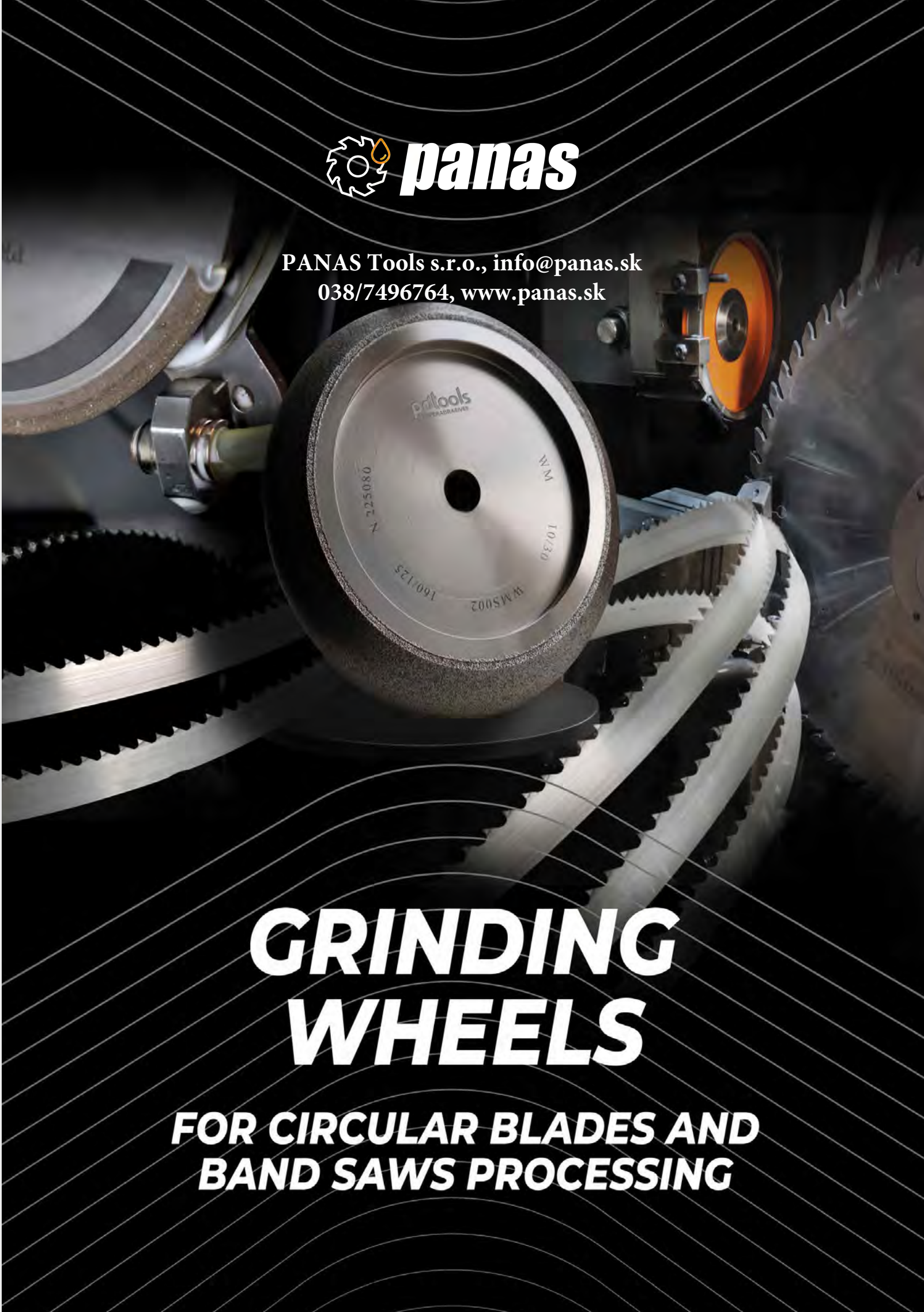

panas
PANAS Tools s.r.o., info@panas.sk
038/7496764, www.panas.sk
GRINDING
WHEELS
FOR CIRCULAR BLADES AND
BAND SAWS PROCESSING

