



Description:

**The modular ladder is designed to provide personnel access to underground structures. The ladder is supplied in preassembled sections which are bolted together on site and fixed to the wall.**

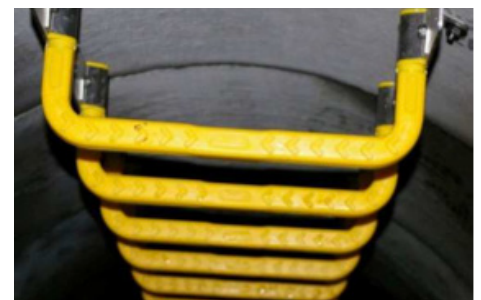
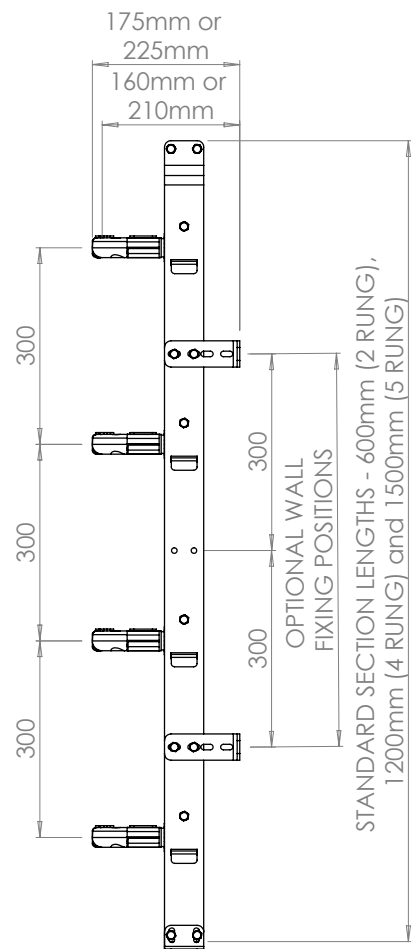
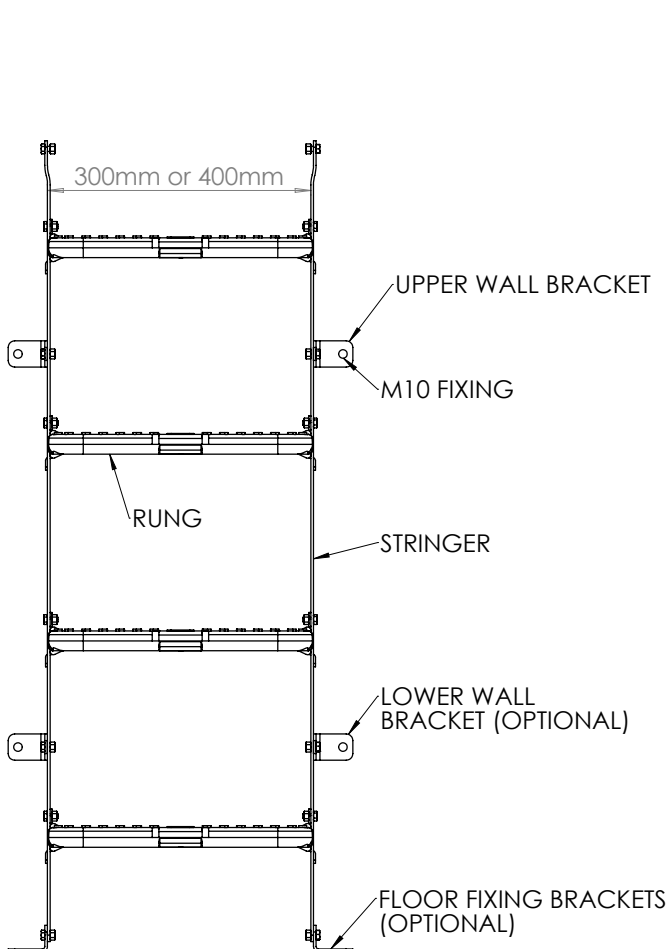
#### Advantages:

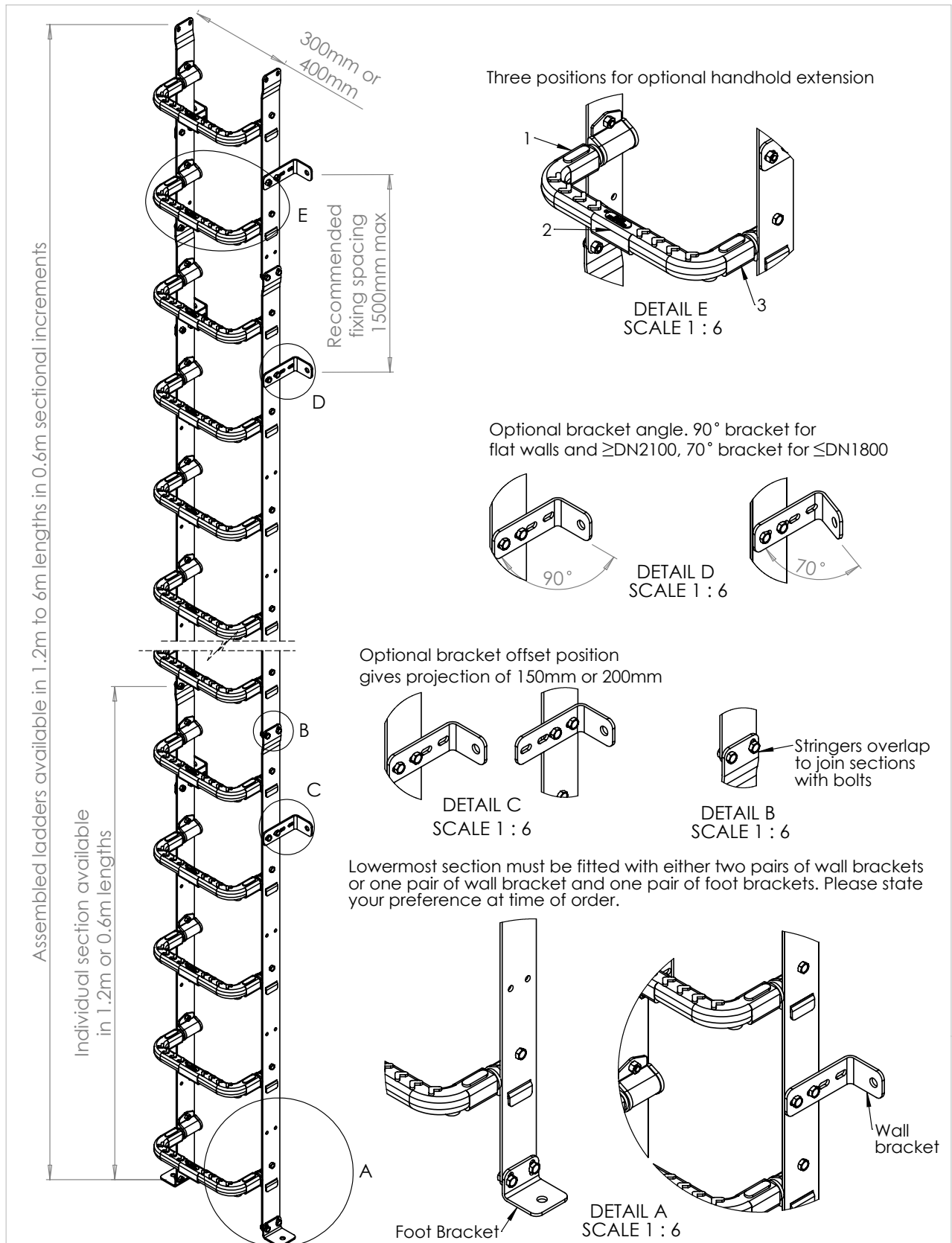
- None bespoke design. Stock parts can be configured on site to create any length of ladder required
- Light weight sections (7.5kg per metre)
- High visibility rungs
- Rungs have proven high grip tread
- Adjustable for 150mm or 200mm nominal projection
- Two widths of rung available, 300mm and 400mm
- Easy fit, two M10 anchors per 1.5m length
- Can be stored on site and installed as required minimising time using temporary access
- No special tools required
- Damaged rungs or sections can be replaced with basic hand tools
- Corrosion resistant stainless steel and plastic encapsulated high tensile steel rungs
- WRC approved, search for approval PT/479/0921



