

Welcome to MULTITUBO systems

... just safely installed



Who we are

MULTITUBO systems - a unique concept:

No connection technology perfectly suits for all kind of different installation application.

MULTITUBO system therefore provides different connection solutions.

*MULTI-LAYER PIPE
+ PRESS-FITTING
+ PUSH-FITTING
+ WELD-FITTING
= 1 SYSTEM*



Who we are

Group structure

- **System-, sales- and distribution competence**

Sales in Germany and more than 40
business co-operations worldwide

Product-Management and Marketing

dw
verbundrohr

- **Pipe development and production**

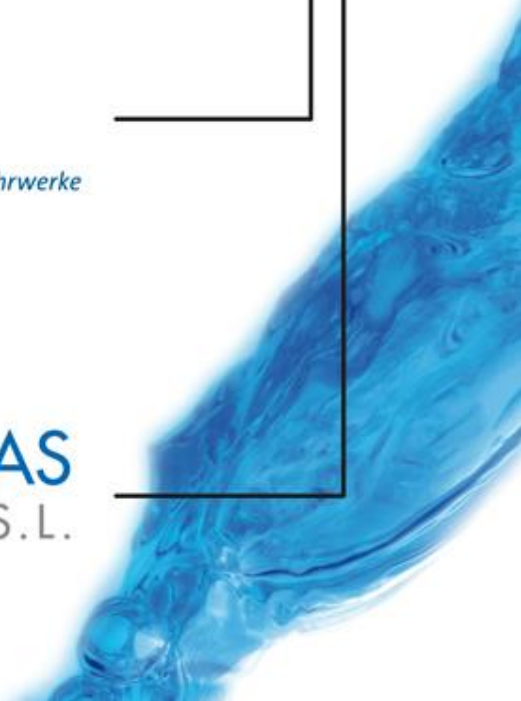
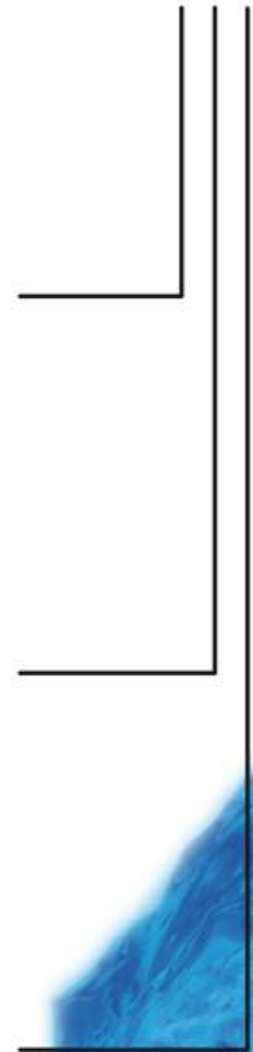
Various innovations for the
multilayer composite pipe

WRW
Westfälische Rohrwerke

- **Fitting development and production**

Development and production of the
press- and push-fitting system

MULTI@PAS
INDUSTRIAL, S.L.



Who we are

Internationally Represented



Active in approx. 40 countries

Personnel (total): ~ 230

Turn-over (total): ~ 65 mio. Euro

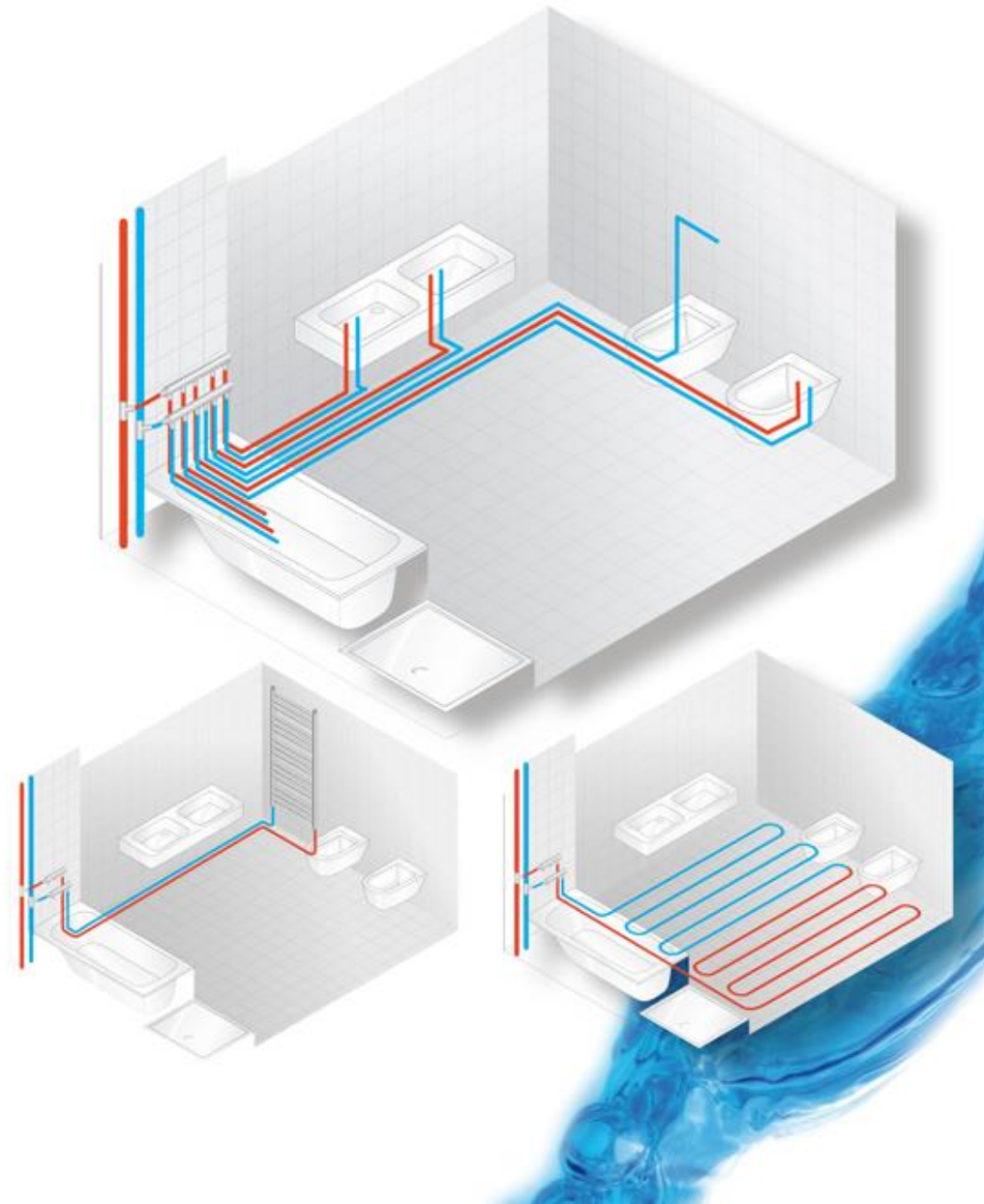
System information

Fields of application

Multilayer pipe is suitable for all installation purposes:

