

Grinding Wheel Selection Guide



The guide contains general principles for selecting grinding wheels that apply to all product categories. Individual product categories include specific guidance developed exclusively for the respective group of products.

Description	Product Category
Resin-Bond Grinding Wheels	C01
Electroplated Grinding Wheels	C02
Ceramic-Bond CBN Grinding Wheels	C03
Ceramic-Bond Grinding Wheels Made of Aluminum Oxide and Silicon Carbide	C04
Ceramic-Bond Grinding Wheels for Sharpening PCD/PCBN Tools	C05
Metal-Bond Sintered Grinding Wheels	C06
Composite Cutting Tools	C07
Dressers	C08

From a technological standpoint, every grinding wheel consists of a bond and an abrasive material. The type of bond determines the manufacturing technology used to produce the grinding wheel, while the type of abrasive grain depends on the material to be machined with the wheel.



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Bond Type Selection

The selection of the bond type determines the manufacturing technology used to produce the grinding wheels. The amount of bond in the abrasive mass influences the wheel hardness, i.e., its ability to retain abrasive grains. Hard grinding wheels have a high grain retention capability, while soft grinding wheels exhibit lower grain retention.

The table below presents the types of bonds used:

Bond	Resin	Polyimide	Ceramic	Electroplated	Metal
Symbol	B	P	V	G	M

The above symbols from the table must be included when ordering the respective grinding wheel product. Examples of correct designations can be found in the ordering examples for individual product ranges.

Selection of Abrasive Grain Type

The type of abrasive grain used determines the type of material to be machined with the grinding wheel.

Grain Type	Hardness	Machined Materials
Cubic Boron Nitride (CBN)	Very High	High-speed steel (HSS), tool steels, case-hardening steels, bearing steels, and stainless and high-alloy steels with a hardness > 55 HRC
Aluminum Oxide	High	Carbon steels, alloy steels (C < 0.5%), cast steels, ductile cast irons, non-ferrous metals, stainless steels, and nickel- and chromium-based alloys
Diamond	Very High	Cemented carbides, glass, ceramics, ferrite, silicon, graphite, thermosetting plastics and glass-fiber-reinforced materials, natural stone, and refractory materials
Silicon Carbide	High	High-speed steels, tool steels, cemented carbides, ceramics, hardened and gray cast irons, non-ferrous metals, plastics, leather, and rubber

As a general rule regarding workpiece materials, cubic boron nitride (CBN) can be considered the superhard equivalent of aluminum oxide, while diamond is the superhard equivalent of silicon carbide.

Grinding Wheel Designation Rules

Grinding wheels have a standardized designation structure consisting of three parts:

Grinding Wheel Type	Geometric Parameters	Abrasive Layer Parameters
e.g., 1A1, 6A2, 9A3, 11V2, etc.	Main grinding wheel dimensions according to the adopted designation system.	Hardness, grain type, bond type, and, if applicable, structure, etc.

Grinding Wheel Type Designation

The creation of a grinding wheel type designation follows strictly defined rules.

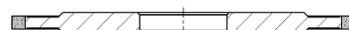
The rules for constructing the correct wheel type symbol are presented in the table below. The meaning of each field is defined by the formula provided below.

CORE SHAPE • ABRASIVE LAYER SHAPE • ABRASIVE LAYER POSITION

Core Shape		Abrasive Layer Shape		Abrasive Layer Position	
1		A	F	1	
3		B	FF	2	
4		BT	H	3	
6		C	L	9	
9		D	M		
11		E	Q		
12		EE	U		
14		ET	V		

Example: 14A1

This grinding wheel has a core with shape designation /14/, a rectangular abrasive layer cross-section /A/, positioned on the periphery of the core /1/.



Example: 11V9

This grinding wheel has a truncated cone core /11/, a parallelogram cross-section abrasive layer /V/, positioned at the corner of the core /9/.



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Grit size has a decisive influence on the grinding process; therefore, its proper selection directly affects the achieved machining results.

