

emtechnik

simply better



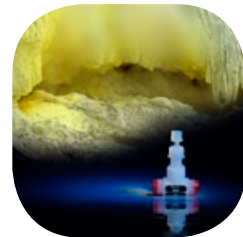
connecting



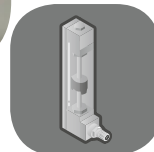
filtering



distributing



regulating



measuring



shutting off



Connectors · Fittings · Connecting Technology



The Company **emtechnik**

Competence and Quality for Your Objectives

emtechnik, a medium-sized family company, is one of the world's leading providers of high-quality miniature fittings and connectors made of special plastics. Our goal is to consistently develop high quality products from our customers' perspective.

Products are manufactured exclusively at **emtechnik** headquarters in Maxdorf, Germany through the combined efforts of over 120 employees. Various subsidiaries and representatives in Europe, Asia and the USA provide support and consulting for our customers in foreign markets.

Safety Without Compromise for the Most Demanding Requirements

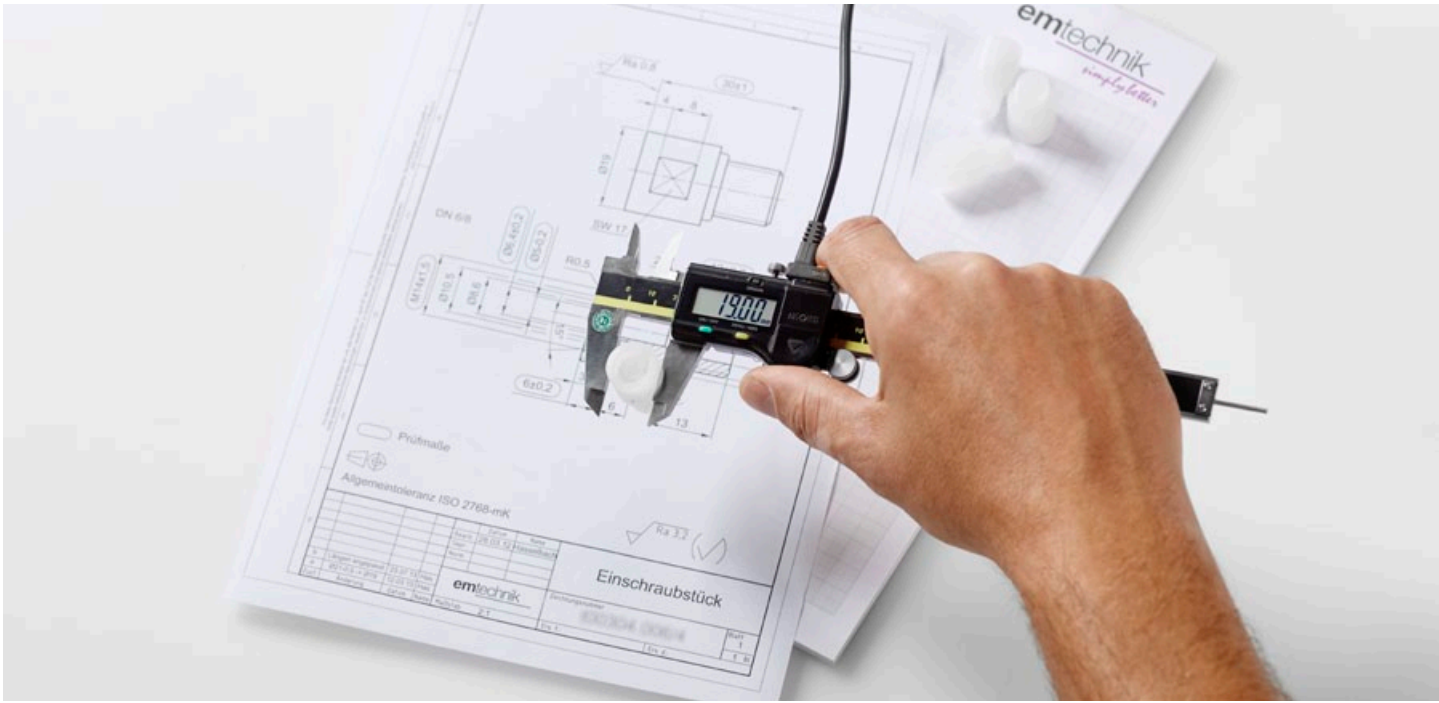
Our extensive line of products forms a modular system in which all the parts fit with each other and can be used compatibly and variably. In this way products of **emtechnik** open up a wide range of applications that meet the most exacting demands for quality, safety and reliability.

We have set technical standards in many application areas with our products. We meet our high requirements for the performance capability of our products in a closely intermeshed process of product development, manufacturing and quality management.

Guiding Principles

Because we use premium plastics exclusively, we produce products with outstanding quality and high technological standards. It is very important for us to offer products we have produced ourselves. Our connectors and fittings are manufactured in nominal diameters from 0.7 to 25 mm or DN 4-10 mm. We offer our customers an optimum price/performance

ratio and guarantee products with maximum operational reliability. We guarantee products with a long service life, leak tightness and chemical resistance. Taking into account all these aspects and uniform, sustainable actions, we are able to create products for our customers that make their production processes easier and more reliable.



We Are Your Reliable International Partner

We Focus on Your Objectives

With subsidiaries in Belgium, France, Holland, Italy, India and Taiwan as well as our representatives in Chile, Finland, Sweden, Spain and the USA we provide direct local advice and support to our customers. Our modular system makes it possible to implement a very wide range of application solutions. Whenever that is not sufficient, we are happy to develop innovative solutions together with you and tailored to your needs, in keeping with **emtechnik**'s guiding principles. Our development and production department is also available to help in planning your individual solutions. For additional information and questions, simply contact us.

Short Distances for High Efficiency

emtechnik consistently follows a philosophy of production based on short distances. With the construction of ultramodern warehouses we have further optimised our logistics. Product development, manufacturing, quality assurance, assembly and shipping are integrated into one closely knit and seamlessly documented process. This guarantees high quality and efficient processing for our customers from the time an order is received until delivery.

Living Responsibility — for Us There Is No Alternative

To make our contribution for following generations, we not only use regenerative energy sources, but also follow a consistent concept of sustainability. Consistent conservation of resources also plays a role here, as does social responsibility and a production which is nearly CO₂ neutral.



Sustainability

Energy Management	Quality	Production	Personnel Development
By using regenerative energy from hydroelectric power, we have reduced the annual output of harmful CO ₂ in our production centre by 1400 tons. Because we care deeply about using eco power, we have voluntarily committed to operating our location exclusively with regenerative energy sources by the end of 2017. The clean electricity produced in our own energy plant by a block heating and regenerating plant is fed into the public power network. We use the heat generated in the process to heat and cool our production buildings and machines.	Uncompromising reliability, a long service life and a modular product system are the key features of emtechnik's sustainable quality. Accordingly we have set up a system of production with short distances, with development, production and fully documented quality management closely intermeshed and synchronised. Quality assurance regularly includes auditing by our customers.	Through our active environmental management we control responsible dealing with all the raw materials that are required in production. By using a high-tech polyamide based on castor oil, we have succeeded for the first time in manufacturing products from 100% regenerative material. Bioplastics are characterized primarily by their technical properties, which make them suitable for many industrial applications. The material has been confirmed by the FDA as suitable for contact with foodstuffs. We have been manufacturing our products CO ₂ -neutrally for years and we take care with our well organised environmental management to ensure that all production waste is recycled, if possible with no residue.	Supporting young people in their personal, social and professional development is one of the most valuable investments in the future for us. As a result, time and again we are able to recruit interested and motivated young people who we provide with training and entry into professional life. We also care about our employees' health and safety. We offer them the possibility of a sportive change of pace from their daily work routine with Life Kinetik.

