	0.11	0.69	1.45	2.35	3.37	6.36	11.03	17.67	25.0	36.5	44.6

Setting



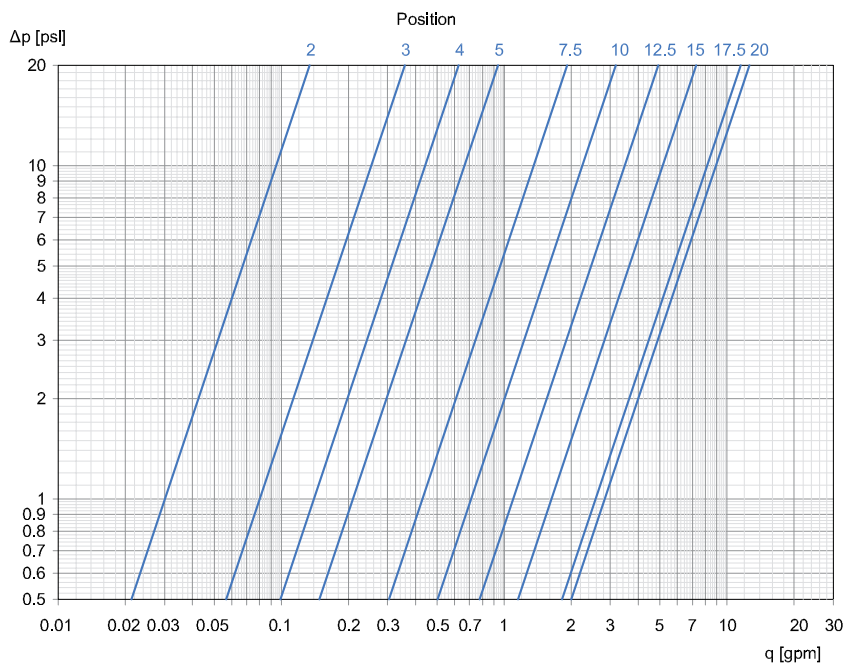
1. Pin
2. Set screw assembly



3. Handle position set at 15 with set screw assembly locked against pin.

Diagrams – Threaded NPT

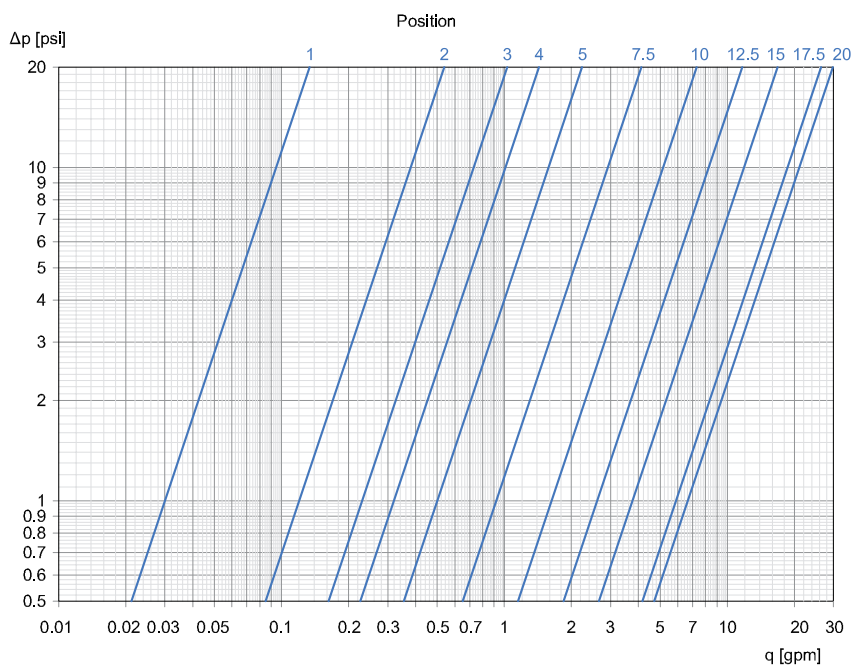
Size 1/2"



Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
1/2"	0.00	0.03	0.08	0.14	0.21	0.43	0.71	1.10	1.63	2.58	2.83

