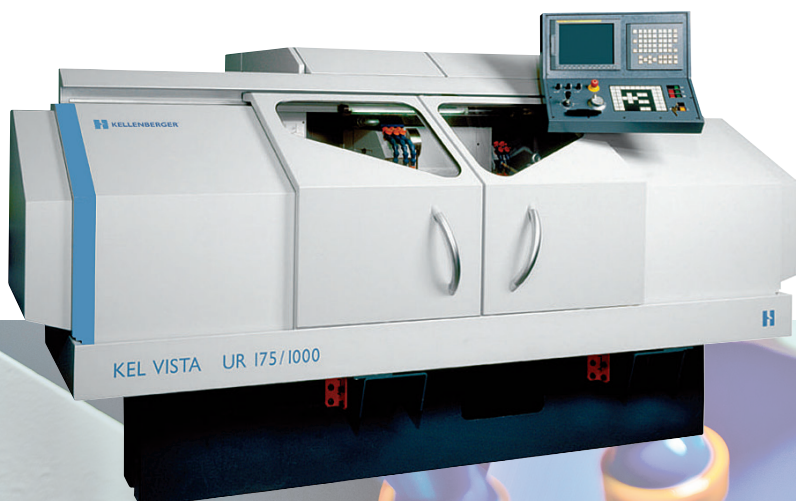




# KEL-VISTA

The economical  
universal CNC machine



[kellenberger.com](http://kellenberger.com)

 **KELLENBERGER**

# KEL-VISTA — The economical universal CNC machine

2



KEL-VISTA - The machine offering an optimal view on the grinding process, economical, innovative in set-up and operation.

Designed for use in highly demanding tool- and mouldmaking, in machine and prototype construction, in maintenance workshops, laboratories, for economical small and medium batch production, or, in other words, wherever flexibility, precision and cost-effectiveness are indispensable.

The KEL-VISTA is designed to be a cost-effective CNC-alternative to hydraulically-controlled cylindrical grinding machines. Programming knowledge is now no longer necessary, thanks to the simple, user-friendly Kellenberger menu-based programming.

The KEL-VISTA has been very compactly designed with coolant tray which is separated from the machine base, an integrated transport system and swivelling upper table.

The swivelling workhead is suitable for grinding between dead centers and for chucked work, is a further example of the machine's progressive design. The thermally-optimized bearings guarantee the highest roundness and dimensional accuracy.

Also the wheelheads of the UR-, R- and RS-machine models exhibit thermal stability thanks to optimized spindle bearings and water-cooled motors.

The Z-axis movement uses traditional guideways, which guarantees a high degree of damping, while the X-axis movement utilizes roller guideways, which in turn facilitates non-stick slip positioning.

The KEL-VISTA is the synonym for cost-optimized, 100% reproducible universal grinding thanks to its CNC-control system.



