VALVE GATE
HOT RUNNER SYSTEMS
High Quantities.

MEDICAL/PHARMACEUTICAL

THIN-WALL PACKAGING

CAPS AND CLOSURES

SMALL PARTS

ENGINEERED PARTS

PERSONAL CARE
Valve Gate Hot Runner Systems.

As pioneer in the field of cylindrical valve gates, männer has 30 years of experience manufacturing high-performance products with a focus on absolute part-to-part consistency and superior gate quality. In particular, our customers benefit from the cost-effective production of thin-wall products produced in high quantities with short cycle times. männer valve gate systems are custom-configured to meet your specific requirements.
Pre-Centered Cylindrical Valve Gate

During the closing movement, the valve pin is first pre-centered by an angled guide area and then positioned perfectly in the gate orifice by means of a cylindrical guide. Nozzle and valve pin are designed to provide high performance and long life.

- Superior gate appearance
- Large gate diameter
- Minimal pressure drop
- Low shear rate
- Long life with minimum wear and low maintenance
- Defined opening and closing of gate
- Processing of resins with narrow processing windows
- Short cycle times
- Optimal temperature control
- Cascade filling possible
- Clean room proven (pneumatic cylinder)
männer Cylindrical Valve Gate. The Original.

**HOT RUNNER MANIFOLD**
- Temperature-independent sealing function
- Leakproof
- Naturally balanced material flow
- No stagnation areas
- Suitable for color changes
- Hardened manifold block

**INSULATION PLATE**
- Reduces thermal radiation

**INSULATION RING**
- Thermal insulation
- Nozzle centering
- Sealing function

**VALVE PIN BUSHING**
- Integration of valve pin guide bushing into nozzle to prevent bending of pin during thermal expansion of manifold
- Replaceable

**TUBULAR HEATING ELEMENTS**
- Long life
- Cast in heat conductivity compound for uniform temperature distribution

**PNEUMATIC UNIT**
- Tandem cylinder: small unit size with high closing force
- Clean room proven

**VALVE PIN**
- Installation/removal of valve pin possible with system already installed
Suitable for processing almost all standard thermoplastics
Large selection of standard nozzles for a wide range of applications
Custom manifold systems with 1 to 128 cavities

<table>
<thead>
<tr>
<th>ø (mm)</th>
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<tbody>
<tr>
<td>ø 8 (SLIMLINE)</td>
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ø 16, 19, 22 mm also available with WEARPROOF option. Other lengths available upon request.
MIS männer Insulated System. MHS männer High-Temperature System.

- Used to process technical and filled resins at high temperatures
- Easy replacement of the screwed-in nozzle tip
- For long hold times

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MHS: optimum temperature control all the way up to the nozzle tip

Other lengths available upon request.
MMS männer Multiple Drop System.

- Ideal for applications with tightly arranged cavities
- Used for producing parts with small shot weights
- 2 to 4-drop nozzles available with various axis distances
- Custom manifold systems with 1 to 128 cavities

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männer SIDEGATE.

- Side injection with the benefits of a cylindrical valve gate
- Direct side gating (no cold runner gating)
- Ideal for long tubular applications
→ Central injection combined with valve gate technology
→ For single-cavity molds used to produce parts with large surfaces
→ For pilot or production molds
→ Available with all nozzle types

Nozzles for production molds can also be used during the testing phase.

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**Insulated model (MIS)**

| ø 22   | 104, 129, 154, 179, 204 |

Other lengths available upon request.
MES männer Stack System.

→ A cost-effective solution for high production volumes
→ männer stack valve gate with opposing injection points arranged on a single axis
→ Double the output with the same clamping force
→ Split main sprue bush allows free access for handling systems and free drop of the parts
→ Two or four level stack systems possible

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männer SLIMLINE.

- For close cavity spacing
- Applications involving tight fitting conditions such as direct gating close to the pins
- For high cavity molds
- For applications with extremely small part weights
- Minimum space requirements

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Special ceramic insulation
Specifically designed for processing filled and abrasive resins

Construction of highly wear-resistant materials for long life and durability

Ensures reliable, long-term operation when processing demanding resin

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Wear-resistant guide area on nozzle tip
We offer our customers fully assembled, wired and tested stationary halves. This helps reduce the time required for mold installation and it lowers costs. Our systems are custom-designed according to customer specifications.
Stationary Halves.

