

**Flexible cables
for cable chains**

Catalogue 2005.01



**b[®] brevetti
stendalto**

TotalChain

Total system for ...

Reducing Costs

Assembly Costs - Delivered to you fully assembled
Warehouse Costs - Fewer components to stock and maintain
Purchasing Costs - Competitively priced

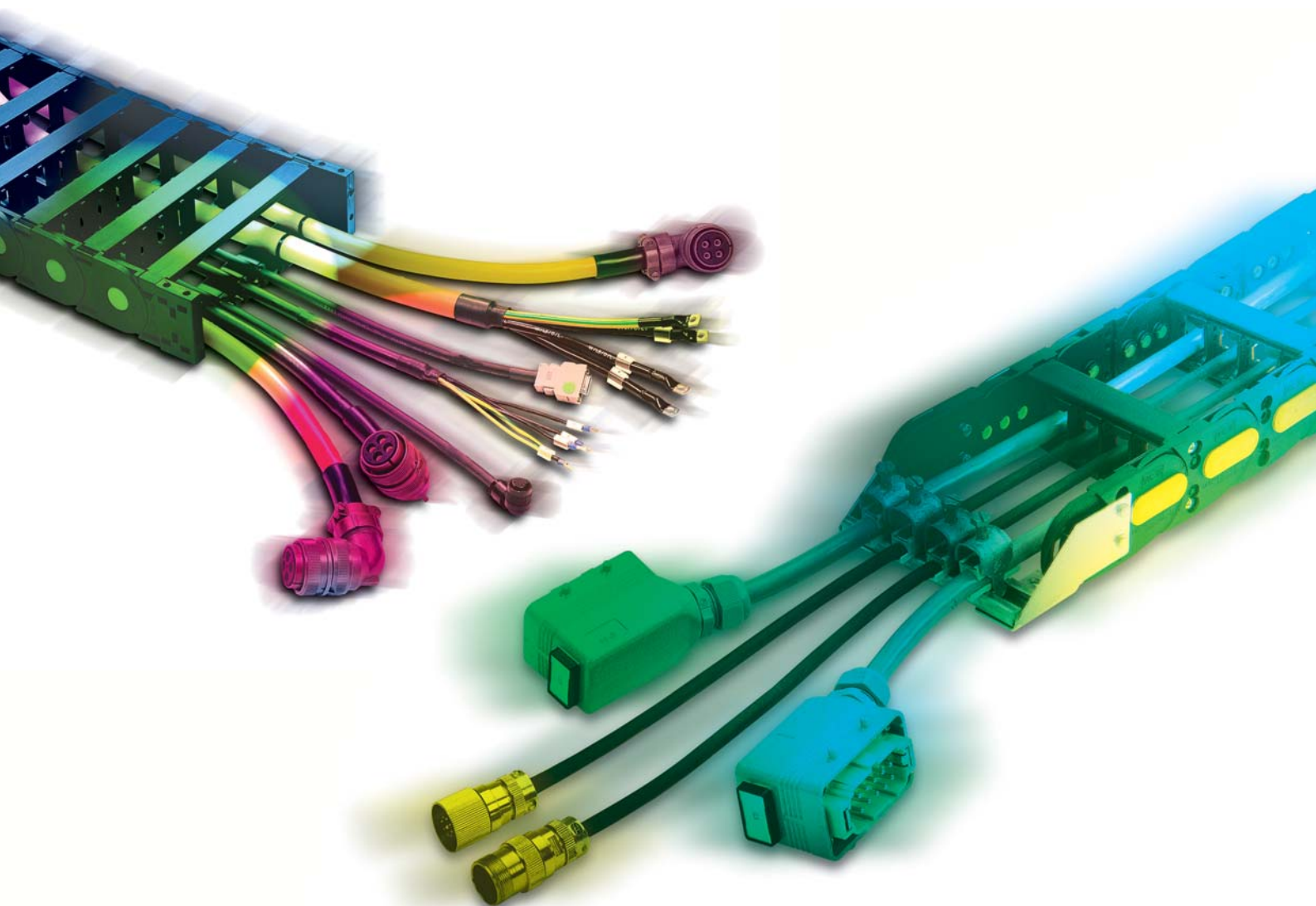
Saving Time

Assembly Time - Delivered ready for installation
Purchasing Time - All components from one supplier
Delivery Time - Quick shipment from receipt of your P.O.

Customer Service

Reliability - Quality components from one supplier
Quality - Complete assembly guaranteed
Customer service - Expert assistance from one supplier

Total Chain is a fully harnessed cable chain, with a full package guarantee, made to order and delivered ready for installation.



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Brevetti Stendalto



In the 60's things changed, - also the way of manufacturing, the magic word became "Automation" as the equipment and machines started to operate based on new concepts, which required a new generation of dynamic cable protection. Mr. Giovanni Mauri, (president and founder of Brevetti Stendalto) captured this new demand, he designed and started to propose Nylon cables chains in alternative to old style steel cable chains, which were too heavy and expensive for most of the new modern automation equipment and machines.

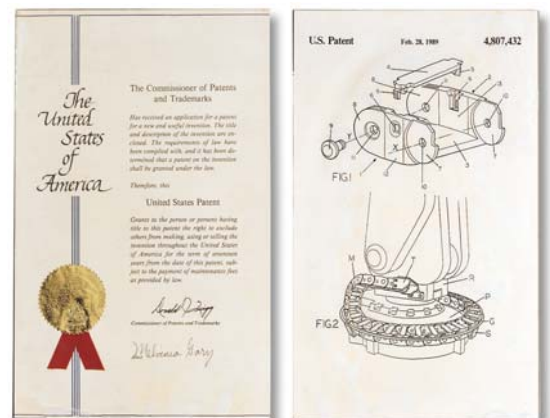
From those days, Brevetti Stendalto's cables chains are used for dynamics cables protection on all kinds of equipment around the world.

The continuing evolution of Brevetti Stendalto has brought: a wide range of cables chains for all kinds applications, international patent for Robot circular chains in 1988, ISO 9001 qualification, branches in France 1998 and Germany 1999, new modern facilities in Monza, Italy and a consolidation of our international sales net in all industrialized countries.

Today's Brevetti Stendalto is projecting its future in two main directions; large cable chain projects and problem solving supply. For large cable chain projects, Brevetti Stendalto is approaching a leading position in this sectors with increasing demand, as offshore platforms and harbour crane equipment.

