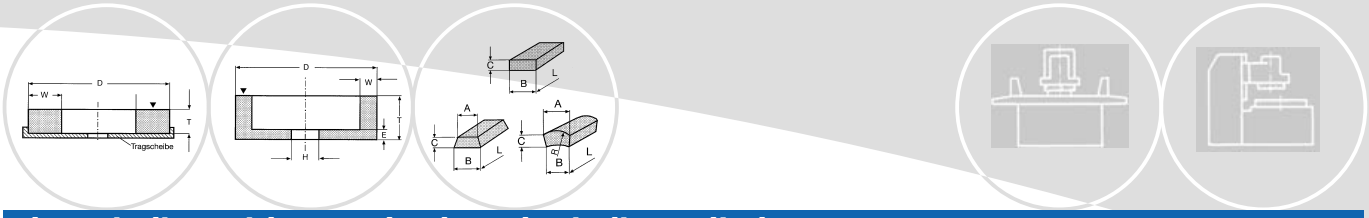
THELEICO quality product range

Shape 2 | Shape 6 | Shape 31.. | Traverse table | Circular table



Flat grinding with cup wheels and grinding cylinders DIN shape No. 2, 6

Application			Grinding wheel specification	
Material	**Alloy**	**Hardness**	**< ø 175 mm**	**> ø 200 mm**
Steel and cast iron	unalloyed and low-alloyed	unhardened	**40A 36-3 H 7 V**	**40A 46-3 I 7 V**
		hardened	**45A 46-9 F11 V**	**45A 46-9 F11 V**
	high-alloyed and HSS, HSS-E	unhardened	**49A 46-0 F 10 V**	**49A 46-0 F 10 V**
		hardened	**24A 36-0 G11 VM**	**25A 46-0 E12 VM**
Grey cast iron, chilled cast iron			**85C 36-3 G 7 V**	**85C 36-3 G 7 V**
Aluminium alloys, bronze, brass, copper, magnetic material (magnetic clamping tables)			**89C 54-9 F 12 V**	**89C 54-9 F 12 V**

Flat grinding with grinding segments DIN shape No. 3101, 3102, 3103, 3104, 3105, 3108, 3109

Application			Grinding segment specification
Material	**Alloy**	**Hardness**	
Steel	unalloyed and low-alloyed	unhardened	**45A 24-1 L 5 B**
	unalloyed and low-alloyed and cast iron	hardened	**45A 24-1 K 6 B**
	high-alloyed	unhardened	**24A 30-1 G11 VM**
		hardened	**24A 30-1 E12 VM**
	stainless and acid-resistant (VA)		**24A 24-9 K11 B**
Grey cast iron, chilled cast iron			**224A 36-2 N 7 B**
Aluminium alloys, bronze, brass, copper			**89C 24-3 H12 V**

Please contact us!

