

Frese STBV Range Fixed Orifice Double Regulating Valve · DN15 - DN300

Description

The Frese FODRV is a Fixed Orifice Double Regulating Valve for flow balancing and verification.

Application

The Frese FODRV is ideally suited for use in heating and cooling applications for the balancing and accurate verification of flow in various sections of the system.

The Frese FODRV balancing valve ensures simple and reliable verification of the system and can be installed in both variable flow systems and constant flow systems.

Operation

The double regulating valve feature allows the valve to be set to the required position and locked thus limiting the opening of the valve. If required, the valve can then be isolated by turning the hand wheel to set point 0.0 and reopened to the previous set point.

The integral fixed orifice, which has a fixed dimension and geometry, induces a difference in pressure for flow measurement.

Benefits

- Kvs value printed clearly on the hand wheel for identification during commissioning
- Simple to install and adjust
- Clear, 2 digit pre-setting scale
- Isolation feature
- Provides an alternative to commissioning sets (only one valve to install instead of a separate DRV and metering station)
- Delivers accurate control of the flow at all settings



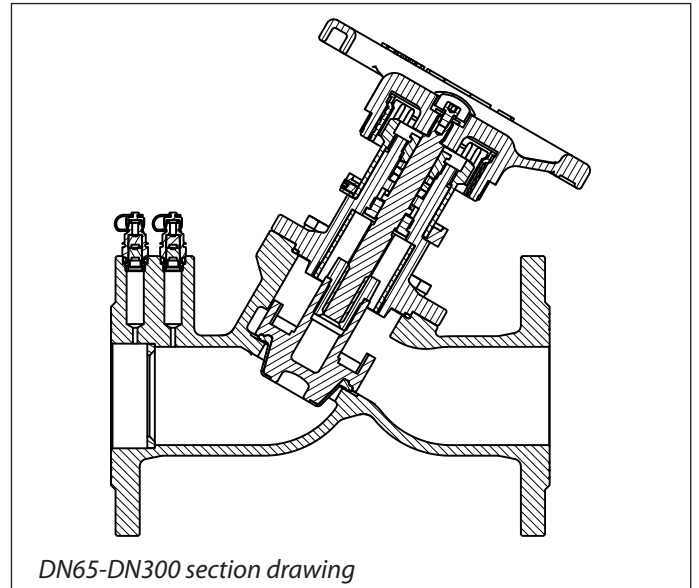
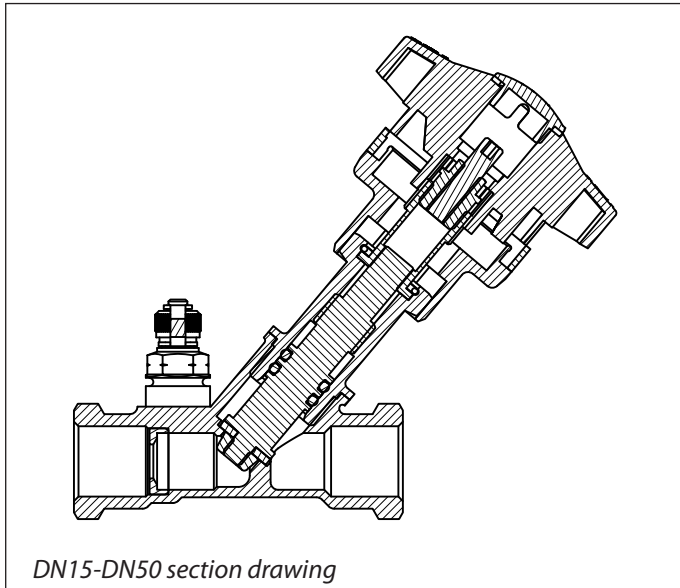
Features

- Available in sizes DN15 to DN300
- Double regulating feature enables the valve opening to be set at the desired set point using a 3mm allen key
- Built in PT ports for flow measurement
- Can be installed with the Frese PV Compact differential pressure control valve for efficient pressure and flow control

Frese STBV Range Fixed Orifice Double Regulating Valve · DN15 - DN300

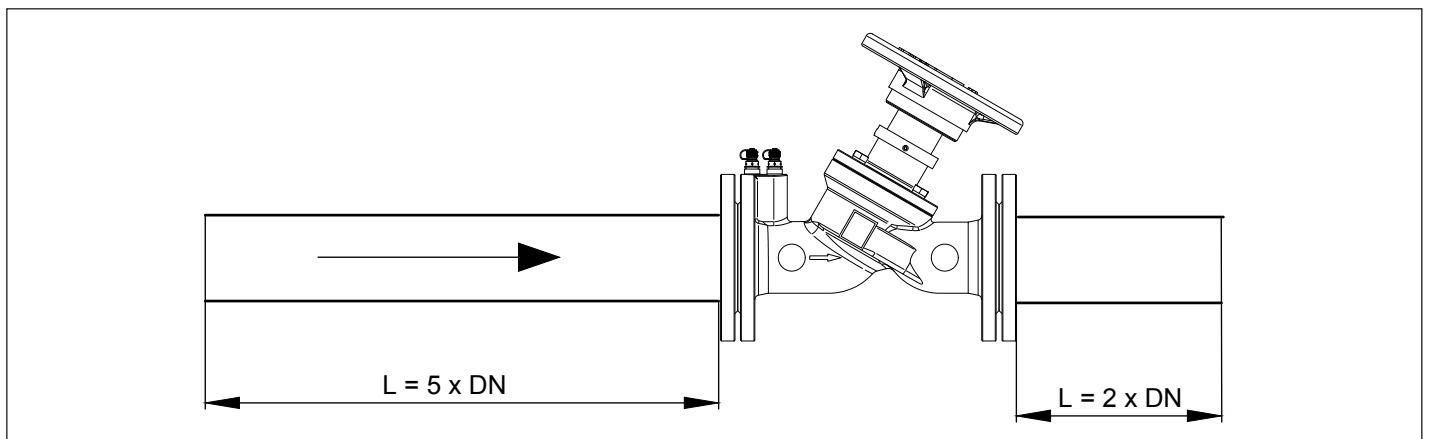
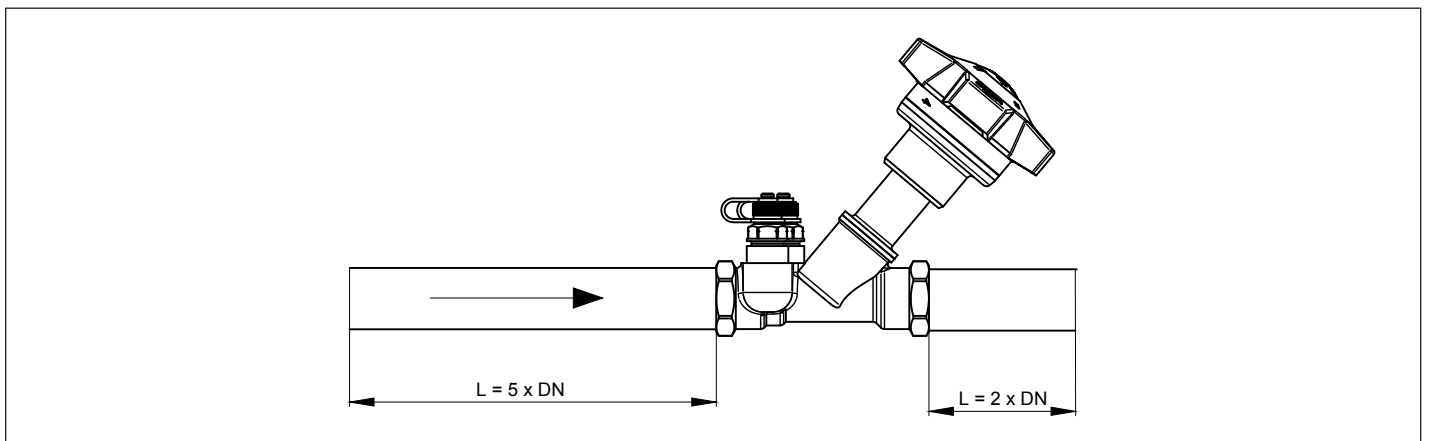
Design

