

pdtools
SUPERABRASIVES

GRINDING WHEELS

**FOR CIRCULAR BLADES AND
BAND SAWS PROCESSING**

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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

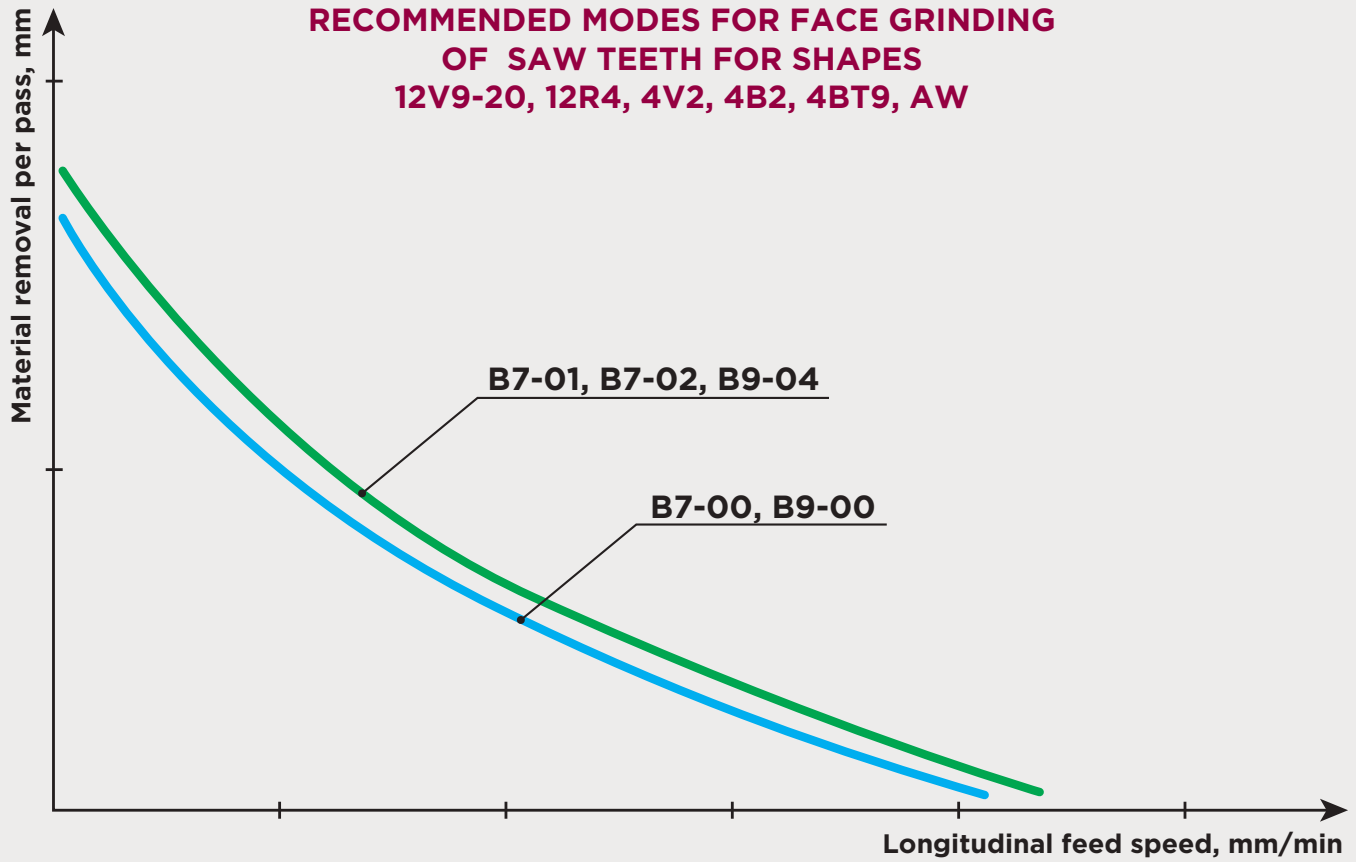
Operational properties of bonds



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.



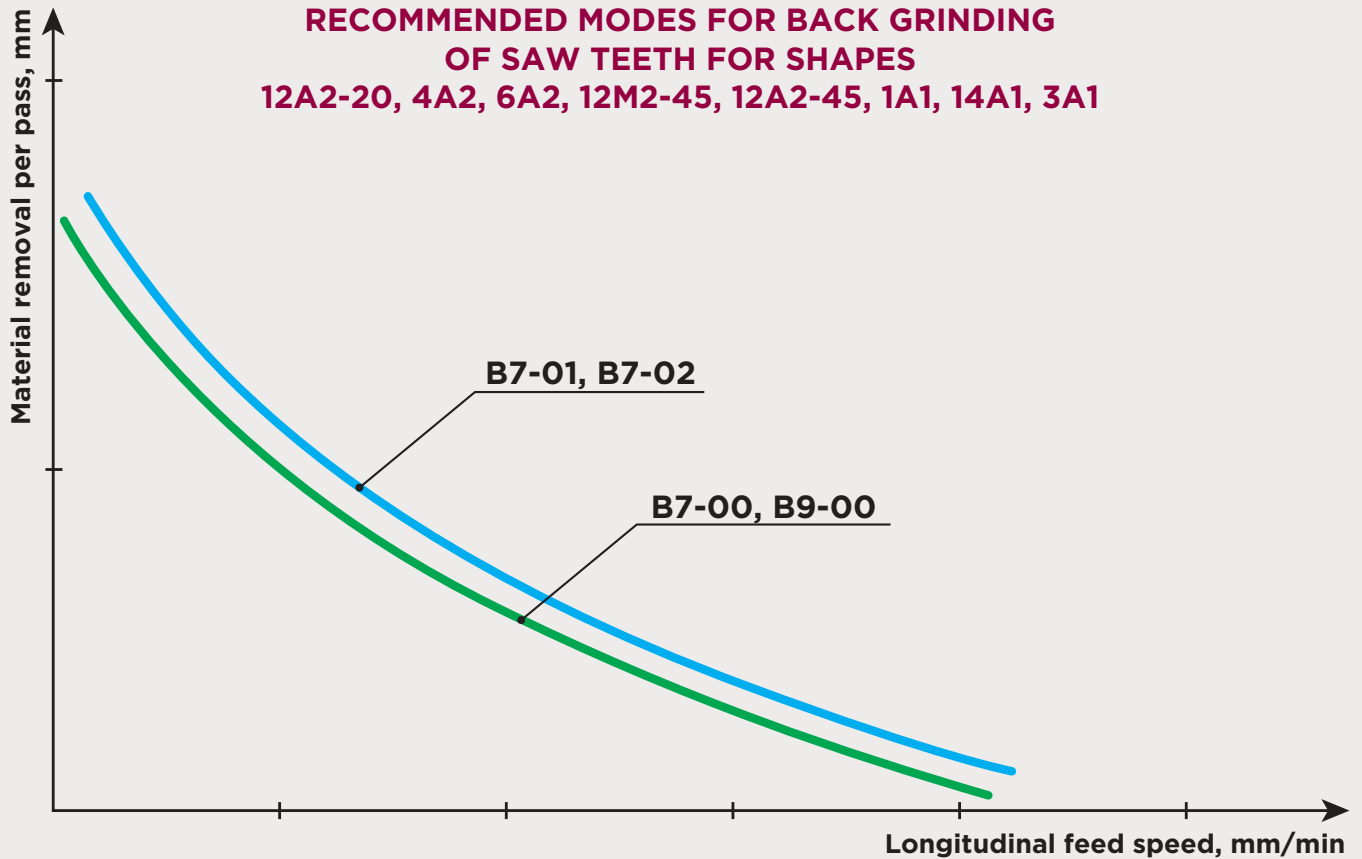
Optimal mode.

