

PROFESSIONAL by HARMAN



The 18SWS1100 is a high powered 18" professional subwoofer specially designed to reproduce sound at the very low end of the audio spectrum. A 4" (100 mm) voice coil wound in a fibreglass former with flat aluminum wire drives the moving assembly. A non-pressed long fiber pulp cone has the necessary stiffness to withstand the tremendous accelerating forces involved and is properly centered by two counteracting polycotton fiber spiders. An triple cooling system consisting of a large diameter center hole surrounded by six smaller holes (directly cooling the gap) and six frame windows (cooling the air trapped between the two spiders) are responsible for an efficient heat transfer mechanism. A highly reinforced aluminum injected frame is effective in absorbing mechanical shocks and acts as a heat sink without interfering with the magnetic field.





The 18SWS1200 is a high-power 18-inch subwoofer, capable of handling up to 1200 Watts RMS (AES or 4800 Watts peak). A bumped and undercut T-yoke assures a minimum of magnetic rectification (off centering) and a compatible maximum displacement (Xlim). The extended pole ensures a correct magnetic flux intribution and improve the thermal dissipation the magnet circuit was optimized by finite element software. Special attention was given to the driver's behavior under mechanical overload conditions, meaning that all but the most severe abuse will be tolerated - without failure.



MODEL NO:	18SWS1100	18SWS1200	THIELE SMALL PARAMETERS	18SWS1100	18SWS1200
Nominal diameter mm (in)	460(18)	457(18)	FS Hz	34	35
Nominal Impedance	8Ω	8Ω	Vas	253.0	253.0
Minimum Impedance @ 88.6Hz	6.8Ω	<b>7.8</b> Ω	Qts	0.50	0.37
Power Handing			Qes	0.52	0.40
Peak	4400W	4800W	Qms	11.68	5.54
Musical Program	2200W	2400W	No (Half Space)	1.94%	2.64%
RMS	1100W	1200W	Sd	0.1194	0.1194
Sensitivity (1W@1m) averaged from 50 to 150 Hz	97 dB SPL	96 dB SPL	Vd (Sd x Xmax)	1134.6	1148.6
Power compression @ 0dB (nom. power)	4.1 dB	3.2 dB	Xmax (max.excursion (peak) with 10% distortion)	9.3	9.6
Power compression @ -3dB (nom. power) / 2	2.4 dB	2.7 dB	Xlim (max.excursion (peak) before physical damage)	25.0	21.0
Power compression @ -10dB (nom. power) / 10	1.7 dB	1.1 dB	Atmospheric comditions at TS parameter Measurements		
Frequency Response @ -10 dB	30 to 3.000 Hz	37 to 2.000 Hz	Temperature	24(75)	25(81.73)
			Atmospheric pressure	1.020 mb	1.047 mb
			Humidity	59%	51%

- -Woofer 15WP550 is a woofer, designed to respond at low and mid frequencies
- Finite element method (FEA) optimized magnetic set resulting in a high efficiency set
- T-yoke use with recessed lower washer ensures a large maxmum displacement (Xlim)

  - 100mm voice coil 2-layer cooper round wire, coiled in poliymide form
  - High strength long fiber cellulose cone- Basket rigid injected aluminum housing

