



INDUSTRY TRUSTED BRAND



EPS PEX CRIMP GAS
PEX-AL PIPING SYSTEM MANUAL



Version 2.5

ABOUT ELSON

- The leading manufacturer providing Lead Free Plumbing Solutions

Elson is an Australian owned and operated company since 1993 with our head office based in Sydney Australia. Elson has two distribution centers situated in Sydney and Melbourne.

Elson plumbing products have been designed specifically for the Australian market. We have been manufacturing quality plumbing products since 1999 in our ISO9001 certified factory. We control quality from the raw materials through the manufacturing process to the finished products. This ensures every elson product is of consistent and of the highest quality and meets our strict standards. elson - *Quality without Compromise*

NCC 2022 Volume Three Clause A5G4 (Plumbing Code of Australia) specifies that copper alloy plumbing products in contact with drinking water must limit the allowable lead content to a weighted average lead content of not more than 0.25%.

Elson set a higher standard and quality benchmark by introducing less than 0.1% Lead Free copper alloy plumbing products in 2016 with the launch of elson PRESS. We have continued to expand our Lead Free ranges to include Water Meter Connection Product Range, Hot Water Control and Protection Valves, Pipeline Control Press Ball Valve, and elson innovative Union Ball Valves, as well as elson EPS PEX Crimp Water & Gas Dual PEX System, EPS LF Push-fit PEX System.

Elson has gained recognition as an INDUSTRY TRUSTED BRAND in Australia. We continue to develop our product ranges, focusing on quality, innovation and technology.

LEAD FREE

elson LEAD FREE - 99.9% Pb free!



Benefits to You: CLEAN HEALTHY DRINKING WATER

- Contribute to provide clean healthy drinking water in contact with lead free brass products.
- AS 4020 Materials in contact with drinking water compliance.
- Compliance to European lead free Copper alloy guideline limit under 0.1% lead.
- Elson 99.9% Lead Free exceeds NCC2022 Guidelines.



Caring for our ENVIRONMENT

- Elson lead free Copper alloy products offer an environmentally friendly advantage while still maintaining the proven product quality you expect from Elson Australasia.
- Lead free Copper alloy can be recycled maintaining the environmental benefits.



Contents

EPS PEX CRIMP

WATER & GAS SYSTEM	4
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EPS PEX CRIMP GAS

- EPS PEX CRIMP Fitting.....	5
- EPS PEX CRIMP Gas Pex-Al Pipe.....	6
- Installation Requirements	7
- Technical Information	9
- Pipe Sizing Tables	10
- Frequently Asked Questions	13
- Jointing Instructions	15

PRODUCT LISTING

- Fittings	17
- Gas Pipes.....	23
- Tools & Accessories	24

Warranty	28
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elson EPS Lead Free Crimp Water & Gas Dual PEX Plumbing System is the Australia's 1st Lead Free PEX System.

EPS PEX CRIMP

elson EPS PEX Crimp Water & Gas Dual Plumbing System is the Australia's 1st Lead Free PEX System.

EPS PEX Crimp Dual System is suitable for both Water and Gas applications.

EPS PEX Crimp Dual System consists of EPS PEX Crimp fittings and SDR 9 PE-Xb pipes for water and PEX-AL-PEX pipes for gas.

EPS PEX Crimp fittings are **99.9% Lead Free** and comply with upcoming NCC 2022 Volume Three - Plumbing Code of Australia.

By design, EPS PEX Crimp joints will leak if not crimped.

EPS PEX Crimp Dual System is fast and easy to install.



Why do we need to have EPS PEX Crimp?

- Leak before crimp design
- Fast & Easy and Secure installation
- Dual approved fittings for both water and gas
- Same tool for both water and gas
- **99.9% Lead Free**

elson EPS PEX Crimp Water & Gas Dual PEX Plumbing System is manufactured and tested to comply with AS/NZS 2537.2, AS 2492 & AS/NZS 5601.

This manual mainly introduces elson EPS PEX Crimp Gas Pex-al Piping System.

EPS PEX CRIMP FITTINGS



EPS PEX Crimp fittings are manufactured from Lead Free DR Brass

Elson EPS PEX Crimp fittings are manufactured in our ISO 9001 Certified Factory. All fittings use only LF DR BRASS <0.1%Pb (Dezincification Resistant) which is batch tested and conforms to AS 2345. Fittings with a Copper Crimp ring have four pipe engagement witness holes. All fittings have stamped detail into their Copper Crimp Rings clearly showing Brand, Size, Pressure Rating, Standards and watermark certificate Number. Lead Free Identification stamping also appears on the brass fitting where possible or it will display the letters “LF”. Elson EPS PEX Crimp fittings have been tested and approved in accordance with the Australian and New Zealand Standard AS/NZS 2537.2 with watermark certificate WMKA 21276.

Benefits of EPS PEX 99.9% LEAD FREE CRIMP FITTINGS

- Leak before crimp design
- 99.9% Lead Free

Features

- Pipe-Grippa™ design prevents pipes from falling out during installation
- Ring-Grippa™ design. No more rings falling off
- Ring collar guide for easier jaw positioning & crimping
- Four witness holes to observe full pipe insertion, from multiple angles
- Full depth pipe insertion – NEW improved design
- Protection caps, prevent damage to copper rings

EPS PEX CRIMP GAS

EPS PEX Crimp Gas is a complete Gas Piping system comprising of a multi-layer composite PE-Xb/AL/PE-Xb (PEX-AL) pipe, a comprehensive range of 99.9% LEAD FREE DR Brass crimp fittings 16mm to 32mm and tooling options in both manual and Battery operation complete with reaming/calibrating tools and crimp gauges to ensure system performance.

