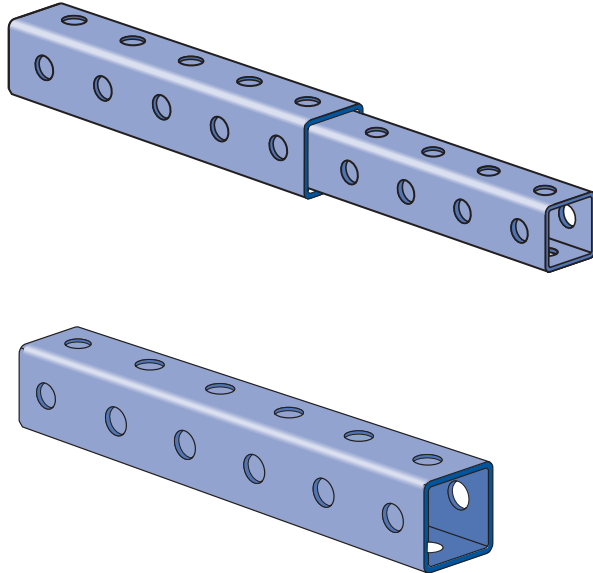




TELESTRUT® SYSTEM



Telescoping Tube.....59-61

Connection Methods 62

Specialized Fittings 62

Post Bases.....62-63

Cutting Chart..... 64

MATERIAL

Unistrut channels are accurately and carefully cold formed to size from low-carbon strip steel.

STEEL: PLAIN

12 Ga. (2.7 mm), 14 Ga.(1.9 mm) and
16 Ga. (1.5 mm) ASTM A1011 SS GR 33.

STEEL: PRE-GALVANIZED

12 Ga. (2.7 mm), 14 Ga. (1.9 mm) and
16 Ga. (1.5mm) ASTM A653 GR 33.

FINISHES

Fittings are available in:

- Perma-Green III (GR),
- Electro-galvanized (EG), conforming to
ASTM B633 Type III SC1;
- Hot-dipped Galvanized (HG), conforming to
ASTM A123 or A153
- Plain (PL).

DIMENSIONS

Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

DESIGN BOLT TORQUE

BOLT SIZE	¼"-20	⅜"-18	½"-16	⅝"-13	¾"-11	1"-10
Rec.Torque Ft/Lbs (N·m)	6 (8)	11 (15)	19 (26)	50 (68)	100 (136)	125 (170)
Max Torque Ft/Lbs (N·m)	7 (9)	15 (20)	25 (34)	70 (95)	125 (170)	135 (183)

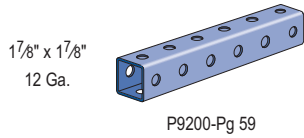
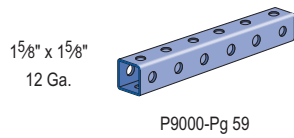
DESIGN LOAD

Load tables and charts are constructed to be in accordance with the SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2001 EDITION published by the AMERICAN IRON AND STEEL INSTITUTE USING ASD METHOD.

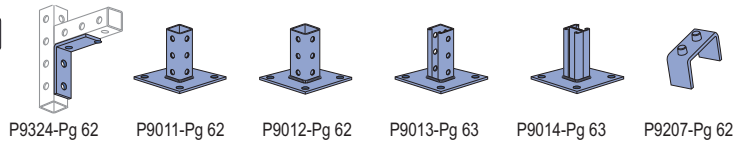
Type of Load	Safety Factor to Yield Strength	Safety Factor to Ultimate Strength
Beam Loads	1.67	2.0
Column Load	1.80	2.2



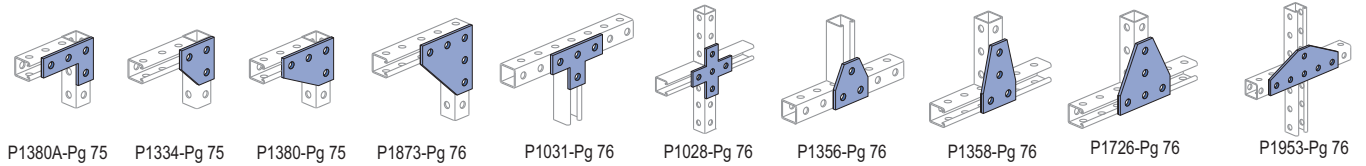
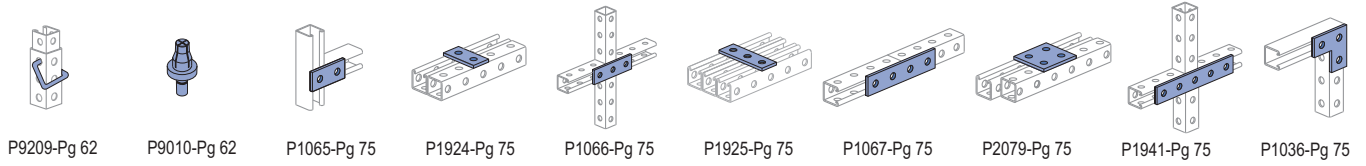
Telestrut Telescoping Tubing



