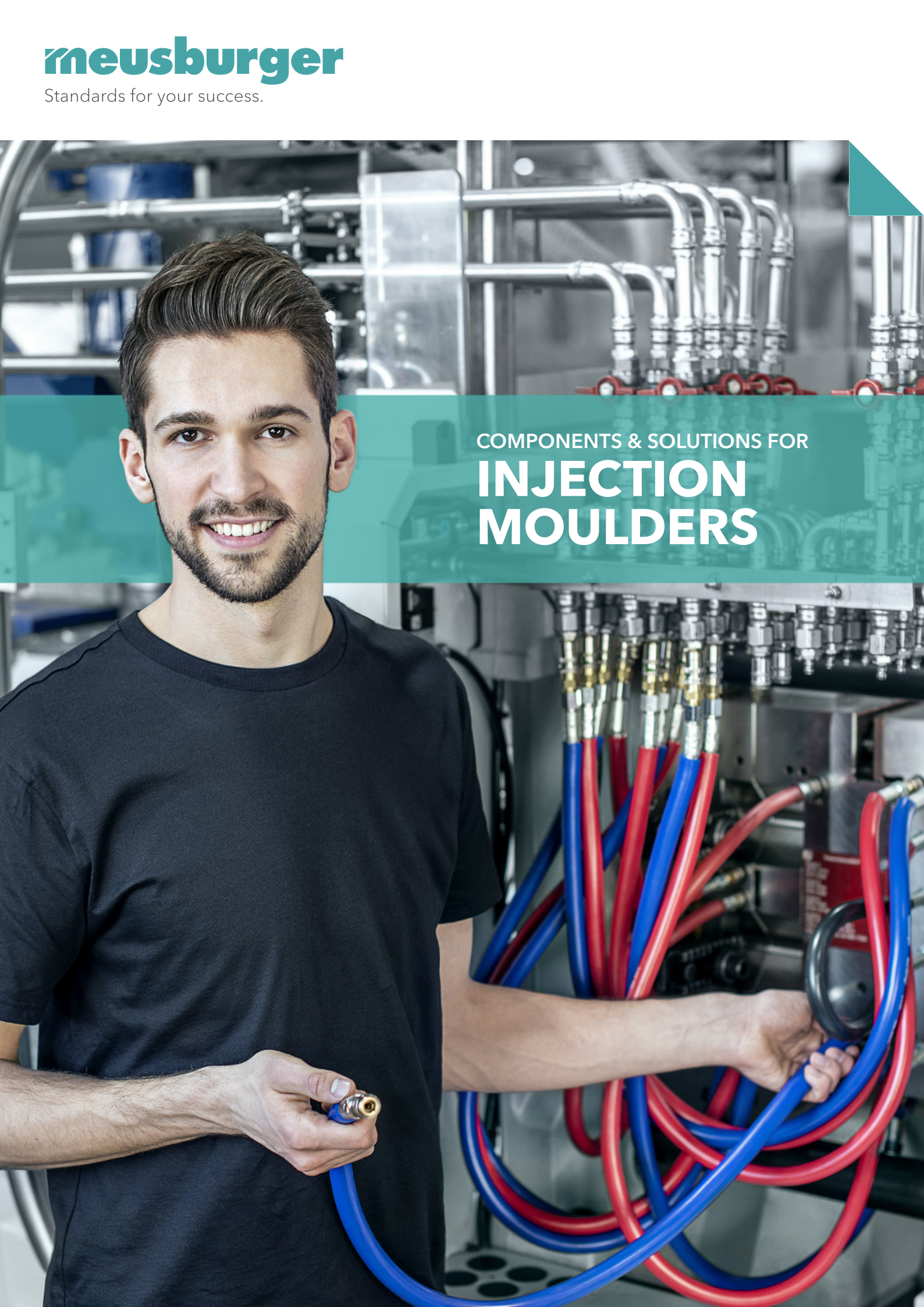


neusbürger

Standards for your success.



COMPONENTS & SOLUTIONS FOR
**INJECTION
MOULDERS**

HIGH-QUALITY COMPONENTS FOR INJECTION MOULDING



AVAILABLE
IMMEDIATELY



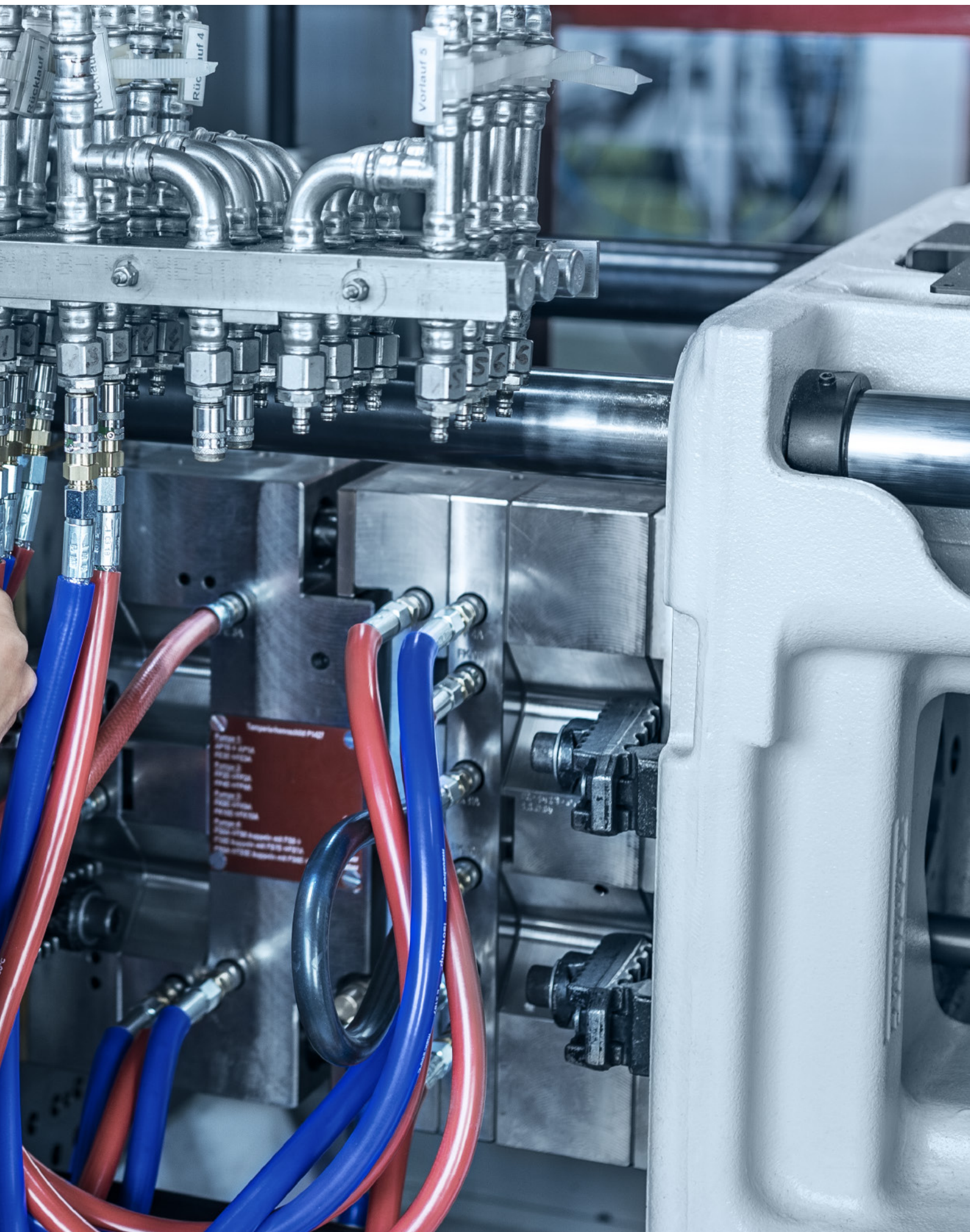
Benefit from our range for injection moulders

Two things are important for a reliable and smooth operation: the use of high-quality moulds and the fast delivery of replacement parts.

Meusburger offers a wide range of over 96,000 items of high quality and functionality. In addition, all items are immediately available from stock. This saves you time and money when purchasing and operating.



You can find more information here:
www.meusburger.com/injection-moulders



Temperaturmessung PFG

Pumpe 1	470 l/min
Pumpe 2	470 l/min
Pumpe 3	470 l/min
Pumpe 4	470 l/min
Pumpe 5	470 l/min
Pumpe 6	470 l/min
Pumpe 7	470 l/min
Pumpe 8	470 l/min

OUR PRODUCTS AT A GLANCE



Temperature regulation

Page 6 – 19

Reliable and safe elements for temperature control of your moulds create the best conditions to avoid production downtimes.



Ejectors & core pins

Page 20 – 23

We offer a large range and easy ordering options for ejectors and core pins.



Marking stamps

Page 24 – 25

Our marking stamps are available in diameters from 2.6 to 16 mm.



Electrical components

Page 26 – 37

As well as a wide range of industrial connectors, we offer components for optimum process monitoring.



Guides

Page 38 – 41

Reliable guiding elements ensure a longer service life of the mould and therefore higher output quantity.



Attachments

Page 42 – 43

To make your mould complete, we also offer the corresponding attachments. See our unique solutions for yourself.



Hot runner controllers

Page 44 – 47

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



Consumables & workshop equipment

Consumables: page 48 – 51

Workshop equipment: page 52 – 53

With a range of high-quality consumables and tools that is tailored to the needs of an injection moulding workshop, nothing stands in the way of a smooth process in production.

TEMPERATURE REGULATION



The right temperature regulation is a very important factor in high part quality. Rely on Meusburger's high quality to prevent downtimes due to leaking temperature regulation components.



Couplings

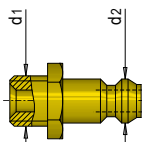


Hose lines and connections



Sealing plugs and accessories

Ordering examples for couplings

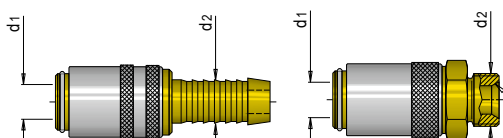


Fitting



Ordering example

Item	Type (≈d2)	Thread (d1)
E 2000	/ 9 /	9



Coupler








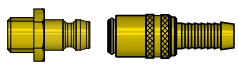
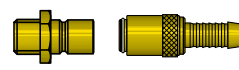
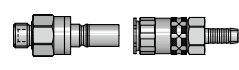

Ordering example

Item	Type (≈d1)	∅ Nozzle or thread (d2)
E 2200	/ 19 /	19
E 2370	/ 13.5 /	3/8





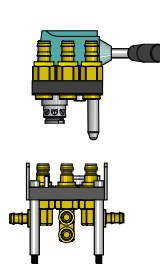
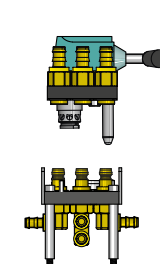
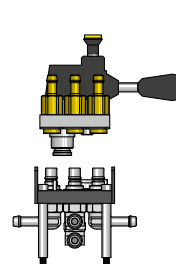
COUPLING SYSTEMS OVERVIEW

Production on the injection moulding machine must be clean and efficient with no downtimes. A suitable coupling system is decisive for a reliable and fast changeover. Meusburger offers high-quality coupling systems and delivers them immediately from stock.

Single couplers

 EU	System EU	 USA	System USA	 Low leak	 RPL	System RPL-Stäubli	 Push-in fittings
meusburger		meusburger		meusburger		STÄUBLI	
							
European profile		International profile				French profile	
Couplers 'Made in Germany'				Original Stäubli 'Made in France'		Couplers 'Made in Germany'	

Multi couplers

 EU	 EU	Multi coupler EU	 USA	Multi coupler USA	 RMI	Multi coupler RMI-Stäubli
 meusburger			 meusburger		 STÄUBLI	
'Made in Germany'					Original Stäubli 'Made in France'	



With the multi couplers EU, USA and RMI it is possible to couple to the mould side with the single couplers of the same system. This helps during the changeover phase in injection moulding from single to multi couplers and in mould making during pressure testing.



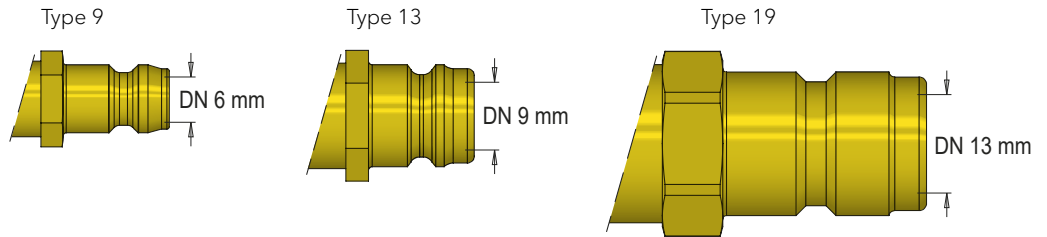
COUPLING SYSTEMS OVERVIEW



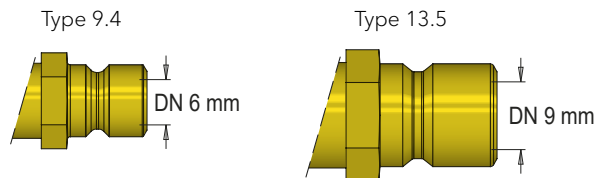
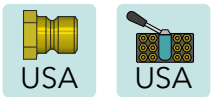
Tip:

Here the systems are shown on a scale of 1:1 for easy identification.

