Hendrix®
MOLDED PRODUCTS

Molded Product Catalog

Revised: April 2017

www.HendrixHPI.com

A Marmon Wire & Cable / Berkshire Hathaway Company

Hendrix®
MOLDED PRODUCTS

Hendrix Molded Products Division began with the development of HPI Tie Top Insulators in the mid-1960's. The first production units were shipped in 1966, giving Hendrix well over 50 years of field experience. In the mid-1970's, Hendrix developed and produced the first Vise Top Insulators, where a conductor clamping mechanism was designed into the top of the insulator, and the first production units were shipped in 1976. In 2012, Hendrix introduced its Line Post Insulator product line to the market and shipped its first order.

All Hendrix HPI Insulators are manufactured from a proprietary blend of gray, track-resistant, high-density polyethylene. Tie Top, Vise Top, and Line Post Insulators are tested in conformance with the ANSI C29 series of specifications and exhibit superior electrical and mechanical characteristics compared to wet process porcelain. They have greater leakage distance, higher flashover and impulse values, are lightweight, vandal resistant, won't chip, crack, or break, are a green recyclable product, and are made in the USA.

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Your Green Insulator Solution

We all feel the pressure to minimize our environmental impact, but when there is also a focus on minimizing costs, it can be difficult to know where to start. Hendrix is here to help. Utilizing recyclable products can strengthen your company's position as a leader in the green revolution. And Hendrix HPI Insulators, unlike traditional porcelain insulators, are made from high-density polyethylene - a recyclable plastic, which is good for your organization and the planet.

We Make It Easy to Be Green

Hendrix Molded Products Division is making it easier than ever to recycle with the introduction of our **"Cradle to Cradle Program."** When there is a need to dispose of insulators, simply send your used Hendrix HPI products to your local recycler, or if you prefer, send them to the address shown here and we will recycle them for you - at no additional cost to you. So what would have been landfill will now be recycled into something new and functional.

Hendrix Molded Products
Cradle to Cradle Program
116 Route 101A
Amherst, NH 03031

Enhance Your Reputation

We all expect consistent delivery of power to our homes and businesses. So why not enhance your reputation for exceptional quality and service with your customers? All Hendrix HPI Insulators meet or exceed industry standards for reliability and performance while offering many value-added features:

- Vandal/shotgun/bullet/impact resistant
- Longer leakage than equivalent porcelain
- Higher puncture resistance than porcelain
- Direct replacement for porcelain
- UV and track resistant
- Easier handling and storage
- Weather washing characteristics
- Lightweight and lineman preferred

ANSI 55-3 “C” Neck *

ANSI 55-4 “F” Neck *

ANSI 55-5 “F” Necks

ANSI 55-5 “F” Necks

ANSI 55-6/7 “F” Necks

ANSI 56-1 “J” Neck *

ANSI 55-6/7 “J” Necks

Benefits

- Exceeds ANSI electrical and mechanical requirements
- Resistant to impact damage, breakage, and vandalism
- Field installed since 1966
- Designed for use with all Tie Products
- Lightweight for ease of handling
- *RUS-Accepted Insulators
- HPIs are green... all HPI Pin Insulators are made of 100 percent recyclable plastic
- Guaranteed for life
- Made in the USA

Polyethylene Pin Insulators – Tie Top

Hendrix Tie Top Insulators are molded from a proprietary blend of gray, track-resistant, high-density polyethylene.

They are ideal for use with all types of construction using either bare wire or covered conductors. When using covered conductors, it is recommended that HPI Insulators always be used in order to match the dielectric properties of the insulating materials. HPI Tie Top Insulators conform with the electrical and mechanical requirements of ANSI C29.5 and C29.6. They are designed with standard ANSI neck and thread sizes and are available in nominal voltage ratings of 15 kV, 25 kV, and 35 kV.

They are especially well suited for areas of vandalism. Ballistics tests have shown that even with damage from a rifle or shotgun, the insulators are still able to perform.

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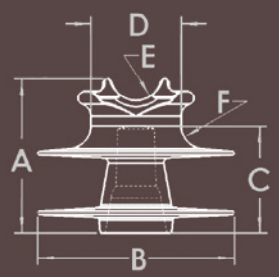
Polyethylene Pin Insulators – Tie Top
Electrical, Mechanical & Physical Data

	HPI-55-3	HPI-55-4	HPI-55-5-01	HPI-25-01	HPI-25J-02	HPI-35J-01	HPI-35J-02
ANSI class	55-3	55-4	55-5	55-5	56-1	55-6	55-7
Insulator neck	C	F	F	F	J	J	J
Typical application, kV	15	15	25	25	25	35	35
Leakage distance, in.	10.3	12.5	14.2	14.6	15	20.8	20.7
ANSI Spec	7	9	12	12	13	15	15
Dry-arc distance, in.	6.1	6.7	7.2	8.3	8.4	10	10
ANSI Spec	4.5	5	6.25	6.25	7	8	8
Pinhole diameter, in.(1)	1	1	1	1	1.375	1	1.375
ANSI Spec	1	1	1	1	1.375	1	1.375
Cantilever strength, lbs.	>3,000	>3,000	>3,000	>3,000	>3,000	>3,000	>3,000
ANSI Spec	2,500	3,000	3,000	3,000	2,500	3,000	3,000
60 HZ dry flashover, kV	69	83	86	87	97	123	123
ANSI Spec (min. 95%)	55	65	80	80	95	100	100
60 HZ wet flashover, kV	45	51	58	51	61	73	73
ANSI Spec (min. 90%)	30	35	45	45	60	50	50
Positive impulse flashover, kV	109	122	137	144	170	177	177
ANSI Spec (min. 92%)	90	105	130	130	150	150	150
Negative impulse flashover, kV	151	202	197	179	176	243	243
ANSI Spec (min. 92%)	110	130	150	150	190	170	170
Low frequency puncture, kV	210	215	215	225	227	211	211
ANSI Spec	90	95	115	115	130	135	135
RIV @ 1MHz 10 kV to gnd, µv	<10	<10					
15 kV to gnd, µv			<10	<10	<10		
22 kV to gnd, µv						<10	<10
ANSI Spec	50	50	100	100	100	100	100
Dimensions, in. A	4.67	5.25	6.1	5.5	5.875	7.5	7.5
B	5.5	5.5	5.5	7.5	7.5	7.5	7.5
C	3.2	3.875	4.76	4	4	5.5	5.5
D	2.25	2.875	2.875	2.875	3.5	3.5	3.5
E	0.75	1	1	1	1	1	1
F	0.75	0.75	0.5	0.875	0.875	0.875	0.875
Max conductor O.D., in.	1.375	1.75	1.75	1.75	1.75	1.75	1.75
Part weight, lbs.	0.9	1.2	1.3	2.1	2.3	2.9	2.9
Max continuous conductor operating temperature, °C	120	120	120	120	120	120	120



(1) = Additional pinhole diameters and thread configurations to meet international standards are available upon request

Frequently Asked Questions – Tie Top Installation

Q: What is the recommended installation procedure for an HPI Insulator?

A: Normal HPI installation will be accomplished by turning the insulator until it engages the internal mastic. The lineman will feel the insulator become tight as the top of the pin makes contact with the mastic. **Do not overtighten!** Then turn the insulator forward to align the top saddle with the conductor (usually 1/2 turn will accomplish this). An additional 1/2 turn of the insulator — if needed — will not hurt the installation, but some insulator spring back may occur. This is caused by the overly compressed mastic giving "back-pressure" to the insulator. The "back-pressure" will dissipate as some of the mastic oozes into the thread area, usually taking several seconds.

Q: Does the top of the crossarm pin or pole top pin have to make contact and compress the mastic?