The Frese FODRV consists of a throttling globe valve to set the flow and a fixed orifice plate for flow verification. The accuracy of the flow measurement is +/- 5% at all settings.



Installation

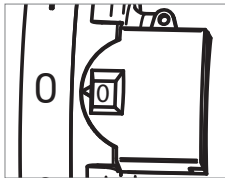
The Frese FODRV must be installed according to the requirements below to obtain the measured flow accuracy.



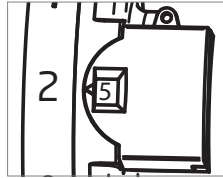
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Setting the valve

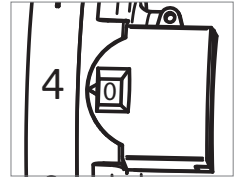
Valve closed



Valve set at 2.5



Valve fully open



Verification of the flow

In general, the flow rate in a system can be verified in two ways:

1. Direct flow rate verification in a circuit
2. Measurement of the differential pressure across the balancing valve or metering station.

1. Direct flow rate verification

For example, this can be carried out by ultrasonic equipment. On the basis of the measured velocity of the flow and the pipe dimension, the software will compute the flow rate. The use of ultrasonic verification requires free access to the pipes as the sensors are fitted directly to the pipe.

2. Measurement of the differential pressure

In the case of balancing valves, such as the Frese FODRV, the differential pressure across the balancing valve or metering station is measured to verify the flow.

Use the flow graphs on pages 7 and 8 to determine the flow or use the data tables on pages 9 to 16 to determine the Kv of the valve at the specific pre-setting. The formula on the right hand side of this page can be used to determine the flow from the measured ΔP.

The following applies to all flow control valves:

$$Q = K_v \cdot \sqrt{\Delta p}$$

Q = Flow (m³/h)

Kv = Orifice area

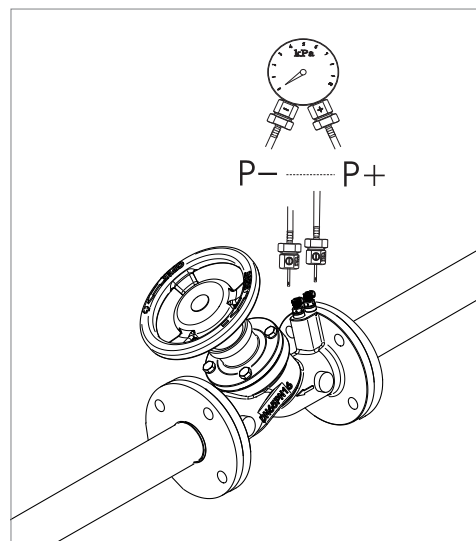
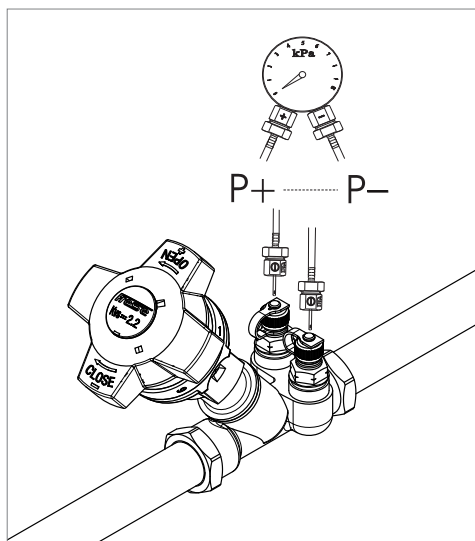
Δp = Differential pressure (Bar)

The Frese FODRV verifies the flow by measuring the differential pressure across the fixed orifice plate. The flow can be calculated using the formula above.

Flow calculation with other units

$Q = K_v \cdot 100 \cdot \sqrt{\Delta p}$	Q = l/h Δp = kPa
$Q = \frac{K_v}{36} \cdot \sqrt{\Delta p}$	Q = l/s Δp = kPa

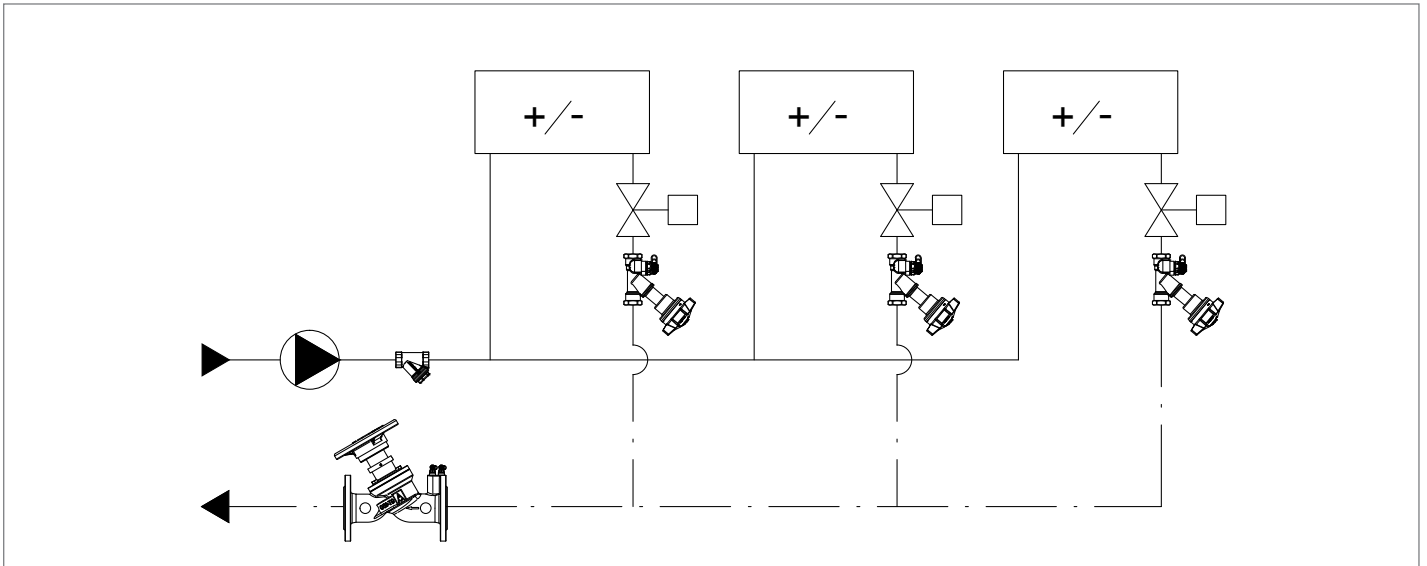
Measurement of the differential pressure across the fixed orifice of the valve



