

Framing • Structural • Cabinetry • Finishing • Specialty

CANADA 

FULL LINE CATALOGUE

GRK
FASTENERS™
ÜberGrade®



Drive with Speed, Quality and Confidence

What Makes Us ÜberGrade?



**RECESSED
STAR DRIVE**

Drive with Speed, Quality and Confidence



Zero Stripping, with (6) points of contact

CEE THREAD™

Enlarges hole to reduce splitting and install torque

W-CUT™

Low torque, smoother drive,
and reduce splitting

ZIP-TIP™

No pre-drilling,
faster penetration
and reduce splitting



**Case Hardened Steel for high tensile,
torque and shear strength.**

**Full breadth of line meeting remodeling and new
construction fastening needs for: Decks, Framing,
Trim, Cabinets, Windows, Doors and more.**

BUILDING CODE APPROVED—for structural use in treated lumber. GRK screws have been evaluated for structural and AC257 corrosion resistance to be in compliance with IBC/IRC specifications. That's why all our fasteners come with a limited lifetime warranty, so you can rest assured your installations will last the life of your project.



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Selection Guide

Fastener Selection Guide and Quick Reference Product Locator

Always build your project according to current ICC (International Code Council) specifications. GRK's Climatek™ coating meets or exceeds standards, including AC257, for use in various type of preservative treated wood.

Please view ICC Report #ESR-2442, ESR-3201 and ESR-3251 for more details. Visit <http://www.grkfasteners.com/index.php/en/techdata/code-approvals>.

No pre-drilling required for most GRK products, unless required or specified by building material. Always place deck boards with outer edge of growth rings facing up (bark side up). Do not use deck cleaners which contain bleach with coated metals. Consult building material supplier's/manufacturer's recommendations for exact instructions. Decking screws should be countersunk 1/8".



R4™ MULTI-PURPOSE FRAMING SCREWS:

Frame with ease and confidence. Multi-use screw for wood, particle board, sheet metal, cement fibre board, laminate and wood decking and melamine. They are self tapping eliminating pre-drilling featuring a countersinking head with cutting teeth, W-Cut™ for reducing splitting, CEE Thread™ for no splitting, reducing install torque and our Climatek™ AC257 code approved coating.

For Southern Yellow Pine use #10. For use in all applications including pressure treated lumber.

They are ESR code approved under ICC Report ESR-3201.



RSS™ RUGGED STRUCTURAL SCREWS:

Speedy lag bolt alternative with Immense drawing power. Ideal for use anywhere you would use a traditional lag screw and more, but with no pre-drilling required. For use in all applications including pressure treated lumber. They are self tapping eliminating pre-drilling featuring a washer head with cutting teeth, W-Cut™ for reducing torque, CEE Thread™ for no splitting, reducing install torque and our Climatek™ AC257 code approved coating. They are ESR code approved under ICC Report ESR-2442.

RSS™ JTS: Joist & Truss Fastener: Used for joists and trusses.

RSS™ LTF: Timber Frame Fastener: Designed specifically for the Log Home & Timber frame market.



KAMELEON™ COMPOSITE DECK SCREWS:

Heads blend in with decking with no mushrooming effect. Use in plastic or composite decking. They come in a variety of deck matching colours of which Grey, Brown and Tan are approved for use with Trex Select™ deck boards.

The Kameleon screws are self tapping featuring fibre trapping rings, a countersinking head with cutting teeth, CEE Thread™, W-Cut™ threads for reduced torque and our Climatek™ AC257 code approved coating. They are ESR code approved under ICC Report ESR-3201.



FIN/TRIM™ TRIM HEAD SCREWS:

Smallest head on the market for a clean finish. Perfect for all interior and exterior finishing applications including deck rails, exterior wood trim, stairs, banisters, window and door trim, base boards, crown moulding and joining cabinets. For use in all applications including pressure treated lumber.

They are self-tapping eliminating pre-drilling featuring the W-Cut™ threads for reduced torque, and our Climatek™ AC257 code approved coating. They are ESR code approved under ICC Report ESR-3201.

RT COMPOSITE™ TRIM HEAD SCREWS:

Reverse thread design prevent mushrooming for a clean finish. Engineered for use in exterior applications including classic composite trim and decking, cPVC trim and moulding. For use in all applications including pressure treated lumber. RT™ Composite Trim screws are self-tapping eliminating pre-drilling featuring the W-Cut™ threads for reduced torque, and our Climatek™ AC257 code approved coating. They are ESR code approved under ICC Report ESR-3201.



LOW PROFILE CABINET™ SCREWS:

Built in washer head presses in flush against any material. Used for cabinet and vinyl siding installation. These unique screws are thin enough to prevent most material splitting, while providing sufficient strength to guarantee a secure installation.

They are self tapping eliminating pre-drilling featuring the W-Cut™ threads for reduced torque and our Climatek™ AC257 code approved coating.



TOP STAR™ SHIM SCREWS:

For plumb installation of wooden door and window frames. No more shims! Other uses include cabinets, insulation, paneling and built-in-wall units.

The two-piece “unique screw within a screw” design reduces labour when installing wooden doors or windows. A unique 2 piece crown/bit allows for quick and easy driving.



CALIBURN™ SCREWS:

Heavy duty concrete and masonry fastener. For attaching a variety of materials and fixtures to concrete. Easy driving high carbon steel allows the screws to create threads while being driven into the concrete. Proper pre-drilling with correct drill bit required. Caliburn™ screws are Climatek™ AC257 code approved coating.

Caliburn Screw: Tapered concrete screw for securing wood.

Caliburn™ PH Screw: Pan head concrete screw for a more aesthetic look

Caliburn™ XL Screws: Washer head style concrete screw for strong connections



Multi-Purpose Framing Screws
Frame with Ease and Confidence



DESCRIPTION/SUGGESTED SPECIFICATIONS

Multi-Purpose Framing Screws—

GRK's R4™ self-countersinking screw has a patented underhead with saw-blade like cutting teeth and six self-contained cutting pockets. Together they act similar to a circular saw-blade, transporting the drill dust away from the edge of the screw hole while cutting a perfectly clean hole into even the most brittle materials without cracking any surface treatment.

ÜberGrade™

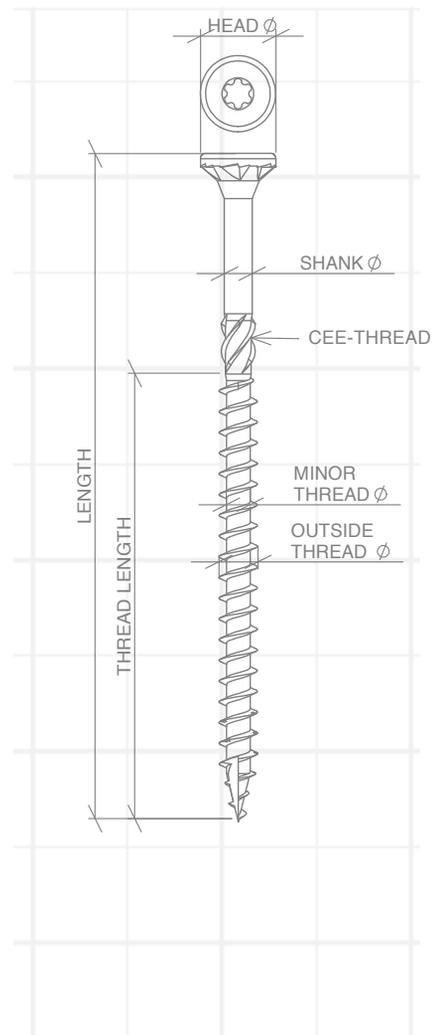


This design enhances the R4™'s versatility by allowing the fastener to countersink into even the hardest woods. The head of the screw closes the hole off with precision, leaving no damaged fibres around the head.

R4™ screws 2" and longer have a four threaded CEE Thread. This enlarges the screw hole for the non-threaded portion of the fastener, allowing the wood to settle easily. It increases the screw's drawing strength and reduces the friction on the screw shank that lowers the driving torque.

ADVANTAGES

- **Recessed Star Drive:** Zero Stripping, with 6 points of contact.
- **CEE Thread:** Enlarges hole to reduce splitting, install torque.
- **W-Cut™:** Low torque, smoother drive, reduce splitting.
- **Zip-Tip™:** No pre-drilling, faster penetration, reduce splitting.
- **Cutting Pockets:** provide a clean hole, reduces splitting, and bore with precision.
- **ESR-3201 Approved** for structural application.
- **Case Hardened Steel:** for high tensile, torque and shear strength.
- **Climatek™ Coating** is AC257 code approved for use in treated lumber.
- For interior/exterior use in; wood, plastic, cement fibre board, particle board, sheet metal, wood decking and melamine.



APPROVALS/LISTING



APPLICATIONS



SELECTION CHART



T-15



T-25



T-25



T-25

U.S. (STD.) SIZE (DIA. X LENGTH)	METRIC SIZE (DIA. X LENGTH)	BULK PART NO.	BULK BOX QTY.	PRO-PAK PART NO.	PRO-PAK PAIL QTY.	HANDY-PAK PART NO.	HANDY-PAK CTN. SIZE/QTY.
#8 x 1-1/2"	4.0 x 40			01073	1,000		
#8 x 2"	4.0 x 50			01077	850	02077	S/100
#9 x 1-3/4"	4.5 x 45					02097	S/100
#9 x 2"	4.5 x 50	00099	3,700	01099	690		
#9 x 2-1/2"	4.5 x 63	00101	2,900	01101	575	02101	M/100
#9 x 2-3/4"	4.5 x 70			01103	480		M/100
#9 x 3-1/8"	4.5 x 80	00105	1,900	01105	425	02105	M/100
#10 x 2-1/2"	5.0 x 63	00133	2,500	01133	470		
#10 x 2-3/4"	5.0 x 70	00135	2,000				
#10 x 3-1/8"	5.0 x 80	00137	1,500	01137	350	02137	M/100
#10 x 3-1/2"	5.0 x 90	00139	1,200	01139	300	02139	M/50
#10 x 4"	5.0 x 100	00141	1,000	01141	270	02141	M/50
#10 x 4-3/4"	5.0 x 120	00143	800	01143	230	02143	M/50
#12/14 x 4"	6.0 x 100	00165	800				
#12/14 x 5-5/8"	6.0 x 140	00173	600			02173	M/50
#12/14 x 6-3/8"	6.0 x 160	00177	1,000			02177	M/9
#12/14 x 7-1/4"	6.0 x 180	00179	1,000			02179	M/9
#12/14 x 8"	6.0 x 200	00181	500			02181	M/9
#12/14 x 10"	6.0 x 250					02187	M/12
#12/14 x 12"	6.0 x 300					02193	M/12

2" bit included in Pro-Paks, 1" bits in Handy-Paks.

*Does not come with the Zip-Tip™ feature. **NOTE:** Pro-Paks need to be ordered in multiples of two.

**Rugged Structural
Screws**
**Speedy Lag Bolt
Alternative with
Immense Drawing
Power**



APPROVALS/LISTING



DESCRIPTION/SUGGESTED SPECIFICATIONS

Rugged Structural Screws—

GRK's RSS™ screw is made of specially hardened steel to provide you with high tensile, torque and shear strength. The sharp threads and points bite instantly into the material (including hardwood), reducing the splitting effect due to smaller shanks.

RSS™ screws that are 3" 1/8" and longer have CEE Threads which enlarge the screw hole for the non-threaded portion of the fastener, allowing the wood to settle easily and increases the screw's drawing strength. The CEE Thread also reduces the friction on the screw shank which can result in lowering the driving torque and the likelihood of splitting the wood. This is why the RSS™ screw is an efficient lag screw alternative.

ÜberGrade™

Our round head with built-in shield (washer type head) has no sharp edges like conventional lag screws. The added shoulder (nominal diameter) underneath the washer has the ability to center the RSS™ screw in pre-drilled hardware like hinges and connector plates.



