

# **Ancon**<sup>®</sup>

# **Ancon Optima Typical Layout Drawings**

Ancon Optima Masonry Support Systems



# Leviat® A CRH COMPANY

We imagine, model and make engineered products and innovative construction solutions that help turn architectural visions into reality and enable our construction partners to build better, safer, stronger and faster.

# Leviat is a world leader in connecting, fixing, lifting and anchoring technology.

From the build of new schools, hospitals, homes and infrastructure, to the repair and maintenance of heritage structures, our engineering skills are making a difference around the world.

We provide technical design assistance at every stage of a project, from initial planning to installation and beyond.

Our technical support services range from simple product selection through to the development of a fully customised project-specific design solution.

Every promise we make locally, has the commitment and dedication of our global team behind it. We employ almost 3,000 people at 60 locations across North America, Europe and Asia-Pacific, providing an agile and responsive service worldwide.

Leviat, a CRH company, is part of the world's leading building materials business.

















### Façade Support & Restraint

Systems for the safe and thermally-efficient fixing of the external building envelope, including brick and natural stone, insulated sandwich panels, curtain walling and suspended concrete façades, and also the repair and strengthening of existing masonry installations.

- Masonry Support Systems
- Windposts
- Lintels
- Brick Slip Systems
- Wall Ties & Restraints
- Masonry Reinforcement

- Natural Stone Façade Systems
- Cavity Trays
- Sandwich Panel anchor
- Suspended concrete façade
- Masonry Repair

### Other areas of expertise:



### **Structural Connections**

Systems to form robust, efficient connections, and continuity of concrete reinforcement as necessary, between walls, slabs, columns, beams and balconies, providing structural integrity as well as enhanced thermal and acoustic performance.



### Lifting & Bracing

Systems for the safe and efficient transportation, lifting and temporary bracing of cast concrete elements and tilt-up panels before permanent structural connections are made.



# Anchoring & Fixing

Systems for fixing secondary fixtures to concrete, including anchor channels, bolts and inserts; also tension rod systems for roofs and canopies.



# Formwork & Site Accessories

Non-structural accessories that complement our engineered solutions and help keep your construction environment operating safely and efficiently, including moulds for casting standard and special concrete elements and construction essentials such as reinforcing bar spacers.



### **Industrial Technology**

Mounting channels, pipe clamps and other versatile framing systems that provide safe fixing in a wide range of industrial applications.

### Leviat product ranges:

Ancon | Aschwanden | Connolly | Halfen | Helifix | Isedio | Meadow Burke | Modersohn | Moment | Plaka | Scaldex | Thermomass

# **Ancon Optima Masonry Support Systems**

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### **Ancon Optima**

The Industry's growing emphasis on speed of construction, and the inability of welded bracket support systems to provide sufficient adjustment on site, led us to develop Ancon Optima.

Ancon Optima is a bracket angle masonry support system. Unlike welded systems, the brackets and angles are supplied as separate components. This provides greater flexibility in the final fixing position of the brackets and makes the system easier to handle and move around site.

Systems comprise laser-cut brackets, twostep angles with pre-marked fixing zones and locking wedges to ensure the correct contact is achieved between the two.

Ancon Optima Systems can be used with the standard Thermal Break to reduce cold bridging.



Ancon Optima 12 System

### **Standard Systems**

Standard systems, referenced Ancon Optima 6, 8, 10, 12 and 14 support an unfactored load of up to 6kN, 8kN, 10kN, 12kN and 14kN per metre respectively. All components are available from stock.

Brackets are available to suit cavities from 60mm to 200mm and are stocked in 5mm increments. Brackets can be changed on site for one of a different depth to allow for cavity variations. Two brackets of a different depth can be used on the same angle.

The brackets used across the five standard systems are universal. The differing performance of the five systems is generated by the varying length and thickness of the angle and the fixing centres of the brackets.

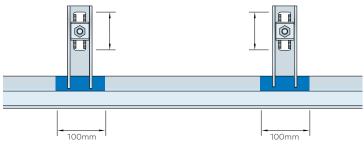
Left-hand and right-hand corners are available.

Not being specific to a particular project, unused components can be moved to another project or, for a small restocking charge, returned to us.

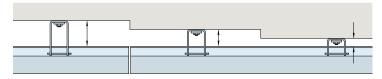
### **Cavity Variations**

The ability of welded bracket support systems to accommodate variations in the line of the structure is limited by the maximum thickness of shims, normally 12mm. Some additional adjustment will be possible by varying the bearing of the brickwork on the support angle but this will be very limited, particularly where pistol bricks are used.

When using a standard Ancon Optima System, brackets are available from stock to suit cavities from 60mm to 200mm in 5mm increments. They can be changed on site to allow for variations in the edge beam. Shims can be used for fine adjustments and should never need to be more than 4mm thick.



Adjustment of Ancon Optima



Ancon Optima accommodates variations in the line of the edge beam. Brackets of a different depth can be used on the same angle

### **Vertical Adjustment**

Vertical adjustment is achieved by the deep slot in the back of the bracket.

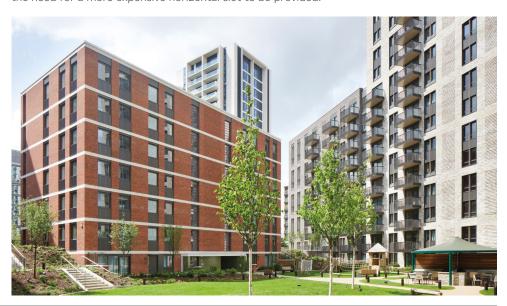
### **Horizontal Adjustment**

Ancon Optima angles have a 100mm pre-marked fixing zone which provides 50mm horizontal adjustment.

If fixing into concrete with expansion bolts, the bracket can be moved to eliminate clashes between the bolts and reinforcing bars.

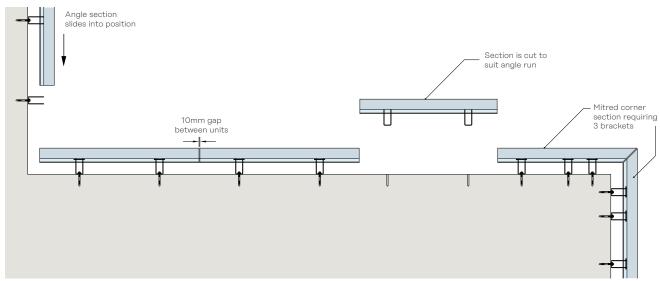
Horizontal adjustment can be increased by fixing the system to an Ancon Channel cast into the face of the concrete.

If fixing to steelwork, the brackets can be moved to align with the location of a hole, negating the need for a more expensive horizontal slot to be provided.





