

# FS 12TEN-99

## FS Series Arena Horn Loudspeaker



### Features

- Industry Standard 8" (203mm) Coaxial, 8 Watt, Loudspeaker
- Ideal for a Wide Array of Outdoor and Indoor Applications
- Integrated 400-Watt 70.7 V / 100V Transformer
- Constant Directivity Design Offers Controlled Coverage of 90° Horizontal by 90° Vertical
- All-Weather Construction Ensures Long-Term Reliability Through Varying Seasons
- Flexible Mounting System Ensures Versatile Install Mounting Angles
- Easy Service Design Allows Transducers to be Serviced in the Field without Uninstalling the Enclosure from the Mount
- Neutral Finish Blends into Any Environment
- EN54-24 Certified
- ISO 7240-24 Certified

### Applications

The FS12TEN-99 features a lightweight and compact all-weather enclosure that can be used in multiple outdoor and indoor installation application including arenas, stadiums, fairgrounds, racetracks, theme parks, outdoor entertainment centers, convention centers, aquatic centers, and multipurpose venues.

### General Description

The EN54-24 certified FS12TEN-99 is two-way, full-range loudspeaker system engineered to provide excellent voice and music reproduction in applications requiring weather resistance. It was designed to withstand exposure to environmental conditions and provide long-lasting reliability.

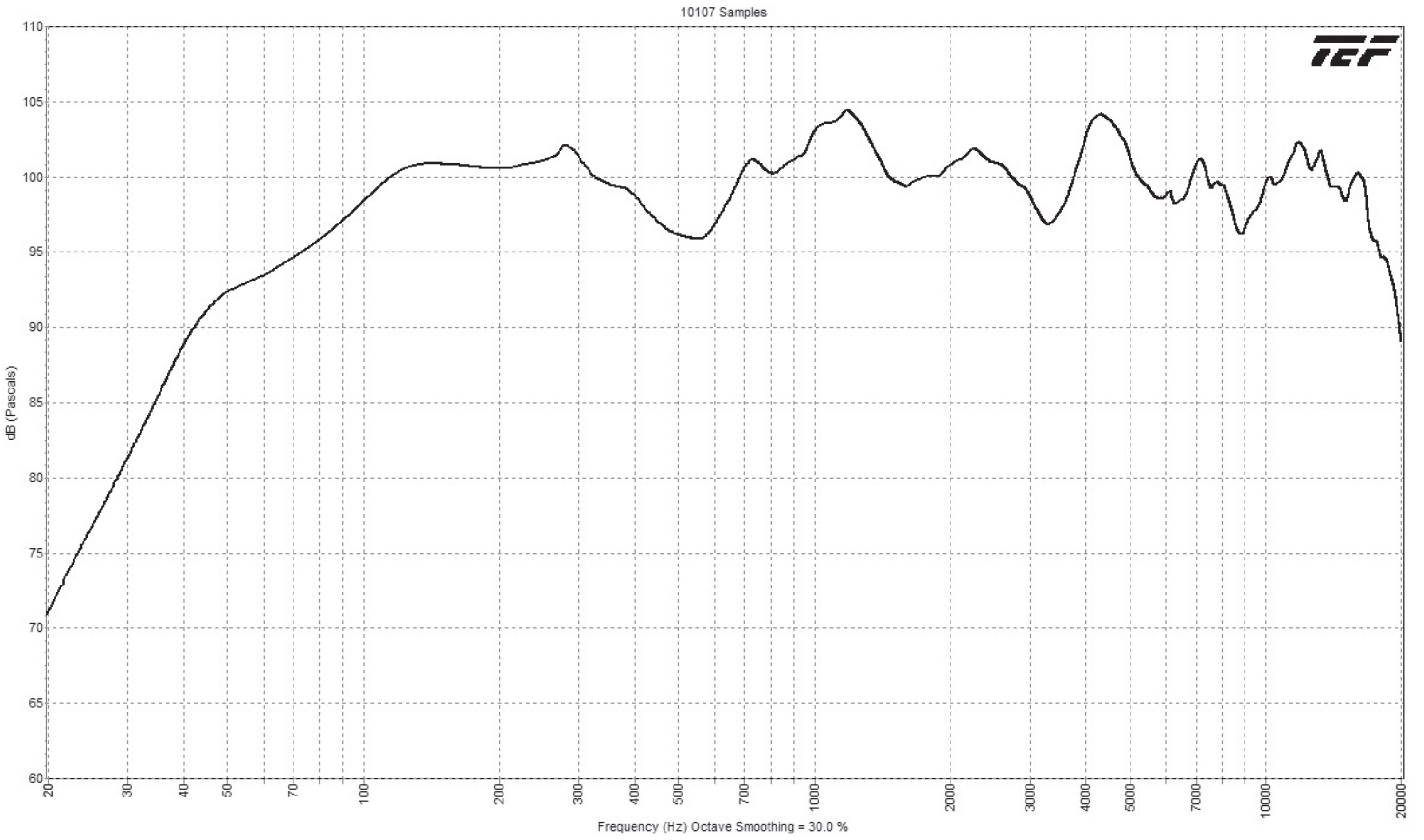
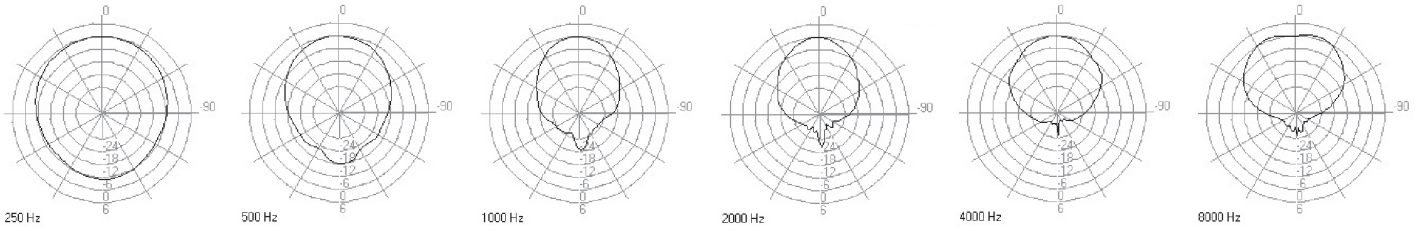
It incorporates a 12" LF driver and 1" exit HF compression driver concentrically mounted to a high-directivity waveguide. It provides 90° x 90° coverage and is tuned for optimal source reproduction.