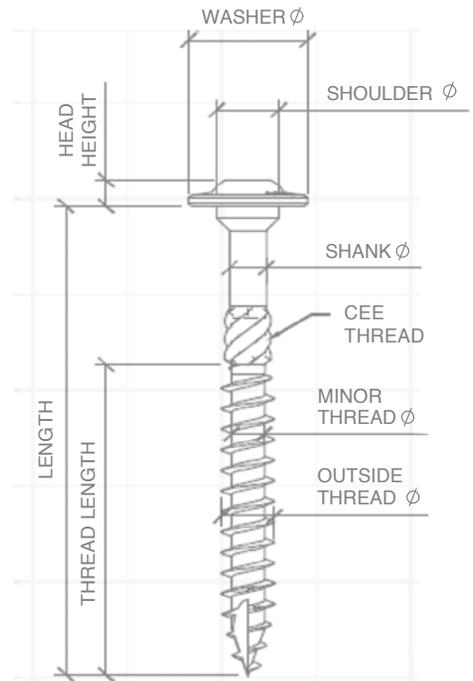
RSS™ JTS - Used for joists and trusses

RSS™ LTF - Designed for log home and timber frame

ADVANTAGES

- **Recessed Star Drive:** Zero Stripping, with 6 points of contact.
- **CEE Thread:** Enlarges hole to reduce splitting, install torque.
- **W-Cut™:** Low torque, smoother drive, reduce splitting.
- **Zip-Tip™:** No pre-drilling, faster penetration, reduce splitting.
- **Washer Head:** for immense holding power.
- **Cutting Pockets:** provide a clean hole, reduces splitting, and bore with precision.
- **ESR-2442 Approved** for structural application.
- **Case Hardened Steel:** for high tensile, torque and shear strength.
- **Climatek™ Coating is AC257** code approved for use in treated lumber.
- For interior/exterior use in; carrying beams, ledger boards, stair rails, deck posts, playground equipment and other professional applications.
- **Advantages:** Factored Resistances as per

CSA 086-14



SELECTION CHART



T-25



T-25



T-30



T-40



T-25



T-40

SHANK DIAMETER	THREAD DIAMETER	LENGTH	BULK PART NO.	BULK BOX QTY.	PRO-PAK PART NO.	PRO-PAK PAIL QTY.	HANDY-PAK PART NO.	HANDY-PAK CTN. SIZE/QTY.
0.138	0.194 (#10)	1-1/2"	10127*	2,300				
		2-3/4"	10135	1,000				
		3-1/8"	10137	800			12137	M/50
0.169	0.25 (1/4)	1-1/2"	10151*	1,000			12151	M/50
		2"	10155*	800			12155	M/50
		2-1/2"	10157	700			12157	M/50
		3-1/8"	10161	500			12161	M/50
		3-1/2"	10163	400			12163	M/50
0.1988	0.3125 (5/16)	2-1/2"	10217	600	12217	100		
		2-3/4"	10219	500	12219	100		
		3-1/8"	10221	500	12221	100		
		3-1/2"	10223	500	12223	100		
		4"	10225	400	12225	100		
		5-1/8"	10231	300	12231	50		
0.2228	0.375 (3/8")	6"	10235	300	12235	50		
		3-1/8"	10273	400	12273	50		
		4"	10275	400	12275	50		
		5-1/8"	10278	300	12278	50		
		6"	10281	300	12281	50		
		7-1/4"	10285	200	12285	50		
		8"	10287	300	12287	50		
		10"	10293	300	12293	50		
0.173	0.25 (1/4)	3-3/8"	91727†	400				
		5"	91735	300				
0.22	0.31 (3/8)	8"	91287	300			93287	M/50
		10"	91293	300			93293	M/50
		12"	91299	300			93299	M/50
		15"	91308	300			93308	M/50
		20"					93323	M/25

RSS™ JTS – JOIST AND TRUSS SCREW

RSS™ LTF – TIMBER FRAME SCREW

RSS™ BLISTER-PAK				
SHANK DIAMETER	THREAD DIAMETER	LENGTH	Part No.	QTY
0.1988	0.3125 (5/16)	3-1/8"	13221	15
		4"	13225	12
		5-1/8"	13231	10
		6"	13235	8

RSS™ SMALLER HANDY-PAK				
SHANK DIAMETER	THREAD DIAMETER	LENGTH	Part No.	QTY
0.1988	0.3125 (5/16)	3-1/8"	14221	M/25
		4"	14225	M/25
		5-1/8"	14231	M/20
		6"	14235	M/20

NOTE: Pro-Paks need to be ordered in multiples of two.

*Does not come with the Zip-Tip™ feature. †Does not have the added CEE-THREAD™ feature. 2" bit included in Pro-Paks, 1" bits in Handy-Paks.

Conversion Guide

GRK RSS vs. Lag Bolt

No more
pre-drilling...
Just grab a screw
and drill!!

Convert from a lag screw to GRK RSS Fasteners

PERFORMANCE DATA

(Compliant for use with Canadian National Building Code)

FACTORED RESISTANCES PERFORMANCE COMPARISON FOR D.FIR MEMBERS^(1,2,3,4,5)
APPLICATION: 2" LEDGER BOARD TO 2" RIM BOARD (LBS)

LAG SCREWS				GRK SCREWS		
LAG SIZE	LENGTH	SHEAR RESISTANCE	PULL-OUT	TYPE OF SCREW	SHEAR RESISTANCE	PULL-OUT
1/4"	3	171	360	GRK RSS (3") (10273)	366	517
1/4"	4	200	360	GRK RSS (4") (10275)	466	517
3/8"	3	249	618	GRK RSS (3") (10273)	366	517
3/8"	4	322	618	GRK RSS (4") (10275)	466	517
1/2"	3	320	779	GRK RSS (3") (10273)	366	517
1/2"	4	427	779	GRK RSS (4") (10275)	466	517
5/8"	3	385	920	GRK RSS (3") (10273)	366	517
5/8"	4	513	920	GRK RSS (4") (10275)	466	517

¹ Lag Screw Factored Resistances have been developed in accordance with 12.6 CSA 086-14. Apply adjustment factors where applicable.

² Factored withdrawn resistance shown assume the entire threaded portion of the screw is installed in to the main member

³ Minimum spacing, edge and end distances shall be in accordance with 12.6 .2 CSA 086-14

⁴ GRK RSS Screw spacing must comply with 12.11.5 CSA 086-14 (See Spacing Tables)

⁵ Dimensions of Lag screw based on Table 15 & 16 ASME B18.2.1-2012

EXAMPLE DECK DESIGN: ATTACHING LEDGER BOARD TO YOUR HOUSE!

Assumptions:

- Deck Span = 8' out from the house
- 10' Wide
- LL = 40 PSF; DL = 10 PSF

Total lateral resistance required = 2900 lbs

Possible Solutions:

Using 1/4" by 3" Lag Bolts = $2900 / 242 = 12$ lags

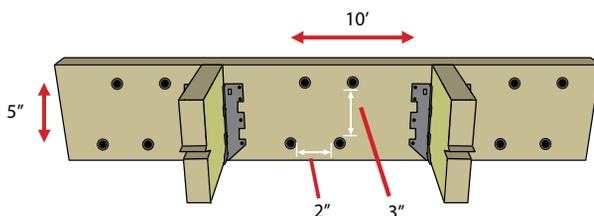
Using 3/8" by 3" Lag Bolts = $2900 / 249 = 12$ Lags (see example below)

Using 1/2" by 3" Lag Bolts = $2900 / 320 = 9$

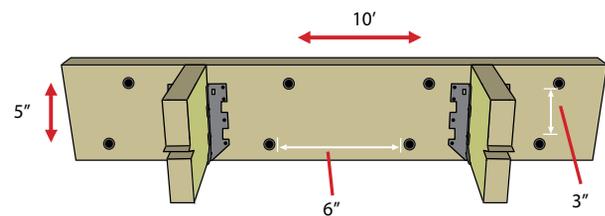
Using 5/8" by 3" Lag Bolts = $2900 / 385 = 8$

Using 3/8" * 3.125 RSS = $2900 / 366 = 8$ screws (see example below)

LAG SOLUTION: 12 LAG SCREWS



RSS SOLUTION: 8 RSS SCREWS¹ NO PRE-DRILLING



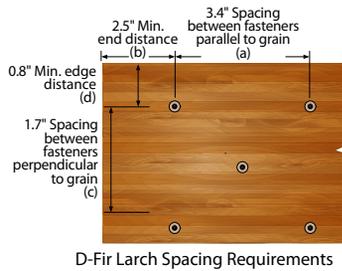
¹ RSS Spacing must comply with 12.11.5 CSA 086-14

Technical Data

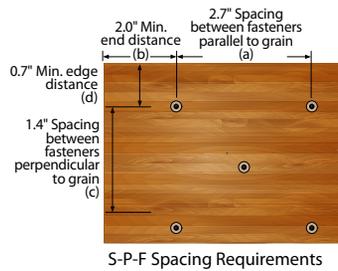
GRK RSS Spacings

MINIMUM ROW SPACING, SPACING IN ROW AND EDGE DISTANCES AS SPECIFIED IN CLAUSE 12.11.2 CSA 086 2016.

SCREW THREAD DIAMETER (IN.)	SCREW SHANK DIAMETER (IN.)	GEOMETRY	MINIMUM DIMENSIONS (in)	
			D. FIR-L	S-P-F
1/4	0.169	a - Spacing parallel to grain	3.4	2.7
		b - End distance parallel to grain	2.5	2.0
		c - Spacing perpendicular to grain	1.7	1.4
		d - Edge distance perpendicular to grain	0.8	0.7

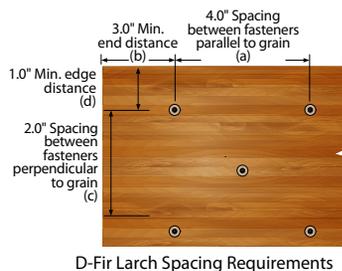


D-Fir Larch Spacing Requirements

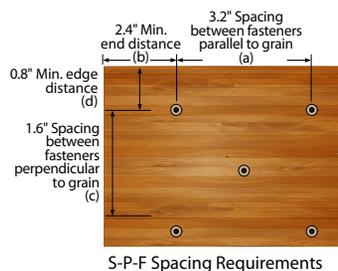


S-P-F Spacing Requirements

SCREW THREAD DIAMETER (IN.)	SCREW SHANK DIAMETER (IN.)	GEOMETRY	MINIMUM DIMENSIONS (in)	
			D. FIR-L	S-P-F
5/16	0.1988	a - Spacing parallel to grain	4.0	3.2
		b - End distance parallel to grain	3.0	2.4
		c - Spacing perpendicular to grain	2.0	1.6
		d - Edge distance perpendicular to grain	1.0	0.8

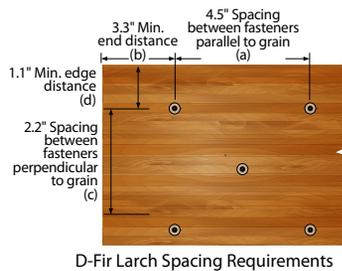


D-Fir Larch Spacing Requirements

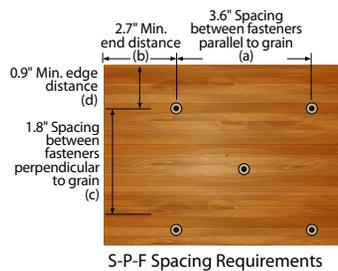


S-P-F Spacing Requirements

SCREW THREAD DIAMETER (IN.)	SCREW SHANK DIAMETER (IN.)	GEOMETRY	MINIMUM DIMENSIONS (in)	
			D. FIR-L	S-P-F
3/8	0.2228	a - Spacing parallel to grain	4.5	3.6
		b - End distance parallel to grain	3.3	2.7
		c - Spacing perpendicular to grain	2.2	1.8
		d - Edge distance perpendicular to grain	1.1	0.9



D-Fir Larch Spacing Requirements



S-P-F Spacing Requirements

1. Table values have been developed in accordance to Clause 12.6.2.6 CSA 086 2016. Designer to note additional provision in Clause 12 in CSA 086 2016 for service conditions and other factors affecting connection layout and capacity.