# **Ancon Optima Typical Layout Drawings**



Typical Ancon Optima layout

### **Setting Out of Standard Systems**

Unlike bespoke systems, there is no time-consuming setting out of individually referenced components with a standard system to a detailed layout drawing.

### **Cutting on site**

Standard Ancon Optima Systems are not designed for specific buildings and certain angles will need to be cut on site to suit the length required. Each angle section must have at least two brackets.



Scan the QR code or visit our website for more information

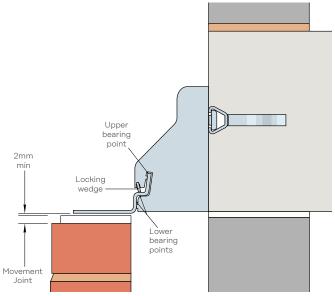
### Corners

Left-hand and right-hand corners are available. Each corner section requires three brackets in order to achieve the required performance. **Ancon Optima corner angles must never be cut on site.** Where corner arrangements are required, contact our Technical Team for further guidance.

#### Installation

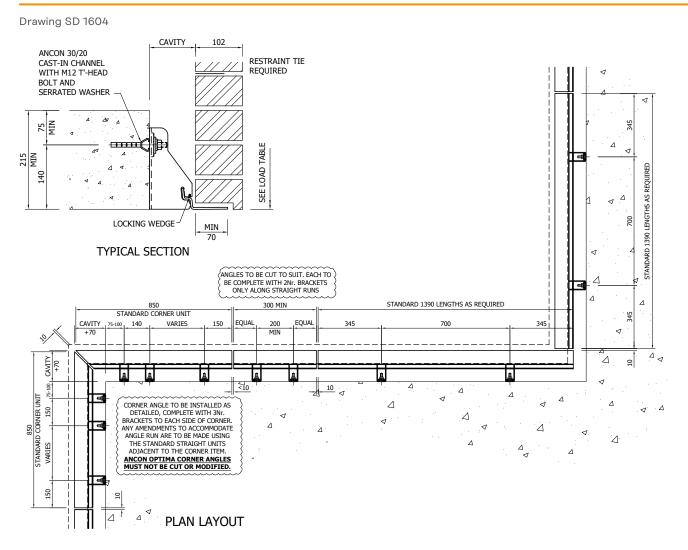
Installation of Ancon Optima provides significant time savings over welded support systems. The individual components are easier to move around site, often without hiring crane time. The preferred technique of installers is to level and fix two brackets and simply slide the angle into position. This reduces the time spent tightening and loosening the fixing bolts of a welded bracket system, in order to achieve a level horizontal shelf. Where space limitations prevent the angle from sliding, the brackets can be positioned on the angle and conventionally fixed; the smaller lengths of angle simplify this method of installation. When the brackets and angle are in position a locking wedge is tapped with a hammer through the notches in each bracket. These wedges ensure the correct contact is achieved between angle and brackets. A detailed installation guide is available here.

 $\frac{\text{https://www.ancon.co.uk/products/masonry-support/non-}}{\text{welded-bracket-angle-support}}$ 



Correct installation of Ancon Optima

### Ancon Optima 6 - Installation Layout Example - Fixed to 30/20 Channel



Performance Date	ta - Straig	ht Runs													
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)								6.0							
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)		6	.0		5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	-

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 6.5kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

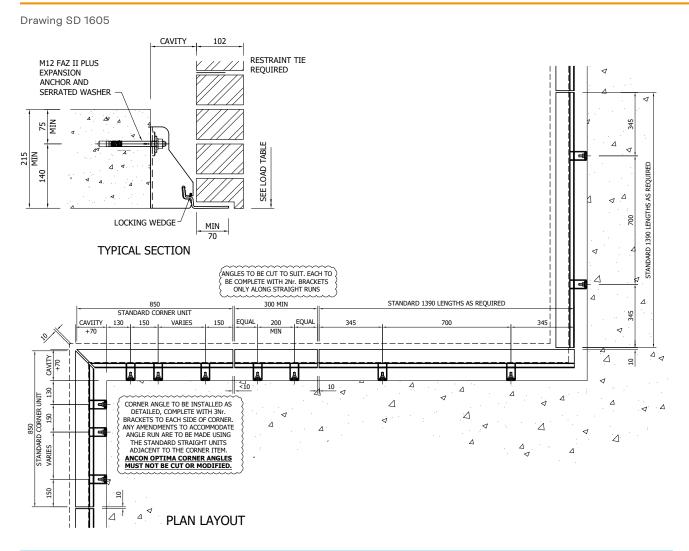
Tightening torque M12 T-head bolt to 30/20 channel = 50Nm

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)



### Ancon Optima 6 - Installation Layout Example - Fixed with M12 FAZ II Plus Anchors (75mm min. top edge)



#### Performance Data - Straight Runs Cavity (mm) 90 95 105 110 120 125 130 Load (kN/m) 6.0 Cavity (mm) 140 145 150 155 160 165 170 175 180 185 190 195 200 Load (kN/m) 6.0

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 6.5kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

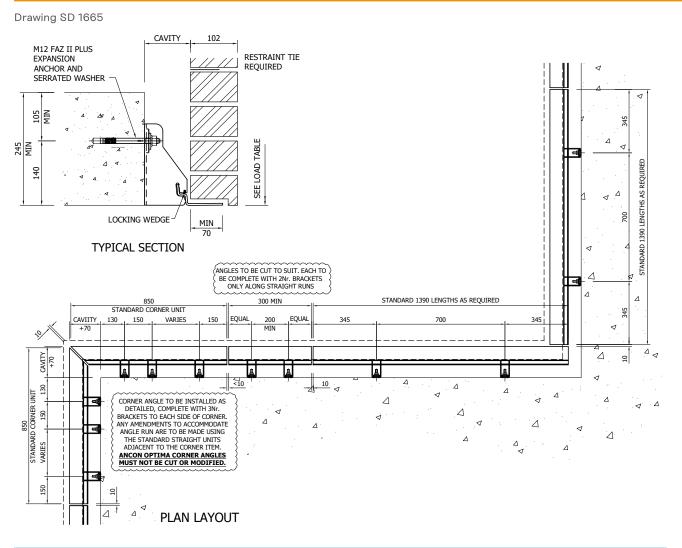
Tightening torque M12 FAZ II Plus 12/30 expansion bolt = 60Nm Drill Ø12 fixing hole 90mm deep; 85mm embedment

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

### Ancon Optima 6 - Installation Layout Example - Fixed with M12 FAZ II Plus Anchors (105mm min. top edge)



#### Performance Data - Straight Runs Cavity (mm) 90 95 105 110 120 125 130 Load (kN/m) 6.0 Cavity (mm) 140 145 150 155 160 165 170 175 180 185 190 195 200 Load (kN/m) 6.0