## SPECIFICATIONS



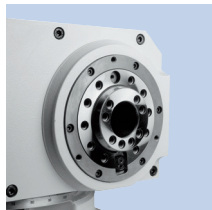
### Workhead

- n l-1000 min-1



### Tailstock

- morse taper 4
- retraction of sleeve 48 mm



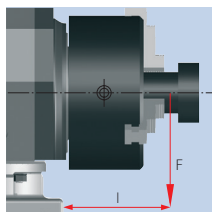
### Spindle nose

- size 5 DIN 55026
- morse taper 5



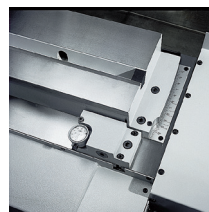
### Micro-adjustment of tailstock

- adjustment range +/- 60 µm

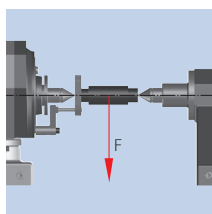


### Load with chucked work

- 100 Nm

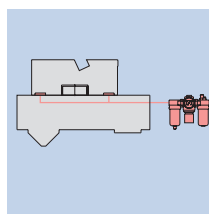


### Upper table swivelling

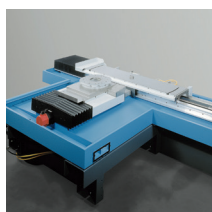


### Load between centers

- 100 kg

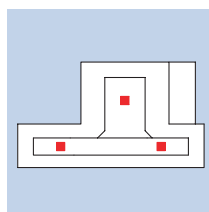


### Upper table with air cushioning feature



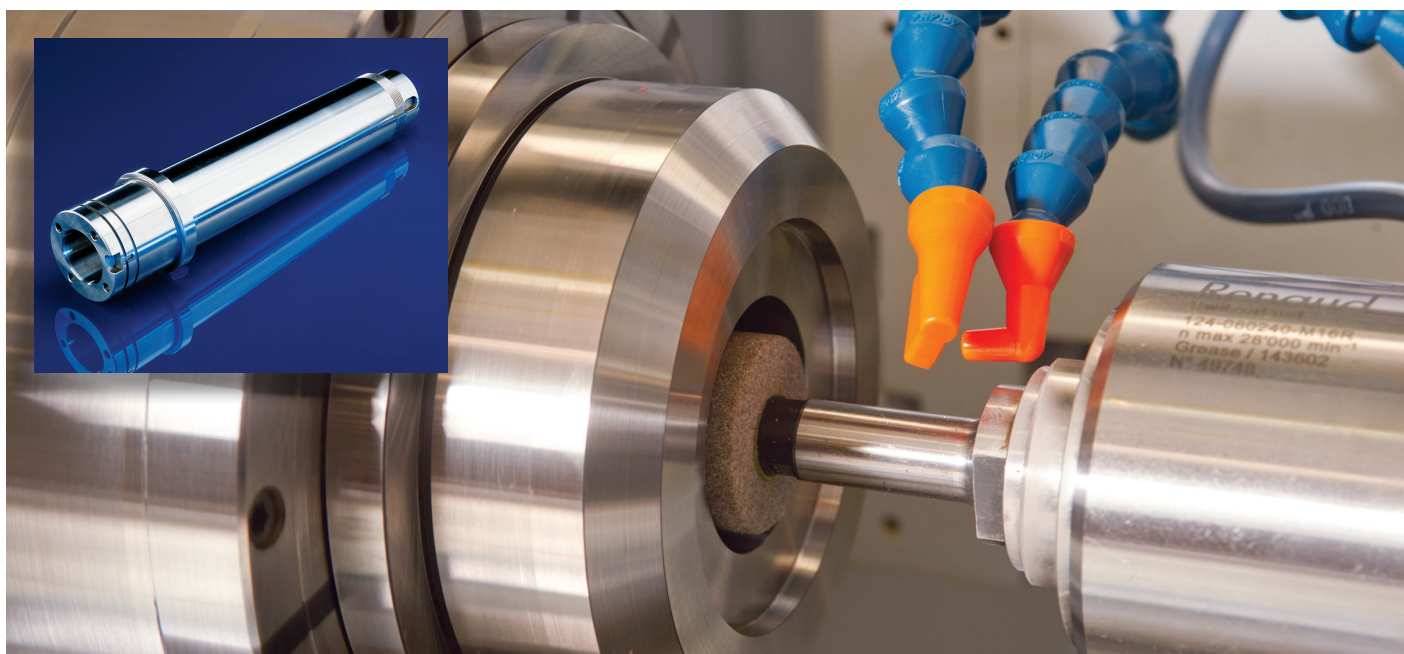
### Design

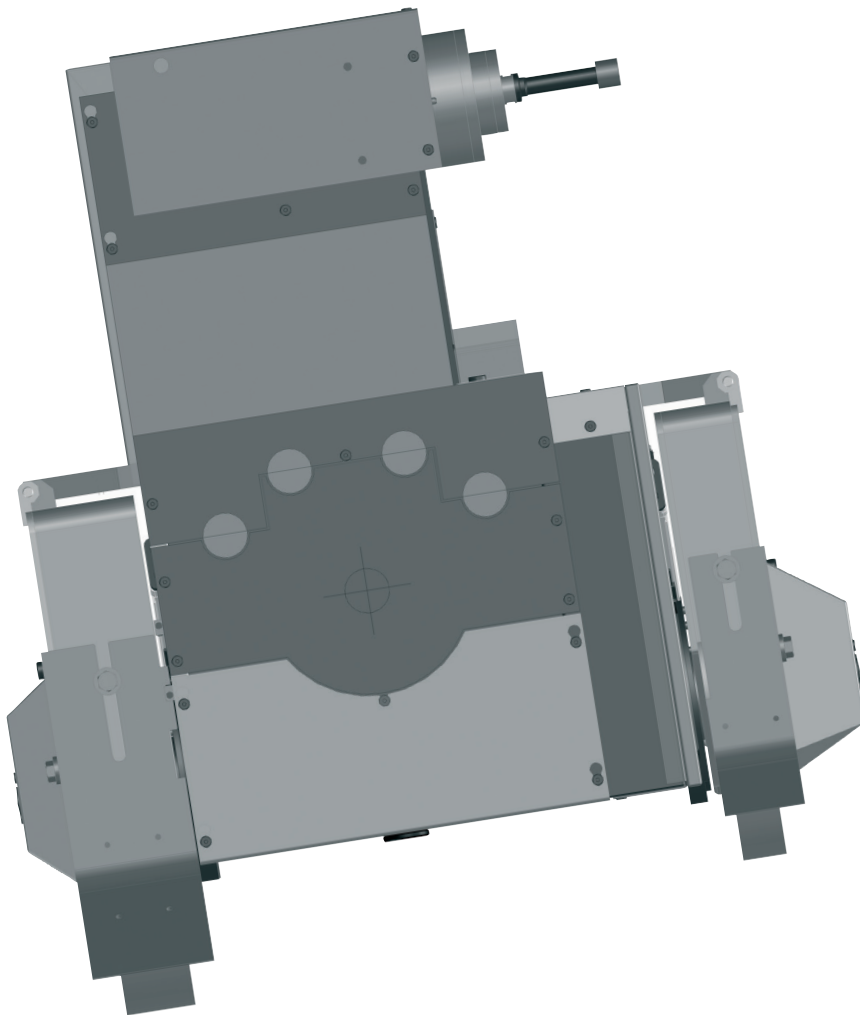
- separation of base and infrastructure
- no external influences on machining processes



### Three-point set-up

- no special foundations required for installation





## UR-Wheelhead

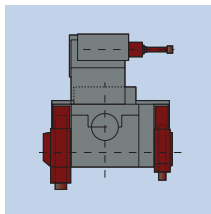
- Wheelhead for external and internal cylindrical, and for face grinding
- Internal grinding with variable peripheral wheel speed
- Automatic swivelling of the wheel head, 1° indexing
- Thermal stability, thanks to optimized spindle bearings and a water-cooled motor
- Motor output 6 kW
- Grinding wheel dimensions  
 $\varnothing 400 \times 63 \times 127$  mm or  
 $\varnothing 450 \times 80 \times 203$  mm



## RS/R-Wheelhead

- Wheelhead for external cylindrical or angular infeed grinding
- Thermal stability, thanks to optimized spindle bearings and a water-cooled motor
- Manual swivelling of the wheelhead, 2.5° indexing
- Motor output 6 kW
- Grinding wheel dimensions  
 $\varnothing 450 \times 80 \times 203$  mm

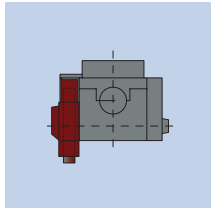
## SPECIFICATIONS



### UR-wheelhead

for external, internal and face grinding

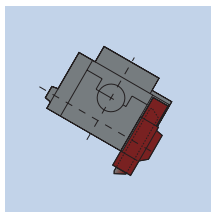
- v-constant for external grinding
- infinitely variable drive for external grinding



