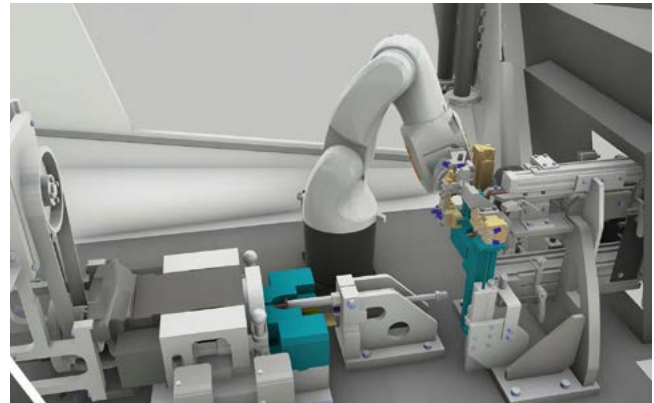


Joining Solutions_KUKA Picus 2

_New versatile friction welding machine in the small range for peak performance



The **Picus® 2** is the new, fully automated friction welding machine from KUKA whose area of application is no longer limited to valves for internal combustion engines, but rather has been expanded to include new e-mobility and general industry applications. In addition to being extremely cost-efficient, the Picus 2 is also incredibly versatile.

Customer benefits

The Picus 2 offers a wide range of new features and is therefore a great deal more flexible than its predecessor:

- Peak performance thanks to fully automated loading and unloading procedures
- Sustainable control concept (Siemens PLC)
- A footprint that is 26 % smaller than that of its predecessor, the RS 2, thanks to integrated control cabinets
- Reduced downtime due to automated discharge of NOK parts
- More convenient operator control with new HMI and touch panel
- Simplified, more flexible approach to component handling thanks to integrated robot & new material transfer interface
- 100 % quality monitoring
- Ready for I4.0, based on OPC UA

Handling robot

The KUKA Agilus handling robot, which is integrated into the machine, is of paramount importance. Due to its increased versatility, this robot will enable you to extend your component spectrum enormously. It also paves the way for a wide range of new applications.

Wide range of options

- Facing and removal of weld flash by means of turning or cutting operations
- Component and customer-specific clamping tools
- Sensitive process axis with 12 kN forge force
- Active Travel Control (for minimizing length tolerances)
- Automation with cell interface
- OPCA UA interface for I4.0

System architecture

The control cabinet which is built into the machine and a hydraulic unit with optimized cabling speed up the commissioning process in addition to simplifying transportation and reducing the footprint.

Scope of supply

- Machine
- Component-specific tool(s)
- Process validation
- Project management
- Machine acceptance (CMK available)
- CE certificate (Declaration of Conformity)
- UL certification not available
("based on UL standard" on request)



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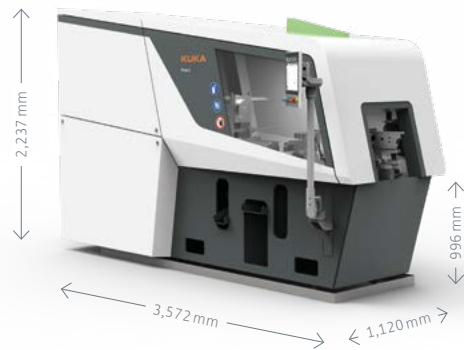
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Base configuration – technical data

Forge force*	8 – 20 kN
Spindle revolutions*	1,000 – 8,000 rpm
Slide travel	max. 190 mm
Noise emission*	< 78 dB (A)
Footprint (incl. control cabinet)	approx. 4.0 m ²
Weight	approx. 2,800 kg
Dimensions (incl. control cabinet)	approx. 3,572 × 1,120 × 2,237 mm
Process controller	KUKA PCD Controller 351
Machine controller	Siemens 7-1500 F-CPU
Robot type	Agilus KR 3 R540 with KUKA smartPAD
Robot controller	KR C4 smallsize-2

* Depending on component, forge force and process sequence

Machine layout

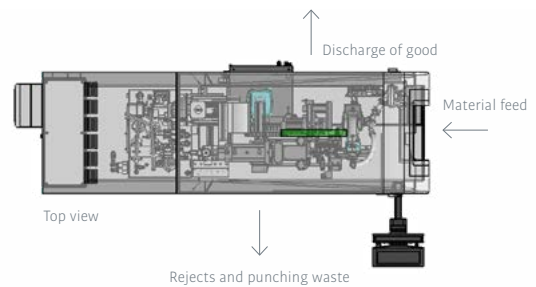


Wide range of applications

Automotive		General Industry
CEV*	E-mobility	New applications
Valves	High-voltage cables 12 V	Drive shafts
	High-voltage cables 48 V	Threaded rods
	Connectors / connecting elements	Guide & contact pins

* CEV – Combustion Engine Vehicle

Functional overview



Examples of applications



For further information please contact us at frictionwelding.industries.de@kuka.com