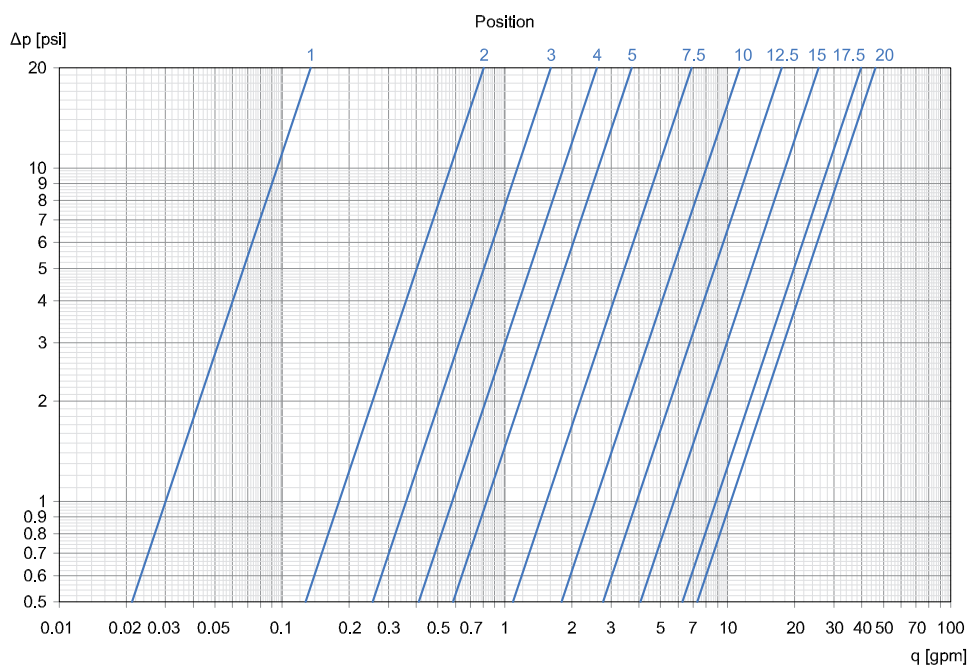
Recommended setting: Position 5-20

Size 3/4"



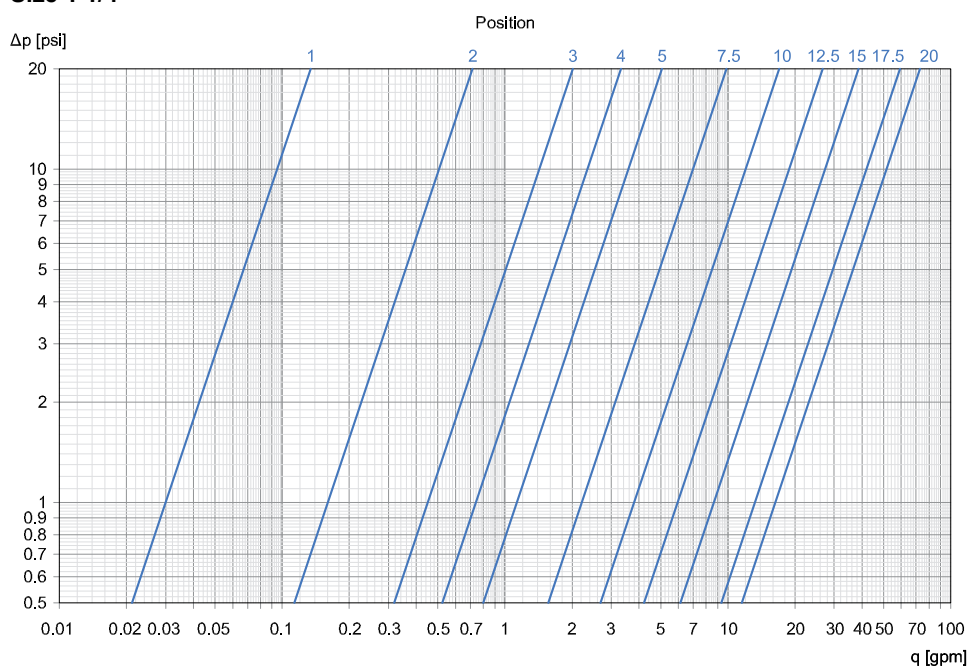
Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
3/4"	0.03	0.12	0.23	0.32	0.50	0.92	1.63	2.61	3.76	5.89	6.67

Recommended setting: Position 5-20

Size 1"

Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
1"	0.03	0.18	0.36	0.58	0.83	1.54	2.54	3.90	5.73	8.86	10.32

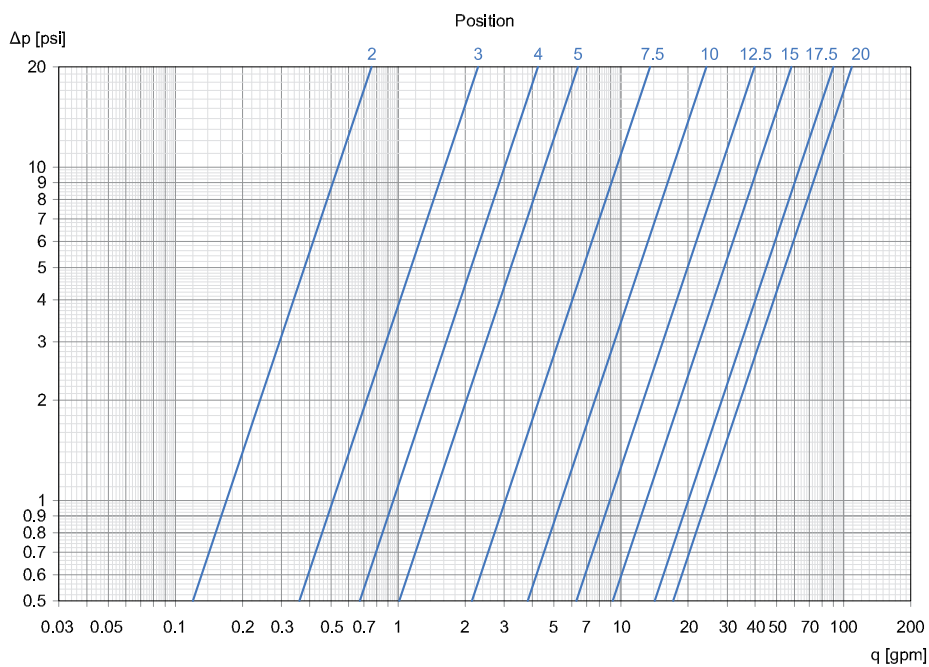
Recommended setting: Position 5-20

Size 1 1/4"

Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
1 1/4"	0.03	0.16	0.45	0.74	1.13	2.21	3.80	5.95	8.65	13.25	16.31

Recommended setting: Position 5-20

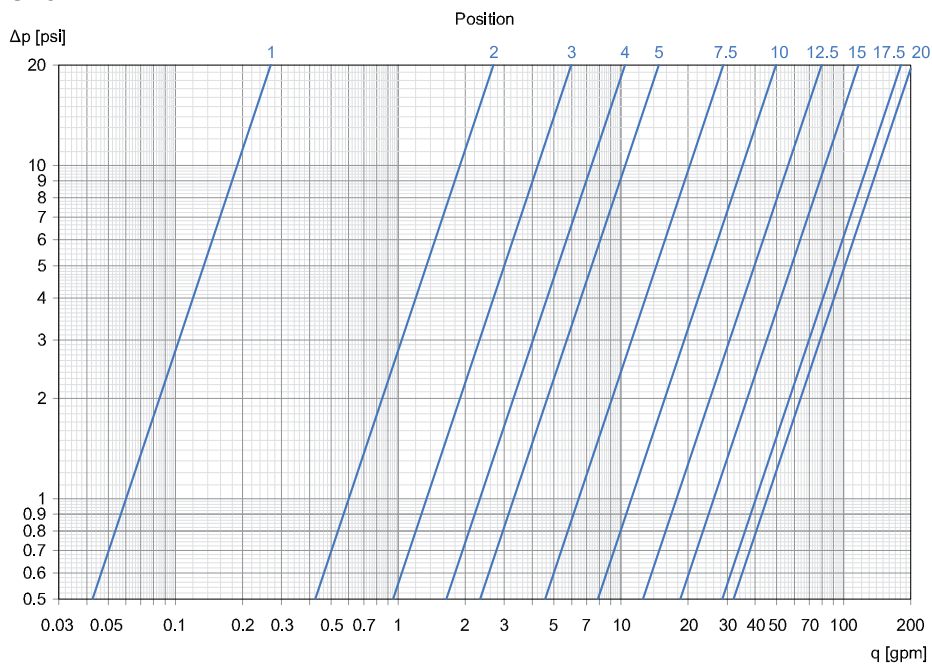
Size 1 1/2"



Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
1 1/2"	0.00	0.17	0.51	0.95	1.43	3.03	5.41	8.91	13.02	20.1	24.3

Recommended setting: Position 5-20

Size 2"

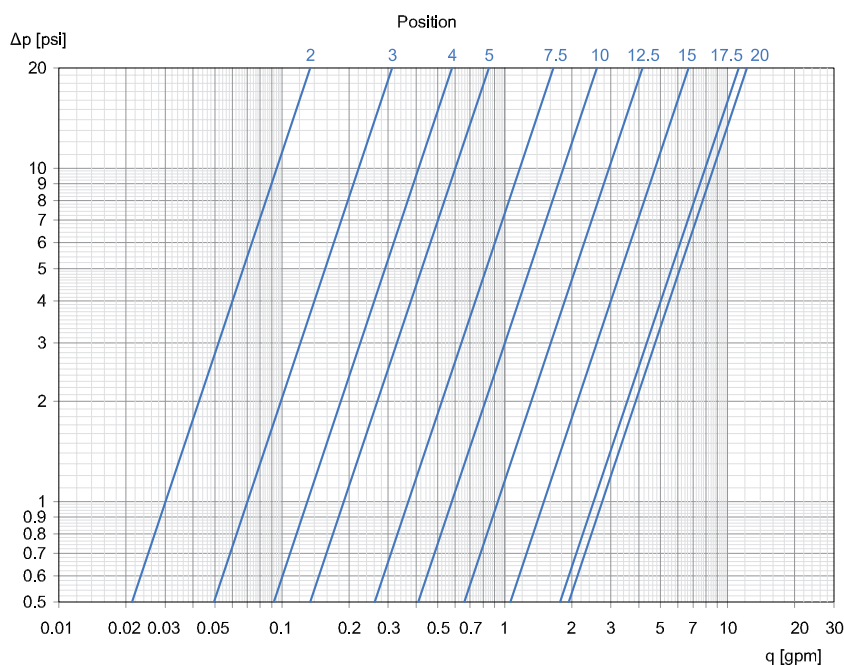


Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
2"	0.06	0.60	1.34	2.33	3.30	6.45	11.13	17.77	26.1	40.4	45.3

Recommended setting: Position 5-20

Diagrams – Solder SWT

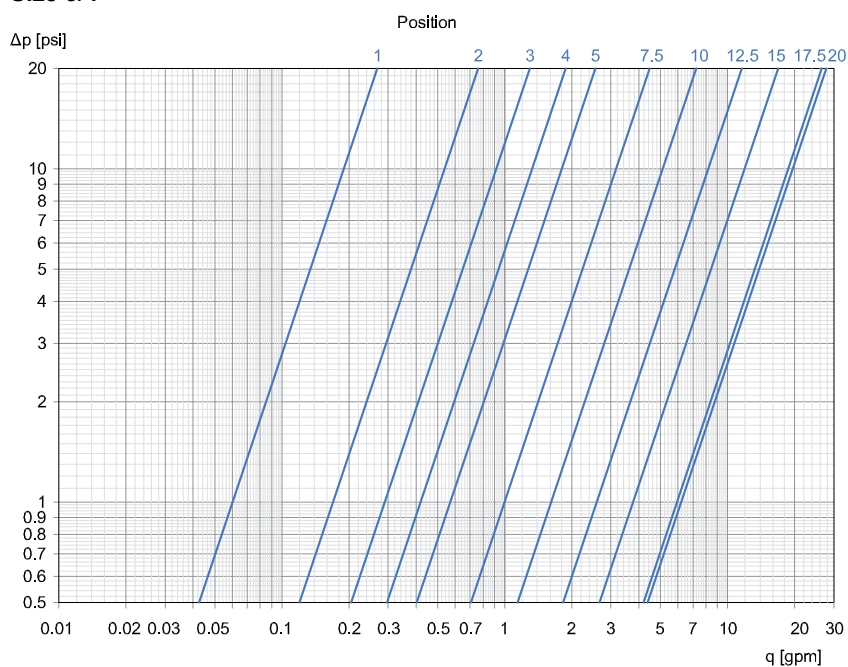
Size 1/2"



Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
1/2"	0.00	0.03	0.07	0.13	0.19	0.37	0.58	0.93	1.50	2.51	2.74

Recommended setting: Position 5-20

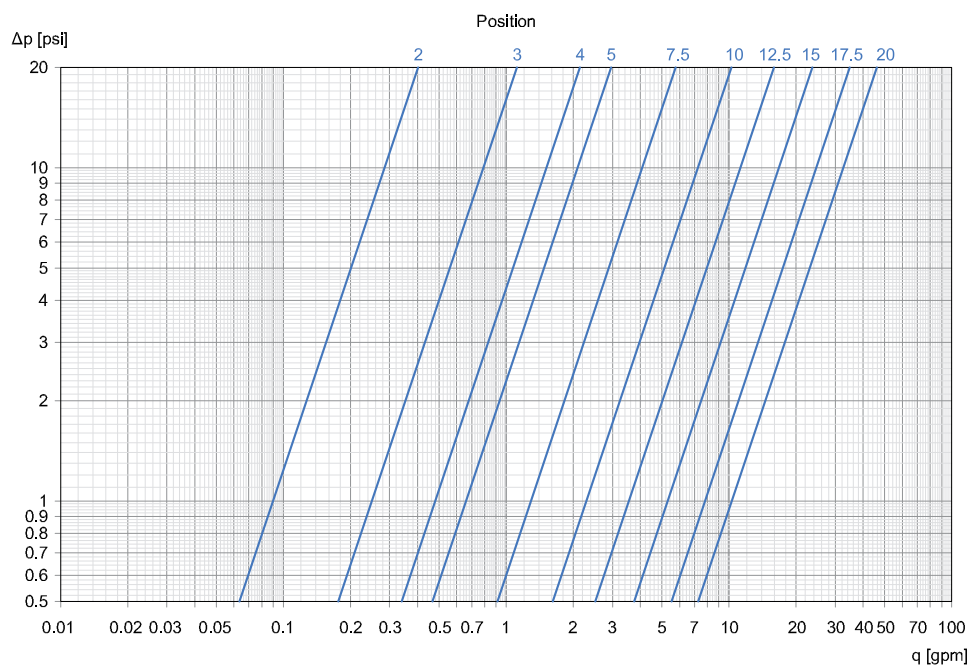
Size 3/4"



Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
3/4"	0.06	0.17	0.29	0.42	0.57	1.00	1.62	2.59	3.77	5.93	6.21

Recommended setting: Position 5-20

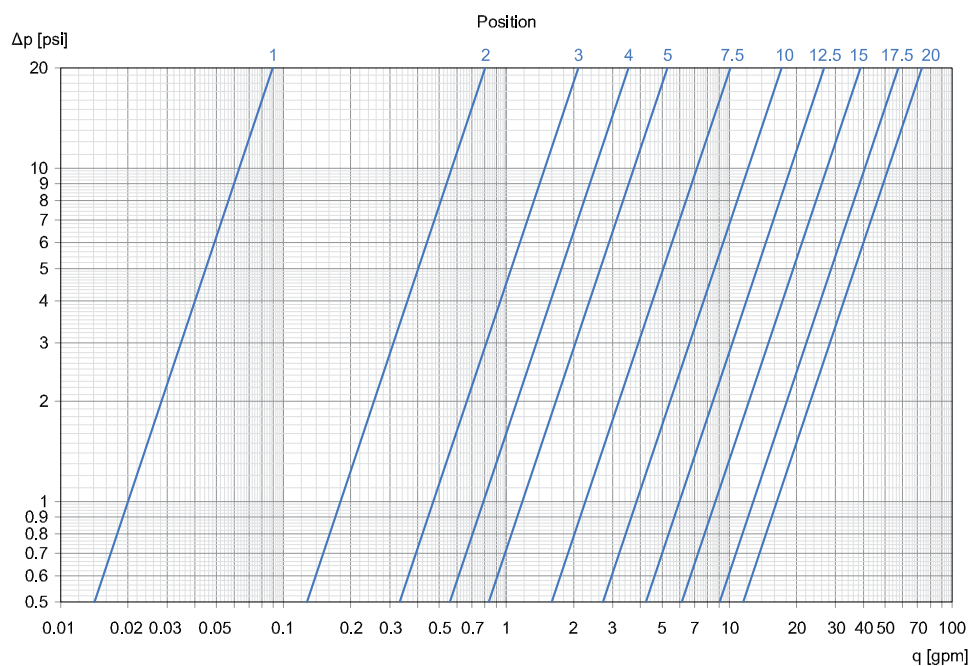
Size 1"



Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
1"	0.00	0.09	0.25	0.48	0.66	1.29	2.29	3.56	5.30	7.80	10.29

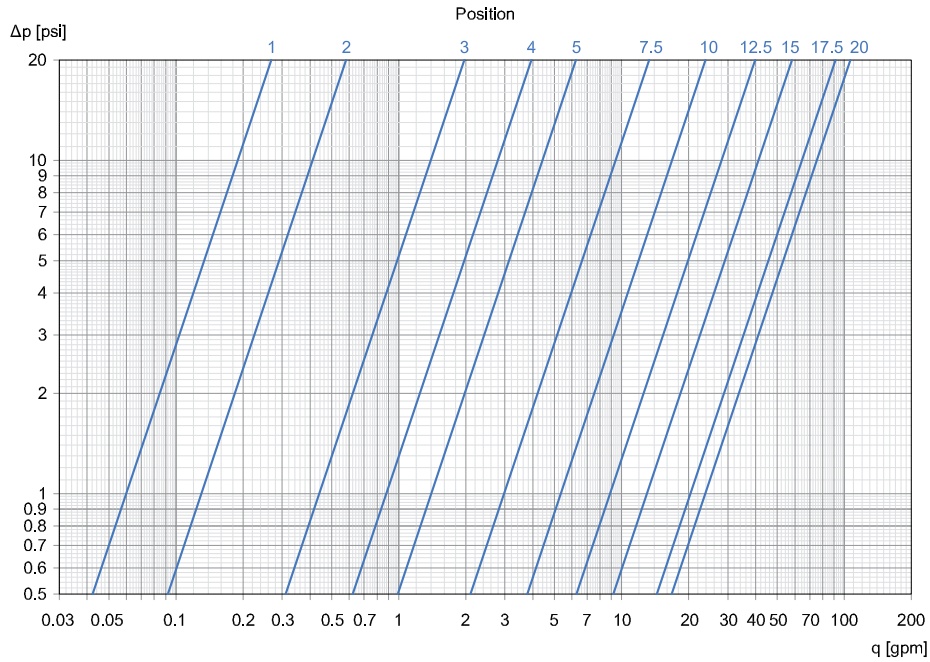
Recommended setting: Position 5-20

Size 1 1/4"



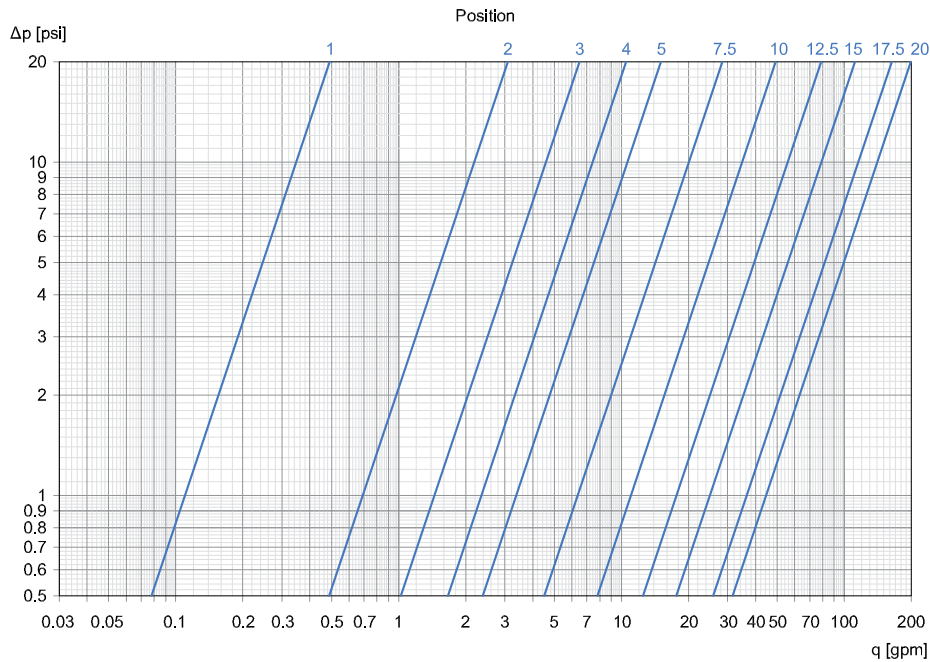
Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
1 1/4"	0.02	0.18	0.47	0.79	1.18	2.26	3.84	5.97	8.68	12.84	16.38