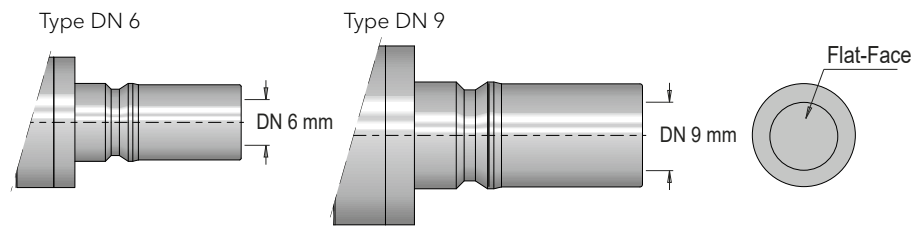
System EU



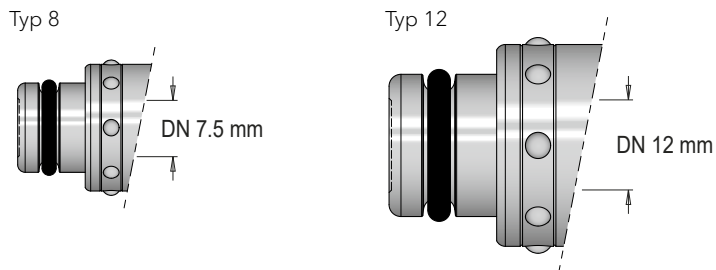
System USA



Low-leakage



System RPL-Stäubli



COUPLINGS RANGE



System EU

Standard		Quick-fit nozzle		Safety coupler	
E 2200	E 2210	E 22005	E 22105	E 22006	E 22106
E 22009	E 22109	E 22007	E 22107	E 22008	E 22108
E 2202	E 2212	E 22025	E 22125	E 22026	E 22126
E 2204	E 2214	E 22045	E 22145	E 22046	E 22146
E 22049	E 22149	E 22047	E 22147		
E 2220	E 2230			E 22206	E 22306
				E 22208	E 22308
E 2222	E 2232			E 22226	E 22326
E 2224	E 2234			E 22246	E 22346
				E 22248	E 22348
E 2252	E 2252			E 22526	
	E 2256				E 22566
E 2258	E 2258				

Fittings

E 2000	E 2020	E 2016	E 2004
E 2000 D	E 2020 D	E 2017	E 2067
E 20004		E 2018	E 2068
E 20009	E 20209	E 20189	E 20689
E 2002		E 2019	E 20685

COUPLINGS RANGE



System USA

Standard		Quick-fit nozzle		Safety coupler	
E 2350	E 2360	E 23505	E 23605	E 23506	E 23606
E 2352	E 2362	E 23525	E 23625		
E 2354	E 2364	E 23545	E 23645		
E 2370	E 2380			E 23706	E 23806
E 2390					
E 2396					
E 2398					

Fittings



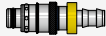




E 2300	E 2320	E 2318	E 2340
E 2301	E 2321	E 2304	







Low-leakage






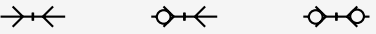
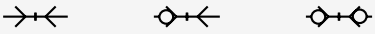
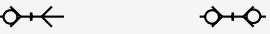
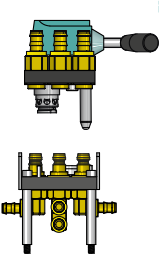
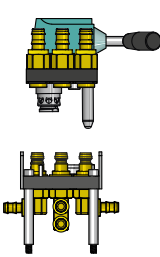
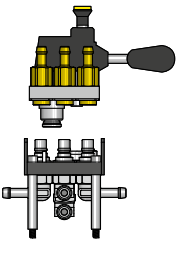
Shut-off fitting	Hose nozzle	Quick-fit nozzle	with thread
E 2500	E 2510	E 2515	E 2520
E 2500HT			E 2520HT
			E 2522
			E 2522HT

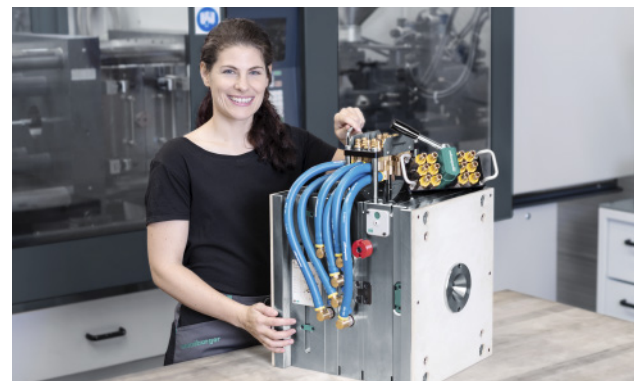
COUPLINGS RANGE

 System RPL-Stäubli	
E 2820	
E 28205	
E 2822	
E 28225	
E 2821	
E 28215	

 Push-in fittings	
E 7400	
E 7405	
E 7410	

Multi coupler

  Multi coupler EU	  Multi coupler USA	 Multi coupler RMI-Stäubli
		
 <p>meusburger</p>	 <p>meusburger</p>	 <p>STÄUBLI</p>

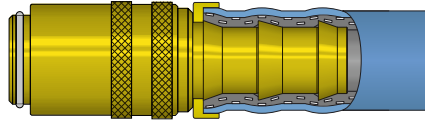


QUICK-FIT SYSTEM

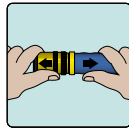
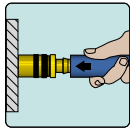
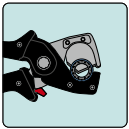


Quick-fit coupling system for coolant hoses

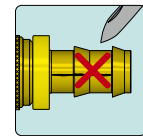
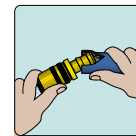
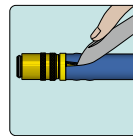
The shape of the nozzle and the special construction of the hose enable time-saving installation without clips. Only specially suited quick-fit coolant hoses (e.g. E 2185) may be used.



Assembly



Removal



Tip: For easier assembly we recommend slipping the E 2185 quick-fit coolant hose on with the help of warm soapy water.



More information in our film:

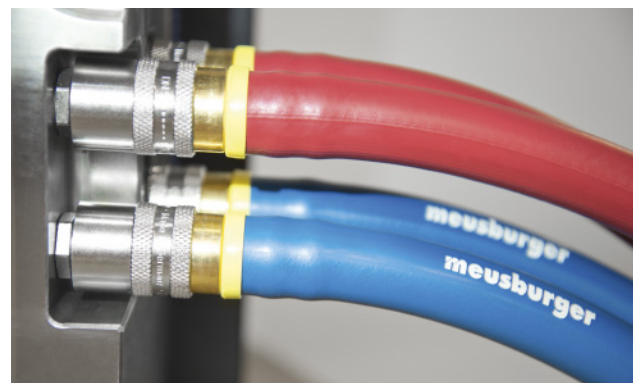
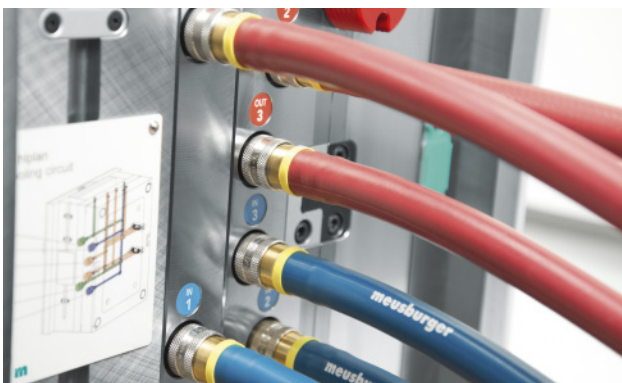
www.meusburger.com/quick-fit-coupling-system

Tools

V 20420



E 21990



SAFETY COUPLER



Automatic safety hose coupler

There is a risk of scalding from a water temperature of 55 °C. Unintended decoupling can have fatal consequences. The automatic safety coupler offers the ideal solution.

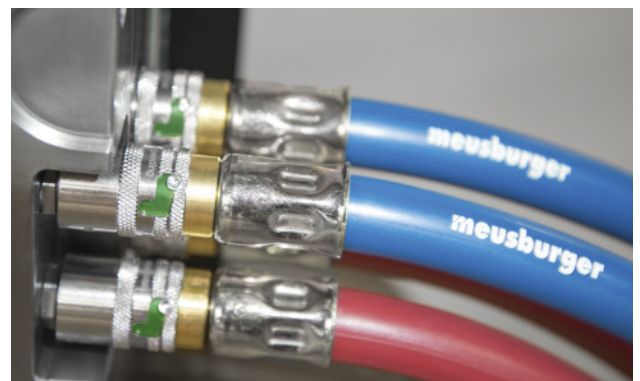


- » Automatic locking when coupling
- » Simple and intuitive decoupling which can be done with one hand
- » Also ideal for high temperature applications due to a special seal (oil 220 °C, water 180 °C)



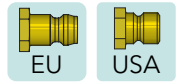
More information in our film:

www.meusbarger.com/safety-coupler



WATER FLOW DIAGRAM

System EU / System USA



		Free flow	Shut-off on one side	Shut-off on both sides
d2	d4			
9	6			
13	9			
19	13			

K_v = flow coefficient

Values and diagrams apply to the EU system.

The values of the USA system are very similar.



Tip: Use the free flow to achieve the full cooling capacity. You can secure the connection against unintentional opening with an automatic safety coupler.

WATER FLOW DIAGRAM

Low-leakage coupling system





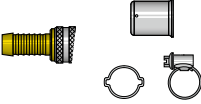
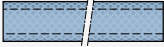


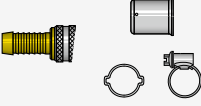
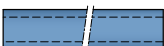


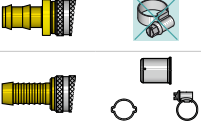
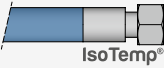





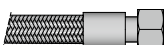

















DN	Shut-off on both sides																		
6	<p>Pressure drop (bar) vs Flow rate (l/min) for $K_v = 1.062$</p> <table border="1"> <caption>Approximate data for DN 6 graph</caption> <thead> <tr> <th>Flow rate (l/min)</th> <th>Pressure drop (bar)</th> </tr> </thead> <tbody> <tr><td>0</td><td>0.0</td></tr> <tr><td>5</td><td>0.1</td></tr> <tr><td>10</td><td>0.4</td></tr> <tr><td>15</td><td>0.9</td></tr> <tr><td>20</td><td>1.6</td></tr> <tr><td>25</td><td>2.5</td></tr> </tbody> </table>	Flow rate (l/min)	Pressure drop (bar)	0	0.0	5	0.1	10	0.4	15	0.9	20	1.6	25	2.5				
Flow rate (l/min)	Pressure drop (bar)																		
0	0.0																		
5	0.1																		
10	0.4																		
15	0.9																		
20	1.6																		
25	2.5																		
9	<p>Pressure drop (bar) vs Flow rate (l/min) for $K_v = 2.85$</p> <table border="1"> <caption>Approximate data for DN 9 graph</caption> <thead> <tr> <th>Flow rate (l/min)</th> <th>Pressure drop (bar)</th> </tr> </thead> <tbody> <tr><td>0</td><td>0.0</td></tr> <tr><td>10</td><td>0.1</td></tr> <tr><td>20</td><td>0.4</td></tr> <tr><td>30</td><td>0.9</td></tr> <tr><td>40</td><td>1.6</td></tr> <tr><td>50</td><td>2.5</td></tr> <tr><td>60</td><td>4.0</td></tr> <tr><td>70</td><td>6.0</td></tr> </tbody> </table>	Flow rate (l/min)	Pressure drop (bar)	0	0.0	10	0.1	20	0.4	30	0.9	40	1.6	50	2.5	60	4.0	70	6.0
Flow rate (l/min)	Pressure drop (bar)																		
0	0.0																		
10	0.1																		
20	0.4																		
30	0.9																		
40	1.6																		
50	2.5																		
60	4.0																		
70	6.0																		

K_v = flow coefficient



HOSE LINES AND CONNECTIONS OVERVIEW

Hose	Medium	Temp.	Pressure	Assembly	Description
E 2180 	  	140 °C	20 bar		EPDM coolant hose
E 2182 	 	60 °C	12 bar		PVC coolant hose
E 2185 	 	140 °C	28 bar		Quick-fit coolant hose
E 2187 	   	200 °C	60 bar		IsoTemp® high temperature hose
E 21872 	   	200 °C	60 bar		High temperature hose
E 7450 	  	90 °C	6 – 16 bar		Flexible plastic tubing PU-H plus
E 7451 	  	60 °C	6 – 14 bar		Flexible plastic tubing PU-H

Matching accessories:



E 2190
Ferrule



E 2192
2-lug hose clamp



E 2194 / E 21949
Hose clamp



E 2165
Manifold

Suitable tools:



E 2196
Hose crimper



E 2198
Crimping tool for 2-lug hose clamps



V 34000
Hexagon socket wrench



V 20420
Hose and pipe cutter



E 21990
Hose assembly device

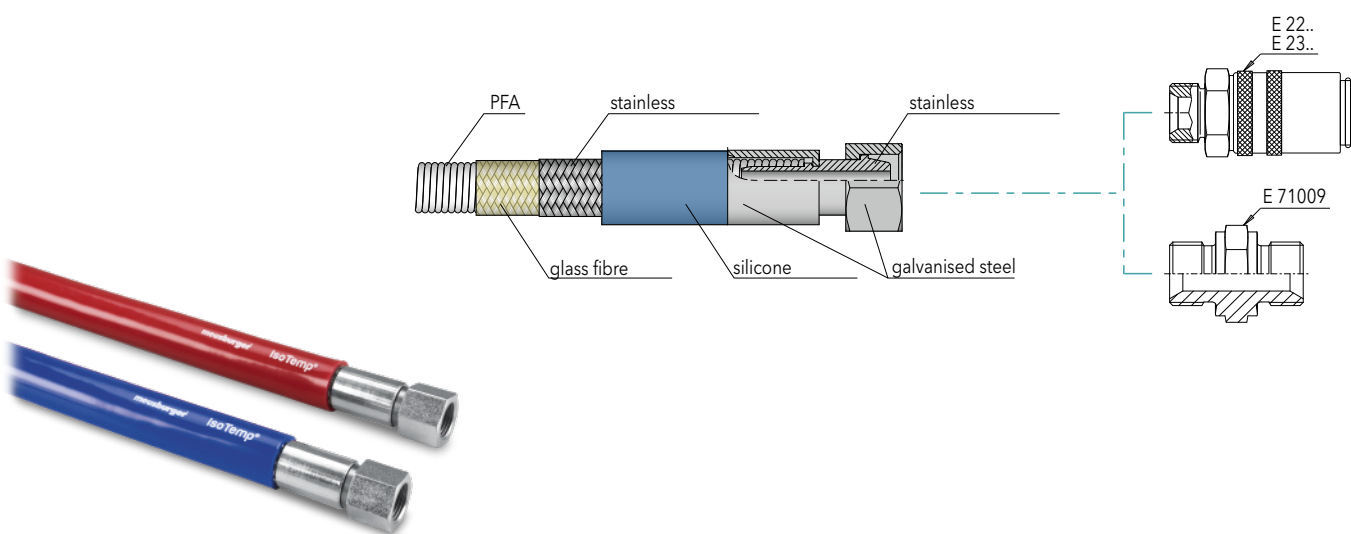
HIGH TEMPERATURE HOSE

IsoTemp®

E 2187 IsoTemp® high temperature hose

The IsoTemp® combines tried and trusted technology with a new silicone sheath.

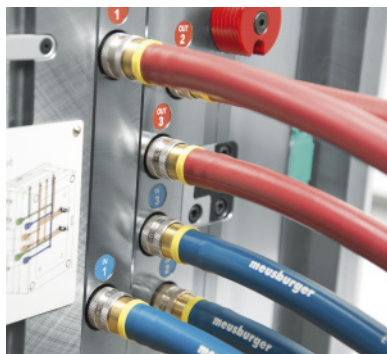
- » Insulation and protection against burns through integrated silicone sheath
- » No abrasion or damage on the metal sheath and therefore no risk of injury from protruding wires
- » High durability and maximum flexibility



The different systems in use



Safety coupler



Quick-fit system





High temperature hose IsoTemp® with safety coupler


CLOSE TEMPERATURE CONTROL CIRCUITS SAFELY

Sealing plugs with thread

Tapered

E 2074  Screw plug with hexagon socket


E 2074 D  Screw plug, tapered with sealant

E 20749  Screw plug, tapered from stainless steel


Cylindrical

E 2080  Screw plug, cylindrical, without sealant


E 2075  Screw plug, cylindrical

E 20809  Screw plug, cylindrical from stainless steel


With collar

E 2076  Screw plug with collar and copper sealing washer


E 20767  Steel screw plug with collar and copper washer


E 20769  Stainless steel screw plug with collar and copper washer

E 20760  Screw plug with sealing cone

E 7140  Screw plug with collar, from steel


Sealing plugs without thread

E 2071  Expander sealing plug

E 20719  Expander sealing plug from stainless steel

E 2072  Copper blank

E 2078  Sealing plug

E 2079  Plug with O-ring seal

Suitable tools:



E 2073
Punch for copper blank



E 2077
Pliers set with E 2078
sealing plugs
d1 = 6 – 12 mm



E 20775
Pliers set with E 2078
sealing plugs
d1 = 14 – 16 mm



V 30410
Phillips screwdriver,
extra long

DEFLECTION ELEMENTS & OTHER PRODUCTS

O-rings

E 2130  O-ring seal
Water: 100 °C, oil: 180 °C

E 21311  High temperature O-ring seal
Water: 200 °C, oil: 200 °C

Suitable tools:



V 28100
Assembly tool set for O-rings

Deflection elements

E 2137  Deflection element

E 2139  Deflection element, adjustable

E 2141  Deflection unit

E 2142  Deflection unit, adjustable




Tip: Especially for temperature regulation with hot water above 100 °C, the usual FKM materials harden quickly and lose their elasticity and thus the sealing effect. To prevent this, use the E 21311 high temperature O-ring seals for water temperatures over 100 °C.

