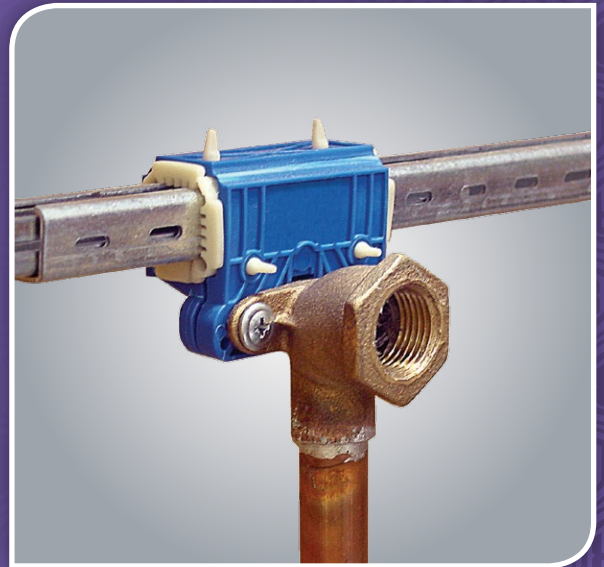
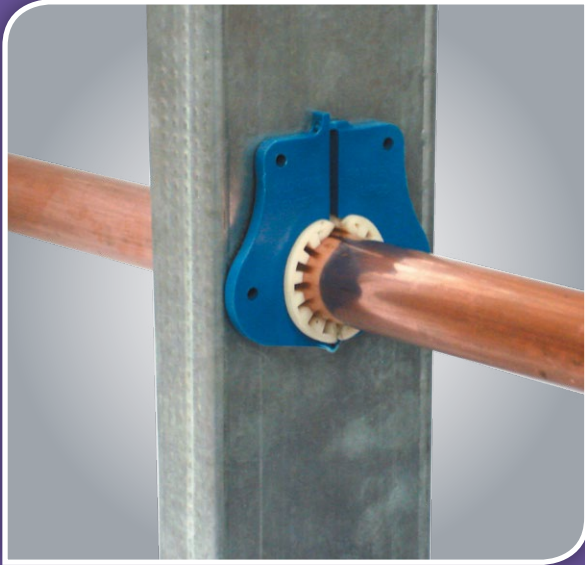




HOLDRITE® SILENCER™ SYSTEM

PROVEN ENGINEERED ACOUSTICAL
PLUMBING SOLUTIONS

SUBMITTALS ISO-3822 TEST DATA



HOLDRITE

CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONSSM
(800) 321.0316 • www.holdrite.com



Since the introduction of the #101-18 copper bonded bracket over 30 years ago, **HOLDRITE** has been “**Converting Makeshift Methods into Engineered Solutions.**” The Hubbard family business was born in 1982 when Master Plumber George Hubbard designed a pipe support solution to replace the time-consuming and labor-intensive method of cutting blocks of wood for every job. George’s invention would ultimately revolutionize plumbing methodology throughout North America by creating the secondary pipe support plumbing methodology.



Proven Engineered Acoustical Plumbing Solution

Acoustical Submittal

For 30 years, HOLDRITE has been an innovator of products ensuring Engineers a quality plumbing installation. Our products have become the industry standard in “Converting Makeshift Methods Into Engineered Solutions”SM. The HOLDRITE Silencer System is the only comprehensive solution that has been tested by a certified ISO-3822 lab at 1/3 octave testing. Additionally, Contractors have found this acoustical pipe support system simple to install and specifically engineered to provide today’s hotels, motels, multifamily homes, and high-end residential projects with superior protection against plumbing noise and vibration disturbance. Thank you for the opportunity to submit this acoustical package for your review and approval. We would like to suggest products that meet today’s acoustical isolation requirements with regards to mitigation of noise in plumbing and piping systems. We trust that this information will prove helpful in your efforts to select high-quality, cost-effective acoustical isolation products for your customers.

This submittal package includes, but isn’t limited to, the following:

1. HOLDRITE Silencer System product submittals.
2. Acoustical test data by certified ISO-3822 lab.
3. Product application matrix with installation notes.
4. Application CAD drawings of installed products (available in PDF, DWG and BIM formats).
5. Estimating/Material Take Off service overview (free and job specific).

A product sample pack is available upon request.

HOLDRITE will provide a hands-on installation training for these and other HOLDRITE products at no cost. We look forward to working with you and being included in your acoustical specification.

Thank you for your consideration.

The Holdrite Team 

Table of Contents

HOLDRITE Silencer Product Line Literature	Pg. 5-8
#250 Spec Sheet	Pg. 10
#255 Spec Sheet	Pg. 11
#257-P Spec Sheet.....	Pg. 12
#280 Spec Sheet	Pg. 13
#285 Spec Sheet	Pg. 14
#287-P Spec Sheet.....	Pg. 15
#261 and #262 Spec Sheet.....	Pg. 16
#263 and #264 Spec Sheet.....	Pg. 17
#265 Spec Sheet	Pg. 18
#270 Spec Sheet	Pg. 19
#271 Spec Sheet	Pg. 20
#271 Spec Sheet	Pg. 21
#272-2 Spec Sheet.....	Pg. 21
#Felt 100 Spec Sheet.....	Pg. 22
#274 Spec Sheet	Pg. 23
#275 Spec Sheet	Pg. 24
#275-T Spec Sheet.....	Pg. 25
#276 Spec Sheet	Pg. 26
#300-310 Spec Sheet	Pg. 27
#320-330 Series Spec Sheet	Pg. 28
#320 Series Spec Sheet	Pg. 29
#SB1S and #SB2S Spec Sheet.....	Pg. 30
#SB3 and #SB4 Spec Sheet.....	Pg. 31
#EZ1 and #EZ2 Spec Sheet.....	Pg. 32
#266-269 Spec Sheet.....	Pg. 33
Product Application Matrix	Pg. 34-36
Application Drawings	Pg. 37-52
Sample Installation Detail Page	Pg. 53
Installation Instructions	Pg. 54-57
Acoustical Noise Pressure Level Test Data (3rd Party, ISO-3822 Accredited Lab).....	Pg. 58-76
HOLDRITE VIP Estimating Service.....	Pg. 77-79

HOLDRITE® SILENCER™ SYSTEM

Proven Engineered Acoustical Plumbing Solutions



SHOWER HEAD



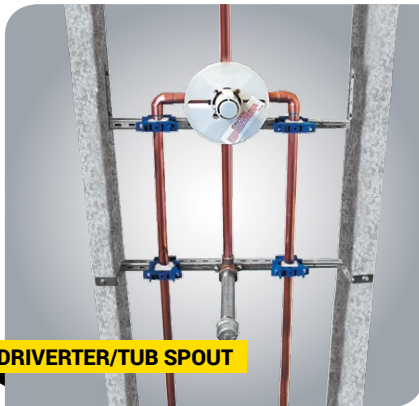
LOOP HANGER



CLEVIS HANGER



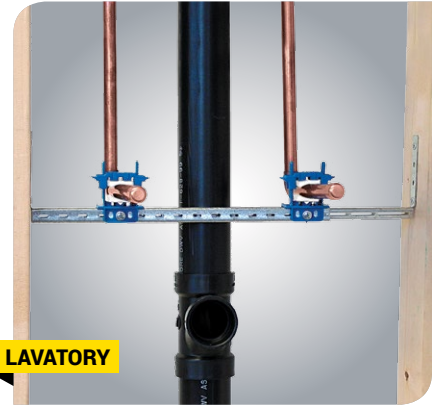
WATER CLOSET



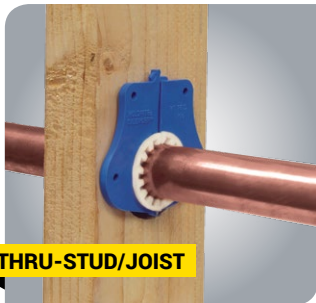
DRIVERTOR/TUB SPOUT



**Quiet
Plumbing
Solution**



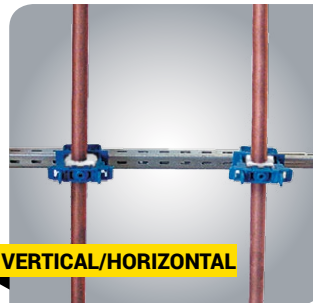
LAVATORY



THRU-STUD/JOIST



WASTE/VENT



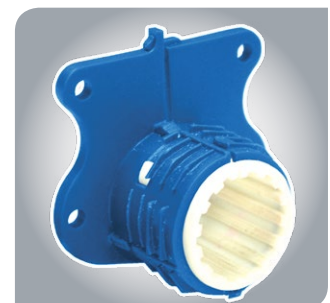
VERTICAL/HORIZONTAL



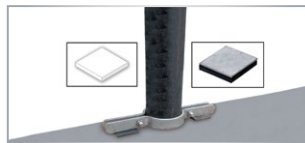
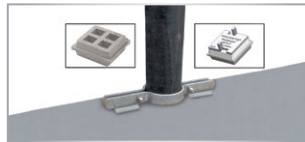
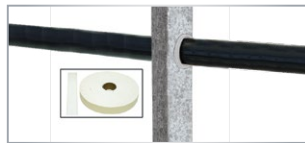
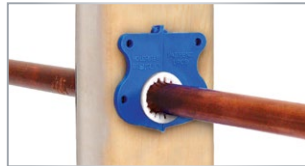
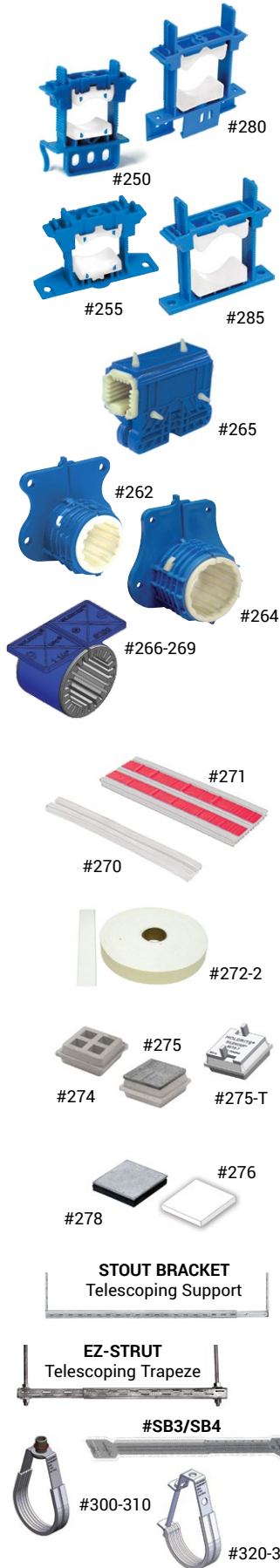
RISER CLAMP PADS



- Certified ISO-3822 lab tested
- Engineered to reduce plumbing noise
- Easy to install into wood or metal studs
- Specification data available upon request
- Adjustable clamps accommodate up to 2" pipe
- Compatible with copper, PEX, CPVC and other materials



HOLDRITE® SILENCER™ SYSTEM



Model#	Description	Box Qty
250	Sound rated variable closure clamp. Mounts to Stout or EZ-Strut bracket. Supports up to 1" CTS tube sizes.	50
255	Sound rated variable closure clamp. Flat base mounts to wood, metal or other surfaces. Supports up to 1" CTS tube sizes.	50
280	Sound rated variable closure clamp. Mounts to Stout or EZ-Strut bracket. Supports 1" to 2" CTS or IPS pipe sizes.	50
285	Sound rated variable closure clamp. Flat base mounts to metal or other surfaces. Supports 1" to 2" CTS or IPS pipe sizes.	50

Model#	Description	Box Qty
265	Shower Head / Tub Spout attachment clamp. Mounts to Stout Bracket.	50

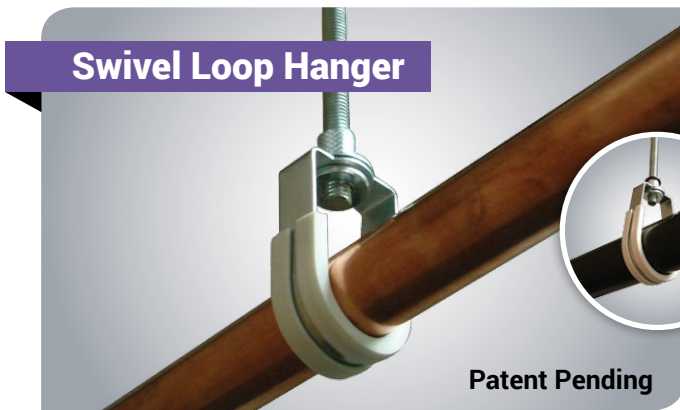
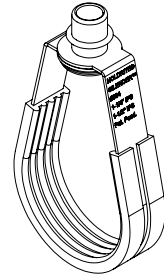
Model#	Tube Size	Description	Box Qty
261	1/2"	Acoustical thru-stud isolator /suspension clamp.	50
262	3/4"	Acoustical thru-stud isolator /suspension clamp.	50
263	1"	Acoustical thru-stud isolator /suspension clamp.	50
264	1-1/4"	Acoustical thru-stud isolator /suspension clamp.	50
266-269	1/2"-1 1/4"	Acoustical suspension clamp.	Various

Model#	Description	Box Qty
270	Acoustical insulation liner-3/4" wide.	50' Roll
271	Acoustical insulation liner-2" wide/adhesive backing.	25' Roll
272-2	2" x 1/4" x 25' Roll isolation felt. Self adhesive back.	25' Roll
274	2" x 2" x 3/4" Neoprene vibration isolation pad. 25 pads per sheet / 4 sheets per box.	100 total (25 sheets of 4)
275	2" x 2" x 3/4" Neoprene vibration isolation pad with 10-gage steel bearing plate.	100/Box
275-T	2" x 2" x 7/8" Neoprene vibration isolation pad with 10-gage steel bearing plate and vertical tabs for keeping riser clamp in place.	100/Box
276	2" x 2" x 1/4" Rubber vibration isolation pad.	50/Box
278	2" x 2" x 1/4" Rubber vibration isolation pad; 10 gage galvanized steel bearing plate.	50/Box

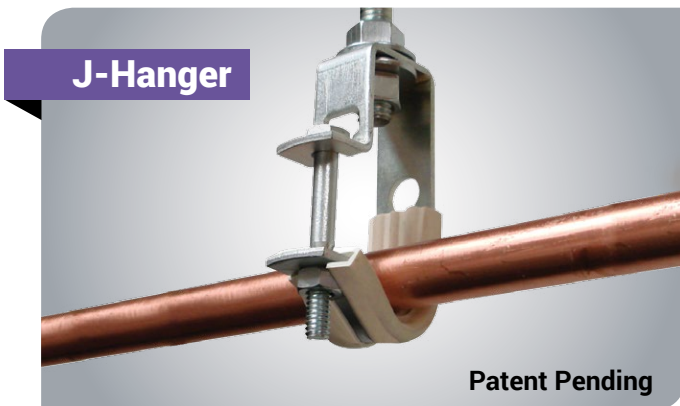
Model#	Description	Box Qty
SB1S	Stout bracket, 10" to 18"; four screws.	50
SB2S	Stout bracket, 13" to 25"; four screws.	50
SB1-2502	One Stout bracket 10" to 18"; two #250 Stout Clamps; four screws.	25
SB2-2502	One Stout bracket 13" to 25"; two #250 Stout Clamps; four screws.	25
SB3/SB4	Multi-purpose galvanized telescoping bracket	25
EZ-1	Trapeze bracket, 12" to 21"; four screws.	25
EZ-2	Trapeze bracket, 23" to 40"; four screws.	25
300-310	Swivel Loop Hangers	Various
320-330	J-hanger with TPE liner	Various

HOLDRITE® SILENCER™

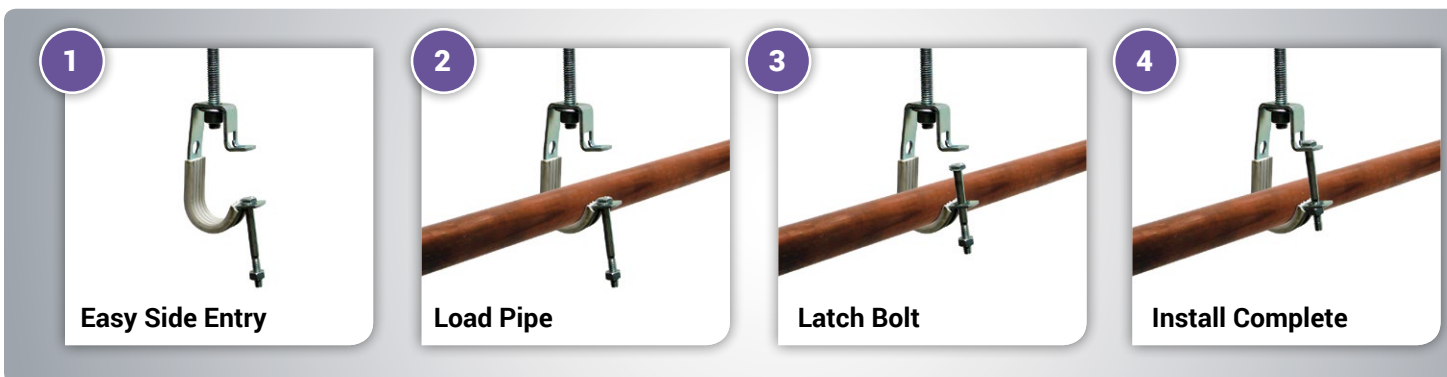
ACOUSTICAL & ISOLATION HANGERS



- > Engineered to Reduce Plumbing Noise
- > Ideal for Dissimilar Metal Isolation
- > For Sizes up to 4"
- > Galvanized Steel Loop Hanger with Thermal Plastic Elastomer Liner
- > Compatible with Copper, CPVC, PEX, ABS, Cast Iron and Other Material Types
- > Lab Tested & Preferred by Acoustical Engineers
- > Specification Data Available Upon Request



HOLDRITE SILENCER J-HANGER INSTALLATION





HOLDRITE Silencer Benefits Over Felt



- ✓ Lab Tested
- ✓ Greater Resistance to Deterioration/Rotting
- ✓ Creates a Consistent Installation Everytime
- ✓ Provides Superior Reduction in Noise
- ✓ Isolates Pipe All of the Time and Not Some of the Time



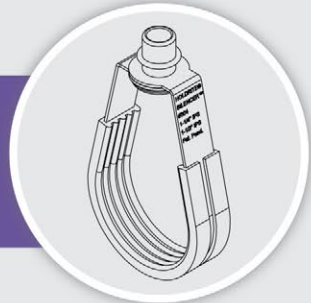
HOLDRITE Silencer Is Compatible With Multiple Pipe Types



HOLDRITE SILENCER LOOP HANGERS

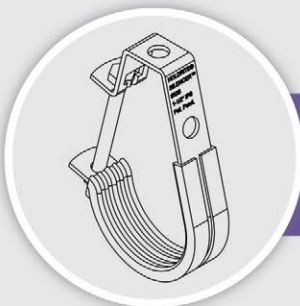
For Pipe Size(s)			
Model#	IPS Size	CTS Size	Box Qty
300	n/a	1/2"	100
301	1/2"	3/4"	100
302	3/4"	1"	100
303	1"	1-1/4"	100
304	1-1/4" - 1-1/2"	1-1/2"	100
306	2"	2"	100
307	2-1/2"	2-1/2"	50
308	3"	3"	50
310	4"	4"	25

Conforms with Federal Specification WW-H-171 (Type 10), Manufacturers Standardization Society (MSS) SP-58 and SP-69 (Type 10)



HOLDRITE SILENCER J-HANGERS

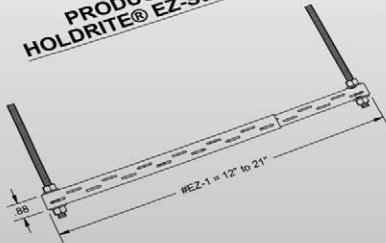
For Pipe Size(s)			
Model#	IPS Size	CTS Size	Box Qty
320	n/a	1/2"	50
321	1/2"	3/4"	50
322	3/4"	1"	50
323	1"	1-1/4"	50
324	1-1/4"	1-1/2"	50
325	1-1/2"	2"	50
326	2"	2-1/2"	50
327	2-1/2"	3"	25
328	3"	n/a	25
330	4"	4"	25



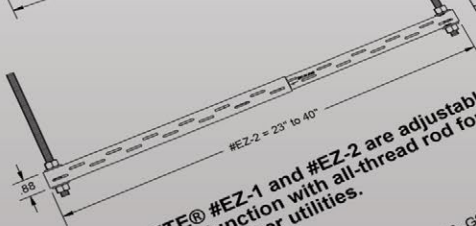
Conforms with Manufacturers Standardization Society (MSS) SP-58 and SP-69 (Type 5)

Project Submittals

**PRODUCT SPECIFICATION DRAWING
HOLDRITE® EZ-Strut™ #EZ-1 & #EZ-2 (Trapeze)**



#EZ-1 Beam Span Inches	Maximum Load (lbs.)	
	Center Pt.	Uniform Load
12	1000	1100
18	500	510
21	380	360



#EZ-2 Beam Span Inches	Maximum Load (lbs.)	
	Center Pt.	Uniform Load
23	400	600
30	400	534
35	160	175
40	120	153

HOLDRITE® #EZ-1 and #EZ-2 are adjustable length trapeze platforms used in conjunction with all-thread rod for suspending overhead pipes, conduits and other utilities.

Product Information:

- Material: 16 gage CRS, galvanized per ASTM-A853-99, G90
- Adjustment ranges: #EZ-1 = 12" to 21"; #EZ-2 = 23" to 40"
- Assembly: (2-point support)
 - a) Suspend from 3/8" all-thread rod
 - b) Fix sliding sections at desired length using 2- #8 sheet metal screws (provided)
 - c) Fix sliding sections to rods both above and below with washer and hex nuts
 - d) Secure sliding sections to desired face of bracket using #8 sheet metal screws
 - e) Attach clamps to desired face of bracket using #8 sheet metal screws
 - f) Do not exceed load rating
- #8 SMS supplied or available from Hubbard Enterprises; other hardware furnished by installer
- Several types of pipe clamps are available for attachment to these platforms
- Seismic/away bracing can be attached where all-thread connects to the trapeze
- UL listing



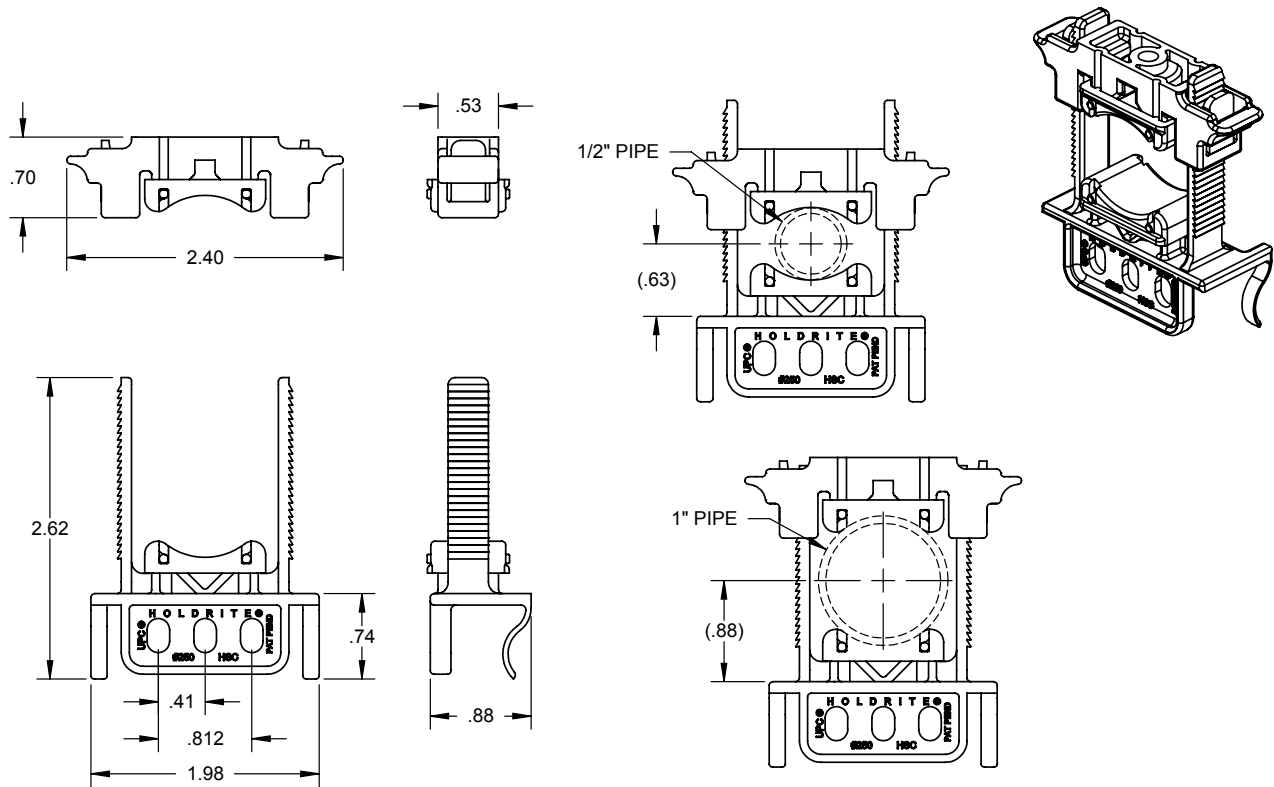
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spec_EZ-1_EZ-2_RevH

Product Submittal	
Job Name:	Qty:
Site:	
Part Number:	
Architect / Owner:	
Contractor:	
Notes:	



**PRODUCT SPECIFICATION DRAWING
HOLDRITE® STOUT CLAMP™ #250**



ALL DIMENSIONS IN INCHES

The HOLDRITE® Stout Clamp™ #250 is a strong, sound rated variable closure clamp compatible with Copper, PEX, CPVC pipe, conduit, etc. Supports up to 1" CTS tubing sizes. Frame work complies with UL94V-2 fire rating and UPC listed.

Product Information:

- Material:
Top & Bottom clamp: Nylon, medium blue, FR UL94V-2
Pads: TPR, natural (off-white), 50 shore A
- Temperature range: -10°F to 180°F
- Load rating: 25 lbs in suspended mode, 200 lbs maximum in top mount
- UPC / IPC listed
- IAPMO listed, per standard PS42-96
- Patent Pending



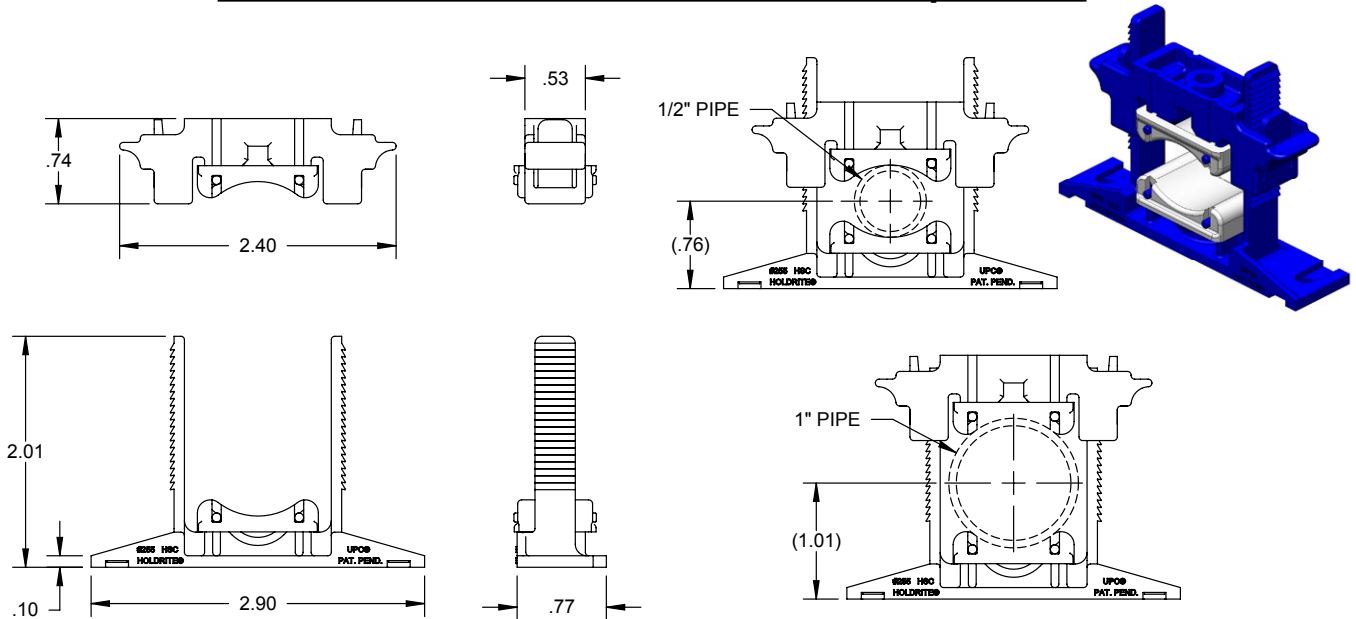
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spec_250_RevH

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING HOLDRITE® Acoustical Standard Clamp™ #255



ALL DIMENSIONS IN INCHES

The HOLDRITE® Acoustical Standard Clamp™ #255 is a strong, sound rated variable closure clamp that installs as a standard two hole pipe clamp with one or two screws. Two acoustical inserts insolate the pipe from the support structure, reducneg piping noise and vibration, while allowing normal pipe expansion and contraction. The clamp has a grip strong enough to serve as a stub-out clamp. Clamp supports up to 1" CTS tubing sizes. Supports Copper, PEX, CPVC tubing, conduit, etc. Frame work complies with UL94V-2 fire rating and UPC listed.

