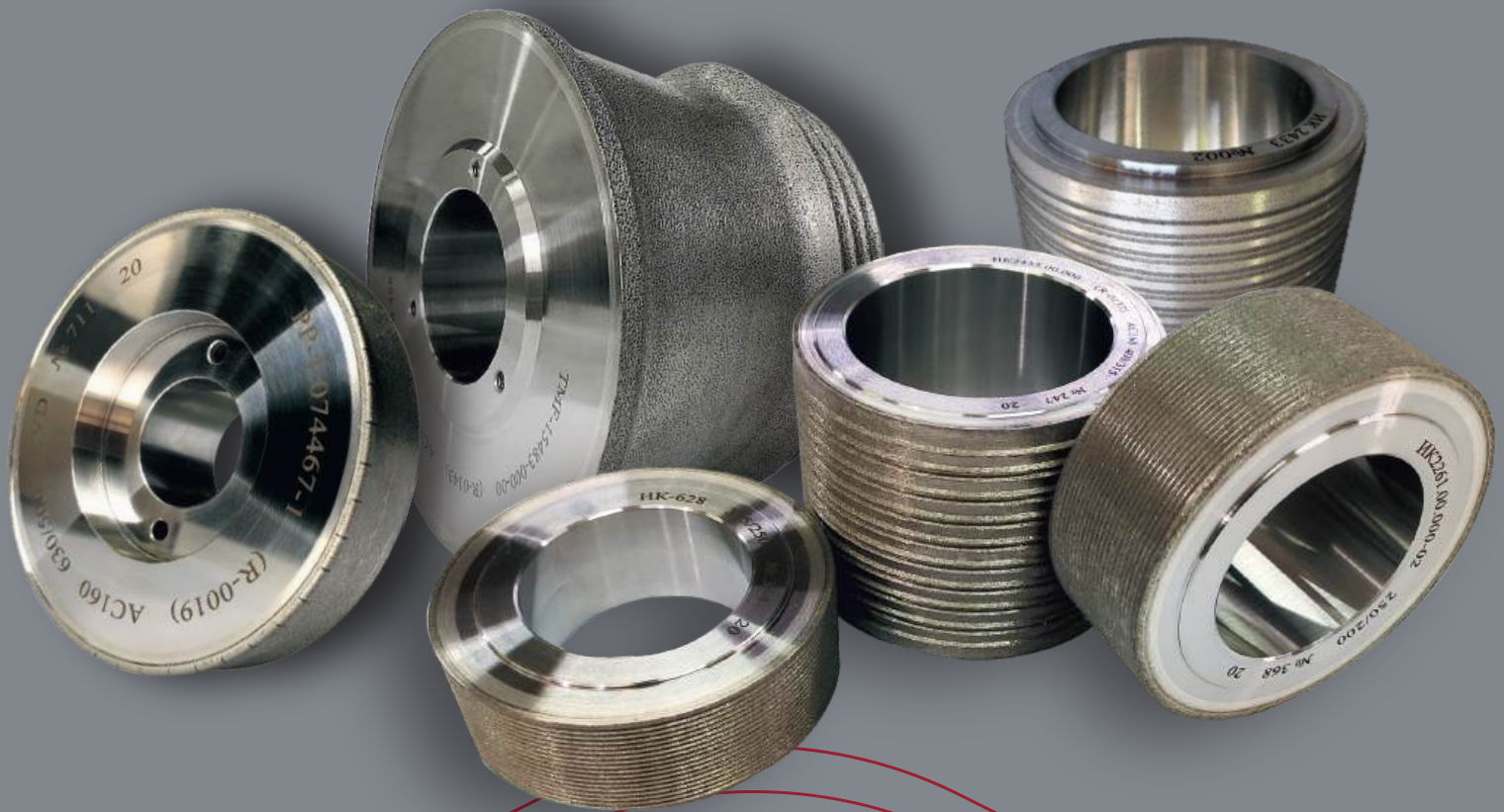


**pdtools**  
SUPERABRASIVES



# **DIAMOND DRESSING ROLLERS**

## DIAMOND DRESSING ROLLERS

Diamond dressing rollers are an integral part of modern grinding methods, primarily used in serial and mass production. These tools create a mirror copy of the profile of the required workpiece on the surface of the grinding wheel. Subsequently, the abrasive wheel transfers this profile onto the workpiece. Diamond rollers allow the combination of multiple technological operations into one, including turning, milling, and coarse grinding.

The production program of **POLTAVA DIAMOND TOOLS** includes the manufacturing of diamond rollers, which are used for:

- crankshaft processing;
- grinding of ball pins;
- processing of piston rings;
- engine valves production;
- manufacturing of turbine blades;
- grinding of cogwheels;
- thread grinding;
- bearing production etc.

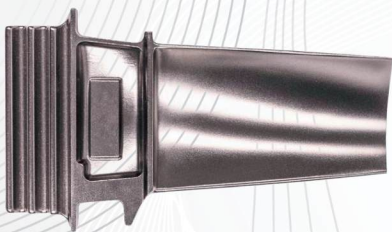
**Advantages in application of diamond profile dressing rollers:**

- creation of the abrasive wheel's profile within minimum possible time;
- profiling the surface of the abrasive wheel in one operation;
- high accuracy even during the grinding of very complex profiles.

