



PE PIPING SYSTEMS FOR

GAS PRODUCTS & TRANSFER SOLUTIONS





Acu-Tech® Piping Systems (Acu-Tech) specialises in manufacturing and supplying advanced polyethylene (HDPE) pipe systems tailored for efficient fluid or gas transfer and cable protection. Our state-of-the-art pipe systems are predominantly made from polyethylene (PE) thermoplastics, integrating the latest advancements in pipe technology. These systems are extensively utilised across various industries, including mining, resource extraction, civil engineering, plumbing, rural applications, irrigation, and industrial sectors.

Founded in 2000, Acu-Tech commenced its journey within three shipping containers, evolving into a thriving Australian company that is privately owned and operated. The company's founders and owners actively participate in day-to-day operations, fostering a culture of inspiration, strong leadership, flexible decision-making, and unwavering accountability throughout the organisation.

With our expanding operations nationwide, the dedicated Acu-Tech team is committed to providing the highest level of service and support throughout every stage of your project. Our team members bring decades of collective experience and embrace a positive “can-do” attitude, deeply committed to ensuring the sustained success of your business.

We Care.

Acu-Tech prioritises high quality customer service and support, focusing on always having a positive ‘can-do’ attitude.

Our Solutions.

With state-of-the-art manufacturing facilities and decades of combined experience, Acu-Tech prioritises continuous innovation and superior products for your HDPE piping needs. Offering turnkey solutions and project management services with a strong emphasis on customer support and success, we ensure tailored solutions that align perfectly with your requirements, whether it's fluid or gas transfer, cable protection, or any other application.

Your Success.

Your Success is our priority. Our durable and cost-effective products, combined with premium client service and support, demonstrate our unwavering commitment to ensuring the long-term success of your business. At Acu-Tech, we are more than just a supplier; we are your partner in success.



OUR VISION

Building Australia's future.

OUR MISSION

Delivering the best pipe solutions for our customers.

OUR VALUES



S

Safety



T

Trustworthy



R

Reliable



I

Innovative



V

Value



E

Energy

Safety

We promote wellbeing first – by following our health and safety practices and speaking up immediately if something seems unsafe.

Trustworthy

We move fast with a high level of trust. We honour our commitments to our customers, team, and community.

Reliable

We have grit, perseverance, and bravery to overcome obstacles, and do what we say we will.

Innovative

We bravely challenge, explore, and implement, effective and improved ways to deliver the best solution.

Value

We are humble, hungry, smart and believe that our team is our greatest asset - every role and every person with great attitude brings value.

Energy

We are hungry, driven by fearless energy 'hustle muscle' to achieve exceptional outcomes by motivating ourselves and those around us to give our best.



Quality Assurance



ISO 9001: DELIVERING EXCELLENCE

At Acu-Tech Piping Systems, we go above and beyond to ensure exceptional quality, epitomised by our ISO 9001 certification - a symbol of excellence in quality assurance.

Our ISO 9001 certification reflects our unwavering commitment to delivering top-tier products and services, while continually refining our processes.

- ✓ **Elevating Product Excellence**
- ✓ **Prioritising Customer Satisfaction**
- ✓ **Streamlining Efficiency and Enhancing Processes**
- ✓ **Mitigating Risk**
- ✓ **Achieving Global Recognition**

In summary, Acu-Tech Piping Systems' ISO 9001 certification is not just a label; it signifies our commitment to providing excellence in quality assurance, ensuring our customers receive the best products and services available.

A black and white photograph of two men in safety vests and work clothes standing on a construction site. They are looking at a large sheet of paper, likely blueprints or plans, which one of them is holding. In the background, there are large pipes and industrial equipment. The right side of the image is overlaid with a teal graphic containing text.

What sets us apart?

Consistent reliability: We consistently provide the ideal solution at the most cost-effective value.


Client-focused approach: We actively listen and collaborate closely with our clients to grasp the challenges they face.

Tailored solutions: Leveraging our materials, technology, training, and installation methods, we help determine and implement the right solutions for our clients.

Problem-solving expertise: Leveraging our vast knowledge and experience, we address challenges and deliver effective solutions.

Industry-specific delivery: We excel in providing bespoke pipeline solutions specifically tailored to the distinctive requirements of the industries we serve.





