Bulletin No. SBR 113

KEITH
ENGINEERING

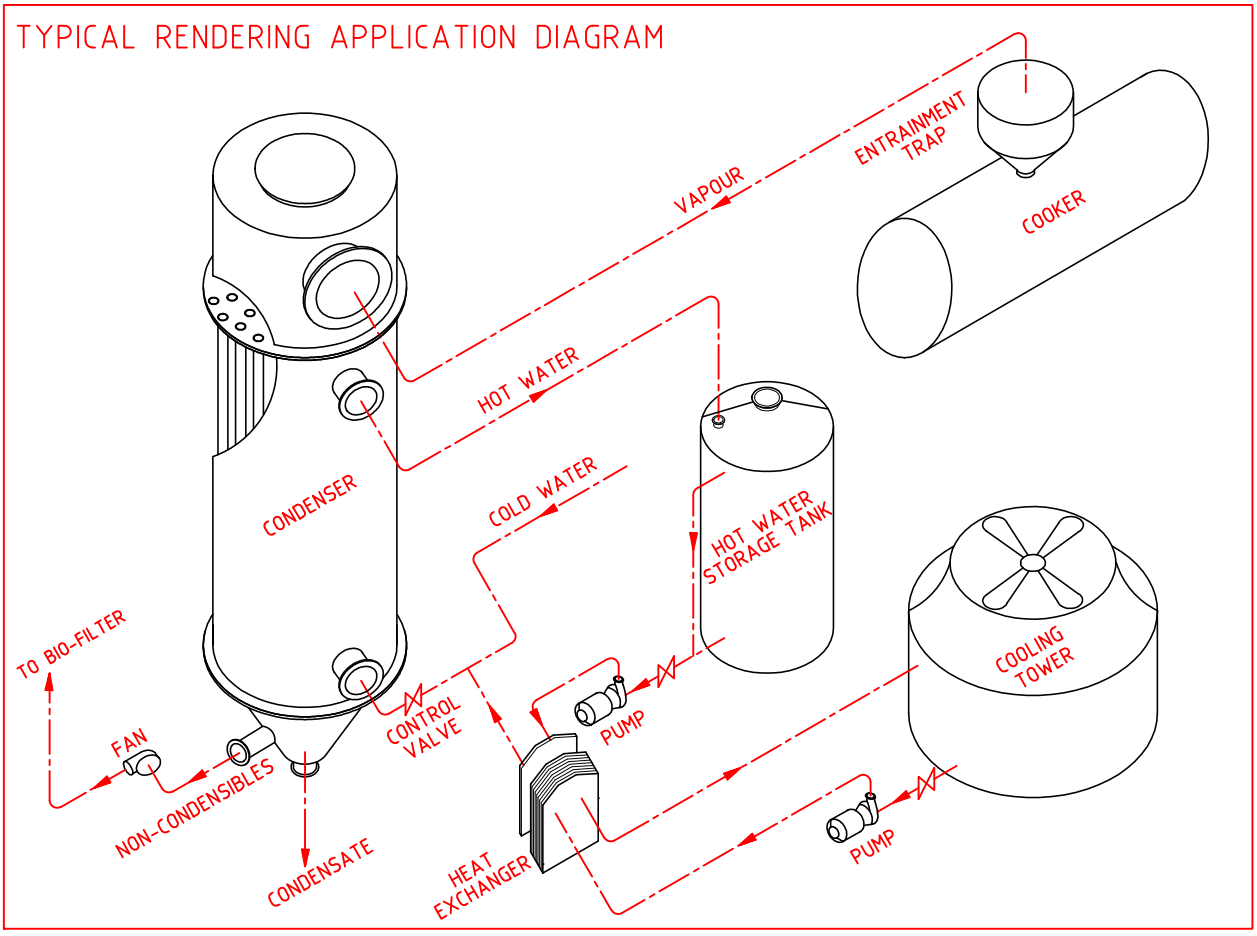
Design. Manufacture. Install.

Specialising in Rendering & Process Equipment

SHELL AND TUBE CONDENSER

FOR THE CONDENSING OF COOKING VAPOURS

TYPICAL RENDERING APPLICATION DIAGRAM



The Shell and Tube Condenser is used to condense vapours by indirect contact. Vapours enter via the top vapour collecting hood and pass down the inside of the tubes where the condensate is collected in a coned bottom and continuously discharged.

Cooling water enters near the bottom of the shell, circulates around the outside of the tubes and discharges as hot water near the top of the shell. The required outgoing water temperature is maintained by regulating the input of cold water through an automatic control valve, operated by a temperature sensor and controller. Non-condensible vapours are removed from the cone bottom.

The Condenser is NOT a pressure vessel and is limited to a maximum internal pressure of 100 kPa. Hot water discharge must be at a pressure less than 100 kPa and preferably at atmospheric pressure. A separate pumping system is necessary to raise the hot water pressure to the plant requirements.

Because of the indirect contact between water and vapours, the hot water produced may be used directly or as a process heating medium. If no use is available the hot water should pass to a cooling system for recycle.

DETAIL	VALUE	MODEL							
		468	338	210	170	158	128	92	44
HEAT EXCHANGE AREA	Sq. M	468	338	210	170	158	128	92	44
SHELL DIAMETER	mm	2000	1525	1220	1220	1220	1070	1120	914
OVERALL HEIGHT	M	9.25	8.5	8.5	8.5	8.5	8.5	8.5	4.67

Materials of construction are to suit application
Custom sizes are available to suit client requirements

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