



664

3-way control valve with in-built by-pass for fan coils. For heating and cooling applications. As zone valve, its use is restricted by the working max differential pressure which limits the working flow rate range. Axial movement for flow rate control of terminal units. Flexible installation direction (mixing and diverting configuration) to match every needs.

Normally Open valve: in standard position, the by-pass line is closed.

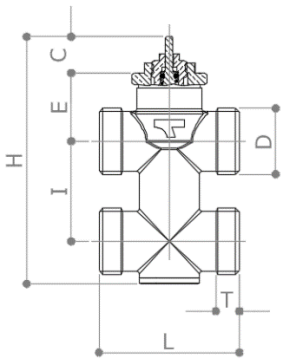
Male connections: fibre gaskets are suggested.

Provided with a commissioning cap. Suitable for actuators with threaded connection M30x1.5 (stroke 3 mm) to implement an ON/OFF control strategy.

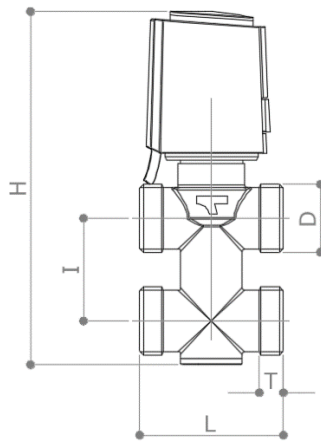
NPT version (**664/3**) available upon request. Supplied with 4 unions. Available 1/2" – 3/4" – 1" Kv 4.2 – starting from DN20 model.

DIMENSIONS

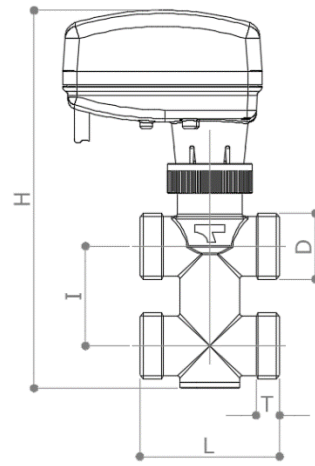
Dimensions in mm



No actuator



with A54_O_series



with VA748_series

DN	10	15	20
D	G1/2"	G3/4"	G1"
T	8	8	8
H	99	99	116
I	40	40	50
L	53	56	65
E	27.5	28	30
C _{min}	11.5		
C _{max}	14.5		
Max width: 36 (cap)			

	10	15	20
D	G1/2"	G3/4"	G1"
T	8	8	8
H	137	137	154
I	40	40	50
L	53	56	65
	-	-	-
	-	-	-
	-	-	-
Max width: 48 (actuator)			

	10	15	20
D	G1/2"	G3/4"	G1"
T	8	8	8
H	152	152	167
I	40	40	50
L	53	56	65
	-	-	-
	-	-	-
	-	-	-
Max width: 49 (actuator)			

DN	10	15	20
Weight [g]	290	300	460

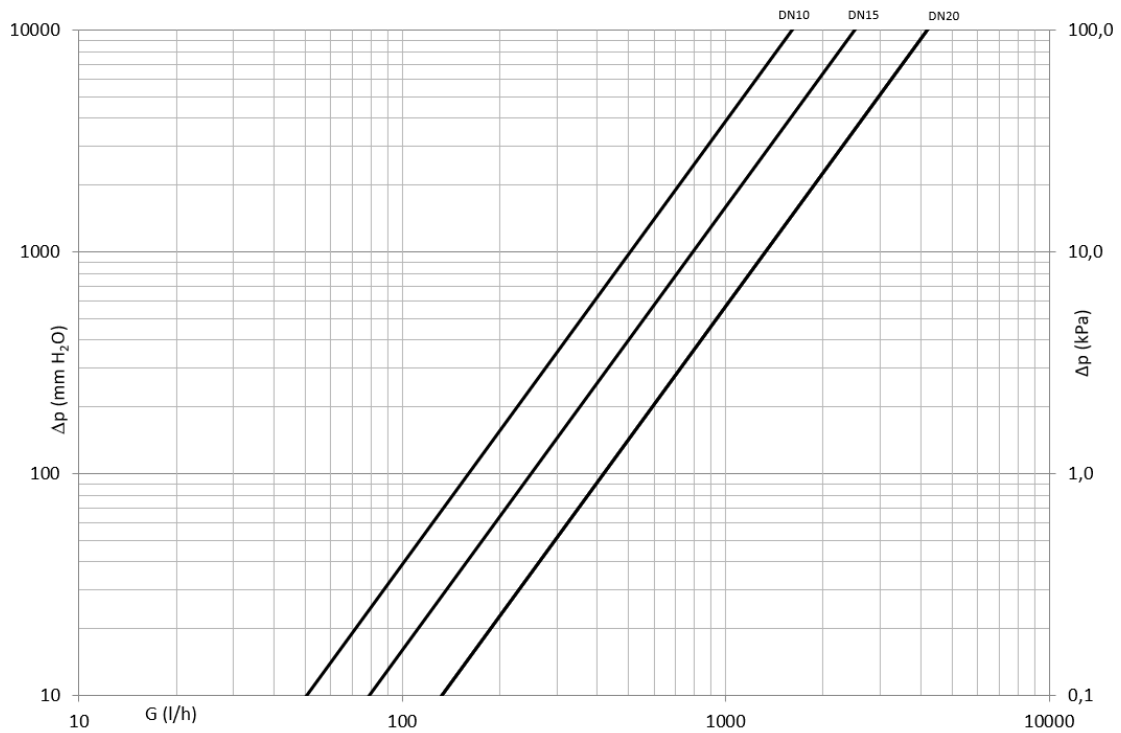
DN	10	15	20
Length of NPT unions	42	35	46

