RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**162AS137-20 (57 ksi) AlphaSTUD 20EQ (G40)**

Physical Properties

Web Height =	1.625 in	Steel Thickness* =	0.0200 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 57	Yield Stress, Fy =	57 ksi
Punchout Width =	0.75 in	Punchout Length =	1.5 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	0.044 in^4
Section Modulus (Sxx)	0.037 in^3
Allowable Bending Moment (Ma)	1.27 in-k

Gross Section Properties of Full Section, Strong Axis

|	
Moment of Inertia (Ixxg)	0.048 in^4
Section modules (Sxxg)	0.059 in^3
Cross Sectional Area (Ag)	0.101 in^2
Radius of Gyration (Rxg)	0.689 in
Gross Moment of Inertia (Iyy)	0.027 in^4
Radius of Gyration (Ry)	0.515 in

Other Section Properties

Member Weight per Foot of Length	0.34 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-1.243 in
St. Venant torsion Constant (J x 1000)	0.015 in^4
Warping Constant (Cw)	0.018 in^6
Radii of Gyration (Ro)	1.511 in^6
Torsional Flexural Constant (Beta)	0.324

* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

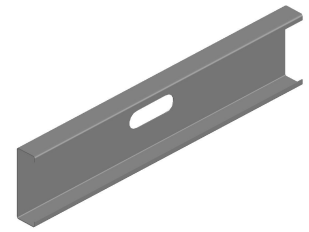• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA
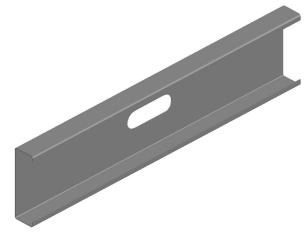
PRODUCT SUBMITTAL DATA

Section Designation :	**250AS137-20 (57 ksi) AlphaSTUD 20EQ (G40)**		
Physical Properties			
Web Height =	2.50 in	Steel Thickness* =	0.0200 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 57	Yield Stress, Fy =	57 ksi
Punchout Width =	0.75 in	Punchout Length =	1.5 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	0.115 in^4
Section Modulus (Sxx)	0.071 in^3
Allowable Bending Moment (Ma)	2.13 in-k

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	0.126 in^4
Section modules (Sxxg)	0.101 in^3
Cross Sectional Area (Ag)	0.120 in^2
Radius of Gyration (Rxg)	1.027 in
Gross Moment of Inertia (Iyy)	0.031 in^4
Radius of Gyration (Ry)	0.511 in

Other Section Properties

Member Weight per Foot of Length	0.41 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-1.103 in
St. Venant torsion Constant (J x 1000)	0.018 in^4
Warping Constant (Cw)	0.042 in^6
Radii of Gyration (Ro)	1.591 in^6
Torsional Flexural Constant (Beta)	0.520

* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)
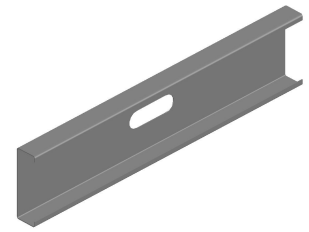• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**362AS137-20 (57 ksi) AlphaSTUD 20EQ (G40)**		
Physical Properties			

Web Height =	3.625 in	Steel Thickness* =	0.0200 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 57	Yield Stress, Fy =	57 ksi
Punchout Width =	1.5 in	Punchout Length =	4.0 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	0.283 in^4
Section Modulus (Sxx)	0.088 in^3
Allowable Bending Moment (Ma)	3.02 in-k

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	0.295 in^4
Section modules (Sxxg)	0.163 in^3
Cross Sectional Area (Ag)	0.144 in^2
Radius of Gyration (Rxg)	1.435 in
Gross Moment of Inertia (Iyy)	0.035 in^4
Radius of Gyration (Ry)	0.496 in

Other Section Properties

Member Weight per Foot of Length	0.49 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.969 in
St. Venant torsion Constant (J x 1000)	0.021 in^4
Warping Constant (Cw)	0.092 in^6
Radii of Gyration (Ro)	1.801 in^6
Torsional Flexural Constant (Beta)	0.7100

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* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

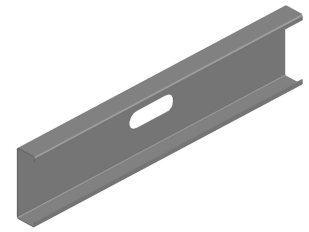• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**400AS137-20 (57 ksi) AlphaSTUD 20EQ (G40)**		

Physical Properties

Web Height =	4.00 in	Steel Thickness* =	0.0200 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 57	Yield Stress, Fy =	57 ksi
Punchout Width =	1.5 in	Punchout Length =	4.0 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	0.358 in^4
Section Modulus (Sxx)	0.098 in^3
Allowable Bending Moment (Ma)	3.34 in-k

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	0.371 in^4
Section modules (Sxxg)	0.186 in^3
Cross Sectional Area (Ag)	0.151 in^2
Radius of Gyration (Rxg)	1.566 in
Gross Moment of Inertia (Iyy)	0.036 in^4
Radius of Gyration (Ry)	0.490 in

Other Section Properties

Member Weight per Foot of Length	0.52 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.932 in
St. Venant torsion Constant (J x 1000)	0.022 in^4
Warping Constant (Cw)	0.115 in^6
Radii of Gyration (Ro)	1.887 in^6
Torsional Flexural Constant (Beta)	0.756

* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)
• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**600AS137-20 (57 ksi) AlphaSTUD 20EQ (G40)**		
Physical Properties			

Web Height =	6.00 in	Steel Thickness* =	0.0200 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 57	Yield Stress, Fy =	80 ksi
Punchout Width =	1.5 in	Punchout Length =	4.0 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	-
Section Modulus (Sxx)	-
Allowable Bending Moment (Ma)	-

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	0.969 in^4
Section modules (Sxxg)	0.323 in^3
Cross Sectional Area (Ag)	0.194 in^2
Radius of Gyration (Rxg)	2.237 in
Gross Moment of Inertia (Iyy)	0.041 in^4
Radius of Gyration (Ry)	0.458 in

Other Section Properties

Member Weight per Foot of Length	0.66 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.779 in
St. Venant torsion Constant (J x 1000)	0.029 in^4
Warping Constant (Cw)	0.285 in^6
Radii of Gyration (Ro)	2.412 in^6
Torsional Flexural Constant (Beta)	0.8960

* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

** Web-height to thickness ratio exceeds 260, Web stiffeners are required at all supports and concentrated loads

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

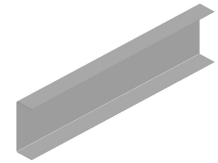• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**162AT125-20 (50 ksi) AlphaTRACK 20EQ (G40)**		
PHYSICAL PROPERTIES :			

Web Height =	1.7226 in	Steel Thickness =	0.0188 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.0902 in
Moment of Inertia for Deflection (Ixx)	0.0265 in^4
Section Modulus (Sxx)	0.0226 in^3
Allowable Bending Moment (Ma)	56.41 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	0.8613 in
Moment of Inertia (Ixxg)	0.0394 in^4
Section modules (Sxxg)	0.0457 in^3
Cross Sectional Area (Ag)	0.0757 in^2
Radius of Gyration (Rxg)	0.7216 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.3617 in
Gross Moment of Inertia (Iyy)	0.0118 in^4
Radius of Gyration (Ry)	0.3942 in

Other Section Property Data

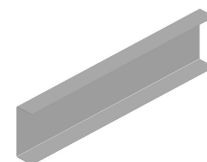|	
Member Weight per Foot of Length	0.2575 lb/ft
Allowable Shear Force In Web (Unpunched)	371.97 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.8330 in
St. Venant torsion Constant (J x 1000)	0.0089 in^4
Warping Constant (Cw)	0.0061 in^6
Radii of Gyration (Ro)	1.1704 in^6
Torsional Flexural Constant (Beta)	0.4935

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**162AT200-20 (50 ksi) AlphaTRACK 20EQ (G40)**		
PHYSICAL PROPERTIES :			
Web Height =	1.7470 in	Steel Thickness =	0.0188 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.0557 in
Moment of Inertia for Deflection (Ixx)	0.0320 in^4
Section Modulus (Sxx)	0.0227 in^3
Allowable Bending Moment (Ma)	53.2 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	0.8735 in
Moment of Inertia (Ixxg)	0.0610 in^4
Section modules (Sxxg)	0.0470 in^3
Cross Sectional Area (Ag)	0.1070 in^2
Radius of Gyration (Rxg)	0.6620 in

Section Properties, Weak Axis

Gross Moment of Inertia (Iyy)	0.0047 in^4
Radius of Gyration (Ry)	0.6618 in

Other Section Property Data

Member Weight per Foot of Length	0.3630 lb/ft
Allowable Shear Force In Web (Unpunched)	371.97 lb

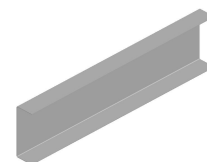**Torsional Properties**

Dist. from Shear Center to Neutral Axis (Xo)	-1.5770 in
St. Venant torsion Constant (J x 1000)	0.0129 in^4
Warping Constant (Cw)	0.0240 in^6
Radii of Gyration (Ro)	1.8690 in^6
Torsional Flexural Constant (Beta)	0.2880

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**250AT125-20 (50 ksi) AlphaTRACK 20EQ (G40)**		
PHYSICAL PROPERTIES :			
Web Height =	2.5976 in	Steel Thickness =	0.0188 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.6888 in
Moment of Inertia for Deflection (Ixx)	0.0726 in^4
Section Modulus (Sxx)	0.0352 in^3
Allowable Bending Moment (Ma)	87.72 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.2988 in
Moment of Inertia (Ixxg)	0.0994 in^4
Section modules (Sxxg)	0.0765 in^3
Cross Sectional Area (Ag)	0.0921 in^2
Radius of Gyration (Rxg)	1.0387 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.2988 in
Gross Moment of Inertia (Iyy)	0.0134 in^4
Radius of Gyration (Ry)	0.3819 in

Other Section Property Data

Member Weight per Foot of Length	0.3135 lb/ft
Allowable Shear Force In Web (Unpunched)	242.38 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.7268 in
St. Venant torsion Constant (J x 1000)	0.0109 in^4
Warping Constant (Cw)	0.0158 in^6
Radii of Gyration (Ro)	1.3240 in^6
Torsional Flexural Constant (Beta)	0.6987

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation : **250AT200-20 (50 ksi) AlphaTRACK 20EQ (G40)**

PHYSICAL PROPERTIES :

Web Height =	2.6220 in	Steel Thickness =	0.0188 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.6066 in
Moment of Inertia for Deflection (Ixx)	0.0880 in^4
Section Modulus (Sxx)	0.0340 in^3
Allowable Bending Moment (Ma)	84.4 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.3110 in
Moment of Inertia (Ixxg)	0.1490 in^4
Section modules (Sxxg)	0.0340 in^3
Cross Sectional Area (Ag)	0.0847 in^2
Radius of Gyration (Rxg)	1.0990 in