Acu-Gas

HDPE Pipe Solution for Gas transfer

Acu-Gas HDPE piping system is a leading solution for safe and reliable transportation of natural and LP gas. Its high-density polyethylene (HDPE) construction leverages heat fusion joining for leak-proof connections and superior strength.

This innovative system builds on a long history of success in the gas distribution industry, where polyethylene has been the preferred choice for over 60 years

1. Leak-Proof System

- **Heat Fusion:** Permanent, leak-proof pipe & fitting connections.
- **No Seals/Gaskets:** Relies on fused HDPE for a strong bond.
- **Frictionless & Restrained:** Secure joint without relying on friction.
- **Safe Installation:** Joints made aboveground for worker safety.
- **Trained Professionals Required:** Ensures proper installation.

2. Durable and Reliable HDPE

- **Tough & Strong:** Handles installation, pressure, and external loads
- **Resilient:** Withstands temperature extremes, seismic activity, vibrations, and pressure surges.
- **Versatile:** Suitable for buried, exposed, and above-ground applications..

3. Lightweight, Flexible and Cost Effective

- **Reliable Joints:** Fusion-joined for leak-proof performance.
- **Durable Construction:** Withstands pressure, impact, and extreme temperatures.
- **Lightweight Design:** Reduces transportation and handling costs.
- **Flexible Installation:** Bends to accommodate curves, lowering costs.
- **Cost-Effective:** Enables trenchless installation for minimal disruption.

Why Acu-Gas

Simply stated... versatility and durability. For more than 50 years HDPE pipe has proved itself in numerous applications where a safe, leak-proof system is absolutely critical. Acu-Tech HDPE pipe is a proven performer above ground, on the surface, below ground and even underwater. It can transport drinking water, gas, or some of the most hazardous waste materials safely and without leakage. These attributes make Acu-Tech HDPE piping systems the best solution for almost any method of installation, including direct burial, slip-lining, pipe bursting, and directional drilling.

Key Benefits:

- Extreme Strength and Flexibility
- High Quality and integrity
- Cost Effective and Durable
- Easy of New Connections, Upgrades & Repairs
- The Green Solution
- Fusion Welded - Extreme Joint Strength
- Common Trenching of Main Services
- Versatility and Flexibility of Design
- Fusion Welding, Training & Accreditation
- Non-Corrosive Materials

Technical Information

Referenced Standards

Pipes and Fittings:

AS/NZS 4129: Fittings for Polyethylene (PE) Pipes for Pressure Applications

AS/NZS 4130: Polyethylene (PE) Pipes for Pressure Applications

Installation:

AS/NZS 5601.1: Gas Installation – General Installations

AS/NZS 4645.3: Gas Distribution Networks -Plastics Pipe Systems

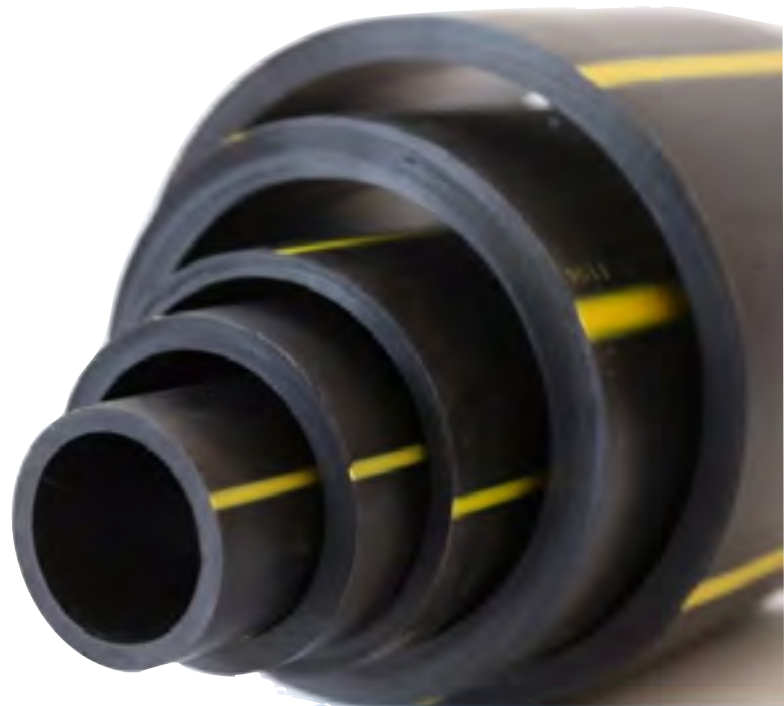
AS/NZS 2033: Installation of Polyethylene Pipe Systems

AS/NZS 2566.2: Buried Flexible Pipelines – Installations

All gas work must be carried out in accordance with the requirements of the relevant Technical Regular, and other local regulatory authority requirements as applicable.

