



# KemPress®

COPPER

**DESIGN &  
INSTALLATION  
GUIDE**

COPPER  
PRESS-FIT  
CONNECTION  
SYSTEM FOR  
WATER AND  
GAS



**A NEW GENERATION OF COPPER  
PRESS-FITTINGS OFFERING ALL THE  
BENEFITS OF COPPER AND NOW EVEN  
EASIER TO INSTALL.**

MM Kembla® has combined the experience and knowledge of nearly 100 years of Australian copper tube manufacturing with German engineering to produce the KemPress® copper press-fit connection system. With a warranty of 25 years, and a design life of over 50 years, KemPress® offers you peace of mind and the simplicity that you want.

When you need the highest quality press-fit system, use Kembla copper tube, KemPress® fittings and the KemPress® tool. Our tools are of the highest quality, are the lightest on the market and have the longest service life.

To make life easy for plumbers the KemPress® system is compatible with Type A & B copper tube complying with AS1432. The KemPress® fittings up to 50mm work with Viega and Rothenberger press-fit tools currently in the market making it a truly universal system.

**WHY USE KEMPRESS® ?**

- Fast and easy to use
  - Considerably faster than conventional brazing
  - No need to drain water out of the system
- Flame free connection
  - No hot works permit required
- High quality fittings manufactured and quality controlled to AS3688
- Universal copper press-fit system
  - KemPress® fittings up to 50mm guaranteed to work with approved copper pressfit tools
    - Rothenberger & Viega tools have been tested to work with KemPress fittings (as at Sept 2012)
  - Fittings designed to work with copper tube compliant to AS1432
- Push and Stay
  - Fitting is tight enough to complete the rough in before securing placement by pressing
- High quality, lightweight KemPress® tool
  - Slim lightweight and ergonomic design
  - One hand operation. Once the jaws are inserted the weight is balanced
  - Smart Electronic controls
  - Longest interval between servicing
    - KPL 40,000 presses
    - KPS 35,000 presses
  - Loan tool provided while servicing
  - The small tool handles tube up to 32mm
  - Second battery included
- Backed by MM Kembla's reputation for high quality products, service and customer care



## TECHNICAL SPECIFICATIONS

### Copper tube

MM Kembla recommends using our high quality Kembla copper tube. KemPress® is suitable for use with hard, half hard and annealed Type A & B copper tube complying with AS1432.

KemPress® fittings can also be used on existing copper tube complying with AS1432. The tube must be in reasonable condition with no signs of external corrosion or any surface damage.

For detailed information on copper tube specifications refer to The Plumbers Handbook. Contact MM Kembla to obtain a hard copy or download the latest edition from our website: [www.kembla.com.au](http://www.kembla.com.au)

### Fittings

Inside each fitting is a sealing element called an Elastomeric O-ring. They are not interchangeable for their different applications. See the O-ring Compatibility table for specific applications.

It is essential that the O-rings are not contaminated or damaged by foreign material such as copper swarf or sharp metal. Gas fittings have a yellow O-ring and are clearly marked on the fittings up to 50mm and also on the packaging with a distinctive yellow colour and the word GAS.

### Push and Stay Feature

The KemPress® fittings have been designed to provide a tight fit when pushed together to allow the rough in to be completed prior to pressing. This ensures you have the right design and tube placement and allows you to make adjustments, if required, prior to pressing. This is especially beneficial for vertical installations.

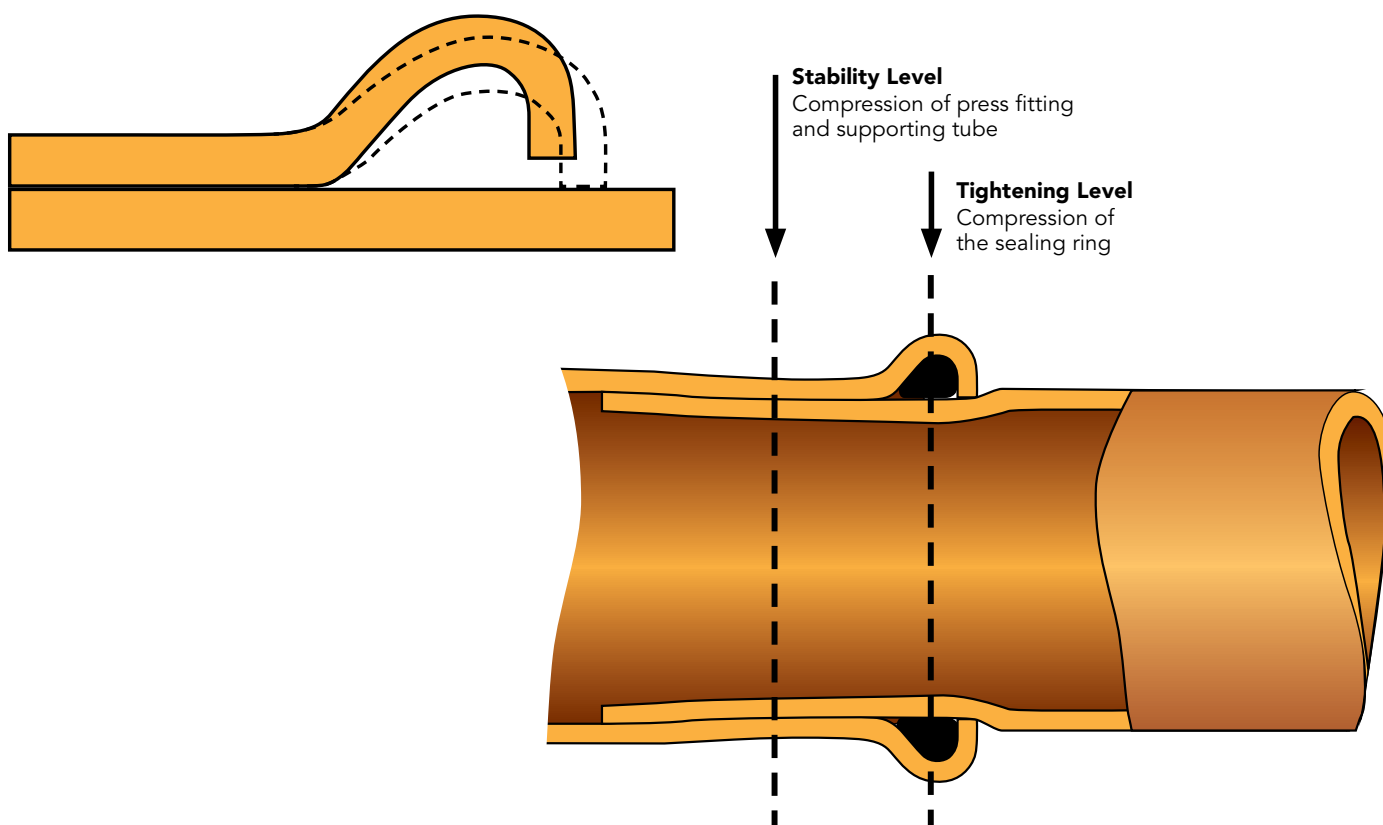
Note: Due to movement it is important to check that you have full engagement of your fittings on the tube prior to pressing. Use the mark made in step 4 of the installation process (see page 9) as your guide.