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, 12M2-45, 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	Green	Yellow	Yellow	Yellow
0,1	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
0,15	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
0,2	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
0,25	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
0,3	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

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.

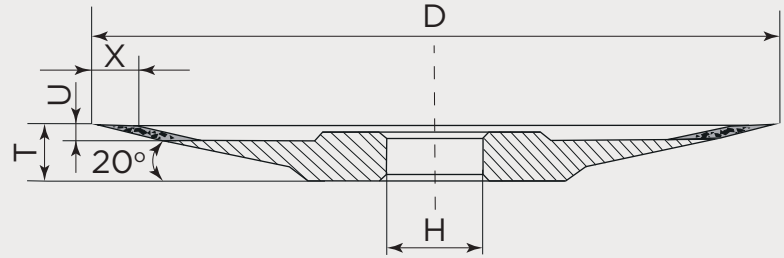
12V9-20

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

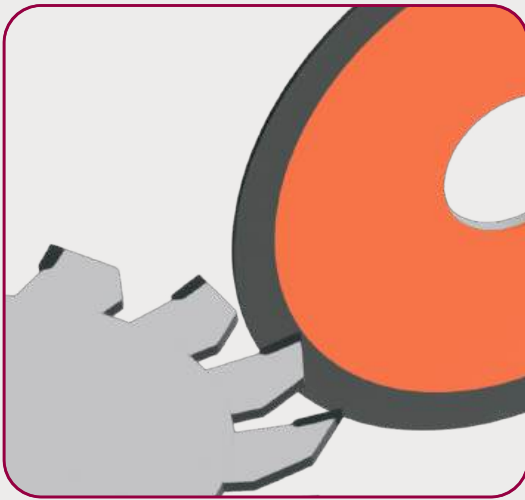
CODE	D, mm	D, inch	T, mm	T, inch	X, mm	X, inch	U, mm	U, inch	H, mm	H, inch
3G3042	100	4	10	3/8	2,3	3/32	4	5/32	20	0,787
3-3042	100	4	10	3/8	2,3	3/32	4	5/32	25	0,984
3C3042	100	4	10	3/8	2,3	3/32	4	5/32	32	1,260
4-4026	120	5	13	1/2	2,5	7/64	4	5/32	32	1,260
3D3048	125	5	13	1/2	2,5	7/64	4	5/32	20	0,787
3M3048	125	5	13	1/2	2,5	7/64	4	5/32	25	0,984
3-3048	125	5	13	1/2	2,5	7/64	4	5/32	32	1,260
3F3048	125	5	15	19/32	2,5	7/64	4	5/32	32	1,260
3U3048	150	6	13	1/2	2,3	3/32	4	5/32	20	0,787
3-3045	150	6	13	1/2	2,3	3/32	4	5/32	32	1,260
3-3333	160	6	13	1/2	2,3	3/32	4	5/32	32	1,260
3-3335	175	7	18	45/64	2,5	7/64	2	5/64	32	1,260
3F3043	175	7	13	1/2	2,5	7/64	4	5/32	32	1,260
3H3049	200	8	13	1/2	2,3	3/32	4	5/32	20	0,787
3-3049	200	8	13	1/2	2,3	3/32	4	5/32	32	1,260

Customer-specific and other grinding tools can be produced on request.

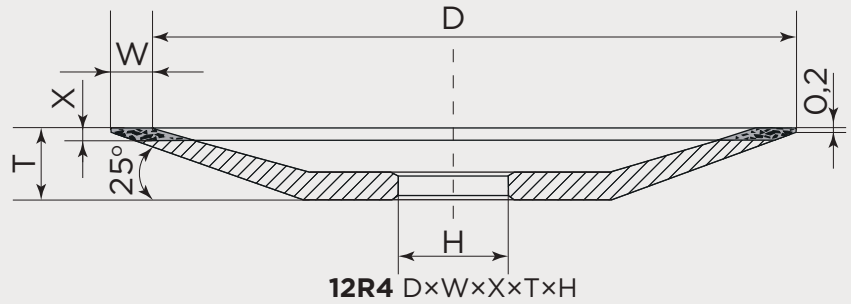
12R4

Application:

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



Face grinding of the tool



CODE	D, mm	D, inch	W, mm	W, inch	X, mm	X, inch	T, mm	T, inch	H, mm	H, inch
5-0041	50	2	2	5/64	1,5	1/16	6	1/4	16	0,630
5-0040	80	3	3	1/8	2	5/64	10	3/8	20	0,787
5-0042	75	3	3	1/8	2	5/64	10	3/8	20	0,787
5N1032	100	4	3	1/8	2	5/64	10	3/8	25	0,984
5-1031	100	4	3	1/8	2	5/64	10	3/8	32	1,260
5-1060	125	5	3	1/8	3	1/8	14	9/16	32	1,260
5E1041	125	5	3	1/8	2	5/64	13	1/2	20	0,787
5M1041	125	5	3	1/8	2	5/64	13	1/2	25	0,984
5-1041	125	5	3	1/8	2	5/64	13	1/2	32	1,260
5K1041	125	5	4	5/32	2	5/64	13	1/2	32	1,260
5D1061	125	5	4	5/32	3	1/8	14	9/16	25	0,984
5-1061	125	5	4	5/32	3	1/8	14	9/16	32	1,260
5V1051	150	6	5	13/64	3	1/8	16	5/8	20	0,787
5-1051	150	6	5	13/64	3	1/8	16	5/8	32	1,260
9-3261	160	6	3	1/8	2	5/64	13,5	1/2	32	1,260
3Q3047	200	8	2	5/64	4	5/32	13	1/2	32	1,260

Customer-specific and other grinding tools can be produced on request.

