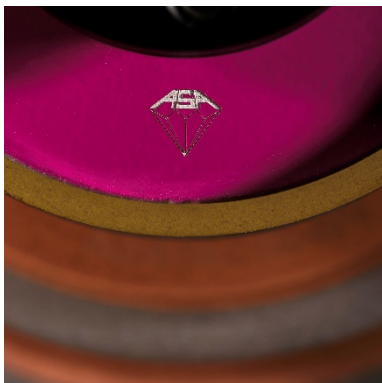
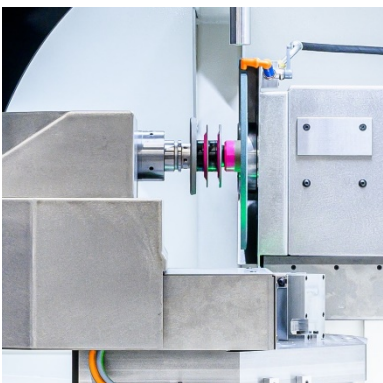
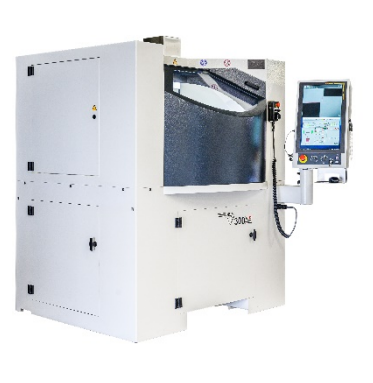
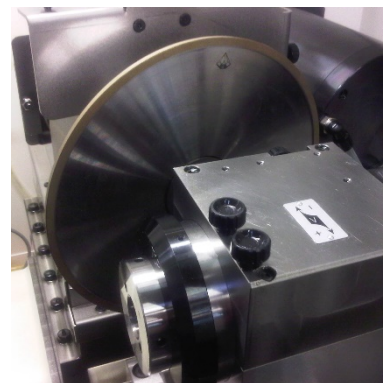


ACTION SUPER ABRASIVE SA



KATALOG



**DIAMANT & CBN SCHLEIFSCHEIBEN
ABRICHT MASCHINE**



Action Super Abrasive SA • 11, Prés-Bersot • 2087 Cornaux • Switzerland

www.actionsuper.ch • info@actionsuper.ch



INTRODUKTION

ASA (Action Super Abrasive) wurde 1993 gegründet. Wir haben uns auf die Herstellung von Diamant- und CBN-Schleifscheiben spezialisiert. Unsere verschiedenen Bindungstypen in Kunstharz- (Phenol und Polyimid), Hybrid- und Metallbindungen wurden vorwiegend für die spanabhebende Werkzeugindustrie entwickelt.

ASA hat sich von Anfang an zur Hauptaufgabe gemacht, die Schleifscheiben mit einer hohen Qualität und entsprechender Wiederholbarkeit zu produzieren. Unser Ziel ist, innert kürzester Zeit Präzisionsschleifscheiben herzustellen, von der Konstruktion bis zum Einzel- oder Serienprodukt.

Wir optimieren stetig unsere Betriebsabläufe im Labor und in der Fertigung.

Dank unserer langjährigen Erfahrung beraten wir Sie kompetent und entwickeln Ihre spezifische Schleifscheibe.



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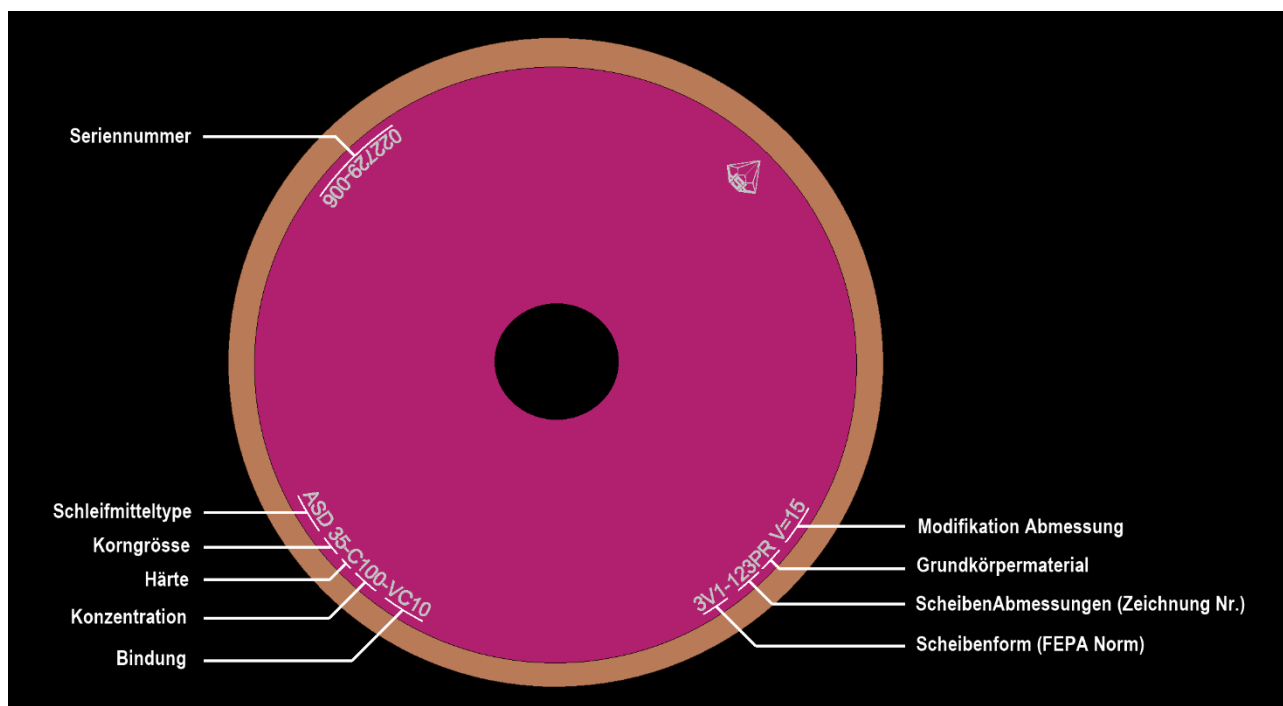


BESTELL DATEN

Die folgenden Beschreibungen sind für die Bearbeitung Ihrer Anfragen oder Bestellungen wichtig. Bitte geben Sie ausserdem die Anwendung der Scheibe, des verwendeten Kühlmittels und des Maschinentyps an. Es ist relevant, uns über die wichtigsten Kriterien zu informieren, die für das erwartete Gleichgewicht zwischen Formhaltigkeit, Oberflächenqualität und Schleifbedingungen erforderlich sind.



ERKLÄRUNG GRAVUR



Die Nummer nach der Scheibenform (FEPA), bestimmt die Abmessungen der Schleifscheibe. Ausserdem fügen wir einen zusätzlichen Platz ein, um Grössenänderungen anzugeben (z.B. einen Winkel).

Diese Informationen finden Sie in all unseren Dokumenten unter folgender Beschreibung:

022729-006
3V1-123PR V=15 ASD 35-C100-VC10
D150-T8-H31.75-U3-X6-V30



SERIENNUMMER

Die Seriennummer ist für die Rückverfolgbarkeit der Scheibenspezifikationen.
 Der erste Teil gibt die Bestätigungsnummer an, der zweite Teil die indizierte Nummer.



SCHLEIFMITTEL BEZEICHNUNG / DIAMANT

DIAMANT

Diamant wird aufgrund seiner Härte zum Schleifen von harten, spröden und kurzspanenden Materialien eingesetzt. Z.B. Hartmetall, Glas, Keramik oder sämtliche nicht Eisenmetalle. (Knoop-Härte 8000 bis 9000).

BESCHREIBUNG

SD

Die Mikrokörnungen werden zusammen mit unseren Polyimid-, Phenol- und Hybridbindungen eingesetzt
Phenolbindungen sind Geeignet für die Trockenbearbeitung
Verfügbar in den Korngrößen von 1 µm bis 35 µm

ASD*

Die beschichteten Körner leiten die Wärme in der Bindung besser ab, wodurch eine längere Standzeit gewährleistet wird
Diese Körner werden hauptsächlich in unserer Phenolbindung unter Kühlmittel eingesetzt
Körnung von 15 bis 252 erhältlich

ASD6*

Das speziell ummantelte Diamantkorn wurde entwickelt um bessere Haltekräfte in der Bindung zu erhalten. Es wird in unseren Polyimid- und Hybridbindungen verwendet
Körnung von 46 bis 252 erhältlich

DMD

Diese Körner werden in unseren Metallbindungen verwendet.
Körnung von 10 bis 252 erhältlich

ASDC

Der speziell beschichteter Diamant, wird für Trockenschleifen verwendet
Körnung von 46 bis 252 erhältlich

ASDK

Ist ideal zum Schleifen von schwierigen Materialien wie Keramik und Cermet. Er wird in unseren Phenol-, Polyimid- und Hybridbindungen verwendet.
Körnung von 46 bis 252 erhältlich

ASDS

Dieses Korn wird für Trennscheiben eingesetzt.
Körnung von 46 bis 252 erhältlich



SCHLEIFMITTEL BEZEICHNUNG / CBN

BORAZON

Kubisches Bornitrid (CBN) wird zum Schleifen von Werkzeugen aus gehärteten Eisenmetallen und Superlegierungen verwendet. (Härte KNOOP 4600).

BESCHREIBUNG	
B	Wird in unseren Polyimid-, Hybrid- und Phenolbindungen verwendet Körnung von 6 bis 10 erhältlich
CBN*	Dass speziell ummantelte Diamantkorn wurde entwickelt um bessere Haltekräfte in der Bindung zu erhalten. Es wird in unseren Polyimid-, Hybrid- und Phenolbindungen verwendet Körnung von 15 bis 252 erhältlich
BM	Diese Körner werden in unseren Metallbindungen verwendet Körnung von 15 bis 252 erhältlich

OBERFLÄCHENQUALITÄT

(Grobe Massschätzung abhängig von den verwendeten Bindungen und Materialien)

DIAMANT	D7	D15	D25	D46	D76	D126	D252	
	D10	D20	D30	D54	D91	D151		
				D64	D107	D181		
	N1	N2	N3	N4	N5	N6	N7	N8
Ra (µm)	0,025	0,06	0,12	0,25	0,5	1,0	1,6	3,2
Rt (µm)	0,5	0,5	1,0	2,0	4,0	8,0	12,5	32,0
Rz (µm)	0,18	0,38	0,75	1,6	3,2	6,3	10,0	16,0
	N1	N2	N3	N4	N5	N6	N7	N8
CBN		B10	B15	B30	B46	B76	B151	B252
			B20		B54	B91	B181	B301
					B64	B107		



KÖRNUNG GRÖSSE

Nach FEPA Standard.

DIAMANT (FEPA)	CBN (FEPA)	MIKRON	US MESH
1	-	1-2 µm	14'000
3	-	2-4 µm	8'000
5	-	4-6 µm	6'000
-	6	4-8 µm	3'000
7	-	6-8 µm	2'500
10	10	6-12 µm	1'800
15	15	10-20 µm	1'200
20	20	15-25 µm	1'000
25	25	20-30 µm	800
30	30	22-36 µm	700
35	(40)	30-40 µm	600
46	46	38-45 µm	325/400
54	54	45-53 µm	270/325
64	64	53-63 µm	230/270
76	76	63-75 µm	200/230
91	91	75-90 µm	170/200
107	107	90-106 µm	140/170
126	126	106-125 µm	120/140
151	151	125-150 µm	100/120
181	181	150-180 µm	80/100
252	252	212-250 µm	60/70
301	301	250-300 µm	50/60



HÄRTE DES SCHEIBEN

Diese Buchstaben stehen immer vor der Konzentration, zur Änderung der Basisbindung.

BUCHSTABE	HÄRTE
L	sanft
N	mittel
C	hart (mit Diamant Schleifmittel in Konzentration 100)
R	hart (mit CBN Schleifmittel in Konzentration 100)
V	sehr hart



KONZENTRATION

Wir verwenden für beide Schleifmittel die gleichen Konzentrationswerte, welche den international anerkannten Standards entsprechen. Dies drückt das Gewicht des Schleifmittels pro cm³ aus. (1 Karat = 0.2g)

KONZENTRATION	CTS/CM ³
25	1.1
50	2.2
75	3.3
100	4.4
125	5.5
150	6.6
175	7.7



BINDUNG / LEGENDE

In der folgenden Tabelle werden die qualitativen Niveaus unserer Bindungen beschrieben, anhand der drei häufigsten, genannten Kriterien unserer Kunden. Um Ihren spezifischen Anforderungen gerecht zu werden, können wir diese Kriterien durch flexible Variationen zwischen Konzentration und Härte anpassen.

	NIEDRIG	AKZEPTABEL	MITTEL	GUT	SUPER
Schneidkraft	○○○○	●○○○	●●○○	●●●○	●●●●
Form halt	○○○○	●○○○	●●○○	●●●○	●●●●
Oberflächenqualität	○○○○	●○○○	●●○○	●●●○	●●●●



BINDUNG / PHENOL






HARZ PHENOL: Wird zum Schleifen und Nachschleifen von kleinen bis mittlerer Losgrößen eingesetzt. Trockenschleifen mit variablen Bindungen ist möglich.

BINDUNG	DIAMANT	CBN
B21	-Zum Polieren (Nuten, Stirn Freiwinkel) -Für Mikrokörnung 	-Zum Polieren (Nuten, Stirn Freiwinkel) -Für Mikrokörnung
VC10	-Universelle Bindung (Stirn Freiwinkel) -Trockenschleifen möglich 	-Universelle Bindung (Stirn Freiwinkel) -Trockenschleifen möglich
B16	-Für Oberflächen- und Einstechschleifen 	-Für Oberflächen- und Einstechschleifen
B25	-Für Trennscheiben 	-Für Trennscheiben
BC4	-Universelle Bindung (Nuten) -Trockenschleifen möglich -Für Mikrokörnung 	-Universelle Bindung (Nuten) -Trockenschleifen möglich -Für Mikrokörnung
BC3	-Wie BC4, jedoch für grössere Körnung 	-Wie BC4, jedoch für grössere Körnung
BC5	-Universelle Bindung (Ausspitzen) -Trockenschleifen möglich 	-Universelle Bindung (Ausspitzen) -Trockenschleifen möglich
BW2	-Ersetzt durch H6 Piranha, noch in unserem Programm bis 2024	-Ersetzt durch H6 Piranha, noch in unserem Programm bis 2024
BW3	- Grobkörnige Topfschleifscheibe zum Planschleifen, mit Kühlmittel 	
ADS	-Zum Polieren (Uhrenindustrie). 	



BINDUNG / POLYIMID








HARZ POLYIMID: Wird zum Schleifen von mittleren bis grossen Serien unter Kühlung mit guter Oberflächenqualität verwendet.

BINDUNG	DIAMANT	CBN
BP4	-Universelle Bindung (Nuten, Ausspitzen) 	-Universelle Bindung (Nuten, Ausspitzen). 
BP11	-Bessere Oberflächengüte als BP4 -Für Mikrokörnung 	- Bessere Oberflächengüte als BP4 -Für Mikrokörnung 
BP17	- Bessere Oberflächengüte als BP11 - Für Mikrokörnung 	
BP40	-Ersetzt durch BPM5, noch in unserem Programm bis 2024	-Ersetzt durch BPM5, noch in unserem Programm bis 2024



BINDUNG / HYBRID

HARZ METALL: Wird zum Schleifen grosser Serien verwendet. Hohe Formhaltigkeit und erhöhte Schnittkraft. Die Oberflächengüte ist geringer als beim Einsatz mit Polyimid.

BINDUNG	DIAMANT	CBN
BPM2A	-Für Ausspitzen und Nuten Schleifen Mikro- und Nano Werkzeugen -Für Mikrokörnung 	
BPM3	- Schleifen mit hohem Materialabtrag 	- Schleifen mit hohem Materialabtrag 
BPM5	- Schleifen mit hohem Materialabtrag (Stirn) 	- Schleifen mit hohem Materialabtrag (Stirn) 
H6 PIRANHA	- Schleifen mit hohem Materialabtrag (Nuten, Werkzeugdurchmesser von 4mm bis 8mm) 	- Schleifen mit hohem Materialabtrag (Nuten, Werkzeugdurchmesser ab 4mm) 



BINDUNG / METALL MNG*

METALL: Wird aufgrund seiner Form- und Wärmebeständigkeit zum Schleifen grosser Serien verwendet.

BINDUNG	DIAMANT	CBN
MNG1	-Schruppscheibe zum Durchmesserschleifen (Rollomatic NP4, NP5, NP50) 	- Schruppscheibe zum Durchmesserschleifen (Rollomatic NP4, NP5, NP50)
MNG2	-Wendeplattenschleifen 	
MNG4	-Für einen höheren Materialabtrag als MNG5 Bindung 	
MNG5	-Für Dental Werkzeuge (Nuten) 	-Für Form Werkzeuge
MNG8	-Für Form Werkzeuge -Für Mikrokörnung 	-Für Form Werkzeuge -Für Mikrokörnung



BINDUNG / METALL-KERAMIK

METALL KERAMIK: Wird aufgrund seiner Schneidkraft und Wärmebeständigkeit für grosse Serien verwendet.

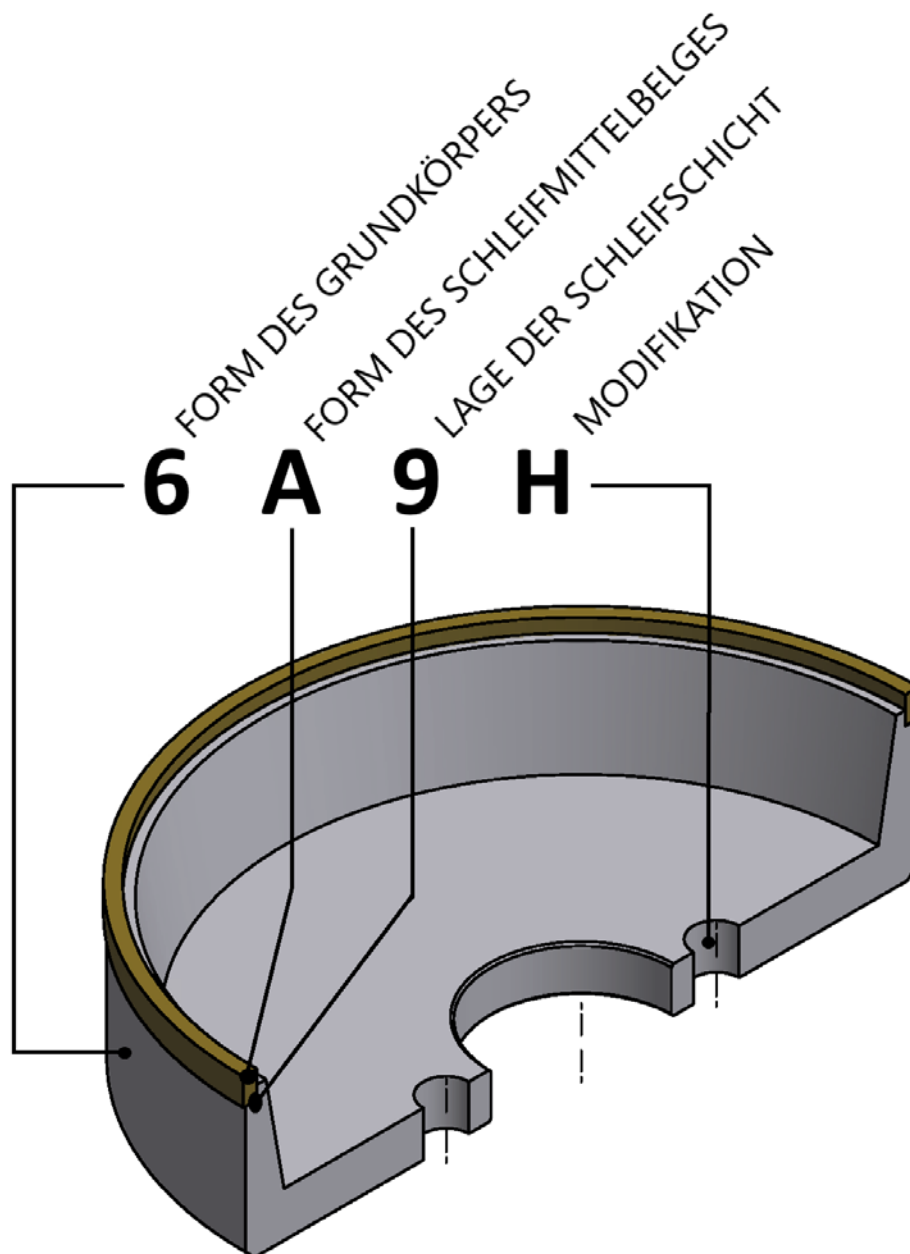
BINDUNG	DIAMANT	CBN
M1 SHARK	-Schleifen mit hohem Materialabtrag (Nuten, Werkzeugdurchmesser ab 8 mm) 	



SCHEIBENFORM

Die Formen unserer Scheiben basieren auf den FEPA-Standards (Europäische Föderation der Hersteller von Schleifmitteln).

Alle unsere Formen sind ab Seite 16 aufgeführt.





SCHEIBEN ABMESSUNGEN

Die Nummer (Zeichnungsnummer), die nach der Formbezeichnung der Scheiben folgt, definiert die Scheibenabmessungen. Sie können die Liste aller unserer Zeichnungen auf unserer Website www.actionsuper.ch einsehen.

Den Abmessungen unserer Schleifscheiben geht ein Buchstabe voraus, der die Abmessung der Scheibe bestimmt.

D	Scheibendurchmesser	T ₁	Reduzierte Breite
T	Gesamtbreite	U ₁	Reduzierte Belagsbreite
H	Bohrung	E	Wandstärke
U	Belagsbreite	K	Durchmesser
X	Belagshöhe	J	Durchmesser
W	Belagsbreite	d	Versetzter Durchmesser vom Körper
V	Belagswinkel	S	Winkel des Körpers
A	Belagswinkel n°1	BC	Lochkreis
B	Belagswinkel n°2		
R	Radius		



KÖRPERMATERIAL

Die beiden Buchstaben nach der Zeichnungsnummer definieren den Grundkörper. Der erste Buchstabe definiert das Material, der zweite die Art der Bindung.

AR	Aluminium / Phenol Bindung
MR	Gepresstes Aluminium (Topfscheibe) / Phenol Bindung
PR	Gepresstes Aluminium / Phenol Bindung
SR	Stahl / Phenol Bindung
AP	Aluminium / Polyimid- und Hybrid Bindung
CP	Gepresstes Kupfer / Polyimid- und Hybrid Bindung
XP	Aluminium und gepresstes Kupfer / Polyimid- und Hybrid Bindung
AM	Aluminium / Metall Bindung
SM	Stahl / Metall Bindung
SH	Stahl / Metall-Keramik Bindung

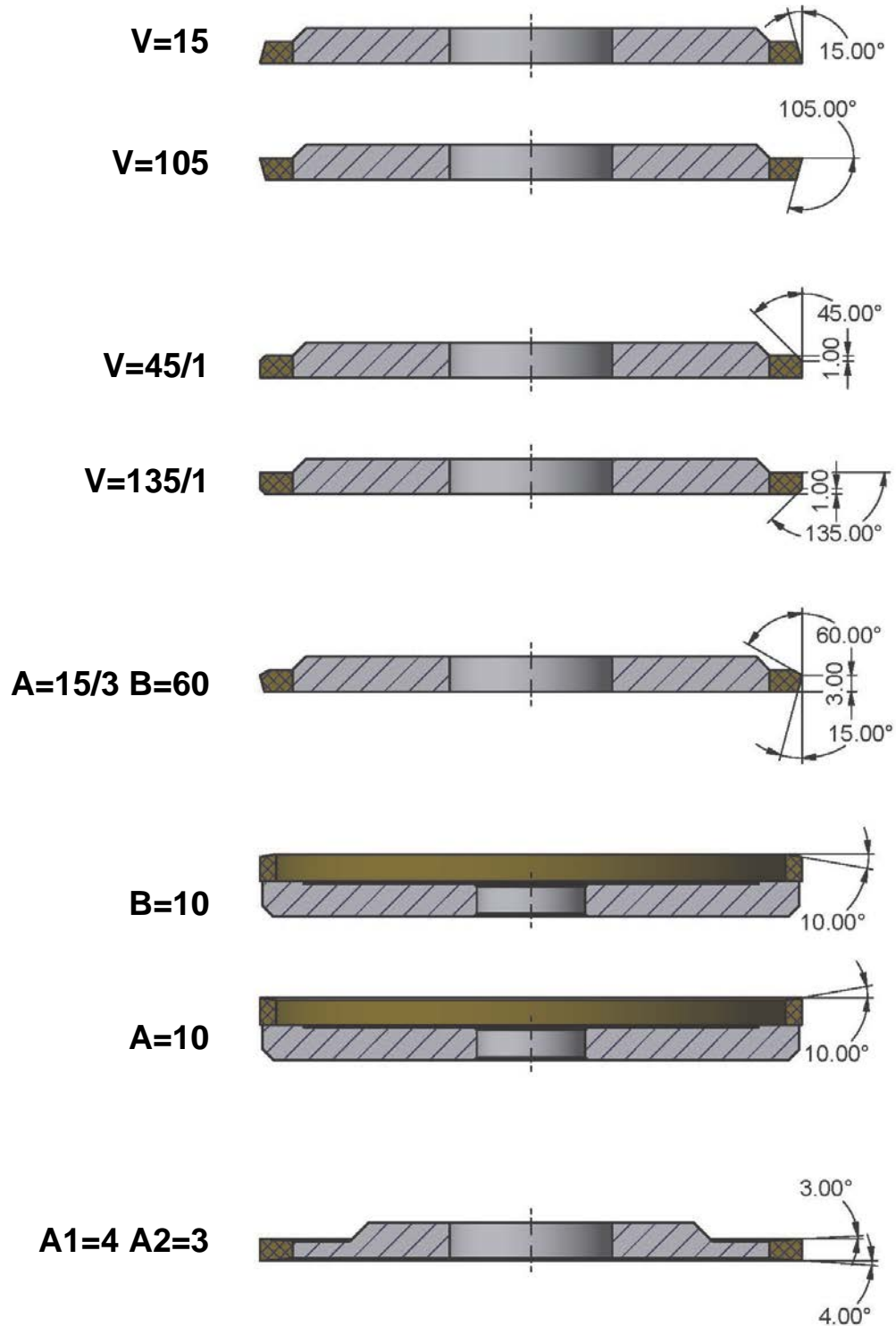


MASSÄNDERUNG

Die Bezeichnung nach der Zeichnungsnummer ermöglicht uns, eine Abmessung zu ändern (z.B. einen Winkel), ohne eine neue Zeichnungsnummer zu erstellen und die Scheibe gemäss den Kundenanforderungen zu profilieren.

