

# Sample Cooler

## Introduction

FITOK sample cooler consists of a single continuous tube that is helically coiled and housed in a shell. Hot fluid from liquid, gas or steam process flows through the tube side of the cooler. The cooling fluid, usually water, flows through the shell side. The sample cooler cools the process fluid which is then collected as sample or piped to in-line process instrumentation for continuous monitoring of properties. The cooler is extensively used in oil & gas industries.

## Features

- ⦿ Designed to handle high pressure samples
- ⦿ Options of heat transfer area
- ⦿ 316/316L SS as standard tube material, a variety of materials are available
- ⦿ Easy maintenance, replacement and cleaning
- ⦿ Mounting bracket supplied with each cooler
- ⦿ Sample inlet and outlet connection: tube fitting

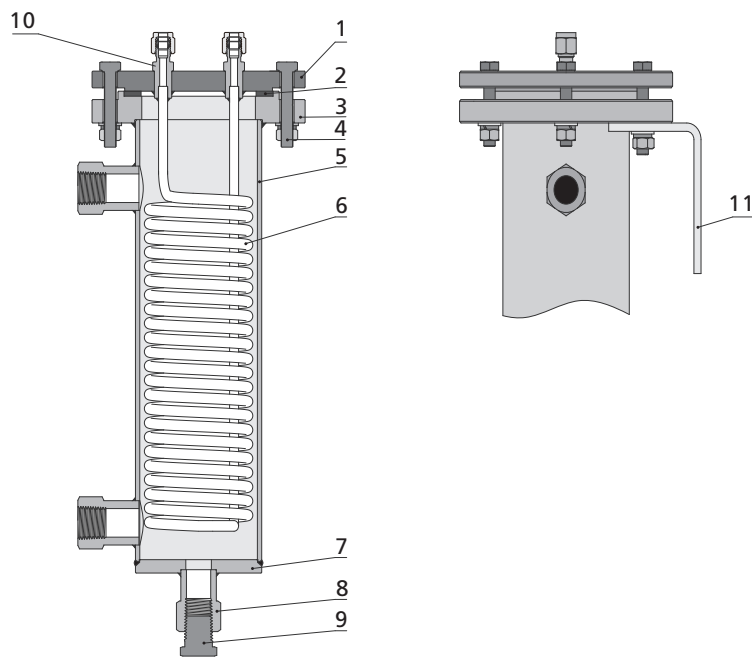
## Technical Data

	HE-4 Type	HE-8 Type
Tube size	1/4" x 0.035"	1/2" x 0.065"
Flow rate	≤ 1.5 L/min	≤ 3.5 L/min
Tube design pressure	3870 psig	3870 psig
Tube design temperature	537 °C	537 °C
Shell design pressure	280 psig	280 psig
Shell design temperature	≤ 60 °C	≤ 60 °C
Heat transfer area	0.11 m <sup>2</sup> ~ 0.44 m <sup>2</sup>	0.22 m <sup>2</sup> ~ 0.44 m <sup>2</sup>

Note: If the flow rate is not within the suggested range, the cooling capacity will decrease.



Standard Construction and materials



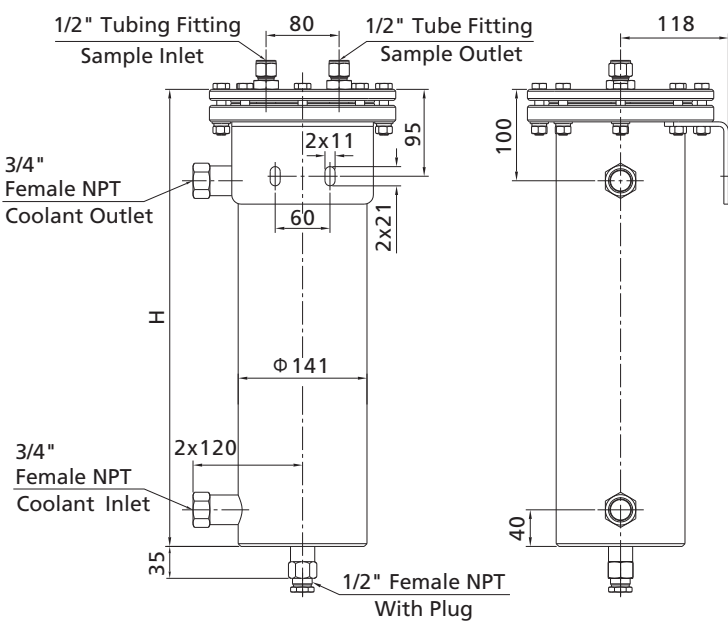
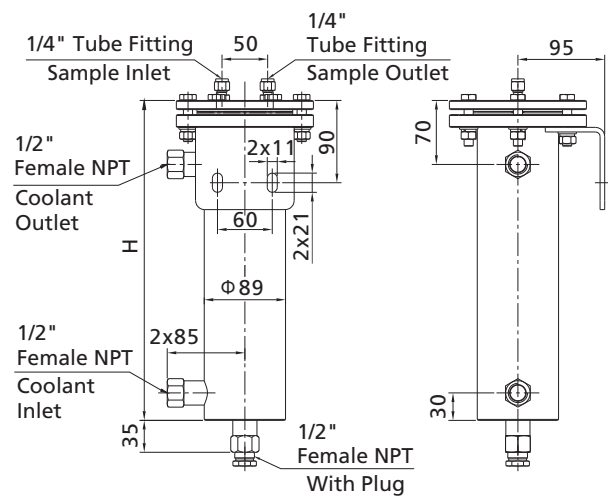
Item	Component	Coil Material			
		316/316L SS	Alloy C-276	6Mo	Alloy 400
		Material Grade/ASTM Specification			
1	Upper Flange	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
2	Gasket	FKM	FKM	FKM	FKM
3	Lower Flange	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
4	Fastener	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
5	Body	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
6	Coil	316L SS /A269	Alloy C-276/B622	S31254/A269	Alloy 400/B165
7	Base Plate	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
8	Shell Fitting	316 SS /A479	316 SS /A479	316 SS /A479	316 SS /A479
9	Plug	316 SS /A479	316 SS /A479	316 SS /A479	316 SS /A479
10	Coil Fitting	316 SS /A479	Alloy C-276/B574	S31254/A479	Alloy 400/B164
11	Bracket	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel

