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1st July 2011



equator

The hot and cold plumbing system

Product & Price Guide

Equator is the next generation hot & cold and central heating system designed to meet and in many cases exceed the requirements of today's demanding market.

Material

Equator is manufactured from cross-linked polyethylene (PE-X), which is a high engineering grade polymer. For over 30 years PE-X pipe has been dominant in under floor heating applications throughout Europe. Excellent chemical resistance, long term durability and performance capabilities make PE-X an ideal material for hot & cold and central heating applications and its benefits, both practical and financial, present a real alternative to copper systems.

The advantages of the PE-X material have now been incorporated into both fittings and pipe. Equator is the only plumbing system in the UK and Europe to offer an all PE-X hot & cold and central heating system.

Features & benefits

- One push jointing system – ensuring joint integrity.
- De-mountable and re-useable fittings – no internal components to replace.
- Unique de-mounting tool – offers a tamper proof and secure system.
- Highly durable and chemically resistant pipe and fittings.
- British & Scottish Gas has accepted Equator as being suitable for open-vented and sealed central heating systems and as eligible for acceptance onto their 3 Star Service cover.
- Equator is covered by a 30 year guarantee against defects in materials or manufacturing. Refer to Design and Installation Guide for full conditions.

Manifold and conduit

In addition to a comprehensive range of fittings and pipe, the Equator range offers a manifold and conduit system. The real benefits of plastics are realised when using this type of system:

- Central connection point for all bathroom/kitchen and radiator layouts.
- Substantially fewer fittings than plumbing using traditional methods.
- Easy pipe withdrawal is possible using conduit piping.

Notes

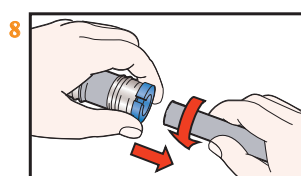
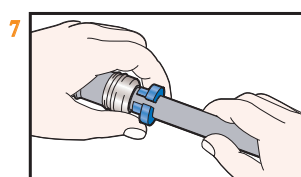
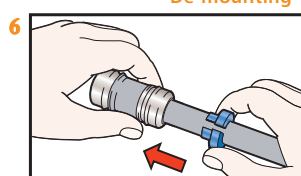
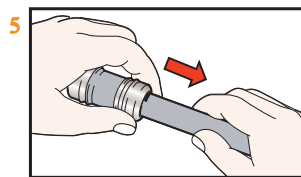
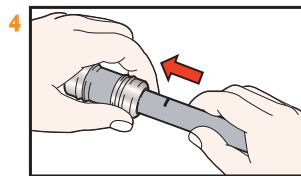
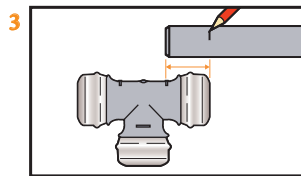
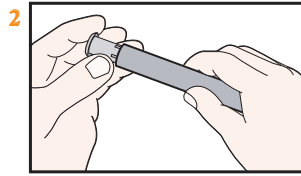
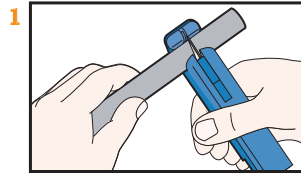
- The spillage or flow of flux onto Equator products during the soldering of adjacent copper pipework must be avoided, refer to the Design & Installation Guide for detailed advice on soldering next to Equator pipework.
- When jointing Equator pipe to non UK compression fittings marked BS864-2 or EN 1254-2, a soft copper olive is recommended.
- UK water regulations require all installations to be water tested to 1½ times maximum working pressure before use.
- Marley Plumbing and Drainage products are manufactured to a constant high standard. The company will not therefore accept responsibility for failure of any installation which includes components not supplied by us.

Approvals and standards

The Equator range is backed by Marley Plumbing & Drainage, a company approved to BS EN ISO 9000 and industrial associate members of the IOP and SNIPEF.

