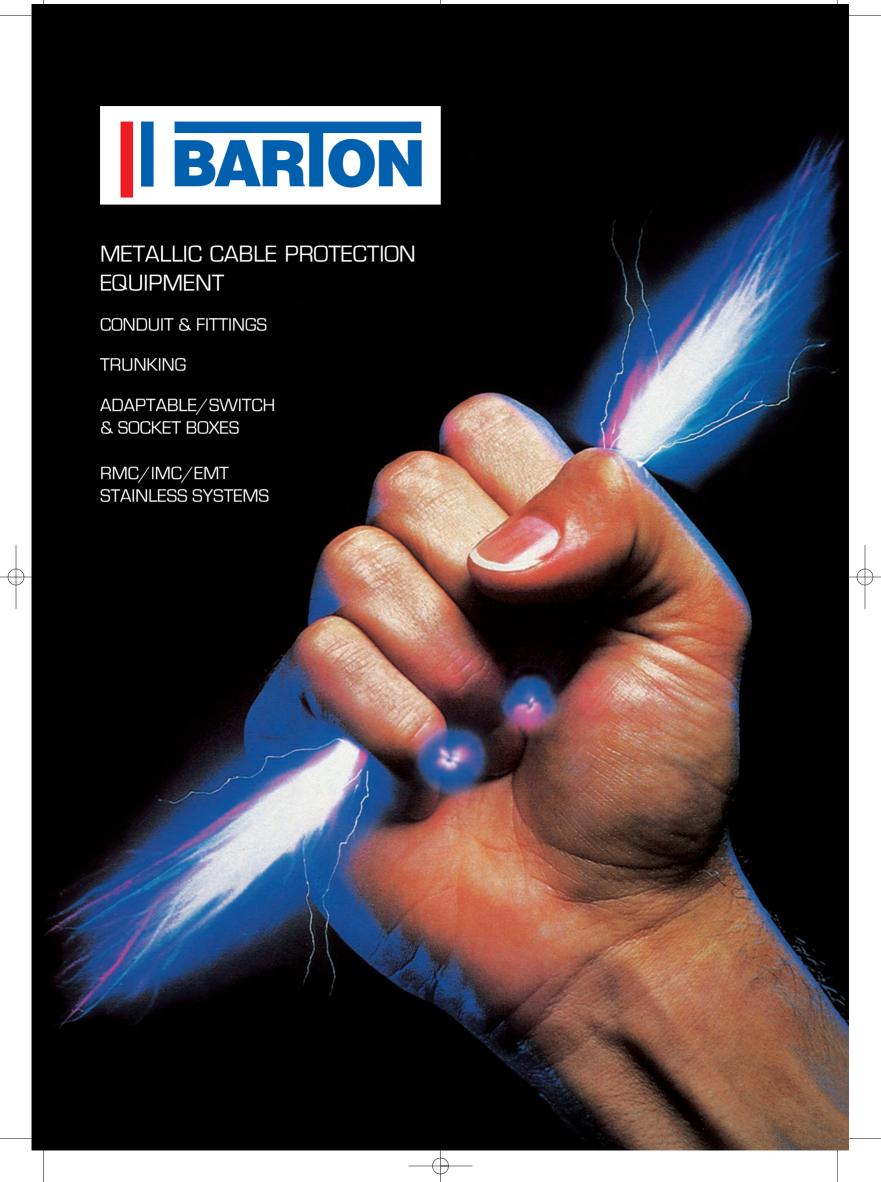
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#### THE COMPANY

Since 1983 Barton has been a subsidiary of Caparo Industries plc, a broad based group with interests in engineering and steel.

Barton Engineering is a division of Caparo Precision Tubes Ltd. Operations have been transferred to Caparo's Oldbury site in the West Midlands which houses the UK's largest capacity precision tube mill.

#### THE QUALITY

Products listed in this brochure are either manufactured by Barton Engineering under a certified ISO 9000 system, or are manufactured by our suppliers under a certified ISO system or have their quality assured to the same level by rigorous inspection at Barton Engineering.

ISO 9000 systems involve a complete set of working practices, disciplines and procedures – implemented at each stage of the manufacturing programme, from raw material inspection through to final despatch.

As a result, all Barton products satisfy a uniform standard of quality and safety.

#### THE SERVICE

Barton provide a highly efficient customer service operation. Fully trained, specialist sales personnel working with computerised equipment provide accuracy, precision and speed at all times.

#### **STANDARDS**

Barton products are generally manufactured in accordance with the relevant British Standards. Details of particular standards are given below:

Product	British and European (Euro Norme) Standards					
Conduit – steel	BS 4568 part 1 BS EN 50086-1:1994 EN61386 part 21 and					
	BS EN 50086-2:1996 BS 31	Metric sizes Imperial sizes				
Conduit Fittings & Accessories	BS EN 50086-1:1994 and					
	BS EN 50086-2:1996 BS 31	Metric sizes Imperial sizes				
Adaptable Boxes	BS 4568 part 2					
Conduit – Flexible Switch and Socket Boxes	BS EN 50086-2-3:1996 EN61386 part 23 BS 4662					

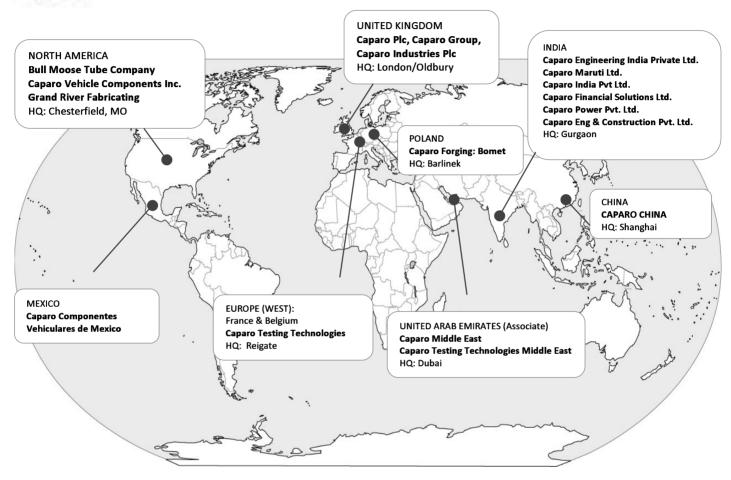
In keeping with clause 511-01-01 of BS 7671:2001 of the 17th Edition of the I.E.E. Wiring Regulations, every item of the equipment listed above complies with the relevant requirements of the current edition of the applicable British and European Standards.

Barton Engineering's operations are subject to a continuing assessment programme by BSI Management Systems UK which confirm compliance with BS EN ISO 9001:2000 certificate No FM515299.





# **Worldwide Locations**



Caparo is a fast growing global association of businesses with interests predominantly in the design, manufacture and marketing of steel, automotive and general engineering products;

Other Caparo activities encompass:

New product development and investment;

Materials testing services:

Hotels;

Media;

Furniture & interior design;

Financial services;

Energy; and

Medical products

Barton Engineering is a market leading supplier of premium quality cable management products. Operating from a modern site, Barton supplies conduit tubes and fittings, trunking, cable tray, electrical enclosures, switch and socket boxes and other associated products.

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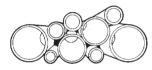


#### Please Note:

- Pre-galvanised conduit does not meet the requirements of BS 4568.
   It does not meet corrosion classifications defined in this standard.
- 2. Binding materials used to make up bundles of Conduit are not intended to be used when lifting this product which should be handled only with approved slings.

#### HEAVY GAUGE CONDUIT WELDED - SCREWED

Manufactured in accordance with BS 31/BS 4568/BS 6053/BS 6099 (I.E.C. 614) where applicable. Each 3.75 metre length screwed both ends and complete with one solid coupling.



		External Diameter	No. of lengths per bundle	No. of bundles per lift	Metres per lift	Approx. weight per lift Tonnes
	BS 4568/BS EN 50086 Part 1 Class 4 finish HOT DIPPED GALVANISED INSIDE & OUTSIDE 3.75 metre lengths	20mm 25mm 32mm	8 8 4	50 40 41	1500 1200 615	1.16 1.17 0.80
;	BS 31 Class 4 finish HOT DIPPED GALVANISED INSIDE & OUTSIDE 3.75 metre lengths	1 <sup>1</sup> / <sub>2</sub> " 2"	4 4	21 21	315 315	0.54 0.85
	PRE-GALVANISED INSIDE & OUTSIDE 3.75 metre lengths	20mm 25mm	8 8	50 40	1500 1200	1.09 1.11
	BS 4568/BS EN 50086 Part 1 Class 2 finish BLACK ENAMELLED INSIDE & OUTSIDE 3.75 metre lengths	20mm 25mm 32mm	8 8 4	50 40 41	1500 1200 615	1.16 1.17 0.80
	BS 31 Class 2 finish BLACK ENAMELLED INSIDE & OUTSIDE 3.75 metre lengths	1 <sup>1</sup> / <sub>2</sub> " 2"	4 4	21 21	315 315	0.54 0.85

Above conduit is packed and shipped in LIFTS (also known as Master Bundles). Each lift comprising the stated number of individual bundles measuring approximately 45-50 centimetres in diameter and 3.75 metres long. The weight varies according to size and finish of conduit but approximate weights are shown above.

Length								COI	NDUI	Γ DIAI	METE	R, MN	//							
of run	16	20	25	32	16	20	25	32	16	20	25	32	16	20	25	32	16	20	25	32
Metres		Stra	ight	•		One	bend	•	-	Two b	ends		Т	hree	bend	S		Four	bend	S
1					188	303	543	947	177	286	514	900	158	256	463	818	130	213	388	692
1.5	1		red by	y	182	294	528	923	167	270	487	857	143	233	422	750	111	182	333	600
2		Table			177	286	514	900	158	256	463	818	130	213	388	692	97	159	292	529
2.5		1 and	1		171	278	500	878	150	244	442	783	120	196	358	643	86	141	260	474
3					167	270	487	857	143	233	422	750	111	182	333	600				
3.5	179	290	521	911	162	263	475	837	136	222	404	720	103	169	311	563				
4	177	286	514	900	158	256	463	818	130	213	388	692	97	159	292	529				
4.5	174	282	507	889	154	250	452	800	125	204	373	667	91	149	275	500				
5	171	278	500	878	150	244	442	783	120	196	358	643	86	141	260	474				
6	167	270	487	857	143	233	422	750	111	182	333	600								
7	162	263	475	837	136	222	404	720	103	169	311	563								
8	158	256	463	818	130	213	388	692	97	159	292	529								
9	154	250	452	800	125	204	373	667	91	149	275	500								
10	150	244	442	783	120	196	358	643	86	141	260	474								

**Table 4**Conduit factors for runs incorporating bends



#### **CABLE CAPACITIES OF CONDUIT**

The following tables give guidance on the calculation of the number of single-core p.v.c insulated cables which can be located in various sizes of conduit.

