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# MANI FLOW

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MANIFOLD PLUMBING SYSTEM



Welcome to LEAP, a new name dedicated to providing the most advanced water systems in Australasia.

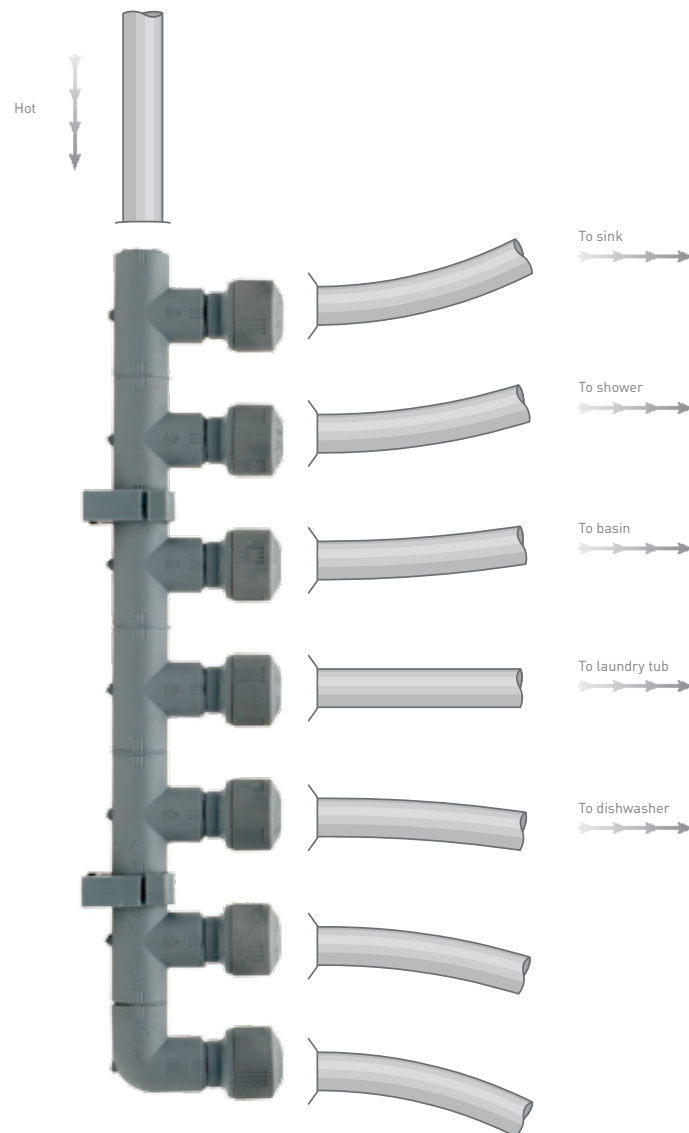
LEAP aims to improve customers' lives with innovative, sustainable, environmentally responsible water systems that deliver superior performance, without costing the earth.

We take responsibility for the environment by sourcing and developing products that are more energy and water efficient – putting less strain on natural resources.

We are proud of our ability to actively design, develop and engineer new water systems to tackle and solve old problems in new ways – we call it 'challenging the status flow'.

# MANIFLOW:

## THE WATER AND ENERGY EFFICIENT PLUMBING SOLUTION



**MANIFLOW** saves energy and conserves water by having a dedicated pipeline from a manifold near the hot water cylinder to each tap or fixture in the house. Hot water goes straight where it's needed without sitting round cooling in the big 'feeder' pipes needed to serve multiple outlets. Less energy and water is wasted as hot water arrives faster at the tap. Flexible and non-metallic pipes result in a quiet and efficient plumbing system that doesn't suffer corrosion, scaling or microbiological build-up.

Water and energy are among today's most precious resources. With a MANIFLOW system, you save both. You also enjoy faster hot water, fewer temperature fluctuations when someone turns a tap on elsewhere in the house, and the reassurance of a leak-free system guaranteed for 50 years.

