



Data sheet „conventional hot pressing“

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Conventional hot pressing

Conventional Hot pressing is a state of the art technology used for the manufacturing of high performance materials. This technology is frequently used for the manufacturing of various materials which are difficult to prepare via liquid phase processing or which are not sufficiently densified by using powder technology such as pressing an sintering. Materials such as pure nitrides, carbides, oxides or borides with densities close to 100% of the theoretical density are examples. The productivity by using this technology is rather limited due to the batch process in combination with a cycle time of several hours (typically >6 hours or >12 hours for hot pressing at temperatures up to 2.200°C)

Range of process parameters for conventional hot pressing are:

Heating rate:	10-20K/min
Cooling rate:	10-20K/min
max Temperature:	2200°C
mech. Pressure:	1000 kN
Atmospheres:	Vac, Ar, N ₂ , H ₂ , N ₂ /H ₂

Typical cycle: > 6 hrs

