

## Jewel orifices

Jewel orifices are produced by Maillard Frères SA, company founded in 1939, specialized in the drilling, enlarging and turning operations of Ruby, Sapphire, Advanced Ceramics and Tungsten Carbide parts. Maillard-Frères SA was a family owned business until the end of 2008 when it was bought by Ceramaret SA.

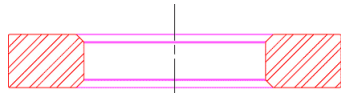
Products made by Maillard-Frères SA are used in various high-tech applications. Their influence on the finished product is strategic in applications such as Watchmaking, Analytical Instruments, Fiber Optic Connectors, Medical Instruments & Equipments

All parts made by Maillard-Frères SA are custom-made and to the highest precision. Innovative solutions are offered in collaboration with Ceramaret SA, from the preliminary study of the project to the finished product



# Technical specifications

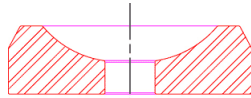
## Various shapes available



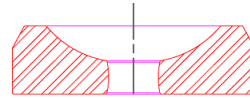
Straight hole



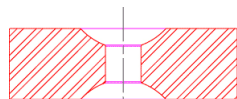
Olived hole



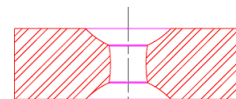
Single cup hole



Single cup olived hole



Double cup straight hole



Double cup olived hole

Other shapes available on request

### Dimensions range:

Minimum hole diameter (as drilled) :	0,04 mm (.001575") Laser drilling Maximum length = 4,00 mm (.1574")
	0,45 mm (.0177") Mechanical drilling Maximum length = 1,00 mm (.0393")
Minimum hole diameter (enlarged) :	0,10 mm (.004")
Maximum hole diameter (as drilled) :	6,00 mm (.2362") Maximum length = 4,50 mm (.177")
Maximum hole diameter (enlarged) :	7,00 mm (.2756")
Hole diameter tolerance :	0,10 mm (.004") as drilled (Mechanical) 0,003 mm (.000118") enlarged
Outside diameter turning :	0,50 to 10,00 mm (.01967" to .3937")
OD tolerance after turning :	0,004 mm (.0001574") Diameter < 5,00 mm (.1968") 0,008 mm (.000315") Diameter > 5,00 mm (.1968")
Concentricity :	0,050 mm (.001968") without turning 0,010 to 0,020 mm (.00039" to .00078") with turning

For information only, can be modified without prior notice