

 **GEBERIT**

# Geberit Piping Systems Industry: Chemical

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# Geberit Piping Systems

Modern processing of chemical and pharmaceutical products involves a wide variety of applications for supply and drainage pipework systems- including coolants, compressed gases, chilled and heated water, lubricants and oils, fire extinguisher systems, and potable water. Geberit's Mapress, Mepla and HDPE piping systems meet all the requirements of these uses as well as being approved for use with many proprietary chemicals.



## Mapress

Mapress pipes and fittings, available in Stainless Steel (BS316 and BS304), Carbon Steel and Copper, are lighter than conventional alternatives and are easier to handle during installations. Mapress piping systems come in outside diameters from 12mm–108mm with working pressures to 16 bar. The unique geometry of Mapress press fittings gives greater seal contact area for added security. Our patented leak path O-ring seal provides an instant visual identification of unpressed joints, removing the need for subsequent inspection.

The high grade pipe material ensures a consistent on-site bending and high corrosion resistance. The risk of corrosion is minimised with fully annealed seam welds and the high molybdenum content of Mapress Stainless Steel pipes ensures excellent durability.

## Mepla

A multi layered composite piping system suitable for hot and cold water, heating and chilled water supplies, Mepla system pipes and fittings are available in diameters from 16mm – 75mm and are suitable for an operating pressure of up to 10 bar and temperatures of up to 70 C.

The Mepla composite structure offers the flexibility and ease associated with the installation of plastic pipes combined with the durability and sustainability of a metallic system.

Cold pressed jointing offers many benefits over threading, soldering, brazing, or welding. Custom press tools ensure precision pressing of joints with no hot work, open flames, hazardous substances or chemicals, which is especially important in areas where flammable materials may be present.

Our comprehensive range reduces the number of fittings required during installation - perfect for complex systems in confined spaces.

All components are 100% pressure tested to ensure perfectly tight, reliable connections that cannot be pulled apart.

**Geberit HDPE drainage** is a lightweight, cost effective alternative to cast iron and PVC installations, and is especially suited to applications where superior chemical resistance is required.

Highly durable- with excellent crush, impact, abrasion, heat (-40°C to +80°C) and UV resistance- HDPE is available in 32mm - 315mm diameters.

Joining / connection methods include: Electrofusion, thermal butt welding, mechanical connection, seal ring and flanged. Geberit offers a full drainage system design and pre-fabrication service for complex assemblies and complete systems.

## The Mapress system components:

### Mapress pressfittings:

Stainless Steel - BS316  
Carbon Steel - galvanised  
Copper

### Mapress pipe:

Stainless Steel - BS316  
Carbon Steel - plastic coated, galvanised

### Mapress press tools:

Pressing units - 12/14V DC battery, 115V & 230V AC mains  
Jaws - 12mm - 35mm  
Collars - 42mm - 108mm

### Mapress special fittings:

Stainless Steel Valves



Mapress seal: leaks in unpressed state



Mepla system pipes

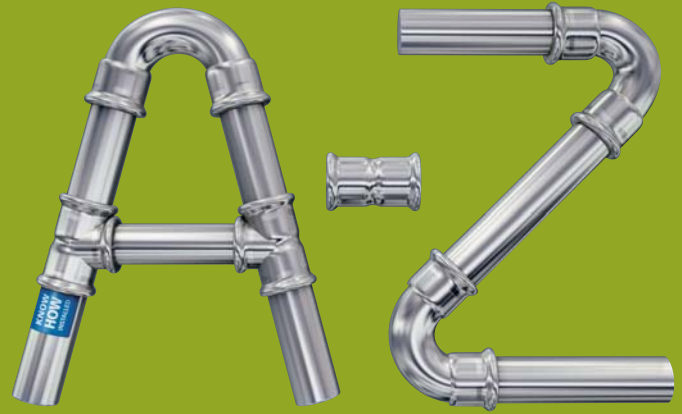


HDPE drainage: impact and chemical resistant



Chemical installation

# Advantages and Applications



## Mapress

- **Fast installation:** minimum machinery downtime ensures max. plant availability
- **Suitable for use in clean environments:** no sealing compounds, lubricants or flames- minimising disruption during fitting and maintenance
- **Cost reduction by means of fast and safe assembly methods:** typical installation time reductions of over 30% compared to welded or threaded joints
- **Easy handling:** Mapress pipes and fittings offer weight savings of up to 50% compared to traditional materials
- **Ideal for fabrication and modular design:** large sections can be easily pre-assembled off-site to save time on-site
- **No fire hazard:** all joints made cold, ideal for repairs and modifying existing systems
- **High quality:** Mapress Stainless Steel pipes and fittings have increased molybdenum content to resist corrosion resulting in a longer service life.

