



KemPress®

COPPER

DESIGN &
INSTALLATION
GUIDE

COPPER
PRESS-FIT
CONNECTION
SYSTEM FOR
WATER AND GAS



NOW INCLUDES DN65-100

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 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. With the new release of DN65-100 fittings, all KemPress® fittings 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
 - 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. 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

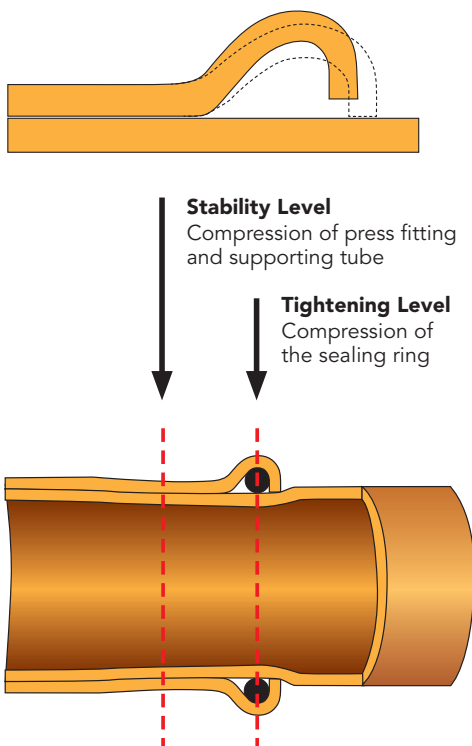
Fittings

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, the new range of 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.

DN15-50 FITTINGS



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.

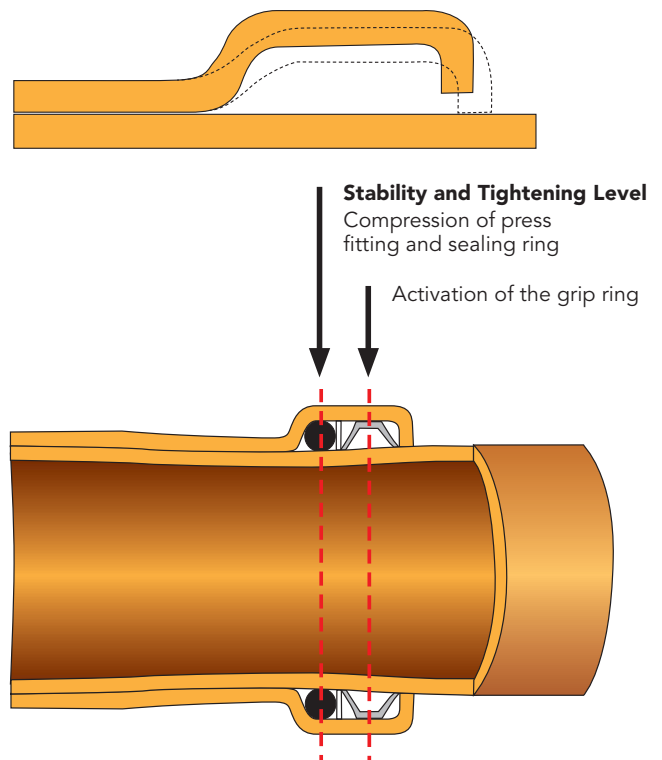
Press profile

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.

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 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.





