600/1000V, PVC Insulated Cables according to IEC 60502-1

Single core(unarmoured)

Two core(unarmoured)

Three core(unarmoured)

Three core +1(unarmoured)

Four core(unarmoured)

Multi- core(unarmoured)

Single core(armoured)

Two core(armoured)

Three core(armoured)

Three core +1(armoured)

Four core(armoured)

600/1000V, PVC Insulated Cables
according to IEC 60502-1

Application:

These cables are used for electricity supply in low voltage installation system, They are suitable for installation in indoors and outdoors, in cable ducts, under ground, in power and switching stations, local energy distributions, industrial plants, where there is no risk of mechanical damage.

Construction:

Conductors Copper or Aluminium conductor, round standed or Shaped, Class 2 to IEC 60228, BS EN 60228. For smaller sizes, a solid round conductor, Class 1 as per IEC 60228, BS EN 60228 can also be supplied upon request.

Insulation PVC Insulation material and thickness shall be as per IEC 60502-1 and BS 6346. PVC material shall be Type A as per IEC 60502-1 or TI1 as per BS EN 50363.
PVC Insulation material as per SASO 1694 rated for 85°C continuous operation is also available upon special request.

Colour Code Colour Code (1) :

1 Core	:	Red or Black
2 Cores	:	Red, Black
3 Cores	:	Red, Yellow, Blue
4 Cores	:	Red, Yellow, Blue, Black
5 Cores	:	Red, Yellow, Blue, Black, Green
Above 5 Cores:		Black Cores with White numerals

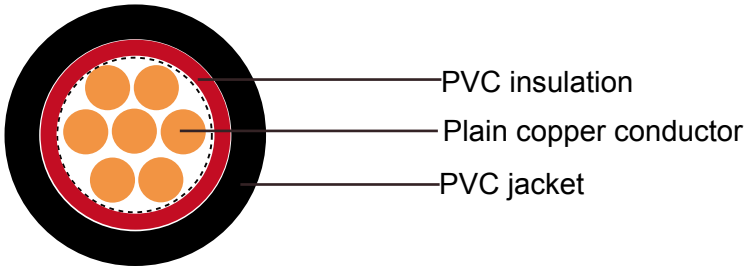
Colour Code (2) :

1 Core	:	Brown or Blue
2 Cores	:	Brown or Blue
3 Cores	:	Brown, Black, Grey
4 Cores	:	Blue, Brown, Black, Grey
5 Cores	:	Green/Yellow, Blue, Brown, Black, Grey
Above 5 Cores:		Black Cores with White numerals

Assembly / Inner Sheath	Two, Three or Four insulated conductors are laid-up together with non-hygroscopic fillers and the assembly is bedded with an extruded layer of PVC. In case of non-armoured cables, this layer may be omitted
Armour	Aluminum/Galvanized Steel Wires applied helically over the bedding as per IEC 60502 or as per BS 5467, BS 6346. Single core cables shall be Aluminium wire armour. Aluminum/Steel Tapes applied helically over the bedding of multi-core cables as per IEC 60502.
Outer Sheath	Outer sheath shall be of Extruded PVC Type ST2 as per IEC 60502-1 or Type 9 as BS 6346/5467. Special type of PVC sheathing material such as Fire Retardant PVC, Anti-Termite PVC, Anti-Rodent PVC, Sunlight resistant PVC, Oil Resistant PVC are available on special request. Also, special sheathing materials such as LLDPE, MDPE, HDPE, LSF, CPE are available on request.
Fire Performance of Cable Sheaths	Cables can be supplied with special flame retardant PVC outer sheath to comply with the flame test requirements of IEC 60332-3-22, IEC 60332-3-23 and IEC 60332-3-24, can also supply cables with Low Smoke Halogen Free (LSHF) material according to IEC 60502-1, BS 7211, BS 6724 or other equivalent standards.