Product Information:

- Material:
Top & Bottom Clamp: Nylon, medium blue, FR UL94V-2
Pads: TPR, natural (off-white), 50 shore A
- Temperature range: -10°F to +180°F
- Load rating: 25 lbs in suspended mode, 200 lbs maximum in top mount
- UPC / IPC listed
- IAPMO listed, per standard PS42-96
- Patent Pending



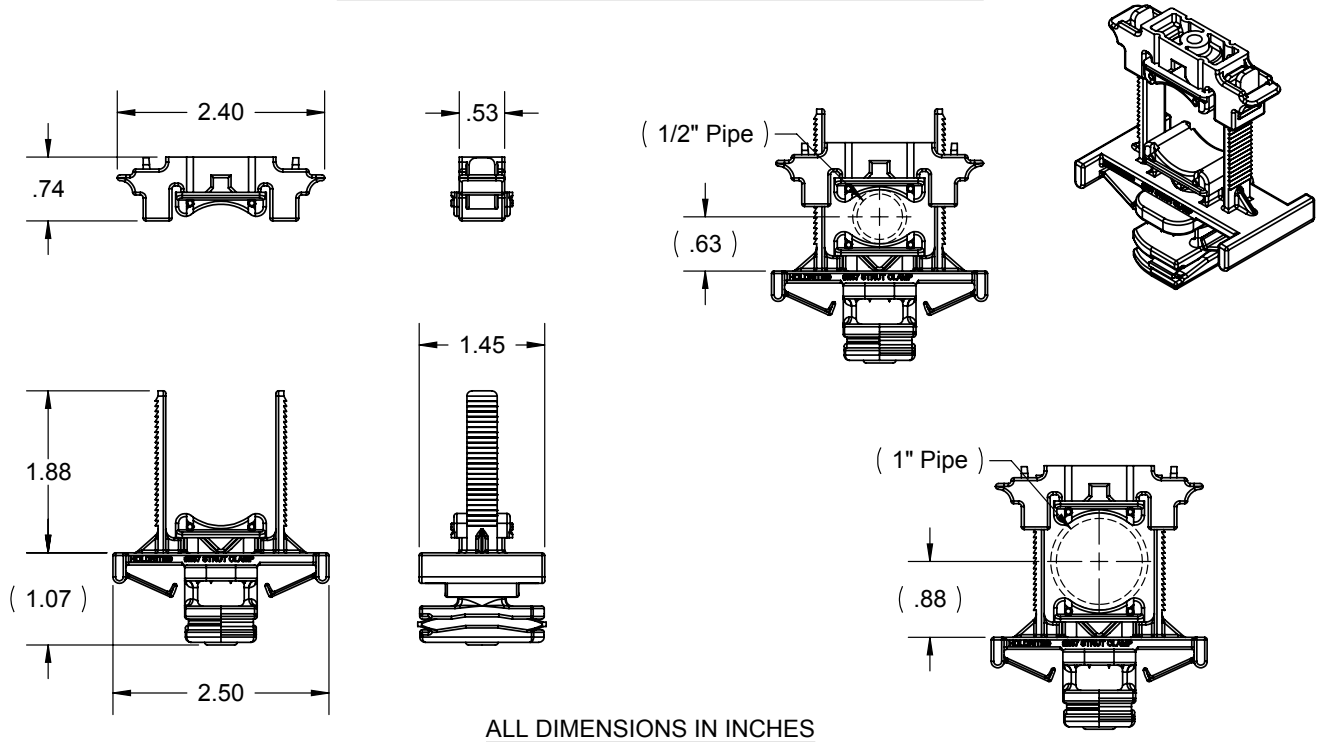
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spec_255_RevJ

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING
HOLDRITE® #Strut Clamp™ #257-P



ALL DIMENSIONS IN INCHES

The **HOLDRITE® Acoustical Strut Clamp™ #257-P** is a strong, sound rated variable closure clamp. Two acoustical inserts isolate the pipe from the support structure, reducing piping noise and vibration, while allowing normal pipe expansion and contraction. Clamp supports up to 1" CTS tubing sizes. Supports Copper, PEX, CPVC tubing, conduit, etc. Framework complies with UL94V-2 fire rating.

Product Information:

- Material:
 Top & Bottom Clamp: Nylon, medium blue, FR UL94V-2
 Pads: TPR, natural (off-white), 50 shore A
- Temperature range: -10°F to +180°F
- Load rating: 25 lbs in suspended mode, 200 lbs maximum in top mount
- UPC / IPC / IAPMO listed



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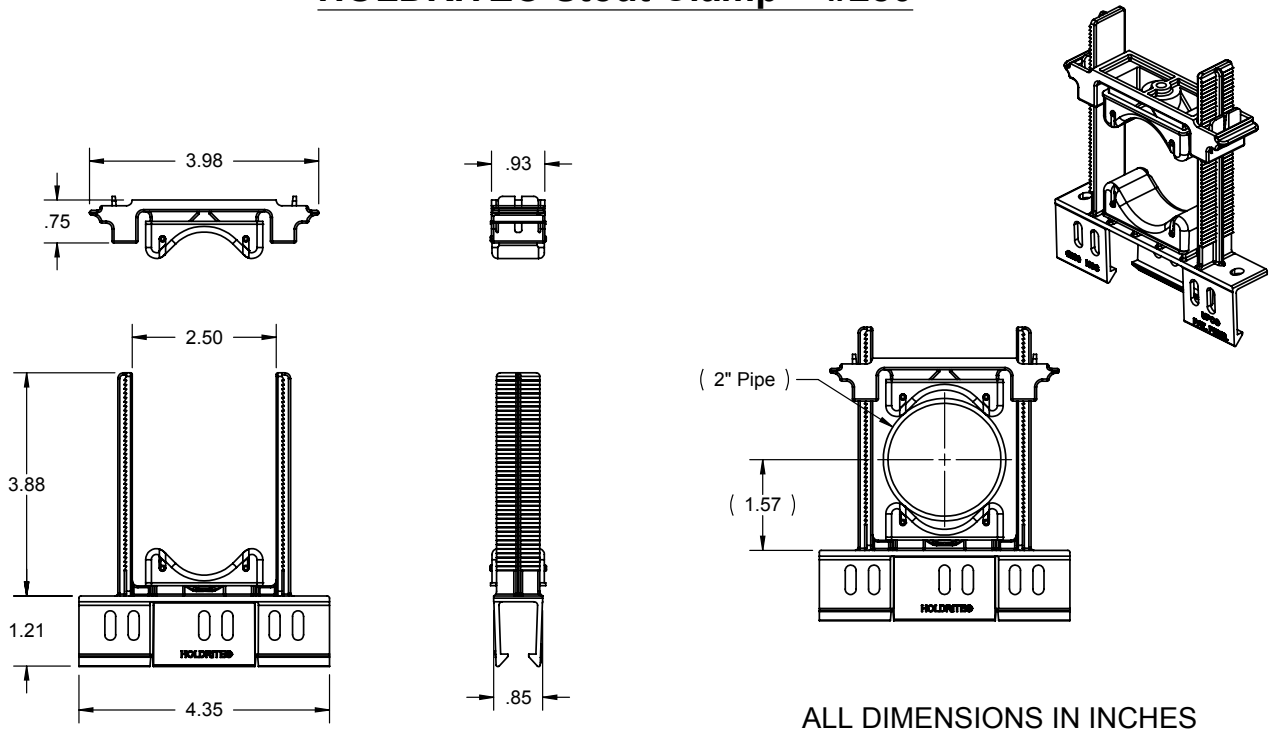


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 spec_257-P_RevH

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING HOLDRITE® Stout Clamp™ #280



Sound rated variable closure clamp that may be installed to HOLDRITE® EZ-Strut™ or Stout Brackets™ with only one to three screws (for maximum load in suspension mode). Two acoustical inserts isolate the pipe from the supporting structure, reducing waterline noise and vibration, while allowing normal pipe expansion and contraction. Variable closure clamp supports 1" - 2" CTS and IPS pipe sizes. Supports Copper, PEX, CPVC tubing, conduit, etc. Frame complies with UL94V-2 frame rating.

Product Information:

- Material:
Top & Bottom Clamp: Nylon, medium blue, FR UL94V-2
Pads: TPR, natural (off-white), 50 shore A
- Temperature range: -10°F to +180°F
- Load rating: 75 lbs in suspended mode, 300 lbs maximum in top mount
- Patent Pending
- UPC / IPC / IAPMO listed



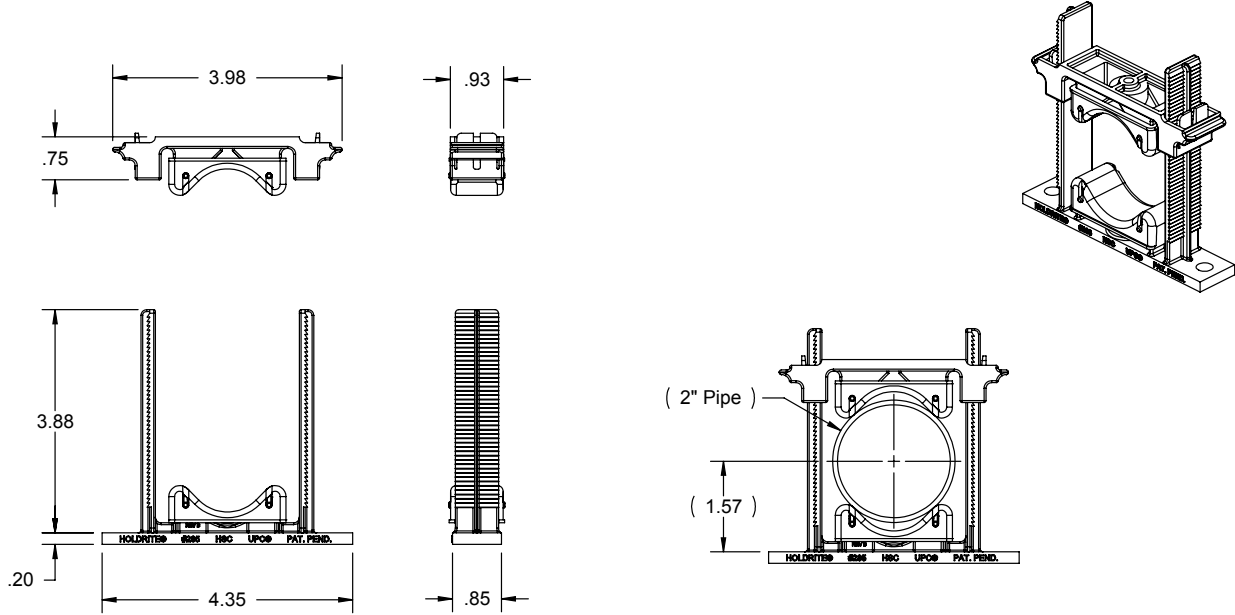
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spec_280_Rev1

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING
HOLDRITE® Stout Clamp™ #285



ALL DIMENSIONS IN INCHES

Sound rated variable closure clamp that may be installed as a standard "two-hole" pipe clamp to flat surfaces, to HOLDRITE® EZ-Strut™ or Stout Brackets™ with one or two screws (for maximum load), or to flat surfaces by using 2 @ 1/4" hammer-set or other anchors. Two acoustical inserts isolate the pipe from the supporting structure, reducing waterline noise and vibration, while allowing normal pipe expansion and contraction. Variable closure clamp supports 1" - 2" CTS and IPS pipe sizes. Supports Copper, PEX, CPVC tubing, conduit, etc. Frame complies with UL94V-2 fire rating.

Product Information:

- Material:
 Top & Bottom Clamp: Nylon, medium blue, FR UL94V-2
 Pads: TPR, natural (off-white), 50 shore A
- Temperature range: -10°F to +180°F
- Load rating: 75 lbs in suspended mode, 300 lbs maximum in top mount
- Patent Pending
- UPC / IPC / IAPMO listed



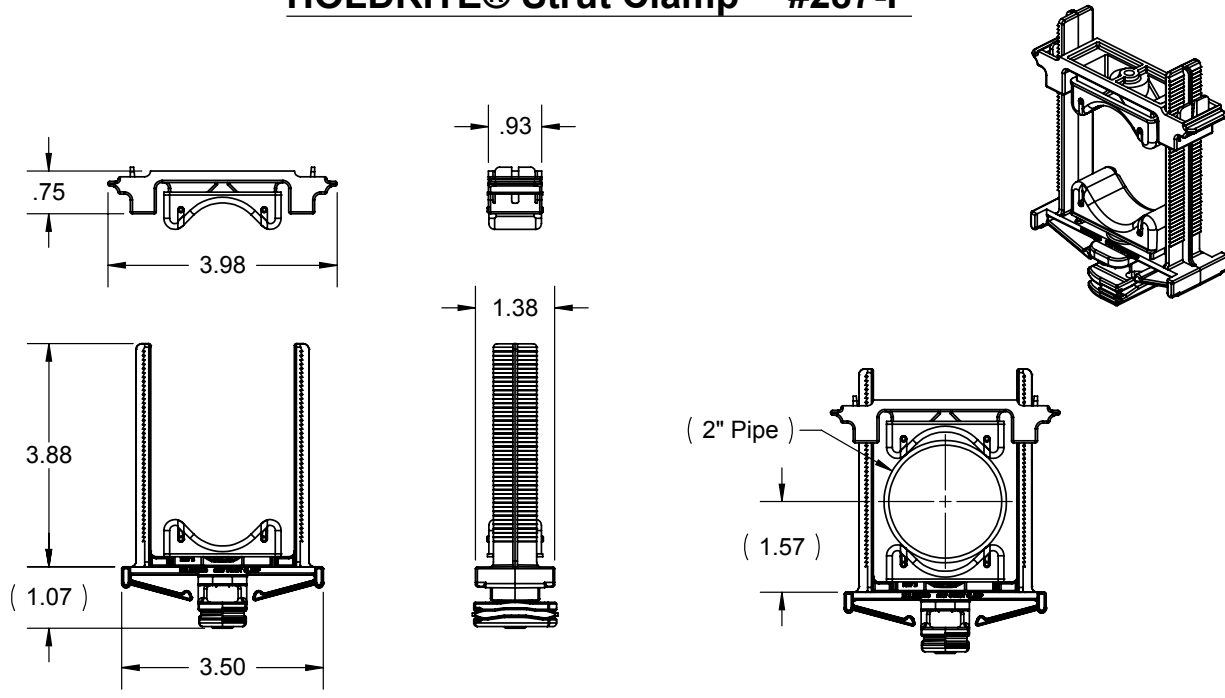
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 spec_285_Rev1

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING HOLDRITE® Strut Clamp™ #287-P



ALL DIMENSIONS IN INCHES

The **HOLDRITE® Acoustical Strut Clamp™ #287-P** is a strong, sound rated variable closure clamp. Two acoustical inserts isolate the pipe from the support structure, reducing piping noise and vibration, while allowing normal pipe expansion and contraction. Clamp supports 1" to 2" CTS/IPS pipe sizes. Supports Copper, PEX, CPVC tubing, conduit, etc. Framework complies with UL94V-2 fire rating.

Product Information:

- Material:
Top & Bottom Clamp: Nylon, medium blue, FR UL94V-2
Pads: TPR, natural (off-white), 50 shore A
- Temperature range: -10°F to +180°F
- Load rating: 75 lbs in suspended mode, 300 lbs maximum in top mount
- UPC / IPC / IAPMO listed



Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

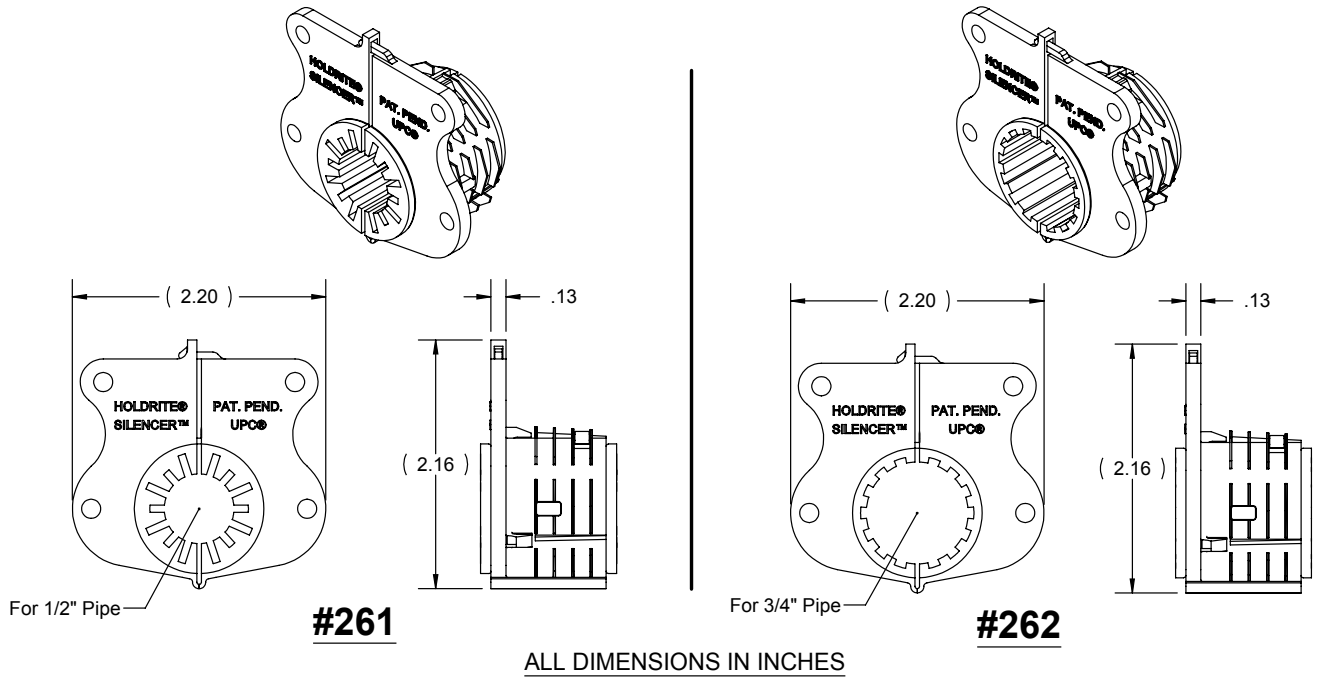
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spec_287-P_RevM

PRODUCT SPECIFICATION DRAWING

HOLDRITE® Silencer™ Through-Stud / Suspension Clamp #261 & #262



Model #'s 261 and 262 can be used as a suspension hanger, e.g., from a joist or cross-member or a HOLDRITE® Stout Bracket™, or as a through-hole isolator in wood or up to 14 gage metal framing into a 1-11/32" - 1-3/8" hole. As a through-hole isolator, they can also be used with HOLDRITE® #103, #121, and #709 series brackets. These models are used for securing and retaining tubing while providing superior acoustical isolation between the tubing and the supporting structure. Supports 1/2" and 3/4" CTS tube sizes. Supports Copper, PEX, CPVC tubing, conduit, etc. UPC listed.

Product Information:

- Material:
Shell: Polypropylene, blue, FR UL94-V2
Isolators: TPE, natural (off-white), 45 shore A
- Temperature Range: -10°F to 140°F (suspension)
-10°F to 180°F (through-stud)
- Load rating: 25 pounds in suspension mode
- UPC / IPC listed
- IAPMO listed, per standard PS42-96
- Patent Pending



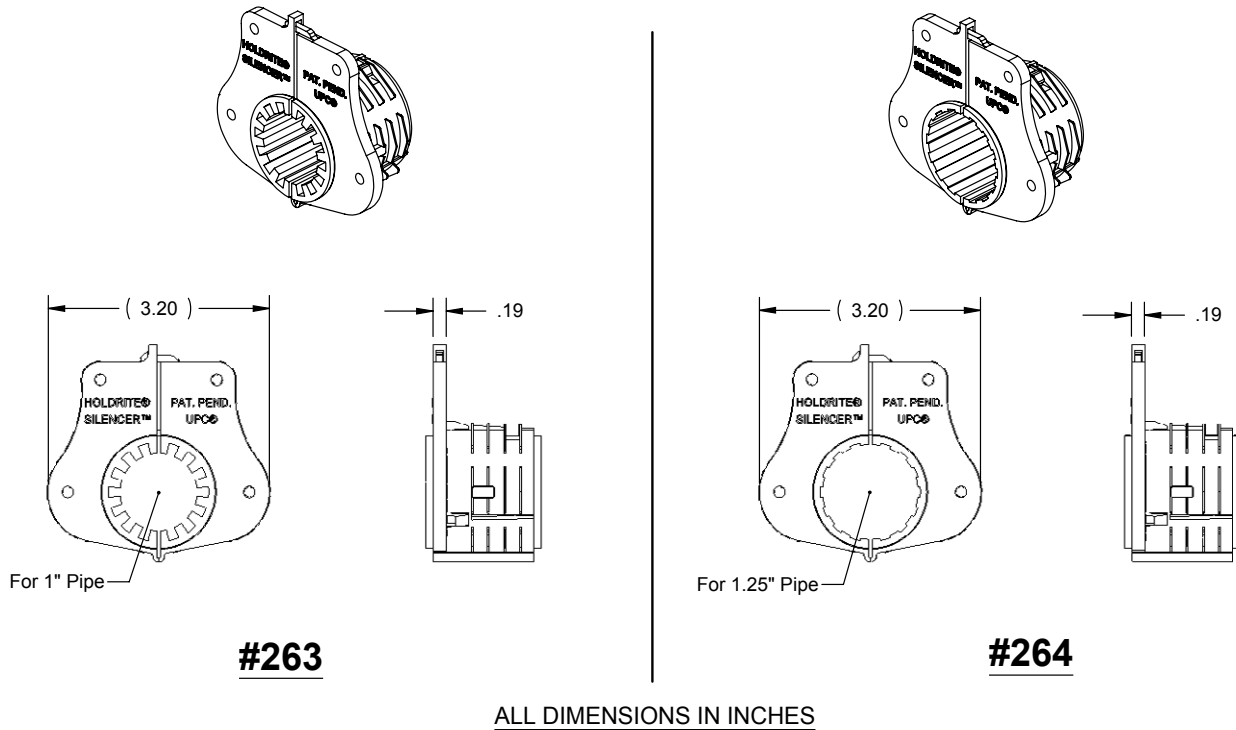
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spec_261_262_RevP

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING
HOLDRITE® Silencer™ Through-Stud / Suspension Clamp #263 & #264



ALL DIMENSIONS IN INCHES

Model #'s 263 and 264 can be used as a suspension hanger, e.g. from a joist or cross-member or a HOLDRITE® Strout Bracket™, or as a through-hole isolator in wood or metal framing. As a through-hole isolator, mounts in 2" hole in wood or sheet metal up to 14 gage. Secures and retains tubing while providing superior acoustical isolation between the tubing and the supporting structure. Supports 1" and 1-1/4" CTS tube sizes. Supports Copper, PEX and CPVC tubing.

Product Information:

- Material:
 Shell: Polypropylene, blue, FR UL94V-2
 Isolators: TPE, natural (off-white), 45 shore A
- Temperature range: -10°F to 140°F (suspension)
 -10°F to 180°F (through-stud)
- Load rating: 50 pounds in suspension mode
- UPC / IPC listed
- IAPMO listed, per standard PS42-96
- Patent Pending



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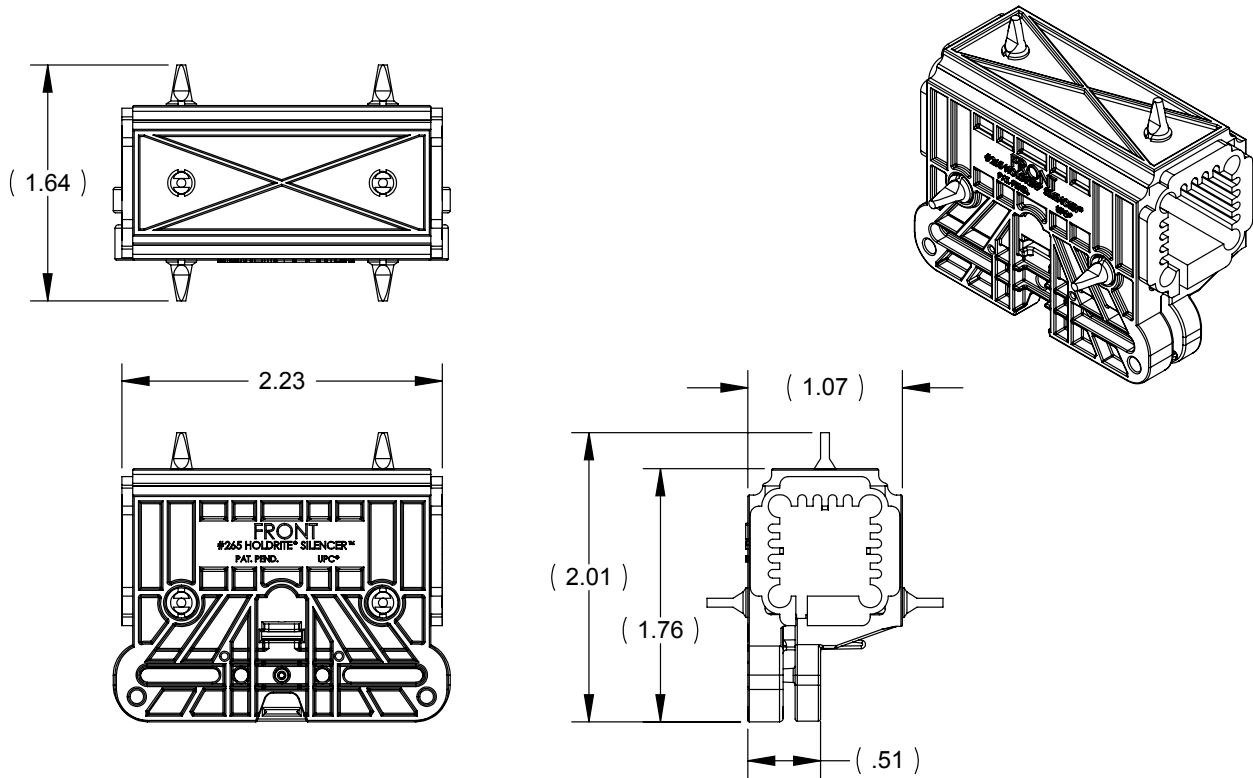


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 spec_263_264_RevJ

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING

HOLDRITE® Silencer™ #265 Acoustical Shower Head/Tub Spout Clamp



ALL DIMENSIONS IN INCHES

The **HOLDRITE Silencer #265 Acoustical Shower Head/Tub Spout Clamp** is a strong and effective clamp for minimizing the noise generated at the shower or similar application. This clamp is designed for attachment to the **Holdrite Stout Bracket®** and accepts a drop eared 90° ell or similar fitting.

