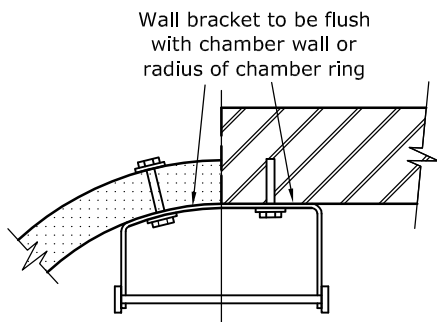
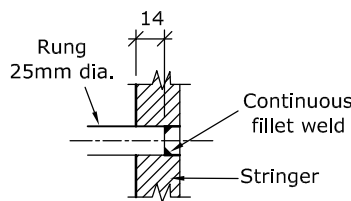


FRONT ELEVATION

SIDE ELEVATION



PLAN



**FIXING DETAIL
RUNG TO STRINGER**

NOTES

- All dimensions in millimetres
- Ladders to be to BS.4211:2005 unless otherwise stated below.
- Rungs shall be welded to stringers.
- Wall brackets shall fit flush with the manhole or catchpit wall or be formed to the radius of the chamber ring.
- The completed ladder assembly including drilled wall brackets shall be galvanized to BS.EN.ISO.1461:2009.
- The method of fixing the wall bracket to the manhole or catchpit shall be as follows:-
 - Brick manhole or catchpit shall use stainless steel stud expansion anchors and washers of 16mm thread diameter with an anchor length not less than 90mm.
 - Precast concrete manhole or catchpit shall use M16 stainless steel or galvanized nuts and bolts with 100 x 100 x 20mm and 40mm dia. stainless or galvanized washers.
- The ladder shall be fixed to the wall bracket by M16 x 55mm stainless steel or galvanized nuts and bolts with stainless or galvanized washers 40mm dia. Holes in wall bracket shall be slotted 20mm in width.
- Stainless steel nuts, bolts and washers shall be to BS.EN.10088-1:2005, designation 1.4401. Isolating washers shall be used between stainless bolts and galvanized fittings.