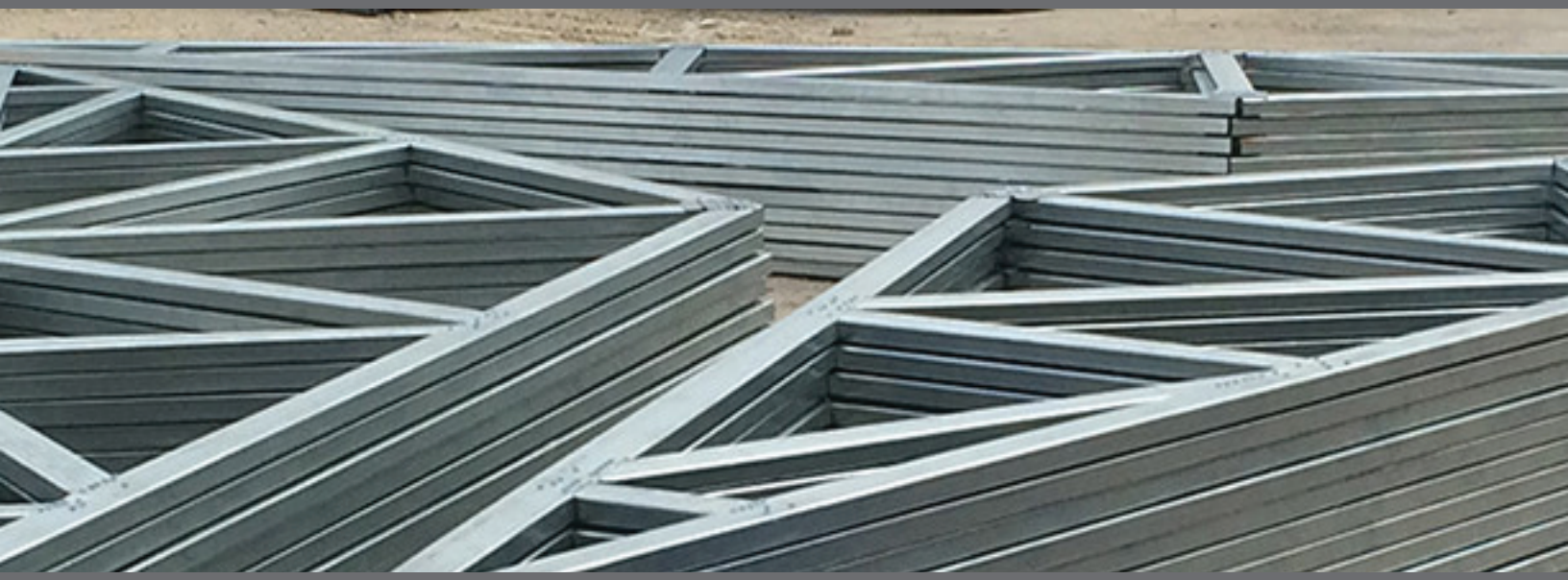
KEYTRUSS

Cold Formed Steel Truss Solution

A MANUAL FOR ARCHITECTS AND ENGINEERS



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INTERNATIONAL STEEL FRAMING
A Keymark Company

International Steel Framing (ISF) is a complete solution for every aspect of cold formed steel frame construction. From component design, to fabrication and assembly, ISF offers its customers an entire "buffet" of cold form steel products and services from which to choose.

But there is more to International Steel Framing (ISF) than great products and services. ISF is dedicated to being a true business partner, focused on developing long-term relationships and devoted to your company's success. International Steel Framing (ISF)will work closely with you to ensure that every solution we provide meets your company's unique requirements.

As a subsidiary of Keymark Enterprises, we have been providing tools and services to the construction industry for nearly four decades. Our highly skilled and experienced staff take pride in delivering industry leading products and services, on time and on budget. At International Steel Framing (ISF), we strive to earn your business every day!

BENEFITS OF STEEL TRUSSES

Steel is easy to work with. Products are roll formed into the exact shapes and sizes required. Detailed labeling of all pieces makes assembly fast and foolproof. Pre-punched holes make it easy to run wiring and plumbing. Steel frame construction time is shortened.

Steel is stable. Studs will not bow, twist, or bend. The sizing is accurate, the framing is exact, and steel does not expand or contract with moisture content. The results are straight walls, true 90-degree corners, and doors and windows that close without binding.

Steel lasts. Steel is impervious to rot, mold, mildew, and damage caused by insects, termites, and vermin.

Steel offers architectural flexibility. With the highest strength-to-weight ratio of any building product, steel has longer span capabilities, wider on-center-spacing possibilities, and reduced foundation requirements.

Steel is environmentally friendly. Steel framing is made from an average of 67% recycled material. And, since steel itself is 100% recyclable, steel construction aids in obtaining LEED certification for your projects. In addition, steel homes and buildings have significantly fewer toxins to irritate asthma and allergy sufferers.

Steel is fire and lightning resistant. Steel does not combust. A framework of steel allows lightning charges to safely dissipate into the ground, minimizing the danger of fire and personal injury.

Steel is cost effective. Construction cost is minimized by faster, easier installation; less material waste (2% for steel vs. 20% for lumber); and reduced delivery and foundation costs. After construction, steel keeps saving money with lower insurance rates and maintenance costs.

KEYTRUSS - STEEL TRUSS SOLUTION

ISF is an authorized manufacturer of KeyTruss – a revolutionary new, patent pending in-line Cee-truss design from Keymark Enterprises. KeyTruss can save your organization up to 30% on Cee-truss designs. Here's how:

KeyTruss Saves on Materials

- All KeyTruss pieces are manufactured cut to length, eliminating the waste associated with stock-inventory products.
- KeyTruss eliminates the need to purchase and maintain stock inventory, saving working capital and storage space.
- The smooth overlap areas between the webs and chords on KeyTruss provide plenty of space for screws, reducing the need for gusset plates.
- The stoutness of KeyTruss members reduces the need for continuous lateral bracing.

KeyTruss Saves on Assembly

- Member connection points and screw locations are clearly labeled and include pilot holes to speed assembly and reduce errors.
- Flanges are coped to make assembly easy.
- The need for fewer gusset plates and less bracing reduces expensive labor costs, both in the factory and in the field.
- Single-sided screw connections mean that trusses do not need to be ipped over during the assembly process, saving time and money.

KeyTruss Saves on Shipping

- Component bundles are sequenced to ensure stable stacks that greatly reduce the risk of damage during shipping.
- The single ply, in-line KeyTruss design cuts shipping volumes in half, compared to traditional back-to-back Cee trusses.

KeyTruss Saves on Installation

- Component bundles are dropped off at predefined points that maximize the efficiency of installation.
- Orientation markings guide and speed truss placement.

But the advantages of KeyTruss go well beyond savings. KeyTruss is engineered to bestrong:

- KeyTruss is oriented on the strong axis, making it stiffer and much stronger than trusses oriented on the weak axis.
- The engineered, coped chords of KeyTruss reinforce truss sections for extra strength. Rigorous testing of KeyTruss at the University of North Texas has proven that KeyTruss connections reinforce sections to the original strength of each member.
- KeyTrusses do not require web stiffeners at support locations.
- Truss-to-truss and truss-to-structure connections are enhanced as a result of the large connection areas that are standard with the KeyTruss design.


Tyvek
Tyvek

KEYMARK MONO TRUSS TESTS

UNT Master Service Agreement ST813

Task Order #3

Report No. 20150312-01

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Associate Professor

March 12, 2015

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Introduction

The project consists of 22 static tests on Keymark Mono trusses. The truss tests were conducted on December 8 to 12, 2014 the Structural Testing Lab at the University of North Texas. Coupon tests were also conducted to obtain the materials' mechanical properties. The objective of the project was to investigate the behavior and the strength of Keymark mono trusses with different truss configurations and connection details.

Research Personnel

Director of Testing - Cheng Yu
Research Assistants - Mohamad Yousof, Mahsa Mahdavian, Nathan Derrick

Truss Test Setup

The trusses were simply supported at both ends of the bottom chord. Hydraulic cylinders were used to apply loads to the top chord via load spreaders, an OSB board was fastened to the top chord to spread the load and provide rotational constraints to the chord member. Two load cells (some trusses used one cell) were used to measure the reaction force at each support. The vertical deflection of the center of the bottom chord was measured by a position transducer. The truss tests were carried out using the force control method. The point loads were continuously applied to the specimen until failure. Wood plates also were used to provide lateral supports to the bottom and top chord. Figure 1 shows the typical test setup.

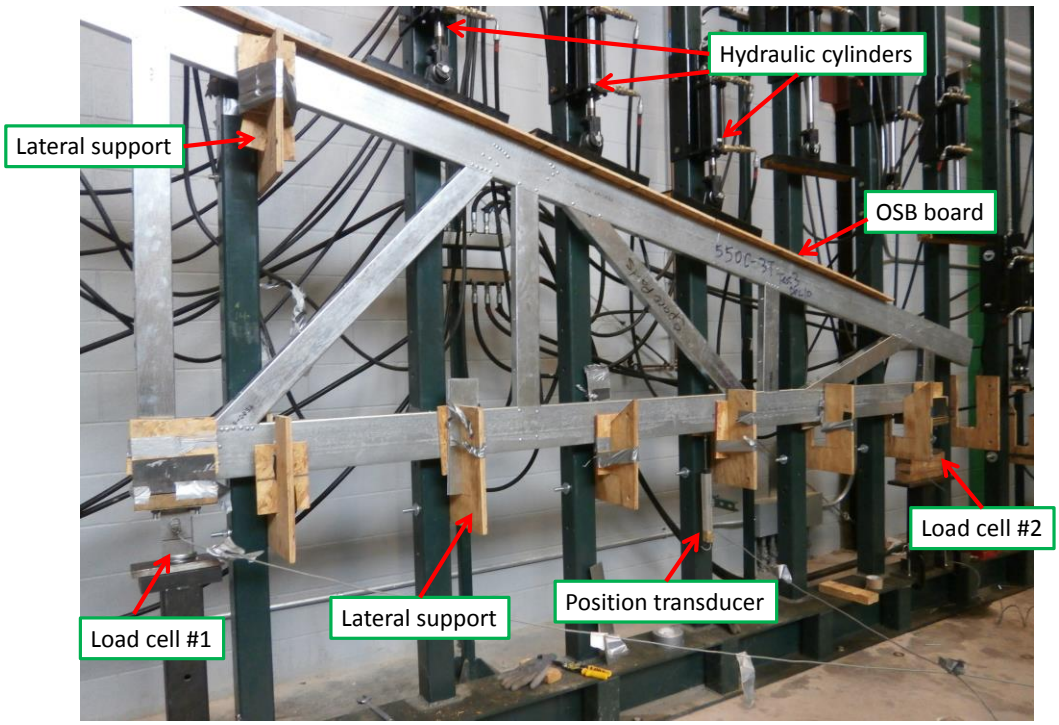


Figure 1: Truss Test Setup

Truss Test Results

The reaction forces at the supports are provided in Tables 1 through 7. The reported forces were the net applied forces not including the truss weight.