To give an idea of what technological wise is reached for such applications, where the dynamic power supply heavily determine the entire project, Brevetti Stendalto's test rig, tests the cable chains at a constant speed of 8 m/s for 130 m travel.

With regards to "Problem solving supply" , Brevetti Stendalto is offering a new supply concept; cable chains completely finished with cables and connectors. For the customer it means reduced assembling and installation time, reduction of possible problems, which again express the philosophy of Brevetti Stendalto: Free to project.



Patent for the circular nylon cable chain.



Chain/Cable testing rig for long travel:
Tests at 8 m/s for 130 m travels.

Applications

From our initial experience from the machine tool centres, more than 30 years ago, Brevetti has acquired the technical know-how to diversify its product range. Nowadays the cables chains are offered together with our range of Highly flexible as a guaranteed package solution for all kinds heavy duty applications for dynamic power supply as: Industrial robots, high-speed automation, automatic storage systems, container cranes. Our package solution of Brevetti cable chains & flexible chains are also being implemented in many sectors of engineering: steel works, offshore, cranes, harbour cranes and compost plants.



Typical single-loop power chain installation on a KCI Konecrane RTG unit in operation



Machine tools equipped with Heavy series cable chains



SR445 vertical nylon chain on machine tool

Signal, Control and Power cables with PVC jacket

BC400



Technical data

Nominal voltage:

VDE DIN 0245 part.102 U_o/U 300/500V
UL 758 AWM - 600V
CSA AWM C.22.2 n.210-600V

Testing voltage:

sect.0,5-6 mm² 2000 V

Temperature range:

-10°C a +80°C

Speed:

80 m/min

Acceleration:

2 m/s²

Burning characteristics:

EN 50265-2-1,
VDE 0472-804 test B,
IEC 60332.3C

Oil resistance:

IEC 60811-2-1: ASTM 2 90°C x 168 h

Homologation UL/CSA:

UL-AWM 80°C - 600V
CSA 80°C - 600V

Construction

Conductor:

Flexible complying with:
VDE 0295, IEC 60228

Insulation:

Composto termoplastico isolante
conforme a UL / CSA

Core ident.:

black num.
+G/V complying with
VDE 0293,
CEI UNEL 00725-74

Jacket material:

Termoplastica, bassa adesione
conforme a UL / CSA
Colour grey RAL 7001

BC401

Shielding:

Tinned copper braid > 80%

Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4000305	3x0,50	6,50	65	60
4000405	4x0,50	7,10	71	70
4000505	5x0,50	7,70	77	85
4000705	7x0,50	8,40	84	115
4001205	12x0,50	11,00	110	167
4001805	18x0,50	12,70	127	258
4002505	25x0,50	15,30	153	337
4000310	3x1,0	7,30	73	80
4000410	4x1,0	7,90	79	100
4000510	5x1,0	8,60	86	125
4000710	7x1,0	9,60	96	170
4001210	12x1,0	12,20	122	260
4001810	18x1,0	14,70	147	380
4002510	25x1,0	17,10	171	550
4000315	3x1,5	7,80	78	100
4000415	4x1,5	8,50	85	125
4000515	5x1,5	9,30	93	155
4000715	7x1,5	10,20	102	210
4001215	12x1,5	13,20	132	330
4001815	18x1,5	15,90	159	485
4002515	25x1,5	18,80	188	710
4000425	4x2,5	10,00	100	175
4000725	7x2,5	12,00	120	310
4001225	12x2,5	15,70	157	495
4000440	4x4	12,50	125	271
4000740	7x4	16,00	160	465
4000460	4x6	14,00	140	370
4000760	7x6	17,70	177	700



Signal, Control and Power cables, Shielded with PVC jacket

BC401



Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4010305	3x0,50	8,20	82	87
4010405	4x0,50	8,80	88	87
4010505	5x0,50	9,40	94	130
4010705	7x0,50	10,20	102	125
4011205	12x0,50	12,20	122	211
4011805	18x0,50	14,30	143	270
4012505	25x0,50	15,90	159	338
4010310	3x1,0	9,00	90	101
4010410	4x1,0	9,70	97	160
4010510	5x1,0	10,40	104	195
4010710	7x1,0	11,30	113	235
4011210	12x1,0	14,00	140	410
4011810	18x1,0	16,50	165	530
4012510	25x1,0	19,30	193	825
4010315	3x1,5	9,70	97	185
4010415	4x1,5	10,30	103	215
4010515	5x1,5	11,10	111	260
4010715	7x1,5	11,90	119	310
4011215	12x1,5	15,00	150	510
4011815	18x1,5	17,70	177	730
4012515	25x1,5	20,40	204	1000
4010425	4x2,5	11,80	118	250
4010725	7x2,5	13,70	137	361
4010440	4x4	15,00	150	360
4010740	7x4	17,50	175	530



BC400 BC401

Speed: 80 m/min
Acceleration: 2 m/s²

Voltage 300/500 V
UL/CSA 600 V

Complying with UL and CSA for the
European and USA market

For further information please
consult Brevetti Stendalto's
Technical Office

Signal, Control and Power cables, with PVC jacket

BC410



Technical data

Nominal voltage:

sect.0,34 mm ²	300 V
sect.0,5-2,5 mm ²	600 V
sect.4-50 mm ²	1000 V

Testing voltage:

sect.0,34 mm ²	1500 V
sect.0,5-2,5 mm ²	2000 V
sect.4-50 mm ²	3000 V

Temperature range:

-10°C +80°C

Speed:

160 m/min

Acceleration:

6 m/s²

Burning characteristics:

CEI 20-35,
VDE 0472-804 test A,
NFC 32070 cat. C1 test 1,
IEC 332.1

Flame resistance:

CEI 20-22/II,
VDE 0472-804 test C,
NFC 32070 cat. C1 test 2,
IEC 332.3C

Oil resistance:

VDE 0472 part 803/B,
UL 1581,
CNOMO E.03.40.150N,
NFT46-013

Homologation UL/CSA:

sect.0,34 mm² UL-AWM 80°C - 300V
CSA-AWM 75°C - 300V FT1

sect.0,5-50 mm² UL-AWM 80°C-600V
CSA-AWM 80°C - 600V FT1

Construction

Conductor:

High-flexible class 6, complying with:
CEI 20-29, VDE 0295,
NFC 32012, IEC 228

Insulation:

PVC complying with standard UL-CSA

Core ident.:

sect.0,34 mm² colour codification
complying with DIN 47100

sect.0,5-50 mm² black num.
+G/V complying with VDE 0293,
CEI UNEL 00725-74

Jacket material:

Special compound type PVC,
Colour grey RAL 7001

BC411

Shielding:

Tinned copper braid > 80%

Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4100303	3x0,34	4,45	34	25
4100403	4x0,34	4,70	36	32
4100503	5x0,34	5,15	39	38
4100703	7x0,34	5,38	41	47
4101203	12x0,34	6,83	52	74
4101803	18x0,34	8,73	66	90
4102503	25x0,34	9,98	75	110
4100305	3x0,50	6,24	47	50
4100405	4x0,50	6,73	51	62
4100505	5x0,50	7,20	54	73
4100705	7x0,50	8,55	65	105
4101205	12x0,50	10,85	82	160
4101805	18x0,50	13,10	99	246
4102505	25x0,50	15,15	114	330
4100307	3x0,75	6,75	51	60
4100407	4x0,75	7,33	55	70
4100507	5x0,75	8,40	63	82
4100707	7x0,75	9,15	69	90
4101207	12x0,75	11,85	89	204
4101807	18x0,75	14,30	108	295
4102507	25x0,75	17,90	135	370
4100310	3x1,0	7,05	53	75
4100410	4x1,0	8,15	62	100
4100510	5x1,0	8,75	66	120
4100710	7x1,0	9,65	73	150
4101210	12x1,0	12,85	97	250
4101810	18x1,0	15,15	114	360
4102510	25x1,0	19,25	145	560
4100315	3x1,5	8,12	61	100
4100415	4x1,5	8,75	66	120
4100515	5x1,5	9,62	73	150
4100715	7x1,5	10,55	80	190
4101215	12x1,5	14,15	109	320
4101815	18x1,5	17,20	129	500
4102515	25x1,5	21,00	158	700
4103815	38x1,5	24,35	183	900
4100425	4x2,5	10,45	79	185
4100725	7x2,5	13,00	98	298
4101225	12x2,5	17,60	132	526
4100440	4x4,0	13,20	99	288
4100540	5x4,0	14,90	112	315
4100460	4x6,0	14,30	108	390
4104100	4x10,0	18,10	136	625
4105100	5x10,0	21,60	162	885
4104160	4x16,0	22,80	171	960
4104250	4x25,0	28,00	210	1480
4104350	4x35,0	31,80	239	1960
4104500	4x50,0	35,80	269	2860



Signal, Control and Power cables, Shielded with PVC jacket

BC411



Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4110303	3x0,34	4,80	36	40
4110403	4x0,34	5,30	40	46
4110503	5x0,34	5,50	42	51
4110703	7x0,34	5,90	45	64
4111203	12x0,34	7,25	55	105
4111803	18x0,34	8,95	68	136
4112503	25x0,34	10,55	80	180
4110305	3x0,50	6,65	50	70
4110405	4x0,50	7,25	55	83
4110505	5x0,50	8,22	62	100
4110705	7x0,50	8,83	67	120
4111205	12x0,50	11,40	86	206
4111805	18x0,50	13,74	104	240
4112505	25x0,50	15,80	119	330
4110307	3x0,75	7,26	55	78
4110407	4x0,75	7,85	59	85
4110507	5x0,75	8,90	67	110
4110707	7x0,75	9,70	73	150
4111207	12x0,75	12,35	93	250
4111807	18x0,75	14,95	113	360
4112507	25x0,75	18,45	139	480
4110310	3x1,0	7,45	56	96
4110410	4x1,0	8,65	65	120
4110510	5x1,0	9,33	70	150
4110710	7x1,0	10,28	78	190
4111210	12x1,0	13,30	100	300
4111810	18x1,0	16,88	127	430
4112510	25x1,0	19,80	149	630
4110315	3x1,5	8,50	64	125
4110415	4x1,5	9,35	71	160
4110515	5x1,5	10,20	77	200
4110715	7x1,5	11,10	84	230
4111215	12x1,5	14,55	110	400
4111815	18x1,5	17,78	134	570
4112515	25x1,5	21,59	162	810
4110425	4x2,5	11,20	84	230
4110725	7x2,5	13,60	102	355
4111225	12x2,5	18,90	142	540
4110440	4x4,0	13,90	105	340
4110460	4x6,0	14,70	110	440
4114100	4x10,0	18,55	139	690
4114160	4x16,0	23,50	176	900
4114250	4x25,0	28,70	216	1480
4114350	4x35,0	31,55	237	2100
4114500	4x50,0	37,70	283	2960

BC410 BC411

Speed: 160 m/min
Acceleration: 6 m/s²

Complying with UL and CSA for the European and USA market

Voltage 600V
by sect. ≥ 0,5 mm²



For further information please consult Brevetti Stendalto's Technical Office

Signal and Control cables. Inner insulation in TPE-E with PUR jacket

BC418



Technical data

Nominal voltage:

sez.0,34 mm ²	300 V
sez.0,5-2,5 mm ²	600 V

Testing voltage:

sez.0,34 mm ²	1500 V
sez.0,5-2,5 mm ²	2000 V

Temperature range:

-30°C +80°C

Speed:

300 m/min

Acceleration:

25 m/s²

Burning characteristics:

IEC 60332.1
VDE 0472-804 test B,

Oil resistance:

VDE 0472 part 803/B,
UL 1581,

Homologation UL/CSA:

UL-AWM 80°C - 600V
CSA-AWM 80°C - 600V FT1

Construction

Conductor:

High-flexible class 6, complying with:
VDE 0295, IEC 228

Insulation:

TPE-E

Core ident.:

sez.0,34 mm²
Colour complying with DIN 47100

sez.0,5-2,5 mm²
black num. +G/V complying with
VDE 0293,
CEI UNEL 00725-74

Jacket material:

PUR complying with standard UL/CSA
colour black

BC419

Shielding:

Tinned copper braid > 80%

Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4180303	3x0,34	5,65	28	36
4180503	5x0,34	6,55	33	62
4180703	7x0,34	7,45	37	71
4181203	12x0,34	8,60	43	117
4181803	18x0,34	9,95	50	157
4182503	25x0,34	12,05	60	218
4180305	3x0,50	5,95	30	40
4180505	5x0,50	6,85	34	55
4180705	7x0,50	7,95	40	76
4181205	12x0,50	9,15	46	114
4181805	18x0,50	10,60	53	165
4182505	25x0,50	12,80	63	219
4180310	3x1,0	6,90	35	61
4180510	5x1,0	8,25	41	93
4180710	7x1,0	9,35	47	122
4181210	12x1,0	10,90	56	196
4181810	18x1,0	12,70	66	274
4182510	25x1,0	15,20	87	385
4180415	4x1,5	8,35	42	100
4180515	5x1,5	9,05	45	128
4180715	7x1,5	10,44	52	177
4181215	12x1,5	12,43	62	275
4181815	18x1,5	14,65	73	405
4182515	25x1,5	17,30	97	565
4180425	4x2,5	9,30	47	150
4180725	7x2,5	11,80	59	238
4181225	12x2,5	14,50	73	422
4181825	18x2,5	18,70	140	650
4182525	25x2,5	26,00	208	910