Cable Parameters:

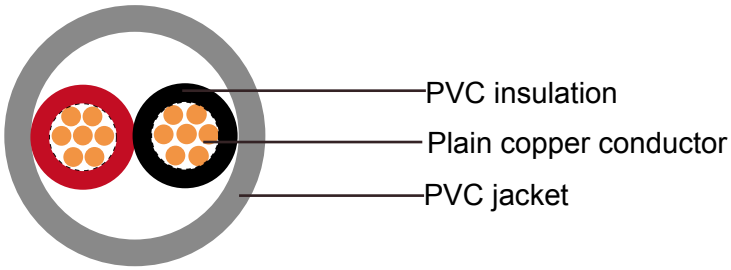
Single core(unarmoured)



Nominal Cross Section	Diameter of Conductor (Approx.)	Nominal Insulation Thickness	Nominal PVC Sheath Thickness	Overall Diameter (Approx.)	Weight of Cable (Approx.)
mm²	mm	mm	mm	mm	Kg/Km
1x4	2.6	1	1.4	7.5	95
1x6	3.1	1	1.4	8	120
1x10	4	1	1.4	9	165
1x16	5	1	1.4	10	230
1x25	6.3	1.2	1.4	12	340
1x35	7.4	1.2	1.4	13	450
1x50	8.8	1.4	1.4	14.5	570
1x70	10.6	1.4	1.4	16	800

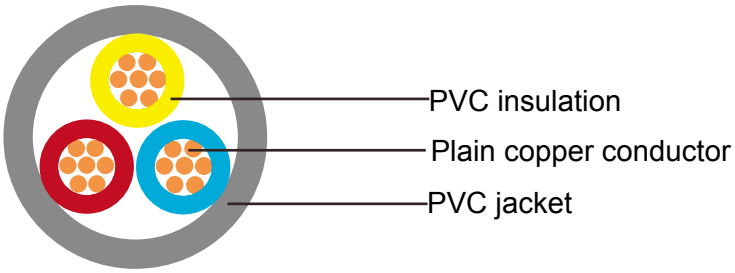
Nominal Cross Section	Diameter of Conductor (Approx.)	Nominal Insulation Thickness	Nominal PVC Sheath Thickness	Overall Diameter (Approx.)	Weight of Cable (Approx.)
mm²	mm	mm	mm	mm	Kg/Km
1x95	12.4	1.6	1.5	18.5	1070
1x120	14	1.6	1.5	20	1300
1x150	15.5	1.8	1.6	22	1600
1x185	17.4	2	1.7	24	1980
1x240	20.3	2.2	1.7	27	2560
1x300	22.7	2.4	1.8	30	3180
1x400	25.4	2.6	1.9	33	4060
1x500	28.8	2.8	2	37	5140
1x630	30.4	2.8	2.2	42	6600

Two cores(unarmoured)



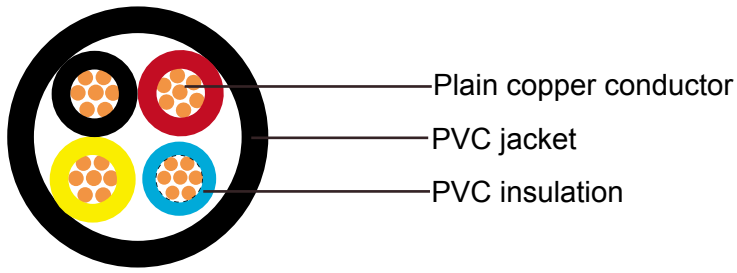
Nominal Cross Section	Diameter of Conductor (Approx.)	Nominal Insulation Thickness	Nominal PVC Sheath Thickness	Overall Diameter (Approx.)	Weight of Cable (Approx.)
mm²	mm	mm	mm	mm	Kg/Km
2x1.5	1.6	0.8	1.8	12	205
2x2.5	2	0.8	1.8	13	250
2x4	2.6	1	1.8	15	330
2x6	3.1	1	1.8	16	400
2x10	4	1	1.8	17.5	525
2x16	5	1	1.8	20	720
2x25	6.3	1.2	1.8	23.5	1030
2x35	7.4	1.2	1.8	25.5	1320
2x50	8.8	1.4	1.8	28.5	1670
2x70	10.6	1.4	1.8	32	2290
2x95	12.4	1.6	1.9	37	3060
2x120	14	1.6	2	40	3700
2x150	15.5	1.8	2.2	44	4500
2x185	17.4	2	2.3	48	5570
2x240	20.3	2.2	2.5	55	7180

