ACTOM

MECHANICAL EQUIPMENT

Products

Acoustic

Double Deflection Sway Braces

ARNOT

Vibration & Rubber
Engineering Solutions

MASON INDUSTRIES, Inc.
Manufacturers of Vibration Control Products

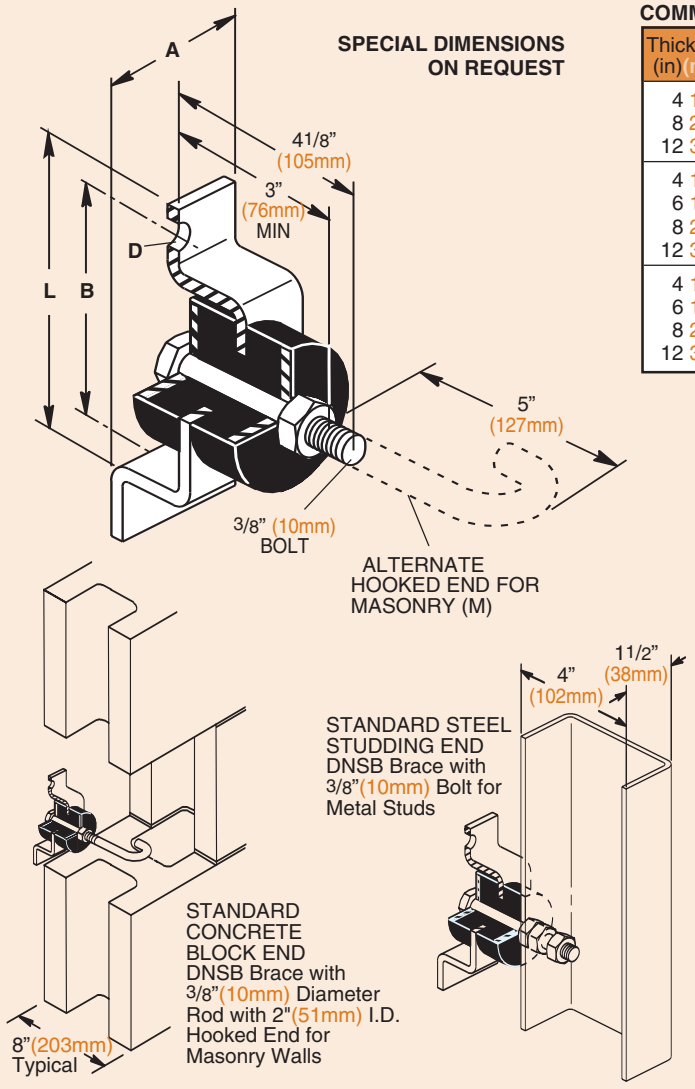
350 Rabro Drive
Hauppauge, NY 11788
631/348-0282
FAX 631/348-0279
Info@Mason-Ind.com
www.Mason-Ind.com

2101 W. Crescent Ave., Suite D
Anaheim, CA 92801
714/535-2727
FAX 714/535-5738
Info@MasonAnaheim.com
www.MasonAnaheim.com

DOUBLE DEFLECTION SWAY BRACE FOR MASONRY OR DRY WALL CONSTRUCTION

TYPE **DNSB**

DATA SHEET DS-402-1.1 A



COMMON WALL WEIGHTS

Thickness (in) (mm)	Material	(lbs/ft²) (kg/m²)
4 102	Brick	35 175
8 203		75 365
12 305		115 560
4 102	Heavy Aggregate Hollow Concrete Block	35 175
6 152		50 245
8 203		58 285
12 305		90 440
4 102	Poured Concrete Masonry	48 235
6 152		72 350
8 203		96 470
12 305		144 705

Thickness (in) (mm)	Material	(lbs/ft²) (kg/m²)
4 102	Steel Studding Alone	1.5 7.5
2x4 51x102	Wood Studding Alone	2.0 10
1/2 13	Gypsum Board	2.1 10
5/8 16		2.7 13
3/4 19		3.2 16
1 25	Cement Plaster	10.0 50
1 25	Gypsum Plaster	5.0 25
-	Metal Lathe	0.5 2.5
-	Gypsum Lathing Board	2.0 10

PHYSICAL PROPERTIES OF BRIDGE BEARING NEOPRENE ELEMENTS

Grade (Durometer A)	60
Original Physical Properties	
Hardness ASTM-D676	60±5
Tensile strength, minimum psi ASTM-D412	2500
Elongation at break, minimum percentage	350
Accelerated Tests to Determine Long-term Aging Characteristics	
Oven Aging - 70 hrs @ 212 F, ASTM-D573	
Hardness, maximum change of points	+15
Tensile strength, maximum percentage of change	±15
Elongation at break, minimum percentage	-40
Ozone (1 ppm in air by volume @ 20% strain @ 100 + 2 F, ASTM-D1149, 100 hrs	No Cracks
Compression Set, ASTM-D395 - Method B, 22 hrs at 158 F, maximum percentage of change	25

