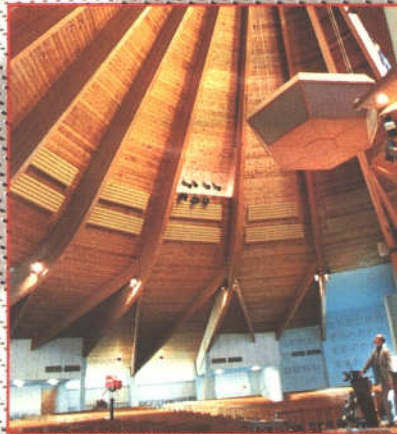


ECKEL

NOISE CONTROL TECHNOLOGIES

**ARCHITECTURAL
NOISE CONTROL PANEL SYSTEMS**
Standard and Custom
Wall and Ceiling Treatments



ECKOUSTIC FUNCTIONAL PANELS

EFP

09800/ECL
BuyLine 1408



Eckel noise control panels can be used in hostile environments such as swimming pools and outdoor environments, often without disturbing existing utilities.



Gymnasium - Arlington, TX



Hillcrest Power Plant - Denver, CO

Eckoustic Functional Panels (EFPs) are attractive, sound absorbing, fire-resistant panels which can be spot located on walls or ceilings to achieve effective noise control. Since EFPs are independent panels, they can be put into place without disturbing existing utilities. This functional approach to acoustic control, therefore, is considerably less expensive than continuous ceiling or wall treatment.

EFPs also help solve other noise control problems. They can be added to barriers to increase noise reduction capability. Special aluminum EFPs, for example, have been attached to concrete barrier walls around transformers and in sewage treatment plants, thereby enhancing the barriers acoustic performance as well as preventing a potential community noise problem. These panels can be manufactured with solid backs, and they will then act as barriers themselves, an extremely practical solution in industrial situations where full noise control enclosures are not feasible.

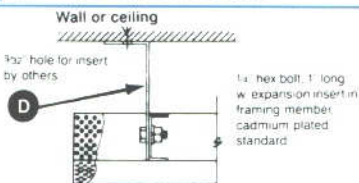
Wherever EFPs are used, a better acoustic environment is obtained... with a resulting reduction in speech interference, fatigue, tension, and errors.

EFPs are Ideal for Correcting Noise Problems in:

- gymnasiums, swimming pools, weight rooms, and similar facilities
- auditoriums and theaters
- libraries
- machine shops
- computer rooms
- restaurants and other food service operations
- offices
- subway stations and other rapid transit facilities
- churches and religious buildings
- open-plan school rooms and multi-purpose rooms
- factories, assembly, and production areas.

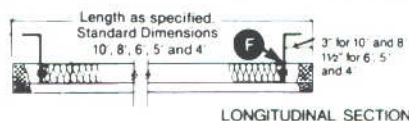
Industrial noise problems such as water and waste-water treatment facilities or power plants sometimes require absorptive treatment as one of the elements of a total noise control program. EFPs provide a convenient, cost-effective method of adding needed sound absorption.

Typical Installation Details



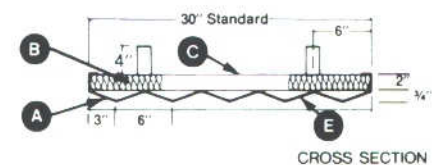
ATTACHMENT DETAIL

A. V Ridge facing — 22 ga galvanized perforated or .032" aluminum optional — for improved acoustical performance, structural rigidity.



LONGITUDINAL SECTION

B. High performance acoustical fill.
C. Optional protective poly or fiberglass wrap.
D. 11 ga wall or ceiling bracket.



CROSS SECTION

E. White polyurethane enamel finish — standard.
F. 20 ga transverse framing member.

Optional Accessories

1. Solid attenuating backs, steel, and transite.
2. Floor stands.
3. Non-standard lengths.
4. Special mounting brackets.

5. Non-standard colors.
6. Aluminum construction for outside use, and swimming pool applications.
7. Fiberglass cloth or poly wrapped acoustic fill

8. Textured surface facing.
9. 18 ga perforated facings (Type HD).

ADVANCED ACOUSTICAL CONSTRUCTION — The special EFP design offers outstanding acoustical performance. "V" ridging improves sound absorption by holding the polyethylene encased acoustical fill away from the perforated metal face. In addition, the ridging increases the stiffness of the panel and aids in protecting the face from damage.