### Press profile

The KemPress® fittings are designed to deliver minimal deformation to the internal shape of the tube they are connecting to, reducing turbulence in the flow of the fluid. The connection provides a rigid coupling with excellent resistance to torsional forces. This is particularly beneficial when connecting mechanical threaded connections.

### Press Process

The objective of the press process is to deliver a permanent connection while achieving the required pull out strength according to AS3688. The KemPress® process presses the lip of the fitting and then compresses the O-ring at the same time.



## UNPRESSED FITTINGS

Once pressed the KemPress® fittings will not leak. It is important to check every fitting has been pressed. The KemPress® system has been designed to make it very obvious to detect an unpressed fitting prior to the commissioning of the system.

### Visual Inspection

Pressed and unpressed fittings are clearly distinguished on a visual inspection.



Unpressed fitting - smooth with no indents.



Unpressed fitting - small gap between fitting and tube.



Pressed fitting - indents on the fitting.



Pressed fitting - no gap between fitting and tube.

## TESTING & COMMISSIONING

When water fitting installations are complete, it is essential to flush with water before use to remove dust, debris and flux residues, in accordance with AS/NZS 3500.

Drinking water installations should be tested and inspected in accordance with AS/NZS 3500 for leaks and remedial action taken if necessary.

Gas installation should be tested in accordance with the requirements specified in AS/NZS 5601.

KemPress® fittings maintain earth continuity without the need for additional continuity straps.

## CERTIFICATION & TESTING

KemPress® has a WaterMark license and is compliant to AS3688 and AS4020. The fittings have undergone a rigorous testing program including:

- Prototype testing
  - burst pressure
- Watermark testing
  - Water tightness
  - Strength of fabrication
  - Strength of joint assembly
  - Pull-out strength
  - Thermal cycling
- Material in contact with drinking water
- Press testing every product in the range
- Press testing every tool and Jaw
- Gas testing standard compliant to AS/NZS 5601:2010

KemPress Fittings have undergone stringent testing by a NATA accredited laboratory to ensure compliance with AS 3688. The KemPress® Gas Fittings have the same metallic body but use a special o-ring sealing element that is compatible with most gases. These KemPress® Gas Fittings have been subjected to low pressure pneumatic tests to simulate the use when conveying gases at the pressures stated in AS 5601 Gas Installation. These tests were witnessed and verified by an Accredited Certifying Body (ACB) who issued a Type Test Certification.

<p align="center"><b>Certificate of Conformity</b></p> <p align="center"><i>Product Conformity Scheme (PCS)-Type Test Cert</i></p> <p>Australian Certification Services Pty Ltd hereby certifies that a sample of the products as listed below and submitted by:</p> <p align="center"><b>Metal Manufactures Ltd</b> Gloucester Boulevard Port Kembla NSW 2505 AUSTRALIA</p> <p>Has been examined and found to be in conformity with the requirements of the Standard below;</p> <p>Evaluated to: AS 3688:2005 Amendment 1 2006 Water supply—Metallic fittings and end connectors AS/NZS 5601.1:2010 Gas installations Part 1: General installations</p> <p>Product Type: Press - Fit Fittings Brand: KEMPRESS Product Description: Range of Copper and Copper Alloy (DR Brass) Press-Fit Fittings DN15 including VHSB O Ring and threaded adaptors designed for use with AS 1432 Type A or B and installed utilising KEMPRESS (KPS/KPL) and authorised tools Manufacturer: SANHA GmbH &amp; Co KG</p> <p>Issue Date: 5<sup>th</sup> November 2012 Initial Issue Date: 5<sup>th</sup> November 2012 Expiry Date: 4<sup>th</sup> November 2017</p> <p align="right">Paul Greig General Manager</p> <p align="center">Certificate No.: 4010</p> <p align="center">This certificate remains the property of Australian Certification Services Pty Ltd The Product Conformity Scheme (PCS)-Type Test Certification is a conformity assessment scheme based on ISO Guide 67 (system 18)</p> <p align="center">Page 3 of 2</p>	<p align="center"><b>WaterMark</b> Level 1</p> <p align="center">Certificate of Conformity Australian Certification Services Pty Ltd grants to the WaterMark User:</p> <p align="center"><b>Metal Manufactures Ltd</b> Trading as MM Kembla</p> <p>the right to use the WaterMark as shown above in conjunction with the Certificate No. on product/s as identified in the WaterMark Schedule and as listed on the WaterMark database <a href="http://www.watermark.org.au">http://www.watermark.org.au</a> which have been shown to comply with the relevant Standard/s and level of certification referred to below. The WaterMark User is granted a licence to use the WaterMark subject to the rules governing the use of the WaterMark.</p> <p>Product Type: Copper and Copper Alloy Press Fit Fittings Evaluated to: AS 3688:2005 Amendment 1 2006 Water supply—Metallic fittings and end connectors</p> <p align="right">Paul Greig General Manager</p> <p>Issue Date: 8<sup>th</sup> December 2011 Initial Issue Date: 8<sup>th</sup> December 2011 Expiry Date: 7<sup>th</sup> December 2016</p> <p align="center">Certificate No.: 23087</p> <p align="center">This certificate remains the property of Australian Certification Services Pty Ltd WaterMark Level 1 certification is a conformity assessment scheme based on ISO Guide 67 (system 5)</p> <p align="center">Australian Certification Services Pty Ltd ABN 17 121 022 366 SHELDON ST, 1 FLOOR, LUTHER NSW 2232 PO Box 627 Jerrard, NSW 2226 AUSTRALIA Phone +61 2 9557 7122 Email <a href="mailto:info@certification.com.au">info@certification.com.au</a> <a href="http://www.certification.com.au">www.certification.com.au</a></p>
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O-RING

The O-Ring is pre-lubricated and should be protected from contamination by foreign objects to avoid damaging the integrity of the product (for example copper filings when cutting copper tubes).

Water

Water applications use an EPDM (Ethylene Propylene Diene Monomer) O-ring sealing element. This O-ring is suitable for standard water applications designated below. It can be used for domestic solar hot water applications. For industrial solar or hot water temperatures exceeding 120°C please contact MM Kembla for guidance.

WATER FITTINGS

Application	Pressure KPa	Temperature °C
Hot & cold potable water	1600	120
Chilled water	1600	-25
Rainwater installations*	1600	Ambient
Vacuum	- 80	Ambient
Domestic fire sprinkler systems and fire hose reel	1600	Ambient
Compressed air installations (oil free)	1600	70
Solar hot-water systems	Compliant to AS/NZS 2712, AS3498 and AS3498:2009	

\* The composition of untreated supplies and bore water should be examined to ensure compatibility with copper prior to installation of piping. Untreated tank water may not be compatible with copper due to the lack of stability and potential microbiological variability.

