TIMEX
Filtration & Water Systems

TBS-IL Basket Strainers

flow rates	filtration degrees	connection sizes
up to **7.000 m³/h** (30.823 US gpm)	**10.000 - 200** micron	up to **DN800 (32 inch)**

Reliable & problem-free solution for the elimination of coarse particles

features:

- Very large filtration area, easy operating mechanism and simple construction.
- Wide range of body materials; Carbon and Stainless Steel options in the fabrication programme. Special alloys upon request.
- Exceptional & revolutionary basket design.
- Low pressure drop and reduced frequency of cleaning thanks to the extensive screening area.
- Sea water application with special corrosion resistant materials
- Available in ASME Section VIII Division 1 design with " U" Stamp and/or PED 97/23/EC design with CE marking
- Applications: Water and Waste Water treatment, Irrigation, Cooling Water, Oil and Gas Industry, Food and Beverage plants, pre-filtration of industrial process liquids, etc.
- Industries: manufacturing, mining, oil & gas, power plants, water treatment plants, turf and agriculture, wherever filtration is required...

How does TBS-IL Basket Strainers work?

General

TIMEX Basket Strainers are perfect solutions for preventing relatively bigger particles to pass into the main pipe line in order to protect the expensive and fragile equipment such as pumps, flow meters, nozzles and valves which could stop functioning in case of solid particle accumulation. TIMEX Basket Strainers do not only protect the equipment and pipeline, furthermore they improve productivity by reducing maintenance and down-time.

TIMEX Basket Strainers are heavy-duty units intended for applications where large amounts of solid particulate are expected. The “TBS-IL” Basket Strainers range in flow-rates up to 7.000 m^3/h (30.823 US gpm). with baskets designed ranging from 10.000 - 200 micron filtration degree. Inlet/Outlet flanges are available up to 800 mm. (32”) diamater.

The Filtering Process

Basically, the strainer removes debris and particulate matter from the liquid by directing the flow through a screen. As the raw water enters from the inlet it passes through the basket and clean water leaves the system through the filter outlet. During the filtration, debris is retained in the basket and filtered liquid leaves the system free of dirt.

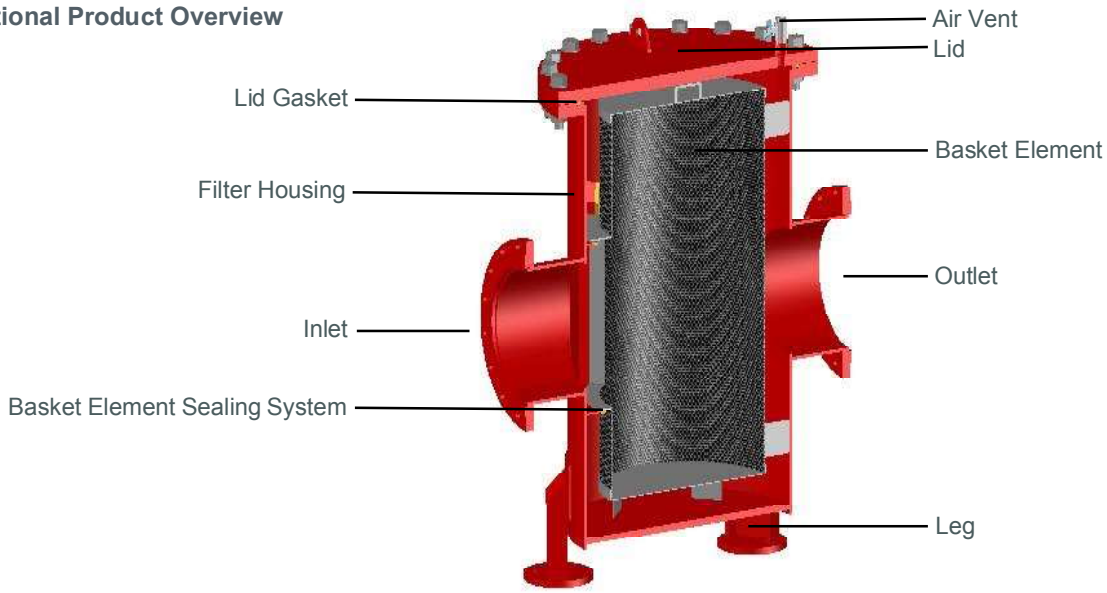
The gradual accumulation of debris inside the basket element causes a resistance to the flow which results in the increase of the pressure differential across the screen. In order to eliminate high pressure drop, basket element must be cleaned periodically. For monitoring the pressure drop, TIMEX Basket Strainers can be supplied with pressure gauges at the inlet and outlet of the filters. Alternatively, DP Switches having BMS output can be incorporated in the system design. Accessories such as steam jackets (for maintaining the critical fluid temperatures through the strainer),magnetic rods (for eliminating small sized iron and steel particles present in the fluid) etc. are supplied upon request.

