



HTC-X121W SERIES
Small Diameter Tube Hone



Built for high precision small and long bores

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

The Sunnen HTC-X121W series

The HTC-X121W series is the result of over 30 years experience in tube hone design and manufacturing, combined with inputs from our customers around the globe. The systems are custombuilt and are the solution for an economical production for high precision small and long bores from diameter 4 mm up to 30 mm.

The system comes in two versions for bore length up to 945 mm or 1'945 mm. Whichever system you choose, they are working at their top performance and will meet everyone's production demands.

As an **all-inclusive supplier**, Sunnen takes full responsibility for the entire honing 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 **pneumatic three-jaw chuck** simplifies part changes and saves valuable time. A manual three-jaw chuck is also available for less productive applications.



The **in-process plug gauge** is reliable and independent of stone wear in holding tightest tolerances. The long-life carbide probe controls on reverse stroke with an accuracy of up to 0.002 mm.

KEY FACTS

Perfection for small and long bores

- Diameter range of 4 - 30 mm
- Stroke length up to 1'950 mm
- Stock removal rate up to 150 cm³/h

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 150 cm ³ /h
Inside diameter	4 - 30 mm
Outside diameter	up to 400 mm

DIMENSIONS

	HTC-1121W	HTC-2121W
Stroke length	945 mm	1'945 mm
Length	4'200 mm	6'200 mm
Width	1'200 mm	1'200 mm
Weight	2'100 kg	2'600 kg

SPINDLE DRIVE SYSTEM

Motor (AC)	1.5 kW
Speed range (Infinitely variable)	100 - 2'100 RPM

STROKE SYSTEM

Motor (Servo)	3.2 kW
Speed range (Infinitely variable)	0.1 - 40 m/min

TOOL FEED SYSTEM

Motor (Servo)	0.7 kW
Motion	Linear tool feed system

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
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

- 3-jaw manual or pneumatic chuck fixture (5 - 100 mm)
- Semi- or fully automatic modes with 3-jaw pneumatic chuck fixture
- Part rotation device (10 - 300 mm)
- Coolant pressure and park bush system
- In-process gaging system for inside diameter 4 - 30 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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