

PEX-AL-PEX Gas System Technical and Installation Guide

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Overview

The Reflex PEX-AL-PEX Gas System is representative of all the attributes demanded by the Australian Plumbing and Gas Sectors; quality, value for money and expertise with PEX systems. The Reflex product offer combines all three of these desirables with a service level second-to-none.

The Reflex PEX-Al-PEX Gas System combines crimp fittings with pre-fitted, stainless steel, crimp-rings with Reflex PEX-Al-PEX pipe. Using one of the crimp-tool options available, a leak-free joint can be fabricated with a minimum of fuss.

One of the many design features of Reflex crimp fittings is that a controlled, positive seal is produced without O-rings. This feature helps avoid any potential issues should the fitting not be crimped at installation because a problem will be immediately evident during the manometer test.

There are a number of trade outlets that stock these systems, so please call us for the details of your local stockist.

Most importantly, Reflex PEX-Al-PEX Gas System fittings or pipe are not interchangeable with any other manufacturers' system.

It should be noted that the Reflex Gas System is designed as a consumer piping system for gas installations in accordance with Australian Standard AS/NZS 5601.1:2013 Gas Installations. All requirements and limiting conditions of AS/NZS 5601:2013 must be strictly adhered to.

Only licensed gas fitters should install the Reflex PEX-Al-PEX Gas System. This document is intended to provide the gas specialist with the technical attributes of the Reflex PEX-Al-PEX Gas System; it is not a training guide for laypersons.

The various tips and suggestions found in this document are a means of reiterating some of the requirements of AS/NZS 5601:2013; it is not to be interpreted as a document that allows the installer to disregard any other obligations or requirements of the Standard.

Inherent dangers when working with gas are well known to gas specialists and, with this in mind, DO NOT classify this manual as the definitive document with regards to the safety risks associated with gas and/or gas systems. We urge all tradespeople to complete any refresher courses from time to time and keep abreast of best-practice and trends within the sector.

AS/NZS 5601:2013 must be read in its entirety to ensure compliance is met by the installer.

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Reflex PEX-Al-PEX Gas Crimp System Crimp Fittings

Reflex Crimp Fittings are manufactured to meet the strict requirements of AS/NZS 2537.2:2011 and AS/NZS 2537.5:2011, resulting in the product being suitable for both water and gas delivery.

The body of the fitting is made from dezincification resistant (DR) brass, threads formed to AS/NZS 1722.1 and DN16 to DN32 fittings complemented with stainless steel crimp-rings, while DN40 & DN50 fittings are fitted with copper crimp-rings. The crimp-rings are positioned and fixed to the body of the fitting via a collet and come fitted with protection plugs to ensure the crimp-ring holds shape during transportation. Most importantly, the collet provides the user with inspection ports that allow installers to determine if the pipe is inserted to the correct depth.

It is critical to the integrity of the joint that the collet and crimp-ring are correctly positioned on the body of the fitting and have not been dislodged in transit prior to any attempt to make a joint. Further, a crimp-ring must not be "double-crimped" or reused in any way after it has been crimped; if this is the case, immediate replacement of the crimp-ring is required.

In order to complete a sound joint, the barb of the fitting is inserted into the bore of the pipe and pushed all of the way in until end of the pipe meets the collet of the fitting. When in the correct position, the pipe will be clearly visible via the inspection ports in the collet for stainless steel crimprings or in the copper crimp-ring if so fitted. If the pipe is at the correct depth and the fitting is aligned as required, the joint is ready for "crimping". Upon crimping the joint, the pipe is compressed between the wall of the crimp-ring and the barb of the fitting. The use of a specialised tool is required to complete this task.

One of the many design features of Reflex crimp fittings is that a controlled, positive seal is produced without O-rings, thereby totally eliminating the potential for all O-ring problems during installation. Most importantly, this feature helps avoid any potential issues should the fitting be missed and not crimped at installation because a problem will be immediately evident during the manometer test.

