

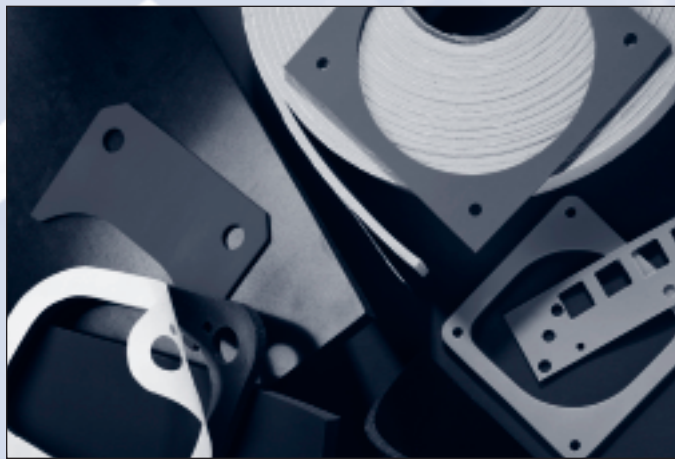
The Source for
Engineered
Solutions

- Noise
- Vibration
- Shock
- Cushioning
- Comfort
- Ergonomics



Product Guide

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Aearo **E·A·R** Specialty[™]
Composites

Toll-Free Solutions Hotline
(877) EAR-IDEA
(327-4332)

For more than 30 years, E-A-R Specialty

Composites has been providing advanced energy control materials and problem-solving technology to OEM markets. E-A-R manufactures the most complete line of noise, vibration and shock control products available from a single source. And E-A-R is the only such producer to offer all the basic materials tools—damping, isolation, barrier, absorption and cushioning materials—for today’s complex OEM design requirements.

E-A-R’s proprietary high performance materials include the ISODAMP® family of damping and damped-isolation molding thermoplastics, VersaDamp™ thermoplastic elastomers with adjustable damping and durometer, TUF COTE® foams, barriers and composites, and specialty materials for the electronics, marine, defense and aerospace industries. It also includes the ISOLOSS family of broad-temperature-range polyurethane elastomers, LS cellular, low compression-set foams, and the CONFOR family of ergonomic, energy-absorbent foams.

With a complete product line, advanced materials technology and extensive analytical capabilities, E-A-R can engineer and deliver cost-efficient, on-target solutions tailored to fit the requirements of virtually any mechanical energy control application.

E-A-R markets products worldwide through a network of technically oriented sales representatives, whose in-depth field knowledge and experience with OEM product and service requirements constitute a primary source of mechanical energy control expertise for design engineers in many OEM markets.

Customers rely on E-A-R products and service for consistently high quality and performance. Facilities in Indianapolis and in Newark, DE—both QS 9000 registered—encompass more than 375,000 square feet of combined capacity, housing state-of-the-art laboratories for OEM product testing, R&D, materials development and quality assurance, as well as complete processing, manufacturing and fabrication operations.

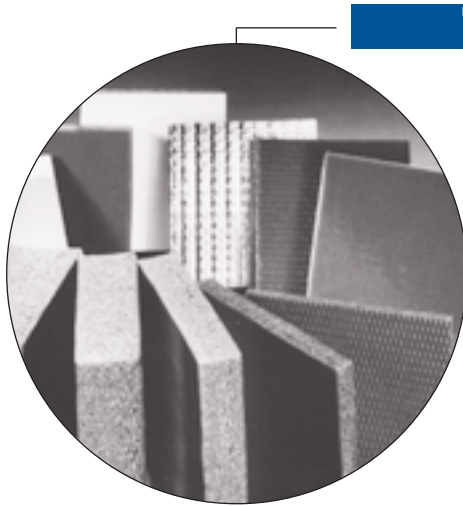
E-A-R is uniquely capable of solving the total range of mechanical energy control problems facing today’s manufacturers. For authoritative, practical assistance with design requirements, E-A-R is all that product designers and manufacturers need to know for noise, vibration, shock, cushioning and motion control.

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A b s o r b i n g F o a m s



TUFCOTE acoustical absorbing foams are widely used to reduce noise levels within a given space—from equipment cabinetry to vehicle cabs.

TUFCOTE foams are produced using a proprietary thin sheet casting process that chemically bonds the foams to a variety of film facings or to barrier and damping materials to form integrated composite products. It is a one-step, on-line process.

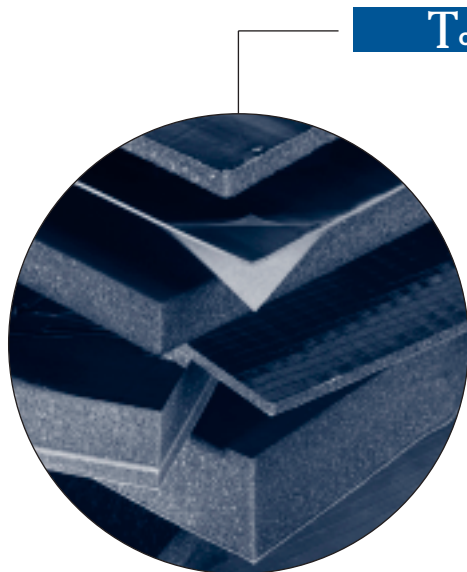
TUFCOTE foams are available in rolls, sheets or as custom die-cut parts, with or

without pressure-sensitive adhesive (PSA) backing, and in thicknesses ranging from .25 inch to 2 inches.

- M-Series foams are formulated specifically for the transportation industry
- E-Series foams are for general OEM use
- H-Series foams feature additional flame retardants
- QUASH® self-supporting sound management foams withstand exposure to fluids, grease and oil
- Foams can be combined with TUFCOTE barriers, a variety of functional facings and PSA backing

Family	Product	Thick (in)	Roll (in) <i>(unless indicated)</i>	Sheet (in) <i>(unless indicated)</i>	Weight <i>(lb/sq ft)</i>
FACED FOAMS Aluminized Facing X=M,E,H	X-25SM	0.25	54 X 266	54 X 72	0.04
	X-50SM	0.50	54 X 266	54 X 72	0.08
	X-75SM	0.75	54 X 266	54 X 72	0.13
	X-100SM	1.00	54 X 266	54 X 72	0.17
	X-150SM	1.50	54 X 133	54 X 72	0.25
	X-200SM	2.00		54 X 72	0.33
Reinforced Aluminized Facing X=M,E	X-25RM	0.25	54 X 266	54 X 72	0.04
	X-50RM	0.50	54 X 266	54 X 72	0.08
	X-75RM	0.75	54 X 266	54 X 72	0.13
	X-100RM	1.00	54 X 266	54 X 72	0.17
	X-200RM	2.00		54 X 72	0.33
Matte Black Polyester Facing X=M,E,H	X-50BP	0.50	54 X 266	54 X 74	0.07
	X-75BP	0.75	54 X 266	54 X 74	0.12
	X-100BP	1.00	54 X 266	54 X 74	0.14
	X-150BP	1.50	54 X 133	54 X 74	0.21
	X-200BP	2.00		54 X 74	0.28
Black Urethane Facing X=M,E	X-50BU	0.50	54 X 266	54 X 74	0.08
	X-75BU	0.75	54 X 266	54 X 74	0.13
	X-100BU	1.00	54 X 266	54 X 74	0.17
	X-200BU	2.00		54 X 74	0.33
Black Tedlar Facing X=M,E	X-50BT	0.50	54 X 266	54 X 72	0.08
	X-100BT	1.00	54 X 266	54 X 72	0.17
Clear Poly. Facing X=M,E	X-100CM	1.00	54 X 266	54 X 72	0.17
TEXTURED SURFACE FOAMS Polyester	E-25TF	0.25	54 x 60 ft		0.04
	E-50TF	0.50	54 X 60 ft		0.08
	E-75TF	0.75	54 X 60 ft		0.13
	E-100TF	1.00	54 X 60 ft		0.17
Polyether X=M,E,H	X-25SF	0.25	54 X 266	54 X 72	0.04
	X-50SF	0.50	54 X 266	54 X 72	0.08
	X-75SF	0.75	54 X 266	54 X 72	0.13
	X-100SF	1.00	54 X 266	54 X 72	0.17
PLAIN FOAMS	E-25	0.25	54 X 60 ft		0.04
	E-50	0.50	54 X 60 ft		0.08
	E-75	0.75	54 X 60 ft		0.13
	E-100	1.00	54 X 60 ft		0.17
RIGID FOAMS QUASH foam	QFR-2301	1.2 (30 mm)		39.4 X 110	0.20
	QFR-2501	2.0 (50 mm)		39.4 X 110	0.33