Cleanliness Without Compromise

When the issue is our customers' quality requirements, we know no compromises at **emtechnik**. This is especially true where requirements for sterile cleanliness are extremely high for modern production processes such as the food and pharmaceutical industries or medical technology and the semiconductor industry. We can pre-treat our products in our clean room on request according to their intended application to achieve an oil and grease-free surface. **emtechnik** has had a clean room to ISO 14644 class 5 since 1997. This facility makes it possible to clean and assemble our products in a contamination-free atmosphere.

All of our products certified to conform to the high-purity standard undergo a carefully moni-

tored production process at our works.

- For preparation for further processing in the clean-room, our products are first pre-cleaned in an ultrasound bath in the clean room with an oil separator and a deionisation bath.
- In the clean-room itself, the products undergo final cleaning and are dried in vacuum conditions.
- The products are then final assembled and quality controlled by specially trained employees.
- All clean-room products are placed in special double-welded packaging for safe transport. This packaging is also filled with class 5.0 nitrogen.



Mould Making

One of the core tasks of **emtechnik** mould making in our own factory is the production of individual injection moulding tools. From planning and manufacturing of moulds to support of production processes and on to maintenance and repair of tools, everything is done inside the company. The wide range of moulds are responsible for the large selection of products. Specific requests for changes can be implemented flexibly so we are also able to provide individual solutions for our customers.

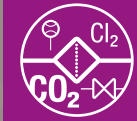
Innovative Manufacturing Processes

The goal of our innovative manufacturing processes is to achieve smooth interplay between humans and machines to ensure optimum work results. Our employees in production are supported by the most modern machines for assembly processes or test sequences. That makes work steps more effective and the results more documentable and reproducible.

Competence in All Areas



Laboratory
and Research



Process Analytical
Technology



Hygienic Design



Pharmaceuticals
and Medical
Technology



Green Energy



Water



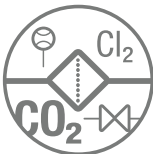
Chemistry



You Can Benefit From Our Industry Competence

We want to offer an extensive assortment to our customers in all industries. Because of this, **emtechnik** is constantly engaged in developing solutions for industries with its many years of experience and in keeping with its guiding principles. We develop and produce different sizes and variants of connectors.

Our extensive product portfolio is drawn from the many possible combinations. Due to the existing basic structures in production, individual product solutions tailored exactly to practical industry-specific requirements can also be manufactured.



Laboratory and Research

Efficient and Reliable Even on a Small Scale

emtechnik offers a large selection of GL connectors, micro-connectors and mini ball valves for use in laboratories and research. They can be used compactly and flexibly even for setting up tests on a small scale. The large selection of materials covering PP, natural PP, PVDF and PFA, even in the smallest nominal diameters guarantees dependable productivity, efficiency and reliability.



Process Analytical Technology (PAT)

Precision Knows No Compromises

Our unique product diversity in the area of process analytical technology features impressive precision and a corrosion-free long service life, especially when working with aggressive media. We offer a selection of highly fluoridated special plastics including PVDF, PFA, PTFE and PEEK which guarantee maximum safety and reliability.



Hygienic Design

Bubbling Over With Cleanliness

Products with ADI-free quality ensure maximum reliability for hygienic and food applications according to FDA, USP Class VI and KTW. Corrosion-free fittings and connectors featuring maximum media resistance are used where products made of stainless steel have long since been replaced. CIP/SIP process capability ensures high efficiency with short downtimes.



Pharmaceuticals and Medical Technology

Health – a Matter Close to Our Heart

emtechnik follows one clear principle for our specialists in pharmaceutical and medical technology: uncompromising quality. Continuous quality control, seamless documentation and our own clean room in accordance with ISO 14644 Class 5 guarantee high process purity. Therefore our products – for example the tri-clamp connector – meet all the strict criteria of USP Class VI and are also ADI-free.



Green Energy

Our Contribution to the Turnaround in Energy Policy

We are especially focused on the issue of sustainability. Our products therefore make a valuable contribution to supporting the process chain in efficient regenerative energy recovery.



Water

Christal Clear Quality

Clean drinking water is a decisive factor for ensuring a healthy quality of life around the world. Thanks to innovative plastics, flow-optimised fittings and connectors from **emtechnik** have KTW approval. They provide an impressive solution with long service life, high media resistance, UV stability and excellent Kv values. In this way we are able to make an important contribution to the production, analysis and treatment of drinking water.

Chemistry

When Things Get Hot We Stay Cool

We offer a large selection of highly fluoridated plastics for chemical plant engineering, featuring high chemical and thermal resistance. Our products guarantee corrosion-free long-term operation with a long service life. Our high-tech plastics with top-quality material properties ensure maximum safety and reliability.

High-Tech Products Made of Plastic

The following plastics are currently in use for a variety of applications: organic PA, PP, PVDF, ECTFE, PTFE, PFA and PEEK. They feature numerous advantages due to their high-tech properties and are often used where other materials fail. For handling aggressive media in potentially explosive environments, our products are available in electrically conductive material variants PP-EL, PVDF-EL and PTFE-EL. To prevent electrostatic charges from accumulating, these high-performance materials are equipped with electrically conducting particles.

Our products made of fluoroplastics are an optimum solution for outdoor applications, as they are resistant to UV radiation.

ECTFE, PFA, PVDF and PTFE are heat and pressure-resistant and can be sterilised in an autoclave without difficulty. Our products made of PEEK are able to withstand high mechanical loads.

Our PA, which consists of 100% recyclable raw materials, is ideally suited for applications with liquids due to its low swelling rate.

Materials



PP

Drinking water/
FDA approval,
radiation sterilisable



PVDF

Drinking water/ FDA approval,
USP Class VI, non-toxic,
radiation/steam sterilisable,
good chemical resistance



natural
PP

Drinking water/
FDA approval,
radiation sterilisable



PFA

Drinking water/ FDA approval,
USP Class VI, non-toxic,
steam sterilisable,
excellent chemical resistance



PEEK

FDA approval, radiation/
steam sterilisable,
excellent chemical resistance



organic
PA

FDA approval,
good chemical resistance

Materials

ISO-Code	Material	Colour	Operating Temperature	Tensile Strength at 23°C	FDA	USP VI	ADI-free
ECTFE	Ethylen Chlorotrifluorethylen	beige	-40 – +140°C	30 – 54 N/mm²			●
Organic PA	Polyamide	natural	-20 – +60°C	54 N/mm²	●		●
PP	Polypropylene	grey	+5 – +90°C	25 – 40 N/mm²	●		
PP-EL	Polypropylene	black	+5 – +90°C	~ 55 N/mm²			
Natural PP	Polypropylene	natural	+5 – +90°C	25 – 40 N/mm²	●		
PVDF	Polyvinylidene fluoride	natural	-40 – +140°C	38 – 50 N/mm²	●	●	●
PVDF-EL	Polyvinylidene fluoride	black	-40 – +140°C	~ 60 N/mm²			
PFA	Perfluoralkoxy	transparent	-200 – +200°C	27 – 32 N/mm²	●	●	●
PTFE	Polytetrafluorethylen	white	-200 – +150°C	30 – 40 N/mm²	●	○	●
PTFE-EL	Polytetrafluorethylen	black	-200 – +260°C	≥ 24,0 N/mm²	●		
PEEK	Polyetheretherketone	brown/grey	-65 – +250°C	0 – 80 N/mm²	●		●

Sealing Materials

ISO-Code	Material	Colour	Operating Temperature	Tensile Strength at 23°C	FDA	USP VI
FPM	Fluoro-rubber	black	-30 – +220°C	13 N/mm²	○	○
EPDM	Ethylenpropylenedienerubber	black	-50 – +180°C	10 N/mm²	○	○
FFKM	Perfluoro-rubber	black	-30 – +290°C	12 N/mm²	○	○
Gylon®	Polytetrafluorethylen	blue	-210 – +260°C	14 N/mm²	●	●

natural PP, PFA, PTFE and PVDF available in high purity ● standard ○ on request

Approvals and Standards

No Dead Volume

A conical, without seam thread end for both the female and male thread of the connector or ball valve ensures connection with no dead volume. This in turn ensures that no bacteria can become lodged, media do not crystallise and dirt particles cannot adhere.

