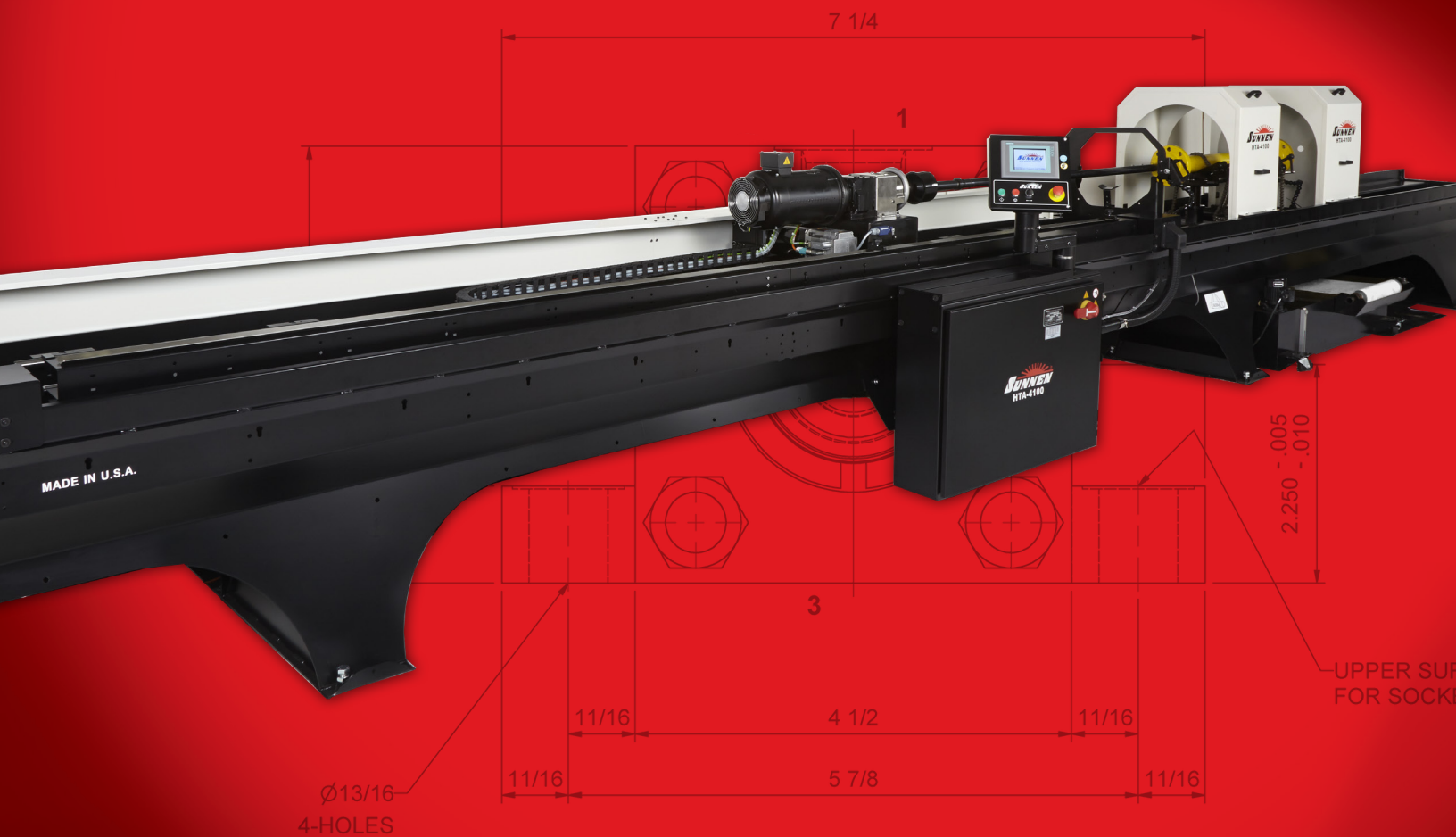




# HTA SERIES

## HORIZONTAL TUBE HONING SYSTEMS



# SUNNEN'S NEW HTA TUBE HONES PACK HIGH-END FE



Before now, to get horizontal tube honing capabilities, you had to invest in large systems that tied up valuable floor space – not to mention valuable capital. But with our HTA tube hone, Sunnen® introduces the first all-electric, lean design tube hone created specifically for hydraulic service facilities doing resurfacing and repair of actuators for construction, mining, farming, and forestry equipment. It is also ideally suited for other applications such as flow tube/meter run cleanup, extruder tube repair and other low stock removal applications.