Equator is designed and manufactured to exceed the requirements of BS7291 and WRAS.

Jointing



Making a push-fit joint

- 1 Cut the PE-X pipe to length using the Marley pipe cutter or similar plastic pipe cutter. Slight pressure as if to twist the cutter around the pipe will aid cutting.

Check that the pipe end is clean, cut square and free of burrs and without surface damage.

- 2 Push a pipe support sleeve fully into the pipe end. When jointing copper to any Equator fitting ensure that the copper pipe end is cut square and de-burred. In order to protect the o-ring from any sharp edges it is recommended that a copper pipe insert is used, ECPI15/22/28. Ensure that the internal edge is reamed out and that the copper pipe insert sits snugly on the cut pipe end.

- 3 Using a suitable pencil or ball point pen, mark the insertion depth on the pipe end. Moulded fittings have an insertion depth line on the fitting bodies. Otherwise, measure the insertion depth in accordance with the dimension table below.

- 4 Push the pipe into the socket until the insertion mark on the pipe meets the edge of the socket.

- 5 To confirm that the joint is secure, tug backwards on the joint.

De-mounting a push-fit joint

- 6 Using the plastic de-mounting tool, place tool around pipe with the lugs facing the joint.

- 7 Locate the four lugs to align with the slots on the face of the fitting and push the tool towards the fitting, using equal pressure around the tool.

- 8 Holding the pipe firmly in one hand, grip the end of the de-mounting tool with the other hand and gently pull the pipe to release the joint.

Note: Fittings can be re-used providing there is no damage evident to the o-ring. It is not recommended to re-use the pipe end once demounted from the fitting. If an Equator fitting has been removed from a system which has been in operation for an extended period, it is advisable to replace it.

Insertion depths for Equator push-fit joints

Pipe size (mm)	Insertion depth (mm)**
10	18
15	25
22	26
28	33

**Nominal dimensions including pipe support sleeve.



Equator design applications

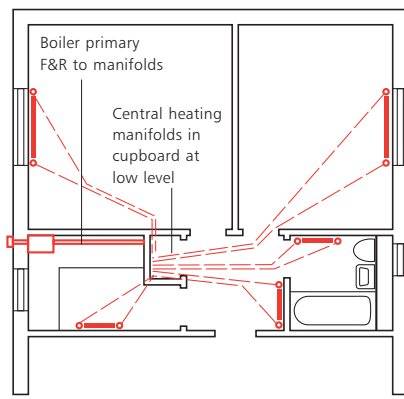
Manifold and conduit plumbing system

Manifold plumbing is ideal for both water supply and heating systems where simple distribution using minimal joints is desired.

The Equator manifold and conduit system offers these benefits:

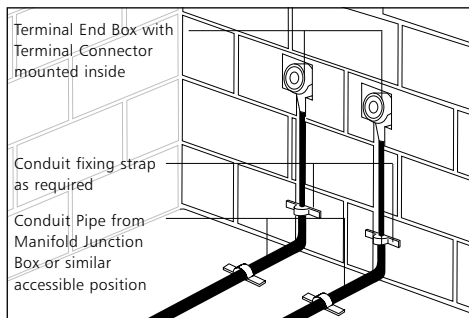
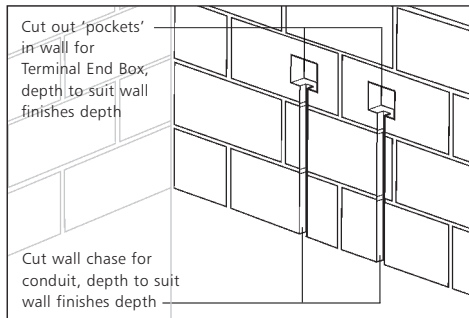
- Central connection point for all bathroom/kitchen and radiator layouts on a floor.
- Substantially fewer fittings than plumbing using traditional methods.
- Easy pipe withdrawal is possible using conduit piping.

