

Standards for your success.



YOUR PARTNER FOR HOT RUNNER AND CONTROL SYSTEMS IN MOULD MAKING

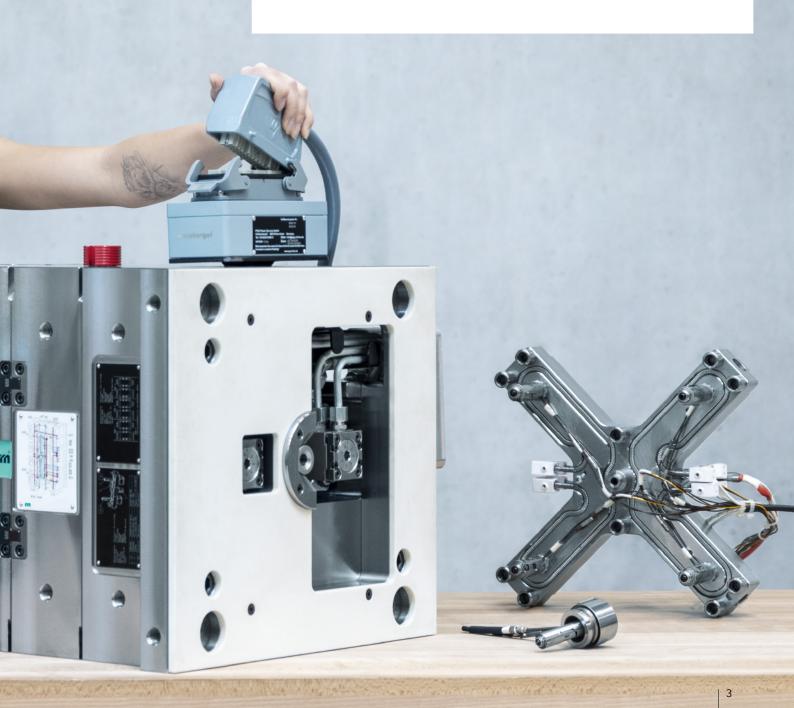


Standard meets custom

We offer a wide range of standardised and customised hot runner solutions. The modular design concept of our hot runner products supports flexible mould design and standardisation of components. Short lead times, cost savings on spare parts and consistent project support are your advantages.

More information at:

www.meusburger.com/hot-runner-systems





YOUR PRODUCT IDEA - OUR SOLUTION

Since 1962, our hot runner systems have met the requirements of demanding applications in terms of physical properties, materials, functional integration, surface quality and special designs. You will find the right hot runner solution with us.



Packaging / caps & closures

- » Attractive product designs
- » Sustainability



Automotive

- » Functionally integrated surfaces
- » Highest design requirements



Recreation & consumer goods

- » Perfect surface quality
- » Material combinations



Technical components

- » Wide range of functions
- » Good mechanical and/ or electrical properties



Transport

- » Complex geometries
- » High load capacity



Medical technology

- » Precision & dimensional accuracy
- » Biocompatible

Standardised and customised hot runner systems

- » Individual and innovative solutions for every application and industry
- » Hot runner systems with a comprehensive nozzle range and customisable manifold geometries
- » The right solutions for diverse types of plastic
- » Maintenance-friendly hot runner system design
- » Standardised hot runner components
- » In-house development department and technical department for specific solutions
- » Personal consultation and online configurators
- » Intelligent hot runner control

OUR PRODUCTS AT A GLANCE



Hot runner nozzles

Page 8 – 9

The smartFILL nozzle series is easy to maintain and guarantees an optimal, homogeneous melt flow for your projects.



Open hot runner nozzles

Page 10 – 11

The smartFILL nozzle series offers great versatility for diverse applications and materials.



Standardised hot runner systems

Page 12 – 15

A wide range of standardised hot runner systems in defined geometries is available for quick mould design.



FH Hot runner mould

Page 16 – 19

With our innovative configurator, you can create standardised hot runner systems including mould bases and accessories in no time at all.



Valve gate nozzles

Page 20 – 21

Our smartFILL hot runner nozzle in the valve gate version achieves highest surface and part quality.



Valve gate operating units

Page 22 - 25

Matching our smartFILL nozzle range, we offer you operating units in different designs for high-precision adjustment of the pin position.



Customised complete systems

Page 26 - 27

Based on standardised hot runner components, you receive ready-to-connect and plug-in hot runner systems or hot halves.



Hot runner control

Page 28 – 31

Our profiTEMP+ hot runner controller features innovative technology and space-saving design.



Customer service & technical support

Page 32 – 33

We are your partner for all customer enquiries and offer you worldwide service on site.