The HTA is available in three base models: the HTA-2100 [2.1-meter stroke (6.9 ft)], the HTA-4100 [4.1-meter stroke (13.5 ft)] and the HTA-6100 [6.1 meter stroke (19.7 ft)]. These systems are designed for bore diameters from 2.5 – 21 inches (64 – 533 mm), and part weights to 8,000 pounds (1815 kg).



# ATURES INTO AN AFFORDABLE, FLEXIBLE SYSTEM



The HTA tube hone is ideal for resurfacing and repair work where light-duty stock removal up to 0.030 inches (0,76 mm) is needed to oversize deeply scored actuator bores. The spindle, powered by a 3 Hp (2,24 kW) AC gear motor, is controlled over a 20-300 rpm speed range. The servo stroking system has a speed range of 5 – 90 ft/min (1,52 – 27,4 m/min).

This affordable and versatile system boasts many features found on high-end machines, such as a PLC-control with touch-screen interface for setting all machine parameters, including stroke reversal, spindle/stroking speeds, and crosshatch angle calculation. The control features a load meter to determine areas of bore tightness, with the ability to dwell and short-stroke the tool in multiple areas to correct part geometry. Other advanced capabilities include choice of manual or automatic tool tensioning, set through the PLC.

In addition to base models, the machine may be ordered without the workpiece support section for very large parts such as turbine rotors and compressor blowers.

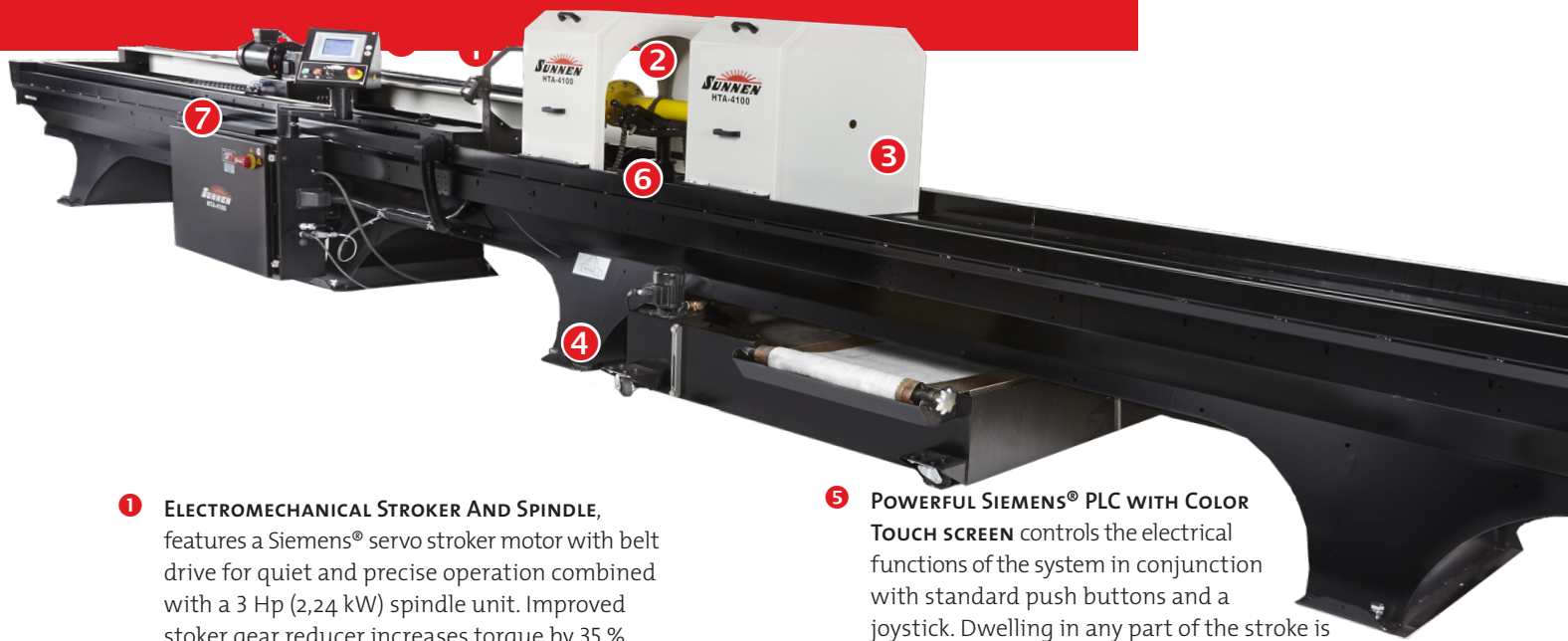
*Your Sunnen Technical Specialist will work with you to determine the best solution for your needs – it's all part of the added value you get with Sunnen. Plus, our worldwide sales and service team provides comprehensive support for the installation and operation of every system we make.*

