



# 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 costs.

### Easy access and maintenance

The compact design of the ALSHE Cond also provides easy access on the process side. High turbulence ensures a low



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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.

### Deliveries from stock

The ALSHE Cond serie are available in 4 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 (barg)				
°C	150	250	300	400
2S	7,5	6,5	6	5,5
4S	7	6	5,5	5
8L	7	6,5	6	5,5
14L	7	6	5,5	5

With full vacuum

Minimum design temperature -100°C

\* Design and manufacturing codes: PED (ASME VIII Div. 1) and ASME VIII Div. 1

## Dimensions

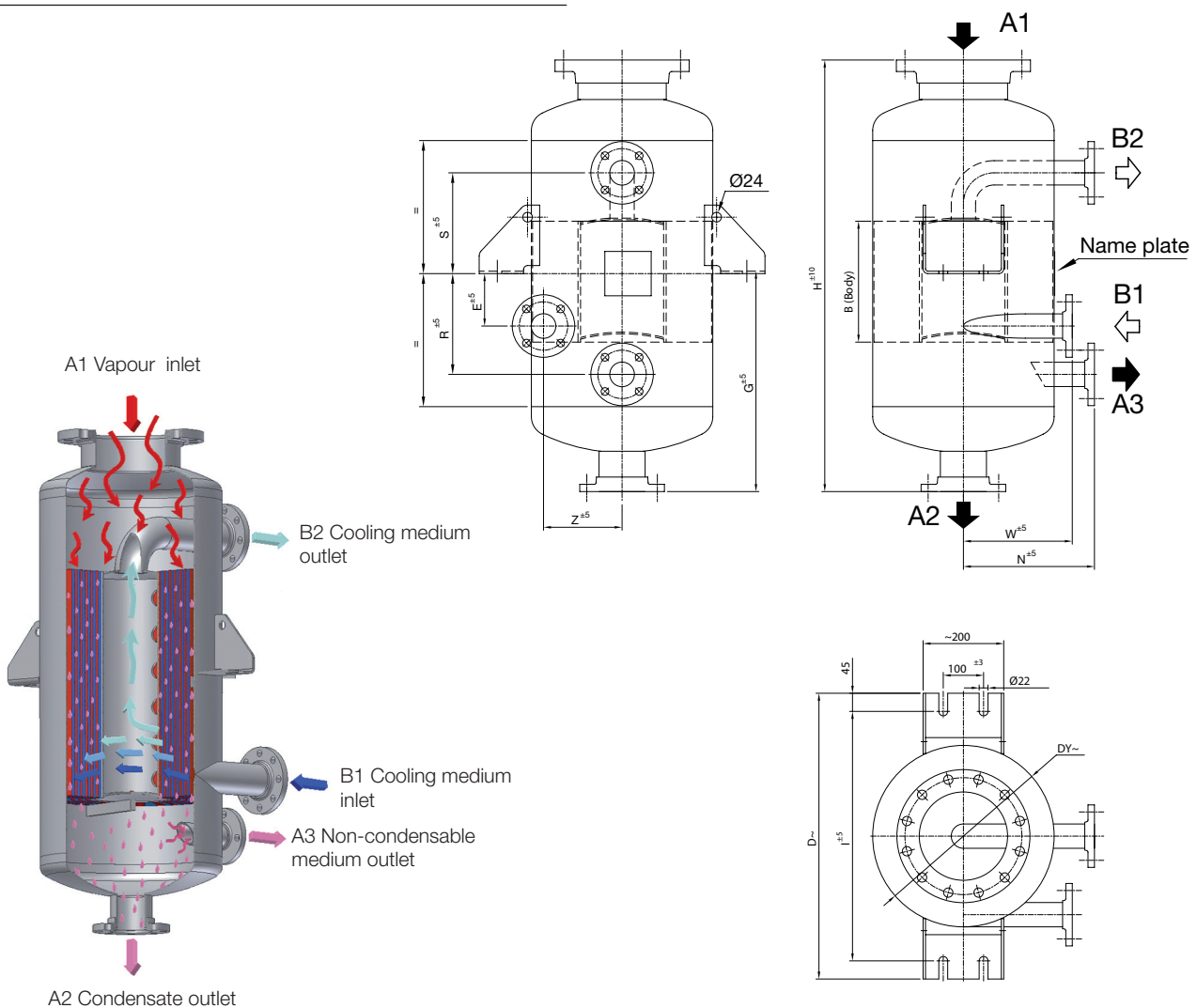
ALSHE Cond	Eff. HTA m <sup>2</sup>	Ø body Dy	Body width	Spacing		Nozzels			D	E
				SA	SB	A1/A2	A3	B1/B2		
2S	2	400	200	5	5	200/100	50	50/50	653	80
4S	4	450	300	5	5	200/100	50	50/50	709	130
8L	8.2	500	625	5	8	250/100	50	80/80	763	275
14L	14.4	650	625	5	12	250/100	80	100/100	922	280

ALSHE Cond	G	H	I	N	R	S	W	Z	Weight empty kg	Volume VA /VB
4S	541	1070	620	325	250	250	270	195	150	100/25
8L	714	1410	675	365	415	410	310	205	300	136/70
14L	794	1580	835	450	440	430	395	268	450	267/136

## Flange specification

Flange EN 1092-1 01 A ANSI B16.5 SO 150 LBS JIS 10K

Material 316L



PCT00003EN 0709

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## How to contact Alfa Laval

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