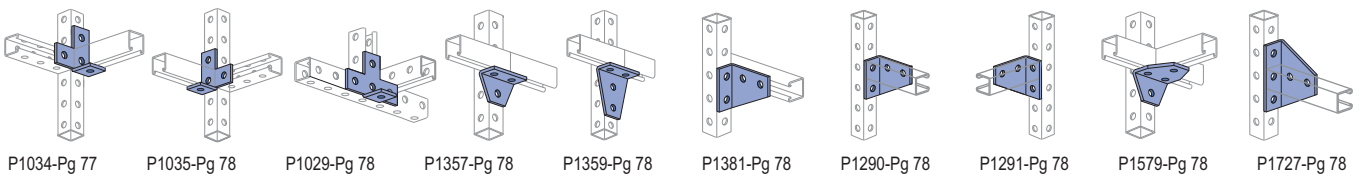
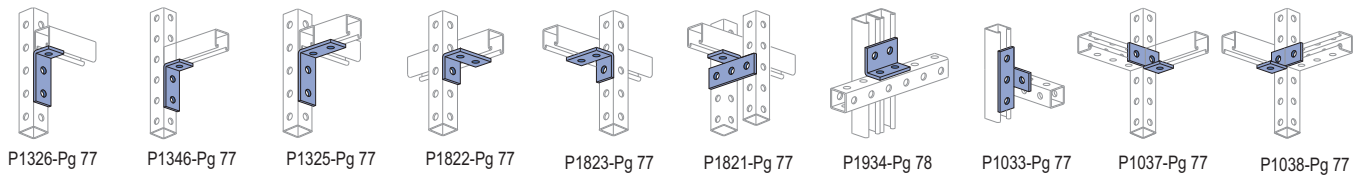
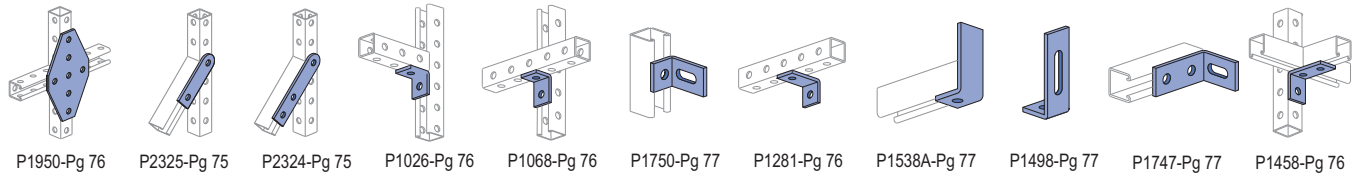
Special Fittings for Telestrut Telescoping Tubing



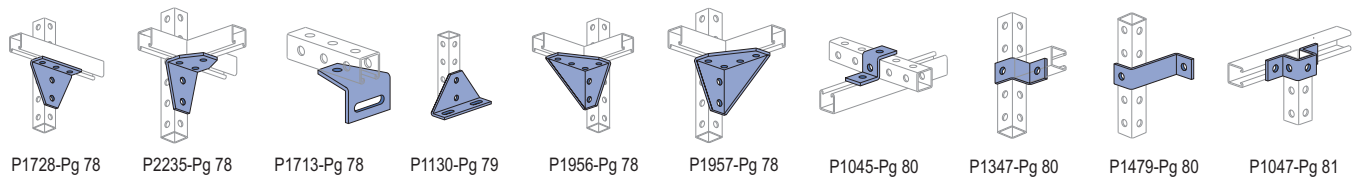
Standard 1 5/8" - Flat Plate Fittings



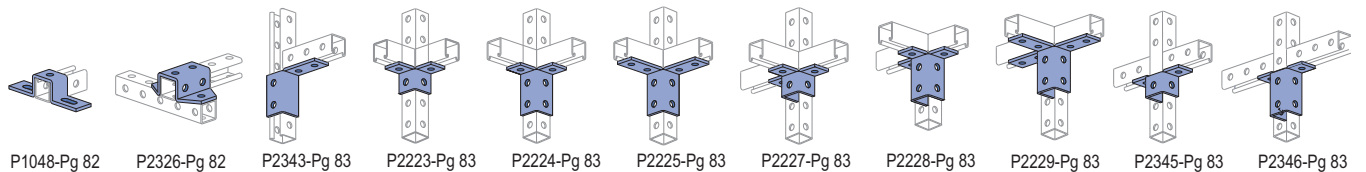
Standard 1 5/8" - Ninety Degree Fittings



