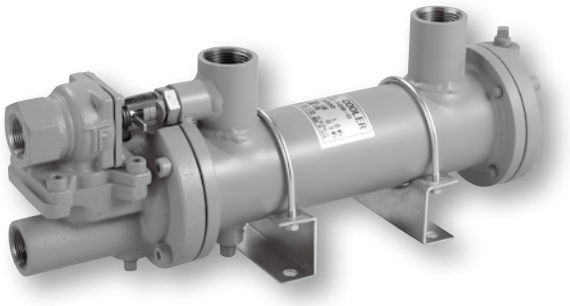
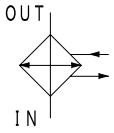
FCX model

Water-Cooled Shell and Tube type Oil Cooler with thermostat
Fixed Tube Sheet type
Heat exchange amount: ~ 52.8kW

Fixed Tube Sheet type Oil Cooler with built-in Thermostat





Water-cooled type cooler

Characteristics

- **Built-in thermostat automatically controls cooling water quantity and keeps temperature setting**
- **Valve opening temperature of thermostat is adjustable between 35 – 55℃.**
- **ϕ9 Low Fin Tube enables high cooling performance and compact design**
- **High flexibility of installation by adjustable U-bolt stand**
- **Fixed tube sheet type is appropriate to a system with small temperature difference and small amount of oil contamination**

SPECIFICATION

	Shell side		Tube side
Max working pressure MPa	1.0		0.5
Max working temperature ℃	100		60
Pass structure	1 pass		2 passes
Fluid type	Standard	Mineral oil	Fresh water
	G	Water glycol fluid	
		Fatty ester fluid	

☆ TAISEI original high performance cooling tube enables 20% size reduction compared with general ϕ12.7 low fin tube.

Shell size code		1□□	2□□
Cooling tube type		ϕ9 Low Fin Tube ☆	
Main material	Cooling tube	Phosphorous-deoxidized copper	
	Body	STKM、SS	
	Channel	FC	
Coating	Outside coating	Aqua blue	
	Inside of channel	Tar-free epoxy coating	
Other	Valve opening temp. ℃	35 ~ 55 (Inlet of oil)	

MODEL CODE

〈Model code example〉

G – FCX – 226 – 0

Code	Fluid type (Shell side)
Blank	Mineral oil
G	Water-glycol fluid
	Fatty ester fluid

Code	Heat transfer area	Shell size
108	0.4㎡	ϕ76.3 (65A)
114	0.7㎡	
122	1.1㎡	
226	1.3㎡	ϕ114.3 (100A)
234	1.7㎡	
242	2.1㎡	
256	2.8㎡	
270	3.5㎡	

Code	Flow rate*2
0	Large
1	Medium
2	Small

＊1 Temperature difference between shell side fluid and tube side fluid should be within 80℃.
＊2 "Flow rate" is for optimization of flow velocity by adjusting the number of baffle plate depend on flow amount variation.

