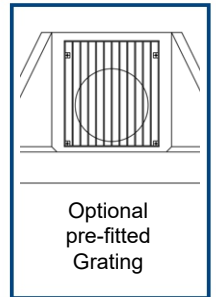
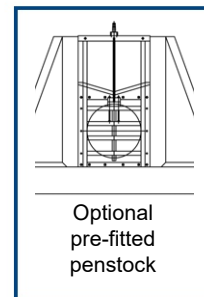
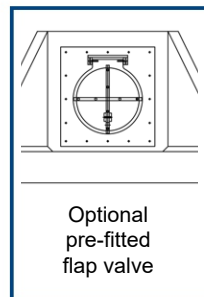
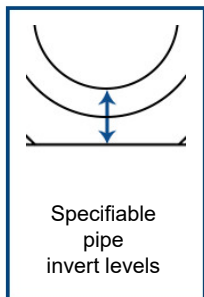
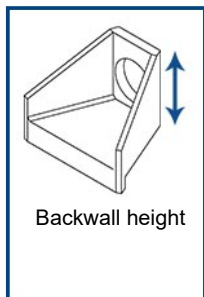
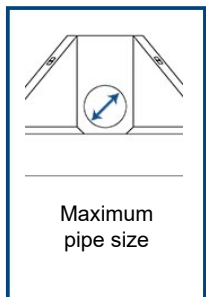
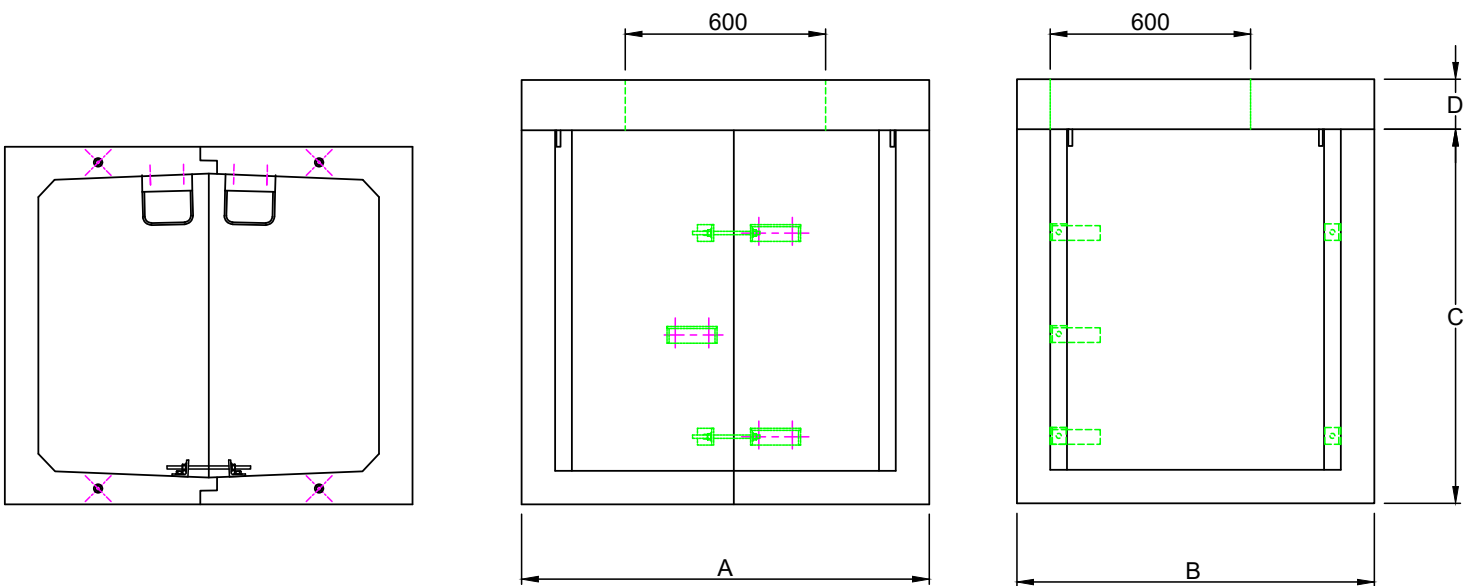
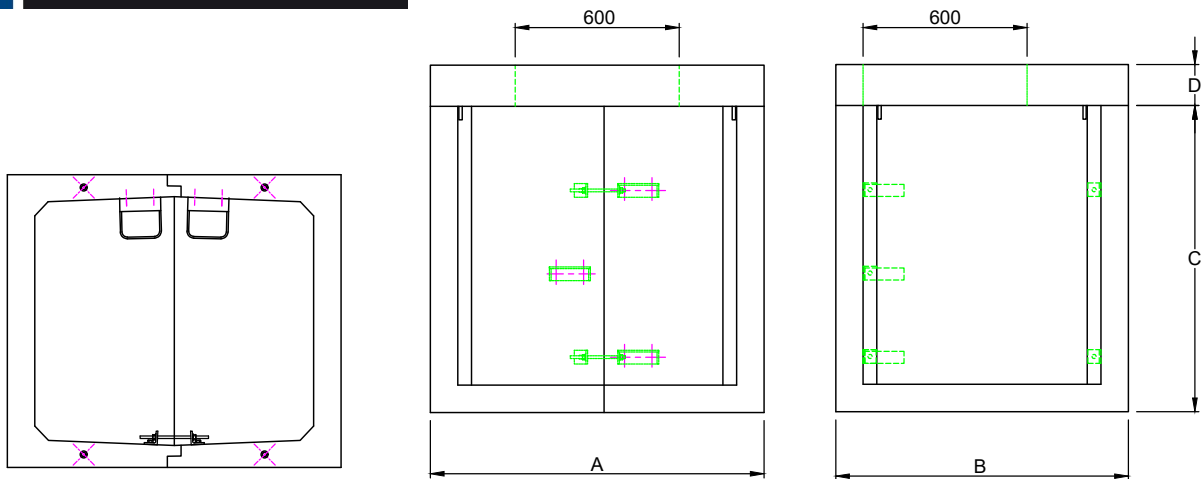