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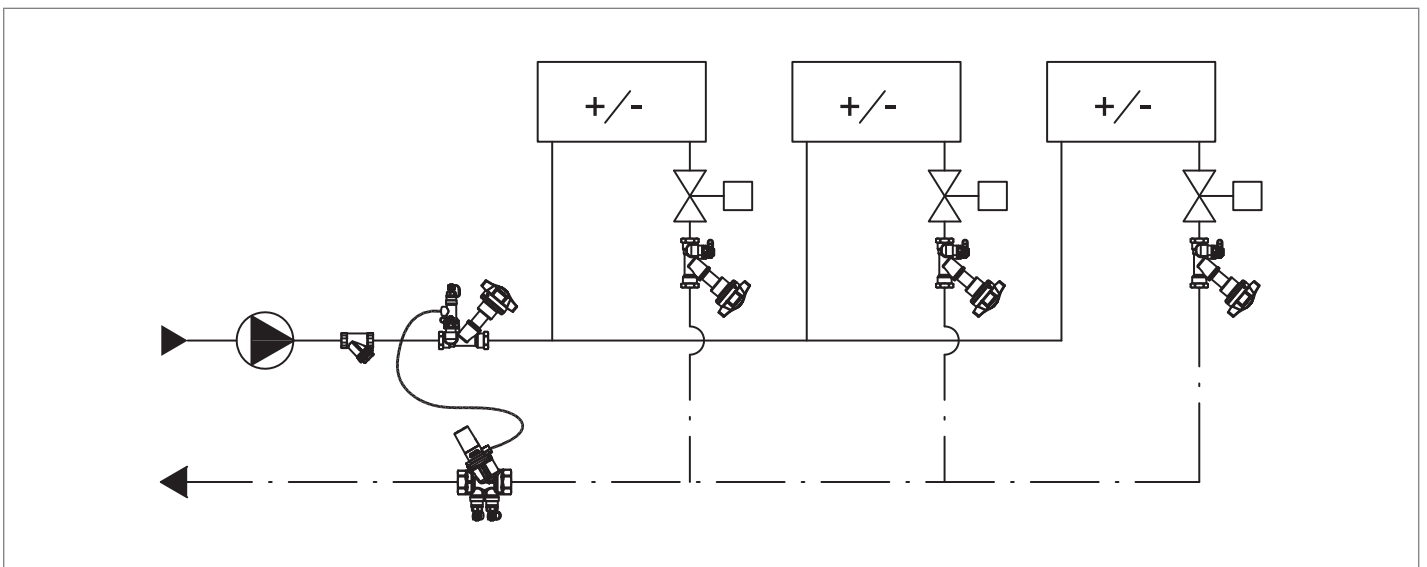
Application diagrams

The Frese FODRV in a system with 2-port Control Valves



The Frese FODRV is placed on every coil to verify and balance the flow.

The Frese FODRV in a system with the Frese PV Compact Differential Pressure Control Valve



The Frese FODRV is placed on every coil to verify and balance the flow.

The Frese PV Compact is connected to the Frese FODRV to ensure silent operation and effective modulating 2-port control of the sub-circuit.

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Technical data

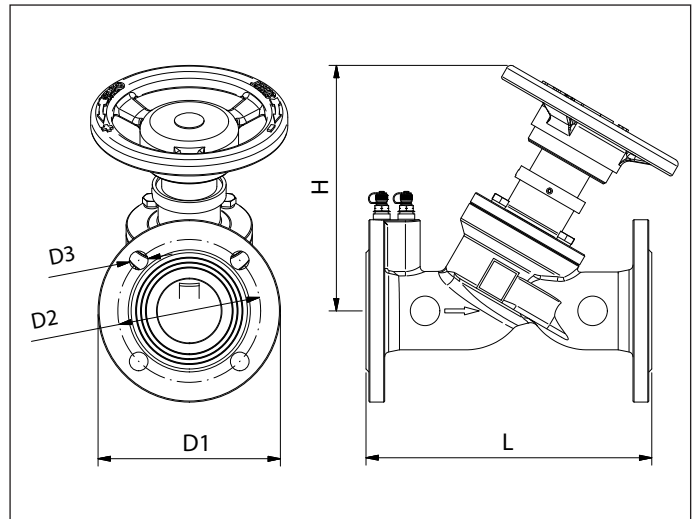
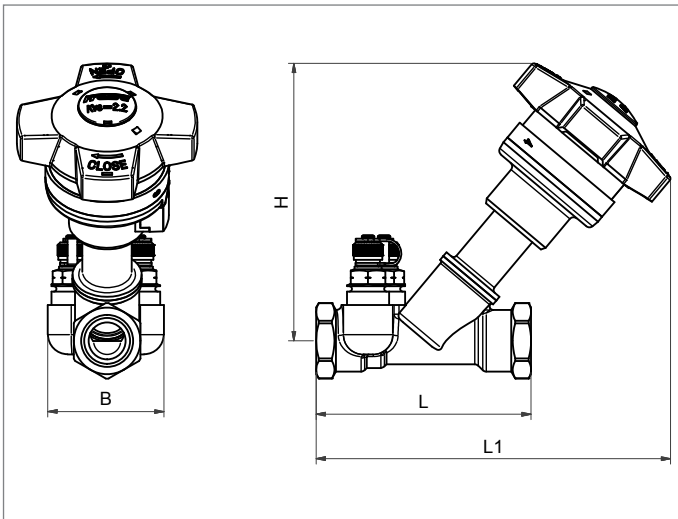
DN15 - DN50

Housing: DZR Brass
Bonnet/Stem: DZR Brass
Handle/Scale: PA6/ABS
O-rings: EPDM
Pressure class: PN25
Temperature range: -10°C to + 120°C
Thread: ISO 228

DN65 - DN300

Housing: Ductile Iron
O-rings: EPDM
Pressure class: PN16
Temperature range: -10°C to + 120°C (DN65 - DN200)
 -10°C to + 110°C (DN250 - DN300)
Flange connections: EN 1092-2

Dimensions



The pipe system must be properly ventilated to avoid risk of air pockets. Glycolic mixtures up to 50% are applicable (both ethylene and propylene).

