



# Propress™ WATER & Propress™ GAS Related questions

## What is the procedure for silver soldering (brazing) near a Viega Propress connection?

When soldering near a Viega Propress connection, you must remain at least 25 pipe diameters away from the connection. If 25 pipe diameters are not possible, the installer should take proper precautions to keep the Viega Propress connection cool while soldering. These include:

- § Wrapping the connection with a cold wet rag
- § Fabricating solder connections prior to installing the pressed fitting making sure the pipe has cooled before installing the fitting
- § Applying “spray type ” spot freezing product

There should not ever be a need to silver solder or braze since Propress has a full range of fittings.

## What is the procedure for soft soldering near a Viega Propress connection?

When soldering near a Viega Propress connection, you must remain at least ten pipe diameters away from the connection. If ten pipe diameters are not possible, the installer should take proper precautions to keep the Viega Propress connection cool while soldering. These include:

- § Wrapping the connection with a cold wet rag
- § Fabricating solder connections prior to installing the pressed fitting making sure the pipe has cooled before installing the fitting
- § Applying “spray type ” spot freezing product

There should never be a need to silver solder or braze since Propress has a full range of fittings.

## How would an inspector know they are looking at a good connection?

Good connections can be proven by performing a pressure test. This is the same procedure for soldered/brazed connections.

## How do I fabricate a system in tight places when using Viega Propress?

If necessary, pre-fabricate connections that are in tight places and then install.

## What is the warranty for Viega Propress?

Viega Propress fittings carry a 25-year warranty against defects in material and workmanship from Viega, conditional on being installed by a licensed plumber who follows the instructions and uses Crane Copper Tube.

## Life of sealing element?

The sealing elements of both the Propress and PropressG have a design life of 50 years with a factor of safety of 1.8.

## Can you rotate a pressed fitting without damaging the integrity of the connection? i.e. rotate an elbow joint by rotating the opposite leg of the joint.



Yes, although this should be avoided if possible. As a general rule of thumb, if the fitting is turned more than 5° it must be repressed to restore the resistance to rotational movement.

#### **Can a user solder the female “C” end of a Viega Propress fitting?**

This is not a recommended practice and constitutes improper use of the product voiding any product warranties. The recessed groove that normally houses the seal will interfere with the capillary action that normally draws solder into and around the tubing.

#### **What are the flow rates through Viega Propress fittings?**

Because of the long radius (1.5D) on elbows and the larger throat on tees, the flow rate is better than standard short radius soldered fitting. Flow rates and flow rate calculations can assumed to be the same as those used for solder fitting installations.

#### **Can both Viega Propress and Viega Propress G fittings be used in the same installation?**

Yes. Both fittings can be used in the same installation as long as both fittings are approved for that particular application.

#### **What should a user do if a Viega Propress system leaks?**

In general, Viega Propress fittings only leak due to one of three reasons; the fitting was never pressed, the copper tubing was not properly inserted or the pressing jaws were not properly aligned. If the fitting was never pressed, confirm that the tubing is properly installed and proceed with pressing. If the copper tubing was not properly inserted, cut out the fitting and reinstall properly. If the pressing jaws were not properly aligned, cut out the fitting and reinstall properly. If problems persists contact Crane Copper Tube.

#### **What should be done if a user accidentally cuts the seal with the copper tubing?**

If the seal is damaged by inserting the copper tubing, the seal must be replaced (note CCT does not intend on selling the sealing elements separately). Please note that the tolerances of the fitting socket ensure that the tubing is inserted at the appropriate angle. Debur the outside of the tubing before insertion into the fitting. This will prevent damage to the seal.

#### **Is Viega Propress approved for underground use?**

Yes. Viega Propress can be installed underground. Approval of this application is based on performance testing, which includes withstanding pressure, temperature, water hammer, bending forces, torsion, temperature variation, vibration and vacuum.

#### **What is the SC Feature?**

The Smart Connect Feature provides a quick and easy way to identify un-pressed connections during the pressure testing process. Un-pressed connections are located by pressurizing the system with air or water. When testing with air, the pressure range required is 3 to 600 kPa. When testing with water, the pressure range is 100 to 600 kPa. The SC Feature is removed during the pressing process, creating a leak-proof, permanent connection. Guaranteed.

