P400

Reliable and high-production deburring system is available with a choice of chamber diameters to fit any application

The Kennametal Extrude Hone™ P400 thermal deburring machine is designed to be a reliable and flexible deburring system. The P400 features a chamber capacity exceeding both the “C” and “S” machine models.

The P400 thermal deburring machine, designed for a max closing pressure of 400 US tons (3558 kN), is available with five different chamber diameters — 8” (200mm), 10” (250mm), 12.6” (320mm), 16” (400mm), or 17.7” (450mm) — for perfectly meeting individual customer requirements.

Five process stations located on an indexing table allow the P400 to perform high production deburring, while a stainless steel upper combustion chamber surrounded by a continuous flow water cooling ring ensures reliable operation.

Features and Benefits

- **Robust, three-post machine frame**
  Engineered for durability and reliability with hydraulic ram 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 deburring chamber**
  Enables system to be used in continuous operation.

- **Hydraulically operated gas charging system**
  Achieves consistent quality with high-precision gas delivery system.

- **User-friendly HMI control with touch screen interface**
  Facilitates quick set ups and fine-tuning of parameters, convenient machine monitoring and operation, and integral fault diagnostics.
Electrical Specifications
The operator interface is located in the front of the machine, with the control cabinet mounted to the side. The machine control unit is a Programmable Logic Controller (PLC). Working cycle can either be sequenced manually in single step mode or started in automatic mode.

- **Electrical**
  - Supply Voltage: 460 VAC/3 PH/60 Hz or 380 VAC/3 PH/50 Hz
  - Control & Valve Voltage: 24 V DC
  - Power: 25 kVA
  - Main Switch: 50 amps

- **Controls**
  - Standard PLCs: Allen Bradley SLC 500/ Siemens S7-300

Connection Requirements

- **Water**
  - Machine: approx. 4 GPM (15 L/min)
  - Hydraulic unit: approx. 6 GPM (23 L/min)
  - Temperature: not to exceed 85 °F, .300 micron
  - Pressure: 50 psi/0.35 MPa

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: 8–15 bar (116–217 psi)

- **Loading Height from Floor**
  - P400: 42” (1070mm)
  - P400XL: 48” (1220mm)

Machine Specifications

- **Available Chambers**
  - Ø 8" (200mm) x 10" (250mm)
  - Ø 8" (200mm) x 12" (300mm)
  - Ø 10" (250mm) x 10" (250mm)
  - Ø 10" (250mm) x 12" (300mm)
  - Ø 12.6" (320mm) x 12" (300mm)
  - Ø 16" (400mm) x 12" (300mm)
  - Ø 16" (400mm) x 19.7" (500mm)
  - Ø 17.7" (450mm) x 19.7" (500mm)

- **Max Chamber Pressure**
  - 8" (200mm): 400 psi (27 bar)
  - 10" (250mm): 300 psi (20 bar)
  - 12.6" (320mm): 212 psi (14 bar)
  - 16" (400mm): 145 psi (10 bar)

- **Part Loading**
  - Manual loading, 5 stations/
  - 450mm chamber 2 stations

- **Cycle Time**
  - 60–90 seconds

- **Weight**
  - approx. 26,000 lbs (11.800 kg)

Standard Equipment

- Exhaust system.
- Remote gas charge system adjustment.
- Machine diagnostics built into PLC.
- Touch screen interface with pendant.
- Water-cooled chamber.
- Redundant ignition detection system.

Accessories/Options

- Natural gas compressor.
- Closed-Loop Cooling system.
- Provision for automation.
- Hydrogen fuel gas.
- Wet scrubber.
- Double shot.
- Recessed lower closure.
- Automated seal cleaner.

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

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