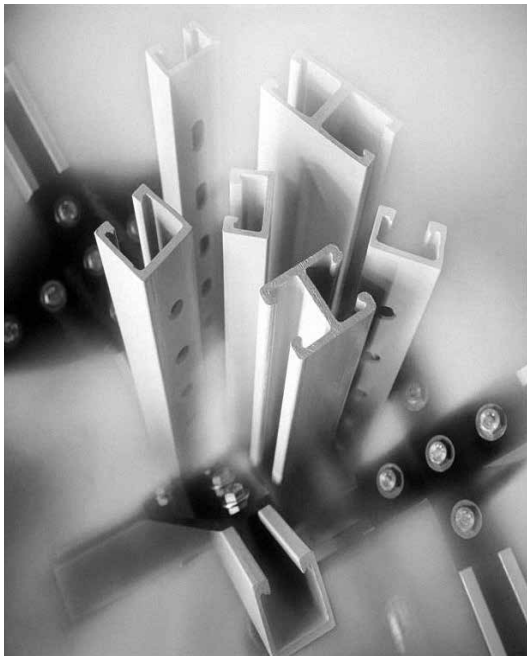
Nonmetallic - Strut systems
Channels

Channels

ABB is proud of its line of nonmetallic strut and accessories. You'll find a complete selection of nonmetallic accessories, fasteners, hangers, pipe clamps and channels.

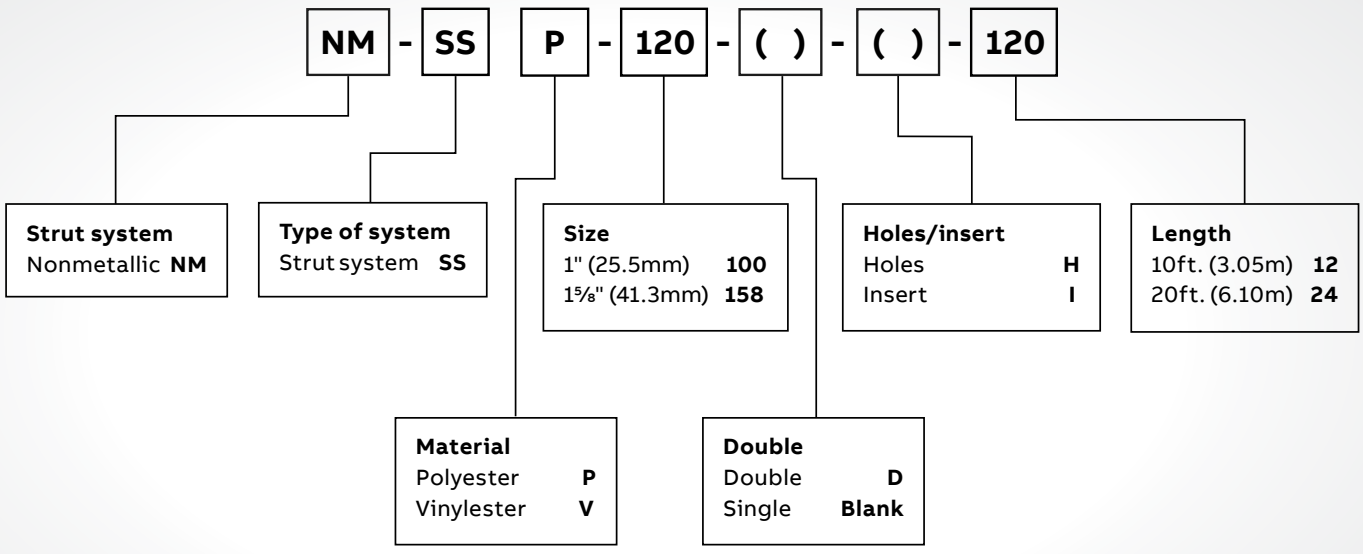
Most ABB strut products are available in a choice of resins – either vinylester or polyester. Our design and engineering staff is ready to help you select the material that best suits your needs.



Channel fitting selection

Example:
NM-SSP-100-120, 1" (25.5mm) single strut, 120" (10 ft. / 3.05m) NOTE: Stocked in 120" (10 ft. / 3.05m) and 240" (20 ft. / 6.10m) lengths.

*NOTE: The U-style and H-style systems are interchangeable.