GRAVUR

ÄNDERUNG





ANGEBOTSANFRAGE

Bitte kopieren Sie diese Seite und geben uns die erforderlichen Informationen bekannt.

KUNDE

Unternehmen: _____ **Kontakt:** _____
Adresse: _____ **Funktion:** _____
Postleitzahl: _____ **Tel.:** _____
Stadt: _____ **E-Mail:** _____
Land: _____

FORM UND SCHEIBENABMESSUNGEN

Bitte verwenden Sie dieses Feld, um eine Skizze der Schleifscheibe zu erstellen:

Form: _____ **N°:** _____
D: _____ **A:** _____
T: _____ **B:** _____
H: _____ **T₁:** _____
U: _____ **U₁:** _____
X: _____ **E:** _____
W: _____ **K:** _____
V: _____ **S:** _____
R: _____ **J:** _____

Skizze

MASCHINE

Hersteller: _____ **Typ:** _____
Kühlmittel: _____ **Druck:** _____ **Bars**
Umdrehung: _____ **zu** _____ U/min **oder** m/sec
Vorschub: _____ **zu** _____ mm/min **anders** _____

WERKZEUGE ZUM SCHLEIFEN

Wenn Die Zeichnung des Werkzeugs verfügbar ist, fügen Sie sie bitte der Anfrage bei,

Material: _____ **Sorten:** _____
Härte HRC: _____ **Oberflächenqualität Ra:** _____
Variation des Vorschubs während Schleifen: Ja Nein

Schleifvorgang: _____

Gesamtmaterialabtrag: _____ mm mm² mm³
Schnitttiefe a_e: _____ mm **Anzahl Durchgänge:** _____
Durchmesser: _____ mm **Länge:** _____ mm
Breite: _____ mm **Andere Dimensionen:** _____

Andere Informationen: _____



ABRICHTEN

Um einen grossen Bestand an Abrichtscheiben zu vermeiden und dennoch um ein gutes Ergebnis erzielen zu können, empfehlen wir die folgenden zwei Abrichtscheiben:

Für die Korngrösse von 10 bis 35:

80C 500 I7 V62A

Für die Korngrösse von 46 bis 252:

10C 120 KL7V

In Fällen, in denen Sie einen grossen Bestand an Abrichtscheiben haben, empfehlen wir nachstehende Scheibenqualitäten für folgende Korngrössen.

KORNGRÖSSE	SPEZIFIZIEREN	HERSTELLER
1 bis 10	SC9-1000-J12 RE DM	Atlantic GmbH
15 bis 25	80C 500 I7 V62A	Stella Keramik GmbH
30 bis 46	10C 320 KL7V	Comet Schleiftechnik GmbH
54 bis 76	10C 220 KL7V	Comet Schleiftechnik GmbH
91 bis 107	10C 120 KL7V	Comet Schleiftechnik GmbH
126 bis 252	10C 60 KL7V	Comet Schleiftechnik GmbH

Empfehlungen für einen zuverlässigen Abrichtprozess:

- Die Abrichtmaschine muss robust und stabil sein
- Die Scheiben mit Oelkühlung abrichten
- Die Abrichtscheibe muss so breit wie möglich sein und einen grösseren Durchmesser als die zu bearbeitende Schleifscheibe haben
- Die Abrichtscheibe dreht sich in die entgegengesetzte Richtung
- Geschwindigkeit Abrichtscheibe: 12-15 m/sec (120 mesh)
10-12 m/sec (500 mesh)
8-10 m/sec (1000 mesh)
- Geschwindigkeit Schleifscheibe: 2-4m/sec
- Schruppen Zustellung: 0.01-0.05mm
- Schlichten Zustellung: 0.002-0.02mm
- Für Schleifscheiben mit spitzem Profil empfehlen wir die Verwendung einer feineren Abrichtscheibe als der empfohlenen. Auf diese Weise wird vermieden, dass Ihre Schleifscheibe beim Abrichten abplatzt.

-Abricht Vorschub: Berücksichtigen Sie den Durchmesser und die Tiefe der zu bearbeitenden Bindungskante.

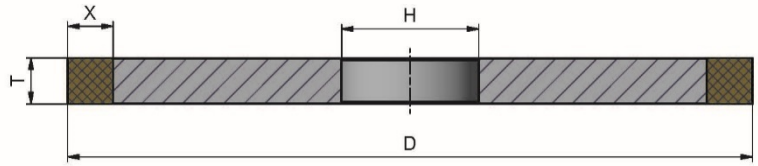
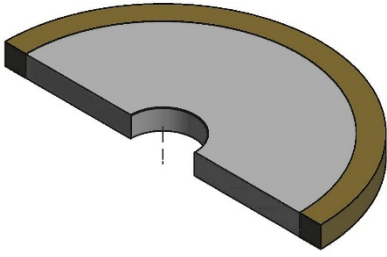
Schleifscheiben mit grossem Durchmesser oder geringer Belagshöhe = Vorschub verringern.

Schleifscheiben mit kleinem Durchmesser oder grosser Belagshöhe = Vorschub erhöhen.

Beispiel: Eine Scheibe mit einem Durchmesser von 150mm und einer Belagshöhe von 3mm liegt die Vorschubgeschwindigkeit etwa 0.5m/min.

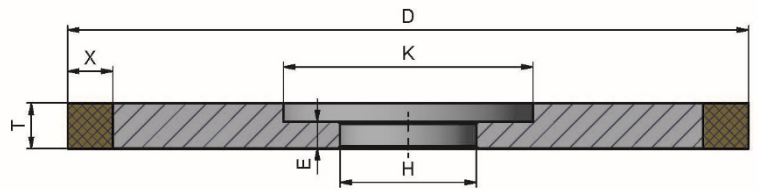
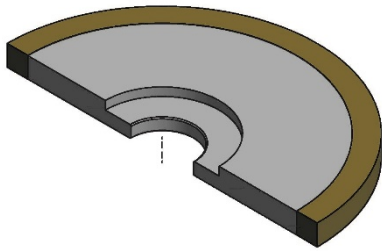
1A1 (shape N°1)

D__-T__-H__-X__



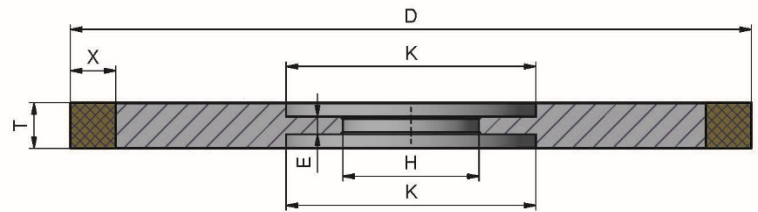
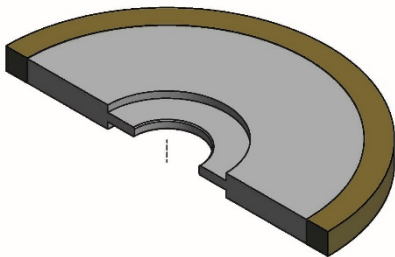
1A1 (shape N°2)

D__-T__-H__-X__-E__-K__ / N°2



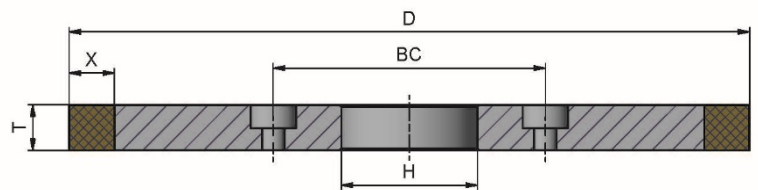
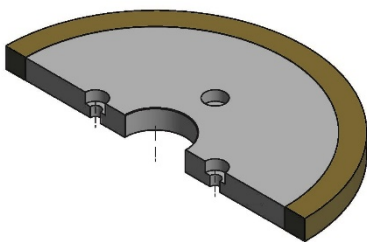
1A1 (shape N°3)

D__-T__-H__-X__-E__-K__ / N°3



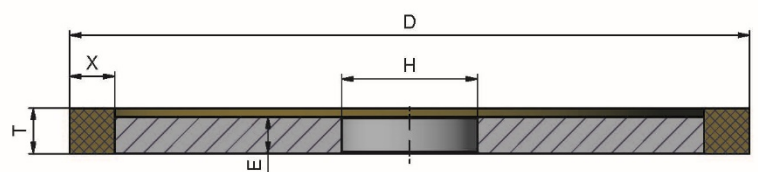
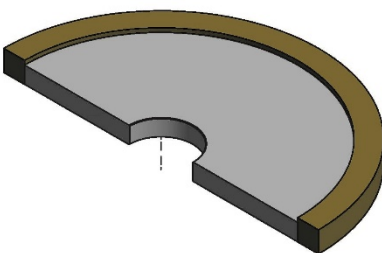
1A1B

D__-T__-H__-X__-BC__



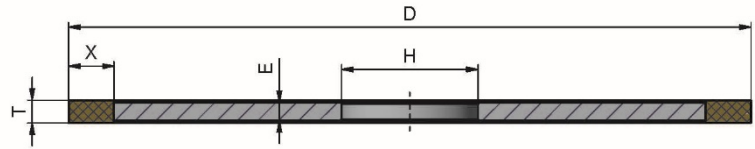
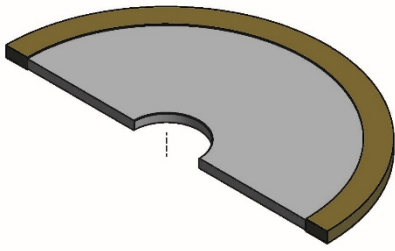
1A1P

D__-T__-H__-X__-E__



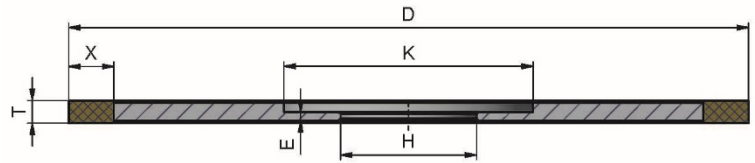
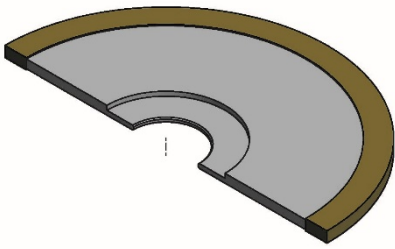
1A1R (shape N°1)

D__-T__-H__-X__-E__



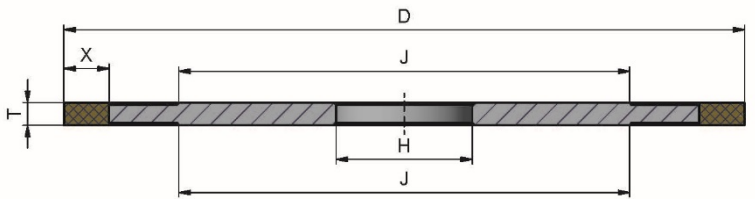
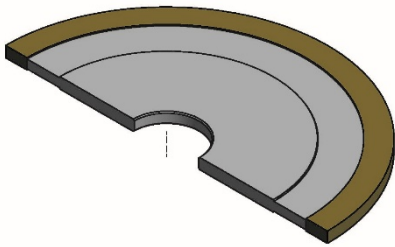
1A1R (shape N°2)

D__-T__-H__-X__-E__-K__ / N°2



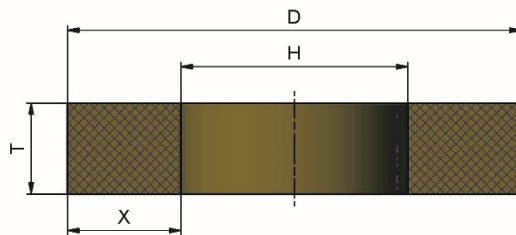
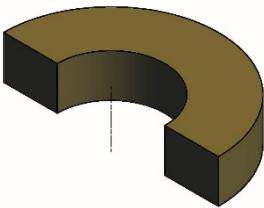
1A1R (shape N°3)

D__-T__-H__-X__-J__ / N°3



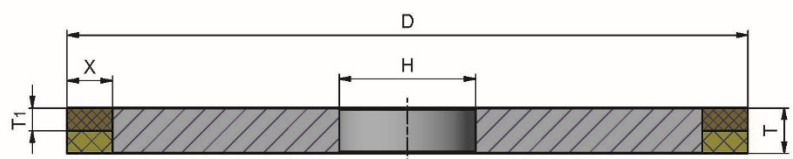
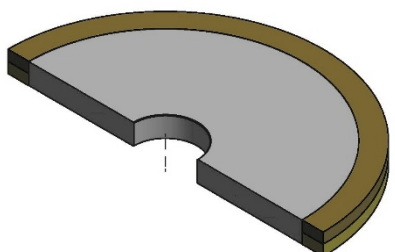
1A8

D__-T__-H__-(X__)



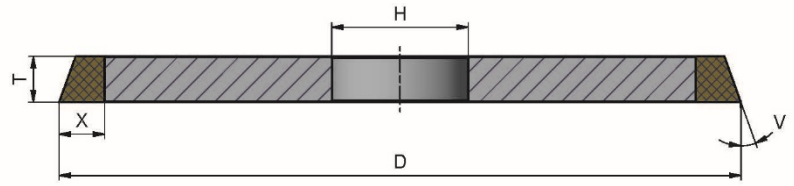
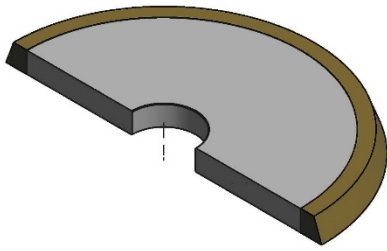
1AA1

D__-T__-H__-X__-T1__



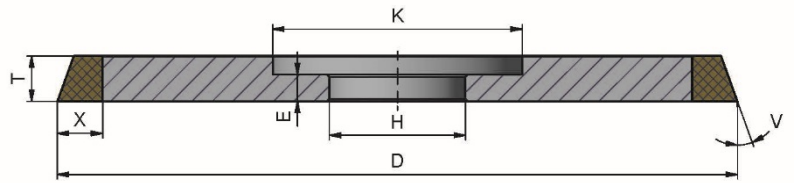
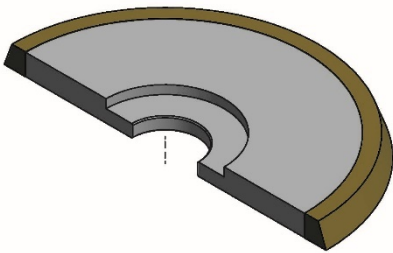
1B1 (shape N°1)

D__-T__-H__-X__-V__



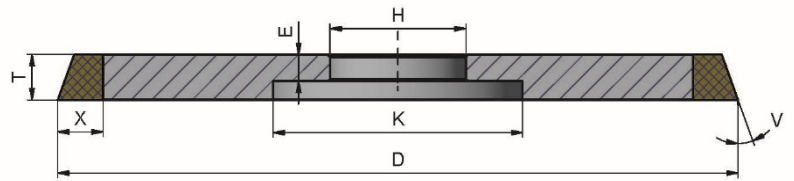
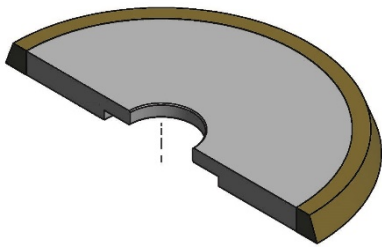
1B1 (shape N°2)

D__-T__-H__-X__-V__-E__-K__ / N°2



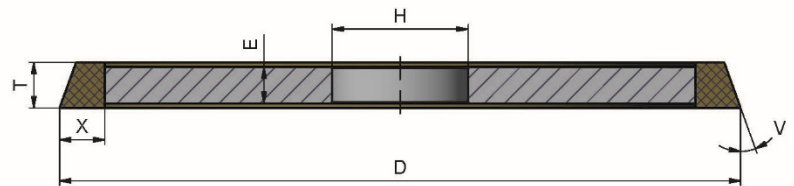
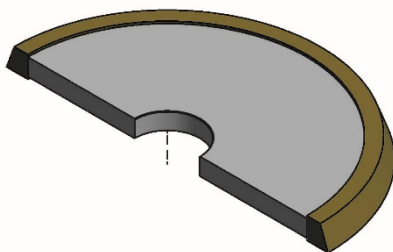
1B1 (shape N°3)

D__-T__-H__-X__-V__-E__-K__ / N°3



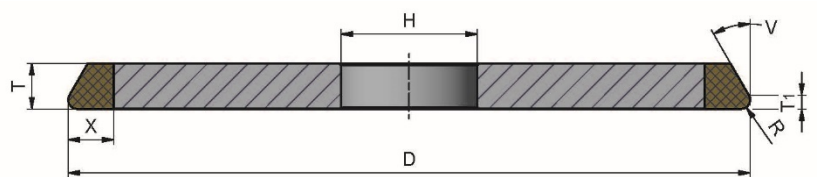
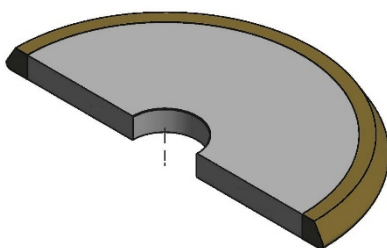
1B1R

D__-T__-H__-X__-V__-E__



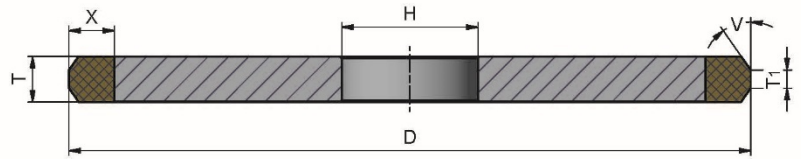
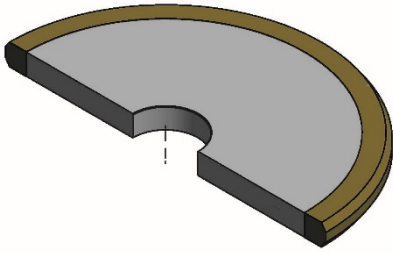
1BF1

D__-T__-H__-X__-V__-R__-T1__



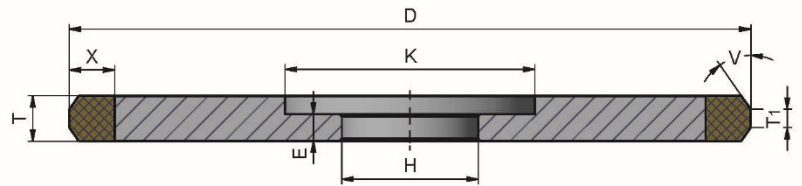
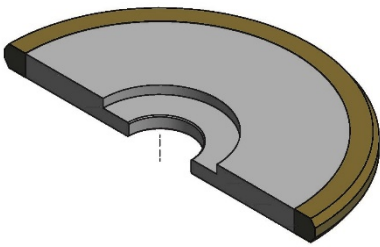
1D1 (shape N°1)

D__-T__-H__-X__-V__-T1__



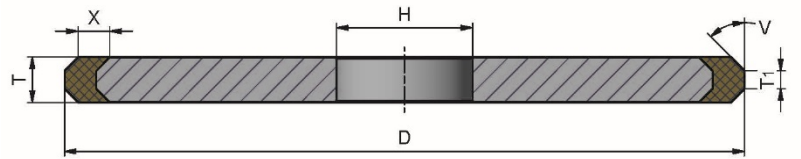
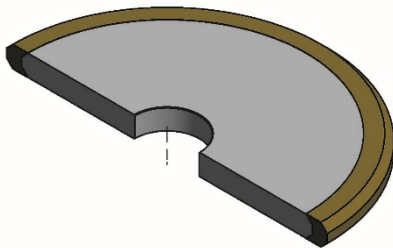
1D1 (shape N°2)

D__-T__-H__-X__-V__-T1__-E__-K__ / N°2



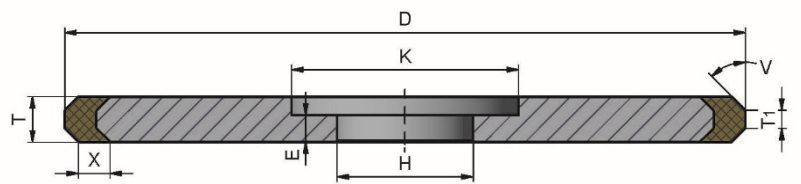
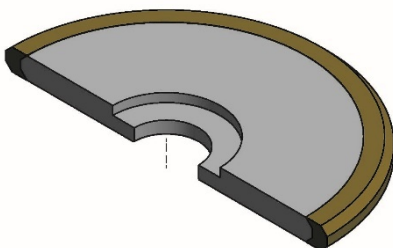
1DD1 (shape N°1)

D__-T__-H__-X__-V__-T1__



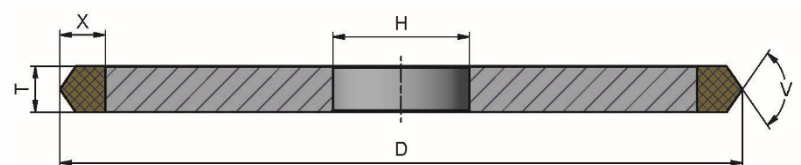
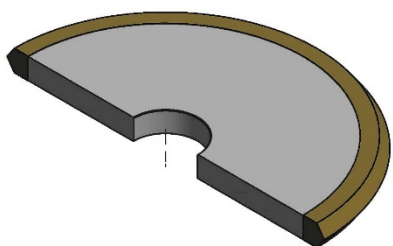
1DD1 (shape N°2)

D__-T__-H__-X__-V__-T1__-E__-K__ / N°2



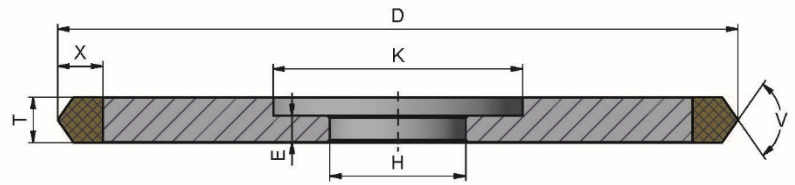
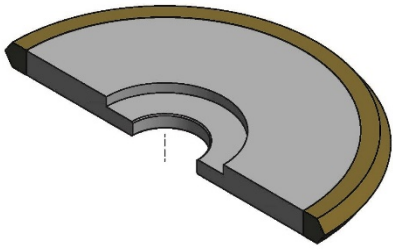
1E1 (shape N°1)

D__-T__-H__-X__-V__



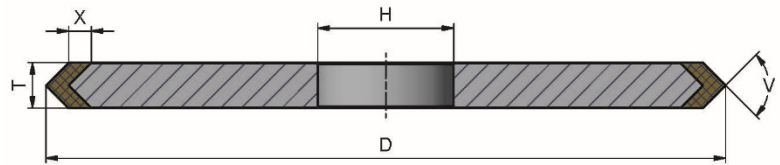
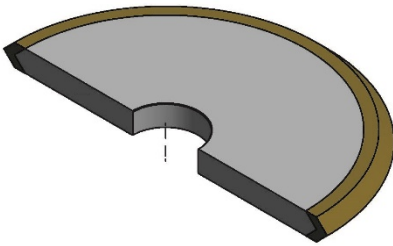
1E1 (shape N°2)

D__-T__-H__-X__-V__-E__-K__ / N°2



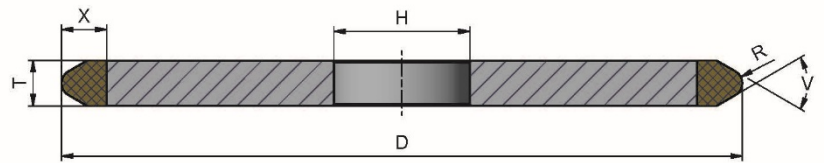
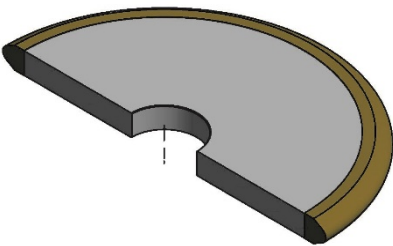
1EE1

D__-T__-H__-X__-V__



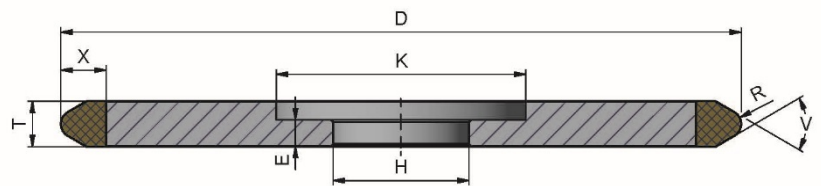
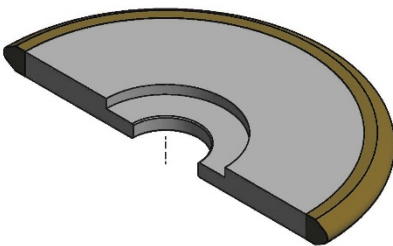
1EF1 (shape N°1)

