PRODUCT DATA SHEET

TEM
Thermal Deburring

T250

Rapid and cost-effective deburring

The T250 thermal deburring machines provide fast and reliable solution for removing all internal and external burrs simultaneously in a single operation. They are designed to accommodate medium- to large- production volumes, as well as handle a variety of difficult to deburr workpieces.

Available in multiple chamber sizes with maximum operating pressure of 23 bar and cycle time from 30 to 60 seconds.

FEATURES and BENEFITS

+ **100 % deburring - cleanliness**
  Consistent, repeatable deburring of internal hard to reach intersected / cross-sectional holes and external contours of components.

+ **Precise Gas metering via mass flow control**
  Mass flow control devices are used to accurately regulate the gas mixture to deliver the right pressure in the chamber.

+ **Hydraulically secured closure plates**
  The deburring chamber is hermetically sealed off, eliminating contamination concerns and guaranteeing production safety.

+ **User-friendly and expandable Programmable Logic Controller (PLC) / HMI**
  Software facilitates quick parameter set-up; convenient machine monitoring with integral fault diagnostics.

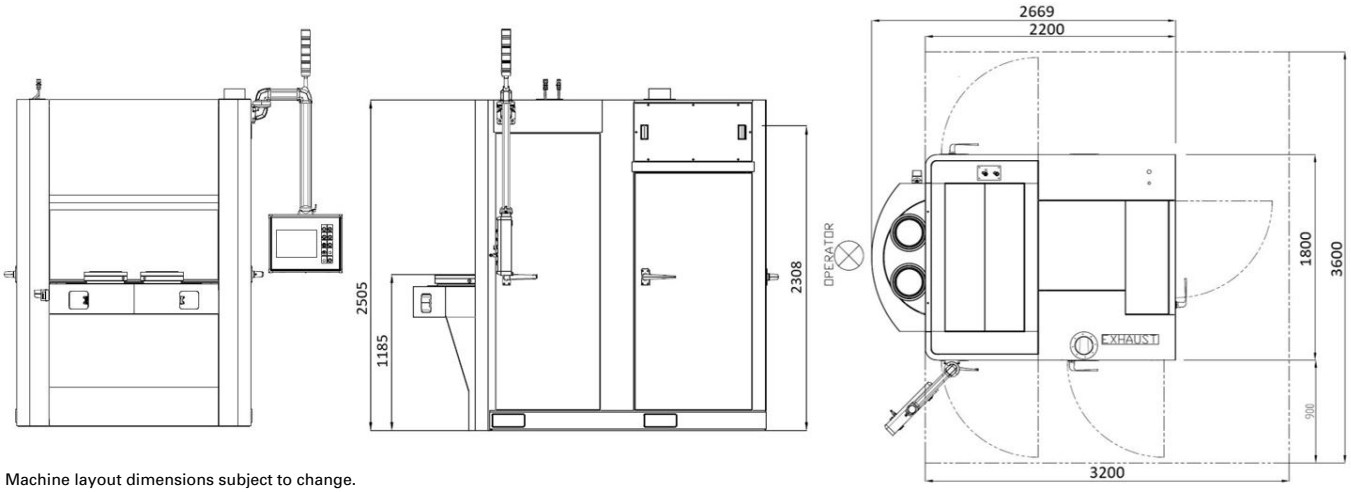
+ **Integrated noise suppression enclosure**
  The enclosure prevents noise emissions into the production environment and ensures safety for the machine operator.

+ **Productivity**
  Significant improvement in the productivity of the overall process of TEM in combination with post-washing.

EXTRUDE HONE®

TECHNICAL INFORMATION

T250



Machine layout dimensions subject to change.

ELECTRICAL SPECIFICATIONS

- Main control cabinet integrated into the noise reduction enclosure.
- 12" touchscreen HMI
- Manual or automatic mode of operation

Power	
Voltage	400 VAC/; 3 P/N/PE/50 Hz *Other voltages available on request
Controls	
PLC	Siemens S7-1500 (Fail Safe PLC)* *Other controls are available as option.
HMI	Siemens Comfort Panel 12" touch screen**

** Optional process HMI display and interface to master computer are available.

CONNECTION REQUIREMENTS

	Water	**Pneumatics**	**Oxygene**	**Methane**
Port	G 1/2"	G 1/2"	G 1/2"	G 1/2"
Pressure	min 3 bar	min 5 bar	min 25 bar	min 25 bar

MACHINE SPECIFICATIONS

- Two-post-portal machine frame construction.
- Clamping forces up to 1.8 MN
- Indexing table equipped with up to five closure plates.

Noise Level	< 70 dB(A)
Weight	T250: approx. 10.000 kg
Cycle Time (single ignition)	30 - 60 seconds

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

MACHINE CONFIGURATION

	Chamber size (ØxH)	**Chamber Pressure (bar)**
T250	250 x 150 / 300 200 x 150 / 300 150 x 150	14 19 23

VALUES FOR GAS MIXTURE PRESSURE

Material	**Natural Gas**
Steel	8-20 bar
Cast Iron	5-20 bar
Zinc	5-10 bar
Aluminium	5-10 bar
Brass Fuel can be natural gas / methane.	8-20 bar

SAFETY

- Exhaust fan with vacuum sensor
- Gas detection system
- Mixing valve tester
- Probing station with integrated seal cleaner

ACCESSORIES/OPTIONS

- Multiple chamber options – diameter and height
- Gas compressor
- Closed loop cooling system
- Full automation

CE

All machines in this series comply with the applicable EU Directives governing machine safety and bear the CE mark. They also comply with accident prevention and the VDE and VDI regulations, as well as the requirements concerning electromagnetic compatibility.

