FIVC Static Balancing Valve

Ductile Iron – PN 25 – Variable Orifice – EN 1092-2

FSB series

Technical data

Main features and materials

- Body: Ductile Iron
- Bonnet: Ductile Iron
- Disc: Ductile Iron + EPDM
- Stem: Stainless Steel
- Handwheel: Ductile Iron
- Dimensions: Face-to-Face acc. to BS 7350:1990
- Drilling: EN 1092-2 PN 25
- Standard: BS EN 12266-1.2003
- Testing: Shell pressure 3.75 MPa
  Seat: pressure 2.75 MPa
- UPS: Hydraulic system balance
  Energy- and temperature optimzation

Field of applications

- Temperature range: -10 to 120°C
- Max. working pressure: 25 bar
- Accuracy of flow measurement: ±5%

- HVAC
- Cooling system
- Water distribution
- Oil distribution

Description

FIVC Static Balancing Valve is designed with integrated pressure probes to determine the flow rate through integrated variable orifice. The valve controls hydraulic medium flow at HVAC plants and ensures load balance, hence contributes to energy and cost savings.

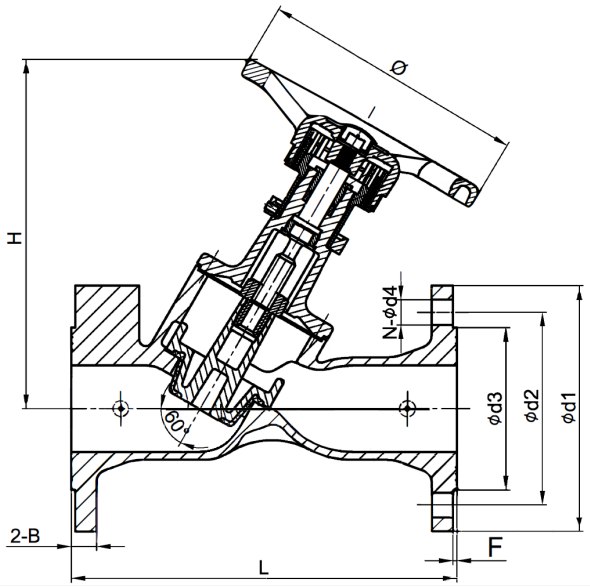
Further, the FIVC Balancing Valve does, through its reduc tion of media flow speed, prevents the water hammer phenomenon.

This valve is used for water, air, and oil.

Declaration

The product has been inspected and tested in accordance with the European PED Directive Nº 2014/68/EU, dated 15/05/2014.

Dimensions



Product code	Size	H	L	B	Ø	ød1	ød2	ød3	N-ød4	F	Kg
FSB065N25GV230	65	263	290	19	200	185	145	118	8-ø19	3	-
FSB080N25GV230	80	268	310	19	200	200	160	132	8-ø19	3	-
FSB100N25GV230	100	300	350	19	240	235	190	156	8-ø23	3	-
FSB125N25GV230	125	328	400	19	290	270	220	184	8-ø28	3	-
FSB150N25GV230	150	340	480	20	290	300	250	211	8-ø28	3	-
FSB200N25GV230	200	525	600	22	350	360	310	274	12-ø28	3	-
FSB250N25GV230	250	572	730	24.5	420	425	370	330	12-ø31	3	-
FSB300N25GV230	300	686	850	27.5	420	485	430	389	16-ø31	4	-
FSB350N25GV230	350	681	980	30	420	555	490	448	16-ø34	4	-
FSB400N25GV230	400	965	1100	32	640	620	550	503	16-ø37	4	-
FSB450N25GV230	450	972	1200	34.5	640	670	600	548	20-ø37	4	-
FSB500N25GV230	500	1065	1250	36.5	640	730	660	609	20-ø37	4	-
FSB600N25GV230	600	1180	1450	42	640	845	770	720	20-ø41	5	-