Three cores(unarmoured)



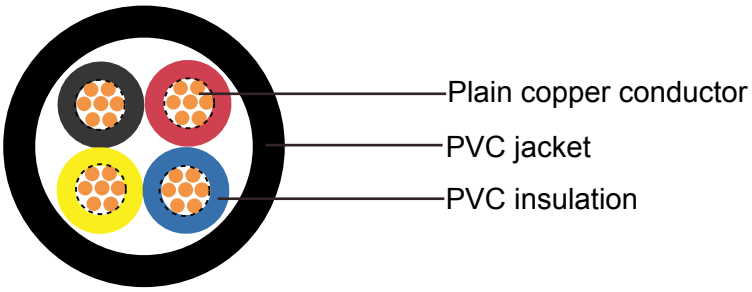
Nominal Cross Section	Diameter of Conductor (Approx.)	Nominal Insulation Thickness	Nominal PVC Sheath Thickness	Overall Diameter (Approx.)	Weight of Cable (Approx.)
mm²	mm	mm	mm	mm	Kg/Km
3x1.5	1.6	0.8	1.8	13	230
3x2.5	2	0.8	1.8	13.5	280
3x4	2.6	1	1.8	15.5	380
3x6	3.1	1	1.8	17	470
3x10	4	1	1.8	18.5	630
3x16	5	1	1.8	21	880
3x25	6.3	1.2	1.8	24.5	1280
3x35	7.4	1.2	1.8	27	1660
3x50	8.8	1.4	1.8	30	2110
3x70	10.6	1.4	1.9	35	2980
3x95	12.4	1.6	2	40	3930
3x120	14	1.6	2.1	43	4780
3x150	15.5	1.8	2.3	48	5880
3x185	17.4	2	2.4	52	7230
3x240	20.3	2.2	2.6	59	9390
3x300	22.7	2.4	2.7	65	11620
3x400	25.4	2.6	3.0	72	14730

Three cores+1(unarmoured)



Nominal Cross Section	Diameter of Conductor (Approx.)		Nominal Insulation Thickness		Nominal PVC Sheath Thickness	Overall Diameter (Approx.)	Weight of Cable (Approx.)
mm²	(3)mm	(1)mm	(3)mm	(1)mm	mm	mm	Kg/Km
3x 16/10	5	4	1	1	1.8	22	1000
3x 25/16	6.3	5	1.2	1	1.8	26	1460
3x 35/16	7.4	5	1.2	1	1.8	28	1830
3x 50/25	8.8	6.3	1.4	1.2	1.8	32	2410
3x 70/35	10.6	7.4	1.4	1.2	1.9	36	3360
3x 95/50	12.4	8.8	1.6	1.4	2.1	41	4440
3x120/70	14	10.6	1.6	1.4	2.2	46	5580
3x150/70	15.5	10.6	1.4	1.2	2.3	49	6580
3x185/95	17.4	12.4	1.6	1.4	2.5	54	8200
3x240/120	20.3	14	1.6	1.4	2.6	61	10570
3x300/150	22.7	15.5	1.8	1.6	2.8	67	13020
3x400/185	25.4	17.4	2	1.6	3.1	75	16560

