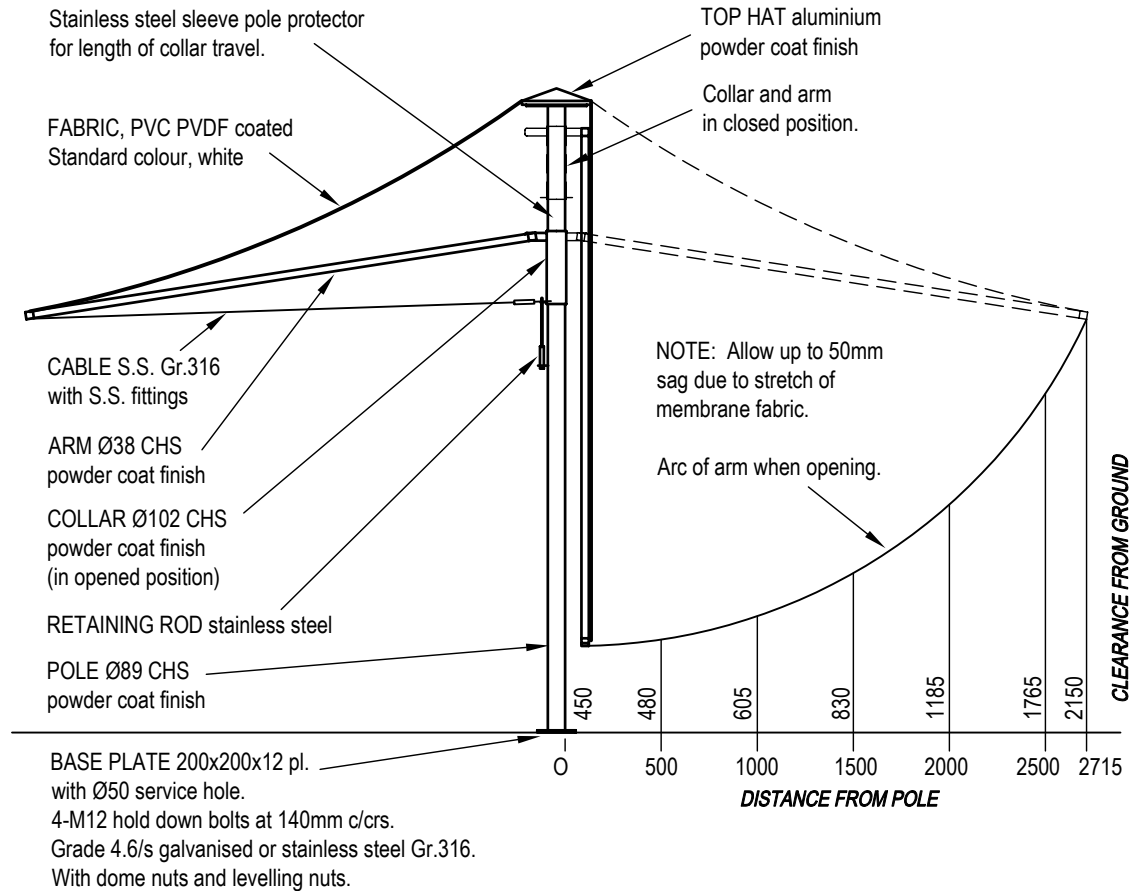
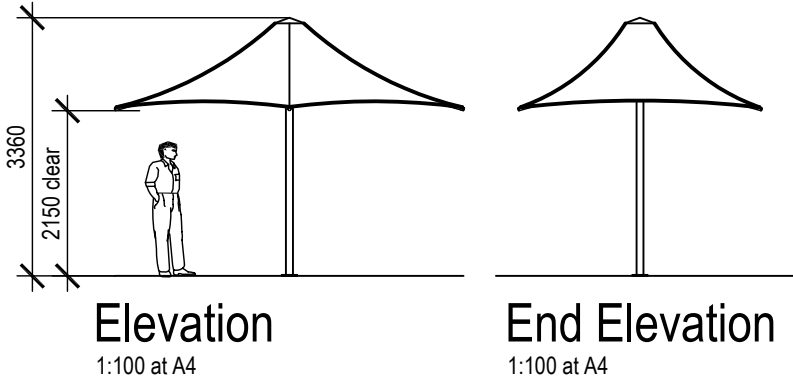
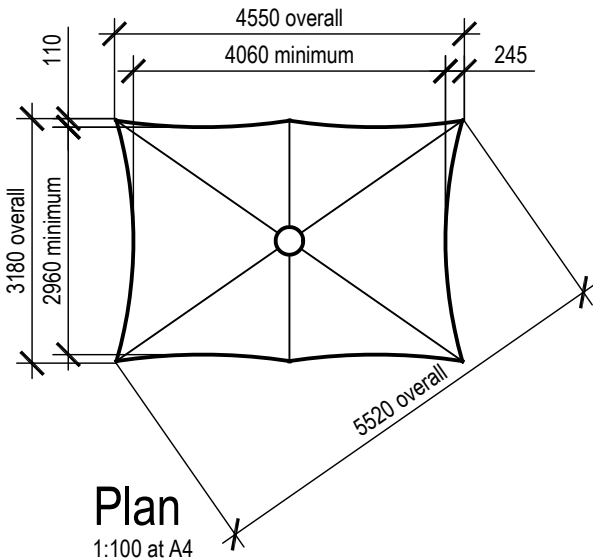