Dimensions are in millimeters

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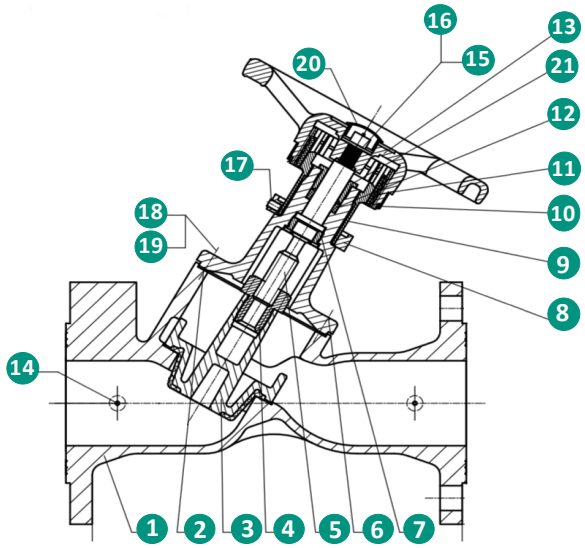
Product Specification



N°	Name	Material
1	Body	Ductile Iron EN JS 1040/65-45-12
2	Seal gasket	EPDM
3	Disc	Ductile Iron EN JS 1040/65-45-12 + EPDM
4	Stem nut	Brass CW617N EN 12165
5	Stem	DN 65-150: Stainless Steel BS 970 410 S21 DN 200-500: Stainless Steel BS 970 431 S29 DN 600: Stainless Steel 630
6	Cover	Ductile Iron EN JS 1040
7	Stem lock bushing	Brass CW617N EN 12165
8	Limit set of indicator	Brass CW617N EN 12165 galvanized
9	Oriented set of indicator	Brass CW617N EN 12165
10	Directed circle	ABS plastic
11	Indicator	ABS plastic
12	Packing	PTFE + EPDM
13	Handwheel	Ductile Iron EN JS 1040
14	Plug	Steel
15	Bolt	Stainless Steel BS 970 304 S15
16	Big gasket	Stainless Steel BS 970 304 S15
17	Hexagon socket screws	Stainless Steel BS 970 304 S15
18	Bolt	Stainless Steel BS 970 304 S15
19	Spring gasket	Stainless Steel BS 970 304 S15
20	Indicator dust cover	ABS plastic
21	Packing gland	DN 65-150: Brass CW617N EN 12165 DN 200-600: Ductile Iron EN JS 1040

Flowrate calculation

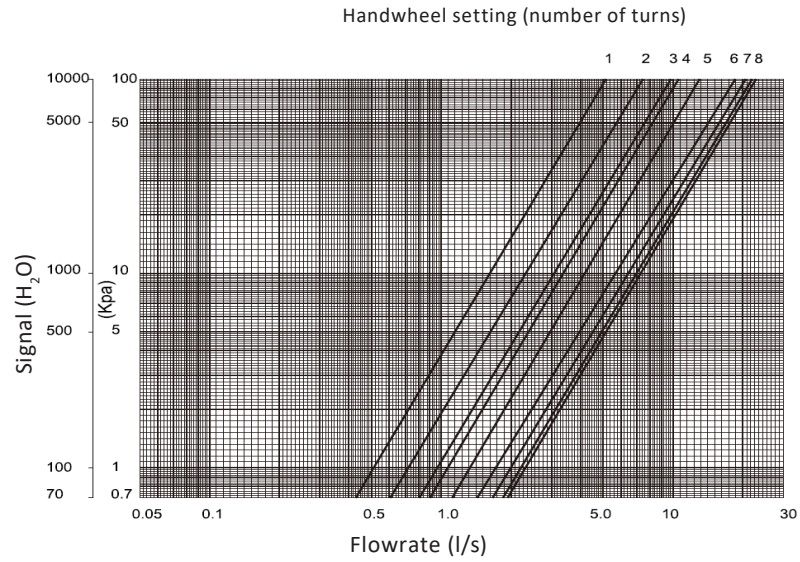
The flow rate Q can be determined with the following formula:

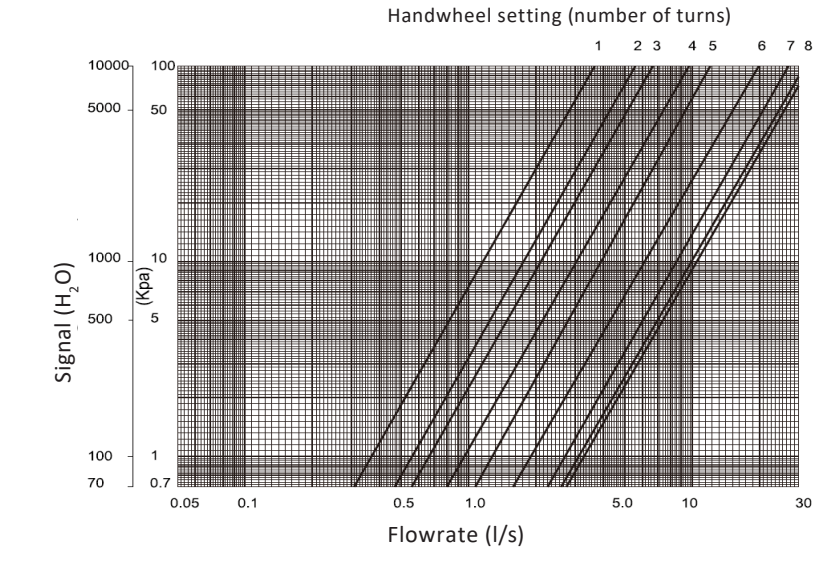
$$Q = Kv_{setting} \bullet \sqrt{\Delta p}$$

Refer to the $Kv_{setting}$ values included in the table: Δp has to be measured through the pressure outlets.Use the following formula for the liquids having density p different from water:

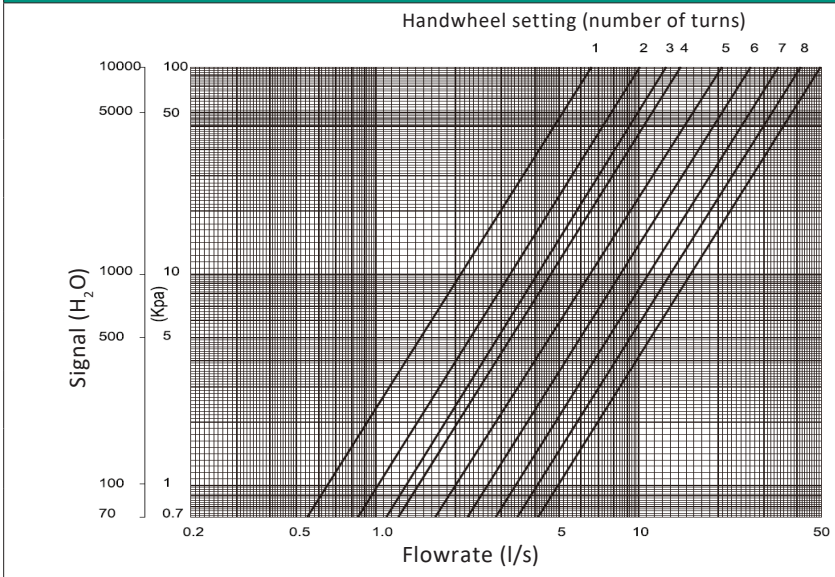
$$Q = Kv_{setting} \bullet \sqrt{\Delta p/p}$$

