



Product Range and Price List 2017

*always supporting
professionals*

We call our clients by name

Over the last 40 years we have not just been producing check systems for heating plants, valves, actuators and built-in systems, but we have always searched for solutions and shared innovative ideas for any plant situation you have to face. Today, even more than in the past, thanks to Internet and new technological resources, Mut can help you find a true solution where others only see problems.



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Icons

APPLICATION FIELD	
hot	
cold	
Sanitary	
hot/cold	
solar	
biomass	

WAYS SCHEME	
2 ways	
3 ways	
4 ways	

WAY LAYOUT	
3-way mixer	
4-way mixer	
3-way diverter	
interceptor	

MOVEMENT	
manual	
motorized	
can be motorized	
thermostatic	

TECHNICAL CHARACTERISTICS	
voltage	
absorbed power	
auxiliary contacts	
pressure	
nominal pressure	
differential pressure	
fl	
temperature	
fluid temperature	
room temperature	
nominal closing time	
nominal opening time	
cartridge opening	
cable length	
kvs flow rate	
type of connection	
insulation class	
protection rating	
maximum percentage of glycol	
connections	
insulation	
magnet	
leak	

Zone valve range



6/8 **TMO SERIES**
ball



9/15 **VMR SERIES**
with shutoff



16/20 **SF SERIES**
with spring return



21 **SFC SERIES**
with spring return



22 **SFCF SERIES**
with spring return



23/25 **VS SERIES**
ball

TMO SERIES

ball zone valves with full passage

The TMO motorized valves are used in households and small systems for controlling the flow of hot and cold water. They can be connected as deviator or mixer valves in central heating or cooling systems.

TECHNICAL DATA



Type of movement

SPDT = 2-pole external electrical control
SPST = Unipolar external electrical control (with built-in relay)



Type of movement

Auxiliary micro



Max. differential pressure

250 kPa, with class A seal (EN 12266-1)



Nominal pressure

PN10



Insulation class

II Ref. European Directive EN60730



Protection rating

IP 40 Ref. European Standard IEC EN 60529



2-Way commutation time

15 s (90 °) - 20 s (90 °) On request



2-Way commutation time

15 s (90 °) - 20 s (90 °) On request



3-Way commutation time

6 s (180 °), 8 s (60 °), 35 s (90 °) 140 s (90 °)
On request



3-Way commutation time

6 s (180 °), 8 s (60 °), 35 s (90 °) 140 s (90 °)
On request



Cable length

1000 mm



Fl temperature limits

5 ÷ 90 °C [max]

CERTIFICATION



TMO 2-WAY



TMO 3-WAY

2-way ball valves with motorized actuator

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01852	TMO 15-2MM SPDT M1S	2-way valve - 230 V - with male-male pipe connections - 6-pole molex cable - G 1/2 with relay	1/2"	10	10	1	5
7.030.01853	TMO 15-2MM SPDT M1S	2-way valve - 230 V - with male-male pipe connections - 6-pole molex cable - G 1/2	1/2"	10	10	1	5
7.030.01854	TMO 20-2MM SPDT M1S	2-way valve - 230 V - with male-male pipe connections - 6-pole molex cable - G 3/4 with relay	3/4"	10	10	1	5
7.030.01855	TMO 20-2MM SPDT M1S	2-way valve - 230 V - with male-male pipe connections - 6-pole molex cable - G 3/4	3/4"	10	10	1	5
7.030.01856	TMO 25-2MM SPDT M1S	2-way valve - 230 V - with male-male pipe connections - 6-pole molex cable - G 1 with relay	1"	10	10	1	5
7.030.01857	TMO 25-2MM SPDT M1S	2-way valve - 230 V - with male-male pipe connections - 6-pole molex cable - G 1	1"	10	10	1	5



7.030.01858	TMO 15-2MF SPDT M1S	2-way valve - 230 V - with male-female pipe connections - 6-pole molex cable - G 1/2 with relay	1/2"	10	10	1	5
7.030.01859	TMO 15-2MF SPDT M1S	2-way valve - 230 V - with male-female pipe connections - 6-pole molex cable - G 1/2	1/2"	10	10	1	5
7.030.01860	TMO 20-2MF SPDT M1S	2-way valve - 230 V - with male-female pipe connections - 6-pole molex cable - G 3/4 with relay	3/4"	10	10	1	5
7.030.01861	TMO 20-2MF SPDT M1S	2-way valve - 230 V - with male-female pipe connections - 6-pole molex cable - G 3/4	3/4"	10	10	1	5
7.030.01862	TMO 25-2MF SPDT M1S	2-way valve - 230 V - with male-female pipe connections - 6-pole molex cable - G 1 with relay	1"	10	10	1	5
7.030.01863	TMO 25-2MF SPDT M1S	2-way valve - 230 V - with male-female pipe connections - 6-pole molex cable - G 1	1"	10	10	1	5



Actuators for ball valves

Code	Model	Description	Pack	Packaging
7.030.01870	ATM-2 SPST M1S	Actuator for 2-way valves - 230 V - 6-pole molex cable with relay	1	5
7.030.01871	ATM-2 SPDT M1S	Actuator for 2-way valves - 230 V - 6-pole molex cable	1	5
7.030.01872	ATM-2 SPST M1S	Actuator for 2-way valves - 24 V - 6-pole molex cable with relay	1	5
7.030.01873	ATM-2 SPDT M1S	Actuator for 2-way valves - 24 V - 6-pole molex cable	1	5



2-way ball valves

Code	Model	Description	Size	Pack	Packaging
7.030.01878	VTM 25-2E	2-way valve - without connections - G 1	1"	1	5
7.030.01879	VTM 15-2MM	2-way valve - with male-male pipe connections - G 1/2	1/2"	1	5
7.030.01880	VTM 20-2MM	2-way valve - with male-male pipe connections - G 3/4	3/4"	1	5
7.030.01881	VTM 25-2MM	2-way valve - with male-male pipe connections - G 1	1"	1	5
7.030.01882	VTM 15-2MF	2-way valve - with male-female pipe connections - G 1/2	1/2"	1	5
7.030.01883	VTM 20-2MF	2-way valve - with male-female pipe connections - G 1/4	3/4"	1	5
7.030.01884	VTM 25-2MF	2-way valve - with male-female pipe connections - G 1	1"	1	5



3-way ball valves with motorized actuator

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01864	TMO 15-MMM SPST M1S	3-way valve - 230 V - with 3 male connections - 6-pole moxex cable - G ½ with relay	1/2"	10	5	1	5
7.030.01865	TMO 15-MMM SPDT M1S	3-way valve - 230 V - with 3 male connections - 6-pole moxex cable - G ½	1/2"	10	5	1	5
7.030.01866	TMO 20-MMM SPST M1S	3-way valve - 230 V - with 3 male connections - 6-pole moxex cable - G ¾ with relay	3/4"	10	5	1	5
7.030.01867	TMO 20-MMM SPDT M1S	3-way valve - 230 V - with 3 male connections - 6-pole moxex cable - G ¾	3/4"	10	5	1	5
7.030.01868	TMO 25-MMM SPST M1S	3-way valve - 230 V - with 3 male connections - 6-pole moxex cable - G 1 with relay	1"	10	5	1	5
7.030.01869	TMO 25-MMM SPDT M1S	3-way valve - 230 V - with 3 male connections - 6-pole moxex cable - G 1	1"	10	5	1	5



Actuators for ball valves

Code	Model	Description	Pack	Packaging
7.030.01874	ATM-3 SPST M1S	Actuator for 3-way valves- 230 V - 6-pole moxex cable with relay	1	5
7.030.01875	ATM-3 SPDT M1S	Actuator for 3-way valves- 230 V - 6-pole moxex cable	1	5
7.030.01876	ATM-3 SPST M1S	Actuator for 3-way valves- 24 V - 6-pole moxex cable with relay	1	5
7.030.01877	ATM-3 SPDT M1S	Actuator for 3-way valves- 24 V - 6-pole moxex cable	1	5



3-way ball valves

Code	Model	Description	Size	Pack	Packaging
7.030.01885	VTM 25E	3-way valve - without connections - G 1	1"	1	5
7.030.01886	VTM 15MMM	3-way valve - with 3 male connections - G 1/2	1/2"	1	5
7.030.01887	VTM 20MMM	3-way valve - with 3 male connections - G 3/4	3/4"	1	5
7.030.01888	VTM 25MMM	3-way valve - with 3 male connections - G 1	1"	1	5



Accessories for ball valves TMO

Code	Model	Description	Size	Pack	Packaging
7.030.00434	CAVO VMR/TMO	6-pole cable x 0.75 for version with M1S	1000 mm	1	5



VMR SERIES

zone valves with shutoff

VMR valves are motorized valves used in home applications and small installations to control the flow of hot and cold water. They can be connected as deviator or mixer valves in central heating or cooling systems.

TECHNICAL DATA



Type of movement
SPDT, SPST, 3 modulating points
according to the model



Max. differential pressure
392 kPa



Nominal pressure
PN10



Insulation class
II Ref. European Standard EN60730



Protection rating
IP 40 Ref. European Standard IEC EN 60529



Way commutation time
6 sec.



Way commutation time
6 sec.



Fl temperature limits
5 ÷ 110 °C [max]



VMR 2-WAY



VMR 3-WAY

CERTIFICATION



2-way click-clock zone valves - VMR series ^{*1} ^{*2}

Bipolar external electric control - SPDT - Zone valves for heating and air conditioning systems

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01129	VMR 15-2 SPDT CR	2-way valve - 230 V - Female gas connections - with fast coupling - no cable	1/2"	10	3,0	1	1
7.030.00874	VMR 20-2 SPDT CR	2-way valve - 230 V - Female gas connections - with fast coupling - no cable	3/4"	10	5,3	1	1
7.030.00720	VMR 25-2 SPDT CR	2-way valve - 230 V - Female connections - with fast coupling - no cable	1"	10	6,0	1	1



7.030.01132	VMR 15-2 SPDT CR M1S	2-way valve - 230 V - Female Gas connections - with fast coupling - no cable - with auxiliary micro	1/2"	10	3,0	1	1
7.030.00726	VMR 20-2 SPDT CR M1S	2-way valve - 230 V - Female Gas connections - with fast coupling - no cable - with auxiliary micro	3/4"	10	5,3	1	1
7.030.00703	VMR 25-2 SPDT CR M1S	2-way valve - 230 V - Female Gas connections - with fast coupling - no cable - with auxiliary micro	1"	10	6,0	1	1

7.013.00463	VMR 20-2E SPDT CR	2-way valve - 230 V - Male Gas connections - with fast coupling - no cable	3/4"	10	5,3	1	5
7.030.00653	VMR 25-2E SPDT CR	2-way valve - 230 V - Male Gas connections - with fast coupling - no cable	1"	10	6,0	1	5



7.030.01272	VMR 20-2E SPDT CR M1S	2-way valve - 230 V - Male Gas connections - with fast coupling - no cable - with auxiliary micro	3/4"	10	5,3	1	5
7.030.00671	VMR 25-2E SPDT CR M1S	2-way valve - 230 V - Male Gas connections - with fast coupling - no cable - with auxiliary micro	1"	10	6,0	1	5

7.013.00698	VMR 22-2EB SPDT CR	2-way valve - 230 V - with fast coupling - no cable -with connections for copper pipes - complete with nuts - ferrules	22 mm	10	5,3	1	5
7.013.00308	VMR 28-2B SPDT CR	2-way valve - 230 V - with fast coupling - no cable -with connections for copper pipes - complete with nuts - ferrules	28 mm	10	6,0	1	5



7.013.00699	VMR 22-2EB SPDT CR M1S	2-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipe - com- plete with nuts - ferrules	22 mm	10	5,3	1	5
7.013.00700	VMR 28-2B SPDT CR M1S	2-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipe	28 mm	10	6,0	1	5

*1 All the VMR series valves can be supplied with a 24 V motor

*2 All the VMR series valves can be supplied with fl cable (refer to MUT for codes)

2-way click-clock zone valves - VMR series ^{*1 *2}

Unipolar external electric control - SPST (with built-in relay)

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01163	VMR 15-2 SPST CR	2-way valve - 230 V - Female Gas connections - with fast coupling - no cable	1/2"	10	3,0	1	1
7.030.01136	VMR 20-2 SPST CR	2-way valve - 230 V - Female Gas connections - with fast coupling - no cable	3/4"	10	5,3	1	1
7.030.00866	VMR 25-2 SPST CR	2-way valve - 230 V - Female Gas connections - with fast coupling - no cable	1"	10	6,0	1	1



7.013.00613	VMR 15-2 SPST CR M1S	2-way valve - 230 V - Female Gas connections - with fast coupling - no cable - with auxiliary micro	1/2"	10	3,0	1	1
7.030.01131	VMR 20-2 SPST CR M1S	2-way valve - 230 V - Female Gas connections - with fast coupling - no cable - with auxiliary micro	3/4"	10	5,3	1	1
7.030.00738	VMR 25-2 SPST CR M1S	2-way valve - 230 V - Female Gas connections - with fast coupling - no cable - with auxiliary micro	1"	10	6,0	1	1

7.030.01192	VMR 20-2E SPST CR	2-way valve - 230 V - Male Gas connections - with fast coupling - no cable	3/4"	10	5,3	1	5
7.030.01117	VMR 25-2E SPST CR	2-way valve - 230 V - Male Gas connections - with fast coupling - no cable	1"	10	6,0	1	5



7.013.00704	VMR 20-2E SPST CR M1S	2-way valve - 230 V - Male Gas connections - with fast coupling - no cable - with auxiliary micro	3/4"	10	5,3	1	5
7.030.01118	VMR 25-2E SPST CR M1S	2-way valve - 230 V - Male Gas connections - with fast coupling - no cable - with auxiliary micro	1"	10	6,0	1	5

7.030.01219	VMR 22-2EB SPST CR	2-way valve - 230 V - with fast coupling - no cable - with connections for copper pipe - complete with nuts - ferrules	22 mm	10	5,3	1	5
7.013.00514	VMR 28-2B SPST CR	2-way valve - 230 V - with fast coupling - no cable - with connections for copper pipe - complete with nuts - ferrules	28 mm	10	6,0	1	5



7.013.00456	VMR 22-2EB SPST CR M1S	2-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipe - complete with nuts - ferrules	22 mm	10	5,3	1	5
7.013.00701	VMR 28-2B SPST CR M1S	2-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipe	28 mm	10	6,0	1	5

*1 All the VMR series valves can be supplied with a 24 V motor

*2 All the VMR series valves can be supplied with fl cable (refer to MUT for codes)

3-way click-clock zone valves - VMR series ^{*1 *2}

Bipolar external electric control - SPDT - Zone valve for heating and cooling systems

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.00650	VMR 15 SPDT CR	3-way valve - 230 V - Female Gas connections - with fast coupling - no cable	1/2"	10	3,5	1	1
7.030.00400	VMR 20 SPDT CR	3-way valve - 230 V - Female Gas connections - with fast coupling - no cable	3/4" 1	0	7,0	1	1
7.030.00312	VMR 25 SPDT CR	3-way valve - 230 V - Female Gas connections - with fast coupling - no cable	1"	10	8,0	1	1



7.030.00652	VMR 15 SPDT CR M1S	3 way valve - 230 V - Gas connections Female - with fast coupling - no cable - with auxiliary micro	1/2"	10	3,5	1	1
7.030.00392	VMR 20 SPDT CR M1S	3 way valve - 230 V - Gas connections Female - with fast coupling - no cable - with auxiliary micro	3/4"	10	7,0	1	1
7.030.00725	VMR 25 SPDT CR M1S	3 way valve - 230 V - Gas connections Female - with fast coupling - no cable - with auxiliary micro	1"	10	8,0	1	1

7.030.00100	VMR 20E SPDT CR	3 way valve - 230 V - Male gas connections - with fast coupling - no cable	3/4"	10	7,0	1	5
7.030.00101	VMR 25E SPDT CR	3 way valve - 230 V - Male gas connections - with fast coupling - no cable	1"	10	8,0	1	5



7.030.00308	VMR 20E SPDT CR M1S	3 way valve - 230 V - Male gas connections - with fast coupling - no cable - with auxiliary micro	3/4"	10	7,0	1	5
7.030.00692	VMR 25E SPDT CR M1S	3 way valve - 230 V - Male gas connections - with fast coupling - no cable - with auxiliary micro	1"	10	0	1	5

7.030.00097	VMR 22EB SPDT CR	3-way valve - 230 V - with fast coupling - no cable - with connections for copper pipe - complete with nuts - ferrules	22 mm	10	7,0	1	5
7.030.00546	VMR 28B SPDT CR	3-way valve - 230 V - with fast coupling - no cable - with connections for copper pipe - complete with nuts - ferrules	28 mm	10	8,0	1	5



7.013.00277	VMR 22EB SPDT CR M1S	3-way valve - 230 V - with fast coupling - no cable - with connections for copper pipe - complete with nuts - ferrules	22 mm	10	7,0	1	5
7.013.00695	VMR 28B SPDT CR M1S	3-way valve - 230 V - with fast coupling - no cable - with connections for copper pipe - complete with nuts - ferrules	28 mm	10	8,0	1	5

*1 All the VMR series valves can be supplied with a 24 V motor

*2 All the VMR series valves can be supplied with fl cable (refer to MUT for codes)

3-way click-clock zone valves - VMR series ^{*1 *2}

Unipolar external electric control - SPST (with built-in relay)

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.00707	VMR 15 SPST CR	3-way valve - 230 V - Female Gas connections - with fast coupling - no cable	1/2"	10	3,5	1	1
7.030.00540	VMR 20 SPST CR	3-way valve - 230 V - Female Gas connections - with fast coupling - no cable	3/4"	10	7,0	1	1
7.030.00314	VMR 25 SPST CR	3-way valve - 230 V - Female Gas connections - with fast coupling - no cable	1"	10	8,0	1	1



7.030.00766	VMR 15 SPST CR M1S	3 way valve - 230 V - Female Gas connections - with fast coupling - no cable - with auxiliary micro	1/2"	10	3,5	1	1
7.030.00550	VMR 20 SPST CR M1S	3 way valve - 230 V - Female Gas connections - with fast coupling - no cable - with auxiliary micro	3/4"	10	7,0	1	1
7.030.00699	VMR 25 SPST CR M1S	3 way valve - 230 V - Female Gas connections - with fast coupling - no cable - with auxiliary micro	1"	10	8,0	1	1

7.030.00185	VMR 20E SPST CR	3-way valve - 230 V - Male Gas connections - with fast coupling - no cable	3/4"	10	7,0	1	5
7.030.01045	VMR 25E SPST CR	3-way valve - 230 V - Male Gas connections - with fast coupling - no cable	1"	10	8,0	1	5



7.030.00332	VMR 20E SPST CR M1S	3-way valve - 230 V - Male Gas connections - with fast coupling - no cable- with auxiliary micro	3/4"	10	7,0	1	5
7.030.00318	VMR 25E SPST CR M1S	3-way valve - 230 V - Male Gas connections - with fast coupling - no cable- with auxiliary micro	1"	10	8,0	1	5

7.030.00269	VMR 22EB SPST CR	3-way valve - 230 V - with fast coupling - no cable - with connections for copper pipe - complete with nuts - ferrules	22 mm	10	7,0	1	5
7.030.00797	VMR 28EB SPST CR	3-way valve - 230 V - with fast coupling - no cable - with connections for copper pipe - complete with nuts - ferrules	28 mm	10	8,0	1	5



7.030.00330	VMR 22EB SPST CR M1S	3-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipe	22 mm	10	7,0	1	5
7.030.00317	VMR 28B SPST CR M1S	3-way valve - 230 V - with fast coupling - no cable with auxiliary micro - with connections for copper pipe	28 mm	10	8,0	1	5

*1 All the VMR series valves can be supplied with a 24 V motor

*2 All the VMR series valves can be supplied with fl cable (refer to MUT for codes)

3-way click-clock zone valves - VMR series ^{*1 *2}

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.00197	VMR 25E CR	3-way valve - 230 V - with fast coupling - no cable - Male gas connections - two-way 3 points 120"	1"	10	8,0	1	5
7.030.01137	VMR 25E CR	3-way valve - 230 V - with fast coupling - no cable - Male gas connections - two-way 3 points 60"	1"	10	8,0	1	5
7.013.00705	VMR 25E CR	3-way valve - 230 V - with fast coupling - no cable - Male gas connections - two-way 3 points 12"	1"	10	8,0	1	5



7.030.00056	VMR 20E CR	3 way valve - 230 V - with fast coupling - no cable - Male gas connections - two-way 3 points 120"	3/4"	10	8,0	1	5
7.030.01190	VMR 20E CR	3 way valve - 230 V - with fast coupling - no cable - Male gas connections - two-way 3 points 60"	3/4"	10	8,0	1	5
7.030.00784	VMR 20E CR	3 way valve - 230 V - with fast coupling - no cable - Male gas connections - two-way 3 points 12"	3/4"	10	8,0	1	5

7.013.00697	VMR	3-way bell valve				1	5
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Accessories for click-clock valves - VMR series ^{*1 *2}

Code	Model	Description	Pack	Packaging
7.013.00055	MR SPDT CR	Valve motor VMR SPDT CR 230 V	230 V	1 5
7.013.00082	MR SPDT CR	Valve motor VMR SPDT CR 24 V	24 V	1 5
7.013.00163	MR SPDT CR M1S	Valve motor VMR SPDT CR 230 V with auxiliary micro	230 V	1 5
7.013.00299	MR SPDT CR M1S	Valve motor VMR SPDT CR 24 V with auxiliary micro	24 V	1 5

7.013.00401	MR SPST CR	Motor for VMR SPST CR valves with built-in relay 230 V	230 V	1 5
7.013.00342	MR SPST CR	Motor for VMR SPST CR valves with built-in relay 24 V	24 V	1 5
7.013.00647	MR SPST CR M1S	Motor for VMR SPST CR valves with built-in relay 230 V - with auxiliary micro	230 V	1 5
7.013.00422	MR SPST CR M1S	Motor for VMR SPST CR valves with built-in relay 24 V - with auxiliary micro	24 V	1 5



7.013.00540	MR B1	Valve motor VMR 230 V CR two-way 3 points	120"	1 5
7.013.00598	MR B2	Valve motor VMR 230 V CR two-way 3 points	12"	1 5
7.030.00805	MR MO	Valve motor VMR 24 V 0-10 modulating with pre-assembled cable	60"	1 5
7.030.00809	MR MO	Valve motor VMR 24 V 0-10 modulating with pre-assembled cable	12"	1 5

*1 All the VMR series valves can be supplied with a 24 V motor

*2 All the VMR series valves can be supplied with fl cable (refer to MUT for codes)

Accessories for click-clock valves - VMR series *1 *2

Code	Model	Description	Pack	Packaging
7.013.00381	KIT VMR	Shutoff set for 3-way valves	1	5
7.013.00312	KIT VMR	Shutoff set for 2-way valves	1	5



7.013.00188	KIT	Shutoff dismantling kit	1	5
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7.013.00415	CAVO VMR	3-pole cable x .0.75	1000 mm	1	5
7.030.00434	CAVO VMR	6-pole cable x 0.75 for version with M1S	1000 mm	1	5
7.013.00159	CAVO VMR	3-pole cable x 0.75	1500 mm	1	5
7.013.00134	CAVO VMR	6-pole cable x 0.75 for version with M1S	1500 mm	1	5
7.030.01595	CAVO VMR	3-pole cable x 0.75	2000 mm	1	5
7.030.01166	CAVO VMR	6-pole cable x 0.75 for version with M1S	2000 mm	1	5



Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.02082	VR	Body 2-way valve 1/2" Female	1/2"	10	3,0	1	5
7.013.00516	VR	Body 2-way valve 3/4" Female	3/4"	10	5,3	1	5
7.013.00642	VR	Body 2-way valve 3/4" Male	3/4"	10	5,3	1	5
7.030.00529	VR	Body 3-way valve 3/4" Female	3/4"	10	8,0	1	5
7.030.01165	VR	Body 3-way valve 1" female	1"	10	8,0	1	5
7.030.00086	VR	Body 3-way valve 3/4" Male	3/4"	10	8,0	1	5
7.013.00745	VR	Body 3-way valve 1" Male	1"	10	8,0	1	5
7.030.01187	VR	Body 2-way valve 1" Male	1"	10	8,0	1	5

*1 All the VMR series valves can be supplied with a 24 V motor

*2 All the VMR series valves can be supplied with fl cable (refer to MUT for codes)

SF SERIES

ball zone valves with spring return

These are powered by an electric motor and can assume two operating positions depending on whether the motor is activated or not. One or two auxiliary switches can be installed on request. These are activated when the valve switches.

The valves are equipped with an external lever for manual positioning of the shut-off ball in a central position.

