INDUSTRIAL FLOW CONTROL SOLUTIONS

Basket Strainer Series

Simplex & Duplex · Flanged · Fabricated & Cast Construction

Purpose-built pipeline filtration to protect pumps, valves, meters, heat exchangers and process equipment from solids carried in liquid services.

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

APPLICATION-LED ENGINEERING
Every Basket Strainer is selected around the actual process duty—flow rate, solids profile, clean pressure-drop allowance, pressure/temperature envelope, fluid compatibility and maintenance strategy.

EQUIPMENT PROTECTION
Retain debris before it reaches critical downstream assets.

PRACTICAL SERVICE
Remove the basket for inspection, cleaning and replacement.

FLEXIBLE CONFIGURATION
Match materials, connections and filtration to the service.

INTRODUCTION

A complete platform for pipeline filtration

A practical reference for specifiers, project engineers, distributors and end users.

Catalog guide

Series at a glance

Parameter	Basket Strainer Series
Configurations	Simplex and duplex
Connection standards	ASME B16.5 or EN 1092-1 flanged, as specified
Nominal size range	DN 15–DN 650 · ½″–26″
Pressure classes	ASME 150 / 300 / 600 · PN 10 / 16 / 25 / 40
Standard basket	SS 316L perforated sheet
Basket filtration	0.8 / 1.6 / 3.0 / 6.0 mm perforation; mesh lining available
Special designs	Materials, coatings, fittings and accessories on request

SPECIFICATION PRINCIPLE

The final ordered configuration is established from the project data sheet, general arrangement drawing and nameplate. This catalog provides product-series guidance and is not a substitute for the order-specific documentation.

Why specify a basket strainer?

01 Protect sensitive equipment

Collect process debris before it causes erosion, blockage, damage or loss of performance downstream.

02 Support low clean pressure drop

High basket open area helps maintain an efficient clean flow path for the selected duty.

03 Plan maintenance confidently

Measure differential pressure against a clean baseline to schedule basket cleaning.

BASKET STRAINERS

Protection that fits the process

A broad, configurable range for liquid services where solids must be contained before downstream equipment.

A Basket Strainer is a pipeline-mounted mechanical filtration device. Fluid enters the body, is directed into a removable cylindrical basket, passes outward through the perforation or mesh lining, and exits through the clean side of the body. Solid contaminants remain inside the basket until cleaning. [1]

Performance benefits

01 **High dirt-holding capacity**
A deep basket element provides practical capacity for scale, rust, weld slag, sand and process debris.

02 **Accessible service route**
A top cover provides access for basket withdrawal, inspection, cleaning and spare-element replacement.

03 **Duty-specific filtration**
Perforation, mesh, materials and configuration can be matched to the contaminants and operating envelope.

Typical applications

WATER & UTILITIES
Intake, treatment, utility and distribution systems.

PUMP PROTECTION
Suction and process lines ahead of sensitive rotating equipment.

BUILDING SERVICES
HVAC, district cooling, marine and support services.

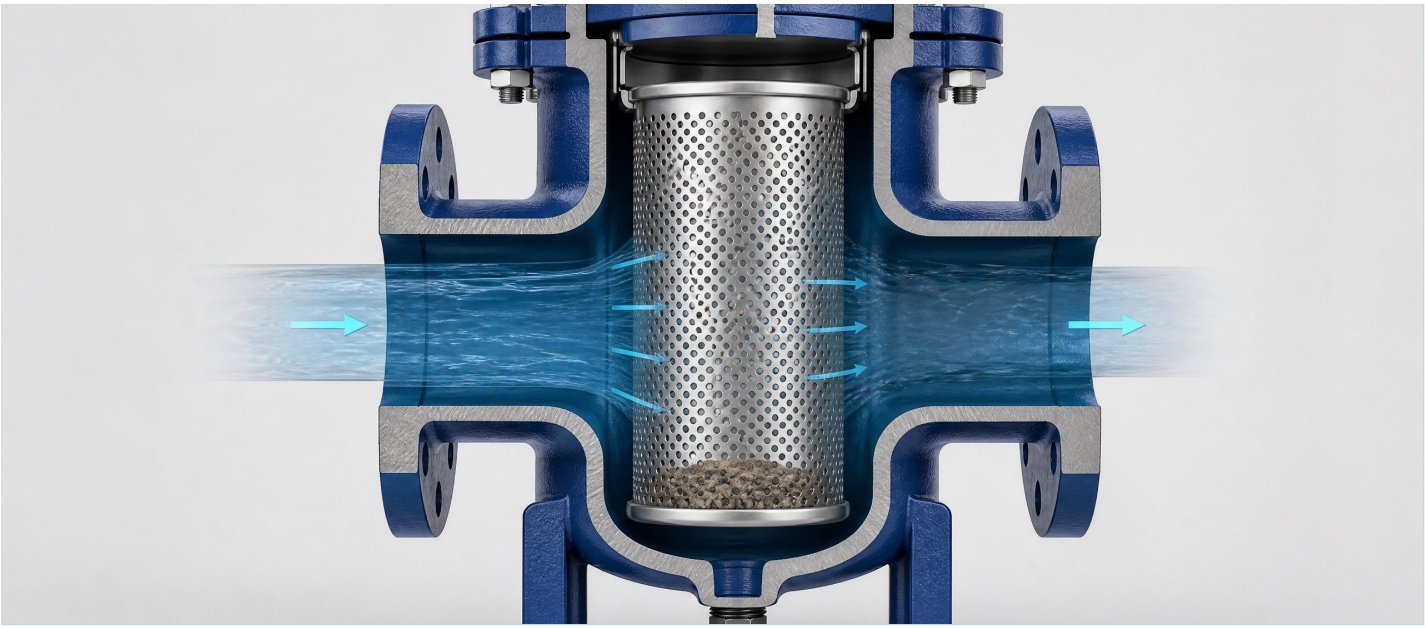
PROCESS DUTIES
Chemical, oil & gas and industrial liquid-handling systems.

