

Viega Marine Systems

Solutions for shipbuilding
and offshore projects.



Viega. A BETTER IDEA!

Some things last

Even more than 120 years later. At Viega, innovation and entrepreneurial vision are now more alive than ever before – these success factors date back to the company founders. With more than 4,000 staff worldwide at ten locations, Viega is constantly working on becoming even better.

Quality made by Viega

Is taken seriously at Viega. Computer-controlled, automated production and up to five quality checks ensure reliable quality and maximum safety. The result: over 17,000 products for almost every type of application.

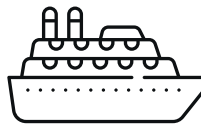
Always a fitting solution

This is made possible by the extensive modular concept. In particular in the case of the press systems, Viega relies on a comprehensive product range and covers nearly all fields of use – no matter how specific it is.



Viega pipe systems

THE RIGHT APPLICATION FOR EVERY MARINE SEGMENT.

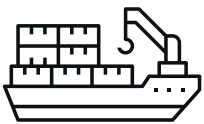


Passenger: Built for 21st century adventures

While guests are relaxing by the pool, eating in the restaurant with its stunning views or getting ready for the next shore excursion in their bathrooms, Viega pipe systems ensure that their holiday experience runs smoothly by transporting water and energy safely and reliably.

From the construction of a new cruise ship with prefabricated bathrooms featuring flexible Viega plastic pipe systems to the fast and efficient installation of media lines in control rooms and distribution shafts, Viega pipe systems can be installed without any need for hot work or complicated tool technology.

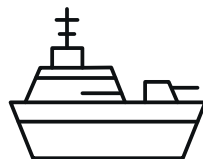
When it comes to maintenance in the dock or during the cruise, Viega pipe systems help to ensure that replacement and repair work can be carried out quickly and conveniently with a perfectly coordinated product range – available anywhere.



Cargo: A life at sea

The marine cargo industry – a little floating world, home to captains and sailors, which provides us with all the goods we need – has long depended on the hygienic transport of that most important of resources: drinking water. Viega pipe systems contribute to ships having a constant, safe supply of drinking water as they traverse the oceans. And that's not all: as well as supplying drinking water on tankers, container ships and general cargo vessels, the extensive system range comprising different materials can also be used for other applications as well.





Defense: Working with the most prestigious vessels

From humanitarian missions to combat operations, military vessels must be ready to serve when and where they are needed. The high demands of safety, quality and reliability of pipe systems are important when you are protecting the nation.

Viega fitting systems can be found on a host of marine vessels. With a reputation for quality, naval ships are an industry leader in innovative maritime engineering and construction.

New ships are built and many undergo repair on a daily basis, providing the opportunity for new technology to aid in the time, cost and quality put into each one.



Specialised: From drilling rigs to dredges

Viega pipe systems cover all kinds of different applications, including special media, and can be relied upon to keep systems running economically. The pipe systems supply media – from seawater to compressed air or coolant – safely and efficiently to the consumer.



Viega press systems

SEA-WORTHY MATERIALS FOR ALL CONNECTIONS.

Not every pipe in shipbuilding is forced to come into contact with seawater. CuNiFe does not always need to be used below deck. Whether it's the tried-and-tested Viega Profipress connector, Sanpress Inox or Megapress – Viega offers a multitude of certified press systems for shipbuilding.



Viega press systems	Profipress EN 1057	Sanpress Inox	Seapress	Megapress	Raxofix
Freshwater					
Fresh-cooling water pipelines	● ○	● ○		● ○	●
Fire extinguisher pipelines	●	●	●	● ○	
Sprinkler pipelines	●	●	●	● ○	
Hot / Cold water pipelines	●	●			●
Seawater					
Bilge water			●		
Seawater fire extinguisher			●		
Pipelines			●		
Foam extinguisher pipelines			●		
Sprinkler systems			●		
Ballast water pipelines			●		
Sea cooling water systems			●		
Tank cleaning pipelines			●		
Non-essential pipelines			●		
Flammable liquids					
Freight oil pipelines	○ ●	○ ●	○ ●	○ ●	
Fuel oil pipelines	●	●	●	●	
Lubricant pipelines	○ ●	○ ●	○ ●	○ ●	
Hydraulic pipelines	○ ●	○ ●	○ ●	○ ●	
Diverse					
Heating	● ○	● ○		● ○	●
Compressed (working air)	● ○ ●	● ○ ●	● ○	● ○ ●	●
Condensation		●			●
Chilled Water	●	●		●	●



