Strainer

Strainer Selection

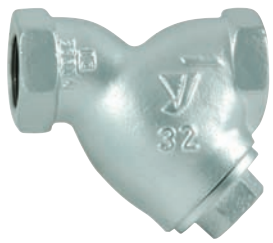
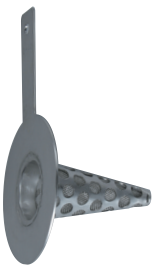
Application				Max. Pressure (MPa)	Material				Max. Temperature (˚C)	Model	Type			Page
Steam	Air	Water	Oil		Ductile Cast Iron	Stainless Steel	Bronze	Carbon Steel			Y Type	Basket	Duplex	
●	●	●		1.0	●				220	SY-40	●			152
●	●	●	●			●			150	SY-8	●			154
●	●	●	●			●				SY-38	●			154
●	●	●	●			●			220	SY-13SS	●			156
●	●	●	●					●		SY-13	●			156
●	●	●						●	260	SY-20-10	●			162
●	●	●	●	1.3			●		220	SY-6	●			150
●	●	●		2.0	●				220	SY-5	●			149
●	●	●			●					SY-40EN	●			153
●	●	●			●					SY-40H	●			153
●	●	●	●			●			150	SY-17	●			151
●	●	●	●			●				SY-37	●			151
●	●	●						●	260	SY-20-20	●			162
●	●	●		3.0				●	260	SY-10-30	●			162
●	●	●						●	350	SY-10H	●			162
●	●	●				●				SY-10HS	●			163
	●	●		1.0	●				60	SY-40C	●			152
	●	●			●				80	SY-9	●			162
		●	●	1.0	●				60	SU-20C		●		158
		●	●		●				80	SU-20S		●		158
		●	●		●					SW-10			●	161
		●	●		●					SW-10S			●	161
		●	●		●				220	SU-20		●		158
		●	●			●			80	SU-10S		●		163
		●	●			●			120	SU-6SS		●		160
		●	●			●			220	SU-10		●		163
		●	●					●	120	SU-6		●		160
		●	●		●				5-80	SU-50S		●		157
		●	●		●					SU-50SS		●		157
		●		1.2			●		60	SU-55F		●		163
		●		1.3			●		80	SY-6-N	●			150
		●		1.6			●		80	SY-24	●			162
		●					●			SY-24-N	●			162
		●	●	2.0				●	260	SU-12		●		163
		●	●		●				80	SU-20H		●		159
		●	●		●				5-80	SU-50H		●		157
●	●	●		4.0		●			220	ST-1 Corn Type Temporary				163

Selection of Strainer

What is a Strainer ??

A strainer catches foreign substances inside of piping and prevents them to flow inside of the piping for steam, air, water, and oil systems for a factory or plant, as well as problems or damage to devices attributable to the ingress of foreign substances.

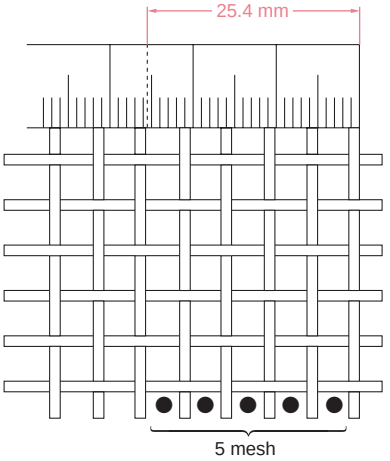
Applications	Y type strainer	Basket strainer	Duplex strainer	Temporary strainer
	A compact type strainer with low fluid resistance and requiring less installation space.	A basket strainer is suitable for liquid, equipped with a larger filtration area than Y type strainer.	The screen can be washed without stopping the fluid because the fluid passage can be switched.	A piping flushing type strainer to be used prior to operation.

Major Products	SY-5	SU-20	SW-10	ST-1
				

Meshes

What is the mesh size?

The mesh size is the number of meshes in 25.4 mm (1 inch).
Example: In the right figure, the mesh size is five.



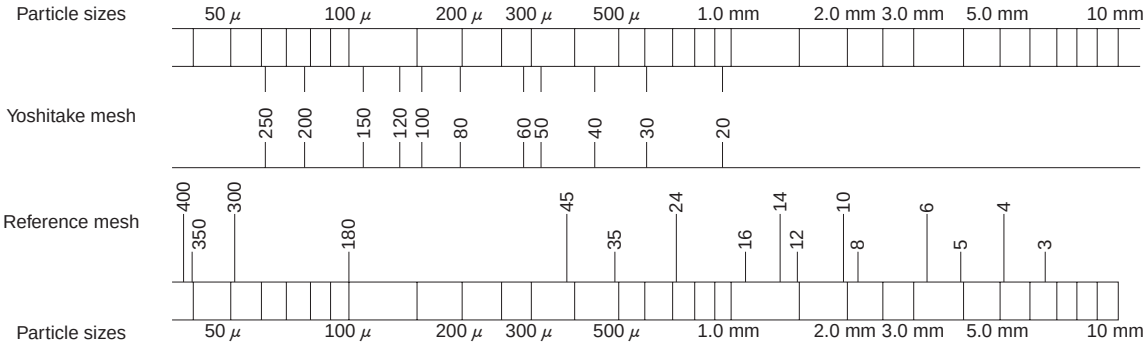
	Specification for Japanese government	Yoshitake standard
For water	40 mesh or more (80 mesh or more when installed before a solenoid valve)	40・60 mesh
For steam	80 mesh or more	80 mesh

●Table of standard mesh per model

Standard meshes	Model
40 mesh	SU-6・6SS
60 mesh	SY-40C, SY-24・24-N, SY-6-N, SY-9, SU-10・10S, SU-20・20S・20C・20H, SU-12, SU-50H・50S・50SS, SW-10・10S, SU-55F
80 mesh	SY-5, SY-40・40EN・40H, SY-6, SY-17, SY-8, SY-10-30, SY-10H・10HS, SY-20-10・20, SY-13・13SS, ST-1

Meshes

Comparison of Meshes and Particle Sizes



- Note that because of the structure, the capability to catch foreign substances equivalent to standard meshes may not be guaranteed. Please contact us when the passing of foreign substances is not permissible.

Porosity of Screen

●Porosity of perforation

Hole diameter (mm) ——— No. of hole (holes/cm²)	Porosity (%)
φ 1.2 ——— 23.8	26.98
φ 1.3 ——— 16.2	21.59
φ 1.5 ——— 11.2	19.96
φ 2.5 ——— 7.21	35.42
φ 6 ——— 1.42	40.30
φ 6 ——— 1.80	50.63
φ 8 ——— 0.954	47.96
φ 10 ——— 0.739	58.04

●Screen porosity table

(%)

	Meshes										
Model	20	30	40	50	60	80	100	120	150	200	250
SY-5・6・9・10・17・20・24・37・38 SY-40・40EN・40H, SU-10・10S・12 SU-20・20S・20H・50H・50S・50SS SW-10・10S	59.5	49.6	51.3	41.6	44.8	38.6	36.7	38.6	41.6	36.7	36.7
SY-8 (15A-100A)	59.5	49.6	51.3	41.6	44.8	38.6	36.7	—	—	—	—
SY-8 (125A-150A)	52.5	43.2									
SY-13・13SS, SU-6・6SS	53.6	49.6	46.9	41.6	44.7	38.6	36.7	38.6	41.6	36.7	36.7
ST-1	52.5	46.4	40.7	39.2	41.7	38.7	36.8	38.6	38	36.8	36.8

How to Calculate the Filtration Area and Filtration Area Ratio of a Strainer

Calculate the filtration area ratio of a strainer to the bore as shown below.

Filtration area of Y type strainer = Surface area of screen (π・ds・ℓs) x porosity of perforated sheet x porosity of mesh screen

Filtration area of basket type and duplex type strainers =

Surface area of screen (π・ds・ℓs + $\frac{\pi \cdot ds^2}{4}$) x porosity of perforated sheet x porosity of mesh screen

$$\text{Filtration area ratio to bore} = \frac{\text{Filtration area of strainer}}{\text{Inside cross sectional area of piping } \left(\frac{\pi \cdot D^2}{4} \right)} \quad \text{(D: Bore)}$$

<Calculation example>

Calculate the filtration area of an 80A SY-8 strainer with a 40 mesh screen

(ds = φ88, ℓs = 130, perforated sheet φ2.5-7.21 holes/cm²).

Filtration area of strainer = (π x 88 x 130) x 0.3542 x 0.513 ≒ 6530 (mm²)

Inside cross sectional area of piping = $\frac{\pi \times 80.7^2}{4}$ ≒ 5114 (mm²) (Assuming that the bore is φ80.7)

Consequently,

Filtration area ratio to bore = $\frac{6530}{5114}$ ≒ 1.27 (times)

Features of Y Type Strainer

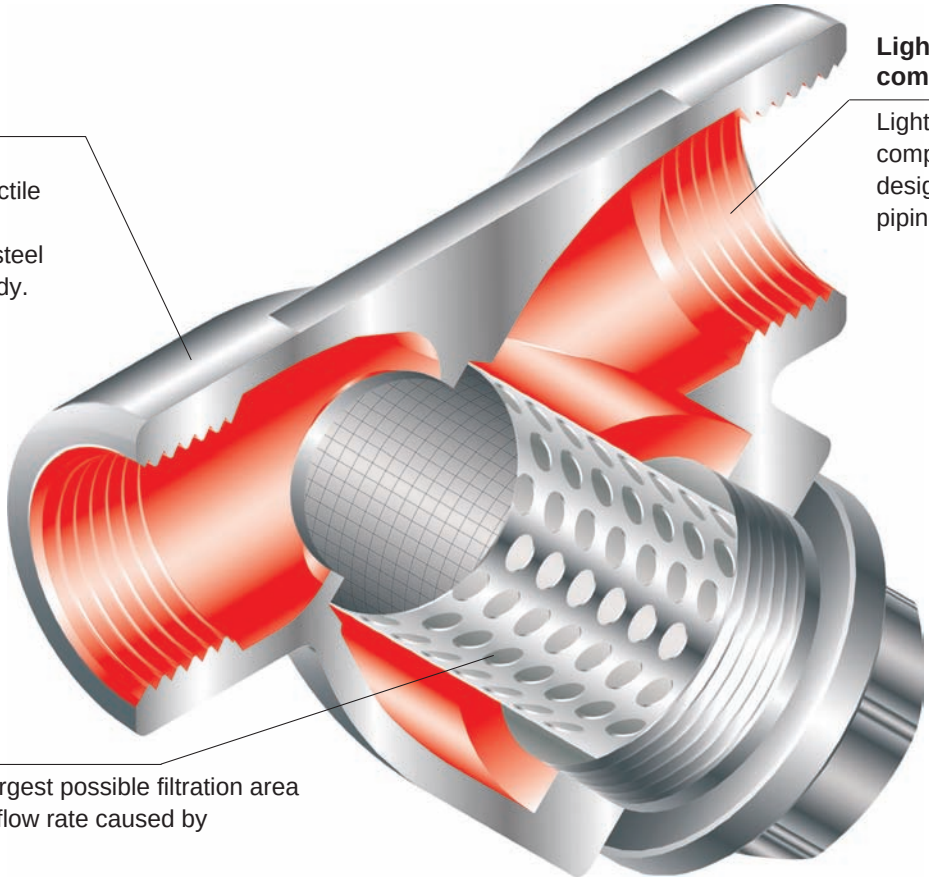
Use this strainer for applications such as:

Mainly for removing dirt and dust from steam or air piping and for protecting control valves.

