

KemPress[®]

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 over 100 years of Australian copper tube manufacturing with press-fit technology & 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. All KemPress fittings are compatible with recognised press-fit tools such as Viega, Rothenberger, Novopress, Milwaukee & Ridgid with Australian sized compatible jaws, 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
 - All KemPress® fittings are guaranteed to work with approved copper pressfit tools
 - Rothenberger & Viega tools have been tested to work with KemPress fittings (as at October 2015)
 - Fittings designed to work with copper tube compliant to AS1432
- Push and Stay
 - DN15-50 fittings are tight enough to complete the rough in before securing placement by pressing
- High quality, lightweight KemPress® tools
 - Slim lightweight and ergonomic design
 - One hand operation. Once the jaws are inserted the weight is balanced
 - Smart Electronic controls
 - Longest interval between servicing
 - KPL2 unlimited for 2 years
 - KPL 40,000 presses
 - KPS 35,000 presses
 - Loan tool provided while servicing
 - Small tool (KPS) handles tube up to DN32
 - Large tool (KPL2) handles tube up to DN100
 - New KPL2 tool is lighter, shorter, contains
 Brushless Motor Technology for more presses
 per battery charge & press area illumination
 - 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, incorporating KemCore technology for superior wall thickness control and optimal press performance. 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

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.

As well as an Elastomeric O-ring, DN65-100 fittings also contain a double layered stainless steel grip ring and separation ring which deliver the required joint strength when pressed.

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 up to DN50 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 DN15-50 installation process (see page 10) as your guide.

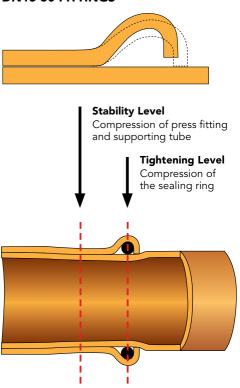
Press profile

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.

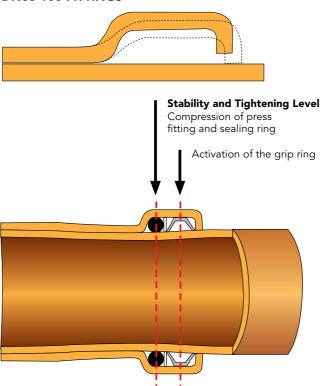
Press Process

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. For DN65-100 fittings, the process presses the lip of the fitting, compresses the O-ring and forces the double layered teeth of the grip ring against the tube.

DN15-50 FITTINGS



DN65-100 FITTINGS





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. For DN65-100 fittings also inspect the fitting for the presence of a KemPress label that is to be removed after pressing to indicate the fitting has been pressed.



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.



For DN65-100 fittings, remove the KemPress® label to indicate completion of the press.

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.





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

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.

High Temperature (HT)



^{*} 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.



	Diameter (DN)	Water Code	Pack Qty	Carton Qty	Gas Code	Pack Oty	Carton Qty
Connector	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	J09540	1	24	J09780	1	24
	80	J09541	1	16	J09781	1	16
Marie Control	100	J09542	1	8	J09782	1	8
Connector Slip	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	J09545	1	22	J09783	1	22
	80	J09546	1	16	J09784	1	16
O	100	J09547	1	8	J09785	1	8
Elbow 45 Degree	15	J09010	10	500	J09330	10	250
	20	J09011	10	200	J09331	10	100
	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
11	65	J09570	1	16	J09795	11	16
	80 100	J09571 J09572	1	10 5	J09796 J09797	<u>1</u> 1	<u>10</u> 5
Elbow 90 Degree	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
0	40	J09065 J09066	2	30	J09384	2	14
0	FO		2	14	J09385 J09798	<u>2</u> 1	6 12
0	50		1				
	50 65 80	J09575 J09576	1 1	12 6	J09798 J09799	1	6