High Temperature (HT)

High temperature applications use an FKM (fluorocarbon) O-ring sealing element. This O-ring is suitable for domestic or industrial solar hot water applications or applications where hot water temperatures exceed 120°C (up to 200°C). HT fittings have a red O-ring and are clearly marked with a distinctive red colour and the word HT.

Gas

Gas applications use a HNBR (Hydrogenated Nitrile Butadiene Rubber) O-ring sealing element. HNBR has been used for decades in automotive and industrial applications. It is designed for gas, oil and chemical resistance. It is not suitable for drinking water. Gas fittings have a yellow O-ring and are clearly marked with a distinctive yellow colour and the word GAS.


GAS FITTINGS

Application	Pressure KPa	Temperature °C
Natural gas installations	1600	100
Liquid gas installations (LPG)	1600	100
Compressed air installations (with oil content)	1600	70
Engine Oils & Lubricants	1000	70
Heating Oil, Diesel	500	40







**Not Suitable for:** Refrigeration and Air Condition Applications, Acetylene, Urea Solution, Methanol, Glycerin Triacetate, Coolant Inhibitor, Sodium Hydroxide, Ammoniac-gaseous.  
**Note:** For information regarding suitability of KemPress® fittings for additional applications contact MM Kembla customer service.











## PRODUCT RANGE

COPPER FITTINGS	Diameter (DN)	Water Code	Pack Qty	Carton Qty	Gas Code	Pack Qty	Carton Qty
<b>Connector</b> 	15	J09000	10	500	J09320	10	300
	20	J09001	10	300	J09321	10	150
	25	J09002	5	125	J09322	5	60
	32	J09003	2	60	J09323	2	30
	40	J09004	2	50	J09324	2	20
	50	J09005	2	30	J09325	2	12
	65	J09414	1	12	J09430	1	8
<b>Connector Slip</b> 	15	J09055	10	500	J09370	10	250
	20	J09056	10	250	J09371	10	120
	25	J09057	5	100	J09372	5	50
	32	J09058	2	60	J09373	2	30
	40	J09059	2	40	J09374	2	20
	50	J09060	2	24	J09375	2	12
	65	J09415	1	12	J09443	1	3
<b>Elbow 45 degree</b> 	15	J09010	10	500	J09330	10	250
	20	J09011	10	200	J09331	10	120
	25	J09012	5	100	J09332	5	50
	32	J09013	2	60	J09333	2	30
	40	J09014	2	40	J09334	2	20
	50	J09015	2	16	J09335	2	10
	65	J09416	1	12	J09432	1	6
<b>Elbow 90 degree M&amp;F</b> 	15	J09020	10	500	J09340	10	250
	20	J09021	10	200	J09341	10	100
	25	J09022	5	100	J09342	5	50
	32	J09023	2	50	J09343	2	20
	40	J09024	2	30	J09344	2	14
	50	J09026	2	14	J09345	2	6
	65	J09418	1	8	J09434	1	3
<b>Tee Reducing</b> 	20x20x15	J09030	10	150	J09350	10	50
	25x25x15	J09031	5	60	J09351	5	30
	25x25x20	J09032	5	70	J09352	5	30
	32x32x25	J09033	2	30	J09353	2	18
	40x40x32	J09034	2	24	J09354	2	12
	65x65x50	J09420	1	7	J09436	1	3
<b>Tee Equal</b> 	15	J09070	10	200	J09390	10	120
	20	J09071	10	80	J09391	10	50
	25	J09072	5	60	J09392	5	30
	32	J09073	2	30	J09393	2	16
	40	J09074	2	22	J09394	2	10
	50	J09075	2	12	J09395	2	6
	65	J09419	1	6	J09435	1	3
<b>Reducer</b> 	20x15	J09035	10	250	J09355	10	150
	25x20	J09036	5	125	J09356	5	70
	65x32	J09421	1	20	J09437	1	3
	65x40	J09422	1	20	J09438	1	3
	65x50	J09423	1	20	J09439	1	3

## PRODUCT RANGE

COPPER FITTINGS	Diameter (DN)	Water Code	Pack Qty	Carton Qty	Gas Code	Pack Qty	Carton Qty
<b>Reducer M&amp;F</b> 	20x15	J09101	10	400	J09400	10	150
	25x15	J09103	5	200	J09401	5	100
	25x20	J09105	5	150	J09402	5	90
	32x25	J09108	2	60	J09403	2	40
	40x25	J09110	2	60	J09404	2	36
	40x32	J09112	2	60	J09405	2	30
	50x25	J09113	2	40	J09406	2	20
	50x32	J09114	2	40	J09407	2	20
	50x40	J09115	2	36	J09408	2	20
	65x40	J09424	1	18	J09440	1	3
	65x50	J09425	1	20	J09441	1	3
<b>Elbow 90 Degree</b> 	15	J09061	10	500	J09380	10	250
	20	J09062	10	200	J09381	10	100
	25	J09063	5	100	J09382	5	50
	32	J09064	2	50	J09383	2	20
	40	J09065	2	30	J09384	2	14
	50	J09066	2	14	J09385	2	6
	65	J09417	1	8	J09433	1	3
<b>Flange Adaptor</b> 	40	J09119	1	1			
	50	J09120	1	1			
<b>HT (HIGH TEMPERATURE) COPPER FITTINGS</b>							
<b>HT Connector</b> 	15	J06700	10	300			
<b>HT Elbow 90 Degree</b> 	15	J06761	10	250			
<b>COPPER ALLOY FITTINGS</b>							
<b>Male Line Adaptor</b> 	15x1/2" BSP	J09040	10	250	J09360	10	240
	15x3/4" BSP	J09041	10	200	J09361	10	200
	20x1/2" BSP	J09042	10	200	J09362	10	200
	20x3/4" BSP	J09044	10	150	J09363	10	150
	25x3/4" BSP	J09046	5	100	J09364	5	100
	25x1" BSP	J09047	5	100	J09365	5	100
	32x1-1/4" BSP	J09048	2	50	J09366	2	50
	40x1-1/2" BSP	J09050	2	40	J09367	2	40
	50x2" BSP	J09052	2	16	J09368	2	16