The Y type strainer can be widely used for removing dirt and dust from pipelines. Lightweight and compact, the Y type strainer comes in a wide variety of structures, shapes, and mesh types.

Selectable materials

Available with various materials, including ductile cast iron, carbon steel, bronze, and stainless steel as materials for the body.



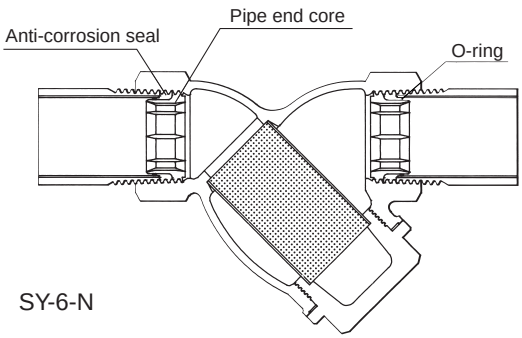
Lightweight and compact

Lightweight, compact, and designed for easy piping.

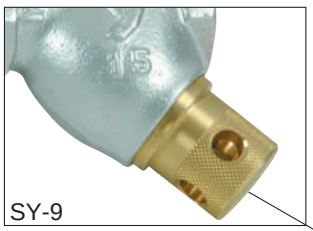
Large filtration area

Marine type with the largest possible filtration area in view of decrease in flow rate caused by clogging.

Available with pipe end core.



SY-6-N



SY-9

Available with "easy plug" which makes the removal and cleaning of the internal screen easy (SY-9).

Easy plug

SY-5

SY-40

SY-8

Features of Basket Strainer

Use this strainer for applications such as:

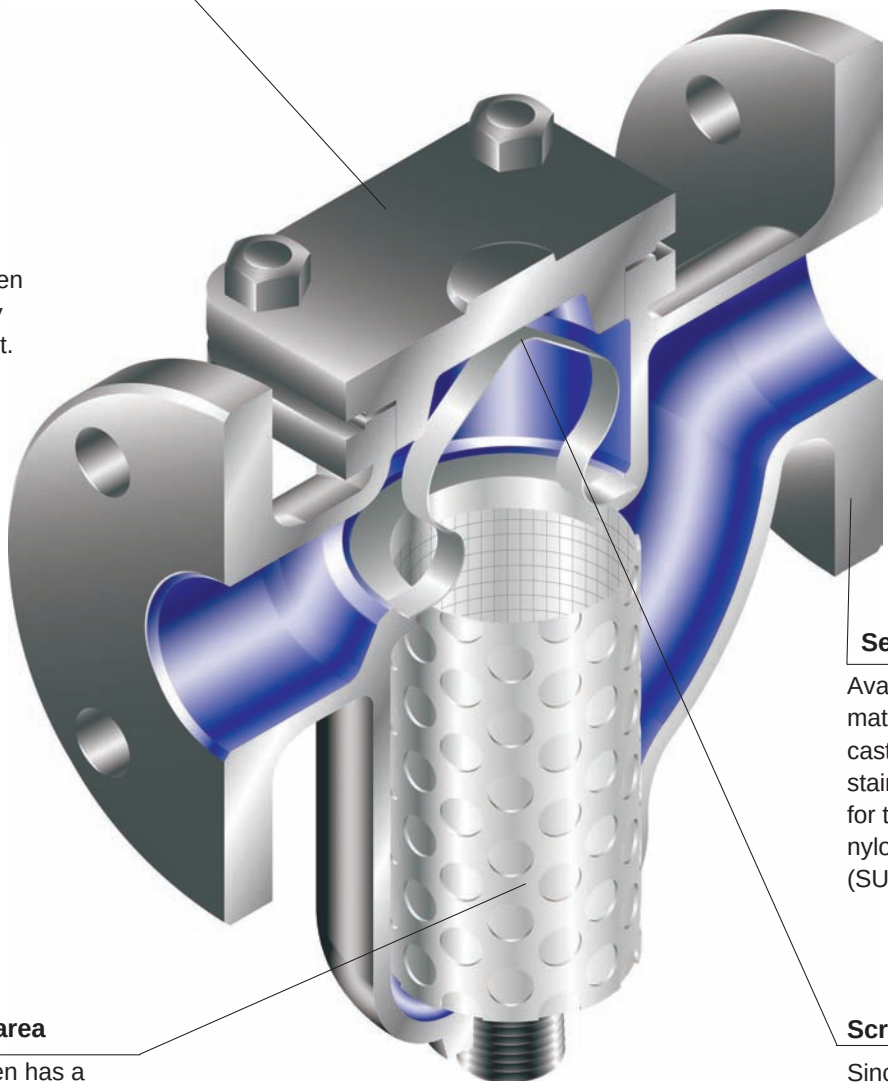
- For industrial water
- For combustion oil for boilers, etc.

The basket strainer can be widely used mainly for removing dirt and dust from pipelines for liquids.

SU-20S

Available with one-touch type allowing the screen to be removed by unfastening a bolt.

One-touch cover



Selectable materials

Available with various materials, including ductile cast iron, carbon steel and stainless steel as materials for the body. Available with nylon-coated basket strainer (SU-20C).

Large filtration area

The internal screen has a large surface area (1.5 times to twice that of other structures), which helps reduce pressure loss due to clogging.

Screen with a handle

Since the screen is provided with a handle, it is possible to remove it with user's hands kept clean.

SU-20

SU-10S

Features of Duplex strainer

Use this strainer for applications such as:

Systems that must keep the fluid flowing, such as fuel supply lines.

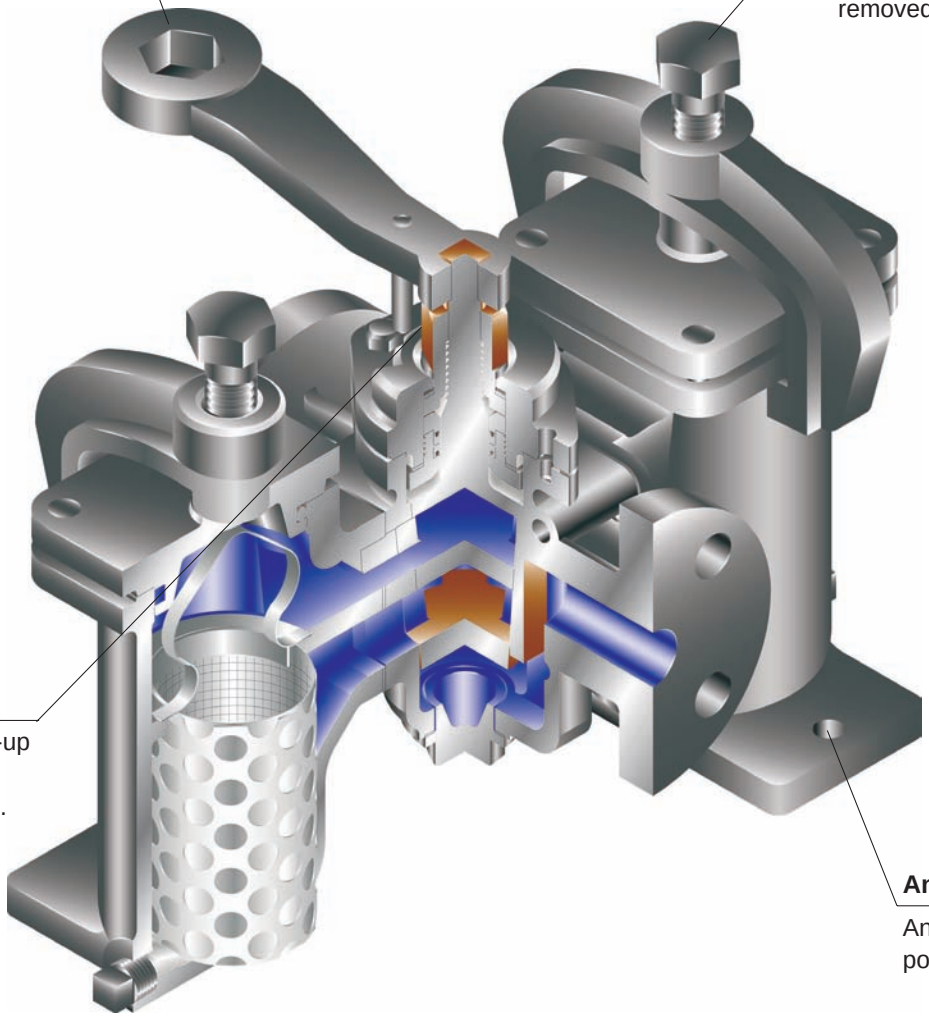
The duplex strainer can be widely used for removing dirt and dust from pipelines for water and oil. By switching the right or left passage to the other, the screen can be washed without stopping the fluid.

No other tools required

Switching can be performed with the attached tool.

One-touch operation

The SW-10S strainer is a one-touch type strainer whose screen can be easily removed.



Pull-up cock

The handle of a pull-up cock type can be effortlessly operated.

Anchor base

Anchor fixing is possible.

The screen can be removed and cleaned without stopping the fluid (system). It is not necessary to install bypass piping.

SW-10

SW-10S

How to Select a Nominal Size

A strainer can work most effectively and completely fulfill working conditions if the following are taken into account:

■ Selecting a nominal size

Select a strainer of the same nominal size as that of the piping to which it will be connected (nominal size of piping = nominal size of strainer). Please remember that using a strainer of a smaller nominal size increases the pressure loss of the strainer and may disable it from keeping specified pressure at the inlet of a device.

<Standard flow velocity of fluids>

Fluid	Remarks	Standard flow velocity
Saturated steam	Auxiliary piping for vacuum or small-diameter piping	15 m/s (10-20)
	Large-diameter piping	30 m/s (20-40)
Superheated vapor	Piping diameter: Approx. ϕ 75-ϕ 250	40 m/s (30-50)
	Piping of high-grade material	70 m/s (65-80)
Inlet of steam coil	0.3-0.7 MPa	30 m/s (25-30)
Air	High pressure: 1.0 MPa	20 m/s (20-25)
	Low pressure	15 m/s (5-15)
	Extremely low pressure: 0.1 MPa	10 m/s (3-10)
Water, oil		2 m/s (2- 4)

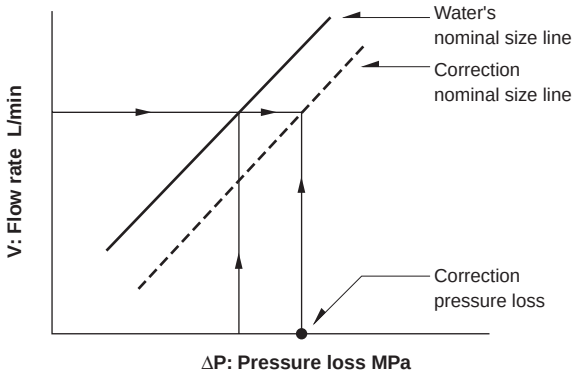
・This table shows the standard flow velocity of each fluid based on the flow velocities specified in JIS F 7101 (Shipbuilding -- Pipes of machinery -- Standard velocity of flow).