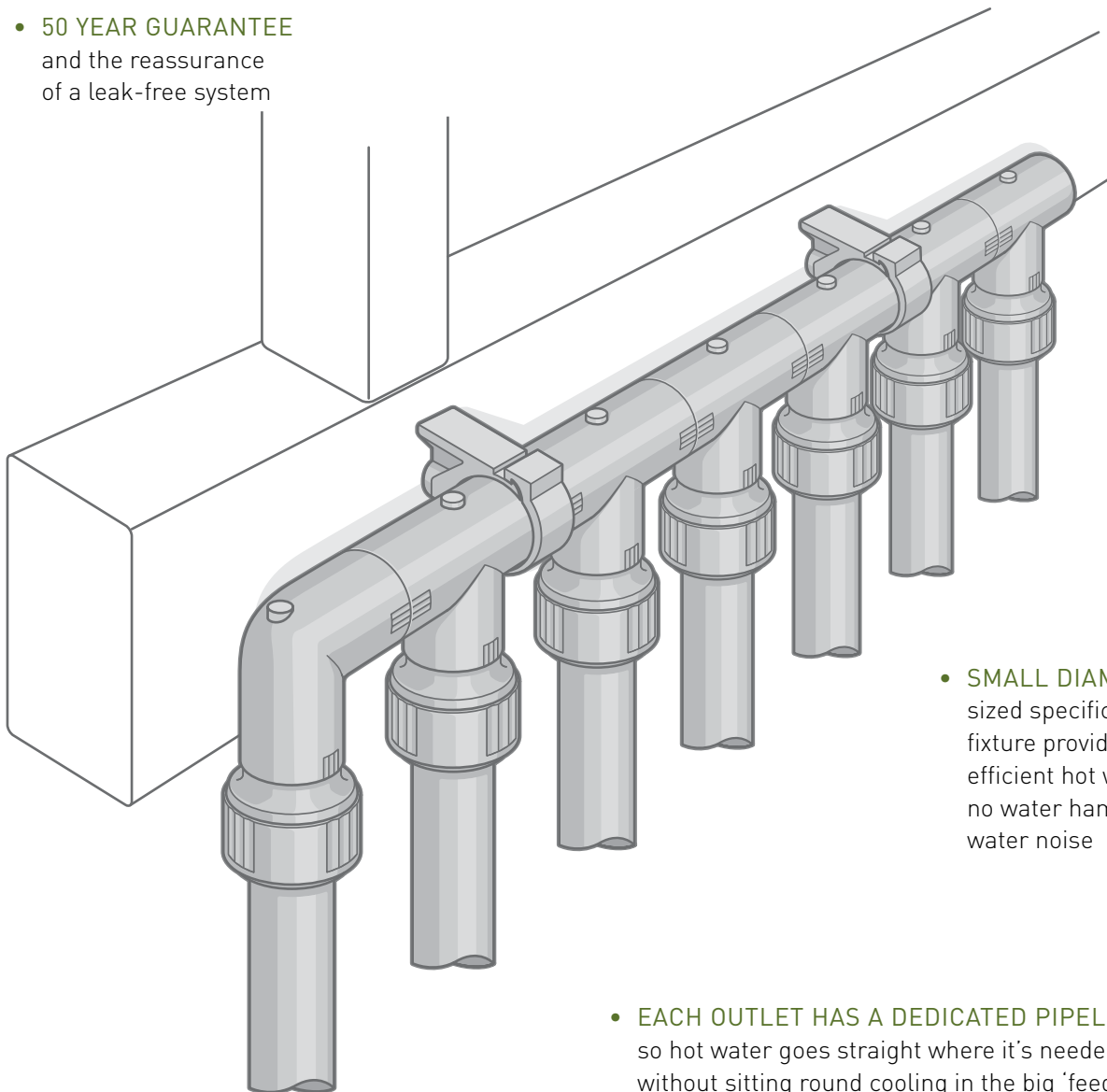
MANIFLOW has a central 'manifold' near the cylinder, with as many branches as you need leading directly to your taps and fixtures. Manifold systems like MANIFLOW are now recognised internationally as the way forward in distributing hot water – for their superior performance and energy and water savings. MANIFLOW is made of flexible Hep<sub>2</sub>O pipes and fittings, a system that offers better cabling ability, less jointing, low wastage and better performance than conventional alternatives.

# MANIFLOW AT A GLANCE

- **CONTINUOUS LINES** to each tap or fixture with no hard-to-get-at joints to leak. It's totally maintenance free

- **POLYBUTYLENE CONSTRUCTION** provides better heat insulation, doesn't support microbiological growth, scale or corrosion even in aggressive water areas

- **50 YEAR GUARANTEE** and the reassurance of a leak-free system



- **SMALL DIAMETER PIPES** sized specifically for each fixture providing a quiet and efficient hot water system with no water hammer or other water noise

- **EACH OUTLET HAS A DEDICATED PIPELINE** so hot water goes straight where it's needed without sitting round cooling in the big 'feeder' pipes needed to serve multiple outlets

- **MANIFOLD SYSTEM** ensures a well-balanced hot water supply providing better showers when other taps are used

# WHY MANIFLOW IS BETTER

## REDUCES WATER WASTAGE

With conventional systems, each time you turn the hot tap on you have to drain off and waste a lot of cooled water before hot water arrives. With MANIFLOW, pipes of a smaller diameter connected almost directly to the cylinder mean much less is wasted before the hot water arrives. You get hot water almost instantaneously and significant savings in water use that add up over time.

## SAVES ENERGY

When you turn the tap off, there's less water remaining in the pipeline to cool off, reducing the amount of energy wasted.

