



**SDV-S SEISMIC**  
Hanging Guide

# SDV-S Seismic

## X: SUSPENDED EQUIPMENT WITH FOUR CABLE RESTRAINTS

$S_s =$	3.75	$a_p =$	2.5	<b>FROM THE TABLES:</b>
$z/h =$	1.0	$R_p =$	2	
Site Class	D	$I_p =$	1.5	$S_{DS} =$ 2.500
Use Group	IV	Calculated Seismic Design Category D		
Product	V			

Tension in Cable,  $T = F_p / \cos(\theta)$   
 Design Strength of Cable =  $F_t$

$\theta$	horz g's	vert g's
55°	5.625	0.400
		1.700

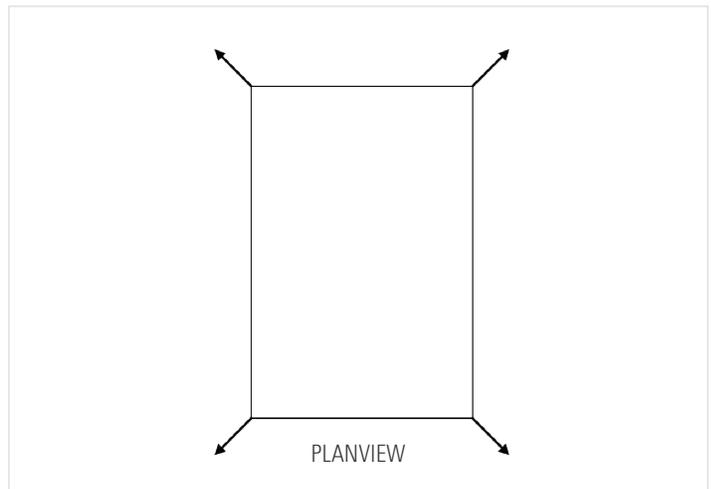
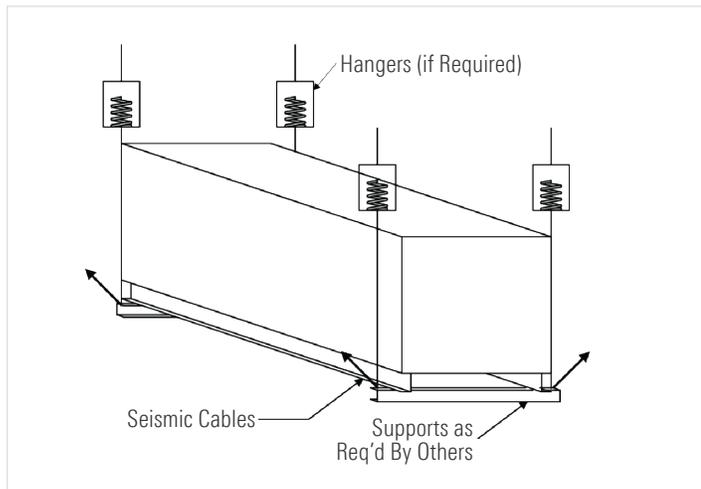
<input checked="" type="radio"/>	LRFD	<input type="radio"/>	ASD	<input type="radio"/>	AC-156
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Fp/Wp		
Min. limit	Actual	Max limit
1.125 g's	5.625 g's	6.00 g's

	DL	E
Load Combination 1	1.2	1
Load Combination 2	0.9	

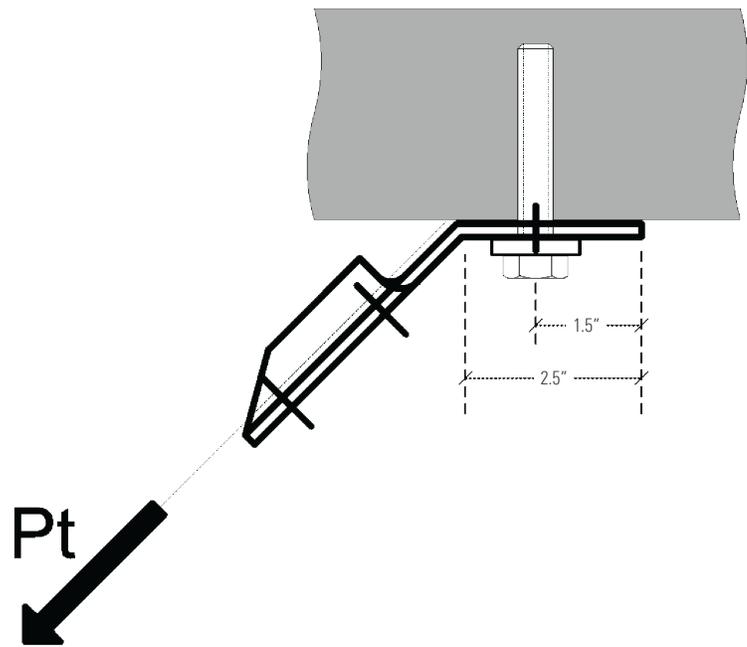
REACTION CALCULATION AND CABLE SELECTION												
Tags	Mfr	Model	Weight (lb)	L	W	H	Fp	T	Cable	Ft	T/Ft (<1.0)	
4,5,6	T&B	4,5,6	90	16	12	8	506	883 #	SB-125	1 100	0.8	
7,8	T&B	7,8	94	16	12	10	529	922 #	SB-125	1 100	0.84	
9,10	T&B	9,10	110	16	14	13	619	1079 #	SB-125	1 100	0.98	
12,14	T&B	12,14	125	16	20	18	703	1226 #	SB-250	4400	0.28	
16	T&B	16	156	16	24	18	878	1530 #	SB-250	4400	0.35	
24 X 16	T&B	24x16	213	16	38	18	1198	2089 #	SB-250	4400	0.47	