### R-wheelhead

for external cylindrical grinding

- v-constant



### RS-wheelhead

for Angular infeed grinding

- grinding lengths 400 / 800 mm
- v-constant



### Water-cooled precision-balanced drive motors

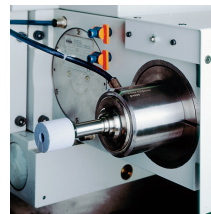
- use of spindle bearings



### Spindle bearings

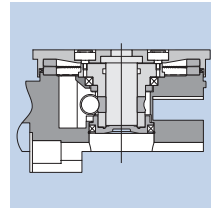
- high-accuracy spindle bearings, pre-stressed

## INTERNAL GRINDING, SWIVELLING SYSTEM AND ACCESSORIES



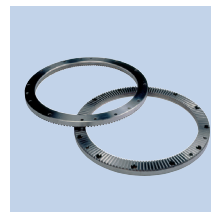
### Internal grinding attachment

- Belt-driven internal grinding spindle
- 828 = max. 28000 min<sup>-1</sup>
- 842 = max. 42000 min<sup>-1</sup>
- 860 = max. 60000 min<sup>-1</sup>

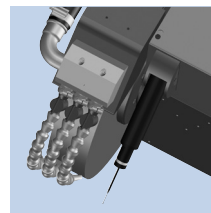


### Indexing

- manual indexing 2.5°
- automatic indexing 1°

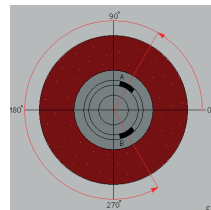


### Hirth coupling



### Active flagging device KEL-POS

- determines component position in Z-axis
- mounted on wheelhead



### KEL-BALANCE

- semi-automatic balancing for I wheels

## THE ADVANTAGES AT A GLANCE

### Universal applications

The cost-effective alternative to hydraulically-operated cylindrical grinding machines

### Simple operation

No programming knowledge necessary

### FANUC 0i CNC control system

Super simple operation thanks to menu-prompting

### Thermally stable wheelhead

Thanks to optimized spindle bearings and a water-cooled motor

### Excellent visibility of grinding

Due to the ideal arrangement of the viewing windows and center height

### Optimized ergonomics

For manual loading and unloading on account of the low machine base height

### The CNC-alternative

At the price of a hydraulic machine

- The new definition of a universal cylindrical grinding machine
- Very short change-over times, thanks to a travelstick and a handwheel
- Comprehensive accessories for the most varied applications





Technical Data

Machine type			
Main specifications			
Distance between centers	mm	800	1000
Grinding length	mm	600	1000
Center height	mm	175	
Weight of workpiece between centers	kg	100	
Load on chucked work	Nm	100	
Mains voltage required		3 x 400V / 50 Hz / 3 x 460V / 60 Hz	
Power consumption depending on equipment	A	32	
Space required / length x width	mm	2400 x 1700	3000 x 1700
Longitudinal / slide: Z-axis			
Travel	mm	750	1150
Rapid traverse speed	m/min	12	
Resolution	µm	0.1	
Swivelling range of upper table	degree	9	
Wheelslide: X-axis			
Travel	mm	350	
Rapid traverse speed	m/min	6	
Resolution	µm	0.1	
Swivel devices			
Autom. indexing / 1° Hirth coupling		option	
Man. indexing / 2.5° Hirth coupling		yes	
Swivelling range	degree	220	
Wheelhead general			
Drive motor water-cooled	kW	6	
Peripheral grinding wheel speed	m/s	35 / 40	

## SPECIFICATIONS

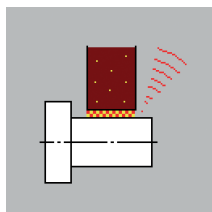


### Monitor

- 10.4" TFT
- Softkeys

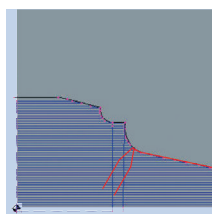


- travel stick for an easy and rapid set-up



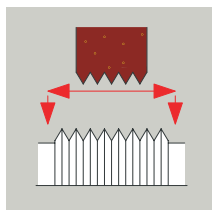
### GAP CONTROL

- operation and display integrated in the control system



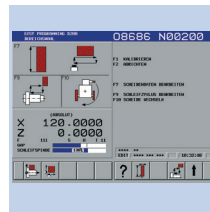
### KEL-ASSIST

- SW package for the preparation of contour-grinding or profile-dressing programs
- DXF import, threads, clearing cycles



