

eziPex



MULTI-LAYER GAS PIPING SYSTEM TECHNICAL GUIDE



Where would we be without Gas?

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INTRODUCTION

Galpro Ezi-Pex systems are a popular multilayer gas system bringing the latest in innovation to low pressure gas applications and installations. Suitable for both natural gas and LPG. The multilayer pipes are strong, durable and oxygen impermeable, as well as offering a high level of flexibility thanks to an inner layer of aluminum surrounded by Pex on either side.

Ezi-Pex is a macro composite pipe of five bonded layers. The inside layer is made of cross-linked Polyethylene (Pex) overlapped welded aluminum liner and covered by the outside (Pex) layer. This type of piping has been tried and tested for many years and proven in a range of environments.

APPROVALS

EziPex Gas Piping and Fittings conform to AS4176.8-2010 and ISO17484-1-2006, and are independently approved by Jas-ANZ.

TECHNICAL INFORMATION

- **UV radiation can be damaging to Ezi-Pex multilayer composite pipe**, do not allow Galpro Ezi-Pex pipes to be exposed to direct sunlight before or after installation, ensure the UV protective pipe cover is used where necessary
- Ezi-Pex is manufactured with a working life of 50 years. The product warranty is 25 years from manufacturing date and in accordance with our terms of business
- Test Galpro Ezi-Pex Gas systems at 3 x working pressure and in accordance with the NZ Gas code, check crimps visually. Crimps should also be checked with a go-no-go gauge
- Galpro Ezi-Pex Gas Pipe is rated to 1000 kPa and Fittings are rated to 75°C, however to comply with AS/NZS5601 this is limited to a maximum pressure of 70kpa
- Ezi-Pex fittings are made from two materials, Nickel plated brass and D.R brass
- Ezi-Pex pipe has a continual operating temperature of -40°C to +70°C

INSTALLATION

- All installations must be performed by a licensed gas fitter and comply to current legal NZ Standards.
- Ezi-Pex piping installations must be installed in accordance with the gas installation code AS/NZS5601.
- Ezi-Pex pipe should be installed using the Ezi-Pex pipe flow chart. The flow charts are rated at maximum flow and allowance must be made for fittings
- Bending pipe should be done with the appropriate bending springs so the pipe does not collapse
- When pipe is run inside walls, especially steel framing, care should be taken that the outside layer is not cut or compromised
- **Ezi-Pex multilayer composite pipe is not UV protected, when pipe is installed outside in sunlight, then the protective pipe covering should be used**
- Ensure Galpro Ezi-Pex Gas pipes are protected from harmful conditions or situations including attack from rodents
- Ezi-Pex pipe should not be used to make the final connection to any appliances, and not be installed where heat may compromise the outer layer of the pipe
- Ezi-Pex pipe must be installed using an approved crimping tool, reamer and only Ezi-Pex fittings
- All Galpro Ezi-Pex pipes may be installed underground in concrete or under buildings in a continuous run and without joints or fittings in accordance with the gas and building codes
- Ezi-Pex pipe is suitable to be laid underground provided the pipe is installed in a manner which will not compromise the outer layer. Sharp objects and rocks should not be used as fill. A suitable bedding material in accordance to AS/NZS 5601 should be used
- It is always recommended that the piping should be installed in a separate protective pipe or cover.
- Ensure Galpro Ezi-Pex Gas pipes are protected from harmful conditions or situations including attack from rodents
- Ezi-Pex pipe should not be laid in Bitumen except if it is covered
- Fittings should be covered with a suitable waterproof sealant

GAS PIPE

Diameter

- 16mm OD
- 16mm OD
- 16mm OD
- 16mm OD
- 20mm OD
- 20mm OD
- 20mm OD
- 20mm OD
- 25mm OD
- 25mm OD
- 25mm OD
- 32mm OD
- 32mm OD
- 32mm OD
- 40mm OD
- 50mm OD

Length

- 5 meter length
- 25 meter coil
- 50 meter coil
- 100 meter coil
- 5 meter length
- 25 meter coil
- 50 meter coil
- 100 meter coil
- 5 meter length
- 25 meter coil
- 50 meter coil
- 5 meter length
- 25 meter coil
- 50 meter coil
- 5 meter length
- 5 meter length

Code

- EZ1216-5MTR
- EZ1216-25COIL
- EZ1216-50COIL
- EZ1216-100COIL
- EZ1620-5MTR
- EZ1620-25COIL
- EZ1620-50COIL
- EZ1620-100COIL
- EZ2025-5MTR
- EZ2025-25COIL
- EZ2025-50COIL
- EZ2632-5MTR
- EZ2632-25COIL
- EZ2632-50COIL
- EZ2340-5MTR
- EZ4150-5MTR