# SDV-S Seismic

Attachment of SB-125 with 1/8" cable into concrete & steel:

TAG	PT (LRFD)
4,5,6	883#
7,8	922#
9,10	1079#



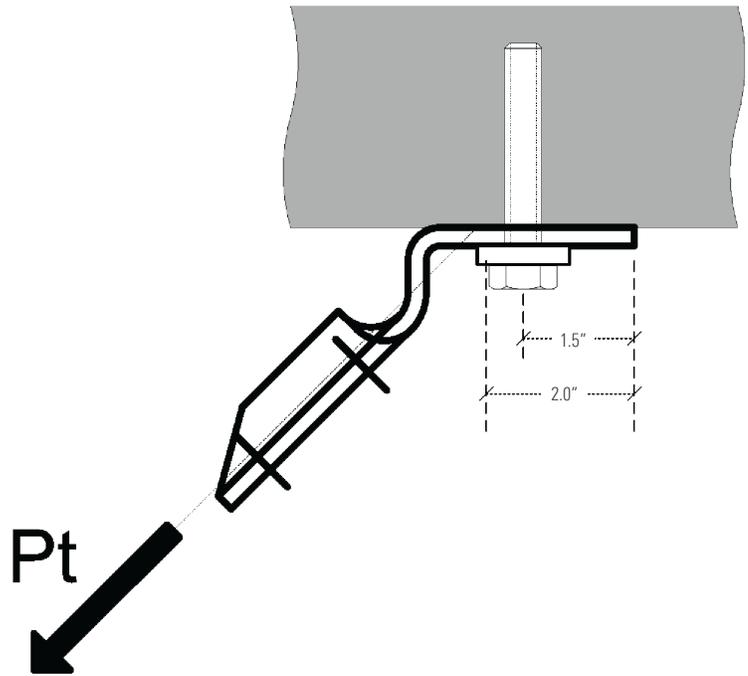
Anchor	SB-125-01; 9/16" Hole			
	Hilti TZ	Hilti TZ	HY-150	A-307
Diameter	1/2"	1/2"	1/2"	1/2"
Embedment	2"	3.25"	2.75"	Bolted to Steel
Slab Depth	4"	6"	4"	
<b>Max Tension Loads (LRFD)</b>				
Anchor Allowable	1220	2010	1740	4950
Max Actual Load	1079	1079	1079	1079
Interaction	0.88	0.54	0.62	0.22

*This installation is acceptable with those anchors with an interaction < 1.0*

# SDV-S Seismic

Attachment of SB-250 with 1/4" cable into concrete & steel:

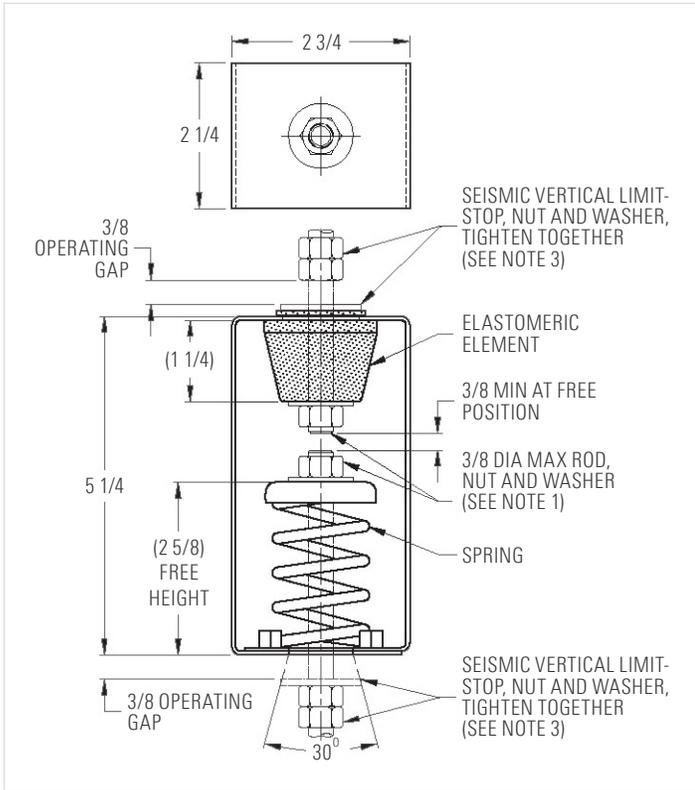
TAG	PT (LRFD)
12,14	1220#
16	1530#
24 X 16	2089#



