



# 08

## Rotating instruments

### The right selection of top-quality instruments

With its TwisTec® family of instruments, DeguDent is offering a series of tools that covers practically the entire range of applications you face in dental technology. The selection covers all the instruments and all the relevant steps for the respective processes. We have taken great care to make our presentation as transparent and easily understood as possible and to adapt it to the sequence of steps you follow in your daily work.

- Top-quality innovative products • Brilliant surface quality • Excellent material properties
- Optimized abrasive performance • Adapted to DeguDent materials
- Optimized running smoothness, nearly without any vibration (exceeds the ISO requirements)
- Up to a working part of 2.35 mm in diameter: Instrument consists of a single piece of tungsten carbide
- Working part more than 2.35 mm in diameter: Working part is welded to the spring steel shank and features a specially designed safety zone
- The length of all shanks are designed for laboratory hand pieces; their diameter is 2.35 mm (ISO 104 HP = hand piece)
- Shanks for the milling technique/milling units are available with diameters of 2.35 mm (short, ISO 103) and Ø 3.00 mm (short, ISO 123)

DeguDent offers a complete range of innovative high-quality tungsten carbide cutters suitable for the treatment of almost any material. The selection of the cut and the geometry of the instruments are tailored to the material to be machined. Durability, milling characteristics and removal performance are direct functions of speed and contact pressure and the properties of the material to be machined. To select the right shape and cut, please consult our Application Guide on page 141.

Exceeding the maximum speed constitutes a safety hazard.

## TC cutter, cross-cut, super-fine (yellow ring)

Used for: Precious alloys, non-precious alloys, composite

Cut: ISO 110

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Packing unit: 1 per box



Shape	Cone	Cylinder	Cone	Torpedo	Cone	Cylinder	Flame	Egg Shape	Cone
L mm	14.0	16.0	8.0	8.0	8.0	8.0	7.0	5.3	14.1
Ø mm	2.3	2.3	2.3	2.3	1.6	2.3	2.3	2.3	4.0
Maximum speed (rpm)	40.000	40.000	40.000	40.000	40.000	40.000	40.000	40.000	30.000
Application*	9, 10, 18, 19	9, 10, 18, 19	9, 10, 18, 19	9, 10, 18, 19	9, 10, 18, 19	9, 10, 18, 19	9, 10, 18, 19	9, 10, 18, 19	18, 19
ISO 500 104 ...	194 110 023	137 110 023	198 110 023	289 110 023	184 110 016	141 110 023	257 110 023	237 110 023	194 110 040
REF 53 5990 ...	0033	0034	0035	0036	0037	0038	0039	0040	0041



see Application\* page 139

## TC cutter, cross-cut, fine (red ring)

Used for: Precious alloys

Cut: ISO 140

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Packing unit: 1 per box



Shape	Cone	Cylinder	Cone	Torpedo	Cone	Egg Shape	Cylinder	Bud	Cone	Pear	Pear
L mm	14.0	16.0	8.0	8.0	8.0	3.1	8.0	13.9	14.1	11.0	5.0
Ø mm	2.3	2.3	2.3	2.3	1.6	1.4	2.3	6.0	4.0	6.0	2.3
Maximum speed (rpm)	40.000	40.000	40.000	40.000	40.000	40.000	40.000	30.000	30.000	20.000	40.000
Application*	9, 10, 11, 14	9, 10, 11, 14	9, 10, 11, 14	9, 10, 11, 14	9, 10, 11, 14	9, 10, 11, 14	9, 10, 11, 14	11, 15	11, 15	11, 15	9, 10, 11, 14
ISO 500 104 ...	194 140 023	137 140 023	197 140 023	289 140 023	198 140 016	277 140 014	141 140 023	274 140 060	194 140 040	237 140 060	237 140 023
REF 53 5990 ...	0012	0013	0014	0015	0016	0017	0018	0019	0020	0021	0022

# Tungsten carbide cutters

## TC cutter, cross-cut, standard (blue ring)

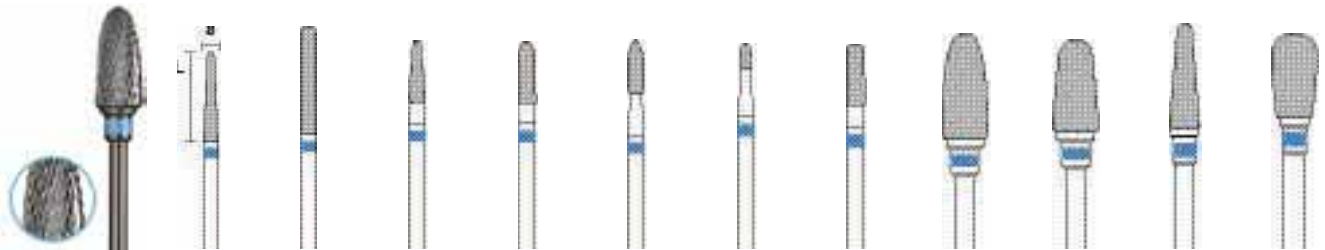
Used for: Precious alloys, CoCr, non-precious alloys, dental stone, resin

Cut: ISO 190

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Packing unit: 1 per box



Shape	Cone	Cylinder	Cone	Torpedo	Flame	Egg Shape	Cylinder	Bud	Cone	Cone	Pear
L mm	14.0	16.0	8.0	8.0	7.0	3.1	8.0	14.2	12.2	14.1	11.0
Ø mm	2.3	2.3	2.3	2.3	2.3	1.4	2.3	6.0	6.0	4.0	6.0
Maximum speed (rpm)	40.000	40.000	40.000	40.000	40.000	40.000	40.000	20.000	20.000	30.000	20.000
Application*	1, 5, 7	1, 5, 7	1, 5, 7	1, 5, 7	1, 5, 7	1, 5, 7	1, 5, 7	2, 6, 8	2, 6, 8	2, 6, 8	2, 6, 8
ISO 500 104 ...	194 190 023	137 190 023	198 190 023	289 190 023	257 190 023	277 190 014	141 190 023	274 190 060	263 190 060	194 190 040	237 190 060
REF 53 5990 ...	0001	0002	0003	0004	0005	0006	0007	0008	0009	0010	0011



see Application\* page 139

## TC cutter, cross-cut, medium-coarse (3 black rings)

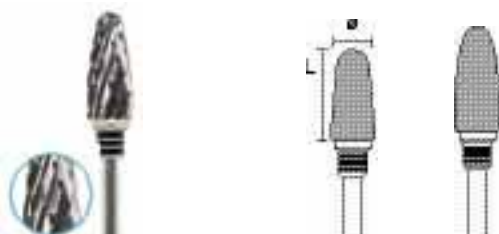
Used for: Dental stone, resin, plaster (dry)

Cut: ISO 221

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Packing unit: 1 per box



Shape	Cone	Bud
L mm	12.2	13.9
Ø mm	6.0	6.0
Maximum speed (rpm)	20.000	20.000
Application*	4, 13	4, 13
ISO 500 104 ...	263 221 060	274 221 060
REF 53 5990 ...	0044	0045

## TC cutter, cross-cut, coarse (green ring)

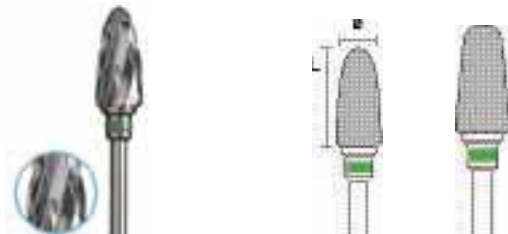
Used for: Resins

Cut: ISO 220

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Packing unit: 1 per box



Shape	Bud	Cone
L mm	13.9	14.2
Ø mm	6.0	7.0
Maximum speed (rpm)	20.000	20.000
Application*	4, 13	4, 13
ISO 500 104 ...	274 220 060	263 220 070
REF 53 5990 ...	0042	0043

## TC cutter, cross-cut, super-coarse (black ring)

Used for: Resins

Cut: ISO 223

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Packing unit: 1 per box



Shape	Cone
L mm	14.2
Ø mm	7.0
Maximum speed (rpm)	20.000
Application*	3
ISO 500 104 ...	263 223 070
REF 53 5990 ...	0046

## TC cutter, spiral-cut, coarse (black ring)

Used for: Reduced-gold alloys, non-precious alloys, titanium

Cut: ISO 194

Shank diameter: ISO 104, 2.35mm

Shank length: ISO 104, hand piece

Packing unit: 1 per box



Shape	Torpedo	Cone
L mm	8.0	13.0
Ø mm	2.3	4.0
Maximum speed (rpm)	40.000	30.000
Application*	1, 5, 16	1, 6, 17
ISO 500 104 ...	289 194 023	194 194 040
REF 53 5990 ...	0031	0032



see Application\* page 139

## TC cutter, spiral-cut, coarse, superfine (3 purple rings)

Used for: Reduced-gold alloys, non-precious alloys, titanium

Cut: ISO 137

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Packing unit: 1 per box



Shape	Cone	Torpedo	Cone	Cone	Grenade	Cylinder	Cone	Bud
L mm	8.0	8.0	8.0	4.2	3.5	8.0	13.7	14.2
Ø mm	2.3	2.3	1.6	0.8	1.4	2.3	4.0	6.0
Maximum speed (rpm)	40.000	40.000	40.000	40.000	40.000	40.000	30.000	20.000
Application*	5, 16	5, 16	5, 16	5, 16	5, 16	5, 16	6, 17	6, 17
ISO 500 104 ...	198 137 023	289 137 023	198 137 016	196 137 008	274 137 014	141 137 023	194 137 040	274 137 060
REF 53 5990 ...	0023	0024	0025	0026	0027	0028	0029	0030