Signal and Control cables. Shielded with inner insulation in TPE-E and PUR jacket

BC419



Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4190303	3x0,34	6,10	31	56
4190503	5x0,34	6,95	35	76
4190703	7x0,34	7,85	39	95
4191203	12x0,34	8,95	45	163
4191803	18x0,34	10,55	53	198
4192503	25x0,34	12,64	63	297
4190305	3x0,50	8,10	41	79
4190505	5x0,50	8,90	45	107
4190705	7x0,50	9,90	50	132
4191205	12x0,50	11,40	57	190
4191805	18x0,50	12,90	65	245
4192505	25x0,50	15,10	76	367
4190310	3x1,0	8,90	45	109
4190510	5x1,0	10,10	51	147
4190710	7x1,0	11,20	56	196
4191210	12x1,0	13,40	67	292
4191810	18x1,0	15,30	77	418
4192510	25x1,0	18,00	90	575
4190415	4x1,5	10,30	52	136
4190515	5x1,5	10,80	54	198
4190715	7x1,5	12,30	62	254
4191215	12x1,5	14,70	74	416
4191815	18x1,5	16,90	85	564
4192515	25x1,5	20,70	104	811
4190425	4x2,5	11,50	70	203
4190725	7x2,5	14,40	90	343
4191225	12x2,5	17,10	105	499



BC418 BC419

Speed: 300 m/min
Acceleration: 25 m/s²

Small outer dimension, with low
min. bending radius

Complying with UL and CSA for the
European and USA market

Voltage 600V

The polyurethan jacket resistance
to hydrolysis, microbics and very
good oils resistance

Suitable for outdoor applications at
-30°C

For further information please
consult Brevetti Stendalto's
Technical Office

Multipair oil resistance shielded with PVC jacket

BC412



Technical data

Nominal voltage:

300 V

Testing voltage:

1500 V

Temperature range:

BC412 -BC416 -10°C a +80°C

BC417 -30°C a +80°C

Speed:

BC412 -BC416 160 m/min

BC417 300 m/min

Acceleration:

BC412 -BC416 6 m/s²

BC417 25 m/s²

Burning characteristics:

CEI 20-35, VDE 0472-804 test A,

NFC 32070 cat. C1 test 1,

IEC 332.1

Flame resistance:

BC412

CEI 20/22II, VDE 0472-804 test C,

NFC 32070 cat. C1 test 2,

IEC 332.3C

Oil resistance:

BC412

VDE 0472 part 803/B, UL 1581

CNOMO E.03.40.150N, NFT46-013

BC416 - BC417

VDE 0472 part 803-A/B, UL 1581

VDE 0282 part 10 HD 22.10 S1

Homologation UL/CSA:

BC412

UL-AWM 80°C - 300V

CSA-AWM 75°C - 300V FT1

BC416 - BC417

UL-AWM 80°C - 300V

CSA-AWM 80°C - 300V FT1

Construction

Conductor:

High-flexible class 5/6 complying with:

CEI 20-29, VDE 0295,

NFC 32012, IEC 228

Insulation:

BC412-BC416

PVC complying with standard UL-CSA

BC417 TPE-E

Core ident.:

colour codification complying with

DIN 47100

Jacket material:

BC412

Special compound type PVC,

Colour grey RAL 7001

BC416 - BC417

PUR complying with standard

UL/CSA colour black

Shielding:

Tinned copper braid > 80%

Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4120203	2x2x0,34	6,35	54	64
4120303	3x2x0,34	6,68	57	72
4120403	4x2x0,34	7,15	61	67
4120503	5x2x0,34	8,14	69	83
4120603	6x2x0,34	8,70	74	100



Multipair oil resistance shielded with PUR jacket

BC416



Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4160203	2x2x0,34	6,37	54	79
4160303	3x2x0,34	6,70	57	110
4160403	4x2x0,34	7,20	61	124
4160503	5x2x0,34	8,20	70	145
4160603	6x2x0,34	8,75	74	170

Multipair oil resistance shielded with PUR jacket

BC417



Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4170307	3x2x0,75	11,30	85	140
4170410	4x2x1,0	12,00	90	175
4170615	6x2x1,5	18,00	135	425
4170325	3x2x2,5	16,00	120	403
4170625	6x2x2,5	22,00	165	620
Multipair Double shielded cable with PUR jacket				
4170610W	6x2x1,0	21,00	150	563



Encoder, measuring systems, resolver cables

BC440

Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km	Appr.
4400001	(4x2x0,25+2x1)C	8,70	74	110	UL-CSA
4400002	(4x2x0,38+4x0,50)C	8,80	90	120	DESINA UL-CSA
4400003	[4x2x0,14+4x0,50+(4x0,14C)]C	8,10	80	102	
4400004	[3x(2x0,14C)+2x1C]	8,35	80	110	
4400005	(4x2x0,14+4x0,50)C	8,45	80	92	UL-CSA
4400006	(3x2x0,14+4x0,14+4x0,25+2x0,50)C	9,45	90	139	DESINA UL/CSA
4400007	4x(2x0,25C)	8,80	90	140	
4400008	4x(2x0,34C)	11,72	120	160	
4400009	[4x(2x0,25C)]C	9,90	100	160	
4400010	[4x(2x0,35C)]C	12,40	120	180	
4400011	[4x(2x0,25C)]C	9,90	85	154	UL-CSA
4400012	[3x(2x0,35C)]C	9,40	80	145	UL-CSA
4400013	[4x(2x0,35C)]C	10,40	90	170	UL-CSA

Technical data

Nominal voltage:

250 V

Testing voltage:

1500 V

Temperature range:

For cables 4400001-2-3-4-5-6

0°C +80°C

For cables 4400007-8-9-10-11-12-13

-10°C +80°C

Speed:

For cables 4400001-2-3-4-5-6-11-12-13

220 m/min

For cables 4400007-8-9-10

60 m/min

Acceleration:

For cables 4400001-2-3-4-5-6-11-12-13

10 m/s²

For cables 4400007-8-9-10

2 m/s²

Burning characteristics:

For cables 4400002-6-7-8-9-10

CEI 20-35,

VDE 0472-804 test A,

NFC 32070 cat. C1 test 1,

IEC 332.1

Oil resistance:

For cables 4400001-2-3-6-11-12-13

complying with VDE 0472 part 803 A/B

For cables 4400004-5-7-8-9-10

complying with VDE 0472 part 803 B

Homologation UL/CSA:

For cables 4400001-5-11-12-13

UL-AWM 80°C - 300V

CSA-AWM 75°C - 300V FT1

For cables 4400002-6

UL-AWM 80°C - 30V

CSA-AWM 75°C 30V FT1

Construction

Conductor:

High flexible

Insulation:

For cables 4400001

Polyolefin

For cables 4400002-6-11-12-13

PP

For cables 4400003-4-5

TPE-E

For cables 4400007-8-9-10

PVC

Core ident.:

coloured

Jacket material:

For cables 4400001 PUR orange RAL 2003

For cables 4400002-6 PUR green RAL 6018

For cables 4400003-4-5-11-12-13 PUR black

For cables 4400007-8-9-10 PVC black

Totally shielded:

Tinned copper braid > 85%

except 4400007-8

Shielded multipair:

for 4400006 (3 Cp - 0,14 mm² spiral in Cu

Tinned copper spiral, coverage >90% on the

single groups)

for 4400003 (Tinned copper spiral, single on

the 4x0,14 mm² Overall : Tinned copper

coverage >85%)

for 4400004 (Tinned copper spiral, single on

the pair coverage >85%)

for 4400007-8-9-10-11-12-13 (Tinned copper

braid, single on the pair coverage >85%)

Capacity:

for 4400006-11-12-13 cond./cond. =100

pF/m; cond./schem. =168 pF/m

for 4400003-4 cond./cond. =140

pF/m; cond./schem. =235 pF/m

for 4400007-8-9-10-11 cond./cond. =150

pF/m; cond./schem. =270 pF/m

BC440

4400001+2

Encoder cables

4400003+6

Measuring system cables

4400007+13

Resolver cables



For further information please
consult Brevetti Stendalto's
Technical Office

Oil resistant cables with PUR jacket, for power supply motors

BC420N

Technical data

Nominal voltage:	600/1000 V
Testing voltage:	4000 V
Temperature range:	-30°C a +80°C
Speed:	300 m/min
Acceleration:	10 m/s ²
Burning characteristics:	
CEI 20-35, VDE 0472-804 test A, NFC 32070 cat. C1 test 1, IEC 332.1	
Oil resistance:	
VDE 0472 part 803/B	

Construction

Conductor:

High-flexible class 6, complying with:
CEI 20-29, VDE 0295,
NFC 32012, IEC 228

Insulation:

TPE-E

Core ident.:

BC420N - BC421N

power: black num. 1-2-3 +G/V
signal: black num. 5-6-7-8

BC428PE

power: brown, black, white + G/V

Jacket material:

PUR Black

Shielding:

BC421N - BC426

Tinned copper braid > 80%

Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4200425N	4x2,5	10,0	50	156
4200440N	4x4	12,1	90	250
4200460N	4x6	13,9	105	350
4200100N	4x10	16,0	120	510
4200160N	4x16	21,0	150	815
4204250N	4x25	24,0	180	1280
4204350N	4x35	28,0	210	1680
4204500N	4x50	31,0	235	2500



Oil resistant shielded cables with PUR jacket, for power supply motors

BC421N

Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4210440N	4x4	12,70	96	314
4210460N	4x6	14,80	111	420
4214100N	4x10	17,50	132	626
4214160N	4x16	21,55	162	940
4214250N	4x25	25,30	190	1480
4214350N	4x35	29,20	220	1900
4214500N	4x50	34,10	256	2900

Oil resistant cables with PUR jacket, for power supply motors

BC428PE

Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
428350PE	3x50+3x10PE	33,0	250	1995
428375PE	3x75+3x16PE	37,0	280	2835
428395PE	3x95+3x16PE	44,1	330	4008

Single conductor with PUR jacket

BC425

Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4250110	1x10	8,10	61	140
4250116	1x16	9,50	71	190
4250125	1x25	11,40	85	290
4250135	1x35	12,90	97	400
4250150	1x50	14,50	106	710
4250170	1x70	16,90	118	980
4250195	1x95	19,90	149	1340
4251120	1x120	21,50	160	1240
4251150	1x150	23,10	175	1500
4251185	1x185	26,00	195	1950



Single shielded conductor with PUR jacket

BC426

Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4260110	1x10	8,9	67	170
4260116	1x16	10,1	76	230
4260125	1x25	11,9	89	350
4260135	1x35	13,3	100	450
4260150	1x50	14,8	111	590
4260170	1x70	17,4	130	840
4260195	1x95	20,3	152	1150
4261120	1x120	22,5	165	1360
4261150	1x150	24,0	180	1690
4261185	1x185	26,8	200	1990



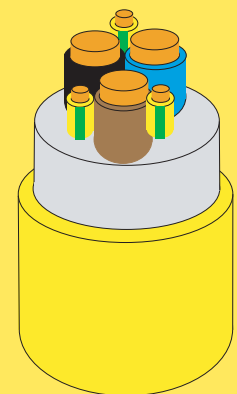
BC420N BC421N BC428PE BC425 BC426

Speed: 300 m/min
Acceleration: 25 m/s²

Highly flexible with small outer dimensions

The polyurethan jacket resistance to hydrolysis, microbics and very good oils resistance

Suitable for outdoor applications at -30°C



BC428PE

* On request

For further information please consult Brevetti Stendalto's Technical Office

Oil resistant shielded cables with PUR jacket, for power supply of brushless motors

BC421



Technical data

Nominal voltage:

power: **BS421-BC435** 600/1000 V
 power: **BS430** 1000 V
 signal: **BS435** 250 V

Testing voltage:

4000 V

Temperature range:

-30°C +80°C

Speed:

220 m/min

Acceleration:

10 m/s²

Burning characteristics:

CEI 20-35, VDE 0472-804 test A,
 NFC 32070 cat. C1 test 1, IEC 332.1

Oil resistance:

BC421 -BC435
 VDE 0472 part 803/B,
BC430
 VDE 0472 part 803/B,
 UL 1581, VDE 0282 part 10,
 HD 22.10 S1

Homologation UL/CSA:

UL-AWM 80°C - 1000V
 CSA-AWM 80°C - 1000V FT1

Construction

Conductor:

High-flexible class 6, complying with:
 CEI 20-29, VDE 0295,
 NFC 32012, IEC 228

Insulation:

BC421-BC435 TPE-E complying
 with standard VDE 0250 1/4
BC430 TPE-E

Core ident.:

BC421-BC435 black U-V-W +G/V
BC430
 power: black num. 1-2-3 +G/V
 signal: black num. 5-6-7-8

Jacket material:

BC421
 PUR complying with standard UL/CSA,
 colour orange RAL 2003
BC430-BC435 PUR colour orange
 RAL 2003

Shielding:

BC421-BC435
 Total: Tinned copper braid > 85%
BC435 Tinned copper braid
 coverage > 80%
BC430 Tinned copper braid
 coverage > 85%
 Signal: Tinned copper braid > 85%,
 + all/polyester, coverage 100%

Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4210415	(3+T) x 1,5	9,90	84	155
4210425	(3+T) x 2,5	11,65	99	230
4210440	(3+T) x 4,0	12,70	108	314
4210460	(3+T) x 6,0	14,80	126	420
4214100	(3+T) x 10,0	17,50	149	626
4214160	(3+T) x 16,0	21,55	183	940
4214250	(3+T) x 25,0	25,30	215	1480
4214350	(3+T) x 35,0	29,20	250	1900
4214500	(3+T) x 50,0	34,10	290	2900



Oil resistant shielded cables with PUR jacket, for power supply of Indramat® brushless motors

BC430



Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4300410	(3+T)x1+2x2x0,75	11,40	97	222
4300415	(3+T)x1.5+2x2x0,75	12,10	103	246
4300425	(3+T)x2.5+2x2x1	15,00	128	360
4300440	(3+T)x4+2x1+2x1.5	15,85	135	510
4300460	(3+T)x6+2x1+2x1.5	18,70	159	590
4304100	(3+T)x10+2x1+2x1.5	22,05	187	840
4304160	(3+T)x16+2x2x1.5	25,12	214	1276
4304250	(3+T)x25+2x2x1.5	27,90	237	1700
4304350	(3+T)x35+2x2x1.5	30,20	257	2120
4304500	(3+T)x50+2x2x2.5	36,80	313	3050



**Oil resistant shielded cables with PUR
jacket, for power supply of brushless motors**

BC435



Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4350415	4x1.5+2x1.5	12,40	105	242
4350425	4x2.5+2x1.5	13,75	117	302
4350440	4x4+2x1.5	14,82	126	397
4350460	4x6+2x1.5	16,90	144	527
4354100	4x10+2x1.5	19,80	168	780
4354160	4x16+2x1.5	23,20	197	1040
4354250	4x25+2x1.5	26,90	229	1510
4354350	4x35+2x1.5	31,30	266	2000
4354500	4x50+2x1.5	34,70	295	2740



BC421

BC430

BC435

Speed: 220 m/min
Acceleration: 10 m/s²

Highly flexible with small outer dimensions

Complying with UL and CSA for the European and USA market

The polyurethan jacket resistance to hydrolysis, microbics and very good oils resistance

Suitable for outdoor applications at -30°C

For further information please consult Brevetti Stendalto's Technical Office

Glass Dielectric Armoured LSOH Sheath

BC500

Technical data

Temperature range:

da -35°C a +70°C

Burning characteristics:

IEC 332-1

VDE 0472-804 B

UL 1581 VW-1

Max. attenuation:

50/125:

@850 nm: dB/km < 2,5

@1300 nm: bB/km < 0,6

62,5/125:

@850 nm: dB/km < 3,0

@1300 nm: bB/km < 0,7

Bandwidth:

50/125:

@850 nm: MHz x km > 400

@1300 nm: MHz x km > 800

62,5/125:

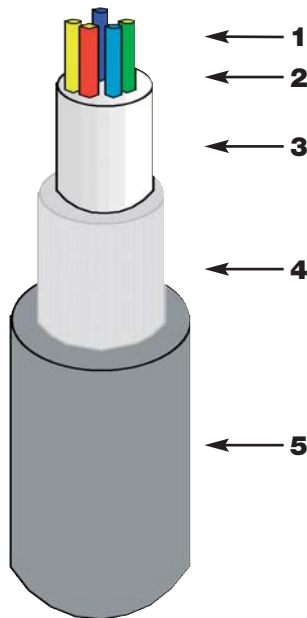
@850 nm: MHz x km > 200

@1300 nm: MHz x km > 600

Outer sheath colour:

Blue

Item no.	Number of fibres	Fibre type µm	Diameter Ø mm	Bending radius mm	Cable weight kg/km
5000662	6	62,5/125	8,5	80	75
5001262,5/125	12	62,5/125	8,5	80	75
5002462,5/125	24	62,5/125	10,5	100	100
5000650/125	6	50/125	8,5	80	75
5001250/125	12	50/125	8,5	80	75
5002450/125	24	50/125	10,5	100	100



Construction

1 - Fibre Optic

2 - Primary coating

3 - Central loose tube PBTB gelly

4 - Antirodent dielectric armouring

5 - Outer sheath LSOH compound

BUS cable

BC450



Item no.	no. of cores x section n x mm ²	Diameter Ø mm	Bending radius mm	Cable weight kg/km
4500001	1x2x0,64/2.55	7,95	Fixed laying	75
4500002	1x2x0,64/2.55	7,95	Fixed laying	97
4500003	1x2x0,64/2.55	7,90	68	67
4500004	3x2x0,22C	7,10	Fixed laying	55
4500005	3x2x0,22C	7,95	68	65
4500006	(1x2x22AWG)+(1x2x24AWG)	7,10	Fixed laying	58
4500007	(1x2x22AWG)+(1x2x24AWG)	7,10	60	60

Technical data

For non dynamic application:
4500001-2-4-6

For dynamic application:
4500003-5-7

Temperature range:
-5°C +60°C
For cables 4500007 -20°C a +80°C

Speed:
For cables 4500003-5-7
180 m/min

Acceleration:
For cables 4500003-5-7
7 m/s²

Normative references:
For cables 4400001-5-11-12-13
UL-listed for all
DESINA for all
EN 50170 e DIN 19245 for
4500001-2-3

Construction

Conductor:
flexible, except 4500001-2

Insulation:
For cables 4500001-2-3 Foam skin
For cables 4500004-5 Polyolefin
For cables 4500006-7
power: Polyolefin
signal: Foam skin

Core ident.:
For cables 4500001-2-3 green-red
For cables 4500004-5 DIN 47100
For cables 4500006-7
power: red
signal: blue-white