ADI Free

emtechnik guarantees that almost all materials it uses are free of constituents of animal origin, in other words that they are ADI free (animal derived ingredient free). The possibility of contamination, for example with BSE pathogens, is absolutely excluded.

KTW (Plastics in Drinking Water)

To meet the guidelines of the German Federal Environment Office for hygienic assessment of organic materials in contact with drinking water and to guarantee hygienic water quality free of residue, emtechnik products are made of innovative plastics.

2002 72 EG

To prevent toxic substances from being transferred to food, thereby creating a risk for human health, emtechnik connectors and fittings meet the requirements of EC directive 2002/72/EC for materials and objects made of plastic (including updates and changes in 2007/19/EC, 2011/8/EU).

Electrically Conducting

To prevent electrostatic charges from accumulating, the high-performance plastics PP, PVDF and PTFE are equipped with electrically conducting particles, which gives them a very low surface resistance of $< 10^3 \Omega$ and $< 10^2 \Omega$. PVDF-EL and PTFE-EL materials are also UV-resistant.

Food Safety

emtechnik connectors and fittings are being used increasingly in the food industry especially, as they not only comply with EN ISO 22000, but are also made of food-safe plastics and thus feature sterilisability, reliability and high media resistance.

FDA

The materials we use, organic PA, PP, PVDF, PTFE and PFA, comply with all the regulations for materials for use with foodstuffs in accordance with EU law and the FDA (U.S. Food and Drug Administration).

High Temperature Compatibility

Our versatile connector types are the ideal solution if you have to work with aggressive media at very high temperatures. The outstanding chemical properties, high operational reliability and special connection principles meet all the requirements for working with high-temperature media.

RoHS

The raw materials used by emtechnik meet the requirements of the RoHS directive 2011/65/EU. That means they must not contain any lead, cadmium, chromium VI, mercury or the flame retardants PBB and PDBE and these materials are also not used anywhere in the production process.

High Purity

emtechnik has a clean room to ISO 14644 class 5 since 1997. This facility makes it possible to clean and assemble our products in a contamination-free atmosphere. All of our products certified to conform to the high-purity standard undergo a carefully monitored production process at our works.

Resistance to Acids

We offer a large selection of plastics that are resistant to acids and lyes.

USP Class VI

The materials PFA and PVDF used for emtechnik products meet the requirements of USP Class VI guidelines (pharmaceutical approval).

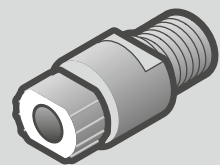
Sterile

PVDF and PFA are also suitable for hot steam sterilisation – the indispensable requirement for absolute sterility. PVDF is autoclavable with no concerns at 134 °C or can be sterilised with γ radiation while fully retaining its mechanical properties (maximum dosage 25-50 kGy). PVDF is non-toxic in the range $< 150 \text{ }^\circ\text{C}$ and does not provide any breeding ground for microorganisms, since it behaves very similarly to glass.

Our Modular Product System

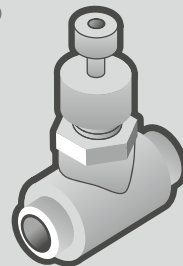
connecting

The great diversity of our connectors with various connection principles makes it possible to connect flexible tubes made of many different materials safely and reliably – even with high industry requirements.



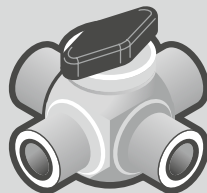
regulating

Wherever flows of gas and liquids need to be regulated, products from **emtechnik** are your ideal partner: Various materials are available primarily for use with aggressive media.



shutting off

Barrier products from **emtechnik** are very conducive to flow and create a safe and reliable barrier to media flow.



filtering

Our filters can be used for versatile applications and are safe and easy to handle. They reliably clean gasses and fluids and are available as particle filters or coalescence filters. Various filter units are available for specific applications.



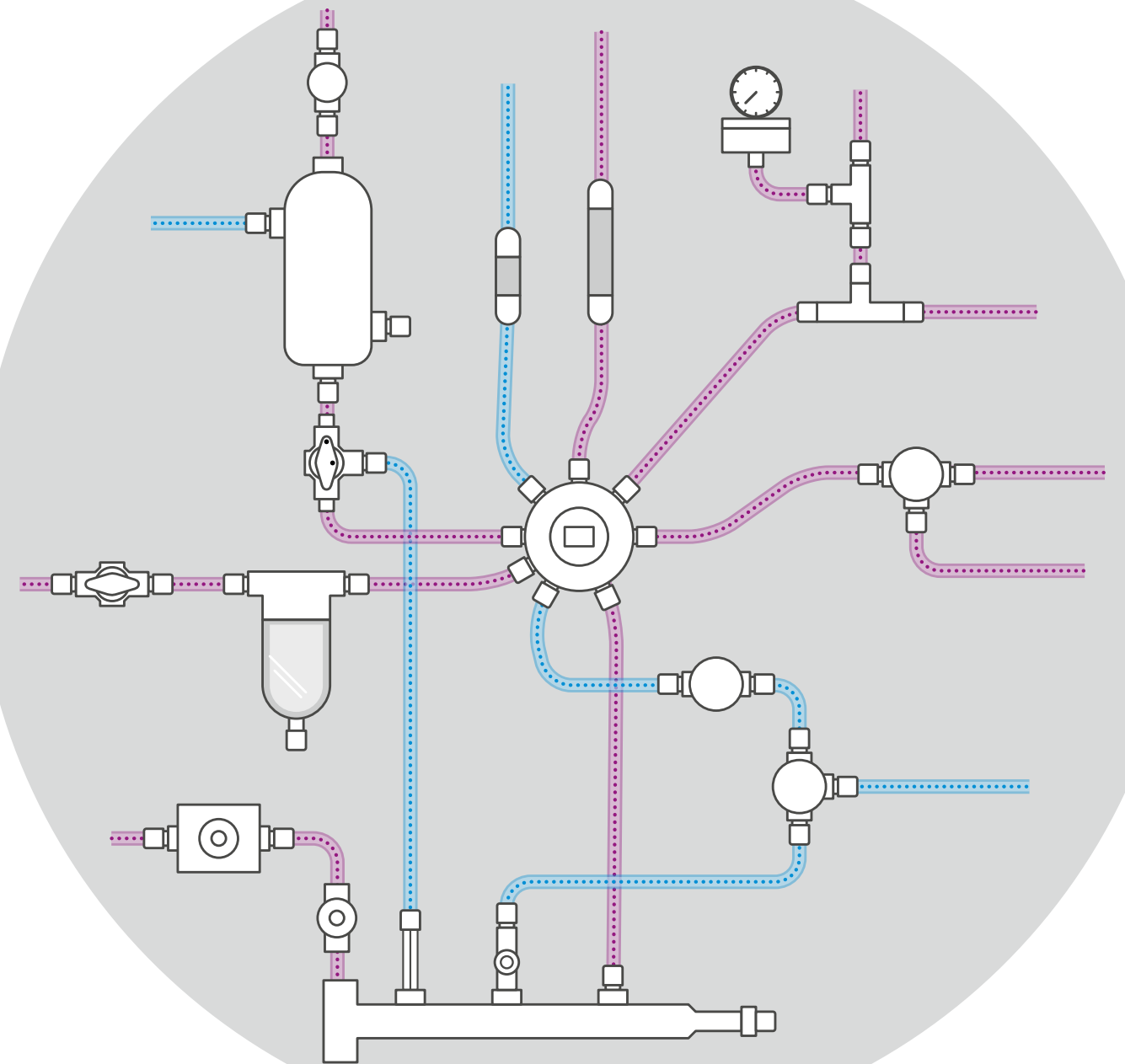
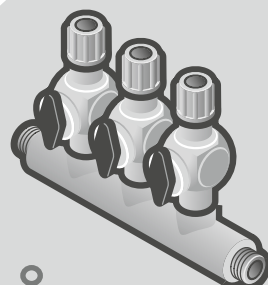
measuring

You can use **emtechnik** fittings to measure volume flows and pressures precisely. They can easily be integrated into existing applications.



distributing

Manifolds from **emtechnik** are the ideal partner wherever media are distributed or collected. Depending on the application, the medium can be either distributed directly or shut off as required using the appropriate fittings.