The following shows a typical heating layout using Equator manifold and conduit system:



Other typical installations using the Equator fittings

Another application for Equator manifold and conduit system is to feed sanitary appliances, as detailed below:



Technical characteristics

The design life of Equator is at least 50 years when used for the applications and operating conditions listed in the table below:

Normal operating and pressure limits for Equator pipe and fittings

Application	Nominal system flow temp °C	Max system service temp °C	System malfunction temp °C	System max working pressure bar
Cold water system	20	20	–	12.5
Vented hot water systems	65	83	100	3.5
Unvented hot water systems to include instantaneous heaters and/or incorporating storage (excludes discharge pipes from temperature and/or pressure relief valves)	65	95	100	6.6
Vented central heating systems	82	95	100	3.5
Sealed central heating systems (excludes discharge pipes from temperature and/or pressure relief valves)	92	105	114	3.0
Underfloor heating	60	83	100	3.5

Notes

1 BS 5449 states that the central heating design flow temperature shall not exceed 82°C

2 Pipe circuits prone to repeated high level over heating such as found in gravity solid fuel and solar heating systems are not suitable for Equator

DO NOT USE FOR GAS, FUEL OIL OR COMPRESSED AIR APPLICATIONS

Storage and handling

Issue	Recommendation																																			
Protecting PE-X from UV damage	<p>PE-X pipe and fittings must be protected from UV degradation as prolonged exposure to sunlight could affect the longevity of the material.</p> <p>Polyethylene packaging or glazing inhibits the effects of ultra violet rays, therefore sealed product packs or installed products within the building will not be at risk.</p> <p>Short-term exposure to UV on building sites will not affect the PE-X products.</p> <ul style="list-style-type: none"> • Do not store bare PE-X products outside. • Do not install bare PE-X product outside without insulation or other protective covering of some kind. 																																			
Storing and handling pipes	<p>Leave the straight pipes in the transportation wrap and remove only when they are to be used.</p> <p>Cut lengths of pipe should be stored flat on a suitable pipe rack.</p> <p>Carefully cut centre of coil pipe wrap and pull from centre. This will help to prevent damage to pipe.</p> <p>Coils may be stored upright within suitable racks to ensure stability or laid flat and stacked vertically one on top of the other. When coils are stacked vertically the maximum recommended stack height is 2m coil packs.</p>																																			
Pack weights (kg)	<table border="1"> <thead> <tr> <th rowspan="2">Size</th> <th colspan="2">Straight lengths</th> <th colspan="3">Coils</th> </tr> <tr> <th>3m</th> <th>6m</th> <th>25m</th> <th>50m</th> <th>100m</th> </tr> </thead> <tbody> <tr> <td>10mm</td> <td>-</td> <td>-</td> <td>-</td> <td>2.25</td> <td>4.50</td> </tr> <tr> <td>15mm</td> <td>8.8</td> <td>17.6</td> <td>1.85</td> <td>3.70</td> <td>7.40</td> </tr> <tr> <td>22mm</td> <td>10.2</td> <td>20.4</td> <td>4.25</td> <td>8.50</td> <td></td> </tr> <tr> <td>28mm</td> <td>7.2</td> <td>14.4</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><i>Note: When transporting cut lengths or coils, do not allow the packs or bare product to drag along rough ground</i></p>	Size	Straight lengths		Coils			3m	6m	25m	50m	100m	10mm	-	-	-	2.25	4.50	15mm	8.8	17.6	1.85	3.70	7.40	22mm	10.2	20.4	4.25	8.50		28mm	7.2	14.4			
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Storing and handling fittings	<p>Fittings should be kept within the polythene bags wherever possible and stored in suitable racking.</p> <p>Bare fittings should be stored in a clean dirt free environment.</p> <p>When handling or storing bare fittings do not allow any objects to slide into the socket to avoid damage to the joint internals.</p> <p><i>Note: Do not push fingers into the push-fit sockets, the sharp stainless steel grip ring could be dangerous</i></p>																																			