Correct selection of grit size ensures proper grinding wheel performance and achievement of the required surface finish. In general, the smaller the grit size, the smoother the machined surface. However, the objective is not to obtain the smoothest possible surface, but to achieve the required result in the shortest processing time. Therefore, the coarsest grit size that allows attainment of an acceptable surface finish should be selected. Excessive stock removal should not be applied when using grinding wheels with fine grit size, as this increases abrasive layer wear and may reduce surface quality. For rough grinding operations, the coarsest possible grit size should be selected in order to maximize grinding efficiency. The recommended depth of cut should not exceed 1/3 of the nominal grit size specified in the grinding wheel designation. For example, for grit size D126 according to FEPA classification, the grinding allowance should not exceed 0.042 mm.

When selecting grit size, the following criteria shall be considered:

- type of operation (rough grinding, finishing)
- required surface finish
- expected grinding efficiency.

FEPA Symbol	FEPA Symbol	FEPA, PN-85/M-59108 [μm]	US Standard ASTM E11 [mesh]
D1181	B1181	1180/850	16/20
D852	B851	850/600	20/30
D602	B602	600/425	30/40
D427	B427	425/300	40/50
D301	B301	300/250	50/60
D251	B251	250/212	60/70
D213	B213	212/180	70/80
D181	B181	180/150	80/100
D151	B151	150/125	100/120
D126	B126	125/106	120/140
D107	B107	106/90	140/170
D91	B91	90/75	170/200
D76	B76	75/63	200/230
D64	B64	63/53	230/270
D54	B54	53/45	270/325
D46	B46	45/38	325/400

Grit sizes finer than 46 are classified as micropowders. The size classification of these grits is presented in the table below.

FEPA Symbol	FEPA Symbol	FEPA, PN-85/M-59108 [μm]
D30	B30	25/30
D20	B20	15/25
D15	B15	15/25
D9	B9	15/10
D7	B7	5/10
D3	B3	2/5
D1	B1	1/2
D0,7	B0,7	0,5/1
D0,25	B0,25	< 0,5



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Superabrasive Concentration

Concentration defines the quantity of diamond or CBN abrasive per unit volume of the grinding wheel abrasive layer. Standard concentration values for grinding wheels with resin bond are presented in the table below.

Diamond		CBN (Cubic Boron Nitride)	
Concentration	Abrasive Content [carat/cm ³]	Concentration	Abrasive Content [carat/cm ³]
K25	1,1	V60	1,05
K50	2,2	V120	2,09
K75	3,3	V180	3,13
K100	4,4	V240	4,18
K125	5,5	V300	5,22

Abrasive concentration in the working layer is one of the key grinding wheel parameters. It affects grinding capacity, wheel service life, workpiece temperature, and machining accuracy. As with any parameter, concentration shall be selected according to the grinding conditions. The optimum concentration depends on other grinding wheel parameters, including grit size, bond hardness, and related specification factors.

High concentration K100, K125; V240, V300 is recommended for:

- high requirements for profile retention during operation,
- low abrasive layer height,
- hard bond,
- coarse grit size,
- deep grinding operations.

Standard concentration K50, K75; V120, V180 is recommended for:

- surface and cylindrical grinding,
- medium abrasive layer height,
- soft bond,
- fine grit size.

Low concentration K25; V60 is recommended for:

- very wide abrasive layers,
- very fine grit size.

High abrasive concentration increases tool life, which is particularly important in profile grinding and in grinding components with very small diameters. The benefits resulting from extended tool life generally compensate for the higher tool cost.

A disadvantage of high abrasive concentration is the occurrence of higher cutting forces and increased process temperature. High concentration does not always represent the most advantageous or technologically optimal solution; however, it requires effective cooling.



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Grinding Wheel Core Material Selection

The grinding wheel core may be manufactured from various materials. Core material properties, such as vibration damping and heat dissipation, significantly influence the grinding process. Therefore, material selection shall be based on the required machining parameters.

The following core materials are available:

- aluminium, for resin bond and vitrified bond grinding wheels
- molded composite, for resin bond grinding wheels
- steel
- ceramic, for vitrified bond grinding wheels

Comparison of the properties of available core materials is presented in the table below.