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 6.5kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

Tightening torque M12 FAZ II Plus 12/30 expansion bolt = 60Nm Drill Ø12 fixing hole 90mm deep; 85mm embedment

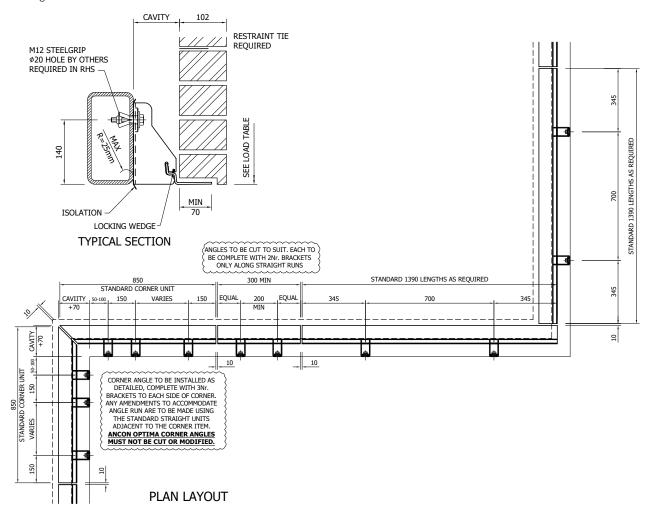
Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)



### Ancon Optima 6 - Installation Layout Example - Fixed with M12 Steelgrips™

### Drawing SD 1607



Performance Data	- Straigl	nt Runs													
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)								6.0							
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)							6.	.0							-

**Notes to above table:** Tables for straight runs only. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 6.5kg/m

All loads shown are un-factored service loads

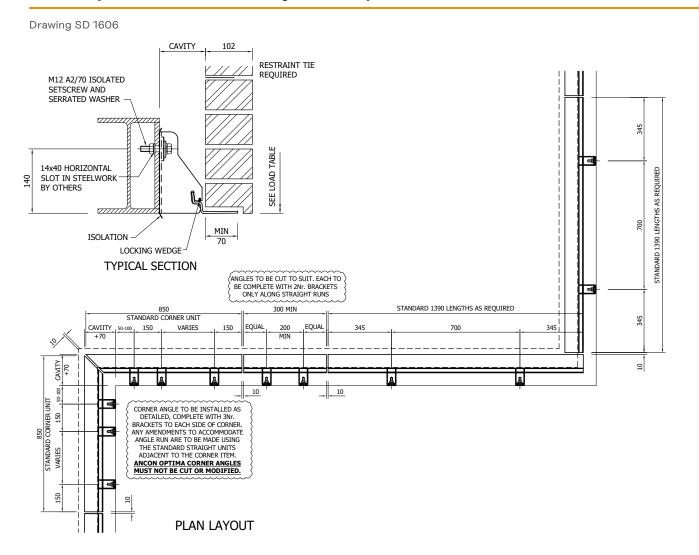
Tightening torque M12 Steelgrip™ = 80Nm Ø20 fixing hole required

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

### Ancon Optima 6 - Installation Layout Example - Fixed with M12 Setscrews



Performance Data	- Straigl	nt Runs													
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)								6.0							
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)							6	.0							-

**Notes to above table:** Tables for straight runs only. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 6.5kg/m

All loads shown are un-factored service loads

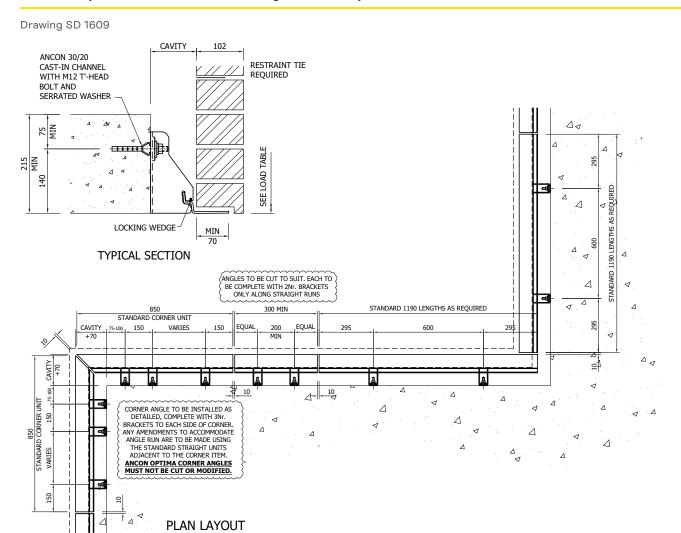
Tightening torque M12 Setscrew = 48Nm Ø14 fixing hole or slot required

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)



### Ancon Optima 8 - Installation Layout Example - Fixed to 30/20 Channel



Performance Data	- Straigl	ht Runs													
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)							8.0							7.8	7.7
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)	7.5	7.4	7.2	7.1	6.9	6.8	6.7	6.5	6.4	6.3	6.2	6.1	6.0	5.9	-

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 6.9kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

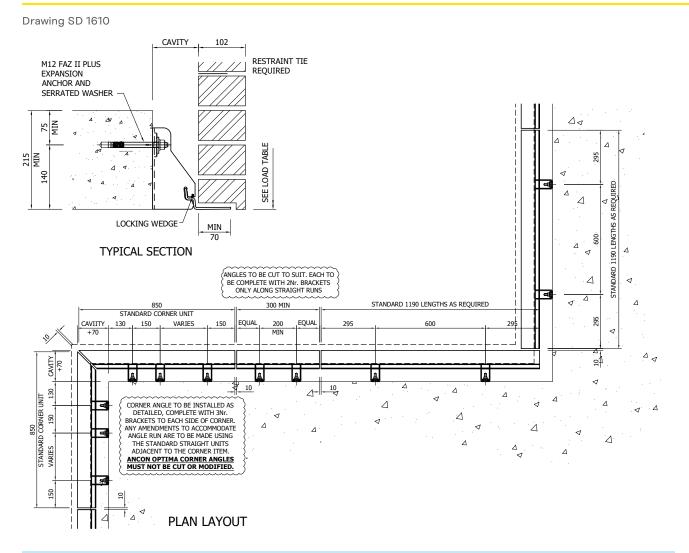
Tightening torque M12 T-head bolt to 30/20 channel = 50Nm

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

### Ancon Optima 8 - Installation Layout Example - Fixed with M12 FAZ II Plus Anchors (75mm min. top edge)



Performance Data	- Straigl	nt Runs													
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)								8.0							
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)				8	.0				7.9	7.7	7.6	7.5	7.3	7.2	-

