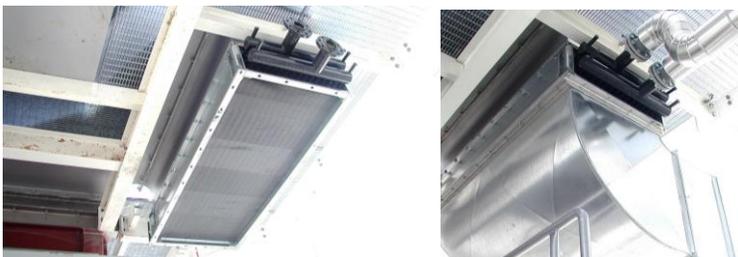


Process Gas Cooling

Featuring the Luehr Filter Gas Cooler

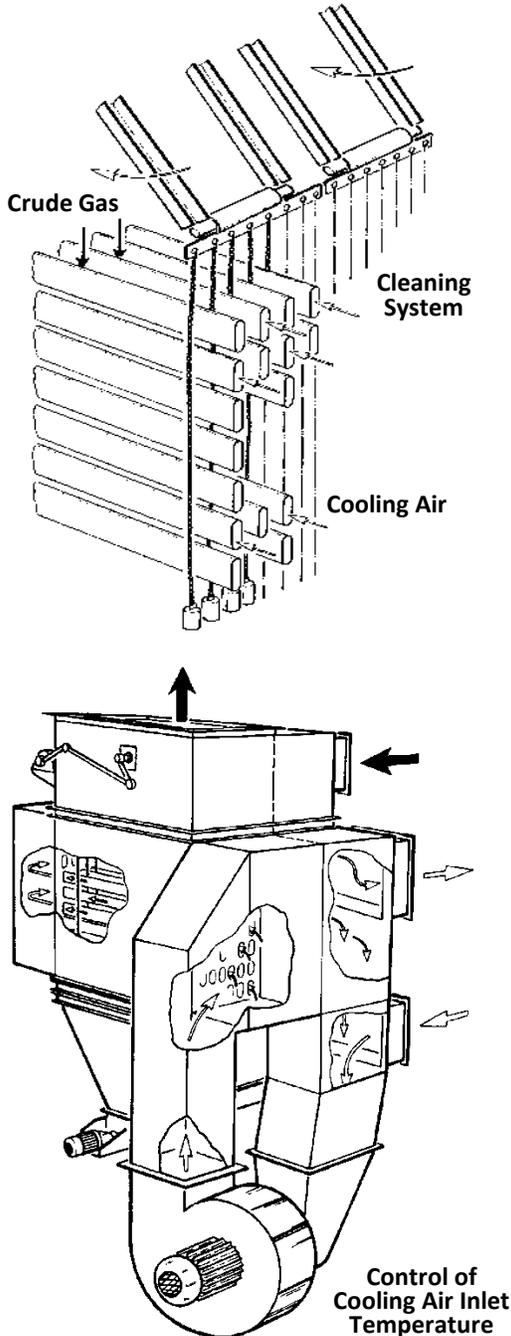
The Luehr Filter Process Gas Cooling Systems from Kuttner North America offer proven performance in dirty gas applications across numerous industries around the world. This robust technology, often combined with the Luehr Filter Air Pollution Control technology, offers a wide range of advantages for footprint, consistent cooling performance, and corrosion resistance together with an on-line cleaning system for the cooling tubes.



Featuring the patented Luehr Filter Gas Cooler, Kuttner's system provides:

- **A compact & modular design**—requiring less physical space than conventional Gas Coolers—with greater effective cooling surface area.
- These modular gas coolers can be configured with **multiple cooling passes through a single housing** which reduces the overall system size.
- **Clean cooling air passes through the inside of the cooling “flat” tubes.** This eliminates the tedious, 1 by 1, clean out for the interior of the tubes.
- **A continuous, on-line, mechanical cleaning system** is included to prevent the buildup of a thick dust layer on the exterior walls of the flat tubes.
- Preventing the dust buildup on the outside of the cooling tubes allows for **consistent and controllable cooling performance over long operating campaigns**, even in high dust processes or applications containing dust with strong adhesive properties
- A packaged **cooling air recirculation system preheats the cooling air** to avoid operation at temperatures approaching, or below, dew point.
- The preheated cooling air provides a strong **defense against cold-end corrosion of the cooling tubes** and allows for the substitution of less costly materials for the tube construction.
- Heat exchanger housing and tube design are such that **individual tubes can be exchanged** so that replacement of a complete tube bundle is not necessary
- **Re-use of cooling air is possible** for facility heating or generation of hot water.

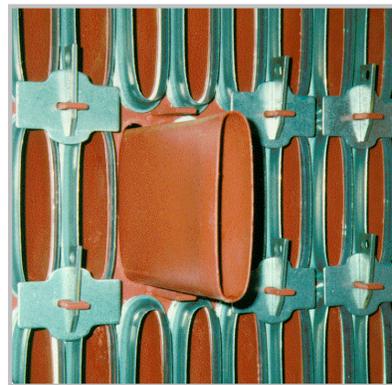
Process Gas Cooling



The exceptional Process Gas Cooling System from Kuttner North America offers unique, patented features for efficient, reliable performance.

Here's how it works...

- The clean, ambient air (or filtered process gas) is blown through the inside of the flat cooling tubes via the cooling air fans.
- If cooling air preheating is necessary (as a measure to prevent corrosion), one or more VFD controlled, centrifugal fans force the cooling air through the flat tubes. Once the cooling air has passed through the tubes, a portion of the now warm air is mixed with the fresh ambient air to control the inlet temperature of the cooling air at a level safely above dew point.
- If preheating of the cooling air is not required (i.e., exhaust gases are not aggressive) a series of axial cooling air fans are integrated into the housing doors of the cooler.
- For all gas coolers, a continuous, on-line cleaning system prevents formation of thick dust layers along the sides of the cooling air flat-tubes.
- The continuous, on-line cleaning system is comprised of a series of oscillating chain curtains that sweep the dust layer away from the flat walls of the cooling tubes.
- The dust that is dislodged from the surface of the cooling tubes falls into the dust hopper of the gas cooler, from where it is continuously removed by the dust discharge device (screw conveyor, rotary valve, or dump-valve).



Flat Tubes and Tube Sheet



View Across Cleaning Chains

Call (888) 918-4483 today for more information or a quote for your specific application.

Kuttner North America is your complete source for the planning, engineering, design, manufacture, installation, and support for state-of-the-art melt centers, gas cleaning systems, waste recovery systems, and environmental systems for many industries. Throughout our history, we have always placed a high emphasis on quality and customer care. Contact Kuttner North America for single-source engineering and complete parts, service, and technical support.