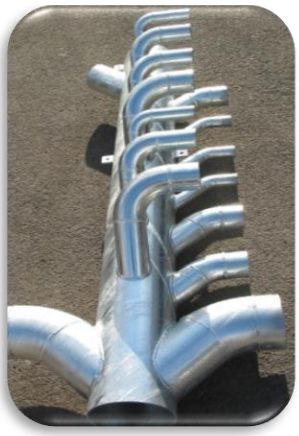
DIAMOND

Fabrications & Pipework

Est 1975



Diamond Fabrication & Pipework
Meadows Drive
Ireland Industrial Estate
Staveley
Chesterfield
S43 3LH

Tel : 01246 452617 email : sales@Diamondfabs.com www.diamondfabricationsandpipework.com

Company Profile

- **Scope of Company : The supply of drainage of Stainless-steel and mild steel galvanised or painted systems comprising rainwater pipes, soil and waste. Services pipework and dry / wet risers. Purpose made fabrications, Box hopper heads and drainage Inspection chambers.**

- **System Design : Conforms to EN 12056:2000 Code of Practice for Sanitary Pipework and BS3868 specification for prefabricated drainage stacks units: galvanised steel.**

- **Diamond F&P have been assessed by UK Quality Assurance and our systems conform to the requirements of ISO 9001:2008**

- **It is the policy of the company to employ suitably qualified/experienced staff and, where necessary provide training to enable us to provide customers with trouble free products and services of the highest standard of quality and reliability, essential for their requirements. This is achieved through a continuous programme of quality awareness with our customers, employees and organisations.**

- **The quality controller has the authority and responsibility to establish and maintain the necessary quality assurance programme and the organisational freedom to recognise quality issues and to initiate, recommend or provide solutions to them.**

- **In the case of conflict between personnel and the quality controller this will be resolved by the Managing director and any such decisions in this respect will take into account all code or customer requirements and will not negate any applicable requirements.**

- **The quality programme laid down in the manual (available on request) has the full support of the Managing Director and all staff are aware of the existence and adhere to it's directives.**

Galvanizing and the environment. *(Information obtained from Galvanizers association)*

- **Galvanizing is efficient in its use of zinc to protect steel for very extensive periods – saving energy and resources with minimal impact on the environment. Galvanizing will protect steel for decades and minimises maintenance.**

- **Galvanised steel can be recycled easily with other steel scrap in the steel production process. Zinc volatilises early in the process, is collected as dust and is the recycled.**

- **Zinc corrodes in preference to steel and sacrifices itself to protect the steel, hence hot dip galvanizing will provide this sacrificial action. The corrosion products from the zinc are deposited on the steel resealing from the atmosphere and therefore stopping corrosion. With painted coating, additional protection would have to be applied immediately after damage accrued.**

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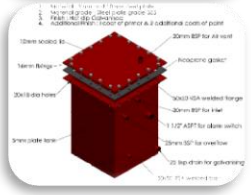
Product Range and Advantages

- ✓ Drainage systems in Galvanised Mild Steel or stainless steel
- ✓ Copper fabrication
- ✓ Multibranch wc soil manifolds
- ✓ Large bore drainage
- ✓ Large Bore Interceptor and disconnecting traps
- ✓ Circular, square line rainwater pipework
- ✓ Modular frames with Integral steel and copper pipe work
- ✓ Dry and wet risers
- ✓ Purpose made fabrications
- ✓ Rainwater Box heads and floor gullies (Loose or for casting in slab)
- ✓ Stainless Steel Heavy Duty Gutters
- ✓ Hydrant Tanks
- ✓ Sprinkler Tanks

Advantages

- ✓ Pipe work is non-combustible, therefore expensive methods of fire stops/fire ducts are avoided. (Gap between pipe and slab will need back filling to prevent fire from spreading around the outside of the pipe)
- ✓ Low noise transmittance
- ✓ Robust nature of a steel system allow for blockage removal without damage to the pipe
- ✓ Multiple branch and boss positions allow for all toilet and bathroom layouts
- ✓ Pipe work can be manufactured from supplied CAD drawing or site measure
- ✓ Long life. Standard pipework minimum 60 years. Confirmed by BRS tests.(Building Research Station ' Report of Special Investigation No.2158' The long life of Galvanised steel allows for stacks to be incorporated into future refurbishments with out the need for the whole riser to be replaced after a number of years.