Further products


E 2025  Extension with female thread

E 20625  Quick-fit nozzle with union nut

E 71009  Straight screw-in socket from stainless steel

E 71109  Adjustable 90° elbow fitting from stainless steel

E 2088  Swivel coupling

E 2081  Double threaded fitting


E 2082  Reducing fitting

E 2083  Reducing fitting


E 2084  Socket

E 2030  Marking chips

E 2170  PTFE sealing band, high density

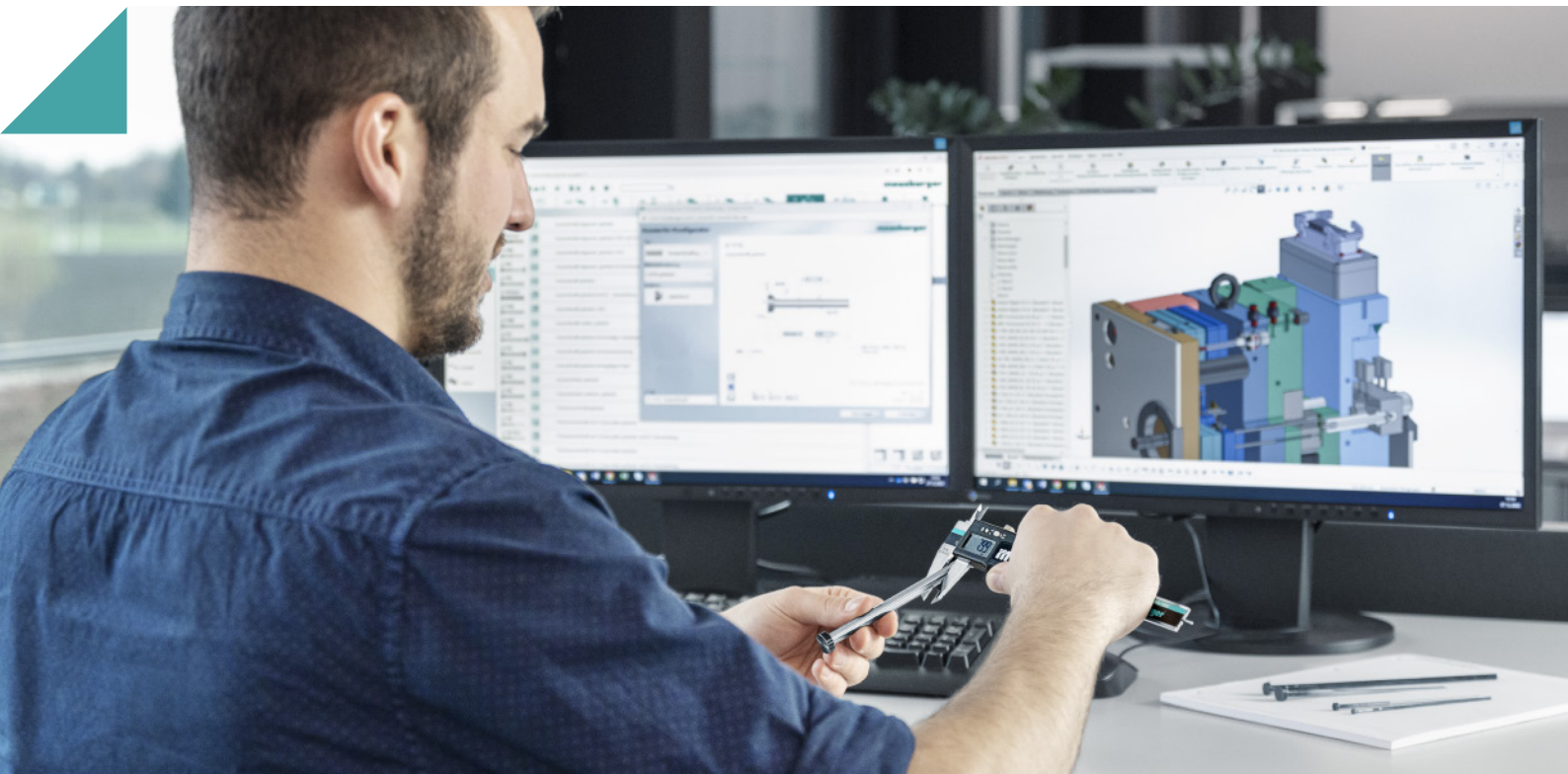
VBA 5M42  Thread sealant, medium strength and medium viscosity

VBA 5M69  High-temperature thread sealant, medium strength

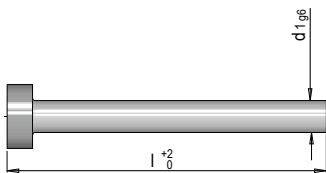
VBA 5M77  Pipe sealant, medium strength and high viscosity

E 2175  Set: Quick adapters for leak test

EJECTORS & CORE PINS



Our comprehensive range of ejectors and core pins includes numerous types in various designs and materials. We deliver these directly from stock. With the configurator, the pins can be cut to length according to customer requirements.

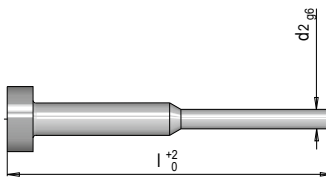


Straight



Ordering example

Item	d1	l
E 1710	/ 2 x	125

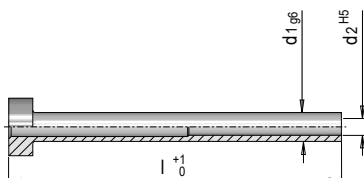


Offset



Ordering example

Item	d2	l
E 1700 DLC	/ 0.5 x	80

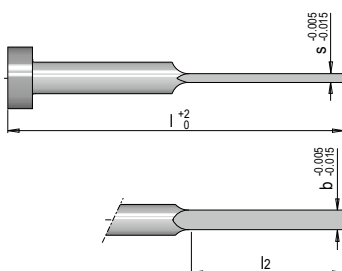


Sleeve



Ordering example

Item	d1	d2	l
E 1750	/ 8	/ 5 x	200



Flat



Ordering example

Item	b	s	l	l2
E 1725	/ 3.8 /	0.8 x	63	
with extra long blade				
E 17264	/ 3.8 /	0.8 x	125 /	93

EJECTORS AND CORE PINS OVERVIEW

Type	Material / version									
	≈1.2210	≈1.2210 DLC	≈1.2343 non-nitrided	≈1.2343 nitrided	≈1.2343 nitrided / oxidised	≈1.2344	≈1.3343 (HSS)	≈1.3343 (HSS) DLC	≈1.4112	Copper
Ejector pin, straight	E 1710 	E 1710 DLC 		E 1741 	E 1740 		E 17103 		E 17109 	
Ejector pin, straight with conical head 60°	E 1715 			E 1745 						
Ejector pin with anti-twist lock on one side	E 1711 									
Ejector pin with anti-twist lock	E 1712 									
Ejector pin, offset	E 1700 				E 1730 		E 17003 	E 1700 DLC 		
Ejector pin, offset with anti-twist lock	E 1702 									
Ejector sleeve	E 1720 			E 1750 						
Ejector sleeve, stepless	E 1723 									
Blade ejector pin	E 1725 				E 1755 					
Blade ejector pin with 2 angle radii	E 1727 	E 1727 DLC 								
Blade ejector pin with 4 angle radii	E 1728 	E 1728 DLC 								
Blade ejector pin with extra long blade	E 1726 									
Blade ejector pin with extra long blade, 2 angle radii	E 17262 	E 17262 DLC 								
Blade ejector pin with extra long blade, 4 angle radii	E 17264 	E 17264 DLC 								
Core pin			E 1742 							E 1780 
Contour core pin	E 1786 					E 1790 				
Ejector pin for ventilation	E 1770 	E 1770 DLC 								

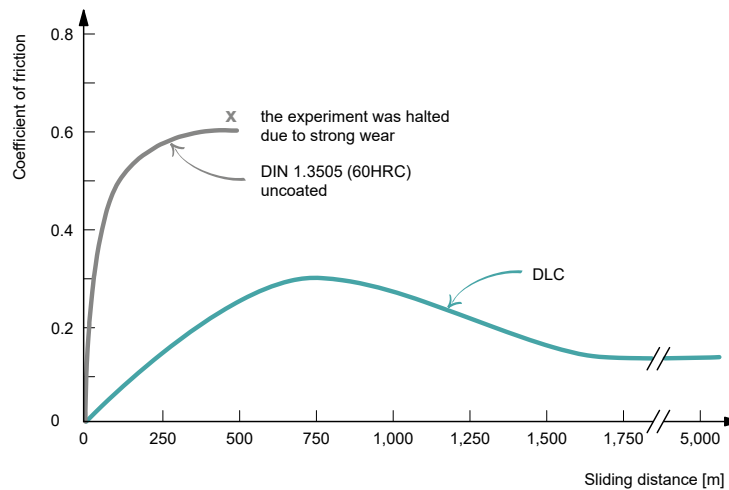
DLC-COATED EJECTORS



Tip: In case of increased wear of the ejector bore, it is recommended to use ejectors with DLC coating. The low coefficient of friction of the DLC layer protects the bore and reduces wear to a minimum.

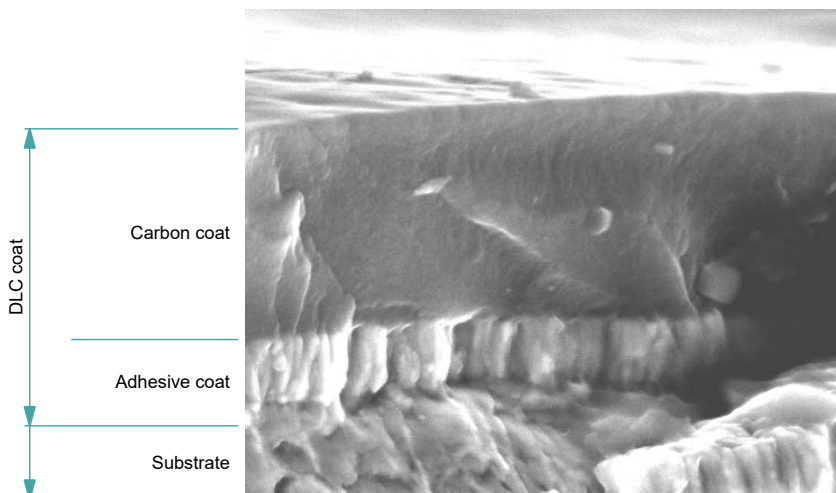
Advantages of the DLC coating

- » Minimised wear thanks to excellent sliding properties
- » Increased corrosion resistance and service life
- » Guaranteed interchangeability through exact tolerances
- » Best dry-running properties enable use in cleanrooms
- » Leaves no stains on plastic parts



Composition and characteristics of a DLC coating

The coating is largely made up of the chemical element carbon. It consists of an adhesive coat and a carbon coat.



Properties of the DLC coating

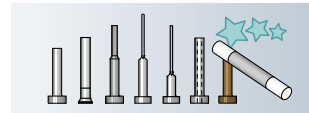
- » Hardness $\approx 3,000$ HV
- » Coating thickness $\approx 2 \mu\text{m}$
- » Coefficient of friction against steel: 0.1 – 0.15

EJECTOR CONFIGURATOR

Using our ejector configurator, you can quickly and easily order an ejector cut to length and ready to use with a length tolerance of 0/+0.02 mm.

How you benefit

- » Direct ordering of ready-to-use ejectors without enquiry process
- » Intuitive and easy to use right in our web shop
- » CAD data of your individual ejector available immediately after configuration




The screenshot displays the Meusburger website's ejector configurator. On the left, a 'Group filter' shows various ejector models like E 1728 DLC, E 1726, E 17262, E 17264, E 17264 DLC, E 1755, and E 1750. The main area shows the selected product 'E 1726' with its technical drawing and a table of specifications. The 'Ejector configurator' window is open, showing options for 'Type' (Blade ejector pin), 'Material/version' (1.2210 hardened), 'Head shape' (cylindrical), and 'angle radii' (without corner radius). It also displays technical drawings with dimensions and a price field.

1. Select the configurator in the shop

2. Configure and order ejector

 **More information in our film:**
www.meusburger.com/ejector-configurator

 **Tip:** Alternatively, you can also order the ready-to-use ejectors via email, telephone or fax. Important here is the specification of the length tolerance of 0/+0.02 mm.



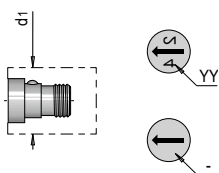
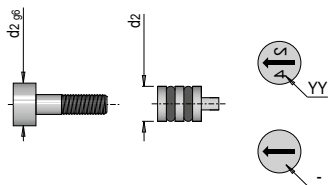
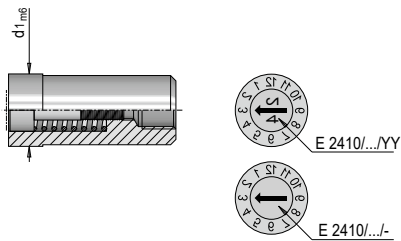
Ordering example

Item	d1	l	Tol
E 1710	/ 5	x 100	0/+0.02

MARKING STAMPS



We offer a wide range of marking stamps with diameters from 2.6 to 16 mm. These are available with fixed height or latching function.



Marking stamps



Ordering example

Item	d1	YY ¹⁾
E 24065	/ 8	
E 2400	/ 16	/ 24

Arrow inserts



Ordering example

Item	d2	YY ¹⁾
E 2410	/ 2.5	
E 2450	/ 5	/ 24

Arrow inserts with latching function



Ordering example

Item	d1	YY ¹⁾
E 2430 R	/ 6	
E 2430 R	/ 8	/ 24

¹⁾ YY: Order example with year 2024

MARKING STAMPS OVERVIEW

Marking	Type							
	Standard			With latching function				
	Stamp, long	Stamp with fixed height, long		Stamp, short	Stamp, long with latching function	Stamp, short with latching function	Multi-stamp with latching function	Die casting
Day				E 2423				
				E 2431				
Week				E 2421				
Month	E 2400	E 24005	E 2440	E 2420	E 24005 R	E 2420 R	E 2420 MR	E 24760
Year	E 2404	E 24045	E 2444	E 2424	E 24045 R	E 2424 R		
Quarter	E 2405			E 2425				
Shift	E 2408			E 2428				
0-9	E 2402	E 24025		E 2422		E 2422 R		
A-M	E 2406	E 24065		E 2426				
N-Z	E 2407			E 2427				
Blank	E 2409	E 24095	E 2449	E 2429		E 2429 R		
Arrow insert	E 2410		E 2450	E 2430	E 2430 R			

Labelling stamp	E 2460	E 2465
-----------------	--------	--------

Stamp, short, weeks combination	E 2421 C
---------------------------------	----------

Stamp, short, date combination	E 2423 C
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Suitable tools:



V 30220
Flat screwdriver, micro



Tip: Especially at high injection pressures, our marking stamps with latching function prevent the arrow insert from twisting by itself.

