



Joining Solutions_**KUKA Genius**



Wide range of type variants to meet every requirement

Depending on your requirements and the spectrum of products to be manufactured, KUKA supplies the friction welding machines of the Genius family in the following type variants:



_KUKA Genius

The bestseller for a wide range of applications



KUKA Genius eco® The basic entry-level model for simple welding tasks.



KUKA Genius plus®
The mid-range
model with automatic
backstop adjustment
for even greater
productivity.



KUKA Genius power®
The fully equipped
variant with a highperformance drive for
the most challenging
material combinations
and angle positioning.



_KUKA Genius V

The special vertical version for small footprints



KUKA Genius V plus The special vertical version for customers requiring a small footprint.



_KUKA Genius D

The versatile double-head machine for one-pass productivity



KUKA Genius D power The versatile, fully equipped double-head machine for one-pass productivity.

Compact, modular friction welding machine The KUKA Genius family

The launch of the KUKA Genius single-head machine in 2015 laid the foundation stone of the KUKA Genius product family. Several versions have been added since then, all based on the same machine platform. Together they form a new modular machine generation for friction welding processes in the forge force range of 12 – 300 kN. These flexible all-rounders can be configured for both simple and complex friction welding tasks according to customer requirements and are therefore a secure investment for the future in times of rapidly changing markets.

Convincing advantages





- Easy access, lightweight operator doors and a large workspace
- Touch panel with state-of-the-art graphical user interface
- Intuitive operation



Custom-tailored complete solution

- Sophisticated hydraulic system
- Various performance classes
- Very large speed/load range for a wide spectrum of components



- electronically controlled hydraulic system
- and drive technology with particularly low mass inertia



Energy-efficient

• Up to 20 % energy savings due to



Simple installation... ...in a minimum of space

- Plug & play solution Low floor space requirements & Elimination of external control compact design
 - Optimal utilization of the available floor space



Industrie 4.0

- Extensive sensor equipment for monitoring the machine & the welding process
- Standardized interfaces for evaluation
- Result: greater productivity and data transparency



Utmost accuracy

- Outstandingly high precision & weld quality
- Precise bearing technologies, pre-tensioned roller guides & a stress-optimized machine bed



Robust components

maintenance doors

Largely wear-free direct drive

and long lubrication intervals Generously dimensioned

Ease of servicing and minimal Intuitive operation and control maintenance

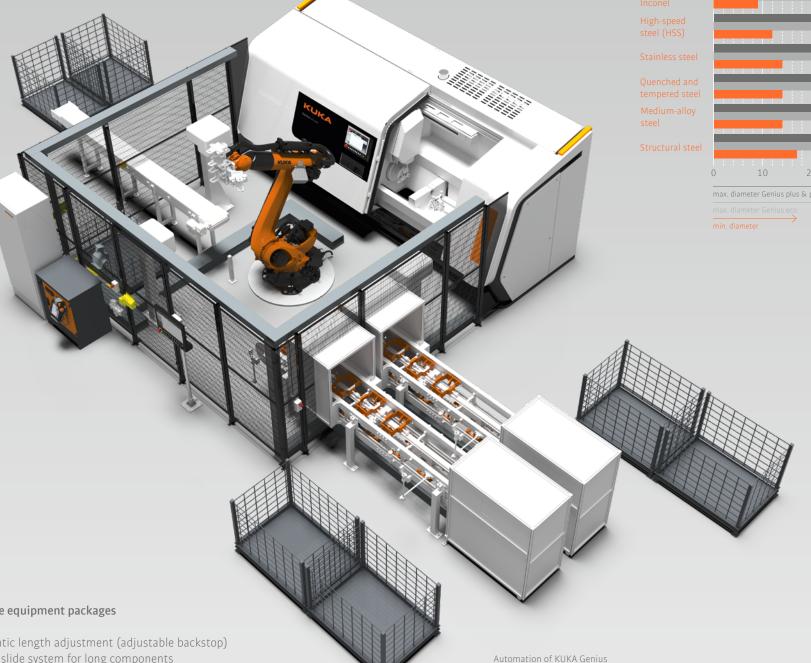
Operator panel

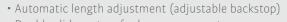
Operator control is carried out intuitively via a touch panel with a modern graphical user interface that can be operated while wearing safety gloves. The user interface provides the following functions:

- Welding program management: user-friendly configuration

 Extensive equipment packages and setting of the welding process, management of up to 1,000 welding programs
- Control & monitoring: all parameters of the welding process Double slide system for long components controlled and monitored with millisecond accuracy via tolerance limits and envelope curves
- Presentation of values and status: display of the actual values and parameters as well as the current status in plain text, graphical representation of current and archived • Cycle time reduction by means of light curtain and parameter profiles
- **Documentation:** documentation of the welding results by means of database, printer, PDF export or database interface • Swarf conveyor
- Quality management: full traceability via data matrix code. Weld data are assigned to the individual components. Comprehensive quality reports are available directly or via interfaces.

with cell4_loading modular





- Defined-angle positioning
- Automatic compensation of length tolerances (active travel
- Virtual inertia welding without flywheel mass (VIPER drive)
- automatic doors
- Tool changer for turning and facing
- Intelligent user management with identification chip (EKS)
- Weld data export
- 14.0 interface based on OPC UA
- Automation interface for cell automation

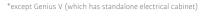


KUKA Genius rotational friction welding machines

Welding ranges (solid materials)







cabinets* for quick installation

We can be found locally all over the world:

Argentina Malaysia Australia Mexico New Zealand Austria Belgium Norway Brazil Poland Canada Portugal Chile Russia China Czech Republic Switzerland Germany Singapore Slovakia Hungary France Spain South Africa Great Britain Taiwan, China India Thailand Italy Japan Turkey Korea USA

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