Core Material	Symbol	Vibration Damping	Thermal Conductivity
Aluminium	KA	Low	Very high
Ceramic	KC	Medium	High
Composite	KT	Medium	Moderate
Steel	KS	Low	High
Cemented Carbide	KW	Low	High

Grinding Wheel Diameter Selection

The primary criterion for selecting the grinding wheel diameter is the type of grinding machine used. If selection is possible, grinding wheels with larger diameters should be applied. Larger diameter wheels provide improved surface quality and higher process economy due to increased grinding efficiency.

In internal grinding operations, the grinding wheel diameter should be 60–80% of the bore diameter. Smaller wheel diameters may prevent attainment of the required surface quality, whereas larger wheel diameters may impair chip evacuation.

Grinding Wheel Hardness Selection Criteria

Grinding wheel hardness is defined as the ability of the bond to retain abrasive grains. Hard grinding wheels have a high grain retention capacity, whereas soft grinding wheels have a lower grain retention capacity.

Selection of grinding wheel hardness depends on multiple operating parameters. Commonly applied selection criteria are presented in the table below.

Machining Parameters	Soft	Hard
Grinding Width	Large	Small
Grit Size	Fine	Coarse
Operating Conditions	Dry	Wet
Workpiece Hardness	Higher	Lower
Other Criteria	High thermal sensitivity of the workpiece	High dimensional tolerance requirements

CBN Characteristics

Cubic boron nitride (CBN) is manufactured using a process similar to that of synthetic diamond production. CBN is the second hardest artificially produced abrasive material. Unlike diamond, it does not undergo adverse chemical reactions in contact with iron, which makes it suitable for grinding alloyed steels.

CBN tools exhibit higher wear resistance compared to conventional abrasive tools. Their use facilitates achievement of the required dimensional accuracy and surface quality of machined components. These characteristics enable higher grinding efficiency and reduced overall process costs.



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Diamond Characteristics

Diamond exhibits the highest hardness among all known abrasive materials. Its hardness, wear resistance, and high thermal stability make it suitable for grinding difficult-to-machine materials. Currently, approximately 90% of industrial diamond is synthetically produced from graphite. Under high pressure and temperature, in the presence of catalysts, the graphite crystal structure is transformed into synthetic diamond. A controlled production process allows the manufacture of diamond with various properties, enabling precise selection of abrasive grain type according to application requirements.

Fused Alumina Characteristics

Fused alumina is a synthetic abrasive material composed of crystalline aluminium oxide ($\alpha\text{-Al}_2\text{O}_3$), known as corundum, with a small amount of impurities. Depending on the content of foreign oxides such as TiO_2 , SiO_2 , Fe_2O_3 , CaO , MgO , or Na_2O , the following types of fused alumina are distinguished:

Name	Color	Al_2O_3 Content	Machined Materials
Normal Fused Alumina 95A	Grey-blue or brown	approx. 94.5%	Carbon steels (C < 0.5%); cast steels; malleable cast iron; non-ferrous metals
Semi-Friable Fused Alumina 97A	Grey-brown or grey-blue	approx. 97.5%	Carbon steels and alloy steels with C = 0.5% and hardness up to 60 HRC
White Fused Alumina 99A (38A)	White	> 98%	Carbon steels and alloy steels with C > 0.5% and hardness above 62 HRC
Monocrystalline Fused Alumina 32A	Light pink	> 98%	Carbon steels and alloy steels with C > 0.5% and hardness above 62 HRC
Microcrystalline Fused Alumina Cubitron SG	Blue	approx. 95%	Stainless steels; titanium, chromium, and nickel alloys
Microcrystalline Fused Alumina Cerpax XTL	White	approx. 99.6%	Stainless steels; titanium, chromium, and nickel alloys

In addition to the above types, several special grades of fused alumina are produced by melting, including chromium fused alumina (pink in color), zirconia fused alumina, titania fused alumina, and other variants.