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 6.9kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

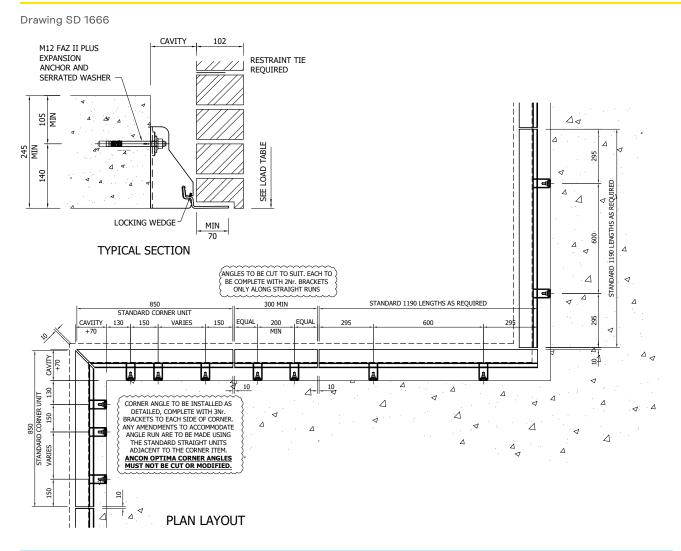
Tightening torque M12 FAZ II Plus 12/30 expansion bolt = 60Nm Drill Ø12 fixing hole 90mm deep; 85mm embedment

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)



### Ancon Optima 8 - Installation Layout Example - Fixed with M12 FAZ II Plus Anchors (105mm min. top edge)



Performance Data	- Straigl	nt Runs													
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)								8.0							
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)							8.	.0							-

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 6.9kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

Tightening torque M12 FAZ II Plus 12/30 expansion bolt = 60Nm Drill Ø12 fixing hole 90mm deep; 85mm embedment

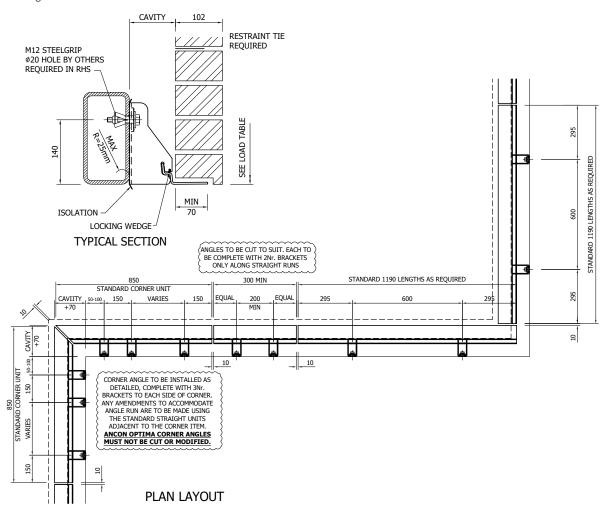
Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

### Ancon Optima 8 - Installation Layout Example - Fixed with M12 Steelgrips™

Drawing SD 1612



Performance Data	- Straigl	nt Runs													
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)								8.0							
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)							8.	.0							-

**Notes to above table:** Tables for straight runs only. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 6.9kg/m

All loads shown are un-factored service loads

Tightening torque M12 Steelgrip™ = 80Nm Ø20 fixing hole required

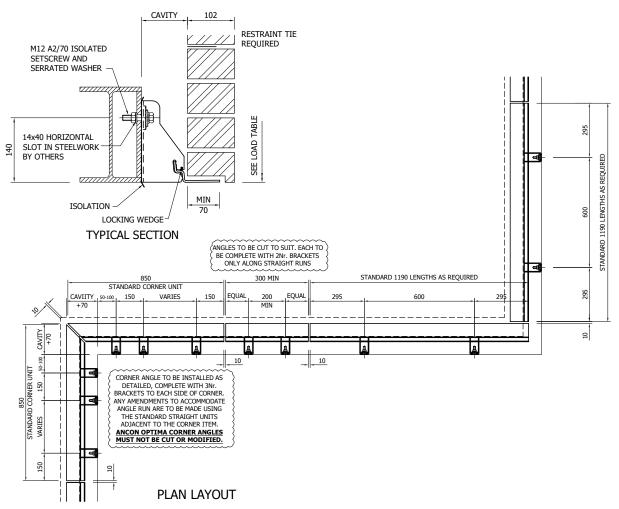
Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)



### Ancon Optima 8 - Installation Layout Example - Fixed with M12 Setscrews

### Drawing SD 1611



Performance Data	- Straigl	nt Runs													
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)								8.0							
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)							8.	.0							-

**Notes to above table:** Tables for straight runs only. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 6.9kg/m

All loads shown are un-factored service loads

Tightening torque M12 Setscrew = 48Nm Ø14 fixing hole or slot required

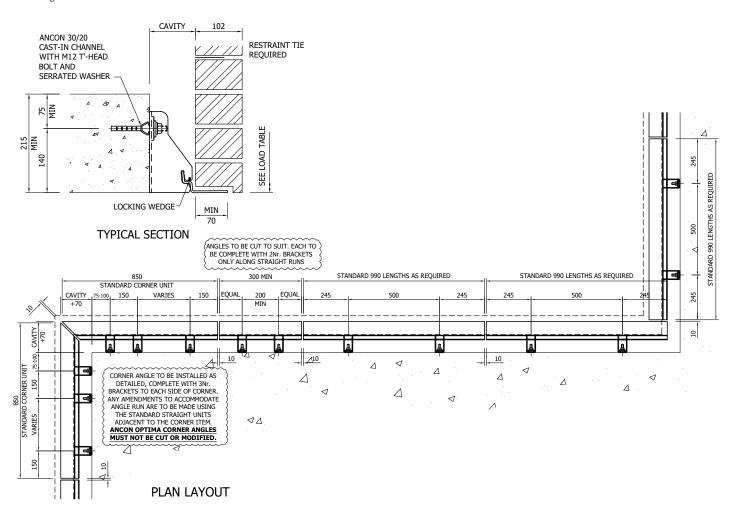
Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

### Ancon Optima 10 - Installation Layout Example - Fixed to 30/20 Channel

Drawing SD 1614



Performance Data	- Straigl	nt Runs													
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)						10.0						9.9	9.6	9.4	9.2
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)	9.0	8.8	8.7	8.5	8.3	8.2	8.0	7.9	7.7	7.6	7.4	7.3	7.2	7.0	-

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 7.4kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

Tightening torque M12 T-head bolt to 30/20 channel = 50Nm

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)



