

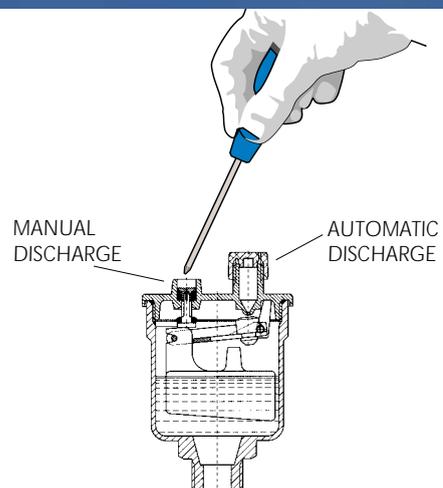
AUTOMATIC AIR VENT VALVES MANUAL VALVES FOR DISCHARGING AIR FROM RADIATORS



MAIN FEATURES

ADVANTAGE OF BUILT-IN MANUAL DISCHARGE

- Provision for controlling operation of the automatic discharge by pressing the manual discharge pin.
- By holding down the manual discharge, water flows through the orifice thus facilitating cleaning of the automatic discharge mechanism.
- Rapid venting of air when filling the system.



DESCRIPTION

The **MAXIVENT** valves are inspectable thanks to the opening left by the cover after unscrewing it from the tank; therefore it is also possible to clean the internal parts (float and lever) in case of ingress of foreign matter in the valve. Tight seal between the tank and cover is thanks to the presence of an **NBR** rubber seal.

Long-term efficiency and performance of the vent movement is ensured by the valve design features. The seal system is designed to withstand vibrations, therefore it is unaffected by any external vibrations.

APPLICATION

Thanks to its particular size, the **MAXIVENT** valve finds application of automatic venting of air in large size water distribution pipes (e.g. distribution manifolds in the central system) and in all cases where it is necessary to eliminate large quantities of air from the system. The **MAXIVENT** valve is provided with manual air vent.

OPERATION

Valve opening and closing is determined by the float movement (up-down).

When there is air in the **MAXIVENT**, the force of the float weight acts on the lever which is integral with the plug, thus causing it to move down. In such situation the seat is free and allows the air to be vented outside.

When filling the system with water, the air entrapped in the water circuit is pushed towards the outside via the **MAXIVENT** valve. As soon as all the entrapped air is discharged, the water, entering the tank, pushes the float up. Consequently the lever moves the plug to press against the seat thus ensuring tight sealing of the system.

INSTALLATION

The **MAXIVENT** valve is normally installed:

- In the highest point of the air separator
- At the top of the columns installed in heating systems with expansion vessel
- In all points where there is risk of air building up
- At the top of the manifolds.

After installation, in order to allow perfect air venting, unscrew the protective cap by at least two turns (such condition ensures the vent characteristics as given in the previous diagram).

MAINTENANCE

Normally the **MAXIVENT** valve does not require routine maintenance.



MXV

MAXIVENT.
Large capacity automatic air vent valve.

Part No.

0253020
0253025
0253032

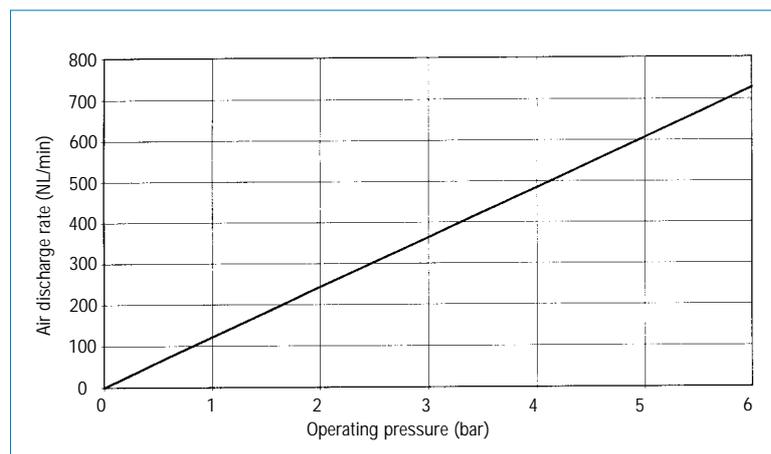
Size

3/4"
1"
1.1/4"