- EPS PEX CRIMP W & G Pex System is a cost effective alternative to other Gas systems.
- EPS PEX Crimp Gas PEX-AL Piping System is fast and easy to install.
- EPS PEX manual crimping tools can be used for both EPS PEX Crimp Water and Gas Dual PEX-AL Piping Systems.



EPS PEX Crimp Gas PEX-AL Pipe

EPS PEX Crimp Gas composite pipe is manufactured from an inner and outer wall of crossed linked polyethylene material which is bonded on both sides with a middle layer of aluminum. The Pipe is yellow in colour and is clearly marked at 1m intervals detailing Brand, Type, Size, Class, Standard and License Number. The pipe has been tested and approved in accordance with the Australian Standard AS 4176 / ATS 5200 under License number SMKP 21859 for gas Installation only using EPS PEX Crimp Gas fittings with the same corresponding License number.



MARKING:

- ① EPS PE-Xb/AL/PE-Xb DN16x2.0 CLASS 500 GAS AS4176.8-2010
- ② SMKP21859 | >>>>> | 23.01.2015 8:00 DN16230115001C01010101 EL01
- ③ NOT FOR USE IN DIRECT SUNLIGHT B018M

Installation Requirements

Pipe & Fitting Protection and Care during Handling and Installation:

EPS PEX Crimp Gas PEX-AL pipe and fittings must be protected from damage through all stages of the process from transport to storage and installation in accordance with AS/NZS 5601. Provision for pipe and fitting protection therefore includes but is not limited to the following:

- Care must be taken to keep pipe free of grit, dirt, dust and foreign matter.
 - Pipe must be protected from physical damage including cuts, abrasion, dents, kinks, tears, holes, etc.
 - Pipe must be protected from long term or permanent U.V. exposure.
 - Pipe and fittings must be protected from excessive heat or burning, (refer to maximum operating temperature detailed in Pipe specification section), chemical / solvent attack, animal or rodent attack, machinery damage, other external threats, etc.
 - Chemical or corrosive environments.
1. Pipe needs to be protected.
 2. Fittings must be wrapped and protected. This includes all underground installations for all fittings.
- Pipe support and clipping; both vertically and horizontally to ensure conformance for vibration, excessive tension, torsion or compressive stresses on fittings and pipe. Refer to pipe specification Chart for spacing.
 - Pipe penetrations through timber and steel frames and concrete sections need to conform and may require protection using grommets, fire collars, sleeving or wrapping. Holes, notches and cutouts must be accurately drilled “in-line” to allow movement for any expansion and contraction of the pipe and fitting so engagements are not exposed to excessive stress. Refer to Pipe specification Chart for timber frame cut out limitations.
 - Pipe Expansion and contraction needs to be accommodated during installation to allow for movement due to thermal linear expansion. Failure to do so may exceed torsional pullout allowances on fittings resulting in product failure. Refer to Pipe specification Chart for the Thermal Expansion co-efficient.
 - Pipe Bending; EPS PEX Crimp Gas PEX-AL pipe is flexible and requires care when bending to avoid kinks, cracks or other permanent deformation that may restrict flow or put undue pressure on joints. If the pipe is kinked, bent or damaged in any way it must be cut out and replaced. EPS PEX Crimp Gas elbows are recommended for tight bends. Refer to the Pipe specification Chart for minimum bending radius and tools for bending.
 - Connecting Barbs; when soldering connecting barbs, (male or female) Ensure fitting has been cooled to room temperature before inserting into EPS pipe alternatively, use elson PRESS CRIMP fittings from copper to EPS PEX Crimp Gas.

Underground Pipe installation:

Underground installation of EPS PEX Crimp Gas PEX-AL Pipe must be in accordance with AS/NZS 5601. The following points should be noted and referenced for conformance to the standard:

- Piping beneath a building and in the ground is allowed with NO joints.
- Piping embedded in Concrete is allowed with NO joints, maximum pressure 70kPa. And must be installed in-conduit.
- Underground installation should include the provision for a Trace Wire and Marker Tape to be installed to assist in pipe detection.
- Underground installation should comply with standard for quality of bedding and backfill.
- Underground installation must comply with the required standards for minimum buried depth.
- Underground Installation must comply with the required standard for termination to Metallic risers.
- Underground Installation must comply with the required separation standard for Consumer Gas Piping.
- EPS PEX Crimp Gas Fittings must be wrapped and protected using suitable and verified processes for all in ground installations and corrosive environments.

Proprietary Gas System Identification:

EPS PEX Crimp Gas PEX-AL Piping system has an identification Tag as part of its Product Range and must be permanently attached adjacent to the gas meter or LP Gas cylinder to identify the system installed on every installation as detailed in AS/NZS 5601. Do not attach this signage plate to any gas cylinder or other movable object.

Provision for Pipe Reversion:

As detailed in AS/NZS 5601, in certain installations in some building types it is mandatory for the installation of reversion fittings to allow for Proprietary Gas Piping systems like EPS PEX Crimp Gas to be extended or additions made for future application. A Reversion Fitting allows for the connection of a Proprietary system to be adapted to a standard Thread or Copper tube. The EPS PEX Crimp Gas PEX-AL Piping system Product Range includes the three variants of Reversion fittings as detailed in the standard.