Full-range supplier

Page 34 – 35

Benefit from the advantages of Meusburger's comprehensive product range for mould and die making.

HOT RUNNER NOZZLES



smartFILL nozzle series

With our smartFILL nozzle series, we offer several innovations that help you meet the requirements of your injection moulded parts.

The smartFILL concept offers a wide range of application areas. For shot weights from 0.5 to 2,500 g per nozzle, everything is possible with smartFILL – from easy-to-process polyolefins to demanding high-temperature plastics.





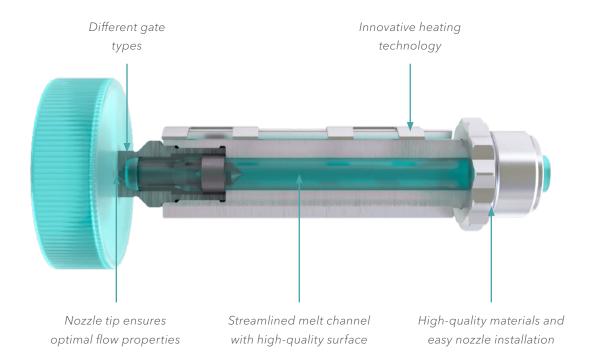
smartFILL TECHNOLOGY

The new heating technology features independent heating zones in one heater and integrated thermocouples with a measuring point directly on the nozzle body. This enables homogeneous temperature distribution along the entire nozzle length.

The intelligent clamping mechanism makes the heating safe, reliable, and very easy to maintain.

The nozzle is highly wear, rust and acid resistant. All parts subject to wear are of the highest quality and can be easily replaced if necessary.

How you benefit: Standard spare parts are available within 24 hours.



- » Service-friendly installation and removal of all nozzle parts (cost savings in maintenance)
- » Optimal melt flow
- » Gate installation without heating
- » High gating temperatures for processing engineering plastics
- » Homogeneous temperature profile
- » Temperature measurement on the nozzle body
- » Optimised heating concept with wedge lock or spiral clamping
- » Multi-zone heating systems with one heating output
- » Rust and acid resistant design

OPEN HOT RUNNER NOZZLES

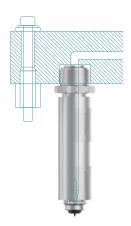


EH 4150 Hot runner nozzle, smartFILL slide seal

The smartFILL slide sealing principle enables you to use short nozzles with large spaces between the nozzles.

Characteristics:

- » Nozzle housing centred in the cavity plate
- » Anti-rotation protection possible
- » Nozzle housing is supported flat on the cavity plate
- » Short nozzle length regardless of spacing



EH 4100 Hot runner nozzle, smartFILL screw-in type

This smartFILL hot runner nozzle is screwed into the hot runner manifold to form a unit. This guarantees easy installation into the injection mould. Our smartFILL hot runner nozzles, screw-in type are available in variable lengths as standard.

Characteristics:

- » Leak-proof, as the nozzle is screwed into the manifold
- » Reduced heat loss due to low contact points with the mould
- » Perfect for ready-to-connect complete systems



EH 4000 Single nozzle, smartFILL

The smartFILL single nozzle offers you an easy and cost-effective solution without the hot runner manifold. The plastic melt is transferred directly from the machine nozzle to the single nozzle and then flows to your injection moulded part with all the benefits of smartFILL.

- » Single nozzle available in standardised lengths
- » Two individual control zones for nozzle body and system bush
- » Standardised radii according to the machine nozzle

smartFILL - THE CHOICE IS YOURS

We have applied the successful smartFILL concept to all nozzle sizes so they are available for almost all injection moulding part sizes and weights.