RECTANGULAR 4.5m - SUA-CR45

Wind Rating: 33m/sec (120km/h)
 Rated when umbrella is fully erected.
 Umbrella weight: 85kg

Overall dimensions represent clearance dimensions for the complete umbrella.
 Membrane dimensions differ, depending on variations in tensioning and fabrication.

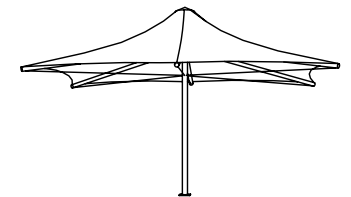
Dimensions are in millimeters.



OPENED POSITION

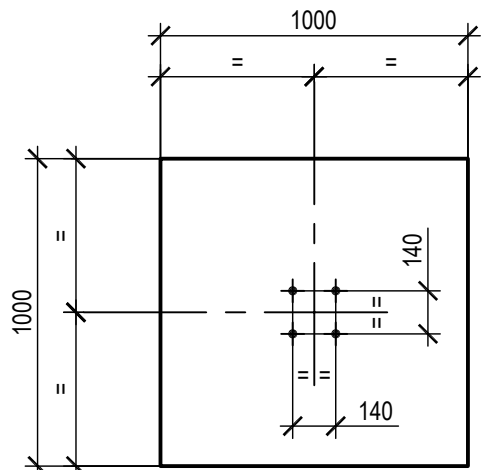
CLOSED POSITION

**4.5m Centre Support Rectangular Umbrella
 Model SUA-CR45**

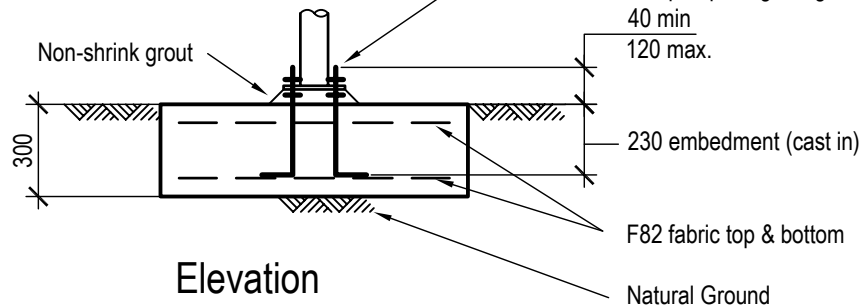


Centre Support Rectangular Umbrella
 Model:SUA-CR45

**street
 umbrellas
 Australia**

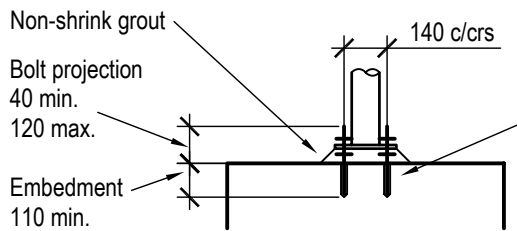


Plan



Elevation

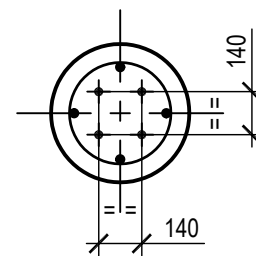
SUA-CR45 Pad Footing



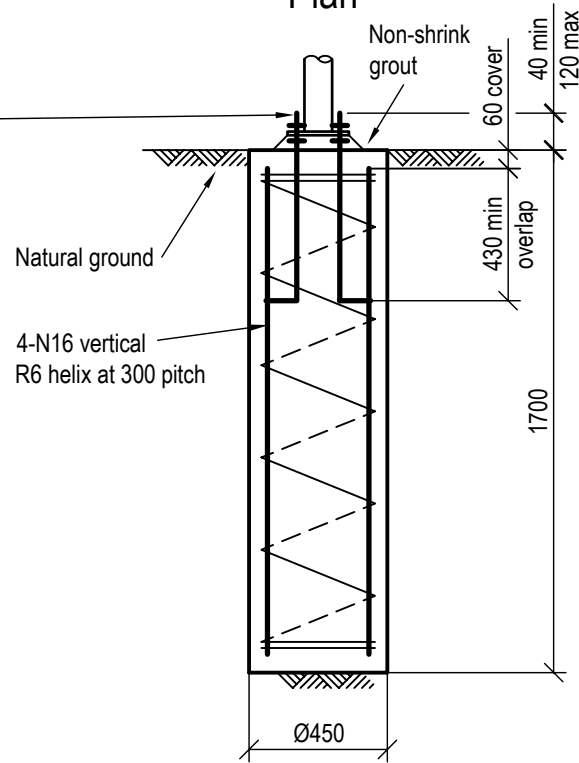
Chemical Anchor Detail