EPS PEX Crimp Gas Tools

EPS PEX Crimp Gas Tools are specifically designed to be used with the EPS PEX Crimp Gas PEX-AL Pipe and Fittings System and must not be used with other systems.

EPS PEX Crimp Gas Tools are manufactured to precise specifications and require:

- Care during operation and confirmation that each completed crimp joint is crimped correctly. The use of the EPS PEX Crimp Gauge is required to confirm crimp conformance.
- Regular maintenance and cleaning after use to avoid dirt, dust, grit or moisture damaging the tool.
- Recognition of the jointing guide procedures and safety recommendations within this Manual and the Handbook Instructions of the approved EPS PEX Crimp battery tool kit.

Specific and approved manual EPS PEX Crimp Gas PEX-AL / Calibrating tools are an essential requirement to round and deburr every squarely cut pipe end prior to insertion into the crimp fitting.

Use the EPS PEX crimp gauge on each crimped joint to ensure the joint has been sufficiently crimped.

System Testing

Pipe and joint system testing must be carried out in accordance with the standard AS/NZS 5601 and any other relevant and applicable local authority codes prior to burying or concealing the EPS PEX Crimp Gas PEX-AL Piping system. It is the responsibility of the Licenced Installer to ensure that all joints and fittings are inspected, checked and tested for leaks to ensure safety and compliance. It is recommended to incorporate a checking procedure to ensure that each joint has been correctly crimped by testing every joint with a crimp gauge and marking as complete.

elson EPS CRIMP PEX/AL/PEX Technical Information				
Nominal O.D. (mm)	16	20	25	32
Color	RAL 1033	RAL 1033	RAL 1033	RAL 1033
Class (kPa)	500	500	500	500
Standard Pipe / Fittings	AS4176.8	AS4176.8	AS4176.8	AS4176.8
License Number For Pipe / Fittings	SMKP21859	SMKP21859	SMKP21859	SMKP21859
Maximum Supported Distance - Clipping (m)	1.0	1.25	1.5	2.0
Min Bending Radius By Hand (mm)	80	100	-	-
Min Bending Radius With Bending Tools (mm)	-	-	90	115
Min Bending Radius With Bending Spring (mm)	32	60	110	150
Coil Size Metres (m)	25, 50 & 100	25, 50 & 100	25 & 50	25 & 50
Straight Length Metres (m)	5	5	5	5
Coefficient Of Linear (UOM) Thermal Expansion In mm Per Meter Of Pipe For Every 10 °C Temperature vVariation	0.26mm / m.k	0.26mm / m.k	0.26mm / m.k	0.26mm / m.k

PIPE SIZING - NATURAL GAS

The following gas pipe sizing tables were calculated using the method described in AS/NZS 5601.

NOTE: This method is detailed in the Standard, AS/NZS 5601 Appendix F section F1.3.

PIPE SIZING TABLE 1 - Flow rates in units of MJ/h

Nom diam (DN)	Natural Gas @ 1.1 kPa - 0.075 kPa Pressure Drop Length of straight pipe m																		
	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	+m for Fitting
16	87	59	48	41	36	33	30	28	26	25	22	20	18	17	16	15	14	14	1.25
20	166	115	92	79	70	63	58	54	51	48	42	39	35	33	31	29	28	26	1.1
25	308	212	170	146	129	117	108	100	94	89	78	71	65	61	57	54	52	49	0.7
32	671	461	371	317	281	255	235	218	205	194	172	155	142	132	124	118	111	107	0.55
	65	70	75	80	85	90	100	120	140	160	180	200	220	240	260	280	300	320	
16	13	13	12	12	11	11	10	9	9	8	8	7	7	6	6	6	6	6	
20	25	24	23	23	22	21	20	18	16	15	14	14	13	13	12	12	11	11	
25	47	45	43	41	41	40	37	33	31	29	27	26	24	23	22	21	20	19	
32	102	98	95	91	89	86	81	73	68	63	58	56	53	50	48	47	45	43	

PIPE SIZING TABLE 2 - Flow rates in units of MJ/h

Nom diam (DN)	Natural Gas @ 1.25 kPa - 0.12 kPa Pressure Drop Length of straight pipe m																		
	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	+m for Fitting
16	99	68	55	47	42	38	35	32	30	29	25	23	21	20	18	17	17	16	1.75
20	212	146	117	100	89	80	74	69	65	61	54	49	45	42	40	37	35	33	1.6
25	403	278	222	191	169	153	141	131	123	116	103	93	86	80	75	71	67	64	0.85
32	886	608	489	418	371	336	309	288	269	255	226	205	188	175	164	155	147	141	0.7
	65	70	75	80	85	90	100	120	140	160	180	200	220	240	260	280	300	320	
16	15	14	14	13	13	13	12	11	10	9	9	8	8	7	7	7	7	6	
20	33	31	30	29	28	27	25	23	22	20	19	17	17	16	15	14	14	14	
25	62	59	57	54	53	52	49	44	41	38	35	33	31	30	29	28	27	26	
32	134	130	124	121	117	113	107	97	89	83	78	73	69	67	64	61	58	57	

