



VarioPipe

optical fibre building cable & pipe entry system

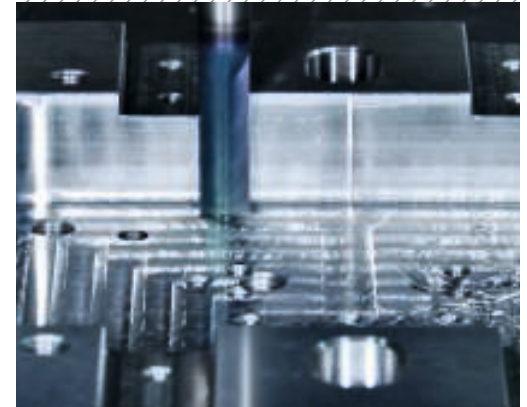
Langmatz – Innovation meets performance

Specialist for technical system solutions

Langmatz is an international industrial company specialising in plastic and metal processing, based in Garmisch-Partenkirchen, Germany. As an expert in technical system solutions, we are one of Europe's leading infrastructure suppliers for power engineering, telecommunications, and traffic engineering.

Our core competencies are research & development, design, and production, and the marketing of high-quality infrastructure products. We have a high rate of in-house manufacturing and invest heavily in development to further enhance our product portfolio in line with customer requirements. The Langmatz brand is synonymous with innovative products that meet international standards and possess premium "Made in Germany" quality.

Customers and their needs are our top priority – a standard we've upheld for over 50 years while supplying countless tailor-made system solutions. Langmatz's customers include energy providers, local councils, public utilities, and telecommunication companies.



▲ Mould and tool making



▲ Injection moulding machines



▲ Product and materials testing laboratory

Langmatz – Your partner

Individual system solutions
from the German Alps

We offer a broad portfolio of high-quality products for the many different requirements of a smart city:

- ▲ Polycarbonate manholes
- ▲ Underground distribution systems
- ▲ Optical fibre network solutions
- ▲ Outdoor cabinets and pedestals
- ▲ Building cable & pipe entry systems
- ▲ Tunnel construction products
- ▲ Fuse boxes
- ▲ Signal requesting devices
- ▲ Radio ripple control receivers



Ongoing digitisation requires technologically mature systems for the networked city of today.

As one of the most innovative companies in Germany, we are your competent partner for implementing custom solutions.



Langmatz building cable & pipe entry systems – The economical solution without compromise



Together, we bring high-speed Internet into every home.

The internet is an essential part of our everyday life; it is literally our gateway to the world. It is therefore clear that the internet connection of the future must be fast, modern, and reliable.

Builders, however, expect not only maximum performance, but also an affordable solution. With our optical fibre building cable & pipe entry system, you can make no mistake here: we offer an economical solution without compromise.

The flexible solution for every case –

VarioPipe optical fibre
building cable & pipe entry
system from Langmatz

**Whether with or without cellar,
or whether built with concrete,
bricks or hollow blocks.**

When faced with the challenge of finding an answer to every builder's wish, you will find we have the perfect solution for every eventuality. Langmatz offers various building cable and pipe entry systems for up to two micropipes for buildings with and without cellars. We also supply the right sealing technology for all common masonry – easy to install and always securely sealed.





DIN 18533 –

The new requirements for optical fibre entry ports

With our new generation of optical fibre entry ports, we build on proven technology while simultaneously setting new standards in terms of safety and flexibility. If nothing else, the advantages of our proven resin injection system are convincing: no matter in which wall, the building cable & pipe entry systems always fit and seal reliably. The Langmatz VarioPipe optical fibre building cable & pipe entry system complies with all DIN 18533 building sealing requirements. And, thanks to its moveable flange, it can even be used with inclined installation.

Added to this is its space-saving design, which makes the VarioPipe building cable and entry system suitable for all wall thicknesses from 200 mm. All that is needed for installation is a hole of Ø 25 – 26 mm and a minimal foundation pit. Your advantage: lower costs for civil engineering work.

Outstanding flexibility

- ▲ Quick installation in a matter of minutes
- ▲ Inexpensive installation thanks to minimal foundation pit at the outer wall

Maximum possible safety

- ▲ Meets the requirements of the new DIN 18533
- ▲ Efficient resin injection system
- ▲ Secure hold thanks to foam tube with dowel function

Properties and technical data

The system is installed in a hole of Ø 25 – 26 mm. The micropipes can be laid directly in the hole.

