

Extrude Hone

TEM • Thermal Energy Method

S250

Compact and flexible deburring system concentrates maximum economy into minimum machine space

The new Kennametal Extrude Hone™ S250 thermal deburring machine is designed to be flexible and compact and offers a host of options. Being a fully featured single-station unit, it is provided with all necessary functions to ensure a controlled deburring process and integrates easily into lean manufacturing environments.

The S250 thermal deburring machine, designed for a max closing pressure of 250 US tons (2,224 kN), is available with different chamber diameters for perfectly meeting individual customer requirements. With an optional “extended chamber”, the deburring unit provides the possibility of machining larger workpieces, thus providing high flexibility and economical operation.

The S250's compact design requires very little floor space, making it ideal for machining not only small batches but also mass-produced parts. This makes the S250 an extremely economical solution for manufacturers with a diverse range of parts and batch sizes. It also integrates easily into a linked production line.



Features and Benefits

- Robust**
 Combination of a frame designed to give long lasting fatigue strength and performance and a hydraulic ram cylinder providing reliable chamber closing.
- Modularly constructed enclosure**
 Low-noise hydraulic power unit reduces noise into the production environment and delivers increased safety for the machine operator.
- Water cooling of the 2-piece deburring chamber**
 Enables system to be used in continuous operation.
- Hydraulically operated gas dosing system**
 Achieves consistent quality with high-precision gas delivery system.
- Simplified loading and unloading operation**
 Automatically operated vertical sliding door and ergonomic loading device (patent pending).
- User-friendly HMI control with touch screen interface**
 Facilitates quick set ups and fine-tuning of parameters and convenient machine monitoring and operation and integral fault diagnostics.

Standard Chamber S250



Extended Chamber S250



Electrical Specifications

The control cabinet is integrated into the machine outside the sound reduction cabinet. The machine is Programmable Logic Controller (PLC) controlled. The operator interface terminal is a touch screen mounted on a pendant. Working cycle can either be sequenced manually in single step mode or started in automatic mode.

Electrical

Supply Voltage	380 VAC/3 PH/50 Hz	460 VAC/3 PH/60 Hz
Power	25 kVA	
Main Switch	50 A CB	

Controls

Standard PLCs	Siemens S7-300	Allen Bradley SLC 500
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Connection Requirements

Water

Pressure	50 psi (3,4 bar)
Flow (Machine & Hydraulics)	approx. 19 liters/min (5 GPM)
Cooling requirement	30,000 BTU/hr
Temperature	85° F max, 300 micron clean

Approximate Values for Gas Mixture Pressures

Material	Natural Gas
Steel	8–20 bar (116–290 psi)
Cast Iron	5–20 bar (73–290 psi)
Zinc	5–10 bar (73–145 psi)
Aluminum	5–10 bar (73–145 psi)
Brass	8–25 bar (116–363 psi)

Fuel gas can be natural gas or methane.

NOTE: Specifications and availability are subject to change without notice.

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Machine Specifications

Machine frame is heavy-duty welded and machined construction

	Standard Chamber	Extended Chamber
Dimensions (W x D x H)	1,196 x 2,960 x 2,860mm (47.1 x 116.5 x 112.6") (not including pendant control)	
Loading Height from Floor	1,065mm (42")	1,195mm (47")
Available Chambers (Ø x H)	Ø 200 x 150mm Ø 250 x 150mm	Ø 200 x 300mm Ø 250 x 300mm
Usable Area (Ø x H)	Ø 176 x 140mm Ø 226 x 140mm	Ø 176 x 292mm Ø 226 x 292mm
Max Chamber Pressure (with methane)	Ø 200mm = 24 bar (348 psi) Ø 250mm = 16 bar (232 psi)	
Part Loading (standard)	Manual loading device	
Cycle Time (at 60 Hz @ 100% stroke)	52 seconds	68 seconds + load/unload time (15 sec.)
Weight	approx. 5,800 kg (12,800 lbs)	
Noise Level	≤80 dBA	

Standard Equipment

- Exhaust system.
- Built-in oil containment tray.
- Machine diagnostics built into PLC.
- Modular sheet metal enclosure with easy access doors for maintenance.
- Touchscreen interface.
- Water-cooled chamber and closing plate.
- Modem.

Accessories/Options

- Hydraulically operated loading device.
- Roof with gas sniffer.
- Double shot.
- Interior work light.
- Hydrogen fuel gas.
- Natural gas compressor.
- Closed-Loop Cooling system.
- Wet scrubber.
- Stack light.
- Recessed lower closure.