Tap water installation
Radiator connection
Radiant heating / -cooling

Industrial use
Pressed air systems



System information



Product Range

Pipes

Pipes in coils and lengths 16 mm – 110 mm

Fittings

Metal-Press-Fittings 16 mm – 110 mm

PPSU-Press-Fittings 16 mm – 32 mm

Metal-Push-Fittings 16 mm – 32 mm

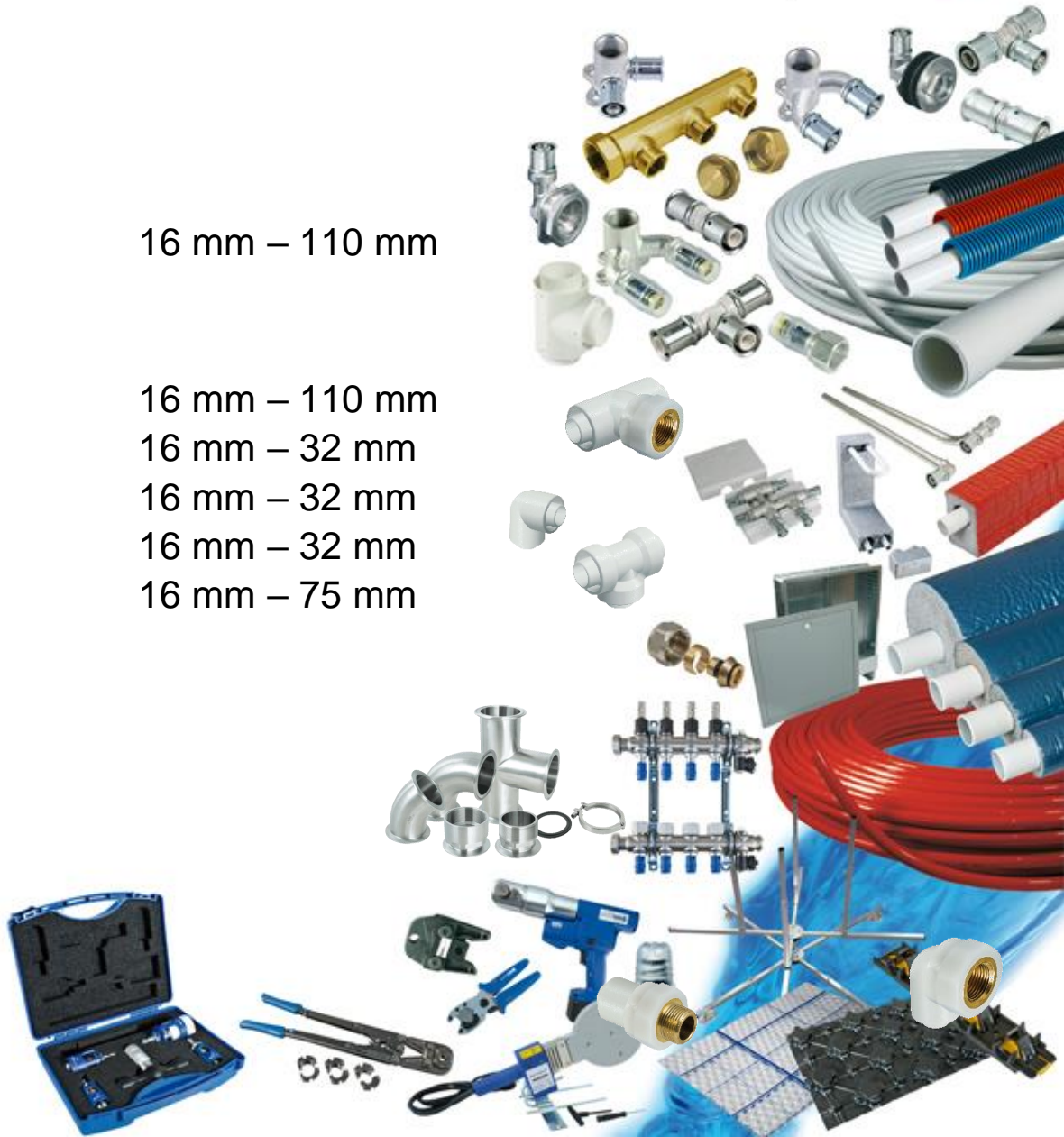
PPSU-Push-Fittings 16 mm – 32 mm

Welding-Fittings 16 mm – 75 mm

Accessories Tap-water

Accessories Heating

Tools



Certificates

MULTITUBO systems is certified in various countries all over the world. This emphasizes the high requirement for quality and durable partnership with the local partners.



Warranty

Also valid for mixed-installations
with the Uponor MLC press-
systems

(see Compatibility)

... just safely installed 

Valid for all products of multitubo systems delivered by us with the exception of electronic components

Warranty

MULTITUBO systems tap water and heating connection system

All components of the multitubo systems are made from high quality materials. The most important parameters and attributes are constantly checked during quality assurance.

Multitubo systems consist of multilayer pipes, fittings and accessories.

For damages occurring at our products within 10 years after the date of delivery and which are provably resulting from faults in production or material we perform free insurance cover.

For other damages (personal injury and damage to property) as well as for all costs for dismantling, removal, and re-installation we are liable in the extent in which our business liability insurance and product liability insurance pays compensation.

The sums insured are the following:

EUR 2.000.000 for personal injury and damage to property

DW Verbundrohr GmbH does not assume liability for improper assembly or installation.

DW Verbundrohr GmbH
Langer Rain 38
D-97437 Hassfurt
Germany

Multi-layer Pipe

A modern composite material

Multi-layer pipes combine:

- Light weight
- A extremely smooth surface
- High bendability
- No corrosion

with:

- Absolute oxygen tightness
- Form stability
- Low thermal heat expansion



Multi-layer Pipe

Top performance and durability

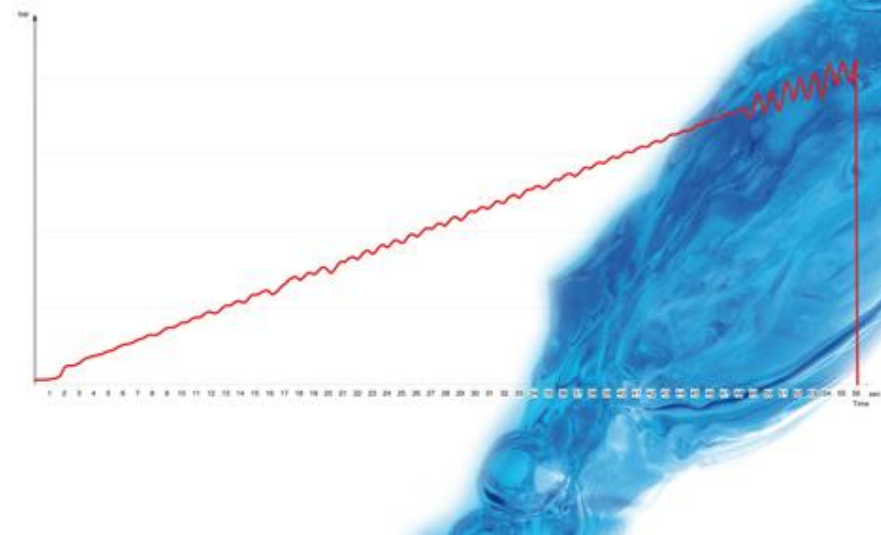
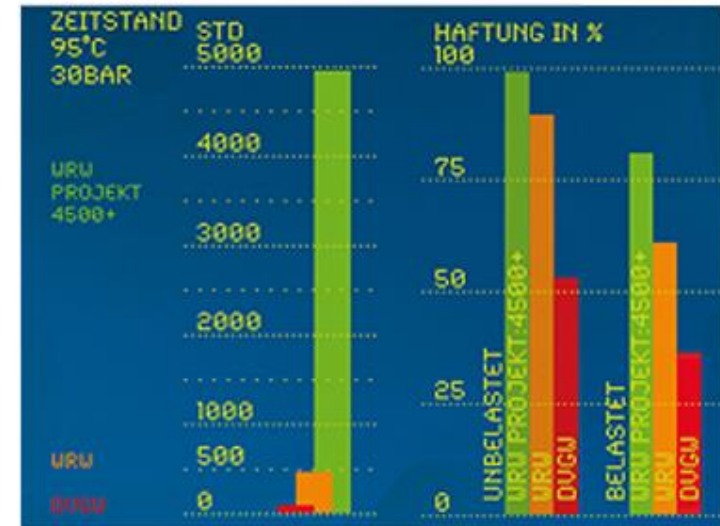
Just one type of pipe needed for all application in tap-water, radiator connection and radiant heating / -cooling, dim. 16 – 110 mm

Produced according to ISO 21003:
Maximum temperature up to 95 °C (short term) and maximum continuous operating pressure up to 10 bar

Designed for a lifetime of more than 50 years

Pipe quality tops approvals parameters

New production technologies permanently improving quality, e.g. x-ray control units and high precision laser welding

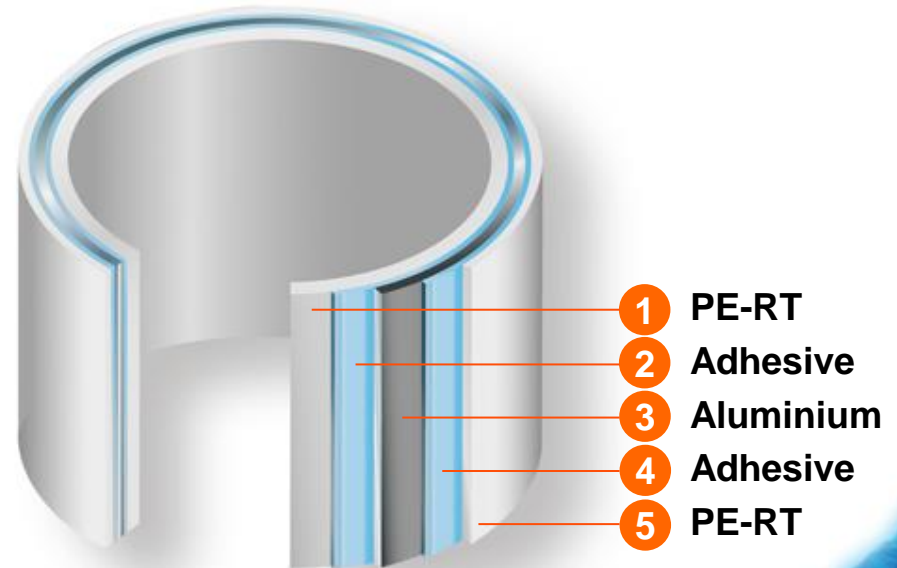


Multi-layer Pipe

Pipe structure

The pipe has **5 layers** to combine the advantages of metal- and plastic-pipes:

- 1 PE-RT**
Polyethylene of Raised Temperature resistance
- 2 Adhesive**
to fix the PE-RT to the Aluminium
- 3 Overlapped welded Aluminium**
- 4 Adhesive**
to fix the PE-RT to the Aluminium
- 5 PE-RT**
Polyethylene of Raised Temperature resistance



made in germany

Multi-layer Pipe

Advantages

Less fittings needed - compared to “stiff” pipes:

Easy bendability

Pipe follows a given shape

Faster work

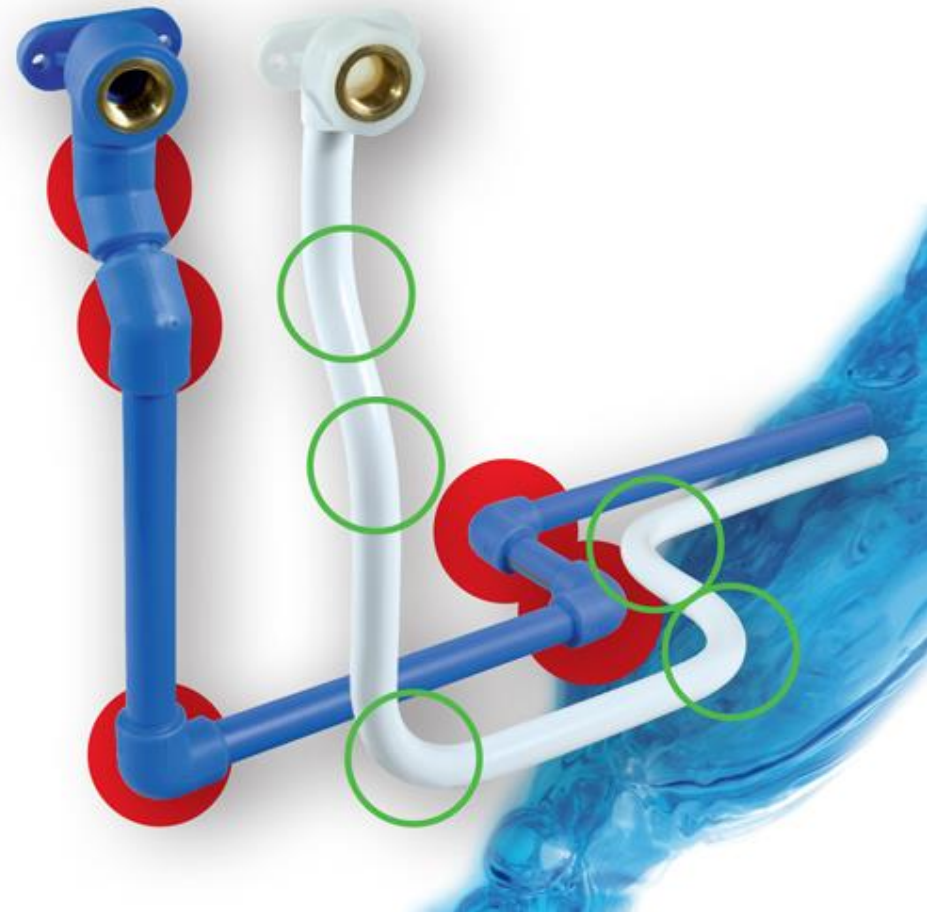
Less fittings for faster pipe laying
Pre-insulated pipe still enhances installing

Less connections concealed

High degree safety

● Fitting required

● No fitting needed due to the easy bendability of the multilayer pipe



Pipe Production Unit Westfälische Rohrwerke, Ahlen

Worldwide longest experience – more than 30 years - in the production of overlapped welded Multilayer Composite Pipes.