Further information and product recommendations at www.leisse.org

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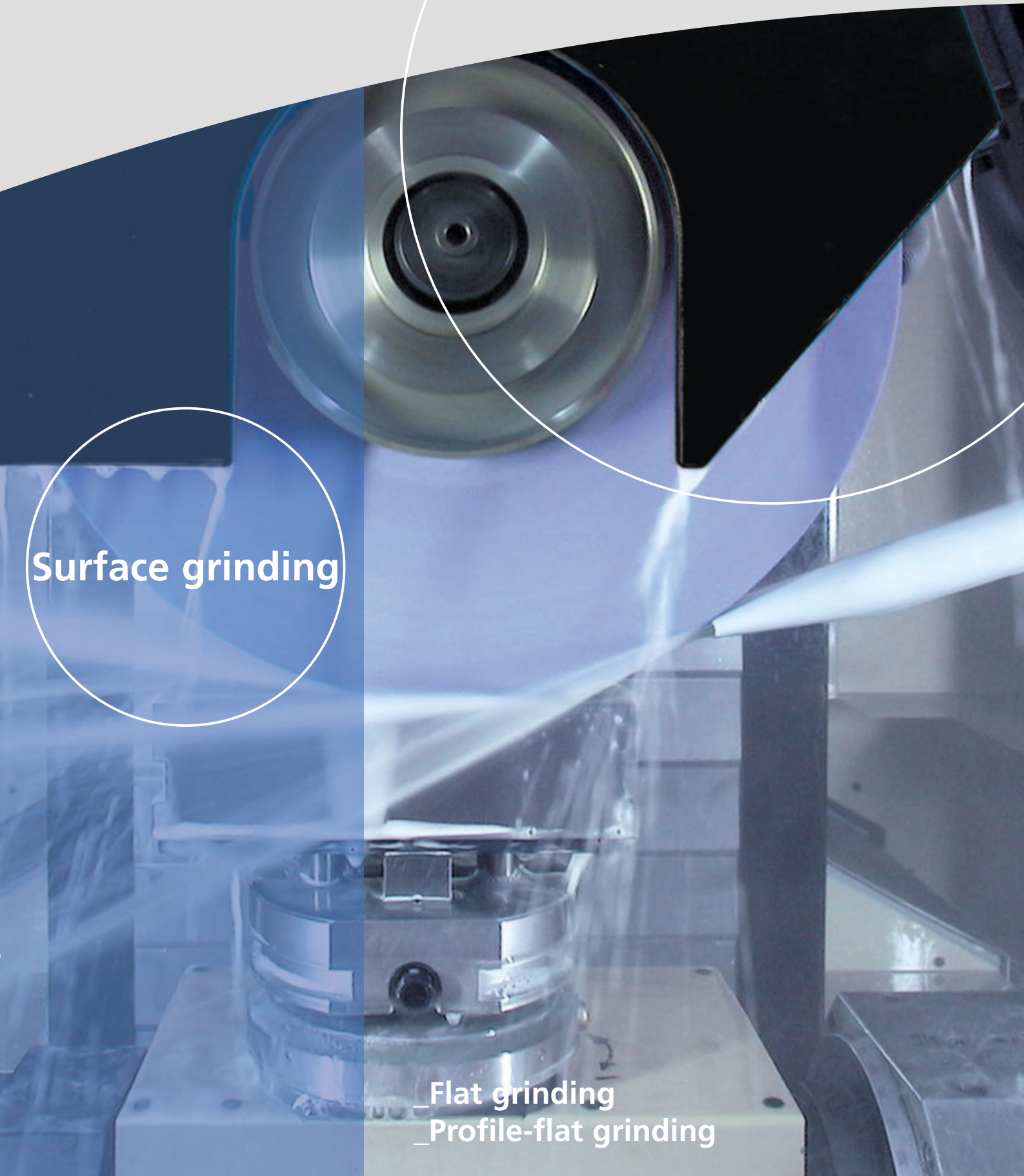
THELEICO®

Evolution in grinding.

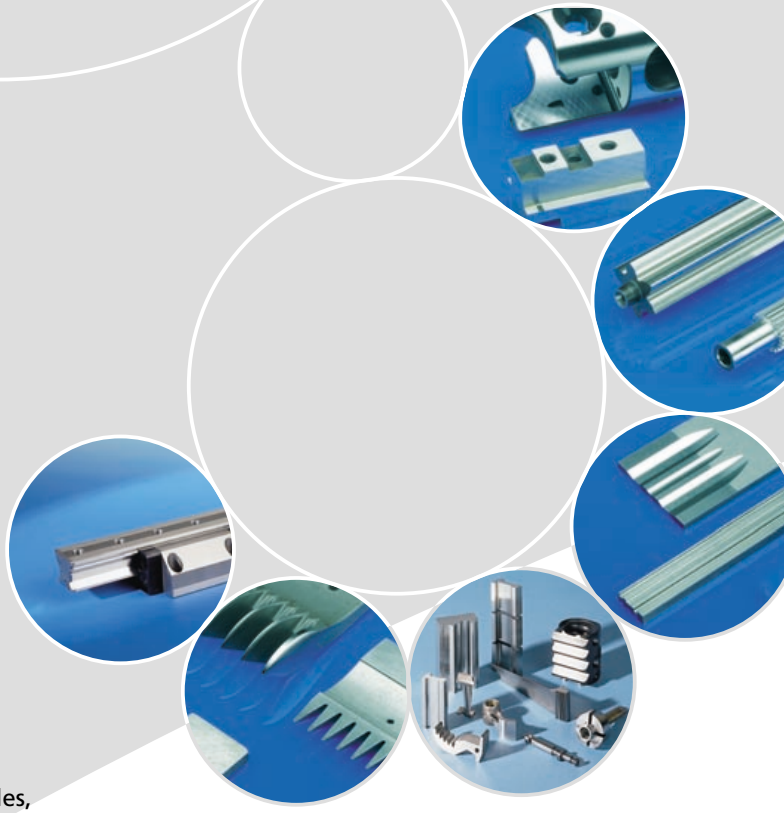


Surface grinding

_Flat grinding
_Profile-flat grinding

Precise flat and profile-flat grinding with optim

As part of manufacturing processes with surface grinding, the high quality of the finished product lowest tolerances regarding smoothness and surface finish are of crucial importance. Depending on the application and size of the grinding machine, workpiece sizes vary from only a few millimetres to several square metres. THELEICO' s grinding wheels and bonded abrasives are used in the following branches of industry: tool manufacture and mould making, electrical and electronics industry, iron and steel industry, metal industry, engineering industry, hydraulics, automotive industry and supplying industry, aviation industry, medical technology, plastics technology, motor industry, drive technology and spring and wood industry. Workpiece geometries and envisaged result are decisive for the grinding wheel geometry and the grinding method.



