

TT-1020

TUNNEL EMERGENCY NOTIFICATION 40° X 30° SINGLE DRIVER LOUDSPEAKER



FEATURES

- Intelligibility at very high output levels
- Consistent controlled directivity and low distortion
- High efficiency and high power capacity
- Highly resistant to harsh environments

APPLICATIONS

Road tunnels and enclosed linear spaces

DESCRIPTION

The TT-1020 is designed to provide consistent intelligible emergency notification for enclosed linear spaces and other long projection applications. Precise pattern control and very narrow coverage angles deliver outstanding performance in highly reverberant environments.

To meet the performance goals for long projection emergency notification, the system utilizes a single high power purpose-built MF transducer, ensuring accurate signal reproduction and very low distortion. Biamp's proprietary 2-inch (51 mm) exit compression driver delivers high intelligibility at elevated sound pressure levels necessary to overcome the high ambient noise and reflected acoustic conditions. This makes it ideal for road or rolling stock tunnels and similar acoustically challenging environments. The large-format waveguide ensures precision directivity control throughout the entire voice band.

Both the driver's inert materials composition and the horn's fiberglass construction make the entire device resistant to potentially caustic tunnel-type environments. All external hardware and mounting brackets are 316 stainless steel.

TECHNICAL SPECIFICATIONS

Operating Mode	100V	
Operating Environment	All conditions, suitable for continuous outdoor direct exposure and harsh environments	
Operating Range	300 Hz to 9 kHz	
Operating Temperature [†]	-5°C – 55°C [23°F – 131°F]	
Nominal Beamwidth	40° H x 30° V (1000 Hz to 8000 Hz)	
Transducers	1 x 2" (51 mm) exit compression, non-metallic diaphragm, ferrofluid-cooled driver	
Nominal Sensitivity [†]	1W/1m * 114 dB	1W/4m ** 102 dB
Nominal Maximum SPL [†]	Continuous @ 1m * 134 dB	Continuous @ 4m ** 122 dB
Equalized Sensitivity	1W/1m * 113 dB	1W/4m ** 101 dB
Equalized Maximum SPL	Continuous @ 1m * 133 dB	Continuous @ 4m ** 121 dB
Transformer Taps (100V)	50W, 100W (Tap designation is factory-configured per order)	
Required Accessories	Digital Signal Processor; High Pass Filter	

PHYSICAL

Input Connection	IP67 4-conductor (Hirschmann CA Series 4-pole)
Mounting Provisions	Three (3) mounting points
Environmental	IP66 per IEC 60529 IEC 60695-11-10:2013 V0
Dimensions H x W x D	19.0" x 34.5" x 53.6" (483 x 877 x 1362 mm)
Weight (including yoke)	53 lbs (24 kg)
Enclosure	Hand-laminated multilayer fiberglass
Grille	Powder-coated perforated 316 stainless steel backed with hydrophobic (treated) acoustic fabric
Finish	Black gelcoat on exterior surfaces (1 exterior, 2 interior)
Accessories (included)	Mounting brackets (2 front and 1 rear)

OPTIONS

Configure-to-Order (CTO)	Custom color, specialized wiring
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[†] Full output not available at lowest temperature -5°C (until applied current warms driver materials)

* Measured far-field, adjusted to 10V into 100 ohms at 1 m. Signal: IEC60268-1

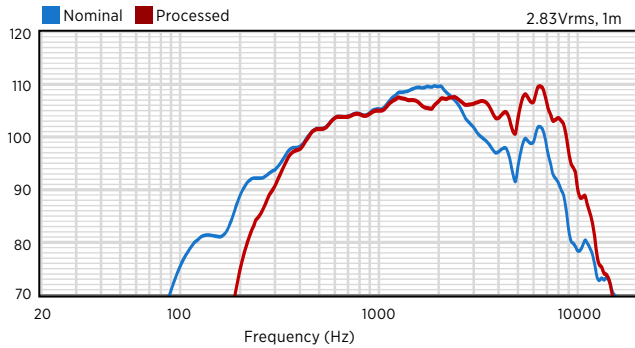
** Measured far-field, adjusted to 10V into 100 ohms at 4 m. Signal: IEC60268-1

Biamp strives to improve its products on a continual basis. Specifications are therefore subject to change without notice.

