

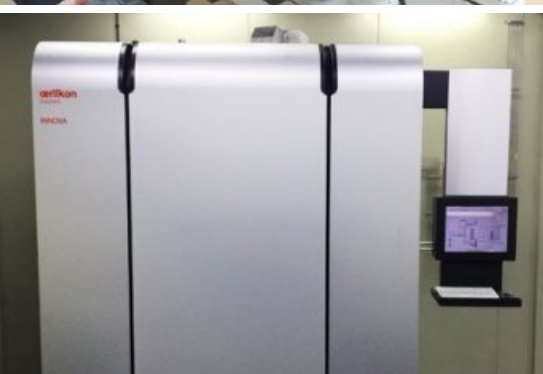
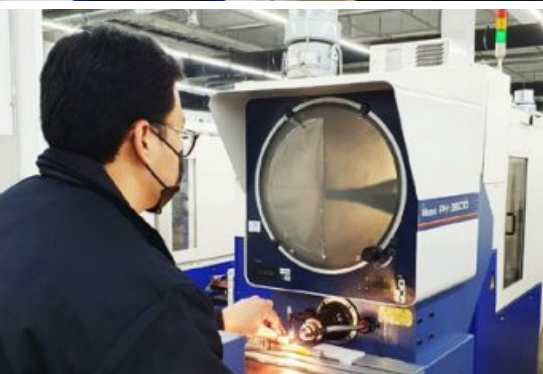


# Dental

Optimized Tools for CAD-CAM Machines



**D** ONEDEN



# ONEDEN



The ONEDEN company was founded in 2022 and is located in Incheon, South Korea.

With sophisticated equipment as well as the latest manufacturing technologies, ONEDEN will provide a whole new family of cutting tools such as End Mills, Drills, and Burrs for the dental industry.

These state-of-the-art products are geared for the manufacturing of dental prostheses through CAD-CAM machines.

The tools will be specifically built under proprietary know-how for adequate geometry and edge prep to give the best performance for each machine and material (PMMA, Glass Ceramics, Zirconia, Cobalt Chrome, and Titanium).

In addition, ONEDEN is using newly developed coatings, and various grades of Carbide raw materials to match requirements.

Outstanding quality is the drive of ONEDEN.

A team of Dental Tool Application specialists is in place and committed to provide the best technical support in selecting the right product for the application.

*There is no doubt that ONEDEN will become a key player in supplying tooling for the Dental Industry.*



## Advantage of 3 flutes versus 2 Flutes in Zirconia.

The difference between Metals (Cobalt Chrome, Titanium), PMMA, and Zirconia is that in the Milling operations of Metals and PMMA, we are creating chips and in Zirconia we are creating powder.

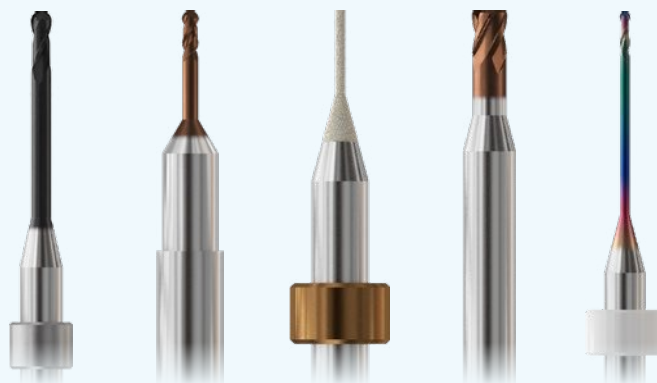
If we are using the same feed on 3 flutes in Zirconia the advantage will be getting a smoother cut with less load and much better tool life.

If we run the same chip load, then the feed rate will be 33% faster.

## Coating

ONEDEN is producing tools using state-of-the-art manufacturing equipment together with the latest coating technologies. We provide PVD and CVD (Diamond) Coating.

We also use the most advanced technology in Electroplating while using diamond grit which offers an excellent binding to avoid micro-cracks and reduces the sensitivity to thermal impact.



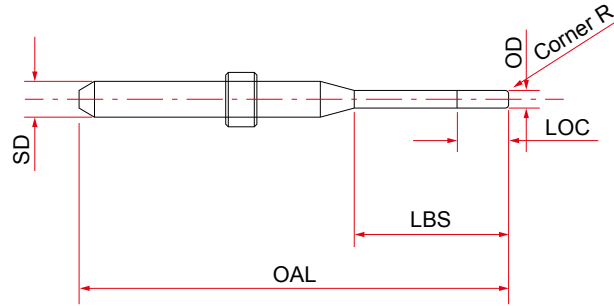
In PVD Coating we are using our TS Coating which has a specific advantage for Cobalt Chrome and Titanium materials.

For the Zirconia we are using Diamond coating,  
while for PMMA and Plastic, we are using DLC (Diamond Like Carbon).  
For Glass Ceramics, we are using Electroplated Diamond.



## Designation (Item No.) structure

| Shape / Coating / Machine |       |      |         |         | Specification |                        |                     |                      |          |                               |
|---------------------------|-------|------|---------|---------|---------------|------------------------|---------------------|----------------------|----------|-------------------------------|
| Sortation                 | Flute | Form | Coating | Machine | Diameter (OD) | Effective Length (LBS) | Shank Diameter (SD) | Overall Length (OAL) | Corner R | Identical code classification |
| Item No.                  | 2     | 1    | 2       | 06      | 30            | 125                    | 4                   | 50                   | 03       | A                             |
| Location                  | 1     | 2    | 3       | 4       | 5             | 6                      | 7                   | 8                    | 9        | 10                            |



### 1. Flute

| Example | Record |
|---------|--------|
| NO      | 0      |
| 1 Flute | 1      |
| 2 Flute | 2      |
| 3 Flute | 3      |
| 4 Flute | 4      |
| 5 Flute | 5      |
| 6 Flute | 6      |

### 2. Form

| Example     | Record |
|-------------|--------|
| Ball        | 1      |
| Flat        | 2      |
| Toric       | 3      |
| Drill       | 4      |
| R Cutter    | 5      |
| T-Cutter    | 6      |
| Thread Mill | 7      |
| Reamer      | 8      |

### 3. Coating

| Example  | Record |
|----------|--------|
| Uncoated | 0      |
| EL-DIA   | 1      |
| DIA      | 2      |
| TS       | 3      |
| DLC      | 4      |
| S-DLC    | 5      |
| TA       | 6      |
| AV       | 7      |
| AT       | 8      |

### 4. Machine

| Example          | Record |
|------------------|--------|
| Amann Girrbach   | 01     |
| Arum             | 02     |
| Ceracube         | 03     |
| Charly           | 04     |
| Dentium          | 05     |
| DOF              | 06     |
| Elben            | 07     |
| Imes-Icore       | 08     |
| Lezirth          | 09     |
| Manix            | 10     |
| NeoBiotech       | 11     |
| Protech Innotion | 12     |
| Rnd              | 13     |
| Roland           | 14     |
| Sirona           | 15     |
| Ugint            | 16     |
| VHF              | 17     |
| Wieland          | 18     |
| YenaDent         | 19     |
| ZIRKONZAHN       | 20     |
| Z-match          | 22     |
| CAMEleon         | 23     |
| Dental plus      | 24     |
| DATRON           | 25     |
| Redon            | 26     |
| AIDITE           | 30     |
| CNC Dental       | 32     |
| Osstem           | 33     |
| Ivoclar          | 36     |
| UP3D             | 38     |

### 5. Mill Diameter(OD)

| Example | Record |
|---------|--------|
| 0.6     | 06     |
| 1.0     | 10     |
| 1.5     | 15     |
| 2.0     | 20     |
| 2.5     | 25     |
| 3.0     | 30     |

### 6. Effective Length(LBS)

| Example | Record |
|---------|--------|
| 5.0     | 050    |
| 5.5     | 055    |
| 12.0    | 120    |
| 12.5    | 125    |
| 13.0    | 130    |
| 16.0    | 160    |

### 7. Shank Diameter(SD)

| Example | Record |
|---------|--------|
| 3       | 3      |
| 4       | 4      |
| 6       | 6      |

### 8. Overall Length(OAL)

| Example | Record |
|---------|--------|
| 35      | 35     |
| 38      | 38     |
| 40      | 40     |
| 45      | 45     |
| 50      | 50     |
| 55      | 55     |
| 57      | 57     |
| 60      | 60     |
| 63      | 63     |

### 9. Corner R

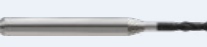
| Example | Record |
|---------|--------|
| R0.3    | 03     |
| R0.5    | 05     |
| R1.0    | 10     |
| R1.5    | 15     |
| R2.0    | 20     |

### 10. Identical code classification

| Example                           | Record |
|-----------------------------------|--------|
| Identical code classification 1st | A      |
| Identical code classification 2nd | B      |

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| Machine                                         | Shank Diameter (Ø) | Material                                                                                                         | Tool                                                                                 | Type        | Flutes | Coating   | Cutting Diameter (Ø) |     | Page |
|-------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------|--------|-----------|----------------------|-----|------|
|                                                 |                    |                                                                                                                  |                                                                                      |             |        |           | Min                  | Max |      |
| AIDITE AMW-520,<br>AMD-500<br>Compatible        | 4                  | Zirconia (ZrO <sub>2</sub> )    |    | Ball        | 2 & 3  | DIA       | 0.6                  | 2.0 | 8    |
|                                                 | 4                  | PMMA                            |    | Ball        | 2      | DLC       | 0.6                  | 3.0 | 8    |
|                                                 |                    |                                                                                                                  |    | Ball & Flat | 1      | Uncoated  | 0.6                  | 3.0 | 9    |
| AIDITE AMW-400<br>Compatible                    | 6                  | Glass Ceramics                  |    | Ball        | 0      | EL-DIA    | 0.6                  | 2.5 | 9    |
| Amann Girrbach<br>CERAMILL Series<br>Compatible | 3                  | Zirconia (ZrO <sub>2</sub> )    |    | Ball        | 2      | DIA       | 0.6                  | 2.5 | 10   |
| Arum<br>Compatible                              | 4                  | Glass Ceramics                  |    | Ball        | 0      | EL-DIA    | 0.6                  | 2.5 | 11   |
|                                                 | 6                  |                                                                                                                  |    | Ball        | 0      | EL-DIA    | 0.6                  | 2.5 | 11   |
|                                                 | 4                  | Zirconia (ZrO <sub>2</sub> )    |    | Ball        | 2      | DIA       | 0.6                  | 2.0 | 12   |
|                                                 | 6                  |                                                                                                                  |    | Ball        | 2      | DIA       | 0.6                  | 2.0 | 12   |
|                                                 | 6                  | Cobalt Chrome / Titanium        |    | Ball        | 2 & 3  | TS        | 0.6                  | 3.0 | 13   |
|                                                 | 4                  | PMMA                           |   | Ball        | 2      | Uncoated  | 1                    | 2.0 | 13   |
| CNC Dental<br>Compatible                        | 6                  | Cobalt Chrome / Titanium      |  | Ball        | 2      | TS        | 1.0                  | 3.0 | 14   |
|                                                 | 6                  |                                                                                                                  |  | High Feed   | 3      | TS        | 4.0                  | 4.0 | 14   |
|                                                 | 6                  |                                                                                                                  |  | Toric       | 4 & 5  | TS        | 3.0                  | 6.0 | 14   |
| DATRON<br>Compatible                            | 6                  | Cobalt Chrome / Titanium      |  | Ball        | 2      | TS        | 0.8                  | 3.0 | 15   |
| DENTAL PLUS X5<br>Compatible                    | 2                  | Zirconia (ZrO <sub>2</sub> )  |  | Ball        | 2      | DLC & DIA | 0.5                  | 2.0 | 16   |
| DOF CRAFT-5X<br>Compatible                      | 4                  | Zirconia (ZrO <sub>2</sub> )  |  | Ball        | 2      | DIA       | 0.6                  | 2.0 | 17   |
|                                                 | 4                  | PMMA                          |  | Ball        | 2      | DLC       | 1.0                  | 2.0 | 17   |
|                                                 | 4                  | Cobalt Chrome / Titanium      |  | Ball        | 3      | TS        | 1.0                  | 2.0 | 18   |
| DOF Sharp2-5X<br>Compatible                     | 3                  | Zirconia (ZrO <sub>2</sub> )  |  | Ball        | 2      | TS & DIA  | 0.6                  | 2.0 | 18   |
| Imes-Icore<br>Compatible<br>Shank 6mm           | 6                  | Zirconia (ZrO <sub>2</sub> )  |  | Ball        | 2 & 3  | DIA       | 0.6                  | 2.5 | 19   |
|                                                 | 6                  | PMMA / WAX / PEEK             |  | Ball        | 1 & 2  | Uncoated  | 1.0                  | 2.5 | 19   |
|                                                 | 6                  | Cobalt Chrome / Titanium      |  | Ball & Flat | 2 & 4  | TS        | 0.6                  | 3.0 | 20   |
|                                                 | 6                  |                                                                                                                  |  | High Feed   | 4      | TS & AT   | 3.0                  | 3.0 | 20   |
|                                                 | 6                  | Glass Ceramics                |  | Ball        | 0      | EL-DIA    | 0.6                  | 2.5 | 21   |
| Imes-Icore<br>Compatible<br>Shank 3mm           | 3                  | Zirconia (ZrO <sub>2</sub> )  |  | Ball        | 2      | DIA       | 0.6                  | 2.5 | 22   |
|                                                 | 3                  | Glass Ceramics                |  | Ball        | 0      | EL-DIA    | 0.6                  | 2.5 | 22   |

