

# ProductionHone Series

Precise, efficient and  
reliable production  
honing



# Introduction to ProductionHone Series

With programmable precision, and de-skilled operational efficiency, the ProductionHone series provides reliable and cost effective production honing. This series includes the ProductionHone Mini (E1000S) and ProductionHone Maxi (E2000S), both ideal for batch production. A choice of fixtures and full adjustability make these machines hugely flexible – they are an invaluable staple in engineering production environments.

## Precision Control

### Reliable accuracy and consistency

- Programmable precision with Siemens HMI
  - Conversational, touchscreen programming
  - Upload, store and download programmes
- Tolerance accuracy to below 1 $\mu$
- Sub-micron adjustment
- Exact cycle times
- Precision stock removal

## Operational Efficiency

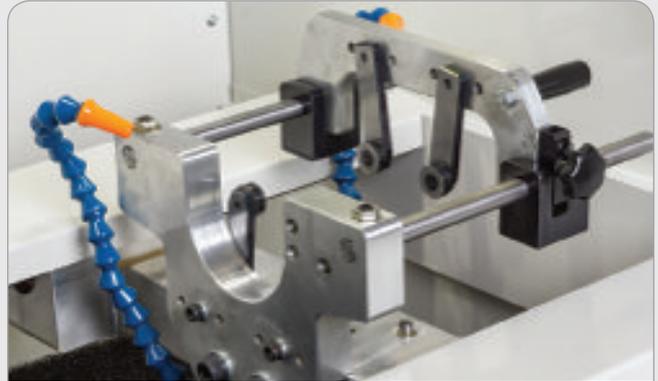
### Reduced cost per part

- Push button, closed door, hands-free operation
- Operation by non-skilled workers
- Ergonomic workstation for improved efficiency
- Fully adjustable spindle, stroking speeds and feed rates
- Quick change tooling (optional)
- Online diagnostics (via Internet)
- Reduced maintenance
- Extended tool life

## Versatile and Flexible

### Wide ranging application and capability

- Ideal for low to medium batch production
- Suitable for prototype production
- Fully automatic, de-skilled operation
- Honing diameters from 1.14mm to 80mm
- Through honing and blind end bores
- Stroke length up to 320mm
- Short stroke (at either end of bore)
- Stroke length to suit most applications
- Choice of fixtures to suit application
- Quick set up mandrel alignment gauge
- Optional automatic guard
- 'Single pass' cycle for use with diamond lapping tools



# ProductionHone: Precise, efficient, reliable

“The value offered by ProductionHone is operational efficiency. These machines optimise the honing process, combining the precision and reliability of electronically-controlled operation, with the cost saving of de-skilled production. The ProductionHone series is highly adjustable and versatile in application, providing choice and speed to match dynamic demands and consistency to meet the highest quality standards.”

Martin Elliott, Managing Director

## Innovative in design, flexible in operation

- Diameter range 1.14-80mm, stroke length up to 320mm
- Fully adjustable stroke length and speed
- Fully adjustable spindle speed
- Fully adjustable stone feed rate
- Unique spindle system with integral stone expansion
- Multi-plane chuck
- Feed movement via precision ballscrew
- Stable, accurate and repeatable stone adjustment
- Choice of fixtures for wide range of applications
- Quick set up mandrel alignment gauge

## Electronic control system with Siemens' digital HMI

- Touch screen, conversational programming
- Tolerance accuracy to 0.001mm with sub-micron adjustment
- Download programmes to memory storage via USB port
- Remote access for assistance, immediate diagnosis, rapid support



## Operational Efficiency

- Programmable, precise electronic control
- Ergonomic workstation
- Non-skilled operation
- Easy and rapid tool changes

## Workforce safety

- Failsafe interlocking guard system
- Closed door, push button operation

# ProductionHone in action

The ProductionHone is fully electronic and fully automatic, which de-skills the honing process. Operatives can access the machine's full functionality in as little as one day of training. A unique alignment gauge trues the mandrel and speeds up tooling changes. With touch screen control, the operation of ProductionHone is designed to be intuitive, reliable and ergonomic.

## ProductionHone for

- De-skilled, precise production honing
- Honing diameters 1mm – 80mm
- Batches of 50 - 100,000
- Through honing and blind end bores (tolerance within one micron)
- Quick changeover

