



# DC5

Milling Tools

**DC milling tools from Dental Concept Systems** are milling and grinding tools for the machining of all commercially available dental materials, developed exclusively for dental automation.

DC milling tools are adapted directly to the requirements of the milling systems from Dental Concept Systems and provide dental technicians with the necessary process reliability with the full variety of materials. The substrate, cutting edge geometry, finishing treatment and coating have been developed taking into account state-of-the-art milling strategies in the DC conceptCAM and adapted to suit the most diverse materials.

The colour system guides the dental technician reliably through all high-speed machining applications and prevents unnecessary mistakes. In addition to the **Blueline** for metals, the **Whiteline** for composites and the **Greenline** for grinding pins for glass/ceramic processing, Dental Concept Systems offers milling tools for the processing of zirconium oxides with 3 different coatings. Depending on the type and quality of the zirconium oxides, different tools are used and enable machining with polished cutting edges for durable premium materials in the **Silverline**, longer service lives in the **Yellowline** and the secure machining of translucent zirconium oxides in the **Redline**.

**Blueline** for the machining of CoCr steels, pure titanium and titanium alloys

The cutting edge geometry of these tools is designed to cope with high stress during hard machine cutting. The **Blueline** coating improves resistance to abrasion and impresses with a very high resistance to oxidation and hot hardness. The very low friction value of the tools reduces the heat development and the milling forces at the cutting edges. Both flat milling bits for the machining of abutments and bridges and high-feeding-rate milling bits for speed-roughing are available.

**Silverline, Yellowline and Redline** for the machining of unfired high-performance ceramics such as zirconium oxide and aluminium oxide with various coatings as well as PMMA and wax.

**Silverline** ball-nose milling bits have a special grinding geometry that guarantees maximum surface quality and was developed for the machining of premium zirconium oxides, PMMA and wax.

**Yellowline** tools have additionally been provided with a special coating that ensures an extremely smooth surface finish and optimises resistance to wear.

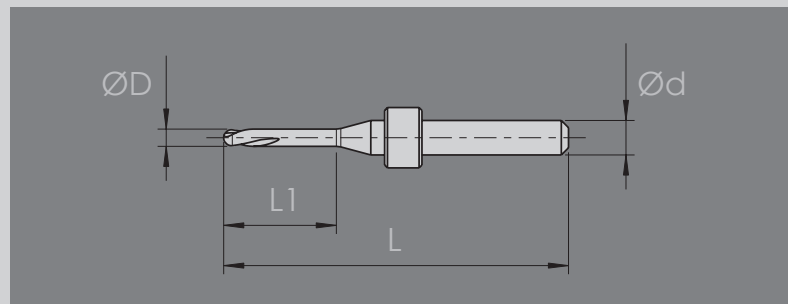
The **Redline** coating was developed especially for translucent and sensitive zirconium oxides. Thanks to the particularly smooth nano-crystalline structure of the highly abrasion-resistant diamond coating, enormous service life advantages are achieved, above all with strongly abrasive materials. The associated reduction in the cutting forces prevents outbreaks even in 5-axis high-speed machining.

**Whiteline** for the machining of composite fibre-reinforced materials

The special grinding geometry with the new **Whiteline** coating enables the achievement of an enormous service life advantage over market-standard tools and does justice to the special properties of the material, even in dry machining.

**Greenline**

The **Greenline** thick-film diamond grinding pins enable the secure machining of all glass ceramics commonly available on the dental market and are also suitable for the grinding of new type composites and hybrid ceramics.



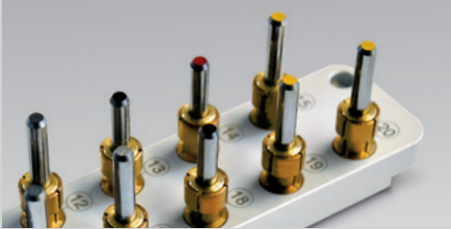
## Milling and grinding tools from Dental Concept Systems

