# Strainers with threaded end connections

**Type 1 N** · With standard strainer insert
**Type 1 NI** · With dual strainer insert
**Type 1 FN** · With standard strainer insert · Version for district heating systems
**Type 1 FNI** · With dual strainer insert · Version for district heating systems

**Application**

For protecting downstream plants, aggregates and measuring and control devices against impurities. Straining and collecting dirt particles carried along by the medium.

With body **G 3/8** to **G 2** · **PN 25** · Suitable for liquids, steam and non-flammable gases up to **max. 300 °C**

**Conversion of valve sizing coefficients:**

$C_v$ (in U.S. gallons/min) = 1.17 · $K_{vs}$ (in $m^3/h$)
$K_{vs}$ (in $m^3/h$) = 0.86 · $C_v$ (in U.S. gallons/min)

The strainers consist of a Y-style body with threaded end connections and a wide-meshed filter element (standard strainer insert) or a wide-meshed filter element with an additional fine-meshed filter element (dual strainer insert).

**Special features**

- Compact design with lengths according to DIN
- Easy removal of the collected dirt particles
- Easy replacement of the strainer insert

**Versions**

Inlet/outlet: female thread 3/8" to 2" · Connection DN 15 to DN 50 · PN 25

**Type 1 N** · With standard strainer insert

**Type 1 NI** · With dual strainer insert

– Body of brass · Connections G 3/8 to G 2

– Body of malleable iron · Connections G 1/2 to G 2

**Type 1 FN** · Version for district heating · With standard strainer insert

**Type 1 FNI** · Same as Type 1 FN, but with dual strainer insert

– Body of red brass · With/without connection nuts and welding ends · Connections G 1/2 to G 2 · Especially suitable for district heating systems

**Principle of operation**

The medium flows through the strainer in the direction indicated by the arrow on the body. The uncleaned medium first contacts the inner side of the strainer insert (filter element). While it passes through the filter element, the dirt particles carried along by the medium are collected in the filter element. The dirt particles can be removed after unscrewing the screw cap.

**Installation**

– Install the strainer in the direction of flow indicated by the arrow on the body. Make sure ample space is available for removing and cleaning the strainer insert (see dimensions).

– In vertical pipelines–when the medium flows upward–install the strainer with the screw cap facing upward. In this case, however, the dirt particles will not be collected, but retained.

– Install swing check valves or similar devices to prevent backflow.

– For further information on installation, refer to the Mounting and Operating Instructions EB 1010 EN.

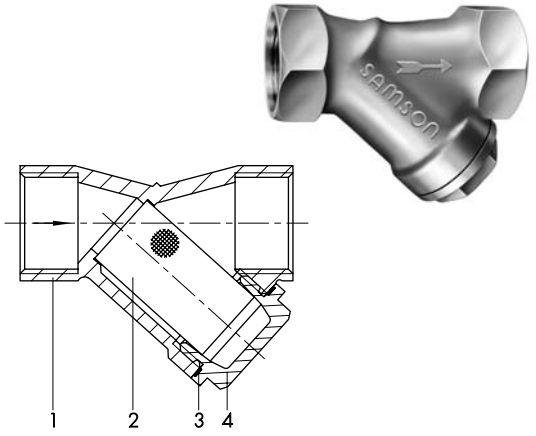



Fig 1 · Type 1 N,/Type 1 NI Strainers
Version in brass or malleable iron

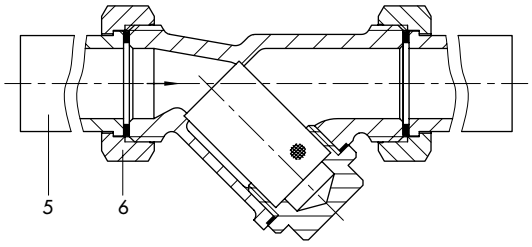



Fig. 2 · Type 1 FN/1 FNI, version in red brass (for district heating systems) with connection nuts and welding ends

| | | | |
|---|---|---|---|
| 1 | Body | 5 | Welding end (on both sides) |
| 2 | Strainer insert | | |
| 3 | Gasket | 6 | Connection nut (on both sides) |
| 4 | Screw cap | | |

**Ordering text**

**Strainer Type 1 N/1 NI**, connection G ...
Body material ...
**Type 1 FN/1 FNI**, connection G ...
With/without connection nuts and welding ends