### Ancon Optima 10 - Installation Layout Example - Fixed with M12 FAZ II Plus Anchors (75mm min. top edge)

Drawing SD 1615

Performance Data - Straight Runs

70

145

10.0

140

75

150

80

155

85

160

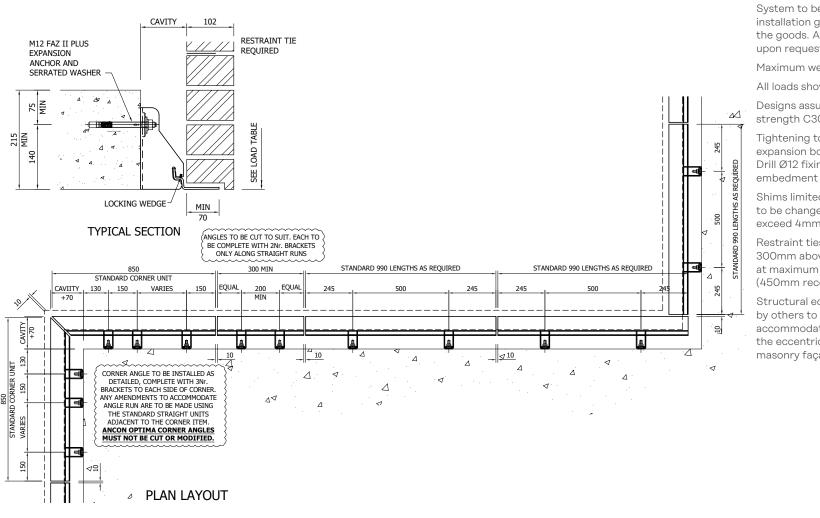
9.9

Cavity (mm)

Load (kN/m)

Cavity (mm)

Load (kN/m)



#### Notes

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 7.4kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

Tightening torque M12 FAZ II Plus 12/30 expansion bolt = 60Nm Drill Ø12 fixing hole 90mm deep; 85mm

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

90

165

9.8

95

10.0

170

9.6

100

175

9.4

105

180

9.2

Ancon Optima Typical Layout Drawings

November 2024

110

185

9.1

115

190

8.9

120

195

8.7

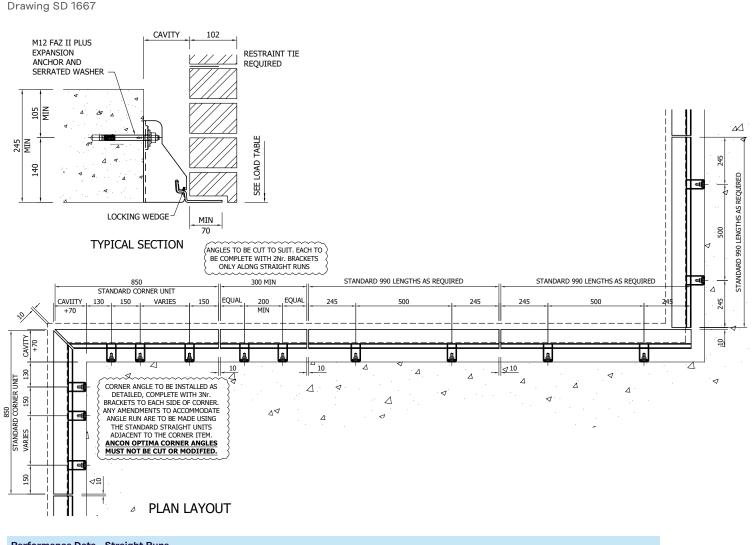
125

200

8.6

130

### Ancon Optima 10 - Installation Layout Example - Fixed with M12 FAZ II Plus Anchors (105mm min. top edge)



### Notes

embedment

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 7.4kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

Tightening torque M12 FAZ II Plus 12/30 expansion bolt = 60Nm Drill Ø12 fixing hole 90mm deep; 85mm

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

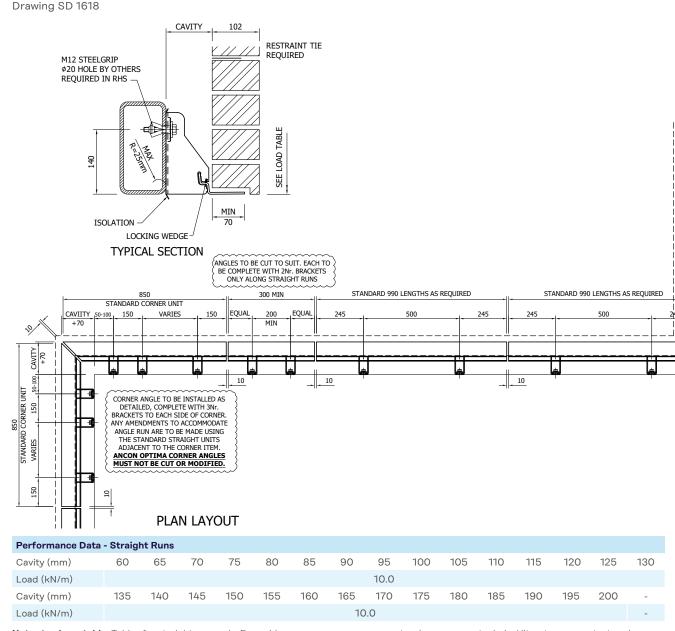
Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

#### Performance Data - Straight Runs Cavity (mm) 75 85 90 95 100 105 110 115 120 125 130 Load (kN/m) 10.0 Cavity (mm) 140 145 150 155 160 165 170 175 180 185 190 195 200 Load (kN/m) 10.0

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.



### Ancon Optima 10 - Installation Layout Example - Fixed with M12 Steelgrips™



#### **Notes**

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System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 7.4kg/m

All loads shown are un-factored service loads

Tightening torque M12 Steelgrip™ = 80Nm Ø20 fixing hole required

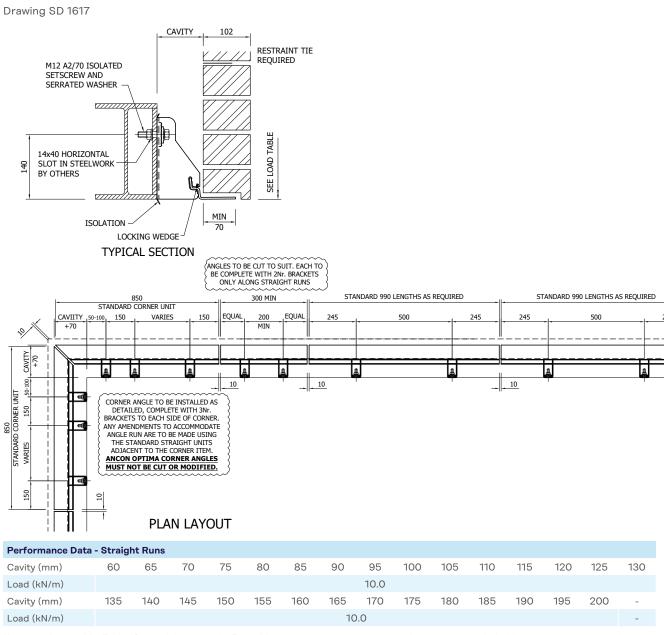
Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