## TC cutter, spiral-cut, fine (purple ring)

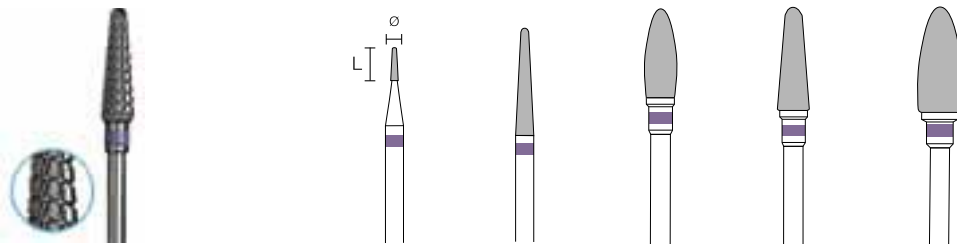
Used for: Reduced-gold alloys, non-precious alloys, titanium

Cut: ISO 134

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Packing unit: 1 per box



Shape	Cone	Cone	Pear	Cone	Bud
L mm	4.2	14.0	11.5	13.7	13.9
Ø mm	0.8	2.3	4.0	4.0	6.0
Maximum speed (rpm)	40.000	40.000	30.000	30.000	20.000
Application*	5, 16	5, 16	6, 17	6, 17	6, 17
ISO 500 104 ...	196 134 008	194 134 023	274 134 040	194 134 040	274 134 060
REF 53 5990 ...	0054	0050	0053	0052	0051



see Application\* page 139

## TC repair cutter

Used for: Roughening of acrylic teeth and dentures

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Packing unit: 1 per box



L mm	3.5
Ø mm	6.0
Maximum speed (rpm)	ca. 5.000
ISO 500 104 ...	118 174 060
REF 53 5990 ...	0048

## TC tricutter bur

Used for: Vacuum formed foil, tray material

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Packing unit: 1 per box



L mm	9.0
Ø mm	2.3
ISO 500 104 ...	467 211 023
REF 53 5990 ...	0047

## TC bur, round

Used for: Metal, resin (e. g. fissure shaping at 5,000 – 40,000 rpm)

Cut: 001

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Maximum speed: 5,000 – 50,000 rpm

Packing unit: 6 per box/pack



Ø mm	0.3	0.4	0.5	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.3	2.7
ISO 500 104 001 001 ...	003	004	005	006	008	010	012	014	016	018	023	027
REF 53 5990 ...	0200	0201	0202	0203	0204	0205	0206	0207	0208	0209	0210	0211

## TC bur, inverted cone

Used for: Metal, resin

Cut: 010 with tip cut

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Maximum speed: 5,000 – 50,000 rpm

Packing unit: 6 per box/pack



L mm	1.7
Ø mm	1.8
ISO 500 104 ...	010 001 018
REF 53 5990 ...	0212

## TC Fissure bur

Used for: Metal, resin

Cut: 006 with tip cut

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Maximum speed: 5,000 – 50,000 rpm

Packing unit: 6 per box/pack



L mm	4.2
Ø mm	0.9
ISO 500 104 ...	107 006 009
REF 53 5990 ...	0213

## Fissure bur, Cone

Used for: Metal, resin

Cut: 007 with tip cut and transverse section

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Maximum speed: 5,000 – 50,000 rpm

Packing unit: 6 per box/pack



L mm	4.2
Ø mm	1.2
ISO 500 104 ...	168 007 012
REF 53 5990 ...	0214

## TC finisher

Used for: Metal

Cut: ISO 213, six-sided

Shank diameter: ISO 104, 2.35 mm

Shank length: ISO 104, hand piece

Maximum speed: 50,000 rpm

Packing unit: 6 per box/pack



L mm	2.5
Ø mm	1.0
ISO 500 104 ...	467 213 010
REF 53 5990 ...	0300

Instruments for the milling technique should be used exclusively in a milling unit. In addition to the 2.35 mm shank diameter (ISO 103) offered, we especially recommend the 3.00 mm shank diameter (ISO 123) for a smoother run. The shank lengths correspond to ISO 103 and 123, hand piece, short.

For wax shaping, the tool should be wetted with Waxit (REF 2518 0013). For metal machining, it should be wetted with a suitable type machine oil. Instruments for fine milling – when wrapped in cotton and soaked in polishing paste – can also be used for polishing metal surfaces.

## Wax cutter, parallel, round

Used for: Trimming of parallel wax models, cut-down milling

Cut: ISO 364

Maximum speed: 3,000 – 5,000 rpm

Packing unit: 1 per box



L mm		8.0	10.0
Ø mm		1.0	1.5
Ø 2.35 mm	ISO 500 103 137 364 ...	010	015
	REF 53 5990 ...	1200	1201
Ø 3.00 mm	ISO 500 123 137 364 ...	010	015
	REF 53 5990 ...	1202	1203

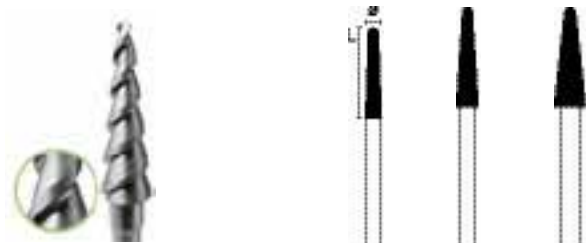
## Wax cutter, conical, round

Used for: Trimming of tapered wax models, cut-down milling

Cut: ISO 364

Maximum speed: 3,000 – 5,000 rpm

Packing unit: 1 per box



Angle		2°	4°	6°
L mm		13.0	13.0	13.0
Ø mm		2.3	3.1	4.0
Ø 2.35 mm	ISO 500 103 200 364 ...	023	031	040
	REF 53 5990 ...	1204	1205	1206
Ø 3.00 mm	ISO 500 123 200 364 ...	023	031	040
	REF 53 5990 ...	1207	1208	1209

## Parallel cutter, cross-cut, coarse

Used for: Pre-milling or coarse milling, reverse milling

Cut: ISO 220

Maximum speed: 10,000 rpm

Packing unit: 1 per box



L mm		8.0	10.0	15.0
Ø mm		1.0	1.5	2.3
Ø 2.35 mm	ISO 500 103 137 220 ...	010	015	023
	REF 53 5990 ...	1100	1101	1102
Ø 3.00 mm	ISO 500 123 137 220 ...	010	015	023
	REF 53 5990 ...	1103	1104	1105

## Parallel cutter, cross-cut, standard

Used for: Pre-milling or coarse milling, reverse milling

Cut: ISO 190

Maximum speed: 10,000 rpm

Packing unit: 1 per box



L mm		8.0	10.0	15.0
Ø mm		1.0	1.5	2.3
Ø 2.35 mm	ISO 500 103 137 190 ...	010	015	023
	REF 53 5990 ...	1106	1107	1108
Ø 3.00 mm	ISO 500 123 137 190 ...	010	015	023
	REF 53 5990 ...	1109	1110	1111

## Parallel cutter, plain-cut

Used for: Fine milling, reverse milling  
 Cut: ISO 103  
 Maximum speed: 10,000 rpm (polishing: 3,000 rpm)  
 Packing unit: 1 per box



L mm		8.0	10.0	15.0
Ø mm		1.0	1.5	2.3
Ø 2.35 mm	ISO 500 103 137 103 ...	010	015	023
	REF 53 5990 ...	1112	1113	1114
Ø 3.00 mm	ISO 500 123 137 103 ...	010	015	023
	REF 53 5990 ...	1115	1116	1117

## Parallel cutter, plain-cut

Used for: Fine milling, reverse milling  
 Cut: ISO 103  
 Left twist, chamfer ground section  
 Maximum speed: 15,000 rpm (polishing: 3,000 rpm)  
 Packing unit: 1 per box



L mm		8.0	10.0	15.0
Ø mm		1.0	1.5	2.3
Ø 2.35 mm	ISO 500 103 137 103 ...	010	015	023
	REF 53 5990 ...	1118	1119	1120
Ø 3.00 mm	ISO 500 123 137 103 ...	010	015	023
	REF 53 5990 ...	1121	1122	1123

## Conical cutter, cross-cut, standard

Used for: Pre-milling or coarse milling of conical crowns, reverse milling  
 Cut: ISO 190  
 Maximum speed: 5,000 – 10,000 rpm  
 Packing unit: 1 per box



Angle		2°	4°	6°
Ø mm		2.3	3.1	4.0
Ø 2.35 mm	ISO 500 103 200 190 ...	023	031	040
	REF 53 5990 ...	1007	1008	1009
Ø 3.00 mm	ISO 500 123 200 190 ...	023	031	040
	REF 53 5990 ...	1010	1011	1012