■ Selecting a piping nominal size

Selecting as large a piping nominal size as possible is an ideal way to reduce pressure loss inside piping. On the other hand, the smaller the piping nominal size, the better in view of piping and equipment costs. Additionally, heat loss rises with an increase in piping nominal size. In selecting a piping nominal size, determine permissible pressure loss based on the application, and find the smallest piping nominal size that can keep actual pressure loss within the determined range. However, an excessively high flow velocity accelerates wear in piping and may cause vibration. In general, the standard flow velocity of a fluid is set according to the application and based on the type and properties of the fluid and the piping nominal size.

How to Read a Pressure Loss Chart

1. When water or a fluid close to water in viscosity and specific gravity is used:
   Find the intersection point of the flow rate V L/min and the pressure loss ΔP MPa (usually 0.02 MPa to 0.03 MPa) on the pressure loss chart for the strainer. The nominal size line above the intersection point represents the required nominal size.
2. When the fluid to be used is different from water in viscosity and specific gravity:
   Take any of each nominal size from pressure loss chart (for water) in each product, and calculate the pressure loss at that point using the expression shown below. Draw a line of the same gradient as water's nominal size line. Then, find the required nominal size as described in 1.
3. When the filter element and the filter screen are different:
   Pressure loss seldom changes even if our perforated sheet and filter screen are replaced. However, fine ones and coarse ones are different in the state and progression of clogging. Set a higher safety factor for a finer one.
4. How to calculate the pressure loss of a strainer:
   Find the intersection point of the nominal size line and the flow rate on the chart. The ΔP value at the intersection point is the pressure loss of the strainer.
   ・Use the expression shown below to calculate pressure loss when a fluid other than water is used and its weight volume ratio and kinetic viscosity coefficient are different from those of water.



<Calculation formula>

$$\Delta P = \Delta Pw \frac{r}{rw}(0.00379v + 1)$$

ΔP	: Pressure loss when the fluid is flowing [MPa]
ΔPw	: Pressure loss when water is flowing [MPa]
r	: Weight volume ratio of the fluid [kg/m³]
rw	: Weight volume ratio of water [kg/m³]
v	: Kinetic viscosity coefficient [cSt]

<Calculation example>

Calculate the pressure loss of an 80A SU-20 strainer when a lubricating oil (weight volume ratio: 900 kg/m³, kinetic viscosity coefficient: 200 cSt) flows at a rate of 300 L/min. Calculate the pressure loss of water from the chart.

$$\Delta Pw = 0.004 \text{ MPa}$$

$$\Delta P = 0.004 \times \frac{900}{1000} \times (0.00379 \times 200 + 1)$$

$$\fallingdotseq 0.007 \text{ MPa}$$

Guidelines for the Installation of a Strainer

- Use a strainer under a maximum pressure loss of 0.1 MPa or less.
- Whether a strainer is clogged can be checked by installing a pressure gauge before and after it.
- When installing a strainer, prepare space for removing the screen from it.
- Do not apply back pressure from the outlet of a strainer because the filter screen may separate from the perforated sheet.

Guidelines for Y type strainer

Install the Y type strainer with the cap down. Remove the drain plug, and attach a blow valve. The dirt accumulating in the lower portion of the strainer can be discharged (see Fig.1).

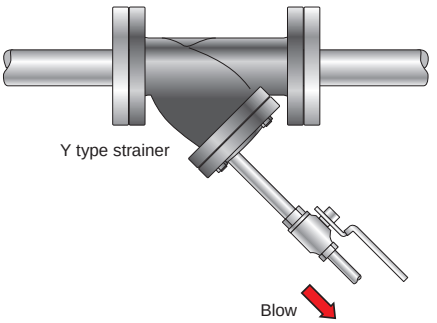


Fig. 1

When the fluid is steam, connect piping so that the cap faces sideways in order to minimize the pooling of drain (see Fig. 2).

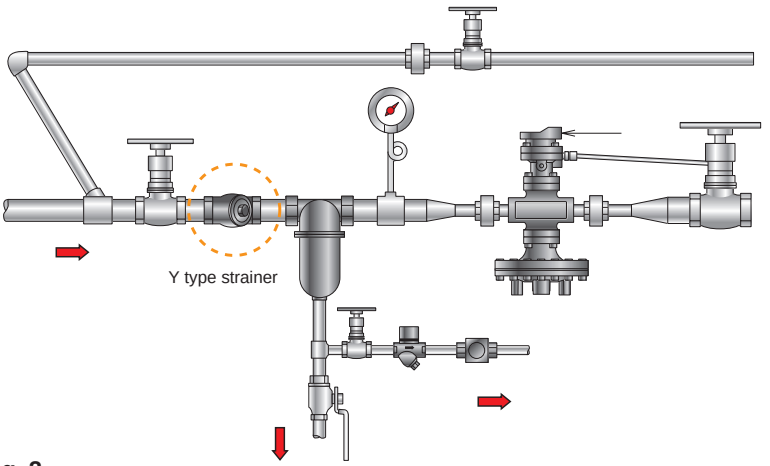
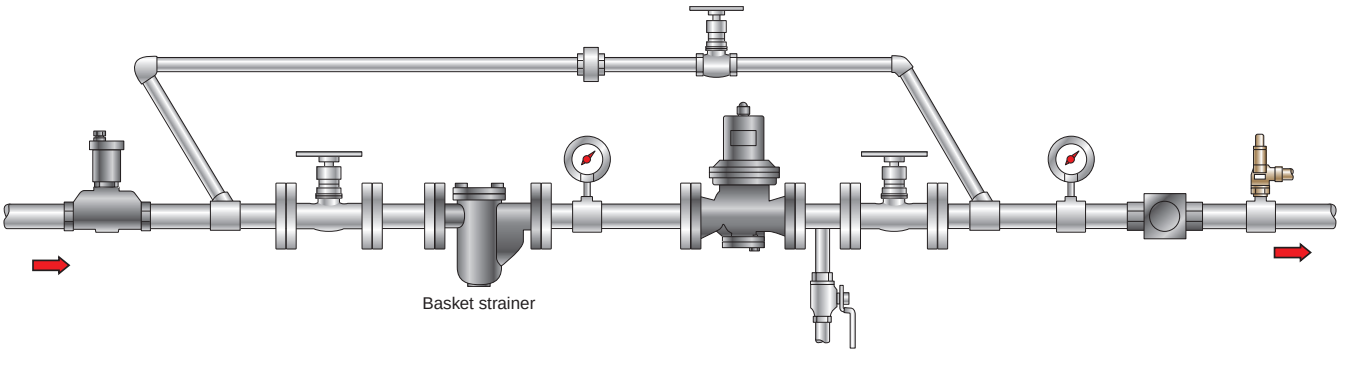


Fig. 2

Guidelines for Basket Strainer

Connect the basket strainer to piping with the mounting cover up.



Guidelines for the Installation of a Strainer

Duplex strainer

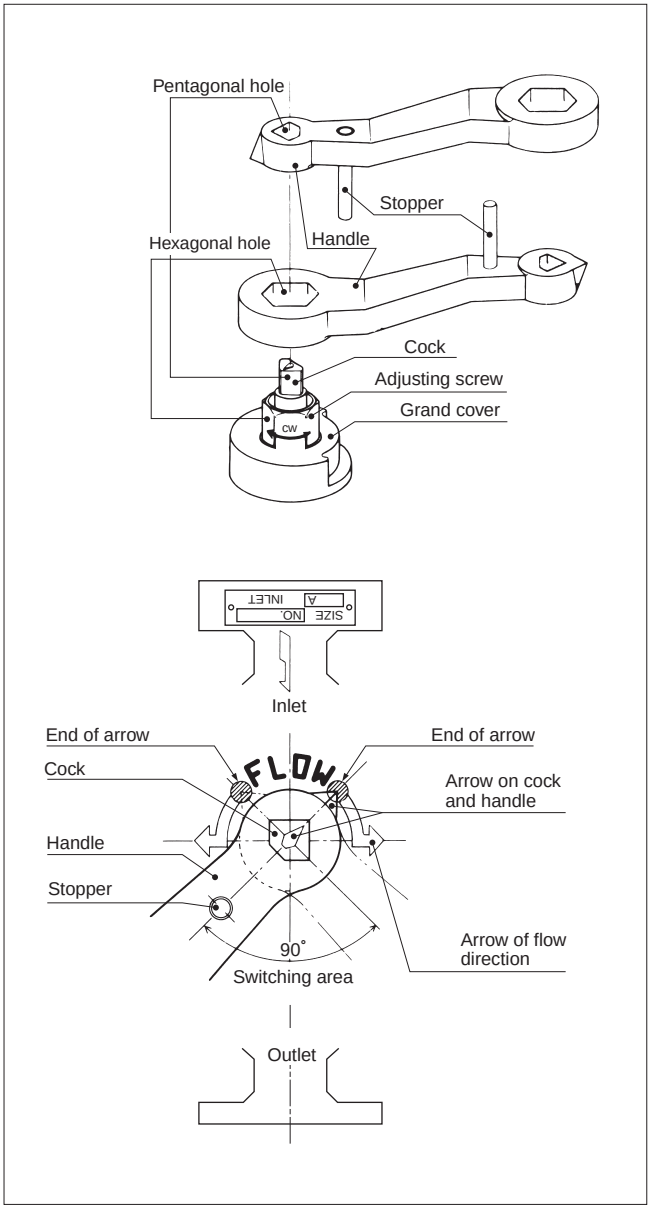
Switch the cock according to the operation procedure described below (the cock will get damaged if switching is carried out without pulling up the cock).

●Operation procedure

1: Slide the handle's head with the hexagonal hole over the adjusting screw, and give the screw one or two clockwise turns (the cock rises).
2: Slide the handle's head with the pentagonal hole over the cock (with the stopper down), switch the cock to the right or left.
3: Align the arrow marked on each of the cock and the handle with the end ● mark of the arrow on the screen.
4: After the cock is switched, turn the adjusting screw counterclockwise, the opposite direction of the operation in (1). If the cock and the adjusting screw simultaneously turn, hold either of them with a wrench, etc. The adjusting screw must be tightened with the attached handle.
5: After switching, clean the strainer opposite to the direction of flow.

●Precautions

1: The pressure loss during switching reaches a maximum value when the angle at the time of the change of the direction of flow of the fluid is 45˚.
2: Keep the fluid flowing when turning the handle (otherwise, the strainer body and the cock may be galled).
3: The cock will get damaged if switching is carried out without pulling up the cock.
4: If the cock and the adjusting screw simultaneously turn, lightly hold either of them with a wrench, etc.
5: Do not tighten the adjusting screw to an excessive torque.