The unit is constructed using molded linear low-density polyethylene (LLDPE), creating an incredibly strong yet lightweight enclosure. The unit includes a stainless steel U-bracket and fly-points allowing for easy mounting. Input is via an integrated 70.7 V / 100V transformer with low insertion loss and full frequency response with power taps up to 400-watts including an 4Ω bypass. The transformer is discretely mounted under the rear cover for weather protection. The finish is neutral "battle ship grey" that is UV resistant and allows for years of durability.

System	
Type	Full-Range, Outdoor, Direct Radiator Loudspeaker
Operation Mode	Non-Powered Passive
Operating Range (-10dB)	57Hz - 18.6kHz
Frequency Response ( $\pm 5$ dB)	80Hz - 17.6kHz
Usable Low Frequency Limit (10dB Down Point)	118 Hz
Input Sensitivity at 1W / 4M EN54-24	84.5dB
Vertical Coverage	90°
Horizontal Coverage	90°
Max Input Ratings (4 $\Omega$ )	400 W Continuous, 40 Volts RMS
Transformer Taps - 70V	400W (12.5 $\Omega$ ), 200W (25 $\Omega$ ), 100W (50 $\Omega$ ), 50W (100 $\Omega$ ) and Low Impedance (4 $\Omega$ )
Transformer Taps - 100V	400W (25 $\Omega$ ) RNP , 200W (50 $\Omega$ ), 10W (100 $\Omega$ ) and Low Impedance (4 $\Omega$ )
Directivity Factor (Q)	22.65 @ 4kHz
Directivity Factor (DI)	13.5 @ 4kHz
Power Handling in 4 $\Omega$ Switch Position	400 Watts
Max SPL at 4m EN54-24 (Passive 400W @ 100V)	106.8dB
Transducer Complement	
LF Transducer Qty and Size	1 x 12" Woofer
LF Voice Coil Size	2.5"
HF Transducer Qty and Size	1 x Compression Driver 1" Throat
HF Voice Coil Size	1.75"
Nominal Impedance (System)	4 $\Omega$
Minimum Impedance (System)	4.1 $\Omega$ @ 1050Hz
Crossover Frequency	1.1 kHz
Crossover Slope	18dB / Octave
Driver Protection (High and Low Frequency)	System Protection Circuit
Enclosure	
Color	Light Grey (Pantone 423 C)
Enclosure Material	LLDPE (Linear Low-Density Polyethylene)
Grille Material	Aluminum
Mount Material	Stainless Steel
Input Connection	7 Pole Barrier Strip with Weather-Resistant Cover
Mounting/Rigging Provisions	6mm Stainless Steel U-Bracket
Ingress Protection EN54-24	IP33C (When Tilted $\geq 15^\circ$ Downwards)
Environmental Testing	MIL-DTL-12606
Logo	2 Sides - Rear Cover and Grill
Product Dimensions (HxWxD)	19.56" x 18.5" x 18.5" (497.84mm x 469.9mm x 469.9mm)
Shipping Dimensions (HxWxD)	24.5" x 23.5" x 23.5" (622.3mm x 596.9mm x 596.9mm)
Net Weight	48 lbs (21.77kg)
Shipping Weight	60 lbs (27.21kg)
Warranty Coverage	
Warranty Period	5 Years