Table 1: Test Results of T-OH-SC Trusses

Truss Label	Reaction Force of Left Support (lbs) at 1st Failure	Reaction Force of Right Support (lbs) at 1st Failure
T-OH-SC Test 1	-	1100
T-OH-SC Test 2	-	1100
T-OH-SC Test 3	-	2789
T-OH-SC Test 4	-	2899

Table 2: Test Results of T-OH-BC-New Trusses

Truss Label	Reaction Force of Left Support (lbs) at 1st Failure	Reaction Force of Right Support (lbs) at 1st Failure
T-OH-BC-New Test 1	-	500
T-OH-BC-New Test 2	-	1650
T-OH-BC-New Test 3	1100	154
T-OH-BC-New Test 4	1100	104

Table 3: Test Results of 550C-3T Trusses

Truss Label	Reaction Force of Left Support (lbs) at 1st Failure	Reaction Force of Right Support (lbs) at 1st Failure
550C-3T Test 1	7918	-
550C-3T Test 2	8246	3699
550C-3T Test 3	8433	4009

Table 4: Test Results of 550C-3T-SingleWeb Trusses

Truss Label	Reaction Force of Left Support (lbs) at 1st Failure	Reaction Force of Right Support (lbs) at 1st Failure
550C-3T-SingleWeb Test 1	5212	2332
550C-3T-SingleWeb Test 2	5174	2209

Table 5: Test Results of T33-3T-SC-New Trusses

Truss Label	Reaction Force of Left Support (lbs) at 1st Failure	Reaction Force of Right Support (lbs) at 1st Failure
T33-3T-SC-New	1384	3264

Table 6: Test Results of Studio-1J-3 Trusses

Truss Label	Reaction Force of Left Support (lbs) at 1st Failure	Reaction Force of Right Support (lbs) at 1st Failure
Studio-1J-3 Test 1	1731	2029
Studio-1J-3 Test 2	3922	1720
Studio-1J-3 Test 3	3352	977
Studio-1J-3 Test 4	3380	1003
Studio-1J-3 Test 5	4577	1638

The photos of failure modes are provided in Tables 7 through 11.

Table 7: Photos of T-OH-SC Trusses

Truss Label	Failure Modes	
T-OH-SC Test 1		
T-OH-SC Test 2		
T-OH-SC Test 3		
T-OH-SC Test 4		

Table 8: Photos of T-OH-BC-New Trusses

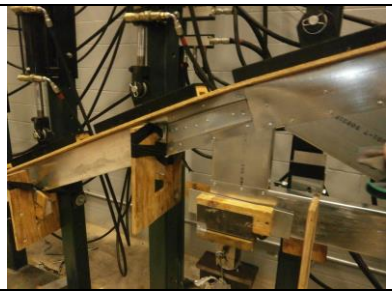
Truss Label	Failure Mode	
T-OH-BC-New Test 1		
T-OH-BC-New Test 2		
T-OH-BC-New Test 3		
T-OH-BC-New Test 4		

Table 9: Photos of 550C-3T Trusses

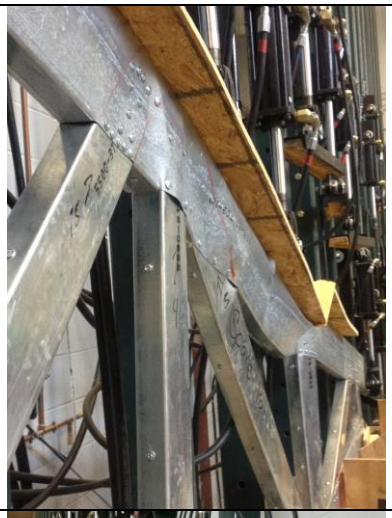
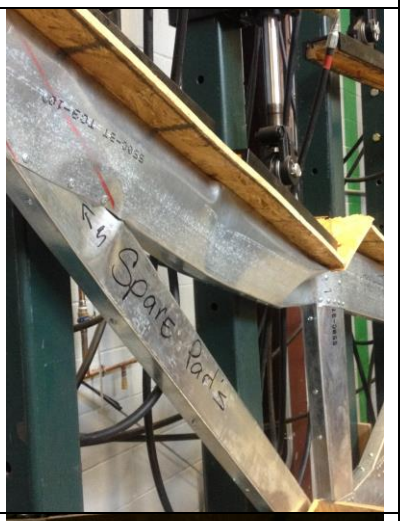
Truss Label	Failure Mode	
550C-3T Test 1		
550C-3T Test 2		
550C-3T Test 3		

Table 10: Photos of T33-3T-SC-New Trusses

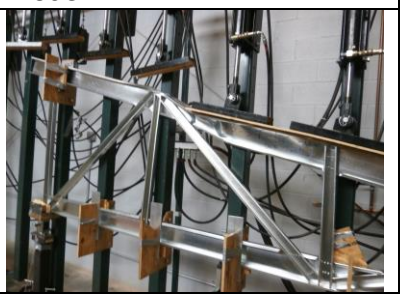
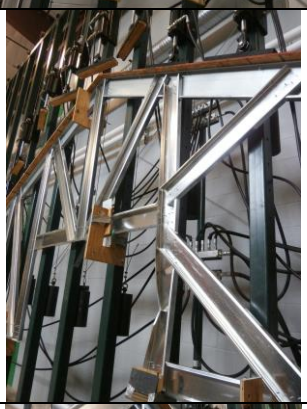
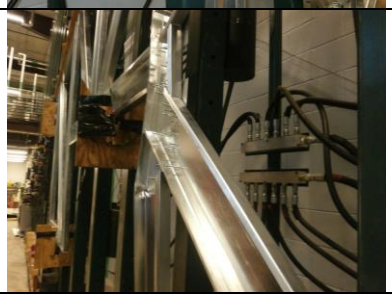
Truss Label	Failure Mode	
T33-3T-SC-New		

Table 11: Photos of Studio-1J-3 Trusses

Truss Label	Failure Mode	
Studio-1J-3 Test 1		
Studio-1J-3 Test 2		
Studio-1J-3 Test 3		
Studio-1J-3 Test 4		
Studio-1J-3 Test 5		

Coupon Test Results

The results of coupon tests are summarized in Table 12. Three coupons were tested and the average results are reported. The yield stress was determined by the 0.2% offset method. The test results indicate that the materials meet the minimum ductility requirements by *North American Specification for Design of Cold-Formed Steel Structural Members*, (AISI S100, 2012) which requires the tensile strength to yield point ratio greater than 1.08, and the elongation on a 2 in. gage length higher than 10%. The base metal thickness meets the minimum requirement by AISI general provisions (AISI S200, 2012). The coupons are tested on an Instron 4482. The setup of the test is shown in Figure 2. The coupon tests followed the test procedure of ASTM A370 (2010).

Figure 2: Coupon Test Setup

Table 12: Coupon Test Results

Member Label	Uncoated Thickness (in.)	Yield Stress (ksi)	Tensile Strength (ksi)	Tensile Strength/Yield Stress	Elongation for 2 in. length
33 mils - 20 ga.	0.03636	54.6	65.2	1.2	20.3%
43 mil - 18 ga.	0.04336	43.4	52.2	1.2	18.1%
54 mil - 16 ga.	0.05695	53.4	69.2	1.29	17.9%

Conclusions

Cold-formed steel mono trusses were tested. The capacity and failure mode were obtained in the test program. Actual material properties were determined by coupon tests.

References

AISI S100 (2012). *North American Specification for the Design of Cold-Formed Steel Structural Members, 2012 Edition.* American Iron and Steel Institute, Washington DC.

AISI S200 (2012). *North American Standard for Cold-Formed Steel Framing – General Provisions, 2012 Edition.* American Iron and Steel Institute, Washington DC.

ASTM A370 (2010). *Standard Test Methods and Definitions for Mechanical Testing of Steel Products.* American Society for Testing and Materials, Conshohocken, PA.


DUPONT
Tyvek
COMMERCIALWRAP

PRODUCT SUBMITTAL SUMMARY

Structural Stud Submittals

	27mils (22ga)	33mils (20ga)	43mils (18ga)	54mils (16ga)	68mils (14ga)
1.625 inch		162S162-33	162S162-43	162S162-54	
2.5 inch		250S162-33	250S125-43	250S162-54	
3.625 inch	362S162-27	362S162-33	362S162-43	362S162-54	362S162-68
6 inch	600S162-27	600S162-33	600S162-43	600S162-54	600S162-68
				600S162-54 G90	600S162-68 G90
8 inch		800S162-33	800S162-43	800S162-54	800S162-68

Structural Track Submittals

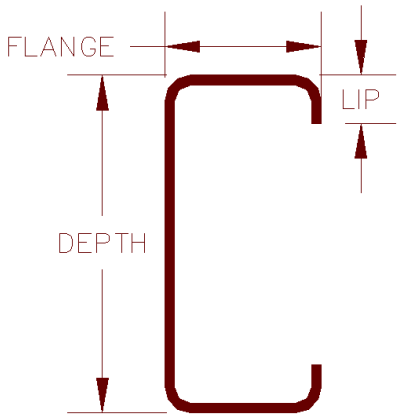
	27mils (22ga)	33mils (20ga)	43mils (18ga)	54mils (16ga)	68mils (14ga)
1.625 inch		162T150-33	162T150-43	162T150-54	
2.5 inch			250T125-43		
		250T150-33	250T150-43	250T150-54	
3.625 inch	362T125-27	362T125-33	362T125-43	362T125-54	362T125-68
		362T150-33	362T150-43	362T150-54	
6 inch	600T125-27	600T125-33	600T125-43	600T125-54	600T125-68
		600T150-33	600T150-43	600T150-54	
				600T125-54 G90	600T125-68 G90
8 inch		800T125-33	800T125-43	800T125-54	800T125-68

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **162S162-33 (33ksi, G60)**
33mils (20ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	1.625 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.193 in^2
Member weight per foot of length	0.66 lb/ft
Moment of inertia (Ix)	0.088 in^4
Section modulus (Sx)	0.109 in^3
Radius of gyration (Rx)	0.677 in
Gross moment of inertia (Iy)	0.074 in^4
Gross radius of gyration (Ry)	0.619 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.182 in^2
Moment of inertia for deflection (Ix)	0.086 in^4
Allowable bending moment (Ma)	2.06 in-k
Allowable moment based on distortion buckling (Mad)	2.06 in-k
Allowable shear force in web (solid section)	601 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.077 in^4
Warping constant (Cw)	0.070 in^6
Distance from shear center to neutral axis (Xo)	-1.628 in
Distance between shear center and web centerline (m)	0.871 in
Radii of gyration (Ro)	1.869 in
Torsional flexural constant (Beta)	0.396

ASTM & Code Standards

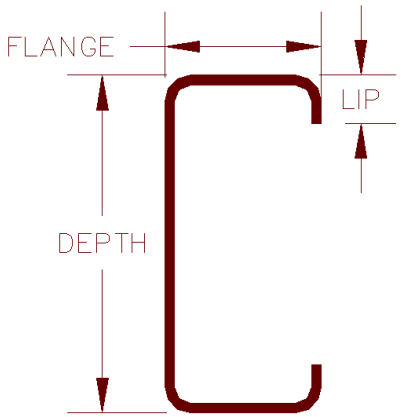
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **162S162-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	1.625 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.250 in^2
Member weight per foot of length	0.848 lb/ft
Moment of inertia (Ix)	0.113 in^4
Section modulus (Sx)	0.139 in^3
Radius of gyration (Rx)	0.673 in
Gross moment of inertia (Iy)	0.094 in^4
Gross radius of gyration (Ry)	0.615 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.250 in^2
Moment of inertia for deflection (Ix)	0.113 in^4
Allowable bending moment (Ma)	2.75 in-k
Allowable moment based on distortion buckling (Mad)	2.75 in-k
Allowable shear force in web (solid section)	777 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.169 in^4
Warping constant (Cw)	0.088 in^6
Distance from shear center to neutral axis (Xo)	-1.616 in
Distance between shear center and web centerline (m)	0.931 in
Radii of gyration (Ro)	1.855 in
Torsional flexural constant (Beta)	0.399