RSS™ Rugged Structural Screws

Factored Resistances (RSS 1/4")

FACTORED RESISTANCES FOR D.FIR MEMBERS

MODEL/ BULK PART NO.	SIZE		SHANK DIAMETER	THREADED LENGTH (in)	D-FIR-L											
	THREAD DIA (in)	LENGTH (in)			FACTORED LATERAL RESISTANCE WOOD SIDE MEMBER THICKNESS (in)										FACTORED WITHDRAWAL	
					1.5	2	2.5	3	3.5	4	4.5	5	6	8		
					LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.		LB.
kN	kN	kN	kN	kN	kN	kN	kN	kN	kN	kN	kN					
10217	1/4	2.5	0.169	1.5	230*	---	---	---	---	---	---	---	---	---	332	
					1.02*	---	---	---	---	---	---	---	---	---	1.48	
22400		3.125		2	287	259	---	---	---	---	---	---	---	---	457	
					1.28	1.15	---	---	---	---	---	---	---	---	2.03	
10163		3.5		2.75	2.75	305	305	230*	---	---	---	---	---	---	---	646
						1.36	1.36	1.02*	---	---	---	---	---	---	---	2.87

FACTORED RESISTANCES FOR S-P-F MEMBERS (LBS)

MODEL/ BULK PART NO.	SIZE		SHANK DIAMETER	THREADED LENGTH (in)	SPF											
	THREAD DIA (in)	LENGTH (in)			FACTORED LATERAL RESISTANCE WOOD SIDE MEMBER THICKNESS (in)										FACTORED WITHDRAWAL	
					1.5	2	2.5	3	3.5	4	4.5	5	6	8		
					LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.		LB.
kN	kN	kN	kN	kN	kN	kN	kN	kN	kN	kN	kN					
10217	1/4	2.5	0.169	1.5	197*	---	---	---	---	---	---	---	---	---	253	
					0.88*	---	---	---	---	---	---	---	---	---	1.12	
22400		3.125		2	246	222	---	---	---	---	---	---	---	---	348	
					1.10	0.99	---	---	---	---	---	---	---	---	1.55	
10163		3.5		2.75	2.75	268	268	197*	---	---	---	---	---	---	---	491
						1.19	1.19	0.88*	---	---	---	---	---	---	---	2.19

¹ End-grain installation is not permitted.

² Factored lateral resistances shown have been developed in accordance with Clause 12.11 CSA O86 2016 **Wood Screw** provisions. Values must be multiplied by all applicable modification factors as specified for **wood screws** in accordance with CSA O86 2016.

³ Factored lateral resistances according to Clause 12.6 CSA O86 2016 **Lag Screw** provisions can be obtained upon request. Please contact ITW Canada for more information. Designer to note provisions for net area and group of fasteners per Clause 12 in CSA O86 2016.

⁴ Factored withdrawal resistances shown have been developed in accordance with Clause 12.6 CSA O86 2016 **Lag Screw** provisions. Values must be multiplied by all applicable modification factors as specified for **lag screws** in accordance with CSA O86 2016.

⁵ Factored withdrawal resistances shown assume the entire threaded portion of the screw is installed into the main member. This accounts for the tip length reduction as per 12.6 CSA O86 2016 **Lag Screw** provisions.

⁶ Minimum row spacing, spacing in row and edge distances shall be as specified in Clause 12.6.2.6 CSA O86 2016. Designer to note additional provision in Clause 12 in CSA O86 2016 for service conditions and other factors affecting connection layout and capacity. The minimum spacing table can be used for reference.

*The penetration length is less than the minimum as per Lag Screw provision but it meets the penetration length according to the Wood Screw provision on Clause 12 of CSA O86 2016. See footnote 6.

⁷ Convert inches to millimetres by multiplying the value by 25.4 (1 in. = 25.4 mm).

Factored Resistances (RSS 5/16")

FACTORED RESISTANCES FOR D.FIR MEMBERS

MODEL/ BULK PART NO.	SIZE		SHANK DIAMETER	THREADED LENGTH (in)	D-FIR-L										FACTORED WITHDRAWAL
	THREAD DIA (in)	LENGTH (in)			FACTORED LATERAL RESISTANCE WOOD SIDE MEMBER THICKNESS (in)										
					1.5	2	2.5	3	3.5	4	4.5	5	6	8	
					LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	
kN	kN	kN	kN	kN	kN	kN	kN	kN	kN	kN	kN				
10217	5/16	2.5	0.1988	1.5	268*	---	---	---	---	---	---	---	---	---	378
					1.19*	---	---	---	---	---	---	---	---	---	1.68
10219		2.75		1.75	295	---	---	---	---	---	---	---	---	---	449
					1.31	---	---	---	---	---	---	---	---	---	2.00
10221		3.125		2.125	335	302*	---	---	---	---	---	---	---	---	556
					1.49	1.34*	---	---	---	---	---	---	---	---	2.47
10223		3.5		2.5	376	376	268*	---	---	---	---	---	---	---	664
					1.67	1.67	1.19*	---	---	---	---	---	---	---	2.95
10225		4		2.75	404	429	402	268*	---	---	---	---	---	---	735
					1.80	1.91	1.79	1.19*	---	---	---	---	---	---	3.27
10231	5.125	3.5	404	459	488	472	418	302*	---	---	---	---	949		
			1.80	2.04	2.17	2.10	1.86	1.34*	---	---	---	---	4.22		
10235	6	3.875	404	459	488	488	488	459	402	268*	---	---	1056		
			1.80	2.04	2.17	2.17	2.17	2.04	1.79	1.19*	---	---	4.70		

FACTORED RESISTANCES FOR S-P-F MEMBERS (LBS)

MODEL/ BULK PART NO.	SIZE		SHANK DIAMETER	THREADED LENGTH (in)	SPF										FACTORED WITHDRAWAL
	THREAD DIA (in)	LENGTH (in)			FACTORED LATERAL RESISTANCE WOOD SIDE MEMBER THICKNESS (in)										
					1.5	2	2.5	3	3.5	4	4.5	5	6	8	
					LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	
kN	kN	kN	kN	kN	kN	kN	kN	kN	kN	kN	kN				
10217	5/16	2.5	0.1988	1.5	230*	---	---	---	---	---	---	---	---	---	288
					1.02*	---	---	---	---	---	---	---	---	---	1.28
10219		2.75		1.75	253	---	---	---	---	---	---	---	---	---	342
					1.13	---	---	---	---	---	---	---	---	---	1.52
10221		3.125		2.125	287	259*	---	---	---	---	---	---	---	---	454
					1.28	1.15*	---	---	---	---	---	---	---	---	1.88
10223		3.5		2.5	322	322	230*	---	---	---	---	---	---	---	505
					1.43	1.43	1.02*	---	---	---	---	---	---	---	2.25
10225		4		2.75	357	368	345	230*	---	---	---	---	---	---	559
					1.59	1.64	1.53	1.02*	---	---	---	---	---	---	2.49
10231	5.125	3.5	357	403	439	415	369	259*	---	---	---	---	723		
			1.59	1.79	1.95	1.85	1.64	1.15*	---	---	---	---	3.21		
10235	6	3.875	357	403	439	439	439	403	345	230*	---	---	804		
			1.59	1.79	1.95	1.95	1.95	1.79	1.53	1.02*	---	---	3.58		

¹ End-grain installation is not permitted.

² Factored lateral resistances shown have been developed in accordance with Clause 12.11 CSA O86 2016 **Wood Screw** provisions. Values must be multiplied by all applicable modification factors as specified for **wood screws** in accordance with CSA O86 2016.

³ Factored lateral resistances according to Clause 12.6 CSA O86 2016 **Lag Screw** provisions can be obtained upon request. Please contact ITW Canada for more information. Designer to note provisions for net area and group of fasteners per Clause 12 in CSA O86 2016.

⁴ Factored withdrawal resistances shown have been developed in accordance with Clause 12.6 CSA O86 2016 **Lag Screw** provisions. Values must be multiplied by all applicable modification factors as specified for **lag screws** in accordance with CSA O86 2016.

⁵ Factored withdrawal resistances shown assume the entire threaded portion of the screw is installed into the main member. This accounts for the tip length reduction as per 12.6 CSA O86 2016 **Lag Screw** provisions.

⁶ Minimum row spacing, spacing in row and edge distances shall be as specified in Clause 12.6.2.6 CSA O86 2016. Designer to note additional provision in Clause 12 in CSA O86 2016 for service conditions and other factors affecting connection layout and capacity. The minimum spacing table can be used for reference.

*The penetration length is less than the minimum as per Lag Screw provision but it meets the penetration length according to the Wood Screw provision on Clause 12 of CSA O86 2016. See footnote 6.

⁷ Convert inches to millimetres by multiplying the value by 25.4 (1 in. = 25.4 mm).

Factored Resistances (RSS 3/8")

FACTORED RESISTANCES FOR D.FIR MEMBERS

MODEL/ BULK PART NO.	SIZE		SHANK DIAMETER	THREADED LENGTH (in)	D-FIR-L											
	THREAD DIA (in)	LENGTH (in)			FACTORED LATERAL RESISTANCE WOOD SIDE MEMBER THICKNESS (in)										FACTORED WITHDRAWAL	
					1.5	2	2.5	3	3.5	4	4.5	5	6	8		
					LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.		LB.
kN	kN	kN	kN	kN	kN	kN	kN	kN	kN	kN	kN					
10273	3/8	3.125	0.2228	1.5	373	336*	---	---	---	---	---	---	---	---	403	
					1.66	1.50*	---	---	---	---	---	---	---	---	---	1.79
10275		4		2.75	474	478	448	---	---	---	---	---	---	---	---	791
					2.11	2.13	1.99	---	---	---	---	---	---	---	---	3.52
10278		5.125		3.5	474	534	590	549	486	336*	---	---	---	---	---	1024
					2.11	2.37	2.62	2.44	2.16	1.50*	---	---	---	---	---	4.56
10281		6		4	474	534	590	590	590	534	448	---	---	---	---	1180
					2.11	2.37	2.62	2.62	2.62	2.37	1.99	---	---	---	---	5.25
10285		7.25		4.5	474	534	590	590	590	590	590	564	373*	---	---	1335
					2.11	2.37	2.62	2.62	2.62	2.62	2.62	2.51	1.66*	---	---	5.94
10287		8		4.375	474	534	590	590	590	590	590	590	534	---	---	1335
					2.11	2.37	2.62	2.62	2.62	2.62	2.62	2.62	2.37	---	---	5.94
10293		10		5	474	534	590	590	590	590	590	590	590	534	---	1490
					2.11	2.37	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.37	---	6.63
10299		12		5.875	474	534	590	590	590	590	590	590	590	590	---	1762
					2.11	2.37	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	---	7.84
10307	14.125	5.875	474	534	590	590	590	590	590	590	590	590	---	1762		
			2.11	2.37	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	---	7.84		
10311	16	5.75	474	534	590	590	590	590	590	590	590	590	---	1762		
			2.11	2.37	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	---	7.84		

¹ End-grain installation is not permitted.

² Factored lateral resistances shown have been developed in accordance with Clause 12.11 CSA 086 2016 **Wood Screw** provisions. Values must be multiplied by all applicable modification factors as specified for **wood screws** in accordance with CSA 086 2016.

³ Factored lateral resistances according to Clause 12.6 CSA 086 2016 **Lag Screw** provisions can be obtained upon request. Please contact ITW Canada for more information. Designer to note provisions for net area and group of fasteners per Clause 12 in CSA 086 2016.

⁴ Factored withdrawal resistances shown have been developed in accordance with Clause 12.6 CSA 086 2016 **Lag Screw** provisions. Values must be multiplied by all applicable modification factors as specified for **lag screws** in accordance with CSA 086 2016.

⁵ Factored withdrawal resistances shown assume the entire threaded portion of the screw is installed into the main member. This accounts for the tip length reduction as per 12.6 CSA 086 2016 **Lag Screw** provisions.

⁶ Minimum row spacing, spacing in row and edge distances shall be as specified in Clause 12.6.2.6 CSA 086 2016. Designer to note additional provision in Clause 12 in CSA 086 2016 for service conditions and other factors affecting connection layout and capacity. The minimum spacing table can be used for reference.

*The penetration length is less than the minimum as per Lag Screw provision but it meets the penetration length according to the Wood Screw provision on Clause 12 of CSA 086 2016. See footnote 6.