Shielding:
For cables 4500001-2-3:
1° all/polyester 2° Tinned copper braid >65%
For cables 4500004-5:
Tinned copper braid >80%
For cables 4500006-7:
pairs: all/polyester
total: Tinned copper braid >70%

Jacket material:

For cables 4500001-2-4-6
PVC purple RAL 4001

For cables 4500003-5-7
PUR purple RAL 4001

Impedance (±15 % > 1 MHz):

For cables 4500001-2-3 150 Ohm
For cables 4500004-5 100 Ohm
For cables 4500006-7 120 Ohm

D.C. resistance:

For cables 4500001-2 57,5 Ohm/km
For cables 4500003 76 Ohm/km
For cables 4500004-5 96 Ohm/km
For cables 4500006-7 78,4 Ohm/km

Isolation resistance:

For cables 4500001-2-3
>2500 MOhm/km
For cables 4500004-5-6-7
>5000 MOhm/km

Attenuation to 4 MHz:

For cables 4500001-2 2,2 db/100 m
For cables 4500003 2,5 db/100 m
For cables 4500004-5 5,2 db/100 m

Data pair attenuation 1 MHz:

For cables 4500006-7 2 db/100 m

Capacity:

For cables 4500004-5 <60 pF/m

Data pair capacitance:

For cables 4500006-7 39 pF/m

Near-End crosstalk 4 MHz:

For cables 4500004-5 50 db

Calculation of attenuation with different frequency

$$\alpha_x = \sqrt{(f_x / f_n)} * \alpha_n$$

α_x = to calculate

f_x = reference frequency

f_n = actual frequency

α_n = attenuation as per above table

BC450

4500001+3
PROFIBUS Cables

4500004+5
INTERBUS Cables

4500006+7
DeviceNet™ Cables



For further information please
consult Brevetti Stendalto's
Technical Office

Installation

For correct installation of cables in the cable chain, it is important to follow the guidelines listed below:

1 - The cables have to be installed and unrolled from the drum carefully to avoid damage. It is therefore important to follow the indications in Figure.1. The coil should not be unrolled from the centre, but it should be placed on a support or on a turning plane and then be unrolled starting from the external ends.

2 - Check the minimum allowed bending radius of the chosen cable and compare it with the bending radius of the chain. For a correct installation, the last mentioned should be larger compared to the bending radius of the cable.

3 - There must be at least 10%-20% free space between the cable diameters and the internal dimensions of the chain. Install the cables/hoses symmetrically in the chain with the larger and heavier towards the outside and the smaller and lighter in the centre. Further, it is necessary to separate the cables using the separators, available for all the chains, or the split cross pieces with holes done in the appropriate sizes according to the external diameter of the cable. (Figure 2) It is important, when having high velocities and accelerations, to avoid the superimposing of the cables. Avoid contact between the different cables and hoses internally in the chain.

4 - The cables/hoses must be placed and installed in such a way so that they can move freely side ways during the movement of the chain and also so that in the bending curve they do not cause any tension or traction on the cable chain.

5 - The chains must be installed and fixed using the appropriate accessories at the extremities of the movement of the chain (the mobile point). For chains that work in the self-supported state it is suggested that the fixed extremity of the chain (fixed point) should be fixed, however this shouldn't be done on applications with long travel distances, where the chain slides on itself in the guide channel.

6 - Verify the installation of the cables in the chains with Brevetti Stendalto's technical office or request a personalised project by filling in the appropriate module

Figure 1

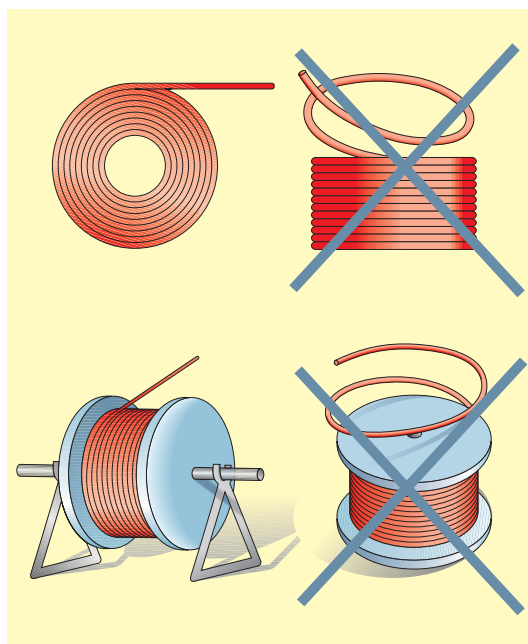
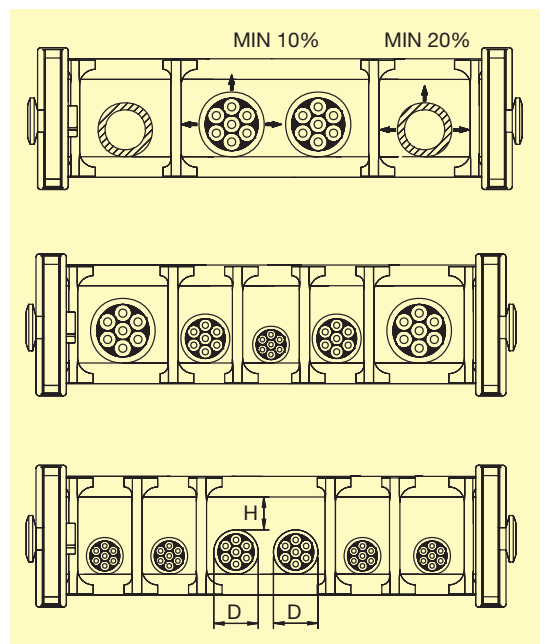


Figure 2



Steel cable clamps

C-profile rail

Part.no	Length mm
6000001	Standard 800 mm; available on request with different length

Single clamp in galvanised steel with 1 plastic pressure cradle and 1 counter pressure cradle

Part.no	Diameter mm	L	H
6000614C	06-14	18	62
6001418C	14-18	22	66
6001822C	18-22	26	70
6002226C	22-26	30	74
6002630C	26-30	34	78
6003034C	30-34	38	82
6003438C	34-38	42	86
6003842C	38-42	46	90

Double clamp in galvanised steel set complete with 1 plastic pressure cradle, 1 double sided cradle and 1 counter pressure cradle