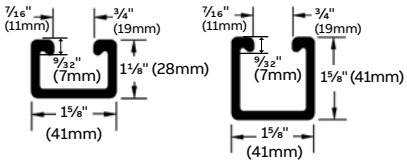


Nonmetallic - Strut systems

Channels - Combinations and hole pattern

Solid – Single strut

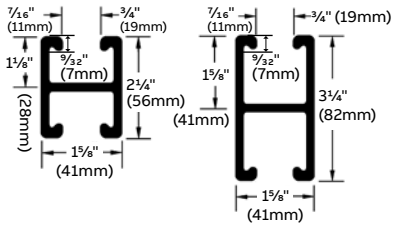
	Cat. No.	Material/resin	Color	Weight (lb/ft.)	Weight (kg/m)
NM-SS(*)-100 NM-SS(*)-158	NM-SSP-100-(L)	Polyester	Gray	0.47	0.70
	NM-SSP-158-(L)	Polyester	Gray	0.63	0.94
	NM-SSV-100-(L)	Vinylester	Beige	0.47	0.70
	NM-SSV-158-(L)	Vinylester	Beige	0.63	0.94



*Add P for polyester or V for vinylester.
(L) Add desired length 120 (10 ft.) or 240 (20 ft.)
Cut-to-length channel also available.

Solid – Back to back

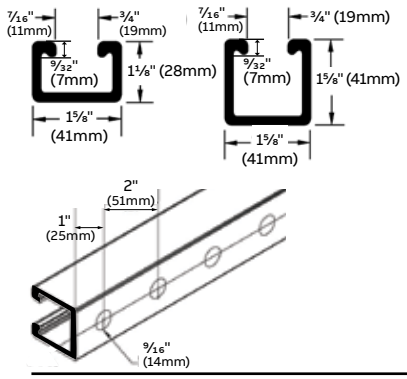
	Cat. No.	Material/resin	Color	Weight (lb/ft.)	Weight (kg/m)
NM-SS(*)-100-D NM-SS(*)-158-D	NM-SSP-100-D-(L)	Polyester	Gray	0.86	1.28
	NM-SSP-158-D-(L)	Polyester	Gray	1.17	1.75
	NM-SSV-100-D-(L)	Vinylester	Beige	0.86	1.28
	NM-SSV-158-D-(L)	Vinylester	Beige	1.17	1.75



*Add P for polyester or V for vinylester.
(L) Add desired length 120 (10 ft.) or 240 (20 ft.)
Cut-to-length channel also available.

Punched

	Cat. No.	Material/resin	Color	Weight (lb/ft.)	Weight (kg/m)
NM-SS(*)-100-H NM-SS(*)-158-H	NM-SSP-100-H-(L)	Polyester	Gray	0.47	0.67
	NM-SSP-158-H-(L)	Polyester	Gray	0.63	0.91
	NM-SSV-100-H-(L)	Vinylester	Beige	0.45	0.67
	NM-SSV-158-H-(L)	Vinylester	Beige	0.61	0.91

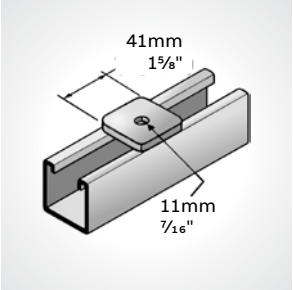


*Add P for polyester or V for vinylester.
(L) Add desired length 120 (10 ft.) or 240 (20 ft.)
Cut-to-length channel also available.

Nonmetallic - Strut systems

Superstrut™ fittings and brackets

01



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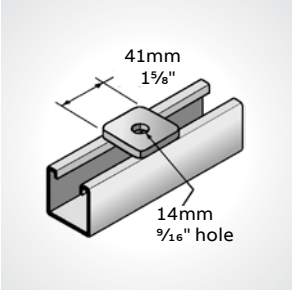

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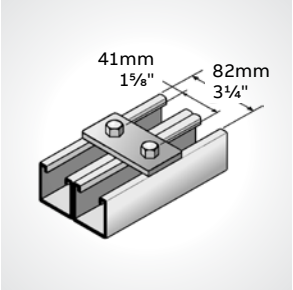

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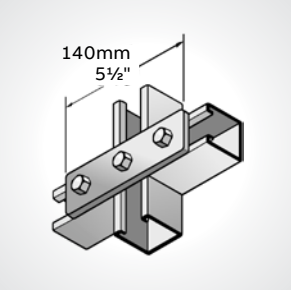

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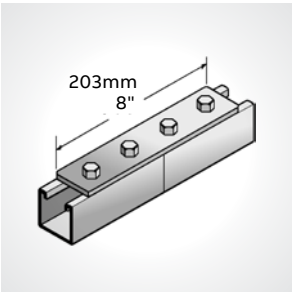

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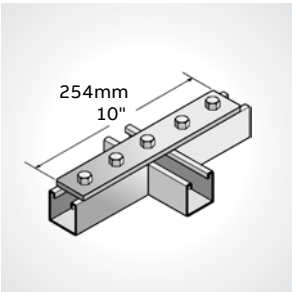