Barriers / Composites



To meet the physical and performance requirements of virtually any application, E-A-R Specialty Composites offers a complete line of TUF-COTE sound barriers and barrier composites, in a variety of standard and custom configurations.

Incorporating a sound barrier between a noise source and receiver is traditionally one of the most effective means to control the transmission of airborne noise. Barrier materials deflect and contain airborne sound waves by means of their mass. E-A-R's flexible barriers offer distinct advantages over high stiffness materials, which exhibit a coincidence frequency at which they readily transmit noise.

E-A-R's barrier and barrier/absorber composites feature TUF-COTE acoustic foam bonded to one or both sides of a flexible barrier. Available in two- and three-layer configurations, our barrier composites combine excellent noise transmission loss and sound absorption performance with the installation convenience of a single product.

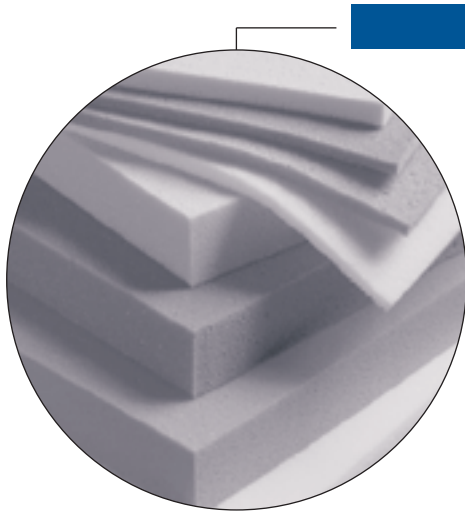
- Loaded vinyl or urethane barriers—no lead content
- Flexible, easy to cut and install
- High transmission loss performance
- Numerous constructions available
- Ideal for demanding environments

Family	Product	Thick (in)	Size (in) <i>(unless indicated)</i>	Unit	Weight <i>(lbs/sq ft)</i>
NON-REINFORCED BARRIERS	WB-5	0.040	54 X 60 ft	ROLL	0.50
	WB-10	0.080	54 X 60 ft	ROLL	1.00
	WB-20	0.160	54 X 30 ft	ROLL	2.00
SPECIAL PURPOSE BARRIERS	MB-75	0.090	38 X 60 ft	ROLL	0.75
	MB-100	0.140	38 X 45 ft	ROLL	1.00
	MB-150	0.190	38 X 30 ft	ROLL	1.50
	EMB-100	0.100	48 X 60 ft	ROLL	1.00
	EMB-150	0.150	48 X 30 ft	ROLL	1.50
PIPE LAG	LAG-10	0.100	48 X 60 ft	ROLL	1.00
BARRIER COMPOSITES**	E-0-5-25	0.29	54 X 60 ft	ROLL	0.54
	E-0-10-25	0.33	54 X 60 ft	ROLL	1.04
	WGB-10-50	0.58	54 X 60 ft	ROLL	1.08
	E-0-10-100	1.06	54 X 30 ft	ROLL	1.16
	R103-10CM-25	0.34	54 X 72*	SHEET	1.04
	R104-10CM-25PSA34	0.35	54 X 72*	SHEET	1.06
	R312-10PSA34-50SM	0.59	54 X 72*	SHEET	1.11
BARRIER/ABSORBER** COMPOSITES	E-25-5-50RM	0.79	54 X 30 ft	ROLL	0.62
	E-25-10-50RM	0.83	54 X 30 ft	ROLL	1.12
	E-25-10-100RM	1.33	54 X 30 ft	ROLL	1.20
	E-25-16-50SM/PSA34	0.90	54 x 84*	SHEET	1.73
	E-25-16-100RM/PSA20	1.30	54 x 68*	SHEET	1.90
	R403-25-10-50SM	0.83	54 X 72*	SHEET	1.12
	R603-25-10-75SM	1.09	54 X 72*	SHEET	1.16
	R803-25-10-100SM	1.35	54 X 72*	SHEET	1.20
	R413-25-10-50RM	0.83	54 X 72*	SHEET	1.12
	R613-25-10-75RM	1.09	54 X 72*	SHEET	1.16
R813-25-10-100RM	1.35	54 X 72*	SHEET	1.20	

* Material will be untrimmed. Usable material size is as listed.

** Other composite constructions can be manufactured

C O N F O R F o a m s



C O N F O R ergonomic foams offer a unique combination of physical characteristics, high energy-absorption properties and temperature-softening behavior. They exhibit unusually low compression set for their low-rebound, highly damped properties. They also provide good energy absorption—up to 97 percent without bottoming out.

CONFOR foams soften on contact with a warm surface—allowing uniform pressure distribution and firm, yet fluid, support. They are ideal for healthcare applications.

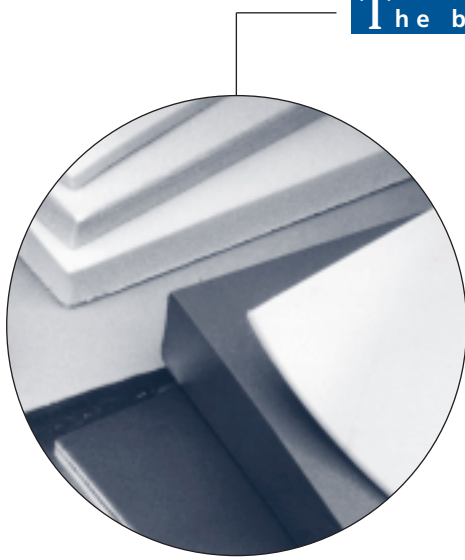
CONFOR foams can provide flexible protection in a variety of *cushioning applications*, from body contact padding to electronics packaging.

