

SOLUTIONS FOR SHIP-BUILDING, REPAIR AND OFFSHORE PROJECTS.

Viega Marine Systems



viega



A BETTER IDEA!

Viega.

Some things last

After more than 120 years, innovation and entrepreneurial vision are more alive than ever at Viega – these success factors date back to the company founders. With more than 5,000 staff worldwide at ten locations, Viega is constantly working on becoming even better.

Quality made by Viega

Quality 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.

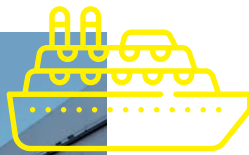
Always a fitting solution

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.



THE RIGHT APPLICATION FOR EVERY MARINE SEGMENT.

Viega piping systems



Passenger: Built for 21st century adventures

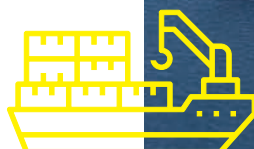
While guests are relaxing by the pool, eating in the restaurant with its stunning views or getting ready for the next shore excursion in their bathrooms, Viega pipe systems ensure that their holiday experience runs smoothly by transporting water and energy safely and reliably.

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 or refit work in the dock or at sea, 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. With the right Viega press tool and material on board, repairs can be easily done at sea without any delays of the ship. 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.





Defence: 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 on 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 improve 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.

SEA-WORTHY MATERIALS FOR ALL CONNECTIONS.

Viega press systems. 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, Seapress, Megapress – Viega offers a multitude of certified press systems for shipbuilding.



VEIEGA PRESS SYSTEMS	PROFIPRESS EN 1057	SANPRESS INOX	SEAPRESS	MEGAPRESS	TEMPOX	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 air (service air)	●○●	●○●	●○	●○●	●○●	●
Condensation		●				●
Chilled water	●	●	●	●	●	●
Urea		●*			●*	



PROPRESS COPPER ASTM B 88	MEGAPRESS CuNi	MEGAPRESS STAINLESS
● ○	○	● ○
●	○	●
●	○	●
●		●
	○	●
	○	●
	○	●
	○	●
	○	●
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○ ●	○	○
●		
○ ●	○	○
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●	○	● ○
●	○	● ○
	○	● ○
●	○	● ○

APPROVALS	PROFIPRESS	SANPRESS INOX	SEAPRESS	MEGAPRESS	TEMPOX	RAXOFIX	PROPRESS COPPER	MEGAPRESS CuNi	MEGAPRESS STAINLESS
DNV GL	x	x	x	x	x	x	x	x	x
LR	x	x	x	x	x	x	x	x	x
RINA	x	x	x	x	x	x		x	x
BV	x	x	x	x	x	x		x	x
ABS	x	x	x	x			x	x	x
IRS	x	x	x						
NK	x	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 Kyōkai

CCS: China Classification Society

US CG: United States Coast Guard

Sealing elements

● EPDM

● HNBR

○ FKM

● without sealing element

* depending on classification society



CHARTING **THE RIGHT** **COURSE** WITH VIEGA.

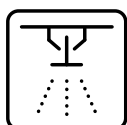
Shipbuilding as a special use. Areas of use such as shipbuilding and other offshore systems place particularly high demands on the safety, quality and reliability of pipe systems. For a shipyard, fire is even worse than water. Welding often leads to fires, and employing the necessary fire watch personnel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



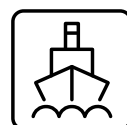
Sprinkler systems



Fire extinguishers



Fresh water



Bilge/ballast systems



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

Safe from the very first moment

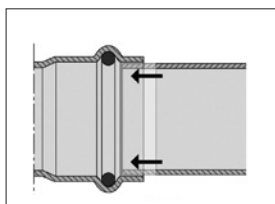
To protect the sealing element and ensure absolute safety, the Viega connectors with V-Contur have a cylindrical pipe guide (Fig. 01). This prevents the pipes from being slid onto the connector in an inadvertently skewed manner, damaging the sealing element (Fig. 03). In addition, it guarantees that the connector and pipes sit straight and can be pressed safely.

Double pressing holds better

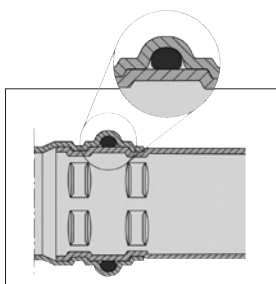
Viega does not compromise when it comes to safety. For this reason, the Viega press tool presses each joint from 12 to 54 mm and ½ to 2 inches twice – both in front of and behind the sealing element (Fig. 02). This means the connection is permanently sealed, longitudinally force-locked and secured against rotation.



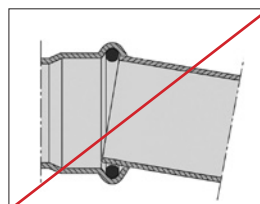
Better handling including optimised lighting and intelligent connectivity: the new Pressgun 6 Plus.



01
The cylindrical pipe guide guarantees a straight and secure position of the pipe and connector.



02
For each press process, the pipe and connector are force-fitted with one another in front of and behind the sealing element.



03
Without the cylindrical pipe guide, the pipe can twist and damage the sealing element.

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 inches 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.