Grinding methods

There are mainly two subtypes including swing frame grinding or full cut procedures:
Flat grinding
(e. g. circular saw blades, circular cutters, die-plates for punches, folding knives, scissor-type knives, finishing bar material to size or bar material working)
Profile-flat grinding
(e. g. linear guides, saw tooth profiles, toothed rack profiles, guides in adjusting elements, annular gears , toothed plates , compass saw blades, turbine blades, rocking levers for car construction, profiled clamping tools, broaching tools).

THELEICO grinding wheel variations

With a variety of parameters and characteristics, when manufacturing grinding wheels, it is already possible, by slightly modifying formulations and due to the resulting variations in moulding, pressing, firing and working parameters, to change grinding wheel characteristics significantly, thus indirectly influencing grinding performance and surface finish of work pieces. And it is especially here, where the technological advance of THELEICO grinding wheels becomes evident. Starting from a selection of standard wheel qualities having been optimised over many years as part of development work in technology and application, it is also possible to offer customer-tailored solutions.

THELEICO quality criteria

- good profiling capacity and optimum dimensional accuracy of profiles
- high cutting performance
- low mechanical stress and deformation of work pieces
- long service life
- high manufacturing precision with respect to smoothness and surface roughness of workpieces

THELEICO prime quality. Grinding wheels made of sintered aluminium oxide

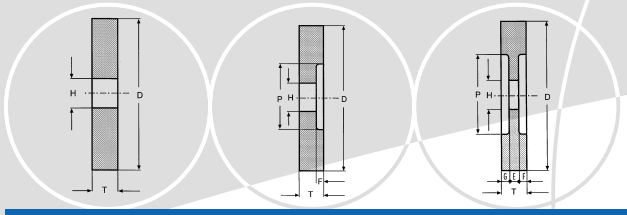
Applications

um cutting efficiency

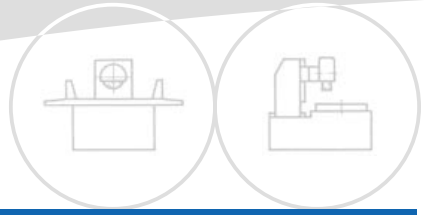
THELEICO®

Evolution in grinding.

Shape 1 | Shape 5 | Shape 7



Traverse table | Circular table



Flat grinding DIN shape No. 1, 5, 7

Application			Grinding wheel specification	
Material	**Alloy**	**Hardness**	**< ø 250 mm**	**> ø 250 mm**
Steel	unalloyed and low-alloyed	unhardened	**40A 46-3 J 7 V**	**33A 36-0 H11 V**
		hardened	**40A 46-3 I 7 V**	**40A 46-3 H11 V**
	high-alloyed	unhardened	**46A 46-2 H11 V**	**46A 46-1 G11 V** **24A 46-1 G11 VM**
		hardened	**46A 46-1 G11 V**	**49A 46-2 F 11 V**
	HSS, HSS-E HSS-CO	hardened and unhardened	**27A 46-1 G10 VM**	**27A 46-1 F 12 VM**
	stainless and acid-resistant (VA)		**85C 54-3 F 11 V**	**89C 54-3 G12 V**
Carbide metal			**85C 54-3 F 11 V**	**89C 54-4 F 12 V**
Aluminium alloys, brass, bronze, nickel			**85C 54-3 H11 V**	**89C 54-0 H12 V**

Profile-flat grinding DIN shape No. 1, 5, 7

Application			Grinding wheel specification	
Material	**Alloy**	**Hardness**	**wide, flat profiles**	**narrow, steep profiles**
Swing frame method				
Steel	unalloyed and low-alloyed	hardened	**42A 80-0 H11 V**	**40A 80-0 I 10 V**
	high-alloyed	hardened	**46A 80-0 H10 V**	**46A 120-0 H10 VM**
	HSS and HSS-E	hardened	**27A 80-0 F 11 VM**	**25A 120-2 F12 V**
Full cut method (creep feed grinding)				
Steel	unalloyed and low-alloyed	unhardened	**47A 60-9 H12 V** **47A 70-1 H12 V**	**47A 120-1 F12 V**
	low-alloyed and high-alloyed	hardened	**47A 60-1 E 12 V**	**47A 100-1 G12 V**
Full cut method (CD process)				
Steel	low-alloyed and high-alloyed	hardened	**27A 60-9 G13 VM**	**327A 60-9 F13 VM**