NORTON®

SAINT-GOBAIN

SUPER ABRASIVES

INTRODUCTION

Diamond is the hardest material known to man, closely followed by Cubic Boron Nitride (CBN). As a result of their hardness these materials are used extensively in the most demanding precision grinding, slicing, and cutting applications. Super Abrasive wheels use diamond and CBN technology to cut demanding materials such as carbide, high speed steel, ceramics, and glass.

Norton provides ultimate, high performance Super Abrasive solutions for the cutting tools industry, offering products specifically designed to deal with the hardest and most challenging materials.

HOW TO READ A SPECIFICATION

ASD	151	R	75	B99
ABRASIVE TYPE	GRIT SIZE	GRADE	CONCENTRATION	BOND

ABRASIVE TYPE

Both diamond and CBN have distinctive characteristics that meet the most demanding applications.

ASD: Synthetic diamond, armoured, high quality, versatile.

CB: Cubic boron nitride, armoured, durable.

GRIT SIZE

Size of the Super Abrasive particles according to FEPA standards. The smaller the number, the finer the grit size.

GRADE

Refers to the degree of durability of the wheel, progressing alphabetically from A (softest, least durable) to Z (hardest, most durable).

CONCENTRATION

Indicates the amount of Super Abrasive grits in the wheel. For CBN wheels the concentration number is included in the grade (Q=50, T=75, W=100, Z=125), concentration 100~4,4 ct/cm³, and accordingly 50~2,2 ct/cm³.
The optimum concentration depends upon the application.

BOND

The element in a grinding wheel that holds the diamond or CBN grains together.

GRIT SIZE

The grit size selection depends on the required stock removal rate and the required surface finish.

EUROPEAN (FEPA) SIZE	U.S. STANDARD	US NORTON GRIT SIZE [MESH]	
	MESH	DIAMOND	CBN
1182	16/20	16	–
852	20/30	24	24
602	30/40	36	36
501	35/40	–	–
427	40/50	46	46
301	50/60	60	60
251	60/70	-	-
-	50/80	80	80C
252	60/80	100	80
213	70/80	-	-
181	80/100	105	100
-	80/120	100S	120C
151	100/120	110	120
126	120/140	120	150
107	140/170	150	180
91	170/200	180	220
76	200/230	220	230
64	230/270	240	240
54	270/325	320	320
46	325/400	400	400

APPROXIMATE EUROPEAN (FEPA) SIZE	NOMINAL MICRON SIZE	NORTON GRIT SIZE [MESH]
M63	40/60	–
M40	30/40	500
M25	20/30	–
M16	10/20	600
M10	6/12	800
M6,3	4/8	–
M4,0	2/4	–
M1,0	0/2	–

CONCENTRATION

The concentration influences the stock removal rate and the geometry of the workpiece.

DIAMOND 50/75/100/125 **CBN** Q/T/W/Z

DIAMOND & CBN WHEELS

Norton diamond and CBN wheels are designed to grind and cut the hardest materials known to man, helping make 'difficult-to-grind' applications routine operations. Hardness, abrasion resistance, compressive strength, thermal conductivity are all features designed to achieve a high level of precision and quality, making them a logical choice for a wide range of applications.

DIAMOND WHEELS

BENEFITS

- High quality synthetic diamonds provide excellent material removal rate and longer wheel life than conventional silicon carbide wheels
- Engineered B-99 resin bond provides free cutting capabilities and superior form holding in dry tool room and 1A1R cut-off operations in grinding glass and ceramic materials
- Can be used wet or dry, in off-hand finishing of carbide tools, providing fast stock removal

APPLICATIONS

- Cemented carbide
- Glass
- Ceramics
- Fibreglass
- Plastics
- Stone
- Abrasives
- Electronic components and materials

CBN WHEELS

BENEFITS

- Made with durable CBN abrasive which cuts easily through hard to grind steels, HRC50 and harder, resisting wear
- Engineered B-99 resin bond for free cutting capability and superior form holding
- Aztec IV bond for larger cutting depth
- Used for dry tool re-sharpening when heavy stock removal is required

APPLICATIONS

- High speed tool steels
- Die steels
- Hardened carbon steels
- Alloy steels
- Aerospace alloys
- Hard stainless steel
- Abrasion-resistant ferrous materials

WHEEL SHAPES

1A1

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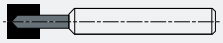
1A1R

PAGE 311



1A1W

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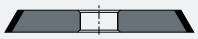

1V1

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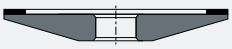

4A2

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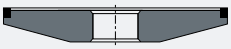

4A9

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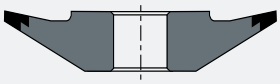

4BT9

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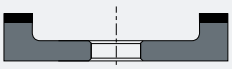

6A2

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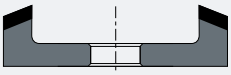

6VV5

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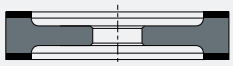

9A3

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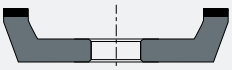
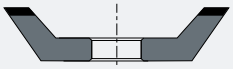


11A2-70º

PAGE 300



11V2

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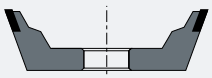

11V9

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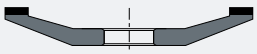
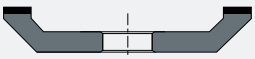


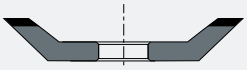
12A2-20º

PAGE 314



12A2-45º

PAGE 314



12V2

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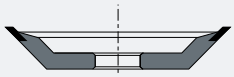

12V9

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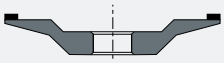
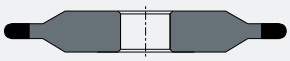


13A2

PAGE 314



14F1

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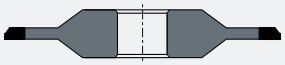

14M1

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ROUND TOOLS

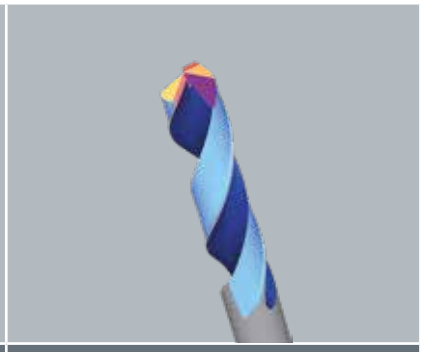
DIAMOND AND CBN GRINDING WHEELS FOR THE MACHINING OF ROUND TOOLS

Norton offers a comprehensive product range for work on round tools including drills, end mills and reamers. Diamond and CBN grinding wheels are ideal for producing and re-sharpening tungsten carbide and HSS tools.

The following sections are arranged by application for easy identification of the correct grinding wheel for fluting, gashing, grinding of clearance angles and re-sharpening. Within the sub-chapters the grinding wheels are ordered by FEPA code.

FLUTING

GASHING



GRINDING OF CLEARANCE ANGLES

BOND OVERVIEW DIAMOND

BOND	WEAR RESISTANCE	RECOMMENDATION FOR USE
R100 B99	↑	For CNC grinding operations (wet)
R75 B99		For universal grinding (wet or dry)
R50 B99		For universal grinding (wet or dry)
R75 B49		For universal grinding (dry)
R50 B49		For universal grinding (dry)

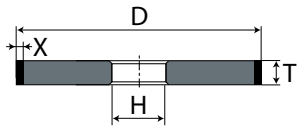
BOND OVERVIEW CBN

BOND	WEAR RESISTANCE	RECOMMENDATION FOR USE
W B99	↑	For CNC grinding operations (wet)
T B99		For universal grinding (wet or dry)
Aztec IV		Very free grinding dry grinding bond
R75 B49		For universal grinding (dry)

DIAMOND & CBN WHEELS
FOR MACHINING ROUND TOOLS

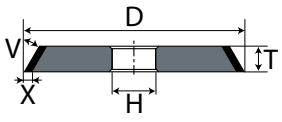
The Norton B99 resin bonded wheel is ideal for flute grinding on CNC machines and is particularly suitable for applications on standard tools.
D64R100B99 and B107 W B99 are the most commonly used products for flute grinding, however other specifications can be made available on request.

1A1 FLUTING



DxTxX (mm)	H (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND				
100x6x3	32	ASD91 R100 B99	1	7958732719
100x10x5	20	ASD64 R100 B99	1	7958732706
100x12x5	20	ASD64 R100 B99	1	7958732713
125x5x3	20	ASD126 R100 B99	1	7958732469
125x10x10	20	ASD64 R100 B99	1	7958732470
125x12x10	20	ASD64 R100 B99	1	7958732471
150x12x10	20	ASD64 R100 B99	1	7958732727
CBN				
100x11x5	20	CB107 W B99	1	7958732712
100x15x5	20	CB107 W B99	1	7958732716
125x10x10	20	CB107 W B99	1	7958728828

1V1 FLUTING



DxTxX (mm)	V (°)	H (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND					
100x10x5	10°	20	ASD64 R100 B99	1	7958732976
100x15x5	20°	20	ASD64 R100 B99	1	7958732974**
125x10x5	30°	20	ASD64 R100 B99	1	7958732984**
CBN					
100x15x5	20°	20	CB107 W B99	1	7958732994

** Available while stocks last

DIAMOND & CBN WHEELS
FOR MACHINING ROUND TOOLS

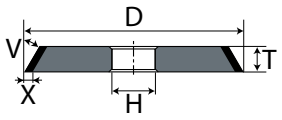
The state-of-the-art Norton B99 resin bond is free cutting and has good corner stability, the most essential characteristic required for CNC gashing.