The tables deal with two particular cases.

- (i) Single-core p.v.c. insulated cables in straight runs not exceeding 3 metres in length.
- (ii) Single-core p.v.c. insulated cables in straight runs exceeding 3 metres in length or in runs of any length with bends or sets.

# STRAIGHT RUNS NOT EXCEEDING 3 METRES IN LENGTH.

For each type of cable being used obtain the cable factor from Table 1. Sum all the cable factors and compare with the conduit factors given in Table 2.

The conduit sizes which will accommodate the cables are those with a conduit factor equal to or greater than the sum of the cable factors.

Type of conductor	Conductor cross-sectional area mm2	Factor
Solid	1 1.5 2.5	22 27 39
Stranded	1.5 2.5 4 6 10	31 43 58 88 146

**Table 1** Cable factors for short straight runs

These tables are based on the 17th edition of the I.E.E. Wiring Regulations Appendix 12.

Conduit dia mm	Factor
16	290
20	460
25	800
32	1400

**Table 2** Conduit factors for short straight runs

# STRAIGHT RUNS EXCEEDING 3 METRES IN LENGTH OR RUNS OF ANY LENGTH INCORPORATING BENDS OR SETS.

For each type of cable being used obtain the cable factor from Table 3.

Sum all the cable factors and compare with the conduit factor given in Table 4 for the relevant length of run and the number of bends and sets in that run.

The conduit sizes which will accommodate the cables are those with a conduit factor equal to or greater than the sum of the cable factors.

**Table 3** Cable factors for long straight runs, or runs incorporating bends

Type of conductor	Conductor cross-sectional area mm2	Factor
Solid or Stranded	1 1.5 2.5 4 6 10	16 22 30 43 58 105

#### **SPACING OF SUPPORTS FOR CONDUITS**

The following table gives guidance on the spacing of supports for conduit.

Nominal size	Maximum distance between supports			
of conduit mm	Horizontal runs m	Vertical runs m		
16mm	0.75	1.0		
17mm – 25mm	1.75	2.0		
26mm – 40mm	2.0	2.25		
Over 40mm	2.25	2.5		

This table is based on the 17th edition of the I.E.E. Wiring Regulations Appendix  $11.\,$ 

These tables are for guidance only and account needs to be taken of future wiring needs.

#### STOCKS, DIES, GUIDES

Complete set Comprising Stock, Dies and Guides.

To screw conduit dia. of 16mm up to 2".

SD2025 Complete set comprising stock, dies and guides for 20mm and 25mm Conduit. Overall Dia. of Dies 42mm.

SD32 Complete set comprising stock, die and guide for 32mm Conduit.

Overall Dia. of Die 63.5mm

SD3850 Complete set comprising stock, dies and guides for  $1^{1/}\!\!\!/_2$  and 2" Conduit. Overall Dia. of Dies  $3^{1/}\!\!\!/_2$  ".

#### Stock - Spare

Overall Dia. of Die ST42 Stock 42mm ST64 Stock 63.5mm





Die - Spare Steel						
		Overall Dia. of Die				
DE16	16mm Die	42mm				
DE20	20mm Die	42mm				
DE25	25mm Die	42mm				
DE32	32mm Die	63.5mm				
DE38	1 <sup>1</sup> /2" Die	3 <sup>1</sup> / <sub>2</sub> "				
DESO	2" Dio	21/2"				



## Guide - Spare Steel

		Overall Dia. of Di
GE16	16mm Guide	42mm
GE20	20mm Guide	42mm
GE25	25mm Guide	42mm
GE32	32mm Guide	63.5mm
GE38	$1^{1/2}$ " Guide	$3^{1/2}$ "
GE50	2" Guide	3 <sup>1</sup> / <sub>2</sub> "

#### **DRAW-IN TAPES**



**No. DT20**Size 20 Metres x 3.2mm

No. DT30

Size 30 Metres x 3.2mm



## BOXES - CIRCULAR, SMALL

Malleable Iron

Finishes: Black Enamel, Galvanised

60.3mm Internal Diameter

20mm Boxes Minimum 25mm Deep 25mm Boxes Minimum 28mm Deep Tapped M4 at 50.8mm centres.

With tapped hole in base for earthing screw.

Supplied without covers or fixing screws unless ordered.



#### Terminal No. M181

20mm 25mm Standard Pack Qty 10



#### Through No. M182

20mm 25mm Standard Pack Qty 10 10



#### Angle No. M183

20mm 25mm Size Standard Pack Qty 10



#### Tee No. M184

20mm 25mm Standard Pack Qty 10



#### Intersection No. M185

20mm 25mm Standard Pack Qty 10



#### Back Outlet No. M186

20mm 25mm Standard Pack Qty 10



#### Terminal and Back Outlet No. M187

20mm 25mm Standard Pack Qty 10



#### Through and Back Outlet No. M188

20mm 25mm Standard Pack Qty 10



#### Angle and Back Outlet No. M189

20mm 25mm Standard Pack Qty 10



#### Tee and Back Outlet No. M190

20mm 25mm Standard Pack Qty 10



#### Intersection and Back Outlet

No. M191

20mm 25mm Standard Pack Qty 10 10



#### Tangent Through No. M192

20mm 25mm Standard Pack Qty 10



#### Tangent Angle No. M193

20mm 25mm Standard Pack Qty 10



## Tangent Tee No. M194

20mm 25mm Standard Pack Qty 10



#### Branch Two Way (U) No. M195

20mm 25mm Standard Pack Qty 10 10

#### CONDUIT FITTINGS AND ACCESSORIES





Branch Three Way (Y) No. M196

20mm 25mm Size Standard Pack Oty 10



Twin Through Way (H) No. M197

20mm 25mm Standard Pack Oty 10



**BOXES - CIRCULAR, LARGE** 

Material: Black Enamel, Galvanised Finishes:

81mm Internal Diameter,

20mm and 25mm Boxes Minimum 35mm Deep. 32mm Box Minimum 38mm Deep.  $1^{1/2}$ " Box Minimum 44mm Deep. 2" Box Minimum 57mm Deep.

Malleable Iron

Tapped M4 at 71.5mm Centres.

With tapped hole in base for earthing screw.

Supplied without covers or fixing screws unless ordered.



Terminal No. M211

20mm 25mm 32mm Standard Pack Qty 5 are available on Size  $1^{1}/2^{"}$  and  $2^{"}$ special request only



Through No. M212

Size 20mm 25mm 32mm Standard Pack Qty 5 5 5 Size  $1^{1}/2$ " and 2" are available on special request only



Angle No. M213

20mm 25mm 32mm Standard Pack Oty 5 5 Size  $1^{1}/2$ " and 2" are available on special request only



Tee No. M214

Size 20mm 25mm 32mm Standard Pack Qty 5 5 Size  $1^{1}/2$ " and 2" are available on special request only



Intersection No. M215

20mm 25mm 32mm Size Standard Pack Qty 5 5 5 Size  $1^{1}/_{2}$ " and 2" are available on special request only



Back Outlet No. M216

20mm Standard Pack Qty 5



Terminal and Back Outlet No. M217

20mm Standard Pack Oty



Through and Back Outlet No. M218

20mm Standard Pack Qty 5



Angle and Back Outlet No. M219

Size 20mm Standard Pack Qty 5



Tee and Back Outlet No. M220

20mm Standard Pack Qty 5



Intersection and Back Outlet

No. M221

20mm Standard Pack Qty 5



Tangent Angle No. M222

20mm 25mm 32mm Standard Pack Qty 5



Tangent Tee No. M223

20mm 25mm 32mm Standard Pack Qty 5 5

## BARION

#### **BOXES - CIRCULAR, SMALL SPECIAL DEEP**

Malleable Iron Material:

Finishes: Black Enamel, Galvanised

60.3mm Internal Diameter x 62mm Deep. Tapped M4 at 50.8mm

Centres. With tapped hole in base for earthing screw. Supplied without covers or fixing screws unless ordered.



#### Terminal No. M231

20mm 25mm Standard Pack Qty 5 Size  $1^{1}/_{2}$ " and 2" are available on

special request only



#### Through No. M232

20mm Standard Pack Qty 5



#### Angle No. M233

20mm 25mm Standard Pack Qty 5



#### Tee No. M234

20mm 25mm Standard Pack Qty 5



#### Intersection No. M235

20mm 25mm Standard Pack Oty 5

#### **BOXES - CIRCULAR, SMALL EXTENSION PATTERN**

Material: Malleable Iron

Finishes: Black Enamel, Galvanised

60.3mm Internal Diameter

Minimum 25mm Deep 20mm Boxes 25mm Boxes Minimum 28mm Deep

Tapped M4 at 50.8mm centres.

With tapped hole in base for earthing screw.

Supplied without covers or fixing screws unless ordered.



#### Terminal No. M241

20mm 25mm Standard Pack Qty 10 10



#### Through No. M242

20mm 25mm Standard Pack Qty 10



#### Angle No. M243

20mm 25mm Standard Pack Qty 10 10



#### Tee No. M244

Size 20mm 25mm Standard Pack Qty 10



#### Intersection No. M245

20mm 25mm Standard Pack Qty 10



#### **BOXES - CEILING ROSE**

Material: Malleable Iron

Finishes: Black Enamel, Galvanised

With tapped hole in base for earthing screw. Internal Diameter minimum 55mm and Minimum Depth 12.5mm. Tapped M4 at 50.8mm Centres.



#### Shallow No. M361

Size 20mm Standard Pack Qty 25

Note this is a special modified version of M186



#### **BOXES - LOOPING IN**

With tapped hole in base for earthing screw. 20mm clearance.



