Civil Engineering & Utilities

Product Specifier

Civil Engineering & Utilities

JDP's experience of supplying the Civil Engineering and Utilities markets has been built around its reputation as a specialist. Offering first class product and application expertise together with high quality products and technical support, ensuring total peace of mind.

We have continued to develop and expand our product portfolio, offering specialized ranges through our nationwide network of branches. Combined with our dedicated vehicle fleet, ensuring timely availability of the total solution for our Civil Engineering & Utilities customers.

Issue 4.

Total Service and Solutions for Civil Engineering & Utilities

Extensive distribution coverage throughout the UK, together with comprehensive product ranges give JDP an excellent position to support the construction and maintenance of infrastructure networks including roads, water distribution and communication services from individual projects to multi site operations nationwide.

JDP is consistently recognised as a leading supplier in the Civils & Utility market because of our expertise and high specification range of products.

JDP offer the following benefits to customers within the civil engineering and utilities market:-

- Product and application expertise
- Specialised product ranges
- High quality performance products
- Technical support
- Nationwide availability
- Nationwide distribution via. JDP vehicle fleet
- One to one contact
- Pricing consistency

At JDP we have strengthened our ability to offer our customers dedicated resources. This includes specialists with a dedicated knowledge of the water utility market.
In addition, JDP's parent company has Polyethylene and uPVC manufacturing capability further enhancing our knowledge and commitment to this market.

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- Barrier Pipe System • Electrofusion Fittings • Fabricated Fittings
- Tooling & Equipment • PE Mechanical Fittings • Saddles
- Water Service Fittings

JDP offers a full range of pipeline products for the potable, non potable water and gas markets.

As a market leader in the supply of polyethylene pipe systems JDP is one of the few distributors which can offer a fully comprehensive range of British and European specification pipe systems. Allied to this we are able to offer pipes in a range of SDR (Standard Dimensional Ratio) and pressure ratings. Often this leads to significant cost savings by manufacturing the pipe to the specific application.

This is one of the benefits derived from JDP being owned by DYKA, a PVC-u & Polyethylene Pipe Systems manufacturer. For more information please ask your local JDP branch.

Within the package of products JDP has water pipe systems suitable for drinking (potable) water distribution above and below ground. Sewage & industrial water pipe systems and high temperature / chemical waste drainage. Gas pipe systems for below ground gas distribution are also available. The range also includes Barrier pipe for below ground use for conveying potable water in brownfield / contaminated sites.

Polyethylene is joined either by compression fittings or by heat welding. Fittings and equipment for Butt-fusion welding and Electrofusion welding are available for sale or hire from JDP's national branch distribution, see Electrofusion, Fabricated Fittings and Tooling & Equipment later in this section.

Polyethylene Overview

Polyethylene (PE) has a number of significant advantages over the traditional materials such as steel or ductile iron, including lower weight, freedom from corrosion, and the ability to coil long lengths of pipe. It is virtually unbreakable to impact at temperatures above 5ºC, and remains very tough at temperatures as low as -40ºC. It is also exceptionally resistant to abrasion, and will outlast steel or other hard materials in most slurry handling applications.

Its flexibility makes it suitable for temporary pipelines which are lain on rough ground or where buried in unstable ground conditions.

Key features:

- PE has good resistance to a wide range of chemicals
- Freedom from corrosion
- Ability to coil long lengths of pipe – up to 180mm dia.
- Significant advantages over traditional materials such as steel or ductile iron
- Universally accepted as an established alternative to ductile iron and uPVC pipes
- Excellent chemical resistance, available in HDPE for higher temperature & chemical resistance
- Long life
- Multiple installation methods that reduce overall installation costs, including Narrow Trenching, Directional Drilling, Impact Moling, Moleploughing and Pipe Bursting

Chemical Resistance

The exceptional resistance of PE to chemical attack is well known and generally there are no naturally occurring ground conditions which affect the material. Polyethylene does not corrode, rot, pit or lose its mechanical strength properties through electrical or chemical reactions with backfill soils. Polyethylene does not, under normal operating conditions, support the microbiological growth of algae, bacteria or fungi, nor is it affected by these conditions.

Where soil conditions are unknown or known to be harmful, a soils analysis should be carried out to determine any likely contaminants. The harmful chemicals can be grouped into 3 main types:

Oxidisers, e.g. very strong acids

Cracking Agents, e.g. detergents

Solvents, e.g. hydrocarbons (petrol, oil)

The degree of resistance to any chemical is dependent on concentration, temperature and the working pressure, all of which may have an effect on the lifetime of the pipeline.

Applications

- Drinking water distribution
- Sewage & industrial water pumping
- Gas distribution
- Temporary over ground solution
- Permanent buried solution
- Land fill gas extraction
- Mines & quarries water
- High temperature / chemical waste drainage

With a number of applications and variations in pipe colour and standards, uncertainty over the suitability of varying pipe systems can occur. The following table has been included to clarify this.

Application & Standards Explained

Application	Material	Colour	Relevant Standard			
			BS EN 12201:2003	EN 13244:2003	WIS 4-32-19:2007	GIS/PL2:2006
Drinking water below ground	PE80		✓	-	-	-
	PE100		✓	-	-	-
Drinking water below or above ground	PE80		✓	-	-	-
	PE100		✓	-	-	-
Drinking water above ground	PE80		✓	-	-	-
	PE100		✓	-	-	-
Industrial water / Sewage pump main above or below ground	PE80		-	✓	-	-
	PE80		-	✓	-	-
Industrial water / Sewage pump main above or below ground	PE100		-	✓	-	-
	PE100		-	✓	-	-
Drinking water in contaminated ground	PE80		-	-	✓	-
	PE100		-	-	✓	-
Gas main below ground	PE80		-	-	-	✓

* Drinking water is also referred to as Potable water

BS EN12201:2003
Plastic piping systems for water supply – polyethylene.

EN13244:2003
Plastic piping systems for general purpose water, drainage and sewerage – polyethylene.

WIS 4-32-19:2007
Polyethylene pressure pipe systems with an aluminium barrier layer for potable water supply in contaminated land.

*Pipe & fittings for this application must be tested together as a "system" to obtain this standard.

GIS/PL2:2006
Specification for polyethylene pipe and fittings for natural gas and suitable manufactured gas.

Materials Explained

PE80 – This is the term used to denote the polyethylene material, which has been widely used for gas, water and industrial applications for many years. The term MDPE (Medium Density Polyethylene) is commonly used to describe this material. It can be made from MDPE or HDPE (High Density Polyethylene)

PE100 – This is a term used to denote High Performance Polyethylene, or HPPE and PE100 pipes. It can be made from HPPE or HDPE (High Density Polyethylene). PE100 is a higher performance material than PE80 and demonstrates exceptional resistance to rapid crack propagation as well as to long-term stress cracking.

In addition, the higher strength of PE100 permits thinner pipe walls than PE80 for the same operating pressure. PE100 uses less polymer and provides for a larger bore and increased flow capacity for a given nominal pipe size. This can result in significant cost savings at certain sizes and pressure ratings.

PE80 and PE100 are not recommended for continuous pressure operation at temperatures above 60°C for liquids, including sewerage and industrial effluents, or 30°C for gaseous fluids. PE100 has advantages over PE80 at low temperatures, since it is extremely crack resistant down to -30°C. When considering applications which exceed the limits stated above, please contact a JDP Branch for further information.

MDPE, HPPE & HDPE - MDPE pipe is only made from PE80 material. HPPE is only made from PE100 material. HDPE pipe can be made from PE80 or PE100 material. MDPE, HDPE & HPPE are merely reference terms, the PE rating along with the SDR rating (see pressure ratings explained below) are the important factors in determining the pressure rating and therefore the pipe required.

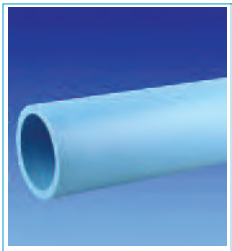
PE100 pipes, whether HDPE or HPPE can be used & welded together in a Polyethylene Pipe System, as can PE80 pipes made from MDPE or HDPE. For more information on compatibility and jointing methods see section Installation Guide p31.

Pressure Ratings Explained

PE80 pipe has a strength classification, referring to a pipe, which has minimum 50 years strength of 8Mpa. PE100 pipe has a strength classification, referring to a pipe which has minimum 50 years strength of 10Mpa (Megapascal).

Being a stronger material PE100 allows less material to be used to obtain the same or greater pressure rating. Thus it is less expensive and less heavy than PE80.

The strength of material, the thickness of the pipe wall and the size of the pipe determine the pressure rating.



The Standard Dimensional Ratio (SDR) is used to describe the relationship between pipe diameter, wall thickness and therefore the pressure rating of the pipe.

The relationship between the pipe OD and wall thickness remains constant for all pipe sizes for a given pressure rating, and can be expressed in the following equation.

$$SDR = \frac{\text{Pipe Outside Diameter (Minimum)}}{\text{Pipe Wall Thickness (Minimum)}}$$

$$\text{eg: SDR 11} = \frac{250}{22.8}$$

The current UK pressure ratings and preferred sizes are detailed in the table below:

Maximum Continuous Operating Pressures at 20ºC for Standard PE Pipes

Pipe OD (mm)	SDR11				SDR13.6	SDR17.6 (GAS) / SDR17 (WATER)		SDR17	SDR21	SDR26
	PE80		PE100		PE100	PE80		PE100	PE100	PE100
	GAS	WATER	GAS	WATER	WATER	GAS	WATER	WATER	WATER	WATER
20	5.5	12.5	-	-	-	-	-	-	-	-
25	5.5	12.5	-	-	-	-	-	-	-	-
32	5.5	12.5	-	16.0	12.5	-	8.0	10.0	-	-
40	-	12.5	-	16.0	12.5	-	8.0	10.0	-	-
50	5.5	12.5	-	16.0	12.5	-	8.0	10.0	-	-
63	5.5	12.5	7.0	16.0	12.5	-	8.0	10.0	-	-
75	-	12.5	-	16.0	12.5	-	8.0	10.0	-	-
90	5.5	-	7.0	16.0	12.5	3.0	8.0	10.0	-	-
110	-	-	-	16.0	12.5	3.0	-	10.0	-	-
125	5.1	-	7.0	16.0	12.5	3.0	-	10.0	-	-
160	5.1	-	-	16.0	12.5	3.0	-	10.0	8.0	6.0
180	4.1	-	7.0	16.0	12.5	3.0	-	10.0	8.0	6.0
200	-	-	-	16.0	12.5	-	-	10.0	8.0	6.0
225	-	-	-	16.0	12.5	-	-	10.0	8.0	6.0
250	4.0	-	7.0	16.0	12.5	3.0	-	10.0	8.0	6.0
280	-	-	-	16.0	12.5	3.0	-	10.0	8.0	6.0
315	3.4	-	7.0	16.0	12.5	2.7	-	10.0	8.0	6.0
355	3.1	-	7.0	16.0	12.5	2.5	-	10.0	8.0	6.0
400	-	-	7.0	16.0	12.5	2.3	-	10.0	8.0	6.0
450	-	-	7.0	16.0	12.5	2.2	-	10.0	8.0	6.0
500	-	-	7.0	16.0	12.5	2.1	-	10.0	8.0	6.0
560	-	-	7.0	16.0	12.5	2.0	-	10.0	8.0	6.0
630	-	-	7.0	16.0	12.5	1.8	-	10.0	8.0	6.0
710	-	-	-	16.0	-	-	-	10.0	8.0	6.0
800	-	-	-	-	-	-	-	10.0	8.0	6.0
900	-	-	-	-	-	-	-	10.0	8.0	6.0
1000	-	-	-	-	-	-	-	10.0	8.0	6.0

Standard Pipe Dimensions

Pipe OD (mm)	Nominal Bore (ID) mm				
	SDR				
	11	13.6	17	21	26
20	15.2	-	-	-	-
25	20.1	-	21.0	-	-
32	25.8	27.2	28.0	-	-
40	32.7	34.0	35.3	-	-
50	40.4	42.6	44.0	-	-
63	50.9	53.6	55.4	-	-
75	61.4	63.8	66.2	-	-
90	72.9	76.6	78.7	81.0	-
110	89.1	93.8	96.3	99.0	-
125	101.2	106.6	109.5	112.5	-
160	129.8	136.4	140.3	144.0	147.4
180	146.0	153.5	158.0	161.9	165.8
200	162.2	170.6	175.7	180.9	184.6
225	182.4	191.8	197.3	202.4	207.4
250	202.8	213.2	219.6	224.9	230.4
280	227.4	238.8	245.9	251.9	258.0
315	255.6	268.6	276.6	283.4	290.3
355	288.1	302.8	311.5	319.4	327.6
400	324.6	341.2	351.2	360.0	368.7
450	365.2	383.8	395.2	404.9	414.8
500	406.3	426.4	438.9	449.9	460.9
560	454.6	477.6	493.9	503.7	516.3
630	511.4	537.4	553.1	566.8	580.8
710	576.4	605.6	623.4	640.8	654.6
800	-	682.4	702.2	722.3	737.6
900	-	-	789.8	812.4	829.8
1000	-	-	877.2	902.3	922.0

PE80 & PE100 Drinking Water Pipe

JDP supplies PE80 & PE100 pipes for drinking water (potable water) pipe, in both blue and black with a blue stripe, in sizes 20 to 1200mm diameter. As well as standard SDR11 & SDR17, ratings SDR13.6, SDR21 & SDR26 can be supplied, subject to volume and availability. Special lengths and markings available on request.

SDR11 PE80 Polyethylene

Size (OD mm)	Wall Thickness (mm)	Nominal Bore (mm)	Approx Weight (kg/m)
20	2.40	15.2	0.12
25	2.45	20.1	0.17
32	3.10	25.8	0.28
40	3.7	32.6	0.42
50	4.80	40.4	0.67
63	6.05	50.9	1.05
75	6.8	61.4	1.47

Size (OD mm)	Blue Code				Black/Blue Stripe Code			
	25m	50m	100m	150m	25m	50m	100m	150m
20	090120MD25	090120MD50	090120MD100	090120MD150	092120BBS25	092120BBS50	092120BBS100	092120BBS150
25	090125MD25	090125MD50	090125MD100	090125MD150	092125BBS25	092125BBS50	092125BBS100	092125BBS150
32	090132MD25	090132MD50	090132MD100	090132MD150	092132BBS25	092132BBS50	092132BBS100	092132BBS150
40	-	090140MD50*	090140MD100*	090140MD150*	092140BBS25*	092140BBS50	092140BBS100	092140BBS150*
50	090150MD25	090150MD50	090150MD100	090150MD150	092150BBS25	092150BBS50	092150BBS100	092150BBS150
63	090163MD25	090163MD50	090163MD100	090163MD150	092163BBS25	092163BBS50	092163BBS100	092163BBS150
75	-	090175MD50*	090175MD100*	-	092175BBS25*	092175BBS50	092175BBS100	092175BBS150*

* Non standard, made to order

SDR11 PE100 Polyethylene

Size (OD mm)	Wall Thickness (mm)	Nominal Bore (mm)	Approx Weight (kg/m)
90	8.6	72.9	2.12
110	10.5	89.1	3.16
125	11.9	101.2	4.08
160	15.1	129.8	6.67
180	17.0	146.0	8.45
200	18.9	162.2	10.35
225	21.3	182.4	13.23
250	23.6	202.8	16.27
280	26.3	227.4	20.35
315	29.7	255.6	25.81
355	33.5	288.1	32.78
400	37.7	324.6	41.60
450	42.4	365.2	52.63
500	47.1	406.3	64.96
560	52.7	454.6	81.47
630	59.3	511.4	103.10
710	66.8	576.4	131.60

Size (OD mm)	Blue Code				Black/Blue Stripe Code			
	6m	12m	50m	100m	6m	12m	50m	100m
90	100127091006	100127091012	100127091050	100127091100	10077020051	10077020052	10077020053	10077020054
110	100127111006	100127111012	100127111050	100127111100	10077020132	10077020151	10077020166	10077020174
125	100127121006	100127121012	100127121050	100127121100	10077020236	10077020251	10077020262	10077020281
160	100127161006	100127161012	100127161050	100127161100	10077020432	10077020456	-	-
180	100127181006	100127181012	100127181050	100127181100	10077020467	10077020469	-	-
200	100127201006	100127201012	-	-	10077020532	10077020551	-	-
225	100127221006	100127221012	-	-	10077020562	10077020566	-	-
250	100127251006	100127251012	-	-	10077060147	10077060171	-	-
280	100127281006	100127281012	-	-	10077060201	10077060211	-	-
315	100127311006	100127311012	-	-	10077060342	10077060366	-	-
355	100127351006	100127351012	-	-	10077060436	10077060441	-	-
400	100127401006	100127401012	-	-	10077060561	10077060571	-	-
450	100127451006	100127451012	-	-	10077060641	10077060646	-	-
500	100127501006	100127501012	-	-	10077060766	10077060776	-	-
560	100127561006	100127561012	-	-	-	-	-	-
630	100127631006	100127631012	-	-	-	-	-	-
710	100127711006	100127711012	-	-	-	-	-	-

SDR17 PE100 Polyethylene

Size (OD mm)	Wall Thickness (mm)	Nominal Bore (mm)	Approx Weight (kg/m)
90	5.7	78.7	1.46
110	6.9	96.3	2.17
125	7.8	109.5	2.76
160	9.9	140.3	4.53
180	11.0	158.0	5.73
200	12.2	175.7	6.92
225	13.9	197.3	8.96
250	15.2	219.6	10.98
280	17.1	245.9	13.8
315	19.2	276.6	17.47
355	21.8	311.5	22.24
400	24.4	351.2	28.11
450	27.4	395.2	35.61
500	30.6	438.9	44.00
560	33.1	493.9	53.57
630	38.5	553.1	69.81
710	43.3	623.4	88.56
800	48.9	702.2	112.26
900	55.1	789.8	141.96
1000	61.4	877.2	175.41

Size (OD mm)	Blue Code				Black/Blue Stripe Code			
	6m	12m	50m	100m	6m	12m	50m	100m
90	100127097006	100127097012	100127097050	100127097100	10077011662	10077011663	10077011664	10077011665
110	100127117006	100127117012	100127117050	100127117100	10077011734	10077011770	10077011777	10077011785
125	100127127006	100127127012	100127127050	100127127100	10077011824	10077011851	10077011853	10077011858
160	100127167006	100127167012	100127167050	100127167100	10077011947	10077011971	-	-
180	100127187006	100127187012	100127187050	100127187100	10077012000	10077012002	-	-
200	100127207006	100127207012	-	-	10077016950	10077016974	-	-
225	100127227006	100127227012	-	-	10077017000	10077017002	-	-
250	100127257006	100127257012	-	-	10077058146	10077058181	-	-
280	100127287006	100127287012	-	-	10077058220	10077058222	-	-
315	100127317006	100127317012	-	-	10077058350	10077058359	-	-
355	100127357006	100127357012	-	-	10077058448	10077058445	-	-
400	100127407006	100127407012	-	-	10077058544	10077058552	-	-
450	100127457006	100127457012	-	-	10077058642	10077058643	-	-
500	100127507006	100127507012	-	-	10077058750	10077058758	-	-
560	100127567006	100127567012	-	-	10077058846	10077058854	-	-
630	100127637006	100127637012	-	-	10077058943	10077058951	-	-
710	100127707006	100127707012	-	-	-	-	-	-
800	100127807006	100127807012	-	-	-	-	-	-
900	100127907006	100127907012	-	-	-	-	-	-
1000	1001271007006	1001271007012	-	-	-	-	-	-

PE80 & PE100 Sewage & Industrial Water Pipe

JDP supplies PE80 & PE100 pipes for dirty water / industrial water in both black and black with a brown stripe, in sizes 20 to 1200mm diameter. As well as standard SDR11 & SDR17, ratings SDR13.6, SDR21 & SDR26 can be supplied, subject to volume and availability. Special lengths and markings available on request.

SDR11 PE80 Polyethylene

Size (OD mm)	Wall Thickness (mm)	Nominal Bore (mm)	Approx Weight (kg/m)
20	2.4	15.2	0.12
25	2.5	20.1	0.17
32	3.1	25.8	0.28
40	3.7	32.6	0.42
50	4.8	40.4	0.67
63	6.1	50.9	1.05
75	6.8	61.4	1.47

Size (OD mm)	Black Code				Black/Brown Stripe Code			
	25m	50m	100m	150m	25m	50m	100m	150m
20	090220BK25	090220BK50	090220BK100	090220BK150	092220BBRS25	092220BBRS50	092220BBRS100	092220BBRS150
25	090225BK25	090225BK50	090225BK100	090225BK150	092225BBRS25	092225BBRS50	092225BBRS100	092225BBRS150
32	090232BK25	090232BK50	090232BK100	090232BK150	092232BBRS25	092232BBRS50	092232BBRS100	092232BBRS150
40	090240BK25*	090240BK50*	090240BK100*	090240BK150*	092240BBRS25*	092240BBRS50	092240BBRS100	092240BBRS150*
50	090250BK25	090250BK50	090250BK100	090250BK150	092250BBRS25	092250BBRS50	092250BBRS100	092250BBRS150
63	090263BK25	090263BK50	090263BK100	090263BK150	092263BBRS25	092263BBRS50	092263BBRS100	092263BBRS150
75	090275BK25*	090275BK50*	090275BK100*	090275BK150*	092275BBRS25*	092275BBRS50	092275BBRS100	092275BBRS150*

* Non standard, made to order

SDR11 PE100 Polyethylene

Size (OD mm)	Wall Thickness (mm)	Nominal Bore (mm)	Approx Weight (kg/m)
90	8.6	72.9	2.12
110	10.5	89.1	3.16
125	11.9	101.2	4.08
160	15.1	129.8	6.67
180	17.0	146.0	8.45
200	18.9	162.2	10.35
225	21.3	182.4	13.23
250	23.6	202.8	16.27
280	26.3	227.4	20.35
315	29.7	255.6	25.81
355	33.5	288.1	32.78
400	37.7	324.6	41.60
450	42.4	365.2	52.63
500	47.1	406.3	64.96
560	52.7	454.6	81.47
630	59.3	511.4	103.10
710	66.8	576.4	131.60

Size (OD mm)	Black Code				Black/Brown Stripe Code			
	6m	12m	50m	100m	6m	12m	50m	100m
90	100232091006	100232091012	100232091050	100232091100	10067053999	10067054000	10067054035	10067054036
110	100232111006	100232111012	100232111050	100232111100	10067054002	10067054003	10067054004	10067054001
125	100232121006	100232121012	100232121050	100232121100	10067054005	10067054006	10067054007	10067054010
160	100232161006	100232161012	100232161050	100232161100	10067054008	10067054009	-	-
180	100232181006	100232181012	100232181050	100232181100	10067054042	10067054043	-	-
200	100232201006	100232201012	-	-	10067054011	10067054012	-	-
225	100232221006	100232221012	-	-	10067054014	10067054015	-	-
250	100232251006	100232251012	-	-	10067054016	10067054017	-	-
280	100232281006	100232281012	-	-	10067054018	10067054019	-	-
315	100232311006	100232311012	-	-	10067054020	10067054021	-	-
355	100232351006	100232351012	-	-	10067054022	10067054023	-	-
400	100232401006	100232401012	-	-	10067054024	10067054025	-	-
450	100232451006	100232451012	-	-	10067054026	10067054027	-	-
500	100232501006	100232501012	-	-	10067054028	10067054029	-	-
560	100232561006	100232561012	-	-	-	-	-	-
630	100232631006	100232631012	-	-	-	-	-	-
710	100232711006	100232711012	-	-	-	-	-	-

SDR17 PE100 Polyethylene

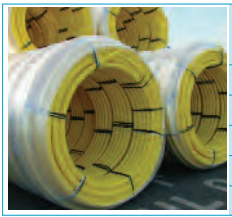
Size (OD mm)	Wall Thickness (mm)	Nominal Bore (mm)	Approx Weight (kg/m)
90	5.7	78.7	1.46
110	6.9	96.3	2.17
125	7.8	109.5	2.76
160	9.9	140.3	4.53
180	11.0	158.0	5.73
200	12.2	176.7	6.92
225	13.9	197.3	8.96
250	15.2	219.6	10.98
280	17.1	245.9	13.8
315	19.2	276.6	17.47
355	21.8	311.5	22.24
400	24.4	351.2	28.11
450	27.4	395.2	35.61
500	30.6	438.9	44.00
560	33.1	493.9	53.57
630	38.5	553.1	69.81
710	43.3	623.4	88.56
800	48.9	702.2	112.26
900	55.1	789.8	141.96
1000	61.4	877.2	175.41

Size (OD mm)	Black Code				Black/Brown Stripe Code			
	6m	12m	50m	100m	6m	12m	50m	100m
90	100232097006	100232097012	100232097050	100232097100	10067051999	10067052000	10067052035	10067052036
110	100232117006	100232117012	100232117050	100232117100	10067052002	10067052003	10067052004	10067052001
125	100232127006	100232127012	100232127050	100232127100	10067052005	10067052006	10067052007	10067052010
160	100232167006	100232167012	100232167050	100232167100	10067052008	10067052009	-	-
180	100232187006	100232187012	100232187050	100232187100	10067052042	10067052043	-	-
200	100232207006	100232207012	-	-	10067052011	10067052012	-	-
225	100232227006	100232227012	-	-	10067052014	10067052015	-	-
250	100232257006	100232257012	-	-	10067052016	10067052017	-	-
280	100232287006	100232287012	-	-	10067052018	10067052019	-	-
315	100232317006	100232317012	-	-	10067052020	10067052021	-	-
355	100232357006	100232357012	-	-	10067052022	10067052023	-	-
400	100232407006	100232407012	-	-	10067052024	10067052025	-	-
450	100232457006	100232457012	-	-	10067052026	10067052027	-	-
500	100232507006	100232507012	-	-	10067052028	10067052029	-	-
560	100232567006	100232567012	-	-	10067052030	10067052031	-	-
630	100232637006	100232637012	-	-	10067052032	10067052033	-	-
710	100232717006	100232717012	-	-	-	-	-	-
800	100232807006	100232807012	-	-	-	-	-	-
900	100232907006	100232907012	-	-	-	-	-	-
1000	1001321007006	1001321007012	-	-	-	-	-	-

PE80 Gas Pipe

JDP supplies PE80 pipes in yellow for gas distribution, in standard SDR11 & SDR17.6 ratings. PE100 pipes are also available for higher pressure applications.

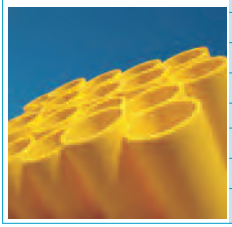
SDR11 PE80 Polyethylene



Size (OD mm)	Wall Thickness (mm)	Nominal Bore (mm)	Approx Weight (kg/m)
20	2.4	15.2	0.12
25	2.5	20.1	0.17
32	3.1	25.8	0.28
50	4.8	40.4	0.67
63	6.1	50.9	1.05

Size (OD mm)	Code			
	6m	50m	100m	150m
20	090320G6	090320G50	090320G100	090320G150
25	090325G6	090325G50	090325G100	090325G150
32	090332G6	090332G50	090332G100	090332G150
50	090350G6	090350G50	090350G100	090350G150
63	090363G6	090363G50	090363G100	090363G150

SDR11 PE80 Polyethylene



Size (OD mm)	Wall Thickness (mm)	Nominal Bore (mm)	Approx Weight (kg/m)
90	8.6	72.9	2.10
125	11.9	101.2	4.04
160	15.2	129.8	6.61
180	17.0	146.0	8.36
250	23.6	202.8	16.10
315	29.7	255.6	25.54
355	33.5	288.1	32.43

Size (OD mm)	Code			
	6m	12m	50m	100m
90	1003090G6	1003090G12	1003090GC50	1003090GC100
110	1003110G6	1003110G12	1003110GC50	1003110GC100
125	1003125G6	1003125G12	1003125GC50	1003125GC100
160	1003160G6	1003160G12	1003160GC50	1003160GC100
180	1003180G6	1003180G12	1003180GC50	1003180GC100
200	1003200G6	1003200G12	-	-
225	1003225G6	1003225G12	-	-
250	1003250G6	1003250G12	-	-
280	1003280G6	1003280G12	-	-
315	1003315G6	1003315G12	-	-
355	1003355G6	1003355G12	-	-

SDR17.6 PE80 Polyethylene

Size (OD mm)	Wall Thickness (mm)	Nominal Bore (mm)	Approx Weight (kg/m)
90	5.4	79.3	1.38
125	7.4	110.3	2.64
180	10.6	158.9	5.45
250	14.7	220.7	10.49
315	18.4	278.2	16.63
355	20.8	313.5	21.11
400	23.4	353.3	26.78
450	26.3	397.5	33.88
500	29.2	441.6	41.81
560	32.6	494.8	52.53

Size (OD mm)	Code			
	6m	12m	50m	100m
90	1003090G76	1003090G712	1003090G7C50	1003090G7C100
110	1003110G76	1003110G712	1003110G7C50	1003110G7C100
125	1003125G76	1003125G712	1003125G7C50	1003125G7C100
160	1003160G76	1003160G712	1003160G7C50	1003160G7C100
180	1003180G76	1003180G712	1003180G7C50	1003180G7C100
200	1003200G76	1003200G712	-	-
225	1003225G76	1003225G712	-	-
250	1003250G76	1003250G712	-	-
280	1003280G76	1003280G712	-	-
315	1003315G76	1003315G712	-	-
355	1003355G76	1003355G712	-	-
400	1003400G76	1003400G712	-	-
450	1003450G76	1003450G712	-	-
500	1003500G76	1003500G712	-	-
560	1003560G76	1003560G712	-	-

Standards

BS EN12201:2003 Plastic piping systems for water supply – polyethylene.

EN13244:2003 Plastic piping systems for general purpose water, drainage and sewerage – polyethylene.

GIS/PL2:2006 Specification for polyethylene pipe and fittings for natural gas and suitable manufactured gas.

Installation Guide

PE pipes can be jointed by Electrofusion or Butt-fusion. This method allows pipe to be fused outside of the trench, reducing the trench width required and minimising excavation.

For Electrofusion and Butt-fusion jointing see jointing guides at the end of the Fabricated Fittings section.

Laying of pipes

The pipes should be installed in the trench with the pipe markings uppermost. Polyethylene may in some instances be laid directly onto the trimmed trench bottom where the soil is uniform, fine grained and free from large stones and flints.

In other cases the trench should be excavated to a depth to allow for a minimum 100mm bed of gravel, crushed stone or coarse sand. A sand/gravel mix is also acceptable, provided the gravel is less than 20mm in size.

Joint clearance holes should be dug into the trench to ensure pipe and sockets are laid level.

Pipes can be laid either in a ***conventional open cut trench*** and jointed in the trench, or a ***narrow trench*** where the pipes are jointed above ground and subsequently lowered into the trench.

The current practice in the UK is to lay service pipes at 750mm cover and mains pipes at 900mm cover, measured from the pipe crown.

The width of an ***open cut trench*** should be the minimum of pipe O.D. plus 250mm to allow for the correct compaction of sidefill and room to work in the trench.

The location of cables and pipes from other utilities should be identified prior to excavation and supported / protected throughout. Any damage should be reported.

Trench walls 1.2m and deeper must be supported – guidance on excavation techniques can be found in:

BS 6031 Code of practice for Earthworks (general trenchworks)
Report No. 97 Trenching practice (more specific advice)
Report UM 1049 : 1990 (review of current practices)

Trench reinstatement in highways is covered in the NRASWA "Specification for the Reinstatement of Openings in Highways", 1992. This code was introduced with the aim that all highway reinstatement is completed as soon as possible to a consistent prescribed performance criteria.

Polyethylene is a flexible material and can deform under load without damage. It is however, important that any deformation is minimised and that the placement of the correct sidefill and initial backfill materials is carried out correctly with adequate compaction. Further details on bed and fill materials are given in WIS 4-08-01.

A minimum 100mm cover should be placed above the crown of the pipe, with heavy compaction equipment not being used with less than 300mm cover. Backfilling can then proceed in 300mm layers.

Trench backfilling should commence as soon as possible after pipe laying to give the pipe protection from damage from objects possibly falling into the trench. To protect the pipe from potential future interference damage it is good practice to ***install a marker tape*** 300mm above pipe crown.

Marker tapes can also include a tracer wire to allow future identification of the pipeline. See accessories section for marker tapes.

Handling and Storage

Take care when handling and storing pipes not to scrape and scuff the pipe. Scores and scrapes at less than 10% of the wall thickness will not affect the service performance.

Black, Black/Blue stripe and Black/Brown stripe polyethylene is UV stabilised providing it with excellent protection against UV radiation.
Blue and yellow polyethylene contains enough UV stabilisation to resist degradation in storage only. The maximum recommended storage outside, in the UK, is 12 months. Products stored for longer should be covered or stored inside.

Always
Store pipes on level, firm ground
Keep pipe away from sharp objects and stones
Keep protective packaging intact until required for use

Never
Drag or roll pipes
Throw or drop pipe
Use metal slings and hooks around the pipe
Store pipes close to petrochemicals or other aggressive materials

Barrier Pipe System

A risk of contamination of drinking water exists near industrial land, agricultural land, landfill sites, petrol stations and developments built on brownfield sites.

To protect against contamination barrier pipe systems must be used to allow safe transportation of drinking water.

Barrier Pipe is a Type A multilayer system that includes a black PE inner core, protective aluminium layer, and an outer layer of PE.

Features & Benefits

- Manufactured from PE100 instead of PE80; stiffer, more scratch resistant, less likely to damage when handling and installing
- Black inner core makes it easier to spot compromised pipelines
- Full range from 25mm – 630mm
- Plastic push-fit, gunmetal compression, hydraulic compression and electrofusion fittings, and butt fusion welding connection methods
- Plastic push-fit and gunmetal compression fittings require no additional aluminium wrapping

Applications

- Potable water systems in contaminated land
- Former industrial land, military land & brownfield sites
- Agricultural land
- Landfill sites
- Petrol stations
- Crossings under rivers
- Flood plains

Barrier Pipe Coils & Lengths

Pipe Type	Pipe Diameter OD - Type A (mm)															
	25	32	63	90	110	125	160	180	225	250	315	355	400	450	500	630
Coils	✓	✓	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
Lengths	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

25mm or 50m coils. 6m lengths

Fittings & Adaptors

Consult the table below to determine suitable fittings for barrier pipe

Fitting Type	Pipe Diameter OD - Type A (mm)															
	25	32	63	90	110	125	160	180	225	250	315	355	400	450	500	630
Push-Fit	✓	✓	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Gunmetal Compression	✓	✓	✓	–	–	–	–	–	–	–	–	–	–	–	–	–
Hydraulic Compression	–	–	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
Electrofusion	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Butt Fusion	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Pipe

Push-Fit Fittings

Gunmetal Compression Fittings

Hydraulic Compression Fittings

Standards

Barrier Pipe is manufactured to BS EN 12201.

Barrier Pipe has the following approvals:

- WRAS
- WIS 4-32-19
- Regulation 31 Water Supply Regulations
- KIWA

Installation

Please consult JDP for the installation process for barrier pipe.

Depending on your project, different fittings and connection types may be used.

Electrofusion Fittings

Electrofusion fittings are specifically designed for reliable, high performance pipe joining and long system life. Complete with automated fusion system, modern Electrofusion fittings have proven to be most economical due to the low potential for operator error.

Fittings directly compatible with the computerized control box being used give information on heating and cooling time directly without any need for operator override. Bar codes are also supplied on the fittings for manual swiping and automatic jointing. The least preferred and reliable method is for the operator to read and manually input the data for heating and cooling times.

Features & Benefits

- Automated computer-controlled jointing to ensure safe, dependable connections
- Computerized data retrieval for proof of a good job, well done
- Proven high performance in gas and water distribution and industrial applications
- Quick to install
- Stronger pipe jointing than compression fittings
- 16 bar rated
- 4.7mm standard UK pin size

Applications

- Drinking water
- Industrial & sewage water
- Gas – for installations under BSEN:1555 pt 3

Electrofusion Fittings

Code	Size (mm)
Coupler	
102249010020	20
102249010025	25
102249010032	32
102249010040	40
102249010050	50
102249010063	63
102249010075	75
102249010090	90
102249010110	110
102249010125	125
102249010140	140
102249010160	160
102249010180	180
102249010200	200
102249010225	225
102249010250	250
102249010280	280
102249010315	315
102249010355	355
102249010400	400

Code	Size (mm)
Light Fit Coupler (10 bar)	
102236010063	63
102236010075	75
102236010090	90
102236010110	110
102236010125	125
102236010140	140
102236010160	160
102236010180	180
102236010200	200
102236010225	225
102236010250	250
102236010280	280
102236010315	315
102236010355	355
102236010400	400

* Larger sizes available

Electrofusion Fittings (contd)

Code	Size (mm)
Reducing Coupler	
102249110012	20 x 16
102249110014	25 x 20
102249110018	32 x 20
102249110019	32 x 25
102249110025	40 x 25
102249110026	40 x 32
102249110030	50 x 25
102249110031	50 x 32
102249110033	50 x 40
102249110046	63 x 32
102249110047	63 x 40
102249110048	63 x 50
102249110060	75 x 63
102249110068	90 x 50
102249110070	90 x 63
102249110071	90 x 75
102249110081	110 x 63
102249110083	110 x 90
102249110095	125 x 90
102249110096	125 x 110
102249110121	160 x 90
102249110122	160 x 110
102249110123	160 x 125
102249110138	180 x 125

Code	Size (mm)
End Cap	
102249120020	20
102249120025	25
102249120032	32
102249120040	40
102249120050	50
102249120063	63
102249120075	75
102249120090	90
102249120110	110
102249120125	125
102249120140	140
102249120160	160
102249120180	180
102249120200	200
102249120225	225
102249120250	250
102249120280	280
102249120315	315

Code	Size (mm)
Tee 90º	
102249040020	20
102249040025	25
102249040032	32
102249040040	40
102249040050	50
102249040063	63
102249040075	75
102249040090	90
102249040110	110
102249040125	125
102249040160	160
102249040180	180
102249040200	200
102249040225	225
102249040250	250

Electrofusion Fittings (contd)

Code	Size (mm)
Reducing Tee 90º	
102249140014	25 x 20 x 25
102249140015	32 x 20 x 25
102249140018	32 x 25 x 32
102249140018	32 x 20 x 32
102249140023	40 x 20 x 40
102249140025	40 x 25 x 40
102249140026	40 x 32 x 40
102249140029	50 x 20 x 50
102249140030	50 x 25 x 50
102249140031	50 x 40 x 50
102249140031	50 x 32 x 50
102249140044	63 x 20 x 63
102249140046	63 x 32 x 63
102249140047	63 x 40 x 63
102249140048	63 x 50 x 63
102249140767	75 x 63 x 75
102249140070	90 x 63 x 90
102249140081	110 x 63 x 110
102249140083	110 x 90 x 110
102249140095	125 x 90 x 125
102249140096	125 x 110 x 125
102249140121	160 x 90 x 160
102249140122	160 x 110 x 160
102249140123	160 x 125 x 160
102249140136	180 x 90 x 180
102249140137	180 x 110 x 180
102249140138	180 x 125 x 180
102249140139	180 x 140 x 180
102249140141	180 x 160 x 180
1022491400200090	200 x 90 x 200
1022491400200110	200 x 110 x 200
1022491400225090	225 x 90 x 225
1022491400225110	225 x 110 x 225
1022491400250090	250 x 90 x 250
1022491400250110	250 x 110 x 250

Code	Size (mm)
Flanged Tee 90º	
102249940072	90 x 80 x 90
102249940083	110 x 80 x 110
102249940095	125 x 80 x 125
102249940096	125 x 100 x 125
102249940110	110 x 100 x 110
102249940121	160 x 80 x 160
102249940122	160 x 100 x 160
102249940136	180 x 80 x 180
102249940137	180 x 100 x 180

Code	Size (mm)
Elbow 90º	
102249050020	20
102249050025	25
102249050032	32
102249050040	40
102249050050	50
102249050063	63
102249050075	75
102249050090	90
102249050110	110
102249050125	125
102249050140	140
102249050160	160
102249050180	180
102249050200	200
102249050225	225
102249050250	250

Code	Size (mm)
Elbow 45º	
102249060032	32
102249060040	40
102249060050	50
102249060063	63
102249060075	75
102249060090	90
102249060110	110
102249060125	125
102249060140	140
102249060160	160
102249060180	180
102249060200	200
102249060225	225
102249060250	250

Electrofusion Fittings (contd)

Code	Size (mm)
Elbow 22.5º	
102249020090	90
102249020110	110
102249020125	125
102249020160	160
102249020180	180

Code	Size (mm)
Adjustable Elbow	
102249470110	110
102249470125	125
102249470160	160
102249470180	180

Code	Size (mm)
PE Cast Iron Flange Transition Coupler	
102249770063	63 x 50
102249770090	90 x 80
102249770110	110 x 100
102249770125	125 x 100
102249770160	160 x 150
102249770180	180 x 150
102249770225	225 x 200

Code	Size (mm)
PE Cast Iron Spigot Transition Coupler	
102249570090	90 x 80
102249570110	110 x 100
102249570125	125 x 100
102249570160	160 x 150
102249570180	180 x 150
102249570225	225 x 200

Code	Size (mm)
Duckfoot Elbow 90º	
102249150090	90

Code	Size (mm)
Duckfoot Elbow with Outlet 90º	
102249650066	90 x 32

Code	Size (mm)
Adjustable Elbow One Sided	
102249471110	110
102249471125	125
102249471160	160
102249471180	180

Code	Size (mm)
Spigot End Plug	
102249127020	20
102249127025	25
102249127032	32
102249127040	40
102249127050	50
102249127063	63
102249127075	75
102249127090	90
102249127110	110
102249127125	125
102249127140	140
102249127160	160
102249127180	180
102249127200	200
102249127225	225
102249127250	250
102249127280	280
102249127315	315

Electrofusion Fittings (contd)

Code	Size (mm)
Spigot Reducer	
102249117101	50 x 32
102249117540	50 x 40
102249117102	63 x 32
102249117640	63 x 40
102249117103	63 x 50
102249117763	75 x 63
102249117100	90 x 50
102249117104	90 x 63
102249117975	90 x 75
102249117105	110 x 63
102249117175	110 x 75
102249117106	110 x 90
102249117107	125 x 63
102249117108	125 x 90
102249117125	125 x 110
102249117190	140 x 90
102249117109	140 x 110
102249117425	140 x 125
102249117110	160 x 90
102249117110	160 x 110
102249117625	160 x 125
102249117111	160 x 140
102249117112	180 x 90
102249117113	180 x 125
102249117125	180 x 140
102249117180	180 x 160
102249117250	200 x 140
102249117260	200 x 160
102249117280	200 x 180

Code	Size (mm)
Spigot Flange Adaptor	
102249027020	20
102249027025	25
102249027032	32
102249027040	40
102249027050	50
102249027063	63
102249027075	75
102249027090	90
102249027110	110
102249027125	125
102249027140	140
102249027160	160
102249027180	180
102249027200	200
102249027225	225
102249027250	250
102249027280	280
102249027315	315
102249027355	355
102249027400	400

Code	Description
Plated Flange Backing Ring	
102249029020	20 x ½"
102249029025	25 x ¾"
102249029032	32 x 1"
102249029041	40 x 1¼"
102249029051	50 x 1½"
102249029009	63 x 2"
102249029075	75 x 2½"
102249029010	90 x 80
102249029020	110 x 100
102249029020	125 x 100
102249029140	140 x 125
102249029040	160 x 150
102249029040	180 x 150
102249029200	200 x 200
102249029061	225 x 200
102249029250	250 x 250
102249029280	280 x 250
102249029315	315 x 300
102249029355	355 x 350
102249029400	400 x 400

Electrofusion Fittings (contd)

Code	Size Range (mm)
Long Coupler	
102249011	32 - 63

Code	Size Range (mm)
Monolithic End Cap	
102249420	32 - 63

Code	Size Range (mm)
PE Ball Valve	
102243625	25 - 125

Code	Size Range (mm)
PE / Steel Transition Union	
102209377	25 x ¾" - 110 x 4"

Code	Size Range (mm)
Male Free Nut Transition Coupler	
102249411	32 x 1" - 63 x 2"

Code	Size Range (mm)
Female Free Nut Transition Coupler	
102249410	32 x 1" - 63 x 2"

Code	Size Range (mm)
Branch Saddle	
102249580	63 x 32 - 250 x 90

Code	Size Range (mm)
Repair Saddle	
102249520	63 - 180

Code	Size Range (mm)
Tapping Saddle	
102249630	40 x 32 - 250 x 63

Code	Size Range (mm)
Tapping Saddle - Parallel Outlet	
102249530	63 x 32 - 250 x 63

Code	Size Range (mm)
Tapping Valve *with serated edge knife	
102249540 / 102249541*	63 x 32 - 250 x 63

Code	Size Range (mm)
Wastewater Adaptor Clay Pipe x 160mm	
102237890	186 - 204

Code	Size Range (mm)
Wastewater Manhole Adaptor	
102237020	160 - 400

Code	Size Range (mm)
Wastewater Spigot Adaptor Clay Pipe x 160mm	
102237117	186 - 204

Code	Size Range (mm)
Wastewater Saddle 45º x 110mm	
102237084	160 - 225/250

Code	Size Range (mm)
Wastewater Saddle 90º x 160mm	
102237580	225/250 - 355/400

Code	Size Range (mm)
Wastewater Adjustable Elbow One Sided	
102237471	160

Code	Size Range (mm)
Controllers	

* Add appropriate size to code for fittings on this page. * For complete range of tooling and equipment see Tooling & Equipment section.

Standards

- BSEN 12201 – Water
- BSEN 1555 – Gas
  (installations under British Gas approval should be Yellow)
- WIS 4-32-14 - Water

Installation Guide

See page 31.

Fabricated Fittings

JDP supply a wide range of fabricated fittings, including Long Radius Bends, Stub Flanges and Hydrant Tees. In addition to the standard range of fittings listed in this section almost any configuration of fitting can be fabricated to suit the needs of the customer, including manifolds and chambers.

The range includes:

Spigot Fittings - ideally suited for Electrofusion

Pupped Fittings – supplied with a minimum pupped length of 500mm (63mm to 450mm OD) and a minimum pupped length of 1000mm (500mm OD and above) making them suitable for Electrofusion or Butt Fusion. If you require different lengths please ask.

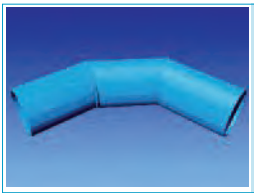
Mitered Bends – short are segmented welded bends suitable for Electrofusion

Mitered Bends – long are segmented welded bends with a minimum length of 500mm making them suitable for Electrofusion or Butt Fusion

Long Radius Bends

- 4.5 x Diameter Radius
- 90 up to 630mm
- 11.25, 22.5, 45, 90 Degree Angles
- Subject to Pressure rating and angle

Mitred Bends



- 90mm up to 630mm
- 11.25, 22.5, 45, 90 Degree Angles

Equal Tees

- 63mm up to 630mm

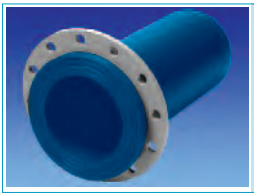
Reduced Branch Tees

- 125 x 63mm (Main x Branch)
- 355 x 250mm (Main x Branch)
- Up to 630 x 90mm (Main x Branch)

Flanged Branch Tees

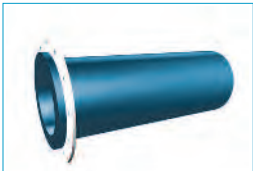
- 315 x 80mm NP16 (Main x Branch)
- 500 x 300mm NP16 (Main x Branch)

Reduced Stubs



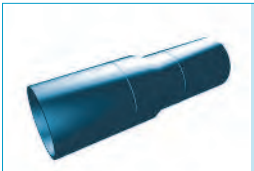
- 250 x 200mm NP16
- 355 x 300mm NP16
- 450 x 400mm NP16

Slim Flanges



- 250 x 200mm NP16
- 315 x 250mm NP16
- 355 x 300mm NP16
- 400 x 350mm NP16
- 450 x 400mm NP16
- 500 x 450mm NP16

Reducers



- 63 x 50mm up to 630 x 500mm

* Allows a smaller valve to be used i.e. a 200mm valve where otherwise a 250mm valve would be required.

Standards

Fabricated fittings are manufactured in accordance with quality assurance procedures and ISO9001.

Installation Guide

Jointing different types of PE

Any PE80 pipe can be joined to another PE80 pipe either by Butt-fusion or Electrofusion. Different manufacturers may have alternative material grades, but as long as the materials are the same i.e. both PE80, they can be joined with the same technique. This also applies to PE100 pipes.

Jointing pipes with different SDRs

Butt-fusion should only be used for jointing pipes of the **same OD and SDR value.**

Electrofusion can be used to weld pipes of the same **OD with different SDR values** and therefore wall thickness. However the maximum working pressure of the pipe must not:

- exceed the pressure rating marked on the fitting
- exceed the lower pressure value of the two pipes, if different SDR values

Electrofusion Jointing Guide

This guide is an overview only, if using Electrofusion to joint fabricated fittings and pipe, installation must be carried out by an operative trained in Electrofusion and in accordance with manufacturer's guidelines.

Installation Overview

- Ensure equipment that is clean, in good condition and regularly maintained
- Use mechanical pipe preparation tooling wherever possible
- Ensure that cutters/blades of mechanical scrapers are clean and in good condition
- Check that you have somewhere clean and dry to place tools and equipment during the Electrofusion process
- Jointing surface of pipe must be dry, clean and suitably scraped
- Check Electrofusion equipment is compatible with fittings – different Electrofusion fittings can have different pin sizes (UK standard is 4.7mm) and automated capability
- Check that the fusion time displayed matches that on the fitting
- Fittings should be dry clean and within their protective wrapping
- Only use alcoholic wipes if the pipe has been previously scraped (>1 minute) to ensure grease removal. A freshly scraped pipe inserted into the fitting immediately is preferred Alcoholic wipes should not be used on Gas pipelines.
- Coiled pipes tend to suffer from ovality. As a result they need to be re-rounded prior to Electrofusion
- Always follow the manufacturer's installation instructions

A basic electrofusion kit for jointing polyethylene pipes should include:

- Automatic or manual Electrofusion control box compatible with fittings & appropriate leads
- Compatible generator
- Pipe scraper (mechanical / hand)
- Restraining, aligning and insertion equipment
- Re-rounding clamp
- Rubber hammer
- Packaging tape
- Alcoholic wipes
- Marker pen
- Data retrieval & barcode scanner (if not built in to control box)

Butt-fusion Jointing Guide

This guide is an overview only, if using Butt-fusion to joint fabricated fittings and pipe, installation must be carried out by an operative trained in Butt-fusion and in accordance with manufacturer's guidelines.

Installation overview

- Ensure equipment that is clean, in good condition and regularly maintained
- Ensure that the correct jointing parameters for the machine type and pipe are known
- Check the heating plate is clean and dry
- Check the trimmer is clean and that the blades are not damaged and in the correct position for the required pipe size
- Ensure that the generator is in good condition and has sufficient fuel
- A tent is available to provide shelter during welding and end caps are available
- Check that the pipe and fittings are compatible – size of pipe, wall thickness (SDR) and material (PE80 or PE100) is the same
- The pipes and fittings to be jointed are of the same size
- Jointing surface of pipe must be dry, clean and suitably scraped
- Always follow the manufacturer's installation instructions

A basic electrofusion kit for jointing polyethylene pipes should include:

- Butt-fusion machine with correct sized clamp shells, trimmer, heater plate, hydraulic pump and timer
- Compatible generator
- Pipe support rollers
- Welding tent / shelter and groundsheet
- Cleaning material, lint free cotton cloth or paper towel
- Pipe cutters
- External/ internal de-beading tool
- Data transfer options
- Printer / Minitran
- Pipe end cover caps
- Indelible marker pen

Tooling and Equipment

JDP supply quality tools and equipment allowing trouble-free installation of Polyethylene pipe systems when Electrofusing or Butt Fusing.

The range includes Control Boxes that provide computerized Electrofusion with minimal potential for operator error. For sales and hire information please contact your local JDP branch.

Electrofusion Equipment & Tooling

For all your installation requirements for Electrofusion JDP hire and sell:

- Electrofusion control boxes
- Generators
- Shelters
- Alignment clamps
- Re rounding clamps
- Pipe scrapers
- Squeeze off tooling
- Top loading clamps
- Pipe clamps
- Alcoholic wipes

Automatic Butt-fusion

For all your installation requirements for Automatic Butt-fusion JDP hire and sell:

- Automatic Butt-fusion Machines
- Generators
- Shelters
- Alignment clamps
- Re rounding clamps
- Internal debeaders
- Pipe scrapers
- Squeeze off tooling
- Top loading clamps
- Pipe clamps

PE Mechanical Fittings

Mechanical fittings provide a fast effective jointing solution when Electrofusion or Butt-fusion is not suitable for the following reasons:

- It is not possible to clean or dry the pipe well enough to make a fusion joint
- Operatives with the required fusion training are not available
- Only a few joints to undertake and so it is not cost effective to hire fusion tooling and equipment

Features & Benefits

- Total end restraint system for PE & uPVC
- The same fitting can be used for SDR11 / SDR17 or uPVC
- Fittings are re-usable and easily dissembled for future adaptions
- High quality epoxy corrosion protection coating
- A full range of fittings including tees and elbows and gate valves available

Applications

Polyethylene and uPVC pipe jointing for:

- Drinking water
- Industrial & sewage water

PE Mechanical Fittings

Code	Size (mm)
PE Mechanical Couplings	
0820S2KC063	63
0820S2KC090	90
0820S2KC110	110
0820S2KC125	125
0820S2KC140	140
0820S2KC160	160
0820S2KC180	180
0820S2KC200	200
0820S2KC225	225
0820S2KC250	250
0820S2KC280	280
0820S2KC315	315
0820S2KC355	355

Code	Size (Pipe x Flange mm)
PE Mechanical Flange Adaptor	
0820S2KF6350	63 X 50
0820S2KF6380	63 X 80
0820S2KF7580	75 X 80
0820S2KF9080	90 X 80
0820S2KF90100	90 X 100
0820S2KF110100	110 X 100
0820S2KF125100	125 X 100
0820S2KF160150	160 X 150
0820S2KF180150	180 X 150
0820S2KF200200	200 X 200
0820S2KF225200	225 X 200
0820S2KF250200	250 X 200
0820S2KF250250	250 X 250
0820S2KF280250	280 X 250
0820S2KF315300	315 X 300
0820S2KF355300	355 X 300
0820S2KF400400	400 x 400
0820S2KF450400	450 x 400

Code	Size (mm)
PE Mechanical End Cap c/w BSP outlet	
0820S2K63CAP	63
0820S2K90CAP	90
0820S2K110CAP	110
0820S2K125CAP	125
0820S2K140CAP	140
0820S2K160CAP	160
0820S2K180CAP	180
0820S2K200CAP	200
0820S2K225CAP	225
0820S2K250CAP	250
0820S2K280CAP	280
0820S2K315CAP	315

Standards

Material: GJS-400 (GGG-40) / fluidized bed epoxy powder coated
Sealing system: pipe sealed via lip seal

Max. operating pressure:

Potable water: 16 bar
Waste water: 16 bar
Flanges to DIN 2501
Restraint push-fit socket for PE and PVC pipes (DIN 8074/8075, DIN 8061/8062)

Installation Guide

- The restraint system is effective independent of the pipe sealing and is achieved by tightening the lock ring
- The pipe end can be pushed into the sealing chamber without major effort
- The flat gasket is already mounted on the flange
- External surfaces must be clean but installation can take place in wet conditions
- Need to match coupling or flange adaptor specifications to pressure class of pipe system – due to the high end loads larger sizes have progressively lower pressure class limits
- Follow the fitting manufacturers' installation instructions including pipe end preparation
- Larger diameters may require a reinforcing insert to be placed inside the pipe spigot
- For thin walled PE-pipes (up to 3mm wall thickness) and low internal pressure as well the use of support liners is required

Saddles

Tapping Saddles

A range of Tapping Saddles is available from JDP, including Gunmetal, Ductile Iron, Polypropylene and Polyethylene versions with either compression, threaded or fusion outlets. For Electrofusion Tapping Tees see Electrofusion Fittings section.

