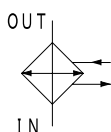


Standard Model of All Stainless-steel Heat Exchanger



Water-cooled type cooler

Characteristics

- All stainless-steel model enables use in various fluids (especially for water/water cooler)
- Low-priced model with cast iron channels (FC) is available
- Tube ends sealing
TCW-1□□/2□□: Tube expansion with seal welding
TCW-3□□: Tube expansion only
- High flexibility of installation by selectable flow direction and adjustable U-bolt stand
- Bare cooling tube appropriate to fluid contamination at shell side is used

SPECIFICATION

	Shell side	Tube side
Max working pressure MPa	1.0	1.0
Max working temperature °C	100*1	100
Pass structure	1 pass	2 passes
Fluid type	Fresh water Fluid without corrosiveness to stainless-steel	Fresh water

Shell size code		1□□-SCS	2□□-SCS	3□□-SCS	1□□	2□□	3□□
Cooling tube type		φ 9 Bare tube					
Main material	Cooling tube	Stainless-steel					
	Body	Stainless-steel					
Coating	Channel	SCS			FC		
	Outside coating	Non-coating			Aqua blue		
	Inside of channel	Non-coating			Tar-free epoxy coating		

MODEL CODE

<Model code example>

TCW - **103** - **1** - **SCS**

Code	Heat transfer area	Shell size
103	0.15㎡	φ76.3 (65A)
106	0.3㎡	
210	0.5㎡	φ114.3 (100A)
214	0.7㎡	
220	1.0㎡	
226	1.3㎡	
330	1.5㎡	φ139.8 (125A)
338	1.9㎡	
352	2.6㎡	
366	3.3㎡	

Code	Flow rate*2
1	Large
2	Small

Code	Material of channel
Blank	FC
SCS	Stainless-steel

* 1 Temperature difference between shell side fluid and tube side fluid should be within 80°C.

* 2 "Flow rate" is for optimization of flow velocity by adjusting the number of baffle plate depend on flow amount variation.