UV PIPE COVER

Diameter

- 16mm OD
- 20mm OD
- 25mm OD
- 32mm OD

Length

- p/meter
- p/meter
- p/meter
- p/meter

Code

- EZPUVB-1216
- EZPUVB-1620
- EZPUVB-2025
- EZPUVB-2632



FITTINGS

Cap

- 16mm OD
- 20mm OD
- 25mm OD
- 32mm OD

Code

ECAP-1216
ECAP-1620
ECAP-2025
ECAP-2632



Female Swivel

- 16mm OD x 1/2"
- 16mm OD x 3/4"
- 20mm OD x 1/2"
- 20mm OD x 3/4"
- 25mm OD x 3/4"

Code

EFS1216X1/2
EFS1216X3/4
EFS1620X1/2
EFS1620X3/4
EFS2025X3/4



Female Connector

- 16mm OD x 1/2"
- 16mm OD x 3/4"
- 20mm OD x 1/2"
- 20mm OD x 3/4"
- 25mm OD x 1/2"
- 25mm OD x 3/4"
- 25mm OD x 1"
- 32mm OD x 3/4"
- 32mm OD x 1"
- 40mm OD x 1"
- 50mm OD x 1-1/2"

Code

EFC1216X1/2
EFC1216X3/4
EFC1620X1/2
EFC1620X3/4
EFC2025X1/2
EFC2025X3/4
EFC2025X1
EFC2632X3/4
EFC2632X1
EFC3240X1
EFC4150X1-1/2



Union Connector

- 16mm OD
- 20mm OD
- 25mm OD
- 32mm OD
- 40mm OD
- 50mm OD

Code

EUC1216
EUC1620
EUC2025
EUC2632
EUC3240
EUC4150



Reducing Union Connector

- 20mm x 16mm OD
- 25mm x 16mm OD
- 32mm x 16mm OD
- 25mm x 20mm OD
- 32mm x 20mm OD
- 32mm x 25mm OD
- 40mm x 25mm OD
- 50mm x 25mm OD
- 40mm x 32mm OD
- 50mm x 32mm OD
- 50mm x 40mm OD

Code

ERUC1620X1216
ERUC2025X1216
ERUC2632X1216
ERUC2025X1620
ERUC2632X1620
ERUC2632X2025
ERUC3240X2025
ERUC4150X2025
ERUC3240X2632
ERUC4150X2632
ERUC4150X3240



Female Tee

- 20mm x 1/2" x 20mm OD
- 25mm x 3/4" x 25mm OD

Code

EFERT1620X1/2
EFERT2025X3/4



Male Tee

- 16mm x 1/2" x 16mm OD

Code

EMERT1216X1/2TEE



Copper Weld Adaptor

- 16mm OD x 1/2"
- 16mm OD x 15mm
- 16mm OD x 3/8"
- 20mm OD x 1/2"
- 20mm OD x 3/8"
- 25mm OD x 15mm
- 32mm OD x 20mm

Code

ECWU1216X1/2
ECWU1216X15MM
ECWU1216X3/8
ECWU1620X1/2
ECWU1620X3/8
ECWU2025X15MM
ECWU2632X20MM



Male Connector

- 16mm OD x 1/2"
- 16mm OD x 3/4"
- 20mm OD x 1/2"
- 20mm OD x 3/4"
- 25mm OD x 1/2"
- 25mm OD x 3/4"
- 25mm OD x 1"
- 32mm OD x 3/4"
- 32mm OD x 1"
- 40mm OD x 1"
- 50mm OD x 1-1/2"

Code

EMC1216X1/2
EMC1216X3/4
EMC1620X1/2
EMC1620X3/4
EMC2025X1/2
EMC2025X3/4
EMC2025X1
EMC2632X3/4
EMC2632X1
EMC3240X1
EMC4150X1-1/2



Pexal Male Connector

- 26mm OD x 3/4"

Code

EPMC2026X3/4



Female Elbow

- 16mm OD x 1/2"
- 16mm OD x 3/4"
- 20mm OD x 1/2"
- 20mm OD x 3/4"
- 25mm OD x 1/2"
- 25mm OD x 3/4"
- 25mm OD x 1"
- 32mm OD x 1"
- 40mm OD x 1"