Standard 1 5/8" - "Z" and "U" Shape Fittings

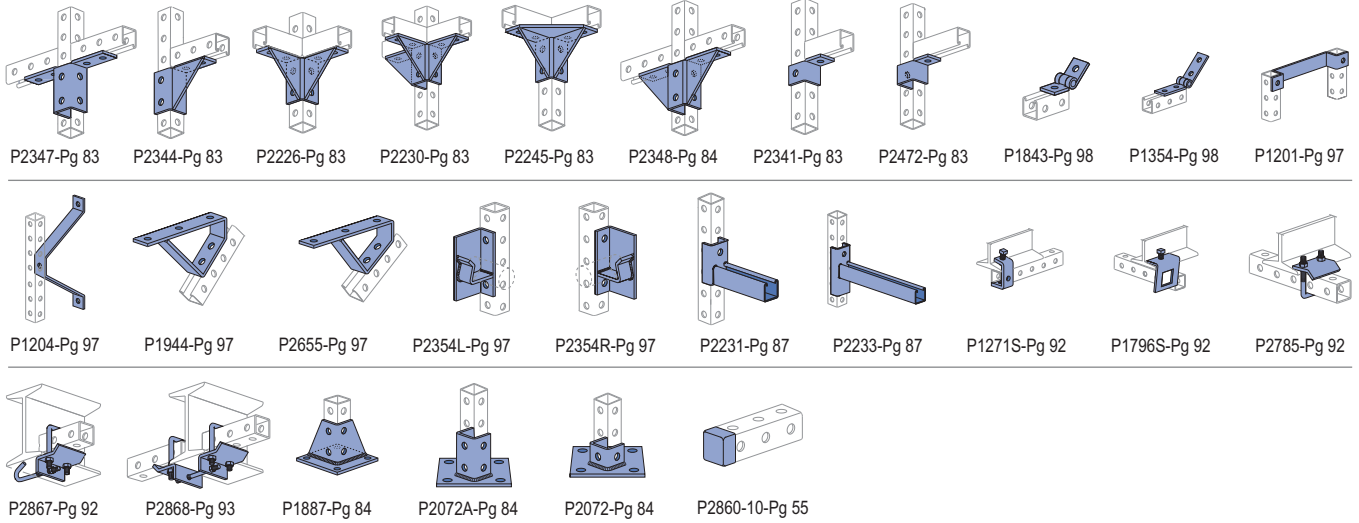


Standard 1 5/8" - Wing Shape Fittings



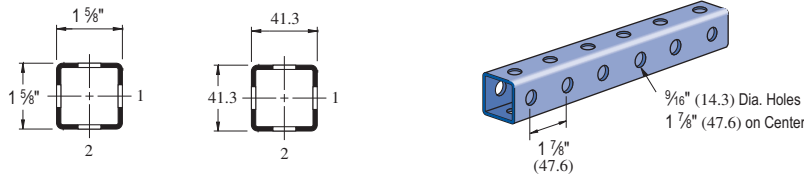
Standard 1 5/8" Metal Framing – Wing Shape Fittings

Standard 1 5/8" – Misc. Fittings



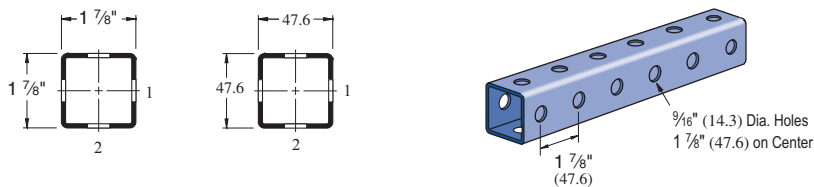
Many of the standard metal framing components are compatible with the Telestrut telescoping tubing. Refer to the appropriate page in other sections of the catalog for information on the particular fittings shown here.