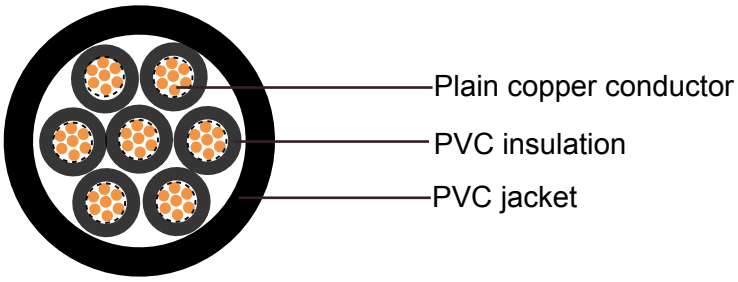
Four cores(unarmoured)



Nominal Cross Section	Diameter of Conductor (Approx.)	Nominal Insulation Thickness	Nominal PVC Sheath Thickness	Overall Diameter (Approx.)	Weight of Cable (Approx.)
mm²	mm	mm	mm	mm	Kg/Km
4x1.5	1.6	0.8	1.8	13.5	265
4x2.5	2	0.8	1.8	14.5	325
4x4	2.6	1	1.8	16.5	450
4x6	3.1	1	1.8	18	560
4x10	4	1	1.8	20	770
4x16	5	1	1.8	23	1080
4x25	6.3	1.2	1.8	26.5	1580
4x35	7.4	1.2	1.8	29.5	2070
4x50	8.8	1.4	1.8	34	2680

Nominal Cross Section	Diameter of Conductor (Approx.)	Nominal Insulation Thickness	Nominal PVC Sheath Thickness	Overall Diameter (Approx.)	Weight of Cable (Approx.)
mm²	mm	mm	mm	mm	Kg/Km
4x70	10.6	1.4	2	38	3760
4x95	12.4	1.6	2.1	44	4960
4x120	14	1.6	2.3	48	6110
4x150	15.5	1.8	2.4	53	7450
4x185	17.4	2	2.6	58	9220
4x240	20.3	2.2	2.8	65	11900
4x300	22.7	2.4	3	72	14730
4x400	25.4	2.6	3.3	81	18830

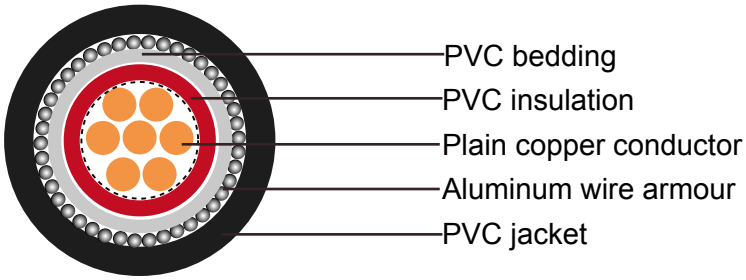
Multi-cores(unarmoured)



Nominal Cross Section	Diameter of Conductor (Approx.)	Nominal Insulation Thickness	Nominal PVC Sheath Thickness	Overall Diameter (Approx.)	Weight of Cable (Approx.)
mm²	mm	mm	mm	mm	Kg/Km
5x1.5	1.6	0.8	1.8	14.5	300
7x1.5	1.6	0.8	1.8	15.5	360
10x1.5	1.6	0.8	1.8	19	460
12x1.5	1.6	0.8	1.8	19.5	510
14x1.5	1.6	0.8	1.8	20	570
19x1.5	1.6	0.8	1.8	22	710
21x1.5	1.6	0.8	1.8	23	770
24x1.5	1.6	0.8	1.8	25	870
30x1.5	1.6	0.8	1.8	26	1020
40x1.5	1.6	0.8	1.8	29	1290
48x1.5	1.6	0.8	1.8	32	1520
61x1.5	1.6	0.8	1.8	35	1900
5x2.5	2	0.8	1.8	16	375
7x2.5	2	0.8	1.8	17	460
10x2.5	2	0.8	1.8	20	590