- Energy absorbent
- Low rebound
- Temperature-responsive
- Ideal for ergonomic applications
- Lighter, lower density formulations available for specialty applications
- Custom thicknesses also available

Family	Product	Thick (in) (unless indicated)	Size (in) (unless indicated)	Unit	Weight (lb/sq ft)	
CONFOR SHEETS* (40,42,45,47)	CF-40025	0.25	36 X 80	SHEET	0.13	
	CF-40050	0.50	36 X 80	SHEET	0.27	
	CF-40 Series— Soft, Yellow	CF-40075	0.75	36 X 80	SHEET	0.40
	CF-40100	1.00	36 X 80	SHEET	0.53	
CF-42 Series— Med. Soft, Pink	CF-42025	0.25	36 X 80	SHEET	0.13	
	CF-42050	0.50	36 X 80	SHEET	0.27	
	CF-42075	0.75	36 X 80	SHEET	0.40	
	CF-42100	1.00	36 X 80	SHEET	0.53	
CF-45 Series— Med. Firm, Blue	CF-45025	0.25	36 X 80	SHEET	0.13	
	CF-45050	0.50	36 X 80	SHEET	0.27	
	CF-45075	0.75	36 X 80	SHEET	0.40	
	CF-45100	1.00	36 X 80	SHEET	0.53	
CF-47 Series— Firm, Green	CF-47025	0.25	36 X 80	SHEET	0.13	
	CF-47050	0.50	36 X 80	SHEET	0.27	
	CF-47075	0.75	36 X 80	SHEET	0.40	
	CF-47100	1.00	36 X 80	SHEET	0.53	
CONFOR NT* SHEETS (CFNT) Very Soft, Yellow	CFNT-5-13-025	0.25	36 X 80	SHEET	0.11	
	CFNT-5-13-050	0.50	36 X 80	SHEET	0.22	
	CFNT-5-13-075	0.75	36 X 80	SHEET	0.33	
	CFNT-5-13-100	1.00	36 X 80	SHEET	0.44	
CONFOR BUNS Classic	Yellow	CF-40	12.00	36 X 80	BUN	175/BUN
	Pink	CF-42	12.00	36 X 80	BUN	175/BUN
	Blue	CF-45	12.00	36 X 80	BUN	175/BUN
	Green	CF-47	12.00	36 X 80	BUN	175/BUN
CONFOR NT	Yellow	CFNT-5-13	14.5	36 X 80	BUN	175/BUN

*Custom thicknesses also available

Damping / Isolation Materials



The broad range of materials in E-A-R's ISODAMP vinyl and ISOLOSS urethane families offers practical, effective solutions for impact noise and structureborne vibration.

With such extensive lines of damping materials, E-A-R can help achieve high-performance vibration control under diverse physical, temperature and environmental conditions.

There's an ISODAMP damping material specifically designed to prevent ringing in lightweight precision equipment frames or to reduce hydrodynamic vibrations in massive ship hulls—or almost anything in between.

- Minimum weight with maximum performance
- Excellent flame resistance—specific styles to meet UL 94 V-0, FAR, ATS and QPL MIL specifications
- Available with pressure-sensitive adhesive backing, in sheet or die-cut form
- Wide range of choices for discrete thickness and temperature regimes
- Available for extensional, composite and constrained-layer systems
- Flexible, easy to install
- Easily die-, web- or kiss-cut
- Custom sizes and composites available

Family	Product	Thick (in)	Size (in) <i>(unless indicated)</i>	Unit	Weight <i>(lb/sq ft)</i>
ISODAMP SD	SD-40	0.040	54 X 48	SHEET	0.35
	SD-40PSA	0.045	54 X 48	SHEET	0.37
	SD-40ALPSA	0.050	27 X 48	SHEET	0.44
	SD-125PSA	0.125	54 X 48	SHEET	1.11
ISODAMP C-2003	C-2003-05	0.050	54 X 48	SHEET	0.44
	C-2003-05PSA	0.055	54 X 48	SHEET	0.46
	C-2003-12PSA	0.125	54 X 48	SHEET	1.14
	C-2003-19	0.188	54 X 48	SHEET	1.66
	C-2003-19PSA	0.188	54 X 48	SHEET	1.68
ISODAMP C-2206	C-2206-03PSA	0.035	54 X 48	SHEET	0.32
ISODAMP C-2206 COMPOSITES	C-2206PSA-25	0.290	54 X 48	SHEET	0.37
	C-2206PSA-25SF	0.290	54 X 48	SHEET	0.37
	C-2206PSA-50	0.540	54 X 48	SHEET	0.41
	C-2206PSA-50SF	0.540	54 X 48	SHEET	0.41
ISODAMP CN SHEET	CN-12	0.125	27 X 48	SHEET	0.90
ISODAMP CN TILE	CN-12	0.125	12 X 12	TILE	0.90
	CN-38	0.350	12 X 12	TILE	2.70
	CN-62	0.560	12 X 12	TILE	4.50
TAD DAMPING FOIL	D001-05PSA	0.007	27 X 48	SHEET	0.07
ISODAMP C-3001	C-3001-25	0.250	54 X 120 ft	ROLL	0.23
	C-3001-25PSA	0.250	54 X 120 ft	ROLL	0.23
	C-3001-50	0.500	54 X 60 ft	ROLL	0.46
	C-3001-50PSA	0.500	54 X 60 ft	ROLL	0.46
ISODAMP C-3002	C-3002-12	0.125	54 X 240 ft	ROLL	0.07
	C-3002-12PSA	0.125	54 X 240 ft	ROLL	0.09
	C-3002-25	0.250	54 X 120 ft	ROLL	0.14
	C-3002-25PSA	0.250	54 X 120 ft	ROLL	0.16
	C-3002-50	0.500	54 X 60 ft	ROLL	0.28
	C-3002-50PSA	0.500	54 X 60 ft	ROLL	0.30

Family	Product	Thick (in)	Size (in) <i>(unless indicated)</i>	Unit	Weight <i>(lbs/sq ft)</i>
ISODAMP C-3201	C-3201-25	0.250	54 X 120 ft	ROLL	0.14
	C-3201-25PSA	0.250	54 X 120 ft	ROLL	0.16
	C-3201-50	0.500	54 X 60 ft	ROLL	0.27
	C-3201-50PSA	0.500	54 X 60 ft	ROLL	0.29
ISODAMP C-3202	C-3202-25	0.250	54 X 120 ft	ROLL	0.14
	C-3202-25PSA	0.250	54 X 120 ft	ROLL	0.16
	C-3202-50	0.500	54 X 60 ft	ROLL	0.27
	C-3202-50PSA	0.500	54 X 60 ft	ROLL	0.29
AIRCRAFT DAMPING COMPOSITES	ADC-005	0.040	54 X 48	SHEET	0.37
	ADC-006	0.050	27 X 48	SHEET	0.44
	ADC-122	0.310	54 X 48	SHEET	0.60
	ADC-124	0.255	27 X 48	SHEET	0.22
	ADC-125	0.300	54 X 48	SHEET	0.51
	ADC-126	0.300	27 X 48	SHEET	0.59
	ADC-152	0.560	54 X 48	SHEET	0.67
	ADC-156	0.550	27 X 48	SHEET	0.72
	ADC-224	0.258	27 X 48	SHEET	0.22
	ADC-226	0.300	27 X 48	SHEET	0.59
	ADC-252	0.560	54 X 48	SHEET	0.59
	ADC-324	0.255	27 X 48	SHEET	0.25
	ADC-326	0.300	54 X 48	SHEET	0.59
	ADC-352	0.560	54 X 48	SHEET	0.67
ISODAMP DAMPED DECOUPLED BARRIERS	E-2D25-5-0	0.290	54 X 48	SHEET	0.64
	E-2D50-5-0	0.540	54 X 48	SHEET	0.77
	E-2D25-10-0	0.330	52 X 60 ft	ROLL	1.14
	E-2D50-10-0	0.580	52 X 60 ft	ROLL	1.27
ISODAMP C-1002	C-1002-01	0.015	54 X 10 ft	ROLL	0.10
	C-1002-01	0.015	54 X 120 ft	ROLL	0.10
	C-1002-03	0.030	54 X 10 ft	ROLL	0.20
	C-1002-03	0.030	54 X 120 ft	ROLL	0.20
	C-1002-06	0.062	54 X 10 ft	ROLL	0.40
	C-1002-06	0.062	54 X 120 ft	ROLL	0.40
	C-1002-12	0.125	54 X 10 ft	ROLL	0.80
	C-1002-12	0.125	54 X 60 ft	ROLL	0.80
	C-1002-25	0.250	54 X 48	SHEET	1.60
	C-1002-25	0.250	54 X 10 ft	ROLL	1.60
	C-1002-50	0.500	12 X 48	SHEET	3.20
	C-1002-99	1.000	24 X 24	SHEET	6.40
ISODAMP C-1100	C-1100-06	0.062	54 X 10 ft	ROLL	0.40
	C-1100-06	0.062	54 X 120 ft	ROLL	0.40
	C-1100-12	0.125	54 X 10 ft	ROLL	0.80
	C-1100-12	0.125	54 X 60 ft	ROLL	0.80
ISOLOSS HD	HD-03	0.030	20 X 20	SHEET	0.20
	HD-06	0.062	20 X 20	SHEET	0.40
	HD-12	0.125	20 X 20	SHEET	0.81
	HD-25	0.250	20 X 20	SHEET	1.62
ISOLOSS HDF	HDF-03PSA	0.030	20 X 20	SHEET	0.20
ISOLOSS VL	VL-06	0.062	20 X 20	SHEET	0.50
	VL-12	0.125	20 X 20	SHEET	1.00
ISOLOSS NV	NV-3520S	0.040	54 X 48	SHEET	0.36
	NV-3534S	0.040	54 X 48	SHEET	0.36
	NV-7520S	0.080	54 X 48	SHEET	0.78
ISOLOSS NV COMPOSITES	NV-3520-100SM	1.040	54 X 48	SHEET	0.49
	NV-7520-100SM	1.080	54 X 48	SHEET	0.91