| Machine                | Shank Diameter (Ø) | Material                                                                                                            | Tool                                                                                | Type         | Flutes | Coating          | Cutting Diameter (Ø) |     | Page |
|------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------|--------|------------------|----------------------|-----|------|
|                        |                    |                                                                                                                     |                                                                                     |              |        |                  | Min                  | Max |      |
| Ivoclar PM7 Compatible | 6                  | Zirconia (ZrO <sub>2</sub> )       |    | Ball         | 2      | DIA              | 0.5                  | 2.5 | 23   |
|                        | 6                  | Glass Ceramics                     |    | Ball         | 0      | EL-DIA           | 0.5                  | 3.0 | 23   |
|                        | 6                  | PMMA                               |    | Ball & Flat  | 1 & 2  | S-DLC & Uncoated | 0.5                  | 5.0 | 24   |
|                        | 6                  | Cobalt Chrome / Titanium           |    | Ball         | 2 & 4  | TS               | 1                    | 3.0 | 24   |
| Ivoclar PM5 Compatible | 6                  | Zirconia (ZrO <sub>2</sub> )       |    | Ball         | 2      | DIA              | 0.5                  | 2.5 | 25   |
|                        | 6                  | Glass Ceramics                     |    | Ball & Flat  | 1      | S-DLC & Uncoated | 0.5                  | 2.5 | 25   |
|                        | 6                  | PMMA                               |    | Ball         | 0      | EL-DIA           | 0.5                  | 2.8 | 26   |
| Redon Compatible       | 4                  | Cobalt Chrome / Titanium           |    | Ball & Flat  | 2      | TS               | 0.6                  | 2   | 27   |
|                        | 4                  |                                                                                                                     |    | Toric        | 2 & 5  | TS & AV          | 2.5                  | 2.5 | 27   |
|                        | 4                  | Glass Ceramics                     |    | Ball         | 0      | EL-DIA           | 0.6                  | 2.5 | 28   |
|                        | 4                  | Zirconia (ZrO <sub>2</sub> )     |  | Ball         | 2      | DIA              | 0.6                  | 2.0 | 28   |
| Roland Compatible      | 4                  | Zirconia (ZrO <sub>2</sub> )     |  | Ball         | 2 & 3  | DIA              | 0.6                  | 3.0 | 29   |
|                        | 4                  | PMMA                             |  | Ball         | 1      | S-DLC            | 1.0                  | 2.0 | 29   |
|                        | 4                  | Universal Material / WAX / PEEK  |  | Ball         | 2      | TA               | 0.3                  | 2.0 | 30   |
|                        | 4                  |                                                                                                                     |  | Flat & Toric | 2 & 4  | TA               | 1.0                  | 4.0 | 30   |
|                        | 3                  | Glass Ceramics                   |  | Ball         | 0      | EL-DIA           | 0.5                  | 2.5 | 31   |
| Sirona Compatible      | 3                  | Zirconia (ZrO <sub>2</sub> )     |  | Ball         | 2 & 4  | DIA              | 0.5                  | 2.5 | 32   |
|                        | 3                  | Universal Material / WAX / PEEK  |  | Ball         | 2 & 4  | Uncoated         | 0.5                  | 2.5 | 32   |
|                        | 3                  | PMMA                             |  | Ball         | 2      | S-DLC            | 0.5                  | 2.5 | 33   |
| Thread Mill            | 6                  | Cobalt Chrome / Titanium         |  | Thread M     | 3      | TS & AV          | 1.5                  | 1.5 | 34   |
| UP3D Compatible        | 4                  | Zirconia (ZrO <sub>2</sub> )     |  | Ball         | 2      | DIA              | 0.3                  | 2.0 | 35   |

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| Machine               | Shank Diameter (Ø) | Material                                                                                                          | Tool                                                                                 | Type        | Flutes | Coating  | Cutting Diameter (Ø) |     | Page |
|-----------------------|--------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------|--------|----------|----------------------|-----|------|
|                       |                    |                                                                                                                   |                                                                                      |             |        |          | Min                  | Max |      |
| VHF Compatible        | 3                  | Zirconia (ZrO <sub>2</sub> )     |    | Ball & Flat | 2 & 3  | DIA      | 0.6                  | 2.0 | 36   |
|                       | 3                  | PMMA / WAX / PEEK                |    | Ball & Flat | 1 & 2  | Uncoated | 1.0                  | 2.5 | 37   |
|                       | 3                  | Universal Material / WAX / PEEK  |    | Ball        | 2      | Uncoated | 0.3                  | 0.3 | 38   |
|                       | 3                  |                                                                                                                   |    | Ball        | 2      | TA       | 0.6                  | 0.6 | 38   |
|                       | 3                  | Glass Ceramics                   |    | Ball        | 0      | EL-DIA   | 0.6                  | 2.4 | 38   |
| ZIRKONZAHN Compatible | 6                  | Zirconia (ZrO <sub>2</sub> )     |    | Ball        | 2      | DIA      | 0.5                  | 2.0 | 39   |
|                       | 3                  |                                                                                                                   |    | Ball        | 2      | DIA      | 0.5                  | 2.0 | 39   |
|                       | 6                  | Universal Material / WAX / PEEK  |    | Ball        | 2      | Uncoated | 0.5                  | 2.0 | 40   |
|                       | 6                  | Sintermetal                      |    | Ball        | 2      | Uncoated | 1.0                  | 2.0 | 40   |
|                       | 6                  | PMMA / WAX / PEEK                |    | Ball & Flat | 2      | Uncoated | 0.3                  | 2.0 | 41   |
|                       | 6                  | Cobalt Chrome / Titanium       |  | Toric       | 4      | TS       | 1.5                  | 3.0 | 42   |

## AIDITE AMW-520, AMD-500 Compatible - Dry machining

### Zirconia (ZrO<sub>2</sub>)



**1**

Ø0.6

21230 06060450



**2**

Ø1.0

21230 10160450



**3**

Ø2.0

21230 20160450



**4**

Ø2.0

31230 20160450



**5**

Ø1.5

42230 15200450



ZrO<sub>2</sub>

| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21230 06060450 | Ball | DIA     | 2      | 0.6     | 1        | 6        | 4       | 50       |
| 2   | 21230 10160450 | Ball | DIA     | 2      | 1.0     | 2.5      | 16       | 4       | 50       |
| 3   | 21230 20160450 | Ball | DIA     | 2      | 2.0     | 5.5      | 16       | 4       | 50       |
| 4   | 31230 20160450 | Ball | DIA     | 3      | 2.0     | 5.5      | 16       | 4       | 50       |
| 5   | 42230 15200450 | Flat | DIA     | 4      | 1.5     | 3.5      | 20       | 4       | 50       |

## AIDITE AMW-520, AMD-500 Compatible - Dry machining

### PMMA



**1**

Ø0.6

21430 06080450



**2**

Ø1.0

21430 10200450



**3**

Ø2.0

21430 20250450



**4**

Ø3.0

21430 30250450



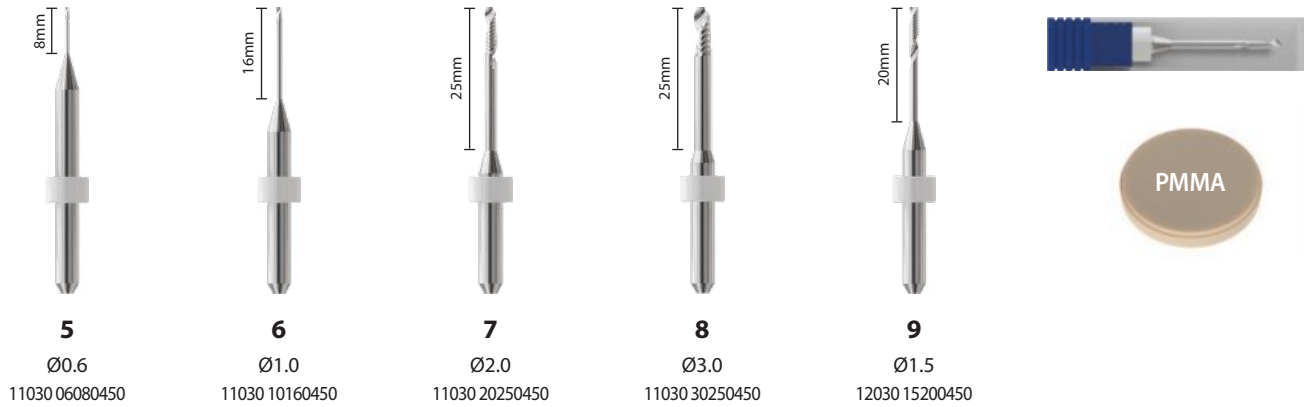
PMMA

| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21430 06080450 | Ball | DLC     | 2      | 0.6     | 2        | 8        | 4       | 50       |
| 2   | 21430 10200450 | Ball | DLC     | 2      | 1.0     | 3        | 20       | 4       | 50       |
| 3   | 21430 20250450 | Ball | DLC     | 2      | 2.0     | 8        | 25       | 4       | 50       |
| 4   | 21430 30250450 | Ball | DLC     | 2      | 3.0     | 8        | 25       | 4       | 50       |



## AIDITE AMW-520, AMD-500 Compatible - Dry machining

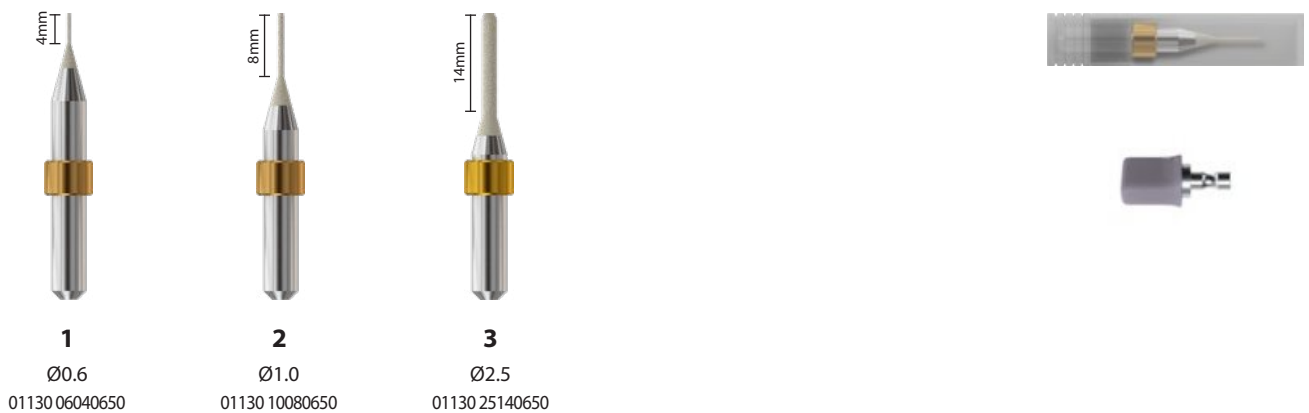
### PMMA



| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 5   | 11030 06080450 | Ball | Uncoated | 1      | 0.6     | 2        | 8        | 4       | 50       |
| 6   | 11030 10160450 | Ball | Uncoated | 1      | 1.0     | 2        | 16       | 4       | 50       |
| 7   | 11030 20250450 | Ball | Uncoated | 1      | 2.0     | 8        | 25       | 4       | 50       |
| 8   | 11030 30250450 | Ball | Uncoated | 1      | 3.0     | 8        | 25       | 4       | 50       |
| 9   | 12030 15200450 | Flat | Uncoated | 1      | 1.5     | 8        | 20       | 4       | 50       |

## AIDITE AMW-400 Compatible - Wet Machining

### Glass Ceramics



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 01130 06040650 | Ball | EL-DIA  | 0      | 0.6     | 4        | 4        | 6       | 50       |
| 2   | 01130 10080650 | Ball | EL-DIA  | 0      | 1.0     | 8        | 8        | 6       | 50       |
| 3   | 01130 25140650 | Ball | EL-DIA  | 0      | 2.5     | 14       | 14       | 6       | 50       |

# Amann Girrbach CERAMILL Series Compatible

## Zirconia (ZrO<sub>2</sub>)



**1**

Ø0.6

21201 06120347



**2**

Ø1.0

21201 10160347



**3**

Ø2.5

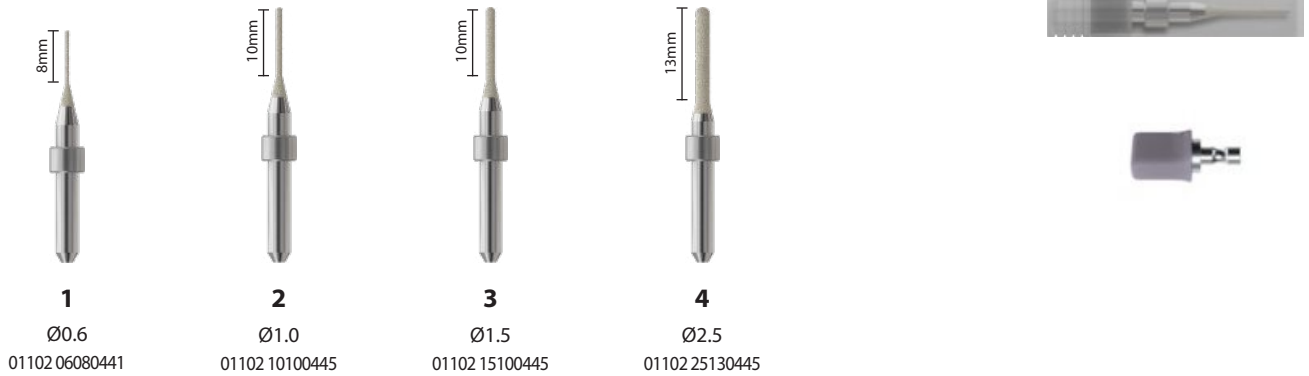
21201 25180347



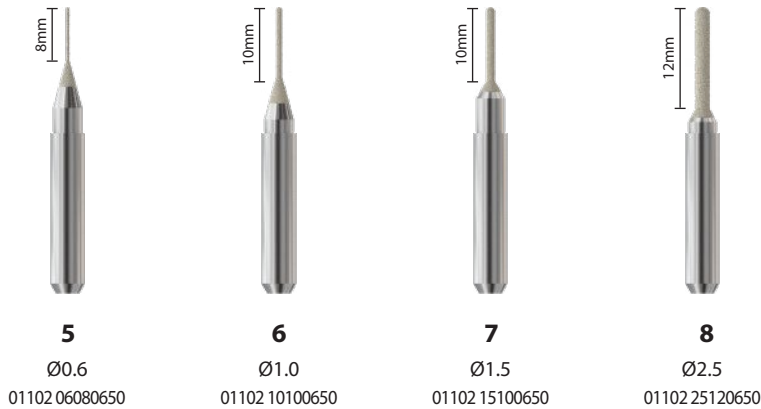
| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21201 06120347 | Ball | DIA     | 2      | 0.6     | 2        | 12       | 3       | 47       |
| 2   | 21201 10160347 | Ball | DIA     | 2      | 1.0     | 2        | 16       | 3       | 47       |
| 3   | 21201 25180347 | Ball | DIA     | 2      | 2.5     | 4        | 18       | 3       | 47       |