Upon creating a crimped joint for any Reflex fitting a Reflex Crimp Gauge must be used to ensure the pressing tongs have sufficiently crimped the crimp-ring to provide a leak-free outcome (see page 6 for assembly details).

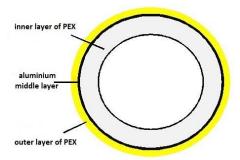
The range is available for sizes from DN16 to DN50.

Crimp Fitting Technical Data

	0					
Dia Nom	Description	Nom OD (mm)	Nom ID (mm)	Body	Crimp Ring	Tool Profile
DN16	DN16 Crimp	16	8.50	DR Brass	304 SS	TH or U
DN20	DN20 Crimp	20	11.20	DR Brass	304 SS	TH or U
DN25	DN25 Crimp	25	14.20	DR Brass	304 SS	TH or U
DN32	DN32 Crimp	32	19.00	DR Brass	304 SS	TH or U
DN40	DN40 Crimp	40	26.00	DR Brass	Copper	TH or U
DN50	DN50 Crimp	50	34.50	DR Brass	Copper	TH or U

Reflex PEX-Al-PEX Composite Pipe

Reflex PEX-Al-PEX pipe is a bonded, triple-layered pipe manufactured to the exacting requirements of AS/NZS 4178.8:2010. Both the inner and outer layers are PEX, while the middle layer is aluminium.



The bore of Reflex PEX-Al-PEX pipe is very smooth and resistant to internal scaling.

Like all reputable PEX-Al-PEX pipe, Reflex PEX-Al-PEX pipe has low thermal conductivity properties, increased flexibility and is lighter than its metal competitors. These features, when coupled with a flame-free solution, ensure the Reflex PEX-Al-PEX Gas System offer many benefits to the installer and consumer.

Reflex PEX-Al-PEX pipe is not permitted to be installed above ground without protection against UV degradation, is not permitted for use as a final connection to appliances and must not be used for applications where the operating pressure exceeds 70kPa¹. Again, the installer must consider a number of other limitations placed upon its use as set-out in AS/NZS 5601:2013¹.

PEX-Al-PEX Pipe Technical Data

Nominal Diameter	DN16	DN20	DN25	DN32	DN40	DN50
Nominal OD (mm)	16	20	25	32	40	50
Nominal Bore (mm)	11.60	14.40	18.00	23.20	31.70	40.90
Thermal Conductivity (W/mk)	0.45	0.45	0.45	0.45	0.45	0.45
Thermal Expansion Rate (mm/mtr every 10° C change)	0.240	0.240	0.240	0.240	0.240	0.240
Pipe Roughness (W mm)	0.007	0.007	0.007	0.007	0.007	0.007
Maximum Continuous Operating Temperature (°C)	80	80	80	80	80	80
Maximum Operating Pressure* (kPa)	70	70	70	70	70	70
Bend Radius (without tools)	3 x OD					
Weight (g) / metre	105	128	202	284	492	732
Volume (I) / metre	0.105	0.160	0.251	0.419	0.789	1.307
Coil Length (mtr)	50/100	50/100	50	50	n/a	n/a
Straight Length (mtr)	5	5	5	5	5	5

^{*}Refer AS/NZS 5601:2013

Wall Penetrations

Only PROMASEAL CFC32 Conduit Collars are certified for use with Reflex PEX-Al-PEX pipe.

These collars have been tested in walls and floors and achieved up to 240 minutes fire resistance in accordance with the criteria BS 476: Part 20: 1987 and AS 1530 Part4:2005 depending upon the size of pipe, installation practice and the material of the penetrated medium.

¹ AS/NZS 5601:2013 must be read in its entirety to ensure compliance is met by the installer.

Installation Instructions

AS/NZS 5601:2013¹ outlines a number of installation practices and considerations the installer must follow in order to complete works in a safe, compliant manner.