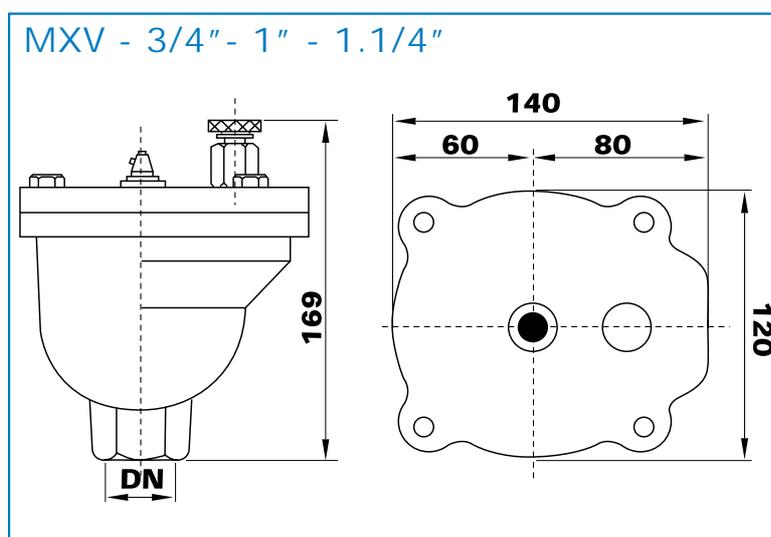
DESIGN FEATURES

Body	Cast iron G25 entirely coated with epoxy resin
Cover	Cast iron G25 entirely coated with epoxy resin
Manual vent valve	Chrome-plated brass OT 58
Lever	Stainless steel
Plug	NBR rubber
Float	High density expanded polyethylene
Seals	NBR rubber
Cap	Brass OT 58
Inlet connection	F 3/4" - 1" - 1 1/4" DIN-ISO 228/1
Outlet connection	F 3/8" DIN-ISO 228/1, brass

Air discharge rate - Operating pressure



Overall dimensions (mm)



TECHNICAL CHARACTERISTICS

Max. discharge pressure	6 bar
Max. operating pressure	12 bar
Min. seal pressure	0.1 bar
Max. operating temperature	115°C

DESCRIPTION

The **DUOVENT** valves are inspectable by unscrewing the cover from the tank.

Tight seal between the tank and cover is thanks to the presence of an O-ring; therefore it is also possible to clean the internal parts (float and lever) in case of ingress of foreign matter in the valve. Long-term efficiency and performance of the vent movement is ensured by the valve design features. The seal system is designed to withstand vibrations, therefore it is unaffected by any external vibrations.

APPLICATION

The **DUOVENT** valve is a development on the automatic **MINIVENT** valve. In fact **DUOVENT** has the same functions as **MINIVENT**, i.e. it is used for automatic venting of air in water distribution pipes in order to avoid certain phenomena of damage (corrosion processes, cavitation) and loss of efficiency (air pockets in radiators) of the heating system, but it is provided with an additional device allowing manual air venting. The manual air vent device offers the following advantages:

- It allows checking the valve for correct operation
- It allows reducing times for discharging air from the system by increasing the discharge flow rate
- Easier cleaning of the orifice by forcing water to flow through it.

The **DUOVENT MVDR** valve is provided with an automatic shut-off valve (**Art. RIA**) which allows removal of the vent valve without having to empty the system.

OPERATION

During automatic operation, valve opening and closing is determined by the float movement (up-down). When there is air in the **DUOVENT**, the force of the float weight acts on the lever which is integral with the plug, thus causing it to move down.

In such situation the seat is free and allows the air to be vented outside. When filling the system with water, the air entrapped in the water circuit is pushed towards the outside via the **DUOVENT** valve.

