



KUKA POSIFLEX

THE POSITIONER SERIES FROM 100 TO OVER 1,000 KG

- KPF1-MD
- KPF1-V
- KPF1-H
- KPF3-V2H
- KPF3-H2H
- SPECIAL KINEMATICS

KUKA POSIFLEX ○ AUTOMATING PRECISION – OPTIMIZING PRODUCTIVITY

Whether it's arc welding, spot welding, laser welding, plasma welding or bonding/sealing – cost-effective joining in durable high quality demands above all maximum speed and precision. KUKA POSIFLEX meets these demands.

With a highly dynamic automated multi-axis positioning system that can be combined with flexible robots to achieve optimal workpiece positioning and accessibility, and therefore also rapid process speeds.

FLEXIBLE



KUKA POSIFLEX – ALL THE ADVANTAGES AT A GLANCE:

MORE DYNAMIC: High rotational speeds and accelerations in the main and planetary axes.

MORE POWERFUL: Graduated range of models for payloads from 100 kg up to 1,000 kg and more per planetary axis.

MORE PRECISE: Very high positioning accuracy.

MORE RELIABLE: Integrated, largely protected energy supply systems.

SIMPLER: Plug & Play control via the robot controller.

MORE FLEXIBLE: Posiflex is based on standard modules which can be combined in accordance with individual requirements, resulting in a wide range of different types for the most diverse kinematics and sizes.

MORE COST-EFFECTIVE: The modular system with its small number of individual modules allows extremely attractive prices.

KUKA POSIFLEX

PURE FREEDOM – FROM 100 TO OVER 1,000 KG

Greater individuality, flexibility and productivity without compromise – with the POSIFLEX series of positioners, KUKA offers forward-looking users ideal automation modules for cost-effective production. For payloads from 100 to over 1,000 kg per planetary axis, highly dynamic KUKA robot motors and gear units guarantee fast, high-precision axis motion across the entire range of models. This ensures maximum process reliability and cost efficiency. In the long term, with future-oriented technology.



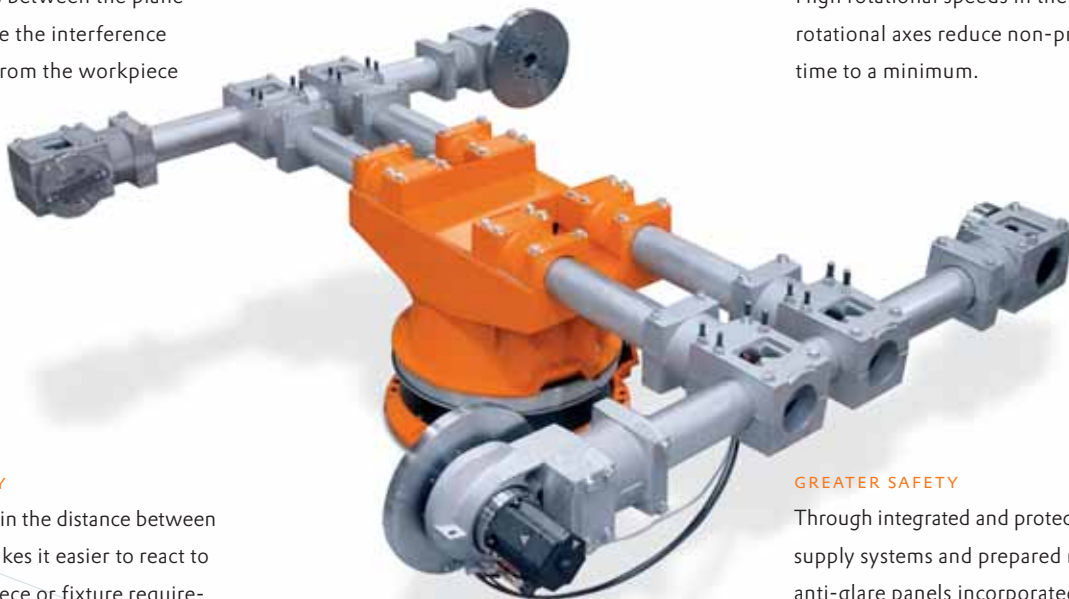
EFFICIENT

GREATER FREEDOM

Flexible distances between the planetary axes minimize the interference contours arising from the workpiece or the fixture.

GREATER LEEWAY

Greater flexibility in the distance between the face plates makes it easier to react to individual workpiece or fixture requirements.



GREATER DYNAMISM

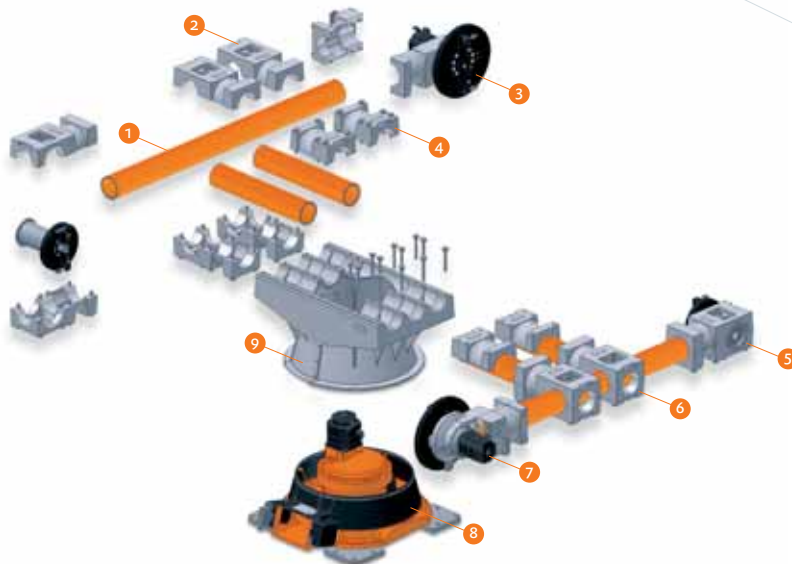
High rotational speeds in the main and rotational axes reduce non-productive time to a minimum.