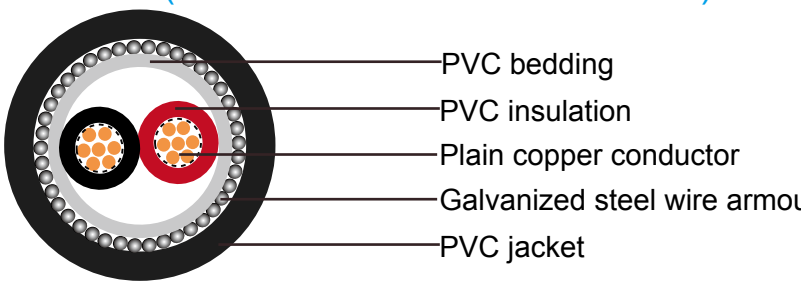
Nominal Cross Section	Diameter of Conductor (Approx.)	Nominal Insulation Thickness	Nominal PVC Sheath Thickness	Overall Diameter (Approx.)	Weight of Cable (Approx.)
mm²	mm	mm	mm	mm	Kg/Km
12x2.5	2	0.8	1.8	21	660
14x2.5	2	0.8	1.8	22	740
19x2.5	2	0.8	1.8	24	940
21x2.5	2	0.8	1.8	25	1030
24x2.5	2	0.8	1.8	27	1150
30x2.5	2	0.8	1.8	29	1370
40x2.5	2	0.8	1.8	32	1810
48x2.5	2	0.8	1.8	36	2130
61x2.5	2	0.8	1.8	39	2630

Single core(aluminum wire armoured)



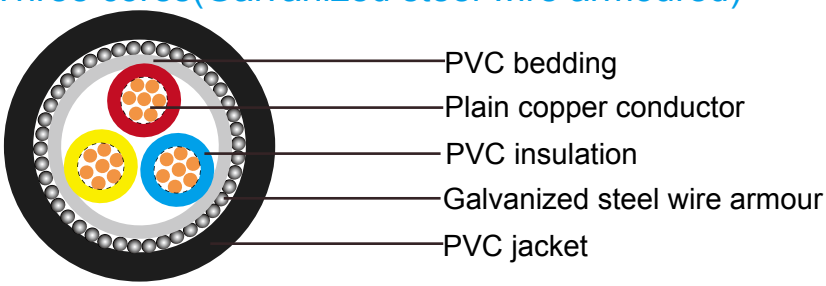
Nominal Area	Approx onductor Diameter	Nominal Insulation thickness	Nominal bedding thickness	Nominal Alum Wire dia.	Nominal Sheath thickness	Approx. Overall Diameter	Approx. Weight
mm²	mm	mm	mm	mm	mm	mm	Kg/Km
1x10	4	1	1	0.8	1.8	14	300
1x16	5	1	1	0.8	1.8	15	375
1x25	6.3	1.2	1	0.8	1.8	16	500
1x35	7.4	1.2	1	0.8	1.8	18	625
1x50	8.8	1.4	1	1.25	1.8	20	835
1x70	10.6	1.4	1	1.25	1.8	22	1075
1x95	12.4	1.6	1	1.25	1.8	24	1385
1x120	14	1.6	1	1.6	1.8	26	1700
1x150	15.5	1.8	1	1.6	1.8	28	2025
1x185	17.4	2	1	1.6	1.8	31	2450
1x240	20.3	2.2	1	1.6	1.9	34	3100
1x300	22.7	2.4	1	2	2	38	3900
1x400	25.4	2.6	1.2	2	2.1	42	4875
1x500	28.8	2.8	1.2	2	2.2	45	6050
1x630	30.4	2.8	1.2	2	2.4	50	7625

Two cores(Galvanized steel wire armoured)