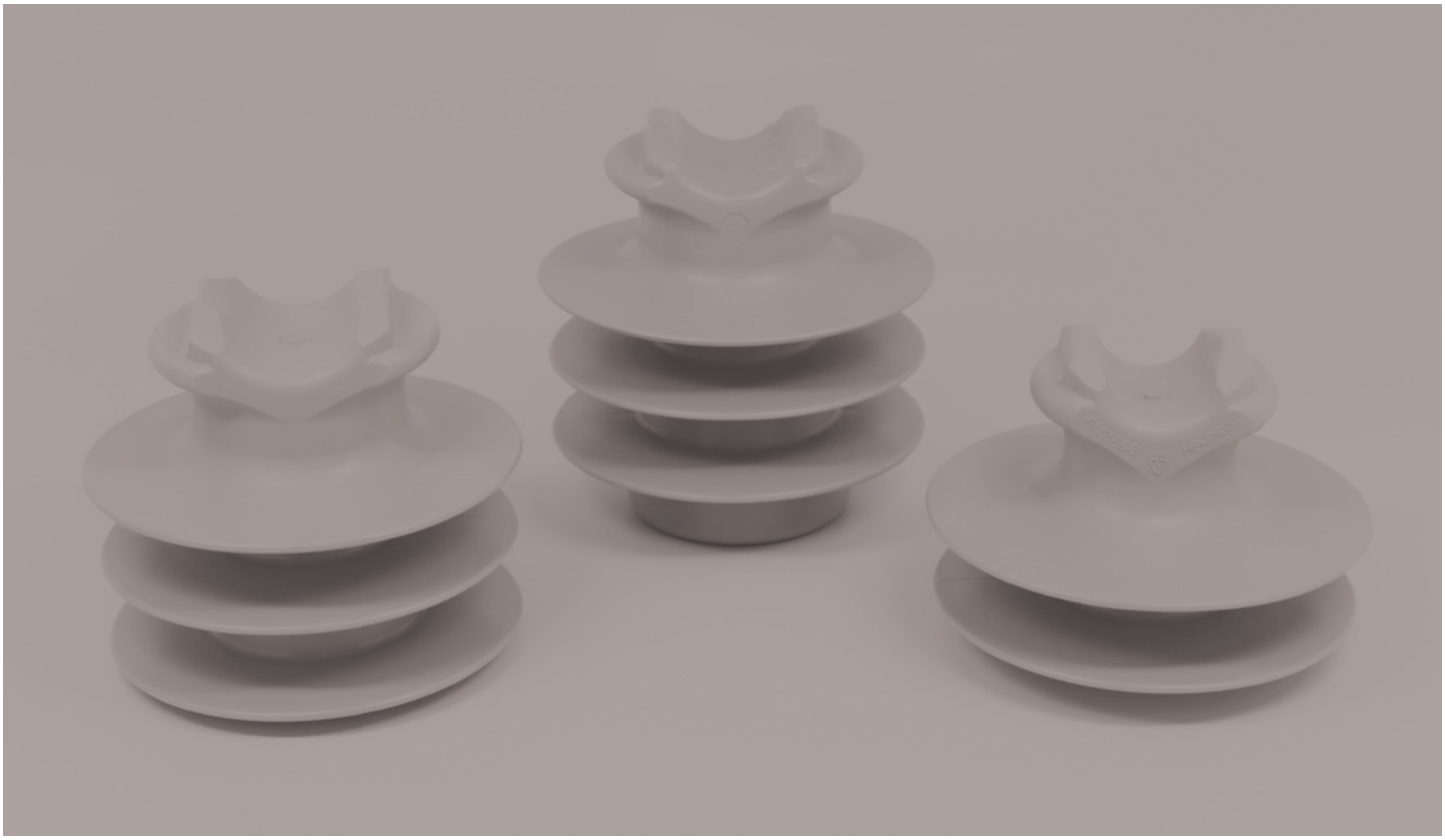
A: To eliminate all the air space between the threads of the crossarm pin and the mastic, we recommend that the insulator be threaded down on the pin until positive contact is made.

Q: What is the purpose of the mastic in the top of the threaded area?

A: The purpose of the mastic in the threaded area of the insulator is simply to eliminate air space and eliminate potential RIV.

Q: Can the HPI be overtightened?

A: Yes. Excessive turning of the insulator on the pin can possibly cause damage to the insulator threads or neck area of the insulator. No tools required. Hand tighten only.



Polyethylene Pin Insulators – Vise Top

Hendrix Vise Top Insulators incorporate a clamping mechanism into the top of the insulator to provide quick and easy conductor installation without the need for additional tie products. When used with the VTST-1 Stringing Tool, conductors can be installed without separate stringing blocks, significantly reducing installation costs. Vise Top insulators are suitable for use with all conductor sizes and types: covered, aluminum, or copper conductors.

Vise Top Insulators are molded from a proprietary blend of gray, track-resistant, high-density polyethylene. They conform with the electrical and mechanical requirements of ANSI C29.5 and C29.6. Nominal voltage ratings are 15 kV, 25 kV, and 35 kV. They are designed to fit on standard 1" or 1 3/8" pins.

They are especially well suited for areas of vandalism. Ballistics tests have shown that even with damage from a rifle or shotgun, the insulators are still able to operate.

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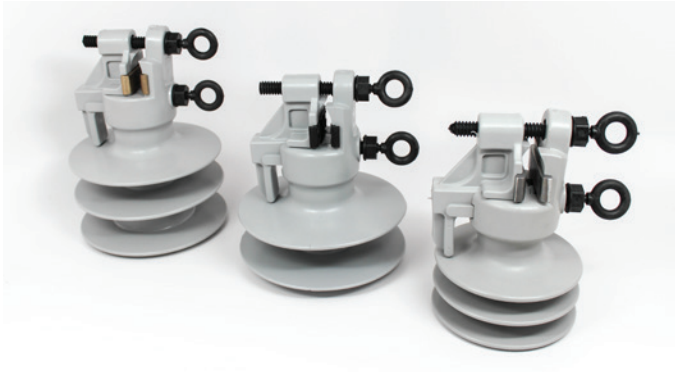


Benefits

- Quick and easy installation using two torque bolts
- Torque bolt rings break away at a predetermined torque to provide proper clamping force
- Insulator acts as a stringing block when used with the VTST-1 Stringing Tool
- Electrically compatible with all conductor types
- Resistant to impact damage, breakage, and vandalism
- Excellent weather washing characteristics
- Directly interchangeable with porcelain insulators
- Lightweight for easy handling
- Field installed since 1976
- Made in the USA

Application

Hendrix Vise Top Insulators are recommended for use with all conductor types, bare or covered. Vise Top Insulators are excellent for contaminated areas due to their long leakage distance and excellent washing characteristics.

There are three styles of Vise Top Insulators. Style #1 has plastic clamping inserts for use with either covered or bare conductors. Style #2 has aluminum clamping inserts for use with bare aluminum conductors. Style #3 has bronze clamping inserts for use with copper conductors.

When ordering, specify an "M" for aluminum inserts, a "P" for plastic inserts, and a "B" for bronze inserts (ex: HPI-25VTM; HPI-25VTP; HPI-25VTB).

To specify pin diameter, add the suffix -01 for 1" threads and -02 for 1 3/8" threads (ex: HPI-25VTM-02).

