

Noiseless
Heater

Type F, S Noiseless Heater



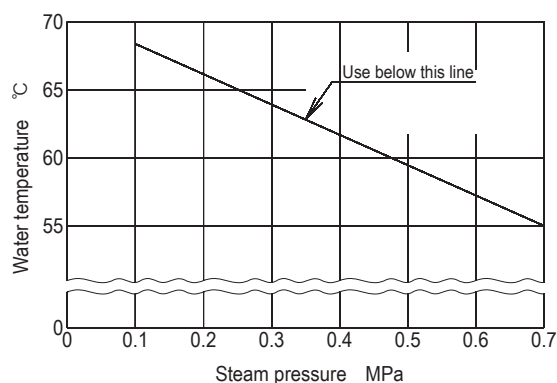
Features

- Simple contraction and easy to use.
- Decrease noise level just connecting with pipe.

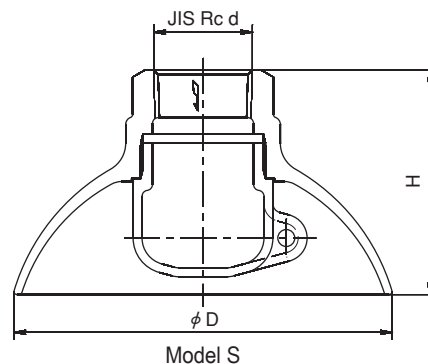
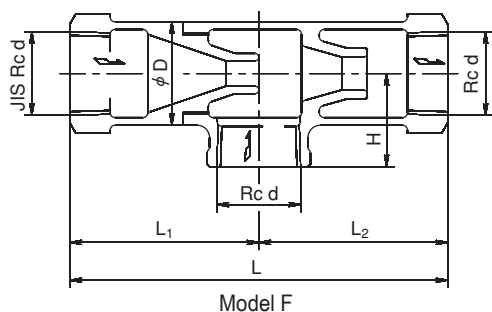
Specifications

Model	F	S
Size	15-50	
Fluid	Steam	
Max. allowable pressure	0.7MPa	
Max. allowable temperature	Saturated	
Allowable water temperature	Below max. effective temp.	100°C
Material	Body	Bronze or stainless steel
	Nozzle	Bronze or stainless steel
Connection	Screwed	

Max. temperature for noise elimination of Model F.



Construction



Dimensions and weights for model F

(mm, kg)

Material	Size	d	L	L ₁	L ₂	H	D	Weight
Bronze	15	1/2	108	54	54	25	29	0.4
	20	3/4	125	62.5	62.5	31	35	0.6
	25	1	150	75	75	37	41	0.9
	32	1 1/4	162	74	88	45	51	1.5
	40	1 1/2	183	82	101	48	56	1.8
	50	2	223	102	121	65	68	3.3
Stainless steel	15	1/2	108	49	59	25	33	1.7
	20	3/4	145	71.5	73.5	37	45	2.3
	25	1	145	71.5	73.5	37	45	2.0
	32	1 1/4	175	77	98	48	60	2.5
	40	1 1/2	175	77	98	48	60	2.3
	50	2	223	97	126	65	72	3.3

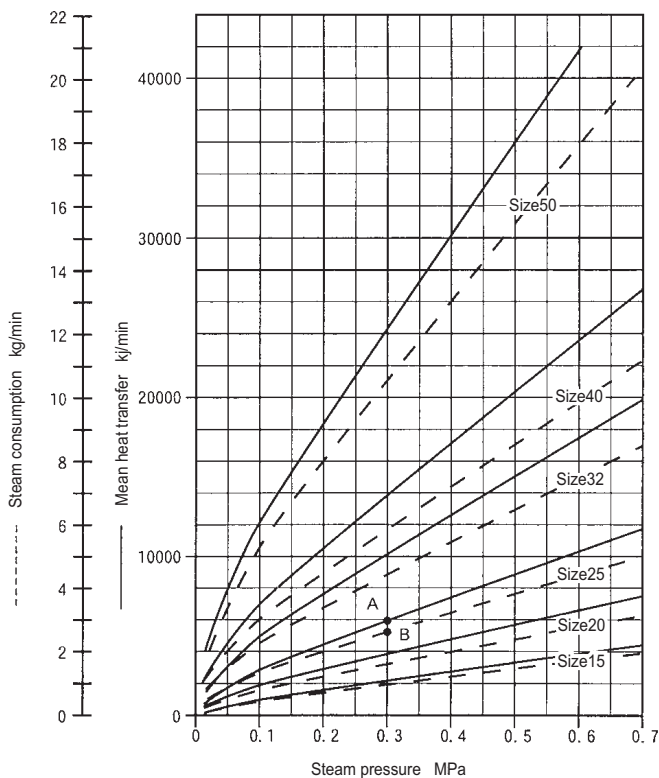
Dimensions and weights for model S

(mm, kg)