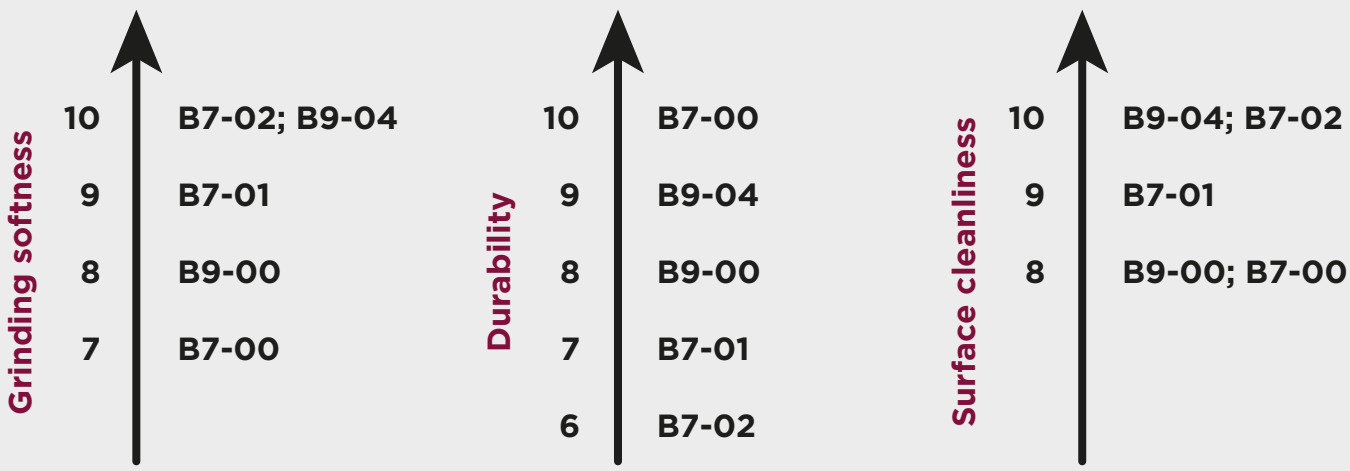
## CATALOG CONTENT

## DIAMOND GRINDING WHEELS FOR SHARPENING SAWS

### BOND DESCRIPTION

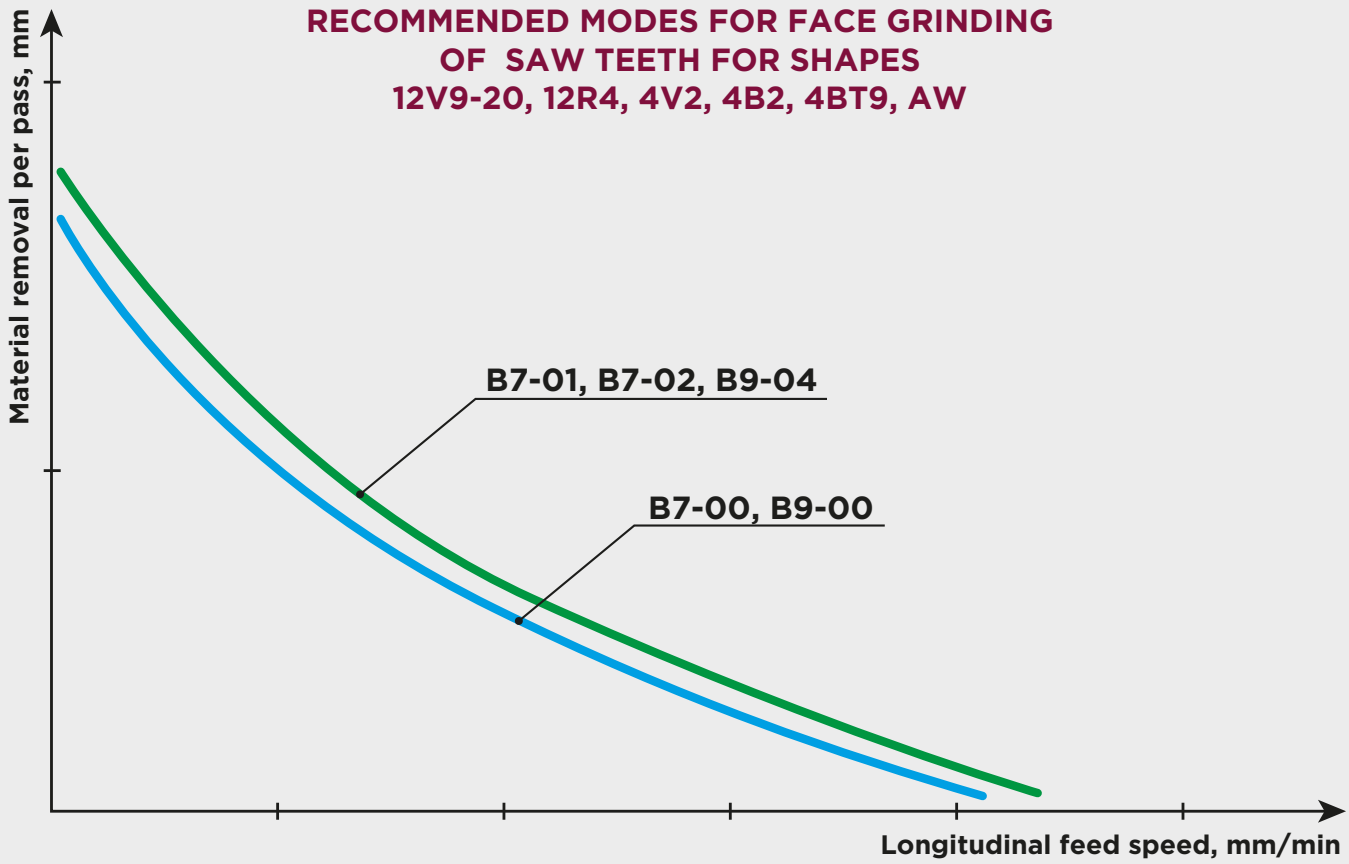
| Bond | Recommendations for use | Cooling |
|---|---|---|
| B9-00 | For face and backside grinding of circular saws with carbide tips. | Oil-based coolant required, water-based coolant is permissible |
| B7-00 | For face and backside grinding of circular saws with carbide tips. | Oil-based coolant required, 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 | | | | | | | | | | | | | | | | |
| 0,08 | | | | | | | | | | | | | | | | |
| 0,1 | | | | | | | | | | | | | | | | |
| 0,15 | | | | | | | | | | | | | | | | |
| 0,2 | | | | | | | | | | | | | | | | |

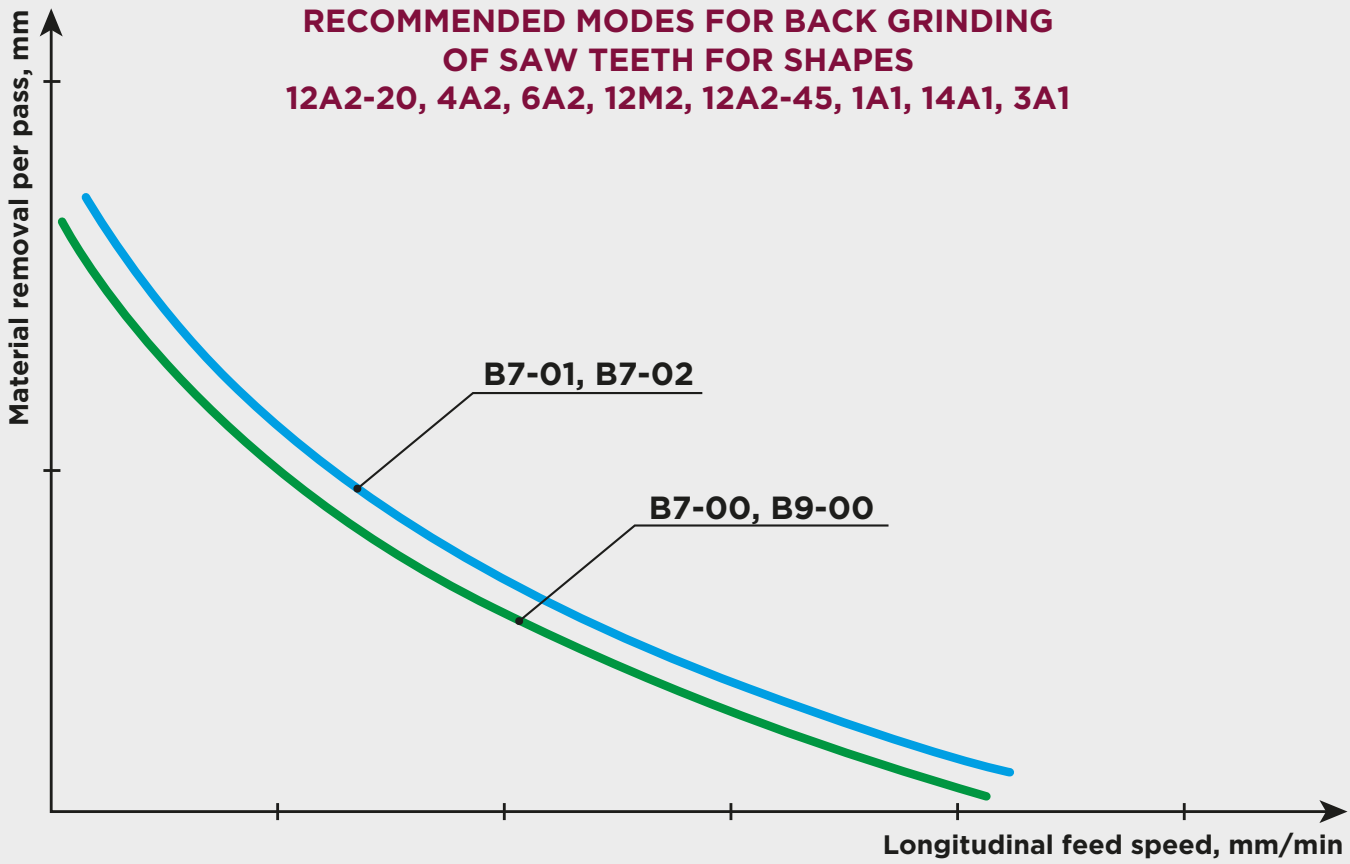
**These recommendations are based on the performance of the B9-04 bond with a grit size of D64.**