Pipe

Barrier PE-X pipe – coils

Product code	Description	Length m	Price £ Coil	Price £ m
EPB15010	10mm	50	72.74	1.45
EPB110010	10mm	100	144.87	1.45
EPB12515	15mm	25	42.24	1.69
EPB15015	15mm	50	84.44	1.69
EPB110015	15mm	100	168.90	1.69
EPB12522	22mm	25	82.26	3.29
EPB15022	22mm	50	164.53	3.29

Barrier PE-X pipe – straight lengths

Product code	Description	Single Length m	Bundle size m	Price £ length	Price £ m
EPB2315	15mm	3	120	5.04	1.68
EPB2615	15mm	6	240	10.04	1.67
EPB2322	22mm	3	60	9.82	3.27
EPB2622	22mm	6	120	19.65	3.28
EPB2328	28mm	3	36	13.47	4.49
EPB2628	28mm	6	72	26.93	4.49

Stop end for pipes

Product code	Description	Bag qty	Ctn qty	Price £
ESEP10	10mm - socket	10	180	1.89
ESEP15	15mm - socket	10	120	1.58
ESEP22	22mm - socket	10	70	2.26
ESEP28	28mm - socket	10	60	4.02

Connectors & adaptors

Straight connectors

Product code	Description	Bag qty	Ctn qty	Price £
ESC10	10mm	10	70	2.30
ESC15	15mm	10	120	1.59
ESC22	22mm	10	70	2.60
ESC28	28mm	10	40	6.57

Stop end for fittings

Product code	Description	Bag qty	Ctn qty	Price £
ESEF15	15mm - spigot	10	60	0.64
ESEF22	22mm - spigot	10	50	0.83

Tank connectors* – acetal, cold water use only

Product code	Description	Bag qty	Ctn qty	Price £
ETKC152	15mm x 1/2" fast nut thread	10	60	2.69
ETKC223	22mm x 3/4" fast nut thread	10	30	3.45

*Washers not included.

Straight tap connectors* – DZR brass nut

Product code	Description	Bag qty	Ctn qty	Price £
ESTC152	15mm x 1/2" BSP nut	10	60	3.29
ESTC153	15mm x 3/4" BSP nut	5	60	3.90
ESTC223	22mm x 3/4" BSP nut	5	50	4.30

*Conical and flat rubber washers supplied.

Bent tap connector* – DZR brass nut

Product code	Description	Bag qty	Ctn qty	Price £
EBTC152	15mm x 1/2" BSP nut	10	60	4.29

*Conical and flat rubber washers supplied.

Socket/Male BSP adaptors – DZR brass body

Product code	Description	Bag qty	Ctn qty	Price £
ESKM152	15mm x 1/2" male BSP thread	10	80	4.93
ESKM223	22mm x 3/4" male BSP thread	5	30	6.01
ESKM284	28mm x 1" male BSP thread	5	30	10.01

ESKM90152	15mm x 1/2" male BSP thread - 90° bend	10	80	4.93
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Socket/Female BSP adaptors – DZR brass body

Product code	Description	Bag qty	Ctn qty	Price £
ESKF152	15mm x 1/2" female BSP thread	10	60	4.93
ESKF223	22mm x 3/4" female BSP thread	5	25	6.01
ESKF284	28mm x 1" female BSP thread	5	20	10.01

ESKF90152	15mm x 1/2" female BSP thread - 90° bend	10	60	4.93
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ECBPPB152	15mm x 1/2" female BSP thread - cross tee	5	30	9.08
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Spigot/Male BSP adaptors – DZR brass body

