

VALVES AND HEATING SYSTEM COMPONENTS



- **mixing valves**
- **zone valves**



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MIXING VALVES

MIXING VALVES DATA TABLE

MODEL RANGE	-	LK840		LK841	
		three-way valve		four-way valve	
TYPE	-	three-way valve		four-way valve	
APPLICATION	-	valve for heating systems		valve for heating systems	
CONNECTIONS	-	outer	inner	outer	inner
NOMINAL DIAMETER	DN	25 - 50	15 - 50	25 - 40	15 - 40
KVS	m ³ /h	4 - 25	1.6 - 40	4 - 15	2.5 - 25
WORKING TEMPERATURE	°C	5 - 110 ¹⁾	5 - 110 ¹⁾	5 - 110 ¹⁾	5 - 110 ¹⁾
MAX. PRESSURE	bar	10		10	
MAX. PRESSURE DIFFERENCE	bar	0.5 - 1.0		0.5 - 1.0	
OTHER	-	manual control possible		manual control possible	

ACTUATORS DATA TABLE

MARKING	-	AVC	ACC	AHC
		CONTROL	-	3-point / 0-10 V
POWER SUPPLY	V	230 / 24	230	230
TORQUE	Nm	5 / 10	6	6
SHIFT TIME	s	60, 120, 240, 60-120	120	120
MAX. POWER INPUT	VA	2.5 / 5	3.5	3.5
IP RATING	-	IP42	IP42	IP42
OTHER	-	manual control possible, or auxiliary switch	manual control possible	manual control possible

¹⁾ The short-term maximum fluid temperature is 120 °C.

MIXING VALVES

LK840 Three-way Mixing Valve

Mixing valves with a rotating inner segment intended for heating or solar thermal systems with water or antifreeze fluid.

In the working area (from 30° to 60° rotation of the inner segment) they have a linear flow characteristics.

The valves can be fitted with any actuator supplied by Regulus.



TECHNICAL DATA

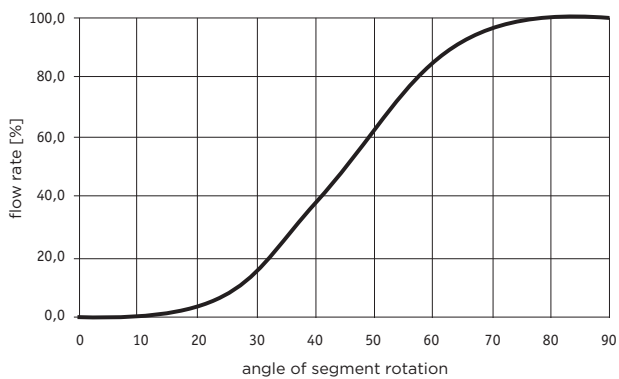
MAX. WORKING PRESSURE	10 bar
FLUID WORKING TEMPERATURE	5 to 110 °C

MATERIALS

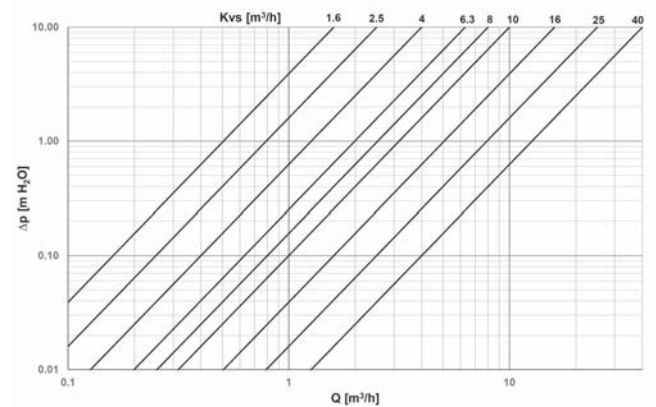
VALVE HOUSING	brass
VALVE SPINDLE	brass
VALVE MEMBER	brass

These valves can be easily converted between a left or right hand version for use in different positions in a heating system.

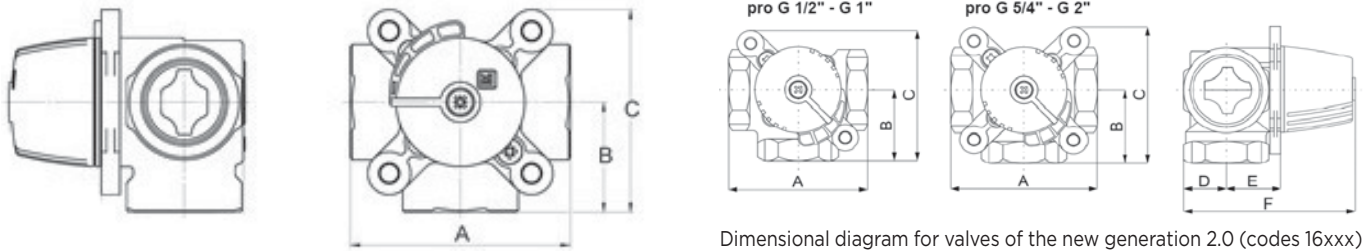
FLOW CHARACTERISTICS



VALVE PRESSURE DROP



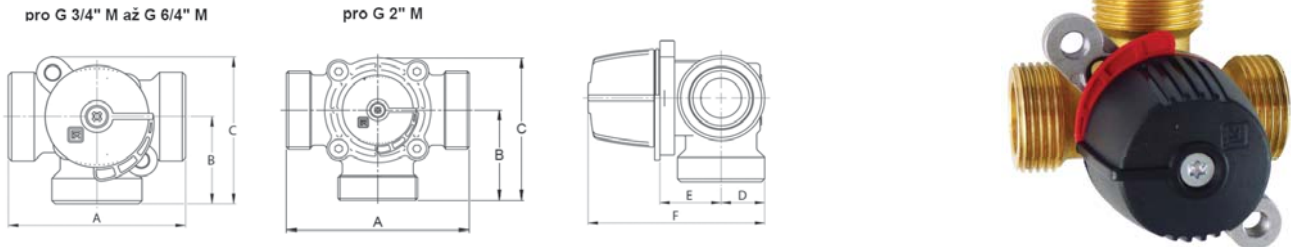
LK840 with internal thread



Dimensional diagram for valves of the new generation 2.0 (codes 16xxx)

CONNECTIONS		1/2" F	1/2" F	3/4" F	3/4" F	1" F	1" F	5/4" F	6/4" F	2" F
A	mm	70	80	70	70	70	70	84	106	106
B	mm	35	40	35	35	35	35	42	53	53
C	mm	63	75	63	63	63	63	77	88	88
WEIGHT	kg	0.5	0.7	0.5	0.5	0.5	0.5	0.8	1.4	1.6
MAX. PRESSURE DIFFERENCE	bar	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
KVS	m ³ /h	1.6	2.5	4.0	6.3	6.3	10.0	16.0	25.0	40.0
CODE		16764	11489	16760	16698	16758	16700	16693	16762	16697

LK840 with outer thread



CONNECTIONS		1" M	1" M	5/4" M	2" M
A	mm	80	80	82	124
B	mm	40	40	41	62
C	mm	68	68	69	97
D	mm	18	18	20	33
E	mm	29	29	29	43
F	mm	81	81	83	110
WEIGHT	kg	0.6	0.6	0.6	1.4
MAX. PRESSURE DIFFERENCE	bar	0.5	1.0	0.5	0.5
KVS	m ³ /h	4.0	6.3	8.0	25.0
CODE	--	16768	18898	18784	16759

MIXING VALVES

LK841 Four-way Mixing Valve

Mixing valves with a rotating inner segment intended for heating and solar thermal systems with water or with antifreeze fluid.

In the working area (from 30° to 60° rotation of the inner segment) they have a linear flow characteristics.

The valves can be fitted with any actuator supplied by Regulus.



TECHNICAL DATA

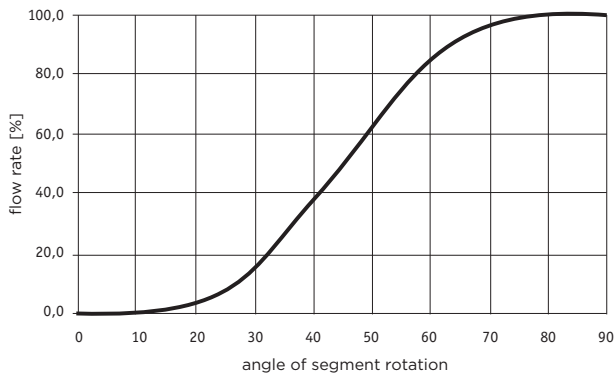
MAX. WORKING PRESSURE	10 bar
FLUID WORKING TEMPERATURE	5 to 110 °C

MATERIALS

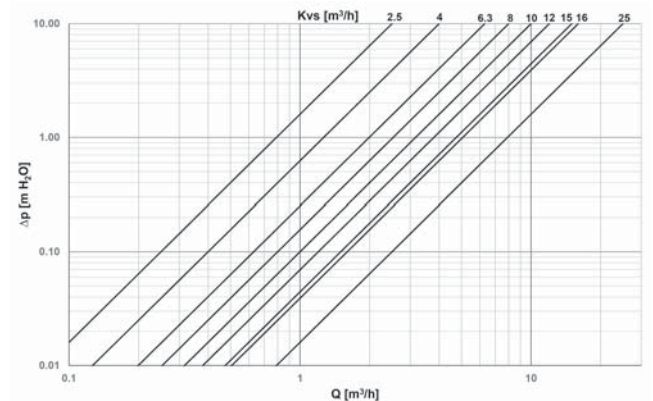
VALVE HOUSING	brass
VALVE SPINDLE	brass
VALVE MEMBER	brass

These valves can be easily converted between a left or right hand version for use in different positions in a heating system.