4-M12 Gr.4.6/S galvanised H.D. bolts with nuts and levelling nuts - Cog 100 Bolt projection to suit level of top of paving, tiling, etc 40 min 120 max. 230 embedment (cast in) F82 fabric top & bottom Natural Ground

4-M12 H.D. bolts to be threaded rod grade 4.6/s hot dipped galvanised, or stainless steel Gr.316. Supplied with nuts, washers and levelling nuts. Chemical anchors, at 140 x 140 centres to be 'Hilti HVU', or engineer approved equivalent, and to be installed in accordance with the manufacturer's instructions. Hole to be clean and dry at time of installation.



Plan



Elevation
SUA-CR45 Pier Footing

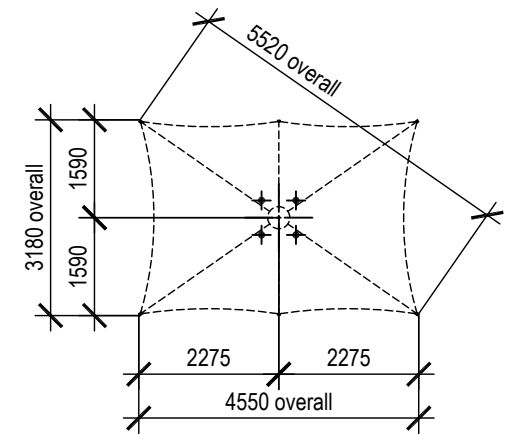
Notes:
Design wind speed 33m/sec (W33)

Assumed soil conditions:
Pad - bearing capacity 100kPa
Pier - cu=50kPa (stiff clay)

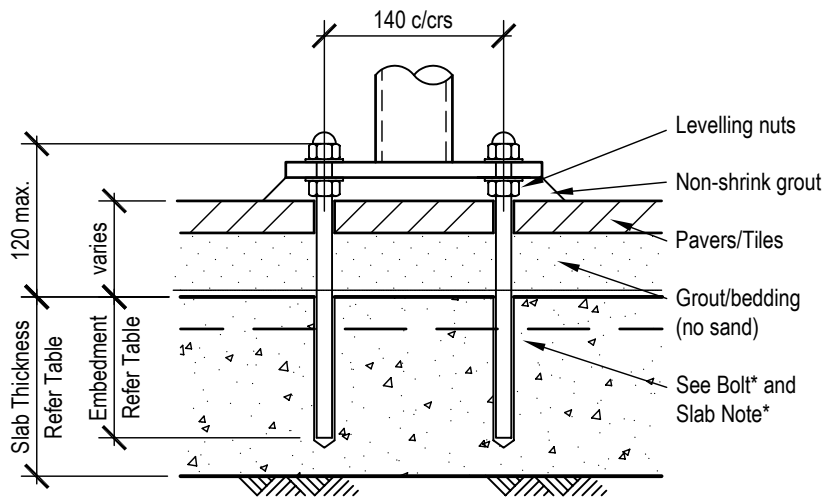
Minimum 60mm cover to all reinforcement
Concrete grade to be N25
20mm aggregate size
Slump 65mm

