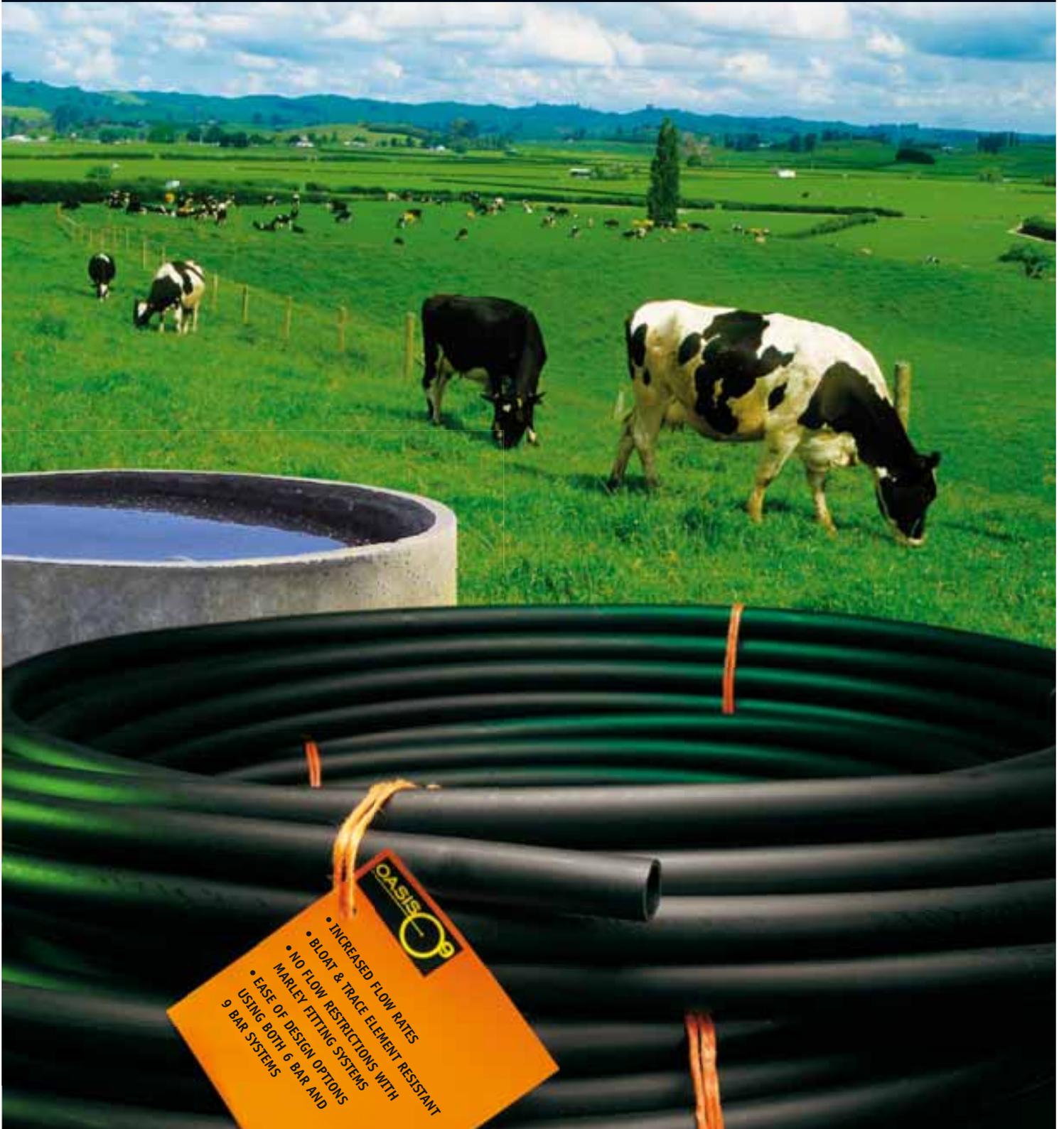


# Marley Oasis 6 & 9 Bar

Works best under pressure



Rural Solutions

**MARLEY**

# OASIS

## 6 & 9 BAR PIPE SYSTEMS



## Advantages of Marley Oasis

### Performance

Oasis has been specifically engineered by Marley using the very latest materials and technology to meet the high demands of modern large herd farming where breakdowns and average performance is not acceptable.