Anchor	SB-250-01; 1 1/16" Hole			
	Hilti TZ	Hilti TZ	HY-150	A-307
Diameter	5/8"	5/8"	5/8"	5/8"
Embedment	3.125"	4"	3.125"	Bolted to Steel
Slab Depth	5"	6"	4.625"	
<b>Max Tension Loads (LRFD)</b>				
Anchor Allowable	3250	4130	3535	9949
Max Actual Load	2844	2844	2844	2844
Interaction	0.88	0.69	0.80	0.29

*This installation is acceptable with those anchors with an interaction < 1.0*

# SDV-S Seismic



AFFECTED MODEL	UNIT SIZE	HANGER
SDV	12, 14, 16	HRSA-1B-50
SDV	4, 5, 6, 7, 8, 9, 10	HRSA-1B-35
SDV	24 X 16	HRSA-1B-70

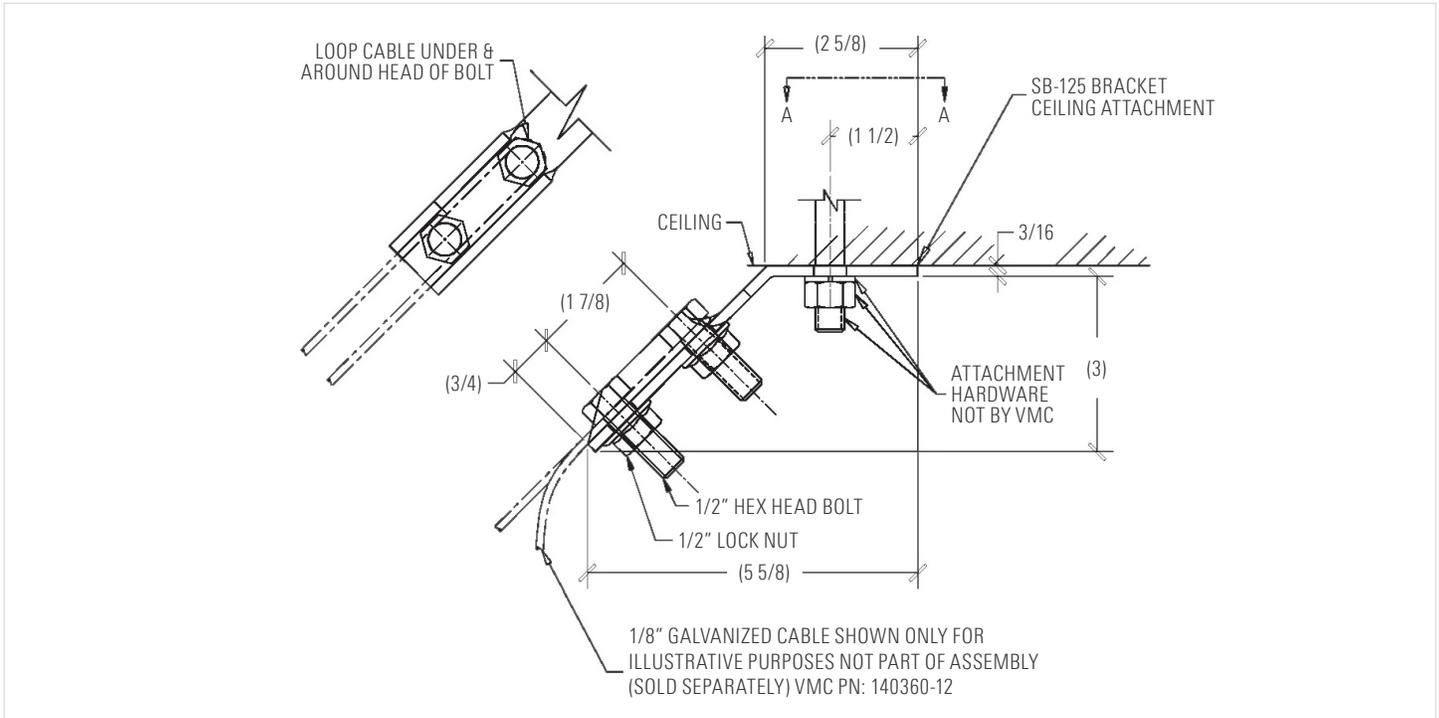
MODEL HRSA-1B ELASTOMERIC & SPRING ANGULARITY HANGERS  
1" NOMINAL DEFLECTION

TYPE HRSA-1B ELASTOMERIC & SPRING ANGULARITY HANGERS FOR 1" NOMINAL DEFLECTION					
HANGER	RATED LOAD (LBS)	DEFLECTION (IN)	SPRING RATE (LB/IN)	SPRING COLOR CODE	ELEMENT LOAD & COLOR CODE
HRSA-1B-20	20	1.48	16	DK BLUE	RE-A-35 BLUE
HRSA-1B-35	35	1.57	30	BLACK	RE-A-35 BLUE
HRSA-1B-50	50	1.38	45	RED	RE-A-75 RED
HRSA-1B-70	70	1.25	80	DK GREEN	RE-A-75 RED

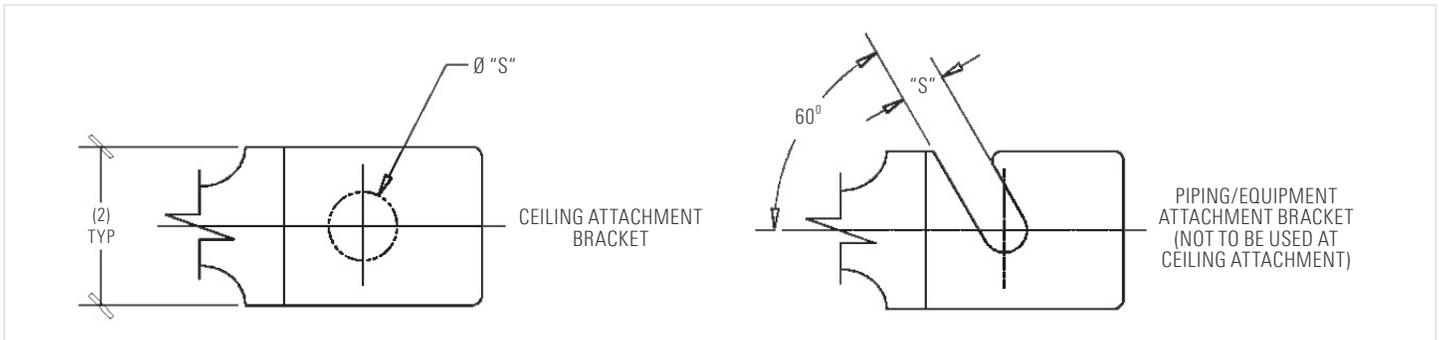
**NOTES:**

- Hanger rods, nuts and washers, as shown, not by the VMC group.
- Standard finish: hanger box - painted, powder coated or galvanized steel, spring - powder coat.
- Seismic vertical-stop hardware required for seismic applications, not by the VMC group install washer .1 Thk. Min. X 1-1/4 O.D. Min. With required inside diameter to accommodate rod size in use. This can be accomplished by using a single washer or by stacking not more than two washers.
- All dimensions in inches, interpret per ANSI Y14.
- All dimensions are for reference, dimensions shown as nominal.
- All springs are designed with minimum 50% over-travel.
- Hanger boxes are available pre-compressed up to their designated max. Load. Percentage of pre-compression to be determined by engineered application or as requested by customer. Consult factory for possible additional parameters and/or limitations.
- Hanger boxes with an elastomeric element have up to an additional 1/2" nominal deflection.
- Other materials, compounds or finishes with equal or superior properties may be substituted as they become available.

