

elson

EPS PEX

INDUSTRY TRUSTED BRAND

LF

99.9% Lead Free

< 0.1% Pb



EPS LF CRIMP GAS PEX-AL

PIPING SYSTEM MANUAL

Australia's 1st Lead Free PEX System – and 99.9% Pb free.



Version 2.5

ABOUT ELSON

Elson is an Australian owned and operated company since 1993 with our head office and national distribution centre based in Sydney Australia.

Elson plumbing products are designed specifically for the Australian market. We have been manufacturing quality plumbing products since 1999 in our ISO9001 certified factory.

Elson set a higher quality benchmark by introducing **99.9% Lead Free** copper alloy plumbing products in 2016 with the launch of elson PRESS Lead Free brass fittings and 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 LF Crimp Water & Gas Dual PEX System, EPS LF Push-fit PEX System.

Elson has gained recognition as Industry Trusted Brand in Australia. We continue to develop our product ranges with innovative quality plumbing products.



Elson is the leading manufacturer providing LEAD FREE Plumbing Solutions.

A 3-year transition period to support Australia's path to reducing allowable lead levels in drinking water plumbing products commenced on 1 May 2023.

Clause A5G4 of NCC 2022 Volume Three (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's journey as being the leading manufacturer of **99.9% lead free** plumbing products began in 2016 well before the initiative by ABCB to implement the reduction of lead in Australian plumbing copper alloy products for drinking water to 0.25% by weight. Elson's **99.9% Lead free** copper alloy products meet

the More Stringent European Lead Free Guideline of containing less than 0.1% by weight. Our Lead free copper alloy products contain a maximum of 0.1% lead by weight setting a higher benchmark than the new standard requirements to be mandatory on the 1st May 2026.

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.



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

EPS 99.9% LEAD FREE CRIMP

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

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

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

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

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

EPS 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**

elsson EPS Lead Free 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 Lead Free Crimp Water PEX Plumbing System.

EPS 99.9% LEAD FREE CRIMP FITTINGS



EPS Crimp fittings are manufactured from Lead Free DR Brass

Elson EPS LEAD FREE 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 LEAD FREE 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 99.9% LEAD FREE CRIMP FITTINGS

- Leak before crimp design
- 99.9% Lead Free

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.
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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 CRIMP GAS

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



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EPS Crimp Gas PEX-AL Pipe

EPS 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 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 8018M

Installation Requirements

Pipe & Fitting Protection and Care during Handling and Installation:

EPS 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.

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- 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 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 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 Crimp Gas.

Underground Pipe installation:

Underground installation of EPS 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:

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- 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 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 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 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 Crimp Gas PEX-AL Piping system Product Range includes the three variants of Reversion fittings as detailed in the standard.

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EPS Crimp Gas Tools

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

EPS 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 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 Crimp battery tool kit.

Specific and approved manual EPS 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 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 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.

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Pipe Specifications & Data Sheet:

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	

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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									+ m for Fitting
	2	4	6	8	10	12	14	16	18	
16	87	59	48	41	36	33	30	28	26	1.25
20	166	115	92	79	70	63	58	54	51	1.10
25	308	212	170	146	129	117	108	100	94	0.70
32	671	461	371	317	281	255	235	218	205	0.55
	20	25	30	35	40	45	50	55	60	
16	25	22	20	18	17	16	15	14	14	
20	48	42	39	35	33	31	29	28	26	
25	89	78	71	65	61	57	54	52	49	
32	194	172	155	142	132	124	118	111	107	
	65	70	75	80	85	90	100	120	140	
16	13	13	12	12	11	11	10	9	9	
20	25	24	23	23	22	21	20	18	16	
25	47	45	43	41	41	40	37	33	31	
32	102	98	95	91	89	86	81	73	68	
	160	180	200	220	240	260	280	300	320	
16	8	8	7	7	6	6	6	6	6	
20	15	14	14	13	13	12	12	11	11	
25	29	27	26	24	23	22	21	20	19	
32	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									+ m for Fitting
	2	4	6	8	10	12	14	16	18	
16	99	68	55	47	42	38	35	32	30	1.75
20	212	146	117	100	89	80	74	69	65	1.60
25	403	278	222	191	169	153	141	131	123	0.85
32	886	608	489	418	371	336	309	288	269	0.70
	20	25	30	35	40	45	50	55	60	
16	29	25	23	21	20	18	17	17	16	
20	61	54	49	45	42	40	37	35	33	
25	116	103	93	86	80	75	71	67	64	
32	255	226	205	188	175	164	155	147	141	
	65	70	75	80	85	90	100	120	140	
16	15	14	14	13	13	13	12	11	10	
20	33	31	30	29	28	27	25	23	22	
25	62	59	57	54	53	52	49	44	41	
32	134	130	124	121	117	113	107	97	89	
	160	180	200	220	240	260	280	300	320	
16	9	9	8	8	7	7	7	7	6	
20	20	19	17	17	16	15	14	14	14	
25	38	35	33	31	30	29	28	27	26	
32	83	78	73	69	67	64	61	58	57	

