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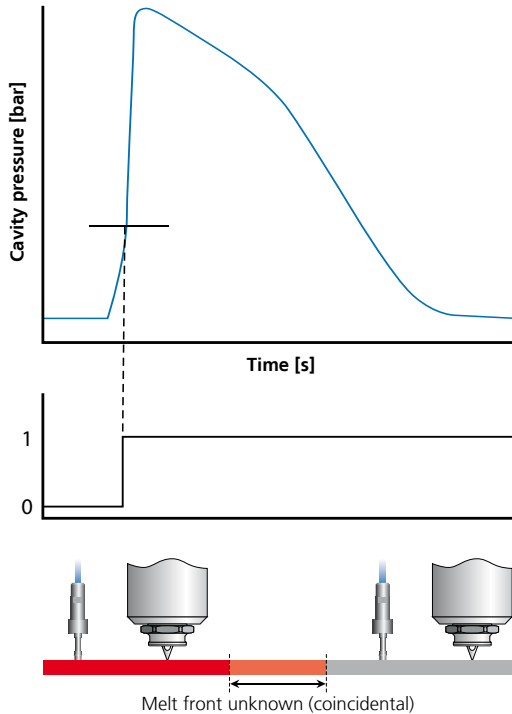


PRIAMUS **PRISOLARIS** – Contactless measuring of temperatures

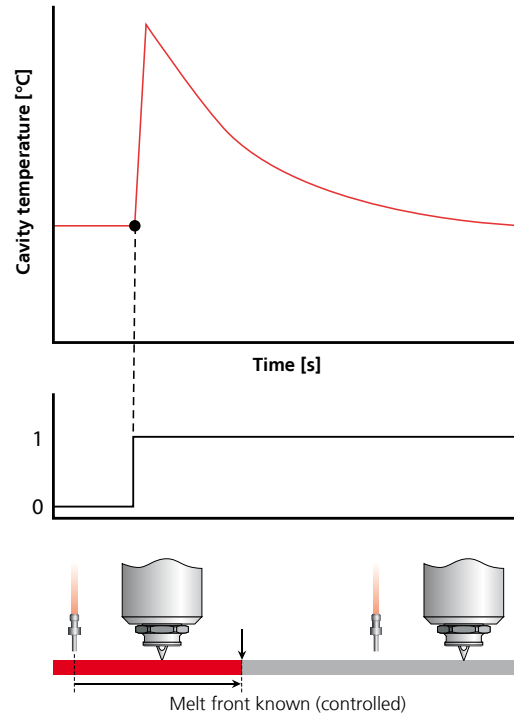


THE SWISS WAY TO IMPROVE THE QUALITY OF YOUR PLASTIC PRODUCTS

Contactless control of the injection molding process



In the past, process dependent switchover processes such as sequential molding or switchover to holding pressure were accomplished by using a fixed cavity pressure switching level. However, an optimal process control was not possible because the melt position in the cavity was not known and thus was subject to process related deviations.

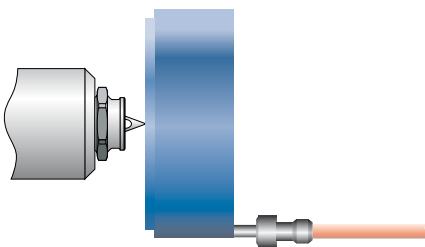


With the automatic switchover process of Priamus, the position of the melt front at switchover is always known. A temperature sensor immediately detects when the melt reaches the sensor position. Priamus PRISOLARIS sensors simplify this process further by detecting the melt front without directly contacting the part or the plastic.

PRISOLARIS temperature sensors

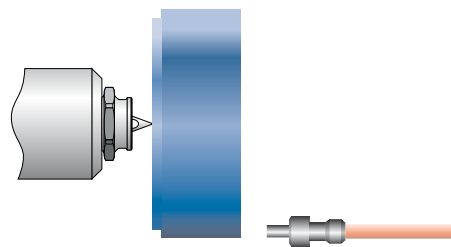
The difference between flush mounted cavity temperature sensors and contactless ones is obvious. Direct measuring sensors touch the part at the surface which leads to sensor marks and a possible sensor front abrasion. The advantages

of the conventional flush mounted sensors are that they have high sensitivity and a fast reaction time. PRISOLARIS sensors are mounted under the surface and do not touch the part.