Two standard specifications are offered:

- For tungsten carbide tools: ASD64 R100 B99
- For HSS-tools: CB107 W B99.

Both are available in 12V9 as well as in 1V1 shape. Further combinations of dimensions, grit sizes and concentrations are available on request.

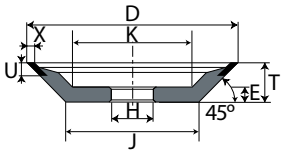
1V1 GASHING



DxTxX (mm)	V (°)	H (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND					
100x15x5	45°	20	ASD64 R100 B99	1	7958732996*
125x15x5	45°	45	ASD64 R100 B99	1	7958733015
CBN					
100x15x5	45°	20	CB107 W B99	1	7958733013
125x15x5	45°	20	CB107 W B99	1	7958733017

* Made-to-order

12V9 GASHING



DxXxU (mm)	H (mm)	T (mm)	K (mm)	E (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND								
100x2x10	20	20	52	11	60	ASD64 R100 B99	1	7958732837
100x3x10	20	20	52	11	60	ASD64 R100 B99	1	7958732832
125x2x10	20	25	60	12	74	ASD64 R100 B99	1	7958733019
150x3x10	20	25	81	15	99	ASD64 R100 B99	1	7958732919
CBN								
100x3x10	20	20	52	11	60	CB107 W B99	1	7958732826
125x3x10	20	25	71	14	74	CB107 W B99	1	7958732814
150x3x10	20	25	81	15	99	CB107 W B99	1	7958732920

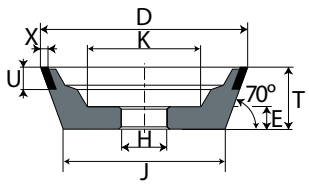
ADDITIONAL INFORMATION
Stiffened body

DIAMOND & CBN WHEELS
FOR MACHINING ROUND TOOLS

Norton B99 resin bond tools are an ideal choice for grinding clearances and relief angles on CNC machines. With excellent cutting behaviour the bond produces a good surface finish. The listed grinding wheels are suitable for the production and re-sharpening of tungsten carbide and HSS round tools.

D64 R100 B99 and B107 W B99 are the most common specifications for clearance angle grinding applications, however, other specifications are available on request.

11V9 CLEARANCE ANGLE GRINDING



ADDITIONAL INFORMATION
Stiffened body

DxXxU (mm)	H (mm)	T (mm)	K (mm)	E (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND								
75x2x10	20	30	40	10	53	ASD64 R100 B99	1	7958732849
100x2x10	20	35	59	15	74	ASD64 R100 B99	1	7958732876
100x3x10	20	35	53	15	74	ASD64 R100 B99	1	7958732877
125x3x10	20	40	70	18	95	ASD64 R100 B99	1	7958732856
CBN								
75x2x10	20	30	40	10	53	CB107 W B99	1	7958732851
100x2x10	20	35	59	15	74	CB107 W B99	1	7958732874
100x3x10	20	35	53	15	74	CB107 W B99	1	7958732844
125x3x10	20	40	70	18	95	CB107 W B99	1	7958732854**

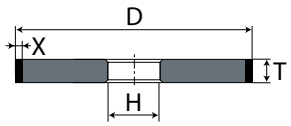
** Available while stocks last

DIAMOND & CBN WHEELS FOR ROUND TOOL UNIVERSAL GRINDING

Norton offers a comprehensive selection of different bonds and concentrations for re-sharpening applications on universal machines. The B99 grinding wheels can be used wet or dry.

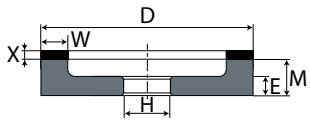
The lower the diamond or CBN concentration the more suited the product will be to grinding large contact areas. Aztec IV is a special free cutting resin bond which is designed for dry grinding operations and enables high material removal.

1A1 RE-SHARPENING



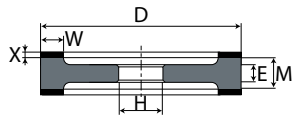
DxTxX (mm)	H (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND				
100x4x3	20	ASD91 R75 B99	1	7958732717
100x10x5	20	ASD91 R75 B99	1	7958732711
125x10x5	20	ASD126 R100 B99	1	7958732466
150x10x3	20	ASD126 R50 B99	1	7958732724
150x10x3	32	ASD126 R75 B99	1	7958732726
CBN				
100x10x5	20	CB126 T B99	1	7958732704
150x10x3	20	CB126 T B99	1	7958732725

6A2 RE-SHARPENING



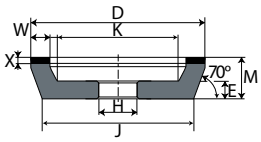
DxWxX (mm)	H (mm)	M (mm)	E (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND						
100x6x4	20	23	10	ASD151 R75 B99	1	7958732881
100x12x2	20	18	10	ASD54 R50 B99	1	7958732886
100x12x2	20	18	10	ASD107 R50 B99	1	7958732879
125x6x5	20	25	10	ASD64 R75 B99	1	7958732922
125x10x2	70	23	10	ASD107 R50 B99	1	7958732882
150x10x2	20	23	10	ASD91 R50 B99	1	7958732932
150x15x2	32	23	10	ASD107 R50 B99	1	7958732933
150x20x2	20	20	10	ASD126 R75 B99	1	7958732934
CBN						
125x6x4	20	23	10	CB151 T B99	1	7958732925
150x6x4	20	23	10	CB151 T B99	1	7958732936
150x6x4	32	23	10	CB151 T B99	1	7958732935

9A3 RE-SHARPENING



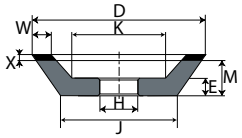
DxWxX (mm)	H (mm)	M (mm)	E (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND						
175x5x2	20	30	14	ASD126 R50 B99	1	7958733002
175x5x2	20	30	14	ASD46 R50 B49	1	66260120338
175x5x2	20	30	14	ASD64 R50 B49	1	66260120339
175x5x2	20	30	14	ASD126 R50 B49	1	66260120340

11A2-70° RE-SHARPENING



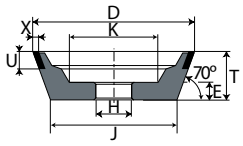
DxWxX (mm)	H (mm)	M (mm)	K (mm)	E (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND								
100x5x4	20	20	75	10	88	ASD151 R75 B99	1	60157682163
CBN								
100x5x4	20	20	75	10	88	CB126 T B99	1	60157682165

11V2 RE-SHARPENING



DxWxX (mm)	H (mm)	M (mm)	K (mm)	E (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND								
100x5x3	20	22	72	8	82	ASD91 R75 B99	1	7958733007
100x5x3	20	22	72	8	82	ASD126 R75 B99	1	7958733011

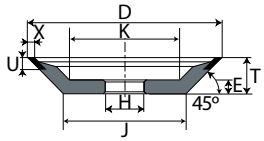
11V9 RE-SHARPENING



DxXxU (mm)	H (mm)	T (mm)	K (mm)	E (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND								
75x2x10	20	30	40	10	53	ASD107 R75 B99	1	7958732857
75x2x10	20	30	40	10	53	ASD126 R75 B99	1	7958732859
75x2x10	20	30	40	10	53	SD64 R75 B49	1	66260120321
75x2x10	20	30	40	10	53	SD126 R75 B49	1	66260120322*
100x2x10	20	35	55	10	74	ASD126 R75 B99	1	7958732867
100x3x10	20	35	60	10	74	ASD126 R75 B99	1	7958732862
100x3x10	32	35	60	10	74	ASD126 R75 B99	1	7958732865
100x2x10	20	35	55	10	75	SD64 R75 B49	1	66260120323
100x2x10	20	35	55	10	75	SD126 R75 B49	1	7958795053
125x3x10	20	40	81	10	96	ASD126 R75 B99	1	7958732847
125x3x10	32	40	81	10	96	ASD126 R75 B99	1	7958732848
CBN								
75x1,5x10	20	30	40	10	53	BN181 Aztec IV	1	69014152323
75x2x10	20	30	40	10	53	CB126 T B99	1	7958732853
75x2x10	20	30	40	10	53	CB126 R75 B49	1	66260121233
100x1,5x10	20	35	55	10	75	BN126 Aztec IV	1	69014152115
100x1,5x10	20	35	55	10	75	BN181 Aztec IV	1	69014152118
100x1,5x10	32	35	55	10	75	BN181 Aztec IV	1	69014152120
100x2x10	20	35	55	10	74	CB126 T B99	1	7958732869
100x2x10	32	35	55	10	74	CB126 T B99	1	7958732871*
100x2x10	20	35	55	10	75	CB126 R75 B49	1	66260121234