TECHNICAL DATA



Type of movement
Spring return



Max. differential pressure
90.2 kPa



Nominal pressure
PN10



Insulation class
II Ref. European Directive EN60730



Protection rating
IP 22 Ref. European Directive IEC EN 60529



Way commutation time
10 sec / 20 sec (2/3 vie)



Way commutation time
4 sec / 10 sec (2/3 vie)



Fl temperature limits
5 ÷ 110 °C [max]



Cable length
1000 mm

CERTIFICATION



SF 2-WAY



SF 3-WAY



Basic SF

SF series 2-way zone valves *

Zone valve with spring return for heating and air conditioning systems

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.001.01574	SF 15-2	2-way valve - 230 V - Female Gas connections	1/2"	10	6,0	1	1
7.001.01603	SF 20-2	2-way valve - 230 V - Female Gas connections	3/4"	10	8,0	1	1
7.001.01639	SF 25-2	2-way valve - 230 V - Female Gas connections	1"	10	10,0	1	1



7.001.01586	SF 15-2 M1	2-way valve - 230 V - Female Gas connections with auxiliary micro	1/2"	10	6,0	1	1
7.001.01618	SF 20-2 M1	2-way valve - 230 V - Fem. Gas connections, with auxiliary microswitch. For the 24 V version use the code 7.001.01615	3/4"	10	8,0	1	1
7.001.01654	SF 25-2 M1	2-way valve - 230 V - Female Gas connections with auxiliary micro	1"	10	10,0	1	1

7.001.01724	SF 15-2 E	2-way valve - 230 V - Male gas connections	1/2"	10	6,0	1	5
7.001.02066	SF 20-2 E	2-way valve - 230 V - Male gas connections	3/4"	10	8,0	1	5
7.001.02283	SF 25-2 E	2-way valve - 230 V - Male gas connections	1"	10	10,0	1	5



7.001.02517	SF 15-2 E M1	2-way valve - 230 V - Male gas connections with auxiliary micro	1/2"	10	6,0	1	5
7.001.02286	SF 20-2 E M1	2-way valve - 230 V - Male gas connections with auxiliary micro	3/4"	10	8,0	1	5
7.001.02195	SF 25-2 E M1	2-way valve - 230 V - Male gas connections with auxiliary micro	1"	10	10,0	1	5

7.001.01693	SF 15-2 EB	2-way valve - 230 V - connections for copper pipes complete with nuts - ferrules	15 mm	10	6,0	1	5
7.001.01682	SF 16-2 EB	2-way valve - 230 V - connections for copper pipes complete with nuts - ferrules	16 mm	10	6,0	1	5
7.001.01704	SF 20-2 EB	2-way valve - 230 V - connections for copper pipes complete with nuts - ferrules	22 mm	10	8,0	1	5
7.001.02844	SF 25-2 B	2-way valve - 230 V - connections for copper pipes complete with nuts - ferrules	28 mm	10	10,0	1	5



7.001.01699	SF 15-2 EB M1	2-way valve - 230 V - connections for copper pipe with auxiliary micro - complete with nuts -	15 mm	10	6,0	1	5
7.001.01685	SF 16-2 EB M1	2-way valve - 230 V - connections for copper pipe with auxiliary micro - complete with nuts -	16 mm	10	6,0	1	5
7.001.02777	SF 20-2 EB M1	2-way valve - 230 V - connections for copper pipe with auxiliary micro - complete with nuts -	22 mm	10	8,0	1	5
7.001.02778	SF 25-2 B M1	2-way valve - 230 V - connections for copper pipe with auxiliary micro - complete with nuts -	28 mm	10	10,0	1	5

7.030.00321	SF BASE	2-way valve - 230 V - complete with flanges	1" 1/4	10	10,0	1	5
7.030.00349	SF BASE M1	2-way valve - 230 V - complete with flanges with auxiliary micro	1" 1/4	10	10,0	1	5



All the valves in the SF series can be supplied with 24 V and 110 V motors (please contact MUT for codes)
Minimum order 5 pcs.

SF series 3-way zone valves *

Zone valve with spring return for heating and air conditioning systems

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.001.01739	SF 15	3-way valve - 230 V - Female gas connections	1/2"	10	6,6	1	1
7.001.01770	SF 20	3-way valve - 230 V - Female gas connections	3/4"	10	8,0	1	1
7.001.01808	SF 25	3-way valve - 230 V - Female gas connections	1"	10	12,6	1	1



7.001.01753	SF 15 M1	3-way valve - 230 V - Female gas connections with auxiliary micro	1/2"	10	6,6	1	1
7.001.01787	SF 20 M1	3-way valve - 230 V - Female gas connections with auxiliary micro	3/4"	10	8,0	1	1
7.001.01827	SF 25 M1	3-way valve - 230 V - Female gas connections with auxiliary micro	1"	10	12,6	1	1

7.001.02097	SF 15 E	3-way valve - 230 V - Male gas connections	1/2"	10	6,6	1	5
7.001.01913	SF 20 E	3-way valve - 230 V - Male gas connections	3/4"	10	8,0	1	5
7.001.01954	SF 25 E	3-way valve - 230 V - Male gas connections	1"	10	12,6	1	5



7.001.02762	SF 15 E M1	3-way valve - 230 V Male gas connections with auxiliary micro	1/2"	10	6,6	1	5
7.001.01935	SF 20 E M1	3-way valve - 230 V Male gas connections with auxiliary micro	3/4"	10	8,0	1	5
7.001.01969	SF 25 E M1	3-way valve - 230 V Male gas connections with auxiliary micro	1"	10	12,6	1	5

7.001.01876	SF 15 EB	3-way valve - 230 V connections for copper pipes complete with nuts - ferrules	15 mm	10	6,6	1	5
7.001.01861	SF 16 EB	3-way valve - 230 V connections for copper pipes complete with nuts - ferrules	16 mm	10	6,6	1	5
7.001.01888	SF 20 EB	3-way valve - 230 V connections for copper pipes complete with nuts - ferrules	22 mm	10	8,0	1	5
7.001.01846	SF 25 B	3-way valve - 230 V - connections for copper pipes complete with nuts	28 mm	10	12,6	1	5



7.001.02511	SF 15 EB M1	3-way valve - 230 V - connections for copper pipes with auxiliary micro - complete with nuts - ferrules	15 mm	10	6,6	1	5
7.001.01865	SF 16 EB M1	3-way valve - 230 V - connections for copper pipes with auxiliary micro - complete with nuts - ferrules	16 mm	10	6,6	1	5
7.001.01895	SF 20 EB M1	3-way valve - 230 V - connections for copper pipes with auxiliary micro - complete with nuts - ferrules	22 mm	10	8,0	1	5
7.001.02780	SF 25 B M1	3-way valve - 230 V - connections for copper pipes with auxiliary micro - complete with nuts - ferrules	28 mm	10	12,6	1	5

All the valves in the SF series can be supplied with 24 V and 110 V motors (please contact MUT for codes)
Minimum order 5 pcs.

SF series 3-way zone valves *

Zone valve with spring return for heating and air conditioning systems

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.001.01998	SF BASE	3-way valve - 230 V - connections prepared for flange		10	12,6	1	5
7.001.02006	SF BASE M1	3-way valve - 230 V - connections prepared for flange with auxiliary micros		10	12,6	1	5



7.030.00343	SF BASE	3-way valve - 230 V - complete with flanges	1" 1/4	10	12,6	1	5
7.030.00347	SF BASE M1	3-way valve - 230 V - complete with flanges with auxiliary micros	1" 1/4	10	12,6	1	5



SF Mid-Position series 3-way zone valves *

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.001.01767	SF 15-MID	3-way valve Mid-Position - 230 V - Fem. Gas connections	1/2"	10	6,6	1	5
7.001.01803	SF 20-MID	3-way valve Mid-Position - 230 V - Fem. Gas connections	3/4"	10	8,0	1	5
7.001.01844	SF 25-MID	3-way valve Mid-Position - 230 V - Fem. Gas connections	1"	10	12,6	1	5



7.001.02748	SF 15-E MID	3-way valve Mid-Position - 230 V - Male gas connections	1/2"	10	6,6	1	5
7.001.01952	SF 20-E MID	3-way valve Mid-Position - 230 V - Male gas connections	3/4"	10	8,0	1	5
7.001.01981	SF 25-E MID	3-way valve Mid-Position - 230 V - Male gas connections	1"	10	12,6	1	5



7.001.02587	SF 15-EB MID	3-way valve Mid-Position - 230 V connections for copper pipes - complete with nuts - ferrules	15 mm	10	6,6	1	5
7.001.01875	SF 16-EB MID	3-way valve Mid-Position - 230 V connections for copper pipes - complete with nuts - ferrules	16 mm	10	6,6	1	5
7.001.01911	SF 20-EB MID	3-way valve Mid-Position - 230 V connections for copper pipes - complete with nuts - ferrules	22 mm	10	8,0	1	5
7.001.02591	SF 25-B MID	3-way valve Mid-Position - 230 V connections for copper pipes - complete with nuts - ferrules	28 mm	10	12,6	1	5



All the valves in the SF series can be supplied with 24 V and 110 V motors (please contact MUT for codes)
Minimum order 5 pcs.

SF valve accessories*

Code	Model	Description	Size	Pack	Packaging
7.001.02025	KIT M1	Auxiliary micro kit with 5 wires - cable gland - spacer nuts - SPST		1	5
7.001.02029	KIT M1S	Auxiliary micro kit with 6 wires - cable gland - spacer nuts - SPST		1	5



6.001.00703	Motor - 230 V - complete with connections			1	5
6.001.01432	Motor - 24 V - complete with connections			1	5



6.001.01464	Motor - 230 V - complete with plate for 2-way valve			1	5
6.001.01450	Motor - 24 V - complete with plate for 2-way valve			1	5
6.001.01485	Motor - 230 V - complete with plate for 2-way Basic SF and SFC			1	5
6.001.00910	Motor - 230 V - complete with plate for 3-way valve			1	5
6.001.01448	Motor - 24 V complete with plate for 3-way valve			1	5



7.001.01561	Mount for 3-way valves - 230 V	1/2"-3/4"		1	5
7.001.01227	Mount for 3-way valves - 230 V with auxiliary micro	1/2"-3/4"		1	5



7.001.01563	Mount for 3-way valves - 230 V	1"		1	5
7.001.01228	Mount for 3-way valves - 230 V with auxiliary micro	1"		1	5

7.001.01559	Mount for 2-way valves - 230 V	1/2"-3/4"-1"		1	5
7.001.01224	Mount for 2-way valve - 230 V with auxiliary micro	1/2"-3/4"-1"		1	5



7.001.00958	Mount for 2-way Basic SF valve and SFC 230 V	1"		1	5
7.001.01392	Mount for 2-way Basic SF valve and SFC 230 V with auxiliary micro	1"		1	5

7.030.01791	Kit Confort	Comfort kit with auxiliary micro	DN20	1	1
7.030.01792	Kit Confort	Comfort kit with auxiliary micro	DN20	1	1



All the valves in the SF series can be supplied with 24 V and 110 V motors (please contact MUT for codes)
Minimum order 5 pcs.

SFC SERIES

zone valves with spring return

These valves are powered by an electric motor and can be in two different operating positions depending on whether the motor is charged or not. An auxiliary switch can be installed on request and activated when the valve is switched. Valves are equipped with an external lever for manual positioning of the shut-off ball in a central position. They also have a built-in by-pass to balance the hydraulic circuit when the valve is closed.

TECHNICAL DATA



Type of movement
Spring return



Max. differential pressure
90.2 kPa



Nominal pressure
PN10



Insulation class
II Ref. European Directive EN60730



Protection rating
IP 22 Ref. European Directive IEC EN 60529



Way commutation time
10 sec



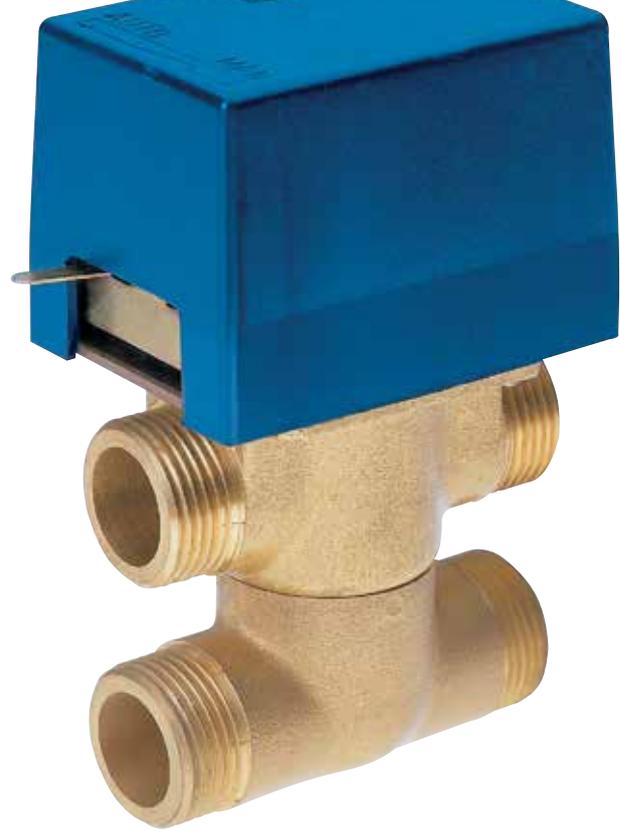
Way commutation time
4 sec



Fl temperature limits
5 ÷ 110 °C [max]



Cable length
1000 mm



CERTIFICATION



Valves for coplanar manifolds - SFC series *

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.001.01012	SFC 25	4-way zone valve with built-in by-pass for balancing the hydraulic head - Male Gas connections 1" - std distance between axes 50 mm - 230 V	1"	10	10,0	1	5
7.001.01031	SFC 25 M1	4-way zone valve with built-in by-pass for balancing the hydraulic head - Male Gas connections 1" - std distance between axes 50 mm - 230 V with auxiliary micro	1"	10	10,0	1	5



Accessories for coplanar manifold's valves - serie SFC

Code	Description	Size	Pack	Packaging
7.001.01547	Spacer for distance between axes	52 mm	1	10
7.001.01548	Spacer for distance between axes	55 mm	1	10
7.001.01549	Spacer for distance between axes	57 mm	1	10
7.001.01550	Spacer for distance between axes	60 mm	1	10
7.001.01551	Spacer for distance between axes	65 mm	1	10



7.001.01558	Pipe union - 1" Male / 1" Female		1	10
7.001.01036	Pipe union - 3/4" Male / 1" Female		1	10



All the valves in the SFC series can be supplied with 24 V and 110 V motors (please contact MUT for codes)
Minimum order 5 pcs.

SFCF SERIES

zone valves with spring return

These valves are moved by an electric motor and they can take on two operation positions according to whether the motor is being powered or not. An auxiliary switch that is activated during valve switching is available on request. The valves have an external lever for placing the shut-off manually in the central position. In addition, the PLUS has an adjustable by-pass and a manometric pressure intake for balancing the hydraulic circuit when the valve is closed.

TECHNICAL DATA



Type of movement
Spring return



Max. differential pressure
61.8 kPa



Nominal pressure
PN10



Insulation class
II Ref. European Directive EN60730



Protection rating
IP 20 Ref. European Directive IEC EN 60529



Way commutation time
20 sec.



Way commutation time
6 sec.



Fl temperature limits
5 ÷ 110 °C [max]



Cable length
1000 mm



CERTIFICATION



Valves for coplanar manifolds - SFCF series

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01559	SFCF 25E	SFCF 25E 230 V valve	1"	10	8,5	1	5
7.030.01528	SFCF 25E	SFCF 25E 230 V plus valve	1"	10	8,5	1	5



7.030.01623	SFCF 25E M1	SFCF 25E M1 valve 230 V with auxiliary micro	1"	10	8,5	1	5
7.030.01622	SFCF 25E M1	SFCF 25E M1 valve 230 V plus with auxiliary micro	1"	10	8,5	1	5



*** All the SF and SFC series valves can be supplied with a 24 V and 110 V motor (refer to MUT for the codes)

VS SERIES

ball zone valve

The ball valve is the most common and used fluid interception device in hydraulic piping. Its operation is based on a 90 degree rotation of a spherical block fitted with cylindrical hole coaxial with the flow. The valve allows the passage or the total blocking of the flow and in some cases even its regulation. A total passage ball valve, i.e., where the passage diameter equal to the internal diameter of upstream and downstream pipe, has a small capacity loss equal to that of the pipe (if the valve is completely open).



TECHNICAL DATA



Type of movement
230 / 24 volt , 3 points with auxiliary micro



Nominal pressure
PN16



Max. differential pressure
6 bar



Insulation class
II Ref. European Directive EN60730



Protection rating
IP 40 Ref. European Directive IEC EN60529



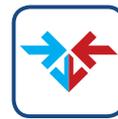
Way commutation time
55 - 120 sec.



Cable length
1100 mm



FI temperature limits
5 ÷ 110 °C [max]



VS 2-WAY



VS 3-WAY

CERTIFICATION



2-ways ball valves with actuator

VS female - female

Code	Model	Description	Size	Motore	Pack	Packaging
7.030.01690	VS 15 F-F M1	Full passage VS valve female-female 230 V M1 with micro	1/2"	V70F 50S 230 M1	1	5
7.030.01692	VS 20 F-F M1	Full passage VS valve female-female 230 V M1 with micro	3/4"	V70F 50S 230 M1	1	5
7.030.01694	VS 25 F-F M1	Full passage VS valve female-female 230 V M1 with micro	1"	V70F 50S 230 M1	1	5
7.030.01696	VS 32 F-F M1	Full passage VS valve female-female 230 V M1 with micro	1"1/4	V200F 120S 230 M1	1	5
7.030.01698	VS 40 F-F M1	Full passage VS valve female-female 230 V M1 with micro	1"1/2	V200F 120S 230 M1	1	5



7.030.01679	VS 15 F-F	VS total flow valve female-female 230 V	1/2"	V70F 50S 230	1	5
7.030.01681	VS 20 F-F	VS total flow valve female-female 230 V	3/4"	V70F 50S 230	1	5
7.030.01683	VS 25 F-F	VS total flow valve female-female 230 V	1"	V70F 50S 230	1	5
7.030.01686	VS 32 F-F	VS total flow valve female-female 230 V	1"1/4	V200F 120S 230	1	5
7.030.01688	VS 40 F-F	VS total flow valve female-female 230 V	1"1/2	V200F 120S 230	1	5

7.030.01689	VS 15 F-F M1	Full passage VS valve female-female 24 V M1 with micro	1/2"	V70F 50S 24 M1	1	5
7.030.01691	VS 20 F-F M1	Full passage VS valve female-female 24 V M1 with micro	3/4"	V70F 50S 24 M1	1	5
7.030.01693	VS 25 F-F M1	Full passage VS valve female-female 24 V M1 with micro	1"	V70F 50S 24 M1	1	5
7.030.01695	VS 32 F-F M1	Full passage VS valve female-female 24 V M1 with micro	1"1/4	V200F 120S 24 M1	1	5
7.030.01697	VS 40 F-F M1	Full passage VS valve female-female 24 V M1 with micro	1"1/2	V200F 120S 24 M1	1	5



7.030.01678	VS 15 F-F	VS total flow valve female-female 24 V	1/2"	V70F 50S 24	1	5
7.030.01680	VS 20 F-F	VS total flow valve female-female 24 V	3/4"	V70F 50S 24	1	5
7.030.01682	VS 25 F-F	VS total flow valve female-female 24 V	1"	V70F 50S 24	1	5
7.030.01685	VS 32 F-F	VS total flow valve female-female 24 V	1"1/4	V200F 120S 24	1	5
7.030.01687	VS 40 F-F	VS total flow valve female-female 24 V	1"1/2	V200F 120S 24	1	5

3-way valve VS series

Code	Model	Description	Size	Motore	Pack	Packaging
7.030.01715	VS 3 - 20	3-way VS valve DN 20 - FFM	3/4"	V200F 120S 230 V M1	1	5
7.030.01716	VS 3 - 25	3-way VS valve DN 25 - FFM	1"	V200F 120S 230 V M1	1	5
7.030.01699	VS 3 - 20E	3-way VS valve DN 20 - MMM	3/4"	V200F 120S 230 V M1	1	5
7.030.01701	VS 3 - 25E	3-way VS valve DN 25 - MMM	1"	V200F 120S 230 V M1	1	5



7.030.01717	VS 3 - 20	3-way VS valve DN 20 - FFM	3/4"	V200F 120 S 230 V	1	5
7.030.01718	VS 3 - 25	3-way VS valve DN 25 - FFM	1"	V200F 120 S 230 V	1	5
7.030.01719	VS 3 - 20E	3-way VS valve DN 20 - MMM	3/4"	V200F 120 S 230 V	1	5
7.030.01720	VS 3 - 25E	3-way VS valve DN 25 - MMM	1"	V200F 120 S 230 V	1	5

7.030.01700	VS 3 - 20	3-way VS valve DN 20 - FFM	3/4"	V200F 120 S 24 V M1	1	5
7.030.01721	VS 3 - 25	3-way VS valve DN 25 - FFM	1"	V200F 120 S 24 V M1	1	5
7.030.01722	VS 3 - 20E	3-way VS valve DN 20 - MMM	3/4"	V200F 120 S 24 V M1	1	5
7.030.01723	VS 3 - 25E	3-way VS valve DN 25 - MMM	1"	V200F 120 S 24 V M1	1	5



7.030.01724	VS 3 - 20	3-way VS valve DN 20 - FFM	3/4"	V200F 120 S 24 V	1	5
7.030.01725	VS 3 - 25	3-way VS valve DN 25 - FFM	1"	V200F 120 S 24 V	1	5
7.030.01726	VS 3 - 20E	3-way VS valve DN 20 - MMM	3/4"	V200F 120 S 24 V	1	5
7.030.01727	VS 3 - 25E	3-way VS valve DN 25 - MMM	1"	V200F 120 S 24 V	1	5



mixer and diverter valves



28/30 **MK SERIES**
with shutoff



31/33 **MK DN SERIES**
with shutoff



33/35 **VPR SERIES**
with shutoff



36/39 **VM/VF 1000 SERIES**
with rotor



40/41 **VM/VDM 2000 SERIES**
with rotor



42/44 **VM 3000 SERIES**
with rotor



45/46 **VMX SERIES**
with rotor

MK SERIES

Globe valves

Series MK three-way shut-off valves can be used as shunt, mixing and on/off valves in heating, air conditioning and ventilation systems and in systems producing domestic hot water. MK valves can also be powered using MUT series AS motors and/or by motors commonly found on the market. Series MK three-way shut-off valves solve all the problems that installers encounter when they use traditional mixing valves. Series MK three-way shut-off valves guarantee:

- Extremely low flow-by even when used as shunt valves in systems with high differential pressures.
- Equal percentage adjustment curves, the best for temperature control in heating and conditioning systems.
- Impossible shut-off ball seizure even when calcium carbonate or other slag and deposits are present in the system.
- Operating temperature range from $4 \div 150$ °C.

These features make this valve highly suited to adjust temperatures in hot water production systems and to adjust temperatures in systems using structurally-embedded heating panels. Body and shut-off ball are made of brass. The stem is made of stainless steel. Stem seal is made using O-rings that are easily replaced in case of wear.



TECHNICAL DATA



Type of movement
Can be motorized



Nominal pressure
PN16



Fl temperature limits
 $4 \div 150$ °C [max]



leak
 $K_{vo} \leq 0,1 \% Kvs$



MK 2-WAY



MK 3-WAY

CERTIFICATION



2-way globe valve, MK series

Shutoff valves for hot/cold water

Code	Mod.	Description	Size	PN	KVS	Pack	Packaging
7.030.00361	MK	2-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Female Gas connections - PN 16	1/2"	16	3,0	1	1
7.030.00362	MK	2-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Female Gas connections - PN 16	3/4"	16	6,3	1	1
7.030.00363	MK	2-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Female Gas connections - PN 16	1"	16	9,0	1	1
7.030.00364	MK	2-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Female Gas connections - PN 16	1"1/4	16	14	1	1
7.030.00360	MK	2-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Female Gas connections - PN 16	1"1/2	16	19	1	1
7.030.00365	MK	2-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Female Gas connections - PN 16	2"	16	25	1	1



3-way globe valve, MK series

Shutoff valves for hot/cold water

Code	Mod.	Description	Size	PN	KVS	Pack	Packaging
7.006.00643	MK	3-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Female Gas connections - PN 16	1/2"	16	3,0	1	1
7.006.00652	MK	3-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Female Gas connections - PN 16	3/4"	16	6,3	1	1
7.006.00649	MK	3-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Female Gas connections - PN 16	1"	16	9,0	1	1
7.006.00646	MK	3-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Female Gas connections - PN 16	1"1/4	16	14	1	1
7.006.00640	MK	3-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Female Gas connections - PN 16	1"1/2	16	19	1	1
7.006.00623	MK	3-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Female Gas connections - PN 16	2"	16	25	1	1



7.030.01373	MK E	3-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Male Gas connections PN 16-DN25	1" 1/2	16	9	1	1
7.030.01376	MK E	3-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Male Gas connections - PN 16-DN32	2"	16	14	1	1
7.030.01377	MK E	3-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Male Gas connections - PN 16-DN40	2" 1/4	16	19	1	1
7.030.01378	MK E	3-way shutoff valve - brass body - brass shutoff and seat - stainless steel shaft - Male Gas connections - PN 16-DN50	2" 3/4	16	25	1	1



Motors for MK series shut-off valves

Code	Model	Description	Voltaggio	Pack	Packaging
7.006.00662	AS/250/75/00	Motor for MK valves from 1/2" to 2": ABS casing - Max. load 25 Kg - strike time 75 sec. - On/Off 3 points	230 V	1	1
7.006.00669	AS/250/75/00	Motor for MK valves from 1/2" to 2": ABS casing - Max. load 25 Kg - strike time 75 sec. - On/Off 3 points	24 V	1	1
7.006.00619	AS/250/75/M0	Motor for MK valves from 1/2" to 2": ABS casing - Max. load 25 Kg - strike time 75 sec. - with self-learning and modulation	24 V	1	1



7.006.00663	AS/250/180/00	Motor for MK valve from 1/2" to 2": ABS casing - Max. load 25 kg - run time 180 sec. - On/Off 3 points	230 V	1	1
7.030.01143	AS/250/180/00	Motor for MK valve from 1/2" to 2": ABS casing - Max. load 25 kg - run time 180 sec. - On/Off 3 points	24 V	1	1
7.006.00674	AS/250/180/M0	Motor for MK valve from 1/2" to 2": ABS casing - Max. load 25 kg - run time 180 sec. - with self-learning and modulation	24 V	1	1

7.006.00664	AS/800/240/00	Motor for MK valves DN 50/65: ABS casing - Max. load: 80 Kg - strike time 240 sec. / 30 mm - On/Off 3 points	230 V	1	1
7.006.00683	AS/800/240/00	Motor for MK valves DN 50/65: ABS casing - Max. load: 80 Kg - strike time 240 sec. / 30 mm. - On/Off 3 points	24 V	1	1
7.006.00677	AS/800/240/M0	Motor for MK valves DN 50/65: ABS casing - Max. load: 80 Kg - strike time 240 sec. /30 mm - with self-learning and modulation	24 V	1	1



7.006.00602	KIT MK	Assembly kit for MK valves from 1/2" to 2" only obligatory for AS800 motors		1	1
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7.030.01644	KIT MK/1	Honeywell V5013R valve adapter kit		1	1
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MK DN SERIES

Globe valves

Series MK DN flanged, three-way shut-off valves can be used as shunt, mixing and on/off valves in heating, air conditioning and ventilation systems. Series MK DN three-way shut-off valves solve all the problems that installers encounter when they use traditional mixing valves. MK DN valve series can be motorized using MUT AS motor series and/or motors that are commercially available. Series MK DN three-way shut-off valves guarantee:

- Extremely low flow-by even when used as shunt valves in systems with high differential pressures;
- Equal percentage adjustment curves, the best for temperature control in heating and conditioning systems;
- Impossible shut-off plug seizure even when calcium carbonate or other slag and deposits are present in the system;
- Operating temperature range from $4 \div 150$ °C.