Design:

AS/NZS 2566.1: Buried Flexible Pipelines – Structural Design





Pipe Dimensions

PIPE SIZE O.D. (mm)	MEAN INSIDE DIAMETER (mm)	SDR RATING	NOMINAL PRESSURE RATING IN BAR (DESIGN SAFETY FACTOR - 2) ¹	AVAILABLE LENGTHS (m)
***16	9.8	11	10	100m Coil
***20	13.8	11	10	100m, 200m Coil
***20	15.0	17	6	100m, 200m Coil
***25	20.0	17	6	100m, 200m Coil
***25	18.0	11	10	100m Coil
***32	25.8	11	10	50m, 100m Coil
40	32.3	11	10	6m Length
40	32.3	11	10	100m Coil
***50	40.4	11	10	100m Coil
63	51.0	11	10	6m, 7m Length
63	51.0	11	10	50m, 100m Coil
***90	78.9	17	6	6m, 50m, 100m Coil
***90	73.1	11	10	7m, 12m Length
110	96.4	17	6	6m, 12m Length
110	96.4	17	6	50m, 100m Coil
110	89.3	11	10	6m, 12m Length*
***125	101.5	11	10	12m Length
160	140.6	17	6	6m, 12m Length
160	129.9	11	10	6m, 12m Length*
225	197.6	17	6	6m, 12m Length
225	182.7	11	10	6m, 12m Length*
***280	227.8	11	10	12m Length

¹ Pressure rating are subject to limitations imposed by application standards and local regulatory authorities and must be verified by the project engineer for the applications.

* Non-Standard item, please contact Acu-Tech for availability.

*** Products are state-specific, contact sales for more information.

Note: Custom diameters available on request.

Information provided is a guide only. All pipe is manufactured to AS/NZS4130 standards.

Other Offerings

Acu-Gas Pipe



Electrofusion Coupler



Electrofusion Reducer



Electrofusion 90°, 45°, 22.5° Elbow



Electrofusion Adjustable Elbow



Electrofusion Equal & Reducing Tees



Electrofusion Tapping And Branch Saddles



Electrofusion End Cap



Ef Test End Cap With Brass Male Bsp Thread



Brass Male / Female Bsp Ef Adaptor



Spigot Stub Flange



Pe To Copper Adapter, Upstands & Meter Risers



Backing Ring Table D / E / Ansi 150



Bolt Sets - Pe To Steel & Steel To Pe Stub Flange Connections



Electrofusion Welders



Welding Wipes



Ancillary Pipeline Products



Marker Tape & Tracer Wire



Foam Pigs



Spigot Fittings (Reducers, End Caps, 90° Elbow, 45° Elbow, 22.5° Elbow, Equal And Reducing Tees)



Equipment Hire & Servicing

Acu-Tech supplies and hires a wide range of welding equipment.

Our hire division has a full range of butt welders, extrusion welders and electrofusion welders that can weld pipe diameters from 20mm up to 1000mm. This includes a wide variety of electrofusion equipment and butt welders, which can be useful if your team is trained to use a particular model.

If you are welding on a site without power supply, we also provide portable generators, designed to be used with poly welding equipment.

New equipment is available for sale if you prefer to invest in equipment upfront.

Work with Acu-Tech and a recommended financial advisor to facilitate capital equipment purchases. Contact our hire sales team for more information.

View the Equipment Hire website:
<https://acu-techhire.com.au/>



Multi Scraper



Mono Pipe Scraper



Pipe Cutter



Turbo Pipe Scrapers



Electrofusion Welders



Transport & Warehouse Logistics

Our transportation yard has the capacity to load up to 15 trucks daily, accommodating a diverse range of pipes with lengths of up to 20 meters and diameters of 800mm. Our dedicated transport team is steadfast in their commitment to ensuring orders are delivered in full and on time, with safety as our top priority.

We offer a comprehensive project solution through our dedicated fleet of trucks and skilled drivers.

These professionals undergo rigorous training to guarantee efficient unloading and an unwavering commitment to delivering exceptional service.

