

# Challenger Trunking Technical

## Material

PVC-U is flame retardant and self-extinguishing. It provides a 100% recyclable material with good sustainability.

## Installation

### Positioning

When used as a skirting system a clearance of 10mm is recommended above floor covering to maintain IP4X rating.

## Expansion/contraction

PVC-U expands and contracts at a uniform rate of approx 5.25mm in a 3 metre length for a temperature change of 25°C. Therefore, a 3mm gap between each length of trunking base is recommended. Fittings have a 10mm overlap on each side to allow for thermal movement of the covers.

## Fitting

- Internal couplers on base units are not required. To fasten base, use No 8 round head screws and washers.
- Avoid over-tightening to permit thermal movement.
- The use of plastic caps over screw heads is recommended to protect installed cables.
- To cut the trunking, use a fine-toothed panel or power jig-saw.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.
- A variable angle jig-saw or chop saw is recommended for cutting 45° mitres.

## Single lengths

Where it is required to fit a single length of trunking (under 3 metres) between two inside walls and no accessory box is fitted, it is advisable to install a coupler in the centre of the run to facilitate the removal of the cover.

## Joints & bends

- Base joints should have a 3mm gap to allow for expansion.
- Internal and external bends are up to Cat 7a compliant. If a Fabricated Tee or Angle is being used then the base must be mitred 45° to ensure total enclosure of trunking, including any internal fitted segregator.
- External moulded fittings overlap the joints by up to 10mm to cover cutting inaccuracies.

## Covers

Covers are designed to limit unauthorised removal and to remain in position during normal conditions irrespective of impact and minor undulations of the mounting surface.

## Covers - fitting

Covers are clipped into place from front.

If accessory boxes are installed, the XT1CLWH cover is butt-joined to the edge of the box. Cut edges of the cover are subsequently concealed by the accessory. For fittings, a gap of 25mm is left between the two cover ends to permit the fitting to clip to base.

## Covers – removal

To remove a cover, first detach a coupler, internal or external bend component to gain access. The main cover can then be gently eased off the base. To remove the outer cover, firstly ease from the base by inserting the blade of a terminal screwdriver between the captive legs of the cover and the base and then ease away from the base.

## Cable capacity chart

All calculations allow for a 45% space factor. As there can be differences between cable sizes, Bendex recommend that cable dimensions are confirmed with the manufacturing company.

	Stranded PVC BS 7211 1.5mm <sup>2</sup> Power cable (singles)					
	Compartment 1 No box      With box		Compartment 2 No box      With box		Compartment 3 No box      With box	
Challenger System 1	66	-	201	72	66	-
Challenger System 2	66	-	201	72	80	-
	Stranded PVC BS 7211 2.5mm <sup>2</sup> Power cable (singles)					
	Compartment 1 No box      With box		Compartment 2 No box      With box		Compartment 3 No box      With box	
Challenger System 1	45	-	137	49	45	-
Challenger System 2	45	-	137	49	55	-
	Stranded PVC BS 7211 4.0mm <sup>2</sup> Power cable (singles)					
	Compartment 1 No box      With box		Compartment 2 No box      With box		Compartment 3 No box      With box	
Challenger System 1	34	-	104	37	34	-
Challenger System 2	34	-	104	37	41	-
	Data Cable Ø5.5mm					
	Compartment 1 No box      With box		Compartment 2 No box      With box		Compartment 3 No box      With box	
Challenger System 1	23	-	73	26	23	-
Challenger System 2	23	-	73	26	29	-
	Data Cable Ø6.0mm					
	Compartment 1 No box      With box		Compartment 2 No box      With box		Compartment 3 No box      With box	
Challenger System 1	20	-	61	21	20	-
Challenger System 2	20	-	61	21	24	-
	Data Cable Ø6.5mm					
	Compartment 1 No box      With box		Compartment 2 No box      With box		Compartment 3 No box      With box	
Challenger System 1	17	-	52	18	17	-
Challenger System 2	17	-	52	18	20	-
	Data Cable Ø7.0mm					
	Compartment 1 No box      With box		Compartment 2 No box      With box		Compartment 3 No box      With box	
Challenger System 1	14	-	45	16	14	-
Challenger System 2	14	-	45	16	18	-
	Data Cable Ø8.4mm					
	Compartment 1 No box      With box		Compartment 2 No box      With box		Compartment 3 No box      With box	
Challenger System 1	10	-	31	11	10	-
Challenger System 2	10	-	31	11	12	-