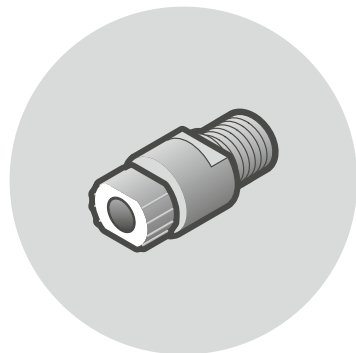
Our Products in Use

emtechnik products are based on a modular system. Because they are coordinated with each other in terms of their functions and can be combined variably, together they can cover almost any applica-

tion. From the individual building block to complex application concepts, we provide perfect solutions exactly tailored to your requirement profile – everything from a single source.

Products for Your Applications





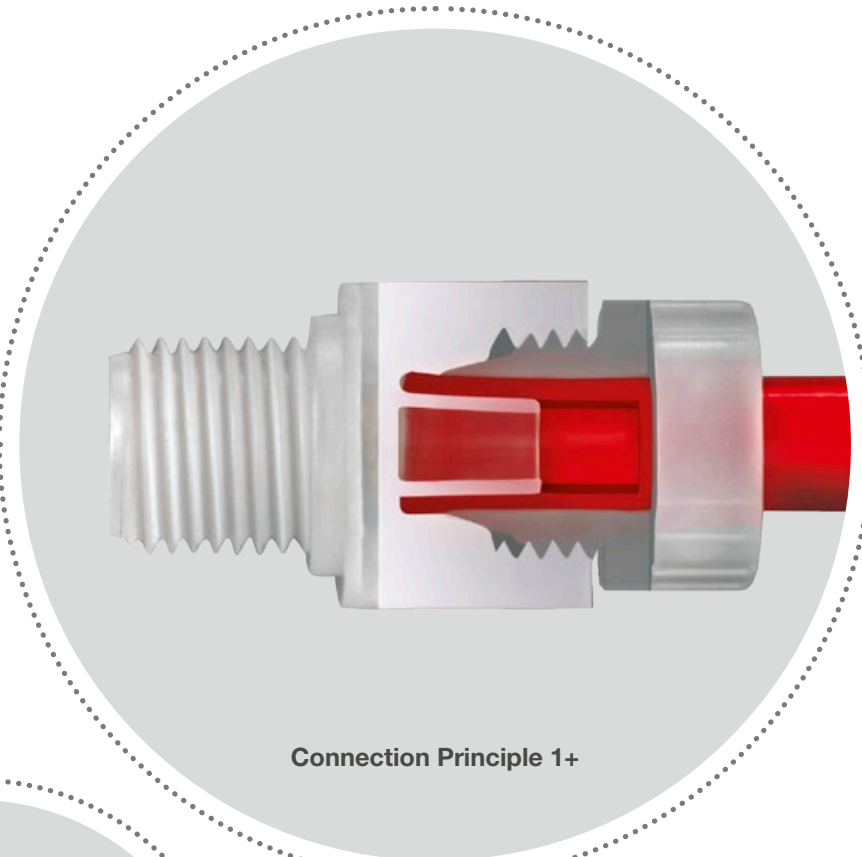
connecting

The New Generation+

Compact design, sturdy construction and simple handling. All of this describes the new Generation+ of emtechnik. All products feature threads and connecting sleeves without seams and can be installed multiple times.

Connection Principle 1+

- Only two parts with an integrated clamping ring
- Pressure stage PN16 for PP and PVDF
- Can be installed multiple times without loss of quality
- Thread and connecting sleeve are securely positioned inside
- Completely sealed and reliable without tools
- Defined stop: overtightening is not possible



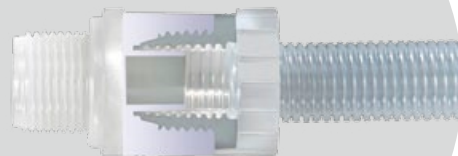
Connection Principle 1+



Connection Principle 1B+

Connection Principle 1B+

- Flexible tube connector for mesh-reinforced flexible tubes
- Also available in organic PA



Connection Principle 1W+

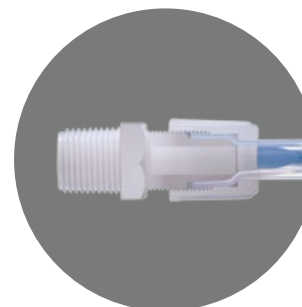
Connection Principle 1W+

- Flexible tube connector for corrugated flexible tubes
- Ready for connection immediately: no smoothing of corrugated flexible tube required



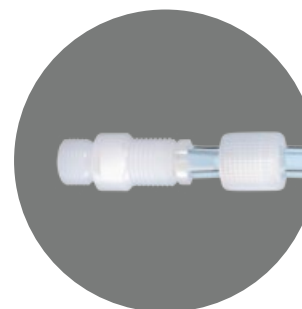
Connection Principle 1B

- Mesh-reinforced flexible tube spreads when pushed onto the connecting sleeve
- Pressure stage PN10
- Locking via knurled nut



Connection Principle 1D

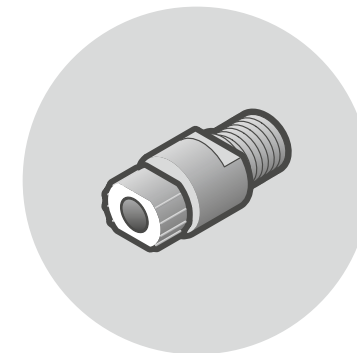
- Flare connection with no dead volume
- Connector made of natural PP, PVDF, PFA in HP quality



Connection Principle 1M

- Microconnector for flexible tubes with small diameter > 1.6 mm
- Connector body with integrated conical connecting sleeve
- Fixing by means of knurled nut and pressure ring

connecting



Materials: PA, PP, natural PP, PVDF, PFA

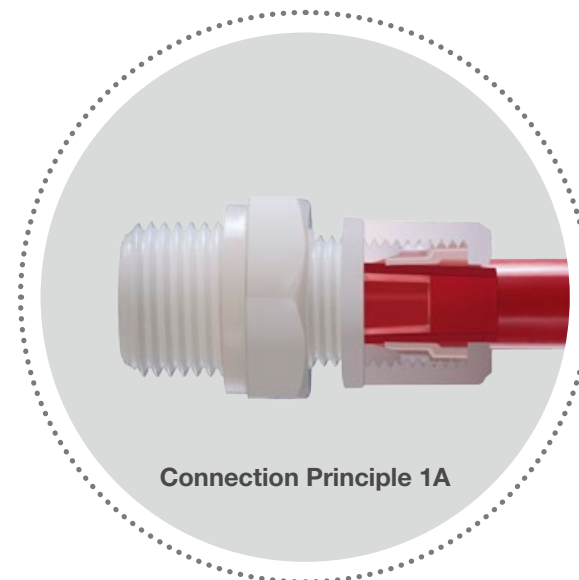
Nominal diameters: DN04/06 – DN18/20, DN1/8"/1/4" – DN7/8"/1"