As soon as all the entrapped air is discharged, the water, entering the tank, pushes the float up. Consequently the lever moves the plug to press against the seat thus ensuring tight sealing of the system.

Manual venting is actuated by pushing down button (10); this can be done by exerting a pressure on the surface, for example with a screw driver. Such operation shifts head (9) integral with O-ring (12) to a position lower than the seat, thus allowing air and/or water to flow along stem. When water flows both from orifice (A) and (B), this indicates that all the air has been discharged from the system.

TECHNICAL CHARACTERISTICS

Nominal pressure	12 bar
Max. operating pressure	8 bar
Max. operating temperature	115°C



MVD

DUOVENT.
Valve with double possibility of venting air from the system, either automatically or manually.
The manual discharge also allows checking for correct operation and cleaning the automatic discharge orifice.

Part No.

0250608
0250610
0250615

Size

1/4"
3/8"
1/2"



MVDR

Like MVD but with automatic shut-off valve RIA.

Part No.

0250708
0250710
0250715

Size

1/4"
3/8"
1/2"

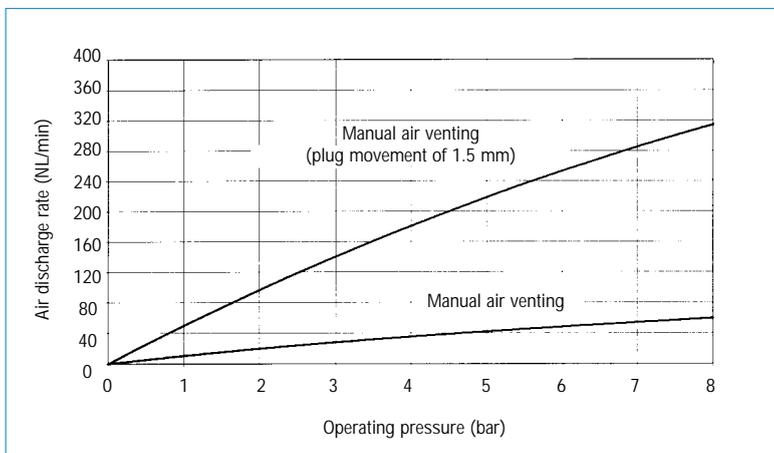
DESIGN FEATURES

Body	Brass OT 58
Cover	Brass OT 58
Plug	EPDM rubber
Spring	Stainless steel
Cap	Polyamide
Lever	Polyacetal
Float	High density expanded polyethylene
Seals	NBR rubber
Plug head	Polyacetal
Plug button	Polyacetal
Spring	Stainless steel
Connections	M 1/4" - 3/8" - 1/2" DIN - ISO 228/1

Air discharge rate - Operating pressure

(comparison between manual and automatic venting)

The automatic venting characteristics are similar to **MINIVENT**. The following diagram shows the automatic and manual venting curves in relation to pressure, assuming a manual plug movement of 1.5 mm. It is clear that the manual venting allows an appreciable increasing in the discharge rate of **DUOVENT**.



INSTALLATION

The **DUOVENT** valve is normally installed:

- In the highest point of the air separator
- At the top of the columns installed in heating systems with expansion vessel
- In all points where there is risk of air building up

In order to ensure maximum air venting efficiency, it is advisable to install the **DUOVENT** valve in those points where water speed is relatively low.

After installation, in order to allow perfect air venting, unscrew the protective cap by at least two turns (such condition ensures the vent characteristics as given in the previous diagram).

