

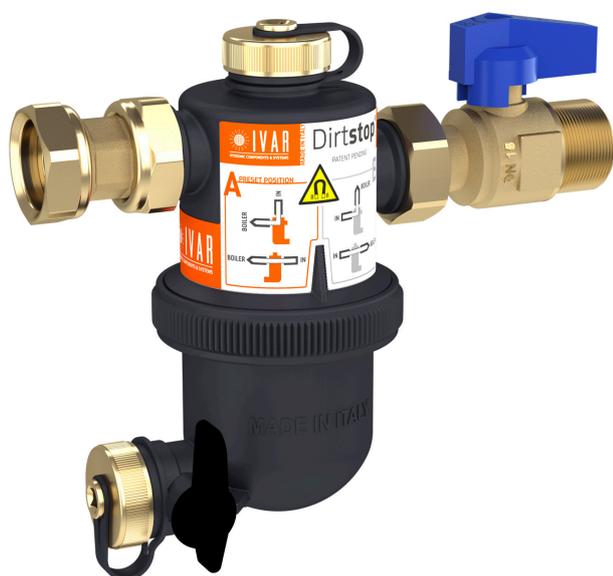


# Swiveling magnetic dirt separator with strainer

## ► Dirtstop®

*Swiveling magnetic dirt separator with double filtering action with connection kit for under-boiler installation.*

### ■ PRESENTATION



Dirtstop® is the swiveling magnetic dirt separator with double filtering action that guarantees maximum effectiveness in any installation position thanks to its patented swiveling insert.

Dirtstop® can be installed in heating systems powered by boiler, heat pump or other heat generators. If the same system is also used for summer climate control, the dirt separator shall be properly insulated.

Metal parts of the heating system are subject to corrosion phenomena and release ferrous impurities into the water. Impurities in heat generator could obstruct the heat exchanger or be attracted by the permanent magnet of new pumps, causing them to block.

Moreover, in the heating system there may be other impurities which accumulate in reduced section parts of the system causing obstructions, noise and other malfunctions.

Dirtstop® keeps the heating system in the best possible conditions. Periodic cleaning of the dirt separator is easy and quick, without emptying the system.

### ■ RANGE

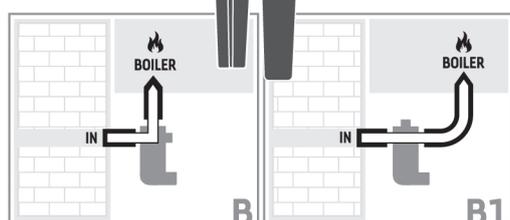
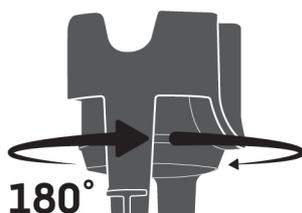
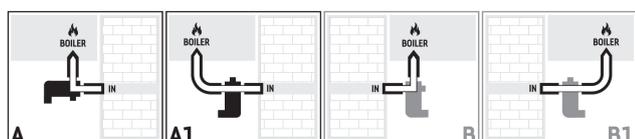
External finish:

- white (RAL 9010)
- anthracite grey (RAL 7010).

Optional kits:

- package including 1 l of high performance cleaner additive and 1 l of anti-scaling inhibitor additive for high temperature heating systems;
- package including 1 l of high performance cleaner additive and 1 l of anti-scaling inhibitor additive for low temperature heating systems.

## ■ PLUS



Dirtstop® is essential to increase the life of your heat generator. Dirtstop® improves thermal exchanges and the overall efficiency of the heating system, protecting it over time thanks to the continuous filtering action.

Advantages:

- Patented swiveling insert which guarantees perfect filtration in all four installation positions.
- Extremely compact, easy to install under-boiler even in small spaces.
- Maintainable even while the system is working: the cleaning is possible without disassembling.
- The first dirt separator with a large settling chamber rotatable 360 degrees and complete with ball shut-off valve to drain impurities, ensuring an easy and quick cleaning.
- Magnet with diametrical polarization which develops a more homogeneous magnetic field, maximizing the capture of impurities.
- 800 µm mesh strainer: exceptional middle way between filtering capacity and ease of cleaning.
- Made of IXEF®, technopolymer with extraordinary mechanical performances, comparable to brass.