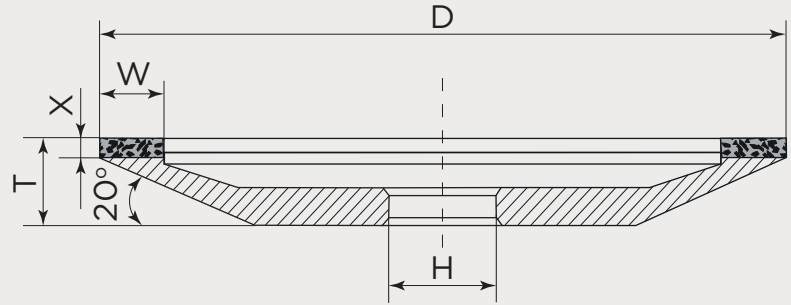
12A2-20

Application:

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



Face grinding of the tool



12A2-20 D×T×X×W×H

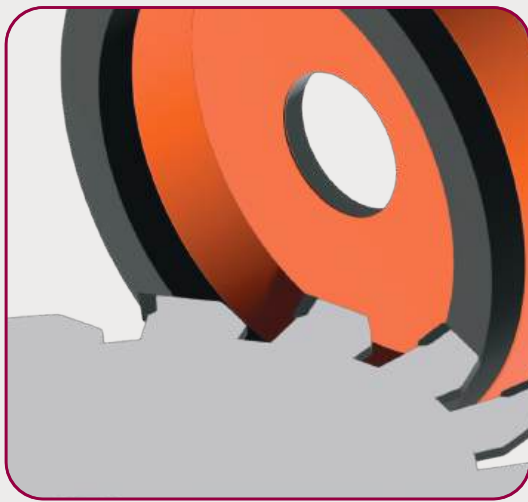
CODE	D, mm	D, inch	T, mm	T, inch	X, mm	X, inch	W, mm	W, inch	H, mm	H, inch
5-0007	100	4	12	1/2	2	5/64	3	1/8	20	0,787
5D0007	100	4	12	1/2	2	5/64	3	1/8	25	0,984
5E0007	100	4	12	1/2	2	5/64	3	1/8	32	1,260
5-0008	100	4	12	1/2	2	5/64	6	1/4	20	0,787
5V0008	100	4	12	1/2	2	5/64	6	1/4	32	1,260
5E0009	125	5	16	21/32	2	5/64	3	1/8	20	0,787
5-0009	125	5	16	21/32	2	5/64	3	1/8	32	1,260
5D0010	125	5	16	21/32	2	5/64	6	1/4	20	0,787
5K0010	125	5	16	21/32	2	5/64	6	1/4	25	0,984
5B0010	125	5	16	21/32	2	5/64	6	1/4	32	1,260
5H0010	125	5	12,5	1/2	1,7	1/16	6	1/4	20	0,787
5N0013	150	6	19	3/4	3	1/8	6	1/4	20	0,787
5B0013	150	6	19	3/4	3	1/8	6	1/4	32	1,260
5U0013	150	6	21	5/6	5	13/64	6	1/4	20	0,787
5F0013	150	6	21	5/6	5	13/64	6	1/4	32	1,260
5K0014	150	6	18	45/64	2	5/64	10	1/4	20	0,787
5-0014	150	6	18	45/64	2	5/64	10	3/8	32	1,260

Customer-specific and other grinding tools can be produced on request.

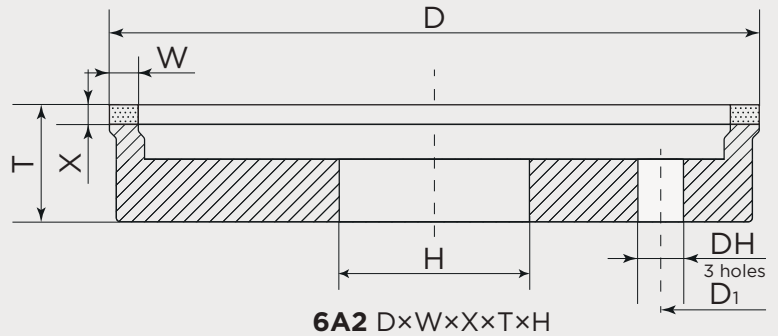
6A2

Application:

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



Top sharpening of the tool



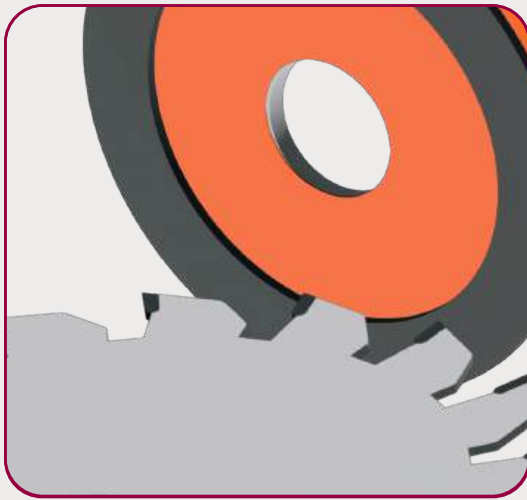
CODE	D, mm	D, inch	W, mm	W, inch	X, mm	X, inch	T, mm	T, inch	H, mm	H, inch
6G3154	100	4	6(2+2+2)	1/4	6	1/4	18	45/64	25	0,984
3F0088	125	5	5(2,5+2,5)	13/64	10	3/8	24	1	32	1,260
3E0088	125	5	5(2,5+2,5)	13/64	10	3/8	22	7/8	32	1,260
3X0088	125	5	5(2,5+2,5)	13/64	10	3/8	22	7/8	32	1,260
6E3153	125	5	6(2+2+2)	1/4	6	1/4	18	45/64	32	1,260
3P0023	125	5	6	1/4	4	5/32	24	1	20	0,787
3-0023	125	5	6	1/4	4	5/32	24	1	32	1,260
6D3153	125	5	6	1/4	6	1/4	18	45/64	20	0,787
6M3153	125	5	6	1/4	6	1/4	18	45/64	32	1,260
3Z0088	125	5	5(2,5+2,5)	13/64	10	3/8	22	7/8	32	1,260
B-0088	125	5	5(2,5+2,5)	13/64	10	3/8	22	7/8	32	1,260
3S0088	125	5	5(2,5+2,5)	13/64	10	3/8	22	7/8	32	1,260

Customer-specific and other grinding tools can be produced on request.

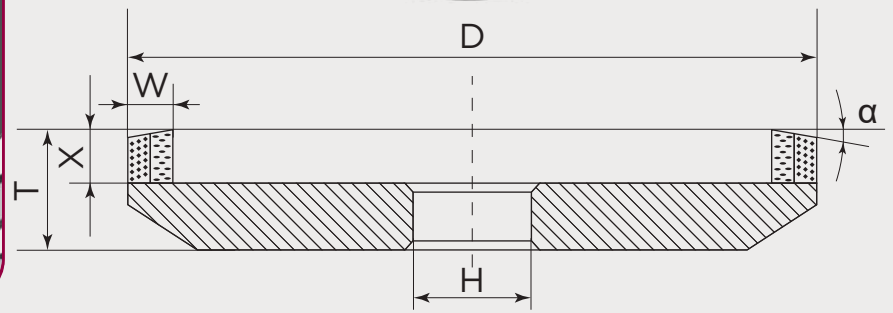
12M2-45

Application:

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



Backside grinding of the tool



12M2-45 D×T×X×W×H×α

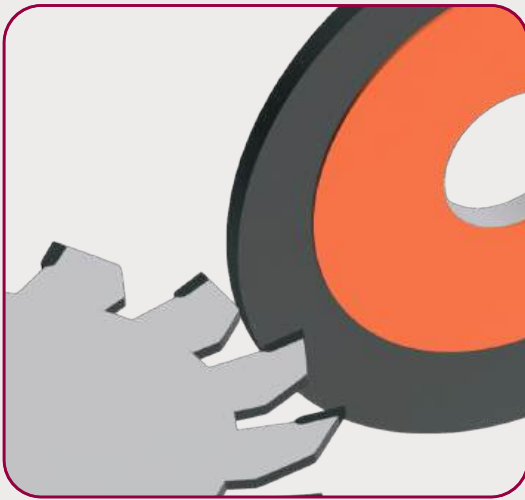
CODE	D, mm	D, inch	T, mm	T, inch	X, mm	X, inch	W, mm	W, inch	H, mm	H, inch	α°
9C3153	125	5	18	45/64	6	1/4	5	13/64	32	1,260	4
9R3153	125	5	18	45/64	6	1/4	5(2,5+2,5)	13/64	32	1,260	5
9-3153	125	5	18	45/64	6	1/4	5(2,5+2,5)	13/64	32	1,260	9
9X3153	125	5	24	1	6	1/4	5(2,5+2,5)	13/64	20	0,787	0
9M3153	125	5	24	1	6	1/4	5	13/64	32	1,260	0
9K3153	125	5	16	21/32	6	1/4	5(2,5+2,5)	13/64	32	1,260	9

Customer-specific and other grinding tools can be produced on request.