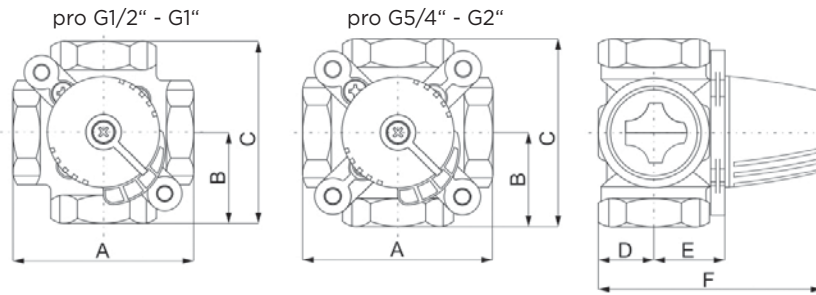
FLOW CHARACTERISTICS



VALVE PRESSURE DROP

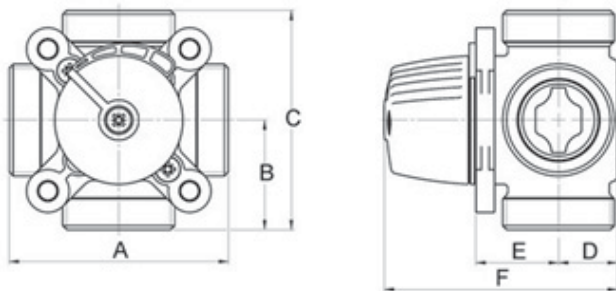


LK841 with internal thread



CONNECTIONS		1/2" F	3/4" F	1" F	5/4" F	6/4" F
A	mm	80	70	70	84	106
B	mm	40	35	35	42	53
C	mm	80	70	70	84	106
WEIGHT	kg	0.7	0.5	0.5	0.8	1.6
MAX. PRESSURE DIFFERENCE	bar	0.5	1.0	1.0	1.0	1.0
KVS	m ³ /h	2.5	6.3	10.0	16.0	25
CODE	--	14859	16780	16694	16699	16783

LK841 with outer thread



CONNECTIONS		1" M	1" M	5/4" M	5/4" M	6/4" M
A	mm	80	80	82	82	84
B	mm	40	40	41	41	42
C	mm	80	80	82	82	84
D	mm	18	18	22	22	24
E	mm	29	29	31	31	32
F	mm	81	81	87	87	90
WEIGHT	kg	0.5	0.5	0.8	0.8	0.9
MAX. PRESSURE DIFFERENCE	bar	1.0	1.0	0.5	0.5	0.5
KVS	m ³ /h	4.0	6.3	8.0	12.0	15.0
CODE	--	16776	16777	14832	14833	14834

MIXING VALVES

AVC, ACC Actuators for Mixing Valves



Actuators designed to control mixing valves. The valve position is indicated by a LED. These actuators are characterized by simple and quick installation, quiet operation. A special design prevents damage if the valve gets blocked.

TECHNICAL DATA

DIMENSIONS	84 x 101 x 85 mm
MATERIALS	
ACTUATOR COVER	Polycarbonate
POWER CABLE	PVC

TYPE Y

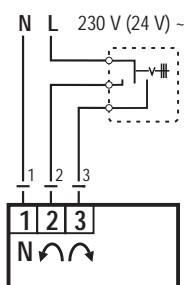
CONTROL		3-POINT					0-10 V		CONSTANT TEMPERATURE	
TORQUE	Nm	5	5	5	5	5	5	10	6	6
SHIFT TIME	s	60	120	120	240	120	60 - 120	60 - 120	120	120
AUXILIARY SWITCH	--	no	no	no	yes	no	no	no	no	no
POWER SUPPLY	--	230V 50Hz	230V 50Hz	230V 50Hz	230V 50Hz	24V 50Hz	24V 50Hz	24V 50Hz	230V 50Hz	230V 50Hz
POWER INPUT	VA	2.5	2.5	2.5	2.5	2.5	5	5	3.5	3.5
IP/PROT. CLASS	--	IP42/II	IP42/II	IP42/II	IP42/II	IP42/II	IP42/II	IP42/II	IP42/I	IP42/I
AMBIENT TEMPERATURE	°C	0 - 40	0 - 40	0 - 40	0 - 40	0 - 40	0 - 40	0 - 40	0 - 60	0 - 60
SENSOR	--	--	--	--	--	--	--	--	Pt1000 1piece	Pt1000 2piece
POWER CABLE										
CROSS SECTION	mm ²	3x0.5	3x0.5	5x0.5	3x0.5	3x0.5	4x0.5	4x0.5	3x0.5	3x0.5
LENGTH	m	2	2	2	2	2	2	2	2	2
CODE	--	10875	9193	10878 ¹⁾	10876	11118	14682	10873	16101	16102

¹⁾ The actuator is equipped with an auxiliary switch.

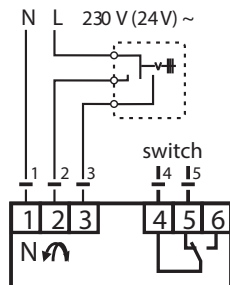
The actuator with 2 Pt1000 sensors (code 16102) is equipped with a differential thermostat suitable to control constant return temperature in solid fuel boilers and to switch off a circulation pump when the boiler goes out.

ELECTRICAL WIRING

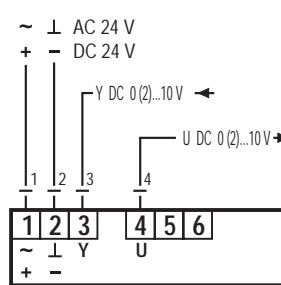
3-point control
10875, 9193, 10876, 11118



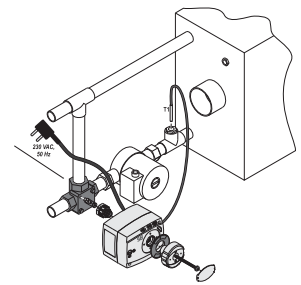
3-point control w. aux.
switch - 10878



Proportional control
0-10 V - 10873, 14682



Control to constant tem-
perature - 16101, 16102



MIXING VALVES



AHC Actuators with OTC controller for mixing valves

Actuators designed to control mixing valves. The actuator with an OTC controller combines control of the mixing valve with control of a heating system using an OTC curve. A set of adapters enabling connection to mixing valves made by various manufacturers is included in supply.

TECHNICAL DATA

DIMENSIONS 84 x 101 x 85 mm

MATERIALS

ACTUATOR COVER Polycarbonate
POWER CABLE PVC
SENSOR Pt1000 3pcs
AUXILIARY SWITCH no

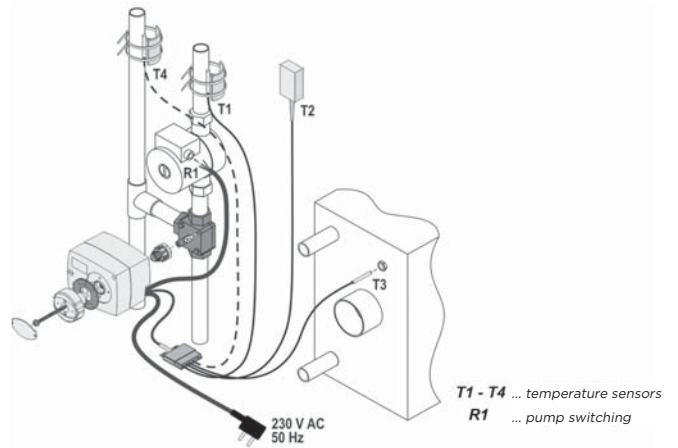
ACTUATOR

POWER SUPPLY 230 V 50 Hz
POWER INPUT <3.5 VA
IP/PROT. CLASS IP42/I
AMBIENT TEMPERATURE 5 to 40 °C
CONTROL OTC
TORQUE 6 Nm
SHIFT TIME 120 s

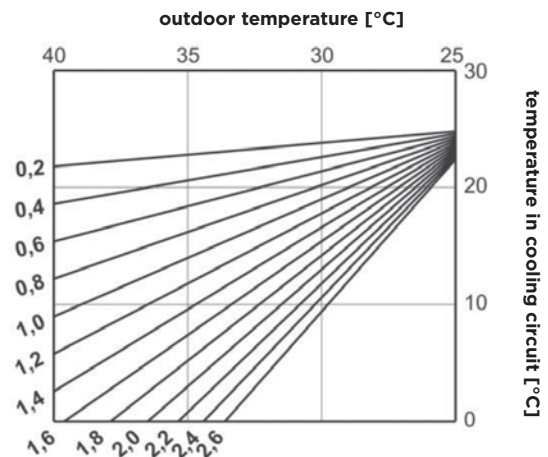
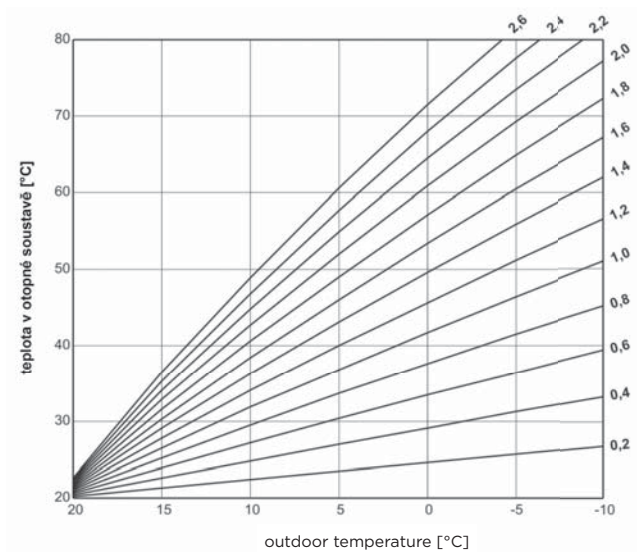
POWER CABLE

CROSS SECTION 3x 0.75 mm²
LENGTH 2 m
CODE 16253

WIRING DIAGRAM



CHARTS OF HEATING AND COOLING CURVES



ACCESSORY

RCD20 room unit
 Code: 19866





TWO-WAY ZONE VALVES

DATA TABLE

MODEL RANGE	-	VZK	VZK M/R¹⁾	LK 525	EV251B
SPECIFICATION	-	ball valve	ball valve	gate valve	solenoid valve
APPLICATION	-	solar thermal systems, heating systems, drinking water systems	solar thermal systems, heating systems, drinking water systems	solar thermal systems, heating systems	heating systems
NOMINAL DIAMETER	DN	15 - 25	20 - 25	25 - 32	10 - 25
KVS	m ³ /h	8.5 - 30	8.9 - 34.3	11	1.5 - 3.5
WORKING TEMPERATURE	°C	5 - 110	5 - 110	-15 - 120 ²⁾	-10 - 90
MAX. PRESSURE	bar	16	10	10	25
MAX. PRESSURE DIFFERENCE	bar	10	10	10	10
CONTROL	-	two-point (SPST) with constant phase	two-point (SPST) with constant phase	two-point (SPST) with constant phase	2-point (SPST)
POWER SUPPLY	V	230	230	230	230
TORQUE	Nm	8	5	-	-
SHIFT TIME	s	30	60	12	0.2
MAX. POWER INPUT	W	7	2.5	7	10
IP RATING	-	IP44	IP42	IP40	IP65
OTHER	-	manual control; actuator can be removed; the valve is tight when closed; anti-blocking function	manual control; actuator can be removed; conversion to Normally Open possible	actuator can be removed	actuator (coil) can be removed; the valve is tight when closed

¹⁾ VZK M valves have the same parameters as VZK R valves but have no actuator.

²⁾ The temperature range shown is valid for the valve with extension, the short-term maximum temperature is 160 °C; working temperature values without extension are 5 to 80 °C (90 °C in short term).

TWO-WAY ZONE VALVES

VZK R Two-way Zone Ball Valve

Zone ball valves intended for heating or solar thermal systems with water or antifreeze fluid and for drinking water systems.