Material Specifications

Mild Steel & Stainless Steel 304L & 316L

- Standard drainage 50 to 150 dia : Standard Weight tube BS/EN10219 Sch/275 (St/st 316L&304L also available 2mm wall)
- Large bore drainage 200 to 600 dia : Medium Weight tube BS/AP1-5L Sch/20 (St/st Shd10 or 2mm wall)
- Dry riser pipe work : Heavy weight tube
- Finish : All items of steelwork shall be Galvanised in accordance with BS EN ISO 1461:1999 specification for hot dip galvanising of steel. Both galvanised and St/st can be powder coated to your specification

Recent Projects Completed by our Team

Crossrail 3 Train Stations

West Ealing, Acton Mainline and Ealing Broadway
Fabricated and installed stainless steel drainage system. Particular attention to aesthetics. All on-view drainage powder coated

St Giles Circus

Fabricated and installed stainless steel drainage system with inspection/rodding points installed level with the floors.

Kensington Row

Fabricated and installed 400mm bore sewer trap with flood valve

Seven Oak School

Fabricated and installed 6 inch stainless steel heavy duty gutters, Hoppers and downpipes.

Galvanised Mild Steel Interceptor and Disconnecting Large bore drainage traps

Size Range :

- 100mm (114mm O/D)
- 150mm (168mm O/D)
- 200mm (219mm O/D)
- 250mm (274mm O/D)
- 300mm (324mm O/D)
- 350mm (355mm O/D)
- 400mm (406mm O/D)
- 450mm (457mm O/D)
- 500mm (508mm O/D)
- 600mm (609mm O/D)

- Manufacture from Radius bends to achieve a free flowing system.

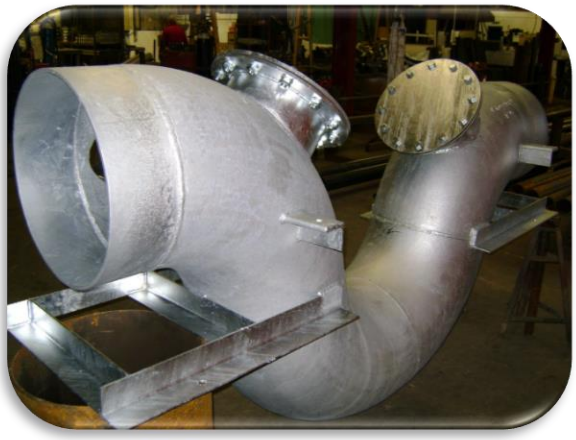
- Traps are manufacture to meet the site requirements, drain vents can be on either side or on top of the trap. Access plates can be position on the top or the side of the bends to allow for ease of access for rodding with in the system

- An engineer can assist with the design to achieve the best possible layout

- Foot supports or welded tabs can be added to make bracketing easier.

- Traps can be manufacture as level invert running traps or Cascade type when connecting to incoming drain.

350mm,300,250 and 150mm combined drainage system



500mm dia Interceptor trap with weight supports

Large bore pipework Galvanised Mild Steel or Thin wall stainless Steel

- **Size range from 100mm to 600mm dia as standard other sizes on application**
- **Minimum joints, Fabrication allows dissimilar sizes branches to be used with out the need for reducers on each branch**
- **Access doors can be positioned at any level or direction.**
- **High pressure couplers up to 16 bar available for multi-storey applications**
- **Reduced bracketing due to larger branch pipe made up of less fittings**
- **Multi branch vertical and Horizontal Header pipes**

300mm dia Rainwater pipe with 16mm drop rods

Multibranch unit being fabricated in shop

Stainless steel tanks and flanged pipework

High level drainage Galvanised or light Weight Thinwall Stainless Steel

- Galvanised steel Drainage pipework running at high level picking up multiple stacks.
- Long lengths of pipe can be used to minimise joints in the systems, this will avoid any potential weak points.
- Ideal for running across sensitive areas e.g. retail, computer rooms, electrical cupboards
- Coupler on each branch allows for site adjustment if needed.
- High Pressure couplers up to 16 bar can be supplied for areas that could be subject to potential backing up
- Substantially reduced joints and minimal bracketry
- Pipe work kept tight under soffit.
- Better design idea would be for any blockages to be cleared from above through an access in the vertical pipe. The robust nature of a steel system along with the medium radius bends and long swept branches allows for easy clearance of obstructions, with out the worry of damaging the pipe work below.