## PRODUCT RANGE

COPPER ALLOY FITTINGS	Diameter (DN)	Water Code	Pack Qty	Carton Qty	Gas Code	Pack Qty	Carton Qty
<b>Female Line Adaptor</b> 	15x1/2" BSP	J09130	10	250	J09534	10	250
	20x3/4" BSP	J09131	10	150	J09535	10	150
	25x1" BSP	J09132	5	80	J09536	5	80
	32x1-1/4" BSP	J09133	2	40	J09537	2	40
	40x1-1/2" BSP	J09134	2	30	J09538	2	30
	50x2" BSP	J09135	2	20	J09539	2	20
<b>End Caps</b> 	15	J09121	10	1000	J09326	10	400
	20	J09122	10	750	J09327	10	300
	25	J09123	5	250	J09328	5	150
	32	J09124	2	100	J09329	2	80
	40	J09125	2	100	J09336	2	40
	50	J09126	2	72	J09337	2	32
	65	J09431	1	40	J09442	1	20
<b>Unions (62)</b> 	15x1/2" BSP	J09053	10	240	J09067	10	240
	20x3/4" BSP	J09054	10	120	J09068	10	120
<b>Unions (69)</b> 	25x1" BSP	J09076	5	30	J09450	5	30
	32x1-1/4" BSP	J09077	2	20	J09451	2	20
	40x1-1/2" BSP	J09078	2	10	J09452	2	10
	50x2" BSP	J09079	2	8	J09453	2	8
<b>Plug In Adaptor (Female Thread)</b> 	15x1/2" BSP	J09140	10	200			
	20x1/2" BSP	J09141	10	170			
	20x3/4" BSP	J09142	10	100			
<b>Plug In Adaptor (Male Thread)</b> 	15x1/2" BSP	J09037	10	170			
	20x1/2" BSP	J09038	10	170			
	20x3/4" BSP	J09039	10	160			
<b>Back Plated Elbow</b> 	15x1/2" BSP MI	J09116	10	60	J09410	10	60
	15x1/2" BSP FI	J09117	10	100	J09411	10	100
	20x3/4" BSP FI	J09118	10	60	J09412	10	60
<b>Back Plated Elbow (Male 96mm)</b> 	15x1/2" BSP	J09127	10	50	J09427	10	50

## 15-50MM INSTALLATION

The following is a step by step guide to installing the KemPress® System. For projects requiring maintenance and repair visually inspect the copper tube to ensure it is in reasonable condition with no signs of external corrosion.



**1.** Cut copper tube to length using a pipe cutter.



**2.** Deburr carefully the end of the tube on the inside to minimize turbulence and pressure loss according to AS3500 and on the outside to avoid damaging the O-ring.



**3.** For existing copper tube, clean the end with emery paper or a soft scourer.



**4.** Mark the insertion depth by lining up the fitting side by side with the tube and mark the tube. When the fitting is inserted onto the tube the outer edge of the fitting must line up with the marking. For correct insertion depths see column **e**, table 1, page 17.



**5.** Select pressing jaw according to the fitting dimension and insert into the pressing machine. Arrest the locking bolts of the machine. Check the jaws are free from debris and in good working order.



**6.** Ensure you have the correct fitting for the application (e.g. water or gas). Check the fitting is clean and the O-ring is free from debris and correctly sitting in place. Push fitting on tube all the way to the engagement marking.



**7.** Check the fitting outer edge still lines up with the marking. Open the pressing jaw and close it around the fitting so the raised bump in the fitting rests inside the groove of the pressing jaw.



**8.** Initiate the pressing job by pressing the start button. The automatic pressing process guarantees a tight connection. The pressing process can be interrupted by pressing the emergency-stop button.



**9.** Visually inspect the fitting to ensure the press has been completed. The KemPress® tool will flash if the fitting did not press correctly. If this occurs a new fitting and tube section is required. At the end of the project visually inspect each fitting to ensure none have been missed.

**CAUTION**

Brazing or soldering near to KemPress® joints should be avoided as this may cause the seal to degrade due to heat transfer. The table below states the minimum distance away from the press joint which is acceptable to braze. If this distance cannot be maintained then adequate precautions must be taken such as fabricating the brazed section prior to assembly with the press fittings, wrapping the press joint in a wet rag and keeping cool during brazing or applying tube freezing spray.

Tube Size	15mm	20mm	25mm	32mm	40mm	50mm	65mm
Minimum Clearance (mm)	350	500	650	800	1000	1300	1650

## 65MM INSTALLATION

65mm installation requires the use of the KemPress® 65mm Collar, Adaptor Jaw and the KemPress® Large tool (KPL) or other approved pressing tool. Repeat steps 1-6 as per the 15-50mm installation and proceed with the following. In step 5, select the 65mm Adaptor Jaw instead of the pressing jaw.

**7.** Select the 65mm press collar and check that it is clean and that the surface is smooth. In order to ensure correct operation of the pressing collar, the sliding segments must be free to move/slide. The sliding segments are tensioned by springs, holding them in the correct starting position. Please ensure that the marking lines on the inner and outer rings form a line for the correct starting position. If the segments are not freely moving, clean and lubricate with light machine oil or have them serviced by an approved KemPress® service agent.



**8.** Place the collar around the KemPress® fitting such that the bump in the fitting is rested into the groove of the press collar. Close press collar. Make certain that the pressing collar fits tightly into the fitting. Afterwards position the pressing collar by rotating it so that the KemPress® Large Tool can be correctly attached.



**9.** Open the adaptor jaw by depressing the jaw levers and attach to the press collar so that the claws of the adaptor jaw grip around the pins of the press collar. Check whether fittings outer edge lines up with the marker of the insertion depth created in Step 4, then start the pressing procedure by pressing the start button. The pressing procedure should not be interrupted prematurely. The automatic pressing process guarantees a tight connection. For safety, the pressing process can be stopped by pressing the emergency stop button. Once the emergency button has been activated, the tool will need to be reset. The affected fitting will then need to be either re-pressed or replaced.



**10.** Loosen the press collar by pulling apart. Visually inspect the fitting to ensure the press has been completed. The KemPress® tool will flash if the fitting did not press correctly. If this occurs, a new fitting and tube section is required. At the end of the project visually inspect each fitting to ensure none have been missed.



PRESS TOOL

The KemPress® tool is the smartest, lightweight copper pressing tool on the market and its slim line design makes it easy to handle. It has been specifically designed and tested to work with KemPress® fittings. There is a small tool and a large tool which deliver different pressing forces. The jaws have been designed specifically for each tool and are not interchangeable.