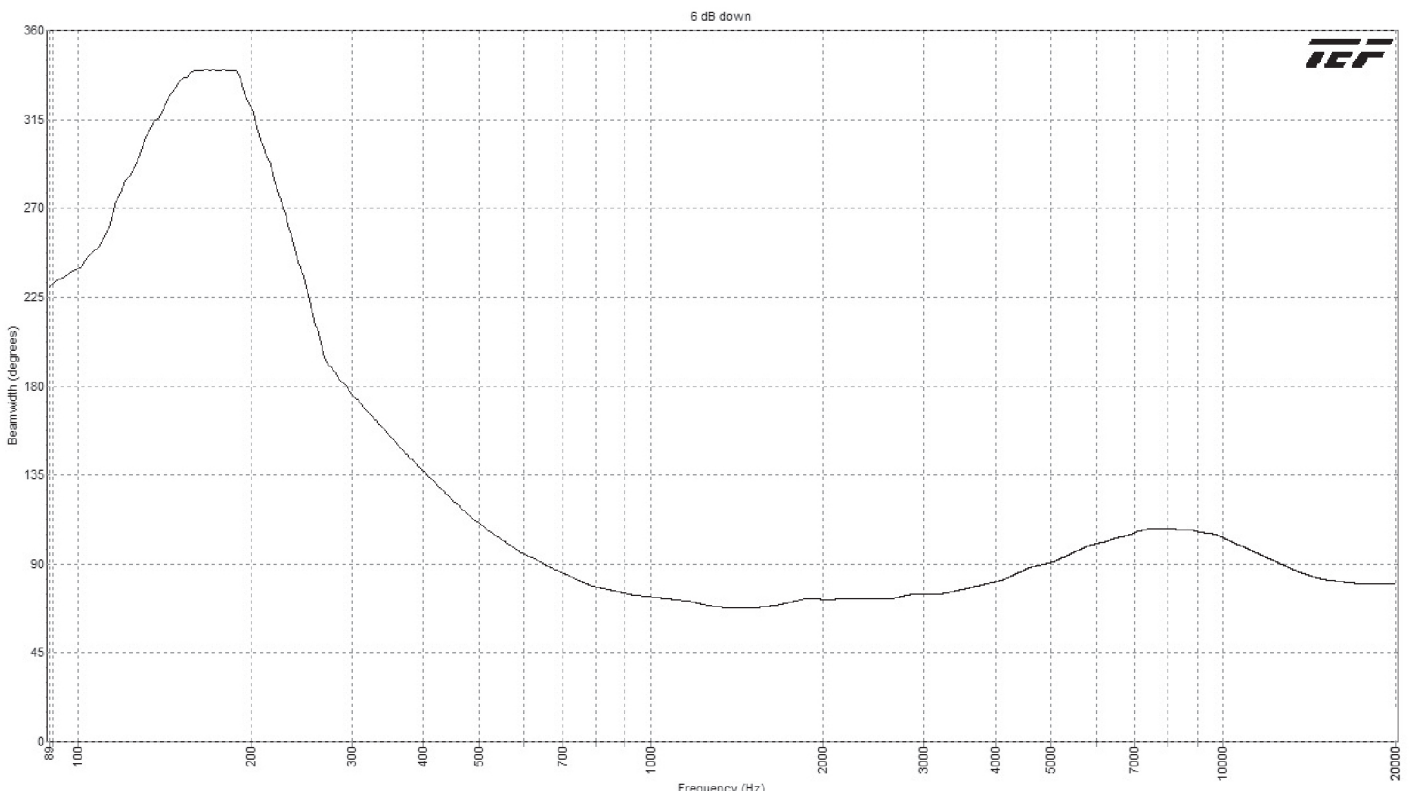