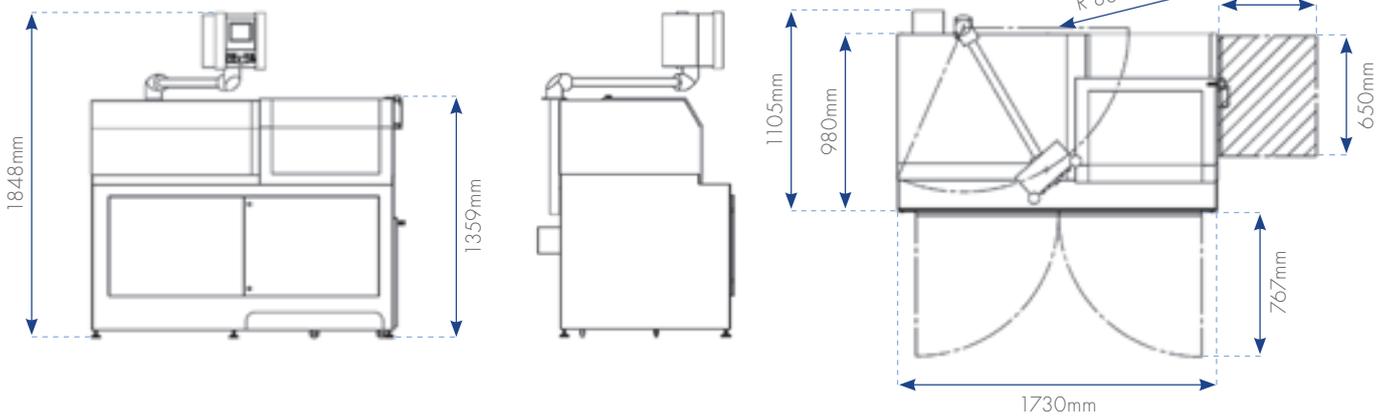


## Ideal for

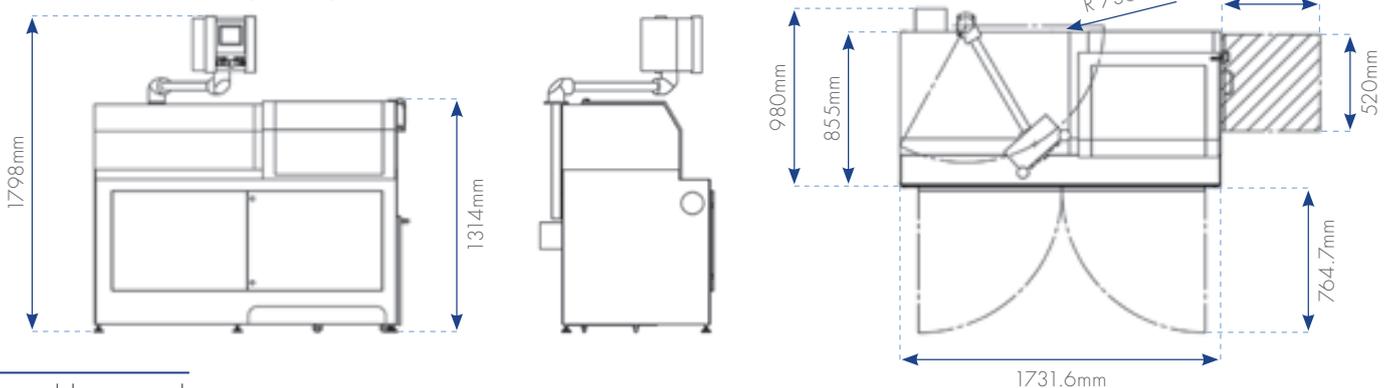
- Safety valves
- Bushes
- Gears
- Hydraulic components

Customised tooling and tailor-made abrasives are offered by Delapena to further extend the flexibility of these machines.

ProductionHone Maxi (E2000S)



ProductionHone Mini (E1000S)



Capacity and Stroke	ProductionHone Mini (E1000S)	ProductionHone Maxi (E2000S)
Diameter range	1.14 – 25mm*	1.14 – 80mm*
Maximum stroke length	Fully adjustable 3 – 320mm*	Fully adjustable 3 – 320mm*
Stroking motor speed	Fully adjustable 1 – 25m/min	Fully adjustable 1 – 25m/min
Stroking motor power	3.0Nm	4.0Nm
Stroking movement	Precision recirculation ball screw	Precision recirculation ball screw
Short stroking	Fully programmable length and frequency	Fully programmable length and frequency

## Spindle Drive and Stone Expansion

Spindle speed	Fully adjustable: 300 – 2500 rpm	Fully adjustable: 300 – 2500 rpm
Spindle motor power	1.5 kW	3kW
Braking	Dynamic braking resistor	Dynamic braking resistor
Feed type	Programmable electro-mechanical	Programmable electro-mechanical
Feed rate	2 programmable speeds for each cycle + timer	2 programmable speeds for each cycle + timer
Incremental feed	0.1 micron increments per second	0.1 micron increments per second
Feed movement	Precision ball screw	Precision ball screw
Stone pressure	Programmable to 670N	Programmable to 670N
Wedge retraction	Programmable	Programmable
Wedge retraction speed	Programmable	Programmable

## Electrical Equipment

Conformity	CE approved. Conforms to Machine Directive 2006/42/EC	CE approved. Conforms to Machine Directive 2006/42/EC
Motor protection category	IP54	IP54
Standard electrical supply	380 – 415V, 3 Phase, 50Hz	380 – 415V, 3 Phase, 50Hz
Control voltage	24VDC	24V DC

## Weight

Net	700kg	950kg
Gross	800kg	1050kg

## Machine

Dimensions	1780mm (W) x 1000mm (D) x 1790mm (H)	1780mm (W) x 1130mm (D) x 1860mm (H)
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All dimensions are nominal. As a result of our policy of ongoing product development, Delapena reserves the right to revise specifications and design, without prior notice.