## Conical cutter, cross-cut, coarse

Used for: Pre-milling or coarse milling of conical crowns, reverse milling  
 Cut: ISO 220  
 Maximum speed: 5,000 – 10,000 rpm  
 Packing unit: 1 per box



Angle		2°	4°	6°
Ø mm		2.3	3.1	4.0
Ø 2.35 mm	ISO 500 103 200 220 ...	023	031	040
	REF 53 5990 ...	1001	1002	1003
Ø 3.00 mm	ISO 500 123 200 220 ...	023	031	040
	REF 53 5990 ...	1004	1005	1006

## Conical cutter, plain-cut

Used for: Fine milling of conical crowns reverse milling  
 Cut: ISO 123  
 Maximum speed: 5,000 – 10,000 rpm  
 Packing unit: 1 per box



Angle		2°	4°	6°
Ø mm		2.3	3.1	4.0
Ø 2.35 mm	ISO 500 103 200 123 ...	023	031	040
	REF 53 5990 ...	1013	1014	1015
Ø 3.00 mm	ISO 500 123 200 123 ...	023	031	040
	REF 53 5990 ...	1016	1017	1018

## Channel cutter

Used for: Milling and fine milling of grooves, holes, reverse milling  
 Cut: ISO 175  
 Maximum speed: 2,000 – 5,000 rpm  
 Packing unit: 1 per box



L mm		7.0	8.0	8.0	8.0
Ø mm		0.7	1.0	1.2	1.5
Ø 2.35 mm	ISO 500 103 538 175 ...	007	010	012	015
	REF 53 5990 ...	1300	1301	1302	1303
Ø 3.00 mm	ISO 500 123 538 175 ...	007	010	012	015
	REF 53 5990 ...	1304	1305	1306	1307

## Tube drill

Used for: Smoothing of drilling walls  
 Cut: ISO 382  
 Maximum speed: 3,000 – 5,000 rpm  
 Packing unit: 1 per boxes



L mm		7.5	9.0	12.0
Ø mm		0.7	1.0	1.2
Ø 2.35 mm	ISO 500 103 107 382 ...	007	010	012
	REF 53 5990 ...	1400	1401	1402
Ø 3.00 mm	ISO 500 123 107 382 ...	007	010	012
	REF 53 5990 ...	1403	1404	1405

## Shoulder cutter

Used for: Milling (countersinking) of (concentric) shoulders

Cut: ISO 175

Maximum speed: 3,000 rpm

Packing unit: 1 per box



Angle		2°	4°
Ø mm		2.7	2.9
Ø 2.35 mm	ISO 500 103 205 175 ...	027	029
	REF 53 5990 ...	1500	1501
Ø 3.00 mm	ISO 500 123 205 175 ...	027	029
	REF 53 5990 ...	1502	1503

## Centring drill

Used for: Placing centring marks for subsequent drilling

Length: 5.0 mm

Cut: ISO 001

Maximum speed: 5,000 rpm

Packing unit: 1 per box



L mm		5.0	5.0	5.0
Ø mm		0.9	1.2	1.4
Ø 2.35 mm	ISO 500 103 153 001 ...	009	012	014
	REF 53 5990 ...	1700	1701	1702
Ø 3.00 mm	ISO 500 123 153 001 ...	009	012	014
	REF 53 5990 ...	1703	1704	1705



see Application\* page 139

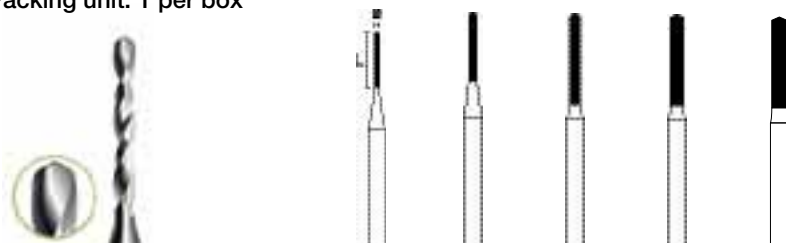
## Twist drill

Used for: Drilling core holes grooves and attachment holes

Cut: ISO 364

Maximum speed: 5,000 – 10,000 rpm

Packing unit: 1 per box



L mm		8.0	9.0	12.0	12.0	12.0
Ø mm		0.7	1.0	1.2	1.5	2.0
Ø 2.35 mm	ISO 500 103 423 364 ...	007	010	012	015	020
	REF 53 5990 ...	1600	1601	1602	1603	1610
Ø 3.00 mm	ISO 500 123 423 364 ...	007	010	012	015	
	REF 53 5990 ...	1604	1605	1606	1607	

# Diamond cutters for turbines

Diamond cutters with 1.6 mm shank diameter (FG) are designed for laboratory turbine units. Their excellent concentric running properties permit very high speeds. We therefore recommend water cooling while treating surfaces of structure or veneering ceramics.

TwisTec® diamond cutters for turbines create very smooth surfaces thanks to their homogeneously distributed diamonds. They are also extremely long-lasting.

Only natural diamonds with grain sizes ranging from 40 µm to 110 µm are used in the fabrication of TwisTec diamond cutters.

## Diamond cutters for turbines, round

Recommended speed: approx. 150,000 rpm

Packing units:

REF 53 5990 3030 and 3031: 3 per box

REF 53 5990 3032: 5 per box



Shape	Round	Round	Round long
L mm	0.0	0.0	0.0
Ø mm	2.1	2.1	1.4
Grain size	110 µm	40 µm	110 µm
ISO	W806 314 001 524 021	W806 314 001 514 021	806 314 697 524 014
REF 53 5990 ...	3030	3031	3032

## Diamond cutters for turbines, bud

Recommended speed: approx. 150,000 rpm

Packing unit: 3 per box



Shape	Bud	Bud
L mm	5.5	5.5
Ø mm	2.0	2.0
Grain size	110 µm	40 µm
ISO	W806 314 257 524 020	W806 314 257 514 020
REF 53 5990 ...	3033	3034

## Diamond cutters for turbines, cylinder

Recommended speed: approx. 150,000 rpm

Packing unit: 3 per box



Shape	Cylinder	Cylinder
L mm	8.0	8.0
Ø mm	1.4	1.4
Grain size	110 µm	40 µm
ISO	W806 314 141 524 014	W806 314 141 514 014
REF 53 5990 ...	3035	3036

## Diamond cutters for turbines, torpedo

Recommended speed: approx. 150,000 rpm

Packing unit: 3 per box



Shape	Torpedo	Torpedo
L mm	10.0	10.0
Ø mm	1.4	1.4
Grain size	110 µm	40 µm
ISO	W806 314 299 524 014	W806 314 299 514 014
REF 53 5990 ...	3037	3038

## Diamonds for turbines, Cylinder

Recommended speed: approx. 150,000 rpm  
Packing unit: 3 per box



Shape	Cylinder	Cylinder	Cylinder	Cylinder
Ø mm	1.0	1.0	1.0	1.0
Grain size	6 µm	18 µm	40 µm	80 µm
ISO	806 316 137 494 010	806 316 137 504 010	806 316 137 514 010	806 316 137 524 010
REF 53 5990 ...	3050	3051	3052	3053

## Diamonds for turbines, Cone

Recommended speed: approx. 150,000 rpm  
Packing unit: 3 per box



Angle	2°	2°	2°	2°
Shape	Cone	Cone	Cone	Cone
Ø mm	2.3	2.3	2.3	2.3
Grain size	6 µm	18 µm	40 µm	80 µm
ISO	806 316 200 494 023	806 316 200 504 023	806 316 200 514 023	806 316 200 524 023
REF 53 5990 ...	3054	3055	3056	3057

Diamond cutters are primarily for the treatment of ceramics. DeguDent TwisTec® diamonds are made almost exclusively from natural diamonds (grits of 110–120 µm/ISO 524 or 135 µm/ISO 534) and are galvanically or organically bound. The use of organic binders ensures a maximum of biocompatibility with the ceramics used in dental technology. The shaft diameter is 2.35 mm (ISO 104), suitable for laboratory hand pieces (HP).

