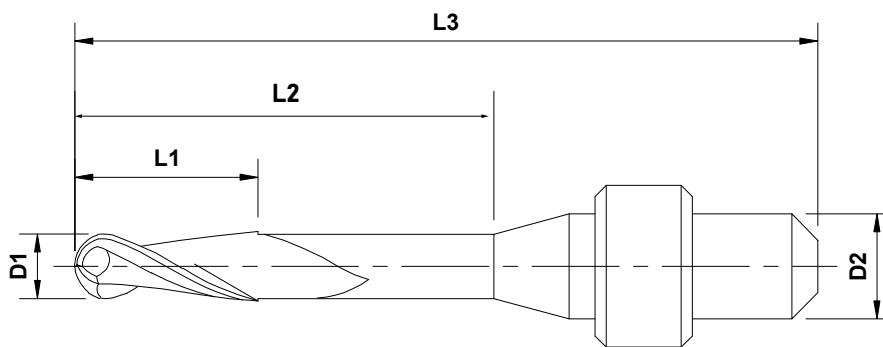# CAD CAM Dental Miiling Bur
CVD Real Diamond Coating
Outstanding milling bur life for machining Zirconia

Chemical Vapour Deposition

Chemical vapour deposition (CVD) is an established technology for coating a wide range of metal cutting tools, including drills, hacksaws, band saws, razor blades and inserts. In some cases, CVD can increase the life of a cutting tool by as much as 20 times the life of an uncoated tool. In addition the cutting efficiency, cutting speeds and the quality of cutting of the workpiece are significantly improved by surface engineering. The technology can be used to deposit a wide variety of coatings such as TiN, TiAlN, multilayers, graded coatings and novel new nanocomposite coatings, for a broad range of applications. Yet in one area there has been little CVD work carried out - the surface treatment of biomedical implants and dental tools such as burs, orthodontic pliers and tweezers, all of which can benefit in terms of quality, safety and cost from the application of a CVD coating.

Advantages of CVD

However, CVD is likely to be the future choice for surface coating of dental burs. The major advantage of CVD over the other surface engineering techniques is its ability to coat, uniformly, complex components such as dental burs, dental drills, pliers and tweezers. Additionally, it is possible to apply continuous layers of coatings onto the substrate material, and so make the tool last longer. Another benefit is that CVD coatings can be applied economically and on a large scale with minimal cost towards the equipment used.

## Diamond Coated Dental Tools

Diamond-coated dental burs are commonly used on patients, as well as in dental laboratories. Dental burs are used for several purposes, including the preparation of teeth cavities and, in many cases, preparation of the teeth themselves for crown and bridgework and partial dentures. Dental burs are also used extensively in the dental laboratory for cutting, drilling, grinding, trimming and polishing of various types of materials such as dentures and metal frameworks.

The burs are made by fixing hard diamond particles onto a substrate surface using a binder matrix material. Dental burs are currently specified by the dimensions of the bur head and the length of the shaft. There is no specification for the grinding surface. In the case of diamond coated burs in particular, there is no standardisation of the grit size or quality of the diamond particles used. The average grit size of diamond particles can vary widely from 50-300μm.

ARUM - Axsys

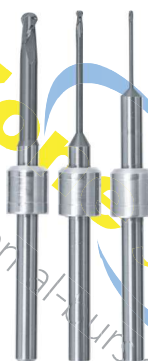ARUM - Axsys VersaMill 5X, 5X-200 & 4X-100
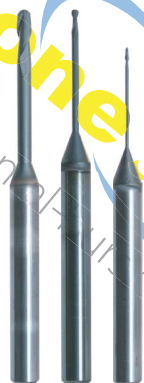
Order Code	D1	L1	L2	L3	D2
AA406	0.6	1.5	10	45	4
AA410	1.0	3.5	16	50	4
AA420	2.0	6.0	18	50	4

Order Code	D1	L1	L2	L3	D2
AA610	1.0	2.0	16	55	6
AA620	2.0	6.0	20	55	6

Amann Girrbach

Amann Girrbach
Ceramill Mikro 4X, 5X, Micro ic, Motion2 5X

Order Code	D1	L1	L2	L3	D2
AG306	0.6	2.0	13	47	3
AG310	1.0	3.5	16	47	3
AG325	2.5	3.5	18	47	3

