

Seat valve, PN16

Threaded seat valves made of bronze, stroke 5.5mm



(DN15/20)



(DN15/20)



4-port valve
(with T-bypass)



(DN20...40)

2-port valve



(DN20...40)

3-port valve

VA2G-T5...

Application

Suitable for use as control valves in heating, ventilating and air conditioning plants for low-pressure hot water and chilled water systems with permissible fluids as:

- Water: Max. 2°C ...120°C
- Domestic water
- Water with glycol (up to a maximum of 50% as anti-freeze)

Design features

- Energy saving with tight shut off through soft sealing.
- 3-port Valves can be used in mixing or diverting application.
- Valves with up to Kvs 4.0 have exchangeable valve inserts (Plug) to easily adapt to different Kvs requirements.
- The compact size makes it perfectly suited for installations where space is limited.
- Equal-percentage flow characteristics
- Maintenance free low friction spindle sealing.
- Threaded valve neck for fitting actuator.
- Screwed knob for manual operation.

Types and operating data

2-port seat valves

Type	DN	k_{vs} m ³ /h	Sv	Actuators A5-400 or M5-400 Δp_{max}^1 (bar)	Fitting
VA2G-T5-015-062	15	0.25	> 50	10 (1)	ESG13
VA2G-T5-015-072	15	0.4	> 50	10 (1)	ESG13
VA2G-T5-015-082	15	0.63	> 50	10 (1)	ESG13
VA2G-T5-015-092	15	1.0	> 50	9 (1)	ESG13
VA2G-T5-015-102	15	1.6	> 50	9 (1)	ESG13
VA2G-T5-015-152	15	2.5	> 50	8 (1)	ESG13
VA2G-T5-020-172	20	2.5	> 50	8 (1)	ESG14
VA2G-T5-020-182	20	4.0	> 50	8 (1)	ESG14
VA2G-T5-020-202	20	6.3	> 100	3 (1)	ESG20
VA2G-T5-025-252	25	10.0	> 100	3 (1)	ESG25
VA2G-T5-032-322	32	16.0	> 100	2 (1)	ESG32
VA2G-T5-040-402	40	25.0	> 100	2 (1)	ESG40

3-port seat valves

Type	DN	k_{vs} m ³ /h	Sv	Actuators A5-400 or M5-400 Δp_{max}^1 (bar)	Fitting
VA3G-T5-015-06	15	0.25	> 50	10 (1)	ESG13
VA3G-T5-015-07	15	0.4	> 50	10 (1)	ESG13
VA3G-T5-015-08	15	0.63	> 50	10 (1)	ESG13
VA3G-T5-015-09	15	1.0	> 50	9 (1)	ESG13
VA3G-T5-015-10	15	1.6	> 50	9 (1)	ESG13
VA3G-T5-015-15	15	2.5	> 50	8 (1)	ESG13
VA3G-T5-020-17	20	2.5	> 50	8 (1)	ESG14
VA3G-T5-020-18	20	4.0	> 50	8 (1)	ESG14
VA3G-T5-020-20	20	6.3	> 100	3 (1)	ESG20
VA3G-T5-025-25	25	10.0	> 100	3 (1)	ESG25
VA3G-T5-032-32	32	16.0	> 100	2 (1)	ESG32
VA3G-T5-040-40	40	25.0	> 100	2 (1)	ESG40

4-port seat valves (3-port with T bypass)

Type	DN	k_{vs} m ³ /h	Sv	Actuators A5-400 or M5-400 Δp_{max}^1 (bar)	Fitting
VA4G-T5-015-064	15	0.25	> 50	10 (1)	ESG13
VA4G-T5-015-074	15	0.4	> 50	10 (1)	ESG13
VA4G-T5-015-084	15	0.63	> 50	10 (1)	ESG13
VA4G-T5-015-094	15	1.0	> 50	9 (1)	ESG13
VA4G-T5-015-104	15	1.6	> 50	9 (1)	ESG13
VA4G-T5-015-154	15	2.5	> 50	8 (1)	ESG13
VA4G-T5-020-174	20	2.5	> 50	8 (1)	ESG14
VA4G-T5-020-184	20	4.0	> 50	8 (1)	ESG14

¹⁾ The Δp_{max} shown is the differential pressure limitation where the actuator can still close the valve, the figure in the bracket is the recommended Δp_{max} under normal operation of the valve.