***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 | | | | | | | | | | | | | | | | | | | | |
| 0,1 | | | | | | | | | | | | | | | | | | | | |
| 0,15 | | | | | | | | | | | | | | | | | | | | |
| 0,2 | | | | | | | | | | | | | | | | | | | | |
| 0,25 | | | | | | | | | | | | | | | | | | | | |
| 0,3 | | | | | | | | | | | | | | | | | | | | |

**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.*

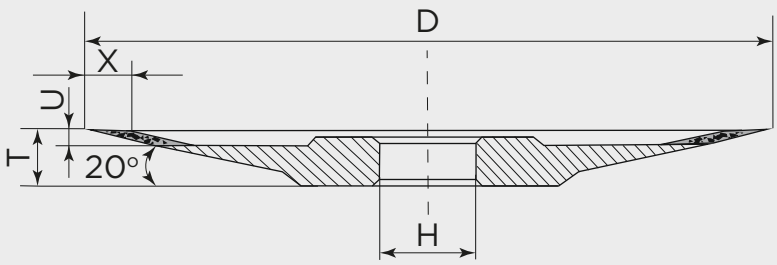
# 12V9-20


**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

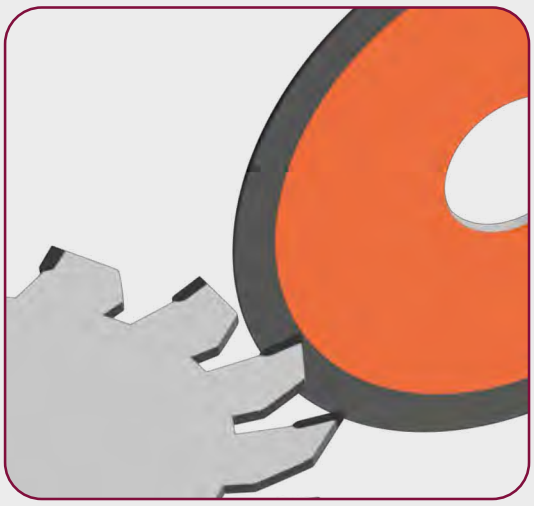
| CODE | SHAPE D×T×X×U×H | CODE | SHAPE D×T×X×U×H |
|---|---|---|---|
| 3G3042 | 12V9-20 100×10×2.3×4×20 | 3U3045 | 12V9-20 150×13×2.3×4×20 |
| 3-3042 | 12V9-20 100×10×2.3×4×25 | 3-3045 | 12V9-20 150×13×2.3×4×32 |
| 3C3042 | 12V9-20 100×10×2.3×4×32 | 3-3333 | 12V9-20 160×13×2.3×4×32 |
| 3D3048 | 12V9-20 125×13×2.5×4×20 | 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

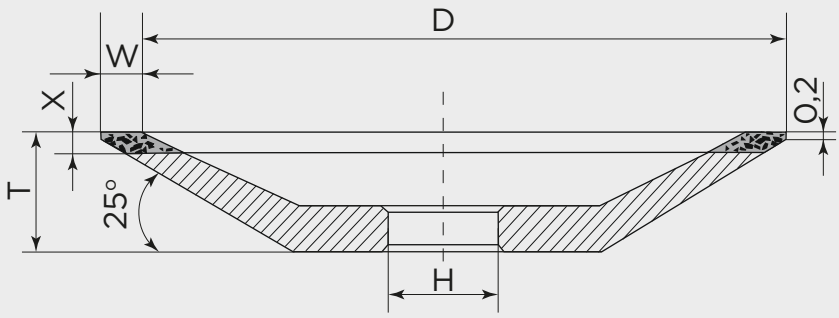
**Application:**

**- Face grinding of teeth**

**- Recommended grit size from D46 to D126**



Face grinding of the tool


**12R4** D×W×X×T×H

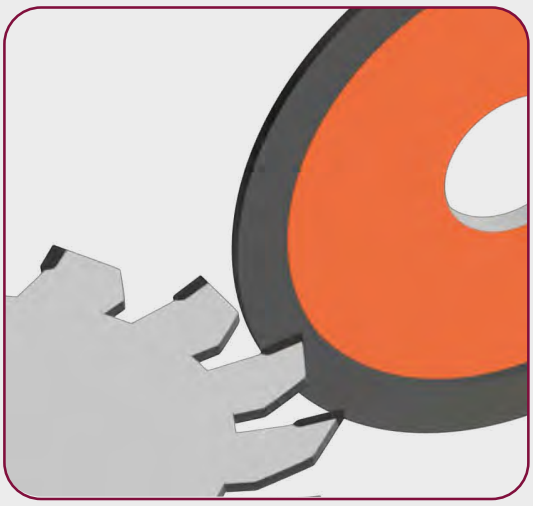
| CODE | SHAPE D×W×X×T×H | CODE | SHAPE D×W×X×T×H |
|---|---|---|---|
| 5-1032 | 12R4 100×3×2×10×20 | 5G1061 | 12R4 125×4×3×14×20 |
| 5N1031 | 12R4 100×3×2×10×25 | 5-1061 | 12R4 125×4×3×14×32 |
| 5-1031 | 12R4 100×3×2×10×32 | 5V1051 | 12R4 150×5×3×16×20 |
| 5E1041 | 12R4 125×3×2×13×20 | 5-1051 | 12R4 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