The valve is equipped with a **two-point control actuator (SPST)**. The actuator can be removed without disassembling the valve. The valve must not be installed in a position with the actuator facing down.

It can be used in connection with any controller or thermostat that has a 230 V contact to switch the switched phase of the actuator. The valve is normally closed, it opens when the switched phase is switched on. This mode can be changed to „normally open“. The opening time is 60 s. In case of failure of the controller or thermostat, the actuator can be controlled manually.



TECHNICAL DATA

MAX. WORKING PRESSURE	10 bar
MAX. PRESSURE DIFFERENCE	10 bar
FLUID WORKING TEMPERATURE	up to 110 °C

MATERIALS

VALVE HOUSING	CW617N
VALVE SPINDLE	CW617N
VALVE BALL	chrome-plated brass
O-RINGS	EPDM, FPM
POWER CABLE	PVC

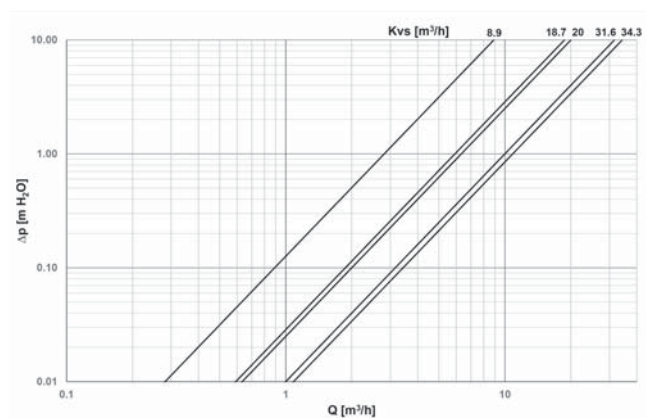
ACTUATOR

POWER SUPPLY	230 V 50 Hz
MAX. CONSUMPTION	4VA
CURRENT	17 mA
IP RATING BY EN 60529	IP 42
PROTECTION CLASS BY EN 61140 ed.2	II

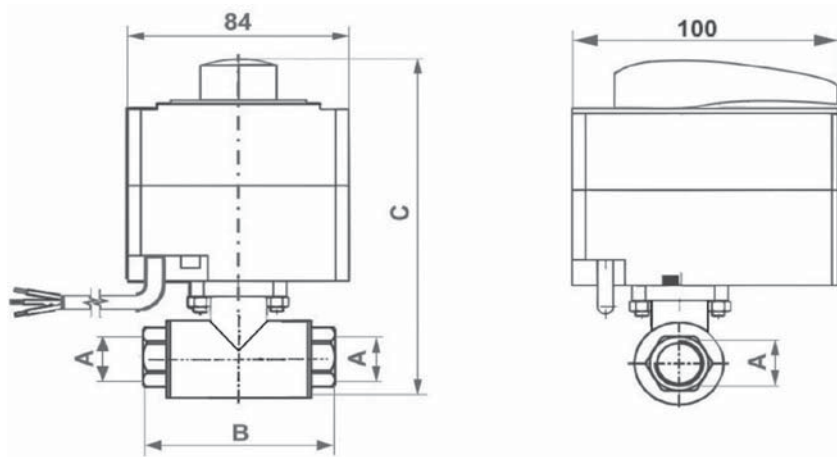
POWER CABLE

CROSS SECTION	3× 0.5 mm ²
LENGTH	2 m

VALVE PRESSURE DROP

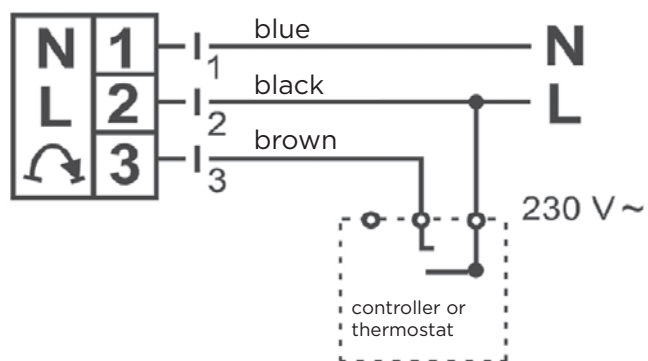


DIMENSIONS AND TYPES



		VZK R 220 1/2F	VZK R 220 3/4F	VZK R 220 1F	VZK R 225 1F	VZK R 225 5/4F
CONNECTIONS	--	1/2" F	3/4" F	1" F	1" F	5/4" F
B	mm	96	96	96	104	104
C	mm	160	160	160	160	160
WEIGHT	kg	1.2	1.2	1.2	1.5	1.5
NOMINAL DIAMETER	DN	20	20	20	25	25
KVS	m ³ /h	8.9	18.7	20.0	31.6	34.3
CODE	--	19682	19677	19680	19686	19689

ELECTRICAL WIRING



TWO-WAY ZONE VALVES

VZK M Two-way Zone Ball Valve

Zone ball valves intended for heating or solar thermal systems with water or antifreeze fluid and for drinking water systems. The valve is equipped with a lever for manual control.

An electric actuator can be retrofitted to the valve - see page 40.



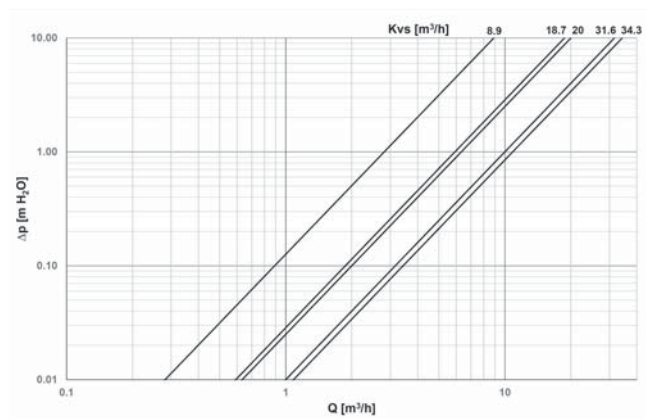
TECHNICAL DATA

MAX. WORKING PRESSURE	10 bar
MAX. PRESSURE DIFFERENCE	10 bar
FLUID WORKING TEMPERATURE	up to 110 °C

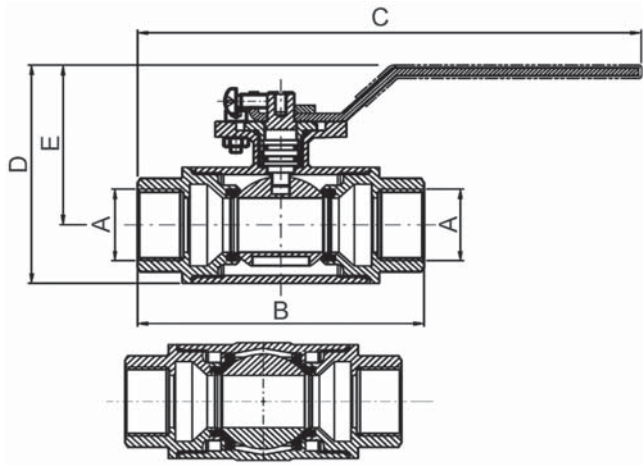
MATERIALS

VALVE HOUSING	CW617N
VALVE SPINDLE	CW617N
VALVE BALL	chrome-plated brass
O-RINGS	EPDM, FPM

VALVE PRESSURE DROP



DIMENSIONS AND TYPES



		VZK M 220 1/2F	VZK M 220 3/4F	VZK M 220 1F	VZK M 225 1F	VZK M 225 5/4 F
CONNECTIONS	--	1/2" F	3/4" F	1" F	1" F	5/4" F
B	mm	96	96	96	104	104
C	mm	170	170	170	174	174
D	mm	81	81	81	90	90
E	mm	55	55	55	64	64
WEIGHT	kg	0.7	0.7	0.7	1.0	1.0
NOMINAL DIAMETER	DN	20	20	20	25	25
KVS	m ³ /h	8.9	18.7	20.0	31.6	34.3
CODE	--	20018	20021	20016	20023	20020

TWO-WAY ZONE VALVES

VZK Two-way Zone Ball Valve

Zone ball valves intended for heating or solar thermal systems with water or antifreeze fluid and for drinking water systems.

The valve is equipped with a **two-point control actuator (SPST)**. The actuator can be removed without disassembling the valve. The valve must not be installed in a position with the actuator facing down.

A working neutral, a permanent phase and a control phase must be supplied to the valve. Without the control phase, the valve is closed, after the control phase is applied, the valve opens fully within 30 seconds.

The valve can be adjusted manually by turning the actuator (it slides out after removing the clip).



TECHNICAL DATA

MAX. WORKING PRESSURE	16 bar
MAX. PRESSURE DIFFERENCE	10 bar
FLUID WORKING TEMPERATURE	up to 110 °C

MATERIALS

VALVE HOUSING	brass, forged, nickel-plated
VALVE SPINDLE	nickel-plated brass
VALVE BALL	chrome-plated brass
O-RINGS	FPM
POWER CABLE	PVC

ACTUATOR

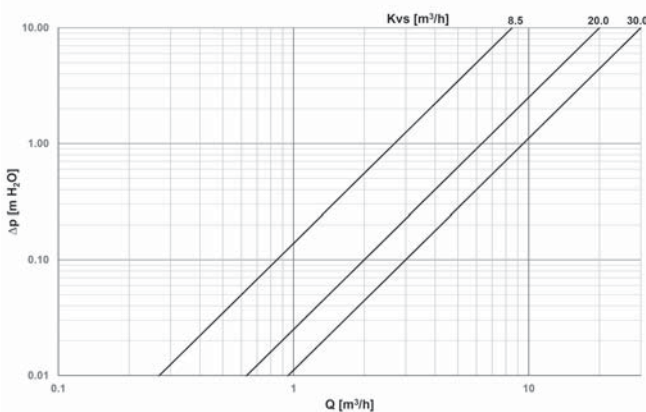
POWER SUPPLY	230 V 50 Hz
POWER INPUT	7 W
CURRENT	30 mA
IP RATING BY EN 60529	IP 44
PROTECTION CLASS BY EN 61140 ed.2	II

POWER CABLE

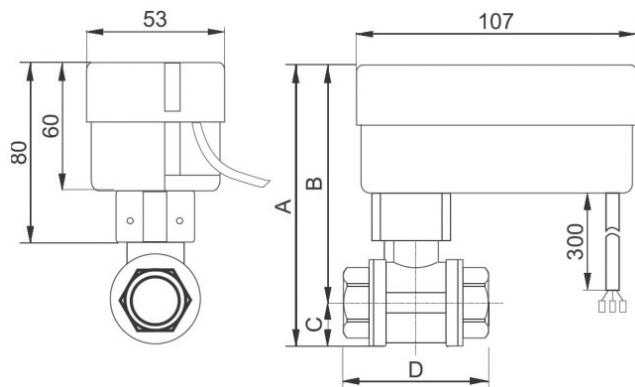
CROSS SECTION	4 × 0.5 mm ²
LENGTH	0.3 m

The valve is equipped with an anti-blocking function - if the valve ball becomes blocked during closing, e.g. due to dirt in the valve, the actuator automatically changes the direction of rotation and closes the valve on the opposite side.