Chieftan Chamber Range

The Althon range of Chieftan precast concrete inspection chambers has been designed to make installation on-site as straightforward as possible. Each inspection chamber comes in two halves with a reinforced cover slab. The units are cast to order to suit any pipe openings and invert levels required.

The real benefit of using a Chieftan concrete inspection chamber is in the ability to pre-fit accessories to the unit prior to delivery to site. Our inspection chambers can pre-fitted with flow control devices such as penstocks, Tideflex Valves and flap valves. This makes installation fast, simple, cost effective and most importantly safe.





Chamber Ref	Width A	Depth B	Back Wall Height C	Lid D	Weight	Half Weight	Lid Weight	Max Opening Size
	mm	mm	mm	mm	kg	kg	kg	mm
1220 x 1070 x 815	1220	1070	815	150	1000	500	220	500
1220 x 1070 x 1120	1220	1070	1120	150	1300	650	220	820
1220 x 1070 x 1425	1220	1070	1425	150	1590	798	220	820
1220 x 1070 x 1730	1220	1070	1730	150	1890	945	220	820
1220 x 1070 x 2035	1220	1070	2035	150	2180	1090	220	820
1220 x 1070 x 2340	1220	1070	2340	150	2480	1240	220	820

Chamber Ref	Width A	Depth B	Back Wall Height C	Lid D	Weight	Half Weight	Lid Weight	Max Opening Size
	mm	mm	mm	mm	kg	kg	kg	mm
1630 x 1070 x 815	1630	1070	815	150	1230	615	330	500
1630 x 1070 x 1120	1630	1070	1120	150	1580	790	330	820
1630 x 1070 x 1425	1630	1070	1425	150	1930	965	330	820
1630 x 1070 x 1730	1630	1070	1730	150	2280	1140	330	820
1630 x 1070 x 2035	1630	1070	2035	150	2630	1315	330	820
1630 x 1070 x 2340	1630	1070	2340	150	2980	1490	330	820

