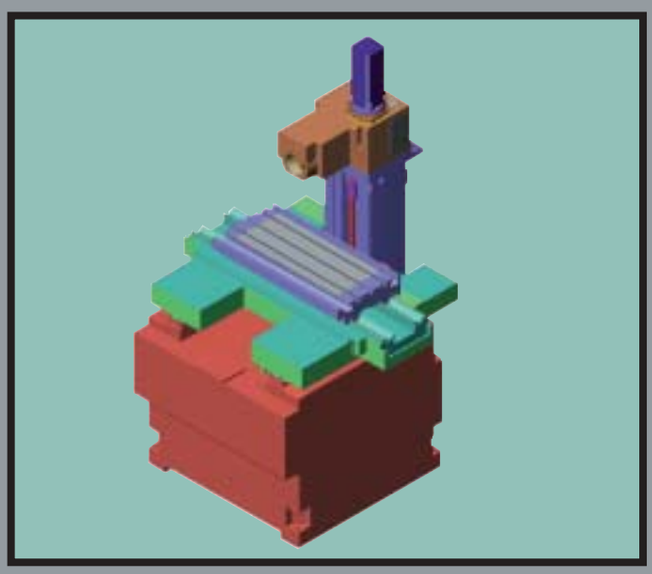
Technical Data



The design principle of the J-series

Jung's legendary double V guide is custom-manufactured for each machine in special clamping fixtures. The production-specific mating principle of the machine base and the cross saddle results in a part which is unique in terms of mechanical precision.

Installation data	**J 525**	**J 630**
Width of the machine	**3000 mm**	**3000 mm**
Depth of the machine	**2700 mm**	**2700 mm**
Height max. (dep. upon configuration)	**2240 mm**	**2240 mm**
Weight	**2.200 kg**	**2.500 kg**
Electrical values		
Voltage and frequency	**400V/50Hz**	**400V/50Hz**
Driving power	**13,5 kW**	**13,5 kW**
Connected load	**35 A**	**35 A**

Table	*J 525*	*J 630*
Size of magnet	500 mm x 200 mm	600 mm x 250 mm
Max. grindable workpiece surface, incl. wheel width	600 mm x 250 mm	600 mm x 305 mm
Max. distance between table surface and center of spindle	500 mm	500 mm
Max. load, incl. magnetic chuck	100 kg	130 kg
Main spindle drive		
Three-phase Motor	1500 U/min	1500 U/min
DC motor (speed steplessly adjustable)	800 - 4200 U/min	800 - 4500 U/min
Max. driving power	5 kW	10 kW
Cutting speed (with variable-speed spindle)	35 m/s	35 m/s
Grinding wheel		
Max. diameter (with three-phase/DC motor)	250 mm	300 mm
Max. width	25 mm	30 mm
Internal diameter	51 mm	76,2 mm
X-Axis (table motion)		
Traversing speed, reciprocal grinding	1000 - 24000 mm/min	1000 - 24000 mm/min
Traversing speed, creep-feed grinding	5 - 1000 mm/min	5 - 1000 mm/min
Traverse path between mechanical end poditions	660 mm	660 mm
Working stroke	630 mm	630 mm
Digital display	0,001 mm	0,001 mm
Y-Axis (vertical motion)		
Max. traversing speed	0,1 - 2000 mm/min	0,1 - 2000 mm/min
Traverse path between mechanical end poditions	395 mm	360 mm
Digital display	0,0001 mm	0,0001 mm
Z-Axis (cross motion)		
Max. traversing speed	0,1 - 2000 mm/min	0,1 - 2000 mm/min
Traverse path between mechanical end poditions	225 mm	280 mm
Traverse path with VJC between mechanical end poditions	—	270 mm
Digital display	0,0001 mm	0,0001 mm

Subject to technical changes.

From company

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J-series

JUNG

Schleifring Gruppe

Ever since the company's foundation in 1919, *K. Jung GmbH* has been one of the world's leading manufacturers of high-precision surface and profile grinding machines. Jung machines, which are renowned for their extraordinary precision, their state-of-the-art grinding technology and their exceptional durability, are in action in more than 50 countries around the world.

