

Type EG5 Tool Applications: Cylinders, faces, tapers and bores

Diameters 55 mm and larger

Features

- Roller burnishing of cylindrical and tapered external surfaces, external or internal faces, and cylindrical and tapered bores (specially designed models available for tapers)
- For use with either CNC-controlled or conventional lathes
- Complete processing in one setting
- Achievable surface quality: $R_z < 1 \mu\text{m}$ ($R_a \leq 0.2 \mu\text{m}$)
- Suitable for metals with tensile strength up to 1400 N/mm^2 and maximum hardness $\text{HRC} \leq 45$
- Symmetrical construction allows either right or left hand operation
- Feed in the direction of the arrow label on the tool
- Roller can rotate in either direction

Advantages

- Short cycle time
- Eliminates set-up and auxiliary processing time
- For use with either CNC-controlled or conventional lathes
- No dust or grinding residue
- Minimal lubrication required (oil or emulsion)
- Variable burnishing force dependent on spring deflection
- Accurately measured burnishing force ensures consistent, high quality results
- Unrestricted roller face for roller burnishing shoulders and other edges
- Spring assembly allows roller head to move with no play and very low friction
- Modular construction allows these tools to be used in several configurations
- Easy to change wear parts
- Tool design includes fixed roller clearance angle α

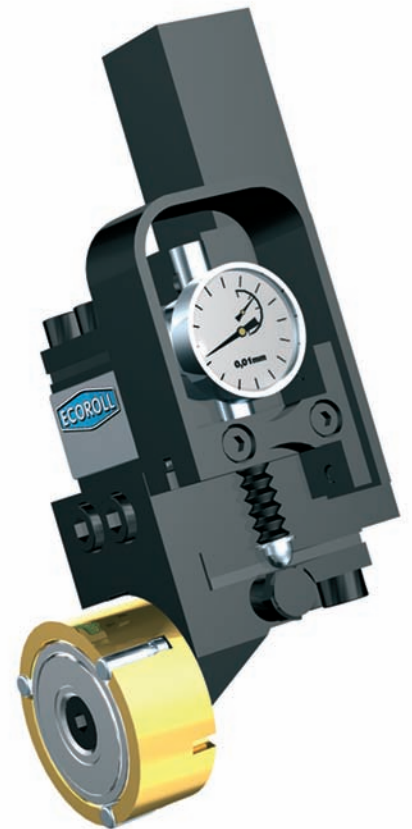
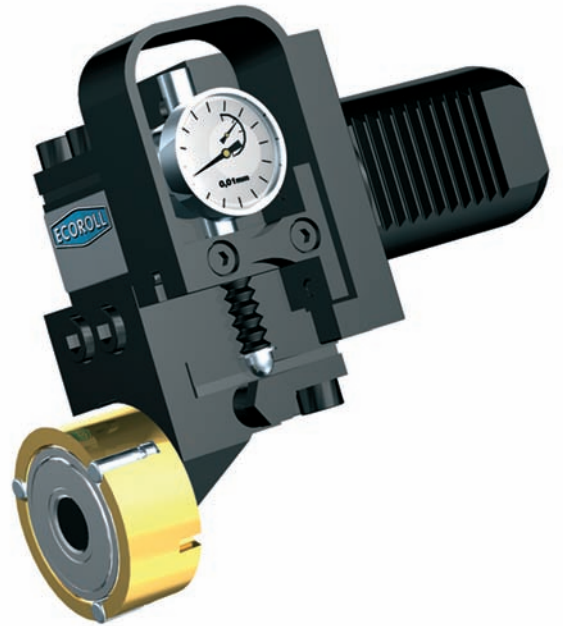
Parameters

- Maximum circumferential speed: 150 m/min.
- Maximum feed rate: 0.6 mm/rev.
- Maximum burnishing force: 3000 N

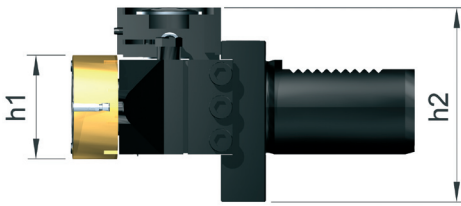
Bore Application

with Design Version 1 (see illustrations, following page)

