



The following excerpt are pages from the North American Anchor Fastening Technical Guide, 2011.

Contact Hilti's team of technical support specialists between the hours of 7:00am – 6:00pm CST for complete details on this product including data development, product specifications, general suitability, installation, corrosion and spacing and edge distance guidelines.

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HPS-1 Impact Anchor 3.3.15

3.3.15.1 Product Description

The HPS-1 Impact Anchor consists of a carbon or stainless steel drive-screw and a plastic expansion body, which combine to form an easy-to-install yet removable fastening, for light duty applications in concrete and masonry.

Product Features

- Recessed philips drive connection in the screw head provides protection during hammering, allowing simple setting and removal
- Anchor collar and screw head form a compact unit which allows countersinking in soft wood and solid clamping action with metal parts
- Expanding head opens in hollow base material to provide reliable keying effect
- One type anchor reduces inventory, provides versatile use in brick, hollow block and concrete
- Can be set with hammer or screw driver for quick and easy installation
- Available with 304 Stainless Steel Nail for use in corrosive environments
- Plastic body is temperature resistant from -40°F to 176°F. Anchor can be installed from 14°F to 104°F. Both temperature ranges allow use in extreme climactic conditions
- Suitable for through-hole fastenings to improve productivity
- Easy removal adds to HPS-1 versatility.

3.3.15.1 Product Description

3.3.15.2 Material Specifications

3.3.15.3 Technical Data

3.3.15.4 Installation Instructions

3.3.15.5 Ordering Information



3.3.15.2 Material Specifications

Corrosion resistant body made of polyamide 6.6 plastic

Carbon steel drive screw material meets the requirements of AISI 1010

Carbon steel drive screw zinc plated to minimum 5 µm thickness in accordance with ASTM B633, SC 1, Type III

Stainless steel drive screw material meets the requirements of AISI 304

3.3.15.3 Technical Data

HPS-1 Allowable Loads¹

Anchor		HPS-1					
		3/16 to 1/2	3/16 to 1-1/2	1/4 to 1	1/4 to 1-5/8 1/4 to 2-1/16 1/4 to 2-5/8	5/16 to 1-5/8 5/16 to 2-1/2	5/16 to 3-5/8 5/16 to 4-3/8
Base Material							
Concrete 2000 psi (13.8 MPa)	Tension lb (N)	30 (133)	55 (245)	70 (311)	80 (356)	90 (400)	
	Shear lb (N)	95 (422)	130 (578)	135 (600)	215 (956)	110 (489)	
Brick Masonry	Tension lb (N)	35 (155)	40 (178)	45 (200)	45 (200)	N/A	
	Shear lb (N)	105 (467)	145 (645)	165 (734)	220 (979)	N/A	
Hollow Concrete Block (Normal Wt.)	Tension lb (N)	50 (222)	55 (245)	60 (600)	65 (289)	N/A	
	Shear lb (N)	120 (534)	140 (623)	160 (712)	185 (823)	N/A	
Min. Embed. Depth	Concrete	in. (mm)	3/4 (19)	7/8 (22)	1 (25)	1-3/16 (30)	1-3/16 (30)
	Hollow Base	in. (mm)	5/8 (16)	13/16 (21)	13/16 (21)	1 (25)	N/A

¹ Representative results of testing and a safety factor of 5.0.

3.3.15 HPS-1 Impact Anchor

3.3.15.4 Installation Instructions

Installation Instructions For Use (IFU) are included with each product package. They can also be viewed or downloaded on-line at www.us.hilti.com (US) and www.hilti.ca (Canada) -- "Service/Technical Info >> Technical Downloads >> Anchoring Systems". Because of the possibility of changes, always verify that downloaded IFU are current when used. Proper installation is critical to achieve full performance. Training is available on request. Contact Hilti Technical Services for applications and conditions not addressed in the IFU.

3.3.15.5 Ordering Information

Carbon Steel

Description	Fastenable Material Thickness in Concrete		Fastenable Material Thickness in Hollow Base Materials		Bit	
	max In.	(mm)	max In.	(mm)	Diameter In.	Box Qty
HPS-1 3/16 x 1	3/16	(5)	3/8	(9)	3/16	200
HPS-1 3/16 x 1-1/2	5/8	(15)	3/4	(19)	3/16	200
HPS-1 1/4 x 1	1/8	(3)	3/16	(5)	1/4	200
HPS-1 1/4 x 1-5/8	5/8	(15)	3/4	(19)	1/4	100
HPS-1 1/4 x 2-1/16	1	(25)	1-3/16	(30)	1/4	100
HPS-1 1/4 x 2-5/8	1-5/8	(41)	1-3/4	(44)	1/4	100
HPS-1 5/16 x 1-5/8	3/8	(9)	5/8	(15)	5/16	100
HPS-1 5/16 x 2-1/2	1-3/16	(30)	1-3/8	(35)	5/16	50
HPS-1 5/16 x 3-5/8	2-3/8	(60)	N/A		5/16	50
HPS-1 5/16 x 4-3/8	3-1/8	(85)	N/A		5/16	50

Stainless Steel

Description	Fastenable Material Thickness in Concrete		Fastenable Material Thickness in Hollow Base Materials		Bit	
	max In.	(mm)	max In.	(mm)	Diameter In.	Box Qty
HPS-1 R 3/16 x 1	3/16	(5)	3/8	(9)	3/16	200
HPS-1 R 3/16 x 1-1/2	5/8	(15)	3/4	(19)	3/16	200
HPS-1 R 1/4 x 1	1/8	(3)	3/16	(5)	1/4	200
HPS-1 R 1/4 x 1-5/8	5/8	(15)	3/4	(19)	1/4	100
HPS-1 R 1/4 x 2-1/16	1	(25)	1-3/16	(30)	1/4	100
HPS-1 R 1/4 x 2-5/8	1-5/8	(41)	1-3/4	(44)	1/4	100
HPS-1 R 5/16 x 3-5/8	2-3/8	(60)	N/A		5/16	50
HPS-1 R 5/16 x 4-3/8	3-1/8	(85)	N/A		5/16	50

1 Hilti carbide tipped drill bits