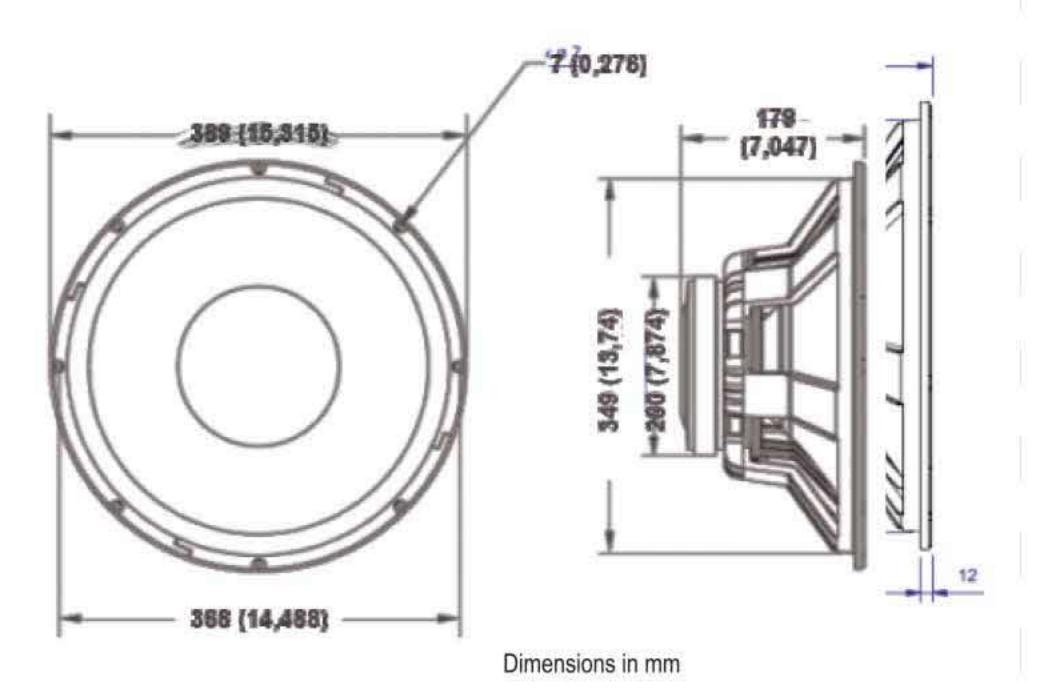






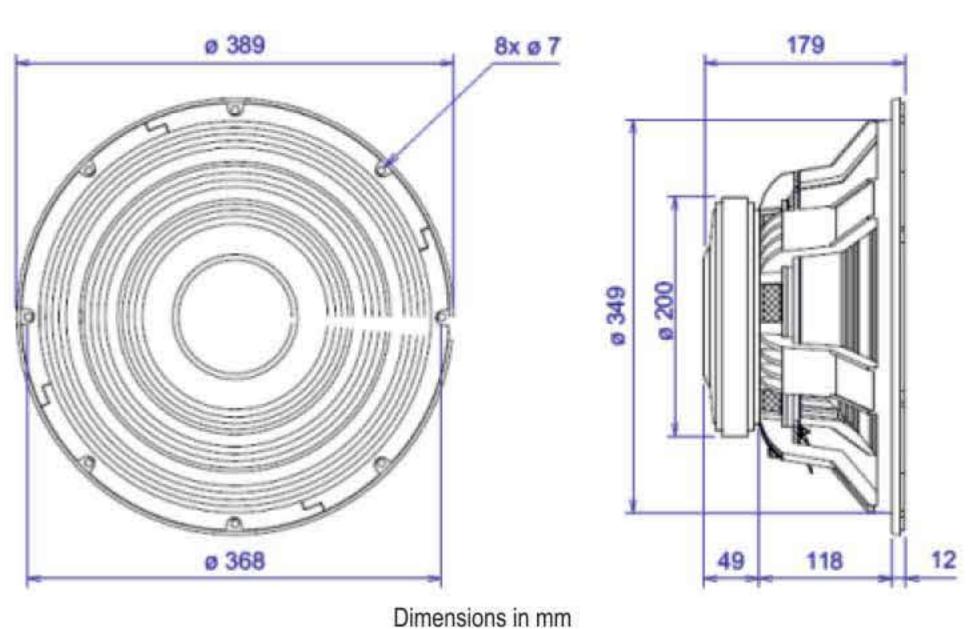
### 15WP550 1100W RMS 4" VC







15" Woofer for low and mid bass professional sound reinforcement, offering high power capacity, out standing low end response and exceptionally smooth transition into the vocal range. This new design is capable of handling up to 1,200 Watts Continue Music. The 15WS600 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 15WS600 is a versatile, high performance woofer. General construction includes a sturdy cast frame, an impregnated cloth surround, impregnated long fibre paper cone and stable double spider. The 15WS600 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



# RESPONSE CURVES (0° AND 45°) IN A TEST ENCLOSURE INSIDE AN

15WS600 600W RMS 4" VC





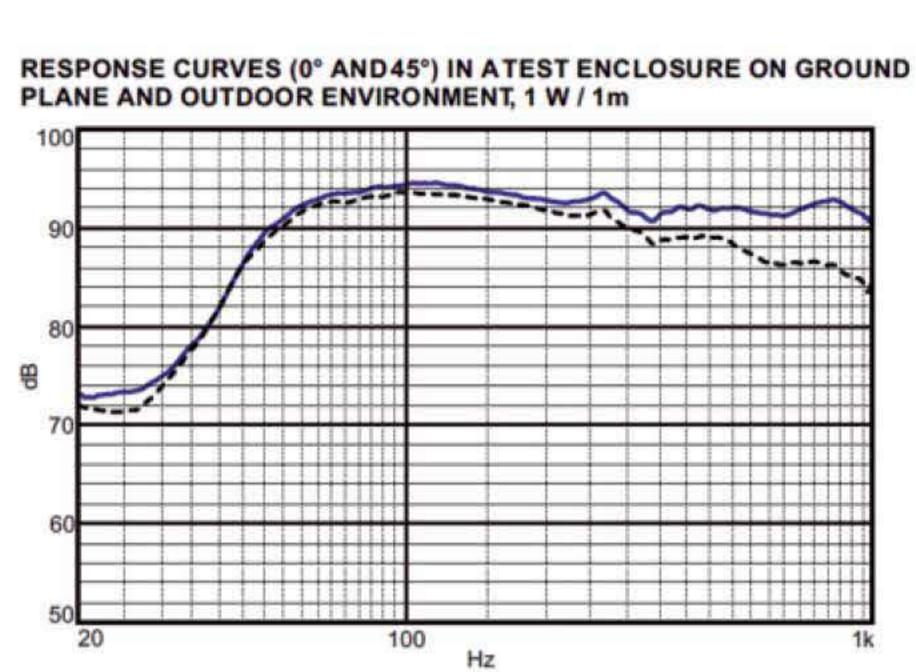
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MODEL NO:	15WS600	15WS600
Nominal diameter mm (in)	381(15)	380(15)
Nominal Impedance	8Ω	8Ω
Minimum Impedance @ 190 Hz	6.7Ω	7.1Ω
Power Handing		
Peak	2200W	2400W
Continuous Music	1100W	1400W
RMS	550W	600W
Sensitivity (2.83@1m) averaged from 100 to 500 Hz	95.5 dB SPL	97 dB SPL
Power compression @ 0dB (nom. power)	4.03 dB	3.2 dB
Power compression @ -3dB (nom. power) / 2	2.72 dB	2.1 dB
Power compression @ -10dB (nom. power) / 10	0.63 dB	0.7 dB
Frequency Response @ -10 dB	45 to 3.500 Hz	40 to 3.500 Hz