## ■ TECHNICAL SPECIFICATIONS

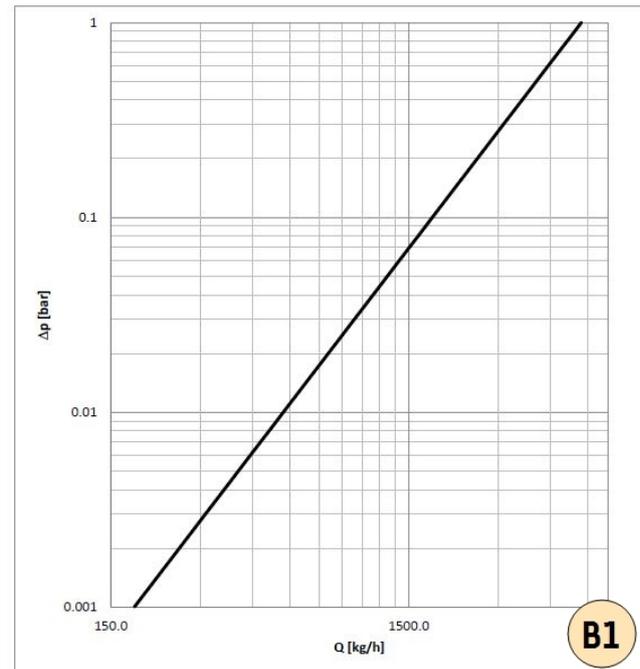
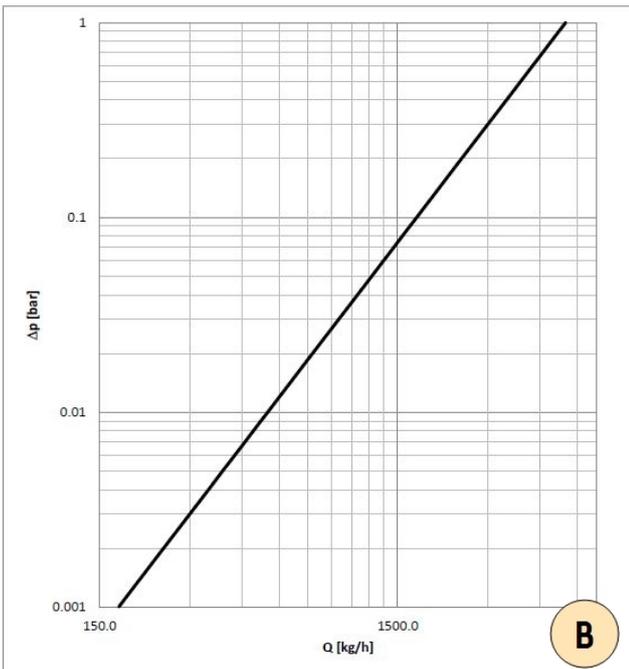
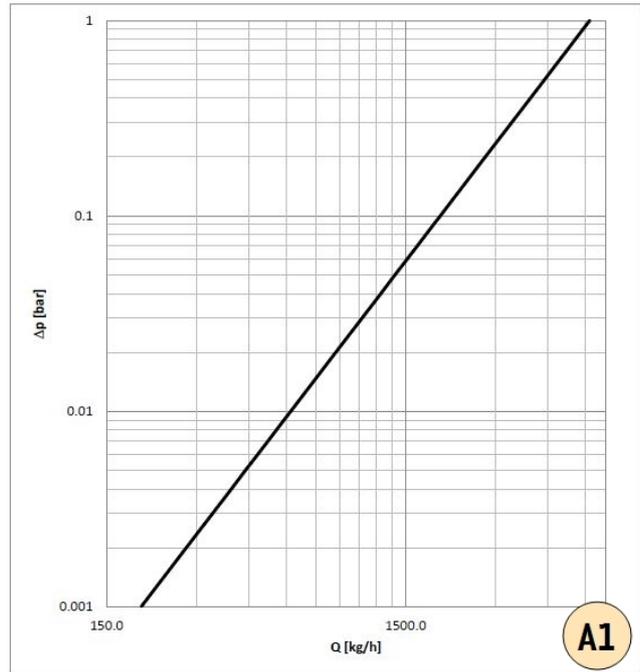
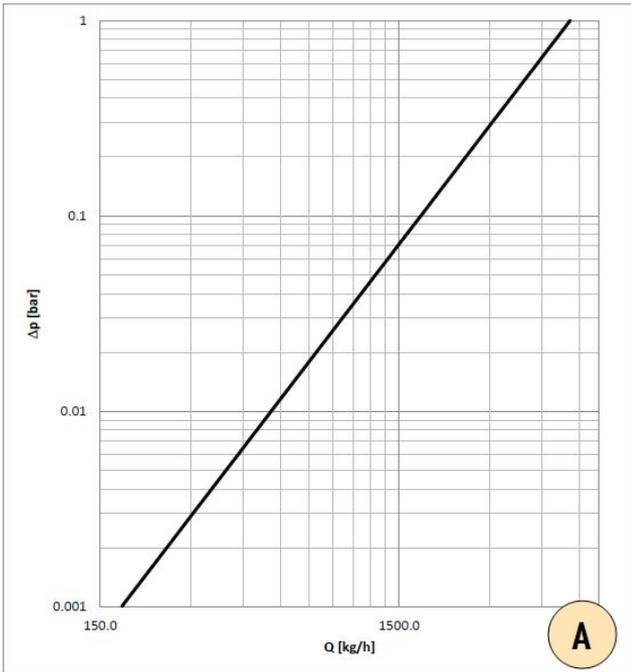
Maximum pressure	3 bar
Temperature	0 - 90 °C
Magnet	Neodymium, magnetic induction B = 1,2 T (12.000 G) Maximum tightening torque 1,4 N·m Diametrically polarized to maximize the capture
Mesh strainer	800 µm made of AISI 304 stainless steel
Compatible fluids	Water or glycol solution (max 50%)
Flow coefficient Kv	Insert in position A - angle configuration: 5,6 m³/h Insert in position A1 - straight configuration: 6,2 m³/h Insert in position B - angle configuration: 5,5 m³/h Insert in position B1 - straight configuration: 5,7 m³/h
Maximum flow rate	1,46 m³/h
Connections	3/4" M x 3/4" F
Dimensions W x H x D	66 x 143 x 70 mm

