



What is Vertigo?

Vertigo is an all steel threaded fastening system for suspending steel threaded rod vertically overhead in pipe hanging, fire protection, electrical conduit and cable-tray applications. Vertigo can be installed in a variety of base materials including steel bar joists and beams, wood frame columns and beams, as well as concrete ceilings, beams and columns.

Steel threaded rods in 1/4", 3/8" and 1/2" diameters can be vertically suspended with Vertigo. In wood and steel base materials, Vertigo is also offered in a side mount style for lateral installation of 1/4" and 3/8" diameter steel threaded rods onto joists, columns and trusses. For all steel and wood Vertigo fasteners, a Vertigo Socket Driver is recommended to provide proper installation with a screw gun or hammer drill. Concrete Vertigo fasteners should be installed with the appropriate size standard drive sockets and adjustable torque, screw gun or hammer drill.

Labor Savings

SAVE MORE THA	AN 50% IN	INSTAL	LATION C	OSTS				
STEEL	SPEED OF	INSTALLED		ТҮ	PICAL CO	ST INSTALLE	O (3/8" SIZE)	
BASE MATERIAL	INSTALLATION	COST	INSTALLATION	LABOR/MIN	TIME	LABOR	MATERIAL	TOTAL
Steel Vertigo	Fast	Low	Very Easy	\$0.77	1	\$0.77	\$0.54	\$1.31
Beam Clamp	Slow	High	Hard	\$0.77	4	\$3.08	\$0.39	\$3.47
SAVE \$2.16	5 SAV	/E 63	%					
WOOD	SPEED OF	INSTALLED		TY	PICAL CO	ST INSTALLED	(3/8" SIZE)	
BASE MATERIAL	INSTALLATION	COST	INSTALLATION	LABOR/MIN	TIME	LABOR	MATERIAL	TOTAL
Wood Vertigo	Fast	Low	Easy	\$0.77	1	\$0.77	\$0.54	\$1.31
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I-Beam Connector	Medium	High	Medium	\$0.77	3	\$2.31	\$0.33	\$2.64
Post Screw Rod	Medium	High	Medium	\$0.77	3	\$2.31	\$0.33	\$2.64
SAVE \$1.35	SAN	/E 52	%					
CONCRETE	SPEED OF	INSTALLED		ТҮРІ	CAL COS	INSTALLED	(3/8" SIZE)	
CONCRETE BASE MATERIAL	SPEED OF	INSTALLED COST	INSTALLATION	TYPI LABOR/MIN	CAL COST TIME	INSTALLED	(<u>3/8" SIZE)</u> MATERIAL	TOTAL
			INSTALLATION Easy	-				total \$4.40

SAVE \$4.55 SAVE 51%

*Labor rates based on ENR 20-City average of hourly pay scales for Electricians, Plumbers and Steamfitters, report dated June 2002.

What is Vertigo For?

- Pipe hanging
- Conduit
- Eye rod
- Cable Trays
- Lighting systems
- Strut channels
- Overhead utilities
- Sprinkler systems
- Drop ceilings
- HVAC Duct
- Electrical
- Refrigeration

Who Uses Vertigo?

- Plumbers
- Maintenance Contractors
- Electricians
- Sprinkler Contractors
- Mechanical Contractors
- HVAC Contractors

Why Vertigo?

Competitive advantages:

- Lower "IN-PLACE" cost
- Simple to install
- FAST
- 1 Socket for Wood & Steel
- 1 system for all rod hanging
- Powers Support
- 15 year performance warranty



2. How difficult is it to use the setting tools and should they be used? ...Hangermate[®] and Sammy Super Screw[®] have several drivers and tools

Vertigo Drivers should always be used. For wood and steel Vertigo there is only <u>one</u> driver, so it's easy. For concrete, each of the 3 sizes has it's own driver. For wood and steel Vertigo the driver allows the coupler to spin free of the driver without stripping or overdriving the fastener. For Vertigo+ there is only one driver size.