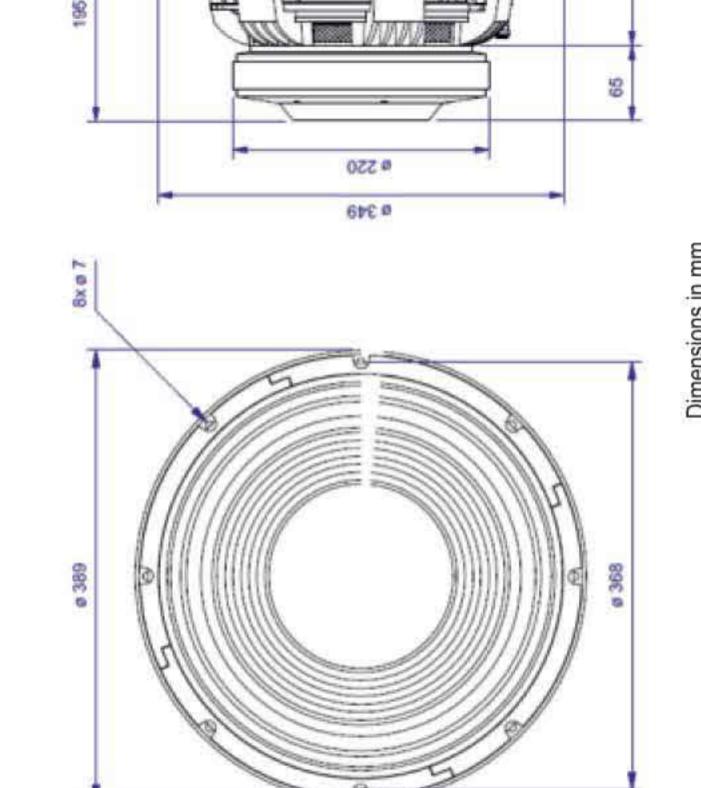
THIELE SMALL PARAMETERS	15WP550	15WS600
FS Hz	39.6	35
Vas	140.3	215.0
Qts	0.37	0.35
Qes	0.38	0.36
Qms	17.2	20.07
No (Half Space)	2.24%	2.5%
Sd	0.0814	0.0814
Vd (Sd x Xmax)	488.4	350.0
Xmax (max.excursion (peak) with 10% distortion)	6	3.75
Xlim (max.excursion (peak) before physical damage)	21	21
Atmospheric comditions at TS parameter Measureme	nts	
Temperature	23.5(74.3)	24(75)
Atmospheric pressure	1.047 mb	1.005 mb
Humidity	53%	63%











### 15SWS1200 1200W RMS 4" VC

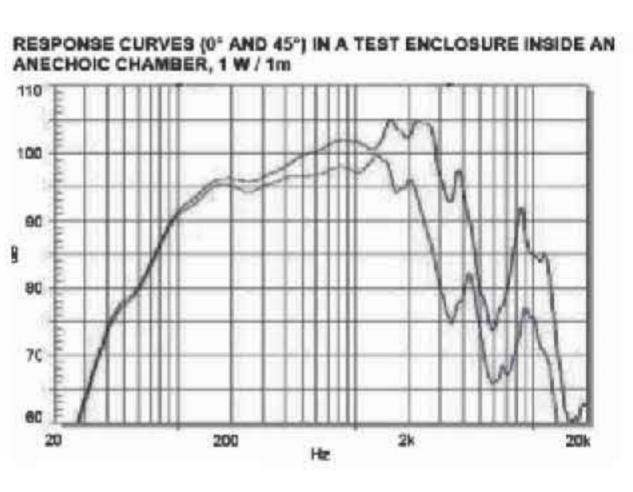
MODEL NO:	
Nominal diameter mm (in)	380(15)
Nominal Impedance	8Ω
Minimum Impedance @ 129 Hz	7.1Q
Power Handing	
Peak	4800W
Continuous Music	2400W
RMS	1200W
Sensitivity (2.83@1m) averaged from 70 to 300 Hz	95 dB SPL
Power compression @ 0dB (nom. power)	3.5 dB
Power compression @ -3dB (nom. power) / 2	1.8 dB
Power compression @ -10dB (nom. power) / 10	1.5 dB
Frequency Response @ -10 dB	35 to 3.000 Hz

