

# phoenix-E

*"Creating the Better Workplace"*

## SONO-CON acoustical louvers

for sound barriers  
to attenuate  
mechanical equipment noise

as weather protection  
and security  
for building ventilation

contemporary architectural treatments

# SONO-CON

SONO-CON acoustical louvers are fabricated in various assembly depths to match the sound attenuation requirements. These are typically installed in the building walls to reduce the noise transmitted through the ventilation openings needed for mechanical equipment cooling or air distribution. SONO-CON louvers are easily installed in panelized or conventional construction and require little additional floor area.

Requirements for aesthetic design, corrosion resistance, pressure drop and insertion loss dictate the design of the acoustical louvers. Generally, acoustical louvers are either aluminum or galvanized steel with airfoil or parallel surfaces.

Grilled, weather-resistant and storm-proof styles are available. Each is rated by independent laboratory testing for both sound attenuation and aerodynamic performance. Pressure drop as a function of face velocity is provided in the performance tables to assist in quickly sizing the acoustical louver area needed to meet ventilation requirements.

In addition to standard constructions the following options can be furnished:

1. Aluminum, stainless steel and heavier gauge galvanized steels.

2. Aluminum constructions can be anodized in any of the following:

Clear #204-R1 or #215-R1

Bronze: Light, medium, dark or black.

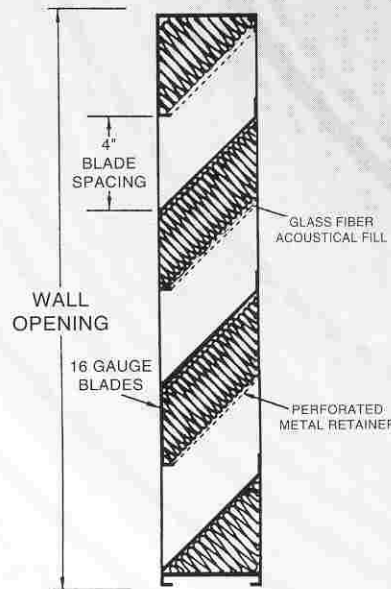
3. Flanged frames. 2" flange standard.

Other sizes available

4. Galvanized screen: 1/2" X 1/2" X 19 gauge is standard. Other sizes and materials can be supplied, including various expanded metal configurations.

## Sono-Con Model 4

45° blade, 4" deep



### SPECIFICATIONS

**Frame:** 16 gauge galvanized steel channel.

**Blades:** 16 gauge galvanized steel.

**Blade spacing:** 4" standard.

**Finish:** Mill finish standard.

### SIZES

**Minimum:** 24" X 24"

**Maximum:** Louvers larger than 72" wide X 96" high may be made in sections with mullions, making size unlimited.

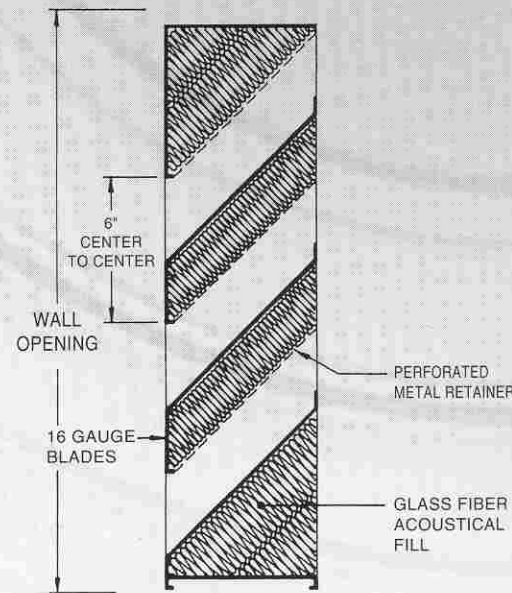
**Depth:** 4" frame standard.