DentalMill

Digital Dental- Dentmill
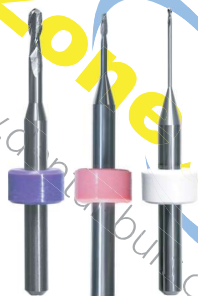
Order Code	D1	L1	L2	L3	D2
DM306	0.6	2.0	6	38	3.175
DM310	1.0	3.5	16	38	3.175
DM320	2.0	3.5	16	38	3.175

Imes Icore

imes-icore CORiTEC one, 140i, 245i/dry, 350i, 350i & 650i Loaders, 650i, 350i robot

Order Code	D1	L1	L2	L3	D2
II306	0.6	2.0	10	48	3
II310	1.0	5.0	14	48	3
II325	2.5	8.0	20	48	3

Order Code	D1	L1	L2	L3	D2
II306	0.6	2.0	10	48	3
II310	1.0	5.0	14	48	3
II325	2.5	8.0	20	48	3

ZONEFLY MEDICAL DEVICES CO., LTD.

Roland

Roland DWX-4, DWX-50, DWX-51, DWX 52
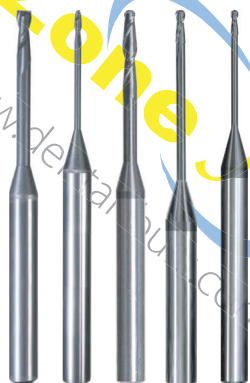
Order Code	D1	L1	L2	L3	D2
RL406	0.6	1.5	6	50	4
RL410	1.0	3.5	16	50	4
RL420	2.0	3.5	16	50	4
RL410EX	1.0	3.5	20	50	4
RL420EX	2.0	5.0	25	52	4

LAVA

Lava™: CNC 240, CAM 4-K4, CNC 500
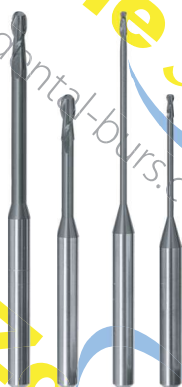
Order Code	D1	L1	L2	L3	D2
LA310S	1.0	3.5	16	38	3
LA320S	2.0	3.5	16	38	3

Order Code	D1	L1	L2	L3	D2
LA310	1.0	2.0	25	50	3
LA320	2.0	2.0	25	50	3

Sirona

Sirona MC X5

Order Code	D1	L1	L2	L3	D2
SR305	0.5	1.0	5	42	3
SR310	1.0	3.5	18	43	3
SR325	2.5	5.0	25	43	3

VHF

vhf K4, K5, S1, S2

Order Code	D1	L1	L2	L3	D2
VHF306S	0.6	2.0	7	35	3
VHF310S	1.0	3.5	16	35	3
VHF320S	2.0	3.5	16	35	3

Order Code	D1	L1	L2	L3	D2
VHF306	0.6	2.0	7	40	3
VHF310	1.0	3.5	16	40	3
VHF320	2.0	3.5	16	40	3

ZONEFLY MEDICAL DEVICES CO., LTD.

Wieland

Wieland Zenotec Select Hybrid, Zenotec Mini

Order Code	D1	L1	L2	L3	D2
WZ307	0.7	2.0	7	40	3
WZ310	1.0	3.5	16	40	3
WZ325	2.5	5.0	20	40	3
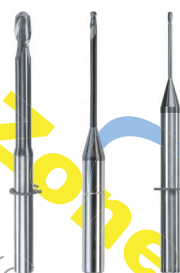
Order Code	D1	L1	L2	L3	D2
WZ307M	0.7	2.0	7	35	3
WZ310M	1.0	3.5	16	35	3
WZ325M	2.5	3.5	20	35	3

Zirkonzahn

Zirkonzahn M1, M4, M5, M6

Order Code	D1	L1	L2	L3	D2
ZK305	0.5	1.5	6	57	3
ZK310	1.0	6.0	12	57	3
ZK320	2.0	10.0	18	57	3

Order Code	D1	L1	L2	L3	D2
ZK605	0.5	3.0	20	50	3
ZK610	1.0	6.0	12	50	3
ZK620	2.5	10.0	18	50	3