

WOOD

STEEL

NEW! CONCRETE  
VERTIGO®+

CODE LISTED  
ICC-ES ESR-2989

CONCRETE

# Vertigo

Rod Hanging System





S I M P L E R O D

## 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 THAN 50% IN INSTALLATION COSTS

STEEL BASE MATERIAL	SPEED OF INSTALLATION	INSTALLED COST	INSTALLATION	TYPICAL COST INSTALLED (3/8" SIZE)				
				LABOR/MIN	TIME	LABOR	MATERIAL	TOTAL
<b>Steel</b> 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 SAVE 63%**

WOOD BASE MATERIAL	SPEED OF INSTALLATION	INSTALLED COST	INSTALLATION	TYPICAL COST INSTALLED (3/8" SIZE)				
				LABOR/MIN	TIME	LABOR	MATERIAL	TOTAL
<b>Wood</b> Vertigo	Fast	Low	Easy	\$0.77	1	\$0.77	\$0.54	\$1.31
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 SAVE 52%**

CONCRETE BASE MATERIAL	SPEED OF INSTALLATION	INSTALLED COST	INSTALLATION	TYPICAL COST INSTALLED (3/8" SIZE)				
				LABOR/MIN	TIME	LABOR	MATERIAL	TOTAL
<b>Concrete</b> Vertigo	Medium	Low	Easy	\$0.77	5	\$3.85	\$0.55	\$4.40
Steel Dropin	Slow	High	Hard	\$0.77	11	\$8.47	\$0.48	\$8.95

**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

## H A N G I N G S Y S T E M



### 1. Where can I buy Powers Vertigo Hangers?

You can buy them at any Peco distributor. For a distributor near you please call the Peco Sales Department at 800-521-7326

### 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 one 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 torque adjustable.

### 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.

# Vertigo®

S I M P L E R O D



Concrete Vertigo+

### CONCRETE VERTIGO™+

CONCRETE CAT NO.	PACKAGE TYPE	ROD SIZE	SCREW SIZE & LENGTH SHANK	THREAD STYLE	PRE-DRILL	FINISH	BOX
7180SD		1/4"	3/8" X 2-3/4"	Wedge-Bolt+	3/8" Wedge-Bit	Yellow Dichromate	100
7181SD		3/8"	3/8" X 2-3/4"	Wedge-Bolt+	3/8" Wedge-Bit	Yellow Dichromate	100
7182SD		1/2"	3/8" X 2-3/4"	Wedge-Bolt+	3/8" Wedge-Bit	Yellow Dichromate	50

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### STEEL VERTICAL HANGER

STEEL CAT NO.	ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE	PACK QTY.
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#### #3 For Purlins

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
7155J	Jar	1/4"	1/4-20 X 1"	#3	0.036" (20 Gage) — 0.188" (3/16") 50
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
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" (20 Gage) — 0.188" (3/16") 100
7158J	Jar	3/8"	1/4-20 X 1" (W/Nuts)	#3	0.036" (20 Gage) — 0.188" (3/16") 50
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
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
7160J	Jar	3/8"	1/4-20 X 1-1/2" (W/Nuts)	#3	0.036" (20 Gage) — 0.188" (3/16") 50

### CROSS REFERENCE

ELCO Hanger Mate®	ITW Sammy Super Screw®
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#### #5 For Beams

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
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
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
7161	Box	1/2"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.500" (1/2") 100
7161J	Jar	1/2"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.500" (1/2") 50

\* 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 NO similar dimensions

## H A N G I N G S Y S T E M

### WOOD VERTICAL HANGER

WOOD CAT. NO.	PACKAGE TYPE	ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE	PACK QTY.
WVH7163J	Jar With Tool	1/4"	1/4" X 2"	Type 17	1/8"	20
7163	Box	1/4"	1/4" X 2"	Type 17	1/8"	100
7163J	Jar	1/4"	1/4" X 2"	Type 17	1/8"	50
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
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
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
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
7169	Box	3/8"	1/4" X 4"	Type 17	1/8"	100
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
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
7164J	Jar	1/2"	5/16" X 2-1/2"	Type 17	1/8"	50