APPLICATION REVIEW
For high-viscosity media, unusual solids, vacuum service, corrosive liquids or critical uptime requirements, share the process data sheet with Globe United FZE for a configuration review.

INTERNAL FLOW PATH

Capture solids inside the basket

The straining direction is inside-to-outside, retaining contaminants in a contained and accessible basket element.



01 **Unfiltered inlet**
The process stream enters the strainer body and is guided into the open top of the internal basket.

02 **Filtration through the wall**
Fluid passes radially through the basket perforation or mesh lining. Solids are retained inside the basket.

03 **Filtered outlet**
Cleaned fluid collects in the surrounding outer chamber and proceeds to the outlet connection.

Core construction

Feature	Purpose in the assembly
Pressure-retaining body	Robust housing with flanged inlet and outlet connections for the specified pressure class.
Bolted cover	Provides controlled top access; sealed by gasket or O-ring depending on the selected construction.
Removable basket	Cylindrical stainless-steel element for debris containment, cleaning and replacement.
Vent & drain	Cover vent assists air release during filling; low-point drain enables controlled draining and flushing.
Optional tappings	Differential-pressure gauge or transmitter connections can support condition-based cleaning.

FLOW DIRECTION
Confirm the flow arrow marked on the actual strainer body agrees with the installed pipeline direction. Correct orientation is essential for the basket to collect debris as designed.

SIMPLEX BASKET STRAINERS

Compact, direct and serviceable

A single-basket configuration for applications where the line can be isolated briefly for cleaning.

Simplex Basket Strainers provide an economical and compact filtration point for systems that can tolerate a planned interruption during basket cleaning. They combine the same robust body, removable basket and configurable filtration options available across the series. [1]

When simplex is the right choice

Planned service windows

The pipeline can be isolated, depressurised and drained without affecting the wider operation.

Compact installation

Space and piping arrangement favour a single pressure-retaining body.

Straightforward protection

The duty requires dependable debris removal without continuous on-line basket changeover.

Recommended line arrangement

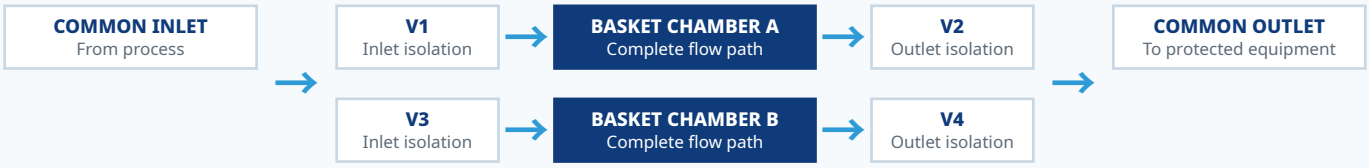
Provide independently supported pipework, upstream and downstream isolation valves, and differential-pressure monitoring. Allow vertical space above the cover for safe basket withdrawal, and pipe the vent and drain connections to a safe collection point. [1]

Selection topic	Simplex guidance
Cleaning strategy	Isolate the line, depressurise, drain, remove cover and clean or replace the basket.
Monitoring	Record clean differential pressure at start-up; clean when the project-defined increase is reached.
Access	Maintain a clear lifting/removal envelope above the cover and access to the drain.
Typical sales message	Straightforward, compact and configurable pipeline protection.

