

## SAFETY VALVES



Art. 2004

- Inlet: 1/2" male
- Outlet: 1/2" female
- Max. temperature: 115°C



Art. 2005

- Inlet: 1/2" female
- Outlet: 1/2" - 3/4" female
- Max. temperature: 115°C



Art. 2007

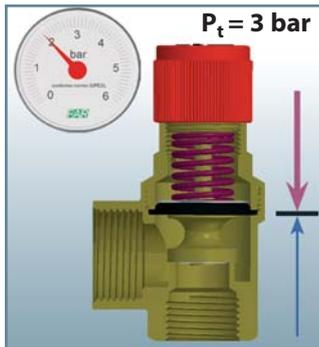
- Inlet: quick connection
- Outlet: 3/4" female
- Max. temperature: 115°C

Available calibrations: 1 - 1.5 - 2 - 2.5 - 3.5 - 4 - 5 - 7 - 8 - 9 - 10 bar

### 1. DESCRIPTION

During system operation, overpressure could occur, damaging components. It is for this reason that safety valves are employed. The valve opens only when the system reaches sufficient pressure to overcome the spring tension, that is to say when

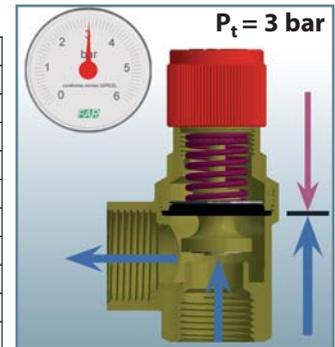
the calibration pressure of the valve is reached. Calibration pressure is selected in the light of the maximum permissible system pressure.



System pressure lower than calibration pressure of valve.

#### Technical features

PED Class:	IV
Nominal pressure:	PN10
Temperature range:	5-115° C
Opening overpressure:	10%
Closing tolerance:	20%
Compatible media:	water
Body and cap:	UNI EN 12165 CW617N brass
Stem:	UNI EN 12164 CW614N brass
Gaskets and membrane:	EPDM
Spring:	UNI EN 10270-1 steel
Handle:	Nylon®



System pressure higher than calibration pressure of valve.

### 2. APPLICATION RANGE

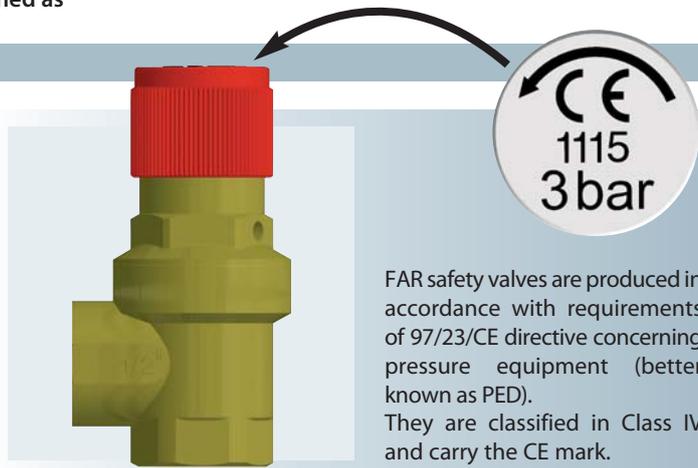
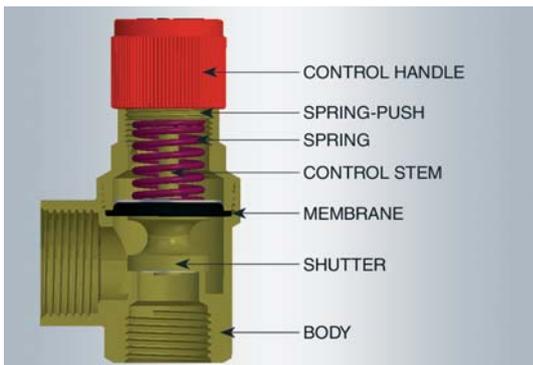
According to Italian regulations safety valves can be used on boilers rated up to 35 kW.

They can be used in hydro-sanitary systems only if they are applied in accordance with 'R collection' safety rules for systems containing fluids under pressure: "In the case of a domestic water heater the expansion tank for boiler protection is achieved by means of a vent valve. The latter is defined as

a counterweight or spring valve whose bore has a diameter in mm not lower than  $V/5$ , where V is the volume in litres of the water heater, with a minimum of 15 mm".

FAR safety valves are installed on heating and hydro-sanitary systems to protect warm water storage.

### 3. CONSTRUCTION FEATURES



FAR safety valves are produced in accordance with requirements of 97/23/CE directive concerning pressure equipment (better known as PED). They are classified in Class IV and carry the CE mark.

**4. INSTALLATION**

Safety valves can be installed in both vertical and horizontal position but not inverted, thus avoiding any deposit of impurities which could interfere with regular operation.  
**Heating system:** valves must be installed on the top of boiler, or

on the flow outlet pipe at a minimum distance of 1 meter (**Fig. 1**).  
**Hydro-sanitary system:** safety valves must be installed near hot water store and there should be no shutoff device between valve and tank (**Fig. 2**).