ELECTRICAL COMPONENTS

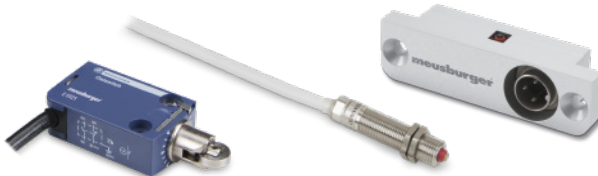


A large variety of industrial connectors with a corresponding cable range offer you a high number of combination possibilities. We also have a wide selection of proximity and limit switches as well as magnetic proximity sensors, thermocouples and pressure sensors in range. With our additional accessories, your mould is ideally equipped for reliable production.

Industrial connectors

E 2700 to E 27421

- » Plug, socket, cable and sleeve housings
- » Female and male inserts
- » Various accessories (plugs, reducers and covers)
- » All available individually



Magnetic proximity sensors

E 6562, E 65620 and E 6563

- » Position monitoring for the E 7020 and E 7021 hydraulic cylinders
- » Ingress protection IP66/67
- » Operating temperatures up to 130 °C



Mechanical limit switches

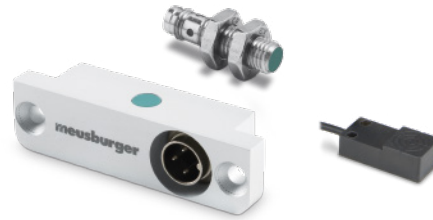
E 6500 to E 6526

- » Each in different installation positions
- » Ingress protection IP66/67
- » Operating temperatures up to 240 °C

Inductive sensors

E 6502 to E 65601

- » With housing, screw-in thread or flat
- » Operating temperatures up to 150 °C



Distributors and electrical connections

- » Logic distributors E 6574, E 65740 and E 6576
- » Terminal block E 6570
- » Y distributor E 65731
- » With matching cable, plug and socket assortment

Thermocouples

E 6700 to E 6712

- » Different variants for recessed or surface mounting
- » Thermocouple type J
- » Operating temperatures up to 400 °C



Cavity pressure sensors

Direct measurement E 6740

Indirect measurement E 6750

- » Piezoelectric operating principle
- » Pressures up to 2,500 bar
- » Compatible with the current systems on the market

General components

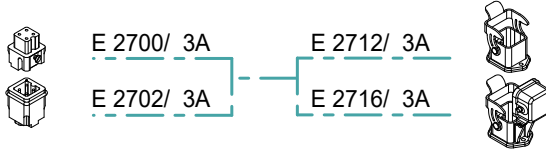
- » Cartridge heater E 6800
- » Cable retainers E 2765 to E 2766
- » Testing device for proximity sensors E 6586
- » Test lamp for limit switches E 6585
- » Mounting bracket for sensor E 6594
- » Marking chips E 2030S



CONNECTOR, SOCKET, AND CABLE HOUSING TYPE A

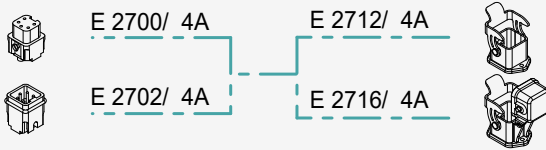
Selection guide

3-pin

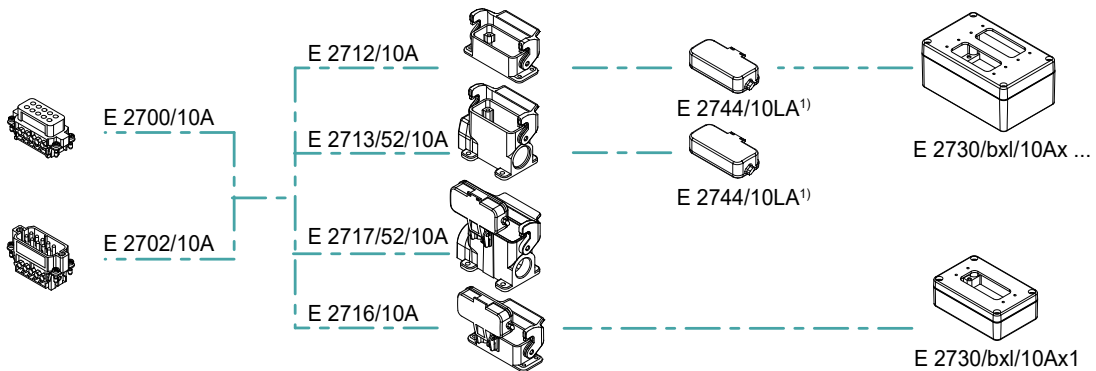


Tip: The connectors can be individually assembled and used for both control and power lines, e.g. in hot runner control systems.

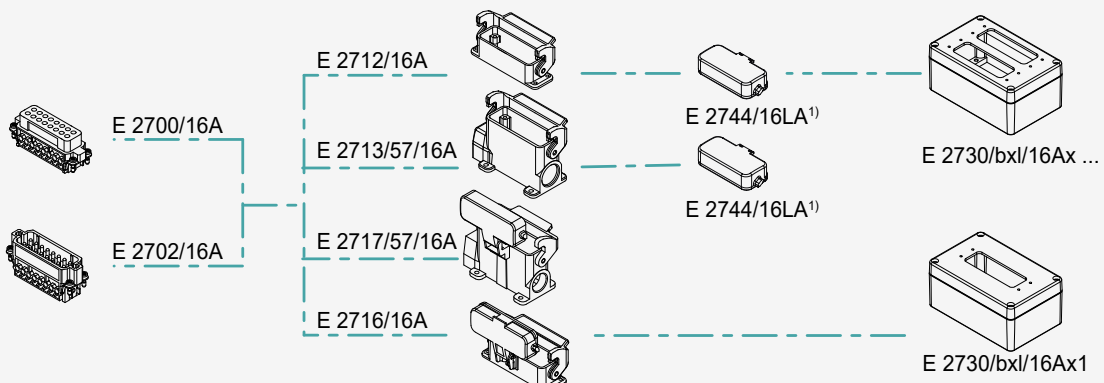
4-pin



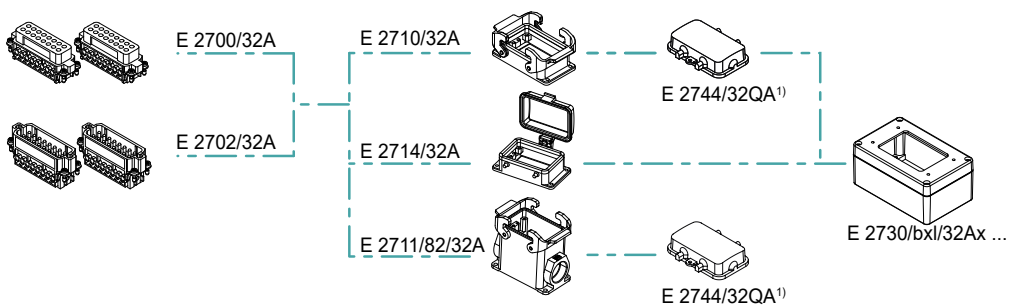
10-pin



16-pin



32-pin

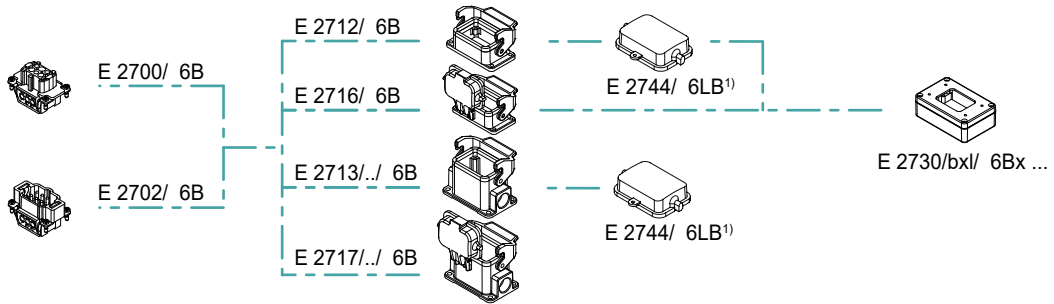


1) optional

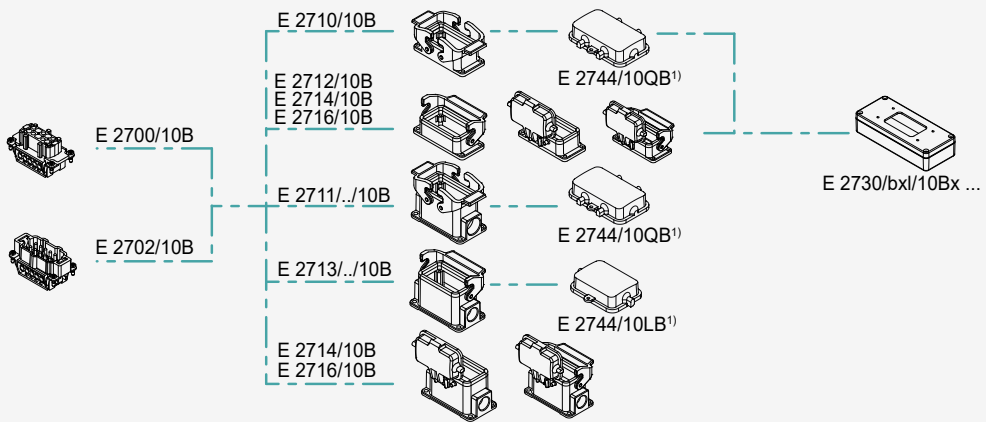
CONNECTOR, SOCKET, AND CABLE HOUSING TYPE B