Code	Size (mm)
09111654063X25	63 x 25
09111654063X32	63 x 32
09111654075X25	75 x 25
09111654075X32	75 x 32
09111654090X25	90 x 25
09111654090X32	90 x 32
091116540110X25	110 x 25
091116540110X32	110 x 32
091116540125X25	125 x 25
091116540125X32	125 x 32
091116540140X25	140 x 25
091116540140X32	140 x 32
091116540160X25	160 x 25
091116540160X32	160 x 32
091116540180X25	180 x 25
091116540180X32	180 x 32

Self Tapping Swivel Tee (PVC or PE)

These Polypropylene mechanical Tapping Tees are designed for underground use, they strap securely around the mains pipe with the stainless steel bolts supplied. A self tapping cutter is housed underneath a protective cap.

Features & Benefits

- Stainless steel bolts & Polypropylene body ensure no corrosion
- 360 degree swivel head
- Suitable for MDPE and PVC mains pipe
- 25 and 32mm MDPE outlets available
- ¾" and 1" BSP male outlets available

Applications

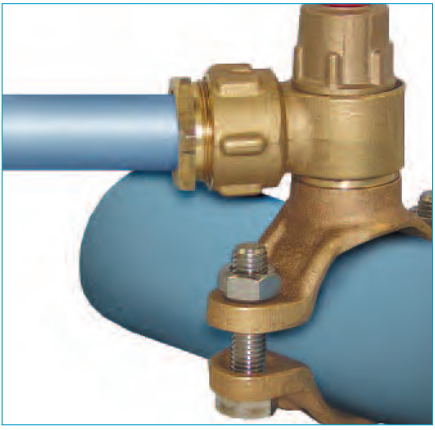
- For drinking water use
- Can incorporate integral service isolation valve (with integral cutter)
- Provide means to connect a separate valve
- Provide for direct connection to service pipe from mains

Self Tapping Gunmetal Ferrule Straps

Designed for underground use, they strap securely around the mains pipe with the stainless steel bolts supplied. A self tapping cutter is housed underneath a protective cap.

Features & Benefits

- Suitable for contaminated ground
- Stainless steel bolts & gunmetal body ensure no corrosion
- 360 degree "banjo" swivel head
- 20, 25 or 32mm MDPE outlets available
- ½", ¾", 1" or 1½" BSP female outlets available
- MDPE and PVC mains pipe



Code	Size (mm)	Code	Size (mm)
08206325STFSM	63 x 25	08206332STFSM	63 x 32
08209025STFSM	90 x 25	08209032STFSM	90 x 32
082011025STFSM	110 x 25	082011032STFSM	110 x 32
082012525STFSM	125 x 25	082012532STFSM	125 x 32
082018025STFM	180 x 25	082018032STFM	180 x 32

Standards

BS EN 1982:1998 CC491K

Installation Guide

This guide is an overview only, for full installation instructions please refer to manufacturer's guidelines.

- Jointing surface of pipe must be dry and clean
- Saddles can be used with pressurised pipe
- Check pressure rating of saddle is compatible with operating pressures of pipe system
- Follow the manufacturer's installation instructions

Flanged Pipe Saddle

Pipe saddles suitable for Polyethylene and uPVC pipes from 110 to 315mm are available from JDP.

Features & Benefits

- Solid construction – epoxy powder coated ductile iron
- Stainless steel bolts, nuts and washers
- O ring sealed drill hole
- Bonded rubber lining on lower saddle ensure positive positioning
- Threaded outlet and shut-off versions available

Applications

- PE & uPVC pipes
- Cold water up to PN 16

	Flange DN		
Pipe OD (mm)	80	100	150
110	•	-	-
140	•	•	-
160	•	•	-
180	•	•	-
200	•	•	-
225	•	•	-
250	•	-	-
280	-	-	•
315	-	-	•

- Denotes sizes available

Water Service Fittings

JDP supply a full range of pipeline service connection fittings. These include dedicated Copper x PE Adaptors, Imperial x PE Adaptors and Universal Joint Adaptors, as well as Standard Metric Compression Fittings. Ideal for repairs and maintenance of existing systems as well as installing new.

Water Service Fittings

Code	Description
Couplings	
0911701020	20mm
0911701025	25mm
0911701032	32mm
0911701050	50mm
0911701063	63mm
0911701075	75mm
0911701090	90mm
09117010110	110mm
09117010125	125mm

Code	Description
Repair Slip Coupling	
0911761020	20mm
0911761025	25mm
0911761032	32mm
0911761040	40mm
0911761050	50mm
0911761063	63mm
0911761075	75mm
0911761090	90mm
09117610110	110mm
09117610125	125mm

Code	Description
Reducing Coupling	
0911711025X20	25mm x 20mm
0911711032X20	32mm x 20mm
0911711032X25	32mm x 25mm
0911711040X25	40mm x 25mm
0911711040X32	40mm x 32mm
0911711050X25	50mm x 25mm
0911711050X32	50mm x 32mm
0911711050X40	50mm x 40mm
0911711063X25	63mm x 25mm
0911711063X32	63mm x 32mm
0911711063X40	63mm x 40mm
0911711063X50	63mm x 50mm
0911711075X50	75mm x 50mm
0911711075X63	75mm x 63mm
0911711090X63	90mm x 63mm
0911711090X75	90mm x 75mm
09117110110X90	110mm x 90mm

Water Service Fittings (contd)

Code	Description
Male Adaptor BSP Thread	
0911702020X1/2	20mm x ½"
0911702020X3/4	20mm x ¾"
0911702020X1	20mm x 1"
0911702025X1/2	25mm x ½"
0911702025X3/4	25mm x ¾"
0911702025X1	25mm x 1"
0911702032X34	32mm x ¾"
0911702032X1	32mm x 1"
0911702032X11/4	32mm x 1¼"
0911702032X11/2	32mm x 1½"
0911702040X1	40mm x 1"
0911702040X11/4	40mm x 1¼"
0911702040X112	40mm x 1½"
0911702040X2	40mm x 2"
0911702050X1	50mm x 1"
091170205011/4	50mm x 1¼"
091170205011/2	50mm x 1½"
0911702050X2	50mm x 2"
0911702063X11/4	63mm x 1¼"
0911702063X11/2	63mm x 1½"
0911702063X2	63mm x 2"
0911702063X212	63mm x 2½"
0911702075X2	75mm x 2"
0911702075X21/2	75mm x 2½"
0911702075X3	75mm x 3"
0911702090X2	90mm x 2"
0911702090X21/2	90mm x 2½"
0911702090X3	90mm x 3"
0911702090X4	90mm x 4"
09117020110X2	110mm x 2"
09117020110X3	110mm x 3"
09117020110X4	110mm x 4"

Code	Description
Female Adaptor BSP Thread	
0911703020X1/2	20mm x ½"
0911703020X3/4	20mm x ¾"
0911703020X1	20mm x 1"
0911703025X1/2	25mm x ½"
0911703025X3/4	25mm x ¾"
0911703025X1	25mm x 1"
0911703032X3/4	32mm x ¾"
0911703032X1	32mm x 1"
0911703032X11/4	32mm x 1¼"
0911703040X1	40mm x 1"
0911703040X11/4	40mm x 1¼"
0911703040X11/2	40mm x 1½"
0911703050X11/4	50mm x 1¼"
091170305011/2	50mm x 1½"
0911703050X2	50mm x 2"
0911703063X2	63mm x 2"
0911703075X2	75mm x 2"
0911703075X21/2	75mm x 2½"
0911703090X2	90mm x 2"
0911703090X3	90mm x 3"
0911703090X4	90mm x 4"
09117030110X3	110mm x 3"
09117030110X4	110mm x 4"

Water Service Fittings (contd)

Code	Description
90º Tee	
0911704020	20mm
0911704025	25mm
0911704032	32mm
0911704050	50mm
0911704063	63mm
0911704075	75mm
0911704090	90mm
09117040110	110mm

Code	Description
90º Slip Tee	
0911704520	20mm
0911704525	25mm
0911704532	32mm
0911704550	50mm
0911704563	63mm

Code	Description
45º Tee	
0911764063	63mm
0911764075	75mm
0911764090	90mm
09117640110	110mm

Code	Description
90º Elbow	
0911705020	20mm
0911705025	25mm
0911705032	32mm
0911705040	40mm
0911705050	50mm
0911705063	63mm
0911705075	75mm
0911705090	90mm
09117050110	110mm

Code	Description
90º Reducing Tee	
0911734025X20	25mm x 20mm
0911734032X25	32mm x 25mm
0911734040X32	40mm x 32mm
0911734050X25	50mm x 25mm
0911734050X32	50mm x 32mm
0911734050X40	50mm x 40mm
0911734063X32	63mm x 32mm
0911734063X40	63mm x 40mm
0911734063X50	63mm x 50mm
0911734075X63	75mm x 63mm

Code	Description
90º Tee with BSP Threaded Female Offtake	
0911714020X1/2	20mm x ½"
09117140203/4	20mm x ¾"
0911714025X1/2	25mm x ½"
0911714025X3/4	25mm x ¾"
0911714025X1	25mm x 1"
0911714025X11/4	25mm x 1¼"
0911714032X3/4	32mm x ¾"
0911714032X1	32mm x 1"
0911714032X11/4	32mm x 1¼"
0911714032X11/2	32mm x 1½"
0911714040X1	40mm x 1"
0911714040X11/4	40mm x 1¼"
0911714040X11/2	40mm x 1½"
0911714040X2	40mm x 2"
09117140511/2	50mm x 1½"
0911714050X2	50mm x 2"
0911714063X11/4	63mm x 1¼"
0911714063X11/2	63mm x 1½"
0911714063X2	63mm x 2"
0911714075X2	75mm x 2"
0911714075X21/2	75mm x 2½"
0911714075X3	75mm x 3"
0911714090X3	90mm x 3"
09117140110X4	110mm x 4"

** Also availbale in Male Offtake

Water Service Fittings (contd)

Code	Description
90º Elbow with BSP Threaded Female Offtake	
09117150201/2	20mm x ½"
09117150203/4	20mm x ¾"
0911715025X1/2	25mm x ½"
0911715025X3/4	25mm x ¾"
0911715025X1	25mm x 1"
09117150323/4	32mm x ¾"
0911715032X1	32mm x 1"
0911715032X11/4	32mm x 1¼"
0911715040X1	40mm x 1"
0911715040X11/4	40mm x 1¼"
0911715040X11/2	40mm x 1½"
0911715040X2	40mm x 2"
0911715050X1	50mm x 1"
0911715050X11/4	50mm x 1¼"
09117150501 1/2	50mm x 1½"
0911715050X2	50mm x 2"
0911715063X11/4	63mm x 1¼"
0911715063X11/2	63mm x 1½"
0911715063X2	63mm x 2"
0911715075X2	75mm x 2"
0911715075X21/2	75mm x 2½"
0911715090X3	90mm x 3"

** Also availbale in Male Offtake

Code	Description
45º Elbow	
0911746032	32mm
0911746040	40mm
0911746050	50mm
0911746063	63mm
0911746090	90mm
09117460110	110mm

Code	Description
End Plug	
09117120X20	20mm
09117120X25	25mm
09117120X32	32mm
09117120X40	40mm
09117120X50	50mm
09117120X63	63mm
09117120X75	75mm
09117120X90	90mm
09117120X110	110mm

Code	Description
Blanking Plug	
0911712920	20mm
0911712925	25mm
0911712932	32mm
0911712950	50mm
0911712963	63mm

Water Service Fittings (contd)

Code	Description
Reducing Set	
0911793025X20	25mm x 20mm
0911793032X20	32mm x 20mm
0911793032X25	32mm x 25mm
0911793040X32	40mm x 32mm
0911793050X25	50mm x 25mm
0911793050X32	50mm x 32mm
0911793050X40	50mm x 40mm
0911793063X25	63mm x 25mm
0911793063X32	63mm x 32mm
0911793063X50	63mm x 50mm
0911793075X63	75mm x 63mm
09117930110X63	110mm x 63mm
09117930110X75	110mm x 75mm
09117930110X90	110mm x 63mm

Code	Description
Plass 4 Universal Elbow	
09117705715-22	25mm x 15-22mm
09117705722-27	25mm x 20-27mm
09117705727-35	27mm x 27-35mm

Code	Description
Metric to Imperial 90º Elbow	
0911747820X1/2	20mm x ½"
0911747825X1/2	25mm x ½"
0911747825X3/4	25mm x ¾"
0911747832X1	32mm x 1"
0911747850X11/2	50mm x 1½"
0911747863X2	63mm x 2"

Code	Description
Dedicated PE to Copper Connector	
0911743615X20	15mm x 20mm
0911743615X25	15mm x 25mm
0911743622X25	22mm x 25mm
0911743628X32	28mm x 32mm

Code	Description
Plass 4 Universal Coupling	
09117701715-22	25mm x 15-22mm
09117701720-27	25mm x 20-27mm
09117701720-2732	32mm x 20-27mm
09117701727-35	25mm x 27-35mm
09117701727-3532	32mm x 27-35mm
09117701735-50	50mm x 35-50mm

Code	Description
Metric to Imperial Slip Coupling	
0911741820X3/8	20mm x ⅜"
0911741820X1/2	20mm x ½"
0911741825X3/8	25mm x ⅜"
0911741825X1/2	25mm x ½"
0911741825X3/4	25mm x ¾"
0911741832X1	32mm x 1"
0911741832X11/4	32mm x 1¼"
0911741850X11/4	50mm x 1¼"
0911741850X11/2	50mm x 1½"
0911741863X2	63mm x 2"

Code	Description
Compression Stopcock BS5433	
0911340720	20mm
0911340725	25mm
0911340732	32mm

Water Service Fittings (contd)

Code	Description
Universal Stop Tap BS5433/1010 Type	
0911905020	20mm
0911905025	25mm
0911905032	32mm

Code	Description
Gunmetal Stop Tap BS5433 BSP Threaded	
0911905311/2	1½"
09119053X2	2"

Code	Description
Gunmetal Spherical Plugtap to WIS 4-32-04	
0911906025	25mm
0911906032	32mm

Code	Description
Universal Valve Key for T Bar & Square Drive Valves	
091160124/12	12mm
091160124	16mm

Code	Description
Brass Wall Plate Elbow	
091190552012	20mm X" 1/2"
091190552534	25mm X 3/4"

Code	Size (mm)
Check Valve Kit	
09117012	25mm

Code	Description
Bib Tap Hose Union with Double Check Valve	
09119056X1/2	1/2"
09119056X3/4	3/4"

Code	Description
Gunmetal Stop Tap BS5433 Square Head	
0911905120	20mm
0911905125	25mm
0911905132	32mm

Code	Description
Gunmetal Stop Tap BS5433 Square Head	
0911905120	20mm
0911905125	25mm
0911905132	32mm

Code	Description
DZR Stoptap BSP Threaded Female / Male	
09119048	1½" / 2"

Code	Description
Plastic Wall Plate Elbow	
0911775020	20mm
0911775025	25mm

Water Service Fittings (contd)

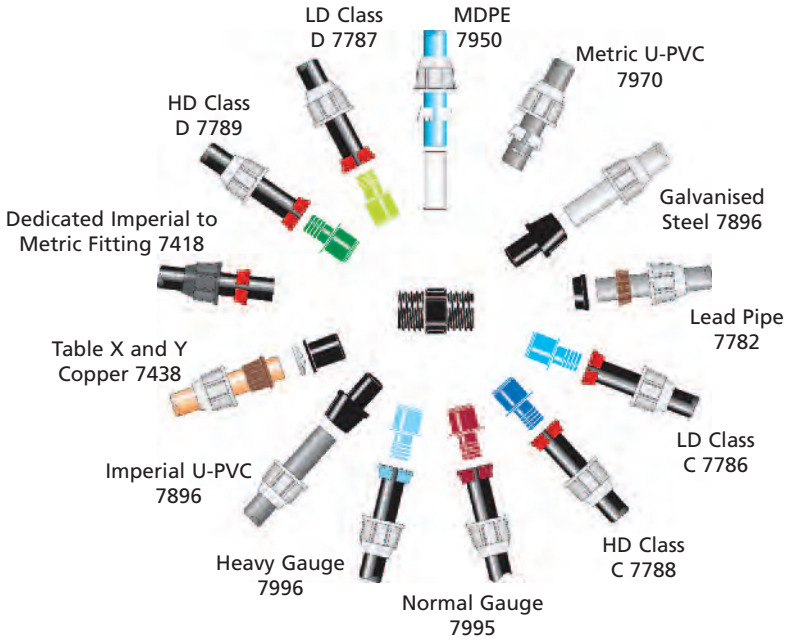
Code	Description
Bib Tap - Ball Type	
09112100X1/2	1/2"
09112100X3/4	3/4"

Code	Description
DZR Double Check Valve Female BS6282/5	
09119057X3/4	3/4"
09119057X1	1"

Code	Description
Pipe Liner	
0911795020	20mm
0911795025	25mm
0911795032	32mm
0911795040	40mm
0911795050	50mm
0911795063	63mm

Code	Description
Pipe Shears	
091160125	20/32mm
091160126	20/63mm

Pipe Conversion Adaptors



Water Service Fittings (contd)

Code	Description
Wrench	
0911799016/40	16mm / 40mm
0911799040/75	40mm / 75mm
0911799063/125	63mm / 125mm
0911799075/110	75mm / 110mm

Code	Description
Chamfer Tool	
0911796020/63	20/63mm

Code	Description
Pipe Squeeze Off Tool	
091160123	16/32mm
09116012332/63	32/63mm

Code	Description
Universal Strap Wrench	
09117992	20/90mm

Code	Description
MDPE Pipe Clips (connectable)	
09116012020	20mm
09116012025	25mm
09116012032	32mm
09116012050	50mm
09116012063	63mm

Water Service Fittings (contd)

Code	Description
Compression Flange Adaptor NP16/10 with Metal Backing Ring	
0911722050X11/2	50mm x 11/2"
0911722050X2	50mm x 2"
0911722063X2	63mm x 2"
0911722075X21/2	75mm x 21/2"
0911722090X3	90mm x 3"
0911722090X4	90mm x 4"
09117220110X4	110mm x 4"
09117220125X5	125mm x 5"
09117220125X6	125mm x 6"

for Flange Gaskets see Valves & Hydrants section

Code	Description
Assembly Tool	
09117991	

Code	Description
Spigot Flange Adaptor NP16/10 with Metal Backing Ring	
0911723650X11/2	50mm x 3"
0911723650X2	50mm x 2"
0911723663X2	63mm x 2"
0911723663X21/2	63mm x 2½"
0911723675X2	75mm x 2"
0911723675X21/2	75mm x 2½"
0911723675X3	75mm x 3"
0911723690X21/2	90mm x 2½"
0911723690X3	90mm x 3"
0911723690X4	90mm x 4"
09117236110X3	110mm x 3"
09117236110X4	110mm x 4"
09117236110X5	110mm x 5"

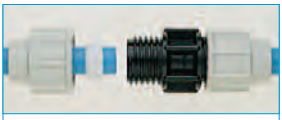
for Flange Gaskets see Valves & Hydrants section

Standards

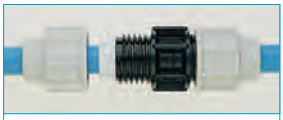
WRAS APPROVED PRODUCT

Code	Description
Water Meter Boxes	
0905BB1	Sealed underground water meter boundary box and stop valve
09113514*	Underground water meter boundary box and stop valve.
0904BB6	Sealed contaminated ground water meter boundary box and stop valve

20-63mm Metric MDPE Pipe



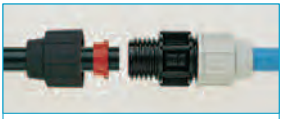
Insert liner into pipe and slacken nut until the thread is visible.



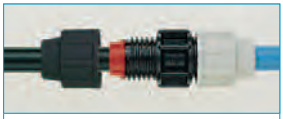
Push and twist pipe body through the nut, split ring and O-ring.

Tighten nut firmly. For final tightening on 50mm & 63mm use 09117990 wrench.

Dedicated Imperial to Metric Fittings



Slacken nut until half the thread is visible.

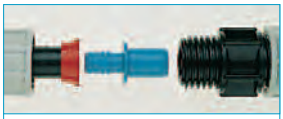


Push and twist pipe body through the nut, split ring and O-ring.

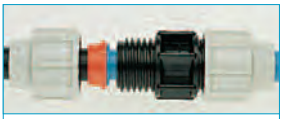
Tighten nut firmly. For final tightening on 11/4", 11/2" & 2"use 09117990 wrench.

Imperial Polyethylene Pipe Adaptor

Cut pipe square. Remove nut from end of fitting and discard white split ring. Mount nut on pipe and assemble red split ring flush with end of pipe (taper towards the nut).



Push barbed adaptor into pipe to the stop.



Push plain end of adaptor into body of fitting, past the sealing ring to the stop. Hand tightening is sufficient.

Universal Pipe Adaptors: Galvanised and PVC

Prepare pipe by ensuring that the end is free of grease and roughen outer surface with wire wool or similar. Cut pipe end square. Remove nut from end of fitting and discard white split ring.

Push adaptor into fitting to the stop. Also push and twist the pipe until it meets the internal stop.

Screw the nut tightly towards the body of the fitting. Final tightening with 09117990 wrench is essential. The installation should be firmly anchored against end loading.

Adaptor Set for Table X and Y Copper

Remove nut from end of fitting and discard white split ring. Except 35, 42 & 54mm fittings, where the white split ring is used as a spacer. Push back rubber seal into fitting body and assemble components in the order shown above.

Replace the nut onto the body without tightening. Mark pipe at X in order that the pipe end reaches flange on body of fitting Y, as shown above.

Push pipe through nut, adaptor and metal ring, into body of fitting to X mark on pipe as shown. Wrench tighten nut onto body firmly using 09117990 wrench. The metal grip ring must be replaced with new if adaptor is re-used.

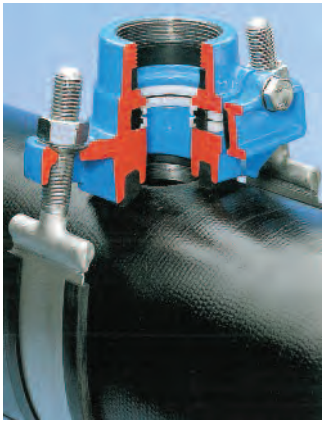
PVC & Ductile Pressure Pipe Systems

- PVC-O Drinking Water Pipe • Ductile Iron Pipes • Flanged Fittings
- Socketed Fittings • Universal Couplings & Flange Adaptors
- Repair Clamps & Saddles • Ancillary Products

JDP

JDP is a supplier of Ductile Iron Pipes and Fittings for both Sewage and Clean Water applications, complying with the relevant British, European and International Standards.

Extensively used by Water Companies, Utility Contractors, Mechanical Engineers and Civil Engineers. Ductile Pressure Pipe Systems are a tried and tested method of distributing water for Potable Water, Waste Water and Fire Mains.



PVC-O Drinking Water Pipe

Molecular orientated PVC (PVC-O) is a high performance, cost effective and environmentally friendly product for the distribution of drinking (potable) water. The PVC-O pipe is jointed with a mechanical rubber ring joint and complimented with a range of PVC-O and ductile iron fittings for use with PVC-O pipe. The pipe is coloured blue and rated to 16 bar working pressure.

The process in which PVC-O pipe is made involves re-orientating the molecules of PVC-u material to improve physical properties. This combination gives the best weight vs. performance characteristics in the industry for a product that will last over 50 years.

Features & Benefits

- Non corrosive
- Lightweight and easy to handle - reduced installation costs
- Extremely tough and resilient
- Long asset life
- Cleanliness – commissioning time reduced
- Tried and tested – proven reliability
- Resistant to fast fracture
- Low frictional resistance
- 16 bar pressure rating – 25bar also available
- Suitable for narrow trenching – up to 30% saving on open cut trenching methods

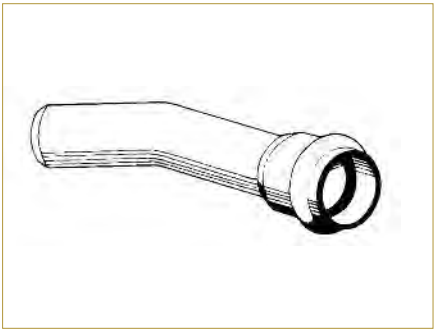
Applications

- Drinking Water (potable)
- Suitable for narrow trenching

Pipes x 6m (16 bar)

Internal Dia (mm)	External Dia (mm)	Code
103.8	110	082336405
133.2	140	082384536
151.2	160	082336408
189.0	200	082336409
237.8	250	082384539
299.6	315	082384540

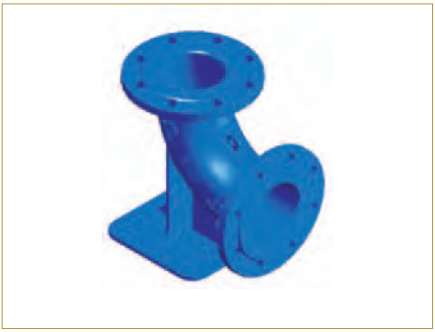
PVC-O Bends



Ductile Iron Socketed Bends

Ductile Iron Socketed Tees

Ductile Iron Flanged Fittings



Standards

WIS 04-31-08 – Molecular oriented Polyvinyl Chloride (PVC-O) Pressure Pipes for Underground Use for Potable Water.

Installation Guide

Jointing of pipes

- Prior to jointing, the pipe ends only need to be exposed, the identification sleeving can be left intact on the remainder of the pipe lengths if preferred.
- Check pipe for scratches or other damage. Pay special attention to the jointing surfaces.
- Lubricate both spigot insertion length and ring with the lubricant supplied.
- PVC-O pipes must NOT be jointed with solvent cement.
- Offer the spigot end to the socket, so that the leading edge is just engaging the socket mouth. CAREFULLY ALIGN THE PIPES in both horizontal and vertical planes before attempting to thrust home. Ensure socket is held firm during the insertion.
- Enter the spigot past the sealing ring as far as the penetration mark. Smaller sizes should enter under hand-applied force, whereas assistance of a crowbar, purchasing on a wooden block, may be necessary up to 315mm size. DO NOT PUSH HOME WITH THE DIGGER BUCKET or similar mechanical means.
- If excessive resistance is felt, withdraw the pipe and check the sealing ring has not been displaced. Re-lubricate, realign and repeat the insertion. At no time should excessive force be used.

Laying of pipes

The pipes should be installed in the trench with the pipe markings uppermost.

The mechanical rubber joints are non end load bearing and consequently require the use of conventional concrete thrust blocks at change of direction, tees etc.

Joint clearance holes should be dug into the trench to ensure pipe and sockets are laid level

Pipes can be laid either in a conventional open cut trench and jointed in the trench. Or a narrow trench where the pipes are jointed above ground and subsequently lowered into the trench.

The current practice in the UK is to lay mains pipes at 900mm cover, measured from the pipe crown.

The location of cables and pipes from other utilities should be identified prior to excavation and supported / protected throughout. Any damage should be reported.

Trench walls 1.2m and deeper must be supported – guidance on excavation techniques can be found in:

BS 6031 Code of practice for Earthworks (general trenchworks)
Report No. 97 Trenching practice (more specific advice)
Report UM 1049 : 1990 (review of current practices)

Trench reinstatement in highways is covered in the NRASWA "Specification for the

Reinstatement of Openings in Highways", 1992. This code was introduced with the aim that all highway reinstatement is completed as soon as possible to a consistent prescribed performance criteria.

Further details on bed and fill materials are given in WIS 4-08-01.

Trench backfilling should commence as soon as possible after pipe laying to give the pipe protection from damage from objects possibly falling into the trench. To protect the pipe from potential future interference damage it is good practice to install a marker tape 300mm above pipe crown.

Marker tapes can also include a tracer wire to allow future identification of the pipeline. See Accessories section for marker tapes.

Handling and Storage

Always

Store pipes on level, firm ground.
Keep pipe away from sharp objects and stones.
Keep protective packaging intact until required for use.
Protected pipes from prolonged intense UV light.

Never

Subject pipe to chafing, abrasion, scoring or cutting.
Drag or roll pipes.
Throw or drop pipe.
Use metal slings and hooks around the pipe.
Store pipes close to petrochemicals or other aggressive materials.

Ductile Iron Pipes

The mechanical properties of Ductile Iron, combined with internal lining and external coating systems, ensure that Ductile Iron pipelines provide assured long term performance.

Flanged pipes and fittings are available in diameters from 50mm up to 1600mm. They have rigid self anchoring joints that provide easy installation and removal of valves, hydrants etc.

Socketed pipes and fittings are available in diameters from 80mm up to 1200mm. The flexible joint system allows some angular deflection and longitudinal withdrawal, and therefore is ideally suited for below ground installations.

Features & Benefits

- Exceptional impact strength
- Suitable for above or below ground installations
- Gravity or pressure systems
- Proven range of joint systems for every requirement
- Corrosion resistant
- High pipe stiffness minimises bedding requirements
- Hydraulically smooth
- Abrasion resistant

Applications

- Pressure sewage pipelines
- Clean or potable water supply

Protection of Ductile Iron Pipe Systems

The internal and external finishes of ductile iron pipework and fittings are generally determined by the specification and application of the product. BS EN 545 relates to clean water and BS EN 598 to sewage or dirty water.

BS EN 545

Internal and External Finishes	Coating / Lining	Pipes	Fittings
External	Zinc & bitumen coating	standard	optional
	Bitumen coating - black	optional	standard
	Fusion bonded epoxy coating- blue	optional	optional
Internal	Cement mortar lined	standard	standard
	Bitumen coating - black	optional	optional
	Cement mortar lined & bitumen seal coated	optional	optional
	Fusion bonded epoxy coating- blue	optional	optional

BS EN 598

Internal and External Finishes	Coating / Lining	Pipes	Fittings
External	Zinc & two-pack epoxy coating – red/brown	standard	standard
	Zinc & bitumen coating – black or red/brown	standard	optional
	Bitumen coating – black or red/brown	optional	optional
Internal	High alumina cement lined	standard	optional
	Zinc & two-pack epoxy coating – red/brown	-	standard
	High alumina cement lined & bitumen seal coating	optional	optional
	Bitumen coating – black or red/brown	optional	optional

Ductile Iron Socketed Pipe BS EN545 6m long single socket pipe

Main Diameter	Code
80mm	082080X6EN545
100mm	0820100X6EN545
150mm	0820150X6EN545
200mm	0820200X6EN545
250mm	0820250X6EN545
300mm	0820300X6EN545

*Larger diameter pipes are available on request *For socket gaskets see Socketed Fittings

Ductile Iron Socketed Pipe BS EN598 6m long single socket pipe

Main Diameter	Code
80mm	082080X6EN598
100mm	0820100X6EN598
150mm	0820150X6EN598
200mm	0820200X6EN598
250mm	0820250X6EN598
300mm	0820300X6EN598

*Larger diameter pipes are available on request *For socket gaskets see Socketed Fittings

Flanged Fittings

Vario

As well as supplying traditional products and materials (that you will find in this section) JDP continually look for innovative solutions to contractors and engineers problems. The Vario is an innovative flexible flanged fitting, with a unique telescopic design incorporating an integral ball-and-socket joint, allowing bending to all sides up to 10° and extension of up to 182mm.

Features & Benefits

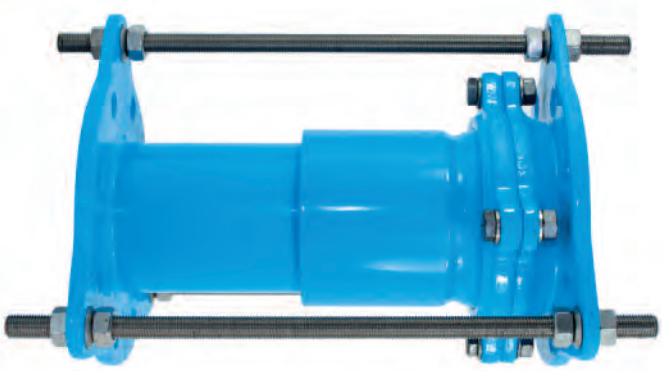
- All parts are made of ductile iron
- GSK epoxy powder coated inside and outside
- 10° angle adjustment
- Extends to more than double length on largest fitting
- Short or long versions
- PN16 rated

Applications

- Subsided pipelines
- Dislocated pipes that are misaligned
- Old valves and cross connections
- Quick install with reduced fittings stock

	Dimension/DN (mm)				
Version	50	80	100	150	200
Short	150 - 207	150 - 214	150 - 216	175 - 250	195 - 292
Long	207 - 323	214 - 344	216 - 350	250 - 408	280 - 462

The tension lock assembly fixes the **Vario** in installed position.



JDP also supply a comprehensive range of fittings that are self anchoring and give no deflection tolerance. This means no external anchoring is necessary at changes in direction or blank ends. Flange adaptors are widely used to give flexibility in the pipeline system, see Universal Flange Adaptors later in this section. A comprehensive range including specials is available from JDP.

Features & Benefits

- Rigid and self anchoring joints
- Easy installation and removal of valves and hydrants etc.
- Available in 50mm - 1600mm

Applications

- For use above ground, in water and sewage treatment works, pumping stations, rising mains etc.
- Connecting valves, pumps and hydrants
- Flanges are supplied as PN16 as standard for working pressures up to and including 16 bar - other flange drillings are available on request.

80mm Flanged Fittings

Description	Water Fittings (Blue) BS EN 545	Sewer Fittings (Red) BS EN 598
AF Pipe x 150mm	082080X150FPB	082080X150FP
AF Pipe x 200mm	082080X200FPB	082080X200FP
AF Pipe x 250mm	082080X250FPB	082080X250FP
AF Pipe x 300mm	082080X300FPB	082080X300FP
AF Bend x 11¼º	082080X11FBB	082080X11FB
AF Bend x 22½º	082080X22FBB	082080X22FB
AF Bend x 45º	082080X45FBB	082080X45FB
AF Bend x 90º	082080X90FBB	082080X90FB
AF Duckfoot Bend x 90º	082080DFBB	082080DFB
AF Equal Tee 80 x 80mm	082080FTB	082080FT
AF 45º Angle Branch	082080X45AFAB	082080X45AFA
AF Flanged Y Pipe	082080AFYPIPE	082080AFYPIPE
Concentric Reducer 80x50mm	082080X50CRB	082080X50CR
Flange Spigot (STD)	082080FSPSTDB	082080FSPSTD
Blank Flange	082080BLKFLGBB	082080BLKFLGB

* Double Flanged Pipe (AF Pipe) available in lengths 50mm - 5000mm

100mm Flanged Fittings

Description	Water Fittings (Blue) BS EN 545	Sewer Fittings (Red) BS EN 598
AF Pipe x 150mm	0820100X150FPB	0820100X150FP
AF Pipe x 200mm	0820100X200FPB	0820100X200FP
AF Pipe x 250mm	0820100X250FPB	0820100X250FP
AF Pipe x 300mm	0820100X300FPB	0820100X300FP
AF Bend x 11¼º	0820100X11FBB	0820100X11FB
AF Bend x 22½º	0820100X22FBB	0820100X22FB
AF Bend x 45º	0820100X45FBB	0820100X45FB
AF Bend x 90º	0820100X90FBB	0820100X90FB
AF Duckfoot Bend x 90º	0820100DFBB	0820100DFB
AF Equal Tee 100 x100mm	0820100FTB	0820100FT
AF Reduced Tee 100 x 80mm	0820100X80FTB	0820100X80FT
AF 45º Angle Branch	0820100X45AFAB	0820100X45AFA
AF Flanged Y Pipe	0820100AFYPIPE	0820100AFYPIPE
Concentric Reducer 100 x 80mm	0820100X80CRB	0820100X80CR
Flange Spigot (STD)	0820F100SPSTDB	0820F100SPSTD
Blank Flange	0820100BLKFLGBB	0820100BLKFLGB

* Double Flanged Pipe (AF Pipe) available in lengths 150 – 5000mm

150mm Flanged Fittings

Description	Water Fittings (Blue) BS EN 545	Sewer Fittings (Red) BS EN 598
AF Pipe x 250mm	0820150X250FPB	0820150X250FP
AF Pipe x 300mm	0820150X300FPB	0820150X300FP
AF Bend x 11¼º	0820150X11FBB	0820150X11FB
AF Bend x 22½º	0820150X22FBB	0820150X22FB
AF Bend x 45º	0820150X45FBB	0820150X45FB
AF Bend x 90º	0820150X90FBB	0820150X90FB
AF Duckfoot Bend x 90º	0820150DFBB	0820150DFB
AF Equal Tee 150 x150mm	0820150FTB	0820150FT
AF Reduced Tee 150 x 80mm	0820150X80FTB	0820150X80FT
AF Reduced Tee 150 x 100mm	0820150X100FTB	0820150X100FT
AF 45º Angle Branch	0820150X45AFAB	0820150X45AFA
AF Flanged Y Pipe	0820150AFYPIPE	0820150AFYPIPE
Concentric Reducer 150 x 80mm	0820150X80CRB	0820150X80CR
Concentric Reducer 150 x 100mm	0820150X100CRB	0820150X100CR
Flange Spigot (STD)	0820150FSPSTDB	0820150FSPSTD
Blank Flange	0820150BLKFLGBB	0820150BLKFLGB

* Double Flanged Pipe (AF Pipe) available in lengths 150 – 5000mm

200mm Flanged Fittings

Description	Water Fittings (Blue) BS EN 545	Sewer Fittings (Red) BS EN 598
AF Bend x 11¼º	0820200X11FBB	0820200X11FB
AF Bend x 22½º	0820200X22FBB	0820200X22FB
AF Bend x 45º	0820200X45FBB	0820200X45FB
AF Bend x 90º	0820200X90FBB	0820200X90FB
AF Equal Tee 200 x 200mm	0820200FTB	0820200FT
AF Reduced Tee 200 x 80mm	0820200X80FTB	0820200X80FT
AF Reduced Tee 200 x 100mm	0820200X100FTB	0820200X100FT
AF Reduced Tee 200 x 150mm	0820200X150FTB	0820200X150FT
AF 45º Angle Branch	0820200X45AFAB	0820200X45AFA
AF Flanged Y Pipe	0820200AFYPIPE	0820200AFYPIPE
Concentric Reducer 200 x100mm	0820200X100CRB	0820200X100CR
Concentric Reducer 200 x150mm	0820200X150CRB	0820200X150CR
Flange Spigot (STD)	0820200FSPSTDB	0820200FSPSTD
Blank Flange	0820200BLKFLGBB	0820200BLKFLGB

* Double Flanged Pipe (AF Pipe) available in lengths 175 – 5000mm

250mm Flanged Fittings

Description	Water Fittings (Blue) BS EN 545	Sewer Fittings (Red) BS EN 598
AF Bend x 11¼º	0820250X11FBB	0820250X11FB
AF Bend x 22½º	0820250X22FBB	0820250X22FB
AF Bend x 45º	0820250X45FBB	0820250X45FB
AF Bend x 90º	0820250X90FBB	0820250X90FB
AF Equal Tee 250 x 250mm	0820250FTB	0820250FT
AF Reduced Tee 250 x 80mm	0820250X80FTB	0820250X80FT
AF Reduced Tee 250 x 100mm	0820250X100FTB	0820250X100FT
AF 45º Angle Branch	0820250X45AFAB	0820250X45AFA
AF Flanged Y Pipe	0820250AFYPIPE	0820250AFYPIPE
Concentric Reducer 250 x 150mm	0820250X150CRB	0820250X150CR
Flange Spigot (STD)	0820250FSPSTDB	0820250FSPSTD
Blank Flange	0820250BLKFLGBB	0820250BLKFLGB

* Double Flanged Pipe (AF Pipe) available in lengths 200 – 5000mm

300mm Flanged Fittings

Description	Water Fittings (Blue) BS EN 545	Sewer Fittings (Red) BS EN 598
AF Bend x 45º	0820300X45FBB	0820300X45FB
AF Bend x 90º	0820300X90FBB	0820300X90FB
AF Equal Tee 300 x 300mm	0820300FTB	0820300FT
AF Reduced Tee 300 x 80mm	0820300X80FTB	0820300X80FT
AF Reduced Tee 300 x 150mm	0820300X150FTB	0820300X150FT
AF 45º Angle Branch	0820300X45AFAB	0820300X45AFA
AF Flanged Y Pipe	0820300AFYPIPE	0820300AFYPIPE
Concentric Reducer 300 x 150mm	0820300X150CRB	0820300X150CR
Concentric Reducer 300 x 200mm	0820300X200CRB	0820300X200CR
Concentric Reducer 300 x 250mm	0820300X250CRB	0820300X250CR
Flange Spigot (STD)	0820300FSPSTDB	0820300FSPSTD
Blank Flange	0820300BLKFLGBB	0820300BLKFLGB

* Double Flanged Pipe (AF Pipe) available in lengths 225 – 5000mm

Diameters above 300mm are available on request

Socketed Fittings

A complete range of socketed fittings is available for Potable Water (BS EN545) and Waste Water (BS EN598) applications. Socketed fittings have an anchor gasket joint which is equipped with stainless steel gripping teeth. Once the pipeline is pressurized these teeth grip the pipe and prevent disconnection.

Features & Benefits

- Flexible jointing allows some angular deflection and longitudinal withdrawal
- Simple and speedy installation
- Long radius curves can be achieved with slight angular deflection allowed with socketed pipe gaskets
- Available in 80 - 1200mm

Applications

- For use below ground, in water and pressure sewage pipelines
- Anchor points are required at change of pipeline direction
- Nitrile socketed pipe gaskets available for applications with oils, hot oils, animal fats, acids and alkalis

80mm Socketed Fittings

Description	Water Fittings (Blue) BS EN 545	Sewer Fittings (Red) BS EN 598
DS Bend x 11¼º	082080X11DSBB	082080X11DSB
DS Bend x 22½º	082080X22DSBB	082080X22DSB
DS Bend x 45º	082080X45DSBB	082080X45DSB
DS Bend x 90º	082080X90DSBB	082080X90DSB
AS Equal Tee 80 x 80mm	082080ASTB	082080AST
Flange on Socket Tee 80 x 80mm	082080FSTB	082080FST
Flange Socket	082080FSB	082080FS
Tyton Gasket	082080TGE	082080TGE
Anchor Gasket	082080TGEA	082080TGEA

100mm Socketed Fittings

Description	Water Fittings (Blue) BS EN 545	Sewer Fittings (Red) BS EN 598
DS Bend x 11¼º	0820100X11DSBB	0820100X11DSB
DS Bend x 22½º	0820100X22DSBB	0820100X22DSB
DS Bend x 45º	0820100X45DSBB	0820100X45DSB
DS Bend x 90º	0820100X90DSBB	0820100X90DSB
AS Equal Tee 100 x 100mm	0820100ASTB	0820100AST
AS Reduced Tee 100 x 80mm	0820100X80ASTB	0820100X80AST
Flange on Socket Tee 100 x 80mm	0820100X80FSTB	0820100X80FST
Flange Socket	0820100FSB	0820100FS
Tyton Gasket	0820100TGE	0820100TGE
Anchor Gasket	0820100TGEA	0820100TGEA

150mm Socketed Fittings

Description	Water Fittings (Blue) BS EN 545	Sewer Fittings (Red) BS EN 598
DS Bend x 11¼º	0820150X11DSBB	0820150X11DSB
DS Bend x 22½º	0820150X22DSBB	0820150X22DSB
DS Bend x 45º	0820150X45DSBB	0820150X45DSB
DS Bend x 90º	0820150X90DSBB	0820150X90DSB
AS Equal Tee 150 x 150mm	0820150ASTB	0820150AST
AS Reduced Tee 150 x 80mm	0820150X80ASTB	0820150X80AST
AS Reduced Tee 150 x 100mm	0820150X100ASTB	0820150X100AST
Flange on Socket Tee 150 x 80mm	0820150X80FSTB	0820150X80FST
Flange on Socket Tee 150 x 100mm	0820150X100FTSB	0820150X100FTS
Flange Socket	0820150FSB	0820150FS
Tyton Gasket	0820150TGE	0820150TGE
Anchor Gasket	0820150TGEA	0820150TGEA

200mm Socketed Fittings

Description	Water Fittings (Blue) BS EN 545	Sewer Fittings (Red) BS EN 598
DS Bend x 11¼º	0820200X11DSBB	0820200X11DSB
DS Bend x 22½º	0820200X22DSBB	0820200X22DSB
DS Bend x 45º	0820200X45DSBB	0820200X45DSB
DS Bend x 90º	0820200X90DSBB	0820200X90DSB
AS Equal Tee 200 x 200mm	0820200ASTB	0820200AST
AS Reduced Tee 200 x 80mm	0820200X80ASTB	0820200X80AST
AS Reduced Tee 200 x 100mm	0820200X100ASTB	0820200X100AST
Flange on Socket Tee 200 x 80mm	0820200X80FSTB	0820200X80FST
Flange on Socket Tee 200 x 100mm	0820200X100FTSB	0820200X100FTS
Flange Socket	0820200FSB	0820200FS
Tyton Gasket	0820200TGE	0820200TGE
Anchor Gasket	0820200TGEA	0820200TGEA

250mm Socketed Fittings

Description	Water Fittings (Blue) BS EN 545	Sewer Fittings (Red) BS EN 598
DS Bend x 11¼º	0820250X11DSBB	0820250X11DSB
DS Bend x 22½º	0820250X22DSBB	0820250X22DSB
DS Bend x 45º	0820250X45DSBB	0820250X45DSB
DS Bend x 90º	0820250X90DSBB	0820250X90DSB
AS Equal Tee 250 x 250mm	0820250ASTB	0820250AST
AS Reduced Tee 250 x 80mm	0820250X80ASTB	0820250X80AST
AS Reduced Tee 250 x 100mm	0820250X100ASTB	0820250X100AST
Flange on Socket Tee 250 x 80mm	0820250X80FSTB	0820250X80FST
Flange on Socket Tee 250 x 100mm	0820250X100FTSB	0820250X100FTS
Flange Socket	0820250FSB	0820250FS
Tyton Gasket	0820250TGE	0820250TGE
Anchor Gasket	0820250TGEA	0820250TGEA

300mm Socketed Fittings

Description	Water Fittings (Blue) BS EN 545	Sewer Fittings (Red) BS EN 598
DS Bend x 11¼º	0820300X11DSBB	0820300X11DSB
DS Bend x 22½º	0820300X22DSBB	0820300X22DSB
DS Bend x 45º	0820300X45DSBB	0820300X45DSB
DS Bend x 90º	0820300X90DSBB	0820300X90DSB
AS Equal Tee 300 x 300mm	0820300ASTB	0820300AST
AS Reduced Tee 300 x 80mm	0820300X80ASTB	0820300X80AST
AS Reduced Tee 300 x 100mm	0820300X100ASTB	0820300X100AST
Flange on Socket Tee 300 x 80mm	0820300X80FSTB	0820300X80FST
Flange on Socket Tee 300 x 100mm	0820300X100FTSB	0820300X100FTS
Flange Socket	0820300FSB	0820300FS
Tyton Gasket	0820300TGE	0820300TGE
Anchor Gasket	0820300TGEA	0820300TGEA

Diameters above 300mm are available on request

Standards

Standards - Potable Water

Potable water applications in the UK must comply with DWI Regulation 31, and corrosion protection is achieved with coatings and linings to the pipes and fittings.

Pipes
Internal Lining:

Pipes are lined with sulphate resistant cement and sealed with an epoxy resin coating. The lining has full Drinking Water Inspectorate (DWI) Regulation 31.4(a) approval. For Flanged pipework, in applications such as pumping stations, treatment works and valve chambers the pipes are supplied as standard with sulphate resisting cement to BS EN 545 Section 4.4.1 and 4.4.3, in this case the lining complies with DWI Regulation 31.4(b).

External Coatings:

The outside of the pipes have a layer of metallic zinc to BS EN 545 Section 4.4.2.1 which is finished with a layer of Black Bitumen or Blue Epoxy to BS EN 545 Section 4.5.2. The metallic zinc is applied with a minimum mass of 200g/m².

Fittings
Internal and External Coating with Blue PPA 571 Plascoat:

Fittings are supplied as standard with a blue PPA 571 Plascoat coating (250 Microns thick), this complies with BS EN 545 Section 4.1.4 and Section 4.5. Alternatively fittings can be coated with blue Resicoat 250.

Standards - Sewage Pipelines

Sewage pipelines are protected with the following coatings and linings.

Pipes
Internal Lining:

Pipes are lined with High Alumina cement in accordance with BS EN 598 Section 4.4.3.

External Coatings:

The outside of the pipes have a layer of metallic zinc to BS EN 598 Section 4.4.2. and have a finish layer of Red Epoxy to BS EN 598 Section 4.1.4 and 4.4.2.4.

Fittings
Internal and External Coatings:

Fittings coated both internally and externally with a Red Plascoat finish in accordance with BS EN 598 Section 4.5.2.

Installation below ground

Pipes coated with zinc and epoxy coating, and fittings finished with a coating of 250 microns may be buried in soils of most levels of corrosivity.

However, for more aggressive soils it is recommended that site applied polyethylene sleeving should be used, and in highly aggressive soil conditions the pipeline should be tape wrapped.

Installation Guide - Socketed Pipes

The procedure to make a Push Fit joint is as follows:

- Ensure spigot end of the pipe is properly chamfered
- Clean spigot and inside of socket
- Lubricate gasket bulb seating area inside the socket
- Insert the clean gasket into socket with square heel into groove
- Push spigot end of pipe into socket

Installation Guide - Flanged Pipes

Bolts should be tightened in the correct sequence and to the appropriate torque. The sequence is determined by the number of bolts in the flange set, however it generally follows a 1,3,2,4 pattern. Torque is determined by the pipe bore and the Bar rating desired (refer to fitting manufacture's tables).

- Check that gasket is correct diameter and matches flange drillings
- Clean flange faces & position gasket
- Check size & number of bolts (only use rust free undamaged bolts)
- Lubricate bolt treads with automotive grease
- Tighten bolts in correct sequence
- Gasket normally suffers some relaxation
- Check and re-tighten bolts, if necessary 'before' pressure testing

Universal Couplings & Flange Adaptors

Universal Couplings and flange adaptors supplied by JDP are for all ferrous, uPVC and AC (Asbestos Cement) pipes for use with Potable Water (drinking) and Waste Water (sewage).

Features & Benefits

- Simple mechanical assembly
- Can be dissembled for future adaptions
- Seals: EPDM as standard, Nitrile available
- Protected coatings: Nylon 11 or fusion bonded epoxy coating (blue)
- Wide tolerances
- Corrosion resistant construction
- Stainless steel bolt sets available
- 16 Bar rated
- Temperature range from -10°C to +70°C

Universal Coupling Applications

Used to joint almost any plain ended 'rigid' pipe material within the same range sizes, on pressure pipelines at working pressures up to and including 16 bar.

Universal Couplings

Nominal Diameter	Range (mm)	Code
40mm	46-63	0820UC40
50mm	57-74	0820UC50
65mm	68-85	0820UC65
80mm	84-106	0820UC80
100mm	109-133	0820UC100
125mm	132-157	0820UC125
150mm	157-183	0820UC150
175mm	193-215	0820UC175
200mm	218-242	0820UC200
225mm	242-268	0820UC225
250mm	266-292	0820UC250
300mm	301-327	0820UC300
350mm	372-396	0820UC350
400mm	410-436	0820UC400

Diameters above 400mm are available on request

Universal Flange Adaptor Applications

Used to convert almost any plain ended 'rigid' pipe material to a flanged end, for connection to another flanged pipe or flanged fitting, on pressure pipelines at working pressures up to and including 16 bar.

Universal Flange Adaptors

Nominal Diameter	Range (mm)	Code
40mm	46-63	0820UD40
50mm	57-74	0820UD50/65
65mm	68-85	0820UD65/50
80mm	84-106	0820UD80
100mm	109-133	0820UD100
125mm	132-157	0820UD125/150
150mm	157-183	0820UD150
175mm	193-215	0820UD200/175
200mm	218-242	0820UD200
225mm	242-268	0820UD250/225
250mm	266-292	0820UD250
300mm	301-327	0820UD300
350mm	372-396	0820UD350
400mm	410-436	0820UD400

Diameters above 400mm are available on request

Standards

WIS 4-52-01
WRC approval

WRAS APPROVED PRODUCT

Installation Guide

1) Both pipe ends must be cleaned by wire brushing, to remove all rust, scale or debris etc...
2) Align both pipe ends maintaining the correct level and concentricity, whilst leaving sufficient gap between pipe ends to allow installation of the fitting.
3) To provide indication that the Coupling has been assembled central over the pipe ends, mark both pipe ends at a distance equal to half the overall length of the fitting + half the setting gap.

RECOMMENDED GAP SETTINGS

DN 40 to DN200 Maximum setting gap = 20mm
DN250 to DN400 Maximum setting gap = 37mm

4) Slide coupling onto the fixed pipe end.
5) Slide free pipe end into coupling, ensuring that the markings on both pipe ends line up with the ends of the fitting.
6) Bolt tightening can now commence, using a torque spanner capable of 40/50 Nm
7) Tighten diametrically opposed bolts as indicated on label, to ensure that the sealing element is loaded evenly. It is essential that all bolts are torqued evenly as indicated on the label (40/50 Nm).
8) On completion of the bolt tightening, the radial gap between the pipe and inside diameter of the Glandring should be even all around the fitting. Some evidence of rubber extruding between the pipe and Glandring might be evident.

Notes! These couplings will not provide end restraint, this must be provided by other means, especially when using the stepped type couplings.

Repair Clamps & Saddles

Under Pressure Tees and Bolt-on Tees

Under pressure tees and saddles as their name suggests are used to branch off pressurised mains. A range of under pressure tees and saddles allow connection to ferrous pipes, PVC and AC, for Potable water and waste water. Contact your local JDP for more information.