## ■ MATERIALS

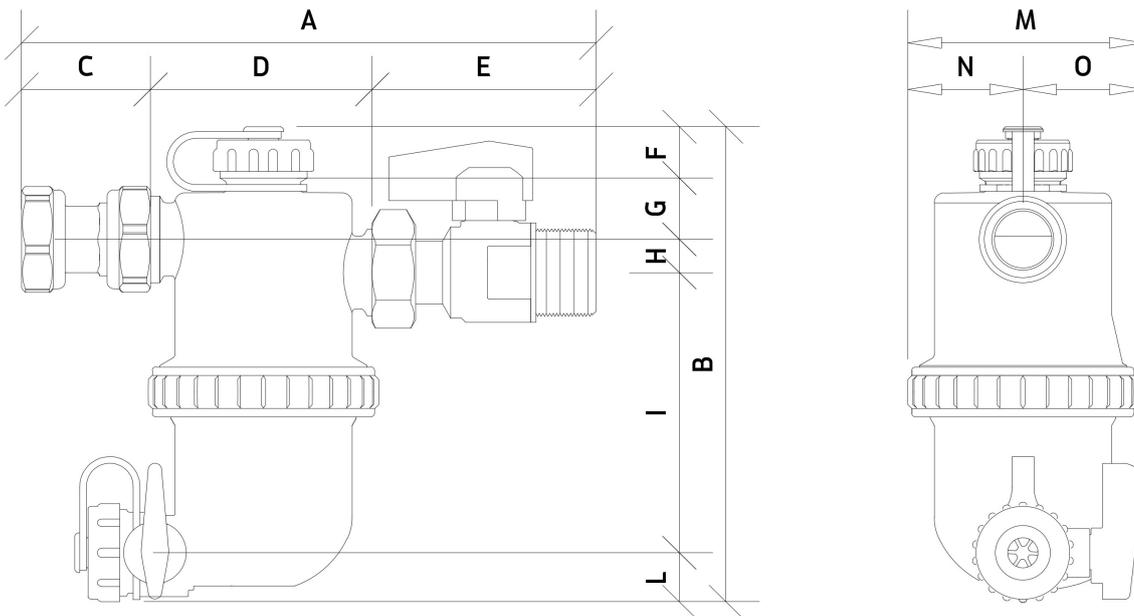
- Body: technopolymer IXEF®
- Ball shut-off valve: CW617N brass
- Swiveling fitting: CW617N brass
- Plugs: CW617N brass
- Sealing elements: Peroxide EPDM