Picture shows pipe work installed at the Heathrow T5c.

Pipe work installed over sensitive area all rodding from floor above.

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Soil Waste & Vent – Vertical Stacks

- Galvanised steel Soil Waste and vent stacks
- Minimum joints, typically 1 to 2 joints per floor
- Fabrication allows branches and bosses to be in any direction to suit drainage layout
- Connection to waste pipe via a push fit boss or a female iron BSPT boss.
- Access doors can be positioned at any level or direction.
- Typical drainage stack diameters : 80mm/100mm/150mm
- Standard couplers ¼ Bar rated.
- The main picture shows a Steel soil and waste riser with extended branches this allowed for the first fix and the plaster board walls to be finished prior to second fix of the waste pipe work.
- The top picture shows duplex branch pipes with stub branches and waste bosses. Diamond F&P can position waste bossed below pan branches there for avoiding the need for large gully pots used on a component system.

Picture shows pipe work installed at Battersea apartments

Example Multi-branch pipe

Example Multi-branch pipe

Restrictive area - Low ceiling

- **Galvanised steel Soil, waste or rainwater pipes can be kept tight to slab by using long tailed bends that extend through the slab , therefore avoiding coupler below or in the slab.**

- **Ideal for use in office, spaces to maximise the ceiling height or a public area where a high ceiling is a feature.**

- **Minimum invert of pipe from the soffit (Highest point) This allows for a channel and bracket**

A. **50mm dia = - 100mm**
B. **75mm dia = - 128mm**
C. **100mm dia = - 154mm**
D. **150mm dia = - 208mm**
E. **200mm dia = - 259mm**

150mm and 100mm tight under slab to achieve maximum head room

Galvanised pipework serving service ducts each side of a hotel corridor

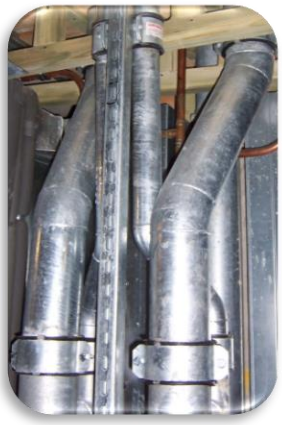
Pipework under slab on apartment contract in Battersea

False ceiling containing galvanised steel drainage pipework

Limited duct space

- **Prefabrication is ideally suited for multiple connections in limited spaces.**
- **Fabricated bends are not restricted to standard range therefore slow offsets and tight bends can be incorporated with in a confined area**
- **Typically used on hotels, apartments, student accommodation and Prisons.**

Galvanised pipework connecting onto bathroom pods



One piece offsets

Grange Hotel St Pauls

Drainage pipework serving vertical risers in a confined duct space

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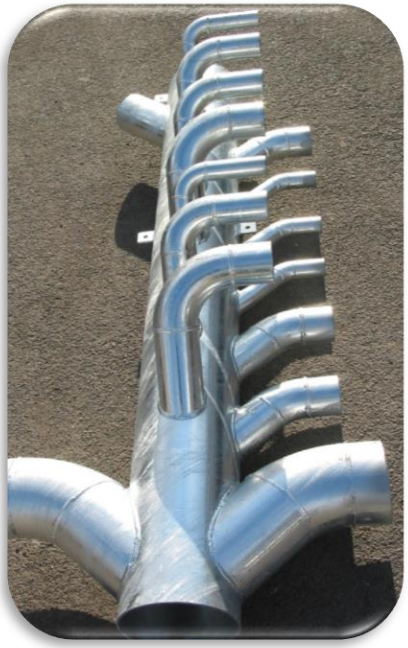
Horizontal manifold