Silicon Carbide Characteristics

Silicon carbide, in addition to fused alumina, is one of the commonly used abrasive materials. Silicon carbide is available in two variants:

Types of Silicon Carbide

Name	Color	SiC Content	Machined Materials
Green Silicon Carbide 99C	Dark green	99,66%	High-speed steels; tool steels; cemented carbides; ceramics
Black Silicon Carbide 98C	Black	98,26%	Hardened and grey cast irons; cemented carbides; non-ferrous metals; plastics; leather and rubber

In terms of chemical composition and physical properties, both variants of silicon carbide differ only slightly. However, green silicon carbide contains fewer impurities, making it more brittle and providing superior abrasive properties.

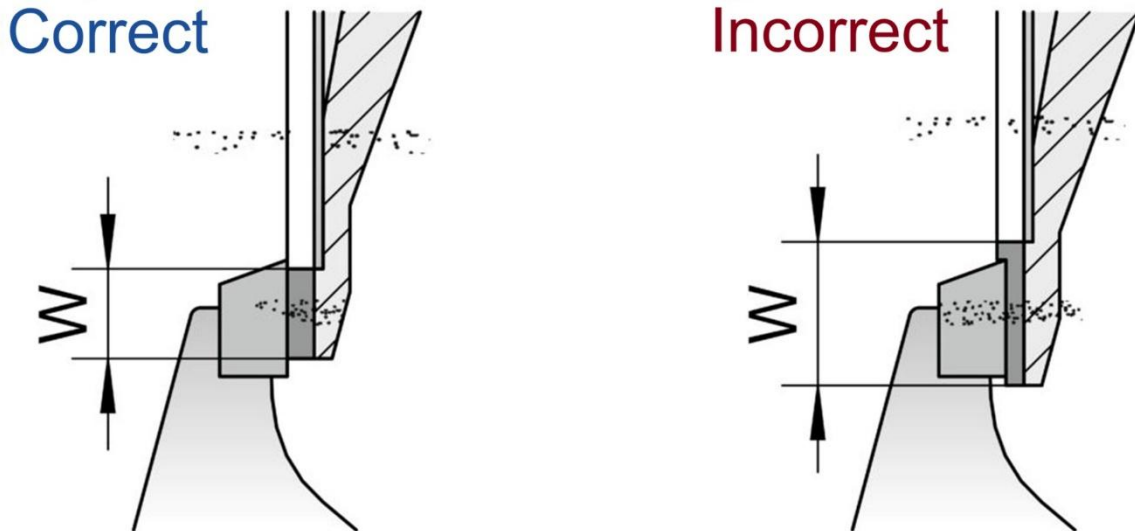


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Selection of Abrasive Layer Width “W”

General recommendations indicate that the abrasive layer width “W” should be as small as possible. The abrasive layer width must always be smaller than the width of the workpiece being ground. Otherwise, a step may form on the working surface of the grinding wheel, contributing to increased wear.



The abrasive layer height does not significantly affect the grinding process, but it influences the tool cost. From an economic standpoint, the use of a greater abrasive layer height X is advantageous, provided that the machining conditions allow it.

Cooling During Machining

Wet grinding (with coolant) is superior to dry grinding (without coolant) in terms of both grinding wheel life and material removal efficiency. Cooling improves grinding conditions by enhancing chip evacuation and reducing temperature in the grinding zone. Therefore, wet grinding should be applied wherever possible. Typical coolants include low-percentage oil-water emulsions or mineral oils with additives to improve cooling performance.

Grinding Speed, Peripheral

Grinding speed plays a critical role in grinding operations. It is defined as the linear speed of the abrasive grains located on the surface of the abrasive layer. Proper selection of grinding speed, depending on the workpiece material and type of operation, is a fundamental requirement in grinding.

Recommended peripheral grinding speeds for bond types “B”, “P”, “M”, “G”, depending on grinding conditions, are presented in the table below.