Type of tool	Milling materials	Shaft Ød[mm]	Cutting edge ØD[mm]	Length L[mm]	Clearance L1[mm]	Cutting edges z	Article - number	
Ball-nose milling tool	CoCr, Titan	6,0	0,6	57,0	3,0	2	20-010603	Blue-line
Ball-nose milling tool	CoCr, Titan	6,0	1,0	57,0	9,0	2	20-011009	
Ball-nose milling tool	CoCr, Titan	6,0	1,5	57,0	14,0	2	20-011514	
Ball-nose milling tool	CoCr, Titan	6,0	2,0	57,0	14,0	2	20-012014	
Ball-nose milling tool	CoCr, Titan	6,0	3,0	57,0	16,0	2	20-013016	
Ball-nose milling tool	CoCr, Titan	6,0	3,0	57,0	20,0	2	20-013020	
Flat milling tool for bars and abutments	CoCr, Titan	6,0	1,5	57,0	14,0	2	20-021514	
Flat milling tool for bars and abutments	CoCr, Titan	6,0	1,5	57,0	20,0	2	20-021520	
High-feeding-rate milling tool for fast-roughing	CoCr, Titan	6,0	3,0	57,0	16,0	3	20-103016	
Ball-nose milling tool	Zirconia, PMMA, Wax	6,0	0,3	57,0	17,0	2	20-030317	Silverline
Ball-nose milling tool	Zirconia, PMMA, Wax	6,0	0,6	57,0	6,0	2	20-030606	
Ball-nose milling tool	Zirconia, PMMA, Wax	6,0	0,6	57,0	12,0	2	20-030612	
Ball-nose milling tool	Zirconia, PMMA, Wax	6,0	1,0	57,0	16,0	2	20-031016	
Ball-nose milling tool	Zirconia, PMMA, Wax	6,0	1,0	57,0	20,0	2	20-031020	
Ball-nose milling tool	Zirconia, PMMA, Wax	6,0	2,0	57,0	20,0	2	20-032020	
Ball-nose milling tool	Zirconia, PMMA, Wax	6,0	2,0	57,0	25,0	2	20-032025	
Ball-nose milling tool	PMMA, Wax	6,0	1,0	57,0	20,0	1	20-031120	
Ball-nose milling tool	PMMA, Wax	6,0	2,0	57,0	25,0	1	20-032125	
Ball-nose milling tool	Zirconia, PMMA	6,0	0,6	57,0	6,0	2	20-040606	Yellowline
Ball-nose milling tool	Zirconia, PMMA	6,0	0,6	57,0	12,0	2	20-040612	
Ball-nose milling tool	Zirconia, PMMA	6,0	1,0	57,0	16,0	2	20-041016	
Ball-nose milling tool	Zirconia, PMMA	6,0	1,0	57,0	20,0	2	20-041020	
Ball-nose milling tool	Zirconia, PMMA	6,0	2,0	57,0	20,0	2	20-042020	
Ball-nose milling tool	Zirconia, PMMA	6,0	2,0	57,0	25,0	2	20-042025	
Ball-nose milling tool	Zirconia, Zirconia transl.	6,0	0,6	57,0	6,0	2	20-070606	Redline Diamond
Ball-nose milling tool	Zirconia, Zirconia transl.	6,0	0,6	57,0	12,0	2	20-070612	
Ball-nose milling tool	Zirconia, Zirconia transl.	6,0	1,0	57,0	16,0	2	20-071016	
Ball-nose milling tool	Zirconia, Zirconia transl.	6,0	1,0	57,0	20,0	2	20-071020	
Ball-nose milling tool	Zirconia, Zirconia transl.	6,0	2,0	57,0	20,0	2	20-072020	
Ball-nose milling tool	Zirconia, Zirconia transl.	6,0	2,0	57,0	25,0	2	20-072025	
Ball-nose milling tool	Composite	6,0	0,6	57,0	3,0	2	20-080603	Whiteline
Ball-nose milling tool	Composite	6,0	1,0	57,0	9,0	2	20-081009	
Ball-nose milling tool	Composite	6,0	1,5	57,0	14,0	2	20-081514	
Ball-nose milling tool	Composite	6,0	2,0	57,0	14,0	2	20-082014	
Ball-nose milling tool	Composite	6,0	3,0	57,0	16,0	2	20-083016	
Ball-nose milling tool	Composite	6,0	3,0	57,0	20,0	2	20-083020	
Flat milling tool for bars and abutments	Composite	6,0	1,5	57,0	14,0	2	20-091514	
Conical grinder	Blue Blanks, Comp.	6,0	0,6	50,0	12,0	Diamond	20-050612	Green-line
Grinding pin	Blue Blanks, Comp.	6,0	1,0	50,0	12,0	Diamond	20-061012	
Grinding pin	Blue Blanks, Comp.	6,0	2,0	50,0	12,0	Diamond	20-062012	

