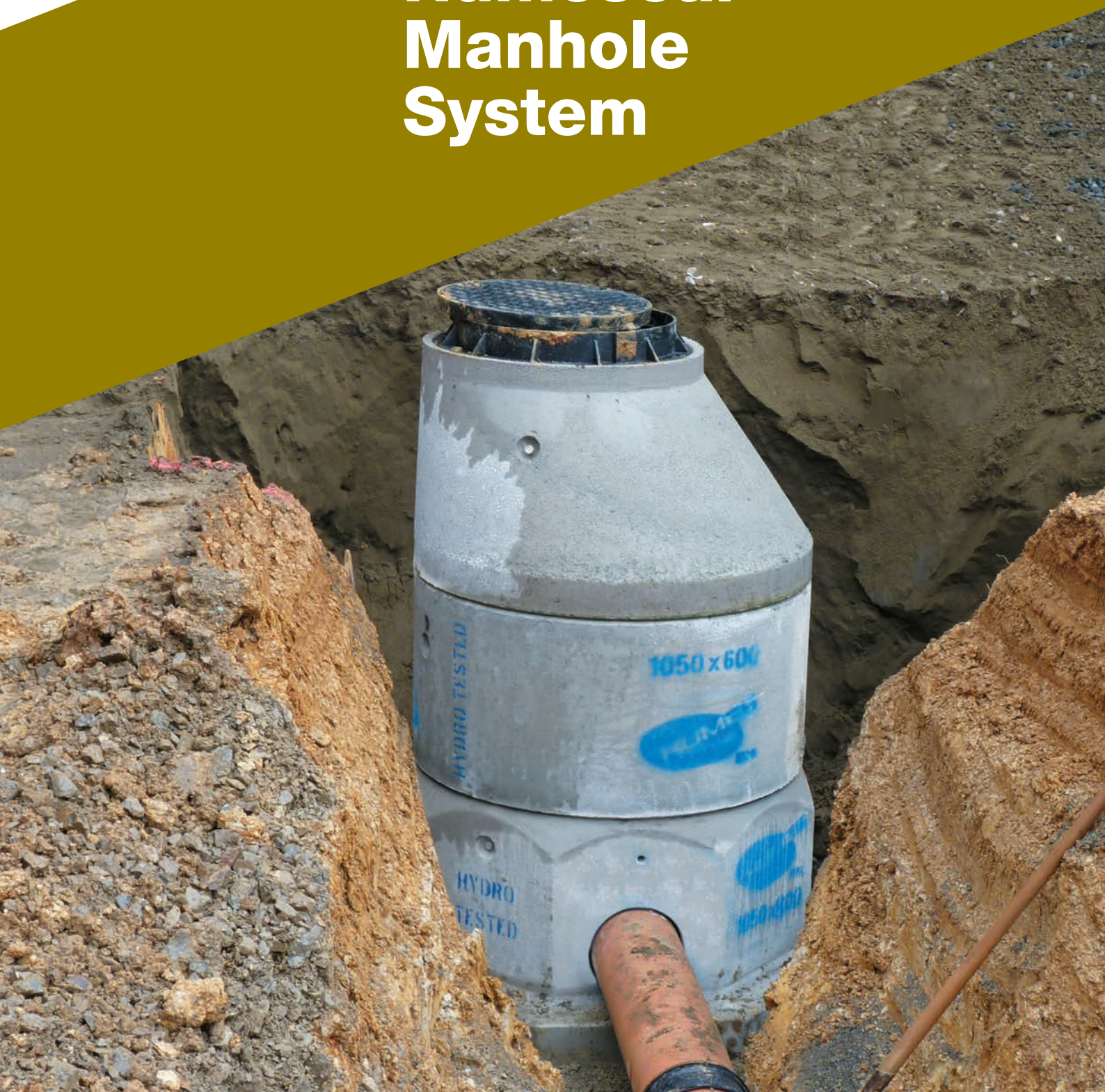




Humeseal Manhole System



Rubber ring jointed fully
sealed manhole system
✓ Watercare approved

0800 502 112
www.humes.co.nz

Introduction

Approved by Watercare, the Humeseal sealed manhole system is the future of sewer networks in New Zealand. The Humeseal system is manufactured using state of the art vibration technology to give unrivalled strength and consistency. The pre-lubricated rubber rings and push fit plastic encapsulated steps ensure the system is leak free, quick and easy to install, and an all-round superior alternative to traditional manhole systems in the market.