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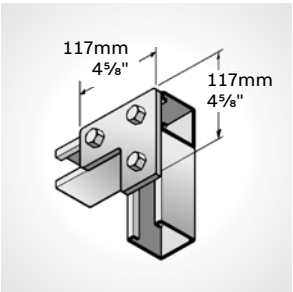

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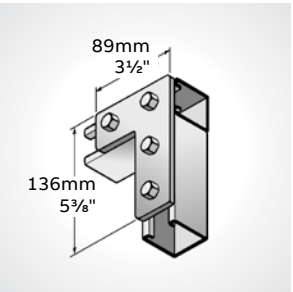

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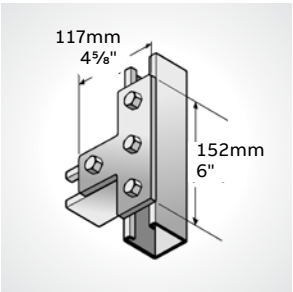

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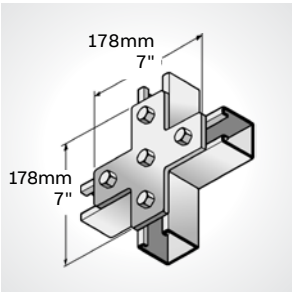

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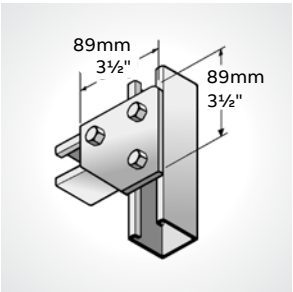

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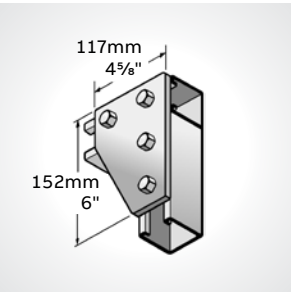

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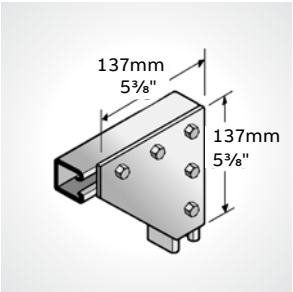

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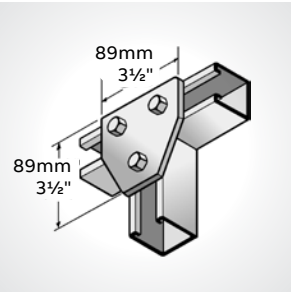

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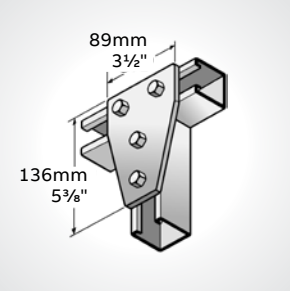

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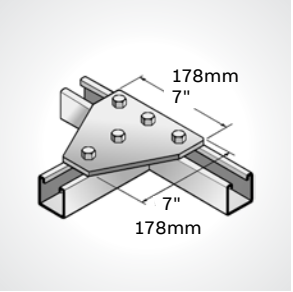


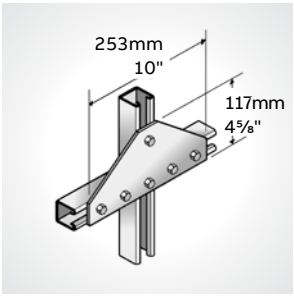
01 **NM-SFP-1S7**
02 **NM-SFP-1S9**
03 **NM-SFP-2S**
04 **NM-SFP-3S**
05 **NM-SFP-4S**
06 **NM-SFP-5S**
07 **NM-SFP-3HL**
08 **NM-SFP-4HL**
09 **NM-SFP-4HT**
10 **NM-SFP-5HX**
11 **NM-SFP-3HCG**
12 **NM-SFP-4HCG**
13 **NM-SFP-5HCG**
14 **NM-SFP-3HTG**
15 **NM-SFP-4HTG**
16 **NM-SFP-5HTG**

NOTE: Based on individual applications, changes may be required on dimension and thickness of material. All fittings are ¼" (6mm) thick unless specified otherwise. All holes are drilled to accept ⅜" and ½" bolts with washers. Not supplied with hardware.

