HUMES

TITAN

Stormwater

TITAN®

Radial Press Concrete Pipe

April 2025

PRODUCT FEATURES AND BENEFITS

Integrated rubber ring	• Efficient installation • Consistent jointing
Modern technology	• Improved lead time
Sustainable design	• Reduced carbon impact • Enhanced freight and handling efficiency • 100-year design life (normal environments)

APPROVAL/STANDARDS

AS/NZS 4058:2007 "Precast Concrete Pipes"

QUALITY

ISO 9001: 2015 "Quality Management Standards"

Quality Designed to
100 Years Service Life

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Humes **TITAN® Radial Press (RP) concrete pipe** is our latest innovation in concrete technology, manufactured to AS/NZS 4058:2007.

TITAN® RP pipes are a first of its kind for concrete pipe production in New Zealand, made with an integrated rubber ring during the manufacturing process.

BENEFITS:

- Efficient installation and consistent jointing – opportunity to save time and effort during construction
- Improved lead times – to help you to stay on track with your project
- Reduce carbon impact – RP pipe contains low-carbon 'EcoSure' GP cement
- Enhanced freight and handling efficiency - improved pipe design reducing product weight

INSTALLATION

Refer to "AS/NZS 3725:2007 - Design for Installation of Buried Concrete Pipe" for pipe installation details and procedures. Concrete pipes laid in accordance with AS/NZS 3725:2007 are expected to deliver a service life in excess of 100 years. Any deviation to AS/NZS 3725:2007 may compromise the service life of the concrete pipes. The "CPAA concrete pipe laying guide" should also be used to accompany the AS/NZS standards for any installer.

CONCRETE DENSITY

A density of 2500kg/m^3 has been used in all calculations.

Table 1 – Concrete Titan RP Pipe

BARREL INTERNAL DIA.	EXTERNAL DIA.	COLLAR EXTERNAL DIA.	COLLAR EXTERNAL LENGTH	BARREL EFFECTIVE LENGTH	OVERALL LENGTH	WALL THICKNESS	MIN JOINT GAP	MAX JOINT GAP	MASS (kg)	LIFTING PIN (Tonne)	HUMES ITEM CODES		
A	B	C	D	E	F	T	X	X			Class 2	Class 4	
525	625	730	251	2500	2590	50	7	11	641	–	80120799	80120800	
600	710	820	257	2500	2590	55	7	11	796	–	80120801	80120802	
675	795	930	302	2500	2600	60	9	14	991	1.3 (x2)	80120803	80120804	
750	880	1030	322	2500	2600	65	9	14	1163	1.3 (x2)	80120805	80120806	
825	965	1120	329	2500	2600	70	9	14	1407	1.3 (x2)	80120807	80120808	
900	1050	1230	364	2500	2600	75	9	14	1668	2.5 (x2)	80120809	80120810	
1050	1216	1390	355	2500	2600	83	9	14	2101	2.5 (x2)	80120811	80120812	
1200	1376	1540	342	2500	2600	88	9	14	2490	2.5 (x2)	80120813	80120814	Subject to availability
1350	1540	1720	374	2500	2625	95	12	17	3030	2.5 (x2)	80120815	80120816	Subject to availability
1500	1710	1880	360	2500	2625	105	12	17	3650	5 (x2)	80120817	80120818	Subject to availability
1650	1880	2050	360	2500	2625	115	12	17	4354	5 (x2)	80120819	80120820	Subject to availability

Notes

RP Pipe available in **Class 2 and 4 only**
Mass calculation based on a nominal density of 2500 kg/m3
X = recommended joint gap range after laying

All dimension are in millimetres, unless noted otherwise
For strength Class 6 or higher, refer to the **VT and spun pipe range**
For marine environments see the **VT pipe range**

Fig 1 – RP Pipe Geometry

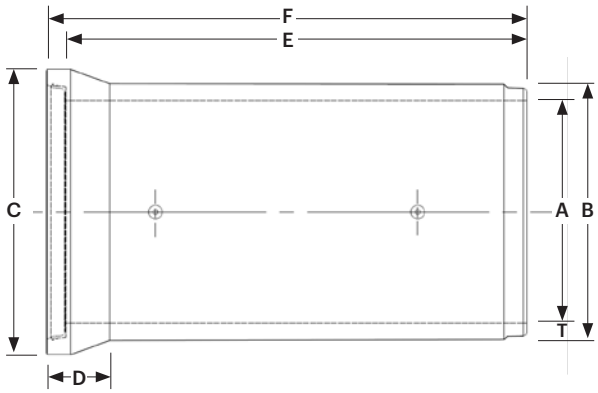
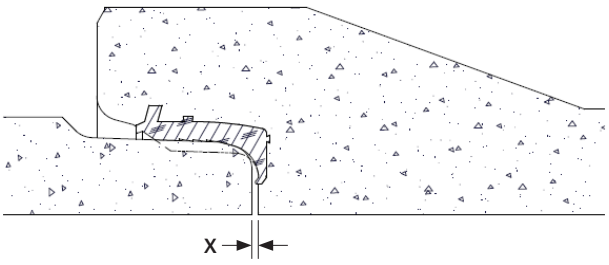