DUPLEX BASKET STRAINERS

Maintain flow while servicing one chamber

A two-chamber arrangement for critical systems where uninterrupted filtration is required.



OPERATING PRINCIPLE

Keep one complete path open—V1 + V2 or V3 + V4. Before cleaning the opposite chamber, isolate it from the process, vent safely and drain fully. Final changeover hardware and valve arrangement are defined by the ordered unit.

Continuity by configuration

A duplex arrangement uses two basket chambers and a changeover arrangement. Flow can be directed through one chamber while the other is isolated for cleaning, allowing the process stream to remain in service. The preferred configuration is determined by the fluid, operating risk, cleaning frequency and permitted outage. [1]

01 **In-service chamber**
Carries the process flow through its basket element.

02 **Service chamber**
Isolated, vented and drained before the cover and basket are accessed.

When duplex adds value

Requirement	Duplex response
Continuous process flow	Move duty between chambers without interrupting the pipeline.
High debris loading	Provide a service route that supports more frequent controlled basket cleaning.
Critical equipment protection	Maintain a filtered path during the cleaning activity.
Operating resilience	Build maintainability into the filtration point rather than depending on shutdown timing.

OPERATING SAFETY
Follow the ordered unit's changeover procedure. Before opening the out-of-service chamber, positively isolate it from the process, vent safely, drain fully and confirm that pressure is at atmospheric level.

BASKET ELEMENTS

Specify the opening around the particle

The basket is the functional filtration component; opening size and open area influence protection, clean pressure drop and cleaning interval.

Standard and optional filtration

Basket media	Typical series selection
Standard basket	SS 316L perforated sheet
Standard perforation	0.8 · 1.6 · 3.0 · 6.0 mm
Fine filtration	Wire-mesh lining, 20 mesh (840 µm) to 100 mesh (150 µm)
Special construction	SS 304 / 304L / 316, duplex SS, Monel and special mesh linings on request
Open-area guidance	Minimum 4:1 basket free area to pipe cross-sectional area on standard designs

Selection principle

Select an opening slightly smaller than the smallest particle that must be retained to protect downstream equipment, while retaining as much open area as practical. A finer opening improves retention but can raise pressure drop and shorten the interval between cleanings. [1]

01

Perforated basket

A robust, washable option for common debris sizes and liquid-process duties.

02

Mesh-lined basket

Supports finer filtration when downstream equipment requires a smaller retained particle size.

03

High-collapse basket

Specify where the expected differential-pressure duty requires enhanced basket strength.

DIFFERENTIAL PRESSURE LIMIT

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

MATERIALS OF CONSTRUCTION

Configure the wetted boundary for the fluid

Specify the body, basket, gasket and fastener materials around the actual chemical, temperature and pressure environment.

Component	Standard / general option	Stainless option	Available on request
Body & cover	Cast carbon steel ASTM A216 WCB / fabricated A106-B / A105	ASTM A351 CF8 / CF8M	Duplex SS, bronze B62, cast iron*, GRP-lined and compatible special materials
Basket element	SS 316L perforated sheet	SS 304 / 304L / 316	Monel, duplex SS, custom perforation and mesh linings
Cover gasket	Non-asbestos compressed fibre	PTFE / spiral-wound SS-graphite	Viton, EPDM, Buna-N and other compatible elastomers
Fasteners	ASTM A193 B7 / A194 2H	A193 B8 / B8M	Coated or exotic-alloy fasteners

Material-selection workflow

01 **Identify the process medium**
Consider concentration, trace contaminants, abrasiveness, cleaning agents and upset conditions.

02 **Confirm the operating envelope**
Use the actual pressure/temperature profile including transients such as pump shut-off head, surge or steam-out.

03 **Select every wetted component**
Confirm body, basket, gasket and fastener compatibility as a complete system.

MATERIAL AVAILABILITY
Various materials are available on request for the construction of Globe United Basket Strainers. Consultation is recommended where the service is corrosive, abrasive, temperature-sensitive or otherwise non-standard. * Cast iron is limited to non-shock, non-hazardous service.

SIZE, CLASS AND CONNECTION OPTIONS

Match the strainer to the system envelope

Choose nominal size, flange class and construction materials against the actual project design conditions.