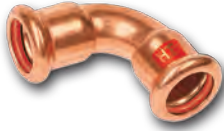




PRODUCT RANGE

COPPER FITTINGS	Diameter (DN)	Water Code	Pack Qty	Carton Qty	Gas Code	Pack Qty	Carton Qty
Connector  	15	069000	10	500	069320	10	300
	20	069001	10	300	069321	10	150
	25	069002	5	125	069322	5	60
	32	069003	2	60	069323	2	30
	40	069004	2	50	069324	2	20
	50	069005	2	30	069325	2	12
	65	069540	1	24			
	80	069541	1	16			
	100	069542	1	6			
	Connector Slip  	15	069055	10	500	069370	10
20		069056	10	250	069371	10	120
25		069057	5	100	069372	5	50
32		069058	2	60	069373	2	30
40		069059	2	40	069374	2	20
50		069060	2	24	069375	2	12
65		069545	1	24			
80		069546	1	16			
100		069547	1	6			
Elbow 45 degree  		15	069010	10	500	069330	10
	20	069011	10	200	069331	10	120
	25	069012	5	100	069332	5	50
	32	069013	2	60	069333	2	30
	40	069014	2	40	069334	2	20
	50	069015	2	16	069335	2	10
	65	069570	1	12			
	80	069571	1	9			
	100	069572	1	5			
	Elbow 90 Degree  	15	069061	10	500	069380	10
20		069062	10	200	069381	10	100
25		069063	5	100	069382	5	50
32		069064	2	50	069383	2	20
40		069065	2	30	069384	2	14
50		069066	2	14	069385	2	6
65		069575	1	10			
80		069576	1	6			
100		069577	1	4			
Elbow 90 degree M&F 		15	069020	10	500	069340	10
	20	069021	10	200	069341	10	100
	25	069022	5	100	069342	5	50
	32	069023	2	50	069343	2	20
	40	069024	2	30	069344	2	14
	50	069026	2	14	069345	2	6







PRODUCT RANGE

COPPER FITTINGS	Diameter (DN)	Water Code	Pack Qty	Carton Qty	Gas Code	Pack Qty	Carton Qty
Tee Equal 	15	069070	10	200	069390	10	120
	20	069071	10	120	069391	10	60
	25	069072	5	50	069392	5	25
	32	069073	2	30	069393	2	16
	40	069074	2	24	069394	2	12
	50	069075	2	10	069395	2	4
	65	069585	1	9			
	80	069586	1	6			
	100	069587	1	3			
	Tee Reducing 	20x20x15	069030	10	150	069350	10
20x15x20		069274	Coming Soon		069290	Coming Soon	
20x15x15		069275	Coming Soon		069291	Coming Soon	
25x25x15		069031	5	100	069351	5	40
25x25x20		069032	5	75	069352	5	40
32x32x25		069033	2	30	069353	2	16
40x40x32		069034	2	30	069354	2	12
65x65x50		069590	1	10			
80x80x50		069591	1	7			
80x80x65		069592	1	7			
100x100x50		069593	1	3			
100x100x65		069594	1	3			
100x100x80		069595	1	3			
Reducer 	20x15	069035	10	300	069355	10	150
	25x15	069280	Coming Soon		069300	Coming Soon	
	25x20	069036	5	125	069356	5	60
	32x20	069281	Coming Soon		069301	Coming Soon	
	32x25	069282	Coming Soon		069302	Coming Soon	
	40x32	069283	Coming Soon		069303	Coming Soon	
	50x40	069284	Coming Soon		069304	Coming Soon	
	Reducer M&F 	20x15	069101	10	400	069400	10
25x15		069103	5	200	069401	5	100
25x20		069105	5	150	069402	5	90
32x25		069108	2	60	069403	2	40
40x25		069110	2	60	069404	2	36
40x32		069112	2	60	069405	2	30
50x25		069113	2	50	069406	2	20
50x32		069114	2	30	069407	2	20
50x40		069115	2	30	069408	2	20
65x40		069560	1	27			
65x50		069561	1	27			
80x40		069562	1	18			
80x50		069563	1	15			
80x65		069564	1	15			
100x50		069565	1	10			
100x65	069566	1	8				
100x80	069567	1	8				

