PC-Series

The low cost production center to improve your productivity

- For all stud welding processes
- Advanced technology
- High quality product
- Controller for welding process
- Microprocessor controlled
- Modular concept based on CAN-Bus-Technology
- Cost savings and reliable

All PC-series are equipped with the HBS high precision welding head KAH 412 for dia. 3 to 8 mm (dia. 10, 12 and 12,7 mm optional)

PC-S
- With manual or automatic stud feeding (30% faster)
- Solid work table
- Positioning of workpieces
- Easy handling
- Short set up time

PC-C
- CNC-controlled
- Fully automatic welding program
- Storage for 10 programs (25 Pos. each) or 20 programs (17 Pos. each)
- Microprocessor controlled
- Display for error indications

PC-Series       PC-S       PC-C
Working range:  T-slot work plate  X-/Y-axis
500 x 375 mm    500 x 300 mm
Speed:          -                    6 m/min.
Max. no. of       1
welding heads:
Positioning (accuracy) of welded studs:  ± 0,2 mm
Welding capacity: up to 15 studs/min. (depending on type, power unit, size and selected position of stud)
Pneumatic work stroke: Z-max. = 125 mm
Z-adjustable = 0-45 mm (lower end stop)

Machine protection cover optional

All PC-series are equipped with the HBS high precision welding head KAH 412 for dia. 3 to 8 mm (dia. 10, 12 and 12,7 mm optional)

Optional: HBS-MS-1000-“MINI”-software and control on pc-basis

Pneumatic work-piece clamps PMB-LS guarantee fast and accurate clamping of the work-piece. The patented horizontal and vertical movement of clamp fingers allow workpiece loading from top or front.

Easy data input through separate control box. Fault indication on display.
**TKM-Series**

**CNC Stud Welding Machine:** The professional solution for your stud welding applications with the HBS MS-1000-Software

- Automatic operation with special welding software
- Fully automatic system
- Highest productivity
- Up to three welding heads
- Motor driven Z-axis
- High welding rate
- Large working range
- Highest welding quality
- Best performance
- High positioning accuracy of welded studs

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**Technical Data**

<table>
<thead>
<tr>
<th>TKM-Series</th>
<th>TKM 120/055</th>
<th>TKM 120/105</th>
<th>TKM 120/155</th>
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</thead>
<tbody>
<tr>
<td>Max. working range [mm]:</td>
<td>1140 x 550</td>
<td>1140 x 1050</td>
<td>1140 x 1550</td>
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<tr>
<td>Max. no. of welding heads:</td>
<td>3 (up to 5 different stud lengths per head)</td>
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<tr>
<td>Positioning accuracy of welded studs:</td>
<td>± 0.2 mm</td>
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<tr>
<td>Welding capacity:</td>
<td>approx. 15 to 25 studs/min. (depending on power unit, size and selected position on stud)</td>
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<tr>
<td>Motor driven Z-axis:</td>
<td>Z = 0-125 mm (free programming)</td>
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</tbody>
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**Advanced PC-Software MS 1000**

- Developed by HBS, specifically for stud welding
- Modular concept based on CAN-Bus-Technology can be extended to customers needs
- Very short set up times, quick failure diagnosis
- Integrated process sequence control
- Fast and easy programming, controlled by industrial PC
- Storage for more than 200 welding programs
- Ether link 10/100 to network by additional adapter
- HBS CAM-DXF-file editor for CAD-drawings

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Motor driven Z-axis. Completely sealed linear guide with 2 no-clearance-saddles. Ball screw drive. 120 mm lift. Free programming for up to 5 different stud lengths.

Up to 5 different stud lengths can be handled by an automatic welding head. Equipped with 1 to 3 welding heads. The standard machine is already equipped with the high precision welding head KAH 412 for stud dia. 3 to 8 mm (dia. 10, 12 and 12.7 mm optional).

Automatic stud feeding: Feeding unit VBZ-3 for quick, fully automatic feeding of DIN EN ISO 13918 studs. Special feeding units upon request.
Components for Automatic Welding

High quality components to be combined for any kind of stud welding applications

HBS Power Units

- **CDM 1600 AT**
  - for capacitor discharge welding
  - Welding range: M3 to M8
  - Loading energy: 1600 Ws

- **CDM 2400 AT**
  - for capacitor discharge welding
  - Welding range: M3 to M10
  - Loading energy: 2400/800 Ws

- **CDM 3200 AT**
  - for capacitor discharge welding
  - Welding range: M3 to M10
  - Loading energy: 3200/1600 Ws

HBS Automatic Stud Welding Gun

- **PAH-1**
  - for stud welding with capacitor discharge or ARC welding
  - Stud dia.: 3 to 8 mm
  - Stud length: 8 to 30 mm

HBS Automatic Stud Feeding

- **VBZ-3**
  - Fully Automatic Stud feeder
  - Stud dia.: 6 to 50 mm
  - Feed power: up to 40 studs/minute

- **PBZ**
  - Pneumatic Single Feed Unit
  - Manual stud feeding
  - Stud transport actuated by CNC-control unit

HBS Automatic Welding Heads

- **KAH 412**
  - Quick change over
  - Stud dia.: 3 to 8 mm
  - Stud length: 8 to 40 mm

- **KAH 1**
  - Quick change over
  - Stud dia.: 3 to 8 mm
  - Stud length: 8 to 30 mm

HBS Accessories

- **Pneumatic Clamp PMB-LS**
  - with horizontal and vertical movement

- **Pneumatic Clamp PMB-S**
  - with vertical movement

- **PBZ**
  - Pneumatic Single Feed Unit
  - Manual stud feeding
  - Stud transport actuated by CNC-control unit

- **Change Over Kit**
  - to change to different stud diameter in the fully automatic stud feeder VBZ-3

- **Feeding Switch Point**
  - to weld different stud length with one welding head

- **Assortment Kit**
  - for manual stud feeding or fully automatic stud feeding VBZ-3

* with capacity switch
** depending on stud size

Technical data may change.