> All Steel and Wood Vertigos are driven with the same universal driver: UDS7187 Socket Driver for Steel and Wood Vertigo

Each size concrete Vertigo (1/4", 3/8", 1/2") has its own driver: CDS7195 Socket for Concrete Vertigo 1/4" (3/8" standard socket) CDS7197 Socket for Concrete Vertigo 3/8" (1/2" standard socket) CDS7198 Socket for Concrete Vertigo 1/2" (11/16" socket) 7180SD, 7181SD, 7182SD Socket for Vertigo+ 1/4", 3/8", 1/2" (11/16" Socket)

3. What type of drill should be used to install steel and wood Vertigo? It is especially important when driving Steel Vertigo or any drill screw to use a low RPM drill to keep the points from wearing prematurely. The RPM allows the case hardened drill tip to do it's

job, especially in thicker steel. Cordless: 12, 14, 18 volt @ 1500-1800 RPM with variable speed Corded: 4.5-6 amp @ 1500-1800 RPM with variable speed *For 1/4" and 3/8" Concrete Vertigo the same tool can be used but must be torgue adjustable.

STEEL

WOOD

CONCRETE

4. Can Concrete Vertigo be installed with Powers 3000 Tool Catalog #5865? Yes, both the 1/4" and 3/8" Concrete Vertigo's can be drilled with a 1/4" x 6" Hex ANSI bit

(Peco Catalog# TPVSDS-14X6) They are installed by inserting the Vertigo socket into the 3000 extension tool and sliding over the drill bit. This allows you to drill and drive with one tool. Be sure the tool is variable speed and in hard aggregate concrete please use a torque adjustable tool.

5. We have heard that some competitive fasteners snap when the rod is pulled to the side while installing a hanger. Is this a problem for Vertigo?

No, the Vertigo product has a special heat treatment which will allow it to pass a 15 degree bend test.

7. Is Powers Vertigo Pole Tool easy to use?

Yes, it extends from 6 to 12 feet and has a quick release 3-jaw chuck to accept sockets and drill bits.

Sammy™ and Sammy Super Screw® are trademarks owned by Illinois Tool Works Inc.

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		1	/4"	3/8" 1/2	2"		Concrete			
		VERTIGO ^{™.}	+							
	CONCRETE CAT NO.	PACKAGE TYPE	ROD SIZE	SCREW SIZE & LENGTH SHANK	THREAD STYLE	PRE-DRILL	finish Yellow	вох	CODE I ICC-ES E	SR-2989
	7180SD		1/4"	3/8" X 2-3/4"	-	3/8" Wedge-Bit	Dichromate	100		
	7181SD		3/8"	3/8" X 2-3/4"		3/8" Wedge-Bit	Dichromate	100		
	7182SD		1/2"	3/8" X 2-3/4"	Wedge-Bolt+	3/8" Wedge-Bit	Dichromate	50	CDOCC-DEF	DENCE
	STEEL VERT STEEL CAT NO.	ICAL HANG	EK ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE		PACK QTY.	CROSS REFI	ITW
	#3 For Purlins								Hanger Mate [®]	Sammy Super Screw [®]
	SVH7155J	Jar With Tool	1/4"	1/4-20 X 1 "	#3	0.036" (20 Gage) —	- 0.188" (3/16")	20		
	7155	Box	1/4"	1/4-20 X 1"	#3	0.036" (20 Gage) —	- 0.188" (3/16")	100	EZE 405	DSTR100
	7155J	Jar	1/4"	1/4-20 X 1"	#3	0.036" (20 Gage) —	- 0.188" (3/16")	50		
1	SVH7157J	Jar With Tool	3/8"	1/4-20 X 2"	#3	0.036" (20 Gage) —	0.188" (3/16")	20		
	7157	Box	3/8"	1/4-20 X 2"	#3	0.036" (20 Gage) —	0.188" (3/16")	100	EZE 665	DSTR1
1	7157J	Jar	3/8"	1/4-20 X 2"	#3	0.036" (20 Gage) —	0.188" (3/16")	50		
	SVH7158J	Jar With Tool	3/8"	1/4-20 X 1" (W/Nuts)	#3	0.036" (20 Gage) —	0.188" (3/16")	20		
	7158	Box	3/8"	1/4-20 X 1" (W/Nuts)	#3	0.036" (2 <mark>0 Gage)</mark> —	0.188" (3/16")	100	EZE 670*	DSTR1
	7158J	Jar	3/8"	1/4-20 X 1" (W/Nuts)	#3	0.036" (20 Gage) —	0.188" (3/16")	50		
1	SVH7159J	Jar With Tool	3/8"	1/4-20 X 1-1/2"	#3	0.036" (20 Gage) —	0.188" (3/16")	20		
	7159	Box	3/8"	1/4-20 X 1-1/2"	#3	0.036" (20 Gage) —	0.188" (3/16")	100	EZE 605	DST15
1	7159J	Jar	3/8"	1/4-20 X 1-1/2"	#3	0.036" (20 Gage) —	0.188" (3/16")	50		-
	SVH7160J	Jar With Tool	3/8"	1/4-20 X 1-1/2" (W/Nuts)	#3	0.036" (20 Gage) —	0.188" (3/16")	20		
	7160	Box	3/8"	1/4-20 X 1-1/2" (W/Nuts)	#3	0.036" (20 Gage) —	0.188" (3/16")	100	EZE 670	
	7160J	Jar	3/8"	1/4-20 X 1-1/2" (W/Nuts)	#3	0.036" (20 Gage) —	0.188" (3/16")	50		
	#5 For Beams									
1	SVH7152J	Jar With Tool	1/4"	12-20 X 1-1/2"	#5	0.188" (3/16") — 0.	500" (1/2")	20		
	7152	Box	1/4"	12-20 X 1-1/2"	#5	0.188" (3/16") — 0.	500" (1/2")	100		
	7152J	Jar	1/4"	12-20 X 1-1/2"	#5	0.188" (3/16") — 0.	500" (1/2")	50		
ļ	SVH7154J	Jar With Tool	3/8"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.	500" (1/2")	20		
	7154	Box	3/8"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.	500" (1/2")	100	EZE 605	
	7154J	Jar	3/8"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.	500" (1/2")	50		
	SVH7161J	Jar With Tool	1/2"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.	500" (1/2")	20		
1	7161	Box	1/2"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.	500" (1/2")	100		TEK50
	7161J	Jar	1/2"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.	500" (1/2")	50		
	* denotes similar dim	nensions	Sammy [™] and Samm	ny Super Screw [®] are trademarks owne	d by Illinois Tool Wor	ks Inc. Hanger Mate™ is a regi	istered trademark of Elc	o Textron Inc.	denotes NO sin	nilar dimensions