COPPER FITTINGS	Diameter (DN)	Water Code	Pack Qty	Carton Qty	Gas Code	Pack Qty	Carton Qty
Elbow 90 degree M&F	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	J09580	1	12	J09753	1	12
	80	J09581	1	8	J09754	1	8
	100	J09582	1	4	J09755	1	4
ee Equal	15	J09070	10	200	J09390	10	120
	20	J09071	10	80	J09391	10	60
	25	J09072	5	60	J09392	5	25
	32	J09073	2	30	J09393	2	16
0	40	J09074	2	22	J09394	2	12
	50	J09075	2	12	J09395	2	4
	65	J09585	1	9	J09801	11	9
	80	J09586	1	7	J09802	1	7
	100	J09587	1	3	J09803	1	3
ee Reducing	20x20x15	J09030	10	150	J09350	10	50
	20x15x15	J09275	10	200	J09291	10	110
	20x15x20	J09274	10	150	J09290	10	70
	25x25x15	J09031	5	60	J09351	5	30
	25x25x20	J09032	5	70	J09352	5	30
	32x32x25	J09626	2	60	J09646	2	30
	32x32x20	J09627	2	60	J09647	2	30
	32x32x25	J09033	2	30	J09353	2	18
	40x40x20	J09628	2	40	J09648	2	20
	40x40x25	J09629	2	30	J09649	2	16
	40x40x32	J09034	2	24	J09354	2	12
	50x50x20	J09630	2	20	J09650	2	8
	50x50x20	J09631	2	20	J09651	2	10
-	50x50x25 50x50x40	J09631 J09277	2	16	J09294	2	10
	65x65x50	J09277 J09590	1	12	J09804	1	12
	80x80x50	J09590 J09591	1	9	J09805	1	9
	80x80x65	J09591 J09592	1	8	J09806	1	8
	100x100x50	J09593	1	5	J09807	1	5
THE STATE OF THE S	100x100x65 100x100x80	J09594 J09595	<u> </u>	3	J09808 J09809	1	3
	1000100000	307373	'	J	367667	·	3



OPPER FITTINGS	Diameter (DN)	Water Code	Pack Qty	Carton Qty	Gas Code	Pack Qty	Carton Qty
educer	20x15	J09035	10	250	J09355	10	150
	25x20	J09036	5	125	J09356	5	70
	25x15	J09280	5	150	J09300	5	90
	32x15	J09620	2	120	J09640	2	60
	32x20	J09281	2	100	J09301	2	60
	32x25	J09282	2	60	J09302	2	50
	40x20	J09621	2	90	J09641	2	40
	40x25	J09622	2	70	J09642	2	30
	40x32	J09283	2	60	J09303	2	30
	50x20	J09623	2	40	J09643	2	20
	50x25	J09624	2	50	J09644	2	16
	50x32	J09625	2	30	J09645	2	20
	50x40	J09284	2	30	J09304	2	14
	65x32	J09550	1	30	J09744	1	30
	65x40	J09551	1	30	J09745	1	30
	65x50	J09552	1	30	J09786	1	30
	80x40	J09553	1	25	J09747	1	25
	80x50	J09554	1	24	J09748	1	24
	80x65	J09555	1	21	J09749	1	21
	100x50	J09556	1	16	J09750	1	16
	100x65	J09557	1	12	J09751	1	12
	100×80	J09558	1	12	J09752	1	12
educer M&F	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	J09560	1	30	J09787	1	30
	65x50	J09561	1	25	J09788	1	25
	80x40	J09562	1	20	J09789	1	20
	80x50	J09563	1	20	J09790	1	20
	80x65	J09564	1	20	J09791	1	20
MARKET	100x50	J09565	1	14	J09792	1	14
	100x65	J09566	1	14	J09793	1	14
	100x80	J09567	1	12	J09794	1	12
lange Adaptor	40	J09119	1	1			
	50	J09120	1	1			



PRODUCT RANGE							
HT (High Temperature) COPPER FITTINGS	Diameter (DN)	Water Code	Pack Qty	Carton Qty	Gas Code	Pack Qty	Carton Qty
HT Connector	15	J06700	10	300			
(Dame)	20	J06701	10	150			
HT Elbow 90 Degree	15	J06761	10	250			
	20	J06762	10	100			
COPPER & COPPER AL	LOY FITTINGS						
End Caps	15	J09121	10	1000	J09326	10	400
	20	J09122	10	750	J09327	10	300
O STATE	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
3	65	J09600	1	30	J09810	1	30
	100	J09601 J09602	1	28 18	J09811 J09812	1	28 18
Male Line Adaptor	15x1/2" BSP	J09040	10	250	J09360	10	250
	15x3/4"BSP	J09041	10	200	J09361	10	200
	20x1/2"BSP	J09042	10	200	J09362	10	200
1	20x3/4"BSP	J09044	10	150	J09363	10	150
1.	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 50x2" BSP	J09050 J09052	2	40 16	J09367 J09368	2	40 16
Female Line Adaptor	15x1/2" BSP	J09130	10	250	J09534	10	250
	20x3/4" BSP	J09131	10	150	J09535	10	150
and .	25x1" BSP	J09132	5	80	J09536	5	80
A CONTRACTOR OF THE PARTY OF TH	32x1-1/4" BSP	J09133	2	40	J09537	2	40
100	40x1-1/2" BSP	J09134	2	30	J09538	2	30
~	50x2" BSP	J09135	2	20	J09539	2	20
Unions (62)	15x1/2" BSP	J09053	10	240	J09067	10	240
CHIEF TO THE PARTY OF THE PARTY	20x3/4" BSP	J09054	10	120	J09068	10	120
Unions (69)	25x1" BSP	J09076	5	30	J09450	5	30
	32x1-1/4" BSP	J09077	2	20	J09451	2	20
A Comment	40x1-1/2" BSP	J09078	2	10	J09452	2	10
	50x2" BSP	J09079	2	8	J09453	2	8