### Fitting Compatibility

Both Oasis 6 bar and 9 bar are compatible with Marley's advanced range of fitting systems which offer a full range of options plus one fitting for both pressure ratings. Whilst Oasis 6 bar and 9 bar can be used with all OD fittings currently sold it has been engineered to provide the best performance when used with Marley's range of fitting systems.

### Improved Flow Rates

Marley Oasis 6 bar when compared to LDPE\* has between 38% and 132% better flow rates depending on pipe dimension (refer table). Oasis 9 bar when compared with other 9 bar rated pipe has between 8% and 18% better flow rates (refer table).

### Superior Fitting Systems with Less Restrictions

Marley's fitting systems offer less flow restrictions and a more secure fit than internal LDPE\* fittings. Whilst Oasis is compatible with any Metric fittings, Marley recommend that for the best performance Oasis 6 bar and 9 bar be used with Marley's range of fitting systems.

### Higher Pressure Rating

Marley Oasis has a higher pressure rating than LDPE\*. This allows Oasis to be used in a wider range of applications, especially with large dairy herds where higher flow and pressure ratings are required.

### Bloat Trace Element Resistance

Marley Oasis is suitable for use with active bloat treatments in the water system in accordance with ASTM.D.1693 condition C.

### Ease of Design Option Using Both Oasis 6 Bar & 9 Bar Systems

Marley Oasis has been designed to provide the same flow rates with both 6 bar and 9 bar. This enables a simpler design process when combining both pressure ratings in one water supply system.

## Flow Rate Comparisons

TABLE 1 - Oasis 6 bar

63mm OASIS delivers	1800 Lt/hr	(38%) extra over 50mm LDPE
50mm OASIS delivers	1290 Lt/hr	(63%) extra over 40mm LDPE
40mm OASIS delivers	540 Lt/hr	(42%) extra over 32mm LDPE
32mm OASIS delivers	280 Lt/hr	(42%) extra over 25mm LDPE
25mm OASIS delivers	160 Lt/hr	(56%) extra over 20mm LDPE
20mm OASIS delivers	130 Lt/hr	(132%) extra over 15mm LDPE

TABLE 2 - Oasis 9 bar

63mm OASIS delivers	720 Lt/hr	(13%) extra over 63mm 9 Ag Pipe
50mm OASIS delivers	360 Lt/hr	(12%) extra over 50mm 9 Ag Pipe
40mm OASIS delivers	215 Lt/hr	(13%) extra over 40mm 9 Ag Pipe
32mm OASIS delivers	145 Lt/hr	(18%) extra over 32mm 9 Ag Pipe
25mm OASIS delivers	36 Lt/hr	(8%) extra over 25mm 9 Ag Pipe
20mm OASIS delivers	50 Lt/hr	(16%) extra over 20mm 9 Ag Pipe

Note: Figures above based on Hydraulic Gradient of 1 metre/100 metres  
\*LDPE to NZ Standard 7601



## Dimensions and Pressure Ratings

TABLE 3 - Oasis 6 bar

OD (mm)	Maximum Pressure Rating (bar)	Coil Sizes (m)
25	9	50,100,200
32	6	50,100,200
40	6	50,100,200
50	6	50,100,200
63	6	50,100,200

TABLE 4 - Oasis 9 bar

OD (mm)	Maximum Pressure Rating (bar)	Coil Sizes (m)
25	9	50,100,200
32	9	50,100,200
40	9	50,100,200
50	9	50,100,200
63	9	50,100,200

Note: 1 bar = 14.2 PSI

## Design Information

### Pipe Selection

Oasis is a specialty pipe designed to supply water in a farm conversion or farm planning situation. The first consideration in planning a water supply is to decide: (a) Where the pipeline will be situated. (b) How much water will be required for the total 24 hour period.

Table 5 outlines the amount of water you will need and allows for wastage and hot weather evaporation.

