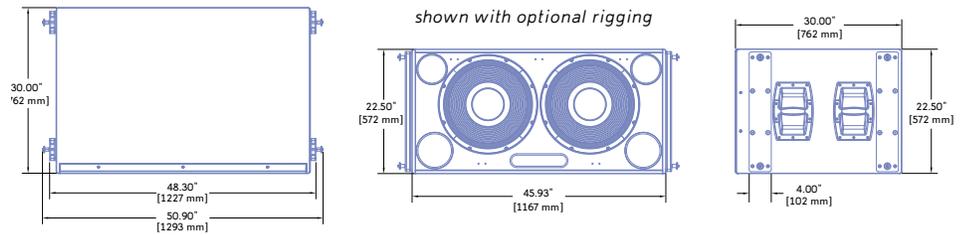




700-HP : UltraHigh-Power Subwoofer



Dimensions	45.93" w x 22.50" h x 30.00" d (1167 mm x 572 mm x 762 mm)
Dimensions w/rigging	50.58" w x 22.50" h x 30.00" d (1285 mm x 572 mm x 762 mm)
Weight	204 lbs (92.53 kg)
Weight w/rigging	259 lbs (117.48 kg)
Enclosure	Multi-ply hardwood
Finish	Black textured
Protective Grille	Perforated metal grille lined with acoustical black mesh
Rigging	Optional QuickFly® rigging kit available, with aluminum and steel side rigging bars, AlignaLinks and quick release pins



The Meyer Sound 700-HP ultrahigh-power subwoofer sets a new standard for the power-to-size equation. The 700-HP's power and bandwidth handle high continuous operating levels and extreme transient information with minimal distortion in its operating frequency range.

Meyer Sound's rigorous design approach has been applied to extract the greatest efficiency from every part of the system, resulting in the 700-HP subwoofer's effortless reproduction of low-frequency transient information. The transducers, amplification and control electronics of the self-powered 700-HP are created as a symbiotic system that optimizes performance and maximizes its tremendous power.

The operating frequency range of 28 Hz to 150 Hz complements other Meyer Sound loudspeakers and line and curvilinear arrays in sound reinforcement applications requiring maximum headroom at the low end of the frequency spectrum.

The 700-HP subwoofer's efficiently tuned cabinet houses two back-vented, long-

excursion, 18-inch cone drivers. Each driver features a 4-inch voice coil and is rated to handle 1200 AES watts (see note 4 on back page). The Meyer Sound designed and manufactured drivers have also been engineered for extreme efficiency, using high-gauss neodymium magnets for the most powerful magnetic field strength. High magnetic field strength increases the driver's sensitivity, which yields greater output, while keeping heat dissipation requirements within operational tolerances.

An integral two-channel class AB/H amplifier with complementary MOSFET output stages supplies total peak power of 2250 watts (1125 watts per channel). With nearly twice the amplification power of the 650-P subwoofer, the 700-HP produces an average of 3 dB more overall SPL, with enormous headroom to accommodate the most extreme demands with ease. Tests conducted by Meyer Sound show the 700-HP producing significantly higher output than other "high-power" subwoofers.

The amplifier, control electronics and power supply are integrated into a single, field-

replaceable module mounted in the cabinet rear. The cabinet is constructed of multi-ply hardwood and coated with a textured black finish. Integral metal grilles lined with acoustical black mesh protect the cone drivers. The stackable 700-HP includes plastic skids on the bottom of the unit to prevent damage to the enclosure or the unit below; the skids align with slots on the cabinet's top to ensure secure stacking. For maximum convenience, the 700-HP can travel in stacks on the MCF-700 caster frame.

The 700-HP is truck-smart, with exterior cabinet dimensions suitable for both European and U.S. trucks. A QuickFly rigging kit is available, installed at the factory or as a field upgrade. Up to 11 cabinets can be suspended from the optional MTG-700 top grid in a straight hang at a 7:1 safety factor.

Options for the 700-HP include weather protection and custom color finishes for fixed installations and any situation requiring specific cosmetics. The optional RMS™ remote monitoring system module allows comprehensive monitoring of all key system parameters on any RMS-equipped host PC.

FEATURES & BENEFITS

- Stackable
- Flyable using optional rigging kit
- Extremely low distortion for ultimate low-frequency clarity

- Very high peak power yields excellent transient reproduction
- Ultra-efficient neodymium magnet drivers
- Transportable in blocks using optional heavy duty caster frame

APPLICATIONS

- Stadiums, arenas and concert halls
- Medium-to-large theatres and clubs
- Theme parks
- Cinema