1983: First Production of overlapped-welded Multilayer Composite Pipes
(production speed: 1 – 2 m/min)

1989 – 2004: Production of Unipipe for the company
UNICOR Rohrsysteme GmbH (later UPONOR)

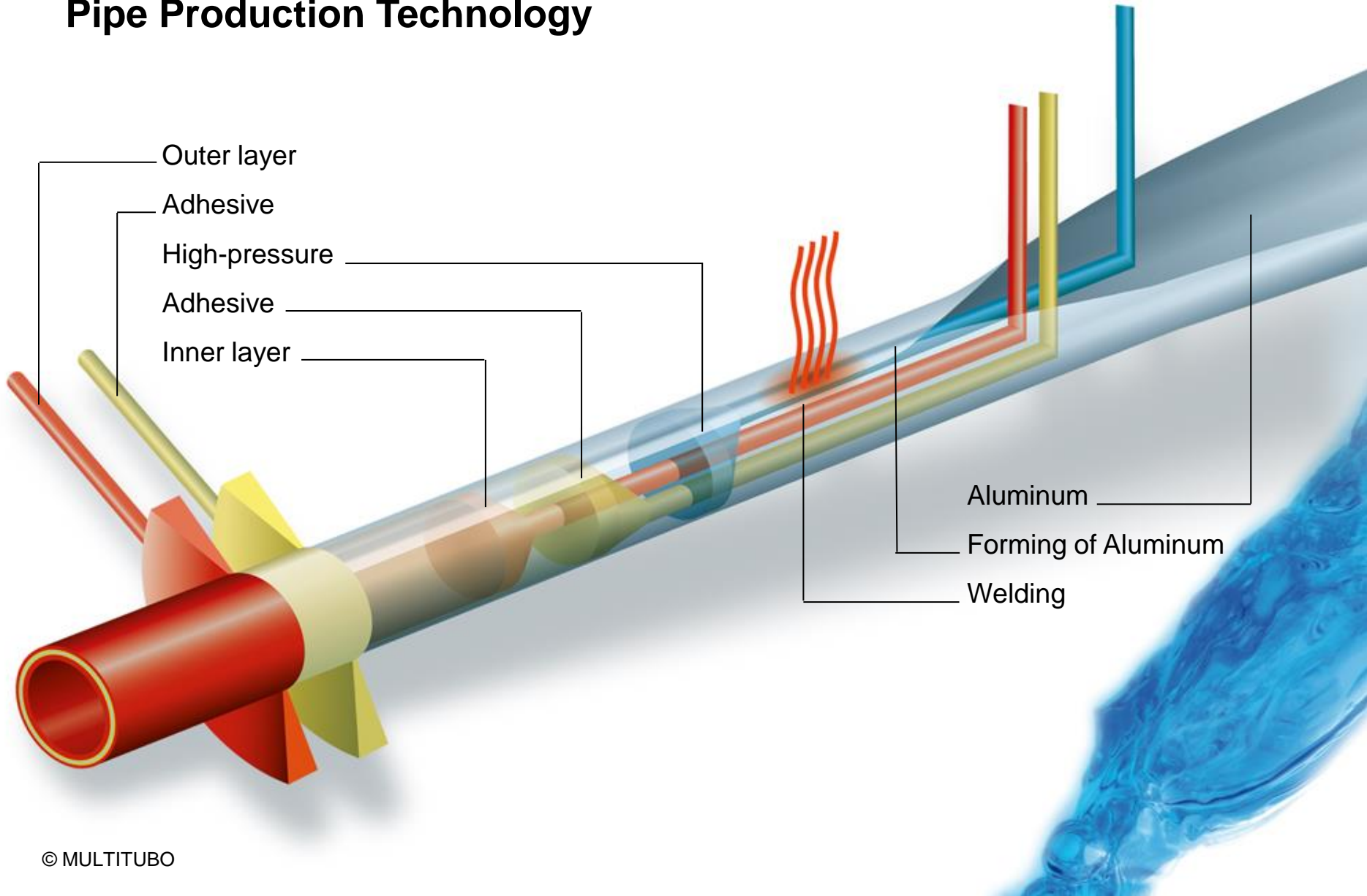
since 2004: Enormous improvement of the pipe quality with regards to improved materials and production technologies

2017: Development of Dim. 90mm and 110mm; Total output of more than 70 Mio. m pipe



Multi-layer Pipe

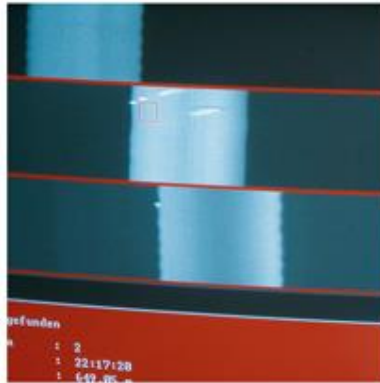
Pipe Production Technology



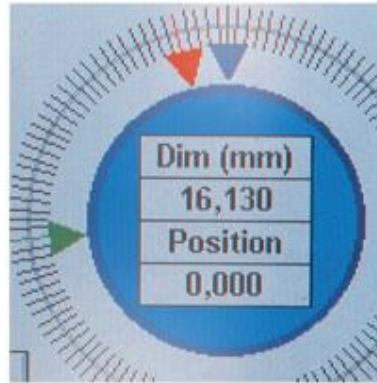
Quality Assurance (extract)



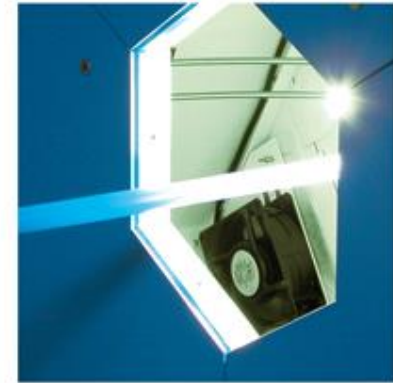
Raw-material tests



Aluminium quality online



Pipe dimension online



Surface and weld quality online



Pipe measures



Long term pressure tests



Peel-off test



Temp. cycle test

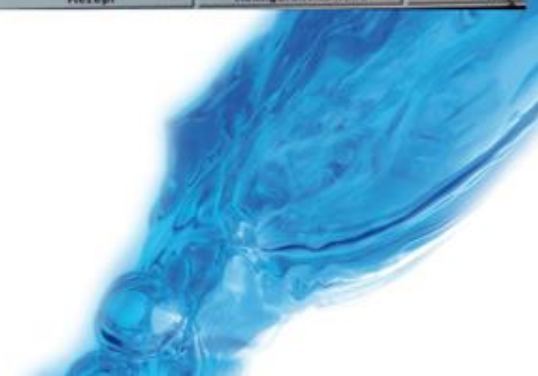
Multi-layer Pipe

Quality Assurance



Inline check device

X-Ray control panel



Multi-layer Pipe

Product Range Pipes

Coils:	16 – 32 mm
5m-length:	16 – 110 mm
3m-length:	40 – 110 mm
UFH Coils (red):	16 mm
Pipe in protective-tube (coils):	16 – 20 mm
Pre-insulated pipes MULTITUBO PLUS (S4, S9, and S13):	16 – 32 mm