VALVE PRESSURE DROP

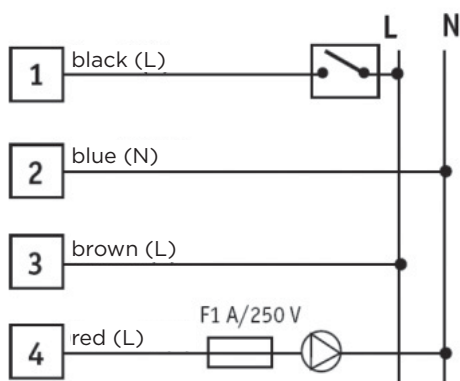


DIMENSIONS AND TYPES



		VZK 215-230-1P	VZK 220-230-1P	VZK 225-230-1P
CONNECTIONS	--	1/2" F	3/4" F	1" F
A	mm	126.0	129.0	137.0
B	mm	108.5	109.5	113.5
C	mm	17.5	19.5	23.5
D	mm	63	57	68
WEIGHT	kg	0.68	0.65	0.81
KVS	m ³ /h	8.5	20.0	30.0
CODE	--	11288	10344	11289

ELECTRICAL WIRING



TWO-WAY ZONE VALVES

LK525 Two-way Zone Gate Valve

Zone gate valves intended for heating or solar thermal systems with water or antifreeze fluid.

The valve is equipped with a **two-point control actuator (SPST)**. It comes with a 1m long 3-wire power cable. The valve must not be installed in a position with the actuator facing down.

A working neutral, a permanent phase and a control phase must be supplied to the valve. Without the control phase, the valve is closed, after the control phase is applied, the valve **opens fully within 12 seconds** (does not apply to valves 12874 and 12875).



TECHNICAL DATA

MAX. WORKING PRESSURE	10 bar
MAX. PRESSURE DIFFERENCE	10 bar
FLUID WORKING TEMPERATURE	5 to 80 °C (120 °C with extension - code 11278)

MATERIALS

VALVE HOUSING	brass, forged
VALVE MEMBER	PPS composite
VALVE SPINDLE	PPS composite
POWER CABLE	PVC

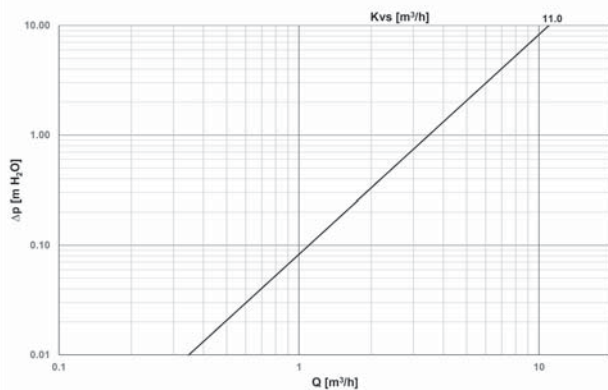
ACTUATOR

POWER SUPPLY	230 V 50 Hz
POWER INPUT	7 W
CURRENT	30 mA
IP RATING BY EN 60529	IP 40
PROTECTION CLASS BY EN 61140 ed.2	II

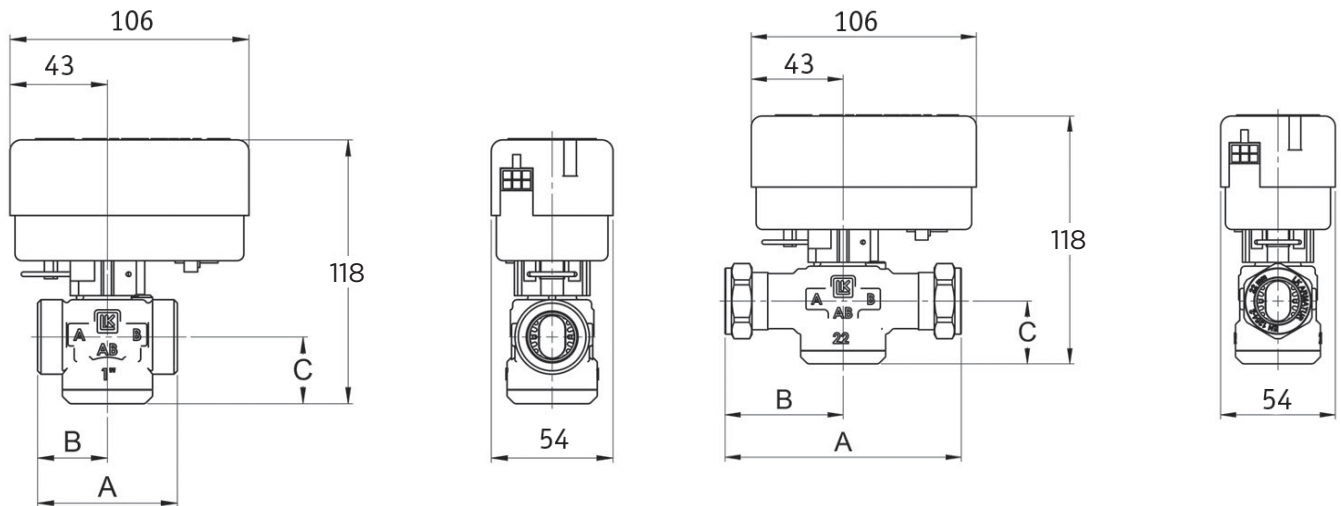
POWER CABLE

CROSS SECTION	3× 0.75 mm ²
LENGTH	1m

VALVE PRESSURE DROP

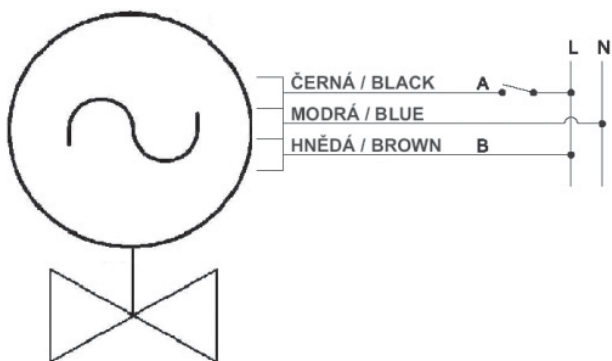


DIMENSIONS AND TYPES



CONNECTIONS	--	1" M	5/4" M	1" M	5/4" M	Cu22	Cu28
A	mm	62	74	62	74	110	110
B	mm	31	37	31	37	55	55
C	mm	30	30	30	30	30	30
WEIGHT	kg	0.6	0.6	0.6	0.6	0.4	0.6
NORMAL CONDITION	--	open	open	closed	closed	open	open
KVS	m ³ /h	11.0	11.0	11.0	11.0	11.0	11.0
CODE	--	12874	12875	16283	16284	14896	14897

ELECTRICAL WIRING





THREE-WAY ZONE VALVES

DATA TABLE

MODEL RANGE	-	VZK	VZK M/R¹⁾	VZU M/R¹⁾	VZK S²⁾	VZU S²⁾	LK 525
SPECIFICATION	-	ball valve	ball valve	ball valve	ball valve	ball valve	gate valve
OSA ACTUATORU	-	in the plane of inputs	perpendicular to the plane of inputs	in the plane of inputs	perpendicular to the plane of inputs	in the plane of inputs	in the plane of inputs
APPLICATION	-	solar thermal systems, heating systems, drinking water systems	solar thermal systems, heating systems, drinking water systems	solar thermal systems, heating systems, drinking water systems	solar thermal systems, heating systems, drinking water systems	solar thermal systems, heating systems, drinking water systems	solar thermal systems, heating systems
NOMINAL DIAMETER	DN	20 - 25	20-25	20	20-25	20	25 - 32
KVS	m ³ /h	7 - 11	10.5-14.3	10.5-14.3	10.5-14.3	10.5-10.6	8
WORKING TEMPERATURE	°C	5 - 110	5 - 110	5 - 110	5 - 110	5 - 110	-15 - 120 ³⁾
MAX. PRESSURE	bar	16	10	10	10	10	10
MAX. PRESSURE DIFFERENCE	bar	10	10	10	10	10	10
CONTROL	-	two-point (SPST) with constant phase	two-point (SPST) with constant phase	two-point (SPST) with constant phase	three-point (SPDT)	three-point (SPDT)	two-point (SPST) with constant phase
POWER SUPPLY	V	230	230	230	230	230	230
TORQUE	Nm	15	5	5	5	5	-
SHIFT TIME	s	64	15. 60	15. 60	60	60	8
MAX. POWER INPUT	W	9	2.5	2.5	2.5	2.5	7
IP RATING	-	IP44	IP42	IP42	IP42	IP42	IP40
OTHER	-	manual control; actuator can be removed; the valve is tight when closed	manual control; actuator can be removed; the valve is tight when closed	manual control; actuator can be removed; the valve is tight when closed	manual control; actuator can be removed; the valve is tight when closed	manual control; actuator can be removed; the valve is tight when closed	actuator can be removed

¹⁾ VZK (VZU) M valves have the same parameters as VZK (VZU) R valves but have no actuator.

²⁾ VZK (VZU) S valve type also enables a mixing function.

³⁾ The temperature range shown is valid for the valve with extension, the short-term maximum temperature is 160 °C; working temperature values without extension are 5 to 80 °C (90 °C in short term).

THREE-WAY ZONE VALVES



VZK R Three-way Zone Ball Valve

Zone ball valves intended for heating or solar thermal systems with water or antifreeze fluid and for drinking water systems.

The valve is equipped with a **two-point control actuator (SPST)**. The actuator can be removed without disassembling the valve. The valve must not be installed in a position with the actuator facing down.

A working neutral, a permanent phase and a control phase must be supplied to the valve. Without the control phase, the outlet B is open, after the control phase is applied, the outlet A opens. The order of outlets opening and the direction of actuator rotation can be changed. Opening time is 60s or 15s. The valve can be adjusted manually by turning the lever (after switching to manual control mode).

Two versions are available: L-bore and T-bore.