Vise Top with covered conductor and plastic/nylon clamping inserts

Vise Top with bare wire and aluminum or bronze clamping inserts

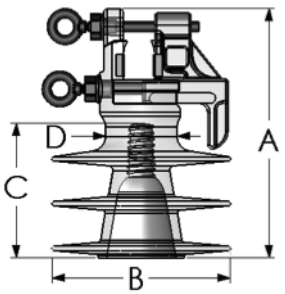
Polyethylene Pin Insulators – Vise Top
Electrical, Mechanical & Physical Data

		HPI-15VT	HPI-25VT-01	HPI-25VT-02	HPI-35VT-01	HPI-35VT-02
ANSI class		55-3 & 55-4	55-5	56-1	55-6	55-7
Insulator neck		C	F	F	F	F
Typical application, kV		15	25	25	35	35
Leakage distance, in.		15.8	15.8	15.7	22.3	22.2
Leakage distance, mm		401	401	399	566	564
Dry-arc distance, in.		8.1	9.3	9.3	11.1	11.1
Pinhole diameter, in.(1)		1	1	1.375	1	1.375
Cantilever strength, lbs.(2)		>3,000	>3,000	>3,000	>3,000	>3,000
60 HZ dry flashover, kV		94	96	96	112	112
60 HZ wet flashover, kV		46	55	55	59	59
Positive impulse flashover, kV		141	153	153	172	172
Negative impulse flashover, kV		175	190	190	215	215
Low frequency puncture, kV		195	220	220	250	250
RIV @ 1MHz	10 kV to gnd, µv	<10				
	15 kV to gnd, µv		<10	<10		
	22 kV to gnd, µv				<10	<10
Dimensions, in.	A	8.25	8.5	8.5	10.25	10.25
	B	5.5	7.5	7.5	7.5	7.5
	C	3.875	3.75	3.75	5.5	5.5
	D	2.5	2.875	2.875	3	3
Max conductor, in.		1.75	1.75	1.75	1.75	1.75
Part weight, lbs.		2.0	2.6	2.6	3.2	3.2
Max continuous conductor operating temperature, ˚C		120	120	120	120	120

Always install the bottom bolt first and the top bolt second, Always breaking the eyes off the bolts

(1) = Additional pinhole diameters and thread configurations to meet international standards are available upon request
(2) = Cantilever strength refers to side neck loading

The Vise Top Insulator can accommodate conductors up to 1.75 inch diameter. Conductors should be mounted in the top saddle position for tangent construction and small angles. Large angles are better suited for the side/neck mounting position. Angles may be supported in the top saddle position provided the mounting pin strength is designed for the expected transverse loading. For all applications, good utility design practice should be followed, including design to National Electric Safety Code (NESC) and/or prevailing rules and codes.



NEW:

Universal Vise Top Pin Insulators

Hendrix Vise Top Pin Insulators feature a clamping mechanism in the top of the insulator for fast and easy installation, eliminating the need for additional tie products.

Our NEW Universal Vise Top models have a single-point mounting position to deliver more strength for both tangent and angled construction.

Plus, an innovative grip design ensures long-term performance with all conductor types and sizes: aluminum, copper, or covered.

Like all Hendrix products, our new Universal Vise Top Insulators are made in the USA.

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Benefits

- Single-point mounting position, tangent or angle
- Improved gripping performance across all conductor types
- Allows product consolidation and SKU reduction

Performance Characteristics

- Direct replacement for porcelain, tie-top, and original vise top distribution voltage pin insulators
- Exceeds ANSI electrical and mechanical requirements
- Resistant to impact damage, breakage, and vandalism
- Breakaway bolt rings ensure proper conductor clamping
- UV stabilized polyethylene

Three Voltage Classes

The Vise Top Universal Insulators are available in three sizes to support the full range of power distribution system voltages. All three are available with standard ANSI 1" or 1-3/8" thread size.

Model Number Key: HPI-##VTU-XX

## - Voltage Class	
15	15kV
25	25kV
35	35kV

XX - Pin Type	
01	1" Size
02	1-3/8" Size

HPI-15VTU

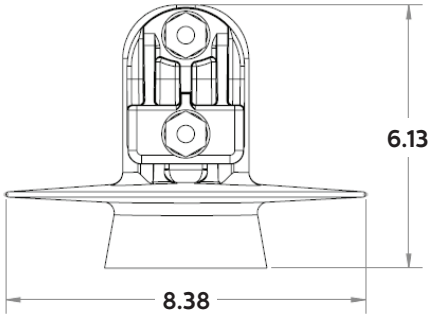
HPI-25VTU

HPI-35VTU

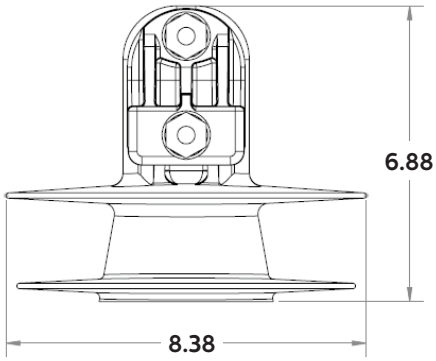
Polyethylene Pin Insulators – Universal Vise Top
Electrical, Mechanical & Physical Data

		ANSI C29.5 Class 55-4	HPI-15VTU-01	ANSI C29.5 Class 55-5	HPI-25VTU-01	ANSI C29.5 Class 55-6	HPI-35VTU-01
DIMENSIONS	Leakage distance (in.)	9	11.5	12	16.8	15	24.5
	Dry-arc distance (in.)	5	7.9	6.25	9.0	8	11
	[1]Pinhole diameter (in.)	1	1	1	1	1	1
MECHANICAL VALUES	Cantilever strength (lbs.)	3,000	>3,000	3,000	>3,000	3,000	>3,000
ELECTRICAL VALUES	Typical application (kV)		15		25		35
	Dry flashover, 60 Hz (kV)	65	99	80	101	100	115
	Wet flashover, 60 Hz (kV)	35	58	45	63	50	79
	Impulse flashover - positive (kV)	105	175	130	186	150	207
	Impulse flashover - negative (kV)	135	168	150	211	170	214
	Low frequency puncture (kV)	95	201	115	201	135	201
OTHER	Max. conductor diameter (in.)		1.5		1.5		1.5
	Part weight (lbs.)		2.1		2.5		3.0
	Max continuous conductor temp (°C)		120		120		120

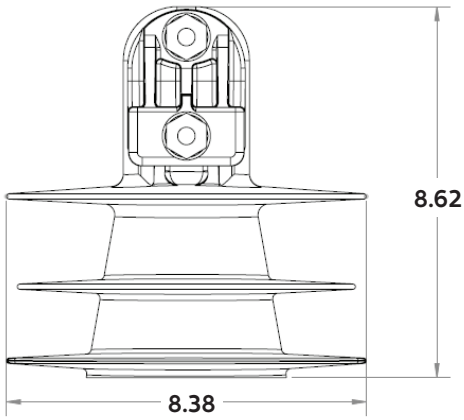
[1] Additional pinhole diameters and thread configurations are available
Patent pending



HPI-15VTU



HPI-25VTU



HPI-35VTU

Frequently Asked Questions – Vise Top Installation

Q: Please describe the installation of a Hendrix Vise Top (VT) Insulator.

A: Conductors should be mounted in the top saddle position for tangent construction and small angles. Large angles are better suited for the side/neck mounting position. Angles may be supported in the top saddle position provided the mounting pin strength is designed for the expected transverse loading. For all applications, good utility design practice should be followed, including designing to the National Electric Safety Code (NESC) and/or prevailing rules and codes.

Top Saddle Mounting Position (tangent or small angles)

- Install the VT Insulator on the crossarm, ridge pin, or other construction mountings by threading onto pin and engaging the mastic **(do not overtighten);** then align the saddle to the conductor
- Remove top eyebolt and loosen bottom eyebolt
- Install conductor into the top saddle
- Tighten the bottom eyebolt until breaking the eye off the bolt (either by hand or hot stick); eye will break off at approximately 75-80 inch pounds
- **ALWAYS TIGHTEN THE BOTTOM BOLT FIRST**
- **Lastly, reinstall and tighten the top bolt using the same method as above**

Side Mounting Position (for large angles)

- Install the VT Insulator on the crossarm, ridge pin, or other construction mountings by threading onto pin and engaging the mastic **(do not overtighten);** then align the saddle to the conductor
- Remove top eyebolt and loosen bottom eyebolt
- Install the conductor under/behind the vertical finger in the side neck position. The conductor should always pull against the neck of the insulator — never against the finger
- Tighten the bottom eyebolt until breaking eye off bolt (either by hand or hot stick) — eye will break off at approximately 75-80 inch pounds
- **ALWAYS TIGHTEN THE BOTTOM BOLT FIRST**
- **Lastly, reinstall and tighten the top bolt using the same method as above**

Q: Is the Universal Vise Top (VTU) Insulator installed the same as the Vise Top (VT) Insulator?