Conventional sensor position

- Very fast reaction time
- High sensitivity



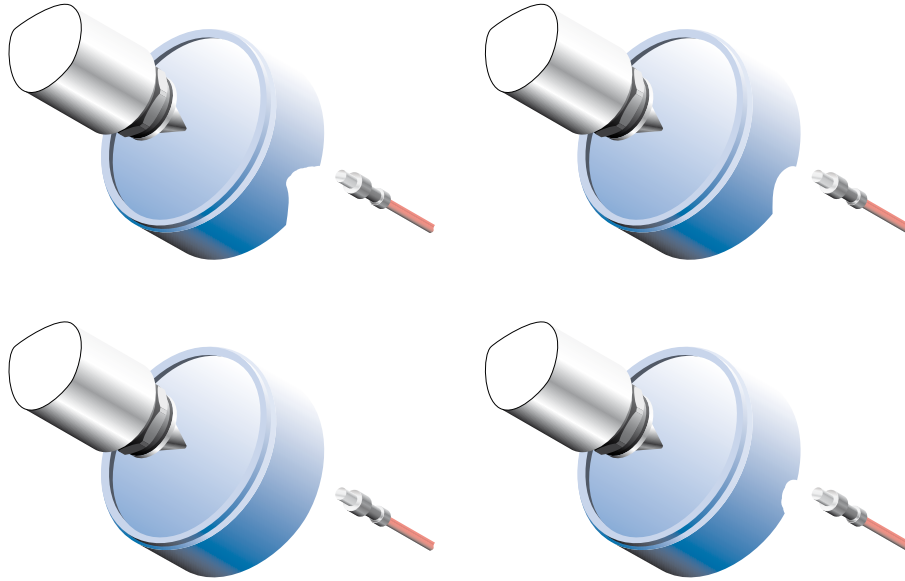
Contactless sensor position

- No sensor mark
- No flashing
- No abrasion
- No front machining
- No leakage

Contactless control of the injection molding process

PRIAMUS cavity temperature sensors are well proven for the automatic control of the injection molding process and are often the only solution for process independent control. PRISOLARIS sensors also offer a number of new options and applications for the automatic control of the injection

molding process. Hotrunner applications, where a sensor mark is not acceptable (for example on optical or cosmetic parts) can now be balanced with the PRIAMUS Fill system without touching the part.

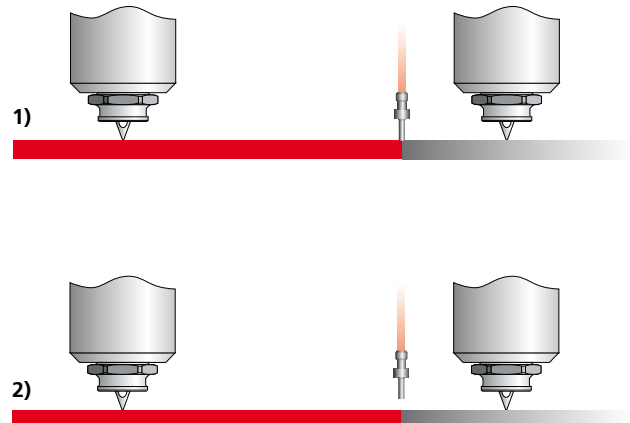
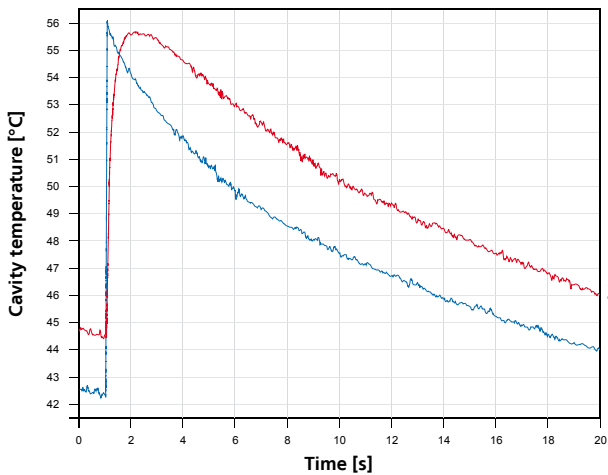


Direct or contactless – a small but subtle distinction

PRISOLARIS sensors are designed so that the measuring signals show, if the mounting is correct, similar sensitivities to our direct measuring cavity temperature sensors.

Great importance has been attached to a bore which can be easily made for the PRISOLARIS sensors.

Comparison of sensor graphs



PRISOLARIS – contactless control for injection molding

Advantages

- No sensor mark
- No flashing
- No abrasion
- No front machining
- No leakage
- Guaranteed filled parts
- Easy handling
- Remarkable cost reduction

Processes

- Automatic hotrunner balancing
- Automatic switchover to holding pressure
- Automatic sequential molding control
- Control of the melt front
- Control of weld lines
- Automatic opening and closing of shot-off nozzles
- Automatic initialising of core and pin movements

Characteristic applications for contactless control processes:

Reflectors should not have any process related marks in the field of vision. Thus the contactless measuring method of PRISOLARIS is ideally suited.



Optical parts such as lenses have to be manufactured within a narrow tolerance zone in order to achieve the qualitative requirements. Only contactless control systems with PRISOLARIS sensors are suitable.



A similar problem can be seen with cosmetic parts where due to the requirements of the surface texture direct measuring sensors can not be used. PRISOLARIS is the solution!