THE RIGHT SOLUTION FOR EVERY CHALLENGE.

Viega marine systems

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EU US

Viega Seapress

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US

Viega MegaPress CuNi

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EU

Viega Profipress

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US

Viega ProPress

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EU

Viega Raxofix

17

EU US

Viega Megapress

18

EU

Viega Sanpress Inox

18

EU

Viega Temponox

19

US

Viega MegaPress Stainless



EU

Threads with BSP standard,
flanges with EU standard

US

Threads with NPT standard,
flanges with US standard

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

Viega Seapress



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 firefighting lines, Seapress is the system that saves a lot of time and resources for welding CuNi pipes.

Seapress applications:

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

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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



CREATED SPECIFICALLY FOR MARINE USES IN STANDARD SIZES.

Viega MegaPress CuNi

Viega's MegaPress CuNi 90/10 system is suitable for thick-walled CuNi pipes in the dimensions from ½ inches up to 4 inches. The copper nickel alloy fittings are approved for installation in a variety of applications from cooling water to fuel to fire sprinklers 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

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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 escape
- Installation savings of up to 80 %
- Dimensions ½ to 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

SAVE TIME, BE MORE PROFITABLE.

Viega Profipress



Unique product diversity

There are good reasons why installations featuring Viega Profipress have been successfully and safely realised 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.

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ADVANTAGES AT A GLANCE

- For copper pipes in acc. with EN 1057
- Full-range product mix including special components for repair and shipbuilding
- 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

THE INDUSTRY'S MOST TRUSTED CONNECTION.

Viega ProPress

Viega ProPress is a 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

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ADVANTAGES AT A GLANCE

- For copper pipes in acc. with ASTM B88
- Full-range product mix including special components for repair and shipbuilding
- 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



FLEXIBLE AND LIGHT SOLUTIONS FOR POTABLE WATER AND MORE.

Viega Raxofix

'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 savings. 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 applications:

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



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ADVANTAGES AT A GLANCE

- Streamlined radii and minimised 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



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

Viega Megapress

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. with EN 10255 with threaded pipe quality and in acc. with 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.

Threads:

- EU all threads in BSP standard, flanges and dimensions in acc. with EU standards
- US all threads in NSP standard, flanges and dimensions in acc. with US standards

Applications:

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

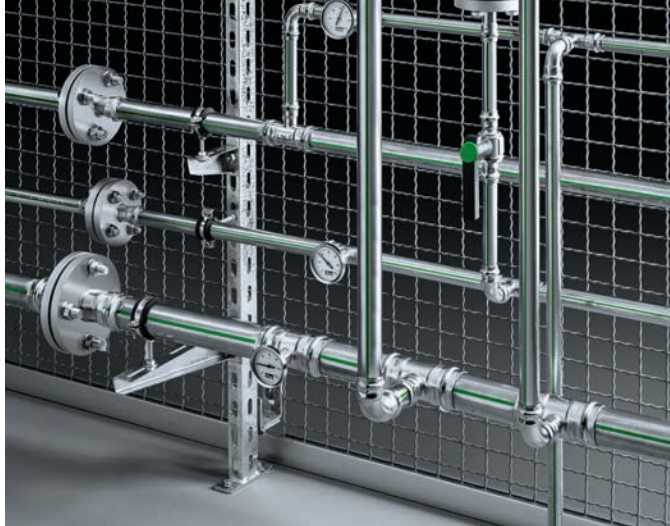
An economic advantage

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 still a proven method today, it always involves high time expenditure, permanent fire risk and strenuous physical effort. This not only renders 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.

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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



STAINLESS STEEL SYSTEMS FOR TOP QUALITY.

Viega Sanpress Inox

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 create a system for maximum potable water quality. But stainless steel is also well used in heating, compressed air, drainage, and piping systems 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 fulfils 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
- Urea*

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ADVANTAGES AT A GLANCE

- Sanpress Inox can cover a wide range of applications
- 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
- High safety thanks to the Viega SC-Contur with the unpressed-and-tight function
- 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 Temponox

Corrosion-resistant quality and economic efficiency

Robust and insensitive stainless steel stands for excellent long-term quality – not only in industrial applications but also in ship-building. The press connectors are made of 1.4301, the pipes are made of 1.4520 and the system is available with sealing elements made of EPDM. Depending on the application, the sealing element can also be replaced by an FKM or HNBR sealing element.

Applications

Temponox fulfils the requirements for piping on ships, regardless of whether for heating, closed cooling systems or service air. The system offers the perfect symbiosis of corrosion-resistant quality and economic efficiency.

Temponox applications:

- Heating systems
- Closed cooling systems
- Service air (non-essential)
- Urea*

* depending on classification society

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ADVANTAGES AT A GLANCE

- Economical complete system made of stainless steel with pipes 1.4520
- Perfectly matched system components in dimensions 15 to 108 mm
- All connectors come with SC-Contur
- Maximum operating pressure with EPDM 1.6 MPa / 230 psi
- Maximum operating temperature with EPDM 110 °C / 230 °F

FOR MORE APPLICATIONS THAN EVER BEFORE.

Viega MegaPress Stainless

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



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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 to 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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