H 4590

Compression Driver

2" COAXIAL COMPRESSION DRIVER

- Extended bandwidth (300 - 22.000 Hz)
- With two subsystems in one, each driver covers a smaller frequency range for increased power handling, high dynamic and extremely low distortion
- Excellent phase coherence
- Point source sound reproduction
- Perfect time alignment without the problems of multi-source interference

US Patent Nº 5.862.928
Europe Patent Nº 0793216

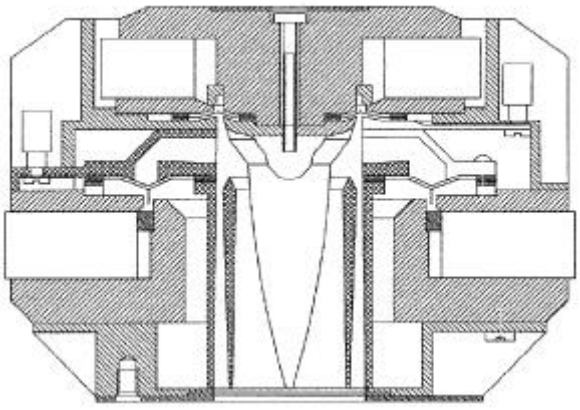
In a conventional full range compression driver the phase plug must be located extremely close to the diaphragm, excursion of the diaphragm is limited and middle frequency performance is compromised.

A typical 2" dome compression driver has a limited high frequency response. Over 8 kHz the dome diaphragm breaks up causing resonance and harsh, metallic sound.

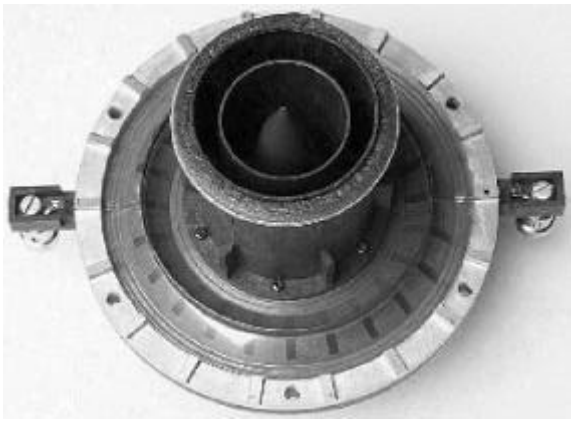
The BMS annular midrange diaphragm covers the frequency range between 400 and 7.000 Hz with a smooth, linear response. The large diaphragm excursion of max. +/-0,8 mm results in high output and increased power handling up to 1.300 W peak.

The ultra light annular diaphragm for the high range offers exceptional transient response with very high efficiency from 6 to 22 kHz.