**Notes to above table:** Tables for straight runs only. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Ancon Optima 10 - Installation Layout Example - Fixed with M12 Setscrews**



### **Notes**

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System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 7.4kg/m

All loads shown are un-factored service loads

Tightening torque M12 Setscrew = 48Nm Ø14 fixing hole or slot required

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

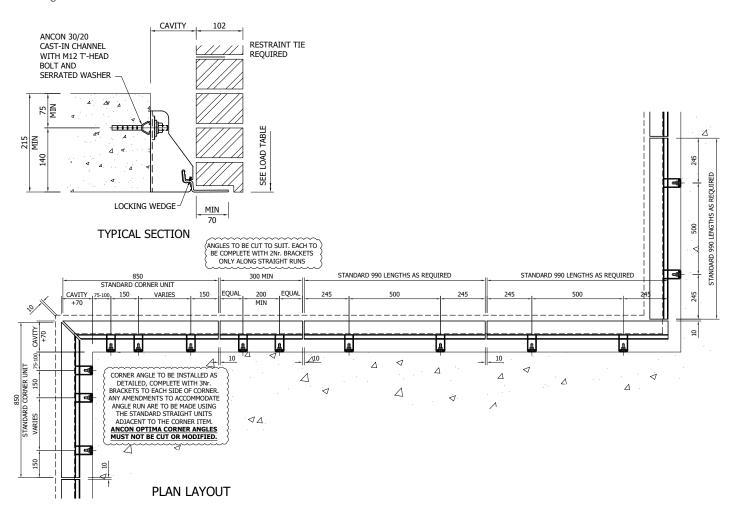
Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

**Notes to above table:** Tables for straight runs only. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.



### Ancon Optima 12 - Installation Layout Example - Fixed to 30/20 Channel

Drawing SD 1619



Performance Data	- Straigl	nt Runs													
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)	10.2	12.0	11.8	11.6	11.3	11.1	10.9	10.6	10.4	10.2	10.0	9.8	9.6	9.4	9.2
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)	9.0	8.8	8.7	8.5	8.3	8.2	8.0	7.9	7.7	7.6	7.4	7.3	7.2	7.0	-

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 8.5kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

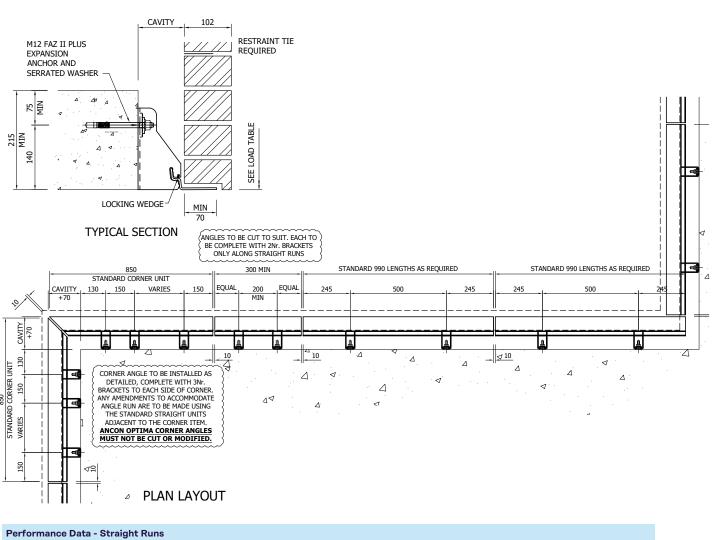
Tightening torque M12 T-head bolt to 30/20 channel = 50Nm

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

### Ancon Optima 12 - Installation Layout Example - Fixed with M12 FAZ II Plus Anchors (75mm min. top edge)



### Notes

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 8.5kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

Tightening torque M12 FAZ II Plus 12/30 expansion bolt = 60Nm Drill Ø12 fixing hole 90mm deep; 85mm embedment

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

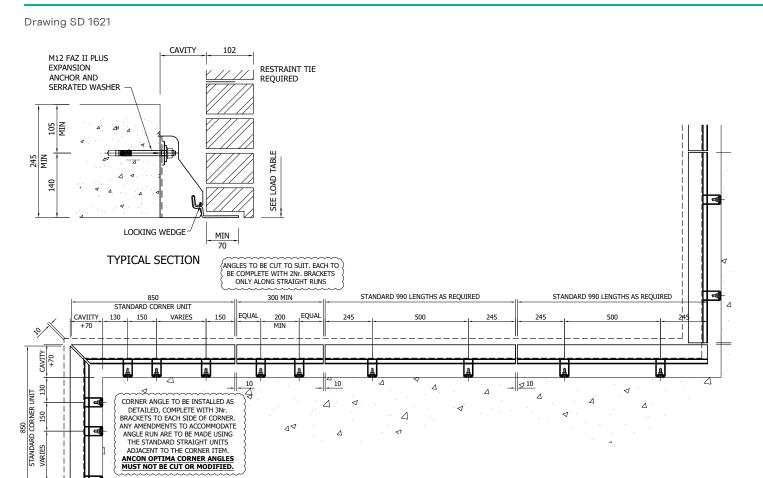
Cavity (mm) 65 70 75 80 85 90 95 100 105 110 115 120 125 130 Load (kN/m) 10.2 12.0 11.7 11.5 11.2 Cavity (mm) 135 140 145 150 155 160 165 170 175 180 185 190 195 200 Load (kN/m) 11.0 10.8 10.6 10.3 10.1 9.9 9.8 9.6 9.4 9.2 9.1 8.9 8.7 8.6

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.



