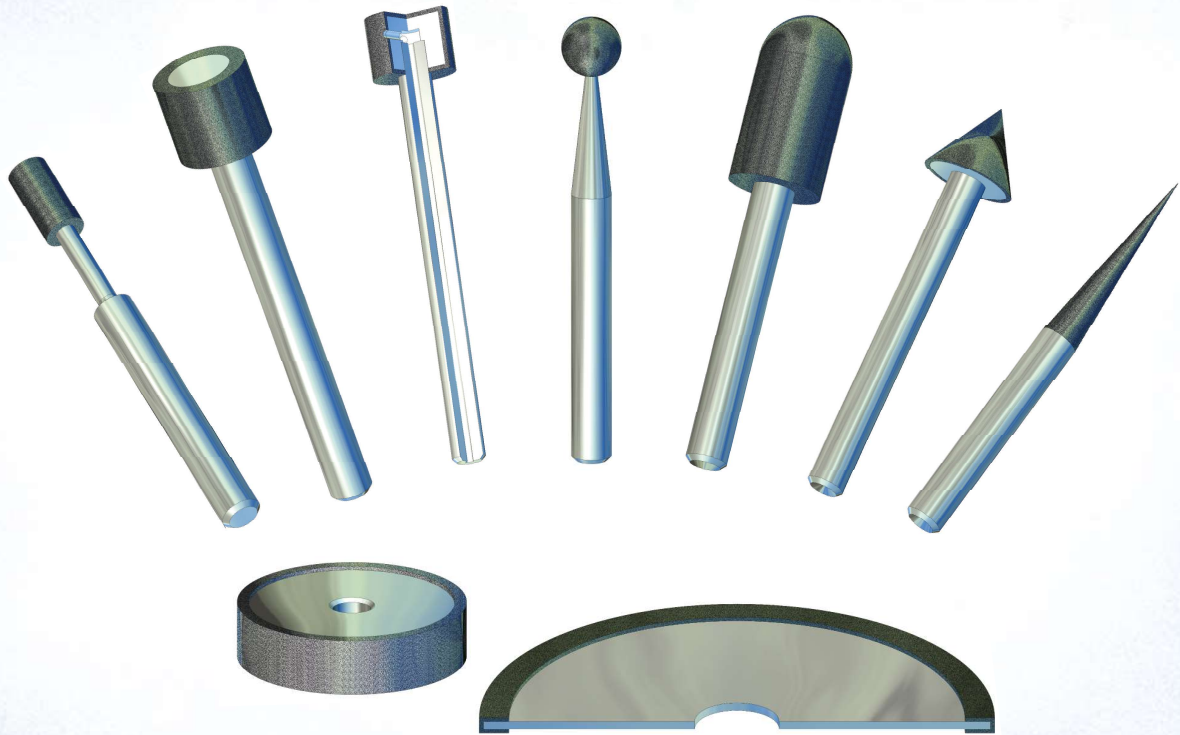


**95 YEARS**  
**1929-2024**



# Electro plated Standard Diamond and CBN Grinding Pins, Wheels and Cutting Discs

Price List ES05/2024

**The QR-Codes lead you directly to our  
Online-Shop!**



All prices are per piece, ex works.

# Corporate History

Top quality at reasonable prices

Since 1929, this philosophy has determined our range of products and services.

To celebrate our 95th anniversary, we would like to invite you to a journey through time.

During his training in a glass factory, the later co-founder Theodor Felix Kraus came into contact with glazier diamonds for the first time and learned how to repair them. The First World War forced him to interrupt his training, but after his time as a soldier in France and Russia, his way led him first to Sweden and back to France where he acquired further knowledge and techniques in the production of diamond tools. Upon his return to Germany, Theodor Felix Kraus was already considered a specialist in the field.

On October 1st, 1929, Theodor Felix Kraus and the businessman Willy Winter founded the Kraus & Winter company at Lindenstraße 5 in Hamburg. The entry into the commercial register took place only 8 days later on 9th October 1929. The first target groups were glass, laboratory and natural stone companies and supplied with the first diamond tools. In 1935, less than 10 years later, the partner Willy Winter retired and Theodor Felix Kraus continued the company as sole owner.

In 1938, the company moved to Hamburg-Lokstedt Lottestraße 9-11 in order to meet increased customer demands and broadening capacity. Over the years, production was expanded into more and more areas.

In 1956 the office was moved to its present location in Hamburg-Lemsahl, and extended in by an annex.

His son Felix-Gunter Kraus joined the company at a young age during his apprenticeship. As a result, the range of diamond tools for all areas was supplemented by his devices for optical glass processing. Thus the field of ophthalmic optics also became potential customers.

After the death of Theodor Felix Kraus, his son took over the company and led it safely into the new age. Until today, the company remains in family hands.

After 95 years of experience, our company still relies on sound know-how in the manufacture of diamond and later CBN tools, intensive research and development work, state-of-the-art production methods, as well as a team of motivated and qualified employees and recognizes them as an essential basis for consistently high quality, forward-looking production optimization and innovation in our company.

By using the latest technology in our company, such as CAD workstations, ERP systems for monitoring order, production and delivery processing, as well as careful final inspections, we can guarantee you on-time delivery and the highest quality standard, even for custom-made products.

Armed with these prerequisites, in the ninety-fifth year since the founding of the company, we look forward to the future.

Be a part of our advancement.

We will be happy to advise you.

**KRAUS & WINTER**  
**95 YEARS**  
**DIAMOND TOOLS**

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# Informations about our Standard Programm of electro plated Diamond and CBN-Tools

In this catalogue our rotating standard tools with customary grain are listed. Since we offer them as standard with many different grains, they are not always in stock. Still we stock them as standard product with accordingly cheap prices.

Naturally all other measurements and grains are suppliable. To this, we ask for consignment of a drawing or exact specifications as well as the desired quantity.

Furthermore, your pieces can be coated. For this we, too need a detailed drawing or specifications as well as quantity for the creation of an offer.

You should consider this layer thicknesses for the manufacture of blanks, if these tools should later be provided with a electro plated diamant- or CBN-layer.