TECHNICAL DATA

MAX. WORKING PRESSURE	10 bar
MAX. PRESSURE DIFFERENCE	10 bar
FLUID WORKING TEMPERATURE	up to 110 °C

MATERIALS

VALVE HOUSING	CW617N
VALVE SPINDLE	CW617N
VALVE BALL	chrome-plated brass
O-RINGS	EPDM, FPM
POWER CABLE	PVC

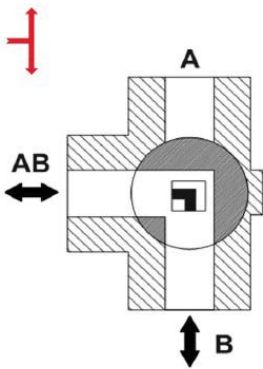
ACTUATOR

POWER SUPPLY	230 V 50 Hz
MAX. POWER INPUT	4VA
CURRENT	17 mA
IP RATING BY EN 60529	IP 42
PROTECTION CLASS BY EN 61140 ed.2	II

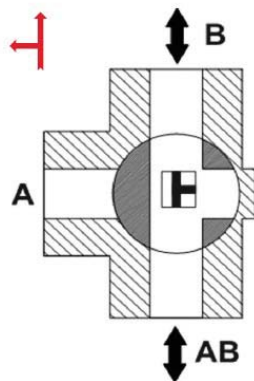
POWER CABLE

CROSS SECTION	3 × 0.5 mm ²
LENGTH	2 m

L-bore valve

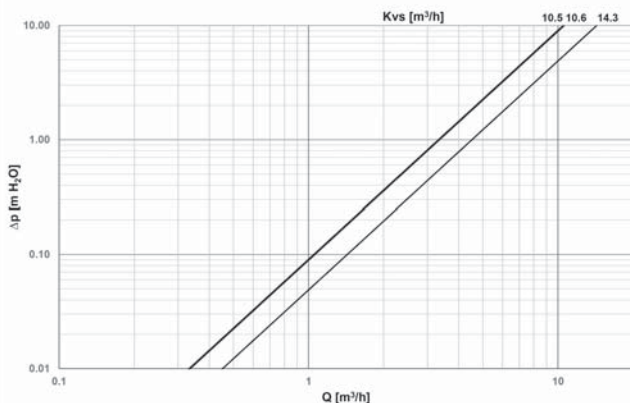


T-bore valve

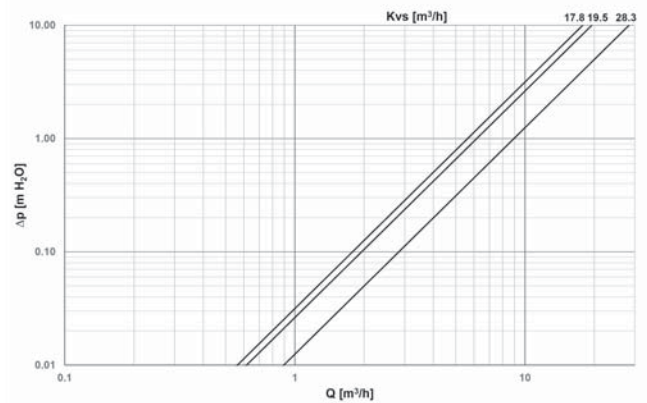


VALVE PRESSURE DROP

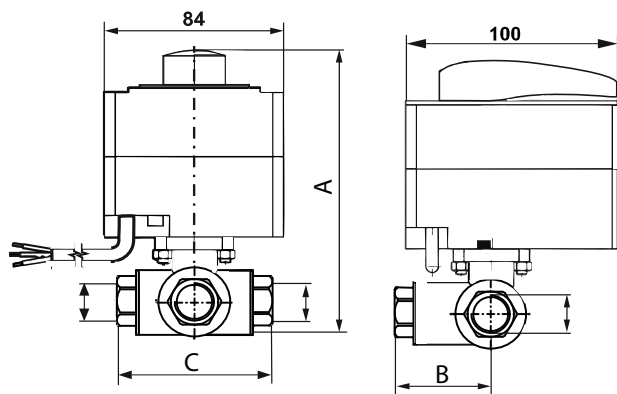
Pressure drop in perpendicular direction



Pressure drop in straight direction



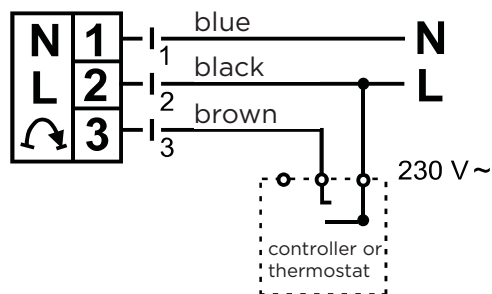
DIMENSIONS AND TYPES



L-bore models		VZK R 320 60 L 3/4F	VZK R 320 60 L 1F	VZK R 320 15 L 1F	VZK R 325 60 L 1F	VZK R 325 15 L 1F	VZK R 325 60 L 5/4F	VZK R 325 15 L 6/4M
CONNECTIONS	--	3/4" F	1" F	1" F	1" F	1" F	5/4" F	6/4" M
A	mm	160	160	160	168	168	168	168
B	mm	50	50	50	52	52	52	64
C	mm	96	96	96	104	104	104	128
WEIGHT	kg	1.3	1.3	1.3	1.7	1.7	1.8	1.8
NOMINAL DIAMETER	DN	20	20	20	25	25	25	25
KVS PERPENDICULAR	m ³ /h	10.5	10.6	10.6	14.3	14.3	14.3	14.3
SHIFT TIME	s	60	60	15	60	15	60	15
CODE	--	19367	19366	20022	13604	19000	18671	19005

T-bore models		VZK R 320 60 T 3/4F	VZK R 320 60 T 1F	VZK R 320 15 T 1F	VZK R 325 60 T 1F	VZK R 325 15 T 1F	VZK R 325 60 T 5/4F	VZK R 325 15 T 6/4M
CONNECTIONS	--	3/4" F	1" F	1" F	1" F	1" F	5/4" F	6/4" M
A	mm	160	160	160	168	168	168	168
B	mm	50	50	50	52	52	52	64
C	mm	96	96	96	104	104	104	128
WEIGHT	kg	1.3	1.3	1.3	1.7	1.7	1.8	1.8
NOMINAL DIAMETER	DN	20	20	20	25	25	25	25
KVS PERPENDICULAR	m ³ /h	10.5	10.6	10.6	14.3	14.3	14.3	14.3
KVS STRAIGHT	m ³ /h	17.8	19.5	19.5	28.3	28.3	28.3	28.3
SHIFT TIME	s	60	60	15	60	15	60	15
CODE	--	19189	19187	20019	18550	19001	18676	19006

ELECTRICAL WIRING



THREE-WAY ZONE VALVES

VZK S Three-way Zone Ball Valve

Zone ball valves intended for heating or solar thermal systems with water or antifreeze fluid and for drinking water systems.

The valve is equipped with a **three-point control actuator (SPDT), mixing possible**. The actuator can be removed without disassembling the valve. The valve must not be installed in a position with the actuator facing down.

When voltage is applied to the brown wire, **the actuator rotates clockwise (the path A-AB opens)**, when voltage is applied to the black wire, **the actuator rotates counter-clockwise (the path B-AB opens)**, when de-energized, the actuator remains in the current position. Shift time is 60s. The valve can be adjusted manually by turning the lever (after switching to manual control mode).

Two versions are available: L-bore and T-bore.



TECHNICAL DATA

MAX. WORKING PRESSURE	10 bar
MAX. PRESSURE DIFFERENCE	10 bar
FLUID WORKING TEMPERATURE	up to 110 °C

MATERIALS

VALVE HOUSING	CW617N
VALVE SPINDLE	CW617N
VALVE BALL	chrome-plated brass
O-RINGS	FPM
POWER CABLE	PVC

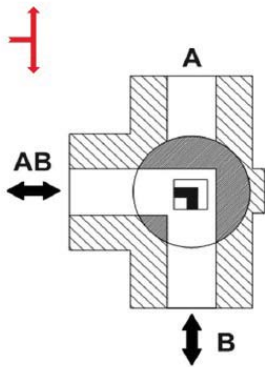
ACTUATOR

POWER SUPPLY	230 V 50 Hz
MAX. POWER INPUT	2.5 VA
CURRENT	10 mA
IP RATING BY EN 60529	IP 42
PROTECTION CLASS BY EN 61140 ed.2	II

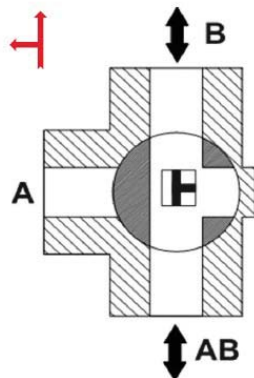
POWER CABLE

CROSS SECTION	3× 0.5 mm ²
LENGTH	2 m

L-bore valve



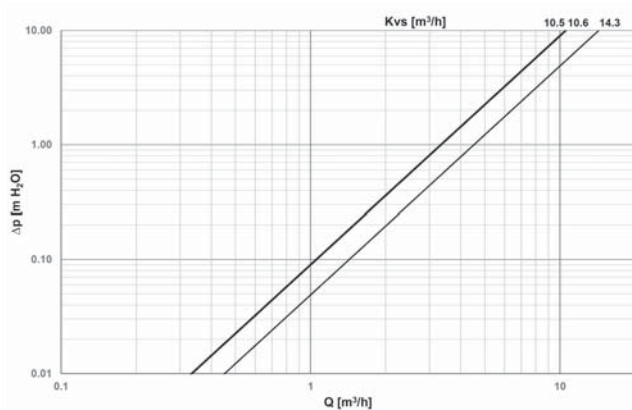
T-bore valve



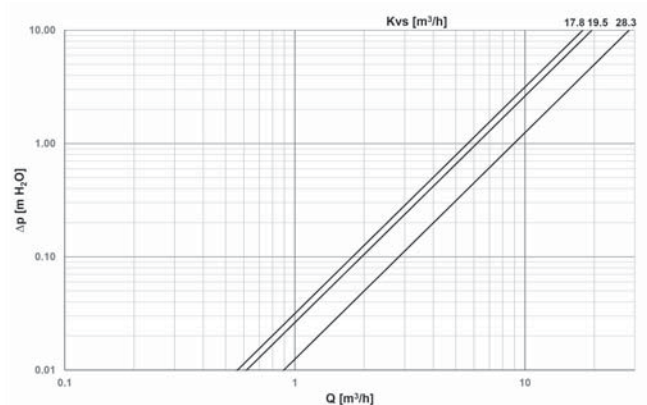
The valve actuator is equipped with an end microswitch with a potential-free contact.