NOMINAL SIZE RANGE	ASME PRESSURE CLASSES	PN PRESSURE CLASSES
DN 15–DN 650 · ½"–26"	150 / 300 / 600	10 / 16 / 25 / 40

Representative ASME pressure–temperature capability

Representative Class 150 / 300 values at stated temperatures. ASME Class 600 designs are available on request. The 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

Flange & interface options

Flange dimensions and drilling are supplied to **ASME B16.5** or **EN 1092-1** as specified. NPT threaded drain and vent plugs are standard on applicable designs; drain and vent valves can be supplied on request. Optional differential-pressure gauge or transmitter tappings support basket condition monitoring. [1]

Design principle

A Basket Strainer must be sized for the duty—not merely matched to nominal pipe size. Flow rate, fluid viscosity, solids loading, allowable pressure drop and service continuity determine the recommended body, basket and configuration.

RATING NOTICE
Do not use the pressure–temperature reference values as a substitute for the order-specific nameplate. The governing maximum allowable working pressure is determined by the ordered body material, flange class and service temperature.

ENGINEER FOR ACCESSIBILITY

Protect equipment—and preserve the service route

Correct installation supports both the initial filtration performance and the long-term ability to clean the basket safely.

Installation essentials

01 Support the pipework
Align and independently support adjacent piping so the strainer does not carry external loads.

02 Create isolation and access
Fit upstream and downstream isolation valves and retain clear vertical space above the cover for basket withdrawal.

03 Monitor differential pressure
Install gauges or a DP device in the provided tappings or adjacent pipework to identify basket fouling.

Routine maintenance sequence

01 Isolate & depressurise
Close valves, vent safely and drain the body fully before disturbing any bolted joint.

02 Remove & inspect
Open the cover, withdraw the basket and inspect the element, gasket and seating surfaces.

03 Clean & reassemble
Clean the basket, renew damaged parts, reseat correctly and tighten bolts in a controlled cross pattern.

04 Restart gradually
Vent trapped air, bring flow up slowly and establish a new clean differential-pressure reference.

Maintenance point	Good operating practice
Differential pressure	Record the clean baseline at commissioning and clean the basket before the project-defined fouling limit is reached.
Basket integrity	Inspect perforations, mesh lining and welds; replace damaged or distorted elements.
Cover gasket	Inspect at every opening and renew if compression set, damage or chemical attack is observed.
Drain / vent	Confirm that valve or plug condition remains suitable for the operating pressure and the disposal arrangement.

SAFETY NOTICE
Never loosen the cover, drain plug, vent plug or any bolted joint while the strainer is pressurised. Isolate, depressurise and drain before maintenance; follow the site permit-to-work and hazardous-media procedures.

FROM PROCESS DATA TO A CONFIGURED STRAINER

Ask the questions that determine the right design

A concise data set enables Globe United to match the body, filtration, materials and service strategy to the real duty.

Project data required

Data group	Information to provide
Process medium	Fluid composition, viscosity, solids type, particle size and expected loading
Hydraulic duty	Normal / maximum flow rate, line size and allowable pressure drop
Design envelope	Pressure, temperature, transients and required pressure class
Materials	Wetted-material requirements, corrosion allowance, gasket and fastener preference
Service strategy	Simplex or duplex, cleaning frequency, shutdown availability and access restrictions
Connections	ASME or EN standard, nominal size, flange facing and drain / vent requirements

Ordering description framework

Use the following sequence to make the product requirement clear in quotations and purchase orders.

1. Configuration: simplex or duplex basket strainer
2. Nominal size / flange standard / pressure class
3. Body, cover, basket, gasket and fastener materials
4. Basket perforation or mesh lining requirement
5. Required drain / vent, DP tappings, coating and accessories
6. Project operating conditions and applicable specification

CRITICAL OR UNUSUAL SERVICE
Send the process data sheet to Globe United FZE for services involving high solids, slurries, high viscosity, vacuum duty, aggressive corrosion, exceptional temperature or critical uptime requirements.

Commercial and engineering support

01 Application review
Review basket sizing, materials, pressure class and configuration around the stated duty.

02 Project documentation
Coordinate data sheets, GA drawings and ordered material details for the final configuration.

03 After-sales continuity
Support spare baskets, gaskets, bolting sets and service-oriented accessory requirements.

References: [1] Globe United FZE, Installation, Operation & Maintenance Manual — Basket Strainers, GU-IOM-BS-001, Rev. 02. [2] ASME B16.5 / EN 1092-1, as applicable to the ordered specification.

GLOBE UNITED FZE

Specify with confidence.

Basket Strainers engineered around the process duty.

Share your flow conditions, contamination profile and service constraints with our team. We will help define a practical Basket Strainer configuration with the right filtration element, materials, connection standard and maintenance strategy.

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CATALOG DISCLAIMER
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