C-series

JUNG

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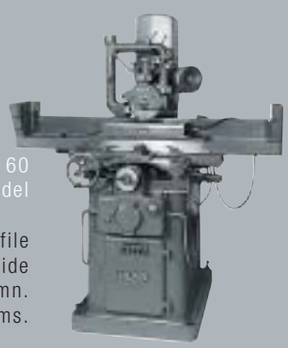
Jung EF 40
1925 - 1938 model

The first surface grinding machine with patented hydraulic, multipump table driving system.



Jung G 60
1938 - 1952 model

Extension of the surface and profile grinding machine by the combound slide principle and upright column. Limitation to table dressing systems.

Jung F 50 / HF 50
1953 - 1977 model

Automatic grinding head in-feed by way of plunge-fed column with variable spindle drive for cycle-controlled grinding. Innovation for profile grinding in the tool and die making industry by the integration of the head dressing device. (Diaform)

Jung JF 520
model as of 1978

Complete integration of all maine and auxiliary axes on the bases of continous-path controlled CNC technology for grinding and dressing.

Jung C 740
model as of 1993

A new generation of precision grinding machines based on a modular construction principle. A fully digital servodrive technology for the very highest standards of precision, even with the large working areas.

Following the worldwide sale of more than 19.000 machines, it remains the declared commitment of K. Jung GmbH to secure and extend its leading position in the field of precision, reliability and long service life. This can only be achieved if close cooperative relations are established with customers to create economic problem solutions that can be evolved into competitively priced products and services in direct coordination with the technical and economic requirements of the market.

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A new dimension in high-precision grinding machines: The C-series sets new standards in an extended working range. In the customary Jung tradition of precision and long service life, the new C-series represents the embodiment of the super standards expected by the company.

The fields of application of the C-series is particularly diverse. The spectrum ranges from exclusive surface grinding to highly flexible profile grinding in tool and mould making, as well as surface and profile grinding in medium to large series.

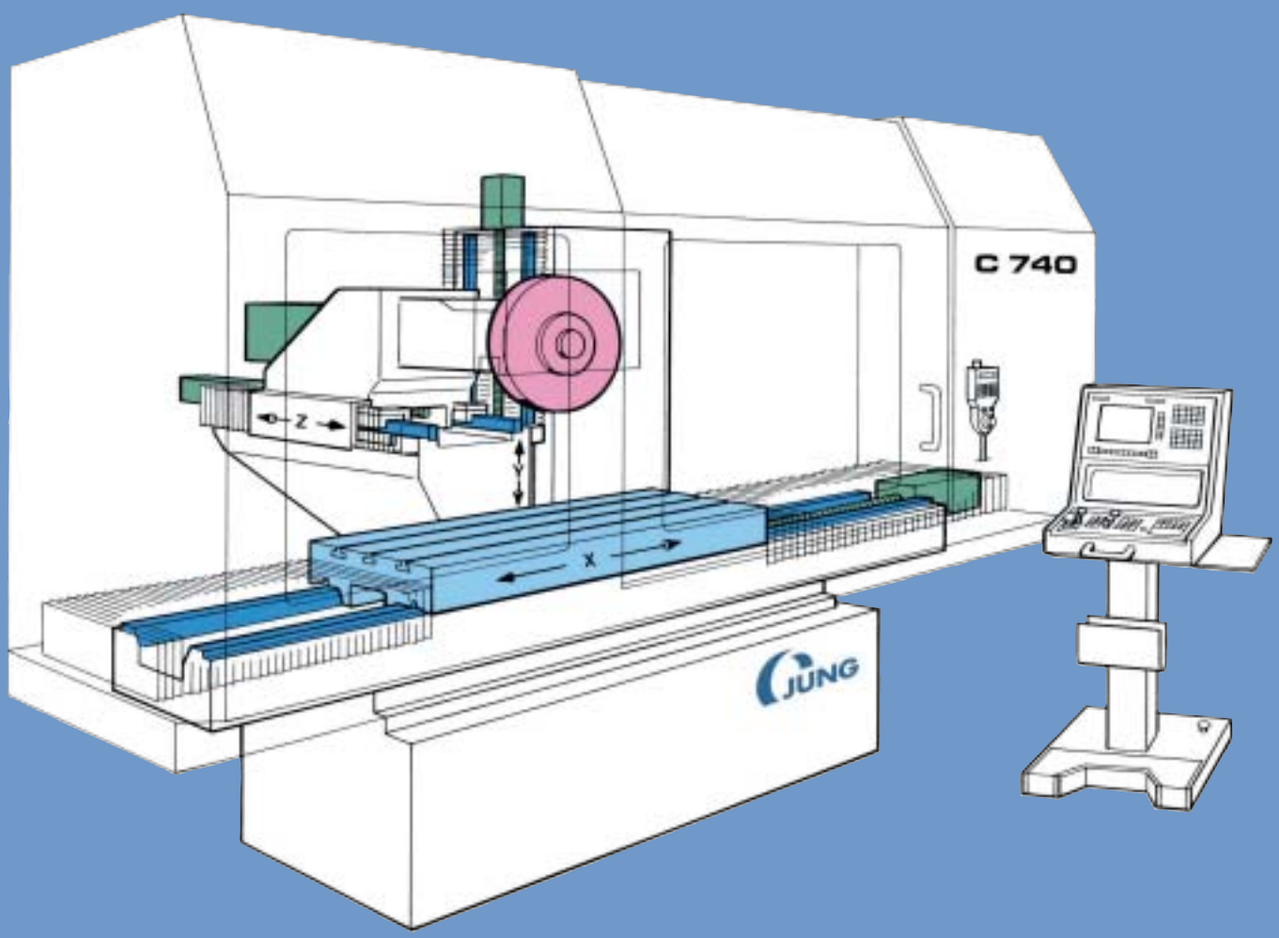
C 740 with half-height guard
Provides effective protection against splashed water and prevents inadvertent access.