Anchor bolt location tolerances per Australian Standard AS 4100-1990

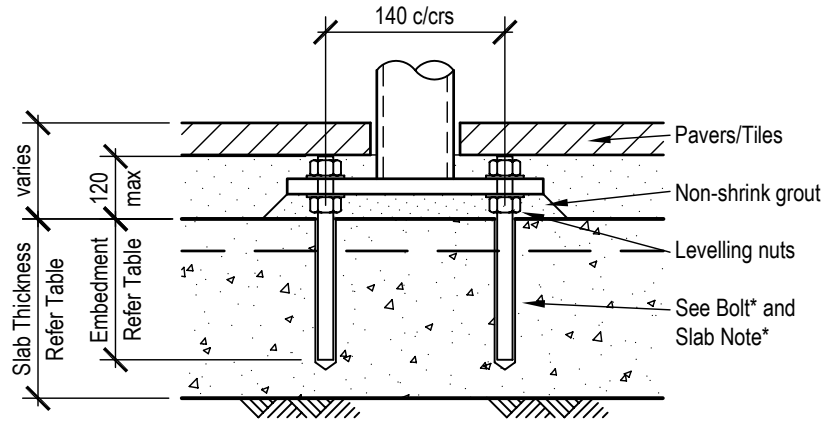
- 3mm for anchor bolt centres within an anchor bolt group.
- 6mm for adjacent anchor bolt group centres.
- Maximum accumulation of 6mm per 30m not to exceed a total of 25mm.
- 6mm from anchor bolt group centre to column line centre.



H.D. Bolt Layout Plan
Not to scale



Over Pavers



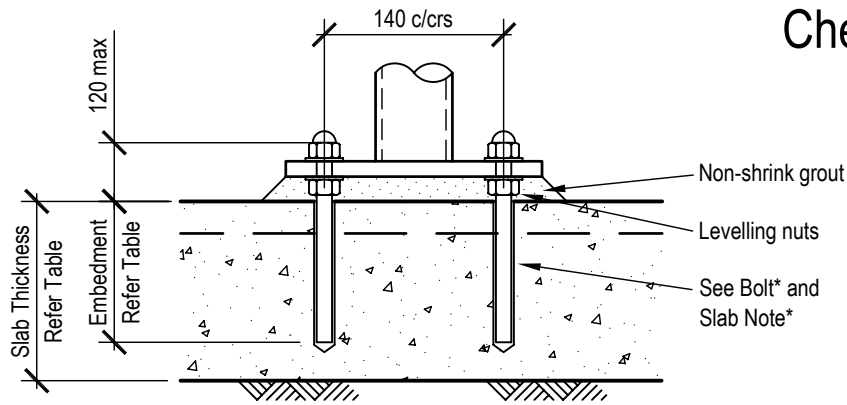
Under Pavers

*** H.D. BOLT NOTE**
 Structure pole has 200 x 200 x 12 base plate.
 4-M12 H.D. bolts to be threaded rod grade 4.6/s
 hot dipped galvanised, or stainless steel Gr.316.
 at 140 x 140 centres.

*** SLAB ON GROUND NOTE**
 The existing reinforced concrete slab on
 ground is to be approved for adequacy by
 a Structural Engineer before installation.
 Concrete strength - f'c 25MPa.
 Installation requires **1 sq m** of continuous
 reinforced slab with the pole centre 400mm
 minimum from a slab edge or control joint.

Contact a SUA Dealer if the slab does not meet
 any of the requirements.