EH 4100 - smartFILL screw-in type

Series	Nozzle length [mm]
19	60–180
27	
37	
47	100–250
57	100-630

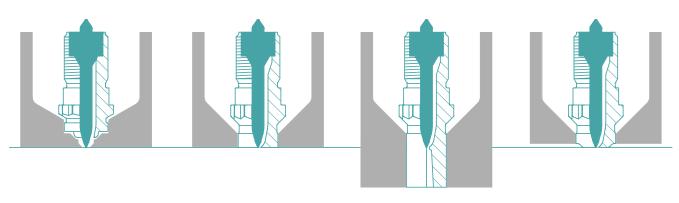
EH 4150 - smartFILL slide seal

Series	Nozzle length [mm]
19	
27	60–180
37	





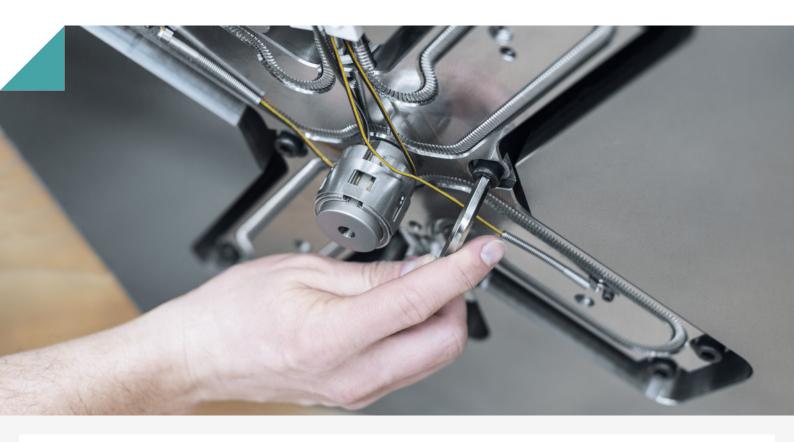
The open hot runner nozzle is available in four main gate types:



- **EH 4200** *RT*
- » Ante-chamber in the mould
- » For direct gating or gating on cold runner
- **EH 4240** *RT-D*
- » Plunging nozzle head
- » For direct gating or gating on cold runner
- **EH 4245** *RT-DL*
- » Plunging nozzle head with extension
- » Gating to free-form surfaces
- » Gating with scrap cone

- EH 4250
 - RT-DC
- » Plunging nozzle head with calotte
- » Sprue scrap remains recessed in the calotte
- » For direct gating

STANDARDISED HOT RUNNER SYSTEMS



Standard at the highest level: varioLINE hot runner systems

Our standardised hot runner systems come in defined geometries and are quick and easy to configure. The 3D data is immediately available in various data formats and the pre-assembled hot runner systems are delivered quickly at attractive prices.

Characteristics:

- » Naturally balanced and pre-assembled hot runner systems
- » Application possibilities with all plastic materials
- » Low-stress processing of the melt made possible through optimal channel routing
- » Heating of the hot runner manifold with flexible pipe heaters
- » Compact design and easily interchangeable components for quick service
- » Savings in cost for replacement parts through standardisation



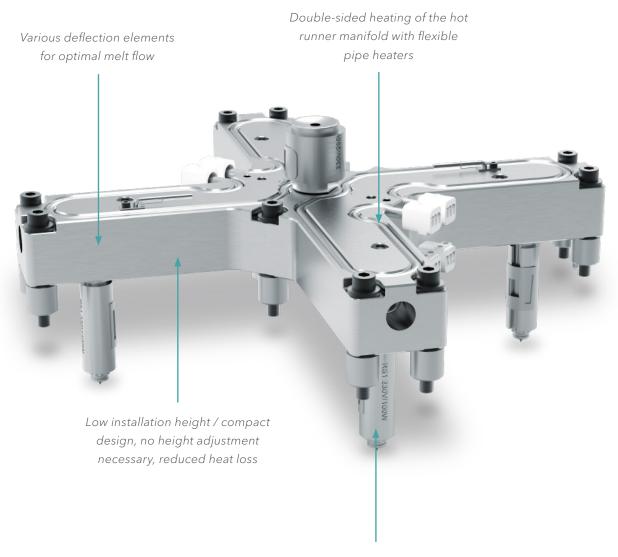
Further information about the varioLINE hot runner system at:

www.meusburger.com/varioline-en

varioLINE ADVANTAGES

Easy to service & modular:

Compact design and easily interchangeable components

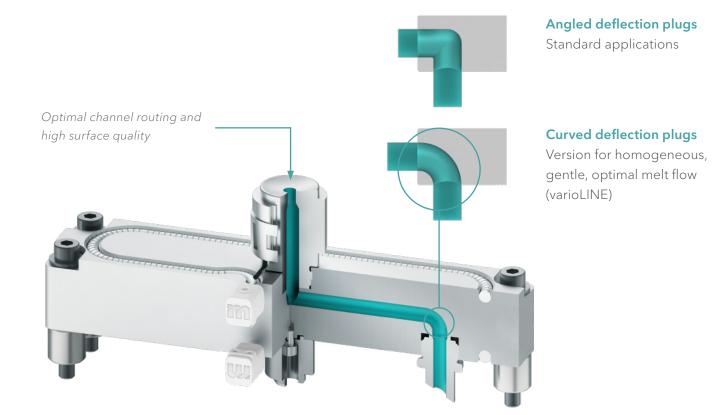


smartFILL screw-in type hot runner nozzles with individual lengths: spacing of the nozzles symmetrically freely selectable

HOMOGENEOUS & OPTIMAL MELT FLOW

Flow-optimised deflection elements

For a homogeneous, low-stress and optimal melt flow without corners or sharp edges we offer you flow-optimised deflection elements.