D__-T__-H__-X__-V__-R__



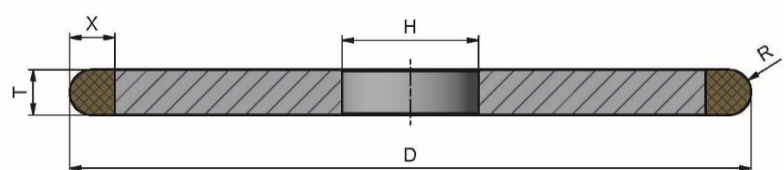
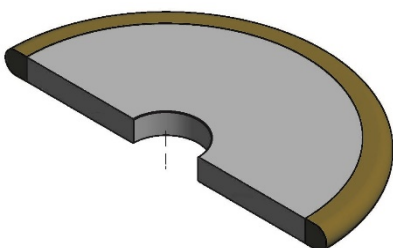
1EF1 (shape N°2)

D__-T__-H__-X__-V__-R__-E__-K__ / N°2



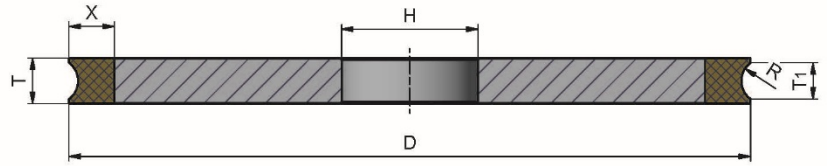
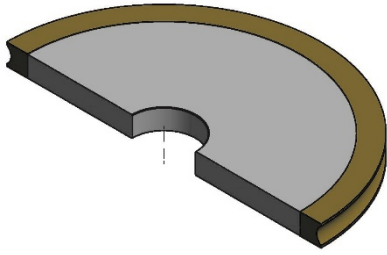
1F1

D__-T__-H__-X__-R__



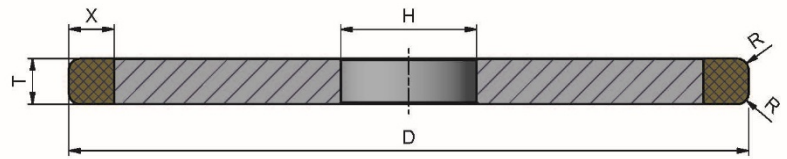
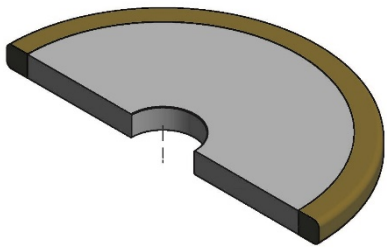
1J1

D__-T__-H__-X__-R__-T1__



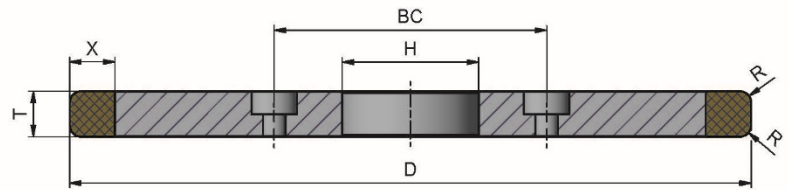
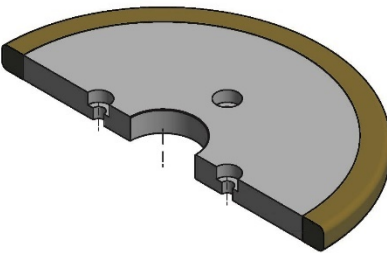
1L1

D__-T__-H__-X__-R__



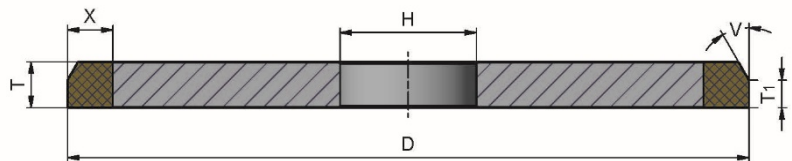
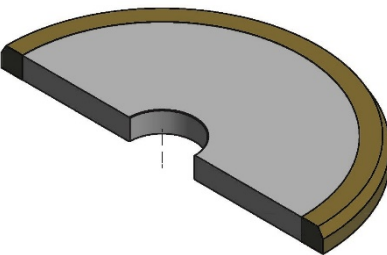
1L1B

D__-T__-H__-X__-R__-BC__



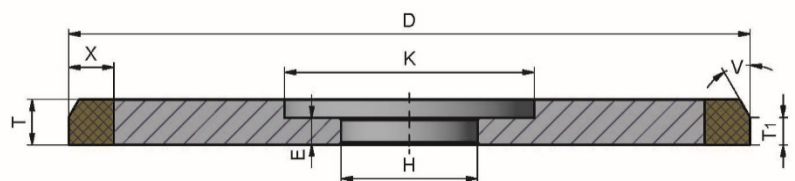
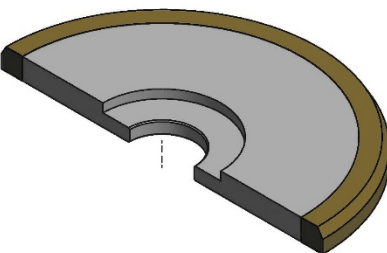
1M1 (shape N°1)

D__-T__-H__-X__-V__-T1__



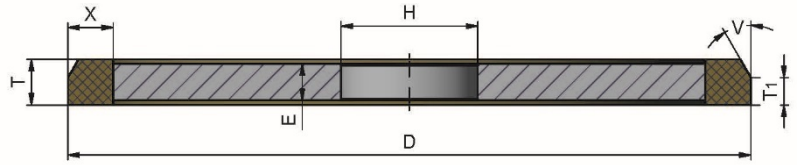
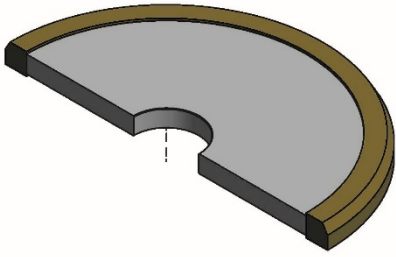
1M1 (shape N°2)

D__-T__-H__-X__-V__-T1__-E__-K__ / N°2



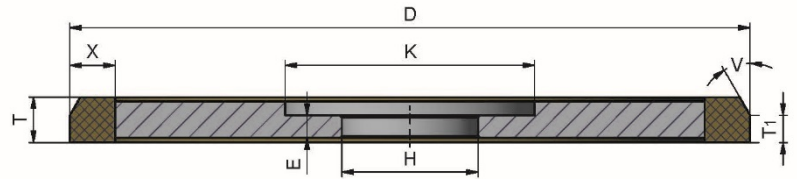
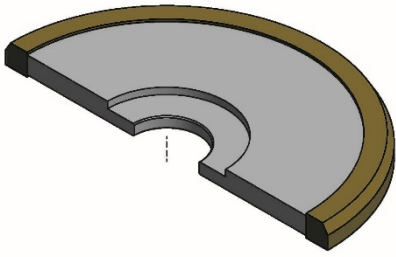
1M1R (shape N°1)

D__-T__-H__-X__-V__-T1__-E__



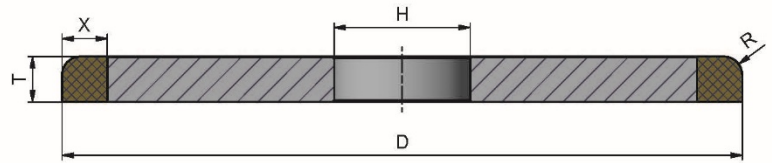
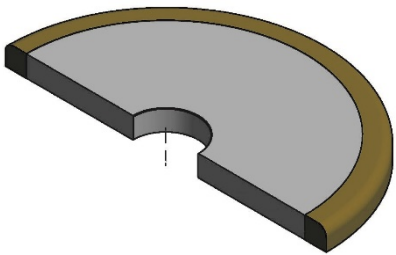
1M1R (shape N°2)

D__-T__-H__-X__-V__-T1__-E__-K__ / N°2



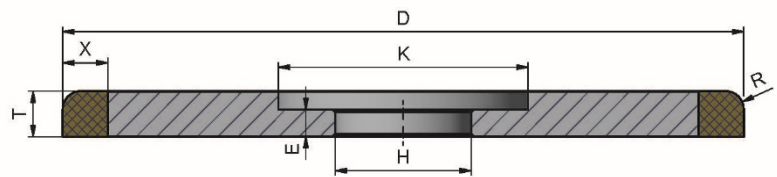
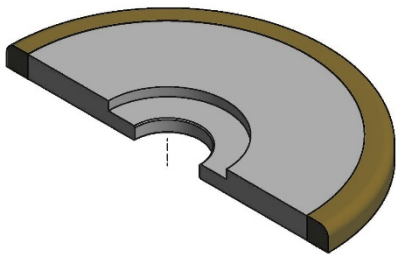
1Q1 (shape N°1)

D__-T__-H__-X__-R__



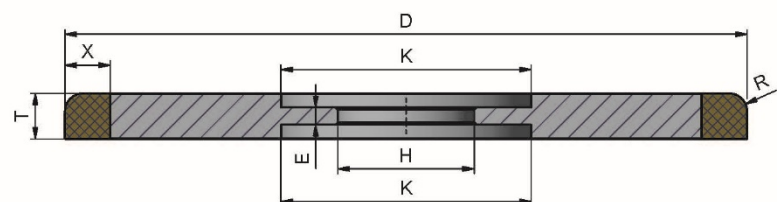
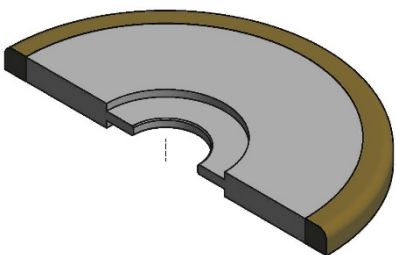
1Q1 (shape N°2)

D__-T__-H__-X__-R__-E__-K__ / N°2



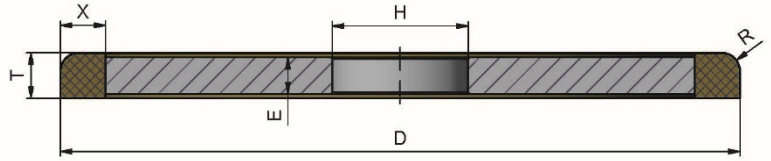
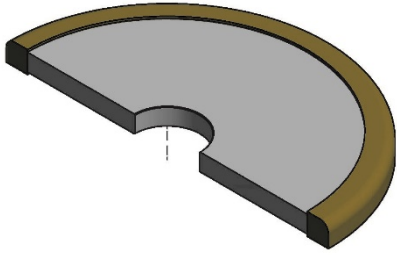
1Q1 (shape N°3)

D__-T__-H__-X__-R__-E__-K__ / N°3



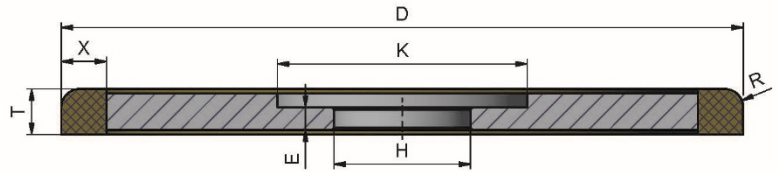
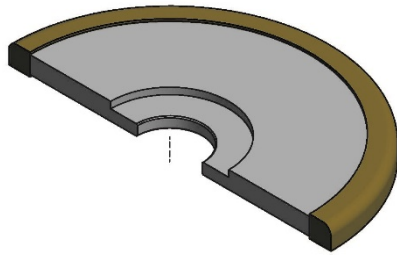
1Q1R (shape N°1)

D__-T__-H__-X__-R__-E__



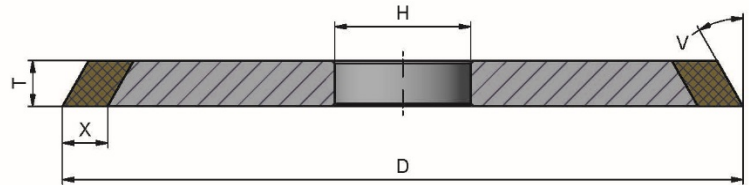
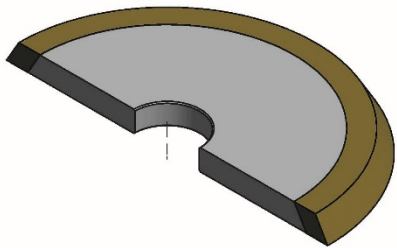
1Q1R (shape N°2)

D__-T__-H__-X__-R__-E__-K__ / N°2



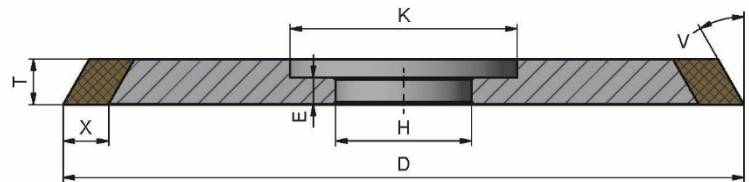
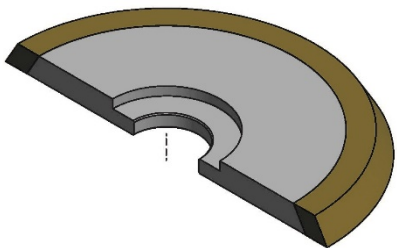
1V1 (shape N°1)

D__-T__-H__-X__-V__



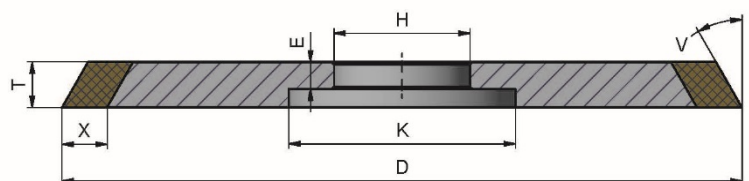
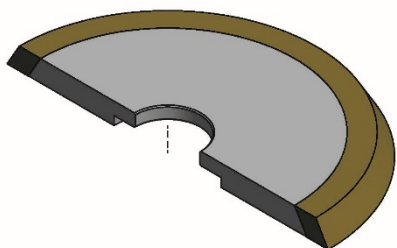
1V1 (shape N°2)

D__-T__-H__-X__-V__-E__-K__ / N°2



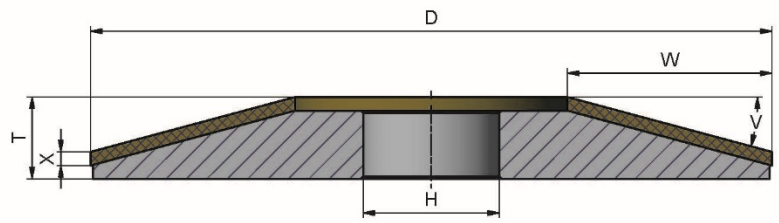
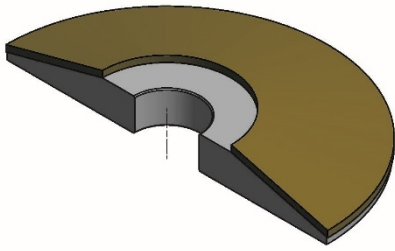
1V1 (shape N°3)

D__-T__-H__-X__-V__-E__-K__ / N°3



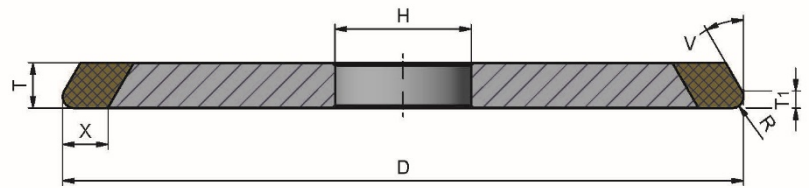
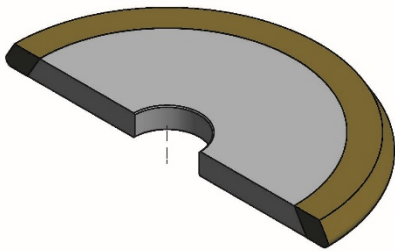
1V5

D__-T__-H__-W__-X__-V__



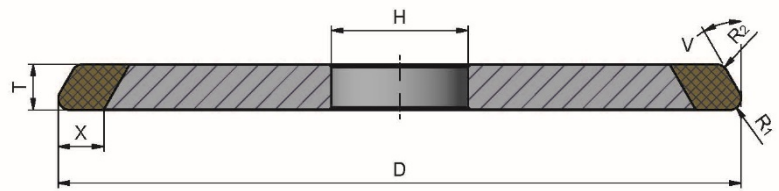
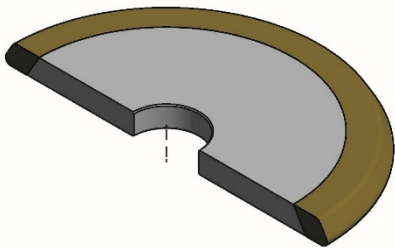
1VF1

D__-T__-H__-X__-V__-R__-T1__



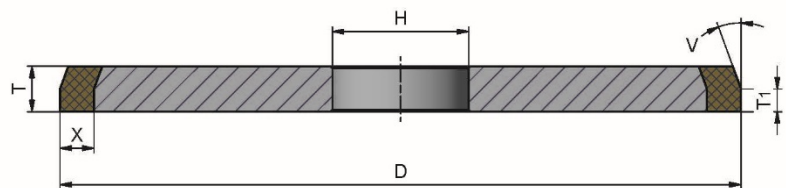
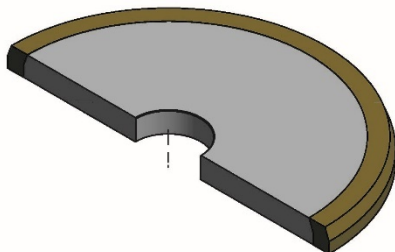
1VL1

D__-T__-H__-X__-V__-R1__-R2__



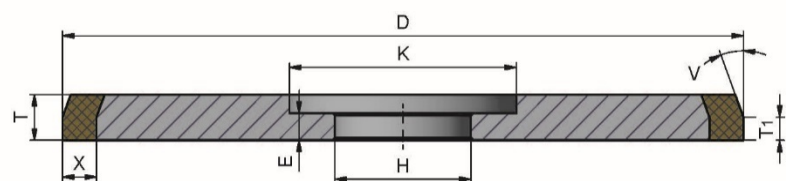
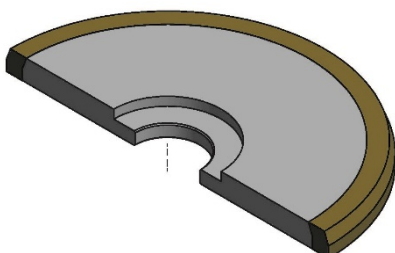
1Y1 (shape N°1)

D__-T__-H__-X__-V__-T1__



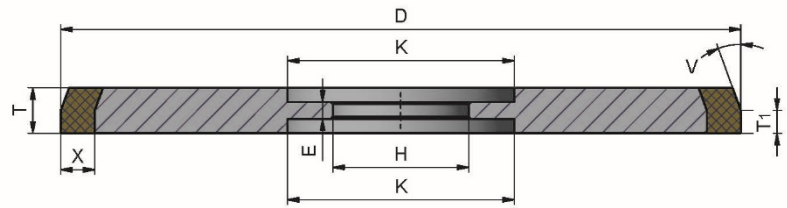
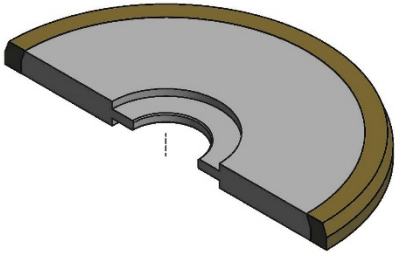
1Y1 (shape N°2)

D__-T__-H__-X__-V__-T1__-E__-K__ / N°2



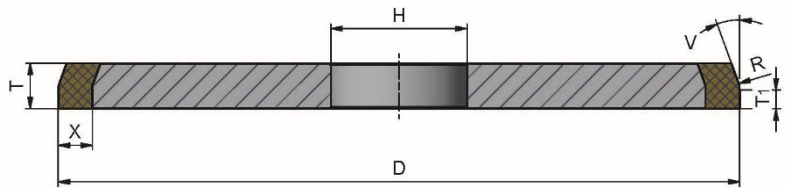
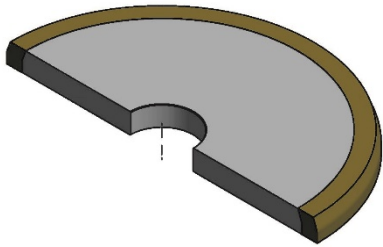
1Y1 (shape N°3)

D__-T__-H__-X__-V__-T1__-E__-K__ / N°3



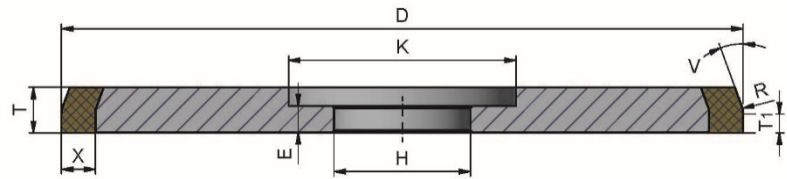
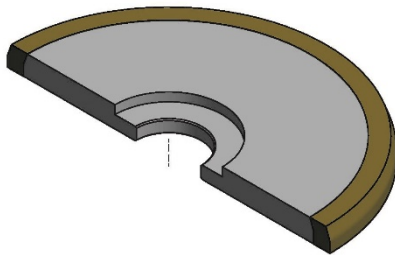
1Y1F (shape N°1)

D__-T__-H__-X__-V__-T1__-R__



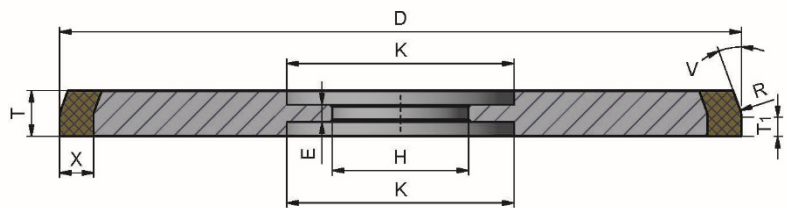
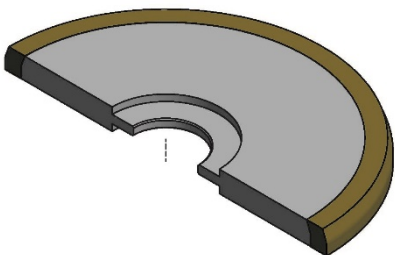
1Y1F (shape N°2)

D__-T__-H__-X__-V__-T1__-R__-E__-K__ / N°2



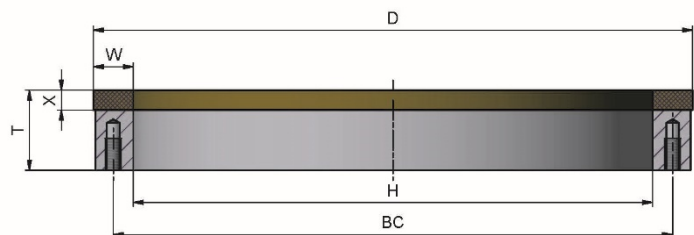
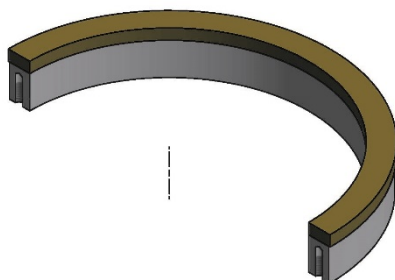
1Y1F (shape N°3)

D__-T__-H__-X__-V__-T1__-R__-E__-K__ / N°3



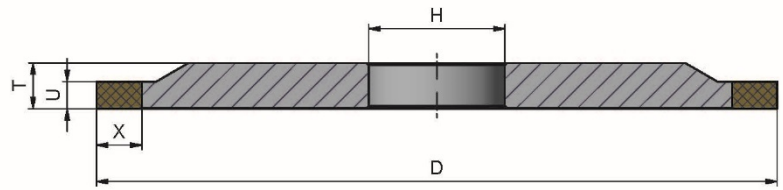
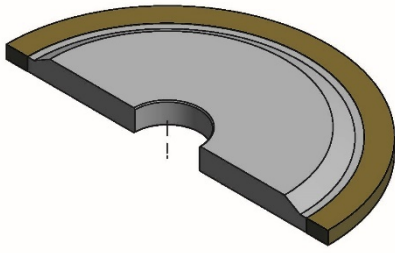
2A2T

D__-T__-H__-W__-X__-BC__



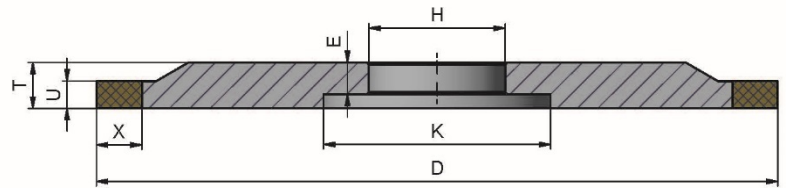
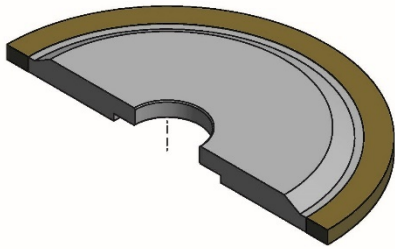
3A1 (shape N°1)

D__-T__-H__-U__-X__



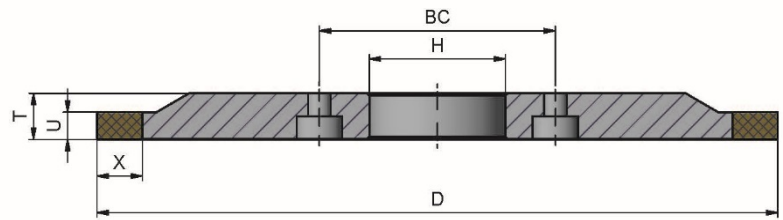
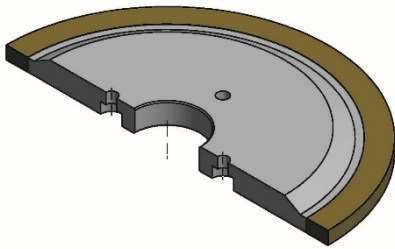
3A1 (shape N°2)