Nonmetallic - Strut systems

Superstrut fittings and brackets

01*



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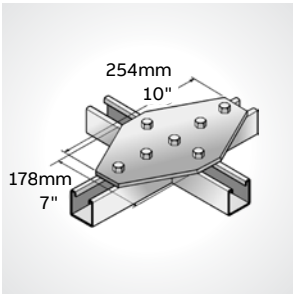

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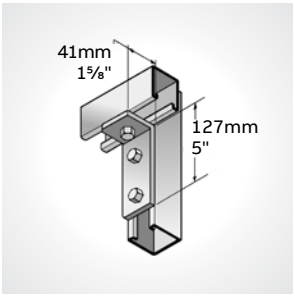

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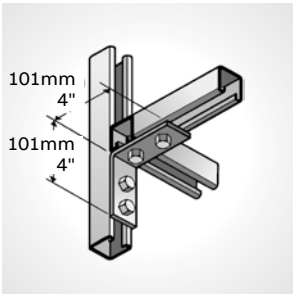

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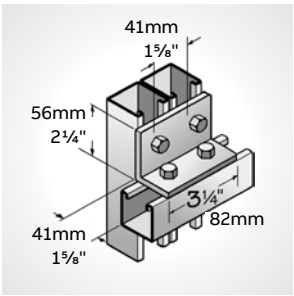

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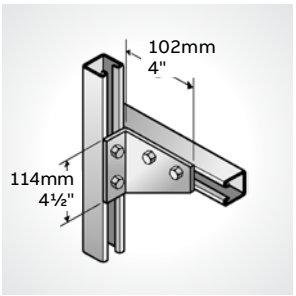

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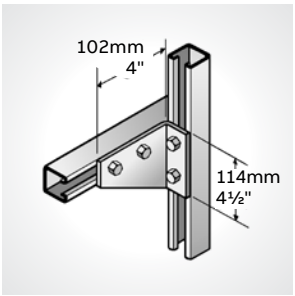

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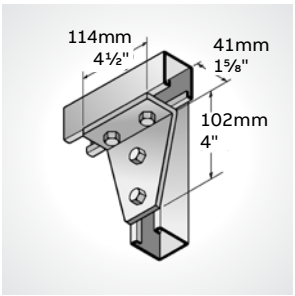

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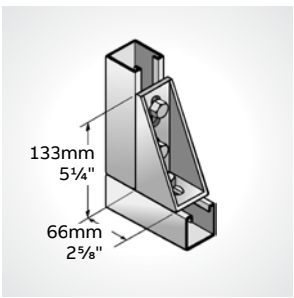

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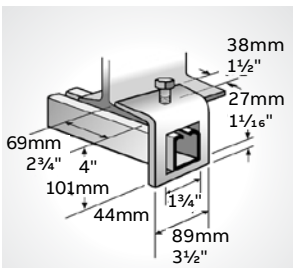

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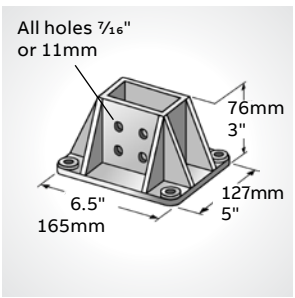

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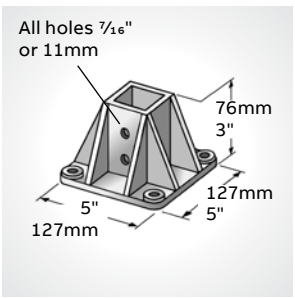


01 **NM-SFP-6HTG**

02 **NM-SFP-7HXG**

03 **NM-SFP-3VL**

04 **NM-SFP-4VL**

05 **NM-SFP-4VLD**

06 **NM-SFP-4VGL**

07 **NM-SFP-4VGR**

08 **NM-SFP-4VTG**

09 **NM-SFP-3CB**

10 **NM-SWC-158**

11 **NM-SSV-DBASE**

12 **NM-SSV-SBASE**

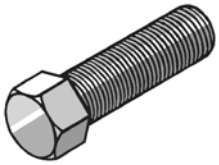
* Items 2 thru 8 (FRP angle components) will not support tensile loads or forces.

NOTE: Based on individual applications, changes may be required on dimension and thickness of material. All fittings are ¼" (6mm) thick unless specified otherwise. All holes are drilled to accept ⅜" and ½" bolts with washers. Not supplied with hardware.