# Arum Compatible - Wet Machining

## Glass Ceramics



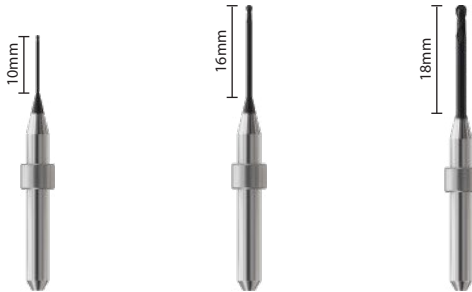
| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 01102 06080441 | Ball | EL-DIA  | 0      | 0.6     | 8        | 8        | 4       | 41       |
| 2   | 01102 10100445 | Ball | EL-DIA  | 0      | 1.0     | 10       | 10       | 4       | 45       |
| 3   | 01102 15100445 | Ball | EL-DIA  | 0      | 1.5     | 10       | 10       | 4       | 45       |
| 4   | 01102 25130445 | Ball | EL-DIA  | 0      | 2.5     | 13       | 13       | 4       | 45       |



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 5   | 01102 06080650 | Ball | EL-DIA  | 0      | 0.6     | 8        | 8        | 6       | 50       |
| 6   | 01102 10100650 | Ball | EL-DIA  | 0      | 1.0     | 10       | 10       | 6       | 50       |
| 7   | 01102 15100650 | Ball | EL-DIA  | 0      | 1.5     | 10       | 10       | 6       | 50       |
| 8   | 01102 25120650 | Ball | EL-DIA  | 0      | 2.5     | 12       | 12       | 6       | 50       |

# Arum Compatible - Dry Machining

## Zirconia (ZrO<sub>2</sub>)



**1**

Ø0.6

21202 06100445



**2**

Ø1.0

21202 10160450



**3**

Ø2.0

21202 20180450



ZrO<sub>2</sub>

| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21202 06100445 | Ball | DIA     | 2      | 0.6     | 1.5      | 10       | 4       | 45       |
| 2   | 21202 10160450 | Ball | DIA     | 2      | 1.0     | 2        | 16       | 4       | 50       |
| 3   | 21202 20180450 | Ball | DIA     | 2      | 2.0     | 3.2      | 18       | 4       | 50       |



**4**

Ø0.6

21202 06080650



**5**

Ø1.0

21202 10140653



**6**

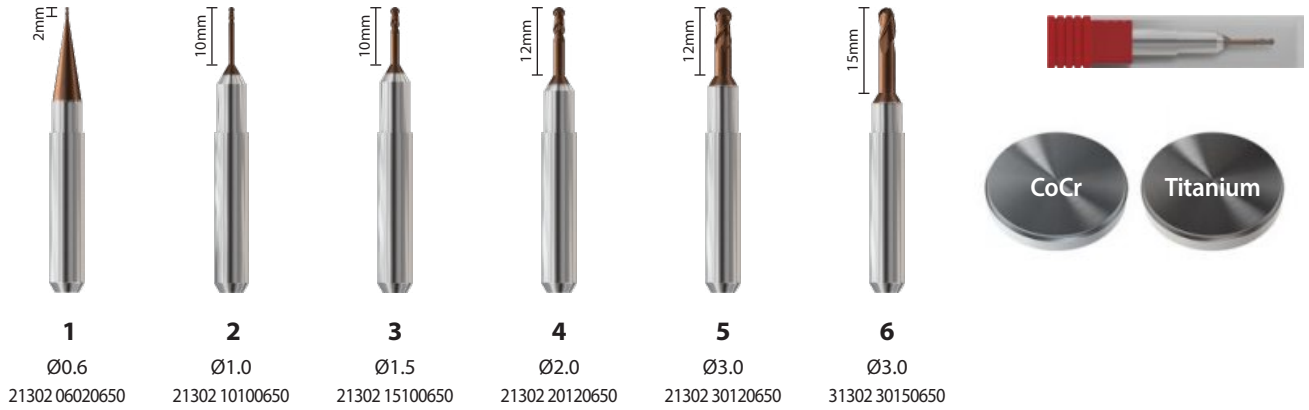
Ø2.0

21202 20200655

| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 4   | 21202 06080650 | Ball | DIA     | 2      | 0.6     | 1.6      | 8        | 6       | 50       |
| 5   | 21202 10140653 | Ball | DIA     | 2      | 1.0     | 2        | 14       | 6       | 53       |
| 6   | 21202 20200655 | Ball | DIA     | 2      | 2.0     | 6        | 20       | 6       | 55       |

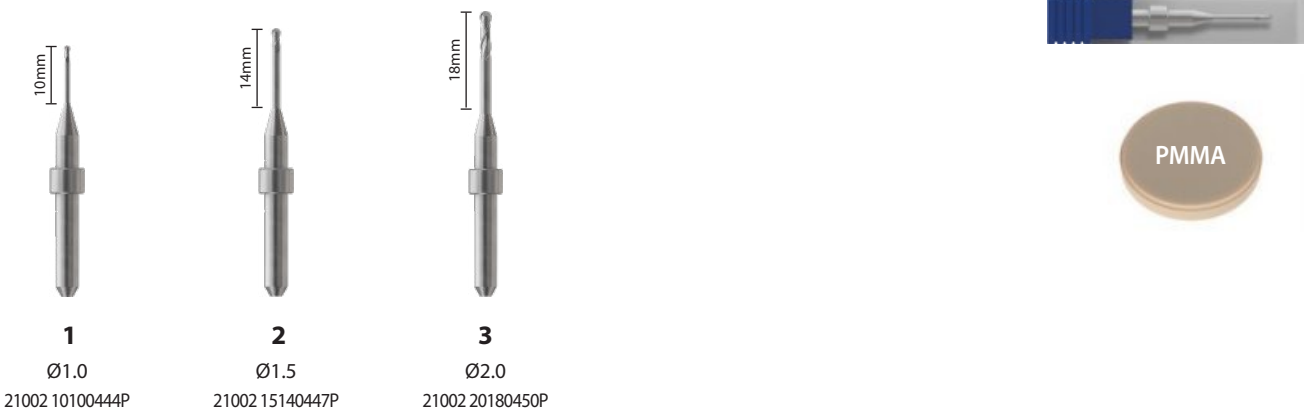
## Arum Compatible - Dry Machining

### Cobalt Chrome / Titanium



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21302 06020650 | Ball | TS      | 2      | 0.6     | 1        | 2        | 6       | 50       |
| 2   | 21302 10100650 | Ball | TS      | 2      | 1.0     | 2        | 10       | 6       | 50       |
| 3   | 21302 15100650 | Ball | TS      | 2      | 1.5     | 3        | 10       | 6       | 50       |
| 4   | 21302 20120650 | Ball | TS      | 2      | 2.0     | 4        | 12       | 6       | 50       |
| 5   | 21302 30120650 | Ball | TS      | 2      | 3.0     | 4.5      | 12       | 6       | 50       |
| 6   | 31302 30150650 | Ball | TS      | 3      | 3.0     | 4.5      | 15       | 6       | 50       |

### PMMA

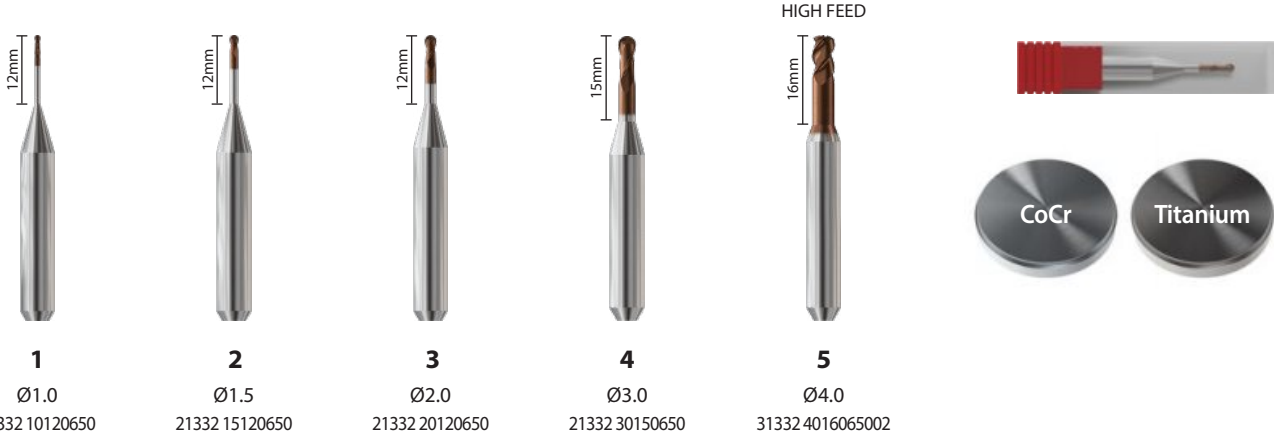


| No. | EDP             | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|-----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 1   | 21002 10100444P | Ball | Uncoated | 2      | 1.0     | 2        | 10       | 4       | 44       |
| 2   | 21002 15140447P | Ball | Uncoated | 2      | 1.5     | 3        | 14       | 4       | 47       |
| 3   | 21002 20180450P | Ball | Uncoated | 2      | 2.0     | 6        | 18       | 4       | 50       |



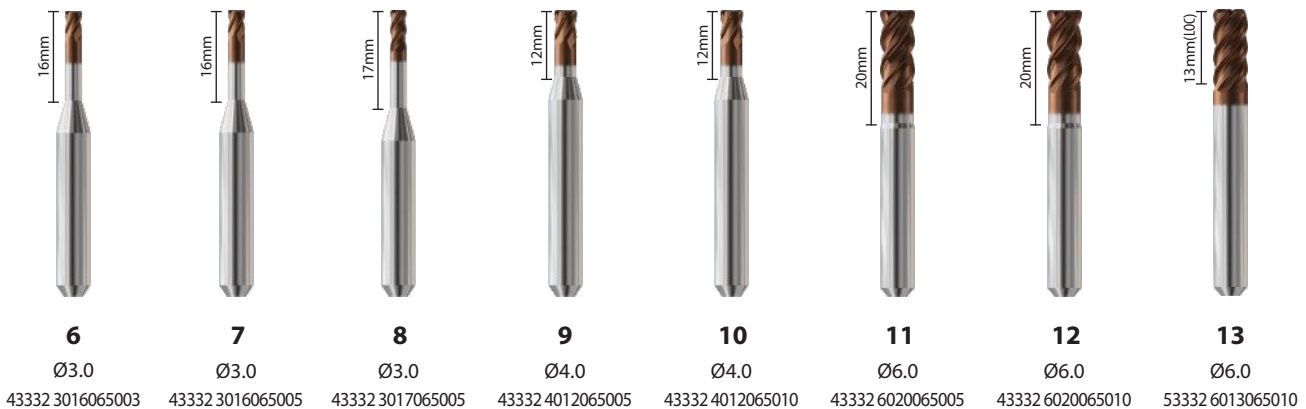
# CNC Dental Compatible - Wet/Dry/MQL

## Cobalt Chrome / Titanium



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21332 10120650 | Ball | TS      | 2      | 1.0     | 3        | 12       | 6       | 50       |
| 2   | 21332 15120650 | Ball | TS      | 2      | 1.5     | 3        | 12       | 6       | 50       |
| 3   | 21332 20120650 | Ball | TS      | 2      | 2.0     | 3.5      | 12       | 6       | 50       |
| 4   | 21332 30150650 | Ball | TS      | 2      | 3.0     | 5.5      | 15       | 6       | 50       |

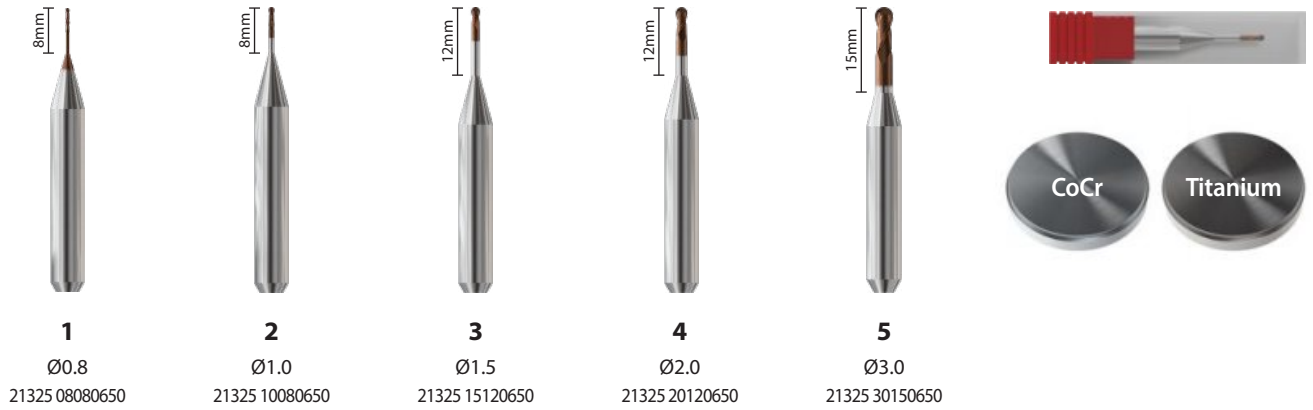
| No. | EDP              | Type      | Coating | Flute | OD [mm]  | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|------------------|-----------|---------|-------|----------|----------|----------|---------|----------|
| 5   | 31332 4016065002 | High Feed | TS      | 3     | 4.0-R0.2 | 4.2      | 16       | 6       | 50       |



| No. | EDP              | Type  | Coating | Flutes | OD [mm]  | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|------------------|-------|---------|--------|----------|----------|----------|---------|----------|
| 6   | 43332 3016065003 | Toric | TS      | 4      | 3.0-R0.3 | 4        | 16       | 6       | 50       |
| 7   | 43332 3016065005 | Toric | TS      | 4      | 3.0-R0.5 | 4        | 16       | 6       | 50       |
| 8   | 43332 3017065005 | Toric | TS      | 4      | 3.0-R0.5 | 7        | 17       | 6       | 50       |
| 9   | 43332 4012065005 | Toric | TS      | 4      | 4.0-R0.5 | 5        | 12       | 6       | 50       |
| 10  | 43332 4012065010 | Toric | TS      | 4      | 4.0-R1.0 | 5        | 12       | 6       | 50       |
| 11  | 43332 6020065005 | Toric | TS      | 4      | 6.0-R0.5 | 13       | 20       | 6       | 50       |
| 12  | 43332 6020065010 | Toric | TS      | 4      | 6.0-R1.0 | 13       | 20       | 6       | 50       |
| 13  | 53332 6013065010 | Toric | TS      | 5      | 6.0-R1.0 | 13       | -        | 6       | 50       |