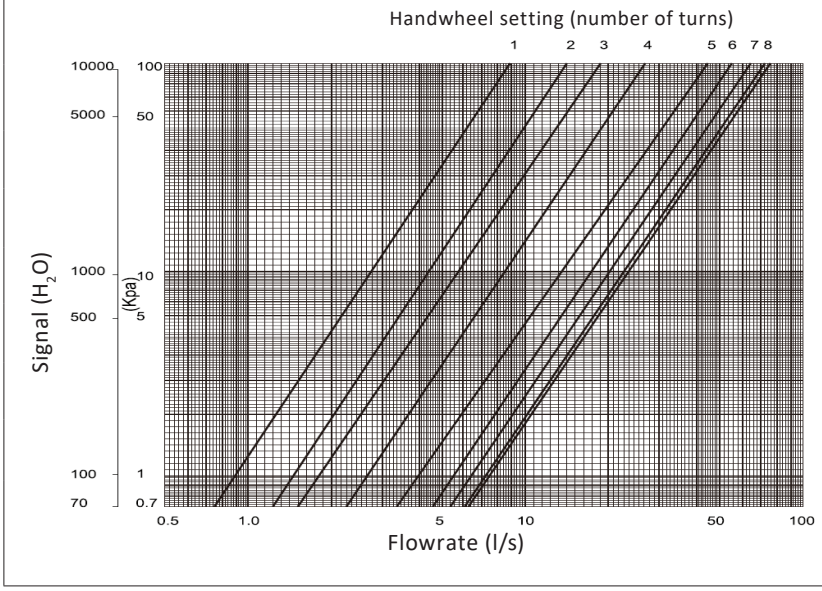
Flow Measurement Graphs

FSB DN 65	Setting	Kv (m^3/h)
	1	18.6
	2	26.8
	3	35.4
	4	38.7
	5	49.4
	6	65.5
	7	74.6
	8	80.2
	All open	83.8

FSB DN 80	Setting	Kv (m^3/h)
	1	13.3
	2	20.0
	3	24.1
	4	34.9
	5	45.9
	6	71.6
	7	98.8
	8	113.7
	All open	119.5

Flow Measurement Graphs

FSB DN 100	Setting	Kv (m^3/h)
	1	23.6
	2	36.6
	3	48.5
	4	55.2
	5	75.2
	6	97.9
	7	123.9
	8	149.4
	All open	178.7

FSB DN 125	Setting	Kv (m^3/h)
	1	32.2
	2	55.6
	3	68.8
	4	98.0
	5	145.7
	6	199.1
	7	231.7
	8	260.5
	All open	272.7