Connection Technologies



5 different types of Connection



Press-Fittings (Metal + PPSU)

1 Inspection Windows

quick check of the correct insertion depth of the pipe

2

U-contour

1

4

3

2 Double Pressing Jaw Guides

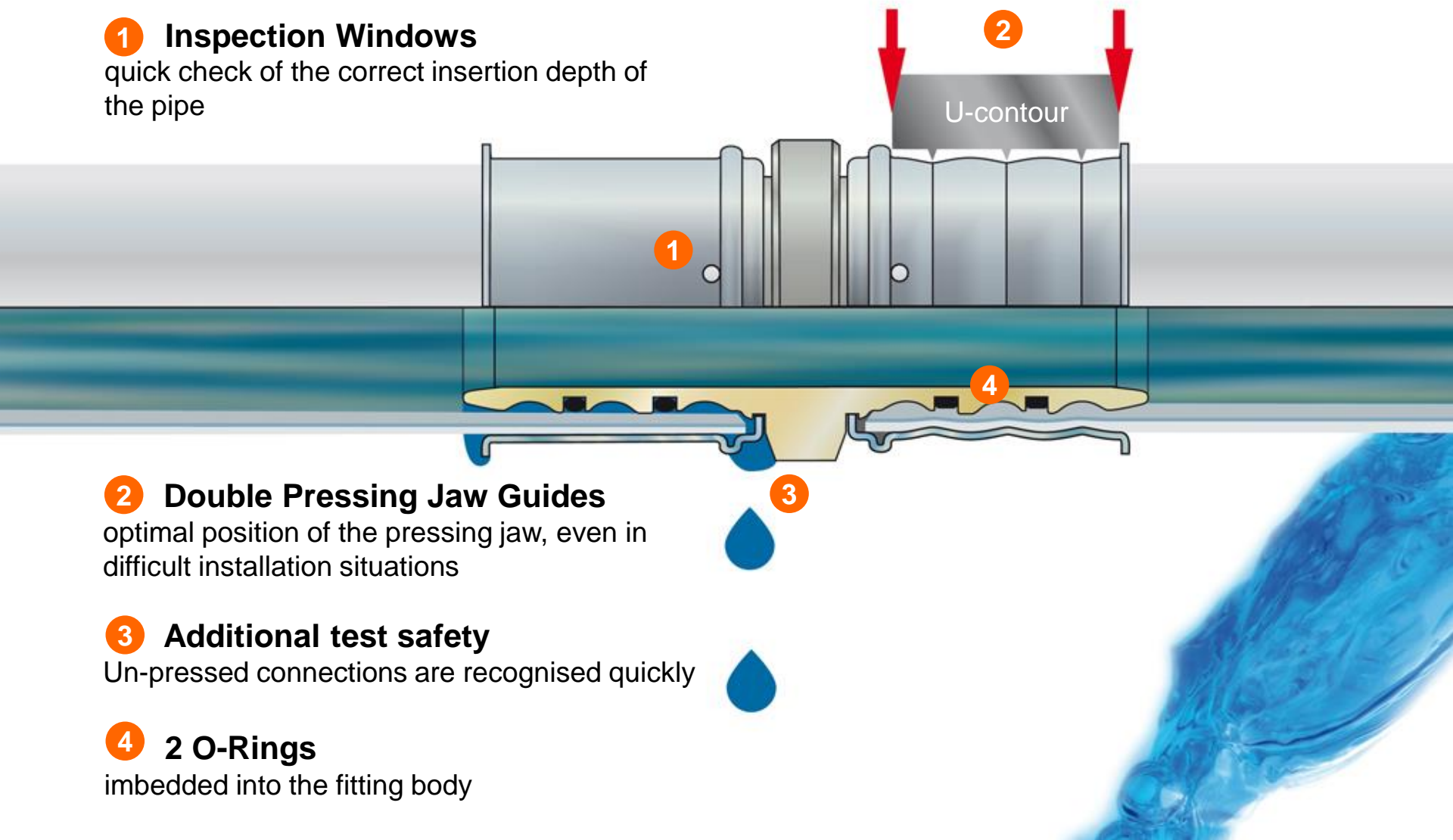
optimal position of the pressing jaw, even in difficult installation situations

3 Additional test safety

Un-pressed connections are recognised quickly

4 2 O-Rings

imbedded into the fitting body



Modular Press-Fittings Metal

Dimensions 75mm, 90mm and 110mm

Larger sizes economical installed

Pressing on work-bench –
installing on site

Simply connected by gripper clamps

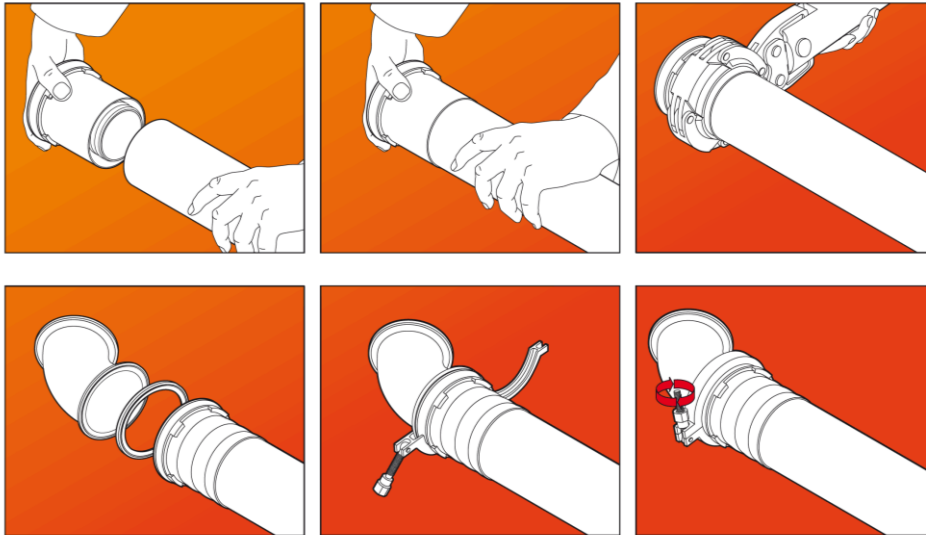
Stainless steel fitting-body with a
high performance at low weight



Modular Press-Fittings Metal

Economic installation without big efforts:

Press the sleeves onto the pipe at the work-bench and connect them on location with the cribber-clamps



With just 15 different parts more than 150 connections possible



Connection Technologies



Push-Fitting (Metal + PPSU)