**Edition February 2007**

**Table 1 · Technical data**

| **Version** | | **PN 25 · Body made of brass, malleable iron, or red brass** | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Type 1 N** or **1 FN** | | | | | | | | |
| **Connection** | **G** | 3/8[1] | 1/2 | 3/4 | 1 | 1 1/4 | 1 1/2 | 2 |
| $K_{VS}$ | | 3.7 | 5.6 | 10.0 | 15.6 | 25.5 | 40 | 63 |
| Mesh size | mm | 0.5 | | | | 0.75 | | |
| Number of meshes per | $cm^2$ | 150 | | | | 64 | | |
| Flow resistance coefficient | ζ | 2.5 | | | | | | |
| Free filter area | | Approx. 3 x cross-sectional area of the pipe | | | | | | |
| **Type 1 NI** or **1 FNI** | | | | | | | | |
| $K_{VS}$ | $m^3/h$ | 3.3[1] | 5.1 | 9.1 | 14.3 | 23.0 | 36.6 | 57 |
| Mesh size | mm | 0.25 | | | | | | |
| Number of meshes per | $cm^2$ | 625 | | | | | | |
| Flow resistance coefficient | ζ | 3 | | | | | | |
| Free filter area | | Approx. 2.5 x cross-sectional area of the pipe | | | | | | |

[1] Only Types 1 N /1 NI with body of brass

**Table 2 · Materials** · Material number according to DIN EN

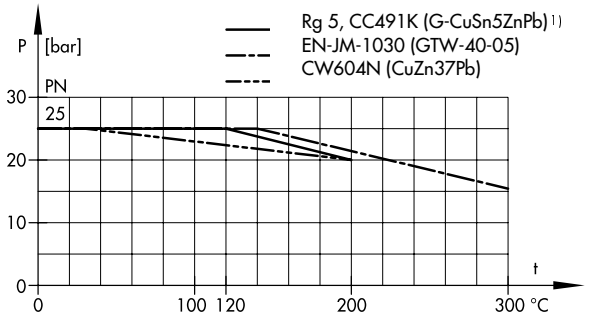
| **Type** | **1 FN/1 FNI** | **1N/1 NI** (brass) | **1 N/1 NI** (malleable iron) |
|---|---|---|---|
| Body | Red brass Rg 5, CC491K (G-CuSn5ZnPb) | Brass CW604N (GK-CuZn37Pb) | Malleable iron EN-JM-1030 (GTW-40-05) |
| Screw cap | Brass CW610N (CuZn39Pb) | | Up to G 1: 9S20K; > G 1: GTW-40-05 |
| Strainer insert (filter element) | Stainless steel 1.4401 | | |
| Gasket | Novatec Premium | | |

**Table 3 · Dimensions in mm and weights in kg**

| Body of brass, malleable iron, or red brass · PN 25 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Connections** **G** | 3/8 [1] | 1/2 | 3/4 | 1 | 1 1/4 | 1 1/2 | 2 |
| Length L | 65 | 65 | 75 | 90 | 110 | 120 | 150 |
| Connection thread R | – | 3/4″ | 1″ | 1 1/4″ | 1 3/4″ | 2″ | 2 1/2″ |
| Width across flats SW | – | 30 | 36 | 46 | 59 | 65 | 82 |
| Length L1 | – | 80 | 85 | 100 | 125 | 135 | 160 |
| Length L2 | – | 225 | 250 | 265 | 293 | 320 | 360 |
| Height H1 | 40 | | 45 | 56 | 73 | 84 | 108 |
| Height H2 (Strainer insert pulled out) | 61 | | 75 | 90 | 115 | 134 | 158 |
| **Weight**, approx. in kg | | | | | | | |
| Types 1N/1NI (brass) | 0.2 | | 0.3 | 0.47 | 0.77 | 1.35 | 1.9 |
| Types 1N/1NI (GTW) | – | 0.3 | 0.5 | 0.6 | 0.9 | 1.6 | 2.4 |
| Types 1 FN/1 FNI (red br.) | – | 0.55 | 0.65 | 0.8 | 1.1 | 1.85 | 2.6 |

[1] Only Types 1N/1NI with body made of brass

**Pressure-temperature diagram**

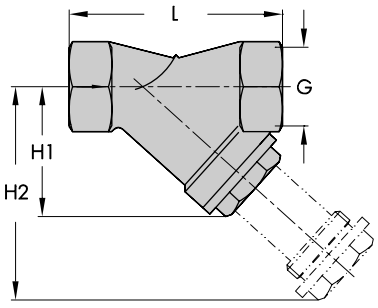



[1] Diagram according to DIN 4747

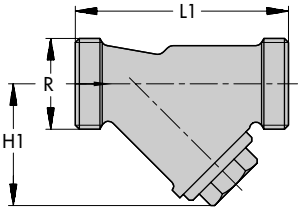
Fig. 3 · Pressure-temperature diagram

**Dimensions**

Types 1 N/1 NI – Body of either malleable iron or brass –




Type 1 FN/1 FNI
– Body of red brass –




... with connection nuts and welding ends

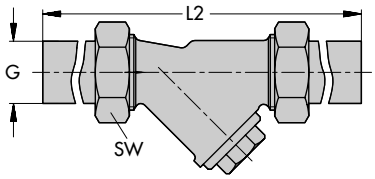



Fig. 4 · Dimensions

Specifications subject to change without notice.

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