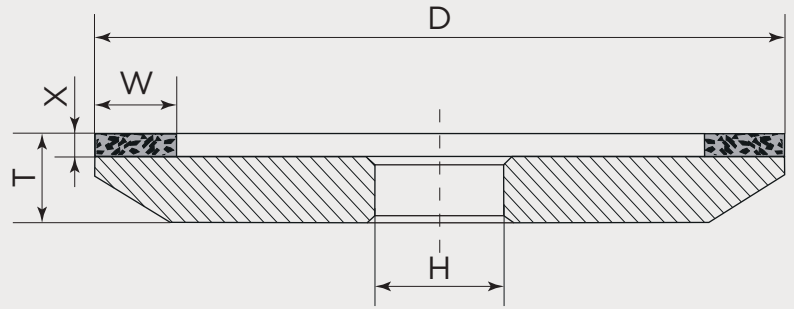
4A2

Application:

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



Backside grinding of the tool



4A2 D×T×X×W×H

CODE	D, mm	D, inch	T, mm	T, inch	X, mm	X, inch	W, mm	W, inch	H, mm	H, inch
9-8151	100	4	10	3/8	2	5/64	3	1/8	20	0,787
9B8151	100	4	10	3/8	2	5/64	3	1/8	25	0,984
9P8151	100	4	10	3/8	2	5/64	3	1/8	32	1,260
9Y8159	100	4	10	3/8	2	5/64	6	1/4	20	0,787
9D9165	125	5	10	3/8	2	5/64	8	5/16	32	1,260
9N9166	125	5	10	3/8	3	1/8	6	1/4	20	0,787
9Y9166	125	5	10	3/8	3	1/8	6	1/4	25	0,984
3C3077	125	5	12	1/2	3	1/8	3	1/8	20	0,787
3G3077	125	5	12	1/2	3	1/8	3	1/8	25	0,984
5B2020	125	5	14	9/16	5	13/64	8(4+4)	5/16	20	0,787
5-2020	125	5	14	9/16	5	13/64	8(4+4)	5/16	32	1,260
9A3153	125	5	14	9/16	6	1/4	5(2,5+2,5)	13/64	32	1,260
9L3153	125	5	18	45/64	6	1/4	5	13/64	32	1,260
9-9174	150	6	12	1/2	4	5/32	5	13/64	20	0,787
9-9175	150	6	12	1/2	4	5/32	5	13/64	32	1,260
3-4009	150	6	13	1/2	2	5/64	6	1/4	32	1,260
3G4009	150	6	14	9/16	3	1/8	6	1/4	32	1,260
3F4009	150	6	15	3/5	4	5/32	6	1/4	32	1,260
3R4009	150	6	16	5/8	5	13/64	6	1/4	32	1,260

Customer-specific and other grinding tools can be produced on request.

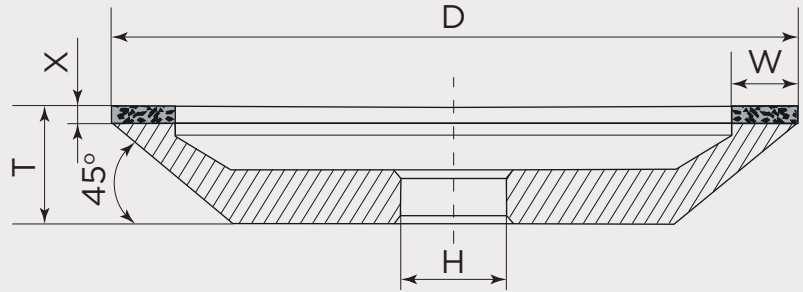
12A2-45

Application:

- Universal grinding
- Recommended GRIT size from D46 to D126



Backside grinding of the tool



12A2-45 D×W×X×T×H

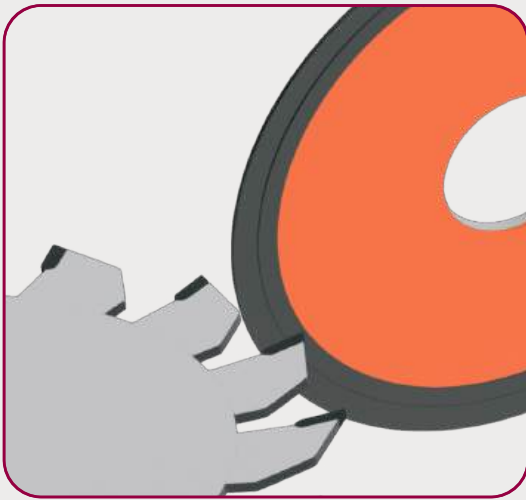
CODE	D, mm	D, inch	W, mm	W, inch	X, mm	X, inch	T, mm	T, inch	H, mm	H, inch
4-0016	100	4	5	13/64	3	1/8	32	1 2/8	20	0,787
4-0019	100	4	5	13/64	5	13/64	34	1 3/8	20	0,787
4F0013	100	4	6	1/4	5	13/64	28	1 1/8	20	0,787
4D0013	100	4	6	1/4	5	13/64	28	1 1/8	32	1,260
4-0017	100	4	10	3/8	3	1/8	32	1 2/8	20	0,787
4L0017	100	4	10	3/8	3	1/8	32	1 2/8	25	0,984
4D0017	100	4	10	3/8	3	1/8	32	1 2/8	32	1,260
4-0014	100	4	10	3/8	5	13/64	28	1 1/8	20	0,787
4-0020	100	4	10	3/8	5	13/64	34	1 3/8	20	0,787
4S0025	125	5	6	1/4	5	13/64	28	1 1/8	32	1,260
4-0022	125	5	10	3/8	3	1/8	26	1	20	0,787
4D0022	125	5	10	3/8	3	1/8	26	1	32	1,260
4-0024	125	5	10	3/8	4	5/32	27	1 1/8	20	0,787
4S0029	125	5	10	3/8	3	1/8	40	1 5/8	20	0,787
4-0029	125	5	10	3/8	3	1/8	40	1 5/8	32	1,260
4-0026	125	5	10	3/8	5	13/64	28	1 1/8	20	0,787
4S0026	125	5	10	3/8	5	13/64	28	1 1/8	20	0,787

Customer-specific and other grinding tools can be produced on request.