PIPE SIZING TABLE 3 - Flow rates in units of MJ/h

Nom diam (DN)	Natural Gas @ 2.75 kPa - 0.25 kPa Pressure Drop Length of straight pipe m																		
	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	+m for Fitting
16	146	100	80	69	61	55	51	47	44	42	37	34	31	29	27	26	24	23	1.75
20	342	236	189	162	144	130	119	111	105	98	88	79	73	68	63	60	57	54	1.6
25	592	407	326	279	248	224	207	192	180	171	151	136	125	117	110	103	99	94	0.85
32	1203	827	664	568	504	457	420	391	366	346	307	278	256	238	224	211	200	191	0.7
	65	70	75	80	85	90	100	120	140	160	180	200	220	240	260	280	300	320	
16	22	21	21	20	19	19	18	16	15	14	13	12	11	11	10	10	10	9	
20	52	50	48	47	45	43	42	37	34	32	30	28	27	25	24	23	23	22	
25	90	87	83	80	77	76	71	65	59	55	52	49	46	44	42	41	40	38	
32	183	176	169	163	158	153	145	131	121	112	105	100	95	90	87	83	80	78	

PIPE SIZING - NATURAL GAS

The following gas pipe sizing tables were calculated using the method described in AS/NZS 5601.

NOTE: This method is detailed in the Standard, AS/NZS 5601 Appendix F section F1.3.

PIPE SIZING TABLE 4 - Flow rates in units of MJ/h

Nom diam (DN)	Natural Gas @ 2.75 kPa - 0.75 kPa Pressure Drop Length of straight pipe m																		
	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	+m for Fitting
16	294	202	162	139	123	111	103	95	89	85	75	68	62	58	55	51	49	47	1.75
20	555	381	306	262	232	210	193	180	169	160	142	128	118	109	103	98	92	89	1.6
25	1098	755	607	519	460	417	384	357	335	316	280	254	233	218	204	193	183	174	0.85
32	2087	1435	1153	986	874	792	729	678	636	601	533	482	443	413	387	366	347	331	0.7
	65	70	75	80	85	90	100	120	140	160	180	200	220	240	260	280	300	320	
16	45	43	41	40	39	37	35	32	30	27	26	24	23	22	21	20	20	19	
20	84	81	78	75	73	70	67	61	56	51	49	46	43	42	40	38	37	35	
25	167	160	155	149	145	140	133	120	111	102	96	91	87	82	79	76	73	70	
32	317	305	294	284	275	266	252	228	210	194	182	173	165	156	151	144	138	133	

PIPE SIZING TABLE 5 - Flow rates in units of MJ/h

Nom diam (DN)	Natural Gas @ 2.75 kPa - 1.5 kPa Pressure Drop Length of straight pipe m																		
	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	+m for Fitting
16	427	294	236	202	179	162	149	139	130	123	109	99	91	84	79	75	71	68	1.75
20	854	587	471	404	358	324	298	277	260	246	218	197	182	169	158	150	142	135	1.6
25	1615	1110	892	763	677	613	564	525	492	465	412	373	344	320	300	283	269	256	0.85
32	3178	2184	1754	1501	1330	1205	1109	1032	968	914	811	734	676	628	590	557	529	505	0.7
	65	70	75	80	85	90	100	120	140	160	180	200	220	240	260	280	300	320	
16	65	62	60	58	56	54	51	47	43	40	37	35	34	32	31	29	28	27	
20	130	125	120	117	112	109	103	93	86	79	75	70	67	64	61	59	57	55	
25	246	236	228	219	213	206	195	176	162	151	142	134	127	121	116	112	108	104	
32	483	465	447	432	418	405	383	347	320	297	278	263	250	238	228	219	211	204	

PIPE SIZING - PROPANE GAS

The following gas pipe sizing tables were calculated using the method described in AS/NZS 5601.

NOTE: This method is detailed in the Standard, AS/NZS 5601 Appendix F section F1.3.

PIPE SIZING TABLE 6 - Flow rates in units of MJ/h

Nom diam (DN)	Propane @ 2.75 kPa - 0.25 kPa Pressure Drop Length of straight pipe m																		
	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	+m for Fitting
16	233	160	129	110	98	88	81	76	71	67	59	54	50	46	43	41	39	37	1.75
20	544	374	300	257	228	206	190	177	165	156	139	126	116	107	101	96	90	87	1.6
25	945	650	522	446	396	359	330	307	288	272	242	219	201	187	175	166	158	150	0.85
32	1922	1321	1061	909	804	730	671	625	585	553	490	444	409	380	357	337	320	305	0.7
	65	70	75	80	85	90	100	120	140	160	180	200	220	240	260	280	300	320	
16	35	34	33	32	31	30	28	25	23	22	20	19	18	17	17	16	15	15	
20	83	79	77	74	71	70	66	60	54	51	48	45	42	41	39	38	36	35	
25	144	138	133	128	124	121	114	103	95	89	83	78	75	71	68	65	63	61	
32	292	281	270	261	253	246	232	210	193	180	169	159	152	144	138	132	128	123	

PIPE SIZING TABLE 7 - Flow rates in units of MJ/h

Nom diam (DN)	Propane @ 70 kPa - 10 kPa Pressure Drop Length of straight pipe m																		
	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	+m for Fitting
16	1620	1118	900	771	684	621	572	532	500	472	419	380	350	326	306	289	275	262	1.75
20	3221	2209	1772	1516	1343	1216	1118	1041	975	921	817	739	679	632	593	560	532	507	1.6
25	6087	4180	3355	2870	2543	2304	2119	1971	1850	1746	1547	1402	1289	1200	1125	1063	1009	963	0.85
32	11979	8252	6635	5684	5041	4571	4208	3915	3675	3472	3080	2792	2570	2392	2245	2122	2016	1924	0.7
	65	70	75	80	85	90	100	120	140	160	180	200	220	240	260	280	300	320	
16	251	242	233	225	218	211	200	181	167	155	146	138	131	125	120	115	111	107	
20	485	466	449	434	420	406	384	348	320	297	279	264	250	238	229	219	211	204	
25	922	885	853	823	797	773	729	661	608	565	530	502	476	454	434	418	402	388	
32	1843	1770	1707	1648	1595	1547	1462	1325	1220	1135	1066	1007	957	913	875	840	810	782	

FAQ

Is there anything I need to do before using a Manual crimp Tool?

