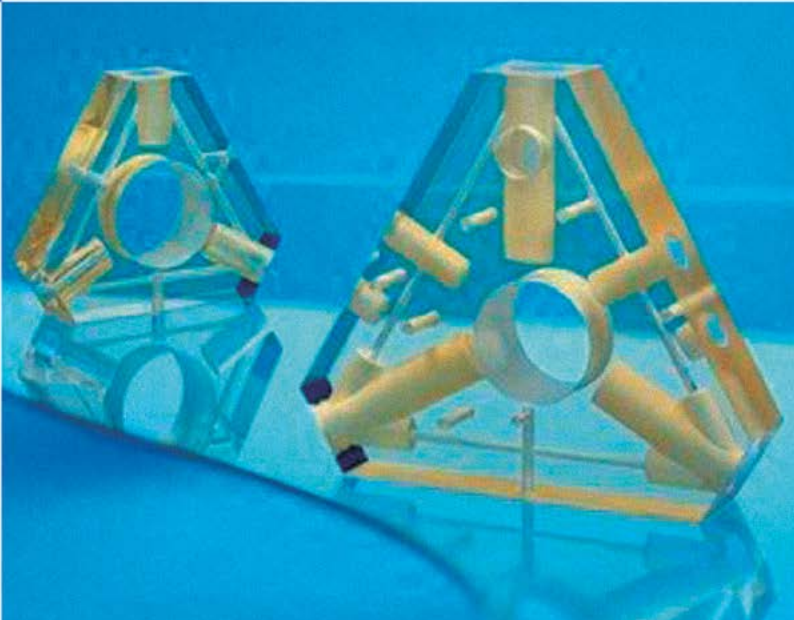
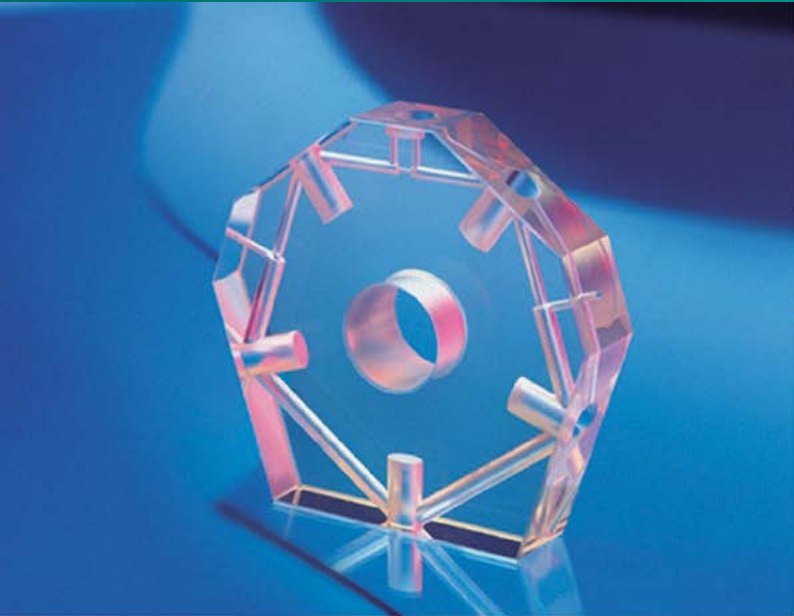


# Diamond micro core drills



# Diamond Micro Core Drills

## RANGE OF SIZES AVAILABLE FOR "MICRO" DRILLS

### ID (inside diameter) of drill

.010" (0.254 mm) to  
.420" (10.67 mm)

### OD (outside diameter) of drill

.023" (0.56 mm) to  
.500" (12.7 mm)

Technodiamant micro core drills are particularly suited for drilling glass, silicon and ceramic materials such as PZT for piezo applications.



Please note that you can specify any exact ID or OD that you require to a standard tolerance of  $\pm 0.025$  mm, or to tighter tolerance of  $\pm 0.012$  mm or  $\pm 0.006$  mm at an additional cost.

Very small diameter drills should be kept as short as possible in order to prevent "walking" when the drill touches the material you are drilling. Drill tube should be specified -5mm longer than thickness of material to allow for drill wear.

Stainless steel hypodermic tubing is used for the very small drills. If both the ID and OD need to be called out, please inquire to see if required sizes are possible.

Drills can be mounted onto an adapter of your choice, with length of drill tube per your requirements. It is also strongly recommended that coolant is used through the center of the drill. It is sometimes possible to flood cool, but this does not effectively remove the swarf and does not cool as well so it hastens tool wear.