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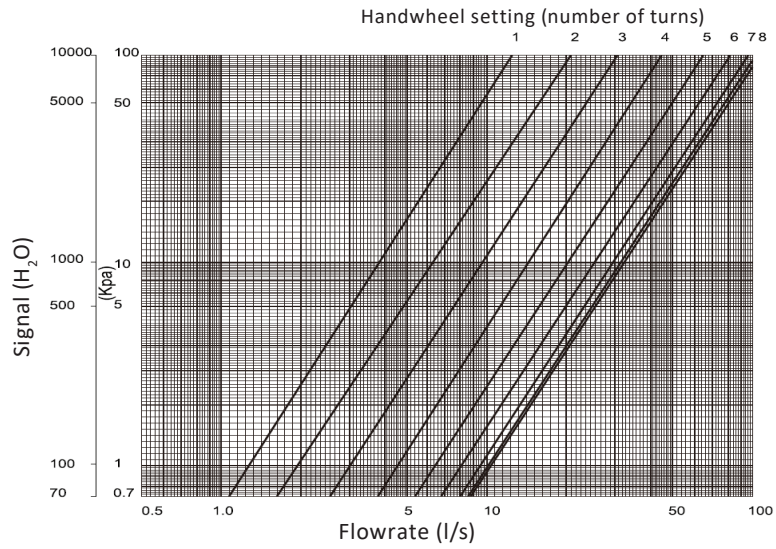
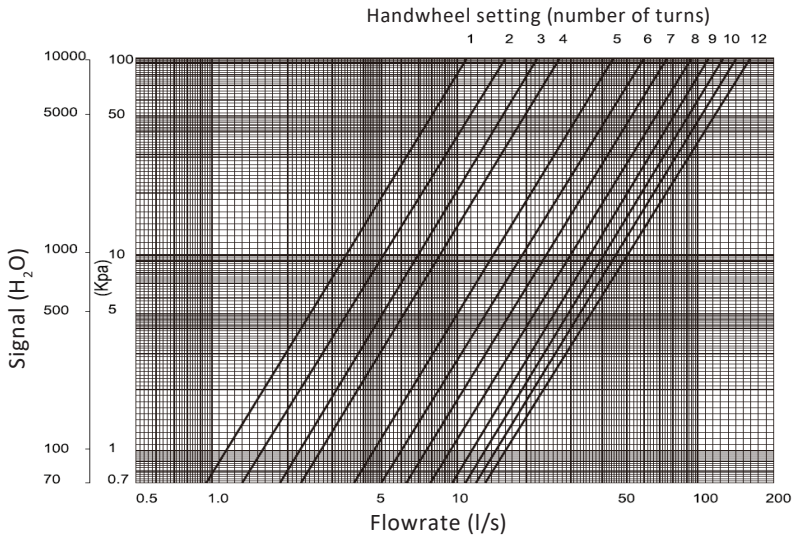
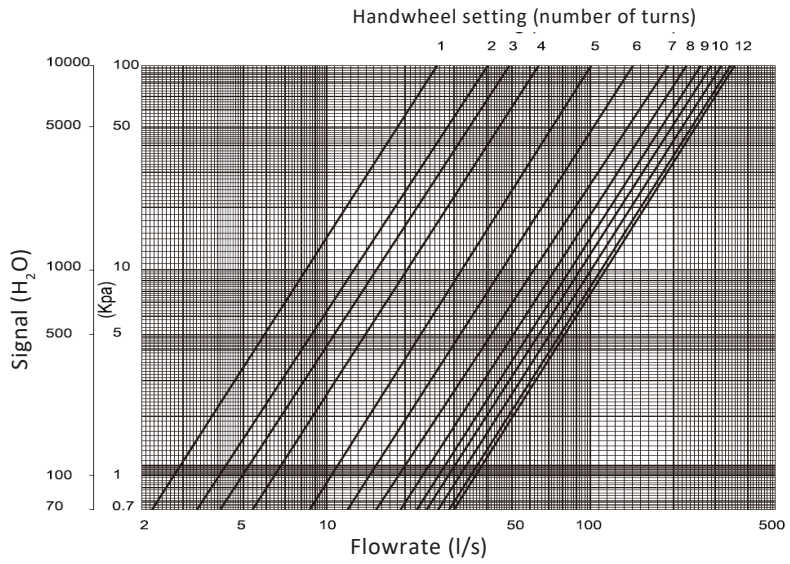
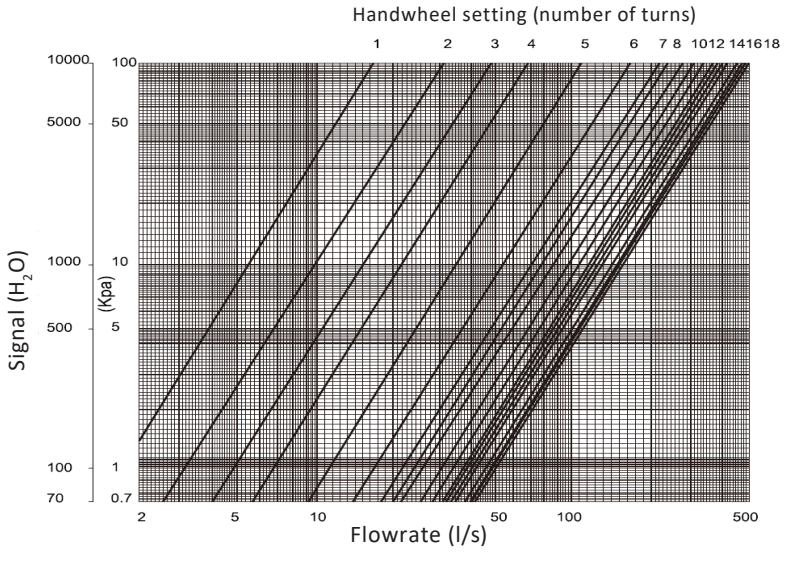
Flow Measurement Graphs

FSB DN 150	Setting	Kv (m^3/h)
	1	48
	2	75
	3	110
	4	162
	5	233
	6	294
	7	346
	8	371
	All open	380