- Lightest tools on the market
- One hand operation (Patent)
- Perfectly balanced with Jaws
- Longest Maintenance interval:  
KPL - 40,000 pressing cycles  
KPS - 35,000 pressing cycles
- Smart electronic controls:  
Flashes if not pressed correctly  
Battery status indicator
- Second battery included, rapid recharge (30 mins)
- Tool Service Program:  
National service centre operated by Kembla  
Loan tool provided during service/repair

Small tool (KPS) designed for DN15, 20, 25, 32mm  
Large tool (KPL) designed for DN15, 20, 25, 32, 40, 50 and 65mm

TECHNICAL DATA	Small Tool KPS	Large Tool KPL
Dimensions	15mm to 32mm	15mm to 65mm
Weight incl. battery	1.7 kg	3.3 kg
Length	319 mm	410 mm
Width	70 mm	80 mm
Height	96 mm	125 mm
Power consumption	240 W	450 W
Piston Force	24 kN	32 kN
Piston stroke	30 mm	40 mm
Battery	12V/1.5 Ah Li-Ion	18V/1.5 Ah Li-Ion
Charging time	30 min	30 min
Number of presses before service	35,000	40,000
Noise pressure at user's ear	75.5 db(A)	76.5 db(A)
Type of protection	IP20	IP20



### Key Features

- Safe handling with slip-proof rubberised housing
- Signals if press not completed correctly - Immediately after the pressing cycle a green lights shows if the required pressing force was achieved, a red light if not
- Press cycle must be completed once it starts
- Electronic log book allows for quick and precise analysis of errors for servicing and repair
- Electronic monitoring of the jaw locking bolt and visual error indicator (KPL)
- When you reach the maximum number of presses before a service is required a warning light flashes. The machine will not close down enabling you to complete the job in hand.
- Redundant switch-off
- Rotatable head (KPS)

### Tool Operation

Holding the tool securely, press and hold the start button for 2 seconds to begin the automatic press cycle (the green LED will go out). Release the start button and continue to hold the tool securely. The green LED will light when the press cycle is complete. To cancel the automatic press cycle press and hold the release button on the side of the tool until the tool turns off.

If the red LED lights up, press the start button. If the tool does not run, call MM Kembla for advice. If the red and green LEDs flash alternately, the tool is ready for a service, contact MM Kembla Customer Service Centre.

The tool will turn off automatically after 30 minutes of no use. Turn the tool ON by quickly pressing and releasing the start button and open the jaws around the fitting.

### Tool Maintenance

KemPress® tool, jaws, adaptor jaws and collars are low maintenance, however, to ensure optimal performance and safety there are minimum precautions and maintenance procedures that need to be followed.

Carry out basic inspection of the pressing device and jaws prior to each use to ensure they are clean and free from debris and dirt. The pressing jaws should be visually inspected to ensure there are no cracks. If there are any cracks in the pressing jaws,

do not use them, as there is risk of the jaws shattering and potential injury from flying fragments. It is recommended to always wear appropriate eye protection whenever using the pressing device. When inspecting the pressing jaws, also ensure that there are no foreign material deposits and that the contours of the jaw surfaces are in order. Failure to do this may result in damage to the jaws and/or the pressing device. Always remove the battery before performing regular cleaning and maintenance work. Regular application of light machine oil to the moving parts of jaws, adaptor jaws and collars and general application of anti-corrosive spray is recommended to maintain serviceable condition and function.

The pressing device, jaws and batteries must be serviced at least within 40,000 presses for the KemPress® large tool and 35,000 for the KemPress® small tool. It is recommended to have the press tool, jaws, adaptor jaws and collars inspected by MM Kembla at least once per year. There are costs associated with the service work. Failure to have the required services carried out may affect the warranty.

### Tool Service Program

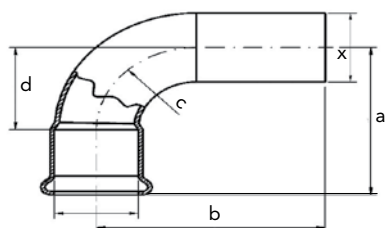
The MM Kembla tool service and repair program is easy, ensures minimal down time and provides known maximum costs for repairs. The key components of the program include:

- 1800 804 631 national customer service centre
- Replacement tools available while your tool is being serviced/repared
- Convenient and easy process for lodging your tool for service/repair via MM Kembla branches, the place of purchase or via our express courier exchange program
- Maximum repair price guarantee: the cost won't exceed our maximum repair price and if the cost of repair is less, you only get charged that amount
- No fix, no charge
- Up to 12 months warranty on repairs
- MM Kembla recommends an annual service of your tools jaws, adaptor jaws and collars

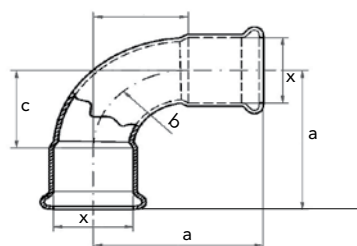
Any service or repair of the KemPress® pressing tool or jaws, requiring opening the device, or mechanical repairs, shall only be carried out by MM Kembla or their authorised agent. Failure to do so may void the warranty.



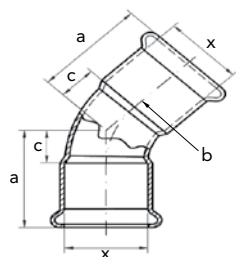
## FITTINGS MEASUREMENTS



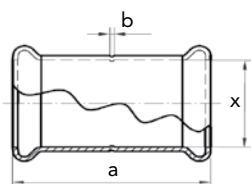
Product Code	a	b	c	d	x
J09020	31.9	40.0	15.3	15.6	15
J09021	44.1	52.0	22.9	23.2	20
J09022	56.1	63.6	30.5	30.8	25
J09023	67.9	76.1	38.1	38.6	32
J09024	80.7	90.0	45.8	46.3	40
J09026	102.8	114.3	61.0	61.5	50
J09418	125.0	142.3	76.8	77.8	65



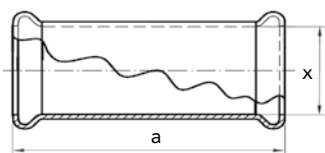
Product Code	a	b	c	x
J09061	31.9	15.3	15.6	15
J09062	44.1	22.9	23.2	20
J09063	56.1	30.5	30.8	25
J09064	67.9	38.1	38.6	32
J09065	80.7	45.8	46.3	40
J09066	102.8	61.0	61.5	50
J09417	125.0	76.8	77.8	65



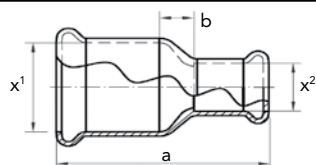
Product Code	a	b	c	x
J09010	22.9	15.3	6.6	15
J09011	30.7	22.9	9.7	20
J09012	38.2	30.5	12.9	25
J09013	45.6	38.1	16.3	32
J09014	53.9	45.8	19.5	40
J09015	67.0	61.0	25.8	50
J09416	80.0	76.8	32.8	65



Product Code	a	b	x
J09000	34.4	1.8	15
J09001	43.6	1.8	20
J09002	52.2	1.8	25
J09003	60.9	2.5	32
J09004	71.1	2.5	40
J09005	84.9	2.5	50
J09414	111.4	17.0	65

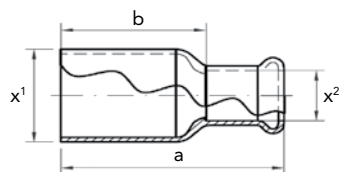


Product Code	a	x
J09055	42.8	15
J09056	56.2	20
J09057	68.7	25
J09058	81.1	32
J09059	96.0	40
J09060	115.9	50
J09415	110.4	65

