



Condenser unit



Design

The vapours created during the cooking and drying process must be condensed before entering a water treatment plant.

The Lildal Condenser unit does the job in a compact designed unit giving high capacity with low maintenance costs and with minimum space requirements.

The complete unit consists of a Cyclone and an integrated unit consisting of an inlet piece to the Condenser, the Condenser itself and a Condensate tank. From top of the Condensate tank is the Non-condensable gases extracted by means of a Vacuum blower.

The Non-Condensable Gases can be eliminated in our Lildal Incinerator resulting in a nearby odour free plant.



Process

Input: Process vapours from continuous or batch process



LILDAL Condenser unit consisting of Cyclone, Condenser Condensate tank, Vacuum blower and Condensate pump



Output: Condensate

Cyclone

Our effective Cyclone is designed to remove larger particles from the process vapour. We design our Cookers and Driers in such a way that particles in the process vapour is kept to a minimum. But some particles will always remain in the vapour. And without our effective Cyclone would the Condenser block and before blocking would the capacity decrease considerably. But the Cyclone effectively removes the particles by means of an optimized vapour velocity decrease causing the larger particles to fall to the bottom of the conical piece. From here can they be removed and returned to the Raw material bin to avoid loss.

Condenser and Condensate tank

Our Condenser is designed to give large capacity in a compact design. This is done by using a compact pipe bundle placed in a close pattern. This together with the "Falling film"-principle allowing smaller particles to pass without blocking and the counter flow design with cooling water on the outside and vapour to be condensed on the inside of the pipes results in high efficiency. The Condensate tank placed directly below the Condenser effectively collects the condensate for further transport to a Water treatment plant by means of a Condensate pump which also is included in the delivery. The water level control in the Condensate tank is done with mechanical level switches for reliable and safe level control.

Distributor/ Agent

Design Features	Customer Benefits
Compact unit consisting of Cyclone, Condenser and Condensate tank	Low space requirements
Condensate plant units made in stainless steel	Because process vapour is aggressive does this mean increased lifetime
Cyclone in stainless steel optimized to separate particles in the process vapour	Ensures maximum Condenser capacity and low maintenance costs
The Cyclone comes with a safety valve on the inlet	Prevents damage of the condensate system if increased pressure should occur at vapour relief
The Condenser consists of a compact pipe bundle with vapours to be condensed on the inside and cooling water on the outside in counter flow	Large cooling area in a compact design and optimized capacity because of the counter flow design
"Falling film" principle in Condenser pipes	Blocking is minimized because small particles can pass free
Expansion bellow build into Condenser shell	Prevents thermal stress resulting in increased lifetime
Top and bottom flanges on Condenser are detachable	Easy access for cleaning, inspection and maintenance
Condensate tank is directly mounted on Condenser	Compact design resulting in low space requirements
The Condensate tank is mounted with mechanical level switches	Reliable and safe control of water level
In general is the unit equipped acc. to the loose flange principle	Easy interconnection and easy connection of external piping



Productinfo

Condenser unit, continued

Technical specifications

Dimensions

Standard sizes Cyclone:

ø300, ø400, ø500, ø600, ø800, ø1000, ø1200, ø1400, ø1600

Standard sizes Condenser [m²]:

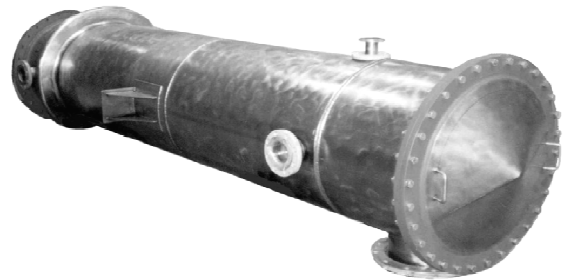
24, 37, 41, 51, 62, 75, 88, 103, 119, 135, 154, 173, 193, 215,

Standard sizes Condensate tank [Liter]:

1.000, 1.500, 2.000

Vacuum blower and Condensate pump will be designed specific plant in question

The combination of the componets above will be designed to the specific requirements of your plant - please ask us



Condenser manufacturing and final product

Configuration

Standard

Condensation plant components in stainless steel EN 1.4301 / E1

Frame in mild steel primed and painted in Lildal blue

Vacuum blower for Non-Condensable Gases

Condensate pump

Options

Cooling tower with Circulating pump

Frame in stainless steel

Frame in galvanized steel

Inspection platform with ladder

Certification

In general does the equipment from Lildal comply with applicable European standards



Lildal

Part of LM-Group

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