* Made-to-order

12V9 RE-SHARPENING



DxXxU (mm)	H (mm)	T (mm)	K (mm)	E (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND								
75x2x10	20	25	34	10	39	ASD64 R75 B99	1	7958732816
75x3x6	20	20	45	10	42	ASD76 R75 B99	1	7958732890*
75x2x10	20	20	45	10	35	SD15 R50 B49	1	66260120324
75x2x10	20	20	45	10	35	SD64 R75 B49	1	66260120326
75x2x10	20	20	45	10	35	SD126 R75 B49	1	66260120327
100x2x6	20	20	64	10	59	ASD126 R75 B99	1	7958732821
100x3x10	20	20	65	10	59	ASD46 R75 B99	1	7958732885
100x2x10	20	20	65	10	60	SD15 R50 B49	1	66260120328*
100x2x10	20	20	65	10	60	SD64 R75 B49	1	66260120329
100x2x10	20	20	65	10	60	SD126 R75 B49	1	66260120330
CBN								
75x2x6	20	20	45	10	42	CB107 T B99	1	7958732813
75x2x10	20	20	45	10	35	CB126 R75 B49	1	66260121235
100x2x6	20	20	65	10	59	CB126 T B99	1	7958732818
100x3x10	20	20	65	10	59	CB126 T B99	1	7958732880
100x2x10	20	20	65	10	60	CB126 R75 B49	1	66260121236

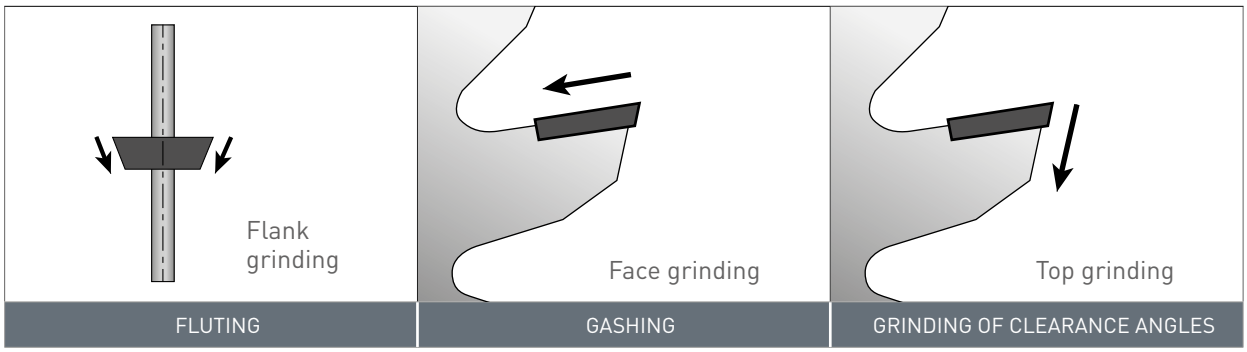
* Made-to-order

SAW BLADES

DIAMOND AND CBN GRINDING WHEELS FOR THE SAW BLADE INDUSTRY

With an emphasis on excellent price vs. performance ratios, the saw blade programme aims to provide the best solutions for grinding tungsten carbide tipped saw blades and one-piece HSS saws.

The tungsten carbide tipped circular saw blade grinding wheels have been specifically designed for face grinding and flank grinding. Norton offers grinding wheels for the most common machine types required for these applications.



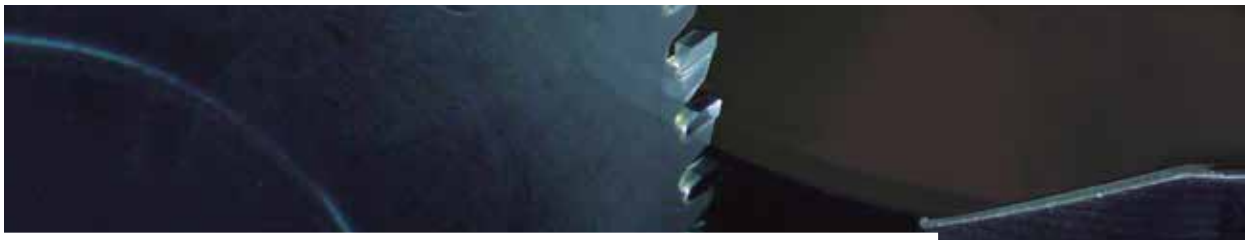
1A1W grinding pins for hollow tooth grinding are also available.

BOND OVERVIEW DIAMOND

BOND	WEAR RESISTANCE	RECOMMENDATION FOR USE
ECO Face	↑	Face grinding of tungsten carbide tipped saw blades
ECO Flank		Flank grinding of tungsten carbide tipped saw blades
ECO Top-AW		Top-grinding of tungsten carbide tipped saw blades on AKEMAT and WOODTRONIC machines
ECO Top		Universal top-grinding of tungsten carbide tipped saw blades
ECO Top-R		Top-grinding of tungsten carbide tipped saw blades, especially re-sharpening
ECO Top-P		Top-grinding of tungsten carbide tipped saw blades, especially production
B99		Universal resin bond for wet and dry grinding

BOND OVERVIEW CBN

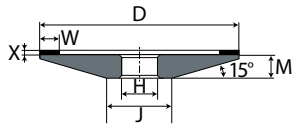
BOND	WEAR RESISTANCE	RECOMMENDATION FOR USE
ECO Curve		Profiling and re-sharpening of HSS saw blades



DIAMOND & CBN WHEELS
FOR SHARPENING OF TUNGSTEN CARBIDE TIPPED SAW BLADES

The tooth face of circular saw blades is ground with sharp angled cup wheels. Depending on the tooth pitch, different angles and wheel thicknesses are required. The greater the number of teeth around the circumference, the narrower the space between them and the thinner the grinding wheel needs to be. Even the narrowest tooth gaps can be machined with our 12V9 *ECO* Face wheels.
For reasons of stability, conventional tooth gaps are mainly ground using 4A2 or 12V2 grinding wheels.

4A2 FACE GRINDING

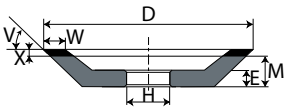


DxWxX (mm)	H (mm)	M (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND						
100x5x2	25*	7	51,5	ASD91 R75 B99	1	7958725784

ADDITIONAL INFORMATION For conventional tooth gaps

*4A2K (with Keyway)

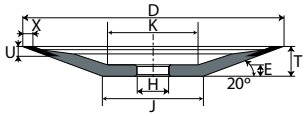
12V2 FACE GRINDING



DxWxX (mm)	H (mm)	M (mm)	V (°)	E (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND							
125x4x2	32	11	30°	9	ASD46 R125 B99	1	60157682189
125x4x2	32	11	30°	9	ASD76 R125 B99	1	60157682188
200x4x2	32	13	30°	11	ASD46 R125 B99	1	7958725781
200x4x2	32	13	30°	11	ASD76 R125 B99	1	7958725780

ADDITIONAL INFORMATION For conventional tooth gaps

12V9 FACE GRINDING



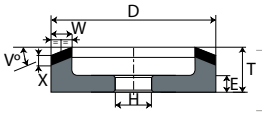
ADDITIONAL INFORMATION
For conventional tooth gaps

DxXxU (mm)	H (mm)	T (mm)	K (mm)	E (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND								
100x2,3x4	25*	10	77	7	51	D46 ***ECO*** Face	1	7958717431
125x2,3x4	25*	10	101	7	76	D46 ***ECO*** Face	1	7958714565
125x2,3x4	32	13	101	10	70	D46 ***ECO*** Face	1	69014148184
150x2,3x4	32	13	126	10	95	D46 ***ECO*** Face	1	7958719191
200x2,3x4	32	13	173	10	145	D46 ***ECO*** Face	1	69014148205

DIAMOND & CBN WHEELS
FOR SHARPENING OF TUNGSTEN CARBIDE TIPPED SAW BLADES

To ensure the circular nature of the saw and to define the wedge and clearance angles, the top of the saw blade needs to be ground.
Vollmer and Widma machines normally require 6VV5 cup wheels Akemat and Woodtronic machines require 14M1 state of the art peripheral wheels.

