



**duraflo**<sup>®</sup>

# ABS PRESSURE PIPE SYSTEMS

MARKET LEADERS IN HVAC, INDUSTRIAL & BUILDING SERVICES

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VIADUX VERSION 2

# MARKET LEADERS IN HVAC INDUSTRIAL & BUILDING SERVICES PIPE SYSTEMS

DURAFLO ABS Pressure Pipe Systems have forged market leadership in heating and ventilation (HVAC), industrial and building services markets by providing a unique suite of benefits and clear superior performance.

The reliability and versatility of DURAFLO ABS Pressure Pipe Systems has seen it successfully installed in many of Australia's prime commercial and institutional developments since the 1970's.

The success of this thermoplastic pipe is due to its engineered structure, delivering the chemical resistance of acrylonitrile, the strength of butadiene and the mouldability of styrene. These materials deliver unique attributes that are vital to the long term performance of HVAC pipe systems

- Corrosion/Scale Resistant
- High Impact Strength
- 50 Year Design Life
- Light Weight
- Low Thermal Conductivity
- Smooth Bore
- Low Maintenance
- Resilience to Water Hammer
- UV Resistant
- Ease of Installation



## PRODUCT & TECHNICAL SUPPORT

DURAFLO ABS provides an unparalleled range of sizes and fittings to complete even the most challenging project.

This expansive range is coupled with innovation and high levels of engineering support throughout the selection, design, installation and commissioning of your pipe system.

The Viadux level of expertise and customer support results in secure project delivery that has been demonstrated time and time again by the large number of successful projects delivered all over the world.

## QUALITY ASSURANCE

A commitment to quality governs the entire Viadux offering, from the sourcing of inputs, to its manufacturing processes and customer service.

Only certified manufacturing facilities are utilised for DURAFLO ABS pipes and fittings under the approval of AS/NZS ISO 9001:1000 Quality Management Systems.

DURAFLO ABS pipe systems are also manufactured to AS/NZS 3518:2004 Acrylonitrile butadiene styrene (ABS) compounds, pipes and fittings for pressure applications.



## CONDENSER WATER SYSTEMS

The flow and return of condenser water between cooling towers and chiller units needs to carry water at temperatures typically between 15°C and 40°C. This water is treated with chemicals to control the growth of Legionella and microbiologically induced corrosion (MIC). When metallic pipes are nominated for this application, a scenario for corrosion and premature failure can be initiated.

DURAFLO ABS can provide a cost effective alternative to traditional metallic pipes for this application. DURAFLO ABS Pressure Pipe will not corrode and is unaffected by dosing chemicals typically used for the control of Legionella and MIC.

The extremely smooth bore of DURAFLO ABS pipes is maintained throughout the life of the system, reducing the running cost and improving the long term efficiency of the building.



## K-FLO PRE-INSULATED PIPE

Originally conceived for district heating systems, pre-insulated pipes are now being incorporated into district cooling systems around the world as an environmentally friendly method of cooling.

Whilst the initial cost of pre-insulated pipe is greater, the reduced installation cost, greater energy efficiency and maintenance free service life make the DURAFLO K-FLO system a standout choice for district cooling pipe systems.



K-FLO incorporates an ABS carrier pipe able to convey water at low temperatures without jeopardising pipeline integrity. The ABS carrier pipe is layered in high quality closed cell polyurethane insulation and jacketed in an ABS outer shell.

The system is joined using cold solvent welding, an easily mastered and quickly completed permanent weld. The effectiveness of the cold solvent cement welding delivers simple yet high integrity joint security for the K-FLO pipe system.

Uniquely, when site joining is completed no post insulation is needed at joints. All pipes and matching fittings butt snugly together requiring only a quickly and easily applied heat shrink sleeve.

This design feature of the system delivers site savings and long lasting energy efficiency. In addition, because ABS has a very low heat transfer coefficient, insulation thicknesses can be reduced compared to metallic pipe systems, delivering further project cost savings.



DURAFLO ABS is resistant to the effects of strong sunlight and retains its high ductility across a wide operating range.

The DURAFLO ABS joining system also provides benefits, known as the 'cut and shut' cold solvent cement weld, it is quick and easy to install in new and existing buildings. The method offers high security leak proof installation and has the added benefit of not requiring a "hot ticket".

## DURAFLO ABS IN ACTION

**Application:** Industrial Cooling, Plastic Extrusion. **Location:** Melbourne, Australia

An investment in new extrusion machines required a review of the cooling capacity of an established manufacturing facility in Melbourne.

Cooling equipment supplier Consonic were contracted to supply a package which included two Green Box air cooled, skid mounted, chiller units with a capacity of 770 kW along with associated pumps for distribution of the chilled water to the extrusion lines.

The operating temperature of the chilled water system was in the range of 8°C to 3°C and so the chosen pipe system had to be capable of maintaining high integrity at these low temperatures. The DURAFLO ABS system operates safely down to minus 30°C, so could adequately handle the system requirements.

A DURAFLO ABS system was chosen to integrate the chillers, pumps sets, holding tanks and the distribution network connecting the extruders. The system had the added benefit of its high insulating property (Thermal Conductivity 0.250 W/mK) which was included as part of the energy management of the system. During commissioning it was noted that the metal bodies of pumps and other equipment began to sweat while the DURAFLO ABS pipes and fittings remained dry.

Installation of the DURAFLO ABS pipe network was efficiently carried out by the factory's own maintenance team. The lower cost of the ABS pipe and the intuitive installation process contributed to the system going live ahead of schedule, delivering cost, time and productivity benefits.





# duraflo®

## INDUSTRIAL PIPE SYSTEMS

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