TYPE DNSB DIMENSIONS (in mm)

Type & Size	A	B	D Hole Diameter	L
DNSB-A DNSB-AM*	2 51	33/4 95	1/2 13	43/4 121
DNSB-B DNSB-BM*	21/2 64	41/4 108	1/2 13	51/4 133

TYPE DNSB LOAD RATINGS

Type & Size	Rated Axial Restraint & Deflection if Stressed				Maximum Assigned Wall Weight (lb)(kg)	Minimum Assigned Weight to Establish 10Hz(lb)(kg)	Resistance to Vertical Motion Created by Wall Pad or Floating Floor Deflection							
	Load (lb)(kg)	Defl (in)(mm)	Load (lb)(kg)	Defl (in)(mm)			Load (lb)(kg)	Defl (in)(mm)	Load (lb)(kg)	Defl (in)(mm)	Load (lb)(kg)	Defl (in)(mm)	Load (lb)(kg)	Defl (in)(mm)
DNSB-A DNSB-AM*	56 25	0.10 2.5	84 38	0.15 3.8	250 113	50 23	6 3	0.05 1.3	12 50	0.10 2.5	18 8	0.15 3.8	24 11	0.20 5.1
DNSB-B DNSB-BM*	260 118	0.10 2.5	390 177	0.15 3.8	1200 544	400 181	39 18	0.05 1.3	78 35	0.10 2.5	117 53	0.15 3.8	156 71	0.20 5.1

*"M" designates Hooked End for Masonry

1. Sway braces prevent buckling or overturning of tall or long walls.
2. Buckling forces are extremely small when braces are reasonably spaced both horizontally and vertically as the brace spacing maintains a very low l/r column ratio.
3. Our general recommendation is spacing on four foot centers both horizontally and vertically.
4. The maximum axial restraint rating is approximately 33% of the maximum assigned wall weight and extremely conservative.
5. Vertical resistance information is provided for checking embedment requirements in walls and shear or pullout forces on both ends of the sway braces. Sway braces are not to be used for vertical supports.
6. Response frequency is a function of the attached mass and the dynamic stiffness in the direction of vibration. The 10 Hz response is normally lower and more desirable than what is usually specified. Heavier weight assignments than the specified minimum will lower the response frequency by the square root of the ratio of the minimum weight to the assigned value multiplied by 10 Hz. Lighter loads will increase the frequency by the same proportion.

   EXAMPLE: 8" Concrete Block Wall weighing 55 lbs. per sq/ft. Sway braces on 4 foot centers both ways.

   Assigned Weight = 16 x 55 = 880 lbs.
   Selection DSNB-B (Maximum 1200 lbs)
   Frequency = 10Hz x $\sqrt{400/880}$ = 6.74 Hz

MASON INDUSTRIES, Inc.
Manufacturers of Vibration Control Products
350 Rabro Drive
Hauppauge, NY 11788
631/348-0282
FAX 631/348-0279
Info@Mason-Ind.com
www.Mason-Ind.com

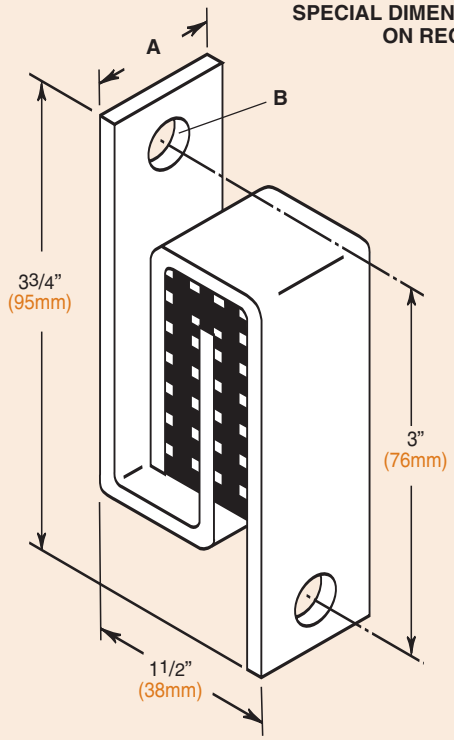
2101 W. Crescent Ave., Suite D
Anaheim, CA 92801
714/535-2727
FAX 714/535-5738
Info@MasonAnaheim.com
www.MasonAnaheim.com

