

Cable Spacing Factors

No liability can be accepted for the data below which is given for guidance only.

To determine the conduit size needed, multiply the quantities of each size of cable by the appropriate factor, and compare the total with the conduit figures shown.
Example: What size of conduit is required for 6 No. 4mm² cables in a 3 metre run with no bends? $6 \times 58 = 348$ The nearest size of conduit with a factor greater than 348 is 20mm.

CONDUIT FACTORS

Single core PVC insulated cables
in straight runs of conduit not exceeding 3m in length

Conduit diameter (mm)	Capacity Factor
16	290
20	460
25	800
32	1400

CABLE FACTORS

Type	Conductor cross-sectional area (mm ²)	Factor
Solid	1.0	22
	1.5	27
	2.5	39
Stranded	1.5	31
	2.5	43
	4.0	58
	6.0	88
	10.0	146

CABLE FACTORS (Exceeding 3m in length)

Single core PVC insulated cables in straight runs of conduit exceeding 3m in length or in runs of any length incorporating bends or sets

Type of conductor	Conductor cross-sectional area (mm ²)	Factor
Solid or stranded	1.0	16
	1.5	22
	2.5	30
	4.0	43
	6.0	58
	10.0	105

CONDUIT CAPACITY FACTORS (Exceeding 3m in length)

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			
1.0	-	-	-	-	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
2.0	-	-	-	-	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
3.0	-	-	-	-	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	-	-	-	-
4.0	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	-	-	-	-
5.0	171	278	500	878	150	244	442	783	120	196	358	643	86	141	260	474	-	-	-	-
6.0	167	270	487	857	143	233	422	750	111	182	333	600	-	-	-	-	-	-	-	-
7.0	162	263	475	837	136	222	404	720	103	169	311	563	-	-	-	-	-	-	-	-
8.0	158	256	463	818	130	213	388	692	97	159	292	529	-	-	-	-	-	-	-	-
9.0	154	250	452	800	125	204	373	667	91	149	275	500	-	-	-	-	-	-	-	-
10.0	150	244	442	783	120	196	385	643	86	141	260	474	-	-	-	-	-	-	-	-

CABLE CAPACITIES OF TRUNKING

To determine the trunking size needed, multiply the quantities of each cable by the appropriate factor, and compare the total with the trunking capacity figures shown.

Example: What size of standard trunking is needed for 10 No.35mm² cables and 16 No.4mm² cables?
 (No. of cables) 10 x 95 (Factor for 35mm² cable) = 950
 (No. of cables) 16 x 18.1 (Factor for 4mm² cable) = 289.6
 Total cable factor = 1239.6
 The nearest size of standard trunking with a capacity factor greater than 1239.6 is 75 x 50mm?

STANDARD TRUNKING CABLE FACTORS

Nominal conductor size mm ²	1.5 solid	1.5 stranded	2.5 solid	2.5 stranded	4	6	10	16	25	35	50	70	95
Factor copper or aluminium	8.6	9.6	11.9	13.9	18.1	22.9	36.3	50.3	75.4	95	133	177	227

STANDARD TRUNKING CAPACITY FACTORS

Trunk Size	Capacity Factor	Trunk Size	Capacity Factor
50mm x 50mm	1,037	150mm x 75mm	4,743
75mm x 50mm	1,555	150mm x 100mm	6,394
75mm x 75mm	2,371	150mm x 150mm	9,697
100mm x 50mm	2,091	200mm x 100mm	8,572
100mm x 75mm	3,189	225mm x 150mm	14,652
100mm x 100mm	4,252	300mm x 150mm	19,607