DN15 - DN50

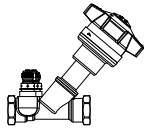
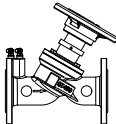
Size		DN15/LF/ULF	DN20	DN25	DN32	DN40	DN50
Dimension (mm)	L	87	96	100	114	124	145
	L1	143	142	153	163	177	190
	H	112	108	125	129	142	154
	B	47	53	57	63	66	76
Weight	kg	0.49	0.58	0.84	1.0	1.2	1.9

DN65 - DN300

Size		DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
Dimension (mm)	L	290	310	350	400	480	600	730	850
	H	249	265	300	353	404	428	560	610
	D1	185	200	220	250	285	340	405	460
	D2	145	160	180	210	240	295	355	410
	D3	4 x ø19	8 x ø19	8 x ø19	8 x ø19	8 x ø23	12 x ø23	12 x ø28	12 x ø28
Weight	Kg	17	20	26	37	53	97	146	188




Frese STBV Range Fixed Orifice Double Regulating Valve · DN15 - DN300

Product programme

	DN15 ULF	DN15 LF	DN15	DN20	DN25	DN32	DN40	DN50
	53-2170	53-2171	53-2172	53-2173	53-2174	53-2175	53-2176	53-2177
Kvs (For flow verification)	0.26	0.69	2.21	4.4	8.2	16.4	24.1	44.2
Kv (Total valve)	0.26	0.69	1.99	3.17	5.21	8.09	13.8	20.7
	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
	53-2178	53-2179	53-2180	53-2181	53-2182	53-2183	53-2184	53-2185
Kvs (For flow verification)	88	116	205	324	449	865	1250	1620
Kv (Total valve)	64.1	85.4	119	203	263	504	912	1099

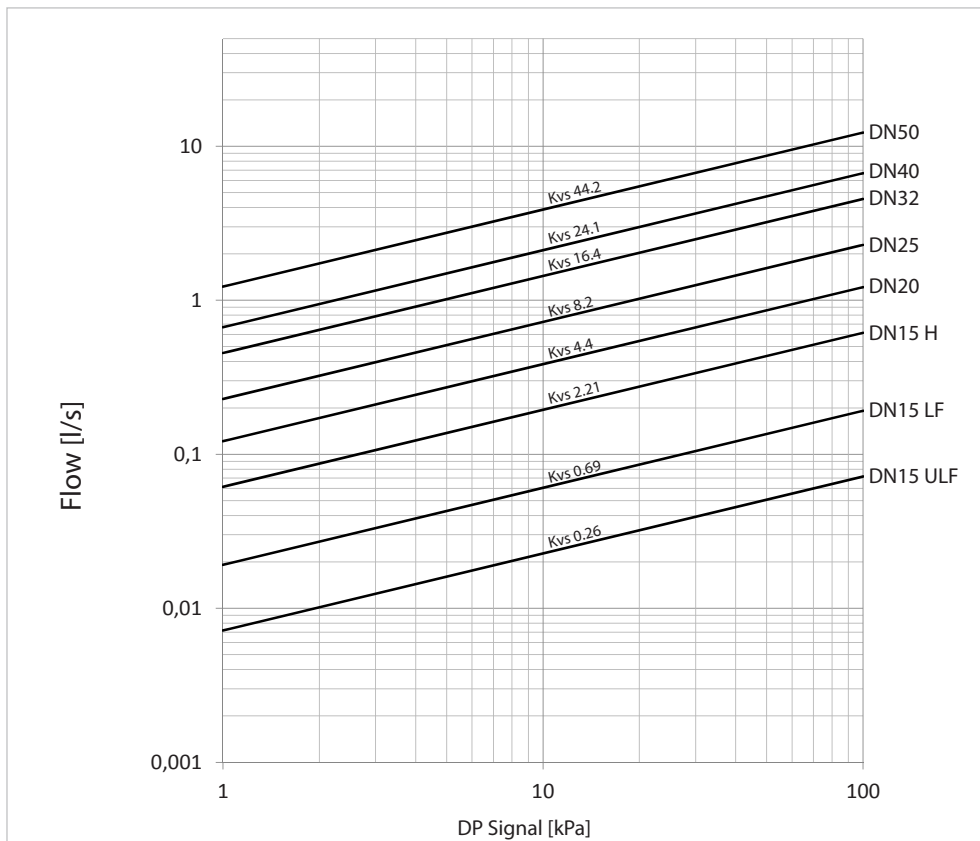
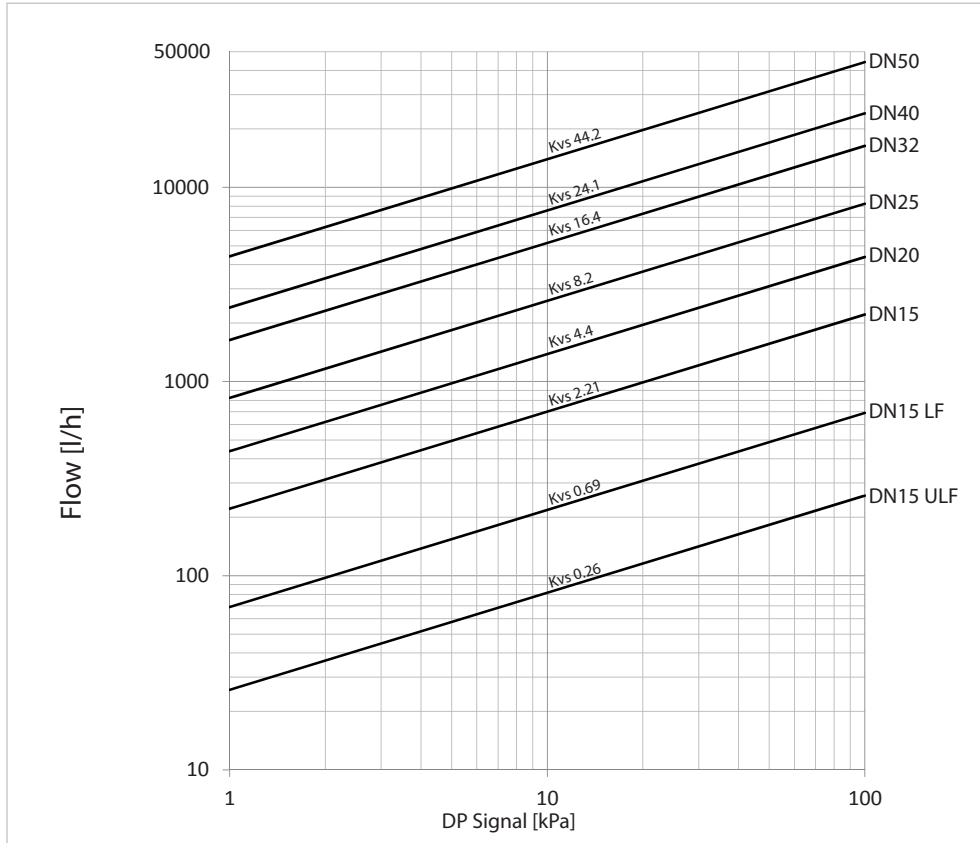
Kv=m³/h at a pressure drop of 1 bar across the fully open valve.