**Mepla** - includes all the benefits above, plus

- **Hygienic:** Cross-linked polythene (PE-Xb) inner layer improves hygiene by resisting limescale build up, aging and wear
- **Stable:** Composite construction allows quick, easy bending of Mepla pipe, without the need of extra brackets to support the system
- **Hot and Cold:** The bonded aluminium inner core limits thermal expansion of the system, reducing the size of compensation loops compared to plastic systems
- **Insulation:** Thermal losses are 900 times less than uninsulated copper pipe, increasing system efficiency
- **Corrosion resistant:** Plastic and Aluminium construction will not corrode, offering a service life in excess of 50 years.

## HDPE

- **Low and High pH resistant:** Geberit HDPE can be used for effluent drainage with pH values from 0 to 14
- **Chemical resistant:** Insoluble in all inorganic and organic solutions at 20°C
- **Non-toxic:** can be used for transportation of foodstuffs

Mapress Application	Black CIIR Seal	Red FKM Seal	Green FKM Seal	Yellow HNBR Seal
Coolant/chilled water	✓✓✓✓		✓✓✓	
Process water	✓✓✓			
Acetone		✓		
Ammonia	✓			
Glycol	✓			
Adhesives	✓			
Oil/Lubricants		✓✓		
Hydraulic fluid	✓			
Caustic soda	✓			
Pigments	✓			
Disinfectants/detergents	✓	✓		
Foaming agents/ fire extinguishing foam	✓			
Resin formulations		✓		
Food flavourings		✓		
Condensate	✓			
Saturated Steam			✓	
Potable water	✓✓✓			
Demineralsed water	✓			
Oil/water emulsion	✓✓			
Cooking fats	✓✓			
Fuel oils (based on mineral oils)	✓			
Cooling liquid, anti-freeze	✓			
Brine solution	✓			
Alcohol solutions	✓			
Control air	✓✓			
Compressed air	✓✓✓			
Nitrogen	✓			
Oxygen	✓			
Natural gas/LPG				✓✓
Solvents	✓			

- **Strong:** Very high impact strength means Geberit HDPE pipes deform rather than split to prevent spillages
- **Tempered:** Heat treatment relieves internal stresses to reduce shortening and mechanical stress on joints
- **Resistant to cold:** Geberit HDPE pipes and fittings stretch elastically if the contained liquid freezes, preventing damage.

- Geberit Mapress Stainless Steel ✓
- Geberit Mapress Carbon Steel ✓
- Geberit Mapress Copper ✓
- Geberit Mepla ✓

## Training and Reference Projects

Geberit offers training courses for Mapress Pressfitting systems at the Geberit Academy facilities in Aylesford, Kent. Alternatively training can be provided at customer's premises or on-site. The training courses are provided free of charge and can be tailored to any specific Geberit product or application.

### Reference Projects

- BASF, Schwartzheide GMBH
- BASF, Ludwigshafen
- Sanofi Aventis, Frankfurt
- Pfizer Heumann, Feucht
- Henkel, Dusseldorf
- Bayer AG, Leverkusen
- Boehringer, Penzberg
- Astra Zeneca UK
- Pfizer UK

### Approvals



Factory Mutual - Mapress: for use in wet and dry sprinkler systems.



Underwriters Laboratories, EX3985 - Mapress for use in wet, fire extinguishing systems.



VdTÜV - Mapress: for special industrial applications.



DVGW Code of Practice W270 - Mapress.



BBA - Geberit HDPE



WRAS - Geberit Mepla  
- Geberit Mapress

### Other products available from Geberit

#### Geberit Silent-db20

- Acoustic drainage systems
- Suitable for both Industrial and Commercial applications
- Ideal for on/off site fabrication
- Offers fast and reliable jointing

#### Geberit Installation systems for wall-hung sanitaryware, infra-red flushing controls and taps.

#### Concealed flushing systems for WC's and urinals.

- Easy to install
- Hygienic
- Offer excellent water saving technology
- Maintenance friendly with easy access

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