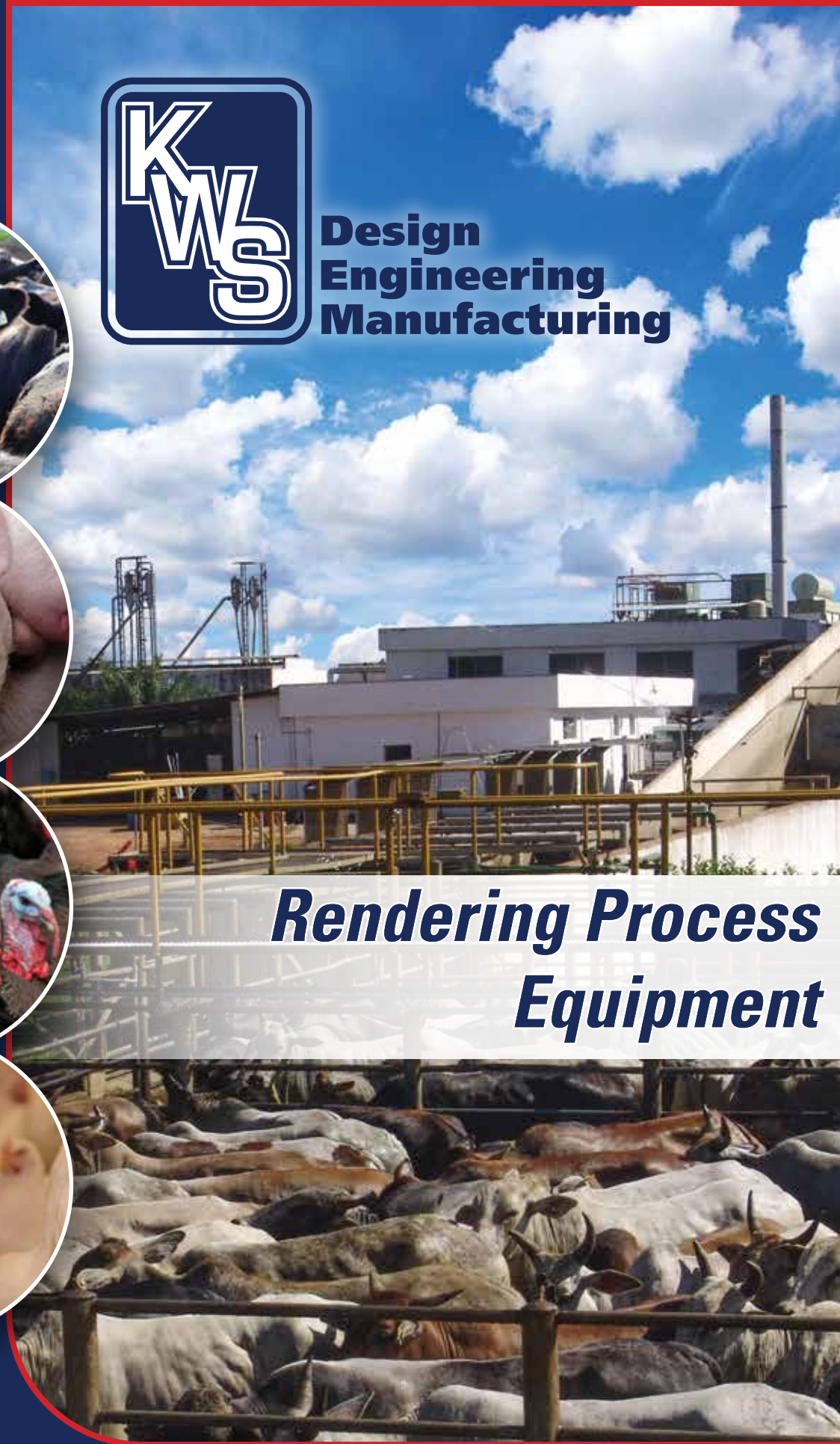




**Design
Engineering
Manufacturing**



***Rendering Process
Equipment***



Design Engineering Manufacturing

KWS Manufacturing Company, Ltd.