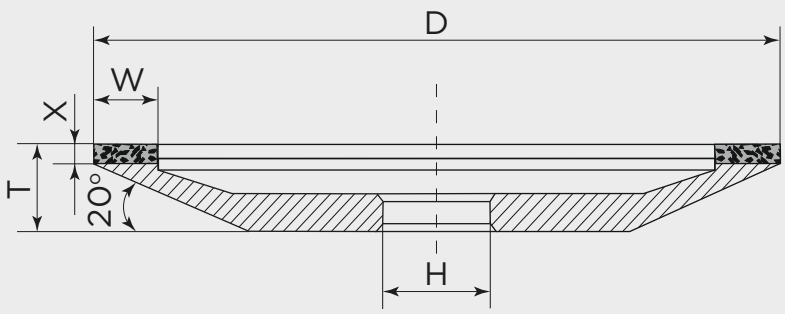
**Application:**

**- 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. | | | |

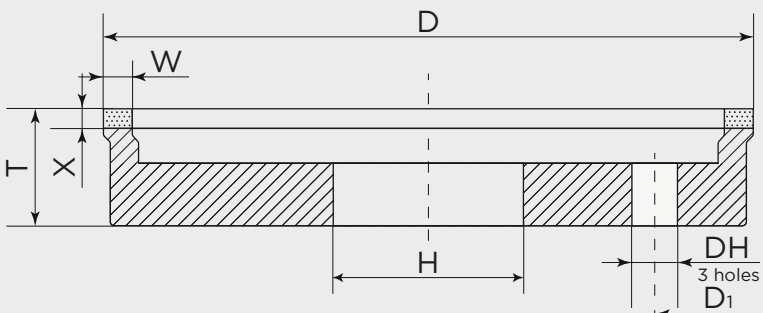
# 6A2


**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




**6A2** D×W×X×T×H

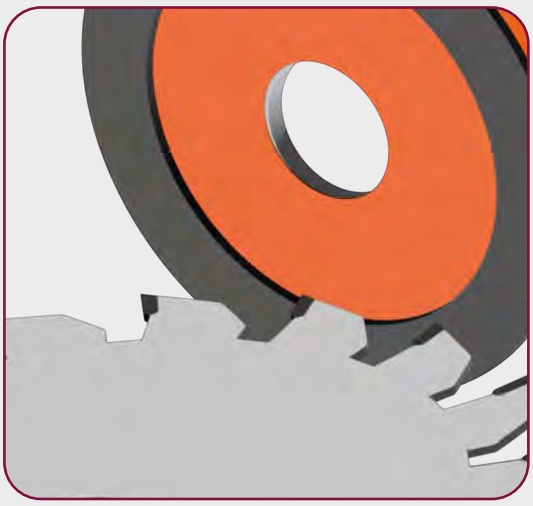
| CODE | SHAPE D×W×X×T×H | CODE | SHAPE D×W×X×T×H |
|---|---|---|---|
| 3-0088 | 6A2 125×5(2.5+2.5)×10×24×32 | 3F0023 | 6A2 125×6×4×24×20 |
| 3K0088 | 6A2 125×5(2.5+2.5)×10×22×32 | 3-0023 | 6A2 125×6×4×24×32 |
| 3D0088 | 6A2 125×5(2.5+2.5)×10×22×32 | 6D3153 | 6A2 125×6×6×18×20 |
| 3G0088 | 6A2 125×5(2.5+2.5)×10×22×32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

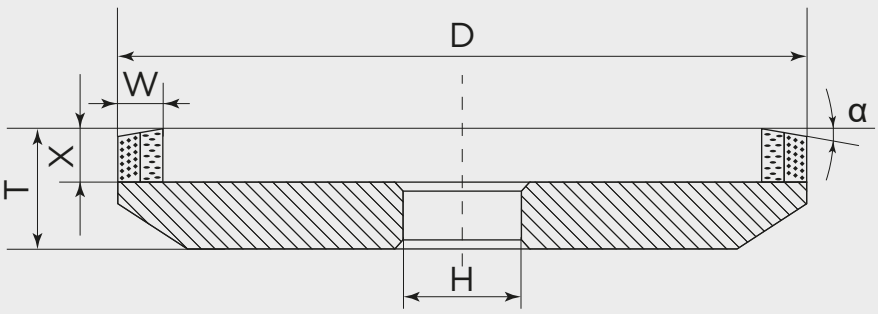
**Application:**

**- Backside grinding of teeth**

**- Recommended grit size from M25 to D151**

Backside grinding of the tool




**12M2** D×T×X×W×H×α

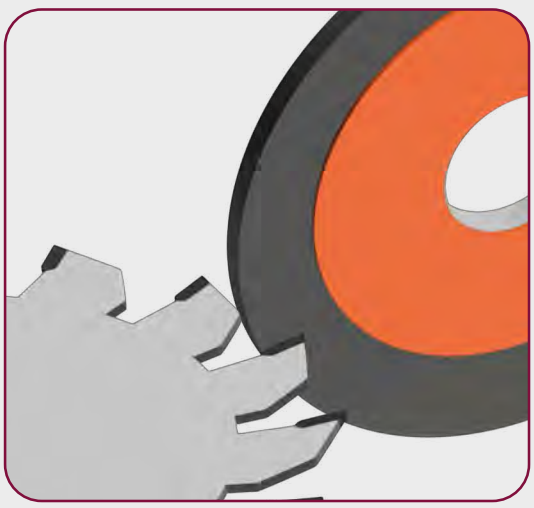
| CODE | SHAPE D×T×X×W×H×α | CODE | SHAPE D×T×X×W×H×α |
|---|---|---|---|
| 9C3153 | 125×18×6×5(2.5+2.5)×32×4 | 9X3153 | 125×24×6×5(2.5+2.5)×20×0 |
| 9R3153 | 125×18×6×5(2.5+2.5)×32×5 | 9M3153 | 125×24×6×5(2.5+2.5)×32×0 |
| 9W3153 | 125×18×6×5(2.5+2.5)×32×8 | 9K3153 | 125×24×6×5(2.5+2.5)×32×9 |
| 9-3153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

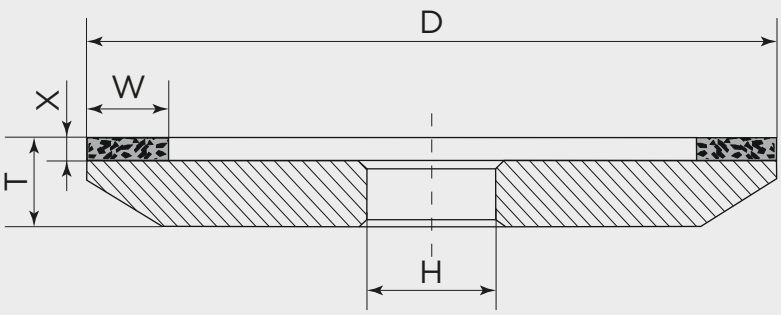
**Application:**

- **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.

