

HLA High-Vacuum Brazing System

for the production of vacuum brazed diamond tools

Process / Technology

The high vacuum brazing process is used for the production of diamond or CBN tools. The grits are bonded mechanically and chemically on the tool surface. With suitable application techniques single grit layer can be achieved. Nickel or active brazing filler metals are used. In some cases coated CBN grit is necessary, diamond can be used without coating in both cases. The diamond type should be of high strength at high temperatures.



High-Vacuum Brazing System HLA

Technische Daten

Technical Data

- vacuum vessel (water jacket): Ø300 mm to Ø1000 mm
- max. tool diameter: 100 mm to 500 mm
- working temperature: max. 1.150°C
- vacuum: <math> < 5 \times 10^{-6}</math> mbar
- process time: app. 2 - 5 h
- transformer with thyristor control: 20-100 KVA
- PLC-control, programmable temperature-time-curve
- integrated water cooler
- specially designed graphite heater

Production capacity

Production capacity pieces / process	HLA system type			
	HLA 1-120	HLA 1-160	HLA 1-200	HLA 1-350
<i>Net volume</i>	<i>Ø120 x 120 mm</i>	<i>Ø160 x 140 mm</i>	<i>Ø200 x 180 mm</i>	<i>Ø350 x 200 mm</i>
Wire beads Ø9 x 10 mm	300	600	1.200	
Rotary grinders Ø30 x 120 mm	4	6	15	
Grinding wheels Ø100 x 5 mm	10	12	15	60
Grinding wheels Ø160 x 5 mm		12	15	16
Grinding wheels Ø200 x 5 mm			15	16
Grinding wheels Ø350 x 5 mm				16

Samples of vacuum brazed grinding tools