- 64-cavity MSS standard system
- 32-cavity MMS multiple drop system
- 4+4-cavity MES stack system
- 2-component MES stack system

64-cavity MSS standard system
32-cavity MMS multiple drop system
4+4-cavity MES stack system
2-component MES stack system
Clamped nozzle heater band

The patented clamping system creates a force-fit connection between heater band and nozzle body, preventing heat from escaping through air gaps. The clamped nozzle heater band is available for use with most männer nozzle types.

Color change caps

Using color change caps considerably reduces the time for color change. Color change caps also prevent the gate area from filling with resin. This minimizes the risk of colors mixing in the molded part after a color change. Color change caps are available for most of the männer nozzles.

- No loss of heat through air gaps
- Precise process management
- Force-fit connection without locking screws
- Simple installation and removal
- Corrosion-resistant material
- Easy installation of thermocouples that provide accurate readings

- Quick color change
Gate bushing

Gate bushings are easily replaced when necessary – no rework on the cavity is required. Depending on the resin to be processed, and depending on the application, either cooled or non-cooled bushings are used.

→ Easy to replace
→ Added insulation
→ All vital installation tolerances are incorporated into gate bushing design
→ Use of valve gate systems also possible with non-hardened cavities

Hot runner technology – For operators and design engineers

männer’s hot runner valve gate systems are high-precision products. To help you achieve optimum results, we offer a solid introduction to hot runner technology along with practical tips for everyday use. The seminars are subdivided into two sections: Theory and Practice.

männer’s seminars offer you:
→ Comprehensive knowledge of hot runner technology
→ State-of-the-art technology
→ For your daily work
Temperature Control Systems.

HCS-TS

High-end temperature control system with touch screen. Keeping track of temperatures has never been easier: at the push of a button, you can view an image of the hot runner and the corresponding temperatures. Each nozzle – and thus the output of each cavity – is monitored individually.

- 24 to 256 control zones
- Group management for multicavity molds, stack molds, and multicomponent molds
- Boost function, Standby function
- Master/slave capability
- Thermostat mode
- Individual on/off for each control zone
- Mold memory
- Mold diagnostics
- Self-optimization function
- Controlled temperature increase

HCS-TS 2

Easy to use control system with touchscreen interface offers maximum convenience along with optimum clarity. To save space, the operating console can also be detached from the control unit.

- 24 to 180 control zones
- For multicavity molds and stack molds
- Modular equipment configuration
- Boost function, Standby function
- Master/slave capability
- Thermostat mode
- Individual on/off for each control zone
- Mold memory
- Mold diagnostics
- Controlled temperature increase
moldMIND®

Be in charge.

moldMIND® is a „black box“ for your injection mold. It is a tamper-proof control instrument for mold owners, injection molders, and moldmakers that records and stores vital process data. All data can be processed and evaluated using a PC or notebook. Seamless documentation makes it possible to find the source of problems more quickly, simplifying efforts to establish the validity of specific guarantee claims.

HCS-2 Series

The modular design of the HCS 2 Series make it easy to exchange or replace components if needed.

Know what is going on inside the mold
Provides the process documentation for potential guarantee claims
For process optimization and quality control
Enables the creation of a tool database
Makes it possible to monitor maintenance intervals

männer moldMIND® records and stores:
Number of cycles (per day/accumulated)
Shortest and longest cycle time plus time of day
Operating time, downtime, disassembly time
Maximum temperature and duration

→ 6 to 36 control zones
→ For multicavity molds and stack molds
→ Modular equipment configuration
→ Boost function, Standby function
→ Thermostat mode
→ Mold memory
→ Controlled temperature increase
About männer.

- 3D design (35 workstations)
- Wire and spark erosion
- 5-axis high-speed cutting
- männer heat treatment (hardening/nitrogen hardening)
- männer test center (with injection molding machines from 75 t – 450 t)
- männer polishing technology
- Surface, profile and jig grinding
- männer center for education and training
- ISO 9001:2000

Founded in 1965.
370 employees.
29 000 m² facility size.
Worldwide service.
männer Worldwide.

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