Accessories

	Frese no.	Description
	48-0015	Combi-drain
	09-2072	PT-plug and connection for capillary tube (for use with PV Compact DN15-DN50)
	48-0033	Connection for capillary tube (for use with PV Compact DN65-DN150)

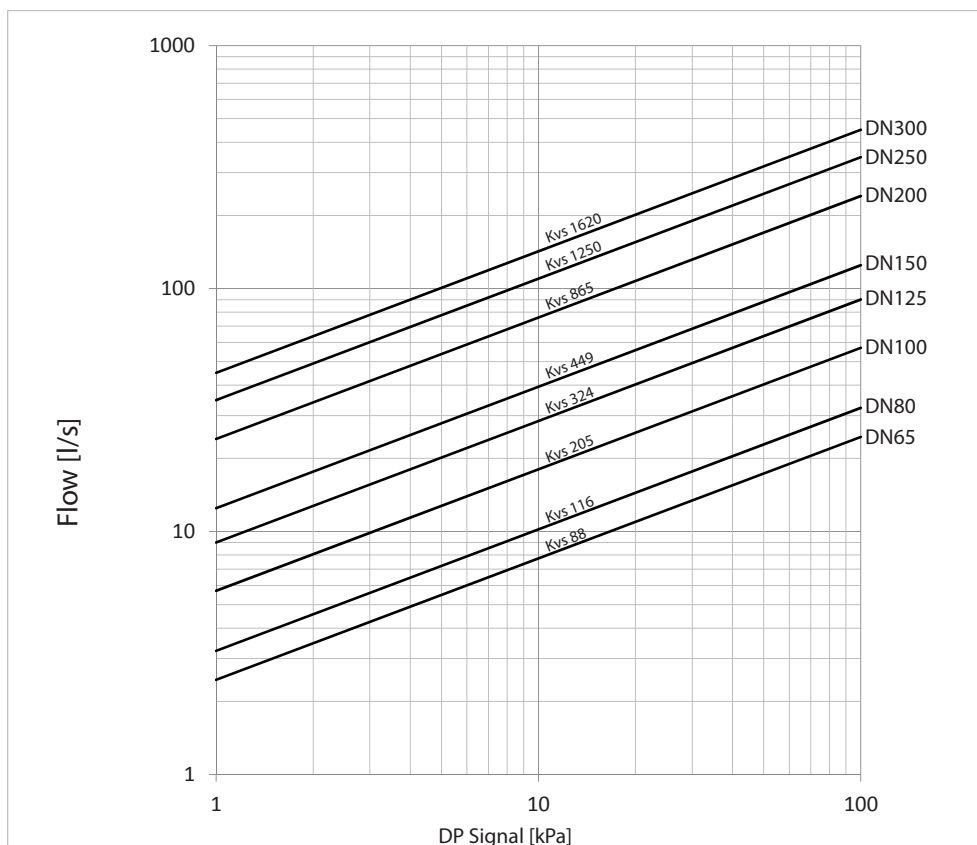
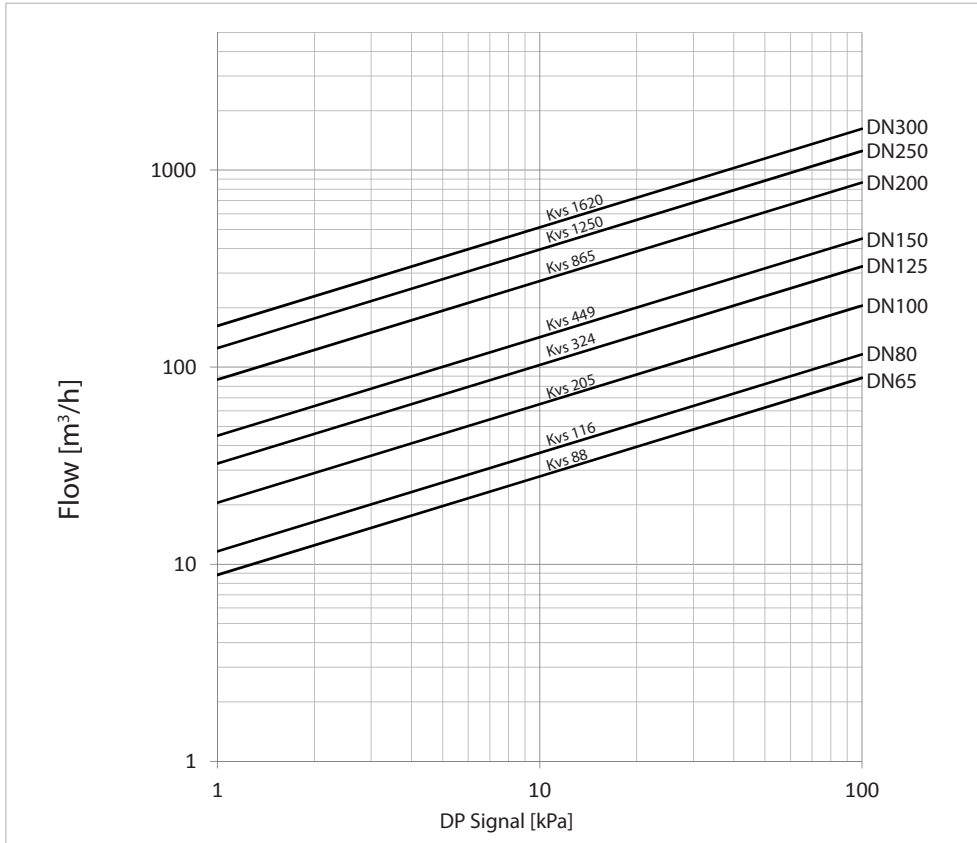
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Flow graphs DN15-DN50 FODRV



Frese STBV Range Fixed Orifice Double Regulating Valve · DN15 - DN300

Flow graphs DN65-DN300 FODRV



Frese STBV Range Fixed Orifice Double Regulating Valve · DN15 - DN300

Setting and Kv - total valve (For pump dimensioning)

STBV FODRV DN15 ULF		STBV FODRV DN15 LF		STBV FODRV DN15		STBV FODRV DN20	
Pre-set	Kv	Pre-set	Kv	Pre-set	Kv	Pre-set	Kv
0	0	0	0	0	0	0	0
0.1	0.03	0.1	0.08	0.1	0.07	0.1	0.04
0.2	0.06	0.2	0.16	0.2	0.15	0.2	0.08
0.3	0.09	0.3	0.23	0.3	0.22	0.3	0.12
0.4	0.12	0.4	0.31	0.4	0.30	0.4	0.16
0.5	0.15	0.5	0.39	0.5	0.37	0.5	0.20
0.6	0.15	0.6	0.43	0.6	0.45	0.6	0.28
0.7	0.16	0.7	0.46	0.7	0.53	0.7	0.36
0.8	0.17	0.8	0.50	0.8	0.60	0.8	0.43
0.9	0.17	0.9	0.53	0.9	0.68	0.9	0.51
1.0	0.18	1.0	0.57	1.0	0.75	1.0	0.59
1.1	0.18	1.1	0.58	1.1	0.81	1.1	0.66
1.2	0.19	1.2	0.60	1.2	0.87	1.2	0.74
1.3	0.19	1.3	0.61	1.3	0.93	1.3	0.82
1.4	0.20	1.4	0.62	1.4	0.99	1.4	0.89
1.5	0.20	1.5	0.63	1.5	1.04	1.5	0.97
1.6	0.21	1.6	0.64	1.6	1.07	1.6	1.03
1.7	0.21	1.7	0.64	1.7	1.10	1.7	1.08
1.8	0.21	1.8	0.65	1.8	1.13	1.8	1.14
1.9	0.22	1.9	0.65	1.9	1.16	1.9	1.19
2.0	0.22	2.0	0.66	2.0	1.19	2.0	1.25
2.1	0.22	2.1	0.66	2.1	1.23	2.1	1.30
2.2	0.23	2.2	0.67	2.2	1.28	2.2	1.36
2.3	0.23	2.3	0.67	2.3	1.32	2.3	1.42
2.4	0.23	2.4	0.67	2.4	1.37	2.4	1.48
2.5	0.24	2.5	0.68	2.5	1.41	2.5	1.54
2.6	0.24	2.6	0.68	2.6	1.47	2.6	1.65
2.7	0.24	2.7	0.68	2.7	1.53	2.7	1.76
2.8	0.24	2.8	0.68	2.8	1.60	2.8	1.87
2.9	0.25	2.9	0.68	2.9	1.66	2.9	1.97
3.0	0.25	3.0	0.69	3.0	1.72	3.0	2.08
3.1	0.25	3.1	0.69	3.1	1.76	3.1	2.21
3.2	0.25	3.2	0.69	3.2	1.80	3.2	2.34
3.3	0.25	3.3	0.69	3.3	1.84	3.3	2.46
3.4	0.25	3.4	0.69	3.4	1.88	3.4	2.59
3.5	0.25	3.5	0.69	3.5	1.92	3.5	2.72
3.6	0.26	3.6	0.69	3.6	1.94	3.6	2.81
3.7	0.26	3.7	0.69	3.7	1.95	3.7	2.90
3.8	0.26	3.8	0.69	3.8	1.96	3.8	2.99
3.9	0.26	3.9	0.69	3.9	1.97	3.9	3.08
4.0	0.26	4.0	0.69	4.0	1.99	4.0	3.17