YES – follow all of these important steps below:

- Ensure that the tool is compatible with EPS PEX Crimp Gas PEX-AL Pipe and EPS PEX Crimp Gas Fittings
- Ensure the tool is in good working order
- Ensure that the jaws align and have no gap when closed
- Ensure that the jaws are clean, free of defects and debris
- Refer to the Jointing Procedure in this manual for correct method

Is there anything I need to do before using the approved battery crimp Tool?

YES – follow all of these important steps below:

- Ensure that the tool and jaws are compatible with EPS PEX Crimp Gas PEX-AL Pipe and EPS PEX Crimp Gas Fittings
- Read and recognise the instructions contained in the manual
- Ensure the correct jaws match the tool, the pipe and the fittings
- Inspect the tool to ensure it functions properly
- Inspect the jaws to ensure they're clean, dry, free of dirt grit and corrosion

If the battery Tool does not fully compress what should I do?

- Release the trigger and jaws by actuating the retract slide
- Recharge the battery or replace with charged battery
- Re - Crimp the joint and check with the crimp gauge
- Cut off the pipe and fitting if it fails to crimp properly

Do I need to inspect the pipe end prior to crimping?

YES, always inspect the pipe and ensure it is cut square, has been “rounded & deburred”, has no rough edges and the internal and external pipe is undamaged prior to crimping.

FAQ

Do I need to “round and deburr” the pipe prior to every crimp joint?

YES - this is a requirement for every joint – ensure that the reaming/calibrating tool suits EPS PEX Crimp Gas PEX-AL pipe.

Do I need to inspect the crimp fitting prior to every crimp joint?

YES - you should visually inspect each fitting to ensure it is free of any dirt and grit and all parts are undamaged – clean/ replace/discard as required.

How can I tell if the pipe has been pushed into the fitting properly?

- Inspect the fitting to ensure the pipe is visible through both witness holes on the copper ring.

Do I need to check every crimp joint has been compressed properly?

YES - you should check every crimp joint has been compressed properly by testing with the crimp gauge

Is there a procedure to follow when soldering connecting barbs?

YES, ALWAYS:

- After heating and brazing allow the fitting to cool fully before inserting pipe.

What are the requirements for installing the EPS PEX Crimp Gas system?

- Must only be installed by a licenced Gas Fitter
- Must be installed in accordance with AS/NZS 5601
- Must be installed using the EPS PEX Crimp Gas PEX-AL Piping system procedures
- Must be installed using EPS PEX Crimp Gas PEX-AL pipe, EPS PEX Crimp Gas fittings and tools, licence SMKP 21859

Jointing Instructions

Tool inspection

Manual Tools:

Must use elson EPS Manual Crimp Tools designed for EPS PEX Crimp Water & Gas Dual Pex Plumbing System.

Visually inspect to the tool ensure it is undamaged – free of defects, debris and corrosion. Also ensure all components are in good working order, function correctly. Always keep tool clean, dry and lubricated. For more details, refer to tool instructions supplied with the tools.

WARNING: An incompatible tool, incorrectly adjusted tool or damaged jaws may result in a joint failure, tool damage or both. It will also void the warranty!



Battery Tool:

Tested and approved tools include:

1. Novopress ACO153.

The tool requires specific EPS Water and Gas Dual Jaws to suit the Elson EPS PEX Crimp Water & Gas Dual plumbing system.

- Before using the battery tool it is essential that the user reads and recognizes the instructions contained in the manual included with every tool. Make sure you are aware of the operating features and functions.
- Ensure that only EPS compatible jaws are used to match the tool. Check the jaw matches the diameter of the EPS PEX Crimp Gas PEX-AL pipe and EPS PEX Crimp gas fittings.
- Inspect and test all tools prior to use to ensure they are functioning properly.
- Visually inspect all tools and jaws to ensure they are clean, dry, free of dust, dirt, grit and corrosion.
- It is a requirement to check every crimped joint with the crimp gauge by passing the crimp gauge over copper ring to ensure proper crimping function.
- If the battery warning light comes on or any detection of incomplete crimping occurs you must change the battery immediately, check the joint with a crimp gauge and re-crimp as necessary.
- If the crimping tool does not fully compress or the jaws do not fully close, release the trigger, actuate the retract slide, check the tool then re-crimp the joint and check with the crimp gauge to ensure conformance.