Product code	Description	Bag qty	Ctn qty	Price £
ESPM152	15mm x 1/2" male BSP thread	10	80	4.21
ESPM223	22mm x 3/4" male BSP thread	10	60	6.46

Spigot/Female BSP adaptors – DZR brass body

Product code	Description	Bag qty	Ctn qty	Price £
ESPF152	15mm x 1/2" female BSP thread	10	60	4.21
ESPF223	22mm x 3/4" female BSP thread	5	25	6.46

Reducers

Socket reducers

Product code	Description	Bag qty	Ctn qty	Price £
ESKR1510	15mm spigot x 10mm socket	10	70	2.46
ESKR2215	22mm spigot x 15mm socket	10	60	2.60
ESKR2822	28mm spigot x 22mm socket	10	70	5.75

Elbows

90° elbows

Product code	Description	Bag qty	Ctn qty	Price £
EB9010	10mm	10	50	3.02
EB9015	15mm	10	60	1.98
EB9022	22mm	10	50	3.12
EB9028	28mm	10	40	8.38

ERB9010	10mm - radiator bend	10	50	1.46
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Please note that pipe support sleeves should be used with this item.



Wall plate elbow – DZR brass body

Product code	Description	Bag qty	Ctn qty	Price £
EBPB152	15mm x 1/2" female BSP thread	5	30	9.47



Spigot elbows

Product code	Description	Bag qty	Ctn qty	Price £
ESB9010	10mm	10	60	3.15
ESB9015	15mm	10	80	2.11
ESB9022	22mm	10	60	5.04

Tees

Equal tees



Product code	Description	Bag qty	Ctn qty	Price £
EET10	10 x 10 x 10mm socket	10	60	3.64
EET15	15 x 15 x 15mm socket	10	50	2.84
EET22	22 x 22 x 22mm socket	10	60	4.17
EET28	28 x 28 x 28mm socket	5	30	10.92



End reduced tee

Product code	Description	Bag qty	Ctn qty	Price £
EEERT22	22 x 15 x 22mm socket	5	40	4.66



Branch reduced tees

Product code	Description	Bag qty	Ctn qty	Price £
EBRT15	15 x 15 x 10mm socket	10	50	4.27
EBRT22	22 x 22 x 15mm socket	10	80	4.66
EBRT2815	28 x 28 x 15mm socket	5	40	8.62
EBRT2822	28 x 28 x 22mm socket	5	40	10.84



Branch reduced tees – spigot

Product code	Description	Bag qty	Ctn qty	Price £
EBRTS22	22 x 22 x 15mm spigot	5	60	4.49



Branch and one end reduced tees

Product code	Description	Bag qty	Ctn qty	Price £
EBRT122	22 x 15 x 15mm socket	5	40	4.38
EBRT128	28 x 22 x 22mm socket	5	40	7.93



Both ends reduced tees

Product code	Description	Bag qty	Ctn qty	Price £
EBET22	15 x 15 x 22mm socket	5	40	4.58
EBET28	22 x 22 x 28mm socket	5	50	7.93

Valves & draincocks

Double check valves* – DZR brass body



Product code	Description	Bag qty	Ctn qty	Price £
EDCV15	15mm	5	30	13.08
EDCV22	22mm	5	20	17.44

*Body to BS 6282 : Part 1.



Shut off valves* – DZR brass body

Product code	Description	Bag qty	Ctn qty	Price £
ESV15	15mm - hot and cold	5	35	5.04
ESV22	22mm - hot and cold	5	25	8.33

*Body to BS 6675.



Appliance valve* – chrome plated DZR brass

Product code	Description	Bag qty	Ctn qty	Price £
EAV153	15mm x 3/8" male BSP thread - hot and cold	5	40	4.85

*Supplied with red and blue lever.



Draincock* – DZR brass

Product code	Description	Bag qty	Ctn qty	Price £
EDC152	15 x 1/2" spigot	5	50	4.76

*Body to BS 2879.

