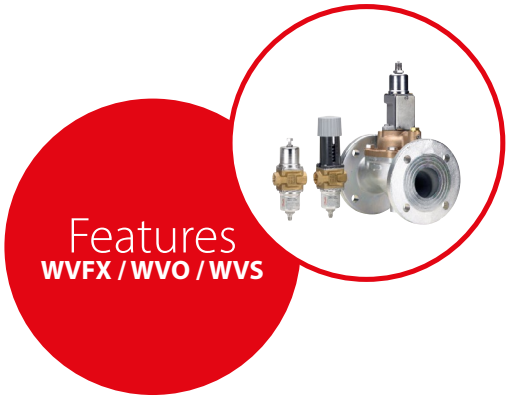
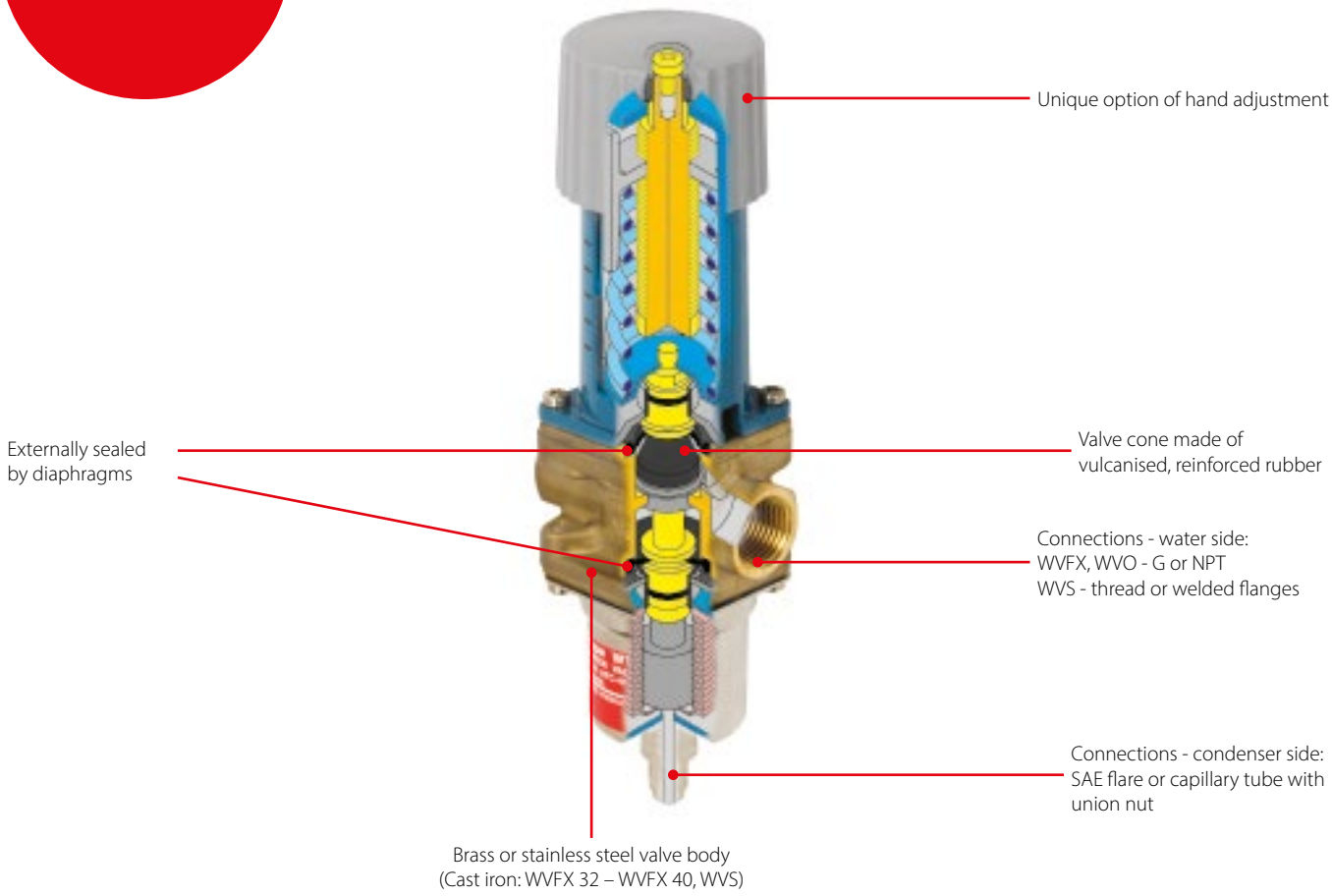
WVFX / WVO / WVS, Pressure operated water valves

WVFX, WVO and WVS pressure operated water valves are used to regulate the flow of water in refrigeration plant with water-cooled condensers in order to ensure constant proportional regulation of condensing pressure. The water valve modulates the water flow to maintain the condensing pressure at a constant level during operation.