## ■ HYDRAULIC CHARACTERISTICS

The graphs below show the Kv coefficient trend in the four Dirtstop® installation positions.

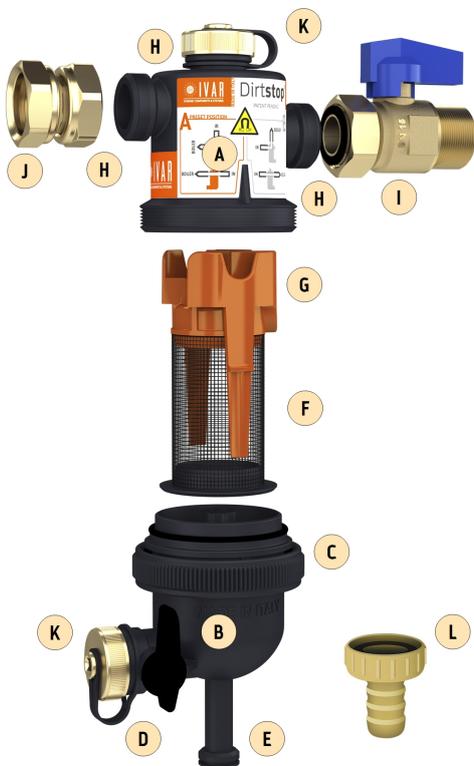


## ■ DIMENSIONS



	A	B	C	D	E	F	G	H	I	L	M	N	O
[mm]	172	143	39	66	67	15.5	18.5	10	84.5	14.5	70	34	36

## ■ COMPONENTS



- A. Upper casing
- B. Lower casing (with a large settling chamber)
- C. Ring nut
- D. Integrated drainage valve (for routine cleaning)
- E. Magnet
- F. Mesh strainer
- G. Patented swiveling insert
- H. Inlet/outlet connections
- I. Ball shut-off valve (connection on heating system side)
- J. Swiveling fitting (connection on boiler side)
- K. Caps
- L. Hose connector nozzle

