

Heavy Gauge Welded Conduit Tube (Class 4)

PRODUCT FEATURES

- Material: Heavy gauge seam welded conduit (with seam trimmed during manufacture).
- Finish: Hot Dipped Galvanized coating, applied inside and outside after the manufacture, Class 4 corrosion protection.
- Comply with BS 4568 / BS EN 50086 / BS EN 61386 / BS 31.
- Threaded both ends and protected by plastic cover protection on one end and one solid coupling at the other end.
- Protection against impact at all temperatures.
- Provide very good protection to enclosed conductors from impact, moisture, and chemical vapours.
- Deflects hand-driven nails and screws and does not stretch or tear.
- Does not burn, contribute to smoke volume, emit potentially escape-inhibiting fire gases, or add to fuel load or flame spread.
- Highest yield and tensile strengths.
- Non-combustible and can be fire stopped with common building materials.
- Provide an excellent electrical path to ground, eliminating the need for supplementary equipment grounding.
- Reduces Electromotive force (EMF) by up to 95% at power frequencies.
- Compatible coefficient of expansion with most construction materials.
- Adaptable and can easily accommodate wiring changes, fully recyclable.
- Bright metallic appearance.
- packed and shipped in lifts (Bundles), the approximate number of lengths in each lift is given in the table below.



PRODUCT LIST CLASS 4

Description	Part Number	Outer Diameter	Thickness	Threading length	Weights (kg/m)	Length	Packing (Bundle)
20mm HDG Heavy BS EN 61386 Gauge Steel Conduit	LPTUB20HDG	min. 19.70 max. 20.00	1.6 ±0.15	min. 13 max. 15	min. 0.682 max. 0.862	3.75	400
25mm HDG Heavy BS EN 61386 Gauge Steel Conduit	LPTUB25HDG	min. 24.60 max. 25.00	1.6 ±0.15	min. 16 max. 18	min. 0.860 max. 1.095	3.75	320
32mm HDG Heavy BS EN 61386 Gauge Steel Conduit	LPTUB32HDG	min. 31.60 max. 32.00	1.6 ±0.15	min. 18 max. 20	min. 1.133 max. 1.432	3.75	200

*all dimensions are nominal value in mm
refer to our catalogue for the complete product range*



SPECIFICATION OF WALSALL CONDUITS SYSTEM

PARAMETER	BS 4568	BS EN 61386	SPECIFICATION
Classification	Assembly: 1) Method of assembly with the fittings- Plain and Screwed. 2) Type of protection: Class 1-Class 4	Specified based on: 1) Mechanical properties 2) Electrical characteristic 3) Resistance to external influences	BS 4568 BS EN 61386
Marking	1) Manufacturer's mark 2) Number of this British Standard 3) Class of finish	1) Manufacturer's mark 2) Classification Code (four-digit code based on resistance and temperature characteristics)	BS 4568 BS EN 61386
Dimensions	Well defined outside diameter, wall thickness, and tolerances for all conduit sizes.	NIL	BS 4568 BS EN 61386
Construction	1) General: No sharp edges, burrs or surface projections. 2) Conduits: Solid drawn steel or ERW welded tube 3) Fittings: Malleable cast Iron	1) General: No sharp edges, burrs or surface projections.	BS 4568 BS EN 61386
Mechanical Properties	Compliance is checked by: 1) Inspection 2) Bending Test	Compliance is checked by: 1) Inspection. 2) Bending Test. 3) Compression Test. 4) Impact Test. 5) Flexing Test. 6) Collapse Test. 7) Tensile Test. 8) Suspended Load Test.	BS 4568 BS EN 61386
Resistance to Corrosion	Same as BS EN 61386.	Same as BS 4568.	BS 4568 BS EN 61386
Electrical Properties	1) Bonding Test consisting of 10 lengths and fittings, checked for continuity of assembly $\leq 0.05\Omega$.	1) Bonding Test: As BS 4568 2) Insulating Test: Resistance between the electrode in the saltwater emersion for the sample shall be $> 100M\Omega$.	BS 4568 BS EN 61386
Fire Resistance	1) Steel conduit is a non-flame propagating conduit.	1) Steel conduit is a non-flame propagating conduit.	BS 4568 BS EN 61386

CABLE CAPACITIES OF CONDUIT

Electrical conduits are limited as regards the maximum number of electrical wires that can be run inside the conduit. This rating, called conduit fill capacity, is specified by the National Electrical Code and followed by most local codes, which serve as the governing law in any given area.

Defining a fill capacity and limiting the number of conducting wires is a matter of safety. Electrical wires heat up slightly under the flow of current and restricting the number of wires allowed in the conduit is a means of limiting heat build-up and ensuring that heat inside the conduit can dissipate. Too many wires carrying too much current carries the danger of generating enough heat to melt the vinyl insulation on the wires.

The following tables provide the guides to calculate the number of various sizes of single-core PVC insulated wires that can run through different sizes and lengths of steel conduit. The tables are for particular cases:

Capacities for short straight runs not exceeding 3m in length

- Obtain the cable factor for each type of cable being used from **Table 1**.
- Sum all cable factors and compare them with the conduit factor given in **Table 2**.
- The conduit size shall be the one with a conduit factor equal to or greater than the sum of the cable factors.

Table 1 - Cable Factors for short straight runs

Type of Conductor	Conductor Size cross-sectional area (sq.mm)	Factor
Solid	1	22
	1.5	27
	2.5	39
Stranded	1.5	31
	2.5	43
	4	58
	6	88
	10	146

Table 2 - Conduits Factors for short straight runs

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

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

Product Data Sheet



Capacities for long straight runs exceeding 3m in length or for runs of any length with bends or sets.

- Obtain the cable factor for each type of cable being used from Table 3.
- Sum all cable factors and compare with the conduit factor given in Table 4 with the relevant length of run, number of bend and sets in that run.
- The conduit size shall be the one with a conduit factor equal to or greater than the sum of the cable factors.

Table 3 - Cable Factors for long straight runs exceeding 3m in length or for runs of any length with bends or sets

Type of Conductor	Conductor Size cross-sectional area (sq.mm)	Factor
Solid or Stranded	1	16
	1.5	22
	2.5	30
	4	43
	6	58
	10	105

Table 4 Conduits Factors for long straight runs exceeding 3m in length or for runs of any length with bends or sets

Length of run (m)	Conduit Diameter (mm)																			
	16	20	25	32	16	20	25	32	16	20	25	32	16	20	25	32	16	20	25	32
	Straight				One Bend				Two bends				Three bends				Four bends			
1	Refer to Table 1 & Table 2				188	303	543	947	177	286	514	900	158	256	463	818	130	213	388	692
1.5					182	294	528	923	167	270	487	857	143	233	422	750	111	182	333	600
2					177	286	514	900	158	256	463	818	130	213	388	692	97	159	292	529
2.5					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								

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

Always follow electrical code requirements specific to your area and, before undertaking any project, contact your local regulatory authority and your insurance company to ensure that you comply with all policies, warranties, regulations, and authorities concerning this work.

Works in electrical facilities must be carried out by suitably qualified individuals and, as a rule, without electrical power. Works in locations where voltage is present can only be carried out by workers suitably qualified for such situations, who have received specific training and who use tools suitably approved for working with electrical power.

The information, materials and/or technical assistance are intended solely for informal guidance and are neither determination of your legal rights or responsibilities under any circumstances.