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because quality matters

Jointing Procedure:

- Cut the pipe straight and square using EPS pipe cutters. Check for any damage to the pipe including any surface damage, cuts, scores, abrasion, kinks, splits, heat damage. Re-cut or replace and remove any physically damaged pipe.
- Round and debur the end of the pipe using the specific sized EPS PEX Crimp Gas manual calibrating tool. Insert the calibrating tool completely into the end of the pipe with a twisting action and rotate 2-3 full turns. Remove all swarf from outside and inside the pipe.
- Visually inspect the inside of the fitting to ensure it is free of dust, dirt and grit.
- Insert the EPS PEX-AL pipe into the EPS PEX Crimp Gas fitting. Ensure that the pipe is fully inserted into the fitting by viewing the pipe through the engagement witness holes in the copper ring.
- For EPS Manual Crimping Tools: Centralise the EPS Manual tool – sized to suit the pipe and fitting with jaws over the copper crimp ring. Slowly bring the lever handles together closing the jaws completely ompressing the joint.
- For EPS approved Battery Crimping Tool: Align the Battery tool jaw centralized on copper ring. Activate the battery tool and compress the copper crimp ring completely until the jaw is closed.
- Check each joint has been compressed correctly by using the EPS Crimp Gauge. If the EPS crimp gauge does not pass over the copper crimp ring check tooling, inspect and adjust the tool according to instructions, then re-crimp and test.



EPS PEX CRIMP FITTINGS

NO.1 STRAIGHT COUPLING LEAD FREE BRASS

Code	Description
LF21000	No.1 Straight Coupling 16mm
LF21002	No.1 Straight Coupling 20mm
LF21004	No.1 Straight Coupling 25mm
LF21006	No.1 Straight Coupling 32mm



NO.1R REDUCING COUPLING LEAD FREE BRASS

Code	Description
LF21020	No.1R Reducing Coupling 20 x 16mm
LF21022	No.1R Reducing Coupling 25 x 16mm
LF21024	No.1R Reducing Coupling 25 x 20mm
LF21026	No.1R Reducing Coupling 32 x 25mm



NO.2 STRAIGHT FEMALE CONNECTOR LEAD FREE BRASS

Code	Description
LF21060	No.2 Straight Connector 16mm x 15mm FI
LF21061	No.2 Straight Connector 16mm x Rp3/4 FI
LF21062	No.2 Straight Connector 20mm x 15mm FI
LF21064	No.2 Straight Connector 20mm x 20mm FI
LF21070	No.2 Straight Connector 25mm x 25mm FI
LF21072	No.2 Straight Connector 32mm x 25mm FI



NO.2 WING BACK CONNECTOR LF DR BRASS

Code	Description
LF21076	NO.2 Wing Back Connector 16mm x Rp1/2 FI
LF21078	NO.2 Wing Back Connector 20mm x Rp3/4 FI


NO.3 STRAIGHT MALE CONNECTOR LEAD FREE BRASS

Code	Description
LF21040	No.3 Straight Connector 16mm x R1/2 MI
LF21058	No.3 Straight Connector 16mm x R3/4 MI
LF21042	No.3 Straight Connector 20mm x R1/2 MI
LF21044	No.3 Straight Connector 20mm x R3/4 MI
LF21046	No.3 Straight Connector 25mm x R3/4 MI
LF21050	No.3 Straight Connector 25mm x R1 MI
LF21041	No.3 Straight 16mm x G1/2 MI - Washer Seal
LF21045	No.3 Straight 20mm x G3/4 MI - Washer Seal
LF21043	No.3 Straight 16mm x G1/2 MI - Cone Seal
LF21047	NO.3 Straight 20mm x G3/4 MI - Cone Seal
LF21056	No.3 Straight Connector 32mm x R1 MI


NO.12 ELBOW LEAD FREE BRASS

Code	Description
LF21080	No.12 Elbow 16mm
LF21082	No.12 Elbow 20mm
LF21084	No.12 Elbow 25mm
LF21086	No.12 Elbow 32mm



NO.12R ELBOW LEAD FREE BRASS

Code	Description
LF21088	No.12R Elbow DN20 x DN16
LF21092	No.12R Elbow DN25 x DN20


NO.13 MALE ELBOW LEAD FREE BRASS

Code	Description
LF21400	No.13 Elbow 16mm x 15mm MI
LF21402	No.13 Elbow 20mm x 15mm MI
LF21404	No.13 Elbow 20mm x 20mm MI


NO.14 FEMALE ELBOW LEAD FREE BRASS

Code	Description
LF21420	No.14 Elbow 16mm x 15mm FI
LF21422	No.14 Elbow 20mm x 15mm FI
LF21424	No.14 Elbow 20mm x 20mm FI


NO.15 LUGGED FEMALE ELBOW LEAD FREE BRASS

Code	Description
LF21120	No.15BP Elbow 16mm x 15mm FI
LF21122	No.15BP Elbow 20mm x 20mm FI


NO.19BP LUGGED MALE ELBOW LEAD FREE BRASS

Code	Description
LF21140	No.19BP Elbow 16mm x 15mm MI 65mm Long
LF21142	No.19BP Elbow 16mm x 15mm MI 90mm Long
LF21146	No.19BP Elbow 16mm x 15mm MI 150mm Long
LF21144	No.19BP Elbow 16mm x 15mm MI 200mm Long
LF21148	No.19BP Elbow 20mm x 15mm MI 95mm Long
LF21152	No.19BP Elbow 20mm x 15mm MI 200mm Long
LF21158	No.19BP Elbow 20mm x 20mm MI 200mm Long