PRODUCT RANGE

COPPER FITTINGS	Diameter (DN)	Water Code	Pack Qty	Carton Qty	Gas Code	Pack Qty	Carton Qty
Flange Adaptor 	40	069119	1	1			
	50	069120	1	1			
HT (HIGH TEMPERATURE) COPPER FITTINGS							
HT Connector 	15	066700	10	300			
	20	066701	10	150			
HT Elbow 90 Degree 	15	066761	10	250			
	20	066762	10	100			
COPPER & COPPER ALLOY FITTINGS							
End Caps  	15	069121	10	1000	069326	10	400
	20	069122	10	750	069327	10	300
	25	069123	5	250	069328	5	150
	32	069124	2	100	069329	2	80
	40	069125	2	100	069336	2	40
	50	069126	2	72	069337	2	32
	65	069600	1	30			
	80	069601	1	28			
	100	069602	1	18			
	Male Line Adaptor 	15x1/2" BSP	069040	10	250	069360	10
15x3/4" BSP		069041	10	200	069361	10	200
20x1/2" BSP		069042	10	200	069362	10	200
20x3/4" BSP		069044	10	150	069363	10	150
25x3/4" BSP		069046	5	100	069364	5	100
25x1" BSP		069047	5	100	069365	5	100
32x1-1/4" BSP		069048	2	50	069366	2	50
40x1-1/2" BSP		069050	2	40	069367	2	40
50x2" BSP		069052	2	16	069368	2	16
Female Line Adaptor 	15x1/2" BSP	069130	10	250	069534	10	250
	20x3/4" BSP	069131	10	150	069535	10	150
	25x1" BSP	069132	5	80	069536	5	80
	32x1-1/4" BSP	069133	2	40	069537	2	40
	40x1-1/2" BSP	069134	2	30	069538	2	30
	50x2" BSP	069135	2	20	069539	2	20

PRODUCT RANGE

COPPER ALLOY FITTINGS	Diameter (DN)	Water Code	Pack Qty	Carton Qty	Gas Code	Pack Qty	Carton Qty
Unions (62) 	15x1/2" BSP	069053	10	240	069067	10	240
	20x3/4" BSP	069054	10	120	069068	10	120
Unions (69) 	25x1" BSP	069076	5	30	069450	5	30
	32x1-1/4" BSP	069077	2	20	069451	2	20
	40x1-1/2" BSP	069078	2	10	069452	2	10
	50x2" BSP	069079	2	8	069453	2	8
Plug In Adaptor (Female Thread) 	15x1/2" BSP	069140	10	200	Universal usage		
	20x1/2" BSP	069141	10	170			
	20x3/4" BSP	069142	10	100			
Plug In Adaptor (Male Thread) 	15x1/2" BSP	069037	10	170	Universal usage		
	20x1/2" BSP	069038	10	170			
	20x3/4" BSP	069039	10	160			
Back Plated Elbow 	15x1/2" BSP MI	069116	10	60	069410	10	60
	15x1/2" BSP FI	069117	10	100	069411	10	100
	20x3/4" BSP FI	069118	10	60	069412	10	60
Back Plated Male Elbow (96mm) 	15x1/2" BSP	069127	10	50	069427	10	50

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.



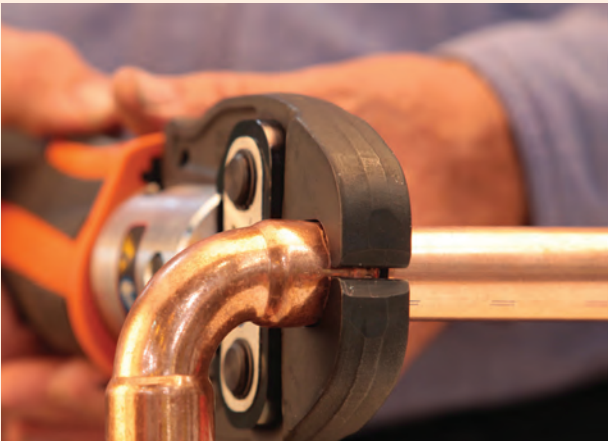
5. Select pressing jaw according to the fitting dimension and insert into the pressing machine. Arrest the locking bolts of the machine. Check the jaws are free from debris and in good working order.



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.