1 Transparent sleeve

quick check of the correct insertion depth of the pipe

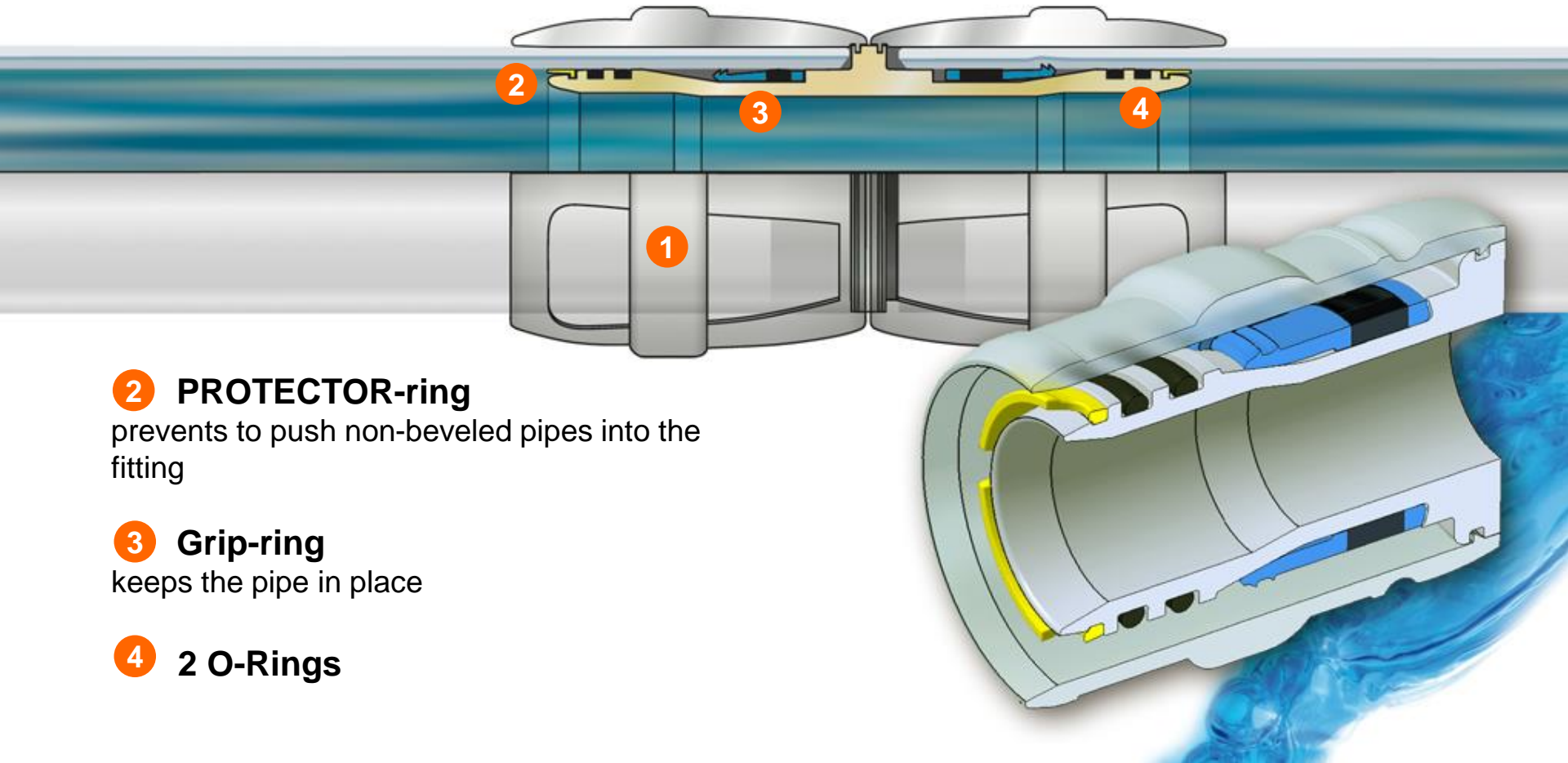
2 PROTECTOR-ring

prevents to push non-beveled pipes into the fitting

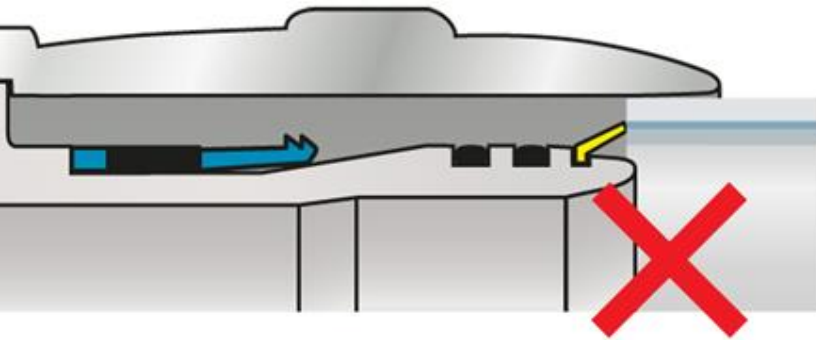
3 Grip-ring

keeps the pipe in place

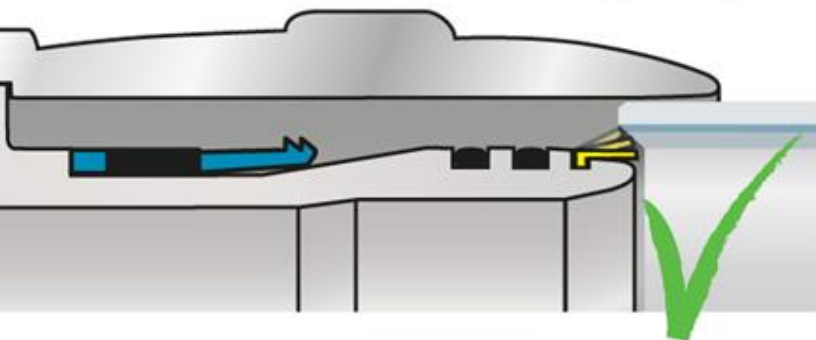
4 2 O-Rings



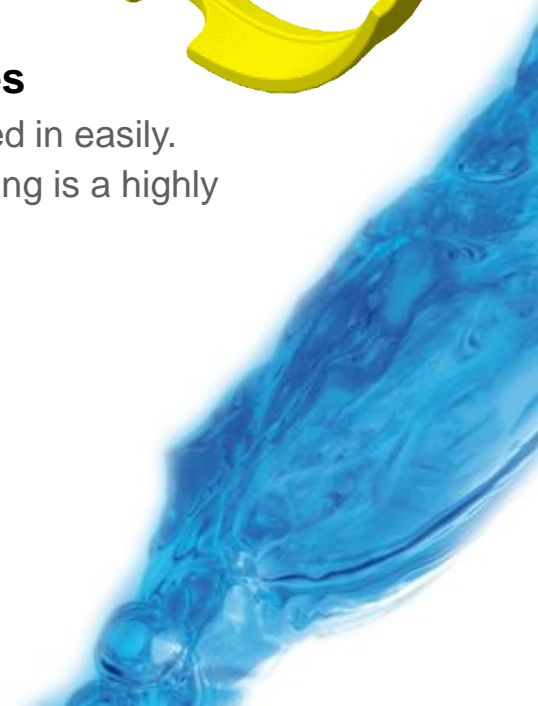
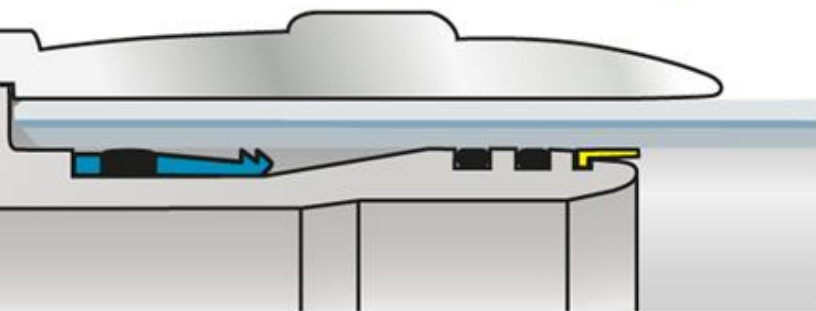
The PROTECTOR-ring