## REDUCES SUDDEN TEMPERATURE CHANGES

The MANIFLOW manifold has a reservoir that helps keep the pressure of your hot water much more consistent. No more "aaaagh!" from the shower when someone fills the tub in the laundry or turns the sink tap on.

## NEEDS NO MAINTENANCE

Flexible, non-metallic MANIFLOW pipes run directly to the fixture. There are none of the hard-to-access joints behind walls or in ceilings where leaks often start.

## GUARANTEED

All MANIFLOW pipes and fittings are guaranteed for 50 years from material or manufacturing defects when installed by licensed plumbers trained and accredited in the MANIFLOW system.

## QUIET

Flexible, small diameter MANIFLOW pipes eliminate water hammer and water noise.

## CLEAN AND SAFE

With MANIFLOW there's no risk of metallic compounds leaching into your water. It doesn't corrode, and doesn't provide the sort of environment where scale or microbes can build up and meets the toughest water quality standards in the world, including AS4020.

## REDUCES FREEZING BURSTS

Flexible polybutylene pipes reduce the chance of pipes bursting from freezing, making MANIFLOW a smart choice in frost-prone areas.

## QUALITY APPROVED

All pipes and fittings used in MANIFLOW are designed, manufactured and approved for performance and reliability to AS/NZS2642. They carry the WaterMark Licence WMKA01963 and are approved for use in all states and territories of Australia and in New Zealand.

# TECHNICAL DETAILS

## GENERAL PROPERTIES

Colour: Grey

Density: 0.937 g/cm<sup>3</sup>

## MECHANICAL PROPERTIES

Tensile strength at yield: 340 Mpa

Modulus of elasticity: 2,700 Mpa

Hardness (Shore): D60

## THERMAL PROPERTIES

Coefficient of expansion:  
1.3 x 14-4 cm/cm/°C

Thermal conductivity: 0.22W/mK

## HYDRAULIC PROPERTIES

Working pressure:  
Class 16 (1,600 kPa)

Hazen-Williams constant (C): 140

Pressure wave propagation velocity:  
198 m/s

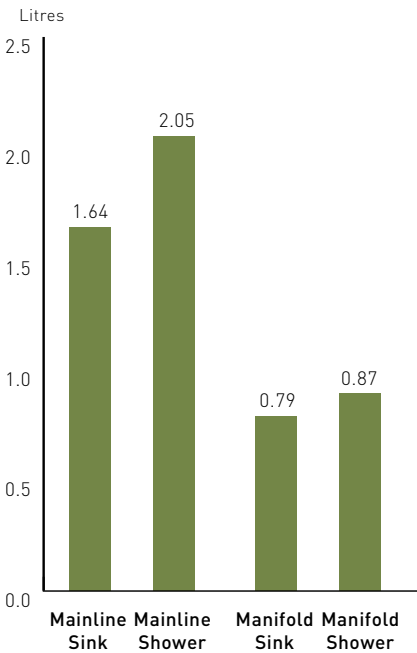
Heat loss characteristics: AS/NZS  
3500 refer Hazen-Williams formula

## DIMENSIONS

Pipe	15mm	18mm	22mm	28mm
Mean OD min	12.6	15.8	22.1	27.9
Mean OD max	12.8	16.0	22.3	28.2
Wall thickness min	1.6	1.6	2.1	2.7
Mean ID	9.3	12.5	17.6	22.2

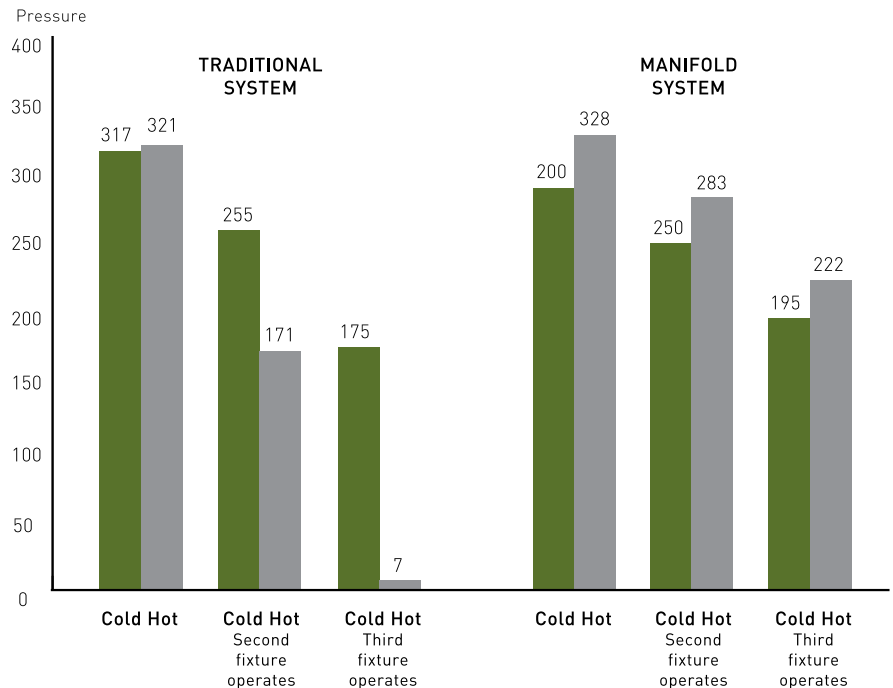
- Temperature and pressure relationship is for operational purposes and not failure pressure.
- Don't use MANIFLOW in continuously circulating hot water loops of above 60°C without expert consultation.
- Always install MANIFLOW to AS/NZS3500 National Plumbing Code standards.
- Keep it shielded or painted to protect it from UV light if you're fitting or storing it externally for extended periods.
- Avoid exposing MANIFLOW to petroleum solvents.
- Insulate MANIFLOW in areas where freezing is possible.