Drawing SD 1620

### Ancon Optima 12 - Installation Layout Example - Fixed with M12 FAZ II Plus Anchors (105mm min. top edge)



#### Performance Data - Straight Runs Cavity (mm) 65 70 75 80 85 90 95 100 105 110 115 120 125 130 Load (kN/m) 10.2 12.0 Cavity (mm) 135 140 145 150 155 160 165 170 175 180 185 190 195 200 Load (kN/m) 12.0 11.8 11.6 11.4 11.2 11.0 10.8 10.6 10.4 10.3 10.1

PLAN LAYOUT

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### Notes

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 8.5kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

Tightening torque M12 FAZ II Plus 12/30 expansion bolt = 60Nm Drill Ø12 fixing hole 90mm deep; 85mm embedment

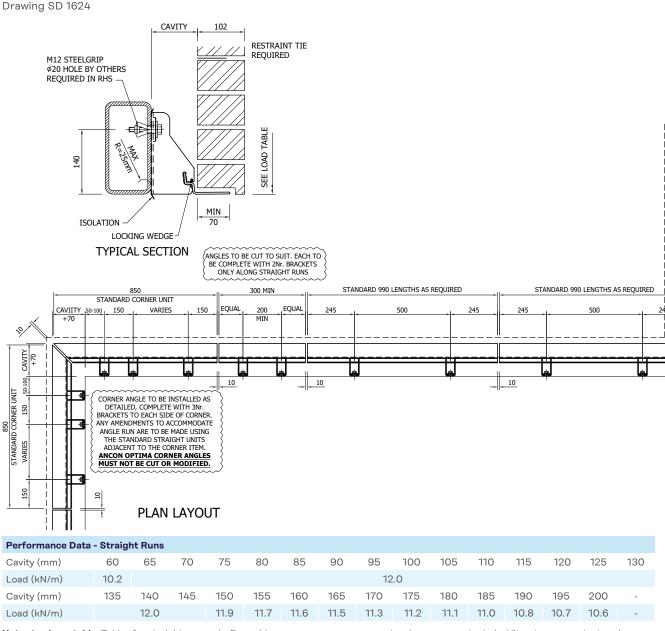
Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

Ancon Optima Typical Layout Drawings

### Ancon Optima 12 - Installation Layout Example - Fixed with M12 Steelgrips™



### **Notes**

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System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 8.5kg/m

All loads shown are un-factored service loads

Tightening torque M12 Steelgrip™ = 80Nm Ø20 fixing hole required

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

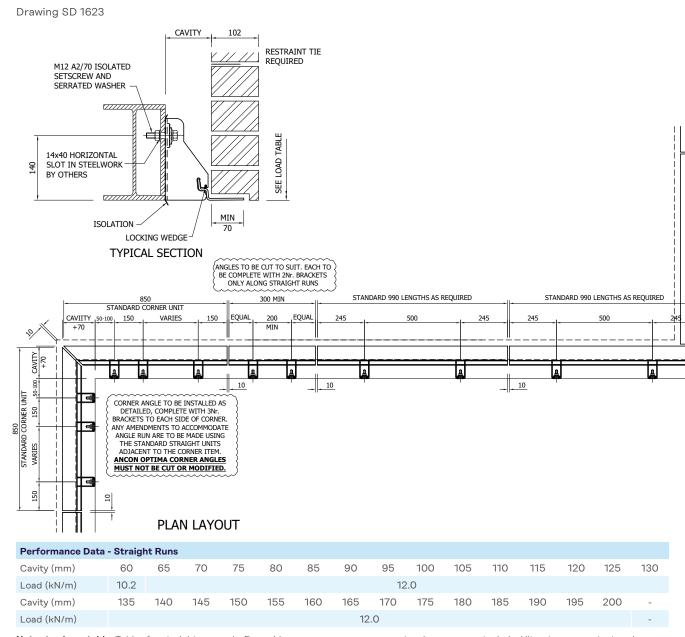
Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

**Notes to above table:** Tables for straight runs only. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.



### Ancon Optima 12 - Installation Layout Example - Fixed with M12 Setscrews



### **Notes**

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System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 8.5kg/m

All loads shown are un-factored service loads

Tightening torque M12 Setscrew = 48Nm Ø14 fixing hole or slot required

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

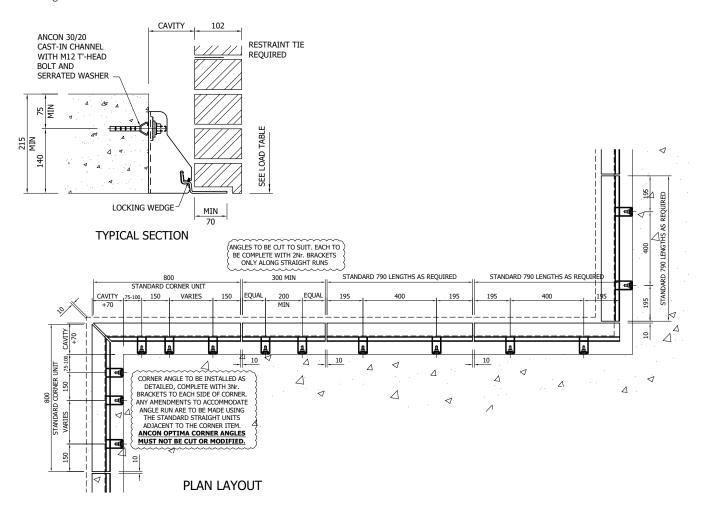
Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

**Notes to above table:** Tables for straight runs only. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### Ancon Optima 14 - Installation Layout Example - Fixed to 30/20 Channel

Drawing SD 1625



Performance Dat	a - Straigl	nt Runs													
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)	12.8		14	4.0		13.9	13.6	13.3	13.0	12.8	12.5	12.2	12.0	11.8	11.5
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)	11.3	11.1	10.8	10.6	10.4	10.2	10.0	9.8	9.7	9.5	9.3	9.1	9.0	8.8	-

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 9.2kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

Tightening torque M12 T-head bolt to 30/20 channel = 50Nm

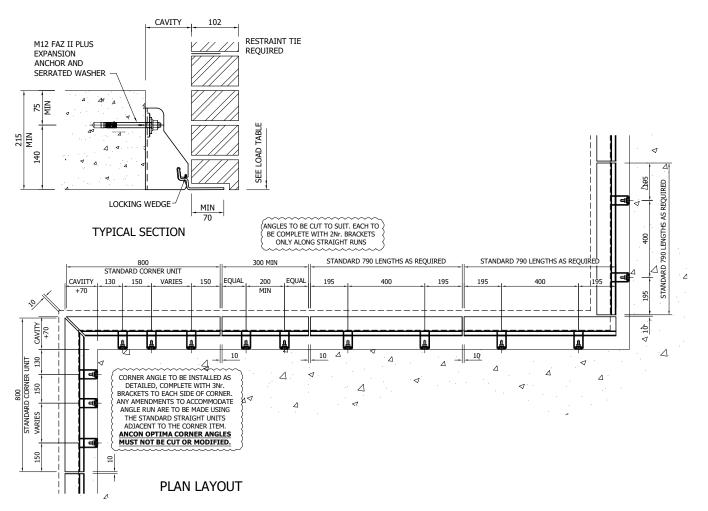
Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)