Accessories

Pipe clips – screw fixing, grey polypropylene



Product code	Description	Bag qty	Ctn qty	Price £
EPC115	15mm	-	200	0.27
EPC122	22mm	-	100	0.27
EPC128	28mm	-	50	0.38

Pipe clips – nail fixing, grey polypropylene



Product code	Description	Bag qty	Ctn qty	Price £
EPC310	10mm	-	200	0.18
EPC315	15mm	-	150	0.24
EPC322	22mm	-	100	0.26



Double Pipe clips – screw fixing, grey polypropylene

Product code	Description	Bag qty	Ctn qty	Price £
EPC215	15mm	-	50	0.58
EPC222	22mm	-	60	0.64
EPC228	28mm	-	50	1.10



Pipe spacer blocks – grey polypropylene

Product code	Description	Bag qty	Ctn qty	Price £
EPS15	spacer block for use with 15mm screw fixing clips	-	250	0.18
EPS22	spacer block for use with 22mm screw fixing clips	-	200	0.24



Copper pipe inserts* – black polypropylene

Product code	Description	Bag qty	Ctn qty	Price £
ECPI15	15mm	50	300	0.13
ECPI22	22mm	50	150	0.14
ECPI28	28mm	20	160	0.16

*It is recommended that when jointing copper to Equator fittings a copper pipe insert is used. This will help protect the o-ring from any sharp edges. Ensure cut copper pipe end is fully de-burred, both internally and externally. Ensure the insert sits snugly on the cut pipe end.



Pipe support sleeves* – stainless steel

Product code	Description	Bag qty	Ctn qty	Price £
EPSS10	10mm	20	300	0.27
EPSS15	15mm	50	300	0.28
EPSS22	22mm	50	150	0.35
EPSS28	28mm	20	160	0.44

*Only use Equator support sleeves with Equator pipe.



De-mounting tools – blue polypropylene

Product code	Description	Bag qty	Ctn qty	Price £
EDT10	10mm	20	200	0.27
EDT15	15mm	50	250	0.29
EDT22	22mm	50	200	0.37
EDT28	28mm	20	120	0.42



Pipe cutter – blue

Product code	Description	Bag qty	Ctn qty	Price £
EPCT28	cutter for pipe up to 28mm	1	12	22.78



Silicone lubricant

Product code	Description	Bag qty	Ctn qty	Price £
SZ100	100g bottle	-	100	17.77



Pipe detection tape

Product code	Description	Bag qty	Ctn qty	Price £
ET100	100m roll	-	1	19.71



Manifolds & fittings

Two port manifolds – nickel plated brass

Product code	Description	Bag qty	Ctn qty	Price £
EM2P2210	3/4" x 10mm - 2 socket ports	-	18	15.29
EM2P2215	3/4" x 15mm - 2 socket ports	-	18	15.94
EM2P2815	1" x 15mm - 2 socket ports	-	10	16.43



Three port manifolds – nickel plated brass

Product code	Description	Bag qty	Ctn qty	Price £
EM3P2210	3/4" x 10mm - 3 socket ports	-	12	20.03
EM3P2215	3/4" x 15mm - 3 socket ports	-	12	20.31
EM3P2815	1" x 15mm - 3 socket ports	-	7	21.48



Four port manifolds – nickel plated brass

Product code	Description	Bag qty	Ctn qty	Price £
EM4P2210	3/4" x 10mm - 4 socket ports	-	9	26.14
EM4P2215	3/4" x 15mm - 4 socket ports	-	9	26.86
EM4P2815	1" x 15mm - 4 socket ports	-	6	28.31



Two port manifolds – nickel plated brass with flow control valves

Product code	Description	Bag qty	Ctn qty	Price £
EM2PV2210	3/4" x 10mm - 2 socket ports	1	10	23.95
EM2PV2215	3/4" x 15mm - 2 socket ports	1	10	24.67
EM2PV2815	1" x 15mm - 2 socket ports	1	10	25.84



