



pdtools
SUPERABRASIVES

GRINDING WHEELS

**FOR CIRCULAR BLADES AND
BAND SAWS PROCESSING**

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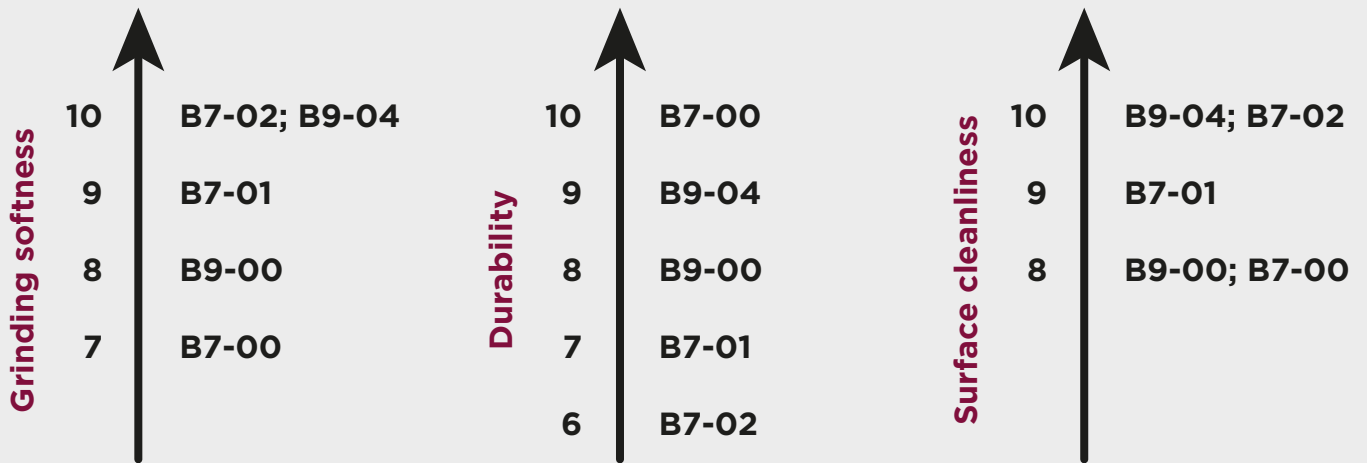
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DIAMOND GRINDING WHEELS FOR SHARPENING SAWS

BOND DESCRIPTION

Bond	Recommendations for use	Cooling
B9-00	For face and backside grinding of circular saws with carbide tips.	Oil-based coolant required, water-based coolant is permissible
B7-00	For face and backside grinding of circular saws with carbide tips.	Oil-based coolant required, water-based coolant is permissible
B7-01	For backside grinding of circular saws on the back surface.	Oil-based coolant
B7-02	For face and backside grinding of circular saws with carbide tips.	Oil-based coolant required, water-based coolant is permissible
B9-04	For face grinding of circular saws.	Oil-based coolant

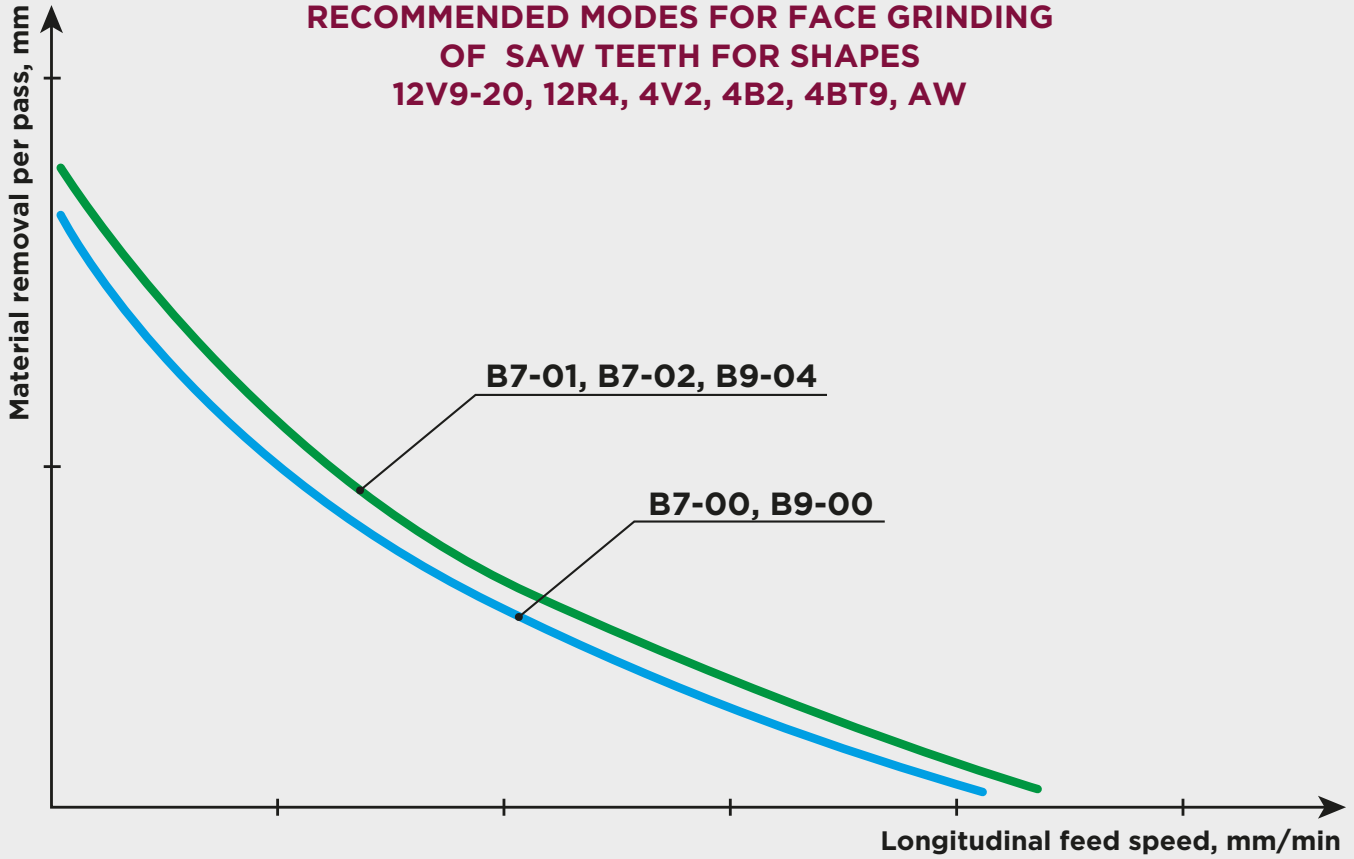
Operational properties of bonds



We recommend using the tool in accordance with these recommendations. Consumers may use the tool with their own settings, but failure to adhere to these recommendations may result in premature wear or damage to the tool.



**RECOMMENDED MODES FOR FACE GRINDING
OF SAW TEETH FOR SHAPES
12V9-20, 12R4, 4V2, 4B2, 4BT9, AW**



Wheel speed $V = 18...30$ m/s

t, mm	S, mm/min															
	80	100	120	140	150	160	180	200	210	220	240	250	270	290	300	310
0,05	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Grey
0,08	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Grey	Grey	Grey
0,1	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Grey	Grey	Grey	Grey	Grey
0,15	Green	Green	Green	Green	Green	Yellow	Yellow	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
0,2	Green	Green	Green	Yellow	Yellow	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey

These recommendations are based on the performance of the **B9-04** bond with a grit size of D64.



Best processing quality.

Used to achieve increased cleanliness and precision of the product.

Using the tool under these modes ensures maximum tool life and processing quality.