Basket elements of TIMEX Basket Strainers are designed to be both effective and durable to perform its function correctly. They are made of stainless steel, altough almost any type of material can be specified in order to cover the special requirements (resistance to corrosion, chemicals i.e.) of application. For special applications, custom fabricated baskets can be supplied to meet the exact specifications.

User-friendly TIMEX Basket Strainers feature quick cleaning with swing-eye bolts closure at the lid and easily removable basket element with a lifting handle. Unique design of TBS-IL Basket Strainers allows fast and easy screen removal without the use of tools which makes the cleaning be completed in seconds.

Special Davit Lid assembly (optional) makes it really easy to open the heavy lids. After opening the swing-eye bolts, the lid is elevated with the help of an arm fixed to the strainer body. T-bolted, hinged etc. type closures can be supplied optionally.

Sectional Product Overview



Selection Criteria for Basket Strainer

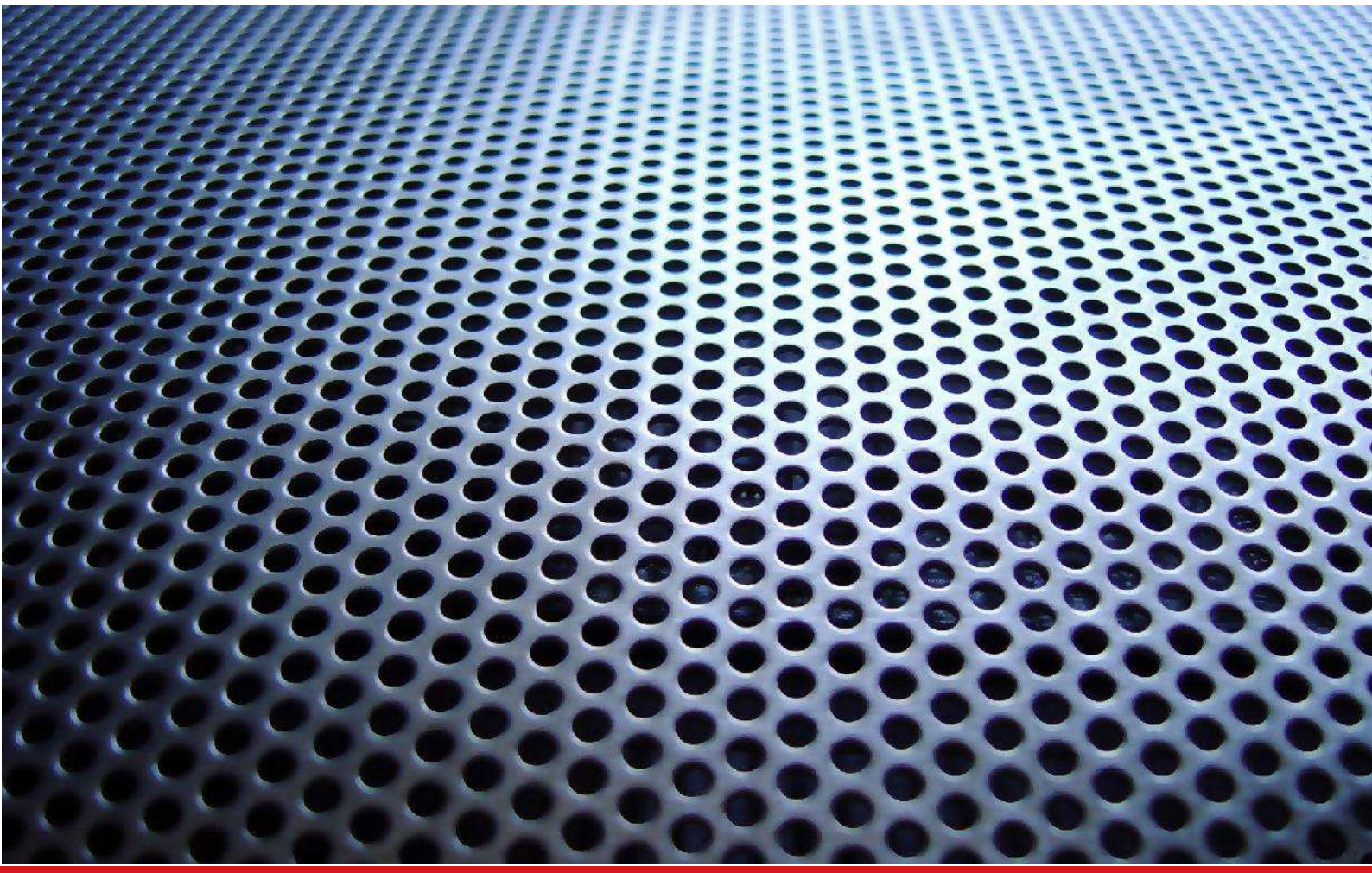
As a general approach the first consideration when selecting a basket strainer is the amount of free open area. This is the ratio of open area though the strainer basket to the cross sectional area of pipe. In order to satisfy low pressure drop, a basket strainer should have an open area ratio minimum 4 to 1. Ratios less than the mentioned may cause excessive pressure drop.