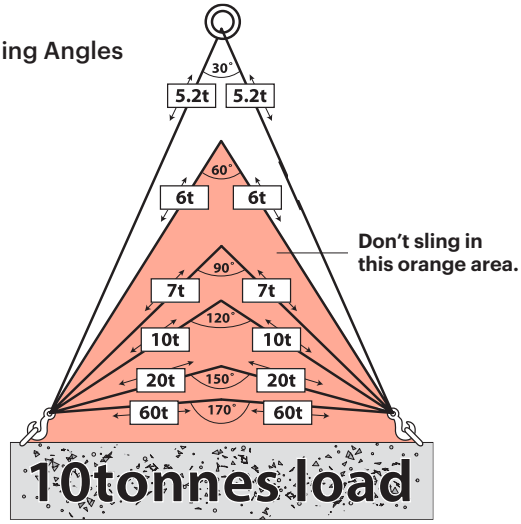
Fig 2 – Pipe Joint/Gap



THE LONGER THE SLINGS, THE LOWER THE LOAD ON ANCHORS.

For example, at an included angle of 170° the load on each sling is six times the weight of the actual load being lifted.

Fig 3 – Sling Angles

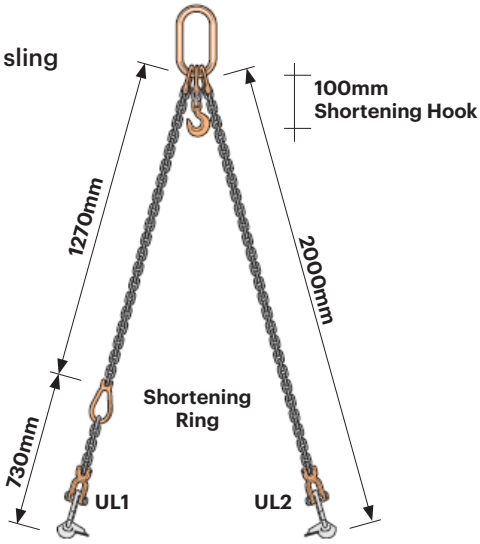


NB – Never make sling length shorter than the distance between two anchors.

THE SLING

The sling is made up as a two-legged chain sling with 2 Swiftlift Lifting Eyes and a shortening hook to enable one chain leg to be shortened. The sling is constructed that either a symmetrical or asymmetrical lifting sling can be made.

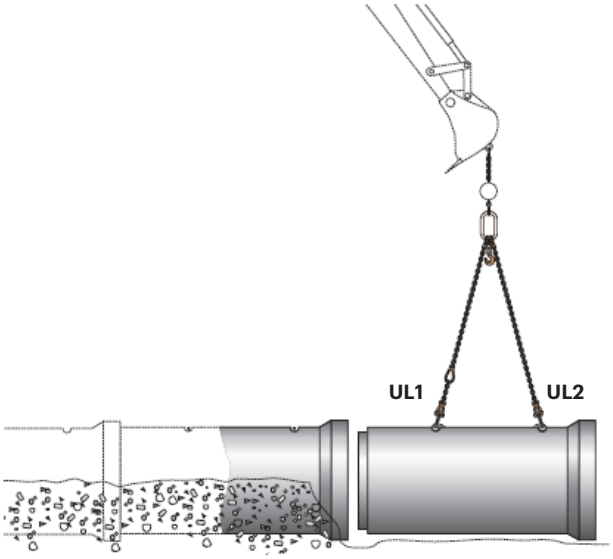
Fig 4 – chain sling



TRANSPORT, LOWERING AND PLACING PIPE IN TRENCH

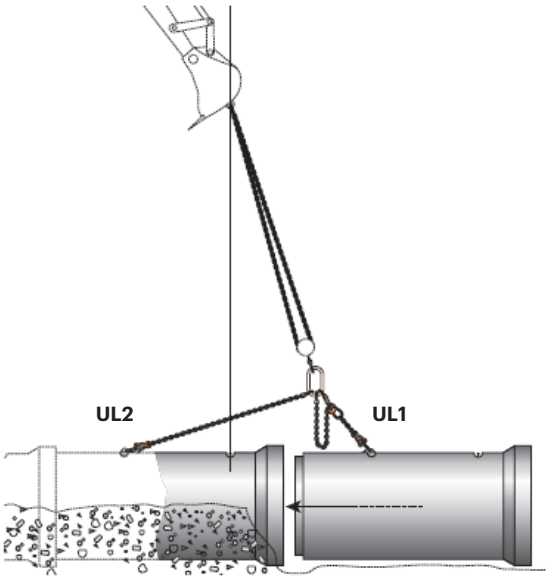
The pipes are handled with the sling in its symmetrical mode and are lowered into the trench close to the last pipe laid.