<Adjusting the direction of flow>
Align the arrow marked on each of the cock and the handle with the end ● mark of the arrow on the screen used (the position at which the handle no longer turns by the handle).

SY-5

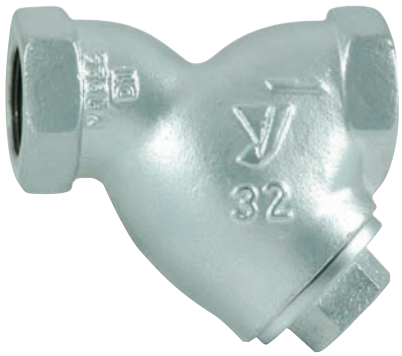
Features

1. Versatile, compact, lightweight and economical.
2. High-flow-rate marine type with the largest possible filtration area in view of decrease in flow rate caused by clogging.

Specifications

Application		Steam, Air, Cold and hot water, Other non-dangerous fluids
Maximum pressure		2.0 MPa
Maximum temperature		220˚C
Material	Body	Ductile cast iron
	Screen	Stainless steel
Screen	Perforation	ϕ 2.5-7.21 holes/cm^2
	Mesh	Standard 80 mesh
Connection		JIS Rc screwed

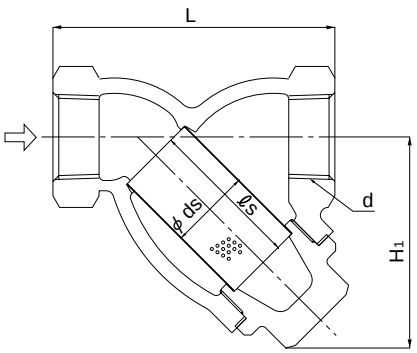
- Available with 20 to 100 mesh screen (perforation: ϕ 2.5-7.21 holes/cm^2) or only with perforation (ϕ 1.2-23.8 holes/cm^2) on request.
- Available with 10A to 32A attached with a plug (material: S15C).
- Available with a brass plug.



10A-32A

Dimensions (mm) and Weights (kg)

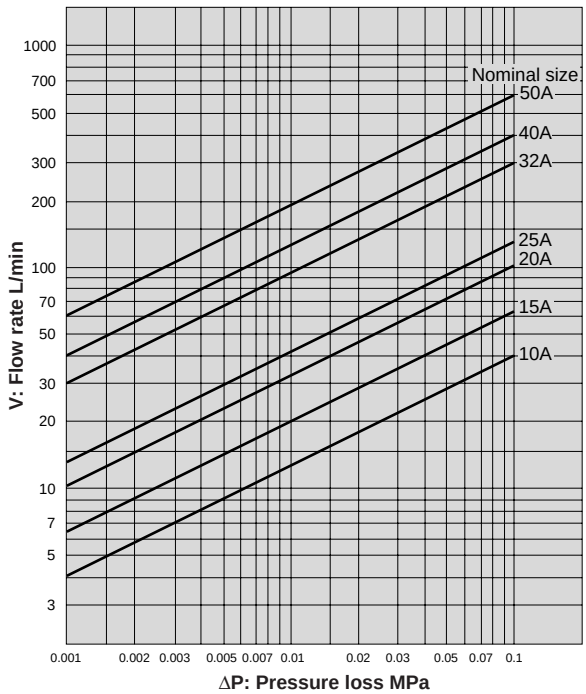
Nominal size	d	L	H1	ds	ℓs	Plug	Weight
10A	Rc 3/8	65	50	18	32	(R 1/4)	0.4
15A	Rc 1/2	75	55	20	35	(R 1/4)	0.6
20A	Rc 3/4	90	70	25	50	(R 3/8)	0.9
25A	Rc 1	110	85	32	60	(R 3/8)	1.4
32A	Rc 1-1/4	135	95	40	70	(R 3/8)	2.2
40A	Rc 1-1/2	145	105	45	75	R 3/8	3.4
50A	Rc 2	170	120	56	90	R 3/8	4.5

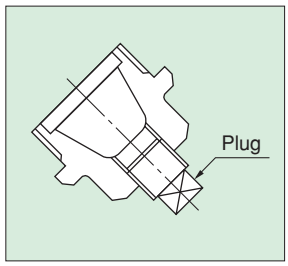


10A-32A

Pressure Loss Chart (For Water)

● Screen: Perforation = ϕ 2.5-7.21 holes/cm^2, Mesh = 80 mesh





40A-50A

SY-6·6-N

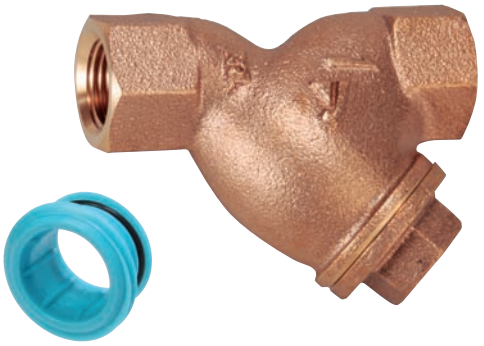
Features

1. Outstanding corrosion resistance offered by bronze body.
2. Corrosive portions, such as the end faces of lining steel piping or threads, are isolated from fluid by a pipe end core, stopping ingress of rust (SY-6L and SY-6L-N).
3. Easy plumbing and cost reduction are ensured since any piping joints, such as bronze nipples and corrosion-resistant sockets, are not needed.
4. Since an integral core is built-in, failure to insert the core no longer occurs (SY-6L and SY-6L-N).
5. The core has an O-ring structure and maintains a high degree of air-tightness (SY-6L and SY-6L-N).

Specifications

Model		SY-6	SY-6-N	SY-6L	SY-6L-N
Type		For general piping		Common core	
Application		Steam, Air, Cold and hot water, Oil, Other non-dangerous fluids	Cold and hot water		
Maximum pressure		1.3 MPa		1.0 MPa	
Maximum temperature		220˚C	80˚C	40˚C	
Material	Body	Cast bronze	Cast bronze (NPb-treated)	Cast bronze	Cast bronze (NPb-treated)
	Screen	Stainless steel			
Screen	Perforation	ϕ 2.5-7.21 holes/cm^2			
	Mesh	Standard 80 mesh	Standard 60 mesh		
Connection		JIS Rc screwed			

・Available with 20 to 100 mesh screen.
・Available with 10A to 32A attached with a plug.

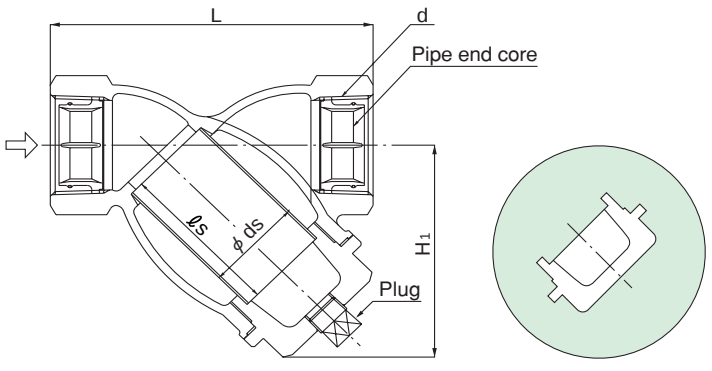


▲Pipe end core

●What is a pipe end core?
An integral core brings the lining steel piping and the core into close contact with each other and stops the inflow of water into threaded portion for rust prevention.

Dimensions (mm) and Weights (kg)

Nominal size	d	L	H$_1$	ds	ℓs	Plug	Weight
15A	Rc 1/2	86	55	20	35	(R 1/4)	0.5
20A	Rc 3/4	98	70	25	50	(R 3/8)	0.8
25A	Rc 1	117	80	32	60	(R 3/8)	1.1
32A	Rc 1-1/4	145	92	40	70	(R 3/8)	1.9
40A	Rc 1-1/2	148	105	45	75	R 3/8	2.6
50A	Rc 2	178	122	56	90	R 3/8	3.8



40A-50A

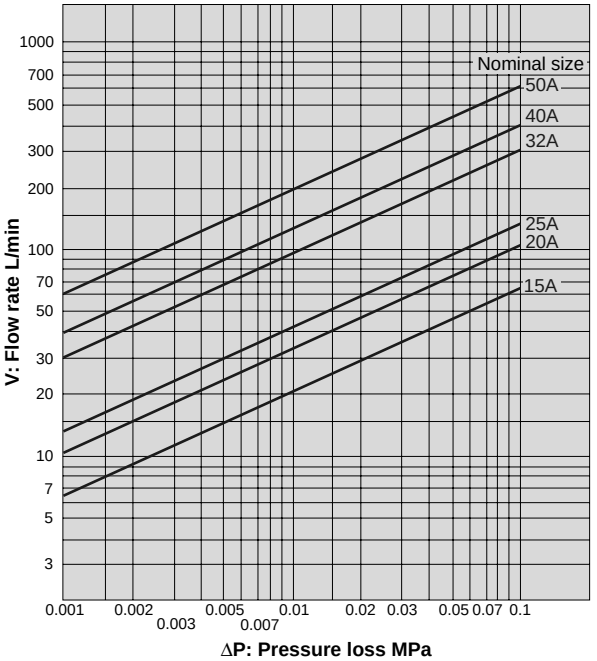
15-32A

Precautions about Installation

Follow the instructions below to maintain the anti-corrosion characteristic of the pipe end core.
1. Use a steel pipe complying with the JIS standard.
2. Cut threads on the pipe according to the JIS standard.

Pressure Loss Chart (For Water)

● Screen: Perforation = ϕ 2.5-7.21 holes/cm^2, Mesh = 60 mesh



SY-17・37

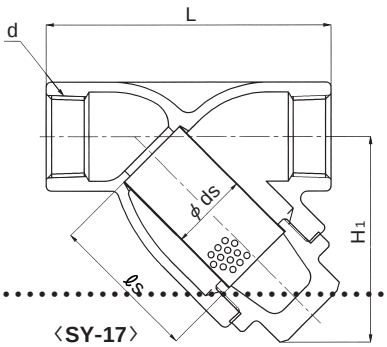
Features

1. Stainless cast steel body is rustless, available for a wide variety of applications ranging from food, chemical industry to oil piping.
2. High-flow-rate marine type with the largest possible filtration area in view of decrease in flow rate caused by clogging.

Specifications

Model		SY-17	SY-37 (strainer with fine mesh)
Application		Steam, Air, Cold and hot water, Oil, Other non-dangerous fluids	
Maximum pressure		2.0 MPa	
Maximum temperature		150˚C (250˚C)	
Material	Body	Cast stainless steel	
	Screen	Stainless steel	
Screen	Perforation	ϕ 2.5-7.21 holes/cm^2	
	Mesh	Standard 80 mesh	120 to 200 mesh
Gasket		PTFE *	
Connection		JIS Rc screwed	

contact us.
・Available with 20 to 100 mesh screen (SY-17).

