

# Supaduct® Rural

Technical Guide PKS1.1

Supaduct Rural® is a lightweight and durable culvert pipe system that is manufactured from reprocessed raw HDPE (High Density Polyethylene) material.



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## Applications

Lightweight and durable culvert pipe system for rural purposes.

## Product Attributes

Lightweight and Durable  
Manufactured using reprocessed raw HDPE and recycled recovery PE plastic  
Cost effective  
Easy to Install

## Approvals/Standards

NZ made and supported locally (technical, marketing and service)

## Quality

ISO9001:2015 Quality Management

# Supaduct® Rural

Supaduct® Rural is a lightweight and durable culvert pipe system that is manufactured from reprocessed raw HDPE (High Density Polyethylene) material. PKS Civil Supaduct® Rural culvert is proudly manufactured in New Zealand.

## Recycled Material

- Supaduct® Rural is manufactured using reprocessed raw HDPE material and recycled recovery PE plastics.

## Why choose Supaduct® Rural?

Supaduct® Rural is a game changing and innovative product that will help save time and money in more ways than one. The main reasons to choose Supaduct® Rural are:

- Cost effective
- Easy to install
- Long life
- Rubber Ring male to female connection optional
- Increased flow rates due to smooth inner
- Chemically resistant
- Physically tough and can handle "loads, knocks and drops"
- ID based pipe range – we don't sell you the outside measurement

## Supaduct® Rural Adaptability

Due to the weldable nature and structural design of Supaduct® Rural it means that there are many ways the pipe can be fabricated to help achieve the desired end result. Some of those ways are:

- Fabricating bends or 'T' pieces to allow for curved culverts or even intersections
- Pipes are easily perforated for drainage or dewatering applications
- Pipes are easily cut to length with jigsaws, chainsaw or reciprocating saws.

*\*Please note the pipe you wish to cut is at the end of the pipeline as you will not be able to join anything to this end once cut.*

- Comes in lightweight 5800mm lengths, but can be manufactured shorter upon request

## Manufacturing Process

- Supaduct® Rural is manufactured in Christchurch, New Zealand by skilled machine operators and fabricators.
- The product is manufactured in accordance with a Quality Management System (QMS) certified by SAI Global to comply with the requirements of ISO 9001:2015 – Quality Management Systems – Requirements.



FIG. 1 Supaduct® Rural manufacturing process.

**TABLE 1** Supaduct® Rural - mm

DN	Product Code	SN4	+/- 50mm	+/- 10mm		kg	
		SN Rating	Length	ID	Pipe OD	Socket OD	Weight
DN500	PK500SUPA.SN4	SN4	5800	500	574	600	96
DN600	PK600SUPA.SN4	SN4	5800	600	674	700	114
DN700	PK700SUPA.SN4	SN4	5800	700	794	800	160
DN800	PK800SUPA.SN4	SN4	5800	800	894	900	182
DN900	PK900SUPA.SN4	SN4	5800	900	1020	1000	225
DN1000	PK1000SUPA.SN4	SN4	5800	1000	1120	1100	250
DN1100	PK1100SUPA.SN4	SN4	5800	1100	1226	1200	331
DN1200	PK1200SUPA.SN4	SN4	5800	1200	1366	1300	457
DN1400	PK1400SUPA.SN4	SN4	5800	1400	1566	1520	520
DN1500	PK1500SUPA.SN4	SN4	5800	1500	1670	1620	583
DN1660	PK1660SUPA.SN4	SN4	5800	1660	1898	1788	660
DN1800	PK1800SUPA.SN4	SN4	5800	1800	2038	1928	713
DN2000	PK2000SUPA.SN4	SN4	5800	2000	2250	2138	1088
DN2500	PK2500SUPA.SN4	SN4	5800	2500	2778	2652	1662

\* Rubber rings available as extra, for larger diameters or special design assistance please contact us directly.

### Supaduct® Rural Installation Guideline

The Supaduct® Rural pipes all have a minimum ring stiffness strength of SN4. The pipes are designed to handle varying vehicle loads and soil cover heights for everyday use on farms and temporary civil works.

The Supaduct® Rural pipes can handle the following settings:

- Light vehicle loading, such as motorbikes, requires a minimum of 300mm of compacted cover.
- Standard vehicle loading, such as Cars, 4WD Trucks and Light Tractor Mowers, requires a minimum of 600mm of compacted cover.
- Heavy vehicle loading, such as Tractors and Excavators, requires a minimum of 1,100mm of compacted cover.

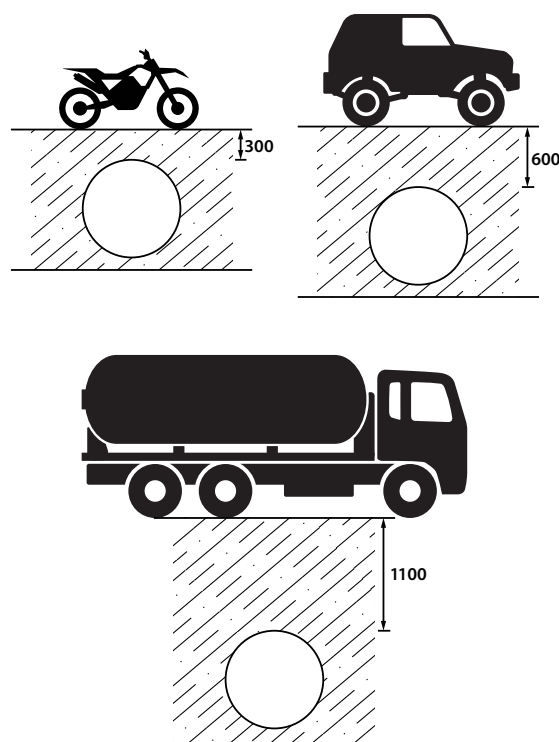
### Determining the Trench Width and Compaction Details

When installing the Supaduct® Rural pipes it is important to allow enough room either side of the pipe to compact the soil sufficiently in 300mm layers, and the table below is to be used as a minimum guideline.

### Pipe Trench Width

The main reasons flexible pipes require a wide trench is to ensure compaction equipment can fit next to the pipe to get well compacted soil to help the pipe handle the load being put onto it by any vehicles.

Pipe Size Range	Gap Either Side of Pipe
DN500 - DN800	300mm
DN900 - DN1500	350mm
>DN1500	DN x 0.25



**FIG. 2** Supaduct® Rural loading guidelines

\*For specific loading scenarios we can provide design and installation guidelines

**Technical - Steven Kallai - ph 021 280 5083**  
**Sales NI - Neil Rodger - ph 027 562 7566**  
**Sales SI & Business Manager - Andrew Howell - ph 022 603 1765**

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