西门子原装进口水阀VVF42/VXF42系列

产品名称	西门子原装进口水阀VVF42/VXF42系列
公司名称	山东泉润泽自控技术有限公司
价格	1000.00/1
规格参数	西门子:进口 VVF42:VXF42 SKD60:SKD62
公司地址	中国 山东 济南 历下区 浆水泉路十一号3号楼1单元202室
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产品详情

2- and 3-port valves with

flanged connections, PN 16

VVF42..

VVF42..K

VXF42..

From the large-stroke valve line

- Performance valves for medium temperatures from -10…150 ° C
- Valve body of grey cast iron EN-GJL-250
- DN 15…150
- kvs 1.6…400 m3/h
- Flange type 21, flange design B
- VVF42..K with pressure compensation to handle high differential pressure
- Equipable with electro-motoric actuators SAX.. or electro-hydraulic

actuators SKD.., SKB.., SKC..

Use

In boiler, district heating and refrigeration plants, cooling towers, heating groups, in ventilation and air-handling units as control or shutoff valves.

For use in closed hydraulic circuits (observe cavitation).

Type summary

Valves Actuators SAX.. 1) SKD.. SKB.. SKC..

Stroke 20 mm 40 mm

PN 16 Positioning force 800 N 1000 N 2800 N 2800 N

Data sheet N4501 N4561 N4564 N4566

DN kvs SV Δps Δpmax Δps Δpmax Δps Δpmax Δps Δpmax

-10…150 °C Stock number [m3/h] [kPa]

VVF42.15-1.6 S55204-V100 15 1.6

> 50 1600

400

1600

400

1600

400 - -

VVF42.15-2.5 S55204-V101 15 2.5

VVF42.15-4 S55204-V102 15 4

VVF42.20-6.3 S55204-V103 20 6.3

VVF42.25-6.3 S55204-V104 25 6.3

VVF42.25-10 S55204-V105 25 10

VVF42.32-16 S55204-V106 32 16

> 100

900 1200

VVF42.40-16 S55204-V107 40 16

550 750

VVF42.40-25 S55204-V108 40 25

VVF42.50-31.5 S55204-V109 50 31.5

350 300 450 1200 VVF42.50-40 S55204-V110 50 40

VVF42.65-50 S55204-V111 65 50

200 150 250 200 700

VVF42.65-63 S55204-V112 65 63

VVF42.80-80 S55204-V113 80 80

125 75 175 125 450 VVF42.80-1002) S55204-V114 80 100

VVF42.100-125 S55204-V115 100 125

- - - - - -

300 250 VVF42.100-1602) S55204-V116 100 160

VVF42.125-200 S55204-V117 125 200

190 160

VVF42.125-250 S55204-V118 125 250

VVF42.150-315 S55204-V119 150 315

125 100 VVF42.150-4002) S55204-V120 150 400

-5…150 ° C

VVF42.50-40K3) S55204-V121 50 40

> 100

VVF42.65-63K3) S55204-V122 65 63 1600 400 1600 400 1600 400 - -

VVF42.80-100K3) S55204-V123 80 100

VVF42.100-160K3) S55204-V124 100 160

VVF42.125-250K3) S55204-V125 125 250 - - - - - - 1600 400

VVF42.150-360K S55204-V126 150 360

1) Suitable for medium temperatures up to 130 ° C

2) Valve characteristic for kvs value 100 m3/h from 70% stroke, kvs value 160 m3/h from 85% stroke and kvs value 400 m3/h from 90% stroke is optimized for maximum volumetric flow

3) Valve characteristics for pressure compensated valves for kvs value 100 m3/h from 70% stroke, kvs value 40,160 and 250 m3/h from 80% stroke and kvs value 63 m3/h from 90% stroke is optimized for maximum volumetric flow.

Valves Actuators SAX.. 1) SKD.. SKB.. SKC..