Selection guide

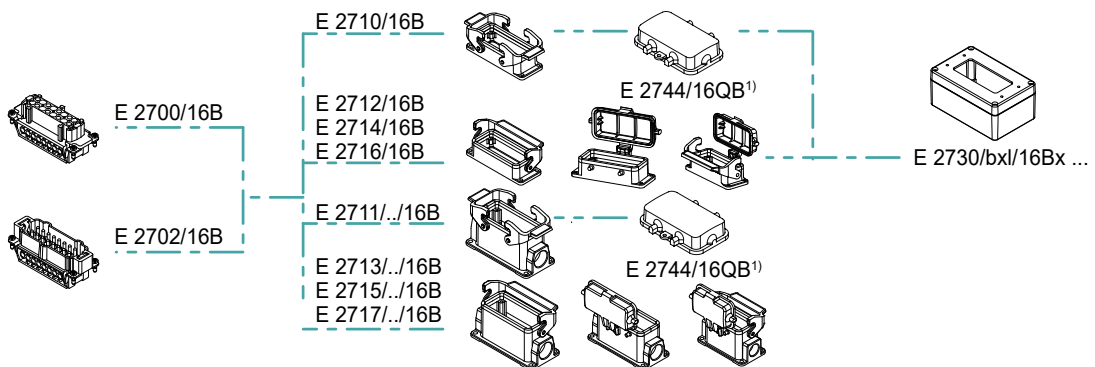
6-pin



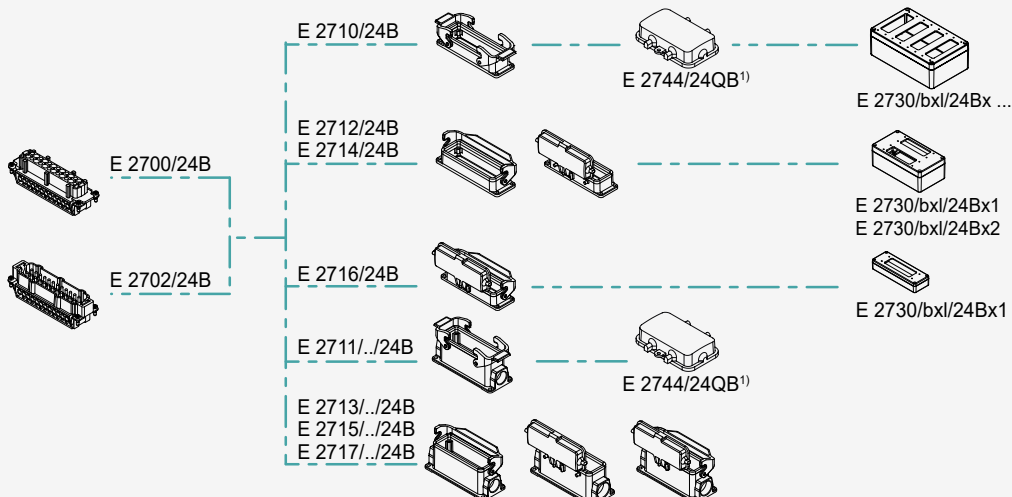
10-pin



16-pin



24-pin

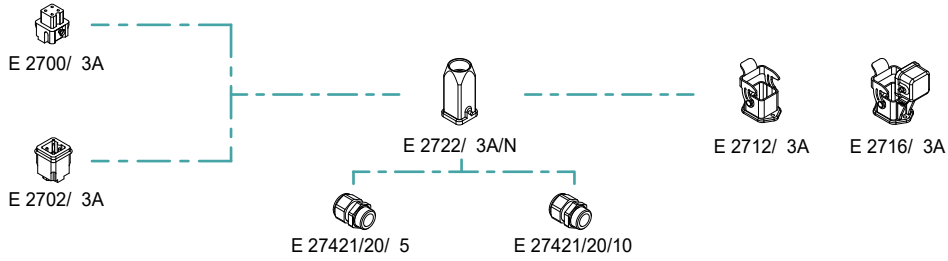


1) optional

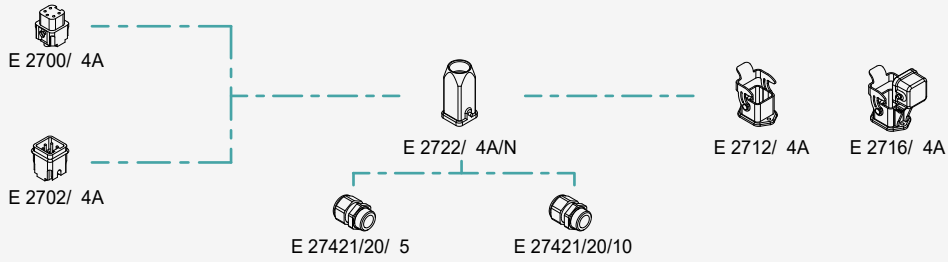
SLEEVE HOUSING TYPE A

Selection guide

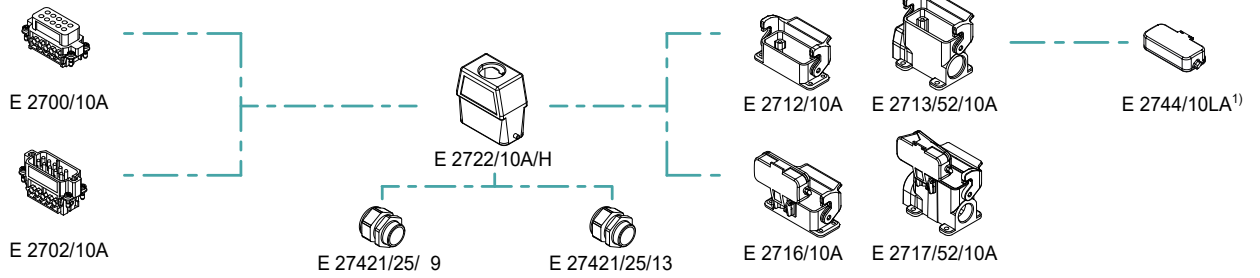
3-pin



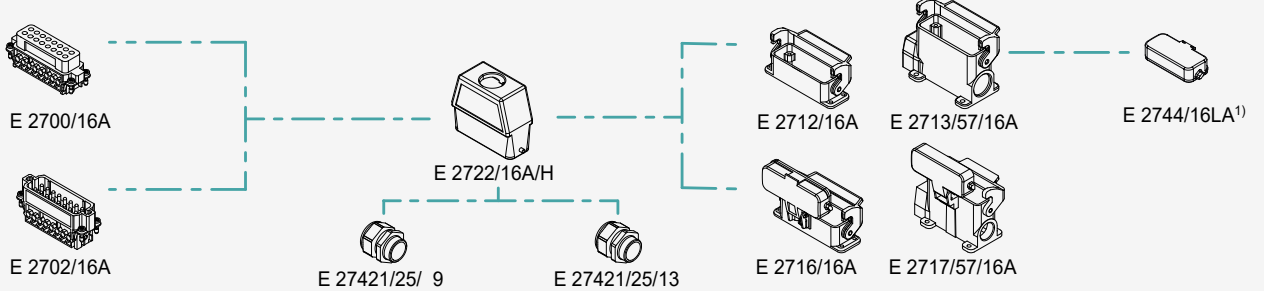
4-pin



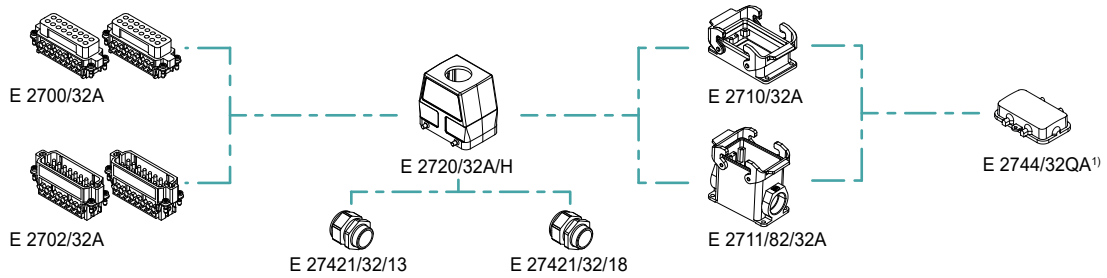
10-pin



16-pin



32-pin

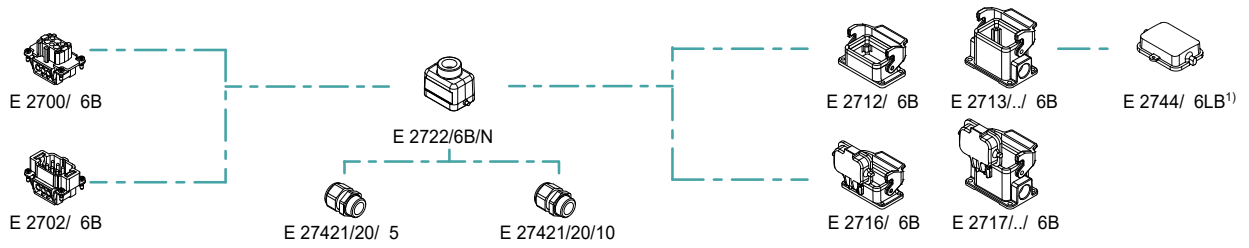


1) optional

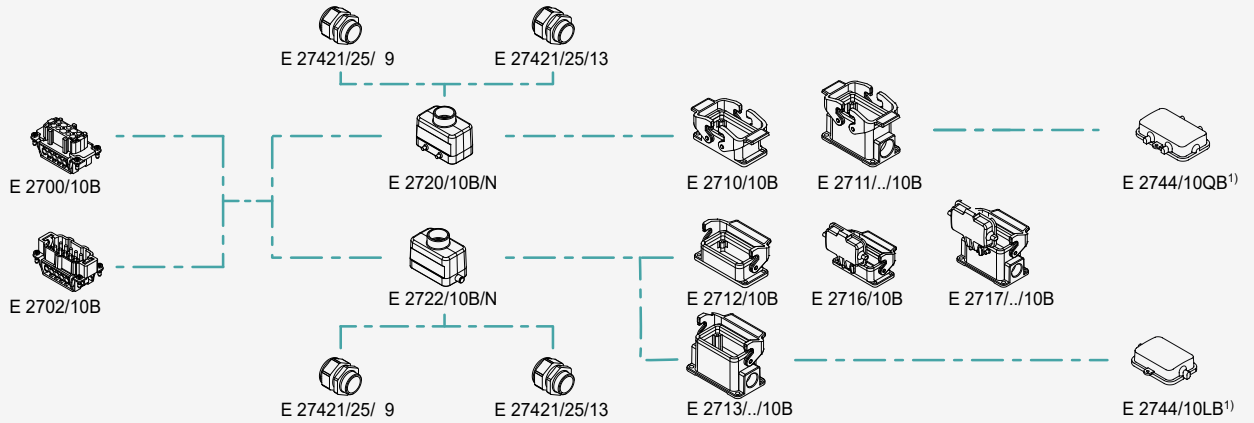
SLEEVE HOUSING TYPE B

Selection guide

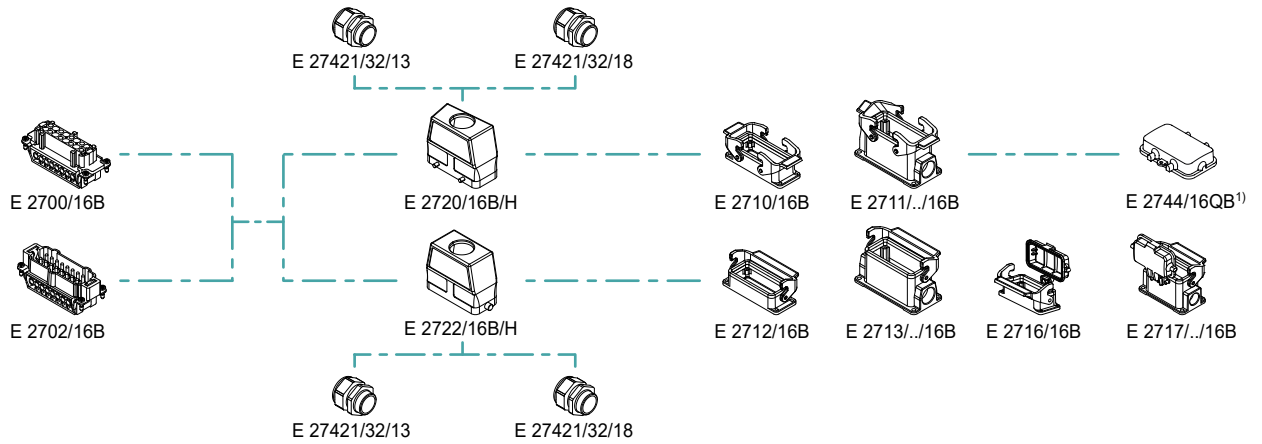
6-pin



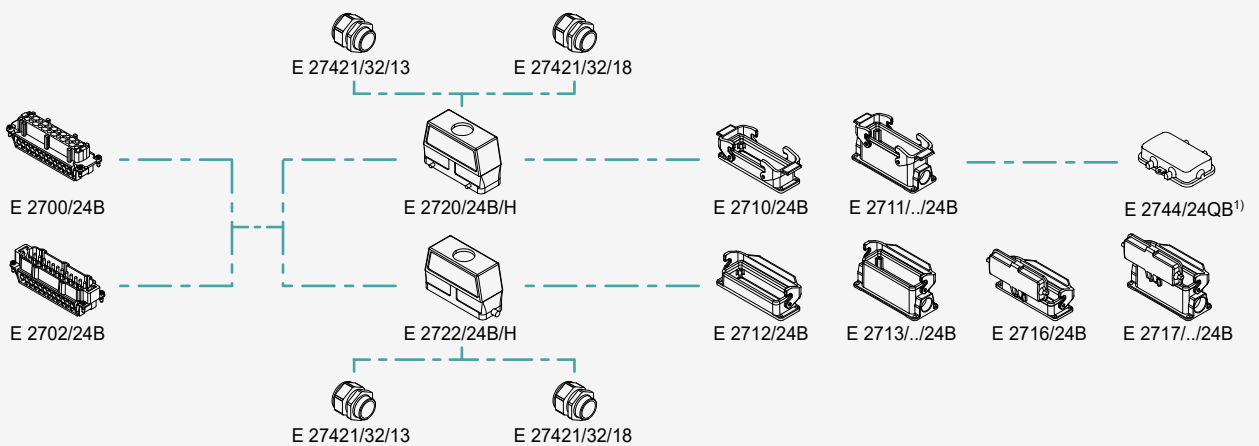
10-pin



16-pin



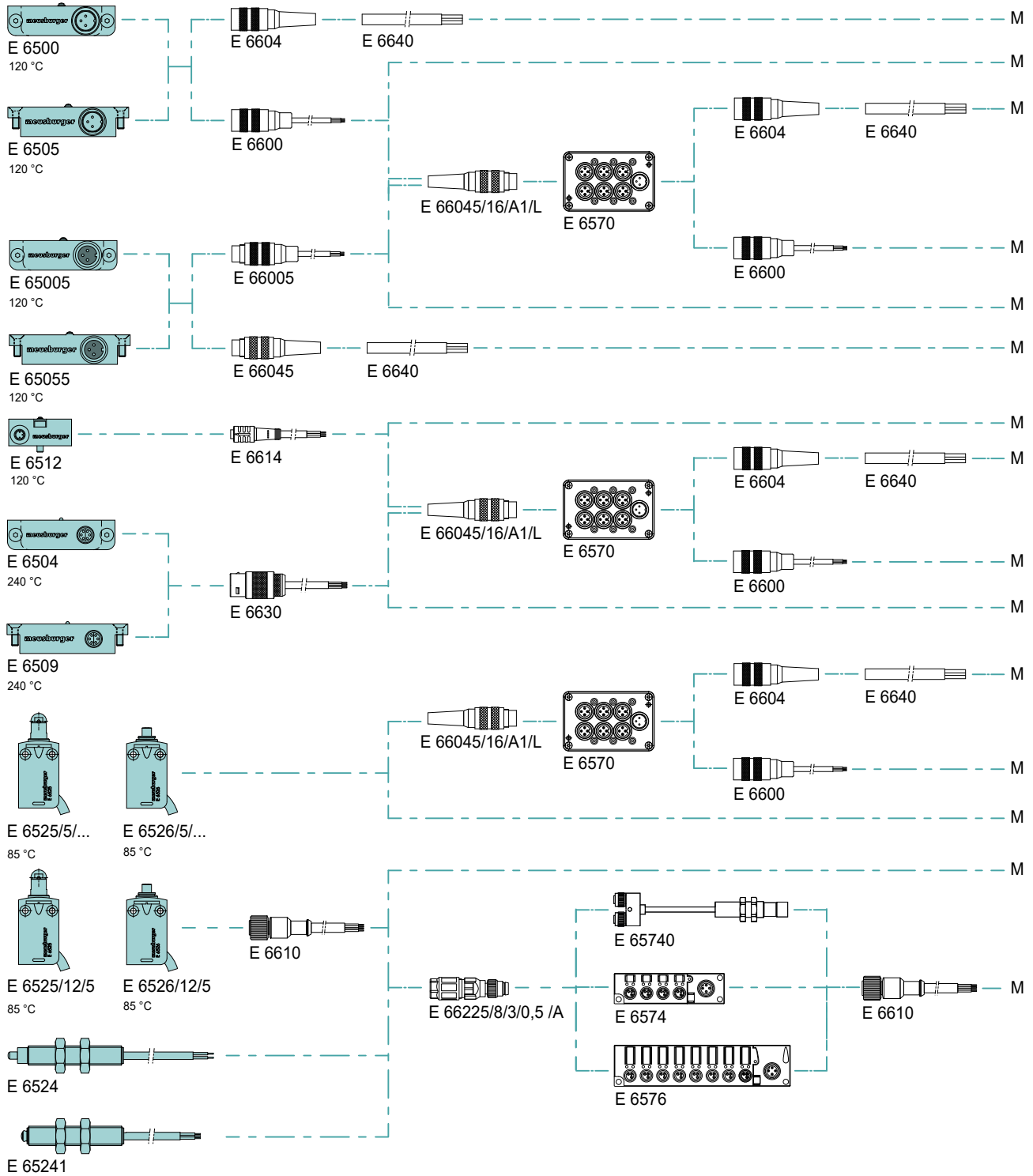
24-pin



1) optional

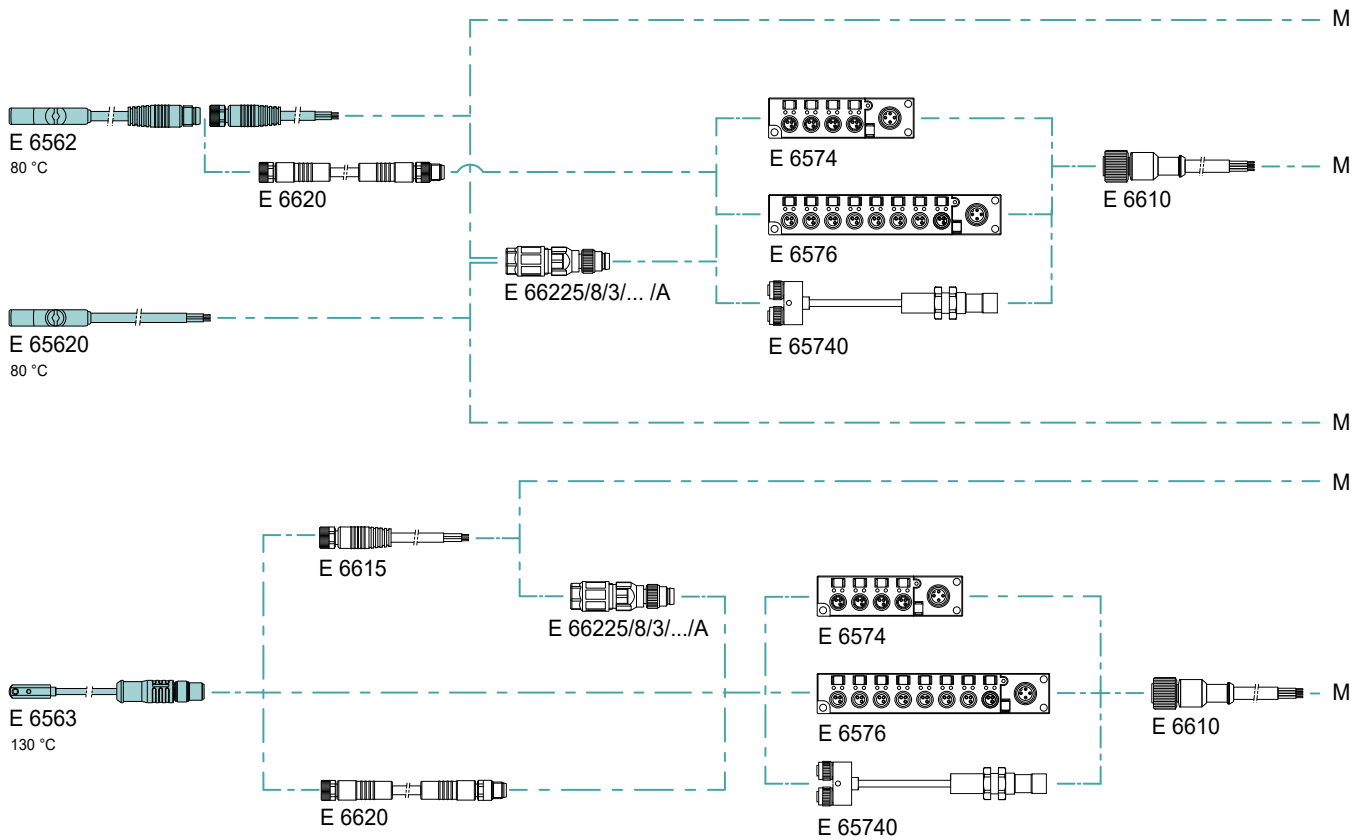
MECHANICAL LIMIT SWITCHES

Connection options



MAGNETIC PROXIMITY SENSORS

Connection options



Matching accessories:



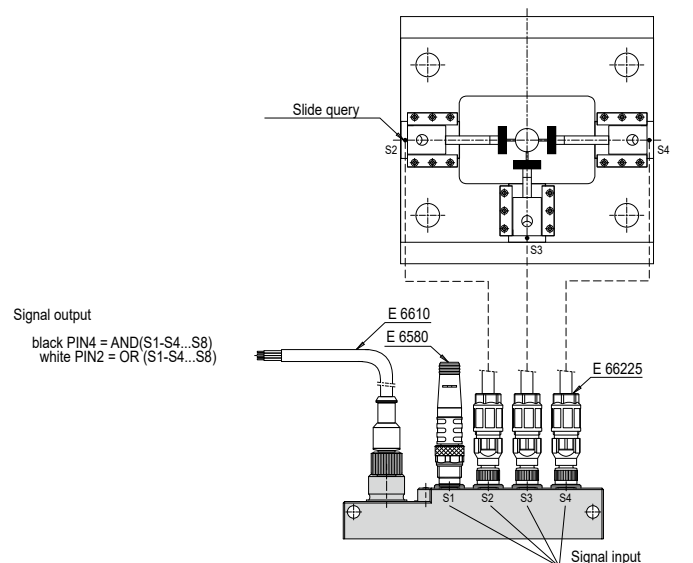
E 6574, E 65740
Logic distributor for sensors, single AND/OR



E 6576
Logic distributor for sensors, double AND

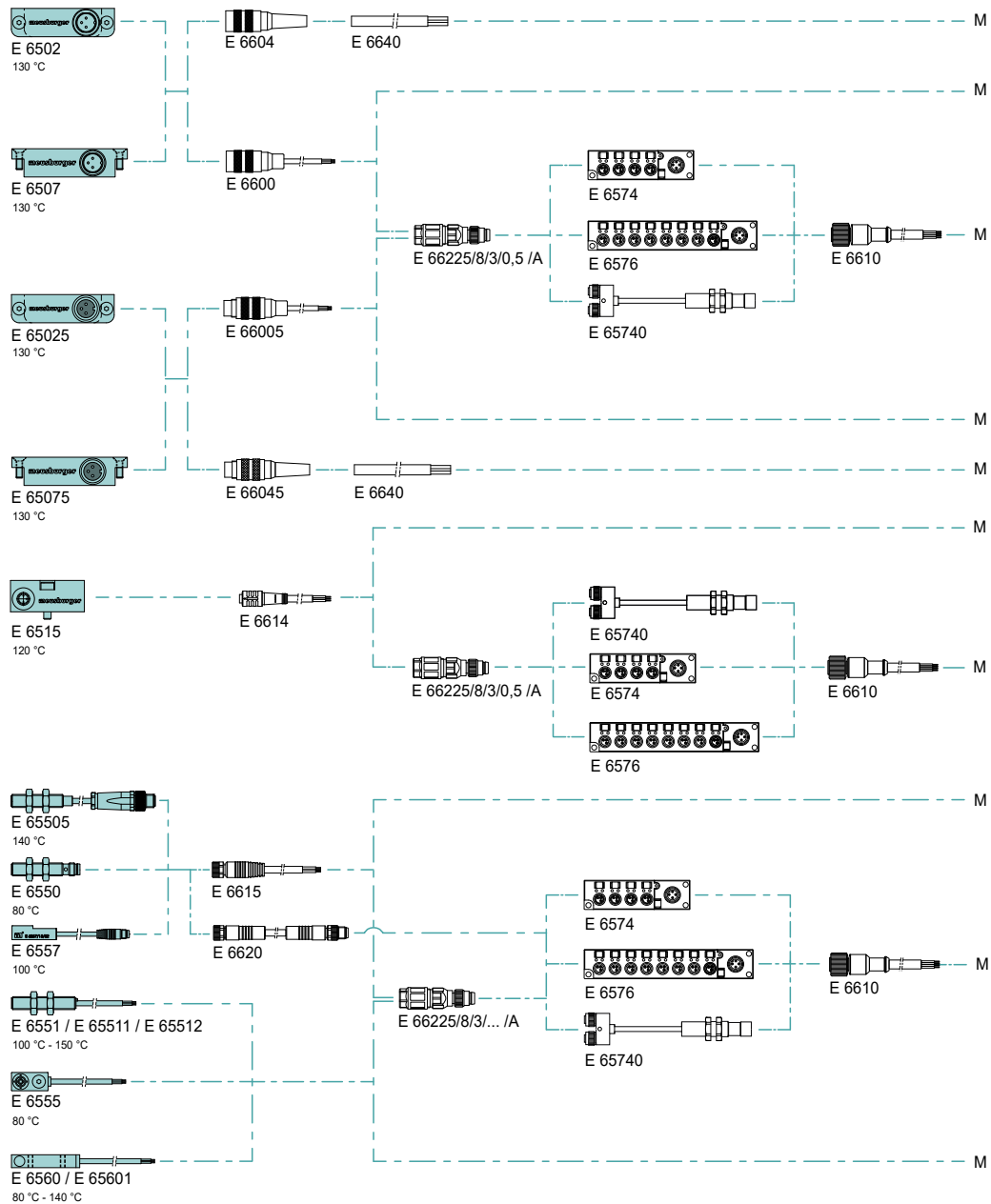
Combine up to 8 signals –
only 1 signal to the machine

- » Orderly cable management
- » No voltage drop
- » Depending on the application, can be used as AND or AND/OR distributor



INDUCTIVE SENSORS

Connection options



Matching accessories:



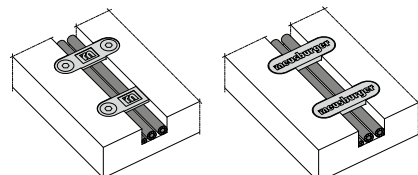
E 2765
Cable retainer



E 27652
Cable retainer from plastic,
with screws



E 2766
Cable retainer, magnetic



Functional principle

The inductive proximity switch produces an alternating electromagnetic field. If an electrically conductive object approaches this alternating field, it will drain energy from it, leading to a reduction of the oscillation amplitude. This change is analysed by the inductive sensor.

Nominal sensing distance

The nominal sensing distance s_n is a parameter for defining the sensing distance. It does not include manufacturing tolerances nor variations due to external influences like voltage or temperature.

Assured sensing distance

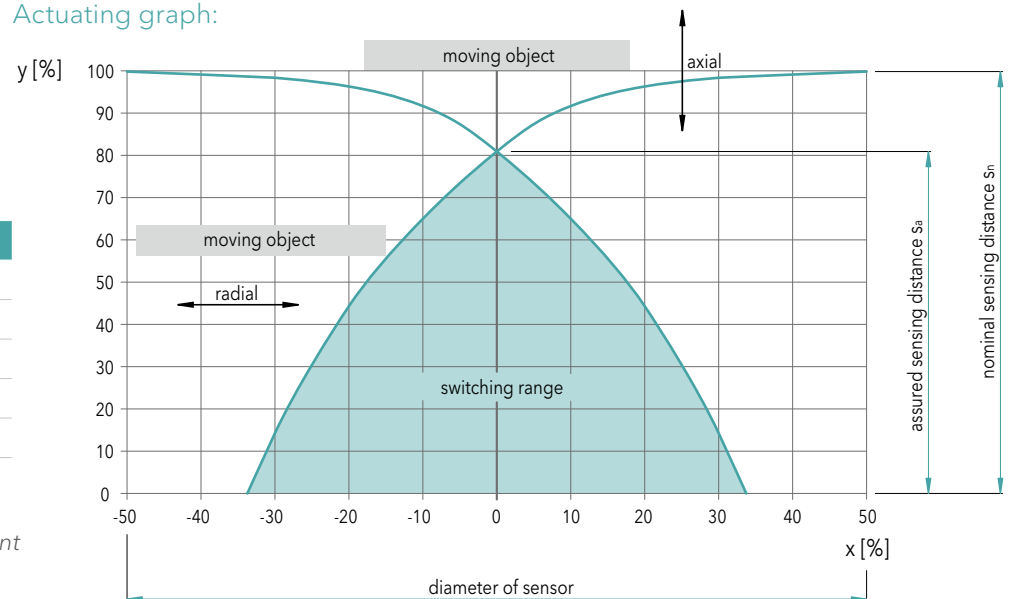
The assured sensing distance s_a is the distance for which the actuation of a proximity switch within a defined voltage and temperature range is guaranteed. It is 0 – 81% of the nominal sensing distance: $s_a \leq 0.81 \times s_n$.

Material	Reduction factor
Steel	1
Stainless steel	0.85
Aluminium	0.4
Brass	0.4
Copper	0.3

Calculation of the assured sensing distance depending on the different materials

= $s_a \times$ reduction factor

Actuating graph:

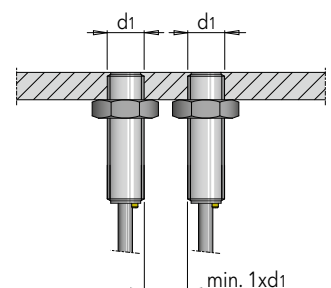


Sensing distance

The sensing distance is the distance between a sensor and an electrically conductive object that will trigger a change of signal. In the case of PNP normally open contacts, the signal changes from OFF to ON. It is influenced by the material and by the direction of motion in relation to the sensor.

Installation requirements

A minimum distance equivalent to the diameter of the housing is required in order to prevent the alternating magnetic field of the neighbouring sensor from influencing the switching reaction of the proximity sensor.



CARTRIDGE HEATERS & THERMOCOUPLES

E 6800 Cartridge heater

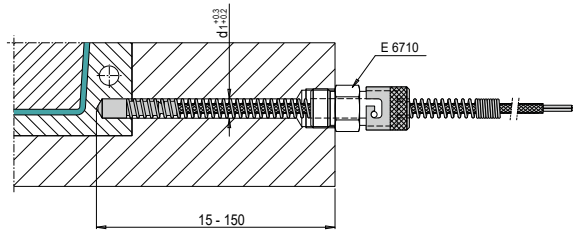
- » Perfectly matched heating power creates the best conditions for a long service life
- » High dimensional accuracy of the diameters



Thermocouples

Thermocouples are used to monitor the mould temperature and thus support process-reliable injection moulding. There are various designs and mounting options to choose from, all immediately available from stock.

E 6700 Thermocouple with bayonet fitting



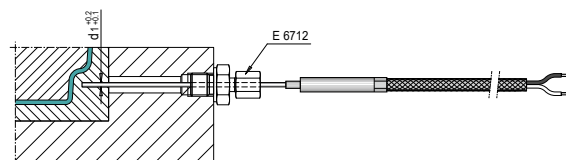
Thermocouple type J
max. temp. 400 °C
ø 6 mm or ø 8 mm
Cable length: 2 m

E 6702 90° bent thermocouple



Thermocouple type J
max. temp. 400 °C
ø 4 x 12 mm or
ø 4 x 25 mm
Cable length: 2 m

E 6704 Mineral-insulated thermocouple



Thermocouple type J
max. temp. 400 °C
ø 1,5 mm; length 100, 150
or 300 mm
Cable length: 2 m

Matching accessories:



E 6710
Threaded nipple



E 6712
Compression fitting



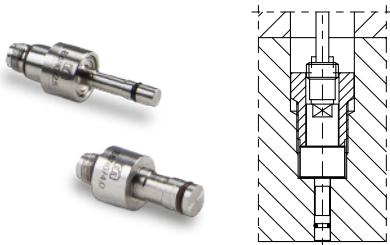
CAVITY PRESSURE SENSORS

Process efficiency in plastic injection moulding

The cavity pressure is an important parameter in process monitoring in injection moulding. Pressure sensors are indispensable for comprehensive mould monitoring. The use of high-quality sensors leads to optimal process quality and increases part quality sustainably.

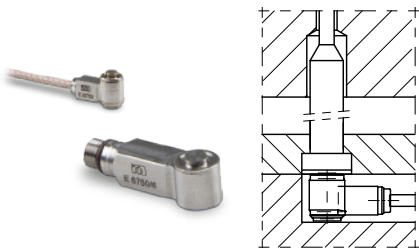
Direct and indirect cavity pressure sensors

Depending on the application, there are two types of pressure sensors: direct and indirect sensors, which serve for direct or indirect pressure measurement.



E 6740 Cavity pressure sensor, direct

For direct measurement, the pressure sensor is inserted directly into the cavity so the cavity pressure can be measured directly in the respective area. When pressure is applied, the sensor delivers an electrical charge (pC), which is then converted into a change of pressure (bar) through the specified sensor sensitivity (pC/bar).



E 6750 Cavity pressure sensor, indirect

The indirect measurement of the cavity pressure is carried out via a force sensor which is located outside the cavity and is indirectly actuated by a force. Unlike direct measurement, the cavity pressure is transmitted to the sensor as a force via an ejector pin. From this impact an electric charge (pC) is emitted, which can be converted into a change in force (N) by the specified sensor sensitivity (pC/N). This change of force combined with the front surface of the ejector is used to calculate the pressure change.

Key

pC

Electric charge in picocoulomb
Coulomb – unit for electric charge

pC/bar

Sensor sensitivity with direct sensors
(change in electrical charge depending on the pressure applied)

pC/N

Sensor sensitivity with indirect sensors
(change in electrical charge depending on the force applied)

Matching accessories:



We offer various coaxial and single-wire sensor cables, multi-channel connectors, connecting cables and assembly tools to match the internal pressure sensors



Current range in the web shop

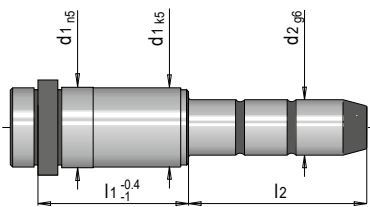


AVAILABLE IMMEDIATELY

GUIDES



We offer a wide range of high-precision guide elements in many different designs for mould making. These are also available in self-lubricating versions.