TABLE 5 - Approximate 24 hour water consumption rates\*

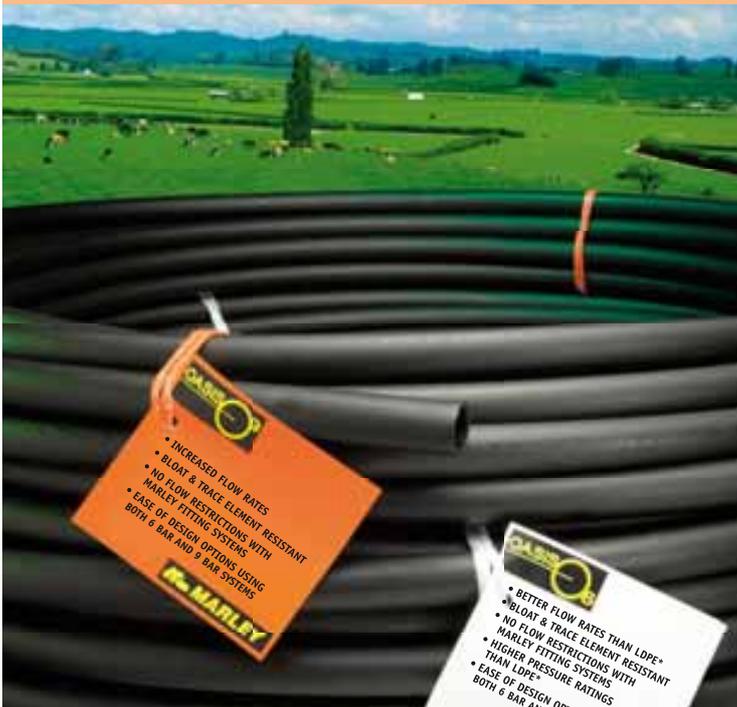
One person		= 182 litres/24 hours
One milking cow		= 140 litres/24 hours
One dry cow or steer		= 45 litres/24 hours
One horse		= 54 litres/24 hours
One ewe in milk		= 15 litres/24 hours
One dry sheep		= 7 litres/24 hours

\*Water consumption rates allow for all general household water consumption and include water used for farm/milk shed cleaning.

To select the correct diameter of pipe for a water system, the following points must be established:

1. Volume of water required at peak period.
2. Length of pipe required.
3. In the case of a gravity supply system the static pressure that is required. This can be determined by establishing the height of the water source.
4. In the case of a pumped system the maximum pumped pressure and flow rate will need to be determined.

\*Maximum pressure in the pipe must not exceed working pressure.



## Installation Instructions

### Expansion and Contraction

Polyethylene has a relatively high co-efficient of expansion, expanding 2mm per lineal metre of pipe with every 10°C increase in pipe material temperature. In above ground installations where the pipe is not fixed and allowed to 'snake', the expansion will be taken up by the flexibility of the pipeline system. When Polyethylene pipe is buried no allowance for expansion and contraction is normally required if the pipeline is permitted to return to normal operating temperature prior to final connection and backfilling.

### Maximum Flow:

The flow through Marley Oasis will in normal circumstances remain constant throughout the life of the pipeline.

### Corrosion Resistance:

Marley Oasis is resistant to most forms of chemical attack. It is unaffected by aggressive water or ground conditions and is not subject to electrolytic corrosion.

However, where aggressive chemicals are to be conveyed the suitability for use should be checked against the chemical resistance tables in the Marley Pressure Pipelines Manual.

### Water Hammer:

Sudden closure or opening of valves in pipelines results in a pressure surge (or 'water hammer'). Valves should therefore be opened and closed slowly.

### Above Ground Pipelines:

Where Marley Oasis is laid above ground, it is essential to ensure that the pipes are adequately protected from damage by stock and vehicles. Keep pipes away from sharp edges where abrasive action could occur, due to expansion and contraction of pipe, particularly during hot weather. Ensure the pipe has freedom of movement, and if secured to fences the method of clipping should be such that the pipe can move freely when necessary.

It is recommended that where possible, large bore pipe lines are protected from direct sunlight and where ever possible are buried.