Section Properties, Weak Axis

Gross Moment of Inertia (Iyy)	0.0054 in^4
Radius of Gyration (Ry)	0.6610 in

Other Section Property Data

Member Weight per Foot of Length	0.420 lb/ft
Allowable Shear Force In Web (Unpunched)	244.82 lb

Torsional Properties

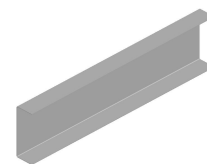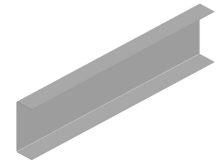|	
Dist. from Shear Center to Neutral Axis (Xo)	-1.4290 in
St. Venant torsion Constant (J x 1000)	0.0149 in^4
Warping Constant (Cw)	0.0630 in^6
Radii of Gyration (Ro)	1.920 in^6
Torsional Flexural Constant (Beta)	0.4460

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

PRODUCT SUBMITTAL DATA

Section Designation :	**362AT125-20 (50 ksi) AlphaTRACK 20EQ (G40)**		
PHYSICAL PROPERTIES :			
Web Height =	3.7226 in	Steel Thickness =	0.0188 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.5065 in
Moment of Inertia for Deflection (Ixx)	0.1714 in^4
Section Modulus (Sxx)	0.0510 in^3
Allowable Bending Moment (Ma)	127.33 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.8613 in
Moment of Inertia (Ixxg)	0.2292 in^4
Section modules (Sxxg)	0.1232 in^3
Cross Sectional Area (Ag)	0.1133 in^2
Radius of Gyration (Rxg)	1.4226 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.2448 in
Gross Moment of Inertia (Iyy)	0.0149 in^4
Radius of Gyration (Ry)	0.3624 in

Other Section Property Data

Member Weight per Foot of Length	0.3855 lb/ft
Allowable Shear Force In Web (Unpunched)	165.89 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.6274 in
St. Venant torsion Constant (J x 1000)	0.0133 in^4
Warping Constant (Cw)	0.0367 in^6
Radii of Gyration (Ro)	1.5964 in^6
Torsional Flexural Constant (Beta)	0.8455

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

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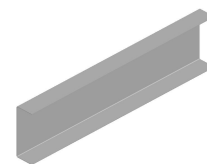
PRODUCT SUBMITTAL DATA

Section Designation :	**362AT200-20 (50 ksi) AlphaTRACK 20EQ (G40)**
PHYSICAL PROPERTIES :	

Web Height =	3.7470 in	Steel Thickness =	0.0188 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.4048 in
Moment of Inertia for Deflection (Ixx)	0.1799 in^4
Section Modulus (Sxx)	0.0500 in^3
Allowable Bending Moment (Ma)	124.95 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.8735 in
Moment of Inertia (Ixxg)	0.3331 in^4
Section modules (Sxxg)	0.1096 in^3
Cross Sectional Area (Ag)	0.1446 in^2
Radius of Gyration (Rxg)	1.5170 in

Section Properties, Weak Axis

Gross Moment of Inertia (Iyy)	0.0061 in^4
Radius of Gyration (Ry)	0.6475 in

Other Section Property Data

|	
Member Weight per Foot of Length	0.3601 lb/ft
Allowable Shear Force In Web (Unpunched)	167.03 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.4789 in
St. Venant torsion Constant (J x 1000)	0.0125 in^4
Warping Constant (Cw)	0.0228 in^6
Radii of Gyration (Ro)	1.5012 in^6
Torsional Flexural Constant (Beta)	0.8982

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation : **400AT125-20 (50 ksi) AlphaTRACK 20EQ (G40)**

PHYSICAL PROPERTIES :

Web Height =	4.0976 in	Steel Thickness =	0.0188 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.7865 in
Moment of Inertia for Deflection (Ixx)	0.2084 in^4
Section Modulus (Sxx)	0.0564 in^3
Allowable Bending Moment (Ma)	140.60 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.0488 in
Moment of Inertia (Ixxg)	0.2878 in^4
Section modules (Sxxg)	0.1405 in^3
Cross Sectional Area (Ag)	0.1203 in^2
Radius of Gyration (Rxg)	1.5465 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.2310 in
Gross Moment of Inertia (Iyy)	0.0152 in^4
Radius of Gyration (Ry)	0.3559 in

Other Section Property Data

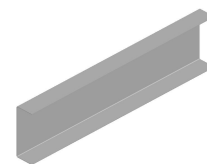|	
Member Weight per Foot of Length	0.4094 lb/ft
Allowable Shear Force In Web (Unpunched)	150.10 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.6005 in
St. Venant torsion Constant (J x 1000)	0.0142 in^4
Warping Constant (Cw)	0.0460 in^6
Radii of Gyration (Ro)	1.6968 in^6
Torsional Flexural Constant (Beta)	0.8747

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**400AT200-20 (50 ksi) AlphaTRACK 20EQ (G40)**

PHYSICAL PROPERTIES :

Web Height =	4.1220 in	Steel Thickness =	0.0188 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.7189 in
Moment of Inertia for Deflection (Ixx)	0.2275 in^4
Section Modulus (Sxx)	0.0545 in^3
Allowable Bending Moment (Ma)	136.64 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.0610 in
Moment of Inertia (Ixxg)	0.4136 in^4
Section modules (Sxxg)	0.1254 in^3
Cross Sectional Area (Ag)	0.1511 in^2
Radius of Gyration (Rxg)	1.6502 in

Section Properties, Weak Axis

Gross Moment of Inertia (Iyy)	0.0063 in^4
Radius of Gyration (Ry)	0.6415 in

Other Section Property Data

Member Weight per Foot of Length	0.5162 lb/ft
Allowable Shear Force In Web (Unpunched)	151.04 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-1.2380 in
St. Venant torsion Constant (J x 1000)	0.0183 in^4
Warping Constant (Cw)	0.0181 in^6
Radii of Gyration (Ro)	2.161 in^6
Torsional Flexural Constant (Beta)	0.6720

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

* Web-height to thickness ratio exceeds 200

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

PRODUCT SUBMITTAL DATA

Section Designation :	**600AT125-20 (50 ksi) AlphaTRACK 20EQ (G40)**

PHYSICAL PROPERTIES :

Web Height =	6.0976 in	Steel Thickness =	0.0188 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	3.5718 in
Moment of Inertia for Deflection (Ixx)	0.4682 in^4
Section Modulus (Sxx)	0.0821 in^3
Allowable Bending Moment (Ma)	204.53 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	3.0488 in
Moment of Inertia (Ixxg)	0.7775 in^4
Section modules (Sxxg)	0.1909 in^3
Cross Sectional Area (Ag)	0.1602 in^2
Radius of Gyration (Rxg)	2.1920 in

Section Properties, Weak Axis

Gross Moment of Inertia (Iyy)	0.0190 in^4
Radius of Gyration (Ry)	0.3412 in

Other Section Property Data

Member Weight per Foot of Length	0.5481 lb/ft
Allowable Shear Force In Web (Unpunched)	119.72 lb

Torsional Properties

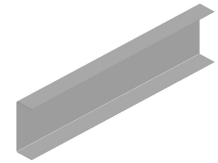|	
Dist. from Shear Center to Neutral Axis (Xo)	-0.5320 in
St. Venant torsion Constant (J x 1000)	0.0194 in^4
Warping Constant (Cw)	0.1300 in^6
Radii of Gyration (Ro)	2.2820 in^6
Torsional Flexural Constant (Beta)	0.9470

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

* Web-height to thickness ratio exceeds 260

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**600AT200-20 (50 ksi) AlphaTRACK 20EQ (G40)**

PHYSICAL PROPERTIES :

Web Height =	6.0976 in	Steel Thickness =	0.0188 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	3.4826 in
Moment of Inertia for Deflection (Ixx)	0.5312 in^4
Section Modulus (Sxx)	0.0837 in^3
Allowable Bending Moment (Ma)	208.47 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	3.0488 in
Moment of Inertia (Ixxg)	0.4381 in^4
Section modules (Sxxg)	0.1719 in^3
Cross Sectional Area (Ag)	0.1889 in^2
Radius of Gyration (Rxg)	2.3385 in

Section Properties, Weak Axis

Gross Moment of Inertia (Iyy)	0.0070 in^4
Radius of Gyration (Ry)	0.6070 in

Other Section Property Data

Member Weight per Foot of Length	0.6438 lb/ft
Allowable Shear Force In Web (Unpunched)	119.72 lb

Torsional Properties

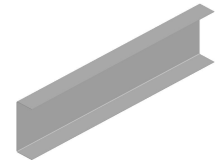|	
Dist. from Shear Center to Neutral Axis (Xo)	-1.0570 in
St. Venant torsion Constant (J x 1000)	0.0229 in^4
Warping Constant (Cw)	0.0461 in^6
Radii of Gyration (Ro)	2.6366 in^6
Torsional Flexural Constant (Beta)	0.8400

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

* Web-height to thickness ratio exceeds 260

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

PRODUCT SUBMITTAL DATA

Section Designation :	**162T200-30 (33 ksi) AlphaTRACK (G40)**		
PHYSICAL PROPERTIES :			
Web Height =	1.7474 in	Steel Thickness =	0.0312 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	33.0000 ksi
Fy With Cold-Work, Fya =	33.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.1317 in
Moment of Inertia for Deflection (Ixx)	0.0669 in^4
Section Modulus (Sxx)	0.0528 in^3
Allowable Bending Moment (Ma)	86.99 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	0.8737 in
Moment of Inertia (Ixxg)	0.0968 in^4
Section modules (Sxxg)	0.1108 in^3
Cross Sectional Area (Ag)	0.1672 in^2
Radius of Gyration (Rxg)	0.7608 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.6573 in
Gross Moment of Inertia (Iyy)	0.0638 in^4
Radius of Gyration (Ry)	0.6175 in

Other Section Property Data

Member Weight per Foot of Length	0.5691 lb/ft
Allowable Shear Force In Web (Unpunched)	604.25 lb

Torsional Properties

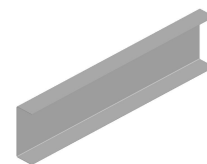|	
Dist. from Shear Center to Neutral Axis (Xo)	-1.4450 in
St. Venant torsion Constant (J x 1000)	0.0543 in^4
Warping Constant (Cw)	0.0342 in^6
Radii of Gyration (Ro)	1.7459 in^6
Torsional Flexural Constant (Beta)	0.3150

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)
• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**250T125-30 (33 ksi) AlphaTRACK (G40)**

PHYSICAL PROPERTIES :