Rendering converts waste animal by-products into stable, value added materials as diverse as animal feed and biodiesel.

KWS builds high quality, engineered solutions to address the abrasive and corrosive environments found in the Rendering Industry.

KWS is an ISO 9001 certified manufacturer. Every component and assembly is manufactured in the USA by highly skilled craftsmen. All KWS welders are certified in accordance with American Welding Society (AWS) and American Society of Mechanical Engineers (ASME) codes.

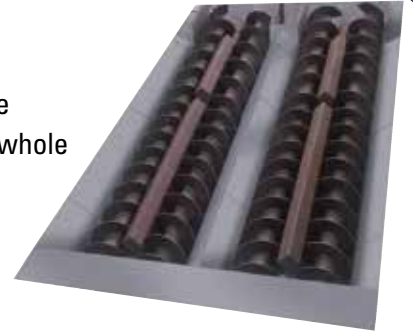
KWS provides Knowledge, Workmanship, and Solutions for even the most difficult Rendering applications.

Raw Material Bin & Feeder

Raw Material Bin & Feeder provides storage and metering of raw materials to Raw Material Grinders.

Typical design and construction –

- Key-hole style troughs for large pieces such as heads or even whole carcasses.
- Heavy-duty construction and high-torque drive units for handling upset conditions.



Metering Bin & Feeder

Metering Bin & Feeder provides storage and metering of ground raw material to Continuous Cookers.

Typical design and construction –

- Mass-flow screw design with variable-speed drives to provide consistent and accurate metering.
- Heavy-duty construction with special flared or U-trough design.



Discharge Conveyor

Discharge Conveyor conveys solids (Crax) from Drainer Conveyor and Settling Tank Conveyor to Screw Presses.