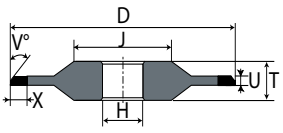
6VV5 TOP GRINDING



DxWxX (mm)	V (°)	H (mm)	T (mm)	E (mm)	SPECIFICATION	ADDITIONAL INFORMATION	PK QTY	ART NO.
DIAMOND								
100x5x10	8°	25*	24	7	ASD126/46 R100/ R75 ***ECO*** TOP	Universal use	1	7958725658
125x5x10	8°	32	22	11	ASD126/46 R100/ R75 ***ECO*** TOP-P	For production, oil	1	7958725661
125x5x10	8°	32	22	11	ASD126/46 R125/ R100 ***ECO*** TOP-R	For re-sharpening	1	7958725663

*6VV5K (with keyway)

14M1 TOP GRINDING



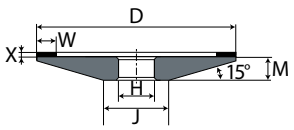
DxUxX (mm)	V (°)	H (mm)	T (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND							
150x5x8	8°	32	10	119	ASD107/46 R100/ R75 ***ECO*** TOP-AW	1	7958725785
200x5x8	8°	32	10	156	ASD126/46 R100/ R75 ***ECO*** TOP-AW	1	7958725786

ADDITIONAL INFORMATION D126/D46: U=2,5/2,5

DIAMOND & CBN WHEELS
FOR SHARPENING OF TUNGSTEN CARBIDE TIPPED SAW BLADES

During the flank grinding process the cutting width of the circular saw blade is defined. Therefore, typically two 4A9 grinding wheels are simultaneously fed from both sides.
When manufacturing saw blades there is a wide variety of tooth geometries and designs to chose from. Depending on the intended use of the saw, the tooth design can be flat, alternate, trapezoid or any combination of these. Hollow ground teeth are very common to achieve finer cuts with no burrs. The rounded shape of hollow ground teeth is produced with 1A1W grinding pins.

4A9 FACE GRINDING

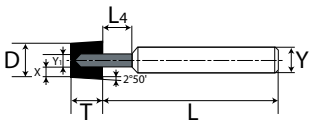


ADDITIONAL INFORMATION
Universal use

DxXxW (mm)	H (mm)	T (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND						
80x4x5	32	10	53	ASD64 ***ECO*** Flank	1	7958725778
86x4x5	32	10	59	ASD64 ***ECO*** Flank	1	7958725779
100x4x4,5	20*	14	35	ASD64 ***ECO*** Flank	1	7958725739
100x4x4,5	20*	14	35	ASD126 ***ECO*** Flank	1	7958725744
100x4x5	32	10	55	ASD64 ***ECO*** Flank	1	7958725737
100x4x5	32	10	55	ASD126 ***ECO*** Flank	1	7958725738

*4A9K (with Keyway)

1A1W HOLLOW TOOTH GRINDING



DxTxX (mm)	Y (mm)	L (mm)	Y_1 (mm)	L_4 (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND							
6,5x3x1,75	6	42	4,1	10	ASD76 R125 B99	1	7958725782
7x3x2	6	42	5,1	10	ASD76 R125 B99	1	7958725783

ADDITIONAL INFORMATION For all common machines

COLOUR CODES FOR MACHINE MANUFACTURERS

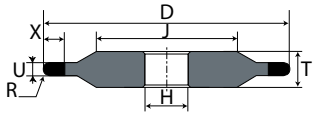
Vollmer-Biberach	Vollmer-Dornhan	Woodtronic	Akemat	Widma

DIAMOND & CBN WHEELS
FOR SHARPENING HSS SAW BLADES

HSS saw blades are one-piece saws that are ground from one solid piece of metal. For this process HSS saws require special grinding machines.

14F1 wheels grind the required profile under CNC control. Wheels are ideal for both initial profiling and re-sharpening thanks to the advanced resin bond systems which ensure the wheels are economic and extremely wear resistant.

14F1 INITIAL PROFILING AND RE-SHARPENING



ADDITIONAL INFORMATION
For Loroch machines

DxUxX (mm)	R (mm)	H (mm)	T (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
CBN							
200x1,3x6,5	0,65	32	8	169	CB107 ***ECO*** Curve	1	7958706686
200x1,6x7	0,8	32	8	164	CB107 ***ECO*** Curve	1	7958714307
200x2x8	1	32	8	164	CB107 ***ECO*** Curve	1	7958706684
200x2,5x8	1,25	32	8	159	CB107 ***ECO*** Curve	1	7958716444
200x3x10	1,5	32	8	160	CB107 ***ECO*** Curve	1	7958718179
200x4x12,5	2	32	8	157	CB107 ***ECO*** Curve	1	7958716216

GENERAL ENGINEERING

DIAMOND AND CBN GRINDING WHEELS FOR GENERAL ENGINEERING

Norton diamond and CBN wheels for general engineering are suitable for many grinding applications like OD-, ID-, and flat grinding, machining of knives, milling cutters and polishing.

Most of the bonds listed in this section are made with ASD (armoured synthetic diamonds) grit and are suitable for wet and dry grinding applications. Some wheels use AMD (armoured metal bond diamonds) which are more wear resistant but require a coolant.

More information about the application can be found in the relevant sub-chapters.

BOND OVERVIEW DIAMOND

BOND	WEAR RESISTANCE	RECOMMENDATION FOR USE
R100 B99	↑	For universal grinding (wet or dry)
R75 B99		For universal grinding (wet or dry)
R50 B99		For universal grinding (wet or dry)
R75 B49		For universal grinding (dry)
R50 B49		For universal grinding (dry)

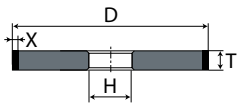
BOND OVERVIEW CBN

BOND	WEAR RESISTANCE	RECOMMENDATION FOR USE
W B99	↑	For universal grinding (wet or dry)
T B99		For universal grinding (wet or dry)
Q B99		For universal grinding (wet or dry)
R75 B49		For universal grinding (dry)
R50 B49		For universal grinding (dry)

DIAMOND & CBN WHEELS
FOR GENERAL ENGINEERING

Norton offers a comprehensive stock programme for resin bonded 1A1 standard grinding wheels designed for OD- and flat grinding tungsten carbide and steel parts.
All specified grinding wheels can be used for OD- and flat grinding. However, wheels (R50) with lower concentration have been specifically designed for flat grinding operations.
Other specifications are available on request.

1A1 OD AND FLAT GRINDING



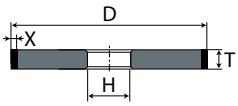
DxTxX (mm)	H (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND				
175x15x3	32	ASD126 R50 B99	1	7958732730
200x10x3	32	ASD126 R75 B99	1	7958732731
200x10x3	51	ASD126 R75 B99	1	7958732732
200x15x3	32	ASD126 R75 B99	1	7958732840
250x15x3	51	ASD126 R75 B99	1	7958764970**
250x15x3	76,2	ASD126 R75 B99	1	7958732804
300x10x3	127	ASD126 R75 B99	1	7958732824
300x15x3	76	ASD126 R75 B99	1	7958764968**
300x15x3	127	ASD126 R75 B99	1	7958732810
300x20x3	127	AMD126 R50 B99	1	7958732812
350x15x3	127	ASD126 R50 B99	1	7958788919*
350x20x3	127	ASD126 R50 B99	1	7958788920*
350x30x3	127	ASD126 R50 B99	1	7958788921*
400x15x3	127	ASD126 R50 B99	1	7958788923*
400x20x3	127	ASD126 R50 B99	1	7958788924*
400x30x3	127	ASD126 R50 B99	1	7958788925*
CBN				
200x10x3	51	CB126 T B99	1	7958732803
200x15x3	32	CB126 Q B99	1	7958732838
250x15x3	51	CB126 T B99	1	7958764971**
250x20x3	76,2	CB126 Q B99	1	7958732802
300x15x3	127	CB126 T B99	1	7958732808
300x20x3	127	CB126 Q B99	1	7958732815
350x15x3	127	CB126 Q B99	1	7958788927*
350x20x3	127	CB126 Q B99	1	7958788928*
350x30x3	127	CB126 Q B99	1	7958788929*
400x15x3	127	CB126 Q B99	1	7958788930*
400x20x3	127	CB126 Q B99	1	7958788932*
400x30x3	127	CB126 Q B99	1	7958788933*

* Made-to-order ** Available while stocks last

DIAMOND & CBN WHEELS
FOR GENERAL ENGINEERING

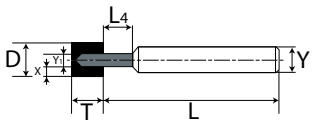
Resin bonded grinding pins and grinding wheels can be used for wet or dry applications, either manually or on automatic grinding machines.
To avoid burning and to ensure stable grinding conditions the diameter must be carefully selected. It is highly recommended to choose a diameter no bigger than 70% of the bore. When using grinding pins it is very important to follow the permitted speed instructions, which are engraved on the grinding tool.
If the permitted speed is slower than the adjustable speed of the grinding spindle, a different technical solution is required.