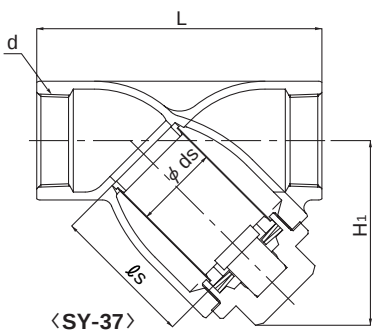


〈SY-17〉

Dimensions (mm) and Weights (kg)

Nominal size	d	L	H1	ds	ℓs	Weight
15A	Rc 1/2	85	55	20 (18)	35	0.40 (0.4)
20A	Rc 3/4	100	69	25 (23)	50	0.68 (0.7)
25A	Rc 1	115	83	32 (30)	60	1.01 (1.1)
32A	Rc 1-1/4	135	92	40 (38)	70	1.48 (1.6)
40A	Rc 1-1/2	150	102	45 (43)	75	1.88 (2.0)
50A	Rc 2	180	117	56 (54)	90	3.34 (3.6)

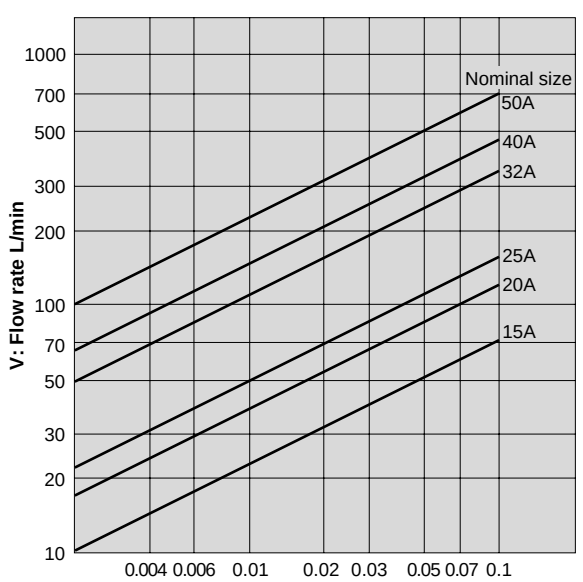
・The above values in parentheses are the dimensions and weights of the SY-37.



〈SY-37〉

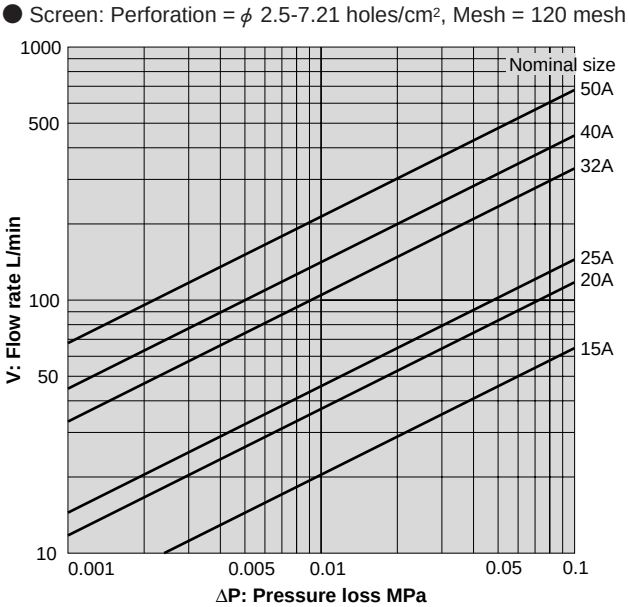
SY-17 Strainer Pressure Loss Chart (For Water)

● Screen: Perforation = ϕ 2.5-7.21 holes/cm^2, Mesh = 80 mesh



SY-37 Strainer Pressure Loss Chart (For Water)

● Screen: Perforation = ϕ 2.5-7.21 holes/cm^2, Mesh = 120 mesh



SY-40·40C

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Model		SY-40	SY-40C
Application		Steam, Air, Cold and hot water, Other non-dangerous fluids	Air, Cold and hot water, Other non-dangerous fluids
Maximum pressure		1.0 MPa	
Maximum temperature		220˚C	60˚C
Material	Body	Ductile cast iron	
	Screen	Stainless steel	
Screen	Perforation	ϕ 2.5-7.21 holes/cm²	
	Mesh	Standard 80 mesh	Standard 60 mesh
Connection		JIS 10K FF flanged	

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Nominal size	L	H1	ds	ℓs	Plug	Weight
15A	130	61	22	40	—	1.9
20A	140	75	27	56	—	2.5
25A	160	88	34	66	—	4.0
32A	175	104	43	76	—	5.2
40A	190	115	50	85	R 1/2	6.7
50A	225	140	61	107	R 1/2	10.2
65A	255	167	73	125	R 1/2	14.5
80A	330	190	88	130	R 1/2	18.3
100A	370	225	108	180	R 3/4	29.7
125A	415	263	136	200	R 3/4	40.5
150A	495	315	160	250	R 3/4	66.0
200A	565	385	210	300	R 3/4	95.8
250A	690	460	260	370	R 3/4	167.5
300A	840	556	315	442	R 3/4	286.0

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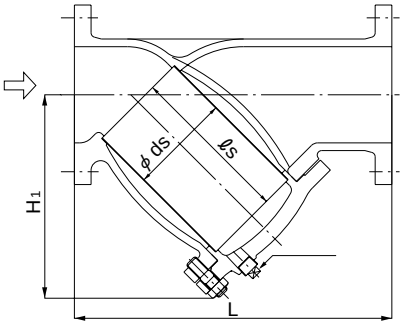
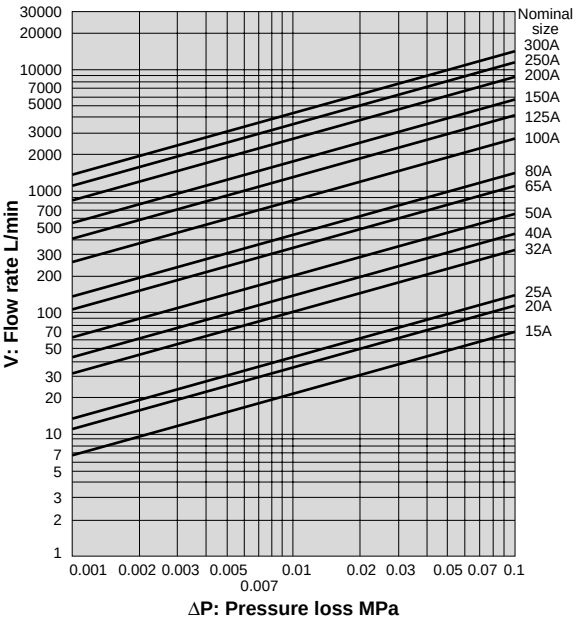


● ϕ



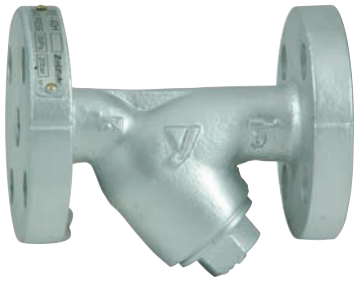
SY-40EN・40H

Features

1. The SY-40EN strainer can be replaced easily from existing strainer because it complies with face-to-face dimensions of the EN standard.
2. High-flow-rate marine type provided with the largest possible filtration area as a contermeasure against the decreasing in the flow rate caused by clogging.
3. 65A or more (in nominal size) is designed as compact as possible and reduced in weight, making plumbing easy.

Specifications

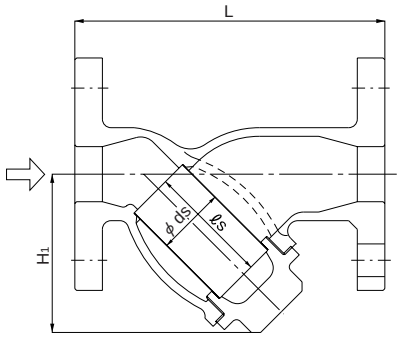
Model		SY-40EN	SY-40H
Application		Steam, Air, Cold and hot water, Other non-dangerous fluids	
Maximum pressure		2.0 MPa	
Maximum temperature		220˚C	
Material	Body	Ductile cast iron	
	Screen	Stainless steel	
Screen	Perforation	ϕ 2.5-7.21 holes/cm^2	
	Mesh	Standard 80 mesh	
Connection		EN1092 PN25	JIS 20K FF flanged ASME Class 300 flanged



・Available with 20 to 100 mesh screen (perforation: ϕ 2.5-7.21 holes/cm^2) or only with perforration (15A to 80A: ϕ 1.3-16.2 holes/cm^2, 100A or more: ϕ 1.5-11.2 holes/cm^2).
・Available with a brass plug (the standard is S15C or FCMB310).

Dimensions (mm) and Weights (kg)

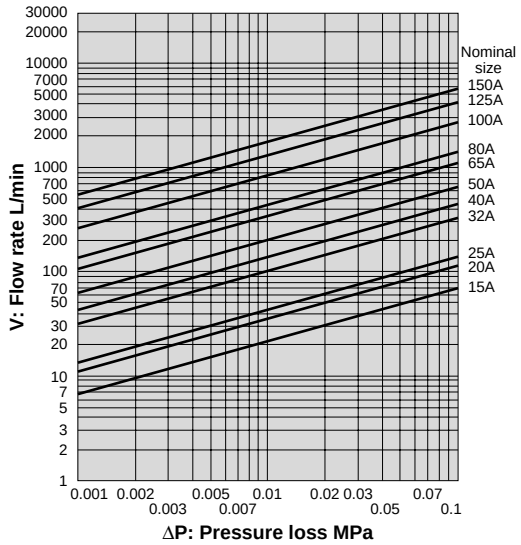
Nominal size	L		H_1	ds	ℓs	Plug	Weight	
	SY-40EN	SY-40H					SY-40EN	SY-40H
15A	130	130 (—)	61	22	40	—	2.0	1.9 (—)
20A	150	140 (—)	75	27	56	—	3.0	2.5 (—)
25A	160	160 (160)	88	34	66	—	4.5	4.0 (4.5)
32A	180	175 (180)	104	43	76	—	5.5	5.2 (6.0)
40A	200	190 (200)	115	50	85	R 1/2	8.0	6.7 (8.5)
50A	230	233 (230)	140	61	107	R 1/2	10.5	10.2 (11.0)
65A	290	290 (302)	167	73	125	R 1/2	14.0	15.0 (15.0)
80A	310	316 (330)	190	88	130	R 1/2	18.0	19.0 (20.0)
100A	350	360 (370)	225	108	180	R 3/4	27.0	28.0 (30.0)
125A	400	415 (440)	263	136	200	R 3/4	40.0	42.0 (43.0)
150A	480	495 (520)	315	160	250	R 3/4	66.0	68.0 (71.0)



The shape of 65A or more is slightly different.

・The values in parentheses are the dimensions and weights of ASME Class 300 flanged.