Chamber Ref	Width A	Depth B	Back Wall Height C	Lid D	Weight	Half Weight	Lid Weight	Max Opening Size
	mm	mm	mm	mm	kg	kg	kg	mm
1830 x 1375 x 780	1830	1375	780	200	1540	770	1030	550
1830 x 1375 x 1085	1830	1375	1085	200	1960	980	1030	800
1830 x 1375 x 1390	1830	1375	1390	200	2380	1190	1030	1000
1830 x 1375 x 1690	1830	1375	1695	200	2800	1400	1030	1125
1830 x 1375 x 2000	1830	1375	2000	200	3220	1610	1030	1125
1830 x 1375 x 2305	1830	1375	2305	200	3640	Ext Piece	1030	1125
1830 x 1375 x 2610	1830	1375	2610	200	4060	Ext Piece	1030	1125
1830 x 1375 x 2915	1830	1375	2915	200	4480	Ext Piece	1030	1125
1830 x 1375 x 3220	1830	1375	3220	200	4900	Ext Piece	1030	1125
1830 x 1375 x 3525	1830	1375	3525	200	5320	Ext Piece	1030	1125
1830 x 1375 x 3830	1830	1375	3830	200	5740	Ext Piece	1030	1125

Chamber Ref	Width A	Depth B	Back Wall Height C	Lid D	Weight	Half Weight	Lid Weight	Max Opening Size
	mm	mm	mm	mm	kg	kg	kg	mm
1830 x 1675 x 780	1830	1675	780	200	1780	890	1300	550
1830 x 1675 x 1085	1830	1675	1085	200	2240	1120	1300	800
1830 x 1675 x 1390	1830	1675	1390	200	2700	1350	1300	1000
1830 x 1675 x 1690	1830	1675	1695	200	3160	1580	1300	1200
1830 x 1675 x 2000	1830	1675	2000	200	3620	1810	1300	1440
1830 x 1675 x 2305	1830	1675	2305	200	4085	Ext Piece	1300	1440
1830 x 1675 x 2610	1830	1675	2610	200	4550	Ext Piece	1300	1440
1830 x 1675 x 2915	1830	1675	2915	200	5015	Ext Piece	1300	1440
1830 x 1675 x 3220	1830	1675	3220	200	5480	Ext Piece	1300	1440
1830 x 1675 x 3525	1830	1675	3525	200	5945	Ext Piece	1300	1440
1830 x 1675 x 3830	1830	1675	3830	200	6410	Ext Piece	1300	1440



Installation Guide

This installation and lifting guide is an aid to contractors for the installation of the Althon Chieftain chamber. It is the responsibility of the installer to ensure that the installation is carried out, in accordance with site conditions and all relevant health & safety regulations.

Lifting of chamber (With the aid of chains)

- Always use adjustable chains.
- It is the site operator's responsibility to assess the risks and carry out a detailed lift plan prior to commencing any lifting operation, taking into account the site conditions and all relevant health and safety recommendations.
- Prior to carrying out any lifting operation, it is imperative that all equipment should be inspected for suitability and condition. Althon recommend that all equipment should have a safe working load in excess of the total load due to be lifted.
- Please contact Althon for further information on recommended operation, inspection and maintenance of any lifting equipment supplied by Althon.
- Prior to lifting, Althon recommend inspecting products for cracks and damage particularly around the lifting points. Products should not be lifted if there are signs of cracks or damage to the lifting points or concrete product.
- Lifting operations must take place on a suitable area of flat and level hard standing.
- Chains should be left as long as is practically possible in order to minimise the side loading on chamber walls.
- Chains should be adjusted accordingly to ensure a level lift.
- Carefully lift the unit until the chains are under tension, if it doesn't sit level, lower it back to the ground and adjust the chains accordingly, repeat process until you achieve an even lift.
- The area around where the lift is due to take place should be free from all non-essential personnel.
- Never stand underneath a suspended load.
- Before carrying out the lifting operation all relevant personnel involved should read the installation and lifting guide in this document and a detailed lift plan and risk assessment should be completed by a qualified person.