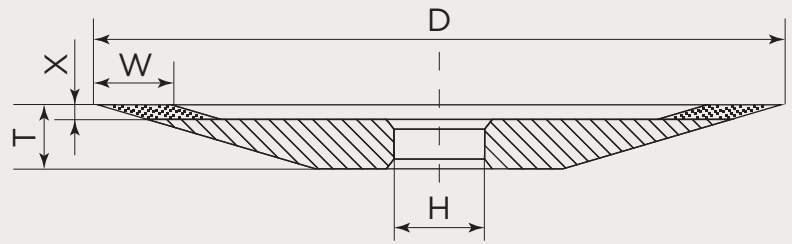
4V2

Application:

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



Backside grinding of the tool



4V2 D×W×X×T×H

CODE	D, mm	D, inch	W, mm	W, inch	X, mm	X, inch	T, mm	T, inch	H, mm	H, inch
OC3001	100	4	4	5/32	2	5/64	13	1/2	20	0,787
O-3001	100	4	4	5/32	2	5/64	13	1/2	25	0,984
OD3002	125	5	4	5/32	2	5/64	13	1/2	20	0,787
O-3002	125	5	4	5/32	2	5/64	13	1/2	25	0,984
OQ3002	125	5	4	5/32	2	5/64	13	1/2	32	1,260
O-3004	125	5	4	5/32	3	1/8	14	9/16	32	1,260
OB3003	150	6	4	5/32	2	5/64	14	9/16	20	0,787
O-3003	150	6	4	5/32	2	5/64	14	9/16	32	1,260

Customer-specific and other grinding tools can be produced on request.

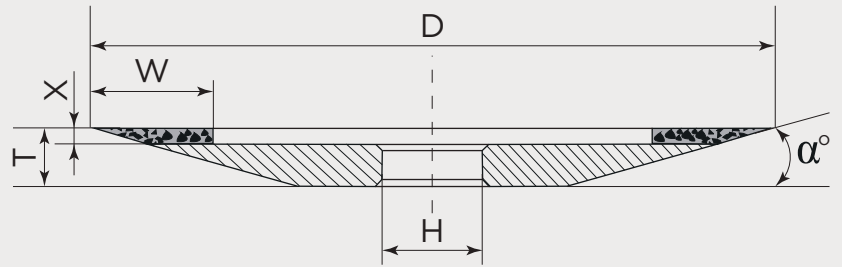
4B2

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

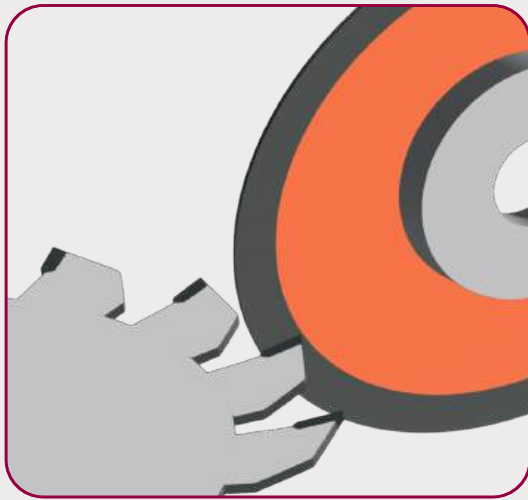
CODE	D, mm	D, inch	T, mm	T, inch	X, mm	X, inch	W, mm	W, inch	α°	H, mm	H, inch
8L7010	100	4	10	3/8	1,5	1/16	6	1/4	20	20	0,787
8D7010	100	4	10	3/8	1,5	1/16	6	1/4	20	25	0,984
8-7010	100	4	10	3/8	1,5	1/16	6	1/4	20	32	1,260
8D7008	125	5	10	3/8	2	5/64	6	1/4	20	20	0,787
8B7008	125	5	10	3/8	2	5/64	6	1/4	20	25	0,984
8-7008	125	5	10	3/8	2	5/64	6	1/4	20	32	1,260
8D7009	150	6	12	1/2	1,5	1/16	6	1/4	20	20	0,787
8-7009	150	6	12	1/2	1,5	1/16	6	1/4	20	32	1,260
8-7004	150	6	12	1/2	1,5	1/16	6	1/4	25	31,75	11/4
8-7012	175	7	14	9/16	1,5	1/16	6	1/4	20	31,75	11/4
8-7013	180	7	14	9/16	1,5	1/16	6	1/4	20	31,75	11/4

Customer-specific and other grinding tools can be produced on request.

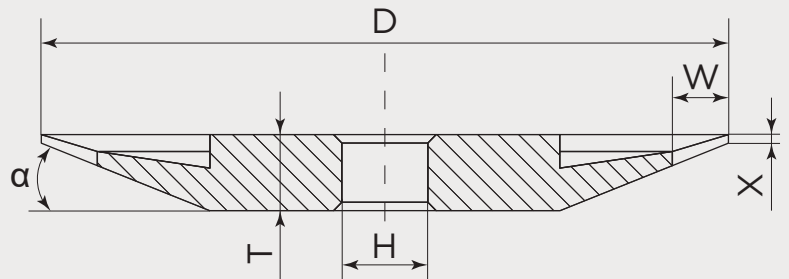
4BT9

Application:

- Face grinding of the teeth, grinding of hobs
- Recommended GRIT size from D46 to D126



Face grinding of the tool



4BT9 D×T×X×W×H

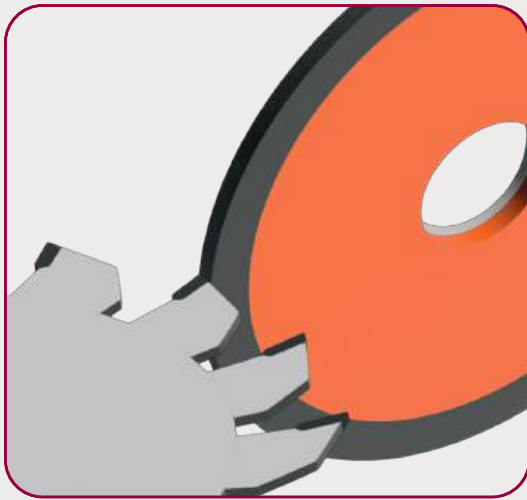
CODE	D, mm	D, inch	T, mm	T, inch	X, mm	X, inch	W, mm	W, inch	H, mm	H, inch
3-3035	125	5	12	1/2	1	1/16	10	3/8	20	0,787
3N3035	125	5	12	1/2	1	1/16	10	3/8	25	0,984
3D3035	125	5	12	1/2	1	1/16	10	3/8	32	1,260
3-3031	150	6	14	9/16	1	1/16	6	1/4	32	1,260

Customer-specific and other grinding tools can be produced on request.

