

Turcon® Skirted Piston

AUTOMATIC SKIRTED PISTON MACHINE



Purpose and main functions

The Trelleborg Sealing Solutions fully automated Skirted Piston Machine is designed for medium to high volume production. Incorporating two separate stations, mounting and calibration, the machine is able to mount the disc and calibrate the skirted piston to its final dimensions. The Skirted Piston Machine runs as an unmanned stand-alone unit, fitting perfectly into an automated manufacturing line. Both blank pistons and Turcon® discs can be refilled during running operation. In addition, the machine also has a double zone calibration unit controlled by the Programmable Logic Controller (PLC).

Construction

All primary movements are handled by state-of-the-art electro-servo actuators controlled by a PLC. All configurations are done via the large color touch panel. The standard supplied recipe system stores individual process settings for up to 99 different piston/skirt configurations and allows the operator to set and change parameters like:

- Calibration mode, speed and time
- Heating temperature
- Calibration temperature
- Numbers of mounting strokes
- Mounting time, speed and positions
- Mounting depth
- Automatic piston centering according to piston diameter
- Automatic Calibration of disc measurement controller
- Settings for disc dimension and tolerance
- All cylinders with adjustable service warnings

- Graphic overview of sequences in PLC for quick error detection
- Error type description
- English user interface (other languages optional)
- Passwords for different user levels

*The Skirted Piston Machine is CE-marked

Standard Skirted Piston Machine

Output:	Up to 700 pistons/hour
Piston Range:	Ø25 to Ø50 mm and 24 mm height
Manning:	0.5 operators (recommended)
Tool Change Over:	15 minutes
Disc Magazine Capacity:	400 pieces
Inlet Conveyor Capacity:	Approx. 400 ø32 pistons
Outlet Conveyor Capacity:	Approx. 400 ø32 pistons
Stand-alone time:	Approx. 30 min.
Thickness Check of Discs:	Yes
Doors:	Magnet switch on 5 doors for safety locking
PLC -controller:	Siemens Simatic
Operator Panel:	SIMATIC 10,4" TFT-display
Air Supply:	6 BAR
Power Supply:	3x400V 50Hz
Power Consumption:	Max 3 Kwh/h at full load
Noise Level:	78 dbA
Size (L, W, H) and Weight:	3510, 1000, 2260 mm, 950 kg

Our Goals

Trelleborg Sealing Solutions wants to be your top supplier for the design and manufacturing of Turcon® discs for skirted pistons!

Top Reasons to Choose Trelleborg Sealing Solutions

Design

The single- and double-lip solution offers a positive rebound sealing, giving an improved ride control and efficient noise suppression.

Material

The unique material composition and processing provides strength and toughness, enabling our skirted piston solutions to have high wear resistance and load ability.

Not just a disc

Trelleborg Sealing Solutions offers a complete integrated skirted piston solution including the initial groove and disc design, material selection, tooling, assembly processes and equipment design.

Trelleborg Sealing Solutions takes ownership of the entire process.

Optimal flow support of parts

We place the equipment at the end of the sinter metal production line or at the beginning of the shock assembly line.

Services/Capabilities

Design

Within a week, Trelleborg Sealing Solutions provides skirted piston solutions (groove and disc design, material selection, etc.) customized to the piston design and tube diameter of the customer.

Prototype service

Trelleborg Sealing Solutions offers to skirt prototypes with a lead-time of 3-4 weeks once customer piston samples (50-100 pcs) have been received.

For larger tests or production run-in

Trelleborg Sealing Solutions has the capabilities of skirting larger series (500-100.000 pistons p.a.)

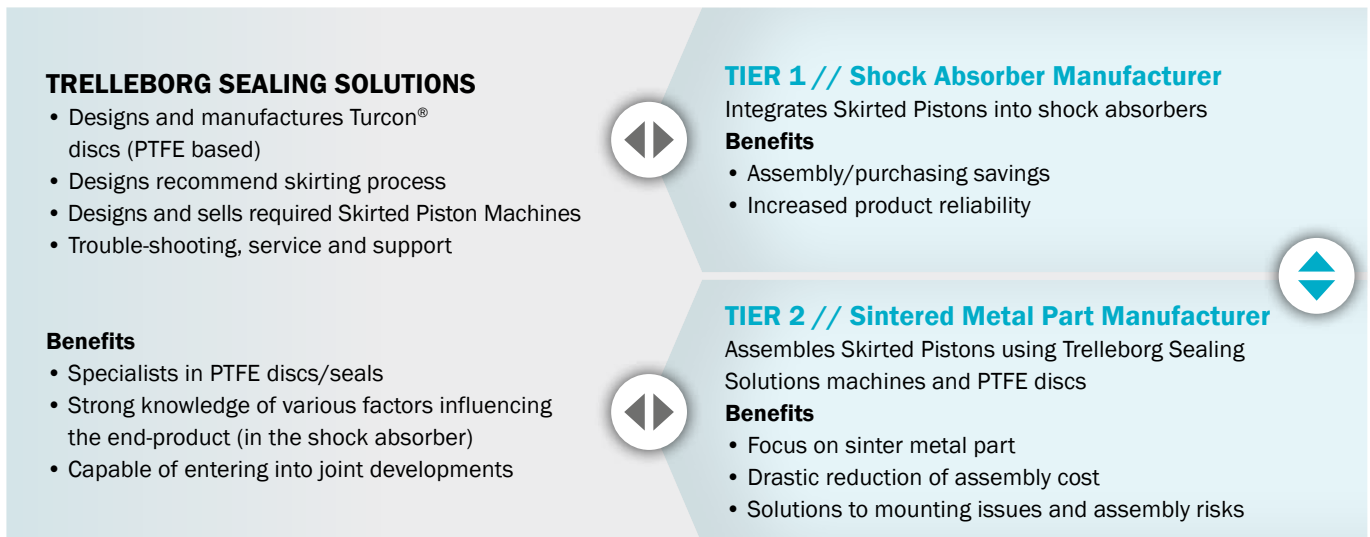
Local Presence, Global Reach

With a design center located in Helsingør, Denmark and a global network of manufacturing facilities, customers can take advantage of our global network while having contact to our local customer support centers. Choose Trelleborg Sealing Solutions to meet your local and global needs for Turcon® discs for skirted pistons!

Years of Experience

- 1987** Trelleborg Sealing Solutions designs the skirted piston as an alternative to the Combi Slydring®
- 2005** 16 Skirted Piston Machines delivered with over 50 million discs produced
- 2013** More than 36 machines placed on the market and more than 450 million discs produced

The Concept



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