

## FLASH CONDENSING HEADS FCD

### DESCRIPTION AND OPERATION

The ADCATherm FCD series flash condensing heads are designed to promote energy efficiency on new or existing systems.

Mixing the flash steam with boiler make-up water allows the energy within the flash steam to be fully absorbed into the water and therefore reduces energy waste that normally occurs from the discharge of flash steam through a vent.

The main advantages over some traditional systems are that it is possible to make the most of the piping connections in a single and compact mixing unit and a greater heat recovery efficiency can be achieved.

This mixing unit includes the following fluid connections:

- Cold make-up water;
- Condensate return;
- Re-circulating feedwater;
- Vacuum breaker and vent connection;
- Optional connections for flash steam from a TDS (Total Dissolved Solids) heat recovery system.

The mixing unit includes the necessary baffles, spray nozzle, water injector pipe, etc., in order to guarantee high mixing energy efficiency. The water is finally mixed in the vessel as it passes through an immersion tube, which ensures a quiet operation.

The feedwater is re-circulated using a low power re-circulating pump which improves thermal efficiency by reducing the temperature stratification.

Additional equipment can be used to improve energy efficiency and accurate control. ADCATrol control valves, ADCAMix steam injectors, ADCATherm exhaust heads and many other items.

### MAIN FEATURES

Prevents energy wastes.

Corrosion-resistant stainless steel construction.

Reduces the flow of flash steam from the vessel venting pipe.

**OPTIONS:** Complete system including all the necessary components.

**USE:** On boiler water feed tanks.

**AVAILABLE MODELS:** FCDSS – stainless steel.

**SIZES:** FCD150, FCD200, FCD250, FCD300 and FCD400.

**CONNECTIONS:** Female threaded ISO 7 Rp or NPT.  
Flanged EN 1092-1 or ASME B16.5.  
Others on request.

**INSTALLATION:** Vertical installation, on the top of the vessel.  
Final dimensions and connections according to the drawing supplied after order confirmation.



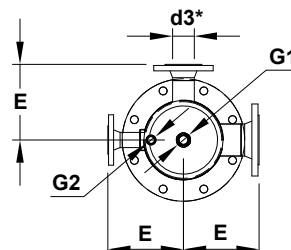
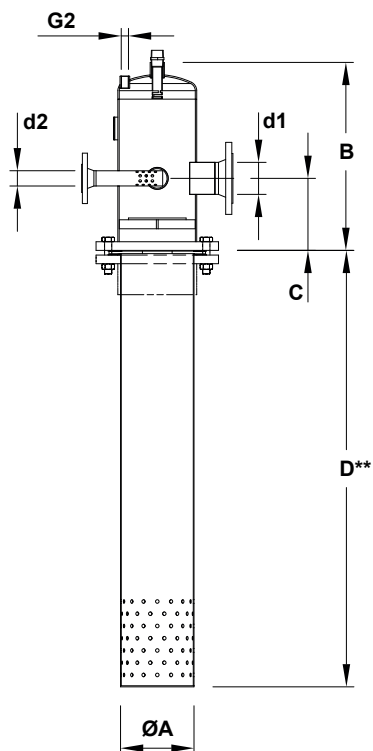
#### LIMITING CONDITIONS

PS – Maximum allowable pressure	0,5 bar
TS – Maximum allowable temperature	120 °C

Minimum operating temperature: -10 °C.

Design code: AD-Merkblatt.

Remark: Other conditions and CE marking on request.



**DIMENSIONS (mm)**

SIZE	ØA	B	C	D	d1	d2	d3 *	E **	G1	G2	WEIGHT (kg)
<b>FCD150</b>	155	484	175	**	DN 50	DN 25	DN 40	184	1"	1/2"	***
<b>FCD200</b>	205	522	200	**	DN 80	DN 32	DN 50	210	1"	1/2"	***
<b>FCD250</b>	255	557	220	**	DN 100	DN 50	DN 80	237	1"	1/2"	***
<b>FCD300</b>	300	617	250	**	DN 100/150	DN 65	DN 100	265	1"	1/2"	***
<b>FCD400</b>	400	680	290	**	DN 150	DN 80	DN 100	303	1"	1/2"	***

d1 – condensate return; d2 – cold make-up water; d3 - flash steam (option); G1 – spray nozzle; G2 – air vent or vacuum breaker.

\* Optional; \*\* Dimensions on request (standard; 950, 1200, 1600, 2100 mm); \*\*\* Weight to be confirmed.

**SELECTION TABLE**

SIZE	FCD150	FCD200	FCD250	FCD300	FCD400
<b>MAXIMUM STEAM GENERATION (kg/h)</b>	5000	10000	20000	30000	50000

Remark: Length of the immersion tube to be defined according to the vessel design.