Product Information:

- **Materials:**
 Shell: Polypropylene, medium blue, UL94V-2
 Isolator: Santoprene, 40 to 45 shore A, natural (off-white)
 Screw Plate: 16 gage CRS, zinc plated
- Patent Pending
- UPC / IPC / IAPMO listed



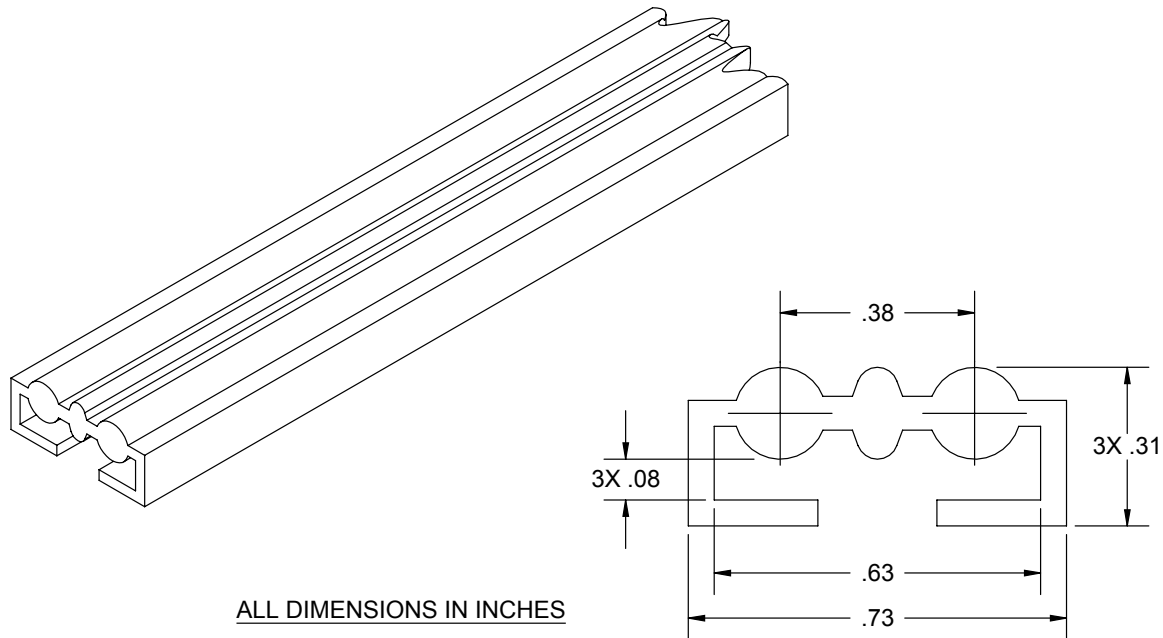
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 spec_265_RevE

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING
HOLDRITE® #270 Acoustical Isolation Liner



ALL DIMENSIONS IN INCHES

Engineered sound insulation lining, minimizes the occurrence of frictional noises caused by thermal expansion of the pipes and protects against contact between dissimilar materials. Attaches to ends of HOLDRITE Stout Brackets™ or around pipes to provide isolation from structure. Also provide sound isolation between metal loop hangers and piping. Available in 50' rolls.

Product Information:

- Material: TPE, 45 shore A, color white
- Temperature range: -30°F to 180°F



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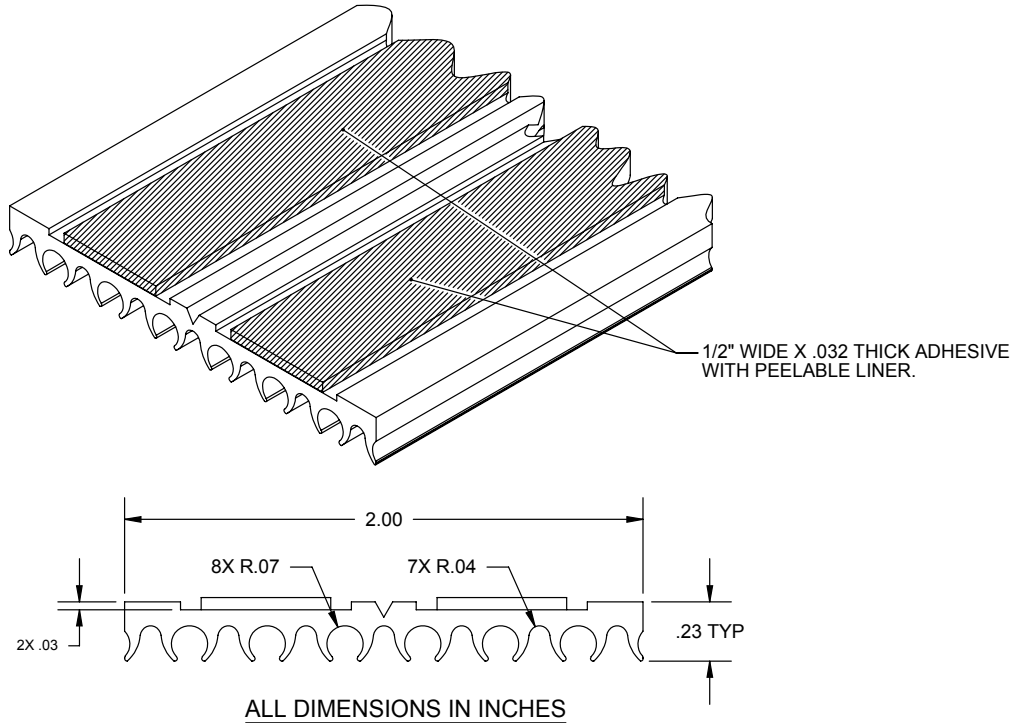


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 spec_270A_RevE

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING

HOLDRITE® Silencer™ #271 Self-Adhesive Acoustical Insulation Liner



The HOLDRITE® Silencer™ #271 is an engineered sound isolation lining with many versatile applications for use in minimizing noise transfer with plumbing and piping systems. This 2" wide strip comes in 25' rolls and can easily be cut down the center at 1" width. The self-adhesive strips provide grip to piping or hangers. Excellent for use in isolating against sound or dissimilar metal contact in hangers or through framing components.

Product Information:

- Material: TPE, natural (off-white), 35 shore A
- Temperature range: -20 °F to +180 °F continuous services



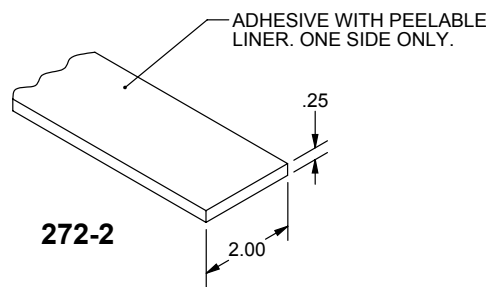
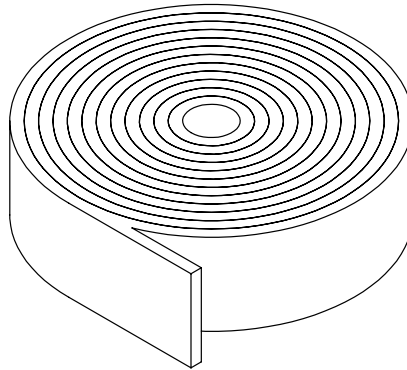
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 spec_271_RevF

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING Felt 272-2 (Accessory)



Felt #272-2 HOLDRITE® Isolating felt for use in eliminating dissimilar metal contact and providing sound and vibration isolation. One side is self-adhesive. Available in 25' roll.

Product Information:

- Material: White Polyester Felt, pressure-sensitive adhesive (PSA), rubber base, one side only



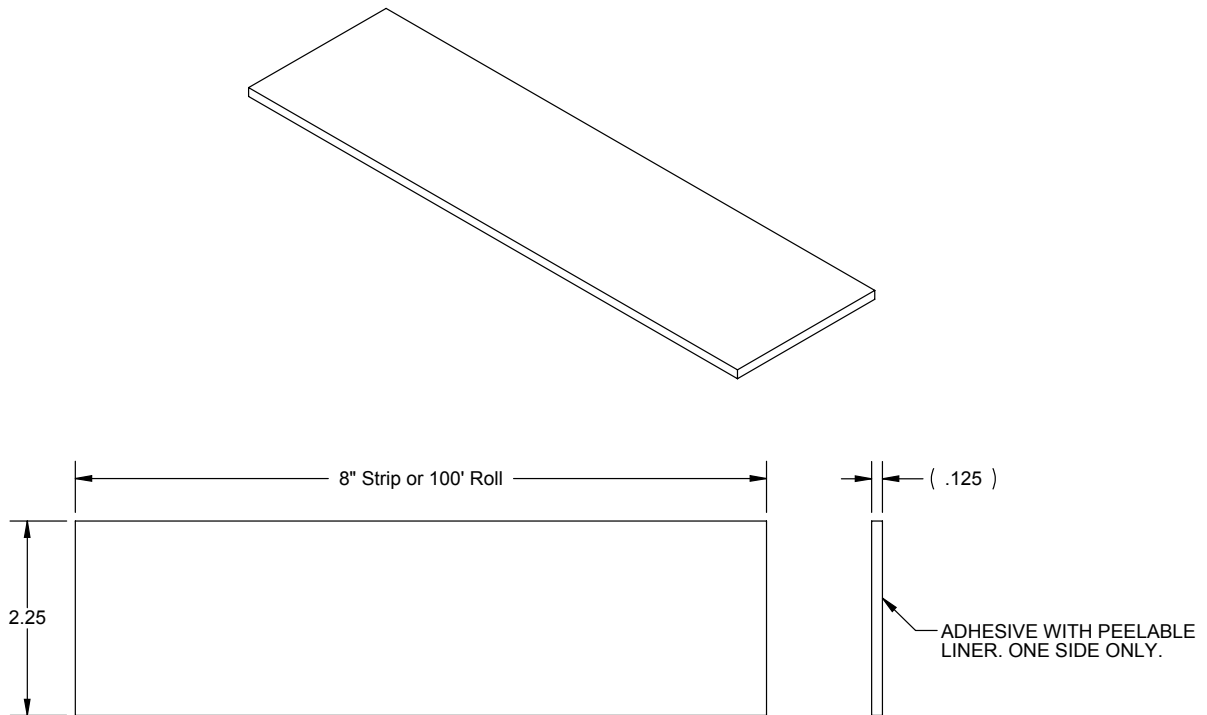
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spec_272-2_RevF

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING Felt 8 & Felt 100 (Accessory)



Felt 8 and Felt 100 HOLDRITE Isolating felt for use in eliminating dissimilar metal contact and provides minimal sound vibration isolation. One side is self-adhesive. Available in 8" strips and 100' roll.



Product Information:

- Material: White Polyester Felt, pressure-sensitive adhesive (PSA), rubber base, one side only

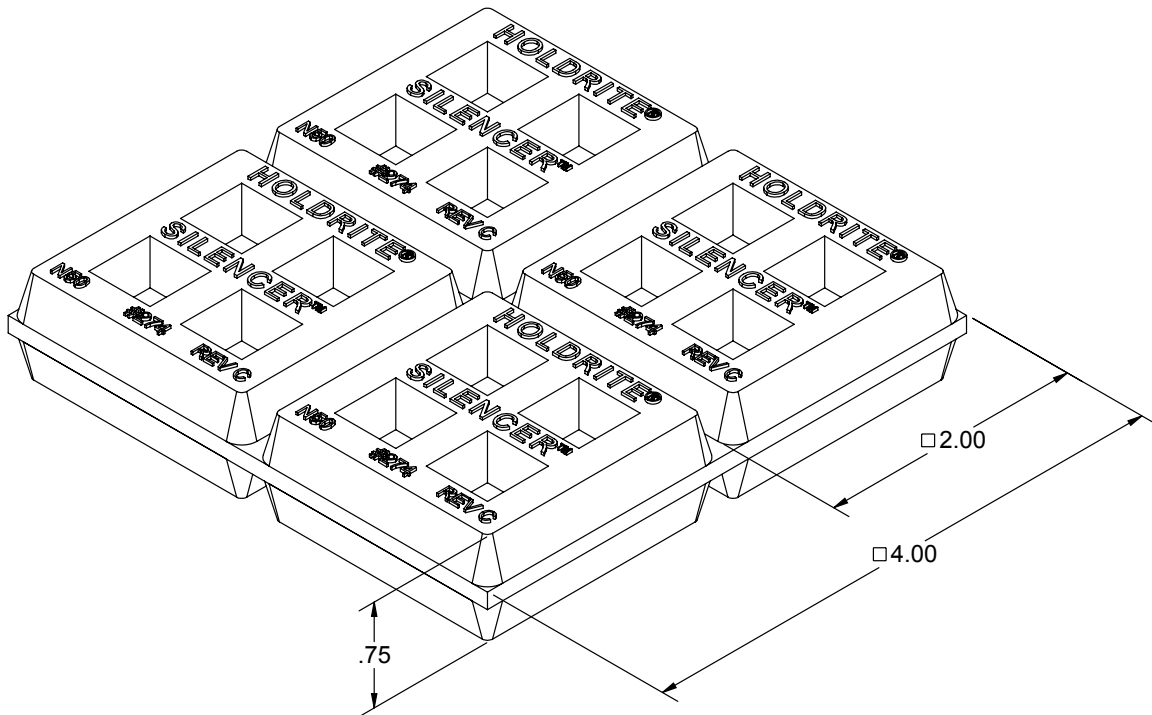
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spec_Felt 8_Felt 100_RevF

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING
HOLDRITE Riser Pad #274
(Riser clamp and equipment isolation)



ALL DIMENSIONS IN INCHES

The HOLDRITE Riser Pad #274 individually measures 2" X 2" X 3/4", that comes in sheet of 4. These can be separated from the sheet using scissors or knife.

Product Information:

- Material: Neoprene, 50 shore A, off-white



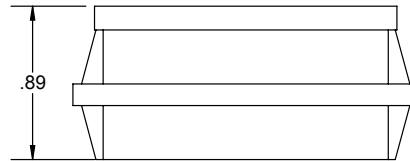
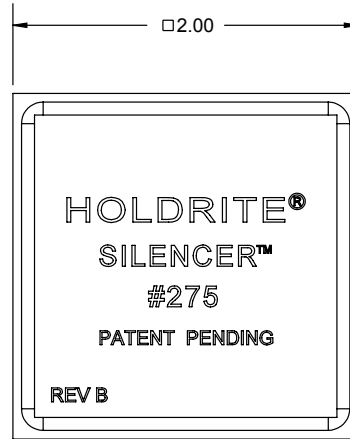
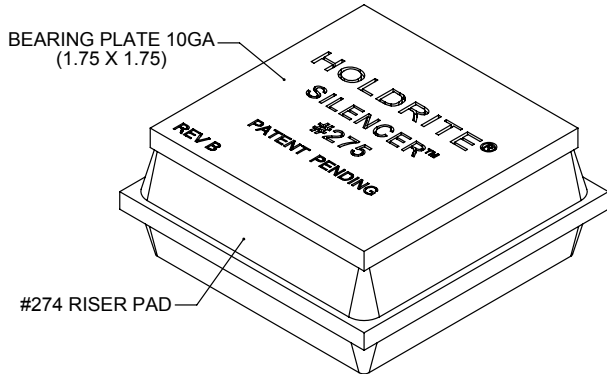
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Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

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 spec_274_RevC

PRODUCT SPECIFICATION DRAWING
HOLDRITE® Silencer™ #275



The HOLDRITE Silencer™ #275 is an engineered sound and vibration riser pad with a steel bearing plate. Ideal for use in isolating riser clamps and equipment bases from noise transfer to the structure.

Product Information:

- **Material:**
 Bearing Plate: 10 gage, Galvanized CRS
 Riser Pad: Neoprene, 50 shore A, off-white

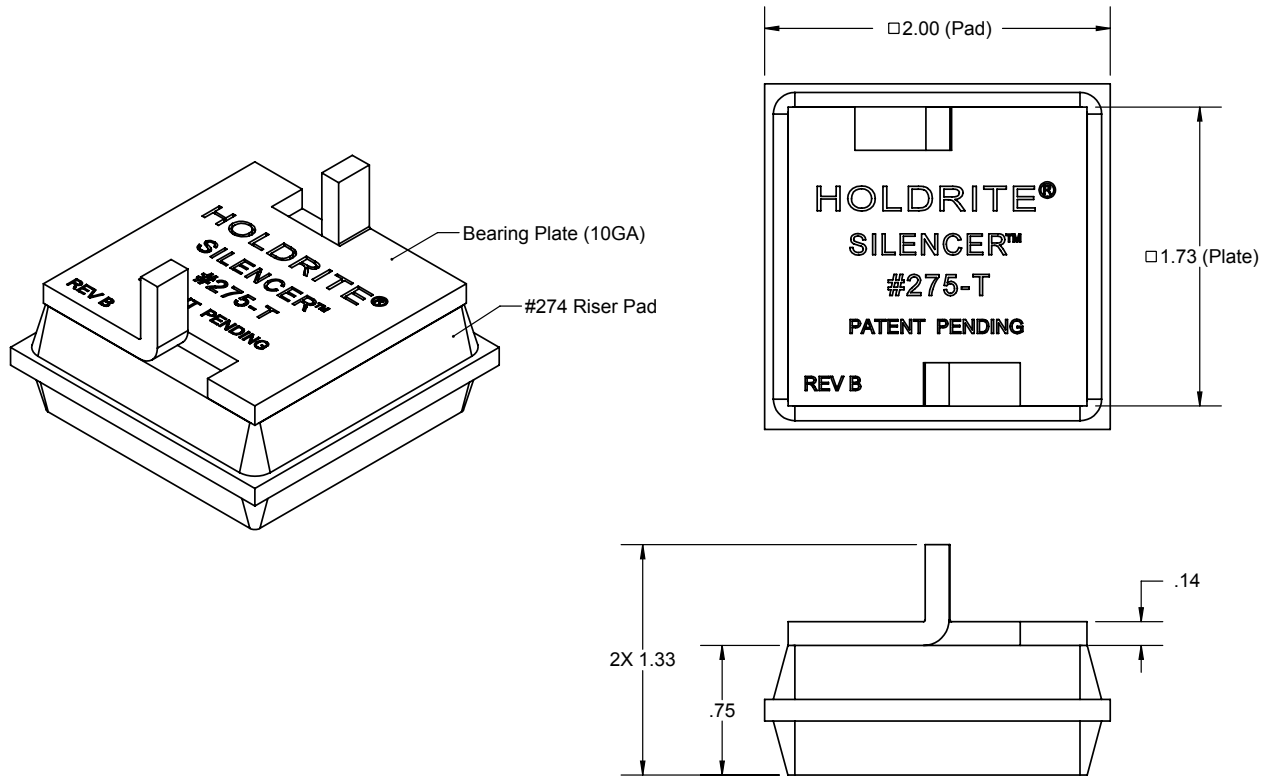
Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

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 spec_275_RevC

PRODUCT SPECIFICATION DRAWING
HOLDRITE® Silencer™ #275-T



The HOLDRITE Silencer™ #275-T is an engineered noise and vibration isolating riser pad with a steel bearing plate. Ideal for use in isolating riser clamps from noise and vibration transfer to the structure. Unique vertical tabs protect from incidental displacement.

Product Information:

- Material:
 Bearing Plate: 10 gage, Galvanized CRS
 Riser Pad: Neoprene, 50 Shore A, off-white
- Patent Pending
- Load Rating: 50 psi

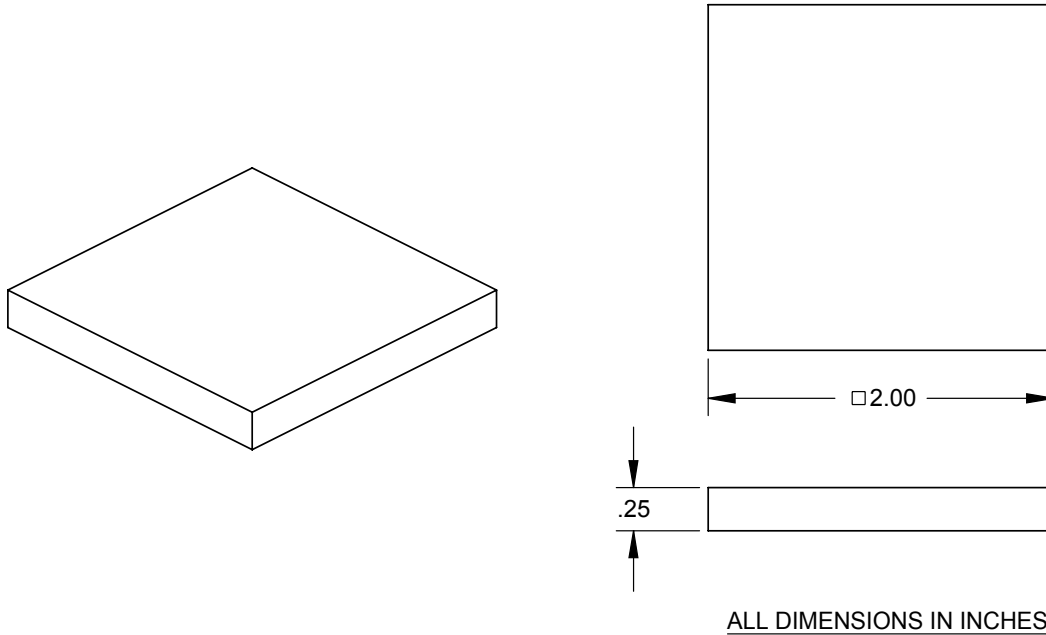
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 spec_275-T_RevE

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING
HOLDRITE® Silencer™ #276 Isolation Pad



The HOLDRITE® Silencer™ #276 is an engineered sound and vibration isolation pad. Ideal for use in isolating riser clamps and equipment bases from noise transfer to the structure.

Product Information:

- Material: Neoprene, 50 Shore A, off white.
- Temperature Range: -20°F to +180°F.
- Load Rating: 50 psi evenly distributed @ .025 compression.
 May be stacked for additional height. Approximately .050 compression @ 50 psi for 1-1/4" stack (5 pads).

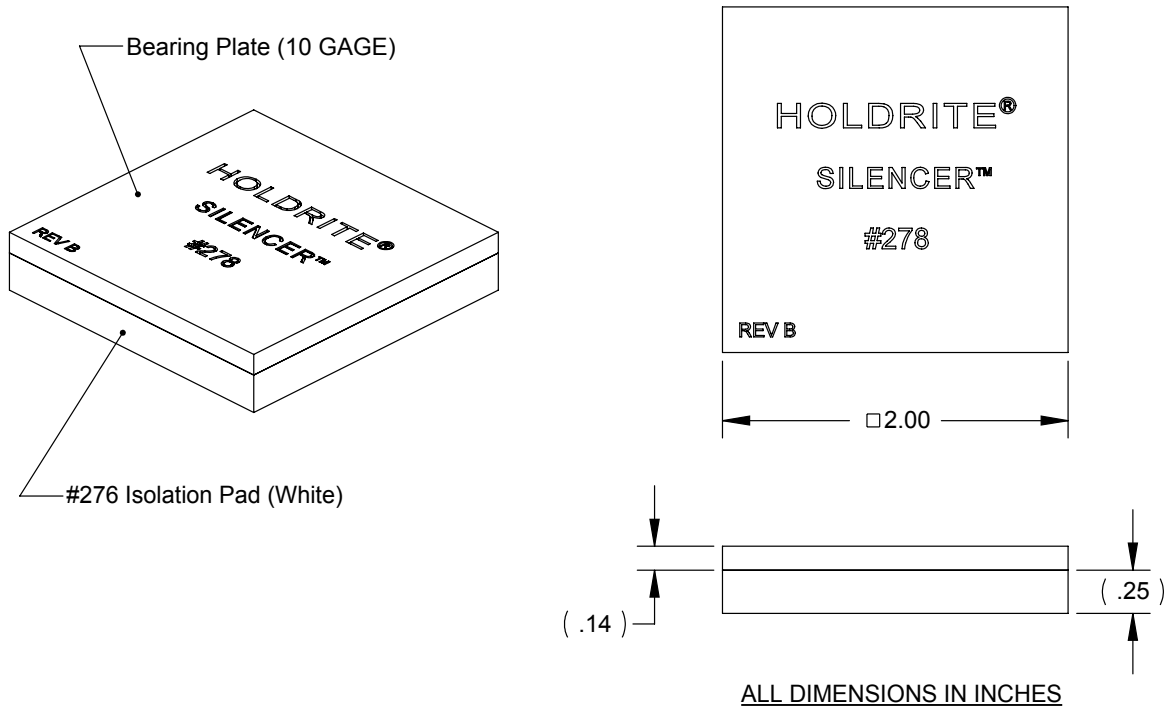
Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

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 spec_276_Rev_special(RevB)

PRODUCT SPECIFICATION DRAWING
HOLDRITE® Silencer™ #278 Isolation Pad (White)



The **HOLDRITE® Silencer™ #278** is an engineered sound and vibration isolation pad with a steel bearing plate. Ideal for use in isolating riser clamps and equipment bases from noise transfer to the structure.

Product Information:

- Material:
 Bearing Plate: 10 gage, Galvanized CRS
 Isolating Pad: Neoprene, 50 Shore A, off-white
- Load Rating: 50 psi



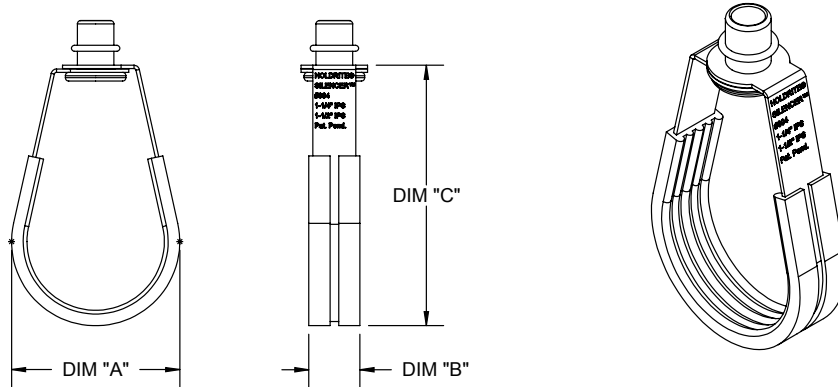
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 spec_278_White_RevE

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING HOLDRITE® SILENCER™ Swivel Loop Hangers



Model #	Size		Swivel Nut Size	Max. Recom. Load (LBS.)	Dimension (inches)		
	IPS	CTS			"A"	"B"	"C"
#300	---	1/2"	3/8"	300	1.2	0.7	2.5
#301	1/2"	3/4"	3/8"	300	1.4	0.7	2.6
#302	3/4"	1"	3/8"	300	1.7	0.7	2.8
#303	1"	1-1/4"	3/8"	300	1.9	0.7	3.1
#304	1-1/4"-1-1/2"	1-1/2"	3/8"	300	2.4	0.7	3.8
#306	2"	2"	3/8"	525	2.9	0.7	4.3
#307	2-1/2"	2-1/2"	3/8"	525	3.5	1	4.8
#308	3"	3"	3/8"	525	4.5	1	6.4
#310	4"	4"	3/8"	650	5.6	1.4	8

HOLDRITE® SILENCER™ Swivel Loop Hanger provide support for pipe and tubing from 1/2" - 4" size. These hangers also provide acoustic noise isolation and protection against dissimilar metal contact.

