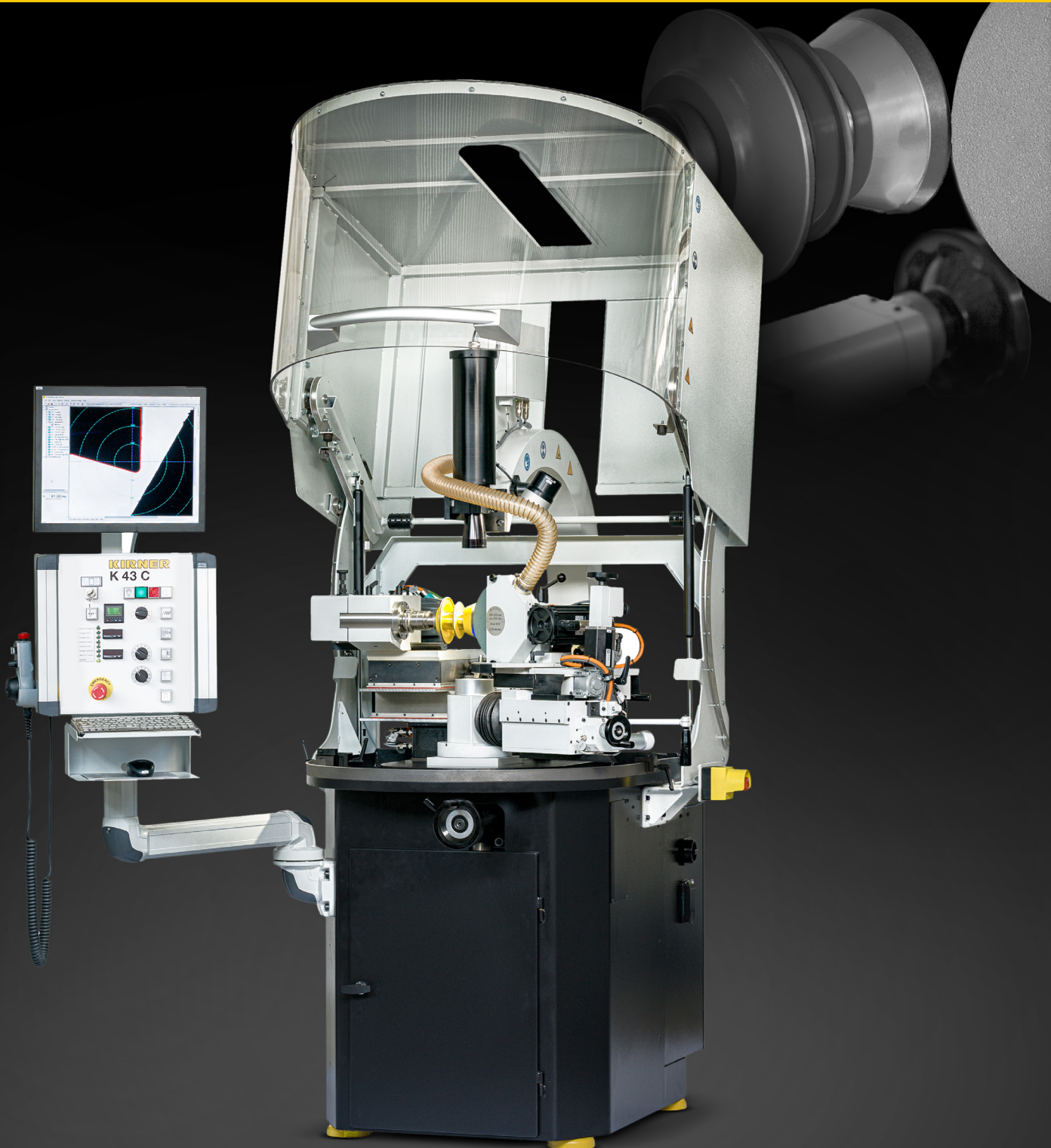


Dressing machine

ULMER
WERKZEUGSCHLEIFTECHNIK

K43C KIRNER

Discipline: Discs



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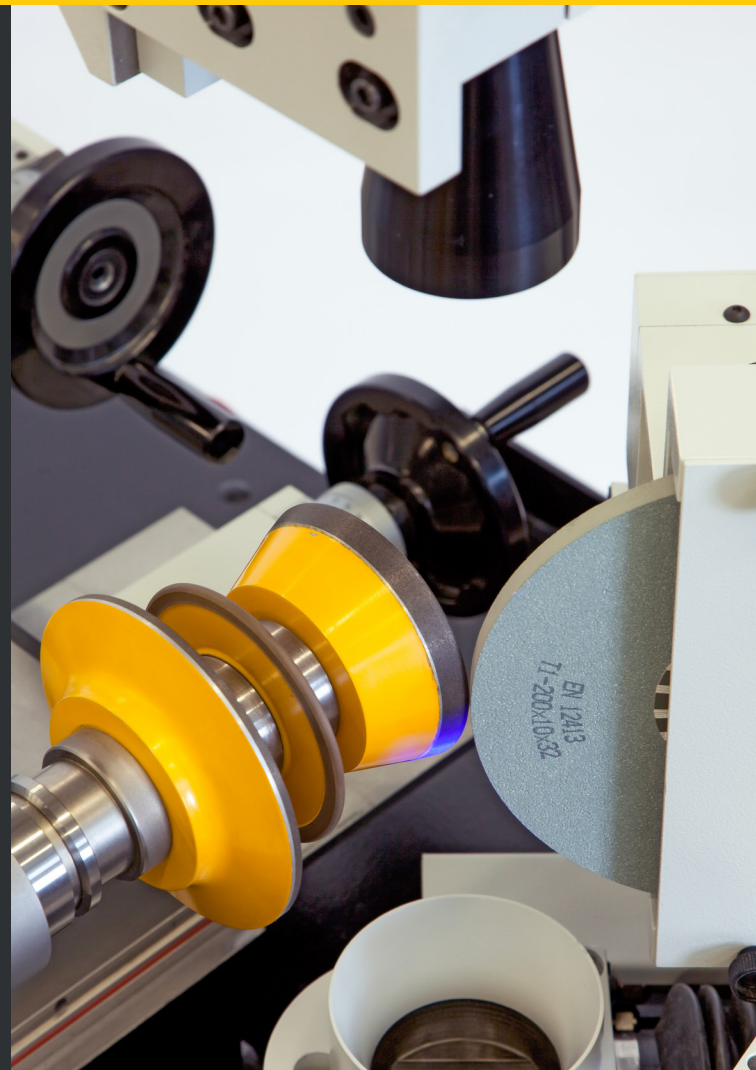
All about the wheels

Dressing and profiling of diamond and CBN grinding wheels with a diameter of up to 400 mm and weighing up to 50 kg.



Good to know

- Stable dressing process due to heavy weight of machine.
- High rigidity thanks to pre-stressed roller guides in all axes.
- Dressing and profiling of diamond and CBN grinding wheels.
- Machining of single wheels and wheel packs.
- Fast and simple dressing due to variable teach-in of the oscillating actuator using the handheld controller.
- Creation of precise profiles with an optimal radial run-out.
- Interface: mounting ISO 40 (HSK 50 optional).
