

V4

VertigSM

ROD HANGING MADE SIMPLESM

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GOLD COAST

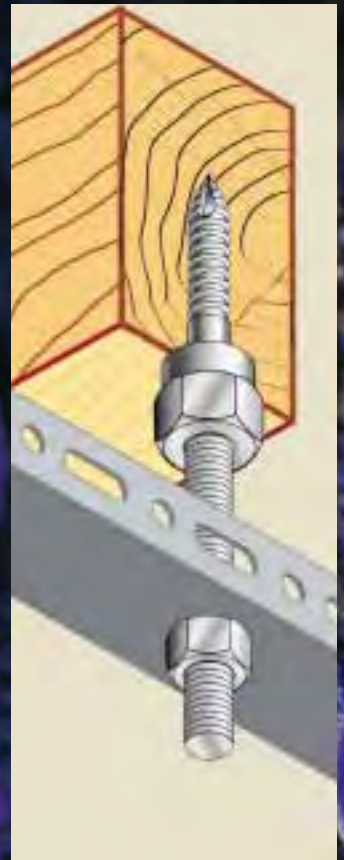
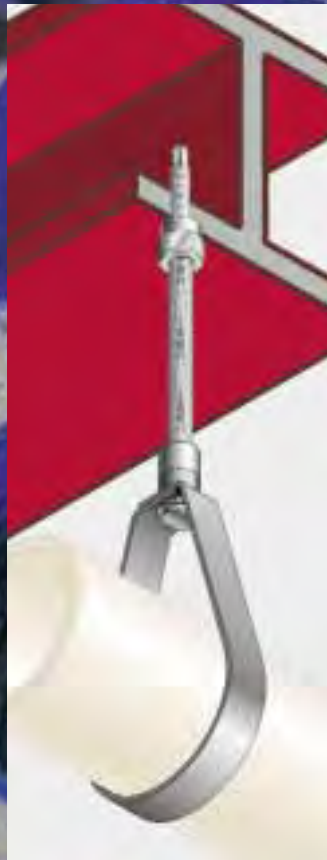
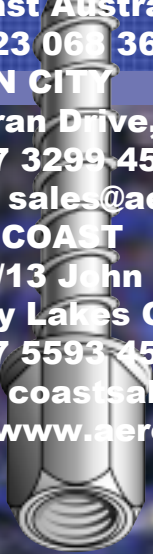
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Powers[®]

WHAT IS VERTIGO?



Vertigo is a one-piece, 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 M6 and M10 diameters can be vertically suspended with Vertigo. In steel base materials, Vertigo is also offered in a side mount style for lateral installation of M6, M8 and M10 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 in "rotation only" mode. Concrete Vertigo fasteners should be installed with the appropriate size standard drive sockets and the Panasonic Cordless Multi Drill and Driver.

WHAT IS VERTIGO FOR?

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

WHO USES VERTIGO?

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



WHY VERTIGO?

COMPETITIVE ADVANTAGES

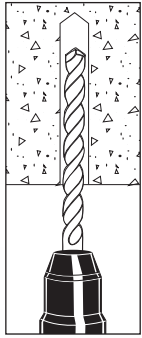
- | | | |
|-------------------------------|----------------------------------|-----------------------|
| 💰 - Lower "IN-PLACE" cost | ABC - Simple to install | 🕒 - FAST |
| 🔴 - 1 Socket for Wood & Steel | 1 - 1 system for all rod hanging | PTV - Jobsite service |
| 🏠 - Powers Support | 🕒 - 15 year performance warranty | |

VERTIGO INSTALLATION

INSTALLATION PROCEDURE

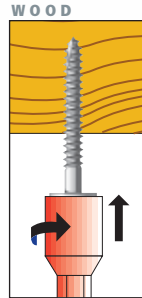
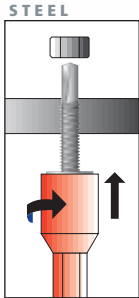
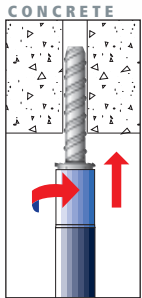
Eye protection should be worn when installing Vertigo fasteners.