VALVE PRESSURE DROP

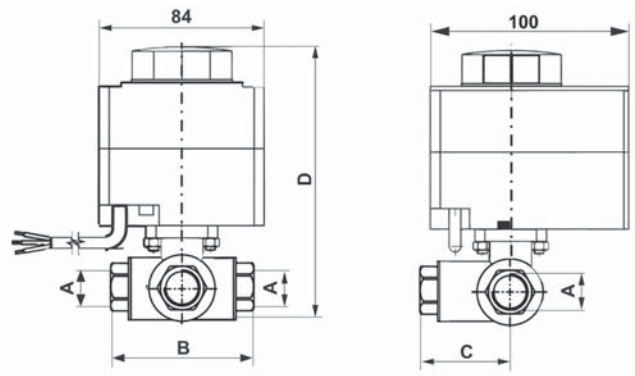
Pressure drop in perpendicular direction



Pressure drop in straight direction

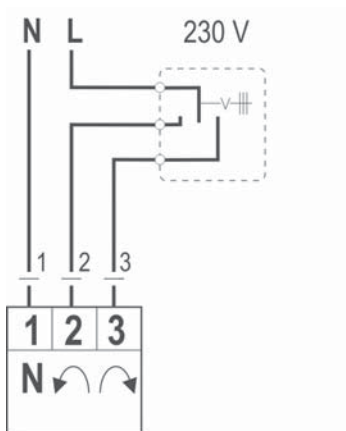


DIMENSIONS AND TYPES



L-bore models		VZK S 320 L 3/4F	VZK S 320 L 1F	VZK S 325 L 1F
CONNECTIONS	--	3/4" F	1" F	1" F
A	mm	96	96	104
B	mm	50	50	52
C	mm	160	160	168
WEIGHT	kg	1.3	1.3	1.7
NOMINAL DIAMETER	DN	20	20	25
KVS PERPENDICULAR	m ³ /h	10.5	10.6	14.3
CODE	--	19838	19835	11287
T-bore models		VZK S 320 T 3/4F	VZK S 320 T 1F	VZK S 325 T 1F
CONNECTIONS	--	3/4" F	1" F	1" F
A	mm	96	96	104
B	mm	50	50	52
C	mm	160	160	168
WEIGHT	kg	1.3	1.3	1.7
NOMINAL DIAMETER	DN	20	20	25
KVS PERPENDICULAR	m ³ /h	10.5	10.6	14.3
KVS STRAIGHT	m ³ /h	17.8	19.5	28.3
CODE	--	19840	19833	18675

ELECTRICAL WIRING



THREE-WAY ZONE VALVES



VZK M Three-way Zone Ball Valve

Zone ball valves intended for heating or solar thermal systems with water or antifreeze fluid and for drinking water systems. The valve is fitted with a lever for manual control.

Two versions are available: L-bore and T-bore.

An electric actuator can be retrofitted to the valve - see page 40.

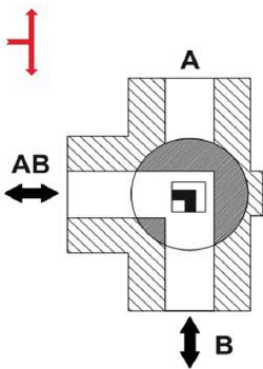
TECHNICAL DATA

MAX. WORKING PRESSURE	10 bar
MAX. PRESSURE DIFFERENCE	10 bar
FLUID WORKING TEMPERATURE	up to 110 °C

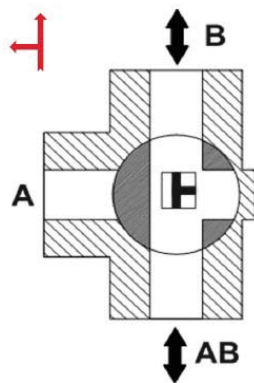
MATERIALS

VALVE HOUSING	CW617N
VALVE SPINDLE	CW617N
VALVE BALL	chrome-plated brass
O-RINGS	EPDM, FPM

L-bore valve

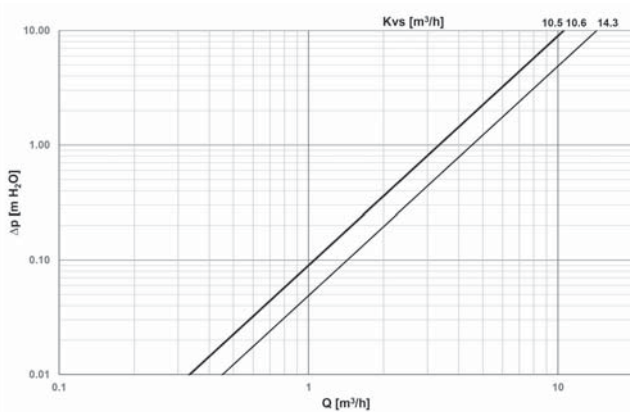


T-bore valve

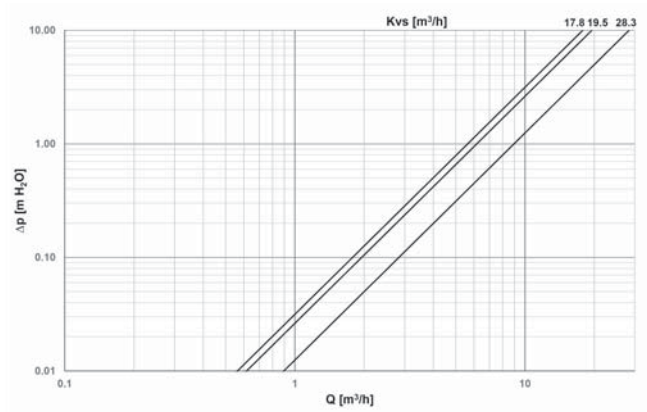


VALVE PRESSURE DROP

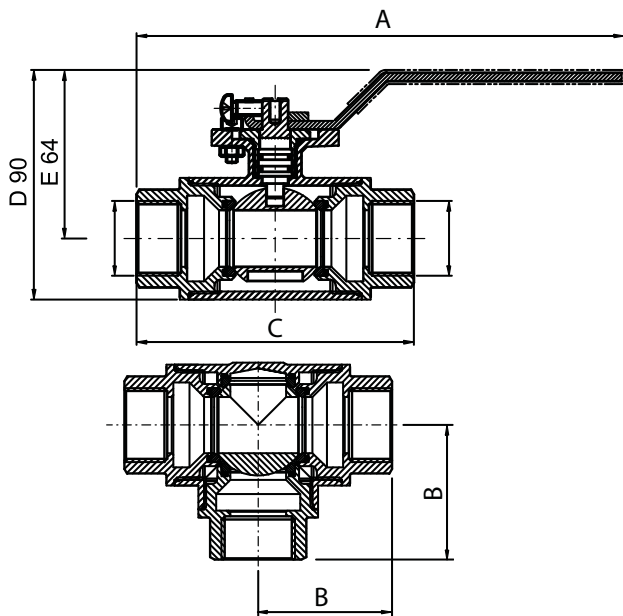
Pressure drop in perpendicular direction



Pressure drop in straight direction



DIMENSIONS AND TYPES



L-bore models		VZK M 320 L 3/4F	VZK M 320 L 1F	VZK M 325 L 1F	VZK M 325 L 5/4F	VZK M 325 L 6/4M
CONNECTIONS	--	3/4" F	1" F	1" F	5/4" F	6/4" M
A	mm	168	168	174	174	184
B	mm	50	50	52	52	64
C	mm	96	96	104	104	128
D	mm	80	80	90	90	90
E	mm	59	59	64	64	64
WEIGHT	kg	0.8	0.8	1.2	1.2	1.3
NOMINAL DIAMETER	DN	20	20	25	25	25
KVS PERPENDICULAR	m ³ /h	10.5	10.6	14.3	14.3	14.3
CODE	--	19841	19832	18860	18864	19002
T-bore models		VZK M 320 T 3/4F	VZK M 320 T 1F	VZK M 325 T 1F	VZK M 325 T 5/4F	VZK M 325 T 6/4M
CONNECTIONS	--	3/4" F	1" F	1" F	5/4" F	6/4" M
A	mm	168	168	174	174	184
B	mm	50	50	52	52	64
C	mm	96	96	104	104	128
D	mm	80	80	90	90	90
E	mm	59	59	64	64	64
WEIGHT	kg	0.8	0.8	1.2	1.2	1.3
NOMINAL DIAMETER	DN	20	20	25	25	25
KVS PERPENDICULAR	m ³ /h	10.5	10.6	14.3	14.3	14.3
KVS STRAIGHT	m ³ /h	17.8	19.5	28.3	28.3	28.3
CODE	--	19839	19834	18865	18867	19004

THREE-WAY ZONE VALVES

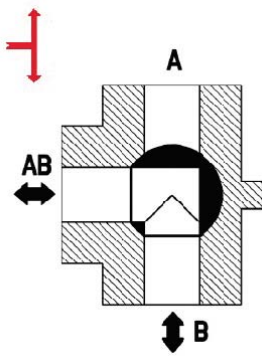
VZU R Three-way Zone Ball Valve

Zone ball valves intended for heating or solar thermal systems with water or antifreeze fluid and for drinking water systems.

The valve is equipped with a **two-point control actuator (SPST)**. The actuator can be removed without disassembling the valve. The valve must not be installed in a position with the actuator facing down.

A working neutral, a permanent phase and a control phase must be supplied to the valve. Without the control phase, the outlet B is open, after the control phase is applied, the outlet A opens. The order of outlets opening and the direction of actuator rotation can be changed. Opening time is 60s or 15s.

The valve can be adjusted manually by turning the lever (after switching to manual control mode).



TECHNICAL DATA

MAX. WORKING PRESSURE	10 bar
MAX. PRESSURE DIFFERENCE	10 bar
FLUID WORKING TEMPERATURE	up to 110 °C

MATERIALS

VALVE HOUSING	CW617N
VALVE SPINDLE	nickel-plated brass
VALVE BALL	chrome-plated brass
O-RINGS	EPDM, FPM
POWER CABLE	PVC

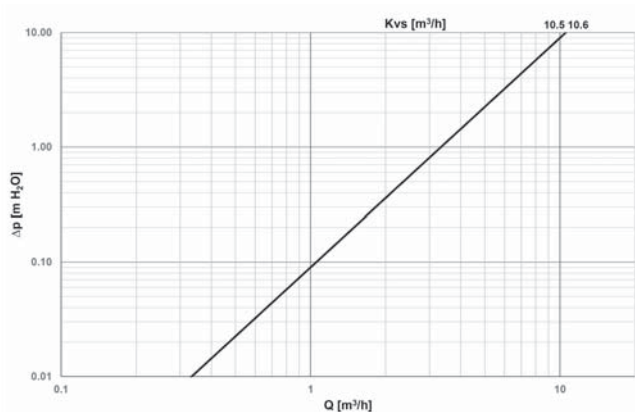
ACTUATOR

POWER SUPPLY	230 V 50 Hz
MAX. CONSUMPTION	4VA
CURRENT	17 mA
IP RATING BY EN 60529	IP 42
PROTECTION CLASS BY EN 61140 ed.2	II