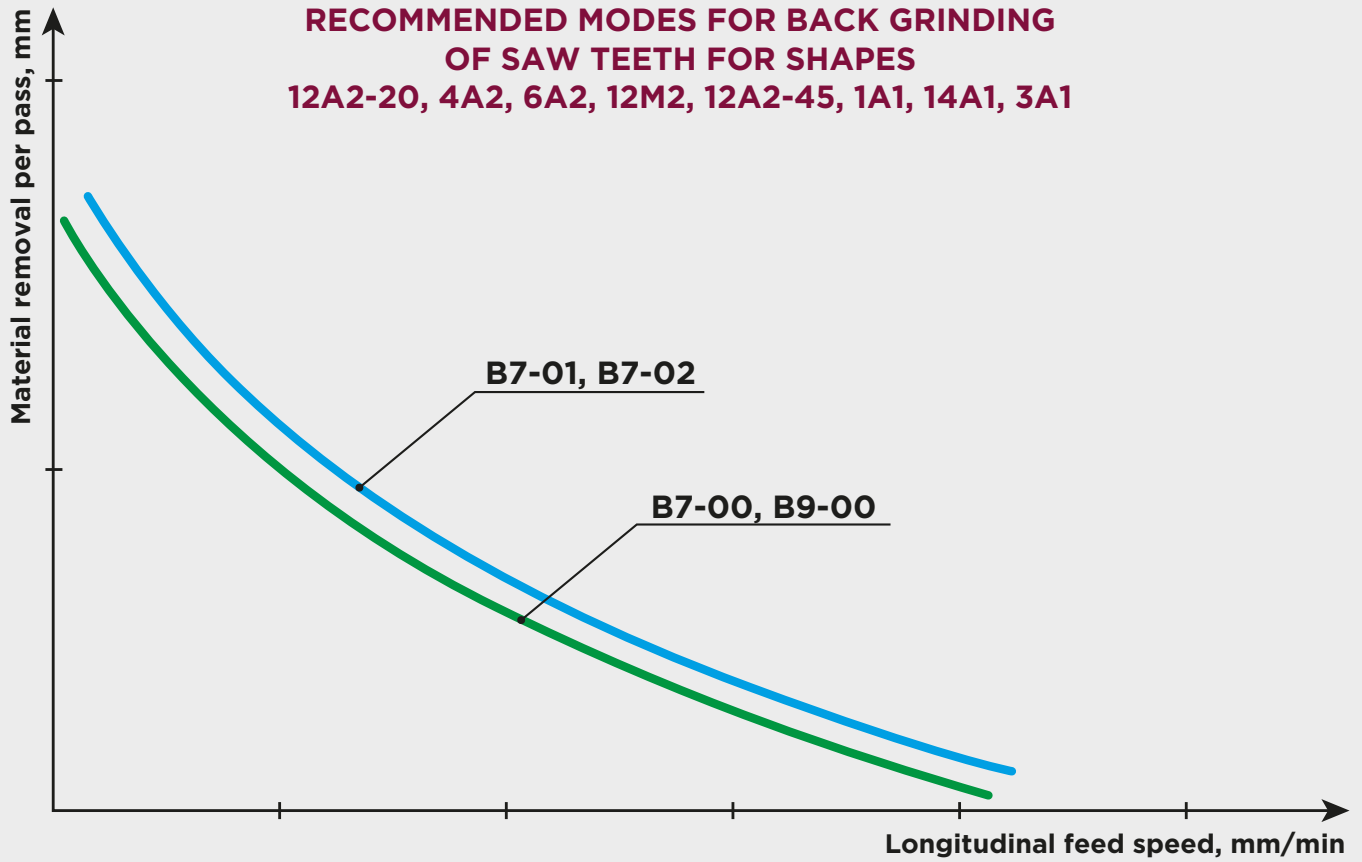
Optimal mode.

Provides good tool durability. Optimal processing quality.



Customers may use these modes in special cases after consultation with the equipment and tool manufacturer.

RECOMMENDED MODES FOR BACK GRINDING OF SAW TEETH FOR SHAPES 12A2-20, 4A2, 6A2, 12M2, 12A2-45, 1A1, 14A1, 3A1



Wheel speed $V = 18...30$ m/s

t, mm	S, mm/min																				
	180	210	240	270	300	330	360	390	450	480	510	540	600	630	720	1020	1080	1140	1200	1260	
0,05	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Grey
0,1	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Grey
0,15	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Grey
0,2	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Grey
0,25	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Grey
0,3	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Grey

These recommendations are based on the performance of the **B9-00** bond with a grit size of D126 / D46.



Best processing quality.

Used to achieve increased cleanliness and precision of the product. Using the tool under these modes ensures maximum tool life and processing quality.



Optimal mode.

Provides good tool durability. Optimal processing quality.

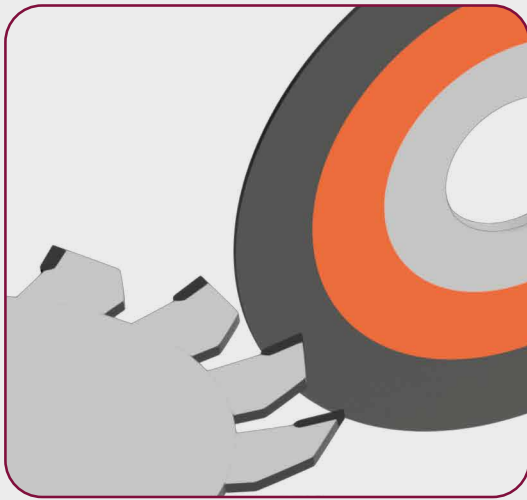


Customers may use these modes in special cases after consultation with the equipment and tool manufacturer.

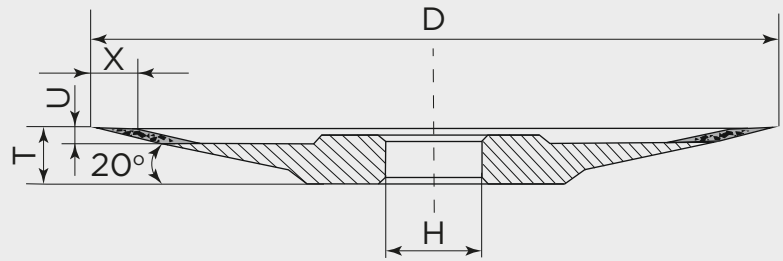
12V9-20

Application:

- Sharpening the front face of teeth
- Recommended grit size from M25 to D91



Face grinding of the tool



12V9-20 D×T×X×U×H

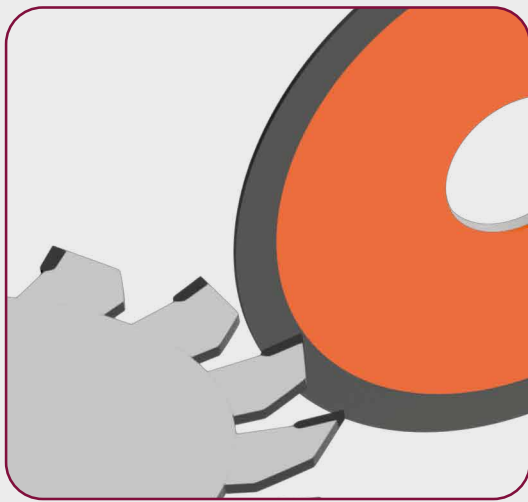
CODE	SHAPE D×T×X×U×H	CODE	SHAPE D×T×X×U×H
3G3042	12V9-20 100×10×2.3×4×20	3U3045	12V9-20 150×13×2.3×4×20
3-3042	12V9-20 100×10×2.3×4×25	3-3045	12V9-20 150×13×2.3×4×32
3C3042	12V9-20 100×10×2.3×4×32	3-3333	12V9-20 160×13×2.3×4×32
3D3048	12V9-20 125×13×2.5×4×20	3-3043	12V9-20 175×13×2.5×4×32
3M3048	12V9-20 125×13×2.5×4×25	3H3049	12V9-20 200×13×2.3×4×20
3-3048	12V9-20 125×13×2.5×4×32	3-3049	12V9-20 200×13×2.3×4×32

Tools can also be manufactured according to the customer's specific requirements upon request.