FS Hz	37
Vas	140.0
Qts	0.41
Qes	0.42
Qms	13.2
No (Half Space)	1.7%
Sd	0.0814
Vd (Sd x Xmax)	757
Xmax (max.excursion (peak) with 10% distortion)	9.3
Xlim (max.excursion (peak) before physical damage)	25.0
Atmospheric comditions at TS parameter Measurement	s
Temperature	24(75)
Atmospheric pressure	1.020 mb
Humidity	59%

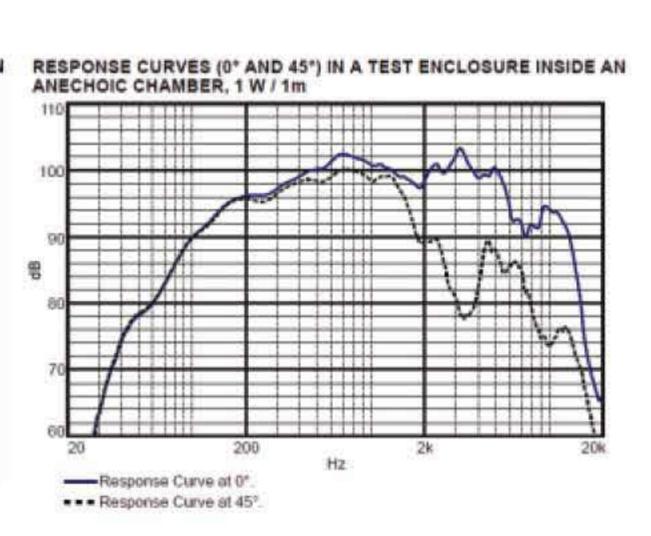
12" & 10" for midbass professional sound reinforcement. Offering high power capacity, outstanding mid range response and exceptional long-term performance, this transducer is ideal for compact enclosures (closed, vented or horns). This transducer exhibits excellent acoustics with work horse construction. Designed for smaller enclosures, the 12MB3P is a versatile high performance midbass. General construction includes a sturdy cast frame, impregnated cloth surround, stable spider and a large central vent channel for reducing long-term heat build-up.



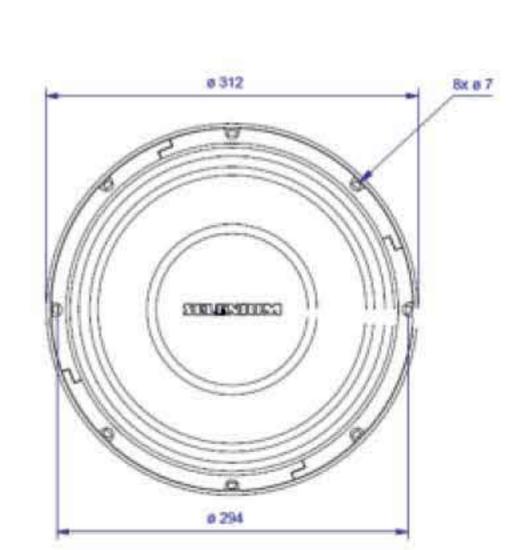
## **12MB3P** 500W RMS 4" VC

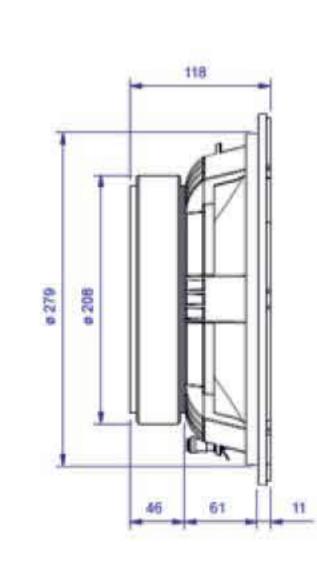


## **10MB3P** 300W RMS 3" VC











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Dimensions in mm		
MODEL NO:	12MB3P	10MB3P
Nominal diameter mm (in)	305(12)	255(10)
Nominal Impedance	8Ω	8Ω
Minimum Impedance @ 308 Hz	$6.5\Omega$	5.9Ω
Power Handing		
Musical Program	1000W	600W
RMS	500W	300W
Sensitivity (2.83@1m) averaged from 200 to 2000 Hz	101 dB SPL	100 dB SPL
Power compression @ 0dB (nom. power)	2.6 dB	3.4 dB
Power compression @ -3dB (nom. power) / 2	1.6 dB	2.1 dB
Power compression @ -10dB (nom. power) / 10	0.8 dB	0.7 dB
Frequency Response @ -10 dB	90 to 4.000 Hz	150 to 12000 Hz

THIELE SMALL PARAMETERS	12MB3P	10MB3P
FS Hz	61	80
Vas	51.0	23
Qts	0.48	0.46
Qes	0.50	0.47
Qms	12.55	16.45
No (Half Space)	2.28%	2.35%
Sd	0.0530	0.0363
Vd (Sd x Xmax)	145.7	21.8
Xmax (max.excursion (peak) with 10% distortion)	2.75	0.6
Xlim (max.excursion (peak) before physical damage)	10.0	13.5
Atmospheric comditions at TS parameter Measurement	s	
Temperature	24(73)	25(77)
Atmospheric pressure	1.016 mb	1.022 mb
Humidity	50%	50%