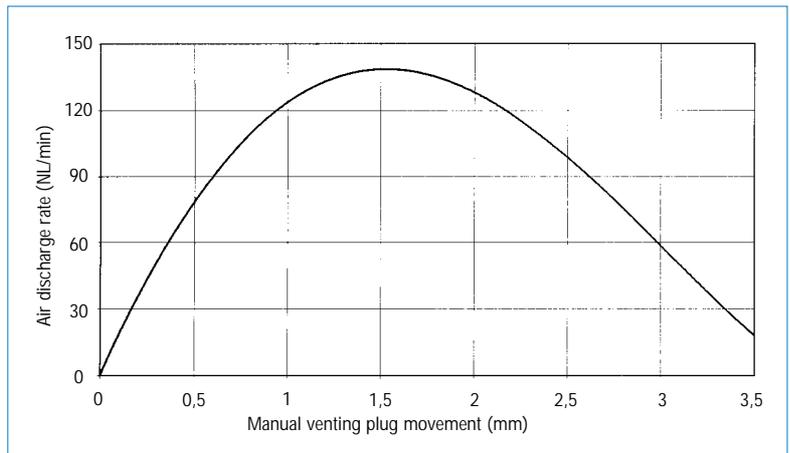
MAINTENANCE

Normally the **DUOVENT** valve does not require maintenance. If maintenance is required, remove the valve; the presence of shut-off valve RIA allows this operation without emptying the system.

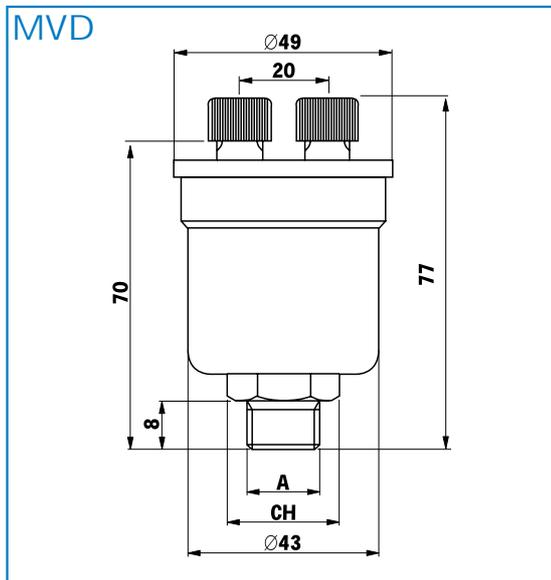
Air discharge rate - Operating pressure

(Pressure equal to 3 bar)

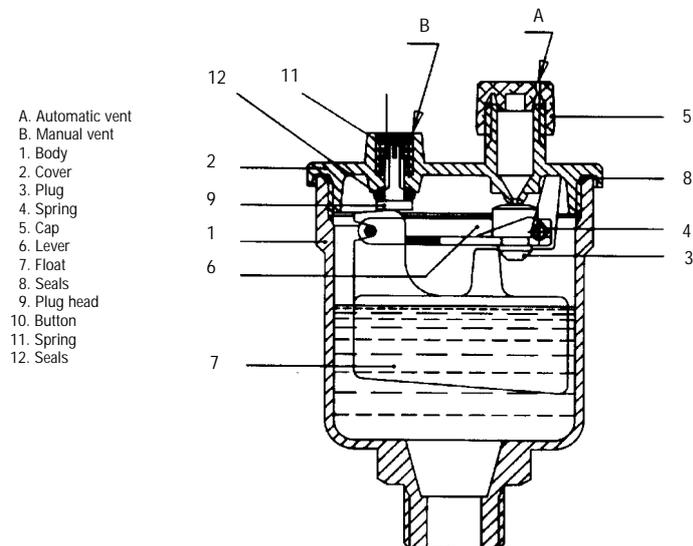
The flow rate in manual air venting varies according to the down movement of the plug, as shown in the following diagram, at a system pressure of 3 bar.



Overall dimensions (mm)



SIZE	CH
1/4"	19
3/8"	19
1/2"	22



DESCRIPTION

The **MINIVENT** valves are inspectable by unscrewing the cover from the tank. Tight seal between the tank and cover is thanks to the presence of an O-ring; therefore it is also possible to clean the internal parts (float and lever) in case of ingress of foreign matter in the valve. Long-term efficiency and performance of the vent movement is ensured by the valve design features. The seal system is designed to withstand vibrations, therefore it is unaffected by any external vibrations.