- Additional options such as integrated displacement measurement system for axes X/Y/A and automatic infeed in connection with access protection.



Extremely precise sharpening and shaping in one process

Optimally adjustable process parameters:

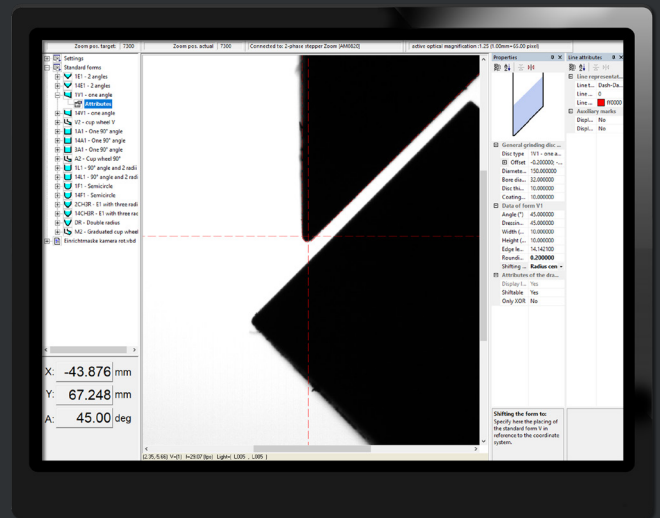
- Relative speed adjusted to the grinding wheel specification.
- Dressing in rotation and counter-rotation.
- Oscillation stroke with automatic infeed (optional).

Example use cases of possible grinding wheel profiles



Optical system

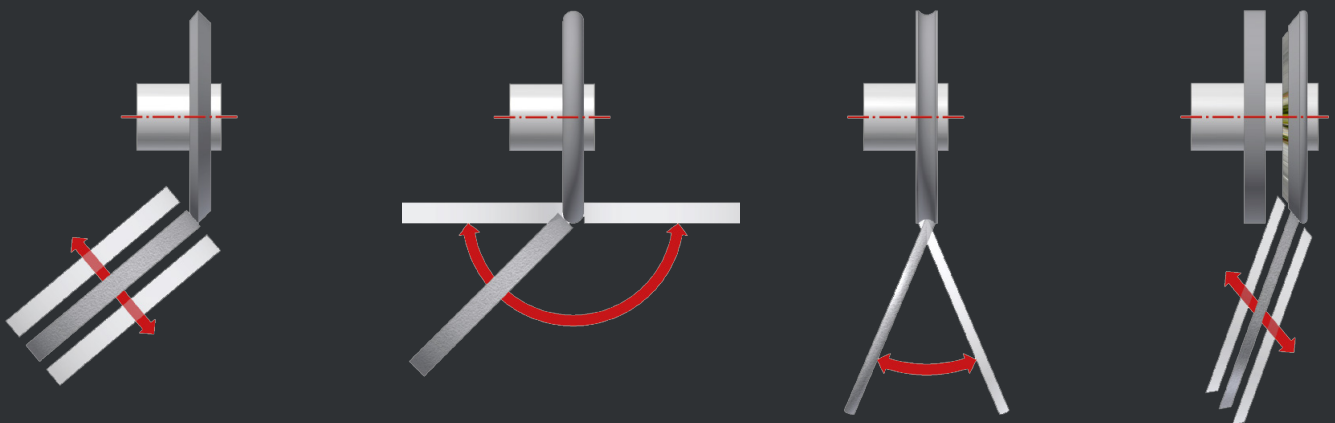
- Extremely small radii of up to 0.04 mm are visualized and can be reliably profiled.
- Reproduction of geometries without distortions (telecentric).
- High resolution camera with high frame rate (30 frames/sec) for an image virtually in real time.
- Zoom range from 9x to over 100x.
- Very small geometries can be profiled and visualized.