Code

EFE1216X1/2
EFE1216X3/4
EFE1620X1/2
EFE1620X3/4
EFE2025X1/2
EFE2025X3/4
EFE2025X1
EFE2632X1
EFE3240X1



Male Elbow

- 16mm OD x 1/2"
- 16mm OD x 3/4"
- 20mm OD x 1/2"
- 20mm OD x 3/4"
- 25mm OD x 3/4"
- 25mm OD x 1"
- 32mm OD x 1"
- 40mm OD x 1"

Code

EME1216X1/2
EME1216X3/4
EME1620X1/2
EME1620X3/4
EME2025X3/4
EME2025X1
EME2632X1
EME3240X1



Union Elbow

- 16mm OD
- 20mm OD
- 25mm OD
- 32mm OD
- 40mm OD
- 50mm OD

Code

EUE1216
EUE1620
EUE2025
EUE2632
EUE3240
EUE4150



Reducing Tee

- 16mm x 20mm x 16mm OD
- 16mm x 25mm x 16mm OD
- 20mm x 16mm x 16mm OD
- 20mm x 16mm x 20mm OD
- 20mm x 20mm x 16mm OD
- 20mm x 25mm x 16mm OD
- 20mm x 25mm x 20mm OD
- 25mm x 16mm x 16mm OD
- 25mm x 16mm x 25mm OD
- 25mm x 20mm x 20mm OD
- 25mm x 20mm x 25mm OD
- 25mm x 25mm x 20mm OD
- 25mm x 32mm x 25mm OD
- 32mm x 16mm x 32mm OD
- 32mm x 20mm x 32mm OD
- 32mm x 25mm x 32mm OD
- 40mm x 25mm x 40mm OD
- 40mm x 32mm x 40mm OD
- 50mm x 25mm x 50mm OD
- 50mm x 32mm x 40mm OD
- 50mm x 32mm x 50mm OD
- 50mm x 40mm x 50mm OD

Code

ERT1216-1620-1216
 ERT1216-2025-1216
 ERT1620-1216-1216
 ERT1620-1216-1620
 ERT1620-1620-1216
 ERT1620-2025-1216
 ERT1620-2025-1620
 ERT2025-1216-1216
 ERT2025-1216-2025
 ERT2025-1620-1620
 ERT2025-1620-2025
 ERT2025-2025-1620
 ERT2025-2632-2025
 ERT2632-1216-2632
 ERT2632-1620-2632
 ERT2632-2025-2632
 ERT3240-2025-3240
 ERT3240-2632-3240
 ERT4150-2025-4150
 ERT4150-2632-3240
 ERT4150-2632-4150
 ERT4150-3240-4150



Equal Tee

- 16mm OD
- 20mm OD
- 25mm OD
- 32mm OD
- 40mm OD
- 50mm OD

Code

EET1216
 EET1620
 EET2025
 EET2632
 EET3240
 EET4150



Reducing Union Elbow

- 20mm x 16mm OD
- 25mm x 16mm OD
- 32mm x 20mm OD
- 40mm x 32mm OD

Code

ERUE1620X1216
 ERUE2025X1216
 ERUE2632X1620
 ERUE3240X2632



Female Swivel Elbow

- 16mm OD x 1/2"

Code

EFSE1216X1/2



Hose Plates

- 16mm OD x 1/2"
- 20mm OD x 3/4"

Code

EHP1216X1/2
 EHP1620X3/4



Wingback

- 16mm OD x 1/2"
- 20mm OD x 1/2"
- 20mm OD x 3/4"
- 25mm OD x 3/4"

Code

EWB1216X1/2
 EWB1620X1/2
 EWB1620X3/4
 EWB2025X3/4



Male Wingback

- 16mm OD x 1/2" (300mm) EBFW1216X1/2
- 20mm OD x 1/2" (55mm) EBFW1620X1/2
- 25mm OD x 3/4" (55mm) EBFW1620X3/4

Code



Plastic White Wall Flange Code

- 15mm
- 20mm

EZFL15
 EZFL20



Muncing Ring

- 10mm (Galv)
- 10mm (Zinc)

Code

HABPG-10
 HABPZ-10



TOOLS



Multi-layer PVC Pipe Cutter
32mm OD
(EPCT-3)



Multi-layer Pipe Reamer
16-25mm OD
(ERM1620)



Multi-layer PVC Pipe Cutter
20mm OD
(EPCT-2)



Multi-layer Pipe Reamer
20-32mm OD
(ERM2022)



Copper Pipe Bender
1/4", 5/16", 3/8"
6mm, 8mm, 10mm OD
(TEG6811)



Multi-layer Pipe Single Reamer
40mm OD
(ERMS3240)

PIPE SIZING GUIDE (LPG 2.75KPA)