Cross section view of the BMS 4590,
2“ coaxial compression driver



Ring radiator diaphragm for
mid-range from 300 Hz - 7 kHz



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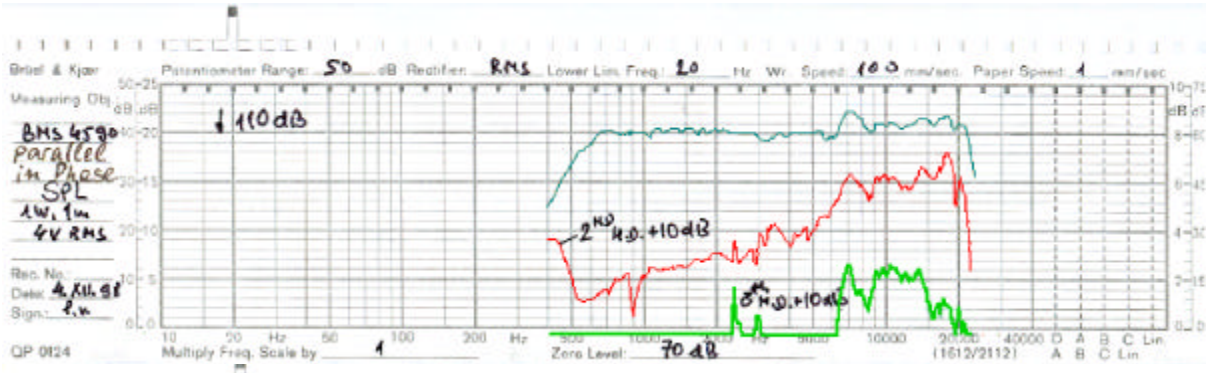
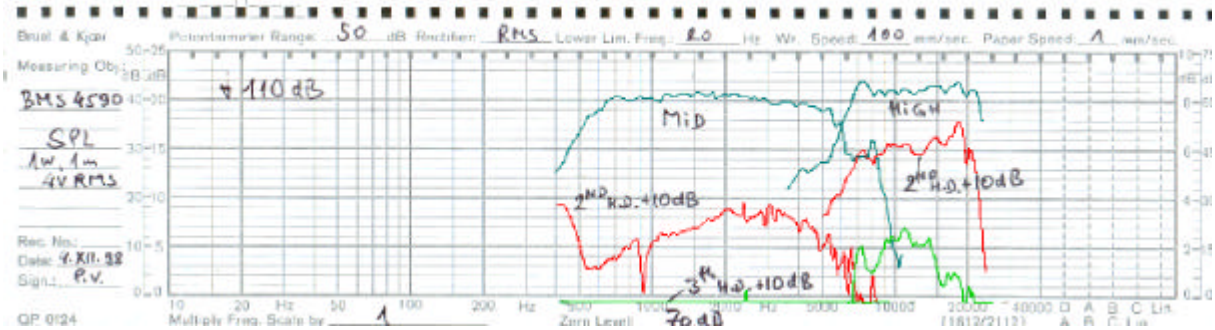
Specifications	4590
Throat diameter	2" (50,8 mm)
Nominal impedance	8 or 16 Ohm
Power capacity	
Middle range (AES)	150 W above 400 Hz
peak	1.000 W above 500 Hz
High range (AES)	80 W
peak	450 W
Sensitivity	118 dB on 2242 Horn
Frequency range	200 - 22.000 Hz
Recommended crossover	300 Hz
Middle frequency range	300 - 7.000 Hz
High frequency range	6.000 - 22.000 Hz
Middle/High crossover	6.300 Hz
Voice coil high-range	1,75" (44,4 mm)
Voice coil mid-range	3,5 " (90 mm)
Magnet material	Ceramic
Flux density high-range	1,95 T
Flux density mid-range	2 T
Efficency	35% (300 - 5.000 Hz)
Voice coil material	Cooper Clad Aluminium (2 layers
Voice coil former	Kapton
Diaphragm material	Polyester