ACOUSTIC PERFORMANCE								
Octave Band	1	2	3	4	5	6	7	8
Ctr. Frq. Hz	63	125	250	500	1K	2K	4K	8K
TL, dB	5	4	5	7	8	12	13	14
NR, dB	11	10	10	11	14	18	21	20

AERODYNAMIC PERFORMANCE								
PRESS. LOSS, LWG	.05	.15	.20	.35	.45	.60	.75	1.0
FACE VELOCITY, FPM	200	346	400	529	600	693	775	895

## Sono-Con Model 6

45° blade, 6" deep



### SPECIFICATIONS

**Frame:** 16 gauge galvanized steel channel.

**Blades:** 16 gauge galvanized steel.

**Blade spacing:** 6" standard.

**Finish:** Mill finish standard.

### SIZES

**Minimum:** 24" X 24"

**Maximum:** Louvers larger than 72" wide X 96" high may be made in sections with mullions, making size unlimited.

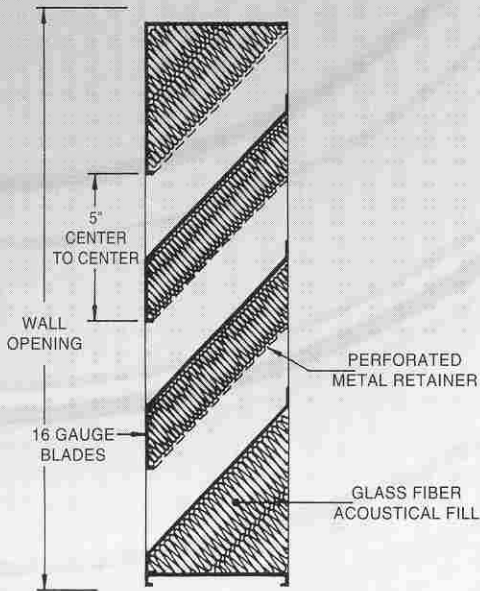
**Depth:** 6" frame standard.

ACOUSTIC PERFORMANCE								
Octave Band	1	2	3	4	5	6	7	8
Ctr. Frq. Hz	63	125	250	500	1K	2K	4K	8K
TL, dB	2	7	8	10	13	15	13	12
NR, dB	9	12	14	16	18	20	19	18

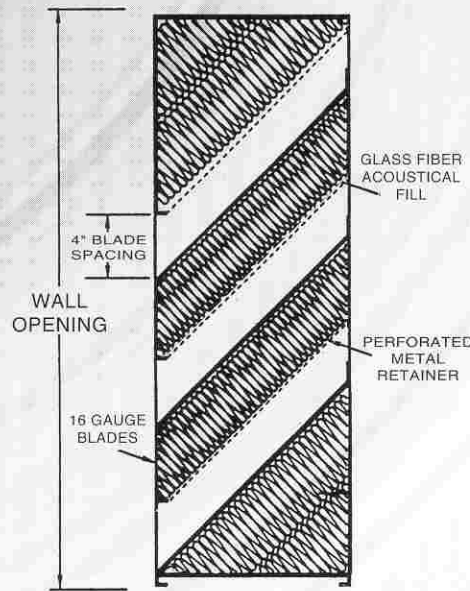
AERODYNAMIC PERFORMANCE								
PRESS. LOSS, LWG	.05	.15	.20	.35	.45	.60	.75	1.0
FACE VELOCITY, FPM	185	305	350	460	517	600	671	775

# acoustical

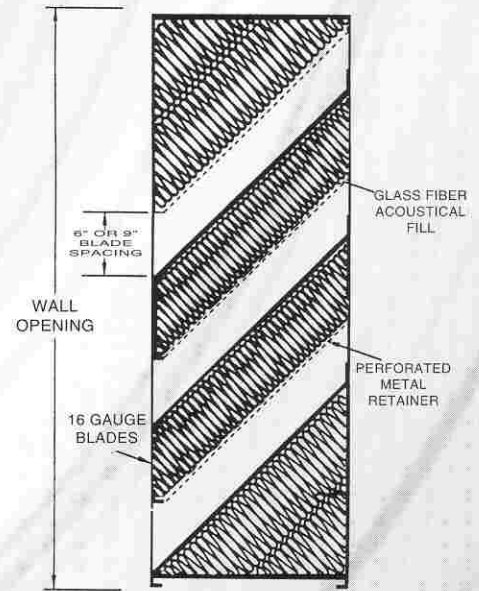
## Sono-Con Model 6R 45° blade, 6" deep



## Sono-Con Model 8 45° blade, 8" deep



## Sono-Con Model 12 45° blade, 12" deep



### SPECIFICATIONS

- Frame:** 16 gauge galvanized steel channel.
- Blades:** 16 gauge galvanized steel.
- Blade spacing:** 5" standard.
- Finish:** Mill finish standard.