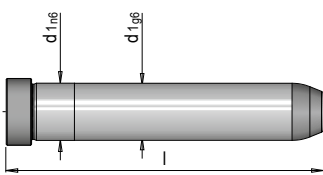


Guide pillar



Ordering example

Item	d2	l1	l2
E 1000	/ 24	- 56	/ 75

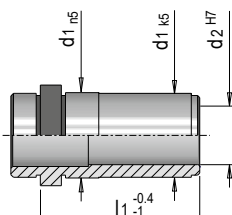


Guide bolt and inclined pin



Ordering example

Item	d1	l
E 1030	/ 20	x 90

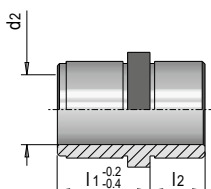


Guide bush



Ordering example

Item	d2	l1
E 1100	/ 20	- 17



Guide bush for ejector set

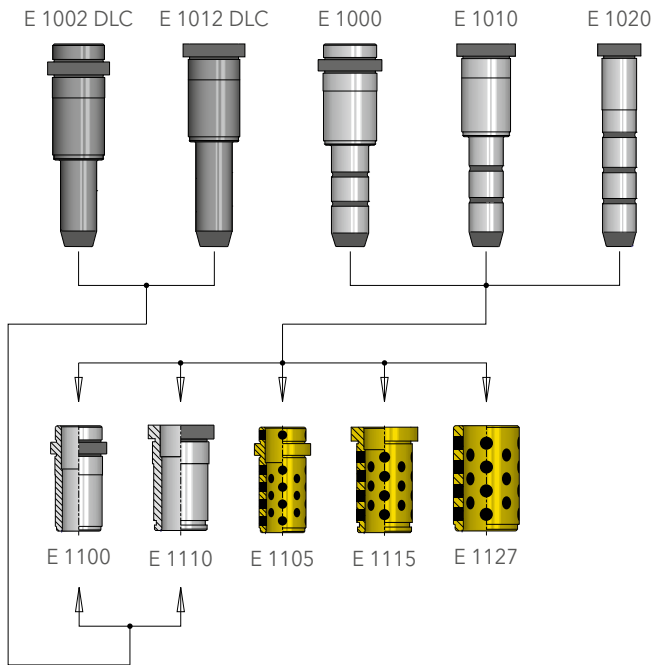


Ordering example

Item	d2	l2	l1
E 11202	/ 20	- 17	/ 22

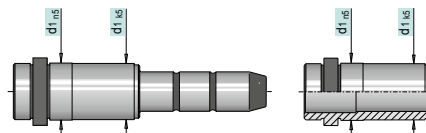
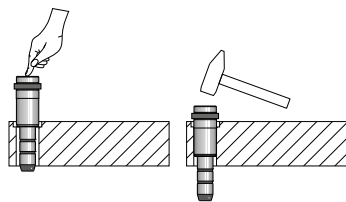
OVERVIEW & SELECTION GUIDES

Standard guiding system

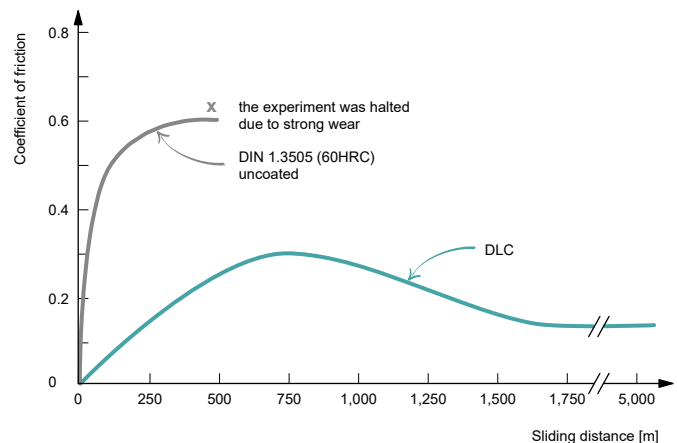


Guiding system with two fitting diameters

- » Guiding system with two fitting diameters for an optimal fit in the guiding hole
- » The second fitting diameter (k5) enables easy assembly and removal



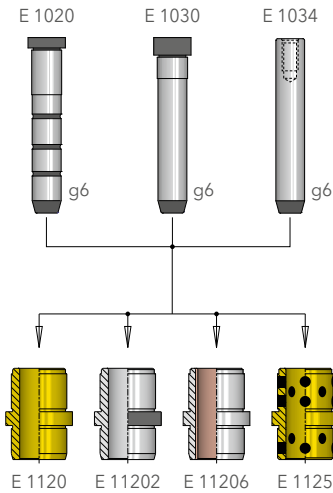
Tip: For cleanroom application and increased wear, it is recommended to use guide pillars with DLC coating. The hard carbon layer protects the pillar and reduces wear to a minimum.



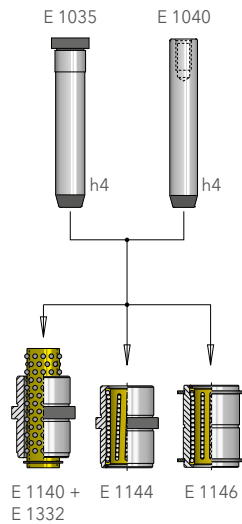
OVERVIEW & SELECTION GUIDES

Ejector set guiding

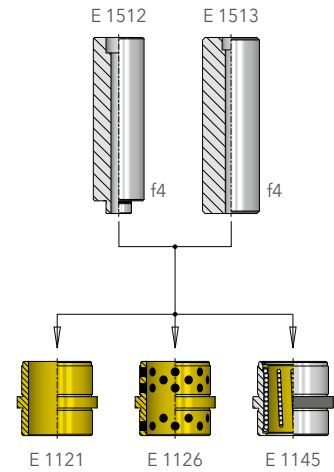
Sliding guide








Roller guide



Support pillars with guiding function



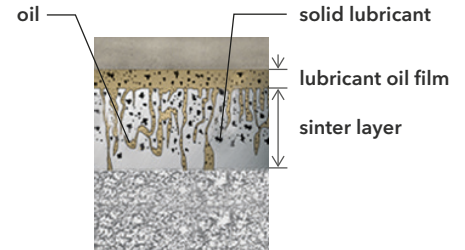
Type	V ¹⁾	FQ ²⁾	Characteristics	Lubrication
E 1144 E 1140 + E 1332 	high	low	<ul style="list-style-type: none"> » Without play » Highest precision » Minimal wear 	High-performance oil VLS 250
E 11206 	moderate	medium	<ul style="list-style-type: none"> » Self-lubricating through sinter layer » Good emergency operating features 	Relubrication with high-performance oil VLS 250
E 1120 	moderate	medium	<ul style="list-style-type: none"> » Common guiding bush in the ejector set 	High-performance grease VGS 180
E 1125 	moderate	medium	<ul style="list-style-type: none"> » Self-lubricating » Optimum lubrication through graphite inserts » Initial lubrication reduces wear 	Initial lubrication with high-performance grease VGM 160
E 11202 	moderate	high	<ul style="list-style-type: none"> » Cleanroom compatible with DLC-coated guide pillars » Cost-effective 	High-performance grease VGS 180

1) V: Speed of the ejector set during demoulding

2) FQ: Permissible shear force

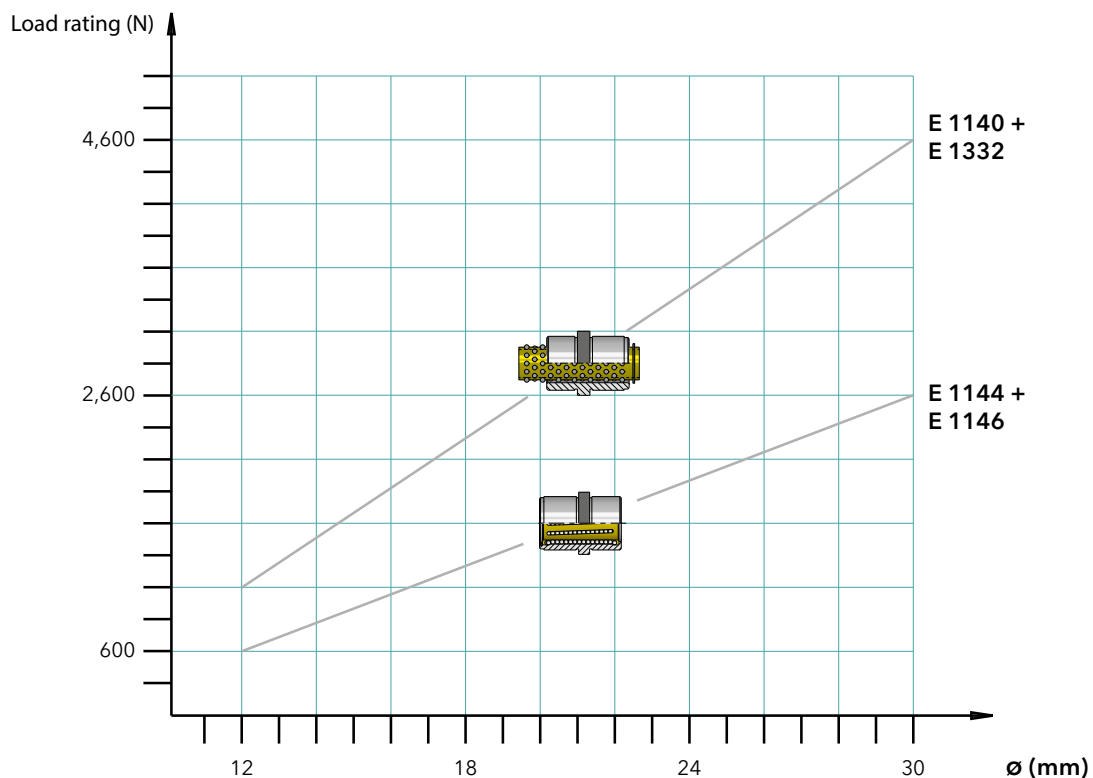
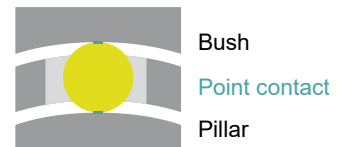
Sliding guide with self-lubricating sinter layer

- » Ideal for self-lubricating applications thanks to the oil depot and solid lubricant MoS₂ in the sinter layer
- » The frictional heat causes the oil to rise to the sliding surface. Due to its capillary action the oil retreats back into the sinter layer (when the machine is idle)
- » The ideal diffusion zone between the sinter layer and the steel sheath ensures inseparable molecular bonds
- » High resistance to abrasive wear and very good emergency operating features without additional lubrication



Ball guides – precise and smooth running

- » Recirculating ball bushings: limited stroke in comparison to E 1140 + E 1332 ball cages
- » Ball cages: higher load capacity compared to recirculating ball bushing
- » Can become overloaded at high shear forces due to the point contact



ATTACHMENTS



Numerous accessories from lifting equipment to cycle counters help professionally equip the mould and ensure safe operation and transport.

Attachments on the mould

E 1917		Status indicator plate, adjustable	E 2480		Mechanical cycle counter
E 2030S		Customised printed marking chips	E 24805		Mechanical cycle counter, high temperature
E 191..		Labels	E 24807		Mechanical cycle counter, high temperature
E 1920		Transparent and magnetic ejector set cover	E 24830		Cycle counter, mini
E 1927		Spacer	E 2484		Mechanical cycle counter, cylindrical, right
E 1928		Support bolt	E 2485		Mechanical cycle counter, cylindrical, left
E 1936		Transport lock	MAU 5000		Set: Dial indicator holders

Other attachments

FW 1002



Tray for change mould inserts

E 1280



Lifting bolt VDI 3366

FW 1500



Mounting device for change mould inserts

E 1282



Lifting stud VDI 3366

E 1930



Adjustable transport bar

E 1284



Lifting stud with cable securing device

Lifting points

		E 1271	E 1272	E 1273	E 1272 M	E 1274	E 1274 M	E 1275	E 1275 M	E 1276	E 1278	E 1279
Thread size	M 6		●			●						
	M 8		●	●	●	●	●	●	●			
	M10	●	●	●	●	●	●	●	●			
	M12	●	●	●	●	●	●	●	●	●	●	
	M16	●	●	●	●	●	●	●	●	●	●	●
	M20	●	●	●	●	●	●	●	●	●	●	●
	M24	●	●	●	●	●	●	●	●	●	●	●
	M30	●	●	●	●	●	●	●	●	●	●	●
	M36		●	●	●	●	●			●	●	
	M42		●	●	●	●	●					
	M48		●		●	●	●					
	M56					●	●					
M64					●	●						
RFID chip		●	●	●		●		●		●	●	
360° rotatable		●	●	●	●	●	●	●	●	●	●	
Ball bearing						●	●			●	●	



Tip: Use the Meusburger E 1917 status indicator plate to clearly identify your moulds. Using an Allen key to adjust it, you can choose between 4 different colours. The respective colour indicates the status of the mould (for example green – approved, red – blocked).



HOT RUNNER CONTROLLER



Our profiTEMP+ hot runner controller not only impresses with its innovative technology, but also with its 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. Thanks to the clearly designed 7" multi-touch screen, easy and intuitive operation is guaranteed.

RH 1000 profiTEMP+ hot runner controller

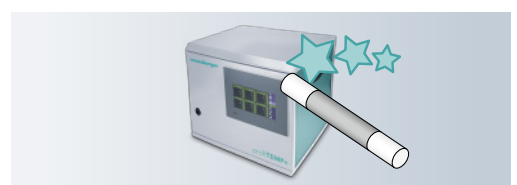


- » Highest process safety and reliable temperature control through state-of-the-art hardware and software components
- » Ergonomic and intuitive operation through multi-touch screen
- » Compact design for minimal space requirements
- » High-end features like intelligent power regulation, MoldCheck and much more



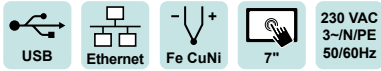
The options in the selected range for our proven profiTEMP+ hot runner controller include:

- » 6 to 198 zones, standard/in-stock devices 6 to 48 zones
- » Power from 11 kW to 43 kW
- » 4 different pin assignments
- » Matching connecting cables in various lengths



 **More information at:**
www.meusburger.com/hot-runner-controller

RH 1200 profiTEMP IM hot runner controller



- » Powerful hot runner controller for all hot runner systems
- » Fast control algorithm shortens the heating phase and increases the operating time
- » Easy to operate on 7" touch screen
- » Support in 15 languages
- » Various heating variants and operating modes selectable



Options in range:

- » 12 zones with power 22 kW
- » 3 different pin assignments

Connecting cables



RHZ 2000 Connecting cable, heater + thermocouple



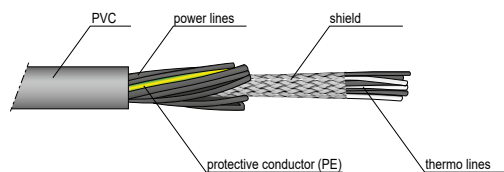
RHZ 2100 Connecting cable, heater



RHZ 2200 Connecting cable, thermocouple



E 2752 Combination cable with thermal and power lines

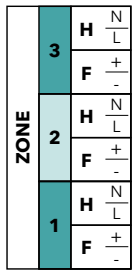


Tip: Special pin assignment possible on request. Simply contact Meusburger for professional expert advice.