As the basket element gets filled with the accumulated particles inside, total area though the basket becomes smaller than the pipe area. This will prevent the free flow of liquid though the strainer basket and cause a headloss to grow. Furthermore, it would result with the more frequent cleaning requirement of basket element.

Cleaning easiness of the basket is another important parameter when deciding the suitable type of strainer. Since the cleaning of basket elements will be required periodically, the basket should be able to be removed and replaced as simply as possible. Thanks to the exceptional design of TIMEX Basket Strainers, cleaning operation is accomplished within seconds without use of any tools.

Compact design is also important when it comes to installing the basket strainer. In many industrial areas, space is at a premium and the less room a strainer takes the better. As to save space, a basket strainer should be able to be properly placed at a small foot-print. TIMEX Basket Strainers are well-designed considering the specific needs of several applications & industries with respect to the gained experience over years. In addition to the standard fabrication line, TIMEX offers custom made strainers which would satisfy the requirement to its best. Design and fabrication as per ASME Sec. VIII, DIN Norms, PED 97/23/EC i.e. is possible upon request. Please consult for your requirements of special products.

A well-designed basket strainer should give the chance to the end-user to be able to change the filtration rating as the filtration demands and particles concentration may vary by time. A wide variety of basket filtration grades should be available as to cover the requirement. TIMEX offers several types of perforated, micron-lined screens in different construction materials.



TBS-IL 50 & 65 / TBS-IL 80 & 100 / TBS-IL 125 & 150
Technical Specifications (flow data at 5.000 micron, average water quality)

Filter Type	TBS-IL 50	TBS-IL 65	TBS-IL 80	TBS-IL 100	TBS-IL 125	TBS-IL 150
General Data *						
Maximum Flow Rate	35 m^3/h (154 gpm)	55 m^3/h (242 gpm)	80 m^3/h (352 gpm)	145 m^3/h (638 gpm)	205 m^3/h (903 gpm)	290 m^3/h (1.277 gpm)
Inlet / Outlet Diameter	DN50 (2")	DN65 (2 1/2")	DN80 (3")	DN100 (4")	DN125 (5")	DN150 (6")
	DIN2576, PN10, Flanged (ASME B16.5 150# SO.RF Flanged)					
Standard Filtration Degrees	Perforated screen 10.000, 5.000, 3.500, 3.000, 2.500, 2.000, 1.500, 1.000 micron Wedge Wire screen 800, 500, 300, 200 micron					
Maximum Working Pressure	10 bar (150 psi) Higher pressure ratings upon request					
Filtration Area	765 cm^2 (118 in^2)		1.200 cm^2 (186 in^2)		2.500 cm^2 (387 in^2)	
Weight [empty]	55 kg (121 lb)	57 kg (126 lb)	81 kg (179 lb)	83 kg (183 lb)	134 kg (295 lb)	137 kg (302 lb)