C 740 with full-height guard

The guard seals off the entire working area so that the arising grinding cloud can be effecti-vely sucked off, thereby significantly improving the work-shop climate, particularly with creep-feed grinding.

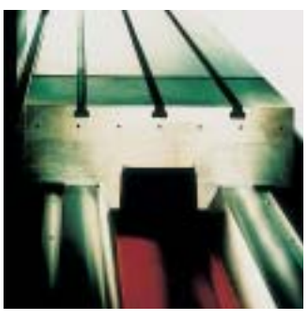
The working area of the C 740

The overall machine design has been carefully thought out right down to the last detail to ensure that the ideal conditions are established for virtually any grinding assignment. The working area guarantees convenient and safe operation on account of the ergonomic design of all controls and the wide opening access doors in the machine enclosure. The machine enclosure is opened at the top when the door is opened to enable the machine table to be loaded with a crane.



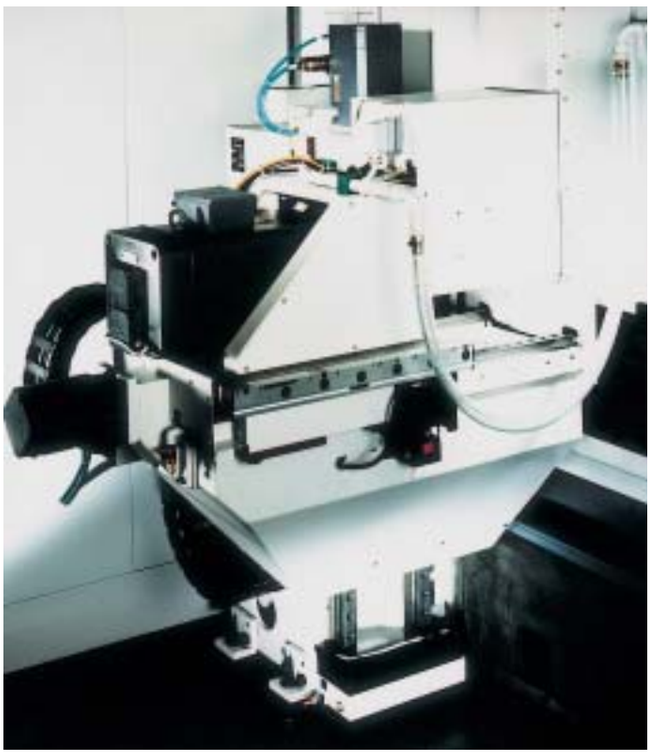
The C-series is based on a completely new modular machine-concept for the very highest standards of quality and precision. Proven machine elements were taken into account in the development of this new concept, and ultra-modern materials and components were added.