CONCRETE



If pre-drilling is required (certain types of wood truss / wood joist and all concrete base materials), select the recommended drill bit type and diameter. Drill to the appropriate embedment depth, adding at least one diameter (6.5mm) to the drilling depth to prevent the tip of the fastener from running into a dead end at the rear of the anchor hole.

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. In "rotation only" mode, drive the fastener with a smooth steady motion until the coupling is firmly seated against the surface of the base material.



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.

Caution: Vertigo is designed for installation in steel, timber or concrete base material.

Do not attempt to bend or realign Vertigo and threaded rod once threaded rod has been screwed into Vertigo as this may result in breakage of the fixing.

INSTALLATION SPECIFICATIONS

VERTIGO FOR STEEL

POINT STYLE

3

Screw Size	1/4" - 20 thread (UNC)
Root Diameter	5.16mm
Thread Length	17mm (for 25mm screw)
Flange Thickness	1.6mm
Drill Speed	500 - 1,500 rpm

VERTIGO FOR WOOD

POINT STYLE

3

Screw Size	1/4" wood (thread forming)
Root Diameter	4.76mm
Thread Length	Screw Length minus 8mm
Flange Thickness	1.6mm
Pre-drill Diameter	3.0mm (if required)

VERTIGO FOR CONCRETE

Rod Diam. / Fastener Size

6mm

10mm

Drill Bit	6.5mm	6.5mm
Anchor Thread Length	28mm	35mm
Root Diameter	5.95mm	5.95mm
Coupling / Washer Height	10.7mm	14.3mm
Integral Washer O.D.	12.3mm	15.5mm
Coupling Thread Size	M6	M10
Coupling Thread Depth	10mm	13mm
Socket Driver Size	3/8"	1/2"

VERTIGO COUPLINGS (STEEL & WOOD)

COUPLING SIZE & TYPE

6mm Vertical

8mm Vertical

10mm Vertical

6mm Side

8mm Side

10mm Side

Coupling Width (flat to flat)	16mm	16mm	16mm	16mm	16mm	16mm
Coupling Height	20mm	20mm	20mm	20mm	20mm	20mm
Coupling Thread Size	M6	M8	M10	M6	M8	M10
Thread Depth	10mm	10mm	10mm	16mm (through)	16mm (through)	16mm (through)

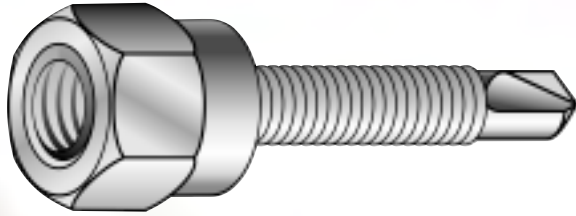
MATERIAL SPECIFICATIONS

ANCHOR COMPONENT

MATERIAL

Screw Body	Case Hardened AISI 1022
Coupling	Case Hardened AISI 1018-1022
Plating	ASTM B 633, SC1, Type III

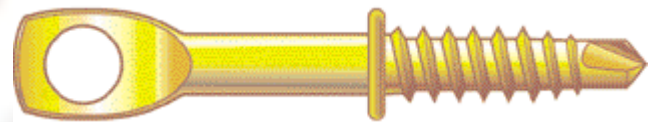
THE RANGE OF POWERS VERTIGO™ ANCHORS



VERTICAL HANGER - STEEL

PART NO.	ROD	SCREW	BOX	CARTON	POINT	DRILLING RANGE (mm)
28000	6mm	1/4"-20 x 25mm	100	500	SD3	1.0 - 3.0
28024	8mm	1/4"-20 x 25mm w/nuts	100	500	SD3	1.0 - 3.0
28008	10mm	1/4"-20 x 25mm w/nuts	100	500	SD3	1.0 - 3.0