## Technical:

- The ladder is designed to the requirements of EN14396 and Sewers for Adoption 7
- Exposed steel components are 304 (A2 / X6CrNiTi18-10) stainless steel
- M10 anchors (not supplied) shall be selected according to the surface with which the ladder shall be attached. Fixings shall provide a minimum pullout of 1.6kN and a minimum shear of 6kN
- Rungs are high tensile steel encapsulated with virgin polypropylene copolymer offering a resistance in excess of 1M $\Omega$  at 500v. Polypropylene has corrosion resistance equivalent to 316 stainless steel
- Ladder is of type D in accordance with section 4.3.1 of EN14396
- Tread width is available at a nominal 300mm or 400mm
- Rung vertical spacing is 300mm
- Rung standoff is optionally 175mm or 225mm determined by the installer to suit the minimum clear opening requirements
- The length and position of the ladder can be determined by the installer to comply with the required maximum distance from the surface of 675mm
- The recommended distance between two wall fixings is 1500mm
- Fasteners are designed such that they cannot work loose
- Manufactured in a UK based ISO 9002: 1994 quality assured factory

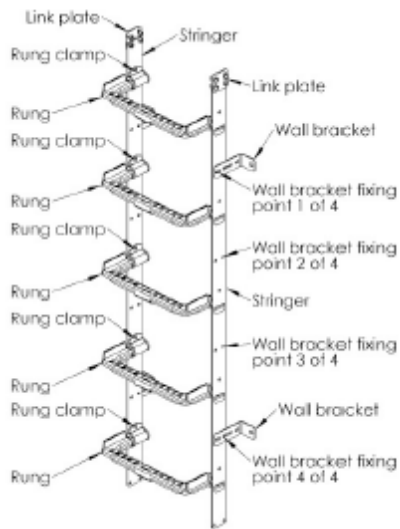




<b>&gt;&gt;Caswick Ltd&lt;&lt;</b> Tel: +44(0)1427 872017 © Copyright. All rights reserved		THIRD ANGLE 		TITLE: <b>Ladder Modular Fixed</b>	
DO NOT SCALE - If in doubt ask! Unless otherwise stated: - All Dimensions in MM - All sharp edges to be removed		Drawn By: <b>A. Turner</b>		MATERIAL: Material <not specified>	
- TOLERANCES: LINEAR: ±5mm ANGULAR: ±5°		WEIGHT: 10869.09 g		DWG NO. <b>7149</b>	
		REVISION A01+		SCALE:1:12 SHEET 3 OF 7	
				08/02/2013	
				<b>A4</b>	



**Image A:**



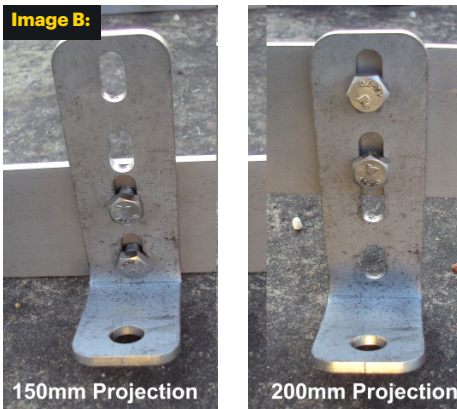
### Required Equipment:

1. M10 Anchor fixings to suit material that ladder is to be fixed to.
2. Drill, spanner & preparation equipment to suit chosen fixing.
3. 2 off 13mm spanners.

### To Install Caswick Modular Ladder:

1. Identify components as shown in image A. Overall length of supplied section may vary.
2. Decide on required projection of ladder rung from wall (as shown on Image B) and loosely fix the wall brackets to stringers. Fit 4 wall brackets onto first section (shown left on image C) to uppermost and lowermost positions. Fit 2 wall brackets to the uppermost position of subsequent sections (shown right on image C). Fit link plates to the top of all but the final section of ladder. Do not tighten the nuts at this stage as there is some movement in the brackets to allow for an uneven surface, but ensure the nuts are tight enough such that they will not fall off. The ladders may be supplied with brackets ready fitted from the factory. If this is the case refer to the label on each section. The ladders will be numbered in sets and the sections of each ladder will also be numbered, section 1 is the lowermost section and the sections are assembled in order.
3. Support the first section so that the lowest rung is within desired distance from benching. Ensure that the section is aligned with the access and vertical. Mark the position of the 4 off mount points (Image D) and fix chosen anchors in accordance with the manufacturers instructions.
4. Secure the first section of ladder and tighten the brackets to the stringer with 2 off 13mm spanners (Image E).
5. Loosely fit the next section of ladder to the link plates, ensure the section is vertical and fix the next wall brackets. Tighten the wall brackets and link plate nuts and bolts with 2 off 13mm spanners.
6. Repeat step 5 until all sections are installed.
7. If the final section is too long cut and deburr the stringer approximately 60mm above uppermost required rung (Image F).
8. Installation can be completed bottom up as described here or top down if this permits easier access.

**Image B:**



**Image C:**



**Image D:**

