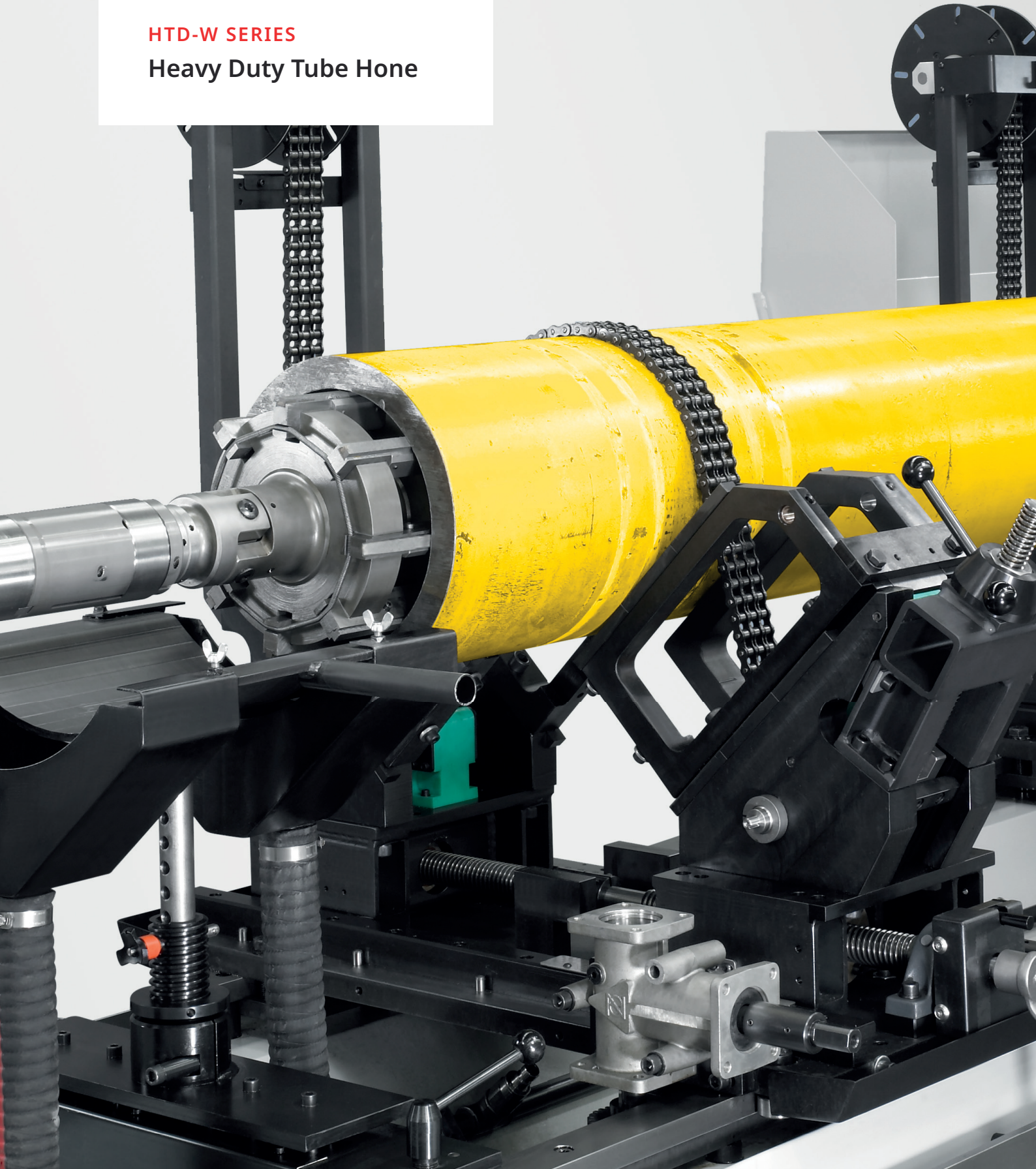




**HTD-W SERIES**

**Heavy Duty Tube Hone**



Built for demanding applications

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

## The Sunnen HTD-W series

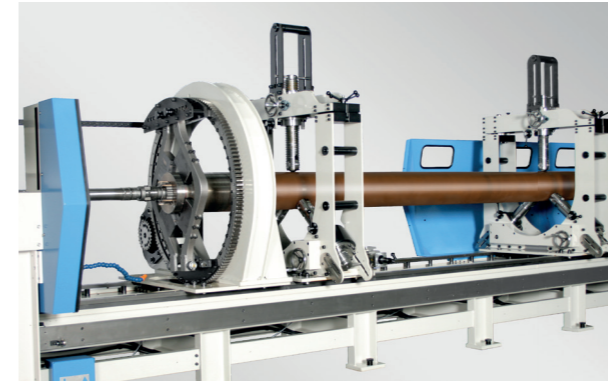
The series of the most successful tube hone system which runs at over 50 customers world-wide got a heavy duty extension. For highest demands, the leading tube hone system of Sunnen now provides a unique stock removal of 2'500 cm<sup>3</sup>/h and more. Two systems are available, the HTD-X300W and the HTD-X400W. Together with the state-of-the-art touch screen control and the enormous power, rough cold drawn tubes can be honed directly without expensive bore drilling. The combination of the HTD system with Sunnen tooling, abrasives and coolant oil, guarantees optimum performance and perfect results.