# DATRON Compatible

## Cobalt Chrome / Titanium



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21325 08080650 | Ball | TS      | 2      | 0.8     | 3        | 8        | 6       | 50       |
| 2   | 21325 10080650 | Ball | TS      | 2      | 1.0     | 3        | 8        | 6       | 50       |
| 3   | 21325 15120650 | Ball | TS      | 2      | 1.5     | 3        | 12       | 6       | 50       |
| 4   | 21325 20120650 | Ball | TS      | 2      | 2.0     | 3.5      | 12       | 6       | 50       |
| 5   | 21325 30150650 | Ball | TS      | 2      | 3.0     | 6        | 15       | 6       | 50       |

# DENTAL PLUS X5 Compatible

## Zirconia (ZrO<sub>2</sub>)



**1**

Ø0.5

21424 05220450



**2**

Ø0.5

21224 05220450



**3**

Ø1.0

21224 10180450



**4**

Ø2.0

21224 20200450



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21424 05220450 | Ball | DLC     | 2      | 0.5     | 2        | 22       | 4       | 50       |
| 2   | 21224 05220450 | Ball | DIA     | 2      | 0.5     | 2        | 22       | 4       | 50       |
| 3   | 21224 10180450 | Ball | DIA     | 2      | 1.0     | 3        | 18       | 4       | 50       |
| 4   | 21224 20200450 | Ball | DIA     | 2      | 2.0     | 7        | 20       | 4       | 50       |

## DOF CRAFT-5X Compatible

### Zirconia (ZrO<sub>2</sub>)



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21206 06080438 | Ball | DIA     | 2      | 0.6     | 2.5      | 8        | 4       | 37.5     |
| 2   | 21206 10160442 | Ball | DIA     | 2      | 1.0     | 3        | 16       | 4       | 41.5     |
| 3   | 21206 20160442 | Ball | DIA     | 2      | 2.0     | 7        | 16       | 4       | 41.5     |

### PMMA



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21406 10160442 | Ball | DLC     | 2      | 1.0     | 3        | 16       | 4       | 41.5     |
| 2   | 21406 20160442 | Ball | DLC     | 2      | 2.0     | 7        | 16       | 4       | 41.5     |

## DOF CRAFT-5X Compatible

### Cobalt Chrome / Titanium



**1**

Ø1.0

31306 10120435



**2**

Ø1.5

31306 15120435



**3**

Ø2.0

31306 20100435



CoCr



Titanium

| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 31306 10120435 | Ball | TS      | 3      | 1.0     | 3        | 12       | 4       | 35       |
| 2   | 31306 15120435 | Ball | TS      | 3      | 1.5     | 4        | 12       | 4       | 35       |
| 3   | 31306 20100435 | Ball | TS      | 3      | 2.0     | 6        | 10       | 4       | 35       |

## DOF Sharp2-5X Compatible

### Zirconia (ZrO<sub>2</sub>)



**1**

Ø0.6

21306 06080340



**2**

Ø1.0

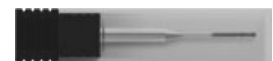
21206 10160344



**3**

Ø2.0

21206 20160344

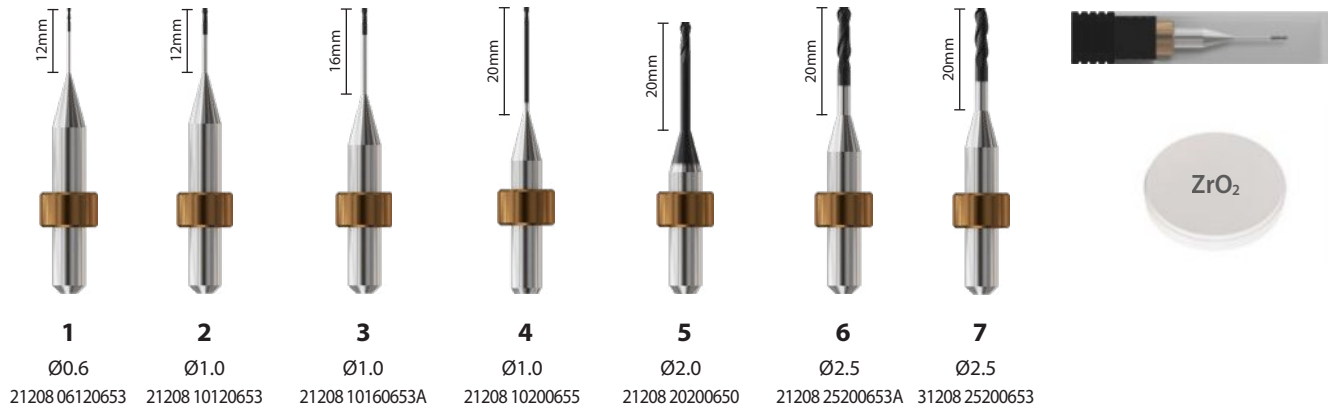


ZrO<sub>2</sub>

| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21306 06080340 | Ball | TS      | 2      | 0.6     | 1.5      | 8        | 3       | 40       |
| 2   | 21206 10160344 | Ball | DIA     | 2      | 1.0     | 3        | 16       | 3       | 44       |
| 3   | 21206 20160344 | Ball | DIA     | 2      | 2.0     | 6.3      | 16       | 3       | 44       |

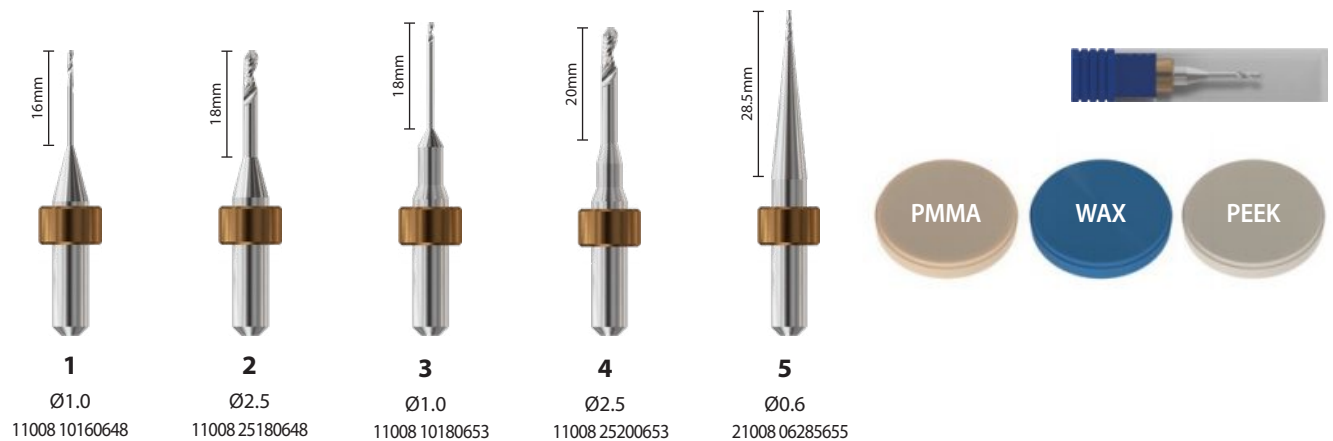
# Imes-Core Compatible Shank 6mm - Dry Machining

## Zirconia (ZrO<sub>2</sub>)



| No. | EDP             | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|-----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21208 06120653  | Ball | DIA     | 2      | 0.6     | 2        | 12       | 6       | 53       |
| 2   | 21208 10120653  | Ball | DIA     | 2      | 1.0     | 2        | 12       | 6       | 53       |
| 3   | 21208 10160653A | Ball | DIA     | 2      | 1.0     | 2        | 16       | 6       | 53       |
| 4   | 21208 10200655  | Ball | DIA     | 2      | 1.0     | 2        | 20       | 6       | 55       |
| 5   | 21208 20200650  | Ball | DIA     | 2      | 2.0     | 5        | 20       | 6       | 50       |
| 6   | 21208 25200653A | Ball | DIA     | 2      | 2.5     | 9        | 20       | 6       | 53       |
| 7   | 31208 25200653  | Ball | DIA     | 3      | 2.5     | 9        | 20       | 6       | 53       |

## PMMA / WAX / PEEK

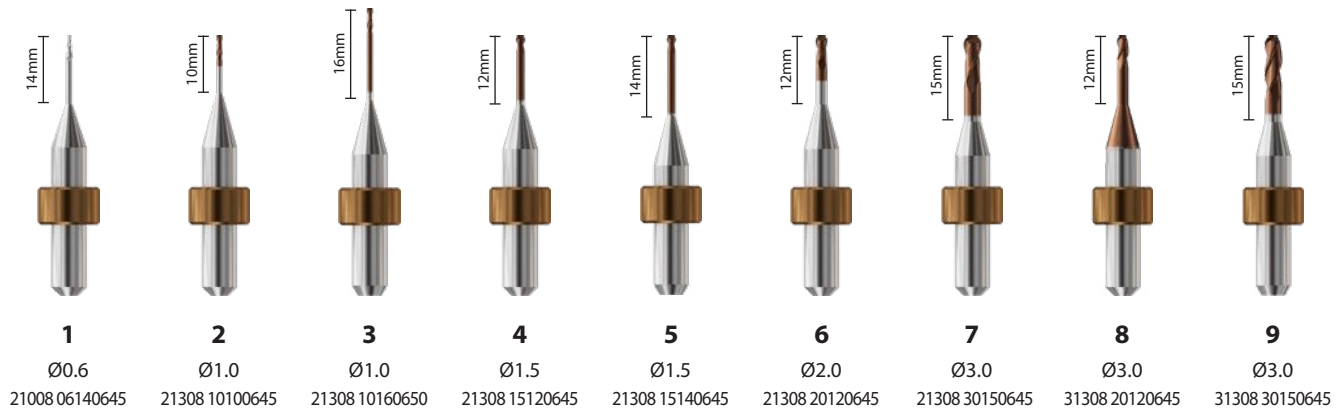


| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 1   | 11008 10160648 | Ball | Uncoated | 1      | 1.0     | 6        | 16       | 6       | 48       |
| 2   | 11008 25180648 | Ball | Uncoated | 1      | 2.5     | 6        | 18       | 6       | 48       |
| 3   | 11008 10180653 | Ball | Uncoated | 1      | 1.0     | 6        | 18       | 6       | 53       |
| 4   | 11008 25200653 | Ball | Uncoated | 1      | 2.5     | 6        | 20       | 6       | 53       |
| 5   | 21008 06285655 | Ball | Uncoated | 2      | 0.6     | 4        | 28.5     | 6       | 55       |