#### Medium, Steel No. R274

Material: Steel. Finishes: Black Enamel, Galvanised. With tapped hole in base for earthing screw. 1 Hole or 4 Knockouts. Size: 29mm Deep x 63.5mm Internal Diameter. Standard Pack Qty: 10



#### Medium, Malleable Iron No. M272

Material: Malleable Iron. Finishes: Black Enamel, Galvanised. With tapped hole in base for earthing screw. 1,2,3,4 Holes. Minimum 31mm Deep x 63.5mm Internal Diameter. Standard Pack Qty: 10

#### **ADAPTORS**

Material: Finish:

Steel

Electro Zinc Plated



#### Imperial to Metric Adaptor No. R114

Size: 3/4" MALE to 20mm FEMALE

Standard Pack Qty: 100

Size: 1" MALE to 25mm FEMALE

Standard Pack Qty: 50



## Metric to Imperial Adaptor No. R115

Size: 20mm MALE to <sup>3</sup>/<sub>4</sub>" FEMALE

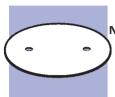
Standard Pack Qty: 100

Size: 25mm MALE to 1" FEMALE

Standard Pack Qty: 50



#### **COVERS - CIRCULAR SMALL**

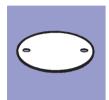


Cover, Light, Overlapping, Loose,

No Screws No. R280 Material: Steel

Finishes: Black Enamel, Galvanised

Standard Pack Qty: 50



Cover, Light, Loose, No Screws. No. R281

Material: Steel

Finishes: Black Enamel, Galvanised

Standard Pack Qty: 100



Cover, Heavy, Loose, No Screws No. R282

Material: Steel

Finishes: Black Enamel, Galvanised

Standard Pack Qty: 50



Cover, Heavy, Loose, No Screws No. M283

Material: Malleable Iron

Finishes: Black Enamel, Galvanised

Standard Pack Qty: 50



Cover, Ball and Socket, Earthed No. M286

Material: Malleable Iron with copper earthwire Finishes: Black Enamel, Galvanised Size 20mm 25mm

Standard Pack Qty: 25



Cover, Hook Dome, Combined No. R287

Material: Steel

Finishes: Black Enamel, Galvanised

Standard Pack Qty: 25



Cover, Female Dome No. M288

Material: Malleable Iron

Finishes: Black Enamel, Galvanised 20mm 25mm Standard Pack Qty 25 25



Cover, Female Dome

No. R289

Material: Steel

Finishes: Black Enamel, Galvanised 20mm 25mm Standard Pack Qty 25 25



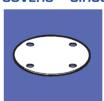
Cover, Ball and Socket, Earthed No. R290

Material: Steel

Finishes: Black Enamel, Galvanised 20mm

Standard Pack Qty 25

#### **COVERS - CIRCULAR LARGE**



Cover, Light, Loose, No Screws No. R381

Material: Steel

Finishes: Black Enamel, Galvanised

Standard Pack Qty: 50



Cover, Heavy, Loose, No Screws No. M383

Replaced by R282





Cover, Ball and Socket, Earthed

Replaced by M286



Cover, Female Dome, No. M388 Replaced by M288



#### **HOOKS AND LOOPS**



Loop, Male No. M501 Material: Malleable Iron

Finishes: Black Enamel, Galvanised 20mm 25mm Standard Pack Qty 50 50



Hook, Male No. M502

Material: Malleable Iron

Finishes: Black Enamel, Galvanised 20mm 25mm Size Standard Pack Qty 50 50



Loop, Female No. M503

Material: Malleable Iron

Finishes: Black Enamel, Galvanised Size 20mm 25mm Standard Pack Qty 50 50



Hook, Female No. M504

Material: Malleable Iron

Finishes: Black Enamel, Galvanised Size 20mm 25mm Standard Pack Qty 50 50



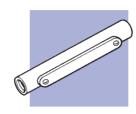


Coupling, Solid No. R101

Material: Steel

Finishes: Black Enamel, Galvanised

20mm 25mm 32mm Size Standard Pack Qty 100 50 50 2" Size  $1^{1}/2$ " Standard Pack Qty 25 20



Coupling, Inspection No. M103

Material: Malleable Iron Body, 16mm – 32mm, Steel Cover, 1<sup>1</sup>/<sub>2</sub>" – 2" Malleable Iron Cover Finishes: Black Enamel, Galvanised

20mm 25mm 32mm Standard Pack Qty 25 10

2" Size  $1^{1/2}$ Standard Pack Qty 5 1



Coupling, Earthing No. M105

Material: Malleable Iron

Finishes: Black Enamel, Galvanised

20mm 25mm 32mm Standard Pack Qty 50 50 25  $1^{1/2}$ 2" Size

25 10 Standard Pack Qty



Nipple, Normal No. F107

Material: Steel

Finishes: Self Colour, Galvanised

20mm 25mm 32mm Size Standard Pack Qty 100 100 50 Size 11/2" 2" Standard Pack Qty 50 25



Nipple, 300mm Long No. F109

Material: Steel

Finishes: Black Enamel. Galvanised

20mm 25mm 32mm Standard Pack Otv 10 10 10 Size  $1^{1}/_{2}$ " 2" Standard Pack Qty 10



Coupling, Flanged, No. M110/M111

Material: Malleable Iron

Complete with washer and brass bush N.B. – Neoprene washers effect a greater degree of protection from the ingress of

dust and/or liquids.

Finishes: Black Enamel, Galvanised

M110 (lead washer), M111 (Neoprene washer)

Size 20mm 25mm 32mm Standard Pack Qty 50 50 25

11/2" Size Standard Pack Qty 25

## BARION

#### **ELBOWS**

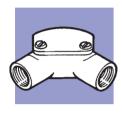


#### Elbow, Solid No. M121

Material: Malleable Iron

Finishes: Black Enamel, Galvanised 20mm 25mm 32mm Standard Pack Oty 25 25 10 2" Size  $1^{1/2}$ "

are available on request only



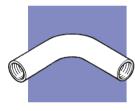
#### Elbow, Channel Inspection, No. M123

Material: Malleable Iron, 20mm - 32mm Steel Cover 11/2" - 2" Malleable Iron Cover Finishes: Black Enamel, Galvanised

20mm 25mm 32mm Size 25 25 Standard Pack Oty 10 11/2" 2"

are available on request only





#### Bends, Normal, Internal Thread

No R141

Size

Material: Steel

Finishes: Black Enamel, Galvanised Size 20mm 25mm 32mm Standard Pack Qty 25 10 5 11/2" Size

are available on request only



#### Bend. Inspection No. M145

Material: Malleable Iron, 20mm - 32mm Steel Cover 11/2" - 2" Malleable Iron Cover Finishes: Black Enamel, Galvanised Size 20mm 25mm 32mm Standard Pack Qty 25 10 5  $1^{1/2}$ " Size

are available on request only

**WASHERS** 



## Lead No. F112

Neoprene No. F113

20mm 25mm 32mm Size Standard Pack Qty 50 50 25 Size  $1^{1}/2$ "

Standard Pack Qty 25



#### Serrated No. F116

Material: Steel

Finishes: Self Colour, Zinc Plated

20mm 25mm 32mm Standard Pack Qty 100 100 100

#### **TEES**



#### Tee, Solid No. M131

Material: Malleable Iron

Finishes: Black Enamel, Galvanised 20mm 25mm 32mm Standard Pack Oty 25 25 10 2" Size  $1^{1/2}$ "

are available on request only



#### Tee, Channel Inspection, No. M133

Material: Malleable Iron, 20mm - 32mm Steel Cover  $1^{1/2}$ " – 2" Malleable Iron Cover Finishes: Black Enamel, Galvanised 20mm 25mm 32mm Size

Standard Pack Qty 25 20 10 2" Size  $1^{1/2}$ "

are available on request only

#### RINGS



#### Ring, Adaptor No. M370

Material: Malleable Iron

Finishes: Black Enamel, Galvanised

Standard Pack Qty: 100



### Ring, Extension No. R294

Material: Steel

Finishes: Black Enamel. Galvanised

Size 6mm 10mm 13mm Standard Pack Qty 100 50 50 Size 16mm 19mm 25mm Standard Pack Qty 25 25 25 Size 32mm 38mm 50mm Standard Pack Qty 10 10 10



#### Clip, Earthing No. F506

Material: Copper Finish: Self Colour

Size 20mm 25mm 32mm 100 100 50 Standard Pack Qty 2" Size  $1^{1}/2''$ Standard Pack Qty 50 50



#### **BUSHES**



#### Bush, Short Male No. F531

Material: Brass Finish: Self Colour

Size 20mm 25mm 32mm Standard Pack Qty 100 50 50 Size  $1^{1}/2$ " 2" Standard Pack Oty 50 25



#### Bush, Long Male No. F532

Material: Brass Finish: Self Colour



#### Bush, Female No. F534

Material: Brass Finish: Self Colour

#### **REDUCERS**



#### Reducer No. M471

Material: Malleable Iron

Finishes: Black Enamel, Galvanised

100

 $32 \times 25 mm \quad 1^{1}/_{4}$ " x 20mm 50 50

50

1<sup>1</sup>/<sub>4</sub>" x 25mm 1<sup>1</sup>/<sub>2</sub>" x 20mm 50 50

1<sup>1</sup>/<sub>2</sub>" x 25mm 1<sup>1</sup>/<sub>2</sub>" x 32mm 50 50

2" x 25mm 2" x 32mm 25 25

 $2^{"} \times 1^{1/2}^{"}$  25

#### PLUGS AND GLANDS



#### Plug, Hexagon Head, No. M527

Material: Malleable Iron

Finishes: Black Enamel, Galvanised Size 20mm 25mm 32mm Standard Pack Qty 100 100 100 Size  $1^{1}/2^{n}$  2"

Size  $1^{1}/_{2}$ " 2" Standard Pack Qty 50 25



#### Plug, Slotted Head No. F535

Material: Brass Finishes: Self Colour

Size 20mm 25mm 32mm Standard Pack Qty 100 100 100 Size  $1^{1}/_{2}$ " 2" Standard Pack Qty 100 50



