

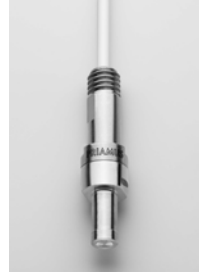


## Newsletter No. 4

### PRIASAFE™ – Simple and safe process monitoring

Real process monitoring can only be made in the cavity because only there it can be measured how the machine settings, the environmental conditions and the changing viscosities of the melt will affect the part quality during production.

Besides cavity temperature it is first of all cavity pressure which is used since many years for reliable quality monitoring in injection molding.



The Achilles heel of cavity pressure measuring technology is the so called force shunt which is generated when the sensitive sensor tip touches the mounting bore. In this case the result is a sensitivity loss which generates faulty measuring signals. The calibrated sensor sensitivity does not correspond to the real signal anymore.

This at last is the reason why the indirect measurement behind an ejector pin usually is not applied because the influence of friction could change the measurement significantly.

A cavity pressure sensor however is a measuring tool for production. On the one side it should be sensitive, on the other side it should be robust. With the new PRIASAFE™ technology (patent pending) both of these properties are combined.



1. Sensor will be mounted into a housing



2. Sensor will be calibrated



3. Sensitivity will be saved by a hardware code

First of all PRIASAFE™ sensors are mounted into a housing and then calibrated once they are installed. This procedure has the real advantage that the sensitivity does not change after the sensor has been installed into the mold because it is "protected" by the housing.

Because the bore tolerances are precisely manufactured by PRIAMUS and also the mounting into the housing is made by the manufacturer a force shunt (contact of the sensor and the bore of the housing) is in this phase not possible. Even if the sensor touches the bore this would be taken into account by the subsequent calibration.

In a second step the determined sensitivity will be saved inside the sensor by a hardware code. With the help of this hardware code the sensor sensitivity can then be automatically detected without being influenced by the sensor installation.

The sensor is therefore easy to use, safe and most suitable for industrial production.

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