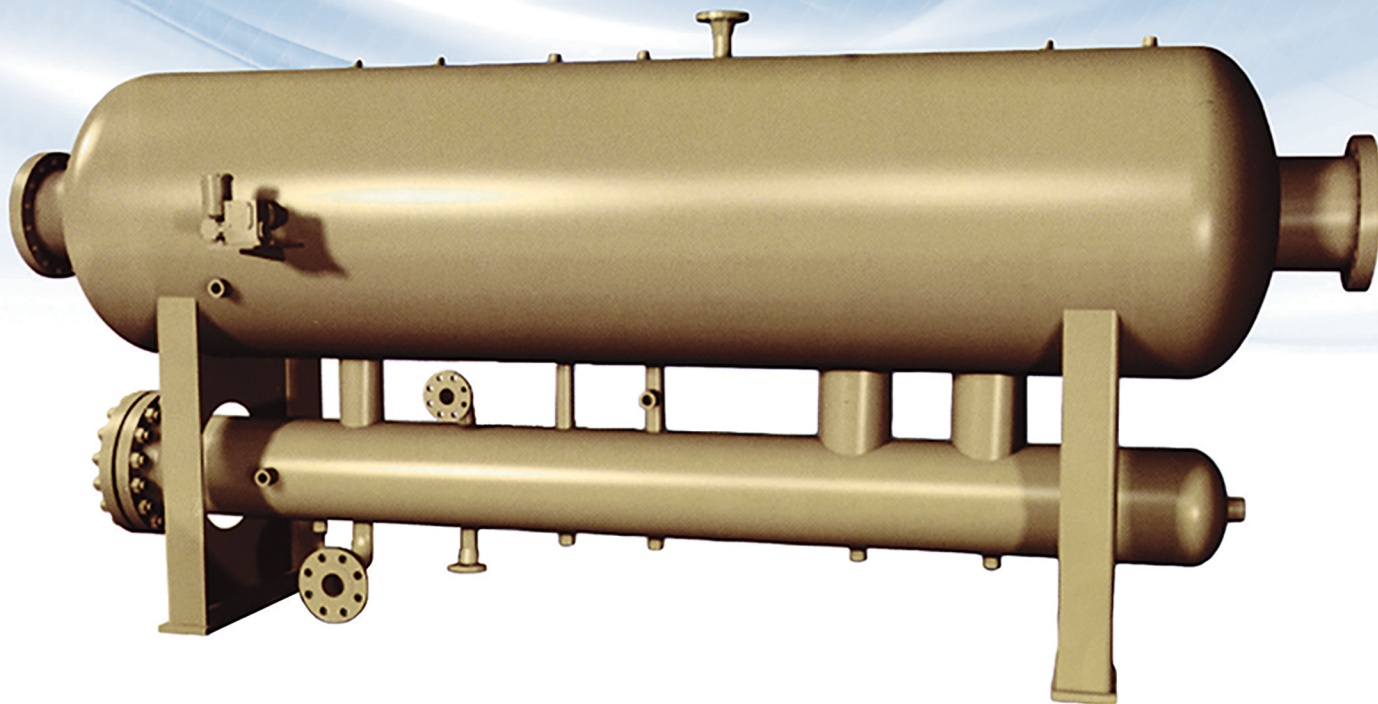


TRICON

3 STAGE SEPARATOR

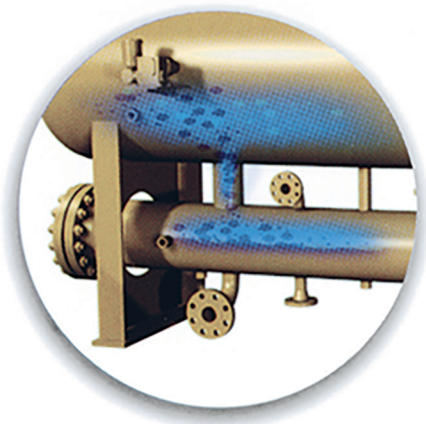
Solving the most difficult problems in removing liquids
and solids from gas streams



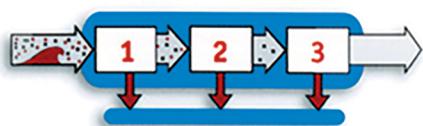
KINGTOOL TRICON SEPARATOR

KingTool Company has combined its state-of-the-art procedures for cleaning gas and coalescing liquid particles with special contactor process technology to create the Tricon separator. This new design elevates the separator industry to a new height by offering a system that is environmentally friendly, efficient to operate, safe to work with, and dependable over a wide range of operating requirements.

KingTool
COMPANY



Tricon Contactor Advantage The contactor section is driven by an energy efficient motor that slowly rotates the contactor. A reservoir of contactor liquid is maintained in the lower portion of the contactor section. With every rotation, the contactor is submerged into the liquid reservoir. This cleans the contactor and assures that it will continue to meet the desired efficiency. The co-mingled solids are then settled out by gravity and swept to a downcomer where they are gathered in an accumulator section. When the accumulator reaches a significant level of solids/sludge, the sludge can be extracted for disposal or reprocessing. If necessary, contactor fluid can be pumped back into the reservoir at operating pressure to maintain proper operating levels.