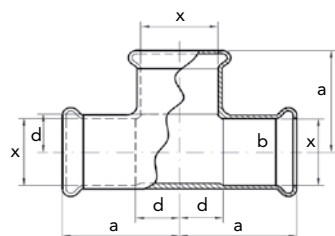


Product Code	a	b	x¹	x²
J09035	44.6	7.3	20	15
J09036	53.6	7.3	25	20
J09421	90.3	23.5	65	32
J09422	101.9	20.0	65	40
J09423	102.3	13.5	65	50

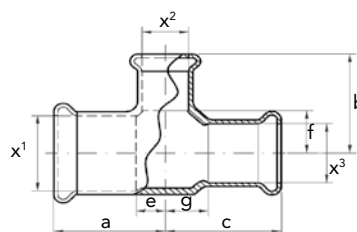
**Note:** All measurements in mm  
x = diameter to suit Diameter  
Nominal copper tube



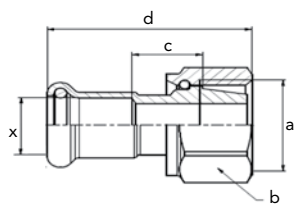
Product Code	a	b	x¹	x²
J09101	50.0	33.6	20	15
J09103	58.0	41.6	25	15
J09105	58.5	37.6	25	20
J09108	67.6	42.1	32	25
J09110	78.0	52.5	40	25
J09112	77.7	48.2	40	32
J09113	93.6	68.1	50	25
J09114	94.1	64.6	50	32
J09115	96.9	62.3	50	40
J09424	123.7	88.3	65	40
J09425	123.6	81.3	65	50



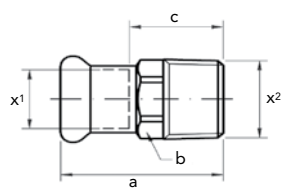
Product Code	a	b	c	d	e	f	g	x
J09070	30.9	24.6	30.9		14.6	8.3	14.6	15
J09071	35.2	32.7	35.2		14.3	11.8	14.3	20
J09072	41.6	40.6	41.6		16.3	15.3	16.3	25
J09073	48.5			19.2				32
J09074	56.9			22.5				40
J09075	70.8			29.0				50
J09419	86.2	97.9	86.2		39	50.7	39	65



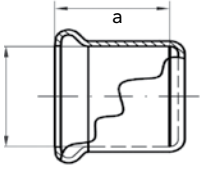
Product Code	a	b	c	d	e	f	g	x¹	x²	x³
J09030	31.7	28.1	31.7		10.8	11.8	10.8	20	15	20
J09031	33.9	31.6	33.9		8.6	15.3	8.6	25	15	25
J09032	37.1	36.2	37.1		11.8	15.3	11.8	25	20	25
J09033	45.3	44.3	45.8		16.0	19.0	16.0	32	25	32
J09034	53.6	51.8	61.0		19.2	22.5	19.2	40	32	40
J09420	82	93.3	82		34.5	51.9	34.5	65	50	65



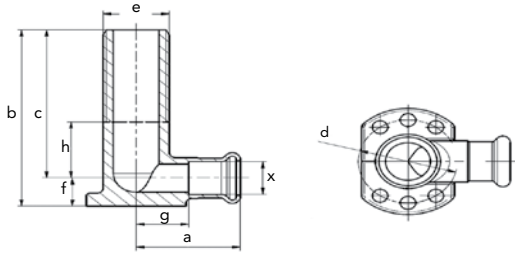
Product Code	a	b	c	d	x
J09053	12.70	24	13.7	39.5	15
J09054	19.05	30	17.3	47.5	20



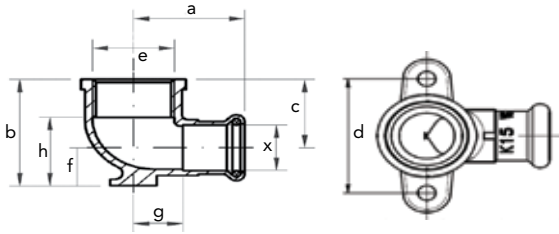
Product Code	a	b	c	x¹	x²
J09040	36	22	20	15	12.70
J09041	38	27	22	15	19.05
J09042	39	23	18	20	12.70
J09044	40	27	19	20	19.05
J09046	44	30	19	25	19.05
J09047	45	34	20	25	25.40
J09048	54	43	25	32	31.75
J09050	59	49	25	40	38.10
J09052	70	49	29	50	50.80



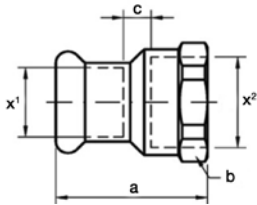
Product Code	a	x
J09121	16.3	15
J09122	20.9	20
J09123	25.2	25
J09124	29.2	32
J09125	34.3	40
J09126	41.2	50
J09431	47.2	65



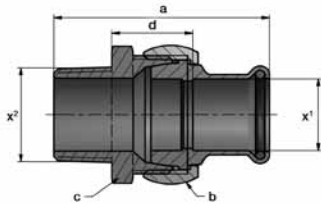
Product Code	a	b	c	d	e	f	g	h	x
J09111	33	69	58	32	12.7	11	15	22	15
J09127	33	96	85	32	12.7	11	15	19	15



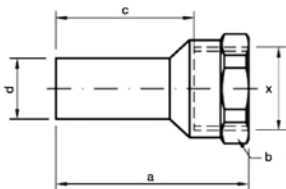
Product Code	a	b	c	d	e	f	g	h	x
J09117	31	33	22	35	12.70	11	15	7	15
J09118	40	46	29	40	19.05	17	16	12	20



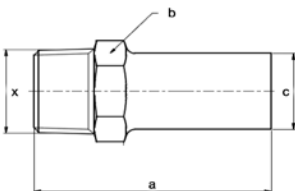
Product Code	a	b	c	x¹	x²
J09130	34	24	4.7	15	12.70
J09131	40	30	4.1	20	19.05
J09132	47	38	5	25	25.40
J09133	55	46	6.7	32	31.75
J09134	63	55	6.7	40	38.10
J09135	74	60	7.5	50	50.80



Product Code	a	b	c	d	x¹	x²
J09076	71	46	45	27	25	25.4
J09077	77	52	50	26	32	31.75
J09078	85.5	59	50	30	40	38.1
J09079	100	75	70	33	50	50.8



Product Code	a	b	c	d	x
J09140	47	24	32.8	12.65	12.70
J09141	48	24	33.8	18.95	12.70
J09142	55	30	39	18.95	19.05

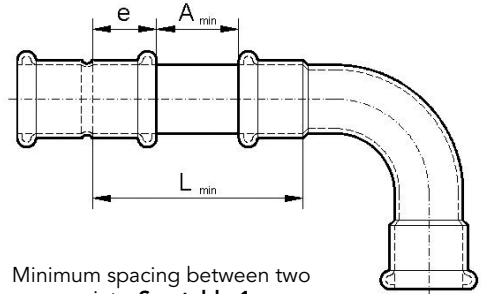


Product Code	a	b	c	x
J09037	48	22	12.65	12.70
J09038	55	22	18.95	12.70
J09039	58	27	18.95	19.05