## Diamond, Round

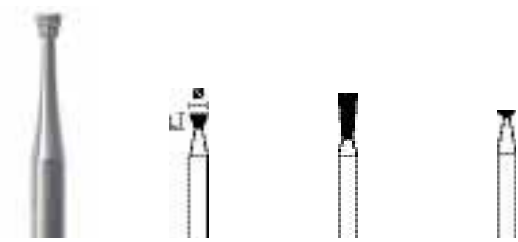
Maximum speed: 40,000 rpm  
Packing unit: 3 per box



Shape	Round	Round	Round
Ø mm	1.2	1.8	2.3
Grain size	110-120 µm	110-120 µm	110-120 µm
Application*	21, 22	21, 22	21, 22
ISO 806 104 001 524 ...	012	018	023
REF 53 5990 ...	3001	3002	3003

## Diamond, Inverted cone

Maximum speed: 40,000 rpm  
Packing unit: 3 per box



Shape	Inverted cone, short	Inverted cone, long	Inverted cone, short
L mm	2.0	6.0	0.8
Ø mm	2.3	2.3	2.3
Grain size	110-120 µm	110-120 µm	110-120 µm
Application*	20, 21, 22	21, 23, 24	20, 25
ISO 806 104 ...	010 524 023	225 524 023	014 524 023
REF 53 5990 ...	3004	3005	3006



see Application\* page 139

## Diamond, Cylinder

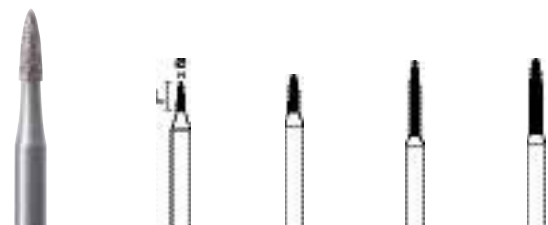
Maximum speed: 40,000 rpm  
Packing unit: 3 per box



Shape	Round Edge	Cylinder, round
L mm	15.0	12.0
Ø mm	2.3	1.8
Grain size	135 µm	110-120 µm
Application*	23	23
ISO 806 104 ...	158 534 023	143 524 018
REF 53 5990 ...	3007	3008

## Diamond, Flame

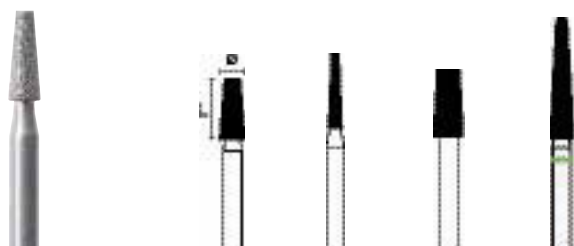
Maximum speed: 40,000 rpm  
Packing unit: 3 per box



Shape	Flame	Flame	Flame	Flame
L mm	4.0	5.0	10.0	10.0
Ø mm	1.0	1.4	1.2	1.6
Grain size	110-120 µm	110-120 µm	110-120 µm	110-120 µm
Application*	20, 21, 27	20, 21, 27	23, 25, 27	23, 25, 27
ISO 806 104 ...	247 524 010	247 524 014	250 524 012	250 524 016
REF 53 5990 ...	3017	3018	3019	3020

## Diamond, Cone

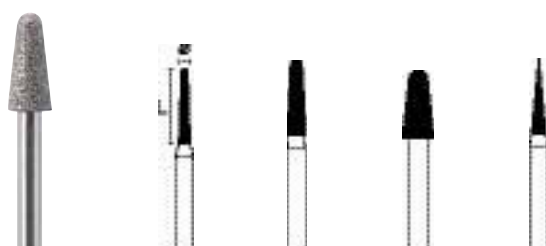
Maximum speed: 40,000 rpm  
Packing unit: 3 per box



Shape	Flat	Flat	Flat	Long, round
L mm	8.0	10.0	9.0	15.0
Ø mm	3.3	1.8	4.0	2.3
Grain size	110-120 µm	110-120 µm	110-120 µm	135 µm
Application*	23, 25	22, 23, 25	22, 23, 25	21, 23, 24, 25
ISO 806 104 ...	172 524 033	173 524 018	173 524 040	175 534 023
REF 53 5990 ...	3009	3010	3011	3012

## Diamond, Cone

Maximum speed: 40,000 rpm  
Packing unit: 3 per box



Shape	Round	Round	Round	Point
L mm	10.0	10.0	9.0	10.0
Ø mm	1.4	2.5	4.0	1.8
Grain size	110-120 µm	110-120 µm	110-120 µm	110-120 µm
Application*	22, 23, 24	22, 23, 24	22, 23, 24, 26	20, 21, 23, 25
ISO 806 104 ...	199 524 014	199 524 025	199 524 040	166 524 018
REF 53 5990 ...	3013	3014	3015	3016



see Application\* page 139

## Diamond, Wheel

Maximum speed: 40,000 rpm  
Packing unit: 3 per box



Shape	Wheel
L mm	1.5
Ø mm	4.0
Grain size	110-120 µm
Application*	26
ISO 806 104 ...	068 524 040
REF 53 5990 ...	3021

## Diamond, Bud

Maximum speed: 40,000 rpm  
Packing unit: 3 per box

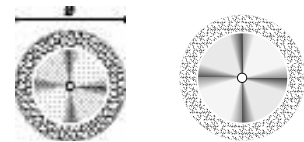


Shape	Bud
L mm	5.0
Ø mm	2.3
Grain size	110-120 µm
Application*	21, 26, 27
ISO 806 104 ...	257 524 023
REF 53 5990 ...	3022

Perforated diamond discs ensure good visibility of the area to be separated as they rotate. Diamond discs for plaster sectioning are characterized by specially segmented cutting edges that ensure that the dust is moved away from the cutting site, avoiding blockage of the rotation movement. All TwisTec® diamond discs are bilateral cutting disks with a fixed mount. Improper use – disregarding the proper speed, canting, excessive pressure – constitutes a safety hazard. Place the discs as closely into the chuck. Make sure it reaches its operating speed before touching the work piece.

## Diamond disc for coarse pre-separating of ceramics (blue ring)

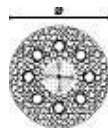
Used for: Pre-separating  
 Thickness: 0.25 mm  
 Grit: ISO 524, 100 µm  
 Packing unit: 1 per box



Ø mm	19.0	22.0
Maximum speed (rpm)	20.000	15.000
ISO 806 104 355 524 ...	190	220
REF 53 5990 ...	3104	3105

## Diamond disc for pre-separating of ceramic (red ring)

Used for: Fine and coarse pre-separating  
 Thickness: 0.2 mm  
 Grit: ISO 514, 50 µm  
 Packing unit: 1 per box



Ø mm	22.0
Maximum speed (rpm)	15.000
ISO 806 104 ...	335 514 220
REF 53 5990 ...	3101

## Diamond Disc for separating ceramics (red ring)

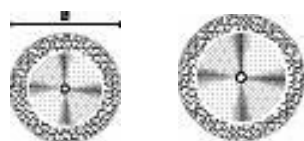
Used for: Pre-cutting  
 Thickness: 0.15 mm  
 Grit: ISO 514, 50 µm  
 Packing unit: 1 per box



Ø mm	22.0
Maximum speed (rpm)	15.000
ISO 806 104 ...	396 514 220
REF 53 5990 ...	3106

## Diamond disc for super-fine separating of ceramics (yellow ring)

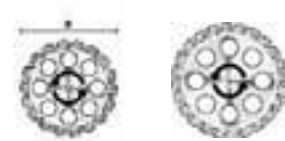
Used for: Super-fine separating  
 Thickness: 0.12 mm  
 Grit: ISO 504, 30 µm  
 Packing unit: 1 per box



Ø mm	19.0	22.0
Maximum speed (rpm)	20.000	15.000
ISO 806 104 355 504 ...	190	220
REF 53 5990 ...	3102	3103

## Diamond disc for separating plaster (blue ring)

Used for: Separating dies  
 Thickness: 0.35 mm  
 Grit: ISO 524, 100 µm  
 Packing unit: 1 per box



Ø mm	30.0	45.0
Maximum speed (rpm)	10.000	10.000
ISO 806 104 365 524 ...	300	450
REF 53 5990 ...	3107	3108

The working part of sintered diamonds consists of diamonds throughout (between 50 and 180  $\mu\text{m}$  grits) with a metal bond. These instruments (2.35 mm shank diameter/ ISO 104) are suitable for almost all materials such as ceramics, CoCr or non-precious alloys. (Not suitable for surfaces to be veneered with ceramics.) They are characterized by their lifetime, reduced heat during operation and a homogeneous grinding result. Note that the surfaces of sintered diamonds must be cleaned with a cleaning stone in case of contamination.

## Sintered diamond, fine grit

Used for: Ceramics, CoCr, non-precious alloys  
 Maximum speed: 25,000 rpm  
 Grit: ISO 513, 50  $\mu\text{m}$  (fine)  
 Packing unit: 1 per box



Shape	Flame	Inverted Cone
L mm	6.0	2.0
$\varnothing$ mm	1.6	2.2
ISO 807 104 ...	248 513 016	023 513 022
REF 53 5990 ...	3201	3202

## Sintered diamond, standard grit

Used for: Ceramics, CoCr, non-precious alloys  
 Maximum speed: 25,000 rpm  
 Grit: ISO 523, 120  $\mu\text{m}$  (standard)  
 Packing unit: 1 per box



Shape	Inverted Cone
L mm	5.0
$\varnothing$ mm	8.0
ISO 807 104 ...	030 523 080
REF 53 5990 ...	3203

## Sintered diamond, coarse grit

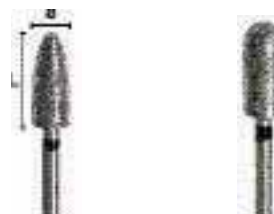
Used for: Ceramics, CoCr, non-precious alloys  
 Maximum speed: 25,000 rpm  
 Grit: ISO 542, 135  $\mu\text{m}$  (coarse)  
 Packing unit: 1 per box



Shape	Cylinder
L mm	10.0
$\varnothing$ mm	3.7
ISO 807 104 ...	112 542 037
REF 53 5990 ...	3204

## Sintered diamond, super-coarse grit

Used for: Ceramics, CoCr, non-precious alloys  
 Maximum speed: 25,000 rpm  
 Grit: ISO 543, 180  $\mu\text{m}$  (super-coarse)  
 Packing unit: 1 per box



Shape	Flame	Cylinder, round
L mm	12.0	12.0
$\varnothing$ mm	5.0	5.0
ISO 807 104 ...	274 543 050	143 543 050
REF 53 5990 ...	3205	3206

TwisTec® polishers are designed especially for the respective materials and are listed here in the order in which they are usually applied. Grits and bonds are excellently adapted to the materials to be worked on, such as ceramics, precious alloys, non-precious alloys or resins.