#### **Why is the Smart Connect Feature so valuable?**

The Smart Connect Feature provides the user with a strong peace of mind. It allows for faster testing procedures since you do not have to shut down and drain the system. Costly damages and possible insurance claims and premiums can be avoided because it identifies un-pressed connections before they can become a problem. Because of the timesavings, projects stay on track.

### **Can Propress be dismantled and reused?**

No, Propress is a permanent connection.

### **I don't trust sealing elements (o-rings)?**

O-rings generally have a bad name because they are used to compensate for low tolerance and wearing parts in dynamic situations, the rubber compounds are also generally quite soft. The sealing elements of Propress are in a static situation with their own high tolerance compartment within the fitting. Because the pressing tool applies 10-15 tonnes of force the rubber compound can be quite rigid.

The rubber's used in the fittings have a proven track record. Water mains pipes have relied on the same EPDM as Propress for over 50 years. The HNBR (Hydrated Nitrile Butliene Rubber) of the PropressG fittings are commonly used as engine seals.

### **What tools do you need for Propress?**

Viega Propress requires a press tool, either the Picco for DN15-DN25 or the PT3-AH for DN15-DN100, a set of jaws is also required for each tube size. The jaws are unique to the Picco or PT3-AH and therefore cannot be interchanged.

### **Can Propress be used on annealed tube?**

Yes, Propress can be used on annealed, half hard and hard drawn tube.

### **Is ovality of the copper tube an issue?**

Propress requires that the tube be perfectly round or the tube will not fit into the fitting. Annealed tube is usually manufactured with unacceptable ovality but cutting the tube with a tube cutter removes this ovalness.

### **Incise mark (permanent branding) on copper pipe?**

Only Crane Copper tube has been tested and approved for use with the Viega Propress system and is perfectly safe to be used over incise markings. Other brands of copper tube have not been tested and therefore are not guaranteed.

### **Can Viega Propress be used in the manufacturing of air conditioners?**

Neither of the sealing elements are compatible with refrigerant gases, so Propress cannot be used in such applications.

### **What pressure can Propress handle?**

Propress is approved for Watermark with a working pressure up to 1600kPa. For pressures requirements in excess of this please consult Crane Copper Tube.

### **Pull out force**

Viega Propress can handle loads in excess of 1.3kN, which is several times greater than required by AS3688. Although not tested in comparison to soft soldering and brazed connections it should be assumed that the Propress pull out force is greater than soft solder but not quite as high as the brazed joint.

### **Are there any installation precautions with Propress**

Yes, the installer should avoid putting the fitting too close to other objects like a stud frame or mounting clips where due to thermal expansion or contraction of the pipe the fitting could have unwanted stresses applied.



These precautions are not unique to Propress as they are good practice for soldering or brazing, which can handle the same amount of expansion as Propress.

**What conductivity does Propress have for electrical earthing.**

Propress allows electricity to conduct.

**Can Propress handle suction or negative pressure?**

Yes, but at significantly less pressure than the safe working pressure of the copper tube. There are two reasons for this. One, all tubing has better performance with positive pressure than negative pressure and two, the Propress fitting is designed such that when the pressure in the tube increases then the tube expands onto the fitting whereas the opposite would be the case for negative pressure. Propress is rated for a vacuum pressure of 800kPa less than the atmospheric pressure differential. Please consult Crane Copper Tube if you intend to use Propress in such situations, as they will be able to give a pressure rating.

**Can Propress be connected to old existing copper pipe installations?**

Yes, Propress is made to the Australian industry standard that has existed since copper tube was used in Australia. Propress does however require that the copper tube be defect free and if scale etc lines the outside of the tube it must be removed.

**What is the failure rate of Viega Propress?**

Viega manufactures hundreds of millions of Propress fittings every year and usually deal with less than a handful of complaints that relate to material or manufacturing faults.