A: The Universal Vise Top Insulator has a single-point mounting position, supporting both tangent and angled constructions. Maximum angles are determined by the pin strength.

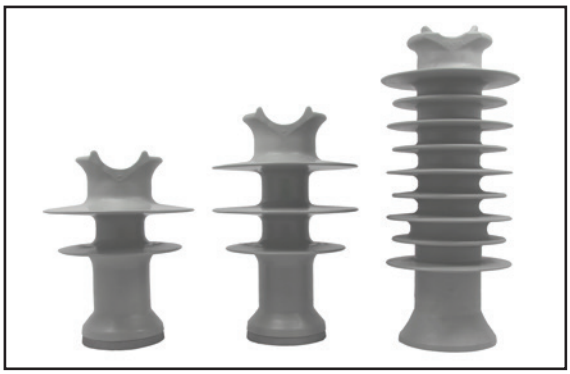
- Install the VTU Insulator on the crossarm, ridge pin, or other construction mountings by threading fully onto the pin and engaging mastic (six plus turns is not uncommon), ensuring VTU is firmly mounted onto pin
- Remove the top eyebolt and loosen the bottom eyebolt
- Install the conductor into the top saddle
- Tighten the bottom eyebolt until breaking the eye off the bolt (either by hand or hot stick); eye will break off at approximately 75-80 inch pounds
- **ALWAYS TIGHTEN THE BOTTOM BOLT FIRST**
- Reinstall and tighten the top eyebolt using the same method as above

Polyethylene Post Insulator

Line Post hardware available on pg. 13

Hendrix Line Post Insulators are molded from a proprietary blend of track-resistant, high-density polyethylene. They are ideal for use with all types of construction using either bare wire or covered conductors. When using covered conductors, it is recommended that HPI Insulators always be used in order to match the dielectric properties of the insulating materials. They are more durable and reliable than traditional porcelain insulators. They are also lighter, safer, and easier to handle.

HPI Line Post Insulators meet the electrical and mechanical requirements of ANSI C29.7 and C29.18. They are designed with a standard ANSI "C" (LP-9 only) and "F" neck and center tap 3/4" thread size.



Benefits

- Stronger than porcelain
- Designed for use with all Tie Products and conductor types
- Easy handling: lighter than porcelain and clamp-top composite designs
- Long-life housing won't chip, crack, or break
- Resistant to impact damage, breakage, and vandalism
- RUS approved (HPI-LP-9 & 11's), HPI-LP-14 by request

Electrical, Mechanical & Physical Data

Characteristic	HPI-LP-9C	HPI-LP-9F	HPI-LP-11C	HPI-LP-11F	HPI-LP-14 Steel Base	HPI-LP-14F AL Base
ANSI C29.7 (Porcelain)	N/A	N/A	N/A	57-1	57-2/57-3	57-2/57-3
ANSI C29.18 (Polymer)	51-1C	51-1F	51-2C	51-2F	51-3/51-4F	51-3/51-4F
DIMENSIONS						
Neck designation	C	F	C	F	F	F
Leakage distance (in.)	12.8	12.5	18.7	18.4	31.4	31.4
Dry-arc distance (in.)	8.1	7.8	10.1	9.8	13.8	13.8
Center-hole diameter (in.)	0.75	0.75	0.75	0.75	0.75	0.75
MECHANICAL VALUES						
Specified cantilever load (lbs.), min.	> 2,400	> 2,400	2,400	> 2,400	> 3,000	> 3,000
Max. design cantilever load (lbs.)	1,250	1,250	1,250	1,250	1,250	1,250
Specified tensile load (lbs.), min.	2,000	2,000	2,000	2,000	2,000	2,000
ELECTRICAL VALUES						
Typical application (kV)	15	15	25	25	25/35	25/35
Flashover, 60 Hz dry (kV)	83	89	107	99	128	128
Flashover, 60 Hz wet (kV)	54	54	77	68	94	94
Impulse flashover - positive (kV)	150	150	168	179	217	217
Impulse flashover - negative (kV)	-222	-222	-300	-279	-365	-365
OTHER						
Max. conductor diameter (in.)	1.75	1.75	1.75	1.75	1.75	1.75
Part weight (lbs.)	3.0	3.2	3.7	3.9	9.4	6.6
Max. continuous conductor temp (°C)	120	120	120	120	120	120

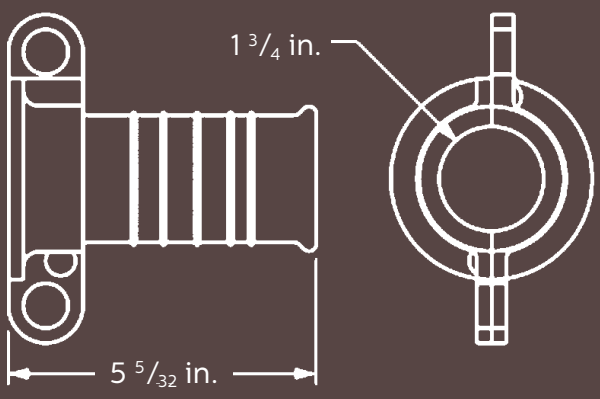
Product Patented

Vise Top Stringing Tool

The Vise Top Stringing Tool is an installation tool that allows a conductor, bare or covered, to be pulled directly through the Hendrix Vise Top Insulator without the need of a stringing block.

Benefits

- Eliminates the need for a separate stringing block
- No transferring of the conductor: the conductor is already in the insulator saddle
- Hot stick friendly: can be used either by hand or with a hot stick
- Multiple installations: stainless steel wear bands support many installations
- Cost savings on crew time in the field: reduces the number of “ups and downs” during construction



VTST-1

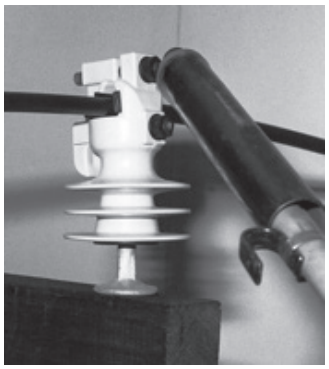
Installation Procedures

Using VTST-1 Stringing Tool With Vise Top Insulator

Install the Vise Top Insulator. Clamp the VTST-1 in the jaw and pull your rope in (Hint: have the large flare of the VTST-1 facing the cable reels)

String and sag the conductor directly on the insulator. Dead ends can be made up and the circuit can be energized (remember: you are in an insulator)

Loosen the bolt and slide the VTST-1 away from the insulator, either by hand or with a hot stick, until the two halves of the tool separate

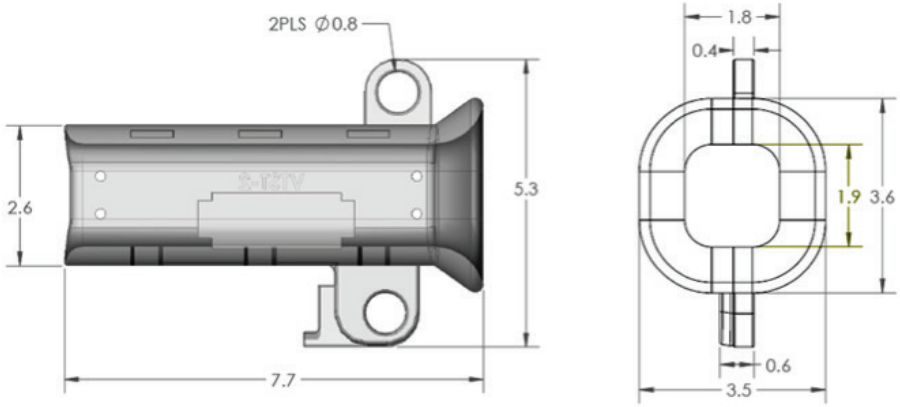


Clamp the conductor in the Vise Top jaw by tightening the torque bolts, BOTTOM BOLT FIRST — ALWAYS, until the rings break away. This can be done by hand or hot stick

NEW VTST-2

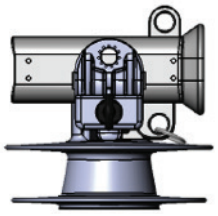
Vise Top Stringing Tools are designed for conductor stringing directly through Vise Top insulators to reduce installation time and cost. They eliminate the need for separate stringing blocks, and there is no conductor transfer needed after the pull — the conductor is already in the saddle.