ASTM & Code Standards

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- Effective properties incorporate the strength increase from the cold work of forming
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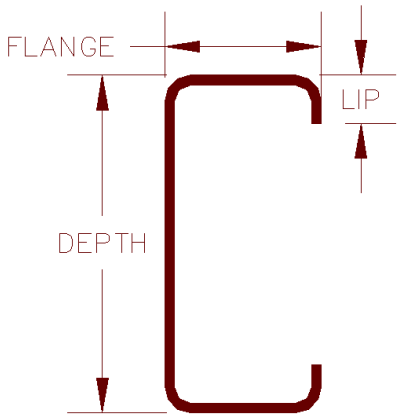
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **162S162-54 (50ksi, G60)**
54mils (16ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	1.625 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.309 in^2
Member weight per foot of length	1.05 lb/ft
Moment of inertia (Ix)	0.138 in^4
Section modulus (Sx)	0.169 in^3
Radius of gyration (Rx)	0.667 in
Gross moment of inertia (Iy)	0.114 in^4
Gross radius of gyration (Ry)	0.609 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.294 in^2
Moment of inertia for deflection (Ix)	0.137 in^4
Allowable bending moment (Ma)	4.99 in-k
Allowable moment based on distortion buckling (Mad)	4.80 in-k
Allowable shear force in web (solid section)	1424 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.330 in^4
Warping constant (Cw)	0.105 in^6
Distance from shear center to neutral axis (Xo)	-1.601 in
Distance between shear center and web centerline (m)	0.925 in
Radii of gyration (Ro)	1.838 in
Torsional flexural constant (Beta)	0.400

ASTM & Code Standards

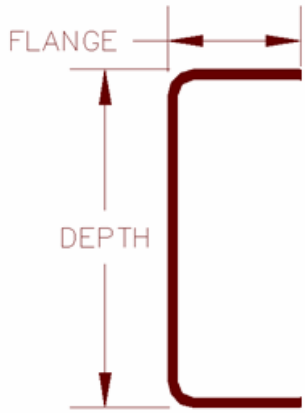
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T150 (1-1/2" Leg Structural Track)

Product Name: **162T150-33 (33ksi, G60)**
33mils (20ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	1.771 in		
Leg width	1.50 in		
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.160 in^2
Member weight per foot of length	0.544 lb/ft
Moment of inertia (Ix)	0.090 in^4
Section modulus (Sx)	0.102 in^3
Radius of gyration (Rx)	0.751 in
Gross moment of inertia (Iy)	0.039 in^4
Gross radius of gyration (Ry)	0.494 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.086 in^2
Moment of inertia for deflection (Ix)	0.061 in^4
Section modulus (Sx)	0.056 in^3
Allowable bending moment (Ma)	1.66 in-k
Allowable shear force in web	1005 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.064 in^4
Warping constant (Cw)	0.020 in^6
Distance from shear center to neutral axis (Xo)	-1.108 in
Radii of gyration (Ro)	1.427 in
Torsional flexural constant (Beta)	0.395

ASTM & Code Standards

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Product Submittal Sheet

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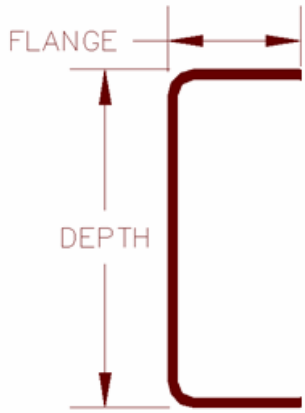
isf-global.com

Product Category: T150 (1-1/2" Leg Structural Track)

Product Name: **162T150-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	1.786 in		
Leg width	1.50 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.208 in^2
Member weight per foot of length	0.708 lb/ft
Moment of inertia (Ix)	0.118 in^4
Section modulus (Sx)	0.132 in^3
Radius of gyration (Rx)	0.753 in
Gross moment of inertia (Iy)	0.050 in^4
Gross radius of gyration (Ry)	0.492 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.086 in^2
Moment of inertia for deflection (Ix)	0.062 in^4
Section modulus (Sx)	0.056 in^3
Allowable bending moment (Ma)	1.68 in-k
Allowable shear force in web	1015 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.141 in^4
Warping constant (Cw)	0.026 in^6
Distance from shear center to neutral axis (Xo)	-1.102 in
Radii of gyration (Ro)	1.423 in
Torsional flexural constant (Beta)	0.396

ASTM & Code Standards

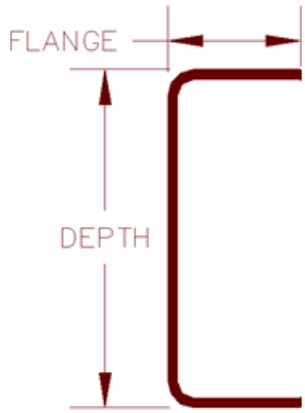
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T150 (1-1/2" Leg Structural Track)

Product Name: **162T150-54 (50ksi, G60)**
54mils (16ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	1.823 in		
Leg width	1.50 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	*Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.261 in^2
Member weight per foot of length	0.888 lb/ft
Moment of inertia (Ix)	0.152 in^4
Section modulus (Sx)	0.166 in^3
Radius of gyration (Rx)	0.762 in
Gross moment of inertia (Iy)	0.063 in^4
Gross radius of gyration (Ry)	0.490 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.086 in^2
Moment of inertia for deflection (Ix)	0.061 in^4
Section modulus (Sx)	0.056 in^3
Allowable bending moment (Ma)	1.66 in-k
Allowable shear force in web	1005 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.279 in^4
Warping constant (Cw)	0.033 in^6
Distance from shear center to neutral axis (Xo)	-1.096 in
Radii of gyration (Ro)	1.422 in
Torsional flexural constant (Beta)	0.394

ASTM & Code Standards

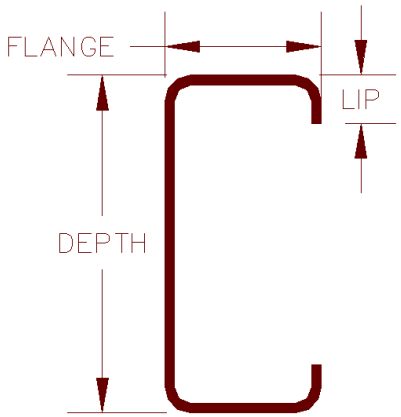
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **250S162-33 (33ksi, G60)**
33mils (20ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	2.500 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.223 in^2
Member weight per foot of length	0.76 lb/ft
Moment of inertia (Ix)	0.235 in^4
Section modulus (Sx)	0.188 in^3
Radius of gyration (Rx)	1.027 in
Gross moment of inertia (Iy)	0.087 in^4
Gross radius of gyration (Ry)	0.624 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.190 in^2
Moment of inertia for deflection (Ix)	0.230 in^4
Allowable bending moment (Ma)	3.56 in-k
Allowable moment based on distortion buckling (Mad)	3.56 in-k
Allowable shear force in web (solid section)	975 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.089 in^4
Warping constant (Cw)	0.140 in^6
Distance from shear center to neutral axis (Xo)	-1.470 in
Distance between shear center and web centerline (m)	0.859 in
Radii of gyration (Ro)	1.898 in
Torsional flexural constant (Beta)	0.400

ASTM & Code Standards

- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
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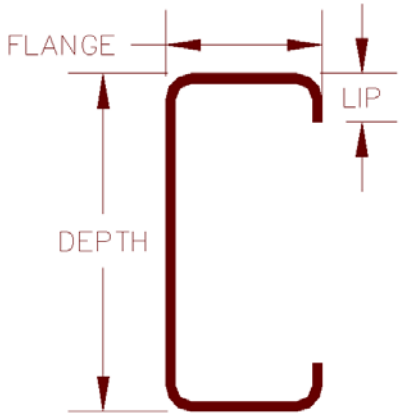
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **250S162-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	2.500 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.289 in^2
Member weight per foot of length	0.98 lb/ft
Moment of inertia (Ix)	0.302 in^4
Section modulus (Sx)	0.242 in^3
Radius of gyration (Rx)	1.022 in
Gross moment of inertia (Iy)	0.111 in^4
Gross radius of gyration (Ry)	0.620 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.274 in^2
Moment of inertia for deflection (Ix)	0.302 in^4
Allowable bending moment (Ma)	5.252 in-k
Allowable moment based on distortion buckling (Mad)	5.25 in-k
Allowable shear force in web (solid section)	1265 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.196 in^4
Warping constant (Cw)	0.184 in^6
Distance from shear center to neutral axis (Xo)	-1.457 in
Distance between shear center and web centerline (m)	0.852 in
Radii of gyration (Ro)	1.885 in
Torsional flexural constant (Beta)	0.402

ASTM & Code Standards

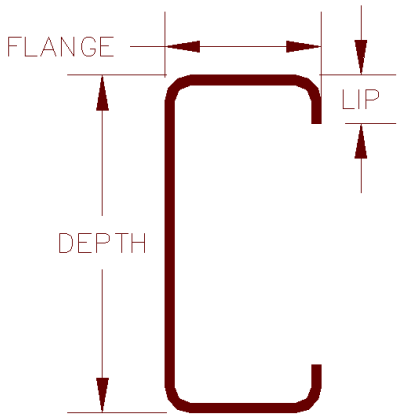
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **250S162-54 (50ksi, G60)**
54mils (16ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	2.500 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.358 in^2
Member weight per foot of length	1.22 lb/ft
Moment of inertia (Ix)	0.370 in^4
Section modulus (Sx)	0.296 in^3
Radius of gyration (Rx)	1.016 in
Gross moment of inertia (Iy)	0.135 in^4
Gross radius of gyration (Ry)	0.614 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.328 in^2
Moment of inertia for deflection (Ix)	0.366 in^4
Allowable bending moment (Ma)	8.66 in-k
Allowable moment based on distortion buckling (Mad)	8.66 in-k
Allowable shear force in web (solid section)	2353 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.382 in^4
Warping constant (Cw)	0.211 in^6
Distance from shear center to neutral axis (Xo)	-1.442 in
Distance between shear center and web centerline (m)	0.845 in
Radii of gyration (Ro)	1.868 in
Torsional flexural constant (Beta)	0.404

ASTM & Code Standards

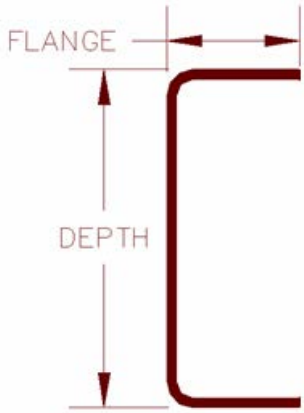
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **250T125-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	2.661 in		
Leg width	1.25 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.225 in^2
Member weight per foot of length	0.77 lb/ft
Moment of inertia (Ix)	0.250 in^4
Section modulus (Sx)	0.188 in^3
Radius of gyration (Rx)	1.055 in
Gross moment of inertia (Iy)	0.035 in^4
Gross radius of gyration (Ry)	0.395 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.166 in^2
Moment of inertia for deflection (Ix)	0.231 in^4
Section modulus (Sx)	0.147 in^3
Allowable bending moment (Ma)	2.91 in-k
Allowable shear force in web	1356 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.153 in^4
Warping constant (Cw)	0.042 in^6
Distance from shear center to neutral axis (Xo)	-0.755 in
Distance between shear center and web centerline (m)	0.453 in
Radii of gyration (Ro)	1.356 in
Torsional flexural constant (Beta)	0.690

ASTM & Code Standards

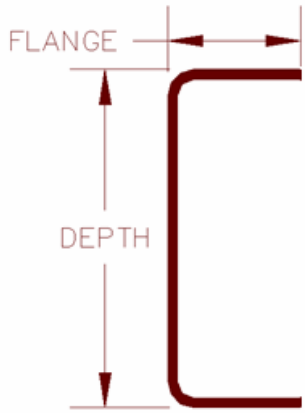
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T150 (1-1/2" Leg Structural Track)

Product Name: **250T150-33 (33ksi, G60)**
33mils (20ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	2.646 in		
Leg width	1.50 in		
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.190 in^2
Member weight per foot of length	0.647 lb/ft
Moment of inertia (Ix)	0.221 in^4
Section modulus (Sx)	0.167 in^3
Radius of gyration (Rx)	1.079 in
Gross moment of inertia (Iy)	0.048 in^4
Gross radius of gyration (Ry)	0.485 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.091 in^2
Moment of inertia for deflection (Ix)	0.157 in^4
Section modulus (Sx)	0.100 in^3
Allowable bending moment (Ma)	2.98 in-k
Allowable shear force in web	1260 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.076 in^4
Warping constant (Cw)	0.052 in^6
Distance from shear center to neutral axis (Xo)	-0.984 in
Distance between shear center and web centerline (m)	0.570 in
Radii of gyration (Ro)	1.539 in
Torsional flexural constant (Beta)	0.595