700-HP SPECIFICATIONS

ACOUSTICAL	
Operating Frequency Range ¹	28 Hz – 150 Hz
Free Field Frequency Response ²	30 Hz – 125 Hz ±4 dB
Phase Response	45 Hz – 145 Hz ±30°
Maximum Peak SPL ³	139 dB
Dynamic Range	>110 dB
COVERAGE	
360° (single unit); varies with number of units and configuration	
TRANSDUCERS	
Low Frequency	Two 18" cone drivers Nominal impedance: 4 Ω Voice coil size: 4" Power-handling capability: 1200 W (AES) ⁴
AUDIO INPUT	
Type	Differential, electronically balanced
Maximum Common Mode Range	±15 V DC, clamped to earth for voltage transient protection
Connectors	Female XLR input with male XLR loop output or VEAM all-in-one (integrates AC, audio and network)
Input Impedance	10 kΩ differential between pins 2 and 3
Wiring	Pin 1: Chassis/earth through 220 kΩ, 1000 pF, 15 V clamp network to provide virtual ground lift at audio frequencies Pin 2: Signal + Pin 3: Signal - Case: Earth ground and chassis
DC Blocking	None on input, DC blocked through signal processing
CMRR	>50 dB, typically 80 dB (50 Hz–500 Hz)
RF Filter	Common mode: 425 kHz Differential mode: 142 kHz
TIM Filter	Integral to signal processing (<80 kHz)
Nominal Input Sensitivity	0 dBV (1 V rms, 1.4 V pk) continuous is typically the onset of limiting for noise and music
Input Level	Audio source must be capable of producing a minimum of +20 dBV (10 V rms, 14 V pk) into 600 Ω in order to produce maximum peak SPL over the operating bandwidth of the loudspeaker
AMPLIFIERS	
Type	Two-channel complementary power MOSFET output stages (class AB/H)
Output Power	2250 W (1125 W/channel) ⁵
THD, IM, TIM	<.02%
Load Capacity	4 Ω each channel
Cooling	Forced air cooling, two fans (one ultrahigh-speed reserve fan)
AC POWER	
Connector	250 V AC NEMA L6–20 (twist lock), IEC 309 male inlet, or VEAM Automatic Voltage Selection
Safety Agency Rated Operating Range	95 V AC – 125 V AC; 208 V AC – 235 V AC; 50/60 Hz
Turn-on and Turn-off Points	85 V AC – 134 V AC; 165 V AC – 264 V AC; 50/60 Hz
Current Draw: Idle Current	0.640 A rms (115 V AC); 0.320 A rms (230 V AC); 0.850 A rms (100 V AC)
Max Long-Term Continuous Current (>10 sec)	8.8 A rms (115 V AC); 4 A rms (230 V AC); 10 A rms (100 V AC)
Burst Current (<1 sec)	19 A rms (115 V AC); 9.5 A rms (230 V AC); 22 A rms (100 V AC)
Ultimate Short-Term Peak Current Draw	39 A pk (115 V AC); 20 A pk (230 V AC); 45 A pk (100 V AC)
Inrush Current	7 A pk (115 V AC); 7 A pk (230 V AC); 10 A pk (100 V AC)
RMS NETWORK (OPTIONAL)	
Equipped for two conductor twisted-pair network, reporting all operating parameters of amplifiers to system operator's host computer.	

NOTES:

1. Recommended maximum operating frequency range. Response depends upon loading conditions and room acoustics.
2. Measured with 1/3 octave frequency resolution at 4 meters.
3. Measured with music at 1 meter.
4. Power handling is measured under AES standard conditions: transducer driven continuously for two hours with a band-limited noise signal having a 6 dB peak-to-average ratio.
5. Amplifier wattage rating is based on the maximum unclipped burst sine-wave rms voltage the amplifier will produce into the nominal load impedance. Both channels 67 V rms (95 V pk) into 4 ohms.



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MEYER SOUND LABORATORIES INC.
2832 San Pablo Avenue
Berkeley, CA 94702

T: +1 510 486.1166
F: +1 510 486.8356

info@meyersound.com
www.meyersound.com

ARCHITECT SPECIFICATIONS

The loudspeaker shall be a self-powered, sub-bass system that may be deployed as either a flown or a ground-stacked unit. The transducers shall consist of two 18-inch cone drivers (4-inch voice coil) each rated to handle 1200 AES* watts.

The loudspeaker shall incorporate internal processing electronics and a two-channel amplifier. Each amplifier channel shall be class AB/H with complementary MOSFET output stages. Burst capability shall be 2250 watts total with nominal 4-ohm resistive load. Distortion (THD, IM, TIM) shall not exceed 0.02%. Protection circuits shall include TruPower limiting. The audio input shall be electronically balanced with a 10 kΩ impedance and accept a nominal 0 dBV (1 V rms) signal (20 dBV to produce maximum SPL). Connectors shall be XLR (A-3) type male and female or VEAM all-in-one. RF filtering shall be provided, and CMRR shall be greater than 50 dB (50 – 500 Hz).

Performance specifications for a typical production unit shall be as follows, measured at 1/3-octave resolution: Operating frequency range shall be 28 Hz to 150 Hz. Phase response shall be ±30° from 45 Hz to 145 Hz. Maximum peak SPL shall be 139 dB at 1 meter.

The internal power supply shall perform automatic voltage selection, EMI filtering, soft current turn-on and surge suppression. Powering requirements shall be nominal 100 V, 110 V or 230 V AC line current at 50 Hz or 60 Hz. UL and CE operating voltage ranges shall be 95 to 125 V AC and 208 to 235 V AC. Current draw during burst shall be 19 A rms at 115 V AC, 9.5 A rms at 230 V AC and 22 A rms at 100 V AC. Current inrush during soft turn-on shall not exceed 7 A at 115 V AC. AC power connectors shall be L6–20, IEC 309 male or VEAM all-in-one.

The loudspeaker shall optionally incorporate the electronics module for Meyer Sound's RMS remote monitoring system.

Loudspeaker components shall be mounted in a multi-ply hardwood enclosure with a black textured finish. Dimensions shall be 45.93" wide x 22.50" high x 30.00" deep (1167 mm x 572 mm x 762 mm). Weight shall be 204 lbs (92.53 kg). Dimension with optional rigging shall be 50.58" wide x 22.50" high x 30.00" deep (1285 mm x 572 mm x 762 mm). Weight with rigging shall be 259 lbs (117.48 kg).

The loudspeaker shall be the Meyer Sound 700-HP ultrahigh-power subwoofer.

*Driven continuously for two hours with band-limited noise signal having a 6 dB peak-average ratio.