PERFORMANCE GRAPH

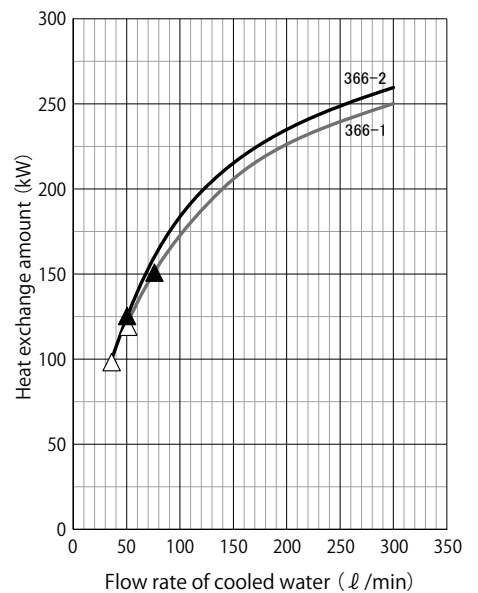
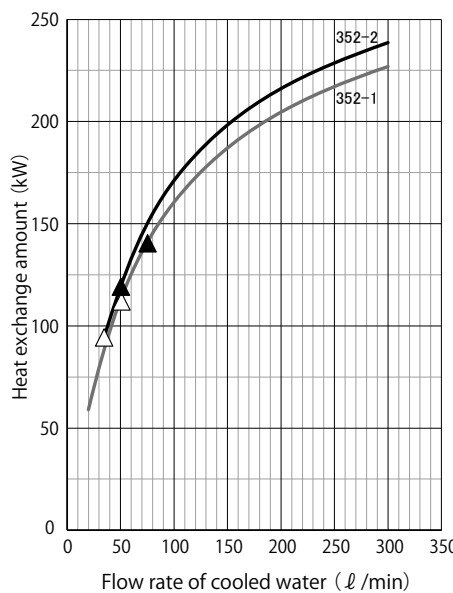
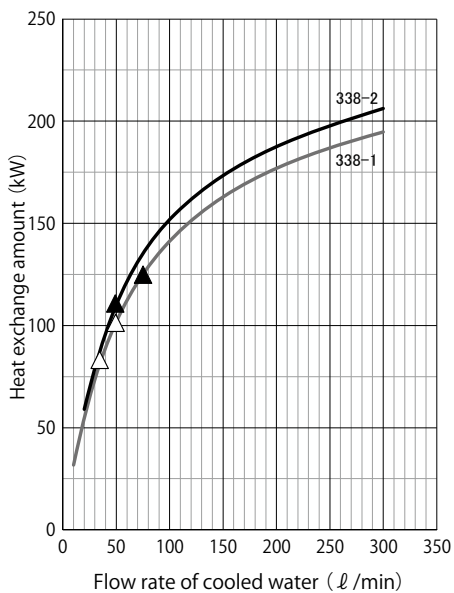
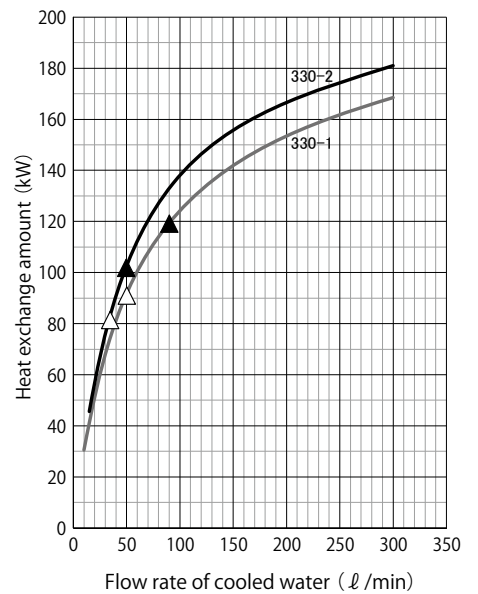
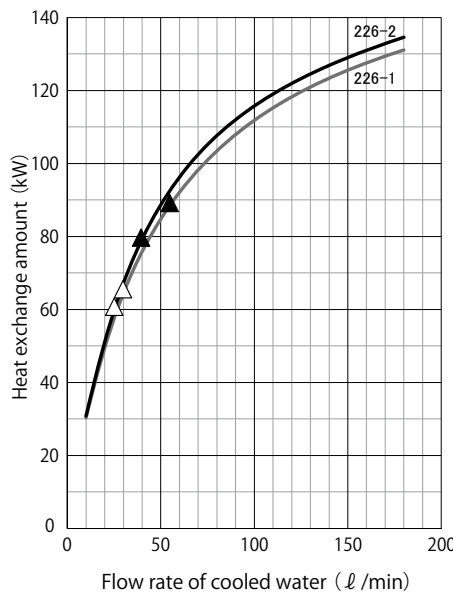
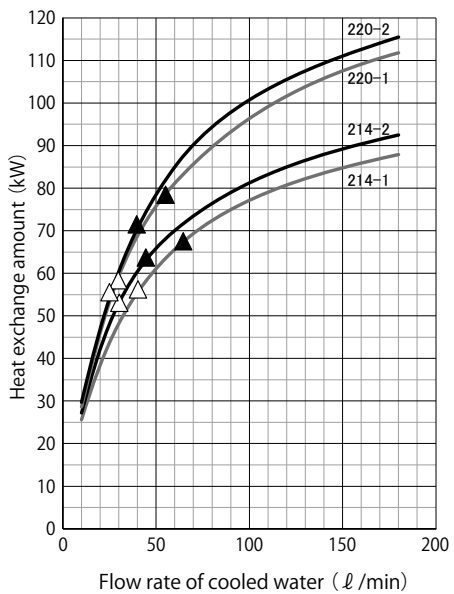
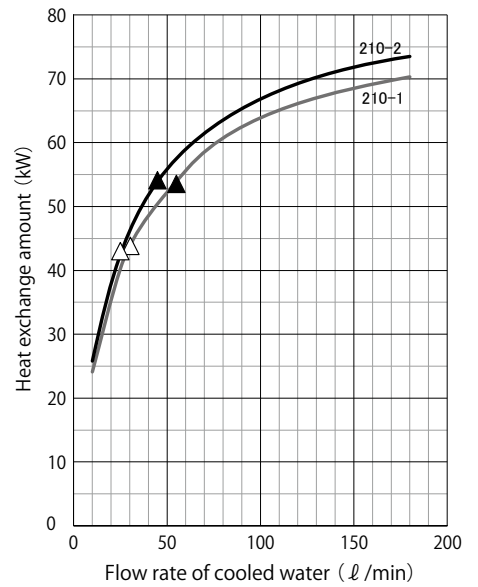
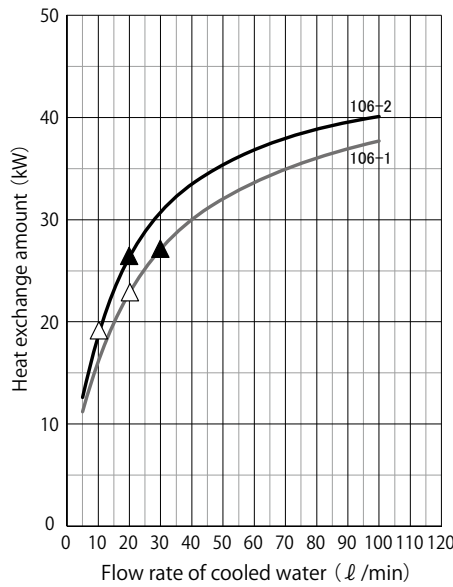
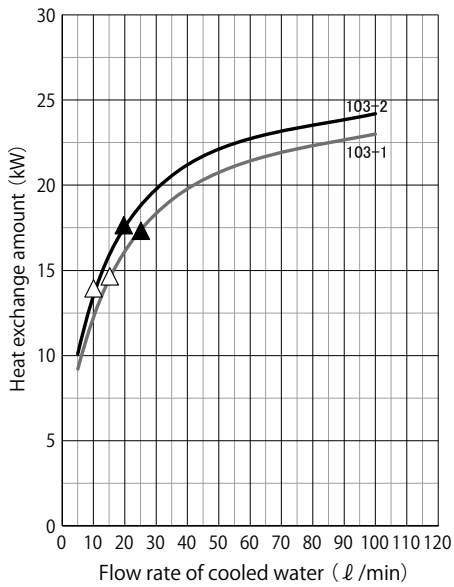
Condition