COPPER ALLOY	Diameter (DN)	Water Code	Pack Qty	Carton Qty	Gas Code	Pack Oty	Carton Qty		
Plug In Adaptor	15×1/2" BSP	J09140	10	200					
Female Thread)	20x1/2" BSP	J09141	10	170	Universal usage				
	20x3/4" BSP	J09142	10	100					
Plug In Adaptor	15x1/2" BSP	J09037	10	170					
Male Thread)	20x1/2" BSP	J09038	10	170	U	niversal usa	ige		
111111	20x3/4" BSP	J09039	10	120					
Back Plated Elbow	15x1/2" BSP MI	J09116	10	60	J09410	10	60		
	15x1/2" BSP FI 20x3/4" BSP FI	J09117 J09118	10 10	100 60	J09411 J09412	10	100		
10				5.5	332	. 5			
Back Plated Male Elbow (96mm)	15x1/2" BSP	J09127	10	50	J09427	10	50		
emale Threaded	15x1/2" BSP	J09813	10	150	J09817	10	150		
Elbow 90 Degree	20x3/4" BSP	J09814	10	70	J09818	10	70		
Male Threaded	15x1/2" BSP	J09815	10	150	J09819	10	150		
lbow 90 Degree	20x3/4" BSP	J09816	10	100	J09820	10	100		



DN15-50 INSTALLATION

The following is a step by step guide to installing the KemPress® System for diameters DN15-50. For projects requiring maintenance and repair visually inspect the copper tube to ensure it is in reasonable condition with no signs of external corrosion or scores. Installation shall be in accordance with Australian standards and the KemPress® Design & Installation Guide. Failure to adhere to either can result in the warranty being voided.



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** of the Fittings Space Requirements table, page 20.



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.

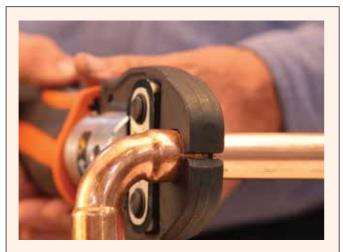




6. Ensure you have the correct fitting for the application (e.g. water or gas). Check the fitting is clean and the O-ring is free from debris and correctly sitting in place. Push fitting on tube all the way to the engagement marking.



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. Ensure the jaw is engaged square with the fitting and not on an angle.



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.

MINIMUM DISTANCE FOR BRAZING NEAR A KEMPRESS FITTING

Tube Size	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
Minimum Clearance to existing connection (mm)	350	500	650	800	1000	1300	1650	2000	2500
Minimum Clearance to existing brazed fitting (mm)	10	10	10	10	20	20	20	20	20



DN65-100 INSTALLATION

DN65-100 installations require the use of the KemPress® Large Tool (KPL/KPL2) and KemPress® DN65-100 Collars and ZB203 Adaptor Jaw or other approved pressing tools. For projects requiring maintenance and repair, visually inspect the copper tube to ensure it is in reasonable condition with no signs of external corrosion or scores and clean the ends with emery paper or a soft scourer. Installation shall be in accordance with Australian standards and the KemPress® Design & Installation Guide. Failure to adhere to either can result in the warranty being voided.



1. Cut copper tube to length using a pipe cutter or fine tooth saw and ensure the pipe is cut square.



2. Carefully deburr and wipe clean the end of the tube internally and externally to minimise turbulence and pressure loss according to AS3500 and avoid damaging the O-ring.

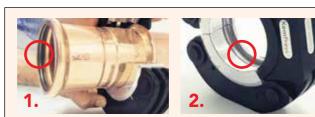


3. Ensure you have the correct sized fitting, check the fitting is clean and the stainless steel grip ring and O-ring are free from debris and correctly seated in the fitting.



4. Mark the insertion depth on the tube by lining up the fitting side by side with the tube or by inserting the fitting onto the tube until it reaches the tube stop. When fitting is inserted onto the tube the outer edge of the fitting must line up with the marking. Refer to the table below for the minimum insertion depth.