### CROSS REFERENCE

ELCO Hanger Mate® ITW Sammy Super Screw®

EZE 455 GST200

■ GST10

■ GST20

■ GST30

■ GST40

EZE 750 ■

■ ■

### CONCRETE VERTICAL HANGER

WOOD CAT. NO.	PACKAGE TYPE	ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE	PACK QTY.
CVH7171J	Jar With Tool	1/4"	1/4" X 1-1/4"	ANSI Wedge-Bolt (OT)	1/4" ANSI	20
7171	Box	1/4"	1/4" X 1-1/4"	ANSI Wedge-Bolt (OT)	1/4" ANSI	100
7171J	Jar	1/4"	1/4" X 1-1/4"	ANSI Wedge-Bolt (OT)	1/4" ANSI	50
CVH7173J	Jar With Tool	3/8"	1/4" X 1-1/2"	ANSI Wedge-Bolt (OT)	1/4" ANSI	20
7173	Box	3/8"	1/4" X 1-1/2"	ANSI Wedge-Bolt (OT)	1/4" ANSI	100
7173J	Jar	3/8"	1/4" X 1-1/2"	ANSI Wedge-Bolt (OT)	1/4" ANSI	50
CVH7175J	Jar With Tool	1/2"	3/8" X 2-3/4"	ANSI Wedge-Bolt (OT)	3/8" ANSI	20
7175	Box	1/2"	3/8" X 2-3/4"	ANSI Wedge-Bolt (OT)	3/8" ANSI	50
7175J	Jar	1/2"	3/8" X 2-3/4"	ANSI Wedge-Bolt (OT)	3/8" ANSI	20

EZE 455 CST200

EZE560 CST20

■ CST2

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

■ denotes NOSimilar dimensions

\* denotes similar dimensions

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S I M P L E R O D

STEEL SIDE HANGER							CROSS REFERENCE	
STEEL CAT NO.	ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE	PACK QTY.	ELCO Hanger Mate®	ITW Sammy Super Screw®	
<b>#3 For Purlins</b>								
SSH7183J	Jar With Tool	1/4"	1/4-20 X 1"	#3	20			
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			
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		20			
7186	Box	3/8"	1/4-20 X 1-1/2" (W/Nuts) #3		100	EZE 870*	■	
7186J	Jar	3/8"	1/4-20 X 1-1/2" (W/Nuts) #3		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			
<b>#5 For Beams</b>								
SSH7200J	Jar With Tool	1/4"	12-20 X 1-1/2"	#5	20			
7200	Box	1/4"	12-20 X 1-1/2"	#5	100	■	■	
7200J	Jar	1/4"	12-20 X 1-1/2"	#5	50			
SSH7201J	Jar With Tool	3/8"	12-20 X 1-1/2" (W/Nuts) #5		20			
7201	Box	3/8"	12-20 X 1-1/2" (W/Nuts) #5		100	■	■	
7201J	Jar	3/8"	12-20 X 1-1/2" (W/Nuts) #5		50			
WOOD SIDE HANGER								
WOOD CAT. NO.	PACKAGE TYPE	ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE	PACK QTY.		
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*
7185J	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		

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## H A N G I N G S Y S T E M

### ACCESSORIES

NUT DRIVER CAT. NO.	SOCKET DESCRIPTION	SUGGESTED USAGE GUIDELINES	COLOR	PACK QTY.
USD7187	Universal Steel & Wood Socket	1500 — 1800 Rpm Drill Speed	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	PACK QTY.
7166	6'-12' Pole Tool (Includes 3 Jaw Chuck)	1

3000 TOOL	DESCRIPTION	PACK QTY.
USD7187	SDS Driver Kit For 1/4" And 3/8" Concrete Vertigo Includes 8" Extension Sleeve, Use 1/4" X 6" Sds Hex Bit (Cat No. 5866)	1

