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Product Datasheet MHT2879
PowerProtect+ C1+
RED

General

Emtelle PowerProtect+ C1+ ducts are suitable for electric cable protection. The ducts are made of PE100 material. The ducts are manufactured and have mechanical performance according to ENATS 12-24, DIN8074/DIN EN12201 Emtelle PowerProtect+ C1+ducts are smooth in- and outside. The duct can be connected using ElectroFusion Couplers, Mechanical Couplers or Fusion-Butt-Welding.

The ducts are skinned coloured RED.

Raw Materials

Material 100% PE100 material are used

Dimensions PowerProtect+ C1+ SDR17.6 RED

Product Code	Product Description	Supply Length	Metre / Frame
300756-12	110x6,3mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	576m
300757-12	125x7,1mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	408m
300758-12	140x8mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	312m
300759-12	160x9,1mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	240m
300760-12	180x10,2mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	204m
300761-12	200x11,4mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	168m
300762-12	225x12,8mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	168m
300763-12	250x14,2mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	84m
300764-12	280x15,9mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	48m
300765-12	315x17,9mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	36m
300766-12	355x20,1mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	36m
300767-12	400x22,7mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	36m
300768-12	450x25,5mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	24m
300769-12	500x28,3mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	24m
300770-12	560x31,7mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	24m
300771-12	630x35,7mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	12m
300772-12	710x40,2mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	12m
300773-12	800x45,3mm PowerProtect+ C1+ SDR17.6 Red, 12m	12m	12m

Other supply lengths available on request

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Dimensions PowerProtect+ SDR17 RED

Product Code	Product Description	Supply Length	Metre / Frame
300308-12	110x6,6mm PowerProtect+ C1+ SDR17 Red, 12m	12m	576m
300309-12	125x7,4mm PowerProtect+ C1+ SDR17 Red, 12m	12m	408m
300310-12	140x8,3mm PowerProtect+ C1+ SDR17 Red, 12m	12m	312m
300311-12	160x9,5mm PowerProtect+ C1+ SDR17 Red, 12m	12m	240m
300312-12	180x10,7mm PowerProtect+ C1+ SDR17 Red, 12m	12m	204m
300313-12	200x11,9mm PowerProtect+ C1+ SDR17 Red, 12m	12m	168m
300314-12	225x13,4mm PowerProtect+ C1+ SDR17 Red, 12m	12m	168m
300315-12	250x14,8mm PowerProtect+ C1+ SDR17 Red, 12m	12m	84m
300316-12	280x16,6mm PowerProtect+ C1+ SDR17 Red, 12m	12m	48m
300317-12	315x18,7mm PowerProtect+ C1+ SDR17 Red, 12m	12m	36m
300318-12	355x21,1mm PowerProtect+ C1+ SDR17 Red, 12m	12m	36m
300319-12	400x23,7mm PowerProtect+ C1+ SDR17 Red, 12m	12m	36m
300320-12	450x26,7mm PowerProtect+ C1+ SDR17 Red, 12m	12m	24m
300321-12	500x29,7mm PowerProtect+ C1+ SDR17 Red, 12m	12m	24m
300322-12	560x33,2mm PowerProtect+ C1+ SDR17 Red, 12m	12m	24m
300323-12	630x37,4mm PowerProtect+ C1+ SDR17 Red, 12m	12m	12m
300324-12	710x42,1mm PowerProtect+ C1+ SDR17 Red, 12m	12m	12m
300325-12	800x47,4mm PowerProtect+ C1+ SDR17 Red, 12m	12m	12m

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Dimensions PowerProtect+ SDR11 RED

Product Code	Product Description	Supply Length	Metre / Frame
300326-12	110x10mm PowerProtect C1+ SDR11 Red, 12m	12m	576m
300327-12	125x11,4mm PowerProtect C1+ SDR11 Red, 12m	12m	408m
300328-12	140x12,7mm PowerProtect C1+ SDR11 Red, 12m	12m	312m
300329-12	160x14,6mm PowerProtect C1+ SDR11 Red, 12m	12m	240m
300330-12	180x16,4mm PowerProtect C1+ SDR11 Red, 12m	12m	204m
300331-12	200x18,2mm PowerProtect C1+ SDR11 Red, 12m	12m	168m
300332-12	225x20,5mm PowerProtect C1+ SDR11 Red, 12m	12m	168m
300333-12	250x22,7mm PowerProtect C1+ SDR11 Red, 12m	12m	84m
300334-12	280x25,4mm PowerProtect C1+ SDR11 Red, 12m	12m	48m
300335-12	315x28,6mm PowerProtect C1+ SDR11 Red, 12m	12m	36m
300336-12	355x32,2mm PowerProtect C1+ SDR11 Red, 12m	12m	36m
300337-12	400x36,3mm PowerProtect C1+ SDR11 Red, 12m	12m	36m
300338-12	450x40,9mm PowerProtect C1+ SDR11 Red, 12m	12m	24m
300339-12	500x45,4mm PowerProtect C1+ SDR11 Red, 12m	12m	24m
300340-12	560x50,8mm PowerProtect C1+ SDR11 Red, 12m	12m	24m
300341-12	630x57,2mm PowerProtect C1+ SDR11 Red, 12m	12m	12m

