

# Industrial Pipe Connections the Safe Way

***mapress***<sup>®</sup>

# Industrial pipe systems ...

## Service and supply pipework

Mechanical, process plant, chemical and petrochemical engineering involve a wide variety of applications for industrial pipework. They include the carrying of coolant and treated or untreated process water, steam and condensate, deionised water, water for fire extinguishing systems and hydrants, mineral oils, fuels, compressed air, nitrogen, oxygen and hydrogen.

The **mapress**<sup>®</sup> pressfitting system is also suitable for use with chemicals approved by Mapress GmbH + Co. KG.



### **mapress**<sup>®</sup> system components

The components – **mapress**<sup>®</sup> pressfittings and **mapress**<sup>®</sup> pipes - are pressed with a matching tool to form a permanent pipe connection.

### **mapress**<sup>®</sup> pressfittings

- Stainless Cr-Ni-Mo steel, material No 1.4401 to DIN EN 10088 (BS 316 S 32 / AISI 316)
- Unalloyed steel, RSt 34-2, material No 1.0034 to DIN EN 10027, galvanised
- DHP copper, material No CW 024A to DIN EN 1412
- Copper-nickel-iron alloy CuNi10Fe 1.6 Mn, material data sheet WL 1.1972

### **mapress**<sup>®</sup> pipes

- Stainless Cr-Ni-Mo steel, material No 1.4401 to DIN EN 10088 (BS 316 S 32 / AISI 316)
- Unalloyed steel, RSt 34-2, material No 1.0034 to DIN EN 10027, plastic coated
- Unalloyed steel, RSt 34-2, material No 1.0034 to DIN EN 10027, galvanised
- Unalloyed steel, RSt 34-2, material No 1.0034 to DIN EN 10027, inside/outside galvanised to DIN EN 10142 and 10147

### **mapress**<sup>®</sup> seal rings

- Chloro-isobutene-isoprene (butyl) rubber (CIIR), black
- FPM, FKM fluorocarbon rubber, red
- FEPM, FFKM perfluoro rubber, green
- NBR acrylonitrile-butadiene rubber, brownish yellow



# demand **mapress**<sup>®</sup> solutions



### Approved worldwide

Numerous international approvals mean **mapress**<sup>®</sup> systems are also used in shipbuilding. In fact the **mapress**<sup>®</sup> pressfitting system has been approved for a wealth of applications. The Mapress GmbH & Co. KG Quality Management System is certified to DIN EN ISO 9001 by the North Rhine-Westphalia Materials Testing Institute.

- VdTÜV component identification No TÜV.AR.271-97
- DVGW system test mark DW-8501AT2552 for drinking water
- DVGW DG4550BL0118 for natural gas and liquid gases
- General building regulations consent for carrying water pollutants (engine and gearbox oils) by the Deutsche Institut für Bautechnik (German Institute of Structural Engineering) (DIBt Z-38.4-156)
- VdS approval Nos G4910039 and G4990013 for fixed water extinguishing systems
- Factory Mutual FM Approval Job Identification J.I. 300157
- Underwriters Laboratories Inc. UL EX 3985
- Lloyds Register of Shipping
- Germanischer Lloyd
- Bureau Veritas
- Det Norske Veritas
- American Bureau of Shipping
- Registro Italiano Navale (RINA)
- Bundesamt für Wehrtechnik und Beschaffung (German Federal Office of Defense Technology and Procurement)



### Advantages of **mapress**<sup>®</sup> pressfittings at a glance

- Safe and reliable, yet quick and easy, installation of pipework
- Permanently tight distribution connections that cannot be pulled apart
- Minimum machinery downtime ensures maximum plant availability
- Corrosion resistant
- Suitable for installation in mixed systems
- Method of installation avoids fire risks
- Fire resistant
- Light
- Extensive range of fittings lends versatility
- Choice of materials ensures flexibility of application

### Drainage pipework and floor drains from Mapress

We also cater for reliable drainage. With the **BLÜCHER**<sup>®</sup> push-fit drainage pipework system, Mapress makes it possible for you to install stainless drainage pipework and stainless steel floor drains throughout your project.