These features make this valve highly suited to adjust temperatures in hot water production systems and to adjust temperatures in systems using structurally-embedded heating panels. Cast iron body, brass shut-off plug and stainless steel stem. Flanges are made according to UNI 2223 and DIN 2533 standards. Stem seal is made using O-rings that are easily replaced in case of wear.



TECHNICAL DATA



Type of movement
Can be motorized



Nominal pressure
PN16



Fl temperature limits
 $4 \div 150$ °C [max]



Leak
 $K_{vo} \leq 0,1 \% K_{vs}$



MK DN 2-WAY



MK DN 3-WAY

CERTIFICATION



MK DN series flanged 2/3-way shut-off valves

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01658	MK	2 way shutoff valve - cast iron body - brass shutoff - stainless steel shaft - flanged connections - PN 16	DN 80*	16	100	1	1

* Other sizes available upon request

7.006.00255	MK	3-way shutoff valve- cast iron body - brass shutoff stainless steel shaft - flanged connections - PN 16	DN 50	16	40	1	1
7.006.00426	MK	3-way shutoff valve- cast iron body - brass shutoff stainless steel shaft - flanged connections- PN 16	DN 65	16	63	1	1
7.006.00428	MK	3-way shutoff valve- cast iron body - brass shutoff stainless steel shaft - flanged connections- PN 16	DN 80	16	100	1	1
7.006.00381	MK	3-way shutoff valve- cast iron body - brass shutoff stainless steel shaft - flanged connections- PN 16	DN 100	16	160	1	1
7.006.00743	MK	3-way shutoff valve- cast iron body - brass shutoff stainless steel shaft - flanged connections- PN 16	DN 125	16	250	1	1
7.006.00717	MK	3-way shutoff valve- cast iron body - brass shutoff stainless steel shaft - flanged connections- PN 16	DN 150	16	360	1	1



Accessories for MK / MK DN valves

Code	Description	Size	Pack	Packaging
7.006.00107	Kit sealing MK + MK DN 50	-	1	1
7.030.01742	Kit sealing MK DN 65-80	-	1	1
7.006.00035	Kit sealing MK DN 100	-	1	1
7.030.02189	Kit sealing MK DN 125	-	1	1
7.030.02190	Kit sealing MK DN 150	-	1	1

Code	Description	Size	Pack	Packaging
7.030.02041	Blind Counter flange gasket and bolts - PN16	DN 50	1	1
7.030.02042	Blind Counter flange gasket and bolts - PN16	DN 65	1	1
7.030.02043	Blind Counter flange gasket and bolts - PN16	DN 80	1	1
7.030.02044	Blind Counter flange gasket and bolts - PN16	DN 100	1	1
7.030.02045	Blind Counter flange gasket and bolts - PN16	DN 125	1	1
7.030.02046	Blind Counter flange gasket and bolts - PN16	DN 150	1	1



Motors for MK DN series flanged shut-off valves

Code	Model	Description	Voltaggio	Pack	Packaging
7.006.00664	AS/800 240/00	Motor for MK valve DN 50/65: ABS casing - Max. load 80 Kg - strike time 240 sec. / 30 mm - On/Off 3 points	230 V	1	1
7.006.00683	AS/800 240/00	Motor for MK valve DN 50/65: ABS casing - Max. load 80 Kg - strike time 240 sec. / 30 mm - On/Off 3 points	24 V	1	1
7.006.00677	AS/800 240/ M0	Motor for MK valve DN 50/65: ABS casing - Max. load 80 Kg - strike time 240 sec. / 30 mm - with self-learning and modulation	24 V	1	1



7.006.00503	AS/1400 150/00	Motor for MK valve DN 50/65/80/100/125/150: ABS casing - Max. load 140 Kg - strike time 150 sec. / 30 mm. ON/Off 3 points	230 V	1	1
7.006.00532	AS/1400 150/00	Motor for MK valve DN 50/65/80/100/125/150: ABS casing - Max. load 140 Kg - strike time 150 sec. / 30 mm. ON/Off 3 points	24 V	1	1
7.006.00603	AS/1400 150/ M0	Motor for MK valve DN 50/65/80/100/125/150: ABS casing - Max. load 140 Kg - strike time 150 sec. / 30 mm - with self-learning and modulation	24 V	1	1



7.030.02000	AS/3200 150/00	Motor for MK DN 125/150 valve: ABS housing – Max. load 320 Kg – run time 150 sec. / 30 mm. ON/Off 3 points – with multi-purpose hooking bracket	230 V	1	1
7.030.02014	AS/3200 150/00	Motor for MK DN 125/150 valve: ABS housing – Max. load 320 Kg – run time 150 sec. / 30 mm. ON/Off 3 points – with multi-purpose hooking bracket	24 V	1	1
7.030.02015	AS/3200 150/ M0	Motor for MK DN 125/150 valve: ABS housing – Max. load 320 Kg – run time 150 sec. / 30 mm. with modulated self-learning – with multi-purpo- se connecting bracket	24 V	1	1



Accessories

Code	Model	Description	Pack	Packaging
7.030.01619	KIT MK-DN	Siemens motor adapter kit	1	1



VPR SERIES

shut off mixing-diverting valves

The VPR series of 3-way shutter valves may be used as deviating or mixing valves (water, water + max. 30% glycol) in heating, conditioning and ventilating systems. They may be motor-driven with MUT motors series V3, on-off and modulating. The VPR valve is available in two versions: - N.O. (normally open): if the stem of the valve is not pressed, the direct passage (AB-A) is open and the by-pass (AB-B) is closed. - N.C. (normally closed): if the stem of the valve is not pressed, the direct passage (AB-B) is open and the by-pass (AB-A) is closed.

VPR valves present:

- High Kvs values.
- Possibility of precise modulation thanks to the long travel and shape of the shutter, which allows both the direct passage and the by-pass to be opened immediately, guaranteeing a modulation of the flows in a field equal to the whole travel.
- Very low leakage, even if used in systems with a high differential pressure.

The valves are particularly suitable for use in regulating temperature in underfloor heating systems.



TECHNICAL DATA



Type of movement
Manual



Type of movement
Can be motorized



Nominal pressure
PN16



Fl temperature limits
-20 + 130 °C [max]



VPR 3-WAY



VPR series valves

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.021.00067	VPR 6NO	3-way mixer/diverter valve- strike 6 mm - NO - Male gas connections	1"	16	4,6	1	5
7.021.00037	VPR 6NC	3-way mixer/diverter valve- strike 6 mm - NC - Male gas connections	1"	16	5,0	1	5
7.021.00028	VPR 2,5NO	3-way mixer/diverter valve- strike 2,5 mm - NO - Male gas connections	1"	16	3,9	1	5
7.021.00038	VPR 2,5NC	3-way mixer/diverter valve- strike 2,5 mm - NC - Male gas connections	1"	16	2,8	1	5



Motors for VPR series valves

Code	Model	Description	Voltaggio	Pack	Packaging
7.011.00041	V3 180/24	Actuator 24 V - On/Off 3 points	24 V	1	1
7.011.00107	V3 180/230	Actuator 230 V - On/Off 3 points	230 V	1	1
7.011.00102	V3 180/24/M0	Modulating actuator - 24 V - 0-10 Vdc and 2-10 Vdc	24 V	1	1



7.030.01292	V3 180/230	Actuator 230 V - on/off - 180 sec. - 3 points - ECO		1	1
7.030.01447	V3 180/24	Actuator 24 V - on/off - 180 sec. - 3 points - ECO		1	1



7.030.00432	ARM	Electric actuator ARM model - 24 V - N.O.		1	5
7.030.00433	ARM	Electric actuator ARM model - 110 V - N.O.		1	5



VM/VF 1000 SERIES

rotative casting iron mixing-diverting valves

This type of valve is used in central heating systems to ensure a hot return to the boiler and consequently achieve thermal operation at sufficiently high temperatures to prevent vapor condensation in the smokestack. Vapors, in combination with the products of combustion, can generate corrosive compounds that reduce the operating life of the boiler.

MUT valves are supplied with manual control systems and can be easily motorized at any time using MUT M Series and V Series type motors and/or commercially available motors.

MUT valves consist of a cast-iron body and an internal rotor. The rotation angle of the rotor is approximately 90°. Mixing is done by a circular segment rotor in models VDM and VDF and by a butterfly valve in models VM and VF.



TECHNICAL DATA



Type of movement
Manual



Type of movement
Can be motorized



Nominal pressure
PN10 - PN6 according to the model



Fl temperature limits
2 ÷ 110 °C [max]



Leak
Kvo ≤ 0,015 % Kvs

CERTIFICATION



VM 3-WAY



VDM 3-WAY



VF 3-WAY



VDF 3-WAY



VDF PLUS 3-WAY



VM 4-WAY



VF 4-WAY

1000 series mixing/diverting valves

ANCC homologated - with anti seizure bushing. mixer/diverter valves for hot/cold water

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.007.00185	VM 3	3-way mixer valve - Female gas connections	3/4"	10	20	1	1
7.007.00186	VM 3	3-way mixer valve - Female gas connections	1"	10	30	1	1
7.007.00187	VM 3	3-way mixer valve - Female gas connections	1"1/4	10	37	1	1
7.007.00188	VM 3	3-way mixer valve - Female gas connections	1"1/2	10	38	1	1
7.007.00189	VM 3	3-way mixer valve - Female gas connections	2"	10	45	1	1
7.007.00190	VM 3	3-way mixer valve - Female gas connections	2"1/2	10	79	1	1



7.007.00166	VDM 3	3-way mixer/diverter valve - Female gas connections	3/4"	10	20	1	1
7.007.00167	VDM 3	3-way mixer/diverter valve - Female gas connections	1"	10	30	1	1
7.007.00168	VDM 3	3-way mixer/diverter valve - Female gas connections	1"1/4	10	37	1	1
7.007.00169	VDM 3	3-way mixer/diverter valve - Female gas connections	1"1/2	10	38	1	1
7.007.00170	VDM 3	3-way mixer/diverter valve - Female gas connections	2"	10	45	1	1
7.007.00171	VDM 3	3-way mixer/diverter valve - Female gas connections	2"1/2	10	79	1	1



7.007.00203	VF 3	3-way mixer valve - Flanged connections	DN 32	6	50	1	1
7.007.00565	VF 3	3-way mixer valve - Flanged connections	DN 40	6	60	1	1
7.007.00205	VF 3	3-way mixer valve - Flanged connections	DN 50	6	70	1	1
7.007.00206	VF 3	3-way mixer valve - Flanged connections	DN 65	6	90	1	1
7.007.00207	VF 3	3-way mixer valve - Flanged connections	DN 80	6	150	1	1
7.007.00208	VF 3	3-way mixer valve - Flanged connections	DN 100	6	200	1	1
7.007.00209	VF 3	3-way mixer valve - Flanged connections	DN 125	6	250	1	1



7.007.00210	VDF 3	3-way mixer/diverter valve - Flanged connections	DN 32	6	60	1	1
7.007.00566	VDF 3	3-way mixer/diverter valve - Flanged connections	DN 40	6	70	1	1
7.007.00212	VDF 3	3-way mixer/diverter valve - Flanged connections	DN 50	6	80	1	1
7.007.00213	VDF 3	3-way mixer/diverter valve - Flanged connections	DN 65	6	90	1	1
7.007.00214	VDF 3	3-way mixer/diverter valve - Flanged connections	DN 80	6	150	1	1
7.007.00215	VDF 3	3-way mixer/diverter valve - Flanged connections	DN 100	6	200	1	1
7.007.00216	VDF 3	3-way mixer/diverter valve - Flanged connections	DN 125	6	250	1	1



1000 series mixing/diverting valves

ANCC homologated - with anti seizure bushing. mixer/diverter valves for hot/cold water

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.02039	VDF 3 PLUS	3-way mixer valve - Flanged connections	DN 32	6	60	1	1
7.030.01894	VDF 3 PLUS	3-way mixer valve - Flanged connections	DN 40	6	70	1	1
7.030.01895	VDF 3 PLUS	3-way mixer valve - Flanged connections	DN 50	6	80	1	1
7.030.01474	VDF 3 PLUS	3-way mixer valve - Flanged connections	DN 65	6	90	1	1
7.030.01475	VDF 3 PLUS	3-way mixer valve - Flanged connections	DN 80	6	150	1	1
7.030.01476	VDF 3 PLUS	3-way mixer valve - Flanged connections	DN 100	6	200	1	1
7.030.02040	VDF 3 PLUS	3-way mixer valve - Flanged connections	DN 125	6	250	1	1



7.007.00159	VM 4	4-way mixer valve - Female gas connections.	3/4"	10	20	1	1
7.007.00160	VM 4	4-way mixer valve - Female gas connections.	1"	10	30	1	1
7.007.00161	VM 4	4-way mixer valve - Female gas connections.	1"1/4	10	37	1	1
7.007.00162	VM 4	4-way mixer valve - Female gas connections.	1"1/2	10	38	1	1
7.007.00163	VM 4	4-way mixer valve - Female gas connections.	2"	10	45	1	1
7.007.00164	VM 4	4-way mixer valve - Female gas connections.	2"1/2	10	79	1	1



7.007.00191	VF 4	4-way mixer valve - Flanged connections	DN 32	6	50	1	1
7.007.00192	VF 4	4-way mixer valve - Flanged connections	DN 40	6	60	1	1
7.007.00193	VF 4	4-way mixer valve - Flanged connections	DN 50	6	70	1	1
7.007.00194	VF 4	4-way mixer valve - Flanged connections	DN 65	6	90	1	1
7.007.00195	VF 4	4-way mixer valve - Flanged connections	DN 80	6	150	1	1
7.007.00196	VF 4	4-way mixer valve - Flanged connections	DN 100	6	200	1	1
7.007.00197	VF 4	4-way mixer valve - Flanged connections	DN 125	6	250	1	1



Accessories for 1000 Series

Code	Model	Description	Pack	Packaging
7.007.00626	Bushing kit	Bushing kit VF3 2" 1/2 S1000	1	1
7.007.00630	Bushing kit	Bushing kit VF3 4" - 5" S1000	1	1
7.007.00584	Bushing kit	Bushing kit VF3 - VM3 from 3/4" to 2" S1000	1	1
7.007.00625	Bushing kit	Bushing kit VF4 - VDF3 2" 1/2 S1000	1	1
7.007.00629	Bushing kit	Bushing kit VF4 - VDF3 4" 5" S1000	1	1
7.007.00583	Bushing kit	Bushing kit VF4 - VM4 - VDF3 - VDM3 3/4 to 2" S1000	1	1
7.007.00628	Bushing kit	Bushing kit VM3 2" 1/2 VF3 3" S1000	1	1
7.007.00627	Bushing kit	Bushing kit VM4 - VDM3 2" 1/2 VF4 - VDF3 3" S1000	1	1



6.030.01445	manifold kit	1000 series manifold kit	1	1
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7.007.00572	seal kit	seal kit VF4 VF-VDF3 from 4" to 5"	1	1
7.007.00573	seal kit	seal kit VF4 VF3-VDF3 from 2" 1/2	1	1
7.007.00574	seal kit	seal kit VM4-VM-VDM3-VF4-VF-VDF3 from 3/4" to 2"	1	1
7.007.00575	seal kit	seal kit VM4-VM3-VDM3 from 2" 1/2 seal kit VF4-VDF3-VF3 from 3"	1	1



* For engines see page 46 and 117

VM/VDM 2000 SERIES

rotative casting iron
mixing-diverting valves

This type of valve is used in central heating systems to ensure a hot return to the boiler and consequently achieve thermal operation at sufficiently high temperatures to prevent vapor condensation in the smokestack. Vapors, in combination with the products of combustion, can generate corrosive compounds that reduce the operating life of the boiler.

MUT valves are supplied with manual control systems and can be easily motorized at any time using MUT M Series and V Series type motors and/or commercially available motors. MUT valves consist of a cast-iron body and internal rotor. The rotation angle is approximately 90°.

Mixing is done by a circular segment rotor in models VDM and VDF and by a butterfly valve in models VM and VF.



TECHNICAL DATA



Type of movement
Manual



Type of movement
Can be motorized



Nominal pressure
PN6



Fl temperature limits
2 ÷ 110 °C [max]



Leak
 $Kvo \leq 0,02 \% Kvs$

CERTIFICATION



VM 3-WAY



VM 4-WAY

2000 series mixing/diverting valves

ANCC homologated - with anti seizure bushing. Mixer/diverter valves for hot/cold water

Code	Model	Description	Size	KVS	Pack	Packaging
7.007.00176	VM3	3-way mixer valve - Female gas connections	3/4"	18	1	1
7.007.00177	VM3	3-way mixer valve - Female gas connections	1"	22	1	1
7.007.00178	VM3	3-way mixer valve - Female gas connections	1" 1/4	22	1	1
7.007.00179	VM3	3-way mixer valve - Female gas connections	1" 1/2	22	1	1



7.007.00181	VDM3	3-way mixing/diverting valve - Female gas connections	3/4"	20	1	1
7.007.00182	VDM3	3-way mixing/diverting valve - Female gas connections	1"	22	1	1
7.007.00183	VDM3	3-way mixing/diverting valve - Female gas connections	1" 1/4	25	1	1
7.007.00184	VDM3	3-way mixing/diverting valve - Female gas connections	1" 1/2	25	1	1



7.007.00172	VM4	4-way mixer valve - Female gas connections	3/4"	18	1	1
7.007.00173	VM4	4-way mixer valve - Female gas connections	1"	20	1	1
7.007.00174	VM4	4-way mixer valve - Female gas connections	1" 1/4	25	1	1
7.007.00175	VM4	4-way mixer valve - Female gas connections	1" 1/2	25	1	1

Accessories for 2000 Series

Code	Model	Description	Pack	Packaging
7.030.00889	Kit bussola	Bushing kit VDM3 1" 1/2 S2000	1	1
7.030.00338	Kit bussola	Bushing kit VM4 S2000	1	1



6.030.01447	Kit manicotto	2000 series manifold kit	1	1
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V3000 SERIES

rotative brass mixing-diverting valves

This type of valve is used in central heating systems to guarantee a hot return to the boiler and consequently keep thermal levels high enough to prevent vapor condensation. Mixing, with a linear characteristic curve for delivery and return water, is performed by the shape of the profiled paths. Mixing is done by a rotor with circular segment in the three-way model and by a butterfly rotor in the four-way model. MUT valves are furnished with manual controls. They can be motorized at any time and without any problems by using MUT V series motors and/or motors marketed by manufacturers of control systems. MUT series 3000 valves are made with a brass body and internal rotor. The rotation angle of the rotor, used for regulation, is approximately 90° and corresponds to the graduations going from 0 to 10 on the identification plate (it is without stops and can consequently rotate 360°).



TECHNICAL DATA



Type of movement
Manual



Type of movement
Can be motorized



Nominal pressure
PN10



Fl temperature limits
5 ÷ 110 °C [max]



Leak
Kvo ≤ (0,3 - 1) % Kvs according to the model



VDM 3-WAY



VM 4-WAY

CERTIFICATION



3000R series mixing/diverting valves

Interaxis 72 mm/brass. Mixer/diverter valves for hot/cold water *1

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.00595	VDM3 3000R	3-way mixer diverter valve mod. VDM3000R - Female gas connections	1/2"	10	1	1	1
7.030.00596	VDM3 3000R	3-way mixer diverter valve mod. VDM3000R - Female gas connections	1/2"	10	1,5	1	1
7.030.000597	VDM3 3000R	3-way mixer diverter valve mod. VDM3000R - Female gas connections	1/2"	10	2,5	1	1



7.020.00090	VDM3 3000R	3-way mixer diverter valve mod. VDM3000R - Female gas connections	3/4"	10	6,3	1	1
7.030.00569	VDM3 3000R	3-way mixer diverter valve mod. VDM3000R - Female gas connections	1"	10	6,3	1	1

7.020.00093	VM4 3000R	4-way mixer valve mod. VM4 3000R - Female gas connections	3/4"	10	6,3	1	1
7.030.00857	VM4 3000R	4-way mixer valve mod. VM4 3000R - Female gas connections	1"	10	6,3	1	1



3000M series mixing/diverting valves

Interaxis 80 mm/brass. Mixer/diverter valves for hot/cold water *2

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.020.00125	VDM3 3000M	3-way mixer diverter valve mod. VDM3000M - Female gas connections	3/4"	10	6,3	1	1
7.030.01211	VDM3 3000M	3-way mixer diverter valve mod. VDM3000M - Female gas connections	1"	10	12	1	1
7.020.00127	VDM3 3000M	3-way mixer diverter valve mod. VDM3000M - Female gas connections	1"1/4	10	18	1	1



7.020.00128	VM4 3000M	4-way mixer valve mod. VM4 3000M - Female gas connections	3/4"	10	6,3	1	1
7.020.00129	VM4 3000M	4-way mixer valve mod. VM4 3000M - Female gas connections	1"	10	6,3	1	1
7.020.00130	VM4 3000M	4-way mixer valve mod. VM4 3000M - Female gas connections	1"1/4	10	18	1	1



*1 Versions available with male connection

*2 Versions available with ring nut connections

3000 series mixing/diverting valves

Interaxes 88 mm/brass. Mixer/diverter valves for hot/cold water *

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.020.00020	VDM3 3000	3-way mixer diverter valve- mod. VDM3000 Female gas connections	3/4"	10	6,3	1	1
7.020.00001	VDM3 3000	3-way mixer diverter valve- mod. VDM3000 Female gas connections	1"	10	12	1	1
7.020.00026	VDM3 3000	3-way mixer diverter valve- mod. VDM3000 Female gas connections	1"1/4	10	18	1	1



7.020.00021	VM4 3000	4-way mixer diverter valve- mod. VM4 3000 Female gas connections	3/4"	10	6,3	1	1
7.020.00012	VM4 3000	4-way mixer diverter valve- mod. VM4 3000 Female gas connections	1"	10	12	1	1
7.020.00028	VM4 3000	4-way mixer diverter valve- mod. VM4 3000 Female gas connections	1"1/4	10	18	1	1



3000E series mixing/diverting valves

Mixer/diverter valves for hot/cold water

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01283	VDM3 3000E	3-way mixer diverter valve- interaxes 88 mm Male gas connections	1"	10	12	1	1
7.030.01282	VDM3 3000E	3-way mixer diverter valve- interaxes 98 mm Male gas connections	1" 1/4	10	20	1	1
7.030.01281	VDM3 3000E	3-way mixer diverter valve- interaxes 110 mm Male gas connections	1" 1/2	10	41	1	1
7.030.01277	VDM3 3000E	3-way mixer diverter valve- interaxes 116 mm Male gas connections	2"	10	56	1	1



Accessories for the 3000 VMX series

Code	Description	Pack	Packaging
7.030.01469	Valve seal kit V3000	1	1
7.030.01470	Valve seal kit VMX-X/H,V3000R/M	1	1



7.030.02207	Shell insulation kit V3000R 3 Vie	1	1
7.030.02208	Shell insulation kit V3000R 4 Vie	1	1
7.030.02209	Shell insulation kit V3000 3 Vie TM - TD3000	1	1



* Version available with ring nut connections

VMX SERIES

rotative 4 ways mixing-diverting valves

This type of valve is used in central heating system to ensure a hot return to the boiler and consequently to prevent vapor condensation in the same boiler, or to devide the thermic-load in the ambients. MUT valves are supplied with manual control but can be easily and simply motorized at any time using MUT motors V series and/ or motors commonly found in commerce. MUT valves are made with cast-iron bodies and internal rotor. Rotor rotation angle uses for the regulation, is about 90°, correspondent to the sequence from 0 to 10 on the reference tally (as there is no end-run it can rotate 360°).