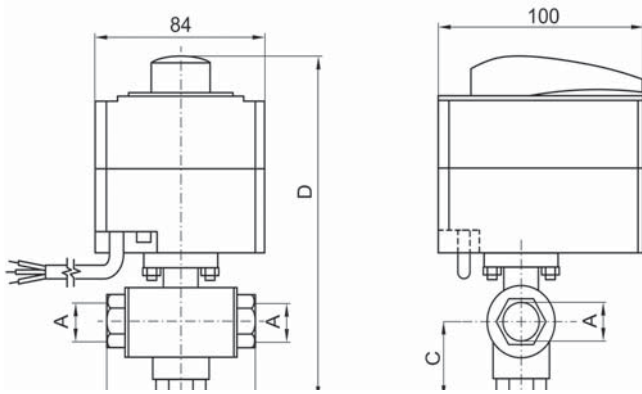
POWER CABLE

CROSS SECTION	3× 0.5 mm ²
LENGTH	2m

VALVE PRESSURE DROP

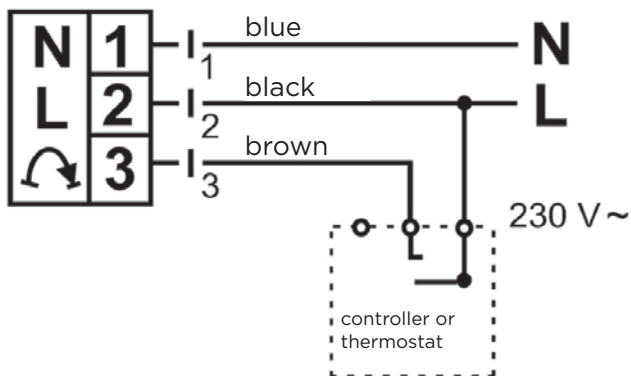


DIMENSIONS AND TYPES



		VZU R 320 60 3/4F	VZU R 320 15 3/4F	VZU R 320 60 1F	VZU R 320 15 1F	VZU R 320 60 5/4M	VZU R 320 15 5/4M
CONNECTIONS	--	3/4" F	3/4" F	1" F	1" F	5/4" M	5/4" M
B	mm	96	96	96	96	116	116
C	mm	50	50	50	50	60	60
D	mm	186	186	186	186	196	196
WEIGHT	kg	1.3	1.3	1.3	1.3	1.3	1.3
NOMINAL DIAMETER	DN	20	20	20	20	20	20
KVS	m ³ /h	10.5	10.5	10.6	10.6	10.6	10.6
SHIFT TIME	s	60	15	60	15	60	15
CODE	--	19986	20461	19982	20017	19989	20462

ELECTRICAL WIRING



THREE-WAY ZONE VALVES

VZU S Three-way Zone Ball Valve

Zone ball valves intended for heating or solar thermal systems with water or antifreeze fluid and for drinking water systems.

The valve is equipped with a **three-point control actuator (SPDT), mixing possible**. The actuator can be removed without disassembling the valve. The valve must not be installed in a position with the actuator facing down.

When voltage is applied to the brown wire, **the actuator rotates clockwise (the path A-AB opens)**, when voltage is applied to the black wire, **the actuator rotates counter-clockwise (the path B-AB opens)**, when de-energized, the actuator remains in the current position. Shift time is 60s. The valve can be adjusted manually by turning the lever (after switching to manual control mode).



TECHNICAL DATA

MAX. WORKING PRESSURE	10 bar
MAX. PRESSURE DIFFERENCE	10 bar
FLUID WORKING TEMPERATURE	up to 110 °C

MATERIALS

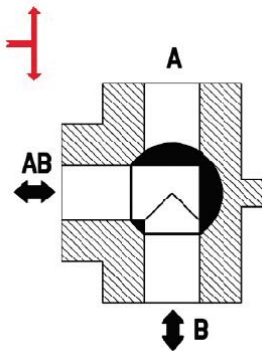
VALVE HOUSING	CW617N
VALVE SPINDLE	nickel-plated brass
VALVE BALL	chrome-plated brass
O-RINGS	EPDM, FPM
POWER CABLE	PVC

ACTUATOR

POWER SUPPLY	230 V 50 Hz
MAX. CONSUMPTION	2.5 VA
CURRENT	?? mA
IP RATING BY EN 60529	IP 42
PROTECTION CLASS BY EN 61140 ed.2	II

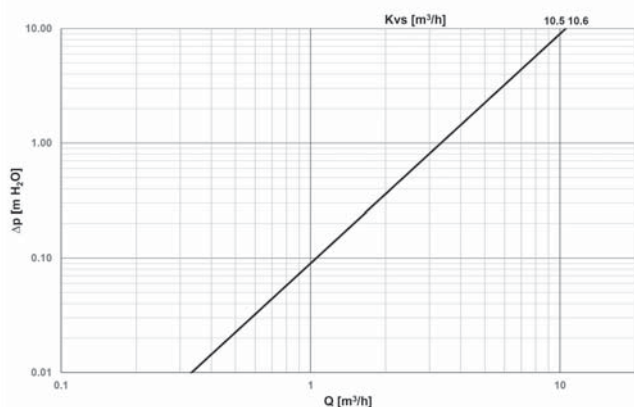
POWER CABLE

CROSS SECTION	3× 0.5 mm ²
LENGTH	2m

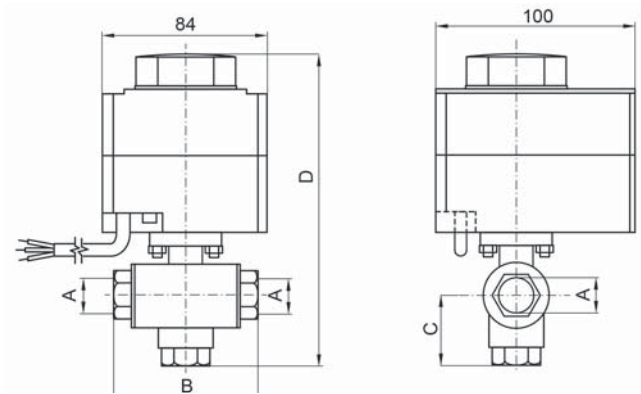


The valve actuator is equipped with an end microswitch with a potential-free contact.

VALVE PRESSURE DROP

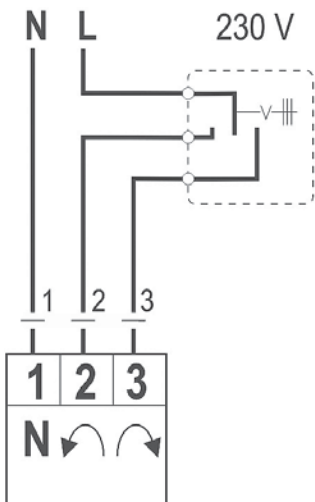


DIMENSIONS AND TYPES



		VZU S 320 3/4F	VZU S 320 1F	VZU S 320 5/4M
CONNECTIONS	--	3/4" F	1" F	5/4" M
B	mm	96	96	116
C	mm	50	50	60
D	mm	186	186	196
WEIGHT	kg	1.3	1.3	1.3
NOMINAL DIAMETER	DN	20	20	20
KVS	m ³ /h	10.5	10.6	10.6
CODE	--	20614	20613	20615

ELECTRICAL WIRING



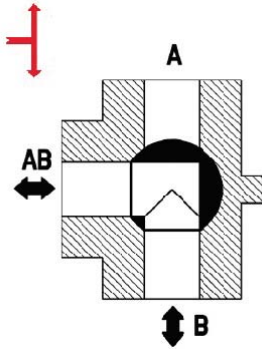
THREE-WAY ZONE VALVES



VZU M Three-way Zone Ball Valve

Zone ball valves intended for heating or solar thermal systems with water or antifreeze fluid and for drinking water systems. The valve is fitted with a lever for manual control.

An electric actuator can be retrofitted to the valve - see page 40.



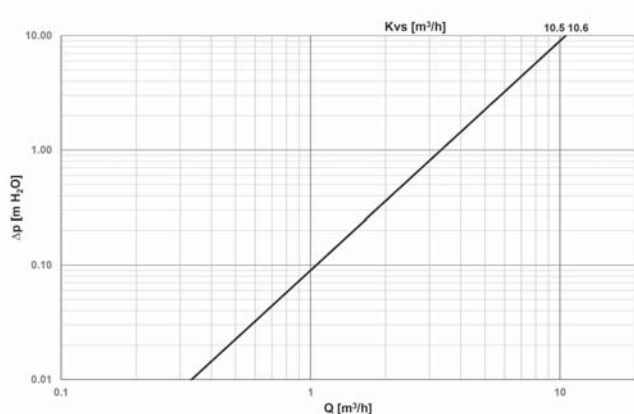
TECHNICAL DATA

MAX. WORKING PRESSURE	10 bar
MAX. PRESSURE DIFFERENCE	10 bar
FLUID WORKING TEMPERATURE	up to 110 °C

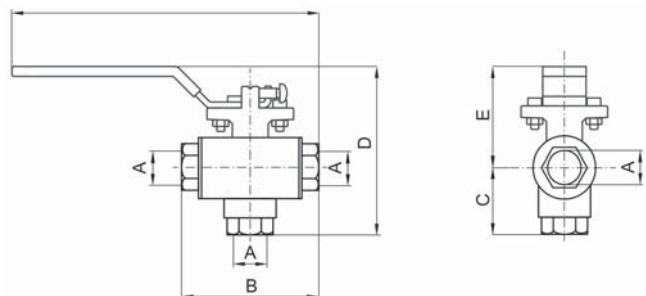
MATERIALS

VALVE HOUSING	CW617N
VALVE SPINDLE	CW617N
VALVE BALL	chrome-plated brass
O-RINGS	EPDM, FPM

VALVE PRESSURE DROP



DIMENSIONS AND TYPES



		VZU M 320 3/4F	VZU M 320 1F	VZU M 320 5/4M
CONNECTIONS	--	3/4" F	1" F	5/4" M
B	mm	96	96	116
C	mm	50	50	60
D	mm	108	108	118
E	mm	58	58	58
F	mm	168	168	174
WEIGHT	kg	0.8	0.8	0.8
NOMINAL DIAMETER	DN	20	20	20
KVS	m ³ /h	10.5	10.6	10.6
CODE	--	20603	20604	20605

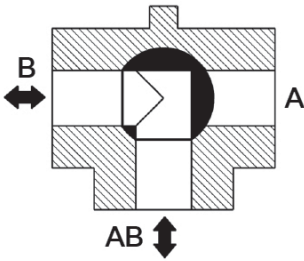
THREE-WAY ZONE VALVES

VZK Three-way Zone Ball Valve

Zone ball valves intended for heating or solar thermal systems with water or antifreeze fluid and for drinking water systems.

The valve is equipped with a **two-point control actuator (SPST)**. The actuator can be removed without disassembling the valve. The valve must not be installed in a position with the actuator facing down.

A working neutral, a permanent phase and a control phase must be supplied to the valve. Without the control phase, the outlet B is open, after the control phase is applied, the outlet A opens. Shift time is 60s. The valve can be adjusted manually by turning the lever (after switching to manual control mode).