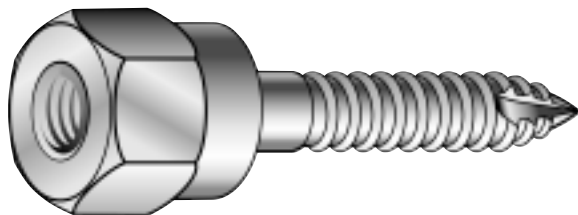
For direct vertical fixing into steel purlin the Powers Vertigo Vertical Hanger for Steel is ideal. The hanger is self drilling and once installed accommodates 6mm, 8mm and 10mm threaded rod for installations including HVAC duct, sprinkler systems and cable trays.



TWPS HANGER - STEEL

PART NO.	ROD	SCREW	BOX	CARTON	POINT	DRILLING RANGE (mm)
TWPS		1/4"-14 x 22mm	250	1000	SD3	1.2 - 1.6

For fixing of suspended ceilings to steel purlin the TWSP hanger is simple as it self drills into the purlin. Vertical hanger fixings for steel can be easily and safely installed from ground level using the Powers pole tool which is available in lengths ranging from 1.8m to 4.8m.

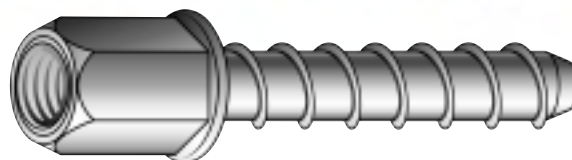


VERTICAL HANGER - TIMBER

PART NO.	ROD	SCREW	BOX	CARTON	POINT	DRILLING RANGE (mm)
28040	6mm	1/4" x 50mm	100	500	Type 17 Self-tapping	
28060	8mm	1/4" x 50mm	100	500	Type 17 Self-tapping	
28044	10mm	1/4" x 50mm	100	500	Type 17 Self-tapping	
28125	10mm	1/4" x 25mm	100	500	Type 17 Self-tapping	

For direct vertical fixing into timber joists the Powers vertigo vertical hanger for timber is the best solution. The hanger is self tapping and once installed accommodates 6mm, 8mm and 10mm threaded rod for installations including HVAC duct, sprinkler systems and cable trays. Vertical hanger fixings for timber can be easily and safely installed from ground level using the Powers Pole Tool which extends from 1.8m to 5.5m.

VERTIGO PERFORMANCE DATA

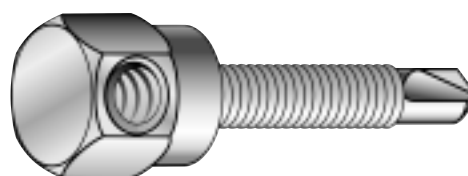


VERTICAL HANGER - CONCRETE

PART NO.	ROD	SCREW	BOX	CARTON	THREAD	DRILLING RANGE (mm)
28080	6mm	6.5mm x 32mm	100	500	BT	Self-tapping
28084	10mm	6.5mm x 38mm	100	500	BT	Self-tapping

For direct vertical fixing into concrete the Powers Vertigo Vertical hanger for concrete is ideal. Installation is simple, select the recommended drill bit, drill to the appropriate embedment depth adding at least one diameter (6.5mm) to the drilling depth thus preventing the fixing from bottoming out in the drilled hole.

Select an installation tool either a manual hand operated ratchet with appropriate sized socket or the highly efficient **Panasonic Cordless Multi Drill and Driver** with an appropriate sized socket. The Panasonic Cordless Multi Drill and Driver has a unique rotary/impact mode that allows for safe and easy installation in all types of concrete base material. **NOTE: Do not install Vertigo Vertical Hanger for concrete with a rotary hammer drill, as this may cause operator injury.** The concrete hanger self taps a thread in the drilled hole and once installed accommodates 6mm and 10mm threaded rod for installations including HVAC duct, sprinkler systems and cable trays.