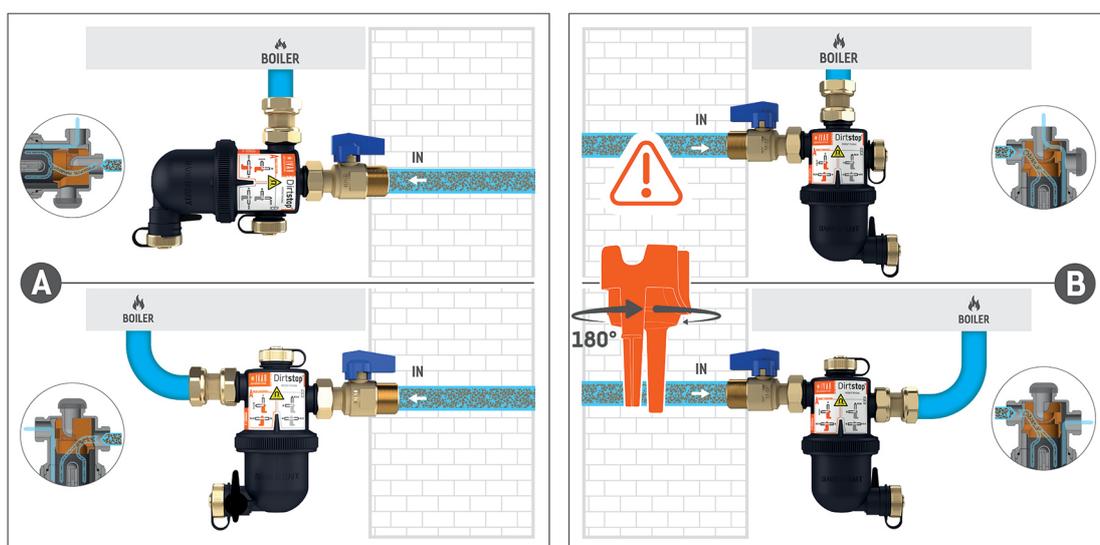
## ■ OPERATION

Dirtstop® holds impurities in the heating system closed circuit. The patented swiveling insert forces water to flow into the mesh strainer in any installation position, always ensuring maximum filtering action. The powerful neodymium magnet retains also ferrous impurities, safeguarding the heat exchanger and the heat generator pump.

Install Dirtstop® on the return pipe of the system, upstream of the heat generator, to intercept impurities in the circuit before they reach the heat generator itself.

When installing Dirtstop® in a new heating system, perform a preventive fluxing to clear the pipes from possible dirt and debris. When installing Dirtstop® in an existing heating system, it is recommended to perform the cleaning of the system using cleaner additive IVAR IV400 and perform a filming treatment using anti-scaling additives IVAR IV100HT (for high temperature heating systems) or IVAR IV100LT (for low temperature heating systems).

The default position of the insert is A, suitable for A and A1 configurations. If you install Dirtstop® in B or B1 configurations, change to B the position of the insert [G].



## ■ MAINTENANCE

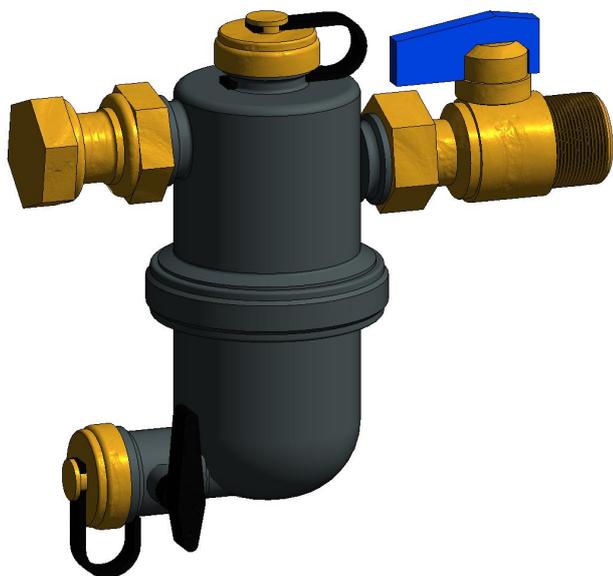
The quantity of waste that accumulates in Dirtstop® depends on the conditions of the system.

The routine cleaning has to be performed after one month of installation. Subsequently, perform routine cleaning every two months during heating season. To perform this activity, simply remove the magnet with an hex wrench and open the integrated drainage valve for a few seconds, making impurities accumulated inside the decantation chamber flow out.

The special cleaning has to be performed at least once a year. To perform this activity it is useful to install a ball shut-off valve before the inlet of the heat generator, to easily section part of the plumbing with the dirt separator. In this way the mesh strainer and the dirt separator body can be disassembled and washed with running water without emptying the system.

To avoid damage to the thread, refit the magnet without tightening too much.

## ■ BIM MODEL OPERATION



IVAR BIM models are natively modelled in Autodesk Revit to keep the file size small. The models are parametric, full of details and information, and faithfully respect the real component.