Web Height =	2.6406 in	Steel Thickness =	0.0312 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0782 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	33.0000 ksi
Fy With Cold-Work, Fya =	33.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.5065 in
Moment of Inertia for Deflection (Ixx)	0.1455 in^4
Section Modulus (Sxx)	0.0896 in^3
Allowable Bending Moment (Ma)	147.59 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.3203 in
Moment of Inertia (Ixxg)	0.1729 in^4
Section modules (Sxxg)	0.1310 in^3
Cross Sectional Area (Ag)	0.1559 in^2
Radius of Gyration (Rxg)	1.0531 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.3207 in
Gross Moment of Inertia (Iyy)	0.0246 in^4
Radius of Gyration (Ry)	0.3972 in

Other Section Property Data

Member Weight per Foot of Length	0.5306 lb/ft
Allowable Shear Force In Web (Unpunched)	832.30 lb

Torsional Properties

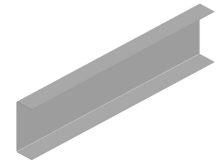|	
Dist. from Shear Center to Neutral Axis (Xo)	-0.7615 in
St. Venant torsion Constant (J x 1000)	0.0506 in^4
Warping Constant (Cw)	0.0297 in^6
Radii of Gyration (Ro)	1.3589 in^6
Torsional Flexural Constant (Beta)	0.6860

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA
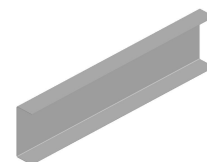
PRODUCT SUBMITTAL DATA

Section Designation :	**250T200-30 (33 ksi) AlphaTRACK (G40)**

PHYSICAL PROPERTIES :

Web Height =	2.6224 in	Steel Thickness =	0.0312 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	33.0000 ksi
Fy With Cold-Work, Fya =	33.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.6325 in
Moment of Inertia for Deflection (Ixx)	0.1692 in^4
Section Modulus (Sxx)	0.0950 in^3
Allowable Bending Moment (Ma)	156.36 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.3112 in
Moment of Inertia (Ixxg)	0.2360 in^4
Section modules (Sxxg)	0.1800 in^3
Cross Sectional Area (Ag)	0.1945 in^2
Radius of Gyration (Rxg)	1.1014 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.5673 in
Gross Moment of Inertia (Iyy)	0.0734 in^4
Radius of Gyration (Ry)	0.6144 in

Other Section Property Data

Member Weight per Foot of Length	0.6620 lb/ft
Allowable Shear Force In Web (Unpunched)	832.30 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-1.3037 in
St. Venant torsion Constant (J x 1000)	0.0631 in^4
Warping Constant (Cw)	0.0872 in^6
Radii of Gyration (Ro)	1.8139 in^6
Torsional Flexural Constant (Beta)	0.4834

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)
• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA
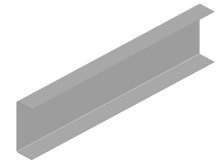
PRODUCT SUBMITTAL DATA

Section Designation :	**362T125-30 (33 ksi) AlphaTRACK (G40)**		
PHYSICAL PROPERTIES :			
Web Height =	3.7656 in	Steel Thickness =	0.0312 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0782 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	33.0000 ksi
Fy With Cold-Work, Fya =	33.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.0948 in
Moment of Inertia for Deflection (Ixx)	0.3390 in^4
Section Modulus (Sxx)	0.1525 in^3
Allowable Bending Moment (Ma)	251.08 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.8828 in
Moment of Inertia (Ixxg)	0.3950 in^4
Section modules (Sxxg)	0.2098 in^3
Cross Sectional Area (Ag)	0.1910 in^2
Radius of Gyration (Rxg)	1.4380 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.2647 in
Gross Moment of Inertia (Iyy)	0.0273 in^4
Radius of Gyration (Ry)	0.3778 in

Other Section Property Data

Member Weight per Foot of Length	0.6500 lb/ft
Allowable Shear Force In Web (Unpunched)	762.14 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.6594 in
St. Venant torsion Constant (J x 1000)	0.0620 in^4
Warping Constant (Cw)	0.0684 in^6
Radii of Gyration (Ro)	1.6265 in^6
Torsional Flexural Constant (Beta)	0.8356

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming
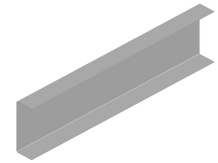
PRODUCT SUBMITTAL DATA

Section Designation :	**362T200-30 (33 ksi) AlphaTRACK (G40)**		
PHYSICAL PROPERTIES :			
Web Height =	3.7474 in	Steel Thickness =	0.0312 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	33.0000 ksi
Fy With Cold-Work, Fya =	33.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.2499 in
Moment of Inertia for Deflection (Ixx)	0.3914 in^4
Section Modulus (Sxx)	0.1624 in^3
Allowable Bending Moment (Ma)	267.41 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.8737 in
Moment of Inertia (Ixxg)	0.5259 in^4
Section modules (Sxxg)	0.2807 in^3
Cross Sectional Area (Ag)	0.2296 in^2
Radius of Gyration (Rxg)	1.5133 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.4829 in
Gross Moment of Inertia (Iyy)	0.0825 in^4
Radius of Gyration (Ry)	0.5993 in

Other Section Property Data

Member Weight per Foot of Length	0.7814 lb/ft
Allowable Shear Force In Web (Unpunched)	758.26 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-1.1624 in
St. Venant torsion Constant (J x 1000)	0.0745 in^4
Warping Constant (Cw)	0.2005 in^6
Radii of Gyration (Ro)	2.0001 in^6
Torsional Flexural Constant (Beta)	0.6622

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA
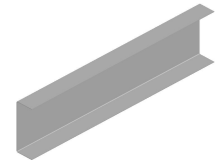
PRODUCT SUBMITTAL DATA

Section Designation :	**400T125-30 (33 ksi) AlphaTRACK (G40)**		
PHYSICAL PROPERTIES :			
Web Height =	4.1406 in	Steel Thickness =	0.0312 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0782 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	33.0000 ksi
Fy With Cold-Work, Fya =	33.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.2887 in
Moment of Inertia for Deflection (Ixx)	0.4271 in^4
Section Modulus (Sxx)	0.1765 in^3
Allowable Bending Moment (Ma)	290.57 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.0703 in
Moment of Inertia (Ixxg)	0.4948 in^4
Section modules (Sxxg)	0.2390 in^3
Cross Sectional Area (Ag)	0.2027 in^2
Radius of Gyration (Rxg)	1.5623 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.2503 in
Gross Moment of Inertia (Iyy)	0.0279 in^4
Radius of Gyration (Ry)	0.3713 in

Other Section Property Data

Member Weight per Foot of Length	0.6898 lb/ft
Allowable Shear Force In Web (Unpunched)	689.26 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.6317 in
St. Venant torsion Constant (J x 1000)	0.0658 in^4
Warping Constant (Cw)	0.0855 in^6
Radii of Gyration (Ro)	1.7256 in^6
Torsional Flexural Constant (Beta)	0.8660

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**400T200-30 (33 ksi) AlphaTRACK (G40)**		
PHYSICAL PROPERTIES :			
Web Height =	4.1224 in	Steel Thickness =	0.0312 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	33.0000 ksi
Fy With Cold-Work, Fya =	33.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.4873 in
Moment of Inertia for Deflection (Ixx)	0.4942 in^4
Section Modulus (Sxx)	0.1810 in^3
Allowable Bending Moment (Ma)	298.05 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.0612 in
Moment of Inertia (Ixxg)	0.6537 in^4
Section modules (Sxxg)	0.3171 in^3
Cross Sectional Area (Ag)	0.2413 in^2
Radius of Gyration (Rxg)	1.6458 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.4603 in
Gross Moment of Inertia (Iyy)	0.0849 in^4
Radius of Gyration (Ry)	0.5932 in

Other Section Property Data

Member Weight per Foot of Length	0.8212 lb/ft
Allowable Shear Force In Web (Unpunched)	686.09 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-1.1226 in
St. Venant torsion Constant (J x 1000)	0.0783 in^4
Warping Constant (Cw)	0.2507 in^6
Radii of Gyration (Ro)	2.0786 in^6
Torsional Flexural Constant (Beta)	0.7083

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation : **600T125-30 (33 ksi) AlphaTRACK (G40)**

PHYSICAL PROPERTIES :

Web Height =	6.1406 in	Steel Thickness =	0.0312 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0782 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	33.0000 ksi
Fy With Cold-Work, Fya =	33.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	3.7256 in
Moment of Inertia for Deflection (Ixx)	1.0947 in^4
Section Modulus (Sxx)	0.2490 in^3
Allowable Bending Moment (Ma)	409.98 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	3.0703 in
Moment of Inertia (Ixxg)	1.2879 in^4
Section modules (Sxxg)	0.4195 in^3
Cross Sectional Area (Ag)	0.2651 in^2
Radius of Gyration (Rxg)	2.2040 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.1951 in
Gross Moment of Inertia (Iyy)	0.0306 in^4
Radius of Gyration (Ry)	0.3396 in

Other Section Property Data

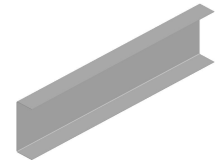|	
Member Weight per Foot of Length	0.9022 lb/ft
Allowable Shear Force In Web (Unpunched)	456.48 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.5177 in
St. Venant torsion Constant (J x 1000)	0.0860 in^4
Warping Constant (Cw)	0.2150 in^6
Radii of Gyration (Ro)	2.2893 in^6
Torsional Flexural Constant (Beta)	0.9489

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**600T200-30 (33 ksi) AlphaTRACK (G40)**		
PHYSICAL PROPERTIES :			
Web Height =	6.1224 in	Steel Thickness =	0.0312 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	33.0000 ksi
Fy With Cold-Work, Fya =	33.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	3.8830 in
Moment of Inertia for Deflection (Ixx)	1.3294 in^4
Section Modulus (Sxx)	0.2674 in^3
Allowable Bending Moment (Ma)	440.28 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	3.0612 in
Moment of Inertia (Ixxg)	1.6420 in^4
Section modules (Sxxg)	0.5364 in^3
Cross Sectional Area (Ag)	0.3037 in^2
Radius of Gyration (Rxg)	2.3251 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.3689 in
Gross Moment of Inertia (Iyy)	0.0947 in^4
Radius of Gyration (Ry)	0.5584 in

Other Section Property Data

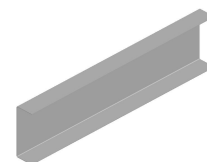|	
Member Weight per Foot of Length	1.0335 lb/ft
Allowable Shear Force In Web (Unpunched)	455.08 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.9525 in
St. Venant torsion Constant (J x 1000)	0.0986 in^4
Warping Constant (Cw)	0.6340 in^6
Radii of Gyration (Ro)	2.5739 in^6
Torsional Flexural Constant (Beta)	0.8631

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)
• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**162AS137-15 (50 ksi) AlphaSTUD 25EQ (G40)**		

Physical Properties

Web Height =	1.625 in	Steel Thickness* =	0.0157 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 50	Yield Stress, Fy =	50 ksi
Punchout Width =	0.75 in	Punchout Length =	1.5 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	0.033 in^4
Section Modulus (Sxx)	0.027 in^3
Allowable Bending Moment (Ma)	0.67 in-k

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	0.037 in^4
Section modules (Sxxg)	0.045 in^3
Cross Sectional Area (Ag)	0.076 in^2
Radius of Gyration (Rxg)	0.692 in
Gross Moment of Inertia (Iyy)	0.020 in^4
Radius of Gyration (Ry)	0.517 in

Other Section Properties

Member Weight per Foot of Length	0.26 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-1.249 in
St. Venant torsion Constant (J x 1000)	0.006 in^4
Warping Constant (Cw)	0.014 in^6
Radii of Gyration (Ro)	1.519 in^6
Torsional Flexural Constant (Beta)	0.323

* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

** Web-height to thickness ratio exceeds 200, Web stiffeners are required at all supports and concentrated loads

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18) Direct Strength Method.