⁷ Convert inches to millimetres by multiplying the value by 25.4 (1 in. = 25.4 mm).

Factored Resistances (RSS 3/8") continued on page G 15

Factored Resistances (RSS 3/8")

FACTORED RESISTANCES FOR S-P-F MEMBERS (LBS)

MODEL/ BULK PART NO.	SIZE		SHANK DIAMETER	THREADED LENGTH (in)	SPF												
	THREAD DIA (in)	LENGTH (in)			FACTORED LATERAL RESISTANCE WOOD SIDE MEMBER THICKNESS (in)										FACTORED WITHDRAWAL		
					1.5	2	2.5	3	3.5	4	4.5	5	6	8			
					LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.	LB.		LB.	
kN	kN	kN	kN	kN	kN	kN	kN	kN	kN	kN	kN						
10273	3/8	3.125	0.2228	1.5	320	288*	---	---	---	---	---	---	---	---	---	307	
					1.42	1.28*	---	---	---	---	---	---	---	---	---	1.37	
10275		4		2.75	410	410	410	---	---	---	---	---	---	---	---	---	602
					1.82	1.82	1.82	---	---	---	---	---	---	---	---	2.68	
10278		5.125		3.5	419	470	521	483	416	288*	---	---	---	---	---	---	780
					1.86	2.09	2.32	2.15	1.85	1.28*	---	---	---	---	---	3.47	
10281		6		4	419	470	521	531	521	470	384	---	---	---	---	---	898
					1.86	2.09	2.32	2.36	2.32	2.09	1.71	---	---	---	---	3.99	
10285		7.25		4.5	419	470	521	531	531	531	531	496	320*	---	---	---	1016
					1.86	2.09	2.32	2.36	2.36	2.36	2.36	2.36	2.21	1.42*	---	---	4.52
10287		8		4.375	419	470	521	531	531	531	531	531	470	---	---	---	1016
					1.86	2.09	2.32	2.36	2.36	2.36	2.36	2.36	2.36	2.09	---	---	4.52
10293	10	5	419	470	521	531	531	531	531	531	531	531	470	---	1134		
			1.86	2.09	2.32	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.09	---	5.04		
10299	12	5.875	419	470	521	531	531	531	531	531	531	531	531	---	1341		
			1.86	2.09	2.32	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	---	5.96		
10307	14.125	5.875	419	470	521	531	531	531	531	531	531	531	531	---	1341		
			1.86	2.09	2.32	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	---	5.96		
10311	16	5.75	419	470	521	531	531	531	531	531	531	531	531	---	1341		
			1.86	2.09	2.32	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	---	5.96		

¹ End-grain installation is not permitted.

² Factored lateral resistances shown have been developed in accordance with Clause 12.11 CSA 086 2016 **Wood Screw** provisions. Values must be multiplied by all applicable modification factors as specified for **wood screws** in accordance with CSA 086 2016.

³ Factored lateral resistances according to Clause 12.6 CSA 086 2016 **Lag Screw** provisions can be obtained upon request. Please contact ITW Canada for more information. Designer to note provisions for net area and group of fasteners per Clause 12 in CSA 086 2016.

⁴ Factored withdrawal resistances shown have been developed in accordance with Clause 12.6 CSA 086 2016 **Lag Screw** provisions. Values must be multiplied by all applicable modification factors as specified for **lag screws** in accordance with CSA 086 2016.

⁵ Factored withdrawal resistances shown assume the entire threaded portion of the screw is installed into the main member. This accounts for the tip length reduction as per 12.6 CSA 086 2016 **Lag Screw** provisions.

⁶ Minimum row spacing, spacing in row and edge distances shall be as specified in Clause 12.6.2.6 CSA 086 2016. Designer to note additional provision in Clause 12 in CSA 086 2016 for service conditions and other factors affecting connection layout and capacity. The minimum spacing table can be used for reference.

*The penetration length is less than the minimum as per Lag Screw provision but it meets the penetration length according to the Wood Screw provision on Clause 12 of CSA 086 2016. See footnote 6.

⁷ Convert inches to millimetres by multiplying the value by 25.4 (1 in. = 25.4 mm).

Kameleon™

**Composite Deck
Screws**

**Heads Blend in
with Decking.
No Mushrooming
Effect**



APPROVALS/LISTING



DESCRIPTION/SUGGESTED SPECIFICATIONS

Composite Deck Screws—

GRK's Kameleon™ screws are an excellent choice for composite and PVC decking applications. The underhead has saw-blade like cutting teeth that cut a perfectly clean hole into the decking.

The Kameleon™ also features five to seven rings that have three indented fibre traps on each ring designed to trap fibres and eliminate the mushroom effect.

ÜberGrade™

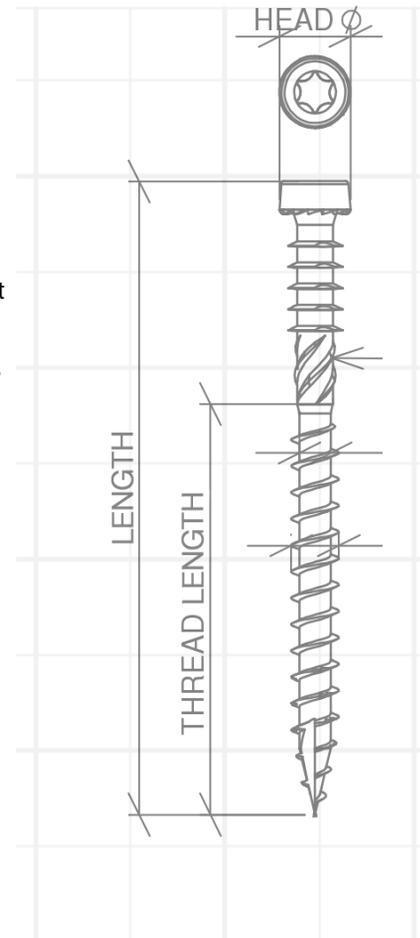


The CEE Thread feature enlarges the screw hole allowing the composite decking to settle easily, increases the screw's drawing strength, and reduces the friction on the screw shank, which can result in lowering the overall driving torque.

The Kameleon™ is also available in many different colors including: Grey, Brown, and Tan.

ADVANTAGES

- **Recessed Star Drive:** Zero Stripping, with 6 points of contact.
- **CEE Thread:** Enlarges hole to reduce splitting, install torque.
- **W-Cut™:** Low torque, smoother drive, reduce splitting.
- **Zip-Tip™:** No pre-drilling, faster penetration, reduce splitting.
- **Fibre Trapping Rings:** are designed to prevent mushrooming and dimpling.
- **Cutting Pockets:** provide a clean hole, reduces splitting, and bore with precision.
- **ESR-3201 Approved** for structural application.
- **Case Hardened Steel:** for high tensile, torque and shear strength.
- **Climatek™ Coating** is AC257 code approved for use in treated lumber.
- For interior/exterior use in; both composite and PVC decking.



Kameleon™ Composite Deck Screws

SELECTION CHART



T-20

	U.S. (STD.) SIZE (DIA. X LENGTH)	METRIC SIZE (DIA. X LENGTH)	HANDY-PAK PART NO.	HANDY-PAK CTN. SIZE/QTY.
Grey	#9 x 2-1/2"	4.5 x 63	67151	M/100
Tan	#9 x 2-1/2"	4.5 x 63	67155	M/100
Brown	#9 x 2-1/2"	4.5 x 63	67158	M/100



NOTE: 1" bits in Handy-Paks.

Fin/Trim™

Finishing Trim Head Screws

Smallest Head on
the Market for a
Clean Finish



DESCRIPTION/SUGGESTED SPECIFICATIONS

Finishing Trim Head Screws—

GRK's Trim™ Head screws are an excellent choice for most fine carpentry applications, as well as window extension jambs and more. Our Trim™ Head screws have the smallest screw head available; with screw lengths from 1-1/4" (30 mm) to 5" (125 mm).

ÜberGrade™

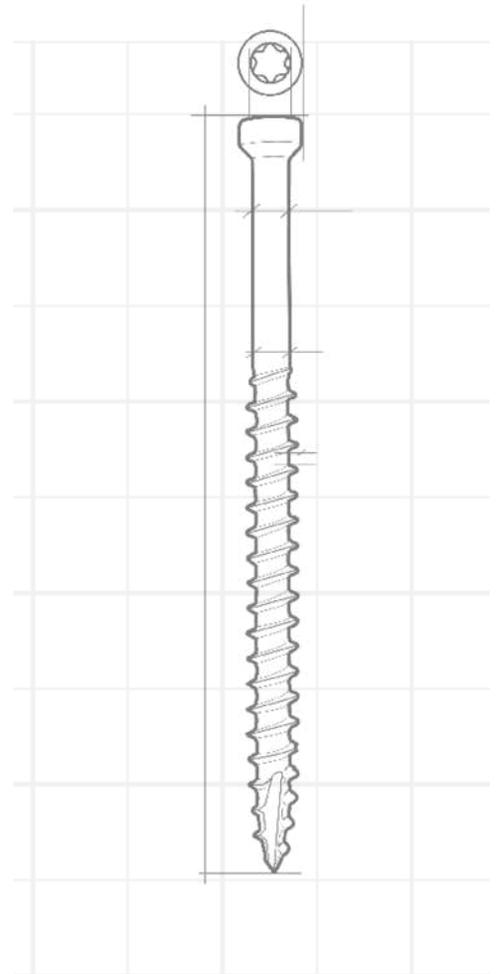
Most material splitting is prevented because of the Trim™ Head screw's exceptionally small head and the W-Cut thread design.



Fin/Trim™ screws are also available in white Climatek™ coated finish to blend in with white wooden trim boards.

ADVANTAGES

- **Recessed Star Drive:** Zero Stripping, with 6 points of contact.
- **Trim Head:** for a clean finished look.
- **W-Cut™:** Low torque, smoother drive.
- **Zip-Tip™:** No pre-drilling, faster penetration.
- **ESR-3201 Approved** for structural application.
- **Case Hardened Steel:** for high tensile, torque and shear strength.
- **Climatek™ Coating is AC257** code approved for use in treated lumber.
- For interior/exterior use.
- Available in **Climatek™** or white powder coated finish.