ASTM & Code Standards

- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
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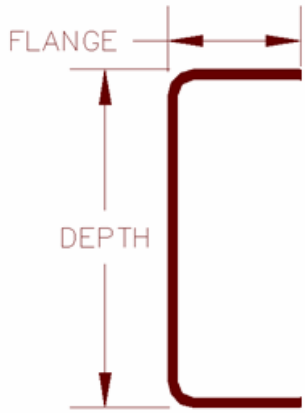
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T150 (1-1/2" Leg Structural Track)

Product Name: **250T150-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	2.661 in		
Leg width	1.50 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.248 in^2
Member weight per foot of length	0.842 lb/ft
Moment of inertia (Ix)	0.289 in^4
Section modulus (Sx)	0.217 in^3
Radius of gyration (Rx)	1.080 in
Gross moment of inertia (Iy)	0.058 in^4
Gross radius of gyration (Ry)	0.483 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.144 in^2
Moment of inertia for deflection (Ix)	0.220 in^4
Section modulus (Sx)	0.142 in^3
Allowable bending moment (Ma)	4.26 in-k
Allowable shear force in web	2054 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.168 in^4
Warping constant (Cw)	0.067 in^6
Distance from shear center to neutral axis (Xo)	-0.979 in
Distance between shear center and web centerline (m)	0.570 in
Radii of gyration (Ro)	1.536 in
Torsional flexural constant (Beta)	0.596

ASTM & Code Standards

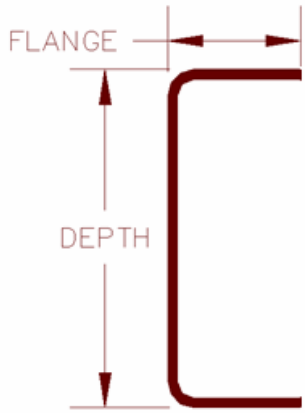
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T150 (1-1/2" Leg Structural Track)

Product Name: **250T150-54 (50ksi, G60)**
54mils (16ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	2.698 in		
Leg width	1.50 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	*Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.311 in^2
Member weight per foot of length	1.056 lb/ft
Moment of inertia (Ix)	0.368 in^4
Section modulus (Sx)	0.273 in^3
Radius of gyration (Rx)	1.088 in
Gross moment of inertia (Iy)	0.072 in^4
Gross radius of gyration (Ry)	0.481 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.216 in^2
Moment of inertia for deflection (Ix)	0.299 in^4
Section modulus (Sx)	0.198 in^3
Allowable bending moment (Ma)	5.92 in-k
Allowable shear force in web	2563 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.332 in^4
Warping constant (Cw)	0.085 in^6
Distance from shear center to neutral axis (Xo)	-0.974 in
Distance between shear center and web centerline (m)	0.564 in
Radii of gyration (Ro)	1.537 in
Torsional flexural constant (Beta)	0.603

ASTM & Code Standards

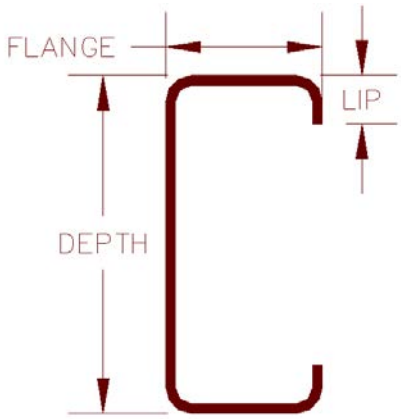
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **362S162-27 (33ksi, G60)**
27mils (22ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.625 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0283 in	Min. steel thickness	0.0296 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.215 in^2
Member weight per foot of length	0.73 lb/ft
Moment of inertia (Ix)	0.454 in^4
Section modulus (Sx)	0.251 in^3
Radius of gyration (Rx)	1.453 in
Gross moment of inertia (Iy)	0.082 in^4
Gross radius of gyration (Ry)	0.618 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.143 in^2
Moment of inertia for deflection (Ix)	0.429 in^4
Allowable bending moment (Ma)	4.52 in-k
Allowable moment based on distortion buckling (Mad)	4.43 in-k
Allowable shear force in web (solid section)	592 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.057 in^4
Warping constant (Cw)	0.237 in^6
Distance from shear center to neutral axis (Xo)	-1.314 in
Distance between shear center and web centerline (m)	0.721 in
Radii of gyration (Ro)	2.054 in
Torsional flexural constant (Beta)	0.589

ASTM & Code Standards

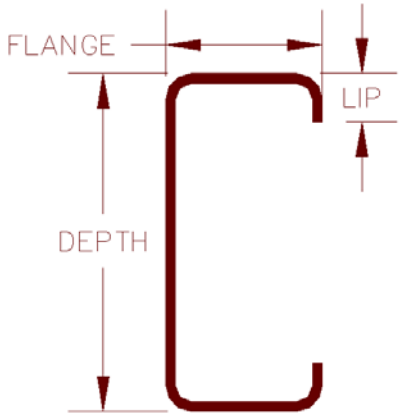
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **362S162-33 (33ksi, G60)**
33mils (20ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.625 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.262 in^2
Member weight per foot of length	0.89 lb/ft
Moment of inertia (Ix)	0.551 in^4
Section modulus (Sx)	0.304 in^3
Radius of gyration (Rx)	1.450 in
Gross moment of inertia (Iy)	0.099 in^4
Gross radius of gyration (Ry)	0.616 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.195 in^2
Moment of inertia for deflection (Ix)	0.538 in^4
Allowable bending moment (Ma)	5.76 in-k
Allowable moment based on distortion buckling (Mad)	5.43 in-k
Allowable shear force in web (solid section)	1024 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.105 in^4
Warping constant (Cw)	0.297 in^6
Distance from shear center to neutral axis (Xo)	-1.308 in
Distance between shear center and web centerline (m)	0.789 in
Radii of gyration (Ro)	2.048 in
Torsional flexural constant (Beta)	0.592

ASTM & Code Standards

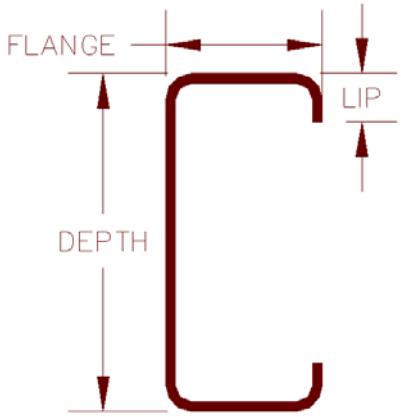
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **362S162-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.625 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.340 in^2
Member weight per foot of length	1.16 lb/ft
Moment of inertia (Ix)	0.710 in^4
Section modulus (Sx)	0.392 in^3
Radius of gyration (Rx)	1.445 in
Gross moment of inertia (Iy)	0.127 in^4
Gross radius of gyration (Ry)	0.611 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.283 in^2
Moment of inertia for deflection (Ix)	0.710 in^4
Allowable bending moment (Ma)	8.513 in-k
Allowable moment based on distortion buckling (Mad)	7.62 in-k
Allowable shear force in web (solid section)	1739 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.230 in^4
Warping constant (Cw)	0.376 in^6
Distance from shear center to neutral axis (Xo)	-1.297 in
Distance between shear center and web centerline (m)	0.782 in
Radii of gyration (Ro)	2.036 in
Torsional flexural constant (Beta)	0.594

ASTM & Code Standards

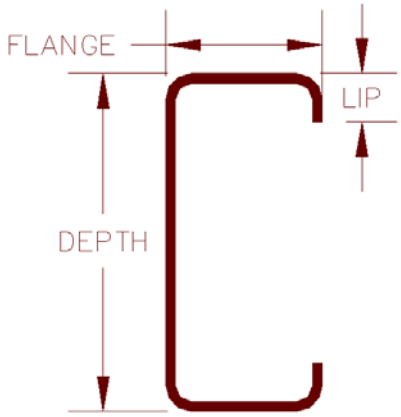
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **362S162-54 (50ksi, G60)**
54mils (16ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.625 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.422 in^2
Member weight per foot of length	1.44 lb/ft
Moment of inertia (Ix)	0.873 in^4
Section modulus (Sx)	0.482 in^3
Radius of gyration (Rx)	1.438 in
Gross moment of inertia (Iy)	0.154 in^4
Gross radius of gyration (Ry)	0.605 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.341 in^2
Moment of inertia for deflection (Ix)	0.859 in^4
Allowable bending moment (Ma)	15.494 in-k
Allowable moment based on distortion buckling (Mad)	13.60 in-k
Allowable shear force in web (solid section)	3372 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.451 in^4
Warping constant (Cw)	0.457 in^6
Distance from shear center to neutral axis (Xo)	-1.283 in
Distance between shear center and web centerline (m)	0.774 in
Radii of gyration (Ro)	2.020 in
Torsional flexural constant (Beta)	0.597

ASTM & Code Standards

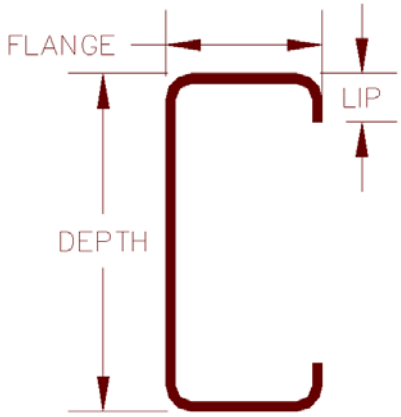
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **362S162-68 (50ksi, G60)**
68mils (14ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.625 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0713 in	Min. steel thickness	0.0677 in
Yield strength, Fy	50 ksi	Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.524 in^2
Member weight per foot of length	1.78 lb/ft
Moment of inertia (Ix)	1.069 in^4
Section modulus (Sx)	0.590 in^3
Radius of gyration (Rx)	1.429 in
Gross moment of inertia (Iy)	0.186 in^4
Gross radius of gyration (Ry)	0.596 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.473 in^2
Moment of inertia for deflection (Ix)	1.069 in^4
Allowable bending moment (Ma)	19.995 in-k
Allowable moment based on distortion buckling (Mad)	17.66 in-k
Allowable shear force in web (solid section)	4370 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.887 in^4
Warping constant (Cw)	0.552 in^6
Distance from shear center to neutral axis (Xo)	-1.264 in
Distance between shear center and web centerline (m)	0.765 in
Radii of gyration (Ro)	1.999 in
Torsional flexural constant (Beta)	0.600

ASTM & Code Standards

- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
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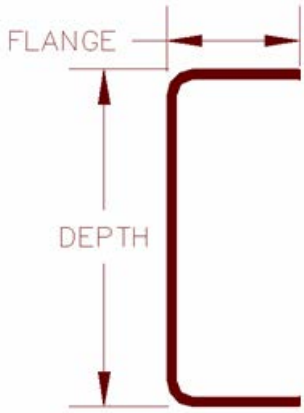
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **362T125-27 (33ksi, G60)**
27mils (22ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.682 in		
Leg width	1.25 in		
Design thickness	0.0283 in	Min. steel thickness	0.0269 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.169 in^2
Member weight per foot of length	0.57 lb/ft
Moment of inertia (Ix)	0.328 in^4
Section modulus (Sx)	0.181 in^3
Radius of gyration (Rx)	1.392 in
Gross moment of inertia (Iy)	0.025 in^4
Gross radius of gyration (Ry)	0.381 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.076 in^2
Moment of inertia for deflection (Ix)	0.260 in^4
Section modulus (Sx)	0.127 in^3
Allowable bending moment (Ma)	2.52 in-k
Allowable shear force in web	592 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.045 in^4
Warping constant (Cw)	0.055 in^6
Distance from shear center to neutral axis (Xo)	-0.680 in
Distance between shear center and web centerline (m)	0.413 in
Radii of gyration (Ro)	1.596 in
Torsional flexural constant (Beta)	0.816