The concrete polymer-machine-bed offers high rigidity, optimal vibration absorption and enor-mous thermal stability. The mounted grey-cast table guideway has excellent damping properties in the movement reversal area. The customary long service life, and the simple cost-effective possibility of finishing, result in a sound basis for a machine concept that is free of compromises with regard to quality and precision. Another major contribution to this effect is the digital drive technology with drift-free and µ-accurate positioning within closed position control loops. Table drive is servo-hydraulic, while a digital servo-drive with rollingring thread drive is used for CNC machines.



The table-guideway
The machine table with its hydro-dynamic, symmetrically arranged double-flat and V-centre guide is fully supported throughout the entire traversing range and is cha-racterized by complete evenness and surface quality, even under the toughest operating conditions.

The grinding spindle
The precision balanced grinding spindle with backlash-free, prestressed super-precision ball bearings is thermally isolated from the spindle motor. It is designed as an insert spindle, thereby also contributing to the high level of service friendliness of the C-series.

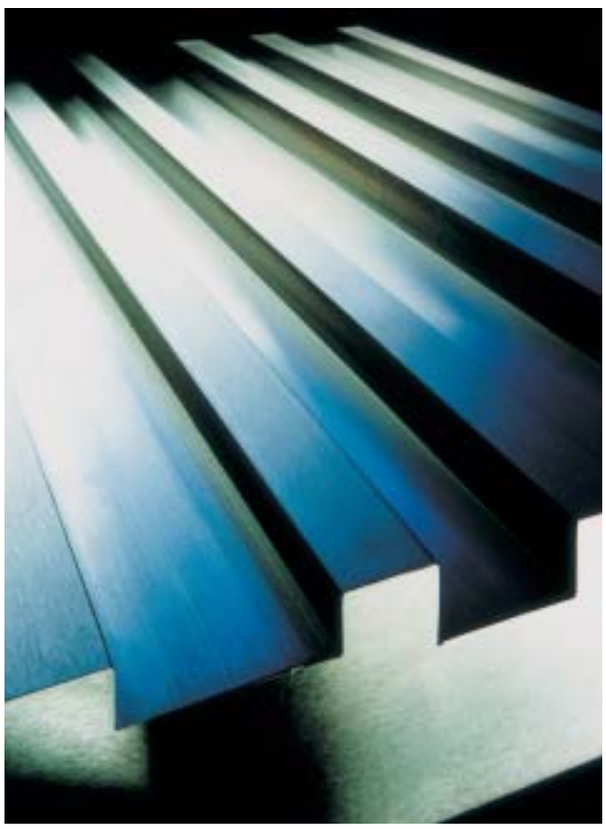


Cross angle with column
The great machine rigidity is the outcome of the upright column that is firmly connected to the machine-bed, the sturdily dimensioned plunging cross angle and the widely spaced guides. Linear guiding elements on the cross rail and cross angle guarantee smooth movement and positioning with μ-accuracy. The cross rail with grinding unit is fully supported in all traversing positions. A constant overhang of the grinding unit in all grinding positions ensures complete levelness over the entire grinding area.

The achievement of the most accurate results under all conditions and at all times is an essential daily requirement. However, the quality of production also depends directly upon the reliability and longevity of the production facilities used.

Decisive for the completition of daily jobs is not the theoretical machine accuracy that can be achieved under optimal conditions, but rather what can be accomplished under actual production conditions. It is a matter of course that Jung machines can maintain the highest standards throughout the day under widely differing service conditions.

Measurement under the projector
μ-accurate contours can be achieved with the utmost reliability by Jung machines in virtually autonomous operation, depending upon the given type of machine and the CNC profile dressing device used.