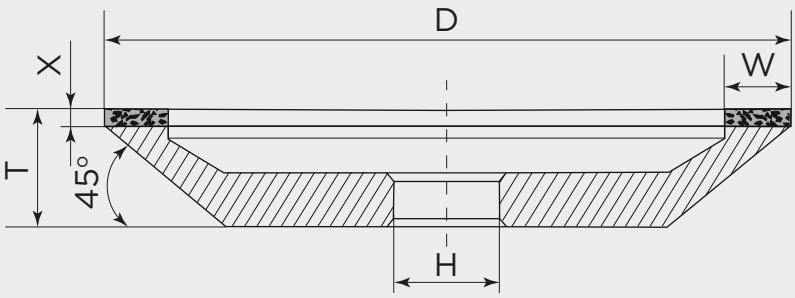
# 12A2-45

**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 |

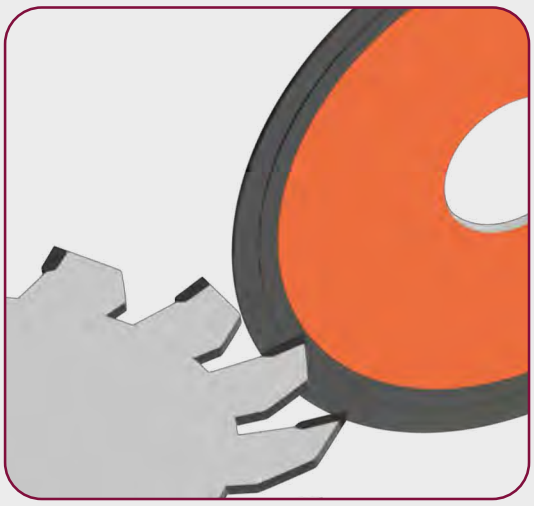
Tools can also be manufactured according to the customer's specific requirements upon request.

# 4V2

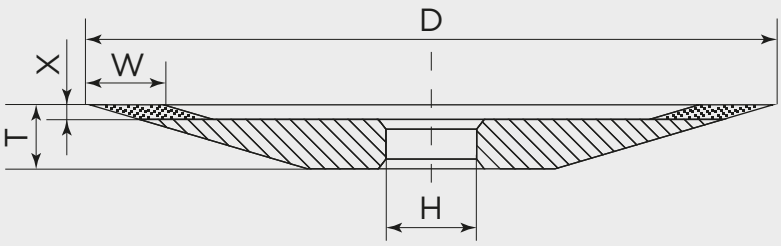
**Application:**

**- Backside grinding of teeth**

**- Recommended grit size from D46 to D126**

Backside grinding of the tool




**4V2** D×W×X×T×H

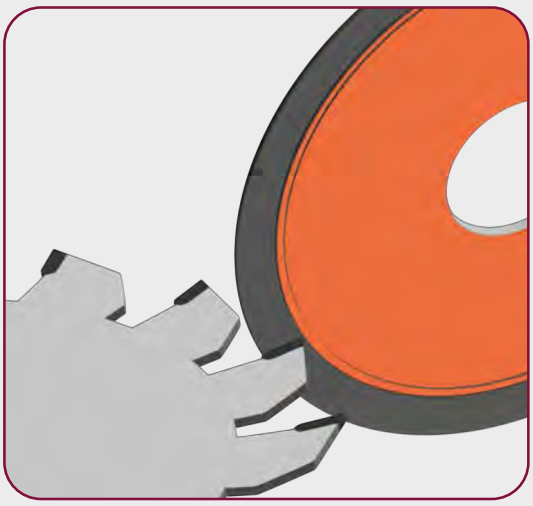
| CODE | SHAPE D×W×X×T×H | CODE | SHAPE D×W×X×T×H |
|---|---|---|---|
| 0C3001 | 4V2 100×4×2×13×20 | 0Q3002 | 4V2 125×4×2×13×32 |
| 0-3001 | 4V2 100×4×2×13×25 | 0-3004 | 4V2 125×4×3×14×32 |
| 0D3002 | 4V2 125×4×2×13×20 | 0B3003 | 4V2 150×4×2×14×20 |
| 0-3002 | 4V2 125×4×2×13×25 | 0-3003 | 4V2 150×4×2×14×32 |
| Tools can also be manufactured according to the customer's specific requirements upon request. | | | |