Features	Benefits for Installer	Benefits for Specifiers and Asset Owners
Rubber Ring Jointed fully sealed system hydrostatically tested AS4198 standard	No joint sealant which saves time and hassle	Fully sealed flexible joints which can accommodate ground movements Guarantees a water tight seal when installed correctly
Rubber ring jointed risers and lids	Flexibility to easily alter heights during construction Time saving on installation	
Rubber ring jointed rebated conical lid	Rebate enables easy installation of the streetware	Removes the joint between the riser and lid, which in the traditional system is a potential infiltration point
Push fit plastic encapsulated steps	Time saving as steps are 'knock in' and do not need to be bolted and epoxied	No step holes penetrating the outside wall, eliminating a potential area for infiltration
Factory made benching with 50 MPa concrete for sewer applications in 800 octagonal base	Time saving on benching No need for earthenware lining Cost saving on materials	Improved hydraulics and assurance the benching is made from strong and durable concrete
Manufactured to AS4198 for structural performance	Assurance of durability, strength and structural performance	

Humeseal Flanged Manhole Bases

The Humeseal 1050 manhole system offers standard 600, 900 and 1200mm high circular rubber ring jointed flanged manhole bases. Suitable for both sewer and stormwater applications, the circular bases are supplied without benching. 800mm benched and 1100mm un-benched octagonal flanged bases with and without soft spots are also available.

600, 900 and 1200 Circular un-benched bases

The 600, 900 and 1200 high standard un-benched circular bases have 110mm thick walls and 150mm flanged bases to resist flotation. These bases require in situ benching and cut or core-drilled for pipe entry to suit any pipe configuration.

800 Octagonal benched base

The 800mm short base is ideal for sewer applications, with factory made 50MPa concrete benching and soft spots to accommodate pipes with an outside diameter of 160mm. The benching has a built-in fall of 50mm as per the requirement of the Land Development standard NZS4404:2010. With formed straight through, 45° and 90° channels, there is no need for messy and time consuming onsite benching. The unused channels can be filled in (as shown).

1100 Octagonal un-benched base

The 1100mm high un-benched base has 4 soft spots at 90°, which can accommodate pipe diameters up to 375mm. This base is also available without soft spots (Item code: 32610). In situ benching is required to suit the specific pipe configuration.



Humeseal Flanged Manhole Bases

Item codes	Type of base	Benched	Internal diameter (mm)	Effective Height (mm)	Width (mm)	Wall thickness (mm)	Base thickness (mm)	Soft spot mm / Location	Mass (kg)	Lifting clutches required (tons)
02890	600 Circular	No	1050	500	1550	110	150	None	1218	2.5
02891	900 Circular	No	1050	800	1550	110	150	None	1519	2.5
02892	1200 Circular	No	1050	1100	1550	110	150	None	1819	2.5
32630	800 Octagonal	Yes	1050	650	1580	110	150	200/45° & 90°	1816	2.5
32615	1100 Octagonal	No	1050	950	1580	110	150	500/90°	1720	2.5

Humeseal Manhole Risers

The Humeseal 1050 manhole system offers 300, 600, 900 and 1200mm high rubber ring jointed risers, common to both sewer and stormwater systems. The self lubricated rubber rings enable easy jointing and a watertight seal, whilst providing the flexibility to increase or decrease manhole heights during construction.

Humeseal Manhole Risers

Item code	Effective riser height (mm)	Internal diameter (mm)	Width (mm)	Wall thickness (mm)	Mass (kg)	Lifting clutches required (tons)	No of steps in the riser
32510	300	1050	1270	110	292	2.5	1
32515	600	1050	1270	110	592	2.5	2
32520	900	1050	1270	110	893	2.5	3
32525	1200	1050	1270	110	1193	2.5	4



Humeseal Manhole Lids

Flat lids

Designed for both non traffic and HN-HO-72 loading, both Humeseal Flat lids are manufactured to NZS 3109:1997 precast standard.