TECHNICAL DATA



Type of movement
Manual



Type of movement
Can be motorized



Nominal pressure
PN10



Fl temperature limits
2 ÷ 110 °C [max]



CERTIFICATION



VMX VMH series mixing/diverting valves

Mixer/diverter valves for hot/cold water

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.019.00014	VMX - X	3-way mixer diverter valve - interaxis 90 2 Male connections + 2 with Ring nuts	DN 40	10	8,0	1	5
7.019.00025	VMX - XM	3-way mixer diverter valve- interaxis 90 Male connections	DN 40	10	8,0	1	5



7.019.00011	VMX - H	4-way mixer diverter valve - interaxis 125 2 Male connections + 2 with ring nuts	DN 40	10	6,3	1	5
7.019.00021	VMX - HM	4-way mixer diverter valve - interaxis 125 Male connections	DN 40	10	6,3	1	5



Motors for mixing/diverting valves

Code	Model	Description	Voltaggio	Pack	Packaging
7.019.00074	V70/220/00	Motor V70 On/Off 3 points for 3000, VMX and VMH series valves - Strike 90° in 220 sec. (50/100/440 sec. upon request) - Complete of auxiliary micro e K3 connection kit	230 V	1	1
7.019.00072	V70/220/00	Motor V70 On/Off 3 points for 3000, VMX and VMH series valves - Strike 90° in 220 sec. (50/100/440 sec. upon request) - Complete of auxiliary micro e K3 connection kit	24 V	1	1
7.019.00111	V70/100/M0	V70 modulating motor for series 3000, VMX and VMH valves – Run 90° in 100 sec. (if requested 60/160 sec.) Modulation 0-10 Vdc (0-5 V; 1-5 V; 2-10 V; 0-20 mA; 4-20 mA on request); ref 0 % signal at A; complete with connection kit K3	24 V	1	1



7.019.00076	GIUNTO K3	Joint: K3 for connection with 3000, VMX and VMH series only for V70 motor		1	1
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7.007.00678	V200/220/00	Motor V200 On/Off 3 points for 1000 and 2000 series valves - until DN 50 - Strike 90° in 220 sec. (125/540 sec. on request)	230 V	1	1
7.007.00732	V200/220/00	Motor V200 On/Off 3 points for 1000 and 2000 series valves - until DN 50 - Strike 90° in 220 sec. (125/540 sec. on request) - Complete with	24 V	1	1
7.007.00720	V200/120/M0	V200 modulating motor for series 1000 and 2000 valves – Run 90° in 120 sec. (155/235 sec. if requested) Modulation 0-10 Vdc (0-5 V; 1-5 V; 2-10 V; 0-20 mA; 4-20 mA if requested ref 0 % signals in A	24 V	1	1



7.007.00666	M1000 220/00	Motor M1000 On/Off 3 points for 1000 series valves - from DN 65 to DN 125	230 V	1	1
7.007.00733	M1000 220/00	Motor M1000 On/Off 3 points for 1000 series valves - from DN 65 to DN 125 - Strike 90° in 220 sec. (125/540 sec. if requested) - Complete	24 V	1	1
7.007.00707	M1000 240/M0	M1000 modulating motor for series 1000 valves - Run 90° in 240 sec. (if requested 80/155 sec.) with modulation (0-5 V; 1-5 V; 2-10 V; 0-20 mA; 4-20 mA) settable	24 V	1	1



Mixing-diverting thermostatic valves



48/49 RA



50 RAJ



51 RAW



52 VTD

RA SERIES

thermostatic mixer valves

The RA thermostatic mixing valves are used in hot water systems for sanitary use. They keep the temperature of the mixed water supplied to the user constant even when the conditions listed below vary:

- Temperature
- Supply pressure
- Incoming hot and cold water flow

The RA thermostatic mixing valves have a temperature range that is ideal for heating a centralised water system with heater. They also have an internal anti-limestone lining.



TECHNICAL DATA



Type of movement
Thermostatic



Max. ratio between input pressure (H/C or C/H)
2:1



Nominal pressure
PN10



Fl temperature limits
120 °C [max]



Fl adjustment range at output (mix)
30 ÷ 60 °C [precision ±2 °C]

CERTIFICATION



Thermostatic Valves - RA series

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01012	TWR-RA 15 E	Anti-burn peripheral thermostat mixers DN 15 M 30-60° with pipe union	1/2"	10	1,7	1	5
7.030.00900	TWR-RA 20 E	Anti-burn peripheral thermostat mixers DN 20 M 30-60° with pipe union	3/4"	10	1,7	1	5
7.030.00722	TWR-RA 25 E	Anti-burn peripheral thermostat mixers DN 25 M 30-60° without pipe union	1"	10	1,7	1	5
7.030.01615	TWR-RA 15 E	Anti-burn peripheral thermostat mixers DN 15 M 30-60° without pipe union	1/2"	10	0,9	1	5
7.030.01616	TWR-RA 20 E	Anti-burn peripheral thermostat mixers DN 20 M 30-60° without pipe union	3/4"	10	0,9	1	5



Thermostatic Valves - RA series with no-return valve

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01504	TWR-RA 15 E	Anti-burn peripheral thermostat mixers DN 15 M with one-way valve - 30-60° with pipe union	1/2"	10	1,7	1	5
7.030.01480	TWR-RA 20 E	Anti-burn peripheral thermostat mixers DN 20 M with one-way valve - 30-60° with pipe union	3/4"	10	1,7	1	5
7.030.01479	TWR-RA 25 E	Anti-burn peripheral thermostat mixers DN 25 M with one-way valve - 30-60° without pipe union	1"	10	1,7	1	5
7.030.01617	TWR-RA 15 E	Anti-burn peripheral thermostat mixers DN 15 M with one-way valve - 30-60° without pipe union	1/2"	10	0,9	1	5
7.030.01618	TWR-RA 20 E	Anti-burn peripheral thermostat mixers DN 20 M with one-way valve - 30-60° without pipe union	3/4"	10	0,9	1	5



Accessories for thermostatic valves

Code	Description	Size	Pack	Packaging
7.030.01510	Accessory one-way valve, pack of 50 pcs.	1"	1	50
7.030.01620	Accessory one-way valve, pack of 50 pcs.	1/2"	1	50
7.030.01621	Accessory one-way valve, pack of 50 pcs.	3/4"	1	50



RAJ SERIES

thermostatic mixer valves

The RAJ thermostatic mixing valves are applied in hot water sanitary systems production and distribution to users.

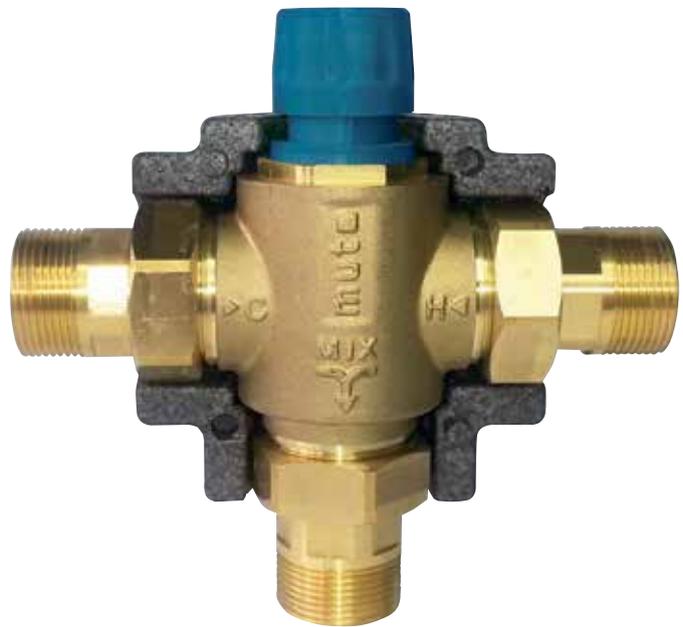
They guarantee a constant temperature (according to temperature set point value) of the mixed water to the users, even when the following conditions vary:

- temperature of water flows before mixing (incoming hot water and cold water flows)
- Supply pressure
- Flow rates of incoming hot and cold water

The thermostatic mixing valves RAJ have a temperature range (adjustable), suitable for central water heating systems. The valve is provided as standard with a thermal insulating shell to reduce heat loss and avoid burns. The adjustable thermostatic mixing valves Raj are available in 3 sizes (G 1 1/4", G 1 1/2", G 2") . Max hot water temperature inlet: 110 °C. Max working pressure (static): 14 bar.



CERTIFICATION



TECHNICAL DATA



Type of movement
Thermostatic



Max. ratio between input pressures (H/C or C/H)
2 :1



Max. differential pressure
5 bar



Fl temperature limits
5 ÷ 110 °C [max]



Fl adjustment range at output (mix)
RAJ (R 1 1/4"): 30 ÷ 65 °C - RAJ (R 1 1/2"; R 2"): 35 ÷ 65 °C
[precision: ±2 °C]

Thermostatic Valve - RAJ series

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01662	TWR-RAJ	Thermostatic radiator valve with nuts and connections of R 1" 1/4	R1" 1/4	10	9,1	1	1
7.030.01661	TWR-RAJ	Thermostatic radiator valve with nuts and connections of R 1" 1/2	R1" 1/2	10	14,5	1	1
7.030.01660	TWR-RAJ	Thermostatic radiator valve with nuts and connections of R 2"	R2"	10	19	1	1



Accessories for RAJ series

Code	Model	Description	Pack	Packaging
7.030.01744	kit cartuccia	Cartridge kit for RAJ thermostatic radiator valve, R 2" and R 1" 1/2	1	1
7.030.01745	kit cartuccia	Cartridge kit for RAJ thermostatic radiator valve, R 1" 1/4	1	1



RAW SERIES

thermostatic radiator mixer and diverter valves

The RAW thermostatic mixing valves are used in hot water systems for sanitary use. They keep the temperature of the mixed water supplied to the user constant even when the conditions listed below vary:

- Temperature
- Supply pressure
- Incoming hot and cold water flow

The RAW thermostatic mixing valves have a temperature range that is ideal for heating a centralised water system with heater.

TECHNICAL DATA



Type of movement
Thermostatic



Nominal pressure
10 bar



Max. ratio between input pressures (H/C or C/H)
2:1



Fl temperature limits
5 ÷ 120 °C [max]



Fl adjustment range at output (mix)
30 ÷ 60 °C [precision ±2 °C]
20 ÷ 43 °C (for the model KVS4)



CERTIFICATION



Thermostatic Valve - RAW series

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01009	TWR-RAW 15E	Adjustable thermostatic mixer valve DN 15 M	1/2"	10	1,6	1	5
7.030.01010	TWR-RAW 20E	Adjustable thermostatic mixer valve DN 20 M	3/4"	10	1,6	1	5
7.030.00847	TWR-RAW 25E	Adjustable thermostatic mixer valve DN 25 M	1"	10	1,6	1	5
7.030.01011	TWR-RAW 32E	Adjustable thermostatic mixer valve DN 32 M	1" 1/4	10	1,6	1	5



7.030.02034	RAW-KVS4 25E	Adjustable thermostatic mixer valve DN 25 M 20/43 °C Centre distance 93	1"	10	4	1	5
7.030.02169	RAW-KVS4 25E	Adjustable thermostatic mixer valve DN 25 M 30/60 °C Centre distance 93	1"	10	4	1	5
7.030.02174	RAW-KVS4 25E	Adjustable thermostatic mixer valve DN 25 M 30/80 °C Centre distance 93	1"	10	4	1	5



VTD SERIES

thermostatic diverter valves

VTD Shunt Valve is installed between the boiler and Solar Heater. The use of this Thermostatic Shunt Valve provides a high savings allowing the use of solar panel with natural circulation even in winter. The domestic water produced by the solar panel in winter often does not reach the required temperature. In this case the Shunt Valve VTD sends "warm" water to the instant wall boiler which will use the heat already present in the water to consume less gas and supply water to the desired temperature.

It allows to adjust precisely the actual temperature.



TECHNICAL DATA



Type of movement
Thermostatic



Nominal pressure
14 bar



FI temperature limits
5 ÷ 120 °C [max]



Max. room temperature
-



Pre-set temperature
from 40/50 °C and from 45/55 °C



Thermostatic Deviating Valve - VTD series

Code	Description	KVS	Pack	Packaging
7.030.01446	Valve VTD 25E 45 °C - 55 °C	1,5	1	5
7.030.01635	Valve VTD 25E 40 °C - 50 °C	1,5	1	5



Safety valve range



54/55 MSV

Diverter and pressure valves



56/57 VDE



58/59 VDP

Flow switches and pressure switches



60 SFS
differential pressure switches



61 SBP
flow signal pressure switches



62 SFP
flows switches

MSV SERIES

safety valves

The safety valves are used to control the pressure on heat generators, in heating systems, accumulations of hot water, in water systems ecc.

TECHNICAL DATA



Type of movement
Manual



Nominal pressure
10 bar



Fl temperature limits
5 ÷ 110 °C [max]



Pressure
from 1.5 to 8 bar



CERTIFICATION



Safety valves *1 *2

Code	Model	Description	Size	PN	Pack	Packaging
7.030.01417	MSV 140	Safety valve - setting 3 bar - female-female gas connections	G 1/2"	10	3	30
7.030.01535	MSV 140	Safety valve - setting 6 bar - female-female gas connections	G 1/2"	10	3	30
7.030.01419	MSV 140	Safety valve - setting 3 bar - female-male gas connections	G 1/2"	10	3	30
7.030.01536	MSV 140	Safety valve - setting 6 bar - female-male gas connections	G 1/2"	10	3	30



7.030.01413	MSV 170	Safety valve - setting 3 bar - female-female gas connections	G 1/2"	10	3	30
7.030.01537	MSV 170	Safety valve - setting 6 bar - female-female gas connections	G 1/2"	10	3	30
7.030.01416	MSV 170	Safety valve - setting 3 bar - female-male gas connections	G 1/2"	10	3	30
7.030.01538	MSV 170	Safety valve - setting 6 bar - female-male gas connections	G 1/2"	10	3	30



7.030.01574	MSV 141	Safety valve with pressure gauge - setting 3 bar female-male gas connections	G 1/2"	10	3	30
7.030.01575	MSV 141	Safety valve with pressure gauge - setting 6 bar female-male gas connections	G 1/2"	10	3	30
7.030.01576	MSV 141	Safety valve with pressure gauge - setting 3 bar female-female gas connections	G 1/2"	10	3	30
7.030.01577	MSV 141	Safety valve with pressure gauge - setting 6 bar female-female gas connections	G 1/2"	10	3	30



7.030.01600	MSV 142	Safety valve - setting 3 bar female-female gas connections - prepared for pressure gauge	G 1/2"	10	3	30
7.030.01601	MSV 142	Safety valve - setting 6 bar female-female gas connections - prepared for pressure gauge	G 1/2"	10	3	30
7.030.01602	MSV 142	Safety valve - setting 3 bar female-male gas connections - prepared for pressure gauge	G 1/2"	10	3	30
7.030.01603	MSV 142	Safety valve - setting 6 bar female-male gas connections - prepared for pressure gauge	G 1/2"	10	3	30



*1 If requested, available set at 1.5 / 2 / 2,5 / 3,5 / 4 / 5 / 7 / 8 bar

VDE SERIES

diverter valves

The VDE valve is designed for use in combined home boilers with instant and semi-rapid production of domestic hot water. It is designed to shunt the flow of water away from the primary boiler circuit to the secondary heat exchanger, excluding the heating circuit (priority to hot water). It can be used in boilers that employ series VDP series VDP/M valves without changing the layout of the boiler fittings and by merely inserting the control unit.

TECHNICAL DATA



Type of movement
motorized



Max. differential pressure
154 kPa



Nominal pressure
PN10



Fl temperature limits
5 ÷ 110 °C [max]



Insulation class
II Ref. European Directive EN60730



Protection rating
IP 40 Ref. European Directive IEC EN60529



Way commutation time
6 s



Way commutation time
6 s



CERTIFICATION



Pressure static diverting valves

Code	Model	Description	Pack	Packaging
7.030.00183	VDE/MLS	Electric diverter valve 24 V - stepper motor	1	10



VDP SERIES

diverter pressure valves

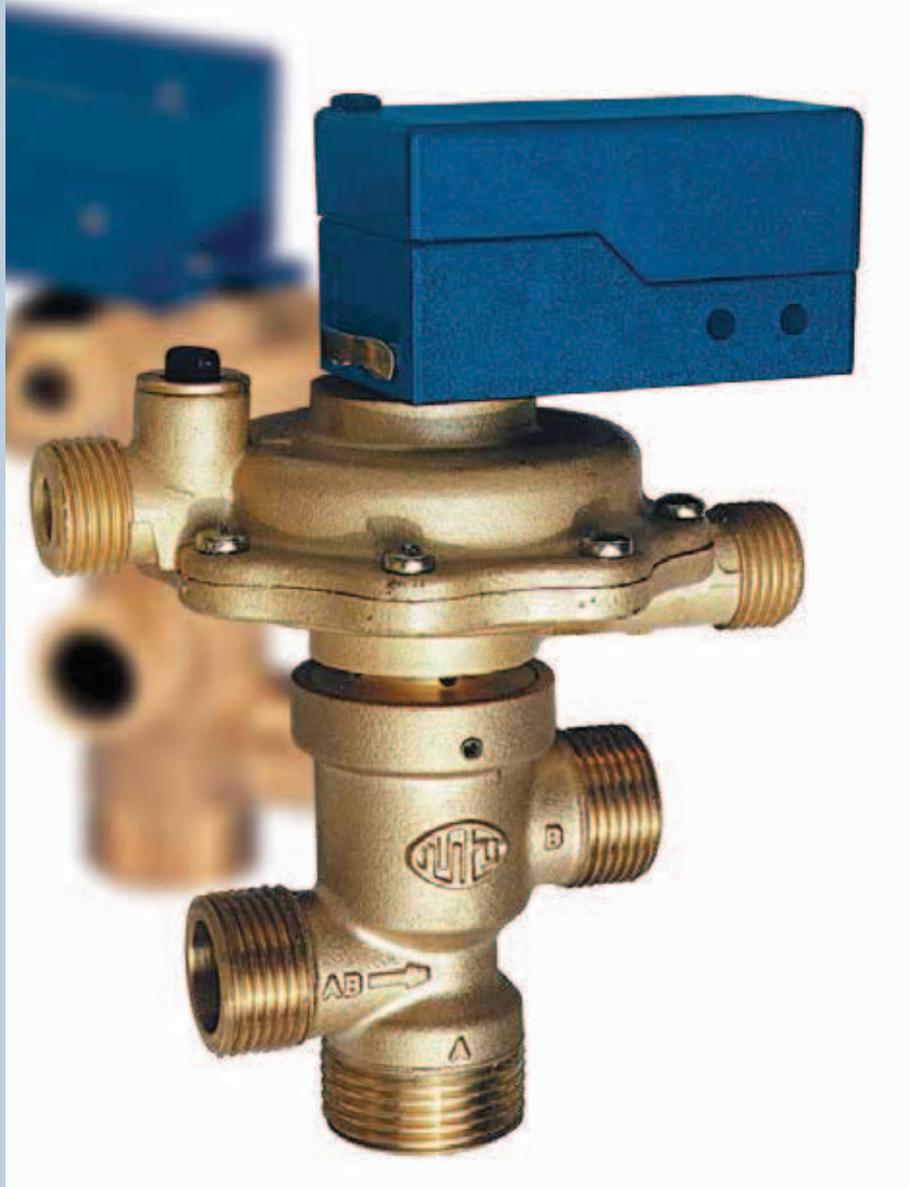
VDP valves are used in domestic boilers with heat exchangers for instantaneous domestic hot water production. When the user requests domestic hot water, the VDP valve shunts the flow of water from the primary circuit of the boiler towards the instantaneous heat exchanger (boiler) excluding the heating circuit; this shunted flow is modulated depending on the domestic hot water flow rate until it reaches the rate where the microswitch trips. The VDP valve is equipped with auxiliary microswitches and with an eventual flow rate regulator (reducer). There is a version that besides the above mentioned characteristics is able to modulate the domestic water flow rate in a wide entrance pressure range thanks to a by-pass (VDP/M series). All versions are also available with secondary heat exchanger. In this case they are called secondary groups.

TECHNICAL DATA



Nominal pressure
PN10

CERTIFICATION



Pressure static diverting valves

Code	Model	Description	PN	Pack	Packaging
7.005.00040	VDP 2	Diverter pressure valve 2 micro - body at 180°	10	1	10
7.030.00777	VDP	Diverter pressure valve no micro - body at 180°	10	1	10
7.005.00490	VDP 2	Diverter pressure valve 2 micro - body at 180°	10	1	10



SFS SERIES

Differential pressure switches

The SFS differential pressure switch closes or diverts an electric contact when the differential pressure between the two inlets reaches the upper set-point (intervention) and opens or releases the contact when it drops below the lower set-point (release). It can be used in plumbing systems when it is necessary to make sure the pressure difference between two points does not exceed or drop below a specific value. A pair of permanent magnets, placed in a mutual-repulsion position one inside the pressure switch body and one outside, replace the classic O-ring and shaft solution and greatly increase the reliability and working life of the pressure switch.



CERTIFICATION



TECHNICAL DATA

	Max. differential pressure 500 kPa
	Nominal pressure PN10
	Protection rating IP 40/54 Ref. European Directive IEC EN60529
	Cable length 920 mm
	FI temperature limits 2 ÷ 95°C [max]

Differential pressure switches

Code	Model	Description	Size	Pack	Packaging
7.004.00022	SFS M1	Differential pressure valve - intervention at 50 mbar - Male connections (intervention at 25/35/100 mbar if requested) (3/8G,7/16UNF connections if requested) with 1 micro - IP 40	1/4"	1	5
7.004.00049	SFS M2	Differential pressure valve - intervention at 50 mbar - Male connections (intervention at 25/35/105 mbar if requested) (3/8G,7/16UNF connections if requested) with 2 micro - IP 40	1/4"	1	5
7.004.00289	SFS M1	Differential pressure valve IP54 - intervention at 50 mbar (intervention at 25/35/105 mbar if requested) - Male connections G 1/4" (3/8G,7/16 UNF if requested)	1/4"	1	5



SBP SERIES

Flow signal pressure switches

The SBP flow switch works as a differential pressure switch until it reaches a pressure value (ΔP_B) which causes the opening of a by-pass making it work as an overpressure valve. Under this value (ΔP_B) the SBP flow switch closes or switches an electrical contact when the pressure reaches its upper set-point micro (ΔP intervention) and releases it when it drops below the lower micro set-point (ΔP release). When the pressure difference goes higher than the pre-established value (ΔP_B) the by-pass opens and the component functions as an overpressure valve. A pair of permanent magnets, placed in their mutual repulsion position, one inside the flow switch body and one outside the body, replace the classic solution of O-ring seal and shaft. This new solution greatly increases the reliability and working life of the flow switch.



CERTIFICATION



TECHNICAL DATA



Nominal pressure
PN10



Fl temperature limits
5 ÷ 95°C [max]

Flow signal pressure switches

Code	Model	Description	Size	Pack	Packaging
7.008.00056	SBP 1	Differential pressure valve with overpressure - valve intervention at 100 mbar - Male connections - with 1 micro - IP 40	3/4"-1/2"	1	5
7.008.00047	SBP 2	Differential pressure valve with overpressure - valve intervention at 100 mbar - Male connections - with 2 micros - IP 40	3/4"-1/2"	1	5



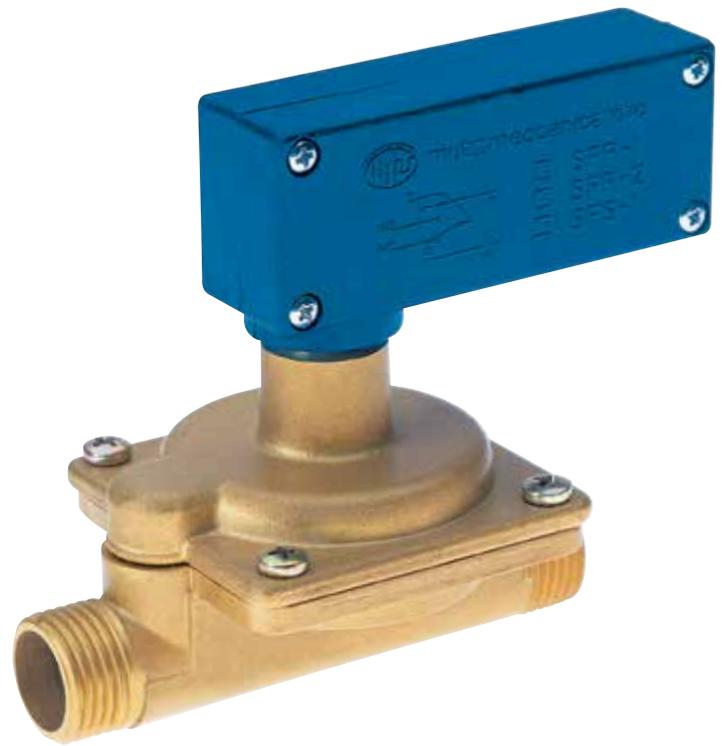
SFP SERIES

Flow switches

flowswitch closes or switches an electric contact when the flow of water passing through it reaches its upper set-point (intervention) and opens or releases the contact when it drops below the lower set-point (release). A pair of permanent magnets, placed in their mutual repulsion position, one inside the flow switch body and one outside the body, replace the classic solution with O-ring seal and shaft. This new solution greatly increases the reliability and working life of the flowswitch.



CERTIFICATION



TECHNICAL DATA



Nominal pressure
PN10

Flow switches

Code	Model	Description	Size	Pack	Packaging
7.003.00084	SFP M1	Flow switch - intervention at 1,5 l/min - Male connections (intervention at 2 and 2,5 l/min if requested) with 1 micro	1/2"-1/2"	1	5
7.003.00076	SFP M2	Flow switch - intervention at 1,5 l/min - Male connections (intervention at 2 and 2,5 l/min if requested) with 2 micros	1/2"-1/2"	1	5
7.003.00258	SFP-RM M1S	Flow switch - intervention at 1,5 l/min - Male connections (intervention at 2 and 2,5 l/min if requested) with flow control valve with 1 micro	1/2"-1/2"	1	5
7.030.00876	SFP-S M1	Flow switch - intervention at 1,5 l/min - Male connections 3/4"- with 1 micro	3/4"-3/4"	1	5



fan-coil valves



64/66 FV3 - V3B

Booster Units



67/68 GRD - GRM - GRT

control units



69/70 MTR

Valves for radiator and fan-coils

The V3B and FV3 valves are part of a series that was designed for domestic heating and cooling use. They have important characteristics, among which: small overall dimensions, easy to install, very low leakage, equipercentage regulation curve, suitable for use with drinkable water and others. These valves are moved manually by an external flywheel and can be controlled at any time by a MUT electric servo control from the V3 series and/or motors marketed by companies that deal with regulation. All that needs to be done is completely unscrew the manual knob and tighten the electric servo control in its place. All this without having to empty the system.