Pressure Loss Chart (For Water)



● Screen: Perforation = ϕ 2.5-7.21 holes/cm^2, Mesh = 80 mesh

SY-8・38

Model		SY-8	SY-38 (strainer with fine mesh)
Application		Steam, Air, Cold and hot water, Oil, Other non-dangerous fluids	
Maximum pressure		1.0 MPa	
Maximum temperature		150˚C (250˚C)	
Material	Body	Cast stainless steel	
	Screen	Stainless steel	
Screen	Perforation	15A to 100A = ϕ 2.5-7.21 holes/cm^2 125A to 150A = ϕ 6-2.05 holes/cm^2	15A to 100A = ϕ 2.5-7.21 holes/cm^2 125A to 150A = ϕ 6-1.80 holes/cm^2
	Mesh	Standard 80 mesh	120 to 200 mesh
Gasket		PTFE *	
Connection		JIS 10K FF flanged	

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Nominal size	L	H1	ds	ℓs	Plug	Weight
15A	125	54	20 (18)	35	—	1.8 (1.8)
20A	140	68	25 (23)	50	—	2.4 (2.4)
25A	160	81	32 (30)	60	—	3.7 (3.8)
32A	180	92	40 (38)	70	—	4.2 (4.2)
40A	190	104	45 (43)	75	—	5.9 (6.1)
50A	220	117	56 (54)	90	—	8.1 (8.3)
65A	270	162	73 (70)	125 (132)	R 1/2	13.2 (13.7)
80A	290	185	88 (85)	130 (134)	R 1/2	17.2 (18.0)
100A	350	222	108 (105)	180 (187)	R 1/2	26.0 (27.0)
125A	390	280	140 (137)	200 (207)	R 1/2	34.0 (40.0)
150A	440	318 (319)	160 (147)	225	R 1/2	60.0 (64.0)

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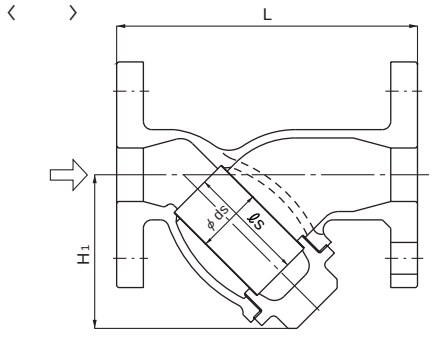
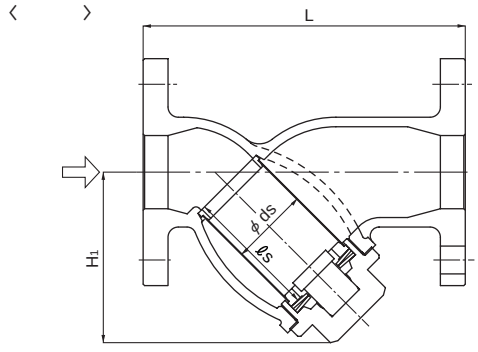
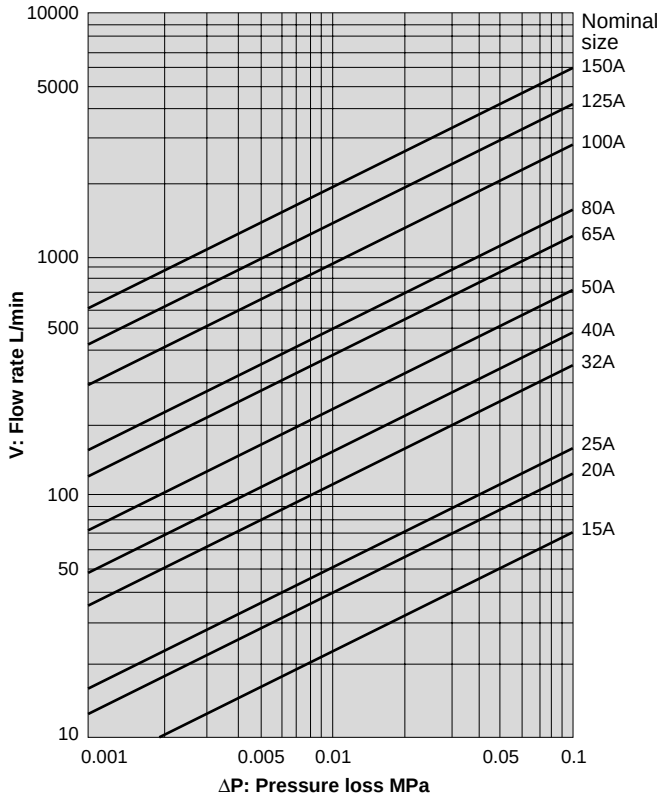




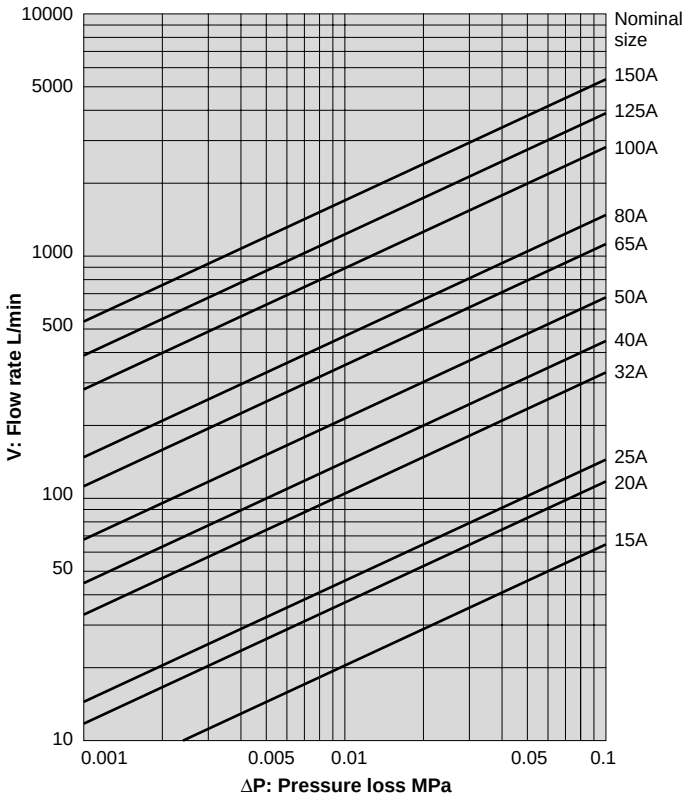
SY-8 Strainer Pressure Loss Chart (For Water)

● Screen: 15A to 100A: Perforation = ϕ 2.5-7.21 holes/cm², Mesh = 80 mesh
125A and 150A: Perforation = ϕ 6-2.05 holes/cm², Mesh = 80 mesh



SY-38 Strainer Pressure Loss Chart (For Water)

● Screen: 15A to 100A: Perforation = ϕ 2.5-7.21 holes/cm², Mesh = 120 mesh
125A and 150A: Perforation = ϕ 6-1.80 holes/cm², Mesh = 120 mesh



SY-13·13SS

Model		SY-13
Nominal size		200A-600A
Application		Steam, Air, Cold and hot water, Oil, Other non-dangerous fluids
Maximum pressure		1.0 MPa
Maximum temperature		220˚C
Material	Body	Carbon steel pipes for pressure service and rolled steels for general structure
	Screen	Stainless steel
Screen	Perforation	ϕ 6-1.80 holes/cm²
	Mesh	Standard 80 mesh
Connection		JIS 10K FF flanged

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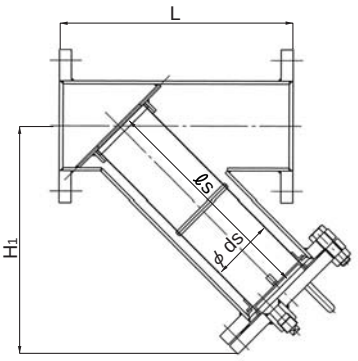
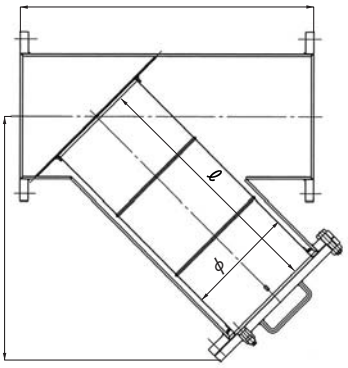


Nominal size	L	H1	ds	ℓs	Plug	Weight
200A	580	500	170	510	R 3/4	75
250A	680	565	220	570	R 3/4	115
300A	800	660	250	680	R 3/4	145
350A	930	745	300	776	R 3/4	210
400A	1000	845	340	876	R 3/4	270
450A	1080	890	400	926	R 3/4	400
500A	1200	1045	450	1100	R 1	460
550A	1300	1175	500	1250	R 1	625
600A	1500	1260	550	1340	R 1	820



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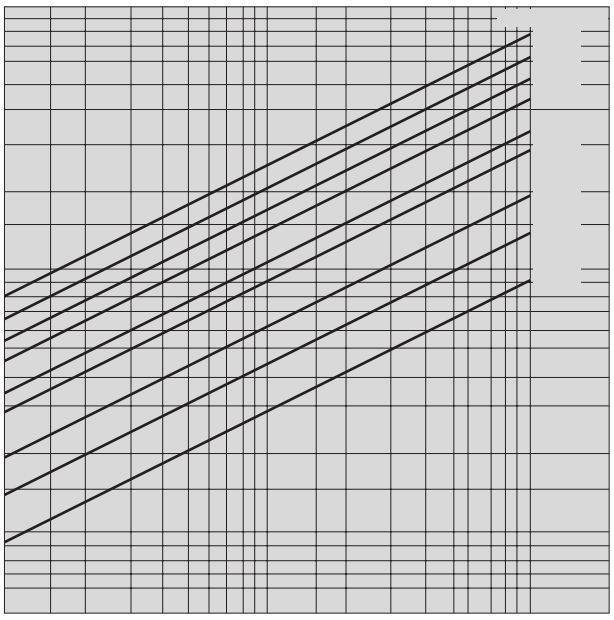

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SU-50H·50S·50SS

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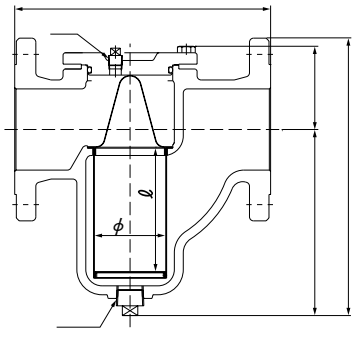

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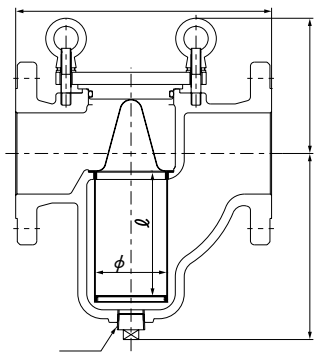