µ-accurate positioning over the entire 500 mm grinding width

μ-accurate positioning ensures precision machining in virtually all fields of mould, jig and fixture construction, and in general machine engineering. Very close tolerances can also be maintained with large workpieces.

More advantages with the Jung Sinumerik

Correction of all data of the grinding technology and geometry while machining is in progress.

Correction of all data of the dressing and truing while machining is in progress.

Machining after a program interruption is continued at the point of interruption.

Automatic feed reduction with small radii.

Up to nine seperate grinding areas can be defined.

Further grinding operations can be programmed while machining is in progress.

Grips programming by way of the Windows operating system with keyboard or mouse control.

The Sinumerik 840 with the Grips 32 integrated Jung Programming System offers a highest measure of flexibility. Jung adapts the user software specifically to your requirements so that your work is made as simple as possible.

The Jung cycles are the rapid and safe way to the finished parts program: Just let yourself be guided by menu prompting which provides continuous infor-mation on the program status. GRIPS 32, a further development of the proven Jung Programming System GRIPS, is directly integrated in the control and offers the operator a maximum of pro-gramming convenience directly at the machine.

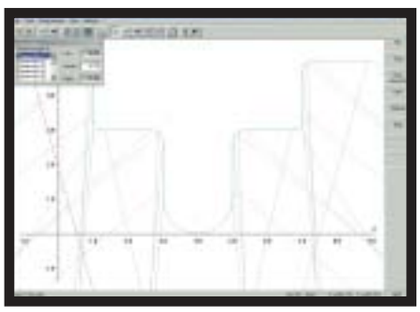
SINUMERIK 840 Control
With Jung technology modul and GRIPS 32 Jung programming system.
The optimal control combination with regards to flexibility, operating convenience and performance.

840 basic display

Axes positions and feed values are displayed in a very convenient manner. Program status indication provides the operator with precise information on every machining stage in hand, which options have been selected, and which feed values are beeing used during machining.

Unequal multiple surfaces

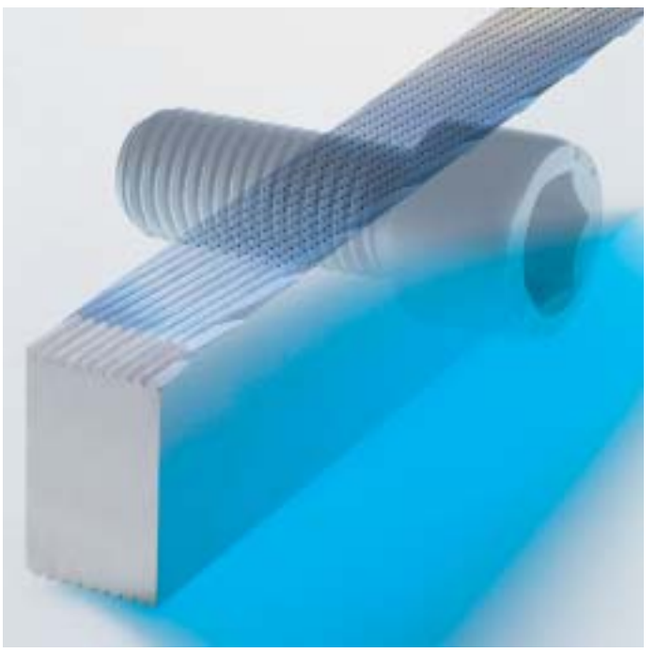
This example shows how a very complex machining process can be summarized into a convenient matrix. The grafic representation of the machining process explains in a simple manner the parameters that are to be entered.