Nominal Area	Approx onductor Diameter	Nominal Insulation thickness	Nominal bedding thickness	Nominal Steel Wire dia.	Nominal Sheath thickness	Approx. Overall Diameter	Approx. Weight
mm²	mm	mm	mm	mm	mm	mm	Kg/Km
2x2.5	2	0.8	1	0.8	1.8	15	425
2x4	2.6	1	1	0.8	1.8	17	525
2x6	3.1	1	1	1.25	1.8	19	775
2x10	4	1	1	1.25	1.8	20	825
2x16	5	1	1	1.25	1.8	21	950
2x25	6.3	1	1	1.25	1.8	23	1150
2x35	7.4	1.2	1	1.6	1.8	27	1700
2x2.5	2	1.2	1	1.6	1.8	29	2050

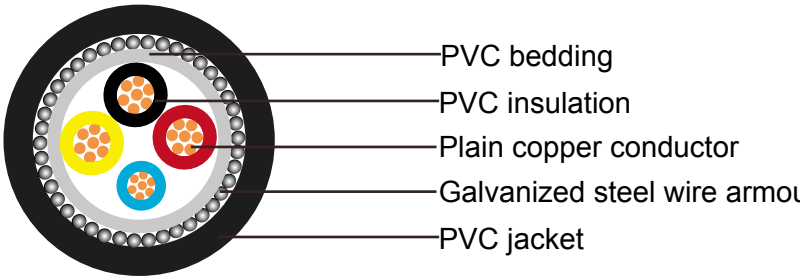
Three cores(Galvanized steel wire armoured)



Nominal Area	Approx onductor Diameter	Nominal Insulation thickness	Nominal bedding thickness	Nominal Steel Wire dia.	Nominal Sheath thickness	Approx. Overall Diameter	Approx. Weight
mm²	mm	mm	mm	mm	mm	mm	Kg/Km
3x2.5 rm	2	0.8	1.2	0.8	1.8	16	465
3x4 re	2.3	1	1.2	1.25	1.8	18	685
3x4 rm	2.6	1	1.2	1.25	1.8	19	725
3x6 re	2.8	1	1.2	1.25	1.8	19	800
3x6 rm	3.1	1	1.2	1.25	1.8	20	850
3x10 re	3.6	1	1.2	1.25	1.8	21	1000
3x10 rm	4	1	1.2	1.25	1.8	22	1050
3x16 rm	5	1	1.2	1.25	1.8	24	1350
3x25 rm	6.3	1.2	1.2	1.6	1.8	29	1975
3x35 rm	7.4	1.2	1.2	1.6	1.8	31	2300

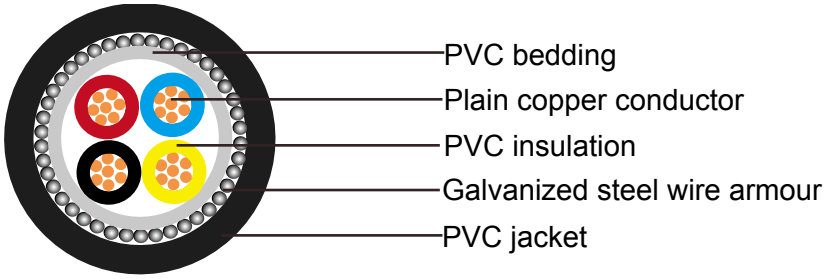
Nominal Area	Approx onductor Diameter	Nominal Insulation thickness	Nominal bedding thickness	Nominal Steel Wire dia.	Nominal Sheath thickness	Approx. Overall Diameter	Approx. Weight
mm²	mm	mm	mm	mm	mm	mm	Kg/Km
3x50 sm	-	1.4	1.2	1.6	2	32	2675
3x70 sm	-	1.4	1.2	2	2.1	36	3700
3x95 sm	-	1.6	1.2	2	2.2	41	4750
3x120 sm	-	1.6	1.2	2	2.3	44	5575
3x150 sm	-	1.8	1.4	2.5	2.5	49	7150
3x185 sm	-	2	1.4	2.5	2.7	53	8550
3x240 sm	-	2.2	1.5	2.5	2.9	59	10700
3x300 sm	-	2.4	1.6	2.5	3.1	65	12925
3x400 sm	-	2.6	1.6	3.15	3.4	74	16900
3x500 sm	-	2.8	1.8	3.15	3.6	81	20650