Accessories

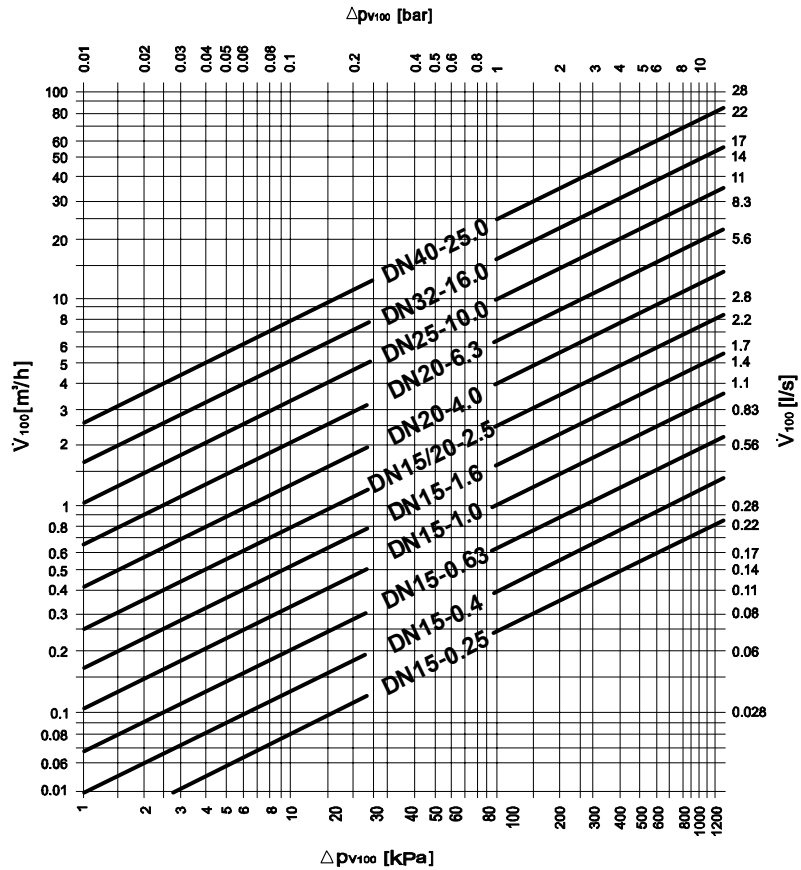
5604 2025G	Replacement 2-port DN15/20 valve insert, Kvs 0.25
5604 2040G	Replacement 2-port DN15/20 valve insert, Kvs 0.4
5604 2063G	Replacement 2-port DN15/20 valve insert, Kvs 0.63
5604 2100G	Replacement 2-port DN15/20 valve insert, Kvs 1.0
5604 2160G	Replacement 2-port DN15/20 valve insert, Kvs 1.6
5604 2250G	Replacement 2-port DN15/20 valve insert, Kvs 2.5
5604 2400G	Replacement 2-port DN15/20 valve insert, Kvs 4.0

5604 3025G	Replacement 3/4-port DN15/20 valve insert, Kvs 0.25
5604 3040G	Replacement 3/4-port DN15/20 valve insert, Kvs 0.4
5604 3063G	Replacement 3/4-port DN15/20 valve insert, Kvs 0.63
5604 3100G	Replacement 3/4-port DN15/20 valve insert, Kvs 1.0
5604 3160G	Replacement 3/4-port DN15/20 valve insert, Kvs 1.6
5604 3250G	Replacement 3/4-port DN15/20 valve insert, Kvs 2.5
5604 3400G	Replacement 3/4-port DN15/20 valve insert, Kvs 4.0

Fittings *

ESG... Coupling sets made of brass with Rp parallel thread, complete with cover and gasket

* Fitting with different thread type or connection available on request.



k_{vs}	Nominal flow
Sv	Range ability to VDI2173
V_{100}	Nominal flow rate at Δp_{V100}
Δp_{V100}	Pressure differential across the fully open valve

3-port seat valve used as a mixing or diverting valve



Used as a mixing valve: From II and III to I
 Used as a diverting valve: From I to II and III

Ordering information

When ordering, please give quantity, designation and type code.

Example: 1pc, DN25 three-port seat valve, PN16, VA3G-T5-025-25

The fittings are to be ordered separately if required. They are also packed separately.

Technical data

Nominal pressure		PN16
Valve characteristic		
2-port valve		0...30% Linear 30%...100% Equal percentage($n_{gl}=2.2$)
3-port valve - Through-port		0...30% Linear 30%...100% Equal percentage($n_{gl}=2.2$)
- Bypass		Linear
Leakage *		
2-port valve		Max. 0.02% of k_{vs}
3-port valve - Through-port		Max. 0.02% of k_{vs}
- Bypass		Max. 2% of k_{vs}
Material	- Valve body	Bronze
	- Plug	Brass
	- Spindle	Stainless steel
	- Stem gland seal	EPDM O-ring
Operating pressure		Max. 1600 kPa (16 bar)
Thread dimension	- Valve	To ISO228/1
	- Fitting	To ISO7/1
Stroke		5.5mm
Weight		See "Dimensions"