EXTRUDE HONE®

PRODUCT DATA SHEET

TEM
Thermal Deburring

T350 – T450

Rapid and cost-effective deburring

The T350 and T450 thermal deburring machines provide fast and reliable solution for removing all internal and external burrs simultaneously in a single operation. They are designed to accommodate medium- to large- production volumes, as well as handle a variety of difficult to deburr workpieces.

Available in multiple chamber sizes with maximum operating pressure of 23bar and shortest cycle time of 55 seconds.

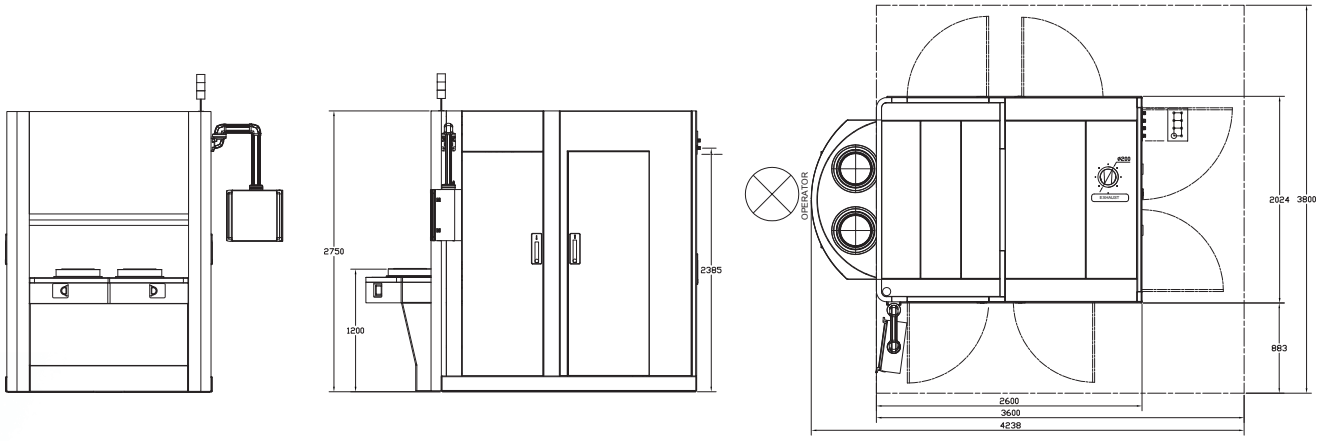
FEATURES and BENEFITS

+ **100 % deburring - cleanliness**
  Consistent, repeatable deburring of internal hard to reach intersected / cross-sectional holes and external contours of components.
+ **Precise Gas metering via mass flow control**
  Mass flow control devices are used to accurately regulate the gas mixture to deliver the right pressure in the chamber.
+ **Hydraulically secured closure plates**
  The deburring chamber is hermetically sealed off, eliminating contamination concerns and guaranteeing production safety.
+ **User-friendly and expandable Programmable Logic Controller (PLC) / HMI**
  Software facilitates quick parameter set-up; convenient machine monitoring with integral fault diagnostics.
+ **Integrated noise suppression enclosure**
  The enclosure prevents noise emissions into the production environment and ensures safety for the machine operator.
+ **Productivity**
  Significant improvement in the productivity of the overall process of TEM in combination with post-washing.

EXTRUDE HONE®

TECHNICAL INFORMATION

TEM T350 – T450



ELECTRICAL SPECIFICATIONS

- Main control cabinet integrated into the noise reduction enclosure.
- 15" touchscreen HMI mounted on a swing arm
- Manual or automatic mode of operation

Power	
Voltage	400 VAC/; 3 P/N/PE/50 Hz *Other voltages available on request
Controls	
PLC	Siemens S7-1500 (Fail Safe PLC)* *Other controls are available as option.
HMI	Siemens Comfort Panel 15" touch screen**

** Optional process HMI display and interface to master computer are available.

CONNECTION REQUIREMENTS

	Water	**Pneumatics**	**Oxygene**	**Methane**
Port	G 1/2"	G 1/2"	G 1/2"	G 1/2"
Pressure	min 3 bar	min 5 bar	min 25 bar	min 25 bar

MACHINE SPECIFICATIONS

- Three-post-portal machine frame construction.
- Clamping forces up to 3.5 MN (T350), / 4.5 MN (T450).
- Indexing table equipped with up to five closure plates.

Noise level	< 70 dB(A)
Weight	T350: approx. 10.000 kg T450: approx. 12.000 kg
Cycle Time (single ignition)	55-70 seconds

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

MACHINE CONFIGURATIONS

	Chamber size (ØxH)*	**Chamber Pressure (bar)**
T350	250 x 300	23
	250 x 400	23
	320 x 300	16
	320 x 400	16
	400 x 400	10
T450	320 x 400	20
	400 x 400	14
	450 x 400	10
	400 x 500**	14

*More sizes available on request **Extended version for chamber height >450mm

VALUES FOR GAS MIXTURE PRESSURE

Material	**Natural Gas**
Steel	8–20 bar
Cast Iron	5–20 bar
Zinc	5–10 bar
Aluminum	5–10 bar
Brass	8–20 bar

Fuel can be natural gas / methane.

SAFETY

Exhaust fan with vacuum sensor
Gas detection system
Mixing valve tester
Probing station with integrated seal cleaner

ACCESSORIES/OPTIONS

Multiple chamber options – diameter and height
Gas compressor
Closed loop cooling system
Full automation

CE

All machines in this series comply with the applicable EU Directives governing machine safety and bear the CE mark. They also comply with accident prevention and the VDE and VDI regulations, as well as the requirements concerning electromagnetic compatibility.