Product Information:

- Material:
Frame: Carbon Steel
Liner: TPE, natural (off-white), 45 shore A.
- Conforms with Federal Specification WW-H-171 (Type 10), Manufacturers Standardization Society (MSS) SP-58 and SP-69 (Type 10)
- Load rating: Complies with (MSS) SP-58
- Temperature range: -50 °F to 225 °F
- Patent Pending

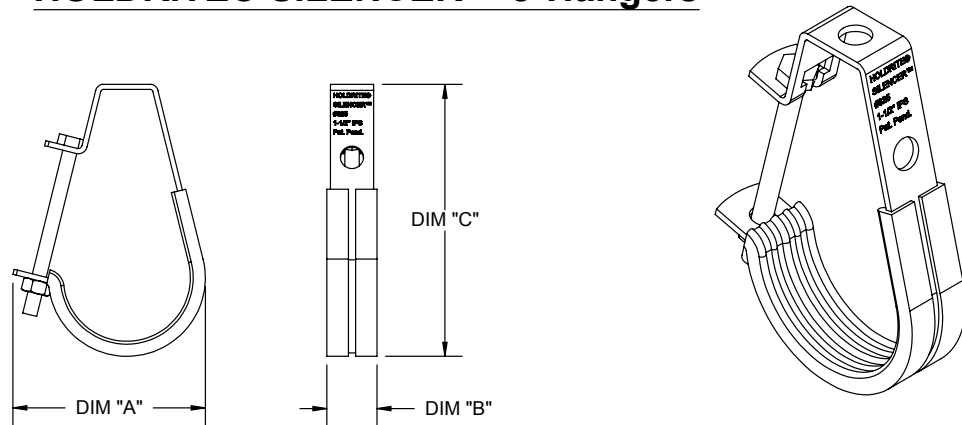
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spec_Loop Hangers_RevG

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING HOLDRITE® SILENCER™ J-Hangers



Model #	Size		Max. Recom. Load (LBS.)	Dimension (inches)		
	IPS	CTS		"A"	"B"	"C"
#320	---	1/2"	400	1.8	0.9	3
#321	1/2"	3/4"	400	2	0.9	3.1
#322	3/4"	1"	400	2.3	0.9	3.4
#323	1"	1-1/4"	400	2.5	0.9	3.8
#324	1-1/4"	1-1/2"	400	2.8	0.9	4.3
#325	1-1/2"	2"	400	3.3	0.9	4.7
#326	2"	2-1/2"	400	3.8	0.9	5.4
#327	2-1/2"	3"	800	4.7	1.3	6.3
#328	3"	---	800	5.1	1.3	7.1
#330	4"	4"	800	6.2	1.3	8.6

HOLDRITE® SILENCER™ J-Hangers provide support for pipe and tubing from 1/2" - 4" size. These hangers also provide acoustic noise isolation and protection against dissimilar metal contact.

Product Information:

- Material:
Frame: Carbon Steel
Liner: TPE, natural (off-white), 45 shore A
- Conforms with Manufacturers Standardization Society (MSS) SP-58 and SP-69 (Type 5)
- Load rating: Complies with (MSS) SP-58
- Temperature range: -50 °F to 225 °F
- Patent Pending

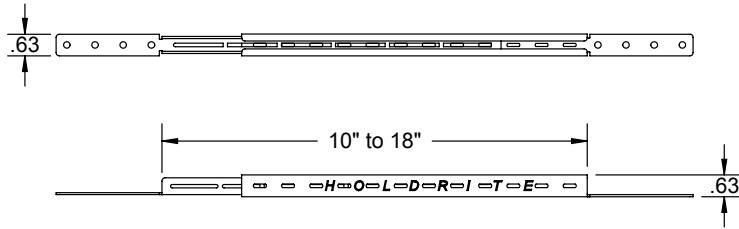
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spec_J-Hangers_RevG

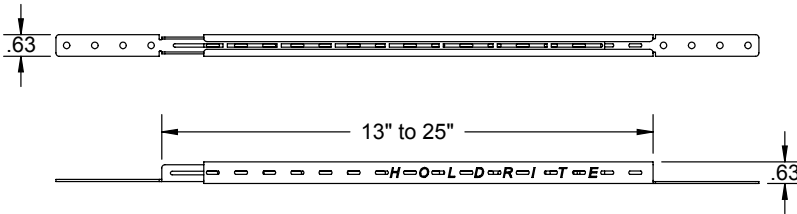
Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING
HOLDRITE® Stout Bracket® #SB1, #SB1S, #SB2 & #SB2S
Adjustable length support system



#SB1 / #SB1S

Beam Span Inches	Maximum Load (lbs.)	
	Center Pt.	Uniform Load
10	400	1150
14.5	164	300
18	104	131



#SB2 / #SB2S

Beam Span Inches	Maximum Load (lbs.)	
	Center Pt.	Uniform Load
18	158	225
22.5	124	165
24	68	120

ALL DIMENSIONS IN INCHES

Slot pattern permits wide versatility in positioning. Mount fittings, clamps, etc. vertically or horizontally. Use with high-ear or wing-ear fittings. Supports shower head, tub spout, piping, etc. Holds HOLDRITE Pro Clamp™, Stout Clamp™ and others. Attaches between studs, joists, etc. Bendable end tabs allow recessed or surface mounting. Use anywhere high strength is required.

Product Information:

- Material: 16 gage CRS, galvanized per ASTM-A653, G90
- SB1S, SB2S series includes (4) #8 X 5/8" long self-drilling sheet metal screw with 1/4" X #2 phillips hex head
- UPC / IPC / IAPMO listed
- UL listing



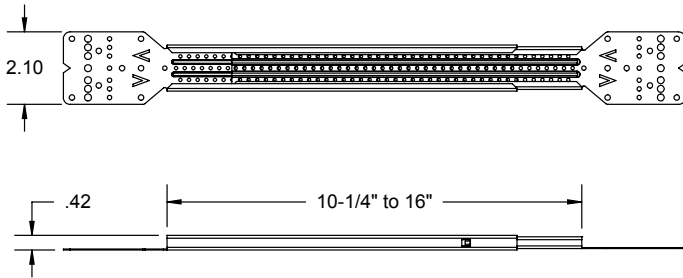
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 spec_SB_Series_RevP

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING HOLDRITE Stout Bracket® #SB3 & #SB4 Telescoping Support System

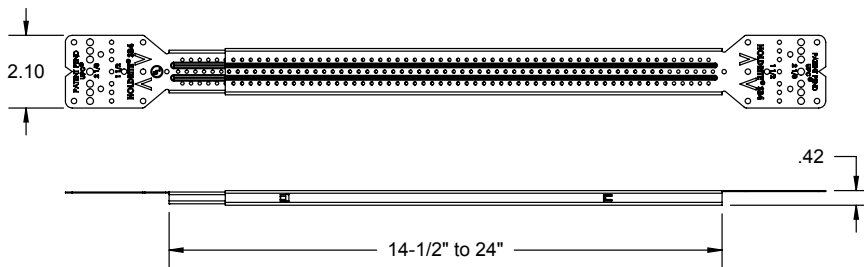


#SB3

Beam Span	Maximum Load (lbs.)
Inches	Center Pt. Load
10-1/4"	863 lbs
14-1/2"	480 lbs
16"	322 lbs

SCALE: 1 / 5

ALL DIMENSIONS IN INCHES



#SB4

Beam Span	Maximum Load (lbs.)
Inches	Center Pt. Load
16"	550 lbs
22-1/2"	271 lbs
24"	228 lbs

Hole pattern permits attachment of a wide variety of Clamps, Fittings, J-Boxes, Outlet Boxes, etc. The wide face provides excellent stability and is also ideal for attachment of both 2-eared and 3-eared shower head and tub spout 90°s. Bracket attaches between studs in span from 10-1/4" through 25-1/2" (depending on model #). End tabs bend easily at 3/4", 1-1/2" & 2-1/4" for in-wall set backs. Optional nailer tabs can be used for quick attachment to wood studs for positioning purposes.

Product Information:

- Material: 24 gage CRS, galvanized per ASTM-A653, G90
- UPC / IPC / IAPMO listed
- UL listing



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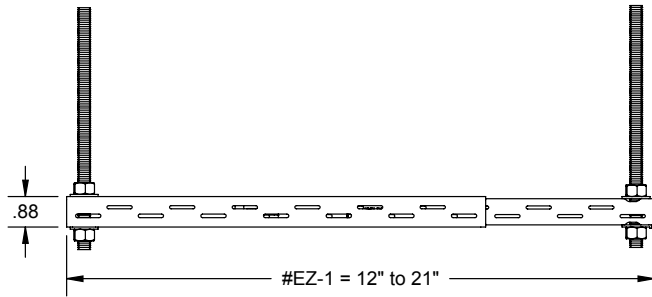


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spec_SB3_SB4_RevE

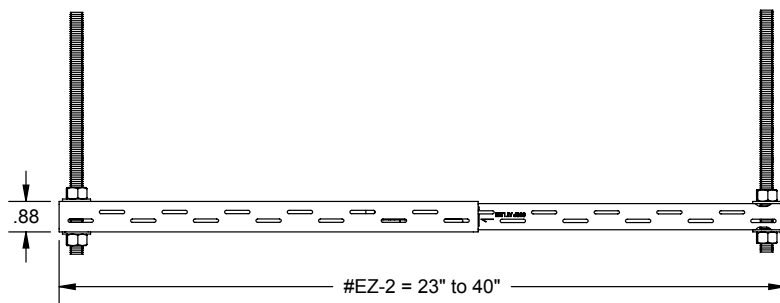
Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING HOLDRITE® EZ-Strut™ #EZ-1 & #EZ-2 (Trapeze)



#EZ-1

Beam Span Inches	Maximum Load (lbs.)	
	Center Pt.	Uniform Load
12	1000	1100
18	500	510
21	360	360



#EZ-2

Beam Span Inches	Maximum Load (lbs.)	
	Center Pt.	Uniform Load
23	400	600
30	400	534
36	160	175
40	120	153

HOLDRITE® #EZ-1 and #EZ-2 are adjustable length trapeze platforms used in conjunction with all-thread rod for suspending overhead pipes, conduits and other utilities.

Product Information:

- Material: 16 gage CRS, galvanized per ASTM-A653-99, G90
- Adjustment ranges: #EZ-1 = 12" to 21"; #EZ-2 = 23" to 40"
- Assembly:
 - Trapeze (2-point support)
 - a) Suspend from 3/8" all-thread rod
 - b) Fix sliding sections at desired length using 2- #8 sheet metal screws (provided)
 - c) Secure sliding sections to rods both above and below with washer and hex nuts
 - d) Attach clamps to desired face of bracket using #8 sheet metal screws
 - e) Do not exceed load rating

#8 SMS supplied or available from HOLDRITE; other hardware furnished by installer

- Several types of pipe clamps are available for attachment to these platforms
- Seismic/sway bracing can be attached where all-thread connects to the trapeze
- UL listing



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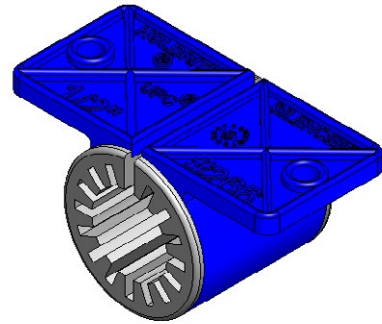
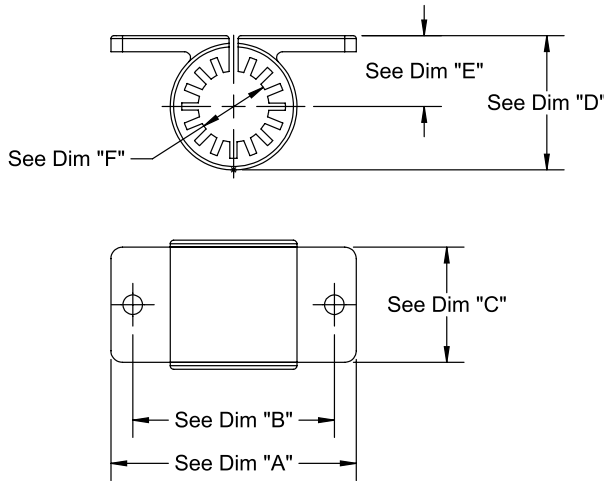
HOLDRITE®

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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM
spec_EZ-1_EZ-2_RevJ

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

PRODUCT SPECIFICATION DRAWING
HOLDRITE® #266 thru #269 Clamps



#266 Shown
 Scale: None

Model	Size	A	B	C	D	E	F
#266	1/2"	2.13	1.75	1.00	1.17	.62	Ø.62
#267	3/4"	2.50	1.93	1.00	1.55	.81	Ø.87
#268	1"	2.75	2.27	1.45	1.82	.94	Ø1.12
#269	1-1/4"	2.88	2.50	1.45	2.07	1.07	Ø1.36

Model #'s 266 thru 269 can be used as a top mount or suspension hanger, e.g., from a joist or cross-member, or from a HOLDRITE Stout Bracket®. These models are used for securing and retaining tubing while providing superior acoustical isolation between the tubing and the supporting structure. Supports 1/2", 3/4", 1" & 1-1/4" CTS tube sizes. Supports Copper, PEX, CPVC tubing, conduit, etc. UPC listed.

Product Information:

- Material:
 Shell: Polypropylene, blue, FR UL94-V2
 Isolators: TPR, natural (off-white), 40 to 45 shore A
- Temperature Range: -10°F to 140°F (suspension)
- Load rating: 25 pounds in suspension mode
- IAPMO UPC / IPC listed
- IAPMO listed, per standard PS42-2013



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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONSSM

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM
 spec_266 thru 269_RevA

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	



Application Matrix

Understanding the plumber's perspective has always been in HOLDRITE's DNA. Even as HOLDRITE evolved into an international company and industry leader in multiple product and service categories, retaining a plumber's perspective has remained our strategic competitive advantage. We recognize that our value comes from constantly providing innovative product solutions to the plumbing industry.



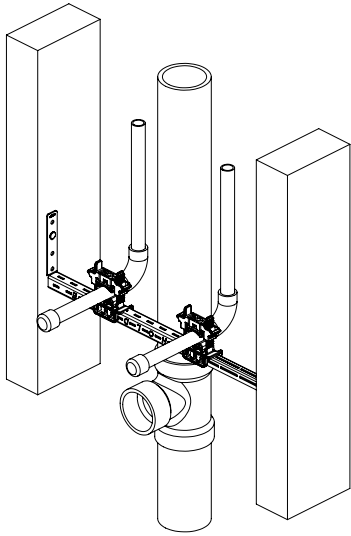
Acoustical Product Application Matrix

APPLICATION	PRODUCT #	MANUFACTURER	INSTALLATION NOTES
Lavatory/sink	SB2S w/250 or 103-18 w/261s, or 110-R w/261, or SB4 w/ 255 or 266	HOLDRITE	Attach #250s, 255s or 266s to bracket, or #103-18 with #261s, or #110-R w/ #261s
Janitor/Mop sink	SB2S w/270 or SB2 w/ 265	HOLDRITE	Attach drop eared 90s to bracket with #270 isolation liner in between or #265 onto #SB2
Tubs/shower combo	SB2S w/250s or 261s and 270, or w/265, or SB3/SB4 w/255 or 266	HOLDRITE	Attach #250s, #255s or #266s to brackets. Attach drop eared 90s to brackets with #270 isolation, or w/ #261s to brackets, or attach #265 to brackets
Shower	SB2S w/250s or 261s and 270, or w/265, or SB3/SB4 w/255 or 266	HOLDRITE	Attach #250s, #255s or 266s to brackets. Attach drop eared 90s to brackets with #270 isolation, or w/ #261s to brackets, or attach #265 to brackets
Spa Tub	SB2S w/250 or 261 or SB3/SB4 w/255 or 266	HOLDRITE	Attach #250s, #255s, #261s or #266s to bracket
Laundry Washer Box	SB2S w/270, or 271 or SB3/SB4 w/271	HOLDRITE	Attach box to bracket with #270 isolation liner between, or attach #271 to drain pipe and then to bracket w/ 2-hole clamp.
Ice Maker Box	SB2S w/270, or 250 on SB2S, or SB3/SB4 w/271, 255 or 266	HOLDRITE	Attach box to bracket with #270 isolation liner in between, or attach water line to bracket with #250, #255 or #266
H.W.T	SB2S w/250s, or 262s into 103-18, or SB3/SB4 with 255 or 266	HOLDRITE	Attach to #250, #255, #262 or #266 to bracket or #262s into the #103-18
Toilet	SB2S w/250 or 261, or 103-18 w/261 or SB3/SB4 w/255 or 266	HOLDRITE	Attach #250, 255, #261 or #266 to bracket or insert #261 into #103-18
Urinal	SB2S w/250 or 267/268 or SB3/SB4 w/255 or 266	HOLDRITE	Attach #250, #267 or 268 to bracket
Drinking Fountain	SB2s w/250 or 261, or 103-18 w/261 or SB3/SB4 w/255 or 266	HOLDRITE	Attach #250, #255, #261 or #266 to bracket, or insert #261 into 103-18 bracket
Vertical, horizontal or mid-span support	SB2S or SB3/SB4 w/250, 255, 261-264, 266-269, 280, 285 or 271	HOLDRITE	Attach #250, #255, #261-#264, #266-#269, #280, #285 to bracket, or #271 & a 2-hole pipe clamp for pipe sizes over 2"
Overhead piping, (high and tight to structure)	121-R,W,L,D,O or 125-D w/261, 262	HOLDRITE	Mount #121 or #125 series bracket and then insert #261 or #262 insert (#125-D brackets are mounted prior to concrete pour)
Trapeze	257-P, 287-P, EZ-1, EZ-2, 250, 271, 280, 261- 264, 266-269	HOLDRITE	Install #257-P, #287-P on standard strut. #250, #280 mounts on EZ-Strut. For piping over 2" IPS use #271 with 2-hole clamps
Riser Clamp Isolation	274, 275, 275-T, 276 or 278	HOLDRITE	Insert #274, #275, #275-T, #276, #278 under each side of the riser clamp
Through stud/joist	261, 262, 263, 264	HOLDRITE	Insert ½", ¾", 1" and 1-1/4" isolators into wood or metal framing members
Through stud/joist (large piping)	271, 272-2	HOLDRITE	Install #271 isolation liner (has adhesive strips) to pipe and install into framing, or install #272-2, 1/4" adhesive felt around piping
Loop / Clevis Hanger/ J Hanger	270, 271, 300-310, 320-330	HOLDRITE	#270 or #271 to pipe or hangers, or hang 300 series hangers from rods and insert pipes
Fixture Isolation	270, 271, 261, 262	HOLDRITE	Place #270/#271 between fixture and finish surface or #261/262 on tub-spout or shower head nipple and apply acoustical caulking.

- To help insure quality installations, the following pages include CAD Application Drawings of HOLDRITE Silencer products in use (available in PDF, DWG and BIM).
- Custom Application Drawings are available upon request.

Application Drawings





LAVATORY OR SINK

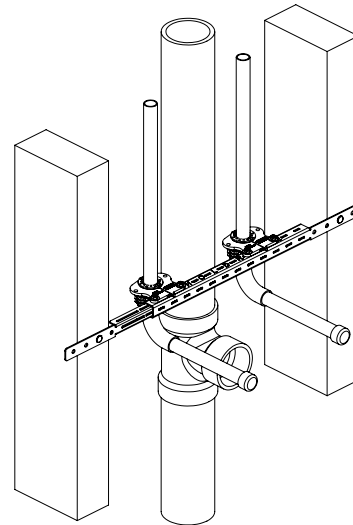
SHOWN WITH HOLDRITE® #250 STOUT CLAMP™ WITH ACOUSTICAL PADS MOUNTED ON A HOLDRITE® STOUT BRACKET™. THESE CLAMPS ACCEPT 3/8" THROUGH 1" TUBING.

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.

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LAVATORY OR SINK

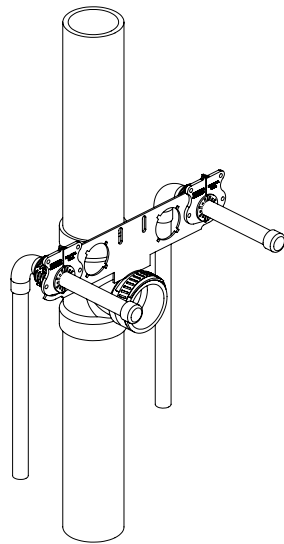
SHOWN WITH HOLDRITE® #261 ACOUSTICAL ISOLATORS. MOUNTED TO HOLDRITE® #SB1S STOUT BRACKET™.

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LAVATORY OR SINK

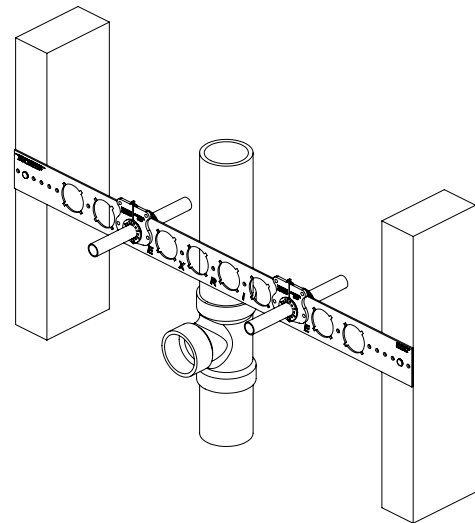
SHOWN WITH HOLDRITE® #110-R BRACKET AND #261 ACOUSTICAL INSERTS. (INSERTS AVAILABLE FOR 1/2" THROUGH 1-1/4" TUBING)

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LAVATORY OR SINK

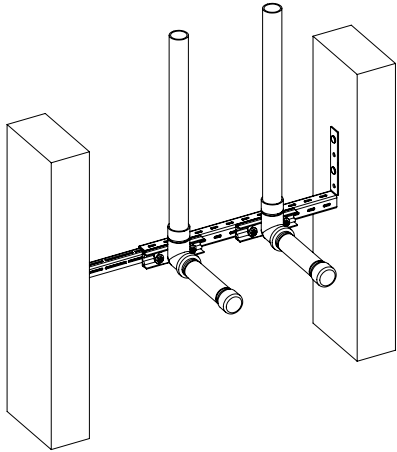
SHOWN WITH HOLDRITE® #103-26 WITH TWO #261 ISOLATORS FOR ACOUSTICAL PROTECTION. (ALSO AVAILABLE FOR 16" STUD BAY #103-18)

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MOP SINK / SERVICE SINK

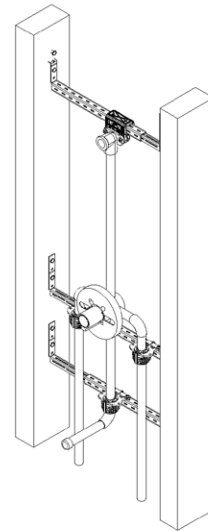
SHOWN WITH HOLDRITE STOUT BRACKET™
ATTACH DROP-EARED 90 TO BRACKET WITH #270
ACOUSTICAL ISOLATION LINER BEHIND DROP-EARED 90.

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TUB / SHOWER

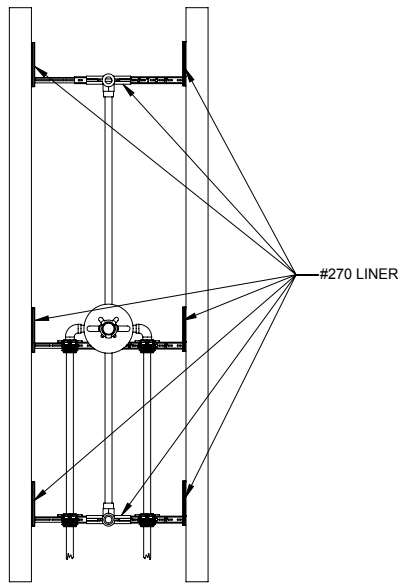
FAUCET AND PIPING SHOWN WITH HOLDRITE #261 ACOUSTICAL ISOLATORS. MOUNTED ON HOLDRITE #SB1S STOUT BRACKETS™. SHOWER HEAD SHOWN WITH DROP EARED 90° MOUNTED ON HOLDRITE #265 SHOWER CLAMP AND STOUT BRACKET.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

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TUB / SHOWER

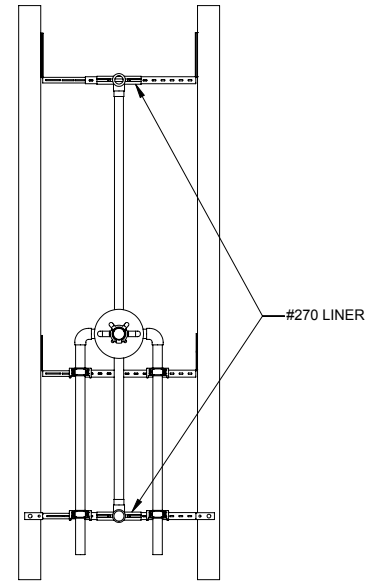
FAUCET AND PIPING SHOWN WITH HOLDRITE® #261 ACOUSTICAL ISOLATORS. MOUNTED ON HOLDRITE STOUT BRACKETS™. SHOWER HEAD AND TUB SPOUT SHOWN WITH DROP EARED 90'S MOUNTED ON HOLDRITE STOUT BRACKETS™ WITH HOLDRITE #270 ACOUSTICAL ISOLATION LINER BEHIND DROP-EARED 90'S AND AT EACH END OF THE STRUT BRACKETS.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

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TUB / SHOWER

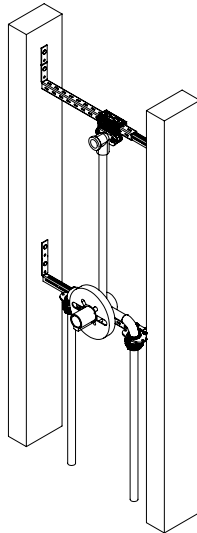
FAUCET AND PIPING SHOWN WITH HOLDRITE® #250 STOUT CLAMPS™ WITH ACOUSTICAL PADS MOUNTED ON HOLDRITE® STOUT BRACKETS™. SHOWER HEAD AND TUB SPOUT SHOWN WITH DROP EARED 90'S MOUNTED ON HOLDRITE® STOUT BRACKETS™ WITH HOLDRITE® #270 ACOUSTICAL SOUND LINERS.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

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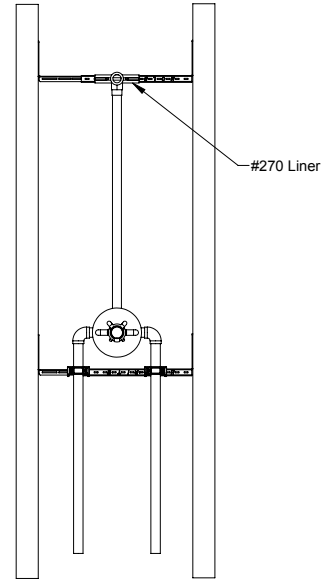
SHOWER

FAUCET AND PIPING SHOWN WITH HOLDRITE #261 ACOUSTICAL ISOLATORS. MOUNTED ON HOLDRITE #SB1S STOUT BRACKETS™. SHOWER HEAD SHOWN WITH DROP EARED 90° MOUNTED ON HOLDRITE #265 SHOWER CLAMP AND STOUT BRACKET.

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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005322-100, RevC (Shower with #261, #265 & SB)



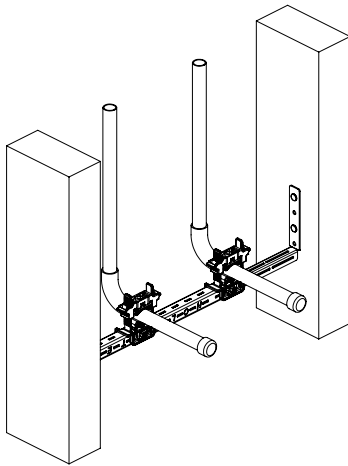
SHOWER

FAUCET AND PIPING SHOWN WITH HOLDRITE® #250 STOUT CLAMPS™ WITH ACOUSTICAL PADS MOUNTED ON HOLDRITE® STOUT BRACKETS™. SHOWER HEAD SHOWN WITH DROP EARED 90°S MOUNTED ON HOLDRITE® STOUT BRACKETS™ WITH HOLDRITE® #270 ACOUSTICAL SOUND LINERS.

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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005076-100, RevE (Shower with #250, #270 & SB)



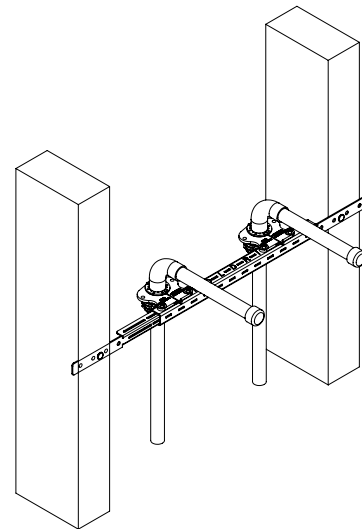
SPA TUB

SHOWN WITH HOLDRITE® #250 STOUT CLAMPS™ WITH ACOUSTICAL PADS MOUNTED ON A HOLDRITE® STOUT BRACKET™. THESE CLAMPS ACCEPT 3/8" THROUGH 1" TUBING.