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Setting and Kv - total valve (For pump dimensioning)

STBV FODRV DN25		STBV FODRV DN32		STBV FODRV DN40		STBV FODRV DN50	
Pre-set	Kv	Pre-set	Kv	Pre-set	Kv	Pre-set	Kv
0	0	0	0	0	0	0	0
0.1	0.24	0.1	0.24	0.1	0.39	0.1	0.61
0.2	0.48	0.2	0.49	0.2	0.79	0.2	1.23
0.3	0.72	0.3	0.73	0.3	1.18	0.3	1.84
0.4	0.96	0.4	0.97	0.4	1.58	0.4	2.46
0.5	1.20	0.5	1.22	0.5	1.97	0.5	3.07
0.6	1.38	0.6	1.42	0.6	2.29	0.6	3.40
0.7	1.56	0.7	1.62	0.7	2.62	0.7	3.74
0.8	1.73	0.8	1.83	0.8	2.94	0.8	4.07
0.9	1.91	0.9	2.03	0.9	3.27	0.9	4.40
1.0	2.09	1.0	2.23	1.0	3.59	1.0	4.73
1.1	2.21	1.1	2.41	1.1	3.85	1.1	5.09
1.2	2.32	1.2	2.59	1.2	4.10	1.2	5.45
1.3	2.44	1.3	2.77	1.3	4.36	1.3	5.80
1.4	2.56	1.4	2.95	1.4	4.62	1.4	6.16
1.5	2.67	1.5	3.13	1.5	4.87	1.5	6.52
1.6	2.75	1.6	3.29	1.6	5.19	1.6	6.92
1.7	2.82	1.7	3.45	1.7	5.50	1.7	7.33
1.8	2.90	1.8	3.61	1.8	5.82	1.8	7.74
1.9	2.98	1.9	3.77	1.9	6.13	1.9	8.14
2.0	3.05	2.0	3.93	2.0	6.45	2.0	8.55
2.1	3.18	2.1	4.16	2.1	6.82	2.1	9.25
2.2	3.31	2.2	4.38	2.2	7.19	2.2	9.96
2.3	3.45	2.3	4.61	2.3	7.56	2.3	10.7
2.4	3.58	2.4	4.83	2.4	7.93	2.4	11.4
2.5	3.71	2.5	5.06	2.5	8.30	2.5	12.1
2.6	3.84	2.6	5.25	2.6	8.80	2.6	12.8
2.7	3.98	2.7	5.45	2.7	9.30	2.7	13.6
2.8	4.11	2.8	5.65	2.8	9.80	2.8	14.4
2.9	4.25	2.9	5.85	2.9	10.3	2.9	15.2
3.0	4.38	3.0	6.05	3.0	10.8	3.0	16.0
3.1	4.49	3.1	6.31	3.1	11.1	3.1	16.5
3.2	4.61	3.2	6.56	3.2	11.5	3.2	17.1
3.3	4.72	3.3	6.82	3.3	11.8	3.3	17.7
3.4	4.83	3.4	7.08	3.4	12.1	3.4	18.2
3.5	4.94	3.5	7.34	3.5	12.5	3.5	18.8
3.6	5.00	3.6	7.49	3.6	12.7	3.6	19.2
3.7	5.05	3.7	7.64	3.7	13.0	3.7	19.6
3.8	5.10	3.8	7.79	3.8	13.3	3.8	20.0
3.9	5.16	3.9	7.94	3.9	13.5	3.9	20.4
4.0	5.21	4.0	8.09	4.0	13.8	4.0	20.7

Frese STBV Range Fixed Orifice Double Regulating Valve · DN15 - DN300

Setting and Kv - total valve (For pump dimensioning)

STBV FODRV DN65		STBV FODRV DN65		STBV FODRV DN80		STBV FODRV DN80	
Pre-set	Kv	Pre-set	Kv	Pre-set	Kv	Pre-set	Kv
0	0.00			0	0.00		
0.1	1.68	4.1	37.9	0.1	1.68	4.1	48.7
0.2	3.36	4.2	38.4	0.2	3.37	4.2	49.6
0.3	5.04	4.3	38.8	0.3	5.05	4.3	50.5
0.4	6.73	4.4	39.3	0.4	6.73	4.4	51.4
0.5	8.41	4.5	39.8	0.5	8.41	4.5	52.2
0.6	10.1	4.6	40.3	0.6	10.1	4.6	53.1
0.7	11.8	4.7	40.7	0.7	11.8	4.7	54.0
0.8	13.5	4.8	41.2	0.8	13.5	4.8	54.8
0.9	15.1	4.9	41.7	0.9	15.1	4.9	55.7
1.0	16.8	5.0	42.2	1.0	16.8	5.0	56.6
1.1	17.7	5.1	42.9	1.1	18.3	5.1	57.5
1.2	18.5	5.2	43.7	1.2	19.8	5.2	58.5
1.3	19.3	5.3	44.5	1.3	21.3	5.3	59.4
1.4	20.2	5.4	45.2	1.4	22.8	5.4	60.3
1.5	21.0	5.5	46.0	1.5	24.3	5.5	61.3
1.6	21.8	5.6	46.8	1.6	25.8	5.6	62.2
1.7	22.7	5.7	47.5	1.7	27.3	5.7	63.2
1.8	23.5	5.8	48.3	1.8	28.8	5.8	64.1
1.9	24.4	5.9	49.0	1.9	30.3	5.9	65.1
2.0	25.2	6.0	49.8	2.0	31.8	6.0	66.0
2.1	26.0	6.1	50.7	2.1	32.7	6.1	67.0
2.2	26.8	6.2	51.5	2.2	33.6	6.2	68.0
2.3	27.6	6.3	52.3	2.3	34.4	6.3	69.0
2.4	28.3	6.4	53.2	2.4	35.3	6.4	70.0
2.5	29.1	6.5	54.0	2.5	36.2	6.5	71.0
2.6	29.9	6.6	54.9	2.6	37.1	6.6	72.0
2.7	30.7	6.7	55.7	2.7	37.9	6.7	73.0
2.8	31.5	6.8	56.5	2.8	38.8	6.8	74.0
2.9	32.3	6.9	57.4	2.9	39.7	6.9	74.9
3.0	33.1	7.0	58.2	3.0	40.6	7.0	75.9
3.1	33.5	7.1	58.8	3.1	41.3	7.1	76.9
3.2	34.0	7.2	59.4	3.2	42.0	7.2	77.8
3.3	34.4	7.3	60.0	3.3	42.8	7.3	78.8
3.4	34.8	7.4	60.6	3.4	43.5	7.4	79.7
3.5	35.3	7.5	61.2	3.5	44.2	7.5	80.7
3.6	35.7	7.6	61.8	3.6	45.0	7.6	81.6
3.7	36.1	7.7	62.3	3.7	45.7	7.7	82.6
3.8	36.6	7.8	62.9	3.8	46.4	7.8	83.5
3.9	37.0	7.9	63.5	3.9	47.2	7.9	84.5
4.0	37.4	8.0	64.1	4.0	47.9	8.0	85.4