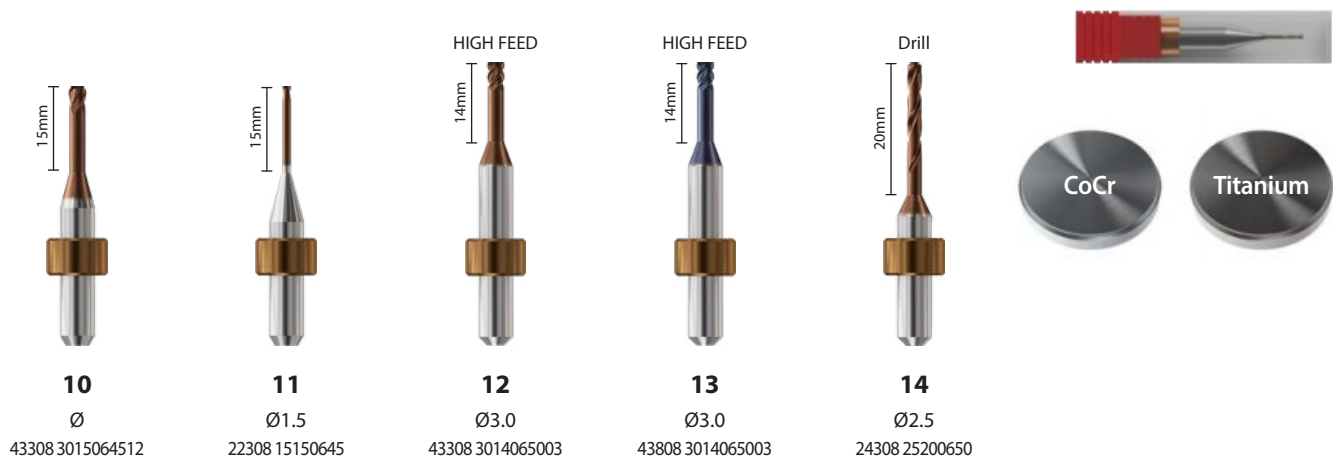


# Imes-Icore Compatible Shank 6mm

## Cobalt Chrome / Titanium



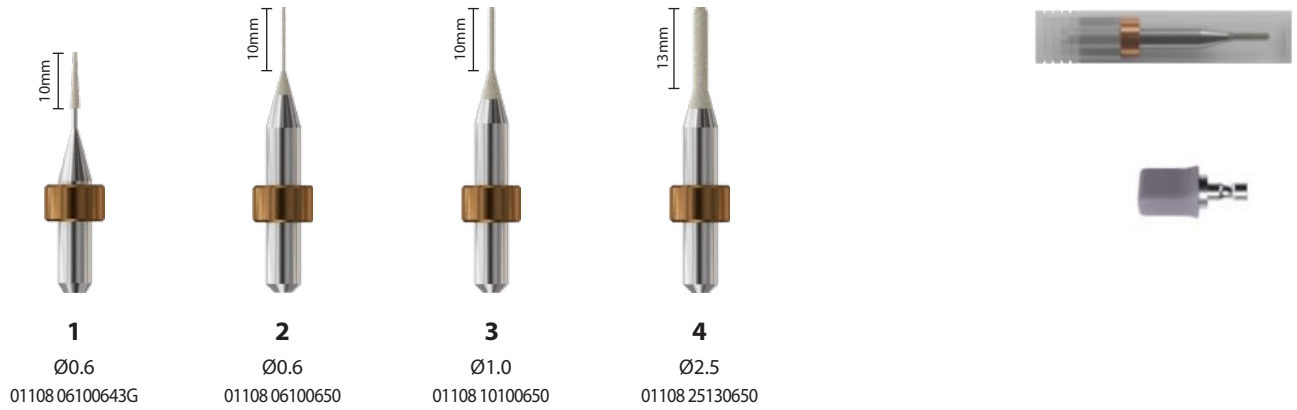
| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 1   | 21008 06140645 | Ball | Uncoated | 2      | 0.6     | 4        | 14       | 6       | 45       |
| 2   | 21308 10100645 | Ball | TS       | 2      | 1.0     | 3        | 10       | 6       | 45       |
| 3   | 21308 10160650 | Ball | TS       | 2      | 1.0     | 1.2      | 16       | 6       | 50       |
| 4   | 21308 15120645 | Ball | TS       | 2      | 1.5     | 1.25     | 12       | 6       | 45       |
| 5   | 21308 15140645 | Ball | TS       | 2      | 1.5     | 1.25     | 14       | 6       | 45       |
| 6   | 21308 20120645 | Ball | TS       | 2      | 2.0     | 3.5      | 12       | 6       | 45       |
| 7   | 21308 30150645 | Ball | TS       | 2      | 3.0     | 6        | 15       | 6       | 45       |
| 8   | 31308 20120645 | Ball | TS       | 3      | 2.0     | 3.5      | 12       | 6       | 45       |
| 9   | 31308 30150645 | Ball | TS       | 3      | 3.0     | 8        | 15       | 6       | 45       |



| No. | EDP              | Type      | Coating | Flutes | OD [mm]   | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|------------------|-----------|---------|--------|-----------|----------|----------|---------|----------|
| 10  | 43308 3015064512 | Toric     | TS      | 4      | 3.0 -R1.2 | 3        | 15       | 6       | 45       |
| 11  | 22308 15150645   | Flat      | TS      | 2      | 1.5       | 2.5      | 15       | 6       | 45       |
| 12  | 43308 3014065003 | High Feed | TS      | 4      | 3.0 -R0.3 | 4        | 14       | 6       | 50       |
| 13  | 43808 3014065003 | High Feed | AT      | 4      | 3.0 -R0.3 | 4        | 14       | 6       | 50       |
| 14  | 24308 25200650   | Drill     | TS      | 2      | 2.5       | 20       | 20       | 6       | 50       |

# Imes-Icore Compatible Shank 6mm - Wet Machining

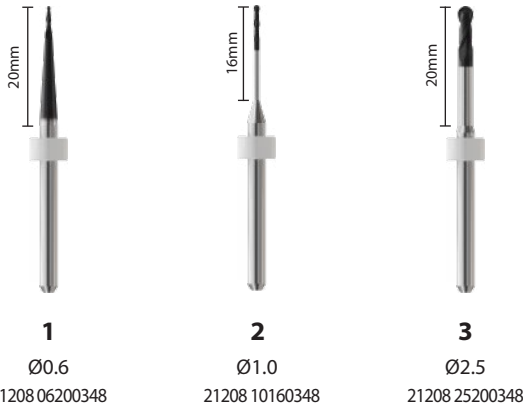
## Glass Ceramics



| No. | EDP             | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|-----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 01108 06100643G | Ball | EL-DIA  | 0      | 0.6     | 10       | 10       | 6       | 43       |
| 2   | 01108 06100650  | Ball | EL-DIA  | 0      | 0.6     | 10       | 10       | 6       | 50       |
| 3   | 01108 10100650  | Ball | EL-DIA  | 0      | 1.0     | 10       | 10       | 6       | 50       |
| 4   | 01108 25130650  | Ball | EL-DIA  | 0      | 2.5     | 13       | 13       | 6       | 50       |

## Imes-Icore Compatible Shank 3mm - Dry Machining

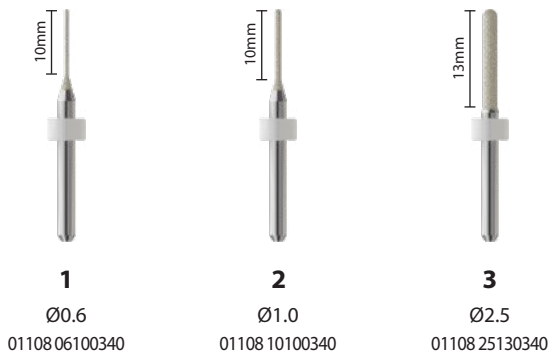
### Zirconia (ZrO<sub>2</sub>)



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21208 06200348 | Ball | DIA     | 2      | 0.6     | 4        | 20       | 3       | 48       |
| 2   | 21208 10160348 | Ball | DIA     | 2      | 1.0     | 4.4      | 16       | 3       | 48       |
| 3   | 21208 25200348 | Ball | DIA     | 2      | 2.5     | 6        | 20       | 3       | 48       |

## Imes-Icore Compatible - Wet Machining

### Glass Ceramics



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 01108 06100340 | Ball | EL-DIA  | 0      | 0.6     | 10       | 10       | 3       | 40       |
| 2   | 01108 10100340 | Ball | EL-DIA  | 0      | 1.0     | 10       | 10       | 3       | 40       |
| 3   | 01108 25130340 | Ball | EL-DIA  | 0      | 2.5     | 13       | 13       | 3       | 40       |

## Ivoclar PM7 Compatible - Dry Machining

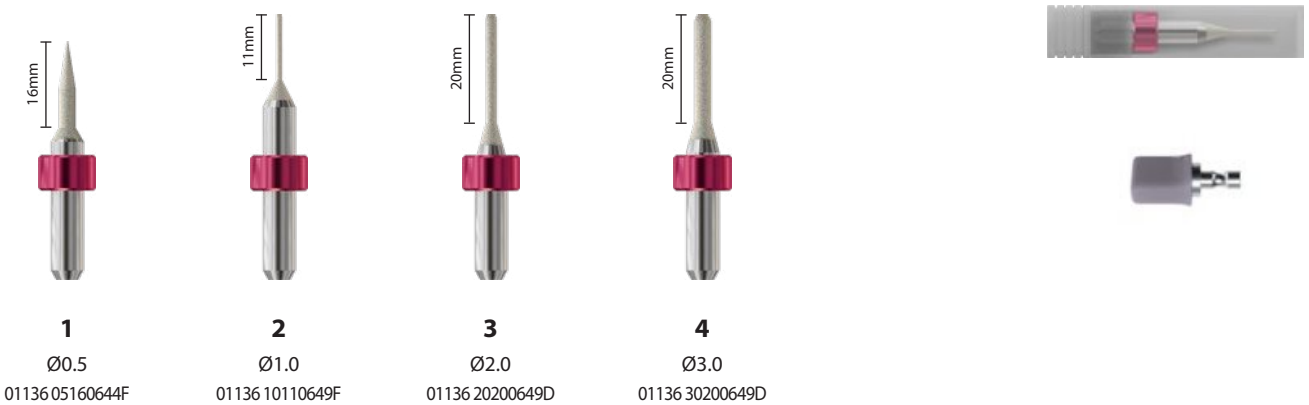
### Zirconia (ZrO<sub>2</sub>)



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21236 05070653 | Ball | DIA     | 2      | 0.5     | 2        | 7        | 6       | 53       |
| 2   | 21236 10140653 | Ball | DIA     | 2      | 1.0     | 4        | 14       | 6       | 53       |
| 3   | 21236 25200653 | Ball | DIA     | 2      | 2.5     | 6        | 20       | 6       | 53       |

## Ivoclar PM7 Compatible - Wet machining

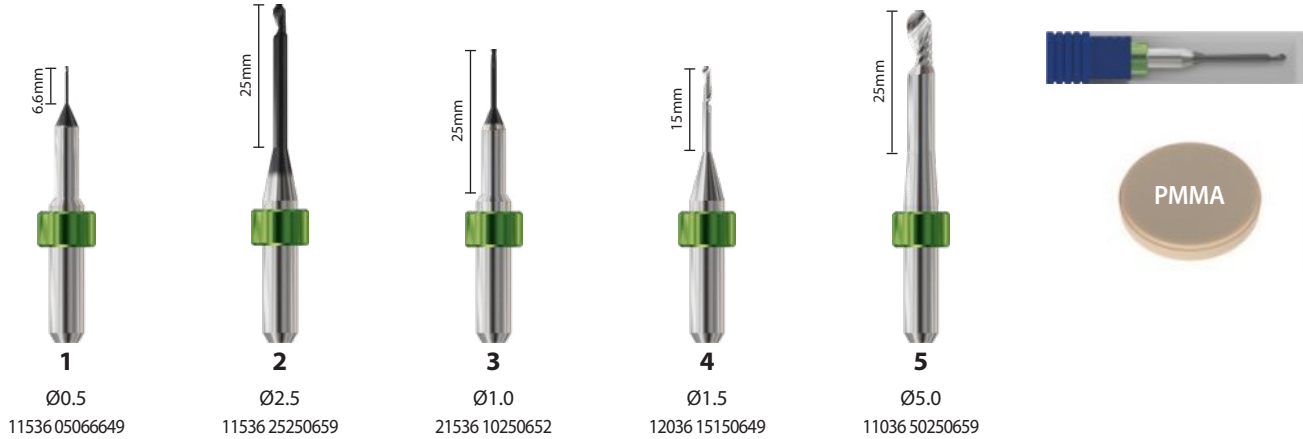
### Glass Ceramics



| No. | EDP             | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|-----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 01136 05160644F | Ball | EL-DIA  | 0      | 0.5     | 16       | 16       | 6       | 44       |
| 2   | 01136 10110649F | Ball | EL-DIA  | 0      | 1.0     | 11       | 11       | 6       | 49       |
| 3   | 01136 20200649D | Ball | EL-DIA  | 0      | 2.0     | 20       | 20       | 6       | 49       |
| 4   | 01136 30200649D | Ball | EL-DIA  | 0      | 3.0     | 20       | 20       | 6       | 49       |

## Ivoclar PM7 Compatible - Dry Machining

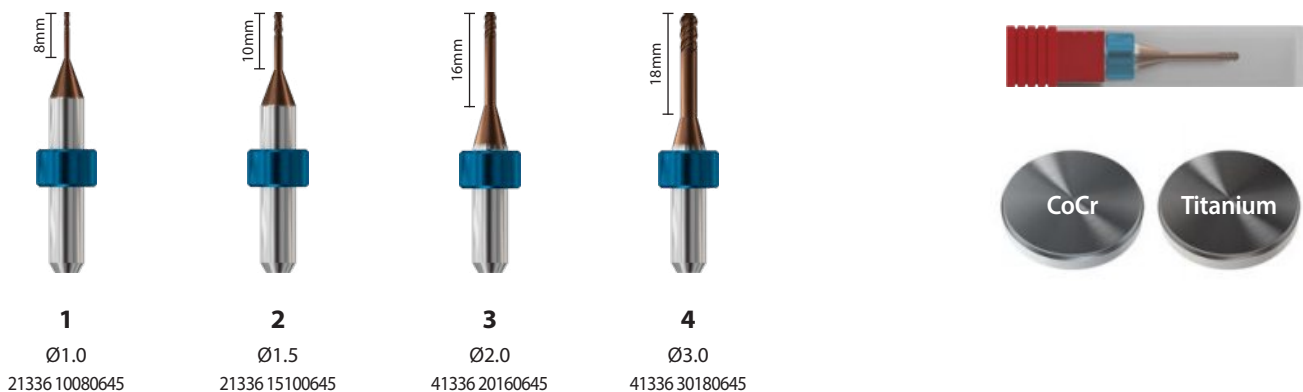
### PMMA



| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 1   | 11536 05066649 | Ball | S-DLC    | 1      | 0.5     | 1        | 6.6      | 6       | 49       |
| 2   | 11536 25250659 | Ball | S-DLC    | 1      | 2.5     | 5        | 25       | 6       | 59       |
| 3   | 21536 10250652 | Ball | S-DLC    | 2      | 1.0     | 2        | 25       | 6       | 52       |
| 4   | 12036 15150649 | Flat | Uncoated | 1      | 1.5     | 6        | 15       | 6       | 49       |
| 5   | 11036 50250659 | Ball | Uncoated | 1      | 5.0     | 10       | 25       | 6       | 59       |