Receipt and Handling of the chieftain chamber on Site

It is the customer's responsibility to advise Althon at the time of order of any site restrictions that may affect delivery. Please contact us for a copy of our delivery questionnaire.

- When stored Althon recommend placing products on suitable wooden bearers to reduce the risk of damage.
- Products must be stored individually and not stacked.
- The movement of products on site must be undertaken in a way that is safe and will not cause damage to the product.
- To allow for easy identification, all products are printed with the following information: Unique Job reference and product number, opening diameter and the date of production.
- Off-loading from delivery vehicles should take place at the nearest suitable area of hard standing to the point of installation.
- Off-loading must be carried out using appropriate lifting equipment.
- It is the responsibility of the company carrying out the offloading procedure to provide a lift plan.
- All items should be carefully inspected during off-loading to verify that products are undamaged and comply with the order placed. Visually inspect the product for any sign of damage, including cracked or chipped concrete, or damage that could affect the performance.
- Each chieftain chamber section is supplied with 2 RD20 stainless steel threaded lifting sockets cast in. Lifting loops, which are available to purchase from Althon can then be threaded into the sockets. Adjustable 3 legged chains can then be connected to the lifting loops in order to lift the product into position with the aid of suitable lifting equipment.



Installation Guide – Chieftain Chamber

Please note; Due to the wide variety of site conditions this document is only intended to be used as a guide, it is inappropriate to give specific information regarding details such as the depth of foundations to support the chamber or a detailed lift plan and risk assessment. Once installed, the ground pressure of a chamber measuring 1070mm wide x 2340mm high is approximately 14kn/m². Althon recommend a sub base of 200mm dry mix concrete to give a flat and level foundation to sit the chamber onto.

1. Dig out the bank of the watercourse or pipeline to take the size of the chamber.
 - If the chamber is being fitted to existing pipes then Althon recommend removing extra material in order to thread each half of the chamber over the pipe individually.
 - Make sure that the chamber will not protrude into the path of any flowing water.
 - Allowances must be made for the height of openings relative to the floor and the invert of the pipe.
 - The installer must also take account of the ground levels and the overall height of the chamber including any lids as this will affect the depth of the chamber.
 - The installer must also consider the loadings that will be placed on the chamber when selecting a suitable lid arrangement.
2. If very large pipes are being used, it is recommended that a 500mm wide x 500mm deep trench filled with mass concrete is constructed underneath the back edge of the chamber to cover the possibility of the heavy pipe resting upon the opening within the back wall of the chamber.
3. Lay a minimum (dependant on ground conditions) of 200mm thick bed of dry mix concrete to create a flat and level foundation to rest the chamber on.
4. Prior to lifting and positioning the chamber all attachments such as gratings and water control gear should be removed.
5. Lift the first half of the chamber into position using 2no RD20 premium lifting eyes, long adjustable chains **(CHAINS MUST BE A MINIMUM OF 2000MM LONG)** and suitable machinery. Before carrying out the lifting operation all relevant personnel involved should read the installation and lifting guide in this document and a detailed lift plan and risk assessment should be completed by a qualified person.
 - The 2no RD20 threaded lifting sockets are all located in the top of the chamber walls.
 - Placing a shim at the bottom of the pipe will assist with centring it in position.
 - If attachments such as water control gear or gratings are to be fitted to the chamber the pipe must be fitted flush with the inside of the back wall.
 - If there are no attachments to be fitted Althon recommend fitting the chamber so that the pipe protrudes 50mm through the chamber wall.
6. If a complete watertight seal is required, mastic sealant should be applied liberally along the joint of both halves prior to lifting the second section into position.
7. Repeat stage 5 of the installation guide with the second half of the chamber.
8. Bolt the two halves of the chamber together using the supplied fixing bolts and brackets.
9. If a height extension is to be fitted, liberally apply a suitable mastic or mortar to the top edge of the sections that have already been installed. Then repeat procedures 5, 6, 7 and 8 of this guide.
10. Install the pipes into the openings in the chamber.
 - If attachments such as water control gear or gratings are to be fitted to the chamber the pipe must be fitted flush with the inside of the chamber.
 - If there are no attachments to be fitted Althon recommend fitting the chamber so that the pipe protrudes 50mm inside the chamber.
11. Backfill around the pipe with either mass concrete or well-compacted impervious clay. If concrete has been used around the pipe then proceed with soil backfilling to the top level of the structure ensuring good compaction as you go.
12. Using an appropriate mortar or resin fill in the gap between the pipe chamber wall.