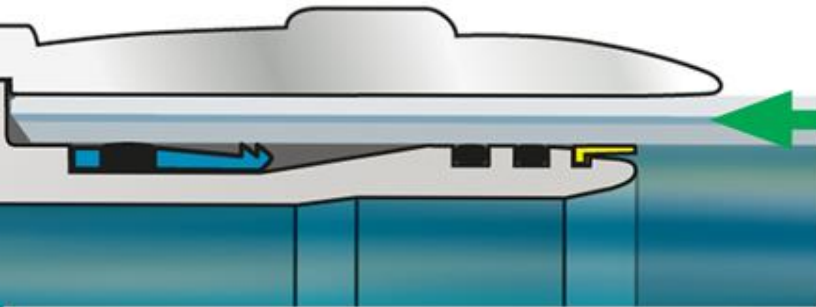
Non-calibrated pipes:
prevents an insertion of non-calibrated pipe and thus any damage of the O-rings.



Correctly calibrated pipes
Calibrated pipes can be pushed in easily. Therefore the PROTECTOR-ring is a highly effective safety feature.

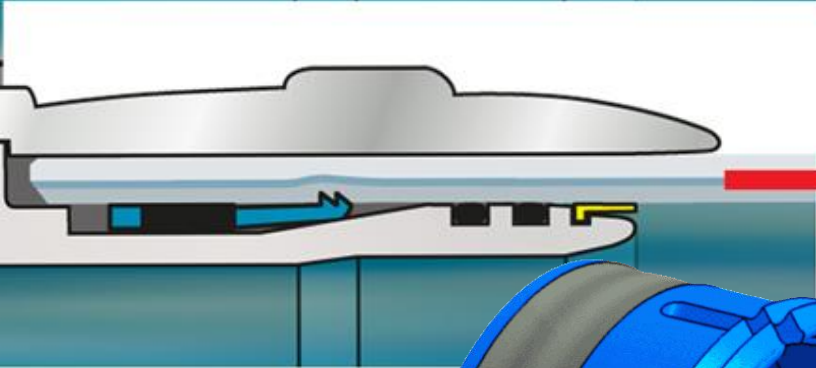


The Grip-ring



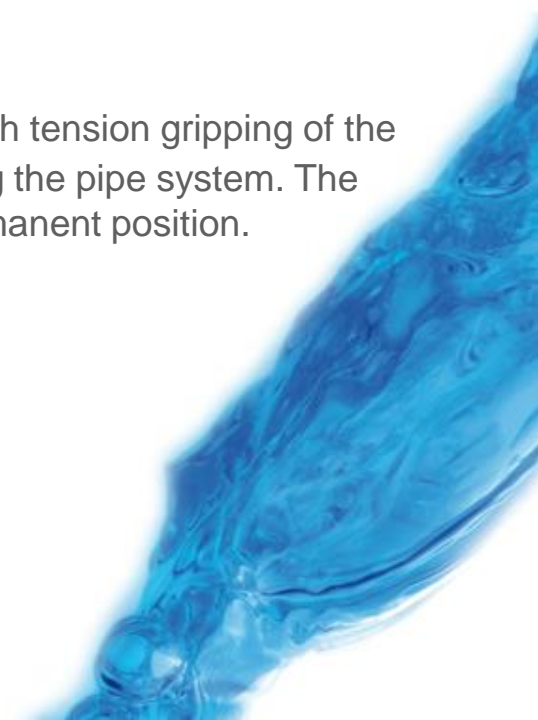
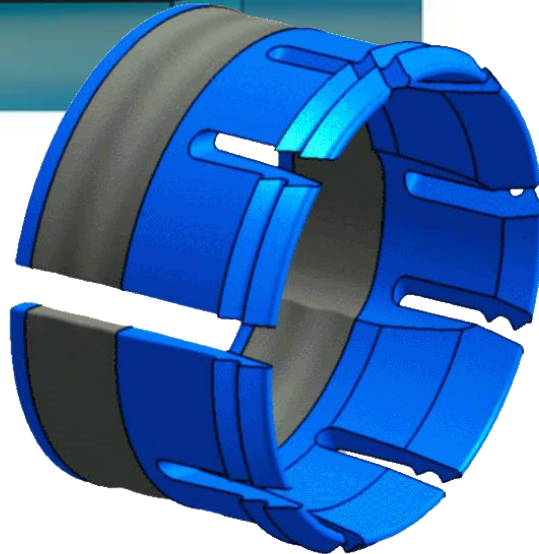
Pushing in of pipe:

With its integrated spring the Grip-ring allows an easy insertion of the pipe.



Under pressure:

The Grip-ring performs high tension gripping of the pipe wall after pressurizing the pipe system. The pipe is kept in a tight, permanent position.



Connection Technologies



Welding System



The first welding connection for dim. 16mm up to 75 mm for PE-RT / Al / PE-RT pipes

Up to 90% weight-reduction compared to metal connectors

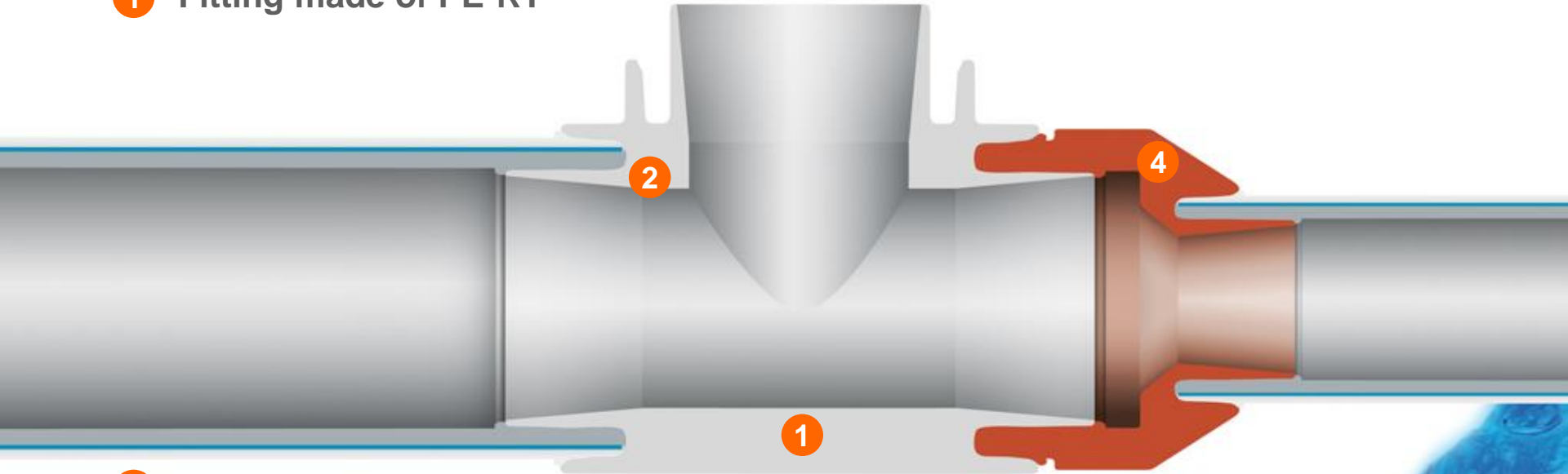
Fully compatible with the MULTITUBO press- and push-system

