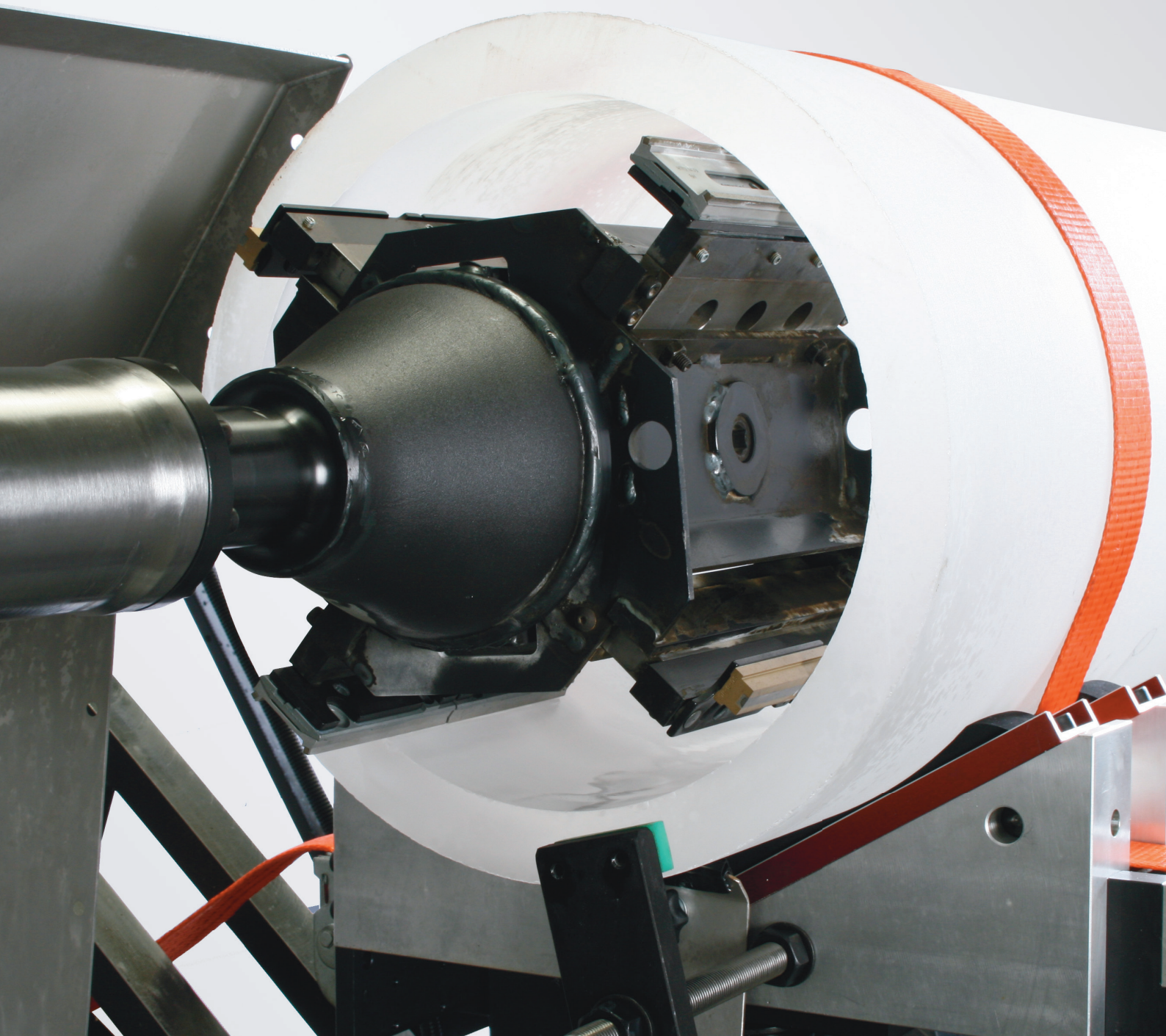




HTC-W SERIES

Production Tube Hone



Built for high volume production

Cylinder liners, hydraulic liners, extrusion cylinders, aircraft and compressor components

The Sunnen HTC-W series

The HTC-W series is the result of 30 years experience in tube hone design and manufacturing, combined with inputs from our customers around the globe. Most of the systems are custom-built and have enough power and sensibility to work from diameter 25 mm up to 1'000 mm. The stock removal rate is given through a 10 kW servo drive and a 4-step gearbox. This configuration ensures optimum power in the whole diameter range and a stock removal rate up to 1'000 cm³/h.