4. To fit the concrete chamber cover slab, apply a suitable mortar or resin to the top edge of the chamber then lift the cover slab into position with the access situated over the step irons or ladder. Any additional fittings and openings such as holes for T keys to adjust a penstock must also be lined up.
 - Lift the lid into position using 3no RD20 premium lifting eyes, long adjustable chains (CHAINS MUST BE A MINIMUM OF 2000MM LONG) and suitable machinery. Before carrying out the lifting operation all relevant personnel involved should read the installation and lifting guide in this document and a detailed lift plan and risk assessment should be completed by a competent person.
 - The 3no RD20 threaded lifting sockets are all located in the top face of the chamber lid.
5. If the height differential between the top of the concrete cover slab and the final surface level of the ground is greater than the thickness of the access lid; 600mm x 600mm concrete extensions are available to purchase from Althon in order to increase the height of the lid.
 - 600mm x 600mm concrete extensions should be jointed to the concrete cover slab and each other using a suitable resin or mortar.
 - Althon recommend filling in around the outside of extensions with mass or dry mix concrete to hold them in position. The specification and thickness of this material is dependent upon loadings that the chamber will be placed under.
6. Once the concrete cover slab has been installed, a suitable personnel access lid can be fixed over the opening. The style of lid is dependent upon the predicted loadings that will be placed upon it and should be specified by a structural engineer. The surrounding surface should then be finished level with the top of the lid.

Steel reinforcing should be used around the lid. This reinforcing design should be specified by a structural engineer based on the specific site loadings and requirements.

A suitable material should then be used on top of the concrete cover slab. The type of material and its thickness should be specified by a structural engineer based on the specific site loadings and requirements.
7. For fitting gratings and other fabricated metal components:-
 - Position the grating using appropriate lifting equipment.
 - Use the correct size and length of stainless steel bolts with washers to fix gratings to the threaded fixing sockets cast into chamber.
 - To prevent bolts binding in threaded fixing sockets copper slip must be applied to the thread of all bolts.
 - Do not exceed a torque setting of 40Nmm² when tightening bolts.
8. For fitting water control gear (i.e. Flap Vales & Penstocks):-
 - Apply foam seal or mastic sealant to the back plate of the water control gear to ensure a watertight seal between the chamber and water control gear.
 - Position the water control gear using appropriate lifting equipment.
 - Use the correct size and length of stainless steel bolts with washers to fix control gear to the threaded fixing sockets cast into the chamber.
 - To prevent bolts binding, copper slip must be applied to the thread of all bolts.
 - Do not exceed a torque setting of 40Nmm² when tightening bolts.
 - Overtightening bolts may distort the back-plate thus preventing the valve from sealing correctly.