KirCam – visualization software

- Extensive database of profile templates.
- DXF import of profiles produced in-house.
- Available and imported profiles can be processed directly on the machine.

Dressing variants



Double-sided dressing of chamfers

Swivel range $\pm 96^\circ$ for dressing radii

Dressing of shaped wheels with inner radius

Dressing of wheel packs

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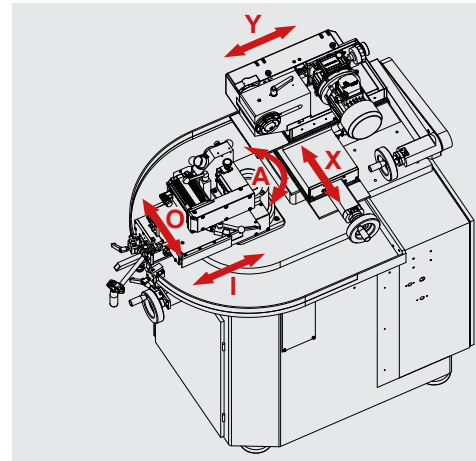
Technology

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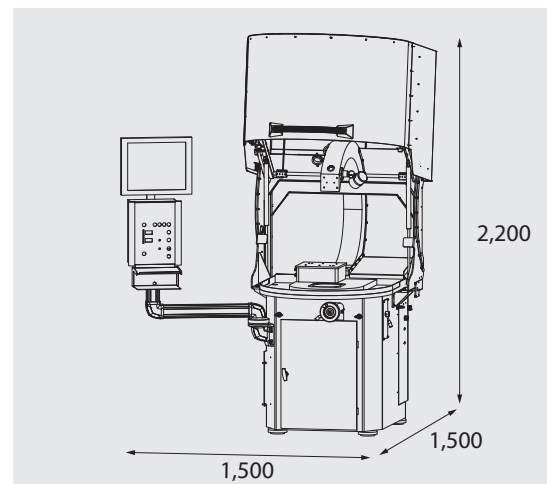
K43 C performance data

Workpiece spindle	Mounting	100 x 160 mm
	Taper	ISO 40 (HSK 50 optional)
	Continuously variable speed	200 - 1,800 rpm
	Direction of rotation	Rotation/counter-rotation
Table coordinates	Travel X-axis	150 mm
	Coarse adjustment X-axis	80 mm
	Travel Y-axis	130 mm
	Coarse adjustment Y-axis	45 mm (60 mm)
Dressing unit	Dressing disc \varnothing max.	200 mm
	Dressing disc width max.	20 mm
	Continuously variable speed	1,000 - 3,000 rpm
	Mounting hole	32 mm
	Swivel range	$\pm 96^\circ$
	Oscillation stroke	42 mm
	Infeed	manual/automatic
Camera monitor system	Monitor	19" industrial TFT
	Camera zoom range	9x, 20x, 40x, 55x and 100x
Machine	Connected load	12 kVA
	Voltage/frequency	400 V/50 Hz
	Dimensions W x D x H	1,500 x 1,500 x 2,200 mm
	Weight	1,000 kg

Kinematics



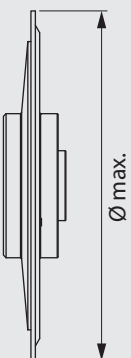
Dimensions [in mm]



Workpiece dimensions

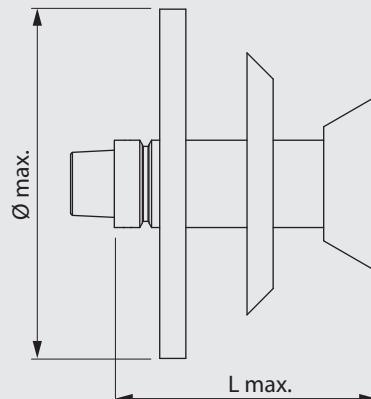
Single wheel

\varnothing max. 350 mm (400 mm)
Weight max. 50 kg



Grinding wheel pack

Length max. 150 mm / \varnothing max. 350 mm
Weight max. 50 kg



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