TECHNICAL DATA



Max. differential pressure
202 kPa



Nominal pressure
PN16



F1 temperature limits
5 ÷ 110 °C [max]

CERTIFICATION



Valves for fancoils

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.010.00001	F2V	2-way valve - connections 1/2"F - 3/4"M		16	0,8	1	50
7.010.00028	F2V	2-way valve - connections 1/2"F - 3/4"M		16	1,6	1	50



7.016.00042	FV3 15 E - NO	4-way fan-coil valve - 230 V male connections	1/2"	16	1,6	1	10
7.016.00039	FV3 20 E - NO	4-way fan-coil valve - 230 V male connections - with auxiliary micro	3/4"	16	2,5	1	10



7.016.00106	FV3 15 EB - NO	3-way valve - connections for copper pipes complete with nuts - ferrules	15 mm	16	1,6	1	10
7.016.00107	FV3 20 EB - NO	3-way valve - connections for copper pipes complete with nuts - ferrules	20 mm	16	2,5	1	10

7.011.00195	V3B 15 E - NO	3-way valve with by-pass - Male connections	1/2"	16	1,6	1	10
7.011.00196	V3B 20 E - NO	3-way valve with by-pass - Male connections	3/4"	16	2,5	1	10



7.011.00363	V3B 15 EB - NO	3-way valve - connections for copper pipes complete with nuts - ferrules	15 mm	16	1,6	1	10
7.011.00364	V3B 20 EB - NO	3-way valve - connections for copper pipes complete with nuts - ferrules	20 mm	16	2,5	1	10

Actuators for fancoil valves

Code	Model	Description	Pack	Packaging
7.011.00041	V3 180/24	Actuator 24 V - On/Off - 180 sec. - 3 points	1	1
7.011.00107	V3 180/230	Actuator 230 V - On/Off - 180 sec. - 3 points	1	1
7.011.00102	V3 180/24/M0	Modulating actuator - 24 V - 0-10 Vdc and 2-10 Vdc	1	1



7.030.01292	V3 180/230	Actuator 230 V - on/off - 180 sec. - 3 points - ECO	1	1
7.030.01447	V3 180/24	Actuator 24 V - on/off - 180 sec. - 3 points - ECO	1	1

7.009.00165	ARM	Electric actuator ARM model - 230 V - N.O.	1	5
7.030.00432	ARM	Electric actuator ARM model - 24 V - N.O.	1	5
7.030.00433	ARM	Electric actuator ARM model - 110 V - N.O.	1	5



7.011.00361	V3 EC	Wax actuator 230 V - 6.5 mm - M30x1.5	1	20
7.011.00362	V3 EC	Wax actuator 24 V - 6.5 mm - M30x1.5	1	20



7.011.00355	V3 EC M1S	Wax actuator with auxiliary micro - 230 V - 6.5 mm - M30x1.5	1	20
7.011.00356	V3 EC M1S	Wax actuator with auxiliary micro - 24 V - 6.5 mm - M30x1.5	1	20

7.030.01613		Thermostatic head with full close cat. A 6-28 °C M 30x1,5	1	20
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Booster Units

MUT temperature regulating units, also called booster units, are suitable for temperature control and water distribution in multi-storey or multi-zone applications. They allow to distribute water or plant fluid at the temperature that is suitable for a correct system operation to each system or zone.

Booster groups are supplied with thermal insulation in high density PPE and are suitable for operation with low temperature heating systems when equipped with a mixing valve (booster group with mixing valve), or directly to medium/high temperature (direct booster unit). Booster groups are obviously also suitable for the distribution of fluid in plants with water coolers (chillers). In heating applications they are installed downstream of the boiler, of a hydraulic separator or a mounted manifolds ready for their connection. Alternatively they allow to use the distribution manifolds of the fluid with a hydraulic separator.

These booster groups have been developed to meet both latest European regulations in terms of energy saving, safety and sustainability, combining features and specifications that allow quick and easy installation and maintenance. The result is a product with high energy performance and at the same time very simple to install and maintain.



TECHNICAL DATA



Fluid used
Water, Water with glycol



Maximum percentage of glycol
30 %



Max. working pressure
6 bar



Max working temperature
110°C



Connections
System side 1" F (ISO228-1)
Boiler/Manifold side 1" M (ISO228/1)



GRD



GRM



GRT

CERTIFICATION



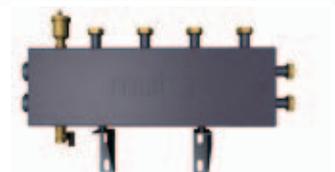
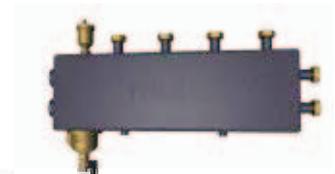
Booster Units

Code	Model	Description	Pack	Packaging
7.030.01923	GRD	Direct Booster UnitPompa Vilo Yonospara 25/6	1	1
7.030.01924	GRM	Booster Unit with motorised mixing valve Motor 3 points on/off 230 Vac	1	1
7.030.01957	GRT	Booster Unit with thermostatic mixing valve 20/43° Pompa Vilo Yonospara 25/6	1	1
7.030.02182	GRT	Booster Unit with thermostatic mixing valve 30/60° Pompa Vilo Yonospara 25/6	1	1
7.030.02183	GRT	Booster Unit with thermostatic mixing valve 30/80° Pompa Vilo Yonospara 25/6	1	1



Collectors for Boosters Units

Code	Description	Pack	Packaging
7.030.02031	Sludge remover/separator manifold 2+1 (side) main connections G 1 ¼ F – ring nut connections G 1 F centre distance 125 mm	1	1
7.030.02210	Sludge remover/separator manifold 2+1 (side) main connections G 1 ¼ F – ring nut connections G 1 ½ F centre distance 125 mm	1	1
7.030.02035	Sludge remover/separator manifold 3+1 (side) main connections G 1 ¼ F - ring nut connections G1 F centre distance 125 mm	1	1
7.030.02212	Sludge remover/separator manifold 3+1 (side) main connections G 1 ¼ F - ring nut connections G1 ½ F centre distance 125 mm	1	1
7.030.02032	Manifold 2+1 (side) main connections G1 ¼ F ring nut connections G 1 F centre distance 125 mm	1	1
7.030.02211	Manifold 2+1 (side) main connections G1 ¼ F ring nut connections G 1 ½ F centre distance 125 mm	1	1
7.030.02036	Manifold 3+1 (side) main connections G 1 ¼ F ring nut connections G 1 F centre distance 125 mm	1	1
7.030.02213	Manifold 3+1 (side) main connections G 1 ¼ F ring nut connections G 1 ½ F centre distance 125 mm	1	1



Booster Units Accessories

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.02033	RAW-KVS4 25E	Adjustable thermostatic mixer valve DN 25 M 20-43 °C - Interaxis 72 (for Booster Unit thermostatic)	1"	10	4	1	1
7.030.02173	RAW-KVS4 25E	Adjustable thermostatic mixer valve DN 25 M 30-60 °C - Interaxis 72 (for Booster Unit thermostatic)	1"	10	4	1	1
7.030.02171	RAW-KVS4 25E	Adjustable thermostatic mixer valve DN 25 M 30-80 °C - Interaxis 72 (for Booster Unit thermostatic)	1"	10	4	1	1
7.030.00074	V70	Motor V70 On/Off 3 points	1"	10	4	1	1
7.030.02180	-	No return valve	1"	10	4	1	1
7.030.01903	-	Thermometers Kit	1"	10	4	1	3
7.030.02181	-	Insulation Kit	1"	10	4	1	1
7.030.02142	-	joints connection for regulation	1"	10	4	1	1





Equiterm Regulators

The MTR series controllers are designed to adjust domestic heating systems using both radiant floor and radiators so as to save on energy. They contain a P.I.D. limit control which guarantees the temperature reaches fast the optimal level in each room. These controllers are easy to program and user-friendly and offer a wide range of adjustment and fine-tuning parameters. You may also program non-use periods to minimize consumption and lower operative temperature. They may come equipped with temperature sensors or sensors may be bought separately. Equiterm-based adjusting systems detect outdoor temperature and optimize the temperature of radiators through a mixing valve to secure a comfortable indoor temperature. All MTR controllers may also be interfaced with room thermostats.

They automatically detect any fault in outdoor temperature sensors and/or system temperature and also detect any failure of the mixing valve and may turn the boiler off to avoid damaging the radiant floor heating system.



TECHNICAL DATA



Voltage
230 Vac



Insulation class
Insulation 11 - IEC 664



Protection rating
IP 20 Ref. European Directive IEC EN60529

CERTIFICATION



Equiterm

Regolatore Equiterm MTR

Code	Model	Description
7.023.00002	MTR 01	Climatic control unit with outdoor probe and contact probe - for ON-OFF motors
7.030.01363	MTR 21	Climatic control unit complete with probes
7.030.01784	MTR 22	Climatic control unit, touch screen, without probes
7.023.00005		Contact probe with cable tie
7.023.00006		probe shaft Ø 7
7.023.00004		Outdoor probe
7.030.00298		Transformer from 230 to 24 V



Air Separator/ Mud Separator



72 DS



73 DF/DS

Hydraulic separator - mod. Combimut



74/75 BASIC



74/75 COMBI FL



74/75 COMBI F

DS SERIES

Air separator

Hydraulic systems where water fluid is properly de-aerated are more efficient, produce less noise and have a longer service life. MUT DS air separators are used to remove continuously air hydraulic circuits. They allow to eliminate all the air present in the circuits in an automatic way. MUT DS air separators are supplied complete with hot pre-formed shell insulation to ensure perfect thermal insulation when used with both hot and chilled water.

TECHNICAL DATA



working fluid
Water, water and glycol



Max glycol percent
50 %



Max. working pressure
10 bar



Max discharge pressure
10 bar



Working temperature range
0 ÷ 110°C



Fittings
Flanged DN 50/65/80/100 PN 16
to be coupled with flat counterflange EN 1092-1



Thermal insulation for the body
Closed cell polyethylene foam th. 18 mm



CERTIFICATION



Air Separators serie DS with flanged

Code	Model	Description	Size	Pack	Packaging
7.030.01787	DS 50	Air Separators with insulation	DN 50	1	1
7.030.01838	DS 65	Air Separators with insulation	DN 65	1	1
7.030.01840	DS 80	Air Separators with insulation	DN 80	1	1
7.030.01842	DS 100	Air Separators with insulation	DN 100	1	1
7.030.02021	DS 125	Air Separators with insulation	DN 125	1	1
7.030.02022	DS 150	Air Separators with insulation	DN 150	1	1



Air Separators serie DS with welding connections

Code	Model	Description	Size	Pack	Packaging
7.030.02050	DS 50	Air Separators with welding connections and insulation	DN 50	1	1
7.030.02051	DS 65	Air Separators with welding connections and insulation	DN 65	1	1
7.030.02052	DS 80	Air Separators with welding connections and insulation	DN 80	1	1
7.030.02053	DS 100	Air Separators with welding connections and insulation	DN 100	1	1
7.030.02054	DS 125	Air Separators with welding connections and insulation	DN 125	1	1
7.030.02055	DS 150	Air Separators with welding connections and insulation	DN 150	1	1



Air Separators threaded

Code	Model	Description	Size	Pack	Packaging
7.030.01985	DS G 3/4"	Air Separators threaded G 3/4" on brass with insulation	DN 20	1	4
7.030.01984	DS G 1"	Air Separators threaded G 1" on brass with insulation	DN 25	1	4
7.030.01983	DS G 1" 1/4	Air Separators threaded G 1" 1/4 on brass with insulation	DN 32	1	4
7.030.01982	DS G 1" 1/2	Air Separators threaded G 1" 1/2 on brass with insulation	DN 40	1	4
7.030.01981	DS G 2"	Air Separators threaded G 2" on brass with insulation	DN 50	1	4



DF/DS SERIES

Air/Mud Separator

Hydraulic systems where water fluid is properly de-aerated and free of contamination are more efficient, produce less noise and have a longer service life. MUT DF/DS air and dirt separators are used to remove continuously air and impurities in the hydraulic circuits. They allow to eliminate all the air present in the circuits in an automatic way and also allow to separate impurities, collecting them in the lower part (collection sump). Inside the "dirt separator", in a position transverse to the direction of flow, there is a perforated grid (filtrating screen): the particles of impurities bumping the grid undergo a further reduction of speed, and then settle more easily. The periodic twisting-off of the purge valve allows to empty the collection sump. MUT DF/DS de-aerator and dirt separators are supplied complete with hot pre-formed shell insulation to ensure perfect thermal insulation when used with both hot and chilled water.

TECHNICAL DATA



working fluid
Water, water and glycol



Max glycol percent
50 %



Max. working pressure
10 bar



Max discharge pressure
10 bar



Working temperature range
0 ÷ 110 °C



Fittings
Flanged DN 50/65/80/100 PN 16
to be coupled with flat counterflange EN 1092-1



Thermal insulation for the body
Closed cell polyethylene foam th. 18 mm



Magnet
Permanent 3 x 0.9 T mod. DN20/25 and 4 x 0.9 T mod. DN32/40/50.



CERTIFICATION



Air/Mud Separators serie DF/DS (with flanges)

Code	Model	Description	Size	Pack	Packaging
7.030.01788	DF/DS 50	Air/Mud Separators with insulation	DN 50	1	1
7.030.01839	DF/DS 65	Air/Mud Separators with insulation	DN 65	1	1
7.030.01841	DF/DS 80	Air/Mud Separators with insulation	DN 80	1	1
7.030.01843	DF/DS 100	Air/Mud Separators with insulation	DN 100	1	1
7.030.02023	DF/DS 125	Air/Mud Separators with insulation	DN 125	1	1
7.030.02024	DF/DS 150	Air/Mud Separators with insulation	DN 150	1	1



Air/Mud Separators serie DF/DS with welding connections

Code	Model	Description	Size	Pack	Packaging
7.030.02056	DF/DS 50	Air/Mud Separators with welding connections and insulation	DN 50	1	1
7.030.02057	DF/DS 65	Air/Mud Separators with welding connections and insulation	DN 65	1	1
7.030.02058	DF/DS 80	Air/Mud Separators with welding connections and insulation	DN 80	1	1
7.030.02059	DF/DS 100	Air/Mud Separators with welding connections and insulation	DN 100	1	1
7.030.02060	DF/DS 125	Air/Mud Separators with welding connections and insulation	DN 125	1	1
7.030.02061	DF/DS 150	Air/Mud Separators with welding connections and insulation	DN 150	1	1



Air/Mud Separators serie DF/DS magnetics (with flanges)

Code	Model	Description	Size	Pack	Packaging
7.030.02107	DF/DS 50	Air/Mud Separators with insulation	DN 50	1	1
7.030.02108	DF/DS 65	Air/Mud Separators with insulation	DN 65	1	1
7.030.02109	DF/DS 80	Air/Mud Separators with insulation	DN 80	1	1
7.030.02110	DF/DS 100	Air/Mud Separators with insulation	DN 100	1	1
7.030.02111	DF/DS 125	Air/Mud Separators with insulation	DN 125	1	1
7.030.02112	DF/DS 150	Air/Mud Separators with insulation	DN 150	1	1



Air/Mud Separators serie DF/DS magnetics with welding connections

Code	Model	Description	Size	Pack	Packaging
7.030.02117	DF/DS 50	Air/Mud Separators with welding connections and insulation	DN 50	1	1
7.030.02118	DF/DS 65	Air/Mud Separators with welding connections and insulation	DN 65	1	1
7.030.02119	DF/DS 80	Air/Mud Separators with welding connections and insulation	DN 80	1	1
7.030.02120	DF/DS 100	Air/Mud Separators with welding connections and insulation	DN 100	1	1
7.030.02121	DF/DS 125	Air/Mud Separators with welding connections and insulation	DN 125	1	1
7.030.02122	DF/DS 150	Air/Mud Separators with welding connections and insulation	DN 150	1	1



Magnetic cartridge accessories Kit

Code	Model	Description	Size	Pack	Packaging
7.030.002129	DF/DS	Housing + magnetic cartridge assembly Kit DF100 and DF80	DF100 / DF80	1	1
7.030.002130	DF/DS	Housing + magnetic cartridge assembly Kit DF65 and DF50	DF65 / DF50	1	1



Air/Mud Separators serie DF/DS magnetic threaded

Code	Model	Description	Size	Pack	Packaging
7.030.01993	DF G 3/4"	Mud Separators magnetic/threaded DF G 3/4" in brass with insulation	DN 20	1	4
7.030.01992	DF G 1"	Mud Separators magnetic/threaded DF G 1" in brass with insulation	DN 25	1	4
7.030.01991	DF G 1" 1/4	Mud Separators magnetic/threaded DF G 1" 1/4 in brass with insulation	DN 32	1	4
7.030.01990	DF G 1" 1/2	Mud Separators magnetic/threaded DF G 1" 1/2 in brass with insulation	DN 40	1	4
7.030.01987	DF G 2"	Mud Separators magnetic/threaded DF G 2" in brass with insulation	DN 50	1	4



7.030.01999	DF/DS G 3/4"	Air/Mud Separators magnetic/threaded G 3/4" in brass with insulation	DN 20	1	4
7.030.01998	DF/DS G 1"	Air/Mud Separators magnetic/threaded G 1" in brass with insulation	DN 25	1	4
7.030.01997	DF/DS G 1" 1/4	Air/Mud Separators magnetic/threaded G 1" 1/4 in brass with insulation	DN 32	1	4
7.030.01996	DF/DS G 1" 1/2	Air/Mud Separators magnetic/threaded G 1" 1/2 in brass with insulation	DN 40	1	4
7.030.01988	DF/DS G 2"	Air/Mud Separators magnetic/threaded G 2" in brass with insulation	DN 50	1	4



Mud Separators magnetic for boilers

Code	Model	Description	Size	Pack	Packaging
7.030.02131	DF 3/4"	Mud separators magnetic threaded G 3/4" in brass with body in technopolymer. Adjustable threaded female connections.	3/4"	1	5
7.030.02133	DF 1"	Mud separators magnetic threaded G 1" in brass with body in technopolymer. Adjustable threaded female connections.	1"	1	5



7.030.02132	DF 22mm	Mud separators magnetic threaded diam.- 22 mm in brass with body in technopolymer Adjustable connections for pipe ø 22	22 mm	1	5
7.030.02134	DF 28mm	Mud separators magnetic threaded diam.- 28 mm in brass with body in technopolymer Adjustable connections for pipe ø 28	28 mm	1	5





Combimut

hydraulic separator

The Mut multipurpose hydraulic separator, designed to satisfy the requirements of hydraulic heating and cooling systems, can operate in three different manners:

- Hydraulic separation

Makes the connected hydraulic circuits independent, separating the capacities and heads of the primary circuit (boiler) from the capacities and heads of the secondary circuit (heating elements).

- Deaeration

Blocks, and as a result continually eliminates, all the air in the circuit to a level of microbubbles

Circulation of the water, which is completely deaerated, means the systems can work in optimal conditions, without creating noise and mechanical damage.

- Sludge removal

Blocks and holds back the heavy impurities in the hydraulic circuit which, hitting the filtering mesh, fall to the lower part of the body which acts as a decantation chamber. Here there is a magnetic device which holds back the ferromagnetic impurities.

The Mut multipurpose hydraulic separator is supplied with a thermoformed insulating shell made of closed cell expanded PE-X, th. 12 mm which guarantees perfect heat insulation.

It is available in two versions: with threaded sleeve Gas UNI ISO 228/1 or flanged PN16.



TECHNICAL DATA



working fluid
Water, water with glycerine



Max glycol percent
30 %



Max. working pressure
10 bar



Max discharge pressure
10 bar



Working temperature range
0 ÷ 110°C



Fittings
Threaded G 1" - G 1" ¼ - G 1" ½ - G 2"(EN ISO 228/1)
Threaded DN 25/32/40/50
coupled with counter flange EN 1092-1 PN 16



Thermal insulation for the body
Closed cell polyethylene foam th. 12 mm



CERTIFICATION



Combimut flanged hydraulic separator *

Code	Model	Description	Size	Pack	Packaging
7.030.01913	COMBI FL 25	Combimut flanged hydraulic separator	DN 25	1	1
7.030.01930	COMBI FL 32	Combimut flanged hydraulic separator	DN 32	1	1
7.030.01928	COMBI FL 40	Combimut flanged hydraulic separator	DN 40	1	1
7.030.01925	COMBI FL 50	Combimut flanged hydraulic separator	DN 50	1	1



Combimut threaded hydraulic separator

Code	Model	Description	Size	Pack	Packaging
7.030.01912	COMBI F 25	Combimut threaded hydraulic separator	G 1"	1	1
7.030.01929	COMBI F 32	Combimut threaded hydraulic separator	G 1" ¼	1	1
7.030.01926	COMBI F 40	Combimut threaded hydraulic separator	G 1" ½	1	1
7.030.01920	COMBI F 50	Combimut threaded hydraulic separator	G 2"	1	1



Basic hydraulic separator

Code	Model	Description	Size	Pack	Packaging
7.030.02138	COMBI F 25	Basic hydraulic separator	G 1"	1	1
7.030.02184	COMBI F 32	Basic hydraulic separator	G 1" ¼	1	1
7.030.02185	COMBI F 40	Basic hydraulic separator	G 1" ½	1	1
7.030.02186	COMBI F 50	Basic hydraulic separator	G 2"	1	1



* Per eventuali contro-flange fare riferimento alla sezione di pagina 32

RP SERIES

pressure reducers

The pressure reducers MUT series RP are devices suitable to reduce the pressure in a water supply network. They are installed at the entrance of the home network and they reduce the pressure of the public water supply, which is often higher than the pressure required from the domestic uses, causing the high consumption of water and possible damage to the pipes. In addition, the network pressure can be especially variable during the night and during the holidays. The MUT pressure reducers guarantee a constant outlet pressure and modest changes, below the minimum set by the European standard UNI-EN 1567: 2002 "Building's valves".

DATI TECNICI



Operating mode
Manual (Hand)



working fluid
Water



Max Upstream pressure:
16 bar



Pressure setting Range
1 - 6 bar



Factory pressure setting
3 bar



Fluid temperature limits
75 °C



Capacity coefficient KVS:
1/2" 3.15 mc/h
3/4" 3.60 mc/h



CERTIFICATION



pressure reducers

Code	Model	Description	Size	Pack	Packaging
7.030.02114	RP 12	Pressure reducers valve male with union + manometer	1/2"	1	4
7.030.02115	RP 34	Pressure reducers valve male with union + manometer	3/4"	1	4



7.030.02187	RP 12	Pressure reducer male with union without manometer	1/2"	1	4
7.030.02188	RP 34	Pressure reducer male with union without manometer	3/4"	1	4



manifolds



78/82 MANIFOLDS

flanges - shutoffs



83/84 FLANGE



85/86 DAMPERS

water-water heat exchangers



87/88 HEAT EXCHANGERS

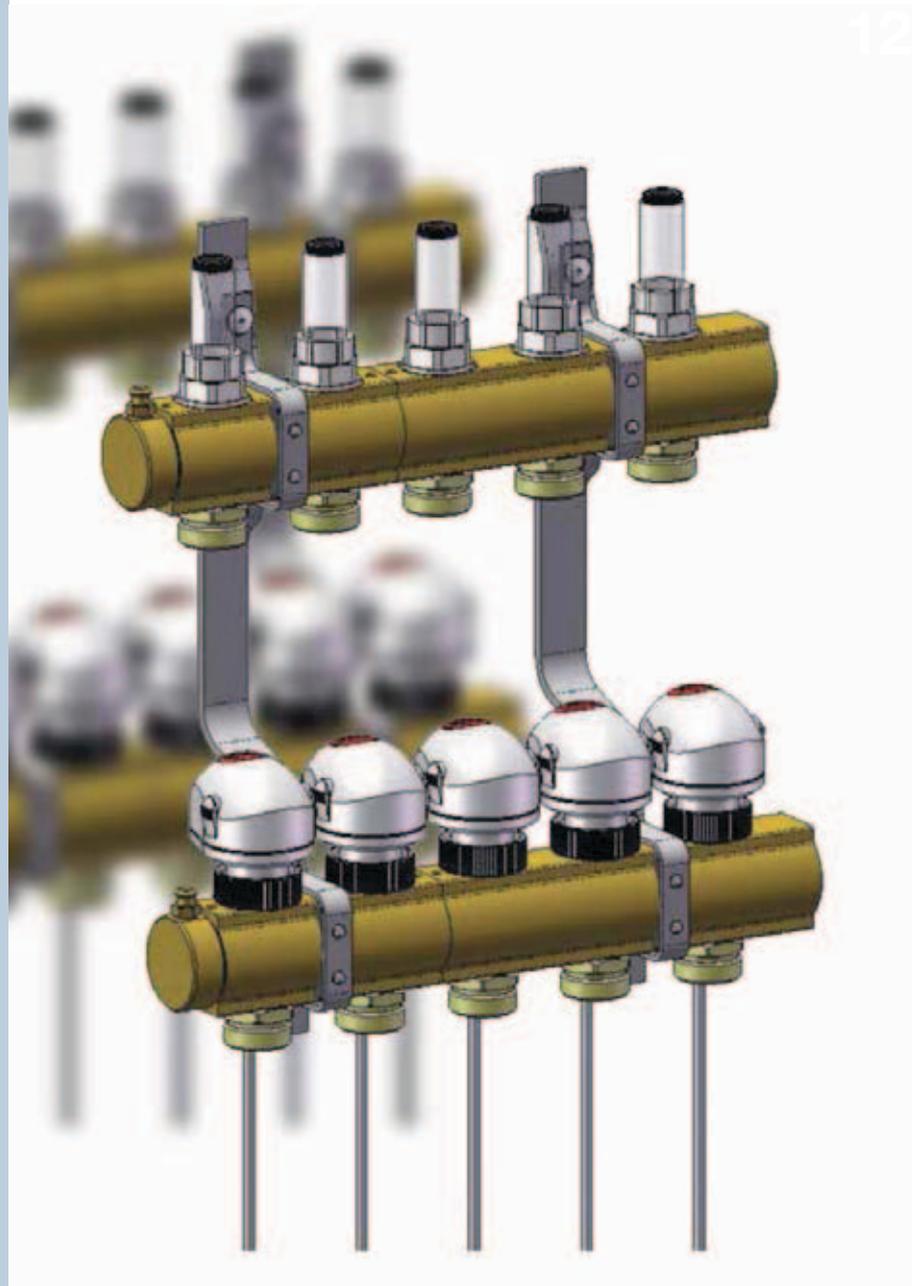
water-water

Manifolds

The manifolds are used to distribute and control the thermal carrier (water and water/glycol mixtures) in heating and conditioning systems. They are very small and guarantee low flow resistance, in addition to guaranteeing precise adjustment control of delivery to the individual circuits. The reduced flow resistance means they can be used as a distribution manifold for several areas, directly installed in the heating system. Insulation is used to prevent the formation of condensation when used in conditioning systems, as well as to limit thermal dispersion.