Fig 5 – Lifting clutch operation



JOINTING THE PIPES

The crane hook is lowered so that both slings become slack. This enables the sling to UL1 to be shortened by placing the shortening ring onto the shortening hook. UL2 is then disconnected from the pipe to be jointed and attached to the furthest anchor on the previously laid pipe.



Specifications and Jointing Instructions for Integrated Rubber Ring Pipes

ANCHOR-3000

The integrated rubber ring Anchor-3000 is manufactured into the pipe. For standard and deep sockets, the Anchor-3000 offers special advantages in terms of durability and long-term behaviour of the pipe joint.

ADVANTAGES

The Anchor-3000 rubber ring is securely fixed and cast into the pipe socket, thus forming a single constructional unit with the concrete pipe. This protects the rubber ring from damage or being left out during installation.

- Consistent joint and increased joint tightness by controlled (radial circumferentially uniform) compression of the rubber ring
- Increased installation efficiency and controlled deflection of the pipes
- Resistant against shear loads during the installation process by the support of the pipe collar end and the optimised elastomer of the ring material
- Root protection of the rubber ring in the concrete
- Optimised relaxation of restoring forces

The Anchor-3000 rubber rings are subject to permanent third-party monitoring by authorized institutions. They correspond to the requirements of EN 1916, EN 681-1, QR 4060 (FBS quality guideline) and other applicable quality standards.

MATERIAL

Anchor-3000 rubber rings are fabricated from Ethylene-Propylene- Diene rubber (EPDM). The use of this material has proven its worth in rainwater and wastewater applications due to the excellent sealing characteristics.

FIELD ASSEMBLY

The necessary non-toxic, water-soluble lubricant must be used when jointing the pipes together. We recommend 'Easy Slip' which can be purchased from a Humes sales branch. It is applied liberally by hand to the spigot of the concrete pipe, starting at the radius. Observe AS/NZS 3725:2007 when laying the pipes.

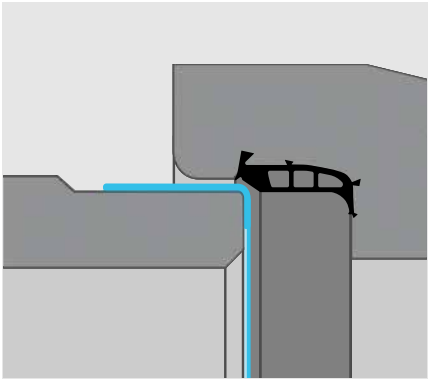


Fig 6 – Apply lubricant when jointing

LUBRICANT PHYSICAL PROPERTIES

Colour - light golden.
Specific gravity - 0.9
Flashpoint - non-flammable.
Viscosity - gel like.
Toxicity - non-toxic.
D.G. Classification - not classified as D.G. under the HSNO Act 1996.
Shelf Life - 1 year in sealed containers.

LUBRICANT PACKAGING

1,2,4 and 20 litres.
Lubricant Material Safety Data Sheet for handling and first aid information is available upon request.

STEP 1
Check the rubber ring in the collar is clear of stones, debris and free of damage. Ensure the spigot is clear of mud, dirt and stones. Any grinding residue can be wiped off with a gloved hand.


STEP 2
Take a handful of the Easy-Slip lubricant, and apply liberally to the spigot of the pipe. Ensure the rounded front corner of the spigot is fully lubricated, and the lubricant goes back **5-6cm** up the spigot profile. Remove any excess clumps of lubricant.

STEP 3
Position the pipe in front of the receiving collar, and slowly bring in together. The pipe should self-centre into the collar once it comes into contact with the rubber ring.

STEP 4
Firmly press the pipe in until it meets firm resistance. There will be a gap between the face of the collar, and the edge of the spigot profile on the external surface of the pipe (for a straight pipeline).

STEP 5
The internal joint gap between pipe barrels can be checked by measuring two distances using a tape measure.

1. **Distance 1** - Push the end of a tape measure against the collar of the receiving pipe and record the distance to the collar of the incoming pipe;


2. **Distance 2** - Pull the tape measure back against the spigot end of the incoming pipe and record the distance to the collar of the incoming pipe.


The difference between Distances 1 and 2 is the as-built internal joint gap between the two pipes after installation. Refer to “MIN JOINT GAP” & “MAX JOINT GAP” in Table 1 for the required joint gap distance.

For further technical details or advice freephone 0800 502 112 or visit www.humes.co.nz