Summarised, the list of some of the considerations that must form part of the installation include¹;

- Pipe protection
- Pipe limitations
- Pipe sizing
- Thermal expansion
- Exposure to heat
- Exposure to UV rays
- Clipping & supporting
- Installation underground, in-slab & underfloor
- Connection to other material
- Future extension
- Connection to appliances
- Fire Protection
- Testing

UV Protection and Mechanical Protection

AS/NZS 5601:2013¹ outline a number of installation practices and considerations the installer must follow, including UV protection and mechanical protection of PEX-Al-PEX pipe.

One of the options available to satisfy this requirement is to install the PEX-Al-PEX pipe within Reflex UV resistant, corrugated tube.

Reversion Fittings

AS/NZS 5601:2013¹ specifically outlines the requirements for reversion fittings to prevent any future issues with the mismatch of components from different manufacturers. Threaded and copper reversion fittings are available from the Reflex range.

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Assembly

Cut Pipe

Cut pipe using Hippo PEX Cutter. The pipe should be cut square and any debris removed prior to installation. If the pipe is oval-shaped after cutting, use a re-rounding tool to return it to its original shape. **NEVER USE A HACKSAW TO CUT PEX PIPE.**





Check Fitting Assembly

Remove the crimp-ring protection plugs from the fitting assembly.

Confirm the crimp-ring and collet are fitted tight against its seat on the body of the fitting by attempting to wiggle the components.





Insert Fitting

Insert the fitting into the bore of the pipe. When the pipe is inserted to the correct depth and resting against the pipe stop, the pipe will be fully visible via the witness slots in the base-plate.





Position, Crimp & Gauge the Joint

Position the Fitting

Position the tongs such that the base plate is seated in its location slot. Ensure the pipe is visible via inspection slots and align the fitting as required.





Crimp the Fitting

Fully close the tongs of the tool and then release the tool to remove it.





Gauge the Joint

Double-check the integrity of the joint by ensuring the crimp gauge can pass over the diameter of the newly formed indentations in the crimp-ring.





CAUTION: Gauging of the fitting after crimping is critical to completing a leak-free joint. Recalibrating of tools maybe required to ensure the correct force/impression depth of the crimping process is achieved.

Pressure Test

The testing protocol outlined in AS/NZS 5601.1:2013¹ MUST BE ADHERED TO in addition to any/all local regulations or requirements.

CAUTION: Failure to test the circuit in strict accordance with the relevant Australian Standard may result in product failure and unsafe, dangerous, installations. Do not test the circuit at an arbitrary pressure, test the circuit at the pressure outlined in the Australian Standard.

Sizing Calculations (Gas)

The calculation and methodology used in this manual is a summarised representation only and should be used in conjunction with all requirements of AS/NZS 5601:2013¹.

Ensure all appliances to be connected are suitable for use with the same gas type.

Pipe Sizing Method

Prior to calculating pipe sizing, the following information is required;

- Gas type
- Available pressure
- Allowable pressure drop
- Gas demand for each appliance or outlet
- Proposed layout

Upon determining the gas type, discharge pressure, allowable pressure drop and gas demand for each appliance, calculate the total length of the main line and fitting allowance as appropriate.

Using the Reflex Gas Pipe Sizing Charts, scroll across the x-axis (at top) to find the length of pipe applicable, ensuring the value to be used is equal to, or greater than, the main line length fitted in the circuit.

Now using the y-axis, scroll down to find the MJ/h value that is equal to, or greater than, the total MJ/h demand value you are looking to provide.

At the intersection of these two values, scroll to the left-most column of the chart and determine which nominal diameter of pipe is required to satisfy your specific requirements.

It should be noted that the calculated main line length (including fitting allowance) is used in all determinations, including branches to appliances, regardless of branch length.

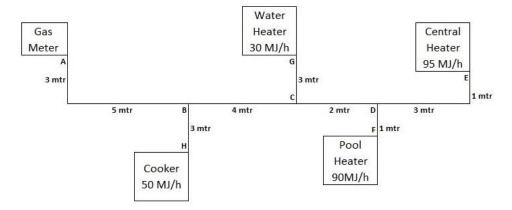
An example of this method is set-out below.