- thread grinding of external and internal threads
- KEL-THREAD for setting up dressing programs

## KEL-EASY/KEL-ISO/Accessories



### KEL-EASY



### KEL-ISO



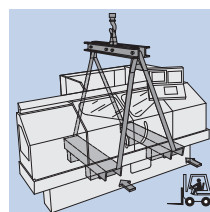
### Additional panel

- for Movomatic or Marposs in-process gauging systems
- for auxiliary units



### Swivel angle display

- for manual swivelling of the workhead



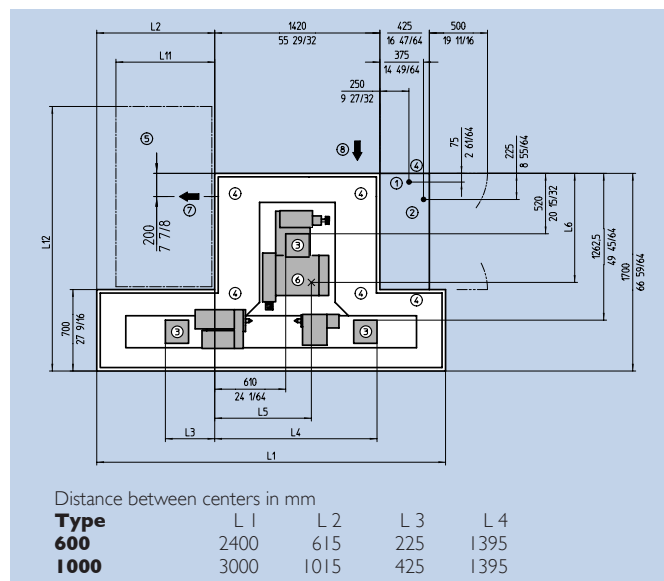
### Transportation

- hook machine
- rapid positioning of machine

<b>Wheelhead R / UR</b>		
Grinding wheel dimensions, lefthand side	mm	400 x 63 x 127
	option mm	450 x 80 x 203
Grinding wheel dimensions, righthand side	option mm	300 x 40 x 127
<b>Wheelhead RS</b>		
Grinding wheel dimensions, righthand side	mm	450 x 80 x 203
<b>Internal grinding attachment only for UR</b>		
Bore for spindles up to	mm	120
Rotational speed of spindle, motor infinitely variable	min-1	6'000 - 21'000
Motor output	kW	3
<b>Workhead</b>		
Rotational spindle speed	min-1	1 - 1000
Driving torque spindle	Nm	15
Spindle nose / internal taper		DIN 55026 #5 MT5 / ASA 5
Swivelling range	option degree	110
<b>Tailstock</b>		
Internal taper		MT4
Retraction of sleeve	mm	48
Micro-adjustment	option µm	+ / -60
<b>CNC control system</b>		
FANUC		0i
<b>Measuring systems</b>		
Gap Control		KEL-TOUCH
Active longitudinal positioning		Movomatic
Passive longitudinal positioning		Movomatic / Marposs
In-process gauging		Movomatic / Marposs

All specifications and designs are subject to alterations without notice

## Space-assignment plan



# Competence and a world-wide partnership

01/2014



Over the years the Hardinge Group has constantly evolved its range of products and areas of activity. As globally active and diversified company, the Hardinge Group has production sites in North America, Europe and Asia.

In addition to the development and construction of turning machines and work-holding fixtures, with Bridgeport the Hardinge Group also has a manufacturer of machining centers.

The Hardinge Group is a major global provider of customer-specific solutions for grinding applications. The Hardinge Grinding Group encompasses all activities in the areas of cylindrical, surface and jig grinding, and includes the well known brands of Kellenberger, Hauser, Tschudin, Jones & Shipman and Usach.

The Hardinge Grinding Group has a global network of partners with trained staff in sales, service and application engineering. This guarantees competent advice and support for evaluation, purchase, and use of the grinding systems.

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## **Your local KELLENBERGER Partner:**