### Polishers for ceramics, light gray, unmounted

Used for: Abrasive pre-polishing, eliminates diamond scratches (even in metal)  
 Maximum speed: 20,000 rpm  
 Packing unit: 100 per box



Shape	Wheel	Cylinder	Knife-edge, big
L mm	3.0	22.0	3.0
Ø mm	22.0	6.0	22.0
ISO 658 900 ...	372 525 220	114 525 060	303 525 220
REF 53 5990 ...	2001	2002	2003

### Polishers for ceramics, Diamond impregnation, yellow, mounted

Used for: High-gloss polishin  
 Maximum speed: 10,000 rpm  
 Packing unit: 1 per box



Shape	Wheel, small	Point
L mm	2.5	15.5
Ø mm	14.5	5.5
ISO 802 104 ...	372 513 145	243 513 055
REF 53 5990 ...	2101	2102

### Polishers for precious-metal alloys, brown, unmounted

Used for: Pre-polishing precious-metal and reduced-gold alloys, even veneering resins  
 Maximum speed: 20,000 rpm  
 Packing unit: 100 per box



Shape	Wheel	Disc	Cylinder
L mm	3.0	1.0	22.0
Ø mm	22.0	22.0	6.0
ISO 658 900 ...	372 513 220	371 513 220	114 513 060
REF 53 5990 ...	2006	2007	2008

### Polishers for precious-metal alloys, green, unmounted

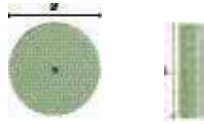
Used for: High-gloss polishing (mat) precious-metal and reduced-gold alloys, even veneering resins  
 Maximum speed: 10,000 rpm  
 Packing unit: 100 per box



Shape	Wheel	Disc	Cylinder
L mm	3.0	1.0	22.0
Ø mm	22.0	22.0	6.0
ISO 658 900 ...	372 503 220	371 503 220	114 503 060
REF 53 5990 ...	2009	2010	2011

## Polishers for yellow-colored alloys, green, unmounted

Used for: Abrasive pre-polishing, surface smoothing  
 Maximum speed: 20,000 rpm  
 Packing unit: 100 per box



Shape	Wheel	Cylinder
L mm	3.0	22.0
Ø mm	22.0	6.0
ISO 658 900 ...	372 522 220	114 522 060
REF 53 5990 ...	2004	2005

## Polishers for yellow-colored alloys, pink, unmounted

Used for: High-gloss polishing  
 Maximum speed: 15,000 rpm  
 Packing unit: 100 per box



Shape	Wheel	Cylinder
L mm	3.0	22.0
Ø mm	22.0	6.0
ISO 658 900 ...	372 502 220	114 502 060
REF 53 5990 ...	2012	2013

## Universal metal polishers, for precious alloys, CoCr, Ti, blue, unmounted

Used for: Pre-polishing, mat finish  
 Maximum speed: 20,000 rpm  
 Packing unit: 100 per box



Shape	Wheel	Knife-edge
L mm	3.0	3.0
Ø mm	22.0	22.0
ISO 658 900 ...	372 522 220	303 522 220
REF 53 5990 ...	2204	2205

## Universal metal polishers, for precious alloys, CoCr, Ti, blue, mounted

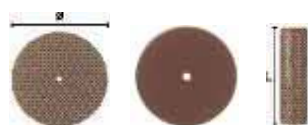
Used for: Pre-polishing, mat finish  
 Maximum speed: 20,000 rpm  
 Packing unit: 12 per box



Shape	Point
L mm	16.3
Ø mm	5.5
ISO 658 104 ...	257 522 055
REF 53 5990 ...	2206

## Polishers for CoCr and non-precious alloys, brown, unmounted

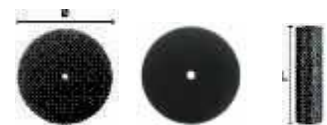
Used for: Abrasive pre-polishing, surface smoothing  
 Maximum speed: 20,000 rpm  
 Packing unit: 100 per box



Shape	Wheel	Disc	Cylinder
L mm	3.0	1.3	22.0
Ø mm	22.0	22.0	6.0
ISO 618 900 ...	372 534 220	371 533 220	114 534 060
REF 53 5990 ...	2301	2302	2303

## Polishers for CoCr and non-precious alloys, black, unmounted

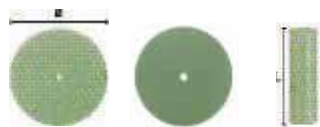
Used for: (Standard) pre-polishing mat lustre  
 Maximum speed: 20,000 rpm  
 Packing unit: 100 per box



Shape	Wheel	Disc	Cylinder
L mm	3.0	1.0	22.0
Ø mm	22.0	22.0	6.0
ISO 652 900 ...	372 523 220	371 523 220	114 523 060
REF 53 5990 ...	2014	2015	2016

## Polishers for CoCr and non-precious alloys, green, unmounted

Used for: Fine polishing, mat lustre  
 Maximum speed: 10,000 rpm  
 Packing unit: 100 per box



Shape	Wheel	Disc	Cylinder
L mm	3.0	1.0	22.0
Ø mm	22.0	22.0	6.0
ISO 652 900 ...	372 513 220	371 513 220	114 513 060
REF 53 5990 ...	2017	2018	2019

## Polishers for titanium alloys, light-blue, unmounted

Used for: Fine polishing, mat lustre  
 Maximum speed: 10,000 rpm  
 Packing unit: 12 per box



Shape	Wheel	Cylinder
L mm	3.0	22.0
Ø mm	22.0	6.0
ISO	658 900 372 512 220	658 900 114 512 060
REF 53 5990 ...	2022	2023

## Polishers for titanium alloys, gray, unmounted

Used for: Pre-polishing  
 Maximum speed: 20,000 rpm  
 Packing unit: 12 per box



Shape	Wheel	Cylinder
L mm	3.0	22.0
Ø mm	22.0	6.0
ISO	658 900 372 521 220	658 900 114 521 060
REF 53 5990 ...	2020	2021

## Polishers for denture resins, gray, mounted

Used for: Highly abrasive, replaces sandpaper  
 Maximum speed: 10,000 – 15,000 rpm  
 Packing unit: 6 per box



Shape	Cylinder, round	Cylinders	Cylinder
L mm	18.0	21.0	24.5
Ø mm	15.0	7.0	10.0
ISO 658 104 ...	201 534 150	107 534 070	273 534 100
REF 53 5990 ...	2201	2202	2203

## Polishers for CoCr, non-precious alloys, precious alloys, brown, red, green, unmounted, for insertion in mandrel, REF 5990 9001

Used for: CoCr, precious alloy  
 Maximum speed: 20,000 rpm  
 Packing unit: 100 per box



Shape	Cylinder, round	Cylinder, round	Cylinder, round
L mm	22.0	22.0	22.0
Ø mm	3.0	3.0	3.0
Application	pre-polishing (coarse)	polishing (medium)	lustre polishing (fine)
ISO	618 000 114 533 030	658 000 114 513 030	658 000 114 503 030
REF 53 5990 ...	2401	2402	2403

## Polishers for composite occlusal surfaces, light-gray, unmounted, for insertion in mandrel, REF 5990 9001

Used for: Composite, polishing (medium)  
 Maximum speed: 20,000 rpm  
 Packing unit: 100 per box



Shape	Cylinder, round
L mm	22.0
Ø mm	3.0
ISO 658 000 ...	114 493 030
REF 53 5990 ...	2404

TwisTec® abrasives with a ceramic bond are primarily suited for pressable ceramics, all-ceramics and veneering ceramics, but also for metal alloys. These instruments allow you trimming your ceramic object, from coarse abrasion to surface smoothing. TwisTec® separating discs are characterized by universal applicability and lifetime.