Other supply lengths available on request

Dimensions PowerProtect+ SDR9 RED

Product Code	Product Description	Supply Length	Metre / Frame
300668-12	110x12,3mm PowerProtect C1+ SDR9 Red, 12m	12m	576m
300669-12	125x14,0mm PowerProtect C1+ SDR9 Red, 12m	12m	408m
300670-12	140x15,7mm PowerProtect C1+ SDR9 Red, 12m	12m	312m
300671-12	160x17,9mm PowerProtect C1+ SDR9 Red, 12m	12m	240m
300672-12	180x20,1mm PowerProtect C1+ SDR9 Red, 12m	12m	204m
300673-12	200x22,4mm PowerProtect C1+ SDR9 Red, 12m	12m	168m
300674-12	225x25,2mm PowerProtect C1+ SDR9 Red, 12m	12m	168m
300675-12	250x27,9mm PowerProtect C1+ SDR9 Red, 12m	12m	84m
300676-12	280x31,3mm PowerProtect C1+ SDR9 Red, 12m	12m	48m
300677-12	315x35,2mm PowerProtect C1+ SDR9 Red, 12m	12m	36m
300678-12	355x39,7mm PowerProtect C1+ SDR9 Red, 12m	12m	36m
300679-12	400x44,7mm PowerProtect C1+ SDR9 Red, 12m	12m	36m
300680-12	450x50,3mm PowerProtect C1+ SDR9 Red, 12m	12m	24m
300681-12	500x55,8mm PowerProtect C1+ SDR9 Red, 12m	12m	24m

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Pipe Performance

Physical Properties:

Test	Standard	Result
Impact test 5kg	DS EN 61386	OK
Elongation at Break	EN ISO 6259	>350%
Yield Stress	EN ISO 6259	>20MPa
Compression	DS EN 61386	>750N
Ring stiffness	ISO 9969	See tables below
Longitudinal reversion	EN ISO 2505	<3%
OIT ≥ 20 min	ISO 11357	OK

The pipes shall have dimensions (mm) as defined above, in addition other non-standard dimensions can be chosen,

The weight (mass) of the pipe shall be nominally calculated for 1m pipe

$$(OD - wt) \times wt \times \pi \times \text{density}$$

Where:

OD (outside diameter) and wt (wall thickness) is in mm, and density for PE material is 0.96 g/cm³.

Appendix SDR17.6

SDR 17.6												
OD [mm]	WT [mm]	ID [mm]	ODmin [mm]	ODmax [mm]	Ovality	WTmin [mm]	WTmax [mm]	Weight [kg/m]	Min Bend Radius [mm] @ 20 ° C	Ring Stiffness SN {kN/m ² }	Max Install tension [kN] @ 20 ° C	Max Install tension [kg] @ 20 ° C
110	6,3	97,4	110,0	110,7	2,2	6,3	7,1	1,97	2.750	TBC	21,67	2.207,10
125	7,1	110,8	125,0	125,8	2,5	7,1	8,0	2,52	3.125	TBC	27,77	2.827,97
140	8,0	124,0	140,0	140,9	2,8	8,0	9,0	3,18	3.500	TBC	35,03	3.567,52
160	9,1	141,8	160,0	161,0	3,2	9,1	10,2	4,14	4.000	TBC	45,56	4.639,09
180	10,2	159,6	180,0	181,1	3,6	10,2	11,4	5,22	4.500	TBC	57,46	5.851,14
200	11,4	177,2	200,0	201,2	4,0	11,4	12,7	6,48	5.000	TBC	71,33	7.263,55
225	12,8	199,4	225,0	226,4	4,5	12,8	14,2	8,19	5.625	TBC	90,11	9.176,09
250	14,2	221,6	250,0	251,5	5,0	14,2	15,8	10,09	6.250	TBC	111,08	11.311,87
280	15,9	248,2	280,0	281,7	5,0	15,9	17,6	12,66	7.000	TBC	139,31	14.186,26
315	17,9	279,2	315,0	316,9	5,0	17,9	19,8	16,03	7.875	TBC	176,43	17.966,27
355	20,1	314,8	355,0	357,2	6,0	20,1	22,3	20,29	8.875	TBC	223,32	22.741,21
400	22,7	354,6	400,0	402,4	7,0	22,7	25,1	25,82	10.000	TBC	284,14	28.934,43
450	25,5	399,0	450,0	452,7	8,0	25,5	28,2	32,63	11.250	TBC	359,11	36.569,60
500	28,3	443,4	500,0	503,0	8,0	28,3	31,3	40,24	12.500	TBC	442,86	45.097,72
560	31,7	496,6	560,0	563,4	8,0	31,7	35,0	50,48	14.000	TBC	555,59	56.577,29
630	35,7	558,6	630,0	633,8	9,0	35,7	39,4	63,96	15.750	TBC	703,86	71.676,41
710	40,2	629,6	710,0	716,4	9,0	40,2	44,4	81,17	17.750	TBC	893,27	90.964,83
800	45,3	709,4	800,0	807,2	10,0	45,3	50,0	103,06	20.000	TBC	1.134,19	115.498,10