P9000



Wt/100 Ft: 188 Lbs (279 kg/100 m)
 Allowable Moment 5,140 In-Lbs (580 N·m)
 12 Gauge Nominal Thickness .105" (2.7mm)

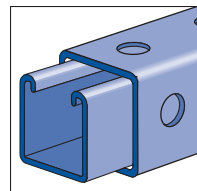
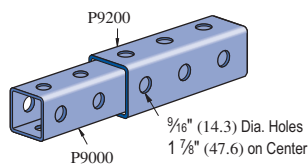
P9200



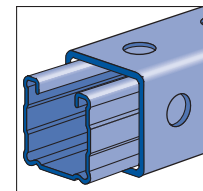
Wt/100 Ft: 223 Lbs (331 kg/100 m)
 Allowable Moment 7,480 In-Lbs (850 N·m)
 12 Gauge Nominal Thickness .105" (2.7mm)

TELESTRUT'S TELESCOPING POWER

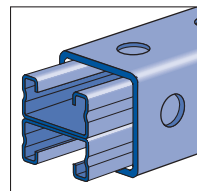
Telestrut can be combined with metal framing channel



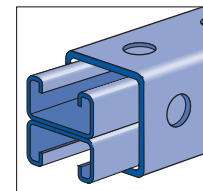
P1000 Series



P1100 Series



P4001 Series



P4101 Series



P9000 - BEAM LOADING

Span In	Max Allowable Uniform Load Lbs	Defl. at Uniform Load In	Uniform Loading at Deflection		
			Span/180 Lbs	Span/240 Lbs	Span/360 Lbs
24	1,710	0.06	1,710	1,710	1,710
36	1,140	0.14	1,140	1,140	810
48	860	0.25	860	680	450
60	690	0.40	580	440	290
72	570	0.57	400	300	200
84	490	0.77	300	220	150
96	430	1.01	230	170	110
108	380	1.27	180	130	90
120	340	1.56	150	110	70
144	290	2.30	100	80	50
168	240	3.02	70	60	40
192	210	3.95	60	40	NR
216	190	5.09	40	NR	NR
240	170	6.24	40	NR	NR

P9200 - BEAM LOADING

Span In	Max Allowable Uniform Load Lbs	Defl. at Uniform Load In	Uniform Loading at Deflection		
			Span/180 Lbs	Span/240 Lbs	Span/360 Lbs
24	2,490	0.05	2,490	2,490	2,490
36	1,660	0.12	1,660	1,660	1,350
48	1,250	0.22	1,250	1,140	760
60	1,000	0.34	980	730	490
72	830	0.49	680	510	340
84	710	0.67	500	370	250
96	620	0.87	380	290	190
108	550	1.10	300	230	150
120	500	1.37	240	180	120
144	420	1.98	170	130	80
168	360	2.70	120	90	60
192	310	3.47	100	70	50
216	280	4.47	80	60	NR
240	250	5.47	60	50	NR

P9000 - COLUMN LOADING

Unbraced Height In	Maximum Allowable Load at Slot Face Lbs	Maximum Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
24	3,640	8,730	8,570	8,330	8,040
36	3,540	8,360	8,040	7,530	6,950
48	3,400	7,880	7,340	6,530	5,660
60	3,210	7,290	6,530	5,440	4,360
72	2,990	6,640	5,660	4,360	3,160
84	2,730	5,940	4,790	3,340	2,320
96	2,430	5,220	3,940	2,560	1,780
108	2,110	4,520	3,160	2,020	1,400
120	1,820	3,840	2,560	1,640	**
144	1,390	2,690	1,780	**	**

P9200 - COLUMN LOADING

Unbraced Height In	Maximum Allowable Load at Slot Face Lbs	Maximum Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
24	4,620	11,120	10,980	10,740	10,460
36	4,530	10,770	10,460	9,950	9,370
48	4,390	10,300	9,760	8,940	8,030
60	4,220	9,720	8,940	7,800	6,590
72	4,000	9,050	8,030	6,590	5,180
84	3,750	8,320	7,080	5,410	3,890
96	3,460	7,560	6,110	4,290	2,980
108	3,140	6,770	5,180	3,390	2,360
120	2,790	5,990	4,290	2,750	1,910
144	2,170	4,510	2,980	1,910	**
168	1,720	3,320	2,190	**	**

P9000/P9200 - ELEMENTS OF SECTION

Parameter	P9000		P9200	
Area of Section	0.387	In ²	0.489	In ²
Axis 1-1				
Moment of Inertia (I)	0.166	In ⁴	0.279	In ⁴
Section Modulus (S)	0.205	In ³	0.297	In ³
Radius of Gyration (r)	0.655	In	0.755	In
Axis 2-2				
Moment of Inertia (I)	0.166	In ⁴	0.279	In ⁴
Section Modulus (S)	0.205	In ³	0.297	In ³
Radius of Gyration (r)	0.655	In	0.755	In

Notes:

* Load limited by spot weld shear.