APPROVALS/LISTING



SELECTION CHART



T-10



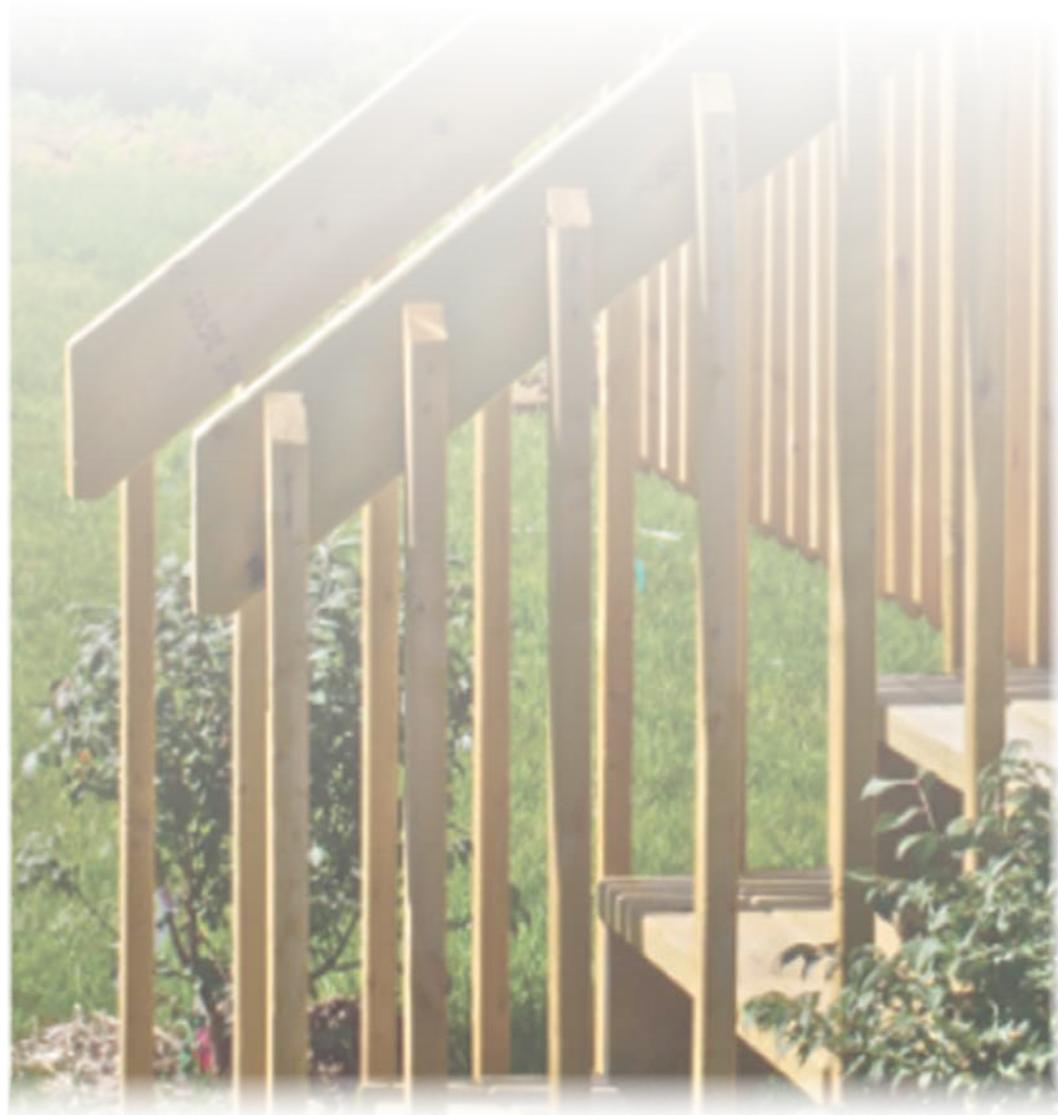
T-15



T-10

U.S. (STD.) SIZE (DIA. X LENGTH)	METRIC SIZE (DIA. X LENGTH)	BULK PART NO.	BULK BOX QTY.	PRO-PAK PART NO.	PRO-PAK PAIL QTY.	HANDY-PAK PART NO.	HANDY-PAK CTN. SIZE/QTY.
#8 x 1-1/4"	4.0 x 30					17720	S/100
#8 x 1-1/2"	4.0 x 40					17724	S/100
#8 x 2"	4.0 x 50					17728	S/100
#8 x 2-1/2"	4.0 x 63	15730	3,500	16730	605	17730	S/100
#8 x 2-3/4"	4.0 x 70					17732	S/100
#8 x 3-1/8"	4.0 x 80	15734	2,500			17734	M/100
#9 x 3-1/8"	4.5 x 80	15756	1,900				
#9 x 4"	4.5 x 100	15760	1,000			17760	M/100
#9 x 5"	4.5 x 125					17766	M/100
WHITE FIN/TRIM™							
#8 x 2-1/2"	4.0 x 63	15830	3,500			17830	S/100

**Excellent for all of
your trimwork and fine
carpentry finishing.**



NOTE: Pro-Paks need to be ordered in multiples of two. 2" bit included in Pro-Paks, 1" bits in Handy-Paks.

**Composite Exterior
Trim Screws**
**Reverse Thread
Design Prevents
Mushrooming**



APPROVALS/LISTING



DESCRIPTION/SUGGESTED SPECIFICATIONS

Exterior Trim Screws—

GRK has modified its innovative FIN/Trim™ Head screw to include reverse threading under the head of the fastener. This technology makes the RT Composite™ Trim Screw ideal for use in composite and cellular PVC trim.

ÜberGrade™

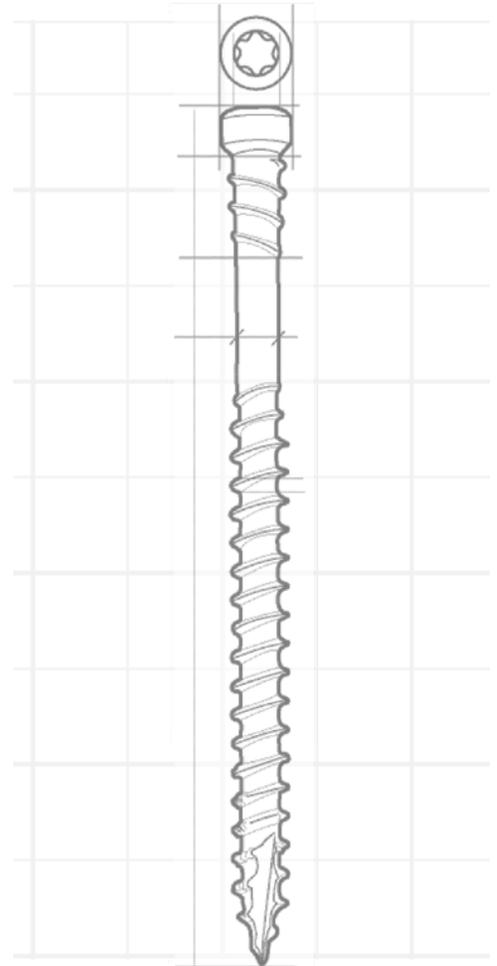


Based on extensive tests, GRK has found that the reverse thread helps the screw head disappear beneath the surface of the classic wood composite material, reducing or eliminating the dimple that sometimes appears when using the FIN/Trim™ screw.

The reverse thread feature is available in RT Composite™ screws from 2" to 3-1/8" in length in both regular Climatek™ coating and in white Climatek™ coated finish to blend in with popular white exterior composite and cellular PVC trim.

ADVANTAGES

- **Recessed Star Drive:** Zero Stripping, with 6 points of contact.
- **Reverse Threads** eliminate mushrooming.
- **Trim Head:** for a clean finished look.
- **W-Cut™:** Low torque, smoother drive and reduce splitting.
- **Zip-Tip™:** No pre-drilling, faster penetration and reduce splitting.
- **ESR-3201 Approved** for structural application.
- **Case Hardened Steel:** for high tensile, torque and shear strength.
- **Climatek™ Coating is AC257** code approved for use in treated lumber.
- For interior/exterior use in; exterior PVC trim (Azek, Kleer, Koma), no pre-drilling is necessary. Climatek™ coated screws work well with CAMO system.
- Available in **Climatek™** or white powder coated finish.



RT Composite™ Exterior Trim Screws

SELECTION CHART



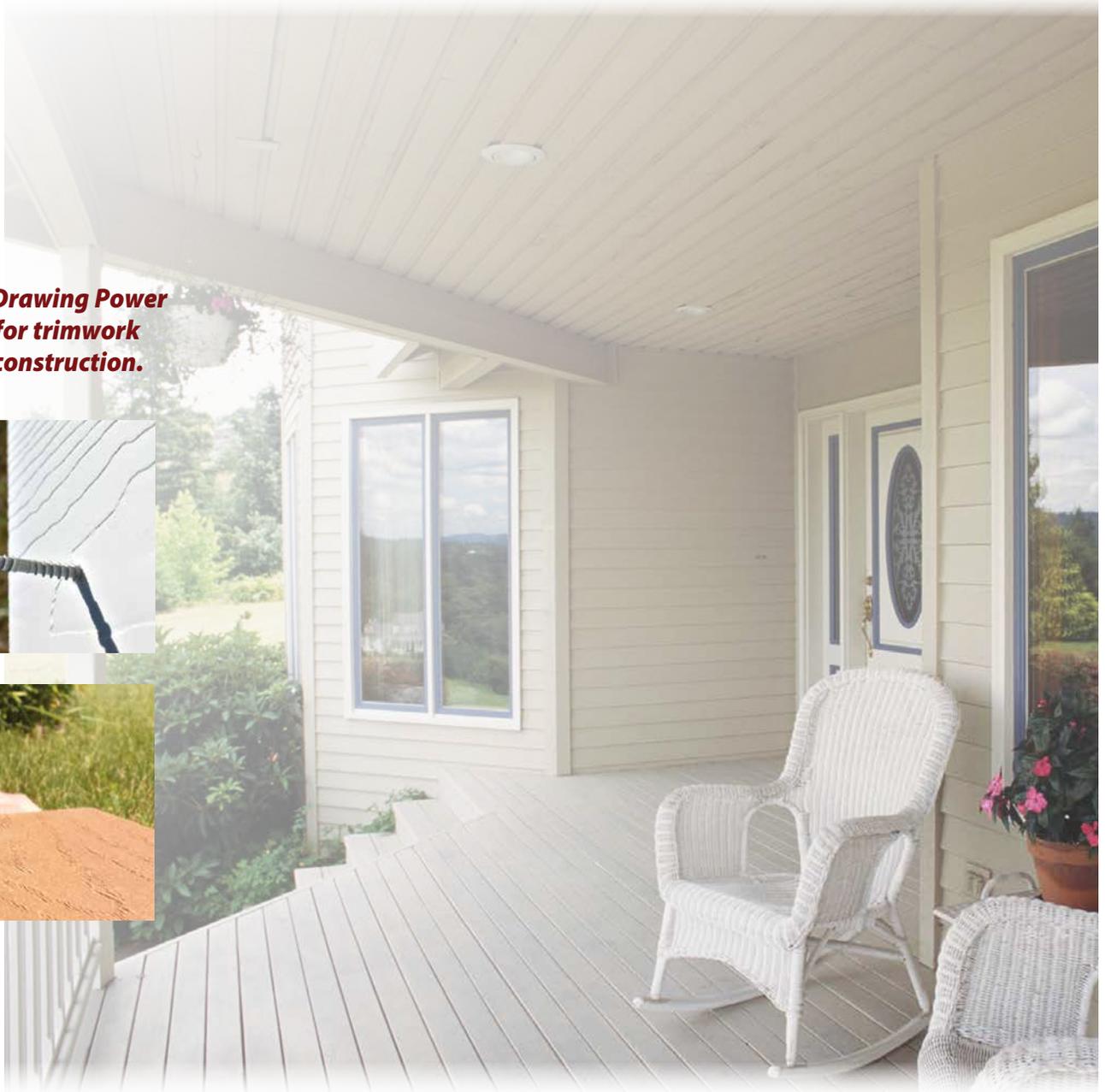
T-10



T-10

U.S. (STD.) SIZE (DIA. X LENGTH)	METRIC SIZE (DIA. X LENGTH)	BULK PART NO.	BULK BOX QTY.	PRO-PAK PART NO.	PRO-PAK PAIL QTY.	HANDY-PAK PART NO.	HANDY-PAK CTN. SIZE/QTY.
#8 x 2"	4.0 x 50					17077	S/100
#8 x 2-1/2"	4.0 x 63	15079	3,500	16079	605	17079	S/100
#8 x 3-1/8"	4.0 x 80	15083	2,500				
WHITE RT COMPOSITE™							
#8 x 2-1/2"	4.0 x 63					17630	S/100

**Supreme Drawing Power
is perfect for trimwork
and deck construction.**



NOTE: Pro-Paks need to be ordered in multiples of two. 2" bit included in Pro-Paks, 1" bits in Handy-Paks.

ITW Construction Products

Call our toll free number 800-387-9692 or visit www.itwconstruction.ca for general information.
Visit GRK Fasteners web site www.grkfasteners.com for the most current product and technical information.

GRK
FASTENERS

G 21

Low Profile™

*Low Profile Cabinet™ Screws
Built-in Washer Head Presses Flush Against any Material*



APPROVALS/LISTING



DESCRIPTION/SUGGESTED SPECIFICATIONS

Cabinet Screws—

GRK's Cabinet™ screws are designed specifically for use in cabinet construction and installation. Cabinet™ screws are manufactured in a #8 gauge (4 mm) diameter for universal size convenience.

These screws are thin enough to prevent most material splitting, while providing sufficient strength to guarantee a secure installation. The washer head design presses flush against any material surface.