- -Woofer 15PW PRO is a woofer, designed to respond at low and mid frequencies
  - Finite element method (FEA) optimized magnetic set resulting in a high efficiency set
  - 60mm voice coil 2-layer cooper round wire, coiled in polyamide form
    - High strength long fiber cellulose cone
      - Basket rigid steel housing

15PW PRO - 8R

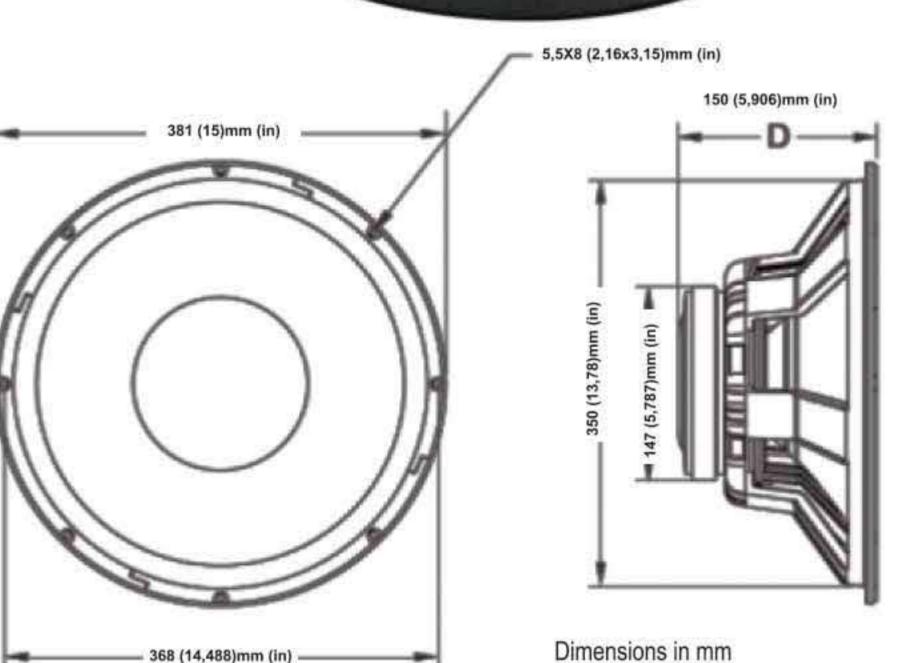
325W RMS 2.4" VC

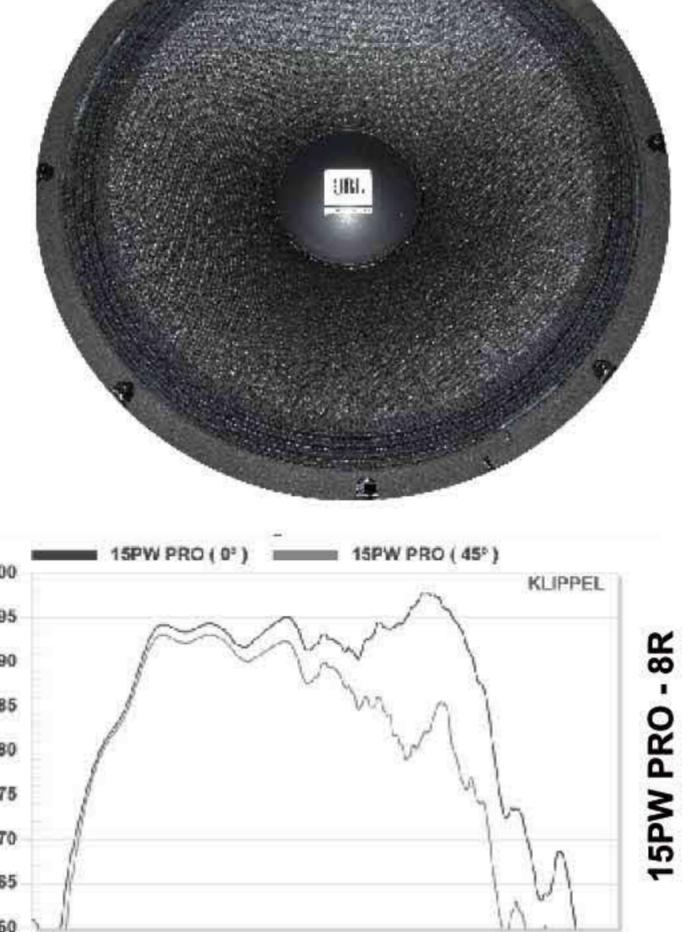
- -Woofer 12PW PRO is a woofer, designed to respond at low and mid frequencies
- Finite element method (FEA) optimized magnetic set resulting in a high efficiency set
  - 60mm voice coil 2-layer cooper round wire, coiled in polyamide form
- High strength long fiber cellulose cone -Basket rigid steel housing