**What is Propress made off:**

|                 |                                                |
|-----------------|------------------------------------------------|
| Body            | Copper or Bronze (threaded connections)        |
| Sealing element | Low compression set EPDM (water) or HNBR (gas) |

## Propress<sup>TM</sup> Specific Questions

**WATER**

**What is the lubrication used on the sealing elements?**

The sealing elements are lubricated with approved silicone oil. If it is necessary to lubricate the seals on site, use water only. Do not use other lubricants, especially any petroleum-based lubricants, as petroleum and EPDM are incompatible.

**How long will the EPDM sealing element last?**

When properly installed, the EPDM seal and connection will last as long as the copper pipe that joins it. 50 years. This is confirmed in NSF-61 test reports.

**How do Viega Propress connections hold up to freezing temperatures?**

Copper water systems, both soldered and pressed, should not be allowed to freeze. When water freezes it expands and will damage the pipe or the system.



**What level of turbulence occurs in Viega Propress fittings and will it cause premature wear in copper tubing?**

The long radius of Viega Propress elbows reduce the turbulence typically experienced with traditional short radius fittings. Not reaming the ID of the pipe is the largest contributing factor to turbulence and premature wear of any piping system.

**If a leak is discovered, is it necessary to drain the system prior to pressing the connection?**

No. It is not necessary to drain the system when making a repair.

**Does Propress have approvals and where can it be used?**

Yes Propress has Watermark Approval for use without restriction on potable water supplies i.e. it can be used behind walls, within chasings under ground, exposed to direct sun light and adjacent to solar water panels.

**What sizes is Propress available in?**

Propress has a full range of fittings for DN15 to DN100 for potable water applications.

**What is the temperature rating of Viega Propress?**

Viega Propress can handle temperatures as high as 130°C for very short periods of time with an instantaneous peak of 200°C and temperatures of -20 to 110°C for extended periods.

**Can Propress be used on compressed air**

Propress can be used on compressed air with an oil concentration of less than 25mg/m<sup>3</sup>. If an installer is not sure of the oil concentration then they should use the PropressG.

**Can Propress be used with sewer water etc?**

Yes, the seal element is made of the same EPDM rubber that sewer lines use for their seal.

**Can Propress be installed on pipes where the mains line won't shut off.**

Yes, this is one of the many intrinsic benefits of Propress. Propress is the ideal fitting for emergency situations as it can be connected when water is running through it. If the water pressure is so high that the fitting cannot physically be installed then other taps in the line should be turned on to reduce the pressure.

**Does Viega Propress have Watermark approval?**

Yes, Viega Propress has Watermark approval. Propress has been independently tested to AS3688 and received Watermark approval under No. LN21120

## Propress<sup>TM</sup><sub>GAS</sub> Specific Questions

**What sizes is PropressG available in?**

Propress has a full range of fittings for DN15 to DN100 for gas applications.



**What is the temperature rating of a Viega PropressG?**

Viega PropressG can handle temperatures between -20 to 70°C.

**Does Viega PropressG meet Australian/New Zealand Standards?**

Yes. Viega PropressG has been added to the next edition of AS5601 Gas installations Standard that will be printed in May 2008. Most of the state based Gas regulators have given Viega an exemption.

**Why use HNBR sealing elements for compressed air systems with more than 25 grams per cubic metre of oil content?**

HNBR sealing elements are better suited for high oil content due to their high resistance to hydrocarbon substances.

## Pressing tools

**How many cycles can the Picco perform before the battery is empty?**

Approx. 150

**How many cycles until the service light is lit?**

20,000

**How many cycles until the Picco shuts down for a service?**

22,000

**What is the cycle time of the Picco?**

4 seconds

**What Hydraulic force does the Picco ram produce?**

The Picco hydraulic ram force is 28 kN (2850kg)

**What Hydraulic force does the PT3-AH ram produce?**

The PT3-AH tool hydraulic ram force is 32 kN (3265kg)

**What force is required to crimp a fitting?**

Both tools exert the same amount of force onto the same size fitting. This amount of force does vary between fittings sizes where a force between 95 kN (9,700kg) and 145 kN (14,800kg) is required depending on the dimension up to DN 50.

**When will the Jaws go out of calibration?**

The jaws are deliberately engineered so they fracture through the two plates that connect jaws at round 12,500 presses. This ensures that the jaws do not press more fittings than intended, thereby eliminating poor pressing when the jaws start to wear.