## Ivoclar PM7 Compatible - Wet machining

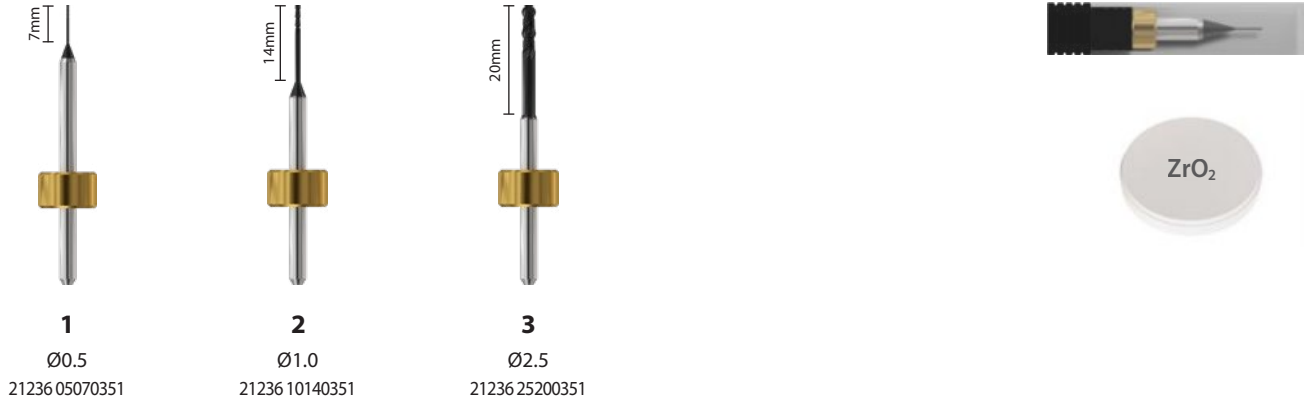
### Cobalt Chrome / Titanium



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21336 10080645 | Ball | TS      | 2      | 1.0     | 2        | 8        | 6       | 45       |
| 2   | 21336 15100645 | Ball | TS      | 2      | 1.5     | 3        | 10       | 6       | 45       |
| 3   | 41336 20160645 | Ball | TS      | 4      | 2.0     | 4        | 16       | 6       | 45       |
| 4   | 41336 30180645 | Ball | TS      | 4      | 3.0     | 6        | 18       | 6       | 45       |

## Ivoclar PM5 Compatible - Dry Machining

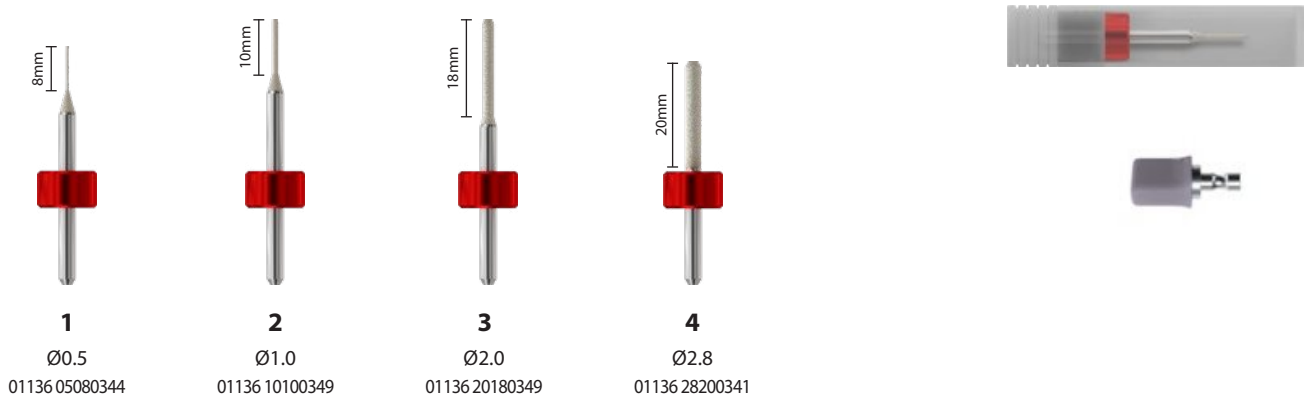
### Zirconia (ZrO<sub>2</sub>)



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21236 05070351 | Ball | DIA     | 2      | 0.5     | 2        | 7        | 3       | 51       |
| 2   | 21236 10140351 | Ball | DIA     | 2      | 1.0     | 4        | 14       | 3       | 51       |
| 3   | 21236 25200351 | Ball | DIA     | 2      | 2.5     | 7        | 20       | 3       | 51       |

## Ivoclar PM5 Compatible - Wet machining

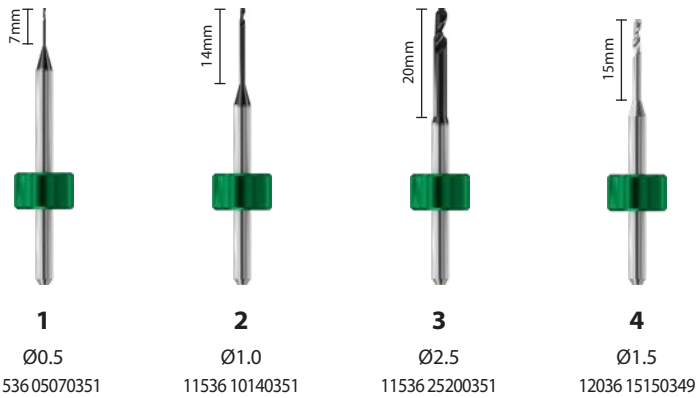
### Glass Ceramics



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 01136 05080344 | Ball | EL-DIA  | 0      | 0.5     | 8        | 8        | 3       | 44       |
| 2   | 01136 10100349 | Ball | EL-DIA  | 0      | 1.0     | 10       | 10       | 3       | 49       |
| 3   | 01136 20180349 | Ball | EL-DIA  | 0      | 2.0     | 18       | 18       | 3       | 49       |
| 4   | 01136 28200341 | Ball | EL-DIA  | 0      | 2.8     | 20       | 20       | 3       | 41       |

# Ivoclar PM5 Compatible - Dry Machining

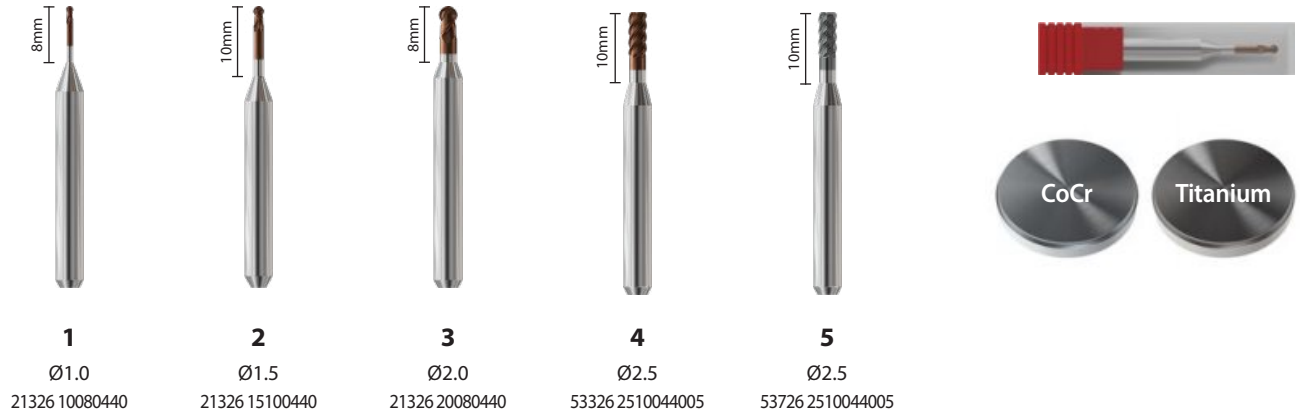
## PMMA



| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 1   | 11536 05070351 | Ball | S-DLC    | 1      | 0.5     | 2        | 7        | 3       | 51       |
| 2   | 11536 10140351 | Ball | S-DLC    | 1      | 1.0     | 2        | 14       | 3       | 51       |
| 3   | 11536 25200351 | Ball | S-DLC    | 1      | 2.5     | 5        | 20       | 3       | 51       |
| 4   | 12036 15150349 | Flat | Uncoated | 1      | 1.5     | 6        | 15       | 3       | 49       |

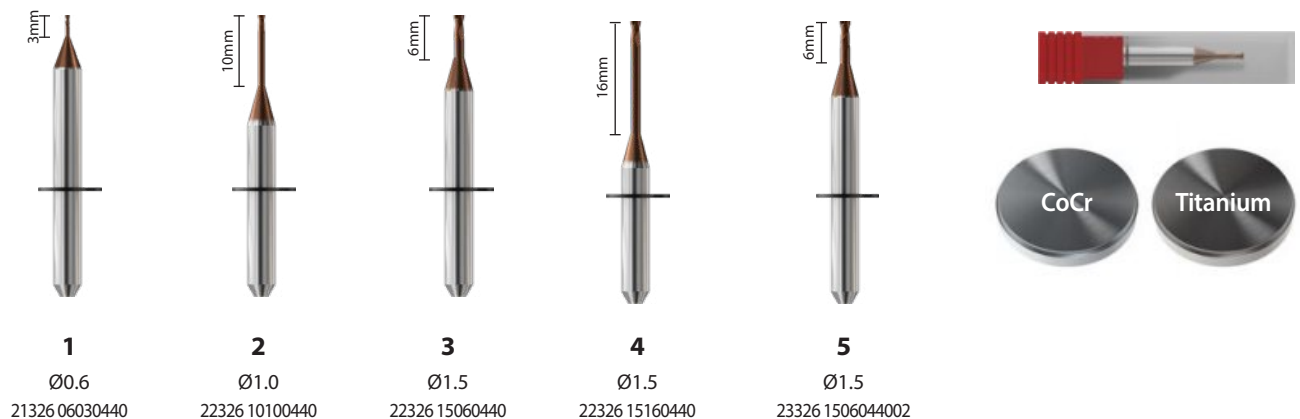
## Redon Compatible

### Cobalt Chrome / Titanium



| No. | EDP              | Type  | Coating | Flutes | OD [mm]   | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|------------------|-------|---------|--------|-----------|----------|----------|---------|----------|
| 1   | 21326 10080440   | Ball  | TS      | 2      | 1.0       | 1.5      | 8        | 4       | 40       |
| 2   | 21326 15100440   | Ball  | TS      | 2      | 1.5       | 2        | 10       | 4       | 40       |
| 3   | 21326 20080440   | Ball  | TS      | 2      | 2.0       | 2.5      | 8        | 4       | 40       |
| 4   | 53326 2510044005 | Toric | TS      | 5      | 2.5 -R0.5 | 6        | 10       | 4       | 40       |
| 5   | 53726 2510044005 | Toric | AV      | 5      | 2.5 -R0.5 | 6        | 10       | 4       | 40       |

### Cobalt Chrome / Titanium



| No. | EDP              | Type  | Coating | Flutes | OD [mm]   | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|------------------|-------|---------|--------|-----------|----------|----------|---------|----------|
| 1   | 21326 06030440   | Ball  | TS      | 2      | 0.6       | 1        | 3        | 4       | 40       |
| 2   | 22326 10100440   | Flat  | TS      | 2      | 1.0       | 1.5      | 10       | 4       | 40       |
| 3   | 22326 15060440   | Flat  | TS      | 2      | 1.5       | 2        | 6        | 4       | 40       |
| 4   | 22326 15160440   | Flat  | TS      | 2      | 1.5       | 2        | 16       | 4       | 40       |
| 5   | 23326 1506044002 | Toric | TS      | 2      | 1.5 -R0.2 | 2.5      | 6        | 4       | 40       |



## Redon Compatible - Wet Machining

### Glass Ceramics



**1**

Ø0.6

01126 06060440



**2**

Ø1.0

01126 10100440



**3**

Ø1.5

01126 15100440



**4**

Ø2.5

01126 25150440



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 01126 06060440 | Ball | EL-DIA  | 0      | 0.6     | 6        | 6        | 4       | 40       |
| 2   | 01126 10100440 | Ball | EL-DIA  | 0      | 1.0     | 10       | 10       | 4       | 40       |
| 3   | 01126 15100440 | Ball | EL-DIA  | 0      | 1.5     | 10       | 10       | 4       | 40       |
| 4   | 01126 25150440 | Ball | EL-DIA  | 0      | 2.5     | 15       | 15       | 4       | 40       |

## Redon Compatible - Dry Machining

### Zirconia (ZrO<sub>2</sub>)



**1**

Ø0.6

21226 06100440



**2**

Ø1.0

21226 10150440



**3**

Ø2.0

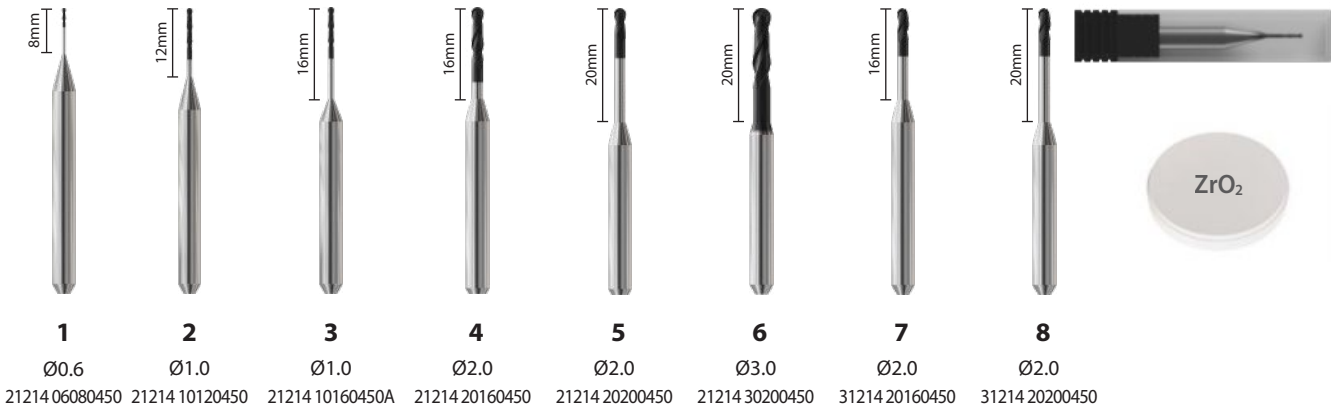
21226 20150440



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21226 06100440 | Ball | DIA     | 2      | 0.6     | 1.5      | 10       | 4       | 40       |
| 2   | 21226 10150440 | Ball | DIA     | 2      | 1.0     | 2        | 15       | 4       | 40       |
| 3   | 21226 20150440 | Ball | DIA     | 2      | 2.0     | 5        | 15       | 4       | 40       |