Grit Size FEPA	Coating Thickness mm	Coat Tolerance mm	Profil Tolerance mm
601	0,75	+/- 0,05	+/- 0,10
427	0,50	+/- 0,05	+/- 0,10
301	0,35	+/- 0,04	+/- 0,08
251	0,30	+/- 0,04	+/- 0,08
213	0,28	+/- 0,04	+/- 0,08
181	0,25	+/- 0,03	+/- 0,06
151	0,20	+/- 0,03	+/- 0,06
126	0,15	+/- 0,02	+/- 0,04
107	0,14	+/- 0,02	+/- 0,04
91	0,12	+/- 0,02	+/- 0,04
76	0,11	+/- 0,02	+/- 0,04
64	0,10	+/- 0,02	+/- 0,04
54	0,09	+/- 0,02	+/- 0,04
46	0,07	+/- 0,02	+/- 0,04
35	0,05	+/- 0,02	+/- 0,04
25	0,04	+/- 0,02	+/- 0,04
15	0,03	+/- 0,02	+/- 0,04

Surface Roughness Table

Diamond	CBN	Ra Surface Roughness*	Grinding Operation
D301		3,2	Roughing
D251	B251	1,6	
D181	B181	1,0	
D151	B151	1,0	Very Rough Grinding
D126	B126	0,8	
D107	B107	0,8	
D91	B91	0,7	Rough Grinding
D76	B76	0,7	
D64	B64	0,5	
D54	B54	0,4	Finishing Grinding
D46	B46	0,4	
D35	B35	0,3	
D25	B25	0,3	Super Finish Grinding
D15		0,2	

\* It is not possible to define the coherence between the roughness grade and the grit size exact - not even when the use is described accurately.

The following parameter define the result:

- Material
- Structural status
- Cooling medium
- Kinematics
- Forward Feed and Speed

Furthermore, you have to take into account that normally at the beginning of the use the roughness grade is the maximum. At first this alters quickly and after some time only slowly - whereby the limit result is an asymptotic solution.

Therefore, only rough descriptions can be made, however without any obligation.

## Standard Grit Size for Diamond and CBN (Bornitride)

In the following grain table we not only have the FEPA but also the US-mesh designation, mesh opening in micron ( $\mu$ ) and conventional grain designations listed. You can then perform conversion yourself.

Diamond Standard FEPA		CBN Standard FEPA		US-Standard (US Mesh)		Mesh Size $\mu$	Grit Size Siliziumcarbide Corundum
narrow	wide	narrow	wide	narrow	wide		
D1181 D1001	D1182	-	-	16/18 18/20	16/20	1180-1000 1000-850	20
D851 D711	D852	-	-	20/25 25/30	20/30	850-710 710-600	24 30
D601 D501	D602	B501	-	30/35 35/40	30/40	600-500 500-425	36 40
D427 D356	D427	B426 B356	B427	40/45 45/50	40/50	425-355 355-300	46 50
D301	-	B301	-	50/60	-	300-250	60
D251 D213	D252	B251 B213	B252	60/70 70/80	-	250-212 212-180	70 80
D181	-	B181	-	80/100	-	180-150	90
D151	-	B151	-	100/120	-	150-125	100
D126	--	B126	-	120/140	-	125-106	120
D107	-	B107	-	140/170	-	106-90	150
D91	-	B91	-	170/200	-	90-75	180
D76	-	B76	-	200/230	-	75-63	200
D64	-	B64	-	230/270	-	63-53	220
D54	-	B54	-	270/325	-	53-45	250
D46	-	B46	-	325/400	-	45-38	280
D35	-	-	-	400/500	-	40-32	320
D30	-	B30	-	450/550	-	32-25	340
D25	-	-	-	600	-	30-20	380
D20	-	-	-	-	-	25-15	-
D15	-	B15	-	1200	-	20-10	600
D10	-	-	-	-	-	15-8	-
D7	-	-	-	2400	-	12-6	1000
D6	-	-	-	-	-	8-4	-
D3	-	-	-	6000	-	4-2	-
D1	-	-	-	8000	-	2-1	-

## Operating conditions for Diamond and CBN Wheels

The cutting speed has great influence on the grinding performance, lifetime and polish quality for diamond- and CBN grinding wheels.

We therefore recommend employing the grinding wheels with our prescribed cutting speed. The lower values apply to the bigger, and the higher values to the smaller contact area.

We listed our recommended cutting speeds for the equivalent grinding procedure along with a conversion table of cutting speed to rate of rotation.

Diamond Wheels for Tungsten Carbide	Resin Bond		Metal Bond		Electro Plated
	wet m/s	dry m/s	wet m/s	dry m/s	wet/dry m/s
Tool Grinding	25-30	16-22	12-20	12-20	20-30
Inside Grinding	10-20	8-15	10-18	8-12	10-20
Flat Grinding	25-35	-	20-30	-	20-30
External cylindrical Grinding	25-35	-	20-30	-	20-30
Deep pass Grinding	20-30	-	80-140	-	20-140

CBN-Wheels for hardened Steel	Resin Bond		Metal Bond		Electro Plated
	wet m/s	dry m/s	wet m/s	dry m/s	wet/dry m/s
Tool Grinding	25-35	16-28	15-25	10-15	20-30
Inside Grinding	15-25	10-20	12-20	10-15	10-20
Flat Grinding	30-40	-	15-20	-	20-30
External cylindrical Grinding	30-40	-	15-25	-	20-30
Deep pass Grinding	20-30	30-40	80-140	-	20-140

## Conversion table of cut speed / diameter (m/s) on rotations by minute (RPM)

D	8 m/s	12 m/s	15 m/s	18 m/s	20 m/s	22 m/s	28 m/s	30 m/s
3	50960	76394	95493	114592	127324	140056	178254	190986
5	30560	45800	57300	68800	76400	84000	106952	114592
10	15280	22930	28650	34380	38200	42000	53500	57300
15	10170	15300	19100	22900	25500	28000	35650	38200
25	6130	9200	11460	13800	15300	16850	21400	23000
50	3050	4580	5730	6870	7650	8400	10700	11450
75	2040	3060	3820	4580	5100	5600	7150	7650
100	1530	2290	2870	3440	3825	4200	5350	5730
125	1220	1830	2290	2750	3050	3355	4280	4600
150	1020	1530	1910	2290	2550	2800	3570	3800
200	765	1145	1430	1720	1910	2120	2675	2875
250	610	920	1150	1380	1525	1685	2140	2300
300	510	765	950	1145	1275	1400	1780	1900
350	440	655	820	980	1090	1200	1530	1640
400	380	570	715	860	960	1050	1340	1450
450	340	510	635	760	850	930	1190	1270
500	305	460	570	690	765	840	1070	1145
600	255	385	480	575	640	700	890	955