* Subject to filtration degree & water quality / Other flange standards are available upon request

Drain Data **			
Drain Valve	DN25	DN25 With Manual Ball Valve	DN25

** Other type valves are available upon request

Construction Materials ***	
Filter Housing & Lid	Carbon Steel, epoxy coating inside & outside
Screen	Perforated or Wedge Wire - Stainless Steel 304
Drain Valve	Stainless Steel 304, natural rubber or EPDM
Seals	Synthetic rubber, NBR

*** Other construction materials & coatings for corrosive use, are available upon request.

" Rathmann Clamps Lid Closure System "

TBS-IL 200 & 250 / TBS-IL 300 & 350 / TBS-IL 400 & 450
Technical Specifications (flow data at 5.000 micron, average water quality)

Filter Type	TBS-IL 200	TBS-IL 250	TBS-IL 300	TBS-IL 350	TBS-IL 400	TBS-IL 450
General Data *						
Maximum Flow Rate	500 m^3/h (2.202 gpm)	750 m^3/h (3.303 gpm)	1.100 m^3/h (4.844 gpm)	1.400 m^3/h (6.165 gpm)	1.950 m^3/h (8.687 gpm)	2.500 m^3/h (11.008 gpm)
Inlet / Outlet Diameter	DN200 (8")	DN250 (10")	DN300 (12")	DN350 (14")	DN400 (16")	DN450 (18")
	DIN2576, PN10, Flanged (ASME B16.5 150# SO.RF Flanged)					
Standard Filtration Degrees	Perforated screen 10.000, 5.000, 3.500, 3.000, 2.500, 2.000, 1.500, 1.000 micron Wedge Wire screen 800, 500, 300, 200 micron					
Maximum Working Pressure	10 bar (150 psi) Higher pressure ratings upon request					
Filtration Area	6.300 cm^2 (976 in^2)		14.000 cm^2 (2.170 in^2)		17.500 cm^2 (2.713 in^2)	
Weight [empty]	269 kg (593 lb)	279 kg (615 lb)	457 kg (1.008 lb)	473 kg (1.043 lb)	735 kg (1.620 lb)	743 kg (1.638 lb)

* Subject to filtration degree & water quality / Other flange standards are available upon request

Drain Data **			
Drain Valve	DN40	DN40 With Manual Ball Valve	DN50

** Other type valves are available upon request

Construction Materials ***	
Filter Housing & Lid	Carbon Steel, epoxy coating inside & outside
Screen	Perforated or Wedge Wire - Stainless Steel 304
Drain Valve	Stainless Steel 304, natural rubber or EPDM
Seals	Synthetic rubber, NBR

*** Other construction materials & coatings for corrosive use, are available upon request.

" Swing-Eye Bolts Lid Closure System "

TBS-IL 500 / TBS-IL 600 / TBS-IL 700 / TBS-IL 800
Technical Specifications (flow data at 5.000 micron, average water quality)

Filter Type	TBS-IL 500	TBS-IL 600	TBS-IL 700	TBS-IL 800
General Data *				
Maximum Flow Rate	3.000 m^3/h (13.210 gpm)	4.350 m^3/h (19.155 gpm)	6.000 m^3/h (26.420 gpm)	7.000 m^3/h (30.823 gpm)
Inlet / Outlet Diameter	DN500 (20")	DN600 (24")	DN700 (28")	DN800 (32")
	DIN2576, PN10, Flanged (ASME B16.5 150# SO.RF Flanged)		DIN2576, PN10, Flanged (ASME B16.47 150# SO.RF Flanged)	
Standard Filtration Degrees	Perforated screen 10.000, 5.000, 3.500, 3.000, 2.500, 2.000, 1.500, 1.000 micron Wedge Wire screen 800, 500, 300, 200 micron			
Maximum Working Pressure	10 bar (150 psi) Higher pressure ratings upon request			
Filtration Area	25.000 cm^2 (3.875 in^2)	32.000 cm^2 (4.960 in^2)	44.000 cm^2 (6.820 in^2)	53.000 cm^2 (8.215 in^2)
Weight [empty]	1.060 kg (2.337 lb)	1.260 kg (2.778 lb)	1.656 kg (3.651 lb)	2.435 kg (5.368 lb)