Material	Size	d	D	H	Weight
Bronze	15	1/2	67	49	0.4
	20	3/4	89	59	0.6
	25	1	127	76	1.3
	32	1 1/4	147	85	2.7
	40	1 1/2	165	94	3.9
	50	2	220	118	5.3
Stainless steel	15	1/2	90	59	0.8
	20	3/4	90	59	0.7
	25	1	131	78	1.8
	32	1 1/4	185	102	3.5
	40	1 1/2	185	102	3.3
	50	2	224	122	5.7

Type F, S Noiseless Heater

Sizing for model F



Example

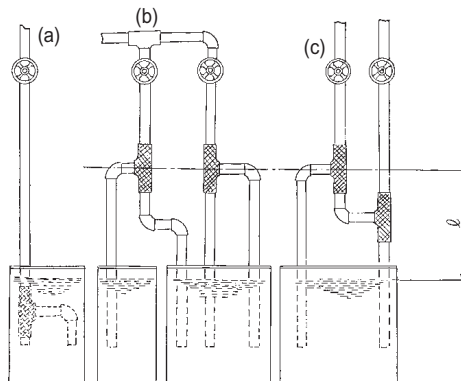
Size : 25 Steam pressure : 0.3MPa

● Mean heat transfer at point A is 5936kJ/min and steam consumption at point B is 2.56kg/min.

● Required time to warm 1000kg water from 10°C to 50°C.

$$(50 - 10) \times 1000 \times 4.186 \times \frac{1}{5936} = 28.2\text{min}$$

Steam consumption is $2.56 \times 28.2 = 72.2\text{kg}$



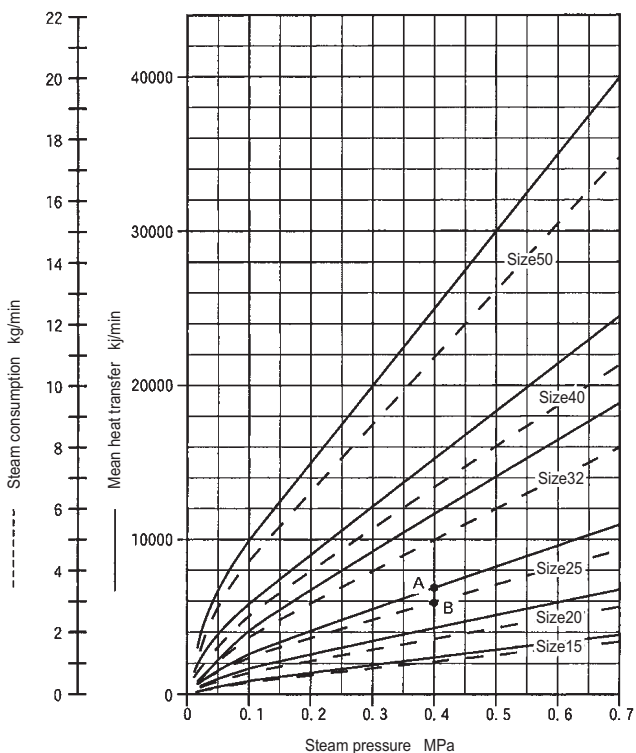
(a) : Typical use to submerge silencer in reservoir.

(b) : Making up the water from other reservoir.

(c) : Heating rapidly by using double silencer.

Dimension ℓ for (b) and (c) shall be as short as possible.

Sizing for model S



Example

Size : 25 Steam pressure : 0.4MPa

● Mean heat transfer at point A is 6698kJ/min and steam consumption at point B is 2.8kg/min.

● Required time to warm 1000kg water from 60°C to 100°C.

$$(100 - 60) \times 1000 \times 4.186 \times \frac{1}{6698} = 25\text{min}$$

Steam consumption is $2.8 \times 25 = 70\text{kg}$