ProPress Copper ASTM B 88	Megapress CuNi	Megapress Stainless
● ○	○	● ○
●	○	● ○
●	○	● ○
●		●
	○	
	○	
	○	
	○	
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	○	
○ ●	○	○
●		
○ ●	○	○
○ ●	○	○
●	○	● ○
●	○	● ○
	○	● ○
●	○	● ○

APPROVALS

	Profipress	Sanpress Inox	Seapress	Megapress	Raxofix	ProPress Copper	Megapress CuNi	Megapress Stainless
DNV GL	x	x	x	x	x	x	x	x
LR	x	x	x	x	x	x	x	x
RINA	x	x	x	x	x		x	x
BV	x	x	x	x	x		x	x
ABS	x	x	x	x		x	x	x
IRS	x	x	x					
NK	x	x	x					
RM	x	x						
CCS	x	x	x					
US CG				x			x	x

DNV GL: Det Norske Veritas Germanischer Lloyd

LR: Lloyd's Register

RINA: Registro Italiano Navale

BV: Bureau Veritas

ABS: American Bureau of Shipping

IRS: Indian Register of Shipping

NK: Nippon Kaiji Kyokai

RM: Russian Maritime Register

CCS: China Classification Society

US CG: United States Coast Guard

Sealing elements

● EPDM

● HNBR

○ FKM

● without sealing element



Shipbuilding as a special use CHARTING THE RIGHT COURSE WITH VIEGA.

Areas of use such as shipbuilding and other offshore systems place particularly high demands on the safety, quality and reliability of pipe systems. For a shipyard, fire is even worse than water. Welding often leads to fires, and employing the necessary firewatch personnel is expensive.

In the field of shipbuilding, Viega offers numerous different systems for wide-ranging applications on ships and offshore – including CuNi systems for seawater, copper and stainless steel for drinking water, heating and cooling or press connectors for thick-walled steel pipes. Thanks to the efficient press systems, there is no need for complicated joining techniques such as welding, soldering and thread cutting. And press technology offers significant benefits with regard to occupational safety as well.

In some cases, it can mean that firewatch personnel are no longer required to supervise hot work, while extensive preliminary work, platforms and scaffolding can also be eliminated. And if a connection accidentally remains unpressed, there is no risk of any problems. In systems with the Viega SC-Contur, the unpressed connection is guaranteed to be found during the tightness test, regardless of whether water, compressed air or inert gases are involved – and in any pressure range.



Cooling systems



Sprinkler systems



Fire extinguishers



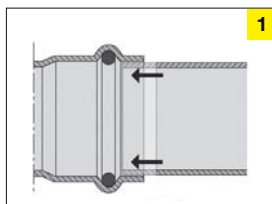
Fresh water



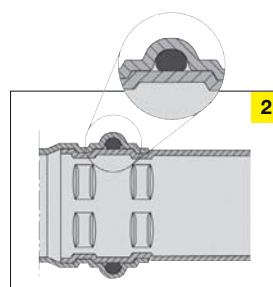
Bilge/ballast systems

Safe from the very first moment

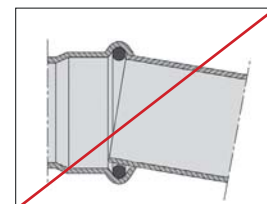
To protect the sealing element and ensure absolute safety, the Viega connectors with V-Contur have a cylindrical pipe guide (Fig. 1). This prevents the pipes from being slid onto the connector in an inadvertently skewed manner, damaging the sealing element. In addition, it guarantees that the connector and pipes sit straight and can be pressed safely.



The cylindrical pipe guide guarantees a straight and secure position of the pipe and connector.