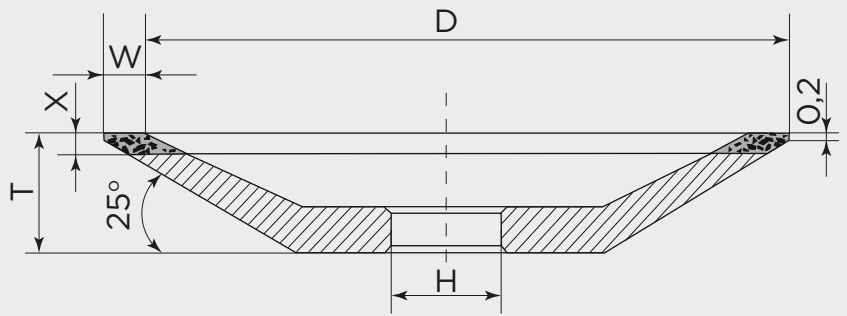
12R4

Application:

- Face grinding of teeth
- Recommended grit size from D46 to D126



Face grinding of the tool



12R4 D×W×X×T×H

CODE	SHAPE D×W×X×T×H	CODE	SHAPE D×W×X×T×H
5-1032	12R4 100×3×2×10×20	5G1061	12R4 125×4×3×14×20
5N1031	12R4 100×3×2×10×25	5-1061	12R4 125×4×3×14×32
5-1031	12R4 100×3×2×10×32	5V1051	12R4 150×5×3×16×20
5E1041	12R4 125×3×2×13×20	5-1051	12R4 150×5×3×16×32
5M1041	12R4 125×3×2×13×25	9-3261	12R4 160×3×2×13.5×32
5-1041	12R4 125×3×2×13×32	3Y3047	12R4 200×2×4×13×20
5K1041	12R4 125×4×2×13×32	3L3047	12R4 200×2×4×13×32

Tools can also be manufactured according to the customer's specific requirements upon request.

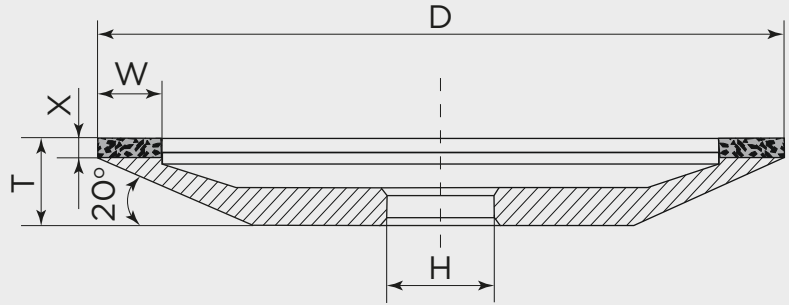
12A2-20

Application:

- Front and backside grinding of teeth
- Recommended grit size from D46 to D151



Front and backside grinding of the tool



12A2-20 D×T×X×W×H

CODE	SHAPE D×T×X×W×H	CODE	SHAPE D×T×X×W×H
5-0007	12A2-20 100×12×2×3×20	5K0010	12A2-20 125×16×2×6×25
5D0007	12A2-20 100×12×2×3×25	5B0010	12A2-20 125×16×2×6×32
5E0007	12A2-20 100×12×2×3×32	5H0010	12A2-20 125×12.5×1.7×6×20
5-0008	12A2-20 100×12×2×6×20	5K2021	12A2-20 125×13×1.7×6×32
5D0008	12A2-20 100×12×2×6×25	5N0013	12A2-20 150×19×3×6×20
5V0008	12A2-20 100×12×2×6×32	5B0013	12A2-20 150×19×3×6×32
5E0009	12A2-20 125×16×2×3×20	5U0013	12A2-20 150×21×5×6×20
5D0009	12A2-20 125×16×2×3×25	5F0013	12A2-20 150×21×5×6×32
5-0009	12A2-20 125×16×2×3×32	5D0014	12A2-20 150×18×2×10×20
5D0010	12A2-20 125×16×2×6×20	5-0014	12A2-20 150×18×2×10×32

Tools can also be manufactured according to the customer's specific requirements upon request.

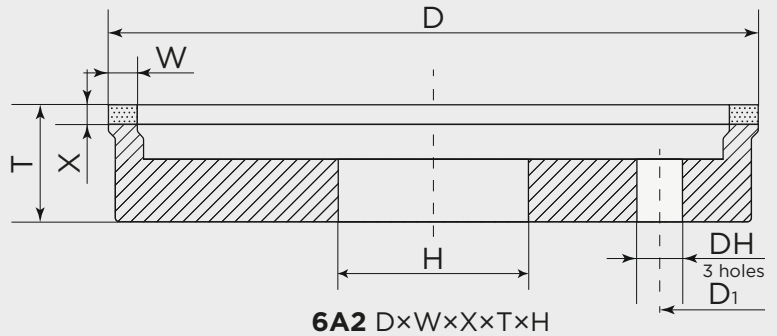
6A2

Application:

- Sharpening the back and side faces of teeth
- Recommended grit size from M25 to D126



Sharpening the back and side faces of the tool



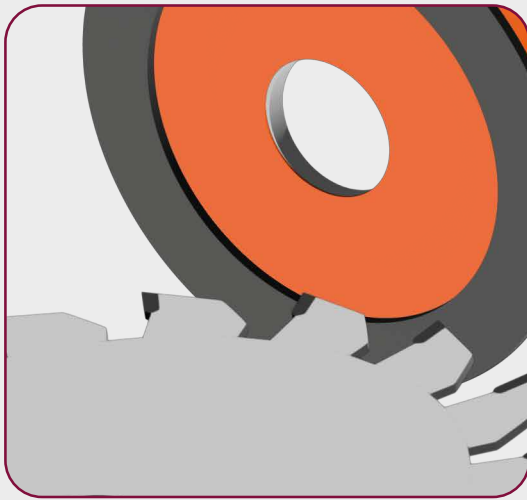
CODE	SHAPE D×W×X×T×H	CODE	SHAPE D×W×X×T×H
3-0088	6A2 125×5(2.5+2.5)×10×24×32	3F0023	6A2 125×6×4×24×20
3K0088	6A2 125×5(2.5+2.5)×10×22×32	3-0023	6A2 125×6×4×24×32
3D0088	6A2 125×5(2.5+2.5)×10×22×32	6D3153	6A2 125×6×6×18×20
3G0088	6A2 125×5(2.5+2.5)×10×22×32	6M3153	6A2 125×6×6×18×32
6E3153	6A2 125×6(2+2+2)×6×18×32		

Tools can also be manufactured according to the customer's specific requirements upon request.