\*subject to application

# Delapena offers the complete honing solution

## To optimise performance of the ProductionHone

### Tooling & abrasives

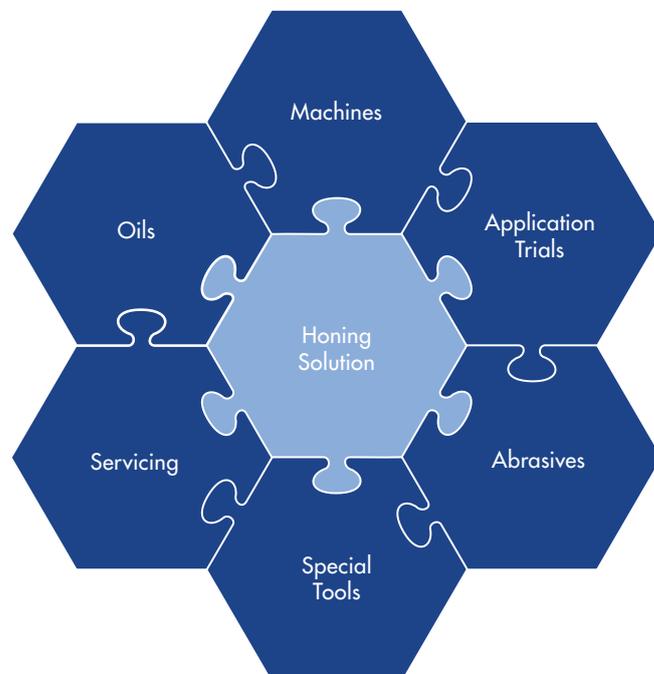
Delapena offers a complete range of horizontal, vertical and heavy duty tooling, plus special tooling which is designed and manufactured to order. Our tooling is supported by a full range of Standard and Super Abrasives to satisfy the most demanding requirements for the honing process, providing size, geometry and surface finish.

We also provide a professional refurbishment service for all variants of honing heads, to support your preventative maintenance programme.

### Oils

We offer a range of high quality oils that focus upon:

- Improved surface finish
- Reduced environmental impact
- Improved operator health and safety, with low misting additives
- Improved lubricity, for reduced tool wear, better surface finishes and consistency for components
- Improved oil longevity for better value



## To support use of the ProductionHone

### Application trials

Each application trial includes data on surface finish, cycle times, abrasives and the best honing solution for the job.

### Commissioning

Every machine is commissioned by a Delapena engineer who manages the set up and provides training for all operatives.

### Training & continued education

To support clients to meet their Health & Safety requirements, we offer training as required for machine operatives. This is tailored to the specific client's requirements.

### Maintenance

The name Delapena is synonymous with reliability and the ProductionHone is designed to be virtually maintenance free, with only annual checks required to ensure optimised operation. For reduced cost and downtime, the ProductionHone can be remotely accessed via an internet connection to the Siemens control unit. This enables global remote access for assistance, immediate diagnostic assessment and rapid support.

## The wider range



E2000S-XL

### CalibreHone

An innovative long bore precision honing machine, designed specifically to hone straight and tapered bores at lengths up to 800mm. The CalibreHone (E2000S-XL) achieves tolerances and geometries to below  $2\mu$ , for diameters up to 50mm.



E3000S

### PrecisionHone

A high precision vertical honing machine with wide ranging capability to hone parts from small scale to heavy components, with a diameter range of 1.14mm to 80mm (subject to application) and a tolerance accuracy to 0.001mm, with sub-micron adjustment.



### PowerHone

A competitively priced vertical honing machine for large and heavy components in small to medium sized batches and one-offs. Suitable for both through and blind bores, producing an excellent surface finish and repeatability. Designed and engineered for durability, efficiency and economical honing.



EAS

### SpeedHone

SpeedHone is a compact, electronically controlled machine that de-skills the honing process. Tooling changes are quick and easy, making SpeedHone ideal for one off and batch production work. With enormous flexibility, SpeedHone is an essential machine for every tool room.

# Honing excellence

Part of Delapena Group, Delapena Honing Equipment is an innovator in the design and manufacture of high precision, technically advanced honing machines. Our company has an impressive history that spans over 85 years and we are exceptionally proud of our heritage. The name Delapena is synonymous with quality and is often used as a verb in the engineering world as the definitive for honing.

Today Delapena is recognised as a master in the honing market, operating internationally to offer complete honing solutions that include not only a range of technically advanced machines, but also the tooling, fixtures, abrasives and other consumables that optimise their performance. From manually operated machines to fully automated systems with Siemens electronic controls, Delapena offers a solution for every honing need and our customers rely upon our trusted expertise to optimise their process and surpass their objectives.



To learn more about the ProductionHone series or any other products and services from Delapena Honing Equipment please visit [www.delapena.co.uk](http://www.delapena.co.uk)

For further details or a quotation call **+44 (0) 1242 516341** or email [sales@delapena.co.uk](mailto:sales@delapena.co.uk)

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