



# **Diamond Dressing Tools**



**Performance and Endurance**  
**For High Precision Machining**

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## ***Dianor can offer a wide range of Diamond Dressing Tools***

**Dressing Tools** is a collective term for the tools used to shape and/or sharpening grinding wheels, mostly ceramic.

**To choose dressing tool** means to choose technology for sharpening and dimensioning your grinding wheel and dressing parameters to achieve a desired result. The most important issues to consider are:

- Requirements on the grinded surface
- Tolerance requirements
- Straight – or profile sharpening
- Requirements for interval and time required for dressing operation
- Available machine equipment
- Grinding wheel properties i.e. diameter and width, grain size, hardness
- Series sizes
- Tool economy

***We will help you find the right solution for your needs!***



Some of our Diamond Dressing Tools



## **Different types of tool**

**Single point dresser** natural or synthetic Diamond dressers. Consists of a natural diamond with one or more tips mounted in some sort of holder.

**Multi point dresser** works with several diamonds in cut at the same time for better tool life or faster tightening.

**Synthetic Diamond** in the form of square rods are used in both single-and multistone performance. These allow higher tolerances and smoother dressing results obtained.

**Diamond impregnated tool** consists of a diamond powder bound in a sintered metal. Provides robust tools for tough applications.

## ***Diamond Qualities***

Natural diamonds are classified according to number of good tips and the amount of cracks and inclusions in the diamond. A perfect diamond is in the shape of an octahedron of six good tips and is free from cracks and inclusions.

A high quality implies good heat-discharge capability which is essential for the life of the diamond.

- **FE/GC:** Only one good tip.
- **HHB:** At least two good tips. Limited inclusions.
- **FC:** Normal quality, at least four good tips. Limited inclusions.
- **FB:** At least five good tips, insignificant inclusions
- **FA/OA:** Diamonds of the highest quality. Octahedra with at least five good tips and virtually free from cracks and inclusions.
- **TM:** "Triangle maccles". Diamonds of exceptional quality, shaped like plates with three tips
- **LS:** "Long Stones". Diamonds of exceptional quality, shaped like elongated "grains of rice" with very constant cross-sectional area through the whole diamond.



### **Synthetic Diamonds of two types exist in our dressing tools**

- **Mono-crystalline diamond:** "Monodress". A rod with a square cross-section formed by a homogeneous synthetically produced diamantkristall. Like a natural diamond in a crystal lattice with certain special directions as to why it is important how the rod is twisted by the application against the grinding wheel.
- **CVD-diamond, "Polydress":** As "Monodress" but Diamond's structure is irregular.



## Dressing Tools BVM/BVP

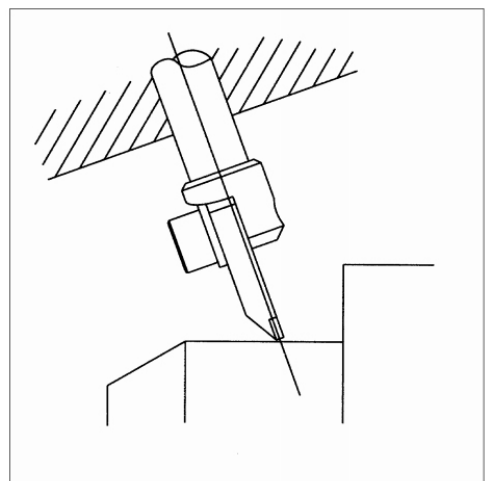
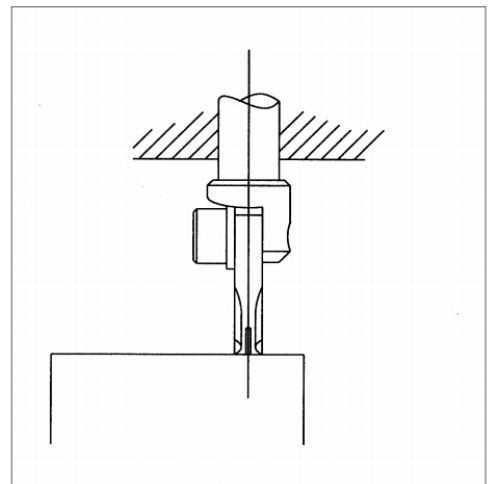
### *Blade-shaped with Synthetic diamond.*

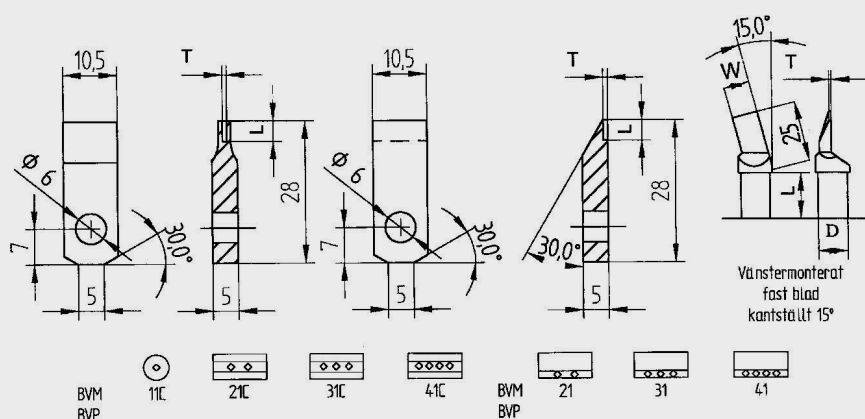
Dressing tools from the BVM series and BVP is used for profiling and sharpening of grinding wheels where high demands on precision and constant properties are set.