I S O L O S S L S F o a m s



As fine-celled, low compression-set, high density polyurethane foams, ISOLOSS LS materials offer unique combinations of design features for difficult mechanical energy control problems.

ISOLOSS LS products exhibit very low compression set and excellent resistance to collapse as well as good shock cushioning and vibration isolation performance. They also feature low outgassing and good dimensional stability, with tight thickness tolerances.

ISOLOSS LS foams are easily and cleanly die cut, and can be fabricated with various facings and combinations of pressure sensitive adhesives (PSAs). PSA backings simplify parts installation and reduce product assembly costs.

Lightweight vibration isolation applica-

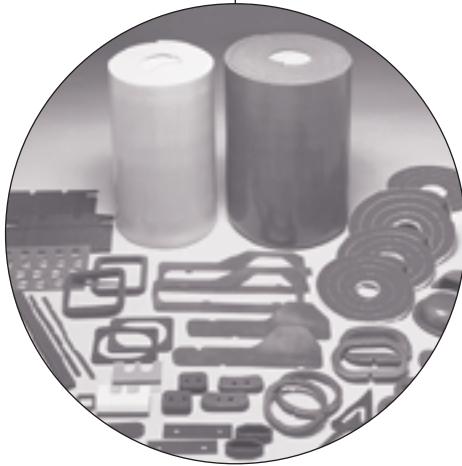
tions take advantage of the foams' low stiffness, high strength and controlled compression characteristics.

Good durability, resilience and high energy absorption make the foams ideal for cushioning and shock applications, in plain form or laminated to fabrics, scrims or other facings. ISOLOSS LS materials also make excellent gaskets and seals.

- Meet UL50, 157, 508 and 514B standards as gaskets and seals
- Low compression set
- High energy absorption
- Effective vibration isolation
- Low outgassing
- High internal strength
- Good chemical and flame resistance
- Broad temperature use
- Available in a range of thicknesses and densities

Family	Product	Thick (in)	Size (in) <i>(unless indicated)</i>	Unit	Weight <i>(lb/sq ft)</i>
ISOLOSS LS FOAMS	LS-2503	0.032	54 X 300 ft	ROLL	0.06
	LS-2006	0.062	54 X 300 ft	ROLL	0.10
	LS-2012	0.125	54 X 160 ft	ROLL	0.20
	LS-1512	0.125	54 X 160 ft	ROLL	0.16
	LS-1519	0.187	54 X 100 ft	ROLL	0.23
	LS-1525	0.250	54 X 80 ft	ROLL	0.31
	LS-1537	0.375	54 X 60 ft	ROLL	0.47
	LS-1025LM	0.250	54 X 80 ft	ROLL	0.21
ISOLOSS LS SAMPLE ROLLS	LS-2503	0.032	54 X 10 ft	ROLL	0.06
	LS-2006	0.062	54 X 10 ft	ROLL	0.10
	LS-2012	0.125	54 X 10 ft	ROLL	0.20
	LS-1512	0.125	54 X 10 ft	ROLL	0.16
	LS-1519	0.187	54 X 5 ft	ROLL	0.23
	LS-1525	0.250	54 X 5 ft	ROLL	0.31
	LS-1537	0.375	54 X 5 ft	ROLL	0.47
	LS-1025LM	0.250	54 X 5 ft	ROLL	0.21

S u p e r S h e e t F o a m s



SuperSheet materials are low-density polyurethane foams featuring excellent water resistance characteristics and physical properties that make them ideal for gasketing and sealing applications.

SuperSheet foams compress with relatively little pressure, allowing their use in lightweight assemblies. With very low compression set, the materials provide an excellent alternative to EPDM seals.

In standard form, SuperSheet foams have a thin water-resistant skin on both upper and lower surfaces. The foams are produced as cast materials

in four standard grades and in two custom lower-density formulations. Standard thicknesses range from 3 mm to 15 mm. SuperSheet foams provide cost-effective gaskets in a variety of markets and applications, including automotive, marine vehicles, RVs, appliances, cabinetry and small equipment.

- Excellent water and air seal properties
- Resistant to compression set
- Soft, yet strong
- Die cut easily and cleanly
- Available in a variety of thicknesses

Family	Number of Sides Skinned	Thick		Size (in)	Unit	Density
		<i>(in)</i>	<i>(mm)</i>	<i>(unless indicated)</i>		<i>(lb/cu ft)</i>
SUPERSHEET H Series	1	.12	3	38.19 X 98.4 ft	ROLL	3.8
	1	.16	4	38.19 X 98.4 ft	ROLL	
	1	.20	5	38.19 X 98.4 ft	ROLL	
	2	.24	6	38.19 X 98.4 ft	ROLL	3.4
	2	.32	8	38.19 X 98.4 ft	ROLL	
	2	.40	10	38.19 X 98.4 ft	ROLL	3.2
	2	.60	15	38.19 X 65.6 ft	ROLL	
SUPERSHEET H3 Series	1	.14	3.5	38.19 X 98.4 ft	ROLL	4.0
	1	.20	5	38.19 X 98.4 ft	ROLL	3.8
	1	.30	7.5	38.19 X 98.4 ft	ROLL	
	2	.40	10	38.19 X 98.4 ft	ROLL	3.6
	2	.60	15	38.19 X 65.6 ft	ROLL	
	2	.80	20	38.19 X 65.6 ft	ROLL	
SUPERSHEET H4 Series	2	.20	5	38.19 X 98.4 ft	ROLL	3.7
	2	.24	6	38.19 X 98.4 ft	ROLL	3.6
	2	.32	8	38.19 X 98.4 ft	ROLL	
	2	.40	10	38.19 X 98.4 ft	ROLL	3.5
SUPERSHEET H6 Series	2	.20	5	38.19 X 98.4 ft	ROLL	3.8
	2	.24	6	38.19 X 98.4 ft	ROLL	3.5