# 4B2

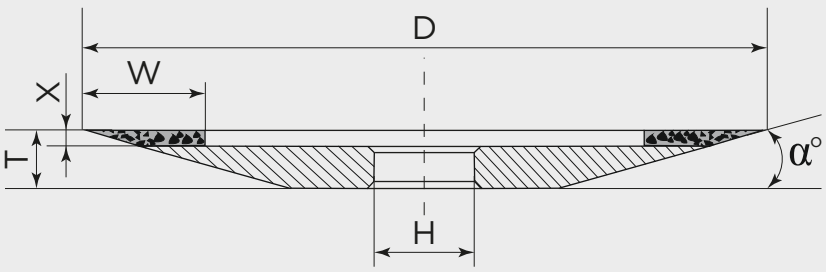
**Application:**

**- Face grinding of the saw teeth**

**- Recommended grit size from D46 to D126**

Face grinding of the tool




**4B2** D×T×X×W×H

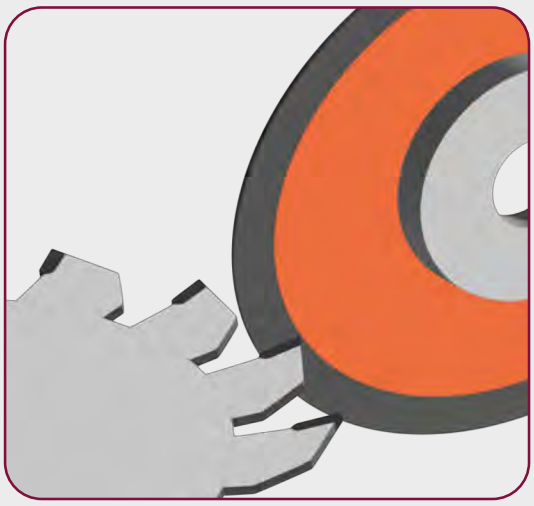
| CODE | SHAPE D×T×X×W×H | CODE | SHAPE D×T×X×W×H |
|---|---|---|---|
| 8L7010 | 4B2 100×10×1.5×6×20×20 | 8V7008 | 4B2 125×10×2×6×20×25 |
| 8D7010 | 4B2 100×10×1.5×6×20×25 | 8-7008 | 4B2 125×10×2×6×20×32 |
| 8-7010 | 4B2 100×10×1.5×6×20×32 | 8D7009 | 4B2 150×12×1.5×6×20×20 |
| 8D7008 | 4B2 125×10×2×6×20×20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

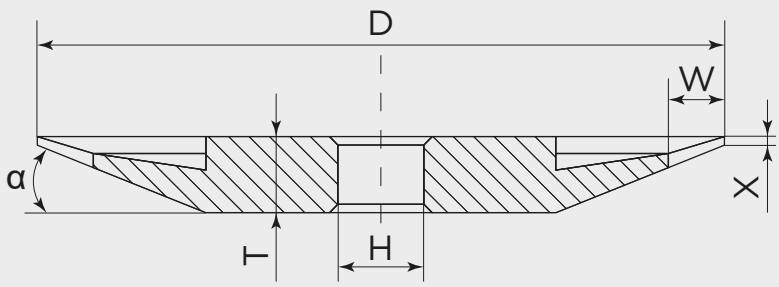
**Application:**

**- Face grinding of the teeth**

**- Recommended grit size from D46 to D126**



Face grinding of the tool




**4BT9** D×T×X×W×H

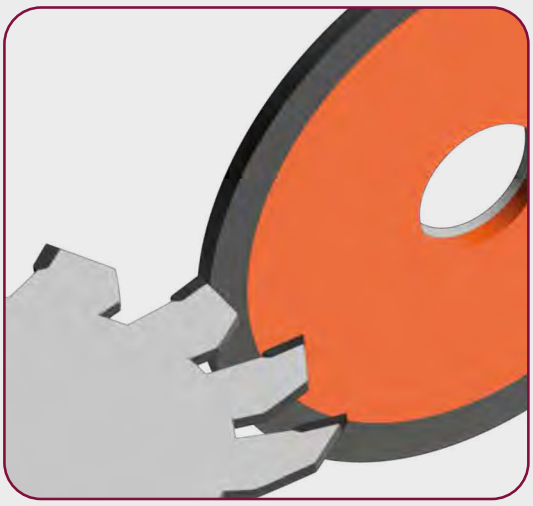
| CODE | SHAPE D×T×X×W×H | CODE | SHAPE D×T×X×W×H |
|---|---|---|---|
| 3-3035 | 4BT9 125×12×1×10×20 | 3D3035 | 4BT9 125×12×1×10×32 |
| 3N3035 | 4BT9 125×12×1×10×25 | 3-3031 | 4BT9 150×14×1×6×32 |
| Tools can also be manufactured according to the customer's specific requirements upon request. | | | |

# 14M1

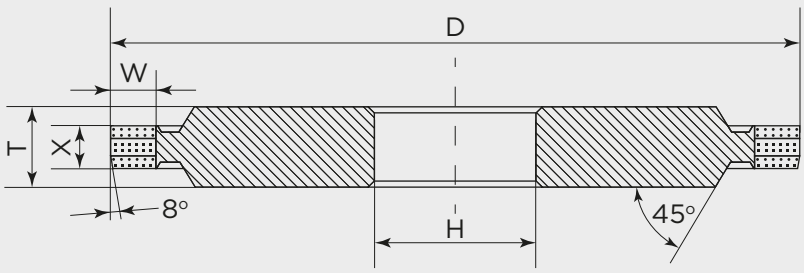
**Application:**

**- Backside grinding of teeth**

**- Recommended grit size from M25 to D126**

Backside grinding of the tool




**14M1** D×T×X×W×H

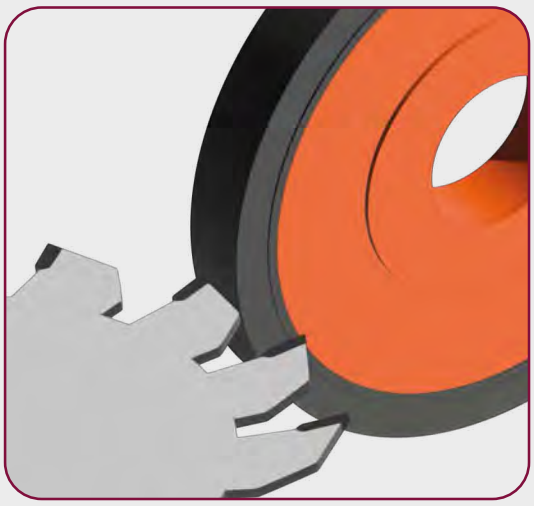
| CODE | SHAPE D×T×X×W×H | CODE | SHAPE D×T×X×W×H |
|---|---|---|---|
| 4-4008 | 14M1 125×10×5(1.7+1.7+1.7)×8×32 | 0K2083 | 14M1 150×10×5(1.7+1.7+1.7)×8×32 |
| 0-2083 | 14M1 150×10×5(2.5+2.5)×8×32 | 0-2103 | 14M1 190×10×5(2.5+2.5)×8×32 |
| | | 9-8018 | 14M1 200×10×5(2.5+2.5)×8×32 |
| Tools can also be manufactured according to the customer's specific requirements upon request. | | | |