The VTST-2 is a second-generation design optimized for use with Hendrix Vise Top Universal (VTU) pin-type insulators and is also compatible with first-generation Vise Top (VT) insulators. It is designed to sit in the insulator's jaw platform and is removable by hand or live-line tool (hot stick). It is made from abrasion-resistant, glass-filled nylon to support numerous installations.

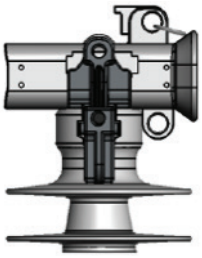


Dimensions in inches

VTU Application



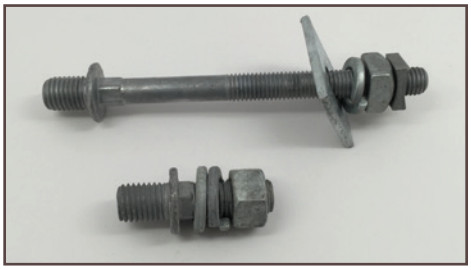
VT Application (inverted)



Model	Description
VTST-1	Two-piece, glass-filled nylon construction with encapsulated stainless-steel wear bands and zinc-plated coupling ring Only fits first-generation Vise Top (VT) Insulators
VTST-2	Two-piece, glass-filled nylon construction with encapsulated stainless-steel wear bands and zinc-plated coupling ring Fits **all** Vise Top Universal (VTU) and Vise Top (VT) Insulators

Line Post Hardware

Catalog #	Description
SBS	3/4" stud bolt, short; 1 3/4"; for steel arms and brackets
SBL-01	3/4" stud bolt, long; 6 9/16"; for crossarms (wood or fiberglass)



Torque Bolts

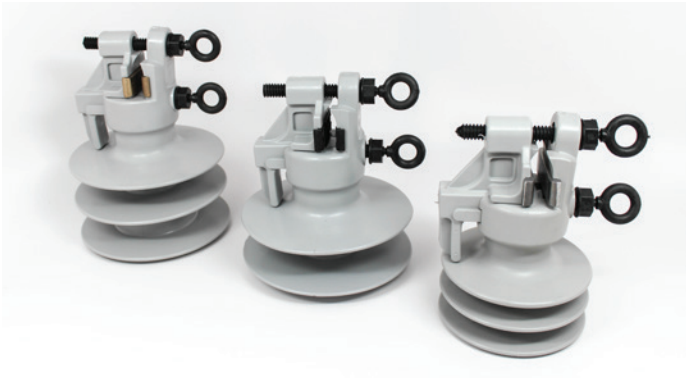
Torque bolts may be purchased separately for replacement purposes. They are made of glass-reinforced black nylon and designed to be tightened using the breakaway ring. This ensures proper gripping force on the conductor.

Cat #: B-1
(for VT Insulators)

Weight: 5.0 lbs./50 pieces

Length: 6 1/2”

Material: Black nylon



B-1 Torque Bolt fits Vise Top (VT) models

Cat #: B-2
(for VTU Insulators)

Weight: 4.3 lbs./50 pieces

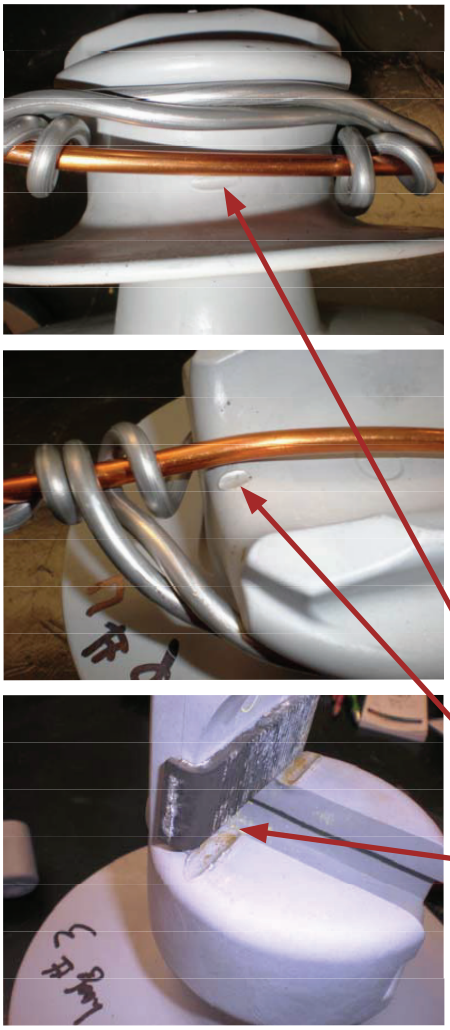
Length: 5 1/2”

Material: Black nylon

B-2 Torque Bolt fits Universal Vise Top (VTU) models

High Temperature – HT Insulators

Utilities have excessive current situations that can cause conductor temperatures to rise well above 100°C. Standard high-density polyethylene has a melting temperature of 130°C. We have learned of several instances at utilities where conductors have melted into the head or neck of an HPI Insulator and raised concerns. These situations definitely have conductor temperatures well in excess of 130°C. Correcting the cause of the high conductor temperatures cannot always be accomplished, so Hendrix developed and patented (US7501469, US8324504), a high-temperature polyethylene insulator for these high conductor temperature situations. We know that utilities need to be concerned for their systems... and not have to worry about their insulators.



Insignificant marks after a three-day, five-stage heat loop test ending at 281°C

Solution

Hendrix has developed a patented blend of polyethylene that allows us to mold Tie Top and Vise Top Insulators that will withstand conductor temperatures that exceed 200°C without damage to the insulator. Meet the “HT” High Temperature Insulators.

All HPI insulators are available in HT. Minimum order requirements apply.

Benefits

- Can withstand conductor temperatures greater than 200°C
- Meets all ANSI C29.5 electrical and mechanical requirements
- Won’t chip, crack, or break
- Direct replacement for porcelain insulators

White Insulators

The White Polyethylene Neutral Insulators are made from the same proprietary track-resistant, high-density polyethylene as all Hendrix Insulators and surpass ANSI C29.5 electrical and mechanical requirements.

Benefits

- Identify your neutrals from the ground
- Resistant to cracking, chipping, and vandalism
- Lightweight and easy to use, at just 0.9 lbs.
- 100 percent recyclable
- All HPI insulators can be ordered in white; minimum order quantity requirements

Spool Insulators

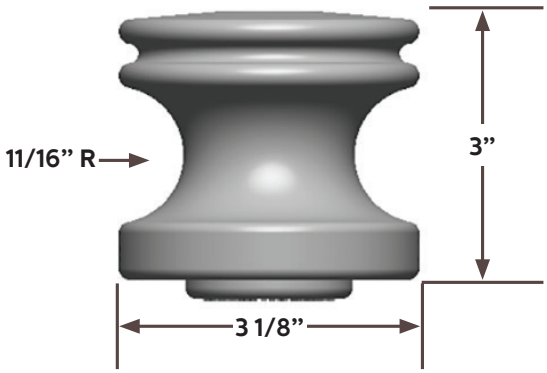
Hendrix HPI-53-2 Spool Insulators meet and surpass ANSI Class 53-2 requirements for 3" Spool Insulators. HPI-53-2 spools are made and tested in accordance with ANSI C29.3 specifications.