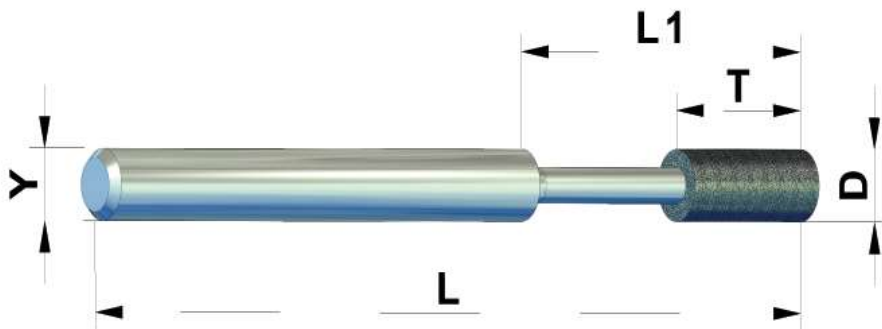
D	40 m/s	50 m/s	60 m/s	70 m/s	80 m/s	90 m/s	100 m/s	110 m/s
3	254648	318310	381972	445634	509296	572958	636620	700282
5	152789	190986	229183	267380	305577	343775	381972	420169
10	76500	95500	114592	133690	152789	171887	190986	210085
15	50800	63800	76400	89127-	101859	114592	127324	140056
25	30600	38200	45840	53520	61120	68730	76400	82000
50	15300	19100	22920	26760	30560	34360	38200	42000
75	10160	15280	15280	17840	20360	22920	25480	28000
100	7620	9550	11460	13380	15280	17180	19100	21000
125	6120	7640	9180	10700	12220	13760	15280	16800
150	5080	6380	7640	8920	10180	11460	12740	14000
200	3820	4775	5730	6690	7640	8590	9550	10510
250	3060	3820	4590	5350	6110	6880	7640	8400
300	2540	3180	3820	4460	5090	5730	6370	7000
350	2180	2730	3270	3820	4370	4910	5460	6000
400	1910	2390	2870	3340	3820	4300	4780	5250
450	1700	2120	2450	2970	3390	3820	4240	4670
500	1530	1910	2290	2670	3060	3440	3820	4200
600	1280	1590	1910	2230	2550	2870	3180	3500



# Cylindrical Grinding Pins Type 300 / 308 / 309 / 306



On ordering please indicate whether diamond- or cbn grit as well as grain size!



# Cylindrical Grinding Pins Type 300 / 308 / 309

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Head Ø D	Width T	Shank-Ø Y	Collar L1	Length L	Grit Diamond/ CBN	Price Diamond €	Price CBN €					
300.008.0403	0,8	4	3	9	55	30-46-54-64- 76-91-107- 126-151- 181-252	7,80	7,80					
300.010.0403	1,0												
300.013.0403	1,3												
300.015.0403	1,5												
300.018.0403	1,8												
300.020.0403	2,0												
300.025.0403	2,5												
300.030.0503	3,0	5	3	20	55		10,30	10,30					
300.035.0503	3,5												
300.040.0503	4,0												
300.045.0503	4,5												
300.050.0503	5,0												
300.050.0706	5,0			7					6	25	75	11,70	11,70
300.060.0706	6,0									30			
300.070.0806	7,0	8	6	35	75		15,00	15,40					
300.080.0806	8,0						16,20	16,60					
300.100.1006	10,0						20,90	21,40					
300.120.1010	12,0	10	10	36	90		24,00	24,60					
300.150.1010	15,0						27,60	28,30					
308.030.0406	3,0						4	6	20	110	12,00	12,00	
308.040.0506	4,0	5											
308.050.0606	5,0	6											
308.060.0706	6,0	7											
308.080.0806	8,0	8											
308.100.1008	10,0	10											
308.120.1010	12,0	10											
308.150.1010	15,0	10											
309.020.0406	2,0	4	6	20	60		25,50	26,60					
309.025.0406	2,5												
309.030.0506	3,0	5											
309.035.0506	3,5												
309.040.0706	4,0												
309.045.0706	4,5	7											
309.050.0706	5,0												
309.055.0706	5,5												
309.060.0706	6,0												
309.070.1006	7,0												
309.080.1006	8,0												
309.090.1006	9,0												
309.100.1006	10,0	10											
309.120.1506	12,0					15							
309.150.1506	15,0												

# Cylindrical Grinding Pins with Tungsten Carbide Shank Type 306

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

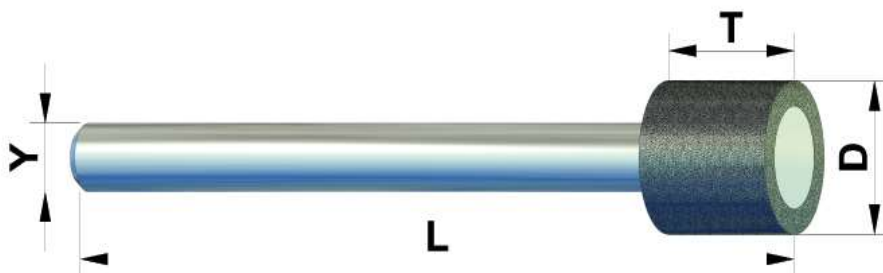
Art. No..	Head Ø D	Width T	Shank Ø Y	Collar L1	Length L	Grit Diamond/ CBN	Price Diamond €	Price CBN €	
306.004.0203	0,4	2	3	3	40	30	9,40	9,40	
306.005.0203	0,5			5		30-64			
306.006.0303	0,6	3		6		30-91	8,70	8,70	
306.007.0303	0,7			10/15 depending on grit size					
306.008.0303	0,8								
306.009.0303	0,9								
306.010.0303	1,0								
306.011.0303	1,1			4					15
306.012.0303	1,2								
306.013.0303	1,3								
306.014.0303	1,4								
306.015.0303	1,5								
306.016.0403	1,6	5	16		30-46-54-64- 76-91-107- 126-151- 181-252				
306.017.0403	1,7			15/16 depending on grit size					
306.018.0403	1,8								
306.019.0403	1,9								
306.020.0503	2,0								
306.021.0503	2,1			4		20	60	25,10	26,10
306.022.0503	2,2								
306.023.0503	2,3								
306.024.0503	2,4								
306.025.0503	2,5								
306.026.0503	2,6								
306.027.0503	2,7								
306.028.0503	2,8								
306.029.0503	2,9								
306.030.0503	3,0								
306.030.0406	2,0	4	6	20	60	25,10	26,10		
306.025.0406	2,5								
306.030.0506	3,0							5	
306.035.0506	3,5								
306.040.0706	4,0								
306.045.0706	4,5	7	6	20	60	25,10	26,10		
306.050.0706	5,0								
306.055.0706	5,5								
306.060.0706	6,0								

# Cylindrical Grinding Pins Type 301 / 313



On ordering please indicate whether diamond- or cbn grit as well as grain size!