D__-T__-H__-U__-X__-E__-K__ / N°2



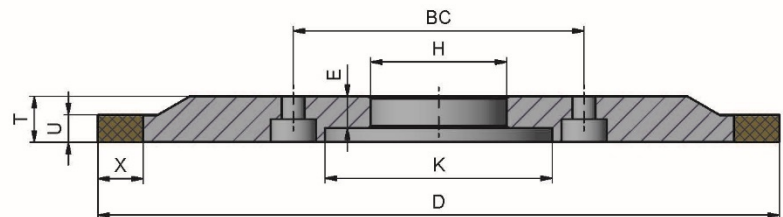
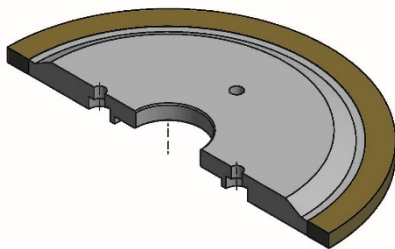
3A1B (shape N°1)

D__-T__-H__-U__-X__-BC__



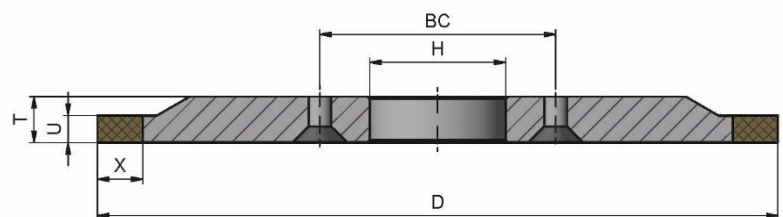
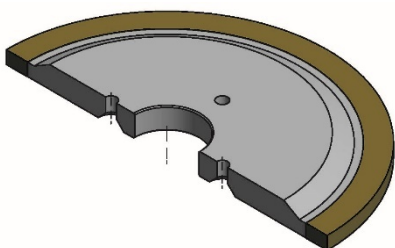
3A1B (shape N°2)

D__-T__-H__-U__-X__-BC__-E__-K__ / N°2



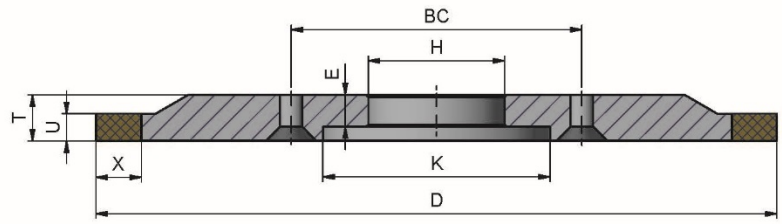
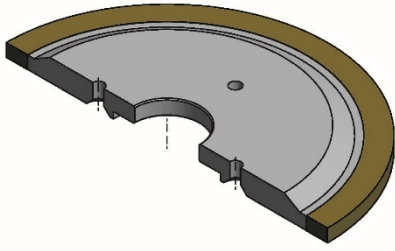
3A1C (shape N°1)

D__-T__-H__-U__-X__-BC__



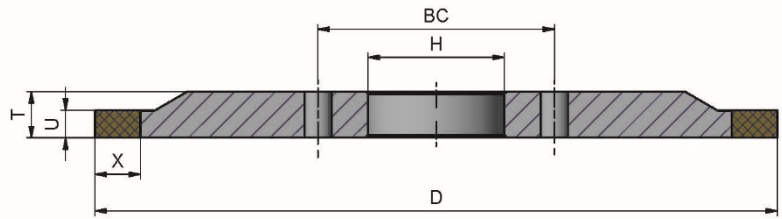
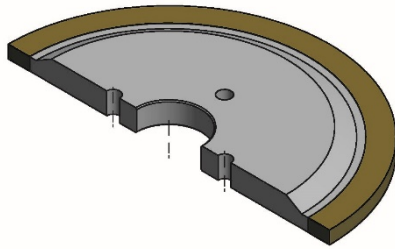
3A1C (shape N°2)

D__-T__-H__-U__-X__-BC__-E__-K__ / N°2



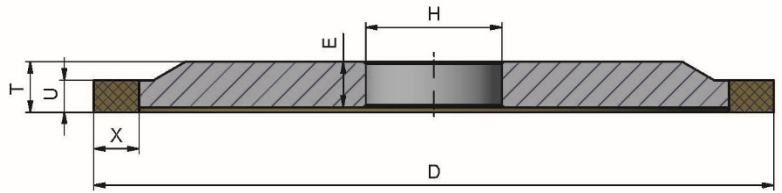
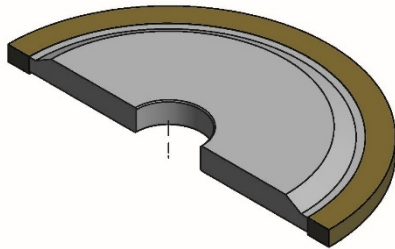
3A1H

D__-T__-H__-U__-X__-BC__



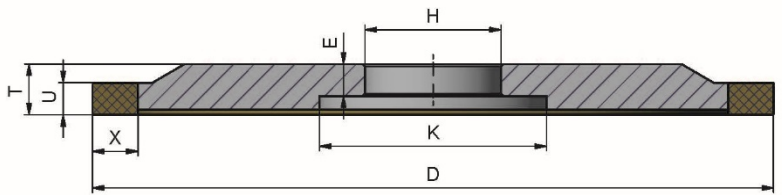
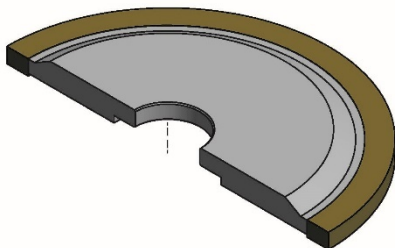
3A1P (shape N°1)

D__-T__-H__-U__-X__-E__



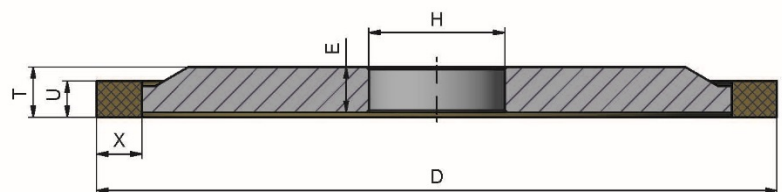
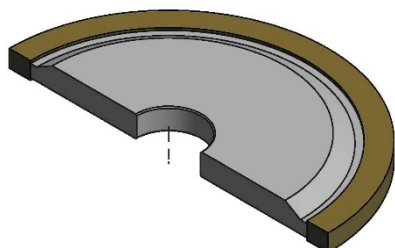
3A1P (shape N°2)

D__-T__-H__-U__-X__-E__-K__ / N°2



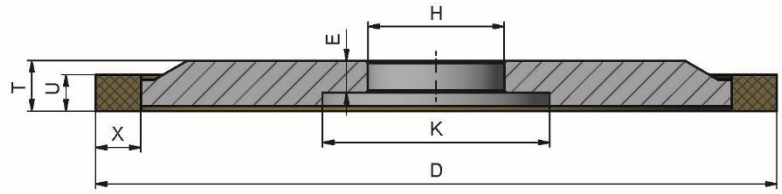
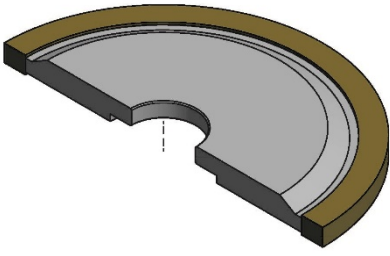
3A1R (shape N°1)

D__-T__-H__-U__-X__-E__



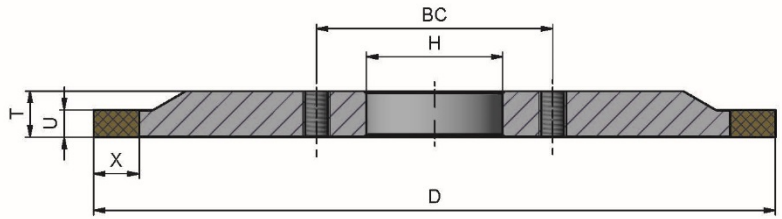
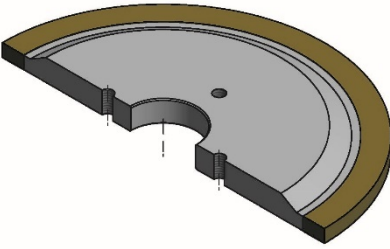
3A1R (shape N°2)

D__-T__-H__-U__-X__-E__-K__ / N°2



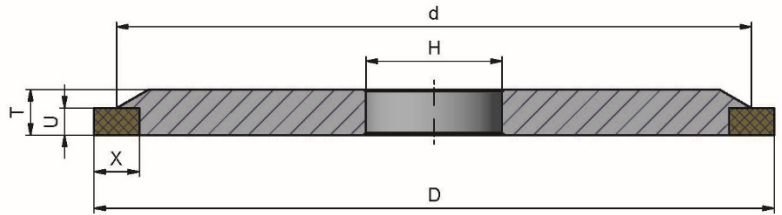
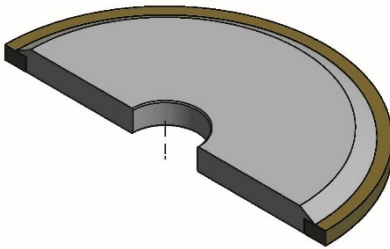
3A1T

D__-T__-H__-U__-X__-BC__



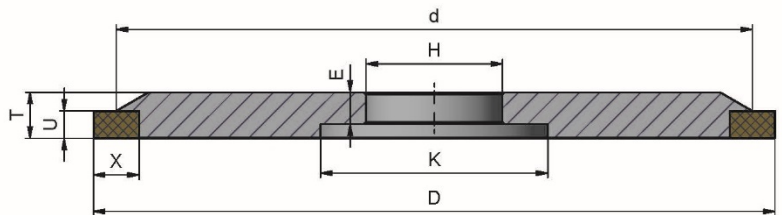
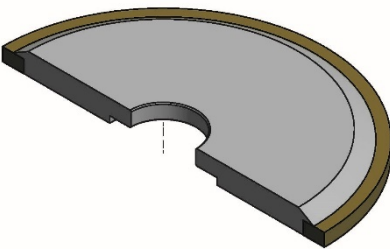
3A9 (shape N°1)

D__-T__-H__-U__-X__-d__



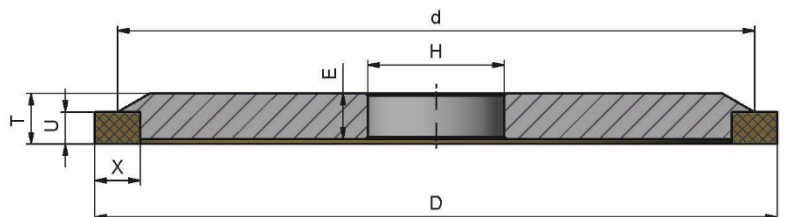
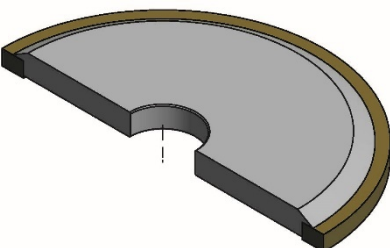
3A9 (shape N°2)

D__-T__-H__-U__-X__-d__-E__-K__ / N°2



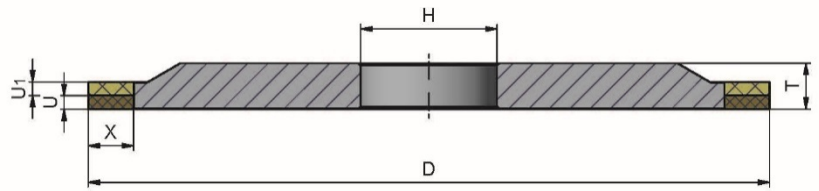
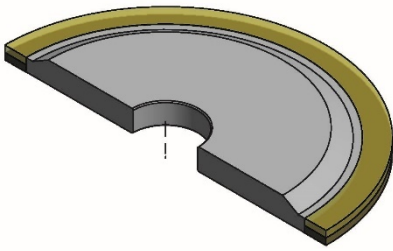
3A9P

D__-T__-H__-U__-X__-E__-d__



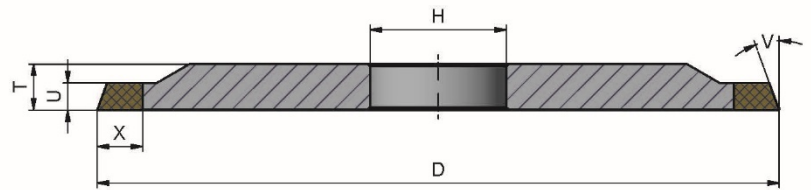
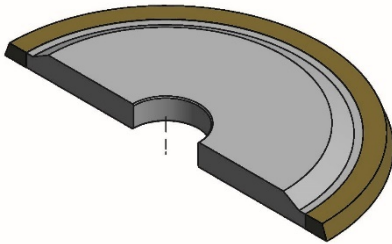
3AA1

D__-T__-H__-U__-X__-U1__



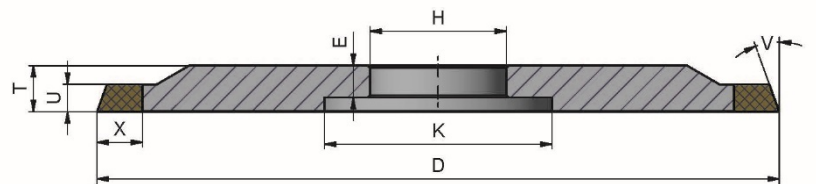
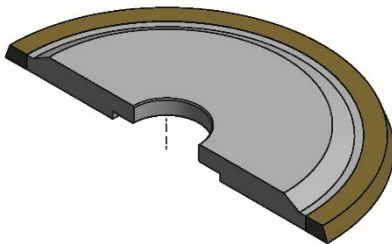
3B1 (shape N°1)

D__-T__-H__-U__-X__-V__



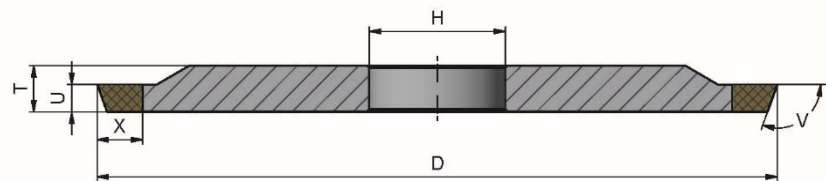
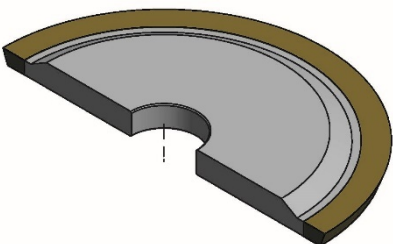
3B1 (shape N°2)

D__-T__-H__-U__-X__-V__-E__-K__ / N°2



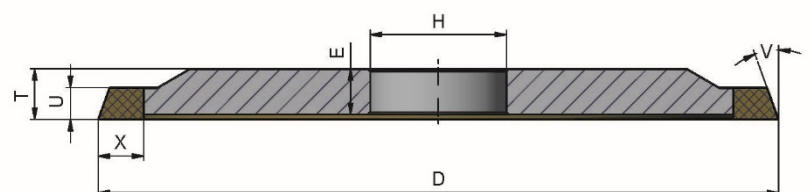
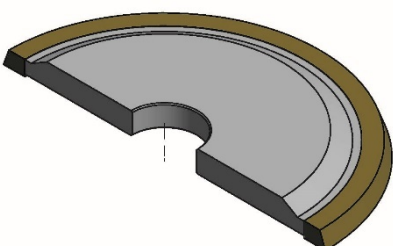
3B1 (shape N°3)

D__-T__-H__-U__-X__-V__ / N°3



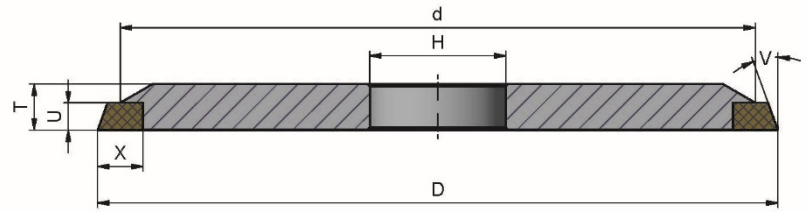
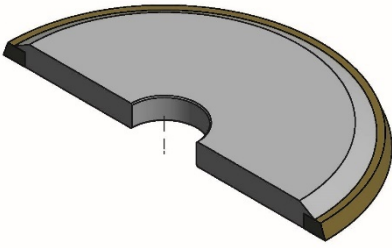
3B1P

D__-T__-H__-U__-X__-V__-E__



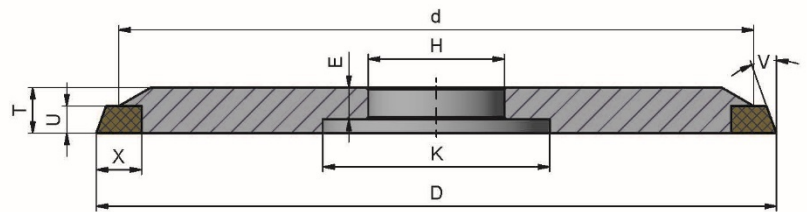
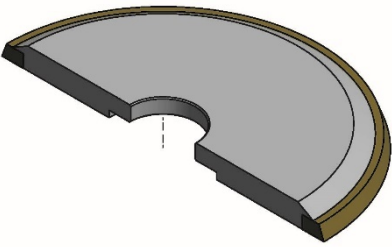
3B9 (shape N°1)

D__-T__-H__-U__-X__-V__-d__



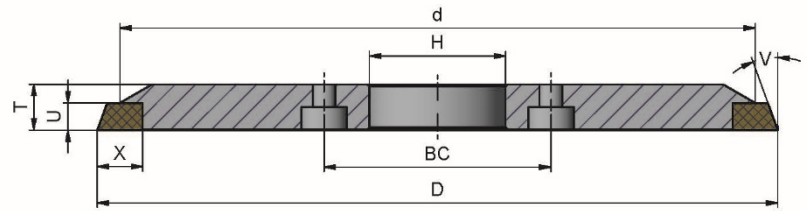
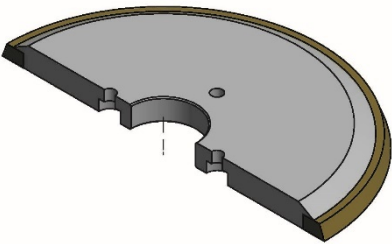
3B9 (shape N°2)

D__-T__-H__-U__-X__-V__-d__-E__-K__ / N°2



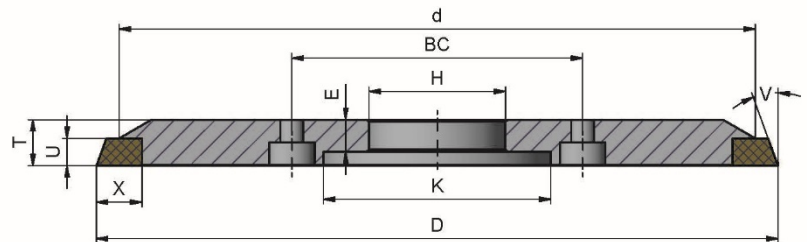
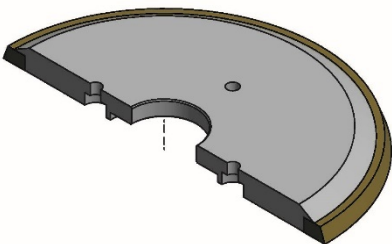
3B9B (shape N°1)

D__-T__-H__-U__-X__-V__-d__-BC__



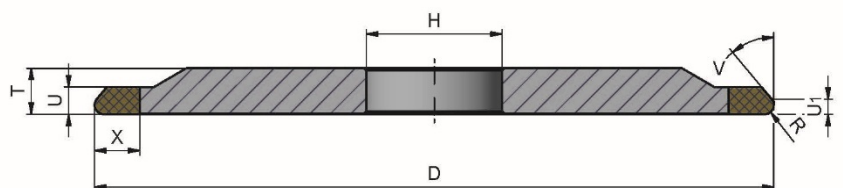
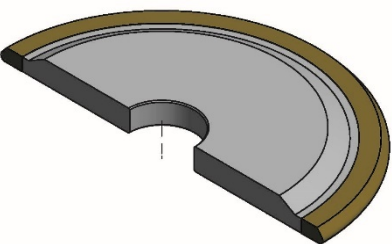
3B9B (shape N°2)

D__-T__-H__-U__-X__-V__-d__-E__-K__-BC__ / N°2



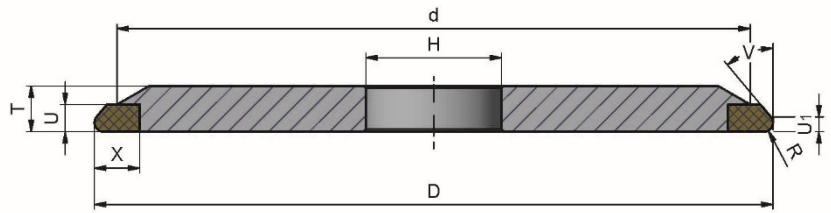
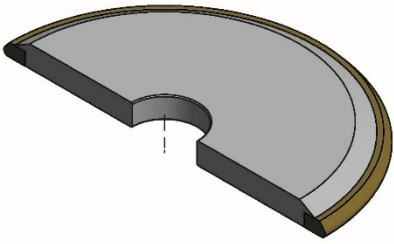
3BF1

D__-T__-H__-U__-X__-V__-R__-U1__



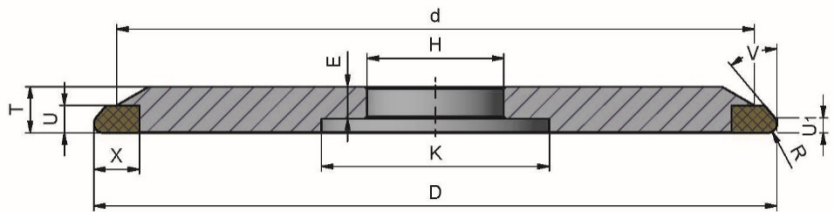
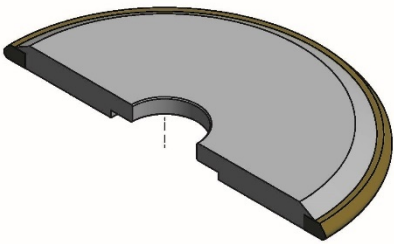
3BF9 (shape N°1)

D__-T__-H__-U__-X__-V__-R__-U1__-d__



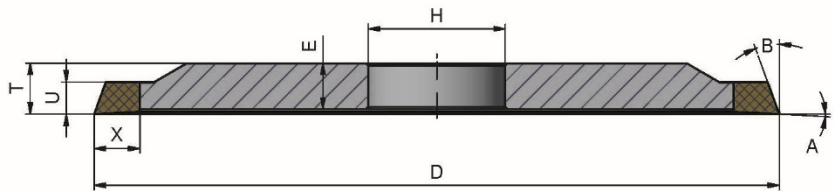
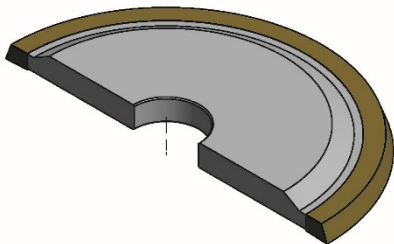
3BF9 (shape N°2)

D__-T__-H__-U__-X__-V__-R__-U1__-d__-E__-K__ / N°2



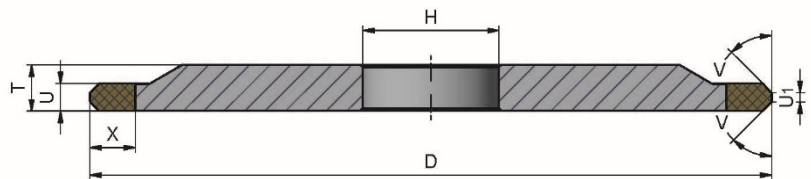
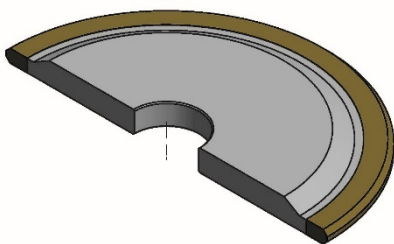
3BT1P

D__-T__-H__-U__-X__-A__-B__-E__



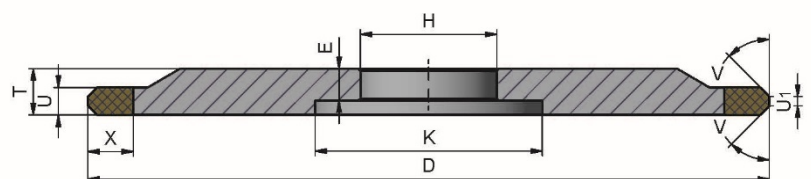
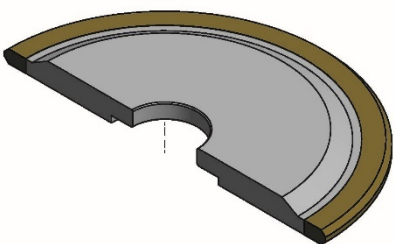
3D1 (shape N°1)

