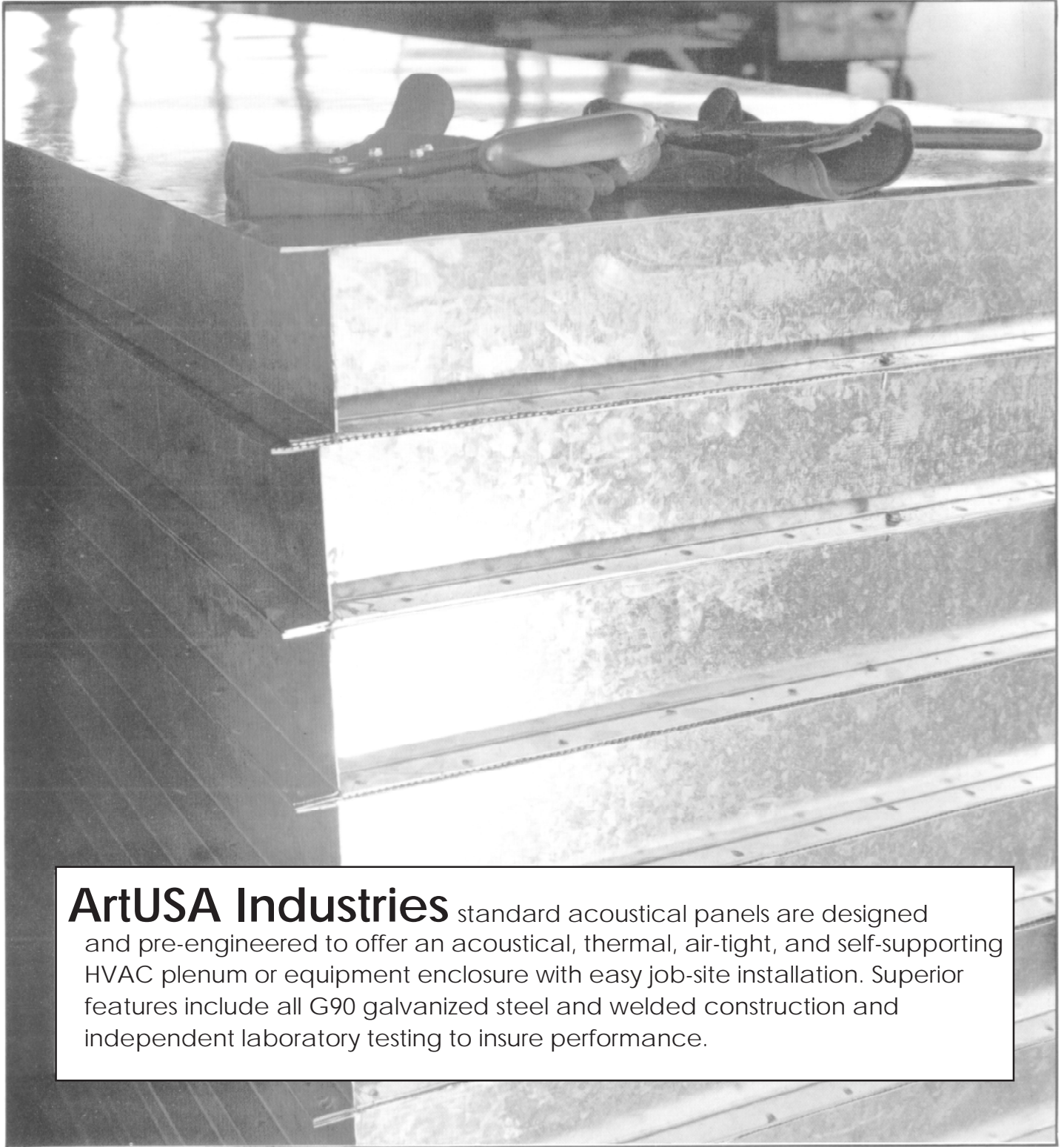




Acoustical Panels

for

HVAC Plenums and Equipment Enclosures



ArtUSA Industries standard acoustical panels are designed and pre-engineered to offer an acoustical, thermal, air-tight, and self-supporting HVAC plenum or equipment enclosure with easy job-site installation. Superior features include all G90 galvanized steel and welded construction and independent laboratory testing to insure performance.