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

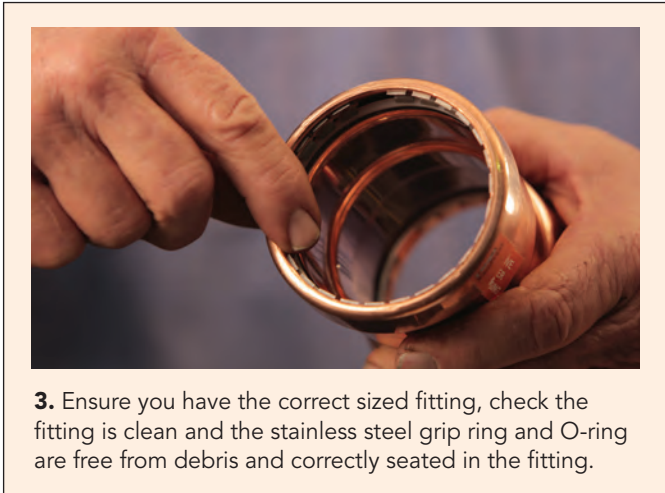
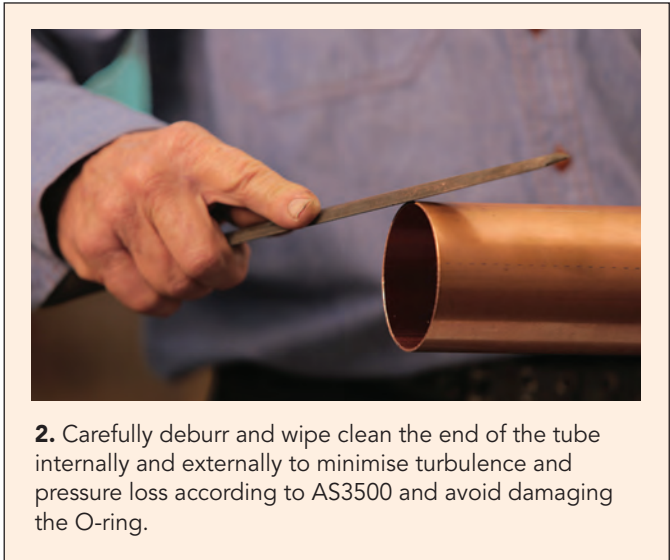
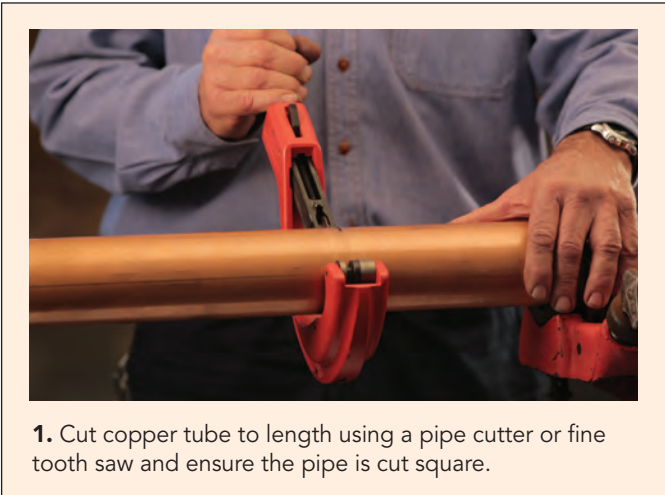
Brazing or soldering near to KemPress® joints should be avoided as this may cause the seal to degrade due to heat transfer. The table below states the minimum distance away from the press joint which is acceptable to braze. If this distance cannot be maintained then adequate precautions must be taken 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. **2.**

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 0800 KEMBLA for clarification.

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



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-Ion	18V/1.5 Ah Li-Ion	18V/1.5 Ah Li-Ion
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 light 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

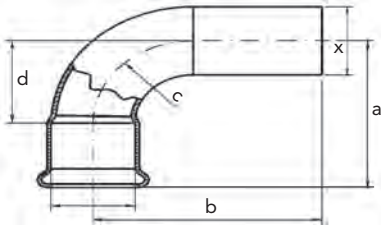
The MM Kembla tool service and repair program is easy, ensures minimal down time and provides known maximum costs for repairs. The key components of the program include:

- 0800 KEMBLA 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

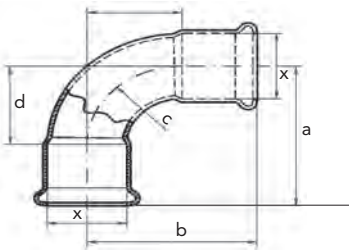
Any service or repair of the KemPress® pressing tool or jaws, requiring opening the device, or mechanical repairs, shall only be carried out by MM Kembla or their authorised agent. Failure to do so may void the warranty.