NO.24 TEE LEAD FREE BRASS

Code	Description
LF21160	No.24 Tee 16mm
LF21162	No.24 Tee 20mm
LF21164	No.24 Tee 25mm
LF21166	No.24 Tee 32mm


NO.25 REDUCED CENTRE TEE LEAD FREE BRASS

Code	Description
LF21180	No.25 Tee Reduced 20 x 20 x 16mm (16mm Centre)
LF21182	No.25 Tee Reduced 25 x 25 x 20mm (20mm Centre)
LF21188	No.25 Tee Reduced 25 x 25 x 16mm (16mm Centre)
LF21190	No.25 Tee Reduced 32 x 32 x 25mm (25mm Centre)


NO.26 REDUCED END TEE LEAD FREE BRASS

Code	Description
LF21186	No.26 Tee Reduced 20 x 16 x 20mm (20mm Centre)
LF21194	No.26 Tee Reduced 25 x 20 x 25mm (25mm Centre)


NO.27 REDUCED CENTRE & END TEE LEAD FREE BRASS

Code	Description
LF21184	No.27 Tee Reduced 20 x 16 x 16mm (16mm Centre+16mm End)
LF21384	No.27 Tee Reduced 25 x 20 x 20mm (20mm Centre+ 20mm End)



NO.61 STOPPER LEAD FREE BRASS

Code	Description
LF21260	No.61 Stopper 16mm
LF21262	No.61 Stopper 20mm
LF21264	No.61 Stopper 25mm
LF21266	No.61 Stopper 32mm


NO.62 STRAIGHT LEAD FREE BRASS

Code	Description
LF21240	No.62 Straight 16mm x G1/2 L/Nut - Cone Seal
LF21242	No.62 Straight 20mm x G3/4 L/Nut - Cone Seal
LF21360	NO.62 Straight 16mm x G1/2 L/Nut - Washer Seal
LF21362	NO.62 Straight 20mm x G3/4 L/Nut - Washer Seal


NO.63 BENT LEAD FREE BRASS

Code	Description
LF21340	No.63 Bent 16mm x G1/2 L/Nut - Cone Seal
LF21342	No.63 Bent 20mm x G3/4 L/Nut - Cone Seal


FLARED COMPRESSION UNION LEAD FREE BRASS

Code	Description
LF21220	Flared Compression Union 16mm x G1/2 FL
LF21222	Flared Compression Union 20mm x G3/4 FL


CONNECTING BARB FEMALE LEAD FREE BRASS

Code	Description
LF21440	Connecting Barb Female 16mm
LF21442	Connecting Barb Female 20mm
LF21444	Connecting Barb Female 25mm



CONNECTING BARB MALE LEAD FREE BRASS

Code	Description
LF21450	Connecting Barb Male 16mm
LF21452	Connecting Barb Male 20mm


ADAPTOR GAS elson LF PRESS x EPS LF CRIMP LF DR BRASS

Code	Description
LF21886	Adaptor Gas elson LF Press DN15 x EPS LF Crimp 16mm
LF21888	Adaptor Gas elson LF Press DN20 x EPS LF Crimp 20mm
LF21890	Adaptor Gas elson LF Press DN20 x EPS LF Crimp 25mm
LF21891	Adaptor Gas elson LF Press DN25 x EPS LF Crimp 25mm



LF21895	Adaptor Gas elson LF Press DN25 x EPS LF Crimp 32mm
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REVERSION UNION

Code	Description
LF21500	Reversion Union 16mm
LF21502	Reversion Union 20mm
LF21504	Reversion Union 25mm
LF21506	Reversion Union 32mm


EPS LF CRIMP GAS ADAPTOR LF DR BRASS

Code	Description
LF21032	Adaptor BUSHPEX Crimp Gas 40mm x EPS PEX Crimp Gas 32mm



GAS PIPE STRAIGHT

Code	Description
21800	PEX/AL/PEX Pipe 5m Length 16mm
21802	PEX/AL/PEX Pipe 5m Length 20mm
21804	PEX/AL/PEX Pipe 5m Length 25mm
21806	PEX/AL/PEX Pipe 5m Length 32mm



GAS PIPE COIL

Code	Description
21817	PEX/AL/PEX Pipe 50m Coil 16mm
21818	PEX/AL/PEX Pipe 50m Coil 20mm
21814	PEX/AL/PEX Pipe 50m Coil 25mm
21815	PEX/AL/PEX Pipe 50m Coil 32mm
21807	PEX/AL/PEX Pipe 25m Coil 16mm
21808	PEX/AL/PEX Pipe 25m Coil 20mm
21809	PEX/AL/PEX Pipe 25m Coil 25mm
21816	PEX/AL/PEX Pipe 25m Coil 32mm



INSTALLATION ID TAG GAS SYSTEM

Code	Description
21530	INSTALLATION ID TAG GAS SYSTEM


EPS LF CRIMP W & G DUAL BATTERY TOOL NOVOPRESS

Code	Description
36901	Novopress ACO153 Bluetooth Press Tool Kit With 2 Batteries & 1 Charger, Less Jaw


EPS LF CRIMP W & G DUAL BATTERY TOOL NOVOPRESS

Code	Description
36902	Novopress ACO153 Bluetooth Press Tool Skin


EPS LF CRIMP W & G DUAL JAW TO SUIT NOVOPRESS ACO-153 (BT) BATTERY TOOL

Code	Description
21904	PB15 Jaw Only 16mm EPS Crimp W & G Dual Suit NV ACO-153 (BT) Bat Tool
21905	PB15 Jaw Only 20mm EPS Crimp W & G Dual Suit NV ACO-153 (BT) Bat Tool
21906	PB15 Jaw Only 25mm EPS Crimp W & G Dual Suit NV ACO-153 (BT) Bat Tool
29937	PEX Crimp Jaw 32mm Suit Novopress ACO-153 (BT) Bat Tool