1A1 ID GRINDING



DxTxX (mm)	H (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND				
15x12x2	6	ASD126 R100 B99	1	7958732728
20x10x2	6	ASD126 R100 B99	1	7958732950
30x10x3	10	ASD126 R75 B99	1	7958732956
40x15x3	10	ASD126 R75 B99	1	7958732971
CBN				
12x10x2	6	CB126 W B99	1	7958732722
15x12x2	6	CB126 W B99	1	7958732729
20x10x2	6	CB126 W B99	1	7958732948
20x15x2	6	CB126 W B99	1	7958732957
25x10x2	10	CB126 W B99	1	7958732945
25x12x2	10	CB126 W B99	1	7958732939
30x15x3	10	CB126 W B99	1	7958732937
40x15x3	10	CB126 W B99	1	7958732961
50x15x3	20	CB126 W B99	1	7958732981

1A1W IDF GRINDING



DxTxX (mm)	Y (mm)	L (mm)	Y_1 (mm)	L_4 (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND							
3x6x0,65	3	60	1,7	8	ASD64 R100 B99	1	7958732951
3x6x0,65	3	60	1,7	8	ASD126 R100 B99	1	7958732949**
5x6x1,5	3	60	2,1	8	ASD64 R100 B99	1	7958732944
5x6x1,5	3	60	2,1	8	ASD126 R100 B99	1	7958732943
6x6x1,5	6	60	3,1	8	ASD64 R100 B99	1	7958732940
6x6x1,5	6	60	3,1	8	ASD126 R100 B99	1	7958732941
8x10x2	6	60	4,1	12	ASD64 R100 B99	1	7958732954
8x10x2	6	60	4,1	12	ASD126 R100 B99	1	7958732953
10x10x2	6	60	-	-	ASD64 R100 B99	1	7958732959
10x10x2	6	60	-	-	ASD126 R100 B99	1	7958732960
12x12x2	6	60	-	-	ASD64 R100 B99	1	7958732963
CBN							
3x6x0,65	3	60	1,7	8	CB126 W B99	1	7958732947
5x6x1,5	3	60	2,1	8	CB126 W B99	1	7958732946
6x6x1,5	6	60	3,1	8	CB126 W B99	1	7958732938
8x10x2	6	60	4,1	12	CB126 W B99	1	7958732955
10x10x2	6	60	-	-	CB126 W B99	1	7958732958
12x12x2	6	60	-	-	CB126 W B99	1	7958732962

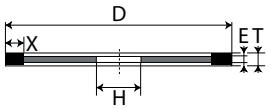
** Available while stocks last

DIAMOND & CBN WHEELS
FOR GENERAL ENGINEERING

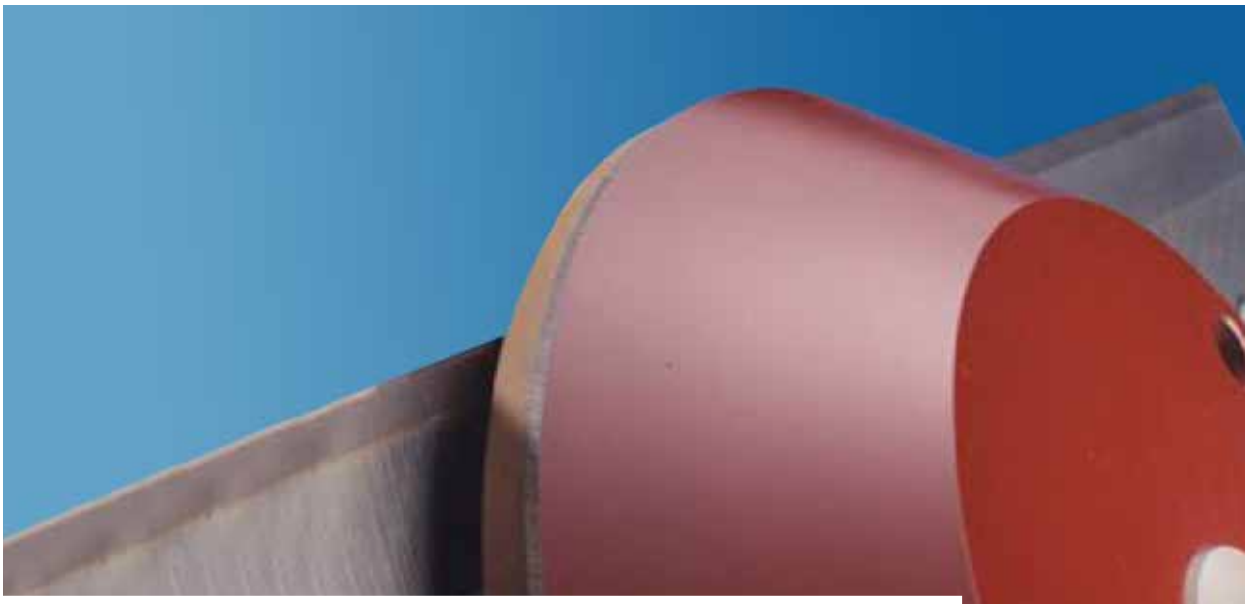
Norton offers a small assortment of standard resin bonded cut-off grinding wheels. The specified diamond cut-off wheels cut hard, short-chipping and wear resistant materials such as glass, ceramics and carbide. The contained CBN cut-off wheels are ideal for machining high speed steel, hardened steel, 55 HRC and magnetic materials.

Further specifications for resin bond, sintered metal and electroplated metal bond are available on request.

1A1R CUT-OFF



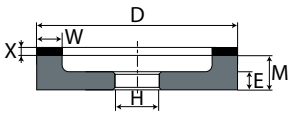
DxTxX (mm)	E (mm)	H (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND					
100x0,9x5	0,7	20	ASD126 R75 B99	1	60157681683
125x1x5	0,7	20	ASD126 R75 B99	1	60157681686
150x1x5	0,8	20	ASD126 R75 B99	1	60157681688
CBN					
100x0,9x5	0,7	20	CB151 T B99	1	60157681767
125x1x5	0,7	20	CB151 T B99	1	60157682094
150x1x5	0,8	20	CB151 T B99	1	60157682103



DIAMOND & CBN WHEELS
FOR GENERAL ENGINEERING KNIFE GRINDING

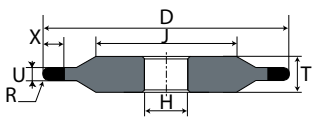
Norton offers a range of resin bonded grinding wheels for machining flat, circular and profile knives.
The 6A2 grinding wheels are specifically designed for wet grinding of circular knifes with tungsten carbide-steel combinations on Göckel and Reform machines.
The 14F1 grinding wheels are designed for use on Weinig machines for grinding profile knives for the wood industry.

6A2 FLAT GRINDING



DxWxX (mm)	H (mm)	M (mm)	E (mm)	SPECIFICATION	PK QTY	MACHINES	ART NO.
DIAMOND							
200x8x4	50	31	23	AMD126 R100 B99	1	For Göckel	7958732926
200x8x4	75	31	23	AMD126 R100 B99	1	For Reform	7958732850

14F1 PROFILE GRINDING



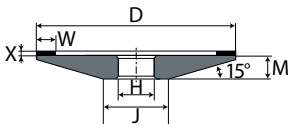
ADDITIONAL INFORMATION
For Weinig machines

DxUxX (mm)	R (mm)	H (mm)	T (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND							
200x2x7	1	60	10	129	ASD64 R100 B99	1	7958732992
200x4x7	2	60	10	134	ASD151 R100 B99	1	7958732986
CBN							
200x2x7	1	60	10	129	CB126 T B99	1	7958732990
200x4x7	2	60	10	134	CB151 W B99	1	7958732988

DIAMOND & CBN WHEELS
FOR GENERAL ENGINEERING MILLING CUTTERS

Grinding tool faces and clearances are the main applications of the milling cutter.
Norton offers a diverse range of grinding wheels to enable excellent performance in both applications. A comprehensive range of grit sizes and concentrations provides the ideal solution for each application. The price vs. performance ratio of these tools is the underlying benefit of this product range.