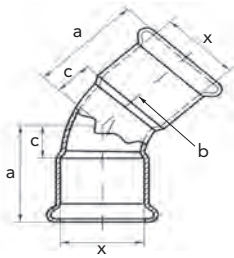
DN 15-50 FITTINGS MEASUREMENTS



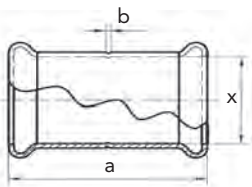
Product Code	a	b	c	d	x
069020	31.9	40.0	15.3	15.6	15
069021	44.1	52.0	22.9	23.2	20
069022	56.1	63.6	30.5	30.8	25
069023	67.9	76.1	38.1	38.6	32
069024	80.7	90.0	45.8	46.3	40
069026	102.8	114.3	61.0	61.5	50



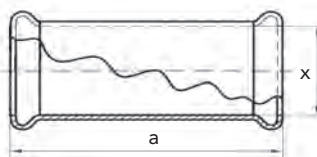
Product Code	a	b	c	x
069061	31.9	15.3	15.6	15
069062	44.1	22.9	23.2	20
069063	56.1	30.5	30.8	25
069064	67.9	38.1	38.6	32
069065	80.7	45.8	46.3	40
069066	102.8	61.0	61.5	50



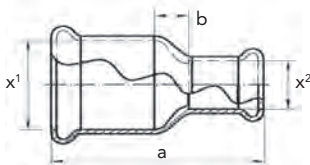
Product Code	a	b	c	x
069010	22.9	15.3	6.6	15
069011	30.7	22.9	9.7	20
069012	38.2	30.5	12.9	25
069013	45.6	38.1	16.3	32
069014	53.9	45.8	19.5	40
069015	67.0	61.0	25.8	50



Product Code	a	b	x
069000	34.4	1.8	15
069001	43.6	1.8	20
069002	52.2	1.8	25
069003	60.9	2.5	32
069004	71.1	2.5	40
069005	84.9	2.5	50

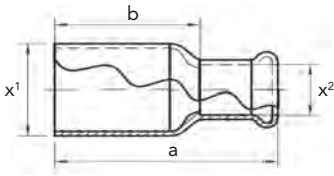


Product Code	a	x
069055	42.8	15
069056	56.2	20
069057	68.7	25
069058	81.1	32
069059	96.0	40
069060	115.9	50

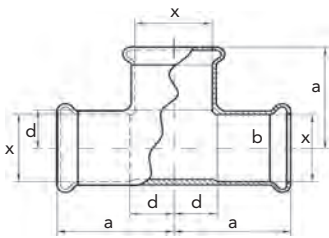


Product Code	a	b	x ¹	x ²
069035	44.6	7.3	20	15
069036	53.6	7.3	25	20

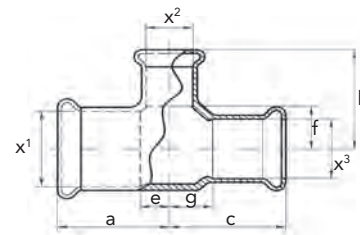
Note: All measurements in mm
x = diameter to suit Diameter
Nominal copper tube



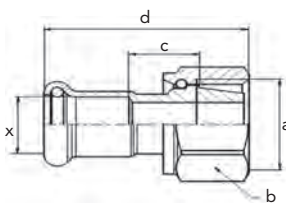
Product Code	a	b	x ¹	x ²
069101	50.0	33.6	20	15
069103	58.0	41.6	25	15
069105	58.5	37.6	25	20
069108	67.6	42.1	32	25
069110	78.0	52.5	40	25
069112	77.7	48.2	40	32
069113	93.6	68.1	50	25
069114	94.1	64.6	50	32
069115	96.9	62.3	50	40



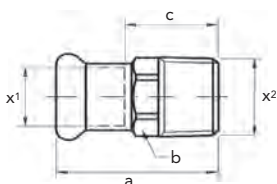
Product Code	a	b	c	d	e	f	g	x
069070	30.9	24.6	30.9		14.6	8.3	14.6	15
069071	35.2	32.7	35.2		14.3	11.8	14.3	20
069072	41.6	40.6	41.6		16.3	15.3	16.3	25
069073	48.5			19.2				32
069074	56.9			22.5				40
069075	70.8			29.0				50



