

How To Order

When ordering **KINIK** standard grinding wheels, specify your selection in this order:

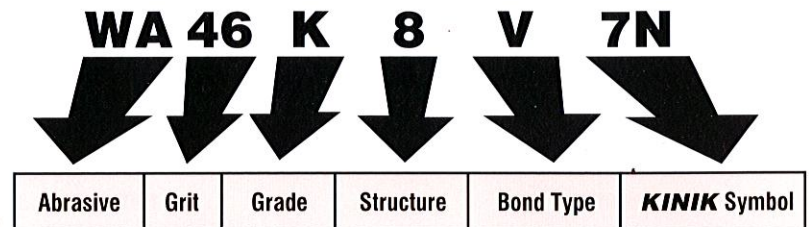
1. Wheel Shape and Face.
2. Dimensions
 - (1) Abrasive
 - (2) Grit Size
 - (3) Grade
 - (1) Bond
4. Quantity

Note: Wheels are available in both metric & imperial dimensions.

Standard Wheel Markings

For clarity as well as to avoid mistakes in wheel selection, a standard designation of wheel specification was developed and was inscribed by ISO in 1965. Standards such as CNS of the R.O.C., JIS of Japan, ANSI of U.S.A. and DIN of West Germany all employ this uniform standard.

A typical wheel marking includes the following information:



Abrasive

Symbols	Characteristics
A	Regular aluminum oxide abrasive, hard and tough.
10A	The premium quality of aluminum oxide abrasive.
WA, 38A	White aluminum oxide abrasive, hard and brittle.
FA, 57A	Semi-friable, aluminum oxide abrasive.
32A, SA	Strong sharp monocrystalline aluminum oxide abrasive.
PA	Pink aluminum oxide abrasive.
RA	Ruby aluminum oxide abrasive.
PSA	A blend of PA and SA abrasive.
FSA	A blend of FA and SA abrasive.
AZ	A modified high zirconia aluminum oxide.
C	Black silicon carbide.
GC	Green silicon carbide.
KG	Micro-crystalline abrasive used primarily for precision grinding of difficult-to-grind steels and alloys.

Note: Above abrasives may be used in combination to generate characteristics for particular applications.

Bond Type

Symbols	Characteristics
V (Vitrified)	Most common bond for precision grinding porosity and strength. Wheel made with this bond give high stock removal and their rigidity helps to attain high precision. Not affected by water, acid, oils or ordinary temperature variations.
B (Resinoid)	Used for wheels in fabrication shops, foundries, billet shops, sharpening and gumming saws, and in many precision applications. These wheels excel in rapid stock removal as well as in applications requiring better finishes. This bond is also restricted to reinforced resinoid products, cut-off wheels, and for snagging with portable grinders.
R (Rubber)	Mainly used for centerless feed wheels & precision ball race grinding wheels.
MG (Magnesia Oxychloride)	A notable bond used for cutlery or particularly thin workpieces, marble surface grinding and superfinishing.

Note: The **KINIK** symbol designates a variation or modification of bond and other characteristics of the wheel.

Grits (CNS & JIS Standard)

Coarse	Medium	Fine	Very Fine	Ultra Fine
#10, 12, 14, 16, 20, 24	30, 36, 46, 54, 60	70, 80, 90, 100, 120, 150, 180, 220	240, 280, 320, 400, 500, 600, 700, 800	1000, 1200, 1500, 2000, 2500, 3000, 4000, 6000

■ **Grades:** Grade indicates the relative strength of the bond which holds the abrasive grain in place.

Very soft	Soft	Medium	Hard	Very Hard
D. E. F. G.	H. I. J. K.	L. M. N. O.	P. Q. R. S.	T. U. V. W. X. Y. Z.

Structures

Symbol No.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Abrasive Ratio %	62	60	58	56	54	52	50	48	46	44	42	40	38	36	34

RECOMMENDED SAFE OPERATING PRACTICES

1. Carefully store grinding wheels in a proper condition. i. e. away from eat and humidity sources.
2. Select correct wheel for your operation. "Ring" wheel and inspect for cracks. Never use cracked wheel.
3. Never exceed maximum safe operating speed marked on wheel.
4. Use clean recessed matching flanges at least 1/3 of wheel diameter.
 - ① A flange-key is required to ensure concentric operation.
 - ② The inside diameter of the wheel should be larger than the spindle diameter.
 - ③ The contact side of the flange should be recessed to prevent from slipping off.
 - ④ The contact area between flange and wheel should insert with blotters or rubber pad with a thickness smaller than 0.025" (0.6mm).
 - ⑤ Two flanges on both sides should be of the same size.
5. Never alter hole sizes of wheels or force a wheel on to a spindle.
6. Keep work rest adjusted within 3mm of wheel face.
7. Adjust wheel guard and put on safety glasses before grinding.
8. Wheels newly mounted or rarely used must run idly for at least one minute before starting to grind.
9. Grind only on face of straight wheel. Use disc wheel for side grinding. Light side grinding permitted on cup or saucer wheel.
10. Do comply with ANSI B7.1 safety code for safe grinding operation.