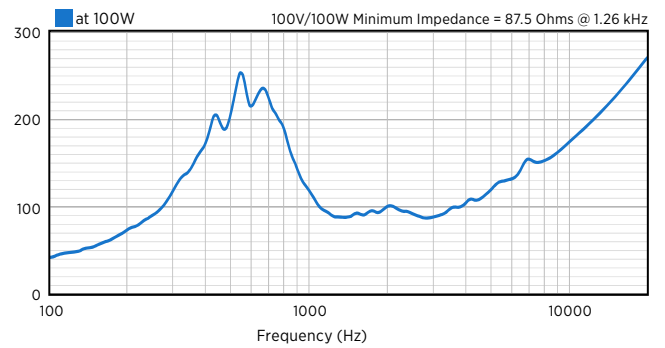
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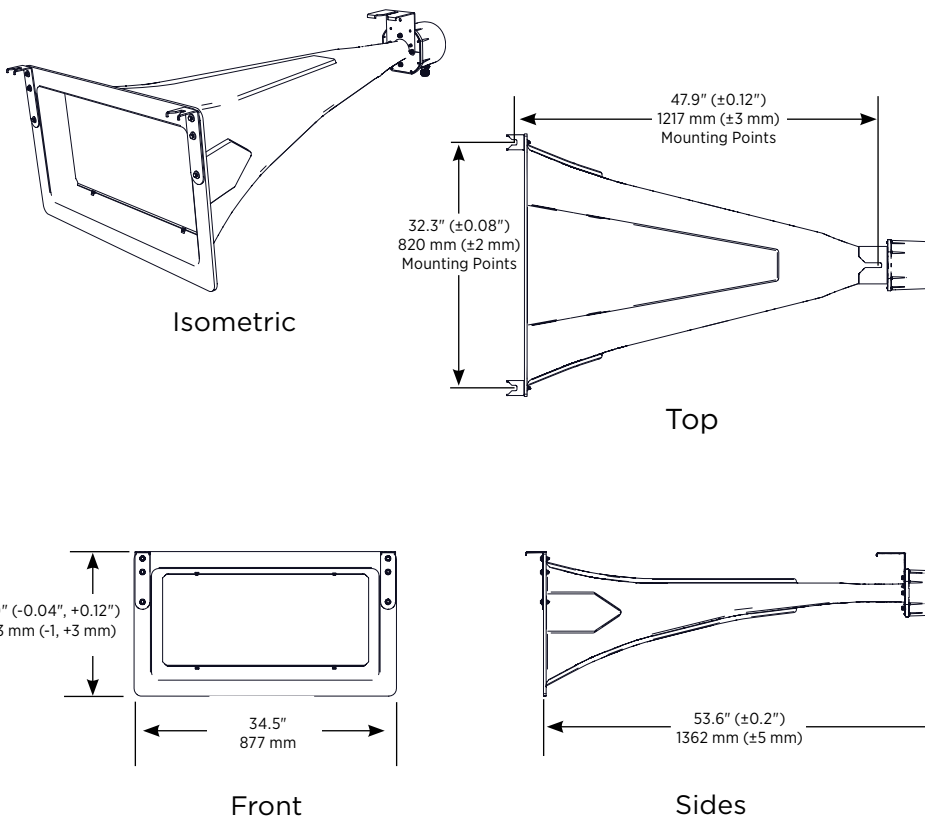
FREQUENCY RESPONSE (dB SPL)



IMPEDANCE (Ohms)



TECHNICAL DRAWING / DIMENSIONS / FINISH



H x W x D
19.0" x 34.5" x 53.6"
(483 x 877 x 1362 mm)

Unit Weight
53 lbs (24 kg) loudspeaker
with mounting brackets

Shipping Weight
158 lbs (71.7 kg) shipped in pairs

Enclosure / Finish
Hand-laminated multilayer fiberglass
with black gelcoat on exterior surfaces

Grille
Powder-coated perforated 316 stainless
steel backed with hydrophobic
(treated) acoustic fabric

Note: Tunnel horn is shown with the mounting brackets.
Overall horn width and height may vary slightly due to fiberglass application thickness.

CAUTION: Installation of loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting design.