MATERIALS

- Body** CW617N (EN 12165) CuZn40Pb2
- Headwork** CW614N (EN 12164) CuZn39Pb3
- Stem** CW614N (EN 12164) CuZn39Pb3 nickel plated
- Spring** Stainless steel AISI 302
- Stuffing box** CW614N (EN 12164) CuZn39Pb3
- Bottom cap** CW614N (EN 12164) CuZn39Pb3
- O-Rings** 4 x EPDM + 1 x NBR

Cap White ABS

PRESSURE DROP DIAGRAM



Dim.	DN10	DN15	DN20
Kv	1.6	2.5	4.2
Kv by-pass	1.3	1.3	2.8
PN	16	16	16

TECHNICAL FEATURES

Feature	
Pressure rating	PN16
Working temperature range [^]	2°C - +120° C
Working differential pressure (no noise)	0.5 bar
Medium	Water or Water-Glycol 40%

[^]no frost and no steam.

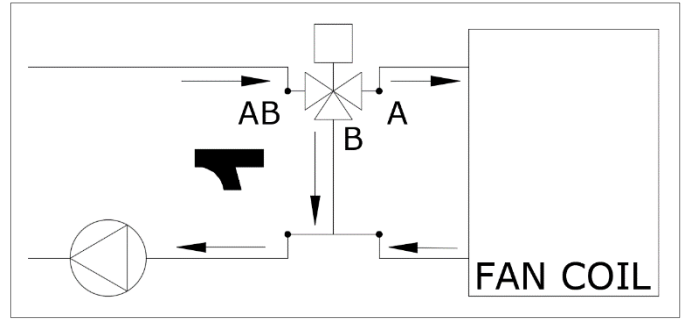
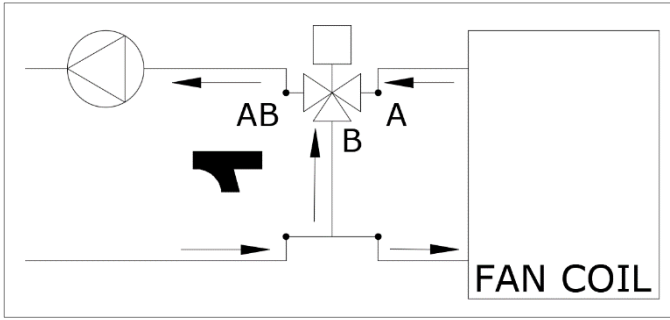
Water quality must comply with UNI 8065. A strainer upstream is suggested.

INSTALLATION SCHEMATIC

The valve can satisfy every installation requirement. It can be mounted in mixing (control valve on terminal unit outlet) or diverting (control valve on terminal unit inlet) configuration. The flow direction logo on the valve body must always be followed. Refer to following schematics for details.

Mixing coniguration

Diverting configuration



CLOSE-OFF PRESSURE

Valve type	With cap	With thermoelectric actuator	With electric actuator
664 DN10	3 bar	2 bar	2 bar
664 DN15	3 bar	1.5 bar	2 bar
664 DN20	3 bar	1 bar	2 bar

According to the valve technology, it is mandatory not to exceed the above-mentioned maximum differential pressure values in order to ensure the right operation with all different actuators, despite it is installed as control valve (terminal units) or zone valve.

ACTUATORS

Type	Part number	Stroke	Adaptor
24 V, 3 Point Floating	VA7481	6.3 mm	-
230 V, 3 Point Floating	VA7481	6.3 mm	-
24 V, ON-OFF PWM Thermic	A544O2S	4 mm	VA80 (included)
230 V, ON-OFF PWM Thermic	A542O2S	4 mm	VA80 (included)
230 V, ON-OFF PWM Thermic	V542O2Q	4 mm	VA80 (included)

The valve can be installed on any position between the horizontal. Upside down installation must be avoided not to expose the actuator (if installed) to any water or dew.