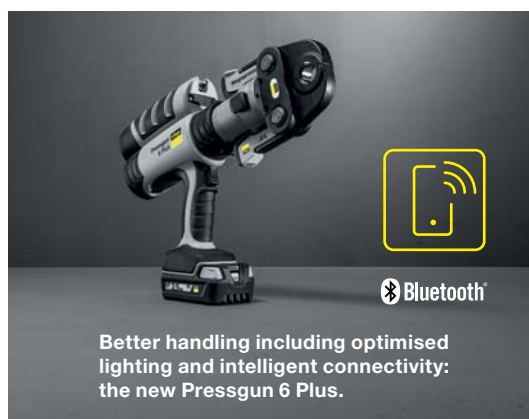
For each press process, the pipe and connector are force-fitted with one another in front of and behind the sealing element.



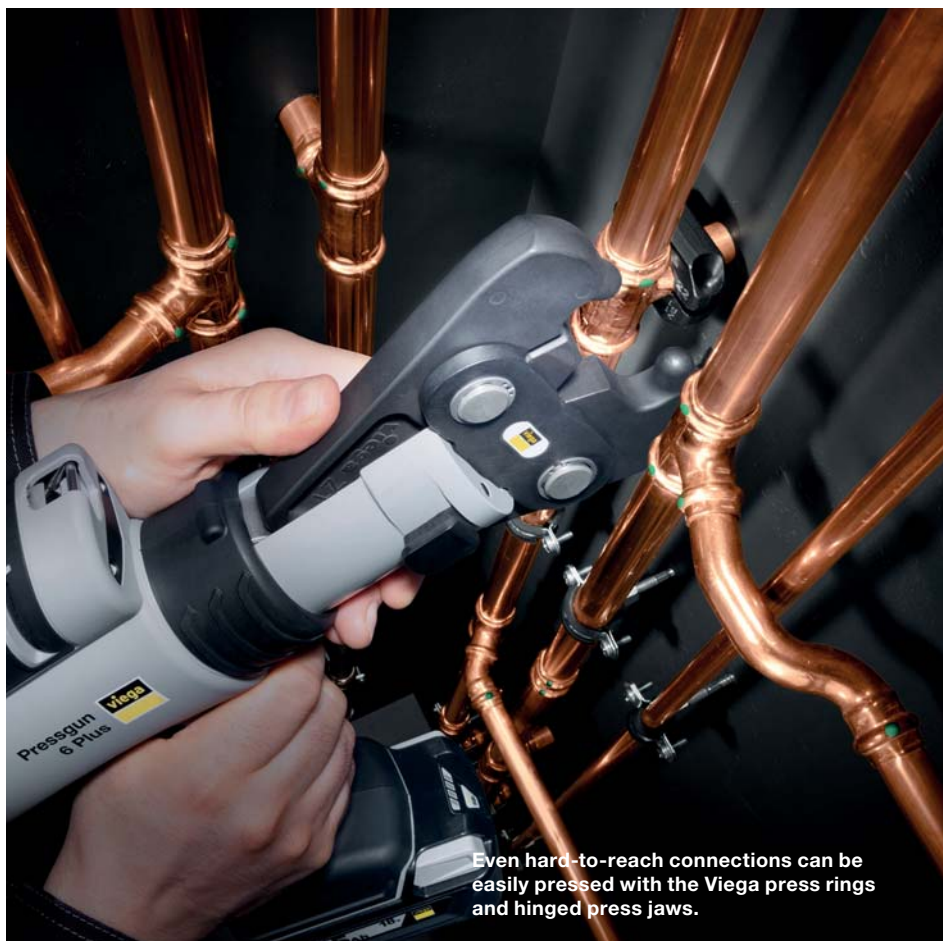
Without the cylindrical pipe guide, the pipe can twist and damage the sealing element.

Double pressing holds better

Viega does not compromise when it comes to safety. For this reason, the Viega press tool presses each join from 12 to 54 mm and ½ to 2 inch twice – both before and behind the sealing element (Fig. 2). This means the connection is permanently sealed, longitudinally force-locked and secured against rotation.