Tube Size	Minimum Insertion Depth
40mm	36mm
50mm	40mm
65mm	43mm
80mm	47mm
100mm	55mm



WARNING. 1st generation KemPress DN65 Collars and Fittings are not to be used with new KemPress® DN65 Collars and Fittings.

1st generation DN65 fittings & collars can be identified by the following: 1. Fittings have a different profile and do not contain a stainless steel grip ring. 2. Collars have a groove on the inside of the collar rather than a flat surface.

If you are unsure of the fitting or collar you are using, please contact MM Kembla Customer Service on 1800 804 631 for clarification.





5. Secure the tube in a vise or pipe support to prevent any movement of the tube and insert the fitting onto the tube. Ensure the outer edge of the fitting lines up with the insertion depth mark made in step 4.



6. Select the appropriate sized KemPress® collar, check it is clean and that the surface of the pressing area is smooth.



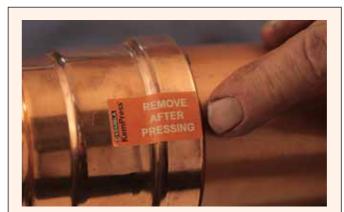
7. Open the collar and place it around the fitting, such that the bump on the fitting is rested into the groove of the pressing collar. Close the press collar ensuring it fits square with the fitting and check the insertion depth mark still lines up with the outer edge of the fitting.



8. Select the ZB203 Adaptor Jaw, insert onto the KPL/ KPL2 pressing tool and arrest the locking bolts of the tool.



9. Open the ZB203 Adaptor Jaw by depressing the jaw levers and attach to the press collar so that the claws of the jaw grip around the pins of the press collar. Initiate the pressing job by pressing the start button. The pressing procedure should not be interrupted prematurely unless in an emergency by pressing the emergency stop button. The KemPress tool will flash if the fitting does not press correctly.



10. Release the adaptor jaw from the collar and the collar from the fitting. Remove the KemPress® label to indicate completion of the press.



PRESS TOOL

The KemPress® tools are 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:
 KPL2 Unlimited, service every 2 years
 KPL 40,000 pressing cycles
 KPS 35,000 pressing cycles
- Smart electronic controls:
 Flashes if not pressed correctly
 Battery status indicator
- New KPL2 tool is lighter, shorter, contains
 Brushless Motor Technology for more presses
 per battery charge & press area illumination
- 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/KPL2) designed for DN15, 20, 25, 32, 40, 50, 65, 80 and 100



KEMPRESS COPPER TOOLING SPECIFICATIONS

TECHNICAL DATA	Small Tool KPS	Large Tool KPL	New Large Tool KPL2
Dimensions	DN15-DN32	DN15-DN100	DN15-DN100
Weight incl. battery	1.7 kg	3.3 kg	2.8 kg
Length	319 mm	410 mm	387 mm
Width	70 mm	80 mm	75 mm
Height	96 mm	125 mm	111 mm
Power Consumption	240 W	450 W	450 W
Piston Force (minimum press force)	21 kN	32 kN	32 kN
Piston Stroke	30 mm	40 mm	40 mm
Battery	12V/1.5 Ah Li-lon	18V/1.5 Ah Li-Ion	18V/1.5 Ah Li-lon
Charging Time	30 mins	30 mins	30 mins
Number of Presses Before Service	35,000	40,000	Unlimited, service every 2 years
Noise Pressure at User's Ear	75.5 db(A)	76.5 db(A)	76.5 db(A)
Type of Protection	IP20	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)
- New 2nd generation large tool KPL2 has a service interval of 2 years

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 (KPL), 35,000 for the KemPress® Small tool (KPS) and every 2 years for the new KemPress® Large tool 2 (KPL2). 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/repaired
- 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

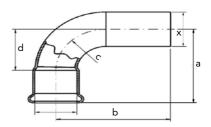
Any service or repair of the KemPress® pressing tool or jaws, requiring opening the device, or mechanical repairs, shall only be carried out by MM Kembla or their authorised agent. Failure to do so may void the warranty.