# Water swivels

Drills can also be provided without adapter in whatever length required, or they can be mounted onto adapters such as:

- 1/4", 3/8", or 1/2" straight adapter X whatever length required (typically 1")
- Branson
- Belgian
- 3/8"-24 female
- 5/8"-18 female
- 7/8"-14
- Habit

Slots and counterbores are available if requested.



To improve coolant flow and swarf removal, we can provide ID waterways (opposing flats) on the ID of the drill at an additional charge.

Double core drills can also be provided. Solid drills and ball end or cone end drills can be quoted as required.

If drilling a flat bottomed hole, we can provide a disintegrating drill that has a keystone coolant passage that is offset from center, which removes the core as you drill but still allows for coolant flow. Larger sized drills are available up to 170mm diameter - please inquire.

For more information on standard products or custom designs, do not hesitate to contact us.

All of our swivels are made of stainless or brass and have glass filled teflon seals. They will not rust, and if properly cared for will last for many years. Large water swivels are available in the following configurations:

3/8"-24 model has a 3/8"-24 male thread on the end, and accepts drills that are mounted on 3/8"-24 female adapters. Opposite end has a 5/8" diameter shaft to fit into collet.

5/8"-18 model has a 5/8"-18 male thread as well as a 3/8"-24 female thread on the end, and accepts drills that are either mounted on 5/8"-18 female adapters or on "Branson" 3/8"-24 male adapters. Opposite end has a 7/8" diameter shaft to fit into collet.

Maximum coolant pressure: 200 PSI

Maximum RPM: 5000

Maximum temp: 212 F (100 C)

Miniature water swivels are available with either 3/8"-24 male or female adapter, to accept either a drill mounted on 3/8"-24 female adapter or mounted on a Branson adapter.

Miniature swivels have a 1/2" diameter shaft to fit into collet, and overall length is under 3" (OAL less than 1-3/4" under collet when mounted in collet).



*3/8"-24 water swivel adapter  
with 5/8" shaft*



*3/8"-24 mini water swivel &  
Branson mini water swivel 1/2"  
shank to fit in collet*

# Comparison table for grit systems

$\mu\text{m}$	DIN 848	FEPA-Standard	US-MESH	$\mu\text{m}$
1250	D 1100	D 1182	16/18	1190
1000	D 900	D 1001	18/20	1000
800	D 700	D 851	20/25	850
630	D 550	D 711	25/30	710
500	D 450	D 601	30/35	600
400	D 350	D 501	35/40	500
315	D 280	D 426	40/45	425
250	D 220	D 356	45/50	355
200	D 180	D301	50/60	300
160	D 140	D 251	60/70	250
125	D 110	D 213	70/80	212
100	D 90	D 181	80/100	180
80	D 65	D 151	100/120	150
63	D 55	D 126	120/140	125
50	D 45	D 107	140/170	106
40	D 35	D 91	170/200	90
32	D 25	D 76	200/230	75
25		D 64	230/270	63
		D 54	270/325	53
		D 46	325/400	45
		D 35		38
		D 30	500/600	32
		D 25		25
		D 15		20
		*		10

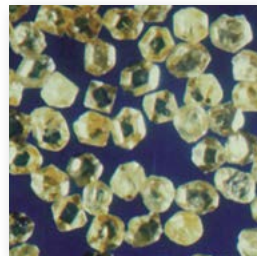
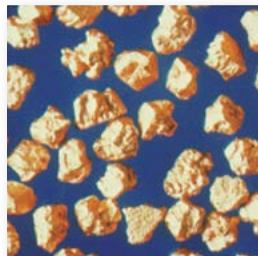
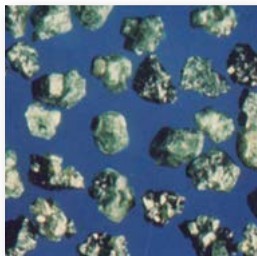
#### Technodiamant België BVBA

Atealaan 3  
2270 Herenthout  
Belgium  
Tel.: +32 (0) 14 36 8828  
Fax: +32 (0) 14 36 8838  
info@technodiamant.be

#### Technodiamant USA Inc.

35A Kennedy Rd, Box 398  
Tranquility, NJ 07879  
USA  
Tel.: +1 (908) 850-8505  
Fax: +1 (908) 850-8506  
info@technodiamant.com

[www.technodiamant.com](http://www.technodiamant.com)



\*Drills can also be supplied in gritsizes D3-D5-D7-D10