*Note that “,” separates for decimals and “.” separates for thousands

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Appendix SDR17

SDR 17												
OD [mm]	WT [mm]	ID [mm]	ODmin [mm]	ODmax [mm]	Ovality	WTmin [mm]	WTmax [mm]	Weight [kg/m]	Min Bend Radius [mm] @ 20 ° C	Ring Stiffness SN {kN/m ² }	Max Install tension [kN] @ 20 ° C	Max Install tension [kg] @ 20 ° C
110	6,6	96,8	110,0	110,7	2,2	6,6	7,4	2,06	2.200	16	22,64	2.305,51
125	7,4	110,2	125,0	125,8	2,5	7,4	8,3	2,62	2.500	16	28,87	2.939,96
140	8,3	123,4	140,0	140,9	2,8	8,3	9,3	3,30	2.800	16	36,26	3.692,89
160	9,5	141,0	160,0	161,0	3,2	9,5	10,6	4,31	3.200	16	47,43	4.830,17
180	10,7	158,6	180,0	181,1	3,6	10,7	11,9	5,46	3.600	16	60,10	6.119,88
200	11,9	176,2	200,0	201,2	4,0	11,9	13,2	6,75	4.000	16	74,26	7.562,02
225	13,4	198,2	225,0	226,4	4,5	13,4	14,9	8,55	4.500	16	94,07	9.579,06
250	14,8	220,4	250,0	251,5	5,0	14,8	16,4	10,50	5.000	16	115,48	11.759,84
280	16,6	246,8	280,0	281,7	5,0	16,6	18,4	13,19	5.600	16	145,06	14.771,55
315	18,7	277,6	315,0	316,9	5,0	18,7	20,7	16,71	6.300	16	183,82	18.718,69
355	21,1	312,8	355,0	357,2	6,0	21,1	23,4	21,25	7.100	16	233,73	23.801,33
400	23,7	352,6	400,0	402,4	7,0	23,7	26,2	26,90	8.000	16	295,87	30.129,01
450	26,7	396,6	450,0	452,7	8,0	26,7	29,5	34,09	9.000	16	374,95	38.182,28
500	29,7	440,6	500,0	503,0	8,0	29,7	32,8	42,13	10.000	16	463,39	47.188,23
560	33,2	493,6	560,0	563,4	8,0	33,2	36,7	52,75	11.200	16	580,23	59.086,21
630	37,4	555,2	630,0	633,8	9,0	37,4	41,3	66,84	12.600	16	735,27	74.874,78
710	42,1	625,8	710,0	716,4	9,0	42,1	46,5	84,80	14.200	16	932,84	94.993,93
800	47,4	705,2	800,0	807,2	10,0	47,4	52,3	107,59	16.000	16	1.183,47	120.516,04