ASTM & Code Standards

- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
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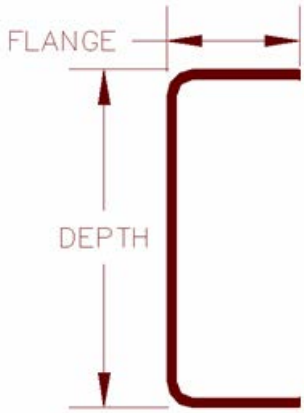
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **362T125-33 (33ksi, G60)**
33mils (20ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.771 in		
Leg width	1.25 in		
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.212 in^2
Member weight per foot of length	0.72 lb/ft
Moment of inertia (Ix)	0.438 in^4
Section modulus (Sx)	0.232 in^3
Radius of gyration (Rx)	1.439 in
Gross moment of inertia (Iy)	0.030 in^4
Gross radius of gyration (Ry)	0.379 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.109 in^2
Moment of inertia for deflection (Ix)	0.385 in^4
Section modulus (Sx)	0.174 in^3
Allowable bending moment (Ma)	3.44 in-k
Allowable shear force in web	1024 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.085 in^4
Warping constant (Cw)	0.076 in^6
Distance from shear center to neutral axis (Xo)	-0.658 in
Distance between shear center and web centerline (m)	0.410 in
Radii of gyration (Ro)	1.626 in
Torsional flexural constant (Beta)	0.836

ASTM & Code Standards

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- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
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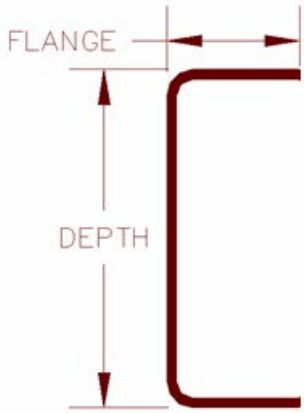
Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **362T125-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.786 in		
Leg width	1.25 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.276 in^2
Member weight per foot of length	0.94 lb/ft
Moment of inertia (Ix)	0.571 in^4
Section modulus (Sx)	0.302 in^3
Radius of gyration (Rx)	1.439 in
Gross moment of inertia (Iy)	0.039 in^4
Gross radius of gyration (Ry)	0.375 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.174 in^2
Moment of inertia for deflection (Ix)	0.531 in^4
Section modulus (Sx)	0.245 in^3
Allowable bending moment (Ma)	4.84 in-k
Allowable shear force in web	1739 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.187 in^4
Warping constant (Cw)	0.098 in^6
Distance from shear center to neutral axis (Xo)	-0.654 in
Distance between shear center and web centerline (m)	0.407 in
Radii of gyration (Ro)	1.625 in
Torsional flexural constant (Beta)	0.838

ASTM & Code Standards

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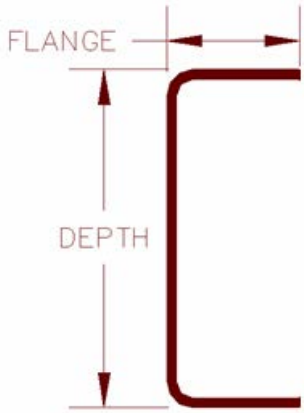
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **362T125-54 (50ksi, G60)**
54mils (16ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.823 in		
Leg width	1.25 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	*Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.346 in^2
Member weight per foot of length	1.18 lb/ft
Moment of inertia (Ix)	0.723 in^4
Section modulus (Sx)	0.378 in^3
Radius of gyration (Rx)	1.445 in
Gross moment of inertia (Iy)	0.048 in^4
Gross radius of gyration (Ry)	0.373 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.225 in^2
Moment of inertia for deflection (Ix)	0.678 in^4
Section modulus (Sx)	0.312 in^3
Allowable bending moment (Ma)	9.34 in-k
Allowable shear force in web	3372 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.369 in^4
Warping constant (Cw)	0.123 in^6
Distance from shear center to neutral axis (Xo)	-0.648 in
Distance between shear center and web centerline (m)	0.404 in
Radii of gyration (Ro)	1.627 in
Torsional flexural constant (Beta)	0.841

ASTM & Code Standards

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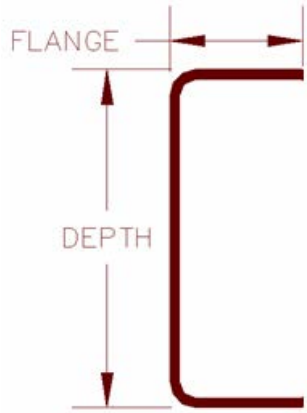
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **362T125-68 (50ksi, G60)**
68mils (14ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.875 in		
Leg width	1.25 in		
Design thickness	0.0713 in	Min. steel thickness	0.0677 in
Yield strength, Fy	50 ksi	*Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.436 in^2
Member weight per foot of length	1.48 lb/ft
Moment of inertia (Ix)	0.921 in^4
Section modulus (Sx)	0.475 in^3
Radius of gyration (Rx)	1.454 in
Gross moment of inertia (Iy)	0.060 in^4
Gross radius of gyration (Ry)	0.370 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.338 in^2
Moment of inertia for deflection (Ix)	0.908 in^4
Section modulus (Sx)	0.427 in^3
Allowable bending moment (Ma)	12.78 in-k
Allowable shear force in web	4703 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.738 in^4
Warping constant (Cw)	0.156 in^6
Distance from shear center to neutral axis (Xo)	-0.641 in
Distance between shear center and web centerline (m)	0.399 in
Radii of gyration (Ro)	1.631 in
Torsional flexural constant (Beta)	0.846

ASTM & Code Standards

- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
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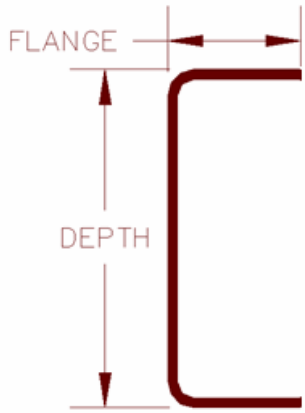
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T150 (1-1/2" Leg Structural Track)

Product Name: **362T150-33 (33ksi, G60)**
33mils (20ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.771 in		
Leg width	1.50 in		
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.224 in^2
Member weight per foot of length	0.762 lb/ft
Moment of inertia (Ix)	0.455 in^4
Section modulus (Sx)	0.251 in^3
Radius of gyration (Rx)	1.425 in
Gross moment of inertia (Iy)	0.049 in^4
Gross radius of gyration (Ry)	0.469 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.110 in^2
Moment of inertia for deflection (Ix)	0.352 in^4
Section modulus (Sx)	0.170 in^3
Allowable bending moment (Ma)	3.36 in-k
Allowable shear force in web	1024 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.089 in^4
Warping constant (Cw)	0.110 in^6
Distance from shear center to neutral axis (Xo)	-0.858 in
Distance between shear center and web centerline (m)	0.410 in
Radii of gyration (Ro)	1.738 in
Torsional flexural constant (Beta)	0.756

ASTM & Code Standards

- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
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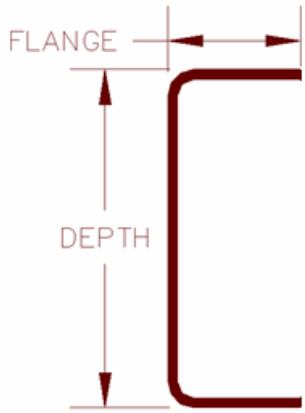
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T150 (1-1/2" Leg Structural Track)

Product Name: **362T150-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.786 in		
Leg width	1.50 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.291 in^2
Member weight per foot of length	0.990 lb/ft
Moment of inertia (Ix)	0.588 in^4
Section modulus (Sx)	0.324 in^3
Radius of gyration (Rx)	1.421 in
Gross moment of inertia (Iy)	0.064 in^4
Gross radius of gyration (Ry)	0.468 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.175 in^2
Moment of inertia for deflection (Ix)	0.483 in^4
Section modulus (Sx)	0.240 in^3
Allowable bending moment (Ma)	4.74 in-k
Allowable shear force in web	1739 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.197 in^4
Warping constant (Cw)	0.141 in^6
Distance from shear center to neutral axis (Xo)	-0.874 in
Distance between shear center and web centerline (m)	0.519 in
Radii of gyration (Ro)	1.732 in
Torsional flexural constant (Beta)	0.767

ASTM & Code Standards

- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
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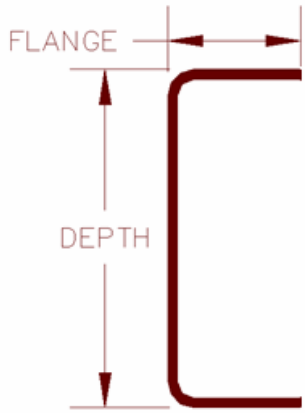
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T150 (1-1/2" Leg Structural Track)

Product Name: **362T150-54 (50ksi, G60)**
54mils (16ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	3.823 in		
Leg width	1.50 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	*Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.363 in^2
Member weight per foot of length	1.234 lb/ft
Moment of inertia (Ix)	0.727 in^4
Section modulus (Sx)	0.401 in^3
Radius of gyration (Rx)	1.415 in
Gross moment of inertia (Iy)	0.079 in^4
Gross radius of gyration (Ry)	0.466 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.226 in^2
Moment of inertia for deflection (Ix)	0.604 in^4
Section modulus (Sx)	0.302 in^3
Allowable bending moment (Ma)	9.03 in-k
Allowable shear force in web	3372 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.388 in^4
Warping constant (Cw)	0.172 in^6
Distance from shear center to neutral axis (Xo)	-0.873 in
Distance between shear center and web centerline (m)	0.516 in
Radii of gyration (Ro)	1.727 in
Torsional flexural constant (Beta)	0.772

ASTM & Code Standards

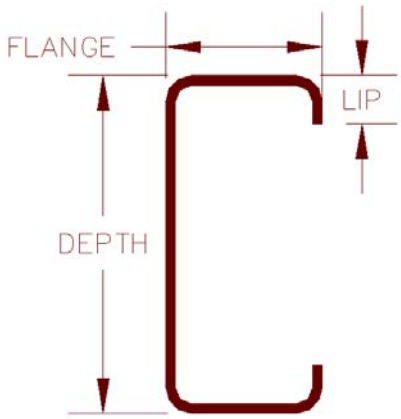
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **600S162-27 (33ksi, G60)**
27mils (22ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.000 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0283 in	Min. steel thickness	0.0296 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.282 in^2
Member weight per foot of length	0.96 lb/ft
Moment of inertia (Ix)	1.474 in^4
Section modulus (Sx)	0.491 in^3
Radius of gyration (Rx)	2.285 in
Gross moment of inertia (Iy)	0.096 in^4
Gross radius of gyration (Ry)	0.584 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.143 in^2
Moment of inertia for deflection (Ix)	0.429 in^4
Allowable bending moment (Ma)	4.52 in-k
Allowable moment based on distortion buckling (Mad)	4.43 in-k
Allowable shear force in web (solid section)	592 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.075 in^4
Warping constant (Cw)	0.687 in^6
Distance from shear center to neutral axis (Xo)	-1.075 in
Distance between shear center and web centerline (m)	0.728 in
Radii of gyration (Ro)	2.592 in
Torsional flexural constant (Beta)	0.518