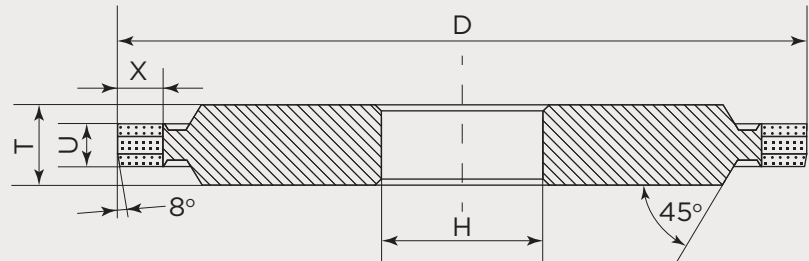
14M1

Application:

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



Backside grinding of the tool



14M1 D×T×U×X×H

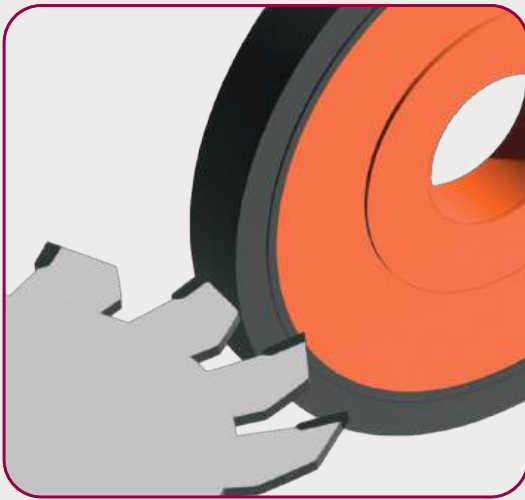
CODE	D, mm	D, inch	T, mm	T, inch	U, mm	U, inch	X, mm	X, inch	H, mm	H, inch
4-4008	125	5	10	3/8	5(1,7+1,7+1,7)	13/64	8	5/16	32	1,260
0-2083	150	6	10	3/8	5(2,5+2,5)	13/64	8	5/16	32	1,260
OK2083	150	6	10	3/8	5(1,7+1,7+1,7)	13/64	8	5/16	32	1,260
0-2103	190	7	10	3/8	5(2,5+2,5)	13/64	8	5/16	32	1,260
9-8018	200	8	10	3/8	5(2,5+2,5)	13/64	8	5/16	32	1,260

Customer-specific and other grinding tools can be produced on request.

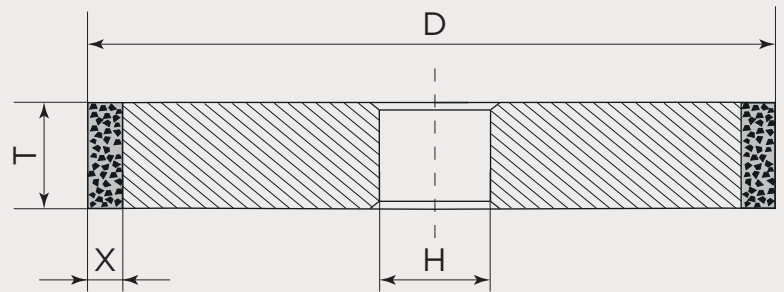
1A1

Application:

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



Backside grinding of the tool



1A1 D×T×X×H

CODE	D, mm	D, inch	T, mm	T, inch	X, mm	X, inch	H, mm	H, inch
O-0063	100	4	6	1/4	3	1/8	20	0,787
OD0063	100	4	6	1/4	3	1/8	32	1,260
O-0069	100	4	6	1/4	5	13/64	20	0,787
OF0069	100	4	6	1/4	5	13/64	32	1,260
OG2079	100	4	6	1/4	10	3/8	20	0,787
O-0064	100	4	8	5/16	3	1/8	20	0,787
O-0070	100	4	8	5/16	5	13/64	20	0,787
9-6960	100	4	8(4+4)	5/16	5	13/64	32	1,260
OK0071	100	4	8	5/16	5	13/64	32	1,260
OC2079	100	4	8	5/16	10	3/8	20	0,787
OM0079	125	5	6	1/4	3	1/8	20	0,787
O-0079	125	5	6	1/4	3	1/8	32	1,260
OS0084	125	5	6	1/4	5	13/64	20	0,787
O-0084	125	5	6	1/4	5	13/64	32	1,260
OD0085	125	5	8	5/16	5	13/64	20	0,787
OK0085	125	5	8	5/16	5	13/64	32	1,260
OB0174	125	5	8	5/16	10	3/8	20	0,787
OS0100	150	6	6	1/4	5	13/64	20	0,787
O-0100	150	6	6	1/4	5	13/64	32	1,260
OB0100	150	6	6(2+2+2)	1/4	5	13/64	32	1,260
OS0101	150	6	8	5/16	5	13/64	20	0,787
O-0101	150	6	8	5/16	5	13/64	32	1,260

Customer-specific and other grinding tools can be produced on request.

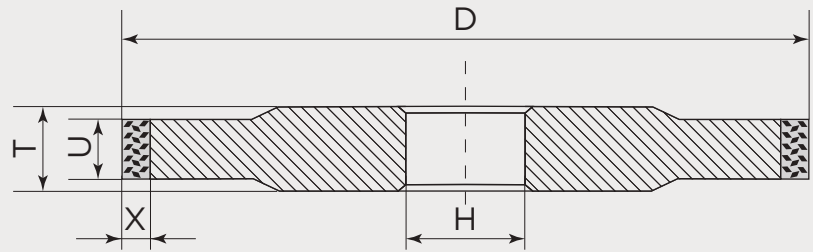
14A1

Application:

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



Backside grinding of the tool



14A1 D×T×U×X×H

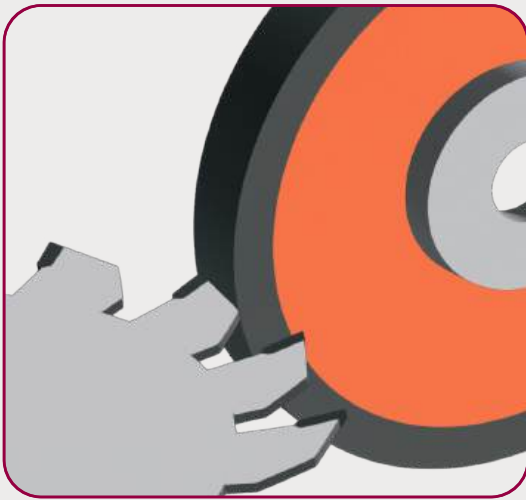
CODE	D, mm	D, inch	T, mm	T, inch	X, mm	X, inch	W, mm	W, inch	H, mm	H, inch
O-0303	100	4	6	1/4	3	1/8	5	13/64	20	0,787
OD0304	100	4	6	1/4	5	13/64	5	13/64	20	0,787
OD0307	125	5	6	1/4	3	1/8	5	13/64	20	0,787
O-0307	125	5	6	1/4	3	1/8	5	13/64	32	1,260
OG0308	125	5	6	1/4	5	13/64	5	13/64	20	0,787
O-0308	125	5	6	1/4	5	13/64	5	13/64	32	1,260
OE0311	150	6	8	5/16	3	1/8	5	13/64	20	0,787
O-0311	150	6	8	5/16	3	1/8	5	13/64	32	1,260
OG0312	150	6	8	5/16	5	1/8	5	13/64	20	0,787
O-0312	150	6	8	5/16	5	13/64	5	13/64	32	1,260

Customer-specific and other grinding tools can be produced on request.