Planned Layout

- Sketch the intended piping layout, including fittings and the position of the appliances
- Show all pipe lengths and the gas demand for each appliance
- Allocate a letter designator to each branch and appliance

Sketch

Piping Layout - Natural Gas with 1.25kPa Supply Pressure, 0.12kPa Allowable Pressure Drop



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To calculate the pipe sizing for the example shown, assume Natural Gas will be used with a discharge pressure at the meter of 1.25kPa and an allowable pressure drop of 0.12kPa, thereby allowing 1.13kPa pressure at the appliance.

Pressure Drop

Pressure drop is the difference between the pressure at the meter and the minimum pressure required at the appliance.

Total Gas Demand

The total gas demand for the example shown above is 50 + 30 + 90 + 95 = 265 MJ/h

Main Line

Determine the length of piping from the meter to the furthermost appliance. For the example shown above, the main line length is; 3 + 5 + 4 + 2 + 3 + 1 = 18 mtrs

Fitting Allowance

For each fitting (tee, elbow, coupling etc.) installed in the main line an additional 0.5 mtr allowance must be made. The layout shown in the sketch will require; $10 \times 0.5 = 5$ mtrs

Calculated Main Line

This calculation is the sum of the main line length and fitting allowance; 18 + 5 = 23 mtrs

Planned Pipe Sizing Chart

Prepare a chart for your layout as per the example shown below.

Pipe Section	Calculated Main Line Length (mtrs) (Main Line Length + Fitting Allowance)	Gas Demand (MJ/h)	Pipe Size Required
A to B	18 + 5 = 23	50 + 30 + 90 + 95 = 265	DN40
B to C	18 + 5 = 23	30 + 90 + 95 = 215	DN40
C to D	18 + 5 = 23	90 + 95 = 185	DN40
D to E	18 + 5 = 23	95	DN25
D to F	18 + 5 = 23	90	DN25
C to G	18 + 5 = 23	30	DN16
B to H	18 + 5 = 23	50	DN20

For complex specialist manifolds using multiple fittings, it's recommended the pressure drop be checked at the farthest connection.