SIDE HANGER - STEEL

PART NO.	ROD	SCREW	BOX	CARTON	POINT	DRILLING RANGE (mm)
28096	6mm	1/4"-20 x 25mm	100	500	SD3	1.0 - 3.0
28112	8mm	1/4"-20 x 25mm w/nuts	100	500	SD3	1.0 - 3.0
28100	10mm	1/4"-20 x 25mm w/nuts	100	500	SD3	1.0 - 3.0

For direct fixing into the web of steel purlin the Powers Vertigo Side Hanger for steel is the only solution. With purlin manufacturers increasingly highlighting the need to fix into the web of steel purlins as opposed to the flange, Powers have developed a product that not only complies with purlin manufacturers recommendations but also provides for a strong permanent fixing. The Vertigo side hanger for steel is self drilling and once installed accommodates 6mm, 8mm and 10mm threaded rod for installations including HVAC duct, sprinkler systems and cable trays.



DRIVER FOR CONCRETE VERTIGO

Multi Drill & Driver was created by using a revolutionary technology that allows switching between "Drill & Driver Mode" and "Impact Mode" via a switch on the top of the body.



ACCESSORIES

PART NO.	DESCRIPTION	COLOUR	BOX	CARTON
7187	Universal (metal/wood) Socket	Red	5	25
7195	Socket for M6 Concrete Vertigo	Blue	5	25
7197	Socket for M10 Concrete Vertigo	Blue	5	25
TWPSDRIVE	TWPS Driver	Black	1	1

The universal (metal/wood) socket is designed with a safety mechanism, which prevents over-driving of the fixing. Once the Vertigo fixing is fully seated onto the timber or steel base material the universal socket releases from the driving action preventing over-driving of the fixing and subsequent damage to the fixing.

The universal socket can be used to drive;

- Vertical Hanger – steel
- Vertical Hanger – timber
- Side Hanger – steel

POLE TOOL - FOR STEEL AND TIMBER VERTIGO

7166	1.8m - 3.65m - 5.5m Pole Tool w/3 Jaw Chuck	1	1
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POLE TOOL - TWPS HANGER

LLN 6-12	1.8m - 3.6m Pole Tool	1	1
LLN 8-16	2.4m - 4.8m Pole Tool	1	1

DRIVER FOR CONCRETE VERTIGO

EY6535	Cordless Multi Drill and Driver	1	1
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VERTIGO PERFORMANCE DATA

CONCRETE VERTIGO - Ultimate Load Capacities Concrete

ANCHOR SIZE/ ROD DIA.	MOUNT DIRECTION	SCREW SHANK SIZE & LENGTH	DRILL BIT DIAM.	EMBEDMENT DEPTH	MAX. CLAMPING TORQUE	15MPa CONCRETE		30MPa CONCRETE		40MPa CONCRETE	
						TENSION (kN)	SHEAR (kN)	TENSION (kN)	SHEAR (kN)	TENSION (kN)	SHEAR (kN)
M6	Vertical	6.5 x 32mm	6.5mm	32mm	15 Nm	6.2	8.1	8.7	10.9	9.3	11.5
M10	Vertical	6.5 x 32mm	6.5mm	32mm	15 Nm	7.9	11.6	11.6	11.2	12.4	12.1

Concrete Vertigo is recommended to be installed with the appropriate concrete nut driver.

STEEL VERTIGO - Ultimate Load Capacities in Tension with Steel

ANCHOR SIZE/ ROD DIA.	MOUNT DIRECTION	SCREW SHANK SIZE & LENGTH	PURLIN (THICKNESS)				
			0.9mm (kN)	1.2mm (kN)	1.5mm (kN)	1.9mm (kN)	2.7mm (kN)
M6	Vertical	1/4-20 x 25mm w/nuts	6.9	6.9	8.0	8.0	9.2
M6	Side	1/4-20 x 25mm w/nuts	6.9	6.9	8.0	8.0	9.2
M8	Vertical	1/4-20 x 25mm w/nuts	6.9	6.9	8.0	8.0	9.2
M8	Side	1/4-20 x 25mm w/nuts	6.9	6.9	8.0	8.0	9.2
M10	Vertical	1/4-20 x 25mm w/nuts	6.9	6.9	8.0	8.0	9.2
M10	Side	1/4-20 x 25mm w/nuts	6.9	6.9	8.0	8.0	9.2
TWPS	Vertical	1/4-14 x 22mm		3.8	4.5		