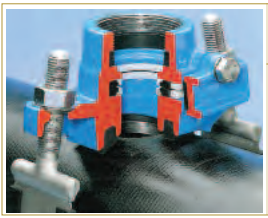
Universal Under Pressure Tee - Ductile

Application	Options	Sizes	Max Working Pressure
Suitable for all ferrous pressure pipes for use with water and neutral liquids (sewage)	Branch sizes 80 - 300mm	100 - 300mm	16 Bar

Under Pressure Tee – Stainless Steel

Application	Options	Sizes	Max Working Pressure
Suitable for all ferrous pressure pipes, PVC & AC. For use with water and neutral liquids (sewage)	Fabricated up to 900mm. Any length available in multiples of 150 - 1200mm	86 - 1200mm	10 Bar

Universal Shut-Off Saddle



Application	Options	Sizes	Max Working Pressure
Suitable for Ductile Iron, Steel and AC pipes. Can be pressure tested from both sides & installed under pressure.	Branch threaded outlets 1" to 2"	50 - 600mm	16 Bar

Universal Repair Clamp

Application	Options	Sizes	Max Working Pressure
Suitable for all ferrous pipes, uPVC and AC pipes, for use with water, and neutral liquids (sewage)	Drilled and tapped boss ½" to 2" Gas versions available	3" - 12"	16 Bar

Multiple Band Repair Clamp

Application	Options	Sizes	Max Working Pressure
Suitable for all ferrous pipes, uPVC and AC pipes, for use with water, and neutral liquids (sewage)	Double or triple bracket option threaded bosses ½" to 2" BSP	80 - 1200mm	10 Bar

Standards

WRAS APPROVED PRODUCT

Ancillary Products

Pipeline Protection

Protectamesh™ Rockshield mesh is an extruded plastic mesh used as a pipe guard to protect pipes and pipelines from rocks when backfilled. Rocks can easily damage the pipes protective coatings and the rock shield mesh helps to cushion any impact during the backfilling. Rockshield is far more economical than backfilling with sand or fine sediment, and is quick and easy to install.

Protectamesh™ Rockshield net can be installed along the pipe or around the pipe, spirally, longitudinally or latitudinally. It can be joined using a gas torch by pressing the faces together, or can be secured by means of strapping tapes or similar.

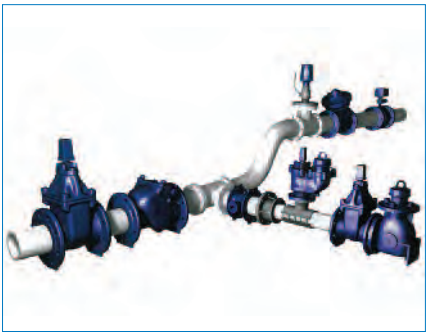
Specification	Rockshield BRS1	Rockshield BRS2	Rockshield BRS3
Material	Blown HDPE	Blown HDPE	Blown HDPE
Width	1.5m	1.5m	1m
Length	20m	20m	20m
Weight g/m2	750	950	1200
Thickness	>5.6mm	>6.0mm	>6.0mm
Colour	Black	Black	Black

Valves & Hydrants

- Gate Valves • Butterfly Valve • Air Valves • Knife Gate Valve
- Float Valve • Fire Hydrants • Check / Non-Return Valves
- Penstocks & Discharge Valves • Chambers • Surface Boxes
- Bolt Sets & Gaskets • Ancillary Products

Through extensive knowledge and respected manufacturers products, JDP has built a strong reputation in the supply of Valves and Hydrants in the UK.

A wide range of Valves, Hydrants and ancillary products for clean water and sewage applications, for above and below ground installations, is found within this section.



Used with the appropriate Flanged Fittings, mechanical Universal Flange Adaptors or fusion weld Stub Flange Adaptors, the valves in this section can be connected to Ductile Iron, Polyethylene and PVC pressure pipelines.

JDP can also supply variations of the valves in this section to suit the specific application requirements. In addition to this extensive range, Pressure Reducing Valves, are available from JDP, please contact your local branch for details.

Gate Valves

JDP offer gate valves from 50mm to 2500mm diameter, including large diameter versions that do not require an actuator or gearbox to open and close the valve. For more details contact your local JDP.

The wedge gate valve is used to regulate the flow of liquid in a pressure pipeline, normally in the fully open or fully closed position to isolate the flow. The range is complimented with a range of extension spindles, caps and handwheels available to suit the valves supplied.

Features & Benefits

- Ductile iron wedge, fully vulcanised with EPDM rubber
- Cap top as standard
- O-ring stem seals replaceable under pressure
- Fully corrosion resistant construction
- Fusion bonded epoxy coating
- Handwheel or electric actuation
- Clockwise 'opening' (CO) or clockwise 'closing' (CC)
- PN16 drilling (alternative drillings available)

Applications

These resilient seat, wedge gate, valves are suitable for use with water and neutral liquids (sewage), to a maximum working pressure of 16 Bar, and between temperatures of -10°C to +70°C. Insulation is essential for temperatures of 0°C and below.

Gate Valves

Diameter	Code
50mm	082050SER21CC*
80mm	082080SER21CC*
100mm	0820100SER21CC*
150mm	0820150SER21CC*
200mm	0820200SER21CC*
250mm	0820250SER21CC*
300mm	0820300SER21CC*
350mm	0820350SER21CC*
400mm	0820400SER21CC*

*Clockwise opening available
** Order Handwheels separately

Gas Valves also available, contact your local branch for details.

Mono Design Gate Valve

JDP also offer a gate valve with Electrofusion Sockets. It is a unique mono-design resilient-seated gate valve complete with electrofusion sockets designed into its body. This reduces both weight and installation time when connecting to Polyethylene pipe systems. Due to its singular mono design an unequalled strength of the valve is achieved.

Features & Benefits

- Up to 50% reduction in installation time
- Up to 50% weight reduction
- 50% reduction in face-to-face length compared to using flanged valves & stub flanges
- No screwed-on bonnet
- Spindle bearing fixed in housing via bayonet lock
- No bear thread at spindle bearing
- Excellent corrosion protection
- Mono design ensures utmost strength and a long service-life
- Electrofusion Sockets for PE100 SDR11 & SDR17

These unique design features permit 100% all-over epoxy powder coating, thus providing an unequalled corrosion protection according to the regulations of GSK, the Quality Association for Heavy Duty Corrosion Protection of Powder Coated Valves and Fittings.

Mono Design Gate Valve also available in flanged version

Butterfly Valve

The double eccentric butterfly valve conforms to BS EN 593 for regulating or isolating flows in pipelines up to DN2200. Manufactured from ductile iron, valves incorporate a positive retained resilient disc seal and either an integral or replaceable body seat. The valve has three unique attributes: less weight, more strength and lower torque.

Features & Benefits

- Double eccentric disc reduces seal wear and torque requirement
- Flat profile disc reduces head-loss across the valve
- Disc/shaft interface keyed and pinned
- European "long" body pattern to DIN 3230 pt 4
- Fusion bonded epoxy coated
- 2 Mounting feet and ISO mounting flanges to optimize installation options
- Lifting points
- All materials WRAS approved

Applications

The integral seat design is for use on water treatment and water distribution lines where buried service is required.

Air Valves

Air relief valves are manufactured in various styles to suit their application requirements. This may be on pressure pipelines that transport potable or filtered water, sewage or raw water, and even sludge.

Air valves are normally incorporated into the system with the addition of an isolating valve, mounting flanges may also be used (size and drilling needs to be specified).

Single Orifice Air Relief Valve (small) - Clean water applications

This composite material single orifice (25mm) air relief valve is suitable for use with potable and filtered water, to a maximum working pressure of 16 bar, and between temperatures of -10°C to +70°C. Insulation is essential for temperatures of 0°C and below.

Features & Benefits

- Air release capability 10 times greater than conventional units
- 300gms. weight
- Reinforced nylon body
- 1" BSP male thread connection
- Rolling seal EDPM rubber
- WRAS approved

25mm Single Orifice Composite Air Valve c/w Isolating DZR Brass Ball Valve	082025SOAVIB

Double Orifice Combination Air Relief Valve (Composite) - Clean water applications

This composite material double orifice air relief valve is suitable for use with potable and filtered water, to a maximum working pressure of 16 bar, and between temperatures of -10°C to +70°C. Insulation is essential for temperatures of 0°C and below.

Features & Benefits

- Large orifice will discharge air to over 1 bar pipeline pressure
- Small orifice 10 times more efficient than conventional units
- Suitable for pipeline up to and including 350mm
- Reinforced nylon body
- Rolling seal EDPM reinforced nylon + STST
- WRAS approved

80mm Double Orifice Combination Air Relief Valve (Composite) c/w Isolating DZR Brass Ball Valve	082080DOAVIB

Double Orifice Air Relief Valve (Cast Iron) - Clean water applications

This double orifice air valve is suitable for use with potable and filtered water, to a maximum temperature of +70°C.

- Release large volumes of air from pipelines up to 0.9bar
- Discharge from the small orifice is 10 times greater than from conventional units
- Lightweight design
- Corrosion resistant construction
- PN25 & PN40 versions
- WRAS approved

Available from DN50 – 200mm

Double Orifice Combination Air Relief Valve – Sewage & Raw water applications

This cast aluminium double orifice air relief valve is suitable for use with sewage, raw water, brine and sludge, to a maximum working pressure of 16 Bar, and between temperatures of -10ºC to +70ºC. Insulation is essential for temperatures of 0ºC and below.

Features & Benefits

- Large orifice will discharge air to over 1 Bar. Pipeline pressure
- Small orifice 10 times more efficient than conventional units
- Rilsan(R) coated aluminium body
- Only 17kg in weight
- Drainage and flushing bosses
- Reduction in hammer and surge in systems
- Highly corrosion resistant
- Optional isolating gate valve

Double Orifice Combination Air Relief Valve	082080SEWAV

Knife Gate Valve

Knife gate valves are designed for in line or end of pipeline applications for low pressure and have a number of advantages over other valve types.

- Unlike conventional wedge gate valves, there is no wedging action to cause the blade to jam and the overall length is less which helps in confined spaces
- Unlike ball valves, there are no cavities or dead areas in which material can settle
- The shorter overall length is an advantage which helps in confined spaces
- Unlike butterfly valves there are no restrictions in the bore when the valve is fully open and the blade does not have to push material aside when opening and closing

Features & Benefits

- Stainless steel plate, spindle and fastenings
- Adjustable seals
- Corrosion resistant construction
- All seals EPDM rubber
- Bi-directional flow
- WRAS approved materials
- Cost effective
- Low operating torque
- Handwheel as standard

Available from DN50 – 1000mm

Float Valve

The float valve is an equilibrium type, single beat design ball float valve, normally fitted within a tank or reservoir, which automatically controls the rate of filling, and will shut off when a predetermined level is reached.

Features & Benefits

- Right angled design
- Long actuating lever for slow closure
- Flanged outlet for fitting of downpipe
- Drop tight shut off
- Lined removable cylinder
- Easily maintained
- Float in control of valve at all positions of travel
- Ported guides
- Face and piston seals easily replaceable

Available from DN80 – 300mm

Fire Hydrants

JDP's most popular fire hydrant is the squat Type 2 fire hydrant; for underground installation it complies with the requirements of BS 750 and features a stainless steel or gunmetal London round thread outlet. Type 2 and specialist above ground hydrants are also available.

Features & Benefits

- Fully maintainable
- Ductile iron construction
- Auto-frost drain valve as standard
- Corrosion resistant construction
- Stainless steel or gunmetal London round thread outlet
- Inlet flange PN10/16 drilling
- Kite marked and WRAS approved

Applications

The Type 2 fire hydrant is suitable for use with water and neutral liquids, to a maximum working pressure of 16 Bar, and between temperatures of -10°C to +70°C. Insulation is essential for temperatures of 0°C and below. Also complies with BS EN 1074-6 for (potable) drinking water.

Fire Hydrant

Inlet Diameter	Code
80mm	0820FHYD2

Check/Non Return Valves

Swing Check Valves are non return valves installed in pressure pipelines, used to check the reverse flow of liquid, by use of a swinging disc inside the fitting. Valves without a lever and weight fitting are only suitable for lower velocities.

Features & Benefits

- Resilient seated disc
- Lightweight ductile iron design
- Pre-fitted extended spindle
- Durable fusion bonded epoxy coated
- Highly adaptable lever & weight system
- Bolt opening for easy maintenance
- Corrosion resistant construction
- PN10 and PN16 drillings

Applications

These resilient seated swing check valves are suitable for use with potable water, raw water and sewage, to a maximum working pressure of 16 Bar, and between temperatures of -10°C to +70°C. Insulation is essential for temperatures of 0°C and below.

Check Valves

Diameter	Without Lever & Weight	With Lever & Weight
80mm	082080NRVAL	082080NRVALLA
100mm	0820100NRVAL	0820100NRVALLA
150mm	0820150NRVAL	0820150NRVALLA
200mm	0820200NRVAL	0820200NRVALLA
250mm	0820250NRVAL	0820250NRVALLA
300mm	0820300NRVAL	0820300NRVALLA

Penstocks & Discharge Valves

This range of valves is used for the purpose of fluid control. Discharge Valves allow the flow of fluids in one direction and are designed to prevent backflow, whereas Penstock Valves deploy a screw operated door, which can be opened and closed manually or with an electric actuator.

Wall and pipe mounted flap valves can be found in the surface water drainage section.

Penstocks

Penstocks are a specialist flow control and isolation valve for fluids associated with water, waste water, sewage treatment plants, power generation, irrigation schemes and process plant. Penstocks are designed to cater for a wide variety of duties from low on seating (fluid forces the penstock onto wall) to high off seating (fluid forces penstock away from wall) and on/off seating (fluid forces can be both ways).

Features and Benefits

- Available with Cast Iron, Stainless Steel and HDPE doors
- Multiple operations, including handwheel or gearbox
- Optional pressure seating (on seat / off seat or both)
- Special sizes factory fabricated
- Wide range of manual operating systems available
- Remote electrical actuator options
- Robust construction with minimum maintenance

Applications

Typically utilised in river, surface/storm water and treatment works outfalls. May be bolted to flanged end of a pipeline, or bolted to wall face of outfall.

Ordering information required

- Quantity required
- Size of opening diameter
- Maximum working head
- On-seating / Off-seating
- Material of spindle
- Invert to coping/operating levels
- Type of operating equipment
- Liquid passing through penstock i.e., sewage, salt water, potable water
- Paint system if special operating conditions apply
- Wall or pipe mounting
- Rising or non-rising spindle

Discharge Valves

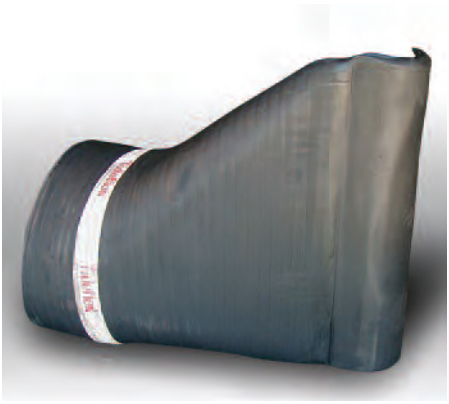
Designed primarily for end-of-pipe outfall installations, discharge valves are characterised by their pinched end or duckbill appearance designed for backflow prevention. Constructed of a rubber compound which changes it's effective opening area in respect of the internal pressure and flow rate to allow the discharge of fluid then self closes to prevent backflow.

Features and Benefits

- Rubber construction resistant to saltwater, sewage and hydrocarbons
- Low headloss characteristics are ideal for low lying areas
- Differential pressure discharge maximises pipeline storage capacity
- Ability to diffuse effluent while preventing backflow
- Connected to end of pipe by bandseal or bolted flange
- Several versions for different applications

Applications

- Storm water discharge into lakes and seas with varying levels
- Effluent discharge where protection from flood water is required
- Airport & highways runoff water contaminated with hydrocarbons
- Pumping stations to ensure tailwater does not backflow
- Site drainage to prevent backflow flooding from canals and rivers



Chambers

Concrete Chambers

Concrete chambers are used to 'protect' and 'house', valves and hydrants. Chambers are constructed around the fitting to the required depth in 100mm increments, utilising interlocking sections. Top sections allow for correct positioning and installation of surface boxes. For larger concrete chambers see Rectangular Chamber Sections in Surface Water Drainage section. For large Modular Chambers see Ducting Systems section.

Features & Benefits

- Strength and rigidity from interlocking construction
- Easy to handle units
- Minimal labour skills required
- Variable depths simply achieved

Applications

Underground protection chambers for valves and hydrants.

Concrete Chambers

Size (mm)	Code
150x150 Section	0820150150100C
225x225 Section	0820225225100C
430x280 Section	0820430280100C
150x150 Top section	0820150150TS
225x225 Top section	0820225225TS
430x280 Top section	0820430280TS

Plastic Chambers

A 100% recycled PVC chamber section often used as a direct alternative to concrete chamber sections for hydrant/valve chambers and house inspection chambers. The one piece unit is lighter than concrete, frost proof and resistant to acids and alkalis.

Features & Benefits

- Up to D400 loading (without the need for concrete surround)
- 100mm wide wall thickness for additional cover bedding area
- Used throughout the water industry in the UK
- Fully compliant with BS 5834
- Massively reduced whole life costs compared to concrete
- Manufactured from 100% recycled material (fully recyclable)
- Ideal for valve chambers and can also be used as an alternative to HIC chambers for drainage

Plastic Chambers

Description	Code	Length (mm)	Width (mm)	Depth (mm)
ECO2	0720ECO2	150	150	150
ECO8	0720ECO8	430	280	150
ECO10	0720ECO10	600	450	150

Tested in accordance with BS EN 124
(D400 loading, 40t) Fully compliant with BS 5834

Bases

Code	Depth (mm)
0720ECOBASE1	40
0720ECOBASE2	40

Surface Boxes

Surface boxes are manufactured from Ductile iron to BS 5834, Grade A loading making them suitable for use in areas subject to heavy loading but not subject to fast moving through traffic.

Badging

Covers normally carry an inscription that identifies the pipeline or fitting below, some examples are shown below (many other badgings are available and should be specified with order):

FH = Fire Hydrant
AV = Air Valve
SV = Sluice Valve
NRV = Non Return Valve
WO = Wash Out

Features & Benefits

- Kitemarked product
- Conforms to BS 5834
- Identification badging
- Locking options available

Applications

Ductile iron surface boxes seal chambers at the surface, giving ready access while preventing the ingress of debris. They also provide identification to the contents of pipeline below and the type of valve or hydrant.

Clear Opening (mm)	Code
150x150	0621SB1515D
229x229	0621SB2323D
380x230	0621SB3823D

* Double Triangular or Solid Top options – please specify at time of order
* Many badging options available – please specify at time of order

Bolt Sets & Gaskets

Flange Bolt Sets

Bolt sets are supplied in bagged sets containing the appropriate number of bolts, nuts and washers for each flanged joint. A standard set is used to bolt one ductile iron flange to another, whereas extra length bolts are required when connecting a PE stub flange to a ductile iron flange.

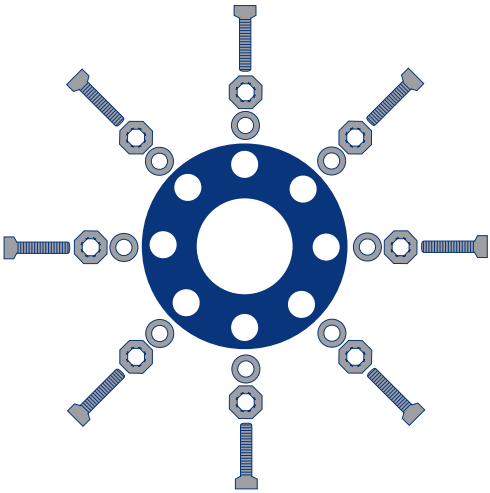
Bolt Types

The standard finish to bolt sets is galvanised steel to BS 4 190. A number of finishing options are available depending upon the specification requirement and site conditions.

- Rilsan coated
- Stainless steel
- Sheridised
- Zinc plated

Flange Specifications

The standard flange drilling is normally PN16, on pipes and fittings for working pressures up to and including 16 Bar. Other drilling configurations (PN10, PN25, PN40) require the corresponding number and size of bolts in a set for the specified drilling arrangement.



Applications

Flanged joints are both rigid and self-anchoring. Used in above ground situations such as Pumping Stations, Treatment Works, and Industrial Pipelines. Also used in below ground when connecting fittings such as Valves and Hydrants.

The seal between flanged ends is achieved by axial compression of a flat gasket between the flanges, which is tightened with bolt sets, as shown above.

Bolt sets (Standard) for PN16 flanges – DI x DI Joint

Flange Diameter	Bolts in Set	Bolt Size (mm)	Code
50mm	4	M16x65	0820BS50GALV
80mm	8	M16x65	0820BS80GALV
100mm	8	M16x65	0820BS100GALV
150mm	8	M20x70	0820BS150GALV
200mm	12	M20x70	0820BS200GALV
250mm	12	M24x90	0820BS250GALV
300mm	12	M24x90	0820BS300GALV
350mm	16	M24x90	0820BS350GALV
400mm	16	M27x100	0820BS400GALV
450mm	20	M27x100	0820BS450GALV
500mm	20	M30x110	0820BS500GALV
600mm	20	M33x120	0820BS600GALV

Bolt sets (Extra Long) for PN16 flanges – DI x PE Joint

Flange Diameter	Bolts in Set	Bolt Size (mm)	Code
80mm	8	M16x80	082080BSDIPEG
100mm	8	M16x80	0820100BSDIPEG
150mm	8	M20x90	0820150BSDIPEG
200mm	12	M20x90	0820200BSDIPEG
250mm	12	M24x100	0820250BSDIPEG
300mm	12	M24x100	0820300BSDIPEG

Installation Guide

Bolts should be tightened in the correct sequence and to the appropriate torque. The sequence is determined by the number of bolts in the flange set, however it generally follows a 1,3,2,4 pattern. Torque is determined by the pipe bore and the Bar rating desired (refer to fitting manufacture's tables).

- Check that gasket is correct diameter and matches flange drillings
- Clean flange faces & position gasket
- Check size & number of bolts (only use rust free undamaged bolts)
- Lubricate bolt threads with automotive grease
- Tighten bolts in correct sequence
- Gasket normally suffers some relaxation
- Check and re-tighten bolts, if necessary 'before' pressure testing

Flange Gaskets

Flange gaskets are available in several formats and are manufactured from a wide range of materials. The most common combination is the full face type made of EPDM, used for jointing ductile iron flanges together (Two lug or IBC Ring types are also available). The standard thickness is 3mm, however 4mm and 6mm are also available on request.

Features & Benefits – EPDM Gasket

- WRAS approved for potable water usage
- Good resistance to heat, weathering, ozone effects, ketones and esters
- Not suitable for contact with petroleum liquids, oils, solvents or fats
- Temperature range between -40ºC and +120ºC

Applications

Full face gaskets are used between two ductile iron flanges, the gasket covers the full face of the flanges and so is holed to suit the bolt positions.

EPDM Full Face Flange Gaskets

Flange Diameter	Code
50mm	0820G50FFE
80mm	0820G80FFE
100mm	0820G100FFE
150mm	0820G150FFE
200mm	0820G200FFE
250mm	0820G250FFE
300mm	0820G300FFE
350mm	0820G350FFE
400mm	0820G400FFE
450mm	0820G450FFE
500mm	0820G500FFE
600mm	0820G600FFE

Ancillary Products

Marker Posts & Plates

JDP offer a range marker posts and marker plates in standard and non-standard formats to suit customer requirements.

Marker Posts

Marker posts can be supplied in either reinforced precast concrete or self coloured high density fibre.

Reinforced precast concrete posts are available in several patterns and up to an overall height of 1500mm.

High Density fibre posts offer the advantages of rapid installation, no rusting or corrosion, colour permeated with UV shield to prevent fading.

Marker Plates

As well as the most commonly used plates displaying H, WO, SV etc. Custom plates can easily be supplied to individual customer specifications / project requirements utilising any combination of size, colour or lettering.

Marker plates are made from heavy duty laminated plastic which can be fitted to walls, marker posts or most street furniture.

Anti-Corrosion Tapes & Mastics

Anti-Corrosion Tapes are cold applied sealing tapes based on a synthetic fabric, impregnated and coated with a neutral petrolatum compound. When protecting mechanical joints, flanges fittings and valves, special Mastic (available as a blanket or triangular strips, round strips or blocks) is used to build up and soften the profile to be protected to eliminate voids beneath the subsequent Anti-Corrosion Tape application.

Features & Benefits

- Cold applied for safe and easy application
- Hand applied or by wrapping machine
- Fully effective from moment of application
- Effective in above or below ground and in water
- Permanently plastic, flexible and conformable
- Tolerant of indifferent surface preparation
- Easily removed and replaced for inspection
- Resists acid or alkali attack and ground movement
- Proven performance for over 60 years

Applications

- Onsite anti-corrosion protection to pipelines and fittings
- Repairing damaged coatings
- Protection of fittings in transit and storage
- General corrosion protect to buried metal components

Specification

	Anti-Corrosion Tape
Breaking strength	4N/mm average
Breakdown voltage (double wrap)	16kv minimum
Resistance to cathodic disbanding (ASTM G8 30day)	Excellent
Resistance to acids salts and alkalis	Excellent
Temperature range (application)	-5°C to 45°C
Service maximum	55°C
Thickness (ASTM D1000)mm	1.15
Weight (kg/m2)	1.44
Roll length (m)	10
Roll widths (mm)	50, 75, 100, 150, 200, 225, 300
Primer coverage	2-5m2/kg
Priming solution coverage	9m2/litre

Road Building Products

• Geogrid • Geotextile • Concrete Kerbs • Recycled Kerbs
• Concrete Kerb Drainage • Recycled Kerb Drainage • Gullies
• Gratings • Covers & Frames • Bedding Mortars & Tarmac
• Flag Paving • Special Paving • Engineering Bricks • Street Furniture

JDP stocks a comprehensive range of products for use during road construction and maintenance.

The products in this section are designed to withstand intense trafficking where they are intended for use in main carriageways.
The range includes British Standard Kerbs in splayed for main highways, and half battered for urban and pedestrian areas, in both traditional concrete and recycled polymer.
Castings designed for use in main highways, Gullies for connecting to Twinwall pipe systems (see Surface Water Drainage section in this book) as well as bedding mortars and a range of paving can all be found within this section.

For a more comprehensive range of Flag Paving and Block Paving and other landscape finishing products please see our Commercial, Public & Industrial Buildings product specifier.

Geogrid

Bi-oriented geogrids (strength in both directions) offer extremely high performance for ground stabilisation in road construction.

Made from extruded polypropylene they are among the toughest of geogrids, reducing rutting, shear failure and increasing bearing capacity. The open structure with rigid ribs and junctions create an efficient interlocking action between the geogrid and the fill to give excellent performance.

JDP also supply a range of geogrid for embankments and earth walls, please see Retaining Walls and Embankments section in this book.

Features & Benefits

- Tensile reinforcement
- Distribute loads more effectively
- Reduce rutting and shear failure
- Increases the bearing capacity of soft sub-soil
- Provides the lateral confinement required to prevent the pumping of sub-grade fines – increasing longevity and reducing the need for maintenance
- Extruded polypropylene geogrids have an open structure with rigid ribs and junctions that create a more efficient interlocking action between the geogrid and the fill to give improved performance

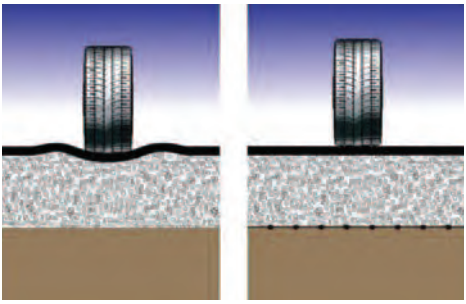
Applications

- Paved and unpaved roads
- Airport runways
- Industrial yards
- Embankment foundations over soft soil
- Retaining wall and steep slope construction
- Railroad ballast reinforcement
- Soil reinforcement of building foundations

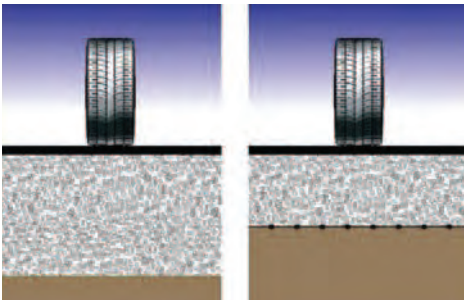
Code	Description
1601LBO220	4 x 50m 220 bi-oriented geogrid
1601LBO330	4 x 50m 330 bi-oriented geogrid
1601LBO440	4 x 50m 440 bi-oriented geogrid

Mono-orientated Geogrids also available

How Geogrid works with the fill material



The base of a road on soft subgrade will quickly deform, with rutting at the surface and difficulty of movements for the vehicles. Closely spaced layers of geogrids considerably stiffen the road base, while geocomposites maintain the separation between the fill and the subgrade while providing positive drainage. Geotextile membranes provide the drainage, separation and reinforcement required to stabilize the base of roads on soft subgrade.



The detail to the left shows the difference Geogrid have on a typical construction e.g. eliminate rutting and reduce stone depth.

Standards

AGRÉMENT TECNICO

First issued: May 9, 1994

SGS

Certificate No. CQ568

CE

Installation Guide

In line with manufacturers recommendations for each application.

Geotextiles

JDP supply both woven and fibre (also referred to as non-woven) geotextiles that can be used in the same applications.

Both woven and fibre (non-woven) geotextiles have a range of products with a varying degree of physical, mechanical and hydraulic properties and performance characteristics.

There is no hard and fast rule that only one type is suitable for one specific application. Selection is dependent on site-specific factors and costs.

However where the emphasis is on a separation material, woven geotextiles are considered best because of their tensile strength to weight properties. This is highlighted within clause 609 of the highway construction detail. For high strength reinforcement or drainage applications non-woven geotextiles have better performance to weight characteristics.

What's the difference between a woven and non-woven geotextile?

Woven geotextiles are manufactured by weaving together narrow strips of film, whilst non-woven geotextiles are created by entangling plastic fibres (needle punch) or bonding them chemically with heat (thermally bonded).

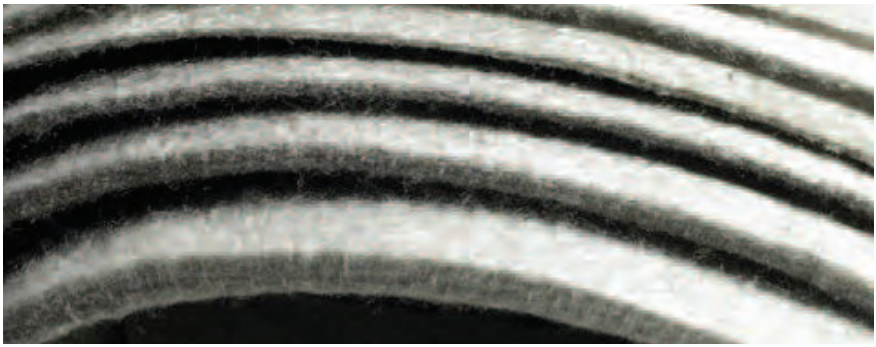
Wovens increase the load capacity of traffic areas by distributing weight more evenly. Non-wovens also do this but combine excellent drainage and filtration to prevent the pooling of surface water.

Both have outstanding separation properties to prevent sub-base contamination, which can result in an uneven surface and construction failure.

How can a geotextile save money?

First of all you'll spend less on materials – the right grade of geotextile will maintain the same load support with less aggregate. This also means you'll spend less time excavating, and because they give a more durable result it's less likely that you'll need to return to repair minor defects. All of this means that a geotextile, far from being an extra cost, will easily pay for itself and more. There's no need for training or special tools either and and it's easy to install.

Fibre Geotextiles



JDP offers thermally bonded non-woven fibre geotextiles for road building and drainage applications. This range is resistant to all naturally occurring soil alkalis and acids and fungal attacks. As well as this they are UV stabilised and will not rot.

Using the latest heat bonding processes thermally bonded geotextiles have increased tensile strength, puncture resistance, less elongation and increased permeability than needle punched fibre geotextile, which have their own unique properties for protection and can be found in the Surface Water Management section of this book.

Using non-woven fibre geotextile between different construction layers avoids the mixing of these layers giving increased bearing capacity as well as significant savings on time and materials.

What's more, the high water flow and excellent filter properties combined with its exceptional mechanical properties, ensures that fine grained particles are retained at the same time as allowing the free movement of water. In this way stability is improved and the life of the construction is considerably prolonged.

Since fibre geotextiles are ideal for water filtration applications they are often preferred to woven geotextile where the importance is placed on drainage and filtration.

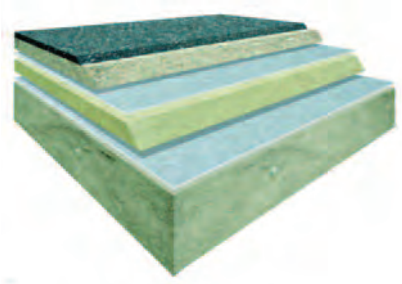
Features & Benefits

- Uniformity
- High strength and elongation
- Superior wearing and abrasion resistant properties
- Unique hydraulic capability
- No delamination

Applications

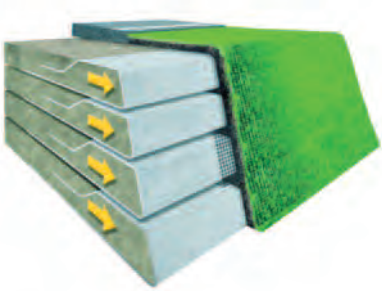
Separation

Strong and flexible, fibre geotextile prevents the sub-base mixing with the sub-grade maintaining the integrity of the construction. This increases the load-bearing capability and provides long-term stability of the foundation layers.



Reinforcement

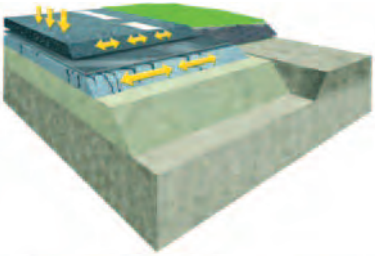
The mechanical properties of JDPs fibre geotextile, make it ideal for reinforcing slopes and other soil structures. Reinforcing with the appropriate fibre geotextile product prevents vertical soil walls and steep slopes from collapsing, increasing the lifespan of these types of construction



Stress Relieving

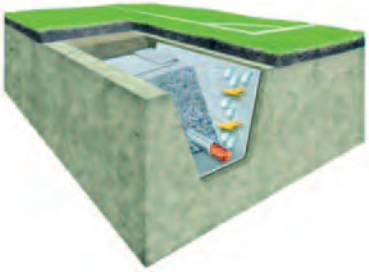
Fibre geotextile offers a flexible, precompressed, nonwoven solution designed especially for stress relieving. Paving fabric is ideal for both new road construction and road maintenance as it absorbs differential movements in the road layers, preventing reflective cracking.

The bitumen saturated paving fabric also forms a waterproof interlayer, protecting the subsoil from water intrusion and thereby avoiding the loss of bearing capacity.



Filtration

The pore structure of JDPs fibre geotextiles are designed to retain particles whilst allowing the free movement of water making it possible to separate two layers during intense hydraulic activity. This avoids the migration of layers, which could reduce load-bearing capacity, and maintains water flow with minimum loss of pressure.



Drainage

JDPs fibre geotextiles enables excess water to be drained away from the construction – not by passing through the fabric but by flowing in the plane of the fabric away from the construction. This ensures reliable ongoing drainage of fluids with minimum loss of pressure.

Fibre Geotextiles

			Needle punched/thermally bonded products						
			F-10	F-20	F-22	F-32	F35	F-40	F-500
Physical properties	Test standard	Units							
Weight	ENISO 9854	g/m²	85	100	120	175	225	255	370
Thickness at 2 kPa	ENISO 9863-1	N	0.6	0.6	0.7	0.9	1.1	1.4	2.2
Mechanical properties									
Static puncture (CBR-test)	ENISO 12236	N	1000	1100	1500	2250	2750	3250	4000
Elongation	ENISO 12236	%	50	50	50	50	50	50	50
Tensile strength (length)	ENISO 10319	kN/m	6	7	8	13	17	18	25
Tensile strength (width)	ENISO 10319	kN/m	6	7	8	13	17	18	25
Elongation at break	ENISO 10319	%	40/58	40/55	40/55	40/50	43/55	50/65	50/50
Dynamic core drop	EN 918	mm	50	35	35	28	22	20	15
Hydraulic properties									
Permeability	ENISO 11058	m/sec	0.1	0.07	0.07	0.04	0.03	0.04	0.04
Permissivity	ENISO 11058	sec²	2	1.4	1.4	1	0.6	0.8	0.8
Water flow	ENISO 11058	l/sec/m²	100	70	70	50	30	40	40
Transmissivity	ENISO 12958	10 m²/sec	0.1	0.3	0.6	0.8	0.7	1	2.5
Water flow capacity at 20 kPa	ENISO 12958	l/incur/m	0.5	1	2	3	3	4	1
Pere size O	ENISO 12958	micron	100	95	100	85	70	70	70
Roll sizes									
Width		m	4.5	4.5	4.5	5	5	5	5
Length		m	100	100	100	100	100	100	100
Roll weight		kg	40	46	55	88	113	128	195

* Properties in this table are a guide. Please consult your local JDP branch for precise properties on specific products and applications.

Standards

Non-woven Fibre geotextiles are CE marked in accordance with The Construction Products Directive (CPD 89/106/EEC). CE marking demonstrates conformity to The Construction Products Directive (CPD 89/106/EEC) and indicates the stringent testing and certification of Factory Production Control (FPC) that our non-woven Fibre geotextiles have gone through to meet the highest European standards.

Manual of Contract Documents for Highway Works clause 609 states:

- The pore size shall be greater than 50 and less than 200 (BS 6906 Pt 2:1989)
- The minimum tensile strength in each direction shall be 6kN/m (EN ISO 10319:1996)

Installation Guide

Manual of Contract Documents for Highway Works Clause 609 states, "a separating membrane with the properties set out below shall be laid on the prepared formation in accordance with the manufacturers' instructions…. the separating membrane shall extend 300mm further than the limits of the kerb beam".

Woven Geotextiles

JDP offer a range of woven geotextiles that are strong, robust and durable, made from extruded polypropylene tapes. The industry-leading design has created a geotextile that combines high tensile strength with exceptional puncture resistance to give outstanding performance and longevity.

Add to this its exceptional resistance to acids, alkalis organic compounds and UV and it's easy to see why it's one of the best-selling geotextiles in use today.

The specifications within Clause 609 of the Manual of Contract Documents for Highway Works calls for a separator material pore opening size of 100 to 300 micron and a permeability of 10 l/m²s, which JDP's standard woven geotextiles meet. In addition a range of strengths and properties are available to suit various site conditions and if the specification or client prefers non woven geotextile, JDP supply these too.

Features & Benefits

- High tensile strength
- Exceptional puncture resistance
- Outstanding performance and longevity
- Exceptional resistance to acids, alkalis organic compounds and UV
- One of the best-selling geotextiles in use today
- Extend trafficked surface area life

Applications

Paved Roadways

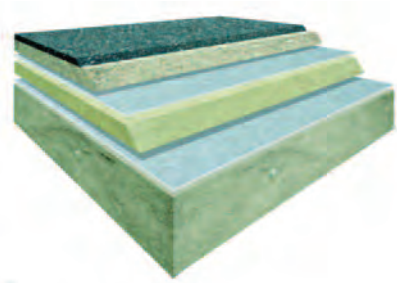
JDPs woven polypropylene geotextiles provide an inexpensive and time-proven solution to the leading cause of pavement failure - aggregate contamination. This can be avoided by laying JDPs woven geotextile between the subgrade and the aggregate layer. In addition to preventing these two layers from combining it also improves subsurface drainage, extending the life of paved roads and parking areas.

Unpaved Roadways

With soft subgrades, high traffic loads and large rutting, unpaved roads can often result in high maintenance. Using our woven geotextiles in these situations can help you lower costs by saving money on the amount of aggregate needed and reducing ongoing repairs.
A soft subgrade covered with the appropriate grade provides stability by spreading loads over a wider foundation, increasing roadway life.

Separation

Using woven geotextiles to separate the aggregate base from the subgrade soil gives substantial improvement to roadway performance, and significantly reduces maintenance costs by preventing these two materials from mixing. Without an effective geotextile, the aggregate base can break down and become mixed with water and soil creating mud - this reduces the shear strength and compaction of the aggregate. Woven geotextiles provide long-term separation by improving compaction and preventing the contamination of the aggregate.
With such a comprehensive range we can provide woven geotextiles to suit a wide variety of subgrades or soils.



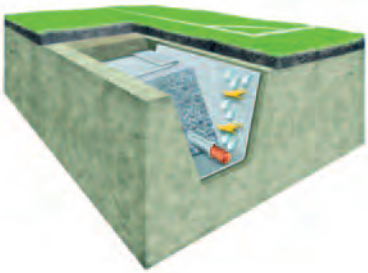
Reinforcement

By spreading the load horizontally across a wide area JDPs woven geotextiles can increase compaction of the aggregate base to reduce rutting and improve strength. Using woven geotextiles for reinforcement improves the load-bearing capacity of soft soils and its ability to withstand vertical loads.

Furthermore woven geotextiles enables the effective fill thickness to be maintained by reducing the intermixing and punching of fill material into the subsoil.

Filtration

JDPs range of woven geotextiles offer an improved method from traditional drainage systems such as French drains. These systems produce mixed results due to their reliance on graded materials, which are expected to prevent the drainage pipe from clogging.
Wrapping less expensive ungraded gravels in woven geotextile allows water to pass through and acts as a barrier to soil particles. In this way, woven geotextiles create a natural filter adjacent to the geotextile, giving a more reliable filtration capability. Available in a wide range of pore sizes it can be matched with differing soil types for optimum performance.



		Woven Polypropylene Products						
		16011919	GW8123	GW8129	GW8139	GW8143	GW8161	GW8180
Tensile strength (kN/m)	Warp	16	20	21	30	40	45	65
BS EN ISO 10319	Warp	12	14	21	25	40	45	65
Elongation at break (%)	Warp	18	13	13	15	15	15	12
BS EN ISO 10319	Warp	12	12	12	9	9	10	12
CBR Puncture Resistance (N) BS EN ISO 102236		1500	2350	3000	3500	4400	5000	8000
Water flow normal to the plane ($1/m^2/sec$) BS 6906 Part 3		10	19	20	18	29	25	14
Pore size 90% finer than (microns) BS 6906 Part 2		150	200	200	200	200	200	220
Effect of UV light		The polypropylene used contains UV inhibitor						
Fabric thickness under $2kN/m^2$ (mm)		0.32	0.45	0.66	0.70	0.80	0.90	1.2
Standard roll width (m)		4.5	4.5	4.5	4.5	4.5	4.5	5.2
Standard roll length (m)		100	100	100	100	100	100	100

* Properties in this table are a guide. Please consult your local JDP branch for precise properties on specific products and applications.

Widths up to 5.2m and longer roll lengths are available on request.

Standards

JDPs woven polypropylene geotextiles are CE marked in accordance with The Construction Products Directive (CPD 89/106/EEC). CE marking demonstrates conformity to The Construction Products Directive (CPD 89/106/EEC) and indicates the stringent testing and certification of Factory Production Control (FPC) that JDPs woven geotextiles have gone through to meet the highest European geotextile standards.

Manual of Contract Documents for Highway Works clause 609 states:

- The pore size shall be greater than 50 and less than 200 (BS 6906 Pt 2:1989)
- The minimum tensile strength in each direction shall be 6kN/m (EN ISO 10319:1996)

Installation Guide

Manual of Contract Documents for Highway Works Clause 609 states, "a separating membrane with the properties set out below shall be laid on the prepared formation in accordance with the manufacturers' instructions.... the separating membrane shall extend 300mm further than the limits of the kerb beam".

Concrete Kerbs

Our JDP branches offer a wide range of concrete kerbs as specified in the current version of BS EN 1340. Due to our close partnerships with the industry's leading manufacturers we can ensure our customers are provided with leading brand quality products from local branches.

In addition to the products in this section a full range of aesthetic kerbs is available in our Commercial, Public & Industrial Buildings product specifier.

Features & Benefits

All straight units and the majority of radius units are hydraulically pressed. Other radius units are hammer-compacted.

- Complies with British Standards
- Designed to withstand occasional vehicular impact

Kerbs / Application Selector

	Access Kerb	HGV Kerb	K-Lite™ Kerb	BS Kerb
Product Identification				
Trafficking	• Designed to withstand occasional bus impact	• Designed to withstand occasional HGV impact while directing vehicle wheels back on to roadway	• Designed to withstand occasional impact	• Designed to withstand occasional bus impact
Features	• Wide range of profiles to suit access requirements • Integral marker bump • Available in natural granite to order	• High strength for busy routes • Damage resistant • Will accept signage	• Light in weight • Maintains strength • Easy to handle and transport • Meets HSE guidelines	• Meets British Standards
Accessories	• Dropper units • Quadrants to certain profiles	• Radius units • Dropper units • Quadrants	• Crossing units • Dropper units • Quadrants • Radius units • Paving	• Crossing units • Dropper units • Radius kerbs • Internal and external angles • Quadrants • Offlets • Marginal strips • Marker channels • Non standard options
Colours	• Grey	• Grey	• Grey	• Grey
Texture	• Standard • Natural Granite	• Standard	• Standard	• Standard

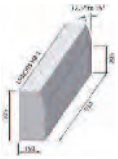
Half Battered BS Kerbs

Half battered kerbs are designed with safety in mind to deflect vehicles travelling at low speeds back into the main carriageway and away from pedestrians using footways.

Applications

- Commercial sites
- Industrial sites
- City roads
- Urban areas

Standard Kerbs



Code	Description
180100866	150x305 HB1
180100860	125x255 HB2
180100855	125x150 HB3

Droppers and Crossing Kerbs

Code	Description
180101074	125x255 mm HB – 125x150 mm BN (LH) DL1
180101075	125x255 mm HB – 125x150 mm BN (RH) DR1
180100658	125x150 mm BN As Crossing Kerb

Radius Droppers (Available in 4, 5, 6, 8 and 10m External Radius Only)

Code	Code	Description
LH	RH	
180141369	180141368	125x255 mm HB – 125x150 mm BN 4m
180141371	180141370	125x255 mm HB – 125x150 mm BN 5m
180141373	180141372	125x255 mm HB – 125x150 mm BN 6m
180141375	180141374	125x255 mm HB – 125x150 mm BN 8m
180141377	180141376	125x255 mm HB – 125x150 mm BN 10m

Radius Kerbs & Channels

Internal Kerb/External Channel

External Kerb/Internal Channel

125x255 HB External	125x255 HB Internal	125x150 BN Channel External	125x150 BN Channel Internal	Size of Radius	Units per ¼ circle
180141318	-	-	-	0.5	1
180140755	180141319	180141321	-	1	2
180140849	180141320	180141178	-	2	4
180140850	180141042	180141179	180141202	3	6
180140851	180141043	180141180	180141203	4	8
180140852	180141044	180141181	180141204	5	10
180140853	180141045	180141182	180141205	6	12
180140854	180141046	180141183	180141206	8	16
180140855	180141047	180141184	180141207	10	20
180140856	180141048	180141185	180141208	15	30

The table shown is an approximate guide only.

All radii over 15 m (40 ft) can be achieved by using standard 914 mm (3 ft) or 609 mm (2 ft) kerbs.

Before ordering, check availability of size and profile.

Also when ordering, please state the dimensions first, then the profile, then the radii followed by Internal or External.
e.g. 125x150 HB 6M Ext

Quadrants

Code	Description
180100854	305x255 mm QHB
180100853	455x255 mm QHB

Transition Kerbs

Code	Description
180101099	125x255 mm HB RH – 125x255 mm SP LH TR
180100983	125x255 mm HB LH – 125x255 mm SP RH TL

Angles

Code	Description
180101177	125x255 mm HB Ext Angle HBXA
180101218	125x255 mm HB Int Angle HBIA

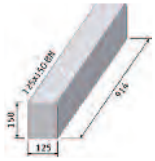
Bull Nose BS Kerbs

Bull nose kerbs are designed to sit just proud of the surface as a crossing kerb. For dropping kerbs see relevant Half Battered or Splayed BS Kerb section.

Applications

- Commercial sites
- City roads
- Industrial sites
- Urban areas

Standard Kerbs



Code	Description
180100666	125x255 mm BN
180100658	125x150 mm BN

Droppers and Crossing Kerbs

Shown as HB profile

Code	Description
180100738	125x255 mm BN – 125x150 mm BN (LH) Non BS
180100826	125x255 mm SP – 125x150 mm BN (RH) Non BS
180100658	125x150 mm BN As Crossing Kerb

Quadrants

Shown as HB profile

Code	Description
180100657	305x255 mm QBN
180100649	455x255 mm QBN

Transition Kerbs

Shown as HB profile

Code	Description
180101099	125x255 mm HB RH – 125x255 mm SP LH TR
180100983	125x255 mm HB LH – 125x255 mm SP RH TL

Angles

Shown as HB profile

Code	Description
180140090	125x255 mm BN Ext Angle
180140089	125x255 mm BN Int Angle

Splayed BS Kerbs

Splayed kerbs are designed with safety in mind to allow vehicles travelling at high speeds to mount the kerb and preventing them from deflecting back into other vehicles on the main carriageway.

Applications

- Highways
- Carriageways

Standard Kerbs

Code	Description
180100780	125x255 mm SP

Droppers and Crossing Kerbs

Shown as HB profile

Shown as HB profile

Code	Description
180100879	125x255 mm SP – 125x150 mm BN (LH) DL2
180100952	125x255 mm SP – 125x150 mm BN (RH) DR2
180100658	125x150 mm BN As Crossing Kerb

Radius Kerbs & Channels

Internal Kerb/External Channel
Shown as HB profile

External Kerb/Internal Channel
Shown as HB profile

125x255 SP External	125 x 255 SP Internal*	125 x 150 BN Channel External	125 x 150 BN Channel Internal	Size of Radius	Units per ¼ circle
-	-	-	-	0.5	1
180141399	-	180141321	-	1	2
180141194	-	180141178	-	2	4
180141195	-	180141179	180141202	3	6
180141196	-	180141180	180141203	4	8
180141197	-	180141181	180141204	5	10
180141198	-	180141182	180141205	6	12
180141199	-	180141183	180141206	8	16
180141200	-	180141184	180141207	10	20
180141201	-	180141185	180141208	15	30

*Not Available use HB

The table shown is an approximate guide only.

All radii over 15 m (40 ft) can be achieved by using standard 914 mm (3 ft) or 609 mm (2 ft) kerbs.

Before ordering, check availability of size and profile.

Also when ordering, please state the dimensions first, then the profile, then the radii followed by Internal or External.
e.g. 125x150 HB 6M Ext

Quadrants

Shown as HB profile

Code	Description
180100775	305x255 mm QSP

Transition Kerbs

Shown as HB profile

Code	Description
180101099	125x255 mm HB RH – 125x255 mm SP LH TR
180100983	125x255 mm HB LH – 125x255 mm SP RH TL

Angles

Shown as HB profile

Code	Description
180100593	125x255 mm SP Ext Angle SPXA
180100753	125x255 mm SP Int Angle SPIA

Channels - Square, Dished, Fluted & Motorway

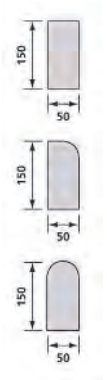
Code	Description	
180100925	150x100x914mm	Square
180100926	150x125x914mm (CS2)	Square
180100931	150x150x914mm	Square
180100928	255x125x914mm (CS1)	Square
180100932	305x150x914mm	Square
180100985	150x100x914mm	Dished
180101132	255x125x914mm (200x25)	Dished
180100990	305x150x914mm (230x25)	Dished
180101100	255x75x914mm	Fluted
180101083	455x150x914mm (18"x6")	Motorway

Edging Kerbs

Edging kerbs are designed to retain the surface structure between the roadside kerb and the loose ground, such as pavements.

Applications

- City roads
- Urban areas
- Highways
- Carriageways
- Commercial sites
- Industrial sites



Code	Description
180100576	50 X 150 X 914 Edging Kerb Flat Top EF
180100589	50 X 205 X 914 Edging Kerb Flat Top EF
180100569	50 X 150 X 914 Bullnose Edging EBN
180101072	50 X 205 X 914 Bullnose Edging EBN
180101615	50 X 150 X 914 Round Top Edging RT
180103772	50 X 205 X 914 Round Top Edging RT
1801	75 X 255 X 914 Round Top Edging RT

Abbreviation Guide: **HB** Half Battered, **BN**, Bullnosed, **SP** 45° Splayed, **RH** Right Hand, **LH** Left Hand, **RT** Round Top Edging, **EF** Flat Top Edging, **EBN** Bullnosed Edging, **TR** Transition Right, **TL** Transition Left

Standards

British Standard kerb products comply with the performance levels in European Standard BS EN 1340.

Installation Guide

These products should be installed in accordance to BS7533 Part 6. They form edge restraints for other paving materials, pedestrian/vehicle segregation and drainage collectors for surface water. Foundations for units can either be a well compacted bed of fresh concrete or a 1:3 cement : sand mortar (12-40mm thick) on a preformed concrete race.

The base concrete, to grade ST1, should be a minimum 150mm thick and extended 150mm beyond the edge of the unit where haunching is required.

Haunching for units as appropriate should be with a concrete grade ST1. It is necessary to ensure a good bond between haunching concrete, unit and base. Allow to gain sufficient strength before laying adjacent paving material. Lay units to line and level with a paviours maul such as that they are within 3mm of the design alignment. Joints should be close joints (trowel thickness) for natural stone and concrete units, laid dry.

Recycled Kerbs

The construction industry has made great progress over the last few years to re-engineer products, making them more user friendly and to reduce the risk of long term injury brought about through improper and/or repetitive manual handling.

These lightweight, environmentally-friendly recycled polymer composite kerbstones will help all specifiers and contractors to comply with Government aims of building a sustainable future. More importantly, it will enable contractors to continue to lay kerbstones exactly as they have done for generations, but in a quicker and safer fashion.

They comply with Health & Safety guidelines concerning the manual handling of kerbstones.
A standard HB2 kerb weighs under 6kg, compared to its concrete equivalent of 67kg and the Health and Safety limit of 20kg for manually handled kerbstones.

They also match the aesthetic appearance of concrete kerbstones and can also assist Local Authorities in achieving Agenda 21 targets.

This focuses on economic, social and environmental agendas, and aims to develop solutions to problems through encouraging better, more efficient practices, with particular reference to sustainability.

Features & Benefits

WEIGHS UNDER 6KG

Its lightweight design enables operatives to quickly position and lay the kerbs. Trials indicate lay rates up to 4 times faster. Being so light makes them extremely easy to store and transport without the use of heavy goods vehicles.

NO MECHANICAL HANDLING EQUIPMENT REQUIRED

Removing the need for mechanical handling equipment, speeds up lay rates and vastly reduces the working space required.

SAFE TO HANDLE

The obvious solution where the health and safety risk assessment does not permit the use of handling equipment; for example, where there is an uneven surface or where the risk of traffic accidents is too high. Mitigates against repetitive strain injury.

