

## ADCATHERM – STS Series SHELL AND TUBE HEAT EXCHANGERS (Steam to water – Vertical installation)

**DESCRIPTION**

The ADCA-STV series steam to water shell and tube heat exchangers are shorter and lighter than the alternative shell and tube exchangers manufactured with smooth pipes. The use of extruded low fin tube has the advantage that it can improve the external surface and thermal performance.

**MAIN FEATURES**

Corrosion-resistant stainless steel low finned tube bundle and shell construction.

Straight tubes for easy cleaning.

Expansion bellow in the shell avoiding excessive tube stresses caused by thermal expansion and contraction.

**OPTIONS:** Horizontal installation  
**USE:** Steam, water, hot condensate and other fluids compatible with the construction.

**AVAILABLE MODELS:** STSV – Vertical installation  
STSH – Horizontal installation (optional)

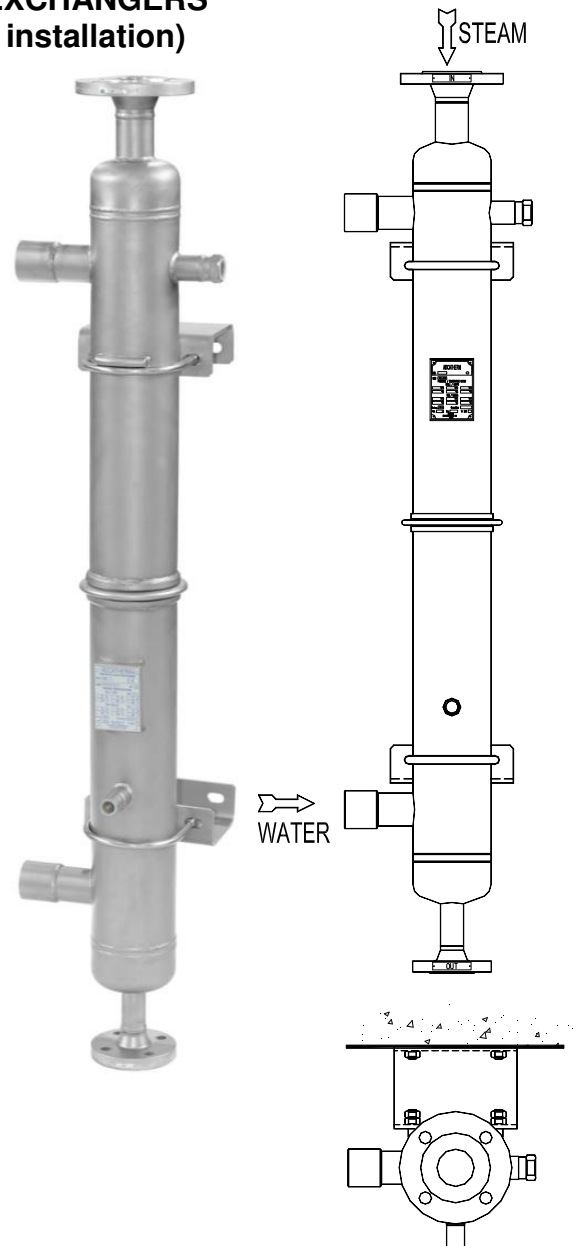
**INSTALLATION:** Vertical or horizontal (different condensate heads execution).

**ORDER REQUIREMENTS:** Steam pressure and temperature  
Inlet and outlet water temperature  
Water mass flow or heat exchanged.

**CE Marking :**

This product have been designed for use on water and steam which are in Group 2 of the PED-European Pressure Equipment Directive 97/23/EC and it comply with those requirements.

The product carries CE mark.