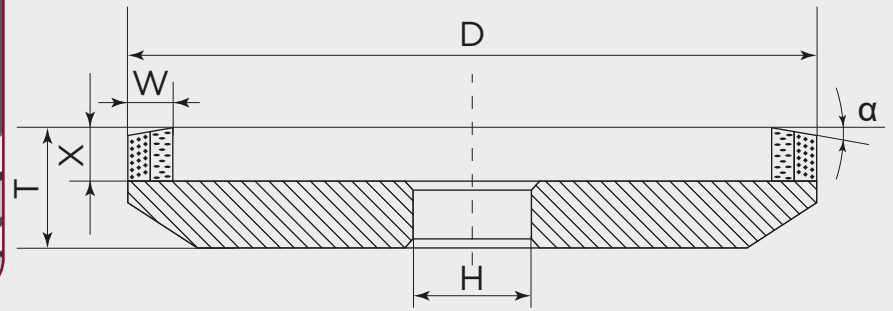
12M2

Application:

- Backside grinding of teeth
- Recommended grit size from M25 to D151



Backside grinding of the tool



12M2 D×T×X×W×H×α

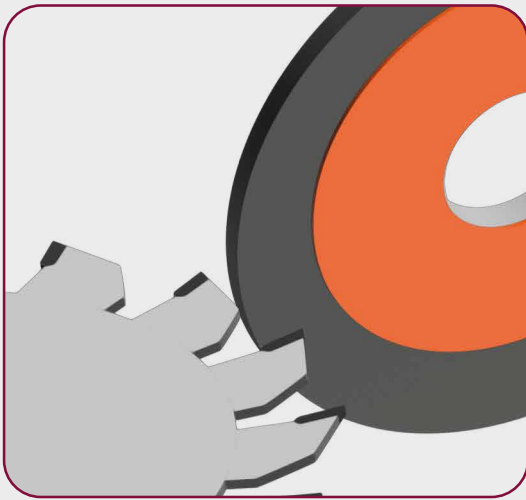
CODE	SHAPE D×T×X×W×H×α	CODE	SHAPE D×T×X×W×H×α
9C3153	125×18×6×5(2.5+2.5)×32×4	9X3153	125×24×6×5(2.5+2.5)×20×0
9R3153	125×18×6×5(2.5+2.5)×32×5	9M3153	125×24×6×5(2.5+2.5)×32×0
9W3153	125×18×6×5(2.5+2.5)×32×8	9K3153	125×24×6×5(2.5+2.5)×32×9
9-3153	125×18×6×5(2.5+2.5)×32×9		

Tools can also be manufactured according to the customer's specific requirements upon request.

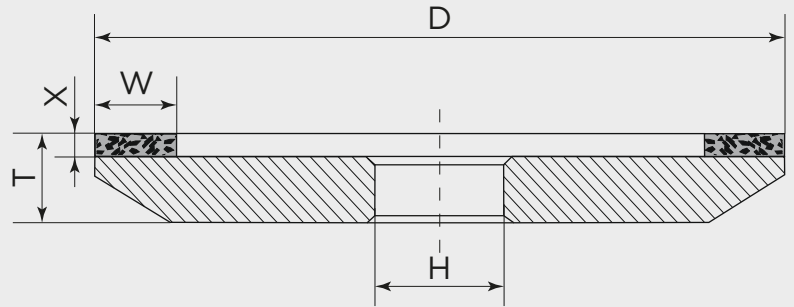
4A2

Application:

- Sharpening the front and back sides of teeth
- Recommended grit size from D46 to D126



Sharpening the front and back sides of the tool



4A2 D×T×X×W×H

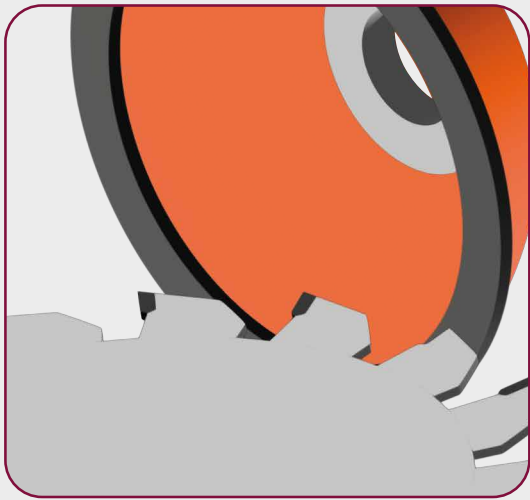
CODE	SHAPE D×T×X×W×H	CODE	SHAPE D×T×X×W×H
9-8151	4A2 100×10×2×3×20	5B2020	4A2 125×14×5×8(4+4)×20
9B8151	4A2 100×10×2×3×25	5-2020	4A2 125×14×5×8(4+4)×32
9P8151	4A2 100×10×2×3×32	9A3153	4A2 125×14×6×5(2.5+2.5)×32
9Y8159	4A2 100×10×2×6×20	9L3153	4A2 125×18×6×5×32
3D9165	4A2 125×10×2×8×32	9-9174	4A2 150×12×4×5×20
3N9166	4A2 125×10×3×6×20	9-9175	4A2 150×12×4×5×32
9Y9166	4A2 125×10×3×6×25	3-4009	4A2 150×13×2×6×32
3C3077	4A2 125×12×3×3×20	3G4009	4A2 150×14×3×6×32
3G3077	4A2 125×12×3×3×25	3F4009	4A2 150×15×4×6×32
3D3077	4A2 125×12×3×3×32	3R4009	4A2 150×16×5×6×32

Tools can also be manufactured according to the customer's specific requirements upon request.

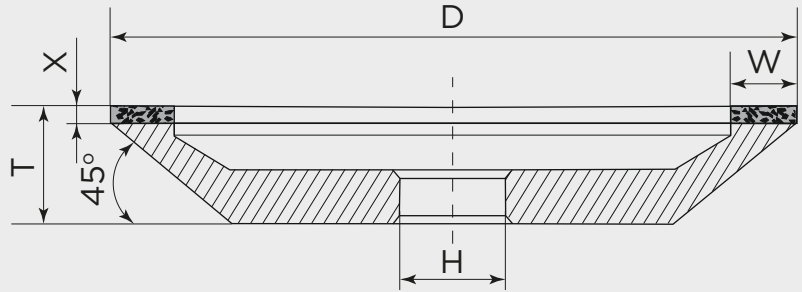
12A2-45

Application:

- Backside grinding of teeth
- Recommended grit size from D46 to D126



Backside grinding of the tool



12A2-45 D×W×X×T×H

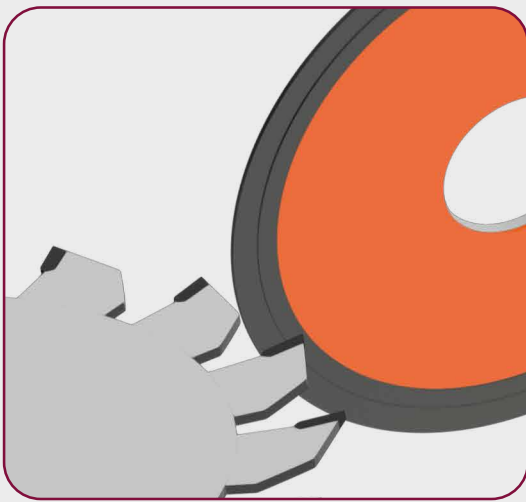
CODE	SHAPE D×W×X×T×H	CODE	SHAPE D×W×X×T×H
4-0016	12A2-45 100×5×3×32×20	4-0020	12A2-45 100×10×5×34×20
4F0016	12A2-45 100×5×3×32×32	4-0025	12A2-45 125×6×5×28×20
4-0019	12A2-45 100×5×5×34×20	4S0025	12A2-45 125×6×5×28×32
4S0019	12A2-45 100×5×5×34×32	4-0022	12A2-45 125×10×3×26×20
4F0013	12A2-45 100×6×5×28×20	4D0022	12A2-45 125×10×3×26×32
4D0013	12A2-45 100×6×5×28×32	4-0024	12A2-45 125×10×4×27×20
4-0017	12A2-45 100×10×3×32×20	4S0029	12A2-45 125×10×3×40×20
4L0017	12A2-45 100×10×3×32×25	4-0029	12A2-45 125×10×3×40×32
4D0017	12A2-45 100×10×3×32×32	4-0026	12A2-45 125×10×5×28×20
4-0014	12A2-45 100×10×5×28×20	4S0026	12A2-45 125×10×5×28×32

Tools can also be manufactured according to the customer's specific requirements upon request.