ASTM & Code Standards

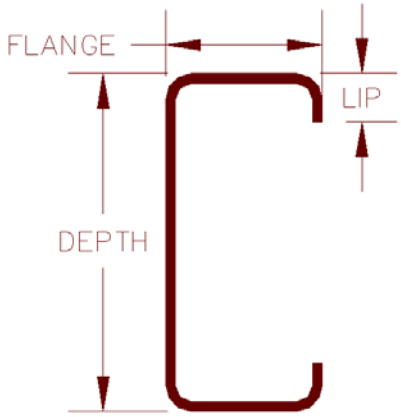
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **600S162-33 (33ksi, G60)**
33mils (20ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.000 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.344 in^2
Member weight per foot of length	1.17 lb/ft
Moment of inertia (Ix)	1.793 in^4
Section modulus (Sx)	0.598 in^3
Radius of gyration (Rx)	2.282 in
Gross moment of inertia (Iy)	0.116 in^4
Gross radius of gyration (Ry)	0.581 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.169 in^2
Moment of inertia for deflection (Ix)	1.578 in^4
Allowable bending moment (Ma)	14.409 in-k
Allowable moment based on distortion buckling (Mad)	9.47 in-k
Allowable shear force in web (solid section)	638 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.137 in^4
Warping constant (Cw)	0.861 in^6
Distance from shear center to neutral axis (Xo)	-1.072 in
Distance between shear center and web centerline (m)	0.677 in
Radii of gyration (Ro)	2.588 in
Torsional flexural constant (Beta)	0.828

ASTM & Code Standards

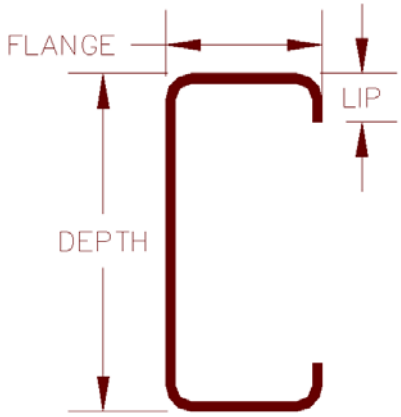
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **600S162-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.000 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	36.3 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.447 in^2
Member weight per foot of length	1.52 lb/ft
Moment of inertia (Ix)	2.316 in^4
Section modulus (Sx)	0.772 in^3
Radius of gyration (Rx)	2.277 in
Gross moment of inertia (Iy)	0.148 in^4
Gross radius of gyration (Ry)	0.576 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.291 in^2
Moment of inertia for deflection (Ix)	2.316 in^4
Allowable bending moment (Ma)	16.781 in-k
Allowable moment based on distortion buckling (Mad)	14.47 in-k
Allowable shear force in web (solid section)	1416 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.303 in^4
Warping constant (Cw)	1.095 in^6
Distance from shear center to neutral axis (Xo)	-1.062 in
Distance between shear center and web centerline (m)	0.670 in
Radii of gyration (Ro)	2.577 in
Torsional flexural constant (Beta)	0.830

ASTM & Code Standards

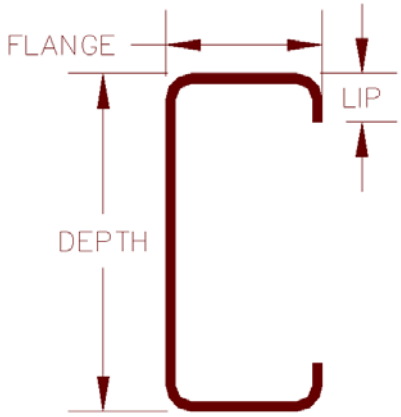
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **600S162-54 (50ksi, G60)**
54mils (16ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.000 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	Fy with Cold-Work, Fya	55.3 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.556 in^2
Member weight per foot of length	1.89 lb/ft
Moment of inertia (Ix)	2.861 in^4
Section modulus (Sx)	0.954 in^3
Radius of gyration (Rx)	2.268 in
Gross moment of inertia (Iy)	0.180 in^4
Gross radius of gyration (Ry)	0.570 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.352 in^2
Moment of inertia for deflection (Ix)	2.813 in^4
Allowable bending moment (Ma)	30.713 in-k
Allowable moment based on distortion buckling (Mad)	25.91 in-k
Allowable shear force in web (solid section)	2823 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.594 in^4
Warping constant (Cw)	1.337 in^6
Distance from shear center to neutral axis (Xo)	-1.049 in
Distance between shear center and web centerline (m)	0.663 in
Radii of gyration (Ro)	2.563 in
Torsional flexural constant (Beta)	0.833

ASTM & Code Standards

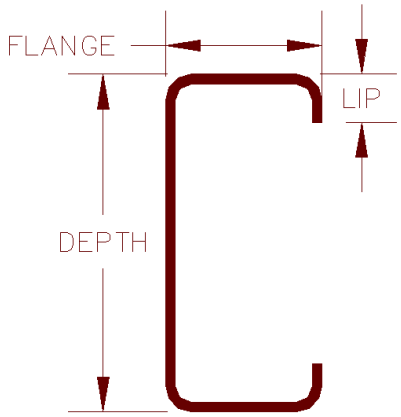
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **600S162-54 (50ksi, G90)**
54mils (16ga)
Coating: G90 per ASTM C955



Geometric Properties

Web depth	6.000 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	Fy with Cold-Work, Fya	55.3 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.556 in^2
Member weight per foot of length	1.89 lb/ft
Moment of inertia (Ix)	2.861 in^4
Section modulus (Sx)	0.954 in^3
Radius of gyration (Rx)	2.268 in
Gross moment of inertia (Iy)	0.180 in^4
Gross radius of gyration (Ry)	0.570 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.352 in^2
Moment of inertia for deflection (Ix)	2.813 in^4
Allowable bending moment (Ma)	30.713 in-k
Allowable moment based on distortion buckling (Mad)	25.91 in-k
Allowable shear force in web (solid section)	2823 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.594 in^4
Warping constant (Cw)	1.337 in^6
Distance from shear center to neutral axis (Xo)	-1.049 in
Distance between shear center and web centerline (m)	0.663 in
Radii of gyration (Ro)	2.563 in
Torsional flexural constant (Beta)	0.833

ASTM & Code Standards

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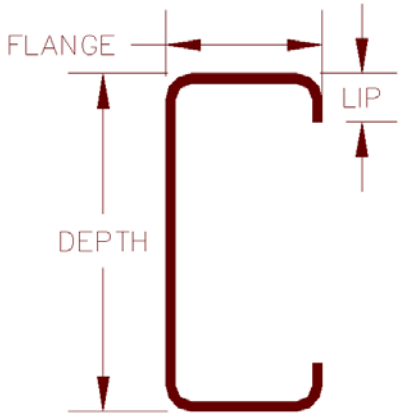
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **600S162-68 (50ksi, G60)**
68mils (14ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.000 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0713 in	Min. steel thickness	0.0677 in
Yield strength, Fy	50 ksi	Fy with Cold-Work, Fya	56.6 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.693 in^2
Member weight per foot of length	2.36 lb/ft
Moment of inertia (Ix)	3.526 in^4
Section modulus (Sx)	1.175 in^3
Radius of gyration (Rx)	2.256 in
Gross moment of inertia (Iy)	0.218 in^4
Gross radius of gyration (Ry)	0.561 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.495 in^2
Moment of inertia for deflection (Ix)	3.525 in^4
Allowable bending moment (Ma)	39.839 in-k
Allowable moment based on distortion buckling (Mad)	35.71 in-k
Allowable shear force in web (solid section)	5350 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	1.174 in^4
Warping constant (Cw)	1.626 in^6
Distance from shear center to neutral axis (Xo)	-1.032 in
Distance between shear center and web centerline (m)	0.655 in
Radii of gyration (Ro)	2.543 in
Torsional flexural constant (Beta)	0.835

ASTM & Code Standards

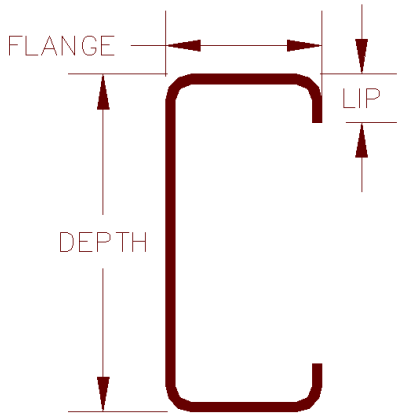
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **600S162-68 (50ksi, G90)**
68mils (14ga)
Coating: G90 per ASTM C955



Geometric Properties

Web depth	6.000 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0713 in	Min. steel thickness	0.0677 in
Yield strength, Fy	50 ksi	Fy with Cold-Work, Fya	56.6 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.693 in^2
Member weight per foot of length	2.36 lb/ft
Moment of inertia (Ix)	3.526 in^4
Section modulus (Sx)	1.175 in^3
Radius of gyration (Rx)	2.256 in
Gross moment of inertia (Iy)	0.218 in^4
Gross radius of gyration (Ry)	0.561 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.495 in^2
Moment of inertia for deflection (Ix)	3.525 in^4
Allowable bending moment (Ma)	39.839 in-k
Allowable moment based on distortion buckling (Mad)	35.71 in-k
Allowable shear force in web (solid section)	5350 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	1.174 in^4
Warping constant (Cw)	1.626 in^6
Distance from shear center to neutral axis (Xo)	-1.032 in
Distance between shear center and web centerline (m)	0.655 in
Radii of gyration (Ro)	2.543 in
Torsional flexural constant (Beta)	0.835

ASTM & Code Standards

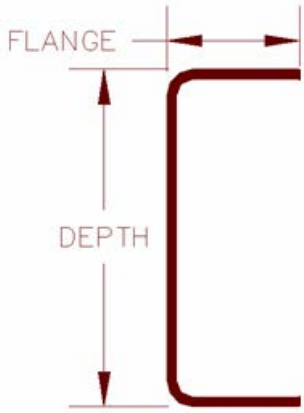
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **600T125-27 (33ksi, G60)**
27mils (22ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.057 in		
Leg width	1.25 in		
Design thickness	0.0283 in	Min. steel thickness	0.0269 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.237 in^2
Member weight per foot of length	0.80 lb/ft
Moment of inertia (Ix)	1.105 in^4
Section modulus (Sx)	0.368 in^3
Radius of gyration (Rx)	2.161 in
Gross moment of inertia (Iy)	0.028 in^4
Gross radius of gyration (Ry)	0.342 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.078 in^2
Moment of inertia for deflection (Ix)	0.764 in^4
Section modulus (Sx)	0.205 in^3
Allowable bending moment (Ma)	4.06 in-k
Allowable shear force in web	349 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.063 in^4
Warping constant (Cw)	0.182 in^6
Distance from shear center to neutral axis (Xo)	-0.531 in
Distance between shear center and web centerline (m)	0.423 in
Radii of gyration (Ro)	2.252 in
Torsional flexural constant (Beta)	0.811

ASTM & Code Standards

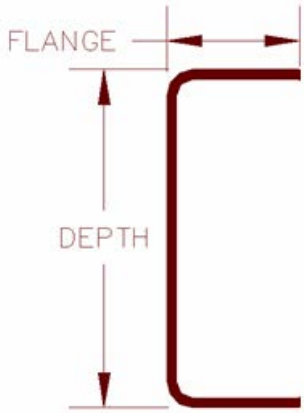
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **600T125-33 (33ksi, G60)**
33mils (20ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.146 in		
Leg width	1.25 in		
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.294 in^2
Member weight per foot of length	1.00 lb/ft
Moment of inertia (Ix)	1.429 in^4
Section modulus (Sx)	0.465 in^3
Radius of gyration (Rx)	2.205 in
Gross moment of inertia (Iy)	0.034 in^4
Gross radius of gyration (Ry)	0.339 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.112 in^2
Moment of inertia for deflection (Ix)	1.258 in^4
Section modulus (Sx)	0.297 in^3
Allowable bending moment (Ma)	5.87 in-k
Allowable shear force in web	622 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.117 in^4
Warping constant (Cw)	0.238 in^6
Distance from shear center to neutral axis (Xo)	-0.516 in
Distance between shear center and web centerline (m)	0.337 in
Radii of gyration (Ro)	2.289 in
Torsional flexural constant (Beta)	0.949