CE MARKING - GROUP 2 GASES CATEGORIES			
RATING	MODEL	CATEGORY Tube side	CATEGORY Shell side
PN 16	STSV 3.075 to 8.150	1	SEP

LIMITING CONDITIONS (Tube and shell)**					
Rating	Press. bar	Temp. °C	Rating	Press. bar	Temp. °C
PN16	16	50	ANSI CL.150lbs	16	50
	16	100		16	100
	13 *	195		13 *	195
	12	250		-	-

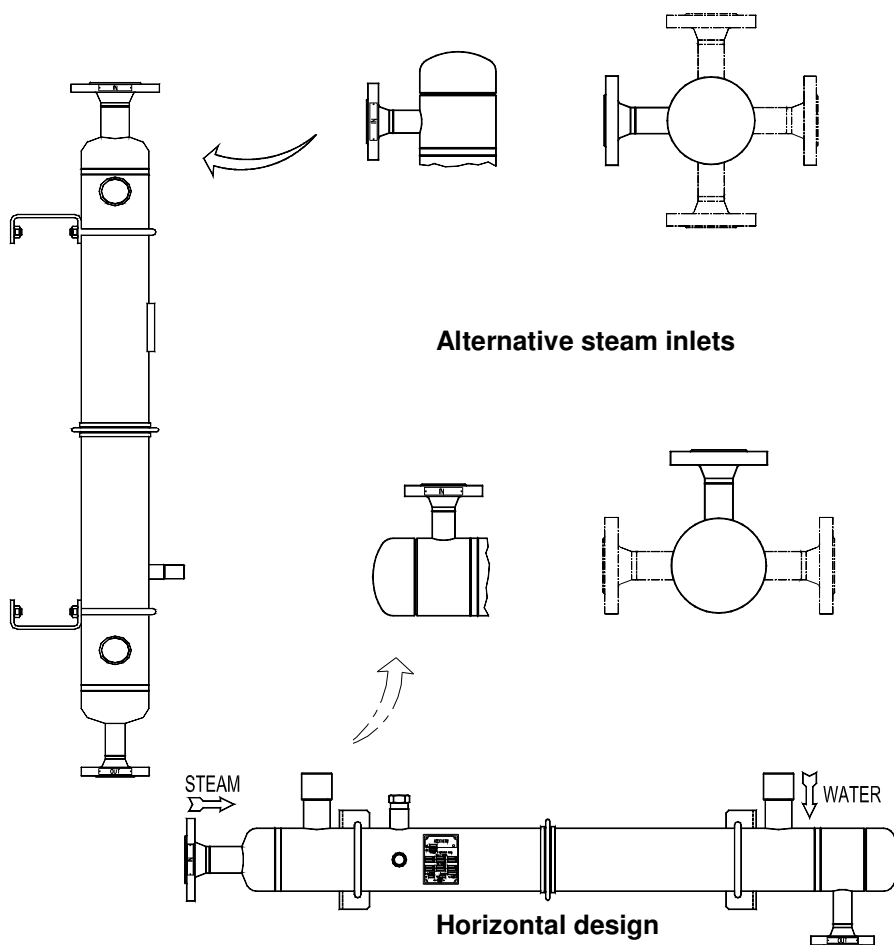
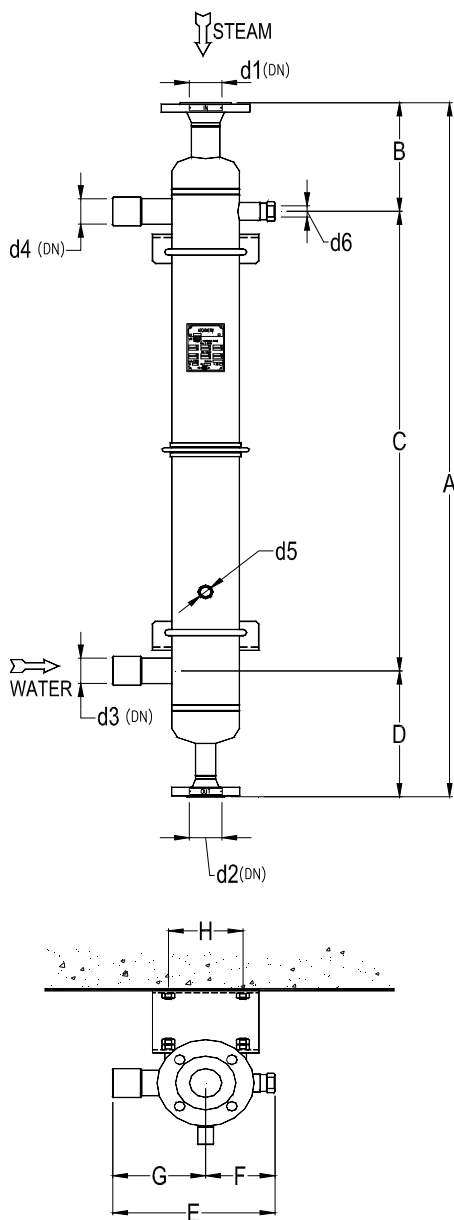
\*PMO-Max.operating pressure for saturated steam.