#### Gland for T.R.S. or similar cable

No. F538 Material: Brass Finishes: Self Colour

Size 20mm 25mm Standard Pack Qty 100 100

#### **LOCKNUTS**



#### Locknut, Hexagon Light No. R507

Material: Steel

Finishes: Black Enamel, Galvanised



#### Locknut, Hexagon Heavy No. M508

Material: Malleable Iron

Finishes: Black Enamel, Galvanised



#### Locknut, Circular, Milled Edge No. F505

Material: Steel

Finishes: Self Colour, Zinc Plated

Size 20mm 25mm 32mm Standard Pack Qty 100 100 100

Size  $1^{1/2}$ " 2" Standard Pack Qty 50 25



#### **SADDLES**



#### Saddle, Hospital No. M362

Material: Malleable Iron Base, with Steel Top Finishes: Black Enamel, Galvanised

10



#### Saddle, Distance No. M363

Standard Pack Qty 25

Material: Iron Base with Steel Top Finishes: Black Enamel, Galvanised



#### Saddle, Spacer Bar, One Way No. R431

Material: Steel

Finishes: Black Enamel, Galvanised



#### Clip (Half Saddle) No. F441

Material: Steel

Finishes: Black Enamel, Galvanised
Size 20mm 25mm
Standard Pack Qty 100 100
Size 32mm
Standard Pack Qty 100



#### Saddle, 1 Way (Single) No. R451

Material: Steel

Finishes: Black Enamel, Galvanised Size 20mm 25mm 32mm

Standard Pack Qty 100 100 100 Size  $1^{1}/2$ " 2" Standard Pack Qty 100 50



#### Crampet, Steel No. F461

Material: Steel

Finishes: Black Enamel, Galvanised Size 20mm 25mm Standard Pack Qty 100 100

#### **SCREWS**



#### Brass. M4 Pan Head No. F645

Length: 6mm 10mm 12mm 16mm

20mm 25mm

Standard Pack Qty: 100



#### Brass. M3.5 Pan Head No. F646

Length: 6mm 10mm 12mm 16mm

20mm 25mm

Standard Pack Qty: 100



## Brass. M3.5 Raised Countersunk

No. F647

Length: 6mm 10mm 12mm 16mm

20mm 25mm

Standard Pack Qty: 100



#### Brass. M3.5 Cheese Head No. F648

Length: 6mm 10mm 12mm 16mm

20mm 25mm

Standard Pack Qty: 100



#### Brass. M4 Earth Terminal Studs

No. F657

Standard Pack Qty: 100



## Screw - Steel, Bright Zinc Plated.

M4 Pan Head No. F645

Length: 5mm 6mm Standard Pack Qty: 100



Screw - Steel, Bright Zinc Plated. M3.5 Pan Head No. F646

Length: 5mm 6mm Standard Pack Qty: 100



#### **GASKETS**



Rubber Gasket for Coupling, Inspection No. F401

Size 20mm 25mm 32mm

Size  $1^{1/2}$ " 2"

#### NO STANDARD PACK - ORDER AS REQUIRED



Rubber Gasket for Bend, Inspection No. F408

Size 20mm 25mm 32mm

Size  $1^{1}/2$ " 2"



Rubber Gasket for Elbow, Channel Inspection No. F402

Size 20mm 25mm 32mm

Size  $1^{1/2}$ " 2"



Rubber Gasket for Box, Small Circular No. F409



Rubber Gasket for Elbow, Circular Inspection No. F403



Rubber Gasket for Box, Large Circular No. F410

Rubber Gaskets also available for all sizes of Adaptable Boxes **No. F415** 



Rubber Gasket for Tee, Channel Inspection No. F405

Size 20mm 25mm 32mm

Size  $1^{1}/2$ " 2"



Barton Adaptable Boxes are manufactured from steel and are available with plain sides or knock-outs.

The standard finishes are Black Enamel and Hot Dipped Galvanised.

Where boxes are supplied with knock-outs the number and size are as follows:

Width of side	Number of K.O.'s in each side	Size of K.O.
3"	2	20mm
4"	3	20mm
6"	4	20mm
9"	6	20mm
12"	6	20mm

Flanged lids are fitted as standard to all boxes and are secured by M5 x 8mm mushroom head screws.

Boxes can be supplied to order with overlapping flat lids at an extra charge.

Rubber gaskets are available and supplied to order at an extra charge.

The complete range is manufactured in accordance with BS  $4568 \, \text{Part} \, 2$ .

A range of Pre-Galvanised Adaptable Boxes are also available on request.



#### Adaptable Boxes Plain No. R261

Size	Pack	
mm	Inches	Qty
75 x 75 x 37.5	3 x 3 x 1 <sup>1</sup> / <sub>2</sub>	10
75 x 75 x 50	3 x 3 x 2	10
75 x 75 x 75	3 x 3 x 3	6
100 x 75 x 37.5	4 x 3 x 1 <sup>1</sup> / <sub>2</sub>	10
100 x 75 x 50	4 x 3 x 2	10
100 x 100 x 37.5	4 x 4 x 1 <sup>1</sup> / <sub>2</sub>	10
100 x 100 x 50	4 x 4 x 2	10
100 x 100 x 75	4 x 4 x 3	6
150 x 75 x 37.5	$6 \times 3 \times 1^{1/2}$	6
150 x 75 x 50	6 x 3 x 2	6
150 x 75 x 75	6 x 3 x 3	6
150 x 100 x 37.5	$6 \times 4 \times 1^{1/2}$	6
150 x 100 x 50	6 x 4 x 2	6
150 x 100 x 75	6 x 4 x 3	6
150 x 150 x 37.5	$6 \times 6 \times 1^{1/2}$	6
150 x 150 x 50	6x 6x2	6
150 x 150 x 75	6x 6x3	4
150 x 150 x 100	6x 6x4	2
225 x 75 x 37.5	$9 \times 3 \times 1^{1/2}$	6
225 x 75 x 50	9 x 3 x 2	6
225 x 75 x 75	9 x 3 x 3	6
225 x 150 x 37.5	$9 \times 6 \times 1^{1/2}$	4
225 x 150 x 50	9 x 6 x 2	4
225 x 150 x 75	9 x 6 x 3	4
225 x 150 x 100	9 x 6 x 4	2
225 x 225 x 50	9x 9x2	2
225 x 225 x 75	9 x 9 x 3	2
225 x 225 x 100	9 x 9 x 4	1
300 x 150 x 50	12 x 6 x 2	2
300 x 150 x 75	12 x 6 x 3	2
300 x 150 x 100	12 x 6 x 4	2
300 x 225 x 50	12 x 9 x 2	2
300 x 225 x 75	12 x 9 x 3	1
300 x 225 x 100	12 x 9 x 4	1
300 x 300 x 50	12 x 12 x 2	2
300 x 300 x 75	12 x 12 x 3	1
300 x 300 x 100	12 x 12 x 4	1



Adaptable Boxes with Knock-outs No. R262



# STANDARD FLEXIBLE METALLIC CONDUIT (UNPACKED)

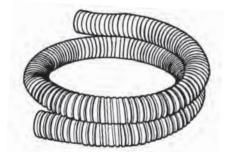
Electro Galvanised Steel - No. F561

Internal Diameter	6mm	10mm	12mm	
	16mm	20mm	25mm	
	32mm	40mm	50mm	

# DAMP-PROOF FLEXIBLE METALLIC CONDUIT (COTTON PACKED)

Electro Galvanised Steel - No. F571

Internal Diameter	6mm	10mm	12mm	
	16mm	20mm	25mm	
	32mm	40mm	50mm	



Standard Coil lengths:  $6\text{mm-}32\text{mm} - 15\text{ metre lengths} \\ 40\text{mm} \text{ and } 50\text{mm} - 7.5\text{ metre lengths}$ 

Also available in 10 or 30m lengths

#### P.V.C. COVERED FLEXIBLE METALLIC CONDUIT

Electronic Galvanized Steel PVC Covered NO. F581

Available as standard in black P.V.C. sheathed for added protection against ingress of dirt, moisture and greases.

For additional flexibility vacuum formed black P.V.C. covered is also available to order.

A full range of fittings is also available.

#### **SPACING OF SUPPORTS FOR CONDUITS**

The following table gives guidance on the spacing of support for flexible conduit.

Nominal size	Maximum distance between supports		
of conduit	Horizontal runs m	Vertical runs m	
16mm and Under	0.3	0.5	
17mm-25mm	0.4	0.6	
26mm-40mm	0.6	0.8	
Over 40	0.8	1.0	



#### Adaptor, Flexible Tube, Conduit, Male Thread No. F536

Material: Brass. Finishes: Self colour.

Conduit x Flexible	Standard Pack
Conduit I/D	Quantity
16mm x 16mm	100
20mm x 16mm	100
20mm x 20mm	50
25mm x 25mm	50
32mm x 32mm	25
1 <sup>1</sup> / <sub>2</sub> " x 40mm	20
2" x 50mm	10



# Adaptor, Flexible Tube, Conduit, Female Thread No. F537

Material: Brass. Finishes: Self colour.

Conduit x Flexible	Standard Pack
Conduit I/D	Quantity
20mm x 16mm	100
20mm x 20mm	50
25mm x 20mm	50
25mm x 25mm	50
32mm x 32mm	25
1 <sup>1</sup> / <sub>2</sub> " x 40mm	20
2" x 50mm	10



A comprehensive range of switch and socket boxes manufactured in four depths 16mm, 25mm, 35mm and 48mm and all available in one and two gang configurations. To facilitate the easy fitting of accessories into the boxes, they are designed with at least one adjustable lug.



Adjustable Lug

All Barton RE Series Switch and Socket Boxes include a unique Regulation Brass Earth Terminal into which several earth wires can be fitted from either the inside or outside of the box.



Regulation Brass Earth Terminal

Each box is produced with a specified number and size of knock outs which allow adequate cable entries for wiring purposes.

**Nominal Dimensions:** 

One Gang – 72mm x 72mm

Two Gang – 132mm x 72mm

Material: Pre-coated galvanised steel

Barton switch and socket boxes are manufactured in accordance with BS 4662.