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		TICAL HANG							CROSS R	EFERENCE
	WOOD CAT. NO. WVH7163J	PACKAGE TYPE	rod size	SCREW SHANK SIZE & LENGTH	POINT STYLE Type 17	SELF-DRILLING F	RANGE	раск оту. 20	ELCO Hanger	ITW Sammy Super
é	7163	With Tool Box	1/4"	1/4" X 2"	Type 17	1/8"		100	Mate®	Screw [®]
	7163J	Jar	1/4"	1/4" X 2"	Type 17	1/8"		50	EZE 455	GST200
e,	WVH7203J	Jar With Tool	3/8"	1/4" X 1"	Type 17	1/8"		20		
	7203	Box	3/8"	1/4" X 1"	Type 17	1/8"		100		GST10
	7203J	Jar	3/8"	1/4" X 1"	Type 17	1/8"		50		
-	WVH7165J	Jar With Tool	3/8"	1/4" X 2"	Type 17	1/8"		20		
	7165	Box	3/8"	1/4" X 2"	Type 17	1/8"		100		GST20
2	7165J	Jar	3/8"	1/4" X 2"	Type 17	1/8"		50		
	WVH7167J	Jar With Tool	3/8"	1/4" X 3"	Type 17	1/8"		20		
	7167	Box	3/8"	1/4" X 3"	Type 17	1/8"		100	-	GST30
	7167J	Jar	3/8"	1/4" X 3"	Type 17	1/8"		50		
	WVH7169J	Jar With Tool	3/8"	1/4" X 4"	Type 17	1/8"		20		
1	7169	Box	3/8"	1/4" X 4"	Type 17	1/8"		100	-	GST40
	7169	Jar	3/8"	1/4" X 4"	Type 17	1/8"		50		
	WVH7162J	Jar With Tool	3/8"	5/16" X 2-1/2"	Type 17	1/8"		20		
	7162	Box	3/8"	5/16" X 2-1/2"	Type 17	1/8"		100	EZE 750	
	7162J	Jar	3/8"	5/16" X 2-1/2"	Type 17	1/8"		50		
	WVH7164J	Jar With Tool	1/2"	5/16" X 2-1/2"	Type 17	1/8"		20		
	7164	Box	1/2"	5/16" X 2-1/2"	Type 17	1/8"		100		
1	7164J	Jar	1/2"	5/16" X 2-1/2"	Type 17	1/8"		50		
2		VERTICAL H								
	WOOD CAT. NO. CVH7171J	PACKAGE TYPE	rod size	screw shank size & length	POINT STYLE ANSI Wedg	e-Bolt (OT)	self-drilling range	раск оту. 20		
	7171	With Tool Box	1/4"	1/4" X 1-1/4"	ANSI Wedg		1/4" ANSI	100	EZE 455	CST200
	7171J	Jar	1/4"	1/4" X 1-1/4"	ANSI Wedg		1/4" ANSI	50		
	CVH7173J	Jar With Tool	3/8"	1/4" X 1-1/2"	ANSI Wedg		1/4" ANSI	20		
1	7173	Box	3/8"	1/4" X 1-1/2"	ANSI Wedg		1/4" ANSI	100	EZE560	CST20
	7173J	Jar	3/8"	1/4" X 1-1/2"	ANSI Wedg	e-Bolt (OT)	1/4" ANSI	50		
	CVH7175J	Jar With Tool	1/2"	3/8" X 2-3/4"	ANSI Wedg		3/8" ANSI	20		
	7175	Box	1/2"	3/8" X 2-3/4"	ANSI Wedg	e-Bolt (OT)	3/8" ANSI	50		CST2
	7175J	Jar	1/2"	3/8" X 2-3/4"	ANSI Wedg	e-Bolt (OT)	3/8" ANSI	20		