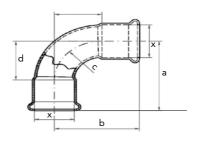


KemPress[®]

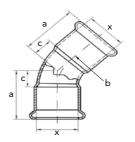
DN 15-50 FITTINGS MEASUREMENTS



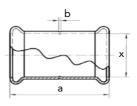
Product					
Code	а	b	С	d	х
J09020	31.9	40.0	15.3	15.6	15
J09021	44.1	52.0	22.9	23.2	20
J09022	56.1	63.6	30.5	30.8	25
J09023	67.9	76.1	38.1	38.6	32
J09024	80.7	90.0	45.8	46.3	40
J09026	102.8	114.3	61.0	61.5	50



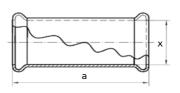
Product				
Code	а	b	С	х
J09061	31.9	15.3	15.6	15
J09062	44.1	22.9	23.2	20
J09063	56.1	30.5	30.8	25
J09064	67.9	38.1	38.6	32
J09065	80.7	45.8	46.3	40
J09066	102.8	61.0	61.5	50



Product				
Code	а	b	С	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

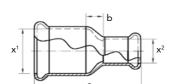


Product			
Code	а	b	x
J09000	34.4	1.8	15
J09001	43.6	1.8	20
J09002	52.2	1.8	25
J09003	60.9	2.5	32
J09004	71.1	2.5	40
J09005	84.9	2.5	50

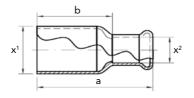


Product		
Code	а	х
J09055	42.8	15
J09056	56.2	20
J09057	68.7	25
J09058	81.1	32
J09059	96.0	40
J09060	115.9	50

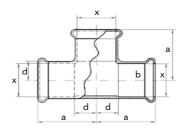




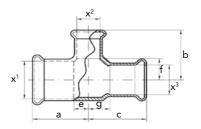
Product Code	a	b	x ¹	X ²
J09035	44.6	7.3	20	15
J09280	53.1	10.4	25	15
J09036	53.6	7.3	25	20
J09620	60.1	13.5	32	15
J09281	61.7	10.5	32	20
J09282	62.9	7.3	32	25
J09621	70.1	13.7	40	20
J09622	71.2	10.5	40	25
J09283	72.2	7.5	40	32
J09623	83.5	20.3	50	20
J09624	84.3	16.8	50	25
J09625	85.1	13.6	50	32
J09284	87.0	10.0	50	40



Product				
Code	а	b	\mathbf{x}^{1}	X ²
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



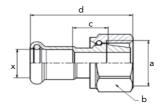
Product Code	a	b	с	d	e	f	g	x	
J09070	30.9	24.6	30.9		14.6	8.3	14.6	15	
J09071	35.2	32.7	35.2		14.3	11.8	14.3	20	
J09072	41.6	40.6	41.6		16.3	15.3	16.3	25	
J09073	48.5			19.2				32	
J09074	56.9			22.5				40	
J09075	70.8			29.0				50	



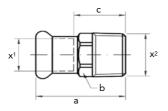
	Product Code	а	b	с	d	е	f	g	\mathbf{x}^1	X ²	x ³
	J09275	31.8	28.2	31.8		10.8	11.8	14.8	20	15	15
	J09274	31.8	28.2	31.8		10.8	11.8	10.8	20	15	20
	J90030	35.0	33	35.0		14.0	12.0	18.0	20	20	15
•	J09031	33.9	31.6	33.9		8.6	15.3	8.6	25	15	15
	J09032	37.1	36.2	37.1		11.8	15.3	11.8	25	25	20
	J09626	38.1	45	38.1		8.8	28.6	8.8	32	32	15
	J09627	41.3	40	41.3		12.0	19.0	12.0	32	32	20
	J09033	45.3	44.3	45.3		16.0	19.0	16.0	32	32	25
	J09628	46.4	53.5	46.4		12.0	32.5	12.0	40	40	30
	J09629	50.4	47.8	50.4		16.0	22.5	16.0	40	40	35
	J09034	53.6	51.8	53.6		19.2	22.5	19.2	40	40	32
	J09630	53.3	60.5	53.3		12.0	39.5	12.0	50	50	30
	J09631	57.3	64.8	57.3		16.0	39.5	16.0	50	50	35
	J09631	64.3	63.4	64.3		22.5	29.0	22.5	50	50	40



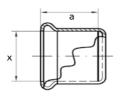
KemPress[®]



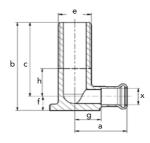
Product Code	a	b	с	d	x
J09053	12.70	24	13.7	39.5	15
J09054	19.05	30	17.3	47.5	20

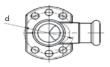


Product					
Code	а	b	c	x ¹	X ²
J09040	36	22	20	15	12.70
J09041	38	27	22	15	19.05
J09042	39	23	18	20	12.70
J09044	40	27	19	20	19.05
J09046	44	30	19	25	19.05
J09047	45	34	20	25	25.40
J09048	54	43	25	32	31.75
J09050	59	49	25	40	38.10
J09052	70	49	29	50	50.80