Our large transportation fleet has the capability to accommodate a diverse range of pipes with lengths of up to 21 meters and diameters up to 1200mm.

Our dedicated transport team is steadfast in their commitment to ensuring orders are delivered in full and on time, with safety as our top priority. With the added assurance of our overhead permits and Heavy Vehicle Accreditation, you can place full trust in us for the secure and timely delivery of your goods, ensuring a smooth transportation experience that perfectly aligns with all your project needs.

Training & Testing Facility

Let Polyweld Tech Academy (PWT) assist with your organisation's polyethylene welding practices.

PWT is equipped with accredited NATA Laboratory testing facilities, specialising in tensile testing of butt welds and peel decohesion of electrofusion welds, along with a complete range of QA/QC inspection services.

PWT is a nationally accredited training organisation, offering specialized courses in HDPE butt welding (PMBWELD301E), electrofusion welding (PMBWELD302E) and extrusion welding (PMBWELD309E) techniques. Two-year reaccreditation courses are also available.



For more information and course enrolments: **1300 36 7659 (GO POLY)**
info@polyweldtech.com.au | www.polyweldtech.com.au



Table of Physical Properties

The properties given below are typical for HDPE grades used to manufacture pipe. It should be noted that many of these properties are relative to temperature and the duration of stress application. Data should not be used for specification work.

PROPERTY		VALUE	UNIT	TEST METHOD	TEST SPECIMEN
Density at 23°C		0.958	g/cm ³	ISO 1183	10mm x 10mm x 4mm
Viscosity Number		380	ml/g	ISO 1628-3	0.1% solution of granules in decahydronaphthalene
Melt Flow Rate	MFR 190/5	0.23	g/10min	ISO 1133	Granules sample weight 3g to 6g
	MFR 190/21.6	6.5	g/10min		
Tensile Properties	Yield Stress	26	N/mm ²	ISO 527, Test Rate 50mm/min	ISO 3167, 4mm thick (test specimen no. 3, 4mm thick according to DIN 53455)
	Elongation at Yield Stress	10	%	ISO 527, Test Rate 50mm/min	
	Tensile modulus of elasticity (secant between 0.05 & 0.25% strain)	900	N/mm ²	ISO 527	
	Tensile Creep Modulus (1 hour value)	650	N/mm ²	ISO 899 Test	
	Tensile Creep Test Modulus (1000 hour value)	350	N/mm ²	Load 2M/mm ²	
Flexural Properties	Flexural Creep Modulus (1 min value)	1100	N/mm ²	DIN 54852-Z4 σ_b -2N/mm ²	110mm x 110mm x 4mm loaded flat
	Flexural Stress (3.5% deflection)	20	N/mm ²	ISO 178, Test Rate 2mm/min	80mm x 10mm x 4mm
Stiffness in Torsion		180	N/mm ²	DIN 53447	60mm x 6.35mm x 3mm
Hardness	Ball Indentation Hardness	41	N/mm ²	ISO 2039 1 Test Load 132N	4mm sheet
	Share Hardness D (3 sec value)	61	~	ISO 868	6mm sheet
	Share Hardness D (15 sec value)	59	~		
Notched impact Strength acN (test specimen from compression moulded sheet)	At 23°C	20	Ki/m ²	ISO 179 / 1eA	80mm x 10mm x 4mm
	At -30°C	10	Ki/m ²		
Vicat Softening Point VST / B / 50		67	°C	ISO 306	4mm sheet
Oxidation Induction Time	200°C in O ₂	>=60	min	ISO TR 10837	Granules

Our Capabilities

Technical Support:

We provide technical support for designers, engineers, and installers.

Training:

Through our training partner we can offer our clients the ability to train staff with nationally accredited polyethylene plastic welding courses.

QA/QC:

We are also qualified to provide Quality Assurance and Quality Control documentation.

Testing:

We have a fully accredited in-house NATA testing facility to provide destructive and pressure testing as per project requirements.

Equipment Hire, Sales, and Servicing:

Acu-Tech offers welding equipment available for hire or sale and providing servicing and calibration for welders.

Transport:

Products are delivered using our own fleet of trucks. By providing our own transport solutions, we can ensure that the product is delivered directly to site in a safe and timely manner.

**National Manufacturer of
HDPE piping systems**





The PE Pipe Systems Specialists

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WE CARE. OUR SOLUTIONS. YOUR SUCCESS.