Together with the Sunnen tools, abrasives and coolant oils, all the HTC-W systems are working at their top performance and will meet everybody's production demands.

As an **all-inclusive supplier**, Sunnen takes full responsibility for the entire process.

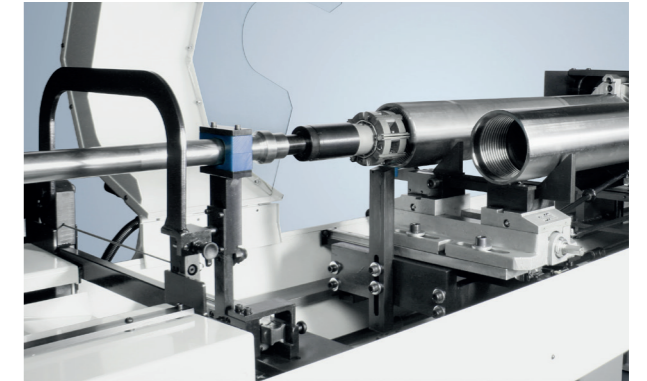


Intuitive touch control with clear, self-explanatory screen. It is the ideal system for optimized process control and fits in all production industries. No programming skills required. A new set-up can be made within 2 minutes, step-by-step. The system recommends the required tool, sets the spindle speed and all necessary cycle parameters. All parameters can be stored.

Easy to operate - The 100% control of the process ensures optimal stock removal and protection of the tool. The system indicates high and low spots and corrects the geometry without operator intervention. For best stock removal and optimum stone wear the tool expansion is controlled continuously and avoids overloading of the tooling for maximum protection.



The **rotation device** prevents axis misalignment and guarantees a better bore geometry.



Flexible fixture systems can be equipped according to tube shapes and customer needs. Special fixtures are our strength.



KEY FACTS

Flexible production honing

- Diameter up to 1'000 mm
- Stroke length up to 12'000 mm
- Stock removal rate up to 1'000 cm³/h
- Direct cross-grinding of rough parts / bores

PRECISION PERFORMANCE

Reliable accuracy and consistency

- Repeatable full and short stroke within 0.1 mm
- Automatic bore geometry correction
- Sizelock and stone wear compensation
- Dwell, oscillation feature and sparkout function
- 100% process control with tool overload protection

EASY OPERATION

Reduced cost per bore

- Short setup and changeover time
- Program memory for over 900 setups
- Variable stroke speed during cycle
- Easy to maintain

Technical specifications

CAPACITY

Stock removal power	up to 1'000 cm ³ /h
Inside diameter	25 - 1'000 mm
Outside diameter	60 - 400 mm (optional up to 1'400 mm)
Stroke length	2'000 / 3'000 / 4'000 / 6'000 / 8'000 / 10'000 / 12'000 mm

DIMENSIONS

Length	6'200 - 27'200 mm
Width	1'200 - 1'500 mm
Weight	2'600 - 7'800 kg

SPINDLE DRIVE SYSTEM

Motor (Servo)	10 kW
Speed range (Infinitely variable)	15 - 450 RPM

STROKE SYSTEM

Motor (Servo)	5.2 kW
Speed range (Infinitely variable)	0.1 - 40 m/min

TOOL FEED SYSTEM

Motor (Servo)	3.5 kW
Motion	Rotary tool feed system with overlap gear

COMPUTER CONTROL

IPC, Windows® EMBEDDED control system, screen size 15"

WORK HOLDING FIXTURE

Universal V-type chain fixture (30 - 400 mm)

SUPPLY REQUIREMENTS

Electrical system	400 - 460 VAC, 50/60 Hz
Pneumatics	6 bar

COOLANT SYSTEM

Capacity	300 l, 38 l/min (up to 4 m) 500 l, 50 l/min (6 to 12 m)
Magnetic separator	70 % cleaning rate

SAFETY FEATURES

CE / Front: Light curtain, Back/Sides: Fence with door (optional)

PAINT

Grey RAL 9002 / Black RAL 9005

OPTIONAL FEATURES

- Universal V-type chain fixture (350 – 600 mm)
- Universal scissor fixture (70 - 1'400 mm)
- Part rotation device (10 - 300 mm)
- Steady rest for 2 to 4 meter machines
- Full base frame coverage
- In-process gaging system for inside diameter 25 - 230 mm
- Filter unit for non ferrous application or very fine surface finish requirements
- Coolant oil chiller unit
- Air-condition for electrical enclosure
- Double stage tool option (roughing / finishing)
- Taper bore option

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