HPI Spool Insulators are used mainly to insulate and support the secondary conductors at the pole. Spool insulators are mounted to the pole using various clevis configurations and are compatible with all manufacturers' hardware designs.

The Hendrix Spool Insulator (nonceramic type) is rated at 75 percent of the ANSI C29.3 - 1986 (R2002) for transverse strength.

Benefits

- Resistant to all breaking, chipping, cracking, and vandalism
- Lightweight at just 7oz.
- Direct replacement for porcelain
- RUS accepted
- Made in the USA



ANSI 53-2 "A" Neck

Cable Restraint Insulators

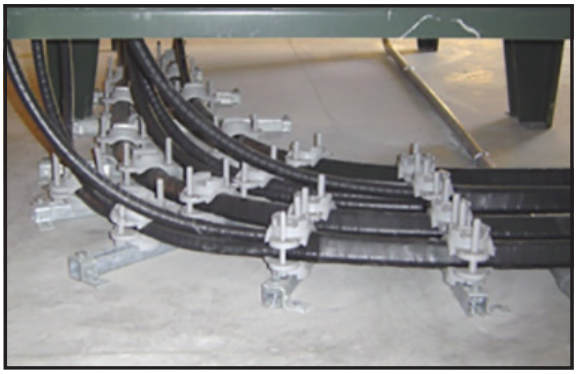
The HPI-CRI-U is designed for cable mounting and training in vault, switching cabinet, rack, and riser applications. It is molded from a proprietary blend of UV-resistant polymers, making it ideally suited for harsh environments and applications where galvanic corrosion is an issue.

Multiple clamping positions, adjustable from 1 1/4" to 4 5/8" openings, allow for use with different conductor sizes and configurations. One half features a mounting channel inline with the cable saddle, and the other half's channel is perpendicular to the saddle. Both halves are suitable for mounting to Unistruts, poles, walls or floors.

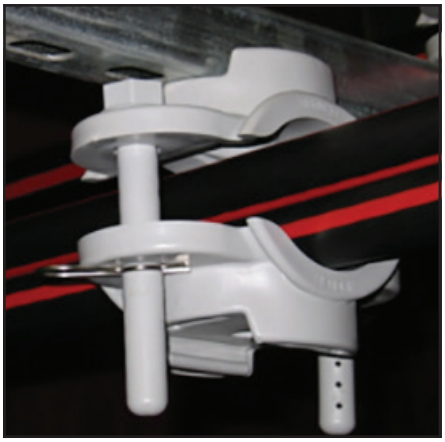
Benefits

- Eliminates broken porcelain: made of high-density polyethylene
- Cost effective: eliminates inventory — one size fits all cable sizes and configurations (single or multiphase).
- High strength: can be bolted directly to the floor, a wall, a riser, or used in a switching cabinet
- Multiple uses: each half can also be used as a cable rack insulator

Application



Vault layout



Three-in-one HPICRI suspended from a Unistrut

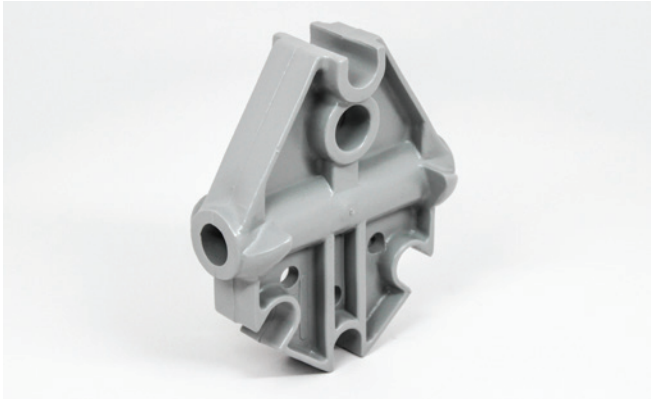
Switchgear

69 kV Riser

Patented design

Secondary Cable Spreader

The S604GR is a secondary cable spreader that is used to separate triplex phase conductors and bare wire neutral at locations where customer service drops are to be connected. The S604GR is molded using a proprietary blend of UV- and track-resistant, gray thermoplastic polymers.

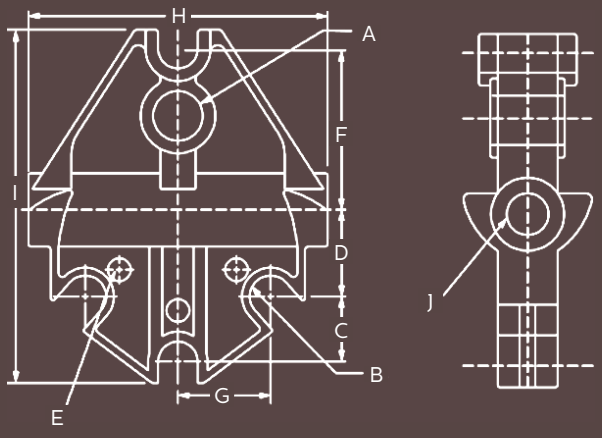


Benefits

- Compact size: lightweight, safe, and easy to use
- Trouble-free: won't chip, crack, or break
- Long life: UV inhibitors prevent solar degradation
- Pole mountable

Application

The S604GR Spreader is designed to accommodate up to three conductors and a neutral at service drop connections between poles. The S604GR is also suitable for fixed installations to the pole using a through-bolt (not included).



S604GR		
Dimension (inches)	A	13/16
	B	11/16
	C	1 1/16
	D	1 7/16
	E	3/8
	F	2 11/16
	G	1 1/2
	H	4 15/16
	I	5 27/32
	J	11/16
Weight (lbs.)		0.40
Material		Gray Thermoplastic Polymers

Vertical Secondary Spacer & Service Bails

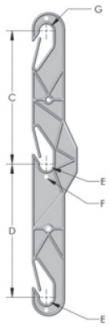
The S8-800 is a “between poles” vertical secondary spacer that is used to separate bare or covered secondary conductors on vertical secondary circuits, midspan service taps, and open wire service drops. The spacers are molded using proprietary, gray, UV-resistant thermoplastic polymer.

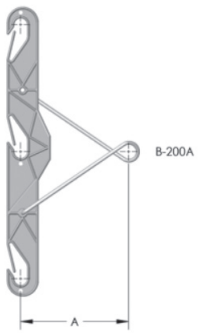
Benefits

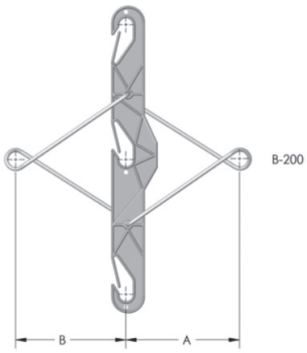
- Economical
- Easy to install
- Neat appearance
- Trouble-free, nonshattering

Application

The S8-800 Spacer is especially useful on long secondary spans with bare conductors. It will accommodate bare or covered conductors having overall diameters as shown in the table below. Holes are provided in the spacers to permit the use of tie wires to secure the conductors to the spacer. Single and double service bails are used when making midspan service taps. For single midspan taps, specify the B-200A Single Bail. For double midspan taps, specify the B200 Double Service Bail (one pair of bails). One B-200A and one B200 cannot be used together to make a double midspan tap.







B-200A

B-200

Catalog Numbers	Dimensions (inches)							Overall		Weight (lbs.)	Material
	A	B	C	D	E	F	G	Height	Width		
S8-800	–	–	8	8	0.800	0.25	0.800	18 1/4	2 3/4	0.42	Polymer
B-200A	5 3/8	–	–	–	–	–	–	–	–	0.10	Aluminum
B-200	5 3/8	5 3/8	–	–	–	–	–	–	–	0.20	Aluminum

Wildlife Protection Products

The Hendrix line of Wildlife Protection Products is designed to protect wildlife from live line contact as well as reduce power outages, and assists in the implementation of your avian protection plan.

