

ECM • Electrochemical Machining

ECLINE™

Individually configurable ECM system for improved efficiency in high-volume production

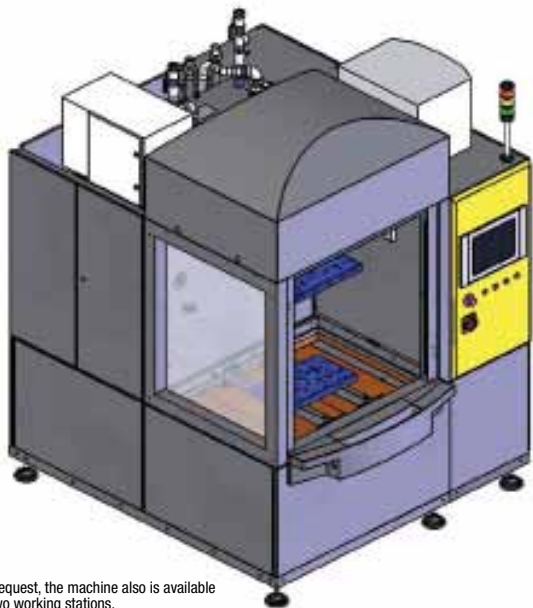
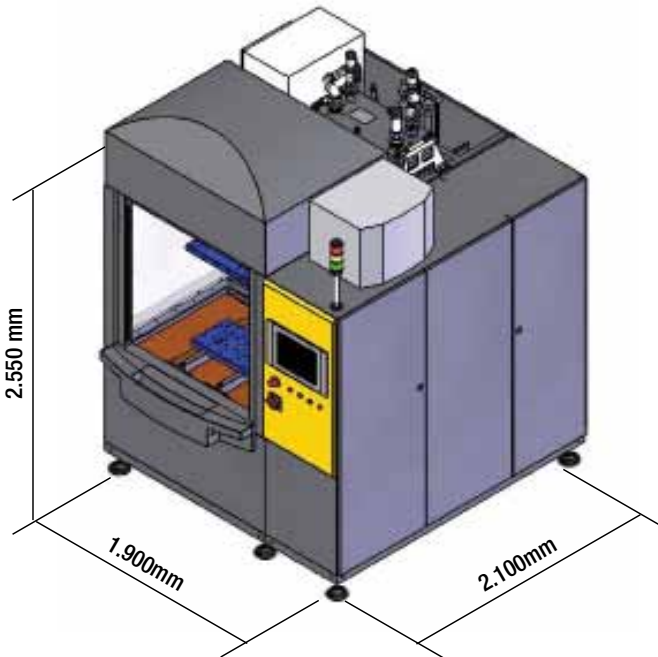
The ECLINE series is the perfect answer whenever burrs have to be specifically removed after turning, milling, grinding, honing, or reaming, as well as rounding edges or incorporating contours. The modular series is particularly suitable for machining medium- to large-batch quantities of workpieces.

The modular design concept of the new ECLINE series allows for individualized configuration while providing reliability and long service life operation. The standard modules complement one another mechanically and electro-technically and are perfectly matched. With these modules, along with the optional equipment available, the ECLINE series is a tailor-made system, customized to specific requirements.



Features and Benefits

- Individually configurable ECM system**
 A modular design concept and various options create a tailor-made system.
- Ergonomic and user-friendly**
 Specifically designed to meet the needs of the end user with features to reduce user fatigue and ensure ease of use.
- Fast setup and change of tooling**
 Generously dimensioned machining area accommodates large workpieces and enables rapid tool change.
- Controlled production**
 State-of-the-art control system stores and monitors all major process data.
- Environmentally friendly design**
 Built-in features provide protection against spillage, corrosion, and vapors.
- Ease of automation and integration in production lines**
 Defined interfaces are available as an option.



Upon request, the machine also is available with two working stations.

System Configuration

- Compact system design with low space requirements — 1900 x 2100 x 2550mm (W x D x H).
- Stainless steel design with finished surface.
- Generous workspace of 1130 x 860 x 1080mm (W x H x D) for universal applications.
- Automatic fixtures interface for all available KEH equipment.
- Automatic process parameter control for consistent machining quality. Siemens S7-300 Visual WIN CC Flexible.
- Latest short-circuit monitor for minimized tool wear.
- Chamber filter press adapted to system for electrolyte conditioning — delivered as standard.
- Generator from 3 kW up to >100 kW with pulse technology.
- User-friendly touch panel with integrated tool menu for comprehensive machining data management.
- Working chamber cowl with interface to exhaust air network — installed at the factory — optional air cleaner expansion.
- Light curtain or sliding door on system front ensures operational safety during operation.
- Integrated three level program.

Connection Data • Power

Power Rating	400 VAC 3P/N/PE 50 Hz
Max dc Power	450 A/43 V
Current	10–450 A
Voltage	3–43 V

Accessories/Options

- Exhaust fan with exhaust hood.
- Set of cover panels.
- Catch-tray.
- Pulsed process current.
- Interface for automation.
- Conductivity measurement.
- Modem services.
- Wet scrubber.

To optimize productivity and the entire process sequence in individual instances, we also supply various pretreatment and after-treatment systems as well as optional supplementary systems:

- Filter presses for continuous purification of the electrolyte.
- Industrial coolers for a constant supply of electrolyte.
- After-treatment systems for cleaning and corrosion-proofing the workpieces.
- Upon request the machine is also available with two working station.

All systems comply with the applicable EU Machinery Directive 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 regulations.

Subject to technical changes serving to improve the system and in line with technological progress

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

Kennametal Extrude Hone GmbH

Berghauser Str. 62
D-42859 Remscheid
Germany
Tel: +49 2191 900250
Fax: +49 2191 900254
remscheid.information@kennametal.com

www.extrudehone.com

Kennametal Extrude Hone Limited

1 Sovereign Business Park
Joplin Court, Crownhill
Milton Keynes MK8 0JP
United Kingdom
Tel.: +44 (0) 1908 26 36 36
Fax: +44 (0) 1908 26 21 41



Kennametal Extrude Hone GmbH

Memminger Straße 37
D-87746 Erkheim
Germany
Tel.: +49 8336-8005-0
Fax: -500
erkheim.information@kennametal.com