Stroke 20 mm 40 mm

PN 16 Positioning force 800 N 1000 N 2800 N 2800 N

Data sheet N4501 N4561 N4564 N4566

DN kvs SV Δ pmax

-10…150 ° C Stock number [m3/h]

[kPa]

VXF42.15-1.6 S55204-V127 15 1.6

> 50

400

100 400 100

400 100 - -

VXF42.15-2.5 S55204-V128 15 2.5

VXF42.15-4 S55204-V129 15 4

VXF42.20-6.3 S55204-V130 20 6.3

VXF42.25-6.3 S55204-V131 25 6.3

VXF42.25-10 S55204-V132 25 10

VXF42.32-16 S55204-V133 32 16

> 100

VXF42.40-16 S55204-V134 40 16

VXF42.40-25 S55204-V135 40 25

VXF42.50-31.5 S55204-V136 50 31.5

300 VXF42.50-40 S55204-V137 50 40

VXF42.65-50 S55204-V138 65 50

150

50

200 80

VXF42.65-63 S55204-V139 65 63

VXF42.80-80 S55204-V140 80 80

75 125 50 VXF42.80-1002) S55204-V141 80 100

VXF42.100-125 S55204-V142 100 125

- - - - - -

250

50

VXF42.100-1602) S55204-V143 100 160

VXF42.125-200 S55204-V144 125 200

160 VXF42.125-250 S55204-V145 125 250

VXF42.150-315 S55204-V146 150 315

100 VXF42.150-4002) S55204-V147 150 400

1) Suitable for medium temperatures up to 130 ° C

2) Valve characteristic for kvs value 100 m3/h from 70% stroke, kvs value 160 m3/h from 85% stroke and kvs value 400 m3/h from 90% stroke is optimized for maximum volumetric flow

DN = Nominal size

kvs = Flow nominal value of cold water (5...30 ° C) through the fully opened valve (H100) at a differential pressure of 100 kPa (1 bar)

Sv = Rangeability

Δ ps = Maximum permissible differential pressure at which the motorized valve still closes securely against the pressure

Δ pmax = Maximum permissible differential pressure across the valve ' s throughport for the entire positioning range of the motorized valve

Ordering

Product number Stock number Description

VXF42.65-63 S55204-V139 3-port valve with flange, PN 16

SKD32.50 SKD32.50 Electro-hydraulic actuator

Valves, actuators and accessories are packed and delivered as separate items.

Counter-flanges, bolts and gaskets must be provided on site.

See page 14

Equipment combinations

Product number Description Stroke Positioning force Operating

voltage

Positioning

signal

Spring

return

time

Positioning

time LED Manual

adjuster

Auxiliary

functions

SAX31.00 S55150-A105

20 mm 800 N

AC 230 V 3-position

-

120 s

-

Press and fix

SAX31.03 S55150-A106 1)

SAX61.03 30 s

SAX61.03U

S55150-A100

S55150-A100-A100

AC 24 V

DC 24 V

0…10 V

4…20 mA

0…1000 Ω

P

2). 3)

SAX81.00 S55150-A102

3-position -

120 s

- 1) SAX81.03

SAX81.03U

S55150-A103

S55150-A103-A100 30 s

SKD32.21 SKD32.21

20 mm 1000 N

AC 230 V 3-position

8 s Opening: 30 s

Closing: 10 s

-

Turn, Position

is maintained

1)

SKD32.50 SKD32.50 -

120 s

SKD32.51 SKD32.51 8 s

SKD60 SKD60

AC 24 V

0…10 V

4···20 mA

0···1000 Ω

-

Opening: 30 s

Closing: 15 s P

2) SKD62

SKD62U

SKD62

SKD62U 15 s

SKD62UA SKD62UA 4)

SKD82.50

SKD82.50U

SKD82.50

SKD82.50U

3-position

-

120 s - 1)

SKD82.51

SKD82.51U

SKD82.51

SKD82.51U 8 s

SKB32.50 SKB32.50

20 mm 2800 N

AC 230 V 3-position

-

120 s -

Turn, Position

is maintained

1)

SKB32.51 SKB32.51 10 s

SKB60 SKB60

AC 24 V

0···10 V

4···20 mA

0···1000 Ω

-

Opening: 120 s

Closing:10 s P

2) SKB62

SKB62U

SKB62

SKB62U 10 s

SKB62UA SKB62UA 4)

SKB82.50

SKB82.50U

SKB82.50

SKB82.50U

3-position

-

120 s - 1)

SKB82.51

SKB82.51U

SKB82.51

SKB82.51U 10 s

SKC32.60 SKC32.60

40 mm 2800 N

AC 230 V 3-position

-

120 s -

Turn, Position

is maintained

1)

SKC32.61 SKC32.61 18 s

SKC60 SKC60

AC 24 V

0…10 V

4…20 mA

0…1000 Ω

-

Opening: 120 s

Closing: 20 s P

2) SKC62

SKC62U

SKC62

SKC62U 20 s

SKC62UA SKC62UA 4)

SKC82.60

SKC82.60U

SKC82.60

SKC82.60U

3-position

-

120 s - 1)

SKC82.61

SKC82.61U

SKC82.61

SKC82.61U 18 s

1) Auxiliary switch, potentiometer

2) Position feedback, forced control, selection of valve characteristic

3) Optional: sequence control, selection of acting direction

4) Plus sequence control, stroke limitation, and selection of acting direction

Example

Delivery

Note

Spare parts, Rev.-No.