- Galvanised steel Soil or Rainwater running at high level picking up multiple stacks.
- Minimum joints in the systems to avoid any potential weak points.
- Coupler on each branch allow for site adjustment
- Fabrication allows the branches to be at minimal centres
- Substantially reduced bracketing.
- Section shown has 16 bar pressure rated couplers.
- Pipe work Range :
- 50mm to 600mm dia

Picture shows pipe work installed at the One Hyde Park. Apartments

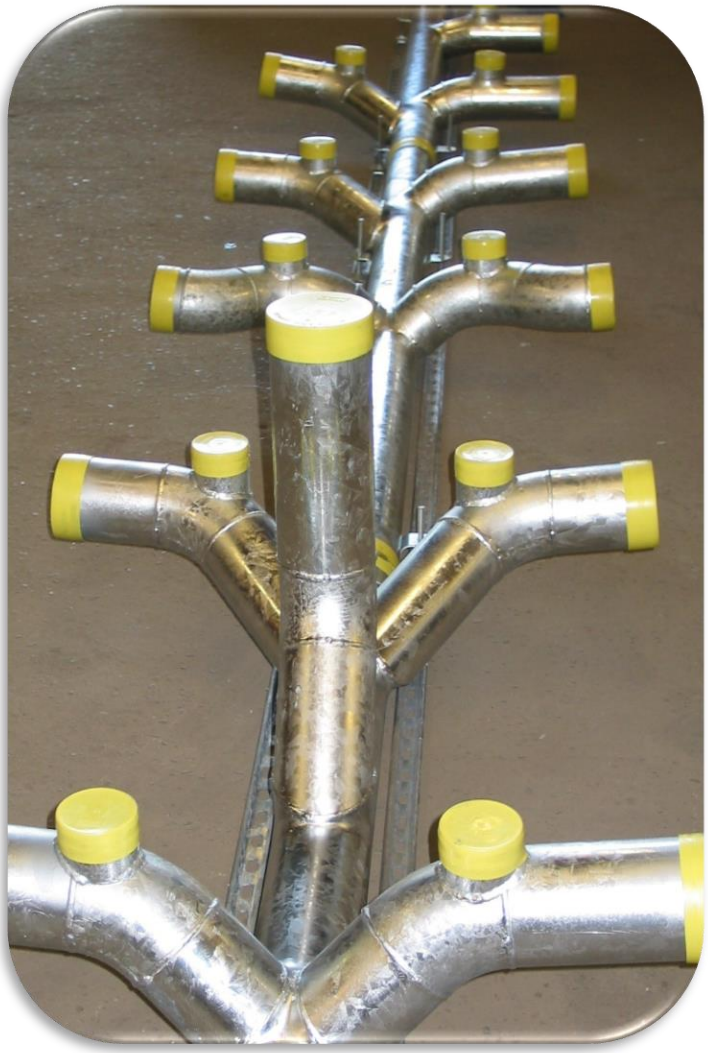
Pipework installed at "One Hyde Park" apartments in Knightsbridge.



Multiple swept branches on header

WC manifolds.
Multiple pan connections.
Single side & back to back branches

- Manufactured from 100mm nom dia Galvanised Mild Steel or Copper
- Fabricated off site, there for cutting down on excessive site labour.
- Pipes are prefabricated with the fall and branch heights set correctly.
- All manifolds are designed to avoid any cross flow or back fall.
- Minimum duct width of 250/300mm can be achieved, dependent on wc type.
- Vent bosses can be situated on the pan arm or the main body of the manifold, or a complete ladder vent can be manufactured.
- Manifolds can manufactured from setting out drawings or site measured once walls and partitions are installed.



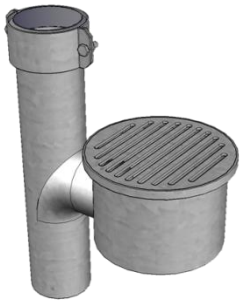
11 wc pan manifold with swept branches individually vented

Back to back manifold with vent

Galvanised steel manifold in frame with cisterns and service pipe

Car Park Drainage

- **Benefits of using galvanised mild steel drainage in a car park.**
- **Manufactured in standard weight steel pipe (3.5mm wall thickness) means it is resistant to vandalism or accidental damage from cars .**
- **Floor to ceiling height sections requires less couplers. Couplers can be kept away from areas the public can easily access. If required anti vandal fixings can be included on couplers and bracket.**
- **Pipework can be kept tight under the slab to allow maximum clearance for vehicles.**
- **Pipework and purpose made floor drains can be cast into the slab or pipes can be run down column recesses.**