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Gas Pipe Sizing Charts

Natural Gas

ivaturai Gas	s (Methan	e) at 1.1	kPa(g) w	ith a 0.0	75 kPa p	ressure (drop				MJ/h								
Nom Size	Pipe Run																		Fitting
(mm)	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	(mtr)
16	84	66	58	51	43	36	31	27	24	21	17	14	12	11	10	9	8	7	0.5
20	154	102	90	87	78	70	65	64	57	52	41	34	29	26	23	21	21	17	0.5
25	289	193	152	128	115	115	110	109	103	98	88	88	74	64	57	52	47	43	0.5
32	562	377	298	252	221	199	182	168	157	131	115	110	105	104	103	102	101	104	0.5
40	1347	908	720	610	536	483	441	408	381	358	315	283	258	238	222	209	179	189	0.5
50	2630	1779	1413	1199	1056	951	870	806	753	708	622	560	512	473	473	415	393	373	0.5
Natural Gas	(Mothan	a) at 1 2	kPa(a)	with a 0 :	12 kBa n	roccuro i	dron				MJ/h								•
Nom Size			ria(y)	with a U.	ігкіар	essuie (шор				1413/11								Fitting
	Pipe Run	` '																	Allowand
(mm)	111	4	6	- 8 - 55	10 52	12 50	14	16	18	20 34	25	30 23	35 20	40 17	45	50 14	55 12	60	(mtr)
16 20	202	70 135	60 107	92	88	90	48 83	43 78	38 66	63	27 62	55	47	41	15 37	33	30	11 28	0.5 0.5
25	379	254	201	170	149	134	122	112	107	105	111	101	93	88	82	79	75	69	0.5
32	736	495	392	332	292	262	240	222	207	194	170	153	129	113	108	98	95	94	0.5
40	1757	1188	943	800	704	634	580	537	501	472	414	373	340	315	294	276	261	248	0.5
50	3424	2322	1847	1569	1382	1245	1140	1056	987	930	817	736	673	623	582	547	517	492	0.5
	-	-> -+ 0.7/	. I-D-(-)																
Natural Gas	s (Wetnan	e) at 2.75	KPa(g)	with a U.	25 кРа р	ressure	<u>arop</u>				MJ/h								Fitting
Nom Size	Pipe Run	(mtrs)																	Allowand
(mm)	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	(mtr)
16	171	114	90	76	69	63	60	56	54	52	53	48	41	36	32	29	26	24	0.5
20	311	209	165	140	123	110	100	93	88	88	90	83	77	65	63	61	61	58	0.5
25	580	391	310	262	230	207	189	175	163	154	135	121	110	108	106	112	109	104	0.5
32	1123	759	603	511	450	405	370	343	320	301	264	238	217	201	187	176	166	158	0.5
40	2670	1812	1442	1225	1080	973	891	826	772	727	639	575	526	487	455	428	405	385	0.5
50	5189	3531	2815	2395	2112	1906	1746	1619	1514	1426	1256	1132	1036	960	897	844	799	760	0.5
Natural Gas	(Methan	e) at 2.75	kPa(q)	with a 0	75 kPa n	ressure i	dron				MJ/h								
Nom Size	Pipe Run																		Fitting
	-																		Allowand
(mm)	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	(mtr)
16	320	216	171	145	127	114	104	96	90	85	72	69	67	66	54	50	47	47	0.5
20	580	392	311	264	232	209	191	177	165	155	136	123	112	103	96	87	86	85	0.5
25	1075	730	580	493	434	391	358	331	310	291	256	230	211	195	182	171	162	154	0.5
32	2071	1409	1123	955	842	759	695	645	603	567	499	450	411	381	356	335	317	301	0.5
40	4897	3343	2670	2274	2007	1812	1662	1541	1442	1359	1197	1080	989	916	857	807	764	727	0.5
50	9478	6488	5189	4425	3909	3531	3240	3007	2815	2654	2341	2112	1936	1795	1679	1582	1499	1426	0.5
Natural Gas	(Methan	e) at 2.75	kPa(g)	supply w	ith a 1.5	kPa pres	sure dro	р			MJ/h								
Nom Size	Pipe Run	(mtrs)																	Fitting
(mm)	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	Allowand (mtr)
16	472	320	254	216	190	171	156	145	135	127	112	100	92	85	79	68	66	69	0.5
20	853	580	461	392	345	311	285	264	247	232	204	184	168	155	145	136	129	123	0.5
20 25	1579	1075	857	730	643	580	532	493	461	434	394	382	366	358	353	347	342	334	0.5
32	3031	2071	1654	1409	1244	1123	1030	955	893	842	742	669	612	567	530	499	473	450	0.5
40	7143	4897	3919	3343	2954	2670	2450	2274	2129	2007	1771	1598	1465	1359	1271	1197	1134	1080	0.5
	13794	9478	7597	6488	5738	5189	4765	4425	4145	3909	3452	3118	2860	2654	2484	2341	2218	2112	0.5
50									4140	3309		3110	2000	2004	2404	2341	4410	2112	0.5
Natural Gas	(Methan	e) at 4.0	kPa(g) s	upply wit	h a 1.5k	Pa press	ure drop	<u> </u>			MJ/h								
Nom Size	Pipe Run	(mtrs)																	Fitting
(mm)	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	(mtr)
16	475	322	256	217	191	172	157	146	136	128	112	101	92	85	79	75	65	68	0.5
20	859	584	465	395	348	313	287	266	248	234	205	185	169	156	146	137	130	123	0.5
25	1589	1083	863	734	648	584	535	496	464	437	385	346	317	293	274	258	244	232	0.5
32																			0.5
	3051	2085 4929	1665 3945	1419	1252	1130	1036	961	899	847	747	673	617	571	534	503	476	453	0.5
			3945	3365	2974	2688	2466	2289	2143	2021	1783	1609	1475	1368	1280	1206	1142	1087	0.3
40 50	7189 13883	9540	7646	6530	5776	5223	4796	4454	4172	3935	3475	3138	2879	2671	2500	2357	2233	2126	0.5