PERFORMANCE GRAPH

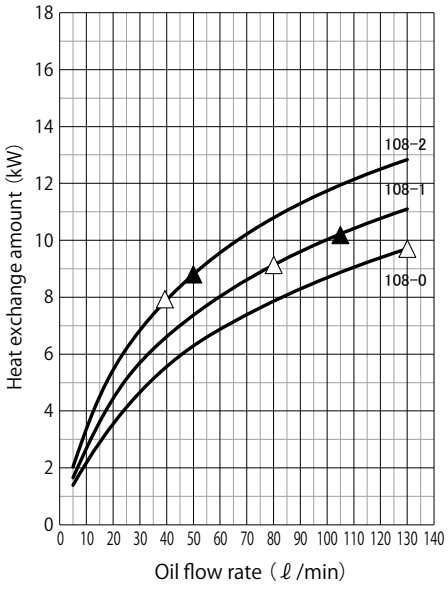
■ Condition

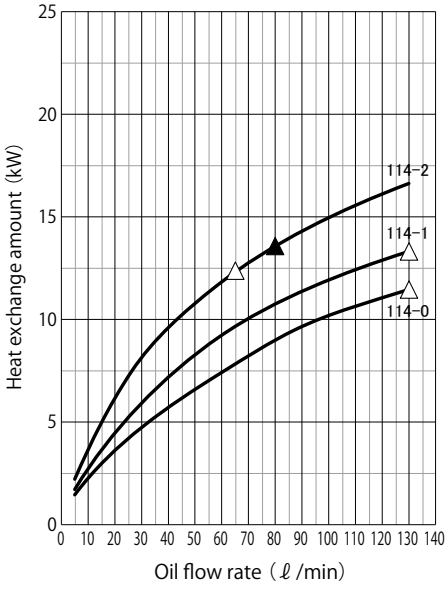
Fluid type		Corresponding to ISO VG46	Pressure drop	Shell side MPa	△ : 0.1 ▲ : 0.15
Inlet temperature	Shell side ℃	55			
	Tube side ℃	30		Tube side MPa	0.01 - 0.03
Flow rate at tube side		Max allowable flow rate	Scale coefficient at tube side	㎡℃/W	0

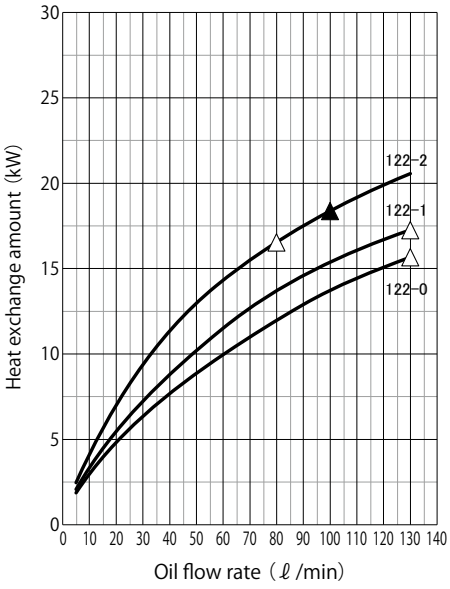
■ Allowable flow rate

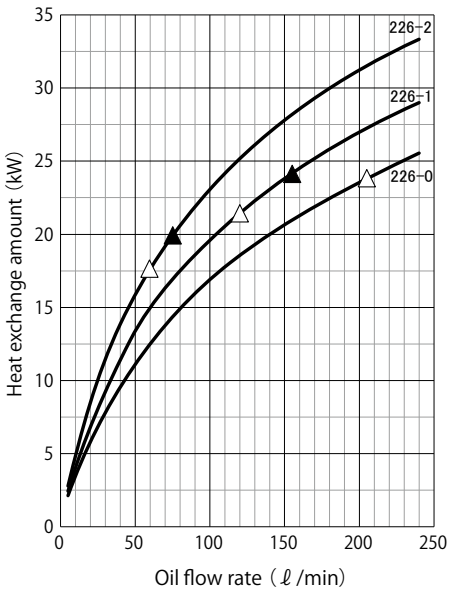
Model code	FCX-1□□	FCX-2□□
Shell side ℓ/min	～130	15～240
Tube side ℓ/min	10～35	20～80

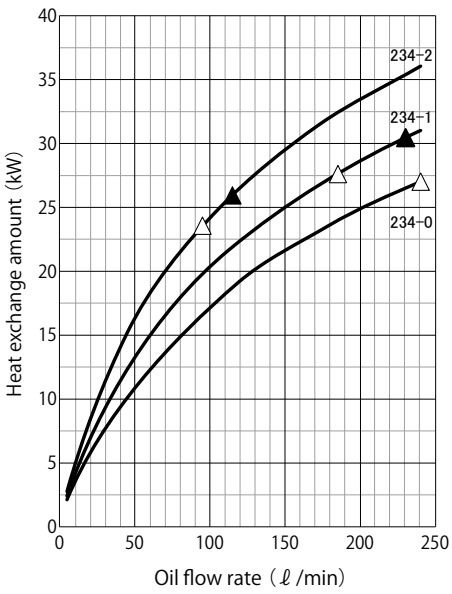
★ It is max value and It depends on each working condition.