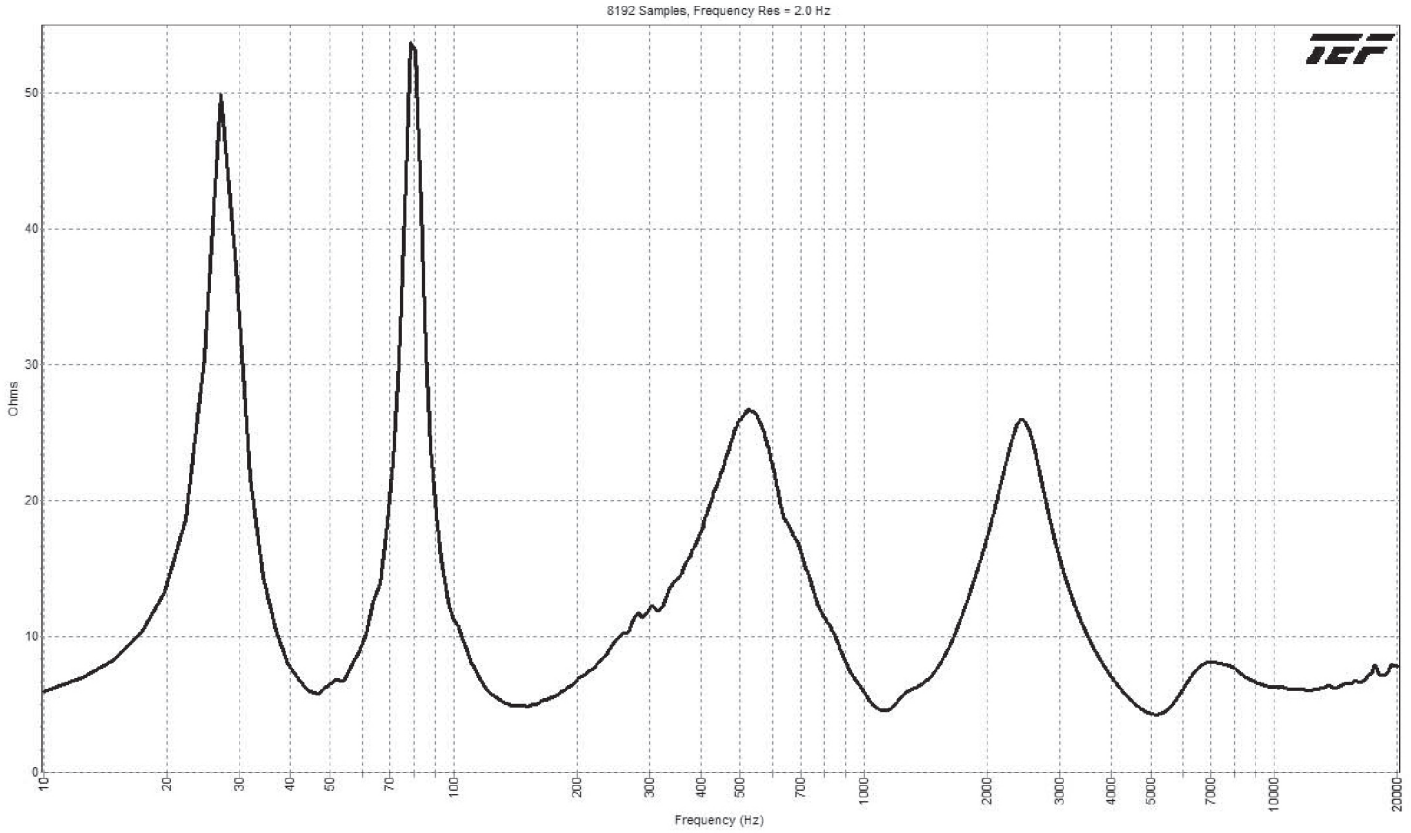
NOTES:

1. Sensitivity: 1 meter, 2.83 volts RMS
2. Power: All power figures are calculated using the rated nominal impedance
3. Frequency response and sensitivity are anechoic measurements

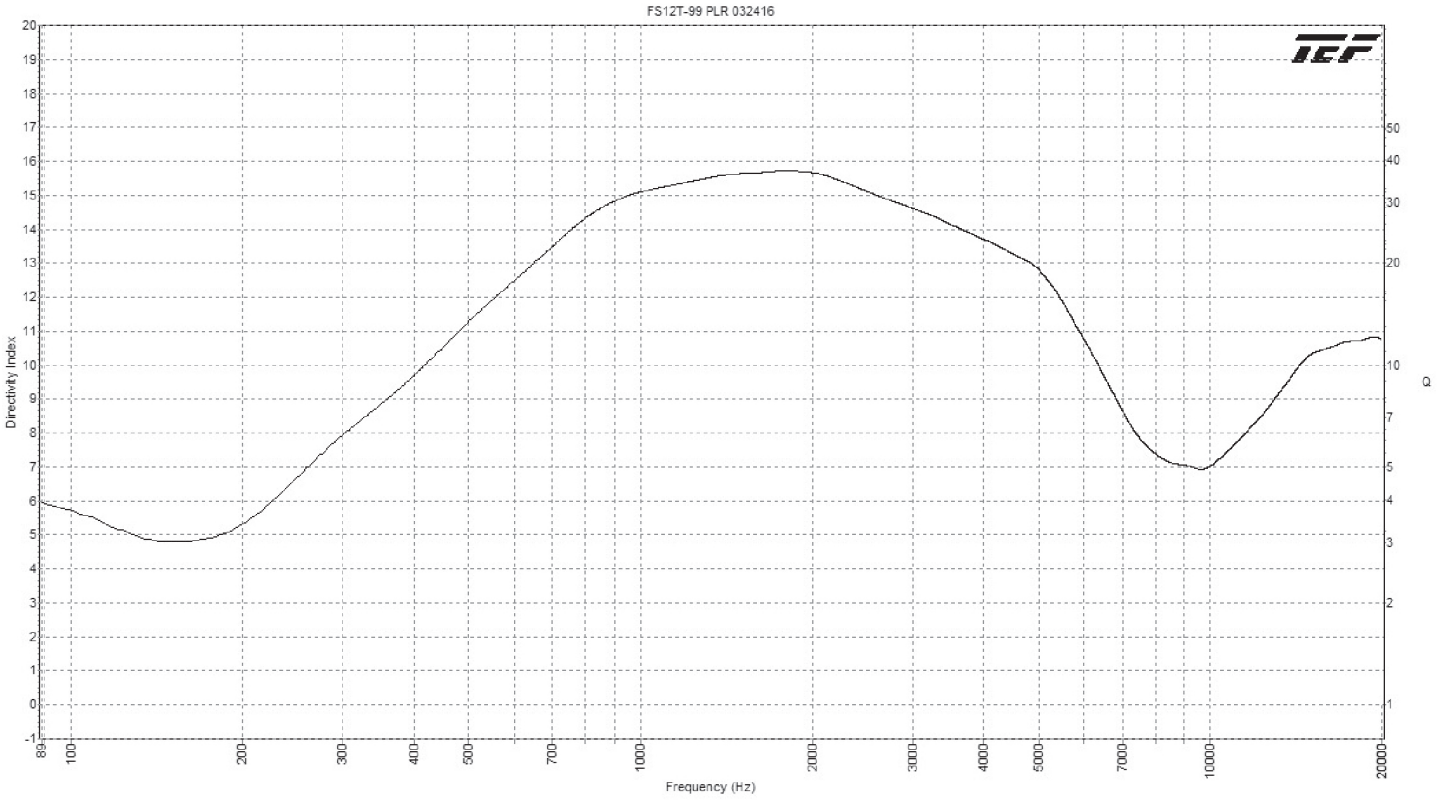