LPG (Propane)

PG (Propa	ille) at 2.7	3 KFa(y)	with a U.	23 KFa pi	essure c	пор					MJ/h								
Nom Size									Pipe Ru	n (mtrs)									Fitting Allowanc
(mm)	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	(mtr)
16	253	169	145	134	99	80	75	72	70	65	62	60	64	60	56	51	46	42	0.5
20	460	309	245	207	182	164	150	138	129	121	105	100	95	90	84	75	70	69	0.5
25	855	578	458	388	342	307	281	260	243	228	200	180	164	152	142	125	127	126	0.5
32	1652	1119	890	755	665	599	548	508	475	446	392	353	323	298	279	262	248	235	0.5
40	4407	3001	2393	2036	1796	1620	1485	1377	1287	1213	1068	962	881	816	762	717	679	646	0.5
50	8546	5835	4660	3969	3504	3164	2901	2691	2518	2373	2092	1886	1728	1601	1497	1410	1335	1270	0.5
.PG (Propa	1						2901	2691		2373 n (mtrs)	2092 MJ/h	1886	1728	1601	1497	1410	1335	1270	Fitting
PG (Propa	1						2901	2691				1886	1728	1601	1497	1410	1335	1270	
PG (Propa	ne) at 70	kPa(g) w	ith a 10 l	Pa press	ure drop				Pipe Ru	n (mtrs)	MJ/h								Fitting
PG (Propa om Size (mm)	ne) at 70	kPa(g) w	ith a 10 k	Pa press	sure drop	12	14	16	Pipe Ru 18	n (mtrs) 20	MJ/h	30	35	40	45	50	55	60	Fitting Allowan (mtr)
PG (Propa lom Size (mm) 16	2 2542	kPa(g) w 4 1755	6 1410	8 1206	10 1068	12 966	14 888	16 825	Pipe Ru 18 773	n (mtrs) 20 729	MJ/h 25 644	30 582	35 534	40 496	45 464	50 437	55 414	60 394	Fitting Allowan (mtr)
PG (Propa om Size (mm) 16 20	2 2542 4549	kPa(g) w 4 1755 3148	6 1410 2533	8 1206 2169	10 1068 1922	12 966 1740	14 888 1600	16 825 1487	Pipe Ru 18 773 1394	n (mtrs) 20 729 1316	MJ/h 25 644 1163	30 582 1052	35 534 966	40 496 897	45 464 840	50 437 792	55 414 751	60 394 715	Fitting Allowan (mtr) 0.5
PG (Propa lom Size (mm) 16 20 25	2 2542 4549 8335	kPa(g) w 4 1755 3148 5780	6 1410 2533 4657	8 1206 2169 3991	10 1068 1922 3539	12 966 1740 3539	14 888 1600 2950	16 825 1487 2743	Pipe Ru 18 773 1394 2573	n (mtrs) 20 729 1316 2429	MJ/h 25 644 1163 2150	30 582 1052 1945	35 534 966 1787	40 496 897 1660	45 464 840 1555	50 437 792 1467	55 414 751 1391	60 394 715 1391	Fitting Allowand (mtr) 0.5 0.5

For complex specialist manifolds using multiple fittings, it's recommended the pressure drop be checked at the farthest connection.

 $^{^{\}rm 1}$ AS/NZS 5601:2013 must be read in its entirety to ensure compliance is met by the installer.