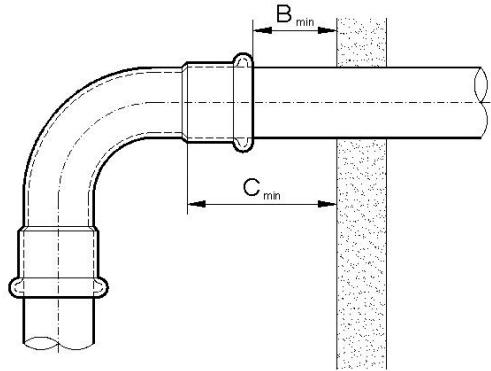
**FITTINGS SPACE REQUIREMENTS**

The distance required between tubes and walls, in corners and wall recesses is shown in the sketches and table 1 below.

TABLE 1						
Nominal Size	Actual OD mm	A mm	L mm	B mm	C mm	e Insertion Depth
DN15	12.70	10	50	60	80	20
DN20	19.05	10	58	60	84	24
DN25	25.40	10	64	60	87	27
DN32	31.75	10	74	60	92	32
DN40	38.10	20	96	60	98	38
DN50	50.80	20	106	60	103	43
DN65	63.50	30	124	60	107	47



Minimum spacing between two press points. See table 1.

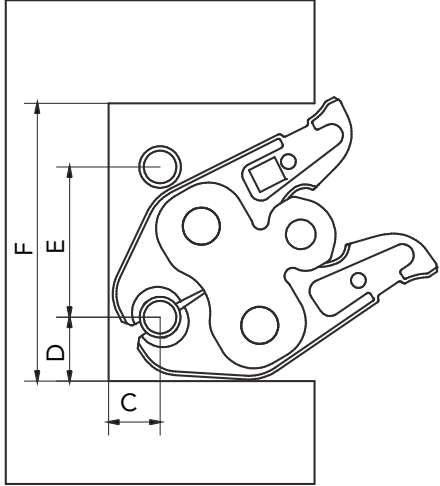
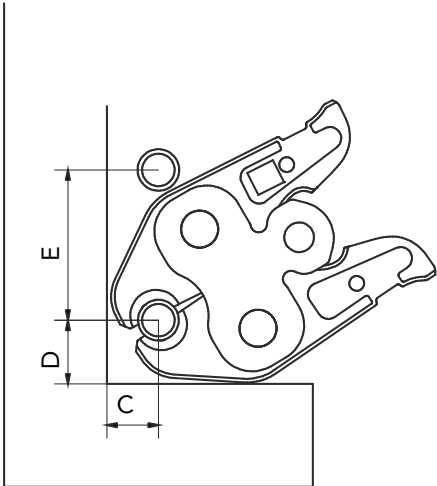
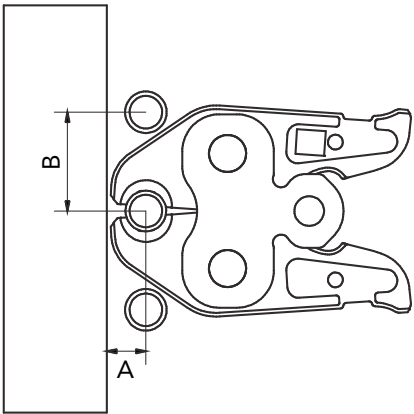


Minimum spacing to the wall points. See table 1.

**TOOL SPACE REQUIREMENTS**

The distance required to operate the KemPress® Tool as shown in the sketches and table 2 below.

TABLE 2						
Nominal Size	A mm	B mm	C mm	D mm	E mm	F mm
DN15	19	48	25	31	73	135
DN20	23	58	30	37.5	80	155
DN25	25	64	30	38.5	83	160
DN32	30	75	36	45	90	180
DN40	34	87	42	54.5	103	212
DN50	45	120	54	73.5	129	276
DN65	100	145	100	100	145	345



## O-RING SPECIFICATION TABLE

Application	Comment		P[kPa]	T [°C]	Water	Gas (HNBR)	HT (FKM)
Water Supply							
Hot and cold potable water	Australian Watermark approved, N.B. Watermark certification for all plumbing products is restricted 1400 kPa at 95°C		1600	120	✓		✓
Solar systems (flat-panel collectors)	System capable of handling 200°C as a peak temperature but not sustained temperature over a period of time		1600	120	✓		✓
	System operates at a sustained temperature of 200 °C (eg. At the solar collector)		1600	200			✓
Fire Services – Fire Sprinkler & Hose Reel	Capable of handling the required test pressure of 1700kPa or 1.5 times the design pressure as specified by AS2419.1		1600	120	✓		✓
Chilled water	Must contact Kembla customer service for open systems (inhibitors)		1600	≥ -25	✓		✓
Steam	Low pressure steam equipment		≤100	120	✓		✓
Spring water	Must contact Kembla customer service		1600	120	✓		✓
Pump circulated HW systems	Compliant with EN 12828		1600	120	✓		✓
Anti-freeze / Corrosion protection / Inhibitors							
Anti-freeze cooling concentration 50%	Product	Manufacturer	1600	-25 to 120			
	Antifrogen N	Clariant			✓		✓
	Antifrogen L	Clariant			✓		✓
	Ethylene Glycol	Various			✓		✓
	Propylene Glycol	Various			✓		✓
	Tyfor	Tyforop-Chemie			✓		✓
	Tyfor L	Tyforop-Chemie			✓		✓
Other Media							
Ethanol			1600	25	✓		✓
Condensate	Steam equipment		1600	110	✓		✓
Leakage indicator liquid for oil tanks	Brenntag R 36522		100	-20 to 30	✓		✓
Acetone	Liquid		500	-10 to 40	✓		✓
Natural Gas							
Natural gas	Australian gas approved, N.B. The scope of AS5601 for all gas system is restricted to 200kPa		200	100		✓	
Liquid gas						✓	
Oils, cooling materials and lubricants							
Engine oils	Product	Manufacturer	1000	70			
	Mahler HA	Q8				✓	
	Pegasus 710	Mobil				✓	
	Pegasus SHC	Mobil				✓	
	GTX	Castrol				✓	
Lubricants	Blasocut BC25	Swisslube AG	1000	70		✓	
	Garia Oil	Shell				✓	
	GL 4	German Oil				✓	
	Formula SLX	Castrol				✓	
Heating oil, Diesel in acc with EN590			500	40		✓	
Other Gas							
Oxygen			1600	Ambient	✓	✓	✓
Argon	For welding		1600	Ambient	✓	✓	
Carbogen			1600	70	✓	✓	
Compressed Air	Oil Content Maximum 25 mg/m³ of Air		1600	70	✓		✓
	With Oil Content greater than 25mg/m³ of Air		1600	70		✓	
Nitrogen – N <sub>2</sub>	After the evaporator		1600	70	✓	✓	✓
Hydrogen – H <sub>2</sub>	Will leak at <0.001cm³/minute		500	70	✓	✓	✓
Carbon dioxide – CO <sub>2</sub>	Dry		1600	70	✓	✓	✓
Carbon monoxide – CO	Stainless steel components not permitted		1600	70	✓	✓	✓
Low vacuum	P <sub>abs</sub> = 200mbar				✓	✓	✓
Forming gas	80% Argon / 20% CO2		1600	70	✓	✓	✓
Helium – He <sub>2</sub>			1600	70	✓	✓	✓
Krypton			1600	70	✓	✓	✓
Neon			1600	70	✓	✓	✓
Xenon			1600	70	✓	✓	✓