(LP Gas only) LP Gas flow through PE-X/AL/PE-X Composite Pipe Crimped Fittings (Mj/h)

Pressure drop of 0.25kPa (Meter Pressure 2.75kPa) Fitting Allowance (M)

Length of run (m)	2	4	6	8	10	12	14	16	18	20	25	30	35
Pipe Size (mm)													
16	448	303	241	204	180	162	148	137	128	116	106	95	88
20	847	574	388	388	342	308	282	262	245	229	203	182	167
25	1169	787	624	530	466	420	385	356	333	314	276	249	228
32	3463	2358	1602	1602	1414	1276	1171	1086	1016	963	844	762	698
40	4921	3354	2281	2281	2014	1819	1669	1548	1449	1366	1205	1087	997
50	9076	6197	4222	4222	3730	3370	3093	2871	1688	2534	2237	2020	1852

Length of run (m)	40	45	50	55	60	65	70	75	80	85	90	95	100	Correction (+) M
Pipe Size (mm)														
16	81	76	71	67	64	61	58	56	54	52	50	48	47	1.7
20	155	144	136	129	123	117	112	107	104	100	96	94	91	1.4
25	211	197	186	181	178	167	157	151	146	141	137	113	128	0.8
32	647	606	570	540	514	491	471	453	436	421	408	396	384	0.6
40	924	885	815	772	735	702	673	647	624	603	583	566	550	N/A
50	1719	1608	1516	1436	1368	1307	1254	1206	1162	1124	1088	1055	1024	N/A

PIPE SIZING GUIDE (LPG -70KPA)

(LP Gas only) LP Gas flow through PE-X/AL/PE-X Composite Pipe Crimped Fittings (Mj/h)

Pressure drop of 10kPa (Meter Pressure -70kPa) Fitting Allowance (M)

Length of run (m)	2	4	6	8	10	12	14	16	18	20	25	30	35
Pipe Size (mm)													
16	2805	1968	1597	1377	1226	1115	1029	959	903	854	759	689	635
20	6188	4347	3531	3045	2714	2470	2280	2127	2001	1894	1685	1533	1413
25	11467	8060	6552	5654	5042	4590	4239	3955	3721	3523	3137	2853	2632
32	24003	16887	13737	11860	10579	9635	8901	8309	7820	7406	6598	6003	5541
40	38937	25294	20582	17774	15885	14445	13347	12463	11730	11110	9903	9010	8319
50	66663	46949	38219	33016	29467	26847	24813	23174	21816	20667	18427	16775	15490

Length of run (m)	40	45	50	55	60	65	70	75	80	85	90	95	100	Correction (+) M
Pipe Size (mm)														
16	592	556	525	499	477	457	439	423	408	395	383	372	361	1.7
20	1316	1237	1171	1112	1063	1018	979	943	911	882	855	930	809	1.4
25	2454	2306	2182	2075	1983	1900	1827	1762	1702	1649	1599	1552	1512	0.8
32	5168	4860	4599	4375	4181	4008	3855	3718	3593	3481	3377	3280	3194	0.6
40	7761	7299	6910	6574	6283	6024	5795	5589	5403	5233	5078	4936	4804	N/A
50	114457	13601	12878	12256	11713	11235	10809	10427	10081	9766	9478	9252	8969	N/A

PIPE SIZING GUIDE (NATURAL GAS 1.1KPA)

(Natural Gas only) Natural Gas flow through PE-X/AL/PE-X Composite Pipe Crimped Fittings (Mj/h)

Pressure drop of 0.75kPa (Meter Pressure 1.1kPa) Fitting Allowance (M)

Length of run (m)	2	4	6	8	10	12	14	16	18	20	25	30	35
Pipe Size (mm)													
16	84	57	45	38	37	36	34	30	27	24	19	16	14
20	158	106	84	72	63	57	52	48	45	43	41	40	35
25	314	211	167	142	125	113	103	96	89	84	79	75	71
32	602	405	322	273	240	216	198	184	172	162	142	128	117
40	985	663	526	446	393	354	324	300	281	264	233	210	192
50	1900	1278	1014	880	757	682	625	579	541	510	449	404	370

Length of run (m)	40	45	50	55	60	65	70	75	80	85	90	95	100	Correction (+) M
Pipe Size (mm)														
16	12	11	10	9	8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.3
20	30	27	24	22	20	18	17	N/A	N/A	N/A	N/A	N/A	N/A	1.2
25	68	64	62	60	58	54	50	48	46	45	45	44	44	0.5
32	109	102	98	95	89	85	83	80	78	76	74	73	71	0.6
40	178	166	157	150	141	136	131	126	121	117	113	110	107	0.9
50	343	321	302	285	272	256	248	238	229	221	214	207	201	N/A