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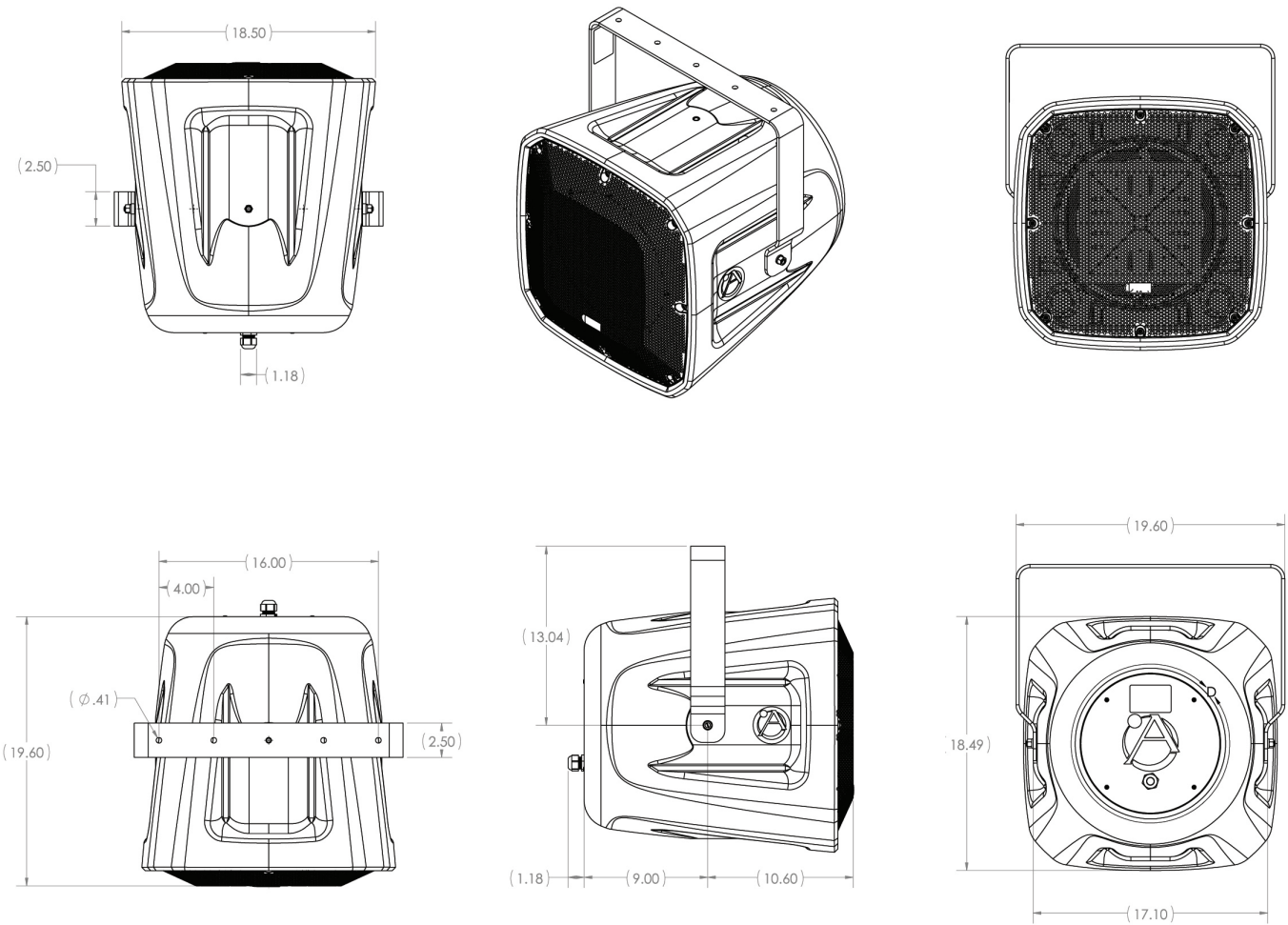
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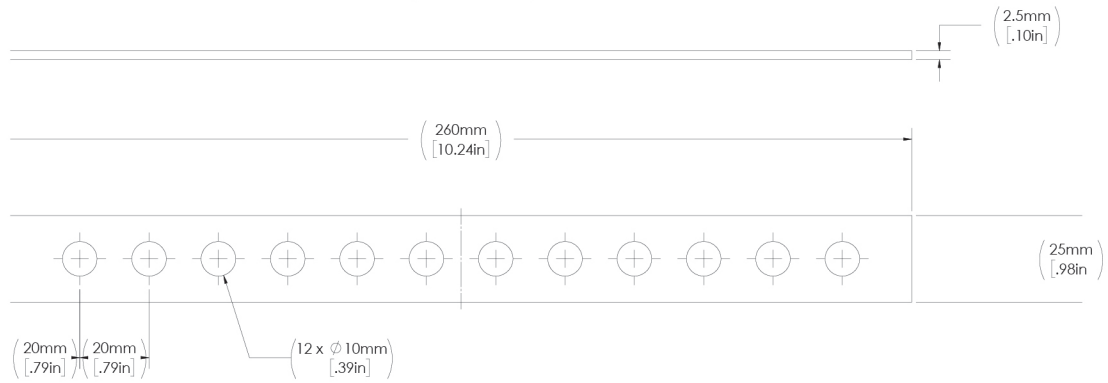