P [kPa] Maximum safe working pressure (continuous operating pressure), greater short duration peaks possible  
 T (°C) Maximum continuous operating temperature, greater short duration peaks possible  
 EPDM Ethylene Propylene Diene Monomer  
 HNBR Hydrogenated Nitrile Butadiene Rubber  
 FKM Fluorocarbon Rubber

### Not Suitable:

Refrigeration and Air Condition Applications, Acetylene, Urea Solution, Methanol, Glycerin Triacetate, Coolant Inhibitor, Sodium Hydroxide, Ammoniac gaseous, Medical Gas Applications.

## WARRANTY

### Tool Warranty

The KemPress® tool, jaws, adaptor jaws and collars are guaranteed to work for a minimum of 3 years from date of purchase. The warranty covers the repair of any damage or malfunction to the tool that is the cause of defective materials or parts. It will not cover damage caused by improper use, inadequate maintenance or mishandling of the tool (for example, major impact caused by dropping the tool or water damage).

The KemPress® 18V Li-ion batteries and battery chargers are covered by a limited 12 month warranty.

The following faults are not covered by the warranty (for examples of how MM Kembla can detect these faults, please contact customer service):

1. Tool damaged by dropping
2. Water damage
3. Heavily affected by dirt
4. Unauthorized opening
5. Inappropriate handling
6. Continuous operation
7. Operation without jaws and fitting
8. Inserting the battery by force

### Fittings and Copper Tube Warranty

For full details of the MM Kembla warranty please see <http://www.kembla.com.au/trading-terms> and download the Standard Conditions of Sale for Goods.

There are three elements to a Press-fit system. The copper tube, the fittings and the press tool. MM Kembla has tested Kembla copper tube, KemPress® fittings and the KemPress® tools in accordance with the relevant standards and guarantees. When installed by a licensed plumber in accordance with the Design and Installation Guide (located on our website) the tube and fittings will be fit for their intended purpose for a period of not less than 25 years. This means that the system is designed not to leak for a minimum of 50 years and guaranteed not to leak for 25 years.


When using copper tube compliant to AS1432 other than Kembla copper tube, MM Kembla will provide the same warranty as above for the same period as the warranty of the copper tube to a maximum of 25 years. If the copper tube warranty is 10 years, then the Kembla warranty for the KemPress® fittings is 10 years.

When using Kembla copper tube with other press-fit fittings, Kembla will provide a warranty for the copper tube only. The fittings manufacturer must provide the warranty for the fittings.

The Viega Press gun 4B, Viega Picco, Rothenberger ROMAX 3000 and ROMAX Compact sold in Australia (up to September 2012) have been tested for use on our KemPress® fittings. This guarantee covers licensed plumbers using these tools on our fittings. The warranty does not cover faults arising from incorrect installations and faults arising from competitor fittings used on the same installation.

**CAUTION:** Product data, design details, performance figures, advice and other information given herein (the "Information") is provided only as a guide to available information. MM Kembla does not accept any liability whatsoever (including arising from negligence) for the accuracy of the Information and for injuries, expense or loss, which may arise as a result of the use of the Information by the recipient.

**For further information:** Refer to the current edition of The Plumbers Handbook available through your MM Kembla representative or contact Customer Service.



## KemPress™

### Warranty Registration Form

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

KemPress™ Owner Name: \_\_\_\_\_

Business Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Post Code: \_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_ Mobile: \_\_\_\_\_

Email: \_\_\_\_\_

KemPress™ Model (KPS/KPL): KP \_\_\_\_\_

KemPress™ Pressing Tool Serial Number: \_\_\_\_\_

KemPress™ Jaws:	Serial Number	Serial Number
DN15 _____	DN20 _____	
DN25 _____	DN32 _____	
DN40 _____	DN50 _____	

Purchase Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Purchased From: \_\_\_\_\_

Merchant: \_\_\_\_\_

Sales Person: \_\_\_\_\_

Please **EMAIL** the completed form and a copy of your receipt/invoice to [sales@kembla.com.au](mailto:sales@kembla.com.au) or FAX to **1800 817 846** at the time of purchase to ensure warranty validation and prompt service response. Please attach a copy of your original receipt/invoice as proof of purchase.

If you have any questions or concerns please call 1800 804 631.

KemPress™ is a registered trade mark of MM Kembla

**Privacy Act Protection** Any personal information which you provide or we obtain is protected under the Privacy Amendment (Private Sector) Act 2000. You authorise us to disclose your personal information to others where it is necessary to do so to give effect to the warranty or to provide other services to you or where we may be compelled to do so by law.



MM, Kembla, MM Kembla, KemPress are registered trademarks of Metal Manufacturers Ltd.

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**Gloucester Boulevard, PO BOX 21, Port Kembla, NSW 2505**  
**T: 1800 804 631 F: 1800 817 846 E: [sales@kembla.com.au](mailto:sales@kembla.com.au)**  
**[www.kembla.com.au](http://www.kembla.com.au)**

**MM Kembla New Zealand**  
**20B Trugood Drive, East Tamaki, Auckland, 2013**  
**PO Box 51 525, Pakuranga, Auckland, 2140**  
**T: +64 9 274 0111 F: +64 9 274 0347 E: [sales@kembla.co.nz](mailto:sales@kembla.co.nz)**  
**[www.kembla.co.nz](http://www.kembla.co.nz)**

Technical Bulletin No: D65/13

A close-up photograph of a man with light brown hair and a slight smile, wearing a light blue button-down shirt. He is holding a black and orange hydraulic press tool, the KemPress K25, which is used for copper pipe connections. The tool has a silver-colored die head with a green '13' label and a yellow warning triangle. The man's hand is visible gripping the black handle of the tool.

**FASTER. EASIER.  
FLAME FREE.  
QUALITY.**

**THE **NEW** UNIVERSAL  
COPPER PRESS-FIT  
CONNECTION  
SYSTEM FROM  
MM KEMBLA.**

 **KEMBLA**  
**KemPress®**  
[www.kembla.com.au](http://www.kembla.com.au)