Nonmetallic - Strut systems

Nonmetallic threaded hardware

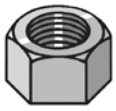
Hex head bolt



Cat. No.	Thread size	Bolt length (in.)	Design load (lb)	Design load N	Max. torque in - lb	Max. torque N - m	Weight / C (lb)	Weight / C (g)
NM-F516100	5/16" - 18	5/16 x 1	190	845	30	3.4	0.4	181
NM-F516114	5/16" - 18	5/16 x 1 1/4	190	845	30	3.4	0.4	181
NM-F38100	3/8" - 16	3/8 x 1	300	1,334	45	5.1	0.9	408
NM-F38114	3/8" - 16	3/8 x 1 1/4	300	1,334	45	5.1	1.1	499
NM-F38212	3/8" - 16	3/8 x 2 1/2	300	1,334	45	5.1	1.5	680
NM-F12100	1/2" - 13	1/2 x 1	490	2,180	110	12.4	1.4	635
NM-F12114	1/2" - 13	1/2 x 1 1/4	490	2,180	110	12.4	1.8	816
NM-F12212	1/2" - 13	1/2 x 2 1/2	490	2,180	110	12.4	3.7	1,678

Safety factor of 3 on design load.

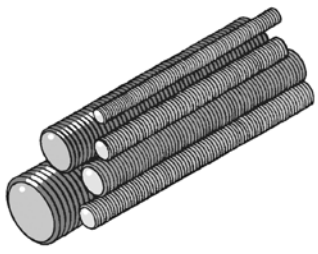
Hex nut



Cat. No.	Thread size	Height (in.)	Height (mm)	Weight / C (lb)	Weight / C (g)
NM-F38HN	3/8" - 16	21/64	8	0.69	136
NM-F12HN	1/2" - 13	7/16	11	0.69	318
NM-F58HN	5/8" - 11	35/64	14	0.69	635

NOTE: 3/4" and 1" sizes are available.
Standard lengths are 4 ft. and 8 ft. Example: NM-F38HN-4.

All-thread rod



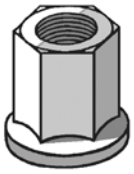
Cat. No.	Thread size	Design load (lb)	Design load N	Max. torque in - lb	Max. torque N - m	Weight / C (lb)	Weight / C (g)
NM-F38AT	3/8" - 16	425	1,890	45	5.1	0.08	36
NM-F12AT	1/2" - 13	750	3,336	110	12.4	0.13	59
NM-F58AT	5/8" - 11	950	4,226	230	26	0.21	95

Safety factor of 3 on design load. NOTE: 3/4" and 1" sizes are available.

Nonmetallic - Strut systems

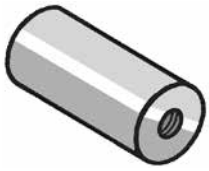
Nonmetallic threaded hardware

All-thread rod hex nut



Cat. No.	Thread size	Height (in.)	Height (mm)	Weight / C (lb)	Weight / C (g)
NM-F38ATHN	⅜" - 16	¾	19	0.8	376
NM-F12ATHN	½" - 13	⅞	22	1.7	771

Rod coupler



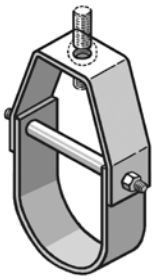
Cat. No.	Thread size	Weight / C (lb)	Weight / C (kg)
NM-FRC38	⅜" - 16	7.4	3.36
NM-FRC12	½" - 13	11.3	5.13
NM-FRC58	⅝" - 11	16.7	7.57

¾" and 1" sizes are available.

Nonmetallic - Strut systems

Nonmetallic pipe hangers, brackets and beam clamps

Clevis hangers

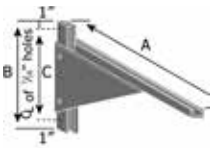


Cat. No.	Nominal pipe size (in.)	Nominal pipe size (mm)	Max. O.D. range (in.)	Max. O.D. range (mm)	Hanger rod size	Design load (lb)	Design load N
NM-SCH200	2	50.8	2½	63.5	½ - 13	90	0.40
NM-SCH212	2½	63.5	3¼	82.6	½ - 13	120	0.54
NM-SCH300	3	76.2	3⅞	98.4	½ - 13	160	0.71
NM-SCH400	4	101.6	5	127	⅝ - 11	250	1.12
NM-SCH600	6	152.4	7	177.8	⅝ - 11	400	1.79
NM-SCH800	8	203.2	9	228.6	⅝ - 11	450	2.01
NM-SCH1000	10	250	11⅜	288.9	⅝ - 11	500	2.24
NM-SCH1200	12	304.8	13½	342.9	⅝ - 11	600	2.69

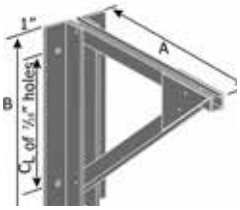
Safety factor of 3 on design loads at 120°F (49°C). Insulation may be required at high temperatures.
Order hanger rods and nuts separately.