D__-T__-H__-U__-X__-V__-U1__



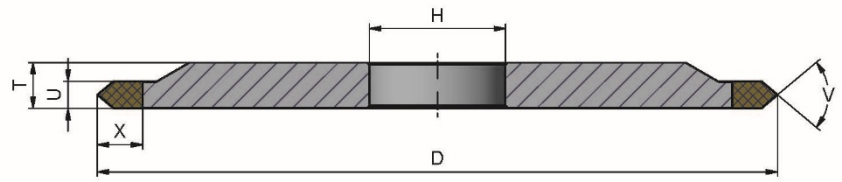
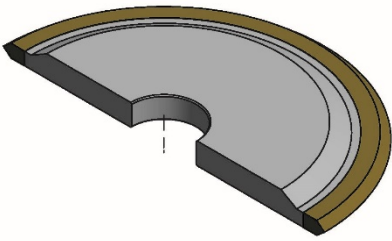
3D1 (shape N°2)

D__-T__-H__-U__-X__-V__-E__-K__-U1__ / N°2



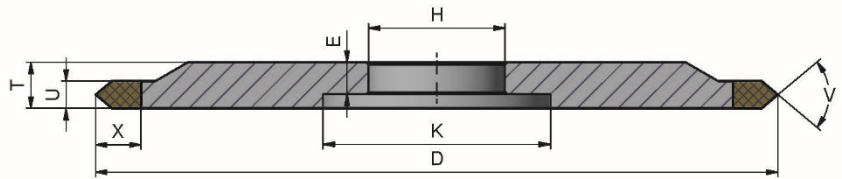
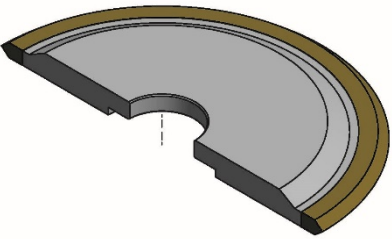
3E1 (shape N°1)

D__-T__-H__-U__-X__-V__



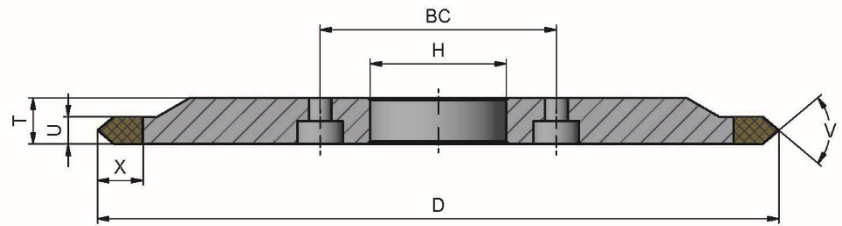
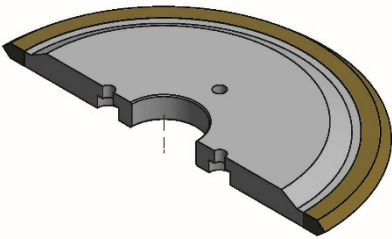
3E1 (shape N°2)

D__-T__-H__-U__-X__-V__-E__-K__ / N°2



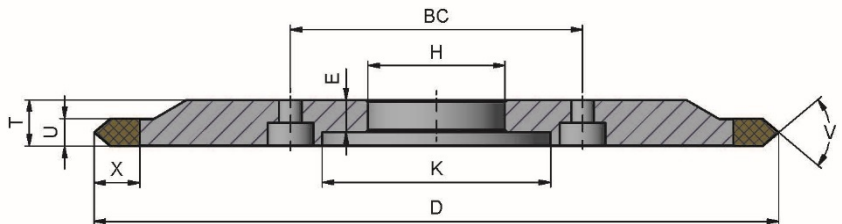
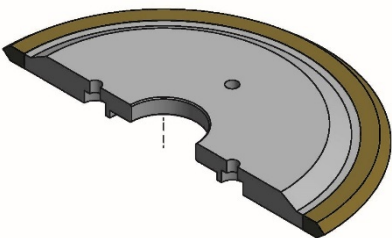
3E1B (shape N°1)

D__-T__-H__-U__-X__-V__-BC__



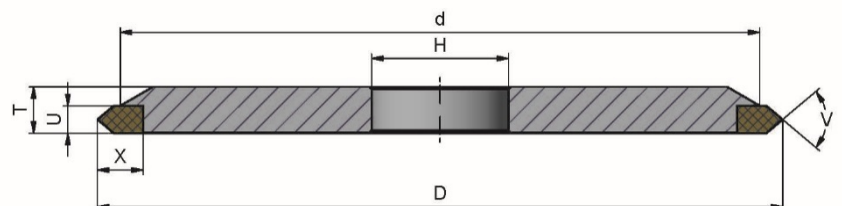
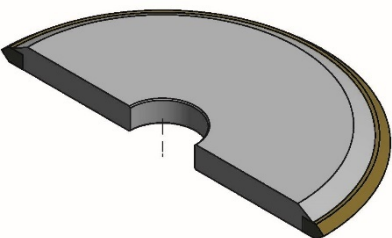
3E1B (shape N°2)

D__-T__-H__-U__-X__-V__-E__-K__-BC__ / N°2



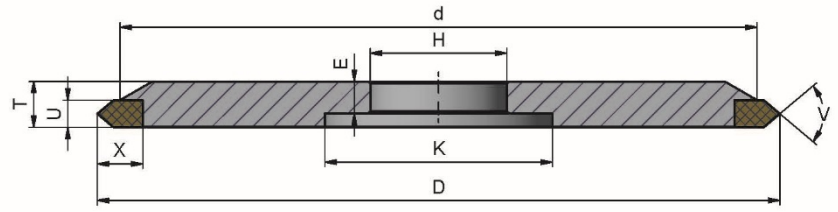
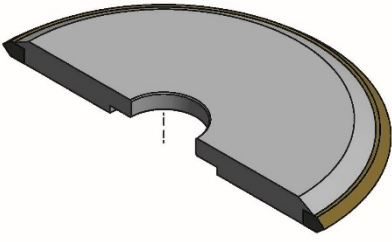
3E9 (shape N°1)

D__-T__-H__-U__-X__-V__-d__



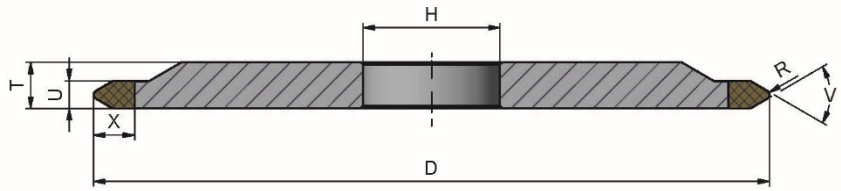
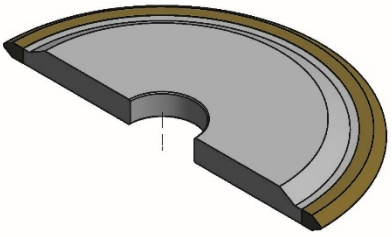
3E9 (shape N°2)

D__T__H__U__X__V__d__E__K__ / N°2



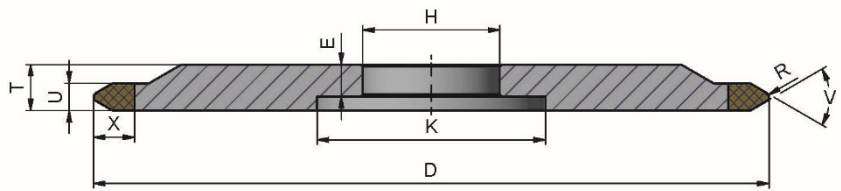
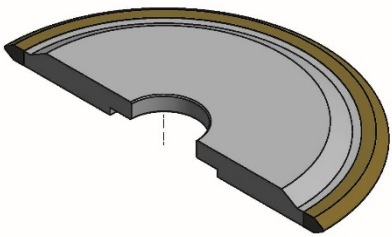
3EF1 (shape N°1)

D__T__H__U__X__V__R__



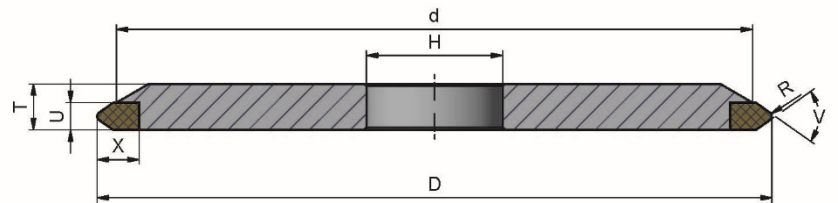
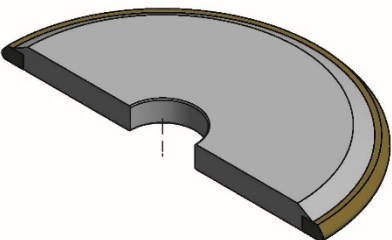
3EF1 (shape N°2)

D__T__H__U__X__V__R__E__K__ / N°2



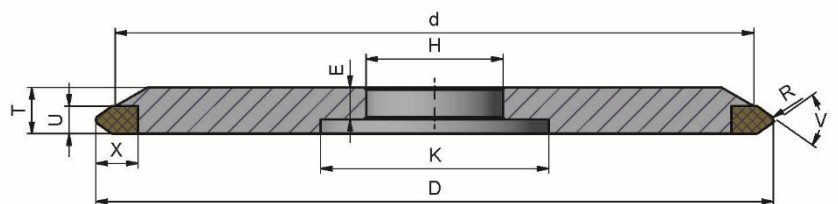
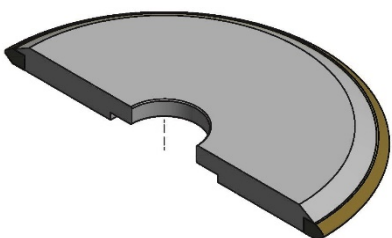
3EF9 (shape N°1)

D__T__H__U__X__V__R__d__



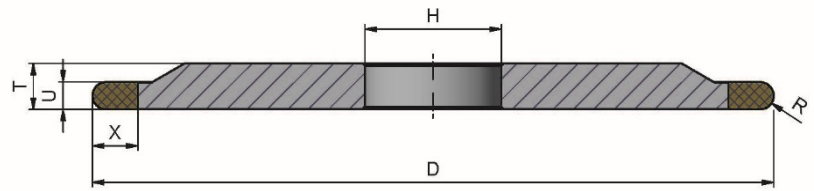
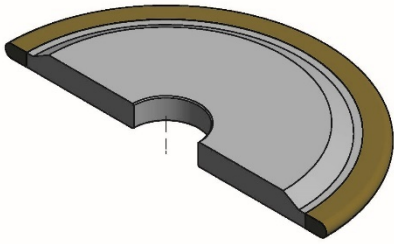
3EF9 (shape N°2)

D__T__H__U__X__V__R__d__E__K__ / N°2



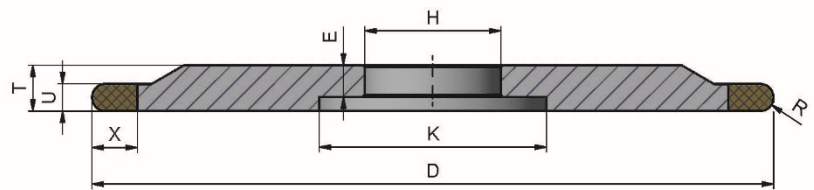
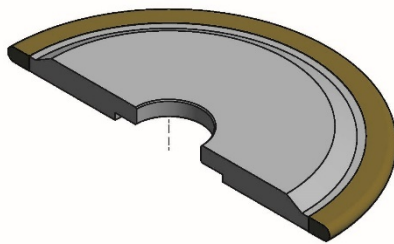
3F1 (shape N°1)

D__-T__-H__-U__-X__-R__



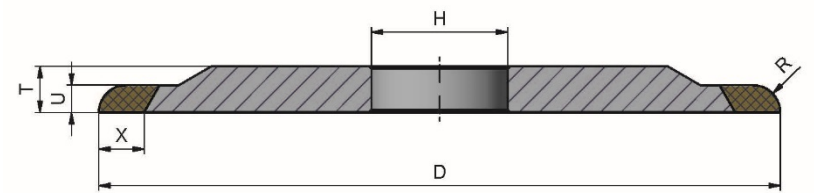
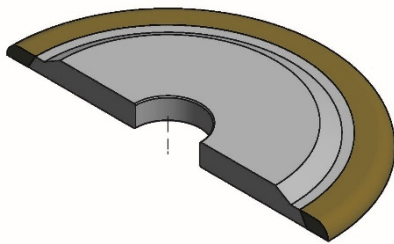
3F1 (shape N°2)

D__-T__-H__-U__-X__-R__-E__-K__ / N°2



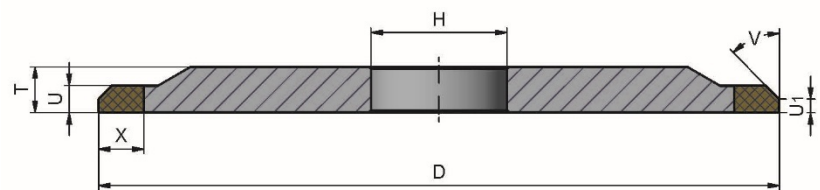
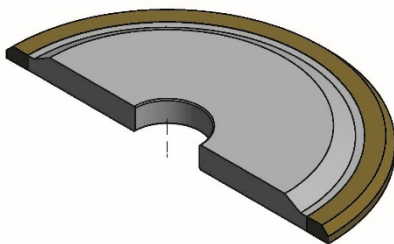
3H1

D__-T__-H__-U__-X__-R__



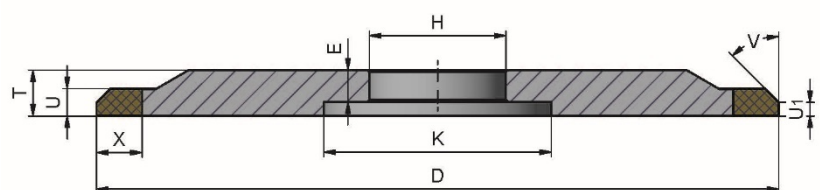
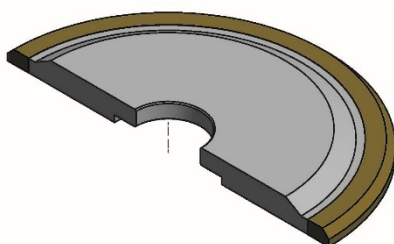
3M1 (shape N°1)

D__-T__-H__-U__-X__-V__-U1__



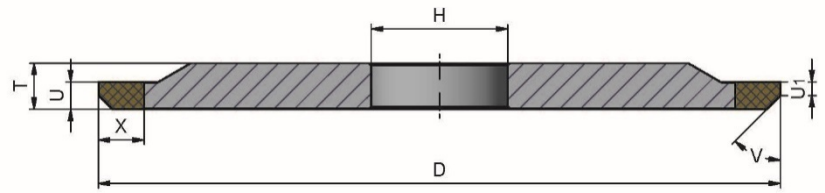
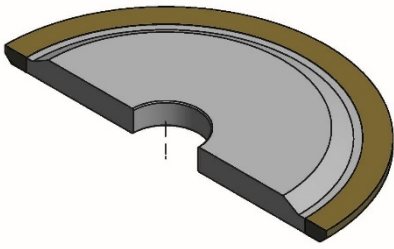
3M1 (shape N°2)

D__-T__-H__-U__-X__-V__-U1__-E__-K__ / N°2



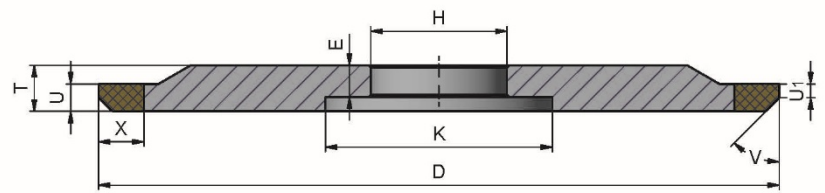
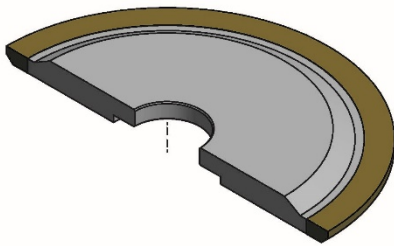
3M1 (shape N°3)

D__-T__-H__-U__-X__-V__-U1__ / N°3



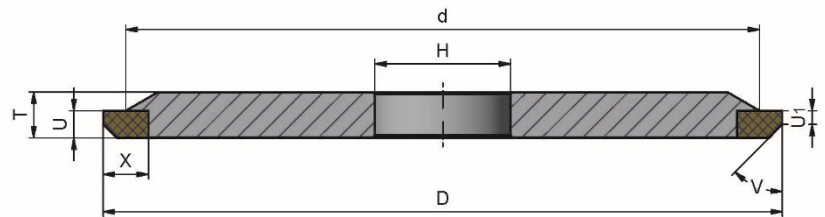
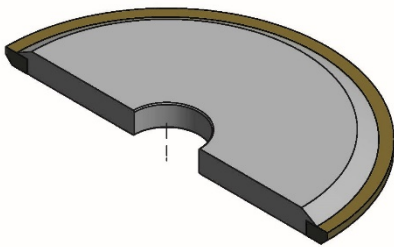
3M1 (shape N°4)

D__-T__-H__-U__-X__-V__-U1__-E__-K__ / N°4



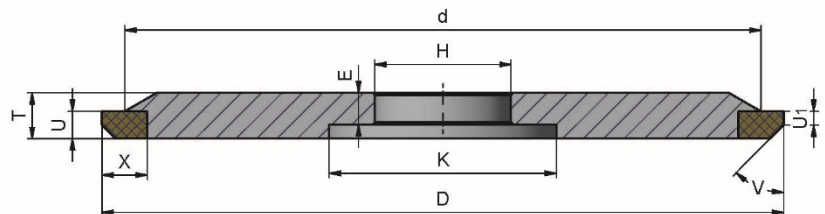
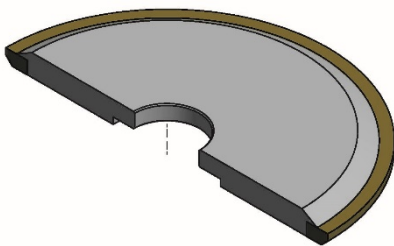
3M9 (shape N°1)

D__-T__-H__-U__-X__-V__-U1__-d__



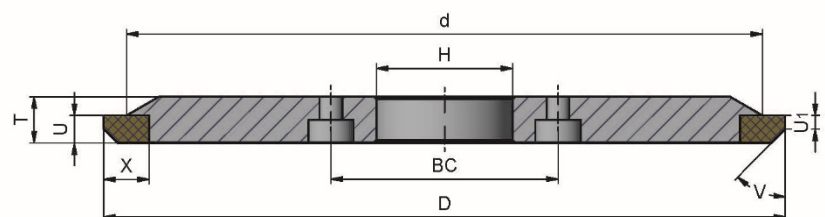
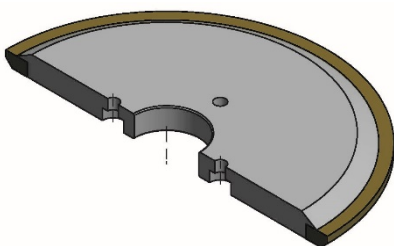
3M9 (shape N°2)

D__-T__-H__-U__-X__-V__-U1__-d__-E__-K__ / N°2



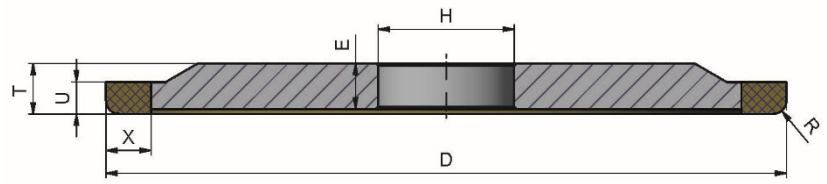
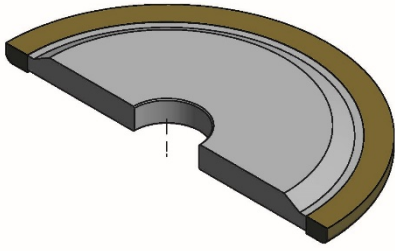
3M9B

D__-T__-H__-U__-X__-V__-U1__-BC__-d__



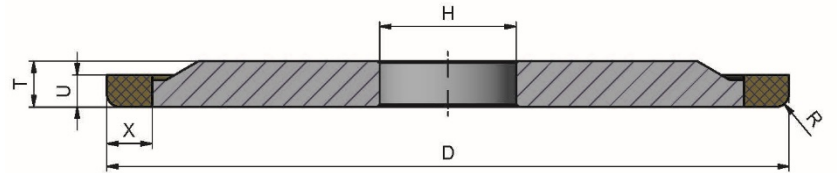
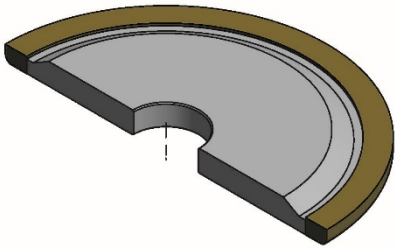
3Q1P (shape N°1)

D__T__H__U__X__R__E__



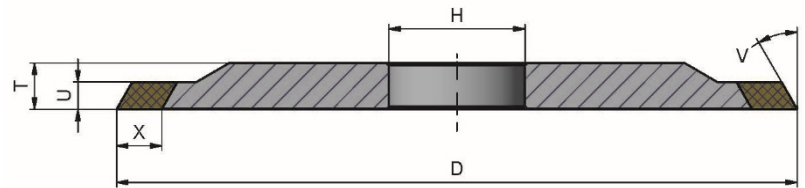
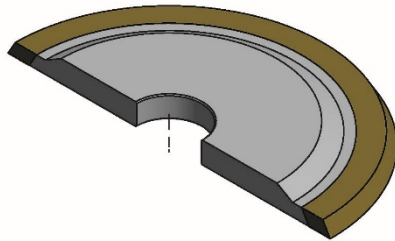
3Q1P (shape N°2)

D__T__H__U__X__R__ / N°2



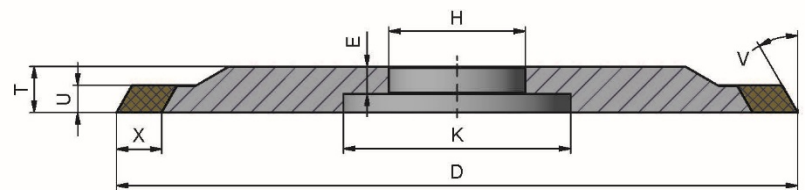
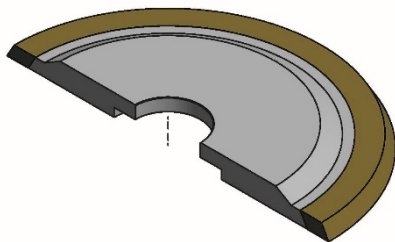
3V1 (shape N°1)

D__T__H__U__X__V__



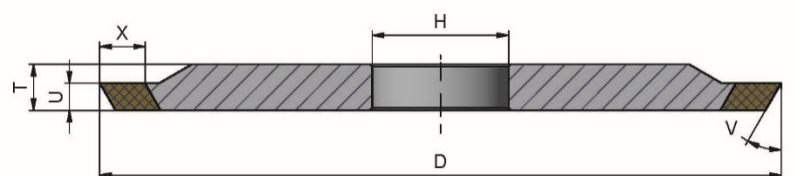
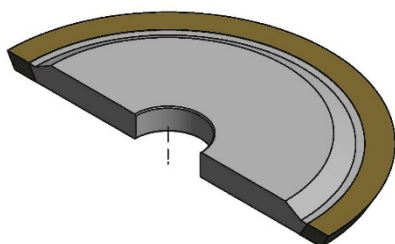
3V1 (shape N°2)

D__T__H__U__X__V__E__K__ / N°2



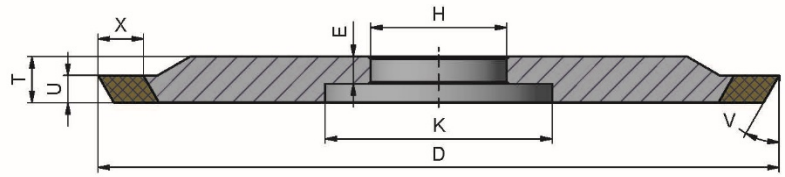
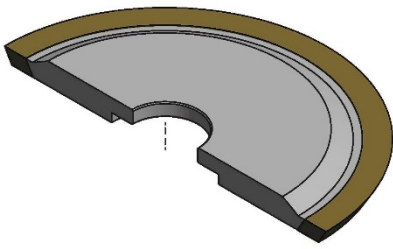
3V9 (shape N°1)

D__T__H__U__X__V__



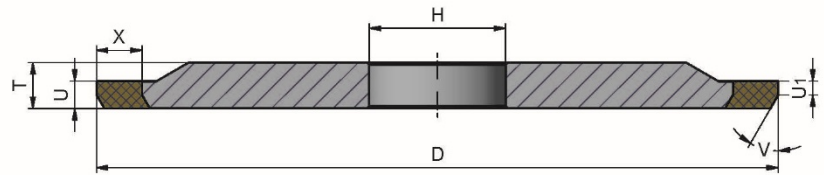
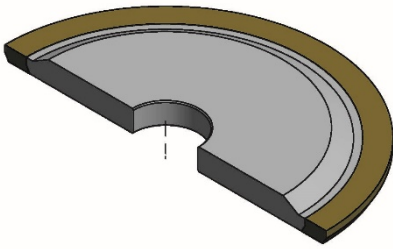
3V9 (shape N°2)

D__-T__-H__-U__-X__-V__-E__-K__ / N°2



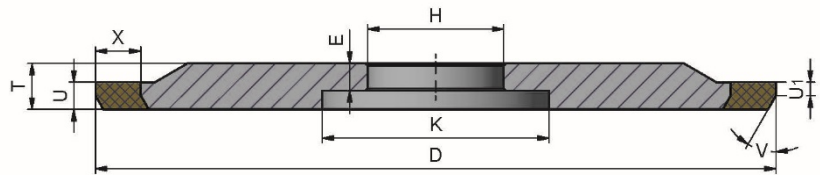
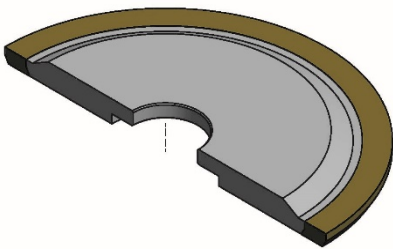
3Y1 (shape N°1)