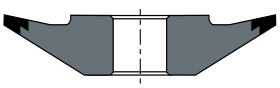
4A2 FACE GRINDING



DxWxX (mm)	H (mm)	M (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND						
100x5x2	20	6	66	ASD64 R75 B99	1	7958732965
125x5x2	20	7	84	ASD64 R75 B99	1	7958732868
125x5x2	20	7	84	ASD126 R75 B99	1	7958732870
125x5x2	32	7	84	ASD91 R75 B99	1	7958732866
125x10x2	20	7	84	ASD107 R75 B99	1	7958732873
150x5x2	32	9	94	ASD64 R75 B99	1	7958732863
150x5x2	20	9	94	ASD126 R75 B99	1	7958732864
150x5x2	32	9	94	ASD54 R50 B99	1	7958732858**
150x5x2	32	9	94	ASD91 R75 B99	1	7958732855
150x3x3,3	20	9	94	ASD64 R75 B49	1	66260120336*
175x5x4	32	11	104	ASD126 R75 B99	1	7958732929*
CBN						
100x5x2	20	6	66	CB126 T B99	1	7958732884
150x5x4	20	9	94	CB107 T B99	1	7958732852
150x3x3,3	20	9	94	CB107 R75 B49	1	66260120370*
175x5x4	20	11	104	CB126 T B99	1	7958733000

* Made-to-order ** Available while stocks last

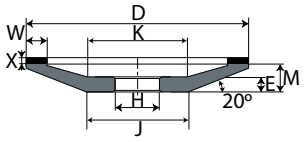
4BT9 FACE GRINDING



DxWxX (mm)	H (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND				
100x10x1	20	ASD64 R75 B99	1	66260171068*
100x10x1	20	ASD126 R75 B99	1	66260171069*
CBN				
100x10x1	20	CB64 T B99	1	66260171070*
100x10x1	20	CB126 T B99	1	66260171067*

* Made-to-order

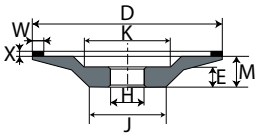
12A2-20° FACE GRINDING



DxWxX (mm)	H (mm)	M (mm)	K (mm)	E (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND								
125x5x2	20	14	54	8	54	ASD126 R75 B99	1	69014151721
125x6x4	20	14	54	8	54	ASD126 R100 B99	1	60157682171
125x6x4	32	14	54	8	54	ASD91 R75 B99	1	60157682172
150x5x2	20	16	68	9	68	ASD64 R50 B99	1	69014151397
150x5x2	20	16	68	9	68	ASD126 R75 B99	1	69014151961
150x5x2	32	16	68	9	68	ASD126 R75 B99	1	69014151963
150x5x3	32	16	68	9	68	ASD64 R100 B99	1	60157682177
150x5x3	32	16	68	9	68	ASD91 R100 B99	1	60157682176**
175x5x2	20	18	82	10	82	ASD126 R75 B99	1	69014151422
175x5x2	32	18	82	10	82	ASD126 R75 B99	1	69014151424
CBN								
150x5x4	20	16	68	9	68	CB126 Q B99	1	69014151412
150x6x4	32	16	68	9	68	CB126 T B99	1	60157682182
175x5x4	20	18	82	10	82	CB126 T B99	1	69014151427

** Available while stocks last

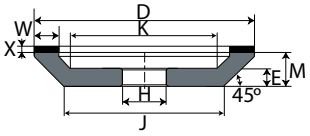
13A2 FACE GRINDING



DxWxX (mm)	H (mm)	M (mm)	K (mm)	E (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND								
125x5x4	20	19	50	9	73	ASD126 R75 B99	1	7958732991**
125x5x4	20	18	50	9	73	ASD64 R50 B49	1	66260120331
125x5x4	20	18	50	9	73	ASD181 R50 B49	1	66260120332*
150x5x4	20	20	75	11	95	ASD64 R50 B49	1	66260120333**
CBN								
125x5x4	20	19	50	9	73	CB64 Q B99	1	7958732973
125x5x4	20	18	50	9	73	CB64 R50 B49	1	66260120367**
150x5x4	20	20	75	11	95	CB126 R50 B49	1	66260120368**
175x5x4	20	22	75	11	95	CB126 R50 B49	1	66260120369**

* Made-to-order ** Available while stocks last

12A2-45° TOP GRINDING



DxWxX (mm)	H (mm)	M (mm)	K (mm)	E (mm)	J (mm)	SPECIFICATION	PK QTY	ART NO.
DIAMOND								
100x5x2	20	23	54	10	56	ASD107 R50 B99	1	7958732999
100x6x3	20	20	64	10	62	ASD76 R75 B99	1	7958732968
100x6x3	20	20	64	10	62	ASD126 R75 B99	1	7958732966
125x6x3	32	23	83	10	81	ASD126 R75 B99	1	7958732969
CBN								
100x5x2	20	23	54	10	56	CB126 Q B99	1	7958732997
125x6x2	20	23	83	10	81	CB126 T B99	1	7958732970

DIAMOND LAPPING COMPOUNDS
FOR GENERAL ENGINEERING

Norton lapping compounds are supplied in a standard concentration of 5g dispenser syringes. Perfectly sized synthetic diamond powder is mixed with a paste. When used, this compound should be diluted with water or alcohol.

APPLICATIONS & MARKETS

- Used for lapping an extremely wide range of parts by hand
- Superfinishing of electronic components, semi-conductors, magnetic heads, rigid discs and optical discs
- Finishing for routine operations
- Preparatory lapping
- Fast removal of material, roughing

DIAMOND COMPOUND PASTE

- Optimised diamond grit distribution
- Easy and safe application

GRADE (MICRONS)	COLOUR	CONTENTS	PK QTY	ART NO.
1/4	GREY	5g	1	69014154990
1/2	LIGHT GREY	5g	1	69014154991
1	IVORY	5g	1	69014154992
3	YELLOW	5g	1	69014154993
6	ORANGE	5g	1	69014154994
9	GREEN	5g	1	69014154995
12	LIGHT BLUE	5g	1	69014154996
15	BLUE	5g	1	69014154997
20	BROWN	5g	1	69014154998
30	RED	5g	1	69014154999
45	CHESTNUT	5g	1	69014155000
60	VIOLET	5g	1	69014155001

DIAMOND FILES
FOR GENERAL ENGINEERING

Norton offers a range of diamond files in various shapes for deburring, tool profiling, hardened steel and metal carbides, glass, ceramics and hard plastics.

FILES

- Free cutting and very high wear resistant, requiring only low contact pressure

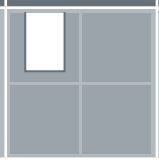
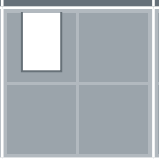
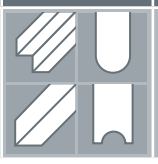
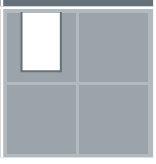
SHAPE	T (mm)	H (mm)	L (mm)	PK QTY	ART NO.
▭	1,4	4,8	140	6	60157636812
◡	1,9	5,3	140	6	60157636813
△	3,6	3,6	140	6	60157636814*
□	2,5	2,5	140	6	60157636815*
▭▭	1,4	4,8	140	6	60157636817*
Set - all above	-	-	-	6	60157636811*

* Made-to-order

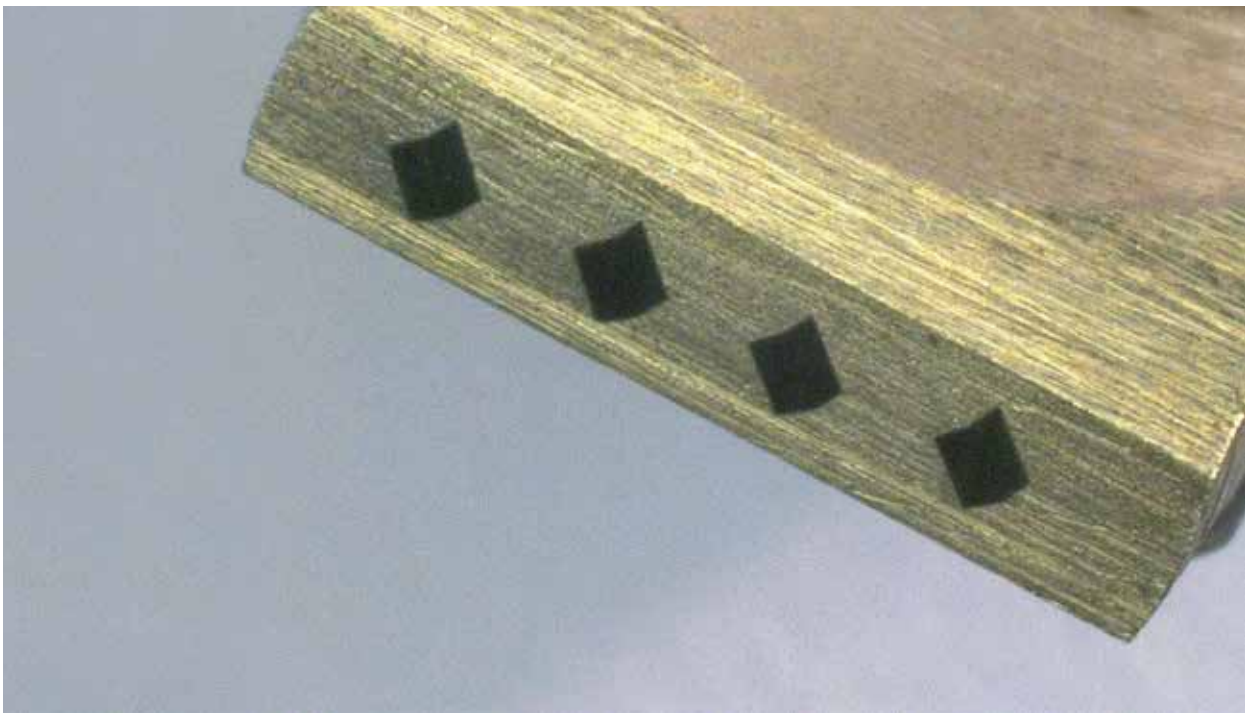
DIAMOND DRESSERS FOR CONVENTIONAL GRINDING WHEELS

Norton stationary diamond dressing tools have a worldwide reputation for quality and technology. Ideal for profiling and straight dressing of all conventional grinding wheels.