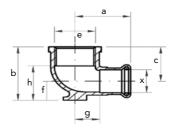


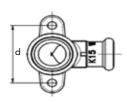
Product		
Code	а	x
J09121	16.3	15
J09122	20.9	20
J09123	25.2	25
J09124	29.2	32
J09125	34.3	40
J09126	41.2	50





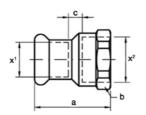
Product Code	a	b	c	d	e	f	g	h	x
J09111	33	69	58	32	12.7	11	15	22	15
J09127	33	96	85	32	12.7	11	15	19	15



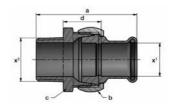


Product Code	а	b	с	d	e	f	g	h	x
J09117	31	33	22	35	12.70	11	15	7	15
J09118	40	46	29	40	19.05	17	16	12	20

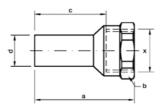




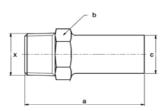
Product Code	a	b	с	x ¹	X ²
J09130	34	24	4.7	15	12.70
J09131	40	30	4.1	20	19.05
J09132	47	38	5	25	25.40
J09133	55	46	6.7	32	31.75
J09134	63	55	6.7	40	38.10
J09135	74	60	7.5	50	50.80



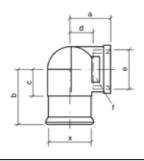
Product Code	2	b	_	d	x 1	x²
Code	a	D	_ `	u	^	
J09076	71	46	45	27	25	25.4
J09077	77	52	50	26	32	31.75
J09078	85.5	59	50	30	40	38.1
J09079	100	75	70	33	50	50.8



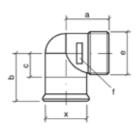
Product					
Code	а	b	С	d	х
J09140	47	24	32.8	12.65	12.70
J09141	48	24	33.8	18.95	12.70
J09142	55	30	39	18.95	19.05



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



Product Code	а	b	С	d	е	f	x
J09813	22	30	14	7	12.7	26	15
J09814	29	40	19	12.5	19.05	32	20



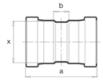
Product Code	а	b	С	d	е	f	x
J09815	25	26	10		12.7	19	15
J09816	33	36	15		19.05	26	20

Note: All measurements in mm x = diameter to suit DiameterNominal copper tube



KemPress[®]

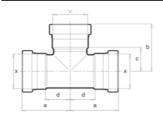
DN 65-100 FITTINGS MEASUREMENTS



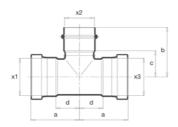
Product			
Code	а	b	x
J09540	110	24	65
J09541	118	24	80
J09542	136	26	100



Product		
Code	а	X
J09545	90	65
J09546	98	80
J09547	114	100



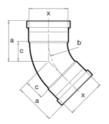
Product					
Code	a	b	с	d	x
J09585	89	87.5	44.5	46	65
J09586	98.5	99	52	51.5	80
J09587	120.5	121.5	66.5	65.5	100



Product					
Code	а	b	c	d	x
J09590	83.5	85	45	40.5	65
J09591	88	91.5	51.5	41	80
J09592	92	94	51	45	80
J09593	96.5	106	66	41.5	100
J09594	102.5	108.5	65.5	47.5	100
J09595	108.5	113	66	53.5	100



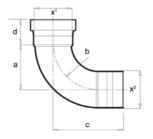
Product			
Code	а	b	x
J09600	43	19.05	65
J09601	47	19.05	80
J09602	55	19.05	100



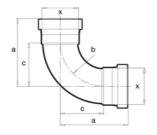
Product Code	a	b	c	x
J09570	76	77	33	65
J09571	87	92	40	80
J09572	107.5	120	52.5	100



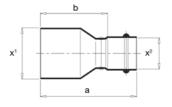
KemPress®



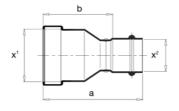
Product Code	а	b	с	d	x 1	x2
J09580	76	58.3	127	43	65	65
J09581	92	69.8	146	47	80	80
J09582	102	94.5	182	55	100	100



Product				
Code	а	b	С	x
J09575	119	77	76	65
J09576	139	92	92	80
J09577	175	120	120	100



Product				
Code	а	b	x ¹	X ²
J09560	107.5	71.3	65	40
J09561	101	61	65	50
J09562	133.5	97.5	80	40
J09563	127.5	87.5	80	50
J09564	122	79	80	65
J09565	155.5	115.5	100	50
J09566	149.5	106.5	100	65
J09567	145	98	100	80



