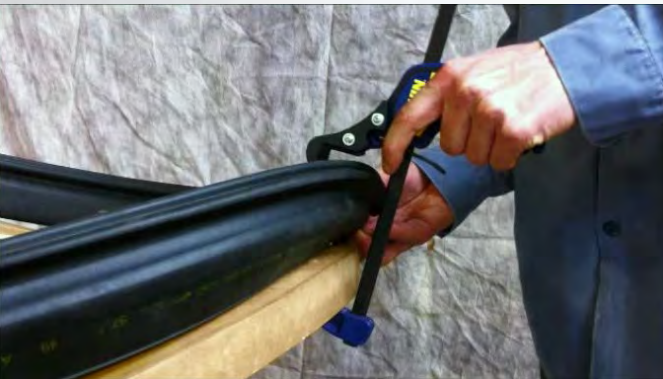


How to Use our Mandrel Installation Grips



Place two grips at 12 & 6 o'clock (the two lowest points on a curved mandrel) with the clamps underneath the outside half of the mandrel. Pull the clamp trigger until the 2 hooks fit snugly into the waterstop of the connector and starts pulling the connector down (see picture below).



Position the other two clamps at 3 and 9 o'clock. Once all four clamps are installed, make sure the nose of the connector is consistently tight against the offset.



Place the inside mandrel half on top and hand-tighten nuts and bolts. Make sure the waterstop is perpendicular to the outside wall of the mandrel. Then look through all observation holes to be sure the nose of the connector is still up against the offset. Tighten nuts with wrench. Re-check waterstop and observation holes.