Firma Jung in Göppingen, Germany

The History of K. Jung GmbH:

1919 Company founded in Berlin.

1925 Presentation of the world's first hydraulic surface grinding machine.

1945 Berlin plant completely dismantled.

1948 Production commence in Göppingen.

1962 Production of the legendary HF 50 series begins.

1977 Presentation of the first numerically controlled machine in Germany.

1983 Japan becomes Jung's biggest export market.

1984 Presentation of the first machine with computerised numerical control.

1992 Presentation of the first fully automated grinding centre.

1996 Automatic high-speed grinding at up to 125 m/s becomes a reality.

1998 All shares in K. Jung GmbH acquired by the Schleifring Group.

JUNG
Schleifring Gruppe

Machine types / Guard variants

Construction / Type	J 525	J 630
open	X	X
semi-guarded	—	X
closed	X	X

Open

The open-type construction combines the extremely effective operation of conventional profile grinding machines with the user-friendliness and precision of modern control, drive and measuring systems. Simple touch guards in the form of insertable plates and completely enclosed danger zones ensure both safe working and easy access for machining small lot sizes with maximum precision and short cutting times.

Semi-guarded

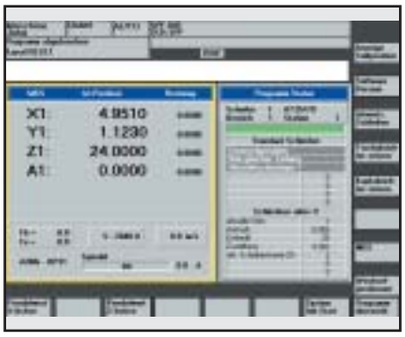
The weight-relieved half guard completely encloses the working area, thus also fulfilling the emission control requirements for manufacturing equipment. As a result, it satisfies increasingly stringent safety demands. The generously dimensioned doors and the brightly illuminated interior ensure good accessibility to the working area and an unimpeded view of the machining process. Better splash protection also has advantages for creep-feed grinding.

Fully enclosed

The self-supporting, full enclosure surrounds the complete machine, but is not connected to it mechanically. This ensures maximum machining precision, as external mechanical and thermal influences are not able to interfere with the equipment. The adequately dimensioned doors provide good accessibility to the entire machine and facilitate automatic loading both from the front and from above.

CNC - Control with Siemens 840 hardware

- *Clearly structured programming with menu bars, softkeys and windowing technique*
- *Positions entered in teach-in mode*
- *Setting-up with graphic support*
- *Portable remote-control panel with electronic handwheel*
- *Option of parallel operation permits programs to be entered and optimised while grinding*
- *Loop interrupt cycles for intermediate measurements*
- *Automatic traverse to workpiece, grinding wheel and diamond-changing positions*
- *Option of interpolation with continuous-path grinding (X/Y / Z/Y)*
- *High-resolution, radiation-free TFT monitor*
- *CAD exchange via DXF interface*



Main machine mask

The clear arrangement of all the data allows the operator to control any grinding operations absolutely safely.

Grinding technology

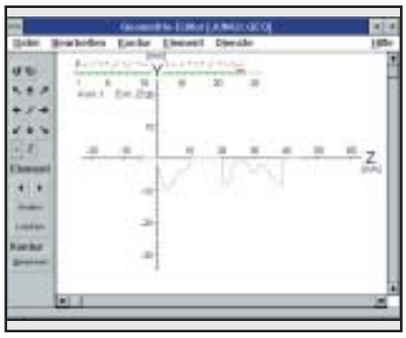
The selectable grinding technologies reduce programming work to a minimum.

Dressing technology

All available dressers can be freely selected regardless of the active dressing technology.

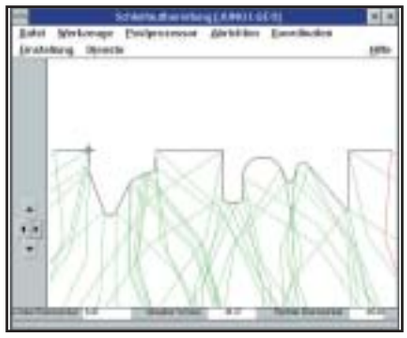
Grinding geometry

Although programming is so easy and fast, even complex grinding tasks can be solved flexibly.



The Jung programming system GRIPS

Contours can be entered or modified directly on the machine - either externally or using CAD.