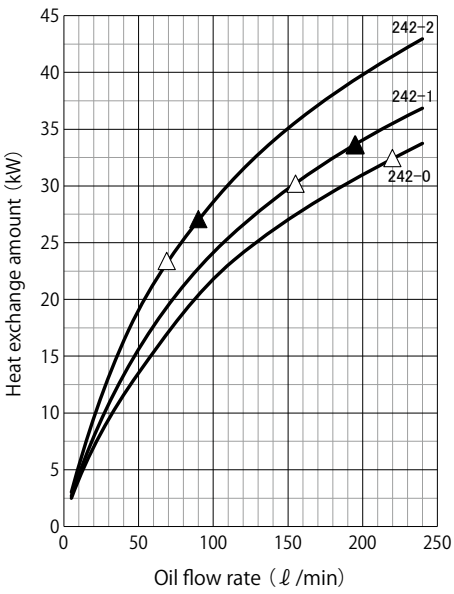


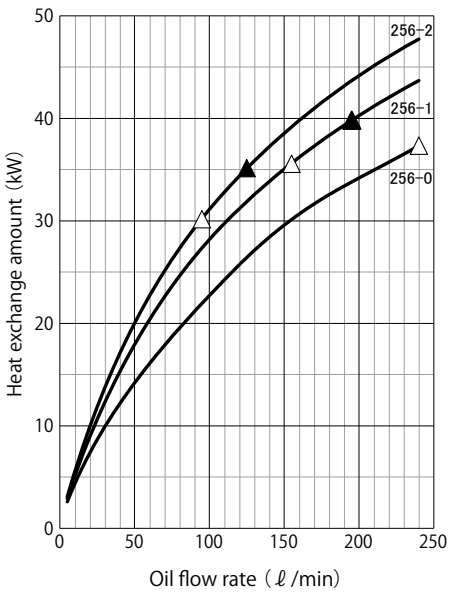


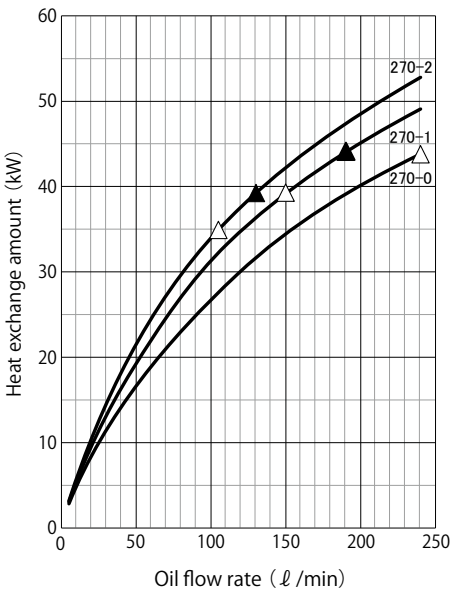










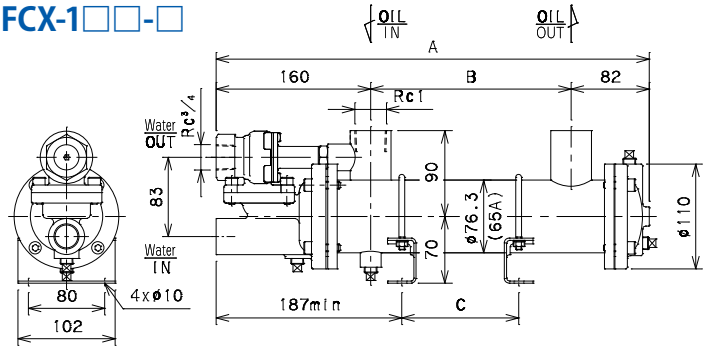


FCX

DIMENSION

FCX-1□□-□

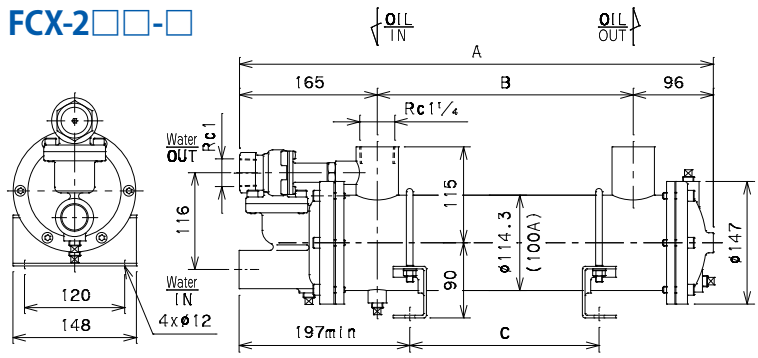
Unit：mm



Model code	Length			Weight (kg)
	A	B	C	
FCX-108-□	422	180	30～125	9
FCX-114-□	602	360	30～305	10.5
FCX-122-□	832	590	30～535	13

★Stand position is adjustable.

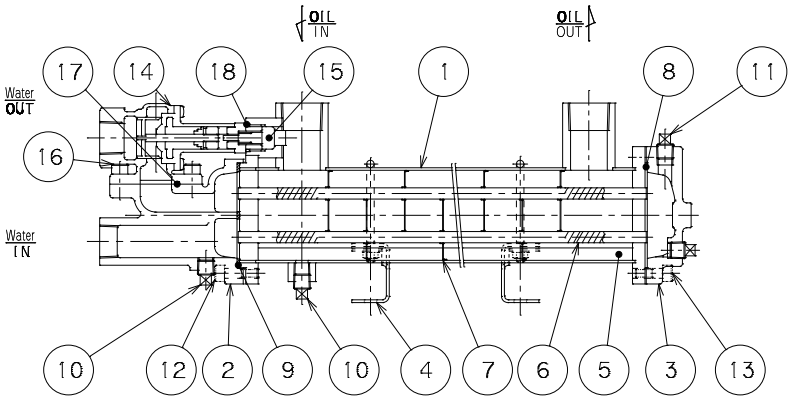
FCX-2□□-□

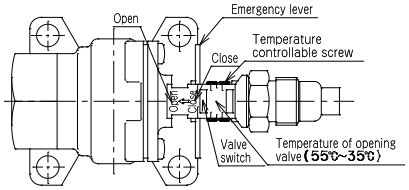


Model code	Length			Weight (kg)
	A	B	C	
FCX-226-□	501	240	40～175	17
FCX-234-□	611	350	40～285	19
FCX-242-□	691	430	40～365	20.5
FCX-256-□	841	580	40～515	25
FCX-270-□	1011	750	40～685	28

★Stand position is adjustable.

CROSS SECTION





- Valve opening temp.: Adjustable between 35 - 55℃
- Valve seat leakage: Less than 30 cc/min (at water supply pressure 0.15MPa)
- Manual valve operation is available by emergency lever

PARTS LIST

No.	Item	Qty
1	Body	1
2	Channel "A"	1
3	Channel "B"	1
4	Stand	2