* Subject to filtration degree & water quality / Other flange standards are available upon request

Drain Data **				
Drain Valve	DN50	DN50	DN50	DN65
	With Manual Ball Valve			

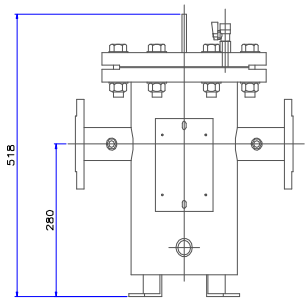
** Other type valves are available upon request

Construction Materials ***	
Filter Housing & Lid	Carbon Steel, epoxy coating inside & outside
Screen	Perforated or Wedge Wire - Stainless Steel 304
Drain Valve	Stainless Steel 304, natural rubber or EPDM
Seals	Synthetic rubber, NBR

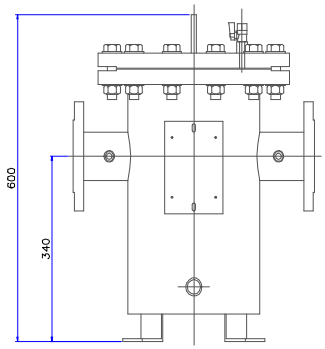
*** Other construction materials & coatings for corrosive use, are available upon request.

" Davit Lid Mechanism "