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA
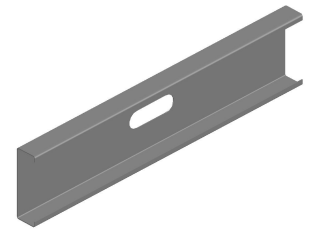
PRODUCT SUBMITTAL DATA

Section Designation :	**250AS137-15 (50 ksi) AlphaSTUD 25EQ (G40)**		

Physical Properties

Web Height =	2.50 in	Steel Thickness* =	0.0157 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 50	Yield Stress, Fy =	50 ksi
Punchout Width =	0.75 in	Punchout Length =	1.5 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	0.088 in^4
Section Modulus (Sxx)	0.046 in^3
Allowable Bending Moment (Ma)	1.11 in-k

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	0.096 in^4
Section modules (Sxxg)	0.076 in^3
Cross Sectional Area (Ag)	0.090 in^2
Radius of Gyration (Rxg)	1.030 in
Gross Moment of Inertia (Iyy)	0.024 in^4
Radius of Gyration (Ry)	0.514 in

Other Section Properties

Member Weight per Foot of Length	0.31 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-1.109 in
St. Venant torsion Constant (J x 1000)	0.008 in^4
Warping Constant (Cw)	0.032 in^6
Radii of Gyration (Ro)	1.598 in^6
Torsional Flexural Constant (Beta)	0.518

* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

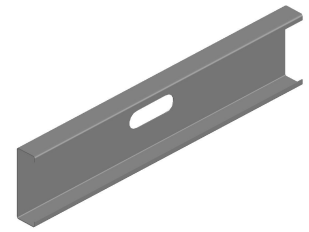** Web-height to thickness ratio exceeds 200, Web stiffeners are required at all supports and concentrated loads

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18) Direct Strength Method.

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation : **362AS137-15 (50 ksi) AlphaSTUD 25EQ (G40)**

Physical Properties

Web Height =	3.625 in	Steel Thickness* =	0.0157 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 50	Yield Stress, Fy =	50 ksi
Punchout Width =	1.5 in	Punchout Length =	4.0 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	0.188 in^4
Section Modulus (Sxx)	0.064 in^3
Allowable Bending Moment (Ma)	1.60 in-k

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	0.223 in^4
Section modules (Sxxg)	0.123 in^3
Cross Sectional Area (Ag)	0.108 in^2
Radius of Gyration (Rxg)	1.437 in
Gross Moment of Inertia (Iyy)	0.027 in^4
Radius of Gyration (Ry)	0.499 in

Other Section Properties

Member Weight per Foot of Length	0.37 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.975 in
St. Venant torsion Constant (J x 1000)	0.009 in^4
Warping Constant (Cw)	0.070 in^6
Radii of Gyration (Ro)	1.807 in^6
Torsional Flexural Constant (Beta)	0.7090

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* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

** Web-height to thickness ratio exceeds 200, Web stiffeners are required at all supports and concentrated loads

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18) Direct Strength Method.

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**400AS137-15 (50 ksi) AlphaSTUD 25EQ (G40)**		
Physical Properties			
Web Height =	4.00 in	Steel Thickness* =	0.0157 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 50	Yield Stress, Fy =	50 ksi
Punchout Width =	1.5 in	Punchout Length =	4.0 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	0.233 in^4
Section Modulus (Sxx)	0.066 in^3
Allowable Bending Moment (Ma)	1.66 in-k

Gross Section Properties of Full Section, Strong Axis

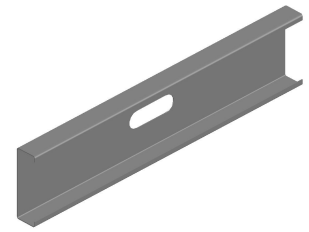|	
Moment of Inertia (Ixxg)	0.280 in^4
Section modules (Sxxg)	0.140 in^3
Cross Sectional Area (Ag)	0.114 in^2
Radius of Gyration (Rxg)	1.568 in
Gross Moment of Inertia (Iyy)	0.028 in^4
Radius of Gyration (Ry)	0.493 in

Other Section Properties

Member Weight per Foot of Length	0.39 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.938 in
St. Venant torsion Constant (J x 1000)	0.009 in^4
Warping Constant (Cw)	0.087 in^6
Radii of Gyration (Ro)	1.893 in^6
Torsional Flexural Constant (Beta)	0.754

* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

** Web-height to thickness ratio exceeds 200, Web stiffeners are required at all supports and concentrated loads

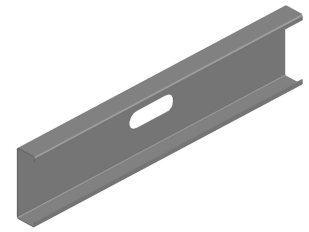• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18) Direct Strength Method.

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**600AS137-15 (50 ksi) AlphaSTUD 25EQ (G40)**		

Physical Properties

Web Height =	6.00 in	Steel Thickness* =	0.0157 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 50	Yield Stress, Fy =	80 ksi
Punchout Width =	1.5 in	Punchout Length =	4.0 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	-
Section Modulus (Sxx)	-
Allowable Bending Moment (Ma)	-

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	0.730 in^4
Section modules (Sxxg)	0.243 in^3
Cross Sectional Area (Ag)	0.145 in^2
Radius of Gyration (Rxg)	2.240 in
Gross Moment of Inertia (Iyy)	0.031 in^4
Radius of Gyration (Ry)	0.460 in

Other Section Properties

Member Weight per Foot of Length	0.49 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.784 in
St. Venant torsion Constant (J x 1000)	0.012 in^4
Warping Constant (Cw)	0.217 in^6
Radii of Gyration (Ro)	2.418 in^6
Torsional Flexural Constant (Beta)	0.8950

* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

** Web-height to thickness ratio exceeds 260, Web stiffeners are required at all supports and concentrated loads

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18) Direct Strength Method.

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**162AT125-15 (50 ksi) AlphaTRACK 25EQ (G40)**		
Physical Properties			

Web Height =	1.7226 in	Steel Thickness =	0.0188 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.0902 in
Moment of Inertia for Deflection (Ixx)	0.0265 in^4
Section Modulus (Sxx)	0.0226 in^3
Allowable Bending Moment (Ma)	56.41 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	0.8613 in
Moment of Inertia (Ixxg)	0.0394 in^4
Section modules (Sxxg)	0.0457 in^3
Cross Sectional Area (Ag)	0.0757 in^2
Radius of Gyration (Rxg)	0.7216 in

Section Properties, Weak Axis

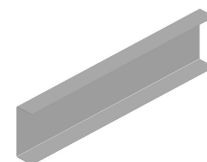|	
Gross Neutral Axis (Xcg) From Web Face	0.3617 in
Gross Moment of Inertia (Iyy)	0.0118 in^4
Radius of Gyration (Ry)	0.3942 in

Other Section Property Data

Member Weight per Foot of Length	0.2575 lb/ft
Allowable Shear Force In Web (Unpunched)	371.97 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.8330 in
St. Venant torsion Constant (J x 1000)	0.0089 in^4
Warping Constant (Cw)	0.0061 in^6
Radii of Gyration (Ro)	1.1704 in^6
Torsional Flexural Constant (Beta)	0.4935

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)
• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**162AT200-15 (50 ksi) AlphaTRACK 25EQ (G40)**		
Physical Properties			
Web Height =	1.7470 in	Steel Thickness =	0.0188 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.0557 in
Moment of Inertia for Deflection (Ixx)	0.0320 in^4
Section Modulus (Sxx)	0.0227 in^3
Allowable Bending Moment (Ma)	53.2 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	0.8735 in
Moment of Inertia (Ixxg)	0.0610 in^4
Section modules (Sxxg)	0.0470 in^3
Cross Sectional Area (Ag)	0.1070 in^2
Radius of Gyration (Rxg)	0.6620 in

Section Properties, Weak Axis

Gross Moment of Inertia (Iyy)	0.0047 in^4
Radius of Gyration (Ry)	0.6618 in

Other Section Property Data

Member Weight per Foot of Length	0.3630 lb/ft
Allowable Shear Force In Web (Unpunched)	371.97 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-1.5770 in
St. Venant torsion Constant (J x 1000)	0.0129 in^4
Warping Constant (Cw)	0.0240 in^6
Radii of Gyration (Ro)	1.8690 in^6
Torsional Flexural Constant (Beta)	0.2880

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**250AT125-15 (50 ksi) AlphaTRACK 25EQ (G40)**		
Physical Properties			
Web Height =	2.5976 in	Steel Thickness =	0.0188 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.6888 in
Moment of Inertia for Deflection (Ixx)	0.0726 in^4
Section Modulus (Sxx)	0.0352 in^3
Allowable Bending Moment (Ma)	87.72 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.2988 in
Moment of Inertia (Ixxg)	0.0994 in^4
Section modules (Sxxg)	0.0765 in^3
Cross Sectional Area (Ag)	0.0921 in^2
Radius of Gyration (Rxg)	1.0387 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.2988 in
Gross Moment of Inertia (Iyy)	0.0134 in^4
Radius of Gyration (Ry)	0.3819 in

Other Section Property Data

Member Weight per Foot of Length	0.3135 lb/ft
Allowable Shear Force In Web (Unpunched)	242.38 lb

Torsional Properties

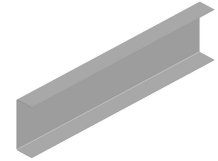|	
Dist. from Shear Center to Neutral Axis (Xo)	-0.7268 in
St. Venant torsion Constant (J x 1000)	0.0109 in^4
Warping Constant (Cw)	0.0158 in^6
Radii of Gyration (Ro)	1.3240 in^6
Torsional Flexural Constant (Beta)	0.6987