Suggestions for using the model:

- Two "Family Types" available: "RAL7010" and "RAL9010". The type choice allows the automatic modification of the external finish (white or anthracite grey).
- Two external finishes available. Choose the desired option by selecting the "Finishing Gray" or "Finishing White" parameter in the "Properties - Materials and Finishes" menu. The choice of the finish allows the correct association of the product code.
- Four installation positions available. Choose the desired option by selecting the "Layout A" or "Layout A1" or "Layout B" or "Layout B1" parameter in the "Properties - Model properties" menu (be careful: choose only one type of installation!).
- Two optional kits available. Choose the desired option by selecting the "Kit with optional additives HT (high temperature system)" or "Kit with optional additives LT (low temperature system)" parameter in the "Properties - Model properties" menu (be careful: choose only one optional kit!).

Download the BIM models from IVAR website, section BIM:

<http://www.ivar-group.com/en/web/international/bim>

## ■ SPECIFICATION SUMMARY

**IVAR Dirtstop® cod. 520049:** Dirtstop® swivelling magnetic dirt separator with double filtering action, compact, with connection kit for the under-boiler installation. The double filtering action, guaranteed in any position thanks to the patented swivelling insert, is performed by a neodymium magnet (magnetic induction  $B = 1,2 \text{ T (12.000 G)}$ ) and a mesh strainer ( $800 \mu\text{m}$ ) made of AISI 304 stainless steel. The neodymium magnet is diametrically polarized and therefore it develops a homogeneous magnetic field which maximizes the capture of ferrous impurities. The mesh strainer retains all impurities. Impurities precipitate into the large settling chamber at the bottom of the dirt separator. The evacuation of impurities is possible without emptying the system and disassembling the dirt separator, thanks to the removable magnet and to the opening of the integrated swivelling ball shut-off valve rotatable 360 degrees. Body material: technopolymer IXEF®. Ball shut-off valve, swivelling fitting and plugs material: CW617N brass. Sealing elements material: Peroxide EPDM. Temperature: 0 - 90 °C. Maximum pressure: 3 bar. Kv with insert in posizione A: 5,6 m<sup>3</sup>/h angle configuration; Kv with insert in position A1: 6,2 m<sup>3</sup>/h straight configuration; Kv with insert in position B: 5,5 m<sup>3</sup>/h angle configuration; Kv with insert in position B1: 5,7 m<sup>3</sup>/h straight configuration. Compatible with water or glycol solutions max 50%. Maximum flow rate: 1,46 m<sup>3</sup>/h. Connections: 3/4" M x 3/4" F. External finish: anthracite grey (RAL7010).

**IVAR Dirtstop® cod. 520049W:** Dirtstop® swivelling magnetic dirt separator with double filtering action, compact, with connection kit for the under-boiler installation. The double filtering action, guaranteed in any position thanks to the patented swivelling insert, is performed by a neodymium magnet (magnetic induction  $B = 1,2 \text{ T (12.000 G)}$ ) and a mesh strainer ( $800 \mu\text{m}$ ) made of AISI 304 stainless steel. The neodymium magnet is diametrically polarized and therefore it develops a homogeneous magnetic field which maximizes the capture of ferrous impurities. The mesh strainer retains all impurities. Impurities precipitate into the large settling chamber at the bottom of the dirt separator. The evacuation of impurities is possible without emptying the system and disassembling the dirt separator, thanks to the removable magnet and to the opening of the integrated swivelling ball shut-off valve rotatable 360 degrees. Body material: technopolymer IXEF®. Ball shut-off valve, swivelling fitting and plugs material: CW617N brass. Sealing elements material: Peroxide EPDM. Temperature: 0 - 90 °C. Maximum pressure: 3 bar. Kv with insert in posizione A: 5,6 m<sup>3</sup>/h angle configuration; Kv with insert in position A1: 6,2 m<sup>3</sup>/h straight configuration; Kv with insert in position B: 5,5 m<sup>3</sup>/h angle configuration; Kv with insert in position B1: 5,7 m<sup>3</sup>/h straight configuration. Compatible with water or glycol solutions max 50%. Maximum flow rate: 1,46 m<sup>3</sup>/h. Connections: 3/4" M x 3/4" F. External finish: white (RAL9010).