Abrasive Type	Dry Operation	Wet Operation
Diamond	15–20 m/s	20–40 m/s
CBN (Cubic Boron Nitride)	15–30 m/s	25–50 m/s

Note: For vitrified bond “V” grinding wheels manufactured on ceramic cores “KC”, the grinding speed shall not exceed 35 m/s. For grinding speeds above 35 m/s, grinding wheels with aluminium cores “KA” shall be used.

Rotational Speed

Rotational speed, designated as “n”, defines the number of revolutions per minute of the abrasive tool, i.e. the number of revolutions performed in one minute. *Grinding speed*, designated as “Vc”, is the linear speed at which an individual abrasive grain removes material from the workpiece. Both speeds are related by the following formula:

π – approximately 3.14

d [mm] – grinding wheel diameter

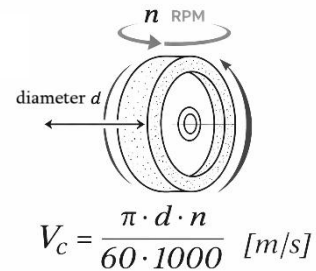
n [rpm] – spindle speed of the machine with the abrasive tool

For diamond or CBN, the peripheral speed “Vc” should be within the range of 20–30 m/s.

Example – Rotational Speed Calculation [rpm]

For a grinding wheel diameter $d = 22$ mm, assuming peripheral grinding.

$$n = \frac{V_c \cdot 60 \cdot 1000}{\pi \cdot d} = \frac{30 \cdot 60 \cdot 1000}{3,14 \cdot 22} = 26\,058 \text{ [rpm]}$$



Grinding Efficiency

Grinding wheel efficiency may be defined as the ratio of the volume of material removed during a given grinding operation to the volume of the abrasive layer consumed:

$$G = \frac{Vu}{Vz}$$

where:

G – grinding efficiency ratio

Vu – volume of removed material [mm³]

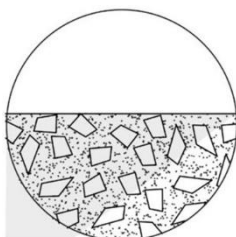
Vz – consumed volume of the grinding wheel abrasive layer [mm³]

A higher ratio of these values indicates greater grinding wheel efficiency, which contributes to a reduction in unit manufacturing costs of the product.

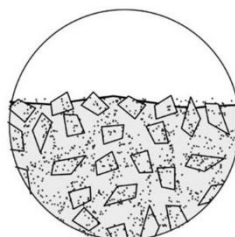
Grinding Wheel Structure Opening

In a properly used grinding wheel, the abrasive grains protrude above the bond surface, enabling effective grinding. If the working surface becomes loaded (clogged), grinding efficiency decreases significantly. In such cases, the grinding wheel structure shall be opened using a ceramic dressing stick. The principle of this operation is illustrated in the figure below.

Closed Structure



Open Structure

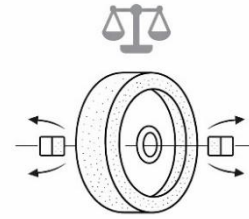


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At the final stage of production, grinding wheels are dynamically balanced to ensure:

- optimum grinding wheel service life
- minimized wear of grinder spindle bearings
- required machining accuracy



During operation with an unbalanced grinding wheel, partial contact of the abrasive layer with the workpiece occurs. This leads to localized wear of the grinding wheel in a short time, which increases imbalance and results in higher surface roughness of the machined component.

A grinding wheel is considered balanced when its center of gravity coincides with the geometric center of the wheel rotation axis.

Grinding Troubleshooting

If grinding results do not meet the required specifications, the process parameters shall first be verified for correct selection. If the parameters are correct and problems persist, the cause shall be identified.

A list of the most common issues occurring during internal grinding operations, together with possible corrective actions, is presented in the table below.