Bore depth (mm)	≤ 16	> 66
Smallest bore diameter (mm)	55	140



Tool Design and Specifications



Basic tool design

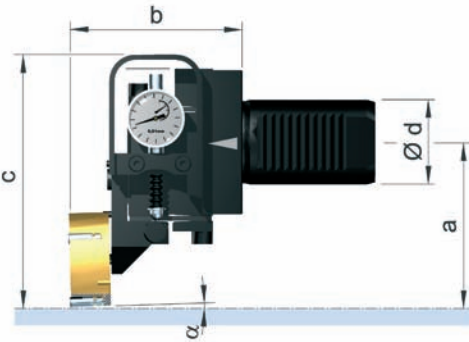
Type EG5 single roller burnishing tools consist of a tool body equipped with a tool shank, a spring assembly that allows the roller head to move with no play and very low friction, and a gauge that indicates the burnishing force as measured by spring deflection. An optional device transmits the values by cable or wireless signal to an external indicator.

The roller head is attached to the flexible, spring-loaded section of the tool body. The roller head consists of a cage, which contains and guides the burnishing roller, and a support roller with a large-scale needle bearing. The cage also contains two spare rollers.

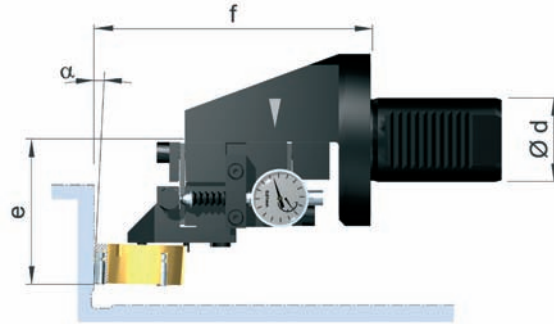
How to order:

Four versions of this tool are available. Please refer to the following illustrations and table.

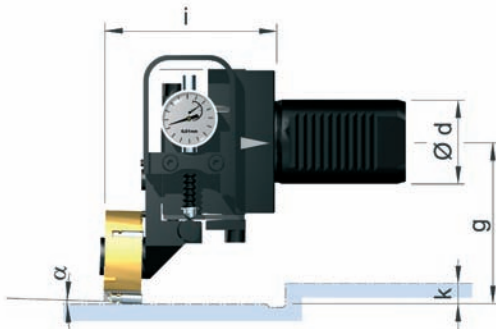
Tool type **EG5-3-VDI30** Shank: VDI = DIN 69880 SL = square shank
 Design version: See illustrations. Specially designed tools for machining tapers by request.



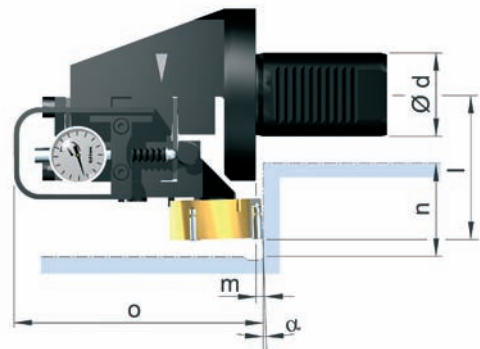
EG5, Design 1
Cylindrical surfaces



EG5, Design 2
Faces on the chuck side



EG5, Design 3
Cylindrical surfaces
Feed direction: toward tailstock



EG5, Design 4
Faces on the tailstock side

Tool type	VDI shank $\varnothing d^{1)}$ (mm)	Height (mm)		Square shank (mm)	Variable dimensions per design version (mm)											
		h_1	h_2		1			2		3			4			
					a	b	c	e	f	g	i	k	l	m	n	o
EG5	20	45	67	16	78	82	120	64	111	78	84	10	84	3	44	120
	30		77	20				69								
	40		82	25				112								

NOTE: 1) Optional sizes