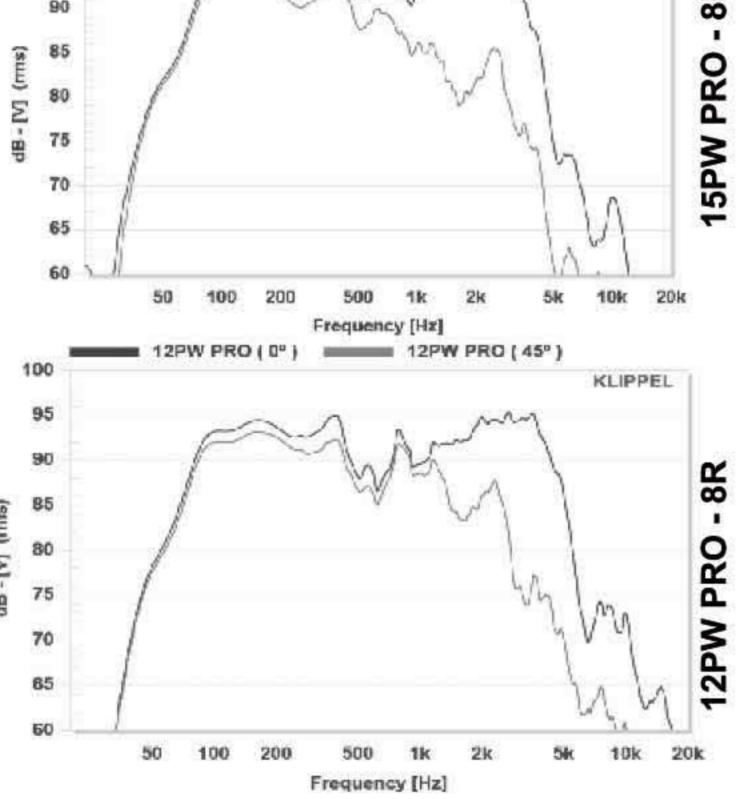


## 12PW PRO - 8R 275W RMS 2.4" VC

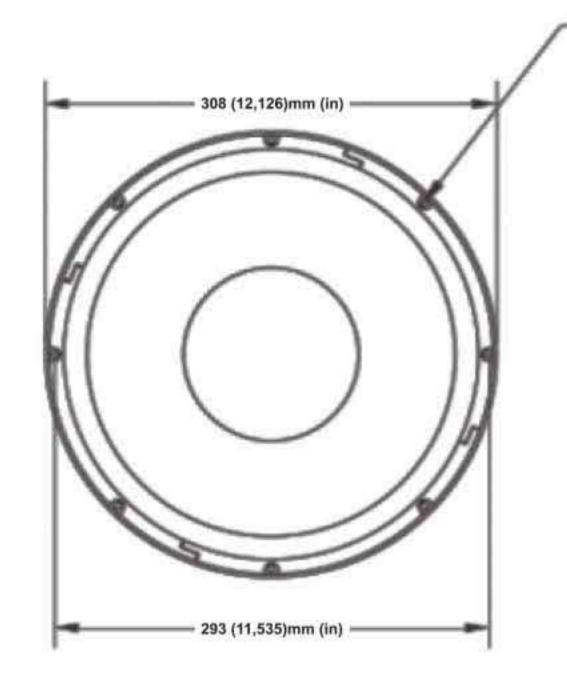


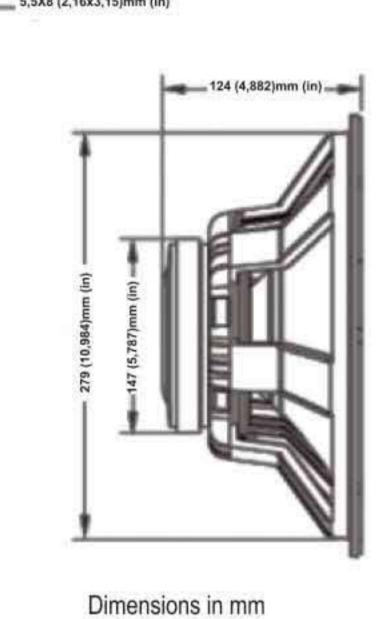












**PROFESSIONAL** 

by HARMAN



10PW PRO - 8R 200W RMS 2" VC

**8PW PRO - 8R** 

175W RMS 1.75" VC







MODEL NO:	15PW PRO - 8R	12PW PRO - 8R	10PW PRO - 8R	8PW PRO - 8R
Nominal diameter mm (in)	381 (15)	304.8 (12)	250 (10)	200 (8)
Nominal impedance	8Ω	8Ω	8Ω	$\Omega$ 8
Minimum Impedance	6.72Ω	$6.79\Omega$	6.78Ω	$6.79\Omega$
Power Handing				
Peak	650W	550W	400W	350W
Nominal power (RMS)	325W	275W	200W	175W
Sensitivity (1W@1m)	94 dB SPL	94 dB SPL	92.5 dB SPL	93 dB SPL
Power compression @ 0dB (nom. power)	3.81 dB	2.31 dB	8 <del></del>	# <del>=</del> }
Power compression @ -3dB (nom. power) / 2	3.00 dB	1.40 dB	3 <b></b> 2	3₩8
Power compression @ -10dB (nom. power) / 10	0.81 dB	1.01 dB	( <b>14</b> ):	
Frequency Response @ -10 dB	40 to 4780 Hz	40to 5200 Hz	60 to 6000 Hz	70to 8150Hz