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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005196-100, RevD (Spa Tub with #250 & SB)



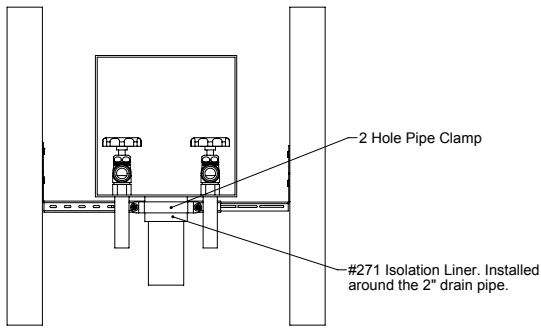
SPA TUB

SHOWN WITH HOLDRITE® #261 ACOUSTICAL ISOLATORS. MOUNTED TO HOLDRITE® #SB1S STOUT BRACKET™.

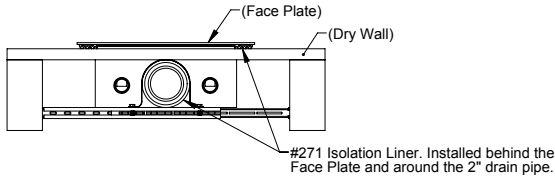
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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005190-100, RevD (Spa Tub with #261 & SB)



SHOWN AT ROUGH-IN STAGE



SHOWN AT FINISH STAGE (bottom view)

LAUNDRY OUTLET BOX

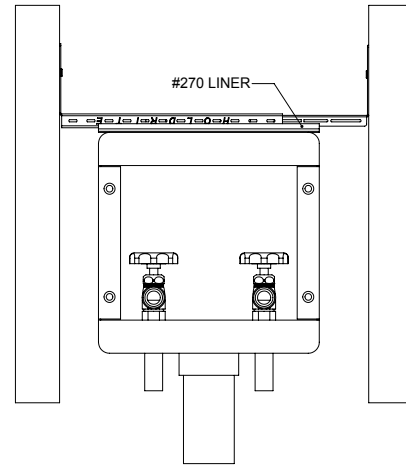
SHOWN WITH HOLDRITE® #SB1S STOUT BRACKET™ WITH #271 ISOLATION LINER.

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LAUNDRY BOX / ICE MAKER

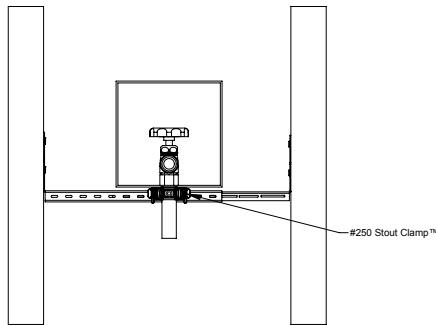
SHOWN WITH HOLDRITE® #SB2S STOUT BRACKET™ WITH #270 ISOLATION LINER.

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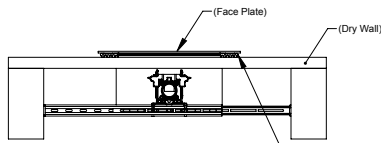


CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005058-100, RevE (Laundry Box / Ice Maker with #SB & #270)



SHOWN AT ROUGH-IN STAGE



SHOWN AT FINISH STAGE (bottom view)

ICE MAKER BOX

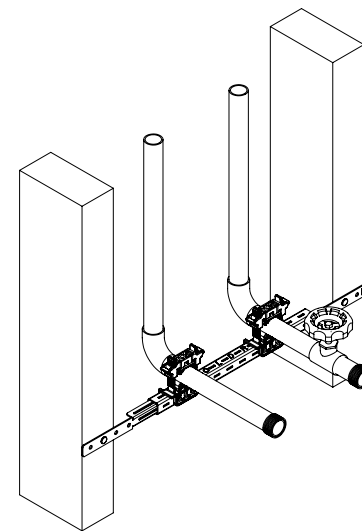
SHOWN WITH HOLDRITE® #250 STOUT CLAMP™, MOUNTED ON HOLDRITE® #SB1S STOUT BRACKET™ WITH #271 ISOLATION LINER.

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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005182-100, RevD (Ice Maker Box with #250 & #271)



HOT WATER TANK

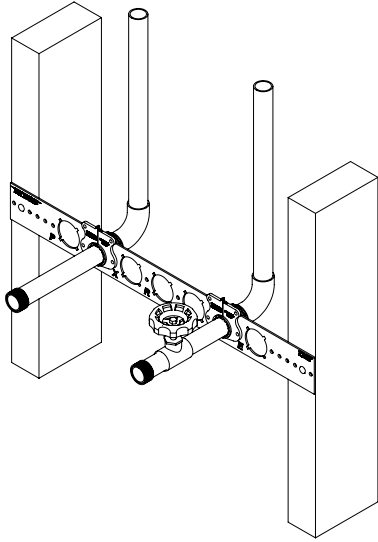
SHOWN WITH HOLDRITE® #250 STOUT CLAMPS™ WITH ACOUSTICAL PADS MOUNTED TO A HOLDRITE® STOUT BRACKET™. THESE CLAMPS ACCEPT 3/8" THROUGH 1" TUBING.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005019-100, RevE (Hot Water Tank with #250 & #SB)



HOT WATER TANK

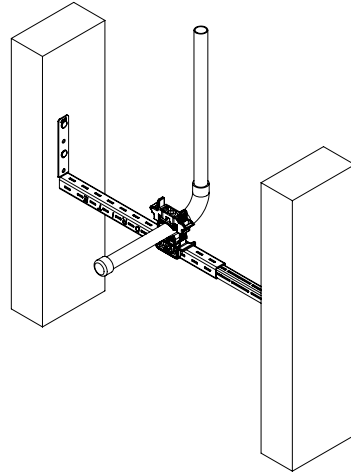
SHOWN WITH HOLDRITE® #262 (3/4") ACOUSTICAL ISOLATOR. MOUNTED ON A HOLDRITE® #103-18 BRACKET.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005065-100, RevE (Hot Water Tank with #262 & #103-18)



TOILET

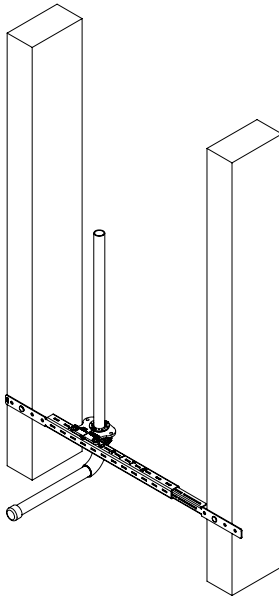
SHOWN WITH HOLDRITE® #250 STOUT CLAMP™ WITH ACOUSTICAL PADS MOUNTED ON A HOLDRITE® STOUT BRACKET™. THIS CLAMP ACCEPTS 3/8" THROUGH 1" TUBING.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005040-100, RevE (Toilet with #250 & SB)



FLOOR MOUNTED FLUSH TANK TOILET

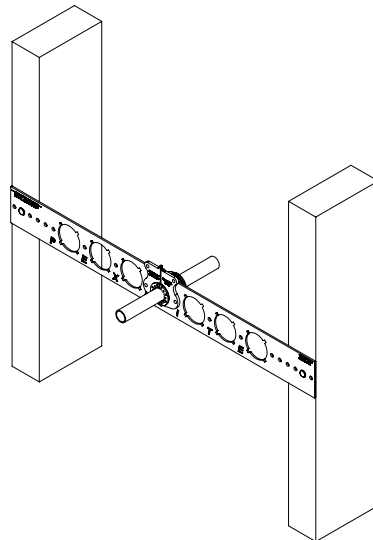
SHOWN WITH HOLDRITE® #261 ACOUSTICAL ISOLATOR. MOUNTED ON HOLDRITE® SB1S STOUT BRACKET™.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005181-100, RevD (Floor Mounted Flush Tank Toilet with #261 & SB)



TOILET

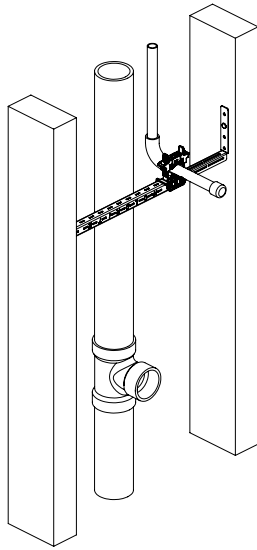
SHOWN WITH HOLDRITE® #261 (1/2") ACOUSTICAL ISOLATOR. MOUNTED ON A HOLDRITE® #103-18 BRACKET.

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005068-100, RevE (Toilet with #261 & #103-18)



URINALS

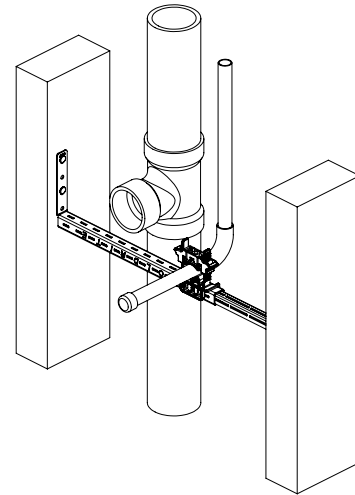
SHOWN WITH HOLDRITE® #250 STOUT CLAMP™ WITH ACOUSTICAL PADS MOUNTED ON A HOLDRITE® STOUT BRACKET™. THIS CLAMP ACCEPTS 3/8" THROUGH 1" TUBING.

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005130-100, RevE (Urinals with #250 & SB)



DRINKING FOUNTAIN / WATER COOLER

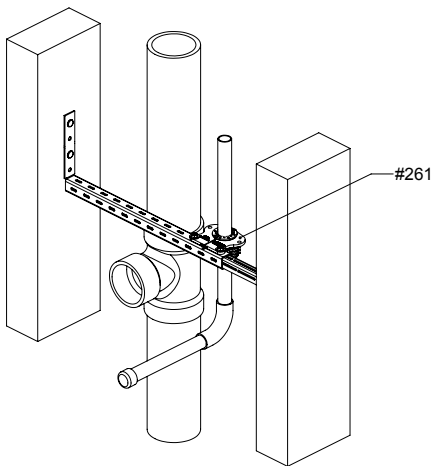
SHOWN WITH HOLDRITE® #250 STOUT CLAMP™ WITH ACOUSTICAL PADS MOUNTED ON A HOLDRITE® STOUT BRACKET™. THIS CLAMP ACCEPTS 3/8" THROUGH 1" TUBING.

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005042-100, RevE (Drinking Fountain / Water Cooler with #250 & SB)



DRINKING FOUNTAIN / WATER COOLER

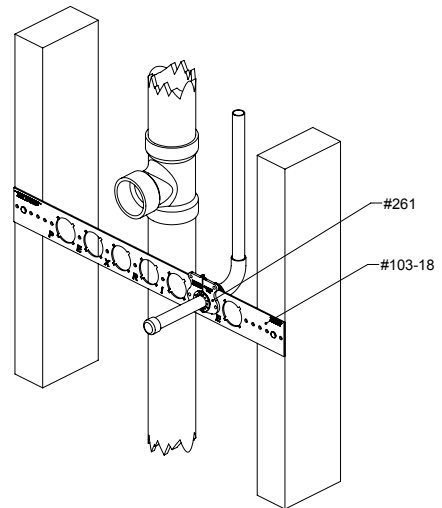
SHOWN WITH HOLDRITE® #261 (1/2") ACOUSTICAL ISOLATOR. MOUNTED ON A HOLDRITE® STOUT BRACKET™.

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005210-100, RevD (Drinking Fountain / Water Cooler with #261 & SB)



DRINKING FOUNTAIN

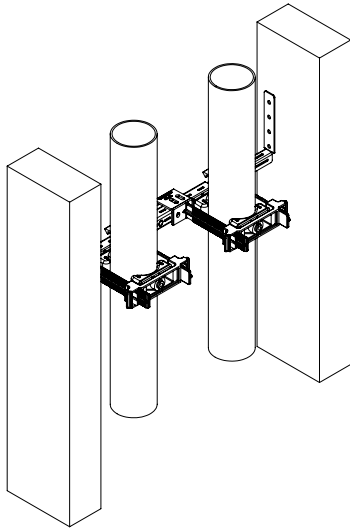
SHOWN WITH HOLDRITE® #261 (1/2") ACOUSTICAL ISOLATOR. MOUNTED ON A HOLDRITE® #103-18 BRACKET. (#103-26 AVAILABLE FOR 24" STUD BAYS)

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005209-100, RevD (Drinking Fountain with #261 & #103-18)



VERTICAL / HORIZONTAL PIPING

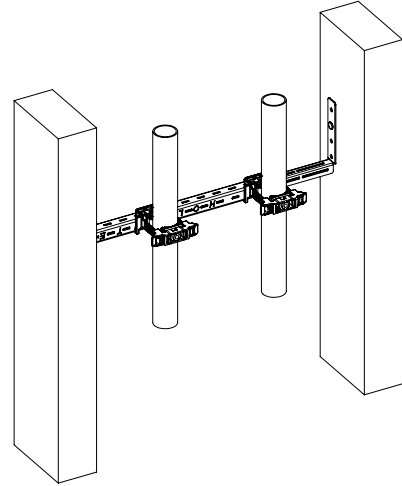
SHOWN WITH HOLDRITE® #280 STOUT CLAMPS™ WITH ACOUSTICAL PADS HOLDING 2" TUBES MOUNTED TO A HOLDRITE® STOUT BRACKET™. THESE CLAMPS ACCEPT 1" CTS THROUGH 2" IPS.

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005022-100, RevF (Vertical / Horizontal with #280 & SB)



VERTICAL / HORIZONTAL PIPING

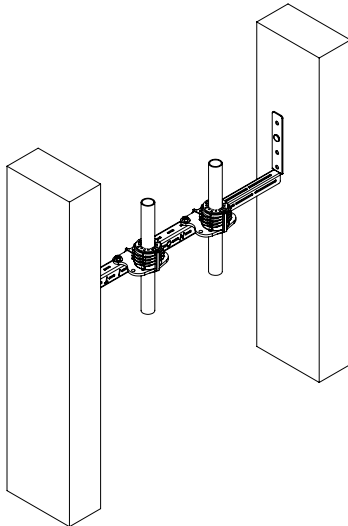
SHOWN WITH HOLDRITE® #250 STOUT CLAMPS™ WITH ACOUSTICAL PADS HOLDING 1" TUBES MOUNTED TO A HOLDRITE® STOUT BRACKET™. THESE CLAMPS ACCEPT 3/8" THROUGH 1" TUBING.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005050-100, RevE (Vertical / Horizontal Piping with #250 & SB)



VERTICAL / HORIZONTAL PIPING

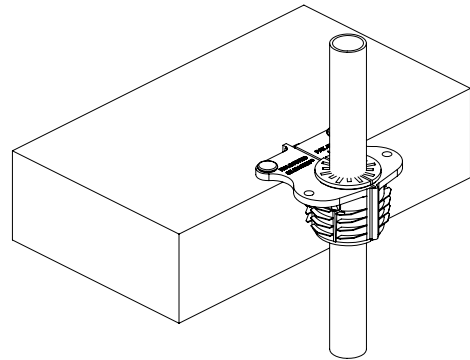
SHOWN WITH HOLDRITE® #261 (1/2") ACOUSTICAL ISOLATORS. MOUNTED ON A HOLDRITE® STOUT BRACKET™. (ALSO AVAILABLE: #262 (3/4"), #263 (1"), & #264 (1-1/4") TUBING)

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005071-100, RevE (Vertical / Horizontal Piping with #261 & SB)



HORIZONTAL / VERTICAL PIPING

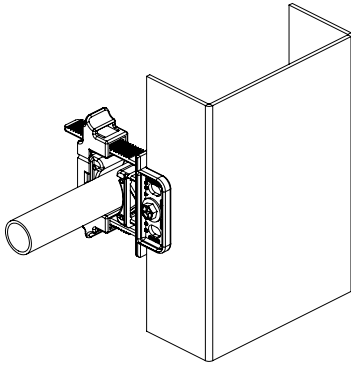
SHOWN WITH HOLDRITE® #261 (1/2") ACOUSTICAL ISOLATOR. (ALSO AVAILABLE: #262 (3/4"), #263 (1") & #264 (1-1/4") TUBE.

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005064-100, RevE (Horizontal / Vertical Piping with #261)



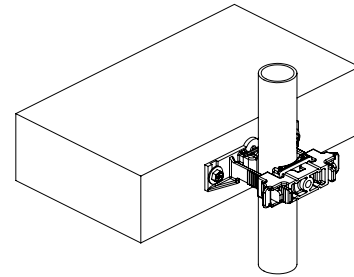
HORIZONTAL / VERTICAL PIPING

SHOWN WITH HOLDRITE® #250 STOUT CLAMP™ WITH ACOUSTICAL PADS.
THIS CLAMP ACCEPTS 3/8" THROUGH 1" TUBING.

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005028-100, RevE (Horizontal / Vertical Piping with #250)



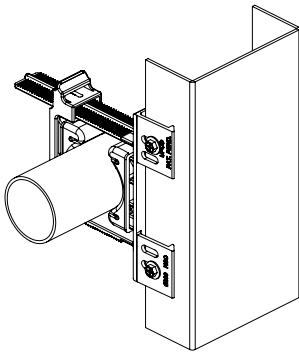
HORIZONTAL / VERTICAL PIPING

SHOWN WITH HOLDRITE® #255 STANDARD CLAMP WITH ACOUSTICAL PADS.
THIS CLAMP ACCEPTS 3/8" THROUGH 1" TUBING.

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005027-100, RevE (Horizontal / Vertical Piping with #255)



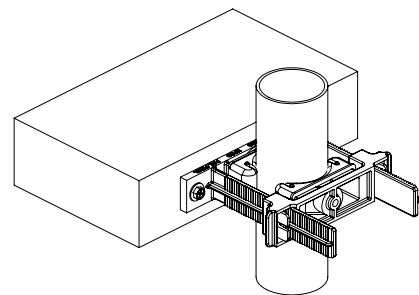
HORIZONTAL / VERTICAL PIPING

SHOWN WITH HOLDRITE® #280 STOUT CLAMP™ WITH ACOUSTICAL PADS HOLDING A 1-1/2" TUBE.
THIS CLAMP ACCEPTS 1" THROUGH 2" TUBING.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM/50-005028-100, RevE (Horizontal / Vertical Piping with #280)



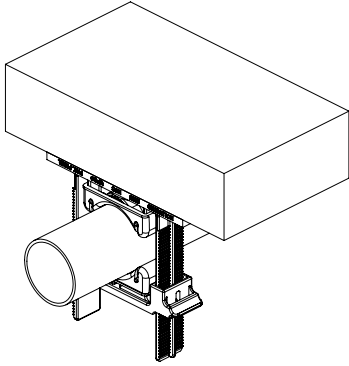
HORIZONTAL / VERTICAL PIPING

SHOWN WITH HOLDRITE® #285 STANDARD CLAMP WITH ACOUSTICAL PADS HOLDING A 1-1/2" TUBE.
THIS CLAMP ACCEPTS 1" THROUGH 2" TUBING

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005026-100, RevE (Horizontal / Vertical Piping with #285)



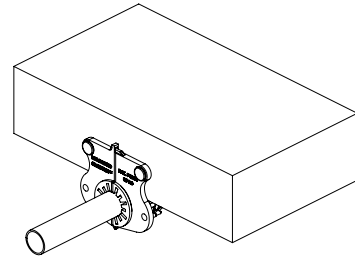
SUSPENDED PIPING

SHOWN WITH HOLDRITE® #285 STANDARD CLAMP WITH ACOUSTICAL PADS WITH A 1-½" TUBE MOUNTED TO A FRAMING MEMBER.
THIS CLAMP ACCEPTS 1" THROUGH 2" TUBING.
(#285-S CLAMP AVAILABLE FOR 25/50 PLENUM RATED APPLICATIONS)

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005024-100, RevE (Suspended Piping with #285)



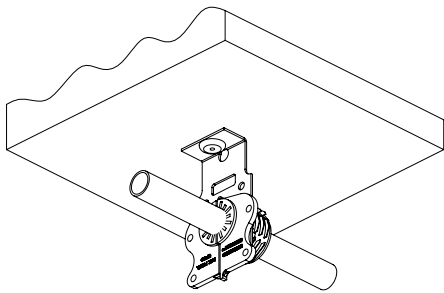
SUSPENDED PIPING

SHOWN WITH HOLDRITE® #261 SUSPENSION CLAMP MOUNTED TO A FRAMING MEMBER.
(ALSO AVAILABLE: #262 (¾"), #263 (1"), & #264 (1-¼") TUBE)

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005025-100, RevE (Suspended Piping with #261)



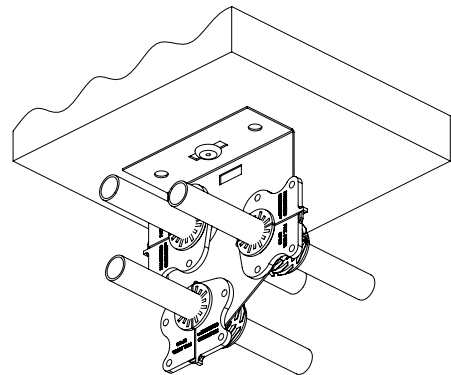
HORIZONTAL OVERHEAD

SHOWN WITH HOLDRITE® #121-W BRACKET.
SUPPORTS ½" THROUGH 1" TUBING.
SHOWN WITH #261 ACOUSTICAL ISOLATOR.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005055-100, RevE (Horizontal Overhead with #121-W & #261)



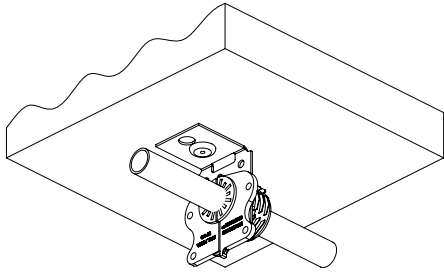
HORIZONTAL OVERHEAD

SHOWN WITH HOLDRITE® #121-O BRACKET.
SUPPORTS ½" THROUGH 1" TUBING.
SHOWN WITH #261 ACOUSTICAL ISOLATORS

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005053-100, RevE (Horizontal Overhead with #121-O & #261)



HORIZONTAL OVERHEAD

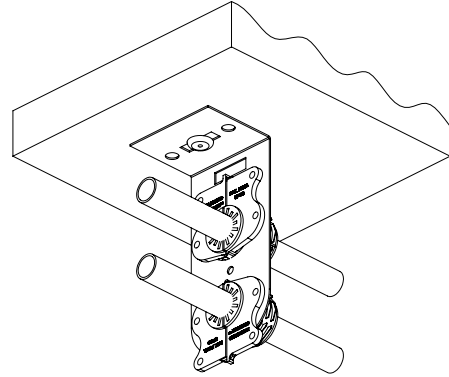
SHOWN WITH HOLDRITE® #121-R BRACKET.
SUPPORTS ½" THROUGH 1" TUBING.
SHOWN WITH #261 ACOUSTICAL ISOLATOR.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005054-100, RevE (Horizontal Overhead with #121-R & #261)



HORIZONTAL OVERHEAD

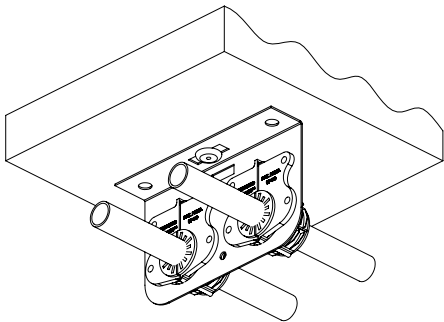
SHOWN WITH HOLDRITE® #121-L BRACKET.
SUPPORTS ½" THROUGH 1" TUBING.
SHOWN WITH #261 ACOUSTICAL ISOLATORS.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005052-100, RevE (Horizontal Overhead with #261 & #121-L)



HORIZONTAL OVERHEAD

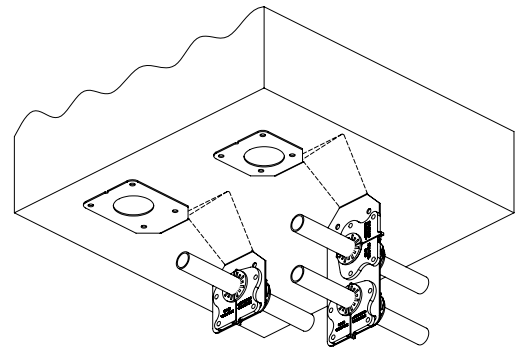
SHOWN WITH HOLDRITE® #121-D BRACKET.
SUPPORTS ½" THROUGH 1" TUBING.
SHOWN WITH #261 ACOUSTICAL ISOLATORS.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005051-100, RevE (Horizontal Overhead with #261 & #121-D)



HORIZONTAL OVERHEAD

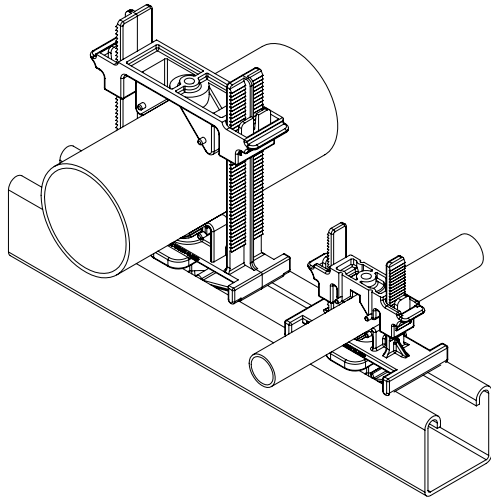
SHOWN WITH HOLDRITE® #125 & #125-L HANGOVER BRACKETS.
IDEAL FOR CAST-IN-PLACE CONCRETE SLABS.
SUPPORTS ½" THROUGH 1" TUBING.
SHOWN WITH #261 ACOUSTICAL ISOLATORS.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005056-100, RevE (Horizontal Overhead with #125, #125-L & #261)



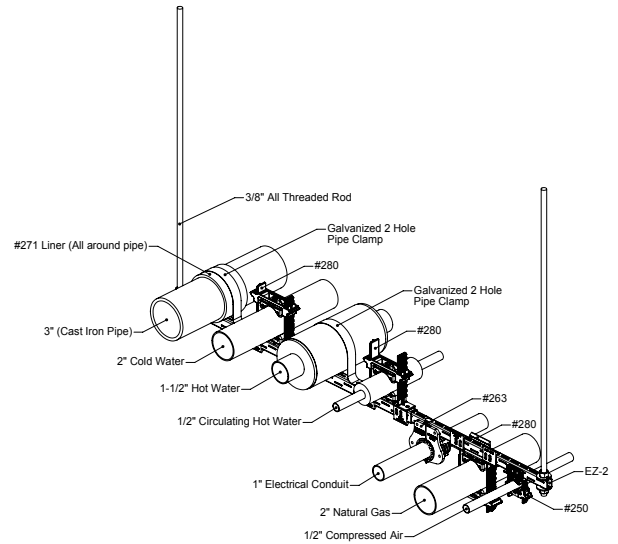
TRAPEZE OR SIMILAR STRUT CLAMP APPLICATIONS

SHOWN WITH HOLDRITE® #257 & #287 STRUT CLAMP.
 HOLDRITE® #257 SUPPORTS 3/8" - 1" CTS.
 HOLDRITE® #287 SUPPORTS 1" - 2" CTS OR IPS.
 (#257-P & #287-P INCLUDES ACOUSTICAL ISOLATION PADS)
 (#257-S & #287-S CLAMPS AVAILABLE FOR 25/50 PLENUM RATED APPLICATIONS)

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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005208-100, RevE (Trapeze or Similar Strut Clamp Application with #257 & #287)