# 1A1

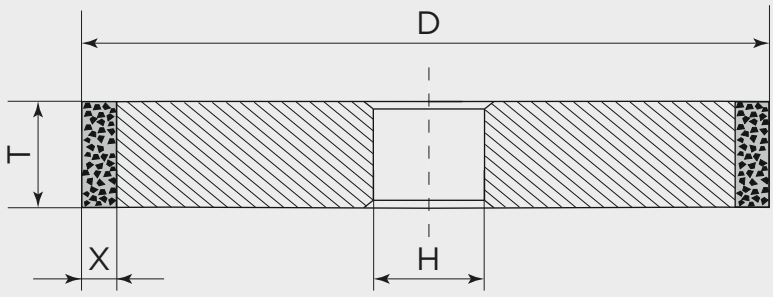
**Application:**

- **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 |
| 0D0063 | 1A1 100×6×3×32 | 0S0084 | 1A1 125×6×5×20 |
| 0-0069 | 1A1 100×6×5×20 | 0-0084 | 1A1 125×6×5×32 |
| 0F0069 | 1A1 100×6×5×32 | 0D0085 | 1A1 125×8×5×20 |
| 0G2079 | 1A1 100×6×10×20 | 0K0085 | 1A1 125×8×5×32 |
| 0-0064 | 1A1 100×8×3×20 | 0B0174 | 1A1 125×8×10×20 |
| 0D0064 | 1A1 100×8×3×32 | 0S0100 | 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 | 0B0100 | 1A1 150×6(2+2+2)×5×32 |
| 0K0071 | 1A1 100×8×5×32 | 0-0095 | 1A1 150×8×3×32 |
| 0C2079 | 1A1 100×8×10×20 | 0D0101 | 1A1 150×8×5×20 |
| 0M0079 | 1A1 125×6×3×20 | 0-0101 | 1A1 150×8×5×32 |

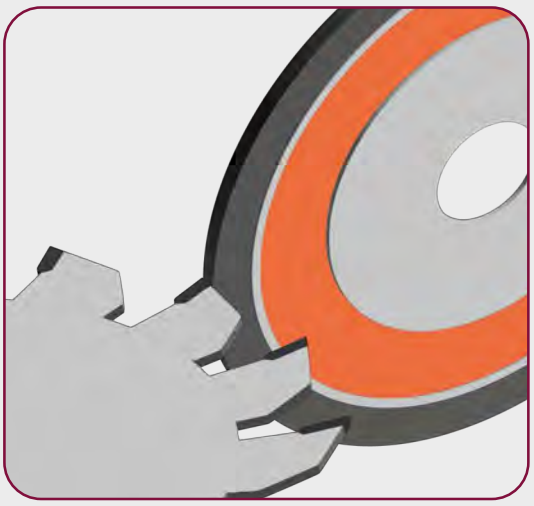
Tools can also be manufactured according to the customer's specific requirements upon request.

# 14A1

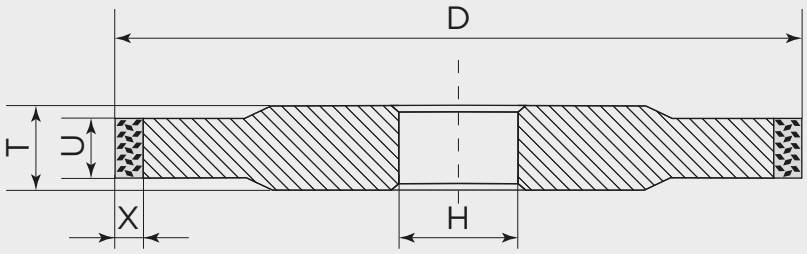
**Application:**

- **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

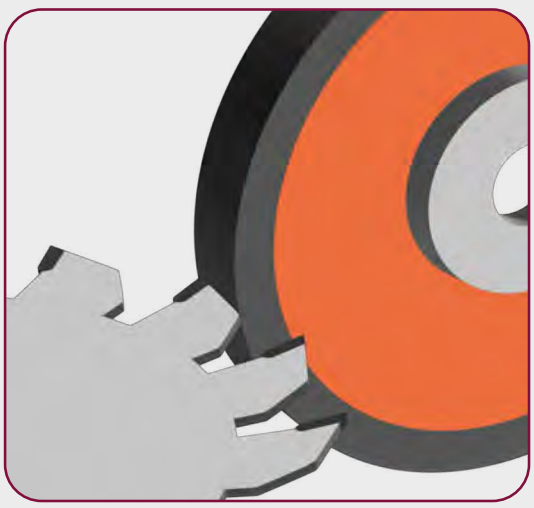
| CODE | SHAPE D×T×X×W×H | CODE | SHAPE D×T×X×W×H |
|---|---|---|---|
| 0-0303 | 14A1 100×6×3×5×20 | 0-0308 | 14A1 125×6×5×5×32 |
| 0D0304 | 14A1 100×6×5×5×20 | 0Б0311 | 14A1 150×8×3×5×20 |
| 0D0307 | 14A1 125×6×3×5×20 | 0-0311 | 14A1 150×8×3×5×32 |
| 0-0307 | 14A1 125×6×3×5×32 | 0G0312 | 14A1 150×8×5×5×20 |
| 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

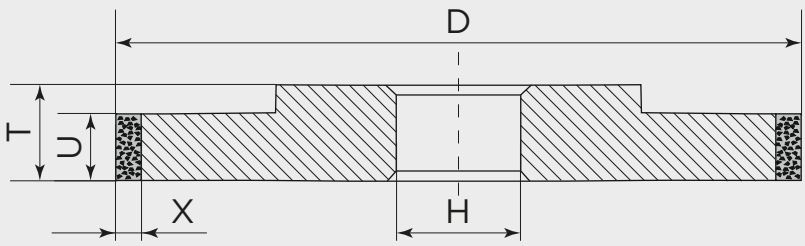
**Application:**

- **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

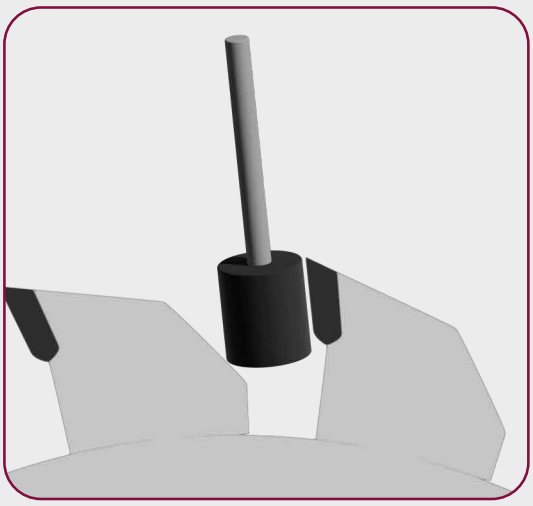
| CODE | SHAPE D×T×U×X×H | CODE | SHAPE D×T×U×X×H |
|---|---|---|---|
| 9-5663 | 3A1 100×10×4×5×20 | 9-5662 | 3A1 100×14×4×4.2×32 |
| 9B5662 | 3A1 100×10×4×4.2×32 | 0N0085 | 3A1 125×7×4×5×20 |
| 9C5662 | 3A1 100×14×4×4.2×20 | 3-2898 | 3A1 125×17×4×5×32 |
| Tools can also be manufactured according to the customer's specific requirements upon request. | | | |