ASTM & Code Standards

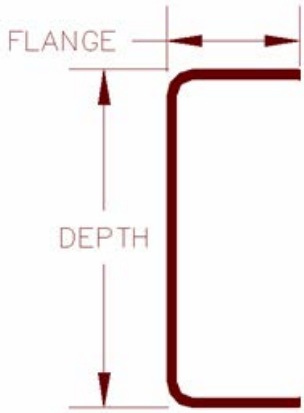
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **600T125-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.161 in		
Leg width	1.25 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.383 in^2
Member weight per foot of length	1.30 lb/ft
Moment of inertia (Ix)	1.862 in^4
Section modulus (Sx)	0.604 in^3
Radius of gyration (Rx)	2.205 in
Gross moment of inertia (Iy)	0.044 in^4
Gross radius of gyration (Ry)	0.337 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.181 in^2
Moment of inertia for deflection (Ix)	1.768 in^4
Section modulus (Sx)	0.461 in^3
Allowable bending moment (Ma)	9.11 in-k
Allowable shear force in web	1377 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.260 in^4
Warping constant (Cw)	0.307 in^6
Distance from shear center to neutral axis (Xo)	-0.513 in
Distance between shear center and web centerline (m)	0.335 in
Radii of gyration (Ro)	2.289 in
Torsional flexural constant (Beta)	0.950

ASTM & Code Standards

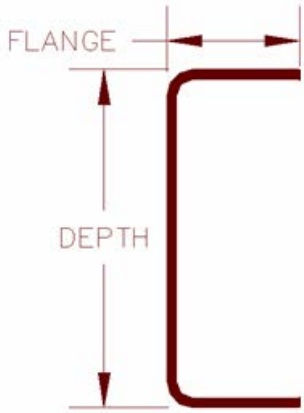
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **600T125-54 (50ksi, G60)**
54mils (16ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.198 in		
Leg width	1.25 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	*Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.480 in^2
Member weight per foot of length	1.63 lb/ft
Moment of inertia (Ix)	2.345 in^4
Section modulus (Sx)	0.757 in^3
Radius of gyration (Rx)	2.209 in
Gross moment of inertia (Iy)	0.054 in^4
Gross radius of gyration (Ry)	0.335 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.234 in^2
Moment of inertia for deflection (Ix)	2.241 in^4
Section modulus (Sx)	0.592 in^3
Allowable bending moment (Ma)	17.74 in-k
Allowable shear force in web	2728 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.513 in^4
Warping constant (Cw)	0.384 in^6
Distance from shear center to neutral axis (Xo)	-0.508 in
Distance between shear center and web centerline (m)	0.332 in
Radii of gyration (Ro)	2.292 in
Torsional flexural constant (Beta)	0.951

ASTM & Code Standards

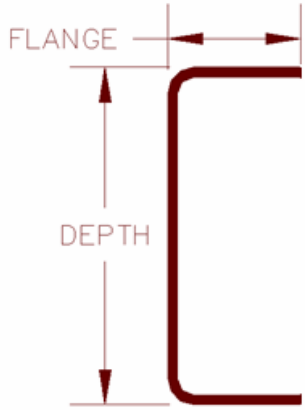
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **600T125-54 (50ksi, G90)**
54mils (16ga)
Coating: G90 per ASTM C955



Geometric Properties

Web depth	6.198 in		
Leg width	1.25 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	*Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.480 in^2
Member weight per foot of length	1.63 lb/ft
Moment of inertia (Ix)	2.345 in^4
Section modulus (Sx)	0.757 in^3
Radius of gyration (Rx)	2.209 in
Gross moment of inertia (Iy)	0.054 in^4
Gross radius of gyration (Ry)	0.335 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.234 in^2
Moment of inertia for deflection (Ix)	2.241 in^4
Section modulus (Sx)	0.592 in^3
Allowable bending moment (Ma)	17.74 in-k
Allowable shear force in web	2728 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.513 in^4
Warping constant (Cw)	0.384 in^6
Distance from shear center to neutral axis (Xo)	-0.508 in
Distance between shear center and web centerline (m)	0.332 in
Radii of gyration (Ro)	2.292 in
Torsional flexural constant (Beta)	0.951

ASTM & Code Standards

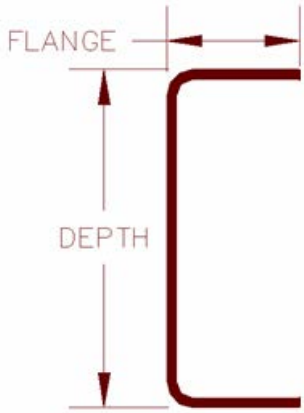
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **600T125-68 (50ksi, G60)**
68mils (14ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.250 in		
Leg width	1.25 in		
Design thickness	0.0713 in	Min. steel thickness	0.0677 in
Yield strength, Fy	50 ksi	*Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.605 in^2
Member weight per foot of length	2.06 lb/ft
Moment of inertia (Ix)	2.970 in^4
Section modulus (Sx)	0.951 in^3
Radius of gyration (Rx)	2.216 in
Gross moment of inertia (Iy)	0.067 in^4
Gross radius of gyration (Ry)	0.332 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.358 in^2
Moment of inertia for deflection (Ix)	2.934 in^4
Section modulus (Sx)	0.858 in^3
Allowable bending moment (Ma)	25.69 in-k
Allowable shear force in web	5350 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	1.025 in^4
Warping constant (Cw)	0.483 in^6
Distance from shear center to neutral axis (Xo)	-0.503 in
Distance between shear center and web centerline (m)	0.329 in
Radii of gyration (Ro)	2.296 in
Torsional flexural constant (Beta)	0.952

ASTM & Code Standards

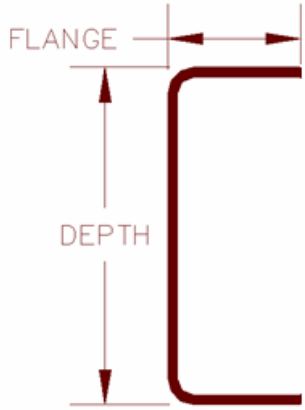
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **600T125-68 (50ksi, G90)**
68mils (14ga)
Coating: G90 per ASTM C955



Geometric Properties

Web depth	6.250 in		
Leg width	1.25 in		
Design thickness	0.0713 in	Min. steel thickness	0.0677 in
Yield strength, Fy	50 ksi	*Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.605 in^2
Member weight per foot of length	2.06 lb/ft
Moment of inertia (Ix)	2.970 in^4
Section modulus (Sx)	0.951 in^3
Radius of gyration (Rx)	2.216 in
Gross moment of inertia (Iy)	0.067 in^4
Gross radius of gyration (Ry)	0.332 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.358 in^2
Moment of inertia for deflection (Ix)	2.934 in^4
Section modulus (Sx)	0.858 in^3
Allowable bending moment (Ma)	25.69 in-k
Allowable shear force in web	5350 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	1.025 in^4
Warping constant (Cw)	0.483 in^6
Distance from shear center to neutral axis (Xo)	-0.503 in
Distance between shear center and web centerline (m)	0.329 in
Radii of gyration (Ro)	2.296 in
Torsional flexural constant (Beta)	0.952

ASTM & Code Standards

- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
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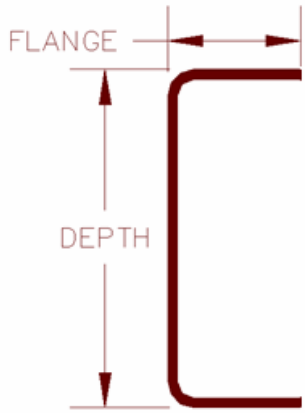
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T150 (1-1/2" Leg Structural Track)

Product Name: **600T150-33 (33ksi, G60)**
33mils (20ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.146 in		
Leg width	1.50 in		
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.311 in^2
Member weight per foot of length	1.058 lb/ft
Moment of inertia (Ix)	1.590 in^4
Section modulus (Sx)	0.517 in^3
Radius of gyration (Rx)	2.260 in
Gross moment of inertia (Iy)	0.057 in^4
Gross radius of gyration (Ry)	0.426 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.095 in^2
Moment of inertia for deflection (Ix)	1.023 in^4
Section modulus (Sx)	0.260 in^3
Allowable bending moment (Ma)	7.79 in-k
Allowable shear force in web	622 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.124 in^4
Warping constant (Cw)	0.384 in^6
Distance from shear center to neutral axis (Xo)	-0.691 in
Distance between shear center and web centerline (m)	0.436 in
Radii of gyration (Ro)	2.401 in
Torsional flexural constant (Beta)	0.918

ASTM & Code Standards

- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
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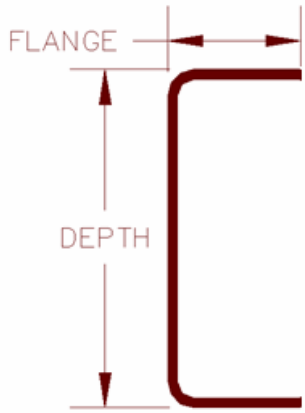
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T150 (1-1/2" Leg Structural Track)

Product Name: **600T150-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.161 in		
Leg width	1.50 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.405 in^2
Member weight per foot of length	1.379 lb/ft
Moment of inertia (Ix)	2.072 in^4
Section modulus (Sx)	0.672 in^3
Radius of gyration (Rx)	2.261 in
Gross moment of inertia (Iy)	0.073 in^4
Gross radius of gyration (Ry)	0.425 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.155 in^2
Moment of inertia for deflection (Ix)	1.518 in^4
Section modulus (Sx)	0.411 in^3
Allowable bending moment (Ma)	12.32 in-k
Allowable shear force in web	1377 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.275 in^4
Warping constant (Cw)	0.496 in^6
Distance from shear center to neutral axis (Xo)	-0.687 in
Distance between shear center and web centerline (m)	0.434 in
Radii of gyration (Ro)	2.400 in
Torsional flexural constant (Beta)	0.919

ASTM & Code Standards

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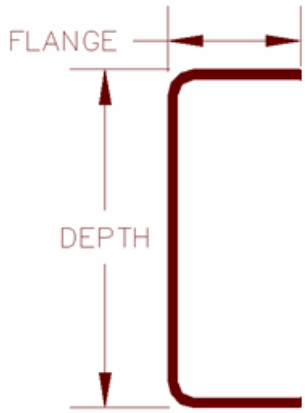
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T150 (1-1/2" Leg Structural Track)

Product Name: **600T150-54 (50ksi, G60)**
54mils (16ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	6.198 in		
Leg width	1.50 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	*Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.497 in^2
Member weight per foot of length	1.692 lb/ft
Moment of inertia (Ix)	2.413 in^4
Section modulus (Sx)	0.804 in^3
Radius of gyration (Rx)	2.202 in
Gross moment of inertia (Iy)	0.090 in^4
Gross radius of gyration (Ry)	0.426 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.237 in^2
Moment of inertia for deflection (Ix)	2.080 in^4
Section modulus (Sx)	0.645 in^3
Allowable bending moment (Ma)	19.32 in-k
Allowable shear force in web	2822 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.531 in^4
Warping constant (Cw)	0.574 in^6
Distance from shear center to neutral axis (Xo)	-0.695 in
Distance between shear center and web centerline (m)	0.434 in
Radii of gyration (Ro)	2.348 in
Torsional flexural constant (Beta)	0.919

ASTM & Code Standards

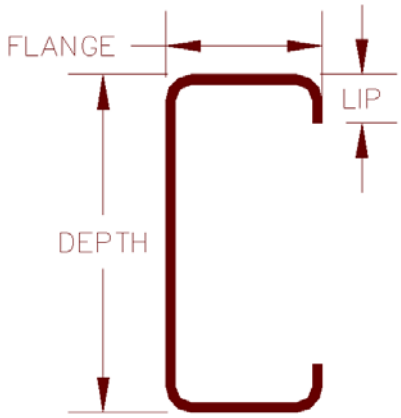
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **800S162-33 (33ksi, G60)**
33mils (20ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	8.000 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.413 in^2
Member weight per foot of length	1.41 lb/ft
Moment of inertia (Ix)	3.583 in^4
Section modulus (Sx)	0.856 in^3
Radius of gyration (Rx)	2.944 in
Gross moment of inertia (Iy)	0.125 in^4
Gross radius of gyration (Ry)	0.550 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.200 in^2
Moment of inertia for deflection (Ix)	3.169 in^4
Section modulus (Sx)	0.710 in^3
Allowable bending moment (Ma)	14.03 in-k
Allowable moment based on distortion buckling (Mad)	12.61 in-k
Allowable shear force in web (solid section)	474 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.165 in^4
Warping constant (Cw)	1.630 in^6
Distance from shear center to neutral axis (Xo)	-0.936 in
Radii of gyration (Ro)	3.138 in
Torsional flexural constant (Beta)	0.911