*Whatever your need, we have the expertise and product range to create the right solution for you and the dedication to support you for the long run.*

SUNNEN AND THE SUNNEN LOGO ARE REGISTERED TRADEMARKS OF SUNNEN PRODUCTS COMPANY



## HIGH-END FEATURES GIVE THE HTA TUBE HONING SYSTEM GREAT VERSATILITY AND VALUE



**1 ELECTROMECHANICAL STROKER AND SPINDLE**, features a Siemens® servo stoker motor with belt drive for quiet and precise operation combined with a 3 Hp (2,24 kW) spindle unit. Improved stoker gear reducer increases torque by 35 %. Electric spindle motor cooling fan is standard.

**2 AUTO TENSIONING SYSTEM** includes a programmable auto tool feed that's standard equipment on the HTA. However, the abrasives can also be fed up manually, if desired.

**PAPER MEDIA COOLANT FILTRATION UNIT (NOT SHOWN)** has a 55 gallon (208 l) capacity, and comes standard with quick disconnects, casters for mobility, sight glass, and a manual paper bed filter to clean the oil. The unit is powered by a reliable, robust 15 gpm (55 lpm) centrifugal pump, is designed to be easy to maintain, and tucks neatly under the HTA's frame.

**3 STANDARD, NON-CE GUARDING** includes easily removable covers for each end of the honed part for safety and coolant splash retention. CE guarding available for EE countries consists of light curtain and wire mesh enclosure.

**4 THE INNOVATIVE MODULAR WORKPIECE SUPPORT** handles up to 8,000 lbs (3629 kg). Heavy one-piece welded construction work support frame is rigid and ensures no oil leakage.

**5 POWERFUL SIEMENS® PLC WITH COLOR TOUCH SCREEN** controls the electrical functions of the system in conjunction with standard push buttons and a joystick. Dwelling in any part of the stroke is handled via the touch screen.

**THE STROKER JOYSTICK** on the control panel allows the operator to move the honing tool over the entire stroke length to set the ends of the stroke during setup. The stroke control override allows short-stroking (2 in minimum) in any part of the bore to allow the clean-up of any tight spots.

**THE OPERATOR STATION** swivels for ease of setup and operation and can be located on either side of the machine.

**MULTIPLE LANGUAGES** (English, Spanish, German, French, Italian) selectable from touch screen. Metric/inch conversion also selectable from touch screen.

**LOAD METER** allows quick location of bore tight spots.

**6 STANDARD UNIVERSAL V-BLOCK WORK HOLDING SYSTEM** provides flexible, quick fixturing of a variety of work pieces.

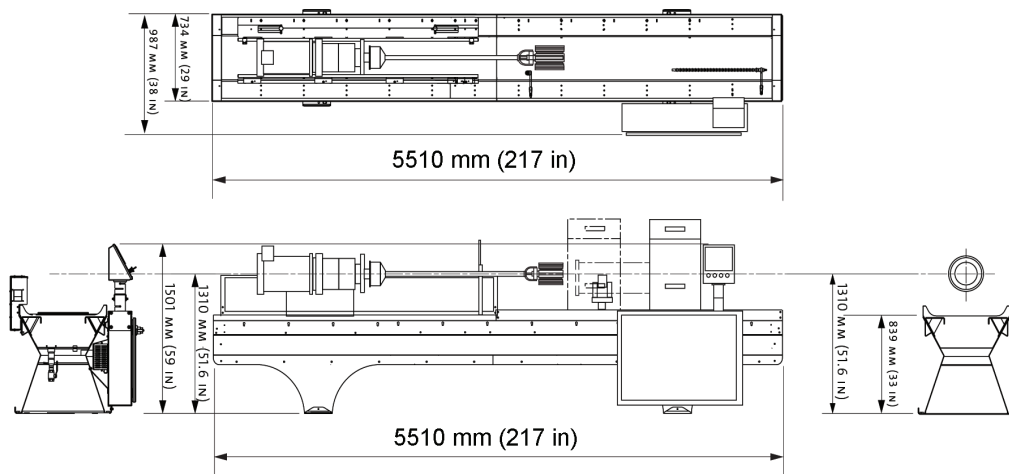
**7 INTEGRAL WORK TRAY** combines with enclosure and operator console.