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For Side Mount Concrete Applications Use Catalog Number 7185 And 7170 With A 3/16" ANSI Drill B

* denotes similar dimensions Sammy[™] and Sammy Super Screw[®] are trademarks owned by Illinois Tool Works Inc. Hanger Mate[™] is a registered trademark of Elco Textron Inc.

denotes NOsimilar dimensions

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1	STEEL SIDE	HANGER						CROSS REF	ERENCE
	STEEL CAT NO. #3 For Purlins	1	ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE	PACK QTY.	ELCO Hanger	ITW Sammy Super
	SSH7183J	Jar With Tool	1/4"	1/4-20 X 1"		#3	20	Mate®	Screw®
	7183	Box	1/4"	1/4-20 X 1"		#3	100		JRC1-1/2
	7183J	Jar	1/4"	1/4-20 X 1"		#3	50		
	SSH7184J	Jar With Tool	3/8"	1/4-20 X 1" (W/Nuts)		#3	20		
4	7184	Box	3/8"	1/4-20 X 1" (W/Nuts)		#3	100	EZE 860*	SWD10
	7184J	Jar	3/8"	1/4-20 X 1" (W/Nuts)		#3	50		
	SSH7186J	Jar With Tool	3/8"	1/4-20 X 1-1/2" (W/Nuts)	#3	0.036" (20 Guage) — 0.188" (3/16")	20		
	7186	Box	3/8"	1/4-20 X 1-1/2" (W/Nuts)	#3	0.036" (20 Guage) — 0.188" (3/16")	100	EZE 870*	/
	7186J	Jar	3/8"	1/4-20 X 1-1/2" (W/Nuts)	#3	0.036" (20 Guage) — 0.188" (3/16")	50		
	SSH7188J	Jar With Tool	3/8"	1/4-20 X 2" (W/Nuts)		#3	20		
	7188	Box	3/8"	1/4-20 X 2" (W/Nuts)		#3	100	EZE 861*	SWDR1
	7188J	Jar	3/8"	1/4-20 X 2" (W/Nuts)		#3	50		
	#5 For Beams	1							
	SSH7200J	Jar With Tool	1/4"	12-20 X 1-1/2"	#5	0.188" (3/16") — 0.500" (1/2")	20	and and a second	
	7200	Box	1/4"	12-20 X 1-1/2"	#5	0.188" (<mark>3/16") —</mark> 0.500" (1/2")	100	-/-	
	7200J	Jar	1/4"	12-20 X 1-1/2"	#5	0.188" (3/16 <mark>") — 0.5</mark> 00" (1/2")	50		
	SSH7201J	Jar With Tool	3/8"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.500" (1/2")	20		
	7201	Вох	3/8"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.500" (1/2")	100	-	
	7201J	Jar	3/8"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.500" (1/2")	50		
							_		
	WOOD SIDE	PACKAGE TYPE	ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE	PACK QTY.		
l	WSH7185J	Jar With Tool	1/4"	1/4" X 1"	Type 17	1/8"	20		
	7185	Box	1/4"	1/4" X 1"	Type 17	1/8"	100		SWG200*
		Jar	1/4"	1/4" X 1"	Type 17	1/8"	50		
	WSH7205J	Jar With Tool	3/8"	1/4" X 1"	Type 17	1/8"	20		
	7205	Box	3/8"	1/4" X 1"	Type 17	1/8"	100		SWG10
	7205J	Jar	3/8"	1/4" X 1"	Type 17	1/8"	50		
	WSH7170J	Jar with tool	3/8"	1/4" X 2"	Type 17	1/8"	20		
	7170	Box	3/8"	1/4" X 2"	Type 17	1/8"	100	EZE 880	SWG20
	7170J	Jar	3/8"	1/4" X 2"	Type 17	1/8"	50		
	WSH7156J	Jar with tool	3/8"	5/16" X 2-1/2"	Type 17	1/8"	20		
	7156	Box	3/8"	5/16" X 2-1/2"	Type 17	1/8"	100	EZE 830*	•
	7156J	Jar	3/8"	5/16" X 2-1/2"	Type 17	1/8"	50		
	* denotes similar din	nensions	Sammy [™] and Samn	ny Super Screw [®] are trademarks owne	ed by Illinois Tool Wo	orks Inc. Hanger Mate [™] is a registered trademark of	Elco Textron Inc.	denotes NOsir	nilar dimensions