APPLICATION

The **MINIVENT** valve is used for automatic venting of air in water distribution pipes in order to avoid certain phenomena of damage (corrosion processes, cavitation) and loss of efficiency (air pockets in radiators) of the heating system.

The **MINIVENT MVR** valve is provided with an automatic shut-off valve (**Art. RIA**) which allows the vent valve to be removed without having to empty the system.

The **MINIVENT** valve is used in independent, central, radiant panel heating systems, etc.

OPERATION

Valve opening and closing is determined by the float movement (up-down). When there is air in the **MINIVENT**, the force of the float weight acts on the lever which is integral with the plug, thus causing it to move down. In such situation the seat is free and allows the air to be vented outside. When filling the system with water, the air entrapped in the water circuit is pushed towards the outside via the **MINIVENT** valve. As soon as all the entrapped air is discharged, the water, entering the tank, pushes the float up. Consequently the lever moves the plug to press against the seat thus ensuring tight sealing of the system.

INSTALLATION

The **MINIVENT** valve is normally installed:

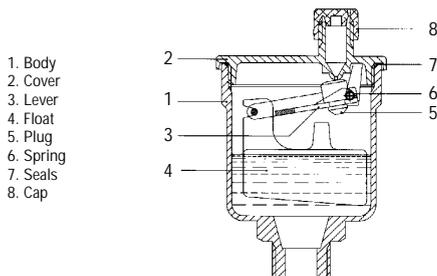
- In the highest point of the air separator
- At the top of the columns installed in heating systems with expansion vessel
- In all points where there is risk of air building up

In order to ensure maximum air venting efficiency, it is advisable to install the **MINIVENT** valve in those points where water speed is relatively low.

After installation, in order to allow perfect air venting, unscrew the protective cap by at least two turns (such condition ensures the vent characteristics as given in the previous diagram).

MAINTENANCE

Normally the **MINIVENT** valve does not require maintenance. If maintenance is required, remove the valve; the presence of shut-off valve **Art. RIA** allows this operation without emptying the system.



MV

MINIVENT.
Automatic valve with vertical air vent.

Part No.

0250008
0250010
0250215

Size

1/4"
3/8"
1/2"



MVR

Like MV but with automatic shut-off valve RIA.

Part No.

0250108
0250110
0250115

Size

1/4"
3/8"
1/2"

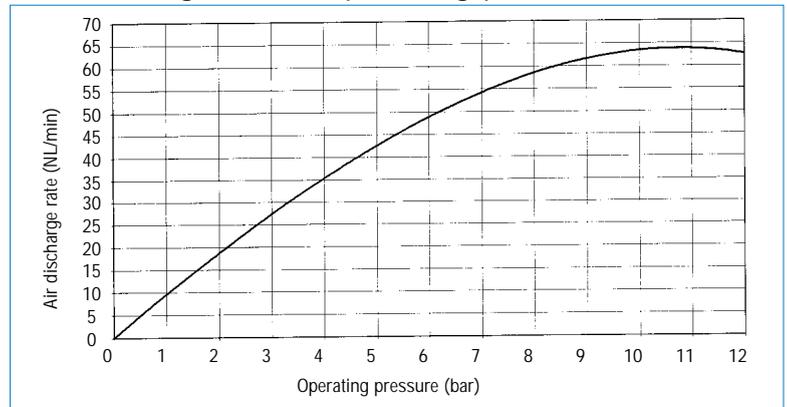
DESIGN FEATURES

Body	Brass OT 58
Cover	Brass OT 58
Lever	Polyacetal
Float	High density expanded polyethylene
Plug	EPDM rubber
Spring	Stainless steel
Seals	NBR rubber
Cap	Polyamide
Connections	M 1/4" - 3/8" - 1/2" DIN-ISO 228/1