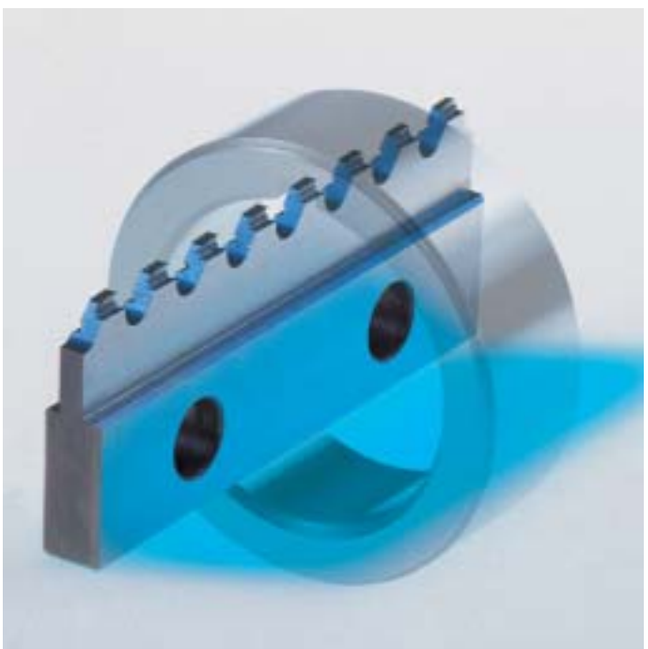


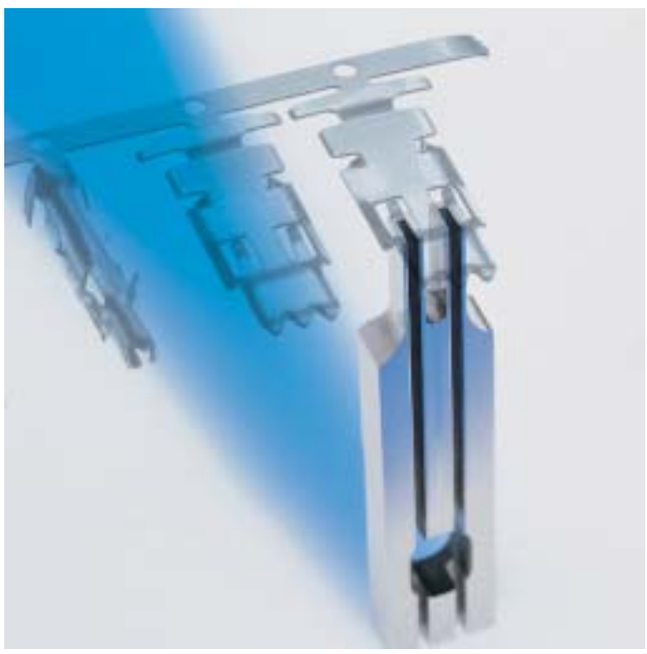
GRIPS 32 geometry display

Grips 32 ensures rapid programming of a NC-program from a DXF contour. All in-tersecting points of the system are calculated, while the diamond swivel angle, collision checks and profile simulation are presented on the screen.

Our best references are the many different jobs which our customers complete every day on Jung machines. The commitment to concern ourselves with the widely differing demands







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Production
For reasons of economic efficiency the manufacture of thread rolling dies and broaching tools requires machining with a high driving power as well as an exceptionally rigid machine construction.