**PDTools superabrasives** produces a wide range of diamond dressing rollers for such industries as:

### Aircraft industry

- ▶ production of turbine blades for aircraft engines



- ▶ production of various high-precision parts for the aircraft industry



## Automotive and transport engineering

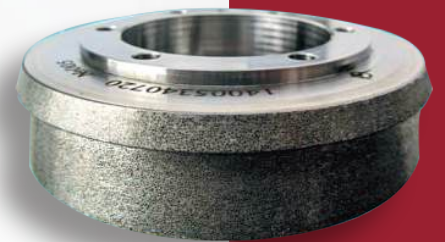
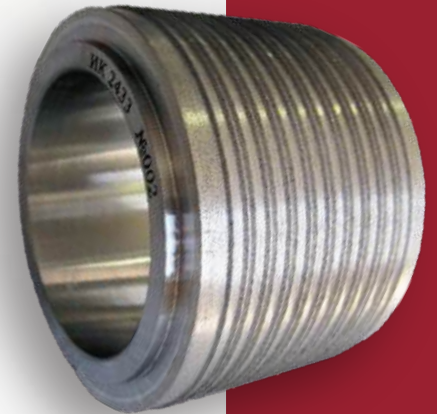
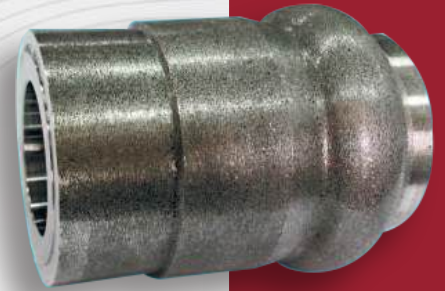
- ▶ production of crankshafts
- ▶ production of ball pins



- ▶ production of piston rings

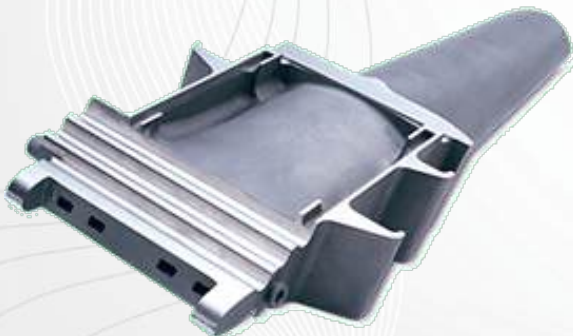


- ▶ valve manufacturing
- ▶ production of gears
- ▶ production of bearing parts



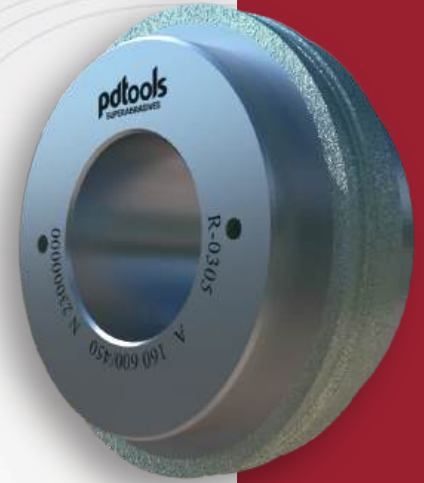
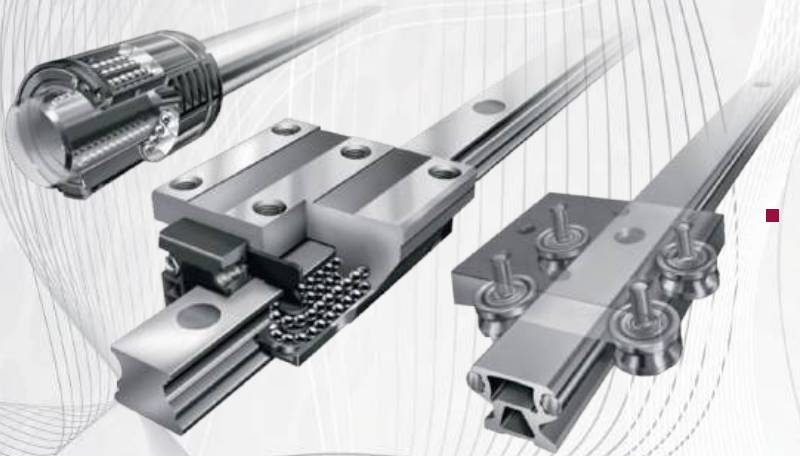
## Power Engineering