Removes iron sulfide and other “black powder” family members. Iron sulfide, or “black powder” as it is oftentimes called, is perhaps the most difficult of all pipeline contaminants to remove from a gas stream. It has the ability to go almost anywhere the gas goes. Its unique tendencies allow it to break up into smaller and smaller particles which can go right through the very best filter cartridges.

FeS

Tricon technology uses a low velocity, low shear design to minimize particle degradation. This approach uses special techniques allowing the black powder to be captured by the liquid in the contactor section while it is still intact. The self-cleaning feature insures that the contactor is always at optimum performance.

HOW THE TRICON WORKS:

FIRST STAGE Slug Interceptor

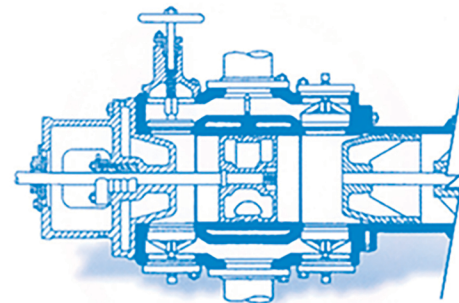
As wet dirty gas first enters the Tricon, the gas velocity is greatly reduced. This allows any and all free liquids, including slugs, to fall out of the gas stream. A downcomer drains the liquids into the sump.

SECOND STAGE Vane Mist Extractor

When the gas leaves the first chamber, the gas contains only entrained solids and liquids. This mixture enters the second stage where it encounters a properly sized vane-type mist extractor that removes any mist remaining in the gas.

Does not shear and re-entrain liquid particles.

The Tricon does not have any centrifugal or other such devices inside the unit to accelerate the liquid particles. This prevents the liquid particles from shearing into a fine mist, thus keeping the fine mist from being re-entrained into the gas stream.



Replacement of Internal Compressor Parts Can Cost Hundreds to Thousands of Dollars to Replace.

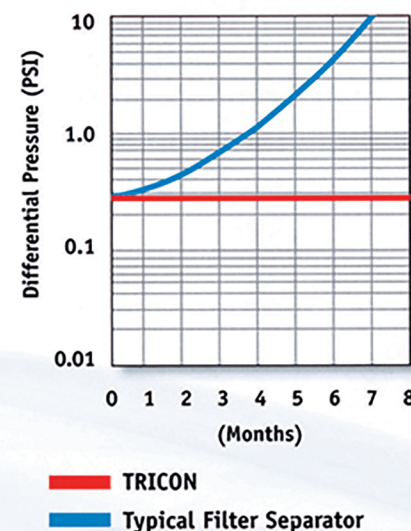
Savings in compression costs.

Both filter elements and mesh pads used in traditional separation equipment become plugged with solids due to continued use. This, of course, causes a pressure drop requiring compressors to work harder to maintain the desired discharge pressure. The result is an increase in fuel consumption and compressor maintenance that can add up to several thousand dollars each year!

There is not any downtime for maintenance.

Since the Tricon is self-cleaning, there will not be any downtime for maintenance. The contactor liquid can be replaced while the Tricon is in service. If the liquid in the contactor section becomes saturated with contaminants, it can be drained and replaced while the vessel is in operation. You do not have to shut-in the Tricon, nor by-pass it. There will not be any need for a second vessel on-site to clean the gas while the contactor fluid is being changed. It takes only a matter of minutes to drain the dirty contactor fluid and recharge the Tricon with clean contactor liquid. It is a one-person job!

Typical Compression Loss of Filter Element vs. TRICON



THIRD STAGE Liquid Contactor

The relatively dry gas then enters the contactor section. Here the gas comes into contact with a one-of-a-kind device that is unique to the gas industry. This contactor is a rotating, continuous self-cleaning component designed in such a way that the gas contaminants come into contact with a liquid which has an affinity for pipeline dust and condensates. Before leaving the vessel, the gas passes through a final polishing arrangement that assures the final product will meet the guaranteed gas quality.



Why bother with replacing coalescing filter elements when there is a better way?

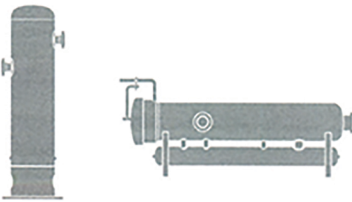
The KingTool Tricon does not have any filter elements or mesh pads. This design gives it a number of advantages over filter separators and mesh pad scrubbers. Some of these are less obvious than others. Consider the following list of advantages:

There are not any costly filter elements to replace. Depending on the size of a filter separator, it may easily cost hundreds, if not, several thousands of dollars for a clean set of elements.

Since the Tricon does not have any elements, forever-end the problem of cartridge disposal of spent and dirty cartridges with the Tricon.

Handles free liquids, including slugs. The sizing and internal configuration of the Tricon enables it to knock out liquid slugs as soon as they enter the vessel.

Does the job of two vessels. The need for a separator and a filter separator will not be required. The Tricon knocks out liquids and solid contaminants, doing the job of both vessels!



Economical Design Eliminates the need for Separator and Filter Separator — Takes Up Less Space.

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