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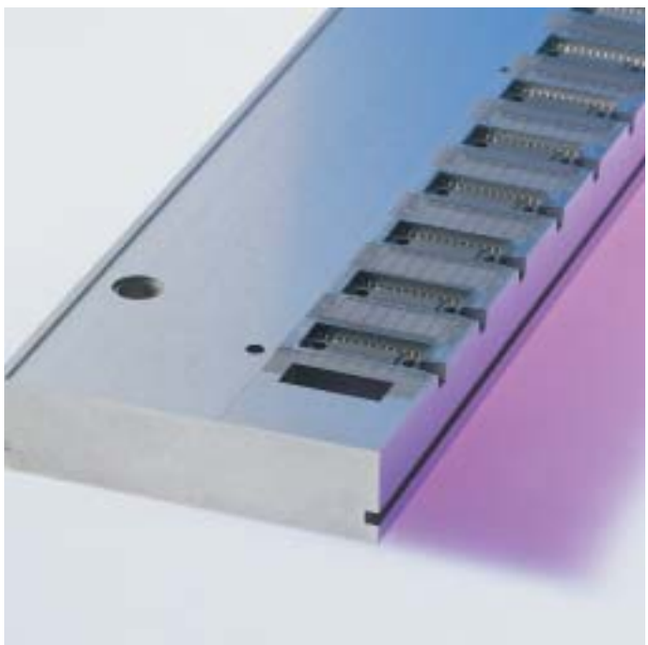
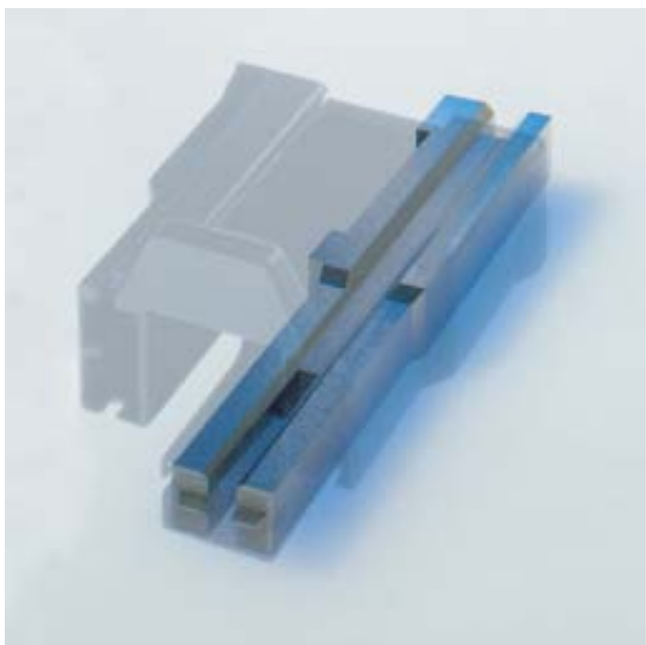
Manufacture of cutting tools
The grinding of punching dies and bending tools is a traditional area of operation for Jung machines. The service life of tools produced by grinding can be as much as 4 times longer than tools made by eroding.

expected by our customers, and the ability to provide the appropriate intelligent solutions, make us an exceptionally competent partner in all matters related to grinding.

These are only a few of an endless number of different examples of the diverse range of applications of the Jung series of machines.





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Mould making
Exchangeability of products that are becoming increasingly smaller is only possible with divided and precision ground mould cores. Machining times are often significant shortened compared with eroding.