Problem	Possible Causes
Grinding wheel does not cut; workpiece surface overheating occurs.	<ol style="list-style-type: none"> 1. Bond too hard or incorrect bond type 2. Peripheral speed too high 3. Insufficient cooling 4. Feed rate too high 5. Excessive contact area between grinding wheel and workpiece 6. Concentration too high 7. Grit size too fine 8. Grinding wheel not balanced
Rapid grinding wheel wear; rapid loss of working profile.	<ol style="list-style-type: none"> 1. Bond too soft or incorrect bond type 2. Insufficient cooling 3. Concentration too low 4. Peripheral speed too low 5. Grit size too coarse 6. Feed rate too high or stock allowance too large 7. Grinding wheel not balanced
High surface roughness of the machined surface.	<ol style="list-style-type: none"> 1. Grit size too coarse 2. Peripheral speed too low 3. Bond too soft 4. Contaminated coolant 5. Insufficient spark-out 6. Feed rate too high 7. Grinding wheel loaded (clogged)


The listed probable causes are not the only factors that may result in the specified irregularities; they represent the most commonly encountered causes.



Troubleshooting in Various Grinding Operations

Problem	Shaft Grinding	Centerless Grinding	Internal Grinding	Surface Grinding	Tool Sharpening
Burn Marks; Cracks	<ol style="list-style-type: none"> Grinding wheel too hard Incorrectly dressed grinding wheel Infeed rate too high Workpiece speed too low 	<ol style="list-style-type: none"> Grinding wheel too hard Incorrectly dressed grinding wheel Infeed rate too high Workpiece speed too low 	<ol style="list-style-type: none"> Grinding wheel too hard Incorrectly dressed grinding wheel Infeed rate too high Workpiece speed too low Contaminated coolant 	<ol style="list-style-type: none"> Grinding wheel too hard Incorrectly dressed grinding wheel Infeed rate too high Workpiece speed too low 	<ol style="list-style-type: none"> Grinding wheel too hard Infeed rate too high Contaminated coolant
Comma Marks; Scratches; Pull-Out	<ol style="list-style-type: none"> Grinding wheel too soft Grit size too coarse Grinding wheel not balanced Incorrectly dressed grinding wheel Infeed too high Workpiece speed too low Contaminated coolant 	<ol style="list-style-type: none"> Contaminated coolant Dirty work rest blade 	<ol style="list-style-type: none"> Grinding wheel too soft Incorrectly dressed grinding wheel Contaminated coolant Spindle play 	<ol style="list-style-type: none"> Incorrectly dressed grinding wheel Contaminated coolant 	<ol style="list-style-type: none"> Grinding wheel too soft Grit size too coarse Contaminated coolant
Grinding Wheel Dulling and Loading	<ol style="list-style-type: none"> Grinding wheel too hard Grit size too fine Feed rate too low Infeed too low Insufficient coolant application 	<ol style="list-style-type: none"> Grinding wheel too hard Grit size too fine Feed rate too low Infeed too low Insufficient coolant application 	<ol style="list-style-type: none"> Grinding wheel too hard Grit size too fine Insufficient coolant application 	<ol style="list-style-type: none"> Grinding wheel too hard Grit size too fine Feed rate too low Insufficient coolant application 	<ol style="list-style-type: none"> Grinding wheel too hard Grit size too fine
Workpiece Form Deviations	<ol style="list-style-type: none"> Grinding wheel too soft Incorrectly dressed grinding wheel Infeed too high Uneven wheel run-out Incorrect machine setup 	<ol style="list-style-type: none"> Grinding wheel too hard Incorrectly dressed grinding wheel Infeed too high Incorrect work rest blade angle Grinding above the centerline Improper guide rails Incorrectly dressed regulating wheel 	<ol style="list-style-type: none"> Grinding wheel too hard Grit size too fine Feed rate too low Insufficient coolant application Uneven wheel run-out Incorrect machine setup 	<ol style="list-style-type: none"> Grinding wheel too soft Grinding speed too low Uneven wheel run-out 	<ol style="list-style-type: none"> Grinding wheel too soft Spindle play Machine vibration






