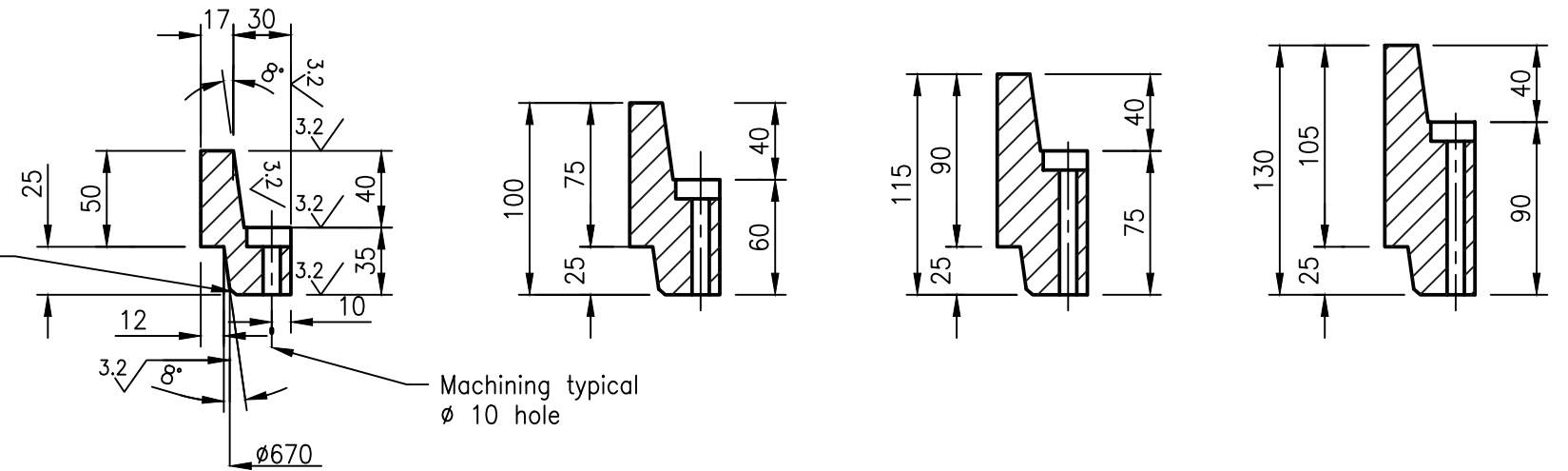


Bolt hole and boss. Gauge shall be used to check PCD and tapped hole position



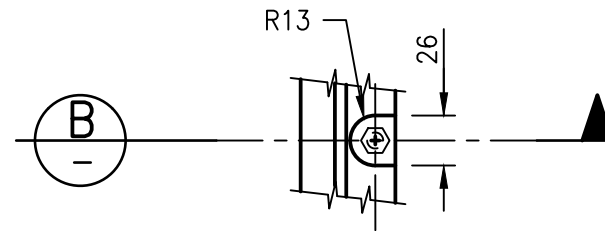
35 RISER
MASS: 27.5kg

60 RISER
MASS: 32kg

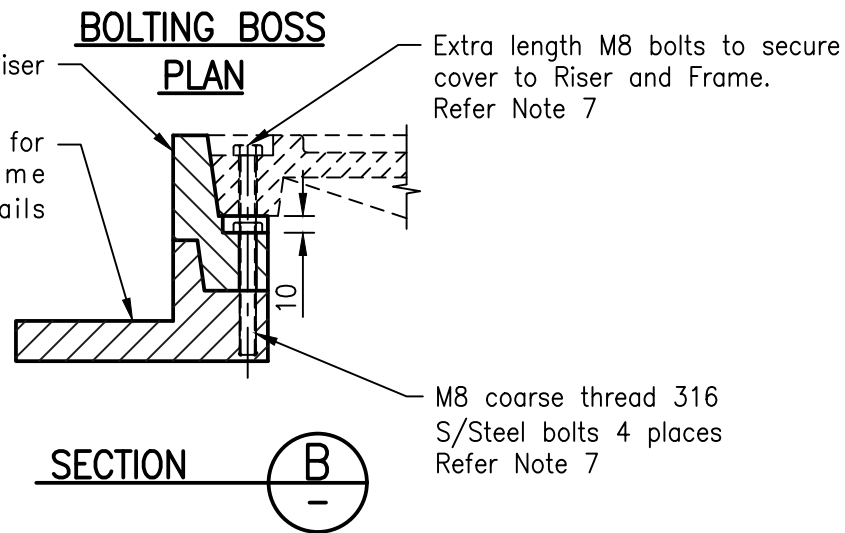
75 RISER
MASS: 38kg

90 RISER
MASS: 44kg

RISER DETAILS
(Refer to 35 riser for typical dimensions for all risers)