Fluid type		Fresh water		Pressure drop	Shell side MPa	Δ : ≤ 0.002
Inlet temperature	Shell side $^{\circ}\text{C}$	80			Tube side MPa	\blacktriangle : 0.005
	Tube side $^{\circ}\text{C}$	30		Scale coefficient at tube side $\text{m}^3\text{C/W}$ 0		
Flow rate at tube side		Max allowable flow rate				

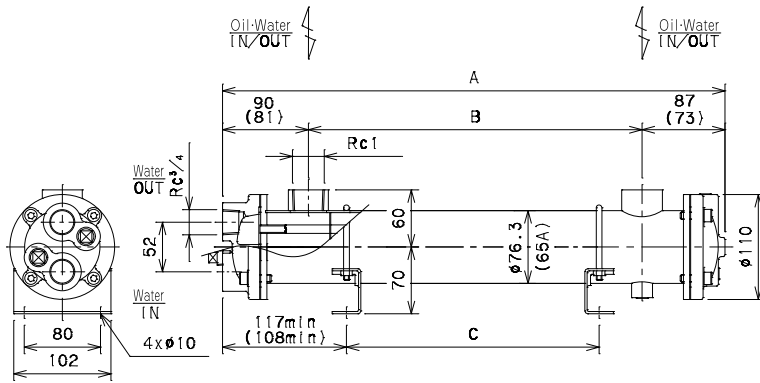
Allowable flow rate

Model code	TCW-1□□	TCW-2□□	TCW-3□□
Shell side ℓ/min	~ 100	~ 180	50 \sim 300
Tube side ℓ/min	20 \sim 35	30 \sim 80	30 \sim 110

★ It is max value and it depends on each working condition.