** KL/r > 200

NR = Not Recommended.

1. Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
4. Deduct Telestrut weight from the beam loads.
5. For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%. For other load conditions refer to page 18.

P9000 - BEAM LOADING (METRIC)

Span mm	Max Allowable Uniform Load kN	Defl. at Uniform Load mm	Uniform Loading at Deflection		
			Span/180 kN	Span/z0 kN	Span/360 kN
600	7.7	2	7.7	7.7	7.7
750	6.2	2	6.2	6.2	5.3
1,000	4.7	4	4.7	4.5	3.0
1,250	3.7	7	3.7	2.9	1.9
1,500	3.1	10	2.7	2.0	1.3
1,750	2.7	13	2.0	1.5	1.0
2,000	2.3	17	1.5	1.1	0.8
2,500	1.9	27	1.0	0.7	0.5
3,000	1.6	39	0.7	0.5	0.3
3,500	1.3	53	0.5	0.4	0.3
4,000	1.2	68	0.4	0.3	0.2
4,500	1.0	86	0.3	0.2	0.1
5,000	0.9	108	0.2	0.2	NR
6,000	0.8	151	0.2	NR	NR

P9200 - BEAM LOADING (METRIC)

Span mm	Max Allowable Uniform Load kN	Defl. at Uniform Load mm	Uniform Loading at Deflection		
			Span/180 kN	Span/240 kN	Span/360 kN
600	11.3	1	11.3	11.3	11.3
750	9.0	2	9.0	9.0	8.9
1,000	6.8	4	6.8	6.8	5.0
1,250	5.4	6	5.4	4.8	3.2
1,500	4.5	8	4.5	3.3	2.2
1,750	3.9	11	3.3	2.4	1.6
2,000	3.4	15	2.5	1.9	1.2
2,500	2.7	23	1.6	1.2	0.8
3,000	2.3	34	1.1	0.8	0.6
3,500	1.9	45	0.8	0.6	0.4
4,000	1.7	60	0.6	0.5	0.3
4,500	1.5	76	0.5	0.4	0.3
5,000	1.3	92	0.4	0.3	0.2
6,000	1.1	132	0.3	0.2	NR

P9000 - COLUMN LOADING (METRIC)

Unbraced Height mm	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	16.2	38.9	38.2	37.1	35.9
750	16.0	38.2	37.1	35.5	33.7
1,000	15.6	36.7	35.0	32.3	29.4
1,250	15.0	34.8	32.3	28.6	24.6
1,500	14.4	32.6	29.4	24.6	19.8
1,750	13.6	30.3	26.2	20.6	15.3
2,000	12.7	27.8	23.0	16.8	11.7
2,250	11.7	25.2	19.8	13.3	9.3
2,500	10.5	22.6	16.8	10.8	7.5
2,750	9.3	20.0	14.0	8.9	6.2

P9200 - COLUMN LOADING (METRIC)

Unbraced Height mm	Maximum Allowable Load at Slot Face kN	Maximum Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
600	20.6	49.5	48.9	47.9	46.6
750	20.4	48.8	47.9	46.3	44.4
1,000	20.0	47.4	45.7	43.1	40.1
1,250	19.5	45.6	43.1	39.3	35.1
1,500	18.8	43.5	40.1	35.1	29.9
1,750	18.1	41.1	36.8	30.7	24.6
2,000	17.2	38.5	33.4	26.3	19.7
2,250	16.2	35.7	29.9	22.1	15.6
2,500	15.1	32.9	26.3	18.2	12.6
2,750	13.9	30.1	23.0	15.0	10.4

P9000/P9200 - ELEMENTS OF SECTION (METRIC)

Parameter	P9000		P9200	
Area of Section	2.50	cm ²	3.16	cm ²
Axis 1-1				
Moment of Inertia (I)	6.92	cm ⁴	11.61	cm ⁴
Section Modulus (S)	3.35	cm ³	4.87	cm ³
Radius of Gyration (r)	1.66	cm	1.92	cm
Axis 2-2				
Moment of Inertia (I)	6.92	cm ⁴	11.61	cm ⁴
Section Modulus (S)	3.35	cm ³	4.87	cm ³
Radius of Gyration (r)	1.66	cm	1.92	cm

Notes:

* Load limited by spot weld shear.