Product Code	а	b	x ¹	X ²
J09550	88.5	68	65	32
J09551	92.5	75	65	40
J09552	94.0	83	65	50
J09553	102.5	79	80	40
J09554	107.0	87	80	50
J09555	101.0	90	80	65
J09556	127.5	95	100	50
J09557	127.0	98	100	65
J09558	120.0	102	100	80

Note: All measurements in mm x = diameter to suit DiameterNominal copper tube



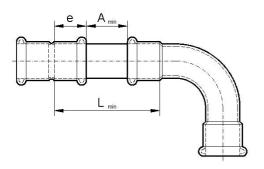
FITTINGS SPACE REQUIREMENTS

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

DN15-50 FITTINGS

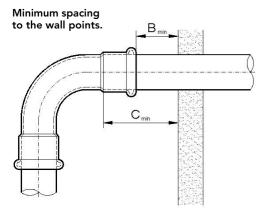
Nominal Size	Actual OD mm	A mm	L mm	B mm	C mm	e Insertion Depth
DN15	12.70	10	42.6	60	76.3	16.3
DN20	19.05	10	51.8	60	80.9	20.9
DN25	25.40	10	60.4	60	85.2	25.2
DN32	31.75	10	68.4	60	89.2	29.2
DN40	38.10	20	88.6	60	94.3	34.3
DN50	50.80	20	102.4	60	101.2	41.2

Minimum spacing between two press points.



DN65-100 FITTINGS

Nominal Size	Actual OD mm	A mm	L mm	B mm	C mm	e Insertion Depth
DN40	38.10	20	92	60	96	36
DN50	50.80	20	100	60	100	40
DN65	63.50	15	101	60	103	43
DN80	76.10	15	109	60	107	47
DN100	101.60	15	125	60	115	55





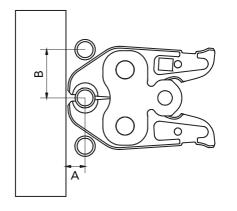


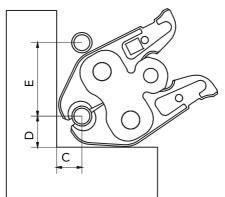
TOOL SPACE REQUIREMENTS

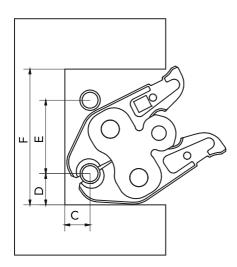
The distance required to operate the KemPress® Tool as shown in the sketches and table below.

DN15-50 FITTINGS

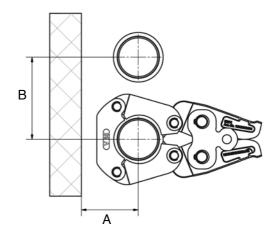
Nominal Size	A mm	B mm	C mm	D mm	E mm	F mm
DN15	19	48	25	31	73	135
DN20	23	58	30	37.5	80	155
DN25	25	64	30	38.5	83	160
DN32	30	75	36	45	90	180
DN40	34	87	42	54.5	103	212
DN50	45	120	54	73.5	129	276