Conical lids

Humeseal conical lids have been tested for structural performance as per AS4198:1994 standard, suitable for HN-HO-72 loading. The conical lid can provide a complete manhole option when combined with a base. The entry point aligns with the wall of the manhole to allow entry directly down the step face of the risers. The conical profile reduces from 1050 to a 610mm opening and streetware can be directly epoxied in to the rebated top of the conical lid. Standard adjustment rings are also available for finer height adjustments.

A special adjustment ring is also available to reduce the 610mm opening to a 530mm opening. Item code: 32640



Humeseal Manhole Lids

Lid type	Item code	Diameter (mm)	Thickness / Height (mm)	Mass (kg)	Live Load	Opening (mm)
Flat lid	32650	1050	200 (t)	430	HN-HO-72	610
Flat lid	32651	1050	100 (t)	280	Non traffic loading	610
Conical lid	32550	1050	600 (h)	643	HN-HO-72	610

Humeseal Manhole Accessories

Sewer manhole connections

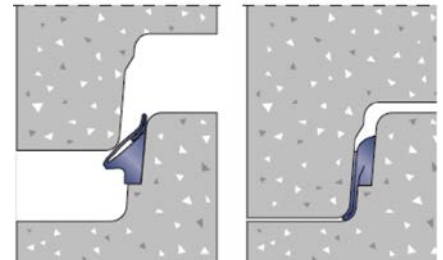
Connections with C-Tech watertight rubber 'push-in seals' can be either supplied separately for fitting in situ or factory fitted to core drilled holes on request. The seal is slightly compressed when fitted, giving it a 'pre-load' against the core drilled hole - providing a resilient, high quality seal, able to withstand a high shear forces.



Rubber rings

The Forsheda pre-lubricated sliding rubber ring provides for easy jointing (and disassembly) and a water tight seal for manhole bases, risers and lids. During installation, the thin sliding mantle slides over the body of the seal. This design permits installation with very low force, as there is no friction between rubber and concrete. The special design of the joint and seal make the system easy to centre during jointing. Forsheda rings meet SS-EN ISO 9001:2000 and bear the British Standard 'Kitemark' CE-marking.

Item code: 72844



Plastic encapsulated steps

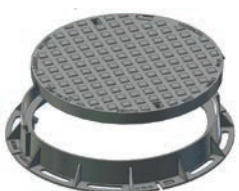

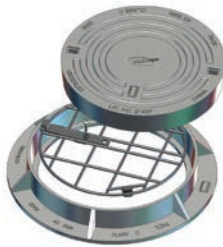
Caswick high grip manhole steps are made from HDPE coated structural carbon steel to European Standard EN13101. Installation is quick and easy as the steps are push fitted into 'cast-in inserts' that do not penetrate the outside wall, maintaining a leak free integrity. The increased width (from 225 to 300mm) and pull out test rating of 5.0KN, add to the many benefits of the Humeseal Sealed Manhole System. Item code: 77462



Standards marked streetware

Humes Standards Marked (AS3996) ductile iron lids with grey iron frames are designed to fit the rebate of the Humeseal manhole conical lid.

There are several options to choose from:

Description	Class D Ductile Iron Manhole Cover set	Class D Ductile Iron Locking Manhole Cover set	Manhole Safety Grill
			
Item #	78250	78255	48514
Class	D	D	
Clear Opening (mm)	600	600	
Frame Diameter (mm)	810	810	
Lid Diameter (mm)	682	682	
Frame Depth (mm)	102	102	
Lid Depth (mm)	47	47	
Weight (Kg)	80	80	
			For complete manhole safety, the Humes Safety grill prevents falls and access to manholes. Available in either galvanised or stainless steel in either a 500 mm or 610 mm size with a locking option. Designed to be retrofitted to most manholes, the safety grill has been independently tested to a weight loading of 500KG. Please note: styles may vary

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

Buyers and users of the products described in this brochure must make their own assessment of the suitability and appropriateness of the products for their particular use and the conditions in which they will be used. All queries regarding product suitability, purpose or installation should be directed to the nearest Humes Sales Centre for service and assistance. © Fletcher Concrete and Infrastructure Limited 2011. Printed 09/13.