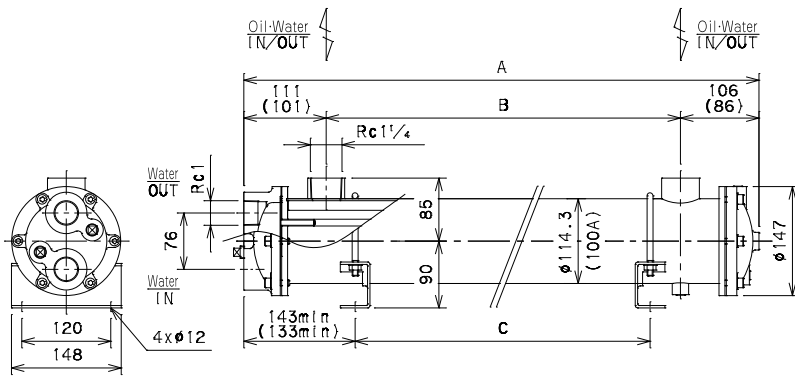
TCW-1□□-□



Model code	Length			Weight (kg)
	A	B	C	
TCW-103-□	347 (324)	170	30~115	5.5 (4.7)
TCW-106-□	527 (504)	350	30~295	7.5 (6.7)

★Value in () is for SCS material.
★Stand position is adjustable.

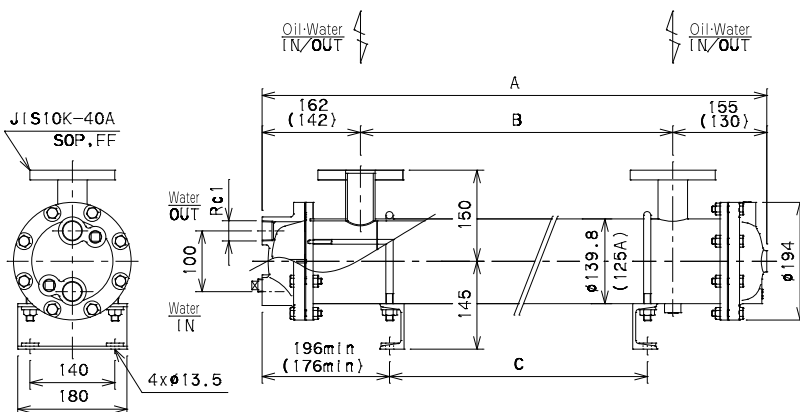
TCW-2□□-□



Model code	Length			Weight (kg)
	A	B	C	
TCW-210-□	437 (407)	220	40~155	11.5 (10)
TCW-214-□	547 (517)	330	40~265	12.5 (11)
TCW-220-□	777 (747)	560	40~495	16.5 (15)
TCW-226-□	947 (917)	730	40~665	18 (16.5)

★Value in () is for SCS material.
★Stand position is adjustable.

TCW-3□□-□



Model code	Length			Weight (kg)
	A	B	C	
TCW-330-□	817 (772)	500	50~430	33 (25)
TCW-338-□	987 (942)	670	50~600	37.5 (30.5)
TCW-352-□	1287 (1242)	970	50~900	45 (38)
TCW-366-□	1587 (1542)	1270	50~1200	58 (51)