G r o m m e t s / M o u n t s

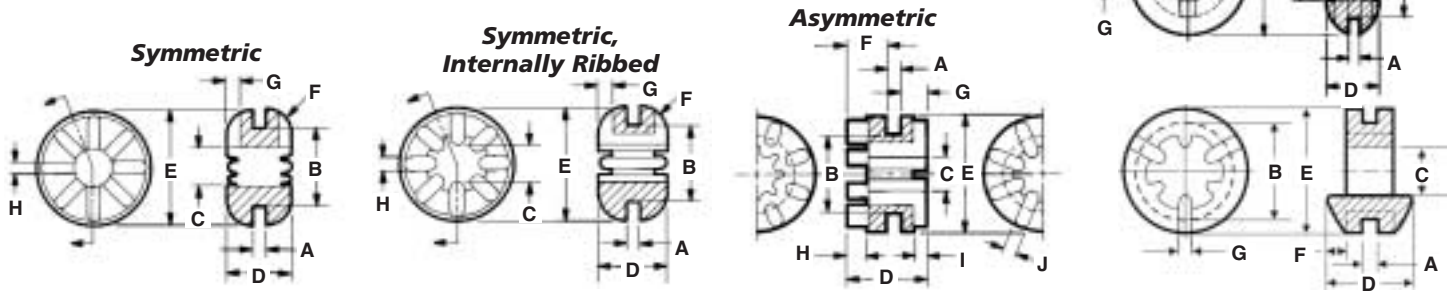
The interrelated dynamics of multiple motors, fans or blowers, actuators and other mechanisms inside OEM and transportation equipment can present problems that prove nearly impossible to define precisely. And product designers also must consider noise control, not to mention unpredictable vibration and shock inputs from external sources.



That process has been simplified, though, with a broad line of standard isolators and mounts molded from proprietary, highly damped ISODAMP, VersaDamp and ISOLOSS elastomers. With numerous configurations and materials formulations available, E-A-R isolators offer extensive design flexibility. Custom-engineered isolators, plus the versatility of VersaDamp TPE (thermo-plastic elastomer) materials with selectable damping and durometer—expand the options even further. (See page 14.)

E-A-R mounts can provide shock control for computer disk drives, meeting demanding space constraints of even miniature and sub-miniature drives. They also control noise, vibration, shock and motion in computer printers and peripherals, and in precision equipment of all types, including medical, office and laboratory equipment.

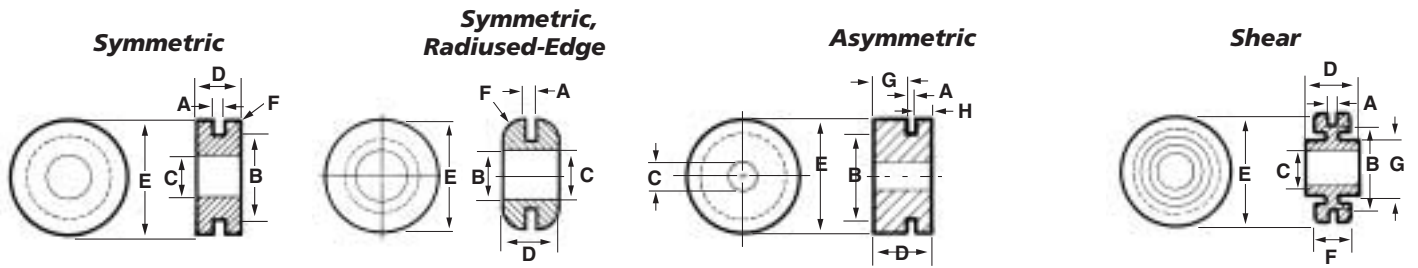
- Provide high performance energy control in minimum sway space
- Variety of formulations, engineered to perform in discrete temperature ranges
- Soft and pliable yet physically strong
- Excellent physical integrity



Family	Product	Load (lbs)	Dimensions (inches)								
			A Plate Thckns.	B Hole Diam.	C Inside Diam.	D Overall Height	E Outside Diam.	F Edge Radius	G Rib Height	H Rib Width	
ISODAMP / VersaDamp	RIBBED GROMMETS Symmetric	G-401	6.0	.063	.375	.224	.313	.563	.125	.063	.063
		G-402	6.0	.125	.375	.226	.375	.563	.125	.063	.063
		G-403	6.0	.063	.375	.276	.313	.625	.125	.063	.063
		G-404	6.0	.125	.375	.281	.375	.625	.125	.063	.063
	Symmetric, Internally Ribbed	G-410	3.0	.057	.250	.158	.230	.379	.050	.040	.050
		G-411	6.0	.063	.375	.188	.323	.563	.130	.063	.063
	G-412	3.0	.031	.250	.158	.230	.379	.050	.040	.050	
	G-414	6.0	.043	.375	.188	.323	.563	.130	.063	.063	
Asymmetric	G-430	5.0	.055	.375	.180	.395	.560	.210/.130	.100/.065	.062	
	G-431	8.0	.055	.560	.172	.390	.750	.210/.125	.100/.065	.062	
Symmetric, Low-Load	G-427	1.5	.049	.312	.180	.194	.440	.025	.056		
	G-461	0.3	.037	.298	.157	.271	.393	.063	.051		
	G-462	0.3	.047	.304	.153	.276	.393	.063	.051		

For C-1002 material, indicate "-1" after part number (e.g. G-401-1)
 For C-1105 material, indicate "-2" after the part number (e.g. G-401-2)
 For C-1100 material, indicate "-3" after the part number (e.g. G-401-3)
 For C-8002 material, indicate "-8" after the part number (e.g. G-401-8)
 For VersaDamp material, indicate "-formulation number" after the part number (e.g. G-401-2325)
 Dimensions given here are nominal. Exact specification print available on request.

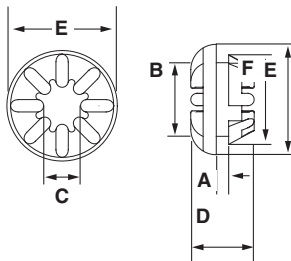
	C-1002	C-1105	C-1100	C-8002	VersaDamp
Grommet Color	Blue	Turquoise	Yellow	Sky Blue	Black
Peak Performance Temp. Range at 1000 Hz	55F-105F (13C-41C)	80F-130F (27C-54C)	95F-145F (35C-63C)	62F-105F (17C-41C)	-40F-122F (-40C-50C)



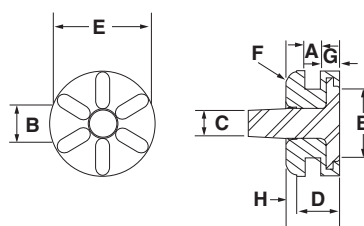
Family	Product	Load (lbs)	Dimensions (inches)								
			A Plate Thckns.	B Hole Diam.	C Inside Diam.	D Overall Height	E Outside Diam.	F Edge Radius	G Lg. Flg. Height	H Sm. Flg. Height	
ISODAMP/VersaDamp	NON-RIBBED GROMMETS Symmetric	G-501	17.0	.060	.360	.187	.120	.500	n/a	n/a	n/a
		G-502	17.0	.063	.338	.182	.182	.500	n/a	n/a	n/a
		G-503	10.0	.054	.244	.190	.306	.385	.020	n/a	n/a
		G-504	13.0	.063	.309	.183	.187	.437	n/a	n/a	n/a
		G-505	17.0	.062	.375	.190	.175	.500	n/a	n/a	n/a
		G-506	14.0	.043	.319	.177	.220	.460	.020	n/a	n/a
		G-507	40.0	.070	.503	.277	.396	.751	.050	n/a	n/a
	Sym., Radiused-Edge	G-521	25.0	.062	.375	.270	.325	.625	.125	n/a	n/a
	Asymmetric	G-511	40.0	.063	.562	.180	.395	.753	n/a	.214	.118
		G-512	26.0	.115	.437	.245	.620	.625	n/a	.380	.125
		G-513	40.0	.078	.500	.304	.500	.750	n/a	.290	.132