Troubleshooting Surface Quality Issues

Problem	Possible Causes	Corrective Action
High Surface Roughness of the Machined Surface	<ol style="list-style-type: none"> Spindle speed too low Feed rate too high Stock allowance too small – marks from previous operation remain Grit size too coarse Incorrect coolant Insufficient coolant application 	<ol style="list-style-type: none"> Increase speed Reduce feed rate Increase stock allowance Reduce grit size Change coolant Increase flow rate and/or pressure
Taper (Converging) 	<ol style="list-style-type: none"> Spindle rotation engaged with the grinding wheel positioned too high Excessive clamping force causing workpiece deformation Grinding speed too low Spindle or chuck run-out Spindle speed too high Spindle speed not reduced during wheel retraction Wheel retraction too slow Significant inaccuracy from previous operation Grinding wheel cutting too aggressively Feed rate too low 	<ol style="list-style-type: none"> Adjust grinding wheel position Reduce clamping force – stresses shall be minimal and uniform Increase grinding speed Eliminate run-out Reduce spindle speed Reduce spindle speed during retraction Increase retraction speed Regrind the workpiece Reduce grit size Increase feed rate



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<p>Taper (Diverging)</p> 	<ol style="list-style-type: none"> 1. Reversal point set too deep 2. Excessive machining time on the lower section of the workpiece 3. Grinding wheel cutting too aggressively 4. Workpiece mounted out of perpendicularity 5. Excessive clamping force causing workpiece deformation 6. Spindle speed too high 7. Spindle or chuck run-out 8. Significant inaccuracy from previous operation 	<ol style="list-style-type: none"> 1. Correctly set the reversal point position 2. Retract the grinding wheel immediately 3. Reduce grit size 4. Properly align the workpiece 5. Reduce clamping force – stresses shall be minimal and uniform 6. Reduce spindle speed 7. Eliminate run-out 8. Regrind the workpiece
<p>Hourglass Shape Deviation</p> 	<ol style="list-style-type: none"> 1. Grinding wheel cutting too aggressively 2. Grinding wheel operating at an angle 3. Workpiece not mounted concentrically and perpendicular 4. Spindle speed too high 5. Excessive clamping force causing workpiece deformation 6. Significant inaccuracy from previous operation 7. Workpiece distortion due to heat treatment 8. Feed rate too low 	<ol style="list-style-type: none"> 1. Reduce grit size 2. Properly align the workpiece 3. Correctly mount the workpiece 4. Reduce spindle speed 5. Reduce clamping force – stresses shall be minimal and uniform 6. Regrind the workpiece 7. Regrind the workpiece 8. Increase feed rate
<p>Barrel Shape Deviation</p> 	<ol style="list-style-type: none"> 1. Excessive clamping force causing deformation in the central section of the workpiece 2. Workpiece with thin walls at the upper and lower sections causing deformation during machining 3. Feed rate too low 4. Spindle speed too high 	<ol style="list-style-type: none"> 1. Reduce clamping force – stresses shall be minimal and uniform 2. Reduce stock allowance 3. Increase feed rate 4. Reduce spindle speed
<p>Ovality at the Top</p> 	<ol style="list-style-type: none"> 1. Spindle rotation engaged with the grinding wheel positioned too high 2. Spindle speed too high 3. Grinding wheel cutting too aggressively 4. Spindle or chuck run-out 5. Spindle speed not reduced during wheel retraction 6. Excessive clamping force causing workpiece deformation 7. Feed rate too low 	<ol style="list-style-type: none"> 1. Adjust grinding wheel position 2. Reduce spindle speed 3. Reduce grit size 4. Replace or clean coolant 5. Reduce spindle speed during retraction 6. Reduce clamping force – stresses shall be minimal and uniform 7. Increase feed rate
<p>Ovality at the Bottom</p> 	<ol style="list-style-type: none"> 1. Reversal point set too deep 2. Excessive machining time on the lower section of the workpiece 3. Grinding wheel cutting too aggressively 4. Spindle speed too high 5. Excessive clamping force causing workpiece deformation 6. Feed rate too low 	<ol style="list-style-type: none"> 1. Correctly set the reversal point position 2. Retract the grinding wheel immediately 3. Reduce grit size 4. Reduce spindle speed 5. Reduce clamping force – stresses shall be minimal and uniform 6. Increase feed rate