PRODUCT SELECTION GUIDE

APPLICATIONS	STRAIGHT PLUNGE GRINDING	ANGULAR PLUNGE / PROFILE GRINDING	CENTRELESS / THROUGH-FEED GRINDING	INTERNAL GRINDING	DIAFORM	SINTERED GRAINS
PROFILE AVAILABILITY						
Blade tool with CVD		●				●
Blade tool with natural grains	●	◐	●			◐
Profile dresser					●	
Multi point	◐		◐			
Single point				●		

Highly recommended ● Recommended ◐



SELECTING A BLADE TOOL DRESSER

Dressing of profiles with blade tools	Dressing tools use a 'needle' form of natural or synthetic diamonds. Needle diamonds are especially suited to dressing profiles using infeeds and angular feeds.
Natural diamonds	An effective diamond layer with a length of up to 15mm creates an economical dressing solution. Using precise diamond setting patterns, with overlapped rows of stones, ensures that consistent dressing results are achieved.
Synthetic diamonds	The constant cross section given by synthetic diamonds, guarantees a constant dressing behaviour through the complete life of the dressing tool.

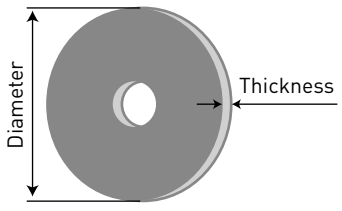
SELECTION OF GRIT SIZE

Grit size of grinding wheel	Synthetic diamond size (mm)	Natural diamond size
46	0,8x0,8	D1181
60	0,8x0,8	D1001
80-120	0,6x0,6	D711

SPEC CHECK

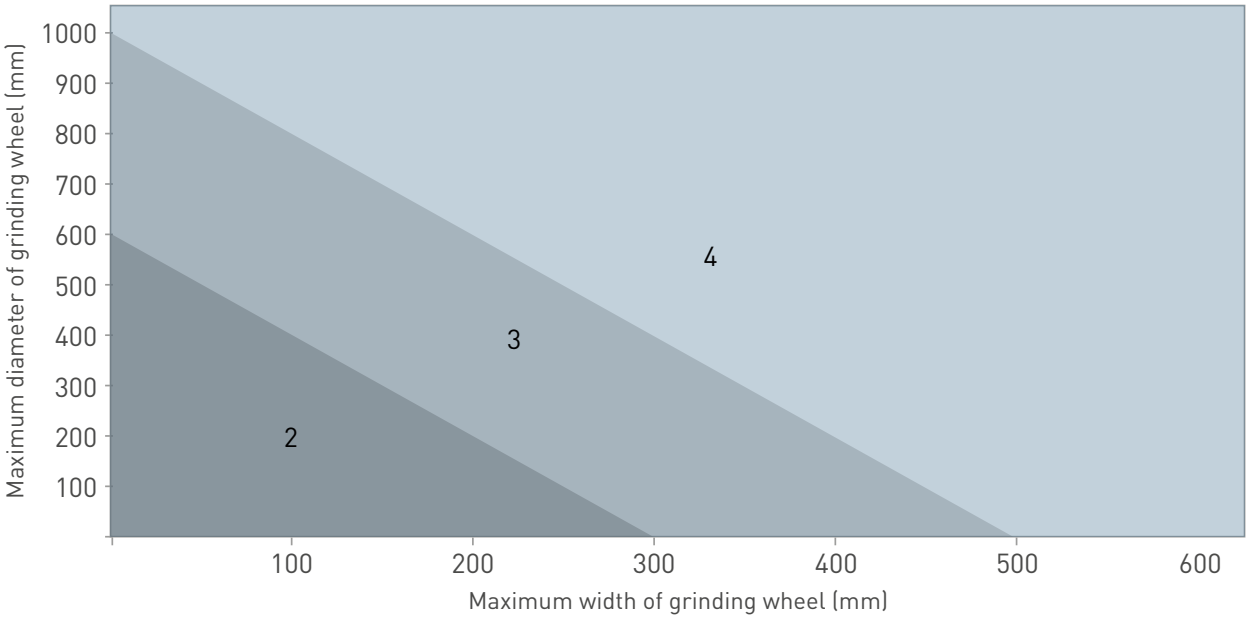
A new dressing tool should be put through at least 5 dressing cycles in order to fit the diameter of the grinding wheel.
The lifetime of the dressing tool is extended by ensuring that adequate coolant pressure and volume are directed at the tool.

SELECTION OF TOOL SIZE



Diameter x Thickness (mm)	No. of synthetic needles	Dimensions (mm)
< 35000	2	10,5x28
35000 – 60000	3	20,5x28
60000 – 100000	4	20,5x28

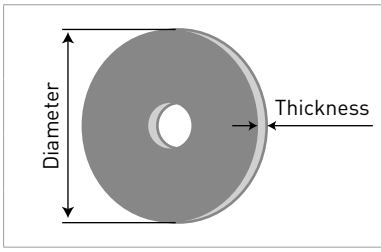
NUMBER OF CVD NEEDLES PER BLADE



SELECTING A SINGLE-POINT DRESSER

Which tool to choose depends mainly on the dimensions of the wheel to be dressed.
In order to calculate this, it is best to use the following method:

MULTIPLY THE DIAMETER OF THE WHEEL BY ITS THICKNESS



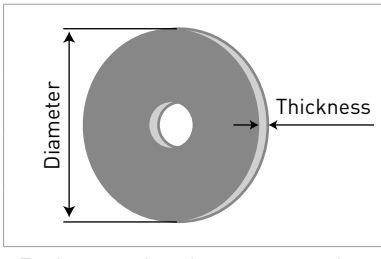
Diameter x Thickness (mm)	Carat
< 6000	0,33 Carat
6000 – 18000	0,50 Carat
> 18000	1,0 Carat

For best results, always use a coolant when dressing

SELECTING A MULTI-POINT DRESSER

Which tool to choose depends mainly on the dimensions of the wheel to be dressed.
In order to calculate this, it is best to use the following method:

MULTIPLY THE DIAMETER OF THE WHEEL BY ITS THICKNESS



Diameter x Thickness (mm)	Carat
< 30000	1,3 Carat
30000 – 60000	2,5 Carat
> 60000	5,0 Carat

For best results, always use a coolant when dressing

DIAMOND DRESSERS

CHOICE OF DIAMOND GRIT

Wheel abrasive	Diamond
80-120	D301
60-80	D711
46-60	D1001
36-46	D2240

BLADE TOOL DRESSERS HPB-D 3565 & 3585

- Synthetic multi-crystalline diamond
- The most consistent dresser for demanding profiling and straight dressing

WxLxDL (mm)	GRIT	SPECIFICATION	PK QTY	ART NO.
10,5x28x4	0,6x0,6	HPB-D 3565 / 2	1	60157682820
10,5x28x4	0,6x0,6	HPB-D 3565 / 3	1	60157682856
10,5x28x4	0,6x0,6	HPB-D 3565 / 4	1	60157682895
10,5x28x4	0,8x0,8	HPB-D 3585 / 2	1	60157682899
10,5x28x4	0,8x0,8	HPB-D 3585 / 3	1	60157682902
10,5x28x4	0,8x0,8	HPB-D 3585 / 4	1	60157682904

BLADE TOOL DRESSERS HPB-D & -C 30, 45, 60

- An economical dressing solution for all Alox and SiC wheels
- Natural diamond
- Needles are recommended for profile dressing

WxLxDL (mm)	GRIT	SPECIFICATION	PK QTY	ART NO.
10,5x28x12	D711	HPB-D 30	1	60157682759*
10,5x28x12	D1001	HPB-D 45	1	60157682782
10,5x28x12	D1181	HPB-D 60	1	60157682786
10,5x28x12	NEEDLE	HPB-D	1	60157682790
20,5x28x10	D711	HPB-C 30	1	60157682801
20,5x28x10	D1001	HPB-C 45	1	60157682806
20,5x28x10	D1181	HPB-C 60	1	60157682809
20,5x28x10	NEEDLE	HPB-C	1	60157682814

* Made-to-order

SCREWED SHANKS FOR BLADE TOOL DRESSERS

DIA (mm)	L (mm)	SHANK CODE	SPECIFICATION	PK QTY	ART NO.
12,065	40	MT1	HPB-H3	1	60157682832
9,045	25,5	MT0	HPB-H4	1	60157682907
11,11	50	Z11,11	HPB-H2	1	60157682910
10,00	50	Z10	HPB-HX	1	60157682911