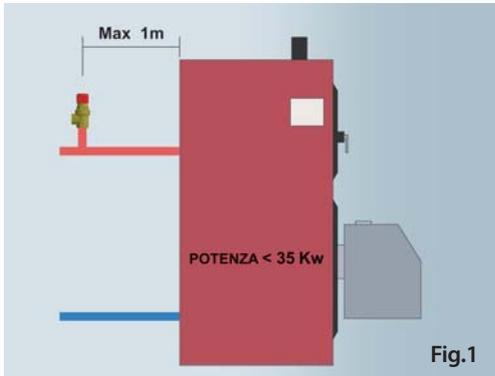


Fig.1

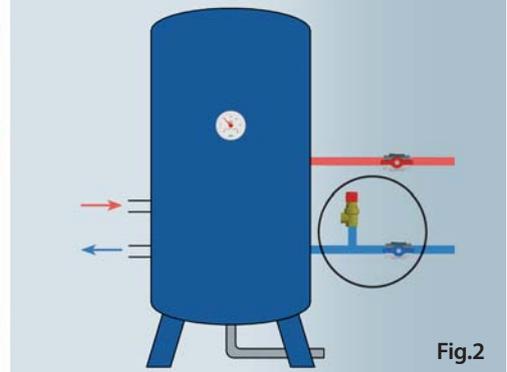
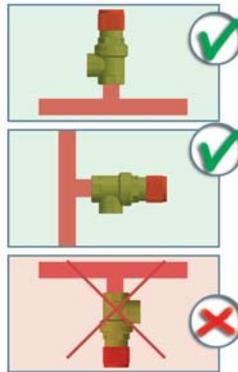


Fig.2

For the installation on hot water heating systems with closed expansion tank please consider the following:

- The set pressure of safety valve added to the allowed overpressure must not exceed the maximum operating pressure value and the valve bore diameter must not be inferior to 15 mm.
- Safety valves must be connected at the upper part of boiler or on the outlet pipeline. The allowed maximum distance between the delivery pipe of the boiler and the safety valve is: 1m.
- On the pipeline segment connecting the boiler and the safety

valve cannot absolutely be installed any shut-off valve, and the segment section cannot be inferior to the inlet section of safety valve.

- Diameter of discharge pipeline must not be inferior to the ones of the outlet connection.
- Discharge pipeline of safety valve must not hinder the regular operation of valves. Discharge must occur very close to safety valve and must be accessible and clearly visible.
- Safety valves are set in our laboratory. Such set pressure cannot be modified without tampering it.

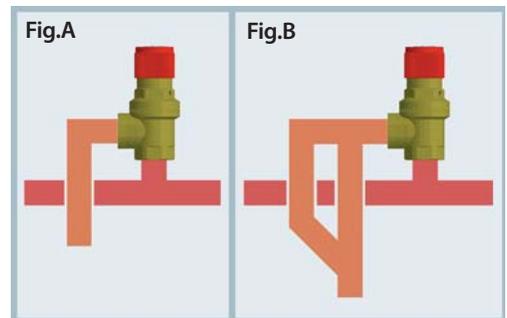
**5. SPECIAL FEATURES**

**Discharge overpressure:** full discharge flow of the valve occurs with pressure values lower than 10% of calibration pressure.

**Closing tolerance:** valve closes by pressure values lower than 20% of calibration pressure, thus reducing water loss.

**Raised output diameter:** makes a minimal reduction of discharge capacity.

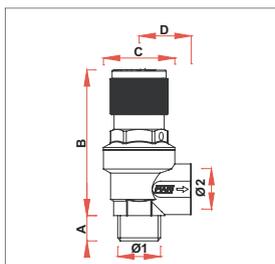
**Conveyor discharge:** discharge pipework should not hinder the regular valves operation, or offer any risk to persons or property. For valves with low capacity simply install a discharge pipe (**Fig. A**), while with high capacity valves it is necessary to proceed as shown in **Fig.B**.



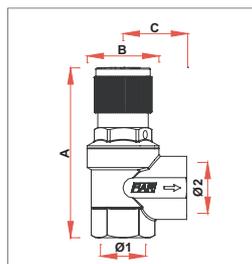
**6. MAINTENANCE**

Over time small losses may be registered due to impurities in the water stream. Continuous accumulation of system debris between seat and shutter can interfere with complete closure of the valve. Therefore, it is necessary to carry out periodic maintenance with seat washing through manual discharge of the valve.

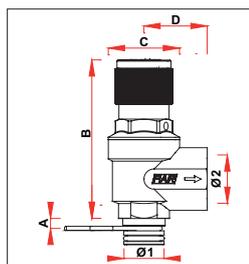
**7. DIMENSIONAL FEATURES**



CODE	Ø1	Ø2	A	B	C	D
2004 1212xx	G1/2	G1/2	13	72	35	26
2004 1234xx	G1/2	G3/4	13	79	35	31



CODE	Ø1	Ø2	A	B	C
2005 1212xx	G1/2	G1/2	80	35	26
2005 1234xx	G1/2	G3/4	84	35	31
2005 3434xx	G3/4	G3/4	84	35	31



CODE	Ø2	A	B	C
2007 3430	G3/4	79	35	31