- ▲ Suitable for all wall thicknesses from 200 mm
- ▲ For holes Ø 25 – 26 mm
- ▲ Horizontal and inclined installation up to 45°
- ▲ Gas- and water-pressure-tight up to 1 bar
- ▲ Waterproof concrete stress class 1 (to DAfStb 2017)
- ▲ Waterproof concrete stress class 2 (to DAfStb 2017)
- ▲ Water impact classes as per DIN 18533: W1.1-E, W1.2-E, W2.1-E

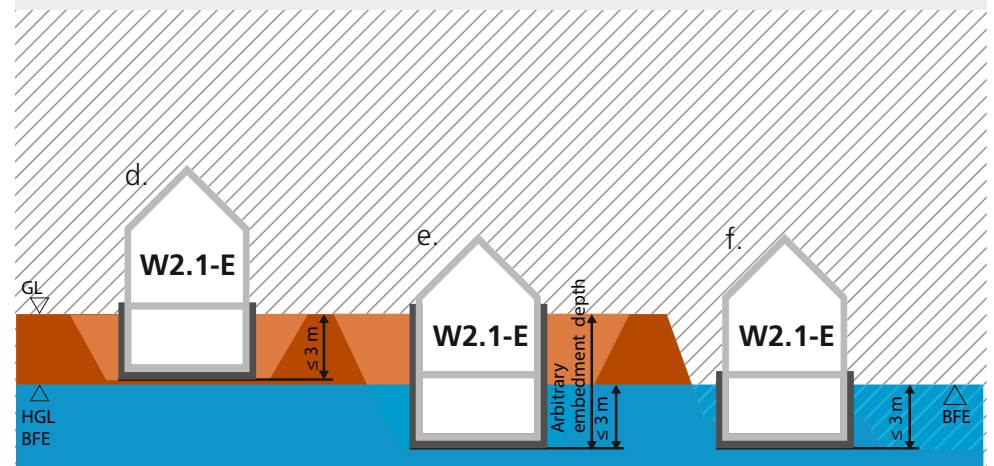
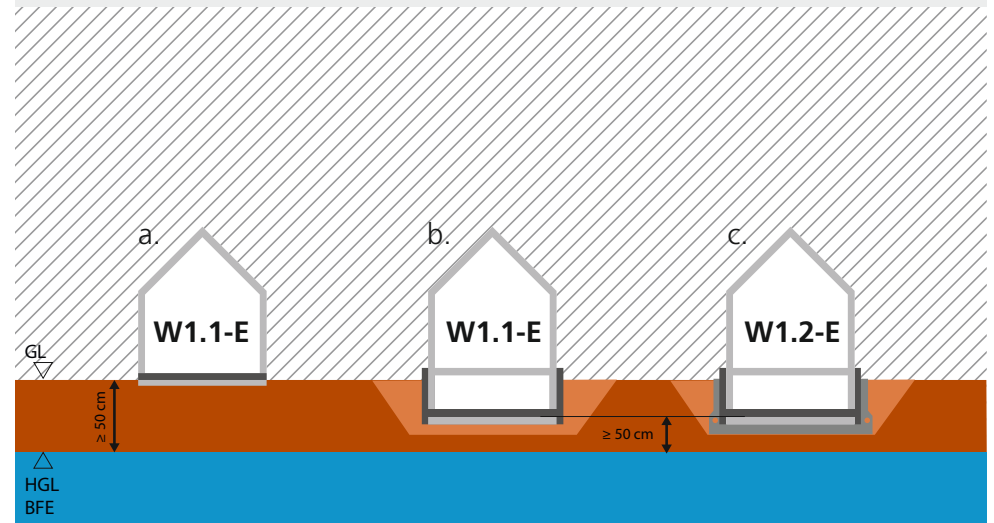
DIN 18533 – Water impact classes

W1.1-E and W1.2-E

- a. **Soil moisture**
highly water-permeable soil/
fill material highly water-permeable
- b. **Soil moisture, non-pressing water**
highly water-permeable soil/
fill material highly water-permeable
- c. **Seepage**
Poorly water-permeable subsoil/
fill material poorly water-permeable
 $k \leq 10^{-4}$ m/s with drainage