			A Plate Thckns.	B Hole Diam.	C Inside Diam.	D Overall Height	E Outside Diam.	F Flange Thckns.	G Boss Out. Diam.	—
Shear	G-601	2.0	.056	.560	.248	.375	.750	.235	.375	—

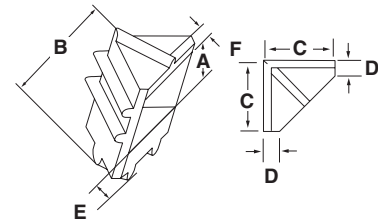
Plug Grommet



Pin Grommet



Corner Bumper



Family	Product	Dimensions (inches)					
		A Plate Thckns.	B Hole Diam.	C Inside Diam.	D Overall Height	E Outside Diam.	F Snap-fit Diam.
ISODAMP/VersaDamp	P-410	.057	.250	.158	.255	.379	.344
	P-411	.063	.395	.188	.323	.563	.457
	P-415	.039	.250	.158	.255	.379	.365

Dimensions (mm)

		A Plate Thckns.	B Hole Diam.	C Pin Diam.	D Grommet Height	E Outside Diam.	F Edge radius.	G Lg Flg. Height	H Sm Flg. Height
PIN GROMMETS	PG-101	1.5	6.4	2.5	5.0	9.8	1.27	1.75	1.75

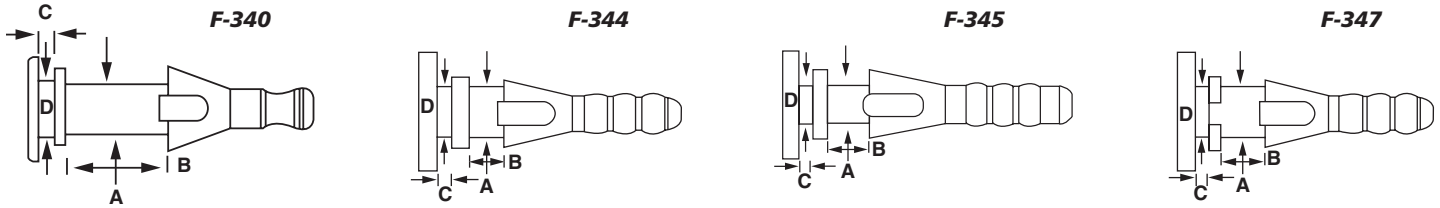
Dimensions (mm)

		A Drive Thckns.	B Bumper Height	C Bumper Length	D Side Wall Thckns.	E Bottom Wall Thckns.	F Top Wall Thckns.
CORNER BUMPERS	CB-100	5.0	9.75	6.00	1.5	1.5	3.25
	CB-101	5.0	8.00	6.75	1.5	1.5	1.50

For C-1002 material, indicate "-1" after part number (e.g. G-401-1)
 For C-1105 material, indicate "-2" after the part number (e.g. G-401-2)
 For C-1100 material, indicate "-3" after the part number (e.g. G-401-3)
 For C-8002 material, indicate "-8" after the part number (e.g. G-401-8)
 For VersaDamp material, indicate "-formulation number" after the part number (e.g. G-401-2325)
 Dimensions given here are nominal. Exact specification print available on request.

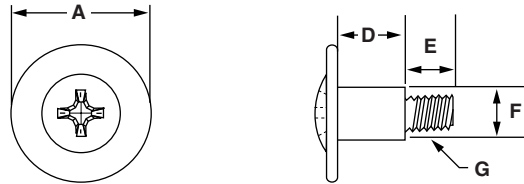
	C-1002	C-1105	C-1100	C-8002	VersaDamp
Grommet Color	Blue	Turquoise	Yellow	Sky Blue	Black
Peak Performance Temp. Range at 1000 Hz	55F-105F (13C-41C)	80F-130F (27C-54C)	95F-145F (35C-63C)	62F-105F (17C-41C)	-40F-122F (-40C-50C)

Fan Mounts



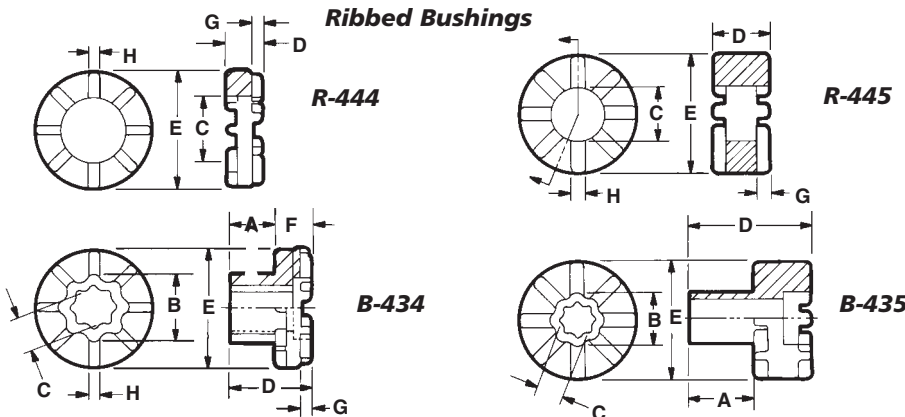
Family	Description	Dimensions (mm)			
ISODAMP/VersaDamp		A Fan Hole Diam.	B Fan Hole Depth	C Plate Thckns.	D Plate Hole Diam.
FAN MOUNTS	F-340	2.5	5.0	.80	2.75
	F-344	4.4	3.0	1.3	4.4
	F-345	3.5	3.8	1.3	3.5
	F-347	4.4	4.5	0.8	4.5

Shoulder Bolts

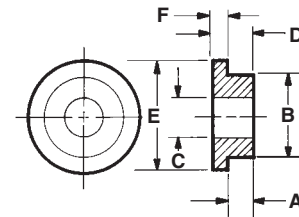


Family	Product		Dimensions (mm)				
Shoulder Bolts		Use With	A Head Diam.	D Shoulder Length	E Thread Length	F Shoulder Diam.	G Thread
SHOULDER BOLTS	SB-4102	G-410	.350	.214	.215-.185	.161	6-32 UNC-2A
	SB-4105	G-410	.350	.214	.150-.126	.161	M3-0.5
	SB-4107	G-410	.350	.214	.215-.185	.161	M3-0.5
	SB-4112	G-411	.500	.300	.215-.185	.196	6-32 UNC-2A
	SB-4114	G-411	.500	.300	.215-.185	.194	M4-0.7
	SB-4118	G-411	.500	.250	.215-.185	.188	6-32 UNC-2A

Ribbed Bushings



Non-ribbed Bushings

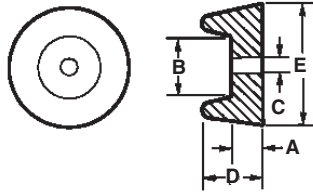


Family	Product	Load (lbs)	Dimensions (inches)							
ISODAMP/VersaDamp		Recommended Maximum	A Shank Height	B Shank Diam.	C Inside Diam.	D Overall Height	E Flange Diam.	F Flange Height	G Rib Height	H Rib Width
BUSHINGS Ribbed	R-444	10.0	n/a	n/a	.460	.250	.813	n/a	.078	.085
	B-434	10.0	.313	.469	.260	.563	.813	.250	.078	.085
	R-445	25.0	n/a	n/a	.457	.520	1.000	n/a	.132	.125
	B-435	25.0	.544	.473	.260	1.060	1.000	.516	.132	.135
Non-Ribbed	B-531	17.0	.120	.360	.189	.175	.500	.055	n/a	n/a
	B-532	40.0	.139	.420	.271	.259	.750	.120	n/a	n/a
	B-533	100.0	.085	.750	.427	.325	1.265	.240	n/a	n/a

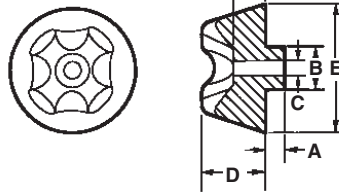
For C-1002 material, indicate "-1" after part number (e.g. G-401-1)
 For C-1105 material, indicate "-2" after the part number (e.g. G-401-2)
 For C-1100 material, indicate "-3" after the part number (e.g. G-401-3)
 For C-8002 material, indicate "-8" after the part number (e.g. G-401-8)
 For VersaDamp material, indicate "-formulation number" after the part number (e.g. G-401-2325)
 Dimensions given here are nominal. Exact specification print available on request.