All milling and grinding tools are available with and without position ring



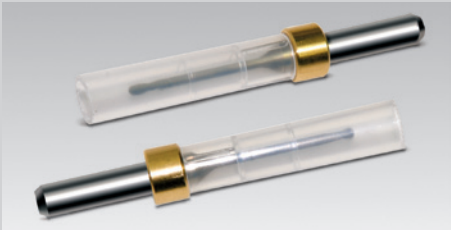
User-friendly labelling of the tool packaging with colour code



Colour code directly on the tools enables process reliability



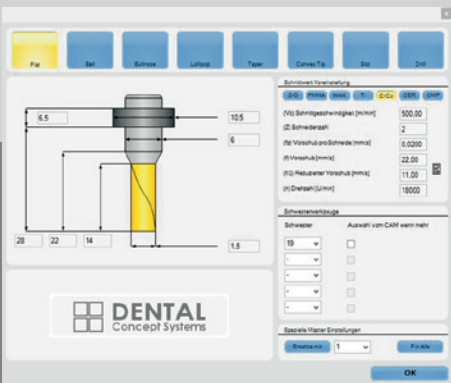
Safety in the system thanks to tuned cutting edge geometry



Protection for tools thanks to additional covering of the cutting edges



Protection for tools thanks to additional covering of the cutting edges



Purposeful development of the tools for milling strategies in the DC5 systems





## **Metal Coolant 014**

The cooling lubricant Metal Coolant 014 has been specially manufactured for the machining of difficult-to-machine metals such as CoCr steels, titanium and titanium alloys.

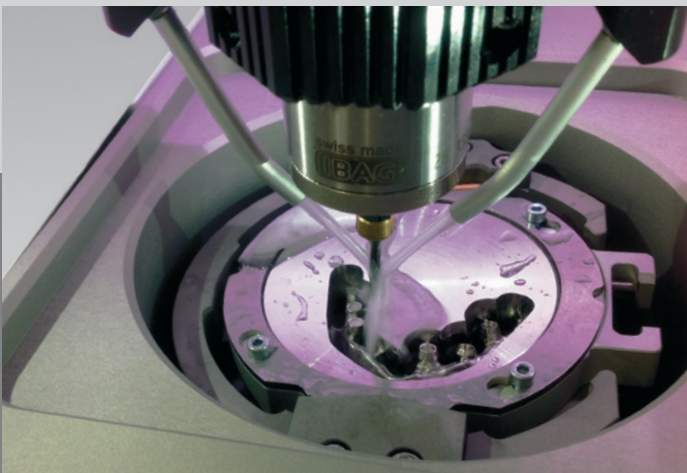
Metal Coolant 014 enables a high material removal rate and impresses even in difficult operations with ultra-fine machining surfaces. Titanium and titanium alloys have the usual shine after the milling process and have no grey clouding. Apart from good human and skin compatibility, Metal Coolant keeps the milling machine clean thanks to its low-foaming properties and enables a clear view of the objects being machined.

Metal Coolant 014 was developed for the cooling and filter systems in the DC5 and precisely adapted to suit the DC milling tools. The resulting high economy, thanks to low consumption and extremely long life in the cooling system of the DC5, is the result of a development that takes into account all system components from Dental Concept Systems.

## **Ceramic Coolant 016**

The cooling lubricant Ceramic Coolant 016 has been manufactured for the grinding of commercially available glass ceramics, composites and hybrid ceramics in the cooling and filter systems of the DC5. In this development, too, the priorities were high economy, cleanliness in the machine and human compatibility. Long tool service lives for the mounted points employed and the gentlest possible machining of the ceramic blocks enable pinpoint results even in small cavities. Ceramic Coolant 016 impresses in particular by optimal surfaces for all the ceramic materials mentioned and stable grinding results. There are no foam problems or high maintenance costs; handling is thus simple and long life is ensured.

Metal Coolant 014 and Ceramic Coolant 016 are available as ready-to-use mixtures in a can or as concentrates that can be mixed with distilled water. The cans are simple to stack and are re-usable. All containers are matched to the volumes in the DC5 cooling and filter system.





technical changes without notice! 1007/2014en

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