Characteristics:

- » Uniform temperature distribution and optimised melt channel
- » Naturally balanced melt flow for an even fill of the cavity
- » Reduced shear stress on the material due to polished channel cross-sections
- » Minimal installation space improves mould stability

Rheologically favourable melt channel

Meusburger also offers you diffusion welded hot runner manifolds. The manifold closing technology prevents clogging and creates an even more material-shear friendly channel flow. The milled channel routing enables best flow properties and prevents material deposits in the melt channel. This manufacturing process is particularly advantageous for frequent colour changes when using crystal-clear plastics.

varioLINE STANDARD VARIANTS



Deflection manifold

IMT1 *



In-line manifold
IMT2 *



In-line manifold
IMT4



Cross manifold CMT4 *



H-manifold HMT4 *

^{*} available directly in the shop via the configurator



Directly to the shop:

www.meusburger.com/fh-configurator

Ante-chamber bush cooled, RT/NZ

- » Continuous cooling near the gate
- » Optimal control of the gate temperature
- » Easy installation / removal and cleaning
- » Includes allowance for the introduction of a mould contour



EH 4830 / RT EH 4835 / NZ

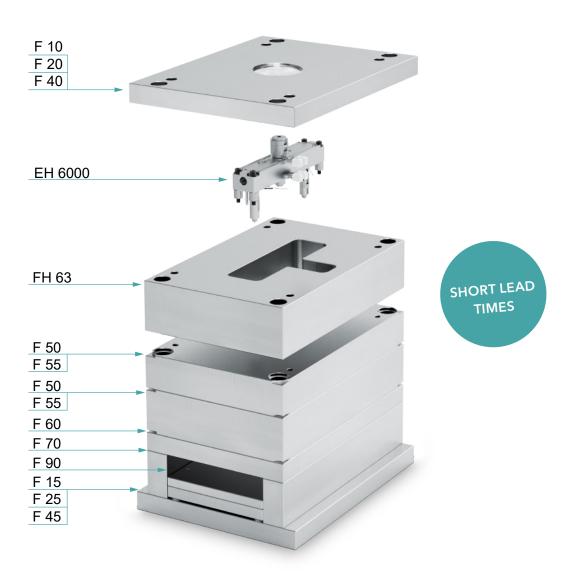
FH HOT RUNNER MOULD



QUICKLY CONFIGURED

A hot runner mould in just 5 minutes

With the help of our innovative configurator, a hot runner mould can be configured and ordered in no time at all. You can choose between four standardised varioLINE manifold types. We also offer the matching manifold plate with already milled recesses for the configured hot runner system as well as optionally integrated temperature regulation.



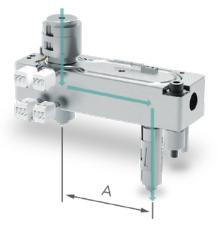


EH 6000 Hot runner system: is delivered completely machined and assembled FH 63 Manifold plate: is delivered including milled recesses for the manifold E 19100/43 70/1/2 Standard labels: are delivered including system-relevant data

varioLINE HOT RUNNER SYSTEM

4 variations – the choice is yours

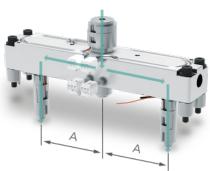
In our configurator you will find four standardised hot runner systems with screw-in hot runner nozzles that ensure a leak-proof connection between the manifold and nozzle.