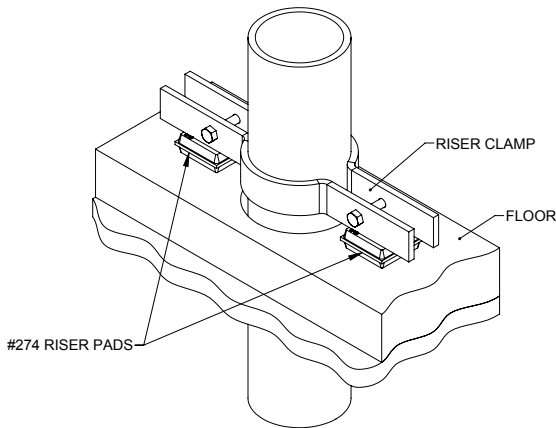
OVERHEAD TRAPEZE PIPING

SHOWN WITH HOLDRITE® EZ-2 ADJUSTIBLE TRAPEZE WITH VARIOUS METHODS OF ACOUSTICAL PIPING PROTECTION.
 (#250-S & #280-S CLAMPS AVAILABLE FOR 25/50 PLENUM RATED APPLICATIONS)

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005020-100, RevF (Overhead Trapeze Piping with EZ-2)



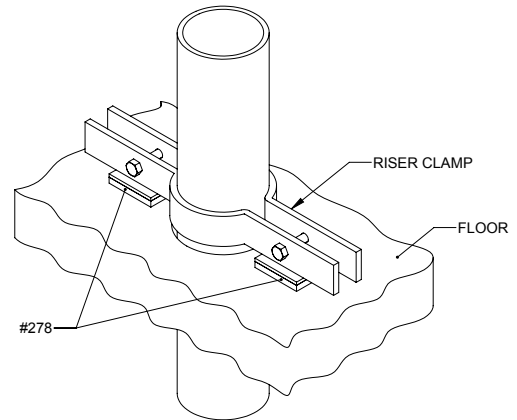
RISER CLAMP ISOLATION

SHOWN WITH HOLDRITE #274 RISER PADS.
 (#275-T AVAILABLE WITH STEEL BEARING PLATE AND VERTICAL RETENTION TABS)

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005308-100, RevD (Riser Clamp Isolation with #274)



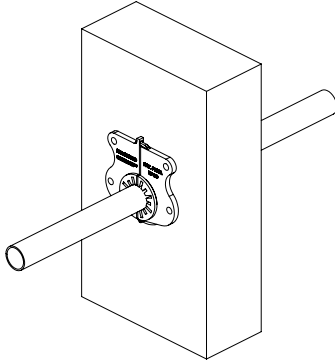
RISER CLAMP ISOLATION

SHOWN WITH HOLDRITE® #278 ISOLATION PADS AND 10 GAGE BEARING PLATES.
 (#276 AVAILABLE WITHOUT BEARING PLATE)

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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005092-100, RevF (Riser Clamp Isolation with #278)



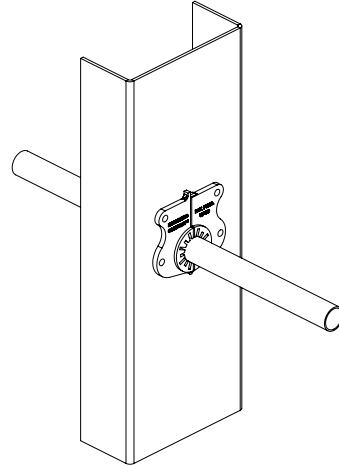
THROUGH WALL STUD OR OTHER WOOD FRAMING MEMBER

SHOWN WITH HOLDRITE® #261 PIPE ISOLATOR IN A 1-3/8" HOLE.
(ALSO AVAILABLE: #262 (3/4"), #263 (1"), & #264 (1-1/4") TUBE)

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005025-100, RevE (Through Wall with #261)



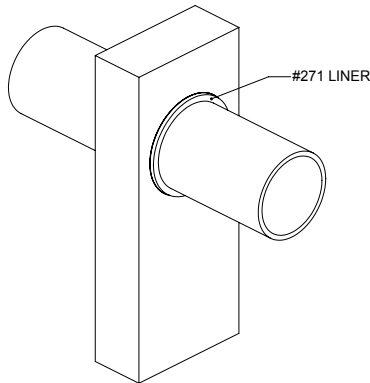
THROUGH WALL STUD OR OTHER METAL FRAMING MEMBER

SHOWN WITH HOLDRITE #261 PIPE ISOLATOR IN A 1-3/8" HOLE.
(ALSO AVAILABLE: #262 (3/4"), #263 (1"), #264 (1-1/4") TUBE).

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005030-100, RevE (Through Wall with #261)



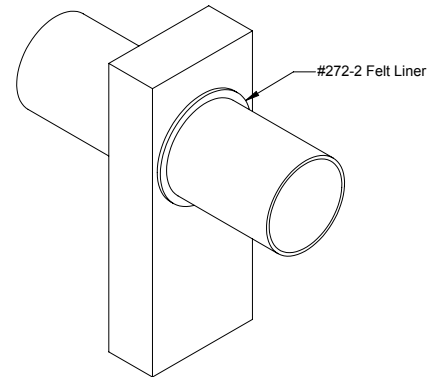
PIPE ISOLATION THROUGH FRAMING MEMBER

SHOWN WITH #271 ISOLATION LINER WITH A 3" PIPE.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005059-100, RevE (Pipe Isolation Through Framing Member with #271)



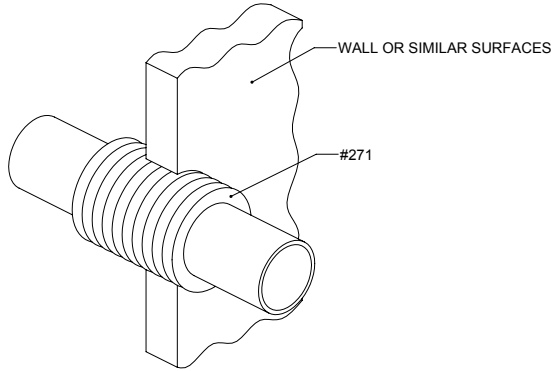
PIPE ISOLATION THROUGH FRAMING MEMBER

SHOWN WITH HOLDRITE #272-2 FELT ISOLATION LINER ON A 3" PIPE.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005314-100, RevC (Pipe Isolation Through Framing Member with #272-2)



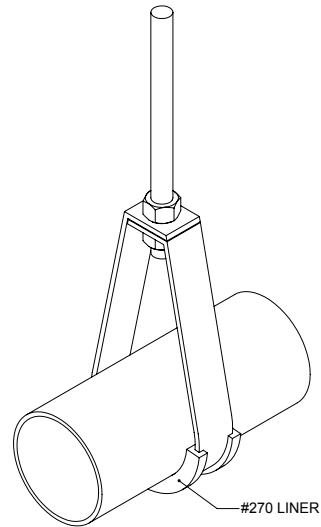
RESILIENT PIPE ISOLATION

SHOWN WITH HOLDRITE® #271 RUBBER ISOLATION LINER.

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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005098-100, RevD (Resilient Pipe Isolation with #271)



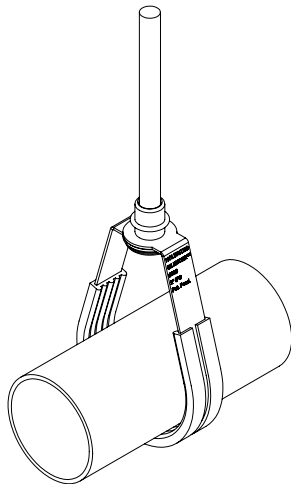
SUSPENDED WASTE, WATER OR OTHER PIPING

SHOWN WITH #270 ISOLATION LINER INSTALLED ONTO A LOOP HANGER WITH A 2" PIPE.

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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005060-100, RevE (Suspended Waste, Water or other Piping with #270)



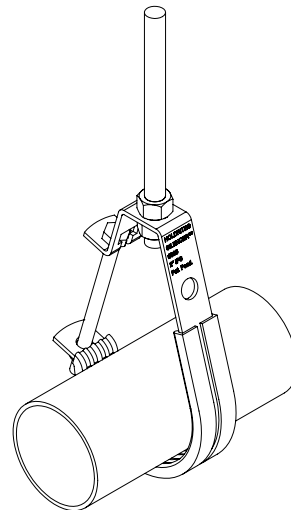
SUSPENDED WASTE, WATER OR OTHER PIPING

THE HOLDRITE SILENCER® ACOUSTICAL ISOLATION LOOP HANGER (#306, 2" SHOWN). THESE HANGERS REDUCE NOISE & VIBRATION WHILE ALSO ISOLATING BETWEEN DISSIMILAR METAL CONTACT. AVAILABLE IN 1/2" - 4" SIZES. (MSS-SP-58 TYPE 10 ADJUSTABLE SWIVEL RING BAND TYPE)

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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005524-100, RevF (Suspended Waste, Water or other Piping with #306)



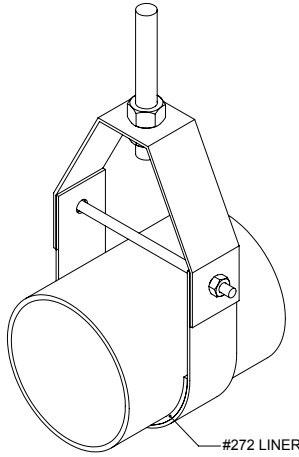
SUSPENDED WASTE, WATER OR OTHER PIPING

THE HOLDRITE SILENCER® ACOUSTICAL ISOLATION J-HANGER (#326, 2" SHOWN). THESE HANGERS REDUCE NOISE & VIBRATION WHILE ALSO ISOLATING BETWEEN DISSIMILAR METAL CONTACT. AVAILABLE IN 1/2" - 4" SIZES. (MSS-SP-58, TYPE 5, PIPE HANGER)

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005525-100, RevF (Suspended Waste, Water or other Piping with #326)



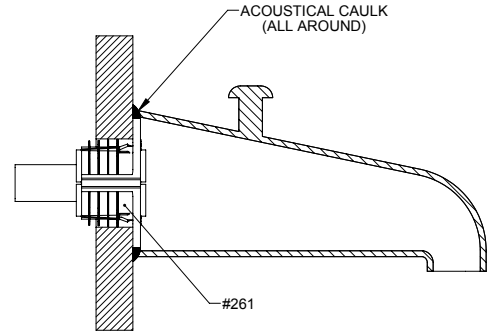
SUSPENDED WASTE, VENT OR OTHER PIPING

SHOWN WITH #272 ISOLATION LINER INSTALLED ON A CLEVIS HANGER WITH A 4" PIPE.

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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005081-100, RevE (Suspended Waste, Vent or other Piping with #272)



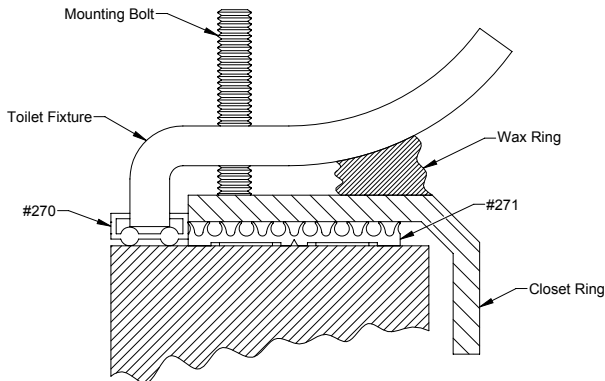
TYPICAL BATH TUB SPOUT

SHOWN WITH HOLDRITE® #261 ISOLATOR.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005101-100, RevE (Typical Bath Tub Spout with #261)



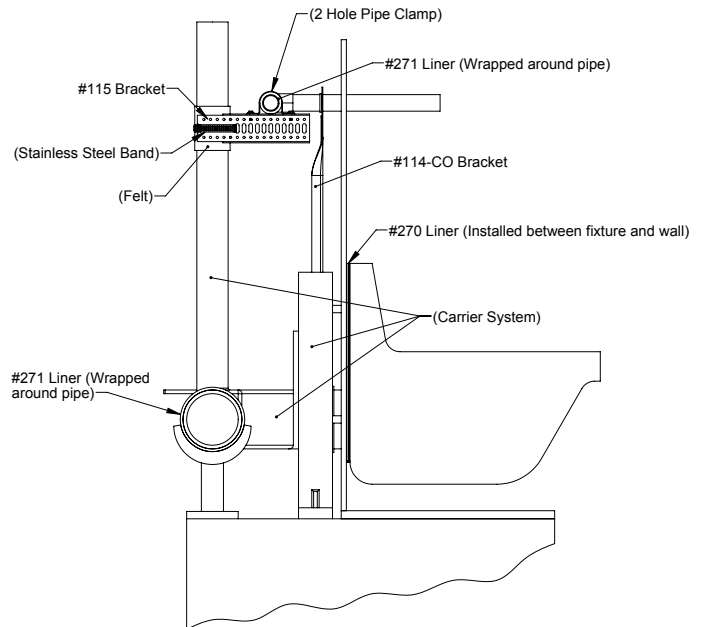
TYPICAL BATHROOM FIXTURE ISOLATION

SHOWN WITH HOLDRITE® #270 & #271 RUBBER ISOLATION LINERS.

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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005099-100, RevE (Typical Bathroom Fixture Isolation with #270 & #271)



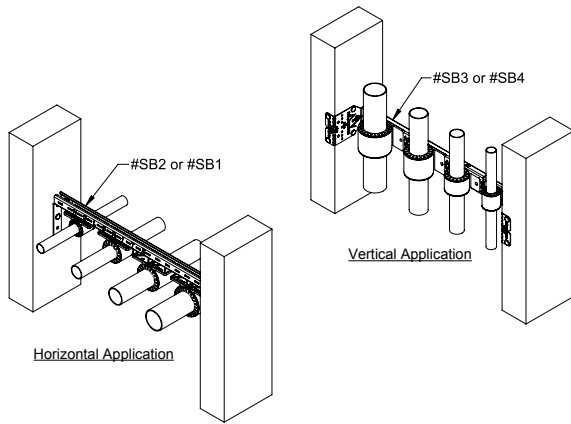
WALL HUNG FIXTURE WITH ACOUSTICAL ISOLATION

SHOWN WITH HOLDRITE® #270 & #271 ISOLATION LINER, #115 BRACKET, & #114-CO BRACKET.

THIS INFORMATION IS PROPRIETARY TO HOLDRITE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT WRITTEN AUTHORIZATION.



CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™
800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM / 50-005186-100, RevD (Wall Hung Fixture with Acoustical Isolation with #114-CO, #115, #270 & #271)



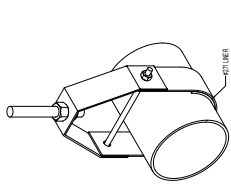
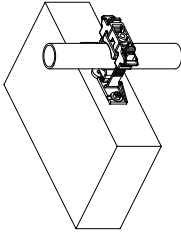
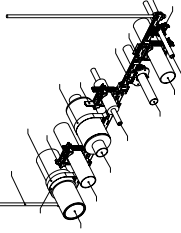
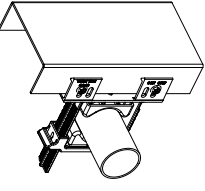
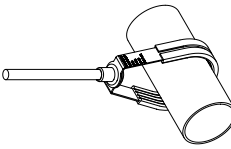
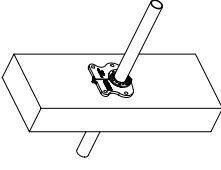
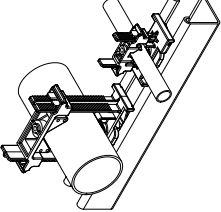
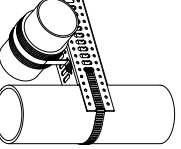
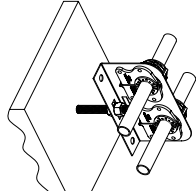
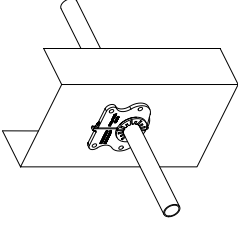
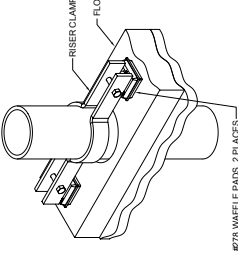
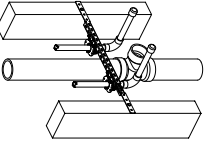
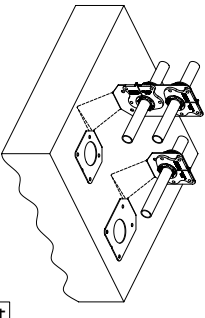
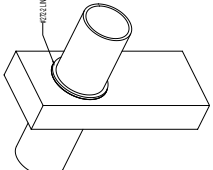
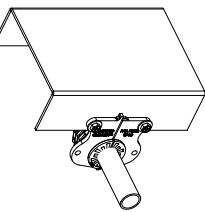
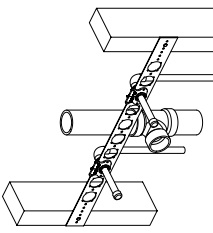
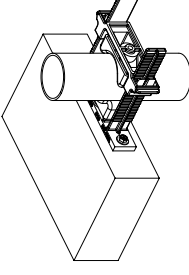
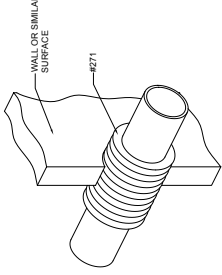
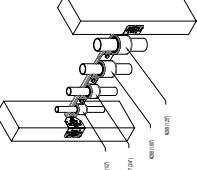
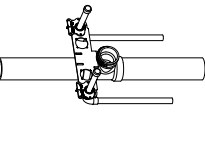
HORIZONTAL / VERTICAL PIPING

SHOWN WITH HOLDRITE® #266 thru #269 ACOUSTICAL CLAMPS.
MOUNTED ON HOLDRITE STOUT BRACKET® #SB2 & #SB3.
CLAMPS SUPPORT 1/2", 3/4", 1" & 1-1/4" CTS TUBE SIZES.

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800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM
50-005645-000, RevA (#266 thru #269#)

<p>1</p>  <p>SUSPENDED WASTE, VENT OR OTHER PIPING SHOWN WITH #271 ISOLATION LINER INSTALLED ON A CLEVIS HANGER WITH A 4" PIPE.</p>	<p>6</p>  <p>HORIZONTAL / VERTICAL PIPING SHOWN WITH #271 ISOLATION PADS HOLDING A 1-1/2" TUBE. THIS CLAMP ACCEPTS 1" THROUGH 2" TUBING.</p>	<p>11</p>  <p>OVERHEAD TRAPEZE PIPING SHOWN WITH HOLDRITE® #271 ADJUSTIBLE TRAPEZE WITH VARIOUS METHODS OF ACOUSTICAL PIPING PROTECTION.</p>	<p>16</p>  <p>HORIZONTAL / VERTICAL PIPING SHOWN WITH HOLDRITE® #271 ADJUSTIBLE TRAPEZE WITH ACOUSTICAL PADS HOLDING A 1-1/2" TUBE. THIS CLAMP ACCEPTS 1" THROUGH 2" TUBING.</p>
<p>2</p>  <p>SUSPENDED WASTE, WATER OR OTHER PIPING HOLDRITE® SILENCER ACOUSTICAL ISOLATION LOOP HANGER #306 (2") SHOWN.</p>	<p>7</p>  <p>THROUGH WALL STUD OR OTHER WOOD FRAMING MEMBER SHOWN WITH HOLDRITE® #271 ACOUSTICAL ISOLATOR (A-1) 3/8" HOLE (P-1) AVAILABLE #271, #271 (1"), & #271 (1-1/2" TUBE).</p>	<p>12</p>  <p>TRAPEZE OR SIMILAR STRUT CLAMP APPLICATIONS SHOWN WITH HOLDRITE® #271 ADJUSTIBLE TRAPEZE WITH ACOUSTICAL PADS HOLDING A 1-1/2" TUBE. THIS CLAMP ACCEPTS 1" THROUGH 2" TUBING.</p>	<p>17</p>  <p>HORIZONTAL / VERTICAL PIPING SHOWN WITH HOLDRITE® #271 CALVANIZED STEEL BRACKET. USING HOLDRITE® #271 SILENCER™ INNER TO WRAP AROUND THE PIPE TO REDUCE NOISE STRAP TO THE BRACKET. FELT GREAT FOR FREE AB.</p>
<p>3</p>  <p>SUSPENDED HORIZONTAL OVERHEAD SHOWN WITH HOLDRITE® #271 HANGOVER BRACKET. USING HOLDRITE® #271 SILENCER™ INNER TO WRAP AROUND THE PIPE TO REDUCE NOISE STRAP TO THE BRACKET. FELT GREAT FOR FREE AB.</p>	<p>8</p>  <p>THROUGH WALL STUD OR OTHER FRAMING MEMBER SHOWN WITH HOLDRITE® #271 PIPE ISOLATOR (A-1) 3/8" HOLE. (ALSO AVAILABLE: #271 (1"), #271 (1-1/2" TUBE), & #271 (1-1/2" TUBE).</p>	<p>13</p>  <p>RISE CLAMP ISOLATION SHOWN WITH HOLDRITE® #271 RISER PADS. (ALSO AVAILABLE: #271 (1"), #271 (1-1/2" TUBE), & #271 (1-1/2" TUBE).</p>	<p>18</p>  <p>LAVATORY OR SINK Shown with Holdrite #271 Acoustical Isolator mounted to Holdrite #271's Short Bracket.</p>
<p>4</p>  <p>HORIZONTAL OVERHEAD SHOWN WITH HOLDRITE® #271 HANGOVER BRACKET. USING HOLDRITE® #271 SILENCER™ INNER TO WRAP AROUND THE PIPE TO REDUCE NOISE STRAP TO THE BRACKET. FELT GREAT FOR FREE AB.</p>	<p>9</p>  <p>PIPE ISOLATION THROUGH FRAMING MEMBER SHOWN WITH #272 ISOLATION LINER WITH A 3" PIPE.</p>	<p>14</p>  <p>HORIZONTAL / VERTICAL PIPING Shown with Holdrite #271 Acoustical Isolator (Also Available #271 (1"), #271 (1-1/2" TUBE), & #271 (1-1/2" TUBE).</p>	<p>19</p>  <p>LAVATORY OR SINK SHOWN WITH HOLDRITE® #103-26 WITH TWO #271 ACOUSTIC (ALSO AVAILABLE FOR 1" STUD BAY #103-19)</p>
<p>5</p>  <p>HORIZONTAL / VERTICAL PIPING SHOWN WITH HOLDRITE® #271 STANDARD CLAMP WITH ACOUSTICAL PADS HOLDING A 1-1/2" TUBE. THIS CLAMP ACCEPTS 1" THROUGH 2" TUBING.</p>	<p>10</p>  <p>RESILIENT PIPE ISOLATION SHOWN WITH #271 ISOLATION LINER WITH A 3" PIPE.</p>	<p>15</p>  <p>HORIZONTAL / VERTICAL PIPING Shown with Holdrite #271 Acoustical Isolator (Also Available #271 (1"), #271 (1-1/2" TUBE), & #271 (1-1/2" TUBE).</p>	<p>20</p>  <p>LAVATORY OR SINK Shown with Holdrite #103-26 Bracket and #271 Acoustical Isolator (Insets Available for 1/2" through 1 1/2")</p>

HOLDRITE®
CONVERTING MAKE-SHIFT METHODS INTO ENGINEERED SOLUTIONS™
Ph: 800-321-0316
Fax: 760-705-1247
www.holdrite.com

HOLDRITE® SILENCER™ SYSTEM
EZ-STRAUT™
PEXRITE™
LOGKRITE™
TESTRITE™
QUICKSTRAP®

Revision:

Acoustical Applications
Job Name:
Sheet Title: HOLDRITE® Installation Details
Date: Sept. 18, 2015
Scale: None
Drawn: Michael McRae
Job #:
Sheet #:
THE SMALL LOGO CONTAINED ON THIS SILENCER IS THE PROPERTY OF PETERSON INTERNATIONAL. THE SILENCER IS A REGISTERED TRADEMARK OF PETERSON INTERNATIONAL. ALL RIGHTS RESERVED.

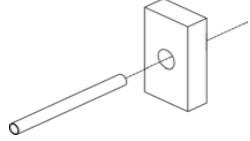
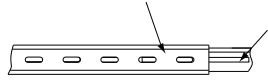
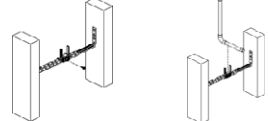
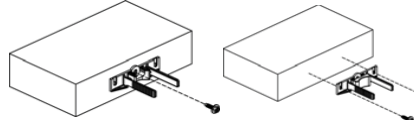
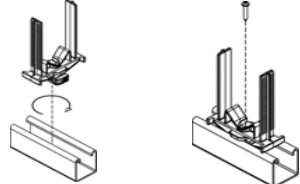
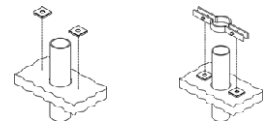
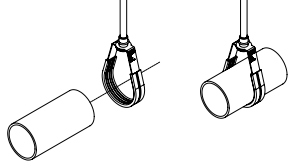


INSTALLATION INSTRUCTIONS

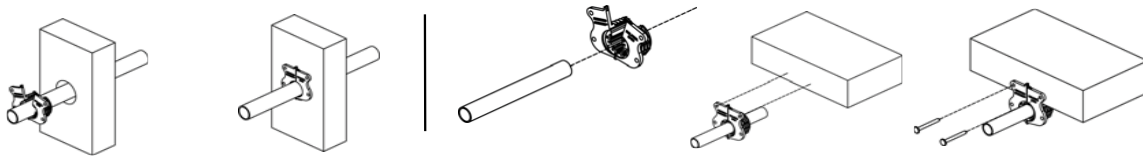
Hundreds of millions of HOLDRITE products have been installed into a wide variety of construction projects, including single- and multi-family residential, healthcare, institutional, hotel, university, and many other sectors such as service and repair and tenant improvement. By understanding both the large-project perspective and the requirements of specific applications, HOLDRITE has developed solutions essential in creating “shop standards” for the collaborative efforts of developers, architects, engineers, and contractors.



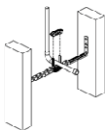
HOLDRITE® Silencer™ (Acoustical Product Installation Instructions)

<p>THROUGH-STUD ISOLATORS / SUSPENSION CLAMPS</p>	<p>#261 (1/2"CTS), #262 (3/4"CTS), #</p>
<p>When used as a "Through-Stud Isolator"</p> <ol style="list-style-type: none"> 1) Install tubing through hole in framing member. 2) Open clamp and install over tubing. 3) Align pipe through center of clamp so it does not come in direct contact stud or plastic clamp shell. 4) Close clamp and slide fully into hole. 	
<p>SHOWER HEAD, or SIMILAR, ISOLATION CLAMP</p>	
<ol style="list-style-type: none"> 1) Wrap #265 clamp around thick end of HOLDRITE S TOUT BRACKET 2) Make sure the side labeled "FRONT" is facing the front (toward Tub/Shower) 3) Attach shower head 90° fitting onto #265 clamp w/2 screws (provided) 	
<p>STOUT CLAMP</p>	<p>#250 (3/8"-1"CTS), #280 (1"-2"CTS)</p>
<ol style="list-style-type: none"> 1) Wrap #265 clamp around thick end of HOLDRITE S TOUT BRACKET 2) Place tubing onto base of clamp, with rubber isolator in place. 3) Push top of clamp over two posts on base of clamp. (Only hand tight) 	
<p>STANDARD CLAMPS (Variable size)</p>	<p>#255 (3/8"-1"CTS), #285 (1"-2"CTS)</p>
<ol style="list-style-type: none"> 1) Secure base of clamp to framing or other flat surface w/ one screw, or 2) Optional: Insert two (2) screws through end tabs. 3) Place tubing onto base of clamp, with rubber isolator in place. 4) Push top of clamp over two posts on base of clamp. (Only hand tight) 	
<p>STRUT CLAMPS (Variable size)</p>	<p>#257-P (3/8"-1"CTS), #287-P (1"-2"CTS)</p>
<ol style="list-style-type: none"> 1) Insert base of clamp into strut/channel, twist 90° clockwise. 2) Optional: To increase grip, insert screw (provided) thru base of clamp. 3) Place tubing onto base of clamp, with rubber isolator in place. 4) Push top of clamp over two posts on base of clamp. (Only hand tight) 5) For 266-269, simply wrap clamp around pipe and with 2 screws. 	
<p>RISER CLAMP PAD</p>	
<ol style="list-style-type: none"> 1) Put isolation pad in position for riser clamp or leg of equipment. 2) Install riser clamp or equipment leg on top of isolation pad. 	
<p>ACOUSTICAL INSULATION LINER</p>	<p>#270, #271, Felt #100</p>
<ol style="list-style-type: none"> 1) Cut to desired length, sufficient to isolate piping from hanger or building surface. 2) Place isolation liner onto framing, bracket, hanger, etc. 3) Install piping into hanger or next to isolated surface. 	