* Test under differential pressure of 1 bar

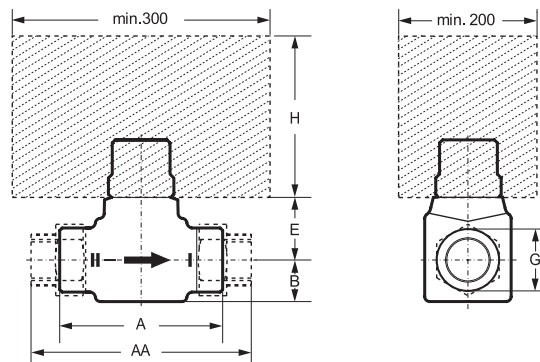
Dimensions

Dimension in mm

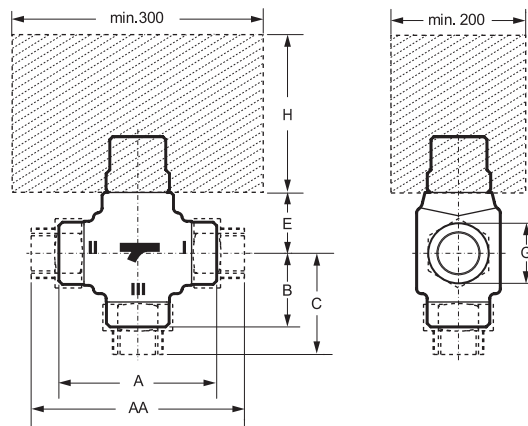
DN15/20

	DN		A	AA	B	C	E	G	Hmin.	Weight in kg	
	mm	inches	mm	mm	mm	mm	mm	mm	mm	A5-400	ESG..
2-way	15	1/2"	66	111	18.0		25.5	G ^{1/2} "	200	0.42	0.15
3-way	15	1/2"	66	111	31.0	54	25.5	G ^{1/2} "	200	0.45	0.15
4-way	15	1/2"	66	111	53.5	40	25.5	G ^{1/2} "	200	0.65	0.15
2-way	20	3/4"	66	117	18.0		25.5	G ^{3/4} "	200	0.42	0.15
3-way	20	3/4"	66	117	31.0	57	25.5	G ^{3/4} "	200	0.45	0.15
4-way	20	3/4"	66	117	63.5	50	25.5	G ^{3/4} "	200	0.70	0.15

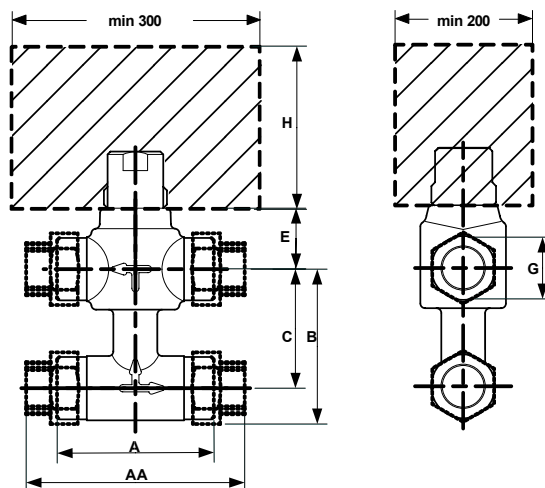
2-port valve



3-port valve



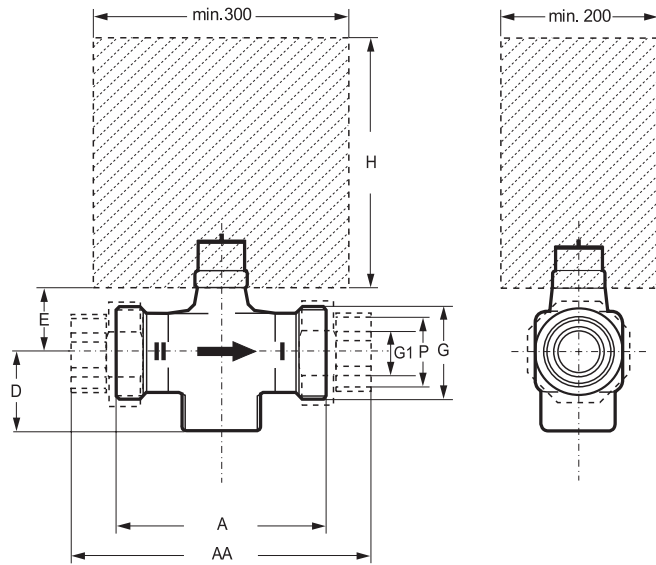
4-port valve (3-port with T-bypass)



DN20...40

DN		A	AA	B	C	D	E	G	Hmin.	Weight in kg		
mm	inches	mm	mm	mm	mm	mm	mm		mm	A5-400	M5-400	ESG...
20	3/4"	100	150	50.0	76	59	30.5	G1 1/4"	200	0.9	1.1	0.23
25	1"	105	160	52.5	81	62	32.5	G1 1/2"	200	1.0	1.3	0.26
32	1 1/4"	105	168	52.5	84	62	39.5	G2"	200	1.6	1.9	0.44
40	1 1/2"	130	191	65.0	100	76	78	G2 1/4"	200	2.7	3.2	0.54

2-port valve



3-port valve