# SDV-S Seismic



SB-125 SEISMIC CABLE RESTRAINT KIT



ALTERNATE VIEW A-A

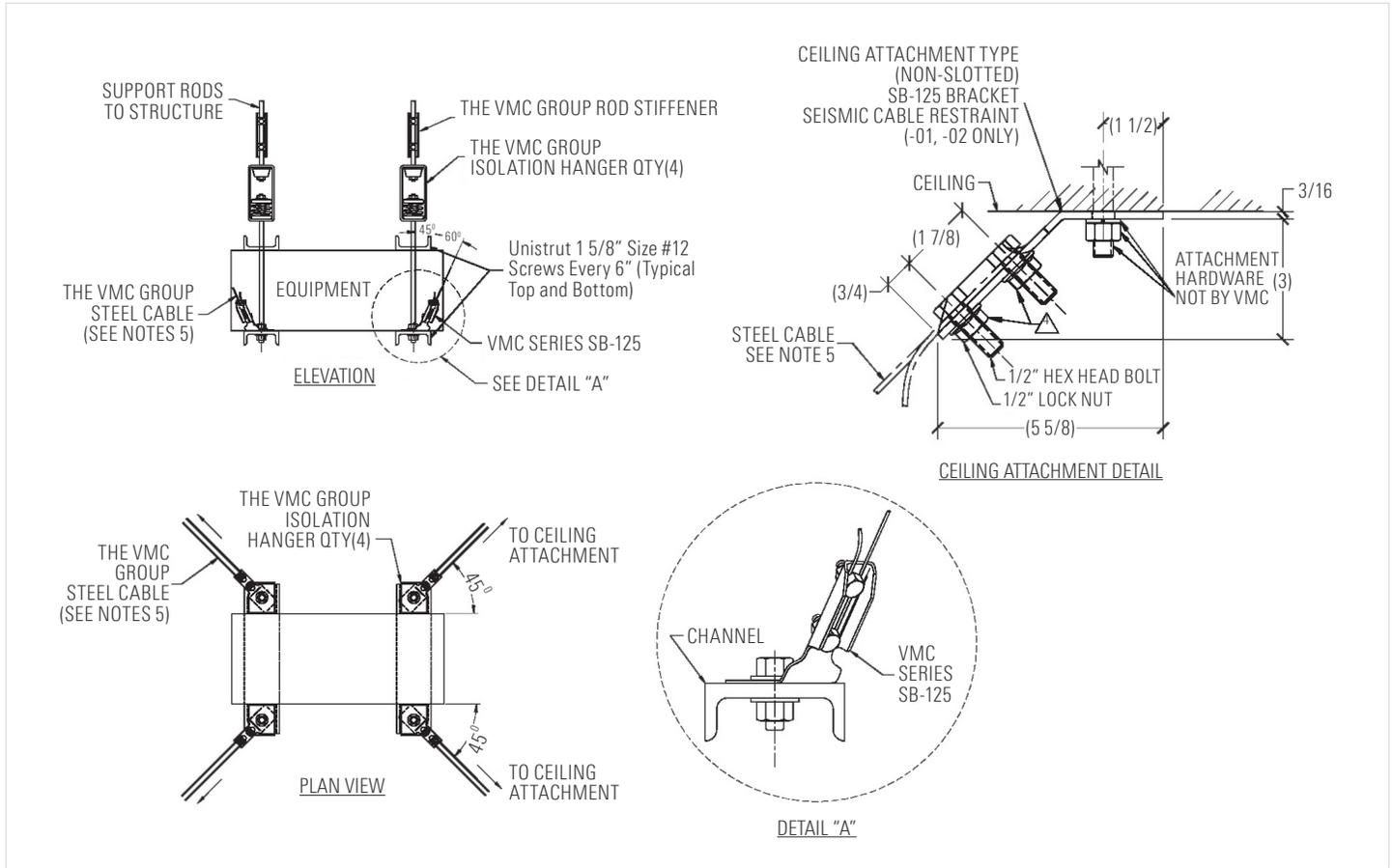
AFFECTED MODEL	UNIT SIZE
SDV	4, 5, 6, 7, 8, 9, 10

KIT PART NUMBER	"S"	COLOR CODE	MAX. TENSION ALLOWABLE
SB-125-01	9/16" KIT	CLEAR ZINC COATED	667 LBS.
SB-125-02	11/16" KIT	YELLOW ZINC COATED	667 LBS.

**NOTES:**

1. Material: cold rolled steel.
2. Hardware & brackets zinc electroplate.
3. Field torque 1/2" lock nuts to 75 FT.-LBS.
4. 1 Kit consists of either 9/16 or 11/16 assemblies consisting of :
  - 2 Slotted brackets
  - 2 Holed brackets
  - 8 Bolts
  - 8 Serrated flange nuts
5. Cable sold separately.