Threads: G1/16" – G1", NPT1/8" – NPT1", M5 – M24x1,5, UNF

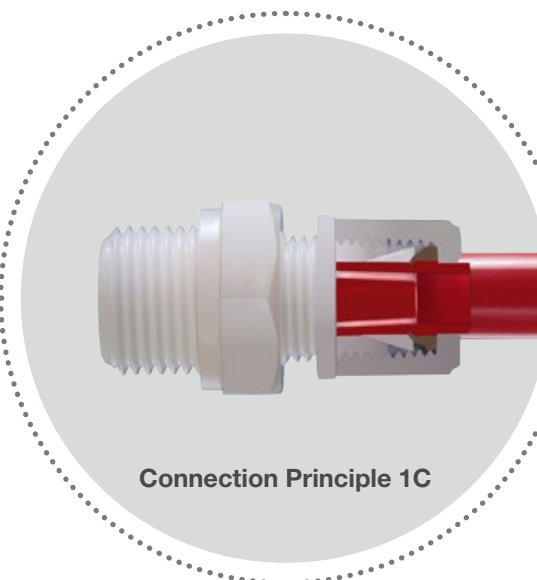
Depending on materials and wall thicknesses, the following connection principles are available for you when connecting flexible tubes. All products feature threads and connecting sleeves without seams and can be installed multiple times.

Connection Principle 1A

- Flexible tube is pushed onto the integrated connecting sleeve
- Pressure stage PN10
- Locking via clamping ring
- Securing via knurled nut
- No tube strain beyond 6%



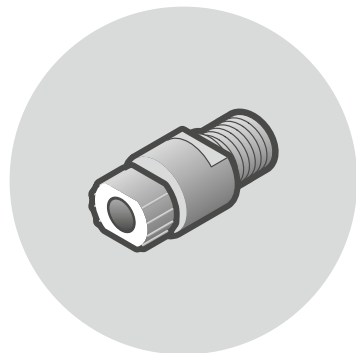
Connection Principle 1A



Connection Principle 1C

Connection Principle 1C

- For high-temperature applications
- For firm flexible tube, for example PFA
- Flexible tube is pushed onto the integrated connecting sleeve
- Sealing provided by sealing ring made of PTFE
- Locking by means of cutting ring made of PEEK and knurled nut



connecting

Pipe Connectors

Materials: PP, natural PP, PVDF, PFA, PTFE, PEEK

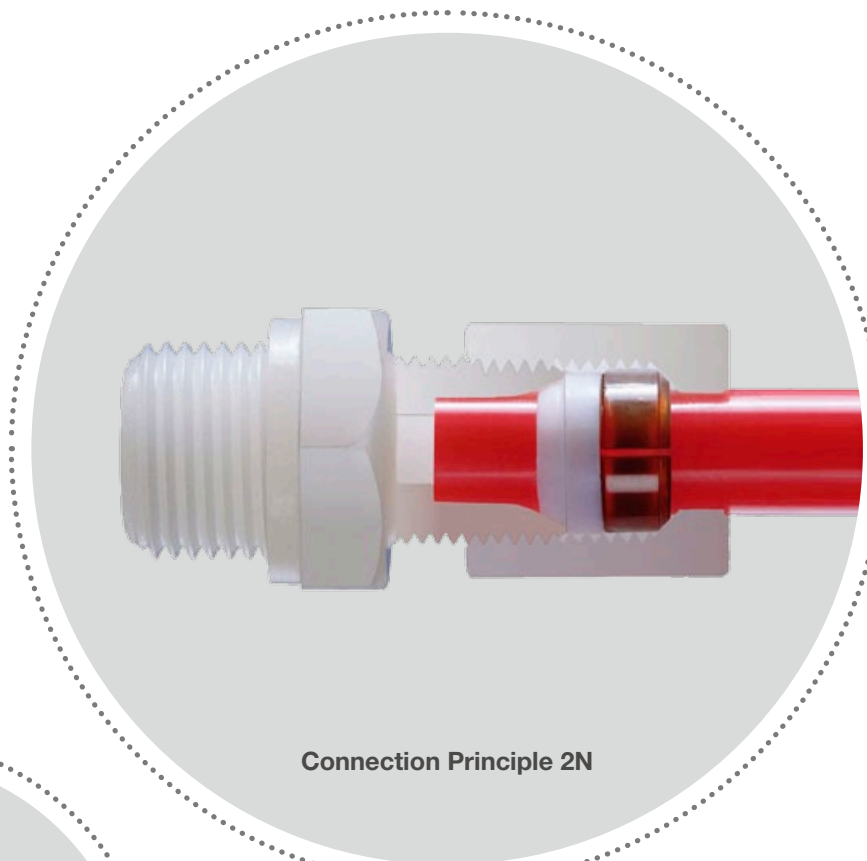
Nominal diameters: D0,7 – D25, D1/8" – D1"

Threads: G1/8" – G1", NPT1/8" – NPT1", M10x1 – M26x1,5, UNF

To connect rigid tubes and pipes with an external diameter from 0.7 mm to 25 mm, the following connection principles which can be released at any time are available.

Connection Principle 2N

- Sealing provided by sealing ring made of PTFE
- Pressure stage PN10
- Locking via cutting ring and nut
- No reduction of cross-section



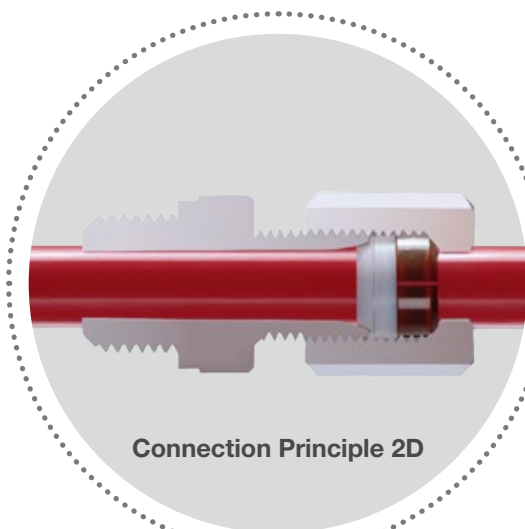
Connection Principle 2N



Connection Principle 2M

Connection Principle 2M

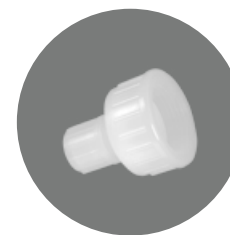
- Specially for thin pipes with external diameter 0.7 mm – 6.35 mm
- Sealing provided by sealing cone made of PTFE
- O-ring holds capillary tube
- No reduction of cross-section



Connection Principle 2D

Connection Principle 2D

- Pipe opening
- Sealing provided by sealing ring made of PTFE
- Locking via cutting ring and nut



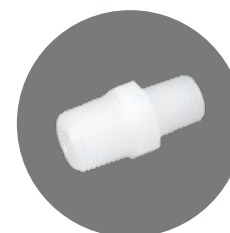
Connector 3E

- Connectable to existing fittings with DIN 8063 male threads
- Inlay component and connector, single piece
- Various connection options for pipes and flexible tubes in many sizes



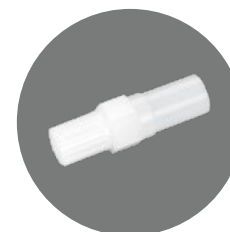
Glass Thread Adapter 3G

- Standard GL thread connection
- Sealing with media-resistant O-ring made of FPM, FPDM, FFKM
- Various connection options



3F Fittings

- Nipples, unions, reducers and flanges in various materials, variants, geometries and threads



Welding Tube Adaptor 3W

- Various connection principles for flexible tube and pipe connections
- Wall thickness of welding unions as defined by DIN ISO 10931