### SIZES

- Minimum:** 24" X 24"
- Maximum:** Louvers larger than 72" wide X 96" high may be made in sections with mullions, making size unlimited.
- Depth:** 6" frame standard.

### SPECIFICATIONS

- Frame:** 16 gauge galvanized steel channel.
- Blades:** 16 gauge galvanized steel.
- Blade spacing:** 4" standard.
- Finish:** Mill finish standard.

### SIZES

- Minimum:** 24" X 24"
- Maximum:** Louvers larger than 72" wide X 96" high may be made in sections with mullions, making size unlimited.
- Depth:** 8" frame standard.

### SPECIFICATIONS

- Frame:** 16 gauge galvanized steel channel.
- Blades:** 16 gauge galvanized steel.
- Blade spacing:** 6" or 9" standard.
- Finish:** Mill finish standard.

### SIZES

- Minimum:** 24" X 24"
- Maximum:** Louvers larger than 72" wide X 96" high may be made in sections with mullions, making size unlimited.
- Depth:** 12" frame standard.

#### ACOUSTIC PERFORMANCE

Octave Band	1	2	3	4	5	6	7	8
Ctr. Frq. Hz	63	125	250	500	1K	2K	4K	8K
TL, dB	6	9	10	11	15	19	17	16
NR, dB	12	13	16	18	21	25	26	24

#### ACOUSTIC PERFORMANCE

Octave Band	1	2	3	4	5	6	7	8
Ctr. Frq. Hz	63	125	250	500	1K	2K	4K	8K
TL, dB	3	7	9	11	14	15	11	8
NR, dB	9	12	15	16	18	20	18	14

#### ACOUSTIC PERFORMANCE

Octave Band	1	2	3	4	5	6	7	8
Ctr. Frq. Hz	63	125	250	500	1K	2K	4K	8K
TL, dB 6"	5	7	9	11	16	18	12	10
TL, dB 9"	3	6	7	9	14	13	11	10
NR, dB 6"	11	13	15	17	22	24	20	15
NR, dB 9"	9	12	14	17	20	18	17	15

#### AERODYNAMIC PERFORMANCE

PRESS. LOSS, LWG	.05	.15	.20	.35	.45	.60	.75	1.0
FACE VELOCITY, FPM	185	205	237	313	355	410	458	529

#### AERODYNAMIC PERFORMANCE

PRESS. LOSS, LWG	.05	.15	.20	.35	.45	.60	.75	1.0
FACE VELOCITY, FPM	185	305	350	460	517	600	671	775

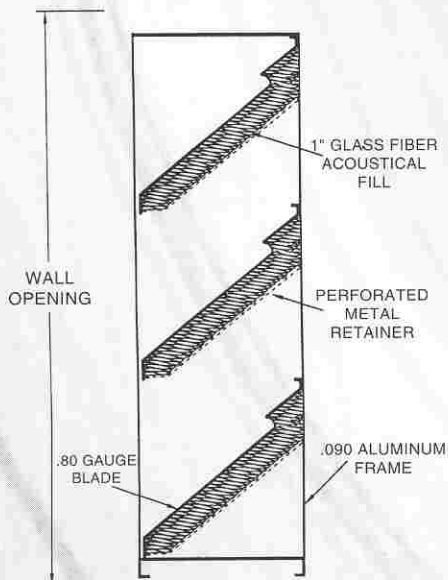
#### AERODYNAMIC PERFORMANCE

PRESS. LOSS, LWG	.05	.15	.20	.35	.45	.60	.75	1.0
FACE VELOCITY, FPM 6"	200	346	385	517	571	675	750	829
FACE VELOCITY, FPM 9"	250	429	500	650	746	850	965	1122

# SONO-CON acoustical

## Sono-Con Model 65

45° blade, 6" deep



### SPECIFICATIONS

**Frame:** .090 6063-T5 extruded aluminum.

**Blades:** .080 6063-T5 extruded aluminum.

**Blade spacing:** 6" standard.

**Finish:** Mill finish standard.

**Sound Insulation:** Glass fiber.

### SIZES

**Minimum:** 14" X 14"

**Maximum:** Louvers larger than 72" wide X 96" high may be made in sections with mullions, making size unlimited.

**Depth:** 6" frame standard.

### OPTIONS

**Screen:** 1/2" X 1/2" 19 gauge galvanized mesh.

Other size and material screens available.