** KL/r > 200

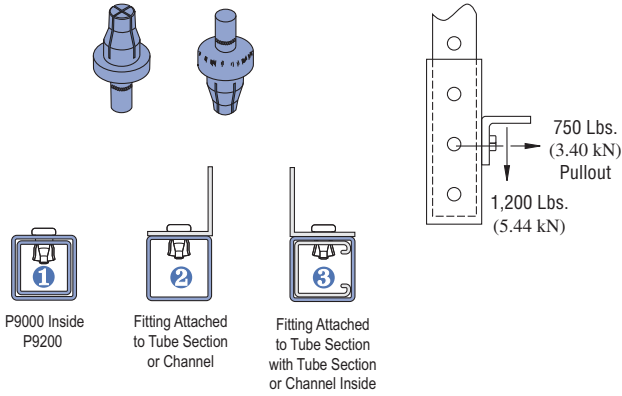
NR = Not Recommended.

1. Beam loads are given in total uniform load (W Lbs) not uniform load (w lbs/ft or w lbs/in).
4. Deduct Telestrut weight from the beam loads.
5. For concentrated midspan point loads, multiply beam loads by 50% and the corresponding deflection by 80%. For other load conditions refer to page 18.



P9010

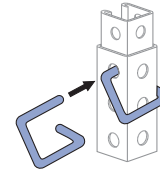
MULTI-GRIP RIVET



Wt/100 pcs: 10 Lbs (4.5 kg)

P9209

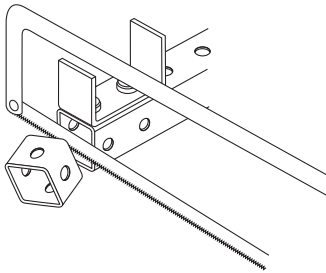
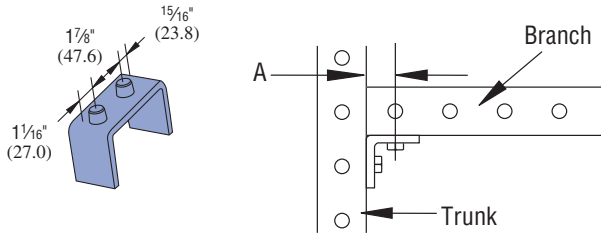
GRAVITY PIN



Wt/100 pcs: 47 Lbs (21.3 kg)

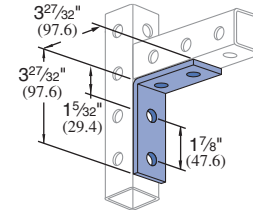
P9207

CUTTING ALIGNMENT GAUGE



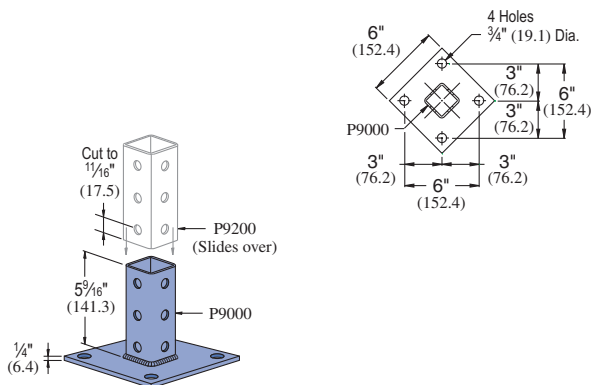
The cutting alignment guide ensures correct cutting of branch members when used with fittings to make connections. Refer to the table of page 64 for the appropriate value for "A" for cutting.

P9324



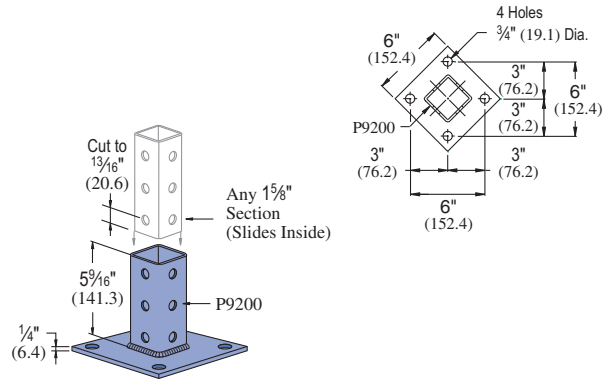
Wt/100 pcs: 78 Lbs (35.0 kg)

P9011



Wt/100 pcs: 332 Lbs (150.7 kg)