ÜberGrade™

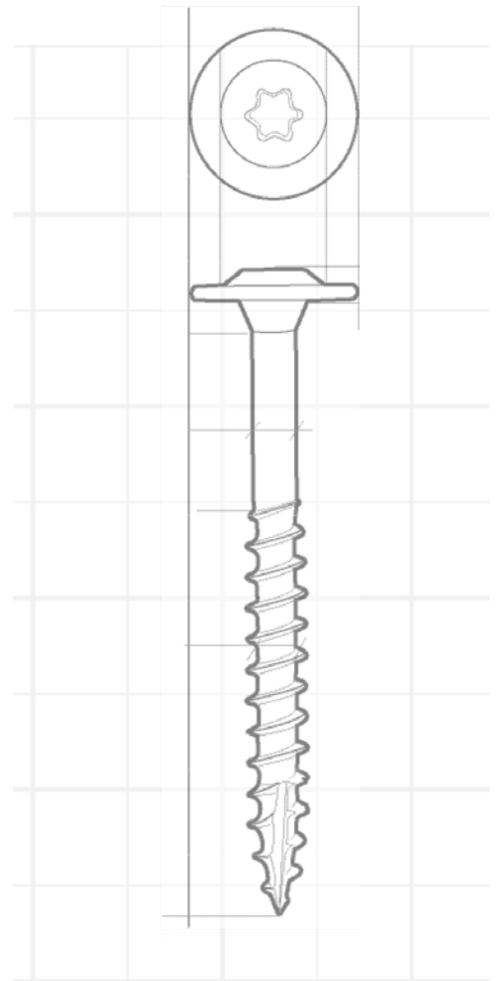
Builders have discovered that short Cabinet™ screws can sometimes be used in vinyl siding installation, which makes this fastener ideal for both interior and exterior applications.



The Cabinet screw can also be used for light duty framing applications where a smaller diameter shank is necessary, yet a need exists for drawing power delivered by the washer head.

ADVANTAGES

- **Recessed Star Drive:** Zero Stripping, with 6 points of contact.
- **Washer Head:** Creates a flush, clean hold for a strong and secure installation.
- **W-Cut™:** Low torque, smoother drive, reduce splitting.
- **Zip-Tip™:** No pre-drilling, faster penetration, reduce splitting.
- **Case Hardened Steel:** for high tensile, torque and shear strength.
- **Climatek™ Coating** is AC257 code approved for use in treated lumber.
- For interior/exterior use.



SELECTION CHART



T-15

U.S. (STD.) SIZE (DIA. X LENGTH)	METRIC SIZE (DIA. X LENGTH)	BULK PART NO.	BULK BOX QTY.	HANDY-PAK PART NO.	HANDY-PAK CTN. SIZE/QTY.
#8 x 1"	4.0 x 25			12067	S/100
#8 x 1-1/4"	4.0 x 30	10069	4,000	12069	S/100
#8 x 1-1/2"	4.0 x 40			12073	M/100
#8 x 1-3/4"	4.0 x 45			12075	M/100
#8 x 2"	4.0 x 50			12077	M/100
#8 x 2-1/2"	4.0 x 63			12079	M/100



Ideal for Cabinets...and so much more. Also excellent for a variety of interior or exterior jobs.

NOTE: 1" bits in Handy-Paks.

Top Star™

Adjustable Shim Screws

For Plumb Installation of Wooden Doors and Windows. No More Shims!



DESCRIPTION/SUGGESTED SPECIFICATIONS

Adjustable Shim Screws—

GRK's adjustable Top Star™ shim screw, is in fact a screw within a screw that allows you to install wooden doors or windows without the use of shims.

ÜberGrade™

The quick and easy system reduces labour and allows for hassle free adjustment to ensure plumb installation.



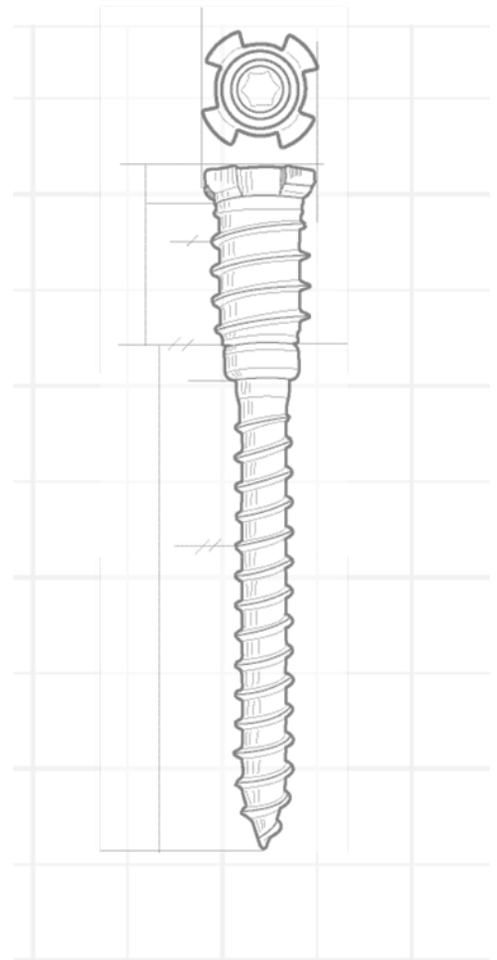
Door stop or cover caps will hide hole

Our product is suited to meet the needs of both professional contractors and weekend warriors making the job easier for one person.

Fine adjustments are as simple as the turn of a screw, even after years of use and settling.

ADVANTAGES

- **Recessed Star Drive:** Zero Stripping, with 6 points of contact.
- **4-point 3/8" diameter Threaded Sleeve** provides a secure hold on your wooden frame.
- **Micro-Adjustments** allow for an absolutely plumb installation.
- Use with GRK's **Top Star™ Crown** and **T-15 Star bit system**.
- **White Zinc Plated** finish for lasting durability.
- **For Shim Free installation** of wooden doors, windows, insulation, paneling, built-in wall units and cabinets.



SELECTION CHART



U.S. (STD.) SIZE (DIA. X LENGTH)	METRIC SIZE (DIA. X LENGTH)	BULK PART NO.	BULK BOX QTY.	BLISTER-PAK PART NO.	BLISTER-PAK QTY.
3/8" x 2-1/2"	6.0 x 63	20157	100	24050	6
3/8" x 3-1/8"	6.0 x 80	20161	100	24100	6
CROWN / BIT					
Includes: (1) Crown / Bit with each				86465	1

The Bit drives the Top Star™ into the material when the Crown and Bit are combined. Using the Bit without the Crown adjusts the distance.

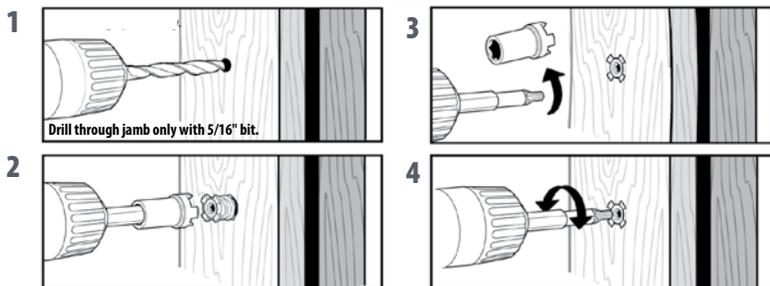
The Threaded Sleeve moves independently from the Top Star™ unless locked by the Crown. When locked, the Top Star™ gets driven into the material. Unlocked, the installed Top Star™ is ready for levelling.

The Complete Top Star™ System Includes:

BIT

CROWN

THREADED SLEEVE



NOTE: Crown and Star bit system included in each bulk box. 5/16" drill bit not included.



Caliburn™

Concrete Screws

Heavy Duty Concrete and Masonry Fastener

DESCRIPTION/SUGGESTED SPECIFICATIONS

Concrete Screws—

Caliburn™ Concrete screws are professionally engineered fasteners with a patented thread design for ease of driving the screw in concrete and similar applications.

Available in three different head designs for multiple applications. Caliburn™, Caliburn™ PH and Caliburn™ XL are Climatek™ coated for high corrosion resistance.

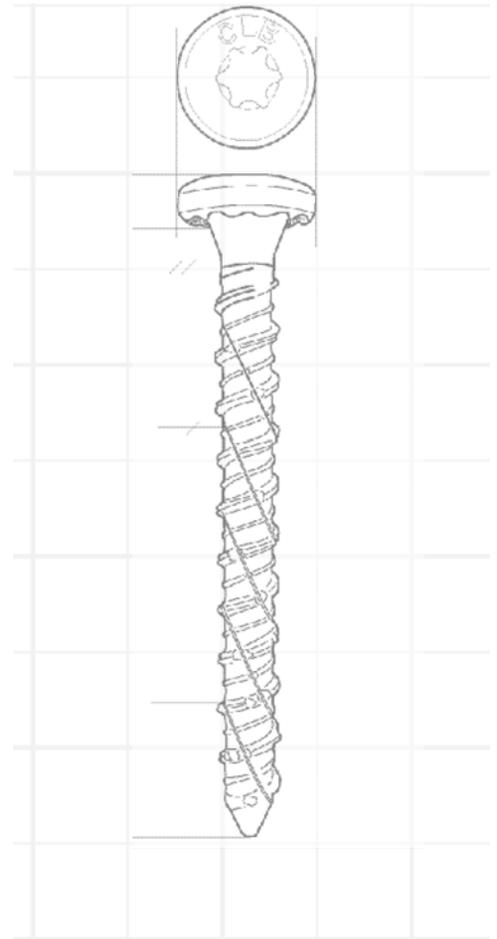
ÜberGrade™



Caliburn's uncompromised draw and pullout strength make it possible to be used in jobs which previously required an anchor. The screws aggressive thread design afford it the ability to be removed and reinserted into the same pilot hole numerous times—without the concern of the fastener breaking or the threads wearing.

ADVANTAGES

- **Recessed Star Drive:** Zero Stripping, with 6 points of contact.
- **Aggressive Heavy duty threads** lock into concrete and can be removed and reinserted without screw damage.
- **Countersinking Bugle Head** locks wood to concrete for complete installation and effective anchoring.
- **Caliburn™ PH** pan head, which is ideal for an exposed finished look including installation of electrical boxes.
- **Caliburn™ XL** washer head design for superior holding power.
- **Climatek™ Coating is AC257** code approved for use in treated lumber.
- Ideal for use in anchoring to concrete or wood to concrete applications including basement framing and sheds.



APPROVALS/LISTING



SELECTION CHART



T-30



T-30



T-40

U.S. (STD.) SIZE (DIA. X LENGTH)	METRIC SIZE (DIA. X LENGTH)	HANDY-PAK PART NO.	HANDY-PAK CTN. SIZE/QTY.
1/4" x 1-3/4"	6.0 x 45	57153	M/50
1/4" x 2-1/4"	6.0 x 55	57156	M/50
1/4" x 2-3/4"	6.0 x 70	57159	M/50
1/4" x 3-1/2"	6.0 x 90	57163	M/50
CALIBURN™ PH			
1/4" x 2-1/4"	6.0 x 55	57831	M/50
CALIBURN™ XL			
19/64" x 2-3/4"	7.5 x 70	57774	M/25
19/64" x 3-1/2"	7.5 x 90	57778	M/25
19/64" x 5"	7.5 x 125	57785	M/25



Great for a wide variety of indoor / outdoor home renovation projects

1" bits in Handy-Paks.





Star Drive Bits, Crown/Bit and Magnetic Bit Holder



BIT SIZE	BIT COLOUR	FITS	CARDED PART NO.	CARDED QTY/PER PACK	BOX PART NO.	QTY/BOX
T-10 2"	yellow	Trim™ Head #8	87419	2		
T-15 2"	red	R4™ Screw #6 & 8 Trim™ Head #9 Cabinet™ Screw Vinyl Window #8	87427	2		
T-20 2"	purple	Kameleon™ Screws	87435	2		
T-25 2"	green	R4™ #9,10 &12, Caliburn™, Caliburn PH™, RSS™ #10 & 1/4"	87443	2	86443	1,000
T-30 2"	black	RSS™ Structural Screw 5/16" & 3/8", Caliburn™ & Caliburn PH™	87451	2	86451	1,000
T-40 2"	blue	Caliburn XL™ Screws RSS™ Structural Screw 3/8"	87459	2	86459	1,000
CROWN/BIT						
		TOP STAR™	86465	1		

High Impact Merchandisers Designed to Drive Sales

Displays are free with qualifying order.