D__-T__-H__-U__-X__-V__-U1__



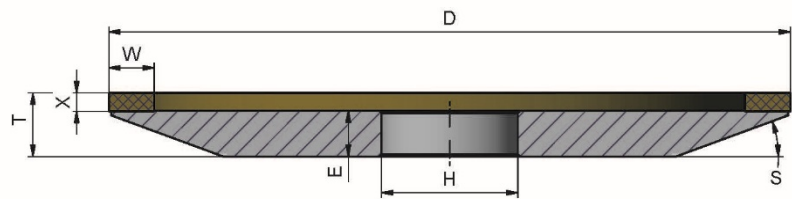
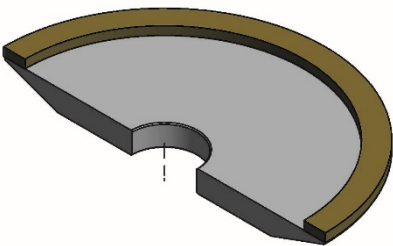
3Y1 (shape N°2)

D__-T__-H__-U__-X__-V__-U1__-E__-K__ / N°2



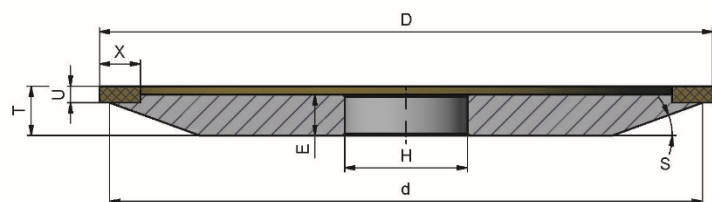
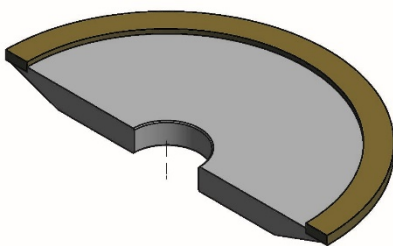
4A2

D__-T__-H__-W__-X__-E__-S__



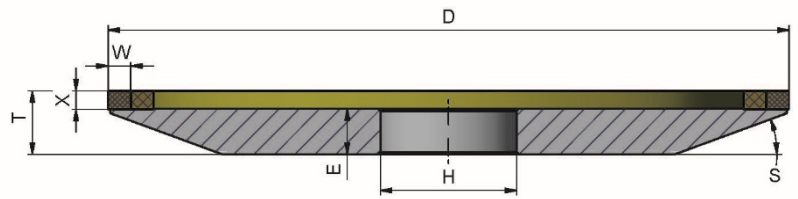
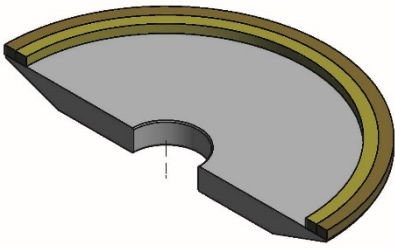
4A9P

D__-T__-H__-U__-X__-E__-S__-d__



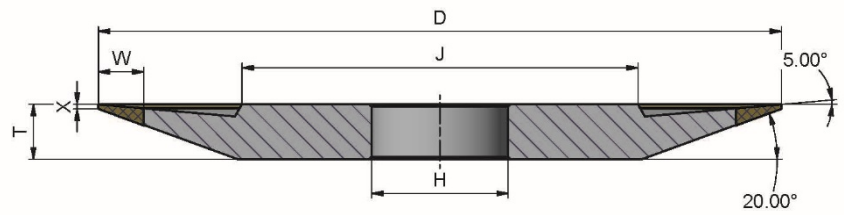
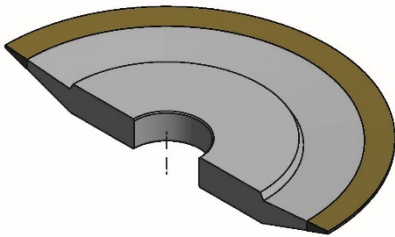
4AA2

D__-T__-H__-W__/_-X__-E__-S__



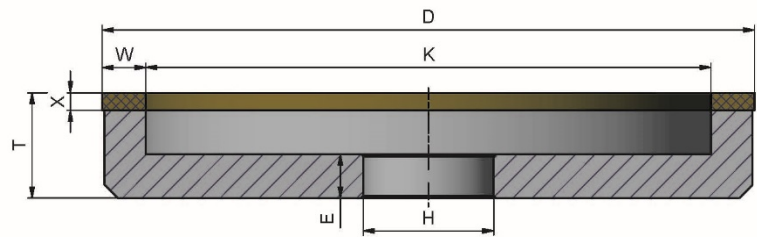
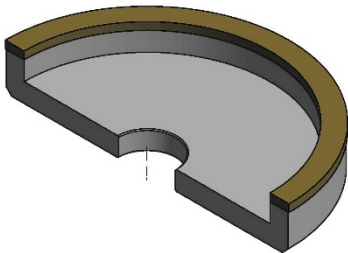
4BT9

D__-T__-H__-W__-X__-J__



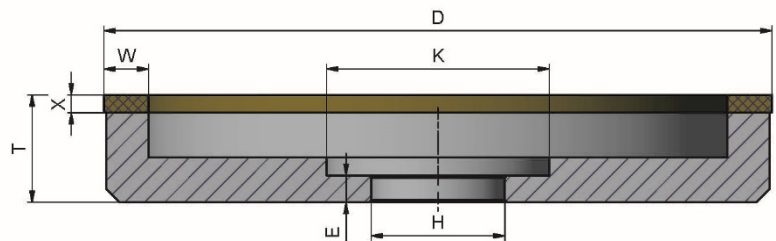
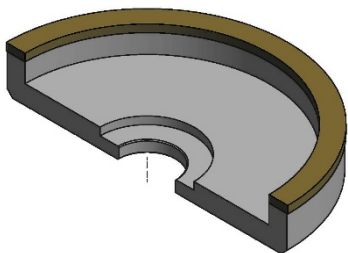
6A2 (shape N°1)

D__-T__-H__-W__-X__-E__-K__



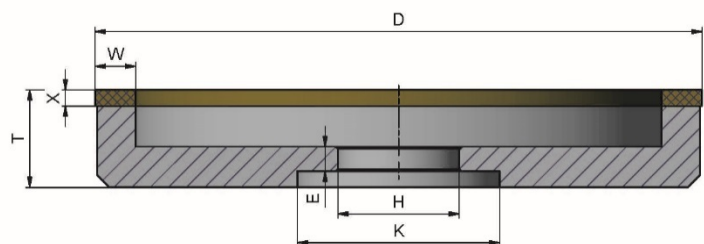
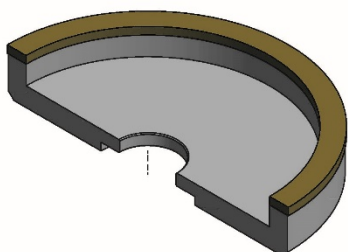
6A2 (shape N°2)

D__-T__-H__-W__-X__-E__-K__ / N°2



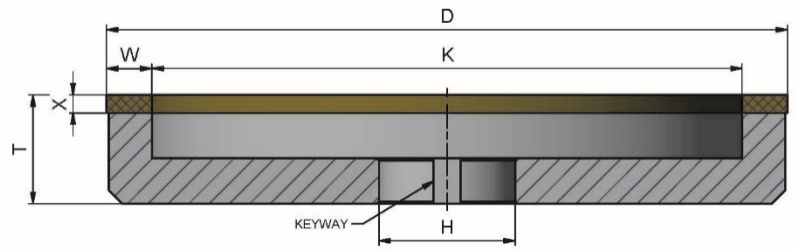
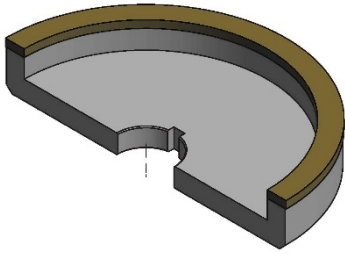
6A2 (shape N°3)

D__-T__-H__-W__-X__-E__-K__ / N°3



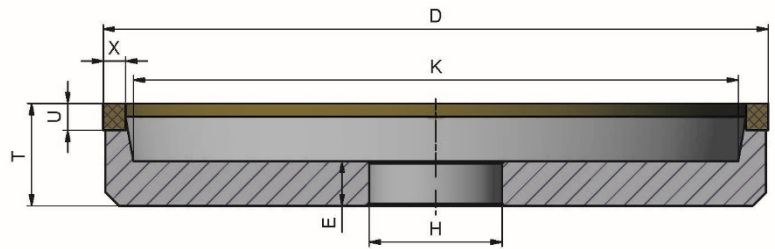
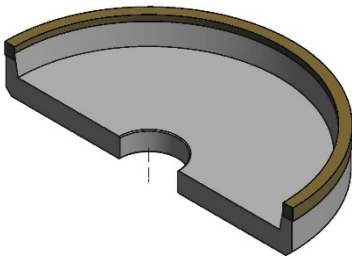
6A2K

D__-T__-H__-W__-X__-E__-K__



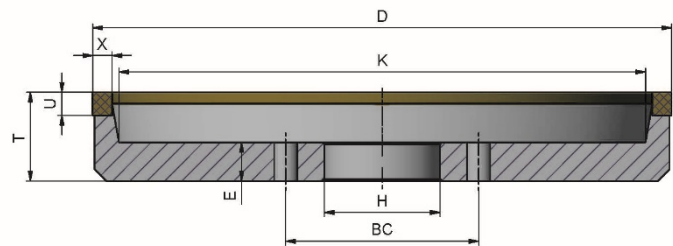
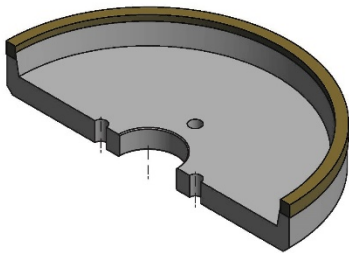
6A9

D__-T__-H__-U__-X__-E__-K__



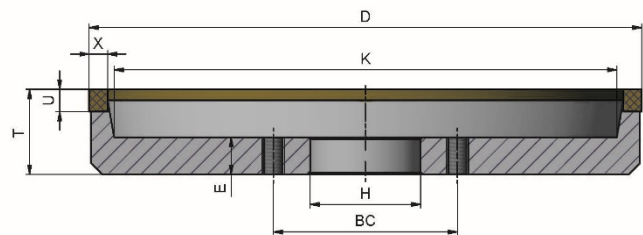
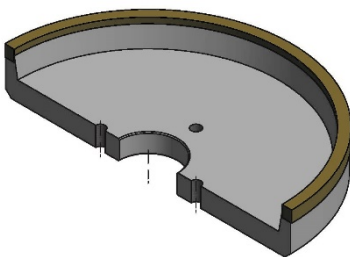
6A9H

D__-T__-H__-U__-X__-E__-K__-BC__



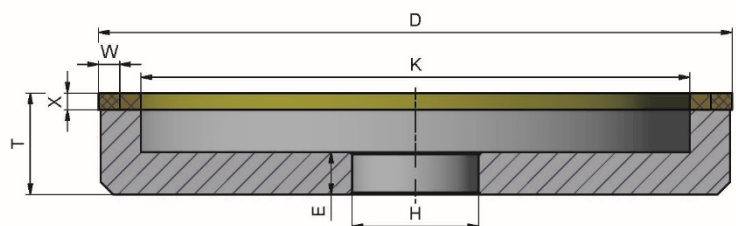
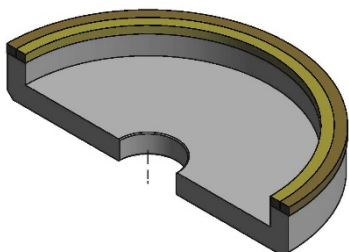
6A9T

D__-T__-H__-U__-X__-E__-K__-BC__



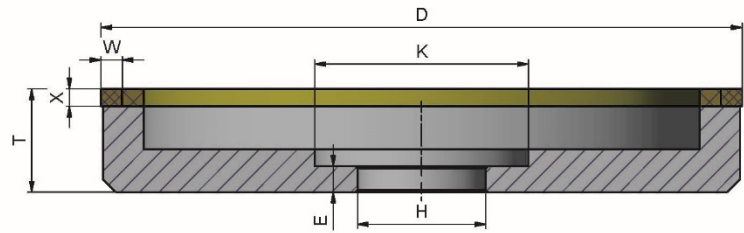
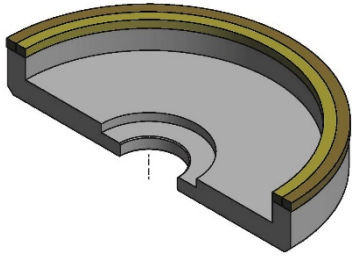
6AA2 (shape N°1)

D__-T__-H__-W__/_-X__-E__-K__



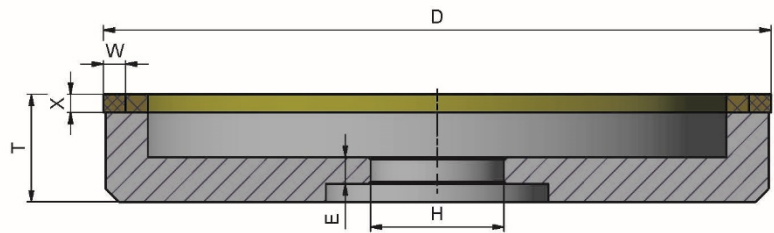
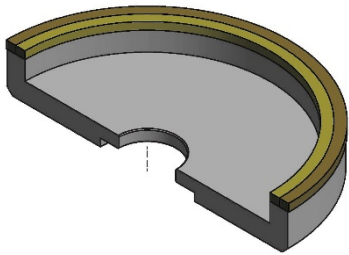
6AA2 (shape N°2)

D__-T__-H__-W__/_-X__-E__-K__ / N°2



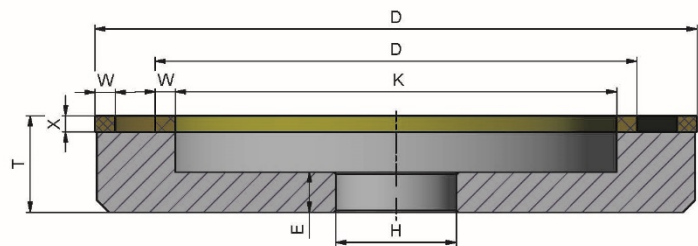
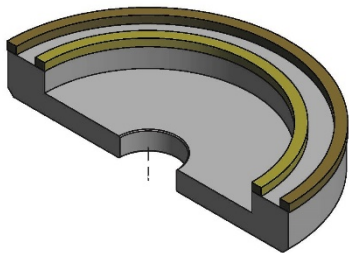
6AA2 (shape N°3)

D__-T__-H__-W__/_-X__-E__-K__ / N°3



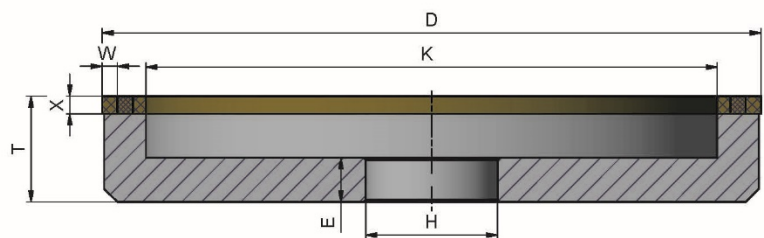
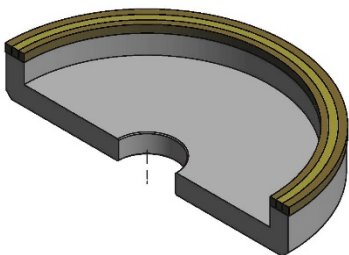
6AA7

D__/_-T__-H__-W__/_-X__-E__-K__



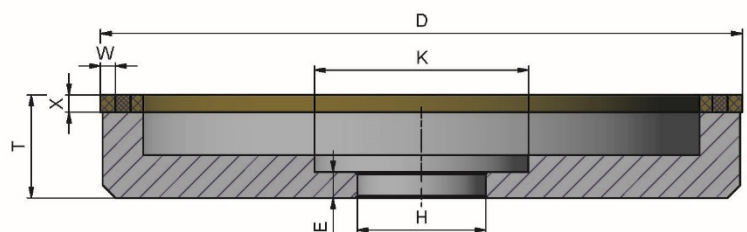
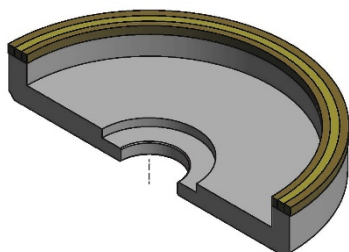
6AAA2 (shape N°1)

D__-T__-H__-W__/_/_-X__-E__-K__



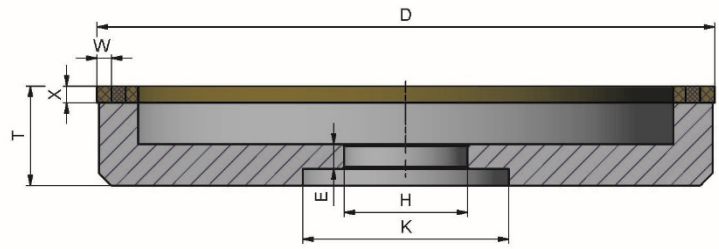
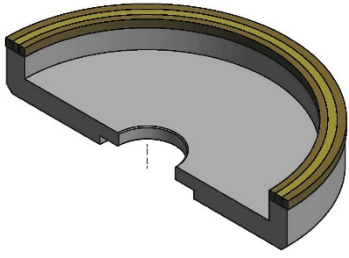
6AAA2 (shape N°2)

D__-T__-H__-W__/_/_-X__-E__-K__ / N°2



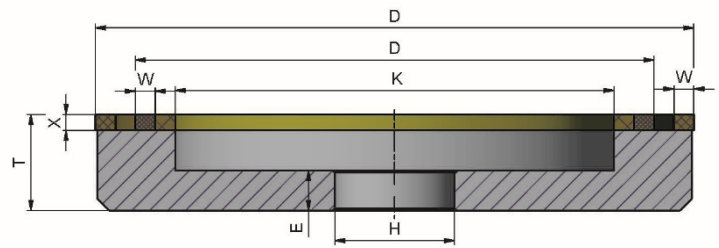
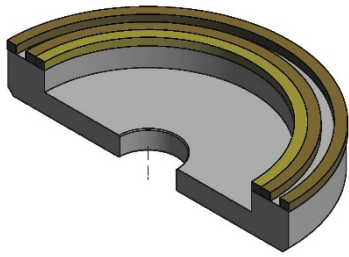
6AAA2 (shape N°3)

D__-T__-H__-W__/_/_-X__-E__-K__ / N°3



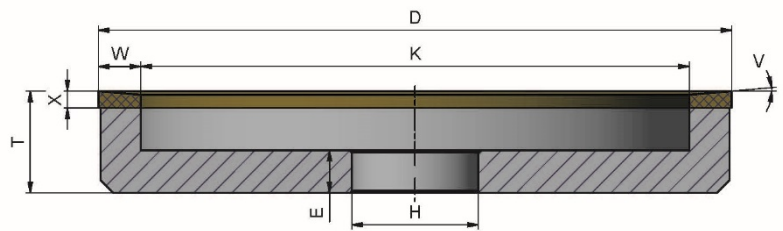
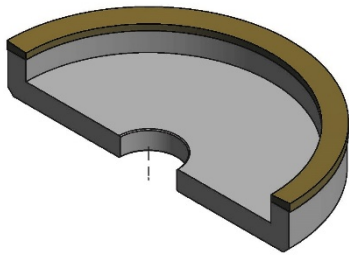
6AAA7

D__/_-T__-H__-W__/_/_-X__-E__-K__



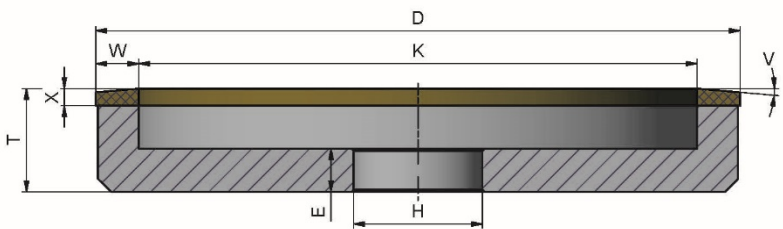
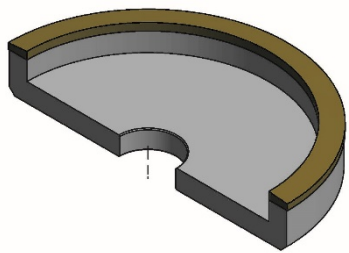
6B2 (shape N°1)

D__-T__-H__-W__-X__-V__-E__-K__



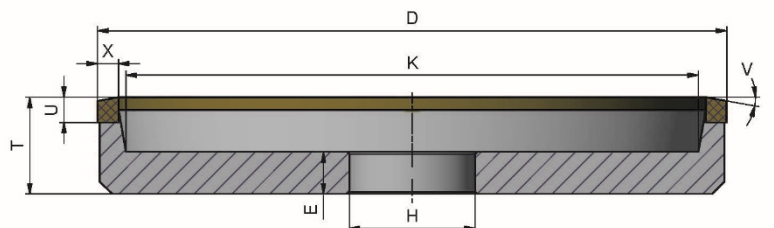
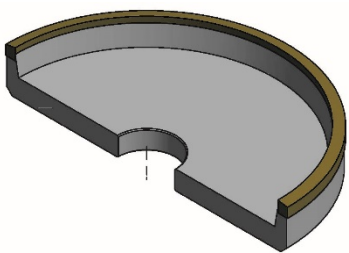
6B2 (shape N°2)

D__-T__-H__-W__-X__-V__-E__-K__ / N°2



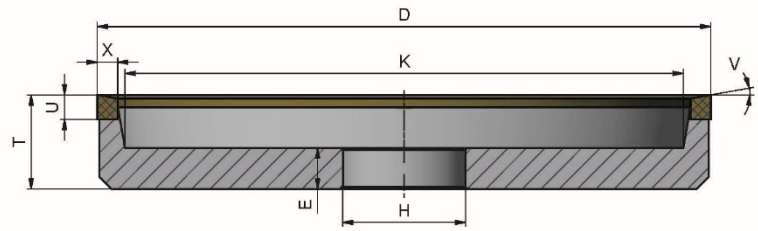
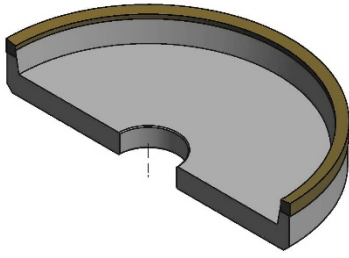
6B9 (shape N°1)

D__-T__-H__-U__-X__-V__-E__-K__



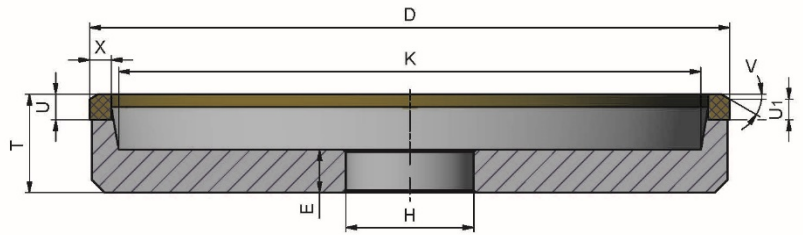
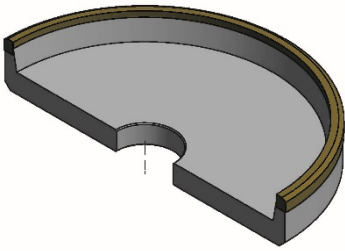
6B9 (shape N°2)

D__T__H__U__X__V__E__K__ / N°2



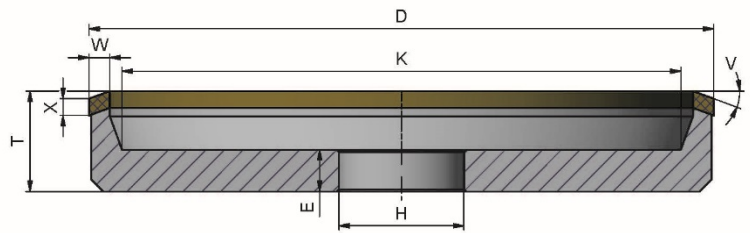
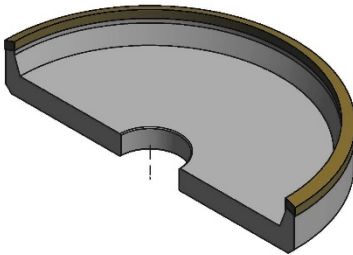
6M9

D__T__H__U__X__E__K__V__U1__



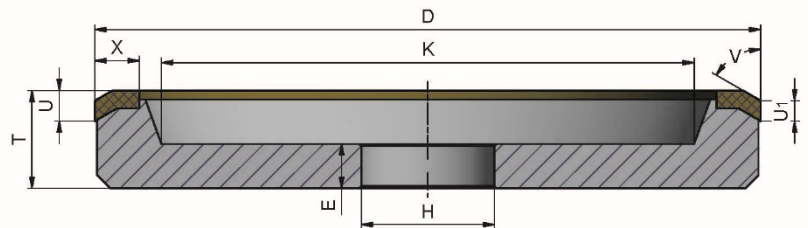
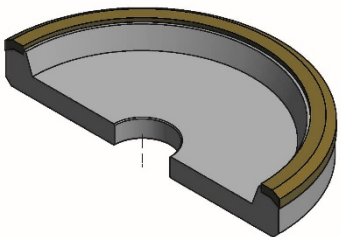
6V5