Better handling including optimised lighting and intelligent connectivity: the new Pressgun 6 Plus.



Even hard-to-reach connections can be easily pressed with the Viega press rings and hinged press jaws.

Safely connected

Comfortable, secure and quick work is guaranteed with the Viega Pressgun 6 Plus. With its low weight of just 3.2 kg and the reduced dimensions, the press machine can be easily handled, while offering the maximum performance. With its 360° rotating press head, it presses connectors ranging from 12 to 108 mm and ½ to 4 inch in seconds – and can carry out 42,000 pressings before it needs a maintenance check.



The Pressgun 6 Plus ensures a permanent, sealed connection with every press process.



The products are supplied in robust cases, with either a battery or mains adapter.



Viega systems

THE RIGHT SOLUTION FOR EVERY CHALLENGE.

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Viega Seapress _____

EU US

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Viega MegaPress CuNi _____

US

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Viega Profipress _____

EU

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Viega ProPress _____

US

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Viega Raxofix _____

EU

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Viega Megapress _____

EU US

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Viega Sanpress Inox _____

EU

19

Viega MegaPress Stainless _____

US

EU Threads with BSP Standard,
flanges with EU Standard

US Threads with NPT Standard,
flanges with US Standard

Viega Seapress

ABLE TO WITHSTAND HIGH PRESSURE, EVEN IN THE DEEPEST WATERS.



The right material

Pipe systems which come into contact with seawater must satisfy the highest demands. The solution: Viega Seapress. The corrosion-resistant copper-nickel-iron alloy of the press connectors is manufactured in accordance with international standards and fulfils the following standards, among others:

- ASTM-B-466 / UNS C70600
- MIL-T-16420K / UNS C70600
- EEMUA 144 / UNS 7060X
- JIS H 3300 / JIS C7060T
- DIN 86019 / WL 2.1972

Correctly sealed

All connectors are equipped with the tried-and-tested EPDM sealing element. This allows a wide range of use from -20 °C to 110 °C. Maximum operation pressure 1,6 MPa. Depending on the application, the sealing element can also be replaced by an HNBR or FKM sealing element.

Seapress applications

From seawater lines for water desalination to applications for cooling or fire fighting lines is seapress the system that saves a lot of times and recourses to welding CuNi pipes.

Seapress applications:

- Seawater lines
- Scupper
- Seawater desalination
- Cooling water systems
- Compressed air
- Wet fire main lines
- Bilge lines



ADVANTAGES AT A GLANCE

- Seawater-resistant press system especially for shipbuilding
- Corrosion-resistant copper-nickel-iron alloy CuNiFe90/10
- Fulfils most relevant standards and has the necessary licences
- Assembly time savings of up to 80 %
- Cylindrical pipe design and double press action for greatest possible security
- Extensive range in dimensions ranging from 15 to 108 mm
- Threads with NPT and BSP Standards
- Maximum operating pressure 1,6 MPa / 230 psi
- Maximum operating temperature with EPDM 110 °C / 230 °F

Viega MegaPress CuNi

CREATED SPECIFICALLY FOR MARINE IN STANDARD SIZES.

Viega's MegaPress CuNi 90/10 system is suitable for thick-walled CuNi pipes in the dimensions from ½ inch up to 4 inch. The copper nickel alloy fittings are approved for installation in a variety of applications from cooling water to fuel to fire sprinkler and are specifically designed to stand up to the harsh environments of the sea.



Megapress CuNi applications:

- Seawater cooling
- Fire main wet, dry and foam
- Sprinkler system and water spray
- Potable water
- Bilge lines
- Foam system
- Ballast system
- Tank cleaning services
- Non-essential systems
- Cargo oil lines
- Fuel oil lines
- Lubricating oil lines
- Hydraulic oils
- Domestic heating
- Compressed air systems
- Condensate return
- Vacuum



ADVANTAGES AT A GLANCE

- For CuNi 90/10 pipes Schedule 40 and Class 200
- Copper nickel alloy (CuNi 90/10) well-suited for marine environments and systems
- One sealing element (FKM) for all applications
- Can press into a wet or dry system
- No fire watches, hot work permits or gas freeing
- Installation savings of up to 80 %
- Dimensions ½–4 inches
- Threads with NPT Standard, flanges and dimensions with US Standard
- Maximum operating pressure with FKM 1,6 MPa / 230 psi
- Maximum operating temperature with FKM 140 °C / 284 °F

Viega Profipress

SAVE TIME, BE MORE PROFITABLE.