# SDV-S Seismic



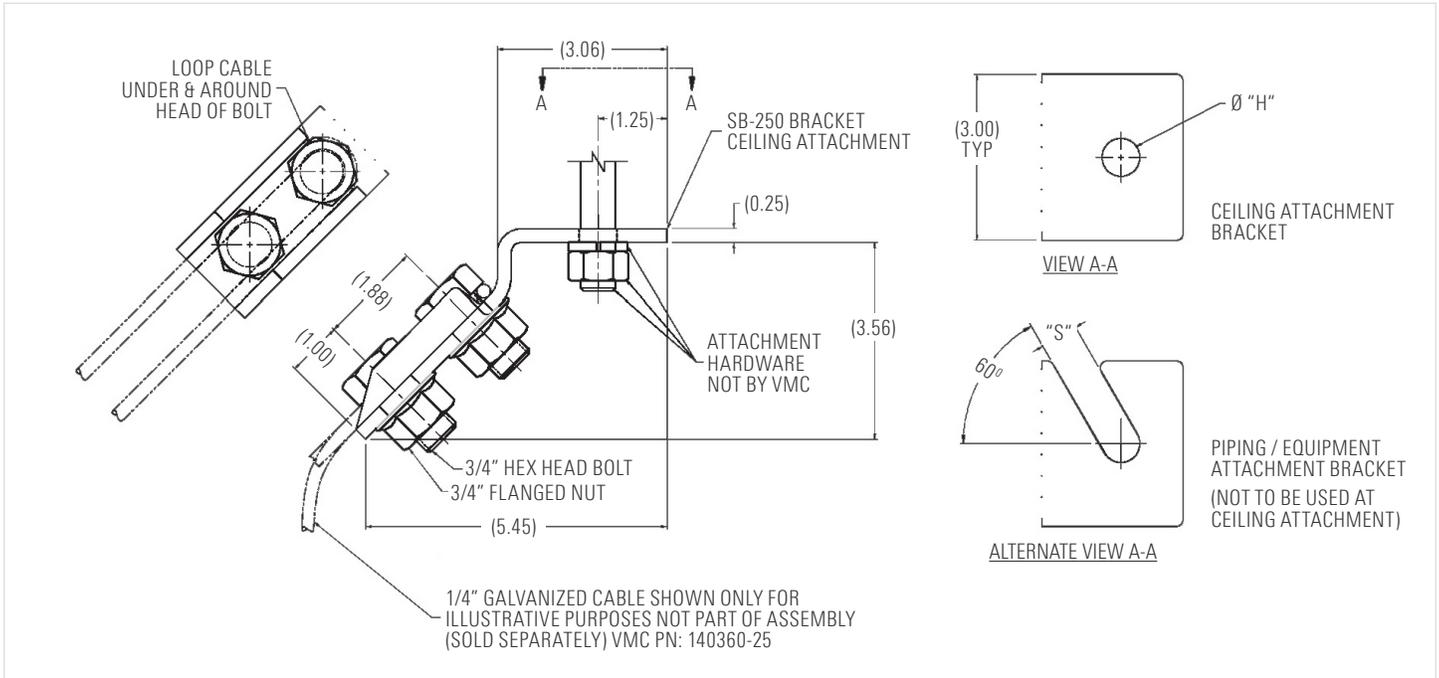
SB-125 TYPICAL TRANSVERSE AND LONGITUDINAL CABLE BRACING FOR EQUIPMENT

AFFECTED MODEL	UNIT SIZE	PART NUMBER	"H"	CONSIST OF ASSEMBLIES	COLOR CODE
SDV	4, 5, 6, 7, 8, 9, 10	SB-125-01	9/16" KIT	154A-100794-01 & -03	CLEAR ZINC COATED
		SB-125-02	11/16" KIT	154A-100794-02 & -04	YELLOW ZINC COATED

**NOTES:**

1. Material: cold rolled steel.
2. Electro zinc plated.
3. Field torque 1/2" lock nut to 75 Ft. Lbs.
4. 1 Kit consists of:
  - 2 Slotted brackets
  - 2 Holed brackets
  - 8 Bolts
  - 8 Serrated flange nuts
5. Cable sold separately.
6. Other materials, compounds, or finishes with equal or superior properties may be substituted as they become available.