# AW

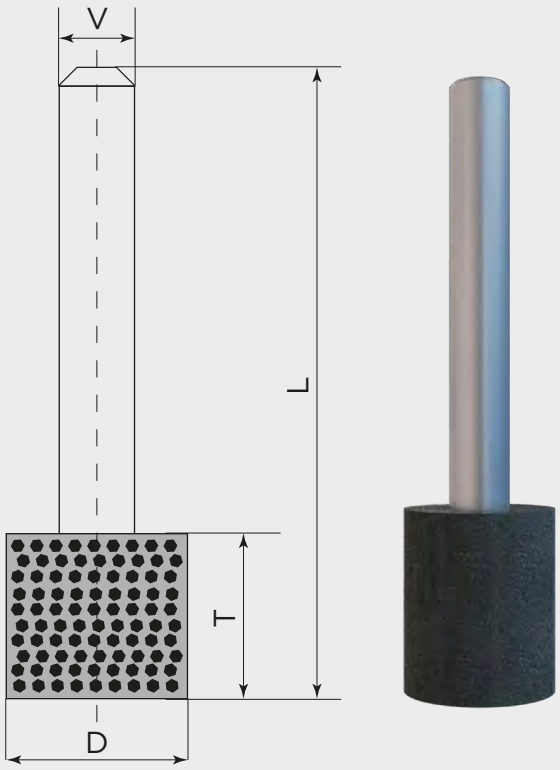
**Application:**

**- Face  grinding of teeth**

**- Recommended grit size from M25 to D151**



Face ginding of the tool

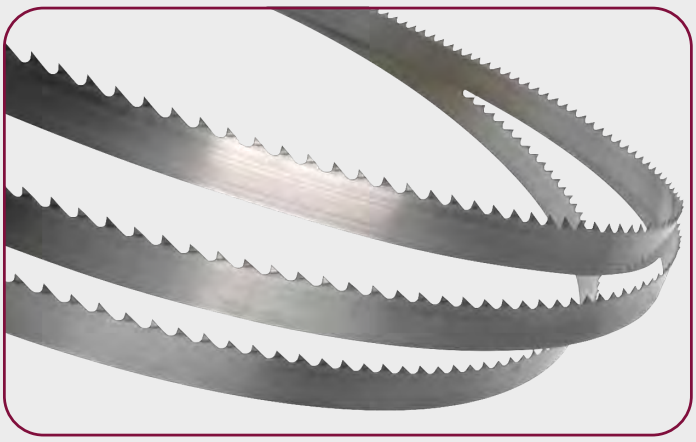



**AW** D×T×V×L

| 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.**

# RECOMMENDED GRINDING PARAMETERS

## 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.**

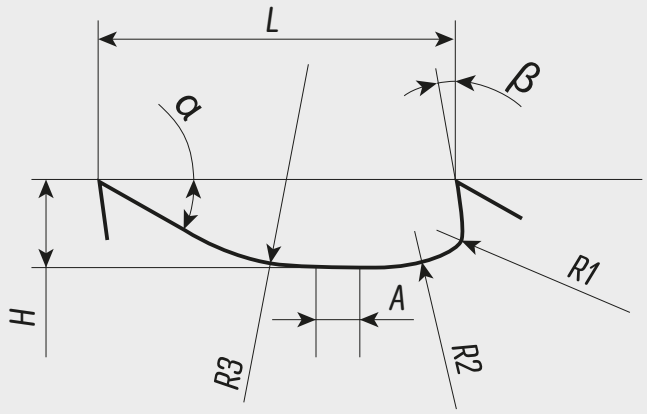
**This can be achieved by fulfilling one of the following conditions:**

**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 | | | | | | | | |
| B181 - B151 | | | | | | | | |
| B126 - B107 | | | | | | | | |

***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.*

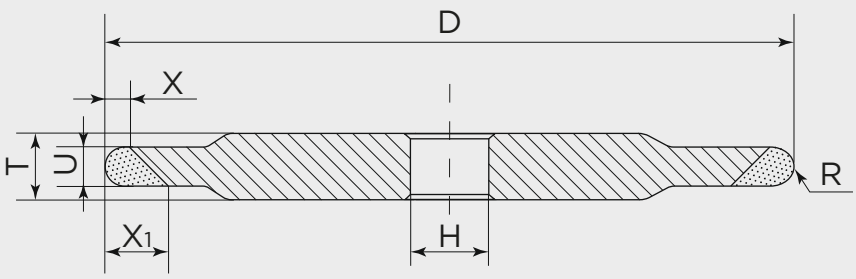
# 14F1 with HSS01 bond

**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×X1×R×H | CODE | SHAPE D×T×U×X×X1×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 | | | | | | | | | | | | | | | | |
| 0,3 | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | |
| 1,5 | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | |
| 2,5 | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | |
| 3,5 | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | |

***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 superabrazive 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 superabrazive 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 |

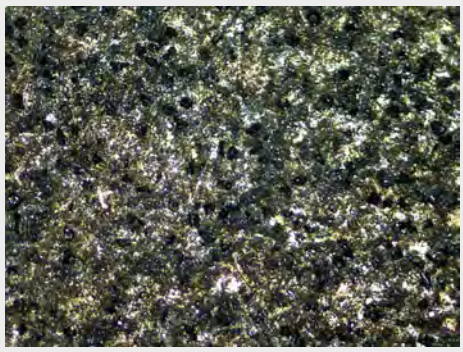
### CHARACTERISTICS OF ABRASIVE WHEELS ON A CERAMIC BOND FOR DRESSING THE DIAMOND LAYER

| 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 |

# CORRESPONDENCE TO STANDARDS

**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 | мкм | |
| 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 | |
| D126/B126 | 120/140 | 140 | 125/100 | COARSE |
| 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 | |
| M40/B40 | 550 | 550 | 40/28 | FINE |
| M30/B30 | 500/600 | 600 | | |
| M25/B25 | 650 | 650 | 28/20 | |


TRADITION OF
Quality
SINCE 1966