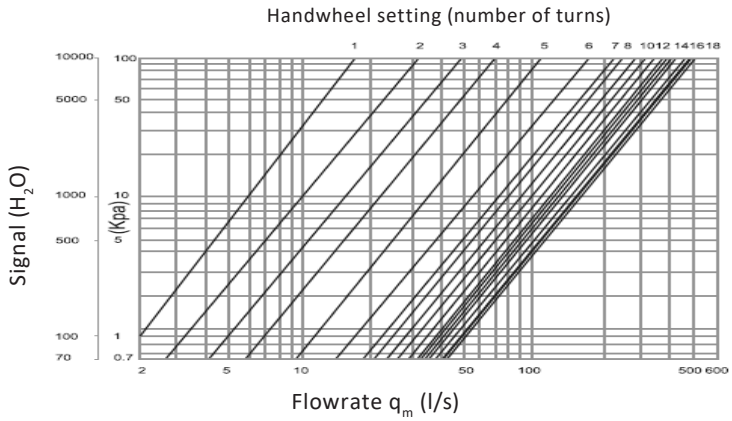
FSB DN 200	Setting	Kv (m^3/h)
	1	41
	2	61
	3	81
	4	99
	5	161
	6	215
	7	271
	8	339
	9	412
	10	482
	11	546
	12 (All open)	608

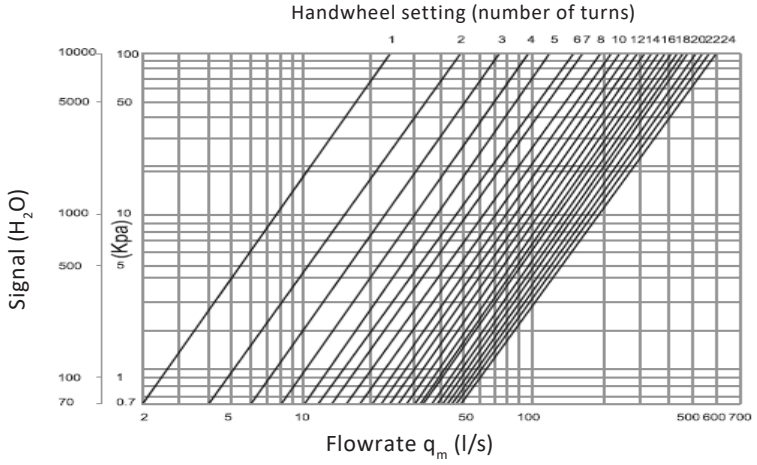
Flow Measurement Graphs

FSB DN 250	Setting	Kv (m^3/h)
	1	97
	2	146
	3	177
	4	232
	5	368
	6	543
	7	695
	8	832
	9	960
	10	1045
	11	1151
	12	1249
	All open	1292

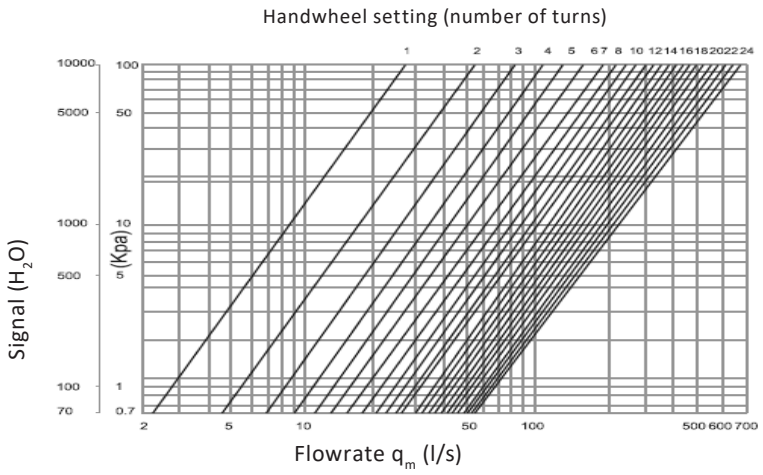
FSB DN 300	Setting	Kv (m^3/h)
	1	63
	2	113
	3	174
	4	245
	5	397
	6	628
	7	792
	8	873
	9	1002
	10	1112
	11	1223
	12	1331
	13	1383
	14	1444
	15	1505
	16	1639
	17	1707
	18	1730
	All open	1791