The manifolds are modular using bayonet connectors with O-ring seal. The delivery manifolds are available in two versions: with balancing valve and shut-off valve - With built-in rate regulator and flow display. The balancing valve balances the individual radiator circuits in order to obtain their effective individual capacity determined during designing.

The return collectors are equipped with on-off valves / manual adjustment that can be moved: Manually - With a thermoelectric actuator.



TECHNICAL DATA



Fluid used
Water, water and glycol



Maximum percentage of glycol
30 %



Max. working pressure
10 bar



Working temperature range
5÷100 °C



Main connections:
1" F Unions for pipe; G 3/4" eurocono
Distance between axes: 50 mm

CERTIFICATION



Brass pre-assembled manifold with reducing valve

Brass manifold, interaxis 50 mm

Code	N°. Vie	Description	Size	Pack	Packaging
7.030.00905	2	Pre-assembled manifold - holders - output 1" - length 129	G 1	1	1
7.030.00906	3	Pre-assembled manifold - holders - output 1" - length 179	G 1	1	1
7.030.00907	4	Pre-assembled manifold - holders - output 1" - length 229	G 1	1	1
7.030.00908	5	Pre-assembled manifold - holders - output 1" - length 279	G 1	1	1
7.030.00909	6	Pre-assembled manifold - holders - output 1" - length 329	G 1	1	1
7.030.00910	7	Pre-assembled manifold - holders - output 1" - length 379	G 1	1	1
7.030.00911	8	Pre-assembled manifold - holders - output 1" - length 429	G 1	1	1
7.030.00912	9	Pre-assembled manifold - holders - output 1" - length 479	G 1	1	1
7.030.00913	10	Pre-assembled manifold - holders - output 1" - length 529	G 1	1	1
7.030.00914	11	Pre-assembled manifold - holders - output 1" - length 579	G 1	1	1
7.030.00915	12	Pre-assembled manifold - holders - output 1" - length 629	G 1	1	1



Brass pre-assembled manifold with rate regulator

Brass manifold, interaxis 50 mm

Code	N°. Vie	Description	Size	Pack	Packaging
7.030.00916	2	Pre-assembled manifold - flow rate measurer - output 1" - length 129	G 1	1	1
7.030.00917	3	Pre-assembled manifold - flow rate measurer - output 1" - length 179	G 1	1	1
7.030.00918	4	Pre-assembled manifold - flow rate measurer - output 1" - length 229	G 1	1	1
7.030.00919	5	Pre-assembled manifold - flow rate measurer - output 1" - length 279	G 1	1	1
7.030.00920	6	Pre-assembled manifold - flow rate measurer - output 1" - length 329	G 1	1	1
7.030.00921	7	Pre-assembled manifold - flow rate measurer - output 1" - length 379	G 1	1	1
7.030.00922	8	Pre-assembled manifold - flow rate measurer - output 1" - length 429	G 1	1	1
7.030.00923	9	Pre-assembled manifold - flow rate measurer - output 1" - length 479	G 1	1	1
7.030.00924	10	Pre-assembled manifold - flow rate measurer - output 1" - length 529	G 1	1	1
7.030.00925	11	Pre-assembled manifold - flow rate measurer - output 1" - length 579	G 1	1	1
7.030.00926	12	Pre-assembled manifold - flow rate measurer - output 1" - length 629	G 1	1	1



Brass pre-assembled manifold with manual knob

Brass manifold, interaxis 50 mm

Code	N°. Vie	Description	Size	Pack	Packaging
7.030.00927	2	Pre-assembled manifold - manual knob - output 1" - length 129	G 1	1	1
7.030.00928	3	Pre-assembled manifold - manual knob - output 1" - length 179	G 1	1	1
7.030.00929	4	Pre-assembled manifold - manual knob - output 1" - length 229	G 1	1	1
7.030.00930	5	Pre-assembled manifold - manual knob - output 1" - length 279	G 1	1	1
7.030.00931	6	Pre-assembled manifold - manual knob - output 1" - length 329	G 1	1	1
7.030.00932	7	Pre-assembled manifold - manual knob - output 1" - length 379	G 1	1	1
7.030.00933	8	Pre-assembled manifold - manual knob - output 1" - length 429	G 1	1	1
7.030.00934	9	Pre-assembled manifold - manual knob - output 1" - length 479	G 1	1	1
7.030.00935	10	Pre-assembled manifold - manual knob - output 1" - length 529	G 1	1	1
7.030.00936	11	Pre-assembled manifold - manual knob - output 1" - length 579	G 1	1	1
7.030.00937	12	Pre-assembled manifold - manual knob - output 1" - length 629	G 1	1	1



Brass pre-assembled manifold

Brass manifold, interaxis 50 mm

Code	N°. Vie	Description	Size	Pack	Packaging
7.030.00938	2	Pre-assembled manifold thermoelectric actuator V3EC - output 1" - length 129	G 1	1	1
7.030.00939	3	Pre-assembled manifold thermoelectric actuator V3EC - output 1" - length 179	G 1	1	1
7.030.00940	4	Pre-assembled manifold thermoelectric actuator V3EC - output 1" - length 229	G 1	1	1
7.030.00941	5	Pre-assembled manifold thermoelectric actuator V3EC - output 1" - length 279	G 1	1	1
7.030.00942	6	Pre-assembled manifold thermoelectric actuator V3EC - output 1" - length 329	G 1	1	1
7.030.00943	7	Pre-assembled manifold thermoelectric actuator V3EC - output 1" - length 379	G 1	1	1
7.030.00944	8	Pre-assembled manifold thermoelectric actuator V3EC - output 1" - length 429	G 1	1	1
7.030.00945	9	Pre-assembled manifold thermoelectric actuator V3EC - output 1" - length 479	G 1	1	1
7.030.00946	10	Pre-assembled manifold thermoelectric actuator V3EC - output 1" - length 529	G 1	1	1
7.030.00947	11	Pre-assembled manifold thermoelectric actuator V3EC - output 1" - length 579	G 1	1	1
7.030.00948	12	Pre-assembled manifold thermoelectric actuator V3EC - output 1" - length 629	G 1	1	1



Brass pre-assembled manifold

Brass manifold, interaxis 50 mm

Code	N°. Vie	Description	Size	Pack	Packaging
7.030.00949	2	Pre-assembled manifold flow rate meter and actuator V3EC output 1" - length 129	G 1	1	1
7.030.00950	3	Pre-assembled manifold flow rate meter and actuator V3EC output 1" - length 179	G 1	1	1
7.030.00951	4	Pre-assembled manifold flow rate meter and actuator V3EC output 1" - length 229	G 1	1	1
7.030.00952	5	Pre-assembled manifold flow rate meter and actuator V3EC output 1" - length 279	G 1	1	1
7.030.00953	6	Pre-assembled manifold flow rate meter and actuator V3EC output 1" - length 329	G 1	1	1
7.030.00954	7	Pre-assembled manifold flow rate meter and actuator V3EC output 1" - length 379	G 1	1	1
7.030.00955	8	Pre-assembled manifold flow rate meter and actuator V3EC output 1" - length 429	G 1	1	1
7.030.00956	9	Pre-assembled manifold flow rate meter and actuator V3EC output 1" - length 479	G 1	1	1
7.030.00957	10	Pre-assembled manifold flow rate meter and actuator V3EC output 1" - length 529	G 1	1	1
7.030.00958	11	Pre-assembled manifold flow rate meter and actuator V3EC output 1" - length 579	G 1	1	1
7.030.00959	12	Pre-assembled manifold flow rate meter and actuator V3EC output 1" - length 629	G 1	1	1



Brass pre-assembled manifold

Brass manifold, interaxisx 50 mm

Code	N°. Vie	Description	Size	Pack	Packaging
7.030.00960	2	Pre-assembled manifold holders and actuator V3EC - output 1" - length 129	G 1	1	1
7.030.00961	3	Pre-assembled manifold holders and actuator V3EC - output 1" - length 179	G 1	1	1
7.030.00962	4	Pre-assembled manifold holders and actuator V3EC - output 1" - length 229	G 1	1	1
7.030.00963	5	Pre-assembled manifold holders and actuator V3EC - output 1" - length 279	G 1	1	1
7.030.00964	6	Pre-assembled manifold holders and actuator V3EC - output 1" - length 329	G 1	1	1
7.030.00965	7	Pre-assembled manifold holders and actuator V3EC - output 1" - length 379	G 1	1	1
7.030.00966	8	Pre-assembled manifold holders and actuator V3EC - output 1" - length 429	G 1	1	1
7.030.00967	9	Pre-assembled manifold holders and actuator V3EC - output 1" - length 479	G 1	1	1
7.030.00968	10	Pre-assembled manifold holders and actuator V3EC - output 1" - length 529	G 1	1	1
7.030.00969	11	Pre-assembled manifold holders and actuator V3EC - output 1" - length 579	G 1	1	1
7.030.00970	12	Pre-assembled manifold holders and actuator V3EC - output 1" - length 629	G 1	1	1



Brass pre-assembled manifold

Brass manifold, distance between way axes 50 mm

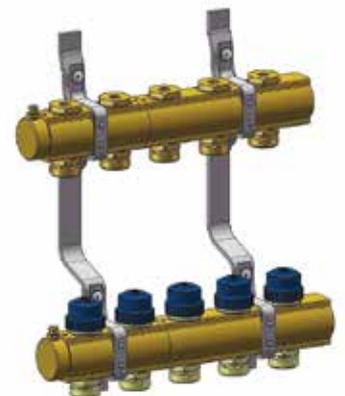
Code	N°. Vie	Description	Size	Pack	Packaging
7.030.00971	2	Pre-assembled manifold flow rate meter and manual holder - output 1" - length 129	G 1	1	1
7.030.00972	3	Pre-assembled manifold flow rate meter and manual holder - output 1" - length 179	G 1	1	1
7.030.00973	4	Pre-assembled manifold flow rate meter and manual holder - output 1" - length 229	G 1	1	1
7.030.00974	5	Pre-assembled manifold flow rate meter and manual holder - output 1" - length 279	G 1	1	1
7.030.00975	6	Pre-assembled manifold flow rate meter and manual holder - output 1" - length 329	G 1	1	1
7.030.00976	7	Pre-assembled manifold flow rate meter and manual holder - output 1" - length 379	G 1	1	1
7.030.00977	8	Pre-assembled manifold flow rate meter and manual holder - output 1" - length 429	G 1	1	1
7.030.00978	9	Pre-assembled manifold flow rate meter and manual holder - output 1" - length 479	G 1	1	1
7.030.00979	10	Pre-assembled manifold flow rate meter and manual holder - output 1" - length 529	G 1	1	1
7.030.00980	11	Pre-assembled manifold flow rate meter and manual holder - output 1" - length 579	G 1	1	1
7.030.00981	12	Pre-assembled manifold flow rate meter and manual holder - output 1" - length 629	G 1	1	1



Brass pre-assembled manifold

Brass manifold, Interaxis 50 mm

Code	N°. Vie	Description	Size	Pack	Packaging
7.030.00982	2	Pre-assembled manifold holders and manual holder - output 1" - length 129	G 1	1	1
7.030.00983	3	Pre-assembled manifold holders and manual holder - output 1" - length 179	G 1	1	1
7.030.00984	4	Pre-assembled manifold holders and manual holder - output 1" - length 229	G 1	1	1
7.030.00985	5	Pre-assembled manifold holders and manual holder - output 1" - length 279	G 1	1	1
7.030.00986	6	Pre-assembled manifold holders and manual holder - output 1" - length 329	G 1	1	1
7.030.00987	7	Pre-assembled manifold holders and manual holder - output 1" - length 379	G 1	1	1
7.030.00988	8	Pre-assembled manifold holders and manual holder - output 1" - length 429	G 1	1	1
7.030.00989	9	Pre-assembled manifold holders and manual holder - output 1" - length 479	G 1	1	1
7.030.00990	10	Pre-assembled manifold holders and manual holder - output 1" - length 529	G 1	1	1
7.030.00991	11	Pre-assembled manifold holders and manual holder - output 1" - length 579	G 1	1	1
7.030.00992	12	Pre-assembled manifold holders and manual holder - output 1" - length 629	G 1	1	1



Flanges

TECHNICAL DATA



Nominal pressure
10 Kg/cm²



Working temperature
seals 2 ÷ 80 °C

CERTIFICATION



Brass flanges

Code	Description	Size	Pack	Packaging
7.001.01089	Brass flanges to be welded with gaskets and screws interaxis 36 mm - with hole diam. 18 mm		2	100
7.001.01090	Brass flanges to be welded with gaskets and screws interaxis 36 mm - with hole diam. 20 mm		2	100
7.001.01091	Brass flanges to be welded with gaskets and screws interaxis 36 mm - with hole diam. 22 mm		2	100
7.001.01087	Brass straight flange complete with gaskets and screws Male gas thread - interaxis 24 mm	1/2"	2	100
7.001.01088	Brass straight flange complete with gaskets and screws Male gas thread - interaxis 24 mm	3/4"	2	100
7.001.01085	Brass straight flange complete with gaskets and screws Female gas thread - interaxis 24 mm	1/2"	2	100



Aluminium flanges

Code	Description	Size	Pack	Packaging
7.001.01094	Aluminium straight flange complete with gaskets and screws - Female Gas thread interaxis 36 mm	1/2"	2	100
7.001.01095	Aluminium straight flange complete with gaskets and screws - Female Gas thread interaxis 36 mm	3/4"	2	100
7.001.01096	Aluminium straight flange complete with gaskets and screws - Female Gas thread interaxis 36 mm	1"	2	100
7.001.01081	Aluminium elbow flange complete with gaskets and screws - Female Gas thread interaxis 36 mm	1/2"	2	100
7.001.01082	Aluminium straight flange complete with gaskets and screws - Female Gas thread interaxis 36 mm	3/4"	2	100
7.001.01052	Aluminium straight flange complete with gaskets and screws - Female Gas thread distance between axes 36 mm	1"	2	100
7.001.01058	Blind flange for Basic SB complete with gaskets and screws		2	100
7.001.01092	Aluminium straight flange complete with gaskets and screws - Male Gas thread interaxis 36 mm	3/4"	2	100
7.001.01093	Aluminium straight flange complete with gaskets and screws - Male Gas thread interaxis 36 mm	1"	2	100
7.001.01084	Aluminium elbow flange complete with gaskets and screws - Female Gas thread interaxis 24 mm	1/2"	2	100
7.001.01099	Aluminium elbow flange complete with gaskets and screws - Male Gas thread interaxis 24 mm	3/4"	2	100
7.030.01610	Aluminium straight flange complete with gaskets and screws - Female Gas thread distance between axes 24 mm (UNI-ISO 228/1 - G 1/2)	1/2"	2	100
7.030.01611	Aluminium straight flange complete with gaskets and screws - Female Gas thread interaxis 24 mm (UNI-ISO 7/1 - Rp 1/2)	1/2"	2	100



Smoke dampers

These are powered by an electric motor and can take two operating positions depending on whether the motor is activated or not. The tube and the shut-off ball are made of rust-proof material. The motor casing mounts an auxiliary switch that is activated during switching of the damper. The damper has an external lever for manually positioning its shut-off ball and which also indicates its position. These dampers are used to control fumes in gas and fuel oil boiler smoke-stacks. They can be installed in both vertical and horizontal positions. Available in five versions: Ø 130 mm, 150 mm, 175 mm, 200 mm, 225 mm.

TECHNICAL DATA



Nominal power supply voltage
230 Vac (24, 110 Vac; 50 Hz available)



Absorbed power
5 ÷ 6 W



Auxiliary contact power
3 A, 250 Vac



Protection rating
IP 22 IEC 529 directive
Ref. European Directive IEC EN 60529



FI temperature limits
+250 °C



Nominal opening time
25 sec.



Nominal closing time
6 ÷ 8 sec.



Total cable length
1000 mm



CERTIFICATION



Smoke dampers with spring return

Code	Model	Description	Size	Pack	Packaging
7.001.02248	SD 100	Smoke dampers - pipe diam. 100 - stainless steel shutoff body power supply voltage 220/240 Vac. - 50 Hz	100	1	1
7.001.00878	SD 130	Smoke dampers - pipe diam. 130 - stainless steel shutoff body power supply voltage 220/240 Vac. - 50 Hz	130	1	1
7.001.00879	SD 150	Smoke dampers - pipe diam. 150 - stainless steel shutoff body power supply voltage 220/240 Vac. - 50 Hz	150	1	1
7.001.02279	SD 175	Smoke dampers - pipe diam. 175 - stainless steel shutoff body power supply voltage 220/240 Vac. - 50 Hz	175	1	1
7.001.02280	SD 200	Smoke dampers - pipe diam. 200 - stainless steel shutoff body power supply voltage 220/240 Vac. - 50 Hz	200	1	1
7.001.02281	SD 225	Smoke dampers - pipe diam. 225 - stainless steel shutoff body power supply voltage 220/240 Vac. - 50 Hz	225	1	1

7.001.02249	SD 100 M1	Smoke dampers - pipe diam. 100 - stainless steel shutoff body power supply voltage 220/240 Vac. - 50 Hz - complete with auxiliary micro	100	1	1
7.001.00930	SD 130 M1	Smoke dampers - pipe diam. 130 - stainless steel shutoff body power supply voltage 220/240 Vac. - 50 Hz - complete with auxiliary micro	130	1	1
7.001.00931	SD 150 M1	Smoke dampers - pipe diam. 150 - stainless steel shutoff body power supply voltage 220/240 Vac. - 50 Hz - complete with auxiliary micro	150	1	1
7.001.03026	SD 175 M1	Smoke dampers - pipe diam. 175 - stainless steel shutoff body power supply voltage 220/240 Vac. - 50 Hz - complete with auxiliary micro	175	1	1
7.001.00939	SD 200 M1	Smoke dampers - pipe diam. 200 - stainless steel shutoff body power supply voltage 220/240 Vac. - 50 Hz - complete with auxiliary micro	200	1	1
7.001.02555	SD 225 M1	Smoke dampers - pipe diam. 225 - stainless steel shutoff body power supply voltage 220/240 Vac. - 50 Hz - complete with auxiliary micro	225	1	1



Damper's accessories

Code	Model	Description	Pack	Packaging
7.001.00790	MS 230	Motor for dampers - Voltage 230/240 V - 50 Hz - Absorbed power 5-6 W	1	1
7.001.03028	MS 230 M1	Motor for dampers - Voltage 230/240 V - 50 Hz - Absorbed power 5-6 W with auxiliary micro	1	1

7.001.00864	MS 24	Motor for dampers - Voltage 24 V - 50 Hz - Absorbed power 5-6 W	1	1
7.001.03027	MS 24 M1	Motor for dampers - Voltage 24 V - 50 Hz - Absorbed power 5-6 W with auxiliary micro	1	1



Heat exchangers

Water - water

These heat exchangers are designed for use in domestic boilers that combine heating with fast production of domestic hot water. This water runs inside a copper coil wrapped in three concentric spirals with different diameters. The primary circuit is connected to the heating circuit and consists of a series of cylindrical baffles that force water to make multiple vertical passes in order to efficiently move against the outer surface of the copper tube. Both internal circuits are welded to threaded connections for installing the heat exchanger in the plumbing circuit. There is also a version for direct connection with a diverter valve for interchanging fluid flows when there is a request for domestic hot water. A version also exists for direct connection with a diverter valve for flows exchange when there is a request for domestic hot water.

CERTIFICATION



Water heat exchangers

Code	Model	Description	Pack	Packaging
7.002.02581	K 21BX	Immediate water-water heat exchanger- Power: 21000 Kcal/h - Inlet primary with nut connection G3/4" - Inlet sanitary with nut connection G1/2" - Outlet primary male connection G3/4" - Outlet sanitary male connection G1/2"	1	5
7.002.00330	K 26 BX	Immediate water-water heat exchanger- Power: 26000 Kcal/h - Inlet primary with nut connection G3/4" - Inlet sanitary with nut connection G1/2" - Outlet primary male connection G3/4" - Outlet sanitary male connection G1/2"	1	5
7.002.00849	K 26 BX	Immediate water-water heat exchanger- Power: 26000 Kcal/h - Inlet primary with nut connection G3/4" - Inlet sanitary with nut connection G1/2" - Outlet primary male connection G3/4" - Outlet sanitary male connection G1/2"	1	5
7.002.02093	K 26 BX	Immediate water-water heat exchanger- Power: 26000 Kcal/h - Inlet primary with nut connection G3/4" - Inlet sanitary with nut connection G1/2" - Outlet primary male connection G3/4" - Outlet sanitary male connection G1/2"	1	5
7.002.00730	K 28 BX	Immediate water-water heat exchanger- Power: 28000 Kcal/h - Inlet primary with nut connection G3/4" - Inlet sanitary with nut connection G1/2" - Outlet primary male connection G3/4" - Outlet sanitary male connection G1/2"	1	5
7.002.01700	K 28 BX	Immediate water-water heat exchanger- Power: 28000 Kcal/h - Inlet primary with nut connection G3/4" - Inlet sanitary with nut connection G1/2" - Outlet primary male connection G3/4" - Outlet sanitary male connection G1/2"	1	5



7.002.02542	K 30 AY	Immediate water-water heat exchanger- Power: 30000 Kcal/h - Inlet primary male connection G1" - Inlet sanitary male connection G1/2" - Outlet primary male connection G1" - Outlet sanitary with nut connection G3/4"	1	3
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MUT BIOMASSA

Anti-condensation thermostatic mixer valve range



90/91 **TM 3000**
Anti-condensation



92/93 **TD 3000**
Anti-condensation



94 **TM 2000**
Anti-condensation

Thermostatic anti-condensation group



95/96 **Blumut**



97/98 **Blumut Compact**

TM 3000 SERIES

anti-condensation thermostatic mixer valves

TM 3000 mixer valves find application in those heating systems (systems with solid fuel boiler and storage tank) where it is essential to ensure the return of hot water (at a minimum temperature level) to the boiler, thus ensuring a sufficiently high thermal regime of operation to prevent vapour condensation in the smokestack. These vapours combined with the products of combustion may give rise to corrosive compounds that affect and limit the life of the boiler.

With the use of the valves TM 3000 are obtained the following advantages:

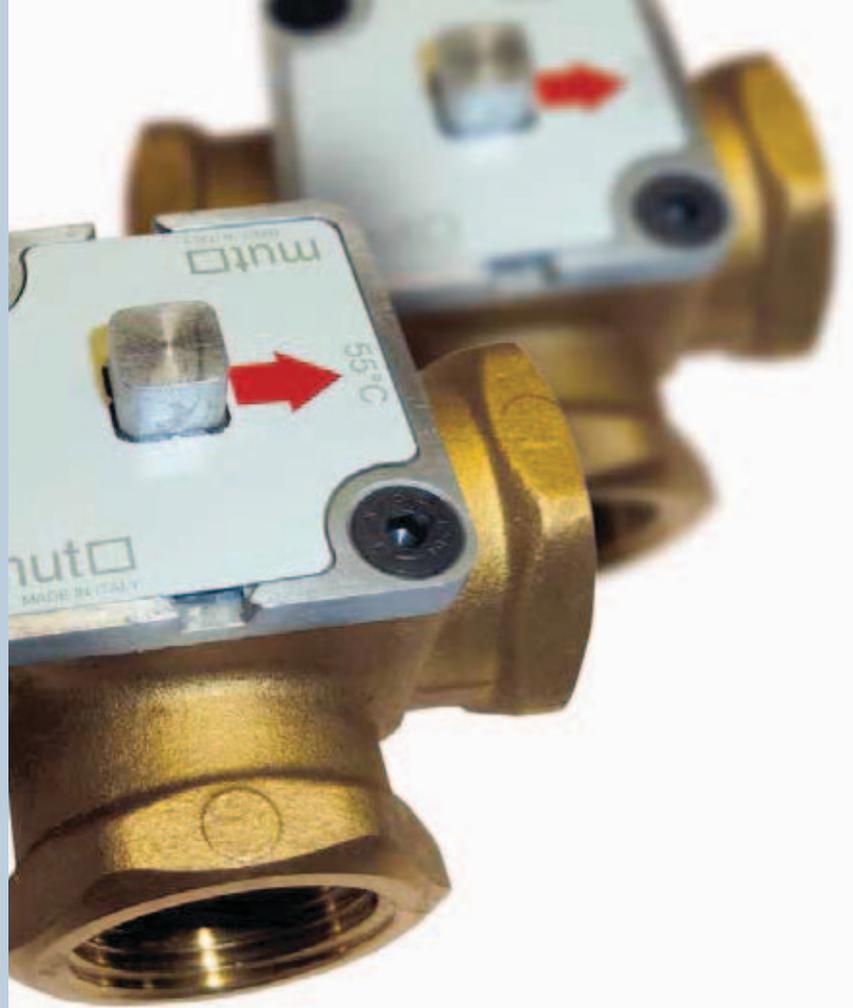
- Increasing the combustion efficiency of the heat generator.
 - Avoiding the risk of destructive thermal shock.
 - Significant lengthening of the working life of the boiler.
- The thermostatic mixing valve TM 3000 aren't equipped with electrical / electronic devices, with consequently great benefit of reliability and of simplicity of system installation and maintenance.

The "one single piece" thermostat-lid allows a quick and easy replacement of the thermostat. To ensure accurate precision, the thermostatic sensor is immersed directly into the fluid.

Operation temperature range: 5 - 110 °C.

Maximum operating pressure: 10 bar. TM 3000 mixer valves are available in 3 sizes (G ¾", G 1", G 1 ¼").

Bypass not close when switching.