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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 3 – Flow rates in units of MJ/h

Nom diam. (DN)	Natural Gas @ 2.75 kPa - 0.25 kPa Pressure Drop									+ m for Fitting
	Length of straight pipe m									
DN	2	4	6	8	10	12	14	16	18	
16	146	100	80	69	61	55	51	47	44	1.75
20	342	236	189	162	144	130	119	111	105	1.60
25	592	407	326	279	248	224	207	192	180	0.85
32	1203	827	664	568	504	457	420	391	366	0.70
	20	25	30	35	40	45	50	55	60	
16	42	37	34	31	29	27	26	24	23	
20	98	88	79	73	68	63	60	57	54	
25	171	151	136	125	117	110	103	99	94	
32	346	307	278	256	238	224	211	200	191	
	65	70	75	80	85	90	100	120	140	
16	22	21	21	20	19	19	18	16	15	
20	52	50	48	47	45	43	42	37	34	
25	90	87	83	80	77	76	71	65	59	
32	183	176	169	163	158	153	145	131	121	
	160	180	200	220	240	260	280	300	320	
16	14	13	12	11	11	10	10	10	9	
20	32	30	28	27	25	24	23	23	22	
25	55	52	49	46	44	42	41	40	38	
32	112	105	100	95	90	87	83	80	78	

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

Nom diam. (DN)	Natural Gas @ 2.75 kPa - 0.75kPa Pressure Drop									+ m for Fitting
	Length of straight pipe m									
DN	2	4	6	8	10	12	14	16	18	
16	294	202	162	139	123	111	103	95	89	1.75
20	555	381	306	262	232	210	193	180	169	1.60
25	1098	755	607	519	460	417	384	357	335	0.85
32	2087	1435	1153	986	874	792	729	678	636	0.70
	20	25	30	35	40	45	50	55	60	
16	85	75	68	62	58	55	51	49	47	
20	160	142	128	118	109	103	98	92	89	
25	316	280	254	233	218	204	193	183	174	
32	601	533	482	443	413	387	366	347	331	
	65	70	75	80	85	90	100	120	140	
16	45	43	41	40	39	37	35	32	30	
20	84	81	78	75	73	70	67	61	56	
25	167	160	155	149	145	140	133	120	111	
32	317	305	294	284	275	266	252	228	210	
	160	180	200	220	240	260	280	300	320	
16	27	26	24	23	22	21	20	20	19	
20	51	49	46	43	42	40	38	37	35	
25	102	96	91	87	82	79	76	73	70	
32	194	182	173	165	156	151	144	138	133	

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

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 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									+ m for Fitting
	2	4	6	8	10	12	14	16	18	
16	427	294	236	202	179	162	149	139	130	1.75
20	854	587	471	404	358	324	298	277	260	1.60
25	1615	1110	892	763	677	613	564	525	492	0.85
32	3178	2184	1754	1501	1330	1205	1109	1032	968	0.70
	20	25	30	35	40	45	50	55	60	
16	123	109	99	91	84	79	75	71	68	
20	246	218	197	182	169	158	150	142	135	
25	465	412	373	344	320	300	283	269	256	
32	914	811	734	676	628	590	557	529	505	
	65	70	75	80	85	90	100	120	140	
16	65	62	60	58	56	54	51	47	43	
20	130	125	120	117	112	109	103	93	86	
25	246	236	228	219	213	206	195	176	162	
32	483	465	447	432	418	405	383	347	320	
	160	180	200	220	240	260	280	300	320	
16	40	37	35	34	32	31	29	28	27	
20	79	75	70	67	64	61	59	57	55	
25	151	142	134	127	121	116	112	108	104	
32	297	278	263	250	238	228	219	211	204	