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

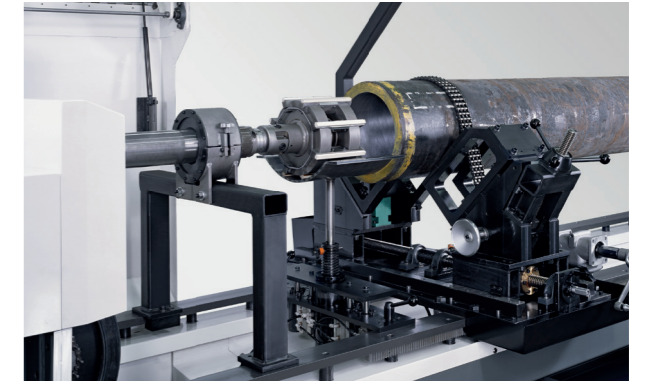


**Intuitive touch control** with clear, self-explanatory screen. It is the ideal system for optimized process control and fits in all production industries. No programming skills required. A new set-up can be made within 2 minutes, step-by-step. The system recommends the required tool, sets the spindle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

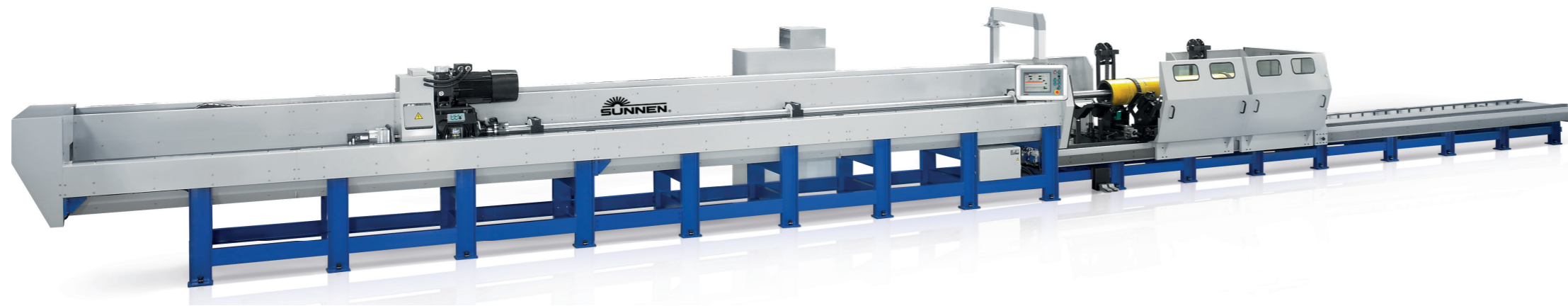
**Easy to operate** - The 100% control of the process ensures optimal stock removal and protection of the tool. The system indicates high and low spots and corrects the geometry without operator intervention. For best stock removal and optimum stone wear the tool expansion is controlled continuously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



The **rotation device** prevents axis misalignment and guarantees a better bore geometry. The **steady rests** (standard from 6 m) are easily to set up.



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



### KEY FACTS

#### Heavy duty honing

- Diameter up to 700 mm
- Bore length up to 14'000 mm
- Stock removal rate up to 2'500 cm<sup>3</sup>/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  
Inside diameter  
Outside diameter  
Bore length

## HTD-X300W

up to 2'000 cm<sup>3</sup>/h  
40 - 500 mm  
see chapter „WORK HOLDING FIXTURE“ below  
4'000 / 6'000 / 8'000 / 10'000 / 12'000 / 14'000 mm

## HTD-X400W

up to 2'500 cm<sup>3</sup>/h  
100 - 700 mm

## DIMENSIONS

Length 13'400 - 33'400 mm  
Width 1'700 mm  
Weight 8'000 - 17'000 kg

## SPINDLE DRIVE SYSTEM

Motor (AC)	22 kW	30 kW
Speed range (Infinitely variable)	10 - 280 RPM	10 - 160 RPM
Quick coupling system	CAMLOCK size no 6	CAMLOCK size no 11

## STROKE SYSTEM

Motor (Servo) / Gearbox	14 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

Option 1	Universal V-type chain fixture (40 - 600 mm, 6'000 kg)
Option 2	Universal V-type chain fixture (50 - 810 mm, 8'000 kg)
Option 3	Universal V-type chain fixture (60 - 1'000 mm, 8'000 kg)

## SUPPLY REQUIREMENTS

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

## COOLANT SYSTEM

Option 1	Coolant tank with chiller and magnetic separator (70% cleaning rate) Capacity of 600 l, 65 l/min
Option 2	Centrifugal filter unit with integrated oil chiller or customer solution

## SAFETY FEATURES

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

## PAINT

Silver Grey RAL 9006 / Dark Blue RAL 5002

## OPTIONAL FEATURES

Special fixtures on request  
Part rotation device (50 - 525 mm)  
In-process gaging system for inside diameter 25 - 230 mm  
Double stage tool option (roughing / finishing)  
Taper bore option