# SDV-S Seismic



## SB-250 SEISMIC CABLE RESTRAINT KIT

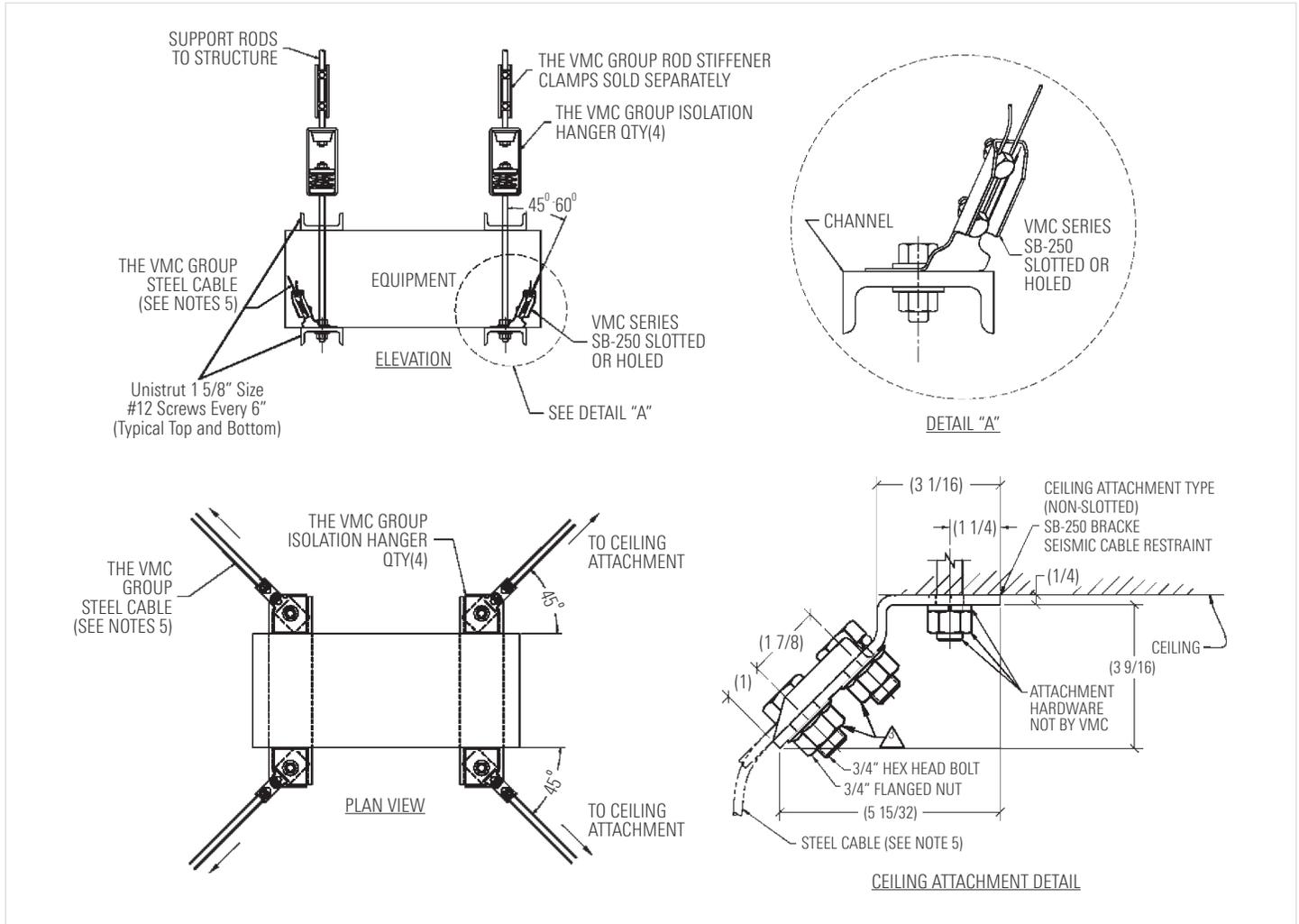
AFFECTED MODEL	UNIT SIZE
SDV	12, 14, 16, 24 X 16

KIT PART NUMBER	"H"	"S"	COLOR CODE	MAX. TENSION ALLOWABLE
SB-250	11/16"	15/16"	CLEAR ZINC COATED	2333 LBS.

### NOTES:

1. Material: cold rolled steel.
2. Hardware & brackets zinc electroplate.
3. Field torque 3/4" flange nuts to 100 Ft- Lbs.
4. 1 kit consists of:
  - 2 Slotted brackets
  - 2 Holed brackets
  - 8 Bolts
  - 8 Serrated flange nuts
5. Cable sold separately.
6. Other materials, compounds, or finishes with equal or superior properties may be substituted as they become available.