Three port manifolds – nickel plated brass with flow control valves

Product code	Description	Bag qty	Ctn qty	Price £
EM3PV2210	3/4" x 10mm - 3 socket ports	1	10	34.21
EM3PV2215	3/4" x 15mm - 3 socket ports	1	10	35.67
EM3PV2815	1" x 15mm - 3 socket ports	1	10	36.76



Four port manifolds – nickel plated brass with flow control valves

Product code	Description	Bag qty	Ctn qty	Price £
EM4PV2210	3/4" x 10mm - 4 socket ports	1	8	47.32
EM4PV2215	3/4" x 15mm - 4 socket ports	1	8	50.23

Manifold accessories

Manifold inspection boxes & lids – shock resistant white polystyrene

Product code	Description	Bag qty	Ctn qty	Price £
EMJB1	300 x 250 x 85mm*	-	1	21.16
EMJB2	480 x 250 x 85mm*	-	1	30.79

*Nominal size.





Straight air vent connectors – nickel plated brass

Product code	Description	Bag qty	Ctn qty	Price £
EMSAV22	3/4" female x 1/2" female BSP straight air vent connector	-	50	2.29



Bent air vent connectors – nickel plated brass

Product code	Description	Bag qty	Ctn qty	Price £
EMBAV22	3/4" female x 1/2" female BSP bent air vent connector	-	30	3.34



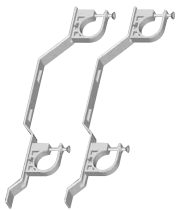
Manifold blanking plugs – nickel plated brass

Product code	Description	Bag qty	Ctn qty	Price £
EMMBC22	3/4" male BSP thread	-	25	2.11
EMMBC28	1" male BSP thread	-	25	2.69



Manifold blanking caps – nickel plated brass

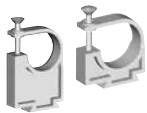
Product code	Description	Bag qty	Ctn qty	Price £
EMFBC22	3/4" female BSP thread	-	40	1.83
EMFBC28	1" female BSP thread	-	30	2.29



Manifold brackets* – zinc plated steel

Product code	Description	Bag qty	Ctn qty	Price £ Pair
EMBD22	3/4" manifold bracket	-	6	12.67
EMBD28	1" manifold bracket	-	6	12.84

*Supplied in pairs complete with two clips.



Manifold clips* – white plastic

Product code	Description	Bag qty	Ctn qty	Price £ Pair
EMCS22	manifold clips for use with 3/4" manifolds	2	50	2.89
EMCS28	manifold clips for use with 1" manifolds	2	50	2.89

*Supplied in pairs, one for close fixing and one for stand-off fixing. For use with manifold inspection box, two pairs normally required.

Conduit system



Conduit pipes – coiled, black HDPE

Product code	Description	Length m	Price £ Coil	Price £ m
ECP5015	15mm	50	54.77	1.10
ECP5022	22mm	50	65.39	1.31



Terminal end box – green polypropylene

Product code	Description	Bag qty	Ctn qty	Price £
ECTEB15	15mm	-	10	2.29



Terminal connector – DZR brass body

Product code	Description	Bag qty	Ctn qty	Price £
ECTC15	15mm socket x 1/2" female BSP thread use with terminal end box	5	25	9.89



Terminal plug – green polypropylene

Product code	Description	Bag qty	Ctn qty	Price £
ECTP15	1/2" BSP - supplied with sealing washer	-	25	0.85

All list prices are for single components unless marked.

This price list does not constitute an offer. All prices are subject to change without notice and are exclusive of VAT. A sum equivalent of the VAT chargeable will be invoiced for payment by the customer. Customer attention is drawn to the Company's official Terms and Conditions of Sale. Goods are supplied strictly in accordance with these terms and conditions, copies of which are freely available on request.



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