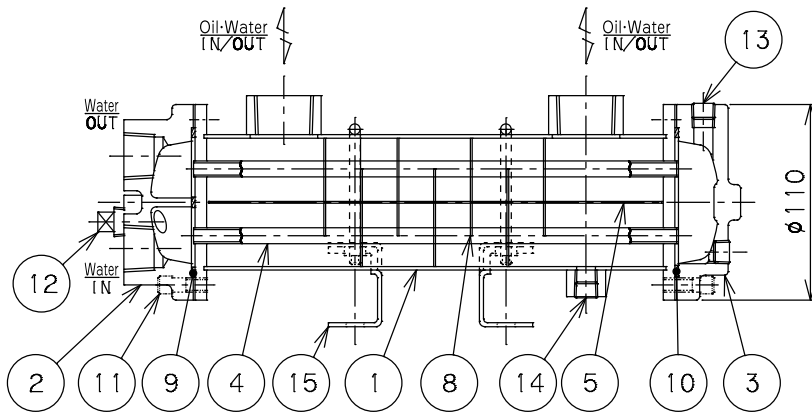
★ Value in () is for SCS material.
★ Stand position is adjustable.

TCW

CROSS SECTION

PARTS LIST

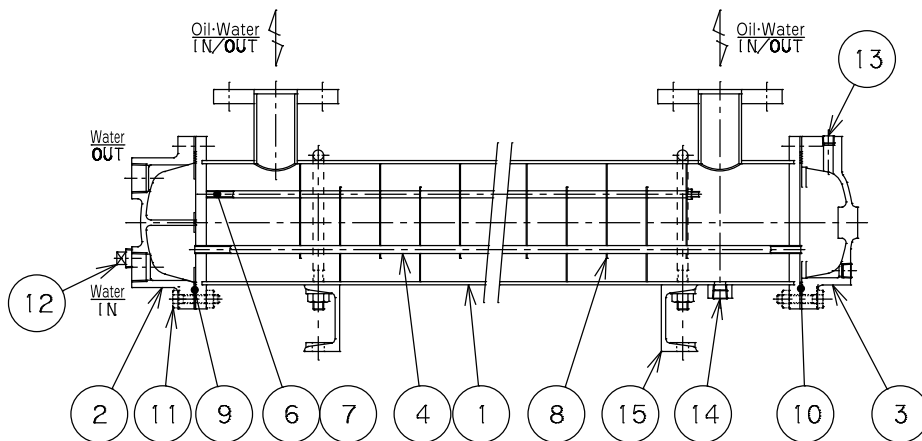
TCW-1□□,TCW-2□□



No.	Item	Qty
1	Body	1
2	Channel "A"	1
3	Channel "B"	1
4	Bare tube	n*
5	Set plate (Only for TCW-1□□,2□□)	n*
6	Distance pipe (Only for TCW-3□□)	n*
7	Rod (Only for TCW-3□□)	4
8	Baffle plate	n*
9	Packing	1
10	Packing	1
11	Bolt (TCW-1□□,2□□) Bolt · Nut (TCW-3□□)	n*
12	Plug	2
13	Air vent plug	1
14	Drain plug	2
15	Stand	2

n* : The number of part depends on model.

TCW-3□□



SEALING PARTS LIST

No.	Item	9	10	Sealing parts set	
				Material	No. : 9,10 Code of sealing parts set (Item code)
TCW-1□□	Special packing non asbestos	t2×φ83/φ72,W6 (with partition)	t2×φ83/φ72	—	SA-TCW-1□□ (SSC000002)
TCW-2□□	Special packing non asbestos	t2×φ120/φ109,W6 (with partition)	t2×φ120/φ109	—	SA-TCW-2□□ (SSC000003)
TCW-3□□	Special packing non asbestos	t2×φ160/φ134,W6 (with partition)	t2×φ160φ134	—	SA-TCW-3□□ (SSC000004)

Upper side : Code or Size Under side : (Item code)

MAINTENANCE TOOL LIST

Item	Size (mm)	Item code	Remarks
Tube brush	φ8.5x1820	KZZ000005	For periodic cleaning of tube to prevent scale.
Tube plug	D5.5×7.5×25	BZZ000021*1	For closing a tube when leakage occurs due to tube corrosion. 2 plugs are required for a tube.

* 1 Material of tube plug is brass. Please confirm fluid type.