

SD-18 Low Frequency Transducer

SD-Series

Heavy Duty

This 18" high acoustic output transducer is packed with high technology with regards to materials, engineering, and manufacturing processes. Only the finest materials were utilized throughout this design. The acoustic package was totally analyzed and designed using the Finite Element Model. The result is an audio transducer that is second to none in performance, quality, and industrial design.



SPECIFICATIONS

GENERAL

Nominal O.D:	18 in, 460 mm.
Nominal Impedance:	8 Ω
Operating Bandwidth:	30 Hz - 1.5k Hz \pm 5%
Power Handling (IEC):	800 (R.M.S.)
Sensitivity @ 1m, 2.83V:	98 dB
Transducer Mass:	15.32 kg
Terminals:	Gold Plated Push

PARAMETER

f_s	= 33.2 Hz \pm 15%
R_e	= 5.1 Ω \pm 5%
S_d	= 0.125 m ²
Bl	= 35.8 Tm \pm 10%
β	= (Bl) ² /Re = 252 N ² /W \pm 15%
η_0	= 3.42 %
SPL ₀	= 98 dB \pm 1 dB
Q_{ms}	= 7.11 \pm 20%
Q_{es}	= 0.27 \pm 10%
Q_{ts}	= 0.26 \pm 10%
V_{as}	= 264.3 L \pm 20%
C_{ms}	= 119.1 mm/N \pm 20%
M_{md}	= 166.7 g \pm 10%
M_{ms}	= 192.1 g \pm 10%

TYPICAL LINEAR X PARAMETERS

Levc @ 1 kHz	= 1.95 mH
Levc @ 20 kHz	= 0.70 mH
K _{rm}	= 14.5 m Ω
K _{xm}	= 38.74 mH
Rem @ 1 kHz	= 7.91 Ω
Rem @ 20 kHz	= 68.56 Ω
E _{rm}	= 0.72
E _{xm}	= 0.65
HVC	= 25 mm
Hag	= 16 mm
X _{mx}	= 5 mm

RECOMMENDED ENCLOSURE

Enclosure Type:	4th Order High Pass
Net Enclosure Volume:	47.7 L (QB3 Alignment)
Number of Ports:	1
Port Inside Diameter (min):	150 mm
Port Inside Diameter (max):	195 mm
Port Length:	288 mm
Tuning Frequency (fb):	48 Hz

MATERIALS

Basket :	Blue Die Cast Aluminium
Cone and Dust Cap:	Paper
Front and Back Plates:	1008 Cold Roll Steel
Gaskets:	Foam
Magnet:	Ferrite
Surround:	SrO • 6Fe ₂ O ₃ ; 3.07 kg
Voice Coil Diameter:	Treated Cloth
Voice Coil Bobbin:	4.5" (114.3mm)
	Fiber Glass (Polyimide)
	High Temp. 400°C
	High Temp. 300°C
	Aluminium Ribbon Wire
	510 x 510 x 280 (mm)
	20.07inx20.07inx11.02in
	2.56 Cu.Ft
Voice Coil Wire:	15.32 kg (33.7 lb)
Dimension (H x W x D):	16.8 kg (36.96 lb)
Net Weight:	
Gross Weight:	