NOVOPRESS BATTERY

Code	Description
23864	Novopress Battery 1.5AH LI-LON 12V



NOVOPRESS BATTERY CHARGER

Code	Description
23866	Novopress Battery Charger 12V 230V AUS



NOVOPRESS BATTERY CHARGER

Code	Description
36909	Novopress Case Only Suit ACO-153 Tool



EPS LF CRIMP W & G DUAL MANUAL CRIMPING TOOL Novopress

Code	Description
21911	EPS Manual Crimping Tool Novopress 16mm
21913	EPS Manual Crimping Tool Novopress 20mm



EPS LF CRIMP W & G DUAL MANUAL CRIMPING TOOL

Code	Description
21941	ALBA EPS Manual Crimping Tool 16mm
21943	ALBA EPS Manual Crimping Tool 20mm
21945	ALBA EPS Manual Crimping Tool 25mm



EPS PEX PIPE CUTTER

Code	Description
29930	CUTTER PIPE PEX BUSHPEX / BUSHPEX GAS 16-32



EPS PEX PIPE CUTTER

Code	Description
21932	T135 Dawn Kwikcut Original Pipe Cutter 16mm-32mm



EPS PEX PIPE CUTTER

Code	Description
21936	PEX PIPE & PEX/AL/PEX PIPE 16mm-32mm



RING REPAIR TOOL

Code	Description
21934	Ring Repair Tool 16mm-25mm



REAMING TOOL EPS CRIMP GAS

Code	Description
21970	Reaming Tool EPS CRIMP GAS 16-25mm



REAMING TOOL EPS CRIMP GAS

Code	Description
21972	Reaming Tool EPS CRIMP GAS 32mm



CRIMP GAUGE

Code	Description
21981	Crimp Gauge 16-20mm



CRIMP GAUGE

Code	Description
21982	Crimp Gauge 25-32mm



CLIP MASONRY NAIL

Code	Description
23810	Open Clip 16mm Masonry Nail
23812	Open Clip 20mm Masonry Nail
23814	Open Clip 25mm Masonry Nail



CLIP TIMBER NAIL

Code	Description
23816	Open Clip 16mm Timber Nail
23817	Open Clip 20mm Timber Nail
23818	Open Clip 25mm Timber Nail



CLIP METAL SCREW

Code	Description
23820	Open Clip 16mm Metal Screw
23822	Open Clip 20mm Metal Screw
23824	Open Clip 25mm Metal Screw



PROFILE BEND

Code	Description
23830	PEX Profile Bend Bracket 90 Degree x 5D 16mm
23832	PEX Profile Bend Bracket 90 Degree x 5D 20mm
23834	PEX Profile Bend Bracket 90 Degree x 5D 25mm



PROFILE BEND BRACKET W/ SPRING

Code	Description
23831	PEX Profile Bend Bracket W/Spring 90 Degree 16mm
23833	PEX Profile Bend Bracket W/Spring 90 Degree 20mm
23835	PEX Profile Bend Bracket W/Spring 90 Degree 25mm



PROFILE BEND

Code	Description
23838	PEX Profile Bend Bracket 90 Deg x 25mm PA6



Warranty

The Elson EPS PEX Crimp Water & Gas Dual Pex Plumbing System carries a 25 year product warranty which covers product manufacturing faults and defects. This warranty only applies under the following requirements:

- The system must have been installed by a licensed Plumber / Gasfitter.
- Proof of installation by a licensed Plumber/Gasfitter is required.
- Proof of purchase is required.
- Installation must be in accordance with AS/NZS 3500 & AS/NZS 5601.
- Installation must be in accordance with any other relevant and applicable local authority codes which may take precedence.
- Installation must be in accordance with established installation practices.
- Installation must be in accordance with the jointing procedures included in this manual.
- Installation must only ever involve the use of the same approved EPS Pipe (watermark certificate WMKA 21274) or the approved system of EPS PEX Crimp Gas PEX-AL pipe and fittings with license SMKP 21859 and approved tooling, Elson EPS PEX Crimp Water & Gas Dual fittings (watermark certificate WMKA 21276) and Elson approved tooling.



Elson Australasia Pty Ltd undertakes to repair or replace product which is found to be faulty or defective in workmanship or manufacture according to the warranty conditions. The benefits provided to the consumer by Elson Australasia Pty Ltd

ABN: 45 059 613 991

38 Eddie Road, Minchinbury, 2770.

Phone: 02 9625 7899 Fax: 02 9625 7855

Email: sales@elson.net.au

Our products come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

To the extent of the Law, Elson shall not be liable for any consequential loss or damage of any kind caused by any product faulty or defective in workmanship or manufacture.

This warranty are in addition to other rights and remedies available to the consumer under the law.

To make a warranty claim please contact Elson Australasia Pty Ltd with your contact details, proof of purchase and Licensed Installers documentation details. If the product has not been installed please contact the place of purchase and return. If there is a problem returning the product please contact Elson Australasia Pty Ltd. To make a claim under warranty you must abide by the warranty conditions.



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