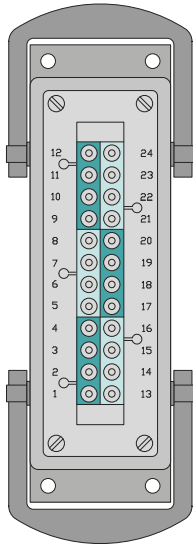
PIN ASSIGNMENTS ON CONNECTING CABLES

Standard pin assignment:

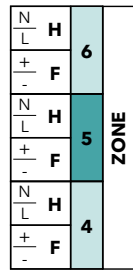
MEU / 001



H Heater



© Female connector



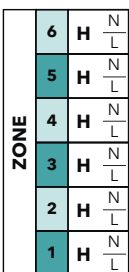
F Thermocouple

- » 6 zones per connector (24-pin)
- » Variable pin assignment for thermocouple and heater
- » Connector type: compatible with industrial connector E 27... type B
- » Insert: socket
- » Type of locking: double locking latch

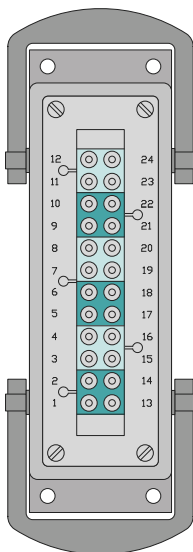
Number of zones	Number of cables
	RHZ 2000/3/001/... RHZ 2000/6/001/...
6	1
12	2
18	3
24	4
30	5
36	6
42	7
48	8

Assignment 121:

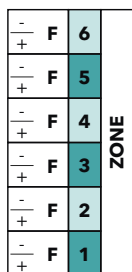
121



H Heater



© Female connector

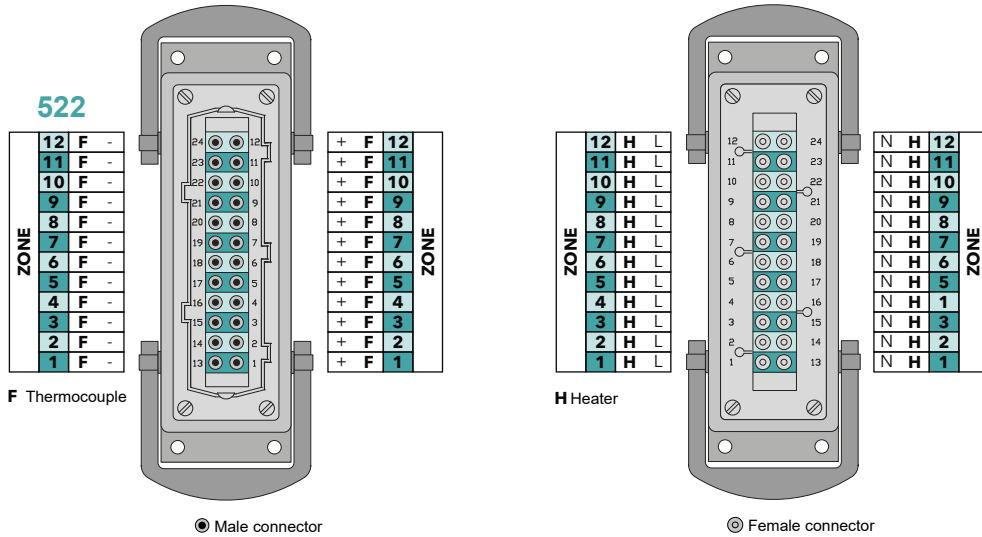


F Thermocouple

- » 6 zones per connector (24-pin)
- » Variable pin assignment for thermocouple and heater
- » Connector type: compatible with industrial connector E 27... type B
- » Insert: socket
- » Type of locking: double locking latch

Number of zones	Number of cables
	RHZ 2000/3/121/... RHZ 2000/6/121/...
6	1
12	2
18	3
24	4
30	5
36	6
42	7
48	8

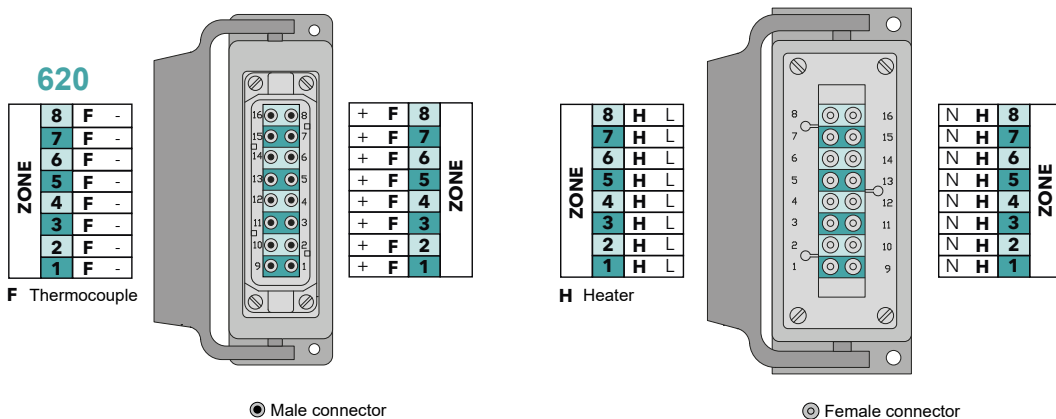
Assignment 522:



- » 12 zones per connector (24-pin)
- » Separate output plugs for thermocouple and heater
- » Connector type: compatible with industrial connector E 27... type B
- » Insert: thermocouple – pin, heater – socket
- » Type of locking: double locking latch

Number of zones	Number of thermocouple cables	Number of heater cables
	RHZ 2200/3/522/... RHZ 2200/6/522/...	RHZ 2100/3/522/... RHZ 2100/6/522/...
6	1	1
12	1	1
18	2	2
24	2	2

Assignment 620 – EUROMAP 14:



- » 8 zones per connector (16-pin)
- » Separate output plugs for thermocouple and heater
- » Connector type heater: industrial connector E 27... type B
- » Connector type thermocouple: industrial connector E 27... type A
- » Insert: thermocouple – pin, heater – socket
- » Type of locking: single locking latch

Number of zones	Number of thermocouple cables	Number of heater cables
	RHZ 2200/3/620/... RHZ 2200/6/620/...	RHZ 2100/3/620/... RHZ 2100/6/620/...
6	1	1
12	2	2
18	3	3
24	3	3

CONSUMABLES



With our range of high-quality consumables especially adapted for mould and die making, nothing stands in the way of a smooth process in the production, maintenance and operation of injection moulds.

Lubricants



Cleaners



Anticorrosives



Release agents



Engineer's blue



Adhesives



AREAS OF APPLICATION

VGI 300 – Fully synthetic inert grease without PTFE



For lubricating ejectors, slides and ejection units in injection moulds which are exposed to extremely high temperatures and require very tight tolerances.

Lubrication of ejectors

- » VGI 300 ^{H1}
- » VGS 180
- » VGM 160
- » VLS 250

VGI 250 S – Lubricant and release agent



For easy relubrication after use of PFPE lubricants. Suitable as release agent in the processing of plastics.

Cutting

- » VGI 250 S ^{H1}
- » VRT 180
- » VRT 130

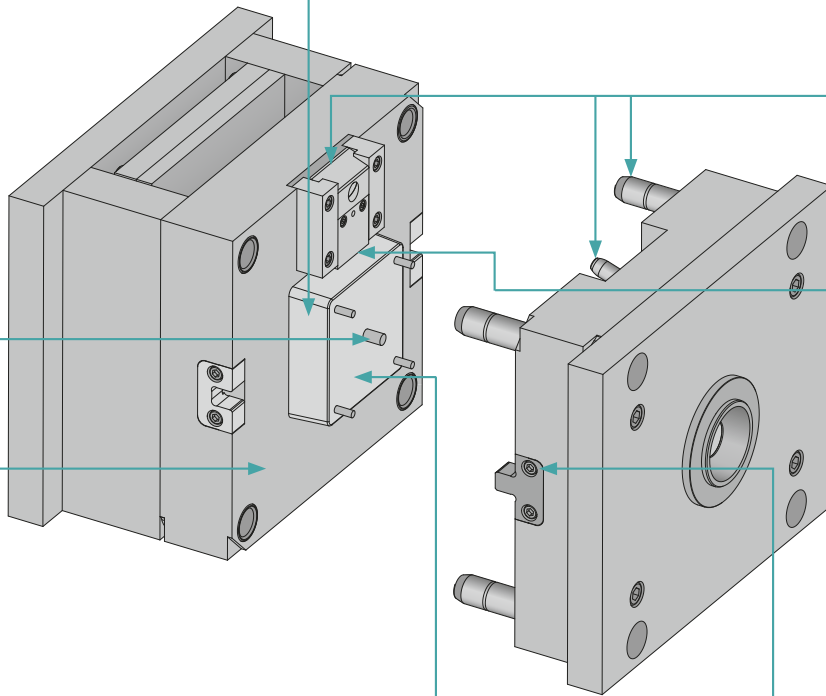
VGS 180 – Fully synthetic high-performance grease



For lubricating any sliding pairs such as slides and guide pillars in injection moulds for which fully synthetic grease lubrication is preferred.

Lubrication of moulds

- » VGS 180
- » VGI 260 ^{H1}
- » VGM 160
- » VGM 160 S
- » VGS 160 FD ^{H1}
- » VLS 250
- » VLS 175



VTP 200 S – High temperature engineer's blue spray



Sprayable engineer's blue for fast and exact matching of split line and sealing faces in die and mould making.

Engineer's blue

- » VTP 200 S
- » VTP 50

VPG 60 – Anti-corrosive cavity protector



For the preserving of cavities in injection moulds.

Corrosion protection

- » VPG 60
- » VPG 70 FD ^{H1}
- » VPW 110
- » VPW 80

VCC 30 – Active cavity cleaner



Removes stubborn plastic and paint remains as well as mould contamination, diesel-effect residues and sealant residues from cavities.

Cleaning

- » VCC 30
- » VCM 25 FD ^{H1}
- » VCM 20 ^{K1 K3}
- » VCF 18
- » VCF 15
- » VCQ 10
- » VCW 25

VAP 1000 – White assembly paste



Protects against corrosion, fretting and fretting corrosion at highly stressed gliding points or screw connections.

Assembly

- » VAP 1000 ^{H1}
- » VAP 1000S
- » VCP 1000

OVERVIEW OF CONSUMABLES

Lubricants

VGI 300		Fully synthetic inert grease without PTFE, usable up to 300 °C
VGI 260		Fully synthetic inert grease with PTFE, usable up to 260 °C
VGS 180		Fully synthetic high-performance grease, usable up to 180 °C
VGM 160		High-performance technical grease, usable up to 180 °C
VGS 170 S		Fully synthetic high-performance spray grease, usable up to 170 °C
VGS 160 FD		High-performance food-safe grease, usable up to 160 °C
VAP 1000		White assembly paste
VAP 1000S		Anti-seize assembly spray
VCP 1000		Copper paste




Cleaners

VCC 30		Active cavity cleaner
VCM 25 FD		Food-safe high-performance cleaner
VCM 20		High-performance universal cleaner
VCF 18		Foam cleaner for cavities
VCQ 10		Industrial express cleaner



Anticorrosives

VPW 110		High-performance anti-corrosion wax
VPW 80		Synthetic anti-corrosion wax
VPG 70 FD		Food-safe anti-corrosive grease
VPG 60		Anti-corrosive cavity protector












Release agents

VGI 250 S		Lubricant and release agent, usable up to 250 °C
VRT 180		High-performance release agent, usable up to 180 °C
VRT 130		Release agent, usable up to 130 °C

Engineer's blue

VTP 200 S		High temperature engineer's blue spray, usable up to 200 °C
VTP 50		Engineer's blue

Adhesives

VBA 2M43		Threadlocker, medium strength
VBA 2M70		Threadlocker, high strength
VBA 6M03		Retaining compound, high strength and low viscosity
VBA 6M48		Retaining compound, high strength and medium viscosity
VBA 5M42		Thread sealant, medium strength and medium viscosity
VBA 5M69		High-temperature thread sealant, medium strength
VBA 5M77		Pipe sealant, medium strength and high viscosity
VBC 4M01		Instant adhesive, general-purpose
VBC 4M06		Instant adhesive, low viscosity
VBC 4M54		Instant adhesive, paste-like
VBC 4M80		Instant adhesive, impact-resistant

WORKSHOP EQUIPMENT



Our many years of experience allow our customers to benefit from our expertise in numerous areas. Here you will find a sample from our wide range of products, specially adapted to the injection moulder. You can find the entire range and further information in our shops.

Surface finishing equipment

GESM 1500



Battery-powered control unit for M-Line micro motor

Temperature measuring devices

MTM 1100



Infrared temperature measuring device

MTM 3300



Temperature measuring device for external probes

MTM 3305



Accessories for temperature measuring device

MTM 7100



Temperature data logger

MTM 7400









Temperature and humidity data logger

MTM 5010







Probes for temperature measuring devices








Scales

MWK 1206		Precision scale
MWK 2106		Counting scale
MWK 2150		Battery for counting scale
MWK 3106		Industrial counting scale
MWK 3130		Stand for industrial counting scale
MWK 5500		Heavy-duty crane scale

Clamping equipment

HWS 100		Power clamp for injection moulding
HWS 104		Power clamp for injection moulding
HWS 120		Clamping claw for threads, with counterholder, adjustable
HWS 124		Tapered clamp with adjustable support screw

Other accessories

V 20435		Diagonal cutters for plastic, 15° cutting edge with cutting protection
ASH 1240		Assembly glove, phynomic lite
ASH 8250		Heat-protection glove
V 76907		Natural-grit diamond compound, temperature resistant
V 76950		Diamond spray, alcohol soluble
V 76980		Cleaning cloth, premium
H 4062		Air-cushioned assembly table

 **More information in our film:**
www.meusburger.com/assembly-table

FURTHER PRODUCTS IN OUR CATALOGUES



Mould making components

- » Large range of components especially for mould making
- » Punched index helps to find the right item quickly and easily
- » Clearly designed article pages with numerous installation examples and references to web videos



Workshop equipment for die and mould making



- » Punched index helps to find the right item quickly and easily
- » Clearly designed article pages with numerous installation examples and references to web videos
- » Prices shown for each item

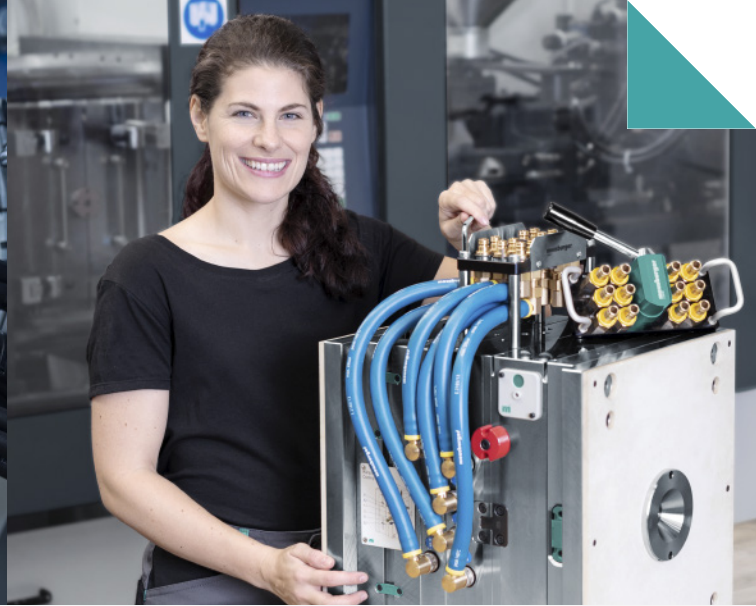
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