## Abrasives, diamond impregnation, ceramic bond, light green

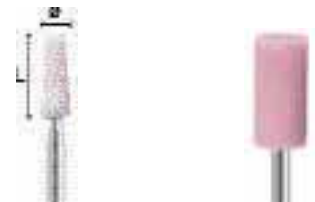
Used for: Ceramics, structuring pressable and veneering ceramics, ceramic bond  
 Maximum speed: 10,000 – 15,000 rpm  
 Packing unit: 1 per box



L mm	11.0	13.0
Ø mm	4.0	5.0
Grain size	135 µm	135 µm
ISO 805 104 ...	173 534 040	107 534 050
REF 53 5990 ...	4002	4001

## Abrasive with corundum, ceramic bond, pink

Used for: Ceramics, CoCr, non-precious alloys, very coarse abrasion  
 Maximum speed: 20,000 – 30,000 rpm  
 Packing unit: 12 per box



L mm	10.5	13.0
Ø mm	3.5	6.5
Grain size	330 µm	340 µm
ISO 625 104 ...	168 523 035	107 533 065
REF 53 5990 ...	4105	4106

## Abrasive with corundum, ceramic bond, brown

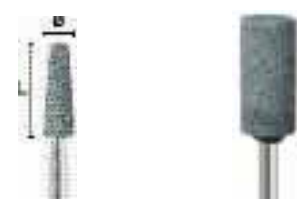
Used for: Ceramics, CoCr, non-precious alloys, coarse abrasion, structuring  
 Maximum speed: 20,000 – 30,000 rpm  
 Packing unit: 12 per box



L mm	10.5	13.0
Ø mm	3.5	6.5
Grain size	230 µm	240 µm
ISO 635 104 ...	168 522 035	107 532 065
REF 53 5990 ...	4101	4102

## Abrasive with silicon carbide, ceramic bond, green

Used for: Ceramics, CoCr, non-precious alloys, surface smoothing  
 Maximum speed: 20,000 – 30,000 rpm  
 Packing unit: 12 per box



L mm	10.5	13.0
Ø mm	3.5	6.5
Grain size	130 µm	130 µm
ISO 655 104 ...	168 523 035	107 533 065
REF 53 5990 ...	4104	4103

## Abrasives, Separating discs,

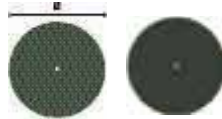
### Separating disc, synthetic resin bond with extra-fine corundum grit

Used for: Separating, non-precious alloys precious alloys, CoCr

Maximum speed: 15,000 – 20,000 rpm

Packing unit: 100 per box

(REF 5990 4201, slightly, flexible)



Shape	Disc	Disc
L mm	0.2	0.3
Ø mm	22.0	22.0
ISO 613 900 327 ...	514 220	504 220
REF 53 5990 ...	4201	4202

### Separating disc, synthetic resin bond with medium corundum grit

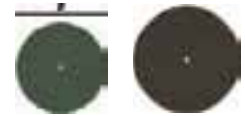
Used for: Separating sprues

Maximum speed: 15,000 – 20,000 rpm

Packing unit:

REF 5990 4203/100 per box

REF 5990 4204/10 per box (extrastrong, fibre-glass)



Shape	Disc	Disc
L mm	0.6	1.0
Ø mm	25.0	40.0
ISO 613 900 ...	327 524 250	371 534 400
REF 53 5990 ...	4203	4204

## Accessories / Miscellaneous

### Mandrels for accommodation of ...

Packing unit: 6 per box



Shape	Occlusal polishers	Wheels, Discs, Knife-edges	Wheels, Discs, Knife-edges	Cylinders
L mm	22.0	3.0	3.0	13.0
Ø mm	3.0	5.0	14.0	5.0
ISO	330 104 612 432 030	330 104 604 391 050	330 104 604 391 140	312 104 610 415 050
REF 53 5990 ...	9001	9002	9003	9004

### Cleaning stone for sintered diamonds

For the cleaning and maintenance of sintering diamonds.



REF 53 5990 3900

1 unit

### Diamond-covered dressing stone

Bilaterally coated, for centring and prepping rubber polishers and stones.



REF 53 5990 9005

1 unit

The TwisTec® range of products is economical and geared to everyday laboratory routines: It contains all the instruments you will need every day, and is free of exotic tools that are never needed. The following sets for the milling technique, ceramic, zirconium oxide and metal offer an eminently practical low-cost selection of high-quality tools for nearly every material you have to work with.  
TwisTec® – all you need.

### Turbo Ceramic set, 9-part

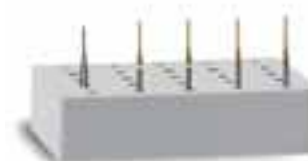
REF	ISO	Description	Ø mm	Amount
<b>Diamond cutters for turbines</b>				
53 5990 3030	W806 314 001 524 021	Round, 110 µm	2.1	1 piece
53 5990 3031	W806 314 001 514 021	Round, 40 µm	2.1	1 piece
53 5990 3032	806 314 697 524 014	Round long, 110 µm	1.4	1 piece
53 5990 3033	W806 314 257 524 020	Bud, 110 µm	2.0	1 piece
53 5990 3034	W806 314 257 514 020	Bud, 40 µm	2.0	1 piece
53 5990 3035	W806 314 141 524 014	Cylinder, 110 µm	1.4	1 piece
53 5990 3036	W806 314 141 514 014	Cylinder, 40 µm	1.4	1 piece
53 5990 3037	W806 314 299 524 014	Torpedo, 110 µm	1.4	1 piece
53 5990 3038	W806 314 299 514 014	Torpedo, 40 µm	1.4	1 piece



REF 53 5990 9109

### Turbo-Telescope-Set, 5-part

REF	ISO	Description	Ø mm	Amount
<b>Wax cutter, parallel, round</b>				
53 5990 1202	500 123 137 364 010	Wax cutter	1.0	1 piece
<b>Diamond cutters for turbines, cylinder</b>				
53 5990 3050	806 316 137 494 010	Cylinder, 6 µm	1.0	1 piece
53 5990 3051	806 316 137 504 010	Cylinder, 18 µm	1.0	1 piece
53 5990 3052	806 316 137 514 010	Cylinder, 40 µm	1.0	1 piece
53 5990 3053	806 316 137 524 010	Cylinder, 80 µm	1.0	1 piece



REF 53 5990 9110

## Turbo-2°-Set, 5-part

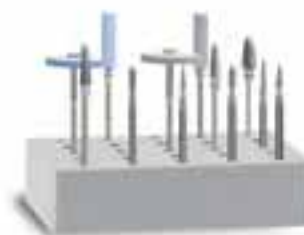
REF	ISO	Description	Ø mm	Angle	Amount
<b>Wax cutter, conical, round</b>					
53 5990 1207	500 123 200 364 023	Wax cutter	3.0	2°	1 piece
<b>Diamond cutters for turbines, cone</b>					
53 5990 3054	806 316 200 494 023	Cone, 6 µm	2.3	2°	1 piece
53 5990 3055	806 316 200 504 023	Cone, 18 µm	2.3	2°	1 piece
53 5990 3056	806 316 200 514 023	Cone, 40 µm	2.3	2°	1 piece
53 5990 3057	806 316 200 524 023	Cone, 80 µm	2.3	2°	1 piece



REF 53 5990 9111

## Titanium set, 12-part

REF	ISO	Description	Ø mm	Amount
<b>TC cutter, spiral-cut, coarse, superfine (3 purple rings)</b>				
53 5990 0023	500 104 198 137 023	Cone	2.3	1 piece
53 5990 0024	500 104 289 137 023	Torpedo	2.3	1 piece
53 5990 0025	500 104 198 137 016	Cone	1.6	1 piece
53 5990 0028	500 104 141 137 023	Cylinder	2.3	1 piece
53 5990 0029	500 104 194 137 040	Cone	4.0	1 piece
<b>TC cutter, spiral-cut, fine (purple ring)</b>				
53 5990 0050	500 104 194 134 023	Cone	2.3	1 piece
53 5990 0052	500 104 194 134 040	Cone	4.0	1 piece
53 5990 0051	500 104 274 134 060	Bud	6.0	1 piece
<b>Polishers for titanium alloys, gray, unmounted</b>				
53 5990 2020	658 900 372 521 220	Wheel	22.0	1 piece
53 5990 2021	658 900 114 521 060	Cylinder	6.0	1 piece
<b>Polishers for titanium alloys, light-blue, unmounted</b>				
53 5990 2022	658 900 372 512 220	Wheel	22.0	1 piece
53 5990 2023	658 900 114 512 060	Cylinder	6.0	1 piece



REF 53 5990 9108

Chrome Cobalt Set, 11-part



REF	ISO	Description	Ø mm	Amount
<b>Abrasive with corundum, pink</b>				
53 5990 4105	625 104 168 523 035	Cone, 330 µm	3.5	2 pieces
53 5990 4106	625 104 107 533 065	Cylinder, 340 µm	6.5	2 pieces
<b>Abrasive with silicon carbide, green</b>				
53 5990 4104	655 104 168 523 035	Cone, 130 µm	3.5	2 pieces
53 5990 4103	655 104 107 533 065	Cylinder, 130 µm	6.5	2 pieces
<b>Separating disc, medium, synthetic resin bond</b>				
53 5990 4204	613 900 371 534 400	Disc	40.0	2 pieces
<b>Polishers for CoCr and non-precious alloys</b>				
53 5990 2014	652 900 372 523 220	Wheel	22.0	2 pieces
53 5990 2016	652 900 114 523 060	Cylinder	6.0	2 pieces
<b>Mandrels</b>				
53 5990 9002	330 104 604 391 050	Wheels, Discs, Knife-edges	5.0	1 piece
53 5990 9003	330 104 604 391 140	Wheels, Discs, Knife-edges	14.0	1 piece
53 5990 9004	312 104 610 415 050	Cylinders	5.0	1 piece
<b>Sintered diamond, super-coarse grit</b>				
53 5990 3205	807 104 274 543 050	Flame, 180 µm	5.0	1 piece