**Finish:** Anodized:

A. Light Bronze

B. Medium Bronze

C. Dark Bronze

D. Black Bronze

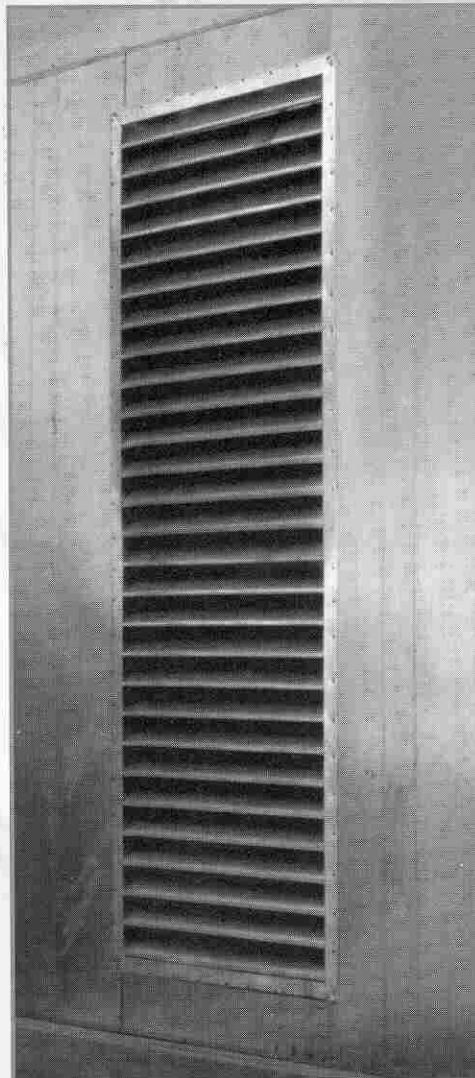
E. Clear No. 204-R1

F. Clear No. 215-R1

Painted:

G. Prime Coat

H. Color Coat



SONO-CON Acoustical Louvers are tested by independent acoustical laboratories in accordance with ASTM E-90, Standard Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions. This data describes the transmission loss characteristics of the louver assembly and is adjusted to reflect the as-installed conditions.

The anticipated field performance is obtained by adding approximately 6 dB to the louver sound transmission loss data obtained in the laboratory as installed between two reverberant rooms. This adjusts the data to an outdoor free field acoustical environment into which the noise is to be discharged. The resulting rating is tabulated as Noise Reduction.

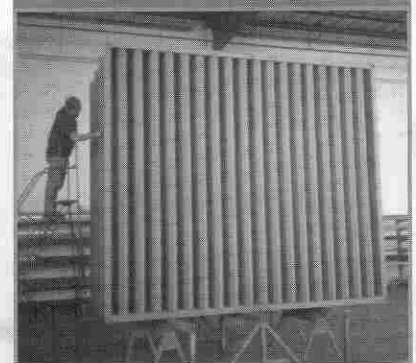
Overall acoustical performance and residual sound levels are provided by summing: (1) the attenuation obtained with the distance of the louver to the nearest critical outdoor location and (2) the Noise Reduction rating.

### ACOUSTIC PERFORMANCE

Octave Band	1	2	3	4	5	6	7	8
Ctr. Frq. Hz	63	125	250	500	1K	2K	4K	8K
TL, dB	3	2	4	6	9	11	12	11
NR, dB	10	9	12	13	14	17	22	24

### AERODYNAMIC PERFORMANCE

PRESS. LOSS, LWG	.05	.15	.20	.35	.45	.60	.75	1.0
FACE VELOCITY, FPM	275	450	525	650	750	850	950	1100



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