HIGHLY RESISTANT

Resistant to the typical chemicals and road salts used in highway construction and maintenance.

AIDS COMPLIANCE WITH ISO 14001

Helps achieve compliance with ISO 14001 and the objectives of the Egan report.

MADE FROM RECYCLED POLYMER BLEND

The use of reprocessed material supports government efforts to increase the volume of recycled materials used in a sustainable manner in the construction industry namely, The Government's Sustainable Buildings Task Force. Redundant kerb can be recycled.

INSTALLED THE SAME WAY BUT MUCH QUICKER AND WITH IMMEDIATE 100% ALIGNMENT

Can be installed exactly as traditional concrete kerbs have been for decades but quicker and safer. No retraining of kerbing operatives is required. The product can be cut with hand tools making less noise and dust than with the concrete equivalent and the kerb is easily knocked down to level. Installers' exposure to Dermatitis and other skin disorders through concrete handling are removed. The interlocking feature ensures 100% alignment every time.

Applications

- Highways
- Commercial sites
- Industrial sites
- City roads

Designed to withstand occasional vehicular impact.

HB2 Range

Accessories

- Straight
- Droppers
- Radius 3m to 10m / Internal & External
- 90° Angles Internal & External

BN3 Range

Accessories

- Straight
- 90° Angles Internal & External

SP1 Range

Accessories

- Straight
- Droppers

Standards

BBA HAPAS accredited

Installation Guide

A semi dry mixed concrete of 10mm aggregate for the bed/race, the latter having a slump of 50mm (ST1 / BS 8500), is required. For the hauching/backing the material is to have a 20/30mm slump. The string line is to be set up on pins and set to correct level. The concrete is to be placed along the intended line behind the string. The concrete should then be spread and struck level with a shovel, leaving no high or low points. Check that the minimum specified thickness of concrete at least is under the struck concrete surface.

The Kerb is then to be taken from the pallet or truck and placed on the concrete bed, laying from the left offering it to the string line. This is done from the verge/footway side, holding the Kerb with both hands. It is then to be adjusted into position using a small rubber hand maul. With a hand on the top, the surface is then to be tapped into position until flush with the string line.

The second unit is then introduced by offering it to the string line at the end of the first Kerb. Ensure that the male alignment spigot on the end face of laid kerb is located within in the female slot of the kerb being laid. The Kerb has a 2.5mm lug integrated into the side face to reduce contact between kerbs, which in turn facilitates the reduction of spalled kerbs during installation. The laying process is then repeated, checking that the first Kerb has not been disturbed, adjusting as necessary with the rubber maul. Successive Kerb units can then be added to the line.

On completion of the kerb line, backing concrete is to be run out from the shute behind the Kerb, covering the lateral flange, keying the Kerb to the haunching and race. The kerb layer then faces off the front of the kerb race, trimming flush to the front flange of the Kerb. The rest of the haunching should be trowelled into shape and then the line of the kerb should be checked again for accuracy.

Concrete Kerb Drainage

Available from the JDP branch network is a range of the latest integrated kerb drainage systems which offer an alternative to conventional kerb, gully and drain. Endeavouring to supply the road building contractors and authorities with the best solution for each application.

The concrete & polymer concrete range of integrated kerb drainage offer efficient drainage combined with traditional manufacturing quality. Whether for use on main carriageways or in urban areas with aesthetic considerations the range is extensive enough to cover all applications.

Kerbs / Application Selector

	Highway	Mini Highway	Highway Ultra	HydroKerb
				
Product Identification				
Key Applications	• Highways • Commercial sites • Industrial sites • City roads	• City roads • Urban roads • Access roads	• City roads • Town centres • Car parks • Access roads • Urban areas	• Urban roads • Car parks • Housing developments • Conservation areas and heritage
Features	• High capacity linear drainage system • Reduces need for underground pipework and subsequent excavation costs • Immediate water removal • Designed for use on motorway and dual carriageway applications	• High surface water drain off • Reduction in excavation and installation cost • Robust design for busy carriageway applications • Available in one piece or two piece units	• Robust polymer concrete design • Minimal installation disruption • Good hydraulic characteristics • Easy to use one or two piece modular design	• Ideal for limited depth applications • Excellent drainage characteristics • Cornish granite finish top with polymer concrete base • Most aesthetic kerb drainage available
Accessories	• Shallow, deep & crossing bases • Junction & outlet bases • Crossing base unit • Silt box top unit • External radius unit • Cable duct unit • Concrete & ductile iron drainage tops	• 3 x base unit depths • Standard top unit • Rodding eye top unit • Silt box top unit • Radius unit 25/11 • Sump unit • Gully unit • Crossing base plate	• Shallow & deep units (base only or one piece) • Dropper units • Top unit • Radius 6m to 25m internal & external • Crossing unit • Access top • Silt box • Deep & shallow gullies	• Top unit • Radius units • Crossing unit • Sump unit • Inspection unit • Gully Inflow unit • Gully pot • Silt box top • Rodding unit

Standards

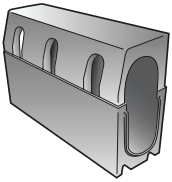
British Standard kerb products comply with the performance levels in European Standard BS EN 1340

Installation Guide

See page 98.

Recycled Kerb Drainage

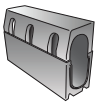
Over recent years the use of Combined Kerb Drainage has grown rapidly, with engineers appreciating the advantages offered over the traditional gully and pipe drainage systems, for car parks and carriageways. Lightweight kerb drainage system, manufactured from 100% recycled waste destined for landfill and 70% lighter than conventional concrete. Recycled Kerb Drainage negates the extra cost and time incurred with the vacuum lifters and grabs needed for traditional concrete kerbs.



Features & Benefits

- Combined kerb drainage system
- Made from 100% recycled material
- 100% recyclable
- Extremely lightweight being some 70% lighter than conventional concrete or polyester concrete equivalent, yet is strong and robust.
- Available in 305mm and 480mm high units to half battered HB1 profile, and has a full range of components including droppers, centre stones, inspection and gully units, radius kerbs etc.
- 3 inlets in the face of the kerb unit, offering better hydraulic performance, and enabling surface water to drain more quickly from the carriageway.
- One-piece unit 500mm long, with a high-impact resistance and has a positive interlock between all components.
- Resistant to most forms of effluents found in highway situations, and has a finish in common with standard concrete kerbs.

Standard Drainage Unit



Code	Description
1801305SU	100x305 mm HB1 Unit
1801480SU	100x480 mm HB1 Unit

Applications

- Urban road schemes
- Trunk roads
- Roundabouts
- Traffic calming situations
- Car parks

A full range of accessories is available making a complete system.

- 90° Internal angle
- 90° Quadrants
- Internal radius units 11-25m
- External radius units 6-7m / 8-10m / 11-25m
- Crossing units
- Drop kerbs
- Rodding access & outlet unit
- Ductile iron gully top cover & base
- End caps / outlet plugs
- End / back outlet drain unions

Shallow Drainage Unit

This shallow kerb unit is available as splayed or half battered and is ideal where construction depths are limited i.e. concrete slabs/ bridge decks, also where low flows are anticipated (narrow/short lengths bridge decks).

It allows continuity of kerb drainage from carriageways over structures. When located on Bridge Decks, sub-surface slots are incorporated to drain the asphalt matrix. A wide range of components is available, such as End Units, End Outlet Units, Expansion Joint Assemblies, and Inspection Units.

Standards

Load tested up to D400 under EN1433
Fully compliant to Highways Agency (HA) IAN117/08 and EN1433

Please Note:

Traditionally, combined kerb drainage system failures are due to side wheel loads, irrespective of the compressive loading capabilities of the product, but EN1433 and DIN19580 do not specify a test for side impact loads.

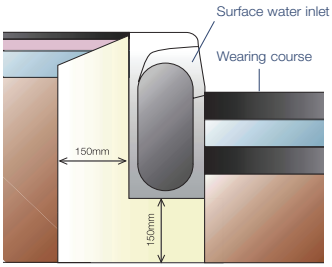
However, it is designed to have a high impact resistance to side wheel loads therefore we recommend the C250kN installation detail with a well compacted road construction.

Installation Guide

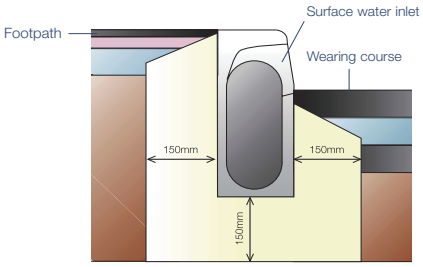
Through a policy of material and process development, Recycled Kerb Drainage has a finish almost identical to a standard Concrete Kerb Drainage.

- Excavate through to line and level.
- Lay out units prior to installation to ensure all rodding access units and outlets are positioned correctly.
- Start at outfall and work away, finished line and level should be pre-determined.
- If sealant is to be applied please apply to the unit not yet laid then butt together – keep joints clean of concrete bedding material.
- A 2mm gap should be left between units (trowel thickness) to allow for contraction and expansion.
- The male/female joint will ease installation procedure as line will be easier to achieve.
- Asphalt can be laid to the pre-marked line shown on units to offer a 125mm kerbface. Asphalt will adhere to the face so pre-pitching is not required.
- Units should be cleaned prior to hand over.

C250kN



D400kN



Gullies / HDPE & PVC Gullies

HDPE & PVC gullies are suitable for road or yard drainage applications. A high quality plastic, easy to handle and install, alternative to heavy concrete and clay gullies. They are suitable for both trapped and untrapped systems and are easily adapted to various pipe systems.

A range of accessories is available, including gully cover slabs that key into the gully and eliminate the need for brickwork to finished level.

The Davigulli has been designed by JDP through understanding the needs of both the installer and the local authority who maintain the system. Through the BBA accreditation JDP's customers have commented on the Davigulli, proving its quality...."good product-many thousands used in the region" "used/specified for 10 years and on in excess of 1000 sites".

The Davigulli is particularly beneficial for ease of cleaning with its smooth chamfered sides.

The Dykagully has the benefit of a specially designed integrated grate, which can independently rotate eliminating the need for additional brickwork or a cover slab.

Features & Benefits

- Lightness and superior strength
- Effective keying into the concrete surround
- Nested gullies lock together for easy handling, transportation and safer storage on site
- Adaptors available to suit a range of pipe systems

Road Gullies 160mm O/let

Code	Description	Diameter mm	Capacity litres
0601DG750	750mm Davigulli	450	80
0602DG900	900mm Davigulli	450	104
0602RG750X450	750mm Rigigully	450	80
0602RG900X450	900mm Rigigully	450	104
0601PG	750mm Pavement Gully	375	
0610MA100	Multi Adaptor 160 x 160-178mm		
0612RF150X25	150/178mm Ridgiflex x 25m		

Yard Gullies 110mm O/let

Code	Description	Diameter mm	Capacity litres
0603UGBASE110	700mm Dykagully Base	315	20
0603UGSTOP	Dykagully Hinged Grating Class B125 (Rotating)		
0603UGSILT	Dykagully Silt Bucket		
0601RG600X300	600mm Midigully	300	24
0601RGSB	Midigully Silt Bucket		

* Bespoke Dyka gullies are available contact your local JDP branch for details.

Standards

Road Gullies BBA certified

Installation Guide

Plastic gully pots shall be set on and surrounded by ST2 concrete. The surround shall be 200mm thick with a 100mm bed above the base slab in 14.

Alternatively, a 150 mm surround of ST4 concrete using Sulphate-resisting cement and 20mm nominal size aggregate may be used.

Concrete Gullies

BS5911-6:2004

We offer a range of precast concrete road gullies with 150mm trapped outlets, manufactured to meet Design Chemical Class 4 as defined in BRE Special digest 1 ' Concrete in aggressive ground' Part 4 : Design guides for specific precast products'.

Gullies are produced monolithically from fully automated machines, providing a strong robust unit, needing no concrete surround and not subject to flotation.

For quick and efficient offloading, an attachment is available which can be quickly fitted to a standard forklift truck, or suitable mechanical off loader. The attachment enables concrete gullies to be handled and offloaded in pairs.

Precast concrete road gullies can be supplied with adaptors for connection to clay or plastic pipes.

Code	I/Dia (mm) A	Nominal Wall Thickness (mm)	Width (mm) B	Effective Depth (mm) C	Capacity (litres)	Weight per Unit (kg)	Outlet I/Dia (mm) D	Approximate Measurement (mm) E	No. per Full 23.5 Tonne Load
1801300450GULLY	300			450	14	120	150	250	
1801300600GULLY	300			600	23	151	150		
1801375750GULLY	375	55	698	750	50	188	150	250	125
1801375900GULLY	375	55	698	900	69	216	150	250	108
1801450750GULLY	450	55	560	750	70	223	150	250	105
1801450900GULLY	450	55	560	900	95	255	150	250	92
18014501050GULLY	450	55	560	1050	120	287	150	250	81
18014501200GULLY	450			1200	151	325	150	250	

Gully Cover Slabs - 450mm Dia

Code	Slab	Overall Dimension (mm)	Kg
1801LSS600	Square	750 x 650 x 100	80
1801LSS675	U	585 x 650 x 100	50

Standards

Concrete gullies available from JDP comply with BS5911-6:2004

Installation Guide

Concrete gully pots shall be installed in accordance with BBA approval requirements. The Engineer would expect the pots to be set on and surrounded by 150mm of ST2 concrete sulphate resistant cement.

Gratings / Ductile Iron Gratings

Within the range of ductile iron gratings are all the tried and tested products that Civil contractors would expect from a respected national distributor like JDP. In addition JDP are always looking for innovative time and cost saving solutions, such as the Retromax range of products, designed to alleviate common problems associated with grating replacements for local authorities and highway maintenance companies.

Retromax Products

Code	Description
0621KD52D	500x350 Clear Opening
0621KD52D6	500x350 Clear Opening - Rear Hinged
0621KD54D	600x450 Clear Opening
0621KD57D	750x450 Clear Opening - Dished Grate & Frame
0621KD44D	1000x450 Clear Opening - Twin Double Triangular
0621KD53D	450x450mm Clear Opening

*For more details see specific tables within this section

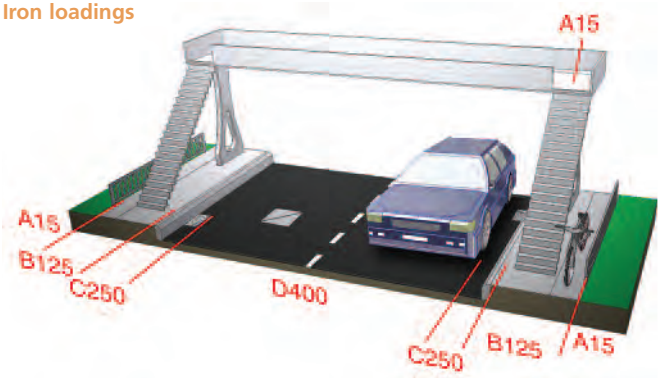
Save Time - Save Labour - Save Money - Increase Drainage Capacity

Applications

Ductile Iron gratings are suitable for use in main carriageway construction, the exact positioning of each class of product is indicated in the illustration below.

Special loadings class E600 & F900 are only used in extremely heavy trafficked areas, or where particular specification demands.

Iron loadings



150mm Deep- Heavy Duty Ductile Iron, Double Triangular Gratings & Frames

Usage: Group 6 Areas with extremely high wheel loads such as dockyards and airports

Features & Benefits

- Manufactured to BS EN124 Class F900
- 90 Tonne safe test load
- HA104/02 compliant
- Kitemarked for third party assurance of quality
- Non rock for added stability & silent operation
- Ductile iron for improved weight to strength ratio
- Black coated finish
- Optional badging – i.e. FW, SW

Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight Kg	Waterway (cm^2)
0621KD41F	450 x 400	150	610 x 542	91	1028

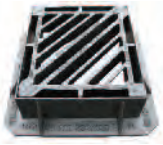
150mm Deep- Heavy Duty Ductile Iron, Hinged & Double Triangular Gratings & Frames

Usage: Group 4 Carriageways & Main Roads for Fast Moving Traffic

Features & Benefits

- Manufactured to BS EN124 Class D400
- Kitemarked for third party assurance of quality
- 40 Tonne safe test load
- HA104/02 compliant
- Captive reversible side hinge for increased safety / security or double triangular non rock three point suspension for stability & silent operation
- Ductile iron for improved weight to strength ratio
- Black coated finish

Double Triangular



Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight Kg	Waterway (cm^2)
0621KD4106	440 x 400	150	550 x 520	50	1180
0621KD43D6N	600 x 600	150	750 x 750	92	2020
0621KD44D	1000 x 450	150	1150 x 540	99	2021

V Hinged Profiled Catchpit Grating

Designed for use in slip from drainage channels parallel to main carriageway

Code	Clear Opening (mm)	Depth (mm)	'V' Profile	Overall Frame (mm)	Weight Kg	Waterway (cm^2)
0621KD55V	630 X 630	150	1:5 20%	794 x 794	93	2380+
621KD19V	1220x675	150	1:5	1380x835	200	4715

Hinged

Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight Kg	Waterway (cm²)
0621KD506N	440 x 400	150	560 x 530	58	1171
0621KD52D6*	500 x 350	150	650 x 435	52	730
0621KD57D**	750 x 450	150	910 x 550	90	2216

*Rear kerb hinged, **Dished.

100mm Deep- Heavy Duty Ductile Iron, Hinged & Double Triangular Gratings & Frames

Usage: Group 4 Carriageways & Main Roads for Fast Moving Traffic

Features & Benefits

- Manufactured to BS EN124 Class D400
- Kitemarked for third party assurance of quality
- 40 Tonne safe test load
- HA104/02 compliant
- Captive reversible side hinge for increased safety / security or double triangular non rock three point suspension for stability & silent operation
- Ductile iron for improved weight to strength ratio
- Black coated finish

Double Triangular

Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight Kg	Waterway (cm²)
0621KD41DNN	440 X 400	100	550 x 520	40	1180
0621KD43DN	600 x 600	100	750 x 750	82	2020

Hinged

Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight Kg	Waterway (cm²)
0621KD51D	380 x 310	100	565 x 410	32	659
0621KD50DNN	440 X 400	100	550 x 520	38	1167
0621KD56D*	440 x 400	100	550 x 525	38	1100
0621KD53D	450 x 450	100	580 x 525	33	1428
0621KD52D	500 x 350	100	650 x 435	42	982
0621KD54D	600 x 450	100	750 x 550	54	1650
0621KD57D**	750 x 450	150	910 x 550	90	2216

*Rear kerb hinged, **Dished.

Hinged Pedestrian Style Grate

Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight Kg	Waterway (cm²)
0621KD50DP	420 x 420	100	570 x 500	48	785
0621KD51DP	380 x 310	100	560 x 410	36	328

75mm Deep- Heavy Duty Ductile Iron, Hinged & Double Triangular Gully Gratings & Frames

Usage: Group 3 Slow moving heavy traffic & areas not exceeding 500mm from the kerbside

Features & Benefits

- Manufactured to BS EN124 Class C250
- Kitemarked for third party assurance of quality
- Captive reversible side hinge for increased safety / security or double triangular non rock three point suspension for stability & silent operation
- Ductile iron for improved weight to strength ratio
- Black coated finish

Double Triangular

Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight Kg	Waterway (cm²)
0621KD41C	445 x 445	75	535 x 500	38	950

#Pedestrian style grating and locked as standard

Hinged

Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight Kg	Waterway (cm²)
0621KD70	225 x 225	50	285 x 265	9	228
0621KD72	300 x 300	50	360 x 340	16	450
0621KD73	300 x 300 Dished	50	360 x 340	16	450
0621KD51C	380 x 310	75	472 x 370	22	764
#0621KD51CPL	380 x 310	75	555 x 410	28	543
0621KD50C-N	420 x 420	75	520 x 510	29	1100

Kerb Gully Units

Features & Benefits

- Manufactured to BS EN124 Class D400
- Kitemarked for third party assurance of quality
- 40 Tonne safe test load
- Standard unit is 150mm deep
- Locked as standard
- Captive Hinged Design for easy access and increased security
- Ductile iron for improved weight to strength ratio
- Black coated finish

Code	Kerb Profile	Clear Opening (mm)	Over Base (mm)	Depth (mm)	Weight Kg
0621KD115HB	Half Battered	495 x 355	590 x 420	150	65
0621KD115SP	Splayed	495 x 355	590 x 420	150	85
0621DSUB	Increases 0621KD115HB/SP to 190mm depth		590 x 420	40	9.5

Kerb Gully Outlet

Features & Benefits

- 25 Tonne safe test load
- For water drainage through the kerb
- Ductile iron for improved weight to strength ratio
- Black coated finish

Code	Kerb Profile	Clear Opening (mm)	Depth (mm)	Weight Kg
0621C44HBB	Half Battered	270 x 250	175	19
0621C44SPB	Splayed	370 x 250	175	19

Congully Dished design to suit proprietary 255 x 125mm (10" x 5") concrete channel available with 3 or 4 flange detail.

Code	Clear Opening (mm)	Overall Depth/ Depth of Dish (mm)	Over Top of Frame (mm)	Over Grate Kg	Over Base (cm^2)
0621KD584 (3 flange)	Clear Opening (mm)	145 / 30	375 x 250	360x 240	480 x 305
0621KD585 (4 flange)	Clear Opening (mm)	145 / 30	375 x 250	360x 240	480 x 355

Gully Chute Connector

Ductile Iron black coated gully chute connector for sub-kerb gully/grating installation.
This item does not require loading category.

Code	Overall Size (mm)	Overall Depth/ Depth of Dish (mm)	Top Catchment (mm)	Bottom Catchment (mm)	O/let (mm)
0621D461	530 x 415	175 (185 with legs)	420 x 330	170 x 160	150

* Suitable for the following gratings:-

0621KD41NN, 0621KD41D6NN, 0621KD50DNN, 0621KD50D6N, 0621KD50DP, 0621KD50DP, 0621KD52D, 0621KD50CN, 0621KD41C, 0621KD115HB, 0621KD115SP, 0621DSUB.

Standards

See page 114.

Installation Guide

See page 115.

Covers & Frames / Heavy & Medium Duty Ductile Iron Covers

BS EN124 and HA104 compliance are important factors that JDP consider when choosing it's suppliers of manhole covers. JDP strive to provide quality products that offer long term cost benefits and manhole covers are a prime example of the need to install products with a long life span.

Reinstatement and failure costs are high, as a result installing the right product first time provides highway maintenance contractors and local authorities with long term cost savings. The installation methods are also key to the life span of the product, and JDP supply a range of bedding mortars which aide installation. You can find these later in the Road Building Section.

A range of lighter weight covers in cast iron, plastic and galvanized steel can be found in our Commercial, Public & Industrial Buildings product specifier.

Badging for manhole covers is available and includes: GAS, CATV, FH, AV, SV, WO, SW, FW, WATER, TRAFFIC SIGNALS, CCTV, TFl, VALVE, STREET LIGHTING, etc. Special badging is available upon request.

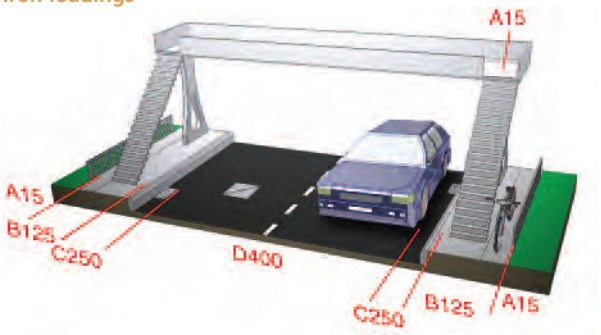
Applications

Ductile Iron covers are suitable for use in main carriageway construction, the exact positioning of each class of product is indicated in the illustration shown here.

Special loadings class E600 & F900 are only used in extremely heavy trafficked areas, or where particular specification demands.

Estate covers are also available.

Iron loadings



Bespoke options including Sealing Plates, Security Grilles, Locking, Safety Grids and Drainage & Air Release Holes are available, please consult your local JDP branch.

150mm Deep- Heavy Duty Ductile Iron Access Covers & Frames

Usage: Group 6 Areas with extremely high wheel loads such as dockyards and airports

Features & Benefits

- Manufactured to BS EN124 Class F900
- 90 Tonne safe test load
- HA104/02 compliant
- Kitemarked for third party assurance of quality
- Non rock for added stability & silent operation
- Ductile iron for improved weight to strength ratio
- Black coated finish
- Optional badging – i.e. FW, SW

Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight Kg
0621KD10F	600 x 600	150	950 x 950	173

150mm Deep- Heavy Duty Ductile Iron Access Covers & Frames

Usage: Group 4 & 5 Areas where high wheel loads are evident such as dockyards etc

Features & Benefits

- Manufactured to BS EN124 Class E600
- 60 Tonne safe test load
- HA104/02 compliant
- Kitemarked for third party assurance of quality
- Non rock for added stability & silent operation
- Ductile iron for improved weight to strength ratio
- Black coated finish
- Optional badging – i.e. FW, SW
- Optional sealing plates, pressure plates

Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight Kg
0621KD10E	600 X 600	150	880 x 880	160
0621KD12E	675 x 675	150	955 x 955	150
0621KD19E	1220 x 675	150	1500 x 955	225

150mm Deep- Heavy Duty Ductile Iron Access Covers & Frames

Usage: Group 4 Carriageways & Main Roads for Fast Moving Traffic

Features & Benefits

- Manufactured to BS EN124 Class D400
- Kitemarked for third party assurance of quality
- 40 Tonne safe test load
- HA104/02 compliant
- Non rock for added stability & silent operation
- Ductile iron for improved weight to strength ratio
- Black coated finish
- Optional badging - i.e. FW, SW

Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight Kg
0621KD10-6	600 X 600	150	750 x 750	97
0621KD12-6	675 X 675	150	825 x 825	119
0621KD14-6	750 X 600	150	900 x 750	145
0621KD15-6	750 X 750	150	900 x 900	175
0621KD16-6	900 X 600	150	1050 x 750	190
0621KD17-6	900 x 900	150	1050 x 1050	265
0621KD19-6	1220 x 675	150	1370 x 825	232
0621KD20-6	1830 x 675	150	1980 x 825	348
0621KD21-6	1200 x 900	150	1350 x 1050	290

100mm Deep- Heavy Duty Ductile Iron Access Covers & Frames

Usage: Group 4 Carriageways & Main Roads for Fast Moving Traffic

JDP offer an in depth range of ductile iron covers suitable for surface water drainage in access roads and car park areas.

Features & Benefits

- Manufactured to BS EN124 Class D400
- Kitemarked for third party assurance of quality
- 40 Tonne safe test load
- HA104/02 compliant
- Non rock for added stability & silent operation
- Ductile iron for improved weight to strength ratio
- Black coated finish
- Optional badging - i.e. FW, SW

Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight
0621KD8	450 x 450	100	600 x 600	60
0621KD9	600 X 450	100	750 x 600	81
0621KD10	600 X 600	100	750 x 750	86
0621KD12	675 X 675	100	825 x 825	104
0621KD14	750 X 600	100	900 x 750	120
0621KD15	750 X 750	100	900 x 900	140
0621KD16	900 X 600	100	1050 x 750	156
0621KD17	900 x 900	100	1050 x 1050	220
0621KD19	1220 x 675	100	1370 x 825	210

75mm Deep- Heavy Duty Ductile Iron, Single Seal Solid Top Access Covers & Frames

Usage: Group 3 Slow moving heavy traffic & areas not exceeding 500mm from the kerbside

Features & Benefits

- Manufactured to BS EN124 Class C250
- Kitemarked for third party assurance of quality
- Full single seal gives airtight seal when packed with grease
- Suitable for slow moving heavy traffic
- Ductile iron for improved weight to strength ratio
- Black coated finish
- Optional badging - i.e. FW, SW

Code	Clear Opening (mm)	Depth (mm)	Overall Frame (mm)	Weight
0621KD60C	450 x 450	75	550 x 550	49
0621KD61C	600 x 450	75	700 x 550	60
0621KD62C	600 x 600	75	700 x 700	75
0621KD63C	750 x 600	75	850 x 700	89
0621KD64C	750 x 750	75	850 x 850	119
0621KD65C	900 x 600	75	1000 x 750	121
0621KD66C	900 x 900	75	1000 x 1000	160

Medium Duty Ductile Iron Access Covers & Frames

Usage: Group 2 for use in car parks, pedestrian areas with vehicular access and driveways

Features & Benefits

- Manufactured to BS EN124 class B125
- Kitemarked for third party assurance of quality
- Single seal versions give airtight seal when packed with grease
- Slide out units are un-sealed and allow easy removal
- Ductile iron for improved weight to strength ratio
- Black coated finish

Code	Clear Opening (mm)	Seal	Depth (mm)	Overall Frame (mm)	Weight
0621KD3240	450 x 450	Single Seal	40	540 x 540	30
0621KD3340	600 x 450	Single Seal	40	690 x 540	38
0621KD3340S	600 x 450	Slide Out	40	690 x 540	34
0621KD3375W	600 x 450	Slide Out	75	760 x 610	41
0621KD3440	600 x 600	Single Seal	40	690 x 690	47
0621KD3440S	600 x 600	Slide Out	40	690 x 690	40
0621KD3475	600 x 600	Plain	75	690 x 690	50
0621KD34C	600mm Dia	Single Seal	75	690mm Dia	36
0621KD34AS	675 x 675	Slide Out	40	765 x 765	50
0621KD3540	750 x 600	Single Seal	40	840 x 690	60
0621KD3640S	750 x 750	Slide Out	40	850 x 850	72
0621KD3740	900 x 600	Single Seal	40	1000 x 700	66
0621KD3740S	900 x 600	Slide Out	40	1000 x 700	64
0621KD3840S	1220 x 675 Twin Cover	Slide Out	40	1320 x 775	110

Standards

All gratings and covers supplied by JDP are manufactured to the required British and European Standard Specification - BS EN124: 1994. JDP ensures that its manufacturing partners only supply gratings and covers which are manufactured in line with BS EN 9001 quality systems, and are approved by BSI as a Kitemark registered firm. We are aware that quality is of key importance to specifiers and installers of road building products and customers can rest assured that the range supplied by JDP meets the highest standards.

HA104 compliant where stipulated.

BSI KITEMARKED- BS EN124- F900, E600, D400, C250, B125

BS EN 124 includes loading categories for certain application areas. It is the responsibility of the engineer to ensure that the correct product is specified:
"The appropriate class of manhole top or gully top to be used depends on the place of installation. The selection of the appropriate class is the responsibility of the designer. Where there is any doubt the stronger class should be selected." Clause 5 BS EN124:1994.

Installation Guide

General Notes

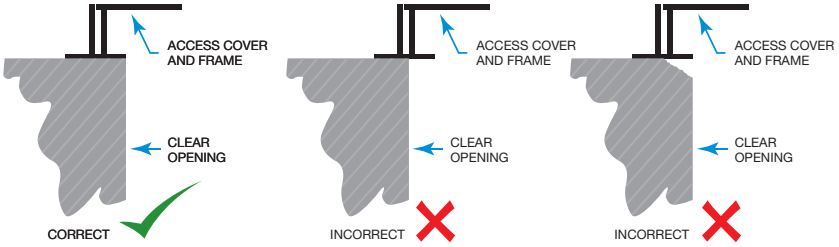
To achieve maximum effectiveness and strength ironwork must be lifted / installed / bedded in the correct way, poor workmanship in installation is a big cause of ironwork failure. Ironwork that has been lifted poorly will "move" and settle, making the road unsafe, and cause premature failure of the ironwork / pavement construction / surfacing / overlay.

The basic requirements amount to good practice, the chamber shall be soundly constructed and pointed (if brickwork), some chambers / gully pots are pre-made in concrete.

The gully pots that are preformed in plastic MUST be completely surrounded with fresh concrete, according to the specification, if the gully is to achieve the correct load carrying strength. Failure to achieve this total surround of appropriate, fresh, concrete is often a cause of the settlement of ironwork.

Ironwork in general shall be bedded on an approved mortar, quite often a rapid setting mortar, e.g. a strength of 10n/mm squared at 2 hours.

1) Covers and frames are manufactured as a unit – ensure that corresponding covers and frames match and fit correctly before commencing installation.
2) The frame of an access cover **must be fully supported**. Any load placed onto the access cover is transferred to the structural opening via the frame. If the frame is only partially supported, **the unit will not carry the load it is designed for and will ultimately fail** – please see sketches below.



3) Mortar bedding material must be placed around the opening immediately after mixing. It should be placed at a depth approximately 5mm greater than the required bedding thickness and spread across the full width of the chamber wall. Deep trowel marks in the bedding should be filled and the surface of the bedding floated to an approximately even finish.
4) The frame should be lowered onto the bedding as soon as possible. The frame must be placed on the bedding so that all webs of the frame are fully supported by the frame supporting structure. The webs must not overhang the internal faces of the frame supporting structure. There must be no voids in the bedding beneath the frame. Special care must be taken in the vicinity of the cover seatings.
5) The frame must be carefully tamped down to the required level and slope. This can be achieved to the Specification requirements by placing a straight edge over the frame webs and surrounding carriageway or other level control points as appropriate.
6) Any holes within the frame must be infilled with bedding material and the flanges of the frame enveloped by a minimum thickness of 10mm of the same material. A greater thickness may be applied provided that sufficient depth is left available for placement of any surfacing layers.
7) Exposed surfaces of the bedding around the outside of the frame must be floated to fill any voids and remove any loose fragments and the exposed surface of the bedding material inside the chamber must be pointed to a smooth finish.
8) The cover should be placed in the frame by a mechanical lifting device or suitable lifting keys after the bedding material has sufficiently set.
9) No surround material must be placed in contact with the frame until the bedding has achieved sufficient tensile and compressive strength.

Bedding Mortars & Tarmac

JDP provide a range of BBA & Highways Agency approved cement, bitumen and resin based products for use in highway construction and reinstatement works.

Cold Lay Macadam

Permanent cold lay surfacing macadam gives first time permanent reinstatements and pothole repairs in footways, footpaths, cycle tracks and roads. The product It is suitable for both permanent and temporary repairs to potholes and reinstatement areas.

Rapid Set Bedding Mortars

Rapid strength bedding mortars for bedding ironwork, such as manhole cover frames during repairs, may be trafficked when the strength is expected to be 20N/mm2. A family of products designed for the bedding of manhole frames and road furniture with specific timing for road opening within 45 / 60 / 90 / 120 or 180 minutes.

Environmentally Friendly Bedding Mortar

New generation, environmentally friendly bedding mortar specifically formulated for the bedding of ironwork conforming to the Highways Agency Design Manual for Roads and Bridges: Mortars for Bedding ironwork, HA104/02, part5, clause 6.1 and is suitable for use in wet weather conditions.

Polyester Resin Mortars

Polyester resin based products available in summer and winter grades designed to allow road opening in the shortest time possible include. Ultra rapid grout, designed to flow into areas under frames being installed on vehicular roadways. Ultra rapid mortar, designed for bedding and leveling of all frames in vehicular surfaces. Kerb fixing, designed for fixing kerbs with high value adhesion to asphalt.

Rapid Set Concrete

Premium grade rapid setting concrete. Designed for rapid reinstatement of all road and street furniture at ambient temperatures down to +1°C. Hardens within 10 minutes to allow continuation work. Can be hand mixed, ideal for use by mobile repair teams.

Flag Paving

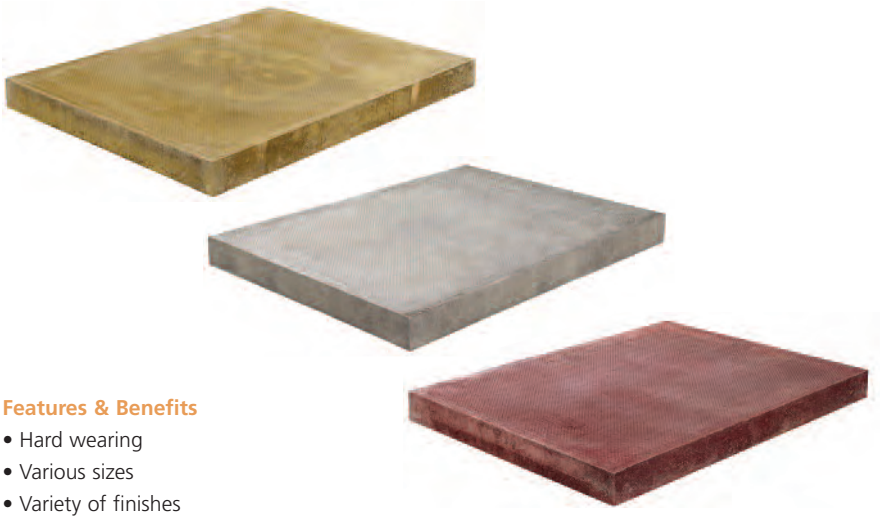
JDP offers a range of Concrete Flag Paving which offers a clean, hardwearing and aesthetically pleasing surface. The flags are produced in a range of square or rectangular sizes - in different thicknesses, which can be combined to form patterns.

Flags can be divided into three main categories: Standard, Small Element and Decorative. Standard and Small Element flags are manufactured to BS EN 1339, to standard sizes in controlled factory conditions and are within this section. For Decorative paving please contact your local JDP.

Flags are manufactured using three processes: semi-dry, wet-pressed and wet-cast; a secondary process may be applied to produce a variety of surfaces - textured, profiled, ground or polished - with or without chamfers. Stable inorganic pigments are used to provide a range of intrinsic permanent colours, further increasing choice. Flags are also available to reproduce the colour and texture of natural stone including split, sawn and tooled finishes.

The level and type of pedestrian and vehicular use on a pavement determine the size and thickness of the flag, the selection of laying courses, the jointing materials and the depth of pavement construction below the flag.

Reinforced flags are also now available which offer superior performance.



Features & Benefits

- Hard wearing
- Various sizes
- Variety of finishes
- Different colours
- Complies with British Standard

Applications

- Pedestrian areas, paths
- Pedestrian areas with occasional car or HGV overrun

BS Standard Paving

Size (mm)	Thickness (mm)	BS Ref.	Weight per unit (kg)	Units per m²	Units per tonne	Colours
450 x 600	50	A50	31	3.7	32	All colours
600 x 600	50	B50	42	2.77	24	All colours
600 x 750	50	C50	52	2.22	19	All colours
600 x 900	50	D50	63	1.85	16	All colours
450 x 600	63	A63	40	3.7	25	All colours
600 x 600	63	B63	52	2.77	19	All colours
600 x 750	63	C63	66	2.22	15	All colours
600 x 900	63	D63	77	1.85	13	All colours

Colours available = Grey, Buff, Red

BS Small Element Paving

Size (mm)	Thickness (mm)	BS Ref.	Weight per unit (kg)	Units per m²	Lift weight (tonnes)	Colours
300 x 300	60	G60	13	11.11	0.44	Grey
400 x 400	50	F50	19	6.25	0.74	Grey
400 x 400	65	F65	24	6.25	0.78	All colours
450 x 450	50	E50	24	4.94	0.94	Grey, Buff
450 x 450	70	E70	34	4.94	1.00	Grey, Buff
430 x 300	65	B63	20	7.41	1.25	Grey, Buff

Colours available = Grey, Buff, Red

Standards

- Manufactured to BS EN 1339
- BS EN 1341 - Natural Stone Flag Paving

Installation Guide

The following table gives a guide to the type and thickness of flag which should be used for various applications.

Suitability of flags for various applications

Designation	Nominal Size (mm)	Thickness (mm)	Pedestrian Only	Vehicular 1	Vehicular 2	Vehicular 3
A	600 x 450	50 or 63	✓	✓	✓ 63mm	✗
B	600 x 600	50 or 63	✓	✓	✓ 63mm	✗
C	600 x 750	50 or 63	✓	✓ 63mm	✗	✗
D	600 x 900	50 or 63	✓	✓	✗	✗
E (small element)	450 x 450	50 or 70	✓	✓	✓ 70mm	✓ 70mm
F (small element)	400 x 400	50 or 65	✓	✓	✓ 65mm	✓ 65mm
G (small element)	300 x 300	50 or 60	✓	✓	✓ 60mm	✓ 60mm

Key:

Vehicular 1 - very occasional use by cars and light mechanical sweepers, e.g. unprotected footways in no parking areas or where overrun is not a problem. These flags can be laid on either a sand or mortar laying course.

Vehicular 2 - footways where vehicles cross to access house driveways. The preferred laying course is sand.

Vehicular 3 - footways where cars and occasional commercial vehicles run over; unprotected pedestrian precincts with about 25 commercial vehicles each day; fire tender access ways. These flags to only be laid on a sand laying course.

Special Paving

JDP offers a range of Concrete deterrent, tactile, demarcation and warning paving featuring the appropriate surface designs and complying, where required, with the relevant British Standards and Building Regulations.

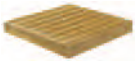
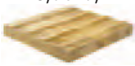
Features & Benefits

- Hard wearing
- Various sizes
- Designed to assist visually impaired pedestrians
- Different colours to suit specific guidelines
- Complies with British Standard

Applications

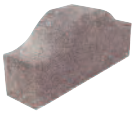
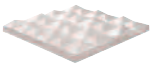
- Pedestrian areas, paths
- Pedestrian areas with occasional vehicular overrun

Tactile Paving

	Thickness (mm)	Size (mm)	Colours	Key Applications
Hazard Warning 	50	400x400	Buff *Grey, *Red	• Identifies any type of potential hazard • Can also be used to mark shared cycle/pedestrian routes
Blister Paving 	65	450x450	*All colours	
Guidance Paving 	50	400x400	*All colours	• Identifies the location of a drop kerb and crossing: Uncontrolled crossing (Buff) Controlled crossing (Red)
	65	400x400	*All colours	
	50	450x450	Buff, Red, *Grey	
	70	450x450	*All colours	
Cycleway 	50	400x400	Grey, Buff, *Red	• To guide pedestrians through potential hazards • Bars rounded to warn of change in direction
	65	400x400	*All colours	
Platform Edge (Blister) 	50	400x400	Grey, Buff, *Red	• Used to mark shared pedestrian/cycle routes
	65	400x400	*All colours	
Platform Edge (Lozenge) 	50	400x400	Buff, *Grey, *Red	• Used to indicate presence of a heavy rail system off-street
	50	400x400	Buff, *Grey, *Red	• Used to warn of the approach to the edge of an on-street LRT platform

*Colour made to order only

Elite Deterrent Range

	Thickness (mm)	Size (mm)	Colours	Key Applications
Format 2 	90-132	298x80	Grey	Pedestrian access deterrent, defining 'no go' zones providing a traffic calming component in speed humps
Format 3 	74	600x600	White	Deterrent paving for all environments in which pedestrian or vehicular traffic needs to be discouraged

Standards

- Manufactured to BS EN 1339
- Complies with BS 7997

*Format 2 complies with BS EN 1338

Installation Guide

See Flag Paving section page 118.

Engineering Bricks

Engineering Bricks are used for their performance characteristics rather than their appearance and are most suited for groundworks, manholes and sewers, retaining walls and other situations where strength and resistance to frost attack and water are the most important factor.

Code	Description
1801ENGBRICK	Engineering Brick Class B

Standards

Engineering bricks are defined in BS 6100 'Glossary of building and civil engineering terms' as 'brick sized fired clay units having a dense and strong semi vitreous body, conforming to defined limits for water absorption and compressive strength.'

In BS 3921 Engineering Bricks are classified as A or B based on minimum compressive strength and maximum water absorption not falling below 70 N/mm2 – 4.5% and 50 N/mm2 –7% respectively.

Installation Guide

Mortar is just as exposed as the brick.

Generally, and especially in the North West of England and Scotland, please note the different mortar mixes in the table below:

	Mortar designation	Type of mortar (proportion by volume)			Mean compressive strength at 28 days	
		Cement: lime: sand	Masonry cement: sand	Cement: sand with plasticizer	Preliminary (laboratory) tests	Site tests
Increasing strength ↑ / Increasing ability to accommodate movement, e.g. due to settlement, temperature and moisture changes ↓					N/mm²	N/mm²
	(i)	1 : 0 to 1/4 : 3			16.0	11.0
	(ii)	1 : 1/2 : 4 to 4 1/2	1 : 2 1/2 to 3 1/2	1 : 3 to 4	6.5	4.5
	(iii)	1 : 1 : 5 to 6	1 : 4 to 5	1 : 5 to 6	3.6	2.5
	(iv)	1 : 2 : 8 to 9	1 : 5 1/2 to 6 1/2	1 : 7 to 8	1.5	1.0
Direction of change in properties is shown by the arrows		Increasing resistance to frost attack during construction →				
		← Improvement in bond and consequent resistance to rain penetration				

Note 1. Where mortar of a given compressive strength is required by the designer, the mix proportions should be determined from tests following the recommendations of appendix A of BS 5628: Part 1: 1978.

Note 2. The different types of mortar that comprise any one designation are approximately equivalent in compressive strength and do not generally differ greatly in their other properties. Some general differences between types of mortar are indicated by the arrows at the bottom of the table, but these differences can be reduced (see BS 5628: Part 3: 2001 clause 5.7).

Note 3. The range of sand contents is to allow for the effects of the differences in grading upon the properties of the mortar. In general, the lower proportion of sand applies to grade G of BS 1200 whilst the higher proportion applies to grade S of BS 1200.

Note 4. The proportions are based on dry hydrated lime. The proportion of lime by volume may be increased by up to 50% (V/V) in order to obtain workability.

Note 5. At the discretion of the designer, air entraining admixtures may be added to lime: sand mixes to improve their early frost resistance. (Ready mixed lime: sand mixes may contain such admixtures)

Street Furniture

JDP supply a range of street furniture products manufactured from recycled materials. Precast concrete bollards are also supplied.

Bollards

Features & Benefits

- 100% recycled plastic
- Agenda 21 and best value compliant
- Solid durable & hardwearing
- Rot & maintenance free
- Textured surface finish
- Knot, splinter & corrosion free
- Easy to install
- Various styles

Domed Top - Round Base

Dimensions:
Available in two sizes:
120 diameter x 1500mm and
150 diameter x 1500mm
Unit Weight: 22kgs
Order Code: D/R

Radius Top - Round Base

Dimensions:
150 diameter x 1500mm
Unit Weight: 25kgs
Order Code: R/R

Chamfered Top - Round Base

Dimensions:
150 diameter x 1500mm
Unit Weight: 22kgs
Order Code: C/R

Flat Top - Round Base

Dimensions:
150 diameter x 1500mm
Unit Weight: 22kgs
Order Code: F/R

Domed Top - Square Base

Dimensions:
145 x 145 x 1500mm
Unit Weight: 23kgs
Order Code: D/S

Pyramid Top - Square Base

Dimensions:
145 x 145 x 1500mm
Unit Weight: 25kgs
Order Code: P/S

Other Products in the Recycled Range

Waymakers

Signage

Knee Rail Fencing

Benches & Seating

Retaining Walls & Embankments

• Geogrid • Gabions & Mattresses • Redi-Rock Retaining Wall
• Erosion Control Products

JDP offers a complete range of products for Retaining Walls and Embankments to prevent downslope movement or erosion and provide support for vertical or sloped grade changes.

Separation, reinforcement, filtration and protection problems occur wherever there is unstable ground often as a result of construction.

The solutions JDP offers include wire gabions and mattresses, Redi-Rock concrete dry walling system, degradable erosion control blankets, non-degradable turf reinforcement mats and geotextile, which can be found in the Road Building section.

These all form a solution to the problem of retaining and protecting slopes from erosion in areas such as railway embankments and river banks.

Geogrid

JDP offer both extruded and woven polyester geogrids, which are widely accepted as giving the best performance and longer lasting results for soil reinforcement.

Mono-orientated geogrids (strength in one direction) offer the ideal solution for the construction of embankments and earth walls that are stable at inclinations of up to 80°.

Bi-oriented geogrids (strength in both directions) offer extremely high performance making them suitable for embankment foundations over soft soil; they are widely used in road construction, so they can also be found in our Road Building Products section.

Woven geogrids offer high strength at low elongation and are available as bi-axial geogrid (strength in both directions) and as a uni-axial geogrid (strength in one direction). These geogrids offer a cost saving against extruded geogrids where such high performance is not required.

Whatever the nature of your project, JDP can give advice in selecting the appropriate product and offer cost effective solutions.

Features & Benefits

- Tensile reinforcement
- Distribute loads more effectively
- Reduce rutting and shear failure
- Increases the bearing capacity of soft sub-soil
- Provides the lateral confinement required to prevent the pumping of sub-grade fines - increasing longevity and reducing the need for maintenance
- Extruded polypropylene geogrids have an open structure with rigid ribs and junctions that create a more efficient interlocking action between the geogrid and the fill to give improved performance

Mono-oriented Geogrid

Available in a range of tensile strengths beyond 120kN/m2, this product minimises environmental impact by allowing the use of poor quality in-situ fill material and encouraging slope back to its natural vegetated state.

Applications

- Vegetated steep slope embankments
- Landslide repair
- Modular concrete block retaining walls
- Road and railway embankments
- Rock fall protection systems
- Containment dykes for landfill and water basins

Bi-oriented Geogrid

Applications

- Embankment foundations over soft soil
- Railroad ballast reinforcement
- Soil reinforcement of building foundations
- Industrial yards
- Airport runways
- Paved and unpaved roads

Bi-oriented Geocomposite Geogrid

A non woven geotextile combined with a bi-oriented geogrid makes a separation and stabilisation product which avoids mixing different soil types whilst providing effective filtration and high strength.

Applications

- Soft soil stabilisation and separation
- High performance and extended life applications
- Improve railroad track life

Standards

AGRÉMENT TECNICO

First issued: May 9, 1994

SYSTEM CERTIFICATION

SGS

Certificate No. Q2568

CE

Installation Guide

In line with manufacturers recommendations for each application.

Gabions & Mattresses

The use of gabions is an effective solution to combat erosion and to stabilise and strengthen embankments, which has been in evidence for many years.

Gabion mattresses are manufactured in the same way as gabions, however the plan area is large in comparison to their depth, typically units are a maximum of 300mm deep.

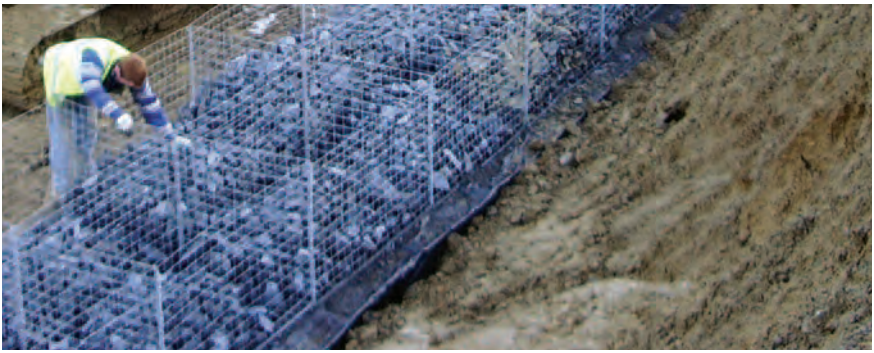
The purpose of a mattress unit is to provide protection on water courses and coastal revetments against scour and erosion.

Mattresses are also used in conjunction with gabions as a scour protection to prevent undermining of gabion retaining structures in coastal or river applications and as a foundation.

Filled with local stone they blend in with the local surroundings and unlike concrete or other solid structures they allow vegetation to flourish, reducing the visible impact and enhancing the natural landscape.

Features & Benefits

- Aesthetically pleasing - straight lines and clean edges can also be blended with natural planting
- Strength and stability - steel wire construction withstands forces of flowing water and retained earth
- Flexibility - ideal for unstable ground
- Corrosion resistant – galvanised to BSEN ISO 10244-2 for 40 year average life
- Cost effective – low maintenance, easy to assemble, minimal foundation preparation



Applications

- Retaining walls
- Rivers, canals and dams
- Erosion control
- Soil conservation
- Marinas and shoreline protection
- Landscaping
- Structure protection
- Flood protection

Standards

Gabions and mattresses are BBA certified for roads & bridges and General Building Regulations.

Redi-Rock Retaining Wall

JDP offer the engineered concrete solution with the look of natural stone – which is much more than a retaining wall.

At the heart of the Redi-Rock product range is an innovative, engineered, interlocking, instant retaining wall system, versatile enough to achieve height without comprising strength. This dry walling system is designed for use in any landscaping project. Ideal in situations where space is limited, fast to construct in all weather conditions and allows flexible programme scheduling.

Features & Benefits

Environmentally friendly

- Recyclable / Relocatable
  - Can be moved easily once project life has expired and used elsewhere
- Sustainable
  - Option to specify eco-friendly cement mix with less environmental damage
  - Uses standard concrete, moulded to look like natural stone, instead of using limited natural quarried stone
- Minimal Disruption to local areas
  - Quick to install with minimal labour force
  - Can be manufactured Off Site or On Site to save on delivery
- Compatible with many of the points in the "Modern Methods of Construction & Sustainable Communities" government guidelines, 2005

Lower Project Cost

- Less Labour
  - Very quick to assemble, minimal workforce
  - No form work or shuttering required
  - No vibrating machinery (Pokers) required
  - Dry laid, no mortar required
  - Minimal foundations
- Less associated cost
  - Less "land take" (land acquisition) as no geogrid required
  - Minimal delays, as can be installed in any weather
  - Quick to install, therefore less site time
  - Minimal maintenance
- Low risk of project disruption and extra costs
  - Can be manufactured off site and delivered on day required
  - Can be laid in any weather
  - Quality assured and cured at source
  - Can be moved once laid if project plans change

High Quality Solution

- Engineered strength
- Appearance of natural stone
  - Can be coloured at source to fit in with different local stones
  - Can be brightly coloured, ideal for corporate colours or branding
- Can increase performance for specifc applications by adding cables, rods or other reinforcements
- Can lay in minimal space
- Large variety of block shapes

Applications

- Retaining walls
- Coastal defences
- Floodplain & shoreline defences
- Traffic management
- Security - force protection
- Infrastructure erosion control
- Landscaping projects
- Permanent and temporary projects
- Bridge abutments
- Erosion control

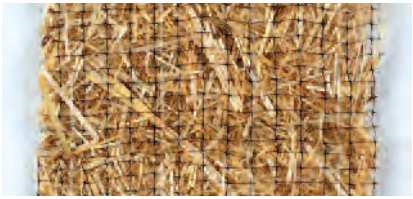
Redi-Rock blocks weigh 1 Tonne each, but just fit together like concrete Lego™.

Erosion Control Products

Erosion due to the forces of water and wind is naturally occurring. The combination of wind strength, water volume and the height, length and steepness of the slope are key factors that influence the amount of erosion. A variety of innovative solutions for erosion control are available from JDP. Many of these products are degradable, allowing vegetation to grow in a stable environment as it becomes established.

Erosion Control Blankets (ECB's)

JDP supply a range of products to control erosion, minimise sediment run off and crucially, encourage growth of vegetation. The Landlok products are also biodegradable, with a life span of one, two or three years. These mats consist of a blend of fibres and straws.