Product documentation

- Mounting Instructions M4030 74 319 0749 0
- Basic documentation P4030 Contains background information and

technical basic knowledge of valves

Technical and

mechanical design

The illustrations below show the basic design of the valves. Constructional features, such as the shape of plugs, may differ.

Fluids

Closing against the pressure

For use with all actuators

The VVF42..K valves use a pressure-compensated plug. This enables the same type of actuators to be used for the control of volumetric flow at higher differential pressures.

Fluids

Closing against the pressure

For use with all actuators

2-port valves do not become 3-port valves by removing the blank flange!

Fluids

Mixing valve (preferred use) Diverting valve

2-port valves

2-port valves

pressure compensated

Note

3-port valves

Accessories

Product

number Stock number Description Note Example

ASZ6.5 ASZ6.5

Stem heating

element Required for medium temperatures < 0 ° C

ASZ6.6 S55845-Z108

Sizing

0,02

0,03

0,04

0,05

0,06

0,08

0,1

0,2

0,3

0,4

0,5

0,6

0,8

1

2

3

4 5 6

8

10

20

30

40

50

60

80

100

200

300

400

500

1

2

3

456

8

10

20

30

40

50

60

80

100

200

300

400

500

600

800

1000

2000

0,01

0,02

0,03

0,04

0,05

0,06

0,08

0,1

0,2

0,3

0,4

0,5

0,6

0,8

10

20

0,025

0,02

0,015

0,01

0,008

0,006

3000

600

800

1000

2000

3000

150

1500

1

2

3

456

1,5

8

15

30

kVS

0,04

0,06

0,03

0,05

0,08

0,1

0,15

0,2

0,25

0,4

0,6

0,3

0,5

0,8

1

1,5

2

2,5

4

6

3

5

8

10

15

20

25

40

60

30

50

80

100

150

200

250

400

600

300

500

800

250

40

31.5

25

16

10

6.3

4

2.5

100

1500

315

160

200

125

63

80

50

360 400

1.6

Δ pmax values apply for the mixing function. Δ pmax values for the diverting function see table „ Type

Flow chart

Flow rate kv / kvs

0···30%: Linear

30···100%: Equal percentage

ngl = 3 to VDI / VDE 2173

For high kvs values the valve characteristic is

optimized for maximum volumetric flow kV100.

Stroke H / H100

Flow rate kv / kvs

0···100%: Linear

Stroke H / H100

Flow rate kv / kvs

Throughport A-AB

0...30%: Linear

30...100%: Equal percentage

ngl = 3 to VDI / VDE 2173

For high kvs values the valve characteristic is

optimized for maximum volumetric flow kV100.

Bypass B-AB

0...100%: Linear

Tor AB = constant flow

Tor A = variable flow

Tor B = bypass (variable flow)

Stroke H / H100

Mixing: Flow from port A and port B to port AB

Diverting: Flow from port AB to port A and port B

Flow rate kv / kvs

Throughport A-AB

0...100%: Linear

Bypass B-AB

0...100%: Linear

Stroke H / H100

Valve characteristics

2-port valves

For product lines:

VVF42.125-250

VVF42.125-250K

VVF42.150-400

VVF42.150-360K

3-port valves

For product lines:

VXF42.125-250

VXF42.150-400

Operating pressure and operating temperatures according to ISO 7005, EN

1092 and EN 12284

All relevant local directives must be observed

Medium Temperature

range Valve Note

VVF42..

VVF42..K

VXF42..

Tmin

[° C]

Tmax

[° C]

Cold water 1 25 ■ ■ ■ -

Low-temperature hot water 1 130 ■ ■ ■ -

High-temperature hot water 1) 130 150 ■ ■ ■ -

150 180 - - - -

Water with antifreeze -5 150 ■ ■ ■ For medium temperatures below 0 ° C,

the stem heating ASZ6.6 has to be

installed.