Benefits

- Prevents harm to wildlife
- Improves circuit reliability, prevents outages
- Installs quickly and easily
- Hot stick compatible
- Designed for both polymer and porcelain pin-type insulator applications

WILDLIFE COVERS ARE NOT FOR PERSONAL PROTECTION.

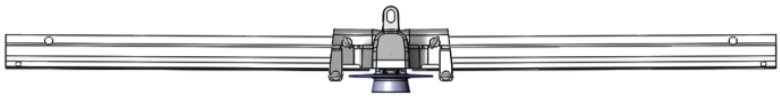
Raptor Shield

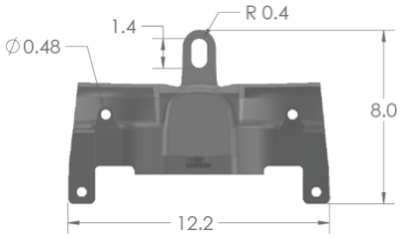
Raptor Shield kit (main body, 2 extension arms w/ 6 pins) For Vise-Top pin insulators from 15 kV up to 38 kV				
Catalog #	Application	Conductor Range	Weight	Overall Length
HRS-VTU	Fits all Vise Top Universal (VTU) and Vise Top (VTP, VTM & VTB) Insulators	#6 through 1000 kcmil and systems rated up to 38kV	3.5 lbs.	76” (assembled)

Center cover and arms may be preassembled at ground level or individually installed on the line
Extension Arm length can be field cut for double-arm or custom application
Patent pending

The HRS-VTU is designed for use with all Hendrix Vise Top Pin-Type Insulators to provide complete coverage of the conductor-insulator interface. The central cover portion rests atop the insulator, above the top shed, so that insulation performance is uncompromised and washing is preserved. Articulating arm joints allow for angled construction up to 30 degrees and adapt to conductor movement in any direction. Two connector pins are required to complete an assembly, and four optional pins are furnished for additional anchoring.

Assembly view on HPI-25VTU insulator



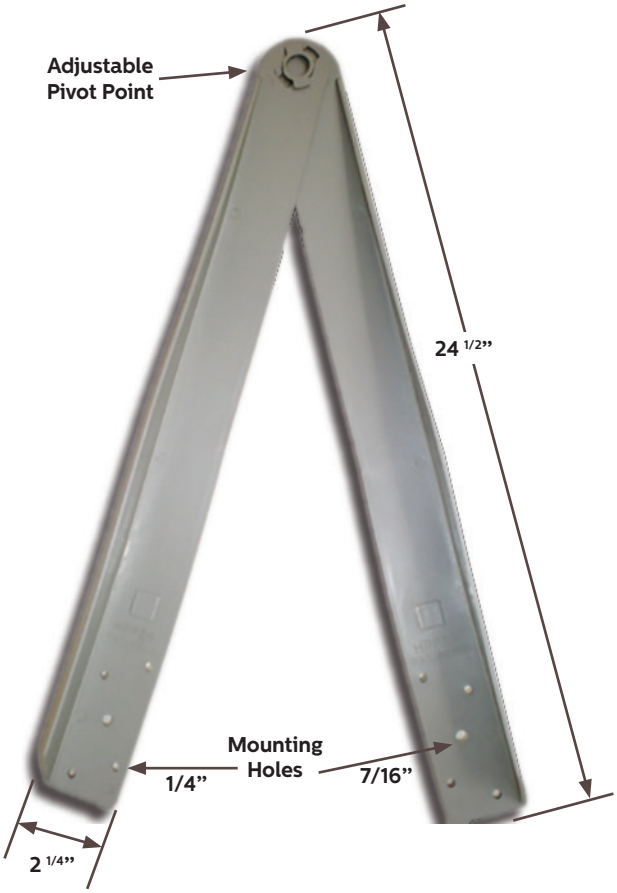


Dimensions in inches

Hendrix raptor shield components can be ordered separately

Perch Preventer

The HPP-24 Perch Preventer is a unique, hinged, adjustable device designed to prevent birds from landing between phases on transmission and distribution structures. The HPP-24 is mounted to a crossarm using either nails or small lag screws. The Perch Preventer is molded using proprietary, gray, UV- and track-resistant thermoplastic polymer.

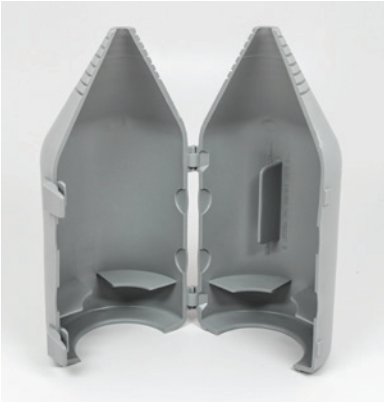


Benefits

- Prevents birds from perching and nesting
- Prevents injury to birds
- Reduces circuit outages
- Adjustable and easy to install
- RUS approved

Application

The HPP-24 Perch Preventer is shipped assembled and ready to mount on a wood, fiberglass, or steel channel crossarm. The legs are adjustable from a 6” to 24” spacing and will fit between different phase spacing. The HPP-24 can be nailed or bolted to the crossarms. Mounting is fast and easy.



Wildlife Guards

The BG-9 is a wildlife guard that is installed on the bushings of transformers and other power equipment. It covers the lead wire and electrical connections to the bushings and prevents contact by birds and squirrels. The BG-9 is molded using proprietary, gray, track-resistant, high-density polyethylene.

Benefits

- Prevents outages, improves circuit reliability
- Prevents harm to wildlife
- Installs quickly and easily
- Scored top for easy conductor fit
- RUS approved
- Rugged molded hinges
- Vertical internal block ensures proper installation

Application

The BG-9 Wildlife Guard is equipped with horizontal internal supports that provide stability when the guard is mounted over the top skirt of the bushing. The guard is designed with double knockouts for direct-connected surge arresters. The BG-9 is designed to be installed without removing the lead wire from the bushing connector, thus allowing installation on energized equipment with live line rubber gloves.

Catalog Number	Maximum Bushing Fin Diameter	Outside Diameter	Height (in.)	Weight (lbs..)
BG-9	3 3/4	4 1/4	9	0.60

Protective Guards

LINEDUC is a protective guard that can be easily clipped onto bare or covered conductors. It protects conductors from abrasion and contact by tree limbs and animals. LINEDUC is extruded using proprietary, track-resistant, high-density polyethylene. LINEDUC is available in black or gray. JUMBO LINEDUC is available in black only.

Benefits

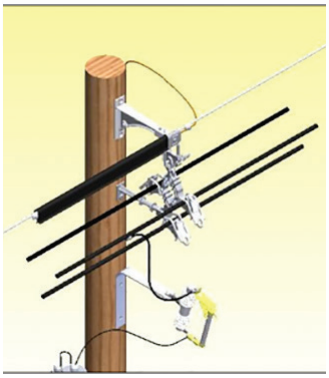
- Eliminates conductor insulation abrasion and contact grounding
- Minimizes service interruptions and repair costs
- Prolongs the life of conductors and cables
- Durable, economical, and easy to install
- Hot stick adaptable
- Reduces tree trimming needs

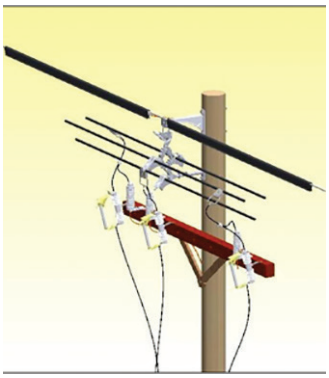
Application

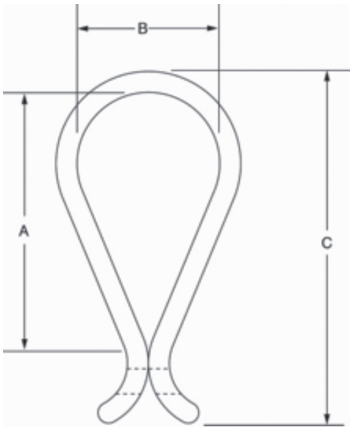
LINEDUC can be clipped onto bare or covered conductors, service drops and communication cables. On spacer cable systems, LINEDUC should always be used to cover the messenger near bare wire taps in order to eliminate short circuits caused by tree limbs, birds, and squirrels. Required lengths can be cut at the job site from standard eight-foot sections. After LINEDUC is clipped over the conductor, it is anchored at the ends with tie wire to prevent longitudinal movement along the conductor.