STEEL VERTIGO - Ultimate Load Capacities in Shear with Steel

ANCHOR SIZE/ ROD DIA.	MOUNT DIRECTION	SCREW SHANK SIZE & LENGTH	PURLIN (THICKNESS)
			0.9mm
M6	Vertical	1/4-20 x 25mm w/nuts	8.8 kN
M6	Side	1/4-20 x 25mm w/nuts	8.8 kN
M8	Vertical	1/4-20 x 25mm w/nuts	8.8 kN
M8	Side	1/4-20 x 25mm w/nuts	8.8 kN
M10	Vertical	1/4-20 x 25mm w/nuts	8.8 kN
M10	Side	1/4-20 x 25mm w/nuts	8.8 kN

Steel Vertigo is recommended to be installed with the appropriate Steel/Wood Nut Driver.

WOOD VERTIGO - Ultimate Load Capacities in Wood Base Materials

ANCHOR SIZE/ ROD DIA.	MOUNT DIRECTION	SCREW SHANK SIZE & LENGTH	EMBEDMENT DEPTH	HARDWOOD (kN)	PINE (kN)
M6	Vertical	1/4" x 50mm	50mm	6.8	6.8
M8	Vertical	1/4" x 50mm	50mm	6.8	6.8
M10	Vertical	1/4" x 25mm	25mm	3.1	2.9
M10	Vertical	1/4" x 50mm	50mm	6.8	6.8

Wood Vertigo is recommended to be installed with the appropriate Steel/Wood Nut Driver.

*Timber/joist manufacturers may require pre-drilled holes with wood depending on the location of the anchor installation. Consult with the truss/joist manufacturer for details.

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.

Guidance to be provided by consulting engineer responsible for project / application.

PRODUCT APPROVALS

Factory Mutual Research Corporation (FMRC)

Underwriters Laboratories (UL) File No. EX1289

International Conference of Building Officials (ICBO) - Pending - updates at www.powers.com

FREQUENTLY ASKED QUESTIONS



1. Where can I buy Powers Vertigo Hangers?

You can buy them at selected Powers distributors

2. How difficult is it to use the setting tools and should they be used?

Vertigo Drivers should always be used. For wood and metal Vertigo there is only one driver, so it's easy. For concrete, each of the 2 sizes has it's own driver. For wood and metal Vertigo the driver allows the coupler to spin free of the driver without stripping or overdriving the fastener.

All Steel and Wood Vertigo's are driven with the same single driver
7187 Socket Driver for Metal and Wood Vertigo

Each size concrete vertigo (M6, M10) has its own driver

7195 Socket for Concrete Vertigo M6 (3/8" standard socket)

7197 Socket for Concrete Vertigo M10 (1/2" standard socket)

3. What type of drill should be used to install wood and metal Vertigo?

It is especially important when driving Metal Vertigo or any drill screw to use a low RPM drill to keep the points from wearing prematurely. The low RPM allows the case hardened drill tip to do it's job especially in thicker steel.

Cordless: 12, 14, 18 volt @1100-2000 rpms with variable speed

Corded: 4.5-6 amp 1200-2000 rpm variable speed

*For Concrete Vertigo use the Panasonic Cordless Multi Drill and Driver.

4. We have heard that competitive fasteners sometimes strip because they are two piece.

Is this a problem for Vertigo?

No, the Vertigo is one integral unit with reverse mating threads that get tighter as the screw is rotated.

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 treat which will pass a 30 degree bend test.

6. Is Powers Vertigo Pole Tool easy to use?

Yes it is, extending from 1.8m to 5.5m and it has a quick release 3-jaw chuck to accept sockets and drill bits.