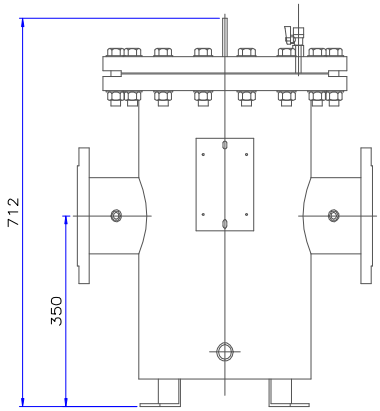
TBS-IL 50 & 65



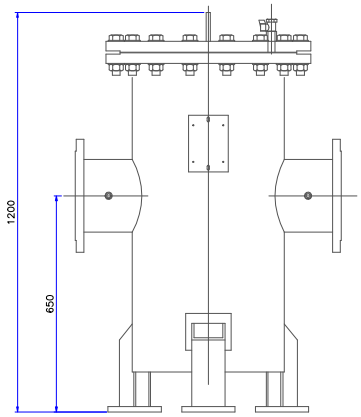
TBS-IL 80 & 100



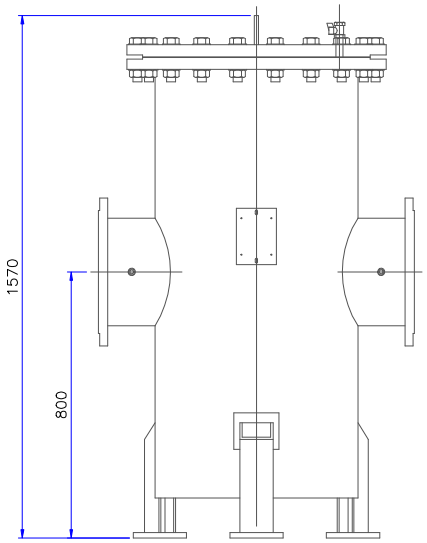
TBS-IL 125 & 150



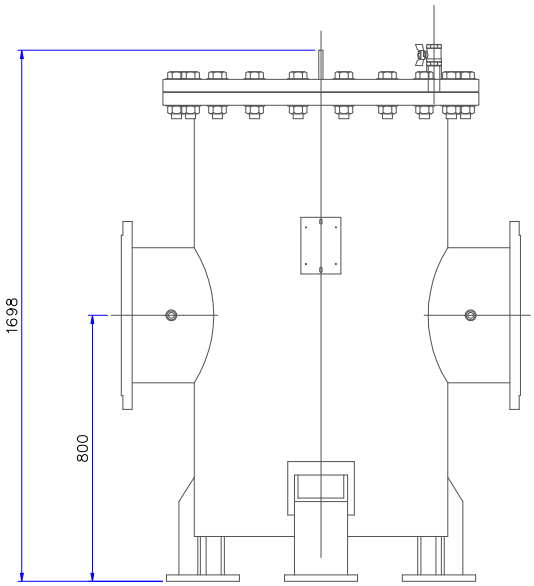
TBS-IL 200 & 250



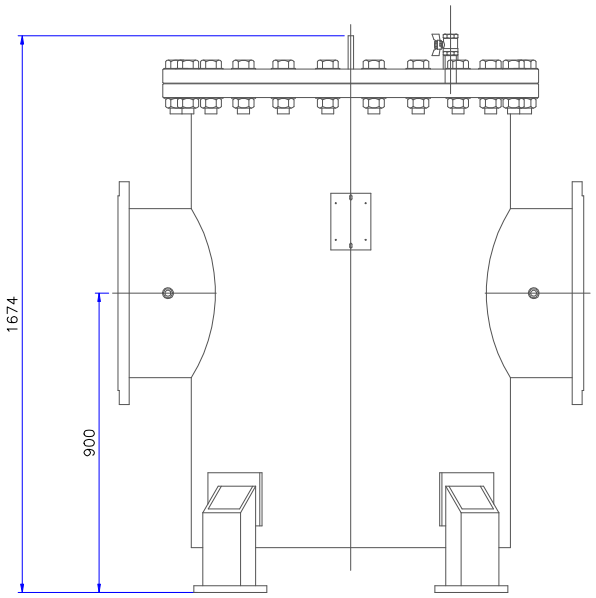
TBS-IL 300 & 350



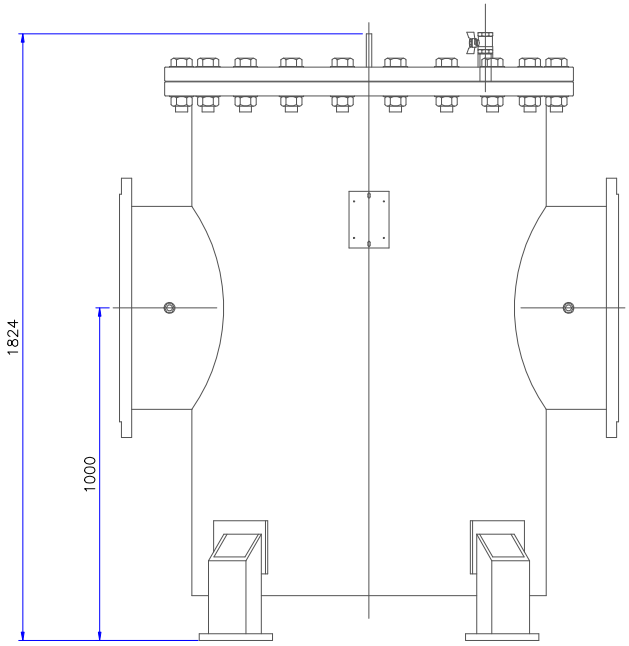
TBS-IL 400 & 450

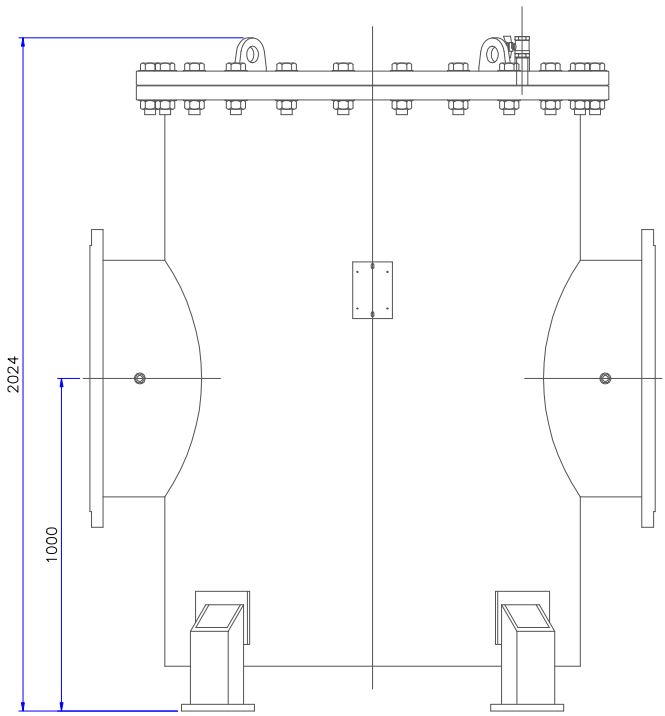


TBS-IL 500

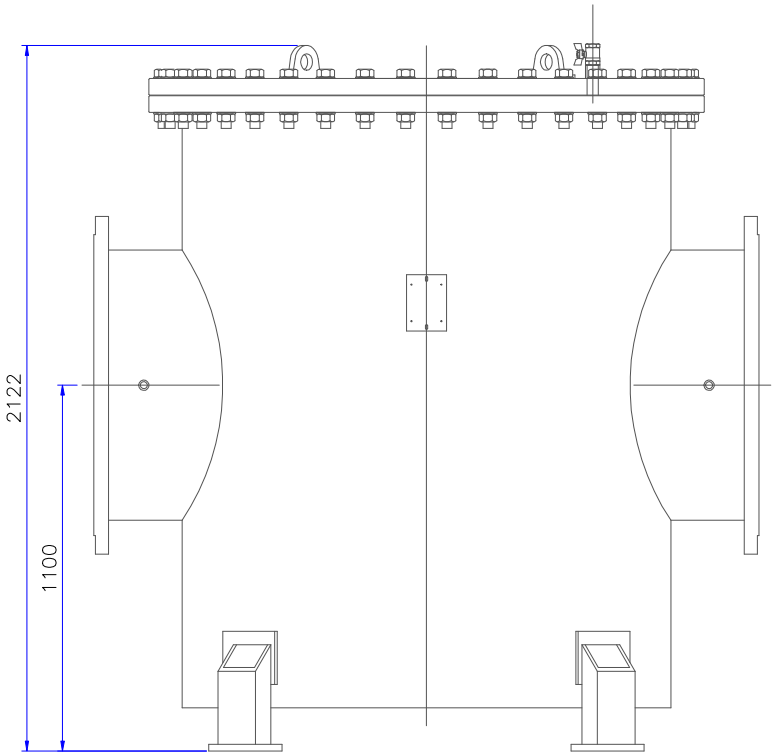


TBS-IL 600





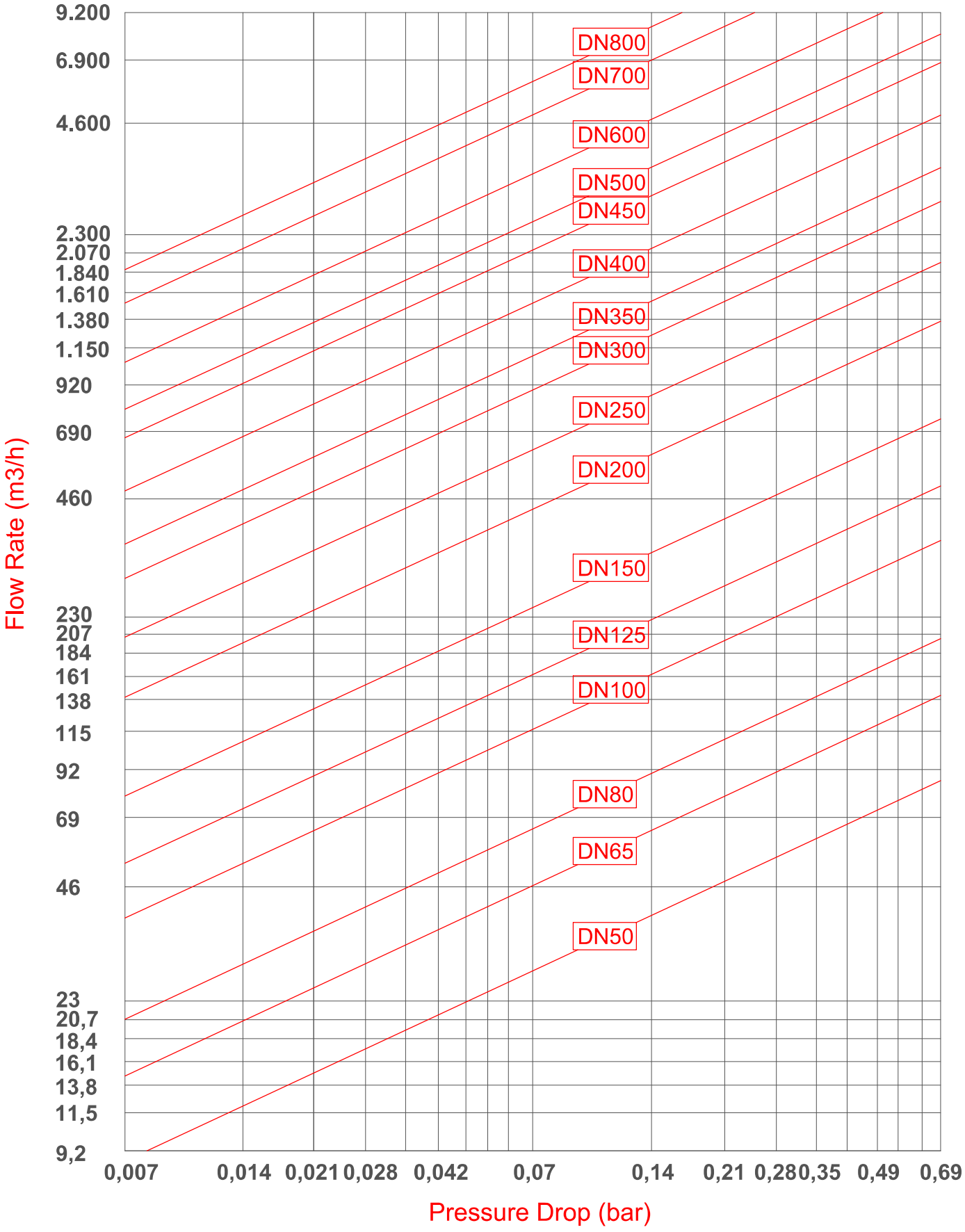
TBS-IL 700



TBS-IL 800

Pressure Loss Diagram

(For 1.500 Micron Perforated Basket Element at Average Water Conditions)



Y STRAINERS

- From DN50 (2”) upto DN500 (20”) - Special Design - Available in ASME Design with “U” Stamp - For High Temperature Applications