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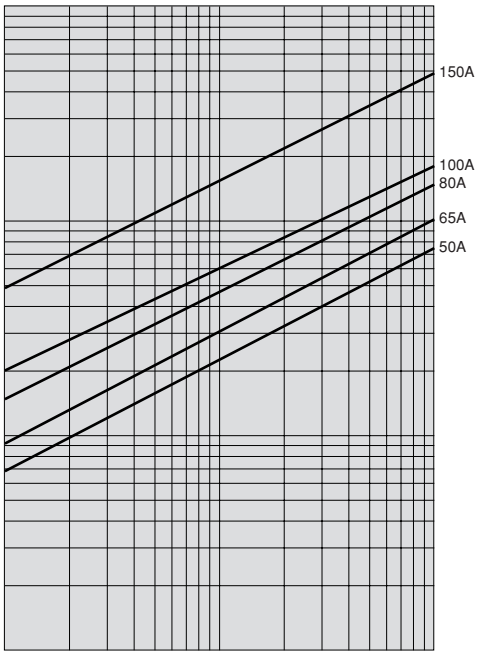

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SU-20·20S·20C

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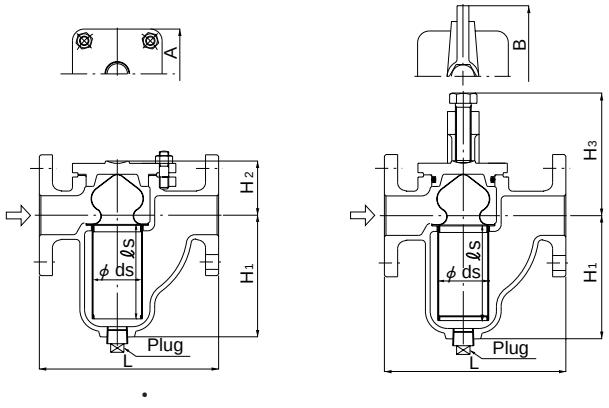
Size	L	H1	H2	H3	A	B	ds	ℓs	Plug	Weight	
										SU-20	SU-20S
20A	175	97.5	54	107.5	87	131	40	70	R 3/8	5.0	5.6
25A	175	97.5	54	107.5	87	131	40	70	R 3/8	6.1	6.7
32A	230	146	67.5	151	115	179	64.5	108	R 3/4	11.1	12.5
40A	230	146	67.5	151	115	179	64.5	108	R 3/4	11.8	13.2
50A	230	156	69.5	153	115	179	64.5	120	R 3/4	12.4	13.8
65A	290	182	70	153.5	134	208	77	140	R 1	18.7	20.8
80A	300	197.5	88.5	189	185	249	90	160	R 1	23.8	27.1
100A	365	262	118.5	253	220	334	120	210	R 1-1/4	41.3	48.6
125A	425	340.5	134.5	269	248	362	140	270	R 1-1/2	61.4	69.4
150A	505	378	158.5	293	305	414	175	300	R 2	98.4	108.3



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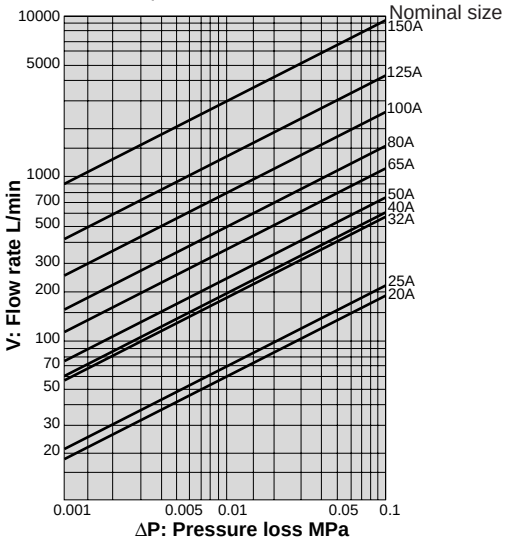


SU-20H

Features

1. The largest possible filtration area in view of flow rate decrease caused by clogging.
2. Equipped with eyebolts and anchoring leg for safety on installation.

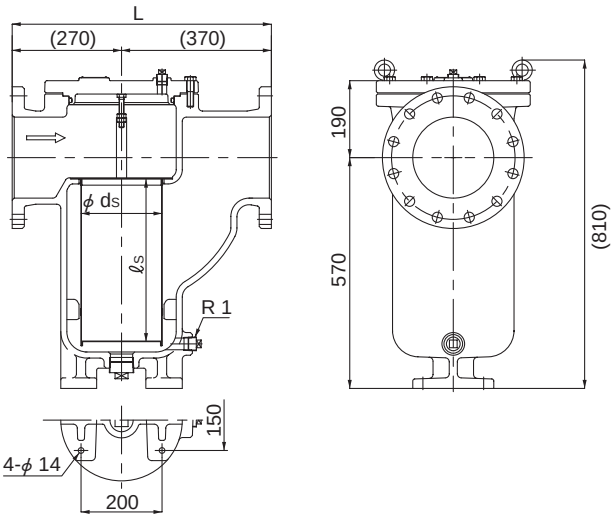
Specifications

Nominal size		200A	
Application		Cold and hot water, Oil	
Maximum working pressure		1.0 MPa	2.0 MPa
Maximum temperature		80˚C	
Material	Body	Ductile cast iron	
	Screen	Stainless steel	
Screen	Perforation	ϕ 6-1.42 holes/cm^2	
	Mesh	Standard 60 mesh	
Connection		JIS 10K FF flanged	JIS 20K RF flanged

・Available with 20 to 100 mesh or only with perforation (when only with perforation, perforation of ϕ 2.5-7.21 holes/cm^2 is used).

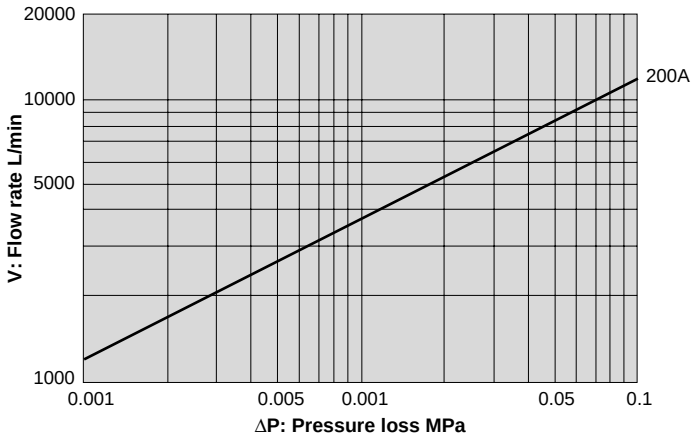
Dimensions (mm) and Weights (kg)

Connection flange	L	Screen		Weight
		ds	ℓs	
JIS 10K FF	640	200	400	167
JIS 20K RF	640	200	400	170



Pressure Loss Chart (For Water)

● Screen: Perforation = ϕ 6-1.42 holes/cm^2, Mesh = 60 mesh



Strainer

SU-6•6SS•6AS

Features

1. Used mainly for cooling water and industrial water for dust prevention.
2. Designed for large-diameter piping and lighter than cast iron strainer.

Specifications

Application		Cold and hot water, Oil, Other non-dangerous fluids
Nominal size		200A-650A
Maximum pressure		1.0 MPa
Maximum temperature		120˚C
Material	Body	Rolled steel for carbon steel piping and general structural rolled steel
	Screen	Stainless steel
Screen	Perforation	ϕ 10-0.8 holes/cm^2
	Mesh	Standard 40 mesh
Connection		JIS 10K FF flanged

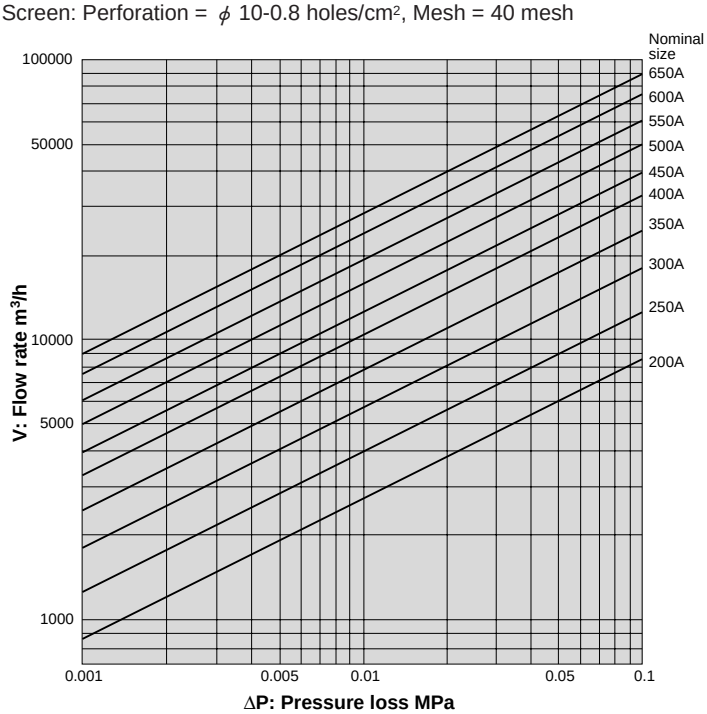
- Available with 20 to 100 mesh screen.
- Available with rust-proof (hot-dip zinc coating).
- Available with stainless steel wetted parts (SU-6SS).
- Available with all stainless steel made (SU-6AS).

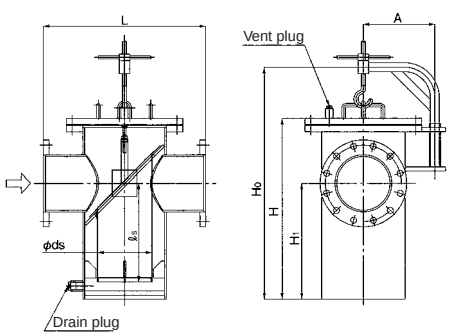
Dimensions (mm) and Weights (kg)

Nominal size	L	A	H_0	H	H_1	C	h_1	ds	ℓs	Drain plug	Vent plug
200A	620	273	882	687	440	—	—	210	375	R 1	R 1/2
250A	660	295	1062	867	570	—	—	240	505	R 1	R 1/2
300A	710	330	1218	1021	670	—	—	290	600	R 1	R 1/2
350A	760	350	1306	1103	710	—	—	340	640	R 1	R 3/4
400A	810	400	1492	1253	810	—	—	390	740	R 1	R 3/4
450A	860	430	1655	1405	910	—	—	440	835	R 1	R 3/4
500A	910	455	2195	1945	1400	800	19	490	930	R 1	R 3/4
550A	960	480	2353	2107	1510	840	23	540	1030	R 1	R 3/4
600A	1010	510	2538	2237	1590	920	27	590	1100	R 1-1/2	R 1
650A	1060	545	2716	2419	1720	970	27	630	1220	R 1-1/2	R 1

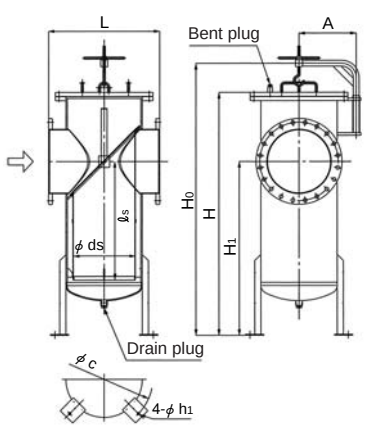
Pressure Loss Chart (For Water)

● Screen: Perforation = ϕ 10-0.8 holes/cm^2, Mesh = 40 mesh





SU-6 200A-450A



SU-6 500A-650A

SW-10・10S

Features

1. Cleanable without stopping the filtrated fluid by switching the left and right units.
2. Cock lifting mechanism (switching by lifting the cock) makes handle operation easy.
3. Since there is no need to install a bypass, piping space can be minimized (SW-10 and SW-10S).
4. Disassembling and cleaning are easy due to a simply structured cover that can be fixed and removed simply by tightening or unfastening a single bolt (SW-10S).