IMT1

Deflection manifold with 1 nozzle

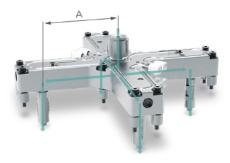
Possible spacing: A: 37.5 – 206.25 mm



IMT2

In-line manifold with 2 nozzles

Possible spacing: A: 25.0 – 206.25 mm



CMT4

Cross manifold with 4 nozzles

Possible spacing: A: 35.5 – 220.5 mm

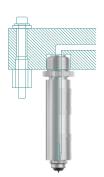


НМТ4

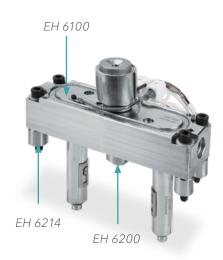
H manifold with 4 nozzles

Possible spacing: L1: 40 – 210 mm L2: 25 – 206.25 mm

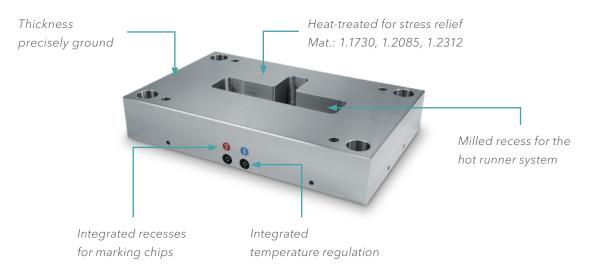
EH 6000 Hot runner system



smartFILL hot runner nozzle, screw-in type optionally with ø 19, 27 and 37 mm



FH 63 Manifold plate



Configurator for FH hot runner mould

- » Easy and fast configuration of the hot runner mould
- » Live display of the manifold and 3D data immediately available
- » Selection of the suitable mould base including accessories
- » Transparent costs due to immediate price display



Use our service and send your configuration to our experts for technical inspection with just a few clicks.

Technical enquiry

Of course, we can also realise your custom projects. Please use the enquiry form on our homepage.

www.meusburger.com/hot-runner-enquiry-form



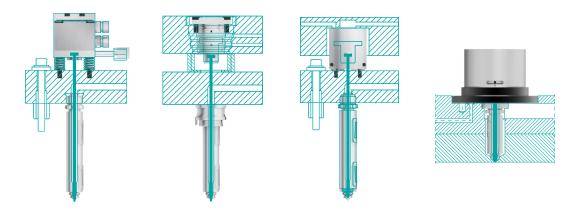
VALVE GATE NOZZLES



The smartFILL series as valve gate variant

The smartFILL hot runner nozzle with valve gate ensures the best surface results on the moulded part. Relatively large gate diameters reduce the melt load and are cleanly sealed by the pin at the end of the injection process. This prevents sprue residue or stringing on the moulded part.

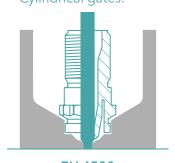
- » Reproducible injection moulding process through precise opening and closing
- » Cylindrical sealing pin as standard version
- » Low wear and high durability
- » Low shear stress in the gate
- » High-quality optical results of the gate
- » Short cycle times



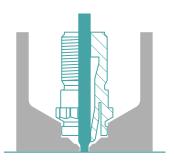
VALVE GATING TECHNOLOGY – THE CHOICE IS YOURS

The valve gate nozzles are available in 7 main gate types:

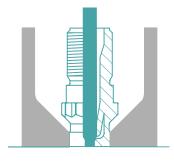
Cylindrical gates:



EH 4500 NZ

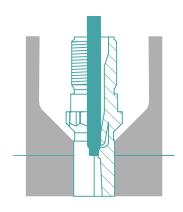


EH 4504 NZ-F



EH 4540

NZ-D



EH 4545

NZ-DL

Conical gates:



EH 4506 NK

- » Ante-chamber in the mould
- » For direct gating or gating on cold runner
- » Ante-chamber in the mould
- » For direct gating or gating on cold runner
- » Permanent pin guide for increased precision

» Plunging nozzle head » For direct gating or gating on cold runner

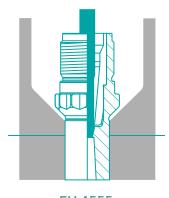


NK-D



» Plunging nozzle head

- » For direct gating or gating on cold runner
- » Gating with scrap cone



EH 4555

NK-DL

VALVE GATE OPERATING UNITS



Matching our smartFILL nozzle range, we offer you operating units in different designs and sizes. Hydraulically or pneumatically operated, the units feature high-precision adjustment of the pin position without changing the pin stroke. How you benefit: the pin can be easily disconnected and can stay in the hot runner system when removing the operating unit. This reduces adjustment and installation times.

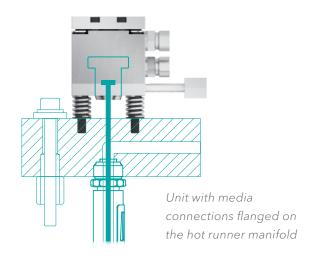
- » Precise pin positioning adjustable via a vernier scale as standard
- » Pin position adjustment without opening the piston chamber
- » Constant pin stroke and high closing force
- » Compact installation space
- » Cascaded control for multiple systems
- » Buffered pin opening with varioFILL
- » Profile-controlled opening and closing with varioFILL advanced