Connection Technologies

Welding System



1 Fitting made of PE-RT

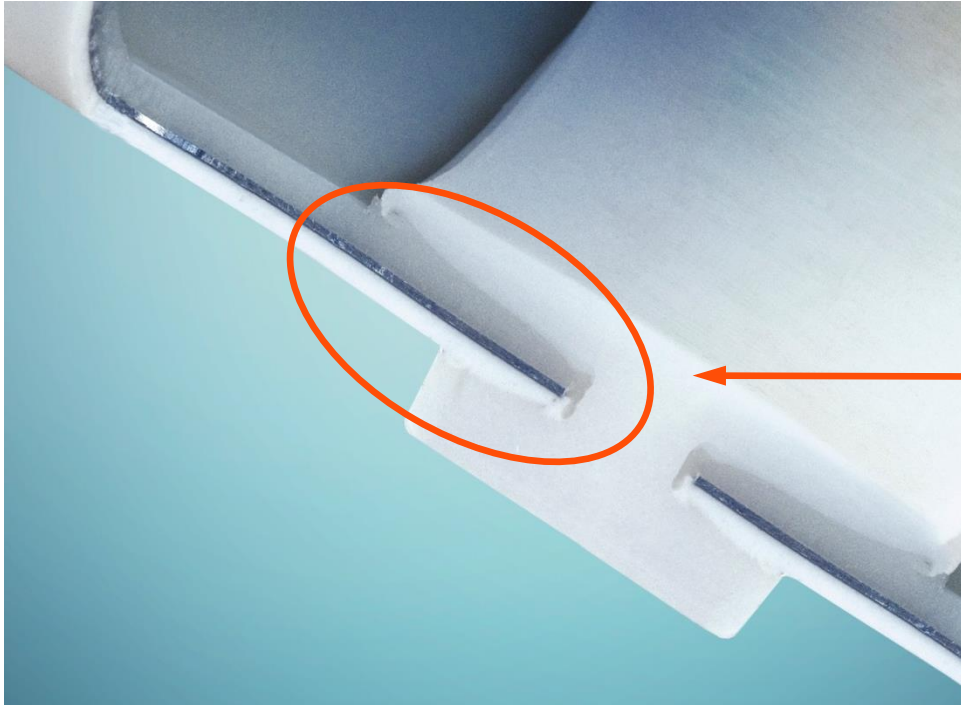


2 Fully protected aluminum layer
inner and outer layer are welded
homogenous, hermetic connection

3 Deburred pipe ends
important for an optimal material flow

4 Reductions easily done

Welding System



100% Protection
of Aluminium

Extensive and permanent tight fusion of the fitting and the pipe inner- and outer-material

Connection Technologies



Assembling

Preparation of pipe



Cut to length, calibrate, ...

Preparation of pipe is obligatory for all kinds of connections!

Connecting to ...



Press-Fittings

... mount fitting, ...

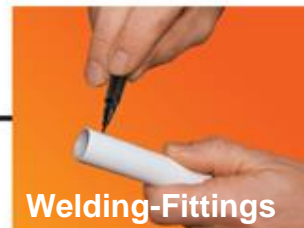


... press, that´s it!



Push-Fittings

... mount fitting, that´s it!



Welding-Fittings

... mark insertion depth, ...



... heat up fitting and pipe, ...



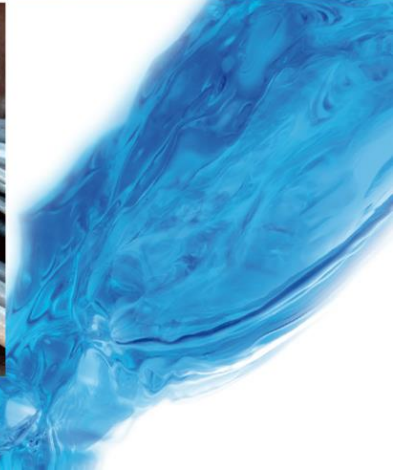
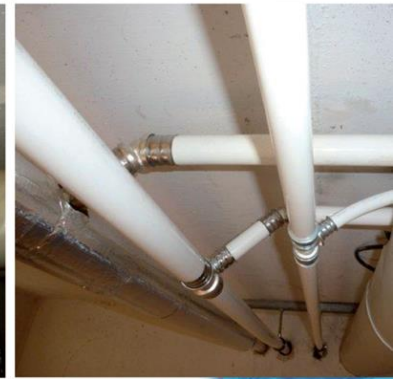
... mount fitting, that´s it!

Now
even more
flexible

MULTI-LAYER PIPE
+ PRESS-FITTING
+ PUSH-FITTING
+ WELD-FITTING
= 1 SYSTEM



Residential Building, Dresden, Germany



- Restructuring
- Exchange of risers / distribution pipes
- Working steps to provide full function
- Welding system

International references

Reykjavik, Iceland



- Multi-story building
- Dormitory
- Press fittings and welding system



Courtyard by Marriott, Hotel, Bremen, Germany



- 150 beds
- 8.500 m pipe, 16 mm - 63 mm
- 5.000 push and press fittings
- Tap water installation

International references

Trocadero, Museum, Paris, France



International references

Hotel, Almeria, Spain



- 14.000 m pipe, 16 mm - 75 mm
- Press fittings, 16 mm - 75 mm
- Risers and distribution pipes for tap water installation



International references

Köln Cubus, Cologne, Germany



- Approx. 11.000 sqm
- 5.000 m pre-insulated pipe
- 3.500 press fittings
- Radiator connection (500 radiators)



Various objects, Thailand



- Exclusive villas
- Multi-story buildings

Residential Building, Wixu, China



- 33 story building
- PE-RT pipes for floor heating

International references

The Eagle, London, England



- 27 story building
- 276 apartments
- 6,316 m² of commercial space



Prora, Rügen, Germany



Renovation and modernisations of a block of buildings

- originally started in 1936, for 20 000 tourists

Until now

- more than 18 km pipe Dim. 16 – 63mm and
- more than 13 000 Push- and Press-fittings





... just safely installed