Support brackets

SB 1



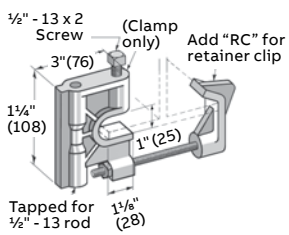
SB 2



Cat. No.*	Dimension "A" (in.)	Dimension "A" (mm)	Dimension "B" (in.)	Dimension "B" (mm)	Dimension "C" (in.)	Dimension "C" (mm)	Design load (lb)	Design load N
NM-SB1-6P	10	254	12	304.8	10	254	1,600	7,117
NM-SB1-9P	13	330.2	12	304.8	10	254	1,100	4,893
NM-SB1-12P	16	406.4	12	304.8	10	254	850	3,781
NM-SB1-18P	22	558.8	12	304.8	10	254	725	3,225
NM-SB1-24P	28	711.2	12	304.8	10	254	480	2,135
NM-SB2-24P	26	660.4	21	533.4	15	381	750	3,336
NM-SB2-30P	32	812.8	21	533.4	15	381	750	3,336
NM-SB2-36P	38	965.2	21	533.4	15	381	750	3,336

*Substitute "V" for "P" when vinylester resin is needed. Design loads based on uniform. Allowable load is based on a total load, uniformly distributed over the length of the rack.
Safety factor = 2.0 loading with a safety factor of 3.

Beam clamps



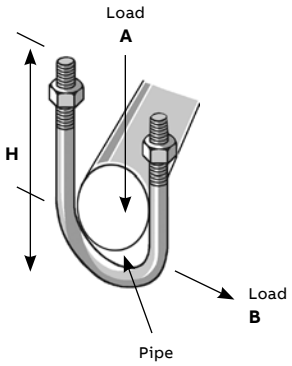
Cat. No.	Description	Design load (lb/ft.)	Design load (kg/m)
NM-SBC	Beam clamp	800	3.56
NM-SBC-RC	Beam clamp with retainer clip	800	3.56

Safety factor of 3 on design load.

Nonmetallic - Strut systems

Nonmetallic pipe hangers and hardware

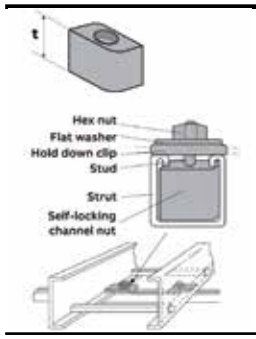
U-bolt



Cat. No.	Nominal pipe size (in.)	Nominal pipe size (mm)	H height (in.)	Design load A (lb)	Design load A N	Design load B (lb)	Design load B N	Max. torque in - lb	Max. torque N - m	Weight / C (lb)	Weight / C (kg)
NM-FUB050	½	12.7	2.41	300	1,334	150	667	30	3.4	3.5	1.59
NM-FUB075	¾	19.1	2.60	300	1,334	150	667	30	3.4	3.9	1.77
NM-FUB100	1	25.4	2.85	300	1,334	150	667	30	3.4	4.4	2.00
NM-FUB114	1¼	31.8	3.16	300	1,334	150	667	30	3.4	4.8	2.18
NM-FUB112	1 ½	38.1	3.47	300	1,334	150	667	30	3.4	5.2	2.36
NM-FUB200	2	50.8	4.18	600	2,669	200	890	60	6.8	7.7	3.49
NM-FUB212	2½	63.5	4.68	600	2,669	200	890	60	6.8	10.2	4.63
NM-FUB300	3	76.2	5.31	600	2,669	200	890	60	6.8	12.6	5.72
NM-FUB312	3½	88.9	5.81	600	2,669	200	890	60	6.8	15.1	6.85
NM-FUB400	4	101.6	6.31	600	2,669	200	890	60	6.8	17.6	7.98

Safety factor of 3 on design load.

Channel nut



Part. No.	Thread size	Weight / C (lb)	Weight / C (g)	Dimension "t" (in.)	Dimension "t" (mm)
NM-FCN14	¼-20	5.58	2,531	1¹⁄₁₆	27
NM-FCN38	⅜-16	5.31	2,408	1¹⁄₁₆	27
NM- FCN12	½-13	5.27	2,390	1¹⁄₁₆	27

Vinyl Ester resin is the standard. Channel nuts are self locking and designed for use with strut only. Resistance to slip = 450 Lbs. per bolt Pull out strength = 700 lb per bolt . Safety factor of 3 on design load.

