

Basket Strainer Series

Simplex & Duplex · Flanged · Fabricated & Cast
Construction

Pipeline-mounted mechanical filtration for the reliable removal of scale, weld slag, rust, sand and process debris before it reaches pumps, control valves, meters, heat exchangers and other sensitive downstream equipment. Basket strainers combine a deep, high-capacity collection element with practical access for inspection and cleaning. [1]



Series range

DN 15–DN 650 · ½"–26"

Pressure classes

ASME 150 / 300 / 600 · PN 10 / 16 /
25 / 40

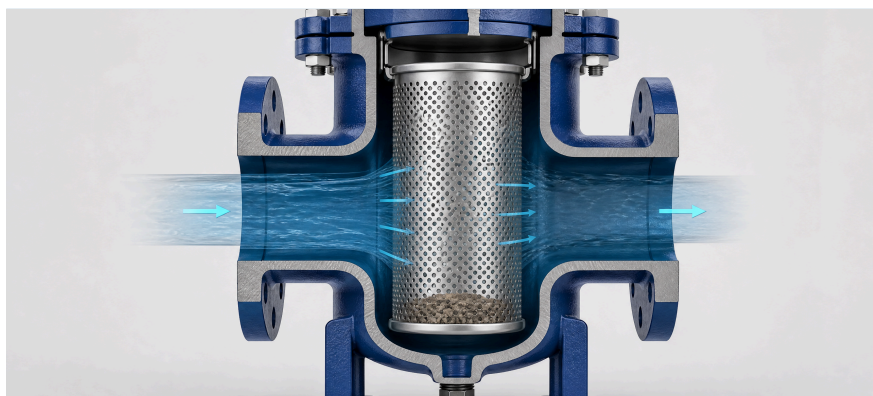
Standard basket

SS 316L perforated sheet

Flow direction

Inside basket → outside basket

Operating principle



From dirty stream to protected equipment

1. Inlet

The process stream enters the strainer body and is routed into the open-top basket.

2. Filtration

Fluid passes radially from the inside of the basket outward through the perforated or mesh-lined wall. Captured solids remain contained inside the basket.

3. Clean outlet

Filtered fluid enters the outer clean chamber and exits through the outlet connection. [1]

Design highlights

Large open area

Minimum 4:1 basket free-area to pipe-area ratio on standard designs for low clean pressure drop.

Serviceable element

Top-access cover and removable basket support inspection, cleaning and replacement.

Pressure-retaining body

Bolted cover with gasket or O-ring; flanged connections to ASME B16.5 or EN 1092-1 as specified.

Application options

Vent and drain, DP tapplings, magnetic inserts, steam jackets, davits and special coatings.

Typical applications

Water & utilities

Treatment plants, intake systems and general utility lines

Pump protection

Process skids, pump suction and recirculation duties

Building services

HVAC, district cooling and marine support systems

Process industries

Chemical, oil & gas and general industrial services

Important application note

The final strainer selection shall be based on actual process duty. Verify flow rate, fluid viscosity, solids profile, allowable pressure drop, pressure/temperature, materials compatibility and whether uninterrupted flow is required.

Filtration performance & selection

Select the basket opening slightly smaller than the smallest particle that must be removed to protect downstream equipment, while keeping the opening as large as practical to maximise the interval between cleanings. Fine wire-mesh linings are supported on a perforated backing basket. [1]

Filtration media	Standard / available selection
Perforated basket	0.8 · 1.6 · 3.0 · 6.0 mm
Mesh-lined basket	20 mesh (840 µm) to 100 mesh (150 µm)
Standard free-area ratio	Minimum 4:1 basket-to-pipe cross-sectional area
Cleaning trigger	Plan from differential pressure versus clean baseline



Typical in-line installation upstream of a centrifugal pump. Provide independent pipe supports and isolation points for service access.

Representative pressure-temperature capability

Representative Class 150 / 300 values at stated temperatures per ASME B16.5. ASME Class 600 designs are available on request; final nameplate rating, gasket selection and ordered material of construction always govern. [2]

Body material / class	Rating at 38 °C	Rating at 200 °C	Maximum temperature
Carbon steel WCB — ASME 150	19.6 bar	13.8 bar	425 °C · derated
Carbon steel WCB — ASME 300	51.1 bar	43.8 bar	425 °C · derated
Stainless CF8M — ASME 150	19.0 bar	13.2 bar	538 °C · derated
Stainless CF8M — ASME 300	49.6 bar	39.8 bar	538 °C · derated

Materials of construction

Component	Standard option	Stainless option	Special options
Body & cover	A216 WCB / A106-B / A105	A351 CF8 / CF8M	Duplex SS, bronze B62, cast iron*, GRP-lined
Basket element	SS 316L perforated sheet	SS 304 / 304L / 316	Monel, duplex SS, special mesh linings
Cover gasket	Non-asbestos compressed fibre	PTFE / spiral-wound SS-graphite	Viton, EPDM, Buna-N
Fasteners	A193 B7 / A194 2H	A193 B8 / B8M	Coated or exotic alloys on request

* Cast iron is limited to non-shock, non-hazardous service. Various body, cover, basket, gasket and fastener materials are available on request; chemical compatibility of all wetted materials must be confirmed for the process medium.

Key limits & options

Basket differential pressure

Do not allow the differential pressure across a standard basket to exceed 1.4 bar (20 psi) unless a high-collapse-rated basket is specified.

Standard connections

ASME Class 150 / 300 / 600 or EN 1092-1 flanges as specified; NPT threaded drain and vent plugs, with valves available on request.

Configuration options

Simplex for isolable services; duplex configuration for continuous-flow requirements. Optional DP gauge tapings, magnetic inserts, steam jackets, davit covers and coating systems are available.

Selection data required for quotation

Process duty Fluid, flow rate, viscosity, solids size and expected debris loading	Operating envelope Design pressure, temperature, transient conditions and required class	Materials Body, basket, gasket and fastener compatibility requirements	Service strategy Simplex or duplex, cleaning interval, access and installation constraints
---	--	--	--

References: [1] Globe United FZE, Installation, Operation & Maintenance Manual — Basket Strainers, GU-IOM-B5-001, Rev. 02. [2] ASME B16.5 / EN 1092-1 as applicable to the ordered specification. This sheet is for preliminary technical reference; the order-specific data sheet, general arrangement drawing and nameplate take precedence.