Refer to D-014 for manhole frame (roadway) details



NOTES:

- All edges to be square.
- Casting to be free of burrs and pits.
- Material**
Ductile cast iron
Tensile strength : 600-3 (AS 1831)
Hardness : 145-185 (HB)
Design load = 210kN (AS 3996)
Mass = varies
- Tolerances**
Cast size $\pm 1.00\text{mm}$
Angle profile $\pm 0.25^\circ$
Machined size $\pm 0.125\text{mm}$
Overall diameter of cover $+0\text{mm}-0.25\text{mm}$
DFT of coating $50 \mu\text{m}$ 3.2 ✓
- Machine surface symbol:
- All machined surfaces shall have a coating approved as fit for the purpose of providing a rust proof, non stick and gas/water proof joint.
- Four (4) M8 Course Thread Stainless Steel Bolts must be supplied and used to fix riser to frame, where cover is required to be bolted down, min two extra length bolts must be used to secure cover and riser to frame, with two remaining bolts securing riser to frame. Refer TABLE 1 for bolt Lengths
- Refer Std Dwg DS-015 for manhole frame details.
- Refer Std Dwg DS-019, DS-020 and DS-021 for manhole cover details.
- All dimensions are in millimetres unless shown otherwise.

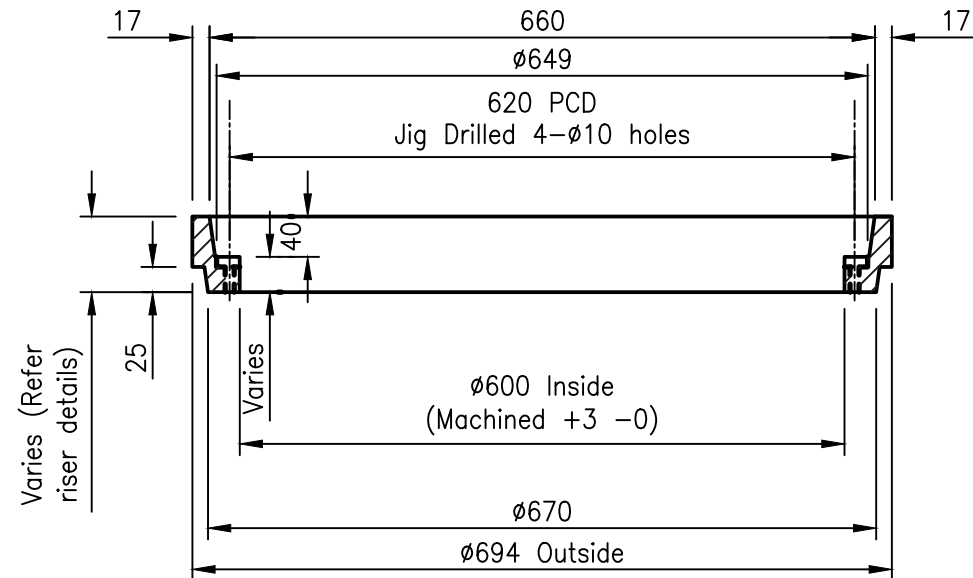


TABLE 1

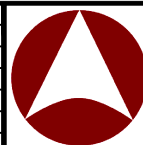
RISER HEIGHT	BOLT LENGTH	
	FOR RISER ONLY	FOR RISER WITH COVER
35	60	100
60	90	130
75	110	150
90	115	160

TYPICAL ASSEMBLY

Bolts: 60 long for 35 riser
90 long for 60 riser
110 long for 75 riser
115 long for 90 riser

These drawings have been developed in consultation between the participating Councils.
BEFORE USE, the user shall confirm that the drawing has been adopted by the appropriate Council.

Rv.	DATE	REVISIONS
C	06/14	Review
B	03/14	Amended Drawing Number
A	10/12	ORIGINAL ISSUE



INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA
STANDARD DRAWINGS

MANHOLE RISER DETAILS
(ROADWAY)

DS-018

C
B
A
Rv.