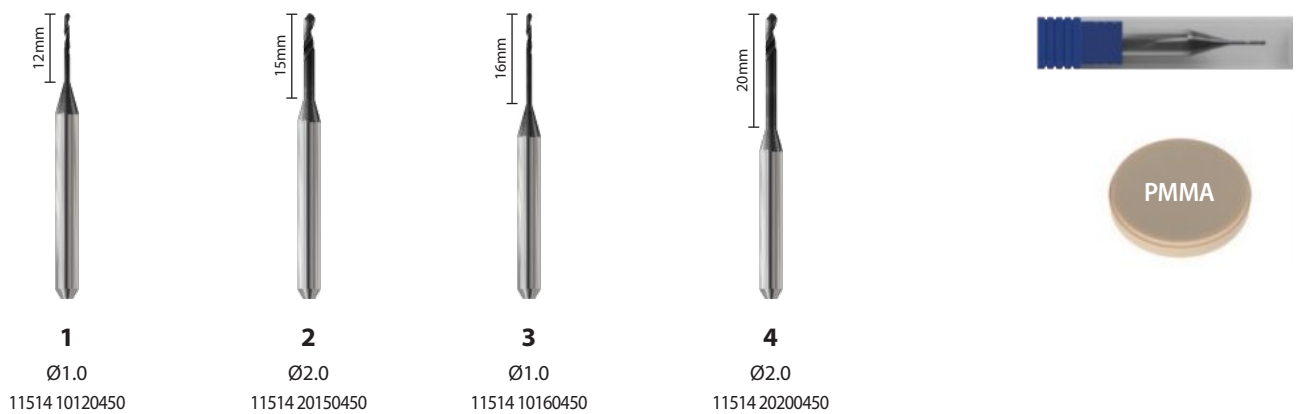
## Roland Compatible - Dry Machining

### Zirconia (ZrO<sub>2</sub>)



| No. | EDP             | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|-----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21214 06080450  | Ball | DIA     | 2      | 0.6     | 2        | 8        | 4       | 50       |
| 2   | 21214 10120450  | Ball | DIA     | 2      | 1.0     | 6        | 12       | 4       | 50       |
| 3   | 21214 10160450A | Ball | DIA     | 2      | 1.0     | 6        | 16       | 4       | 50       |
| 4   | 21214 20160450  | Ball | DIA     | 2      | 2.0     | 8        | 16       | 4       | 50       |
| 5   | 21214 20200450  | Ball | DIA     | 2      | 2.0     | 3        | 20       | 4       | 50       |
| 6   | 21214 30200450  | Ball | DIA     | 2      | 3.0     | 10       | 20       | 4       | 50       |
| 7   | 31214 20160450  | Ball | DIA     | 3      | 2.0     | 4        | 16       | 4       | 50       |
| 8   | 31214 20200450  | Ball | DIA     | 3      | 2.0     | 4        | 20       | 4       | 50       |

### PMMA



| No. | EDP            | Type | Coating            | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|--------------------|--------|---------|----------|----------|---------|----------|
| 1   | 11514 10120450 | Ball | S-DLC              | 1      | 1.0     | 3.3      | 12       | 4       | 50       |
| 2   | 11514 20150450 | Ball | S-DLC              | 1      | 2.0     | 11       | 15       | 4       | 50       |
| 1*  | 11014 10120450 | Ball | Uncoated (*Option) | 1      | 1.0     | 3.3      | 12       | 4       | 50       |
| 2*  | 11014 20150450 | Ball | Uncoated (*Option) | 1      | 2.0     | 11       | 15       | 4       | 50       |
| 3   | 11514 10160450 | Ball | S-DLC              | 1      | 1.0     | 3.3      | 16       | 4       | 50       |
| 4   | 11514 20200450 | Ball | S-DLC              | 1      | 2.0     | 11       | 20       | 4       | 50       |

# Roland Compatible - Dry Machining

## Universal Material / WAX / PEEK



**1**

Ø0.3

21014 03015450



**2**

Ø0.6

21614 06080450



**3**

Ø1.0

21614 10120450



**4**

Ø2.0

21614 20160450



| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 1   | 21014 03015450 | Ball | Uncoated | 2      | 0.3     | 0.5      | 1.5      | 4       | 50       |
| 2   | 21614 06080450 | Ball | TA       | 2      | 0.6     | 0.9      | 8        | 4       | 50       |
| 3   | 21614 10120450 | Ball | TA       | 2      | 1.0     | 1.5      | 12       | 4       | 50       |
| 4   | 21614 20160450 | Ball | TA       | 2      | 2.0     | 3        | 16       | 4       | 50       |



**5**

Ø1.0

22614 10200450



**6**

Ø1.5

22614 15160450



**7**

Ø3.0

22614 30160450



**8**

Ø1.5

42614 15200450



**9**

Ø2.0

42614 20200450



**10**

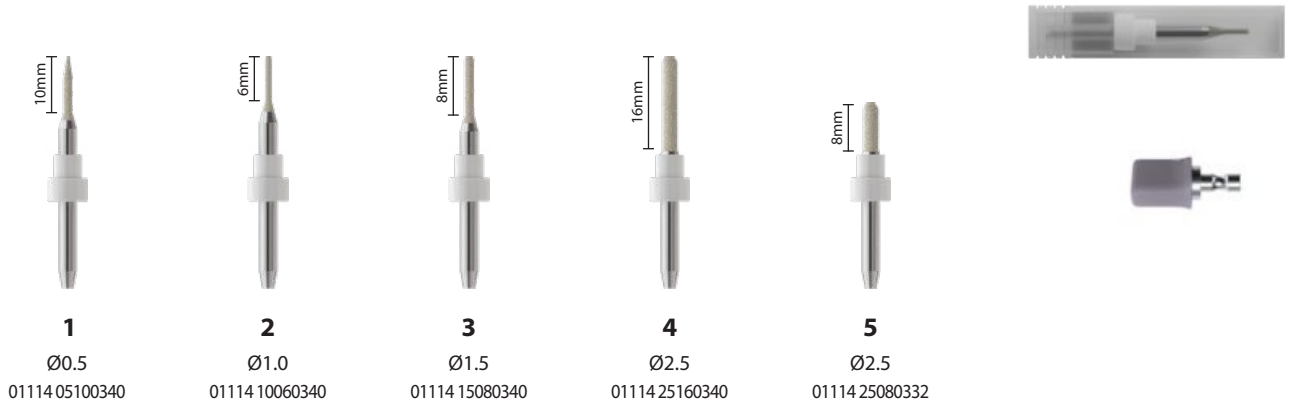
Ø4.0

33614 4013045002

| No. | EDP              | Type  | Coating | Flutes | OD [mm]  | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|------------------|-------|---------|--------|----------|----------|----------|---------|----------|
| 5   | 22614 10200450   | Flat  | TA      | 2      | 1.0      | 1.5      | 20       | 4       | 50       |
| 6   | 22614 15160450   | Flat  | TA      | 2      | 1.5      | 2.3      | 16       | 4       | 50       |
| 7   | 22614 30160450   | Flat  | TA      | 2      | 3.0      | 4.5      | 16       | 4       | 50       |
| 8   | 42614 15200450   | Flat  | TA      | 4      | 1.5      | 3.5      | 20       | 4       | 50       |
| 9   | 42614 20200450   | Flat  | TA      | 4      | 2.0      | 3.5      | 20       | 4       | 50       |
| 10  | 33614 4013045002 | Toric | TA      | 3      | 4.0-R0.2 | 13       | -        | 4       | 50       |

# Roland Compatible - Wet Machining

## Glass Ceramics



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 01114 05100340 | Ball | EL-DIA  | 0      | 0.5     | 10       | 10       | 3       | 40       |
| 2   | 01114 10060340 | Ball | EL-DIA  | 0      | 1.0     | 6        | 6        | 3       | 40       |
| 3   | 01114 15080340 | Ball | EL-DIA  | 0      | 1.5     | 8        | 8        | 3       | 40       |
| 4   | 01114 25160340 | Ball | EL-DIA  | 0      | 2.5     | 16       | 16       | 3       | 40       |
| 5   | 01114 25080332 | Ball | EL-DIA  | 0      | 2.5     | 8        | 8        | 3       | 32       |

## SIRONA Compatible - Dry Machining

### Zirconia (ZrO<sub>2</sub>)



**1**  
Ø0.5  
21215 05050342

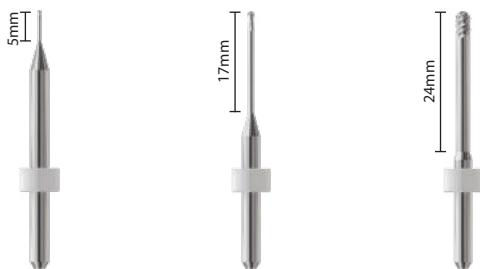
**2**  
Ø1.0  
21215 10170343

**3**  
Ø2.5  
41215 25240344



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21215 05050342 | Ball | DIA     | 2      | 0.5     | 0.6      | 5        | 3       | 42       |
| 2   | 21215 10170343 | Ball | DIA     | 2      | 1.0     | 2        | 17       | 3       | 43       |
| 3   | 41215 25240344 | Ball | DIA     | 4      | 2.5     | 4        | 24       | 3       | 44       |

### Universal Material / WAX / PEEK



**1**  
Ø0.5  
21015 05050342

**2**  
Ø1.0  
21015 10170343

**3**  
Ø2.5  
41015 25240344



| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 1   | 21015 05050342 | Ball | Uncoated | 2      | 0.5     | 0.6      | 5        | 3       | 42       |
| 2   | 21015 10170343 | Ball | Uncoated | 2      | 1.0     | 2        | 17       | 3       | 43       |
| 3   | 41015 25240344 | Ball | Uncoated | 4      | 2.5     | 4        | 24       | 3       | 44       |

# SIRONA Compatible - Dry Machining

## PMMA



**1**

Ø0.5

21515 05050342



**2**

Ø1.0

21515 10170343



**3**

Ø2.5

21515 25240344



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21515 05050342 | Ball | S-DLC   | 2      | 0.5     | 0.6      | 5        | 3       | 42       |
| 2   | 21515 10170343 | Ball | S-DLC   | 2      | 1.0     | 2        | 17       | 3       | 43       |
| 3   | 21515 25240344 | Ball | S-DLC   | 2      | 2.5     | 4        | 24       | 3       | 44       |

# Thread Mill

## Cobalt Chrome / Titanium



1

Ø1.5

37332 15050650



2

Ø1.5

37732 15050650



CoCr

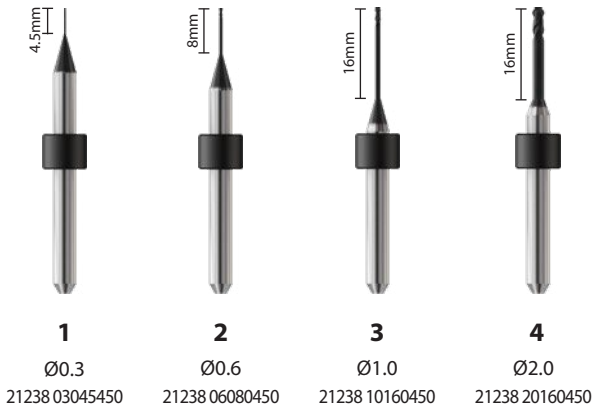


Titanium

| No. | EDP            | Type          | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|---------------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 37332 15050650 | Thread M2x0.4 | TS      | 3      | 1.5     | 0.4      | 5        | 6       | 50       |
| 2   | 37732 15050650 | Thread M2x0.4 | AV      | 3      | 1.5     | 0.4      | 5        | 6       | 50       |

## UP3D - Dry Machining

### Zirconia (ZrO<sub>2</sub>)



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21238 03045450 | Ball | DIA     | 2      | 0.3     | 0.5      | 4.5      | 4       | 50       |
| 2   | 21238 06080450 | Ball | DIA     | 2      | 0.6     | 1        | 8        | 4       | 50       |
| 3   | 21238 10160450 | Ball | DIA     | 2      | 1.0     | 2.5      | 16       | 4       | 50       |
| 4   | 21238 20160450 | Ball | DIA     | 2      | 2.0     | 3.5      | 16       | 4       | 50       |



# VHF Compatible - Dry Machining

## Zirconia (ZrO<sub>2</sub>)



**1**

Ø0.6

21217 06030335



**2**

Ø0.6

21217 06110335



**3**

Ø1.0

21217 10160335



**4**

Ø2.0

21217 20160335



**5**

Ø2.0

31217 20160335



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21217 06030335 | Ball | DIA     | 2      | 0.6     | 1.2      | 3        | 3       | 35       |
| 2   | 21217 06110335 | Ball | DIA     | 2      | 0.6     | 2        | 11       | 3       | 35       |
| 3   | 21217 10160335 | Ball | DIA     | 2      | 1.0     | 2        | 16       | 3       | 35       |
| 4   | 21217 20160335 | Ball | DIA     | 2      | 2.0     | 4        | 16       | 3       | 35       |
| 5   | 31217 20160335 | Ball | DIA     | 3      | 2.0     | 4        | 16       | 3       | 35       |