**IVARDirtstop® cod. 520050HT:** kit including Dirtstop®, 1 l of high performance cleaner additive (code: IV400) and 1 l of anti-scaling inhibitor additive for high temperature heating systems (code: IV100HT). Dirtstop® swiveling magnetic dirt separator with double filtering action, compact, with connection kit for the under-boiler installation. The double filtering action, guaranteed in any position thanks to the patented swiveling insert, is performed by a neodymium magnet (magnetic induction  $B = 1,2 \text{ T}$  (12.000 G)) and a mesh strainer (800  $\mu\text{m}$ ) made of AISI 304 stainless steel. The neodymium magnet is diametrically polarized and therefore it develops a homogeneous magnetic field which maximizes the capture of ferrous impurities. The mesh strainer retains all impurities. Impurities precipitate into the large settling chamber at the bottom of the dirt separator. The evacuation of impurities is possible without emptying the system and disassembling the dirt separator, thanks to the removable magnet and to the opening of the integrated swivelling ball shut-off valve rotatable 360 degrees. Body material: technopolymer IXEF®. Ball shut-off valve, swivelling fitting and plugs material: CW617N brass. Sealing elements material: Peroxide EPDM. Temperature: 0 - 90 °C. Maximum pressure: 3 bar. Kv with insert in posizione A: 5,6 m<sup>3</sup>/h angle configuration; Kv with insert in position A1: 6,2 m<sup>3</sup>/h straight configuration; Kv with insert in position B: 5,5 m<sup>3</sup>/h angle configuration; Kv with insert in position B1: 5,7 m<sup>3</sup>/h straight configuration. Compatible with water or glycol solutions max 50%. Maximum flow rate: 1,46 m<sup>3</sup>/h. Connections: 3/4" M x 3/4" F. External finish: anthracite grey (RAL7010).

**IVARDirtstop® cod. 520050LT:** kit including Dirtstop®, 1 l of high performance cleaner additive (code: IV400) and 1 l of anti-scaling inhibitor additive for low temperature heating systems (code: IV100LT). Dirtstop® swiveling magnetic dirt separator with double filtering action, compact, with connection kit for the under-boiler installation. The double filtering action, guaranteed in any position thanks to the patented swiveling insert, is performed by a neodymium magnet (magnetic induction  $B = 1,2 \text{ T}$  (12.000 G)) and a mesh strainer (800  $\mu\text{m}$ ) made of AISI 304 stainless steel. The neodymium magnet is diametrically polarized and therefore it develops a homogeneous magnetic field which maximizes the capture of ferrous impurities. The mesh strainer retains all impurities. Impurities precipitate into the large settling chamber at the bottom of the dirt separator. The evacuation of impurities is possible without emptying the system and disassembling the dirt separator, thanks to the removable magnet and to the opening of the integrated swivelling ball shut-off valve rotatable 360 degrees. Body material: technopolymer IXEF®. Ball shut-off valve, swivelling fitting and plugs material: CW617N brass. Sealing elements material: Peroxide EPDM. Temperature: 0 - 90 °C. Maximum pressure: 3 bar. Kv with insert in posizione A: 5,6 m<sup>3</sup>/h angle configuration; Kv with insert in position A1: 6,2 m<sup>3</sup>/h straight configuration; Kv with insert in position B: 5,5 m<sup>3</sup>/h angle configuration; Kv with insert in position B1: 5,7 m<sup>3</sup>/h straight configuration. Compatible with water or glycol solutions max 50%. Maximum flow rate: 1,46 m<sup>3</sup>/h. Connections: 3/4" M x 3/4" F. External finish: anthracite grey (RAL7010).