Unique product diversity

There are good reasons why installations featuring Viega Profipress have been successfully and safely realized all over the world. It is all made possible by the unique product diversity of Profipress. Whether for drinking water, cooling, heating, or for special applications for cruise liners or navy ships: Viega Profipress offers the right technical solution for every installation. Over 800 components in different sizes ensure maximum flexibility. And they also have a unique safety factor: the Viega SC-Contur.

Profipress applications:

- Potable Water
- Heating
- Compressed air
- Cooling water systems
- Fuel oil systems
- Lubricating oil systems
- Technical Gases



Work more efficiently and safely

Soldering and bolting drinking water and heating pipes has not been necessary for a long time: Thanks to Viega Profipress, the globally established system, copper pipes are rapidly pressed in place to the highest quality standards. And the optimized Z-dimensions of the robust, pipe-moulded press connectors permit quick and efficient working even in tight spaces.



ADVANTAGES AT A GLANCE

- For copper pipes in acc. to EN 1057
- Full range product mix including special components for repair and ship building
- Available in dimensions 12 to 108 mm including intermediate size 64 mm
- Made of copper and gunmetal or silicon bronze for maximum quality
- All dimensions with SC-Contur
- Equipped with high-quality EPDM, HNBR or FKM sealing element
- Threads with BSP Standard, flanges and dimensions with EU Standard
- Maximum operating pressure with EPDM 1,6 MPa / 230 psi
- Maximum operating temperature with EPDM 110 °C / 230 °F

Viega ProPress

THE INDUSTRY'S MOST TRUSTED CONNECTION.

Viega ProPress is one of the well known leader in copper press joining solutions. Viega offers hundreds of press fitting choices. ProPress is ideal for marine applications such as potable water, fuel and compressed air.

ProPress applications:

- Cooling water systems
- Compressed air
- Fire main and water spray
- Sprinkler systems
- Potable water
- Cargo oil lines
- Fuel oil lines
- Lubricating oil lines
- Hydraulic oil
- Vacuum



ADVANTAGES AT A GLANCE

- For copper pipes in acc. to ASTM B88
- Full range product mix including special components for repair and ship building
- Available in dimensions ½ to 4 inches
- Made of copper and silicon bronze for maximum quality
- All dimensions with SC-Contur
- Equipped with high-quality EPDM, HNBR or FKM sealing element
- Threads with NPT Standard, flanges and dimensions with US Standard
- Maximum operating pressure with EPDM 2,0 MPa / 300 psi
- Maximum operating temperature with EPDM 120 °C / 250 °F



Viega Raxofix

FLEXIBLE AND LIGHT SOLUTIONS FOR POTABLE WATER AND MORE.

'Raxial' press connecting technology without sealing elements

The raxial press connecting technology developed for Raxofix is a trailblazer. It combines the decisive advantage of radial press connecting technology – namely its easy handling – with that of axial sliding sleeve technology with its familiar pressing action. The Raxofix connection pieces are designed in such a way that a radial movement is transformed into an axial pressing operation. In this way, it is possible to produce an absolutely secure, homogeneous pressing – suitable for plastic – in just a single step. Without the need for a sealing element and without time-consuming calibration, chamfering or enlargement.

Viega Raxofix is the perfect system for the efficient distribution of drinking water on ships. Thanks to its optimised joining technology with no sealing elements, it is particularly easy and safe to install – from the distribution line (63 mm) to the flexible connection of the last tap (16 mm). With a broad range of products for supplying drinking water in bathrooms on cruise ships and superyachts, Viega Raxofix is perfectly tailored to prefabricated bathrooms and components.