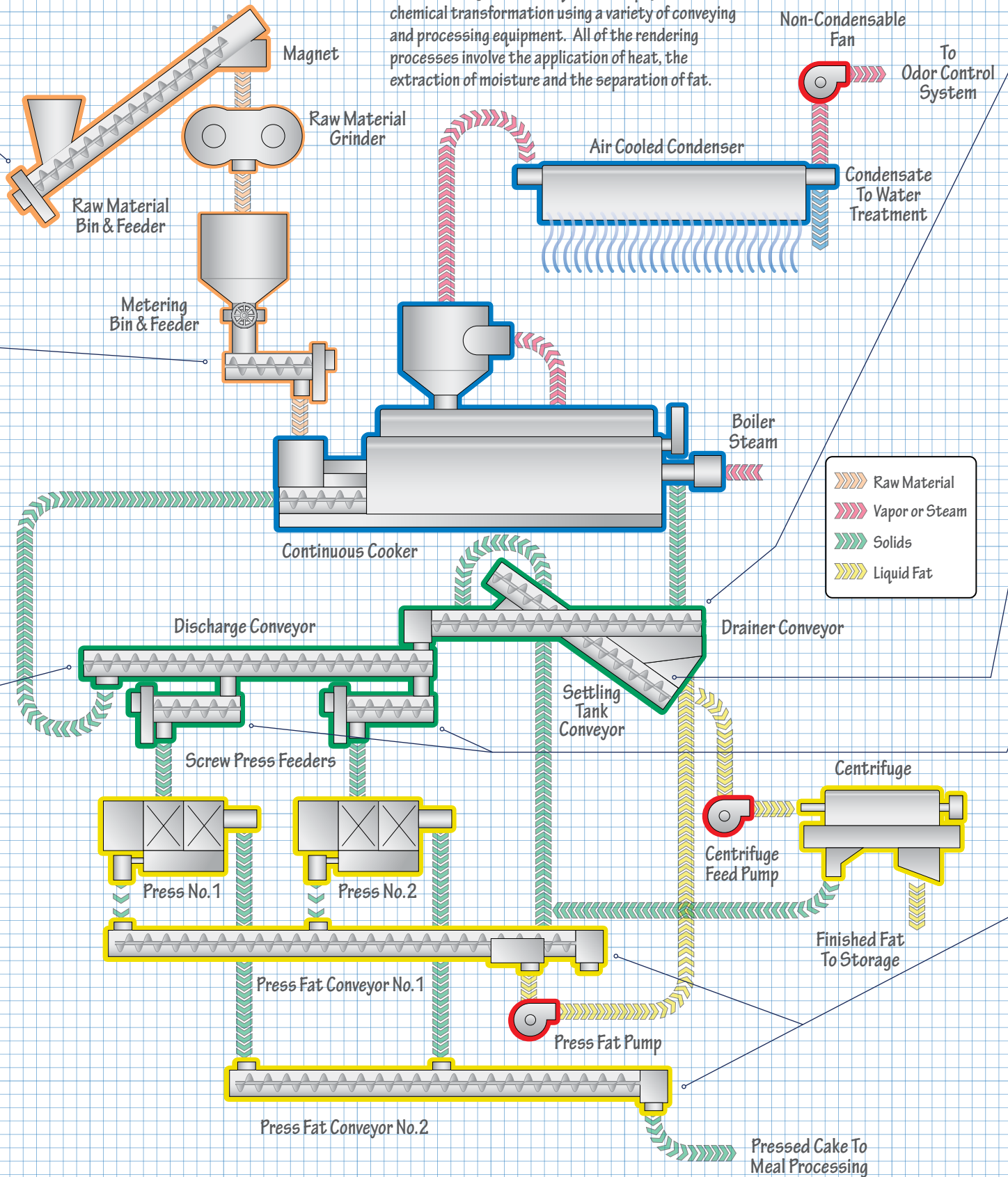
Typical design and construction –

- Heavy-duty screw design with close-coupled and clocked screws on wear liners.
- High-torque drive units for handling upset conditions.



Rendering Process Equipment

The Rendering Process requires both physical and chemical transformation using a variety of conveying and processing equipment. All of the rendering processes involve the application of heat, the extraction of moisture and the separation of fat.



Drainer Conveyor

Drainer Conveyor separates liquids from cooked product and conveys solids to Discharge Conveyor. The liquids drain through and are processed further.



Typical design and construction –

- Special perforated trough bottoms for efficient separation of solids and liquids.
- Close-tolerance screw with short pitch to scalp solids from perforated trough bottoms.

Settling Tank Conveyor

Settling Tank Conveyor further separates liquids from solid fines and conveys solid fines to Discharge Conveyor.



Typical design and construction –

- Special hopper tank to separate liquid fat from solid fines.
- Low speed screw for efficient extraction of solid fines from tank.

Screw Press Feeders

Screw Press Feeder meters solids (Crax) from Discharge Conveyor to Screw Presses.



Typical design and construction –

- Mass-flow screw design with variable-speed drives to provide consistent and accurate metering.
- Heavy-duty construction with special tubular or U-trough design.

Press Fat Conveyors

Press Fat Conveyors convey solids from Screw Presses to meal processing. Solids are now called pressed cake.



Typical design and construction –

- Special perforated trough bottom area for separating residual liquids from solids.
- Heavy-duty screw design with close-coupled and clocked screws on wear liners.

Conveying...



Design | Engineering | Manufacturing
Project Management | Site Service & Support

Stock Inventory

KWS keeps a large inventory of stock components for the Rendering Industry



Rendering Screws

- 9, 12, 14 and 16-Inch Diameter
- 3/8-Inch Thick Sectional Flights
- Continuously Welded on Both Sides
- Schedule 80 Pipe
- 3-Bolt Drilling on Both Ends



Rendering Troughs

- 9, 12, 14 and 16-Inch Diameter
- Formed Flange
- 3/16-Inch Thick
- 1/4-Inch Thick AR-235 Liners



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Engineering
Manufacturing**

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**ISO 9001
Certified**



MADE IN THE USA