## COMPARISON OF WATER WASTED AWAITING HEATING



Based on a standard tap and AA Rated Shower (9l/min)

## COMPARISON OF PRESSURE AT SHOWER DURING SIMULTANEOUS FLOW



**PLEASE NOTE:** This information is only a summary. Your plumber will need to contact a LEAP supplier for a copy of the Installation Manual which has other important information.

# OTHER LEAP SYSTEMS



## SOLAR WATER HEATING SYSTEM

SOLARGENIUS water heating system harnesses clean, free solar energy to heat water quickly and effectively, even on cloudy days. Solar water heating systems are commonly installed in both new and existing houses, especially when renovating, and are integrated with household electricity and gas supplies. SOLARGENIUS systems are lightweight, easy-to-install solar water heaters that can save households between 40% and 75% on hot water bills.



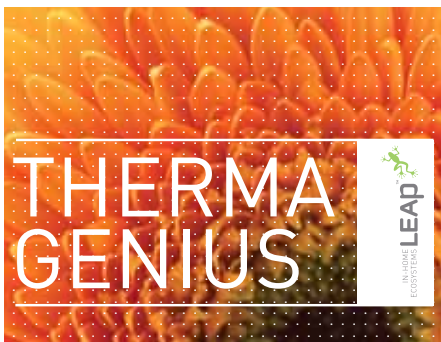
## HOT WATER CONTROL SYSTEM

SAFETEMP is the reliable and convenient way to ensure water temperatures at your ablutionary fixtures, bath, shower and basin are safe. Its unique design keeps tap temperatures at a safe level, using a special cartridge that detects incoming water temperatures and adjusts the blend. The failsafe mechanism shuts off supply if there's no cold water. Its unique design and construction means it's guaranteed for 5 years – currently the only safety valve guaranteed for so long.



## HYDRONIC HEATING SYSTEM

TERRATHERM is a highly effective and unobtrusive way to radiate comfortable, healthy warmth through your home. TERRATHERM pipes in heat via hot water circulated through flexible underfloor pipes and radiators where required. The system delivers warmth that starts at ground level then slowly rises. TERRATHERM is built-in and its zone-by-zone controls also let you manage your home heating more efficiently, ensuring heat goes where and when it's needed.



## HEAT PUMP WATER HEATING SYSTEM

THERMAGENIUS extracts renewable energy stored in the air to heat water. THERMAGENIUS is not dependent on weather and operates throughout the year from inside or outside your home. With high efficiencies, payback on a THERMAGENIUS can be very quick. Unobtrusive, easy to install and cheap to run, these units are a great way to provide hot water for the home. The only energy used is electricity to power the pumps but delivering 3 or 4 times as much energy.



## HOME FIRE SPRINKLER SYSTEM

BLAZESTOP is an affordable sprinkler system linked to a domestic water supply, putting the reassurance of sprinkler protection within reach of private homeowners. Designed especially for the home environment, BLAZESTOP uses sprinkler heads concealed in the ceiling. Flexible, concealed piping makes retrofitting into homes easy and cost-effective. Made from durable polybutylene, it isn't affected by scaling, corrosion, or microbiological growth and doesn't transmit noise.



## WASTEWATER SYSTEM

FRESHFLOW combines the advanced Hepv0 self-sealing waterless waste valve with easy to install flexible HepFlex Waste piping. This innovative system replaces space-hungry S or U traps with a hygienic valve that provides an effective and reliable barrier against sewer gases escaping into a building. As well as its space-saving advantages, FRESHFLOW leaves no standing reservoir of water which can stagnate and lead to bacterial or fungal growth.

FOR MORE INFORMATION ABOUT MANIFLOW CALL

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