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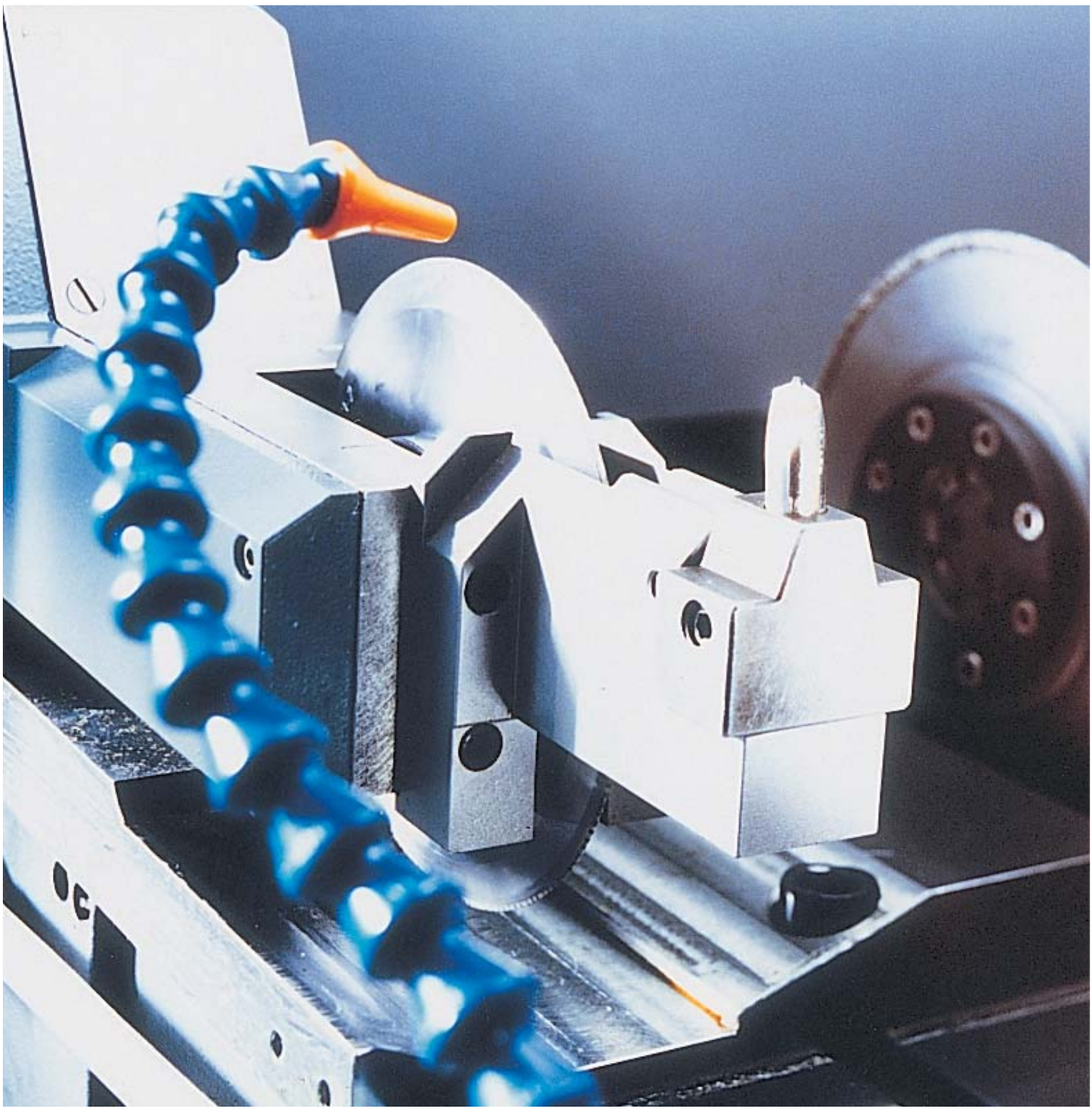
Special-purpose applications
A hard-metal die is used to punch the microchip terminal pins out of this punching strip. Groove widths of less than 2/10 mm can be achieved on Jung machines at a degree of parallelity and rectangularity accuracy in the μ-order.



Convincing dressing concepts are a focal point of the C-series. This does not apply to profile grinding, but to an increasing extent also surface grinding. There can be no doubt that the economical operation of a surface and contour grinding machine is significantly influenced by a conclusive dressing concept.

With the operation of different dressing devices in conjunction with intelligent dressing programs, it is not only possible to fulfill virtually all requirements regarding grinding wheel profiles, but to also offer different variants for automatic straight dressing of grinding wheels. The C-series also offers the possibility of automatic conical clearance of grinding wheels so that prepared grooves can be finished by face grinding.

CNC Profile Dressing Device PA 130 T

The CNC-controlled profile truing device has a driven, swivel diamond truing wheel used to generate complex profiles. Convenient programming is effected by the CNC machine control.

Profile Truing Device AT 70 D

Left: A profile truing device of the very highest stability and with four truing diamonds arranged at 45°. The seperate roughing and finishing station reduces diamond wear. Ideal for clearance truing and normal dressing of simple profile in conjunction with CNC control.

Diamond Roll Profile Device ER 100

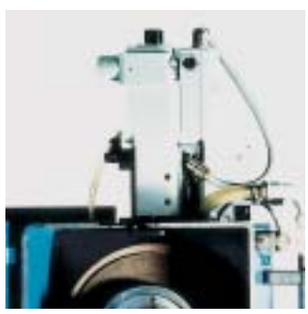
Right: A profile dressing device to true grinding wheels by the single-roll crush dressing method. The device uses diamond contour rolls for this purpose. Economical grinding of medium and large series. Grinding is CNC controlled.

Predressing Device TV-R

A driven, non-swivelling diamond pretruing roll. Radius-parallel rough plunge-cut cycles minimize diamond wear on the PA 130 T. The technology parameters are freely selectable with CNC ma-chine control.