#### SWITCH AND SOCKET BOXES





# Switch and Socket Boxes 35mm deep No. BC82RE2025

Gang	Type of Entry	Fixing Lugs	Pack Qty.
One Gang	20 & 25mm KO's	3 fixed and 1 adjustable	10

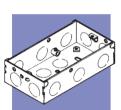
#### **EXPORT SPECIFICATION**



#### Switch and Socket Boxes 35mm deep No. BC88TH

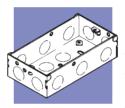
Gang	Type of Entry	Fixing Lugs	Pack Qty.
One Gang	20mm KO's	4 fixed	20

AS ABOVE IN LIGHT GAUGE No. BC88TH/E



#### Switch and Socket Boxes 35mm deep No. BC92RE

Gang	Type of Entry	Fixing Lugs	Pack Qty.
	20 & 25mm KO's	1 fixed and 1 adjustable	5



#### Switch and Socket Boxes 35mm deep No. BC98TH

Gang	Type of Entry	Fixing Lugs	Pack Qty.
Two	20 & 25mm	2 fixed	10
Gang	KO's		

AS ABOVE IN LIGHT GAUGE No. BC98TH/E

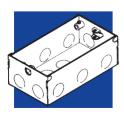


#### Switch and Socket Boxes

47mm deep No. BC14RE

(For use with double thickness partitioning)

Gang	Type of Entry	Fixing Lugs	Pack Qty.
One	20mm	2 fixed and	20
Gang	KO's	2 adjustable	



#### Switch and Socket Boxes

47mm deep No. BC22RE

(For use with double thickness partitioning)

Gang	Type of Entry	Fixing Lugs	Pack Qty.
	20 & 25mm KO's	1 fixed and 1 adjustable	10



# THE BARTON CABLE TRUNKING RANGE

#### QUICK-FIX RANGE (QF)

This is the most popular range of trunking. It features a rapid and fool proof method for securing the lid, by simply twisting turnbuckles through 90 degrees. These lock the lid in place, providing full earth continuity between body and lid.

The range is manufactured from high quality galvanised steel as standard and is also available as an option with a coloured powder coating.

#### **LIGHTING TRUNKING (LT)**

The range of lighting trunking has a 50 x 50mm body section with either a white PVC or steel snap-in lid. Fittings are common to the Quick-Fix and Screw-Fix ranges, providing complete compatability between cable and lighting trunking.

The standard finish is high quality galvanised steel.

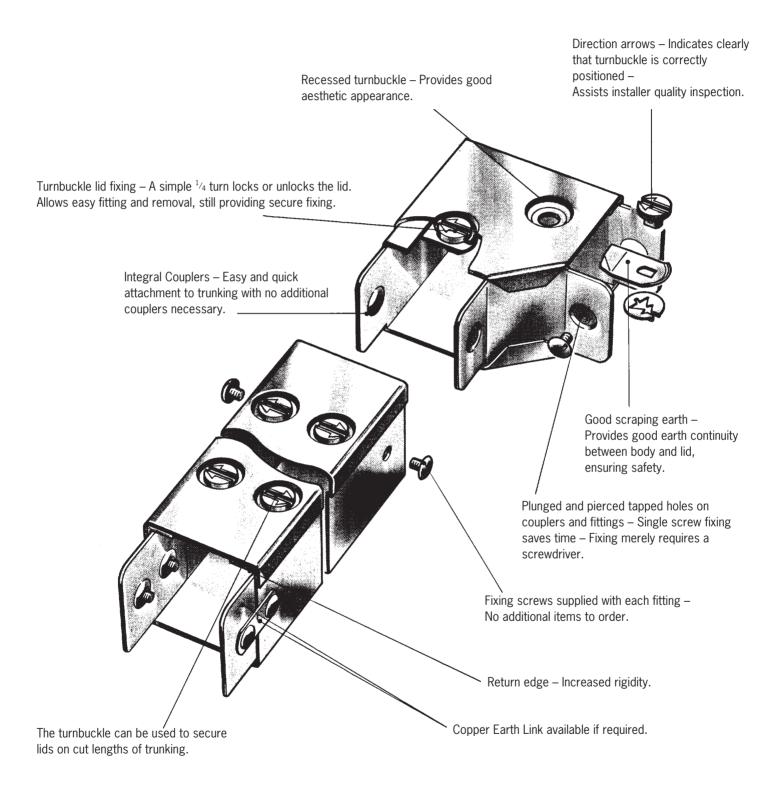
#### **QUALITY**

All galvanised steel used in the manufacture of cable trunking and fittings complies with BS EN 10142 (and BS 4678), ensuring a no-flake, no-fracture product.

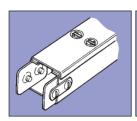
#### **MULTI COMPARTMENT TRUNKING**

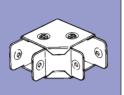
We manufacture Multi Compartment Trunking. Please see Page 28 for further information.

## QUICK-FIX













Dimensions (mm)	CABLE TRUNKING (See note (1) below)	RIGHT ANGLE BEND - TOP LID	RIGHT ANGLE BEND - INSIDE LID	RIGHT ANGLE BEND - OUTSIDE LID
50 x 50	QF/22	QF/RABT 22	QF/RABI 22	QF/RABO 22
75 x 50	QF/32	QF/RABT 32	QF/RABI 32	QF/RABO 32
75 x 75	QF/33	QF/RABT 33	QF/RABI 33	QF/RABO 33
100 x 50	QF/42	QF/RABT 42	QF/RABI 42	QF/RABO 42
100 x 75	QF/43	QF/RABT 43	QF/RABI 43	QF/RABO 43
100 x 100	QF/44	QF/RABT 44	QF/RABI 44	QF/RABO 44
150 x 50	QF/62	QF/RABT 62	QF/RABI 62	QF/RABO 62
150 x 75	QF/63	QF/RABT 63	QF/RABI 63	QF/RABO 63
150 x 100	QF/64	QF/RABT 64	QF/RABI 64	QF/RABO 64
150 x 150	QF/66	QF/RABT 66	QF/RABI 66	QF/RABO 66
225 x 100	QF/94	QF/RABT 94	QF/RABI 94	QF/RABO 94









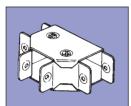


Dimensions (mm)	45 DEGREE BEND - TOP LID	45 DEGREE BEND - INSIDE LID	45 DEGREE BEND - OUTSIDE LID	4 WAY BOX	HANGER
50 x 50	QF/FFT 22	QF/FFI 22	QF/FFO 22	QF/FW 22	0F/H 22
75 x 50	QF/FFT 32	QF/FFI 32	QF/FFO 32	QF/FW 32	0F/H 32
75 x 75	QF/FFT 33	QF/FFI 33	QF/FFO 33	QF/FW 33	QF/H 33
100 x 50	QF/FFT 42	QF/FFI 42	QF/FFO 42	QF/FW 42	QF/H 42
100 x 75	QF/FFT 43	QF/FFI 43	QF/FFO 43	QF/FW 43	QF/H 43
100 x 100	QF/FFT 44	QF/FFI 44	QF/FFO 44	QF/FW 44	QF/H 44
150 x 50	QF/FFT 62	QF/FFI 62	QF/FFO 62	QF/FW 62	QF/H 62
150 x 75	QF/FFT 63	QF/FFI 63	QF/FFO 63	QF/FW 63	QF/H 63
150 x 100	QF/FFT 64	QF/FFI 64	QF/FFO 64	QF/FW 64	QF/H 64
150 x 150	QF/FFT 66	QF/FFI 66	QF/FFO 66	QF/FW 66	QF/H 66
225 x 100	QF/FFT 94	QF/FFI 94	QF/FFO 94	QF/FW 94	QF/H 94

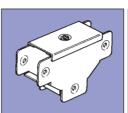
(1) Cable Trunking – 3m length complete with lid and couplers.

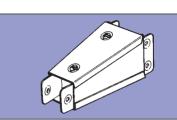
Product Code Example. QF/RABT 22. ie. Quick-Fix/Right Angle Bend Top 2" x 2".

All 50 x 50mm Fittings are compatible with 50 x 50mm Lighting Trunking.









Dimensions (mm)	TEE BEND - TOP LID	TEE BEND - INSIDE LID	TEE BEND - OUTSIDE LID	REDUCER	
50 x 50	QF/TT 22	QF/TI 22	QF/TO 22		
75 x 50	QF/TT 32	QF/TI 32	QF/TO 32	75 x 50 TO 50 x 50mm	QF/RED 32/22
75 x 75	QF/TT 33	QF/TI 33	QF/TO 33	75 x 75 TO 50 x 50mm	QF/RED 33/22
100 x 50	QF/TT 42	QF/TI 42	QF/TO 42	75 x 75 TO 75 x 50mm	QF/RED 33/32
100 x 75	QF/TT 43	QF/TI 43	QF/TO 43	100 x 50 TO 50 x 50mm	QF/RED 42/22
100 x 100	QF/TT 44	QF/TI 44	QF/TO 44	100 x 75 TO 50 x 50mm	QF/RED 43/22
150 x 50	QF/TT 62	QF/TI 62	QF/TO 62	100 x 100 TO 50 x 50mm	QF/RED 44/22
150 x 75	QF/TT 63	QF/TI 63	QF/TO 63	100 x 100 TO 75 x 75mm	QF/RED 44/33
150 x 100	QF/TT 64	QF/TI 64	QF/TO 64	150 x 100 TO 100 x 100mm	QF/RED 64/44
150 x 150	QF/TT 66	QF/TI 66	QF/TO 66	150 x 150 TO 100 x 100mm	QF/RED 66/44
225 x 100	QF/TT 94	QF/TI 94	QF/TO 94	150 x 150 TO 150 x 100mm	QF/RED 66/64

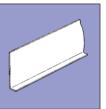












Dimensions (mm)	STOP END	COUPLER	FLANGED COUPLER	CABLE RETAINER	PIN RACK	LOOSE SEPARATOR 3m LENGTHS
50 x 50	QF/SE 22	QF/C 2	QF/FC 2	QF/CRS 2	QF/PR 22	QF/LS 2
75 x 50	QF/SE 32	QF/C 2	QF/FC 2	QF/CRS 3	QF/PR 32	QF/LS 2
75 x 75	QF/SE 33	QF/C 3	QF/FC 3	QF/CRS 3	QF/PR 33	QF/LS 3
100 x 50	QF/SE 42	QF/C 2	QF/FC 2	QF/CRS 4	QF/PR 42	QF/LS 2
100 x 75	QF/SE 43	QF/C 3	QF/FC 3	QF/CRS 4	QF/PR 43	QF/LS 3
100 x 100	QF/SE 44	QF/C 4	QF/FC 4	QF/CRS 4	QF/PR 44	QF/LS 4
150 x 50	QF/SE 62	QF/C 2	QF/FC 2	QF/CRS 6	QF/PR 62	QF/LS 2
150 x 75	QF/SE 63	QF/C 3	QF/FC 3	QF/CRS 6	QF/PR 63	QF/LS 3
150 x 100	QF/SE 64	QF/C 4	QF/FC 4	QF/CRS 6	QF/PR 64	QF/LS 4
150 x 150	QF/SE 66	QF/C 6	QF/FC 6	QF/CRS 6	QF/PR 66	QF/LS 6
225 x 100	QF/SE 94	QF/C 4	QF/FC 4	QF/CRS 9	QF/PR 94	QF/LS 4

<sup>\*2</sup> Metre lengths available to order.