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Setting and Kv - total valve (For pump dimensioning)

STBV FODRV DN100		STBV FODRV DN100		STBV FODRV DN125		STBV FODRV DN125	
Pre-set	Kv	Pre-set	Kv	Pre-set	Kv	Pre-set	Kv
0	0.00			0	0.00		
0.1	2.51	4.1	75.0	0.1	3.97	4.1	116
0.2	5.02	4.2	76.0	0.2	7.93	4.2	118
0.3	7.53	4.3	77.0	0.3	11.9	4.3	119
0.4	10.0	4.4	78.1	0.4	15.9	4.4	121
0.5	12.6	4.5	79.1	0.5	19.8	4.5	123
0.6	15.1	4.6	80.1	0.6	23.8	4.6	124
0.7	17.6	4.7	81.1	0.7	27.8	4.7	126
0.8	20.1	4.8	82.1	0.8	31.7	4.8	127
0.9	22.6	4.9	83.1	0.9	35.7	4.9	129
1.0	25.1	5.0	84.1	1.0	39.7	5.0	131
1.1	27.0	5.1	85.2	1.1	42.5	5.1	133
1.2	28.9	5.2	86.4	1.2	45.3	5.2	136
1.3	30.7	5.3	87.5	1.3	48.1	5.3	138
1.4	32.6	5.4	88.7	1.4	50.9	5.4	141
1.5	34.5	5.5	89.8	1.5	53.7	5.5	143
1.6	36.4	5.6	90.9	1.6	56.5	5.6	146
1.7	38.3	5.7	92.1	1.7	59.3	5.7	148
1.8	40.1	5.8	93.2	1.8	62.1	5.8	151
1.9	42.0	5.9	94.4	1.9	64.9	5.9	153
2.0	43.9	6.0	95.5	2.0	67.7	6.0	156
2.1	45.5	6.1	96.7	2.1	70.3	6.1	158
2.2	47.0	6.2	98.0	2.2	72.8	6.2	161
2.3	48.6	6.3	99.2	2.3	75.4	6.3	163
2.4	50.1	6.4	100	2.4	77.9	6.4	166
2.5	51.7	6.5	102	2.5	80.5	6.5	168
2.6	53.3	6.6	103	2.6	83.0	6.6	171
2.7	54.8	6.7	104	2.7	85.6	6.7	173
2.8	56.4	6.8	105	2.8	88.1	6.8	176
2.9	58.0	6.9	106	2.9	90.7	6.9	178
3.0	59.5	7.0	108	3.0	93.2	7.0	181
3.1	61.0	7.1	109	3.1	95.3	7.1	183
3.2	62.4	7.2	110	3.2	97.4	7.2	185
3.3	63.9	7.3	111	3.3	100	7.3	187
3.4	65.3	7.4	112	3.4	102	7.4	189
3.5	66.8	7.5	113	3.5	104	7.5	192
3.6	68.2	7.6	115	3.6	106	7.6	194
3.7	69.7	7.7	116	3.7	108	7.7	196
3.8	71.1	7.8	117	3.8	110	7.8	198
3.9	72.6	7.9	118	3.9	112	7.9	200
4.0	74.0	8.0	119	4.0	114	8.0	203

Frese STBV Range

Fixed Orifice Double Regulating Valve · DN15 - DN300

Setting and Kv - total valve (For pump dimensioning)

STBV FODRV DN150		STBV FODRV DN150	
Pre-set	Kv	Pre-set	Kv
0	0.00		
0.1	7.72	4.1	181
0.2	15.4	4.2	183
0.3	23.2	4.3	186
0.4	30.9	4.4	189
0.5	38.6	4.5	191
0.6	46.3	4.6	194
0.7	54.0	4.7	197
0.8	61.8	4.8	199
0.9	69.5	4.9	202
1.0	77.2	5.0	205
1.1	81.1	5.1	207
1.2	85.0	5.2	209
1.3	88.9	5.3	212
1.4	92.9	5.4	214
1.5	96.8	5.5	217
1.6	101	5.6	219
1.7	105	5.7	221
1.8	109	5.8	224
1.9	112	5.9	226
2.0	116	6.0	229
2.1	119	6.1	231
2.2	123	6.2	233
2.3	126	6.3	235
2.4	129	6.4	237
2.5	132	6.5	239
2.6	135	6.6	241
2.7	138	6.7	243
2.8	141	6.8	245
2.9	144	6.9	247
3.0	147	7.0	249
3.1	150	7.1	250
3.2	153	7.2	252
3.3	156	7.3	253
3.4	160	7.4	255
3.5	163	7.5	256
3.6	166	7.6	257
3.7	169	7.7	259
3.8	172	7.8	260
3.9	175	7.9	262
4.0	178	8.0	263

Frese STBV Range Fixed Orifice Double Regulating Valve · DN15 - DN300

Setting and Kv - total valve (For pump dimensioning)

STBV FODRV DN200		STBV FODRV DN200		STBV FODRV DN200	
Pre-set	Kv	Pre-set	Kv	Pre-set	Kv
0	0.00				
0.1	13.4	4.1	243	8.1	369
0.2	26.8	4.2	245	8.2	373
0.3	40.2	4.3	247	8.3	377
0.4	53.6	4.4	249	8.4	381
0.5	67.0	4.5	251	8.5	385
0.6	80.4	4.6	253	8.6	389
0.7	93.8	4.7	255	8.7	393
0.8	107	4.8	256	8.8	397
0.9	121	4.9	258	8.9	401
1.0	134	5.0	260	9.0	405
1.1	139	5.1	263	9.1	409
1.2	144	5.2	266	9.2	414
1.3	148	5.3	270	9.3	418
1.4	153	5.4	273	9.4	423
1.5	158	5.5	276	9.5	427
1.6	162	5.6	279	9.6	432
1.7	167	5.7	282	9.7	436
1.8	172	5.8	285	9.8	441
1.9	177	5.9	288	9.9	445
2.0	181	6.0	291	10.0	450
2.1	185	6.1	294	10.1	453
2.2	189	6.2	298	10.2	457
2.3	193	6.3	301	10.3	461
2.4	197	6.4	304	10.4	464
2.5	200	6.5	308	10.5	468
2.6	204	6.6	311	10.6	472
2.7	208	6.7	315	10.7	475
2.8	212	6.8	318	10.8	479
2.9	215	6.9	322	10.9	483
3.0	219	7.0	325	11.0	486
3.1	221	7.1	329	11.1	488
3.2	224	7.2	333	11.2	490
3.3	226	7.3	337	11.3	492
3.4	228	7.4	341	11.4	493
3.5	230	7.5	345	11.5	495
3.6	232	7.6	349	11.6	497
3.7	234	7.7	353	11.7	499
3.8	236	7.8	357	11.8	501
3.9	239	7.9	361	11.9	503
4.0	241	8.0	365	12.0	504