301



# Cylindrical Grinding Pins Type 301

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Head Ø D	Width T	Shank Ø Y	Length L	Grit Diamond/CBN	Price Diamond €	Price CBN €		
301.045.0504.1	4,5	5	4	50		13,30	15,40		
301.045.0504.3				75					
301.050.0504.1	5,0	5	4	50					
301.050.0504.3				75					
301.055.0504.1	5,5	5	4	50					
301.055.0504.2				60					
301.055.0505.1			5	50					
301.055.0505.3				70					
301.055.0505.4				80					
301.060.0604.1				6,0				6	4
301.060.0604.2	60								
301.060.0605.1	5	50							
301.060.0605.3		70							
301.060.0605.4		80							
301.065.0605.1		6,5	6					5	50
301.065.0605.3	70								
301.065.0605.4	6			80					
301.065.0606.3				70					
301.065.0606.4	80								
301.065.0606.5	100								
301.070.1006.3	7,0	10	6	70	30-46-54-64- 76-91-107-126- 151-181-252	14,10	15,80		
301.070.1006.4				80					
301.070.1006.5				100					
301.075.1006.3	7,5	10	6	70					
301.075.1006.4				80					
301.075.1006.5				100					
301.080.1006.3	8,0	10	6	70				14,60	16,60
301.080.1006.4				80					
301.080.1006.5				100					
301.085.1006.3	8,5	10	6	70					
301.085.1006.4				80					
301.085.1006.5			8	100					
301.085.1008.3				70					
301.085.1008.4				80					
301.085.1008.5				100					
301.090.1006.3	9,0	10	6	70	17,70	19,80			
301.090.1006.4				80					
301.090.1006.5			8	100					
301.090.1008.3				70					
301.090.1008.4				80					
301.090.1008.5				100					
301.095.1006.3	9,5	10	6	70					
301.095.1006.4				80					
301.095.1006.5			8	100					
301.095.1008.3				70					
301.095.1008.4				80					
301.095.1008.5				100					

# Cylindrical Grinding Pins Type 301

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Head Ø D	Width T	Shank Ø Y	Length L	Grit Diamond/CBN	Price Diamond €	Price CBN €
301.100.1006.3	10,0	10	6	70	30-46-54-64- 76-91-107-126- 151-181-252	19,50	21,40
301.100.1006.4				80			
301.100.1006.5				100			
301.100.1008.3			8	70			
301.100.1008.4				80			
301.100.1008.5				100			
301.105.1506.3	10,5	15	6	70		21,30	23,30
301.105.1506.4				80			
301.105.1506.5				100			
301.105.1508.3			8	70			
301.105.1508.4				80			
301.105.1508.5				100			
301.105.1510.4			10	80			
301.105.1510.5				100			
301.105.1510.6				120			
301.110.1506.3	11,0	15	6	70		21,30	23,30
301.110.1506.4				80			
301.110.1506.5				100			
301.110.1508.3			8	70			
301.110.1508.4				80			
301.110.1508.5				100			
301.110.1510.4			10	80			
301.110.1510.5				100			
301.110.1510.6				120			
301.115.1506.3	11,5	15	6	70	21,30	23,30	
301.115.1506.4				80			
301.115.1506.5				100			
301.115.1508.3			8	70			
301.115.1508.4				80			
301.115.1508.5				100			
301.115.1510.4			10	80			
301.115.1510.5				100			
301.115.1510.6				120			
301.120.1506.3	12,0	15	6	70	22,60	24,60	
301.120.1506.4				80			
301.120.1506.5				100			
301.120.1508.3			8	70			
301.120.1508.4				80			
301.120.1508.5				100			
301.120.1510.4			10	80			
301.120.1510.5				100			
301.120.1510.6				120			

# Cylindrical Grinding Pins Type 301

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Head Ø D	Width T	Shank Ø Y	Length L	Grit Diamond/CBN	Price Diamond €	Price CBN €
301.125.1506.3	12,5	15	6	70		22,60	24,60
301.125.1506.4				80			
301.125.1506.5				100			
301.125.1508.3			8	70			
301.125.1508.4				80			
301.125.1508.5				100			
301.125.1510.4			10	80			
301.125.1510.5				100			
301.125.1510.6				120			
301.130.1506.3			13,0	15			
301.130.1506.4	80						
301.130.1506.5	100						
301.130.1508.3	8	70					
301.130.1508.4		80					
301.130.1508.5		100					
301.130.1510.4	10	80					
301.130.1510.5		100					
301.130.1510.6		120					
301.135.1506.3	13,5	15			6	70	30-46-54-64- 76-91-107-126- 151-181-252
301.135.1506.4			80				
301.135.1506.5			100				
301.135.1508.3			8	70			
301.135.1508.4				80			
301.135.1508.5				100			
301.135.1510.4			10	80			
301.135.1510.5				100			
301.135.1510.6				120			
301.140.1506.3			14,0	15	6	70	
301.140.1506.4	80						
301.140.1506.5	100						
301.140.1508.3	8	70					
301.140.1508.4		80					
301.140.1508.5		100					
301.140.1510.4	10	80					
301.140.1510.5		100					
301.140.1510.6		120					
301.145.1506.3	14,5	15			6	70	
301.145.1506.4			80				
301.145.1506.5			100				
301.145.1508.3			8	70			
301.145.1508.4				80			
301.145.1508.5				100			
301.145.1510.4			10	80			
301.145.1510.5				100			
301.145.1510.6				120			