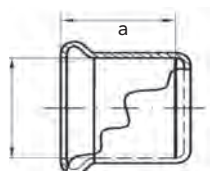
Product Code	a	b	c	d	e	f	g	x ¹	x ²	x ³
069030	31.7	28.1	31.7		10.8	11.8	10.8	20	15	20
069031	33.9	31.6	33.9		8.6	15.3	8.6	25	15	25
069032	37.1	36.2	37.1		11.8	15.3	11.8	25	20	25
069033	45.3	44.3	45.8		16.0	19.0	16.0	32	25	32
069034	53.6	51.8	61.0		19.2	22.5	19.2	40	32	40



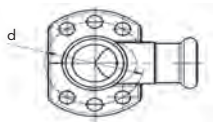
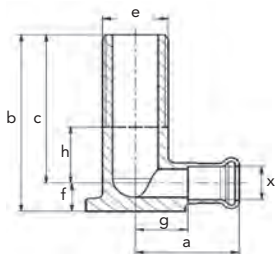
Product Code	a	b	c	d	x
069053	12.70	24	13.7	39.5	15
069054	19.05	30	17.3	47.5	20



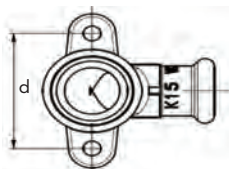
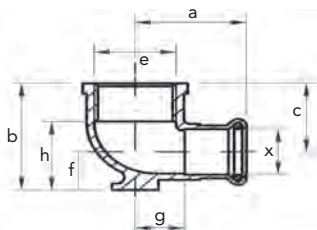
Product Code	a	b	c	x ¹	x ²
069040	36	22	20	15	12.70
069041	38	27	22	15	19.05
069042	39	23	18	20	12.70
069044	40	27	19	20	19.05
069046	44	30	19	25	19.05
069047	45	34	20	25	25.40
069048	54	43	25	32	31.75
069050	59	49	25	40	38.10
069052	70	49	29	50	50.80



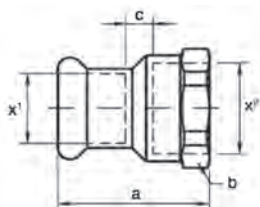
Product Code	a	x
069121	16.3	15
069122	20.9	20
069123	25.2	25
069124	29.2	32
069125	34.3	40
069126	41.2	50



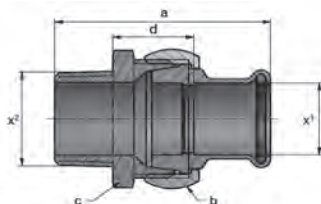
Product Code	a	b	c	d	e	f	g	h	x
069127	33	96	85	32	12.7	11	15	19	15



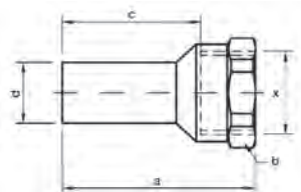
Product Code	a	b	c	d	e	f	g	h	x
069117	31	33	22	35	12.70	11	15	7	15
069118	40	46	29	40	19.05	17	16	12	20



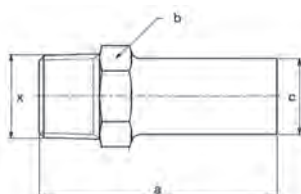
Product Code	a	b	c	x ¹	x ²
069130	34	24	4.7	15	12.70
069131	40	30	4.1	20	19.05
069132	47	38	5	25	25.40
069133	55	46	6.7	32	31.75
069134	63	55	6.7	40	38.10
069135	74	60	7.5	50	50.80



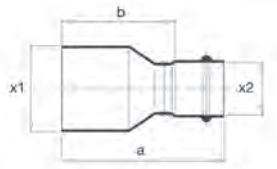
Product Code	a	b	c	d	x ¹	x ²
069076	71	46	45	27	25	25.4
069077	77	52	50	26	32	31.75
069078	85.5	59	50	30	40	38.1
069079	100	75	70	33	50	50.8