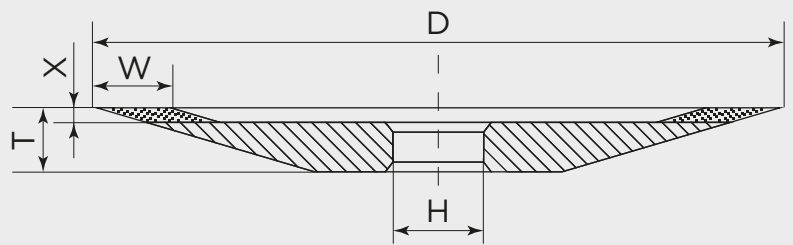
4V2

Application:

- Backside grinding of teeth
- Recommended grit size from D46 to D126



Backside grinding of the tool



4V2 D×W×X×T×H

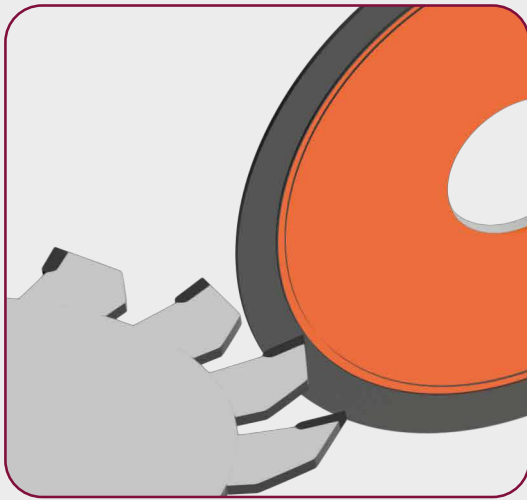
CODE	SHAPE D×W×X×T×H	CODE	SHAPE D×W×X×T×H
OC3001	4V2 100×4×2×13×20	OQ3002	4V2 125×4×2×13×32
O-3001	4V2 100×4×2×13×25	O-3004	4V2 125×4×3×14×32
OD3002	4V2 125×4×2×13×20	OB3003	4V2 150×4×2×14×20
O-3002	4V2 125×4×2×13×25	O-3003	4V2 150×4×2×14×32

Tools can also be manufactured according to the customer's specific requirements upon request.

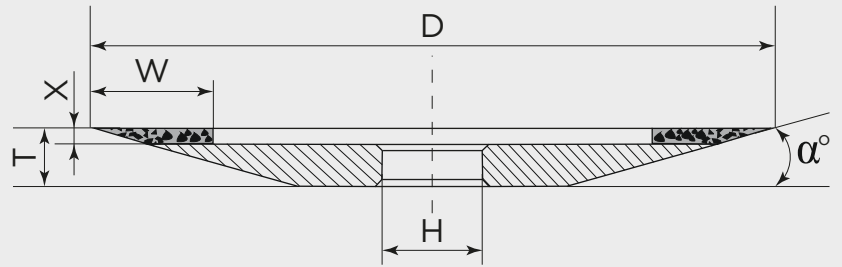
4B2

Application:

- Face grinding of the saw teeth
- Recommended grit size from D46 to D126



Face grinding of the tool



4B2 D×T×X×W×H

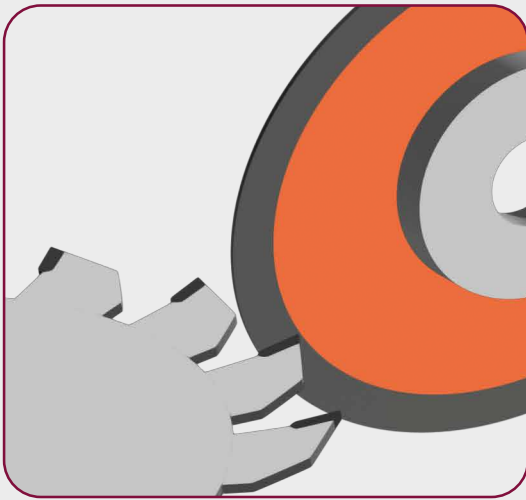
CODE	SHAPE D×T×X×W×H	CODE	SHAPE D×T×X×W×H
8L7010	4B2 100×10×1.5×6×20×20	8V7008	4B2 125×10×2×6×20×25
8D7010	4B2 100×10×1.5×6×20×25	8-7008	4B2 125×10×2×6×20×32
8-7010	4B2 100×10×1.5×6×20×32	8D7009	4B2 150×12×1.5×6×20×20
8D7008	4B2 125×10×2×6×20×20	8-7009	4B2 150×12×1.5×6×20×32

Tools can also be manufactured according to the customer's specific requirements upon request.

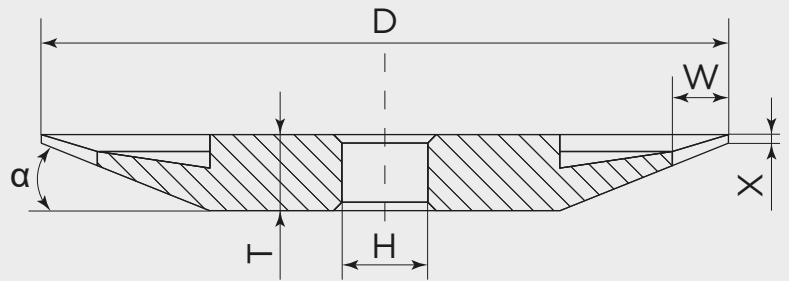
4BT9

Application:

- Face grinding of the teeth
- Recommended grit size from D46 to D126



Face grinding of the tool



4BT9 D×T×X×W×H

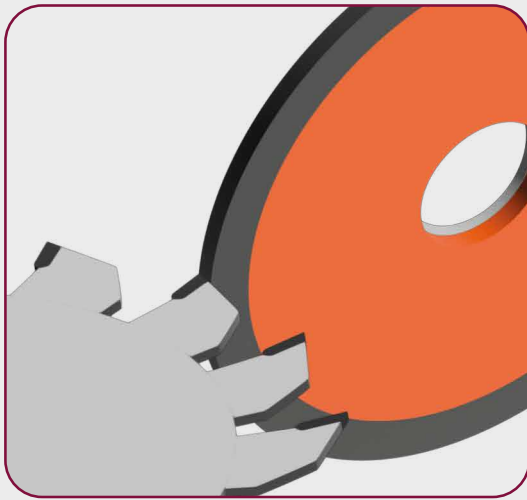
CODE	SHAPE D×T×X×W×H	CODE	SHAPE D×T×X×W×H
3-3035	4BT9 125×12×1×10×20	3D3035	4BT9 125×12×1×10×32
3N3035	4BT9 125×12×1×10×25	3-3031	4BT9 150×14×1×6×32

Tools can also be manufactured according to the customer's specific requirements upon request.