The **mapress**® pressfitting system eliminates welded and screwed connections. This is an advantage you will come to appreciate, particularly when installing industrial or ship pipework in tight spaces. It cuts labour costs by 25 to 40% compared with conventional connection methods.

Mapress offers you systems and solutions that are also suitable for:

- Gas pipes
- Fire mains
- Air conditioning systems
- Drainage pipework and floor drains
- Pipework for hazardous areas, clean rooms and shipbuilding



Shipbuilding



Fire extinguishing systems



Process plant engineering



Chemical plant engineering

### Metal sealing fitting connection without seal ring up to 40 bar

A seal ring can only meet the requirements for heavy duty industrial pipe connections with difficulty. Mapress has therefore developed a pressfitting whose tapered pressrings form a permanent joint with the **mapress**® Cr-Ni-Mo steel pipe. The resultant connection will withstand working pressures of 40 bar and temperatures above 200°C, over the size range from DN15 to 50 (pipe OD 18 – 54mm). The axial pressing operation takes just seconds, and ensures a permanently tight (stainless to stainless) connection is formed over five defined zones. Particularly with the tried and tested **mapress**® pipe, this connection is faster and cheaper than the usual alternatives of welding or compression fittings.



# our experience your safeguard



## Installation no longer major expense

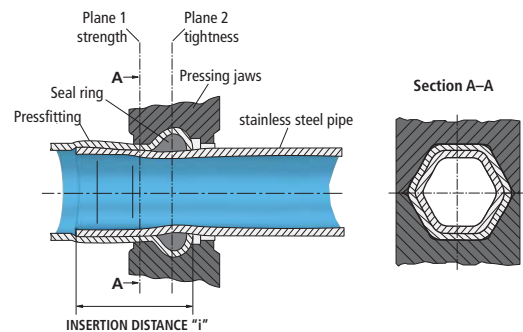
Tight, robust pipe connections are essential when installing pipework for process plant, machinery, chemical, petrochemical, shipbuilding and all other applications. Today's quick and reliable **mapress**<sup>®</sup> pressfitting systems relegate welded connections to the past.

## Connection method in demand worldwide

Pressfittings have now become established as one of the standard methods of connecting pipes. Mapress emerged from the Mannesmann Group to become one of the world's leading manufacturers of pressfitting systems made of stainless steel, unalloyed steel, copper and copper-nickel-iron alloys. Today its Langenfeld production facilities supply numerous countries around the globe.

## System

Perfectly matched components (pressfitting, pipe and pressing tool) guaranteed permanently tight connections. Fitting and pipe are pressed to produce very strong joints that cannot be pulled apart. The key to the long-term tightness is the factory fitted seal ring in the end beads of the fittings, which deforms in a defined manner during pressing. The range of fittings to suit the different applications is available in sizes (pipe OD) from 15 to 108mm depending on the material.



Special characteristics:

The connections are made through the application of physical pressure. In other words no welding, no involved inert gas shielding, no fire risks, no tightening. Many users therefore employ the **mapress**<sup>®</sup> pressfitting system for modernisation and repairs.

Overall, it is clear that **mapress**<sup>®</sup> pressfittings are a convenient solution catering for future development. They are suitable not only for installing new systems, but also for modernisation and extension of pipework.

We hope you find the *mapress*® pressfitting system of interest. You will find more detailed information in our Installation Guidelines and Range catalogue for industrial pipework. We look forward to your phone call, fax or email.



#### Contakt

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***mapress*® STAINLESS STEEL**

***mapress*® STAINLESS STEEL GAS**

***mapress*® EDELFLX**

***mapress*® CARBON STEEL**

***mapress*® COPPER**

***mapress*® COPPER GAS**

***mapress*® CUNIFE**

***BLÜCHER*® MASTERPIPE**