TECHNICAL DATA



Type of movement
Thermostatic



Nominal pressure
10 bar



Fl temperature limits
5 ÷ 110 °C [max]

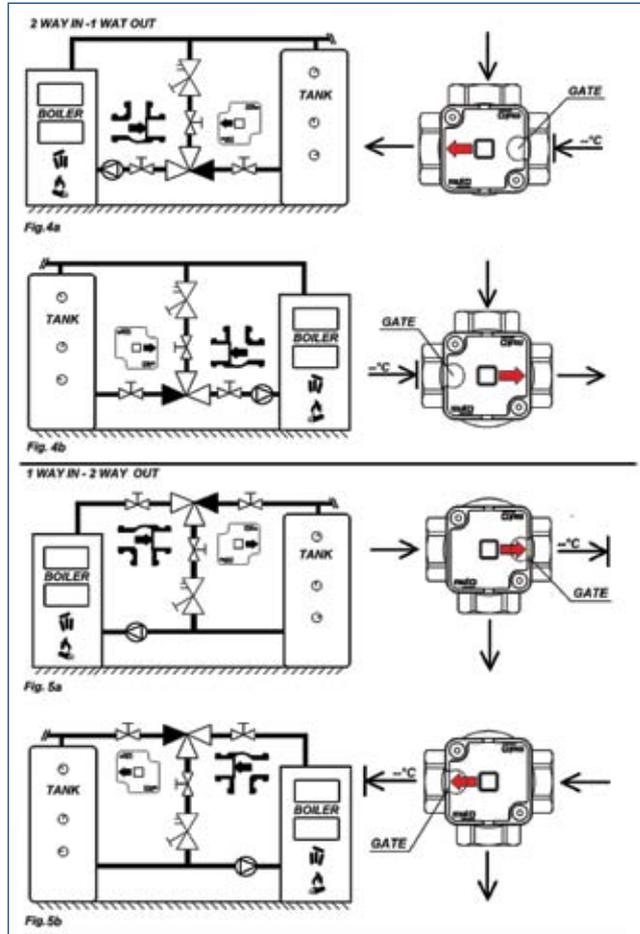


Settable opening temperature values
45 °C ÷ 50 °C ÷ 55 °C ÷ 63 °C ÷ 72 °C ÷ 78 °C

CERTIFICATION



OPERATION



Anti-condensation thermostatic mixer valves - TM 3000 series

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01756	TM 3000	Anti condensation mixer valve TM 3000-G 3/4-45 °C	3/4"	10	8	1	5
7.030.01790	TM 3000	Anti condensation mixer valve TM 3000-G 1-45 °C	1"	10	9	1	5
7.030.01818	TM 3000	Anti condensation mixer valve TM 3000-G 1 1/4-45 °C	1 1/4"	10	10	1	5



7.030.01819	TM 3000	Anti condensation mixer valve TM 3000-G 3/4-50 °C	3/4"	10	8	1	5
7.030.01820	TM 3000	Anti condensation mixer valve TM 3000-G 1-50 °C	1"	10	9	1	5
7.030.01821	TM 3000	Anti condensation mixer valve TM 3000-G 1 1/4-50 °C	1 1/4"	10	10	1	5

7.030.01604	TM 3000	Anti condensation mixer valve TM 3000-G 3/4-55 °C	3/4"	10	8	1	5
7.030.01605	TM 3000	Anti condensation mixer valve TM 3000-G 1-55 °C	1"	10	9	1	5
7.030.01582	TM 3000	Anti condensation mixer valve TM 3000-G 1 1/4-55 °C	1 1/4"	10	10	1	5

7.030.01822	TM 3000	Anti condensation mixer valve TM 3000-G 3/4-63 °C	3/4"	10	8	1	5
7.030.01764	TM 3000	Anti condensation mixer valve TM 3000-G 1-63 °C	1"	10	9	1	5
7.030.01677	TM 3000	Anti condensation mixer valve TM 3000-G 1 1/4-63 °C	1 1/4"	10	10	1	5

7.030.01823	TM 3000	Anti condensation mixer valve TM 3000-G 3/4-72 °C	3/4"	10	8	1	5
7.030.01581	TM 3000	Anti condensation mixer valve TM 3000-G 1-72 °C	1"	10	9	1	5
7.030.01824	TM 3000	Anti condensation mixer valve TM 3000-G 1 1/4-72 °C	1 1/4"	10	10	1	5

7.030.01825	TM 3000	Anti condensation mixer valve TM 3000-G 3/4-78 °C	3/4"	10	8	1	5
7.030.01826	TM 3000	Anti condensation mixer valve TM 3000-G 1-78 °C	1"	10	9	1	5
7.030.01827	TM 3000	Anti condensation mixer valve TM 3000-G 1 1/4-78 °C	1 1/4"	10	10	1	5

Accessories for TM 3000 series

Code	Model	Description	Pack	Packaging
7.030.01832	kit cartuccia	Cartridge kit TM 3000 - 45 °C	1	1
7.030.01777	kit cartuccia	Cartridge kit TM 3000 - 50 °C	1	1
7.030.01778	kit cartuccia	Cartridge kit TM 3000 - 55 °C	1	1
7.030.01833	kit cartuccia	Cartridge kit TM 3000 - 63 °C	1	1
7.030.01834	kit cartuccia	Cartridge kit TM 3000 - 72 °C	1	1
7.030.01835	kit cartuccia	Cartridge kit TM 3000 - 78 °C	1	1



TDA 3000 SERIES

anti-condensation thermostatic diverter valves

TDA 3000 diverter valve is applied in heating systems (especially in solar thermal heating systems), in all those situations when the fluid flow has to be deviated according to its temperature, allowing a correct and precise temperature control according to circuit design specifications or requirements.

TDA 3000 valves are available in 3 sizes (G 3/4", G 1" , G 1 1/4").

The thermostatic diverter valve TDA 3000 does not have electric/electronic devices, with great benefits on function reliability and easy system installation. The single-piece cartridge lid allows a quick and easy replacement of the thermostat. Operation temperature range: 5 - 110 °C. Max operation pressure: 10 bar.



TECHNICAL DATA



Type of movement
Thermostatic



Nominal pressure
10 bar



Fl temperature limits
5 ÷ 110 °C [max]

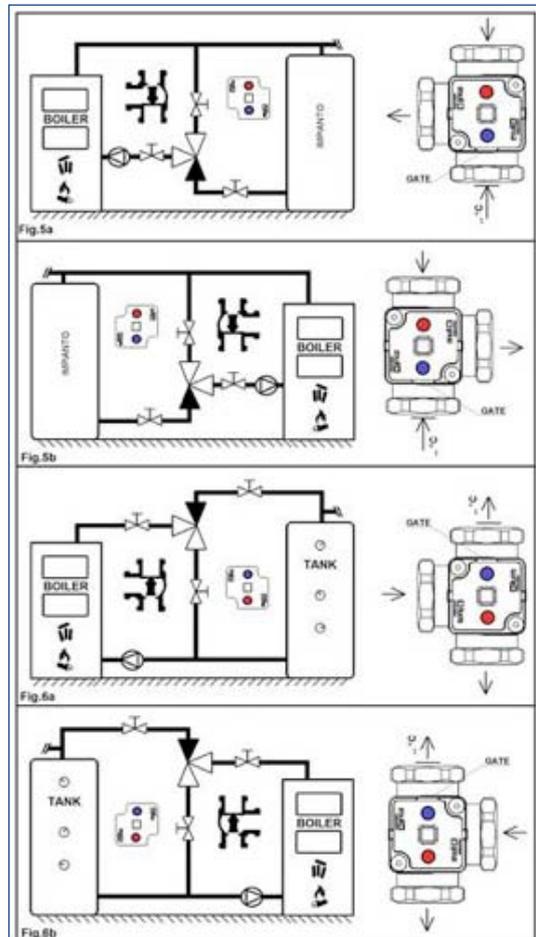


Settable opening temperature values
45 °C ÷ 50 °C ÷ 55 °C ÷ 63 °C ÷ 72 °C ÷ 78 °C

CERTIFICATION



OPERATION



Anti-condensation thermostatic diverter valves - TDA 3000 series

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01752	TDA 3000	Anti condensation diverter valve TDAA 3000-G 3/4-45 °C	3/4"	10	8	1	5
7.030.01774	TDA 3000	Anti condensation diverter valve TDA 3000-G 1-45 °C	1"	10	9	1	5
7.030.01811	TDA 3000	Anti condensation diverter valve TDA 3000-G 1 1/4-45 °C	1 1/4"	10	10	1	5



7.030.01763	TDA 3000	Anti condensation diverter valve TDA 3000-G 3/4-50 °C	3/4"	10	8	1	5
7.030.01773	TDA 3000	Anti condensation diverter valve TDA 3000-G 1-50 °C	1"	10	9	1	5
7.030.01812	TDA 3000	Anti condensation diverter valve TDA 3000-G 1 1/4-50 °C	1 1/4"	10	10	1	5

7.030.01606	TDA 3000	Anti condensation diverter valve TDA 3000-G 3/4-55 °C	3/4"	10	8	1	5
7.030.01607	TDA 3000	Anti condensation diverter valve TDA 3000-G 1-55 °C	1"	10	9	1	5
7.030.01608	TDA 3000	Anti condensation diverter valve TDA 3000-G 1 1/4-55 °C	1 1/4"	10	10	1	5

7.030.01580	TDA 3000	Anti condensation diverter valve TDA 3000-G 3/4-63 °C	3/4"	10	8	1	5
7.030.01753	TDA 3000	Anti condensation diverter valve TDA 3000-G 1-63 °C	1"	10	9	1	5
7.030.01741	TDA 3000	Anti condensation diverter valve TDA 3000-G 1 1/4-63 °C	1 1/4"	10	10	1	5

7.030.01813	TDA 3000	Anti condensation diverter valve TDA 3000-G 3/4-72 °C	3/4"	10	8	1	5
7.030.01814	TDA 3000	Anti condensation diverter valve TDA 3000-G 1-72 °C	1"	10	9	1	5
7.030.01815	TDA 3000	Anti condensation diverter valve TDA 3000-G 1 1/4-72 °C	1 1/4"	10	10	1	5

7.030.01816	TDA 3000	Anti condensation diverter valve TDA 3000-G 3/4-78 °C	3/4"	10	8	1	5
7.030.01817	TDA 3000	Anti condensation diverter valve TDA 3000-G 1-78 °C	1"	10	9	1	5
7.030.01729	TDA 3000	Anti condensation diverter valve TDA 3000-G 1 1/4-78 °C	1 1/4"	10	10	1	5

Accessories for TDA 3000 series

Code	Model	Description	Pack	Packaging
7.030.01828	cartridge kit	Cartridge kit TDA 3000 - 45 °C	1	1
7.030.01775	cartridge kit	Cartridge kit TDA 3000 - 50 °C	1	1
7.030.01776	cartridge kit	Cartridge kit TDA 3000 - 55 °C	1	1
7.030.01829	cartridge kit	Cartridge kit TDA 3000 - 63 °C	1	1
7.030.01830	cartridge kit	Cartridge kit TDA 3000 - 72 °C	1	1
7.030.01831	cartridge kit	Cartridge kit TDA 3000 - 78 °C	1	1
7.030.02209	Kit guscio	Shell insulation kit V3000 3 Vie TM - TD3000	1	1



TM 2000 SERIES

anti-condensation thermostatic mixer valves

TM 2000 mixer valves find application in those heating systems (systems with solid fuel boiler and storage tank) where it is essential to ensure the return of hot water (at a minimum temperature level) to the boiler, thus ensuring a sufficiently high thermal regime of operation to prevent vapour condensation in the smokestack. These vapours combined with the products of combustion may give rise to corrosive compounds that affect and limit the life of the boiler. With the use of the valves TM 2000 are obtained the following advantages:

- Increasing the combustion efficiency of the heat generator.
 - Avoiding the risk of destructive thermal shock.
 - Significant lengthening of the working life of the boiler.
- The thermostatic mixing valve TM 2000 aren't equipped with electrical / electronic devices, with consequently great benefit of reliability and simplicity of system installation and maintenance.

The "one single piece" thermostat-lid allows a quick and easy replacement of the thermostat. To ensure accurate precision, the thermostatic sensor is immersed directly into the fluid.

Operation temperature range: 5 -110 ° C.

Maximum operating pressure:10 bar. TM 2000 mixer valves are available in 4 sizes (G ¾, "G 1", G 1 ¼", G 1 ½"). Bypass not close when switching.



TECHNICAL DATA



Type of movement
Thermostatic



Nominal pressure
10 bar



Fl temperature limits
5 ÷ 110 °C [max]



Settable opening temperature values
45 °C ÷ 50 °C ÷ 55 °C ÷ 63 °C ÷ 72 °C ÷ 78 °C

CERTIFICATION



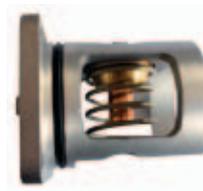
Anti-condensation thermostatic mixer valves - TM 2000 series

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01672	TM 2000	Anti condensation mixer valve TM 2000-G 3/4, 55 °C	3/4"	10	14	1	5
7.030.01706	TM 2000	Anti condensation mixer valve TM 2000-G 1 1/4, 55 °C	1"	10	14	1	5
7.030.01707	TM 2000	Anti condensation mixer valve TM 2000-G 1 1/4, 55 °C	1 1/4"	10	15	1	5
7.030.01711	TM 2000	Anti condensation mixer valve TM 2000-G 1 1/4, 55 °C	1 1/2"	10	16	1	5



Accessories for TM 2000 series

Code	Model	Description	Pack	Packaging
7.030.01904	cartridge kit	Cartridge kit TM 2000 45 °C	1	5
7.030.01905	cartridge kit	Cartridge kit TM 2000 50 °C	1	5
7.030.01906	cartridge kit	Cartridge kit TM 2000 55 °C	1	5
7.030.01907	cartridge kit	Cartridge kit TM 2000 63 °C	1	5
7.030.01908	cartridge kit	Cartridge kit TM 2000 72 °C	1	5
7.030.01909	cartridge kit	Cartridge kit TM 2000 78 °C	1	5



Blumut

Thermostatic anti-condensation group

Blumut is a thermostatic unit complete with recirculation pump that connects a solid fuel heater (pellets, wood, chips...) to one or more inertial heat accumulators. It is a very simple, compact device that works well and is easy to install.

An important aspect of Blumut is that it causes the heater to work at the highest possible temperature in a manner that stops the formation of acid condensate and guarantees stratified filling of the accumulation tank without mixing water internally. Blumut is therefore an effective anti-condensation and anti-thermal shock system that uses the maximum return of the heater to obtain energy-saving results.

The thermostatic elements used have different opening temperatures that range from 50 to 87°C. They can be easily replaced to adapt the working temperature effortlessly to the different characteristics of the unit. The natural circulation between heater and storage can be put to good use even when the pump is stopped. This is an important feature because if the electricity is disconnected for any reason, the heater is guaranteed a minimum flow of cooling water.



TECHNICAL DATA

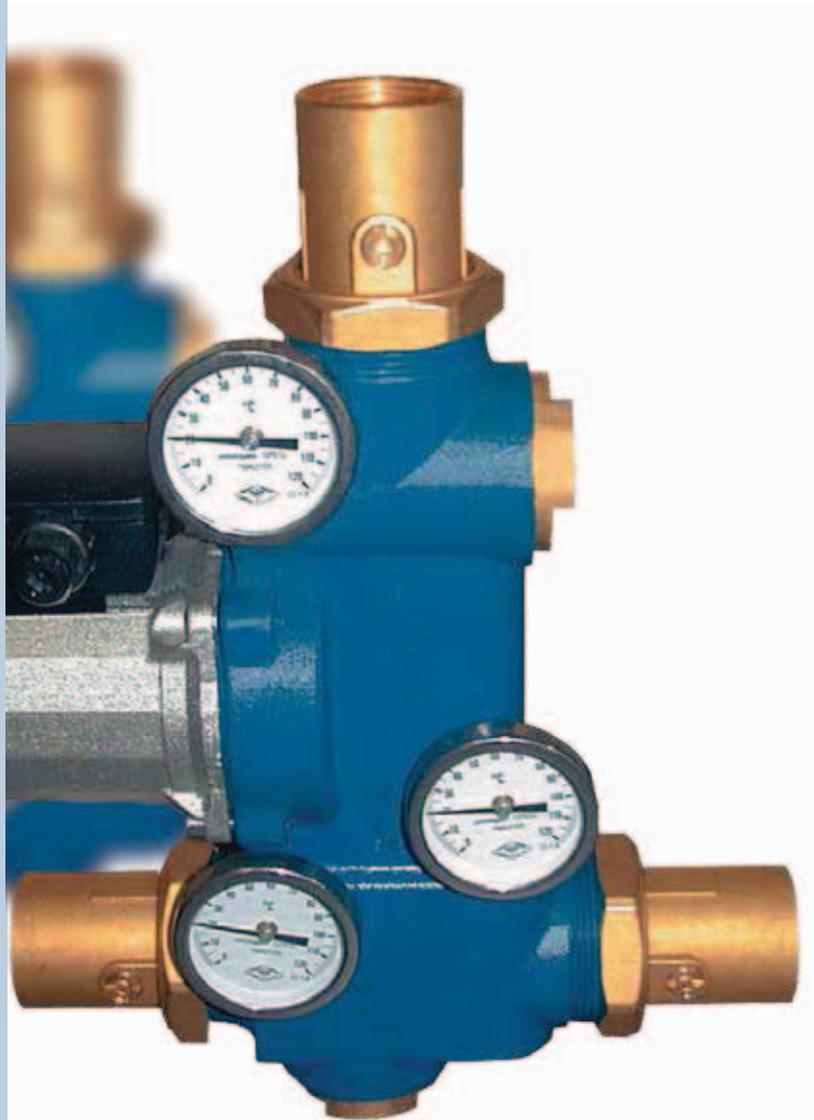


Nominal pressure
PN10

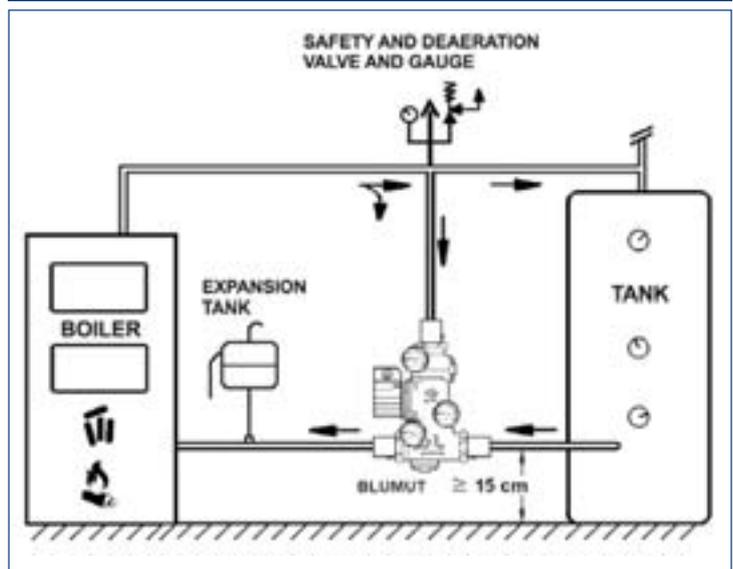


Fl temperature limits
110 °C [max]

CERTIFICATION



OPERATION



Thermostatic-anti-condensation group - Blumut *

Code	Model	Description	Size	Pack	Packaging
7.030.01155	BLUMUT	Blumut filling unit 55° - (EX- UE Markets)	1" 1/4	1	1
7.030.00799	BLUMUT	Blumut filling unit 63° - (EX- UE Markets)	1" 1/4	1	1
7.030.01105	BLUMUT	Blumut filling unit 72° - (EX- UE Markets)	1" 1/4	1	1
7.030.00695	BLUMUT	Blumut filling unit 78° - (EX- UE Markets)	1" 1/4	1	1



7.030.02026	BLUMUT HE	Blumut HE 55 °C unit	1" 1/4	1	1
7.030.02027	BLUMUT HE	Blumut HE 63 °C unit	1" 1/4	1	1
7.030.02028	BLUMUT HE	Blumut HE 72 °C unit	1" 1/4	1	1
7.030.02029	BLUMUT HE	Blumut HE 78 °C unit	1" 1/4	1	1



Blumut temperature kit accessories

Code	Description	Pack	Packaging
7.030.01095	Blumut thermostatic element 55°	1	1
7.030.01039	Blumut thermostatic element 63°	1	1
7.030.01040	Blumut thermostatic element 72°	1	1
7.030.01041	Blumut thermostatic element 78°	1	1
7.030.01042	Blumut thermostatic element 83°	1	1
7.030.01043	Blumut thermostatic element 87°	1	1



7.030.01366	Thermometer for Blumut	1	10
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7.030.01728	Blumut insulation kit	1	1
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* If requested all Blumuts can be supplied with insulation and have G 1 ball valves

Blumut Compact

Thermostatic anti-condensation group

Blumut Compact is a filling group complete with recycle pump that connects to a solid fuel boiler (pellets, wood, chips...) with one or more accumulation tanks. It is easy to use and functional, very compact and easy to install. Its main characteristic is that it allows a high working temperature to reach the boiler, so stopping the formation of acid condensation. It also guarantees stratified loading of the accumulation tank, limiting the internal mixing of water. Blumut Compact is therefore an efficient anti-condensation and anti-heat shock system that increases boiler return and lengthens boiler life. The thermostatic elements used have different opening temperatures that range from 50 to 87°C. They can be easily replaced, in order to adapt the operation temperature to the different system characteristics. Blumut Compact also favours the natural circulation between boiler and accumulation with the pump stopped, a very important function because a minimum boiler cooling flow rate is guaranteed if the power supply is interrupted.



TECHNICAL DATA



Nominal pressure
PN10

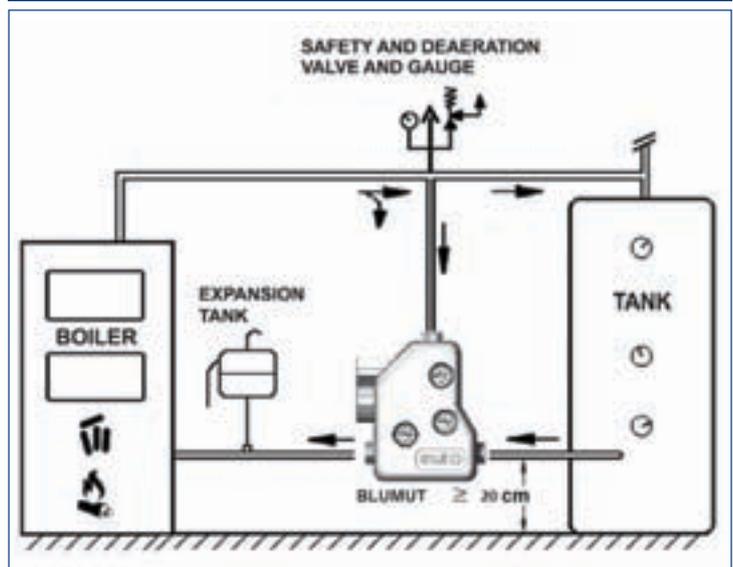


Fl temperature limits
110 °C [max]

CERTIFICATION



OPERATION



Thermostatic-anti-condensation group - Blumut Compact

Code	Model	Description	Size	Pack	Packaging
7.030.01495	BLUMUT COMPACT	Blumut filling unit Compact 50° (EX- UE Markets)	1"	1	1
7.030.01461	BLUMUT COMPACT	Blumut filling unit Compact 55° (EX- UE Markets)	1"	1	1
7.030.01496	BLUMUT COMPACT	Blumut filling unit Compact 63° (EX- UE Markets)	1"	1	1
7.030.01497	BLUMUT COMPACT	Blumut filling unit Compact 72° (EX- UE Markets)	1"	1	1
7.030.01498	BLUMUT COMPACT	Blumut filling unit Compact 78° (EX- UE Markets)	1"	1	1



7.030.02016	BLUMUT COMPACT HE	Blumut Compact HE 50 °C unit	1"	1	1
7.030.02017	BLUMUT COMPACT HE	Blumut Compact HE 55 °C unit	1"	1	1
7.030.02018	BLUMUT COMPACT HE	Blumut Compact HE 63 °C unit	1"	1	1
7.030.02019	BLUMUT COMPACT HE	Blumut Compact HE 72 °C unit	1"	1	1
7.030.02020	BLUMUT COMPACT HE	Blumut Compact HE 78 °C unit	1"	1	1



Blumut Compact temperature kit accessories

Code	Description	Pack	Packaging
7.030.01488	Blumut thermostatic element Compact 50°	1	1
7.030.01489	Blumut thermostatic element Compact 55°	1	1
7.030.01490	Blumut thermostatic element Compact 63°	1	1
7.030.01491	Blumut thermostatic element Compact 72°	1	1
7.030.01492	Blumut thermostatic element Compact 78°	1	1
7.030.01493	Blumut thermostatic element Compact 83°	1	1
7.030.01494	Blumut thermostatic element Compact 87°	1	1



7.030.01903	Thermometer for Blumut Compact	1	10
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Ball valve for pump

Code	Description	Size	Pack	Packaging
7.030.01357	Ball valve for pump	2"x1"1/4"	1	2
7.030.01358	Ball valve for pump	2"x1"	1	2
7.030.01499	Blumut Compact ball valve	1"1/2x1"	1	2



Minimum order 2 pcs.