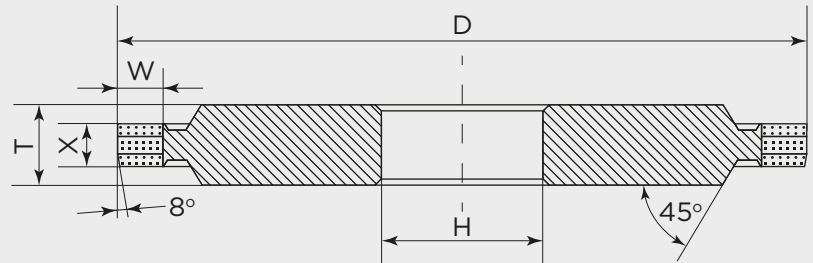
14M1

Application:

- Backside grinding of teeth
- Recommended grit size from M25 to D126



Backside grinding of the tool



14M1 D×T×X×W×H

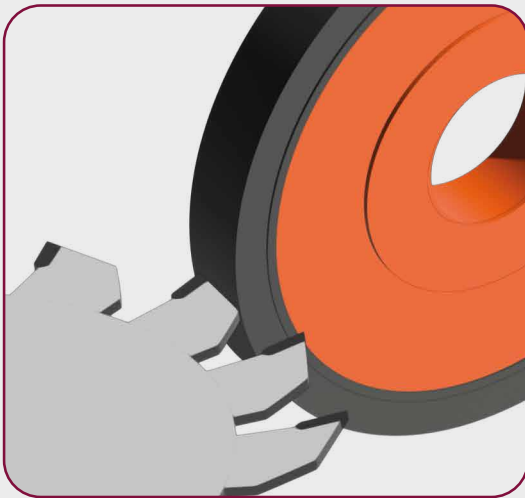
CODE	SHAPE D×T×X×W×H	CODE	SHAPE D×T×X×W×H
4-4008	14M1 125×10×5(1.7+1.7+1.7)×8×32	OK2083	14M1 150×10×5(1.7+1.7+1.7)×8×32
0-2083	14M1 150×10×5(2.5+2.5)×8×32	0-2103	14M1 190×10×5(2.5+2.5)×8×32
		9-8018	14M1 200×10×5(2.5+2.5)×8×32

Tools can also be manufactured according to the customer's specific requirements upon request.

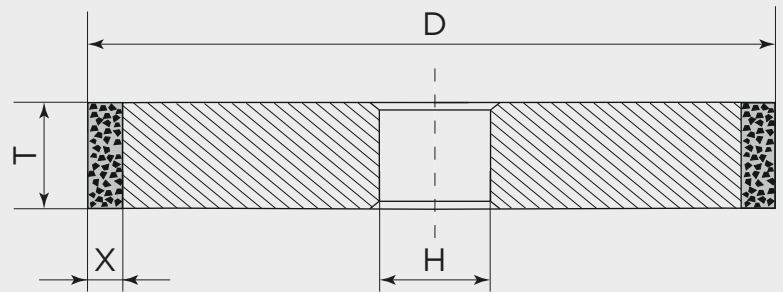
1A1

Application:

- Grinding of the back and side surfaces of teeth
- Recommended grit size from D46 to D126



Grinding of the back and side surfaces of the tool



1A1 D×T×X×H

CODE	SHAPE D×T×X×H	CODE	SHAPE D×T×X×H
0-0063	1A1 100×6×3×20	0-0079	1A1 125×6×3×32
OD0063	1A1 100×6×3×32	OS0084	1A1 125×6×5×20
0-0069	1A1 100×6×5×20	0-0084	1A1 125×6×5×32
OF0069	1A1 100×6×5×32	OD0085	1A1 125×8×5×20
OG2079	1A1 100×6×10×20	OK0085	1A1 125×8×5×32
0-0064	1A1 100×8×3×20	OB0174	1A1 125×8×10×20
OD0064	1A1 100×8×3×32	OS0100	1A1 150×6×5×20
0-0070	1A1 100×8×5×20	0-0100	1A1 150×6×5×32
9-6960	1A1 100×8(4+4)×5×32	OB0100	1A1 150×6(2+2+2)×5×32
OK0071	1A1 100×8×5×32	0-0095	1A1 150×8×3×32
OC2079	1A1 100×8×10×20	OD0101	1A1 150×8×5×20
OM0079	1A1 125×6×3×20	0-0101	1A1 150×8×5×32

Tools can also be manufactured according to the customer's specific requirements upon request.

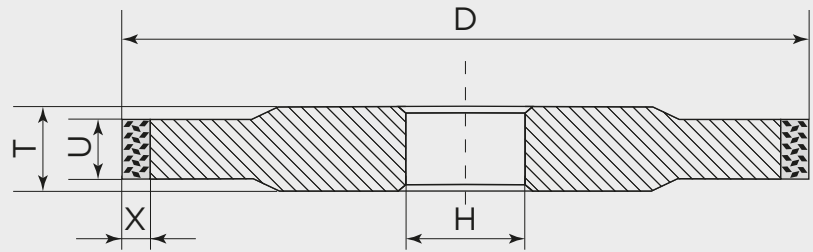
14A1

Application:

- Grinding of the back and side surfaces of teeth
- Recommended grit size from D46 to D126



Grinding of the back and side surfaces of the tool



14A1 D×T×U×X×H

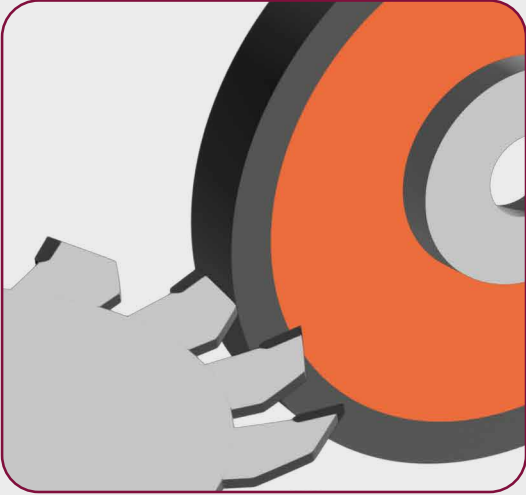
CODE	SHAPE D×T×X×W×H	CODE	SHAPE D×T×X×W×H
0-0303	14A1 100×6×3×5×20	0-0308	14A1 125×6×5×5×32
0D0304	14A1 100×6×5×5×20	0B0311	14A1 150×8×3×5×20
0D0307	14A1 125×6×3×5×20	0-0311	14A1 150×8×3×5×32
0-0307	14A1 125×6×3×5×32	0G0312	14A1 150×8×5×5×20
0G0308	14A1 125×6×5×5×20	0-0312	14A1 150×8×5×5×32

Tools can also be manufactured according to the customer's specific requirements upon request.

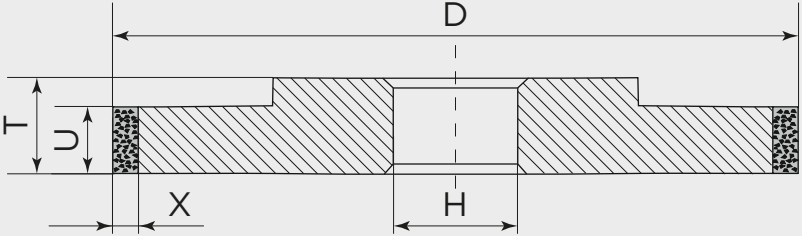
3A1

Application:

- Grinding of the back and side surfaces of teeth
- Recommended grit size from D46 to D126



Grinding of the back and side surfaces of the tool



3A1 D×T×U×X×H

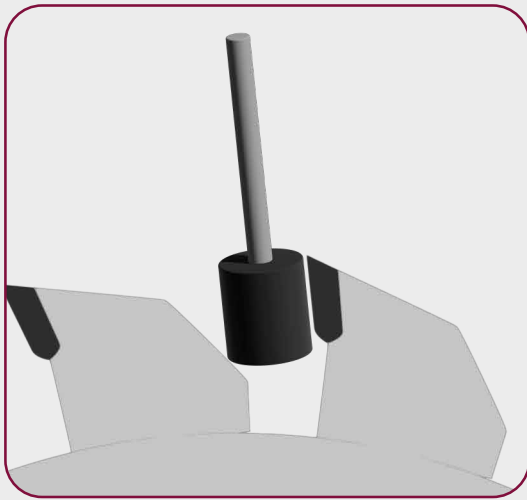
CODE	SHAPE D×T×U×X×H	CODE	SHAPE D×T×U×X×H
9-5663	3A1 100×10×4×5×20	9-5662	3A1 100×14×4×4.2×32
9B5662	3A1 100×10×4×4.2×32	ON0085	3A1 125×7×4×5×20
9C5662	3A1 100×14×4×4.2×20	3-2898	3A1 125×17×4×5×32

Tools can also be manufactured according to the customer's specific requirements upon request.