## Dimensional Drawings



## Angle Set Strap



## Architect and Engineer Specifications

Loudspeaker shall be AtlasIED model FS12TEN-99 or approved equal. The loudspeaker system shall be a two-way, full-range EN54-24 design with an IP33C (When Tilted  $\geq 15^\circ$  Downwards) rating. It shall include a 12" cast frame LF woofer and an integral, concentrically mounted 1" exit compression driver coupled to a constant directivity high frequency waveguide. The three pole (18dB/octave) dividing network shall have a crossover frequency of 1.1kHz. The dividing network shall include a poly switch protection circuit for the highfrequency component.

The loudspeaker system shall be capable of providing a sound dispersion angle of 90° horizontal by 90° vertical in the 2kHz octave band. Rated power shall be 400 watts RMS based on EIA Standard RS-426B.

Enclosure shall be UV-resistant, linear low-density polyethylene (LLDPE) and shall include a 2-stage multiple mesh filter system for weather and rodent resistance: to include a 20-gauge perforated aluminum screen on front mouth assembly, a 100 x 100 weave stainless steel mesh between HF horn and HF driver and a 100 x 100 weave stainless steel mesh over 12" woofer. The loudspeaker shall include a stamped and formed, 2mm stainless steel powder coated mounting bracket assembly for surface mounting.

The sensitivity at 1W/4m shall be 84.5 dB SPL with a max SPL of 106.8db at 4m.

Overall frequency response shall be 80Hz – 176kHz. The input section located on the bottom rear of the loudspeaker shall be via 7 position screw down terminal strip internally configured to allow input to an internally mounted 70.7V transformer with 50, 100, 200, 400-watt taps and a bypass jumper direct coupled to the speaker for nominal 4 $\Omega$  operation. The system connections shall be protected from the elements by a screw affixed weather resistant cover.