18" Woof for low and mid bass professional sound reinforcement, offering high power capacity, outstanding low end response and exceptionally smooth transition into the vocal range. This new design is capable of handling up to 1,200 Watts Continuous Music.

The 18WS600 is ideal for side fill as well as front of house cabinets. This woofer exhibits outstanding acoustics with work horse construction. Designed for smaller enclosures, the 18WS600 is a versatile, high performance woofer. General construction includes a sturdy cast frame, an impregnated cloth surround, impregnated long fiber paper cone and stable double spider.

The 18WS600 woofer incorporates a large magnetic assembly central hole and 6 windows on the frame which increases heat dissipation and reduces operating temperature increasing the output power with reduced power compression.

### SPECIFICATIONS

**Nominal diameter**
- 460 (18) mm (in)

**Nominal impedance**
- 8 Ω

**Power handling**
- Peak: 2,400 W
- Continuous Music: 1,200 W
- NBR\(^1\): 800 W
- AES\(^2\): 450 W

**Sensitivity** (2.83V/1m) averaged from 100 to 500 Hz...
- 98 dB SPL

**Power compression**
- @ 0 dB (nom. power): 2.6 dB
- @ -10 dB (nom. power)/10: 0.7 dB

**Frequency response**
- @ -10 dB: 35 to 3,000 Hz

**TNELE-SMALL PARAMETERS**

**Fs**
- 33 Hz

**Vas**
- 375 (13.24) l (ft)

**Qts**
- 0.43

**Qes**
- 0.44

**Qms**
- 18.79

**Qts**
- 2.99%

**Sd**
- 0.1194 (184.45) m (in)

**Vmax**
- 247.8 (27.67) cm (in)

**Xmax**
- 3.8 (0.15) mm (in)

**Xlim**
- 21 (0.82) mm (in)

**Atmospheric conditions at Ts parameter measurements:**
- Temperature: 24 (75) °C (°F)
- Humidity: 56%

**Theile-Small parameters are measured after a 2-hour power test using half power. A variation of ±15% is allowed.**

### ADDITIONAL PARAMETERS

**βL**
- 19.2 Tm

**Flux density**
- 0.98 T

**Voice coil diameter**
- 100 (4) mm (in)

**Wire temperature coefficient of resistance (α2)**
- 0.00388 1/°C

**Maximum voice coil operation temperature**
- 251 (484) °F

**Voice coil winding length**
- 29.7 (97.4) m (ft)

**Vdc (max.voice coil operation temp./max.power)**
- 0.56 (1.07)

**Hvc (voice coil winding depth)**
- 17.0 (0.71) mm (in)

** Hag (air gap height)**
- 9.5 (0.37) mm (in)

**Re**
- 6.3 Ω

**Mms**
- 123.5 (0.27) g (lb)

**Cms**
- 1.90 μm/N

**Rms**
- 1.37 kg/s

### NON-LINEAR PARAMETERS

- Le @ Fs (voice coil inductance @ Fs)
  - 4.569 mH
- Le @ 1 kHz (voice coil inductance @ 1 kHz)
  - 1.702 mH
- Le @ 20 kHz (voice coil inductance @ 20 kHz)
  - 0.714 mH
- Red @ Fs
  - 0.201 Ω
- Red @ 1 kHz
  - 4.769 Ω
- Red @ 20 kHz
  - 77.338 Ω
- Krm
  - 1.4 mΩ
- Km
  - 21.5 mH
- Erm
  - 0.93
- Exm
  - 0.71

### ADDITIONAL INFORMATION

**MOUNTING INFORMATION**

Number of bolt-holes: 8

**Bolt-hole diameter**
- 7.0 (0.27) mm (in)

**Bolt-circle diameter**
- 439 (17.28) mm (in)

**Baffle cutout diameter (front mount)**
- 422 (16.61) mm (in)

**Baffle cutout diameter (rear mount)**
- 412 (16.22) mm (in)

**Connectors**
- Silver-plated push terminals

**Polarity**
- Positive voltage applied to the positive terminal (red) gives forward cone motion

Minimum clearance between the back of the magnetic assembly and the enclosure wall...

Dimensions in mm.
HOW TO CHOOSE THE RIGHT AMPLIFIER
The power amplifier must be able to supply twice the RMS driver power. This 3 dB headroom is necessary to handle the peaks that are common to musical programs. When the amplifier clips those peaks, high distortion arises and this may damage the transducer due to excessive heat. The use of compressors is a good practice to reduce music dynamics to safe levels.

FINDING VOICE COIL TEMPERATURE
It is very important to avoid maximum voice coil temperature. Since moving coil resistance (R) varies with temperature according to a well known law, we can calculate the temperature inside the voice coil by measuring the voice coil DC resistance:

\[ T_a = T_s + \left( \frac{R_s - R_\infty}{R_\infty} - 1 \right) \left( T_s - 25 + \frac{1}{a_w} \right) \]

\[ a_w \] voice coil wire temperature coefficient at 25°C.

POWER COMPRESSION
Voice coil resistance rises with temperature, which leads to efficiency reduction. Therefore, if after doubling the applied electric power to the driver we get a 2 dB rise in SPL instead of the expected 3 dB, we can say that power compression equals 1 dB. An efficient cooling system to dissipate voice coil heat is very important to reduce power compression.

NON-LINEAR VOICE COIL PARAMETERS
Due to its close coupling with the magnetic assembly, the voice coil in electrodynamic loudspeakers is a very non-linear circuit. Using the non-linear modeling parameters Krm, Kxm, Erm and Exm from an empirical model, we can calculate voice coil impedance with good accuracy.

SUGGESTED PROJECTS
HB1805A1 HB1805B1 HB1805C1 VB1805A1 PAS1G1 PAS2G1 PAS3G1
For additional project suggestions, please access our website.

SPECIFICATIONS
- 170-liter volume with 3 ducts ø 4“ by 11“ length.
- Response curves and harmonic distortion curves measured at 10 input power, 1 W / 1 m.
- Impedance and phase curves measured in free-air.

TEST ENCLOSURE
- 170-liter volume with 3 ducts ø 4“ by 11“ length.
- Response curves and harmonic distortion curves measured at 10 input power, 1 W / 1 m.
- Impedance and phase curves measured in free-air.