Universal Display:

Ideal for end-cap with large selection of GRK product.

Heavy Duty Rack Display:



PERFORMANCE TABLES

TABLE 1: RSS™ FASTENER SPECIFICATIONS

FASTENER DESIGNATION	OVERALL LENGTH ¹ (INCHES)	LENGTH OF THREAD ² (INCHES)	MINOR THREAD DIAMETER ³ (INCHES)	SHANK DIAMETER ³ (INCHES)	OUTSIDE THREAD DIAMETER ³ (INCHES)	ALLOWABLE STEEL STRENGTH			
						BENDING YIELD STRENGTH ⁴ F _{YB} (PSI)	TENSILE (LBF)	SHEAR (LBF)	
RSS	1/4 x 2-1/2"	2-3/8	1-1/2	0.152	0.169	0.236	170,400	1,112	754
	1/4 x 2-3/4"	2-3/4	1-3/4						
	1/4 x 3-1/8"	3-1/8	2						
	1/4 x 3-1/2"	3-1/2	2-3/8						
	5/16 x 2-1/2"	2-3/8	1-1/2	0.167	0.195	0.276	190,900	1,415	982
	5/16 x 2-3/4"	2-3/4	1-3/4						
	5/16 x 3-1/8"	3-1/8	2-1/8						
	5/16 x 3-1/2"	3-1/2	2-1/2						
	5/16 x 4"	3-7/8	2-3/4						
	5/16 x 5-1/8"	5	3-1/2						
5/16 x 6"	5-7/8	3-7/8	0.191	0.219	0.313	178,000	1,941	1,231	
3/8 x 3-1/8"	3-1/8	2-1/8							
3/8 x 4"	3-7/8	2-3/4							
3/8 x 5-1/8"	5-1/8	3-1/2							
3/8 x 6"	5-7/8	4							
3/8 x 7-1/4"	7	4-1/2							
3/8 x 8"	7-7/8	4-3/8							
3/8 x 10"	9-3/4	5							
3/8 x 12"	11-7/8	5-7/8							
3/8 x 14-1/8"	14-1/8	5-7/8							
3/8 x 16"	15-5/8	5-3/4							
LFT	3/8 x 8"	7-7/8	3-7/8	0.191	0.220	0.310	167,600	1,714	1,094
	3/8 x 10"	9-7/8	3-7/8						
	3/8 x 12"	11-3/4	3-7/8						
	3/8 x 15"	14-3/4	3-7/8						
	3/8 x 20"	19-5/8	3-7/8						
JTS	1/4 x 3-3/8"	3-3/8	1-3/8	0.152	0.171	0.240	226,300	1,104	769
	1/4 x 5"	5	1-5/8						
	1/4 x 6-3/4"	6-3/4	1-1/2						

for S1: 1 inch = 25.4 mm; 1 psi = 6.9 kPa.

¹ Overall length of fastener is measured from the underside of the head to bottom of the tip. See Figure 1.

² Length of thread includes tip. See detailed illustration, Figure 1.

³ Minor thread, shank and outside thread diameters are shown in table without manufacturing tolerances.

⁴ Bending yield strength determined in accordance with ASTM F 1575 using the minor thread diameter.

PERFORMANCE TABLES

TABLE 2: RSS™ WITHDRAWAL DESIGN VALUES (W)¹
[WITHDRAWAL VALUES (W) ARE IN POUNDS PER INCH OF THREAD PENETRATION INTO SIDE GRAIN OF MAIN MEMBER]

FASTENER DESIGNATION AND DIAMETER Ø		WITHDRAWAL, W (LBS./IN.) FOR SPECIFIC GRAVITIES OF:	
		0.42 ≤ G < 0.55	0.55 ≤ G < 0.67
RSS	Ø 1/4	151	186
	Ø 5/16	165	227
	Ø 3/8	180	259
LTF	Ø 3/8	163	216
JTS	Ø 1/4	152	191

for S1: 1 inch = 25.4 mm

¹ Fastener withdrawal was tested in accordance with ASTM D 1761.

² Withdrawal values (W) shall be multiplied by the length of thread penetration in the main member (including tip).

TABLE 3: RSS™ PULL-THROUGH DESIGN VALUES (P)¹
[PULL-THROUGH VALUES (P) ARE IN POUNDS PER INCH OF SIDE MEMBER THICKNESS]

FASTENER DESIGNATION AND DIAMETER Ø		PULL-THROUGH, P (LBS./IN.) FOR SPECIFIC GRAVITIES OF:	
		0.42 ≤ G < 0.55	0.55 ≤ G < 0.67
RSS	Ø 1/4	165	275
	Ø 5/16	207	418
	Ø 3/8	196	351
LTF	Ø 3/8	202	373
JTS	Ø 1/4	154	372

for S1: 1 inch = 25.4 mm

¹ Fastener pull-through testing was performed in accordance with ASTM D 1037 with 3/4" thick side members.

These figures are only offered as a guide and are not reduced by any safety factor. For safety factor requirements in your area, contact your local building official, architect or engineer.

PERFORMANCE TABLES

TABLE 4: RSS™ LATERAL DESIGN VALUES (Z) FOR SINGLE SHEAR (TWO-MEMBER) CONNECTIONS¹
[FOR SAWN LUMBER OR SCL WITH BOTH MEMBERS OF IDENTICAL SPECIFIC GRAVITY]

FASTENER DESIGNATION	SIDE MEMBER THICKNESS T_s (INCHES):	FASTENER PENETRATION P (INCHES)	LATERAL VALUE, Z (POUNDS) FOR SPECIFIC GRAVITIES OF:			
			$0.42 \leq G < 0.55$		$0.55 \leq G < 0.67$	
			PARALLEL TO GRAIN Z_{\parallel}	PERPENDICULAR TO GRAIN, Z_{\perp}	PARALLEL TO GRAIN Z_{\parallel}	PERPENDICULAR TO GRAIN, Z_{\perp}
RSS	1/4 x 2-1/2"	3/4	153	137	175	175
	1/4 x 2-3/4"	3/4				
	1/4 x 3-1/8"	3/4				
	1/4 x 3-1/2"	3/4				
	5/16 x 2-1/2"	3/4	168	133	214	178
	5/16 x 2-3/4"	3/4				
	5/16 x 3-1/8"	3/4				
	5/16 x 3-1/2"	3/4				
	5/16 x 4"	1-1/2	239	236	333	257
	5/16 x 5-1/8"	1-1/2				
	5/16 x 6"	2	265	299	472	289
	3/8 x 3-1/8"	3-4	188	156	251	220
	3/8 x 4"	1-1/2	224	205	274	264
	3/8 x 5-1/8"	1-1/2				
	3/8 x 6"	2	270	296	325	288
	3/8 x 7-1/4"	2-3/4	423	291	593	304
	3/8 x 8"	3-1/2				
	3/8 x 10"	3-1/2				
3/8 x 12"	3-1/2					
3/8 x 14-1/8"	3-1/2					
3/8 x 16"	3-1/2					
LFT	3/8 x 8"	4	433	315	556	402
	3/8 x 10"	6				
	3/8 x 12"	8				
	3/8 x 15"	11	N/A	N/A	N/A	N/A
	3/8 x 20"	16	3-5/8			
JTS	1/4 x 3-3/8"	1-3/4	157	168	217	217
	1/4 x 5"	1-3/4	168	221	241	237
	1/4 x 6-3/4"	1-3/4				

for S1: 1 inch = 25.4 mm

¹ Lateral load testing was performed in accordance with ASTM D 1761.

These figures are only offered as a guide and are not reduced by any safety factor. For safety factor requirements in your area, contact your local building official, architect or engineer.

PERFORMANCE TABLES

TABLE 5: CONNECTION GEOMETRY

CONNECTION GEOMETRY/CRITERIA	DIAMETERS ¹	RSS & JTS 1/4" NOMINAL DIAMETER (INCHES)	RSS 5/16" NOMINAL DIAMETER (INCHES)	RSS & LTF 3/8" NOMINAL DIAMETER (INCHES)
MINIMUM EDGE DISTANCE				
LOADING PARALLEL TO GRAIN	8	1-1/2	1-5/8	1-7/8
LOADING PERPENDICULAR TO GRAIN, LOADED EDGE	8	1-1/2	1-5/8	1-7/8
LOADING PERPENDICULAR TO GRAIN, UNLOADED EDGE	8	1-1/2	1-5/8	1-7/8
MINIMUM END DISTANCE				
TENSION LOAD PARALLEL TO GRAIN	15	2-5/8	3	3-3/8
COMPRESSION LOAD PARALLEL TO GRAIN	10	1-3/4	2	2-1/4
LOAD PERPENDICULAR TO GRAIN	10	1-3/4	2	2-1/4
SPACING (PITCH) BETWEEN FASTENERS IN A ROW				
PARALLEL TO GRAIN	15	2-5/8	3	3-3/8
PERPENDICULAR TO GRAIN	10	1-3/4	2	2-1/4
SPACING (GAGE) BETWEEN ROWS AND FASTENERS				
IN-LINE	5	7/8	1	1-1/8
STAGGERED	2.5	1/2	1/2	5/8
MINIMUM PENETRATION INTO MAIN MEMBER FOR SINGLE SHEAR CONNECTIONS				
	6 ²	1-1/8	1-1/4	1-3/8

for S1: 1 inch = 25.4 mm

¹ Diameter is the shank diameter as specified in Table 1.

² Reduce lateral load values provided in Table 4 when penetration is less than 10D.

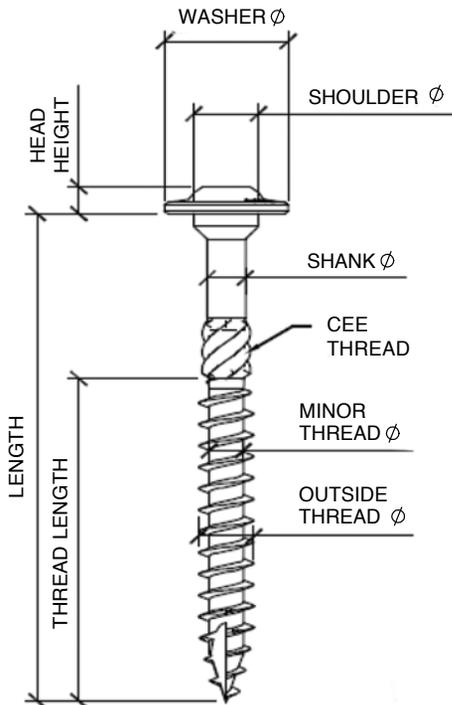


FIGURE 1 - FASTENER DIMENSIONS

SCREW TYPE	HEAD STAMP	WASHER Ø ± 0.020	HEAD HEIGHT ± 0.010	SHOULDER Ø ± 0.010	CEE THREAD ²
RSS 1/4 (6.0 mm)		0.533	0.110	0.244	LENGTH ≥ 3-1/8"
RSS 5/16 (7.0 mm)		0.620	0.157	0.301	LENGTH ≥ 3-1/8"
RSS 3/8 (8.0 mm)		0.689	0.181	0.364	LENGTH ≥ 3-1/8"
LTF 3/8 (8.0 mm)		0.688	0.181	0.364	LENGTH ≥ 3-1/8"
JTS 1/4 (6.3 mm)		0.534	0.090	0.244	LENGTH ≥ 5"

NOTES:

1. See table 1 for overall length, thread length, shank diameter, outside thread diameter and minor thread diameter.
2. CEE thread on screws with lengths greater than or equal to those indicated, not used for calculations.