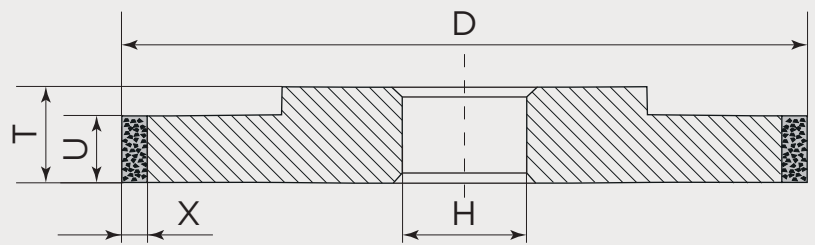
3A1

Application:

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



Backside grinding of the tool



3A1 D×T×U×X×H

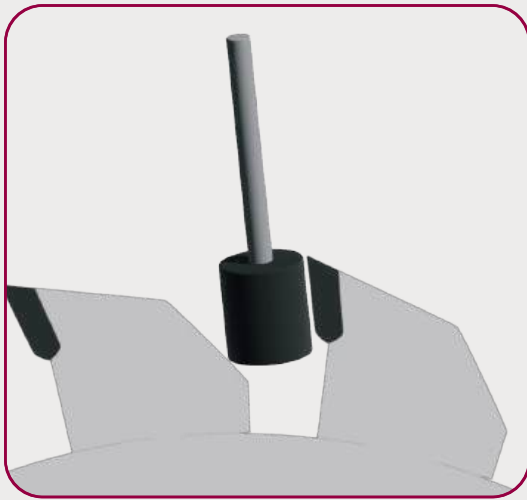
CODE	D, mm	D, inch	T, mm	T, inch	U, mm	U, inch	X, mm	X, inch	H, mm	H, inch
9-5663	100	4	10	3/8	4	5/32	5	13/64	20	0,787
9B5662	100	4	10	3/8	4	5/32	4,2	5/32	32	1,260
9C5662	100	4	14	9/16	4	5/32	4,2	5/32	20	0,787
9-5662	100	4	14	9/16	4	5/32	4,2	5/32	32	1,260
ON0085	125	5	7	9/32	4	5/32	5	13/64	20	0,787
3-2898	125	5	17	43/64	4	5/32	5	13/64	32	1,260

Customer-specific and other grinding tools can be produced on request.

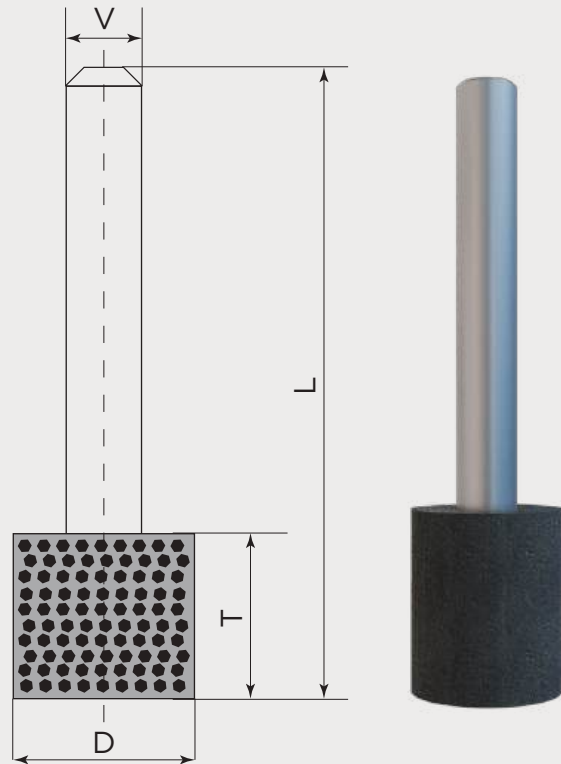
AW

Application:

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



Face grinding of the tool



AW D×T×V×L

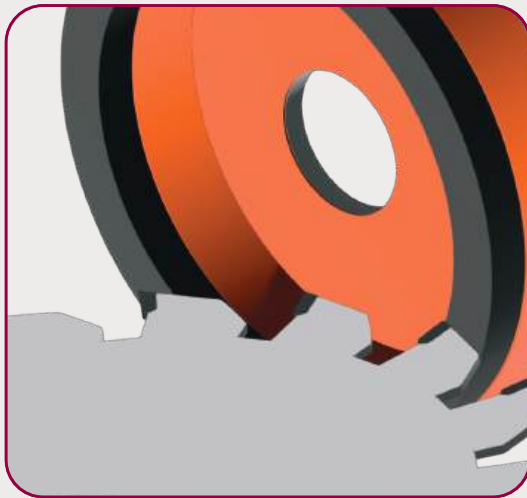
CODE	D, mm	D, inch	T, mm	T, inch	V, mm	V, inch	L, mm	L, inch
6S3051	6	1/4	6	1/4	3	1/8	40	1 4/7
6D3051	6,5	17/64	6	1/4	6	1/4	40	1 4/7
6G3051	6,5	17/64	3	1/8	6	1/4	40	1 4/7
6Q3051	6,5	17/64	6	1/4	6	1/4	56,4	2 2/9
6F3051	7	9/32	3	1/8	6	1/4	40	1 4/7
8H1023	7	9/32	6	1/4	6	1/4	45	1 7/9
6-3051	7	9/32	6	1/4	6	1/4	56,4	2 2/9
8D1023	7	9/32	6	1/4	6	1/4	60	2 1/3

Customer-specific and other grinding tools can be produced on request.

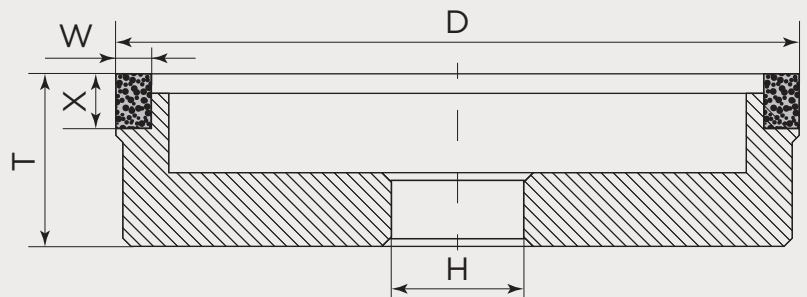
6A9

Application:

- Grinding of the back and side surfaces of teeth
- Recommended GRIT size
 - diamond from M25 to D126
 - CBN for Stellite tipped teeth from B151 to B213



Backside grinding of the tool



6A9 D×T×X×W×H

CODE	D, mm	D, inch	T, mm	T, inch	X, mm	X, inch	W, mm	W, inch	H, mm	H, inch
3D3154	125	5	18	3/4	8	5/16	5(2,5+2,5)	13/64	32	1,260
3-3154	125	5	20	51/64	8	5/16	5(2,5+2,5)	13/64	32	1,260
3-2843	125	5	20	51/64	6	1/4	5(2,5+2,5)	13/64	32	1,260
9K3421	125	5	18	3/4	6,5	17/64	3	1/8	32	1,260
9-8170	100	4	40	1 4/7	12	1/2	3	1/8	20	0,787
9E8150	100	4	30	13/16	6	1/4	3	1/8	20	0,787
3M0059	250	10	32	1 1/4	12	1/2	6	1/4	50	1,969

Customer-specific and other grinding tools can be produced on 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.