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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									+ m for Fitting
	Length of straight pipe m									
DN	2	4	6	8	10	12	14	16	18	
16	233	160	129	110	98	88	81	76	71	1.75
20	544	374	300	257	228	206	190	177	165	1.60
25	945	650	522	446	396	359	330	307	288	0.85
32	1922	1321	1061	909	804	730	671	625	585	0.70
	20	25	30	35	40	45	50	55	60	
16	67	59	54	50	46	43	41	39	37	
20	156	139	126	116	107	101	96	90	87	
25	272	242	219	201	187	175	166	158	150	
32	553	490	444	409	380	357	337	320	305	
	65	70	75	80	85	90	100	120	140	
16	35	34	33	32	31	30	28	25	23	
20	83	79	77	74	71	70	66	60	54	
25	144	138	133	128	124	121	114	103	95	
32	292	281	270	261	253	246	232	210	193	
	160	180	200	220	240	260	280	300	320	
16	22	20	19	18	17	17	16	15	15	
20	51	48	45	42	41	39	38	36	35	
25	89	83	78	75	71	68	65	63	61	
32	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									+ m for Fitting
	Length of straight pipe m									
DN	2	4	6	8	10	12	14	16	18	
16	1620	1118	900	771	684	621	572	532	500	1.75
20	3221	2209	1772	1516	1343	1216	1118	1041	975	1.60
25	6087	4180	3355	2870	2543	2304	2119	1971	1850	0.85
32	11979	8252	6635	5684	5041	4571	4208	3915	3675	0.70
	20	25	30	35	40	45	50	55	60	
16	472	419	380	350	326	306	289	275	262	
20	921	817	739	679	632	593	560	532	507	
25	1746	1547	1402	1289	1200	1125	1063	1009	963	
32	3472	3080	2792	2570	2392	2245	2122	2016	1924	
	65	70	75	80	85	90	100	120	140	
16	251	242	233	225	218	211	200	181	167	
20	485	466	449	434	420	406	384	348	320	
25	922	885	853	823	797	773	729	661	608	
32	1843	1770	1707	1648	1595	1547	1462	1325	1220	
	160	180	200	220	240	260	280	300	320	
16	155	146	138	131	125	120	115	111	107	
20	297	279	264	250	238	229	219	211	204	
25	565	530	502	476	454	434	418	402	388	
32	1135	1066	1007	957	913	875	840	810	782	

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Frequently Asked Questions

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 GAS PEX-AL Pipe and EPS 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 GAS PEX-AL Pipe and EPS 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.

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

Frequently Asked Questions

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 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 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 Crimp Gas PEX-AL Piping system procedures
- Must be installed using EPS Gas PEX-AL pipe, EPS Crimp Gas fittings and tools, licence SMKP 21859

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Jointing Instructions

Tool inspections

Manual Tools:

Must use elson EPS Manual Crimp Tools designed for EPS LEAD FREE 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 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-AL pipe and EPS 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.

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 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.

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- Visually inspect the inside of the fitting to ensure it is free of dust, dirt and grit.



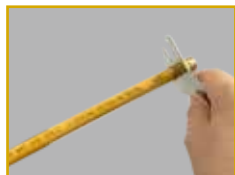
- Insert the EPS PEX-AL pipe into the EPS Crimp Gas fitting. Ensure that the pipe is fully inserted into the fitting by viewing the pipe through the engagement witness holes in the copper ring.

- 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 compressing 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.



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EPS LEAD FREE CRIMP GAS 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
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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
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NO.2 STRAIGHT FEMALE CONNECTOR LEAD FREE BRASS



Code	Description
LF21060	No.2 Straight Connector 16mm x Rp1/2 FI
LF21061	No.2 Straight Connector 16mm x Rp3/4 FI
LF21062	No.2 Straight Connector 20mm x Rp1/2 FI
LF21064	No.2 Straight Connector 20mm x Rp3/4 FI
LF21070	No.2 Straight Connector 25mm x Rp1 FI



LF21072	No.2 Straight Connector 32mm x Rp1 FI
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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
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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
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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 R1/2 MI
LF21402	No.13 Elbow 20mm x R1/2 MI
LF21404	No.13 Elbow 20mm x R3/4 MI

NO.14 FEMALE ELBOW LEAD FREE BRASS



Code	Description
LF21420	No.14 Elbow 16mm x Rp1/2 FI
LF21422	No.14 Elbow 20mm x Rp1/2 FI
LF21424	No.14 Elbow 20mm x Rp3/4 FI

NO.15 LUGGED FEMALE ELBOW LEAD FREE BRASS



Code	Description
LF21120	No.15BP Elbow 16mm x Rp1/2 FI
LF21122	No.15BP Elbow 20mm x Rp3/4 FI

NO.19BP LUGGED MALE ELBOW LEAD FREE BRASS



Code	Description
LF21140	No.19BP Elbow 16mm x G1/2B MI 65mm Long
LF21142	No.19BP Elbow 16mm x G1/2B MI 90mm Long
LF21146	No.19BP Elbow 16mm x G1/2B MI 150mm Long
LF21144	No.19BP Elbow 16mm x G1/2B MI 200mm Long
LF21148	No.19BP Elbow 20mm x G1/2B MI 95mm Long
LF21152	No.19BP Elbow 20mm x G1/2B MI 200mm Long
LF21158	No.19BP Elbow 20mm x G3/4B MI 200mm Long

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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
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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)

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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
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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

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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



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

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

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

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

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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

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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 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 joining 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 Crimp Gas PEX-AL pipe and fittings with license SMKP 21859 and approved tooling, Elson EPS Crimp Water & Gas Dual fittings (watermark certificate WMKA 21276) and Elson approved tooling.

Warranty

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.



Elson Australasia Pty Ltd

ABN 45 059 613 991

ACN 059 613 991

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Disclaimer: The information provided within this Product Information and Installation Manual is designed as a guide only and is believed to be accurate at the time of printing. Elson Australasia Pty Ltd and its employees take no responsibility in regard to any specific installation. Installation must always require supervision and consultation from a licenced Plumber.

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