### HTA FLOOR PLAN LAYOUT AND DIMENSIONS

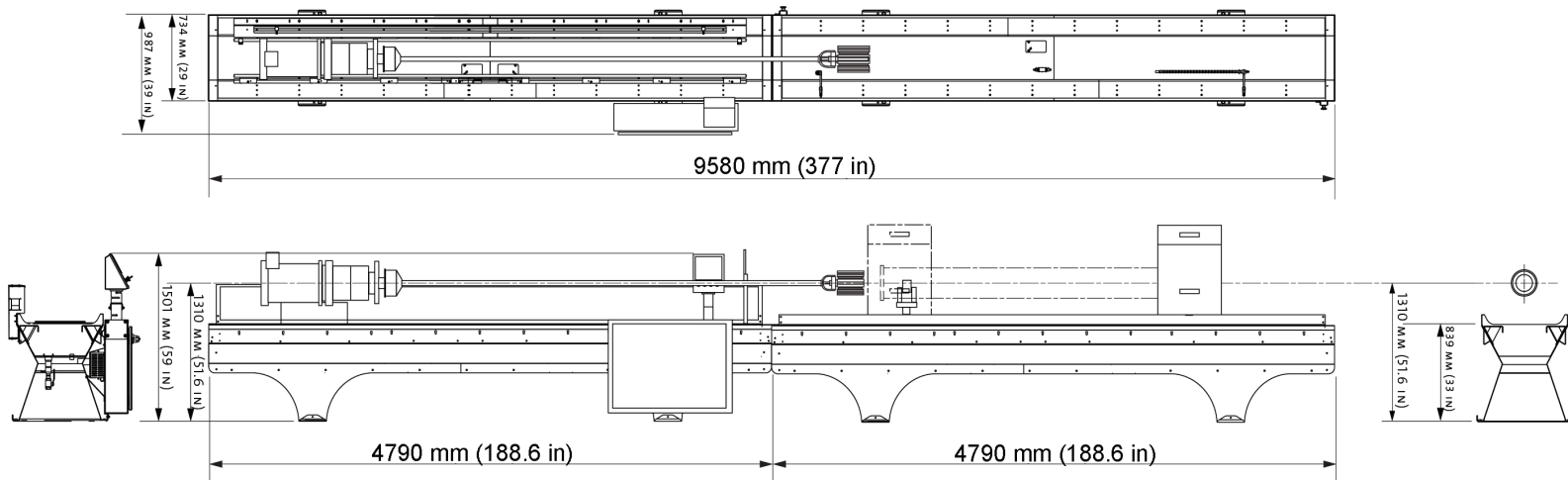
This versatile system packs a lot of performance into an efficient footprint that's significantly smaller than other horizontal tube honing systems.



HTA-2100

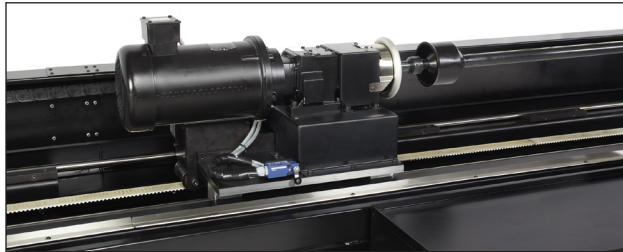


HTA-4100

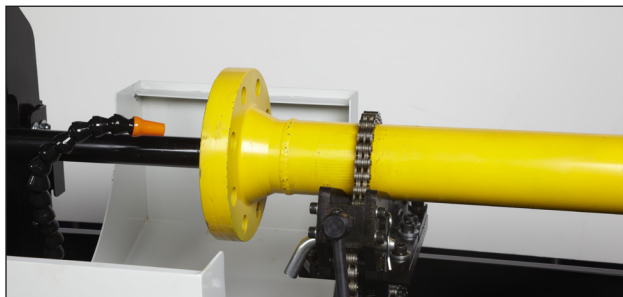


## THE HTA IN ACTION

Sunnen's new HTA tube hone is suited for a wide range of applications, including reconditioning of hydraulic cylinders, die casting shot tubes, plastics extruder barrels and gas flow meter tubes.