D__T__H__W__X__V__E__K__



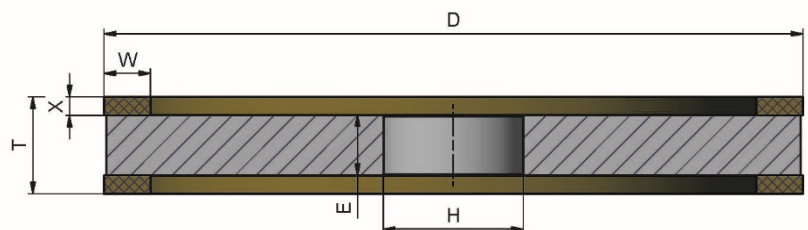
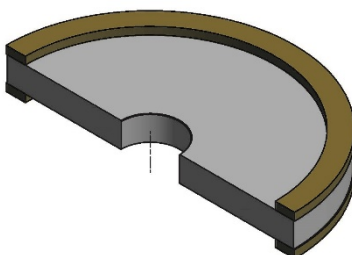
6Y9

D__T__H__U__X__E__K__V__U1__



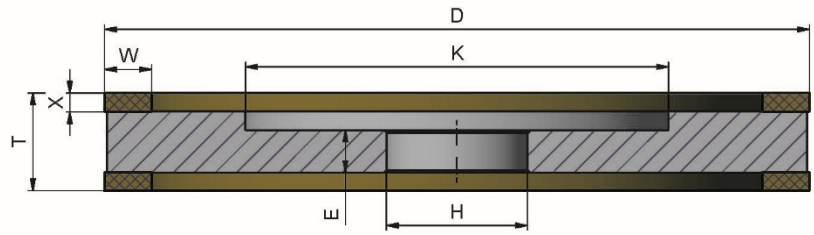
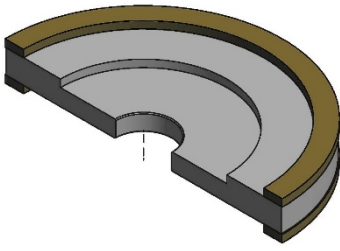
9A3 (shape N°1)

D__T__H__W__X__E__



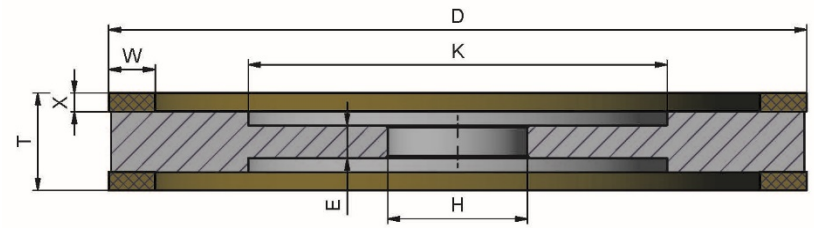
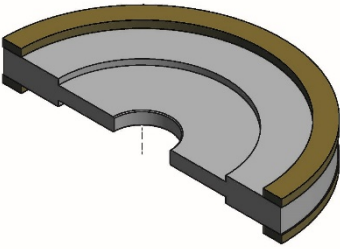
9A3 (shape N°2)

D__-T__-H__-W__-X__-E__-K__ / N°2



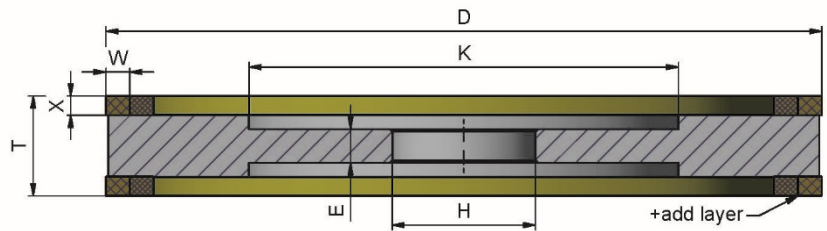
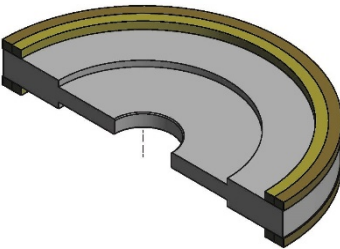
9A3 (shape N°3)

D__-T__-H__-W__-X__-E__-K__ / N°3



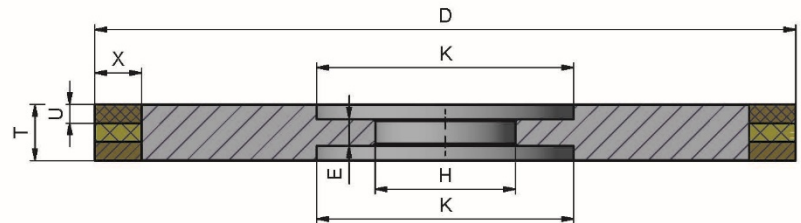
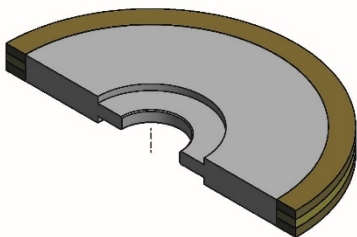
9AA3

D__-T__-H__-W__/_-X__-E__-K__



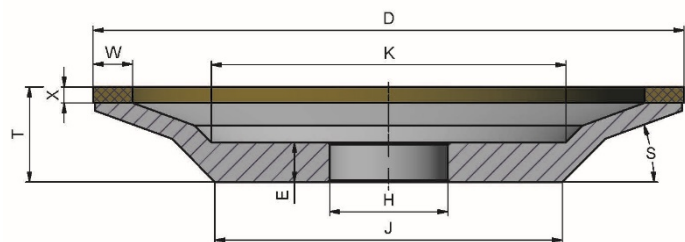
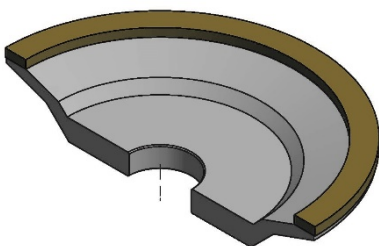
9AAA1

D__-T__-H__-U__-X__-E__-K__



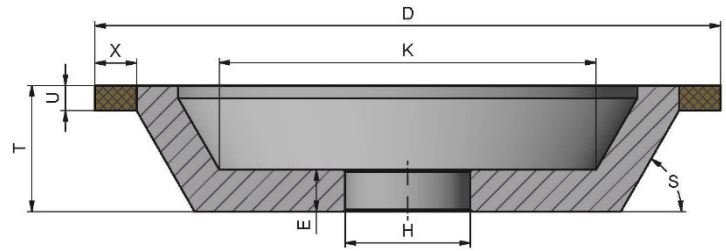
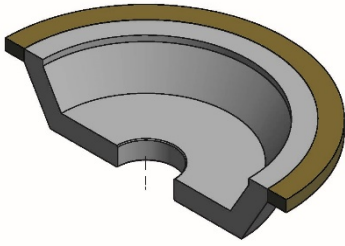
10A2

D__-T__-H__-W__-X__-E__-K__-J__-S__



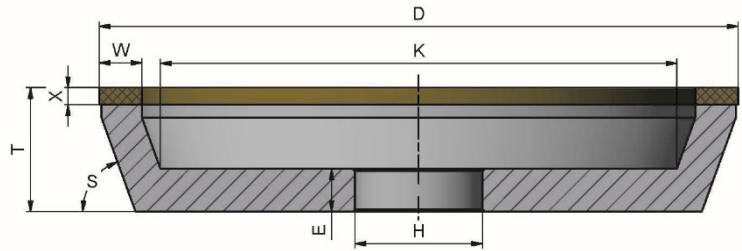
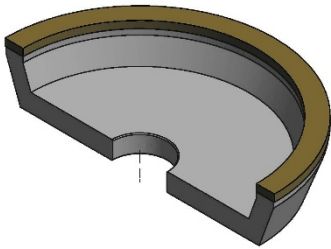
11A1

D__T__H__U__X__E__K__S__



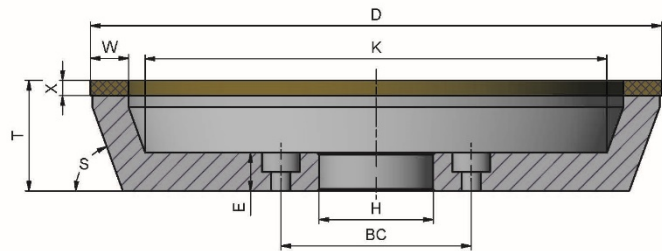
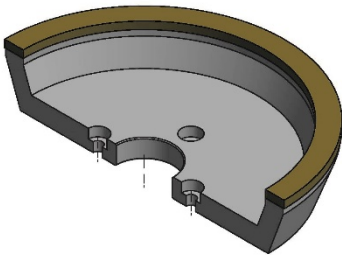
11A2

D__T__H__W__X__E__K__S__



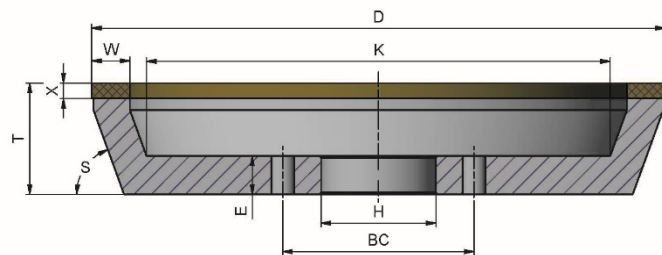
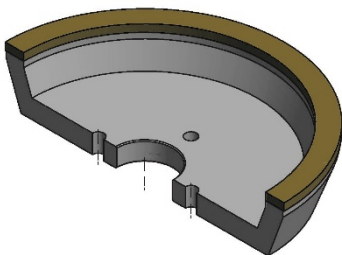
11A2B

D__T__H__W__X__E__K__S__-BC__



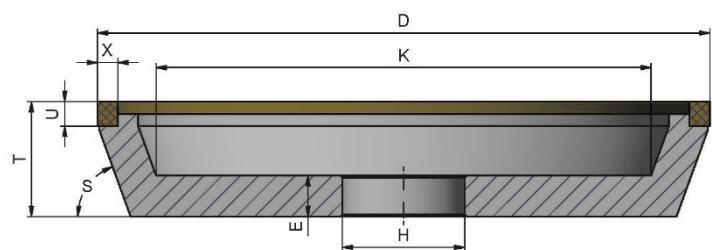
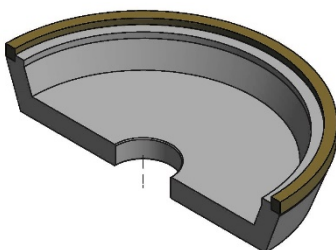
11A2H

D__T__H__W__X__E__K__S__-BC__



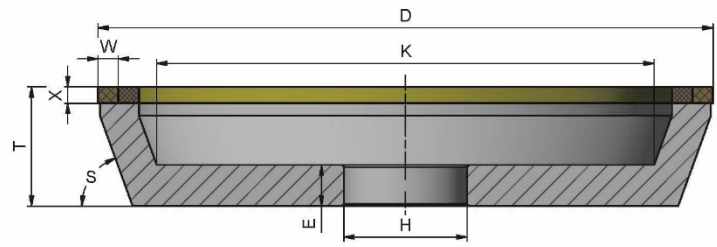
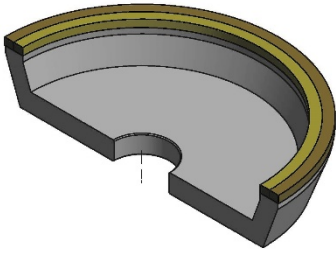
11A9

D__T__H__U__X__E__K__S__



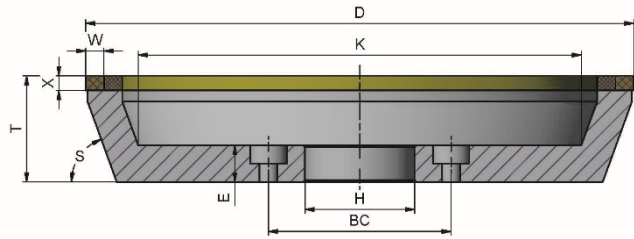
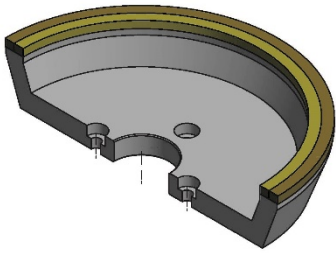
11AA2

D__T__H__W__/_X__E__K__S__



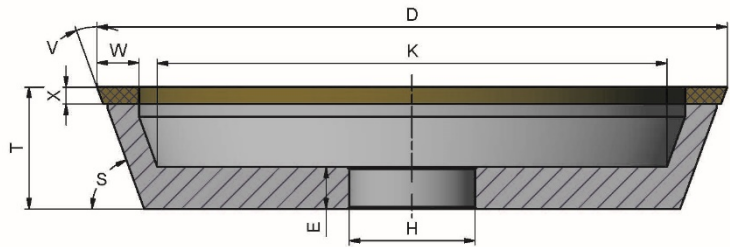
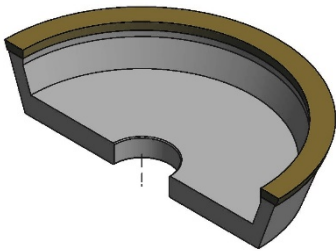
11AA2B

D__T__H__W__/_X__E__K__S__-BC



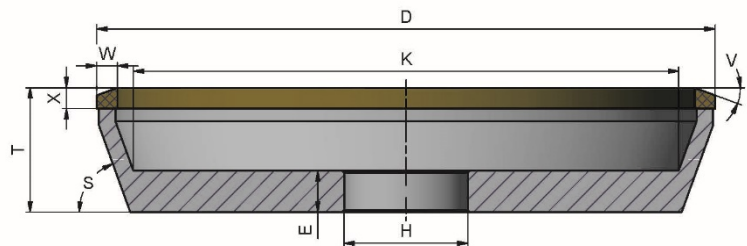
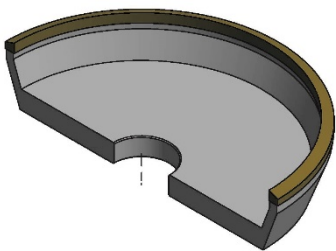
11B2

D__T__H__W__-X__V__E__K__S__



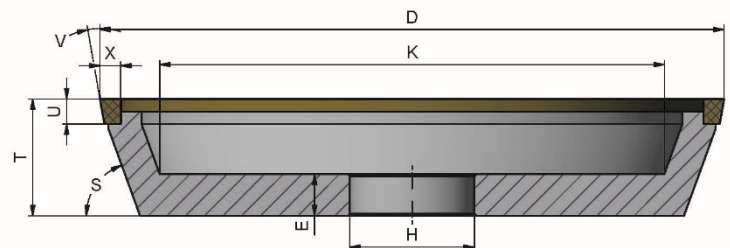
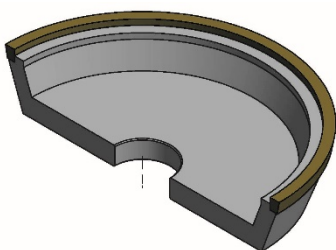
11B2R

D__T__H__W__-X__V__E__K__S__



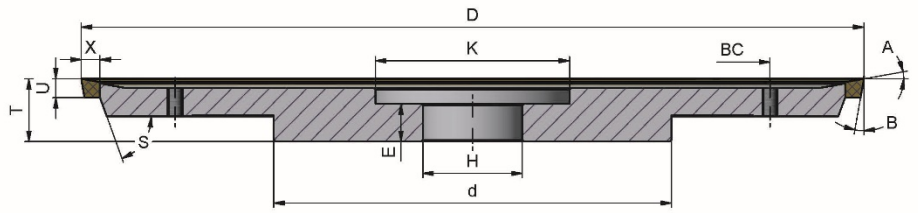
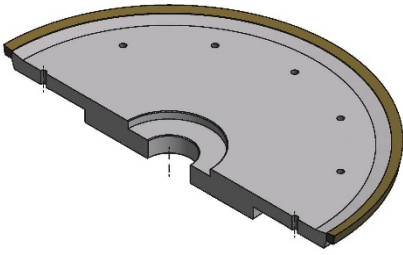
11B9

D__T__H__U__-X__V__E__K__S__



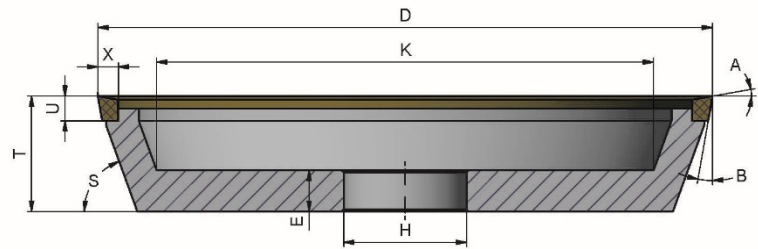
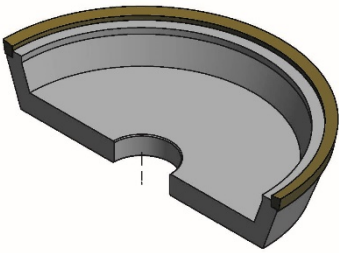
11BT1T

D__T__H__U__X__E__K__A__B__S__BC__d__



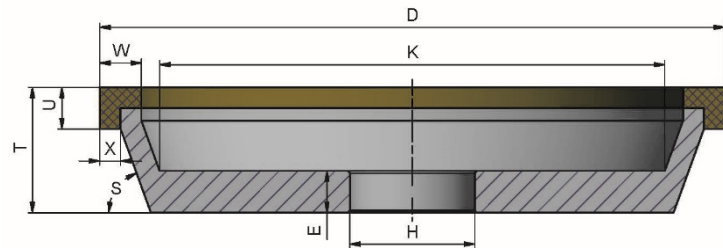
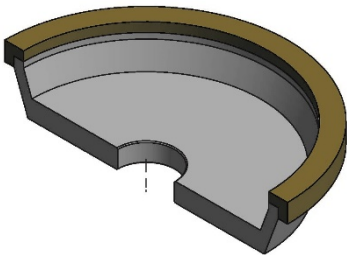
11BT9

D__T__H__U__X__E__K__A__B__S__



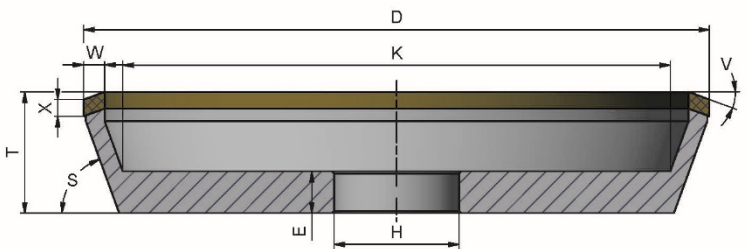
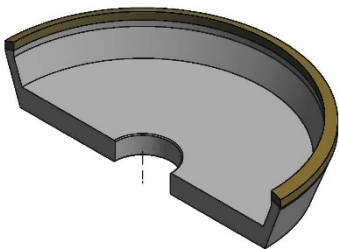
11C9

D__T__H__U__W__X__E__K__S__



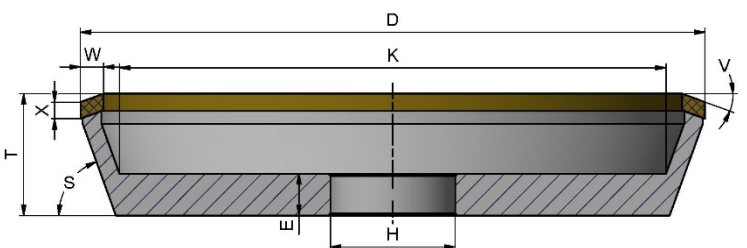
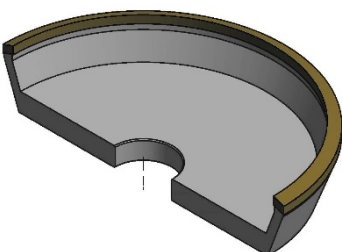
11V5

D__T__H__W__X__V__E__K__S__



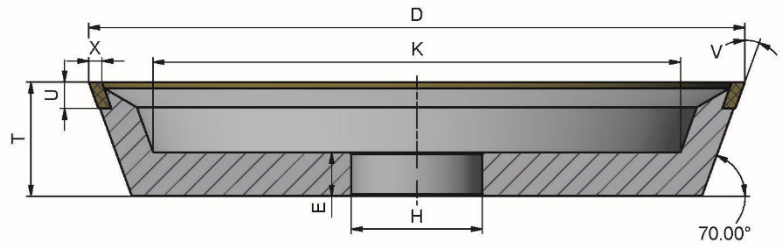
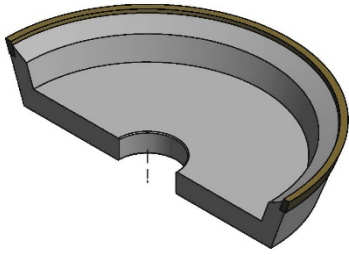
11V5R

D__T__H__W__X__V__E__K__S__



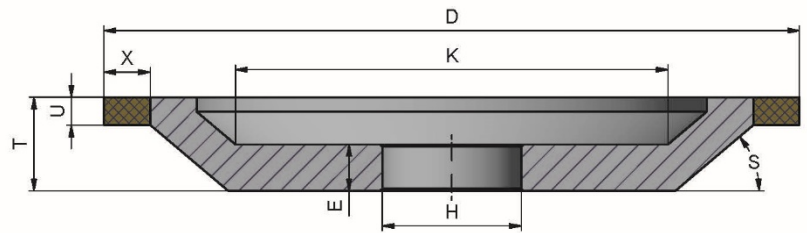
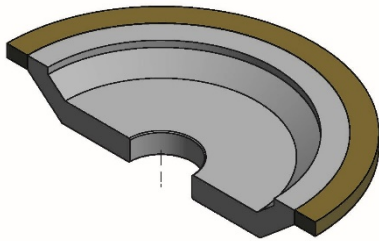
11V9

D__T__H__U__X__V__E__K__



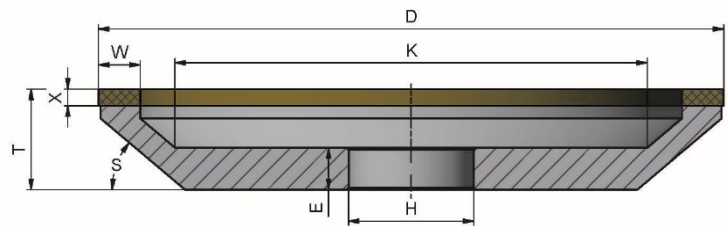
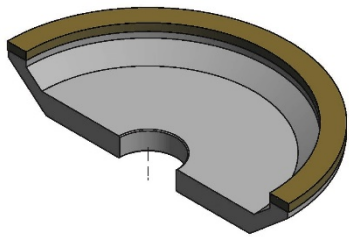
12A1

D__T__H__U__X__E__K__S__



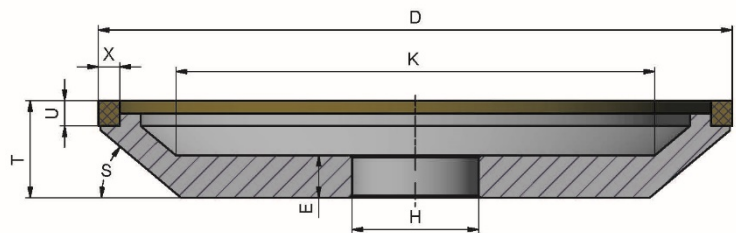
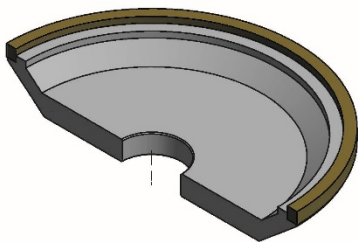
12A2

D__T__H__W__X__E__K__S__



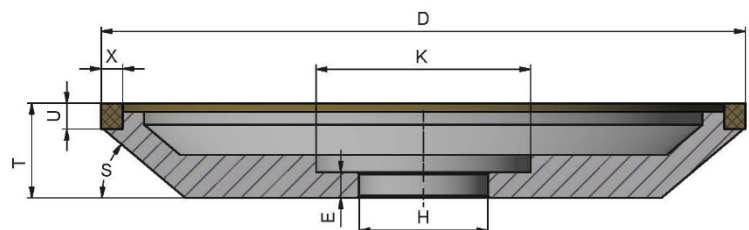
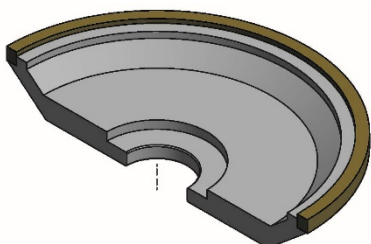
12A9 (shape N°1)

D__T__H__U__X__E__K__S__



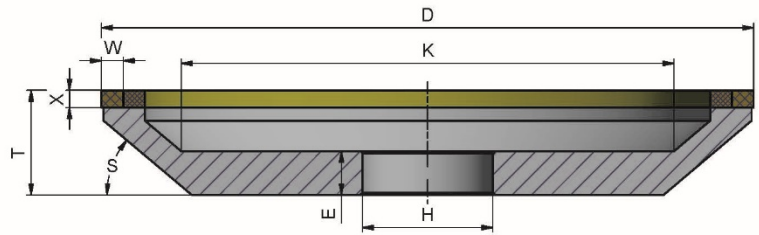
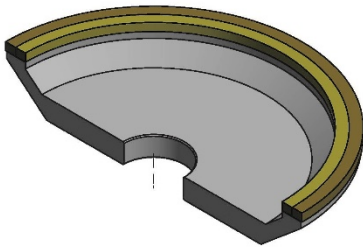
12A9 (shape N°2)