Hangers are available with  $11\,\mathrm{mm}$  or  $21\,\mathrm{mm}$  holes.

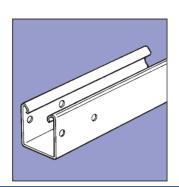
Manufactured from pre-galvanised sheet steel to BS EN 10142.

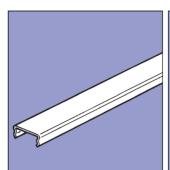
<sup>\*</sup>Powder-coated finishes are available to suit customer requirements.

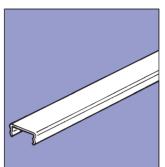
<sup>\*</sup>Non gusset fittings and accessories are available.

#### LIGHTING TRUNKING

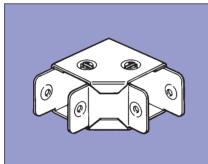


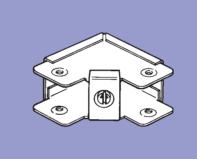


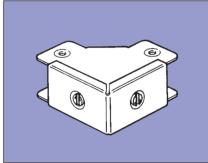




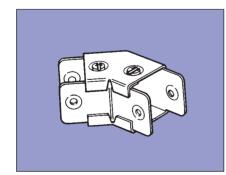
Dimensions mm	LIGHTING TRUNKING – BODY ONLY		METAL LID	P.V.C. LID
50 x 50	3.5M long LT22/3.5	5.0M long LT22/5.0	2M long	2M long
30 x 30	4.5M long LT22/4.5	6.0M long LT22/6.0	LT2/ML	LT2/PVCL

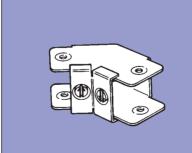


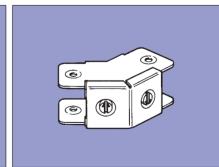




Dimensions mm	RIGHT ANGLE BEND - TOP LID	RIGHT ANGLE BEND - INSIDE LID	RIGHT ANGLE BEND - OUTSIDE LID
50 x 50	QF/RABT 22	QF/RABI 22	QF/RABO 22
30 X 30			



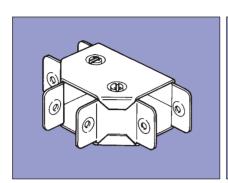


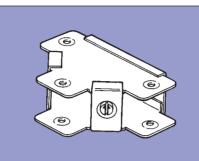


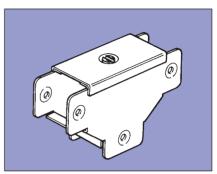
Dimensions mm	45 DEGREE BEND - TOP LID	45 DEGREE BEND - INSIDE LID	45 DEGREE BEND - OUTSIDE LID
50 x 50	QF/FFT 22	QF/FFI 22	QF/FF0 22
30 x 30			

Product Code Example QF/RABT 22 i.e. Quick-Fix/Right Angle Bend Top 2" x 2".

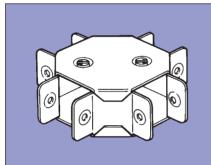
## BARION

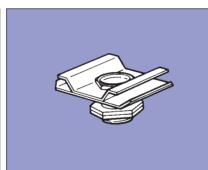


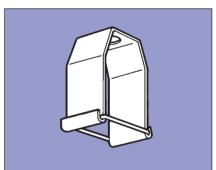




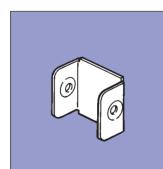
Dimensions mm	TEE BEND - TOP LID	TEE BEND - INSIDE LID	TEE BEND - OUTSIDE LID
50 x 50	QF/TT 22	QF/TI 22	QF/TO 22
30 X 30			

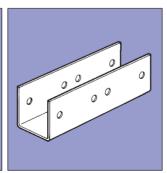


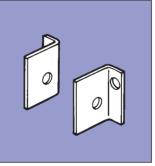


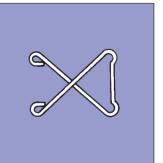


Dimensions mm	FOUR WAY BOX	SUSPENSION UNIT	HANGER
50 x 50	QF/FW 22	LT/SU 22	LT/H 22
30 X 30			









Dimensions mm	STOP END	COUPLER	FLANGED COUPLER	CABLE RETAINER
50 x 50	QF/SE 22	LT/SC 22 (Short)	QF/FC 22	QF/CRS 2
30 % 30		LT/LC 22 (Long)		

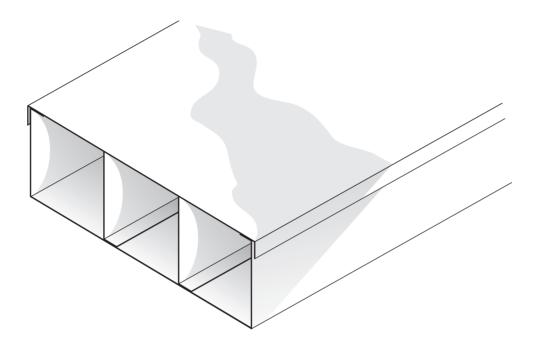
50 x 50mm Quick-Fix fittings are available for use with Lighting Trunking.

Hangers are available with 11mm or 21mm holes.

Manufactured from pre-galvanised sheet steel to BS EN 10142.



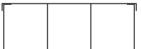
#### **AVAILABLE IN QUICK-FIX**



For 2 Compartment Trunking add QF/----/2 the listed numbers on the previous pages.



For 3 Compartment Trunking add QF/----/3 to the listed numbers on the previous pages.



Multi Compartment Trunking is supplied with evenly spaced separators. Trunking with different sized compartments may be supplied subject to prior agreement.

Details must be confirmed in writing when ordering.

#### TRUNKING AND BENDS

"L" shaped separators are welded into position or can be supplied loose for fitting on site.

#### **TEES AND INTERSECTIONS**

Separators are supplied loose so that wiring can be laid into position. 50% of the wiring area is lost by the fitting of separators.



## TRUNKING CAPACITY GUIDE

The following guide will help you select the correct size of trunking for the required number and size of cables in your installation. It has been prepared from Appendix 12 of the I.E.E. wiring regulations for Electrical Installations.

When cables are pulled into trunking, they experience drag from other cables and from the trunking itself. Using this guide to select the size of trunking for your cabling will ensure that an acceptable pulling force is required to install the cables, and that minimum damage to the insulation will occur. This is only a guide: and is designed for use with single core PVC insulated cables.

#### TO USE THIS GUIDE

- (a) Calculate Capacity Unit by multiplying the number of cables by the Factor from table A.
- (b) Use Capacity Unit to choose nearest size of trunking from table B.
- (c) Remember that cables can cross over each other and that you may need space for future wiring. Consequently, select the next size up.

EXAMPLE				
NUMBER OF CABLES	CONDUCTOR CROSS SECTION MM <sup>2</sup>	FACTOR (FROM A)	CAPACITY UNIT (FROM B)	
50	1.5 stranded	8.1	405	
40	2.5 stranded	11.4	456	
20	6.0 stranded	22.9	458	
		Total	1319	

From Table B, The Capacity Unit of 1319 falls between 50 x 50mm and 75 x 50mm hence choose 75 x 50mm trunking.

	TABLE A				
TYPE OF CONDUCTOR	CONDUCTOR CROSS SECTION	FACTOR			
Solid	1.5	7.1			
Solid	2.5	10.2			
	1.5	8.1			
	2.5	11.4			
	4	15.2			
Stranded	6	22.9			
	10	36.3			
	16	42.9			
	25	62.6			
	35	95			

**Note:** For sizes and types of cables not included in the above tables A and B, calculate total cross section of cables and select trunking size so that not more than 45% of trunking is filled.

TABLE B		
CAPACITY UNIT	DIMENSION OF TRUNKING MM X MM	
738	75 x 25	
993	100 x 25	
1037	50 x 50	
1555	75 x 50	
2091	100 x 50	
2371	75 x 75	
3162	150 x 50	
3189	100 x 75	
4252	100 x 100	
4743	150 x 75	
9697	150 x 150	

**NOTES** 



#### **ORDERING PROCEDURES**

- 1. Please contact our sales office to discuss product availability, delivery times and any commercial queries.
- 2. All telephone orders must be confirmed in writing and be clearly marked 'Confirmation Order'. Please order using the catalogue number and specify the finish required.
- 3. Invoices will reflect current ongoing discounts unless there is a valid special price. In such cases, these prices will only be available if the written order refers to special prices and refers to the quotation reference number.
- **4.** Orders for items not usually held in stock must be placed in writing and may not then be cancelled.
- **5.** Please refer to our current price lists for details of minimum carriage paid order values and any minimum order charges.
- **G.** All orders and transactions are subject to our Conditions of Sale which may be obtained upon request.

#### **QUALITY ASSURANCE PROCEDURES**

All aspects of the operations of Barton Engineering are governed by detailed Quality Assurance Procedures. These are subject to regular independent audit who provide independent certification to confirm that they comply with the requirements of the International Standard ISO 9002.