Features & Benefits

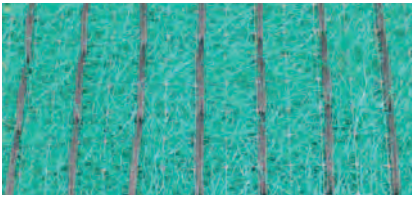
- Captures 700% more sediment than channels lined with hard armour
- Gives an environmentally friendly solution
- Attractive, natural appearance
- Holds seed and soil in place preventing soil from washing away
- Highly effective protection from the effects of wind and rain
- Improve water quality through vegetation filtering sediment out

Applications

- Channel erosion protection, low to moderate flow slope protection, medium to moderate inclines

Turf Reinforcement Mats (TRM's)

These non-degradable synthetic mats provide twice the erosion protection of vegetation alone and provide immediate erosion protection. Used in lining systems they provide excellent long-term protection and reduce maintenance.



Features & Benefits

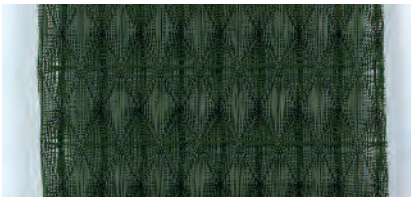
- Captures 700% more sediment than channels lined with hard armour
- UV stabilised
- Reinforces vegetation by anchoring root structure
- Holds seed and soil in place preventing soil from washing away
- Highly effective protection from the effects of wind and rain
- 33 – 50% cost savings against traditional hard armour systems such as rock ripra

Applications

- Channel erosion protection, high flow
- Slope protection, steep inclines
- Erosion prevention for areas requiring immediate protection
- Open channels
- Drainage ditches
- Detention basins
- Steep slopes

High Performance Turf Reinforcement Mats (HPTRM's)

These non-degradable synthetic mats provide additional performance to standard TRM's for extreme applications.



Features & Benefits

- Captures 700% more sediment than channels lined with hard armour
- Three times the UV stabilisation of standard TRM's
- Ten times stronger than standard TRM's
- Reinforces vegetation by anchoring root structure
- Holds seed and soil in place preventing soil from washing away
- Highly effective protection from the effects of wind and rain
- 33 – 50% cost savings against traditional hard armour systems such as rock riprap

Applications

- Channel erosion protection, most demanding flows
- Slope protection, most demanding slopes
- Erosion prevention for areas requiring immediate protection
- Ideal for arid environments or sites where limited vegetation growth is expected
- Storm water runoff for pipe inlets and outlets

Erosion Control Mat

Trinter is one of the latest developments in erosion control. Polypropylene and HDPE nets are heat bonded to form a corrugated structure. This provides a structure for root systems to interlock, stabilising the top layer and allowing a strong, deeper root system to build up. Providing the most effective solution for erosion control.

Features & Benefits

- Strength allows for use on slopes of any length and gradient
- Best soil retention properties available
- Flexibility means natural contours are followed enhancing performance
- Prevents drying out by allowing roots to span soil layers

Applications

- Road, motorway and railway cuts and fills
- River banks, channels and irrigation channels
- Reservoir embankments, dams and lagoons
- Grassed spillways
- Culvert inlet and outfalls
- Golf courses, lawns and residential areas

Cellular Confinement System

Cellular Confinement Systems are manufactured from high density polyethylene (HDPE) strips ultrasonically welded together to create a strong, lightweight, three dimensional panel.

Expanded on-site they form a honeycomb-like structure with interconnecting cell walls incorporating drainage holes to prevent water logging.

The unique hoop strength forms a durable composite mattress that can be filled with common materials for the most demanding load support and erosion control applications.

Features & Benefits

- Save up to 50% on infill materials compared to other load support systems
- Reduces need for excavation
- Reduces sub base thickness
- Simple, speedy installation saving on construction costs
- Environmentally friendly
- Protection for germination on vegetated slopes

Applications

- Retaining walls
- Erosion control and slope stabilisation
- Channel protection
- Tree root protection
- Load support
- Ground stabilization

Surface Water Management (SUDS)

- Stormwater Management
- Infiltration Geotextiles & Attenuation Membranes
- Flow Control Valves & Chambers
- Silt Traps, Leaf Filters & Treatment Filters

At JDP we understand the concept of sustainable water management and that it is a major driver in today's UK construction industry. This is why we offer a range of solutions to meet specific site requirements.

Recent legislation has seen more pressure on local planning authorities and specifiers to implement Sustainable Drainage Systems (SUDS) wherever possible. As this legislation builds it becomes imperative to specify the correct sustainable drainage solution.

SUDS are much more than a single product. The objective is to design a system to deal with the flow at source, rather than transferring the problem further down the watercourse:

- Each site should tackle the problem with management and control measures. These should be designed to meet most objectives
- Control and manage stormwater to reduce the impact of urbanization
- Protect and enhance local water quality and the recharge of groundwater
- Reuse stormwater to reduce load on local resources and to integrate into the local environment

JDP has a number of products that provide effective and practical attenuation (storage) and infiltration (soakaway) systems. Used in a combined approach these products can provide a system that offers the best solution required for your current or future projects.

This approach means knowledge and understanding of a wide variety of techniques and products for SUDS solutions is available to you through JDP, including the connecting Pipework, Gullies, Leaf Filters, Flow Control Valves and Membranes that complete the system.

Stormwater Management

RAINBOX® Cellular Blocks, Large Diameter HDPE Pipes, Tunnel System, Attenuation Tanks, HICAP Drainage and Retention System

RAINBOX®

RAINBOX® geocellular crates have led the way in attenuation and infiltration in recent years. Wrapped in either a non permeable membrane and protective fleece (needle punched fibre geotextile) for storage, or a permeable geotextile for soakaway (both available from JDP), they provide capacities from 230 litres to an infinite size.

Applications

- Soakaway or storage applications
- Trafficked or non trafficked applications
- Large or small storage capacity
- Shallow and deep excavation up to maximum of 5.5m in good ground
- Narrow strips, or use in restricted areas
- Any storage volume from 1 crate to 1000+

Features & Benefits

- 95% void ratio providing greater storage capacity and reduced excavation and disposal costs
- Modular units allow flexibility of shape-ideal for shallow excavation systems, narrow strips, or use in restricted areas
- For trafficked areas upto a minimum 60 tonnes per square metre load bearing capacity (Extra duty only)
- BBA Certified
- Crates are light enough to carry providing health and safety benefits
- Speed and ease of installation

LITE

NON TRAFFIC APPLICATIONS

Applications

- Camp Sites
- Caravan Parks
- Plot Soakaways

MEDIUM

TRAFFIC APPLICATIONS

Applications

- Car Parks
- Housing Estates
- Access Roads

HEAVY

HEAVY TRAFFIC APPLICATIONS

Applications

- Warehouse Areas
- Yard Areas
- Highways & Major Roads

rainbox® 3S

Specification

Dimensions (L x W x D mm)	1200 x 600 x 420
Gross Volume	302 L
Net Volume	290 L
Void Ratio	96%
Weight	11.5 kg

Installation

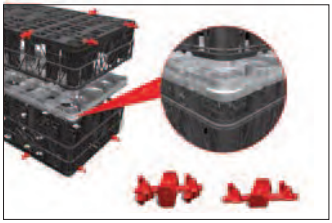
	Load Type		
	Non -Trafficked	**Small Vehicles ≤ 3T (GVWR)**	**Vehicles ≤ 12T (GVWR)**
Min. earth covering (m)	0.20	0.50	0.60
Max. earth covering (m)	1.50	1.30	1.30
Max. Installation Depth (m)			
With Ground φ' 25°	2.40	2.30	Refer to JDP
With Ground φ' 35°	3.60	3.60	Refer to JDP
With Ground φ' 40°	4.00	4.00	4.00

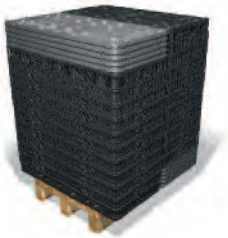
A structural design check of a RAINBOX® 3S system should be carried out by the installer prior to work commencing. Contact JDP Technical Support or consult the RAINBOX® 3S Technical Installation Guide for more information.

Assembly

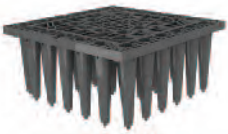
RAINBOX® 3S crates are assembled quickly.
Crates arrive on site flat-packed on pallets and consist of 2 half boxes with an intermediary plate. Boxes and plates simply snap together to make a full sized crate.

Interlocking crates are joined using minimum 2 single clips per contact side (double clips between layers).





rainbox® core

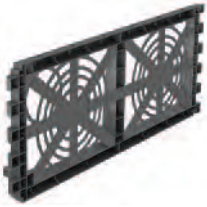


RAINBOX® Core

Volume (litres)	Length (mm)	Width (mm)	Height (mm)	Weight (kg)	Colour	Code
225	800	800	350	9	Black	1120402200

RAINBOX® Core baseplate

Volume (litres)	Length (mm)	Width (mm)	Height (mm)	Weight (kg)	Colour	Code
25	800	800	40	4	Black	1120402201



RAINBOX® Core end plates

The outside surface of a RAINBOX® Core system is sealed with end plates DN100/150/200/250 contact surfaces.

Item	Colour	Code
RAINBOX® Core end plates (set 2 units)	Black	1120402203

A structural design check of a RAINBOX® Core system should be carried out by the installer prior to work commencing. Contact JDP Technical Support or consult the RAINBOX® Core Technical Installation Guide for more information.

Assembly

The RAINBOX® Core base plate forms the foundation of the system.
Stack RAINBOX® Cores to the required installation depth for your application.
The outside surface is then sealed with RAINBOX® Core end plates.

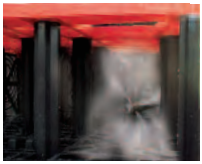
rainbox® cube

Twice the volume per truck

To save space during transport, two RAINBOX® Cube modules are stacked one inside the other. This halves transport costs and CO_2 emissions.

Easy to install

RAINBOX® Cube modules are easy to transport and install.
The modular system structure requires few accessories.



Easy to inspect

The standard inspection channel allows the entire percolation system to be effectively monitored. The ability of the RAINBOX® Cube system allow access by inspection cameras that are commonly found on the market. This has been confirmed, by several independent testing authorities.

Can be cleaned by high pressure jetting

RAINBOX® Cube system can be easily cleaned by high pressure jetting.

Highly flexible

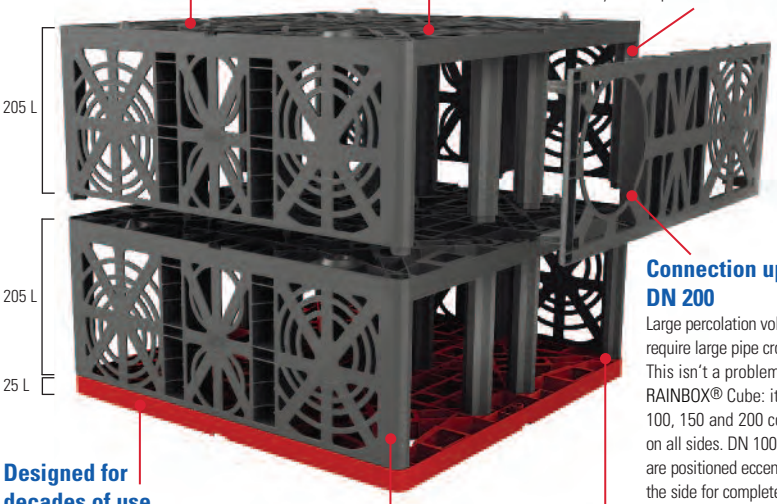
Each RAINBOX® Cube module has a volume of 205 l, an area of 800 x 800 mm and a height of 320 mm. The system size and loadbearing can be adjusted individually to suit requirements of traffic and of non-traffic area.

Lorry-bearing

The RAINBOX® Cube has a heavy-duty lorry-bearing capacity of 60 tons with a 800 mm earth covering.

Installation depth of up to 5 metres

Even under very heavy loads, RAINBOX® Cube system can be installed at a depth of up to 5 metres. This means that up to 14 layers are possible.



Connection up to DN 200

Large percolation volumes require large pipe cross-sections. This isn't a problem for RAINBOX® Cube: it has DN 100, 150 and 200 connections on all sides. DN 100 connections are positioned eccentrically at the side for complete deaeration.

Designed for decades of use

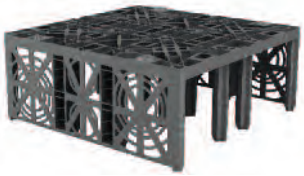
A durable product design ensures sustainability. Built to offer double safety, the RAINBOX® Cube is designed for a **service life of over 50 years.**

Universal use

For rainwater infiltration, retention or rainwater harvesting.

High percolation rate

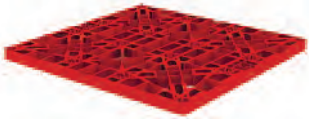
The RAINBOX® Cube system is designed to have high rate of percolation and barrier free inspection.



RAINBOX® Cube

For large storage volumes DN 100/150/200 connecting faces

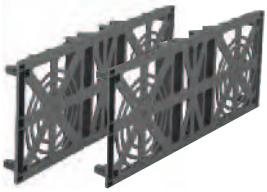
Volume (litres)	Length (mm)	Width (mm)	Height (mm)	Weight (kg)	Colour	Code
205	800	800	320	8	Grey	1120402005



RAINBOX® Cube baseplate

Forms the foundation of the RAINBOX® Cube system

Volume (litres)	Length (mm)	Width (mm)	Height (mm)	Weight (kg)	Colour	Code
25	800	800	40	4	Red	1120402006



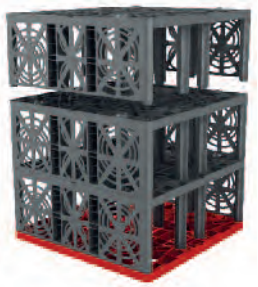
RAINBOX® Cube end plates

The front ends of an RAINBOX® Cube system are sealed with end plates DN 100/150/200 contact surfaces

Item	Colour	Code
RAINBOX® Cube end plates (Set 2 units)	Grey	1120402002

Easy assembly

The RAINBOX® Cube ground plate forms the foundations of the system. Up to 14 RAINBOX® Cube modules with a storage volume of 195 litres each can be fitted on one ground plate. The front ends are sealed with RAINBOX® Cube end plates.



Large Diameter HDPE Pipes

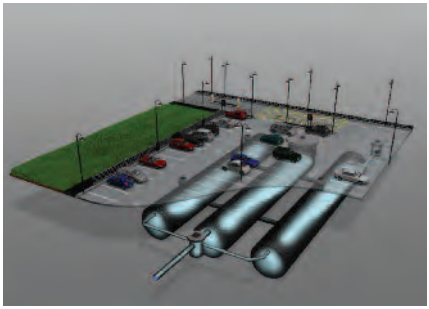
Large diameter HDPE pipes are a tried and tested method for carrying stormwater underground. To form a tank structure they include welded end plates and can also include manifolds to join individual lines together.

Applications

- Soakaway or storage applications
- Trafficked or non trafficked applications
- Large or small storage capacity
- Deep excavation systems to maximum of 6m as standard
- Where large amounts of silt & debris contamination is present in stormwater runoff
- Where access for inspection is a requirement
- Accepted for adoption by water authorities *may vary between regions
- Ability to design and manufacture pipe strength to suit the exact application providing cost effective solutions
- Highways Agency approved

Features & Benefits

- Large range available up to 3000mm diameter
- Trafficked areas up to HGV loading or non trafficked applications
- BBA Certified
- Tanks of any size can be fabricated
- Can be configured to provide access for inspection
- Lightweight for ease of handling and installation combined with high stiffness and durability
- Suitable for flushing and jetting maintenance
- Pipe strength can be customized to suit site conditions



Tunnel System

The Hydro Chamber tunnel system is backfilled with 35-50mm clean washed crushed stone, the stone / chamber combination provides excellent structural strength as shown in independent field tests where the chambers were exposed to loads four times that expected in service.

Applications

- Soakaway or storage applications
- Trafficked and non trafficked applications
- Excavation depths in excess of 3.5m
- System sizes from 2m³ - >10,000m³
- Large or small storage capacity
- Where access for inspection is required
- Accepted for adoption by water authorities *may vary between regions

Features & Benefits

- WRc certification
- Superior structural strength
- Field tested to 200kN single axel load
- Silt / grit management system
- Suitable for visual and camera inspection
- Suitable for flushing and jetting maintenance
- Unique watertight pipe joint (HydroSeal)
- Stackable for transport and site storage
- Foundation design guidelines
- Technical support and project management available

HydroChamber 800 Specification

Overall Dimensions (mm): 2325 x 1265 x 800
Installed Dimensions (mm): 2175 x 1265 x 800
Nominal Chamber Storage (m³): 1.40

Attenuation Tanks

These GRP preformed tanks are made off site ready for installation in a concrete surround. As well as Attenuation Tanks, Rainwater Harvesting Tanks can be used as part of a SUDS solution, see the Water Recycling section in our Commercial, Public & Industrial Buildings Specifier.

Applications

- Storage applications
- Trafficked or non trafficked applications
- Large or small storage capacity - an unlimited size can be achieved by interconnecting tanks
- Practically all ground conditions, even high water tables
- Accepted for adoption
- Where access for inspection is required

Features & Benefits

- Easy and quick to install, no complicated on site assembly
- Trafficked or non trafficked applications
- Deep excavation systems to 5m
- Suitable for all ground conditions
- BBA certified tanks available
- Available in 2 in line and 1 off line systems
- Suitable for flushing and jetting maintenance
- Single tanks up to 275,000lts - can be interconnected to create larger storage volumes

In-Line Attenuation Tanks

In-line systems are designed to allow water to back up through the tank, and drain by gravity through the separate GRP chamber, housing a vortex flow regulator, or within the balancing tank itself.

V1: Orifice Tank Systems

- Based on pressure, with flow being regulated through holes (varying sizes) in an orifice plate
- Simple and inexpensive system

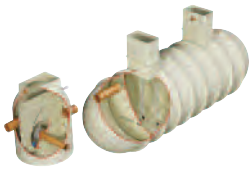
V2: Vortex Control Tank Systems

- Based on creating a rotating flow around an opening at high speed to limit outflow
- Works in a similar way to a bath: a vortex reduces the flow even though there is water to drain

Off-Line Attenuation Tanks

Off-line attenuation tanks have a flow regulator in a separate chamber, and so allows water to build up and even overspill into storage tanks to cope with even the worst of situations.

V3: Off-line System



- The storage tank is emptied using in-built pumps which are automatically activated after a storm has passed
- System provides a shallow inlet to outlet ratio and so can withstand larger flows of stormwater
- Patent pending

Infiltration Geotextiles & Attenuation Membranes

For the installation of Infiltration and Attenuation Crates JDP offer a range of permeable geotextiles and non-permeable membranes and protective fleeces (needle punched fibre geotextile), designed to complete the system. In addition to these products a supply and fit service can also be offered for large projects, particularly where a sealed attenuation tank is required.

Features & Benefits

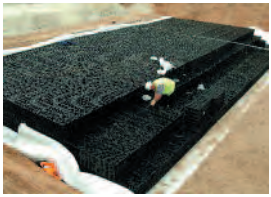
- Membranes for all applications
- Complete systems
- Supply and fit option

Applications

- Wrapping crates for Infiltration / Soakaway applications
- Wrapping crates for Attenuation / Storage applications

Products

Infiltration / Soakaway Applications



For soakaway applications we provide woven and non-woven geotextiles. These offer high permeability and strength, ideal for infiltration crates.

See Road Building section for our full range of geotextiles.

Attenuation / Storage Applications

For storage applications we offer impermeable polyethylene membranes in a roll form along with joining tapes and top hat pipe seals to enable sealing of pipe inlet/outlet junctions with storage tank. Together with needle punched Fibre (non-woven) geotextile protection fleece to minimise risk of puncture to impermeable membrane from sharps in backfill material.

Installation Service

If a fully welded system is required we can supply materials and labour to site. The contractor shall excavate the hole whilst our fully approved installer will install the crates, geotextile protection fleece, and impermeable membrane with fully welded seams (any membrane thickness from 0.75mm to 2mm is available) and securely welded pipe entries and vent pipes. The contractor is then left to backfill around tank.

Standards

Supply and fit option - Our suppliers carry all necessary public liability insurances and CIS5 certification.

Flow Control Valves & Chambers

JDP supply Flow Control Valves as individual units (in stainless steel or plastic) or complete with chamber (in concrete or HDPE) to bespoke design as part of a SUDS system to control the rate at which stormwater leaves a particular site. A typical application of these valves is to control the flow from storm water attenuation / infiltration tanks preventing downstream flooding during periods of heavy rainfall.

The valve controls fluid flow by hydraulic effect without requiring moving parts. At low flow rates, the valve allows water to enter through the inlet passing to the outlet unrestricted. However, at high flow rates water enters through the inlet with enough energy to create a vortex in the chamber. This vortex controls flow to the specified discharge rate.

Design Requirements

- Head - Depth from invert level of outlet to the top water level upstream
- Flow - Required discharge
- Type of application - ie. foul, combined or stormwater
- Any details of the proposed application, manhole details or control chamber proposals

Applications

Flow Controls can be used wherever there is a need to limit the rate of forward flow of surface water within a drainage system. Typical schemes include:

- Source Control/SUDS Schemes
- Traditional Attenuation Storage
- Energy Dissipation / Velocity Control

Stormcheck Vortex Flow Control Chamber

These HDPE plastic chambers are made to specific requirements according to the application, providing a sealed chamber ready to install complete with a stainless steel flow control device. This makes the Stormcheck Chamber one of the easiest products to install.

Features & Benefits

- Pre-Fabricated to customer specification
- Choice of depth up to a maximum invert level of six metres
- Choice of chamber size, 1050mm, 1200mm, 1500mm, 1800mm
- Lightweight chamber design
- Tough and durable product
- A sealed chamber, built to exacting specifications and delivered to site ready to be installed
- The factory fitted vortex flow control device saves the contractor the time and expense of on-site construction
- Vortex flow control devices are widely recognised as being the most hydraulically efficient means of flow regulation. The unique design utilising no moving parts, means they are virtually maintenance free.
- Stormcheck Chambers are manufactured with an integral sump for silt catchment and an optional drain down system to ease maintenance and silt removal
- The Stormcheck Chamber can be integrated with any SUDS solution

Hydro-Brake

One of the easiest to install, is the Hydro-Brake® Chamber, supplied by CPM which comprises a precast reinforced concrete chamber base containing a bespoke Hydro-Brake® Flow Control Valve.

A range of outlet pipe sizes are also available to suit site requirements. Once lifted into position, the connecting pipework can be installed. Depending on the overall depth of chamber required, further concrete rings can be added and the cover slab positioned (additional concrete rings and cover slab sold separately).

Features & Benefits

• Bespoke Design

Every Hydro-Brake® Chamber includes a made-to measure Hydro-Brake® Flow Control designed to suit the site specific design. Standard units also have benching for the flow control preformed in the chamber. Step Irons can also be pre-fitted within the chamber if required.

• Inlets / Outlets

Inlet hole(s) of up to 600mm diameter ID can be cored / formed to the customer's exact specification. A range of outlet sizes is available to suit.

• Rapid Installation

The Hydro-Brake® Chamber is delivered to site as one complete unit with the Hydro-Brake® Flow Control already installed in position. This guarantees the flow control is fitted correctly.

• Simple Construction

The strength of the reinforced concrete chamber eliminates the need for a concrete surround.

• Cost Saving

The use of a Hydro-Brake® Flow Control can reduce the upstream storage volume requirement by up to 30%. This can significantly reduce capital expenditure.

• Minimal Maintenance

The integral Hydro-Brake® Flow Control is totally self-activating, has no moving parts and requires no power to operate.

A Diameter (mm)	B Height (mm)	C Height to Invert (mm)	D Height from to Top (mm)	Weight (Kg)	Outlet Size Options (mm)	Maximum Inlet Diameter (mm)
1200	1250	630	620	2150	150, 225 & 300	300
1500	1750	710	1040	3970	225/300 & 375/450	600

Option 1 - Hydro-Brake® Chamber with High Level Overflow

This chamber includes an emergency overflow. The design incorporates a cored hole at the desired height to accommodate a reverse backdrop pipe arrangement. This is an alternative design to a weir wall configuration and can be incorporated in the 1200mm, 1500mm and 2000mm diameter chambers (see Option 3).

Option 2 - Hydro-Brake® Chamber with Adjacent Penstock

Although the Flow Control includes an integral bypass allowing for drain down and full rodding / jetting, certain Water Companies may also require a completely separate bypass. In these instances we can provide a 150, 225 or 300mm diameter penstock (suitable for up to 6m on seating pressure).
The penstock is mounted on the headwall by the side of the Flow Control which can be opened for emergency discharge. Please note that this design is only available in the 1500mm and 2000mm diameter chambers. If required, both the Flow Control and penstock can be mounted on a weir wall (see option 3).

Option 3 - Hydro-Brake® Chamber with Integral Weir Wall

This chamber design includes a reinforced concrete weir wall, complete with pre-mounted Flow Control. The weir wall can be constructed at various heights to suit design requirements.
As with the previous option, the weir wall configuration can also include a penstock located alongside the Flow Control (if required).
Please note that this option is only available with the 2000mm diameter chamber.

Option 4 - Hydro-Brake® Chamber with Complex Flow Controls

With increasing legislation requesting staged discharge rates linked to an assortment of return periods, solving for a single flow rate under a given return period is not always acceptable. Under these circumstances the outflow hydrograph from the control chamber (the point at which the forward flow is restricted) is particularly complicated and cannot usually be achieved with the use of a single flow control device.
With the use of appropriate modelling software a solution can be found using 'complex flow controls'- placing two or more controls in parallel.

Hydro-Valve

The plastic Hydro-Valve is designed with a curved back to be installed on the internal wall of a 1200mm diameter concrete or plastic chamber.

Features & Benefits

- Manufactured to customised specifications
- Self activating and self cleaning
- Minimal maintenance
- The outlet opening is 3-6 times larger than conventional controls
- Reduce storage requirements by up to 30% compared to an orifice plate
- Curved back with neoprene seal allows ease of installation compared with conventional vortex valves
- The Hydro-Valve unit is attached to the inside of a standard 1200mm (diameter) manhole with six steel anchors (supplied)
- Available to suit rectangular manholes upon request
- Full installation drawings are supplied with Hydro-Valve

JDP can also supply individual Stainless Steel flow control valves

Silt Traps, Leaf Filters and Treatment Filters

One of the topical issues with Attenuation and Infiltration systems is how to prevent silt entering the system and how to manage silt that does enter the system. Prevention is the obvious first choice.

Additionally minimising pollution of the natural watercourse, in line with new legislation and guidelines such as the Water Framework Directive is becoming increasingly important. This is where the use of a Treatment Filter is necessary.

Silt Traps

These bespoke fabricated solutions stop the ingress of silt and debris through the use of specific filters designed to suit particular requirements.

Applications

All SUDS solutions

Features & Benefits

- Prevents ingress of debris into structure, extending its useful life
- Lightweight chamber design
- Tough and durable product
- Pre-fabricated off-site and delivered ready to install
- Choice of chamber sizes from 1050mm, 1200mm, 1500mm, 1800mm and 2100mm
- Inlets and outlets supplied with integral sockets as standard
- Provides easy access maintenance points for silt collection prior to the attenuation structure

Leaf Filters

As with the Silt Traps, Leaf filters are a bespoke fabrication to stop the ingress of leafs through the use of specific filters. Their use is predominantly in conjunction with GRP Attenuation Tanks.

Applications

Used with GRP Attenuation Tanks

Features & Benefits

- Self cleaning
- Low maintenance
- Filters for roofs up to 3000m2
- Pre-fabricated off-site and delivered ready to install
- Tough and durable product

Treatment Filters

New legislation and guidelines such as the Water Framework Directive calls for stricter water quality discharged into the environment. JDP offers regulatory-compliant solutions for dealing with the issues of water quality from surface water run-off from roofs, car parks, and the most polluted roads, even in heavily trafficked areas.

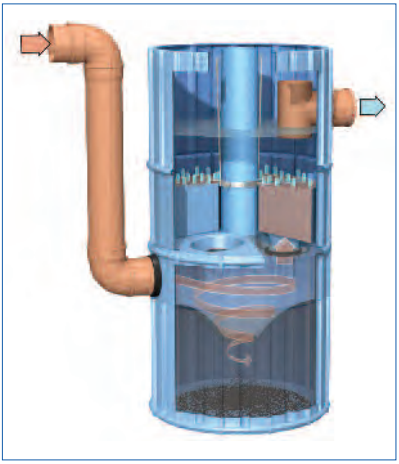
These products are not a substitute for use as Oil Seperators, see Surface Water Drainage section for Oil Seperators.

Applications

- Highway runoff
- SUDS projects
- Vehicle maintenance wash down
- Car parks
- Industrial commercial areas
- Wetland projects

Features & Benefits

- 4 stage filtration for oil retention, chemical separation, filtration and sedimentation
- Low maintenance
- Source control
- Easy to install
- Off site solution
- 3 versions for, traffic, heavy traffic and roof applications



Downstream Defender®

The Downstream Defender ®, supplied by CPM, is an ideal solution for the prevention or reduction of solids and pollutants entering water storage areas where settlement can occur, leading to a build up over time. The system is a hydrodynamic separator which is incorporated into a reinforced concrete chamber.

The design of the internal components directs stormwater downwards and around the periphery of the chamber inducing a rotational flow. A unique flow pattern created within the chamber encourages the solids separation, the silt sediment sinks and floatable debris floats. Both are then prevented from re-entering the main flow path.

Whilst this product has an oil retention element it is not a substitute for Oil Seperators, see Surface Water Drainage section for Oil Seperators.

Features & Benefits

- Available in sizes 1000mm to 3000mm diameter
- No moving parts
- Highly effective with minimal head loss
- Inline & same level inlet & outlet pipes
- Small footprint
- No concrete backfill required
- 1000mm & 1200mm sizes delivered complete
- Other sizes delivered in easy to construct component systems

Surface Water Drainage

- Channel Drainage • Slot Drainage • High Capacity Channel Drainage
- Separators • Twinwall Surface Water Drainage
- Large Diameter HDPE Pipes • Concrete Drainage Pipe
- Box Culverts • Land Drainage • Non-Return & Flap Valves

JDP provides a range of products & solutions for surface & stormwater drainage, these are supplied in line with the requirements for sustainable urban development, by balancing the different issues that should be influencing the design.

Used in conjunction with the SUDS solutions in the Surface Water Management section, these products collect, transport and discharge the surface water to the various points within the system.

The range of products in this section can be used in a combined approach to offer the best solution required for the project.

This versatility within such an in depth product range, means that the specialist knowledge and advice that JDP can provide often gives the designer, installer and owner opportunities to gain installation and long term cost savings.

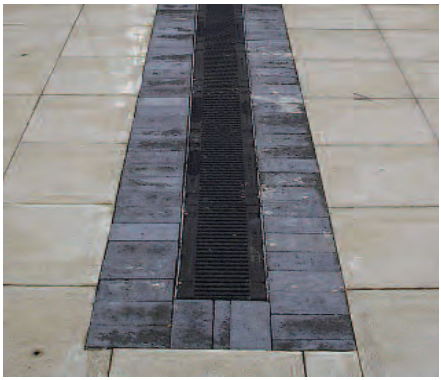
Sustainability is a key word in today's construction, with this in mind JDP offer a number of products in this section that are manufactured from recycled materials, and the majority of products are manufactured from plastic which is 100% recyclable at the end of its useful life.

Channel Drainage

JDP supply one of the most comprehensive ranges of channel drainage available. This depth of range offers high quality products for individual solutions.

These products are used in various applications to prevent flooding and drain surface water.

A combination of channel drainage made from fibre reinforced concrete, cement bonded fibre composites and fully recycled PE-PP, offers the widest selection of channel options to suit every application.



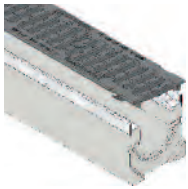
From 100mm – 300mm internal width channels, with grating options that include composite colour options, traditional slotted, mesh, longitudinal and perforated, JDP's range of channel drain provides loadings up to F900.

The extremely robust construction of our heavy duty channels offer total peace of mind in even the most demanding installations. Please see our Commercial, Industrial & Public Buildings Product Specifier for a full range of lighter duty options.

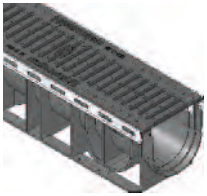
Applications

- Industrial / commercial
- Airports
- Port installations
- Container terminals
- Military areas
- Power plants
- Car parks
- Roads and motorways

Channel Drainage

	FASERFIX® KS	Filcoten® Pro G	Filcoten® Tec
Product Identification			
Key Features & Benefits	• Manufactured from fibre reinforced concrete • KS Side-Lock boltless locking system • Galvanised steel edge angle housing • Optional stainless steel edge • FASERFIX® SUPER channels, with extra thick side walls, is also available for applications where extra assurance is required	• Manufactured from cement bonded fibre composites • Moulded anchor rib design for secure installation • Cast iron edging • Optional stainless steel edge • Lightweight compared to other concrete channels • Pro V channel, with galvanised steel edging, is also available	• Manufactured from cement bonded fibre composites • Moulded anchor rib design for secure installation • Lightweight compared to other concrete channel • Galvanised steel edge • Lightweight compared to other concrete channels
Loading Applications	C250, D400, E600, F900	D400, E600, F900	C250/D400
Ductile Iron Gratings	Mesh, Slotted, Heelsafe	Heelsafe, Mesh, Slotted	Heelsafe
Steel Gratings	Mesh, Slotted, Perforated, Solid, Longitudinal	Contact JDP	Contact JDP
Nominal Width (mm)	100, 150, 200, 300	100, 150, 200, 300	100
Accessories	End cap End cap with outlet Trash box Foul air trap	End cap End cap with outlet Sump unit Silt bucket Locking kit Anti-theft kit	End cap End cap with outlet Sump unit Silt bucket

Channel Drainage

RECYFIX® NC	RECYFIX® PRO	RECYFIX® PLUS	RECYFIX® MONOTEC
			
• Manufactured from recycled PE-PP • Integrated angle housing, moulded as part of the channel • Bolt down gratings • Lightweight	• Manufactured from recycled PE-PP • Integrated angle housing, moulded as part of the channel • Bolt down gratings • Lightweight • Comes with black composite C250 grating • Other colour options available	• Manufactured from recycled PE-PP • KS Side-Lock boltless locking system • Galvanised steel edge angle housing • Optional stainless steel edge • Lightweight	• Manufactured from durable high strength PP • Monolitihic one piece design, no separate grating • Deep channels for high flow • Lightweight
D400, E600	C250, D400	C250, D400	C250/D400
Slotted, Heelsafe	-	Mesh, Slotted, Heelsafe	-
Mesh, Slotted, Perforated, Solid, Longitudinal	-	-	-
100, 150, 200, 300, 400	100, 150, 200, 300	100, 150, 200, 300	100, 200
End cap End cap with outlet Trash box Foul air trap	End cap End cap with outlet Trash box Foul air trap	End cap End cap with outlet Trash box Foul air trap	End cap End cap with outlet Trash box Step fall adaptor

C250 Systems

C250 is the classification for access covers and gratings that are capable of withstanding a 250kN test load.

For use in car parks, forecourts, industrial sites and areas with slow moving traffic.

FASERFIX® KS 100

Type	Length (mm)	Width (mm)	Height (mm)	Drainage Cross Section (cm^2)	Intake Cross Section (cm^2/m)	Code
Channel	1000	160	160	88	–	12018000
Grating	500	149	20	–	454	12018068
Trash Box	500	160	500	–	–	12018059

RECYFIX® PLUS 100

Type	Length (mm)	Width (mm)	Height (mm)	Drainage Cross Section (cm^2)	Intake Cross Section (cm^2/m)	Code
Channel	1000	147	135	92	290	120140363
Trash Box	500	147	489	–	–	120140352

Channel includes grating

RECYFIX® PRO 100

Type	Length (mm)	Width (mm)	Height (mm)	Drainage Cross Section (cm^2)	Intake Cross Section (cm^2/m)	Code
Channel	1000	160	150	92	372	120147055
Trash Box	500	160	504	–	–	120147054

Channel includes grating

D400 Systems

D400 is the classification for access covers and gratings that are capable of withstanding a 400kN test load.

For use in areas where cars and lorries will have access.

RECYFIX® PLUS 100

Type	Length (mm)	Width (mm)	Height (mm)	Drainage Cross Section (cm^2)	Intake Cross Section (cm^2/m)	Code
Channel	1000	147	135	92	290	120140371
Trash Box	500	147	489	–	–	120140393

Channel includes grating

RECYFIX® PRO 100

Type	Length (mm)	Width (mm)	Height (mm)	Drainage Cross Section (cm^2)	Intake Cross Section (cm^2/m)	Code
Channel	1000	160	150	92	372	120147055
Trash Box	500	160	504	–	–	120147054

Channel includes grating

Flitcoten® Tec NW100

Type	Length (mm)	Width (mm)	Height (mm)	Drainage Cross Section (cm^2)	Intake Cross Section (cm^2/m)	Code
Channel	1000	130	135	83	475	1209410700
Trash Box	500	146	500	–	–	1209410790

Channel includes grating

F900 Systems

F900 is the classification for access covers and gratings that are capable of withstanding a 900kN test load.

For use in areas where particularly high wheel loads are imposed, such as airports.

FASERFIX® KS 100

Type	Length (mm)	Width (mm)	Height (mm)	Drainage Cross Section (cm^2)	Intake Cross Section (cm^2/m)	Code
Channel	1000	160	160	88	–	12018000
Grating	500	149	20	–	454	12018061
Trash Box	500	160	500	–	–	12018059

Flitcoten® Pro G NW100

Type	Length (mm)	Width (mm)	Height (mm)	Drainage Cross Section (cm^2)	Intake Cross Section (cm^2/m)	Code
Channel	100	138	142	83	465	120910610100
Channel	500	138	142	83	465	120910610180
Trash Box	500	145	600	–	–	120910610190

Channel includes grating

Standards

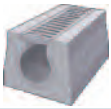
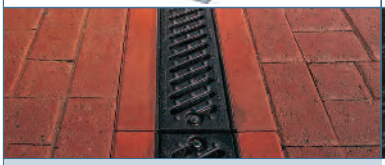
Complies with EN 1433
Ductile iron gratings BS EN124

Installation Guide

- Prepare trench by laying crushed stone and compacting the sub-soil frost resistance.
- Install end caps to the first and last channels. Cut out apertures for pipe joint, screw on adapter and connect pipework.
- The adjoining surface must be 3-5mm higher than the top of the channel system.
- Horizontal forces on the channel or concrete benching are to be eliminated by the use of expansion joints.
- Channels must be prevented from being damaged mechanically during installation, e.g. during compacting of the adjoining surfaces.
- Channels should be installed with grating in place.

Concrete Linear Drainage

JDP supply concrete linear drainage systems with discrete cross falls which are suitable for applications up to Class F900.

	Clearway	Safeticurb
		
		
Key applications	• Hard landscaping areas • Commercial sites • Dockyards • Airports • Industrial sites	• Highways • Hard landscaping areas • Industrial sites • Commercial sites • Car parks
Features	• Extremely robust • 3 colour options • Slot or grid option • Medium, heavy and super heavy duty applications	• Cost-effective alternative to gulley networks • Minimal maintenance • Slot or grid option • Reduces need for underground connecting pipework

Slot Drainage

The slot drainage hexagonal channel profile was originally developed in conjunction with industry professionals from the airport sector.

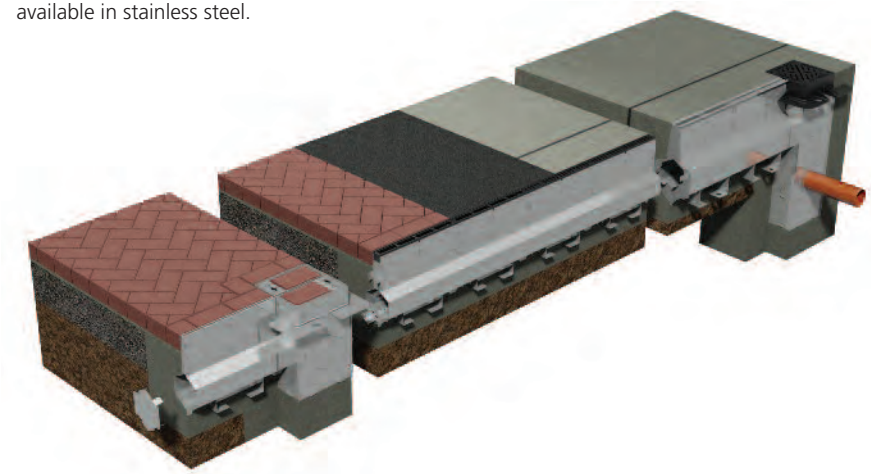
The concept has proved infinitely scalable and has been developed into a comprehensive range of products suitable for smaller projects such as landscaping schemes, shopping developments and parking facilities.

Features & Benefits

- Strong and durable
- Watertight
- Rigid steel lining with high impact resistance
- High capacity
- Stepped fall & self-cleansing
- Continuous interception means reduced wash-over and maximum intake
- Fewer channel joints with lengths up to 3m
- Simple system with proven performance
- Aesthetically pleasing finish

All channels are manufactured in 3 metre, 1 metre and 0.5 metre lengths of galvanised steel.

Bespoke units are available upon request to suit specific design requirements and are also available in stainless steel.



Slot Drainage

FaçadeSlot	PaveSlot	CastSlot	UltraSlot
			
A discreet surface drainage channel that can be installed against a building, wall or other external landscape feature, to provide effective drainage from vertical surfaces, door thresholds and adjacent pavement areas. FaçadeSlot channels can be made to follow the building perimeter whether straight or curved, the system can also accommodate rainwater downpipes using a simple inlet box.	PaveSlot is used to drain external hard surface areas where a neat, unobtrusive aesthetic is required. The system is used with paving units laid against the top edge of the channel. The system is suitable for all paved areas, in public and commercial projects.	The unobtrusive profile of CastSlot sits neatly within concrete, asphalt, and block surface finishes. CastSlot features an electro painted ductile iron throat section, which is securely fixed to the galvanised steel channel body to provide an exceptionally robust yet discreet drainage system. Available with a 30mm opening and a Treadsafe option, which reduces the slot opening from 30mm wide to 2 x 10mm wide slots.	UltraSlot is used in external pavement areas such as airports, ports, highways and similar areas. The system is designed withstand infrequent ultra heavy-duty loads. A Treadsafe option is available, which reduces the slot opening from 30mm wide to 2 x 9mm wide slots. This has no effect on the intake capacity of the system but will make the channel safe to cross for pedestrians.

Channel Widths (mm)			
50, 75, 115	100, 150, 225, 300, 350, 400, 500, 600	100, 150, 225, 300, 350, 400, 500, 600	100, 150, 225, 300, 350, 400, 500, 600

Load Classification			
A15 Bespoke options up to D400 available	A15 to D400	A15 - F900	A15 - F900

High Capacity Channel Drainage

JDP offers RECYFIX® HICAP® high capacity drainage channel which is extremely versatile, with unique features and benefits. Not only can the different sizes be combined together, it can also create a complete stormwater drainage system when used with associated products such as kerb drainage (see Road Building products section).

Features & Benefits

- Easy to install and level
- Lightweight material means easy manual handling
- Unique slot design giving a high quality, aesthetically pleasing finish
- Manufactured from recycled PP-PE
- Complete range for all areas of application up to Class F900
- Integral tongue and groove joints
- Slots supplied with protective tape to avoid ingress of dirt, which is easy to remove
- Hydraulic calculation program and individual design support

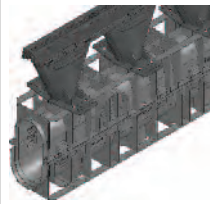
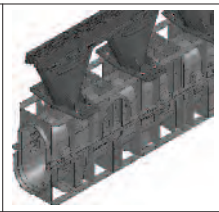
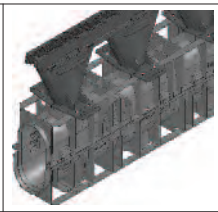
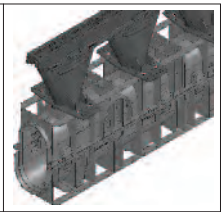
Applications

- Parking areas
- Supermarkets
- Shopping centres
- Pedestrian areas
- Airports
- Industrial estates
- Cargo handling & loading yards
- Power stations
- Ports

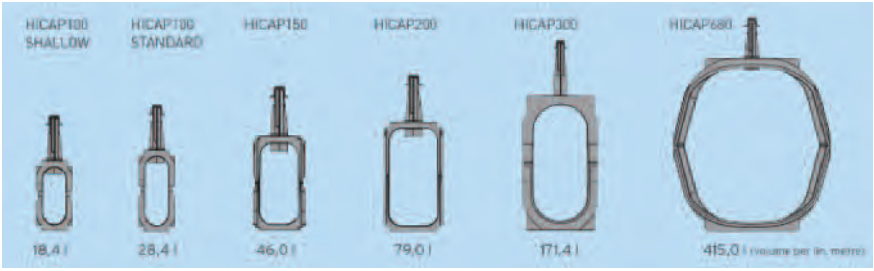
Slot Types

RECYFIX® HICAP®

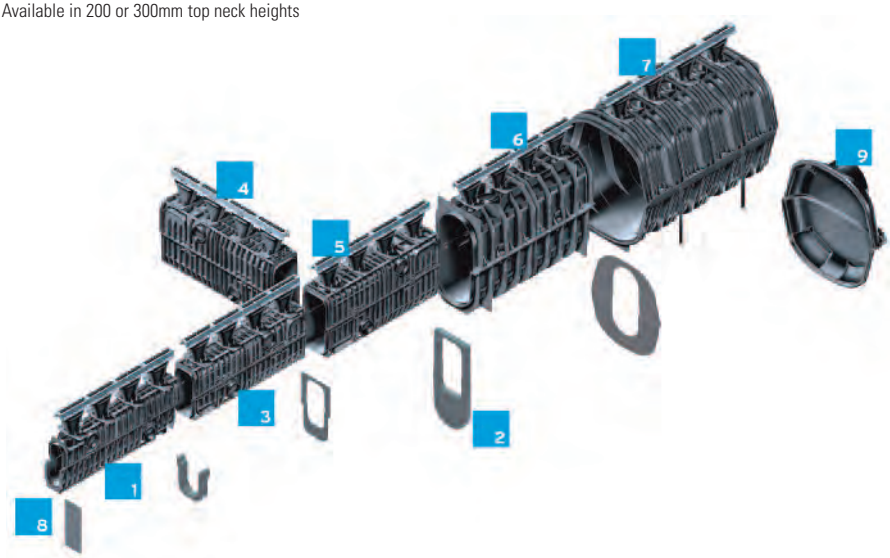
Inlet adaptors made of PE-PP
Suitable for concrete & asphalt applications

			
14mm Slot	**Non-Trafficked**	**Traffic**	**Industrial**

The range of RECYFIX® HiCAP® Channels



Available in 200 or 300mm top neck heights



1. RECYFIX® HICAP® channel 100 in PE-PP with inlet adapter and integrated ductile iron grating
2. The connector is used to connect to the next nominal size up.
3. RECYFIX® HICAP® channel 150 in PE-PP with inlet adapter and integrated ductile iron grating
4. T-connector for connecting to branches
5. RECYFIX® HICAP® channel 200 in PE-PP with inlet adapter and integrated ductile iron grating
6. RECYFIX® HICAP® channel 300 in PE-PPc with inlet adapter and integrated ductile iron grating
7. RECYFIX® HICAP® channel 680 in PE-PP with inlet adapter and integrated ductile iron grating
8. End cap 100
9. End cap 680 with canal connection option

Image for illustrative purposes only.

Standards

RECYFIX® HICAP® channels have been tested to comply with DIN EN 1433 and are suitable for installation in loading classes A 15 to F 900

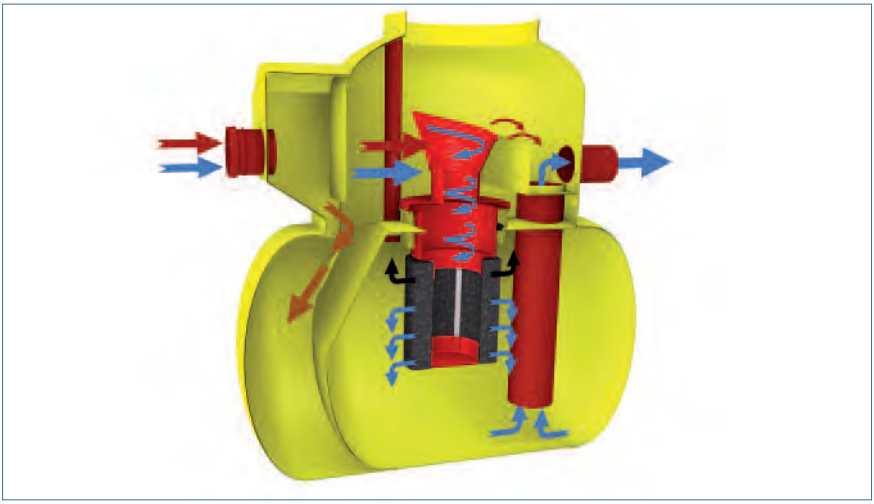
Separators

Surface water drains normally discharge to a watercourse or indirectly into underground waters (groundwater) via a soakaway. Contamination of surface water by oil, chemicals or suspended solids can cause these discharges to have a serious impact on the receiving water.

Oil separators are installed on surface water drainage systems to protect receiving waters from pollution by oil, which may be present due to minor leaks from vehicles and plant, from accidental spillage or due to deliberate and illegal tipping into drains.

Note that throughout this section the term 'separator' is used instead of the term 'interceptor'. The terms have the same meaning. **It is a mandatory requirement under PPG3 (Pollution Prevention Guidelines), to fit an automatic oil level warning device (alarm).** Additionally a silt capacity within the tank (preferred) or in an upstream catchpit is required under PPG3.

Bypass Separator



Information required to specify a nominal size Bypass Separator:

- The calculated flow rate (NS) or the drainage area served (m^3). Designs are based on the assumption that any interconnecting pipework fitted elsewhere on site does not impede flow into or out of the separator
- The required discharge standard. This will decide whether a Class 1 or Class 2 unit is required
- The drain invert inlet depth
- Pipework type, size and orientation

Each bypass separator design includes the necessary volume requirements for:

- Oil separation capacity
- Oil storage volume
- Silt storage capacity
- Coalescer

Features & Benefits

- Light and easy to install
- Class 1 and Class 2 designs
- Independently tested and performance sampled, certified by the BSI
- Comprehensive range with rapid availability
- Inclusive of silt storage volume
- Oil alarm system available (mains, solar & GSM options)
- Fitted inlet/outlet connectors
- Vent points within necks
- Extension access shafts for deep inverts
- Maintenance from ground level

Applications

Bypass separators are used when it is considered an acceptable risk not to provide full treatment, for very high flows, and are used, where the risk of a large spillage and heavy rainfall occurring at the same time is small .e.g

- Surface car parks
- Roadways
- Lightly contaminated commercial areas

Operation

100% of the liquid, up to the unit's designated flow passes through both chambers of the unit. The separation chamber retains the lighter than water pollutants, oils and petrol which rise to the surface. These pollutants are stored within the separator. The separated water discharges from the unit by gravity. If the flow rate rises above the unit's nominal size rating, the excess flow is diverted by a bypass arrangement and discharged without passing through the separation chamber. This ensures that excess flows will not cause 'wash out' of stored pollutants.

Performance

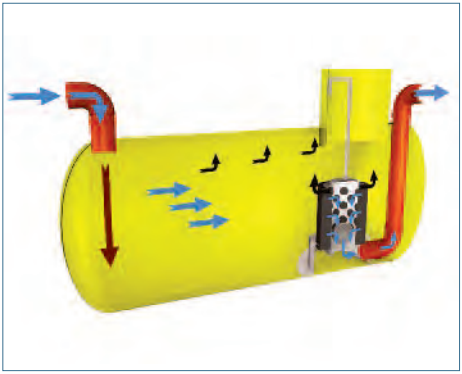
The unit is designed to treat 10% of peak flow. The calculated drainage areas served by each separator are indicated according to the formula given by PPG-3 NSB = 0.0018A(m^2).
Flows generated by higher rainfall rates will pass through part of the separator and bypass the main separation chamber.

Class 1 separators are designed to achieve a concentration of 5mg/litre of oil under standard test conditions.
Class 2 separators are designed to achieve a concentration of 100mg/litre of oil under standard test conditions.

Full Retention Separator

Each full retention separator design includes the necessary volume requirements for:

- Oil separation capacity
- Oil storage volume
- Silt storage capacity and incorporating a Coalescer (class 1 units only)
- Coalescer
- Automatic closure device (ACD)



Features & Benefits

- Light and easy to install
- Comprehensive range
- Independently tested and performance sampled, certified by the BSI
- Class 1 and Class 2 designs
- Inclusive of silt storage volume
- Oil alarm system available (mains, solar & GSM options)
- Rapid availability
- Fitted inlet/outlet connectors
- Vent points within necks
- Extension access shafts for deep inverts
- Maintenance from ground level

Applications

- Fuel distribution depots
- Vehicle workshops
- Scrap yards
- Garage forecourts

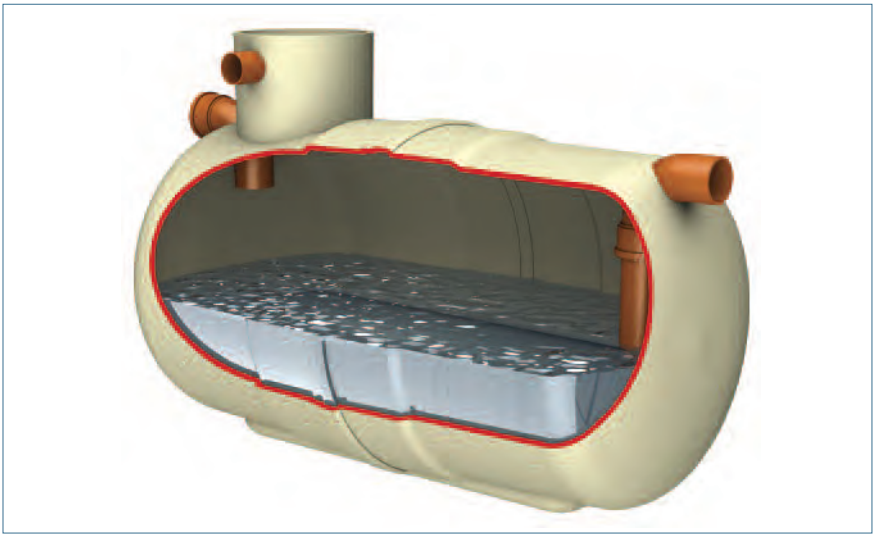
Operation

Contaminated water enters the unit, the internal design and configuration ensures that the liquid is retained for a sufficient period to ensure inactive conditions within the separator. Lighter than water pollutants, such as oils and petrol, rise to the surface of the water and are retained within the separator. Separated liquid discharges.
An automatic closure device seals off the outlet when the retained oil reaches the pre-determined level. Retained oil must be emptied from the unit once that level of oil is reached and the closure device is operated.

