



# ALSHE Cond

## Standard spiral heat exchanger for two-phase applications

### Applications

The Alfa Laval ALSHE Cond spiral heat exchanger can be used as condenser, reflux condenser, reboiler, gas cooler and heater even in presence of very large vapour or gas flows and/or very low pressure drop.

### Advantages

- Very low pressure drop and large flow volumes on the cross flow vapour side
- Drastically reduced fouling thanks to the single channel design on cooling circuit
- Full drainability on process (vapours) side
- High versatility

### Operating principles

The ALSHE Cond spiral heat exchanger features one medium in spiral flow while the other is in cross flow, parallel to the axis of the spiral element. The channel with the medium (generally cooling media) in spiral flow is welded shut on each side while the medium in cross flow (generally vapours) passes through the open spiral element. This design combines high liquid velocity in the closed spiral channel with large flow volumes and low pressure drop on the cross flow vapour side.

### Self-cleaning

The single-channel construction eliminates bypassing and reduces fouling. The turbulence of the fluid in the channel constantly flushes away any scaling or deposits as soon as they form. If fouling occurs, thus diminishing the cross section of the channel, the velocity increases and scrubs away deposits at the exact zone affected.

### Process efficiency

Minimal vapour pressure drop can be easily achieved, so that high-capacity vacuum systems are not needed. A large cross-flow area within a short flow length allows the handling of large volume flows in a single unit.

### Small space requirement

The wrapped cylindrical arrangement of a minimized heat transfer surface results in an extremely compact unit. This compact design ensures lower capital and installation cost

### Easy access and maintenance

The compact design of the ALSHE Cond also provides easy access on the process side. High turbulence ensures a low risk of fouling on the cooling side. If cleaning is needed, chemical cleaning on the cooling side is very efficient because of the single-channel construction.



ALSHE Cond

### Deliveries from stock

The ALSHE Cond serie are available in 5 sizes and are delivered directly off the shelf. They are suitable for fast track replacement of existing heat exchangers or for new installations. Their high heat transfer efficiency & versatility make them suitable for replacing shell & tube or other types of heat exchangers for any kind of condensing or reboiling duty.

MAWP / Maximum Working Pressure (psig)							
	-148 to 200	300	400	500	600	700	752 °F
1S	108	108	100	92	84	79	79 psig
2S	108	108	100	92	84	79	79 psig
4S	100	100	93	85	76	72	72 psig
8L	100	100	100	92	84	79	79 psig
14L	100	100	93	85	76	72	72 psig

With full vacuum

Minimum design temperature -148°F

\* Design according to ASME VIII Div. 1

\* Available for PED, U stamp and many other regulations

\* Material: SS 316L

## Dimensions

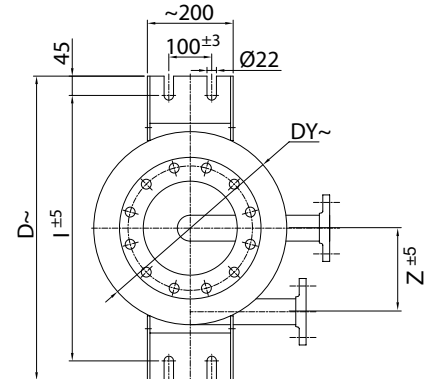
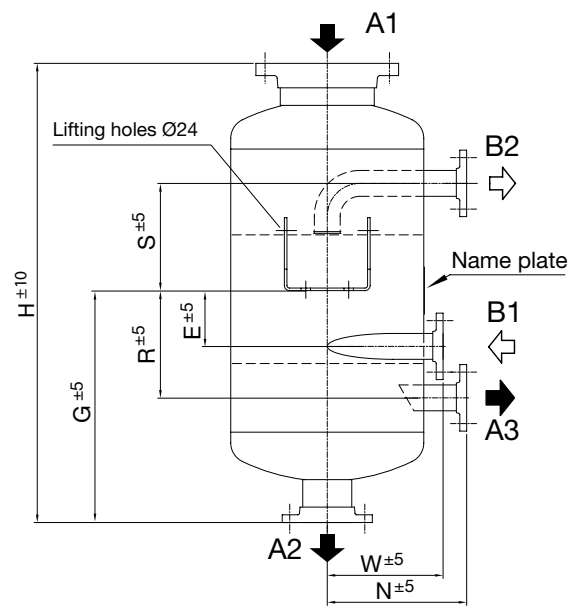
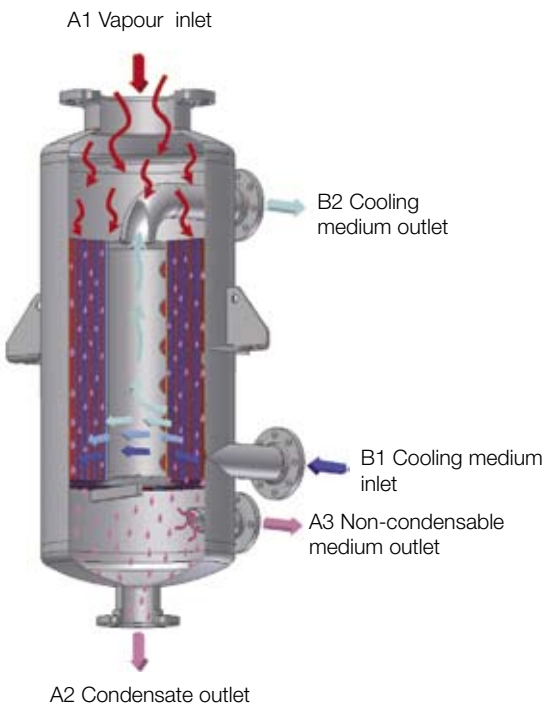
ALSHE Cond	Eff. HTA ft <sup>2</sup>	Ø body Dy (inch)	Body width (inch)	Spacing SA (inch)	SB (inch)	Nozzles A1/A2	A3	B1/B2	D	E
1S	10.76	9.45	7.87	0.2	0.2	10" / 10"	2"	2"	--	--
2S	21.53	15.75	7.87	0.2	0.2	8" / 4"	2"	2"	25.7	3.15
4S	43.06	17.72	11.81	0.2	0.2	8" / 4"	2"	2"	25.91	5.12
8L	88.26	19.68	24.61	0.2	0.31	10" / 4"	2"	3"	30.04	10.83
14L	155	25.59	24.61	0.2	0.47	10" / 4"	3"	4"	36.3	11.02

ALSHE Cond	G	H	I	N	R	S	W	Z	Weight empty (lb)	Volume A US gal	Volume B US gal
1S	--	19.68	--	--	--	--	9.84	--	165	6.6	1.32
2S	18.94	37.4	22.24	11.81	7.87	7.87	9.64	6.69	220.5	19.81	3.96
4S	21.3	42.13	24.41	12.79	9.84	9.84	10.63	7.68	330.7	26.42	6.6
8L	28.11	55.51	26.57	14.37	16.34	16.14	12.2	8.07	650	35.93	18.49
14L	31.26	62.2	32.87	17.71	17.32	16.93	15.55	10.55	992	70.53	35.93

## Flange specification

Flange 1092-1 01A PN10/ANSI B16.5 SO 150Lbs/JIS SO 10K

## Working principle



PCT00003ENUS 0904

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## How to contact Alfa Laval

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