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**250AT200-15 (50 ksi) AlphaTRACK 25EQ (G40)**		
Physical Properties			

Web Height =	2.6220 in	Steel Thickness =	0.0188 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.6066 in
Moment of Inertia for Deflection (Ixx)	0.0880 in^4
Section Modulus (Sxx)	0.0340 in^3
Allowable Bending Moment (Ma)	84.4 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.3110 in
Moment of Inertia (Ixxg)	0.1490 in^4
Section modules (Sxxg)	0.0340 in^3
Cross Sectional Area (Ag)	0.0847 in^2
Radius of Gyration (Rxg)	1.0990 in

Section Properties, Weak Axis

Gross Moment of Inertia (Iyy)	0.0054 in^4
Radius of Gyration (Ry)	0.6610 in

Other Section Property Data

Member Weight per Foot of Length	0.420 lb/ft
Allowable Shear Force In Web (Unpunched)	244.82 lb

Torsional Properties

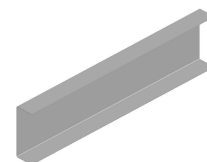|	
Dist. from Shear Center to Neutral Axis (Xo)	-1.4290 in
St. Venant torsion Constant (J x 1000)	0.0149 in^4
Warping Constant (Cw)	0.0630 in^6
Radii of Gyration (Ro)	1.920 in^6
Torsional Flexural Constant (Beta)	0.4460

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**362AT200-15 (50 ksi) AlphaTRACK 25EQ (G40)**
Physical Properties	

Web Height =	3.7470 in	Steel Thickness =	0.0188 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.4048 in
Moment of Inertia for Deflection (Ixx)	0.1799 in^4
Section Modulus (Sxx)	0.0500 in^3
Allowable Bending Moment (Ma)	124.95 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	1.8735 in
Moment of Inertia (Ixxg)	0.3331 in^4
Section modules (Sxxg)	0.1096 in^3
Cross Sectional Area (Ag)	0.1446 in^2
Radius of Gyration (Rxg)	1.5170 in

Section Properties, Weak Axis

Gross Moment of Inertia (Iyy)	0.0061 in^4
Radius of Gyration (Ry)	0.6475 in

Other Section Property Data

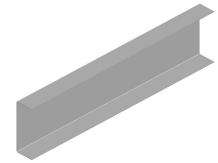|	
Member Weight per Foot of Length	0.3601 lb/ft
Allowable Shear Force In Web (Unpunched)	167.03 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.4789 in
St. Venant torsion Constant (J x 1000)	0.0125 in^4
Warping Constant (Cw)	0.0228 in^6
Radii of Gyration (Ro)	1.5012 in^6
Torsional Flexural Constant (Beta)	0.8982

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

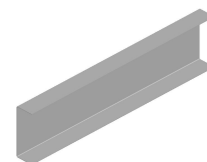• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**400AT125-15 (50 ksi) AlphaTRACK 25EQ (G40)**		
Physical Properties			

Web Height =	4.0976 in	Steel Thickness =	0.0188 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.7865 in
Moment of Inertia for Deflection (Ixx)	0.2084 in^4
Section Modulus (Sxx)	0.0564 in^3
Allowable Bending Moment (Ma)	140.60 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.0488 in
Moment of Inertia (Ixxg)	0.2878 in^4
Section modules (Sxxg)	0.1405 in^3
Cross Sectional Area (Ag)	0.1203 in^2
Radius of Gyration (Rxg)	1.5465 in

Section Properties, Weak Axis

Gross Neutral Axis (Xcg) From Web Face	0.2310 in
Gross Moment of Inertia (Iyy)	0.0152 in^4
Radius of Gyration (Ry)	0.3559 in

Other Section Property Data

Member Weight per Foot of Length	0.4094 lb/ft
Allowable Shear Force In Web (Unpunched)	150.10 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.6005 in
St. Venant torsion Constant (J x 1000)	0.0142 in^4
Warping Constant (Cw)	0.0460 in^6
Radii of Gyration (Ro)	1.6968 in^6
Torsional Flexural Constant (Beta)	0.8747

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)
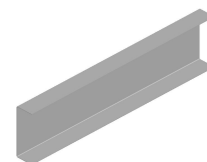• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**400AT200-15 (50 ksi) AlphaTRACK 25EQ (G40)**

Physical Properties

Web Height =	4.1220 in	Steel Thickness =	0.0188 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.7189 in
Moment of Inertia for Deflection (Ixx)	0.2275 in^4
Section Modulus (Sxx)	0.0545 in^3
Allowable Bending Moment (Ma)	136.64 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	2.0610 in
Moment of Inertia (Ixxg)	0.4136 in^4
Section modules (Sxxg)	0.1254 in^3
Cross Sectional Area (Ag)	0.1511 in^2
Radius of Gyration (Rxg)	1.6502 in

Section Properties, Weak Axis

Gross Moment of Inertia (Iyy)	0.0063 in^4
Radius of Gyration (Ry)	0.6415 in

Other Section Property Data

Member Weight per Foot of Length	0.5162 lb/ft
Allowable Shear Force In Web (Unpunched)	151.04 lb

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-1.2380 in
St. Venant torsion Constant (J x 1000)	0.0183 in^4
Warping Constant (Cw)	0.0181 in^6
Radii of Gyration (Ro)	2.161 in^6
Torsional Flexural Constant (Beta)	0.6720

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

* Web-height to thickness ratio exceeds 200

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**600AT125-15 (50 ksi) AlphaTRACK 25EQ (G40)**

Physical Properties

Web Height =	6.0976 in	Steel Thickness =	0.0188 in
Top Flange =	1.2500 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	1.2500 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	3.5718 in
Moment of Inertia for Deflection (Ixx)	0.4682 in^4
Section Modulus (Sxx)	0.0821 in^3
Allowable Bending Moment (Ma)	204.53 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	3.0488 in
Moment of Inertia (Ixxg)	0.7775 in^4
Section modules (Sxxg)	0.1909 in^3
Cross Sectional Area (Ag)	0.1602 in^2
Radius of Gyration (Rxg)	2.1920 in

Section Properties, Weak Axis

Gross Moment of Inertia (Iyy)	0.0190 in^4
Radius of Gyration (Ry)	0.3412 in

Other Section Property Data

Member Weight per Foot of Length	0.5481 lb/ft
Allowable Shear Force In Web (Unpunched)	119.72 lb

Torsional Properties

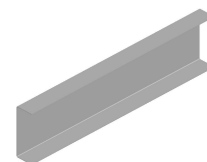|	
Dist. from Shear Center to Neutral Axis (Xo)	-0.5320 in
St. Venant torsion Constant (J x 1000)	0.0194 in^4
Warping Constant (Cw)	0.1300 in^6
Radii of Gyration (Ro)	2.2820 in^6
Torsional Flexural Constant (Beta)	0.9470

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

* Web-height to thickness ratio exceeds 260

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)
• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**600AT200-15 (50 ksi) AlphaTRACK 25EQ (G40)**		
Physical Properties			

Web Height =	6.0976 in	Steel Thickness =	0.0188 in
Top Flange =	2.0000 in	Inside Corner Radius =	0.0600 in
Bottom Flange =	2.0000 in	Yield Stress, Fy =	50.0000 ksi
Fy With Cold-Work, Fya =	50.0000 ksi		

Effective Section Properties, Strong Axis

Neutral Axis from Top Fiber (Ycg)	3.4826 in
Moment of Inertia for Deflection (Ixx)	0.5312 in^4
Section Modulus (Sxx)	0.0837 in^3
Allowable Bending Moment (Ma)	208.47 ft-lb

Gross Section Properties of Full Section, Strong Axis

Neutral Axis from Top Fiber (Ycg)	3.0488 in
Moment of Inertia (Ixxg)	0.4381 in^4
Section modules (Sxxg)	0.1719 in^3
Cross Sectional Area (Ag)	0.1889 in^2
Radius of Gyration (Rxg)	2.3385 in

Section Properties, Weak Axis

Gross Moment of Inertia (Iyy)	0.0070 in^4
Radius of Gyration (Ry)	0.6070 in

Other Section Property Data

Member Weight per Foot of Length	0.6438 lb/ft
Allowable Shear Force In Web (Unpunched)	119.72 lb

Torsional Properties

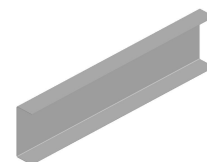|	
Dist. from Shear Center to Neutral Axis (Xo)	-1.0570 in
St. Venant torsion Constant (J x 1000)	0.0229 in^4
Warping Constant (Cw)	0.0461 in^6
Radii of Gyration (Ro)	2.6366 in^6
Torsional Flexural Constant (Beta)	0.8400

Location (1) and (6) are tip of compression and tension lip respectively

Location (2) and (5) are flange/lip corner of compression and tension side respectively

Location (3) and (4) are flange/web corner of compression and tension side respectively

* Web-height to thickness ratio exceeds 260

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**162AS137-30 (33 ksi) AlphaSTUD 20EQ (G40)**		
Physical Properties			
Web Height =	1.625 in	Steel Thickness* =	0.0312 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 33	Yield Stress, Fy =	33 ksi
Punchout Width =	0.75 in	Punchout Length =	1.5 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	0.066 in^4
Section Modulus (Sxx)	0.062 in^3
Allowable Bending Moment (Ma)	1.23 in-k

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	0.067 in^4
Section modules (Sxxg)	0.083 in^3
Cross Sectional Area (Ag)	0.141 in^2
Radius of Gyration (Rxg)	0.690 in
Gross Moment of Inertia (Iyy)	0.034 in^4
Radius of Gyration (Ry)	0.488 in

Other Section Properties

Member Weight per Foot of Length	0.48 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-1.134 in
St. Venant torsion Constant (J x 1000)	0.046 in^4
Warping Constant (Cw)	0.018 in^6
Radii of Gyration (Ro)	1.414 in^6
Torsional Flexural Constant (Beta)	0.357

* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

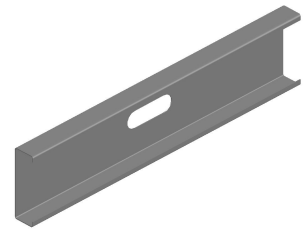• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**250AS137-30 (33 ksi) AlphaSTUD 20EQ (G40)**		
Physical Properties			
Web Height =	2.50 in	Steel Thickness* =	0.0312 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 33	Yield Stress, Fy =	33 ksi
Punchout Width =	0.75 in	Punchout Length =	1.5 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	0.173 in^4
Section Modulus (Sxx)	0.113 in^3
Allowable Bending Moment (Ma)	2.16 in-k

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	0.176 in^4
Section modules (Sxxg)	0.141 in^3
Cross Sectional Area (Ag)	0.169 in^2
Radius of Gyration (Rxg)	1.023 in
Gross Moment of Inertia (Iyy)	0.039 in^4
Radius of Gyration (Ry)	0.481 in