Flat washer

Cat. No.	Hole size (in.)	Weight / C (lb)	Weight / C (g)
NM-F38W	⅜	0.5	227
NM-F12W	½	0.5	227
NM-F58W	⅝	0.5	227
NM-F34W	¾	0.5	227
NM-F100W	1	0.5	227

Nonmetallic - Strut systems

Sealant

Kit contents
- Resin
- Catalyst
- Stir stick and applicator

Brush-on resin seal kit

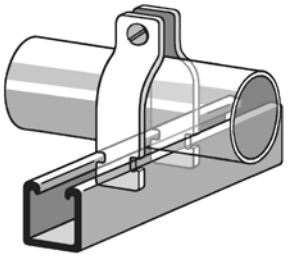
Cat. No.	Description
NM-RSK-QT	946 ml

To reseal fiberglass after field modifications.
Vinylester resin.

Nonmetallic - Strut systems

Pipe clamps

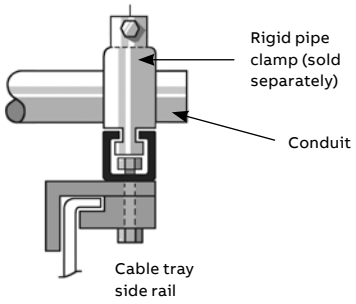
Rigid pipe clamp*



Cat. No.	Nominal pipe size (in.)	Nominal pipe size (mm)	Design load (lb)	Design load (kg)	Max. Torque N	Max. Torque (in. - lb)	Max. Torque (N - m)
NM-SRPC050	½	12.7	300	136	1.33	10	1.13
NM-SRPC075	¾	19.1	300	136	1.33	10	1.13
NM-SRPC100	1	25.4	300	136	1.33	10	1.13
NM-SRPC114	1¼	31.8	300	136	1.33	10	1.13
NM-SRPC112	1½	38.1	300	136	1.33	10	1.13
NM-SRPC200	2	50.8	300	136	1.33	10	1.13
NM-SRPC212	2½	63.5	300	136	1.33	10	1.13
NM-SRPC300	3	76.2	300	136	1.33	10	1.13
NM-SRPC312	3½	88.9	300	136	1.33	10	1.13
NM-SRPC400	4	101.6	300	136	1.33	10	1.13

Safety factor of 3 on design load.
*Fastener is included

Conduit swivel clamp



Cat. No.	Description
NM-SCSC-(CTD)	Conduit swivel clamp

Cable tray designation (CTD) required. (Ex. 6CP series designates 6" deep polyester resin). Pipe clamps are a separate order item.

Nonmetallic - Strut systems

Channel Loading Chart

Loading information

Beam loads: The charts below list the total allowable uniform load for various simple spans based on a minimum safety factor of 2.
If the load is concentrated at center span, multiply the load by 0.5 and the corresponding deflection by 0.8.

Channel framing loading – Beam and column data: Polyester and vinyl ester resin base