#### **CE MARKING**

It is our policy that Barton Engineering products will be CE marked to confirm that they comply with the relevant directives.

At the time of writing our best advice is that our ranges of Cable Protection Products will be classified within the Low Voltage Products Directive. We will therefore ensure that the CE marking is undertaken to comply with the necessary regulation.



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# STATEMENT TO PURCHASERS AND PROSPECTIVE PURCHASERS

- Section 6 of this Act provides that manufacturers, designers, importers or suppliers of articles for use at work have a duty to ensure, so far, as is reasonably practicable, that the article will be safe and without risk to health when properly used. An article is not regarded as being 'properly used' if it is used without regard to any relevant information or advice relating to its use made available by the manufacturer, designer, importer or supplier.
- 2. Having regard to these provisions the following is given as a guide to the information which is readily available to you, in order that the obligations of all concerned may be met as fully as is reasonably practicable. This information relates to those products detailed in our Catalogue(s) or associated literature.
- Information on the design, construction and installation of our products to ensure that so far as is reasonably practicable they are safe and without risk to health when properly used may be found in:
  - Relevant British Standard Specifications and Codes of Practice.
  - Regulations for Electrical Equipment of Buildings (published by the Institution of Electrical Engineers).
  - Catalogues and product leaflets of this Company.
  - Or may be obtained by specific request to the Company.

- 4. It is important that the products concerned should be *installed, commissioned and maintained* by, or under the supervision of, competent persons in accordance with good engineering practice and:
  - I.E.E. Regulations for the Electrical Equipment of Buildings.
  - Codes of Practice.
  - Statutory Requirements.
  - Any instructions specifically advised by the Company and, where appropriate, with particular reference to information marked on the product.
- 5. In accordance with the provisions of the Act, you are therefore requested to take such steps as are necessary to ensure that any appropriate information relevant to our products is made available by you to anyone concerned.
- 6. C.O.S.H.H. REGULATIONS 1988 Due to the nature of BARTON Products being of ferrous or non ferrous material supplied in either self colour, painted stove enamel or galvanised finishes, there are no substances hazardous to health involved with the finished products within the meaning given to that phrase in the regulations.
- 7. All BARTON Products are manufactured in accordance with the ENVIRONMENTAL PROTECTION ACT.

Our policy is one of continuous product improvement and hence we reserve the right to revise designs and specifications without prior notice.

## Terms and Conditions of Trading

#### 1. INTERPRETATION

means the person, firm or company entering into the Contract to purchase the Goods and/or Services from the Seller; BUYER

CONDITIONS means the standard terms and conditions of sale set out in this document and (unless the context otherwise requires) includes any special terms and conditions agreed in Writing between the Buyer and the Seller;

CONTRACT means the contract for the purchase and sale of the Goods and/or Services

DELIVERY DATE

means the earlier of the time of actual delivery of the Goods or, if the Goods are to be collected by the Buyer or the Buyer worngululy fails to take delivery of the Goods, the date that the Seller notifies the Buyer that the Goods are ready for collection or, as the case may be, the Seller tenders delivery of the Goods or, if the Buyer worngululy fails to allow performance of the Services, the date that the Seller notifies the Buyer that it is in a position to perform the Services:

GOODS

means the goods (including any instalment of the Goods or any parts for them) which the Seller is to supply in accordance with these Conditions;

means Caparo Precision Tubes Limited trading as Barton Engineering;

SERVICES means the services which the Seller is to supply in accordance with these Conditions;

TOOLING includes patterns, tooling and dies:

#### BASIS OF THE CONTRACT

These Conditions shall govern the Contract to the exclusion of any other terms and conditions

#### ORDERS AND SPECIFICATIONS

- The Buyer shall be responsible to the Seller for ensuring the accuracy of the terms of any order (including any applicable specification) and for giving the Seller any necessary information relating to the Contract within a sufficient time to enable the Seller to perform the Contract. Where the Goods are capable of production. Where the Goods are capable of production.
- The quantity, quality and description of and any specification for the Goods and/or the description of the Services shall be those set out in the Seller's quotation (if accepted by the Buyer) or the Buyer's order (if accepted by the Seller).
- The Seller reserves the right to make any changes in the specification of the Goods or Services which are required to conform with any applicable safety or other statutory or EU requirements or, where the Goods or Services are to be supplied to the Seller's specification, which do not materially affect their cugality or performance.
- No Contract may be cancelled by the Buyer except with the agreement in Writing of the Seller and on terms that the Buyer shall indemnify the Seller in full against all loss (including loss of profit), costs, damages, charges and expenses.
- The Buyer shall indemnify and keep indemnified the Seller against any claim or liability in respect of any infringement of intellectual or industrial property rights resulting from compliance with the Buyer's instructions express or implied.
- Drawings, illustrations and specifications prepared by or on behalf of the Seller in connection with the Contract shall remain the property of the Seller and shall not be communicated to third parties without the Seller's prior written consent.
- The Seller reserves the right to undertake credit references and may suspend delivery of Goods or performance of the Contract or any other contract with the Buyer if such references are unsatisfactory.
- Each performance or delivery schedule submitted by the Buyer shall constitute an order capable of acceptance by the Seller. If the S agrees that any such schedule shall not constitute an order in circumstances where it is reasonably necessary for the Seler to a reliance upon such schedule os as the enable the Seller to perform the schedule in accordance with its terms if such schedule performed in such schedule in accordance with its terms if such schedule performed in such schedule in accordance with its terms if such schedule performed in such schedule in a contraction of the schedule in accordance with its terms if such schedule in a reliance to the schedule in the schedule in a schedule in the schedule in a contraction of the schedule in a reliance to the schedule in the schedule in the schedule in a reliance to the schedule in the schedule in the schedule in a reliance to the schedule in the schedule in the schedule in a reliance to the schedule in the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in a reliance to the schedule in the schedule in the schedule in a reliance to the schedule in reliance to the schedule in the schedule in

- The price shall be the Seller's quoted price, or where no price has been quoted or a quoted price is no longer valid, the price listed in the Seller's published price is fit current at the date of acceptance of the order. Where the Goods are supplied for export from the United Kingdion, the Seller's published export price its shall papply in the absence of a price quoted by the Seller. All prices quoted are valid for 30 days or until earlier acceptance by the Buyer, after which time they may be aftered by the Seller without giving notice.
- The Seller reserves the right to increase the price to reflect any increase in the cost to the Seller which is due to any factor beyond the Seller's control, any change in delivery or performance dates, quantities or specifications which is requested by the Buyer, or any delay caused by any instructions of the Buyer or failure of the Buyer to give the Seller adequate information or instructions. 4.2
- All prices are given by the Seller on a carriage paid basis, unless otherwise agreed.
- The cost of pallets and returnable containers will be charged to the Buyer in addition to the price but full credit will be given to the Buyer provided they are returned undamaged to the Seller within 28 days of the date of delivery.

- The Seller shall be entitled to invoice the Buyer for the price on or at any time after the Delivery Date.
- The Buyer shall pay the price without any deduction or set-off (save as set out in this condition 5.2) on or before the last day of the month following the Delivery Date and the Seller shall be entitled to recover the price, notwithstanding that delivery may not have taken place and the properly in the Goods hasnot passed to the Buyer and/or the Services have not been performed. The time of payment of the price shall be of the essence ofthe Contract. The buyer shall be entitled to a discount of 1.00% of the price (excluding the costs of transport, packing and insurance) in the event of payment before the last day of the month following the Delivery Date
- If the Buyer fails to make any payment on the due date then, without prejudice to any other right or remedy the Seller shall be entitled to:
  - suspend all or any further deliveries to the Buyer or the provision of all or any services made under that or any other contract with the Buyer and in such event the Buyer shall not be released from its obligations to the Seller under that or any other contract or accened the Contract or any other contract with the Buyer and to claim damages from the Buyer for breach of contract;
  - 5.3.2 appropriate any payment made by the Buyer to such part of the Contract or Goods (or the goods supplied under any other contract between the Buyer and the Seller) as the Seller may think fit (notwithstanding any purported appropriation by the Buyer); and
  - 5.3.3 charge the Buyer interest (both before and after any judgement) on the amount unpaid, at the rate of 4 per cent per annum above Barclays Bank base rate from time to time accruing daily, until payment in full is made.
- The Seller may without notice set off any sums from time to time owed to the Buyer in or towards the satisfaction of all and any liabilities of the Buyer to the Seller whether or not under this Contract.
- The Seller shall have a general lien over all goods and property of the Buyer (whether worked on or not) in the possession of the Sel all unpaid debts due from the Buyer and the Seller reserves the right upon the expiration of fourteen days written notice to dispose o goods or depote, and to apply the proceeds of sale (net of costs of sale) towards the payment of such debta.