By synthetic, in the form of a rod, has exactly the same width and area throughout his lifetime, the grinding wheel structure is held constant and a high profile accuracy can be achieved.

BVM series and BVP has different types of diamonds. The BVM-tools consist of a "mono-crystalline" diamond. Diamond, in these dressing tools are oriented correctly in the grinding direction. BVP-tools has a "poly-crystalline" diamond. Its random oriented diamond grains enables the diamond can be rotated freely. Even characteristics like hardness and price can determine the choice

In addition to this, there is a series of special design adapted to special applications. Contact us for recommendations.





See the chart below for the standard program of BVM and BVP.

The diamonds can be placed in other types of tools according to customer specifications.

If desired, grinding of the tools can be made for constant startup qualities.

### BVM

### BVP

Artikelnr.	Benämning	Artikelnr.	Benämning	T	L	Artikelnr.	Benämning	Artikelnr.	Benämning	T	L
						2000073	BVP 11-440C			0,4	4
						2100143	BVP 21-440C	2100167	BVP 21-440	0,4	4
						2100144	BVP 31-440C	2100168	BVP 31-440	0,4	4
						2100145	BVP 41-440C	2100169	BVP 41-440	0,4	4
2000060	BVM 11-640C			0,85	4	2000074	BVP 11-640C			0,6	4
2100086	BVM 21-640C	2100068	BVM 21-640	0,85	4	2100146	BVP 21-640C	2100170	BVP 21-640	0,6	4
2100087	BVM 31-640C	2100069	BVM 31-640	0,85	4	2100147	BVP 31-640C	2100171	BVP 31-640	0,6	4
2100088	BVM 41-640C	2100070	BVM 41-640	0,85	4	2100148	BVP 41-640C	2100172	BVP 41-640	0,6	4
2000061	BVM 11-840C			1,13	4	2000075	BVP 11-840C			0,8	4
2100089	BVM 21-840C	2100071	BVM 21-840	1,13	4	2100149	BVP 21-840C	2100173	BVP 21-840	0,8	4
2100090	BVM 31-840C	2100072	BVM 31-840	1,13	4	2100150	BVP 31-840C	2100174	BVP 31-840	0,8	4
2100091	BVM 41-840C	2100073	BVM 41-840	1,13	4	2100151	BVP 41-840C	2100175	BVP 41-840	0,8	4
2000062	BVM 11-1040C			1,42	4	2000076	BVP 11-1040C			1,0	4
2100092	BVM 21-1040C	2100074	BVM 21-1040	1,42	4	2100152	BVP 21-1040C	2100176	BVP 21-1040	1,0	4
2100093	BVM 31-1040C	2100075	BVM 31-1040	1,42	4	2100153	BVP 31-1040C	2100177	BVP 31-1040	1,0	4
2100094	BVM 41-1040C	2100076	BVM 41-1040	1,42	4	2100154	BVP 41-1040C	2100178	BVP 41-1040	1,0	4
2000063	BVM 11-650C			0,85	5	2000077	BVP 11-650C			0,6	5
2100095	BVM 21-650C	2100077	BVM 21-650	0,85	5	2100155	BVP 21-650C	2100179	BVP 21-650	0,6	5
2100096	BVM 31-650C	2100078	BVM 31-650	0,85	5	2100156	BVP 31-650C	2100180	BVP 31-650	0,6	5
2100097	BVM 41-650C	2100079	BVM 41-650	0,85	5	2100157	BVP 41-650C	2100181	BVP 41-650	0,6	5
2000064	BVM 11-850C			1,13	5	2000078	BVP 11-850C			1,0	5
2100098	BVM 21-850C	2100080	BVM 21-850	1,13	5	2100158	BVP 21-850C	2100182	BVP 21-850	1,0	5
2100099	BVM 31-850C	2100081	BVM 31-850	1,13	5	2100159	BVP 31-850C	2100183	BVP 31-850	1,0	5
21000100	BVM 41-850C	2100082	BVM 41-850	1,13	5	2100160	BVP 41-850C	2100184	BVP 41-850	1,0	5
2000065	BVM 11-1050C			1,42	5	2000079	BVP 11-1050C			1,0	5
2100101	BVM 21-1050C	2100083	BVM 21-1050	1,42	5	2100161	BVP 21-1050C	2100185	BVP 21-1050	1,0	5
2100102	BVM 31-1050C	2100084	BVM 31-1050	1,42	5	2100162	BVP 31-1050C	2100186	BVP 31-1050	1,0	5
2100103	BVM 41-1050C	2100085	BVM 41-1050	1,42	5	2100163	BVP 41-1050C	2100187	BVP 41-1050	1,0	5
						2000080	BVP 11-1250C			1,2	5
						2100164	BVP 21-1250C	2100188	BVP 21-1250	1,2	5
						2100165	BVP 31-1250C	2100189	BVP 31-1250	1,2	5
						2100166	BVP 41-1250C	2100190	BVP 41-1250	1,2	5

## ***Considerations for dressing operations with diamond tools***

- Diamonds are sensitive to nature, shocks and overheating.
- The grinding wheel should be well balanced and free of vibrations and the tool well fastened.
- Tearing should occur in the same proportion as the slipoperationen.
- By tearing with coolant should the disc be flushed and be completely wet before the tearing, and the coolant is flowing continuously at tool engagement point. High flushing pressure is an advantage.
- When dry may not be tearing tool in surgery for more than a very short time. Let the tool cool down before the new procedures. Cooling not by adding coolant.
- Cutting depth normally 0.004-0.03 mm, max 0.05 mm.
- Feed speed 0.05-0.5 mm/Rev.