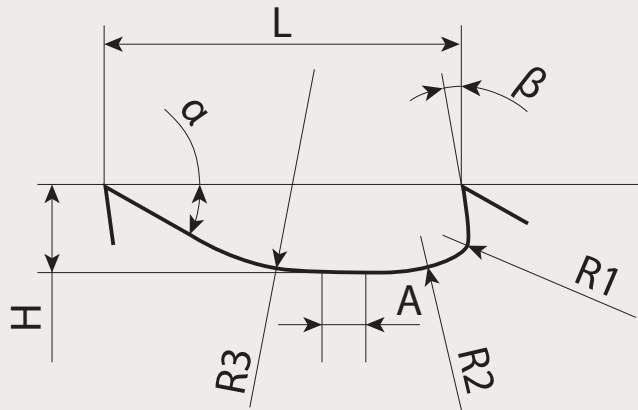
This can be achieved by fulfilling one of the following conditions:

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.

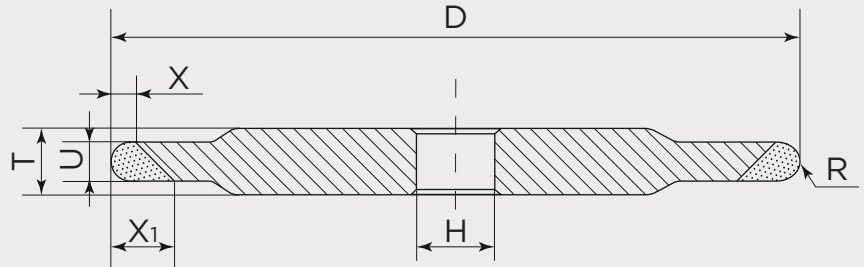
14F1 with HSS01 bond

Application:

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



Sharpening and reprofiling of HSS circular saws



14F1 D×T×U×X×X₁×R×H

CODE	D, mm	D, inch	T, mm	T, inch	U, mm	U, inch	X, mm	X, inch	X ₁ , mm	X ₁ , inch	R, mm	R, inch	H, mm	H, inch
W-0100	150	6	8	5/16	1,2	1/21	4	5/32	7	9/32	0,6	0,024	32	1,260
W-0101	150	6	8	5/16	1,3	3/64	4	5/32	7	9/32	0,65	0,026	32	1,260
W-0102	150	6	8	5/16	1,5	1/17	4	5/32	7	9/32	0,75	0,030	32	1,260
W-0103	150	6	8	5/16	1,6	1/16	5	13/64	8	5/16	0,8	0,031	32	1,260
W-0104	150	6	8	5/16	1,8	1/16	5	13/64	8	5/16	0,9	0,035	32	1,260
W-0105	150	6	8	5/16	2	5/64	5	13/64	8	5/16	1	0,039	32	1,260
W-0106	150	6	8	5/16	2,5	7/64	8	5/16	12	1/2	1,25	0,049	32	1,260
W-0107	150	6	8	5/16	3	1/8	8	5/16	12	1/2	1,5	0,059	32	1,260
W-0108	150	6	8	5/16	3,5	9/64	8	5/16	12	1/2	1,75	0,069	32	1,260
W-0109	150	6	8	5/16	4	5/32	10	3/8	15	3/5	2	0,079	32	1,260
W-0110	150	6	8	5/16	5	13/64	10	3/8	15	3/5	2,5	0,098	32	1,260
W-0111	150	6	8	5/16	5,5	7/32	10	3/8	15	3/5	2,75	0,108	32	1,260
W-0112	150	6	8	5/16	6	1/4	10	3/8	15	3/5	3	0,118	32	1,260
W-0000	200	8	8	5/16	1,2	1/21	4	5/32	7	9/32	0,6	0,024	32	1,260
W-0001	200	8	8	5/16	1,3	3/64	4	5/32	7	9/32	0,65	0,026	32	1,260
W-0002	200	8	8	5/16	1,5	1/17	4	5/32	7	9/32	0,75	0,030	32	1,260
W-0003	200	8	8	5/16	1,6	1/16	5	13/64	8	5/16	0,8	0,031	32	1,260
W-0004	200	8	8	5/16	1,8	1/16	5	13/64	8	5/16	0,9	0,035	32	1,260
W-0005	200	8	8	5/16	2	5/64	5	13/64	8	5/16	1	0,039	32	1,260
W-0006	200	8	8	5/16	2,5	7/64	8	5/16	12	1/2	1,25	0,049	32	1,260
W-0007	200	8	8	5/16	3	1/8	8	5/16	12	1/2	1,5	0,059	32	1,260
W-0008	200	8	8	5/16	3,5	9/64	8	5/16	12	1/2	1,75	0,069	32	1,260
W-0009	200	8	8	5/16	4	5/32	10	3/8	15	3/5	2	0,079	32	1,260
W-0010	200	8	8	5/16	5	13/64	10	3/8	15	3/5	2,5	0,098	32	1,260
W-0011	200	8	8	5/16	5,5	7/32	10	3/8	15	3/5	2,75	0,108	32	1,260
W-0012	200	8	8	5/16	6	1/4	10	3/8	15	3/5	3	0,118	32	1,260

Customer-specific and other grinding tools can be produced on request.

RECOMMENDED GRINDING PARAMETERS FOR HSS CIRCULAR BLADES PROCESSING

Coolant - mineral oil or water-based emulsions.
Wheel speed $V = 35...60$ 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	Yellow	Yellow	Grey	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.

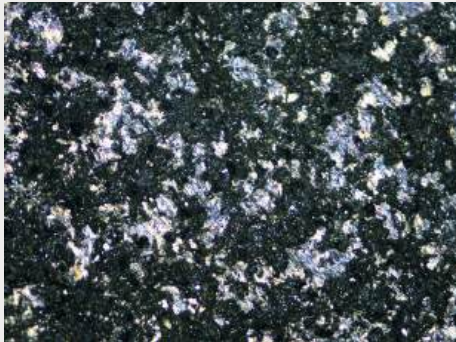
**RECOMMENDED MODES FOR PROFILING
THE DIAMOND LAYER WITH ABRASIVE WHEELS**

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

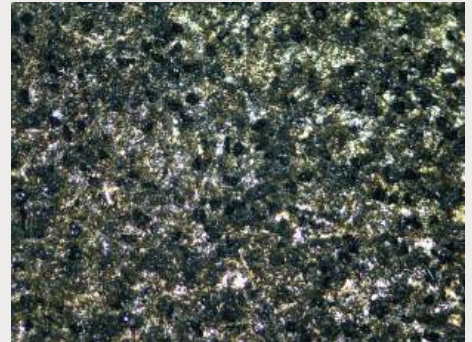
**CHARACTERISTICS OF ABRASIVE WHEELS
ON A CERAMIC BOND FOR DRESSING THE DIAMOND LAYER**

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.



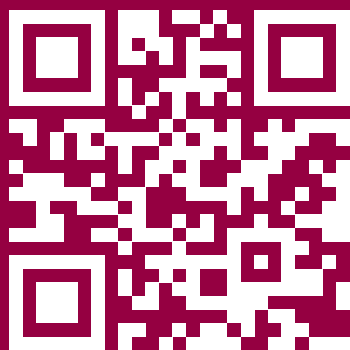
BEFORE DRESSING



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	µm	
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	



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