P9012

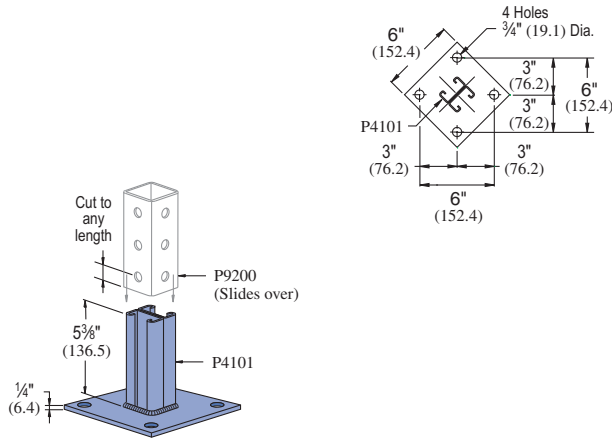


Wt/100 pcs: 340 Lbs (154 kg)

Standard Dimensions for 1 5/8" (41mm) width series channel fittings (Unless Otherwise Shown on Drawing)

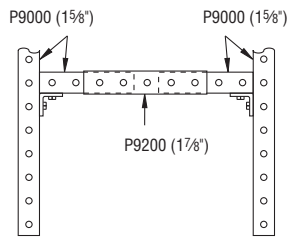
Hole Diameter: 9/16" (14mm); Hole Spacing - From End: 1 3/16" (21mm); Hole Spacing - On Center: 1 7/8" (48mm); Width: 1 5/8" (41mm); Thickness: 1/4" (6mm)

P9014



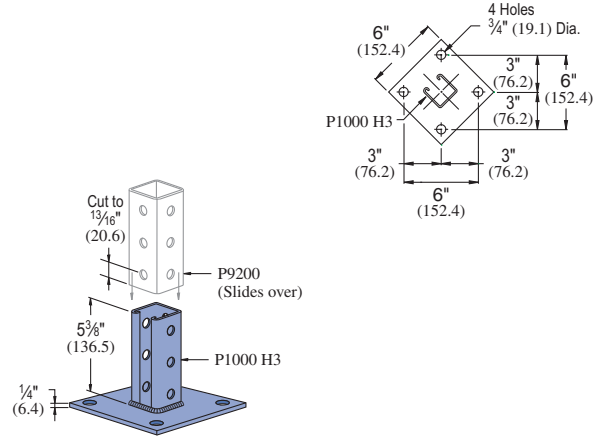
Wt/100 pcs: 303 Lbs (137.5 kg)

PREFERRED THREE-PIECE ASSEMBLY



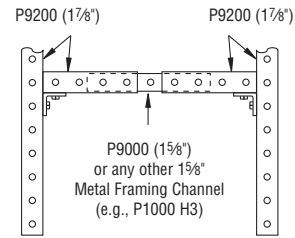
In most applications, telescoping assemblies should be made from three sections of Telestrut material. The simplest construction utilizes a center section of 1 7/8" material (P9200) into which a 1 5/8" member (P9000) is telescoped from each end. In this way, all intersecting verticals and horizontals are formed from 1 5/8" members assuring maximum compatibility and ease of assembly

P9013



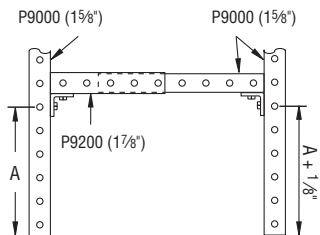
Wt/100 pcs: 318 Lbs (144.7 kg)

ALTERNATE THREE-PIECE ASSEMBLY



A similar technique is to use a center 1 5/8" center member (P9000) which can be telescoped into 1 7/8" members used at both ends. With this method, all intersecting connections should be formed from compatible 1 7/8" members.

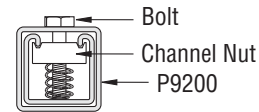
TWO-PIECE ASSEMBLY



Two-piece telescoping assemblies can be used, but special cutting of one or both telescoping members is needed to achieve proper alignment of fittings at the intersecting connections.

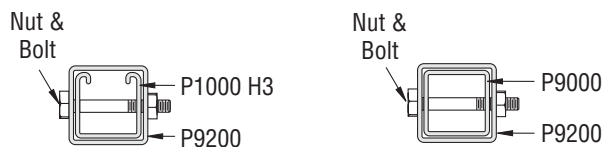
In addition, the right-angle members to which telescoping pieces are attached must be cut according to the illustration at right to insure smooth movement of telescoping members.

CHANNEL NUT CONNECTION – INFINITE ADJUSTMENT



Any of the 1 5/8" (41 mm) channel can be connected to the P9000 using standard channel nuts.