Minimum operating temp.: -10°C. Design code: AD-Merkblatt

\*\* Rating according to EN1092:2007.

MATERIALS	
DESIGNATION	Material
Tube bundle	AISI316L / 1.4404
Tubesheet	AISI316L / 1.4404
Heads and shell	AISI316L / 1.4404
Inlet / Outlet pipes	AISI316L / 1.4404
EN flanges	AISI316L / 1.4404
ANSI Flanges	AISI316L / 1.4404
Sockets	AISI316L / 1.4404
Suports	AISI304 / 1.4301

EN 10204 3.1 certificate available if requested with the order.



Alternative steam inlets

Horizontal design

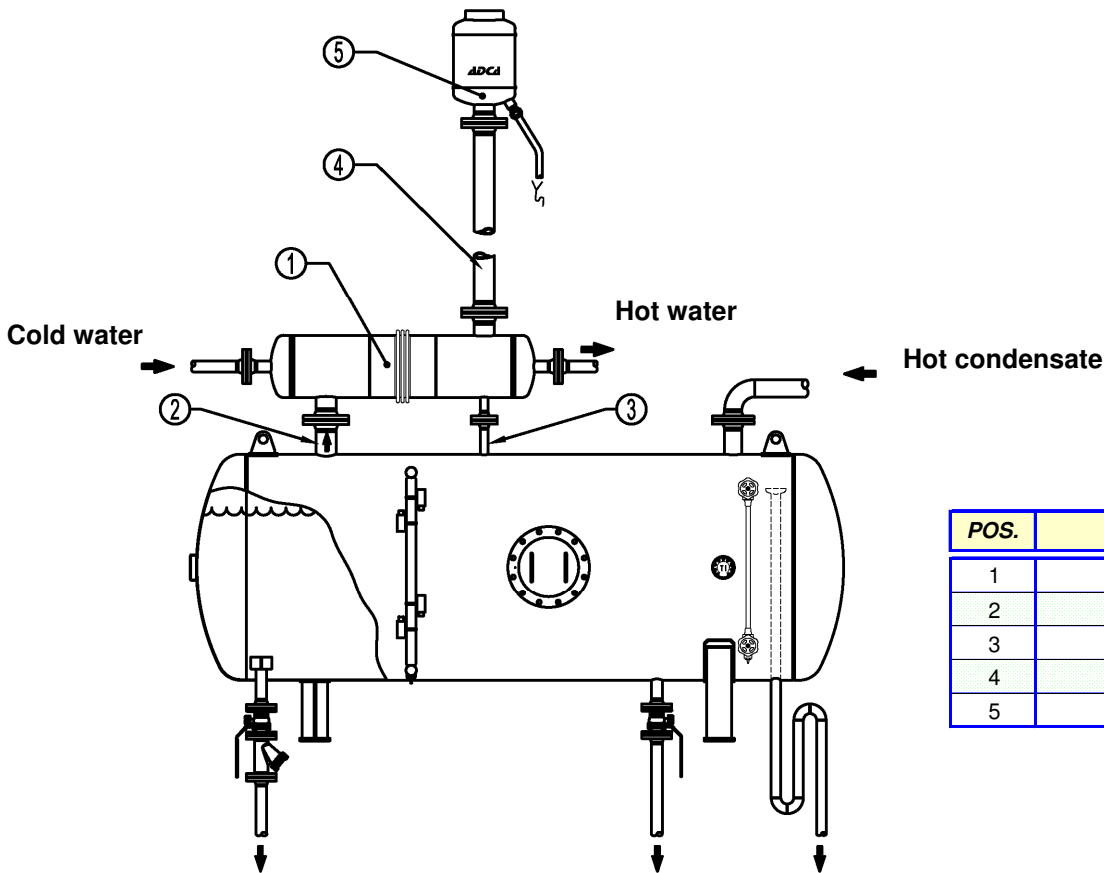
Alternative connections		
Clamp	Round thread	Flange

Different designs and dimensions on request.