When the refrigeration plant is stopped, the cooling water flow is shut off automatically. Media: fresh water and neutral brine.
For use with aggressive media such as sea water, WVFX 15, WVFX 20 and WVFX 25 are available in stainless steel versions.





Facts

Applications:
- Traditional refrigeration
- Air conditioning units
- Other applications with water-cooled condenser
- Ice making machines
- Ice cream machines
- IT cooling
- Water chillers

- WVFX 10 – WVFX 25 can be supplied in stainless steel housing for sea water applications

- Exact pressure control - high accuracy of WVO valves up to 0.2 bar
- Reliable design - factory setting is maintained during whole life cycle
- Insensitive to dirt - fit and forget solution
- High permissible water pressure (PS) = 16 bar - can be used with water towers
- Low flow version - 0.63 m³/h (available on request)
- WVFX 10 – WVFX 40 are direct actuated valves
- WVS 32 – WVS 100 are servo-operated valves

- Very wide media temperature range: -25 – 130 °C
- Versions with capillary tube available on request
- Applicable to R22, R1270, R134a, R290, R404A, R407A, R407C, R407F, R410A [1], R448A, R449A, R450A, R452A, R507A, R513A, R600, R600a, R717 [2]

[1] High pressure refrigerants version (45.2 MWP) only
[2] WVS, WVFX 10 – 25 and WVO with flare connection only; versions with capillary tube or with solder connections are not compatible with R717. WVFX 32 and WVFX 40 are not compatible with R717

- May be used in the following EX range: Category 3 (Zone 2)

Technical data

WVFX / WVO / WVS, Pressure operated water valve

Technical data

Type				Liquid side			K_v value [1] [m³/h]
	Control press. adjustable closing press. [bar]	Max. working pressure PS [bar]	Max. test pressure PB [bar]	Media	Max. working pressure PS [bar]	Max. test pressure PS [bar]	
WVO 10	8.0 – 22 [2]	26.4	29	Fresh water, neutral brine, sea water [3]	16	24	1.4
WVFX 10	3.5 – 16	26.4	29		16	24	1.4
	4.0 – 23	26.4	29		16	24	1.4
	15.0 – 29.0	45.2	60		16	24	1.4
WVO 15	14.0 – 18.0	26.4	29		16	24	1.9
WVFX 15	3.5 – 16.0	26.4	29		16	24	1.9
	4.0 – 23.0	26.4	29		16	24	1.9
	15.0 – 29.0	45.2	60		16	24	1.9
WVFX 20	3.5 – 16.0	26.4	29		16	24	3.4
	4.0 – 23.0	26.4	29		16	24	3.4
	15.0 – 29.0	45.2	60		16	24	3.4
WVFX 25	3.5 – 16.0	26.4	29		16	24	5.5
	4.0 – 23.0	26.4	29		16	24	5.5
	15.0 – 29.0	45.2	60		16	24	5.5
WVFX 32	4.0 – 17.0	24.1	26.5		10	10	11.0
WVFX 40	4.0 – 17.0	24.1	26.5		10	10	11.0
WVS 32	2.2 – 19.0	26.4	29	Fresh water, neutral brine	10	16	12.5
	15.0 – 29.0	45.2	60		10	16	12.5
WVS 40	2.2 – 19.0	26.4	29		10	16	21.0
	15.0 – 29.0	45.2	60		10	16	21.0
WVS 50	2.2 – 19.0	26.4	29		10	16	32.0
	15.0 – 29.0	45.2	60		10	16	32.0
WVS 65	2.2 – 19.0	26.4	29		10	16	45.0
	15.0 – 29.0	45.2	60		10	16	45.0
WVS 80	2.2 – 19.0	26.4	29		10	16	80.0
	15.0 – 29.0	45.2	60		10	16	80.0
WVS 100	2.2 – 19.0	26.4	29		10	16	125.0
	15.0 – 29.0	45.2	60		10	16	125.0

[1]) The K_v value is the flow of water in [m³/h] with a pressure drop across the valve of 1 bar, ρ = 1000 kg/m³.
[2]) Pressure control range width max. 6 bar.
[3]) WVFX 15 – WVFX 25 with stainless steel housing only.

