

## Topics

Specimen Injection Molding

Hot Runner Monitoring

Hot Runner Controlling

Nozzle Melt Monitoring



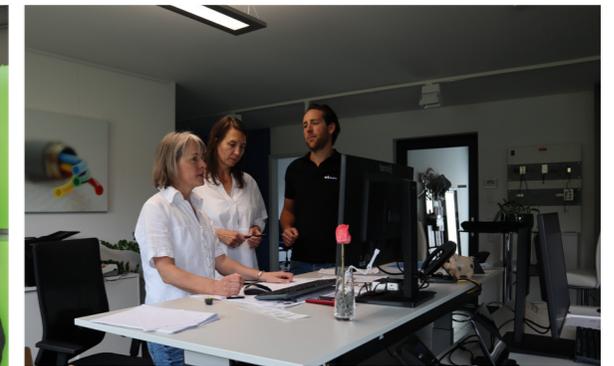
Wf plastic GmbH was founded in 2003. The family-managed company with a highly motivated team relies on good business relations.

Our products are constantly being developed and are always at the state-of-art-technology. We attach particular importance to functionality and intuitive operation here. We have set up a technical center with cutting-edge testing devices and an injection molding machine for our testing series and samples.

Our working environment is characterized by a modern und energetic building. A photovoltaic system covers our entire electricity demand as well as the low heating demand is generated by a heat pump.

Only the best components are used for our products. Here we are aware of the careful use of limited resources and the optimal and efficient utilization of products and solutions.

We operate on the national as well as on the international market and also attach value to sustainability in the customer relation, employee retention as well as in training and knowledge transfer.



More than ever before, technical solutions are requested for the increasing number of issues in the plastic sector. Faster paced and changing production processes require an optimal production and testing process.

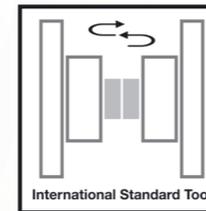
The standardized proving conditions for plastics can only be ensured through the manufacturing of test specimens.

For that issue we designed our International Standard Tool.

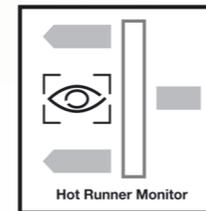
The patented Hot Runner Monitor offers optimal tool security through hot runner protection.

A solid and inexpensive Hot Runner Controller ensures a continuous injection molding process through its controller. The controller is also available in combination with the Hot Runner Monitor.

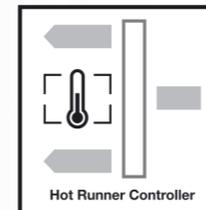
The Nozzle Melt Monitor protects your injection molding machine from production downtimes, it can be easily installed in the machine cabinet without adjustment.



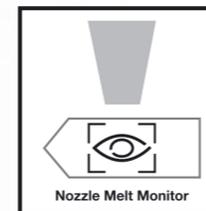
**International Standard Tool**  
Specimen Injection Molding



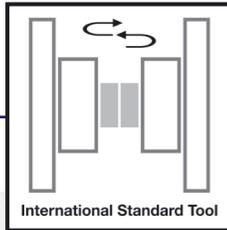
**Hot Runner Monitor**  
Hot Runner Monitoring



**Hot Runner Controller**  
Hot Runner Controlling



**Nozzle Melt Monitor**  
Nozzle Melt Monitoring



## Specimen Injection Molding

Due to the quickly exchangeable inserts for the nozzle and ejector side, different standard test specimens such as tension tests, impact bending tests, sample plates or flow spirals can be produced one after the other without time delays. The inserts are connected directly to the temperature control system via quick-release couplings without water loss. The test mold is immediately ready for the next injection molding shot.

**Easy tool change!**

For plastics IST test specimen mold serves to produce standard test specimens of thermoplastic synthetics in the injection molding process.

The mold consists of three elements:

- Master mold
- Interchangeable insert on the nozzle side
- Interchangeable insert on the ejector side

## International Standard Tool

### Features

- Large selection of interchangeable inserts for various test requirements
- Different surface coatings and materials, also for plastic materials with abrasive and corrosive behavior
- Quick cavity change through insert system

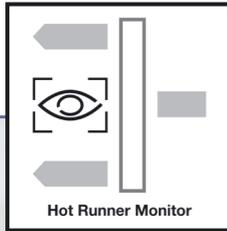
### Possible applications

- Standardized test specimen for materials appraisal
- Rheological investigations to determine flow path length and pressure losses
- Testing the weld line strength
- Sample plates for color and haptic presentation
- Special inserts for sampling

### Functions

- Compatible with most injection molding machines
- Mold temperatures up to 180°C
- Special design high temperature up to 220°C
- Electrically heatable inserts possible





## Hot Runner Monitoring

## Hot Runner Monitor

Complex molds with hot runner technology often lead to leak. The molding material flows through a defect in the hot runner system into the rear mold technology. The causes of this are diverse and difficult to determine in advance. We have designed a technically high valued, international patented and simple functioning device which is helpful for determining the causes and considerably reduces consequential costs.

Prevent high consequential costs and expensive downtimes – We have the solution for every hot runner!

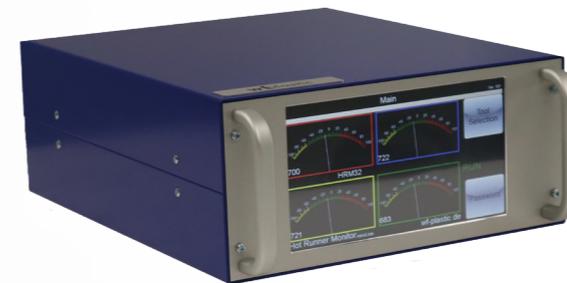
### Application-oriented solution!