	C-1002	C-1105	C-1100	C-8002	VersaDamp
Grommet Color	Blue	Turquoise	Yellow	Sky Blue	Black
Peak Performance Temp. Range at 1000 Hz	55F-105F (13C-41C)	80F-130F (27C-54C)	95F-145F (35C-63C)	62F-105F (17C-41C)	-40F-122F (-40C-50C)

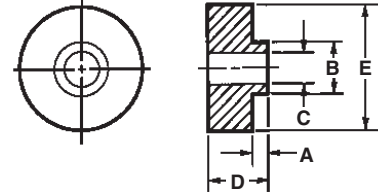
Mounting Feet



Mounting Feet

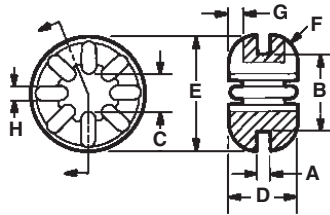


Equipment Mounts

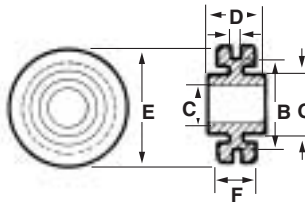


Family	Product	Load (lbs)	Dimensions (inches)						
			A	B	C	D	E	F	
ISODAMP		<i>Recommended Maximum</i>	<i>Bolt Flg. Height</i>	<i>Bolt Flg. Diam.</i>	<i>Inside Diam.</i>	<i>Overall Height</i>	<i>Outside Diam.</i>	<i>Bolt Flg. Height</i>	
	C-1002	MF-1010	15.0	.270	.493	.123	.521	.982	n/a
	MOUNTING FEET	MF-1010PSA	15.0	.270	.493	.123	.521	.982	n/a
			<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	
			<i>Shank Height</i>	<i>Shank Diam.</i>	<i>Inside Diam.</i>	<i>Mount Height</i>	<i>Mount Diam.</i>	<i>Bolt Flg. Height</i>	
C-1002	MOUNTING FEET	L-020	20.0	.215	.500	.194	.755	1.502	.410
		L-021	20.0	n/a	n/a	.194	.755	1.502	.410
		L-030	20.0	.215	.509	.325	.755	1.502	.410
		L-031	20.0	n/a	n/a	.320	.755	1.502	.410
C-1002	EQUIPMENT MOUNTS	ML-4250	70.0	.125	.500	.327	.625	1.172	n/a
		ML-42100	140.0	.188	.750	.443	.820	1.656	n/a
		ML-42200	300.0	.260	1.010	.575	1.007	2.371	n/a
		ML-42500	700.0	.355	1.000	.549	1.385	3.667	n/a

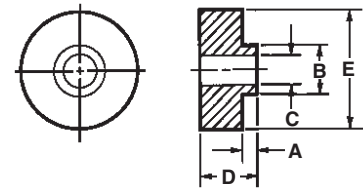
Symmetric, Internally Ribbed



Shear



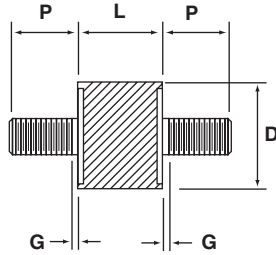
Equipment Mounts



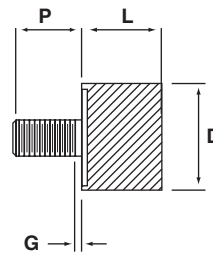
Family	Description	Load (lbs)	Dimensions (inches)							
			A	B	C	D	E	F	G	H
ISOLOSS		<i>Recommended Maximum</i>	<i>Plate Thckns.</i>	<i>Hole Diam.</i>	<i>Inside Diam.</i>	<i>Overall Height</i>	<i>Outside Diam.</i>	<i>Edge Radius</i>	<i>Rib Height</i>	<i>Rib Width</i>
	HD/VL GROMMETS									
Symmetric, Internally Ribbed	G-411-H	6.0	.063	.375	.188	.313	.555	.125	.063	.063
	G-411-V	1.0	.063	.375	.188	.323	.563	.130	.063	.063
			<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>
			<i>Plate Thckns.</i>	<i>Hole Diam.</i>	<i>Inside Diam.</i>	<i>Overall Height</i>	<i>Outside Diam.</i>	<i>Flange Thckns.</i>	<i>Boss Out. Diam.</i>	<i>Rib Width</i>
Shear	G-601-H	2.0	.056	.565	.245	.375	.750	.237	.375	n/a
	G-601-V	0.3	.050	.569	.245	.380	.755	.245	.380	n/a
			<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>
			<i>Shank Height</i>	<i>Shank Diam.</i>	<i>Inside Diam.</i>	<i>Overall Height</i>	<i>Flange Diam.</i>	<i>Flange Thckns.</i>	<i>Boss Out. Diam.</i>	<i>Rib Width</i>
EQUIPMENT MOUNTS	ML-4250-H	70.0	.125	.495	.309	.629	1.169	n/a	n/a	n/a
	ML-4250-V	10.0	.126	.500	.313	.638	1.190	n/a	n/a	n/a

"H" after part number indicates ISOLOSS HD material; "V" after part number indicates ISOLOSS VL material. Dimensions given here are nominal. Exact specification print available on request.