Other Section Properties

Member Weight per Foot of Length	0.57 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-1.002 in
St. Venant torsion Constant (J x 1000)	0.055 in^4
Warping Constant (Cw)	0.047 in^6
Radii of Gyration (Ro)	1.511 in^6
Torsional Flexural Constant (Beta)	0.560

* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)
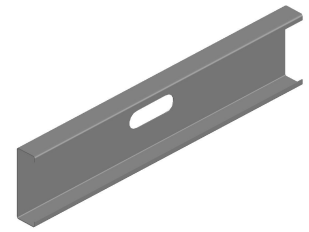• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation :	**362AS137-30 (33 ksi) AlphaSTUD 20EQ (G40)**		
Physical Properties			
Web Height =	3.625 in	Steel Thickness* =	0.0312 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 33	Yield Stress, Fy =	33 ksi
Punchout Width =	1.5 in	Punchout Length =	4.0 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	0.406 in^4
Section Modulus (Sxx)	0.157 in^3
Allowable Bending Moment (Ma)	3.11 in-k

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	0.413 in^4
Section modules (Sxxg)	0.228 in^3
Cross Sectional Area (Ag)	0.204 in^2
Radius of Gyration (Rxg)	1.424 in
Gross Moment of Inertia (Iyy)	0.044 in^4
Radius of Gyration (Ry)	0.464 in

Other Section Properties

Member Weight per Foot of Length	0.69 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.877 in
St. Venant torsion Constant (J x 1000)	0.066 in^4
Warping Constant (Cw)	0.108 in^6
Radii of Gyration (Ro)	1.736 in^6
Torsional Flexural Constant (Beta)	0.7450

* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)
• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING

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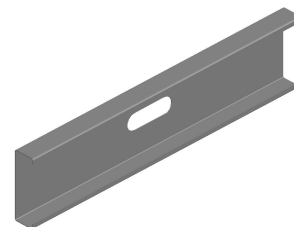
PRODUCT SUBMITTAL DATA

Section Designation :   **400AS137-30 (33 ksi) AlphaSTUD 20EQ (G40)**

Physical Properties

Web Height =	4.00 in	Steel Thickness* =	0.0312 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 33	Yield Stress, Fy =	33 ksi
Punchout Width =	1.5 in	Punchout Length =	4.0 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	0.511 in^4
Section Modulus (Sxx)	0.175 in^3
Allowable Bending Moment (Ma)	3.46 in-k

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	0.520 in^4
Section modules (Sxxg)	0.260 in^3
Cross Sectional Area (Ag)	0.215 in^2
Radius of Gyration (Rxg)	1.553 in
Gross Moment of Inertia (Iyy)	0.045 in^4
Radius of Gyration (Ry)	0.458 in

Other Section Properties

Member Weight per Foot of Length	0.73 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.843 in
St. Venant torsion Constant (J x 1000)	0.070 in^4
Warping Constant (Cw)	0.136 in^6
Radii of Gyration (Ro)	1.826 in^6
Torsional Flexural Constant (Beta)	0.787

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* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

** Web-height to thickness ratio exceeds 200

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

RESCUE METAL FRAMING
1601 Australian Avenue, Riviera Beach, FL 33404, USA

PRODUCT SUBMITTAL DATA

Section Designation : **600AS137-30 (33 ksi) AlphaSTUD 20EQ (G40)**

Physical Properties

Web Height =	6.00 in	Steel Thickness* =	0.0312 in
Flange Width =	1.375 in	Inside Corner Radius =	0.040 in
Steel Grade =	ASTM A1003 NS 33	Yield Stress, Fy =	80 ksi
Punchout Width =	1.5 in	Punchout Length =	4.0 in

Effective Section Properties, Strong Axis

Moment of Inertia for Deflection (Ixx)	1.298 in^4
Section Modulus (Sxx)	0.317 in^3
Allowable Bending Moment (Ma)	5.56 in-k

Gross Section Properties of Full Section, Strong Axis

Moment of Inertia (Ixxg)	1.363 in^4
Section modules (Sxxg)	0.454 in^3
Cross Sectional Area (Ag)	0.278 in^2
Radius of Gyration (Rxg)	2.215 in
Gross Moment of Inertia (Iyy)	0.050 in^4
Radius of Gyration (Ry)	0.425 in

Other Section Properties

Member Weight per Foot of Length	0.95 lb/ft

Torsional Properties

Dist. from Shear Center to Neutral Axis (Xo)	-0.701 in
St. Venant torsion Constant (J x 1000)	0.090 in^4
Warping Constant (Cw)	0.347 in^6
Radii of Gyration (Ro)	2.362 in^6
Torsional Flexural Constant (Beta)	0.9120

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* Minimum delivered thickness shall be 95% of design steel thickness per AISI S220 Section A6.1

** Web-height to thickness ratio exceeds 260

• Properties based upon the AISI S100-16 - North American Specification for the Design of CFS Structural Members incl. Supplement 1 (S100-16/S1-18)

• Effective properties include the strength increase from cold forming

Limiting Heights for Studs Braced @ 48"o.c.

AlphaSTUD™	Fy (ksi)	Spacing (in) oc	5 psf			7.5 psf			10 psf		
			L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
162AS137-15	50	12	8' 8"	7' 7"	6' 7"	7' 1"	6' 7"	5' 9"	6' 2"	6' 0"	5' 3"
162AS137-15	50	16	7' 6"	6' 11"	6' 0"	6' 2"	6' 0"	5' 3"	5' 4"	5' 4"	4' 9"
162AS137-15	50	24	6' 2"	6' 0"	5' 3"	5' 0"	5' 0"	4' 7"	4' 4"	4' 4"	4' 2"
162AS137-20	57	12	10' 9"	8' 7"	7' 6"	9' 4"	7' 6"	6' 7"	8' 5"	6' 10"	5' 11"
162AS137-20	57	16	9' 9"	7' 10"	6' 10"	8' 5"	6' 10"	5' 11"	7' 3"	6' 2"	5' 5"
162AS137-20	57	24	8' 5"	6' 10"	5' 11"	6' 10"	5' 11"	5' 2"	5' 11"	5' 5"	4' 9"
162AS137-30	33	12	12' 0"	9' 7"	8' 5"	9' 11"	8' 4"	7' 4"	8' 7"	7' 7"	6' 8"
162AS137-30	33	16	10' 7"	8' 9"	7' 7"	8' 7"	7' 7"	6' 8"	7' 6"	6' 11"	6' 1"
162AS137-30	33	24	8' 7"	7' 7"	6' 8"	7' 0"	6' 7"	5' 10"	6' 1"	6' 0"	5' 3"
250AS137-15	50	12	11' 9"	10' 6"	9' 2"	9' 7"	9' 2"	8' 0"	8' 4"	8' 4"	7' 3"
250AS137-15	50	16	10' 2"	9' 6"	8' 4"	8' 4"	8' 4"	7' 3"	7' 2"	7' 2"	6' 7"
250AS137-15	50	24	8' 4"	8' 4"	7' 3"	6' 9"	6' 9"	6' 4"	5' 10"	5' 10"	5' 9"
250AS137-20	57	12	14' 9"	11' 10"	10' 4"	12' 10"	10' 4"	9' 0"	11' 6"	9' 5"	8' 2"
250AS137-20	57	16	13' 4"	10' 9"	9' 5"	11' 6"	9' 5"	8' 2"	9' 11"	8' 6"	7' 5"
250AS137-20	57	24	11' 6"	9' 5"	8' 2"	9' 4"	8' 2"	7' 2"	8' 1"	7' 5"	6' 6"
250AS137-30	33	12	16' 4"	13' 3"	11' 7"	13' 4"	11' 6"	10' 1"	11' 7"	10' 5"	9' 2"
250AS137-30	33	16	14' 2"	12' 0"	10' 6"	11' 7"	10' 5"	9' 2"	10' 0"	9' 6"	8' 4"
250AS137-30	33	24	11' 7"	10' 5"	9' 2"	9' 5"	9' 1"	8' 0"	8' 2"	8' 2"	7' 3"
362AS137-15	50	12	13' 4" e	13' 4" e	11' 10" e	10' 11" e	10' 11" e	10' 4" e	9' 5" e	9' 5" e	9' 4" e
362AS137-15	50	16	11' 6" e	11' 6" e	10' 9" e	9' 5" e	9' 5" e	9' 4" e	8' 2" e	8' 2" e	8' 2" e
362AS137-15	50	24	9' 5" e	9' 5" e	9' 4" e	7' 8" e	7' 8" e	7' 8" e	6' 8" e	6' 8" e	6' 8" e
362AS137-20	57	12	18' 2"	15' 8"	13' 9"	14' 10"	13' 9"	12' 0"	12' 10"	12' 5"	10' 11"
362AS137-20	57	16	15' 9"	14' 3"	12' 6"	12' 10"	12' 5"	10' 11"	11' 2"	11' 2"	9' 11"
362AS137-20	57	24	12' 10"	12' 5"	10' 11"	10' 6"	10' 6"	9' 6"	9' 1"	9' 1"	8' 8"
362AS137-30	33	12	19' 4"	17' 6"	15' 4"	15' 10"	15' 3"	13' 5"	13' 8"	13' 8"	12' 2"
362AS137-30	33	16	16' 9"	15' 11"	13' 11"	13' 8"	13' 8"	12' 2"	11' 10"	11' 10"	11' 0"
362AS137-30	33	24	13' 8"	13' 8"	12' 2"	11' 2"	11' 2"	10' 7"	9' 8"	9' 8"	9' 7"
400AS137-15	50	12	13' 7" e	13' 7" e	12' 6" e	11' 1" e	11' 1" e	10' 11" e	9' 7" e	9' 7" e	9' 7" e
400AS137-15	50	16	11' 9" e	11' 9" e	11' 4" e	9' 7" e	9' 7" e	9' 7" e	8' 4" e	8' 4" e	8' 4" e
400AS137-15	50	24	9' 7" e	9' 7" e	9' 7" e	7' 10" e	7' 10" e	7' 10" e	6' 9" e	6' 9" e	6' 9" e
400AS137-20	57	12	19' 1"	16' 11"	14' 10"	15' 7"	14' 10"	12' 11"	13' 6"	13' 5"	11' 9"
400AS137-20	57	16	16' 7"	15' 5"	13' 5"	13' 6"	13' 5"	11' 9"	11' 9"	11' 9"	10' 8"
400AS137-20	57	24	13' 6"	13' 5"	11' 9"	11' 0"	11' 0"	10' 3"	9' 7"	9' 7"	9' 4"
400AS137-30	33	12	20' 5"	18' 11"	16' 7"	16' 8"	16' 6"	14' 6"	14' 5"	14' 5"	13' 1"
400AS137-30	33	16	17' 8"	17' 2"	15' 1"	14' 5"	14' 5"	13' 1"	12' 6"	12' 6"	11' 11"
400AS137-30	33	24	14' 5"	14' 5"	13' 1"	11' 9"	11' 9"	11' 5"	10' 3"	10' 3"	10' 3"
600AS137-30	33	12	27' 3"	25' 11"	22' 10"	22' 3"	22' 3"	19' 10"	19' 3"	19' 3"	18' 0"
600AS137-30	33	16	23' 7"	23' 6"	20' 8"	19' 3"	19' 3"	18' 0"	16' 8"	16' 8"	16' 3"
600AS137-30	33	24	19' 3"	19' 3"	18' 0"	15' 9"	15' 9"	15' 8"	13' 7" e	13' 7" e	13' 7" e

Values are based on AISI Standard, North American Specification for the Design of Cold-Formed Steel Structural Members, 2012 edition (AISI S100-2012). All calculations are based on allowable strength design (ASD).