Performance

Under PPG3 guidelines Separators are tested to BS EN 858-1. The NS number denotes the flow at which the separator operates and is only able to be applied to products which have been independently tested and certified.
The British Standards Institute (BSI) has tested the required range of separators and has certified their performance in relation to their flow and process performance.
Forecourt separators specifically to retain on site the maximum spillage likely to occur on a petrol filling station or other refuelling site are also available.

Washdown & Silt Separator Range



Washdown Separators

This unit can be used in areas such as car wash and other cleaning facilities that discharge directly into a foul drain, which feeds to a municipal treatment facility. If emulsifiers are present the discharge must not be allowed to enter a NS class 1 or class 2 unit.

Features & Benefits

- Light and easy to install
- Comprehensive range
- Inclusive of silt storage volume
- Rapid availability
- Fitted inlet/outlet connectors
- Vent points within necks
- Extension access shafts for deep inverts
- Maintenance from ground level

Performance

Washdown facilities must not be allowed to discharge directly into either surface water or any oil/water separator discharging into a surface water as they utilise emulsifiers, soaps and detergents, which can dissolve and disperse the oils and upset the separation process.

Standards

Separators are governed and tested by PPG3 guidelines (PPG13 for washdown separators)
Tested to BS EN 858-1

Installation Guide

Siting the Unit

The tank should be as far away from habitable buildings as is economically practicable. The direction of the prevailing wind should be considered in relation to any properties when siting the works. The sludge emptying contractor's vehicle will probably have a maximum reach of 30 metres, but the depth from the ground level to the bottom of the tank must not exceed 5 metres.

The installation should be carried out in accordance with the requirements of the Construction and Building Regulations. An inspection chamber should be installed upstream of the Separator.

It is a mandatory requirement under PPG3 (Pollution Prevention Guidelines), to fit an automatic oil level warning device (alarm). Additionally a silt capacity within the tank (preferred) or in an upstream catchpit is required under PPG3.

BEFORE INSTALLING YOUR TANK

- Read Full Installation Guide provided with delivery of goods.
- Ensure access for desludging tanker. (Building regulations suggest 30m max).
- Check orientation and heights of inlet and outlets.
- Use a pump to keep excavation clean and free from rising ground water during installation.

DO:

- Use the correct backfill material.
- Site tank at furthest practical location from habitable dwellings. Most regulations recommend a minimum of 3m.
- Fit the correct duty cover & frame LOCKABLE.
- Lift the tank using adequate ropes or slings through both of the lugs fitted either side of the neck.
- Fill the tank with water once bedded in hole before pouring concrete to prevent movement.

DO NOT:

- Subject the tank to impact or contact with sharp edges.
- Add neck extensions to the tank, nor, build a brick manhole above the tank neck (as this increases burial depth of the tank beyond that which it was designed for). We do not recommend extending the neck of the tank under any circumstances.
- Install tank deeper than the depth that the fitted neck will allow.
- Install in trafficked areas without a suitable load bearing slab.
- Site the tank so that it is subjected to excess ground pressure (e.g. sloping sites) or applied loads such as may be generated by the proximity of vehicular traffic.
- Lift using only one of the lugs.
- Fill an unsupported tank.

Service Agreement

Although of a minimal nature, the separator must be serviced periodically to help ensure many years of trouble-free operation. This is a requirement of the PPG3 guidelines

The period between maintenance operations may vary depending on the location and use of the interceptor, therefore routine inspections should be undertaken at least every 6 months, and a log kept of the inspection date, depth of oil, depth of silt and any cleaning undertaken.

Twinwall Surface Water Drainage

JDP offer a complete system of twinwall drainage, which is manufactured by a twin extrusion process comprising of two HDPE (high density polyethylene) pipes which are extruded simultaneously, one inside the other, and heat welded together in one continuous process.

The pipes are black in colour, the outer wall being corrugated and the inner wall having a smooth finish to assist the hydraulic flow. A comprehensive range of push fit fittings and sealing rings is also available for each diameter.

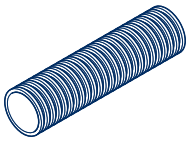
Twinwall pipes are available in carrier, fully perforated and solid invert configurations (Half Perforated). Twinwall is approved for roads and building. For sizes 700mm upto 3000mm please see the Large Diameter HDPE later in this section.

JDP also offer a range of twinwall with a BBA certificate from 150 – 600mm which is manufactured from recycled plastic. This is a benefit to contractors and local authorities who need to meet stringent environmental conditions attached to developments. For more information on this product range and other recycled products please contact your local JDP branch.

Features & Benefits

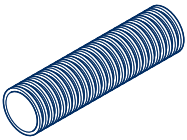
- Full range from 100 to 600mm (larger sizes in Large Diameter HDPE section)
- Fewer joints means faster installation and less potential for leakage
- Structured wall design for a high ring stiffness
- Optimised weight for reduced health and safety risks and ease of transport, handling and installation
- Twinwall pipes have a weight less than 6% of the equivalent size of concrete pipe
- Strong yet flexible design allows pipeline to withstand some ground movement and differential settlement
- Robust, impact and abrasion resistant construction
- Low friction inner wall for far superior hydraulic performance
- Integral sockets available in diameters 150mm to 600mm

Plain Ended Carrier Drain Order seals and couplings separately



Nominal Size (mm)	ID (mm)	OD (mm)	Length (m)	Weight (kg/m)	Code
100	100	119	6	0.8	0425110TPU
150	149	178	6	1.4	0425150TPU
225	221	265	6	3.0	0425225TPU
300	295	354	6	5.0	0425300TPU
375	372	426	6	6.0	0425375TPU
450	445	512	6	8.5	0425450TPU
600	592	680	6	14.5	0425600TPU

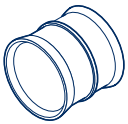
Plain Ended Filter Drain Order couplings separately



Nominal Size (mm)	ID (mm)	OD (mm)	Length (m)	Weight (kg/m)	Code
100	100	119	6	0.8	0425110TPP
150	149	178	6	1.4	0425150TPP
225	221	265	6	3.0	0425225TPP
300	295	354	6	5.0	0425300TPP
375	372	426	6	6.0	0425375TPP
450	445	512	6	10.2	0425450TPP
600	592	680	6	14.5	0425600TPP

All sizes also available as Half Perforated

Double Socket Couplings



Nominal Size (mm)	Code
100	0425110TC
150	0425150TC
225	0425225TC
300	0425300TC
375	0425375TC
450	0425450TC
600	0425600TC

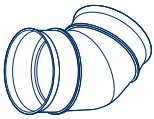
Sealing Rings (Plain End Pipe)

Nominal Size (mm)	Code
100	0425110TRS
150	0425150TRS
225	0425225TRS
300	0425300TRS
375	0425375TRS
450	0425450TRS
600	0425600TRS

End Caps

Nominal Size (mm)	Code
100	0401EC1059
150	0401EC1778
225	0401EC5064
300	0401EC6010

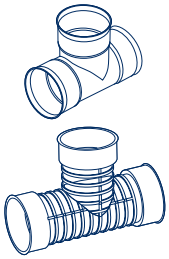
DS Bends



Nominal Size (mm)	11.25º /15º	22.5º /30º	45º	90º
100	0425100X15TB	0425100X30TB	0425100X45TB	0425100X90TB
150	0425150X15TB	0425150X30TB	0425150X45TB	0425150X90TB
225	0425225X15TB	0425225X30TB	0425225X45TB	0425225X90TB
300	0425300X15TB	0425300X30TB	0425300X45TB	0425300X90TB
375	0425375X15TB	0425375X30TB	0425375X45TB	0425375X90TB
450	0425450X15TB	0425450X30TB	0425450X45TB	0425450X90TB
600	0425600X15TB	0425600X30TB	0425600X45TB	0425600X90TB

* Other Bends can be fabricated to order

Equal Junctions



TS / DS	Nominal Size (mm)	45º Code	90º Code
TS	100	0425100X45YJ	0425100X90TJ
TS	150	0425150X45YJ	0425150X90TJ
TS	225	0425225X45YJ	0425225X90TJ
TS	300	0425300X45YJ	0425300X90TJ
TS	375	0425375X45YJ	0425375X90TJ
TS	450	0425450X45YJ	0425450X90TJ
TS	600	0425600X45YJ	0425600X90TJ

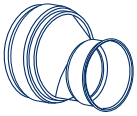
TS = Triple Socket

Unequal Junctions

TS / DS	Nominal Size (mm)		45º Code	90º Code
	Main	Branch		
TS	150	100	0425150X100YJ	0425150X100TJ
TS	150	150	0425150X45YJ	0425150X90TJ
TS	225	150	0425225X150YJ	0425225X150TJ
TS	225	100	0401225X100YJ	0401225X100TJ
TS	225	225	0401225X225YJ	0401300X225TJ
TS	300	300	0401300X300YJ	0401300X300TJ
TS	300	150	0425300X150YJ	0425300X150TJ
TS	300	225	0425300X225YJ	0425300X225TJ
TS	375	150	0425375X150YJ	0425375X150TJ
TS	450	150	0425450X150YJ	0425450X150TJ
TS	600	150	0425600X150YJ	0425600X150TJ

TS = Triple Socket, DS = Double Socket * Other junctions can be fabricated to specific requirements

Level Invert Reducers



Size A (mm)	Size B (mm)	Code
150	100	0425150X100TR
225	150	0425225X150TR
300	225	0425300X225TR
300	150	0425300X150TR
375	225	0425375X225TR
375	300	0425375X300TR
450	300	0425450X300TR
450	375	0425450X375TR
600	150	0425600X150TR
600	300	0425600X300TR

* Other Reducers can be fabricated to order

Adaptors

Size (mm)	To Pipe	Code
100 Socket	110mm BS EN 1401 Spigot	02082080JFC
150 Socket	160mm BS EN 1401 Spigot	02082081TW

* Other Adaptors can be fabricated to order

* Other Adaptors can be fabricated to order

Standards

TwinWall products are covered with British Board of Agrément Certificate BBA.

Installation Guide

General

TwinWall unslotted carrier pipes and slotted filter pipes and couplings must be installed in accordance with highway authority requirements and clauses 503, 505 and 518 of the manual of contract documents for highway works.

Installation

1) For typical laying, trench and backfilling specification details reference should be made to the manual of contract documents for highway works, volume 3 drawing No F1, Types T and S and F2, Types G, H and I.

2) Pipes are cut easily using conventional hand tools, and should be cut square between the corrugations.

3) For a watertight joint, the pipe ends and coupler should be cleaned and the rubber seal fitted externally between the first and second corrugation in the pipe. The inside of the coupler should be lubricated and the pipe pushed fully home to the central register either by hand, or using a lever if necessary.

4) TwinWall slotted & unslotted pipes and couplings must be protected against damage from site construction traffic.

5) Care should be taken during backfill to maintain the line and level of the pipeline. If necessary, the pipe should be restrained to prevent uplift.

Large Diameter HDPE Pipes

Large diameter HDPE pipes are tough and lightweight, and offer installation economy and long service life with inherent corrosion and chemical resistance properties.

Features & Benefits

- Lightweight and impact resistant
- Corrosion and chemical resistant
- BBA approved
- Installation is cost effective saving time and money against concrete
- Ability to manufacture bends and junctions designed to customer specifications
- 2kN/m^2, 4kN/m^2, 6kN/m^2 & 8kN/m^2 options available

Applications

- Gravity and low pressure applications
- Surface water drainage & attenuation
- Culverts
- Outfalls
- Pipe rehabilitation and relining
- Above and below ground applications

Large Diameter Twinwall

Manufactured with recycled HDPE using a twin extrusion process, large diameter twinwall has an outer corrugated wall to provide structural strength and an smooth inner wall to offer optimised hydraulic flow.

A unique integrated locking system removes the need to deepen the pipe bedding at the joint and requires just one seal per joint. Strength rating options up to 6kN/m^2 are available. Contact JDP if your project requires this application.

Unperforated Large Diameter Twinwall

Nominal Size (m)	ID (mm)	OD (mm)	Length (m)	Code
750	750	848	6	0425750TPU*
900	900	1024	6	0425900TPU*
1050	1050	1200	6	04251050TPU*

* 2kN/m^2

For perforated or half perforated large diameter twinwall please contact JDP.

Structured Wall Large Diameter HDPE

With sizes from 700mm to 3000mm structured wall large diameter HDPE suits many specialist applications such as attenuation, landfill and marine pipelines.

Standard lengths are available in 2kN/m^2 & 4kN/m^2, with specialist production options providing lengths up to 18m and strength ratings up to 8kN/m^2.

Stiffness Class	2 kN/m^2		4 kN/m^2	
ID (mm)	OD (mm)	Total kg/m	OD (mm)	Total kg/m
700	758	25	782	32
750	812	25	840	36
900	962	36	1012	48
1050	1134	52	1172	57
1200	1316	67	1346	90
1350	1474	82	1506	93
1500	1636	95	1662	140
1650	1786	108	1810	150
1800	1976	125	1998	165
2000	2180	140	2230	195
2100	2286	200	2316	240
2200	2412	205	2440	260
2400	2624	210	2664	295
2500	2730	280	2764	310
2600	2846	295	2864	320
2800	3096	360	3064	425
3000	3266	362	3288	515

A comprehensive range of elbows, tees and bends can be manufactured to suit clients requirements
* Properties in this table are a guide only

Fabrications

JDP supply fabrications from bends and junctions to complete off site solutions designed to customer specification. Please ask your local branch for more details.

See also our Preformed Chambers section.

Standards

BBA Roads and Bridges Certificate
WRc Certified
DWI Regulation 25
WIS 4-35-01:2000
Network Rail Certificate

Installation Guide

Pipe Bedding - The bedding soil must be free from stones within the breadth of the pipe trench. On the trench bottom a 150mm thick bedding layer is prepared and well compacted. For installation in soft/wet soil, a geotextile is placed under bedding.

Pipe Laying - Pipe laying should be carried out in accordance with the latest edition of the Civil Engineering Specification for the Water Industry (CESWI). Prior to installation commencing, a site briefing to the developer and his installation contractor should be carried out.

Inspection - Pipes and fittings should be visually checked for any damage immediately prior to installation.

Pipe Jointing - The pipes should be jointed in the trench and laid on the prepared bed so that the barrel of the pipe maintains substantially continuous contact. Small depressions should be made to accommodate the pipe sockets or couplings. Once the joint is complete, these depressions should be carefully infilled, taking care that no voids remain under or around the joint.

Primary Backfill - Backfilling shall be made over the whole width of the trench. Compaction of the backfill material shall be made in layers of 150-300mm. The final layer of the primary backfill should be minimum 300mm above the pipe crown. **Note: No compaction is to be done directly above the pipe until the backfill has reached 300mm above the pipe crown.**

Final Backfill - The final backfill is done with regard to the native soil and external loads (traffic). When deemed necessary, the compaction is carried out in several layers.

Please note this is a guide only, for full installation instructions manufacturers advice should be followed.

Concrete Drainage Pipe

JDP offer an extensive range of precast concrete flexible jointed pipes from 225mm to 2100mm including rocker pipes, bends, junctions and fittings. Suitable for storm water and sewer drainage applications.

Features & Benefits

- Proven 100 year service life
- Manufactured to European and British Standards
- Rigid pipe - structure not designed to deform
- Inherent strength and durability
- Minimal bedding requirement - less bedding material required and therefore less muck away off site
- Can be laid to depths of 8-12 metres
- Low reliance on site workmanship to achieve installed strength
- High resistance to water jetting
- Low risk of floatation in areas with high groundwater table
- Resistant to rodent attack

Applications

- Storm water drainage
- Sewer drainage

Standard Pipes

Standard Sizes (mm)		225	300	375	450	525	600	675	750	825	900	1050	1200	1350	1500	1800	2100
Internal Diameter (DN)	A	225	300	375	450	525	600	675	750	805	900	1050	1200	1350	1500	1800	2100
Barrel Diameter	B	335	416	501	586	681	776	901	996	975	1080	1266	1460	1620	1790	2130	2460
Socket Diameter	C	392	497	575	665	760	852	960	1060	1130	1235	1420	1590	1800	2010	2380	2650
Effective Length	D	1700	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
Approx. Weight	Kg.	216	449	590	729	974	1245	1818	2158	1691	2057	2756	3626	4416	5330	7302	9160

Standards

BS EN1916: 2002 / BS5911-1: 2002

Installation Guide

Jointing

1) Correctly position and bed the first pipe. Prepare the bedding for the second pipe and hollow out for incoming spigot to prevent bedding material entering the joint.

2) Ensure the joint ring is of the correct size and the spigot and socket are clean and undamaged.

3) Ensure the joint ring is not twisted, is correctly located on the spigot and is the right way round.

4) Lubricants must not be used where 'G' and Lamell rings are supplied. Lubrication is required with the 'integral' joint.

5) Ensure the pipe to be jointed is adequately supported. The spigot should be centered carefully in the socket before jointing is completed, making sure bedding material does not enter the joint at any time.

Box Culverts

These units are specifically used for culverting highways, storm and foul sewers, sea outfalls, tunnels and subways, underpasses and stream crossings. In addition they can also be used as tanks for attenuation of storm or foul water and can be provided with dished inverts or channels for dry weather flow.

Features & Benefits

- High flow capacities in low gradient and restricted headroom
- Individually designed to meet precise external loading conditions
- For shallow or deep fill

Applications

- Storm and foul drainage
- Attenuation
- Culverting highways
- Subways & underpasses
- Stream crossings

These units are available in sizes 1m (W) x 0.5m (H) with a flow rate of 0.58 m^3/s, to 4m (W) x 2.5m (H) with a flow rate of 33.53 m^3/s, in either 1, 1.5 or 2m lengths depending on the unit.

Standards

Precast concrete box culverts are produced to comply with BS EN 14844 and subject to a third party quality management scheme as a BS Registered manufacturer. Designs and materials are in accordance with BS 5400, BS 8110, BS 8500 and BD 31/01 as appropriate.

Installation Guide

It is generally recommended that the culvert should be installed on a 200mm thick granular bedding as specified for Highway Works (MCHDHW) or UK WIR Ltd 'Civil engineering specification for the water industry'. Alternative bedding designs using insitu concrete and blinding or piling may be required in poor ground.

For further details of structural or hydraulic designs please contact your local JDP.

Land Drainage

JDP offer a comprehensive range of land drainage pipe and associated products, we also understand that whatever drainage is required, efficient drainage is essential to maintain a good ground surface. Loss of use due to water logging or turf damage can result in unable to use land.

An efficient land drainage pipe will eliminate water logging and improved drainage will result in improved soil structure and a better quality vegetation and grass.

Purpose-made junctions and connectors should always be used when joining pipes.

Features & Benefits

- Flexible
- Cost effective
- Land drainage to BS4962
- 60mm to 200mm available in coils
- Comprehensive range of fittings

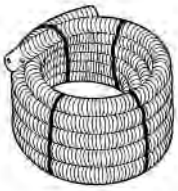
Perf Coil Kite Marked BS4962

050460HC25	60mm Perf Land Drain Coil x 25m
050460HC50	60mm Perf Land Drain Coil x 50m
050460HC150	60mm Perf Land Drain Coil x 150m
050480HC25	80mm Perf Land Drain Coil x 25m
050480HC50	80mm Perf Land Drain Coil x 50m
050480HC100	80mm Perf Land Drain Coil x 100m
0504100HC25	100mm Perf Land Drain Coil x 25m
0504100HC50	100mm Perf Land Drain Coil x 50m
0504100HC100	100mm Perf Land Drain Coil x 100m
0504125HC75	125mm Perf Land Drain Coil x 75m
0504160HC25	160mm Perf Land Drain Coil x 25m
0504160HC50	160mm Perf Land Drain Coil x 50m
0504200HC40	200mm Perf Land Drain Coil x 40m

Unperf Coil Kite Marked BS4962

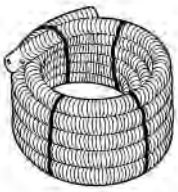
050460HC150U	60mm Unperf Land Drain Coil x 150m
050480HC100U	80mm Unperf Land Drain Coil x 100m
0504100HC100U	100mm Unperf Land Drain Coil x 100m
0504125HC75U	125mm Unperf Land Drain Coil x 75m
0504160HC45U	160mm Unperf Land Drain Coil x 45m
0504160HC50U	160mm Unperf Land Drain Coil x 50m
0504200HC40U	200mm Unperf Land Drain Coil x 40m

Perf Coil Non Kite Marked



0504SP6025	60mm Perf Coil x 25m
0504SP6050	60mm Perf Coil x 50m
0504SP60150	60mm Perf Coil x 150m
0504SP8025	80mm Perf Coil x 25m
0504SP8050	80mm Perf Coil x 50m
0504SP80100	80mm Perf Coil x 100m
0504SP10025	100mm Perf Coil x 25m
0504SP10050	100mm Perf Coil x 50m
0504SP100100	100mm Perf Coil x 100m
0504SP16045	160mm Perf Coil x 45m
0504SP16050	160mm Perf Coil x 50m

Unperf Coil Non Kite Marked



0504SU60150	60mm Unperf Coil x 150m
0504SU8050	80mm Unperf Coil x 50m
0504SU80100	80mm Unperf Coil x 100m
0504SU10025	100mm Unperf Coil x 25m
0504SU10050	100mm Unperf Coil x 50m
0504SU100100	100mm Unperf Coil x 100m
0504SU16045	160mm Unperf Coil x 45m
0504SU16050	160mm Unperf Coil x 50m

Wrapped Filter Coil

050560WCX150	60mm Wrapped Perf Land Drain Coil x 150m
050580WCX100	80mm Wrapped Perf Land Drain Coil x 100m
0505100WCX100	100mm Wrapped Perf Land Drain Coil x 100m
0505160WCX50	160mm Wrapped Perf Land Drain Coil x 50m

Connectors

0511DC60	60mm Coil Connector
0511DC80	80mm Coil Connector
0511DC100	100mm Coil Connector
0511DC125	125mm Coil Connector
0511DC160	160mm Coil Connector
0511DC200	200mm Coil Connector

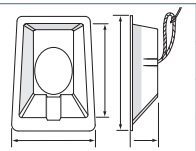
End Caps

0511HEC60	60mm Coil End Cap
0511HEC80	80mm Coil End Cap
0511HEC100	100mm Coil End Cap
0511HEC125	125mm Coil End Cap
0511HEC160	160mm Coil End Cap

Branches

051060MB	60mm Junction
051080MB	80 x 60/80mm Multi Junction
0511LDJ100	100 x 60-100mm Multibranch Junction
0510CDJ10M	80/100 x 60-100mm Maxi Multi Junction
0511LDJ160	160 x 60-160mm Multibranch Junction
0510CDJ160M	125/160 x 60-160mm Maxi Multi Junction

GRC Headwalls



0599GRCDI	Glass Reinforced Concrete Pipe Drain Inlet
0599GRCHEAD	Glass Reinforced Concrete Headwall (Large) B102
0599GRCHEADWALL	Large Glass Reinforced Concrete Headwall
0599HEADWALL	480mm x 440mm GP Headwall

Standards

Plastic land drainage BS4962 where specified.

Installation Guide

Drainage plans should clearly show the location of the drain runs, spacings, levels and other relevant information necessary for the correct installation.

The minimum depth of cover on any piped drain should be at least 450mm to protect the pipe from damage due to surface traffic or maintenance operations such as deep spiking.

Inspection chambers and silt traps should be incorporated into the scheme to allow for inspection and maintenance.

Consideration should be given as to whether the soil arisings from the works are to remain on site or be removed.

Preformed Concrete Headwalls also available

The choice of permeable backfill is imperative to the long-term success of the drainage scheme as, by definition, it allows passage of water from the surface to the pipe. All backfill material placed over drains should be durable, evenly graded and free from pollutants.

All drainage outfalls into watercourses should incorporate suitable headwalls fitted with a vermin guard.

Non-Return & Flap Valves

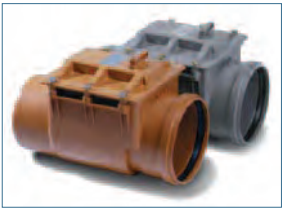
Non-Return Valves

JDP supply a range of non-return valves (NRV's) complying with the requirements of BSEN 13564 – 'Anti-flooding devices for buildings'.

Non-return valves or backwater valves are used within sewerage and drainage systems to eliminate the risk of flood damage by the backflow of sewage or flood water into properties through low level entries such as low level drain gullies, toilets and washing machine outlets. These valves are also used in applications where non-pressure flow control is required.

REDI Advantages

- DN100 to DN630
- 0.5 bar (5m head)
- uPVC body
- EPDM seal (Nitrile seal optional)
- To BSEN 681-1
- Easily connected to any type of pipe material



Norham Advantages

- DN250 to DN500
- 1 bar (10m head)
- Glass reinforced plastic body (GRP)
- EPDM seal (Nitrile seal optional)
- To BSEN 10088-2
- Easily connected to any type of pipe material

Flap Valves

A range of flap valves in GRP and Ductile Iron is available from JDP. The principal applications for flap valves are for surface water drainage associated with river, estuary and sea water outfalls to prevent backflow into the sewer and for final effluent outfalls from wastewater treatment works to prevent flood damaged within the works.

GRP Flap Valves

A range of GRP flap valves designed for ease of installation due to their low weight but with exceptional mechanical strength and durability is available from JDP.

Multi – BD

DN100 to DN200

A range of small diameter flap valves with a PN 10 flange and an integral foamed EPDM rubber gasket for direct fixing to a flange or concrete headwall.

Advantages

- Lightweight for fast and easy installation
- No need for cement grout when fixing to a headwall

Multi – N

DN200 to 600

A range of flap valves designed for direct connection to any type of drain or sewer pipe using Standard Flexible Couplings and Bushes see Underground Sewer section

Advantages

- Eliminates need for concrete headwall or pipe flange for fixing e.g. can be connected to the spigot of an outfall pipe passing through gabions
- No drilling required
- Fast and easy installation

Multi – CD

DN250 to 600

A range of medium diameter flap valves with a PN 10 flange. Integral EPFM rubber sealing rings for sealing to concrete headwall.

Advantages

- Lightweight for fast and easy installation.
- Resistant to 0.8bar (8m head) backpressure.
- No need for cement grout when fixing to headwall.
- Hinged design ensures full face sealing when closed.

Multi – NB

DN200 to 1500

A range of medium diameter flap valves with an inclined flap and PN 10 flange. Integral EPFM rubber sealing rings for sealing to concrete headwall.

Advantages

- Lightweight for fast and easy installation.
- Inclined flap for additional security against backflow.
- No need for cement grout when fixing to headwall.
- Hinged design ensures flap closure when no discharge.

Ductile Iron Flap Valves

Metal seat double hinge flap valves have a circular aperture with a double-hinged door that prevents reverse flow of liquids in outfall situations. The plate around the opening is drilled to suit both flange and wall mounting.

Features & Benefits

- Double-hinged for optimal sealing
- Lightweight ductile iron design
- Durable fusion bonded epoxy coated
- Anti-tamper stainless steel hinge pins
- Corrosion resistant construction
- Lifting eye as standard
- Tidal and non tidal versions available
- HDPE Flap Valves available

Applications

Typically utilised in river, surface/storm water and treatment works outfalls. May be bolted to flanged end of a pipeline, or bolted to wall face of outfall.

Double Hinge Flap Valves

Diameter	Code
80mm	082080FLAPVLV
100mm	0820100FLAPVLV
150mm	0820150FLAPVLV
200mm	0820200FLAPVLV
225mm	0820225FLAPVLV
250mm	0820250FLAPVLV
300mm	0820300FLAPVLV

*Larger diameters are available on request

Underground Sewer Systems

• Clay Pipes • Clay Jacking Pipes • Perfect Base • Concrete Manhole Rings
• Preformed Chambers • Rectangular Concrete Chamber Sections
• Axedo Inspection Chamber System • Flexible Couplers
• No Dig Pipe Repair Kits • Test Equipment

Many years of experience in the supply of underground sewer systems enables JDP to offer civil engineering and utilities contractors a product portfolio which provides a total system solution.

Our policy and aim is to supply products of the highest quality from leading manufacturers within the industry, thereby ensuring the best offer for every application. The range includes trenchless technologies, concrete manhole rings and flexible couplings and adaptors.

In addition to the systems in this section, products developed and manufactured in our own factories in uPVC such as EN1401-1 sewer drain and fittings, inspection chambers and adoptable sewer can be found in our House Builder Product Specifier.

Clay Pipes

JDP offer a comprehensive range of vitrified clay pipe for underground drainage.

A fully socketed system is offered from DN375 to DN600 in accordance with EN295-1 System 'N' with an extensive range of fittings, including beds, junctions and tapers. In addition, a range from DN100 to DN300 with an extensive range of fittings, including traps and access items, particularly suitable for building drainage applications is available in our House Builder Product Specifier.

Features & Benefits

- Extremely durable
- Quick installation by manual pushfit operation
- Flexible joints allow for minor settlement
- Minimum granular bedding required
- Nitrile seals available for contaminated ground
- Accommodates controlled discharges up to 75°C

Applications

- Foul sewerage
- Surface water
- Road drainage

Aggressive environments

The standard pipes, polyester fairings and elastomeric sealing rings are resistant to all forms of attack from substances which are commonly encountered in public sewers. Where more aggressive effluents or environments are present, special sealing rings may be required. Alternatively, Hathernware clay pipes should be considered. Hathernware is a specialist Chemical Drainage System that covers the most aggressive discharges and extreme conditions, including thermal shock – a phenomenon where extremes of temperature variation can put significant structural strain on a drainage system.

Pipe

		Strength		
Nominal Size (mm)	Standard Length	Crushing Strength (FNkN/m)	Class Number	Weight (kg/m)
375	2.0m	72	240	75
400	2.0m	48	128	125
450	2.0m	64	160	150
500	2.0m	80	160	235
600	2.0m	96	160	250

Standards

Clayware

Vitrified clay pipes and fittings manufactured in accordance with the requirements of BS EN 295-1. Kitemark No. KM 20173.

Joints

All pipes consist of a factory fitted grade 316 stainless steel sleeve a 5-bar rated EPDM self-lubricated seal.

Installation

1. Check the pipes and fittings to ensure that they have suffered no damage, ensuring that the spigot and socket are clean and free of any grit.
2. Insert the spigot end into the stainless steel sleeve and lower the pipe on to the to the pipe bedding by the means of a cloth strap around the centre of the pipe. There is no requirement for any lubricant as EPDM Seals are self-lubricating.
3. Insert a suitable wooden packer into the stainless steel sleeve and apply an equal mechanical force onto the pipe end. The pipe is fully home in the sleeve when there is a 5mm gap between the sleeve and the pipe rebait.
4. Test the pipe and joint after the installation of every three pipes in accordance with BSEN 295:2013 Clause 5.18 Airtightness.

Backfilling

Any selected or granular fill must be carefully hand-compacted in layers not exceeding 150mm to complete the pipeline surround. Place and compact this fill equally on both sides of the pipeline to prevent displacement.

Slice with a spade around the barrels to form a cradle for the pipes. This work is important, as the pipeline derives some of its strength from a properly constructed bedding.

The trench must be backfilled to at least 300mm above the crown of the pipes before any power-ramming takes place. Backfill should then be well-compacted in layers not exceeding 300mm.

As backfilling proceeds withdraw timber and trench sheeting in stages to avoid disturbing the pipeline or the creation of voids within the bedding and surround.

Contact JDP Technical Support for more information.

Clay Jacking Pipes

Vitrified clay pipes have been in production for over a 100 years meeting the needs of water borne sewerage systems. JDP offer a modern vitrified clay jacking pipe system that has been developed to meet the requirements of pipe installations by trenchless construction methods.

These systems may be used for a number of methods; Microtunneling (pipe jacking), Guided Auger Boring, Pipe Bursting, Pipe Eating and Slip Lining.

Features & Benefits

Why Trenchless Technology?

Existing networks of utility services are usually found in cities and crowded urban areas, where pipelines in need of replacement or expansion are located below roads and buildings or interwoven with other services. Trenchless Technology greatly reduces the need for surface excavation which in turn minimises traffic congestion and built environment disruption.

Traditional 'Open Cut' Installations

This form of Installation is characterised by the high level of physical work that is carried out.

- Excavation of a trench, removal of spoil, temporary supports
- Laying and jointing of pipeline on specified bedding material
- Refilling the trench, compacting fill materials, removal of surplus spoil
- Restoring the above ground infrastructure

Typically 50 times the amount of spoil that the new pipeline will occupy has to be removed and then refilled again after the pipeline is laid.
As well as being very labour intensive, various skills possibly from several companies and authorities may need to be co-ordinated.

Trenchless Technology Installations

Access using trenchless techniques also requires surface work, but not to the scale of the open trench approach. In comparison trenchless projects are characterised by:-

- Less indirect costs, because surface access is less disruptive
- Projects are generally of shorter duration, therefore social and environmental costs are considerably reduced
- Public awareness of disruption is lessened due to concealment of the works

Trenchless Techniques

Pipe Jacking – spoil and water is removed by pumping as slurry
Guided Auger Boring – spoil is removed by an auger through a steel casing
Pipe Bursting – the existing pipeline is forced into bedding material by means of an expanding hydraulic cone at the head of the replacement pipeline
Pipe Eating – the existing pipeline is ground using a cutting head and fragments are removed by augers through the replacement pipeline
Slip Lining – the replacement pipeline is winched through an existing pipe and the void between old and new is filled with grout

Jacking Pipes with polypropylene sleeve coupling and moulded-in EPDM rubber seals

Nominal size DN (mm)	Effective Length (mm)	Approx. Weight Kg/m
150	996	45

Jacking Pipes with stainless steel sleeve coupling and integral EPDM elastomer sleeve moulding

(This joint system is especially beneficial for smaller diameter jacking pipes as the joint system can accommodate better storage extremes)

Nominal size DN (mm)	Effective Length (mm)	Approx. Weight Kg/m
200	996	60
225	996	80
250	996	100
300	996	120

Jacking Pipes with stainless steel sleeve, EPDM elastomer seals and factory fitted packing ring

(This joint system is capable of achieving a minimum 2bar internal/external pressure)

Nominal size DN (mm)	Effective Length (mm)	Approx. Weight Kg/m
400	984 / 1984	240
450	984 / 1984	250
500	984 / 1984	260
525	984 / 1984	280
600	984 / 1984	338
700	984 / 1984	430
800	984 / 1984	508
900	984 / 1984	680
1000	984 / 1984	800
1100	984 / 1984	967
1200	984 / 1984	1170

Jacking Pipes with stainless steel sleeve, EPDM elastomer seals and factory fitted packing ring

(These jacking pipes are designed for installation by either the '3' pass guided auger boring or pipe bursting)

Nominal size DN (mm)	Approx. Weight Kg/m
400	149
450	202
500	232

Standards

All pipes and assemblies are manufactured in accordance with

- BS EN295-7 'Requirements for vitrified clay pipes and joints for pipe jacking'
- BS EN12889: 2000 'Trenchless construction and testing of drains and sewers'

Perfect Base

The Perfect Base is a custom-made watertight monolithic benched concrete base.
It allows JDP to provide any practical channel inlet/outlet configuration. Inlets are possible at every angle from 90° to 270° from outlet.
JDP's manufacturing partners allow for swift manufacture & delivery to site just days after order.

SAFER INSTALLATION

Reduced working time in confined spaces

WATERTIGHT SYSTEM

The combination of a thicker wall and rubber joint ensures a watertight structure

EFFICIENCY

Installation times significantly shorter than traditional methods

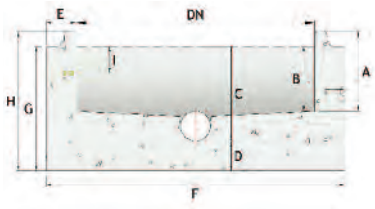
CUSTOM CONNECTIONS

Manufactured with integrated couplers to suit any pipe type

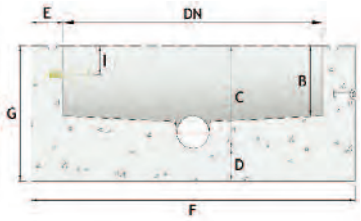
LOW CARBON FOOTPRINT

40-45% more environmentally friendly than traditional methods

WATERTIGHT JOINT



TONGUE & GROOVE JOINT



Note: Sealant strip is required for Tongue & Groove installation

PERFECT BASE / DN1200

Inlet/Outlet Diameter	A	B	C	D	E	F	G	H	I	Approx Weight
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
100	400	325	475	150	150	1500	625	700	125	1710
100	300	225	375	150	150	1500	525	600	125	1550
100	200	125	275	150	150	1500	425	500	125	1400
100	100	25	175	150	150	1500	325	400	125	1250
150	400	325	475	150	150	1500	625	700	125	1710
150	300	225	375	150	150	1500	525	600	125	1550
150	200	125	275	150	150	1500	425	500	125	1400
150	100	25	175	150	150	1500	325	400	125	1250
225	400	325	575	150	150	1500	725	800	125	2020
225	300	225	475	150	150	1500	625	700	125	1870
225	200	125	375	150	150	1500	525	600	125	1710
300	400	325	625	150	150	1500	775	850	125	2150
300	300	225	525	150	150	1500	675	750	125	2000

Dimensions may vary depending on type of pipe used.

PERFECT BASE / DN1500

Inlet/Outlet Diameter	A	B	C	D	E	F	G	H	I	Approx Weight
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
375	500	415	815	200	230	1960	1015	1100	175	5000
375	400	315	715	200	230	1960	915	1000	175	4700
375	300	215	615	200	230	1960	815	900	175	4400
450	500	415	915	200	230	1960	1115	1200	175	5390
450	400	315	815	200	230	1960	1015	1100	175	5090
450	300	215	715	200	230	1960	915	1000	175	4790
450	200	115	615	200	230	1960	815	900	175	4490
525	500	415	915	200	230	1960	1115	1200	175	5390
525	400	315	815	200	230	1960	1015	1100	175	5090
525	300	215	715	200	230	1960	915	1000	175	4790
600	500	415	915	200	230	1960	1115	1200	175	5390
600	400	315	815	200	230	1960	1015	1100	175	5090

Dimensions may vary depending on type of pipe used.

PERFECT BASE / DN1800

Inlet/Outlet Diameter	B	C	D	E	F	G	I	Approx Weight
mm	mm	mm	mm	mm	mm	mm	mm	kg
675	900	1400	200	300	2400	1600	125	10180
675	800	1300	200	300	2400	1500	125	9700
675	700	1200	200	300	2400	1400	125	9230
650	600	1100	200	300	2400	1300	125	8750
750	900	1400	200	300	2400	1600	125	9970
750	800	1300	200	300	2400	1500	125	9490
750	700	1200	200	300	2400	1400	125	9020
725	600	1100	200	300	2400	1300	125	8540
900	900	1400	200	300	2400	1600	125	9780
900	800	1300	200	300	2400	1500	125	9310
900	700	1200	200	300	2400	1400	125	8830

Dimensions may vary depending on type of pipe used. Note: DN1800 Base only available as tongue & groove joint.

Complies with BS EN 1917 and BS 5911-3 Accepted by major water companies and is included in Sewers for Adoption

Concrete Manhole Rings

We offer a complete range of precast concrete rings from DN 900 to DN 4000 in varying depths with tongue and groove joints manufactured to meet Design Chemical Class 4 as defined in BRE Special digest 1 ' Concrete in aggressive ground' Part 4 : Design guides for specific precast products'.

Manufacturers Quality Assurance scheme in accordance with the European Standard enabling products in the range DN900-3000 to be kitemarked.

Note:

A constructed precast concrete manhole is a strong, durable structure with its own inherent strength and does not require a concrete surround.

Concrete Manhole Rings

DN	Available Depth of Section				Approx Wall Thickness mm	Approx Weight /m Depth kg
	0.25m	0.5m	0.75m	1.0m		
900	•	•	•	•	70	530
1050	•	•	•	•	80	710
1200	•	•	•	•	90	912
1350		•	•	•	95	1080
1500		•	•	•	105	1330
1800		•	•	•	115	1760
2100		•	•	•	125	2140
2400		•	•	•	140	2740
2700		•	•	•	150	3400
3000		•	•	•	165	4140
3660			•	•	185	5300
4000			•	•	200	6360

DN 1350, DN 3660, DN 4000 are not covered by the British Standard, but comply with all the relevant provisions of the European Standard. DN4000 is supplied in 2 halves.

Manhole chamber sections are supplied with nominal 50mm diameter holes for lifting purposes:

- 2 Number in DN 1800 & below
- 3 Number in DN 2100 & above

Shaft/chamber sections can be supplied:

- with or without fixed double steps
- perforated with 75mm diameter holes for use as soakaways
- with holes or cut outs
- with bases cast in

Recommended minimum Chamber diameters to suit pipe sizes

Largest Pipe DN	Chamber DN
Less than 375	1200
375 - 450	1350
500 - 700	1500
750 - 900	1800

Manhole Cover Slabs

Chamber DN	Depth	Overall DN	Standard Access Sizes					Weight (kg) 675² Access
			600x600	675x675	750x750	750x600	1200x675	
900	150	1060	C	C	X	X	X	130
1050	150	1230	E	E	C	To order	X	235
1200	150	1400	E	E	C	E	To order	355
1350 *	150	1560	E	E	To order	E	C	475
1500	150	1730	E	E	To order	E	C	790
1800	175	2050	E	E	To order	E	E	1210
2100	180	2370	E	E	To order	E	E	1745
2400	180	2700	E	E	To order	E	E	2375
2700	205	3020	E	E	To order	E	E	3335
3000	225	3350	E	E	To order	E	E	4585
3660 *	275	3960	To order	E	To order	To order	To order	7760
4000 *	275	4500	To order	E	To order	To order	To order	10040

* Not Kitemarked

Note:

1. DN900 and 1050 are the only slabs in which a 600x600 access complies with the European Standard
2. All slabs detailed are Type 2
3. Weights available on request as they are dependant on the access size
4. C denotes central position
   E denotes eccentric position
   As defined in the British Standard
5. Non standard slabs and accesses can be designed and supplied to order
6. DN3660 cover slab is supplied in 3 sections
7. DN4000 cover slabs can be supplied in 2 or 3 sections dependant on the opening required
8. All accesses have 75 x 75 corner chamfers
9. All cover slabs are 'heavy duty' and are suitable or use in main roads

Landing Slabs

Landing slabs to suit DN 1500 chamber section and above are supplied with a 900mm circular access.

Reducing Slabs

Standard reducing slabs are supplied to suit the various chamber sections, from DN 1050 to DN 3000, and have a 900, 1050 or 1200mm diameter circular access. DN 3660 and 4000 reducing slabs are also available but are not covered by the European Standard. Other shaft sizes are available on request.

Manhole Steps

Polypropylene coated mild steel double steps to BS EN 13101:2004 are fitted to manhole sections when required

- Polypropylene coated stainless steel steps are available on request
- Manhole sections fitted with double steps can be used in any depth configuration

Standards

All units are manufactured and tested in accordance with BS EN 1917:2002/ BS5911-3:2002. All units are supplied with suitable points for lifting purposes.

Polypropylene coated mild steel double steps to BS EN 13101:2004

Installation Guide

This section describes the recommended procedure for the installation of precast concrete manholes.

a) Place the bottom unit with either integral precast, or insitu concrete base.

b) Erect the required number of standard components and seal the joints as appropriate all in accordance with the design.

c) Place a reinforced concrete cover slab on top.

d) If required place a corbel slab then add the appropriate number of adjusting units.

e) Fit the manhole top for access from ground level.

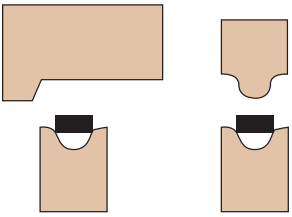
Jointing to pipeline

To allow for any differential settlement between manhole and pipeline, short "butt" pipes, either spigot or socket, should be built into the manhole wall so that a flexible joint is incorporated as close as possible to the outside of the manhole or the concrete surround if used. Depending on ground conditions, short length pipes (rockers) then connect these butt pipes to the incoming pipe runs. Additional care must be taken to ensure that the joints are properly made.

Sealants

Manholes can be jointed quickly and easily with a rubber bitumen compound such as Tok Strip or other approved sealant providing a watertight seal without the use of a concrete surround.

Code	Unit Nominal Size (mm)	Sealant Length (per joint)	Sealant Size	Primer
08206X50X6LS	600 x 450	2.5m	6mm x 50mm	5 litres per 100m
08206X50X6LS	750 x 600	3.0m	6mm x 50mm	5 litres per 100m
082012X60X6LS	1000 x 675	3.5m	12mm x 60mm	5 litres per 75m
082012X60X6LS	1200 x 750	4.5m	12mm x 60mm	5 litres per 75m



Preformed Chambers

Reducing construction time and resources required on site is a continual challenge and opportunity to manufacturers and distributors. JDP strive to be involved in the latest advances in new and existing materials and technologies which offer engineers solutions.

Manhole

Provides a sealed system for waste water management in manhole construction, replacing the need for the groundworker to form on site. Can also be used for surface water.

Features & Benefits

- Creates an immediate watertight structure
- Clean access for inspection, reduces maintenance and running costs
- Accommodates all combinations and variations in entry / exit pipes
- Reduced labour activity in manhole, improves safety
- Eliminates material wastage associated with in-situ method
- Eliminates effects of poor site practice and weather conditions
- HDPE version can be made bespoke to full chamber height for a complete off site solution
- Concrete version accepts manhole rings to create chamber

Catchpit

This chamber provides a sealed sump manhole, which can be connected with adaptors to uPVC, twinwall, clay, ductile iron and concrete pipes.

Features & Benefits

- Creates an immediate watertight structure
- Limited wet trades required in manhole construction
- Accommodates all types of pipes used in manhole construction
- Reduced labour activity in manhole
- Eliminates material wastage associated with in-situ method
- HDPE version can be made bespoke to full chamber height for a complete off site solution
- Concrete version accepts manhole rings to create chamber

Rectangular Concrete Chamber Sections

Loose steps can be supplied for use with the 1200x750 and 1475x1025 sections. For a range of smaller rectangular concrete chambers referred to as House Inspection Chambers see our House Building product specifier.

Rectangular Inspection Chambers

Code	Size (mm)	Effective Depth (mm)	Wall Thickness (mm)	Nominal Weight of Unit (kg)	Number of Units Per Pallet
18011200RHHS	1200x750	150	75	115	8
18011200500RHHS	1200x750	500	75	390	-
18011200750RHHS	1200x750	750	75	600	-
18011400RHHS	1475x1025	250	100	355	-

Rectangular Cover Slabs

Code	Size (mm)	Access (mm)	Effective Thickness (mm)	Nominal Weight of Units (kg)	Number of Units Per Pallet
18011200RMHCSH	1200x750HD	600x600	144	310	5
18011209060RMHCSH	1200x750HD	900x600	144	235	5
18011200RMHTS	1200x750HD	1200x675	125	230	5
180111475RMHCSH	1475x1025HD	600x600	144	640	-
18011479060RMHCSH	1475X1025HD	900x600	144	580	-
18011475RMHTS	1475X1025HD	1200x675	144	485	-

Standards

Chamber sections and cover slabs are manufactured to BS EN1917:2002 / BS 5911-3:2002. Rectangular covers and cover surrounds are manufactured to satisfy Class A15 loading situations to BS EN 124. All units are to sulfate resistance Class 4.

Heavy Duty - These cover slabs may be used together with the appropriate duty proprietary cover and frame in main road situations, equivalent to a wheel load of 112kN.

Installation Guide

See page 189.

Axedo Inspection Chamber System

Safety in confined spaces

One of the key drainage issues, which must always be considered, by contractors, installers and maintenance engineers is that of the health and safety of employees and operatives.

The Confined Spaces Regulations 1997 states: "No person at work shall enter a confined space to carry out work for any purpose, unless it is not reasonably practicable to achieve that purpose without such entry."

Axedo – the safe solution

The Axedo Chambers are designed to be installed at depths of up to 6m and comprises of a base unit available in various channel configurations, with sealed shaft and cover options.
The base unit is available with 100mm,150mm, 225mm, 300mm or 375mm connections to all main UK pipe systems including Adoptable Sewer, HDPE Twinwall and Clay. Other pipe systems and sizes can be accommodated with the use of adaptors or inlet reducers.

Features & Benefits

- Fully sealed system
- Lightweight & ease of installation
- Chemical & corrosion resistant
- Safe inspection & maintenance
- Recyclable
- Adaptable to all pipe types
- Wide choice of flow profiles and sizes
- Install up to 6 meters deep
- 200, 300, 450 and 600mm shaft options

Applications

Include use as demarcation chambers or main sewer or surface water inspection chambers.

Axedo Inspection Chamber System

Axedo 200

Base Components

Base	ID (mm)	OD (mm)	Code
Straight	100	110	02080028811
	150	160	02080028821

Certified to EN 1852

Shaft

Shaft		ID (mm)	OD (mm)	Code
Height (m)	1.0	185	200	02080020001
	2.0	185	200	02080020002

Shaft certified to EN 1401-1 & EN 13476-2

Features & Benefits

- 200mm diameter base
- 110 and 160mm (OD) inlet sizes
- SfA7 Type 4 compliant
- SfS3 Section 4.2.32 compliant
- Install up to 2 metres
- A15 and B125 cover types
- Adaptable to all pipe types using separate adaptors available from JDP
- Stabilising feet and ribs for additional strength and ease of installation

Axedo 300

Base Components

Base	ID (mm)	OD (mm)	Code
45° Branch	100	110	02080034111
	150	160	02080034112

Base requires shaft sealing ring
Certified to EN 1852
Complies with BS EN 13598-2

Shaft

Shaft		ID (mm)	OD (mm)	Code
Height (m)	1.0	300	355	02080030001
	2.0	300	355	02080030002

Shaft Sealing Ring	02080030010

Shaft complies with HAPAS BBA
Full range of covers and frames available upon request from JDP

Features & Benefits

- 300mm diameter base
- 110 and 160mm (OD) inlet sizes
- SfA7 Type 4 compliant
- SfS3 Section 4.2.32 compliant
- Install up to 2 metres
- A15 and B125 cover types
- Adaptable to all pipe types using separate adaptors available from JDP
- Stabilising feet and ribs for additional strength and ease of installation

Axedo Inspection Chamber System

Axedo 450-2

Features & Benefits

- 450mm diameter base
- 110 and 160mm (OD) inlet sizes
- 5 inlets for multiple application use
- SfA7 Type 3 compliant
- SfS3 Section 4.2.32 compliant
- Install up to 3 metres (adoptable)
- Install up to 6 metres (non-adoptable*
- A15, B125, C250 and D400 cover types
- Utilises standard 450mm diameter risers or solid shaft system
- Stabilising feet and ribs for additional strength and ease of installation

Base Components

Base	45°	90°	Code
110mm Swept Cross with 110mm 45° Double Branch	110	110	020820048078
160mm Swept Cross with 110mm 45° Double Branch	110	160	020820048079

Complies with BS EN 13598-2

Shaft System

One piece construction. Use up to 3m in adoptable systems or up to 6m in non-adoptable systems.

Height (m)	ID (mm)	OD (mm)	Code
1.5	450	512	02080040001
3.0	450	512	02080040002
6.0	450	512	0425450TPU

Shaft certified HAPAS BBA

Shaft Adaptor	020820048769
Shaft Sealing Ring	02080040010
Shaft Restrictor Ring	01024DLMRR

Adaptor complies with EN 13598-2
Full range of covers and frames available upon request from JDP

Riser System

Use standard risers to build to the required height, up to 3m in adoptable and non-adoptable systems.

Height (mm)	ID (mm)	OD (mm)	Code
235	467	504	01024DLMR

Riser Restrictor Ring	02082084DLMRR

Riser sections come with seal. Full range of covers and frames available upon request from JDP.

*Maximum buried depth 6m in non-adoptable projects subject to ground conditions

Axedo Inspection Chamber System

Features & Benefits

- 600mm diameter base
- 160, 250, 315 and 400mm (OD) pipework
- SfA7 Type 3 compliant
- SfS3 Section 4.2.32 compliant
- Install up to 3 metres (adoptable)
- Install up to 6 metres (non-adoptable)*
- A15, B125, C250 and D400 cover types
- Adaptable to most pipe types using separate adaptors available from JDP

*Maximum buried depth 6m in non-adoptable projects subject to ground conditions

Axedo 600

Base Components

Base	Pipe Diameter ID/OD (mm)			
	150/160	225/250	300/315	375/400
Straight	020820048418	020820048419	———	020820034241
Swept Cross	020820048421	020820048422	020820048423	———

Base requires shaft sealing ring
Certified to EN 13598-2
Complies with BS EN 13598-2 & BS EN 752:2008

Shaft

Shaft		ID (mm)	OD (mm)	Code
Height (m)	1.5	600	678	02082090001
	3.0	600	678	02082090003
	6.0	600	678	0425600TPU

Shaft certified HAPAS BBA

Shaft Sealing Ring	02082090010
600mm Restrictor Ring	02082090011
Concrete Cover Slab (Square Opening)	18011050CS750
600mm Seating Ring	1801600SEATRING
675mm Seating Ring	1801675SEATRING

Full range of covers and frames available upon request from JDP.

Installation Guide

For full details ask for the Axedo Inspection Chamber Systems Technical Brochure

Flexible Couplers

JDP offers a comprehensive range of pipe connection and repair couplers, bushes, puddle flanges and end stops. We provide the most extensive range of couplings available, specifically designed to connect and repair pipelines of different materials or sizes used in sewerage, drainage and other underground applications.

When excavation work is required to repair a damaged pipe, our couplings will reduce the amount of time required, and minor differences in pipe diameter can be accommodated. Larger diameter differences are installed using a suitably sized bush.

The combination of a durable design and excellent sealing properties enables our couplings to provide a reliable seal on rough pipe surfaces e.g. concrete, and a high performance seal on smooth surfaces e.g. PVCu.

Our couplings can be combined with bushes in order to act as an adaptor between pipelines of widely differing outside diameters. A bush will be required by the contractor when connecting pipes of different materials or sizes i.e. when outside diameters of the joints exceeds 12mm.

We can also supply standard couplings with nitrile sleeves.

Features & Benefits

- Durable design ensuring a high performance and reliable seal
- Stainless steel shear band provides excellent resistance to heavy loads and shear forces
- Reduces excavation work
- Shear band ensures joint flexibility and pipe alignment
- High performance sealing properties of the couplings eliminates need for grouting in most applications
- WIS 4-41-01 approved

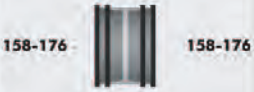
Applications

When used individually or combined with bushes, our couplings have many applications in the construction, repair and maintenance of pipe systems:

- As a joint for plain ended pipes
- Repair and maintenance of existing pipelines
- Connecting short and cut lengths of pipe
- Making post construction connections to an existing pipeline
- Reconnection of laterals on renovated sewers
- Introducing rocker pipe outside manholes or structures

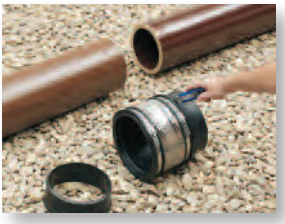
Genius Multi-Flexible-Couplings with Integrated Bushes

JDP offers the Mission-GENIUS™ that jointes all pipes within one dimension in DN100 and DN150. This Multi-Flexible-Coupling comes with two integrated bushes that can be folded out and removed on one or both sides depending on the application. Whether connecting Supersleve to old salt glazed war, structural walled plastic to clay or plastic to plastic the GENIUS is the right answer.