Beam span in. / (mm)	Cat. No.	Maximum allowable uniform beam load		Deflection @ Maximum allowable uniform beam load		Uniform load @ Maximum deflection = 0.25 in. (6mm)		Uniform load @ Maximum Deflection = 0.50 in. (13mm)		Maximum allowable column load lb (kg)
		Poly lb (kg)	Vinyl lb (kg)	Poly lb (kg)	Vinyl (kg)	Poly lb (kg)	Vinyl lb (kg)	Poly lb (kg)	Vinyl lb (kg)	
12 (304.8)	NM-SSP-100	790 (358)	990 (449)	0.11 (3)	0.12 (3)	–	–	–	–	2,550 (1,156)
	NM-SSP-158	1,720 (780)	2,150 (975)	0.07 (2)	0.07 (2)	–	–	–	–	3,650 (1,655)
	NM-SSP-158-D	5,080 (2,301)	6,350 (2,880)	0.04 (1)	0.04 (1)	–	–	–	–	7,300 (3,111)
18 (457)	NM-SSP-100	530 (240)	670 (304)	0.24 (6)	0.27 (7)	–	620 (281)	–	–	2,350 (1,066)
	NM-SSP-158	1,150 (521)	1,440 (653)	0.15 (4)	0.17 (4)	–	-	–	–	3,370 (1,528)
	NM-SSP-158-D	5,080 (2,301)	4,240 (1,923)	0.09 (2)	0.10 (2)	–	–	–	–	6,740 (3,058)
24 (609.6)	NM-SSP-100	400 (181)	500 (227)	0.43 (11)	0.48 (12)	240 (109)	270 (122)	–	–	2,070 (939)
	NM-SSP-158	860 (390)	1,080 (490)	0.27 (7)	0.30 (8)	810 (367)	910 (412)	–	–	2,960 (1,342)
	NM-SSP-158-D	2,540 (1152)	3,180 (1,442)	0.16 (4)	0.17 (4)	–	–	–	–	5,920 (2,685)
30 (762)	NM-SSP-100	320 (145)	400 (181)	0.67 (17)	0.75 (19)	120 (54)	140 (63)	240 (109)	270 (122)	1,710 (775)
	NM-SSP-158	690 (313)	870 (394)	0.42 (11)	0.48 (12)	410 (186)	460 (209)	–	–	2,450 (1,111)
	NM-SSP-158-D	2,040 (925)	2,550 (1,156)	0.24 (6)	0.27 (7)	2,000 (907)	2,350 (1,066)	–	–	4,900 (2,222)
36 (914.4)	NM-SSP-100	270 (122)	340 (154)	0.98 (25)	1.10 (28)	70 (31)	80 (36)	140 (63)	160 (72)	1,260 (571)
	NM-SSP-158	580 (263)	730 (331)	0.61 (15)	0.69 (19)	240 (109)	270 (122)	480 (217)	540 (245)	1,800 (816)
	NM-SSP-158-D	1,700 (771)	2,130 (966)	0.35 (9)	0.39 (10)	1,220 (553)	1,370 (621)	–	–	3,600 (1,633)
42 (1066.8)	NM-SSP-100	230 (104)	290 (131)	1.32 (34)	1.49 (38)	50 (22)	55 (25)	100 (45)	115 (52)	920 (417)
	NM-SSP-158	490 (222)	620 (281)	0.82 (21)	0.92 (23)	150 (68)	170 (77)	300 (136)	340 (154)	1,320 (598)
	NM-SSP-158-D	1,460 (662)	1,830 (830)	0.48 (12)	0.62 (16)	770 (349)	870 (394)	1,510 (650)	1,720 (530)	2,640 (1,197)
48 (1219.2)	NM-SSP-100	200 (91)	250 (113)	1.72 (44)	1.92 (49)	30 (13)	25 (16)	60 (27)	70 (31)	700 (317)
	NM-SSP-158	430 (195)	540 (245)	1.07 (27)	1.20 (30)	100 (45)	115 (52)	200 (90)	230 (104)	1,010 (458)
	NM-SSP-158-D	1,270 (576)	1,590 (721)	0.62 (16)	0.69 (17)	520 (236)	590 (267)	1,040 (471)	1,170 (780)	2,020 (916)
60 (1524)	NM-SSP-100	160 (72)	200 (91)	2.68 (68)	2.99 (76)	20 (9)	23 (10)	40 (18)	45 (20)	180 (81)
	NM-SSP-158	350 (158)	400 (200)	1.70 (43)	1.91 (48)	60 (27)	70 (32)	120 (54)	135 (61)	260 (118)
	NM-SSP-158-D	1,020 (462)	1,280 (580)	0.97 (25)	1.09 (28)	270 (122)	310 (140)	540 (245)	610 (276)	520 (235)
72 (1828.8)	NM-SSP-100	140 (63)	180 (81)	–	–	10 (4)	12 (5)	20 (9)	23 (10)	–
	NM-SSP-158	290 (131)	370 (168)	2.44 (62)	2.78 (71)	30 (13)	34 (15)	60 (27)	70 (32)	–
	NM-SSP-158-D	850 (385)	1,070 (485)	1.40 (35)	1.57 (40)	160 (72)	180 (81)	320 (145)	360 (163)	–
84 (2133.6)	NM-SSP-100	120 (54)	150 (68)	–	–	NR	–	12 (5)	15 (7)	–
	NM-SSP-158	250 (113)	320 (145)	–	–	20 (9)	23 (10)	40 (18)	45 (20)	–
	NM-SSP-158-D	730 (331)	920 (417)	1.91 (48)	2.15 (55)	100 (45)	115 (52)	200 (90)	230 (104)	–
96 (2438.4)	NM-SSP-100	100 (45)	130 (59)	–	–	NR	–	–	–	–
	NM-SSP-158	220 (100)	250 (113)	–	–	13 (6)	15 (7)	26 (12)	30 (13)	–
	NM-SSP-158-D	640 (290)	800 (363)	2.50 (63)	2.79 (71)	70 (32)	80 (36)	140 (63)	160 (72)	–

Temperature	Design load multiplier
75°F (24°C)	100%
100°F (38°C)	90%
125°F (52°C)	78%
150°F (66°C)	68%
175°F (79°C)	60%
200°F (93°C)	52%

Recommended guideline
Published design loads are based on usage at 70°F (21°C) and must be reduced for continuous exposure to higher temperatures. Refer to the chart opposite for high temperature applications.