In comparison with metal pipes, there is a significant weight saving. The systems can be installed on ships in no time at all thanks to the use of lightweight, dimensionally stable yet flexible pipes. Thanks to the absence of sealing elements in the connectors, there is virtually no reduction in the cross-section. This enables smaller dimensions, which in turn reduces the volume of water in the pipes, thus improving the hygiene of the drinking water.

In comparison with standard plastic pipe systems, time savings of over 30 % can be achieved during installation. Only three installation steps are required: cut the pipe to length using a pipe shear or cutter – no calibration, widening or further pipe preparation – mount, and press. And that's it!

Raxofix application:

- Potable water
- Heating water
- Chilled water
- Compressed air
- Condensate from air conditioning



ADVANTAGES AT A GLANCE

- Streamlined radii and minimized cross-sectional area reductions keep pressure losses in Raxofix connection pieces low
- Low pressure losses mean that pipelines can be designed with smaller sized pipes
- Connection system without sealing elements
- Calibration not needed = up to 30 % faster
- Thought-through pipe design for high resistance to buckling
- Complete product range for drinking water and heating installations
- Durable and corrosion-resistant metal connecting pieces
- Maximum operating pressure 1,0 MPa / 145 psi
- Maximum operating temperature 80 °C / 176 °F



Viega Megapress

PRESSES THICK-WALLED STEEL: COLD SAFE AND IN SECONDS.

One system for all applications

Viega Megapress is the press technology specifically designed for thick-walled steel pipes. The formed-pipe connectors made of 1.0308 steel material with a zinc-nickel coating guarantee the highest quality and durability, and therefore of course a long service life. Steel pipes in acc. to EN 10255 with threaded pipe quality and in acc. to EN 10220/10216-1 and EN 10220/10217-1 in boiler pipe quality and ASTM Schedule 5 to Schedule 40 carbon steel pipe, in the sizes of $\frac{3}{8}$ to 4 inches, can be connected safely and reliably using the Viega Megapress system. Viega Megapress is available with sealing elements made of EPDM, HNBR and FKM depending in the application.

An economic advantage

Viega Megapress has a clear advantage over common connection methods for thick-walled steel pipes. Especially when it comes to welding, cold press technology is far superior. Although welding is a proven method still today, it always involves high time expenditure, permanent fire risk and strenuous physical effort. This does not only render welding economically unattractive – carrying heavy gas cylinders and welding apparatus is a really back-breaking job, especially if the connection is located several metres high or at hard-to-access locations. Cold press connecting technology makes Viega Megapress simply faster, safer, and more efficient. Viega press tools also make sure that connections are durable and safe.

Threads:

- EU all threads in BSP Standard, flanges and dimensions in acc. to EU Standards
- US all threads in NSP Standard, flanges and dimensions in acc. to US Standards

Megapress applications:

- Fire extinguisher pipelines
- Sprinkler
- Low pressure steam
- Compressed air
- Vacuum
- Freight oil
- Fuel oil
- Lubricant oil
- Hydraulic oil
- Closed heating and cooling applications



ADVANTAGES AT A GLANCE

- In terms of economy, up to 60 % less installation time for connection compared with welding for sizes from $\frac{3}{8}$ to 2 inches, and up to 80 % for sizes from 2½ to 4 inches
- Absolutely fire-safe, because neither flames nor smoke arise with cold press technology
- No additional time and cost expenditure for fire protection precautions
- Viega SC-Contur in all Megapress connectors immediately indicates any inadvertently unpressed connections during the pressure test
- Presses thick-walled steel pipes with nominal connection diameters from $\frac{3}{8}$ to 4 inches, regardless whether the pipe is seamless, welded, black, galvanized or epoxy resin coated
- Thanks to the Innovative Pressgun Press Booster, steel pipes of sizes 2½, 3, and 4 inches can also be force-fit connected
- Maximum operating pressure with FKM 1,4 MPa / 200 psi
- Maximum operating temperature with FKM 140 °C / 284 °F

Viega Sanpress Inox

A STAINLESS STEEL SYSTEM FOR TOP QUALITY DRINKING WATER INSTALLATIONS.