### INSTALLATION SPECIFICATIONS

POINT STYLE	#3	#5
Screw Size (UNC)	1/4" - 20 thread	1/4" - 20 thread
Root Diameter (in)	13/64	13/64
Thread Length (in)	1-3/16" (1-1/2" screw)	31/32" (1-1/2" screw)
Flange Thickness (in)	1/16	1/16
Drill Speed (RPM)	1,500 - 1,800	1,500 - 1,800

SCREW SIZE	1/4" WOOD (THREAD FORMING)	3/8" WOOD (THREAD FORMING)
Point Style	Type 17	Type 17
Root Diameter (in)	3/16	7/32
Thread Length (in)	Screw length less 5/16	Screw length less 5/16
Flange Thickness (in)	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
Coupling Thread Depth (in)	3/8	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

### MATERIAL SPECIFICATIONS

ANCHOR COMPONENT	MATERIAL
Screw Body	Carbon Steel (Case Hardened)
Coupling	Carbon Steel (Case Hardened)
Plating	ASTM B 633, SC1, Type III (Zinc)

### Installation Procedure

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 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.

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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)**

ANCHOR SIZE/ROD DIA.	MOUNT DIRECTION	SCREW SHANK SIZE & LENGTH	STEEL GAUGE (THICKNESS)						
			20 0.036" (LBS)	18 0.048" (LBS)	16 0.060" (LBS)	14 0.075" (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/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 CONCRETE		4,000 PSI CONCRETE		6,000 PSI CONCRETE	
						TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)
1/4"	Vertical	1/4" x 1-1/4"	1/4"	1-1/4"	8 ft. - lbs.	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. - lbs.	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

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.



Peco Fasteners, Inc. • P. O. Box 43483 • Atlanta, GA 30336  
 Location: Peco Fasteners, Inc. • 1218-A Six Flags Rd. • Austell, GA 30168  
 Phone: 770-745-1300 • Wholesale Only: 800-521-7326 • Fax: 770-745-1333



WOOD

STEEL

NEW! CONCRETE  
VERTIGO®+

CODE LISTED  
ICC-ES ESR-2989

CONCRETE

# Vertigo

Rod Hanging System





S I M P L E R O D

## 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 THAN 50% IN INSTALLATION COSTS

STEEL BASE MATERIAL	SPEED OF INSTALLATION	INSTALLED COST	INSTALLATION	TYPICAL COST INSTALLED (3/8" SIZE)				
				LABOR/MIN	TIME	LABOR	MATERIAL	TOTAL
<b>Steel</b> 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 SAVE 63%**

WOOD BASE MATERIAL	SPEED OF INSTALLATION	INSTALLED COST	INSTALLATION	TYPICAL COST INSTALLED (3/8" SIZE)				
				LABOR/MIN	TIME	LABOR	MATERIAL	TOTAL
<b>Wood</b> Vertigo	Fast	Low	Easy	\$0.77	1	\$0.77	\$0.54	\$1.31
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 SAVE 52%**

CONCRETE BASE MATERIAL	SPEED OF INSTALLATION	INSTALLED COST	INSTALLATION	TYPICAL COST INSTALLED (3/8" SIZE)				
				LABOR/MIN	TIME	LABOR	MATERIAL	TOTAL
<b>Concrete</b> Vertigo	Medium	Low	Easy	\$0.77	5	\$3.85	\$0.55	\$4.40
Steel Dropin	Slow	High	Hard	\$0.77	11	\$8.47	\$0.48	\$8.95

**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

## H A N G I N G S Y S T E M



### 1. Where can I buy Powers Vertigo Hangers?

You can buy them at any Peco distributor. For a distributor near you please call the Peco Sales Department at 800-521-7326

### 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 one 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 torque adjustable.