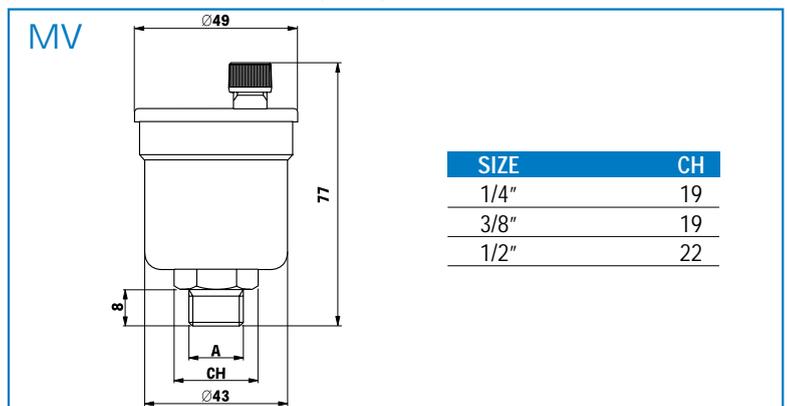
TECHNICAL CHARACTERISTICS

Max. operating pressure	12 bar
Max. operating temperature	115°C

Air discharge rate - Operating pressure



Overall dimensions (mm)



DESCRIPTION

The **MICROVENT** valves are inspectable by unscrewing the cover from the tank. Tight seal between the tank and cover is thanks to the presence of an O-ring; therefore it is also possible to clean the internal parts (float and lever) in case of ingress of foreign matter in the valve. Long-term efficiency and performance of the vent movement is ensured by the valve design features. The seal system is designed to withstand vibrations, therefore it is unaffected by any external vibrations.

The **MICROVENT** valve is provided with a vacuum breaker tongue (close to the connection) designed for improving the air venting characteristics.

However such vacuum breaker tongue is not fitted when the **MICROVENT** valve is supplied with shut-off valve which already incorporates the tongue.

APPLICATION

The **MICROVENT** valve is used for automatic venting of air in water distribution pipes in order to avoid certain phenomena of damage (corrosion processes, cavitation) and loss of efficiency (air pockets in radiators) of the heating system.

The **MICROVENT MKVR** and **MKLR** valves are provided with an automatic shut-off valve (**Art. RIA**) which allows the vent valve to be removed without having to empty the system.

OPERATION

Valve opening and closing is determined by the float movement (up-down).

When there is air in the **MICROVENT**, the force of the float weight acts on the lever which is integral with the plug, thus causing it to move down. In such situation the seat is free and allows the air to be vented outside.

When filling the system with water, the air entrapped in the water circuit is pushed towards the outside via the **MICROVENT** valve. As soon as all the entrapped air is discharged, the water, entering the tank, pushes the float up. Consequently the lever moves the plug to press against the seat thus ensuring tight sealing of the system.

INSTALLATION

The **MICROVENT** valve is normally installed:

- In the highest point of the air separator
- At the top of the columns installed in heating systems with expansion vessel
- In all points where there is risk of air building up

In order to ensure maximum air venting efficiency, it is advisable to install the **MICROVENT** valve in those points where water speed is relatively low. After installation, in order to allow perfect air venting, unscrew the protective cap by at least two turns (such condition ensures the vent characteristics as given in the previous diagram). When it is necessary to mount a **MICROVENT** valve provided with vacuum breaker tongue on a **RIA** shut-off valve, merely lift out the tongue with two fingers.

MAINTENANCE

Normally the **MICROVENT** valve does not require maintenance. If maintenance is required, remove the valve; the presence of shut-off valve **Art. RIA** allows this operation without emptying the system.



MKV

MICROVENT.
Automatic valve with vertical air vent.

Part No.

0251210

Size

3/8"



MKVR

Like MKV but with automatic shut-off valve RIA.

Part No.

0251310

Size

3/8"



MKL

MICROVENT.
Automatic valve with side air vent.

Part No.

0252210

Size

3/8"



MKLR

Like MKL but with automatic shut-off valve RIA.

Part No.