SPACE SAVING TYPE W NEOPRENE PAD INTERLOCKING CLIP (SWAY BRACE)

TYPE WIC

DATA SHEET DS-402-1.1 B

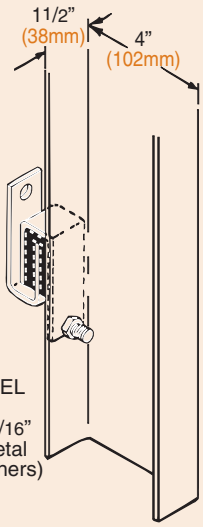
SPECIAL DIMENSIONS ON REQUEST



COMMON WALL WEIGHTS

Thickness (in) (mm)	Material	(lbs/ft²) (kg/m²)
4 102	Brick	35 175
8 203		75 365
12 305		115 560
4 102	Heavy Aggregate Hollow Concrete Block	35 175
6 152		50 245
8 203		58 285
12 305		90 440
4 102	Poured Concrete Masonry	48 235
6 152		72 350
8 203		96 470
12 305		144 705

Thickness (in) (mm)	Material	(lbs/ft²) (kg/m²)
4 102	Steel Studding Alone	1.5 7.5
2x4 51x102	Wood Studding Alone	2.0 10
1/2 13	Gypsum Board	2.1 10
5/8 16		2.7 13
3/4 19		3.2 16
1 25	Cement Plaster	10.0 50
1 25	Gypsum Plaster	5.0 25
-	Metal Lathe	0.5 2.5
-	Gypsum Lathing Board	2.0 10



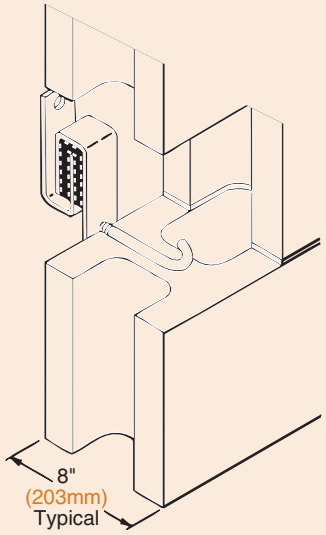
STANDARD STEEL STUDDING END
WIC Brace with 5/16" (8mm) Bolt for Metal Studs (Bolt by Others)

MATERIAL:

Standard 40 Durometer
5/16"(8mm) Neoprene Waffle Pad

TYPE WIC DIMENSIONS (in mm)

Type & Size	A	B Hole Diameter
WIC-1	1 25	3/8 10
WIC-2	2 51	3/8 10



STANDARD CONCRETE BLOCK END
WIC Brace with 5/16" (8mm) Diameter Rod with 2"(51mm) I.D. Hooked End for Masonry Walls (Hook by Others)

TYPE WIC LOAD RATINGS

Type & Size	Rated Horizontal Restraint & Deflection if Stressed		Maximum Assigned Wall Weight (lb) (kg)	Minimum Assigned Weight to Establish 15Hz (lb) (kg)
	Load (lb) (kg)	Defl (in) (mm)		
WIC-1	90 41	0.05 1.3	250 113	50 23
WIC-2	260 118	0.05 1.3	500 227	100 45

1. Sway braces prevent buckling or overturning of tall or long walls.
2. Buckling forces are extremely small when braces are reasonably spaced both horizontally and vertically as the brace spacing maintains a very low l/r column ratio.
3. Our general recommendation is spacing on four foot centers both horizontally and vertically.
4. The maximum axial restraint rating is approximately 33% of the maximum assigned wall weight and extremely conservative.
5. Vertical resistance information is provided for checking embedment requirements in walls and shear or pullout forces on both ends of the sway braces. Sway braces are not to be used for vertical supports.
6. Response frequency is a function of the attached mass and the dynamic stiffness in the direction of vibration. The 15 Hz response is normally lower and more desirable than what is usually specified. Heavier weight assignments than the specified minimum will lower the response frequency by the square root of the ratio of the minimum weight to the assigned value multiplied by 15 Hz. Lighter loads will increase the frequency by the same proportion.

EXAMPLE: Steel stud wall with 2 layers of 3/4 inch gypsum board weighing 7.9 lbs. per sq/ft. Sway braces on 4 foot centers both ways.

Assigned Weight = 16 x 7.9 = 126 lbs.
WIC-1 Selection (Maximum 250 lbs)
Frequency = 15Hz x $\sqrt{126/250}$ = 10.65 Hz

SP808
4/07
Printed in U.S.A.