Part.no	Diameter mm	L	H
6020614C	10-14	18	78
6021418C	14-18	22	86
6021822C	18-22	26	94
6022226C	22-26	30	103
6022630C	26-30	34	112
6023034C	30-34	38	120
6023438C	34-38	42	129
6023842C	38-42	46	138

Triple clamp in galvanised steel set complete with 1 plastic pressure cradle, 2 double sided cradles and 1 counter pressure cradle

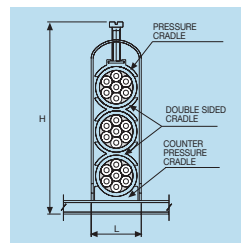
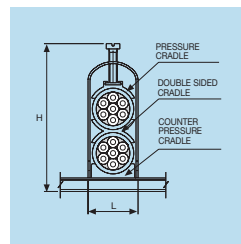
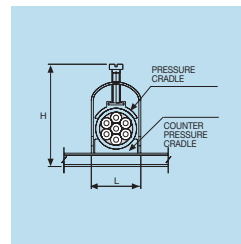
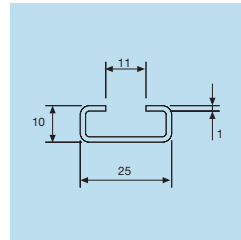
Part.no	Diameter mm	L	H
6031012C	10-12	16	87
6031214C	12-14	18	93
6031416C	14-16	20	99
6031618C	16-18	22	105
6031820C	18-20	24	111
6032022C	20-22	26	117
6032224C	22-24	28	123
6032426C	24-26	30	129
6032628C	26-28	34	135
6032830C	28-30	38	141

Counter pressure cradle

Part.no	Diameter mm
6100612	06-12
6101214	12-14
6101618	16-18
6101822	18-22
6102226	22-26
6102630	26-30
6103034	30-34
6103438	34-38
6103842	38-42

Doublesided cradle

Part.no	Diameter mm
6201012	10-12
6201214	12-14
6201416	14-16
6201618	16-18
6202022	20-22
6202224	22-24
6202426	24-26
6202628	26-28
6202830	28-30
6203034	30-34
6203438	34-38
6203842	38-42



Steel Cable Clamps

The steel cable clamps connect the cable to the extremities of the chain.

The plastic counter pressure cradle with the integrated screw tighten and fix the cable.

The smooth surface and the design of the cradles guarantee high stability and avoid any damage to the cables

Special versions are available on request.

Fixing set is composed by the following parts:

- Steel clamps with pressure cradle
- Counter pressure cradle
- Doublesided cradle for double and triple clamps
- Steel mounting rails



Nylon tie-wraps

As an alternative to steel cable clamps, Brevetti Stendalito offers the possibility to mount on the end-brackets nylon tie-wraps, which allow a more flexible cable fixing. For further information on this system, please consult our cable chain catalogue.

Colour tables

DIN 47100 Multipair cables

N°	Conductor A	Conductor B
1	White	Brown
2	Green	Yellow
3	Grey	Pink
4	Blue	Red
5	Black	Purple
6	Grey/Pink	Red/Blue
7	White/Green	Brown/Green
8	White/Yellow	Yellow/Brown
9	White/Grey	Grey/Brown
10	White/Pink	Pink/Brown
11	White/Blue	Brown/Blue
12	White/Red	Brown/Red
13	White/Black	Brown/Black
14	Grey/Green	Yellow/Grey
15	Pink/Green	Yellow/Pink
16	Green/Blue	Yellow/Blue
17	Green/Red	Yellow/Red
18	Green/Black	Yellow/Black
19	Grey/Blue	Pink/Blue
20	Grey/Red	Pink/Red
21	Grey/Black	Pink/Black
22	Blue/Black	Red/Black

DIN 47100 Multi conductor cables

N°	Colour conductor	N°	Colour conductor
1	White	23	White/Red
2	Brown	24	Brown/Red
3	Green	25	White/Black
4	Yellow	26	Brown/Black
5	Grey	27	Grey/Green
6	Pink	28	Yellow/Grey
7	Blue	29	Pink/Green
8	Red	30	Yellow/Pink
9	Black	31	Green/Blue
10	Purple	32	Yellow/Blue
11	Grey/Pink	33	Green/Red
12	Red/Blue	34	Yellow/Red
13	White/Green	35	Green/Black
14	Brown/Green	36	Yellow/Black
15	White/Yellow	37	Grey/Blue
16	Yellow/Brown	38	Pink/Blue
17	White/Grey	39	Grey/Red
18	Grey/Brown	40	Pink/Red
19	White/Pink	41	Grey/Black
20	Pink/Brown	42	Pink/Black
21	White/Blue	43	Blue/Black
22	Brown/Blue	44	Red/Black

Conversion table for AWG/mm²

AWG	Section mm ²	Diameter mm	D.C. resistance 20°C Ω	AWG	Section mm ²	Diameter mm	D.C. resistance 20°C Ω
44	0,0020	0,050	8498	20	0,519	0,813	33,2
43	0,0025	0,055	7021	19	0,653	0,912	26,4
42	0,0032	0,063	5446	18	0,823	1,02	21,0
41	0,0039	0,071	4330	17	1,04	1,15	16,6
40	0,0049	0,079	3540	16	1,31	1,29	13,2
39	0,0062	0,089	2780	15	1,65	1,45	10,4
38	0,0081	0,102	2130	14	2,08	1,63	8,28
37	0,0103	0,114	1680	13	2,63	1,83	6,56
36	0,0127	0,127	1360	12	3,31	2,05	5,21
35	0,0159	0,142	1080	11	4,17	2,30	4,14
34	0,0201	0,160	857	10	5,26	2,588	3,277
33	0,0255	0,180	675	9	6,63	2,906	2,600
32	0,0324	0,203	532	8	8,37	3,264	2,061
31	0,0401	0,226	430	7	10,55	3,655	1,634
30	0,0507	0,254	340	6	13,30	4,115	1,296
29	0,0649	0,287	266	5	16,77	4,620	1,028
28	0,0806	0,320	214	4	21,15	5,189	0,8152
27	0,102	0,361	169	3	26,67	5,287	0,6466
26	0,128	0,404	135	2	33,62	6,543	0,5128
25	0,162	0,455	106	1	42,41	7,348	0,4065
24	0,205	0,511	84,2	1/0	53,49	8,252	0,3223
23	0,259	0,574	66,6	2/0	67,43	9,266	0,2557
22	0,324	0,643	53,2	3/0	85,01	10,40	0,2028
21	0,411	0,724	41,9	4/0	107,22	11,68	0,1608

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