0252310

Size

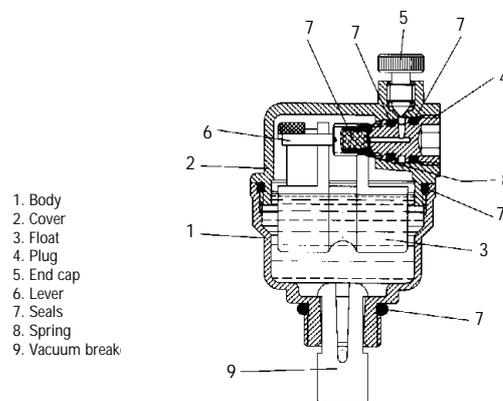
3/8"

DESIGN FEATURES

Body	Brass OT 58
Cover	Brass OT 58
Float	High density expanded polyethylene
Plug	Polyphenylene oxide
End cap	Polyphenylene oxide, glass fibre reinforced
Lever	Polyphenylene oxide, glass fibre reinforced
Seals	NBR rubber
Spring	Stainless steel
Vacuum breaker	Polyacetal
Connections	M 3/8" DIN - ISO 228/1

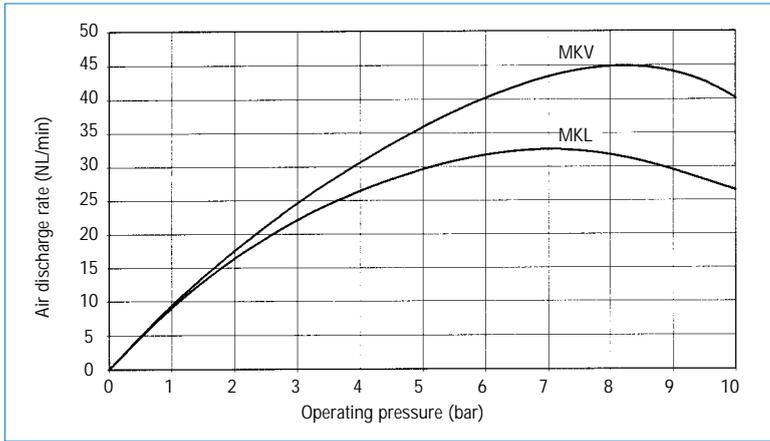
TECHNICAL CHARACTERISTICS

Max. operating pressure	10 bar
Max. operating temperature	110°C

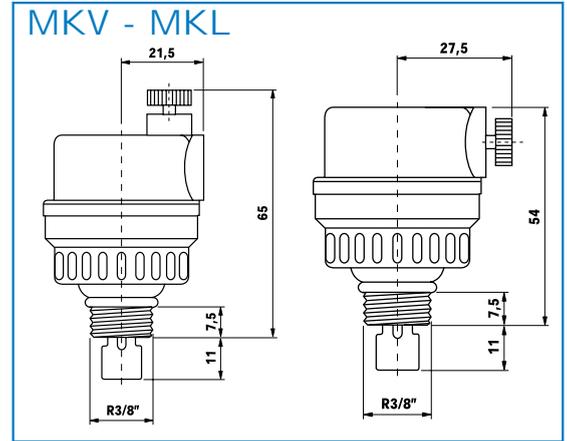


1. Body
2. Cover
3. Float
4. Plug
5. End cap
6. Lever
7. Seals
8. Spring
9. Vacuum break

Air discharge rate - Operating pressure



Overall dimensions (mm)



OPERATION

Automatic shut-off valve **RIA** allows the air vent valves (**MINIVENT**, **DUOVENT**, and **MICROVENT**) to be removed without having to empty the system. The **RIA** shut-off valve is fitted with a device for quick total emptying of the water from the valve.



RIA

Automatic shut-off valve.