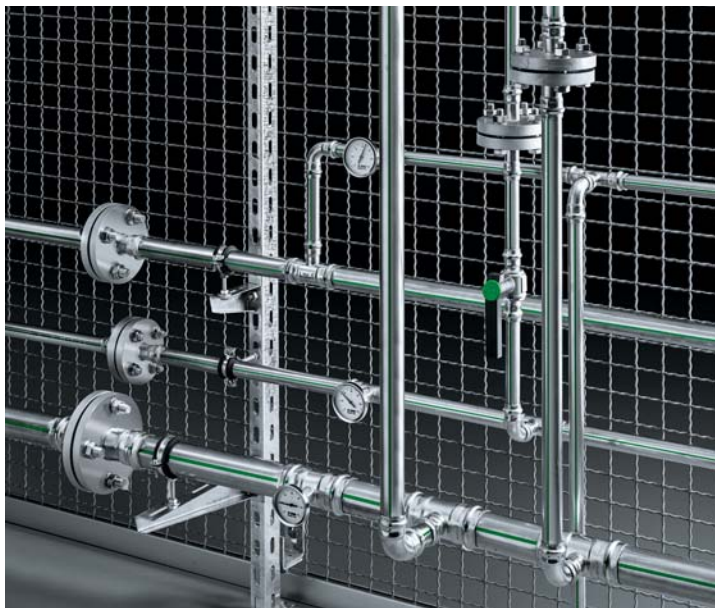
Safety under the roughest conditions

A reliable system made of high quality materials. Pipes made of 1.4401 and 1.4521 with press connectors made of stainless steel creates a system for most potable water quality.

But stainless steel is also well used as heating, compressed air, drainage, and piping system for oils and technical gases. Available with sealing elements of EPDM, HNBR and also FKM for different applications.

Applications

Irrespective of how high the requirements for the preservation and constancy of drinking water quality are: Sanpress Inox fulfills even the most stringent of guidelines. It is therefore not only perfectly suited for drinking water installations, but also for industrial cooling and process water systems.



Sanpress Inox applications:

- Potable water
- Chilled water
- Compressed air
- Technical gases
- Fuel oil
- Lubricant oil
- Freight oil
- Hydraulic pipelines
- Greywater
- Low-pressure steam
- Chemical process lines
- Steam condensate
- Condensate
- Heating
- Demineralised water



ADVANTAGES AT A GLANCE

- Top quality material all the way through, created by a combination of stainless steel connectors with stainless steel pipes 1.4521 and 1.4401
- Available in dimensions 15 to 108 mm
- All connectors come with SC-Contur
- High quality, durable EPDM sealing element
- Maximum operating pressure with EPDM 1,6 MPa / 230 psi
- Maximum operating temperature with EPDM 110 °C / 230 °F

Viega MegaPress Stainless

FOR MORE APPLICATIONS THAN EVER BEFORE.

Designed for thick-walled stainless steel pipes. Viega's line of MegaPress fittings in stainless steel make efficient connections possible for more applications than ever before. MegaPress Stainless fittings are available in 304 and 316 stainless steel. MegaPress Stainless is approved for use with Schedule 5 through Schedule 40 pipe in sizes ½ to 4 inches.

MegaPress Stainless applications:

- Chemical process lines
- Chilled water
- Compressed air
- Technical gases
- Condensate
- Diesel fuel
- Ethanol
- Fuel oil
- Greywater
- Hydronic heating
- Low-pressure steam
- Lube oils
- Potable water
- Steam condensate
- Vacuum
- Heating



ADVANTAGES AT A GLANCE

- Available in 304 and 316 stainless steel
 - 304 fittings feature FKM sealing elements
 - 316 fittings feature EPDM or FKM sealing elements
- Fitting sizes ranging from ½ to 4 inches
- Fittings approved for use with Schedule 5 to Schedule 40 pipe
- SC Contur helps easily identify unpressed connections
- Cold press technology eliminates the need for fire watches or hot work permits
- No contamination caused by thread cutting oil or filings
- System-matched installation tools, jaw and press rings
- Maximum operating pressure with FKM 1,4 MPa /200 psi
- Maximum operating temperature with FKM 140 °C / 284 °F





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