### 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.

# Vertigo®

S I M P L E R O D



Concrete Vertigo+

### CONCRETE VERTIGO™+

CONCRETE CAT NO.	PACKAGE TYPE	ROD SIZE	SCREW SIZE & LENGTH SHANK	THREAD STYLE	PRE-DRILL	FINISH	BOX
7180SD		1/4"	3/8" X 2-3/4"	Wedge-Bolt+	3/8" Wedge-Bit	Yellow Dichromate	100
7181SD		3/8"	3/8" X 2-3/4"	Wedge-Bolt+	3/8" Wedge-Bit	Yellow Dichromate	100
7182SD		1/2"	3/8" X 2-3/4"	Wedge-Bolt+	3/8" Wedge-Bit	Yellow Dichromate	50

**CODE LISTED**  
ICC-ES ESR-2989

### STEEL VERTICAL HANGER

STEEL CAT NO.	ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE	PACK QTY.
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#### #3 For Purlins

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
7155J	Jar	1/4"	1/4-20 X 1"	#3	0.036" (20 Gage) — 0.188" (3/16") 50
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
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" (20 Gage) — 0.188" (3/16") 100
7158J	Jar	3/8"	1/4-20 X 1" (W/Nuts)	#3	0.036" (20 Gage) — 0.188" (3/16") 50
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
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
7160J	Jar	3/8"	1/4-20 X 1-1/2" (W/Nuts)	#3	0.036" (20 Gage) — 0.188" (3/16") 50

### CROSS REFERENCE

ELCO Hanger Mate®	ITW Sammy Super Screw®
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#### #5 For Beams

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
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
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
7161	Box	1/2"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.500" (1/2") 100
7161J	Jar	1/2"	12-20 X 1-1/2" (W/Nuts)	#5	0.188" (3/16") — 0.500" (1/2") 50

\* 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 NO similar dimensions

## H A N G I N G S Y S T E M

### WOOD VERTICAL HANGER

WOOD CAT. NO.	PACKAGE TYPE	ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE	PACK QTY.
WVH7163J	Jar With Tool	1/4"	1/4" X 2"	Type 17	1/8"	20
7163	Box	1/4"	1/4" X 2"	Type 17	1/8"	100
7163J	Jar	1/4"	1/4" X 2"	Type 17	1/8"	50
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
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
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
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
7169	Box	3/8"	1/4" X 4"	Type 17	1/8"	100
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
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
7164J	Jar	1/2"	5/16" X 2-1/2"	Type 17	1/8"	50

### CROSS REFERENCE

ELCO Hanger Mate® ITW Sammy Super Screw®

EZE 455 GST200

■ GST10

■ GST20

■ GST30

■ GST40

EZE 750 ■

■ ■

### CONCRETE VERTICAL HANGER

WOOD CAT. NO.	PACKAGE TYPE	ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE	PACK QTY.
CVH7171J	Jar With Tool	1/4"	1/4" X 1-1/4"	ANSI Wedge-Bolt (OT)	1/4" ANSI	20
7171	Box	1/4"	1/4" X 1-1/4"	ANSI Wedge-Bolt (OT)	1/4" ANSI	100
7171J	Jar	1/4"	1/4" X 1-1/4"	ANSI Wedge-Bolt (OT)	1/4" ANSI	50
CVH7173J	Jar With Tool	3/8"	1/4" X 1-1/2"	ANSI Wedge-Bolt (OT)	1/4" ANSI	20
7173	Box	3/8"	1/4" X 1-1/2"	ANSI Wedge-Bolt (OT)	1/4" ANSI	100
7173J	Jar	3/8"	1/4" X 1-1/2"	ANSI Wedge-Bolt (OT)	1/4" ANSI	50
CVH7175J	Jar With Tool	1/2"	3/8" X 2-3/4"	ANSI Wedge-Bolt (OT)	3/8" ANSI	20
7175	Box	1/2"	3/8" X 2-3/4"	ANSI Wedge-Bolt (OT)	3/8" ANSI	50
7175J	Jar	1/2"	3/8" X 2-3/4"	ANSI Wedge-Bolt (OT)	3/8" ANSI	20

