

## **R10 RAINWATER PIPEWORK/ GUTTERS**

To be read with Preliminaries/ General conditions.

### **TYPES OF PIPEWORK/ GUTTER**

#### **260 GALVANISED STEEL PIPEWORK FOR EXTERNAL USE:**

- LINDAB RAINLINE GALVANISED STEEL RAINWATER GOODS.
- Pipes, fittings and accessories: Supplied and installed in accordance with the manufacturer's recommendations. Supplier Lindab Ltd. Building Products Division, Shenstone trading estate, Broms grove Road, Halesowen, West Midlands, B63 3XB.  
Nominal size(s): standard 150mm H/R deep flow gutter to main roof and 125mm gutter to the all smaller roofs.  
Colour: Galvanised finish.
- Method of fixing: Slotted fitting.
- Downpipes: 100mm Diameter pipe for the main roof and 87mm pipes for all smaller roofs.
- Fascia bracket fixing: Fascia bracket spacings at 600mm centres. All brackets should be secured to sprocket with two 25 x 5mm (1" x 10) screws.
- Angles, outlets and stopends: External and internal angles and all outlets and stopends should have close supporting brackets fitted within 150mm on each side.
- Unions: Unions should have a supporting bracket positioned within 150mm on one side.  
Rainwater pipes: Rainwater pipes are generally fitted externally with joints between spigot and socket left unsealed. Every rainwater pipe should have a clip located at its socket to support the pipework system. Intermediate pipe clips should then be provided at maximum 1.8m centres. An expansion gap of 10mm should be allowed between the end of each pipe and the bottom of the socket. It is recommended that socket and pipe clips be secured with round headed screws, zinc plated, sheradised or brass.

### **INSTALLATION**

#### **400 BEFORE COMMENCING WORK specified in this section, ensure that:**

- Below ground drainage is ready to receive rainwater or that the discharge can be dispersed by approved means to prevent damage or disfigurement of the building fabric.
- Any specified painting of surfaces which will be concealed or inaccessible is completed.

#### **410 INSTALLATION GENERALLY:**

- Install pipework/gutters to ensure the complete discharge of rainwater from the building without leaking.
- Obtain all components for each type of pipework/guttering from the same manufacturer unless specified otherwise.
- Provide access fittings and rodding eyes as necessary in convenient locations to permit adequate cleaning and testing of pipework.
- Avoid contact between dissimilar metals and other materials, which would result in electrolytic corrosion.
- Do not bend plastics or galvanized steel pipes.
- Adequately protect pipework/gutters from damage and distortion during construction. Fit purpose made temporary caps to prevent ingress of debris. Fit all access covers, cleaning eyes and blanking plates as the work proceeds.
- Where not specified otherwise use plated, sherardized, galvanized or nonferrous fastenings, suitable for the purpose and background, and compatible with the material being fixed.

#### **420 FIXING GUTTERS:**

- Set out to a true line and even gradient to ensure no ponding or backfall. Position high points of gutters as close as practical to the roof and low points not more than 50 mm below the roof.
- Position outlets to align with connections to below ground drainage, unless shown otherwise on drawings.

- Provide for thermal and building movement when fixing and jointing, and ensure that clearances are not reduced as fixing proceeds.
  - Seal as specified to make watertight.
    - Ensure that roofing underlay is dressed into gutter.
- 450 RAINWATER OUTLETS: Ensure that:
- Outlets are securely fixed before connecting pipework.
  - Junctions between outlets and pipework can accommodate all movement in the structure and pipework.
- 460 FIXING PIPEWORK:
- Fix securely at specified centres plumb and/or true to line.
  - Make changes in direction of pipe runs only where shown on drawings unless otherwise approved.
  - Fix branches and low gradient sections with uniform and adequate falls to drain efficiently.
  - Fix externally socketed pipes/fittings with sockets facing upstream.
  - Provide additional supports as necessary to support junctions and changes in direction.
  - Fix every length of pipe at or close below the socket collar or coupling.
  - Provide a load bearing support for vertical pipes at not less than every storey level. Tighten fixings as the work proceeds so that every storey is self supporting and undue weight is not imposed on fixings at the base of the pipe.
  - Isolate from structure where passing through walls or floors and sleeve pipes as specified in Section P31.
  - Provide for thermal and building movement when fixing and jointing, and ensure that clearances are not reduced as fixing proceeds.
  - Fix expansion joint pipe sockets rigidly to the building and elsewhere use fixings that allow the pipe to slide.
- 465 JOINTING PIPEWORK/GUTTERS:
- Joint using materials, fittings and techniques, which will make effective and durable connections.
  - Joint differing pipework/gutter systems with adaptors recommended by manufacturer(s).
  - Cut ends of pipes to be clean and square with burrs and swarf removed. Chamfer pipe ends before inserting into ring seal sockets.
  - Ensure that jointing or mating surfaces are clean, and where necessary lubricated, immediately before assembly.
  - Form junctions using fittings intended for the purpose ensuring that jointing material does not project into bore of pipes, fittings and appliances.
  - Remove surplus flux/solvent/cement/sealant from joints.
- 510 ELECTRICAL CONTINUITY: Use clips or suitable standard couplings supplied for the purpose by pipework manufacturer to ensure electrical continuity at all joints in metal pipes with flexible couplings and which are to be earth bonded.
- 540 ACCESS FOR TESTING AND MAINTENANCE:
- Install pipework and gutters with adequate clearance to permit testing, cleaning and maintenance.
  - Position access fittings and rodding eyes so that they are not obstructed by other pipework, framing, etc.
- 550 TESTING GENERALLY:
- Inform CA sufficiently in advance to give him a reasonable opportunity to observe tests.
  - Check that all sections of installation are free from obstruction and debris before testing.
  - Provide clean water, assistance and apparatus for testing as required.
  - Carry out tests as specified. After testing, locate and remedy all defects without delay and retest as instructed.
  - Keep a record of all tests and provide a copy of each to the CA.

- 570 GUTTER TEST: Block all outlets, fill gutters to overflow level and after 5 minutes closely inspect for leakage.
- 590 IMMEDIATELY BEFORE HANDOVER:
- Remove construction rubbish and debris from all roofs and gutters. Where possible, sweep and remove fine dust, which may enter rainwater systems. Do not sweep or flush dust or debris into the rainwater system.
  - Remove swarf, debris and temporary caps from the entire rainwater installation. Ensure that all access covers rodding eyes, outlet gratings, etc. are secured complete with all fixings.