-10 150 ■ -3) ■

-20 150 - - -

Cooling water 2) 1 25 - - - -

Brines -5 150 ■ ■ ■ For medium temperatures below 0 ° C,

the stem heating ASZ6.6 has to be

installed.

-10 150 ■ -3) ■

-20 150 - - -

Super-clean water

(demineralized and deionized

water)

1 150 - - -

Demineralized water according

to VDI2035 / SWKI_BT102-01 1 150 ■ ■ ■

1) Differentiation due to saturated steam curve

2) Open circuits

3) VVF42..K can ’ t be used with media below -5 ° C due to the compensation sealing material

Fields of use Valves

VVF42.. VVF42..K VXF42..

Generation Boiler plants ■ ■ ■

District heating plants ■ ■ -

Refrigeration plants ■ ■ ■

Distribution Heating groups ■ ■ ■

Ventilation and air-handling

units ■ ■ ■

Operating pressure [bar]

Medium temperature [° C]

Curve for saturated steam; steam forms below this line

Operating pressure according to EN 1092, valid for 2-port valves with

blank flange

Operating pressure

and medium

temperature

Fluids, PN16

with V..F42..

Notes

Medium

compatibility and

temperature ranges

Fields of use

Engineering notes

Preferably mount the valves at the return, as the temperature is lower there and the strain on the stem sealing gland is lower.

Mount a dirt filter or dirt trap before the valve to ensure proper functioning, and a long service life of the valve. Remove dirt, welding beads, etc. from the valves and pipes.

Cavitation can be avoided by limiting the pressure differential across the valve depending on the medium temperature and prepressure.

Mounting notes

Indoors Outdoors

Mounting positions apply to both 2- and 3-port valves.

Commissioning notes

The valve may be put into operation only if actuator and valve are correctly assembled.

Ensure that actuator stem and valve stem are rigidly connected in all positions.

Valve Throughport A à AB Bypass B à AB

Valve stem extends Closes Opens

Valve stem retracts Opens Closes

Maintenance notes

The valves are maintenance-free.

When servicing valves or actuators:

- Deactivate the pump and turn off the power supply
- Close the shutoff valves
- Fully reduce the pressure in the piping system and allow pipes to completely cool down

If necessary, disconnect the electrical wires.

Due to the different types of material used, the valve must be disassembled prior to disposal. Special handling of certain valve components may be required by law or may be sensible from an ecological point of view.

Local and currently valid legislation must be observed.

Mounting location

Dirt trap

Cavitation

Monting position

Note

Function check

Disposal

Warranty

Application-related technical data are guaranteed only when the valves are used in connection with the Siemens actuators listed under ”Equipment combinations”, page 4.

When used with actuators of other manufacture, any warranty by Siemens becomes void.

Technical data

Functional data	PN class PN 16
	Connection Flange
	Operating pressure See Section "Operating pressure and medium temperatures", page 8
	Valve characteristics 1) See section "Valve characteristics", page 7
	Leakage rate Throughport 0…0.02% of kvs value
	Bypass 0.5…2% of kvs value (kvs ≥6.3)
	0.5…3% of kvs value (kvs 1.6; 2.5; 4)
	Permissible media See table " Medium compatibility and temperature ranges", page 8
	Medium temperature -10…150 ° C
	VVF42..K: -5…150 ° C
	Rangeability To DN 25: > 50
	From DN 32: >100
	Nominal stroke To DN 80: 20 mm
	From DN 100: 40 mm
Materials	Valve body EN-GJL-250
	Blank flange VVF.. S235JRG2
	Valve stem Stainless steel
	Seat Machined

Plug Brass/ Bronze

Stem sealing gland Brass

EPDM O-rings

PTFE sleeve

silicon-free

Compensation sealing Stainless steel

FEPM (silicone-free)

Standards Pressure Equipment Directive PED 97/23/EC

Pressure-carrying accessories According to article 1, section 2.1.4

Fluid group 2 PN 16

Without CE certification as per

article 3, section 3 (sound

engineering practice)

≤DN 50

Category I, with CE certification DN 65…125

Category II,

with CE certification, notified

body identification number 0036

DN 150

PN class ISO 7268

Operating pressure ISO 7005, DIN EN 12284

Flanges ISO 7005

Length of flanged valves DIN EN 558-1, line 1

Valve characteristic VDI 2173

Leakage rate Throughport, bypass according to

EN 60534-4 / EN 1349

Environmental conditions

Storage: IEC 60721-3-1 Class 1K3

Temperature -15…+55 ° C

Rel. humidity 5…95% r.h.