When ordering standard size LINEDUC, specify black or gray color.

CAUTION: LINEDUC should not be used as a protective safety covering for energized work.







Catalog Number	Dimensions (inches)			Material	Weight (lbs.)	Length (ft.)
	A	B	C			
LINEDUC	2	1	2 5/8	High-Density Polyethylene	3.04	8
JUMBO LINEDUC	3	1 1/2	3 1/2	High-Density Polyethylene	4.56	8

Lighter, Stronger, Better.

And Now Guaranteed for Life.

Upgrade to time-tested Hendrix HPI Insulators.

Hendrix introduced the Tie-Top insulator in the 1960s, and we've been innovating ever since. Our HPI insulators are made from a proprietary blend of track-resistant, high-density polyethylene. They have greater leakage distance, higher flashover and impulsive values, are lightweight, vandal-resistant, and they won't chip, crack, or break. **Plus, our HPI insulators are recyclable and made 100% right here in the USA.**

The Hendrix Guaranteed for Life Program.

For all Hendrix insulator's including:

- Tie-Top insulators
- Vise-Top insulators
- Universal Vise-Top insulators
- **NEW:** Line Post insulators

The Guaranteed for Life Program covers previously installed Hendrix insulators.

MADE IN U.S.A.

Hendrix MOLDED PRODUCTS 50 YEARS

Guaranteed for Life Program

Tie Top Pin Insulators

Hendrix Tie Top Insulators are molded from a proprietary blend of gray, track-resistant, high-density polyethylene. They are ideal for use with all types of construction using either bare wire or covered conductors. They are especially well suited for areas of vandalism. Ballistics tests have shown that even with damage from a rifle or shotgun, the insulators are still able to operate.

ANSI Class Number	Hendrix (Polyethylene)	Gamma/ Lapp (Porcelain)	PPC (Seves) (Porcelain)	Victor Imported (Porcelain)	Newell (Porcelain)	Santana (PPC/Seves) (Porcelain)	PLH (Porcelain)	MacLean (Dulhunty) (Porcelain)	Description
55-3	**HPI-55-3***	6184R-70	261-S	VI 605R	2355530	PI 23132	P553GR	DP55-3	15KV "C" Neck; 1" Threads
55-4	**HPI-55-4***	6183R-70	366-S	VI 606R	2355540	PI 23152	P554GR	DP55-4	15KV "F" Neck; 1" Threads
55-5	**HPI-55-5-01**	7061R-70	380-S	VI 609R	2355550	PI 23253	P555GR	DP55-5	25KV "F" Neck; 1" Threads
	HPI-25-01		380-S	VI 609R	2355550	PI 23253	P555GR	DP55-5	25KV "F" Neck; 1" Threads
55-6	**HPI-35J-01**	320275R-70	386-ST	VI 611R	2355560	PI 23254		DP55-6	35KV "J" Neck; 1" Threads
55-7	**HPI-35J-02**								35KV "J" Neck; 1 3/8" Threads
56-1	**HPI-25J-02***	8248R-70	1027-ST	VI 627R	2365610	PI 43231	P561GR	DP56-1	25KV "J" Neck; 1 3/8" Threads
	HPI-55-5-02								25KV "F" Neck; Tie Top; 1 3/8" Threads
	HPI-25-02								25KV "F" Neck; Tie Top; 1 3/8" Threads
	HPI-25J-01								25KV "J" neck; 1" Threads
	HPI-35-01								35KV "F" Neck; Tie Top; 1" Threads
	HPI-35-02								35KV "F" Neck; Tie Top; 1 3/8" Threads

*RUS-approved items

Other items can be approved based on RUS exception

Spools

HPI Spool Insulators are used mainly to insulate and support the secondary conductors at the pole. Spool Insulators are mounted to the pole using various clevis configurations and are compatible with all manufacturers' hardware designs.

ANSI Class Number	Hendrix (Polyethylene)	Gamma/ Lapp (Porcelain)	PPC (Seves) (Porcelain)	Victor Domestic (Porcelain)	Santana (PPC/Seves) (Porcelain)	PLH (Porcelain)	MacLean (Dulhunty) (Porcelain)	Joslyn (Maclean) (Porcelain)	Hubble (Chance) (Enerscan) (Plastic)	Description
53-2	**HPI-53-2**	8442-70	5101	2012	RO12012	P532G	DP-53-2	J 151	C9091032P	3" Spool

Line Post Insulators

Hendrix Line Post Insulators are molded from a proprietary blend of track-resistant, high-density polyethylene. They are ideal for use with all types of construction using either bare wire or covered conductors. HPI Line Post Insulators meet the electrical and mechanical requirements of ANSI C29.7 and C29.18. They are designed with a standard ANSI "F" neck and center tap 3/4" thread size.

Porcelain						
Hendrix (Polyethylene)	**Gamma/Lapp** (Porcelain)	**Victor Imported** (Porcelain)	**NGK** (Porcelain)	**Santana (PPC)** (Porcelain)	**PLH** (Porcelain)	**Description** (Nominal Voltage Shown)
HPI-LP-9C*	4215PX-70	2115	N/A	5015	N/A	15KV "C" Neck; Tie Top; 3/4" threads
HPI-LP-9F*	4320PX-70	2120	N/A	5120	N/A	15KV "F" Neck; Tie Top; 3/4" threads
HPI-LP-11F*	9325X-70	2025	N/A	5125	P57-1G	25KV "F" Neck; Tie Top; 3/4" threads
HPI-LP-14	4327PX-70	2127	N/A	5125	N/A	25KV "F" Neck; Tie Top; 3/4" threads
HPI-LP-14	9325X-70	62055	DA55004E	5135	P57-2G	25KV "F" Neck; Tie Top; 3/4" threads
HPI-LP-14	9335X-70	62056	DA65008E	5145	P57-3G	35KV "F" Neck; Tie Top; 3/4" threads

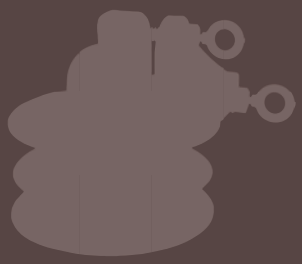
*Items are RUS approved

Composite				
Hendrix (Polyethylene)	**MacLean**	**K-Line**	**Hubble (Ohio Brass)** (VeriLite)	**Description** (Nominal Voltage Shown)
HPI-LP-9C**	NPNN20XG07S0	KL15STC	80S0150C09	15KV "C" Neck; Tie Top; 3/4" threads
HPI-LP-9F**	NPNN20XG07S0	KL15STF	80S0150F09	15KV "F" Neck; Tie Top; 3/4" threads
HPI-LP-11F**	NPNN20XG09S0	KL28STF	80S0280F09	25KV "F" Neck; Tie Top; 3/4" threads
HPI-LP-14	NPNN20XG09S0	KL28STF	80S0250F09	25KV "F" Neck; Tie Top; 3/4" threads
HPI-LP-14	NPNN20XG13S0	KL35STF	80S0280F09	35KV "F" Neck; Tie Top; 3/4" threads
HPI-LP-14	N/A	N/A	N/A	25/35KV "F" Neck; Tie Top; 3/4 threads

**RUS approval available on request

NOTES

Reliably serving the utility industry since the 1960s



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