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To select an appropriate grinding wheel, the following parameters shall be specified:

- grinding wheel type, abrasive layer dimensions, and bore or shank diameter
- depending on the workpiece material and type of operation, abrasive type, concentration, grit size, and bond hardness
- operating conditions: with coolant (wet) or without coolant (dry)

If possible, please specify in the order the workpiece material, type of operation, operating conditions, and the machine type for which the grinding wheels are intended. This information enables optimal matching of the grinding wheel to the application requirements and reduces selection time.

Due to production process optimization, we would like to present the main benefits of ordering grinding wheels under a package system or framework agreement compared to individual purchase orders.

Features of Orders Executed Under a Framework Agreement

- very short delivery time; grinding wheels are dispatched from stock
- reduced administrative workload on the customer side; a single order with agreed collection dates replaces multiple individual orders
- volume discount on grinding wheels
- under a framework agreement, payment is made as grinding wheels are withdrawn from stock; for package orders, the invoice is issued after order completion by Inter-Diamet

Features of Package Orders

- delivery time approximately 2 weeks, depending on quantity
- reduced administrative workload on the customer side; a single order with agreed collection dates replaces multiple individual orders
- volume discount on grinding wheels

Features of Individual Orders

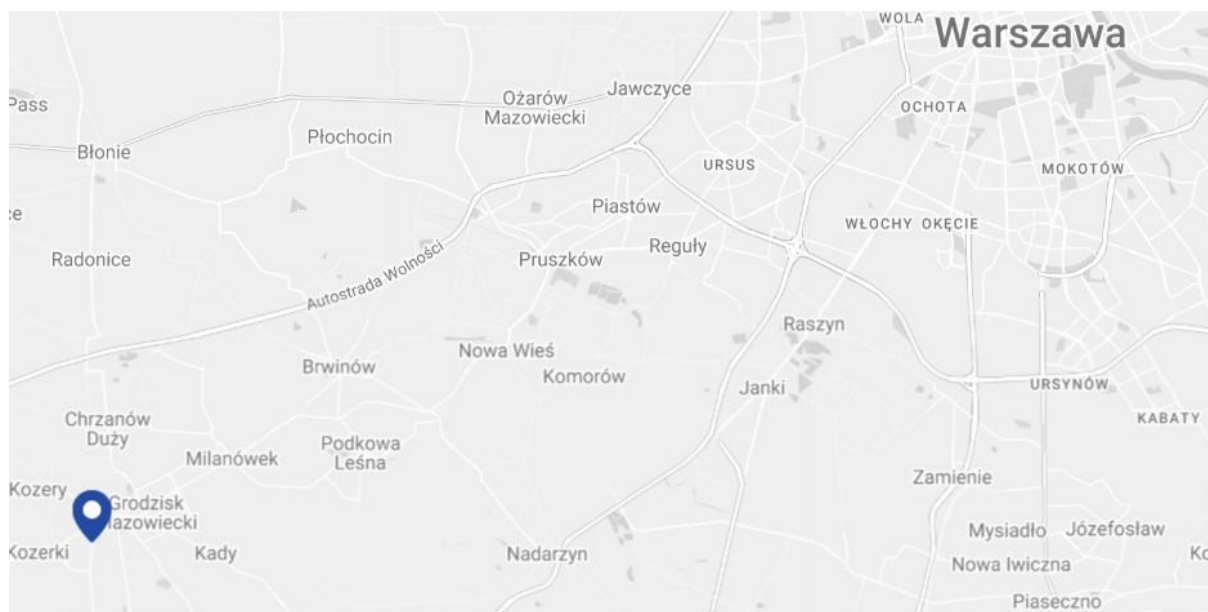
- delivery time approximately 2 weeks or longer
- no volume discount
- no reduction of administrative workload on the customer side

If the required grinding wheel is not listed on our website, it can be manufactured on special order. The website presents examples of the most common products from our range.



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