Transport: IEC 60721-3-2 Class 2K3, 2M2

Temperature -30…+65 ° C

Rel. humidity < 95% r.h.

Operation: IEC 60721-3-3 Class 3K5, 3Z11

Temperature -15…+55 ° C

Rel. humidity 5…95% r.h.

Environmental compatibility ISO 14001 (environment)

ISO 9001 (quality)

SN 36350 (environmentally compatible

products)

RL 2002/95/EG (RoHS)

Dimensions / Weight Dimensions See „ Dimensions “ , page 13

Weight See „ Dimensions “ , page 13

1) For certain valve lines and high kvs values, the valve characteristic is optimized for maximum

volumetric flow kV100.

Dimensions

Product

number DN B Ø D Ø D1 Ø D2 L1 L2 L3 Ø K H1 H2 H

SAX.. SKD.. SKB.. SKC..

VVF42.. 15 3.7 14 95 46 14 (4x) 130 65 86 65 37 133.5 479 537 612 -

20 4.7 16 105 56 14 (4x) 150 75 97 75 37 133.5 479 537 612 -

25 5.4 15 115 65 14 (4x) 160 80 106.5 85 37 133.5 479 537 612 -

32 8.4 17 140 76 19 (4x) 180 90 119 100 37 133.5 479 537 612 -

40 9.3 16 150 84 19 (4x) 200 100 126 110 37 133.5 479 537 612 -

50 12.2 16 165 99 19 (4x) 230 115 144 125 50 146.5 492 550 625 -

65 17 17 185 118 19 (4x) 290 145 174 145 75 171.5 517 575 650 -

80 25 17 200 132 19 (8x) 310 155 186 160 75 171.5 517 575 650 -

100 35.7 17 220 156 19 (8x) 350 175 205 180 110 226.5 - - - 685

125 52.5 17 250 184 19 (8x) 400 200 233 210 123 239.5 - - - 698

150 74.3 17 284 211 23 (8x) 480 240 275.5 240 150.5 267 - - - 726

VVF42..K 50 12 16 165 99 19 (4x) 230 115 144 125 50 146.5 492 550 625 -

65 17.5 17 185 118 19 (4x) 290 145 174 145 75 171.5 517 575 650 -

80 27 17 200 132 19 (8x) 310 155 186 160 75 171.5 517 575 650 -

100 35.9 17 220 156 19 (8x) 350 175 206 180 110 226.5 - - - 685

125 52.3 17 250 184 19 (8x) 400 200 233 210 123 239.5 - - - 698

150 76.3 17 284 211 23 (8x) 480 240 275.5 240 150.5 267 - - - 726

Product

number DN B Ø D Ø D1 Ø D2 L1 L2 L3 Ø K H1 H2 H

SAX.. SKD.. SKB.. SKC..

VXF42.. 15 2.6 14 95 46 14 (4x) 130 65 65 65 37 133.5 479 537 612 -

20 3.3 16 105 56 14 (4x) 150 75 75 75 37 133.5 479 537 612 -

25 3.8 15 115 65 14 (4x) 160 80 80 85 37 133.5 479 537 612 -

32 5.7 17 140 76 19 (4x) 180 90 90 100 37 133.5 479 537 612 -

40 6.3 16 150 84 19 (4x) 200 100 100 110 37 133.5 479 537 612 -

50 8.7 16 165 99 19 (4x) 230 115 115 125 50 146.5 492 550 625 -

65 12.9 17 185 118 19 (4x) 290 145 145 145 75 171.5 517 575 650 -

80 19.2 17 200 132 19 (8x) 310 155 155 160 75 171.5 517 575 650 -

100 28.8 17 220 156 19 (8x) 350 175 175 180 110 226.5 - - - 685

125 43.2 17 250 184 19 (8x) 400 200 200 210 123 239.5 - - - 698

150 61.5 17 284 211 23 (8x) 480 240 240 240 150.5 267 - - - 726

VVF42..

VVF42..K

VXF42..