

Type EG14 Tool Applications: External surfaces and bores, cylindrical and tapered

Diameters 120 mm and larger

Features

- Machines 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/mm² and maximum hardness HRC ≤ 45
- Modular construction allows these tools to be used in several configurations
- Symmetrical construction allows either right- or left-hand operation
- Rotates in either direction
- Tool design includes fixed roller clearance angle α



Advantages

- Short cycle time
- No auxiliary processing time necessary
- No dust or grinding residue
- Minimal lubrication required (oil or emulsion)
- Infinitely variable burnishing force
- Accurately measured burnishing force ensures consistent, high quality results
- Unrestricted roller face makes roller burnishing of shoulders and other edges possible
- Easy to change wear parts

Parameters

- Maximum circumferential speed: 200 m/min.
- Maximum feed rate: 1 mm/rev.
NOTE: Feed in the direction of the arrow label on the tool (see tools, following page)
- Maximum burnishing force: 10,000 N

Bore Application

with Design Version 1 (see illustrations, following page)

Bore depth (mm)	≤ 25	≤ 50	> 50
Smallest bore diameter (mm)	120	150	180

Tool Design and Specifications



Basic tool design

Type EG14 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.

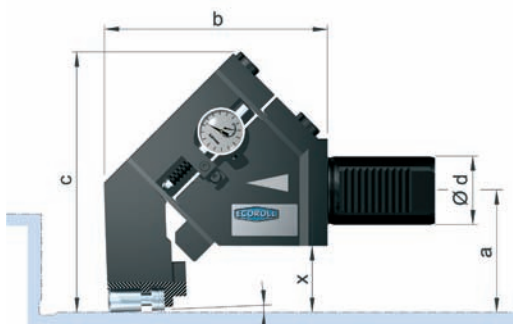
The roller head is attached to the flexible, spring-loaded section of the tool body. The roller head consists of a cage, which contains and guides the burnishing roller, and a support roller with a large-scale needle bearing.

How to order:

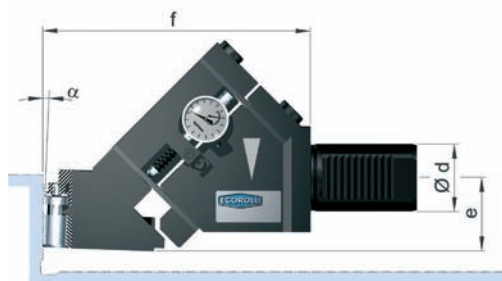
Four versions of this tool are available. Please refer to the following illustrations and table.

Tool type **EG14-1-VDI50** Shank:
 VDI = DIN 69880, double toothed
 SL = square shank
 Specially designed shanks by request

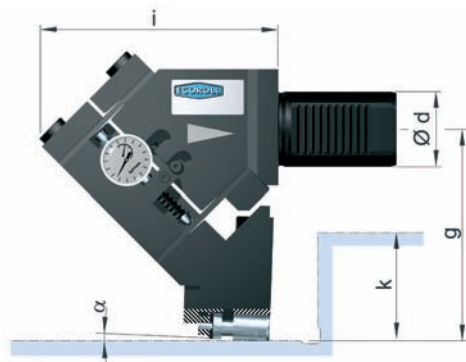
Design version: see illustrations.
 Specially designed tools for machining tapers by request.



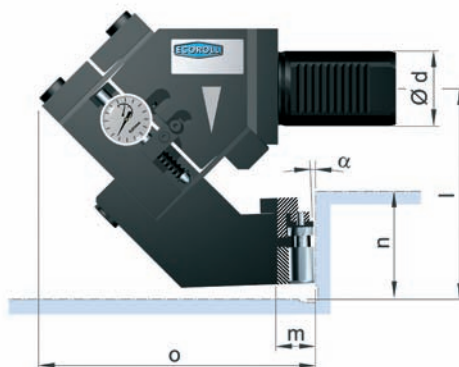
EG14, Design 1
Cylindrical surfaces



EG14, Design 2
Faces on the chuck side



EG14, Design 3
Cylindrical surfaces
Feed direction: toward tailstock



EG14, 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			
					$p^{(1)}$	a	b	c	x	e	f	g	i	k	l	m	n
EG14	40	63	81	25 or 32	71	131	152	43	40	159	113	127	50	106	20	50	147
	50		45														
	60		110						150	50							

NOTE: 1) Optional sizes