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Н	A N G	I N	G	S
ACCESSORIE	S			
NUT DRIVER CAT. NO.	SOCKET DESCRIPTION	SUGGESTED USAGE GUIDELINES	COLOR	PACK QTY.
USD7187	Universal Steel & Wood Socket	1500 — 1800 Rpm Drill Sp	eed Red	1
CSD7195	1/4" Concrete Socket		Blue 📕	1
CSD7197	3/8" Concrete Socket		Blue	1
CSD7198	1/2" Concrete Socket (Use For All Vertigo+ Diameters)		Blue 📕	1
POLE TOOL	DESCRIPTION			РАСК QTY.
7166	6'-12' Pole Tool (Includes 3 Jaw Ch	nuck)		1
3000 TOOL	DESCRIPTION			PACK QTY.
USD7187	SDS Driver Kit For 1/4" And 3/8" (0.5866)	1

Includes 8" Extension Sleeve, Use 1/4" X 6" Sds Hex Bit (Cat No. 5866)

INSTALLATION SPECIFICATIONS

#3	# 5
1/4" - 20 thread	1/4" - 20 thread
13/64	13/64
1-3/16" (1-1/2" screw)	31/32" (1-1/2"screw)
1/16	1/16
1,500 - 1,800	1,500 - 1,800
	1/4" - 20 thread 13/64 1-3/16" (1-1/2" screw) 1/16

SCREW SIZE	1/4" WOOD (THRE	AD FORMING)	3/8" WOOD (THREAD FORMING)				
Point Style	Type 17		Type 17	Type 17			
Root Diameter (in)	3/16		7/32	7/32			
Thread Length (in)	Screw length I	ess 5/16	Screw length	Screw length less 5/16			
Flange Thickness (in)	1/16 1		1/16	1/16			
COUPLING SIZE & TYPE	1/4" VERTICAL	3/8" VERTICAL	1/2" VERTICAL	1/4" SIDE	3/8" SIDE		
Coupling Width (flat to flat) (in)	5/8	5/8	5/8	5/8	5/8		
Coupling Height (in)	13/16	13/16	13/16	13/16	13/16		
Coupling Thread Size (UNC)	1/4"- 20	3/8" - 16	1/2"- 13	1/4"- 20	3/8"- 16		