PERFORMANCE TABLES

TABLE 1: FASTENER SPECIFICATIONS

FASTENER DESIGNATION	OVERALL LENGTH ¹ (INCHES)	LENGTH OF THREAD ² (INCHES)	MINOR THREAD DIAMETER ³ (INCHES)	SHANK DIAMETER ³ (INCHES)	OUTSIDE THREAD DIAMETER ³ (INCHES)	ALLOWABLE STEEL STRENGTH			
						BENDING YIELD STRENGTH ⁴ F _{yb} (PSI)	TENSILE (PSI) [POUNDS]	SHEAR (PSI) [POUNDS]	
R4	9 x 2"	2	1-1/4	0.117	0.130	0.174	158,800	61,760 [627]	39,660 [428]
	9 x 2-1/2"	2-3/8	1-5/8						
	9 x 2-3/4"	2-3/4	1-7/8						
	9 x 3-1/8"	3-1/8	2-1/8						
	10 x 2-1/2"	2-3/8	1-5/8	0.128	0.142	0.194	143,590	62,640 [846]	44,520 [542]
	10 x 2-3/4"	2-3/4	1-7/8						
	10 x 3-1/8"	3-1/8	2-1/8						
	10 x 3-1/2"	3-1/2	2-3/8						
	10 x 4"	3-7/8	2-5/8						
	10 x 4-3/4"	4-5/8	3	0.153	0.172	0.238	134,280	60,580 [1,134]	38,610 [655]
	12 x 2-1/2"	2-3/8	1-1/2						
	12 x 2-3/4"	2-3/4	1-3/4						
	12 x 3-1/8"	3-1/8	2-1/8						
	12 x 3-1/2"	3-1/2	2-3/8						
	12 x 4"	3-7/8	2-5/8						
	12 x 4-3/4"	4-5/8	3						
	12 x 5-5/8"	5-1/2	3						
	12 x 6-3/8"	6-1/4	3						
12 x 7-1/4"	7	3							
12 x 8"	7-7/8	2-5/8							
12 x 10"	9-3/4	2-3/4							
12 x 12"	11-3/4	2-3/4							
TRIM	8 x 2-1/2"	2-3/8	1-1/2	0.106	0.116	0.160	148,410	56,580 [499]	40,000 [360]
	8 x 2-3/4"	2-3/4	1-7/8						
	8 x 3-1/8"	3-1/8	2-1/8						
	9 x 2-1/2"	2-3/8	1-5/8	0.114	0.128	0.176	147,280	57,000 [576]	42,160 [425]
	9 x 2-3/4"	2-3/4	1-3/4						
	9 x 3-1/8"	3-1/8	2-1/8						
KAMELEON	9 x 2-1/2"	2-1/2	1-5/8	0.119	0.134	0.177	160,210	57,490 [634]	37,870 [437]
	9 x 2-3/4"	2-3/4	1-3/4						
	9 x 3-1/8"	3-1/8	2-1/8						

for S1: 1 inch = 25.4 mm; 1 psi = 6.9 kPa.

¹ Overall length of fastener is measured from the top of the head to bottom of the tip. See Figure 1.

² Length of thread includes tip. See detailed illustration, Figure 1.

³ Minor thread, shank and outside thread diameters are shown in table without manufacturing tolerances.

⁴ Bending yield strength determined in accordance with ASTM F 1575 using the minor thread diameter.

PERFORMANCE TABLES

SCREW TYPE	HEAD Ø	CEE-THREAD
R4 - #9 (4.5 mm)	0.328 ± 0.006	LENGTH = > 2"
R4 - #10 (5.0 mm)	0.368 ± 0.006	LENGTH = > 2"
R4 - #12 (6.0 mm)	0.439 ± 0.010	LENGTH = > 2"
TRIM - #8 (4.0 mm)	0.197 ± 0.006	N/A
TRIM - #9 (4.5 mm)	0.230 ± 0.006	N/A
KAMELEON - #9 (4.5 mm)	0.258 ± 0.006	ALL LENGTHS

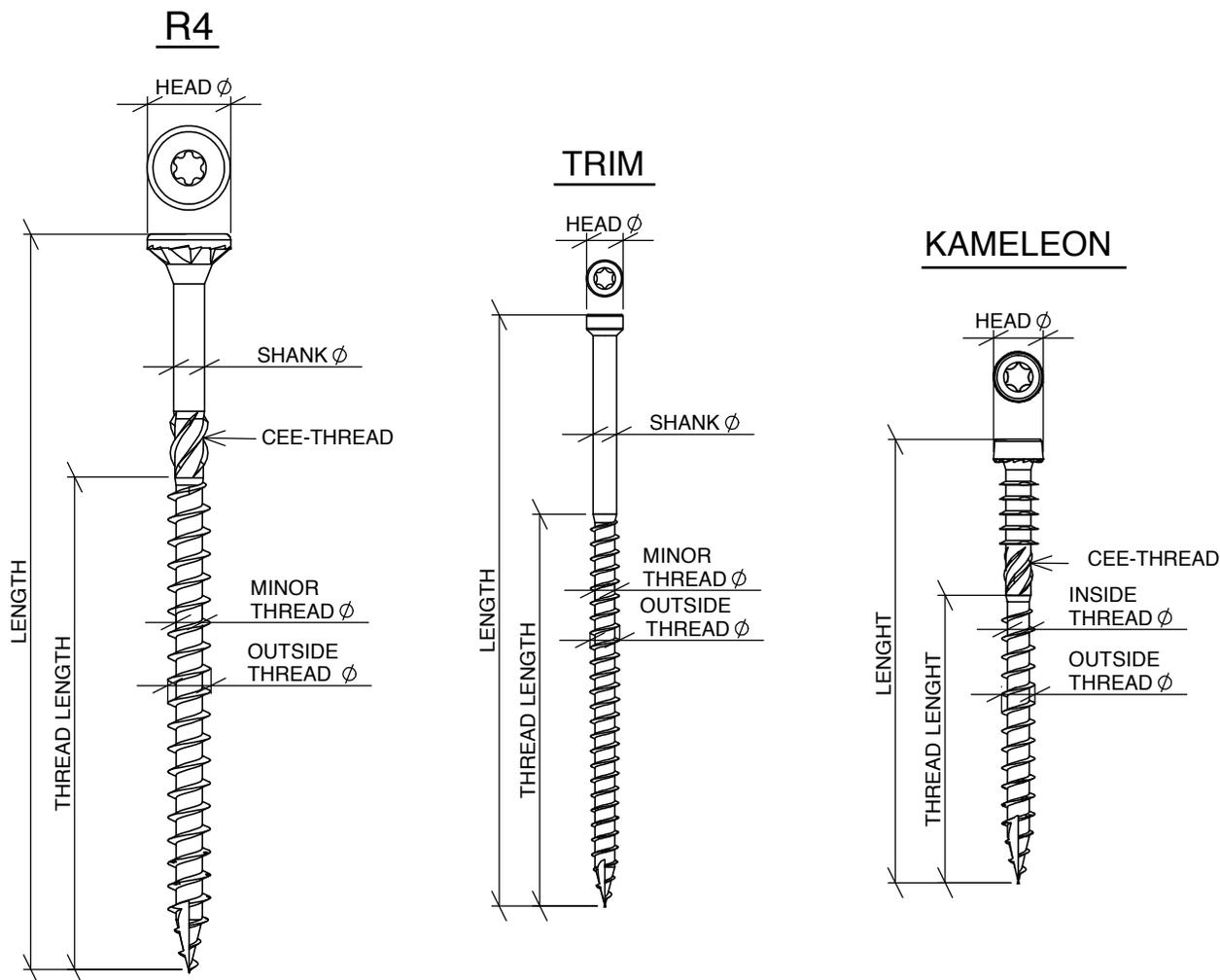


FIGURE 1 - FASTENER DIMENSIONS

NOTES:

1. See table 1 for overall length, thread length, shank diameter, outside thread diameter and minor thread diameter.
2. CEE thread on screws with lengths greater than or equal to those indicated, not used for calculations.
3. Dimensions given if not otherwise stated are in inches (for SI 1 inch = 25.4 mm)

PERFORMANCE TABLES

TABLE 2: DESIGN WITHDRAWAL VALUES (W)¹
[TABULATED WITHDRAWAL VALUES (W) ARE IN POUNDS PER INCH OF THREAD PENETRATION INTO SIDE GRAIN OF MAIN MEMBER]

FASTENER DESIGNATION		WITHDRAWAL, W (LBS./IN.) FOR SPECIFIC GRAVITIES OF:
		0.67
R4	# 9	179
	# 10	249
	#12	255
TRIM	# 8	175
	# 9	221
KAMELEON	# 9	186

for S1: 1 inch = 25.4 mm; 1 lbf/in = 175.127 N/m.

¹ Fastener withdrawal was tested in accordance with ASTM D 1761.

² Values must not be multiplied by any adjustment/safety factor.

TABLE 3: DESIGN PULL-THROUGH VALUES (P)¹
(TABULATED PULL-THROUGH VALUES (P) ARE IN POUNDS PER INCH OF SIDE MEMBER THICKNESS)

FASTENER DESIGNATION		PULL-THROUGH, P (LBS./IN.) FOR SPECIFIC GRAVITIES OF:
		0.67
R4	# 9	162
	# 10	275
	#12	407
TRIM	# 8	61
	# 9	94
KAMELEON	# 9	143

for S1: 1 inch = 25.4 mm; 1 lbf/in = 175.127 N/m.

¹ Fastener pull-through testing was performed in accordance with ASTM D 1037.

² Values must be multiplied by all applicable adjustment factors. (20.15 NDS Table 11.3.1)

³ Minimum side member thickness must be 3/4".

PERFORMANCE TABLES

TABLE 4: REFERENCE LATERAL DESIGN VALUES (Z) FOR SINGLE SHEAR (TWO MEMBER) CONNECTIONS¹
[FOR SAWN LUMBER OR SCL WITH BOTH MEMBERS OF IDENTICAL SPECIFIC GRAVITY]

	FASTENER DESIGNATION	SIDE MEMBER THICKNESS, T_5 (INCHES)	FASTENER PENETRATION, P (INCHES)	REFERENCE LATERAL ULTIMATE VALUE, Z (POUNDS) FOR SPECIFIC
				0.67
				PARALLEL TO GRAIN, $Z_{ }$
R4	9 x 2"	3/4	1-1/8	175
	9 x 2-1/2"	3/4	1-1/2	
	9 x 2-3/4"	3/4	2	
	9 x 3-1/8"	3/4	2-3/8	
	10 x 2-1/2"	3/4	1-1/2	203
	10 x 2-3/4"	3/4	2	
	10 x 3-1/8"	3/4	2-3/8	
	10 x 3-1/2"	3/4	2-3/4	
	10 x 4"	3/4	3-1/8	242
	10 x 4-3/4"	3/4	3-7/8	
	12 x 2-1/2"	3/4	1-1/2	
	12 x 2-3/4"	3/4	2	
	12 x 3-1/8"	3/4	2-3/8	
	12 x 3-1/2"	3/4	2-3/4	
	12 x 4"	3/4	3-1/8	
	12 x 4-3/4"	3/4	3-7/8	
	12 x 5-5/8"	3/4	4-3/4	
	12 x 6-3/8"	3/4	5-1/2	
	12 x 7-1/4"	3/4	6-1/4	
	12 x 8"	3/4	7	
12 x 10"	3/4	9		
12 x 12"	3/4	11		
TRIM	8 x 2-1/2"	3/4	1-1/2	84
	8 x 2-3/4"	3/4	2	
	8 x 3-1/8"	3/4	2-1/2	
	9 x 2-1/2"	3/4	1-1/2	104
	9 x 2-3/4"	3/4	2	
	9 x 3-1/8"	3/4	2-3/8	
KAMELEON	9 x 2-1/2"	3/4	1-5/8	159
	9 x 2-3/4"	3/4	1-7/8	
	9 x 3-1/8"	3/4	2-3/8	

for S1: 1 inch = 25.4 mm

¹ Lateral load testing was performed in accordance with ASTM D 1761.

² Values must be multiplied by all applicable adjustment factors. (20.15 NDS Table 11.3.1)



LIABILITY AND WARRANTIES

GRK Fasteners™ is a distributor of commercial grade fasteners. Conformance to “IFI” specifications is formally requested from our suppliers. The parts that we supply are quality inspected by independent labs.

We maintain lot traceability on all products listed in this catalog as long as they are in their original bulk boxes. Certifications are maintained on all fasteners.

Hydrogen Embrittlement: We require our platers and suppliers of plated fasteners to bake case hardened parts to “IFI” specifications. However, this process does not guarantee that hydrogen embrittlement will not still be present after baking or that it will not occur at a later date while in service. Specialized testing or a substitute part may be required, depending on the application.

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