# Cylindrical Grinding Pins Type 301

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Head Ø D	Width T	Shank Ø Y	Length L	Grit Diamond/CBN	Price Diamond €	Price CBN €			
301.150.1506.3	15,0	15	6	70	30-46-54-64- 76-91-107-126- 151-181-252	26,30	28,30			
301.150.1506.4				80						
301.150.1506.5				100						
301.150.1508.3			8	70						
301.150.1508.4				80						
301.150.1508.5				100						
301.150.1510.4			10	80						
301.150.1510.5				100						
301.150.1510.6				120						
301.155.1506.3			15,5	15				6	70	30-46-54-64- 76-91-107-126- 151-181-252
301.155.1506.4	80									
301.155.1506.5	100									
301.155.1508.3	8	70								
301.155.1508.4		80								
301.155.1508.5		100								
301.155.1510.4	10	80								
301.155.1510.5		100								
301.155.1510.6		120								
301.160.1506.3	16,0	15				6	70	30-46-54-64- 76-91-107-126- 151-181-252	27,50	
301.160.1506.4			80							
301.160.1506.5			100							
301.160.1508.3			8	70						
301.160.1508.4				80						
301.160.1508.5				100						
301.160.1510.4			10	80						
301.160.1510.5				100						
301.160.1510.6				120						
301.165.1506.3			16,5	15		6	70			
301.165.1506.4	80									
301.165.1506.5	100									
301.165.1508.3	8	70								
301.165.1508.4		80								
301.165.1508.5		100								
301.165.1510.4	10	80								
301.165.1510.5		100								
301.165.1510.6		120								
301.170.1506.3	17,0	15			6	70	30-46-54-64- 76-91-107-126- 151-181-252		28,10	
301.170.1506.4			80							
301.170.1506.5			100							
301.170.1508.3			8	70						
301.170.1508.4				80						
301.170.1508.5				100						
301.170.1510.4			10	80						
301.170.1510.5				100						
301.170.1510.6				120						



# Cylindrical Grinding Pins Type 301

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Head Ø D	Width T	Shank Ø Y	Length L	Grit Diamond/CBN	Price Diamond €	Price CBN €	
301.175.1506.3	17,5	15	6	70		28,10	30,20	
301.175.1506.4				80				
301.175.1506.5				100				
301.175.1508.3			8	70				
301.175.1508.4				80				
301.175.1508.5				100				
301.175.1510.4			10					80
301.175.1510.5								100
301.175.1510.6								120
301.180.1506.3			18,0	15				6
301.180.1506.4	80							
301.180.1506.5	100							
301.180.1508.3	8	70						
301.180.1508.4		80						
301.180.1508.5		100						
301.180.1510.4	10				80			
301.180.1510.5					100			
301.180.1510.6					120			
301.185.1508.3	18,5	15			8	70	30-46-54-64- 76-91-107-126- 151-181-252	
301.185.1508.4			80					
301.185.1508.5			100					
301.185.1510.4			10		80			
301.185.1510.5					100			
301.185.1510.6					120			
301.190.1508.3					19	15		
301.190.1508.4	80							
301.190.1508.5	100							
301.190.1510.4	10		80					
301.190.1510.5			100					
301.190.1510.6			120					
301.195.1508.3	19,5	15	8	70				
301.195.1508.4				80				
301.195.1508.5				100				
301.195.1510.4			10					80
301.195.1510.5								100
301.195.1510.6								120
301.200.1508.3	20	15	8	70		29,30	31,90	
301.200.1508.4				80				
301.200.1508.5				100				
301.200.1510.4			10					80
301.200.1510.5								100
301.200.1510.6								120

# Cylindrical Grinding Pins Type 313 with Tungsten Carbide Shank

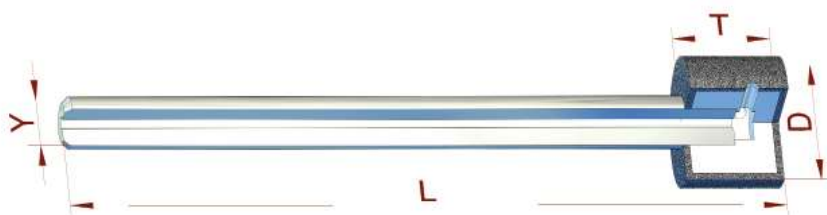
Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Head Ø D	Width T	Shank Ø Y	Length L	Grit Diamond/CBN	Price Diamond €	Price CBN €	
313.050.0503.1	5	5	3	75	30-46-54-64- 76-91-107-126- 151-181-252	29,50	29,50	
313.050.0503.3				100				
313.060.0503.2	6			80		30,50	30,50	
313.060.0503.3				100				
313.070.0806.1	7	8	6	75		43,70	43,70	
313.070.0806.3				100				
313.080.0803.2	8			3		80	34,80	34,80
313.080.0803.3						100		
313.080.0806.1		6	75	46,50		46,50		
313.080.0806.3			100					
313.100.1006.4	10	10	6	30-46-54-64- 76-91-107-126- 151-181-252		49,00	49,00	
313.100.1008.4			8			54,50	54,50	
313.120.1006.4	12		6			52,40	52,40	
313.120.1008.4			8			57,80	57,80	
313.120.1010.4		10	82,30			82,30		
313.140.1006.4		14	6			55,60	55,60	
313.140.1008.4	8		61,70			61,70		
313.140.1010.4	10		88,20			88,20		
313.150.1006.4	15		6			57,60	57,60	
313.150.1008.4		8	63,20			63,20		
313.150.1010.4		10	88,20		88,20			
313.160.1006.4		16	6		58,90	58,90		
313.160.1008.4	8		64,30		64,30			
313.160.1010.4	10		90,30		90,30			
313.180.1006.4	18		6		59,90	59,90		
313.180.1008.4		8	65,40		65,40			
313.180.1010.4		10	94,20		94,20			
313.200.1006.4		20	6		61,10	61,10		
313.200.1008.4	8		66,50		66,50			
313.200.1010.4	10		98,30		98,30			

# Cylindrical Grinding Pins with Inside Cooling and Tungsten Carbide Shank Type 312



On ordering please indicate whether diamond- or cbn grit as well as grain size!