**6**

Ø0.6

21217 06030340A



**7**

Ø0.6

21217 06110340



**8**

Ø1.0

21217 10160340



**9**

Ø2.0

21217 20160340



**10**

Ø2.0

31217 20160340



**11**

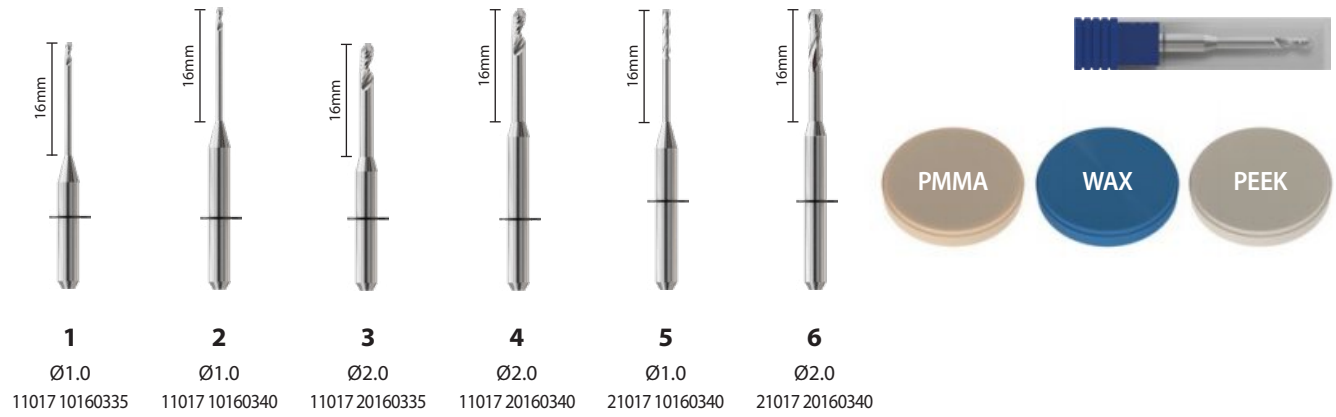
Ø1.2

22217 12160340

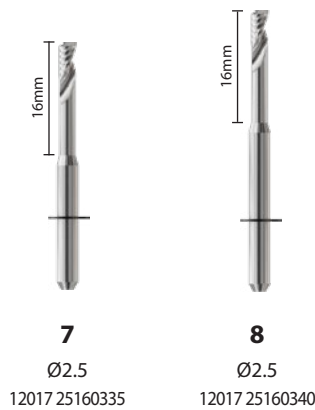
| No. | EDP             | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|-----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 6   | 21217 06030340A | Ball | DIA     | 2      | 0.6     | 1.2      | 3        | 3       | 40       |
| 7   | 21217 06110340  | Ball | DIA     | 2      | 0.6     | 2        | 11       | 3       | 40       |
| 8   | 21217 10160340  | Ball | DIA     | 2      | 1.0     | 2        | 16       | 3       | 40       |
| 9   | 21217 20160340  | Ball | DIA     | 2      | 2.0     | 4        | 16       | 3       | 40       |
| 10  | 31217 20160340  | Ball | DIA     | 3      | 2.0     | 4        | 16       | 3       | 40       |
| 11  | 22217 12160340  | Flat | DIA     | 2      | 1.2     | 5        | 16       | 3       | 40       |

# VHF Compatible - Dry Machining

## PMMA / WAX / PEEK



| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 1   | 11017 10160335 | Ball | Uncoated | 1      | 1.0     | 2        | 16       | 3       | 35       |
| 2   | 11017 10160340 | Ball | Uncoated | 1      | 1.0     | 2        | 16       | 3       | 40       |
| 3   | 11017 20160335 | Ball | Uncoated | 1      | 2.0     | 4        | 16       | 3       | 35       |
| 4   | 11017 20160340 | Ball | Uncoated | 1      | 2.0     | 4        | 16       | 3       | 40       |
| 5   | 21017 10160340 | Ball | Uncoated | 2      | 1.0     | 2        | 16       | 3       | 40       |
| 6   | 21017 20160340 | Ball | Uncoated | 2      | 2.0     | 4        | 16       | 3       | 40       |



| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 7   | 12017 25160335 | Flat | Uncoated | 1      | 2.5     | 5        | 16       | 3       | 35       |
| 8   | 12017 25160340 | Flat | Uncoated | 1      | 2.5     | 5        | 16       | 3       | 40       |

## VHF Compatible - Wet Machining

### Glass Ceramics



**1**

Ø0.6

01117 06055335



**2**

Ø1.0

01117 10080335



**3**

Ø2.4

01117 24160335



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 01117 06055335 | Ball | EL-DIA  | 0      | 0.6     | 5.5      | 5.5      | 3       | 35       |
| 2   | 01117 10080335 | Ball | EL-DIA  | 0      | 1.0     | 8        | 8        | 3       | 35       |
| 3   | 01117 24160335 | Ball | EL-DIA  | 0      | 2.4     | 16       | 16       | 3       | 35       |

## VHF Compatible - Dry Machining

### Universal Material / WAX / PEEK



**1**

Ø0.3

21017 03180340



**2**

Ø0.6

21617 06030335



**3**

Ø0.6

21617 06030340



| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 1   | 21017 03180340 | Ball | Uncoated | 2      | 0.3     | 0.6      | 18       | 3       | 40       |
| 2   | 21617 06030335 | Ball | TA       | 2      | 0.6     | 1.2      | 3        | 3       | 35       |
| 3   | 21617 06030340 | Ball | TA       | 2      | 0.6     | 1.2      | 3        | 3       | 40       |

# ZIRKONZAHN Compatible - Dry Machining

## Zirconia (ZrO<sub>2</sub>)



**1**  
Ø0.5  
21220 05090650



**2**  
Ø1.0  
21220 10120650



**3**  
Ø2.0  
21220 20180650



| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 1   | 21220 05090650 | Ball | DIA     | 2      | 0.5     | 3        | 9        | 6       | 50       |
| 2   | 21220 10120650 | Ball | DIA     | 2      | 1.0     | 6        | 12       | 6       | 50       |
| 3   | 21220 20180650 | Ball | DIA     | 2      | 2.0     | 10       | 18       | 6       | 50       |



**4**  
Ø0.5  
21220 05065357



**5**  
Ø1.0  
21220 10120357



**6**  
Ø2.0  
21220 20180357

| No. | EDP            | Type | Coating | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|---------|--------|---------|----------|----------|---------|----------|
| 4   | 21220 05065357 | Ball | DIA     | 2      | 0.5     | 3        | 6.5      | 3       | 57       |
| 5   | 21220 10120357 | Ball | DIA     | 2      | 1.0     | 6        | 12       | 3       | 57       |
| 6   | 21220 20180357 | Ball | DIA     | 2      | 2.0     | 10       | 18       | 3       | 57       |

# ZIRKONZAHN Compatible - Dry Machining

## Universal Material / WAX / PEEK



**1**

Ø0.5

21020 05090650



**2**

Ø1.0

21020 10120650



**3**

Ø2.0

21020 20180650



| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 1   | 21020 05090650 | Ball | Uncoated | 2      | 0.5     | 3        | 9        | 6       | 50       |
| 2   | 21020 10120650 | Ball | Uncoated | 2      | 1.0     | 6        | 12       | 6       | 50       |
| 3   | 21020 20180650 | Ball | Uncoated | 2      | 2.0     | 7        | 18       | 6       | 50       |

## Sintermetal



**1**

Ø1.0

21020 10120650



**2**

Ø2.0

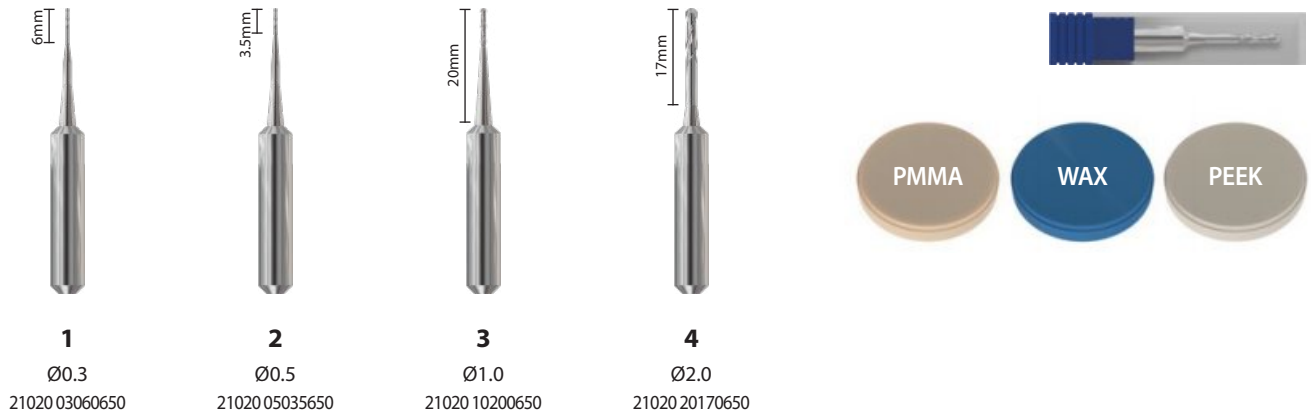
21020 20180650



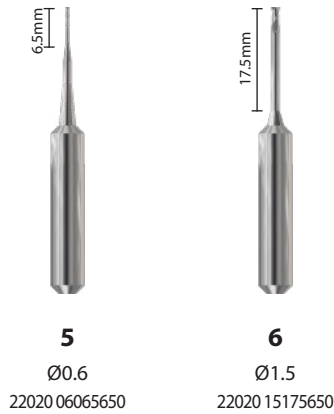
| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 1   | 21020 10120650 | Ball | Uncoated | 2      | 1.0     | 6        | 12       | 6       | 50       |
| 2   | 21020 20180650 | Ball | Uncoated | 2      | 2.0     | 7        | 18       | 6       | 50       |

# ZIRKONZAHN Compatible - Dry Machining

## PMMA / WAX / PEEK



| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 1   | 21020 03060650 | Ball | Uncoated | 2      | 0.3     | 3        | 6        | 6       | 50       |
| 2   | 21020 05035650 | Ball | Uncoated | 2      | 0.5     | 3        | 3.5      | 6       | 50       |
| 3   | 21020 10200650 | Ball | Uncoated | 2      | 1.0     | 6        | 20       | 6       | 50       |
| 4   | 21020 20170650 | Ball | Uncoated | 2      | 2.0     | 8        | 17       | 6       | 50       |



| No. | EDP            | Type | Coating  | Flutes | OD [mm] | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|----------------|------|----------|--------|---------|----------|----------|---------|----------|
| 5   | 22020 06065650 | Flat | Uncoated | 2      | 0.6     | 3.5      | 6.5      | 6       | 50       |
| 6   | 22020 15175650 | Flat | Uncoated | 2      | 1.5     | 3        | 17.5     | 6       | 50       |

# ZIRKONZAHN Compatible

## Cobalt Chrome / Titanium



**1**

Ø1.5

43320 1512065002



**2**

Ø2.0

43320 2012065005



**3**

Ø3.0

43320 3018065007



CoCr



Titanium

| No. | EDP              | Type  | Coating | Flutes | OD [mm]   | LOC [mm] | LBS [mm] | SD [mm] | OAL [mm] |
|-----|------------------|-------|---------|--------|-----------|----------|----------|---------|----------|
| 1   | 43320 1512065002 | Toric | TS      | 4      | 1.5-R0.25 | 1        | 12       | 6       | 50       |
| 2   | 43320 2012065005 | Toric | TS      | 4      | 2.0-R0.5  | 3        | 12       | 6       | 50       |
| 3   | 43320 3018065007 | Toric | TS      | 4      | 3.0-R0.75 | 5        | 18       | 6       | 50       |

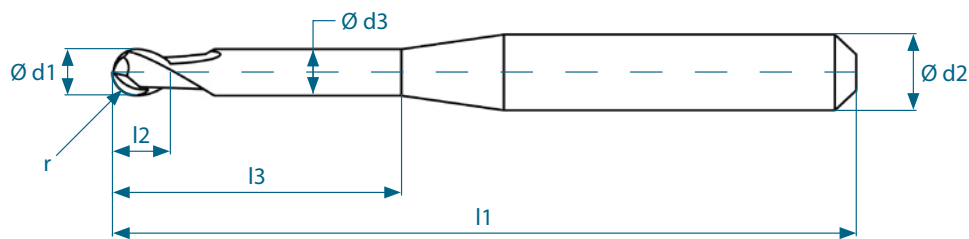
## Technical Inquiry

\*Company: .....  
 \*Contact: .....  
 \*E-mail: .....  
 Phone: .....

\*Machine Type: ..... CAM System: .....

**\*Material:**

☐ Cobalt Chrome      ☐ PMMA / PEEK      ☐ Zirconia (ZrO<sub>2</sub>)      ☐ Glass Ceramics  
☐ Titanium      ☐ WAX      ☐ Sintermetal



**\*Dimensions:**

Cutting Diameter  $d1$ : ..... mm      Overall Length  $l1$ : ..... mm  
 Shank Diameter  $d2$ : ..... mm      Length of Cut  $l2$ : ..... mm  
 Neck Diameter  $d3$ : ..... mm      Neck Length  $l3$ : ..... mm  
 Radius  $r$ : ..... mm

**\*Profile:**



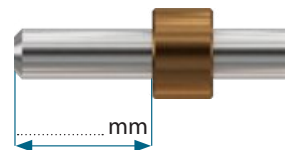
\*Coating: ☐ Coated      ☐ Uncoated      Coating Type: .....

**\*Shank Design:**

☐ Cylindrical Shank



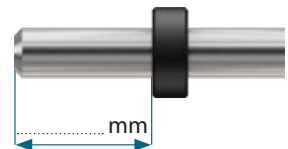
☐ Cylindrical Shank with Bronze Ring



☐ Cylindrical Shank with Clamping Flat



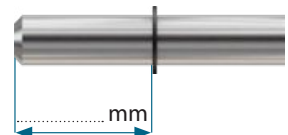
☐ Cylindrical Shank with Synthetic Ring



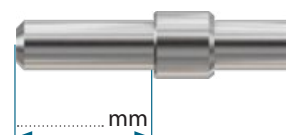
☐ Cylindrical Shank with off-set Neck



☐ Cylindrical Shank with Snap Ring



☐ Cylindrical Shank with Steel Ring







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