SINGLE-POINT DRESSER BC SG +++++

- Highest quality diamonds
- Specifically developed for dressing ceramic abrasive (SG/TG) wheels which require faster traverse speed dressing
- High performance tools
- Enables dressing costs to be reduced, specially at production grinding stations

SHANK (mm)	CARAT	PK QTY	ART NO.
Z8	0,50	1	66260161757
	1,00	1	66260161755
Z10	0,33	1	66260161769
	0,50	1	66260161768
	1,00	1	66260161766
Z11,11	0,33	1	66260156906
	0,50	1	66260156907
	1,00	1	66260157010
Z12	0,50	1	66260161779
	1,00	1	66260161777

SINGLE-POINT DRESSER BC (CYLINDRICAL SHANK) ++++

- Standard diamonds
- Ideal for applications where it is difficult to measure the performance of the dressing tool
- Economy product
- Suitable for dressing conventional abrasive wheels

SHANK (mm)	CARAT	PK QTY	ART NO.
Z8	0,33	1	66260161753
	0,50	1	66260161752
	1,00	1	66260161750
Z10	0,33	1	66260161764
	0,50	1	66260161763
	1,00	1	66260161761
Z11,11	0,33	1	66260195003
	0,50	1	66260195005
	1,00	1	66260195009
Z12	0,33	1	66260161775
	0,50	1	66260161774

NEW SINGLE-POINT DRESSER (SP MK-SHANK & BC CYLINDRICAL SHANK) +++

- Commercial standard diamonds
- Standard dresser for conventional abrasive wheels

SHANK (mm)	CARAT	PK QTY	ART NO.
MK0	0,3	1	66260211018
	0,5	1	66260211022
	1,0	1	66260211023
MK1	0,3	1	66260211024
	0,5	1	66260211025
	1,0	1	66260211027
Z8	0,33	1	66260211028
	0,5	1	66260211029
	1,0	1	66260211030
Z10	0,33	1	66260211031
	0,5	1	66260211033
	1,0	1	66260211034

SINGLE-POINT DRESSER SP (MK- SHANK) +++

- Commercial standard diamonds
- Standard dresser for conventional abrasive wheels

SHANK (mm)	CARAT	PK QTY	ART NO.
MK0	0,3	1	69014119596
	0,5	1	69014119598
	1,0	1	69014119599
	1,5	1	69014119600
MK1	0,3	1	69014119570
	0,5	1	69014119591
	1,0	1	69014119594
	1,5	1	69014119595

PROFILE DRESSER +++++

- Extremely high performance tools
- Used to meet extremely high profile accuracy requirements

SHANK (mm)	RADIUS (mm)	ANGLE	SPECIFICATION	ART NO.
Z9,52	0,13	40°	DC 40/130	60157682850
	0,25	40°	DC 40/250	60157682889
	0,50	40°	DC 40/500	60157682901
	0,13	60°	DC 60/130	60157682903
	0,25	60°	DC 60/250	60157682905
	0,50	60°	DC 60/500	60157682909

MULTI-POINT DRESSER +++++

- Economical and robust too
- Ideal for straight dressing at high speed with low technical demands

TYPE	SHANK (mm)	GRIT	PK QTY	ART NO.
D11x11 (5 Carat)	Z8	D2240	1	60157682849
		D1001	1	60157682896
		D711	1	60157682906
	Z10	D2240	1	60157682892
		D1001	1	60157682897
		D711	1	60157682908
	Z11,11	D2240	1	60157682893
		D1001	1	60157682898
		D711	1	60157682912
	MT1 12,065	D2240	1	60157682894
		D1001	1	60157682900
		D711	1	60157682914
D8x11 (2,5 Carat)	Z8	D2240	1	60157682915
		D1001	1	60157682920
		D711	1	60157682970
	Z10	D2240	1	60157682916
		D1001	1	60157682922
		D711	1	60157682968
	Z11,11	D2240	1	60157682917
		D1001	1	60157682923
		D711	1	60157682977
	MT1 12,065	D2240	1	60157682918
		D1001	1	60157682925
		D711	1	60157682981
D6x8 (1,3 Carat)	Z8	D711	1	60157682986
		D301	1	60157683153
	Z10	D711	1	60157682990
		D301	1	60157683154
	Z11,11	D711	1	60157682992
		D301	1	60157683155
	MT1 12,065	D711	1	60157682996
		D301	1	60157683156

HAND DRESSER +++++

- High diamond concentration
- Grit 18/25 SPC
- High wear resistance and long product lifetime
- Suitable for face and side dressing

SPECIFICATION	PK QTY	ART NO.
HD-150	1	60157682852

BRAKE CONTROLLED TRUING DEVICE +++++

- For fast effective truing of diamond and CBN wheels with minimum loss of abrasive
- Ideal for truing diamond and CBN wheel types: straight wheels with diamond in the periphery, tool and cutter grinding wheels, wheels used on surface and cylindrical grinding machines, cut-off wheels and internal grinding wheels and cup wheels with diamonds in the rim, as used on vertical spindle surface grinders

SPECIFICATION	PK QTY	ART NO.
BCTD	1	66260274459

SCREWED SHANKS FOR BLADE TOOL DRESSERS +++++

DIA (mm)	T (mm)	B (mm)	SPECIFICATION	PK QTY	ART NO.
80	25	13	Wheel 37C60-NV	10	69936668764

DRESSING STICKS +++

- High purity white aluminium oxide abrasive
- Friable abrasive
- Ideal for dressing CBN Super Abrasive wheels

DIA (mm)	SPECIFICATION	PK QTY	ART NO.	APPLICATION
13x25x150	38A 150 HVBE	10	61463605565	For SA wheels ≥D54
	38A 220 HVBE	10	61463605066	-
	38A 320 HVBE	10	69936684889	For SA wheels ≤D46

SPEC CHECK

Mount the device spindle parallel to the wheel spindle to ensure correct straight face truing.
For cup shaped wheels, the device spindle will be mounted perpendicularly to the wheel spindle.
Use appropriate traverse rates.

TECHNICAL INFORMATION

DESIGNATION OF GRIT SIZES

FEPA MICRONS	US MESH	JIS	DWMI	DIAMOND	CBN	RA (mm) SURFACE FINISH		
						CARBIDE	STEEL PLUNGE	STEEL OSCILLATING
1181	16/18							
1182	16/20			16				
1001	18/20							
851	20/25							
852	20/30	20		24	24			
711	25/30							
601	30/35							
602	30/40	30		36	36			
501	35/40							
426	40/45							
427	40/50	40		46	46			
356	45/50							
301	50/60	50		50	50			
	50/80							
251	60/70			60	60			
252	60/80	60	60	80c	80c	0,6-0,9		
213	70/80			80	80			
181	80/100	80	80	100	100	0,4-0,7	1,0-1,1	0,9-1,1
	80/120			110c				
151	100/120	100	100	110	120		0,9-1,0	0,8-0,9
126	120/140	120	120	120	150	0,4-0,5	0,8-0,9	0,6-0,8
107	140/170	140	150	150	180		0,6-0,8	0,5-0,6
91	170/200	170	180	180	220	0,3-0,4	0,5-0,6	0,4-0,5
76	200/230	200	220	220	230			
64	230/270	230	240	240	240	0,2-0,3	0,4-0,5	
54	270/325	270	320	320	320			
46	325/400	325	400	400	400	0,1-0,2		
	400/500	400		500	500			
M63	40/60							
M40	30/40	500		500				
M25	20/30	700						
	15/25	800						
M16	*10/20*	1000		600				
	8/16	1500						
M10	*6/12*	2000		800				
M6,3	*4/8*	2500						
	3/6	4000						
M4	*2/4*	5000						
M1	*0/2*	15000						

CONCENTRATION

The concentration is defined by a standard and indicates the weight of abrasive (in carats) contained in 1cm^3 of abrasive strip – 1 carat = 0.2 grams.

CONCENTRATION*			NUMBER OF CARATS/cm^3		ABRASIVE WEIGHT PER cm^3
DIAMOND ABRASIVE		CBN ABRASIVE*			
100	=	W	4.4	=	0,88g/cm^3
75	=	T	3.3	=	0,66g/cm^3
50	=	Q	2.2	=	0,44g/cm^3

* Other concentrations available upon request

SELECTION OF CONCENTRATION

The choice of concentration depends on the machining parameters:

HIGH CONCENTRATION	MEDIUM OR LOW CONCENTRATION
Roughing operations	Finishing operation
Powerful machine	Low power machine
Small contact area	Large contact area
Retention of profile or sharp edges of wheel	Cutting without temperature rise

OPERATION	INTERNAL GRINDING	EXTERNAL GRINDING	SURFACE GRINDING	SHARPENING
Diamond	100	75	50	50/75
CBN	W	T	Q	Q/T