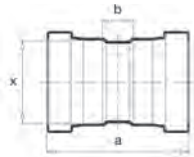
Product Code	a	b	c	d	x
069140	47	24	32.8	12.65	12.70
069141	48	24	33.8	18.95	12.70
069142	55	30	39	18.95	19.05



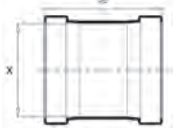
Product Code	a	b	c	x
069037	48	22	12.65	12.70
069038	55	22	18.95	12.70
069039	58	27	18.95	19.05

DN 65-100 FITTINGS MEASUREMENTS


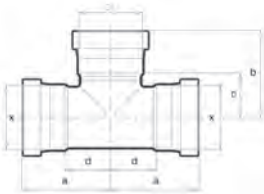
Product Code	a	b	x ¹	x ²
069560	107.5	71.3	65	40
069561	101	61	65	50
069562	133.5	97.5	80	40
069363	127.5	87.5	80	50
069564	122	79	80	65
069565	155.5	115.5	100	50
069566	149.5	106.5	100	65
069567	145	98	100	80



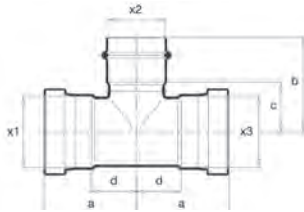
P. Code	a	b	x
069540	110	24	65
069541	118	24	80
069542	136	26	100



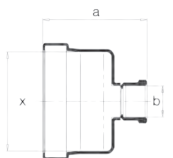
P. Code	a	x
069545	90	65
069546	98	80
069547	114	100



P. Code	a	b	c	d	x
069585	89	87.5	44.5	46	65
069586	98.5	99	52	51.5	80
069587	120.5	121.5	66.5	65.5	100



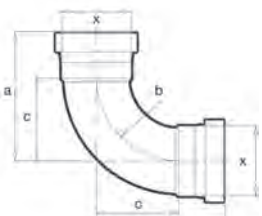
P. Code	a	b	c	d	x
069590	83.5	85	45	40.5	65
069591	88	91.5	51.5	41	80
069592	92	94	51	45	80
069593	96.5	106	66	41.5	100
069594	102.5	108.5	65.5	47.5	100
069595	108.5	113	66	53.5	100



P. Code	a	b	x
069600	43	19.05	65
069601	47	19.05	80
069602	55	19.05	100



P. Code	a	b	c	x
095700	76	77	33	65
069571	87	92	40	80
069572	107.5	120	52.5	100



P. Code	a	b	c	x
069575	119	77	76	65
069576	139	92	92	80
069577	175	120	120	100

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

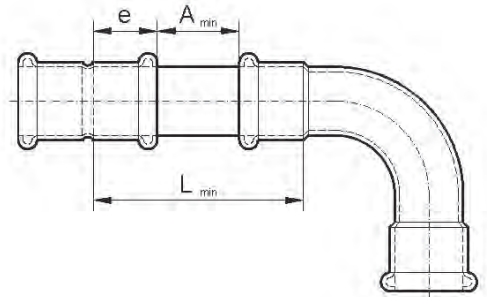
FITTINGS SPACE REQUIREMENTS

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

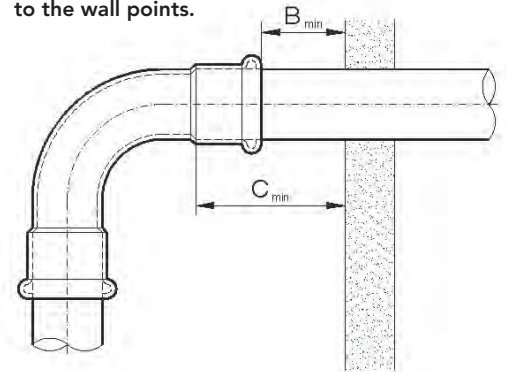
Minimum spacing between two press points.



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

Minimum spacing to the wall points.