SW-10

SW-10S

Specifications

Application		Cold and hot water, Oil, Other non-dangerous fluids
Maximum pressure		1.0 MPa
Maximum temperature		80˚C
Material	Body	Ductile cast iron
	Cock	Cast bronze
	Screen	Stainless steel
Screen	Perforation	ϕ 6-1.42 holes/cm^2
	Mesh	Standard 60 mesh
Connection		JIS 10K FF flanged

・Available with stainless steel (SCS13) made.
・Available with 20 to 250 mesh screen.

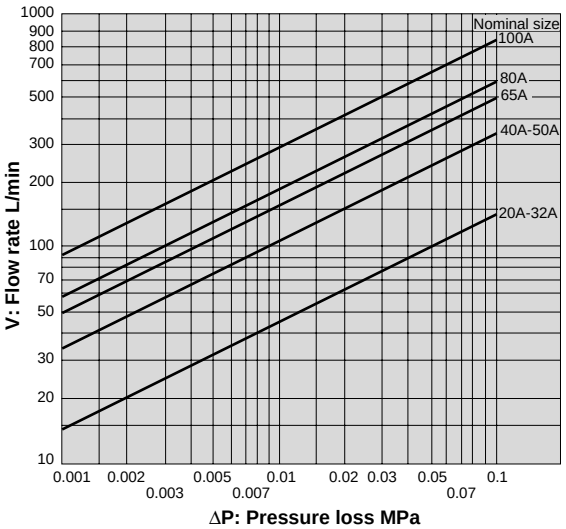
Dimensions (mm) and Weights (kg)

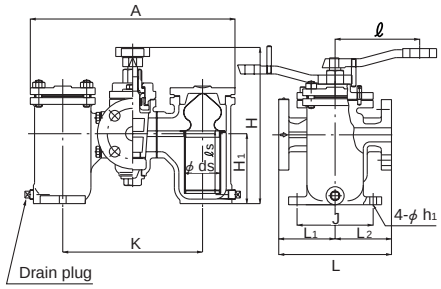
Nominal size	L	L_1	L_2	H_1	H	H_a	A	ℓ	ds	ℓ_s	Anchor space			Drain plug	Weight	
											J	K	h_1		SW-10	SW-10S
20A	200	100	100	126	280	292	363	180	64.5	108	135	248	12	R 1	23.9	26.7
25A	200	100	100	126	280	292	363	180	64.5	108	135	248	12	R 1	25.1	27.9
32A	205	102.5	102.5	126	280	292	363	180	64.5	108	135	248	12	R 1	26.1	28.9
40A	245	122.5	122.5	134	306	316	390	180	64.5	120	135	275	12	R 1	34.0	36.8
50A	245	122.5	122.5	134	306	316	390	180	64.5	120	135	275	12	R 1	35.9	38.7
65A	285	130	155	155	356	345	450	240	77	140	160	311	15	R 1	52.5	54.6
80A	285	130	155	155	356	345	450	240	77	140	160	311	15	R 1	53.0	55.1
100A	385	175	210	230	482	509	644	340	120	210	225	430	19	R 1	117.0	124.3

・Dimensions H_1, H, K, and A are reference values.
・The values of H_1 and H are different from those of stainless steel made.
・Plugs of R 3/4 are used for stainless steel strainers of all sizes.

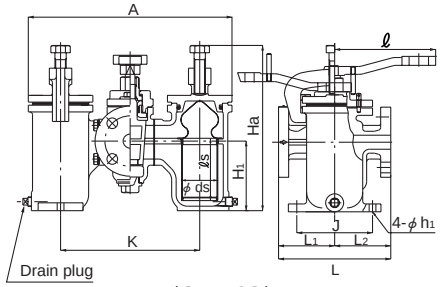
Pressure Loss Chart (For Water)

● Screen: Perforation = ϕ 6-1.42 holes/cm^2, Mesh = 60 mesh



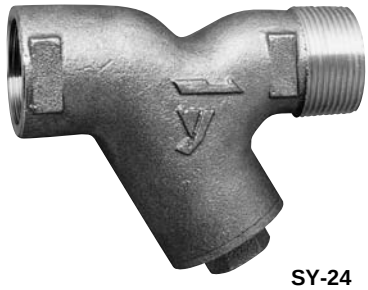


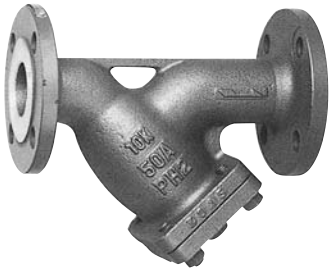
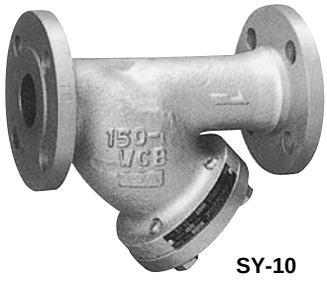
〈SW-10〉

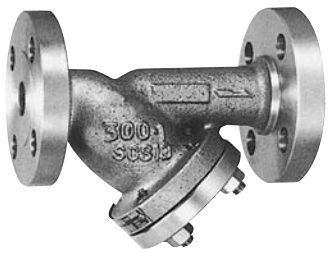
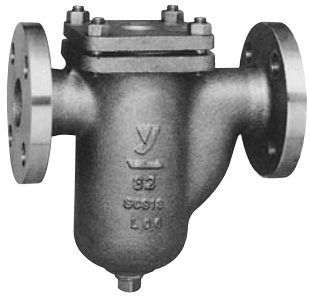


〈SW-10S〉

Strainer

Feature		Y type screwed / Easy plug	Y type screwed / Bronze	Leadless bronze
Model		SY-9	SY-24	SY-24-N
Picture			 SY-24	
Application		Air, Cold and hot water, Other non-dangerous fluids	Cold and hot water	
Max. pressure		1.0 MPa	1.6 MPa	
Max. temperature		80˚C	80˚C	
Connection		JIS Rc screwed	Inlet: JIS Rc screwed Outlet: JIS R screwed	
Material	Body	Ductile cast iron	Cast bronze	Cast bronze (NPb-treated)
	Screen	Stainless steel	Stainless steel	
Standard screen		60 mesh (ϕ 2.5-7.21 holes/cm^2)	60 mesh (ϕ2.5-7.21 holes/cm^2)	
Available screen		20-100 mesh (ϕ 2.5-7.21 holes/cm^2)	20-100 mesh (ϕ 2.5-7.21 holes/cm^2)	
Size		15A-50A	15A-50A	
Others		—	—	—

Feature		Y type flanged / Carbon steel	Y type flanged / Carbon steel	
Model		SY-20	SY-10	SY-10H
Picture			 SY-10	
Application		Steam, Air, Cold and hot water, Other non-dangerous fluids	Steam, Air, Cold and hot water, Other non-dangerous fluids	High-pressure gas, Steam, Cold and hot water, Other non-dangerous fluids
Max. pressure		1.0 or 2.0 MPa	3.0 MPa	1.0, 2.0 or 3.0 MPa
Max. temperature		260˚C	260˚C *	350˚C *
Connection		JIS 10K RF flanged JIS 20K RF flanged	JIS 30K RF flanged	JIS 10K RF flanged JIS 20K RF flanged JIS 30K RF flanged
Material	Body	Cast carbon steel	Cast carbon steel	
	Screen	Stainless steel	Stainless steel	
Standard screen		80 mesh (ϕ 6-1.80 holes/cm^2)	80 mesh (ϕ 6-1.80 holes/cm^2)	
Available screen		20-60 mesh (ϕ 6-1.80 holes/cm^2)	20-100 mesh (ϕ 6-1.80 holes/cm^2)	
Size		15A-150A	15A-250A	15A-100A
Others		—	* If the temperature is more than 260˚C, please contact us.	* For SY-10H-30, 350˚C for working pressure up to 2.0 MPa, and 300˚C for more than 2.0 MPa.

Feature		Y type flanged / Stainless steel	Basket / Stainless steel	One-touch / Stainless steel		
Model		SY-10HS	SU-10	SU-10S		
Picture						
Application		High-pressure gas, Steam, Cold and hot water, Other non-dangerous fluids	Cold and hot water, Oil, Other non-dangerous fluids			
Max. pressure		1.0, 2.0 or 3.0 MPa	1.0 MPa	1.0 MPa	0.7 MPa	0.5 MPa
Max. temperature		350˚C *	220˚C	80˚C		
Connection		JIS 10K RF flanged JIS 20K RF flanged JIS 30K RF flanged	JIS 10K FF flanged			
Material	Body	Cast stainless steel	Cast stainless steel			
	Screen	Stainless steel	Stainless steel			
Standard screen		80 mesh (ϕ 6-1.80 holes/cm^2)	60 mesh (ϕ 6-1.42 holes/cm^2)			
Available screen		20-100 mesh (ϕ 6-1.80 holes/cm^2)	20-250 mesh (ϕ 6-1.42 holes/cm^2)			
Size		15A-100A	20A-150A	20A-100A	125A	150A
Others		* For SY-10HS-30, 350˚C for working pressure up to 2.0 MPa, and 300˚C for more than 2.0 MPa.	—	—		

Feature		Basket flanged / CS	Small type / Bronze	Corn type / Temporary
Model		SU-12	SU-55F	ST-1
Picture				
Application		Cold and hot water, Oil, Other non-dangerous fluids	Cold and hot water	Stem, Air, Cold and hot water, Other non-dangerous fluids
Max. pressure		1.0, 1.6 or 2.0 MPa	1.2 MPa	1.0, 2.0, 3.0 or 4.0 MPa
Max. temperature		260˚C *	60˚C	220˚C
Connection		JIS 10K RF flanged JIS 16K RF flanged JIS 20K RF flanged ASME Class 150 flanged ASME Class 300 flanged	JIS Rc screwed	JIS 10K flanged JIS 20K flanged JIS 30K flanged JIS 40K flanged
Material	Body	Cast carbon steel	Cast bronze	—
	Screen	Stainless steel	Stainless steel	Stainless steel
Standard screen		60 mesh (ϕ 6-1.42 holes/cm^2)	60 mesh	80 mesh (ϕ 8-0.954 holes/cm^2)
Available screen		20-250 mesh (ϕ 6-1.42 holes/cm^2)	—	20-250 mesh (ϕ 8-0.954 holes/cm^2)
Size		20A-150A	15A	25A-300A
Others		* If the temperature is more than 260˚C, please contact us.	—	—