THROUGH-BOLT CONNECTION – INCREMENTAL ADJUSTMENT



Standard Dimensions for 1 5/8" (41mm) width series channel fittings (Unless Otherwise Shown on Drawing)

Hole Diameter: 5/16" (14mm); Hole Spacing - From End: 1 3/16" (21mm); Hole Spacing - On Center: 1 1/2" (48mm); Width: 1 5/8" (41mm); Thickness: 1/4" (6mm)

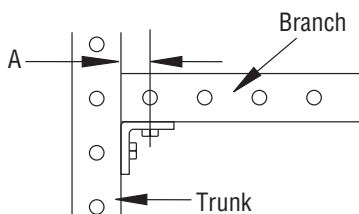


CUTTING CHART

Fitting	1½" (41.3) Branch		1½" (47.6) Branch	
	Trunk 1½" (41.3)	Trunk 1½" (47.6)	Trunk 1½" (41.3)	Trunk 1½" (47.6)
P1026	A	A	A	B
P1028	A	A	A	B
P1029	†	†	†	†
P1031	A	A	A	B
P1033	B	A	A	B
P1034	†	†	†	†
P1035	A	†	†	†
P1036	A	A	A	B
P1037	†	†	†	†
P1038	†	†	†	†
P1045	†	†	†	†
P1047	†	†	†	†
P1048	†	†	†	†
P1049	†	†	†	†
P1050	†	†	†	†
P1065	A	A	A	B
P1066	A	A	A	B
P1068	C	NR	NR	NR
P1130	A	A	A	C
P1131	A	A	A	C
P1290	A	NR	NR	NR
P1291	A	NR	NR	NR
P1325	A	NR	NR	NR
P1326	C	NR	NR	NR
P1334	A	A	A	B
P1346	A	A	A	B
P1347	C	NR	NR	NR
P1354	D	D	D	D
P1356	A	A	A	B
P1357	A	NR	NR	NR
P1358	A	A	A	B
P1359	A	NR	NR	NR
P1380	A	A	A	B
P1380 A	A	A	A	B
P1381	†	†	†	†
P1382	†	†	†	†
P1458	A	NR	NR	NR
P1498	†	†	†	†
P1499	†	†	†	†
P1538 A	C	A	A	C
P1538 B	C	A	A	C
P1538 C	C	A	A	C
P1538 D	C	A	A	C
P1579	A	NR	NR	NR
P1713	†	†	†	†

Fitting	1½" (41.3) Branch		1½" (47.6) Branch	
	Trunk 1½" (41.3)	Trunk 1½" (47.6)	Trunk 1½" (41.3)	Trunk 1½" (47.6)
P1726	A	A	A	B
P1727	B	NR	NR	NR
P1728	†	†	†	†
P1747	†	†	†	†
P1750	†	†	†	†
P1821	†	†	†	†
P1822	†	†	†	†
P1823	†	†	†	†
P1843	D	D	D	D
P1873	†	†	†	†
P1834	†	NR	NR	NR
P1941	A	A	A	B
P1950	A	A	A	B
P1953	A	A	A	B
P1956	†	†	†	†
P1957	†	†	†	†
P2223	A	NR	A	NR
P2224	A	NR	A	NR
P2225	A	NR	A	NR
P2226	A	NR	A	NR
P2227	A	NR	A	NR
P2228	A	NR	A	NR
P2229	A	NR	A	NR
P2230	A	NR	A	NR
P2235	A	NR	NR	NR
P2245	A	NR	A	NR
P2324	E	NR	NR	F
P2325	E	A	A	F
P2326	E	NR	NR	F
P2341 R-L	A	NR	A	NR
P2343 R-L	A	NR	A	NR
P2344 R-L	A	NR	A	NR
P2345	A	NR	A	NR
P2346	A	NR	A	NR
P2347	A	NR	A	NR
P2348	A	NR	A	NR
P2472 R-L	C	NR	A	NR
P2815	C	NR	NR	NR
P2815 D	C	NR	NR	NR
P9324	G	G	G	G
P9325	A	A	A	A
P9484	A	A	A	A

This table shows the value for "A" when using the specified fitting to connect the branch and trunk. Sizes "A" and "B" can be cut with the cutting alignment gauge (P9207). Other sizes require special cutting. Those marked NR are not recommended.



Legend

Designator	"A" In (mm)
A	1½" 37.5
B	1⅝" 39.8
C	1¾" 41.3
D	1⅞" 47.6
E	2" 50.8

Designator	"A" In (mm)
F	7/16" * 11.1
G	1½" 29.4
NR	Not Recommended
†	Special Cutting Req'd (See part dwg)