STANDARD VARIANTS OF OPERATING UNITS

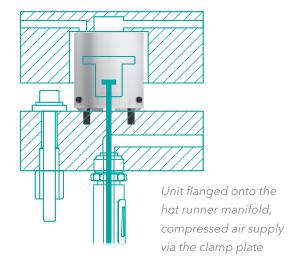
EH 6500 Cooled operating unit

- » Ideal for ready-to-use complete systems version with screw-in type nozzles
- » Optimal isolation to the hot runner manifold
- » Separate cooling plate with cooling pipe
- » Cooling of the clamp plate after production ends not necessary
- » Detachable version available as standard
- » Double sealing between piston and housing
- » Anti-rotation pin protection without additional costs



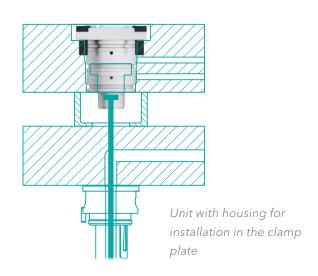
EH 6510 Pneumatic operating unit

- » Compressed air is supplied via the clamp plate
- » No separate cooling of the unit required
- » Reduced installation space due to the compact design and elimination of air and water pipes



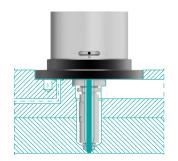
EH 6520 Operating unit in clamping plate

- » Operating unit installed in the clamp plate
- » Double sealing between piston and housing
- » Thermally separated from the hot runner manifold
- » Cooling of the clamp plate after production ends not necessary



SINGLE NOZZLE WITH VALVE GATE





EH 4050 Single valve gate nozzle, smartFILL

The EH 4050 single valve gate nozzle is the stand-alone solution without a hot runner manifold. It permits central gating of the moulded part in the mould with valve gate in direct extension to the machine nozzle.

Thanks to the integrated valve gate, the EH 4050 achieves the best surface results on the moulded part. The pin actuation is carried out by an annular piston and transverse bar so there are no lateral forces on the pin.



- » Pneumatic or hydraulic actuation
- » Media is supplied through the clamping plate
- » Pin positioning possible when installed
- » All cylindrical gate types can be used
- » Compatible with ante-chamber bushes and wear inserts
- » Integrated cooling of the operating unit
- » Easy installation and maintenance



PIN ACTUATION OPTIONS WITH LIFTING PLATE

Valve gate actuation with lifting plate

A lifting plate is essential for precise and simultaneous opening of the valve pins. In particular, this type of pin actuation enables the injection moulding of small moulded parts with a high number of cavities in a very confined space. Standardised and yet customisable, we provide you with various solutions.

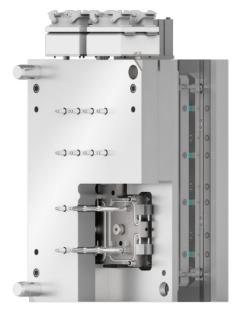
Characteristics:

- » Precise and simultaneous opening and closing of the pins
- » Small cavity distances possible
- » Closure of individual cavities possible
- » Pneumatic or hydraulic operation
- » Pin positions individually adjustable if required
- » Highest process reliability
- » Customised to your application
- » With pneumatic drive unit suitable for cleanroom applications



powerMOVE- the lever operated lifting plate

Due to its unique mechanism, the lever-operated lifting plate powerMOVE offers decisive additional advantages to operation via lifting cylinders. The integrated, roller-bearing mounted lever moves the pin set with an ideal speed profile. The pins plunge slowly with maximum force in the gate and close the cavities.



- » Reduced height accumulation
- » Lowest mechanical friction losses
- » Maintenance-free operation, no lubrication
- » Central control via a drive unit
- » Suitable for cleanroom applications

CUSTOMISED COMPLETE SYSTEMS



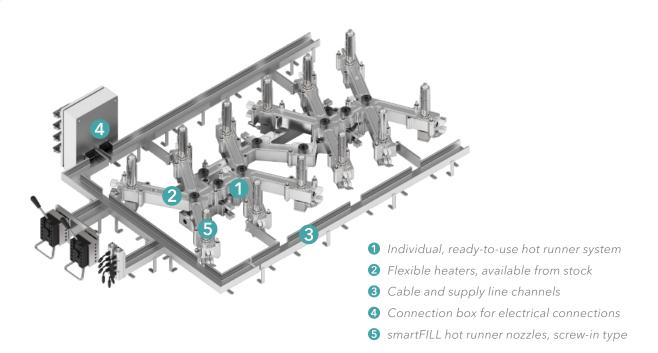
Our hot runner systems are as unique as your applications. Based on standardised hot runner components, we complete our hot runner systems so that they are tailored to your needs and requirements. That way they are matched to the plastic, injection moulding machine, and peripherals and allow an optimum production process.