REF 53 5990 9105

TC Cutter Set, 14-part



REF	ISO	Description	Ø mm	Amount
<b>HM-cutter cross-cut standard (blue ring)</b>				
53 5990 0003	500 104 198 190 023	Cone	2.3	1 piece
53 5990 0004	500 104 289 190 023	Torpedo	2.3	1 piece
53 5990 0010	500 104 194 190 040	Cone	4.0	1 piece
<b>HM-cutter cross-cut fine (red ring)</b>				
53 5990 0014	500 104 197 140 023	Cone	2.3	1 piece
53 5990 0015	500 104 289 140 023	Torpedo	2.3	1 piece
53 5990 0020	500 104 194 140 040	Cone	4.0	1 piece
<b>HM-cutter cross-cut superfine (yellow ring)</b>				
53 5990 0035	500 104 198 110 023	Cone	2.3	1 piece
53 5990 0036	500 104 289 110 023	Torpedo	2.3	1 piece
53 5990 0041	500 104 194 110 040	Cone	4.0	1 piece
<b>TC bur, round</b>				
53 5990 0200	500 104 001 001 003	TC bur	0.3	1 piece
53 5990 0204	500 104 001 001 008	TC bur	0.8	1 piece
53 5990 0207	500 104 001 001 014	TC bur	1.4	1 piece
53 5990 0211	500 104 001 001 027	TC bur	2.7	1 piece
<b>TC Fissure bur</b>				
53 5990 0213	500 104 107 006 009	Fissure bur	0.9	1 piece

REF 53 5990 9103

## Ceramic Set, 11-part

REF	ISO	Description	Ø mm	Amount
<b>Diamond cutters</b>				
53 5990 3001	806 104 001 524 012	Round, 110-120 µm	1.2	1 piece
53 5990 3002	806 104 001 524 018	Round, 110-120 µm	1.8	1 piece
53 5990 3004	806 104 010 524 023	Inverted cone, short, 110-120 µm	2.3	1 piece
53 5990 3008	806 104 143 524 018	Cylinder, round, 110-120 µm	1.8	1 piece
53 5990 3009	806 104 172 524 033	Flat, 110-120 µm	3.3	1 piece
53 5990 3012	806 104 175 534 023	Long, round, 135 µm	2.3	1 piece
53 5990 3018	806 104 247 524 014	Flame, 110-120 µm	1.4	1 piece
<b>Diamond disc</b>				
53 5990 3105	806 104 355 524 220	standard grit, 100 µm	22.0	1 piece
53 5990 3106	806 104 396 514 220	fine grit, 50 µm	22.0	1 piece
<b>Polishers for ceramics, diamond impregnation, yellow, unmounted</b>				
53 5990 2101	802 104 372 513 145	Wheel, small	14.5	1 piece
<b>Abrasives, diamond impregnation, light green</b>				
53 5990 4002	805 104 173 534 040	Cone, standard grit, 135 µm	4.0	1 piece



## REF 53 5990 9104

## Profi-Set, 10-part

REF	ISO	Description	Ø mm	Amount
<b>TC cutter cross-cut, fine</b>				
53 5990 0017	500 104 277 140 014	Egg Shape	1.4	1 piece
53 5990 0020	500 104 194 140 040	Cone	4.0	1 piece
<b>TC cutter, cross-cut, standard (blue ring)</b>				
53 5990 0008	500 104 274 190 060	Bud	6.0	1 piece
53 5990 0010	500 104 194 190 040	Cone	4.0	1 piece
53 5990 0006	500 104 277 190 014	Egg Shape	1.4	1 piece
<b>Diamond disc</b>				
53 5990 3102	806 104 355 504 190	superfine grit, 30 µm	19.0	1 piece
53 5990 3106	806 104 396 514 220	fine grit, 50 µm	22.0	1 piece
<b>Polishers for ceramics, diamond impregnation, yellow</b>				
53 5990 2101	802 104 372 513 145	Wheel, small	14.5	1 piece
53 5990 2102	802 104 243 513 055	Point	5.5	1 piece
<b>Abrasives, light green</b>				
53 5990 4002	805 104 173 534 040	Cone, standard grit, 135 µm	4.0	1 piece



## REF 53 5990 9106

## Instrumentation set for zirconia green copings, 11-part

REF	ISO	Description	Ø mm	Amount
<b>TC-cutter superfine (yellow ring)</b>				
53 5990 0037	500 104 184 110 016	Cone	1.6	1 piece
53 5990 0041	500 104 194 110 040	Cone	4.0	1 piece
<b>TC cutter fine (red ring)</b>				
53 5990 0017	500 104 277 140 014	Egg Shape	1.4	1 piece
<b>TC cutter superfine (3 purple rings)</b>				
53 5990 0026	500 104 196 137 008	Cone	0.8	1 piece
<b>Channel cutter</b>				
53 5990 1301	500 103 538 175 010	Channel cutter	2.3	1 piece
<b>TC bur, round</b>				
53 5990 0203	500 104 001 001 006	TC bur	0.6	1 piece
53 5990 0210	500 104 001 001 023	TC bur	2.3	1 piece
<b>Polishers for ceramics, gray, unmounted</b>				
53 5990 2001	658 900 372 525 220	Wheel	22.0	2 pieces
53 5990 2002	658 900 114 525 060	Cylinder	6.0	2 pieces
<b>Mandrels for...</b>				
53 5990 9002	330 104 604 391 050	Wheels, Discs, Knife-edges	5.0	1 piece
53 5990 9004	312 104 610 415 050	Cylinders	5.0	1 piece



## REF 53 5990 9107

Milling technique set, 21-part

REF Ø 2.35 mm	ISO Ø 2.35 mm	REF Ø 3.00 mm	ISO Ø 3.00 mm	Description	Ø mm	Angle	Amount
<b>Wax cutter parallel round</b>							
53 5990 1200	500 103 137 364 010	53 5990 1202	500 123 137 364 010	Wax cutter	1.0		1 piece
53 5990 1201	500 103 137 364 015	53 5990 1203	500 123 137 364 015	Wax cutter	1.5		1 piece
<b>Tube drill</b>							
53 5990 1400	500 103 107 382 007	53 5990 1403	500 103 107 382 007	Tube drill	2.3		1 piece
53 5990 1401	500 103 107 382 010	53 5990 1404	500 103 107 382 010	Tube drill	2.3		1 piece
53 5990 1402	500 103 107 382 012	53 5990 1405	500 103 107 382 012	Tube drill	2.3		1 piece
<b>Twist drill</b>							
53 5990 1600	500 103 423 364 007	53 5990 1604	500 103 423 364 007	Twist Drill 0,7	2.3		1 piece
53 5990 1601	500 103 423 364 010	53 5990 1605	500 103 423 364 010	Twist Drill 1,0	2.3		1 piece
53 5990 1602	500 103 423 364 012	53 5990 1606	500 103 423 364 012	Twist Drill 1,2	2.3		1 piece
<b>Shoulder cutter</b>							
53 5990 1500	500 103 205 175 027	53 5990 1502	500 103 205 175 027	Shoulder cutter 2°	2.3	2°	1 piece
53 5990 1501	500 103 205 175 029	53 5990 1503	500 103 205 175 029	Shoulder cutter 4°	2.3	4°	1 piece
<b>Centring drill</b>							
53 5990 1700	500 103 153 001 009	53 5990 1703	500 103 153 001 009	Centring Drill 0,9	2.3		1 piece
53 5990 1701	500 103 153 001 012	53 5990 1704	500 103 153 001 012	Centring Drill 1,2	2.3		1 piece
<b>Parallel cutter, cross-cut, coarse</b>							
53 5990 1100	500 103 137 220 010	53 5990 1103	500 103 137 220 010	parallel cutter	2.3		1 piece
53 5990 1101	500 103 137 220 015	53 5990 1104	500 103 137 220 015	parallel cutter	2.3		1 piece
53 5990 1102	500 103 137 220 023	53 5990 1105	500 103 137 220 023	parallel cutter	2.3		1 piece
<b>Parallel cutter, cross-cut, standard</b>							
53 5990 1106	500 103 137 190 010	53 5990 1109	500 103 137 190 010	parallel cutter	2.3		1 piece
53 5990 1107	500 103 137 190 015	53 5990 1110	500 103 137 190 015	parallel cutter	2.3		1 piece
53 5990 1108	500 103 137 190 023	53 5990 1111	500 103 137 190 023	parallel cutter	2.3		1 piece
<b>Channel cutter</b>							
53 5990 1300	500 103 538 175 007	53 5990 1304	500 123 538 175 007	Channel cutter	3.0		1 piece
53 5990 1301	500 103 538 175 010	53 5990 1305	500 123 538 175 010	Channel cutter	3.0		1 piece
53 5990 1302	500 1203 538 175 012	53 5990 1306	500 123 538 175 012	Channel cutter	3.0		1 piece