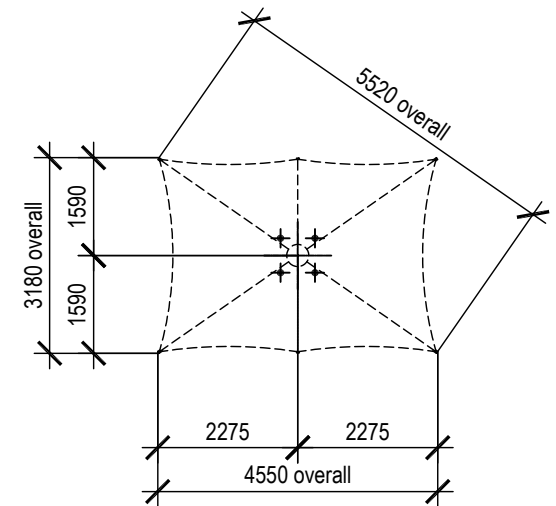
Chemical Anchor Fixing to Slab on Ground



On Slab

Slab Thickness	Chemical Anchor	Min. Embedment	H.D. Bolts*	Min. Slab Edge Distance*
100	Ramset Reo 502 (or Hilti HIT-RE 500)	80	4-M12 at 140 c/crs	400
110	Ramset Reo 502 (or Hilti HIT-RE 500)	90	4-M12 at 140 c/crs	400
120	Ramset Reo 502 (or Hilti HIT-RE 500)	100	4-M12 at 140 c/crs	400
130	Hilti HVU	110	4-M12 at 140 c/crs	400
140 plus	Hilti HVU	110	4-M12 at 140 c/crs	400

Chemical anchor to be as above or Engineer approved equivalent,
 and to be installed in accordance with the manufacturer's instructions.



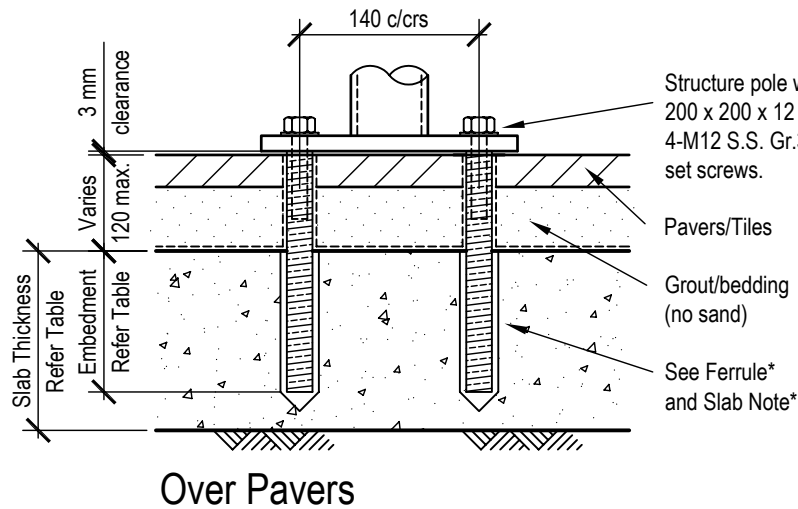
H.D. Bolt Layout Plan
 Not to scale

Installation Detail Model SUA-CR45

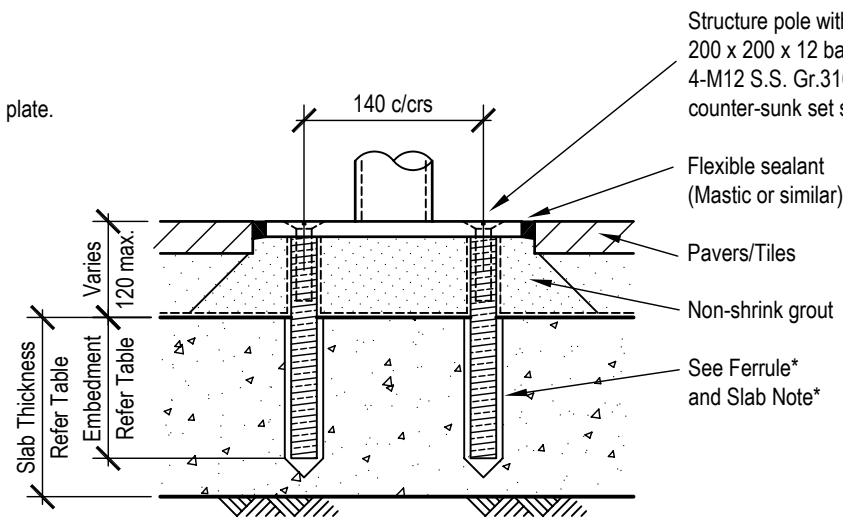
Centre Support Rectangular Umbrella
 Model:SUA-CR45