Ready to install and connect hot runner systems

The hot runner system with smartFILL screw-in type hot runner nozzles is delivered completely assembled and the function of the system has already been tested. The hot runner manifold just has to be inserted into the fixed half of the mould and screwed to the cavity plate. There is no need to adjust the height of the clamp plate because the hot runner nozzle and manifold are screwed together, thus ensuring that the hot runner system is sealed.

- » Leak-proof hot runner system with screw-in type nozzles
- » Stable channel for holding electrical and media supply lines
- » Connections and plugs designed according to individual customer standards



Hot half

On the fixed half of the mould the only thing missing is the cavity plate with cavities. We supply the customised hot half, either with open hot runner nozzles or as a valve gate system.

Characteristics:

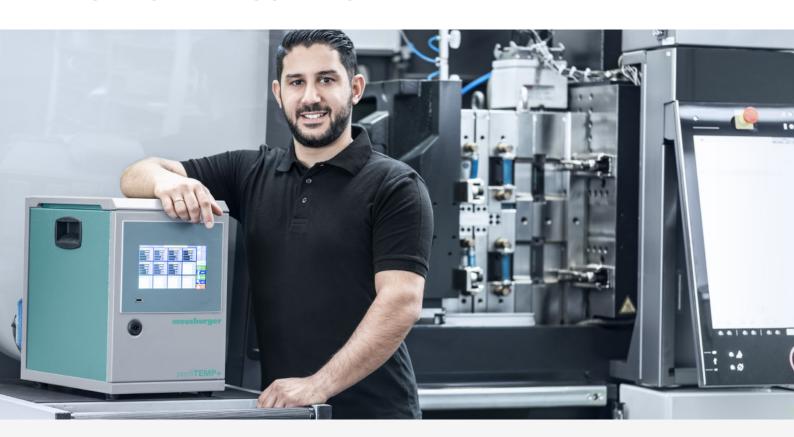
- » Variation with the smartFILL nozzle series
- » System adjustment for leakage-free operation
- » Pin actuation individually per nozzle or with lifting plate
- » Ready to connect according to customer standard with suitable electrical plugs and media connections
- » Highly convenient project planning, assembly, and production



More convenience

We offer you complete solutions from a single source and give you the assurance that all components are coordinated. This simplifies project planning, shortens the commissioning, and offers service advantages.

HOT RUNNER CONTROL



Meusburger offers you customised control systems for all application areas with electrical heating technology. All hardware and software solutions are developed and produced at our facilities. Whether series products or customised solutions— our field engineers and our technical internal sales team will support you during project planning.

profiTEMP+

Have it all with the profiTEMP+ hot runner controller. It features not only innovative technology, but also space-saving design. In addition to new intelligent functions such as Smart Power Limitation (SPL) and MoldCheck, the tried and trusted features have also been further developed in the new hot runner controller. With the clearly designed multi-touch screen, easy and intuitive operation is guaranteed.



profiTEMP+ SERIES

Characteristics:

- » Intuitive user interface on modern multi touch screen
- » Precise control algorithm ensures optimal part quality
- » All process errors are detected by the control unit and displayed as plain text
- » Set-up Assistant: set up the most important settings of the profiTEMP+ on a new mould in a flash
- » The MoldCheck function tests the hot runner control systems fully automatically for errors in the sensor and heating circuits
- » Top heating functions such as automatic ramp, Heat'n'Dry, relay heating or start-up mode
- » Flexible combination options via pairing mode
- » Smart energy management
- » Extensive data interfaces (including OPC 40082-2)
- » Quick support via remote support



6 to 48 control zones in 6-zone grid

- » Two housing versions with stable carrying handles
- » Central operation via 7" touch screen

54 to 192 control zones in 6-zone grid

- » Rollable housing with handles
- » Standard central operation via 10" multi touch screen

More convenience: Upon request also available with IPC 15" touch screen and functionally more comprehensive TEMPSoft2 software or with a 7" touch screen separate from the hot runner controller.

HOT RUNNER CONTROL PORTFOLIO

RH 1100 profiTEMP TM

Our RH 1100 hot runner diagnosis device is perfectly matched to the requirements of mould makers and maintenance and service departments. Thanks to the easy operation and user interface in 15 languages, a complete and professional diagnosis of the condition of the heaters and thermocouples as well as the wiring of a hot runner can be made.