Dress check

Automatic swivel angle calculation with collision check and simulation of all dressing operations.

A-PA 31 K
Grinding wheel profiling tool

Mounted on the grinding head. Extremely short manufacturing times can be achieved with the CD option. The backlash compensation and the leadscrew error correction functions of the control ensure maximum precision. With integrated 4x toolholder (for C control).

A-PA 130 T **Automatic, swivelling CNC dresser**

This CNC profile dresser is equipped with a driven, swivelling diamond-forming wheel that enables complex contour segments to be created flexibly. Programming is very convenient with the CNC machine control (for E and C control).

A-TVR 40 J
Pre-dresser

Driven, non-swivelling diamond predressing roller. Roughing/plunge-grinding cycles parallel to the contour reduce diamond wear on the dresser to a minimum. The technology parameters can be selected on the CNC machine control.

A-PA 30 T
Automatic profile dresser

Mounted on the grinding table. The grinding wheel is moved along the CNC axes on the dresser. The dressing diamond is swivelled according to the profile shape by means of CNC (for E and C control).

A-AT 35 D
Grinding wheel profiling tool

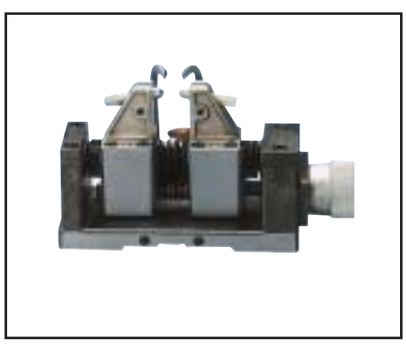
Mounted on the grinding table. With fixed dressing diamonds for simple profile dressing tasks. The roughing and finishing station ensures an exceptionally long service life for the dressing tools.

A-AF 65 K
Automatic straight-line dresser

Mounted on the side of the spindle head. The infeed values and the dressing intervals can either be sequentially controlled (JF) or freely programmed and incorporated in fully automatic grinding cycles.

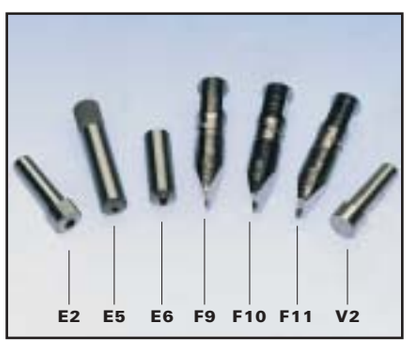
A-MA 65 K
Manual dresser

Mounted on the grinding head, with a position transmitter for dressing the grinding wheel cylindrically. The set cutting speed remains constant. Option of dressing value compensation.



A-NA 50
Side dresser

For dressing the side faces of grinding wheels and for plunge-grinding grooves with a width of 0.5 to 20 mm. Includes an integrated coolant supply.



A-EDIA 2/5/6 A-FDIA 9/10/11
A-VDIA 2 **Dressing diamonds**

We look forward to helping you choose the right diamonds for a wide range of applications.

The most important applications of Jung machines are in such areas as microelectronics, mouldmaking and the production of plug-in electric contacts. Whereas in one situation a satin finish might be demanded, other tasks insist on contour precision down to a few microns. All Jung machines share the same innovative dynamism as well as an ability to master the most complex of manufacturing challenges. Jung machines have been renowned for these qualities for several generations and enjoy a worldwide reputation for their dependability in complying with the toughest requirements.

Compound slide scraper

The machine table is scraped up to the ground guideways in the longitudinal axis in order to match the guide systems mechanically to each individual application. The combination of the Jung team's technical skill and extensive experience guarantees that Jung machines are absolutely precise during this phase of the manufacturing process.

Jung hydraulic system

Diving column

Jung's technological potential:
spindle - hydraulic system - diving column

These three important components of every Jung machine all have one thing in common - they facilitate absolute micron precision during the grinding process. The Jung **spindle**, *which is manufactured in-house, ensures optimum concentricity and balance characteristics. The Jung* **hydraulic system** *establishes a defined thermal state in the upper guide area - essential for mastering the double V guide systems. And the* **diving column** *principle developed by Jung results in perfect infeed/guiding precision, thanks to the mechanical link to the machine structure.*