The HTA is an all-electric machine. And no hydraulics mean less noise, no leaks, better control, and more accuracy during bore reversals.



A flexible, modular work-holding system allows rapid setups of a wide variety of workpieces.

All machine features are controlled via the PLC controlled operator station, meaning no hydraulic valves to adjust or limit switches to move. The operator station swivels for ease of use. Color monitor is standard.



The 55-gallon capacity paper media coolant filtration unit is standard.

### **SPECIFICATIONS:**

#### **SPINDLE SPEED:**

20 – 300 RPM

#### **SPINDLE POWER:**

3 Hp (2,24 kW)

#### **STROKE:**

1.5 Hp (1,12 kW)

#### **STROKE SPEED RANGE:**

5 – 90 ft/min (1,52 – 2,74 m/min)

#### **I.D. DIAMETER RANGE:**

2.5 – 21 inches (64 – 533 mm)\*

*\*For diameter sizes below 2.5 inches (64mm), contact your Sunnen Field Engineer.*

#### **O.D. DIAMETER RANGE:**

24 in. (610 mm) max

#### **APPROXIMATE STOCK REMOVAL RATE:**

8in<sup>3</sup>/hr (130 cm<sup>3</sup>/hour)\*

*\*Steel material with conventional abrasives. Actual stock removal rates will vary depending upon application.*

#### **MAXIMUM PART LENGTH:**

HTA-2100 - 6.56 Ft. (2 M)

HTA-4100 - 13.12 Ft (4 M)

HTA-6100 - 19.7 ft (6 M)

#### **MAXIMUM PART WEIGHT:**

8,000 lbs (3630 kg)

#### **APPROXIMATE WEIGHT (INCLUDES COOLANT CART):**

HTA-2100 – 3,190 lbs (1448 kg)

HTA-4100 – 3,865 lbs (1750 kg)

HTA-6100 - 4,580 lbs (2077 kg)

#### **ELECTRICAL SYSTEM:**

400/460 V, 50/60 Hz, 3 phase, 15 amp

Designed in accordance with NEC/NFPA 79

#### **ADDITIONAL MODELS:**

- HTA-8100 (featuring 8.1 M stroke)
- HTA-10100 (featuring 10.1 M stroke)
- Power section of machine only for large diameter parts such as turbine rotors. Customer is responsible for part fixturing.

#### **OPTIONAL EQUIPMENT:**

- Additional work holding configurations
- CE guarding (light curtain/wire mesh enclosure)
- Transformer configurations to accommodate voltage/frequency combinations beyond 400 VAC 50 Hz / 460 VAC 60 Hz



# HTA SERIES TOOLING, ABRASIVES, HONING OILS AND COOLANTS

## TOOLING

The HTA is compatible with Sunnen portable tooling for precise, accurate and consistent bore sizing. It is specifically designed around the ANR-275 style tooling system with the ANR-160 hone head. Those shops already using ANR-style tooling can also use it with the HTA tube hone, including stone supports, master holders and abrasives.

**BORE DIAMETER RANGE:**  
2.5 – 21 inches (64 – 533 mm)\*

\*FOR DIAMETER SIZES BELOW 2.5 INCHES (64MM), CONTACT YOUR SUNNEN FIELD ENGINEER.



ANR-160A-style Portable Hone assembled with Stone Support, Single Length Master Holder Set, Stone Set and Drive Shank.

## SUNNEN-MADE ABRASIVES

From aluminum oxide to silicon carbide to diamond and CBN, Sunnen manufactures the industry's largest variety of mounted or un-mounted stick abrasives, bond types, grain sizes and stone configurations.

Before any stone is shipped, it is graded and qualified, maintaining the most exacting quality control standards in the industry to assure you of the most precise and consistent honing performance available.



## SUNNEN PREMIUM HONING OILS & COOLANTS

Sunnen's premium honing oils and coolants provide extreme lubricity for higher honing pressure and harder abrasives, delivering faster, lower cost-per-part and ultimately more profitable cutting rates.





A LEGACY OF EXCELLENCE SINCE 1924.

## SUNNEN WORLDWIDE



With world headquarters in St. Louis, Missouri, Sunnen is the largest fully integrated company in the world specializing in precision bore creation, sizing and finishing equipment. A Sunnen solution might include honing, lapping, skiving/roller burnishing or deep hole machining...or a combination of those processes.

Our 13 international subsidiaries and over 40 authorized distributors allow us to deliver top quality Sunnen machines, tools, service and training wherever they are needed around the globe.

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