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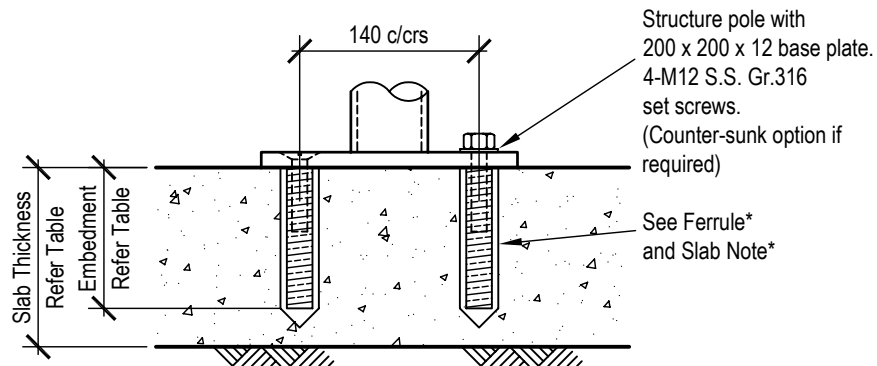
Existing Slab on Ground



Over Pavers

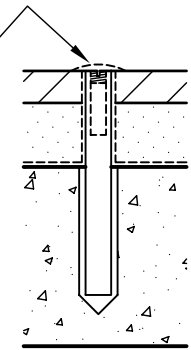


At Pavers



On Slab

Rubber grommets, stainless steel grub screws with hex socket or brass flat dome head screws, screw into ferrule flush with paving to keep ferrule thread clean.



Ferrule Fixing with Umbrella Removed

Chemical Anchor Fixing to Slab on Ground

Slab Thickness	Chemical Anchor	Min. Embedment	Ferrules*	Min. Slab Edge Distance*
100	Ramset Reo 502 (or Hilti HIT-RE 500)	80	4-M12 at 140 c/crs	400
110	Ramset Reo 502 (or Hilti HIT-RE 500)	90	4-M12 at 140 c/crs	400
120	Ramset Reo 502 (or Hilti HIT-RE 500)	100	4-M12 at 140 c/crs	400
130	Hilti HVU	110	4-M12 at 140 c/crs	400
140 plus	Hilti HVU	110	4-M12 at 140 c/crs	400

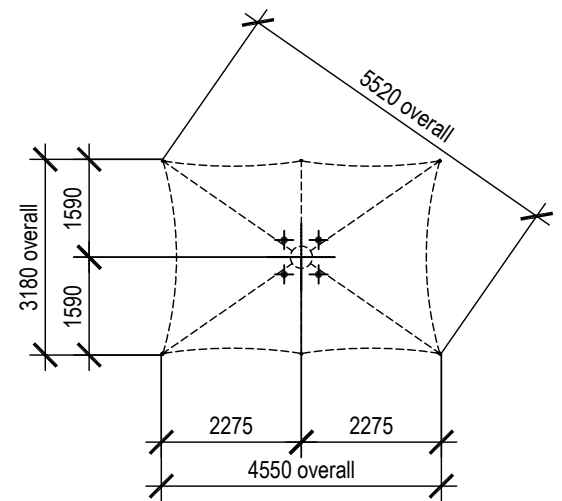
Chemical anchor to be as above or Engineer approved equivalent, and to be installed in accordance with the manufacturer's instructions.

Ferrule Detail Model SUA-CR45

*** FERRULE NOTE**
 Ferrules at 140 x 140 centres are M20 stainless steel Gr.316 threaded rods tapped for M12.

*** SLAB ON GROUND NOTE**
 The existing reinforced concrete slab on ground is to be approved for adequacy by a Structural Engineer before installation. Concrete strength - f_c 25MPa. Installation requires **1 sq m** of continuous reinforced slab with the pole centre 400mm minimum from a slab edge or control joint.

Contact a SUA Dealer if the slab does not meet any of the requirements.



H.D. Bolt Layout Plan
 Not to scale