Characteristics:

- » 12 zones
- » Especially compact housing dimensions
- » Light weight: the profiTEMP TM can be conveniently transported
- » Operation is via a high-contrast 7" touch screen
- » With the 15 amp heating outputs, almost all nozzles and manifolds can be controlled

RH 1200 profiTEMP IM

The new compact and powerful hot runner controller offers many possibilities with its five operating modes and four heating variants.

- » Fast control algorithm shortens the heating phase and increases the operating time
- » Precise temperature control improves and ensures part quality
- » Clear, user-friendly touch screen user interface
- » Easy maintenance as the zone fuses are accessible from the outside (fuses available as spare parts)



profiTEMP+ VCON

The profiTEMP+ VCON is our solution for precise control of the valve pins in cascade injection moulding. By using hot runners with cascade injection technology, a much better part quality is achieved in the production of large parts.



Characteristics:

- » Desktop housing with up to 32 control circuits for cascade control
- » Can be combined with the profiTEMP+ hot runner controller in one housing
- » Full process control through optional monitoring of the pin end positions
- » Intuitive user interface on modern multi touch screen
- » Clear status display of the pin positions
- » Can control up to three opening / closing movements per cycle



www.meusburger.com/variofill-en

Connecting cables and accessories

Your high-quality hot runner controller comes with the appropriate connecting cables. In addition to the standard options, we have specified several hundred standards of connecting cables and are continuously updating them. All components are robust, durable and suitable for use in industrial environments.



CUSTOMER SERVICE & TECHNICAL SUPPORT



Comprehensive customer support for every project

From the engineering and design phase to commissioning and maintenance, our team will provide you with comprehensive support. You receive feedback in every project phase within 24 hours. On request, our experts check your projects and ensure that you achieve the optimisation you want in the injection moulding process, different materials and mould concepts.

Our range of services

- » Hot runner systems field engineers and technical internal sales for specific customer support on site
- » Specially trained application engineers & designers for technical challenges
- » Fast availability of 3D data
- » Analysis of injection moulding problems and 3D filling analyses
- » Test runs with customer moulds on our own injection moulding machine in our technical centre
- » Sampling of customer materials (plastics)

WORLDWIDE SERVICE AND CONSULTING ON SITE

Service

We offer you a clear cost estimate. All hot runner systems we receive for repair are tested and returned to you within just a few days along with a service report.

- » Fast responding service team with you on site within 24/48 hours
- » Maintenance, repair and service check at the Viernheim, Germany location or directly at the customer's premises
- » Standardised components / spare parts available from stock
- » Customer training in the handling and operating of hot runner systems, on request
- » Quick support control systems: technical support via remote maintenance software (TeamViewer)



Your personal consultation

We support you in building a productive and reliable mould. Our hot runner systems are designed to meet the most demanding requirements for your injection moulded parts.

Feel free to contact us. Our team is at your service.



Customer service

+43 5574 6706-0

96,000 PRODUCTS – THE CHOICE IS YOURS



Mould bases

A large range of pre-drilled and non-drilled plates in combination with a sophisticated system and convenient product advantages form the basis of precise, high-quality injection moulds.



Standard plates

The largest range of standardised plates – angular or round – in different versions offer maximum flexibility. All plates are manufactured to tight tolerances as standard and the thickness is precisely ground. If you cannot find what you are looking for in our standard range, don't worry: we also offer plates in customised dimensions.



Special mould bases

Challenging projects ahead? Whether sliding core moulds for complex components, change moulds for prototypes and small series or micro moulds for producing the smallest parts - you will find a solution among our special mould bases.



Hot runner moulds

With our configurator for hot runner moulds, a standardised mould base including hot runner manifold and manifold plate can be created with just a few mouse clicks. The variably selectable components of the hot runner mould are delivered promptly and in the usual high quality.



Standard bars

Versatile bars in various shapes, dimensions and material grades are suitable for the production of inserts, mould cores and slides. Save time with already hardened tool steel in the form of blocks for eroding and much more.



Components

Unique components with sophisticated details let you break new ground. From guides and slide systems to electrical, hydraulic and hot runner components - be inspired by our wide selection of over 19,000 components.



Machining

Whether it is milling, hard milling, deep hole drilling, grinding or flame cutting – we offer short lead times for customised solutions. You can fully rely on our expertise and experience when it comes to special machining.



Workshop equipment

Out of the vast range on the market, we have compiled an ideal selection especially for mould and die making. This allows you to save time and money when you compare, select and order high-quality products for daily use in the workshop and production.













ORDERING – THE WAY YOU LIKE IT BEST!





Web shop www.meusburger.com



Offline shop Install and get started!



Phone +43 5574 6706-0



Email sales@meusburger.com

100002503-V2-04/23-EN