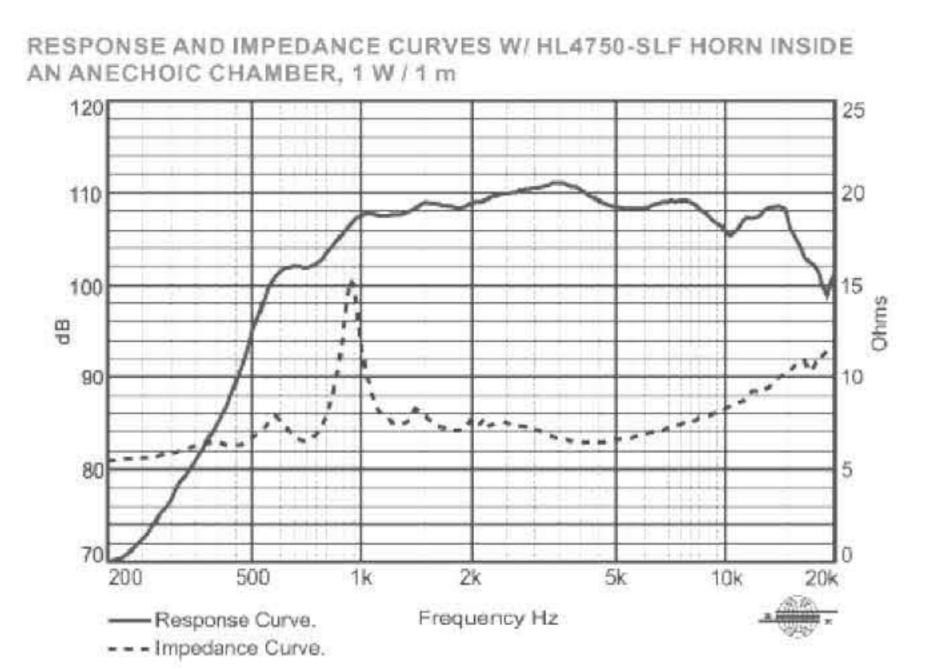


The D3305Ti DPD® model is an ultra high quality compression driver for Polarity:professional use wherever high SPL and low distortion are of great concern. Pure titanium specially designed diaphragm with IPF® (Impregnated Polymer Fiber) surround, for high sensitivity, low distortion and smooth extended frequency response applications. The D3305Ti DPD® is recommended for use in arenas, stage monitors, side fills and sound reinforcement systems. Optimized aluminum injected phase plug avoids phase cancellation problems.





MODEL NO:	D3305 Ti DPD
Nominal diameter	8Ω
Nominal Impedance	6.7Ω
Musical Program	150W
Sensitivity	
On Horn, 1W@1m,on axis2	108 dB SPL
On plane-wave tube, 0.0894V <sup>3</sup>	116 dB SPL
Frequency response @ -10 dB	500 to 20.000 Hz
Throat Diameter mm (in)	50 (2)
Diaphragm Material	Titanium
Voice coil diameter mm (in)	75 (3)
RE	4.8Ω
Flux density	1.68 T
Minimum recommended crossover (12	dB/oct) 800 Hz

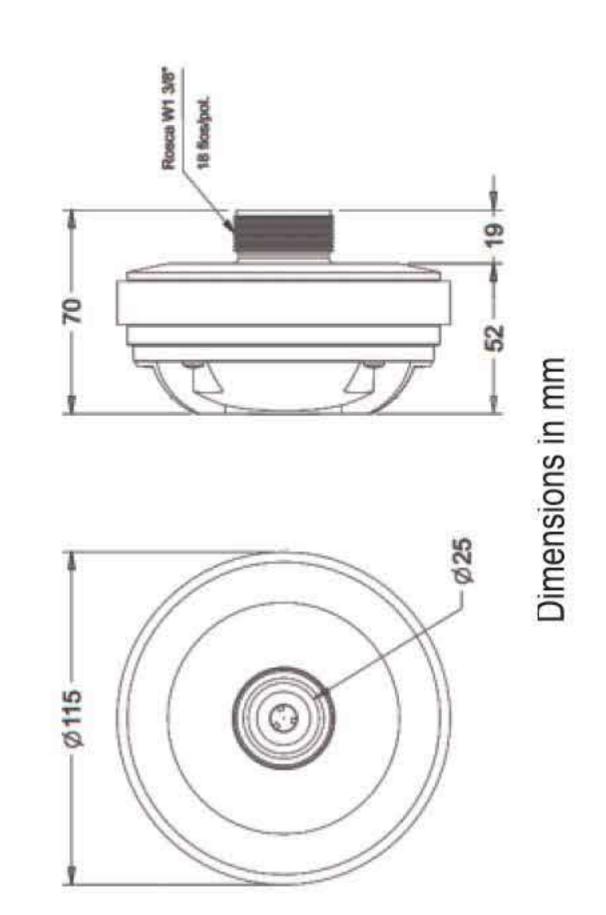


High quality compression driver with dome diaphragm in pure titanium, offers high efficiency and low distortion over the medium and high frequencies band. It can be successfully used in studio monitors, stage boxes and sound reinforcement in small rooms, where a high performance is requested. This performance results from the proper combination of the components. Diaphragm type dome in pure, rigid, light and extremely thin titanium (0.025 mm). To avoid stress and distortion, the suspension has a special design. Injected phase plug in engineering plastic, optimized to eliminate undesirable phase cancellations. Magnetic assembly that concentrates flux in the gap, optimized using FEA(Finite Element Analysis).