Standard Table Dressing Device

A table dressing device, which is height adjustable by way of a spindle sleeve, is intended for surface dressing of grinding wheels from the machine table. The dressing device is designed for automatic dressing with dressing measure compensation.



Surface Dressing Device AF 100

This electromechanical dressing unit for automatic surface dressing of grinding wheels is located outside the working area of the grinding head. Automatic dressing includes dressing measure compensation. CD dressing possible.

Right from the outset it was the unfailing reliability of a Jung machine that established our "sound reputation". And we will continue to ensure that this proverbial reliability and long service life of our machines will remain unchanged also in the future. For this purpose we offer a comprehensive service package to match the ever tougher competition on the market, and to remain a genuine partner for our customers.

The numerous advantages of the Jung service package:

1
Application Consulting

Our Application Technology Section is at your disposal with advice and assistance prior to the purchase of a new machine, and will continue to help you resolve any machining problems during the subsequent period.

2
Training

An experienced team of instructors on our training center will instruct your personnel to operate our machines competently, thereby ensuring speedy access to the new technology.

3
Second-hand machinery

We are happy to accept a "used machine" in part payment when a new Jung machine is purchased, and you can also approach us when you are looking for a second-hand machine.

4
Financing

As a result of many years of close cooperation with reputed leasing companies, we are certain that we can submit interesting offers in this respect. In this manner you will be able to realize your investments without tying up your capital for prolonged periods.

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5
Repairs

A worldwide, competent and reliable service organization is instantly at your disposal to remedy any problems in the very rare event that this becomes necessary. The organization maintains service centres in Austria, Germany, Switzerland, Netherland, Portugal, Italy, Hongkong, Singapore and Japan, to name a few. In China all repair work is handled by our subsidiary Tianjin GMS, German Machine Tool Service Co., LTD.

6
Maintenance

More and more customers are having their machines serviced at regular intervals. This prevents potential machine failures as a result of normal wear, and withit loss of production and delays in delivery. Make an appointment with our maintenance team or conclude a servicing agreement with us.

7
Engineering

With the development of our products we not only fulfil all the requisite statutory requirements and laws, but also the much tougher demands of our own Jung standards! You are therefore guaranteed a reliable and practice-proven high-precision product. The development of innovations and customized solutions ranks among our most important engineering activities.

Table	C 740
Ground area	800 mm x 430 mm
Magnet dimensions	800 mm x 400 mm
Max. grindable workpiece area	880 mm x 510 mm
Max. space between table and spindle centre	735 mm
Permissable load, incl. magnetic plate	800 kg
Height over floor	900 mm
Main spindle drive	
Digital servomotor	
Continuously variable speed	1500 - 4300 rpm
Driving power	15 kW, Option bis 22 kW
Cutting speed (with variable speed spindle)	up to 45 m/s, Opt. bis 63 m/s
Grinding wheel	
Max. diameter	400 mm
Max. width	100 mm
Bore hole	127 mm
Max. radial wear	95 mm
X-axis (table motion)	
Traversing speed	
Reciprocal grinding	1000 - 40000 mm / min
Creep-feed grinding	0,1 - 1000 mm / min
Traversing path between mechanical end positions	1100 mm
Working stroke	max. 880 mm
Y-axis (vertical motion)	
Traversing speed	max. 5000 mm / min
Traversing path between limit switches	585 mm
Measuring system resolution	0,2 µm
Z-axis (cross motion)	
Traversing speed	max. 5000 mm / min
Traversing path between limit switches	460 mm
Measuring system resolution	0,2 µm
Installation data	
Width	3100 mm
Depth	2500 mm
Height (depending upon configuration)	1950 - 2500 mm
Weight	approx. 4900 kg
Electrical values	
Voltage and frequency	400 V, 50 Hz
Connected load (at 15 kW driving power)	30 kW
Machine colour	
Standard	Light grey RAL 7035
	Basalt grey RAL 7012
Optional	Customized

J3-1002 Subject to technical changes. Gruppe Mayländer, Stuttgart.

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