W2.1-E

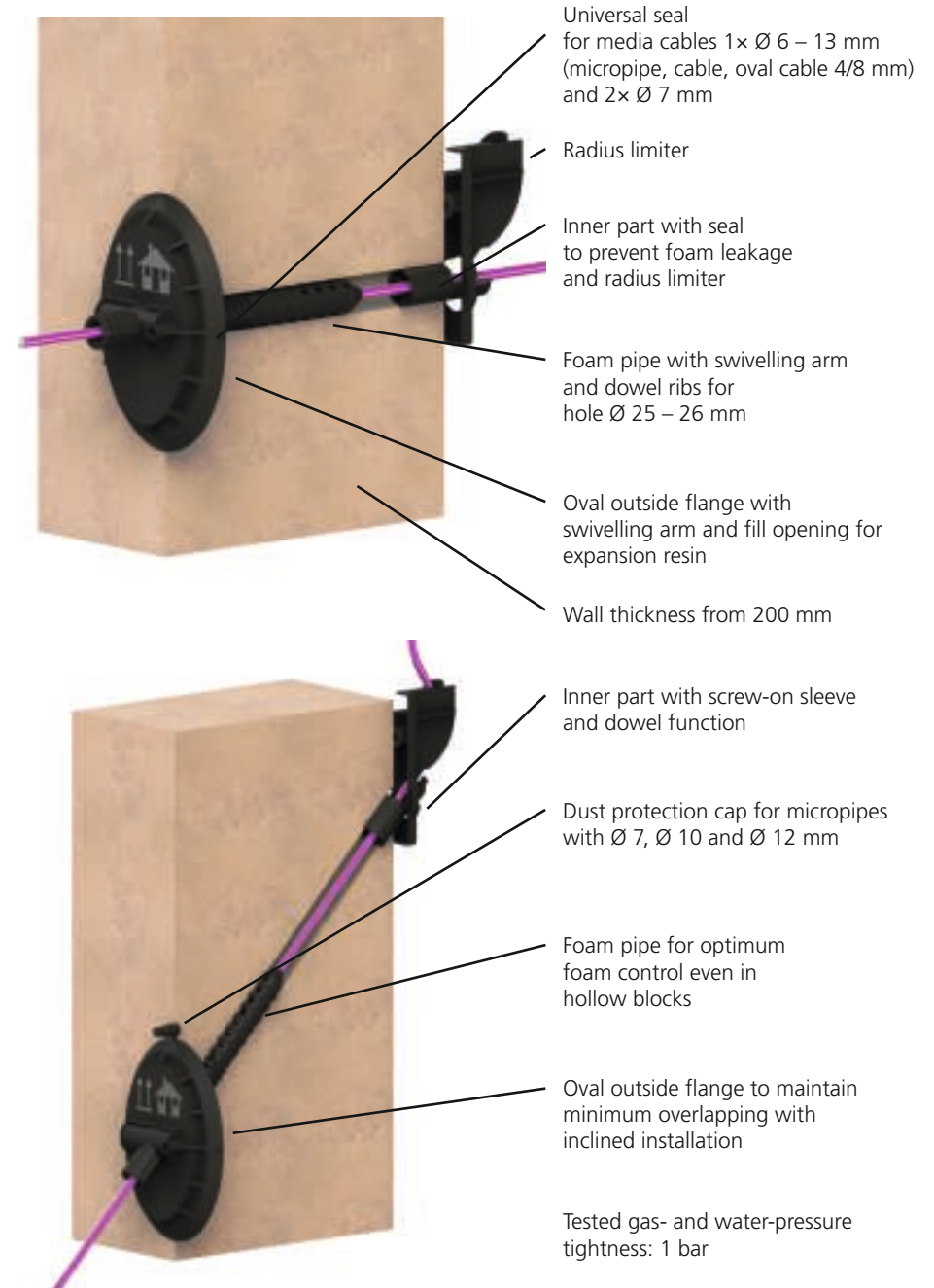
- d. **Backwater to 3 m, pressing water**
poorly water-permeable subsoil/
fill material poorly water-permeable without drainage
- e. **Groundwater to 3 m, pressing water**
any foundation depth
- f. **Flood water to 3 m, pressing water**



GL: ground level | HGL: highest measured groundwater level | BFE: base flood elevation

Engineering expertise – Easy to install, safe to use

- ▲ Gas- and water-pressure-tight up to 1 bar
- ▲ Continuously adjustable up to 45°
- ▲ Optimum distribution of the sealing foam in any installation position due to directed volume flow
- ▲ Moulded dust protection cap for different diameters prevents dirt from entering the micropipe
- ▲ Flexible seal prevents foam from leaking out at the inside wall of the building
- ▲ Bending radius limiter with snap-in fixing for micropipes with diameters from 7 mm to 12 mm