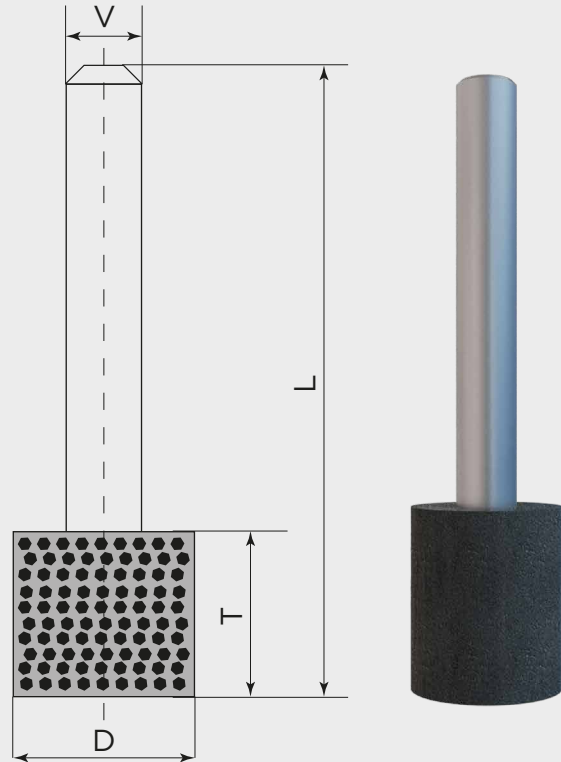
AW

Application:

- Face grinding of teeth
- Recommended grit size from M25 to D151



Face grinding of the tool



AW D×T×V×L

CODE	SHAPE D×T×V×L	CODE	SHAPE D×T×V×L
6D3051	AW 6.5×6×6×40	6-3051	AW 7×6×6×56.4
6F3051	AW 7×3×6×40	8-1024	AW 8×8×3×60
8H1023	AW 7×6×6×45	8D1033	AW 8×10×6×60

Tools can also be manufactured according to the customer's specific requirements upon request.

14FF1, 1FF1

High-performance electroplated CBN tool that ensures precise sharpening of band saw teeth.



Application:

- Sharpening of tooth profile
- Recommended grit size from B107 to B251

Product Characteristics:

The company produces wheels 14FF1, 1FF1 in various sizes. In stock, there are standard profile wheels with diameters of 127mm, 150mm, 203mm, and custom wheels can also be produced based on customer drawings.

Advantages:

- CBN with a double-layer coating provides high tool durability (up to 20-25 km of sawing).
- High-quality nickel plating of the body ensures additional adhesion of the CBN coating.
- Stable geometry profile due to manufacturing on CNC machines.
- High balancing grade.
- Preservation during packaging allows for long-term storage of the tool.
- The quality of the wheels is confirmed by consistent deliveries to the European market.

Considerations for Order Coordination:

To ensure the sharpening quality and longlife of the tool, it is necessary to match the profile of the 14FF1, 1FF1 wheel to the profile of the sharpened band saw.

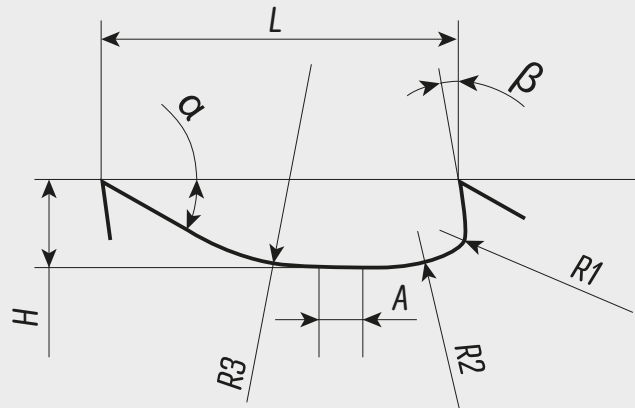
This can be achieved by fulfilling one of the following conditions:

a) Provide a sample saw (100-200mm length) to the manufacturing plant, indicating the outer diameter of the wheel, the diameter of the mounting hole, and the angle of inclination during installation.

b) Conduct precise measurements (with an accuracy of up to 0.02mm) of the profile of the used band saw, determining all dimensions according to the provided sketch, namely:

- L, H, R1, R2, R3, A and the angles α , β .
- Also, specify the outer diameter of the wheel, the diameter of the mounting hole, and the angle of inclination during installation.

In case of partial mismatch between the tool profile and the saw profile, uneven wear marks will be observed on the working part of the wheel.



RECOMMENDED GRINDINGPARAMETERS FOR SHARPENING HSS BAND SAWS

Coolant - mineral oil or water-based emulsions.

Wheel speed V = 20...45 m/s.

Grit size	t, mm							
	0,05	0,1	0,12	0,15	0,17	0,2	0,25	0,3
B251 - B213	Green	Green	Green	Green	Green	Green	Yellow	Grey
B181 - B151	Green	Green	Green	Green	Yellow	Grey	Grey	Grey
B126 - B107	Green	Green	Yellow	Grey	Grey	Grey	Grey	Grey



Best processing quality.

Used to achieve increased cleanliness and precision of the product. Using the tool under these modes ensures maximum tool life and processing quality.



Optimal mode.

Provides good tool durability. Optimal processing quality.

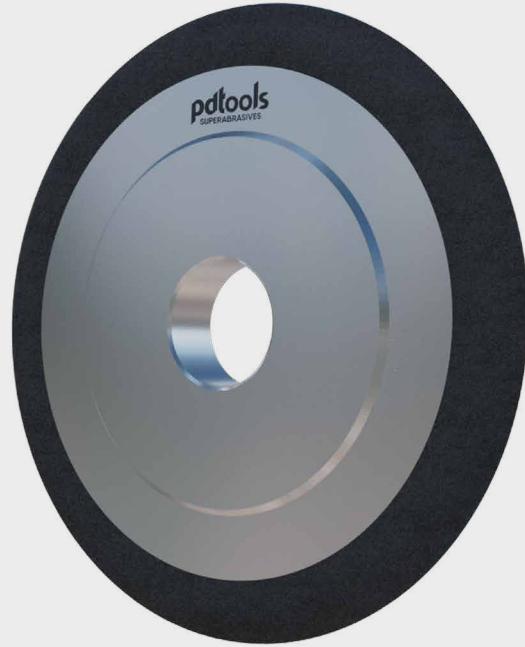


Customers may use these modes in special cases after consultation with the equipment and tool manufacturer.