### Ancon Optima 14 - Installation Layout Example - Fixed with M12 FAZ II Plus Anchors (75mm min. top edge)





Performance Data - Straight Runs															
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)	12.8							14.0							13.7
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)	13.5	13.2	12.9	12.7	12.4	12.2	12.0	11.8	11.5	11.3	11.1	10.9	10.8	10.6	_

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### Notes

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 9.2kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

Tightening torque M12 FAZ II Plus 12/30 expansion bolt = 60Nm Drill Ø12 fixing hole 90mm deep; 85mm embedment

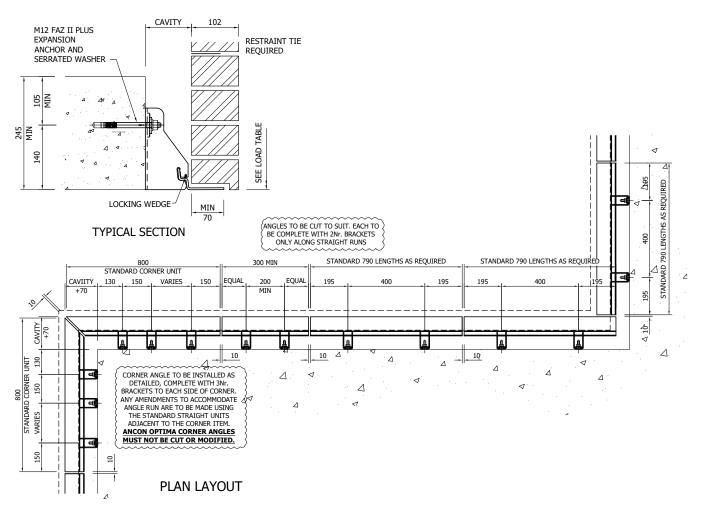
Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

### Ancon Optima 14 - Installation Layout Example - Fixed with M12 FAZ II Plus Anchors (105mm min. top edge)





Performance Data - Straight Runs															
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)	12.8														
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)				14.0				13.9	13.7	13.5	13.3	13.0	12.8	12.6	-

**Notes to above table:** Tables for straight runs only and based on C30/37 concrete, cracked. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 9.2kg/m

All loads shown are un-factored service loads

Designs assume cracked concrete, minimum strength C30/37

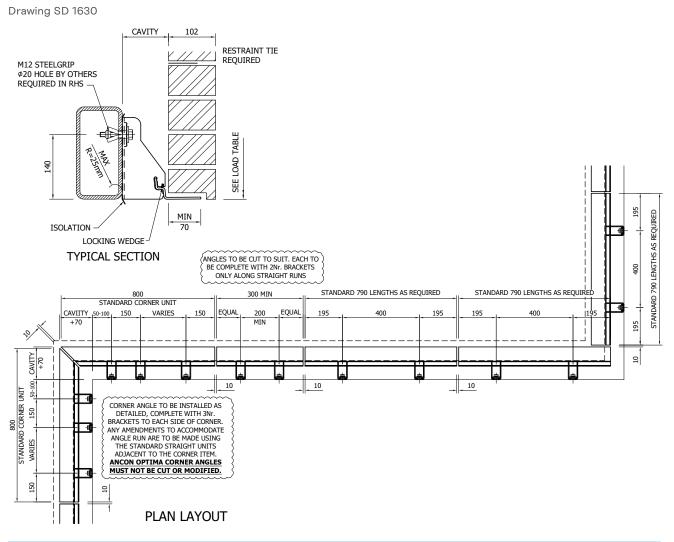
Tightening torque M12 FAZ II Plus 12/30 expansion bolt = 60Nm Drill Ø12 fixing hole 90mm deep; 85mm embedment

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)



### Ancon Optima 14 - Installation Layout Example - Fixed with M12 Steelgrips™



Performance Data - Straight Runs															
Cavity (mm)	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
Load (kN/m)	12.8														
Cavity (mm)	135	140	145	150	155	160	165	170	175	180	185	190	195	200	-
Load (kN/m)					14.0					13.9	13.7	13.6	13.4	13.3	-

**Notes to above table:** Tables for straight runs only. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 9.2kg/m

All loads shown are un-factored service loads

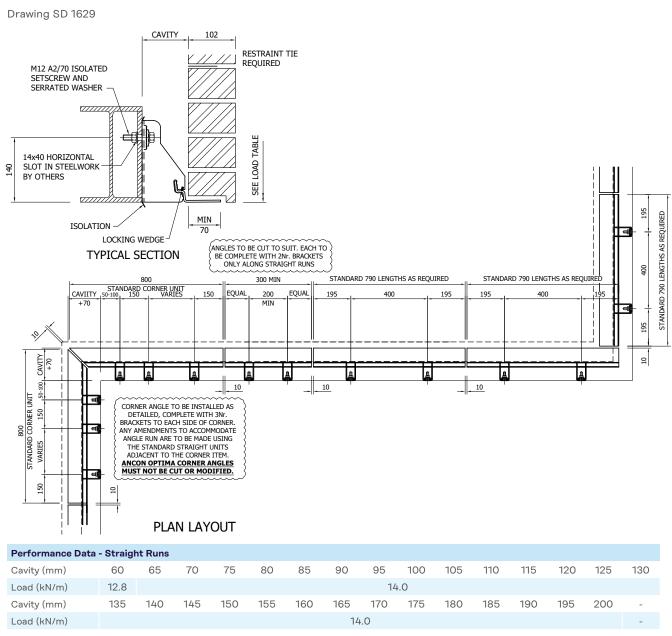
Tightening torque M12 Steelgrip™ = 80Nm Ø20 fixing hole required

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)

Structural edge member must be designed by others to minimise deflection and accommodate the torsional forces created by the eccentric load induced by the supported masonry façade

### Ancon Optima 14 - Installation Layout Example - Fixed with M12 Setscrews



**Notes to above table:** Tables for straight runs only. For guidance on corner arrangements, please see our technical literature or contact us. In some instances, an alternate system may be required at external corner locations.

### **Notes**

System to be installed in accordance with installation guidance supplied by Leviat with the goods. Additional copies can be supplied upon request or downloaded from our website

Maximum weight of system = 9.2kg/m

All loads shown are un-factored service loads

Tightening torque M12 Setscrew = 48Nm Ø14 fixing hole or slot required

Shims limited to maximum 4mm. Brackets to be changed should shimming requirement exceed 4mm

Restraint ties to be provided within 225-300mm above the masonry support angle and at maximum 450-600mm horizontal centres (450mm recommended where achievable)



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