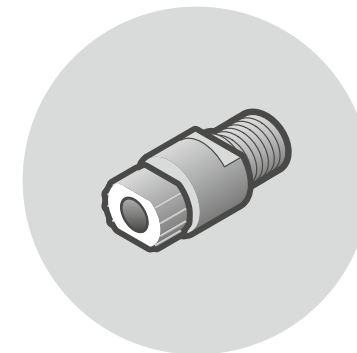
connecting

Other Connection Types

Materials: PP, natural PP, PVDF, PFA, PTFE

Nominal diameters: D0,7 – D25, D1/8" – D1", DN04/06 – DN18/20, DN1/8"/1/4" – DN7/8"/1"

Threads: G1/8" – G1", NPT1/8" – NPT1", M5 – M24x1,5, GL14 – GL45, TC25 – TC50,5



Tri-Clamp Connector 3C

Tri-Clamp Connector 3C

- Quick connection with locking clip made of stainless steel or plastic
- Size, diameter and locking clip in accordance with DIN 32676, ISO 2852, BS 4825
- Depending on the medium, various flange seals are available made of EPDM, FPM, PTFE, FFKM and Gylon®
- Many possibilities for connecting tubes and plastic pipes



Luer Lock Adapter 3L

Luer Lock Adapter 3L

- Allows for quick connection
- Luer lock thread without seam according to DIN EN 20594-1 or ISO 594
- Autoclavable at 134 °C or can be sterilised with γ radiation



shutting off

Materials: PP, natural PP, PVDF, PFA, PTFE
Nominal diameters: DN02 – DN15
Threads: G1/16" – G3/4", NPT1/8" – NPT1/2"

To shut off aggressive gases and liquids safely and reliably and prevent return flow, we offer ball valves, check valves and other solutions.



Ball Valves

Ball Valves

- 2-way to 5-way ball valves are available (7, 9, 11-way ball valves on request)
- With without seam female thread
- Various fastening options
- Electrical or pneumatic part-turn actuators possible



Check Valves

Check Valves

- Prevent return flow/back blow of media in systems
- COMPACT version with integrated flexible tube connectors for direct inline installation
- Spring made of Hastelloy® or PCTFE
- Also for low opening pressures of 10 mbar and up



Electrical Ball Valves

- DC micro-motor with planetary gear
- Wear-free Hall sensors as position transducers
- Motor housing is made of impact-resistant PP
- Can be connect directly to PLC or PCS



Diaphragm Valves

- Pneumatically controlled shut-off or safety fittings
- Nominal diameter DN05
- Sealing principle: Diaphragm with 90° cone made of XP40
- Design with no dead space



Quick Connector

- Connections for flexible tube up to DN10/12
- Spring made of PEEK, 1.4571 or Hastelloy®; housing made of PVDF
- Coupling and nipple can be shut off



Pressure Reducing Valves

- For reducing system pressures to largely constant working pressures
- Valve adjustment also possible at working pressure
- Hermetically sealed by valve diaphragms made of PTFE



Pressure Keeping Valves

- Valve adjustment also possible at working pressure
- Safe elimination of pressure peaks and pulses
- Small hysteresis

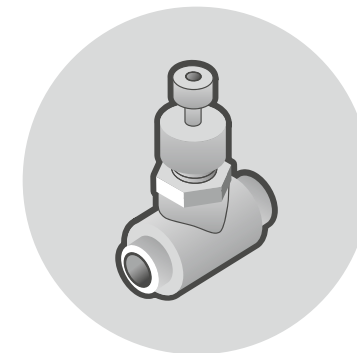


Transmitter Valves

- Valve blocks for reliably connecting system lines to transmitters
- Direct assembly on differential pressure transmitter (transmitter) as per DIN 19213
- With 3 or 5 valves

regulating

Materials: PP, natural PP, PVDF, PFA, PTFE
Nominal diameters: DN04 – DN15
Threads: G1/8" – G1/2", NPT1/8" – NPT1/2"



We offer valves in different materials as a suitable and reliable solution for regulating the flow of media, especially for use with aggressive media.



Regulation Valves

Regulation Valves

- Regulating and shutting off gas and liquid flows
- For panel mounting
- particularly light and compact design



Fine Control Valves

Fine Control Valves

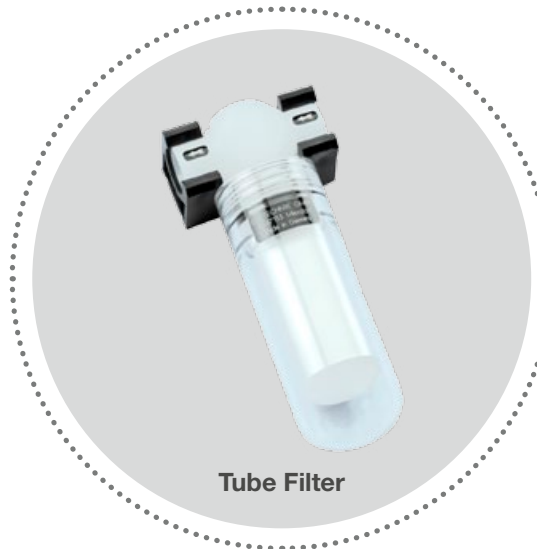
- Linear flow rate characteristics for precision control
- Manual or with electric drive
- Also available with adjustment scale for reproducible settings



filtering

- Materials:** PP, natural PP, PVDF, PFA, PTFE
- Nominal diameters:** on request
- Threads:** G1/8", G1/4", G3/8", G1/2"
- Connections:** DN04/06 – DN10/12

Suitable for many applications and safe and easy to use, our particle filters or coalescence filters reliably clean the gases or liquids you are using. Different types of filters are available for individual applications with filter grades from 0.3 µm to 100 µm.



Tube Filter

- Tube Filter**
- With G female thread on both sides
- Particle or coalescence filter
- Easy filter replacement
- Available with shut-off or drain



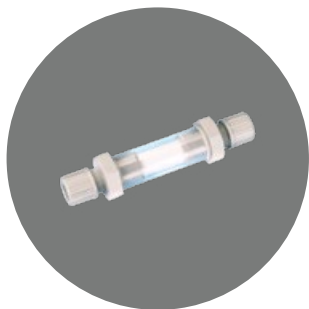
Tri-Clamp Filter

- Tri-Clamp Filter**
- With seal and bracket
- With G male thread on both sides



Macrofilter

- For liquid media
- With G female thread



Inline Filter

- With connection for flexible tube on both sides
- Small and compact
- Easy to replace and can be retrofitted without problem



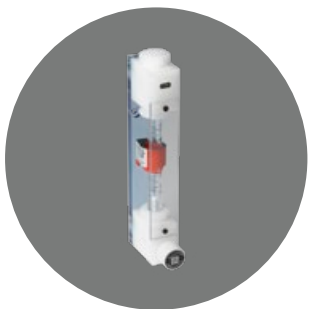
Mounted Filter

- For front panel mounting
- Viewing glass for assessing the degree of soiling
- Fast and easy filter replacement from outside



Mini Flow Meter 4M

- For very small flow rates
- With connection for flexible tube on the back
- Measuring tube made of DURAN® glass



Flow Meter 4A

- Glass can be while still installed
- Different types of measurement acquisition possible
- Wide variety of connection options, on the side or rear
- Comes standard with valve



Flow Meter 4N

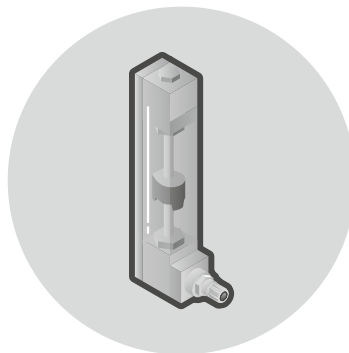
- Specially for air
- Measuring tube made of plastic
- For inline installation and panel mounting

measuring

- Materials:** PP, natural PP, PVDF, PFA, PTFE
- Nominal diameters:** DN04 – DN10
- Threads:** G1/8" – G1/2", NPT1/8" – NPT1/2"
- Connections:** DN04/06, DN06/08

Our flow meters use the float principle and are suitable for exact measurement of gases and liquids. They offer numerous connection options. Measurement acquisition is possible on request.

