



system integrat

integrat evolution

Dynamic cavity temperature control
with ceramic power heaters



Heating:

Inside the mould with high performance ceramic (CPH)

The dynamic cavity temperature control relocates the heater from the temperature controller into the mould. Through a ceramic high performance heater located only a few millimetres behind the cavities, the desired change in temperature can be affected ten times faster with a tenth of the usually required energy consumption.

Cooling:

Via temperature controller with fluid medium

The cooling of the mould walls happens through a temperature controller with direct cooling and very low outlet temperature. The cooling is effected close-to-cavity through water and serves simultaneously to insulate the mould from the heater. Hereby an intensive and short cooling phase is ensured. The start of the cooling phase is initiated

by a machine signal. After the end of the cooling phase, the mould opens and the next cycle starts.

High performance mould inserts and integrat 4D

The integrated high performance mould inserts with ceramic power heaters (CPH) and close-to-cavity cooling are responsible for the highly dynamic temperature control. Independent from the temperature of the main mould they highly efficiently control the temperature profile of each individual cavity with heating / cooling cycles of up to 30 K/sec. Process control is handled by the central controller of the heating unit which simultaneously ensures a uniform temperature of the mould.