ASTM & Code Standards

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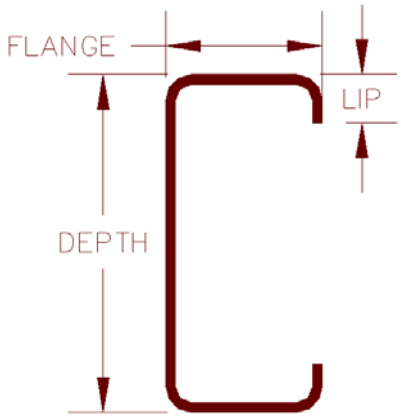
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **800S162-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	8.000 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.537 in^2
Member weight per foot of length	1.83 lb/ft
Moment of inertia (Ix)	4.635 in^4
Section modulus (Sx)	1.159 in^3
Radius of gyration (Rx)	2.938 in
Gross moment of inertia (Iy)	0.160 in^4
Gross radius of gyration (Ry)	0.546 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.294 in^2
Moment of inertia for deflection (Ix)	4.352 in^4
Section modulus (Sx)	1.019 in^3
Allowable bending moment (Ma)	20.141 in-k
Allowable moment based on distortion buckling (Mad)	18.34 in-k
Allowable shear force in web (solid section)	1051 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.364 in^4
Warping constant (Cw)	2.076 in^6
Distance from shear center to neutral axis (Xo)	-0.926 in
Radii of gyration (Ro)	3.128 in
Torsional flexural constant (Beta)	0.912

ASTM & Code Standards

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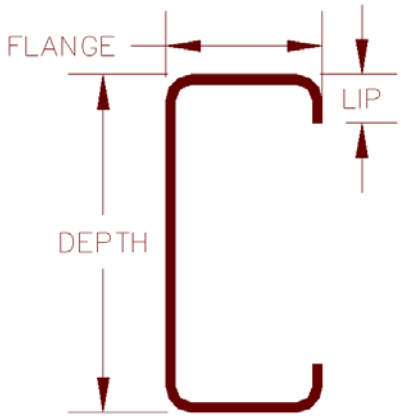
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **800S162-54 (50ksi, G60)**
54mils (16ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	8.000 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.670 in^2
Member weight per foot of length	2.28 lb/ft
Moment of inertia (Ix)	5.737 in^4
Section modulus (Sx)	1.434 in^3
Radius of gyration (Rx)	2.927 in
Gross moment of inertia (Iy)	0.194 in^4
Gross radius of gyration (Ry)	0.539 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.355 in^2
Moment of inertia for deflection (Ix)	5.295 in^4
Section modulus (Sx)	1.229 in^3
Allowable bending moment (Ma)	36.79 in-k
Allowable moment based on distortion buckling (Mad)	32.89 in-k
Allowable shear force in web (solid section)	2091 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.715 in^4
Warping constant (Cw)	2.539 in^6
Distance from shear center to neutral axis (Xo)	-0.914 in
Radii of gyration (Ro)	3.114 in
Torsional flexural constant (Beta)	0.914

ASTM & Code Standards

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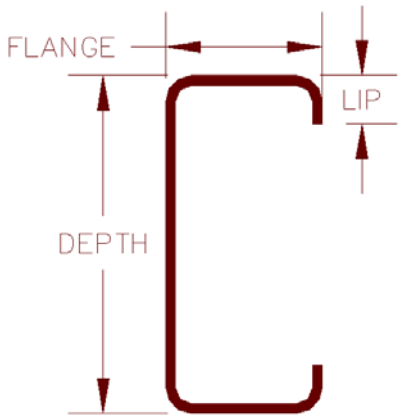
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: S162 (1-5/8" Flange Structural Stud)

Product Name: **800S162-68 (50ksi, G60)**
68mils (14ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	8.000 in		
Flange width	1.625 in		
Stiffening lip	0.500 in		
Design thickness	0.0713 in	Min. steel thickness	0.0677 in
Yield strength, Fy	50 ksi	Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.836 in^2
Member weight per foot of length	2.84 lb/ft
Moment of inertia (Ix)	7.092 in^4
Section modulus (Sx)	1.773 in^3
Radius of gyration (Rx)	2.913 in
Gross moment of inertia (Iy)	0.235 in^4
Gross radius of gyration (Ry)	0.530 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.503 in^2
Moment of inertia for deflection (Ix)	6.877 in^4
Allowable bending moment (Ma)	49.806 in-k
Allowable moment based on distortion buckling (Mad)	45.13 in-k
Allowable shear force in web (solid section)	4221 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	1.416 in^4
Warping constant (Cw)	3.093 in^6
Distance from shear center to neutral axis (Xo)	-0.899 in
Distance between shear center and web centerline (m)	0.586 in
Radii of gyration (Ro)	3.094 in
Torsional flexural constant (Beta)	0.916

ASTM & Code Standards

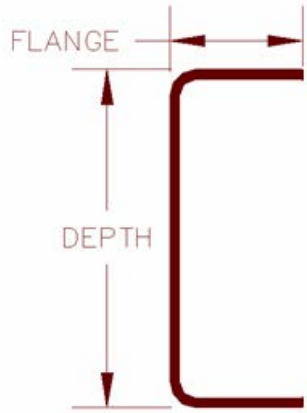
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation & storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **800T125-33 (33ksi, G60)**
33mils (20ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	8.146 in		
Leg width	1.25 in		
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.363 in^2
Member weight per foot of length	1.24 lb/ft
Moment of inertia (Ix)	2.897 in^4
Section modulus (Sx)	0.711 in^3
Radius of gyration (Rx)	2.824 in
Gross moment of inertia (Iy)	0.036 in^4
Gross radius of gyration (Ry)	0.313 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.114 in^2
Moment of inertia for deflection (Ix)	2.442 in^4
Section modulus (Sx)	0.407 in^3
Allowable bending moment (Ma)	8.03 in-k
Allowable shear force in web	465 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.145 in^4
Warping constant (Cw)	0.456 in^6
Distance from shear center to neutral axis (Xo)	-0.439 in
Distance between shear center and web centerline (m)	0.294 in
Radii of gyration (Ro)	2.875 in
Torsional flexural constant (Beta)	0.977

Note: Web-depth-to-thickness ratio exceeds 200. Web stiffeners are required at all support points and concentrated loads.

ASTM & Code Standards

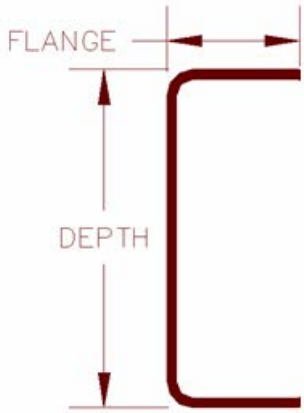
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **800T125-43 (33ksi, G60)**
43mils (18ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	8.161 in		
Leg width	1.25 in		
Design thickness	0.0451 in	Min. steel thickness	0.0428 in
Yield strength, Fy	33 ksi	*Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.473 in^2
Member weight per foot of length	1.61 lb/ft
Moment of inertia (Ix)	3.774 in^4
Section modulus (Sx)	0.925 in^3
Radius of gyration (Rx)	2.824 in
Gross moment of inertia (Iy)	0.046 in^4
Gross radius of gyration (Ry)	0.311 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.184 in^2
Moment of inertia for deflection (Ix)	3.484 in^4
Section modulus (Sx)	0.640 in^3
Allowable bending moment (Ma)	12.65 in-k
Allowable shear force in web	1030 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.321 in^4
Warping constant (Cw)	0.589 in^6
Distance from shear center to neutral axis (Xo)	-0.436 in
Distance between shear center and web centerline (m)	0.292 in
Radii of gyration (Ro)	2.875 in
Torsional flexural constant (Beta)	0.977

ASTM & Code Standards

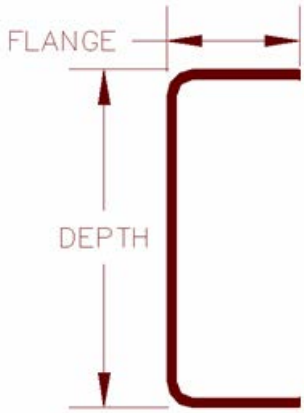
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **800T125-54 (50ksi, G60)**
54mils (16ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	8.198 in		
Leg width	1.25 in		
Design thickness	0.0566 in	Min. steel thickness	0.0538 in
Yield strength, Fy	50 ksi	*Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.594 in^2
Member weight per foot of length	2.02 lb/ft
Moment of inertia (Ix)	4.747 in^4
Section modulus (Sx)	1.158 in^3
Radius of gyration (Rx)	2.828 in
Gross moment of inertia (Iy)	0.057 in^4
Gross radius of gyration (Ry)	0.309 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.238 in^2
Moment of inertia for deflection (Ix)	4.427 in^4
Section modulus (Sx)	0.824 in^3
Allowable bending moment (Ma)	24.66 in-k
Allowable shear force in web	2039 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.634 in^4
Warping constant (Cw)	0.735 in^6
Distance from shear center to neutral axis (Xo)	-0.432 in
Distance between shear center and web centerline (m)	0.289 in
Radii of gyration (Ro)	2.877 in
Torsional flexural constant (Beta)	0.977

ASTM & Code Standards

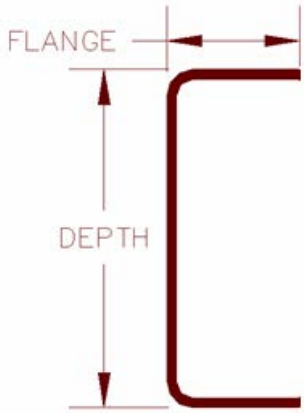
- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007

Product Submittal Sheet

Sales: (817) 591-0507
isf-global.com

Product Category: T125 (1-1/4" Leg Structural Track)

Product Name: **800T125-68 (50ksi, G60)**
68mils (14ga)
Coating: G60 per ASTM C955



Geometric Properties

Web depth	8.250 in		
Leg width	1.25 in		
Design thickness	0.0713 in	Min. steel thickness	0.0677 in
Yield strength, Fy	50 ksi	*Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.748 in^2
Member weight per foot of length	2.54 lb/ft
Moment of inertia (Ix)	6.000 in^4
Section modulus (Sx)	1.455 in^3
Radius of gyration (Rx)	2.833 in
Gross moment of inertia (Iy)	0.070 in^4
Gross radius of gyration (Ry)	0.307 in

Used in framing applications:

- **Load-bearing walls**
- **Curtain walls**
- **Tall interior walls**
- **Trusses**

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.365 in^2
Moment of inertia for deflection (Ix)	5.956 in^4
Section modulus (Sx)	1.216 in^3
Allowable bending moment (Ma)	36.40 in-k
Allowable shear force in web	4087 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	1.267 in^4
Warping constant (Cw)	0.920 in^6
Distance from shear center to neutral axis (Xo)	-0.427 in
Distance between shear center and web centerline (m)	0.286 in
Radii of gyration (Ro)	2.881 in
Torsional flexural constant (Beta)	0.978

ASTM & Code Standards

- AISI North American Specification [NASPEC] S100-07 with 2010 supplement
- Effective properties incorporate the strength increase from the cold work of forming
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- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- Keymark's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program
- For installation and storage information refer to ASTM C1007