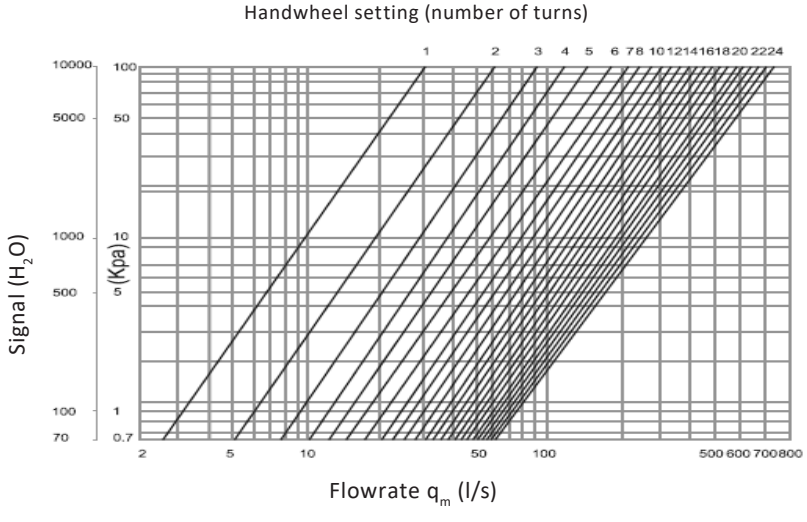
Flow Measurement Graphs

FSB DN 350	Setting	Kv (m^3/h)
	1	64
	2	115
	3	177
	4	250
	5	404
	6	639
	7	807
	8	889
	9	1020
	10	1132
	11	1246
	12	1355
	13	1409
	14	1470
	15	1533
	16	1669
	17	1739
	18	1762
	All open	1824

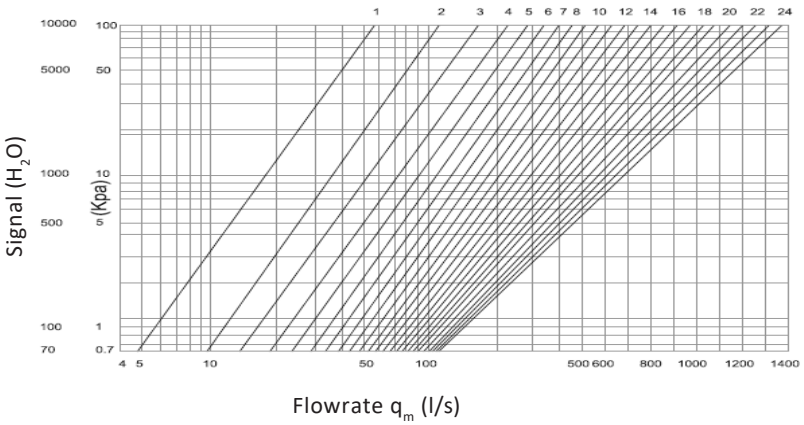
FSB DN 400	Setting	Kv (m^3/h)
	1	87
	2	175
	3	262
	4	350
	5	437
	6	525
	7	612
	8	699
	9	787
	10	874
	11	962
	12	1049
	13	1136
	14	1224
	15	1311
	16	1399
	17	1486
	18	1574
	19	1661
	20	1748
	21	1836
	22	1923
	23	2011
	24	2098

Flow Measurement Graphs

FSB DN 450	Setting	Kv (m^3/h)
	1	99
	2	198
	3	296
	4	395
	5	494
	6	593
	7	692
	8	791
	9	889
	10	988
	11	1087
	12	1186
	13	1285
	14	1384
	15	1482
	16	1581
	17	1680
	18	177
	19	1878
	20	1977
	21	2075
	22	2174
	23	2273
	24	2372

FSB DN 500	Setting	Kv (m^3/h)
	1	110
	2	220
	3	330
	4	440
	5	550
	6	660
	7	770
	8	880
	9	990
	10	1100
	11	1210
	12	1320
	13	1430
	14	1540
	15	1650
	16	1760
	17	1870
	18	1980
	19	2090
	20	2200
	21	2310
	22	2420
	23	2530
	24	2640

Flow Measurement Graphs

FSB DN 600	Setting	Kv (m^3/h)
	1	206
	2	412
	3	617
	4	823
	5	1029
	6	1235
	7	1441
	8	1647
	9	1852
	10	2058
	11	2264
	12	2470
	13	2676
	14	2882
	15	3087
	16	3293
	17	3499
	18	3705
	19	3911
	20	4117
	21	4322
	22	4528
	23	4734
	24	4940