#### Hot Runner Monitor (HRM) types

- HRM 08 (8 monitoring points)
- HRM 16 (16 monitoring points)
- HRM 32 (32 monitoring points)
- HRM Test

The Hot Runner Monitor (HRM) is convincing with its low investment costs and cost-effective as well as low-maintenance operation. The HRM improves efficiency with clearly lower repair costs, faster mold availability in production and checks of repair success in the production operation.

The innovative touch panel technology combines intuitive operation with a clear display of all relevant data. The retrofitting and installation of the Hot Runner Monitor in new moulds or production tools can be production tools without any problems.



#### Features

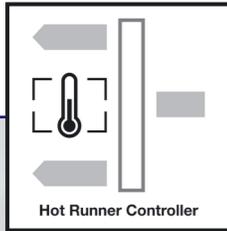
- Programming in the teach-in mode
- Any number of monitoring points due to the modular system
- Upgrading possible at any time
- Big number of programmable memory positions
- Machine shutdown by potential-free contact
- Digital interface

#### Possible applications

- Molds with hot runner or simple nozzle systems
- Current production monitoring
- Repair success control
- Early detection of gradual leakage

#### Functions

- Leakage detection
- Exact pressure difference measuring



## Hot Runner Controlling

## Hot Runner Controller

The modular system for the functional control of the hot runner

- Inexpensive
- Simple handling
- Easy adjustable manual mode

The quality of the moldings and the duration are dependent on the temperature of the hot runner. In the sense of profitability there should be a constant temperature.

Particularly important is a balanced temperature control.

Small temperature differences during the current production serve process reliability through stable mold quality.

A perfectly balanced hot runner ensures the highest productivity and high molded part quality.

**Best temperature control!**

**Hot Runner Controller (HRC) types**

- HRC t6 (6 heating zones)
- HRC t12 (12 heating zones)
- HRC tc (12...240 heating zones)
- HRC &m (12...240 heating zones and 32 monitoring points)

The reliable and robust solution for continuous process monitoring in your production. Our controller is adaptable with any kind of hot runner system. Important for plastics with limited process windows is the quick micro process PID-Control.

**Features**

- Modular design
- Mobile device with micro controller handling
- Fast microprocessor PID controller
- Easy connection to machine and hot runner system
- Identification of sensor damage
- Easy and quick adjustment
- Simple and intuitive usage via touchscreen
- Compact case
- Diagnosis for tool safety device
- Single heating
- Single cooling

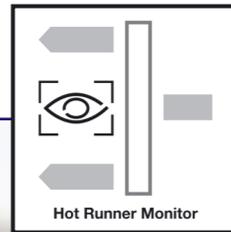
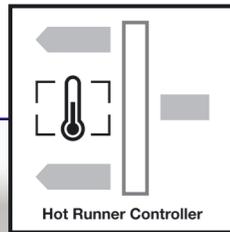
**Possible applications**

- First mounting and upgrading for hot runner systems and injection molding machines
- Continuous production control
- Production monitoring
- Installation control

**Functions**

- Highest process reliability
- Safety temperature adjustment
- Up to 240 zones
- Automatic machine shutdown





## Hot Runner Controlling and Monitoring

We combined two systems to one. The number of different periphery systems on injection molding machines lead up two different problems, such as place issues and claiming of operating personnel.

Less is more!

The reliable solution for continuous hot runner controlling with included hot runner monitoring. The combined system is suitable for any kind of hot runner systems. Nevertheless, each function is able to operate independent.

## Hot Runner Controller & m

### Features

- Hot Runner Monitor
- Hot Runner Controller

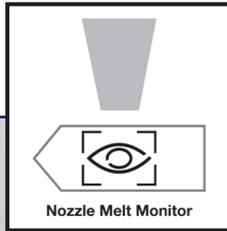
### Possible applications

- Tools with hot runner or single nozzle systems
- Continuous production monitoring
- Repair success control
- Early detection of gradual leakage
- Continuous production control

### Functions

- Leakage detection
- Safety temperature adjustment





## Nozzle Melt Monitoring

With our system for nozzle monitoring, you can check whether the melting caused by leakage flows onto the heat strips and sensors of the nozzle unit.

**Decrease maintenance!**

**Nozzle Melt Monitor (NMM) types**

- NMM cv, cabinet-version
- NMM sv, stand-alone-version

## Nozzle Melt Monitor

The Nozzle Melt Monitor (NMM) ensures cost-effective, low-maintenance operation and as a result lower repair costs and faster availability of the production machines. Therefore, our NMM prevents machine damages and production downtime.



### Features

- Low investment costs
- Cost-effective and low-maintenance operation
- Significantly lower repair costs
- Faster availability of the production machines
- Available as stand-alone or switch cabinet-version
- One monitoring point
- Upgrading possible at any time
- No adjustment necessary, plugin
- Machine shutdown by potential-free contact
- Digital interface, direct machine connection

### Possible applications

- Machine and mold nozzles
- Injection molding and extrusion machines
- Production monitoring

### Functions

- Pressure difference measuring
- Identification of melt leakage at nozzle break
- Potential-free contact
- Data interface (Euromap 77)
- Flexible, thin stainless steel tubes
- Monitoring line on the nozzle



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