**R11 Above Ground Foul Drainage Systems**

2 To be read with Preliminaries/General conditions.

**GENERAL**

115 ABOVE GROUND FOUL DRAINAGE SYSTEMS.  
Sanitary and floor drainage outlets: As per detail sections below  
Waste pipework: As per detail sections below  
Discharge stack and branch pipework: As per detail sections below  
Separate ventilating pipework: As per detail sections below  
Accessories: As per detail sections below  
Disposal: As per detail sections below

**SYSTEM PERFORMANCE**

210 DESIGN  
Design: Complete the design of the above ground foul drainage system  
Standard: To BSEN12056-1:2000 and BSEN12056-2:2000, and in accordance with BSEN12056-2:2000, National Annexes NA-NG  
Proposals: Submit Drawings, technical information, calculations and manufacturer’s literature.

220 COLLECTION AND DISTRIBUTION OF FOUL WATER:   
General: Complete, and without leakage or noise nuisance

230 DESIGN PARAMETERS - GENERAL  
General: Quick, quiet and complete, self-cleansing in normal use, without blockage, crossflow, backfall, leakage, odours, noise nuisance or risk to health.  
Pressure fluctuations in pipework (maximum): ±38 mm water gauge.  
Water seal retained in traps (minimum): 25 mm.  
  
**PRODUCTS**

315 MARLEY ALUTEC SHOWER DRAINS

Manufacturer: Marley Alutec, Unit 1 (G-H), Viking Industrial Park, Hudson Road,  
Elms Farm Industrial Estate, Bedford MK41 0LZ  
Tel: 01234 359438, Fax: 01234 357199.  
Email: enquiries@marleyalutec.co.uk  
Reference: Alutec aluminium shower outlet  
Type: Vertical spigot – Tiled floor  
Product code: DF232

Description: Polished stainless steel grate, K3 load-class, for tiled flooring

Connection size: 40mmØ, 110mmØ

Flow Performance: 73 litres per minute

Material: Body made from marine grade Aluminium alloy to BSEN1559:1997, BSEN 1676:1997 and BSEN 1706:1998

**EXECUTION**

601 INSTALLATION GENERALLY

Standard: To BS EN 12056-5.

Components: From the same manufacturer for each type of pipework.

Electrolytic corrosion: Avoid contact between dissimilar metals where corrosion may occur.

Plastics and galvanized steel pipes: Do not bend.

Allowance for thermal and building movement: Provide and maintain clearance as fixing and jointing proceeds.

Concealed or inaccessible surfaces: Decorate before starting work specified in this section.

Protection:

- Purpose made temporary caps: Fit to prevent ingress of debris.

- Access covers, cleaning eyes and blanking plates: Fit as the work proceeds

605 PIPE ROUTES

General: The shortest practical, with as few bends as possible.

- Bends in wet portion of soil stacks: Not permitted.

- Routes not shown on drawings: Submit proposals before commencing work.

610 FIXING PIPEWORK

Pipework: Fix securely plumb and/ or true to line. Fix discharge stack pipes at or close below socket collar or coupling.

Branches and low gradient sections: Fix with uniform and adequate falls to drain efficiently.

Externally socketed pipes and fittings: Fix with sockets facing upstream.

Additional supports: Provide as necessary to support junctions and changes in direction.

Vertical pipes: Provide a load bearing support not less than every storey level.

Tighten fixings as work proceeds so that every storey is self supporting.

Wall and floor penetrations: Isolate pipework from structure, e.g. with pipe sleeves.

Masking plates: Fix at penetrations if visible in the finished work.

Expansion joint sockets: Fix rigidly to the building.

Fixings: Allow the pipe to slide.

630 JOINTING PIPEWORK - GENERALLY

General: Joint with materials, fittings and techniques that will make effective and durable connections.

Jointing differing pipework systems: With adaptors intended for the purpose.

Cut ends of pipes: Clean and square. Remove burrs and swarf. Chamfer pipe ends before inserting into ring seal sockets.

Jointing or mating surfaces: Clean and, where necessary, lubricate immediately before assembly.

Junctions: Form with fittings intended for the purpose.

Jointing material: Do not allow it to project into bore of pipes and fittings.

Surplus flux, solvent jointing materials and cement: Remove from joints.

640 JOINTING PIPEWORK - CAST IRON - FLEXIBLE COUPLINGS

Jointing: Paint cut ends of pipes.

645 JOINTING PIPEWORK - CAST IRON - SPIGOT AND SOCKET

Jointing: See manufactures instructions

655 JOINTING PIPEWORK - HDPE

Jointing: Electrofusion couplings, pipe prepared to manufacturers recommendations.

675 COATED PIPES

Cutting: Recoat bare metal.

680 ELECTRICAL CONTINUITY

Joints in metal pipes with flexible couplings: Make with clips (or suitable standard pipe couplings) supplied for earth bonding by pipework manufacturer to ensure electrical continuity.

685 IDENTIFICATION OF INTERNAL FOUL DRAINAGE PIPEWORK

Markings: To BS 1710.

Type: Integral lettering on pipe wall, self-adhesive bands or identification clips.

Locations: At 500 mm centres, junctions and both sides of slabs, valves, appliances, bulkheads and wall penetrations.

695 DISCHARGE AND VENTILATING STACKS

Terminations: Perforated cover or cage that does not restrict airflow.

Material: Stainless Steel, uPVC or HDPE

700 INSTALLING AIR ADMITTANCE VALVES

Position: Vertical, above flood level of highest appliance served and clear of insulation materials (other than the manufacturer's insulating cover).

Connection to discharge stack: Allow removal for rodding, e.g. ring seal.

Roof spaces and other unheated locations: Fit manufacturer's insulating cover.

705 ACCESS FOR TESTING AND MAINTENANCE

General: Install pipework with adequate clearance to permit testing, cleaning and maintenance, including painting where necessary.

Access fittings and rodding eyes: Position to avoid obstruction.

**COMPLETION**

900 TESTING GENERALLY

Dates for testing: Give notice.

Period of notice (minimum): 3 days.

Preparation:

Pipework: Securely fixed and free from obstruction and debris.

Traps: Filled with clean water.

Testing:

- Supply clean water, assistance and apparatus.

- Do not use smoke to trace leaks.

Records: Submit a record of tests.

905 PIPEWORK AIRTIGHTNESS TEST

Preparation:

- Open ends of pipework: Temporarily seal using plugs.

- Test apparatus: Connect a 'U' tube water gauge and air pump to pipework via a plug or through trap of an appliance.

Testing: Pump air into pipework until gauge registers 38 mm.

Required performance: Pressure of 38 mm is to be maintained without loss for at least three minutes.

910 SIPHONAGE AND BACK PRESSURE TESTS

Method:

- WC pans: Test by flushing.

- Other appliances: Test by filling to overflow level, then removing the plug.

Number of tests: Test each appliance three times. Recharge traps before each test.

Self siphonage testing: Test each appliance individually.

Induced siphonage and back pressure testing: Test by discharging the following numbers of appliances simultaneously on each stack:

- WCs: To be confirmed by employers agent

- Washbasins: To be confirmed by employers agent

- Sinks: To be confirmed by employers agent

- Selection of appliances: Submit proposals.

915 PREHANDOVER CHECKS

Temporary caps: Remove.

Permanent blanking caps, access covers, rodding eyes, floor gratings and the like: Secure complete with fixings.