Recommended setting: Position 5-20

Size 1 1/2"

Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
1 1/2"	0.06	0.13	0.44	0.88	1.40	2.97	5.34	8.88	13.02	20.4	23.8

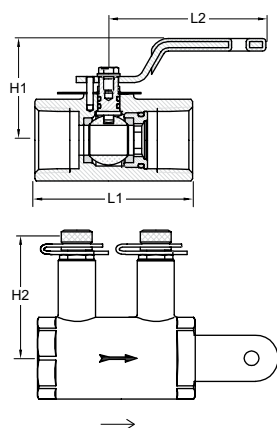
Recommended setting: Position 5-20

Size 2"

Size	1	2	3	4	5	7.5	10	12.5	15	17.5	20
2"	0.11	0.69	1.45	2.35	3.37	6.36	11.03	17.67	25.0	36.5	44.6

Recommended setting: Position 5-20

Articles



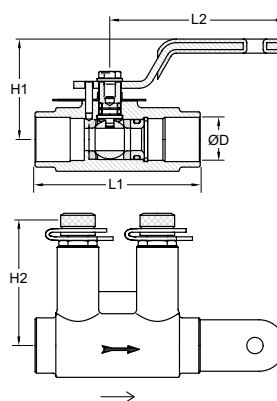
Threaded NPT

Inlet: Fixed connection

Outlet: Fixed connection

Size	D	L1 [in]	L2 [in]	H1 [in]	H2 [in]	Flow range [gpm]	Cvs	Weight [lb]	Article No
1/2"	1/2 NPT	2.35	2.49	1.43	1.80	0.38-5.30	2.83	0.60	BBVLF050FF
3/4"	3/4 NPT	2.50	2.49	1.61	1.89	0.94-12.48	6.67	0.80	BBVLF075FF
1"	1 NPT	3.03	4.00	1.95	2.05	1.56-19.30	10.32	1.28	BBVLF100FF
1 1/4"	1 1/4 NPT	3.32	4.00	2.15	2.21	2.11-30.5	16.31	2.02	BBVLF125FF
1 1/2"	1 1/2 NPT	3.60	4.78	2.41	2.34	2.68-45.4	24.3	2.82	BBVLF150FF
2"	2 NPT	4.09	4.78	2.69	2.58	6.18-85.0	45.3	4.42	BBVLF200FF

→ = Flow direction



Solder SWT

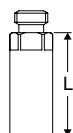
Inlet: Fixed connection

Outlet: Fixed connection

Size	D [in]	L1 [in]	L2 [in]	H1 [in]	H2 [in]	Flow range [gpm]	Cvs	Weight [lb]	Article No
1/2"	0.63	2.35	2.49	1.43	1.74	0.36-5.13	2.74	0.49	BBVLF050SS
3/4"	0.88	3.05	2.49	1.61	1.87	1.07-11.61	6.21	0.70	BBVLF075SS
1"	1.13	3.61	4.00	1.95	2.03	1.24-19.20	10.29	1.18	BBVLF100SS
1 1/4"	1.38	3.99	4.00	2.15	2.15	2.20-30.6	16.38	1.65	BBVLF125SS
1 1/2"	1.63	4.53	4.78	2.41	2.29	2.61-44.5	23.8	2.40	BBVLF150SS
2"	2.13	5.47	4.78	2.69	2.55	6.30-83.0	44.6	3.92	BBVLF200SS

→ = Flow direction

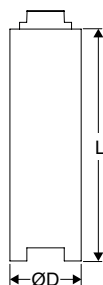
Accessories



Extension for measuring point

(2 pcs)

L [in]	Article No
1.18	DX



Extension for handle

Valve size	L [in]	D [in]	Article No
1/2" - 3/4"	1.96	0.78	BBVEH-A
1" - 1 1/4"	1.96	0.98	BBVEH-B
1 1/2" - 2"	1.96	1.30	BBVEH-C



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