Three cores+1(Galvanized steel wire armoured)



Nominal Area	Approx Conductor Diameter		Nominal Insulation thick-ness		Nominal bedding thick-ness	Nominal Steel Wire dia.	Nominal Sheath thick-ness	Approx. Overall Diameter	Approx. Weight
mm²	mm	mm	mm	mm	mm	mm	mm	mm	Kg/Km
3x10 rm+6	4	3.1	1	1	1.2	1.25	1.8	23	1175
3x16 rm+10	5	4	1	1	1.2	1.6	1.8	26	1650
3x25 rm+16	6.3	5	1.2	1	1.2	1.6	1.8	30	2200
3x35 sm+16	-	5	1.2	1	1.2	1.6	1.9	30	2375
3x50 sm+25	-	6.3	1.4	1.2	1.2	2	2	35	3275
3x70 sm+35	-	7.4	1.4	1.2	1.2	2	2.1	39	4200
3x95 sm+50	-	8.8	1.6	1.4	1.2	2	2.3	44	5425
3x120 sm+70	-	10.6	1.6	1.4	1.2	2.5	2.5	48	6950
3x150 sm+70	-	10.6	1.8	1.4	1.4	2.5	2.6	52	8100
3x185 sm+95	-	12.4	2	1.6	1.4	2.5	2.7	57	9775
3x240 sm+120	-	14	2.2	1.6	1.5	2.5	2.9	63	12250
3x300 sm+150	-	15.5	2.4	1.8	1.6	2.5	3.1	70	14775
3x400 sm+185	-	17.4	2.6	2	1.6	0.3	3.5	79	19250
3x500 sm+240	-	20.3	2.8	2.2	1.8	3.15	3.7	85	23625

Four cores(Galvanized steel wire armoured)



Nominal Area	Approx onductor Diameter	Nominal Insulation thickness	Nominal bedding thickness	Nominal Steel Wire dia.	Nominal Sheath thickness	Approx. Overall Diameter	Approx. Weight
mm²	mm	mm	mm	mm	mm	mm	Kg/Km
4x4 re	2.3	1	1	1.25	1.8	19	790
4x4 rm	2.6	1	1	1.25	1.8	20	825
4x6 re	2.8	1	1	1.25	1.8	21	925
4x6 rm	3.1	1	1	1.25	1.8	21	975
4x10 re	3.6	1	1	1.25	1.8	23	1175
4x10 rm	4	1	1	1.25	1.8	24	1250
4x16 rm	5	1	1	1.6	1.8	27	1750
4x25 rm	6.3	1.2	1	1.6	1.8	31	2375
4x35 sm	-	1.2	1	1.6	1.9	31	2600
4x50 sm	-	1.4	1	2	2.1	37	3625
4x70 sm	-	1.4	1.2	2	2.2	40	4575
4x95 sm	-	1.6	1.2	2.5	2.4	46	6350
4x120 sm	-	1.6	1.4	2.5	2.5	50	7525
4x150 sm	-	1.8	1.4	2.5	2.7	55	8950
4x185 sm	-	2	1.4	2.5	2.9	60	10650
4x240 sm	-	2.2	1.6	2.5	3.1	66	13575
4x300 sm	-	2.4	1.6	2.5	3.3	73	16425
4x400 sm	-	2.6	1.8	3.15	3.6	83	21500
4x500 sm	-	2.8	2	3.15	3.9	91	26500