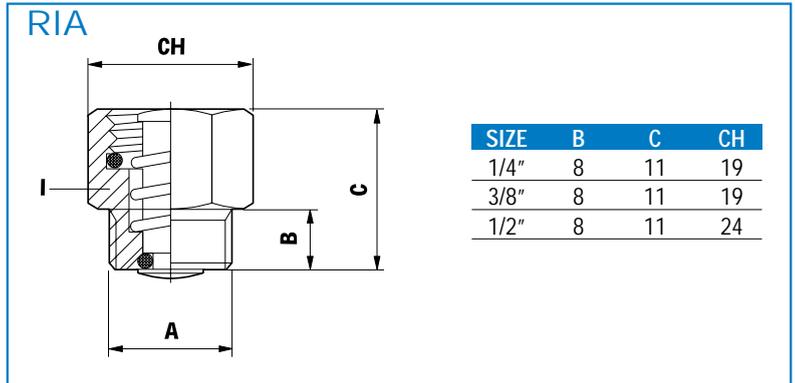
Part No.

Size

0259008	1/4" x 1/4"
0259010	3/8" x 3/8"
0259015	1/2" x 1/2"

Overall dimensions (mm)

DESIGN FEATURES	
Body	Brass OT 58
Lever	Polyphenylene oxide, glass fibre reinforced
Plug	Polyacetal with O-ring
Spring	Stainless steel
Connections	M/F 1/4" - 3/8" - 1/2" DIN - ISO 228/1



DESIGN FEATURES	
Body	Brass OT 58, chrome-plated
Screw	Brass OT 58, chrome-plated
O-ring	NBR rubber



SMM

Manual valve for venting air from radiators with adjustable discharge nozzle, manual discharge opening with handwheel.

Part No.

Size

0257106	1/8"
0257108	1/4"
0257110	3/8"
0257115	1/2"

TECHNICAL CHARACTERISTICS	
Max. operating pressure	10 bar
Max. operating temperature	95°C

DESIGN FEATURES

Body	Brass OT 58, chrome-plated
Screw	Brass OT 58, chrome-plated
Discharge nozzle and handwheel	Polyamide, reinforced with glass fibre
O-ring	NBR rubber

TECHNICAL CHARACTERISTICS

Max. operating pressure	10 bar
Max. operating temperature	95°C

The components and dimensional characteristics of the valves allow a perfectly tight seal associated with very easy operation.



VMM

Manual valve for venting air from radiators with adjustable discharge nozzle, **manual discharge opening either screw driver or coin or wrench CH.**

Part No.

0256206
0256208
0256210

Size

1/8"
1/4"
3/8"



PMC

Manual valve for venting air from radiators with adjustable discharge nozzle, **manual discharge opening either screw driver or coin or wrench CH to avoid manual tampering.**

Part No.

0256306
0256308
0256310
0256315

Size

1/8"
1/4"
3/8"
1/2"



RSR

Radiator drain valve for quick and easy emptying of the water contained in the radiator, without requiring emptying the entire system.

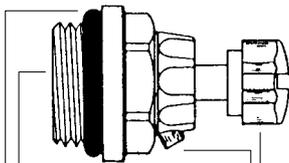
Part No.

0256008
0256010
0256015

Size

1/4"
3/8"
1/2"

VMM



Inlet hole smaller than the outlet hole to avoid ingress of particles which could block air discharge.

O-ring for easy assembly and perfectly tight seal on the radiator.

Handwheel designed for manual opening with screw-driver, coin or wrench CH/VP. Limit stop on the screw to avoid the handwheel coming out from the valve body.

Adjustable discharge nozzle, glass fibre reinforced nylon body.



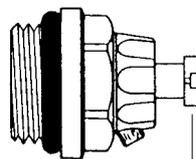
CH

Wrench for valves RSR, VMM, PMC.

Part No.

0256101

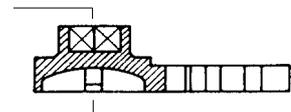
PMC



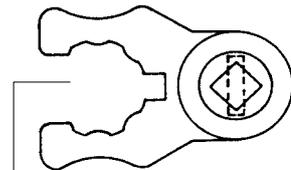
Valve handwheel PMC with opening by screw-driver, coin or wrench CH/VP.

Slot for opening valves PMC, RSR

Slot for opening valve VMM.



CH/VP



Wrench flat for adjusting discharge nozzle body. Wrench CH/VP can be left inserted on the body.

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