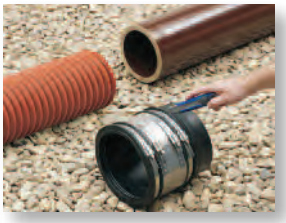
EXAMPLE APPLICATION DN 150	GENIUS Option Size Range (mm)
Supersleve, Superseal, Densleve, Denseal, Hepseal, Twinwall, Rigidrain, Pitch Fibre, Asbestos C. — Supersleve, Superseal, Densleve, Denseal, Hepseal, Twinwall, Rigidrain, Pitch Fibre, Asbestos C.	
PVCu, PP, PE, Ultra-Rib, Ultra-Fortis, Polysewer, Quantum, Cast Iron, Grey Iron, Stainless Steel, ABS — Supersleve, Superseal, Densleve, Denseal, Hepseal, Twinwall, Rigidrain, Pitch Fibre, Asbestos C.	
PVCu, PP, PE, Ultra-Rib, Ultra-Fortis, Polysewer, Quantum, Cast Iron, Grey Iron, Stainless Steel, ABS — PVCu, PP, PE, Ultra-Rib, Ultra-Fortis, Polysewer, Quantum, Cast Iron, Grey Iron, Stainless Steel, ABS	

(DN)	TOTAL-SIZE RANGE (mm)
100	108 - 137
150	158 - 192

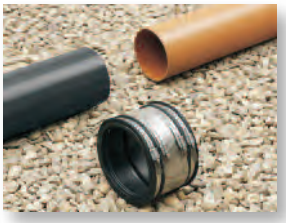
Genius Multi-Flexible-Couplings with Integrated Bushes



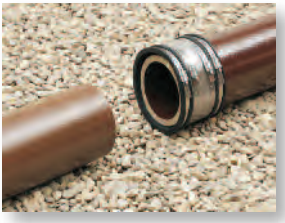
1. Clay/Clay
Fold out and cut off both GENIUS bushes



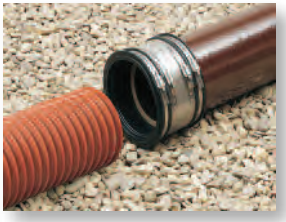
1. Ultra-Rib/Clay
GENIUS bush integrated on the left, fold out and cut off on the right side



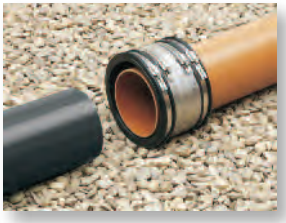
1. PP/PVCu
Both GENIUS bushes stay integrated



2. Clay/Clay
Slide GENIUS over pipe end and push pipes together



2. Ultra-Rib/Clay
Slide GENIUS over clay pipe and push pipes together



2. PP/PVCu
Slide GENIUS over pipe end and push pipes together

Standard Couplings & Extra Wide Couplings (Up to 2100mm Diameter)

All Standard and Extra Wide couplings comply with the requirements of WIS 4-41-01 and are specifically designed to connect and repair pipelines with different materials or sizes used in sewerage, drainage and other underground applications. Extra Wide couplings also available in Nitrile and 316 Stainless Steel.

Standard & Extra Wide Couplings (100 - 790mm Diameter)

Size Range (mm)	Standard Couplings Code	Width (mm)	Extra Wide Couplings Code	Width (mm)
100-115	2004SC115	120	-	-
105-122	2004SC120	120	-	-
120-137	2004SC137	120	-	-
130-150	2004SC150	120	-	-
137-162	2004SC162	120	-	-
150-175	2004SC175	120	-	-
160-182	2004SC180	120	-	-
165-190	2004SC190	150	-	-
175-200	2004SC200	150	-	-
200-225	2004SC225	150	-	-
225-250	2004SC250	150	2004SC250W	300
250-275	2004SC275	150	2004SC275W	300
265-290	2004SC290	150	2004SC290W	300
285-310	2004SC310	185	2004SC310W	300
290-320	2004SC320	185	2004SC320W	300
310-335	2004SC335	185	2004SC335W	300
315-345	2004SC345	185	-	300
325-350	2004SC350	185	2004SC350W	300
335-360	2004SC360	185	2004SC360W	300
355-385	2004SC385	185	2004SC385W	300
385-410	2004SC410	185	2004SC410W	300
400-430	2004SC430	185	2004SC430W	300
415-445	2004SC445	185	2004SC445W	300
435-465	2004SC465	185	2004SC465W	300
460-490	2004SC490	185	2004SC490W	300
480-510	2004SC510	185	2004SC510W	300
495-525	2004SC525	185	2004SC525W	300
515-545	2004SC545	185	2004SC545W	300
530-560	2004SC560	185	2004SC560W	300
540-570	2004SC570	185	2004SC570W	300
550-580	2004SC580	185	2004SC580W	300
570-600	2004SC600	185	2004SC600W	300
590-620	2004SC620	185	2004SC620W	300
665-690	-	185	2004SC600W	300
765-790	-	185	2004SC700W	300

Large Standard & Extra Wide Couplings (601 - 2100mm Diameter)

These couplings comply with WIS 4-41-01 and are made to order to specific size requirements. The size range information in the table below is for general guidance only.

Size Range (mm)	Large Standard Couplings Code	Width (mm)	Extra Wide Couplings Code	Width (mm)
601-699	2004LC600	190	2004LC600W	300
700-799	2004LC700	190	2004LC700W	300
800-899	2004LC800	190	2004LC800W	300
900-999	2004LC900	190	2004LC900W	300
1000-1099	2004LC1000	190	2004LC1000W	300
1100-1199	2004LC1100	190	2004LC1100W	300
1200-1299	2004LC1200	190	2004LC1200W	300
1300-1399	2004LC1300	190	2004LC1300W	300
1400-1499	2004LC1400	190	2004LC1400W	300
1500-1599	2004LC1500	190	2004LC1500W	300
1600-1699	2004LC1600	190	2004LC1600W	300
1700-1799	2004LC1700	190	2004LC1700W	300
1800-1899	2004LC1800	190	2004LC1800W	300
1900-1999	2004LC1900	190	2004LC1900W	300
2000-2100	2004LC2000	190	2004LC2000W	300

Bushes

Bushes are designed too be used with Standard, Large and Extra Wide Couplings where the two pipes being connected have significantly different outside diameters. They are available moulded or fabricated.

Bushes should be used where the difference in diameter exceeds 12mm and an adaptor coupling is not available or not suitable.

Bushes Fabricated

BUSH SIZE I.D. (mm)	THICKNESS (mm)							
	5	8	14	16	24	32	40	48
135 - 199	•	•	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
200 - 299	•	•	•	•	Min 250mm	Not Available	Not Available	Not Available
300 - 399	•	•	•	•	•	•	Not Available	Not Available
400 - 499	•	•	•	•	•	•	Not Available	Not Available
500 - 599	•	•	•	•	•	•	•	•
600 - 699	•	•	•	•	•	•	•	•
700 - 799	•	•	•	•	•	•	•	•
800 - 899	•	•	•	•	•	•	•	•
900 - 999	•	•	•	•	•	•	•	•
1000 - 1099	•	•	•	•	•	•	•	•
1100 - 1199	•	•	•	•	•	•	•	•
1200 - 1299	•	•	•	•	•	•	•	•
1300 - 1399	•	•	•	•	•	•	•	•
1400 - 1999	•	•	•	•	•	•	•	•
2000 - 2099	•	•	•	•	•	•	•	•

Note: The bush size range is an indicator of size for ordering purposes only. Bushes are manufactured to suit customer requirements. Also produced in Nitrile rubber. Please contact us for availability.

Bushes Moulded

Reference Number	Size Range (mm)	Nominal OD (mm)
MBC 06/43	35 -40	55
MBC 23/65	55 - 65	110
MBC 17/76	65 - 76	110
MBC 08/95	85 - 95	110
MBC 27/65	55 - 65	120
MBC 15/115	105 - 115	145

Also produced in Nitrile rubber. Please contact us for availability.

Drain Couplings (80 - 275mm)

Drain couplings are used in drainage systems where resistance to earth loads normally provided by a sheer ring is not required. They have many applications in the construction, repair and maintenance of drainage and other small diameter non pressure pipe systems.

Part Number	Size Range (mm)	Width (mm)
2004DC100	85-100	100
2004DC115	110-115	120
2004DC122	107-122	120
2004DC135	120-135	120
2004DC150	135-150	120
2004DC165	150-165	120
2004DC175	160-175	120
2004DC185	170-185	120
2004DC195	180-195	120
2004DC212	197-212	150
2004DC225	210-225	150
2004DC250	225-250	150
2004DC275	250-275	150

Adaptor Couplings (40 – 420mm Diameter)

Adaptor Couplings have a moulded elastomeric sleeve with different diameters at each end to enable different outside diameters to be connected economically and quickly. The sleeve is fitted with 2 stainless steel clamping bands by which they are secure at both ends.

Also produced in Nitrile rubber and with grade 1.4401 (316) stainless steel fittings. Please contact us for availability.

Universal Range

Part Number	Size Range A/B (mm)	Width C (mm)
2004AC4000	121-137/108-122	120
2004AC6000	180-200/160-180	150

For Structural Walled Plastic Pipes

Part Number	Size Range A/B (mm)	Width C (mm)
2004AR1500	160-170/170-192	100
2004AR2250	240-250/260-285	130
2004AR3000	325-335/360-385	160

Drainage Adaptors

Part Number	Size Range A (mm)	Size Range B (mm)	Width C (mm)
2004AC1153	100 - 115	40 - 50	100
2004AC1154	100 - 115	53 - 63	100
2004AC1155	100 - 115	75 - 89	100
2004AC1251	110 - 125	80 - 95	120
2004AC5144	110 - 125	100 - 115	120
2004AC1360	121 - 136	75 - 89	100
2004AC1361	121 - 136	80 - 95	120
2004AC1362	121 - 136	100 - 115	120
2004AC1451	130 - 145	95 - 110	100
2004AC1452	130 - 145	110 - 125	120
2004AC1501	135 - 150	100 - 115	100
2004AC1602	144 - 160	110 - 125	120
2004AC1603	144 - 160	121 - 136	120
2004AC1701	155 - 170	100 - 115	150
2004AC1702	155 - 170	110 - 125	120
2004AC1703	155 - 170	130 - 145	120
2004AC1801	160 - 180	100 - 115	150
2004AC1802	160 - 180	110 - 125	150
2004AC1805	160 - 180	155 - 170	150
2004AC1922	170 - 192	110 - 125	120
2004AC1923	170 - 192	121 - 136	120
2004AC1924	170 - 192	144 - 160	120
2004AC1991	180 - 200	100 - 115	150
2004AC1993	180 - 200	121 - 136	150
2004AC2000	180 - 200	130 - 145	150
2004AC2001	180 - 200	155 - 170	150
2004AC2102	185 - 210	110 - 125	150
2004AC2104	185 - 210	130 - 145	150
2004AC2105	185 - 210	144 - 160	150
2004AC2152 o/s	200 - 115	100 - 115	150
2004AC2203	195 - 220	155 - 170	150
2004AC2303	205 - 230	130 - 145	165

Drainage Adaptors (contd)

Part Number	Size Range A (mm)	Size Range B (mm)	Width C (mm)
2004AC2352	210 - 235	110 - 125	150
2004AC2353	210 - 235	121 - 136	150
2004AC2354	210 - 235	144 - 160	150
2004AC2355	210 - 235	170 - 192	150
2004AC2356	210 - 235	190 - 215	150
2004AC2505	225 - 250	155 - 170	150
2004AC2507	225 - 250	195 - 220	150
2004AC2508	225 - 250	205 - 230	150
2004AC2654	240 - 265	144 - 160	150
2004AC2655	240 - 265	170 - 192	150
2004AC2656	240 - 265	190 - 215	150
2004AC2657	240 - 265	210 - 235	150
2004AC2753	250 - 275	155 - 170	165
2004AC2755	250 - 275	195 - 220	165
2004AC2904	265 - 290	144 - 160	150
2004AC2905	265 - 290	170 - 192	165
2004AC2906	265 - 290	190 - 215	150
2004AC2907	265 - 290	210 - 235	150
2004AC2908	265 - 290	240 - 265	150
2004AC3003 o/s	275 - 300	180 - 200	150
2004AC3157	290 - 315	245 - 270	165
2004AC3158	290 - 315	260 - 285	165
2004AC3204	295 - 320	144 - 160	150
2004AC3205	295 - 320	170 - 192	150
2004AC3206	295 - 320	190 - 215	150
2004AC3207	295 - 320	210 - 235	150
2004AC3208	295 - 320	240 - 265	150
2004AC3209	295 - 320	265 - 290	150
2004AC3257	300 - 325	250 - 275	165
2004AC3307	305 - 330	245 - 270	150
2004AC3351 o/s	310 - 335	180 - 205	150
2004AC3357	310 - 335	295 - 320	150
2004AC3600	335 - 360	295 - 320	165
2004AC3606	335 - 360	190 - 215	165
2004AC3607	335 - 360	210 - 235	165
2004AC3608	335 - 360	240 - 260	165
2004AC3609	335 - 360	265 - 290	165
2004AC3708	345 - 370	300 - 325	165
2004AC3709	345 - 370	310 - 335	165
2004AC3850	360 - 385	300 - 325	165
2004AC3858	360 - 385	240 - 265	165
2004AC3859	360 - 385	265 - 290	165
2004AC4208	395 - 420	240 - 265	165
2004AC4209	395 - 420	265 - 290	165

o/s = offset

Sewer Saddle

Code	Size (mm)	Angle	Saddle Size Range (mm)
2004TA11090	105 – 120	90º	152 – 395
2004TA12590	115 – 130	90º	200 – 400
2004TA16090	150 – 170	90º	200 – 395
2004TA20090	175 – 200	90º	300 – 500
2004TA11045	110	45º	152 – 395
2004TA16045	160	45º	200 - 395

Twistee Saddles

Versatile sewer saddle designed to make lateral connections to clay and concrete main sewers quick and simple. The spigot will connect to a DN160 uPVC lateral pipe or to and DN150 lateral using a Flexible rubber adaptor coupling.

	Main Sewer Dimensions			
Code	Min Dia	Max Dia	Min Wall Thickness	Core Hole Dia
2004MTS15001	300	375	32	186mm+/-1mm
2004MTS15002	400	600	32	186mm+/-1mm
2004MTS15003	675	NA	32	186mm+/-1mm

Lateral Connector

Code	Size (mm)	Hole Size (mm)
2004LC110	110	127
2004LC160	160	177

The Lateral Connectors provide a fast cost effective method of connecting lateral pipes to twinwall or ribbed pipes.

Wall Seals

Used for sealing pipe openings through walls of concrete structures such as concrete manhole rings, pump chambers etc. Available in 40 and 140mm length.

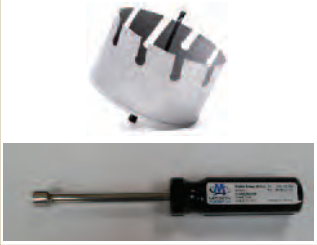
Wall Seal M40 width of Sealing 40mm

Reference Number	O.D. of Pipe (mm)	Drilled Hole Size (mm)
2004M40/100	110	122
2004M40/125	125	137
2004M40/160	160	172
2004M40/200	200	212
2004M40/250	225	262

Wall Seal M140 width of Sealing 140mm

Reference Number	O.D. of Pipe (mm)	Drilled Hole Size (mm)
2004M140/110	110	122
2004M140/125	125	137
2004M140/160	160	172
2004M140/200	200	212
2004M140/250	225	262

Tools



Code	Description
2004CD127	127mm Core Drill for structured wall pipe
2004CD177	177mm Core Drill for structured wall pipe
2004T001	8mm Nut Driver (for couplings upto 300mm ID)
2004T002	8mm Ratchet Spanner (for couplings from 300 to 600mm ID)
2004T003	13mm Ratchet Spanner (for couplings over 600mm ID)

Installation

Standard/Extra Wide/Euro Couplings

Insertion of a junction or repair of existing pipeline using Standard Extra Wide Couplings

Recommended Tightening Torques (Nm)

Standard / Extra Wide Couplings	
Up to 300mm	10
300 to 620mm	13
Large standard /Extra Wide Couplings	
Up to 1200mm	20
Over 1200mm	25
Drain & Adaptor Couplings	6
Lateral Connectors & Saddles	6

A. Cut section from pipeline using pipe cutter or disc saw and remove.
B. This should be about 20mm longer than the junction or short pipe length to be installed.
C. Loosen clamps on coupling and slide onto each end of existing pipeline then position new junction or short pipe length. (Lubricant not required.)
D. Place pencil mark half a coupling width from each joint.
E. Using these pencil marks, centre a coupling over one joint at a time.
F. Tighten the worm drive units in sequence across the width of the coupling to recommended torque. Central shear ring is on the coupling, this should be tightened first.
G. Upon completion of joints, carefully tamp bedding material under the pipe.

Adaptor / Drain

Installing Drain Couplings

A. Slide the coupling fully onto pipe; positon next pipe.
B. Mark one pipe with a pencil, half a coupling width from the joint.
C. Centre coupling over joint.
D. Tighten clamps to recommended torque and tamp bedding material under pipe.

Installing Adaptor Couplings

A. Slide coupling fully onto larger pipe.
B. Mark smaller pipe with a pencil, half a coupling width from the joint.
C. Insert smaller pipe up to the mark.
D. Tighten clamps to recommended torque and tamp bedding material under pipe.

Bushes

Installing a Standard Coupling using a Bush

A. Slide the bush over the end of the smaller pipe. Loosen the clips on the coupling and place on the end of the larger pipe.
B. If required, additional bushes can be placed over the first to obtain the necessary thickness.
C. Push pipes together and slide the coupling over the bush until the ends are level. (Lubricant not required.)
D. Tighten the central shear ring then clamps to recommended torque.
E. Upon completion of joints, carefully tamp bedding material under the pipe.

Lateral Connector

A. Drill 90° hole to pipe axis
B. Clean and file drill hole
C. Press Lateral Connector (L.C.) into socket
D. Pull L.C. up until bottom flange is tight against inside wall pipe
E. Mark incoming lateral pipe 80mm from end/ lubricate pipe and L.C.
F. Now press pipe down to lowest stop (mark disappears). Tighten the clamp to 6 Nm.

Standards

Pressure Ratings Standard Couplings and Bushes

Up to 620mm	2.5 bar	635mm to 995mm	1.0 bar
Over 995mm	0.6 bar	Extra wide couplings	0.6 bar

Standard Couplings and Bushes up to 620mm comply with WIS 4-41-01.
EN 295-4, EN 681-1

No Dig Pipe Repair Kits

Pipe Repair Kits together with packers provide a reliable and cost effective system for the permanent and watertight localised repair of sewers and drains by the No-Dig technique. By eliminating the need for costly and often disruptive excavation these kits save the contractor time and money.

Applications

Repair of cracked, fractured and broken pipes, including clay, concrete, pitch fibre, asbestos cement, cast iron and PVCu pipes.

Repair of pipe joints damaged by root intrusion or ground movement.

Bonds to most pipe materials.

Each Kit contains all the materials required for a single repair and by reducing both preparation time and wastage is a cost effective alternative to purchasing materials in bulk.

Contents
2 part resin in separate bottles for ease of mixing and use
Fibreglass mat
2 packer protection sleeves
Protective groundsheet
Spreader
Cable And wires

All components of the Pipe Repair Kits can be supplied in bulk if required.

Features & Benefits

- Minimum disruption due to No-Dig application
- Quick and easy to use
- Permanent and watertight repair
- Reduces preparation time and wastage
- Pre-measured components ensures accurate mixing of resin
- Elimination of resin mixing buckets and measuring cable and wires cylinder
- System has German DIBt approval
- 50 year projected lifespan for the completed repair

Test Equipment

JDP offers a full range of test equipment for this purpose including the latest technology in super nylon. The inflatable and lever action test plugs in this section can be removed remotely without entering the Manhole, the former can also be installed remotely. A great Health and Safety benefit.

PVC Inflatable Testing Bags

- Range available from 75 – 450mm
- Easily inflated air bag for trouble free testing of all types of pipe
- Inflated with a bicycle pump (available from JDP)
- Ideal for use in areas where access is smaller than the test diameter
- A large sealing area achieves a more effective test
- Testing Bags have a 1/2" through tube with a 1/2" BSP male thread
- Can be used for carrying out a water test, or air test using a 'U' air gauge
- Extension hoses are available to facilitate remote sealing

* Sealing Bags also available

Canvas Inflatable Testing Bags

- Range available for pipe diameters from 50mm to 4000mm
- Ideal for use in areas where access is smaller than the test diameter
- Easily inflated for trouble free pipe sealing
- Inflated with a bicycle pump (available from JDP). Larger sizes can be inflated with a foot pump or small compresser
- Fitted with a brass air tap - for use with a brass inflator
- Larger sizes fitted with ball valve for inflating using a compressor
- Can be fitted with a pressure gauge to prevent over inflation. Extension hose available to facilitate remote sealing

Inflatable Pipe Stopper

- Totally collapsible, lightweight to handle
- Available in size range from 300mm to 1800mm
- Manufactured to exact pipe size. Nominal bore + or - 6mm
- Car wheel type valve for air in vent, on/off valve for air out vent
- 5mm closed cell sealing surface, car wheel type - 1/4" BSP female valve for inflation and lever ball valve for rapid deflation
- Pre-set relief valve to suit stopper size connected by 1200mm umbilical tube. Pull out strap with hook and loop strip to attach U gauge

High Pressure Inflatable Pipe Stoppers

- Wide expansion range will work in all types of pipe - 100mm up to 2,000mm
- Lightweight, most sizes can be installed by one person
- Reinforced synthetic rubber for maximum durability
- Available in Nitrile for Hydrocarbon applications
- Compressor inflation controller
- Special sizes upon request

Maximum allowable back pressure 3.0bar (30mtr head water). Maximum inflation pressure 6.0bar. Applies for stoppers fully inserted into the pipe and mechanically braced against slippage

Steel Test Plugs

- Available from 40mm-450mm
- Roller bearings fitted as standard on all plugs 9" (225mm) & above to make tightening up of the plugs even easier.
- Zinc plated – corrosion resistant to 90 hours salt spray test.
- Combines the economy of price with the strength of steel

* Also available with lever action Camstopper™ design

Aluminium Test Plugs

- Available from 40mm up to 600mm diameter, larger sizes available upon request
- Roller bearings fitted as standard on all plugs 9" (225mm) & above to make tightening up of the plugs even easier
- Aluminium plates combine strength with lightness
- Chemical resistant seals can be supplied to order
- Steel components are zinc plated to 90 hours salt spray test

* Also available with lever action Camstopper™ design

Multi-lock Steel Test Plugs

- Multiple compression points around the perimeter of the plug enable the seal to expand in localised areas.
- Strength where it matters – at the compression point.
- Steel components are aluminium coated against corrosion
- The Plugs are fitted with handle bars, to make it easier to locate the plug in the pipe
- Can be supplied with twin outlets – lower outlet allows complete emptying of water from the drain before removal of the plug
- Chemical resistant seals can be supplied to order.
- "Double Seal" plugs can be supplied to order

End of Pipe Testing/Sealing Plugs

- For temporary sealing of new pipework on construction sites
- Easier to use than traditional test plugs – fit flush onto the end of the pipe
- Available from 50mm up to 300mm diameter
- Zinc plated – corrosion resistant to 90 hours salt spray test

By Pass Test Plugs

- Available as a Camstopper™ lever action design or as an inflatable stopper. For use in sewer renovation or repair when it is necessary to over pump the flow
- Camstopper™ sizes 400 – 1000mm Incorporating a 4"/100mm or 6"/150mm Bauer connection
- Inflatable sizes 100 – 1200mm incorporating 2"/50mm or 3"/75mm or 4"/100mm or 6"/150mm or 8"/200mm Bauer connection

Camstopper™ Test Plugs - Nylon

The fast action lever modern design brings many benefits
- 20 times quicker to install and retrieve
- Non man-entry retrieval
- Improved sealing pressures
- Longer lasting durable pressures
- Labour cost reductions
- Allows improved compliance with Confined Spaces Regulations 1997

Camstopper™ Remote Installation Device

- Non man entry installation and retrieval
- Stops flow in 4" & 6" pipes, up to 3m deep
- No confined space entry needed
- No contact with effluent or sewage

Air Test Kits

- A range of test kits for drains & sewers in accordance with BS EN 1610: 1998
- Air Test Kits contain `U' air gauge, hand bellows, approx. 2m (6'6") rubber tubing, 13mm (½ ") nipple cap, `Y' piece and full operating instructions

Smoke Testers

- Smoke Testers produces a dense grey smoke for approx 4 minutes
- Use for detecting broken and cracked drains

Standards

All new drains and sewers laid in the UK must be subjected to an air pressure test in accordance with BS 8005. For sizes above 300mm in accordance to BS 8000 or BS EN 1610.

Installation

Tests should be carried out before back filling or bedding on or surrounding in concrete. Tests should be made manhole to manhole. The tests should be carried out by inserting drain plugs at each end of the pipe and assembling the 'U' Air Kit as illustrated.

Air is pumped in by hand bellows until the pressure of 100mm is indicated on the gauge. Provided the air pressure does not fall below 75mm in a 5 minute period, the drain is deemed to have passed the test.

Ducting Systems

- Power • Motorway Communications • Street Lighting & Traffic Signals
- Telecommunications • Cable TV / Fibre Optics
- Water • Gas • General Purpose Ducts • Access Ducting
- Access Chamber Systems • Telecoms Access Chambers
- Modular Access Chambers • Specialist Steel Access Covers & Frames
- Duct & Cable Sealing Gaskets & Sleeves • Accessories

JDP offer a range of ducting systems for a variety of applications within the Civils and Utility market. Where necessary products meet the stringent tests of BS EN50086-2-4, BBA Highways Specification, ENATS, and NJUG colour marking recommendations.

Twinwall HDPE, solid wall Polyethylene and solid wall uPVC systems are available to suit the various applications depending on the specification and project requirements. This section has been laid out by application which includes Power, Motorway Communications, Street Lighting & Traffic Signals Telecommunications, Cable TV / Fibre Optics, Water and Gas.

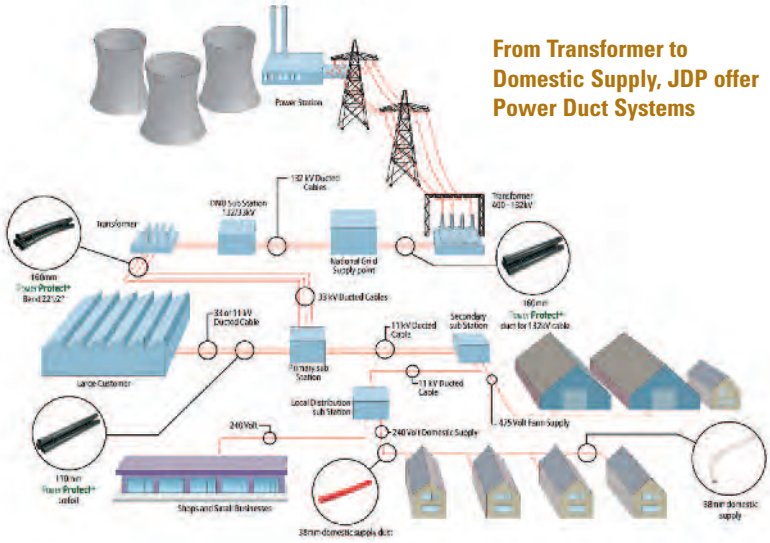
General purpose use ducts, manufactured in twinwall HDPE and solid wall uPVC and accessories are included in this section.

In addition to the standard products within this section JDP's parent company DYKA has manufacturing capability for thick walled uPVC pipes up to 8" imperial and 630mm metric sizes, which can be used for ducting applications that demand an extremely strong thick walled, heat resistant pipe. Non standard lengths, colours and markings can be produced providing the quantity constitutes a reasonable production run.

See the Thermoplastic Pipework within the Polyethylene Pressure Pipe Systems section or contact your local branch.

Power

JDP supply power ducting to Energy Network Association Technical Specification (ENATS) 12-24 Class 1, Class 2 and Class 3 as well as to BS EN50086-2-4 specification for conduit systems for cable management. Systems manufactured in solid wall uPVC, twinwall HDPE, and solid wall MDPE/HDPE cover the complete range of needs for contractors working for Distribution Network Operators (DNO) in all areas of the country.



From Transformer to Domestic Supply, JDP offer Power Duct Systems

Class 1

These black solid wall uPVC and solid wall Polyethylene ducts are suitable for Class 1 applications where Energy Network Association Technical Specification (ENATS) specification is stipulated.

uPVC – Class 1

With its manufacturers partners JDP supplies Class 1 uPVC duct in specific markings and colours to suit a variety of Distribution Network Operators (DNO), including Scottish Power Energy Networks and Electricity North West (Red).

Applications

- For Class 1 electric cable applications – guaranteeing 450kN compression performance at operating temperatures up to 75°C
- Generally 33kV
- Where ENATS 12-24 specification is stipulated

ID / OD (mm)	81.9/88.9	102/110	116/125	150/160	188/200
Pipe 6m	07055079T	07053978S	07055080T	07054749	07055888
Couplers	07055306	-	07055621	07053748	-
End Caps	-	-	-	-	-
11.25° Bends	07055492	07055854	07054736B	07055858	-
22.5° Bends	07055536	07055855	07055427	07055859	07055900
45° Bends	-	07055856	-	07055860	-
90° Bends	-	07055886	-	07055861	-

* Codes used are standard black product

Standards

EN50086-2-4.
ENATS 12-24 revision 2 (revised February 2008).

Large Diameter Polyethylene Duct – Class 1

These solid wall Polyethylene ducts conform to EN50086-2-4 and ENATS. Their main advantage over other duct systems is their jointing method, either Buttfusion or Electrofusion and that they are ideally suited for directional drilling under roadways.

Applications

- Open trench or trenchless installation
- Moleploughing
- Directional drilling or no dig (shallow depth)
- Where ENATS 12-24 Class 1 is stipulated

SDR11	90mm	110mm	125mm	160mm	180mm
6m	-	07029896	07029897	-	07029909
12m	-	07029896L	07029897L	07029951	07029909L
50m	07029676S	07029667S	07029678S	07029679S	07029681S
100m	07029676	07029667	07029678	07029679	07029681

For larger sizes see our Polyethylene Pressure Pipe Systems section
Specific colours and markings available subject to minimum order values

Standards

Conforms to BS EN50086-2-4.
Conforms to ENATS 12-24 revision 2 (revised February 2008).

Class 2

Twinwall HDPE - Class 2

These black external corrugated / smooth internal bore HDPE twinwall ducts are suitable for Class 2 applications where Energy Network Association Technical Specification (ENATS) 12-24 specification is stipulated.

Applications

- For Class 2 electric cable applications – guaranteeing 450kN compression performance at operating temperatures up to 50°C
- Generally 11kV or below
- Where ENATS 12-24 Class 2 specification is stipulated

ID / OD (mm)	94/110	100/118	125/148	150/178
Pipe 6m	0707RB94X6	0707RB100X6	0707RB125X6	0707RB150X6
Couplers	0707CRB94	0707CRB100	0707CRB125	0707CRB150
Seals	0707SRD94	0707SRD100	-	-
End Caps	0707RBEC94	0707EC1059	0707EC3051	0707EC1778
11.25º Bends	0707RBDB94X11X0.42	0707B1001125	0707RB125X11X2.4	0707RB150X11X2.4
22.5º Bends	0707RBDB94X22X0.42	0707B1002250	0707RB125X22X2.4	0707RB150X22X2.4
45º Bends	0707B9445X450	0707B10045X450	0707B12545X610	0707B15045X610
90º Bends	0707B9490X450	0707B10090X450	0707B12590X610	0707B15090X610

Standards

Produced to BS EN50086-2-4.
ENATS 12-24 revision 2 (revised February 2008).

uPVC - Class 2

These solid wall uPVC ducts are suitable for Class 2 applications where Energy Network Association Technical Specification (ENATS) 12-24 specification is stipulated.

Applications

- For Class 2 electric cable applications – guaranteeing 450kN compression performance at operating temperatures up to 50°C
- Generally 11kV or below
- Where ENATS 12-24 specification is stipulated

ID / OD (mm)	83.3/88.9	90.5/96.5	103.6/110	117.4/125	152/160
Pipe 6m	07025079	07023772S	07024748S	07025080	07024749

* for fittings see Class 1 uPVC fittings

Standards

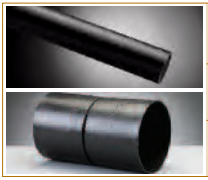
Produced to BS EN50086-2-4.
ENATS 12-24 revision 2 (revised February 2008).

Polyethylene - Class 2

These black solid wall Polyethylene ducts are available in coils.

Applications

- For Class 2 electric cable applications - guaranteeing 450kN compression performance at operating temperatures up to 50°C
- Where ENATS 12-24 Class 2 specification is stipulated
- Open trench or trenchless installation



ID / OD (mm)	32/38	50/58	50/60
50m	0705PD/002X50E	07055847	0705PD/004
Couplers	0705C/PD002	-	0705C/PD004

Standards

Produced to BS EN50086-2-4.
ENATS 12-24 revision 2 (revised February 2008).

Class 3

Twinwall HDPE - Class 3

These black external corrugated / smooth internal bore HDPE twinwall ducts are suitable for all cable management systems where EN50086-2-4 specification or ENATS 12-24 Class 3 is required. They do not however meet the higher performance standards set by Class 1 or Class 2 ENATS 12-24 specification.

Applications

- For cable applications - 450kN compression performance at ambient operating temperatures (23°C)

Coils

ID / OD (mm)	32/40	40/50	50/63	75/90	94/110	137/160
Pipe x50m	0707RC4050B	0707RC5050B	0707RC6350B	0707RC9050B	0707RC11050B	0707RC16025B
Couplers	0707CRC40	0707CRC50	0707CRC63	0707CRC90	0707CRC110	0707CRC160
Seals	0707RCS40	0707RCS50	0707RCS63	0707RCS90	0707RCS110	0707RCS160
End Caps	0707RCE40	0707RCE50	0707RCE63	0707RCE90	0707RCE110	0707RCE160

Lengths

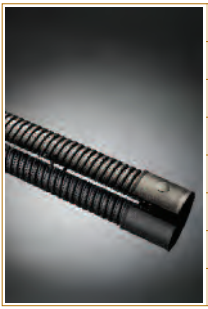
ID / OD (mm)	94/110	100/120	125/145	137/160	150/178
Pipe	0707ENTW94X6BE	0707ENTW100X6BE	0707ENTW125X6BE	0707ENTW137X6BE	0707ENTW150X6BE
Couplers	0707CRC110	0707CRC120	0707CRC145	0707CRC160	0707CRC178
Seals	0707RCS110	0707RCS120	0707RCS145	0707RCS160	0707RCS178
End Caps	0707RCE110	0707RCE120	0707RCE145	0707RCE160	0707RCE178
11.25° Bends	0707BDRB94X11	0707BDRB100X11	0707BDRB125X11	0707BDRB137X11	0707BDRB150X11
22.5° Bends	0707BDRB94X22	0707BDRB100X22	0707BDRB125X22	0707BDRB137X22	0707BDRB150X22
45° Bends	0707BDRB94X45	0707BDRB100X45	0707BDRB125X45	0707BDRB137X45	0707BDRB150X45
90° Bends	0707BDRB94X90	0707BDRB100X90	0707BDRB125X90	0707BDRB137X90	0707BDRB150X90

Also available in 225 & 300mm ID.

Produced to BS EN50086-2-4.

Split Duct

An ideal solution for ducting existing cables, or repairing damaged ducting this product is available in short lengths as standard.



0707ENTWS94X1BE	94/110mm Split Duct x 1m
0707ENTWS100X1BE	100/120mm Split Duct x 1m
0707ENTWS125X1BE	125/145mm Split Duct x 1m
0707ENTWS150X1BE	150/178mm Split Duct x 1m
0707ENTWS94X3BE	94/110mm Split Duct x 3m
0707ENTWS100X3BE	100/120mm Split Duct x 3m
0707ENTWS125X3BE	125/145mm Split Duct x 3m
0707ENTWS150X3BE	150/178mm Split Duct x 3m

Standards

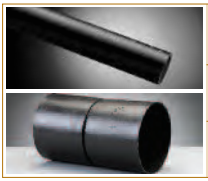
Produced to BS EN50086-2-4.

Polyethylene - Class 3

These black solid wall Polyethylene ducts conform to BS EN50086-2-4 and ENATS 12-24 Class 3. They are available in coils.

Applications

- For Class 3 electric cable applications - 450kN compression performance at ambient operating temperatures
- Where ENATS 12-24 Class 3 specification is stipulated
- Open trench or trenchless installation



ID / OD (mm)	32/37	38/44
50m	0705PD002X50E	0705PD003X50E
Couplers	0705C/PD002	0705C/PD003

Standards

Produced to BS EN50086-2-4.
ENATS 12-24 revision 2 (revised February 2008).

Motorway Communications

JDP supply Motorway Communications ducting in Twinwall HDPE and smooth wall Polyethylene.

Twinwall HDPE

Externally corrugated with a smooth internal bore, these purple HDPE twinwall ducts conform to BS EN50086-2-4. Available in lengths and coils suitable for all road network cabling.

Applications

- Motorway & Highways communication cables

Coils

ID / OD (mm)	50/63	94/110	137/160
Pipe 50m	0707RC6350P	0707RC11050P	0707RC16050P
Couplers	0707CRC63	0707CRC110	0707CRC160
Seals	0707RCS63	0707RCS110	0707RCS160
End Caps	0707RCE63	0707RCE110	0707RCE160

Lengths

ID / OD (mm)	94/110	100/120	137/160	150/178
Pipe 6m	0707ENTW94X6P	0707ENTW100X6P	0707ENTW137X6P	0707ENTW150X6P
Couplers	0707CRC110	0707CRC120	0707CRC160	0707CRC178
Seals	0707RCS110	0707RCS120	0707RCS160	0707RCS178
End Caps	0707RCE110	0707RCE120	0707RCE160	0707RCE178
11.25° Bends	0707BDRB94X11	0707BDRB120X11	0707BDRB160X11	0707BDRB178X11
22.5° Bends	0707BDRB94X22	0707BDRB120X22	0707BDRB160X22	0707BDRB178X22
45° Bends	0707BDRB94X45	0707BDRB120X45	0707BDRB160X45	0707BDRB178X45
90° Bends	0707BDRB94X90	0707BDRB120X90	0707BDRB160X90	0707BDRB178X90

* Bends supplied black as standard

Standards

Produced to BS EN50086-2-4.

Lengths fully compliant with Highways Specification & BBA approved.

Polyethylene

These purple solid wall Polyethylene ducts conform to BS EN50086-2-4. They are ideally suited for directional drilling under roadways. Alternative sizes available subject to minimum quantities.

Applications

- Motorway & main highways communication cables
- Open trench or trenchless installations

Lengths

ID / OD (mm)	101/125
6m	0705PD

Standards

Produced to BS EN50086-2-4.

Street Lighting & Traffic Signals

JDP offer Twinwall orange street lighting and traffic signals ducting conforming BS EN50086-2-4 in lengths and coils. Manufactured from Twinwall HDPE, solid wall Polyethylene or solid wall uPVC, these ducts are used extensively with access chamber systems, available within this Ducting Systems section.

We also supply a purple single wall corrugated coiled duct system for street lighting as specified in Scotland. Product details are contained within this section.

Twinwall HDPE

Externally corrugated with a smooth internal bore, these orange HDPE twinwall ducts conform to Highways specification and BS EN50086-2-4. Available in lengths and coils suitable for all street lighting and traffic signals applications.

Applications

- Street lighting – Printed
- Traffic signals – Printed
- Street lighting or traffic signals – Plain / no print

Coils

ID / OD (mm)	50/63	94/110	137/160
Pipe 50m	0707RC6350	0707RC11050	0707RC16050
Couplers	0707CRC63	0707CRC110	0707CRC160
Seals	0707RCS63	0707RCS110	0707RCS160
End Caps	0707RCE63	0707RCE110	0707RCE160

* when ordering add printing code, SL = Street Lighting, TS = Traffic Signals, O = Plain

Lengths

ID / OD (mm)	94/110	100/120	137/160	150/178
Pipe 6m	0707ENTW94X6	0707ENTW100X6	0707ENTW137X6	0707ENTW150X6
Couplers	0707CRC110	0707CRC120	0707CRC160	0707CRC178
Seals	0707RCS110	0707RCS120	0707RCS160	0707RCS178
End Caps	0707RCE110	0707RCE120	0707RCE160	0707RCE178
11.25° Bends	0707BDRB94X11	0707BDRB120X11	0707BDRB160X11	0707BDRB178X11
22.5° Bends	0707BDRB94X22	0707BDRB120X22	0707BDRB160X22	0707BDRB178X22
45° Bends	0707BDRB94X45	0707BDRB120X45	0707BDRB160X45	0707BDRB178X45
90° Bends	0707BDRB94X90	0707BDRB120X90	0707BDRB160X90	0707BDRB178X90

* when ordering add printing code, SL = Street Lighting, TS = Traffic Signals, O = Plain

Standards

Produced to BS EN50086-2-4.

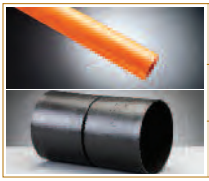
Polyethylene

These orange solid wall Polyethylene ducts conform to BS EN50086-2-4 and are available in coils and lengths suitable for street lighting and traffic signals applications. They are ideally suited for directional drilling under roadways.

Applications

- Street lighting – Printed
- Traffic signals – Printed
- Street lighting or traffic signals – Plain / no print
- Open trench or trenchless installation

Coils



ID / OD (mm)	38/44	50/60
Pipe 50m	0705PD3844X50	0705PD5060X50
Couplers	0705C/PD003	0705C/PD004

Lengths

ID / OD (mm)	50/60	56/63	97/107
Pipe 6m	0705PD5060X6	0705PD5663X6	0705PD97107X6
Couplers	0705PDC60	0705PDC63	0705PDC107
11.25° Bends	0705PDB60X1125	0705PDB63X1125	0705PDB107X1125
22.5° Bends	0705PDB60X225	0705PDB63X225	0705PDB107X225
45° Bends	0705PDB60X45	0705PDB63X45	0705PDB107X45
90° Bends	0705PDB60X90	0705PDB63X90	0705PDB107X90

* when ordering add printing code, SL = Street Lighting, TS = Traffic Signals, O = Plain

Standards

Produced to BS EN50086-2-4.

Scottish Street Lighting

This single wall corrugated duct manufactured in purple is used specifically for street lighting in Scotland.

Applications

• Street lighting - Scotland

	ID / OD (mm)	29/35	50/63	90/105	150/163
	Pipe	070268027	070268006	070268001	070268110
	Couplers	-	070229343	070229345	-
	Reducers 105x63	-	-	070268008	-
	Junction Box	-	-	070268132	-

Standards

Produced to Scottish street lighting requirements.

Telecommunications

Telecommunications ducting systems supplied by JDP are fully approved for use on the national BT network. This grey ducting system is available in 54mm or 96.5mm manufactured in uPVC.

uPVC

These solid wall grey uPVC ducts conform to BS EN50086-2-4 and are available in lengths suitable for Telecommunications use.

Applications

- BT network cabling
- Telecommunications cabling

Grey Telecommunications uPVC Duct

ID/OD (mm)	49/54	90/96.5
Pipe 6m SS	070154DX6*	070196.5DX6GR
Couplers	070954DRUMCG	0709965DRUMCG
Connector Sleeve	-	0709519
End Caps	07091902	07091875
11.25° Bends	070954DRUM1125G	0709965DRUM1125G
22.5° Bends	070954DRUM225G	0709965DRUM225G
45° Bends	070954DRUM45G	0709965DRUM45G
90° Bends	070954DRUM90G	0709965DRUM90G
Swept Tee 96.5 x 54mm	-	07094479
Split Swept Tee 96.5 x 54mm	-	07093342
Equal Y Branch	-	07093683
Reducer 96.5 x 54mm	-	07093189
Caulking Gland	07023666	07093476

* Also available in 3m lengths

Standards

Manufactured in accordance with dimensions and performance requirements, tried and tested by the telecommunications industry. BS EN50086:2:4.
Manufactured to BT Specification.

Cable Television / Fibre Optics

We offer a range of uPVC Cable TV / Fibre Optics ducting systems, manufactured in accordance with dimensions and performance requirements tried and tested by the industry and supplied in green and available in uPVC.

uPVC

Externally corrugated with a smooth internal bore, these green HDPE twinwall ducts conform to EN50086-2-4 and are available in lengths and coils suitable for Cable TV and Fibre Optics use.

Applications

- Cable TV

Green Cable TV uPVC Duct

ID/OD (mm)	49/54	90/96.5
Pipe 6m SS	070154DX6*	070196.5DX6GR
Couplers	070954DRUMCG	0709965DRUMCG
Connector Sleeve	07091258S	07091250S
End Caps	07091902	07091875
11.25° Bends	070954DRUM1125G	0709965DRUM1125G
22.5° Bends	070954DRUM225G	0709965DRUM225G
45° Bends	070954DRUM45G	0709965DRUM45G
90° Bends	070954DRUM90G	0709965DRUM90G
Swept Tee 96.5 x 54mm	-	07091552
Split Swept Tee 96.5 x 54mm	-	07091880
Equal Y Branch	07092211	07092066
Caulking Gland	07093333	07092856

* Also available in 3m lengths

Standards

BS EN 50086-2-4.

Manufactured in accordance with dimensions and performance requirements, tried and tested by the telecommunications industry.
Virgin Media approved.

uPVC Split Duct & Repair Kits

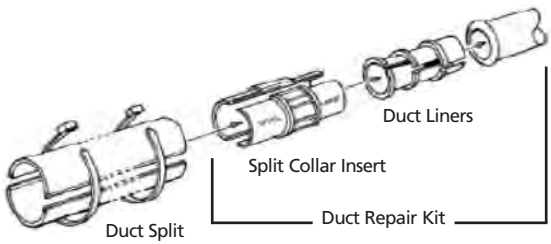
Split Duct and Duct Repair Kits consist of the parts required to allow repair of damaged or jointed duct in the field.

Features & Benefits

- Ideal for repairing existing ducting
- Split Duct supplied complete with ties
- Repair Kits supplied complete with collar and liners to connect pipes

Split Duct -
Supplied in 3m Lengths.

Repair Kits -
Enables the split duct to be connected to the in-situ duct at both ends of the repair.
One Repair Kit comprises -
2 x split collar inserts,
6 x duct liners,
4 x cable ties.



0709SD096X3	96.5mm Split Duct X 3m
0709SD110X3	110mm Split Duct X 3m
0709SDRK096	96.5mm Duct Repair Kit
0709SDRK110	110mm Duct Repair Kit

*Available in Green or Grey

Water

JDP supply water ducting in a twinwall HDPE to BS EN50086-2-4.

Twinwall HDPE

These externally corrugated / smooth internal bore, blue HDPE twinwall ducts conform to BS EN50086-2-4 and are available in lengths and coils.

Applications

- Water pipe ducting

Coils

ID / OD (mm)	40/50	50/63	75/90	94/110	137/160
Pipe 50m	0707RC5050BL	0707RC6350BL	-	0707RC11050BL	-
Couplers	0707CRC50	0707CRC63	-	0707CRC110	-
Seals	0707RCS50	0707RCS63	-	0707RCS110	-
End Caps	0707RCE50	0707RCE63	-	0707RCE110	-

Lengths

ID / OD (mm)	94/110	100/120	137/160	150/178
Pipe 6m	0707ENTW94X6BL	0707ENTW100X6BL	0707ENTW137X6BL	0707ENTW150X6BL
Couplers	0707CRC110	0707CRC120	0707CRC160	0707CRC178
Seals	0707RCS110	0707RCS120	0707RCS160	0707RCS178
End Caps	0707RCE110	0707RCE120	0707RCE160	0707RCE178
11.25° Bends	0707BDRB94X11	0707BDRB120X11	0707BDRB160X11	0707BDRB178X11
22.5° Bends	0707BDRB94X22	0707BDRB120X22	0707BDRB160X22	0707BDRB178X22
45° Bends	0707BDRB94X45	0707BDRB120X45	0707BDRB160X45	0707BDRB178X45
90° Bends	0707BDRB94X90	0707BDRB120X90	0707BDRB160X90	0707BDRB178X90

* Also available in 225 & 300mm ID

* Bends supplied black as standard

Standards

Produced to BS EN50086-2-4.

Gas

JDP supply gas ducting in a single wall perforated duct to Transco specification and in twinwall HDPE to BS EN50086-2-4.

Twinwall HDPE

These externally corrugated / smooth internal bore, yellow HDPE twinwall ducts conform to BS EN50086-2-4 and are available in lengths and coils.

Applications

- Gas pipe ducting

Coils

ID / OD (mm)	40/50	50/63	75/90	94/110	137/160
Pipe 50m	0707RC5050Y	0707RC6350Y	-	0707RC11050Y	-
Couplers	0707CRC50	0707CRC63	-	0707CRC110	-
Seals	0707RCS50	0707RCS63	-	0707RCS110	-
End Caps	0707RCE50	0707RCE63	-	0707RCE110	-

Lengths

ID / OD (mm)	94/110	100/120	137/160	150/178
Pipe 6m	0707ENTW94X6Y	0707ENTW100X6Y	0707ENTW137X6Y	0707ENTW150X6Y
Couplers	0707CRC110	0707CRC120	0707CRC160	0707CRC178
Seals	0707RCS110	0707RCS120	0707RCS160	0707RCS178
End Caps	0707RCE110	0707RCE120	0707RCE160	0707RCE178
11.25° Bends	0707BDRB94X11	0707BDRB120X11	0707BDRB160X11	0707BDRB178X11
22.5° Bends	0707BDRB94X22	0707BDRB120X22	0707BDRB160X22	0707BDRB178X22
45° Bends	0707BDRB94X45	0707BDRB120X45	0707BDRB160X45	0707BDRB178X45
90° Bends	0707BDRB94X90	0707BDRB120X90	0707BDRB160X90	0707BDRB178X90

* Also available in 225 & 300mm ID

* Bends supplied black as standard

Standards

Produced to BS EN50086-2-4.

uPVC

This perforated gas ducting is a single wall perforated corrugated duct manufactured in Yellow as specified by Transco.

Applications

- Gas pipe ducting
- Transco spec

ID/OD (mm)	60mm	80mm	100mm	160mm
25m	-	070268073	070268070	-
50m	070268075	070268072	070268069	070268066
100m	-	070268071	070268068	-
150m	070268074	-	-	-

Standards

Manufactured to BS 4962.

General Purpose Ducts

General purpose ducts manufactured in twinwall and uPVC conforming to no specific standards are also supplied by JDP for general purpose use.

Twinwall HDPE

This black non Kitemarked ducting retains many of the same features and benefits as the BS EN50086-2-4 system, for applications that do not require a full BS EN specification duct. It is an ideal superior alternative to uPVC Daviduct in these applications.

ID / OD (mm)	94/110	150/178
Pipe 6m	0707TW94X6	0707TW150X6

For fittings use twinwall HDPE Class 3 Power ducting.
Other colours available subject to minimum order volumes

uPVC Type 4660

uPVC Type 4660 Duct is manufactured to the dimensional requirements of BS4660. This system offers a greater strength than uPVC General Purpose duct systems and is supplied in black / dark grey colour and as a ring sealed system as standard, although unsealed systems are available.

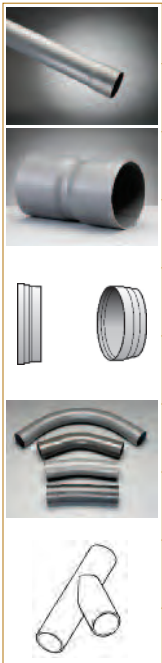
ID/OD (mm)	104.8/110	152.2/160
Pipe 6m SS	07011104660	07011604660
Couplers	01024D20D	01026D20D
Bends 11.25°	0709110DRUM11	0709160DRUM11
Bends 22.5°	0709110DRUM225	0709160DRUM225
Bends 45°	0709110DRUM45	0709160DRUM45
Bends 90°	0709110DRUM90	0709160DRUM90

Standards

Dimensional compliance to BS4460 only.

uPVC Daviduct

Daviduct is a cost effective alternative to higher specification systems, for use in light and medium duty applications. The products are manufactured to traditionally accepted dimensions but do not meet the requirements of BS EN 50086-2-4:1994. General Purpose ducting is not suitable for Highways Agency applications and will require a higher standard of installation than more robust systems for successful performance.



ID/OD (mm)	2" (50/54)	3" (85/89)	4" (110/114)	6" (162/168)	8" (193/200)
Pipe 6m	07012DD	07013DD	07014DD	07016DD	07018DD
Couplers	07092DBGP	07093DBGP	07094DBGP	07096DBGP	07098DBGP
End Caps	0709DUCT2AE	0709DUCT3AE	0709DUCT4BE	0709DUCT6BE	0709DUCT8BE
11.25° Bends	07092DBGP1125	07093DBGP1125	07094DBGP1125	07096DBGP1125	07098DBGP1125
22.5° Bends	07092DBGP225	07093DBGP225	07094DBGP225	07096DBGP225	07098DBGP225
45° Bends	07092DBGP45	07093DBGP45	07094DBGP45	07096DBGP45	07098DBGP45
90° Bends	07092DBGP90	07093DBGP90	07094DBGP90	07096DBGP90	07098DBGP90
45° Y Junction	07092JF45YJ	07093JF45YJ	07094JF45YJ	07096JF45YJ	07098JF45YJ
90° T Junction	07092JF90TJ	07093JF90TJ	07094JF90TJ	07096JF90TJ	07098JF90TJ

Single socket pipe

Standards

Manufactured to traditionally accepted dimensions, but are not covered by any approvals.

Access Ducting

JDP supply a range of Access Ducting also known as Service Channels, in the form of concrete trough units with complementary lids. This system can be used to house most types of services including power and communication cables, and pipes carrying liquids and gases.

Features & Benefits

- Mechanical protection
- Ease of access to services
- Security
- Ease of installation of services
- Multiple services

Applications

Power and communication cables for:

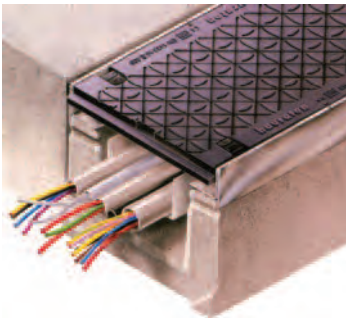
- Electrical and nuclear power installations
- Water and sewage treatment works
- Gas, oil and chemical plants
- Civil and military installations
- Docks and harbours
- Motorways, roads and railways
- Commercial and sports developments

Precast Concrete System

This range is available from internal widths 150mm to 1250mm and internal depths from 115mm to 1000mm. Other sizes can be produced as special bespoke items. This gives an extremely comprehensive range for multiple applications including pipes carrying liquids and gases. Can be surface laid, installed flush with the surface of the ground or buried.