Our diaphragm pressure gauges with manometer are available for measuring pressure in neutral and aggressive media.



Flow Meter 4L

- Wide range of standard measuring ranges
- Individual measuring ranges on request
- With rear G female thread and fine control valve
- Measuring tube made of DURAN® glass
- Measurement acquisition possible



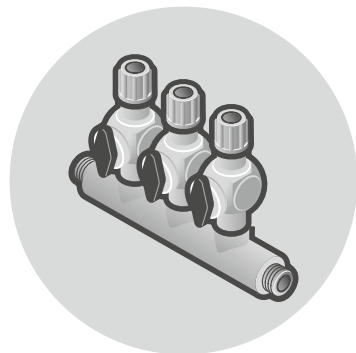
Flow Meter 4L

Diaphragm Pressure Gauge 3D

- Different pressure measurement ranges
- Reliable protection of the manometer from aggressive media
- With welding union, G female or male thread
- With retaining bracket



Diaphragm Pressure Gauge 3D



distributing

Materials: PP, PVDF, PTFE
Nominal diameters: on request
Threads: on request

Manifolds from **emtechnik** are the ideal partner wherever medium is distributed or collected. Our series 8B offers standard manifolds in various designs and materials. We also offer customised solutions to your individual specifications for material, length, shape, number and arrangement of outlets. Depending on the application, the medium can be either distributed directly or shut off or regu-

lated as required using the appropriate fittings.

Manually operated multiport ball valves consist of two multi-port ball valves that are arranged one on top of the other in a housing with 2 levels. There is no flow connection between the individual levels. With one switching process both media flows are synchronously distributed or collected using a common shaft.

Ball Valves

- 2 multi-port ball valves on 2 levels
- Fixed assignment ensures synchronous switching of the two levels



Ball Valves



Manifolds

Manifolds

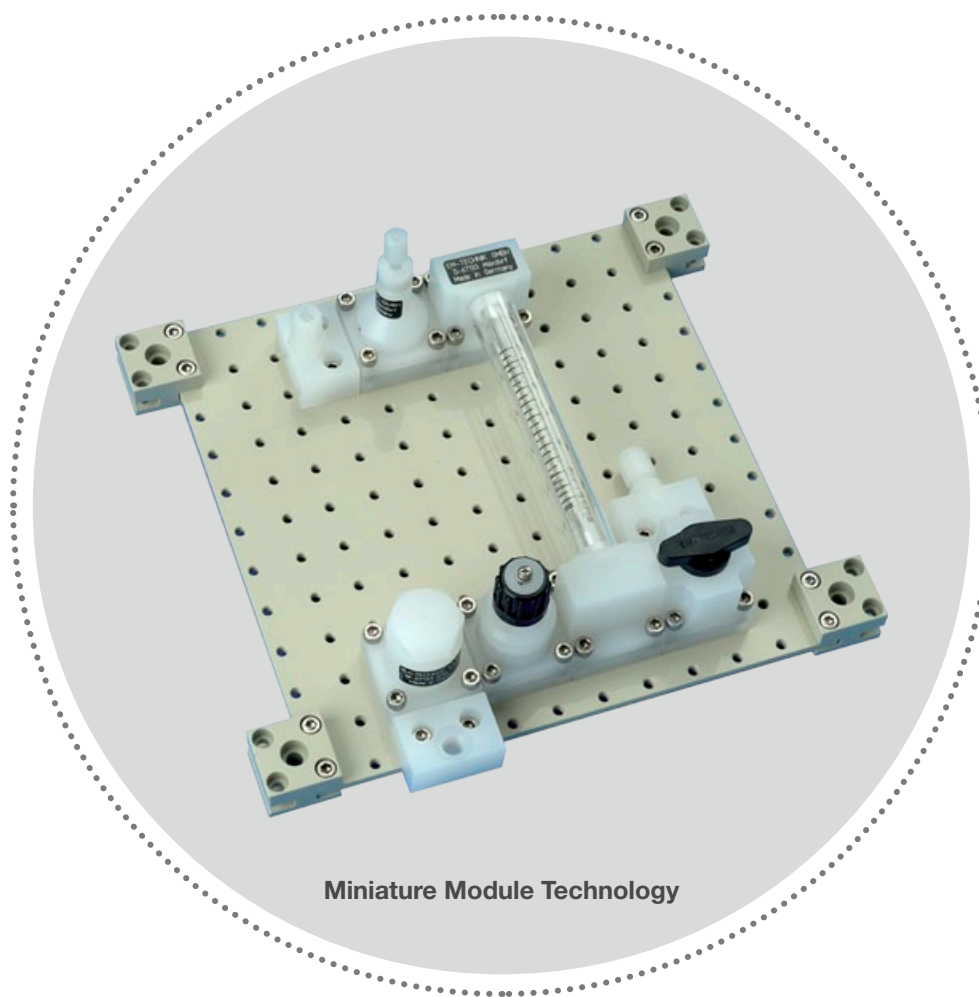
- For distributing and mixing media
- Individual manifolds to customer specifications

Miniature Module Technology

Materials: PVDF
Nominal diameters: DN03

Miniature Module Technology (MMT) makes it possible to install variable flow systems in the smallest spaces. This means that manifold modules can be placed on a base plate to create all required flow directions on one level. The manifold modules can be combined with various fitting model such as valves, flow meters or ball valves and easily replaced or reconfigured when needed.

Thanks to small base surfaces and miniaturised fittings, MMT allows for efficient use of space for designing process analysis or fluid distribution systems and for miniplants or sampling and sample processing, thereby reducing assembly and maintenance expense. With a maximum cross-section of 3 mm for all manifold modules, smaller quantities can be reliably distributed or analysed in the system, especially for very cost-intensive media.



Miniature Module Technology

Miniature Module Technology

- Small base surface and miniaturised fittings
- Flexible layout thanks to modular design: all modules and fitting can be freely combined with and replaced by each other in all directions

Other Applications



Conveying – Injectors

- Conveying – Injectors
- Gas jet pump for use without auxiliary electrical energy
 - No wear parts thanks to Venturi principle



Collecting – Condensate Containers

- Collecting – Condensate Containers
- Safe and reliable collecting of condensed liquids
 - Different volumes
 - Containers made of DURAN® glass with GL drain



Separating – Ion Exchanger

- Separating – Ion Exchanger
- Function based on direct-current method
 - Can be filled with any carrier material by the customer
 - Containers made of DURAN® glass

Individual Customer Solutions

Do you have a very special application you are unable to cover with standard products? We can develop a solution together with you. Whether it requires modifications to one of our standard products or an individual combination of connectors and fittings to make a specific application ready for use on a plate as a “Mini Plant Panel”. Or do you need a completely new product? Our engineers and technicians can find a solution for almost any problem that occupies our customers.

You can contact us at: technik@em-technik.com

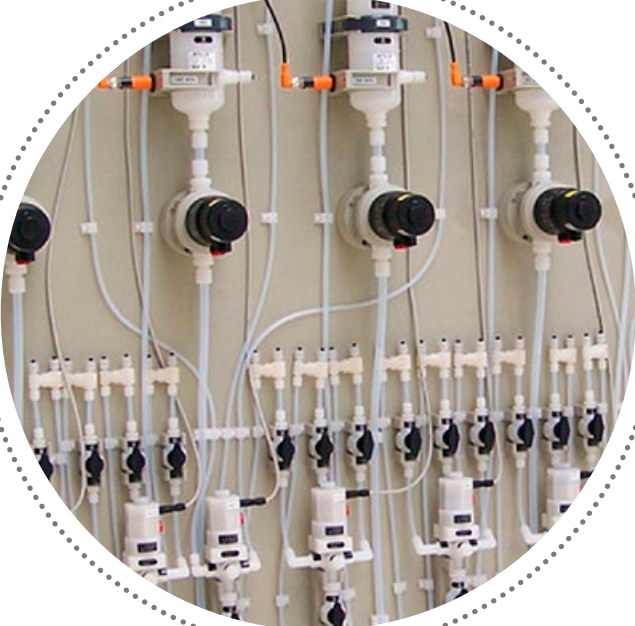


- Mini Plant Panels
- We will produce your Mini Plant Panel individually and specially for you, tailor made for your application. Everything is possible with our modularly structured product line, whether shutting off, dosing, controlling, distributing or measuring. You will receive your Mini Plant Panel ready to use – planned according to your wishes and produced by us, fully assembled, test and documented.