Table Notes:
1. Lateral loads have not been modified for strength or deflection checks.
2. Flexural strength taken as the minimum of local buckling and distortional buckling allowable moments.
3. For distortional buckling allowable moment, $k_\phi = 0$.
4. Limiting non-composite heights noted as "BRACED AT 48" o.c." based on properly attached bridging or blocking at a maximum 48" oc
5. Moment of inertia for deflection is calculated at the maximum service level stress for the height listed. Note that this value may be higher than the effective Ixx listed in section property tables.
6. Limiting non-composite heights are based on steel properties only.
7. Web crippling check based on 1 inch end bearing. Where listed limiting heights are followed by "e", web stiffeners are required.

RESCUE METAL FRAMING

AlphaSTUD™   AlphaTRACK™
Physical Section Properties

AlphaSTUD™

Section	Nominal	Base Metal Min. Thickness (in)	Design Thickness (in)	Min. Yield Strength (ksi)	Gross Properties[5] Area (in²)	Weight (lb/ft)	I_{xx} (in⁴)	S_{xx} (in³)	R_x (in)	I_{yy} (in⁴)	R_y (in)	Effective Properties[3] I_{xx}[4] (in⁴)	S_{xx} (in³)	M_{a-L} (in-k)	M_{a-D}[6] (in-k)	V_{ag} (lb)	V_{aNet} (lb)	Torsional Properties Jx1000 (in⁴)	C_w (in⁶)	Xo (in)	m (in)	Ro (in)	b	L_u (in)
162AS137-15[7]	1-5/8" x 25 Ga.	0.0150	0.0158	50	0.076	0.26	0.037	0.045	0.692	0.020	0.517	0.033	0.027	0.67	0.70	232	104	0.006	0.014	-1.249	0.714	1.519	0.323	27.5
162AS137-20	1-5/8" x 20 Ga.	0.0200	0.0211	57	0.101	0.34	0.048	0.059	0.689	0.027	0.515	0.044	0.037	1.27	1.36	500	165	0.015	0.018	-1.243	0.710	1.511	0.324	26.2
162AS137-30	1-5/8" x 30 Mil	0.0296	0.0312	33	0.141	0.48	0.067	0.083	0.690	0.034	0.488	0.066	0.062	1.23	1.36	572	124	0.046	0.018	-1.134	0.647	1.414	0.357	31.5
250AS137-15[7]	2-1/2" x 25 Ga.	0.0150	0.0158	50	0.090	0.31	0.096	0.076	1.030	0.024	0.514	0.088	0.046	1.15	1.11	147	141	0.008	0.032	-1.109	0.656	1.598	0.518	31.5
250AS137-20	2-1/2" x 20 Ga.	0.0200	0.0211	57	0.120	0.41	0.126	0.101	1.027	0.031	0.511	0.115	0.071	2.41	2.13	352	251	0.018	0.042	-1.103	0.653	1.591	0.520	25.7
250AS137-30	2-1/2" x 30 Mil	0.0296	0.0312	33	0.169	0.57	0.176	0.141	1.023	0.039	0.481	0.173	0.113	2.24	2.16	832	397	0.055	0.047	-1.002	0.595	1.511	0.560	31.3
362AS137-15[1,7]	3-5/8" x 25 Ga.	0.0150	0.0158	50	0.108	0.37	0.223	0.123	1.437	0.027	0.499	0.188	0.064	1.60	1.62	100	100	0.009	0.070	-0.975	0.597	1.807	0.709	26.4
362AS137-20	3-5/8" x 20 Ga.	0.0200	0.0211	57	0.144	0.49	0.295	0.163	1.435	0.035	0.496	0.283	0.088	3.02	3.14	239	210	0.021	0.092	-0.969	0.593	1.801	0.710	25.4
362AS137-30	3-5/8" x 30 Mil	0.0296	0.0312	33	0.204	0.69	0.413	0.228	1.424	0.044	0.464	0.406	0.157	3.11	3.26	776	457	0.066	0.108	-0.877	0.540	1.736	0.745	31.2
400AS137-15[1,7]	4" x 25 Ga.	0.0150	0.0158	50	0.114	0.39	0.280	0.140	1.568	0.028	0.493	0.223	0.066	1.66	1.79	90	90	0.009	0.087	-0.938	0.579	1.893	0.754	26.3
400AS137-20	4" x 20 Ga.	0.0200	0.0211	57	0.151	0.52	0.371	0.186	1.566	0.036	0.490	0.358	0.098	3.34	3.48	216	216	0.022	0.115	-0.932	0.576	1.887	0.756	25.3
400AS137-30	4" x 30 Mil	0.0296	0.0312	33	0.215	0.73	0.520	0.260	1.553	0.045	0.458	0.511	0.175	3.46	3.63	701	490	0.070	0.136	-0.843	0.524	1.826	0.787	31.1
600AS137-15[1,7]	6" x 25 Ga.	0.0150	0.0158	50	0.145	0.49	0.730	0.243	2.240	0.031	0.460	-	-	-	-	-	-	0.012	0.217	-0.784	0.503	2.418	0.895	-
600AS137-20[1]	6" x 20 Ga.	0.0200	0.0211	57	0.194	0.66	0.969	0.323	2.237	0.041	0.458	-	-	-	-	-	-	0.029	0.285	-0.779	0.500	2.412	0.896	-
600AS137-30	6" x 30 Mil	0.0296	0.0312	33	0.278	0.95	1.363	0.454	2.215	0.050	0.425	1.298	0.317	6.26	5.56	461	461	0.090	0.347	-0.701	0.453	2.362	0.912	30.4

AlphaTRACK™

Section	Nominal	Base Metal Min. Thickness (in)	Design Thickness (in)	Min. Yield Strength (ksi)	Gross Properties[5] Area (in²)	Weight (lb/ft)	I_{xx} (in⁴)	S_{xx} (in³)	R_x (in)	I_{yy} (in⁴)	R_y (in)	Effective Properties at Yield Stress[3] I_{xx}[4] (in⁴)	S_{xx} (in³)	M_a (in-k)	V_a (lb)	Torsional Properties J (in⁴)	C_w (in⁶)	Xo (in)	m (in)	Ro (in)	b
162AT125-15	1-5/8" x 25 Ga.	0.0150	0.0158	50	0.065	0.22	0.034	0.039	0.717	0.011	0.412	-	-	-	-	0.005	0.006	-0.881	0.507	1.208	0.468
162AT125-20	1-5/8" x 20 Ga.	0.0200	0.0211	57	0.087	0.30	0.045	0.053	0.719	0.015	0.411	0.030	0.025	0.86	500	0.013	0.007	-0.878	0.505	1.207	0.471
162AT125-30	1-5/8" x 30 Mil	0.0296	0.0312	33	0.128	0.44	0.067	0.078	0.722	0.022	0.409	0.054	0.048	0.95	612	0.042	0.011	-0.872	0.502	1.204	0.475
250AT125-15	2-1/2" x 25 Ga.	0.0150	0.0158	50	0.079	0.27	0.085	0.066	1.037	0.013	0.400	-	-	-	-	0.007	0.015	-0.771	0.462	1.353	0.675
250AT125-20	2-1/2" x 20 Ga.	0.0200	0.0211	57	0.105	0.36	0.114	0.088	1.039	0.017	0.399	0.082	0.040	1.35	340	0.016	0.019	-0.769	0.461	1.353	0.677
250AT125-30	2-1/2" x 30 Mil	0.0296	0.0312	33	0.156	0.53	0.169	0.130	1.042	0.025	0.397	0.140	0.087	1.71	832	0.051	0.029	-0.763	0.458	1.351	0.681
362AT125-15[1]	3-5/8" x 25 Ga.	0.0150	0.0158	50	0.097	0.33	0.196	0.106	1.425	0.014	0.381	-	-	-	-	0.008	0.034	-0.668	0.416	1.619	0.830
362AT125-20	3-5/8" x 20 Ga.	0.0200	0.0211	57	0.129	0.44	0.263	0.142	1.426	0.019	0.380	0.199	0.058	1.97	233	0.019	0.045	-0.665	0.414	1.619	0.831
362AT125-30	3-5/8" x 30 Mil	0.0296	0.0312	33	0.191	0.65	0.389	0.209	1.428	0.027	0.378	0.330	0.149	2.94	754	0.062	0.067	-0.661	0.412	1.618	0.833
400AT125-15[1]	4" x 25 Ga.	0.0150	0.0158	50	0.103	0.35	0.247	0.121	1.550	0.014	0.374	-	-	-	-	0.009	0.043	-0.640	0.402	1.718	0.861
400AT125-20	4" x 20 Ga.	0.0200	0.0211	57	0.137	0.47	0.330	0.161	1.551	0.019	0.373	0.242	0.064	2.17	211	0.020	0.057	-0.637	0.401	1.718	0.862
400AT125-30	4" x 30 Mil	0.0296	0.0312	33	0.203	0.69	0.488	0.238	1.553	0.028	0.372	0.417	0.172	3.41	683	0.066	0.084	-0.633	0.398	1.718	0.864
600AT125-15[1]	6" x 25 Ga.	0.0150	0.0158	50	0.134	0.46	0.646	0.213	2.194	0.016	0.343	-	-	-	-	0.011	0.108	-0.524	0.343	2.281	0.947
600AT125-20[1]	6" x 20 Ga.	0.0200	0.0211	57	0.179	0.61	0.863	0.284	2.195	0.021	0.342	-	-	-	-	0.027	0.144	-0.522	0.341	2.282	0.948
600AT125-30	6" x 30 Mil	0.0296	0.0312	33	0.265	0.90	1.278	0.419	2.196	0.031	0.340	1.074	0.240	4.74	-	0.086	0.212	-0.519	0.339	2.282	0.948

Values are based on AISI Standard, North American Specification for the Design of Cold-Formed Steel Structural Members, 2012 edition (AISI S100-2012). All calculations are based on allowable strength design (ASD).

Where Effective Properties are listed as "-", flange width-to-thickness exceeds 60 or web height-to-thickness exceeds 260, tested values available upon request

The data contain herein is intended as a general guide only and all designs should be completed by a design professional with cold-formed steel design expertise.