Milling technique Set, 2.35 mm	REF 53 5990 9100
Milling technique Set, 3.00 mm	REF 53 5990 9101
Wooden box, empty, 2.35 mm	REF 53 5990 9900
Wooden box, empty, 3.00 mm	REF 53 5990 9901

## The ISO number and its meaning

ISO	500	104	194	110	023
	Material of the working part:	Instrument shaft (length and diameter):	Shape of the working part:	Cut/grit of the working part:	Maximum diameter of the working part:
The ISO number is composed of five groups of digits whose meaning is explained above.	e. g. 500 tungsten carbide or 80x sintering diamond or 6xx corundum abrasive	e. g. 103 laboratory hand piece, short, 2.35 mm or 104 laboratory hand piece, long, 2.35 mm or 123 laboratory hand piece, short, 3.00 mm	e. g. 194 taper or 239 pear or 289 torpedo	e. g. 110 cross-cut, super-fine or 514 grit $\leq 50 \mu\text{m}$ or 001 bur cut, straight	e. g. 023 2.3 mm or 070 7.0 mm

## Tungsten carbide cutters

No.	Material	Application examples	Max. speed (rpm)
1	Model plaster, stone	Working on stone dies	15.000 – 20.000
2	Model plaster, stone	Working on stone dies	8.000 – 10.000
3	Model plaster, stone	Wet plaster, rough material reduction	10.000
4	Model plaster, stone	Dry plaster, rough material reduction	10.000
5	CoCr casting alloys	Rough trimming, contouring	15.000 – 20.000
6	CoCr casting alloys	Rough trimming	10.000 – 15.000
7	Denture resins and tray materials	Rough trimming	15.000 – 20.000
8	Denture resins and tray materials	Rough trimming	10.000 – 15.000
9	Precious alloys (inlays, onlays, crowns, bridges, combination and telescope works)	For fine and detailed trimming, to smoothen surfaces, occlusal areas and margins. Improves bond strength. Metal-ceramics or resin.	15.000 – 30.000
10	Non-precious alloys (crowns, bridges, combination restorations and telescopic crowns)	For fine and detailed trimming, to smoothen surfaces, occlusal areas and margins. Improves bond strength. Metal-ceramics or resin.	15.000 – 30.000
11	CoCr casting alloys	Fine trimming and smoothing	15.000 – 20.000
12	CoCr casting alloys	Fine trimming and smoothing	10.000 – 15.000
13	Denture resins and tray materials	Removing fins	10.000 – 15.000
14	Denture resins and tray materials	Gingiva matrix contouring and fine finishing	15.000 – 20.000
15	Denture resins and tray materials	Gingiva matrix contouring and fine finishing	10.000 – 15.000
16	Titanium	Trimming and contouring	15.000 – 20.000
17	Titanium	Trimming and contouring	10.000 – 15.000
18	Precious and non-precious alloys	For fine and detailed trimming, to smoothen surfaces, contour occlusal areas, margins and ceramic-metal transition areas.	15.000 – 20.000
19	Veneering resins	For fine and detailed trimming, to smoothen surfaces, contour occlusal areas, margins and ceramic-metal transition areas.	15.000 – 20.000

## Diamond cutters

No.	Material	Application examples:	Max. speed (rpm)
		Contouring	
20	Ceramic material	Fissures	40.000
21	Ceramic material	Occlusal surfaces	40.000
22	Ceramic material	Cervical surfaces	40.000
23	Ceramic material	Labial surfaces	40.000
24	Ceramic material	Lingual surfaces	40.000
25	Ceramic material	Interdental spaces	40.000
26	Ceramic material	Abrasions characteristics (for veneers)	40.000
27	Ceramic material	Internal corrections (all-ceramics)	40.000

### Protective measures:

1. Wear eye protection (goggles).
2. Remove dust particles by vacuum. Do not inhale.
3. Wear respiratory protection wherever possible.

### Safety notes:

1. Push the instruments as deeply as possible into the chuck.
2. Do not exceed the maximum speed.
3. Do not jam or cant instruments.
4. Do not exert excessive contact pressure.
5. Do not use instruments that are damaged.
6. Centre and align all separating discs.

Tungsten carbide cutters

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500 104 001 001 008	53 5990 0204	118
500 104 001 001 010	53 5990 0205	118
500 104 001 001 012	53 5990 0206	118
500 104 001 001 014	53 5990 0207	118
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500 104 001 001 018	53 5990 0209	118
500 104 001 001 023	53 5990 0210	118
500 104 001 001 027	53 5990 0211	118
500 104 010 001 018	53 5990 0212	118
500 104 107 006 009	53 5990 0213	118
500 104 118 174 060	53 5990 0048	117
500 104 137 110 023	53 5990 0034	114
500 104 137 140 023	53 5990 0013	114
500 104 137 190 023	53 5990 0002	115
500 104 141 110 023	53 5990 0038	114
500 104 141 137 023	53 5990 0028	116
500 104 141 140 023	53 5990 0018	114
500 104 141 190 023	53 5990 0007	115
500 104 168 007 012	53 5990 0214	118
500 104 184 110 016	53 5990 0037	114
500 104 194 110 023	53 5990 0033	114
500 104 194 110 040	53 5990 0041	114
500 104 194 134 023	53 5990 0050	117
500 104 194 134 040	53 5990 0052	117
500 104 194 137 040	53 5990 0029	116
500 104 194 140 023	53 5990 0012	114
500 104 194 140 040	53 5990 0020	114
500 104 194 190 023	53 5990 0001	115
500 104 194 190 040	53 5990 0010	115
500 104 194 194 040	53 5990 0032	116
500 104 196 134 008	53 5990 0054	117
500 104 196 137 008	53 5990 0026	116
500 104 197 140 023	53 5990 0014	114
500 104 198 110 023	53 5990 0035	114
500 104 198 137 016	53 5990 0025	116
500 104 198 137 023	53 5990 0023	116
500 104 198 140 016	53 5990 0016	114
500 104 198 190 023	53 5990 0003	115
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500 104 237 140 023	53 5990 0022	114
500 104 237 140 060	53 5990 0021	114
500 104 237 190 060	53 5990 0011	115
500 104 257 110 023	53 5990 0039	114
500 104 257 190 023	53 5990 0005	115
500 104 263 190 060	53 5990 0009	115
500 104 263 220 070	53 5990 0043	115
500 104 263 221 060	53 5990 0044	115
500 104 263 223 070	53 5990 0046	116
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500 104 274 137 014	53 5990 0027	116
500 104 274 137 060	53 5990 0030	116
500 104 274 140 060	53 5990 0019	114
500 104 274 190 060	53 5990 0008	115
500 104 274 220 060	53 5990 0042	115
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500 104 277 140 014	53 5990 0017	114
500 104 277 190 014	53 5990 0006	115
500 104 289 110 023	53 5990 0036	114
500 104 289 137 023	53 5990 0024	116
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Milling technique

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500 103 137 103 015	53 5990 1113	120
500 103 137 103 015	53 5990 1119	120
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500 103 137 190 015	53 5990 1107	119
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500 103 153 001 014	53 5990 1702	122
500 103 200 123 023	53 5990 1013	121
500 103 200 123 031	53 5990 1014	121
500 103 200 123 040	53 5990 1015	121
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500 103 200 190 031	53 5990 1008	120
500 103 200 190 040	53 5990 1009	120
500 103 200 220 023	53 5990 1001	120
500 103 200 220 031	53 5990 1002	120
500 103 200 220 040	53 5990 1003	120
500 103 200 364 023	53 5990 1204	119
500 103 200 364 031	53 5990 1205	119
500 103 200 364 040	53 5990 1206	119
500 103 205 175 027	53 5990 1500	122
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500 103 423 364 007	53 5990 1600	122
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500 103 538 175 015	53 5990 1303	121
500 123 107 382 007	53 5990 1403	121
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500 123 107 382 012	53 5990 1405	121
500 123 137 103 010	53 5990 1121	120
500 123 137 103 010	53 5990 1115	120
500 123 137 103 015	53 5990 1122	120
500 123 137 103 015	53 5990 1116	120
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500 123 137 220 023	53 5990 1105	119
500 123 137 364 010	53 5990 1202	119
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500 123 153 001 009	53 5990 1703	122
500 123 153 001 012	53 5990 1704	122
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500 123 200 123 023	53 5990 1016	121
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500 123 200 190 023	53 5990 1010	120
500 123 200 190 031	53 5990 1011	120
500 123 200 190 040	53 5990 1012	120
500 123 200 220 023	53 5990 1004	120
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806 314 697 524 014	53 5990 3032	123
806 316 137 494 010	53 5990 3050	124
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806 104 175 534 023	53 5990 3012	126
806 104 199 524 014	53 5990 3013	126
806 104 199 524 025	53 5990 3014	126
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806 104 225 524 023	53 5990 3005	125
806 104 247 524 010	53 5990 3017	125
806 104 247 524 014	53 5990 3018	125
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806 104 355 504 190	53 5990 3102	127
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658 000 114 503 030	53 5990 2403	131
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658 104 201 534 150	53 5990 2201	131
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