Model	DIMENSIONS													
	A	B	C	D	E	F	G	H	d1*	d2*	d3*	d4*	d5	d6
STSV 3.075	1048	225	590	225	250	105	145	110	40	25	11/2"	11/2"	1/2"	3/4"
STSV 3.100	1290	225	840	225	250	105	145	110	40	25	11/2"	11/2"	1/2"	3/4"
STSV 3.150	1790	225	1340	225	250	105	145	110	40	25	11/2"	11/2"	1/2"	3/4"
STSV 4.075	1070	240	590	240	274	117	157	126	40	25	11/2"	11/2"	1/2"	3/4"
STSV 4.100	1320	240	840	240	274	117	157	126	40	25	11/2"	11/2"	1/2"	3/4"
STSV 4.150	1820	240	1340	240	274	117	157	126	40	25	11/2"	11/2"	1/2"	3/4"
STSV 5.075	1090	250	590	250	300	130	170	151	50	40	2"	2"	1/2"	3/4"
STSV 5.100	1340	250	840	250	300	130	170	151	50	40	2"	2"	1/2"	3/4"
STSV 5.150	1840	250	1340	250	300	130	170	151	50	40	2"	2"	1/2"	3/4"
STSV 6.075	1120	265	590	265	330	145	185	181	65	40	2"	2"	1/2"	3/4"
STSV 6.100	1370	265	840	265	330	145	185	181	65	40	2"	2"	1/2"	3/4"
STSV 6.150	1870	265	1340	265	330	145	185	181	65	40	2"	2"	1/2"	3/4"
STSV 8.075	1150	280	590	280	380	170	210	231	80	50	2 1/2"	2 1/2"	1/2"	3/4"
STSV 8.100	1400	280	840	280	380	170	210	231	80	50	2 1/2"	2 1/2"	1/2"	3/4"
STSV 8.150	1900	280	1340	280	380	170	210	231	80	50	2 1/2"	2 1/2"	1/2"	3/4"

\* Connections shown are only indicative. Final sizes will be attributed after order and considering the effective flow rates.

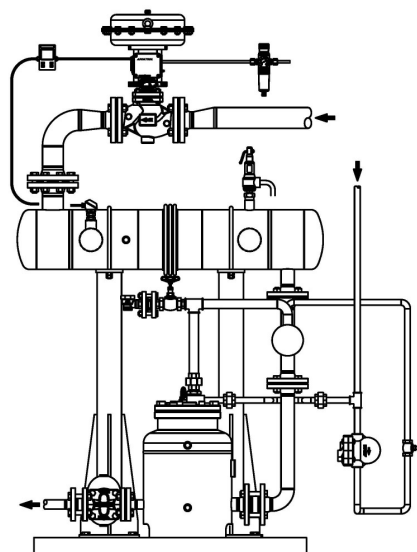
### TYPICAL INSTALLATION AS FLASH STEAM VENT CONDENSER ( Steam to the shell )



POS.	MATERIALS
1	STS Heat exchanger
2	Receiver vent
3	Drain (condensate)
4	Vent to atmosphere
5	EH - Exhaust head

Flash steam vents energy recovery. When heating water or another process fluid using this steam which is normally wasted, both boiler operation period and energy consumption are reduced, consequently reducing also the pollution emissions.

### TYPICAL INSTALLATION AS A PART OF "PWHU" ( Packaged Water Heating Unit )



The PWHU unit allows several options for the preparation of hot water for consumption or heating. It can be supplied complete with the feed water system, expansion and recirculation for closed circuit operation, or simply prepared to supply process hot water. For drawing simplifying purposes some components and accessories have been omitted.