GREATER SAFETY

Through integrated and protected energy supply systems and prepared mounts for anti-glare panels incorporated into the design.

GREATER INTEGRATION

The positioner axes are controlled as external robot axes, thereby allowing mathematically coupled motion with the robot-guided tool.



POSIFLEX MODULAR SYSTEM

- 1 Tube
- 2 T shell
- 3 Drive mount
- 4 I shell
- 5 Counterbearing
- 6 Node
- 7 Drive unit
- 8 Robot base frame
- 9 Central support



TUBE/NODE CONNECTIONS

In the design of robotic grippers, the tube-and-node system has been the state-of-the-art for years – and not without reason. Design details such as FEM-optimized and precision-milled nodes ensure durably secure connections with an optimal interference fit, even with highly dynamic robot motions.

SPECIAL KINEMATICS

The modular elements of the POSIFLEX system allow special kinematics to be implemented without difficulty. This makes it possible to combine short delivery times and custom-tailored solutions in an ideal way, without technical compromises.

KUKA POSIFLEX ○ STANDARD PRODUCT LINE

| Planetary axis, payload kg | Main axis, speed ° /s | Main axis, turning range | Planetary axis, speed ° /s | Planetary axis, turning range | Repeatability (with R=500 mm) | Distance between face plates mm |
|-------------------------------|--------------------------|-----------------------------|-------------------------------|----------------------------------|----------------------------------|------------------------------------|
|-------------------------------|--------------------------|-----------------------------|-------------------------------|----------------------------------|----------------------------------|------------------------------------|

KPF1-MD ○ Modular drive unit



| | | | | | | |
|-----------|-----|--------|---|---|-------|---|
| up to 250 | 132 | ± 190° | – | – | ± 0,1 | – |
| 250-500 | 132 | ± 190° | – | – | ± 0,1 | – |
| 500-750 | 114 | ± 190° | – | – | ± 0,1 | – |
| 750-1,000 | 108 | ± 190° | – | – | ± 0,1 | – |

KPF1-V ○ Turntable



| | | | | | | |
|-----|-----|--------|---|---|-------|---|
| 200 | 132 | ± 190° | – | – | ± 0,1 | – |
| 400 | 132 | ± 190° | – | – | ± 0,1 | – |
| 700 | 108 | ± 190° | – | – | ± 0,1 | – |

KPF1-H ○ Turnover positioner



| | | | | | | |
|-----------|-----|--------|---|---|-------|-------------|
| up to 250 | 132 | ± 190° | – | – | ± 0,1 | 1,000-3,000 |
| 250-500 | 132 | ± 190° | – | – | ± 0,1 | 1,000-3,000 |
| 500-750 | 114 | ± 190° | – | – | ± 0,1 | 1,000-3,000 |
| 750-1,000 | 108 | ± 190° | – | – | ± 0,1 | 1,000-3,000 |

KPF3-V2H ○ Dual turnover positioner, vertical



| | | | | | | |
|-----------|------|--------|-----|--------|-------|-------------|
| up to 250 | 88,5 | ± 180° | 132 | ± 190° | ± 0,1 | 1,500-2,600 |
| 250-500 | 81 | ± 180° | 132 | ± 190° | ± 0,1 | 1,500-2,000 |
| 500-750 | 75 | ± 180° | 114 | ± 190° | ± 0,1 | 1,600-2,800 |
| 750-1,000 | 60 | ± 180° | 108 | ± 190° | ± 0,1 | 1,600-2,800 |

KPF3-H2H ○ Dual turnover positioner, horizontal

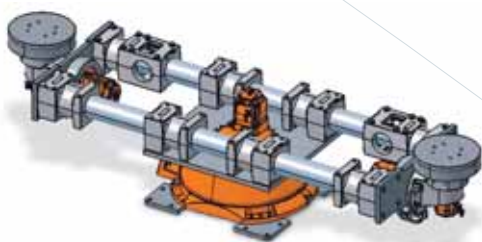


| | | | | | | |
|-----------|-----|--------|-----|--------|-------|-----------|
| up to 250 | 126 | ± 180° | 132 | ± 190° | ± 0,1 | 800-3,000 |
| 250-500 | 90 | ± 180° | 132 | ± 190° | ± 0,1 | 800-3,000 |
| 500-750 | 75 | ± 180° | 114 | ± 190° | ± 0,1 | 800-3,000 |
| 750-1,000 | 71 | ± 180° | 108 | ± 190° | ± 0,1 | 800-3,000 |

OPTIONS

- Application-specific energy supply system (air, control / parameter cable, ground, water)
- Insulation of the face plates
- Mounting strips for fixtures
- Signal transmission by bus cable (Interbus, CAN bus, Profibus)
- Connecting cables between positioner and robot controller 7 m, optionally 15 m, 25 m
- Planetary axis with integrated routing of energy supply system

EC Machinery Directive 89/392/EEC, EC Low Voltage Directive 73/23/EEC, EC EMC Directive 89/336/EEC



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