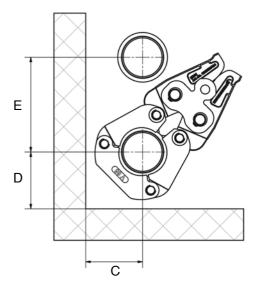






DN65-100 FITTINGS









O-RING SPECIFICATION TABLE

Application	Comment		P[kPa]	T [°C]	Water	Gas (HNBR)	HT (FKM)
Water Supply			<u>'</u>				
Hot and cold potable water	Australian Watermark appro	ved, N.B. Watermark certification for all ted 1400 kPa at 95°C	1600	120	✓		✓
Solar systems (flat-panel collectors)	System capable of handling sustained temperature ove	g 200°C as a peak temperature but not r a period of time	1600	120	✓		✓
	System operates at a susta solar collector)	System operates at a sustained temperature of 200 °C (eg. At the solar collector)					✓
Fire Services – Fire Sprinkler & Hose Reel	Capable of handling the re times the design pressure a	quired test pressure of 1700kPa or 1.5 as specified by AS2419.1	1600	120	✓		✓
Chilled water	Must contact Kembla custo	omer service for open systems (inhibitors)	1600	≥ -25	✓		✓
Steam	Low pressure steam equipr	nent	≤100	120	✓		✓
Spring water	Must contact Kembla custo	omer service	1600	120	✓		✓
Pump circulated HW systems	Compliant with EN 12828		1600	120	✓		✓
Anti-freeze / Corrosion prot	ection / Inhibitors				<u>I</u>		
•	Product	Manufacturer					
Anti-freeze cooling	Antifrogen N	Clariant			✓		√
concentration 50%	Antifrogen L	Clariant					<u> </u>
	Ethylene Glycol	Various	1400	1600 -25 to 120	✓ ✓		<u> </u>
	<u> </u>		1000 -23 to 120	∨		<u> </u>	
	Propylene Glycol	Various	4		-		-
	Tyfcor	Tyforop-Chemie			√		√
	Tyfor L	Tyforop-Chemie			✓		✓
Other Media			<u> </u>	<u> </u>	1	,	
Ethanol			1600	25	✓		✓
Condensate	Steam equipment	1600	110	✓		✓	
Leakage indicator liquid for oil tanks	Brenntag R 36522	100	-20 to 30	✓		✓	
Acetone	Liquid	Liquid					✓
Natural Gas							
Natural gas	Australian gas approved, N	I.B. The scope of AS5601 for all gas	200	100		✓	
Liquid gas	system is restricted to 200k	:Pa	200	100		√	
Oils, cooling materials and l	ubricants						
	Product	Manufacturer					
Engine oils	Mahler HA	Q8				✓	
g	Pegasus 710	Mobil	1			✓	
	Pegasus SHC	Mobil				✓	
	GTX	Castrol	1000	70		✓	
	Blasocut BC25	Swisslube AG				✓	
Lubricants	Garia Oil	Shell				✓	
Edolicalita	GL 4	German Oil]		✓		
11 .: 1 D: 1: :: :: ENEOO	Formula SLX	Castrol	500	40		√	
Heating oil, Diesel in acc with EN590			500	40		✓	
Other Gas	T			T			
Oxygen	- III		1600	Ambient	√	√	√
Argon	For welding		1600	Ambient	√	√	
Campragad Air	Oil Content Maximum 25 n	og/m³ of Air	1600	70 70	✓ ✓	√	
Compressed Air	Oil Content Maximum 25 r With Oil Content greater th		1600 1600	70	V	√	✓
Nitrogen – N ₂	After the evaporator	ian zonig/iii or All	1600	70	✓	✓	√
Hydrogen – H ₂	Will leak at <0.001cm³/min	ute	500	70	✓	✓	<u> </u>
Carbon dioxide – CO ₂	Dry		1600	70	✓	✓	<u> </u>
Carbon monoxide – CO	Stainless steel components	not permitted	1600	70	√	·	<u>·</u> ✓
Low vacuum	P _{abs} = 200mbar	•	1		✓	· ✓	<u> </u>
Forming gas	80% Argon / 20% CO2		1600	70	√	√	√
Helium – He ₂			1600	70	✓	✓	✓
			1600	70	√	✓	√
Krypton							
Krypton Neon			1600 1600	70	✓	✓	✓

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

T (°C) EPDM

HNBR FKM

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

KemPre	
Warranty R	Registration Form
Date://	
KemPress™ Owner Name:	
Business Name:	
Address:	
City:	State: Post Code:
Phone: ()	Mobile:
Email:	
DN15 DN25	
DN40	
DN40	DN50
	DN50
DN40	DN50
DN40 Purchase Date:/ Purchased From: Merchant:	DN50
DN40 Purchase Date:/ Purchased From: Merchant: Sales Person: Please EMAIL the completed is alse@kembla.com.au or FAX warranty validation and promp receipt/invoice as proof of pur	form and a copy of your receipt/invoice to to 1800 817 846 at the time of purchase to ensure ts service response. Please attach a copy of your original

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 below list of press tools sold in Australia (up to April 2018) with AS3688 size press jaws and collars 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.

TOOLS COMPATIBLE FOR USE WITH KEMPRESS FITTINGS

KemPress® KPS, KPL and KPL2

Viega Picco, 4B and 5

Novopress ACO102, ACO202, ACO203, ECO202 and ECO203

Ridgid RP 210-B and RP 340

Milwaukee M12 & M18 Force Logic

Rothenberger Compact and ROMAX 3000 & 4000

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.



NOTES	



 $MM,\,Kembla,\,MM\,\,Kembla,\,KemPress\,are\,\,registered\,\,trademarks\,\,of\,\,Metal\,\,Maunfacturers\,\,Ltd.$

MM Kembla, ABN 13 003 762 641 Gloucester Boulevarde, PO BOX 21, Port Kembla, NSW 2505 T: 1800 804 631 F: 1800 817 846 E: sales@kembla.com.au 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 www.kembla.co.nz



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