- ▶ production of turbine blades for gas pumping stations



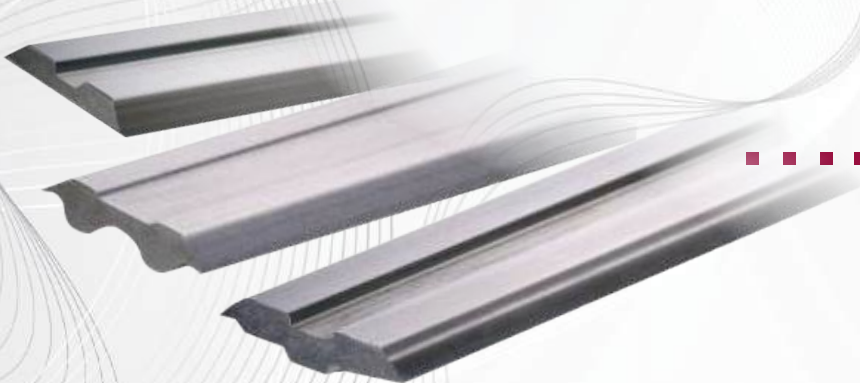
## Machine tool industry

- ▶ diamond dressing rollers for linear guide rails production



## Tool production

- ▶ diamond dressing rollers for planer knives

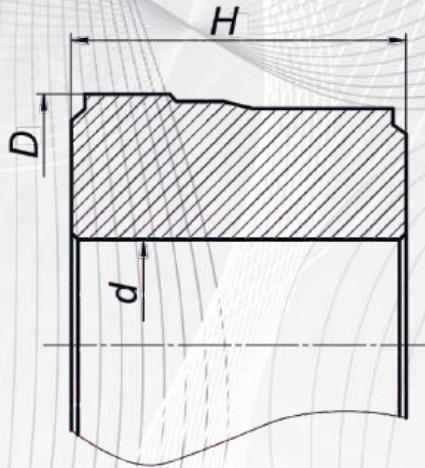


## Dressing rollers with CVD

- ▶ diamond dressing rollers with CVD inserts for grinding profiles with increased roller edge load



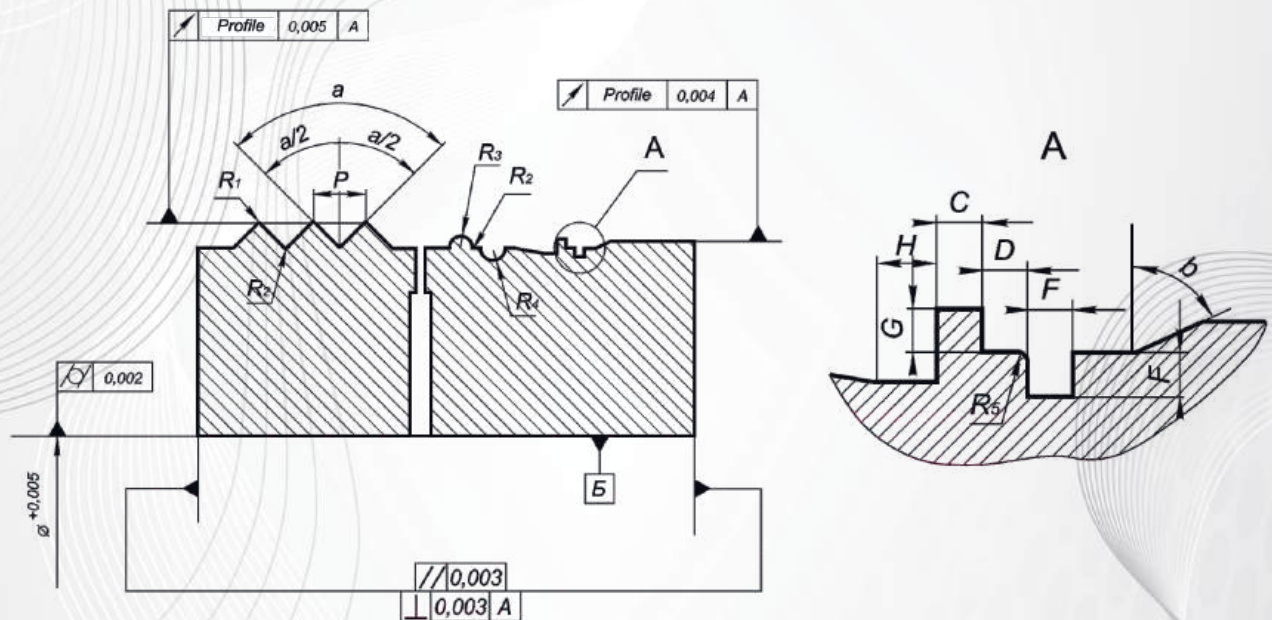
## AVAILABLE DIMENSIONS OF DIAMOND ROLLERS



Dimensions	Dimensions of diamond rollers, mm O2H*
D max	160
D min	65
H max	140
H min	10
d min	20

\*O2H - reverse plated manufacturing method with a non-orientable diamonds bonded with a metal bond. The ratio of the diameter of the diamond roller to its height should be no more than 0.9.

## TOLERANCES OF DIAMOND ROLLER SURFACES



C = ± 0,002	H = ± 0,002	R4= ±0,01
D = ± 0,002	P = ± 0,002	R5= ±0,012
E = ± 0,002	R1= 0,15	a = ±3'
F = ± 0,002	R2= ±0,12	a/2 = ±3'
G = ± 0,002	R3= ±0,01	b = ±3'