EASY, PRACTICAL INSTALLATION — Since the functional arrangement of the EFPs requires that less than 25-30% of the ceiling area be covered, the panels can be installed without relocating existing sprinklers, lights, or ventilation outlets.

ECONOMICAL — EFPs offer superb sound absorption...and more sabins of sound absorption per sq. ft. means fewer panels are required to achieve the desired results. And, less panels, in turn, mean greater cost savings.

LOW MAINTENANCE — Panels can be cleaned in place without removing the acoustic fill. Dust, dirt, etc. can be removed by wiping the EFPs down or washing with soap and water. Panels can be repainted. They should be taken down and the acoustical fill should be removed prior to spray painting. Aluminum panels with polyethylene bagged acoustical fill can be hosed down with water.

ATTRACTIVE — The pleasing architectural design harmonizes with the interiors of auditoriums, classrooms, swimming pools, factory areas, and most other places where people gather to work or relax. Finishes can be selected to blend or contrast with the interior.



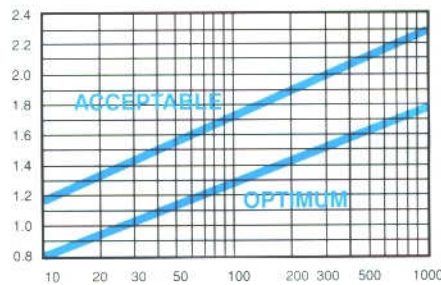
Construction

EFPs are fabricated with facings of 22 ga perforated zinc coated and stiffeners of 20 ga zinc coated paintable steel (aluminum also available). Facings are perforated with $\frac{3}{32}$ " holes on $\frac{1}{16}$ " staggered cen-

ters, ridged on 6" centers and flanged at sides and top for stiffness. Insulation is 2" thick, fine fibered, fibrous glass. Acoustical insulation may be enclosed in 1.5-2 mil plastic when panels are exposed to high humidity, oil, or grease vapors and in dust-free clean rooms.

Standard finish is white polyurethane enamel paint. Other colors are available.

Four bracket hangers are provided with each panel for either wall or ceiling mounting. Brackets typically are bolted to panels before shipping. Standard panel width, 30". Standard lengths: 4', 5', 6', 8', or 10'. Special lengths can be provided.



Volume - Thousands of Cubic feet

Ranges of acceptable reverberation times at 500 Hz. The lower portion of the band is most suitable for rooms intended primarily for speech, while the upper portion is better for music rooms. For general purpose rooms, a reverberation time in the middle portion of the band is recommended.

Acoustical Performance

Sound absorption expressed as Sabins per Panel.

FREQ (Hz)	SIZE (30" wide x length)					Sq. Ft.*
	4'	5'	6'	8'	10'	
125	3.0	3.8	4.5	6.9	6.2	.31
250	8.5	10.6	12.7	17.8	20.5	.85
500	14.9	18.7	22.4	28.4	35.2	1.43
1000	14.5	18.2	21.8	27.3	34.5	1.49
2000	13.2	16.5	19.8	25.5	31.5	1.41
4000	13.8	17.3	20.7	27.9	33.1	1.50
NRC	12.8	16.0	19.2	24.8	30.4	1.30

*Average sound absorption coefficient for 6', 8', and 10' panels. Based on standard sound absorbing material per ASTM C-423 as conducted by Riverbank Acoustical Laboratories.

* Detailed architects specifications available from SweetSource, Spec-Disk, from the factory or visit our website at www.eckelaoustic.com.



Reduction in Room Reverberation Time
Treatment of a typical room with 10' EFPs.