312

# Cylindrical Grinding Pins Type 312 with Inside Cooling and Tungsten Carbide Shank

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Kopf- Ø D	Width T	Shank Ø Y	Hole Ø	Length L	Grit Diamond/CBN	Price Diamant €	Price CBN €
312.100.1006.1	10	10	6	1,8	110	30-46-54-64- 76-91-107-126- 151-181-252	65,30	65,30
312.100.1006.2					150		71,00	71,00
312.100.1006.3					200		78,80	78,80
312.100.1006.4					250		87,60	87,60
312.120.1006.1	12		110	68,30	68,30			
312.120.1006.2			150	74,30	74,30			
312.120.1006.3			200	82,00	82,00			
312.120.1006.4			250	87,80	87,80			
312.120.1008.1	12	8	2,5	110	77,50		77,50	
312.120.1008.2				150	85,30		85,30	
312.120.1008.3				200	93,00		93,00	
312.120.1008.4				250	100,80		100,80	
312.150.1506.1	15	6	1,8	110	73,60		73,60	
312.150.1506.2				150	79,50		79,50	
312.150.1506.3				200	87,20		87,20	
312.150.1506.4				250	93,00		93,00	
312.150.1508.1	15	8	2,5	110	82,80	82,80		
312.150.1508.2				150	90,50	90,50		
312.150.1508.3				200	98,40	98,40		
312.150.1508.4				250	105,80	105,80		
312.150.1510.1	15	10	3,0	110	95,90	95,90		
312.150.1510.2				150	111,50	111,50		
312.150.1510.3				200	123,10	123,10		
312.150.1510.4				250	134,80	134,80		
312.180.1506.1	18	6	1,8	110	75,70	75,70		
312.180.1506.2				150	81,50	81,50		
312.180.1506.3				200	89,30	89,30		
312.180.1506.4				250	95,10	95,10		
312.180.1508.1	18	8	2,5	110	84,90	84,90		
312.180.1508.2				150	92,70	92,70		
312.180.1508.3				200	98,60	98,60		
312.180.1508.4				250	104,30	104,30		
312.180.1510.1	18	10	3,0	110	98,10	98,10		
312.180.1510.2				150	113,50	113,50		
312.180.1510.3				200	125,20	125,20		
312.180.1510.4				250	136,80	136,80		

On these grinding pins it is possible to replat the the diamond or CBN-Layer easily and cost efficiently

# Cylindrical Grinding Pins Type 312 with Inside Cooling and Tungsten Carbide Shank

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Head Ø D	Width T	Shank Ø Y	Hole Ø	Length L	Grit Diamond/CBN	Price Diamond €	Price CBN €		
312.200.1506.1	20	15	6	1,8	110	30-46-54-64- 76-91-107-126- 151-181-252	76,90	76,90		
312.200.1506.2					150		82,80	82,80		
312.200.1506.3					200		90,60	90,60		
312.200.1506.4					250		96,30	96,30		
312.200.1508.1	20		8		110		86,00	86,00		
312.200.1508.2					150		94,00	94,00		
312.200.1508.3					200		99,50	99,50		
312.200.1508.4					250		105,80	105,80		
312.200.1510.1	20	15	10	2,5	110		99,00	99,00		
312.200.1510.2					150		114,70	114,70		
312.200.1510.3					200		126,40	126,40		
312.200.1510.4					250		138,00	138,00		
312.250.1508.1	25		15		8		3,0	110	93,00	93,00
312.250.1508.2								150	100,70	100,70
312.250.1508.3								200	108,50	108,50
312.250.1508.4								250	116,40	116,40
312.250.1510.1	25	15		10	3,0	110		105,00	105,00	
312.250.1510.2						150		120,30	120,30	
312.250.1510.3						200		132,00	132,00	
312.250.1510.4						250		143,60	143,60	
312.300.1510.1	30		15	10		3,0	110	113,40	113,40	
312.300.1510.2							150	130,00	130,00	
312.300.1510.3							200	140,70	140,70	
312.300.1510.4							250	152,40	152,40	

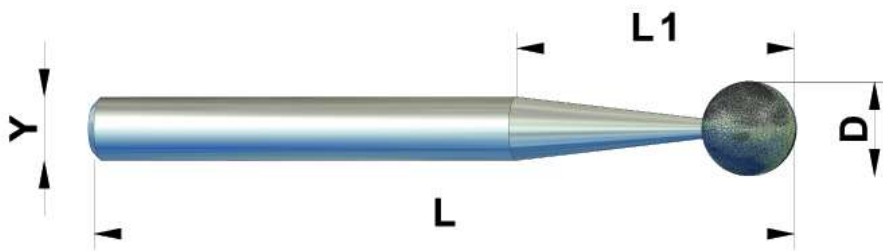
On these grinding pins it is possible to replat the the diamond or CBN-Layer easily and cost efficiently.

# Ball and Half Ball Grinding Pins Type 302 / 314 / 304

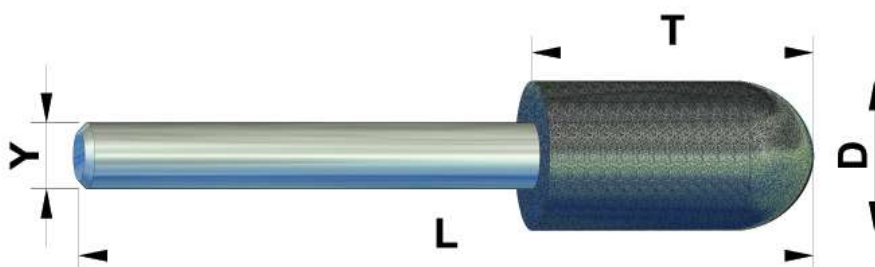


On ordering please indicate whether diamond- or cbn grit as well as grain size!

302/314



304



# Ball Grinding Pins Type 302

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Head Ø D	Shank Ø Y	Collar L1	Length L	Grit Diamond/CBN	Price Diamond €	Price CBN €			
302.005.03	0,5	3	10	40	30	9,20	9,20			
302.006.03	0,6									
302.007.03	0,7				30-46-54-64					
302.008.03	0,8									
302.009.03	0,9									
302.010.03	1,0									
302.011.03	1,1									
302.012.03	1,2									
302.013.03	1,3									
302.014.03	1,4									
302.015.03	1,5									
302.016.03	1,6									
302.017.03	1,7									
302.018.03	1,8				6	20	60	30-46-54-64- 76-91-107-126- 151-181-252	7,10	7,10
302.019.03	1,9									
302.020.03	2,0									
302.025.03	2,5									
302.030.03	3,0									
302.040.03	4,0									
302.050.03	5,0									
302.060.03	6,0									
302.050.06	5,0									
302.060.06	6,0									
302.080.06	8,0									
302.100.06	10,0									
302.120.06	12,0									
302.140.06	14,0									
302.150.06	15,0									
302.160.06	16,0									
302.180.06	18,0									
302.200.06	20,0									
302.220.08	22,0	8		80		39,20	40,30			
302.220.08	22,0									
302.250.08	25,0									
302.300.10	30,0	10				63,20	65,10			

## Ball Grinding Pins Type 314 with Tungsten Carbide Shank

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art.No.	Head Ø D	Shank Ø Y	Length L	Grit Diamond/CBN	Price Diamond €	Price CBN €
314.04.03.1	4	3	77	30-46-54-64- 76-91-107-126- 151-181-252	29,50	29,50
314.05.03.1	5				30,50	30,50
314.06.03.1	6				32,60	32,60
314.07.03.1	7				35,20	35,20
314.08.03.1	8		102		29,50	29,50
314.04.03.2	4				30,50	30,50
314.05.03.2	5				32,60	32,60
314.06.03.2	6				35,20	35,20