D__T__H__U__X__E__K__S__ / N°2



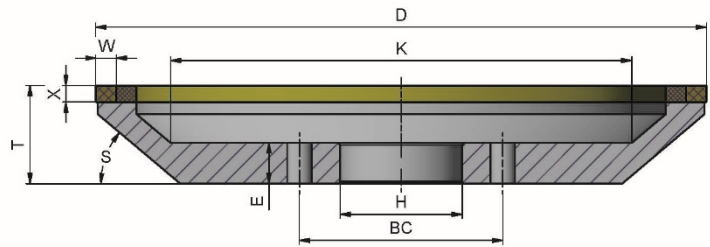
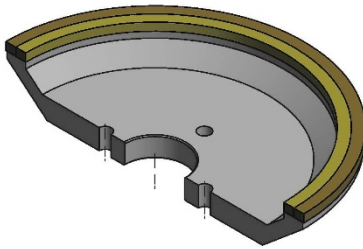
12AA2

D__T__H__W__/_X__E__K__S__



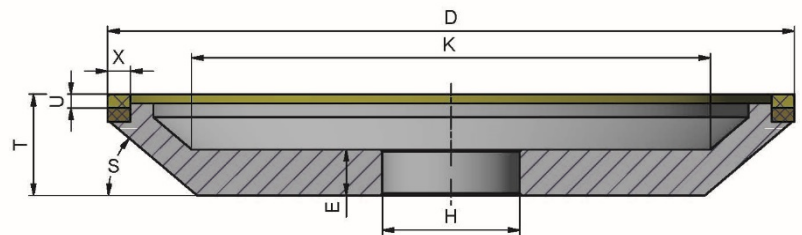
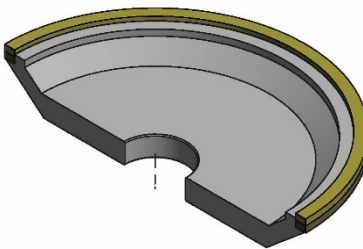
12AA2H

D__T__H__W__/_X__E__K__S__-BC



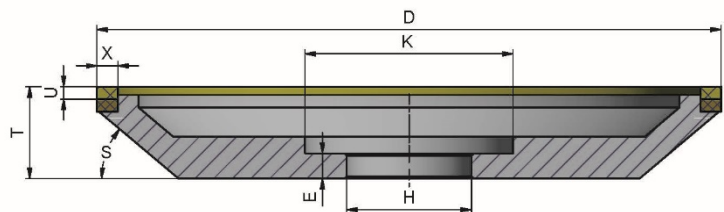
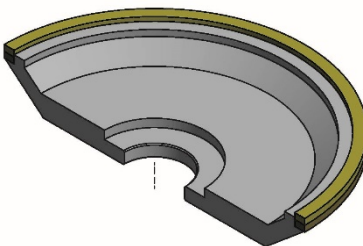
12AA9 (shape N°1)

D__T__H__U__/_X__E__K__S__



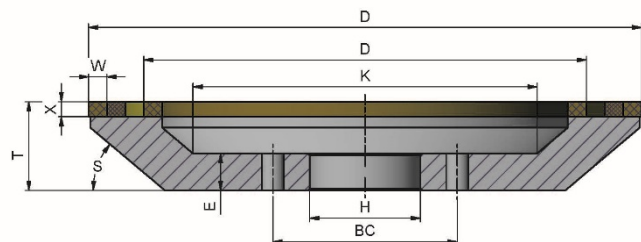
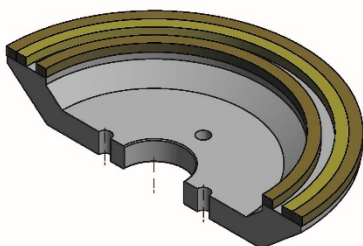
12AA9 (shape N°2)

D__T__H__U__/_X__E__K__S__ / N°2



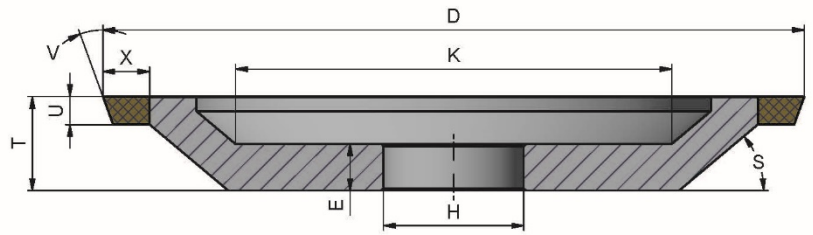
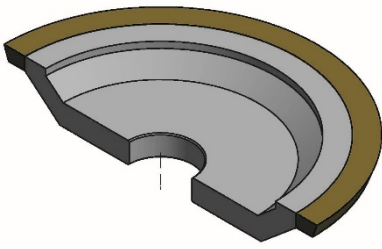
12AAA7H

D__/_T__H__W__/_/_X__E__K__S__-BC



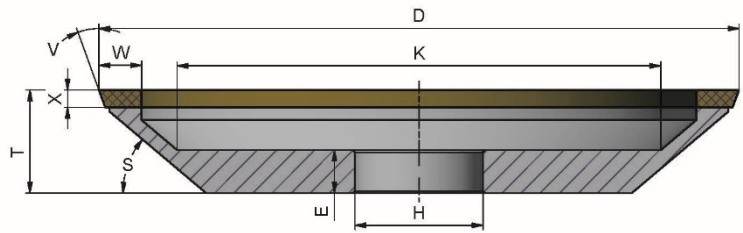
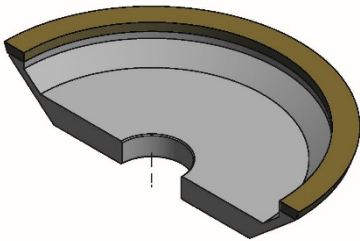
12B1

D__T__H__U__X__V__E__K__S__



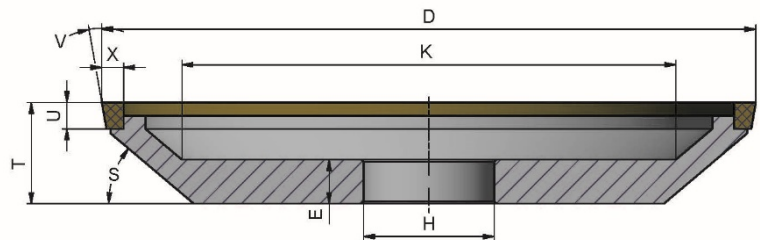
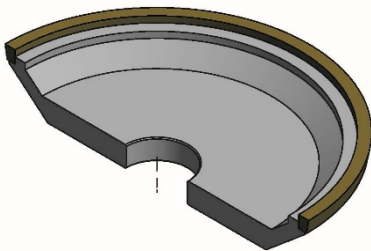
12B2

D__T__H__W__X__V__E__K__S__



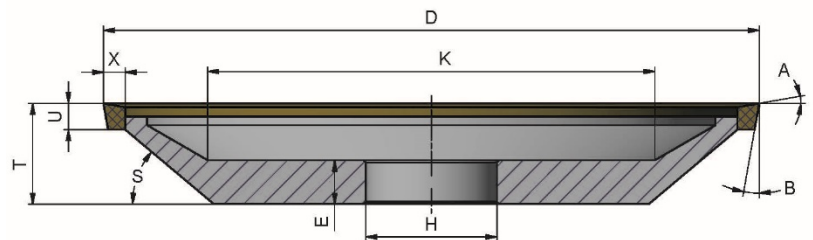
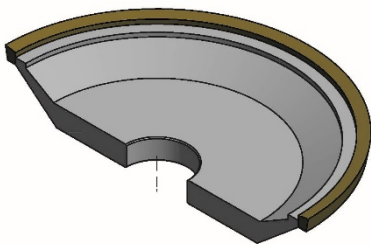
12B9

D__T__H__U__X__V__E__K__S__



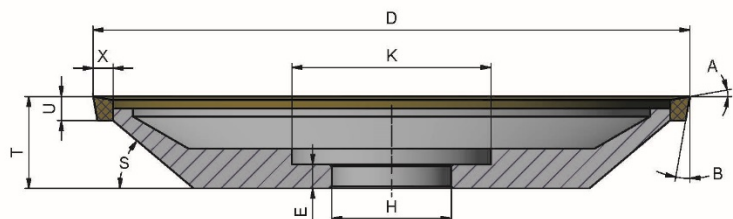
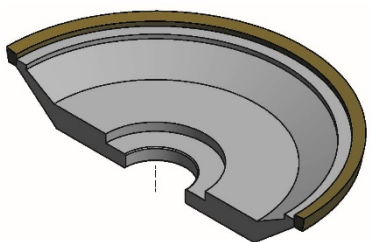
12BT1 (shape N°1)

D__T__H__U__X__A__B__E__K__S__



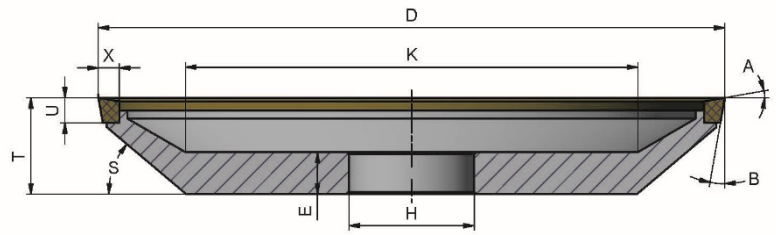
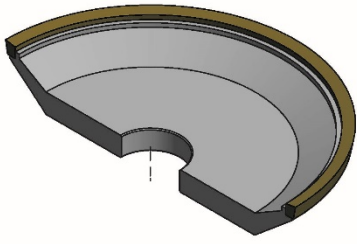
12BT1 (shape N°2)

D__T__H__U__X__A__B__E__K__S__ / N°2



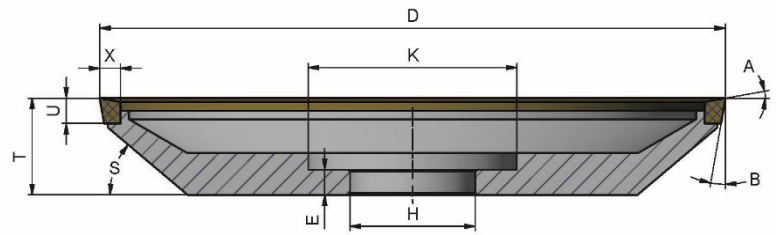
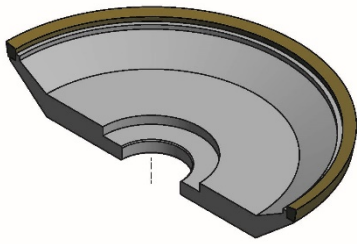
12BT9 (shape N°1)

D__T__H__U__X__A__B__E__K__S__



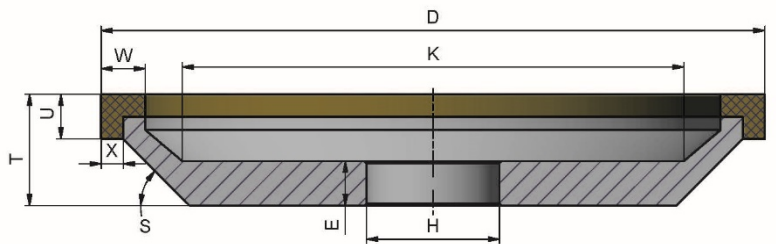
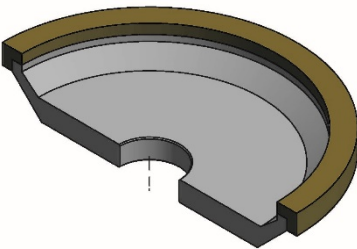
12BT9 (shape N°2)

D__T__H__U__X__A__B__E__K__S__ / N°2



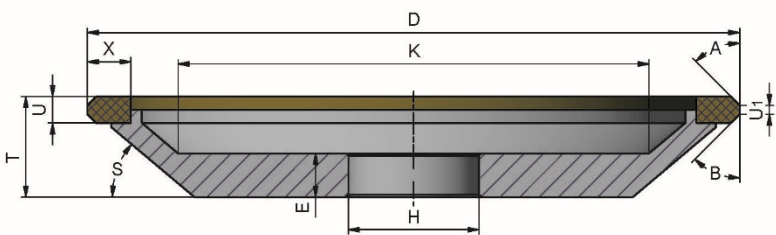
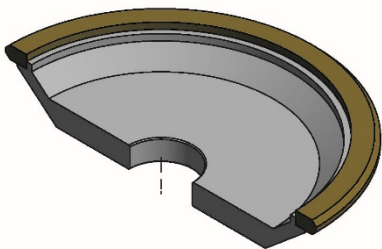
12C9

D__T__H__U__W__X__E__K__S__



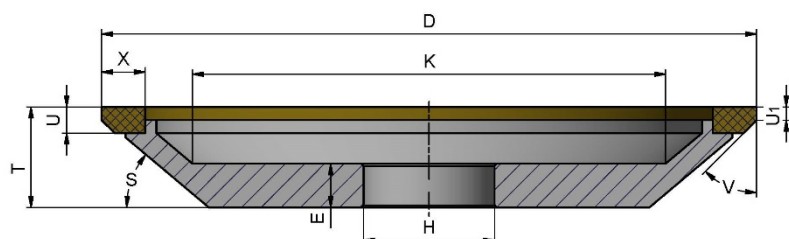
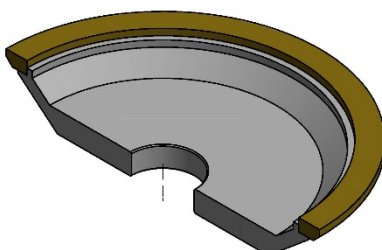
12D9

D__T__H__U__X__A__B__U1__E__K__S__



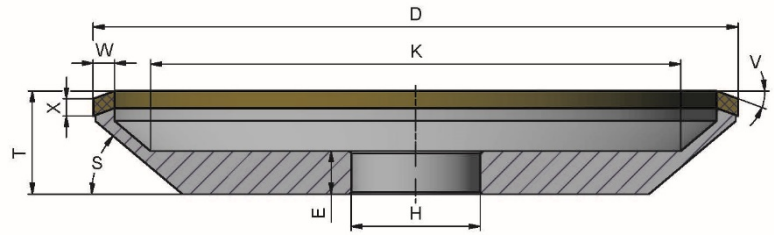
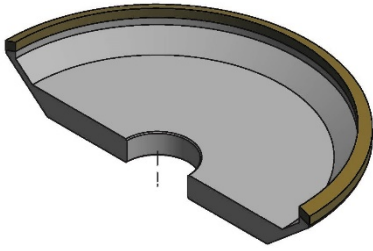
12M9

D__T__H__U__X__V__U1__E__K__S__



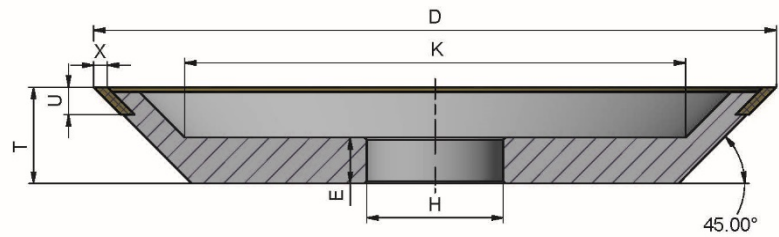
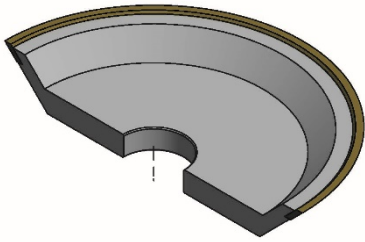
12V5

D__-T__-H__-W__-X__-V__-E__-K__-S__



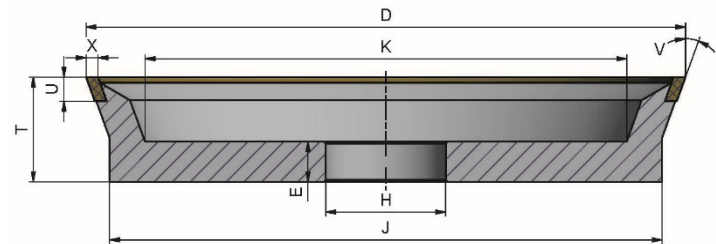
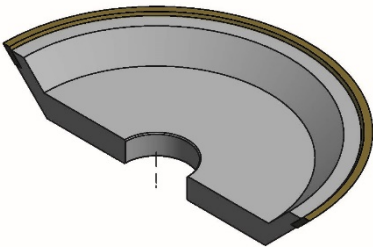
12V9

D__-T__-H__-U__-X__-E__-K__



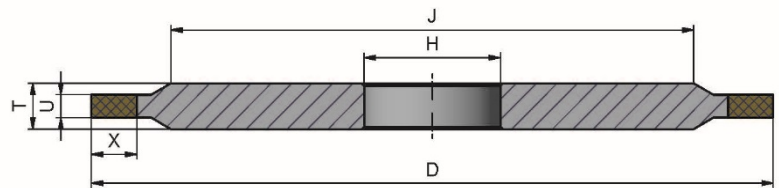
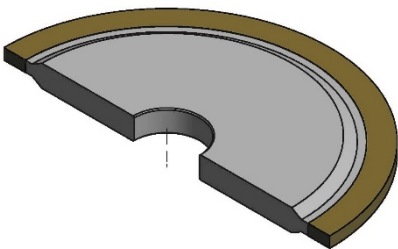
13V9

D__-T__-H__-U__-X__-V__-E__-K__-J__



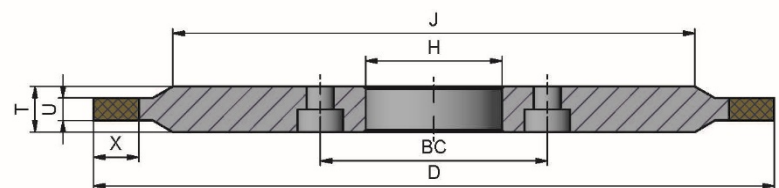
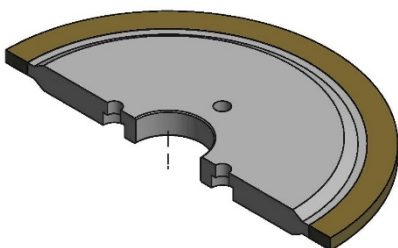
14A1

D__-T__-H__-U__-X__-J__



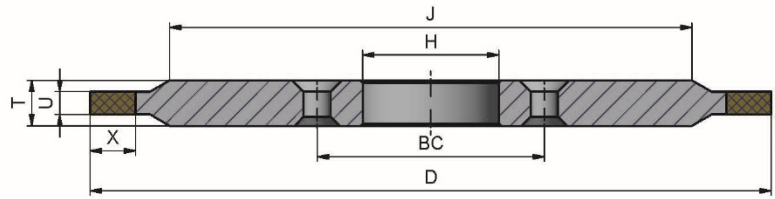
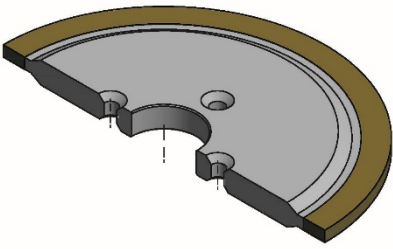
14A1B

D__-T__-H__-U__-X__-J__-BC__



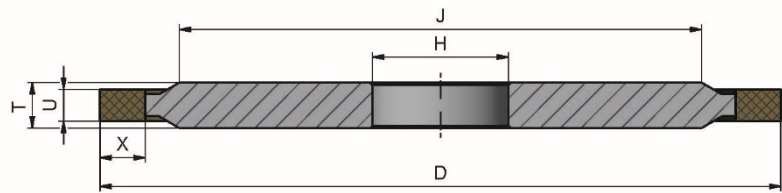
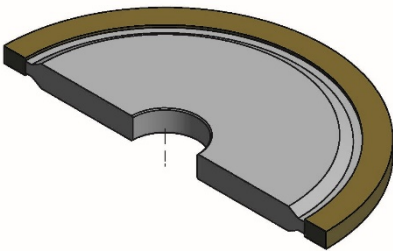
14A1CC

D__-T__-H__-U__-X__-J__-BC__



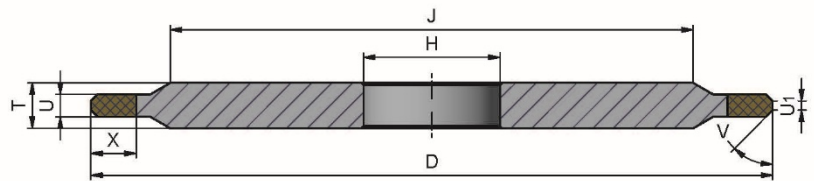
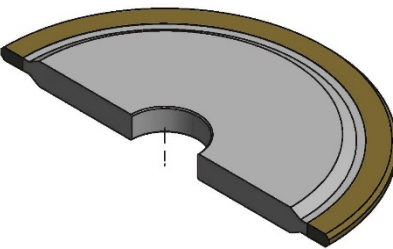
14A1R

D__-T__-H__-U__-X__-J__



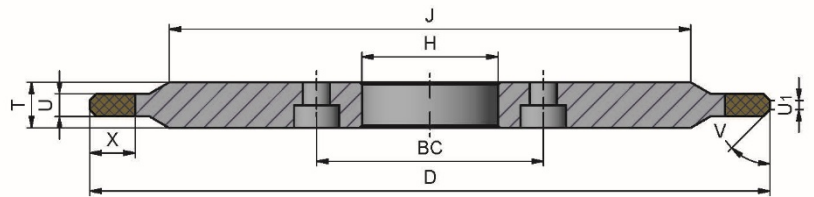
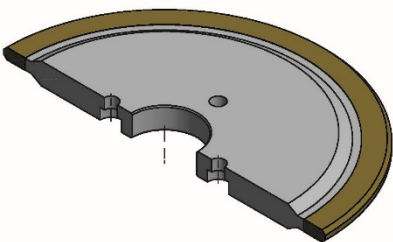
14D1

D__-T__-H__-U__-X__-V__-U1__-J__



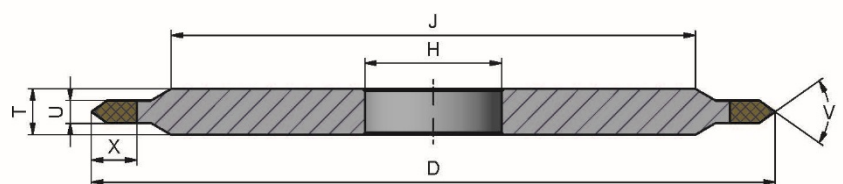
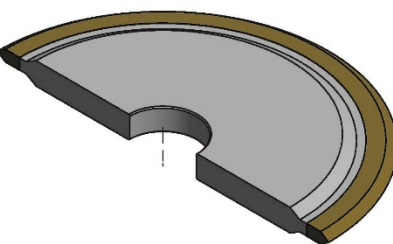
14D1B

D__-T__-H__-U__-X__-V__-U1__-J__-BC__



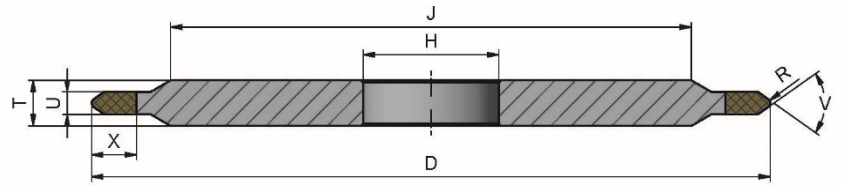
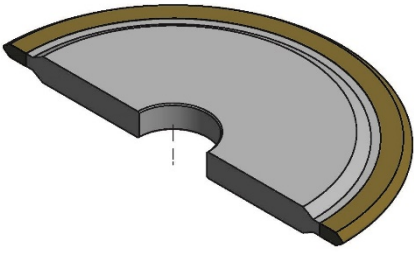
14E1

D__-T__-H__-U__-X__-V__-J__



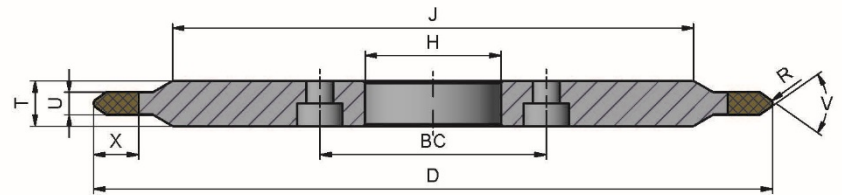
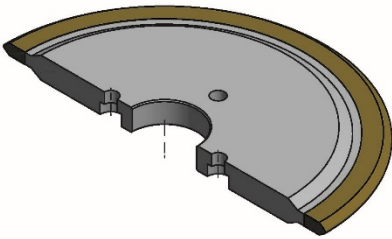
14EF1

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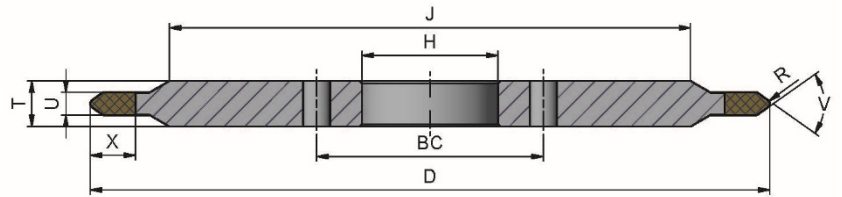
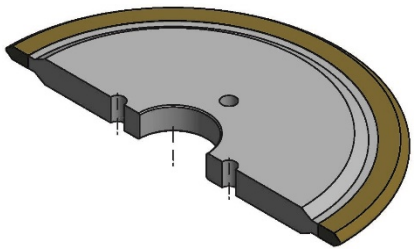
14EF1B

D__-T__-H__-U__-X__-V__-R__-J__-BC__



14EF1H

D__-T__-H__-U__-X__-V__-R__-J__-BC__



STICK

ARTICLE

A x B x C



A11261	ASA N°2 / 10 – 35 micron	13x25x102mm
A11260	ASA N°1 / STICK > 46	13x25x102mm
A12848	ASA N°3 / STICK > 46	25.4x25.4x152mm