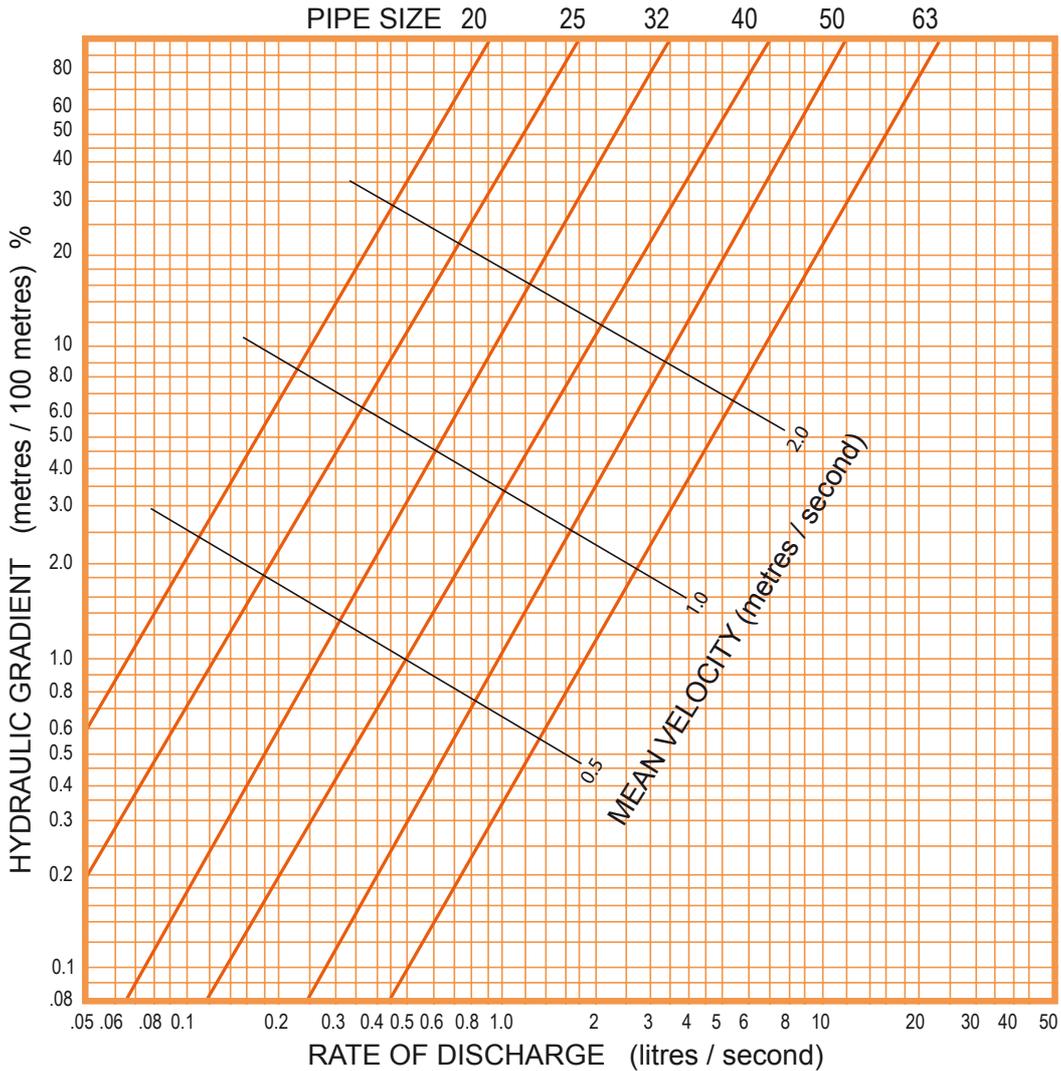
### Buried Pipelines:

Below ground installations should have a minimum cover of 300mm and a greater cover in trafficked areas. Bedding material must not contain any sharp objects such as stones as these can cause indentations and scoring of the pipe. Care should be taken to remove all levelling pegs or temporary packing before the commencement of pipe laying.

### Ploughing In:

Marley Oasis can be ploughed directly into the ground using a pipe laying plough. The pipe must be stationary in relation to the surrounding soil and special care should be taken that the pipe is not subjected to excessive tension during or after the laying operation. The pipe should be inspected to ensure that it is not being scored by the machine. Soils with sharp stones are considered unsuitable for ploughing in techniques.

TABLE 6 - Flowchart



**Handling and Storage:**

Marley Oasis is tough, flexible and in general resistant to impact damage. However, Oasis should not be dropped, dragged or subjected to rough treatment and particular care should be taken when loading and unloading. Oasis, and all polyethylene pipes are susceptible to scoring from sharp edges and are subject to distortion under load, particularly at elevated temperatures.

**Cutting:**

Marley Oasis can be cut with a hacksaw, a fine toothed woodsaw or pipe cutter. Burrs and swarf should be removed with sand paper, fine file or sharp knife.

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**AUCKLAND**

Mahia Road, Manurewa, Private Bag 802 Manurewa  
 Direct Fax 09 279 2778 Freefax 0800 652 621  
 Head Office: Telephone 09 279 2799 Fax 09 279 2798  
**Customer services:** 0800 222 922

**CHRISTCHURCH**

Shands Road, Hornby, PO Box 16233 Christchurch  
**Customer services:** 0800 222 922

For a quotation, installation or more information call free

For further information: **0800 MARLEY** (0800 627 539) [www.marley.co.nz](http://www.marley.co.nz). ©2007

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