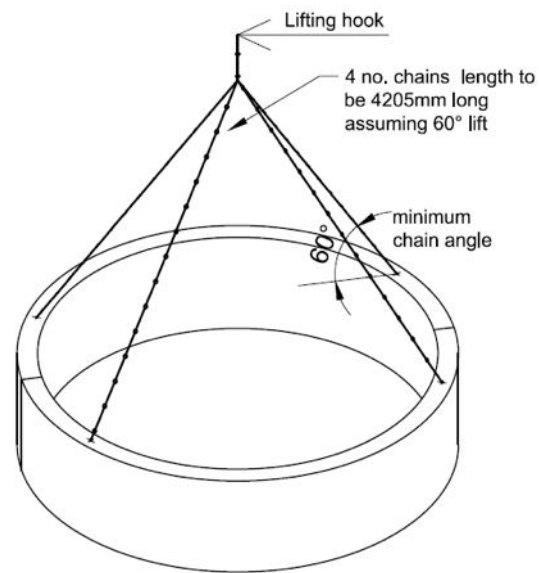
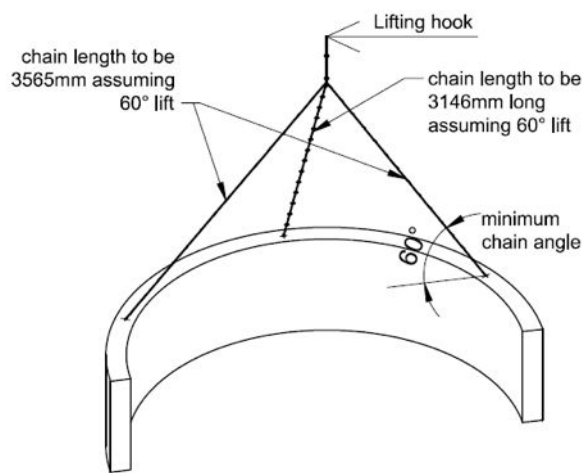


# DN4000 delivery, handling and installation guide

## 1. Lifting

Single units (half ring) are lifted using 3 number threaded lifting loops which locate into threaded lifting sockets, cast into the units, all of which must be used. The chain angle should not be less than 60 degrees to the horizontal. In order to lift without tilt the chain lengths will differ. Refer to diagram below for explanation of minimum chain angle and lengths. Alternatively a spreader beam may be used. Complete units (full ring) are lifted using 4 number threaded lifting loops which locate into threaded lifting sockets cast into the units. Refer to diagram below for explanation of the location of the lifting sockets to be used. The chain angle should not be less than 60 degrees to the horizontal. Alternatively a spreader beam may be used. Note: Using 3 chains will put unforeseen stresses on the concrete and may cause the concrete around the join to crack)



Unit weight and identification of lifting points will be marked on each casting for information.

## 2. Handling & Installation

It is recommended that two piece chamber ring is jointed before lifting into place:

- Place the two units on a level surface, ideally on 2 no skids to reduce resistance when jointing and also to maintain a clean joint.
- Place both halves side by side ensuring both are at the correct orientation i.e. with bolt holes in line with threaded sockets.
- Insert the M24x200 threaded pins with the 60mm threaded side placed into the cast in sockets.
- Place a strip of bituminous sealant along the small recess of the vertical joint on both halves of ring.
- Once bolts and sealant are in position, the 2 halves of the unit must be pulled together using a ratchet system e.g. a chain block fixed to the cast in M24x80 sockets on opposite ends of the units. **(Do not use the wall end bolting system to pull the units together as this may crack the concrete and damage the joint)**
- The completed ring can then be manoeuvred into place as detailed above.

Half-rings can be lifted into final position and the chamber can be built up a half unit at a time.

**Please note it is the end-user's responsibility to ensure safe access and lifting procedures are followed at all times.**