- For Refineries and Power Plants

STANDARD STRAINERS

- With Davit Lid Option
- Internally Coated for Potable Water Applications

SKID SYSTEMS

- Combination with Manuel Strainers and Automatic MAP Filters
- Complete Systems with Pump, Internal Piping, Valves and Control Panel

STANDARD STRAINERS

- With Special Material SUPER DUPLEX SS
- Swing Eye Bolts
- ASME Design

PUMP PACKAGE SYSTEM

- Skid Mounted
- Pump, Strainers, Internal Piping,Control Panel

SPECIAL FABRICATION STRAINERS

- ASME Code with ”U” Stamp
- High Pressure Application
- For Oil&Gas Industry

SPECIAL FABRICATION STRAINERS

- DN350 - DN1.000 Inlet/Outlet Diameter
- From 20.000 - 70.000 cm^2 Filtration Area
- Special Body and Screen Material
- For Refineries

SKID MOUNTED DUPLEX STRAINERS

- From DN50 (2”) - DN700 (28”)
- Full Control System

industry
Automotive, Aviation, Ballast treatment, Electronics, Food & Beverage; Mining, Oil & Gas, Petrochemical, Power Generation, Pulp & Paper

municipal
Potable Water, Waste Water, Desalination, Brackish Water, High rise buildings, Pre-filtration to Membranes

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aquaculture
Fish Farming, Recirculating Aquaculture Systems (RAS), Fish Processing Industry

Factory & Head Office

ASO 2 OSB, 2036. Street No : 12
Sincan / ANKARA / TURKEY

Tel: +90 312 815 52 46-47

Fax: +90 312 815 52 48

E-mail: info@timex.com.tr

www.timex.com.tr

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