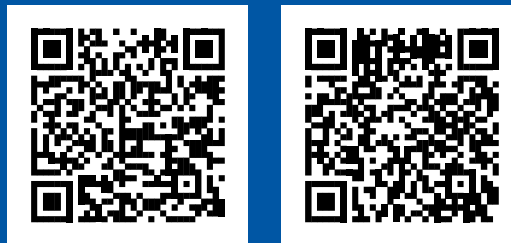
## Half Ball Grinding Pins Type 304

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

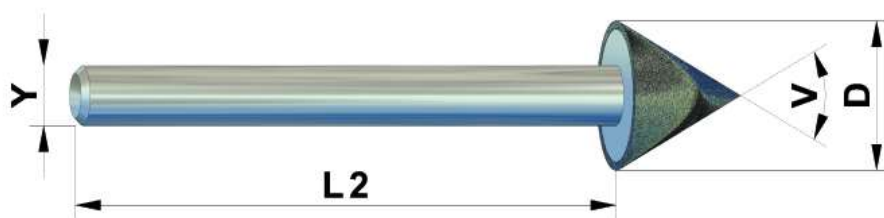
Art. No.	Head Ø D	Shank Ø Y	Width T	Length L	Grit Diamond/CBN	Price Diamond €	Price CBN €
304.03.03	3	3	15	40	30-46-54-64- 76-91-107-126- 151-181-252	8,30	8,30
304.04.03	4		8,70			8,70	
304.05.03	5		9,10			9,10	
304.06.03	6		10,70			10,70	
304.08.03	8		15,20			15,80	
304.10.03	10		19,70			20,30	
304.06.06	6	6	20	60	30-46-54-64- 76-91-107-126- 151-181-252	11,20	11,50
304.08.06	8		15,20			15,50	
304.10.06	10		19,70			20,30	
304.12.06	12		22,40			23,00	
304.14.06	14		24,80			25,60	
304.16.06	16		26,90			27,60	
304.18.06	18		28,10			29,00	
304.20.06	20		29,30			30,20	



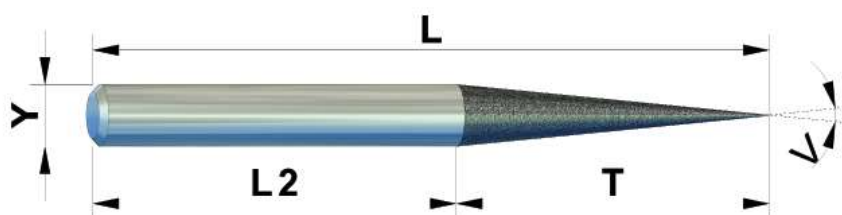
# Taper and Cone Grinding Pins Type 303 / 305



On ordering please indicate whether diamond- or cbn grit as well as grain size and angle!!



303



305

## Taper Grinding Pins Type 303

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Head Ø D	Shank Ø Y	Angle V	Length L2	Grit Diamond/CBN	Price Diamond €	Price CBN €	
303.03.03	3,0	3	45°-60°- 90° 120°	40	30-46-54-64- 76-91-107-126- 151-181-252	7,50	7,50	
303.04.03	4,0					8,60	8,60	
303.05.03	5,0							
303.06.03	6,0							
303.06.06	6,0	6		45°		60	11,80	11,80
303.08.06	8,0						16,00	16,00
303.10.06	10,0						20,30	20,30
303.12.06	12,0						23,40	23,40
303.14.06	14,0						24,60	24,60
303.15.06	15,0						27,60	27,60
303.16.06	16,0			28,90		28,90		
303.18.06	18,0			36,10		36,10		
303.20.06	20,0		53,60	53,60				
303.18.06	18,0		8	60°-90°- 120°	29,90	29,90		
303.20.06	20,0	60°		32,10	32,10			
303.25.06	25,0	90°-120°		42,20	42,20			
303.30.06	25,0	60°		39,20	39,20			
303.30.06	30,0	8	60°	54,10	54,10			
303.30.06	30,0		90°-120°	48,70	48,70			
303.35.08	35,0		60°	62,20	62,20			
303.35.08	35,0		90°-120°	58,20	58,20			
303.40.08	40,0	8	60°	69,30	69,30			
303.40.08	40,0		90°-120°	65,30	65,30			

## Cone Grinding Pins Type 305

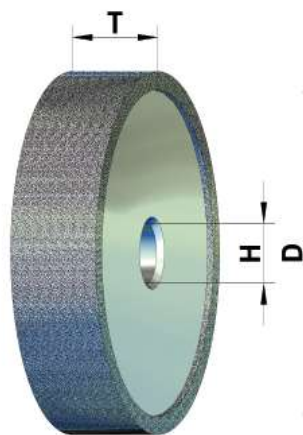
Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Shank Ø Y	Angle V°	Length L	Width T	Grit Diamond/CBN	Price Diamond €	Price CBN €
305.05.06	6	5	128	68	30-46-54-64- 76-91-107-126- 151-181-252	16,70	16,70
305.06.06		6	115	55			
305.08.06		8	100	40			
305.10.06		10	94	34		14,70	14,70
305.12.06		12	86	26			
305.14.06		14	84	24			
305.16.06		16	81	21			
305.18.06		18	79	19		13,50	13,50
305.20.06		20	77	17			

# Grinding Wheels with lateral coating Type 307



On ordering please indicate whether diamond- or cbn grit as well as grain size!