PIPE SIZING GUIDE (NATURAL GAS 2.75KPA)

(Natural Gas only) Natural Gas flow through PE-X/AL/PE-X Composite Pipe Crimped Fittings (Mj/h)

Pressure drop of 0.75kPa (Meter Pressure 2.75kPa) Fitting Allowance (M)

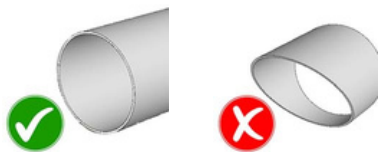
Length of run (m)	2	4	6	8	10	12	14	16	18	20	25	30	35
Pipe Size (mm)													
16	315	214	168	142	125	113	103	96	90	84	74	67	61
20	589	396	314	267	235	212	194	179	168	158	139	125	115
25	1169	787	624	530	466	420	385	356	333	314	276	249	228
32	2246	1511	1199	1017	895	807	739	684	640	602	530	478	438
40	3671	2470	1960	1662	1463	1319	1207	1119	1046	985	867	781	715
50	7082	4766	3780	3207	2823	2544	2329	2158	2018	1900	1672	1507	1380

Length of run (m)	40	45	50	55	60	65	70	75	80	85	90	95	100	Correction (+) M
Pipe Size (mm)														
16	57	53	50	47	45	42	44	39	37	36	35	34	33	1.7
20	106	99	94	88	84	80	77	74	71	69	67	65	63	1.4
25	211	197	186	181	178	167	157	151	146	141	137	113	128	0.8
32	405	379	357	340	335	329	321	309	298	287	278	270	262	0.6
40	663	620	583	555	526	505	484	466	449	434	420	408	396	N/A
50	1278	1195	1125	1027	1014	936	897	863	832	804	778	756	734	N/A

INSTALLATION GUIDE

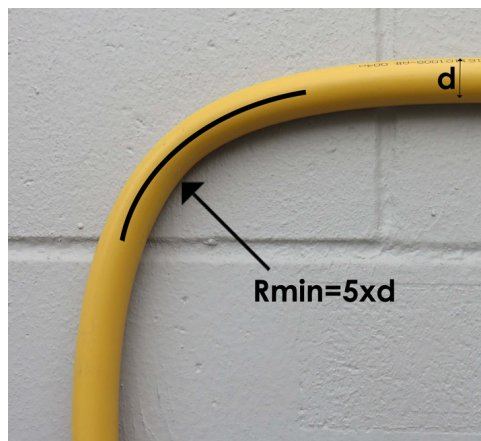
PIPE PREPARATION

- Cut the Ezi-Pex pipe vertically with a Pipe Cutter/Pipe Cutting Tool, the cross section must be vertical to the axis.
- Round and bevel the endholes and make a minimum 2mm incline so that the pipe connects tightly to the fittings. (Check that the edge is smooth and without chipping to ensure a tight connection)



PIPE BENDING

- Holding the pipe approx. 40cm away from the bending point on either side, gently bend the pipe until it reaches the required degree. This can be done manually or with an internal/external bending spring, however the bend can be controlled more precisely using a Pipe Bending Tool.
- The minimum bend of the pipe should be minimum 5 times the diameter of the pipe - **Be cautious not to bend the piping too far as this will cause damage.**



PRESS FITTING

- Ensure that the fitting is the correct size for the piping, then push the inserts into the pipe up to the baffle ring, until the pipe is visible through the inspection window.
- Choose the right size head for the clamp to fit the fitting and piping tightly
- Open the clamp jaw and place the fitting in the mould ensuring that the baffle is up against the mould when the jaw is closed. Press the clamp tightly closed to secure the fitting.

Pipe Dimension (mm)	Min. Pipe Length between 2 Press Fittings (mm)
16	60
20	70
25	80
32	80
40	100
50	100



25 YEAR WARRANTY

Ezi-Pex Gas Piping and Fittings conform to AS4176.8-2010 and ISO17484-1-2006.

Ezi-Pex offers a 25 year warranty including all elements of the piping system from piping to fittings. The warranty is conditional upon:

- The Ezi-Pex system being installed by a Licensed and Registered Gasfitter to PGDB
- The Ezi-Pex system being installed is in accordance with AS/NZS 5601
- If there is a failure with either the installed piping or fitting please see our Terms & Conditions at www.galpro.co.nz