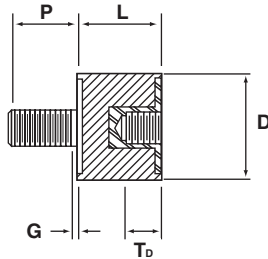
Male-Male Sandwich Mounts



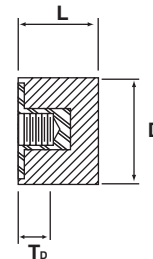
Male-Blank Sandwich Mounts



Male-Female Sandwich Mounts



Female-Blank Sandwich Mounts



Family	Product	Load (lbs)		Dimensions		Metal Insert				
		Maximum Compressive	Maximum Shear	D Diam. (in)	L Length (in)	Type	P Overall Height	G Grip (in)	T _D Depth (in)	
ISOLOSS										
HD/VL SANDWICH MOUNTS	Male-Male	MM-100-UC04-H	4.0	1.5	.275	.320	#4-40	.200	.060	n/a
		MM-100-UC04-V	0.5	0.2	.280	.320	#4-40	.200	.060	n/a
		MM-200-UC06-H	8.0	3.0	.400	.500	#6-32	.375	.060	n/a
		MM-200-UC06-V	1.0	0.4	.405	.500	#6-32	.375	.060	n/a
		MM-200-UC08-H	8.0	3.0	.400	.500	#8-32	.375	.060	n/a
		MM-200-UC08-V	1.0	0.4	.400	.500	#8-32	.375	.060	n/a
		MM-300-UC25-H	20.0	5.0	.615	.625	1/4-20	.500	.100	n/a
		MM-400-UC31-H	50.0	13.0	1.00	.750	5/16-18	.625	.100	n/a
	Male-Blank	MB-100-UC04-H	4.0		.275	.320	#4-40	.200	.060	n/a
		MB-100-UC04-V	0.5		.280	.320	#4-40	.200	.060	n/a
		MB-200-UC06-H	8.0		.400	.500	#6-32	.375	.060	n/a
		MB-200-UC06-V	1.0		.405	.500	#6-32	.375	.060	n/a
		MB-200-UC08-H	8.0		.400	.500	#8-32	.375	.060	n/a
		MB-200-UC08-V	1.0		.405	.500	#8-32	.375	.060	n/a
MB-300-UC25-H		20.0		.615	.625	1/4-20	.500	.100	n/a	
MB-400-UC31-H		50.0		1.00	.750	5/16-18	.625	.100	n/a	
Male-Female	MF-100-UC04-H	2.0	0.8	.275	.320	#4-40	.200	.060	.110	
	MF-100-UC04-V	0.3	0.1	.280	.320	#4-40	.200	.060	.110	
	MF-200-UC06-H	4.0	2.0	.400	.500	#6-32	.375	.060	.160	
	MF-200-UC06-V	0.6	0.3	.405	.500	#6-32	.375	.060	.160	
	MF-200-UC08-H	4.0	2.0	.400	.500	#8-32	.375	.060	.160	
	MF-200-UC08-V	0.6	0.3	.405	.500	#8-32	.375	.060	.160	
	MF-300-UC25-H	12.0	3.5	.615	.625	1/4-20	.500	.100	.260	
	MF-400-UC31-H	45.0	10.0	1.00	.750	5/16-18	.625	.100	.290	
Female-Blank	FB-100-UC04-H	2.0		.275	.320	#4-40	n/a	n/a	.110	
	FB-100-UC04-V	0.3		.280	.320	#4-40	n/a	n/a	.110	
	FB-200-UC06-H	4.0		.400	.500	#6-32	n/a	n/a	.160	
	FB-200-UC06-V	0.6		.405	.500	#6-32	n/a	n/a	.160	
	FB-200-UC08-H	4.0		.400	.500	#8-32	n/a	n/a	.160	
	FB-200-UC08-V	0.6		.405	.500	#8-32	n/a	n/a	.160	
	FB-300-UC25-H	12.0		.615	.625	1/4-20	n/a	n/a	.260	
	FB-400-UC31-H	45.0		1.00	.750	5/16-18	n/a	n/a	.290	

"H" after part number indicates ISOLOSS HD material; "V" after part number indicates ISOLOSS VL material. Dimensions given here are nominal. Exact specification print available on request.

Molding Materials / Custom Parts



For custom- engineered parts to control noise, vibration or shock, E-A-R offers numerous moldable thermoplastic and thermoset materials to choose from.

Thermoplastics: ISODAMP C-1000 Series Thermoplastics are highly damped vinyl materials that exhibit extremely low amplification at resonance and quick return to system equilibrium after shock input. C-1000 Series materials are soft and pliable, yet physically strong and wear-resistant. The three formulations are engineered to perform in discrete temperature ranges: ISODAMP C-1002 from 13C to 41C (55F to 105F); C-1105 from 27C to 54C (80F to 130F); and C-1100 from 35C to 63C (95F to 145F).

ISODAMP C-8000 Series Thermoplastics are highly damped elastomers that provide the same benefits of the C-1000 series materials in a non-PVC formulation. They are also formulated to be environmentally clean; providing excellent flammability performance (UL 94 V-0) without halogens, silicones or metal oxides. This unique family of elastomers will meet most of the emerging environmentally “green” initiatives and specifications. ISODAMP C-8000 materials have a peak performance temperature range of 17C to 41C (62F to 105F).

Thermoplastic Elastomers (TPEs): VersaDamp 2000 Series TPEs are olefinic dynamic vulcanizates. They are usually selected to optimize damping performance or durometer or both. The materials eliminate the need to make tradeoffs in damping and operating temperature range. They feature durometers ranging from 40 Shore A to 74 Shore A, and they have widely varying energy control capabilities.

Thermosets: ISOLOSS HD Elastomers exhibit excellent load bearing strength, compression-set resistance and stiffness stability over a broad temperature range. With a recommended maximum continuous operating temperature of 90C (195F), the materials can withstand intermittent exposure as high as 107C (225F). Designed specifically for use in metal-bonded elastomeric mounts, these elastomers exhibit excellent environmental-resistance properties.

ISOLOSS VL Elastomers combine extremely low modulus and good damping performance with stable material properties and strength throughout a useful temperature range of 0C to 32C (32F to 90F). VL molded parts maintain a stable natural frequency and effectively damp system resonances despite wide shifts in temperature.

Typical Properties

Property	ISODAMP C-1002	ISODAMP C-1105	ISODAMP C-1100	ISODAMP C-8002	VersaDamp V-2325	VersaDamp V-2590	VersaDamp V-2725	ISOLOSS HD	ISOLOSS VL
Description	Vinyl Solid	Vinyl Solid	Vinyl Solid	TPE Solid	TPE Solid	TPE Solid	TPE Solid	Urethane Solid	Urethane Solid
Typical Process Method	Injection Mold	Injection Mold	Injection Mold	Injection Mold	Injection Mold	Injection Mold	Injection Mold	Transfer/Compression Mold	Transfer/Compression Mold
Peak Transmissibility at Resonance (dB)	3	3	3	3	13	7	11	3	6
Hardness Nominal ASTM D2240 15 sec impact at 23C (73F) Shore A Durometer	56	63	70	56	40	57	74	58	24
Bashore Resilience 1st Rebound (%)	4.8	5.4	5.7	4.0	40	12.0	35	4.5	23.0
Tensile Strength (psi)	1574	1807	2058	1150	380	653	976	1300	256
Elongation (%)	459	417	317	750	278	344	381	424	900
Post Compression Recovery (%) at 20C (68F)	86	77	76	82	90	85	80	96	96
Resistance to:									
Ozone	Good	Good	Good	Good	Good	Good	Good	Good	Good
Water	Good	Good	Good	Good	Good	Good	Good	Good	Good
UV	Good	Good	Good	Fair	Good	Good	Good	Good	Good
Kerosene	Fair	Fair	Fair	Poor	Poor	Poor	Poor	Fair	Poor

See material summary sheets for more data and testing method information. The data listed in this guide are typical or average values based on tests conducted by independent laboratories or by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed maximums or minimums. Materials must be tested under actual service to determine their suitability for a particular purpose.

It's easy to get more information

Toll-Free Solutions Hotline:
(877) EAR-IDEA (327-4332)

Customer Service Fax:
(317) 692-3111

Website:
www.earsc.com

Electronics Website:
www.earshockandvibe.com

E-mail:
solutions@earsc.com

The solution to your noise, vibration or cushioning problem could be simply a phone conversation away. Just give us a call if you'd like additional product literature, if you'd like to talk to an E-A-R engineer or if you need to determine the availability of materials listed in this catalog. We'd be happy to discuss your specific application, explain our materials and technology or even send you samples of our products.

For additional information about...

Ask for Materials Summary Sheet...

- Absorbing Foams 1
- Barriers 2
- Barrier Composites 3
- Damping Materials 4
- Damping Composites 5
- Isolation Materials 6
- Grommets/Mounts/Molding Materials 7
- ISOLOSS LS High Density Foams . . 8
- CONFOR Ergonomic Foams 9
- Adhesives 10
- SuperSheet Gasketing Foams 11



Website: www.earsc.com
E-mail: solutions@earsc.com

7911 Zionsville Road
Indianapolis, IN 46268
(317) 692-1111
Fax (317) 692-3111

650 Dawson Drive
Newark, DE 19713
(302) 738-6800
Fax (302) 738-6811