Engineering expertise – Versatile in use, easy to install

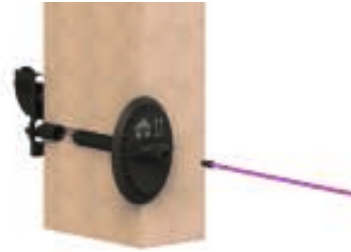
Insert the wall duct



▲ Inside of building

▲ Outside of building

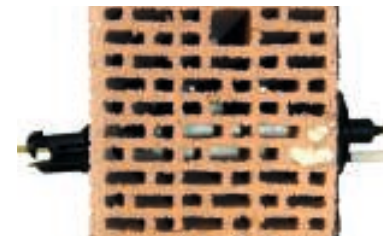
Insert media cable



Apply the sealing foam



Leak-tight over multiple chambers



VarioPipe optical fibre building cable & pipe entry system

The VarioPipe optical fibre building cable & pipe entry system was developed specifically for the insertion of micropipes into buildings and through building walls to connect subscribers to the optical fibre network. The building cable & pipe entry system can also be used for other media cables, such as copper telecommunication cables or oval cables, and is suitable for all common wall types, such as waterproof concrete, bricks or hollow blocks. The foam-fill principle along the drill channel and the media cable guarantees absolute seal tightness.

Advantages:

- ▲ Fast, easy installation
- ▲ Secure hold of the foam pipe in the hole thanks to clamping ribs
- ▲ Oval outside flange guarantees a high coverage of the hole in any installation position (external coatings are included)
- ▲ Inner routing element ensures permitted bending radii are not undercut
- ▲ Reliable sealing thanks to expanding 2-component resin



VarioPipe optical fibre building cable & pipe entry system

Technical data

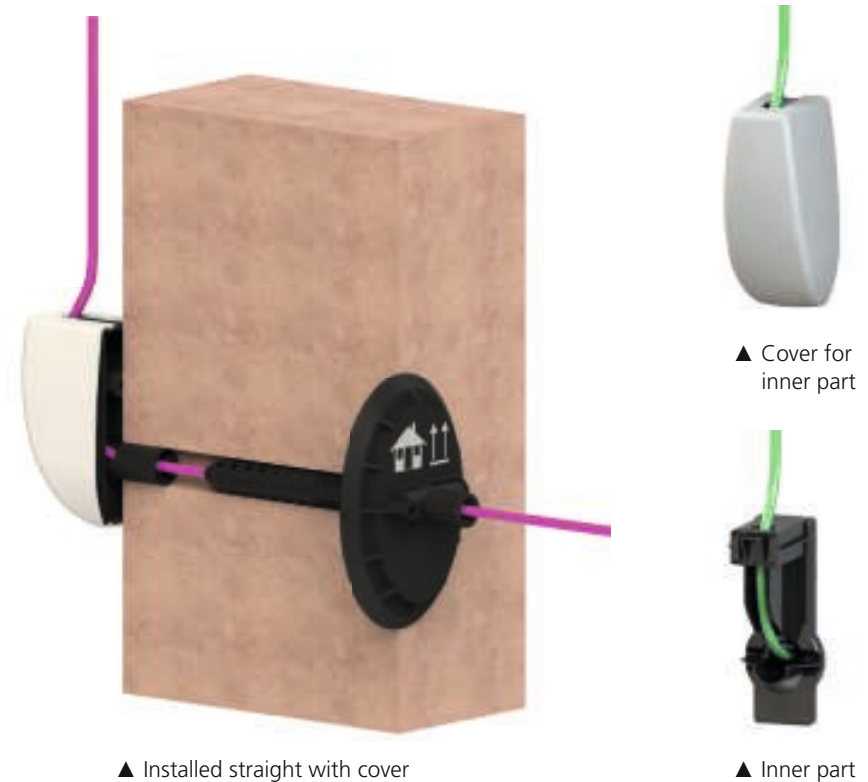
VarioPipe optical fibre building cable & pipe entry system EK459

- ▲ Horizontal or inclined installation up to 45°
- ▲ Filling with one media cable Ø 6–13 mm (micropipe, cable, oval cable 4/8) or 2x Ø 7 mm
- ▲ Inner bend radius limit R60 (mm) with fastener for different diameters
- ▲ Wall thicknesses from 200 mm
- ▲ Gas and water-pressure-tight up to 1 bar
Water impact classes as per DIN 18533: W1.1-E, W1.2-E, W2.1-E
 - Waterproof concrete stress class 1 (DAfStb 2017)
 - Waterproof concrete stress class 2 (DAfStb 2017)

Accessories:

Cover for VarioPipe optical fibre building cable & pipe entry system EK459

- ▲ Polycarbonate (PC) material with a matt finish
- ▲ Colour RAL 9016 traffic white
- ▲ IK degree of shock resistance IK05



We will gladly send you further detailed product information for your planning.

Please contact your local Langmatz representative or our head office.
Data sheets and other information can be found on our website:

www.langmatz.de

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