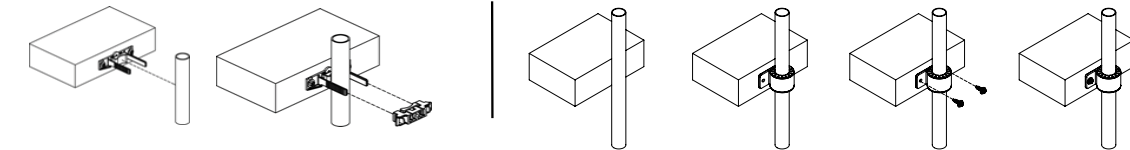
#263 (1"CTS), #264 (1-1/4"CTS)



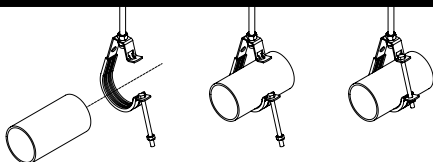
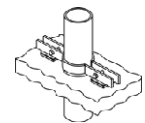
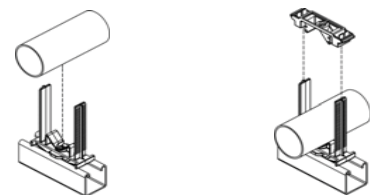
1/2"IPS)



1/2"IPS) or #266 - #269 1/2" - 1 1/4"



1/2"CTS/IPS)



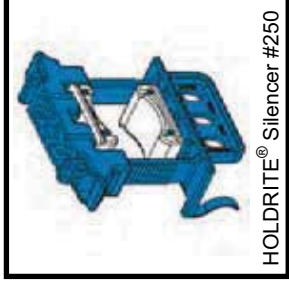
HOLDRITE® is the only manufacturer of acoustical plumbing solutions to retain an independent 3rd party to conduct ISO-3822 acoustical testing to compare relative noise level isolation performance of the HOLDRITE® Silencer™ System. Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80Hz to 10,000Hz

Test Data





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



HOLDRITE® Silencer #250

TEST: Noise and Vibration Isolation

APPLICATION TESTED: Fixture Stub-out Support

TEST RESULTS:

Date: 8/23/2006

Test 1: HOLDRITE® Silencer™ #250 on HOLDRITE Stout Bracket®

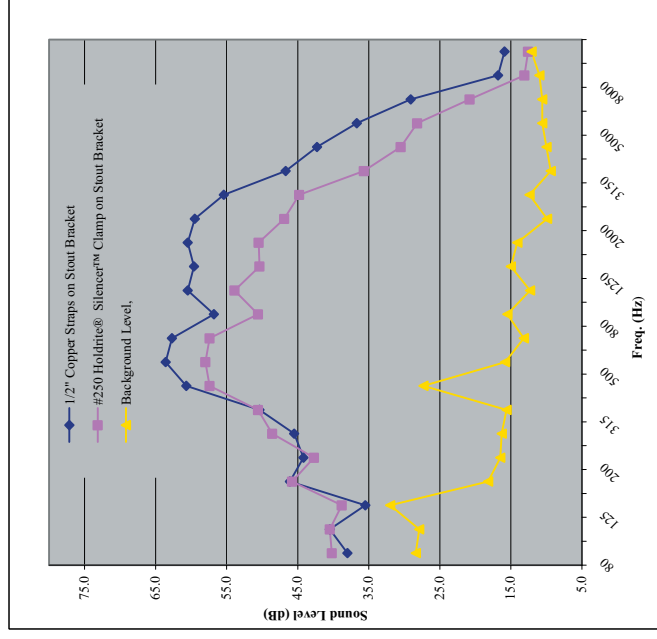
Test 2: 1/2" Copper Tube Strap on HOLDRITE Stout Bracket®

Pipe Size: 1/2" Copper tubing

Wall Type: 2 x 4 Wood stud

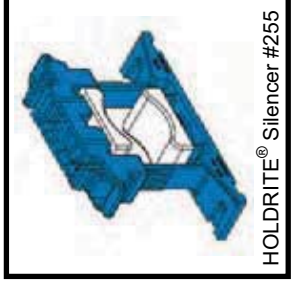
- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 µbar)		
	Background Level, Leq (dB)	#250 Holdrite® Silencer™ Clamp on Stout Bracket Leq (dB)	Copper Straps on Stout Bracket Leq (dB)
80	28.4	40.2	38.0
100	27.9	40.5	40.5
125	32.0	38.8	35.5
160	18.2	45.8	46.1
200	16.5	42.7	44.2
250	16.3	48.6	45.5
315	15.6	50.6	50.4
400	27.3	57.4	60.7
500	15.8	58.0	63.6
630	13.2	57.4	62.7
800	15.5	50.6	56.8
1000	12.3	53.9	60.5
1250	15.0	50.4	59.6
1600	14.1	50.5	60.5
2000	9.9	46.9	59.5
2500	12.4	44.8	55.4
3150	9.4	35.7	46.7
4000	10.0	30.5	42.3
5000	10.6	28.2	36.7
6300	10.6	20.8	29.1
8000	11.0	13.1	16.8
10000	12.1	12.6	15.9
dBA	26.8	61.8	69.1





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



HOLDRITE® Silencer #255

TEST: Noise and Vibration Isolation

APPLICATION TESTED: Fixture Stub-out Supports

TEST RESULTS:

Date: 8/22/2006

Test 1: HOLDRITE® Silencer™ #255

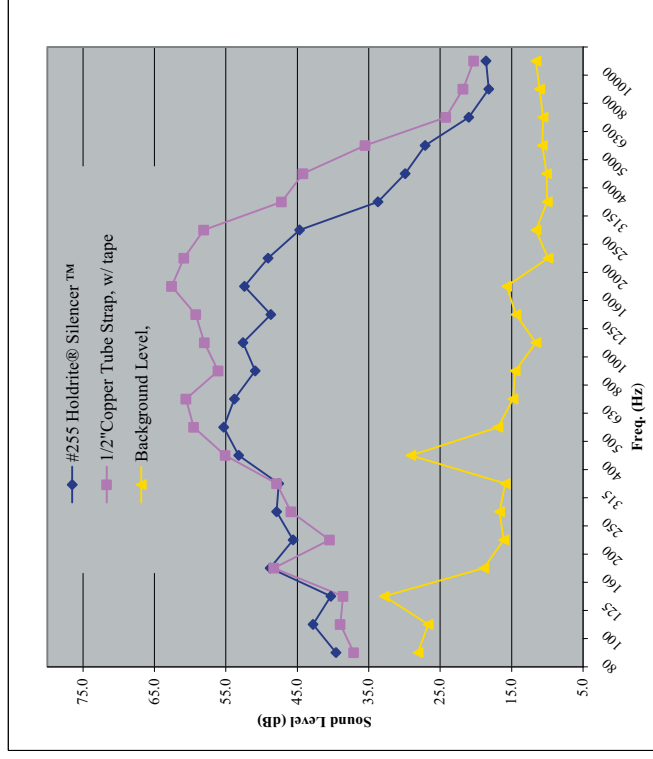
Test 2: 1/2" Copper Tube Strap

Pipe Size: 1/2" Copper tubing

Wall Type: 2 x 6 Steel stud

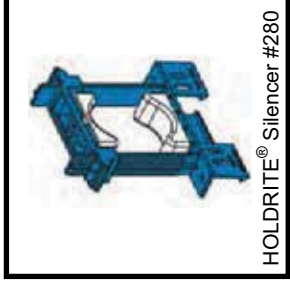
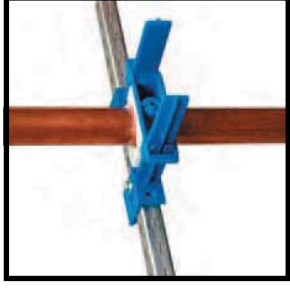
- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 µbar)	
	Background Level, L _{eq} (dB)	#255 Holdrite® Silencer™ L _{eq} (dB)
80	28.1	37.1
100	26.7	39.0
125	32.8	38.6
160	18.9	48.3
200	16.1	40.5
250	16.7	45.9
315	15.9	47.9
400	29.1	55.1
500	16.9	59.5
630	14.8	60.6
800	14.5	56.1
1000	11.6	58.0
1250	14.4	59.2
1600	15.7	62.6
2000	9.9	60.9
2500	11.6	58.1
3150	10.0	47.2
4000	10.1	44.2
5000	10.7	35.5
6300	10.6	24.2
8000	11.1	21.8
10000	11.6	20.3
dBA	27.7	68.9
		60.4





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



TEST: Noise and Vibration Isolation

APPLICATION TESTED: Vertical, mid-span tubing support

TEST RESULTS:

Date: 8/23/2006

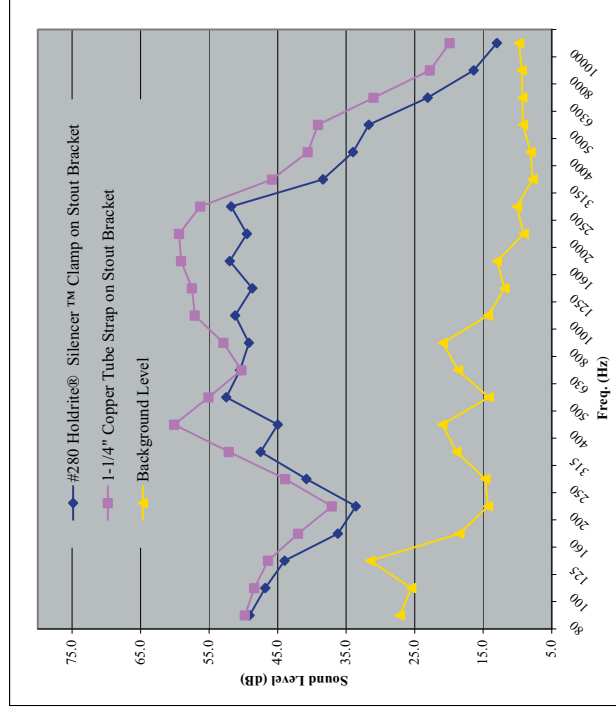
Test 1: HOLDRITE® Silencer™ #280 on HOLDRITE Stout Bracket®

Test 2: 1-1/4" Copper Tube Strap on HOLDRITE Stout Bracket®

Pipe Size: 1-1/4" Copper tubing
Wall Type: 2 x 6 Steel stud

- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 µbar)	
	Background Level L _{eq} (dB)	#280 Holdrite® Silencer™ Clamp on Stout Bracket L _{eq} (dB)
80	27.2	49.1
100	25.5	46.8
125	31.5	46.4
160	18.5	42.0
200	14.3	37.1
250	14.7	43.9
315	18.9	52.1
400	21.0	60.1
500	14.2	55.1
630	18.7	50.3
800	20.9	52.9
1000	14.3	57.1
1250	11.9	57.5
1600	13.0	59.1
2000	9.1	59.4
2500	10.1	56.3
3150	7.8	45.8
4000	8.1	40.6
5000	9.2	39.1
6300	9.3	31.0
8000	9.4	22.8
10000	9.8	19.9
dBA	26.0	66.6





TEST: Noise and Vibration Isolation

APPLICATION TESTED: Tubing Stub-out Supports

TEST RESULTS:

Date: 8/22/2006

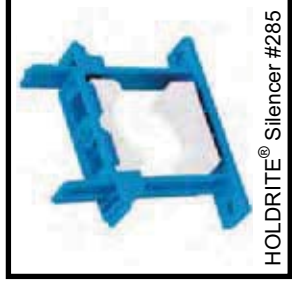
Test 1: HOLDRITE® Silencer™ #285

Test 2: 2" Copper Tube Strap

Pipe Size: 2" Copper tubing

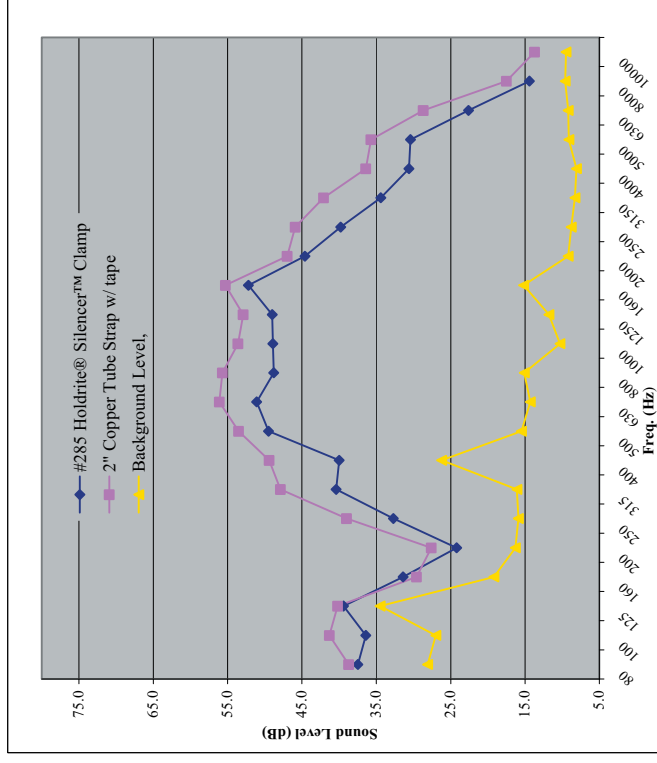
Wall Type: 2 x 6 Steel stud

Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



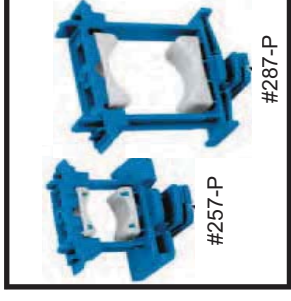
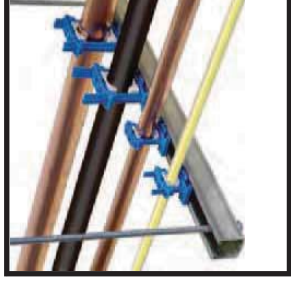
- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re 0.0002 µbar)	
	Background Level, L_{eq} (dB)	#285 Holdrite® Silencer™ Clamp 2" Copper Tube Strap w/ tape L_{eq} (dB)
80	28.1	37.5
100	27.0	36.4
125	34.5	39.4
160	19.2	31.4
200	16.3	24.2
250	15.9	32.7
315	16.1	40.4
400	26.2	40.0
500	15.5	49.5
630	14.3	51.1
800	15.1	48.8
1000	10.3	48.9
1250	11.8	49.0
1600	15.2	52.2
2000	9.2	44.6
2500	8.8	39.8
3150	8.3	34.4
4000	8.1	30.6
5000	9.1	30.4
6300	9.2	22.6
8000	9.6	14.4
10000	9.5	13.0
dBA	26.2	62.2
		57.8





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



TEST: Noise and Vibration Isolation

APPLICATION TESTED: Pipe Supported on Steel Strut Platform

TEST RESULTS:

Date: 8/22/2006

Test 1: HOLDRITE® Silencer™ #257-P

Test 2: HOLDRITE® Silencer™ #287-P

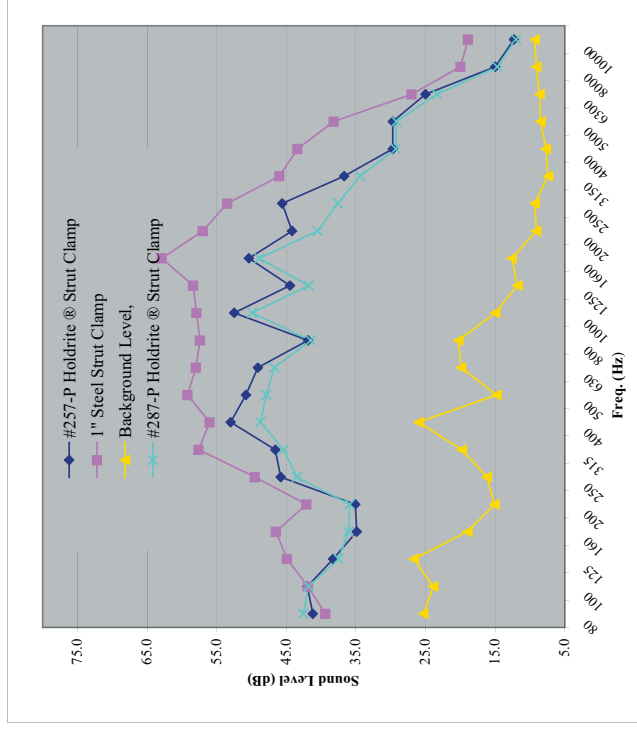
Test 3: 1" Steel Strut Clamp on 14-ga. UniStrut

Pipe Size: 1" Copper tubing

Wall Type: 2 x 6 Steel stud

- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re 0.0002 µbar)			
	Background Level, L_{eq} (dB)	1" Steel Strut Clamp, L_{eq} (dB)	#257-P Holdrite® Strut Clamp, L_{eq} (dB)	#287-P Holdrite® Strut Clamp, L_{eq} (dB)
80	25.3	39.4	41.2	42.6
100	23.9	41.9	42.0	41.8
125	26.7	44.9	38.3	37.5
160	19.0	46.5	34.9	36.1
200	15.1	42.1	35.1	35.9
250	16.2	49.5	45.8	43.5
315	19.8	57.6	46.6	45.4
400	26.0	56.0	53.0	48.7
500	14.8	59.2	50.8	47.9
630	19.9	58.0	49.1	46.7
800	20.3	57.4	41.9	41.5
1000	15.0	57.9	52.5	49.9
1250	11.8	58.4	44.5	41.8
1600	12.6	62.9	50.4	48.9
2000	9.1	57.0	44.2	40.5
2500	9.3	53.5	45.6	37.6
3150	7.4	46.0	36.7	34.4
4000	7.7	43.4	29.7	29.3
5000	8.5	38.2	29.7	29.2
6300	8.6	27.0	25.0	23.4
8000	9.1	20.0	15.0	14.7
10000	9.3	18.9	12.3	12.0
dBA	26.7	67.9	57.9	55.2





HOLDRITE
CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONS™

Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



TEST: Noise and Vibration Isolation

APPLICATION TESTED: Thru-Stud Penetrations

TEST RESULTS:

Date: 8/16/2006

Test 1: HOLDRITE® Silencer™ #261

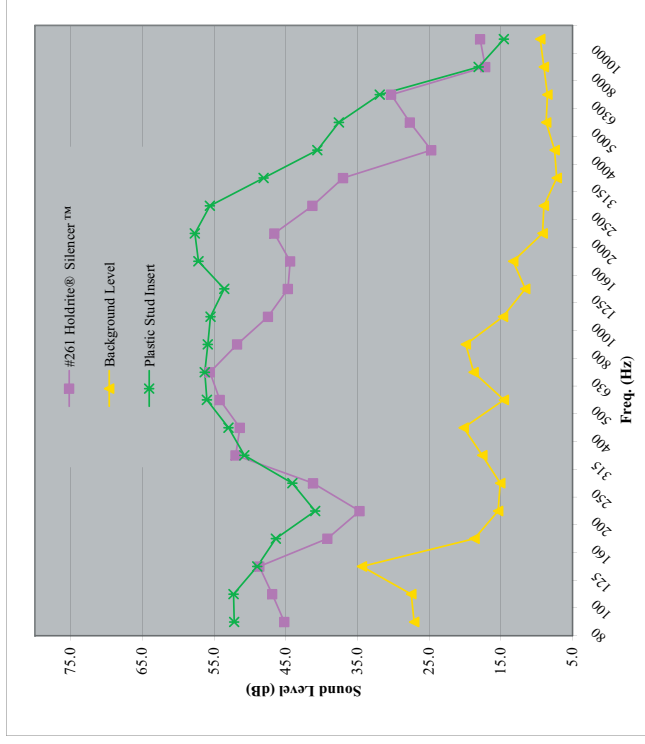
Test 2: Plastic Stud Insert

Pipe Size: 1/2" Copper tubing

Wall Type: 2 x 4 Steel stud

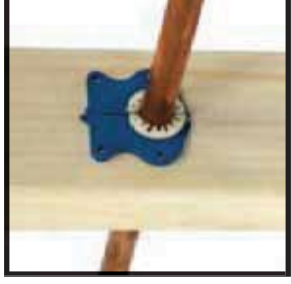
- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 µbar)		
	Background Level L _{eq} (dB)	#261 Holdrite® Silencer™ L _{eq} (dB)	Plastic Stud Insert L _{eq} (dB)
80	27.1	45.2	52.2
100	27.5	46.9	52.3
125	34.4	48.7	49.0
160	18.7	39.2	46.4
200	15.4	34.7	40.9
250	15.1	41.2	44.1
315	17.6	52.0	50.8
400	20.2	51.4	53.0
500	14.6	54.2	56.0
630	18.8	55.6	56.3
800	19.9	51.8	55.9
1000	14.7	47.5	55.5
1250	11.6	44.7	53.6
1600	13.3	44.4	57.2
2000	9.2	46.6	57.7
2500	9.0	41.3	55.6
3150	7.2	37.0	48.1
4000	7.5	24.7	40.6
5000	8.7	27.7	37.6
6300	8.5	30.3	31.9
8000	9.0	17.2	18.1
10000	9.5	17.9	14.6
dBA	26.0	58.7	65.3





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



HOLDRITE® Silencer #261

TEST: Noise and Vibration Isolation

APPLICATION TESTED: Thru-Stud Penetrations

TEST RESULTS:

Date: 8/8/2006

Test 1: HOLDRITE® Silencer™ #261

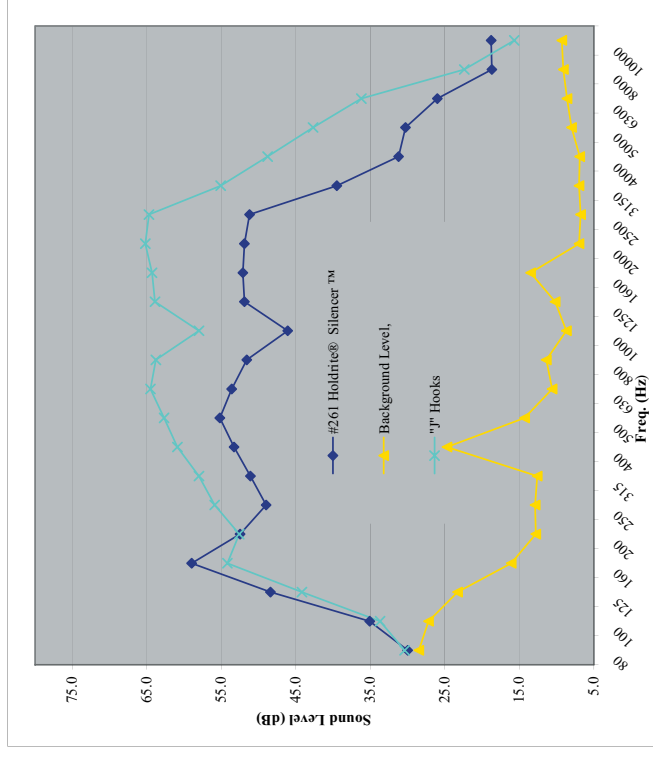
Test 2: Copper-plated “J” Hook

Pipe Size: 1/2” Copper tubing

Wall Type: 2 x 4 Wood stud

- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

Sound Level, dB (re. 0.0002 µbar)			
1/3 Octave Freq (Hz)	Background Level, L _{eq} (dB)	#261 Holdrite® Silencer™ L _{eq} (dB)	“J” Hooks L _{eq} (dB)
80	28.5	30.0	30.4
100	27.2	35.1	33.7
125	23.3	48.4	44.2
160	16.1	59.0	54.2
200	12.8	52.5	52.6
250	12.9	49.0	55.9
315	12.6	51.1	58.0
400	24.7	53.3	60.9
500	14.3	55.2	62.7
630	10.6	53.6	64.5
800	11.4	51.6	63.8
1000	8.7	46.1	58.0
1250	10.2	51.9	63.9
1600	13.5	52.1	64.3
2000	7.0	51.9	65.2
2500	6.8	51.2	64.7
3150	7.0	39.5	55.1
4000	6.9	31.2	48.8
5000	8.0	30.3	42.7
6300	8.6	26.0	36.2
8000	9.1	18.7	22.4
10000	9.3	18.8	15.7
dBA	23.8	61.3	73.0





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



TEST: Noise and Vibration Isolation

APPLICATION TESTED: Thru-Stud Penetrations

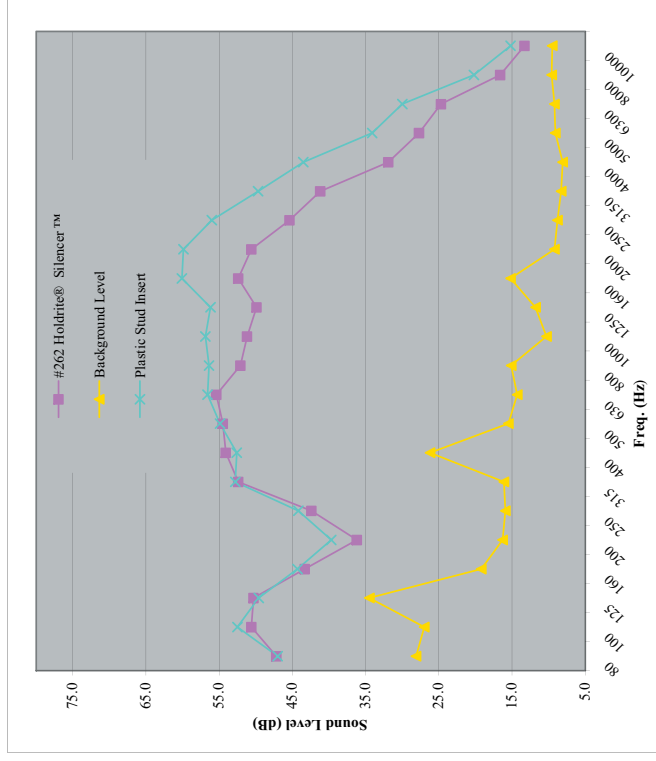
TEST RESULTS:
Date: 8/17/2006

Test 1: HOLDRITE® Silencer™ #262
Test 2: Plastic Stud Insert

Pipe Size: 3/4" Copper tubing
Wall Type: 2 x 4 Steel stud

- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 μbar)	
	Background Level L _{eq} (dB)	#262 Holdrite® Silencer™ L _{eq} (dB)
80	28.1	47.2
100	27.0	50.6
125	34.5	50.3
160	19.2	43.3
200	16.3	36.2
250	15.9	42.4
315	16.1	52.4
400	26.2	54.1
500	15.5	54.5
630	14.3	55.4
800	15.1	52.1
1000	10.3	51.2
1250	11.8	49.9
1600	15.2	52.4
2000	9.2	50.6
2500	8.8	45.4
3150	8.3	41.2
4000	8.1	31.9
5000	9.1	27.7
6300	9.2	24.7
8000	9.6	16.6
10000	9.5	13.3
dBA	26.2	61.0
		66.7





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



HOLDRITE® Silencer #262

TEST: Noise and Vibration Isolation

APPLICATION TESTED: Thru-Stud Penetrations

TEST RESULTS:

Date: 8/9/2006

Test 1: HOLDRITE® Silencer™ #262

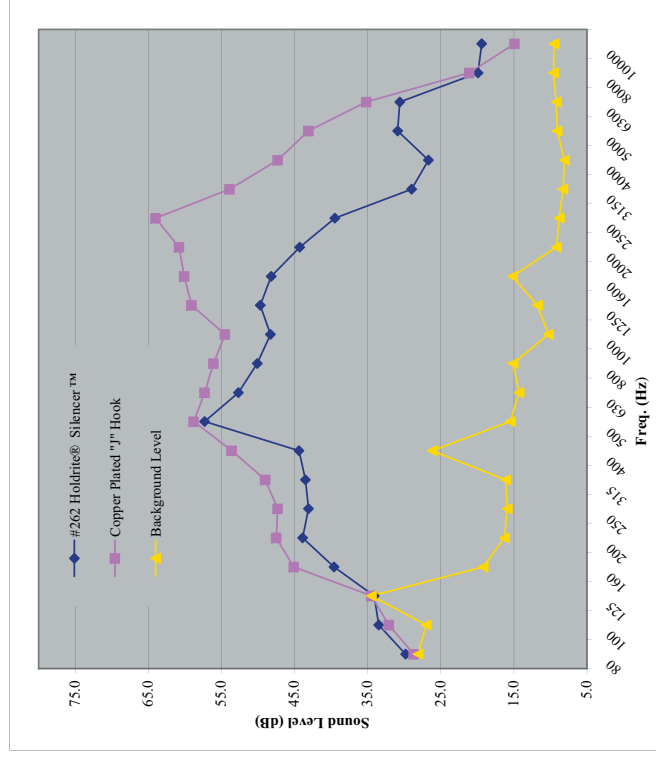
Test 2: Copper-plated “J” Hook

Pipe Size: 3/4” Copper tubing

Wall Type: 2 x 4 Wood stud

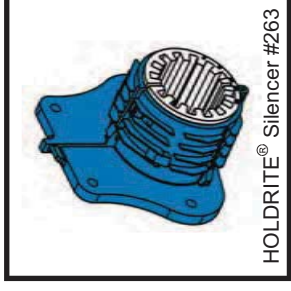
- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 µbar)		
	Background Level L _{eq} (dB)	Copper Plated "J" Hook L _{eq} (dB)	#262 Holdrite® Silencer™ L _{eq} (dB)
80	28.1	29.8	29.8
100	27.0	32.1	33.5
125	34.5	34.5	34.1
160	19.2	45.1	39.6
200	16.3	47.5	43.9
250	15.9	47.3	43.1
315	16.1	49.0	43.5
400	26.2	53.6	44.4
500	15.5	58.8	57.3
630	14.3	57.3	52.7
800	15.1	56.1	50.1
1000	10.3	54.5	48.3
1250	11.8	59.1	49.7
1600	15.2	60.1	48.2
2000	9.2	60.8	44.3
2500	8.8	64.0	39.5
3150	8.3	53.9	29.0
4000	8.1	47.3	26.7
5000	9.1	43.1	30.9
6300	9.2	35.2	30.6
8000	9.6	21.1	19.9
10000	9.5	14.9	19.4
dB A	26.2	69.1	58.8





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



TEST: Noise and Vibration Isolation

APPLICATION TESTED: Thru-Stud Penetrations

TEST RESULTS:

Date: 8/17/2006

Test 1: HOLDRITE® Silencer™ #263

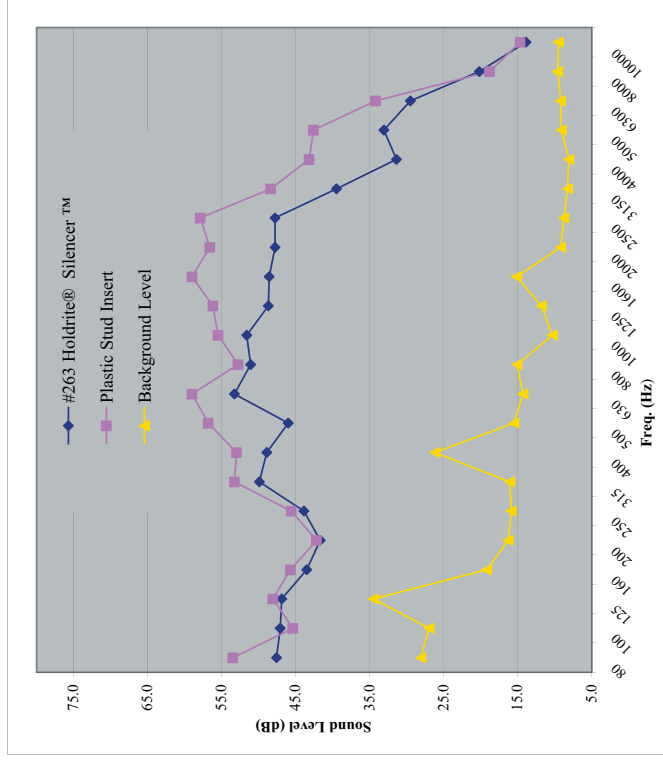
Test 2: Plastic Stud Insert

Pipe Size: 1" Copper tubing

Wall Type: 2 x 4 Steel stud

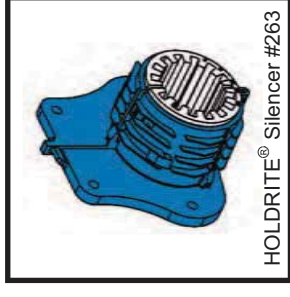
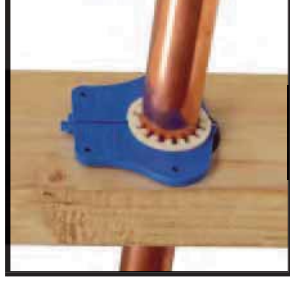
- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 µbar)	
	Background Level L _{eq} (dB)	#263 Holdrite® Silencer™ L _{eq} (dB)
80	28.1	53.5
100	27.0	45.4
125	34.5	48.1
160	19.2	45.7
200	16.3	42.2
250	15.9	45.6
315	16.1	53.3
400	26.2	53.0
500	15.5	56.8
630	14.3	59.0
800	15.1	52.8
1000	10.3	55.5
1250	11.8	56.2
1600	15.2	59.0
2000	9.2	56.6
2500	8.8	57.9
3150	8.3	48.4
4000	8.1	43.2
5000	9.1	42.6
6300	9.2	34.2
8000	9.6	18.8
10000	9.5	14.7
dBA	26.2	66.3
		58.9





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



TEST: Noise and Vibration Isolation

APPLICATION TESTED: Thru-Stud Penetrations

TEST RESULTS:

Date: 8/11/2006

Test 1: HOLDRITE® Silencer™ #263

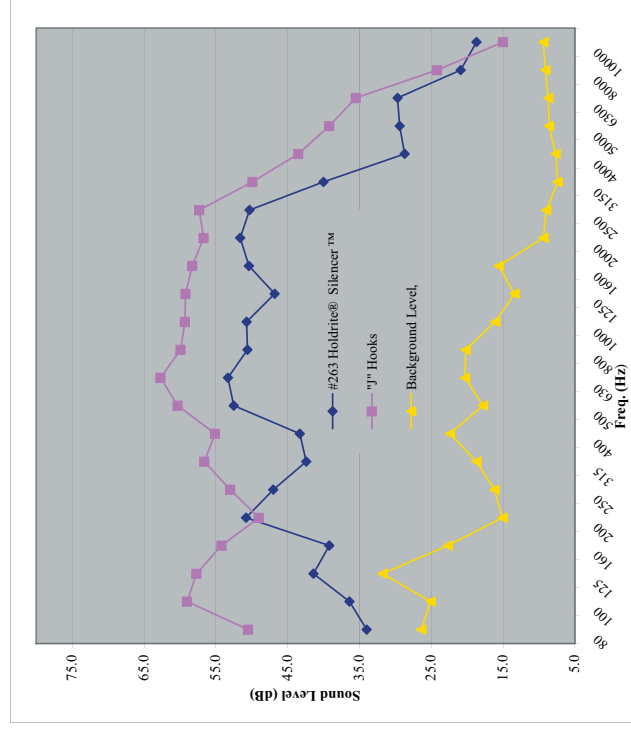
Test 2: Copper-plated “J” Hook

Pipe Size: 1” Copper tubing

Wall Type: 2 x 4 Wood stud

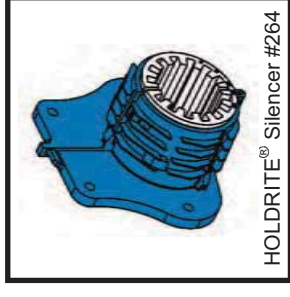
- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 µbar)		
	Background Level, L _{eq} (dB)	“J” Hooks L _{eq} (dB)	#263 Holdrite® Silencer™ L _{eq} (dB)
80	26.4	50.5	34.0
100	25.1	59.0	36.4
125	31.8	57.7	41.4
160	22.7	54.2	39.2
200	15.1	49.0	50.8
250	16.2	53.0	47.0
315	18.7	56.6	42.4
400	22.4	55.1	43.3
500	17.8	60.3	52.5
630	20.3	62.7	53.3
800	20.2	59.9	50.6
1000	16.1	59.3	50.7
1250	13.4	59.2	46.8
1600	15.6	58.3	50.4
2000	9.4	56.7	51.6
2500	9.0	57.3	50.3
3150	7.4	49.9	40.0
4000	7.7	43.5	28.7
5000	8.6	39.2	29.4
6300	8.7	35.5	29.7
8000	9.1	24.2	20.9
10000	9.4	15.0	18.7
dBa	26.7	68.2	59.8





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



TEST: Noise and Vibration Isolation

APPLICATION TESTED: Thru-Stud Penetrations

TEST RESULTS:

Date: 8/15/2006

Test 1: HOLDRITE® Silencer™ #264

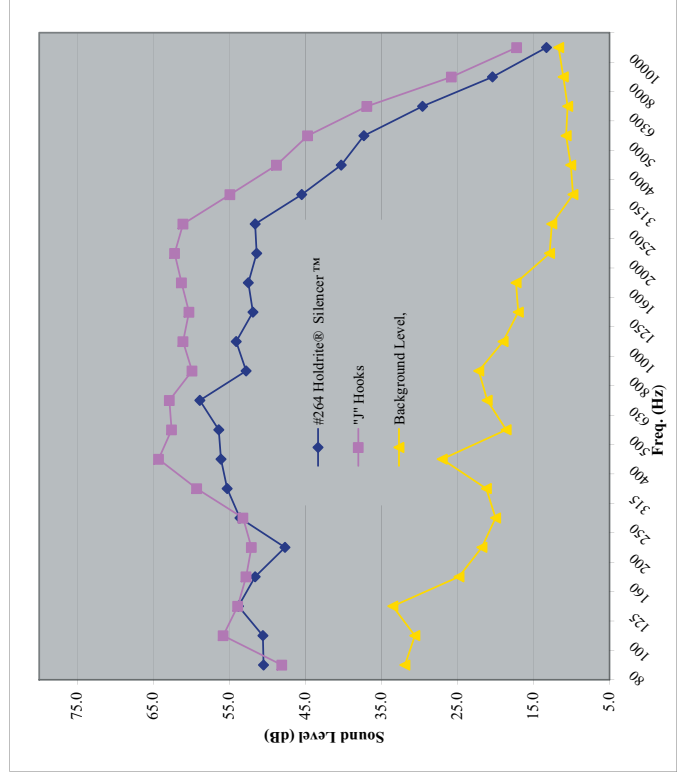
Test 2: Copper-plated “J” Hook

Pipe Size: 1-1/4” Copper tubing

Wall Type: 2 x 4 Wood stud

- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

Sound Level, dB (re. 0.0002 µbar)			
1/3 Octave Freq (Hz)	Background Level, L _{eq} (dB)	"J" Hooks L _{eq} (dB)	#264 Holdrite® Silencer™ L _{eq} (dB)
80	31.9	48.1	50.5
100	30.6	55.8	50.6
125	33.5	53.9	53.8
160	24.8	52.8	51.6
200	21.8	52.1	47.7
250	20.0	53.2	53.6
315	21.2	59.3	55.3
400	27.0	64.3	56.1
500	18.6	62.6	56.4
630	21.1	62.9	58.9
800	22.2	59.9	52.8
1000	19.0	61.1	54.1
1250	17.0	60.3	51.9
1600	17.3	61.3	52.5
2000	12.9	62.2	51.4
2500	12.6	61.1	51.6
3150	9.8	54.9	45.5
4000	10.1	48.8	40.3
5000	10.7	44.7	37.3
6300	10.5	36.9	29.6
8000	11.1	25.8	20.4
10000	11.7	17.2	13.3
dBA	29.3	70.9	63.3





TEST: Noise and Vibration Isolation

APPLICATION TESTED: Shower Head/Tub Spout

TEST RESULTS:

Date: 9/18/2006

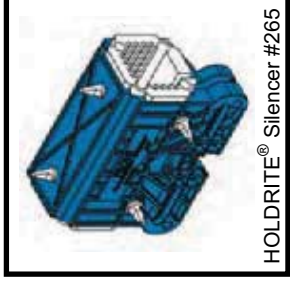
Test 1: HOLDRITE® Silencer™ #265 on HOLDRITE Stout Bracket®

Test 2: Drop Eared 90-degree direct mount to HOLDRITE Stout Bracket®

Pipe Size: 1/2" Copper tubing

Wall Type: 2 x 4 Wood stud

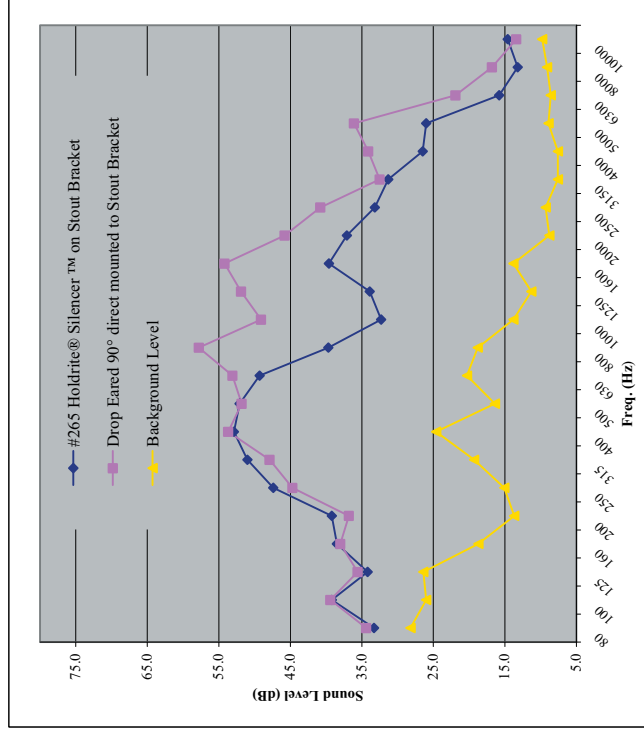
Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



HOLDRITE® Silencer #265

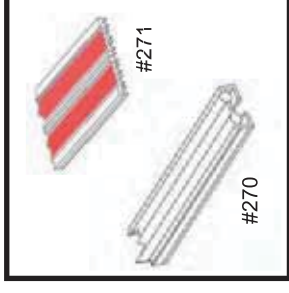
- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 µbar)		
	Background Level L _{eq} (dB)	Drop Eared 90° direct mounted to Stout Bracket L _{eq} (dB)	#265 Holdrite® Silencer™ on Stout Bracket L _{eq} (dB)
80	28.2	34.4	33.3
100	26.0	39.4	39.2
125	26.4	35.6	34.2
160	18.7	38.0	38.5
200	13.7	36.8	39.2
250	15.1	44.7	47.4
315	19.3	47.9	51.0
400	24.6	53.7	52.9
500	16.4	51.8	52.1
630	20.3	53.1	49.3
800	18.8	57.8	39.7
1000	13.8	49.1	32.3
1250	11.3	51.9	33.9
1600	13.8	54.2	39.6
2000	8.8	45.8	37.1
2500	9.3	40.8	33.2
3150	7.6	32.5	31.3
4000	7.6	34.1	26.5
5000	8.9	36.1	26.0
6300	8.6	21.9	15.8
8000	9.1	16.8	13.2
10000	9.8	13.4	14.6
dBA	26.1	61.5	54.1





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



TEST: Noise and Vibration Isolation

APPLICATION TESTED: Thru-Stud Penetrations

TEST RESULTS:

Date: 8/31/2006

Test 1: HOLDRITE® Silencer™ #270

Test 2: HOLDRITE® Silencer™ #271

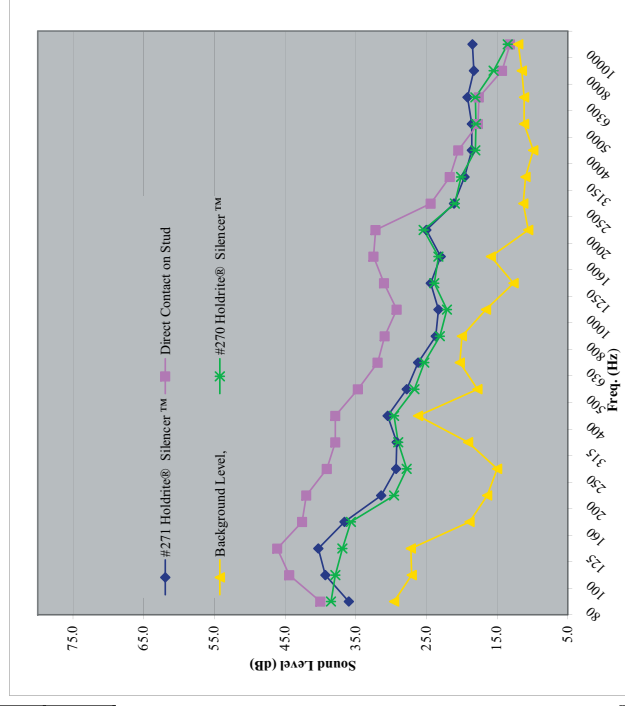
Test 3: Direct Contact to Stud

Pipe Size: 3" Cast Iron DWV Drain Pipe

Wall Type: 2 x 6 Wood stud

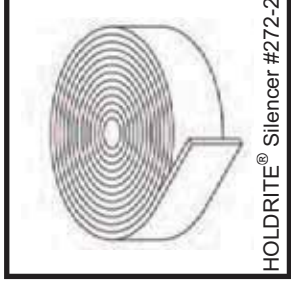
- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 µbar)			
	Background Level, L _{eq} (dB)	Direct Contact on Stud L _{eq} (dB)	#271 Holdrite® Silencer™ L _{eq} (dB)	#270 Holdrite® Silencer™ L _{eq} (dB)
80	29.6	40.0	36.0	38.5
100	27.1	44.4	39.3	37.9
125	27.2	46.1	40.3	36.9
160	18.9	42.6	36.6	35.7
200	16.4	42.0	31.4	29.6
250	15.0	39.1	29.3	27.8
315	19.1	37.9	29.2	29.0
400	26.2	37.9	30.5	29.6
500	17.8	34.7	27.8	26.7
630	20.3	31.9	26.2	25.3
800	20.0	30.9	23.7	23.1
1000	16.6	29.2	23.3	22.1
1250	12.7	31.0	24.4	23.9
1600	15.9	32.5	23.0	23.3
2000	10.6	32.2	25.0	25.4
2500	11.3	24.4	21.1	21.0
3150	11.0	21.7	19.6	20.1
4000	9.9	20.5	18.6	18.1
5000	11.2	17.7	18.6	18.0
6300	11.2	17.6	19.2	18.1
8000	11.5	14.3	18.3	15.5
10000	12.0	13.2	18.5	13.5
dBA	27.6	42.6	35.8	35.1





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



TEST: Noise and Vibration Isolation

APPLICATION TESTED: Thru-Stud Penetrations

TEST RESULTS:

Date: 8/31/2006

Test 1: HOLDRITE® Silencer™ #272-2

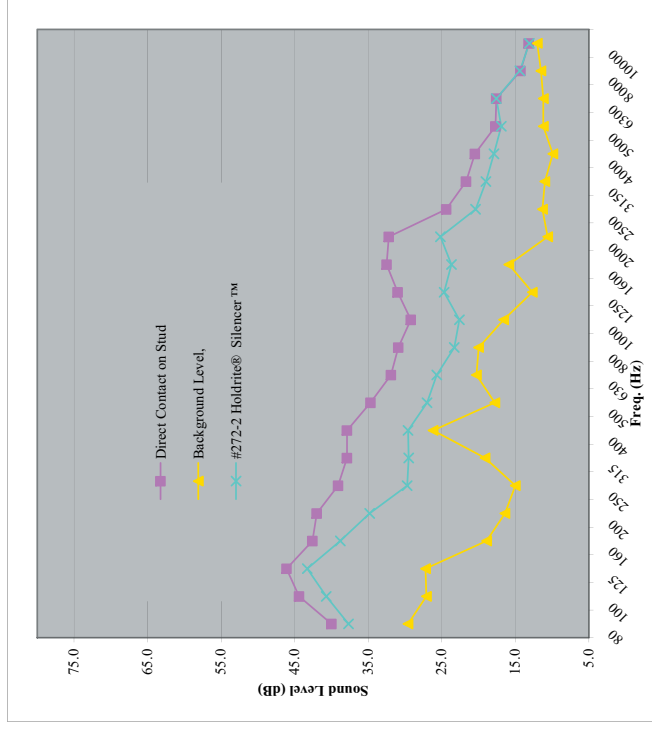
Test 2: Direct Contact to Stud

Pipe Size: 3" Cast Iron DWV Drain Pipe

Wall Type: 2 x 6 Wood stud

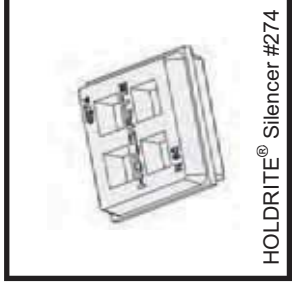
- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 µbar)		
	Background Level, L_{eq} (dB)	Direct Contact on Stud L_{eq} (dB)	#272-2 Holdrite® Silencer™ L_{eq} (dB)
80	29.6	40.0	37.7
100	27.1	44.4	40.7
125	27.2	46.1	43.3
160	18.9	42.6	38.8
200	16.4	42.0	34.8
250	15.0	39.1	29.7
315	19.1	37.9	29.5
400	26.2	37.9	29.6
500	17.8	34.7	27.0
630	20.3	31.9	25.7
800	20.0	30.9	23.3
1000	16.6	29.2	22.6
1250	12.7	31.0	24.7
1600	15.9	32.5	23.7
2000	10.6	32.2	25.2
2500	11.3	24.4	20.4
3150	11.0	21.7	19.0
4000	9.9	20.5	17.9
5000	11.2	17.7	16.9
6300	11.2	17.6	17.6
8000	11.5	14.3	14.4
10000	12.0	13.2	13.1
dBA	27.6	42.6	36.1





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



HOLDRITE® Silencer #274

TEST: Noise and Vibration Isolation

APPLICATION TESTED: Vertical Riser Support

TEST RESULTS:

Date: 10/9/2006

Test 1: HOLDRITE® Silencer™ #274

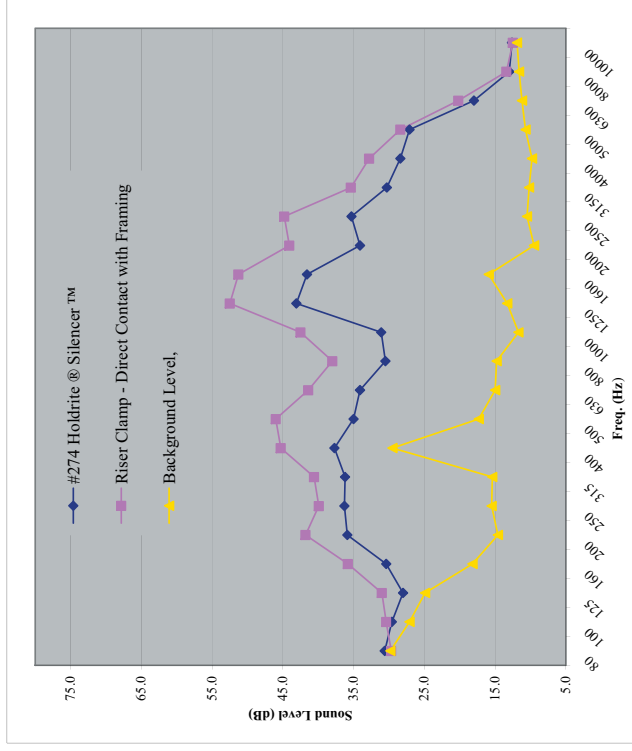
Test 2: Riser Clamp-Direct Contact with Framing

Pipe Size: 3" Cast Iron DWV Drain Pipe

Wall Type: 2 x 6 Wood Framed Wall

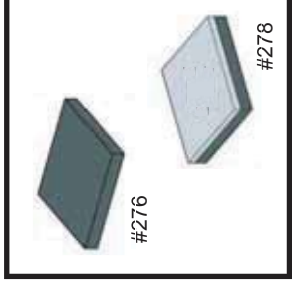
- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 µbar)		
	Background Level, L _{eq} (dB)	Riser Clamp - Direct Contact with Framing, L _{eq} (dB)	#274 Holdrite® Silencer™ L _{eq} (dB)
80	29.8	29.7	30.6
100	27.1	30.4	29.6
125	24.9	31.0	28.0
160	18.2	35.8	30.4
200	14.6	41.8	35.9
250	15.5	39.9	36.3
315	15.4	40.6	36.2
400	29.5	45.3	37.7
500	17.3	46.0	35.0
630	15.0	41.4	34.1
800	14.8	38.0	30.5
1000	11.7	42.5	31.1
1250	13.3	52.5	43.1
1600	15.9	51.3	41.6
2000	9.5	44.1	34.1
2500	10.5	44.8	35.3
3150	10.2	35.4	30.3
4000	9.8	32.8	28.4
5000	10.7	28.4	27.1
6300	11.2	20.2	18.0
8000	11.6	13.4	13.0
10000	11.9	12.5	12.6
dBA	27.5	57.0	47.7





Change in Sound Pressure Level (+ or -)	Change in Apparent Loudness
3 dB	Just Perceptible
5 dB	Clearly Noticeable
10 dB	Twice (or 1/2) as Loud
15 dB	Three (or 1/3) as Loud
20 dB	Four (or 1/4) as Loud



TEST: Noise and Vibration Isolation

APPLICATION TESTED: Vertical Riser Support

TEST RESULTS:

Date: 10/9/2006

Test 1: HOLDRITE® Silencer™ #276

Test 2: HOLDRITE® Silencer™ #278

Test 3: Riser Clamp-Direct Contact with Framing

Pipe Size: 3" Cast Iron DWV Drain Pipe

Wall Type: 2 x 6 Wood Framed Wall

- Independently lab tested by ISO-3822 certified lab
- Resulting acoustic spectra were analyzed in 1/3 octave bands, from 80 Hz to 10,000 Hz
- Other HOLDRITE Silencer application solution data available upon request

1/3 Octave Freq (Hz)	Sound Level, dB (re. 0.0002 µbar)			
	Background Level, L _{eq} (dB)	Riser Clamp - Direct Contact with Framing, L _{eq} (dB)	#276 Holdrite® Silencer™, L _{eq} (dB)	#278 Holdrite® Silencer™, L _{eq} (dB)
80	29.8	29.7	31.3	30.7
100	27.1	30.4	32.1	30.4
125	24.9	31.0	30.1	29.9
160	18.2	35.8	33.9	29.6
200	14.6	41.8	38.6	35.7
250	15.5	39.9	35.8	35.7
315	15.4	40.6	37.1	37.8
400	29.5	45.3	39.7	38.9
500	17.3	46.0	39.5	36.1
630	15.0	41.4	36.2	34.8
800	14.8	38.0	33.2	31.5
1000	11.7	42.5	34.0	32.6
1250	13.3	43.8	43.8	44.0
1600	15.9	51.3	44.3	44.6
2000	9.5	44.1	36.7	36.9
2500	10.5	44.8	37.5	37.6
3150	10.2	35.4	31.7	31.6
4000	9.8	32.8	29.4	29.6
5000	10.7	28.4	27.6	27.7
6300	11.2	20.2	19.8	20.4
8000	11.6	13.4	13.2	13.4
10000	11.9	12.5	11.9	12.4
dBA	27.5	57.0	49.6	49.6