TECHNICAL DATA

MAX. WORKING PRESSURE	16 bar
MAX. PRESSURE DIFFERENCE	10 bar
FLUID WORKING TEMPERATURE	up to 110 °C

MATERIALS

VALVE HOUSING	brass, forged, nickel-plated
VALVE SPINDLE	nickel-plated brass
VALVE BALL	chrome-plated brass
O-RINGS	FPM
POWER CABLE	PVC

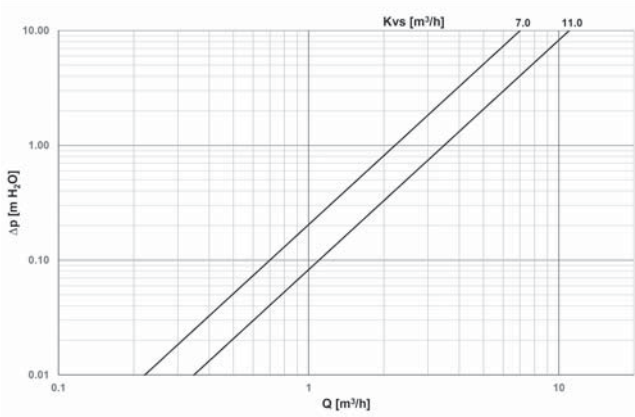
ACTUATOR

POWER SUPPLY	230 V 50 Hz
POWER INPUT	9 W
CURRENT	40 mA
IP RATING BY EN 60529	IP 44
PROTECTION CLASS BY EN 61140 ed.2	II

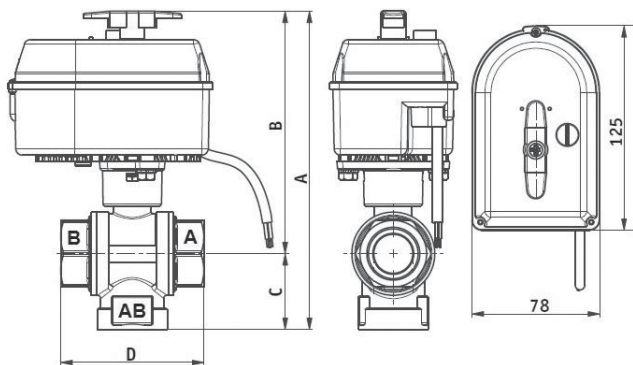
POWER CABLE

CROSS SECTION	4 × 0.5 mm ²
LENGTH	2 m

VALVE PRESSURE DROP

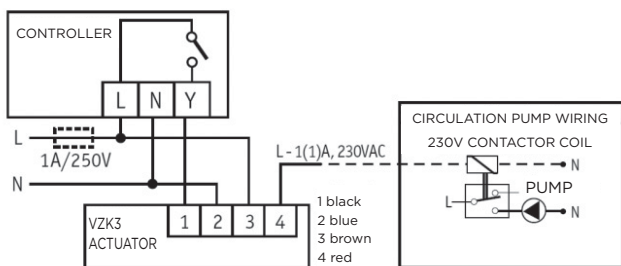


DIMENSIONS AND TYPES



		VZK 320-230-1P	VZK 325-230-1P
CONNECTIONS	--	3/4" F	1" F
A	mm	183	194
B	mm	144	148
C	mm	39	46
D	mm	74	88
WEIGHT	kg	1.25	1.53
MAX. PRESSURE DIFFERENCE	bar	10	10
KVS	m ³ /h	7.0	11.0
CODE	--	11293	11294

ELECTRICAL WIRING



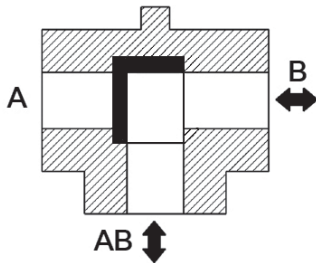
THREE-WAY ZONE VALVES

LK525 Three-way Zone Gate Valve

Zone gate valves intended for heating or solar thermal systems with water or antifreeze fluid.

The valve is equipped with a **two-point control actuator (SPST)**. It comes with a 1m long 3-wire power cable. The valve must not be installed in a position with the actuator facing down.

A working neutral, a permanent phase and a control phase must be supplied to the valve. Without the control phase, the outlet B is open, after the control phase is applied, the outlet A opens. **Shift time is 8s.**



TECHNICAL DATA

MAX. WORKING PRESSURE	10 bar
MAX. PRESSURE DIFFERENCE	10 bar
FLUID WORKING TEMPERATURE	5 to 80 °C (120 °C with extension - code 11278)

MATERIALS

VALVE HOUSING	brass, forged
VALVE MEMBER	PPS composite
VALVE SPINDLE	PPS composite
POWER CABLE	PVC

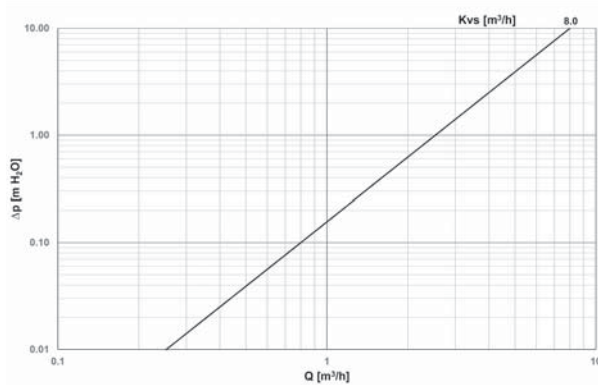
ACTUATOR

POWER SUPPLY	230 V 50 Hz
POWER INPUT	7 W
CURRENT	30 mA
IP RATING BY EN 60529	IP 40
PROTECTION CLASS BY EN 61140 ed.2	II

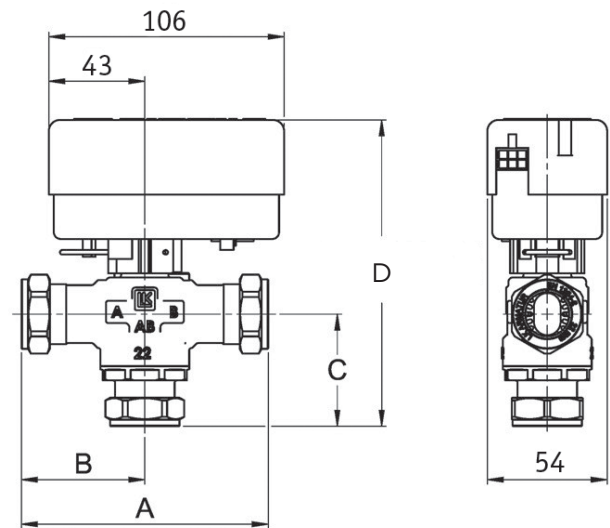
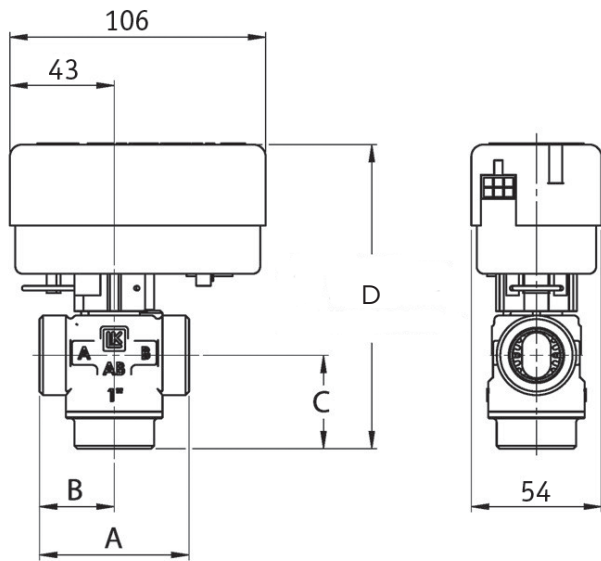
POWER CABLE

CROSS SECTION	3× 0.75 mm ²
LENGTH	1m

VALVE PRESSURE DROP

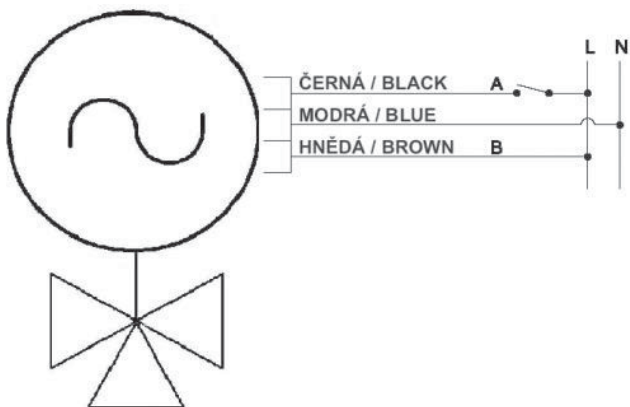


DIMENSIONS AND TYPES



CONNECTIONS	--	1" M	5/4" M	Cu22	Cu28
A	mm	62	74	110	110
B	mm	31	37	55	55
C	mm	39	40	50	54
D	mm	127	128	138	142
WEIGHT	kg	0.6	0.6	0.4	0.6
MAX. PRESSURE DIFFERENCE	bar	10	10	10	10
KVS	m ³ /h	8.0	8.0	8.0	8.0
CODE	--	11284	11285	14883	14884

ELECTRICAL WIRING



THREE-WAY ZONE VALVES

AMC Actuators for Zone Valves

Actuators designed for 2-point (SPST) control of flanged ball valves. The valve position can be identified by the lever position and field colour (blue x red), the LED light indicates the current movement direction.



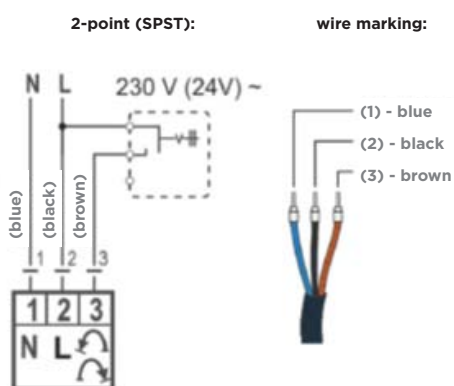
TYPE Y

SHIFT TIME	s	60	15
CODE	--	14093	17176

TECHNICAL DATA

DIMENSIONS	84 x 101 x 99 mm
MATERIALS	
ACTUATOR COVER	Polycarbonate
POWER CABLE	PVC
VALVE BALL	chrome-plated brass
O-RINGS	FPM
ACTUATOR	
CONTROL	2-point
TORQUE	5 Nm
POWER SUPPLY	230V 50Hz
POWER INPUT	2.5 VA
IP/PROT. CLASS	IP42/I
POWER CABLE	
CROSS SECTION	3 x 0.5 mm ²
LENGTH	2 m

ELECTRICAL WIRING



AVC actuators (see page 10) can also be used to control zone valves using the mounting adapter (code 14094).

The most commonly used AVC-5Nm-60s actuator (code 10875) is also available as a set with the adapter (code 18626).





