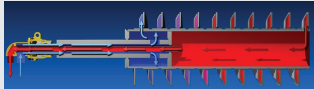




Features & Benefits



Hollow Flight

KWS Hollow Flight Screw Processor

KWS Hollow Flight Screw Processors are a new era of technology in thermal processing for bulk materials that need to be heated, cooled or maintained at a constant temperature. Thermal media enters the rotary union and flows through the hollow flights over the entire length of the screw before returning through the center pipe, syphon tube and out the rotary union again. The continuous rotation of the screw causes bulk materials to tumble, increasing the surface area contact with the thermal processor. As a result, heat transfer is very efficient. The screw rotates at a slow speed allowing accurate temperature control and creating uniform thermal processing while eliminating hot spots.

The construction of the KWS hollow flight processor consists of flat flights on the carrying side welded to a helicoid wrap with cupped flights that are welded to the existing flat lights and helicoid wrap. The helicoid wrap is continuous around the center pipe for the entire length of the screw. The hollow flights are not welded directly to the center pipe and operate as a free floating unit. The hollow flights and center pipe expand and contract independently, decreasing stress and increasing overall equipment life.

Features

Hollow Flights– Hollow flights provide a path for the thermal media to flow through the full length of the thermal processor, utilizing every available square inch of heat transfer area. The center pipe also provides surface area for heat transfer.

Drive Unit– The motor and gear reducer are located in line with the thermal processor. The low speed coupling isolates the gear reducer from the heat source. The in-line drive has a large torque capacity for the low speeds at which thermal processors operate.

Rotary Union – The rotary union is attached to the tail shaft of the screw processor, allowing the thermal media to enter and exit the screw and hollow flights while the entire assembly is rotating. Each rotary union is specifically designed for the application based on rotational speed as well as heat transfer media type, temperature and pressure.

Wide Variety of Construction Materials – KWS Hollow Flight Screw Processors are available in many different materials of construction. Standard industrial applications with operating temperatures below 700-degrees F are typically constructed from carbon steel. 304, 316, Inconel, or duplex stainless steels are available for high temperature, corrosive, or food-grade applications.

Benefits

Compact Design – KWS Hollow Flight Screw Processors provide more thermal processing per volume of equipment than any other technology on the market. The hollow flight design provides maximum surface area for heat transfer. Multiple hollow flight screws can be placed in parallel providing even more surface area for heat transfer within a relatively small equipment footprint.

Efficient Heat Transfer – KWS Hollow Flight Screw Processors transfer heat through direct conduction. The thermal media is in direct contact with the inside surfaces of the hollow flights while the material being heated or cooled is in direct contact with the outside surfaces of the hollow flights, providing an efficient path for heat transfer. Compared to most technologies which utilize indirect convection heat transfer, KWS Hollow Flight Screw Processors offer a tremendous increase in efficiency.



**Design
Engineering
Manufacturing**

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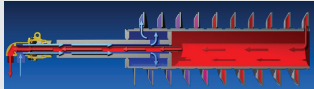
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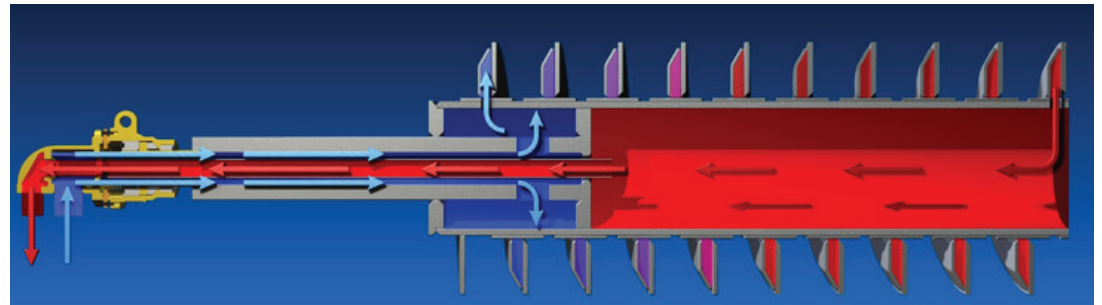
Features & Benefits



Hollow Flight

KWS Hollow Flight Screw Processor

Drive In-line with Screw – Inline helical gear reducers provide maximum torque output, lower cost, and a smaller footprint when compared to parallel shaft or right angle gear reducers. Since the gear reducer is directly coupled to the thermal processor, there are no chain and sprocket drives to maintain and lubricate.



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