3/8

3/8

5/8 (through) 5/8 (through)

ROD DIAMETER / ANCHOR SIZE	1/4″	3/8″	1/2″	1/4″	3/8″	1/2″
Drill Bit (in)	1/4 ANSI	1/4 ANSI	3/8 ANSI	1/4″	3/8″	1/2″
Anchor Thread Length (in)	1-1/8	1-3/8	2-1/2	3/8*	3/8*	3/8*
Root Diameter (in)	15/64	15/64	23/64	2-1/2	2-1/2	2-1/2
Coupling / Washer Height (in)	27/64	9/16	53/64	23/64	23/64	23/64
Integral Washer O.D. (in)	31/64	39/64	31/32	53/64	53/64	53/64
Coupling Thread Size (UNC)	1/4"- 20	3/8"- 16	1/2"- 13	31/32	31/32	31/32
Coupling Thread Depth (in)	3/8	1/2	3/4	1/4"- 20	3/8"- 16	1/2"- 13
Socket Driver Size (in)	3/8	1/2	11/16	3/8	1/2	3/4

be III (Zinc)

3/8

MATERIAL SPECIFICATIONS

Coupling Thread Depth (in)

Anchon comi onemi	
Screw Body	Carbon Steel (Case Hardened)
Coupling	Carbon Steel (Case Hardened)
Plating	ASTM B 633, SC1, Type III (Zinc

Installation Procedure

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When installing Vertigo fasteners, eye protection should be worn as a safety precaution.

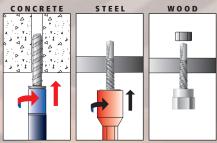
If pre-drilling is required (all concrete base materials and certain types of wood truss / wood joist), select the recommended drill bit type and diameter. Drill to the appropriate embedment depth, adding at least one diameter (1/4" to 1/2") to the drilling depth to prevent the tip of the fastener from running into a dead end at the rear of the anchor hole.



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Select the appropriate socket driver for the anchor size and type to be installed and mount into chuck of installation tool. Insert the Vertigo fastener into the socket driver, and install perpendicular to the base material surface. Drive the fastener with a smooth steady

motion until the coupling is firmly seated against the surface of the base material. Concrete Vertigo may also be installed in "Impact" mode with a small electric wrench.



Thread the appropriate diameter steel threaded rod or threaded bolt into the coupling. The threaded rod or bolt should fully engage the thread length of the coupling on a vertical mount fastener. The threaded rod or threaded portion of the bolt can pass through coupling of a side mount fastener.

For UL and FM listings, Steel Vertigo should be installed with a retaining nut.

STEEL VERTIGO - Ultimate Load Capacities Installed in Minimum ASTM A 36 Steel (Purlins and Beams)										
						EL GUAGE (THICKNE				
ANCHOR SIZE/ROD DIA.	MOUNT DIRECTION	SCREW SHANK SIZE & LENGTH	20 0.036" (LBS)	18 0.048" (LBS)	16 0.060" (LBS)	14 0.0.75" (LBS)	12 0.105" (LBS)	3/16" 0.188" (LBS)	1/4" 0.250" (LBS)	
1/4"	Vertical	1/4-20 x 1" (w/nuts)	1,550	1,550	1,775	1,775	2,050	3,850	-	
1/4"	Side	1/4-20 x 1" (w/nuts)	1,550	1,550	1,775	1,775	2,050	3,850	-	
3/8"	Vertical	1/4-20 x 1" (w/nuts)	1,550	1,550	1,775	1,775	2,050	3,850	-	
3/8"	Side	1/4-20 x 1-1/2" (w/nuts)	1,550	1,550	1,775	1,775	2,050	3,850	-	
3/8"	Vertical	1/4-20 x 1-1/2"	405	620	985	1,160	1,560	3,205	-	
3/8"	Side	1/4-20 x 1-1/2"	405	620	985	1,160	1,560	1,965	-	
3/8"	Vertical	1/4-20 x 2" (w/nuts)	1,550	1,550	1,775	1,775	2,050	3,850		
1/2"	Vertical	12-20 x 1-1/2"	495	710	920	1,560	2,050	3,280	5,040	

Steel Vertigo are recommended to be installed with the Universal Steel & Wood Nut Driver.