Combined RWP and gully

Limited joints avoids leak points caused by car damage

Rainwater pipes running up the support column at T5 Heathrow

Her Majesties Prisons and Young offenders Institutions

Practical Solution

- **Limited Space**
- **Vandal proof**
- **Fire Resistant**
- **Offsite manufacture**
- **Minimal joints**
- **Speed of installation**

- **It is now over 25 years since the Diamond F&P system became involved in the planning and supply of single cell and associated waste drainage systems.**

- **Typically new house blocks are of a modular built system, Diamond F&P supply the upper level stack sections to an offsite manufacturer. An engineer will then site measure the ground floor units and the pan arms**

- **The picture opposite shows a typical duplex stack section serving two cells.**

Twin Cell riser with loose pan arms. Full Roding access from all directions

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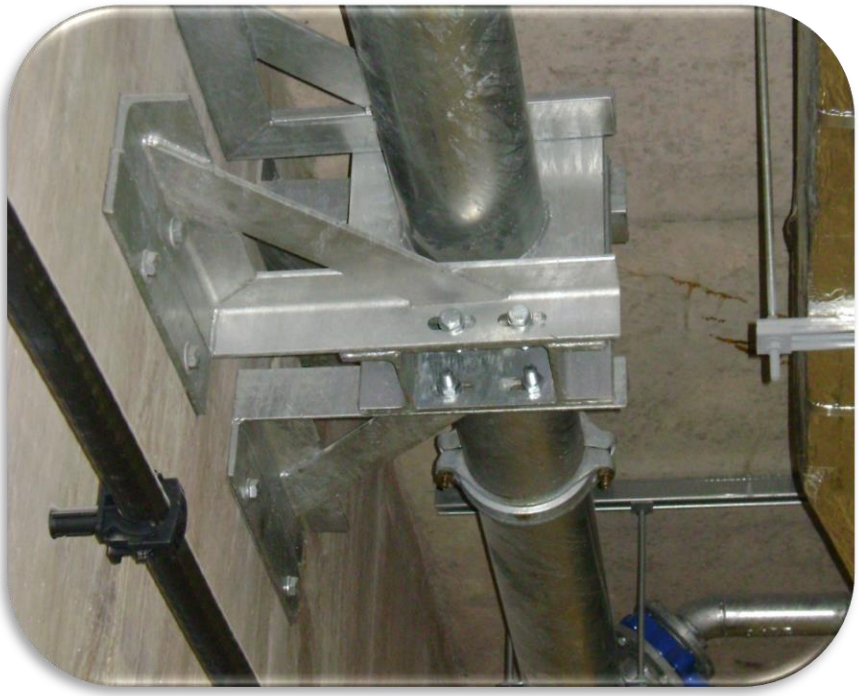
Fabricated supports and bracketing

- *All types of application will require support and restraint.*
- *Most gravity systems require only weight support and restraints at a change of direction.*
- *It is essential that individual sections of pipe are bracketed.*
- *Pressure systems may require additional restraints at bends and branches*
- *Dry Riser systems (Picture opposite) may also require anchors , thrust blocks.*
- *Extended runs of pipeline can also have slide guides to accommodate minor expansion and contraction.*
- *Diamond F&P can fabricate all types of Bracketing, weight supports, thrust blocks, Pump skids and Frame works.*



Thrust bracket body of bracket fully welded to pipework

Pipe supports for stainless steel pipes

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We Offer In-House Design and Fabrication

- Pressure pipework Systems
- Above Ground Drainage Solutions
- Drainage Sewer Interceptor Traps
- Fire Hydrant & Sprinkler Tanks
- Manways for various applications
- Structural Steelwork to Execution class 2

- We can offer Installation for all the above on request

Diamond Fabrication & Pipework
Meadows Drive
Ireland Industrial Estate
Staveley
Chesterfield
S43 3LH

E-mail: sales@Diamondfabs.com

Tel: 01246 452617