Frese STBV Range Fixed Orifice Double Regulating Valve · DN15 - DN300

Setting and Kv - total valve (For pump dimensioning)

STBV FODRV DN250		STBV FODRV DN250		STBV FODRV DN250		STBV FODRV DN250	
Pre-set	Kv	Pre-set	Kv	Pre-set	Kv	Pre-set	Kv
0	0.00						
0.1	10.4	4.1	297	8.1	497	12.1	685
0.2	20.9	4.2	303	8.2	501	12.2	690
0.3	31.3	4.3	309	8.3	505	12.3	696
0.4	41.7	4.4	315	8.4	508	12.4	701
0.5	52.2	4.5	321	8.5	512	12.5	707
0.6	62.6	4.6	327	8.6	516	12.6	712
0.7	73.0	4.7	333	8.7	520	12.7	718
0.8	83.4	4.8	339	8.8	524	12.8	723
0.9	93.9	4.9	345	8.9	527	12.9	729
1.0	104	5.0	350	9.0	531	13.0	734
1.1	109	5.1	357	9.1	536	13.1	740
1.2	115	5.2	363	9.2	541	13.2	746
1.3	120	5.3	369	9.3	547	13.3	752
1.4	125	5.4	375	9.4	552	13.4	757
1.5	130	5.5	381	9.5	557	13.5	763
1.6	135	5.6	387	9.6	562	13.6	769
1.7	140	5.7	393	9.7	567	13.7	775
1.8	145	5.8	400	9.8	573	13.8	781
1.9	150	5.9	406	9.9	578	13.9	787
2.0	155	6.0	412	10.0	583	14.0	792
2.1	163	6.1	417	10.1	587	14.1	798
2.2	171	6.2	422	10.2	591	14.2	803
2.3	178	6.3	427	10.3	595	14.3	808
2.4	186	6.4	432	10.4	599	14.4	813
2.5	194	6.5	438	10.5	603	14.5	818
2.6	202	6.6	443	10.6	608	14.6	823
2.7	209	6.7	448	10.7	612	14.7	828
2.8	217	6.8	453	10.8	616	14.8	833
2.9	225	6.9	458	10.9	620	14.9	838
3.0	232	7.0	463	11.0	624	15.0	843
3.1	238	7.1	466	11.1	630	15.1	850
3.2	244	7.2	469	11.2	635	15.2	857
3.3	250	7.3	472	11.3	641	15.3	864
3.4	256	7.4	475	11.4	646	15.4	871
3.5	262	7.5	478	11.5	652	15.5	878
3.6	268	7.6	481	11.6	657	15.6	884
3.7	274	7.7	484	11.7	663	15.7	891
3.8	280	7.8	487	11.8	668	15.8	898
3.9	285	7.9	490	11.9	674	15.9	905
4.0	291	8.0	493	12.0	679	16.0	912

Frese STBV Range Fixed Orifice Double Regulating Valve · DN15 - DN300

Setting and Kv - total valve (For pump dimensioning)

STBV FODRV DN300		STBV FODRV DN300		STBV FODRV DN300		STBV FODRV DN300	
Pre-set	Kv	Pre-set	Kv	Pre-set	Kv	Pre-set	Kv
0	0.00						
0.1	13.0	4.1	375	8.1	647	12.1	818
0.2	25.9	4.2	381	8.2	653	12.2	826
0.3	38.9	4.3	388	8.3	660	12.3	834
0.4	51.8	4.4	394	8.4	666	12.4	842
0.5	64.8	4.5	400	8.5	673	12.5	850
0.6	77.8	4.6	406	8.6	679	12.6	857
0.7	90.7	4.7	412	8.7	686	12.7	865
0.8	104	4.8	418	8.8	693	12.8	873
0.9	117	4.9	424	8.9	699	12.9	881
1.0	130	5.0	430	9.0	706	13.0	889
1.1	138	5.1	437	9.1	710	13.1	897
1.2	147	5.2	443	9.2	714	13.2	906
1.3	156	5.3	450	9.3	719	13.3	914
1.4	165	5.4	456	9.4	723	13.4	923
1.5	173	5.5	463	9.5	728	13.5	931
1.6	182	5.6	470	9.6	732	13.6	940
1.7	191	5.7	476	9.7	736	13.7	948
1.8	199	5.8	483	9.8	741	13.8	957
1.9	208	5.9	489	9.9	745	13.9	965
2.0	217	6.0	496	10.0	749	14.0	974
2.1	225	6.1	503	10.1	751	14.1	981
2.2	233	6.2	511	10.2	753	14.2	988
2.3	241	6.3	519	10.3	754	14.3	995
2.4	248	6.4	526	10.4	756	14.4	1002
2.5	256	6.5	534	10.5	757	14.5	1009
2.6	264	6.6	541	10.6	759	14.6	1016
2.7	272	6.7	549	10.7	760	14.7	1023
2.8	280	6.8	557	10.8	762	14.8	1030
2.9	288	6.9	564	10.9	763	14.9	1037
3.0	296	7.0	572	11.0	765	15.0	1044
3.1	303	7.1	579	11.1	769	15.1	1050
3.2	310	7.2	586	11.2	774	15.2	1055
3.3	318	7.3	592	11.3	778	15.3	1061
3.4	325	7.4	599	11.4	783	15.4	1066
3.5	332	7.5	606	11.5	788	15.5	1072
3.6	340	7.6	613	11.6	792	15.6	1077
3.7	347	7.7	620	11.7	797	15.7	1082
3.8	354	7.8	626	11.8	801	15.8	1088
3.9	362	7.9	633	11.9	806	15.9	1093
4.0	369	8.0	640	12.0	810	16.0	1099

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Frese STBV Range Fixed Orifice Double Regulating Valve · DN15 - DN300

Text for Technical Specifications

The valve housing, stem and bonnet shall be made of DZR brass (DN15-DN50) and Ductile Iron (DN65-DN300)

The valve shall be pressure class rated PN25 (DN15-DN50) and PN16 (DN65-DN300)

The valve shall be a static balancing valve with fixed orifice plate

The valve shall include P/T plugs for the verification of flow through measurement of the differential pressure across the orifice

The Kv-value for flow verification shall not be changed by the hand wheel setting

The valve shall have a flow accuracy measurement +/-5% at all hand wheel settings

The valve shall only be adjustable by a handle that can be set and locked to a maximum position