* If requested all Blumuts can be supplied with insulation and have G 1 ball valves

Mixing-diverting thermostatic valves



106 TDS 3000



108 RA SERIES



109 RAJ



110 KIT SOLAR

Zone valves



103/105 VMR SERIES
with shutoff



106/108 SF SERIES
spring return

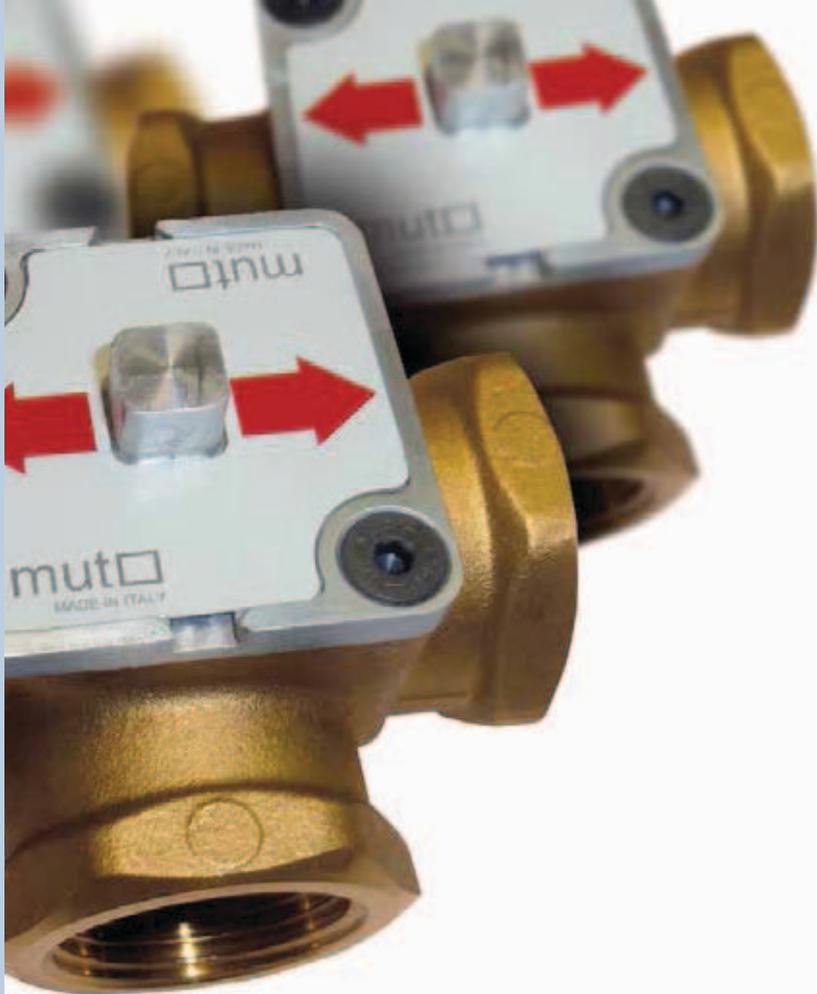
TDS 3000 SERIES

Diverting thermostatic valves for Solar

TDS 3000 diverter valve is applied in heating systems (especially in solar thermal heating systems), in all those situations when the fluid flow has to be deviated according to its temperature, allowing a correct and precise temperature control according to circuit design specifications or requirements.

TDS 3000 valves are available in 3 sizes (G ¾", G 1" , G 1 ¼").

The thermostatic diverter valve TDS 3000 does not have electric/electronic devices, with great benefits on function reliability and easy system installation. The single-piece cartridge lid allows a quick and easy replacement of the thermostat. Operation temperature range: 5 - 110 °C. Max operation pressure: 10 bar.



TECHNICAL DATA



Type of movement
Thermostatic



Nominal pressure
10 bar



Fl temperature limits
5 ÷ 110 °C [max]

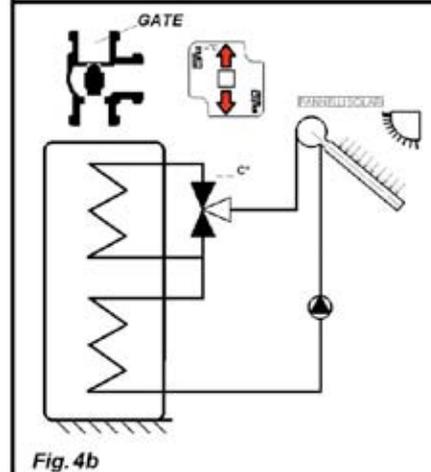
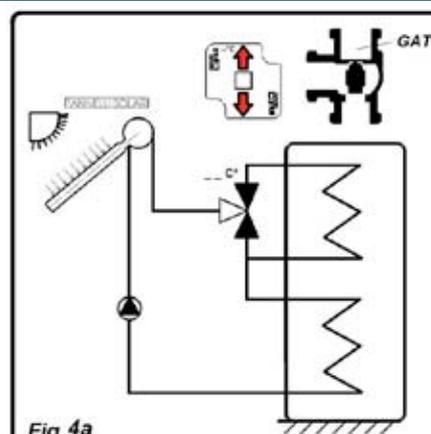


Settable opening temperature values
45 °C ÷ 50 °C ÷ 55 °C ÷ 63 °C ÷ 72 °C ÷ 78 °C

CERTIFICATION



OPERATION



Diverting thermostatic valves for Solar - TDS 3000 Series

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.02147	TDS 3000	Solar diverting valve TDS 3000 - G 3/4 - 45 °C	3/4"	10	8	1	5
7.030.02148	TDS 3000	Solar diverting valve TDS 3000 - G 1 - 45 °C	1"	10	9	1	5
7.030.02149	TDS 3000	Solar diverting valve TDS 3000 - G 1 1/4 - 45°C	1 1/4"	10	10	1	5
7.030.02150	TDS 3000	Solar diverting valve TDS 3000 - G 3/4 - 50 °C	3/4"	10	8	1	5
7.030.02151	TDS 3000	Solar diverting valve TDS 3000 - G 1 - 50 °C	1"	10	9	1	5
7.030.02152	TDS 3000	Solar diverting valve TDS 3000 - G1 1/4 - 50 °C	1 1/4"	10	10	1	5
7.030.02116	TDS 3000	Solar diverting valve TDS 3000 - G 3/4 - 55 °C	3/4"	10	8	1	5
7.030.02125	TDS 3000	Solar diverting valve TDS 3000 - G 3/4 - 50 °C	1"	10	9	1	5
7.030.02126	TDS 3000	Solar diverting valve TDS 3000 - G 1/4 - 55 °C	1 1/4"	10	10	1	5
7.030.02153	TDS 3000	Solar diverting valve TDS 3000 - G 3/4 - 63 °C	3/4"	10	8	1	5
7.030.02154	TDS 3000	Solar diverting valve TDS 3000 - G 1 - 63 °C	1"	10	9	1	5
7.030.02155	TDS 3000	Solar diverting valve TDS 3000 - G 1 1/4 - 63°C	1 1/4"	10	10	1	5
7.030.02156	TDS 3000	Solar diverting valve TDS 3000 - G 3/4 - 72 °C	3/4"	10	8	1	5
7.030.02157	TDS 3000	Solar diverting valve TDS 3000 - G 1 - 72 °C	1"	10	9	1	5
7.030.02158	TDS 3000	Solar diverting valve TDS 3000 - G 1 1/4 - 72 °C	1 1/4"	10	10	1	5
7.030.02159	TDS 3000	Solar diverting valve TDS 3000 - G 3/4 - 78 °C	3/4"	10	8	1	5
7.030.02160	TDS 3000	Solar diverting valve TDS 3000 - G 1 - 78 °C	1"	10	9	1	5
7.030.02161	TDS 3000	Solar diverting valve TDS 3000 - G 1 1/4 - 78 °C	1 1/4"	10	10	1	5



Accessories for TDS 3000

Code	Model	Description	Pack	Packaging
7.030.02163	cartridge kit	Cartridge kit TDS 3000 - 45 °C	1	1
7.030.02164	cartridge kit	Cartridge kit TDS 3000 - 50 °C	1	1
7.030.02128	cartridge kit	Cartridge kit TDS 3000 - 55 °C	1	1
7.030.02165	cartridge kit	Cartridge kit TDS 3000 - 63 °C	1	1
7.030.02166	cartridge kit	Cartridge kit TDS 3000 - 72 °C	1	1
7.030.02167	cartridge kit	Cartridge kit TDS 3000 - 78 °C	1	1
7.030.02209	Kit guscio	Shell insulation kit V3000 3 Vie TM - TD3000	1	1



RA SERIES

thermostatic mixer valves

The RA thermostatic mixing valves are used in hot water systems for sanitary use. They keep the temperature of the mixed water supplied to the user constant even when the conditions listed below vary:

- Temperature
- Supply pressure
- Incoming hot and cold water flow

The RA thermostatic mixing valves have a temperature range that is ideal for heating a centralised water system with heater. They also have an internal anti-limestone lining.



CERTIFICATION



TECHNICAL DATA



Type of movement
Thermostatic



Max. ratio between input pressures (H/C or C/H)
2:1



Nominal pressure
PN10



Fl temperature limits
120 °C [max]



Fl adjustment field at output (mix)
30 ÷ 60 °C [precision ±2 °C]

Thermostatic valve - RA series

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01124	TWR-RA 15 E solar	Adjustable thermostat mixer valve DN 15 M - 30/60 °C with pipe connections	1/2"	10	1,7	1	5
7.030.01123	TWR-RA 20 E solar	Adjustable thermostat mixer valve DN 20 M - 30/60 °C with pipe connections	3/4"	10	1,7	1	5
7.030.01122	TWR-RA 25 E solar	Adjustable thermostat mixer valve DN 25 M - 30/60 °C	1"	10	1,7	1	5



RAJ SERIES

thermostatic mixer valves

The RAJ thermostatic mixing valves are applied in hot water sanitary systems production and distribution to users.

They guarantee a constant temperature (according to temperature set point value) of the mixed water to the users, even when the following conditions vary:

- temperature of water flows before mixing (incoming hot and cold water flows)
- Supply pressure
- Flow rates of incoming hot and cold water

The thermostatic mixing valves RAJ have a temperature range (adjustable), suitable for central water heating systems. The valve is provided as standard with a thermal insulating shell to reduce heat loss and avoid burns. The adjustable thermostatic mixing valves Raj are available in 3 sizes (G 1 1/4", G 1 1/2", G 2") . Max hot water temperature inlet: 110 °C. Max working pressure (static): 14 bar.



CERTIFICATION



TECHNICAL DATA



Type of movement
Thermostat



Max. ratio between input pressures (H/C or C/H)
2 : 1



Fl temperature limits
5 ÷ 110 °C [max]



Fl adjustment range at output (mix)
RAJ (R 1 1/4"): 30 ÷ 65 °C - RAJ (R 1 1/2"; R 2"): 35 ÷ 65 °C
[precision: ±2 °C]

Thermostatic valve - RAJ series

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.01732	TWR-RAJ	Thermostatic radiator valve with nuts and connections of R 1" 1/4 solar	R1" 1/4	14	9,1	1	1
7.030.01731	TWR-RAJ	Thermostatic radiator valve with nuts and connections of R 1" 1/2 solar	R1" 1/2	14	14,5	1	1
7.030.01730	TWR-RAJ	Thermostatic radiator valve with nuts and connections of R 2" solar	R2"	14	19	1	1



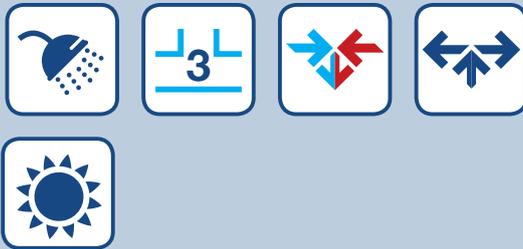
Accessories for RAJ series

Code	Model	Description	Pack	Packaging
7.030.01744	kit cartuccia	Cartridge kit for RAJ thermostatic radiator valve R 2" and R 1" 1/2	1	1
7.030.01745	kit cartuccia	Cartridge kit for RAJ thermostatic radiator valve R 1" 1/4	1	1



SOLAR KIT

Offers double operation in a compact and efficient manner using thermostatic components only. This makes it completely independent, and makes installation much easier. The kit is made up of two thermostatic devices and a T connecting collector. If the water that enters from the solar collector is not hot enough, it is diverted towards a heater (e.g. wall heater) by the thermostatic shunt valve, and is mixed to the temperature required by the thermostatic mixer when it exits hot from the heater. If the water entering from the solar collector is warm enough, it is diverted towards the thermostatic mixer and directly mixed for use. Solar energy is used efficiently.



CERTIFICATION



TECHNICAL DATA



Type of movement
Thermostatic



Nominal pressure
10 bar



Fl temperature limits
5 ÷ 120 °C [max]



Settable opening temperature values
45 °C ÷ 50 °C ÷ 55 °C ÷ 63 °C ÷ 72 °C ÷ 78 °C

Solar kit

Code	Description	Pack	Packaging
7.030.01195	Thermal solar kit	1	1
7.030.01633	Thermal solar kit with G 3/4 (45/55°C)(30/60°C) connections	1	1
7.030.01634	Thermal solar kit with G 1 (45/55°C)(30/60°C) connections	1	1
7.030.02113	Motorized solar kit with ball valve mod. TMO	1	1
7.030.01609	Motorized thermal solar kit with G 1 230 V (45/55°C) connections	1	1



VMR SERIES

zone valves with shutoff

VMR valves are motorized valves used in home applications and small installations to control the flow of hot and cold water. They can be connected as deviator or mixer valves in central heating or cooling systems.

TECHNICAL DATA



Type of movement
SPDT, SPST, 3 points according to the model



Max. differential pressure
392 kPa



Nominal pressure
PN10



Insulation class
I Ref. European Directive EN 60730



Protection rating
IP 40 Ref. European Directive IEC EN60529



Way commutation time
6 sec.



Way commutation time
6 sec.



Fl temperature limits
5 ÷ 120 °C [max]



VMR 2-WAY



VMR 3-WAY

CERTIFICATION



2-way click-clock zone valves - VMR series

Bipolar external electric control - SPDT *¹ *²

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.00451	VMR 15-2 SPDT CR M1S	2-way valve - 230 V - Female gas union - with fast coupling - no cable - with auxiliary micro - for high temperatures	1/2"	10	3,0	1	5
7.030.00452	VMR 20-2 SPDT CR M1S	2-way valve - 230 V - Female gas union - with fast coupling - no cable - with auxiliary micro - for high temperatures	3/4"	10	5,3	1	5
7.030.00453	VMR 25-2 SPDT CR M1S	2-way valve - 230 V - Female gas union - with fast coupling - no cable - with auxiliary micro - for high temperatures	1"	10	6,0	1	5



7.030.00454	VMR 20-2E SPDT CR M1S	2-way valve - 230 V - Male gas union - with fast coupling - no cable - with auxiliary micro - for high temperatures	3/4"	10	5,3	1	5
7.030.00455	VMR 25-2E SPDT CR M1S	2-way valve - 230 V - Male gas union - with fast coupling - no cable - with auxiliary micro - for high temperatures	1"	10	6,0	1	5



7.030.00456	VMR 22-2EB SPDT CR M1S	2-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipes- complete with nuts - ferrules - for high temperatures	22 mm	10	5,3	1	5
7.030.00457	VMR 28-2B SPDT CR M1S	2-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipes- complete with nuts - ferrules - for high temperatures	28 mm	10	6,0	1	5



2-way click-clock zone valves - VMR series

Unipolar external electric control - SPST (with built-in relay)

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.00458	VMR 15-2 SPDT CR M1S	2-way valve - 230 V - Female gas union - with fast coupling - no cable - with auxiliary micro - for high temperatures	1/2"	10	3,0	1	5
7.030.00459	VMR 20-2 SPDT CR M1S	2-way valve - 230 V - Female gas union - with fast coupling - no cable - with auxiliary micro - for high temperatures	3/4"	10	5,3	1	5
7.030.00460	VMR 25-2 SPDT CR M1S	2-way valve - 230 V - Female gas union - with fast coupling - no cable - with auxiliary micro - for high temperatures	1"	10	6,0	1	5



7.030.00461	VMR 20-2E SPST CR M1S	2-way valve - 230 V - Male gas union - with fast coupling - no cable - with auxiliary micro - for high temperatures	3/4"	10	5,3	1	5
7.030.00462	VMR 25-2E SPST CR M1S	2-way valve - 230 V - Male gas union - with fast coupling - no cable - with auxiliary micro - for high temperatures	1"	10	6,0	1	5



7.030.00463	VMR 22-2EB SPST CR M1S	2-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipes- complete with nuts - ferrules - for high temperatures	22 mm	10	5,3	1	5
7.030.00464	VMR 28-2B SPST CR M1S	2-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipes- complete with nuts - ferrules - for high temperatures	28 mm	10	6,0	1	5



7.030.00476	KIT VMR	Shutoff set for 2-way valves - for high temperatures				1	5
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*¹ All the SF and SFC series valves can be supplied with a 24 V motor

*² All the VMR series valves can be supplied with a fi cable (refer to MUT for the codes)

3-way click-clock zone valves - VMR series

Bipolar external electric control - SPDT* *1 *2

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.00439	VMR 15 SPDT CR M1S	3-way valve - 230 V - Female gas connections - with fast coupling - no cable - with auxiliary micro - for high temperatures	1/2"	10	3,5	1	5
7.030.00440	VMR 20 SPDT CR M1S	3-way valve - 230 V - Female gas connections - with fast coupling - no cable - with auxiliary micro - for high temperatures.	3/4"	10	7,0	1	5
7.030.00441	VMR 25 SPDT CR M1S	3-way valve - 230 V - Female gas connections - with fast coupling - no cable - with auxiliary micro - for high temperatures	1"	10	8,0	1	5



7.030.00442	VMR 20E SPDT CR M1S	3 way valve - 230 V - Male Gas connections - with quick connector - no cable - with auxiliary micro - for high temps.	3/4"	10	7,0	1	5
7.030.00443	VMR 25E SPDT CR M1S	3 way valve - 230 V - Male Gas connections - with quick connector - no cable - with auxiliary micro - for high temps	1"	10	8,0	1	5



7.030.00467	VMR 22EB SPDT CR M1S	3-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipes- complete with nuts - ferrules - for high temperatures	22 mm	10	7,0	1	5
7.030.00444	VMR 28B SPDT CR M1S	3-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipes- complete with nuts - ferrules - for high temperatures	28 mm	10	8,0	1	5



3-way click-clock zone valves - VMR series

Unipolar external electric control - SPST (with built-in relay)

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.00445	VMR 15 SPST CR M1S	3-way valve - 230 V - Female gas connections - with fast coupling - no cable - with auxiliary micro - for high temps.	1/2"	10	3,5	1	5
7.030.00446	VMR 20 SPST CR M1S	3-way valve - 230 V - Female gas connections - with fast coupling - no cable - with auxiliary micro - for high temps.	3/4"	10	7,0	1	5
7.030.00447	VMR 25 SPST CR M1S	3-way valve - 230 V - Female gas connections - with fast coupling - no cable - with auxiliary micro - for high temps.	1"	10	8,0	1	5



7.030.00448	VMR 20E SPST CR M1S	3-way valve - 230 V - Male gas connections - with fast coupling - no cable - with auxiliary micro - for high temps.	3/4"	10	7,0	1	5
7.030.00449	VMR 25E SPST CR M1S	3-way valve - 230 V - Male gas connections - with fast coupling - no cable - with auxiliary micro - for high temps.	1"	10	8,0	1	5



7.030.00466	VMR 22EB SPST CR M1S	3-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipe - complete with nuts - ferrules - for high temperatures	22 mm	10	7,0	1	5
7.030.00450	VMR 28B SPST CR M1S	3-way valve - 230 V - with fast coupling - no cable - with auxiliary micro - with connections for copper pipe - complete with nuts - ferrules - for high temperatures	28 mm	10	8,0	1	5



7.030.00475	KIT VMR	Shutoff set for 3-way valves - for high temperatures				1	5
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*1 All the VMR series valves can be supplied with a 24 V motor

*2 All the VMR series valves can be supplied with fl cable (refer to MUT for codes)

SF SERIES

zone valves
with spring return

These are powered by an electric motor and can assume two operating positions depending on whether the motor is activated or not. One or two auxiliary switches can be installed on request. These are activated when the valve switches.

The valves are equipped with an external lever for manual positioning of the shut-off ball in a central position.

TECHNICAL DATA



Type of movement
Spring return



Max. differential pressure
90.2 kPa



Nominal pressure
PN10



Insulation class
III Ref. European Directive EN60730



Protection rating
IP 22 Ref. European Directive IEC EN60529



Way commutation time
10 sec.



Way commutation time
4 sec.



Fl temperature limits
5 ÷ 120 °C [max]



Cable length
1000 mm



SF 2-WAY



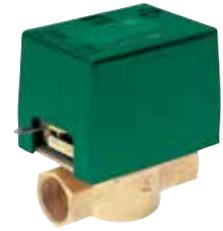
SF 3-WAY

CERTIFICATION



SF series 2-way zone valves *

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.00422	SF 15-2 M1	2-way valve - 230 V - Female gas connections with auxiliary micro - for high temperatures	1/2"	10	6,0	1	5
7.030.00423	SF 20-2 M1	2-way valve - 230 V - Female gas connections with auxiliary micro - for high temperatures	3/4"	10	8,0	1	5
7.030.00424	SF 25-2 M1	2-way valve - 230 V - Female gas connections with auxiliary micro - for high temperatures	1"	10	10	1	5



7.030.00425	SF 15-2 E M1	2-way valve - 230 V - Male gas connections with auxiliary micro - for high temperatures	1/2"	10	6,0	1	5
7.030.00426	SF 20-2 E M1	2-way valve - 230 V - Male gas connections with auxiliary micro - for high temperatures	3/4"	10	8,0	1	5
7.030.00427	SF 25-2 E M1	2-way valve - 230 V - Male gas connections with auxiliary micro - for high temperatures	1"	10	10	1	5



7.030.00428	SF 15-2 EB M1	2-way valve - 230 V - connections for copper pipe with auxiliary micro - complete with nuts - ferrules for high temperatures	15 mm	10	6,0	1	5
7.030.00429	SF 16-2 EB M1	2-way valve - 230 V - connections for copper pipe with auxiliary micro - complete with nuts - ferrules for high temperatures	16 mm	10	6,0	1	5
7.030.00430	SF 20-2 EB M1	2-way valve - 230 V - connections for copper pipe with auxiliary micro - complete with nuts - ferrules for high temperatures	22 mm	10	8,0	1	5
7.030.00431	SF 25-2 B M1	2-way valve - 230 V - connections for copper pipe with auxiliary micro - complete with nuts - ferrules for high temperatures	28 mm	10	10	1	5



7.030.00420	SF BASE M1	2-way valve - 230 V - complete with flanges with auxiliary micros - for high temperatures	1" 1/4	10	12,6	1	5
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* All the valves in the SF and SFC series can be supplied with 24 V and 110 V motors (please contact MUT for codes)

SF series 3-way zone valves *

Code	Model	Description	Size	PN	KVS	Pack	Packaging
7.030.00410	SF 15 M1	3-way valve- 230 V - Female gas union with auxiliary micro - for high temperatures	1/2"	10	6,6	1	5
7.030.00411	SF 20 M1	3-way valve- 230 V - Female gas union with auxiliary micro - for high temperatures	3/4"	10	8,0	1	5
7.030.00387	SF 25 M1	3-way valve- 230 V - Female gas union with auxiliary micro - for high temperatures	1"	10	12,6	1	5



7.030.00412	SF 15 E M1	3-way valve- 230 V - Male gas union with auxiliary micro - for high temperatures	1/2"	10	6,6	1	5
7.030.00413	SF 20 E M1	3-way valve- 230 V - Male gas union with auxiliary micro - for high temperatures	3/4"	10	8,0	1	5
7.030.00414	SF 25 E M1	3-way valve- 230 V - Male gas union with auxiliary micro - for high temperatures	1"	10	12,6	1	5

7.030.00415	SF 15 EB M1	3-way valve - 230 V - connections for copper pipe with auxiliary micros - complete with nuts - ferrules - for high temperatures	15 mm	10	6,6	1	5
7.030.00416	SF 16 EB M1	3-way valve - 230 V - connections for copper pipe with auxiliary micros - complete with nuts - ferrules - for high temperatures	16 mm	10	6,6	1	5
7.030.00417	SF 20 EB M1	3-way valve - 230 V - connections for copper pipe with auxiliary micros - complete with nuts - ferrules - for high temperatures	22 mm	10	8,0	1	5
7.030.00418	SF 25 B M1	3-way valve - 230 V - connections for copper pipe with auxiliary micros - complete with nuts - ferrules - for high temperatures	28 mm	10	12,6	1	5



7.030.00419	SF BASE M1	3-way valve - 230 V - connections prepared for flanges with auxiliary micros - for high temperatures		10	12,6	1	5
7.030.00421	SF BASE M1	3-way valve - 230 V - complete with flanges with auxiliary micros - for high temperatures	1" 1/4	10	12,6	1	5



SF valve accessories

Code	Description	Size	Pack	Packaging
7.030.00471	Mount for 3-way valve - 230 V with auxiliary micro - for high temperatures	1/2"-3/4"	1	5
7.030.00472	Mount for 3-way valve - 230 V with auxiliary micro - for high temperatures	1"	1	5
7.030.00473	Mount for 2-way valve - 230 V with auxiliary micro - for high temperatures	1/2"-3/4"	1	5
7.030.00474	Mount for 2-way Basic SF and SFC valves 230 V with auxiliary micro - for high temperatures	1"	1	5



* All the valves in the SF and SFC series can be supplied with 24 V and 110 V motors (please contact MUT)

motor-valve compatibility table

	MOTORS									
	AS 1400	AS 800	AS 250	M 1000	V 200	V 70	ARM	V3EC	V3	MR
MK SERIES (range from G 1/2 to G2)		✓ pagee 30	✓ page 30							
MK SERIES (range from DN50 to DN80)	✓ page 32	✓ page 30								
MK SERIES (range from DN100 tio DN150)	✓ page 32									
VM/VF 1000 SERIES (range from DN20 to DN50)					✓ page 46					
VM/VF 1000 SERIES (range from DN65 to DN125)				✓ page 46						
VM/VDM 2000 SERIES					✓ page 46					
VM/VDM 3000 SERIES						✓ page 46				
VMX-H SERIES						✓ page 46				
VDE/MR SERIES										✓ page 14
VMR SERIES										✓ page 14
VPR SERIES (stroke 2.5 mm)							✓ page 35	✓ page 35	✓ page 35	
VPR SERIES (stroke 6 mm)									✓ page 35	
FV3-V3B SERIES								✓ page 66	✓ page 66	
F2V SERIES								✓ page 66	✓ page 66	

VALVES

Note