Table Notes:
1. Where section designations include a superscript '1', web height-to-thickness exceeds 200. Web stiffeners are required at all supports and concentrated loads.
2. Effective Properties include the effects of cold-forming as applicable in Section A7.2 of AISI S100-12
3. Effective X-X Axis properties of stud sections based on punched sections. Track sections are considered unpunched
4. The effective moment of inertia for deflection is calculated at a stress which results in a section modulus such that the stress times the section modulus at that stress is equal to the allowable local buckling moment.
5. Tabulated gross properties are based on the full, unreduced section away from punchouts
6. Moment capacity for distortional buckling based on Kf = 0
7. Non-structural 15-mil effective properties are determined using the Direct Strength Method (AISI S100, Appendix 1)

Fully Braced Limiting Heights

AlphaSTUD™	Fy (ksi)	Spacing (in) oc	5 psf			7.5 psf			10 psf		
			L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
162AS137-15	50	12	9' 5"	7' 7"	6' 7"	7' 9"	6' 7"	5' 9"	6' 8"	6' 0"	5' 3"
162AS137-15	50	16	8' 2"	6' 11"	6' 0"	6' 8"	6' 0"	5' 3"	5' 9"	5' 6"	4' 9"
162AS137-15	50	24	6' 8"	6' 0"	5' 3"	5' 5"	5' 3"	4' 7"	4' 9"	4' 9"	4' 2"
162AS137-20	57	12	10' 9"	8' 7"	7' 6"	9' 4"	7' 6"	6' 7"	8' 5"	6' 10"	5' 11"
162AS137-20	57	16	9' 9"	7' 10"	6' 10"	8' 5"	6' 10"	5' 11"	7' 8"	6' 2"	5' 5"
162AS137-20	57	24	8' 5"	6' 10"	5' 11"	7' 4"	5' 11"	5' 2"	6' 6"	5' 5"	4' 9"
162AS137-30	33	12	12' 0"	9' 7"	8' 5"	10' 5"	8' 4"	7' 4"	9' 0"	7' 7"	6' 8"
162AS137-30	33	16	10' 11"	8' 9"	7' 7"	9' 0"	7' 7"	6' 8"	7' 10"	6' 11"	6' 1"
162AS137-30	33	24	9' 0"	7' 7"	6' 8"	7' 5"	6' 7"	5' 10"	6' 5"	6' 0"	5' 3"
250AS137-15	50	12	12' 2"	10' 6"	9' 2"	9' 11"	9' 2"	8' 0"	8' 7"	8' 4"	7' 3"
250AS137-15	50	16	10' 6"	9' 6"	8' 4"	8' 7"	8' 4"	7' 3"	7' 5"	7' 5"	6' 7"
250AS137-15	50	24	8' 7"	8' 4"	7' 3"	7' 0"	7' 0"	6' 4"	6' 1"	6' 1"	5' 9"
250AS137-20	57	12	14' 9"	11' 10"	10' 4"	12' 10"	10' 4"	9' 0"	11' 7"	9' 5"	8' 2"
250AS137-20	57	16	13' 4"	10' 9"	9' 5"	11' 7"	9' 5"	8' 2"	10' 4"	8' 6"	7' 5"
250AS137-20	57	24	11' 7"	9' 5"	8' 2"	9' 9"	8' 2"	7' 2"	8' 5"	7' 5"	6' 6"
250AS137-30	33	12	16' 7"	13' 3"	11' 7"	13' 10"	11' 6"	10' 1"	12' 0"	10' 5"	9' 2"
250AS137-30	33	16	14' 9"	12' 0"	10' 6"	12' 0"	10' 5"	9' 2"	10' 5"	9' 6"	8' 4"
250AS137-30	33	24	12' 0"	10' 5"	9' 2"	9' 10"	9' 1"	8' 0"	8' 6"	8' 3"	7' 3"
362AS137-15	50	12	14' 8" e	13' 6" e	11' 10" e	11' 11" e	11' 10" e	10' 4" e	10' 4" e	10' 4" e	9' 4" e
362AS137-15	50	16	12' 8" e	12' 3" e	10' 9" e	10' 4" e	10' 4" e	9' 4" e	8' 11" e	8' 11" e	8' 6" e
362AS137-15	50	24	10' 4" e	10' 4" e	9' 4" e	8' 5" e	8' 5" e	8' 2" e	7' 4" e	7' 4" e	7' 4" e
362AS137-20	57	12	19' 7"	15' 8"	13' 9"	16' 5"	13' 9"	12' 0"	14' 2"	12' 5"	10' 11"
362AS137-20	57	16	17' 4"	14' 3"	12' 6"	14' 2"	12' 5"	10' 11"	12' 3"	11' 3"	9' 11"
362AS137-20	57	24	14' 2"	12' 5"	10' 11"	11' 7"	10' 10"	9' 6"	10' 0"	9' 9"	8' 8"
362AS137-30	33	12	20' 4"	17' 6"	15' 4"	16' 7"	15' 3"	13' 5"	14' 5"	13' 10"	12' 2"
362AS137-30	33	16	17' 8"	15' 11"	13' 11"	14' 5"	13' 10"	12' 2"	12' 6"	12' 6"	11' 0"
362AS137-30	33	24	14' 5"	13' 10"	12' 2"	11' 9"	11' 9"	10' 7"	10' 2"	10' 2"	9' 7"
400AS137-15	50	12	14' 11" e	14' 4" e	12' 6" e	12' 2" e	12' 2" e	10' 11" e	10' 6" e	10' 6" e	9' 11" e
400AS137-15	50	16	12' 11" e	12' 11" e	11' 4" e	10' 6" e	10' 6" e	9' 11" e	9' 1" e	9' 1" e	9' 0" e
400AS137-15	50	24	10' 6" e	10' 6" e	9' 11" e	8' 7" e	8' 7" e	8' 7" e	7' 5" e	7' 5" e	7' 5" e
400AS137-20	57	12	21' 1"	16' 11"	14' 10"	17' 3"	14' 10"	12' 11"	14' 11"	13' 5"	11' 9"
400AS137-20	57	16	18' 3"	15' 5"	13' 5"	14' 11"	13' 5"	11' 9"	12' 11"	12' 2"	10' 8"
400AS137-20	57	24	14' 11"	13' 5"	11' 9"	12' 2"	11' 8"	10' 3"	10' 7"	10' 7"	9' 4"
400AS137-30	33	12	21' 6"	18' 11"	16' 7"	17' 7"	16' 6"	14' 6"	15' 2"	15' 0"	13' 1"
400AS137-30	33	16	18' 7"	17' 2"	15' 1"	15' 2"	15' 0"	13' 1"	13' 2"	13' 2"	11' 11"
400AS137-30	33	24	15' 2"	15' 0"	13' 1"	12' 5"	12' 5"	11' 5"	10' 9"	10' 9"	10' 5"
600AS137-30	33	12	27' 3"	25' 11"	22' 10"	22' 3"	22' 3"	19' 10"	19' 3"	19' 3"	18' 0"
600AS137-30	33	16	23' 7"	23' 6"	20' 8"	19' 3"	19' 3"	18' 0"	16' 8"	16' 8"	16' 3"
600AS137-30	33	24	19' 3"	19' 3"	18' 0"	15' 9"	15' 9"	15' 8"	13' 7" e	13' 7" e	13' 7" e

Values are based on AISI Standard, North American Specification for the Design of Cold-Formed Steel Structural Members, 2012 edition (AISI S100-2012). All calculations are based on allowable strength design (ASD).

Table Notes:
1. Lateral loads have not been modified for strength or deflection checks.
2. Flexural strength taken as the minimum of local buckling and distortional buckling allowable moments.
3. For distortional buckling allowable moment, $k_\phi = 0$.

Web Crippling Values

AlphaSTUD[TM]	Fy		Condition 1 Bearing Length (in)				Condition 2 Bearing Length (in)				Condition 3 Bearing Length (in)				Condition 4 Bearing Length (in)			
Design Thickness	(ksi)		1	3.5	4	6	1	3.5	4	6	1	3.5	4	6	1	3.5	4	6
162AS137-15	0.0158	50	67	111[1,2]	117[1,2]	139[1,2]	119	173[1,2]	182[1,2]	210[1,2]	48	69[1,2]	72[1,2]	83[1,2]	137	183[1,2]	190[1,2]	214[1,2]
162AS137-20	0.0211	57	133	214[1]	226[1]	269[1,2]	246	351[1]	366[1]	420[1,2]	105	147[1]	153[1]	174[1,2]	286	375[1]	388[1]	434[1,2]
162AS137-30	0.0312	33	159	251[1]	264[1]	312[1]	312	433[1]	451[1]	513[1]	141	190[1]	198[1]	223[1]	372	473[1]	488[1]	540[1]
250AS137-15	0.0158	50	63	104[2]	110[2]	131[1,2]	116	169[2]	177[2]	204[1,2]	37	53[2]	56[2]	64[1,2]	121	163[2]	169[2]	190[1,2]
250AS137-20	0.0211	57	126	203	215	255[1,2]	240	342	358	410[1,2]	87	121	126	144[1,2]	260	341	353	394[1,2]
250AS137-30	0.0312	33	152	240	253	299[1]	306	424	442	503[1]	123	166	172	194[1]	346	439	453	502[1]
362AS137-20	0.0211	57	119	191	202	240[2]	234	334	348	400[2]	67	94	98	112[2]	233	305	316	353[2]
362AS137-30	0.0312	33	145	229	242	285	300	416	433	492	104	140	146	164	318	404	417	462
400AS137-20	0.0211	57	116	188	199	236[2]	232	331	346	397[2]	62	86	90	102[2]	225	294	305	341[2]
400AS137-30	0.0312	33	143	226	238	281	298	413	430	489	98	133	138	156	310	394	407	450
600AS137-30	0.0312	33	134	211	223	263	290	401	418	475	72	97	101	114	272	346	357	395

Values are based on AISI Standard, North American Specification for the Design of Cold-Formed Steel Structural Members, 2012 edition (AISI S100-2012). All calculations are based on allowable strength design (ASD).

The data contain herein is intended as a general guide only and all designs should be completed by a design professional with cold-formed steel design expertise.

Table Notes:
1. Bearing length to web height ratio, N/h exceeds limit of 2.
2. Bearing length to thickness ratio, N/t exceeds limit of 210.
3. Listed allowable loads apply only to stud members with stiffened flanges.
4. Listed allowable loads are based on members 'fastened to supports'.
5. Listed allowable loads are for unpunched webs. Capacity reductions for end and interior one flange loading may be calculated per AISI S100 section C3.4.2

Condition 1

Condition 2

Region of Failure

≥ 1.5h   ≥ 1.5h

Region of Failure

h

≥ 1.5h   ≥ 1.5h

b

Condition 3

h

Condition 4

h