EZE 455 CST200

EZE560 CST20

■ CST2

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

■ denotes NOSimilar dimensions

\* denotes similar dimensions

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S I M P L E R O D

STEEL SIDE HANGER							CROSS REFERENCE	
STEEL CAT NO.		ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE	PACK QTY.	ELCO Hanger Mate®	ITW Sammy Super Screw®
<b>#3 For Purlins</b>								
SSH7183J	Jar With Tool	1/4"	1/4-20 X 1"		#3	20		
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		
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 Gauge) — 0.188" (3/16")	20		
7186	Box	3/8"	1/4-20 X 1-1/2" (W/Nuts) #3		0.036" (20 Gauge) — 0.188" (3/16")	100	EZE 870*	■
7186J	Jar	3/8"	1/4-20 X 1-1/2" (W/Nuts) #3		0.036" (20 Gauge) — 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		
<b>#5 For Beams</b>								
SSH7200J	Jar With Tool	1/4"	12-20 X 1-1/2"	#5	0.188" (3/16") — 0.500" (1/2")	20		
7200	Box	1/4"	12-20 X 1-1/2"	#5	0.188" (3/16") — 0.500" (1/2")	100	■	■
7200J	Jar	1/4"	12-20 X 1-1/2"	#5	0.188" (3/16") — 0.500" (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	Box	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 HANGER								
WOOD CAT. NO.	PACKAGE TYPE	ROD SIZE	SCREW SHANK SIZE & LENGTH	POINT STYLE	SELF-DRILLING RANGE	PACK QTY.		
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*
7185J	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 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

## H A N G I N G S Y S T E M

### ACCESSORIES

NUT DRIVER CAT. NO.	SOCKET DESCRIPTION	SUGGESTED USAGE GUIDELINES	COLOR	PACK QTY.
USD7187	Universal Steel & Wood Socket	1500 — 1800 Rpm Drill Speed	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	PACK QTY.
7166	6'-12' Pole Tool (Includes 3 Jaw Chuck)	1

3000 TOOL	DESCRIPTION	PACK QTY.
USD7187	SDS Driver Kit For 1/4" And 3/8" Concrete Vertigo Includes 8" Extension Sleeve, Use 1/4" X 6" Sds Hex Bit (Cat No. 5866)	1

### INSTALLATION SPECIFICATIONS

POINT STYLE	#3	#5
Screw Size (UNC)	1/4" - 20 thread	1/4" - 20 thread
Root Diameter (in)	13/64	13/64
Thread Length (in)	1-3/16" (1-1/2" screw)	31/32" (1-1/2" screw)
Flange Thickness (in)	1/16	1/16
Drill Speed (RPM)	1,500 - 1,800	1,500 - 1,800

SCREW SIZE	1/4" WOOD (THREAD FORMING)	3/8" WOOD (THREAD FORMING)
Point Style	Type 17	Type 17
Root Diameter (in)	3/16	7/32
Thread Length (in)	Screw length less 5/16	Screw length less 5/16
Flange Thickness (in)	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
Coupling Thread Depth (in)	3/8	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

### MATERIAL SPECIFICATIONS

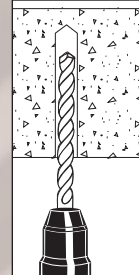
ANCHOR COMPONENT	MATERIAL
Screw Body	Carbon Steel (Case Hardened)
Coupling	Carbon Steel (Case Hardened)
Plating	ASTM B 633, SC1, Type III (Zinc)

### Installation Procedure

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 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.

#### CONCRETE



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.

#### CONCRETE

#### STEEL

#### WOOD



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)**

ANCHOR SIZE/ROD DIA.	MOUNT DIRECTION	SCREW SHANK SIZE & LENGTH	STEEL GAUGE (THICKNESS)						
			20 0.036" (LBS)	18 0.048" (LBS)	16 0.060" (LBS)	14 0.075" (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/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 CONCRETE		4,000 PSI CONCRETE		6,000 PSI CONCRETE	
						TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)
1/4"	Vertical	1/4" x 1-1/4"	1/4"	1-1/4"	8 ft. - lbs.	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. - lbs.	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

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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