**IVARDirtstop® cod. 520050WHT:** kit including Dirtstop®, 1 l of high performance cleaner additive (code: IV400) and 1 l of anti-scaling inhibitor additive for high temperature heating systems (code: IV100HT). Dirtstop® swiveling magnetic dirt separator with double filtering action, compact, with connection kit for the under-boiler installation. The double filtering action, guaranteed in any position thanks to the patented swiveling insert, is performed by a neodymium magnet (magnetic induction  $B = 1,2 \text{ T}$  (12.000 G)) and a mesh strainer (800  $\mu\text{m}$ ) made of AISI 304 stainless steel. The neodymium magnet is diametrically polarized and therefore it develops a homogeneous magnetic field which maximizes the capture of ferrous impurities. The mesh strainer retains all impurities. Impurities precipitate into the large settling chamber at the bottom of the dirt separator. The evacuation of impurities is possible without emptying the system and disassembling the dirt separator, thanks to the removable magnet and to the opening of the integrated swivelling ball shut-off valve rotatable 360 degrees. Body material: technopolymer IXEF®. Ball shut-off valve, swivelling fitting and plugs material: CW617N brass. Sealing elements material: Peroxide EPDM. Temperature: 0 - 90 °C. Maximum pressure: 3 bar. Kv with insert in posizione A: 5,6 m<sup>3</sup>/h angle configuration; Kv with insert in position A1: 6,2 m<sup>3</sup>/h straight configuration; Kv with insert in position B: 5,5 m<sup>3</sup>/h angle configuration; Kv with insert in position B1: 5,7 m<sup>3</sup>/h straight configuration. Compatible with water or glycol solutions max 50%. Maximum flow rate: 1,46 m<sup>3</sup>/h. Connections: 3/4" M x 3/4" F. External finish: white (RAL9010).

**IVARDirtstop® cod. 520050WLT:** kit including Dirtstop®, 1 l of high performance cleaner additive (code: IV400) and 1 l of anti-scaling inhibitor additive for low temperature heating systems (code: IV100LT). Dirtstop® swiveling magnetic dirt separator with double filtering action, compact, with connection kit for the under-boiler installation. The double filtering action, guaranteed in any position thanks to the patented swiveling insert, is performed by a neodymium magnet (magnetic induction  $B = 1,2 \text{ T}$  (12.000 G)) and a mesh strainer (800  $\mu\text{m}$ ) made of AISI 304 stainless steel. The neodymium magnet is diametrically polarized and therefore it develops a homogeneous magnetic field which maximizes the capture of ferrous impurities. The mesh strainer retains all impurities. Impurities precipitate into the large settling chamber at the bottom of the dirt separator. The evacuation of impurities is possible without emptying the system and disassembling the dirt separator, thanks to the removable magnet and to the opening of the integrated swivelling ball shut-off valve rotatable 360 degrees. Body material: technopolymer IXEF®. Ball shut-off valve, swivelling fitting and plugs material: CW617N brass. Sealing elements material: Peroxide EPDM. Temperature: 0 - 90 °C. Maximum pressure: 3 bar. Kv with insert in posizione A: 5,6 m<sup>3</sup>/h angle configuration; Kv with insert in position A1: 6,2 m<sup>3</sup>/h straight configuration; Kv with insert in position B: 5,5 m<sup>3</sup>/h angle configuration; Kv with insert in position B1: 5,7 m<sup>3</sup>/h straight configuration. Compatible with water or glycol solutions max 50%. Maximum flow rate: 1,46 m<sup>3</sup>/h. Connections: 3/4" M x 3/4" F. External finish: white (RAL9010).

## ■ CODES

<b>520049</b>	IVAR Dirtstop® anthracite grey (RAL 7010)
<b>520049W</b>	IVAR Dirtstop® white (RAL 9010)
<b>520050LT</b>	IVAR Dirtstop® anthracite grey (RAL 7010) and package including 1 l of high performance cleaner additive and 1 l of anti-scaling inhibitor additive for low temperature heating systems
<b>520050HT</b>	IVAR Dirtstop® anthracite grey (RAL 7010) and package including 1 l of high performance cleaner additive and 1 l of anti-scaling inhibitor additive for high temperature heating systems
<b>520050WLT</b>	IVAR Dirtstop® white (RAL 9010) and package including 1 l of high performance cleaner additive and 1 l of anti-scaling inhibitor additive for low temperature heating systems
<b>520050WHT</b>	IVAR Dirtstop® white (RAL 9010) and package including 1 l of high performance cleaner additive and 1 l of anti-scaling inhibitor additive for high temperature heating systems

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