WOOD VERTIGO - Ultimate Load Capacities Installed in Wood Base Materials (Structural Wood and Timber)								
ANCHOR SIZE/ ROD DIA.	MOUNT DIRECTION	SCREW SHANK SIZE & LENGTH	EMBEDMENT DEPTH	FIR (LBS)	PINE (LBS)	SPRUCE (LBS)		
1/4"	Vertical	1/4" x 2"	2″	1,510	1,510	1,510		
1/4"	Side	1/4" x 1"	1″	685	650	650		
3/8"	Vertical	1/4" x 2"	2"	1,510	1,510	1,510		
3/8"	Side	1/4" x 2"	2"	1,800	1,800	1,800		
3/8"	Vertical	1/4" x 3"	3"	2,075	1,510	1,510		
3/8"	Vertical	1/4" x 4"	4″	2,075	1,510	1,510		
3/8"	Vertical	3/8" x 2-1/2"	2-1/2"	2,670	3,110	3,110		
3/8"	Side	3/8" x 2-1/2"	2-1/2"	1,450	1,530	1,380		
1/2"	Vertical	3/8" x 2-1/2"	2-1/2"	2,670	3,110	3,110		
*Timber/inist	t manufacturers may require i	pre-drilled holes with wood depending on the	e location of the anchor installation. Co	nsult with the manufacture	r for details			

*Timber/joist manufacturers may require pre-drilled holes with wood depending on the location of the anchor installation. Consult with the manufacturer for details. Wood Vertigo are recommended to be installed with the Universal Steel & Wood Nut Driver.

CONCRETE VERTIGO - Ultimate Load Capacities Installed in Normal Weight Concrete											
ANCHOR SIZE/ROD DIA.	MOUNT DIRECTION	SCREW SHANK SIZE & LENGTH	ANSI DRILL BIT DIAMETER	EMBEDMENT DEPTH	MAX. CLAMPING TORQUE	2,000 PSI TENSION (LBS)	CONCRETE SHEAR (LBS)	4,000 PSI TENSION (LBS)	CONCRETE SHEAR (LBS)	6,000 PSI CO TENSION (LBS)	
1/4"	Vertical	1/4" x 1-1/4"	1/4"	1-1/4"	8 ft Ibs.	1,390	1,810	1,950	2,440	2,070	2,570
3/8"	Vertical	1/4" x 1-1/2"	1/4"	1-1/2"	8 ft lbs.	1,760	2,580	2,595	2,640	2,770	2,700
1/2"	Vertical	3/8" x 2-3/4"	3/8"	2-3/4"	35 ft Ibs.	5,320	5,250	6,050	6,330	8,620	7,410

Concrete Vertigo are recommended to be installed with the appropriate Concrete Nut Driver.

CONCRETE VERTIGO - Ultimate Tension Load Capacities Installed in Hollow Core Plank								
ANCHOR SIZE/ROD DIA.	MOUNT DIRECTION	SCREW SHANK SIZE & LENGTH	ANSI DRILL BIT DIAMETER	EMBEDMENT DEPTH	MAX. CLAMPING TORQUE	CENTER OF WEB (LBS)	CENTER OF CORE(LBS)	
1/4″	Vertical	1/4" x 1-1/4"	1/4"	1-1/4"	8 ft-lbs	2,775	1,920	
3/8″	Vertical	1/4" x 1-1/2"	1/4"	1-1/2"	8 ft-lbs	3,700	2,570	
1/2"	Vertical	3/8" x 2-3/4"	3/8"	2-3/4"	35 ft-lbs	8,240	3,480	
				1 6 4 9 9 9 1		-	1 11.	

Tabulated load values are for anchors installed in 8-inch thick hollow core plank with a minimum compressive strength of 4,000 psi at the time of installation. The 4' x 6' normal-weight concrete member features include 1-1/2" cover above and below cores and a minimum web thickness of 1-1/2".

Concrete Vertigo are recommended to be installed with the appropriate Concrete Nut Driver.

Depending on fastener application and governing building code, ultimate load capacities should be reduced by a minimum safety factor to determine the allowable working load.

NFPA 13 Fire Protection requirements are 5 times the weight of the liquid (water) filled pipe plus 250 lbs. Consult the engineer of record.



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