307

# Grinding Wheels with lateral coating Type 307

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

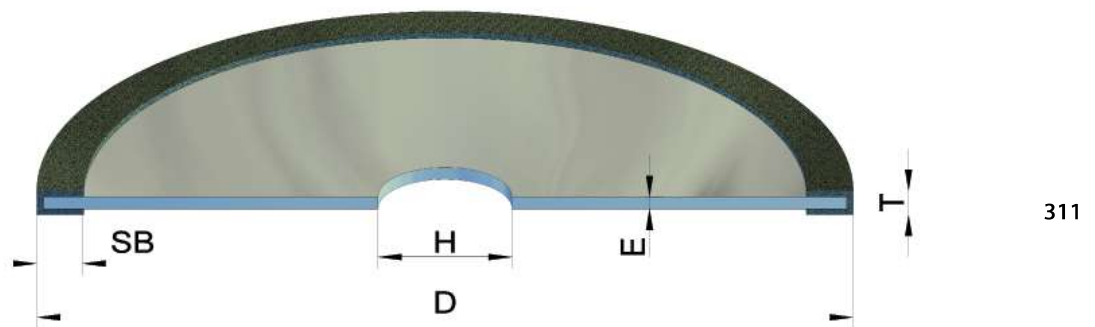
Art. No.	Diametre	Width	Hole	Grit Diamond/CBN	Price Diamond	Price CBN	
	D	T	H		€	€	
307.1010.06	10	10	6	30-46-54-64- 76-91-107-126- 151-181-252	15,70	15,70	
307.1015.06	10	15			16,10	16,10	
307.1210.06	12	10			16,20	16,20	
307.1215.06	12	15			16,60	16,60	
307.1220.06	12	20			17,10	17,10	
307.1510.06	15	10			17,60	17,60	
307.1515.06	15	15			18,60	18,60	
307.1520.06	15	20			19,30	19,30	
307.1810.06	18	10			20,20	20,20	
307.1815.06	18	15			22,60	22,60	
307.1820.06	18	20			23,00	23,00	
307.2010.06	20	10			8	24,10	24,10
307.2010.08	20	10				24,10	24,10
307.2015.08	20	15				26,50	26,50
307.2020.08	20	20	28,00			28,00	
307.2510.08	25	10	27,10			27,10	
307.2510.13	25	10	13			27,10	27,10
307.2515.08	25	15	8		28,60	28,60	
307.2515.13	25	15	13		28,60	28,60	
307.2520.13	25	20			29,90	29,90	
307.3010.08	30	10	8		30,20	30,20	
307.3010.13	30	10	13		30,20	30,20	
307.3015.08	30	15	8		31,70	31,70	
307.3015.13	30	15	13		31,70	31,70	
307.3020.13	30	20			33,00	33,00	
307.3510.20	35	10	20		34,60	34,60	
307.3515.20	35	15			35,70	35,70	
307.3520.20	35	20			37,10	37,10	
307.4010.10	40	10	10		38,10	38,10	
307.4010.20	40	10	20		38,10	38,10	
307.4015.20	40	15		39,20	39,20		
307.4020.20	40	20		40,60	40,60		
307.4510.20	45	10		42,20	42,20		
307.4515.20	45	15		43,70	43,70		
307.4520.20	45	20		44,60	44,60		
307.5010.10	50	10		10	45,60	45,60	
307.5010.20	50	10	20	45,60	45,60		
307.5015.20	50	15		51,20	51,20		
307.5020.20	50	20		56,10	56,10		
307.6010.20	60	10		63,20	63,20		
307.6015.20	60	15		73,60	73,60		
307.6020.20	60	20		79,70	79,70		
307.7510.20	75	10		86,70	86,70		
307.7515.20	75	15		98,80	98,80		
307.7520.20	75	20		112,30	112,30		

Extra charge per side for sparings, or other diametre for boring € 4,90

# Cutting Discs Type 311



On ordering please indicate whether diamond- or cbn grit as well as grain size!



# Cutting Discs Type 311

Customs tariff number: Diamond 6804 21 00, CBN 6804 22 50

Art. No.	Diametre D	E	T D76 B76	T D91 B91	T D107 B107	T D126 B126	T D151 B151	T D181 B181	Hole H	Price Diamond €	Price CBN €
311.020.0505	20	0,5	0,70	0,75	0,80	0,85	0,90	0,95	5,0	24,60	24,60
311.020.1005	20	1,0	1,20	1,25	1,30	1,35	1,40	1,45			
311.020.1505	20	1,5	1,70	1,75	1,80	1,85	1,90	1,95			
311.020.2005	20	2,0	2,20	2,25	2,30	2,35	2,40	2,45			
311.025.0508	25	0,5	0,70	0,75	0,80	0,85	0,90	0,95	8,0	27,10	27,10
311.025.1008	25	1,0	1,20	1,25	1,30	1,35	1,40	1,45			
311.025.1508	25	1,5	1,70	1,75	1,80	1,85	1,90	1,95			
311.025.2008	25	2,0	2,20	2,25	2,30	2,35	2,40	2,45			
311.032.0508	32	0,5	0,70	0,75	0,80	0,85	0,90	0,95		29,60	29,60
311.032.1008	32	1,0	1,20	1,25	1,30	1,35	1,40	1,45			
311.032.1508	32	1,5	1,70	1,75	1,80	1,85	1,90	1,95			
311.032.2008	32	2,0	2,20	2,25	2,30	2,35	2,40	2,45			
311.040.0510	40	0,5	0,70	0,75	0,80	0,85	0,90	0,95	10,0	39,00	39,00
311.040.1010	40	1,0	1,20	1,25	1,30	1,35	1,40	1,45			
311.040.1510	40	1,5	1,70	1,75	1,80	1,85	1,90	1,95			
311.040.2010	40	2,0	2,20	2,25	2,30	2,35	2,40	2,45			
311.050.0513	50	0,5	0,70	0,75	0,80	0,85	0,90	0,95	13,0	43,00	43,00
311.050.1013	50	1,0	1,20	1,25	1,30	1,35	1,40	1,45			
311.050.1513	50	1,5	1,70	1,75	1,80	1,85	1,90	1,95			
311.050.2013	50	2,0	2,20	2,25	2,30	2,35	2,40	2,45			
311.063.0816	63	0,8	1,00	1,05	1,10	1,15	1,20	1,25	16,0	49,00	49,00
311.063.1516	63	1,5	1,70	1,75	1,80	1,85	1,90	1,95			
311.063.2016	63	2,0	2,20	2,25	2,30	2,35	2,40	2,45			
311.100.1016	100	1,0	1,20	1,25	1,30	1,35	1,40	1,45			
311.100.1516	100	1,5	1,70	1,75	1,80	1,85	1,90	1,95	73,50	73,50	
311.125.1022	125	1,0	1,20	1,25	1,30	1,35	1,40	1,45			
311.125.1522	125	1,5	1,70	1,75	1,80	1,85	1,90	1,95	22,0	104,20	104,20

## Clamping shank Type A12 for our Discs Type 311

Art.No.	For Discs Ø	Shank- Ø	Length mm	Price €
A12.03	20-32	3	55	12,80
A12.03H	20-40		50 with Tungsten Carbide Shank	29,30
A12.06	40-50	6	100	17,60
A12.08	63	8		21,50
A12.10	100-125	10		48,70

## Note

**Since 95 Years Production of Diamond Tools**



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