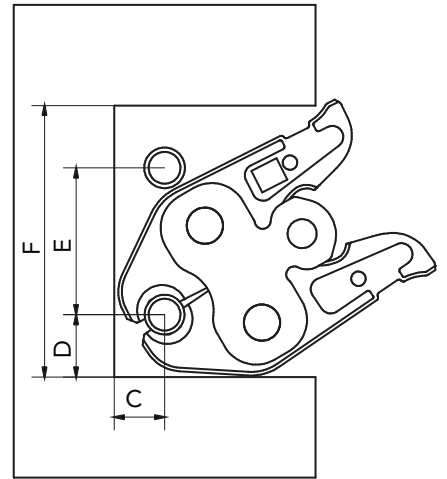
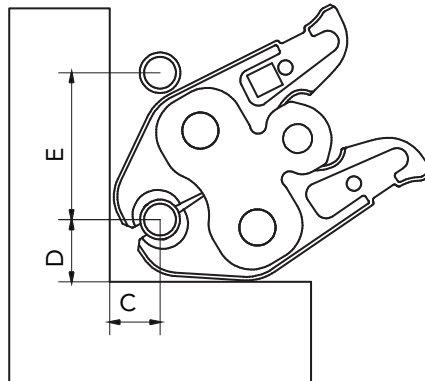
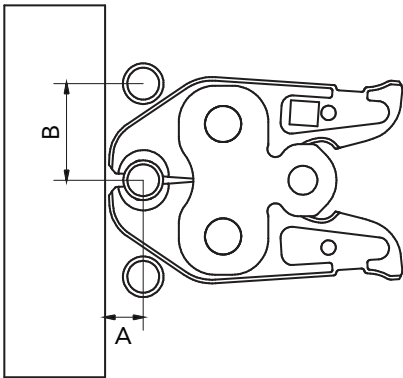


TOOL SPACE REQUIREMENTS

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

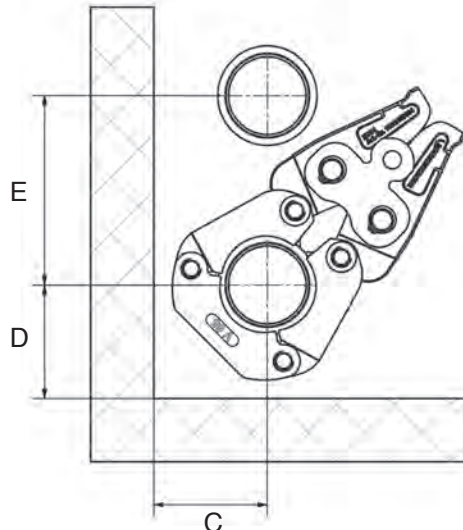
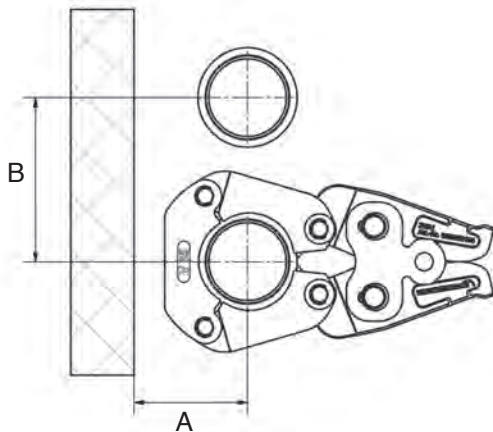
DN15-50 FITTINGS

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

Nominal Size	A mm	B mm	C mm	D mm	E mm
DN65	90	130	90	90	150
DN80	95	145	95	100	165
DN100	110	165	110	115	190



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		✓		
	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/m ³ of Air	1600	70	✓		✓
	With Oil Content greater than 25mg/m ³ of Air	1600	70		✓	
Nitrogen – N ₂	After the evaporator	1600	70	✓	✓	✓
Hydrogen – H ₂	Will leak at <0.001cm ³ /minute	500	70	✓	✓	✓
Carbon dioxide – CO ₂	Dry	1600	70	✓	✓	✓
Carbon monoxide – CO	Stainless steel components not permitted	1600	70	✓	✓	✓
Low vacuum	P _{abs} = 200mbar			✓	✓	✓
Forming gas	80% Argon / 20% CO ₂	1600	70	✓	✓	✓
Helium – He ₂		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 October 2015) 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 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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