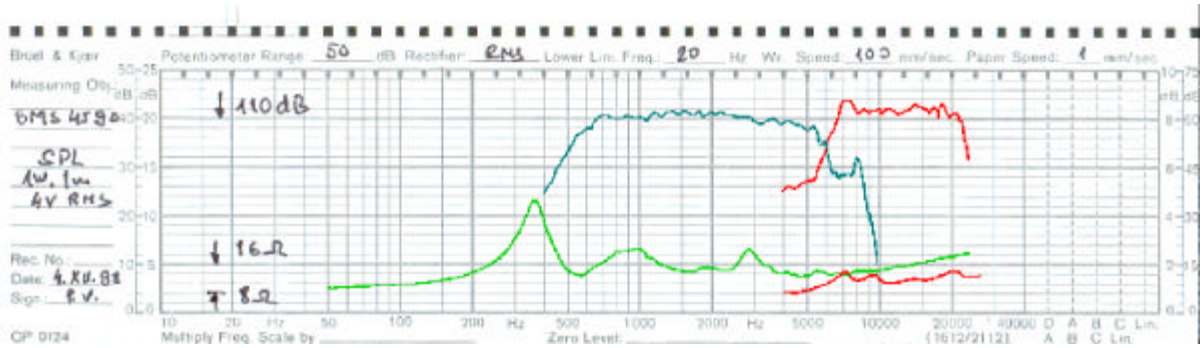
Mounting information

Overall Diameter	182 mm (+/- 3 mm)
Depth	129 mm
Net weight	9 kg

Four M6 holes, 90° on 101,6 mm, 4" diameter







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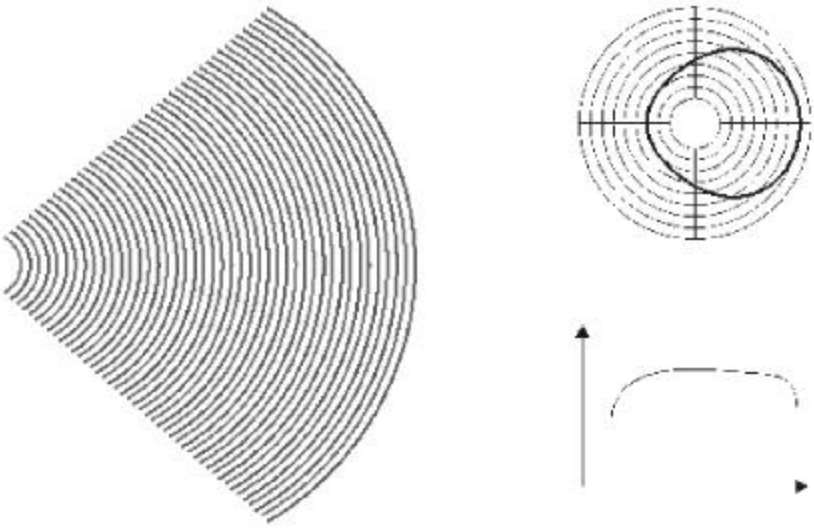
The driver is in fact a two way system employing two concentric annular ring diaphragms. The larger of the two reproduces middle frequency from 300 Hz upwards, crossing over 6.3 kHz to the HF transducer which is capable of reaching 22 kHz. The voice coils may be driven together in conjunction with a passive crossover or driven individually from an active crossover.

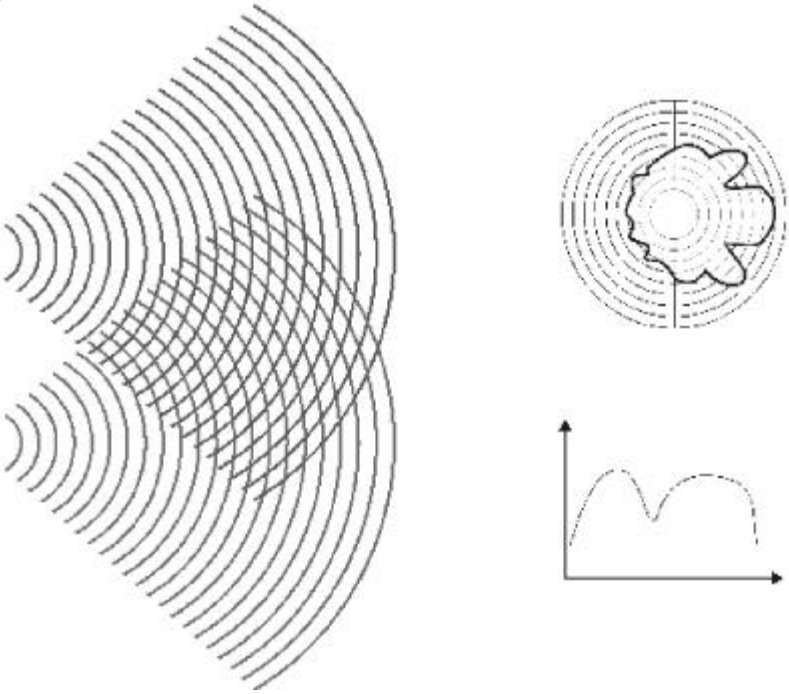
The outer casting, features extensive heat sinking ensures high power handling and low compression.

The unique voice coil technology employs a light weigh Cooper Clad Aluminium wire wound inside and outside of the Kapton former to improve the heat dissipation, dramatically increasing the acoustic output and reliability of the driver while minimizes the power compression.

BMS design of 4590



Conventional design



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