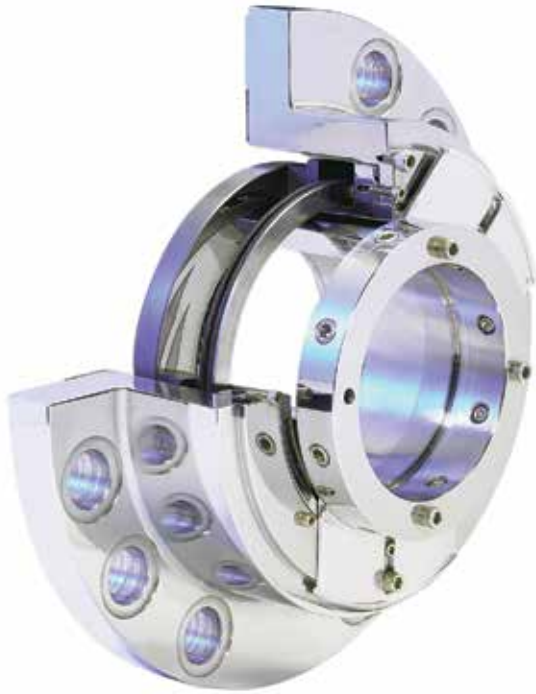


## NON-CONTACTING, STEAM TURBINE GAS SEAL



### DESIGN BENEFITS

- Dry running seals half steam waste-leakage problems
- Spiral groove: best steam sealing technology
- Virtually no maintenance

## PRODUCT DESCRIPTION

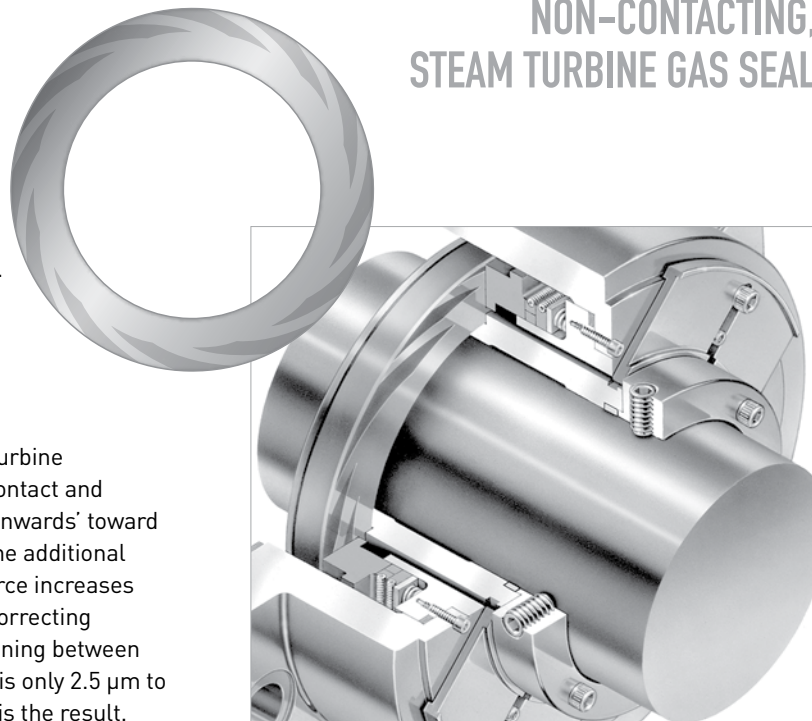
- John Crane Type 28ST steam seals are the most technologically advanced solution, keeping your equipment running with reduced downtime and assuring driver dependability. With Type 28ST seals, savings are immediate and significant, and payback is typically less than two years.

## NON-CONTACTING, STEAM TURBINE GAS SEAL

These dry running seals keep steam inside the turbine, eliminating the perennial problems of steam turbine drivers.

- Loss of valuable steam
- Leakage caused corrosion and rust damage
- Leakage induced bearing failure

Use of patented design of Type 28ST seals improves steam turbine performance. A partial spiral groove pattern prevents face contact and wear during dynamic operation, as well as pumping steam 'inwards' toward a non-grooved face that serves as a barrier to steam flow. The additional pressure created then acts to separate the two faces. The force increases as the faces tend to approach each other, producing a self-correcting mechanism that automatically maintains a small, stable opening between the faces that seals the process. The typical face separation is only 2.5 µm to 5 µm (0.0001" to 0.0002"). Barely discernible steam leakage is the result.



### Constant, recurring costs are eliminated

Excessive shaft steam leakage is the crux of steam turbine driver problems: bearing oil contamination, bearing failure, and oxidation and corrosion damage of other equipment. These are costly and wasteful problems that are experienced with all other types of traditional turbine seals – segmented carbon rings, labyrinths and rings with condenser/ejectors or condenser/eductors.

Type 28ST seals are the answer to steam turbine driver problems in refineries, chemical and petrochemical processing plants, ammonia plants, sugar mills, paper-making operations, textile and food-processing facilities. For new steam turbines and importantly for retrofits, most turbines can be equipped with little or no modification. Further, fitting a Type 28ST protects against additional maintenance and repair costs, enabling fast turnaround, providing trouble-free running and near care-free management, with virtually no wear.

**Together, we will work with you to keep your mission-critical operations up and running with support and guidance from our experienced team.**



North America	Europe	Latin America	Middle East & Africa	Asia Pacific
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If the products featured will be used in a potentially dangerous and/or hazardous process, your John Crane representative should be consulted prior to their selection and use. In the interest of continuous development, John Crane Companies reserve the right to alter designs and specifications without prior notice. It is dangerous to smoke while handling products made from PTFE. Old and new PTFE products must not be incinerated. ISO 9001 and ISO 14001 Certified, details available on request.