PRE-POUR INSPECTION

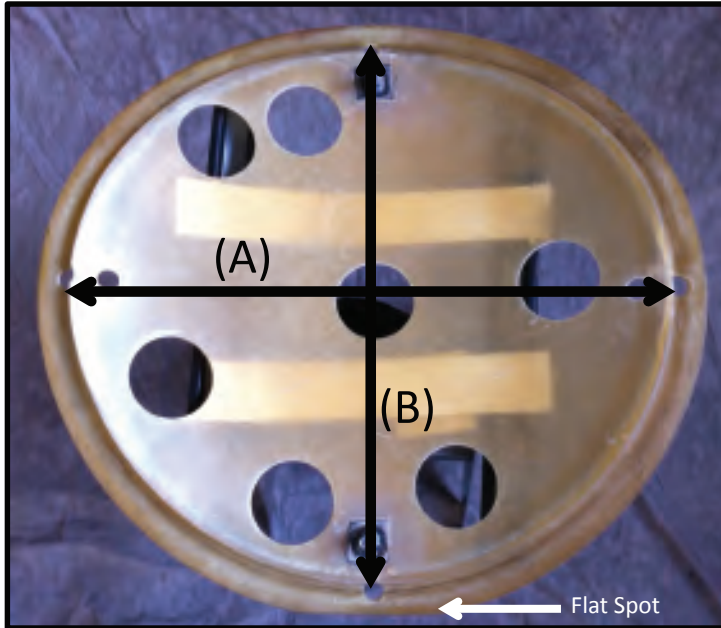


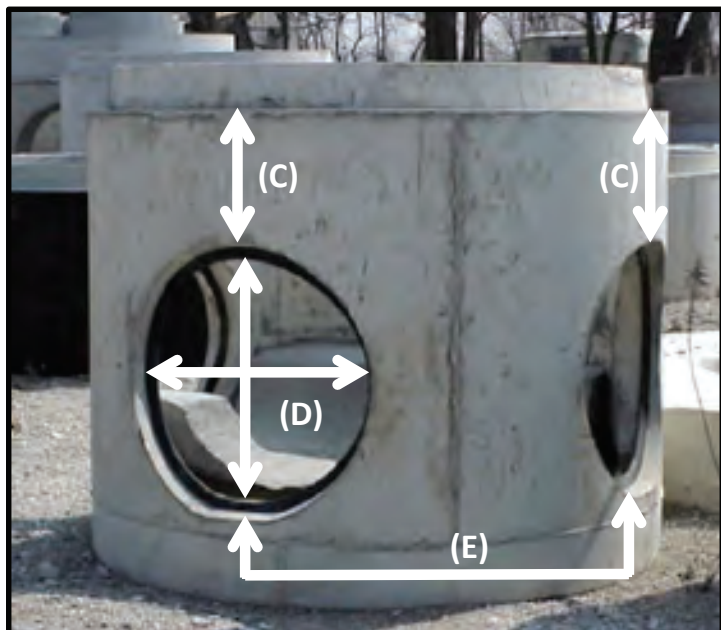
Fig.1 - Outside Mandrel Half

1. Determine your parts are correct by checking the pipe O.D. using the A-LOK Dimensional Data Sheet where you will find the correct connector and mandrel.
2. Measure the offset of the outside mandrel half at the 3 & 9 (A) and 6 & 12 (B) o'clock positions to check for roundness. These measurements should be within 1/4" of each other.
3. To identify the mandrel, locate the measurement from the 6 & 12 o'clock position (B) in the mandrel I.D. column on the A-LOK Dimensional Data Sheet. The connector and mandrel should have matching part numbers.
4. After the connector has been installed on the mandrel, measure the width of the mandrel at the 12 o'clock position (Fig. 2) to determine the wall thickness.
5. Check to make sure the mandrel locations, angles and heights match the plans.



Fig. 2
A-LOK Connector
Mounted on Mandrel

POST-POUR INSPECTION



A-LOK Connectors Cast-in Manhole

1. After stripping from form, check correct placement and heights to make sure no movement or shifting has occurred by using a common reference point (C).
2. Measure the connector's inside dimension at 12 & 6 and 3 & 9 o'clock positions for concentricity (D). These measurements should be within 1/4" of each other. Compare measurements with our Dimensional Data Sheet.
3. Check angle placement of connectors by measuring the center-to-center dimensions of the connectors (E). The angle can be determined by using the following formula:

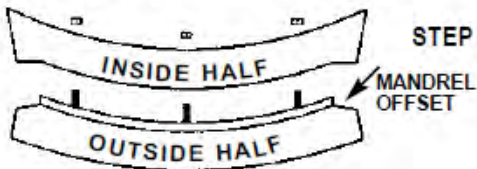
$$\frac{\text{Structure OD} \times \pi}{360} = \frac{\text{inches}}{\text{degree}}$$

4. Visually check connector for consistent embedment all the way around and to ensure it is not damaged. Make sure the flat spot is on the bottom (B).

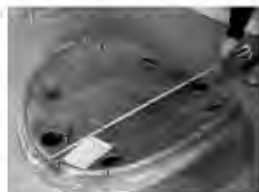
MANDREL MOUNTING INSTRUCTIONS FOR **A•LOK** CONNECTORS

WARNING:

IMPROPER INSTALLATION OF CONNECTOR ON THE MANDREL COULD CAUSE THE CONNECTOR TO FAIL. MANDRELS SHOULD ONLY BE USED IN THE FORMS THEY ARE DESIGNED. ANY OTHER USE COULD CAUSE DIMENSIONAL DAMAGE TO THE MANDREL.

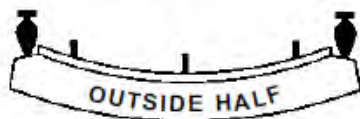


STEP 1. REMOVE NUTS AND SEPARATE MANDREL HALVES.



STEP 2. MEASURE OFFSET DIMENSION 3-9 AND 6-12 TO BE SURE IT MATCHES THE CONNECTOR I.D.

REFER TO A•LOK DIMENSIONAL DATA SHEET FOR THE CORRECT A•LOK CONNECTOR I.D.

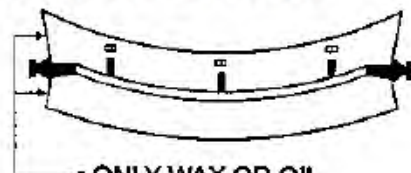


STEP 3. PLACE CONNECTOR NOSE AGAINST THE MANDREL OFFSET ON THE OUTSIDE HALF.



STEP 4. ROLL CONNECTOR TO A HORIZONTAL POSITION.
NOTE: CONNECTOR'S NOSE **MUST** FIT FLUSH AGAINST MANDREL OFFSET.

STEP 5. SET INSIDE HALF OF MANDREL ON TOP AND TIGHTEN NUTS.



ONLY WAX OR OIL OUTSIDE OF MANDREL. (NOT THE GASKET)

STEP 6. CHECK ALL INSPECTION HOLES TO INSURE THE CONNECTOR IS TIGHT ABOUT THE OFFSET.



NOSE OF CONNECTOR

MOUNTING MANDRELS ON FORM

IMPORTANT: MANDRELS SIZE 600 AND ABOVE - FLAT SPOT MUST BE PLACED ON THE OUTSIDE TOWARDS THE BOTTOM OF THE STRUCTURE TO INSURE PIPE WILL BE CENTERED IN CONNECTOR DURING INSTALLATION.



FLAT SPOT