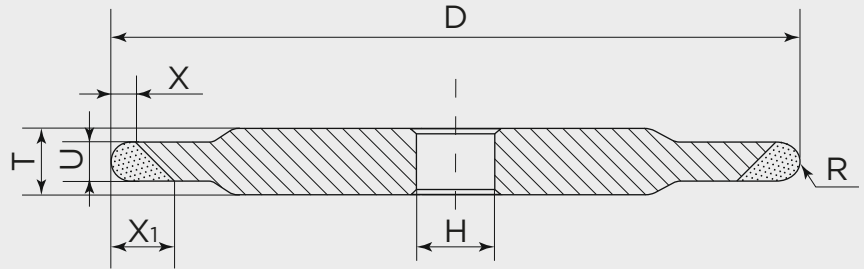
14F1 with HSS01 bond

Application:

- Wheels for manufacturing, sharpening, and reprofiling of HSS circular saws
- Recommended grit size: B107, B76



Sharpening and reprofiling of HSS circular saws



14F1 D×T×U×X×X₁×R×H

CODE	SHAPE D×T×U×X×X ₁ ×R×H	CODE	SHAPE D×T×U×X×X ₁ ×R×H
W-0100	14F1 150×8×1.2×4×7×0.6×32	W-0000	14F1 200×8×1.2×4×7×0.6×32
W-0101	14F1 150×8×1.3×4×7×0.65×32	W-0001	14F1 200×8×1.3×4×7×0.65×32
W-0102	14F1 150×8×1.5×4×7×0.75×32	W-0002	14F1 200×8×1.5×4×7×0.75×32
W-0103	14F1 150×8×1.6×5×8×0.8×32	W-0003	14F1 200×8×1.6×5×8×0.8×32
W-0104	14F1 150×8×1.8×5×8×0.9×32	W-0004	14F1 200×8×1.8×5×8×0.9×32
W-0105	14F1 150×8×2×5×8×1×32	W-0005	14F1 200×8×2×5×8×1×32
W-0106	14F1 150×8×2.5×8×12×1.25×32	W-0006	14F1 200×8×2.5×8×12×1.25×32
W-0107	14F1 150×8×3×8×12×1.5×32	W-0007	14F1 200×8×3×8×12×1.5×32
W-0108	14F1 150×8×3.5×8×12×1.75×32	W-0008	14F1 200×8×3.5×8×12×1.75×32
W-0109	14F1 150×8×4×10×15×2×32	W-0009	14F1 200×8×4×10×15×2×32
W-0110	14F1 150×8×5×10×15×2.5×32	W-0010	14F1 200×8×5×10×15×2.5×32
W-0111	14F1 150×8×5.5×10×15×2.75×32	W-0011	14F1 200×8×5.5×10×15×2.75×32
W-0112	14F1 150×8×6×10×15×3×32	W-0012	14F1 200×8×6×10×15×3×32

Tools can also be manufactured according to the customer's specific requirements upon request.

RECOMMENDED GRINDING PARAMETERS FOR SHARPENING HSS BAND SAWS

Coolant - mineral oil or water-based emulsions.
Wheel speed $V = 20...45$ m/s.

t, mm	S, mm/min															
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
0,2	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Grey	Grey
0,3	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Grey	Grey
1	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Grey	Grey	Grey	Grey	Grey	Grey	Grey
1,5	Green	Green	Green	Green	Green	Green	Green	Yellow	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
2	Green	Green	Green	Green	Green	Green	Yellow	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
2,5	Green	Green	Green	Green	Green	Yellow	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
3	Green	Green	Green	Green	Yellow	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
3,5	Green	Green	Green	Yellow	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
4	Green	Green	Yellow	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey



Best processing quality.

Used to achieve increased cleanliness and precision of the product.
Using the tool under these modes ensures maximum tool life and processing quality.



Optimal mode.

Provides good tool durability. Optimal processing quality.



Customers may use these modes in special cases after consultation with the equipment and tool manufacturer.

We recommend using the tool in accordance with these recommendations. Consumers may use the tool with their own settings, but failure to adhere to these recommendations may result in premature wear or damage to the tool.



RECOMMENDATIONS FOR APPLICATION OF PROFILING AND DRESSING WHEELS

When using diamond wheels, the following basic rules should be followed:

- The wheels should be mounted on holders and should not be removed until they are fully worn out.
- The tool should be carefully prepared and securely fastened to the spindle of the machine, whose accuracy meets the requirements for diamond processing equipment.
- Profiling (restoring geometry) of the diamond layer is performed using abrasive wheels on a ceramic bond, based on the recommendations specified below.
- Dressing (cleaning) of the diamond layer surface is performed using abrasive stones on a ceramic bond.

Profiling (restoring geometry) of the diamond layer of the wheels is carried out to restore shape accuracy, remove defects on the working surface, and form the required profile. Typically, profiling is done without coolant.

The most effective method of profiling is grinding the diamond-bearing layer with abrasive wheels. Profiling is performed using white electrocorundum wheels on a ceramic bond, with a grit size one or two grades higher than the grit size of the superabrasive wheel.

The hardness of the wheels K – H for tool profiling is selected according to the rule: the finer is the grit size of the superabrasive wheel, the softer the wheel used for profiling should be.

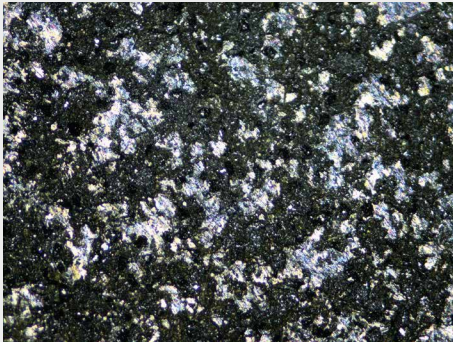
**RECOMMENDED MODES FOR PROFILING
THE DIAMOND LAYER WITH ABRASIVE WHEELS**

Position of diamond wheel	Dressing mode			
	Peripheral speed, m/s		Longitudinal feed rate, m/min	Cross-feed rate, mm/stroke
	Abrasive wheel	Diamond wheel		
Diamond wheel mounted on a holder or spindle of a sharpening or CNC machine	25 - 35	2 - 5	1,0 - 2,0	0,02 - 0,04

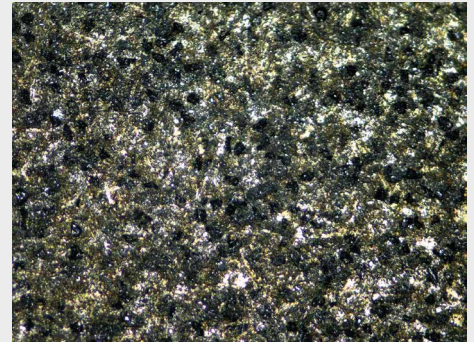
**CHARACTERISTICS OF ABRASIVE WHEELS
ON A CERAMIC BOND FOR DRESSING THE DIAMOND LAYER**

Characteristic of the diamond layer		Characteristic of the dressing wheel		
Bond type	Diamond grit size	Abrasive type	Abrasive grit size	Hardness
B9-00, B7-00, B7-01, B7-02, B9-04	D151- D126	Aluminum oxide 22A, 23A, 15A, 16A	20; 16 ; 12	M - L
	D107-D76		12; 10; 8	L - K
	D64-D46		8; 6; 4	K - H
	M40-M25		M40; M28	J

Dressing (cleaning) of the diamond layer of the wheels is performed to remove contaminants from the working surface of the layer and restore the cutting ability of the wheel. Dressing is carried out using white electrocorundum stones on a ceramic bond with a grit size one or two grades higher than the grit size of the superabrasive wheel. The hardness of the stones, ranging from K to H, is selected for dressing according to the rule: the finer the grit size of the superabrasive wheel, the softer the stone used for dressing should be.



BEFORE DRESSING



AFTER DRESSING

CORRESPONDENCE OF POWDER PARTICLE SIZE BETWEEN INTERNATIONAL STANDARDS: GOST, FEPA, ANSI

FEPA DIAMOND CBN	ANSI B74-16 USA	GRIT	Standards system used in Ukraine and CIS: DSTU 3292-95 / GOST 9206-80	GRIT SIZE CLASS
microns	mesh	grit	MKM	
D251/B251	60/70	60	250/200	EXTRA COARSE
D213/B213	70/80	70	200/160	
D181/B181	80/100	80		
D151/B151	100/120	100	160/125	COARSE
D126/B126	120/140	140	125/100	
D107/B107	140/170	170	100/80	
D91/B91	170/200	200	80/63	
D76/B76	200/230	230		
D64/B64	230/270	270	63/50	MEDIUM
D54/B54	270/325	325	50/40	
D46/B46	325/400	400		
M63/B63	500	500	60/40	FINE
M40/B40	550	550	40/28	
M30/B30	500/600	600		
M25/B25	650	650	28/20	