Acoustical Panel

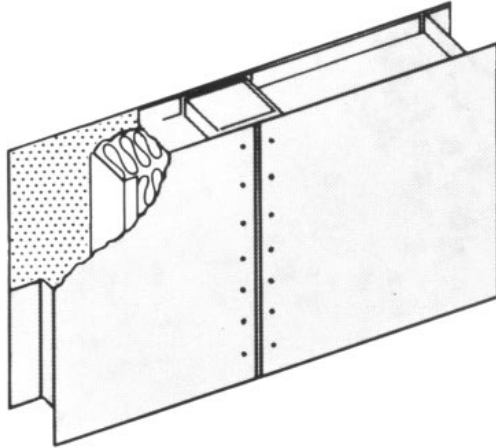


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ENGINEERING DATA SHEET

OPTIONS

- Tongue & Groove
- Mylar, Polyethylene, or Fiberglass Cloth Lining
- Framed Cutouts/Openings
- Primer or Finish Paint
- Different Gauge Construction
- Different Material Construction; i.e. Stainless Steel
- Special Configurations: Perf/Perf, Solid/Sloid, Perf/Solid/Perf
- Different Insulation Materials and Densities



CONSTRUCTION

ArtUSA Industries standard Acoustical/Thermal Panels are fabricated with an 18 gauge G90 galvanized solid steel outer skin with 16 gauge galvanized solid steel channel frames, filled with mineral-glass fiber acoustic/thermal fill, and protected by an inner skin which consists of a 22 gauge G90 galvanized perforated steel sheet which has 23% open area (3/32" holes on 3/16" staggered centers).

ACOUSTICAL PERFORMANCE* - Standard Construction

TRANSMISSION LOSS (ASTM E90-81)

OCTAVE BAND CENTER FREQUENCY (HZ)	125	250	500	1K	2K	4K	STC
4 1/4" PANEL (TL in dB)	22	29	40	48	54	60	41
2 1/4" PANEL (TL in dB)	21	24	35	43	52	57	37

SOUND ABSORPTION COEFFICIENTS (ANSI?ASTM C423-81a AND E795)

OCTAVE BAND CENTER FREQUENCY	125	250	500	1K	2K	4K	NRC
4 1/4" PANEL	0.86	1.09	1.22	1.06	1.05	1.04	1.1
2 1/4" PANEL	0.31	0.82	1.19	1.12	1.07	1.06	1.11

*All Acoustical tests were performed and reported by an Independent Accredited Acoustical Laboratory. Copies of the test report can be furnished upon request.

ACOUSTICAL PERFORMANCE* - Non-Standard Construction

- A.** Standard Panel Construction with the addition of a 1 mil Mylar protective liner between the acoustical/thermal fill and the perforated face sheet.
- B.** Standard Panel construction with the standard acoustical/thermal fill replaced by an 8 pcf rigid insulation.
- C.** Industrial Panel construction as follows: 14 gauge G 90 galvanized solid steel outer skin with 16 gauge G90 galvanized solid steel frame. The coustical/thermal fill is 8 pcf rigid insulation board sealed with a 1 mil Mylar lining. The inner skin is 22 gauge G90 galvanized perforated steel with 23% open area.

TRANSMISSION LOSS (ASTM E90-81)

OCTAVE BAND CENTER FREQUENCY (HZ)	125	250	500	1K	2K	4K	STC
A (TL in dB)	28	38	46	49	54	62	48
B (TL in dB)	22	30	42	49	54	61	42
C (TL in dB)	27	36	48	53	55	57	49

SOUND ABSORPTION COEFFICIENTS (ANSI/ASTM C423-81a AND E795)

OCTAVE BAND CENTER FREQUENCY	125	250	500	1K	2K	4K	NRC
A	0.25	0.37	0.64	0.6	0.56	0.29	0.55
B	0.8	0.79	1.07	0.95	0.91	0.83	0.95

*All Acoustical tests were performed and reported by an Independent Accredited Acoustical Laboratory. Copies of the test report can be furnished upon request.