Media temperature range
WVFX 10 – WVFX 25: -25 – 130 °C
WVFX 32 – WVFX 40: -25 – 90 °C
WVS 50 – WVS 100: -25 – 90 °C

Opening differential pressure
WVO 10 – 25: 0 – 10 bar
WVFX 10 – WVFX 40: 0 – 10 bar
WVS 32 – WVFX 40: 0.5 – 4 bar
WVS 50 – WVS 100: 0.3 – 4 bar

Technical data and ordering

WVFX - Pressure operated water valves, commercial applications

Ordering

Type	Connection			Range (refrigerant) [bar]	Code no.
	Water side ISO 228-1	Condenser side			
		[in]	[mm]		
WVFX 10	G ⅜	¼	6 flare	3.5 – 16	003N1100
	G ⅜	¼	6 flare	4.0 – 23	003N1105
	G ⅜	¼	6 flare	15.0 – 29.0	003N1410
WVFX 15	G ½	¼	6 flare	3.5 – 16	003N2100
	G ½	¼	6 flare nut	4.0 – 23	003N2205
	G ½	¼	6 flare	4.0 – 23	003N2105
	G ½	¼	6 flare	15.0 – 29.0	003N2410
WVFX 20	G ¾	¼	6 flare	3.5 – 16	003N3100
	G ¾	¼	6 flare	4.0 – 23	003N3105
	G ¾	¼	6 flare nut	4.0 – 23	003N3205
	G ¾	¼	6 flare	15.0 – 29.0	003N3410
WVFX 25	G 1	¼	6 flare	3.5 – 16	003N4100
	G 1	¼	6 flare	4.0 – 23	003N4105
	G 1	¼	6 flare	15.0 – 29.0	003N4410
WVFX 32	G 1 ¼	¼	6 flare	4.0 – 17	003F1232
WVFX 40	G 1 ½	¼	6 flare	4.0 – 17	003F1240

WVFX - Pressure operated water valves, with stainless steel housing

WVFX 15	G ½	¼	6 flare	3.5 – 16	003N2101
	G ½	¼	6 flare	4.0 – 23	003N2104
WVFX 20	G ¾	¼	6 flare	4.0 – 23	003N3104
WVFX 25	G 1	¼	6 flare	3.5 – 16	003N4101
	G 1	¼	6 flare	4.0 – 23	003N4104

WVO - Pressure operated water valves, commercial applications

WVO 10	G ⅜	¼	6 flare	8 – 12	003N5203
	G ⅜	¼	6 flare	14 – 18	003N5206
	G ⅜	¼	6 flare	16 – 20	003N5207
WVO 15	G ½	¼	6 flare	14 – 18	003N5216

WVS - Pressure operated water valve parts programme

Type	Connection ISO 228-1	Code no.				
		Valve body	Pilot unit [2]	Pilot unit for R410A and R744 (CO_2) [2]	Flange set [3]	Servo spring for differential pressure range: 1 – 10 bar
WVS 32	G 1 ¼	016D5032	016D1017	016D1018	–	016D1327
WVS 40	G 1 ½	016D5040	016D1017	016D1018	–	016D0575
WVS 50	2 in. weld flange	016D5050 [1]	016D1017	016D1018	027N3050	016D0576
WVS 65	2 ½ in. weld flange	016D5065 [1]	016D1017	016D1018	027N3065	016D0577
WVS 80	3 in. weld flange	016D5080 [1]	016D1017	016D1018	027N3080	016D0578
WVS 100	4 in. weld flange	016D5100 [1]	016D1017	016D1018	027N3100	016D0579

[1] Code numbers cover valve body, flange gaskets, flange bolts and screws for pilot valve.
[2] Code numbers cover control element and spring housing.
[3] Code numbers cover an inlet and an outlet flange.

Accessories

Description	Code no.
1 m capillary tube ¼ in., 6 mm flare coupling nuts at each end	060-017166
Bracket for do WVFX 10 – WVFX 25	003N0388