Fibre Reinforced Concrete System

This range is available in six channel sizes from internal widths 100mm to 500mm. This system has a unique bolt-less Side-Lock system, allowing the ductile iron non slip covers to be removed quickly and re fitted easily during cable laying and removal. The ductile cover fits flush with the surface and can be fitted with coloured plugs to identify type of service.



Access Chamber Systems

JDP offer Access Chamber Systems for Street Lighting, Traffic Signals and the Communications Industry. Our Access Chamber Systems are suitable for and accepted by the water, rail and CCTV sectors. In fact, wherever there is a need for cables and draw pits, this range of products can be used.

A wide range of chamber sections is available, all of which have preformed trepanned rings to simplify cut outs which suit a variety of ducts or bespoke off-site solutions with predrilled holes.

As part of our range of Access Chamber systems we offer high strength anti-slip composite covers available to complement the most popular access chamber sizes.

All covers comfortably exceed testing requirements, wet and dry.

The composite covers are supplied with a deep seated cast aluminium framework which is designed to bear on the reinstated ground allowing flexibility on line and level relative to the chamber.

Standard in black, the anti-slip cover can be supplied badged or plain as required. Other colours can be made to order.

The covers are supplied with a simple locking device as standard. The non-ferrous lid has no scrap value and is corrosion and maintenance free.

Where loading or site specific requirements demands, a full range of standard or special fabrication, lockable and non-lockable Galvanised Steel Covers and Frames is available.

Applications

- Cable Drawpits
  Duct Access Chambers
- Highway MCX Chambers
  Motorway Communications
- Under Track Crossings
- Street Lighting
  Traffic Signals
- BT Openreach Chambers
- CCTV Installations
  Fibre Optics
- Valve Chambers
  Hydrant Chambers
- HIC Inspection Chambers

Standard Access Chambers

JDP's Standard Access Chamber Systems are for Street Lighting, Traffic Signals and the Communications Industry.

Identical sections can be stacked to obtain the required height, up to 1 metre deep.

Preformed trepanned rings simplify cut outs, with hole sizes designed to provide a snug fit, but allow for variations in duct entry angle.

The lightweight sections are surrounded by in-situ concrete and offer substantial savings in time and money over traditional brick chambers.

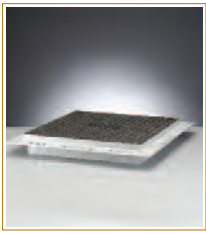
Features & Benefits

- Recyclable
- Economical solution
- Composite Anti slip covers (B125) with locking frame
- No specialist labour required
- High-Strength & impact resistance HDPE
- Badging & various colours available on request - Approved by many Local Authorities and Utility Sectors
- 63, 110 & 160mm pipe connections
- Trepanned holes to accept 63, 90, 110, 120, 145 and 160mm duct pipe
- Each section fits directly into each other

Standard Access Chambers

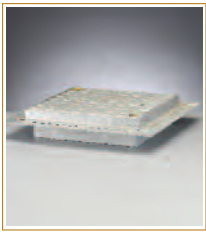
Code	Description & Sizes
072069224	Metro Access Chamber 300 X 300 X 330mm
072069225	Metro Access Chamber 450 X 300 X 330mm
072069226	Metro Access Chamber 450 X 450 X 330mm
072069227	Metro Access Chamber 600 X 450 X 330mm
072069228	Metro Access Chamber 600 X 600 X 330mm

Composite Covers & Frames



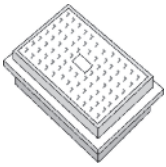
Code	Length (mm)	Width (mm)	Load Class
0720CCF300300	300	300	B125
0720CCF300450	300	450	B125
0720CCF450450	450	450	B125
0720CCF450600	450	600	B125
0720CCF600600	600	600	B125

Galvanised Covers & Frames



Code	Length (mm)	Width (mm)	Load Class
073069101	300	300	AAA
073069098	300	450	AAA
073069099	450	450	AAA
073069100	450	600	AAA
073069102	600	600	AAA

Ductile Covers & Frames

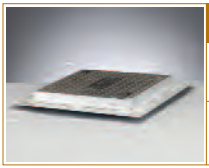


Code	Length (mm)	Width (mm)	Load Class
0621KD59C	300	450	D400
0621KD3240	450	450	B125
0621KD3340	600	450	B125
0621KD3440	600	600	B125

Pole Boxes

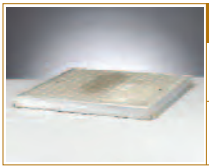
Code	Length (mm)	Width (mm)	Depth (mm)
073069024	275	295	500
073069025	450	450	500

Composite Covers & Frames (Pole Boxes)



Code	Length (mm)	Width (mm)	Load Class
073069158	300	300	B125
073069159	450	450	B125

Galvanised Covers & Frames (Pole Boxes)



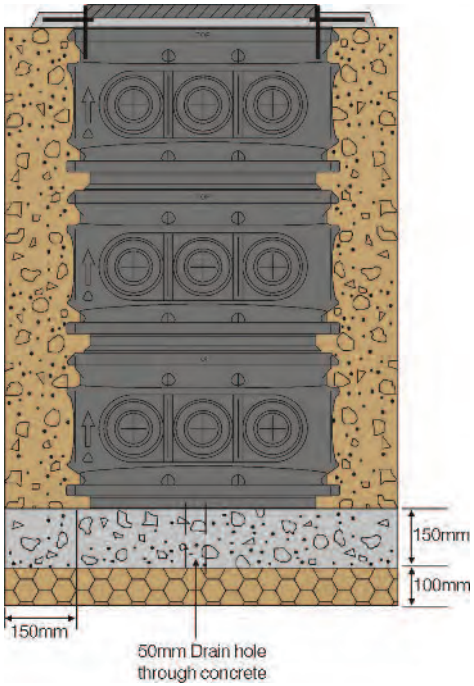
Code	Length (mm)	Width (mm)	Load Class
073069156	300	300	AAA
073069157	450	450	AAA

Standards

Access and pole boxes are designed to meet the requirements of the Traffic Control Signals Unit (TCSU) specification.

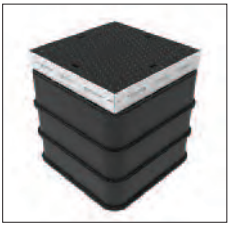
Installation Guide

- Excavate to the depth of appropriate number of chambers (maximum of 3), plus additional 40mm for depth of base.
- Install chamber centrally within trench.
- Base of excavated area to be well compacted granular material or concrete slab. A drainage hole is required within the base to allow excess water to drain freely.
- Before connecting the duct, the trepanned holes will require cutting out to required diameter. Access boxes take from 63mm to 160mm OD duct pipes.
- Allow minimum of 150mm surrounding the chamber for solid concrete support, which should be of semi-dry workable mixture.
- Ensure concrete fill is evenly distributed around the chamber and level with the top surface. Concrete the frame in at the appropriate height.



Structured Access Chambers

Preformed structural duct chambers designed specifically for any underground cable access application. Chambers are manufactured to comply with NJUG standards.



Features & Benefits

- Up to B125 loading with "as-dug" backfill (D400 with concrete surround)
- Manufactured from recycled material (fully recyclable)
- Ideal for traffic signals and street lighting
- 600 x 450 chamber can be used as an alternative to concrete HIC inspection chambers

Structural Access Chambers

Code	Width (mm)	Length (mm)	Depth (mm)
0720CTS1	300	300	150
0720CTS2	450	300	150
0720CTS3	450	450	150
0720CTS4	600	450	150
0720CTS5	600	600	150

Tested in accordance with BS EN 124 (B125 loading, 12.5t)

Composite Covers & Frames

Code	Length (mm)	Width (mm)	Load Class
0720CCF300300	300	300	B125
0720CCF300450	300	450	B125
0720CCF450450	450	450	B125
0720CCF450600	450	600	B125
0720CCF600600	600	600	B125

Installation Guide

- Excavate hole allowing additional width for chamber wall thickness and additional depth for cover and frame required for the mortar bed.
- When the hole is excavated, a concrete base is poured to act as the foundation for the access chamber. Thickness of the concrete base is according to the preference of the onsite engineer. A 150mm base is sufficient in most cases. A drainage hole or sump should be made within the concrete base.

Important Note

If the access chamber is being installed onto wet concrete, ensure that it sinks in to the concrete by a minimum of 20mm. If it is being installed onto set concrete then a layer of concrete must be poured inside the inspection chamber, to fill its base to a depth of 20mm minimum.

Once positioned and top caps put in place, "as-dug" or preferred backfill can be used, filling & compacting 300mm depth at a time.

Frame of cover can be fixed to chamber and after curing has taken place cover can be installed in frame.

We recommend resin mortar to be used between chamber and frame on D400 loadings.

Telecoms Access Chambers

Preformed Telecoms access chambers offer users a de-skilled, fast track construction method with a single site visit and without the need for concrete backfill. In installations carried out for BT, complete chambers were constructed from excavation to reinstatement in just over one hour.

Manhole steps, cable bearers, brackets and other chamber furniture are easily accommodated within the modular access chambers design and can be factory fitted as an option.

Features & Benefits

Excellent side wall stiffness. Unlike other preformed chambers available, no bracing is required during backfilling or compaction.

- No requirement for concrete surround – 'as dug' or type 1 backfill will be suitable
- Perfect for overbuilding on existing network
- No second visit to site required
- Deskilled installation process
- Reduced signing / guarding costs
- Reduced public liability risk
- Ease of cutting duct entries etc.
- No site material waste
- 11 point BT installation check is reduced to only 4-point check with a Salmor chamber, minimizing risk of failed installation
- Designed & tested with BT

Applications

- Suitable for all non-carriageway applications
- Areas subject to slow moving HGV as per requirements of Class C250

BT Chamber Boxes & Replacement Covers

Access Chambers

0720BT4	BT 4 Chamber 915 x 445 x 150mm
0720BT6	BT 6 Chamber 1310 x 610 x 150mm
0720BT2	BT 2 Chamber 725 x 255 x 150mm
0720BT1	BT 1 Chamber 600 x 450 x 150mm

Concrete Covers

0720BT4CC	BT 4 Concrete Cover
0720BT6CC	BT 6 Concrete Cover

Recessed Block Paviour Covers

0720BT4RC	BT 4 Recessed Cover
0720BT6RC	BT 6 Recessed Cover

Furniture

0720BTS	Drop On Steps
0720BTWB	Drop On Wall Bracket

The high quality preformed twinwall access chamber is an excellent cost effective alternative for a traditional brick built access chamber.

Concrete covers & cover slabs, or specialist spring loaded, locking galvanised manhole covers to suit these chambers are available later in the Ducting System section.

Standards

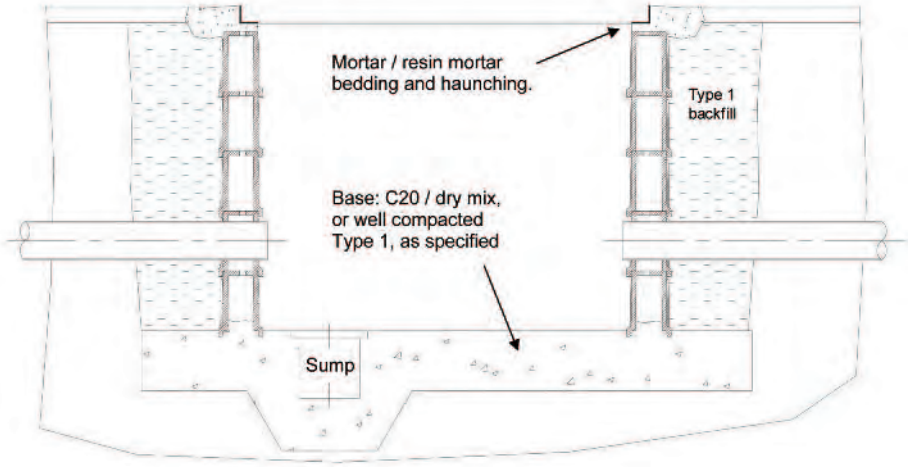
Approved for use in BT's national network; the first and only BT approved modular joint box system.

The chamber system is available with an optional prefitted secondary security system, which has been independently tested to category C of Loss Prevention Board Standard 1175.

The modular access systems offer a number of significant health & safety benefits to users.

The chambers have been independently certified to the European standard for construction materials BS EN ISO 11925-2:2002.

Installation Guide



The use of preformed chambers significantly de-skills the installation process and eliminates the requirement for specialist box building teams. In most cases the use of chambers eliminates the requirement for concrete surrounds.

Duct entry holes can be drilled using a general-purpose hole saw. Fitting a longer pilot drill in the hole saw helps align the holes in the inner and outer skins. Where possible, drill the duct entry holes before installing the chamber.

Modular Access Chambers

JDP offer a range of Modular Access Chambers, these high quality preformed access chambers are an excellent cost effective modern alternative to brick built chambers. Concrete covers & cover slabs or spring loaded, locking manhole covers to suit these chambers are also available. See the Specialist Steel Access Covers & Frames later in this section.

Features & Benefits

- Excellent side wall stiffness, no bracing is required during backfilling or compaction
- No requirement for concrete surround, "as dug" or type 1 backfill will be suitable
- Perfect for overbuilding on existing network
- No second visit to site required
- De-skilled installation process
- Reduced signing / guarding costs
- Reduced public liability risk
- Ease of cutting duct entries etc
- No site material waste

Applications

These chambers are versatile, lightweight yet strong and quick to install, making them ideal for any access solution including:

- Telecommunications
- Water & wastewater
- Gas & power utilities
- Highways & motorway communications
- Rail infrastructure
- Street lighting & traffic signals
- Cable TV

Sizes

Due to the modular design, the chambers are available in almost any clear opening dimension between 450mm and 4000mm and any depth. A finished chamber is produced by simply stacking the units to the required depth followed by backfill and reinstatement. The sections can be supplied either pre-assembled for ease of use or flat-pack for maximum efficiency.

Furniture & Accessories

Manhole steps, cable bearers, brackets and other chamber furniture are easily accommodated within the design and can be factory fitted as an option.

Secondary Security Covers

Developed to provide enhanced network security protection from vandalism, the system consists of steel plates supported on angles that are bolted to the chamber wall. These are secured in place with a locking bar and padlock.

GRP Sealing Plates

Glass reinforced plastic (GRP) plate, which prevents the egress of odours and may limit the ingress of water and, especially in countries with high temperatures, act as a barrier against the corrosive properties of sewer gases.

Cable Management Equipment

Cable Management Equipment is used to support any cabling used in underground networks. Cable bearers and brackets are manufactured from mild steel and galvanised to EN1461 and are available in a variety of lengths.

Bolt-On Step Irons

Manufactured from ductile iron and galvanised to EN1461, all steps have an anti-slip design on the top face and 2No 15mm diameter holes for easy bolting to the internal chamber walls.
This provides a quick, safe way of gaining access to any equipment housed within the chamber.

Sealants, Mastics and Bonding Agents

We can offer a range of WRAS approved sealants that, when applied correctly to the appropriate chamber, form a completely watertight chamber.

Specialist Steel Access Covers & Frames

JDP supply an in depth range of solid top galvanized steel chequer plate access covers & frames which include Reservoir Covers for Water Treatment Works, ideal for applications where lids will be regularly opened by a single operator and need to conform to manual handling single lift regulations. Also suitable for applications with specific security needs or other safety requirements.

The variety of options available in this range of products is detailed below. Manufactured bespoke to the contractors on site needs the combinations are almost infinite providing an access solution to virtually any application.

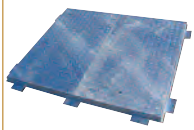
Features & Benefits

- Chequer plate solid top lids under braced where required to meet stated load ratings
- Massive list of options
- Available up to F.A.C.T.A class FL
- Available with removable beams and frame fixing points
- Kitemarked versions available
- Manufactured under an ISO 9001:2000 Quality System
- Finish: Hot dipped galvanised to BS EN ISO 1461 as standard
- On site ladder fitting service available
- Safety chains and hand rails for manhole access available

Applications

- Any Access Chamber
- Manhole Chambers
- Especially suited for safety and security needs
- Trafficked and non-trafficked areas

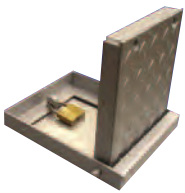
Bespoke Options



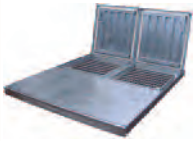
Finish
• Galvanised Mild Steel
• Black Coated Mild Steel
• Stainless Steel Grade 304
• Stainless Steel Grade 316
• Aluminium

Loading
• Pedestrian Duty
• Light Duty
• Medium Duty
• Heavy Duty
• Extra Heavy Duty
• Special Loadings

Sealing
• Unsealed
• Single Grease Seal
• Double Grease Seal
• Neoprene Seal
• Double Neoprene Seal



Locking
• Slotted Csk Screw
• Socket Cap Screw
• MOD / Home Office Approved
• Turnbuckle Locking
• Padlock Facility
• Socket Csk Screw



Other
• Hinged
• Assisted Lift
• Safety Grille
• Pressure & Water Tight
• Peep Hole
• Multiples
• Size

Standards

- Manufactured under an ISO 9001:2000 Quality System.
- Galvanised to BS EN ISO 1461 as standard

Steel Access Cover Loadings

All steel covers are manufactured to FACTA loadings in line with the gross laden vehicle weight (complete vehicle weight) of vehicles that are likely to travel over them i.e. 5 tonne gross laden vehicle weight or 10 tonne gross laden vehicle weight (GLVW). Occasionally loadings are asked for as wheel loads. This is known as slow moving wheel load (SMWL). It is important to establish what loading is required, as a 10 tonne GLVW cover will not hold a 10 tonne wheel load (SMWL). Furthermore, if the vehicle has a small wheel footprint (for example a forklift truck) specially reinforced covers are required to account for the reduced cover contact area and the effect it has on the cover.

CLASSIFICATION - TABLE 1

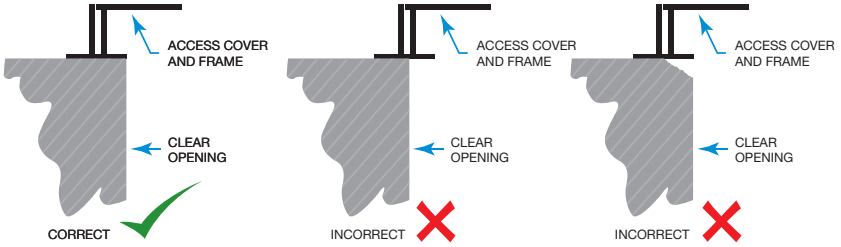
Fabricated access covers complying with the requirements of this specification shall be graded as follows:

	Comparison**	Wheel Loads	
FACTA Class	**EN124 Class**	**Wheel Loads * (slow moving) Pneumatic**	**Wheel Loads * (slow moving) Solid**
A 	A15	0.6 tonne (5kN)	N/A
AA 	N/A	1.5 tonne (15kN)	N/A
AAA 	N/A	2.5 tonne (25kN)	0.5 tonne
B 	B125	5.0 tonne (50kN)	0.75 tonne
C 	C250	6.5 tonne (65kN)	1.0 tonne
D 	D400	11.0 tonne (108kN)	3.0 tonne
E 	E600	16.0 tonne (158kN)	5.0 tonne
F 	F900	24.0 tonne (237kN)	N/A

Installation Guide

1) Covers and frames are manufactured as a unit – ensure that corresponding covers and frames match and fit correctly before commencing installation.

2) The frame of an access cover **must be fully supported**. Any load placed onto the access cover is transferred to the structural opening via the frame. If the frame is only partially supported, **the unit will not carry the load it is designed for and will ultimately fail** – please see sketches below.



3) Mortar bedding material must be placed around the opening immediately after mixing. It should be placed at a depth approximately 5mm greater than the required bedding thickness and spread across the full width of the chamber wall. Deep trowel marks in the bedding should be filled and the surface of the bedding floated to an approximately even finish.

4) The frame should be lowered onto the bedding as soon as possible. The frame must be placed on the bedding so that all webs of the frame are fully supported by the frame supporting structure. The webs must not overhang the internal faces of the frame supporting structure. There must be no voids in the bedding beneath the frame. Special care must be taken in the vicinity of the cover seatings.

5) The frame must be carefully tamped down to the required level and slope. This can be achieved to the Specification requirements by placing a straight edge over the frame webs and surrounding carriageway or other level control points as appropriate.

6) Any holes within the frame must be infilled with bedding material and the flanges of the frame enveloped by a minimum thickness of 10mm of the same material. A greater thickness may be applied provided that sufficient depth is left available for placement of any surfacing layers.

7) Exposed surfaces of the bedding around the outside of the frame must be floated to fill any voids and remove any loose fragments and the exposed surface of the bedding material inside the chamber must be pointed to a smooth finish.

8) The cover should be placed in the frame by a mechanical lifting device or suitable lifting keys after the bedding material has sufficiently set.

9) No surround material must be placed in contact with the frame until the bedding has achieved sufficient tensile and compressive strength.

Accessories

A range of ducting accessories are available including draw cord and duct spacers, for a comprehensive range of marker tapes and trench marker tiles see the main Accessories section at the back of this book.

Sealed Duct Plugs

94mm and 100mm ID duct plugs are available to seal duct systems to prevent ingress of water and build up of methane gas within the cable duct system.

ID / OD (mm)	94/110	100/120
Blank Plug	070729342	070729343
Transit Plug	0707DP94	0707DP100
Blank Grommet	0707DPGO*	

*9/12/14/16/18/21/24/27mm grommets available. To order replace O with correct size required.
Fully compliant with Highways Specification series 1500 & MHCW 1530. Other sizes available to order.

Duct Spacers

110mm and 120mm OD duct spacers are available to secure multiple installations of corresponding sized duct.

ID / OD (mm)	94/110	100/120
2 way	0707RBS110X2	0707RBS118X2
4 way	0707RBS110X4	0707RBS118X4
6 way	0707RBS110X6	0707RBS118X6

Fully compliant with MHCW 1530

Draw Cord

0711DCORD220	220m x 6mm Thick Coil
0711DCORD500	500m x 6mm Thick Drum

Precast Concrete Marker Blocks

Precast Concrete Marker Blocks help to locate and identify buried service lines. They are part of a range of accessories that may be used in conjunction with access ducting and service protection markers. There are four standard Marker Blocks. Other non-standard specials can be made on a bespoke basis.

Features

Indented Lettering

The Marker Blocks have lettering formed in the top surface of the units to identify the service it is identifying. Bespoke letters and numerals can be supplied subject to normal minimum quantities.

Supplementary Identification Plate Recess

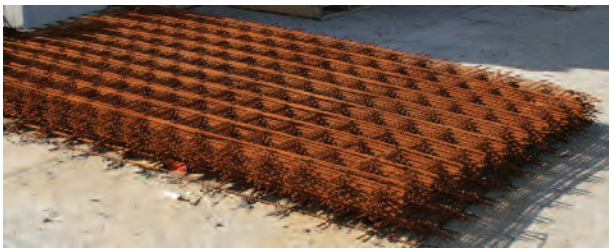
CG2 and CG3 Marker Blocks have a recess formed in the top face of the unit. This provides the opportunity to attach a supplementary identification plate, if required, using a suitable adhesive.

Construction Materials

• Cement • Aggregates • Reinforcing Mesh • Concrete Blocks
• Lintels • Pad Stones • Damp Proof Membrane

JDP offer a range of construction materials for building and civil engineering applications.

The products in this section complement the core product ranges within this product selector and are generally required when installing them. JDP aim to give the Civil Engineer a "one stop shop" whilst retaining a specialist service and knowledge in the products that we supply.



Cement

JDP offers a range of cements for civil engineering, building applications, ready-mixed concrete, and concrete products.

Features & Benefits

- Consistent strength meeting all the conformity criteria in BS EN 197-1
- Compatible with admixtures

Applications

- For use as a bonding ingredient for mortar mix or concrete

Code	Description	Uses
1806CEMENT	25kg Bag Cement	General purpose cement for most applications
1806PROCEM	25kg Bag Pro Cement	General purpose cement for all types of concrete, including structural concrete, mortars, renders and screeds
1806MASTERCRETE	25kg Bag Mastercrete Cement	The first choice for internal and external general purpose non-structural concrete, mortars, renders and screeds
1806CEMENTWH	25kg Bag Cement White	A white Portland cement without pigments or additives, for concretes intended to remain visible, renders, mortars and grouts
1806SULFACRETE	25kg Bag Sulfacrete Cement	A low alkali cement with a high sulfate resistance and a moderate heat hydration. For use where ground conditions require sulphate resisting concrete or mortar
1806MORTAR	20kg Bag Mortar Mix	A highly workable masonry cement
1806EXTRARAPID	25kg Extra Rapid Cement	Rapid hardening and setting properties making it suitable for repairs and maintenance work. Available in water repellent, plastic packaging
1806POSTCRETE	20kg Postcrete Cement	A rapid setting mix of cement, aggregates and hardeners

Admixtures such as air-entraining mortar plasticizers, such as Febmix, designed to enhance the workability and freeze thaw resistance of brick and block laying mortars are also available from JDP.

Standards

Cements are quality assured with independent third party certification and carry a CE Mark.

Installation Guide

Trial mixes are recommended to determine the optimum mix proportions. The cement content must be correct and the water: cement ratio as low as possible consistent with satisfactory placing, thorough compaction and effective curing. Refer to the following documents:

- BS EN 206-1: Concrete
- BS 8500: Concrete-Complementary British Standard to BS EN 206-1
- BS 5628: Part 3 Use of Masonry

Aggregates

JDP offers a wide range of aggregates that are durable and versatile. Aggregates can be used in a wide variety of applications including concrete and asphalt production, sub-base, capping and drainage systems as well as for decorative purposes.

Features & Benefits

- Available in 25kg or 1 tonne bulk bags
- Decorative and practical uses

Applications

- Pipework bedding or filter material
- Bulk fill material
- General and specialist construction
- Driveway and pathway finishes
- Decorative landscaping

Product name	What's it like?	What's it for?
20/40mm Coarse Aggregate	Single sized and graded coarse aggregates including: crushed limestone, crushed granite, crushed gritstone, crushed & uncrushed gravel and secondary aggregates.	Can be used in concrete and asphalt production, civil engineering (pipe bedding and surround, filter media) and for decorative uses.
20/32.5mm Coarse Aggregate		
10/20mm Coarse Aggregate		
6/14mm Coarse Aggregate		
4/10mm Coarse Aggregate		
2/6mm Coarse Aggregate		
4/40mm Graded Aggregate		
4/20mm Graded Aggregate		
2/14mm Graded Aggregate		
0/40mm All-In Aggregate		
0/20mm All-In Aggregate		
0/10mm All-In Aggregate		
0/6.3mm All-In Aggregate		

Product name	What's it like?	What's it for?
0/4mm Fine Aggregate (Coarse)	Natural sands and crushed rock fine aggregates in the size range 0-4mm.	Can be used in concrete, asphalt and mortar production. It can also be used decoratively or as bedding for block paving.
0/4mm Fine Aggregate (Medium)		
Bedding Sand		
0/2mm Fine Aggregate (Medium)	Natural sands and crushed rock fine aggregates in the size range 0-2mm.	
0/2mm Fine Aggregate (Fine)		
Building Sand		
Crusher Run	Well graded crushed rock in the size range 0-125mm.	Generally used as bulk fill to stabilize structures and pavements. May also be used for footpaths or as a temporary running surface.
Quarry Scalpings		
6F Capping Materials		
Type 1 Granular Sub-Base		
Walling Stone	Large single-sized crushed rock in the size range 100-500mm.	For use as dry stone walling.
Armour Stone		For use in sea and river defence work.
Railway Track Ballast		For use in bedding under railway tracks.
Gabion Stone		Ideal filling for Gabion baskets.
Rockery Stone		Ideal for use in the garden.
Golden Amber Gravel	Single-sized gravels.	Can be used in a range of decorative applications e.g. driveways and footpaths.
Eversley Gold		

Ordering the right amount

When you are ready to order the aggregates you require, please have the following measurements available.

a) The length of the area
b) The width of the area
c) The depth of the area

Aggregates are sourced within the local region; therefore JDP's offering may vary from branch to branch. Please contact your local JDP for details.

Standards

Depending on the application, JDP are able to supply materials in full compliance with all of the following British and European Standards:

- BS EN 12620
- BS EN 13043
- BS EN 13285
- BS EN 13242
- BS EN 13450
- BS EN 13383
- BS 8007 and Specification for Highway Works

Reinforcing Mesh

JDP supply reinforcing mesh for general concreting applications.

BS Reference	Mesh Size Nominal Pitch of Wires		Wire Sizes		Cross Sectional Area per Metre Width		Nominal Weight per m^2	Sheets per tonne (approx)	Sheet Weight (kg)	Sheets per Bundle	Square Metres per tonne
	Main	Cross	Main	Cross	Main	Cross	(kg)				
A393M	200mm	200mm	10mm	10mm	393mm^2	393mm^2	6.16	23	44.35	20	162.34
A252M	200mm	200mm	8mm	8mm	252mm^2	252mm^2	3.95	35	28.44	30	253.16
A193M	200mm	200mm	7mm	7mm	193mm^2	193mm^2	3.02	46	21.74	40	331.31
A142M	200mm	200mm	6mm	6mm	142mm^2	142mm^2	2.22	63	15.98	50	450.45
B785M	100mm	200mm	10mm	8mm	785mm^2	252mm^2	8.14	17	58.61	20	122.85

Concrete Blocks

JDP offer a range of standard concrete blocks for the building and civil engineering market.

Features & Benefits

- Completely fire resistant
- Excellent sound insulation
- Ideal background for dry lining, wet finishes and fixings
- Inherent thermal mass acts as heat store
- Recyclable
- Proven and familiar building method - no risk
- Widely and readily available
- Cost effective
- Standard finish for rendering and close textured for direct decoration available

Applications

- Internal & external leaves of cavity walls
- Solid walls
- Separating / party walls
- Partitions
- Multi-storey
- Foundations
- Beam & block floor

Code	Description	Size (mm)
1801100X215MBLK	Dense Concrete Block	100 x 215 x 440
1801140X215MBLK	Dense Concrete Block	140 x 215 x 440

Standards

BS EN 771-3 which covers the BS requirements of all types of concrete block (and brick) units

Installation Guide

Careful selection of mortar is essential. Extensive guidance is given in the BS 5628 suite of masonry design standards. The location of the block work is an important consideration, and as a guide stronger mortars will be required in high exposure situations. Similarly the design of walls employing high strength blocks, typically 10N/mm or greater, will result in enhanced load bearing capacity when designation (ii) or (i) mortar mixes are used. However, for the construction of most internal walls in inner leaves of cavity walls above ground, it is common practice to specify mortars no stronger than 1:1:6 cement, lime, sand composition or similar designation (iii) mix or general purpose to BS 5628-3.

All types of aggregate block are suitable for use to the inner leaf of external cavity walls, or internal walls below ground. For the external leaf of external cavity walls, or solid external walls, dense, lightweight 7/mm^2 blocks or aggregate block with a density of at least 1500kg/m^3 are all suitable. Where unusual ground conditions exist, or for more information contact your local JDP branch.

Lintels

JDP offer a range of pre-stressed and high strength lintels. The pre-stressed lintel is one of the most specified lintel ranges in the country. The method of manufacture gives a high performance pre-stressed concrete unit designed to be used in plastered situations. This range can also be used as ground beams being able to be used directly off pad foundations saving you time and money. If used in conjunction with our steel lintel can comply with part E: 2002 and Part L: 2002 to solve thermal bridging and acoustic problems.

Features & Benefits

- Chemical resistance
- Fire resistance
- Wide range for a variety of applications
- Variety of finishes

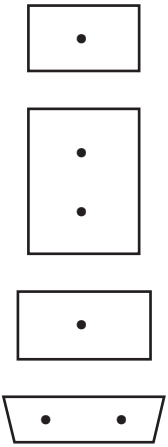
Lintels have low water absorption and as a result of the quality controlled High Specification dense concrete mix used in their manufacture, they can therefore be used underground provided that the ends of the lintels have a minimum 45mm cover of mortar to the ends of the reinforcing strands.

Applications

- Building support beams
- Service lintels

Lintels are available to suit a wide range of applications, using the following criteria:

Wall Thickness	100, 140, 190, 220 or 254mm
Clear Span	700-3200mm Fire resistance 0 – 4hrs
Fire resistance	0 – 4hrs
Finish	Fair faced finish, Chemical resistance, Coloured finish, Economy, Steel 'L' section, Radius lintels, Steel 'C' section



Code	Description	Size (mm)
1806CL10065600	ER1 Pre-stressed Concrete Lintel	100 x 65 x 600
1806CL10065900	ER1 Pre-stressed Concrete Lintel	100 x 65 x 900
1806CL100651200	ER1 Pre-stressed Concrete Lintel	100 x 65 x 1200
1806CL100651500	ER1 Pre-stressed Concrete Lintel	100 x 65 x 1500
1806CL100140900	ER2 Pre-stressed Concrete Lintel	100 x 140x 900
1806CL1001401200	ER2 Pre-stressed Concrete Lintel	100 x 140 x 1200
1806CL1001401500	ER2 Pre-stressed Concrete Lintel	100 x 140 x 1500
1806CL14065900	ER3 Pre-stressed Concrete Lintel	140 x 65 x 900
1806CL140651200	ER3 Pre-stressed Concrete Lintel	140 x 65 x 1200
1806CL140651500	ER3 Pre-stressed Concrete Lintel	140 x 65 x 1500
1806CL22065900	ER4 Pre-stressed Concrete Lintel	220 x 65 x 900
1806CL220651200	ER4 Pre-stressed Concrete Lintel	220 x 65 x 1200
1806CL220651500	ER4 Pre-stressed Concrete Lintel	220 x 65 x 1500

Load Table (kN/m)

Product Reference		P100	S4	R6	R9	R12	P140	R3	S5	R8	R11	P190	R2	R190	R13	P215	R7	S8	R14	P254
Cross Section Size	Width (mm)	100	100	100	100	100	140	140	140	140	140	190	190	190	190	215	215	215	215	254
	Height(mm)	70	110	145	215	290	70	100	140	215	290	70	145	215	290	70	145	215	290	70
Length (mm)	Clear Span (mm)																			
900	700	17.67	34.27	50.74	78.18	100.05	18.14	49.17	63.32	100.57	128	30.88	81.86	126.49	162.2	32.53	90.15	138.94	178.6	34.85
1100	900	10.89	23.18	40.47	62.44	79.9	11.15	33.04	50.5	80.31	102.2	19.02	60.78	101	129.49	20.02	63.86	110.93	142.58	21.43
1200	1000	8.86	19.04	36.74	56.72	72.57	9.06	27.08	41.89	72.95	98.82	15.48	50.12	91.72	117.6	16.29	52.65	92.25	129.48	17.43
1500	1200	6.18	13.48	26.19	48.57	60.85	6.31	19.11	29.81	62.22	77.58	10.79	35.69	70.66	97.99	11.35	37.48	74.26	107.73	12.13
1800	1500	3.95	8.75	17.14	36.27	49.66	4	12.38	19.49	41.6	63.3	6.88	23.34	46.87	79.77	7.23	24.49	49.23	83.95	7.71
2100	1800	2.72	6.1	12.04	25.78	41.91	2.73	8.62	13.67	29.53	51.38	4.72	16.36	33.22	56.74	4.96	17.15	34.87	59.68	5.27
2400	2100	1.96	4.47	8.89	19.21	31.7	1.96	6.31	10.07	21.97	38.35	3.41	12.03	24.68	42.28	3.57	12.6	25.89	44.45	3.79
2700	2400		3.39	6.8	14.83	24.53		4.79	7.68	16.93	29.64		9.17	18.98	32.63		9.59	19.89	34.28	
3000	2700		2.64	5.34	11.76	19.49		3.74	6.03	13.4	23.53		7.17	14.99	25.85		7.49	15.69	27.14	
3300	3000		2.1	4.29	9.53	15.83		2.98	4.83	10.83	19.09		5.73	12.08	20.92		5.97	12.63	21.94	
3600	3200		1.82	3.75	8.36	13.49		2.59	4.2	9.49	16.25		4.98	10.56	17.77		5.18	11.04	18.62	
Lintel Weight Kg/m		17	26	35	53	69.6	24	34	47	72	97.4	32	66	98	132.2	36	75	111	150	43

All pre-stressed lintels are available in standard lengths from 600 to 3600mm long.
Concrete lintels are also available in short lengths for use as high compression padstones.

Standards

- The design of pre-stressed concrete lintels complies with BS8110 part 1:1997: section 4
- Lintels are manufactured in accordance with BS5977: part 2:1983
- Materials used in the manufacture of pre-stressed lintels comply with BS12 and BS882
- The pre-stressing strand/wire complies with BS5896

Installation Guide

Lintels should be carefully bedded on a full mortar joint.
Wall ties should be positioned in accordance with current building regulations.
A damp proof course should be used for all lintels in external walls, and must be fixed in accordance with building regulations.
In cavity construction, it is recommended that both internal and external leaves be taken up uniformly.
For spans in excess of 1200mm, it is good practice to provide temporary support (at 1200mm centres). If lintels are supporting concrete floor load, a minimum lintel depth of 140mm is recommended to allow for impact loads during the actual placing of concrete flooring.

Cutting

Concrete lintels may be cut using a high-speed disc cutter. Use of this should be by a properly trained operative taking due regard of current Health and Safety regulations.

Pad Stones

Padstone Range

A comprehensive range of standard padstones is available with others available upon request.
Our Padstone range uses a 50kn/2 grade of concrete to ensure the perfect product for your needs and the high finish.

Damp Proof Membrane

JDP supply a range of damproof membranes (DPM), polyethylene membranes for use in solid concrete ground floors that are not subject to hydrostatic pressure, to protect buildings against water from the ground.

Features & Benefits

- High resistance to puncture
- Supplied in rolls
- Ease of joining or overlapping
- Tough reliable material

Applications

- Concrete floors to protect buildings against damp / water from the ground

Code	Description	
15014X25BBA250	BBA DPM Blue 250MU	4m x 25m
15014X25BBA300	BBA DPM Blue 300MU	4m x 25m
15014X125BBA500	BBA DPM Blue 500MU	4m x 12.5m
1501SEALTAPE	DPM Jointing Tape 75mm x 33mt	

Also available in black

Standards

Manufactured in accordance to BBA certification

Installation Guide

Should be in accordance with the manufacturer's instructions and Clause 11 of CP 102: 1973, the relevant clauses of BS 8000-4: 1989.

Unless the base is smooth a surface blinding of soft sand (or similar material) should be used to prevent puncturing during installation or when the concrete or screed is being placed. Sheets must be clean and free from dirt and grease.

Adjacent sheets should be overlapped by at least 150 mm and should be bound with mastic strips and sealed with 100 mm wide girth jointing tape.

Alternatively, when it is not possible to keep the sheet dry, a double-welded fold should be formed using at least 300 mm of the membrane. It is essential that the fold be held in position prior to placing the concrete, e.g. by weighting with bricks.

Accessories

• Underground Marker Tapes • Contaminated Ground Warning Indicator • Road Safety & Traffic Management • Personal Protective Equipment (PPE) • Tools & Equipment

JDP offer a range of accessories for use with the core product ranges in this product selector.

JDP are committed to providing customers with all the products they need, making it easier to source full requirements from one supplier. A range of products including marker tapes, standpipes, tools, safety wear and hoses are therefore available from JDP trade counters.
These products compliment the main product ranges and systems within this book, please visit our trade counters to see the full range offering.

Underground Marker Tapes

Coloured and marked with standard text for easy identification, our marker tapes are the most economical way of warning excavators of buried services below ground. Specific colours and text can be made to order.

Features & Benefits

- Four grades available
- Premium manufactured to ESI-12-23
- Detectable and Tape Tile manufactured to BS EN12613: 2001
- Soil tolerance from pH 2.5 to pH 11 inclusive

Applications

Premium Range 100 microns thick 150mm x 365m

Code	Description
2003ELECCABLE	Electric Cable Warning Tape
2003GASMAIN	Yellow Gas Warning Tape
2003WATERPIPE	Blue Water Warning Tape
2003TELEPHONE	Telephone Warning Tape
2003FIBRE	Fibre Optic Cable Warning Tape
2003FOULSEWER	Red Foul Sewer Warning Tape
2003SEWERAGE	Sewerage Pumping Main Warning Tape

Economy Range 50 microns thick 150mm x 365m

Code	Description
2003ELECECON	Economy Yellow Electric Warning Tape
2003GASECON	Economy Yellow Gas Warning Tape
2003WATERECON	Economy Blue Water Warning Tape
2003TELEECON	Economy Green Telephone Warning Tape
2003FIBREECON	Economy Fibre Optic Warning Tape
2003FOULSEWECON	Economy Foul Sewer Warning Tape

Detectable Range 200mm x 100m

Code	Description
2003DETMESHECB	Yellow Electric Dectectamesh (low voltage)
2003DETMESHGPB	Yellow Gas Dectectamesh
2003DETMESHWMB	Blue Water Dectectamesh
2003DETMESHTCB	Green Telephone Dectectamesh
2003DETMESHFO	Green Fibre Optic Dectectamesh
2003DETMESHSPB	Red Sewer Below Dectectamesh

Tape Tile 2.5mm x 40m heavy-duty cable protection

Code	Description
2003UKTO2ELE150	150mm Marker Tile Electric (low voltage)
2003UKTO2ELE200	200mm Marker Tile Electric (low voltage)

Standards

Premium to ESI 12-23

Detectable and Tape Tile to BS EN12613: 2001

Trench Marker Tiles

- High impact recycled polyethylene sheets
- Fully jointed, laid overlapped, jointed with pegs
- Direct replacement for concrete covers and steel plates
- Bespoke colour and print can also be supplied

150mm x 11mm x 100m

Code	Description
20035606FO	Caution Fibre Optic Cable
20035606TC	Caution Telecoms Cable
20035606EL	Caution Electric Cable

Precast Concrete Cable Covers also available

Contaminated Ground Warning Indicator

For Brownfield sites where contamination is present, JDP offer products to indicate the presence of contaminated soil, to ensure anyone carrying out future excavations have adequate warning.

Features & Benefits

- Highly visible over large areas
- Rot proof
- Available as an indicator or a combined geotextile & indicator
- Excellent filtration

Applications

- Highlight border between clean and contaminated soil layers

2 x 30m Contaminated Ground Warning Mesh
2 x 25m Contaminated Ground Warning Mesh & Geotextile
4 x 25m Contaminated Ground Warning Mesh & Geotextile
4.5 x 100m Contaminated Ground Warning Geotextile

Road Safety & Traffic Management

Plastic mesh barrier fencing, hazard warning tapes and pins for use on construction sites are available from JDP.

Hi Vis. Barrier Fencing

Code	Description
200255BF	5.5Kg Orange Barrier Fencing 1m x 50m
20028BF	8Kg Orange Barrier Fencing 1m x 50m
2002PINS	Support Pins

Hazard Warning Tape

Code	Description
2003HAZARD100	Hazard Warning Tape Red/White Str 75mm x 100m
2003HAZARD	Hazard Warning Tape Red/White Str 75mm x 500m

Cones & Signs

Code	Description
2040267330	Road Cone 30" Composition Rubber D2
2040473202	Triangular Road Sign Frame c/w provision for supplementary plate
20404770	Men at Work Road Sign Plate Class 2

* For a comprehensive range of Cones & Signs available, please contact your local JDP branch.

Trench Cover

The Trench Cover is the perfect solution for maintaining access and overcoming the hazard of trenches and excavations in pavements and footways during construction work. Manufactured from glass reinforced composite material the Trench Cover is strengthened with the inclusion of steel mesh reinforcement. The cover is designed to withstand a maximum vehicle weight of 2000kgs (500kgs per wheel) and complies fully with the UK's DETR Safety at Streetworks and Roadworks Code of Practice.

Personal Protective Equipment (PPE)

JDP offer a range of essential health and safety ware for construction sites.

Code	Description
2040272000	Muff Ear Lightweight BS 6344 Pt1
2040053305	Waistcoat H/V Yellow EN471/2 2 B/B L
2040049105	Jacket H/V Yellow (300Den) EN471/3 L
2040296800	Knee Pads Economy
2040691120	Respirator JSP Foldflat P1-211 -20
2040094609	Boot Dual Density Black 9SM
2040269700	Glove PVC Knitted Wrist
2040267500	Goggle (CDM) BS EN166 -349B
2040267901	Helmet JSP Mk3 Comfort White
2040272200	Spectacle Visitor EN166F

Tools & Equipment

A comprehensive range of tools is available at JDP trade counters. Including hammers, trowels, pipe cutters and shovels, using quality brands, the range is designed to suit the needs of the contractor when installing and servicing the many products that JDP supply.

Contractors Tools

Code	Description
20402004045	Axe Economy Felling 41/2lb.
2040200804	Brick Bolster 4" Economy
2040344648	Shaft Broom 48" x 15/16"
20402556	Brush Coco
2040278210	Chisel 10" x 1" Flat Cold
2040201060	Crowbar Straight 5'
20402014025	Hammer Club 2.5lb Hardwood
2040249507	Pick Head 7lb. Chisel &Point
2040343036	Shaft Pick 36"
2040216401	Rake Russell Steel Shaft Tar Flat Tooth
2040261824	Saw Blade Bushman Economy 24"
20405060	Scraper Floor c/w Wood Handle
20405061	Scraper Floor Blade
20997253A	Tarmac Rake Round Teeth Wood Handle
209991090	Tarmac Tamper Square
2040506202	Shovel Russell Taper Mouth T
2040485210	Spirit Level Fisco L8-025 10"
20400550003	Tape Rule Pocket 3M/10Ft
20402632	Trowel Pointing 6" Economy
2040202218	Wrecking Bar 18" x 5/8"

* For a more comprehensive range of Hand Tools please visit or contact your local JDP branch.

Drain Clearing

Code	Description
200160341	Drain Clear Rod Kit
200147011	Drain Clear Rod Kit c/w Case
2001DR1	36" Universal Drain Rod
2001DRPLUNGER	Drain 4" Rubber Plunger
2001DRSCRAPER	Drain 4" Drop Scraper
2001DRWHEEL	Drain Clearing Wheel
2001DRWORM	Drain Double Worm Screw

Drain Tracing Dye

Code	Description
2001DYEB	Drain Trace Dye Blue (200g)
2001DYEG	Drain Trace Dye Green (200g)
2001DYER	Drain Trace Dye Red (200g)

Buckets & Barrows

Code	Description
2099WB	Contractor's Wheelbarrow
2008F066A	Builder's Bucket Black
2008F066B	Builder's Bucket Yellow

Manhole Lifting Keys

Code	Description
200191006	6" Manhole Lifting Keys (Pair)
200191012	12" Manhole Lifting Keys (Pair)
200191020	20" Manhole Lifting Keys (Pair)
200191024	24" Manhole Lifting Keys (Pair)
0620QKEY	Recessed Cover Lifting Keys (Pair)

Pipe Cutter

Code	Description
2001PPC110	110mm Pipe Cutter

Spray Marker Paint

Ideal for site and survey marking, these marker sprays are available in several colours.

Code	Description
2099SMPB	750ml Blue Survey Marker Paint
2099SMPG	750ml Green Survey Marker Paint
2099SMPO	750ml Orange Survey Marker Paint
2099SMPR	750ml Red Survey Marker Paint
2099SMPW	750ml White Survey Marker Paint
2099SMPY	750ml Yellow Survey Marker Paint

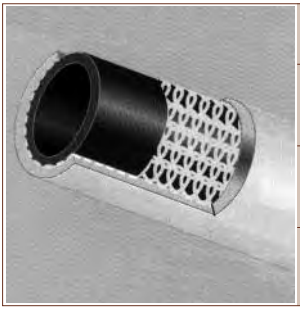
Water Supply Tools

Standpipes ideal for use as temporary water supplies on construction sites are available from JDP.

Code	Description
0820SPDCV	Standpipe c/w Double Check Valve & Bib Tap
0820SPDCVM	Standpipe with Water Meter
0820SPA212	Aluminium 2 1/2" Standpipe
0820SPFB	Standpipes in Frost Boxes
0820VTKEY1M	Valve Tee Key 1mtr
200191751	Toby Key - Heavy Duty Stop Tap Key
200191515	Hydrant Key
200191072	Stop Tap Key, 42" Long
200192500	1/2" Stop Cock Key, 42" Long
200192750	3/4" Stop Cock Key, 42" Long

Hoses

JDP supply reinforced, kink and abrasive resistant hose for construction sites, commercial and domestic use.



Code	Description
1901TOR12X25	1/2" Yellow Hose x 25m
1901TOR12X50	1/2" Yellow Hose x 50m
1901TOR12X100	1/2" Yellow Hose x 100m

*Hose connections and bib taps are also available.

Submersible Pumps

	Description
	A range of submersible pumps for a variety of applications are available from JDP

Protective Sheeting

Code	Description
2040240901	Tarpaulin Reinforced PVC4.5 x 3.5M White
1501TPS4.5KG	4.5KG Clear Temporary Protective Sheeting

Products for Specialist Applications

JDP are dedicated to finding and introducing products that offer solutions. Such products are invaluable in solving problems and offering options to architects and contractors alike, providing quick cost effective solutions to otherwise costly and complex situations.

Off Site Solutions / Installation Time Saving Products

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Nominal Bore		inch	0.5	0.75	1	1.25	1.5	2	2.5	3	3.5	4	5	6	7	8	9	10	11	12	14	15	16	18	20	21	22	24	26	27	28	30	32	33	34	36	40	42	44	48
		mm	15	20	25	32	40	50	65	80	90	100	125	150	175	200	225	250	275	300	350	375	400	450	500	525	550	600	650	675	700	750	800	825	850	900	1000	1050	1100	1200
Imperial Cast Iron & Asbestos Cement (Tumed End)	BS 78 1981	Class ABCD																														32.52 826.0		35.66 905.8		38.76 984.5		45.0 1143.0		51.20 1300.5
	BS 78 BS 486 1996	Class CD Only					2.20 55.9	2.72 69.1	3.24 82.3	3.76 95.5		4.80 121.9	5.90 149.9	6.98 177.3	8.06 204.7	9.14 232.2	10.20 259.1	11.26 286.0		13.14 333.8	15.22 386.6	16.26 413.0	17.30 439.4	19.38 492.3	21.46 545.1	22.50 571.5	23.54 597.9	25.60 650.2	27.66 702.6	28.70 728.9	29.72 754.9	31.78 807.2	33.84 859.5	34.88 886.0	25.92 912.4	37.96 964.2	42.06 1068.3	44.12 1120.6	46.16 1172.5	50.26 1276.6
	BS 1211 (UTI 27" NB)	Class AB Only					2.20 55.9	2.72 69.1	3.24 82.3	3.76 95.5		4.80 121.9	5.90 149.9	6.98 177.3	8.06 204.7	9.14 232.2	10.20 259.1	11.26 286.0		13.00 345.4	15.72 399.3	16.78 426.2	17.84 453.1	19.96 506.9	22.06 560.13	23.12 587.2	24.16 613.7	26.26 667.0	28.36 720.3	29.4 746.8	30.44 773.2	32.52 826.0	24.62 879.3	35.66 905.8		38.76 984.5	42.92 1090.2	45.0 1143.0		51.20 1300.5
		Non-Standard					2.25 57	3.25 82.5																																
Steel	ISO/4200	Series 1	21.3	26.9	33.7	42.4	48.3	60.3	76.1	88.9	101.6	114.3	139.7	168.3		219.1		273		323.9	355.6		406.4	457	508			610			711		813			914	1016	1067	1118	1219
		Series 2		25	32	40	57	63.5	70		101.6	127	133																			762							1168	
		Series 3		25.4	30	44.5	54		73	82.5		108	141.3	159	193.7		244.5										559		660						864					
		Series 3			35								152.4	177.8																										
	BS 1387		21.3	26.9	33.7	42.4	48.3	60.3	76.1	88.9		114.3	139.7	165.1																										
	BS 534							60.3	76.1	88.9		114.3	139.7	168.3	193.7	219.1	244.5	273		323.9	355.6		406.4	457	508		559	610	660		711	762	813		864	914	1016			1220
	BS 3600		21.3	26.9	33.7	42.4	48.3	60.3	76.1	88.9	101.6	114.3	139.7	168.3	193.7	219.1	244.5	273		323.9	355.6		406.4	457	508		559	610	660		711	762	813		864	914	1016			1220
	API 5L & BS 1600 (UTI 36" NB)		21.3	26.7	33.4	42.2	48.3	60.3	73	88.9	101.6	114.3	141.3	168.3		219.1		273		323.9	355.6		406.4	457	508		559	610	660		711	762	813		864	914	1016	1067	1118	1220
uPVC	BS 3505		21.3	26.9	33.7	42.4	48.3	60.3		88.9		114.3	140.2	168.3		219.1		273		323.9	355.6		406.4	457	508			610												
	BS 3506		21.3	26.9	33.7	42.4	48.3	60.3	75.1	88.9		114.3	140.2	168.3	193.7	219.1	244.5	273		323.9	355.6		406.4	457	508		559	610												
Ductile Iron	BS 4772 DIN 28601, 28602, 28603, 28605						56 DIN 28601	66 DIN 28605	82 DIN 28605	98		118	144 DIN 28601/3	170		222		274		326	378		429	480 BS Only	532			635			738		842			945	1048		1152 BS Only	1255
GRP																220		272		324	376		427	478	530			633			718		820			924	1027		1144	1228
Metric Asbestos Cement (Tumed End)	BS 486 1981	Class 15												177		232	259	286		334	392		448	498	568			654			761	808	869		927	970				
		Class 20														232	259	286		345	405		463	515	586			672			780	830	891		952	996				
		Class 25						69		96		122		177		240	268	295		356	419		478	532	605			691			801	852	915		977	1024				
Metric uPVC & PE have a designated nominal bore, which is usually the same as the outside diameter. Quote pipe class, rating or wall thickness on enquiries.																																							
uPVC & Polyethylene	Metric BS 5556 iso/161/1		16	20	25	32	40	50	63	75	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630	710	800	900	1000	1200	1400	1600	1800	2000				

JDP would like to thank the following manufacturing partners for their support.

Branch Listing

SCOTLAND

1 INVERNESS
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Tel: 01463 717818

2 ABERDEEN
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Inverurie
AB51 0YQ
Tel: 01467 633332

3 OBAN
10-11 Glengallan Industrial
Estate Glenshellach
Oban PA34 4HG
Tel: 01631 706417

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East Mains Industrial Estate
Broxburn
EH52 6PQ
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7 BIRTLEY
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8 SKIPTON
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Cotes Industrial Estate
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3 Church Street
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23 HEREFORD
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