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Appendix SDR11

SDR 11												
OD [mm]	WT [mm]	ID [mm]	ODmin [mm]	ODmax [mm]	Ovality	WTmin [mm]	WTmax [mm]	Weight [kg/m]	Min Bend Radius [mm] @ 20 ° C	Ring Stiffness SN {kN/m ² }	Max Install tension [kN] @ 20 ° C	Max Install tension [kg] @ 20 ° C
110	10,0	90,0	110,0	110,7	2,2	10,0	11,1	3,02	2.200	64	33,18	3.378,33
125	11,4	102,2	125,0	125,8	2,5	11,4	12,7	3,91	2.500	64	42,96	4.375,07
140	12,7	114,6	140,0	140,9	2,8	12,7	14,1	4,88	2.800	64	53,63	5.461,78
160	14,6	130,8	160,0	161,0	3,2	14,6	16,2	6,40	3.200	64	70,43	7.171,66
180	16,4	147,2	180,0	181,1	3,6	16,4	18,2	8,09	3.600	64	89,01	9.064,20
200	18,2	163,6	200,0	201,2	4,0	18,2	20,2	9,98	4.000	64	109,77	11.178,09
225	20,5	184,0	225,0	226,4	4,5	20,5	22,7	12,64	4.500	64	139,08	14.162,81
250	22,7	204,6	250,0	251,5	5,0	22,7	25,1	15,56	5.000	64	171,17	17.431,21
280	25,4	229,2	280,0	281,7	5,0	25,4	28,1	19,50	5.600	64	214,54	21.847,13
315	28,6	257,8	315,0	316,9	5,0	28,6	31,6	24,70	6.300	64	271,74	27.672,05
355	32,2	290,6	355,0	357,2	6,0	32,2	35,6	31,35	7.100	64	344,83	35.114,92
400	36,3	327,4	400,0	402,4	7,0	36,3	40,1	39,82	8.000	64	437,99	44.601,78
450	40,9	368,2	450,0	452,7	8,0	40,9	45,1	50,46	9.000	64	555,09	56.526,89
500	45,4	409,2	500,0	503,0	8,0	45,4	50,1	62,25	10.000	64	684,70	69.724,85
560	50,8	458,4	560,0	563,4	8,0	50,8	56,0	78,01	11.200	64	858,16	87.388,53
630	57,2	515,6	630,0	633,8	9,0	57,2	63,1	98,81	12.600	64	1.086,96	110.688,20

*Note that “,” separates for decimals and “.” separates for thousands

Appendix SDR9

SDR 9												
OD [mm]	WT [mm]	ID [mm]	ODmin [mm]	ODmax [mm]	Ovality	WTmin [mm]	WTmax [mm]	Weight [kg/m]	Min Bend Radius [mm] @ 20 ° C	Ring Stiffness SN {kN/m ² }	Max Install tension [kN] @ 20 ° C	Max Install tension [kg] @ 20 ° C
110	12,3	85,4	110,0	110,7	2,2	12,3	13,7	3,62	2.200	TBC	39,87	4.059,78
125	14,0	97,0	125,0	125,8	2,5	14,0	15,6	4,68	2.500	TBC	51,55	5.249,93
140	15,7	108,6	140,0	140,9	2,8	15,7	17,4	5,88	2.800	TBC	64,74	6.592,85
160	17,9	124,2	160,0	161,0	3,2	17,9	19,8	7,67	3.200	TBC	84,38	8.593,09
180	20,1	139,8	180,0	181,1	3,6	20,1	22,3	9,69	3.600	TBC	106,62	10.857,92
200	22,4	155,2	200,0	201,2	4,0	22,4	24,8	11,99	4.000	TBC	131,98	13.439,81
225	25,2	174,6	225,0	226,4	4,5	25,2	27,9	15,18	4.500	TBC	167,04	17.009,77
250	27,9	194,2	250,0	251,5	5,0	27,9	30,8	18,68	5.000	TBC	205,57	20.934,14
280	31,3	217,4	280,0	281,7	5,0	31,3	34,6	23,47	5.600	TBC	258,25	26.297,98
315	35,2	244,6	315,0	316,9	5,0	35,2	38,9	29,69	6.300	TBC	326,74	33.273,05
355	39,7	275,6	355,0	357,2	6,0	39,7	43,8	37,73	7.100	TBC	415,27	42.287,96
400	44,7	310,6	400,0	402,4	7,0	44,7	49,3	47,87	8.000	TBC	526,89	53.654,36
450	50,3	349,4	450,0	452,7	8,0	50,3	55,5	60,60	9.000	TBC	666,98	67.921,06
500	55,8	388,4	500,0	503,0	8,0	55,8	61,5	74,72	10.000	TBC	822,29	83.736,55

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Exposure:

The pipe shall be UV stabilized to withstand daylight exposure period of at least 12 months.

Marking on duct every meter:

ELECTRIC CABLE DUCT C1+ [POWERPROTECT+ LOGO] ODmm SDR-Value EMTELLE MACHINE NO. "DD.MM.YYYY HH:MM" "Lot. No."

3 Lines of print @120degree

Environmental considerations: Can be disposed to recycling.

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