- Delivery of the Goods shall be made by the Seller delivering the Goods to the Buyer's premises or such other premises specified in the Buyer's order. The Buyer shall be responsible for the unloading of Goods and where the Seller or its employees or agents carries out or assists the Buyer, its employees or agents in such unloading the Buyer shall indemnify and keep indemnified the Seller against all liabilities including without limitation all loss, costs, damages, charges and expenses arising from such unloading.
- Any dates quoted for delivery of the Goods or performance of the Services are approximate only and the Seller shall not be liable for any delay howsoever caused. Time for delivery and/or performance shall not be of the essence. The Goods may be delivered and/or Services may be performed by the Seller in advance of the quoted date upon giving reasonable notice to the Buyer.
- The Seller reserves the right to under or over-deliver the order quantity of any Goods by up to 10% more or less, without any adjustne the price, and the quantity so delivered shall be deemed to be the quantity ordered.
- Where the Goods are to be delivered or Services performed in instalments, each delivery or performance shall constitute a separate contract and failure by the Seller to deliver or perform any one or more of the instalments in accordance with these Conditions or any claim by the Buyer in respect of any one or more instalments shall not entitle the Buyer to treat the Contract as a whole as repudiated in
- If the Seller fails to deliver the Goods (or any instalment) or perform any Services (or any instalment) for any reason other than any cause beyond the Seller's reasonable control or the Buyer's fault, and the Seller is accordingly liable to the Buyer, the Seller's liability shall be limited to the excess, if any, of the reasonable cost to the Buyer (in the cheapest available market) of similar goods and/or services to replace those not delivered over the price of the Goods and/or Services.
- If the Buyer fails to take delivery of the Goods or to allow performance of the Services or fails to give the Seller adequate delivery or performance instructions at the time stated for delivery or performance (otherwise than by reason of any cause beyond the Buyer's reasonable control or by reason of the Seller's fault the, without prejude to any other right or remedy available, the Seller may be a seller and the seller's fault of the seller's fault then without prejude to any other right or remedy available, the Seller may be a seller and the seller and

  - 6.6.2 after the expiration of 3 months from the Delivery Date dispose of the Goods in such manner as the Seller may determine; and
  - 6.6.3 suspend any further performance of the Services or services under the Contract or any other contract.
- The Services shall be performed at the Seller's premises

- Risk of damage to or loss of the Goods shall pass to the Buyer on the Delivery Date.
- The property in the Goods shall not pass to the Buyer until the Seller has received in cash or cleared funds payment in full of the price of the Goods and all other goods sold or agreed to be sold by the Seller to the Buyer under any other contract.
- Until such time as the property in the Goods passes to the Buyer, the Buyer shall be entitled to resell or use the Goods in the ordinary course of its business, but shall have a fiduciary duty to the Seller to account for the proceeds of sale or otherwise of the Goods.
- Until such time as the property in the Goods passes to the Buyer, the Seller shall be entitled at any time to require the Buyer to deliver up the Goods to the Seller and, if the Buyer falls to do so forthwith, to enter upon any premises of the Buyer or any third party where the Goods are stored and repossess the Goods and for that purpose the Buyer hereby authorises and licences the Seller, its officers employees and agents to enter upon any land or building upon which the Goods are situated to recover those Goods.

#### WARRANTIES AND LIABILITIES

#### THE BUYER'S ATTENTION IS IN PARTICULAR DRAWN TO THE PROVISIONS OF THIS CLAUSE 8.

- 8.2 The above warranties are given by the Seller subject to the following Conditions:
  - 8.2.1 the Seller shall be under no liability in respect of any failure or defect arising from any Tooling, drawing, design or specification supplied by the Bruse:
  - 8.2.2 the Seller shall be under no liability in respect of any defect or failure arising from fair wear and tear, wilful damage, negligence, abnormal working conditions, failure to foliow the Seller's instructions (whether oral or in writing), misuse or alteration or repair of the Goods without the Seller's approval;
  - 8.2.3 if the total price has not been paid by the due date, the Seller shall be under no liability until the total price has been paid;
  - 8.2.4 the above warranties do not extend to parts, materials or equipment not manufactured by the Seller, in respect of which the Buyer shall only be entitled to the benefit of any such warranty or guarantee as is given by the manufacturer to the Seller;
  - 8.2.5 the Seller shall be under no liability in respect of any failure or defect if such failure or defect is within reasonable commercial
- Subject as expressly provided in these Conditions, all warranties, conditions or other terms implied by statute or common law are excluded to the fullest extent permitted by law.
- Any claim by the Buyer which is based on any defect in the quality or condition of the Goods or any failure to exercise reasonable care and skill or any under or over-delivery of the Goods shall, whether or not delivery is refused by the Buyer, be notified to the Seller within 3 days from the Delivery Date or, where the defect or failure was not apparent on reasonable into practice, within 3 reasonable time after discovery of the defect or failure and in any event within 7 days of discovery. If delivery is not refused, and the Buyer does not so notify the Seller, the Seller shall have no liability for such defect or failure, and the Buyer shall be bound to pay the price as if the Contract had been performed in accordance with its terms.
- Where any valid claim in respect of any of the Goods, which is based on any defect in the quality or condition of the Goods or any failure to exercise reasonable care and skill, is notified to the Seller in accordance with these Conditions, the Seller shall be entitled to replace the Goods (or the part in question) or to re-perform the Senices free of charge or, at the Seller's sole discretion, refund to the Buyer the price (or a proportionate part of the price) but the Seller shall have no further liability to the Buyer.
- The Seller shall not be liable to the Buyer by reason of any representation, or any implied warranty, condition or other term, or any dut common law, or under the express terms of the Contract, for any consequential loss or damage (whether for loss of profit, product reca otherwise), costs, expenses or other claims for compensation whatsoever (whether caused by the negligence of the Seller, its employ or agents or otherwised which arise out of or in connection with the supply of the Goods and/or the Services or their use or resale by Buyer and the entire liability of the Seller under or in connection with the Contract shall not exceed the price under the Contract, except expressly provided in these Conditions.
- Nothing in these Conditions shall exclude or limit the Seller's liability for death or personal injury caused by the Seller's negligence

#### THE BUYER'S ATTENTION IS IN PARTICULAR DRAWN TO THE PROVISIONS OF THIS CLAUSE 9

- The Buyer shall take or procure the taking of all such steps as may be necessary to ensure the safety of the Seller's employees, agents and contractors on any premises at which the Service is to be provided including, without limitation, notifying such representatives of any relevant hazards.
- The Buyer shall indemnify and keep indemnified the Seller, its employees, agents and sub-contractors against any loss or damage to any property or injury or death of any person caused by any negligent act or omission or w

- Any Tooling supplied by the Buyer shall remain the property of the Buyer and at the Buyer's risk. The Buyer shall be responsible for the repair and maintenance of such Tooling. The Seller shall not use such Tooling in connection with any contract with a third party without the Buyer's prior consent in Writing.
- All Tooling used, manufactured or procured in connection with the Contract and which is not supplied by the Buyer shall be the property of
- All and any intellectual or industrial property rights comprised in any Tooling shall vest in the party owning such Tooling.
- The Seller reserves the right to charge the Buyer for the cost of storage of the Buyer's Tooling and to require the Buyer to remove such Tooling from the Seller's premises upon not less than 3 months notice in Writing.

#### 11. INSOLVENCY OF BUYER

- - 11.1.1 the Buyer makes any voluntary arrangement with its creditors or becomes subject to an administration order (or being an individual or firm) becomes bankrupt or (being a company) goes into liquidation, otherwise than for the purpose of amalgamation or reconstruction; or
  - 11.1.2 an encumbrancer takes possession, or a receiver is appointed, of the Buyer's undertaking or any of its property or assets; or
  - 11.1.3 the Buyer ceases, or threatens to cease, to carry on business; or
  - 11.1.4 the Seller reasonably apprehends that any of the events mentioned above is about to occur in relation to the Buyer and notifies the Buyer accordingly.
- If this clause applies then, without prejudice to any other right or remedy available to the Seller, the Seller shall be entitled to cancel the Contract or suspend performance and/or any further deliveries under the Contract without any liability to the Buyer, and if the Goods have been delivered and/or Services performed, but not paid for, the price shall become immediately due and payalor.

- Where the Goods are supplied for export from the United Kingdom, the provisions of this clause 12 shall apply notwithstanding any other provisions of these Conditions.
- The Buyer shall be responsible for complying with any legislation or regulations governing the importation of the Goods into the country of destination and for the payment of any duties thereon.
- Unless otherwise agreed in writing between the Buyer and the Seller, the Goods shall be delivered FOB the air or sea port of shipment and the Seller shall be under no obligation to give notice under section 32(3) of the Sale of Goods Act 1979
- The Buyer shall be responsible for arranging for testing and inspection of the Goods at the Seller's premises before shipment. shall have no liability for any claim in respect of any defect which would be apparent on inspection and which is made after ship respect of any damage during transit.
- Payment of all amounts due to the Seller shall be made by irrevocable letter of credit opened by the Buyer in favour of the Seller and confirmed by the Seller's Bank in the United Kingdom, or, if the Seller has agreed in Writing on or before acceptance of the Buyer's order to wake this requirement, by acceptance by the Buyer and delivery to the Seller of a bill of exchange drawn on the Buyer payable 30 days after sight to the order of the Seller at such branch of Barclays Bank in England as may be specified on the bill of exchange.

#### 13. GENERAL

- Neither the Buyer nor the Seller shall be entitled to assign the whole or any part of the Contract without the prior written consent of the other provided that the Seller shall be entitled to sub-contract the whole or any part of its obligations.
- No waiver by the Seller of any breach of the Contract by the Buyer shall be considered as a waiver of any subsequent breach of the same or any other provision.
- If any provision of these Conditions is held by any competent authority to be invalid or unenforceable in whole or in part the validity of the other provisions of these Conditions and the remainder of the provision in question shall not be affected thereby unless such provision goes to the root of the Contract.
- The Conditions shall constitute the entire agreement in relation to its subject matter and no modification or waiver thereof shall be valid unless made in Writing expressly for the purpose and signed by an authorised officer of the Seller and of the Buyer provided that nothing in these Conditions shall exclude or limit liability for frau.
- The Contract shall be governed by the laws of England and the Buyer agrees to submit to the non-exclusive jurisdiction of the English courts.



BARTON Engineering has a long and successful reputation for manufacturing and supplying premium quality cable management systems. Today, operating from its facilities in West Midlands, UK, the BARTON range includes:

- BS31/4568/50086/61386 Conduit Tube and Accessories
  - Class 4 HDG
  - Class 4 Stainless Steel
- BS4678 Trunking and Accessories
- BS4662 Switch & Socket Boxes
- Flexible Conduit and Cable Trays
- US Specification EMT/IMC/RMC Conduit and Accessories

BARTON products are installed in the most demanding of applications and environments. Examples inculede airports, schools, malls, hospitals, tunnels, stadiums, tall and super tall buildings, hotels and places of worship.

BARTON Engineering is part of the Caparo Group, a global association of manufacturing and engineering businesses founded in 1968 by Lord Paul of Marylebone. Caparo interests include the design, manufacture and marketing of steel, automotive and general engineering products, including materials testing. The Caparo Group is wholly owned and controlled by the Paul Family from its headquarters in London, UK. Please Visit www.caparo.com



Located in The UAE, Caparo Middle East is the exclusive BARTON service agent throughout the Middle East and North Africa region. A highly focused team based at the Caparo Middle East service centre in Jebel Ali Free Zone provides customers with stock, logistics, technical and sales support for the entire BARTON range. All product information is provided in good faith and is subject to our Terms of Trading, a copy of which may be obtained upon request.

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