Ordering Number and Dimensions

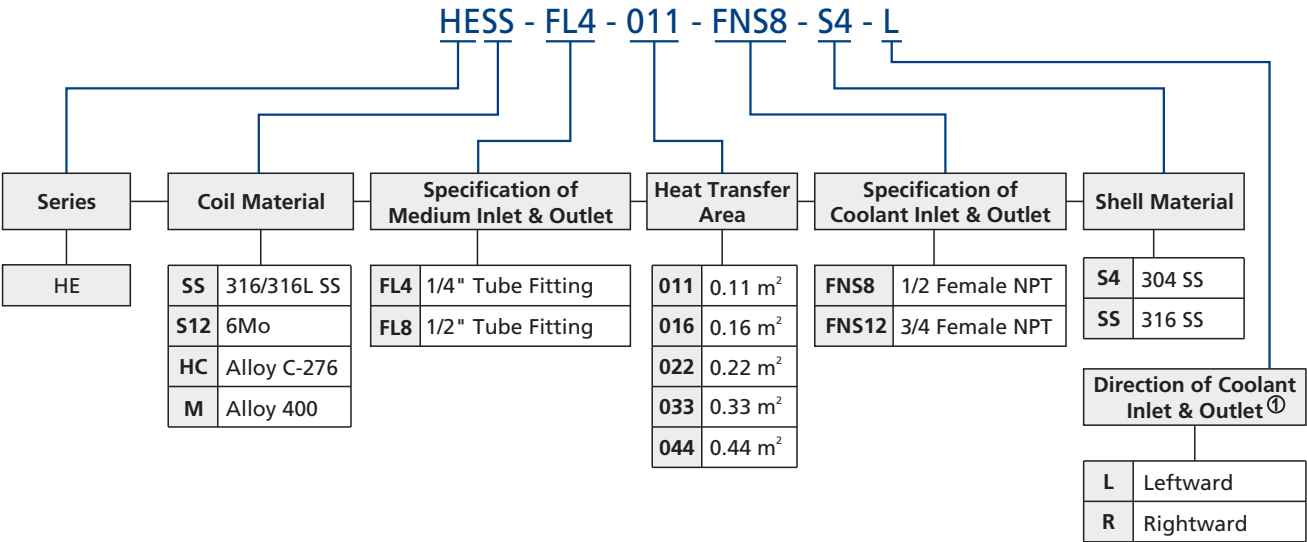
Ordering Number	Heat Exchange Area	Height (H)	Weight
HESS-FL4-011-FNS8-S4-L(R)	0.11 m <sup>2</sup>	300 mm	7.0 kg
HESS-FL4-016-FNS8-S4-L(R)	0.16 m <sup>2</sup>	400 mm	8.1 kg
HESS-FL4-022-FNS8-S4-L(R)	0.22 m <sup>2</sup>	350 mm	7.6 kg
HESS-FL4-033-FNS8-S4-L(R)	0.33 m <sup>2</sup>	470 mm	9.1 kg
HESS-FL8-022-FNS12-S4-L(R)	0.22 m <sup>2</sup>	400 mm	16.0 kg
HESS-FL8-033-FNS12-S4-L(R)	0.33 m <sup>2</sup>	500 mm	18.0 kg
HESS-FL8-044-FNS12-S4-L(R)	0.44 m <sup>2</sup>	610 mm	20.3 kg

HE-4 Type

HE-8 Type



Ordering Number Description



- Note:
- 1. When the bracket faces the user, for a leftward coolant inlet and outlet, the suffix is -L, while for a rightward coolant inlet and outlet, the suffix is -R.
  - 2. "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.