Containers

- Containers
- Our special vessels offer numerous possibilities for applications: as traditional condensate collector, compensation tank, mixing container, overflow or pearl vessel. These containers can be used to collect, mix, store or separate gases or liquids.



Special Ball Valves



Special Ball Valves

- Special Ball Valves
- Our ball valves can easily be combined with peripheral parts to produce fittings that cover a wider range of applications.

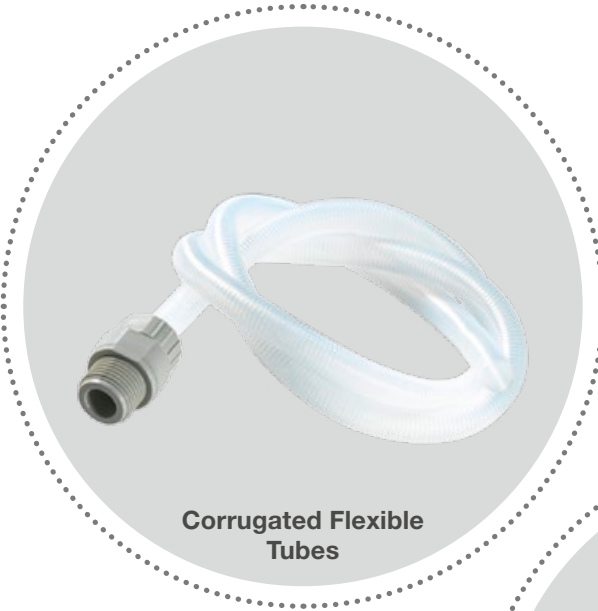
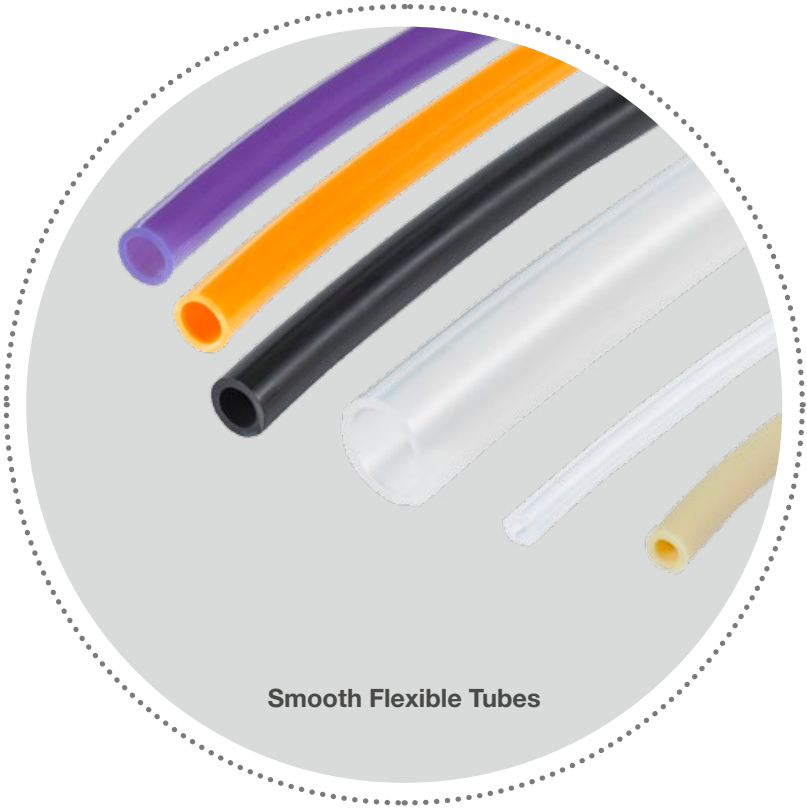
Flexible Tubes

Materials: PA, PE, FPM, PFA, PTFE, PVC, organic PVC, PVDF, silicone
Nominal diameters: DN01/03 – DN19/27, DN1/32"/1/16" – DN7/8"/1"

A tight and a safe connection depends on the tolerance precision and centrifugation of the pipe along its entire length. That's why **emtechnik** offers flexible tubes for almost every application in the most popular colours and materials – also electrically conductive.

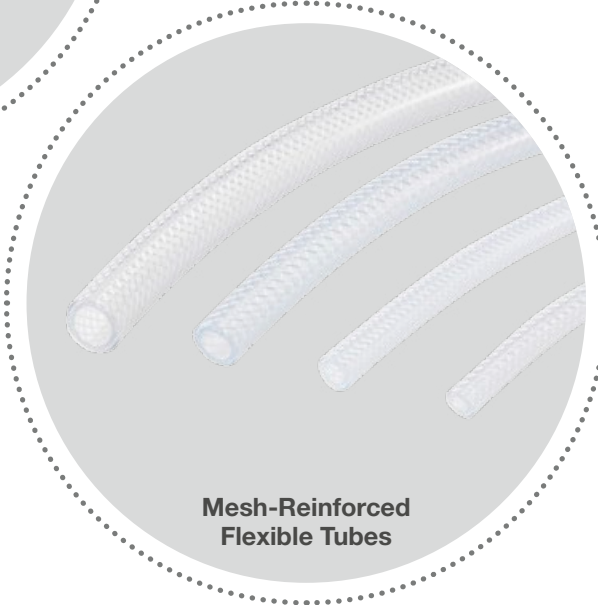
Smooth Flexible Tubes

- A wide range of dimensions provides solutions for all connection requirements
- Available in various materials and colours
- High operational reliability due to uniform wall thicknesses



Corrugated Flexible Tubes

- Flexible with small bending radius
- Smooth inner wall reduces adhesion of particles and makes cleaning easier
- Without smooth ends, ready for direct connection to our 1W+ connector
- PTFE for high resistance to media and temperatures



Mesh-Reinforced Flexible Tubes

- Different materials with mesh insert
- Robust and resistant to chemicals

Accessories and Seals



Accessories for Connectors

- Plug caps
- Knurled and flat nuts
- Sealing, cutting and clamping rings
- Tube cutter
- ...



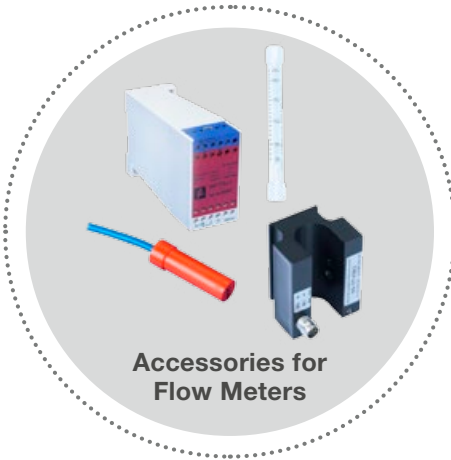
Accessories for Ball Valves

- Fastening clamps
- Mounting brackets
- Drive systems
- ...



Accessories for Filters

- Filter diaphragms
- Filter cartridges
- ...



Accessories for Flow Meters

- Measuring tube
- Annular proximity switch
- Isolating amplifier
- ...

Seals

- Suitable for all types and sizes of thread
- Tri-clamp seals
- In various materials for many different possible applications



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