System Tools

Power Tools

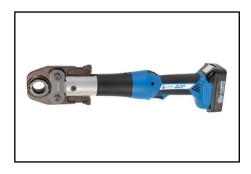
Battery-operated tools are available for both crimp and compression fittings. The kits come complete in a steel carry case with tongs suitable for 16mm to 25mm crimp fittings and heads for 16mm to 25mm compression fittings. Both kits also come with batteries and a battery charger.

Hand Tools

Hippo Multicrimp hand tools are available for the Reflex crimp fittings. Options for the hand tool include the Multicrimp tool with interchangeable tongs for 16mm to 25mm fittings or the Megacrimp tool which can handle crimp fitting sizes from 16mm to 32mm. Both options come with a carry case and adjustment spanner.







Hippo Battery Tool

Cutter & Gauge

Hippo pipe cutters and a crimp gauge are essential components of the tradesman's tool kit.



Hippo Pipe Cutter



Hippo crimp gauge

Tool Profile Designator

The profile designator for crimp tongs suitable for use with Reflex crimp fittings size DN16 to DN32 is "TH" or "U".

CAUTION: Re-calibrating of tools, particularly hand tools, maybe required to ensure the correct force/impression-depth of the crimping process is achieved. If unsure talk with your local Reflex representative for detailed advice.

Warranty Statement and Conditions

This warranty is provided by Saveur Pacific Pty Ltd, 27B Prosperity Place, Geebung Queensland 4034. We may be contacted by phone at +61 7 3266 4794 or at www.savpac.com.au

All products sold by Saveur Pacific come with a warranty that cannot be excluded under Australian Consumer Law (ACL).

You are entitled to a replacement or refund for a major failure and, if reasonably foreseeable, compensation for other loss or damage. If the goods fail to be of acceptable quality and failure does not amount to a major failure, Saveur Pacific has the right to provide you with a repair or replacement product.

In addition to all rights you are entitled to under any Australian law(s), Reflex Water and Gas Systems are guaranteed free from manufacturing defects and/or faulty workmanship for a period of 25 years, subject to the conditions outlined below.

If any other party within the supply chain wishes to provide additional warranty or change any warranty conditions, it does so *without* any authority from Saveur Pacific.

Warranty Conditions

- Reflex Water and Gas systems must have been installed by a licensed Plumber or Gas
 Fitter in accordance with the information supplied in this document, AS/NZS 3500,
 AS/NZS 5601:2013, and all relevant statutory and local requirements of the State or
 Territory in which the system is installed.
- All pipe sizing values listed in this document are specific to the Reflex PEX-Al-PEX Gas
 Systems and must not be substituted with the values produced by any other
 manufacturers.
- 3. Only Reflex Gas Fittings and Reflex PEX-Al-PEX Composite Pipe can be intermixed as these products are not interchangeable with other manufacturers' products.
- 4. All requests for warranty must be made directly with the entity from which the product(s) was purchased.
- 5. If on-site investigation of any issue is agreed to by Saveur Pacific, Saveur Pacific reserves the right to appoint a third party of its choosing to act as its representative.

Warranty is offered in good faith in accordance with all Australian consumer law(s).

However, our liability under this manufacturer's warranty is subject to us being satisfied that a defect was caused by defective workmanship during manufacture and/or failed materials and was not caused by, or substantially contributed to, factors or circumstances beyond our control including (but not limited to) the following;

- 1. Where damage is caused by accident, acts of God, misuse or incorrect installation.
- 2. Where failure is found to be caused by poor, malformed joints.
- 3. The failure is due, in part or in whole, to faulty manufacture or incorrect installation of any appliance of which the Reflex Water and Gas Systems form part.
- 4. Where the failure, directly or indirectly, is as a result of excessive pressure or temperature, thermal input, corrosive environments, non-compliance with the REFLEX Installation Guide or failure to adhere to all relevant statutory and local requirements of the State or Territory in which these systems are installed.
- 5. Failure of the system was due to foreign matter or debris, either from installation or poor conditions, resulting in blocked components or appliances.

SAVEUR PACIFIC PTY LTD

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