THERMAL PERFORMANCE

Individual panels will have a "U" Factor of 0.07 and an entire panel plenum will have a "U" factor of 0.14.

FIRE HAZARD RATING

Standard acoustical fill will have the following UL Fire Hazard Ratings as per ASTM E-84:

- FLAME SPREAD - 15
- FUEL CONTRIBUTED - 0
- SMOKE DEVELOPED - 0

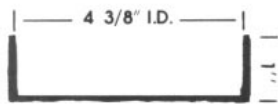
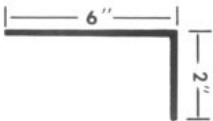
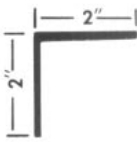
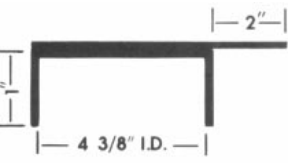
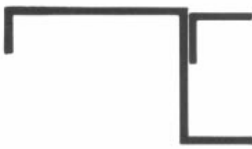


STRUCTURAL PERFORMANCE

The entire panel plenum shall be self-supporting and air-tight up to a pressure differential of 10 inch Water Gauge. When needed, additional structural support can be provided to assure that the plenum will be air-tight and not deflect more than 1/240th of the longest span.

FEATURES

- ALL TRIM IS 16 GAUGE SOLID STEEL FURNISHED IN 10 FOOT LENGHTS FOR EASE OF INSTALLATION.
- ALL STRUCTURAL STEEL, WHERE SUPPLIED BY ARTUSA INDUSTRIES WILL HAVE A PRIME COAT PAINT APPLIED AT THE FACTORY.
- ARTUSA INDUSTRIES FURNISHES ALL NECESSARY DRAWINGS FOR APPROVAL AND ERECTION AS WELL AS ANY STRUCTURAL AND OR SEISMIC CALCULATIONS AS REQUIRED.
- ALL FASTENERS ARE ZINC PLATED, SELF-DRILLING, SELF-TAPPING SHEET METAL SCREWS.
- ARTUSA INDUSTRIES OFFERS THE OPTION OF EITHER PANEL CONNECTOR, FLANGE CONNECTION OR TONGUE AND GROOVE PANEL CONSTRUCTION.

TRIM AND ACCESSORY ENGINEERING DATA

Components	Section Details	Application	Standard Lengths	Unit Weight	Notes
Floor Channel (FC)		Used for joining panels to floors or walls. Used for capping exposed ends of wall and floor panels. Also used to trim rectangular cutouts.	120"	16 GA 15 lbs./ft.	A. Concrete inserts are furnished by others. B. Field cut and miter corners to suit.
Outside Angle (OA)		Used for trimming outside roof and outside vertical corners	120"	16 GA 1.8 lbs./ft.	Field cut and miter corners to suit.
Inside Angle (IN)		Used for trimming inside vertical corners. Also used to seal duct penetrations and to join removable panels to floor.	120"	16 GA 0.9 lbs./ft.	Field cut and miter corners to suit.
Ceiling Cap (CC)		Used for joining walls to roof. Also wall corners.	120"	16 GA 3.3 lbs./ft.	Field cut and miter corners to suit.
Wall Corner (WC)		Alternate method of joining walls at corners.	96" 120"	16 GA 3.1 lbs./ft.	Field cut and miter corners to suit.
Panel Connector (PC)		Used for joining wall and roof panels.	96" 120" 144"	1.8 lbs./ft.	For load limitations & alternate structural steel substitutions, consult factory.
2"x4" Rect. Tubing (RT)		Used for joining wall and/or roof panels when additional structural rigidity is required.	Length as required	Consult Factory	For load limitations & alternate structural steel substitutions, consult factory.