# SDV-S Seismic



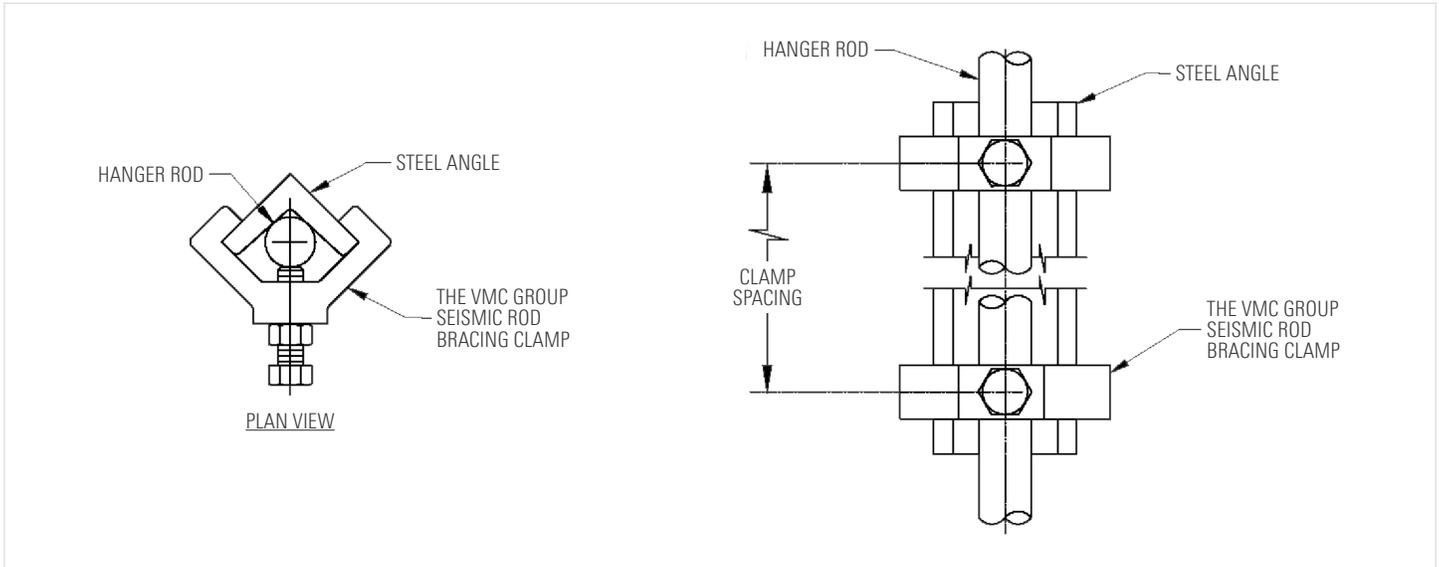
SB-250, TYPICAL TRANSVERSE AND LONGITUDINAL CABLE BRACING FOR EQUIPMENT

AFFECTED MODEL	UNIT SIZE	PART NUMBER	"H"	CONSIST OF ASSEMBLIES	COLOR CODE	KIT TYPE
SDV	12, 14, 16, 24 X 16	SB-250-01	11/16" BRACKET ASSEMBLIES	154A-101893-01 & 02	CLEAR ZINC COATED	HOLE
			15/16" BRACKET ASSEMBLIES		CLEAR ZINC COATED	SLOT
		SB-250-02	11/16" BRACKET ASSEMBLIES	54A-101893-02	CLEAR ZINC COATED	HOLE

**NOTES:**

1. Material: cold rolled steel.
2. Hardware & brackets zinc electroplate.
3. Field torque 3/4" lock nuts to 100 Ft.-Lbs.
4. SB-250 kits:
  - SB-250-01 Kit consists of : 2-11/16 Holed brackets, 2-15/16 Slotted brackets, 8 Bolts, 8 Serrated flange nuts
  - SB-250-02 Kit consists of : 4 -11/16 Holed brackets, 8 Bolts, 8 Serrated flange nuts
5. Cable sold separately PN:140360-25.
6. Other materials, compounds, or finishes with equal or superior properties may be substituted as they become available.

# SDV-S Seismic



SEISMIC ROD BRACING CLAP

SRBC TABLE					
VERTICAL HANGER ROD INSTALLATION DETAILS					
VMC ROD BRACING CLAMP No.	ROD DIA (INCHES)	ROD LENGTHS OVER "X" INCHES	STEEL ANGLE SIZE (INCHES)	CLAMP SPACING	MIN # OF CLAMPS PER STIFFENER
SRBC - 1	3/8"	20"	1 X 1 X 1/4"	16"	3
SRBC - 1	1/2"	25"	1 X 1 X 1/4"	20"	3
SRBC - 1	5/8"	31"	1 X 1 X 1/4"	12"	3
SRBC - 1 1/2	3/4"	37"	1 1/2 X 1 1/2 X 1/4"	16"	3
SRBC - 1 1/2	7/8"	43"	1 1/2 X 1 1/2 X 1/4"	12"	4
SRBC - 1 1/2	1"	50"	1 1/2 X 1 1/2 X 1/4"	16"	4
SRBC - 1 1/2	1 1/8"	62"	1 1/2 X 1 1/2 X 1/4"	20"	4

**Disclaimer :**

*This installation manual is provided by Tuttle & Bailey for informational purposes only. It outlines general guidelines for the proper installation of Tuttle & Bailey terminal units in seismic-compliant applications. The materials, hardware, and components necessary to complete installation are not supplied by Tuttle & Bailey and must be provided by others. The installer bears sole responsibility for ensuring that all installation work is performed in accordance with applicable seismic compliance requirements and recognized engineering standards. Tuttle & Bailey assumes no responsibility for the selection or performance of any materials or methods used during installation.*



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