5	Set plate	n*
6	Fin tube	n*
7	Baffle plate	n*
8	Packing	1
9	Packing	1
10	Drain plug	3
11	Air vent plug	1
12	Bolt	n*
13	Bolt	n*
14	Thermostat	1
15	Thermo sensor	1
16	Bolt	4
17	O-ring	1
18	O-ring	1

n*：The number of part depends on model.

SEALING PARTS LIST

No.	8	9	17	18	Sealing parts set	
Item・Standard*1 / Model code	Special packing non asbestos		JIS B2401 1A		No.：8,9,17,18	
					Material	Code of sealing parts set (Item code)
FCX-1□□	t2×φ83/φ72	t2×φ83/φ72,W6 (with partition)	P34	P18	NBR	SA-FCX-100 (SSC000047)
FCX-2□□	t2x120x109	t2×φ120/φ109,W6 (with partition)			NBR	SA-FCX-200 (SSC000048)

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

MAINTENANCE TOOL LIST

Item	Size (mm)	Item code	Remarks
Tube brush	D6x1000	KZZ000001	For periodic cleaning of tube to prevent scale.
Tube plug	D5.5x7.5x25	BZZ000021	For closing a tube when leakage occurs due to tube corrosion. 2 plugs are required for a tube.

＊1　Standard material of sealing part is NBR, but other material is selectable depending on fluid type.