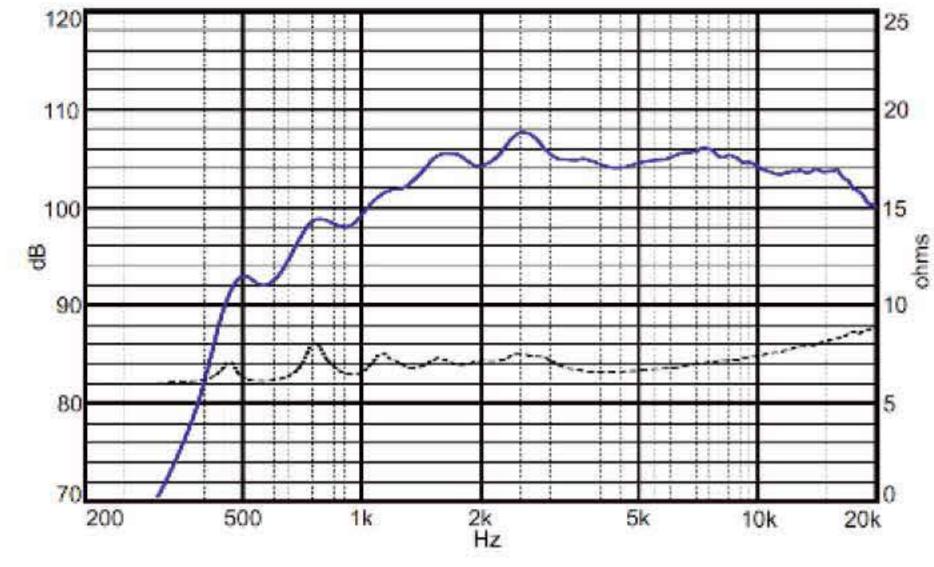


## D220Ti 1" Throat 80W RMS





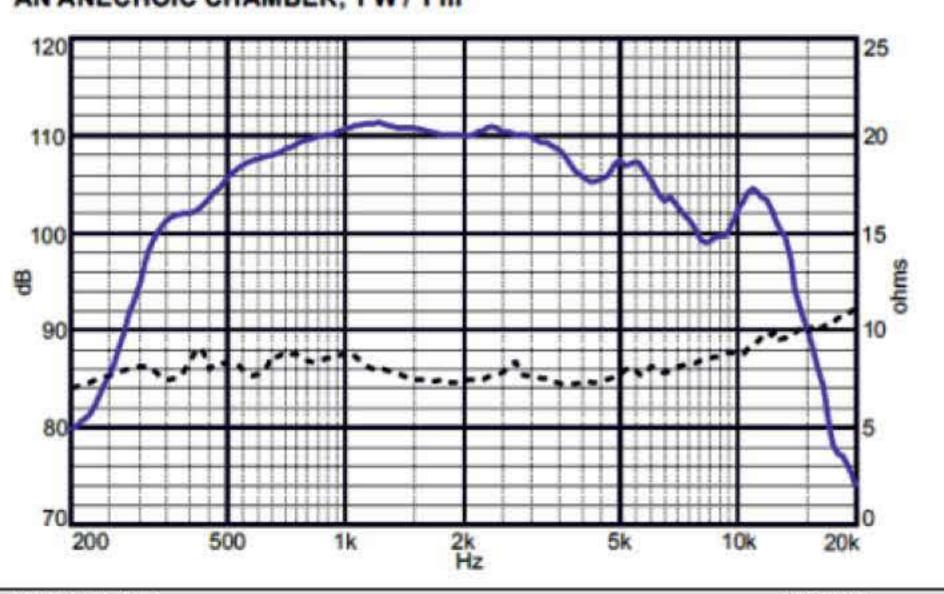
## RESPONSE AND IMPEDANCE CURVES W/ HL14-25 HORN INSIDE AN ANECHOIC CHAMBER, 1 W / 1 m



MODEL NO:	D220Ti	
Nominal Impedance	8Ω 6.7Ω	
Minimum Impedance @ 4280 Hz		
RMS power Using Crossover	<b>ACTIVE</b>	<b>PASSIVE</b>
AES (HPF 15KHz - 12dB /oit)4	16	40W
AES (HPF 20KHz - 12dB /oit)4	24	60W
Music Program power using crossover		
(HPF 15KHz - 12dB /oit)⁴	32	80W
(HPF 20KHz - 12dB /oit)4	48	160W
Sensitivity		
On horn 283V@1m on Axis <sup>2</sup>	106 dB SPL	
On plane-wave tube 0.0894V <sup>3</sup>	111 dB SPL	
Frequency response @ -10dB	1000 to 20000 Hz	
Throat diameter	25 (1)	
Diaphragm material	Titanium	
Voice Coil diameter	44 (1.7)	
Re	6.0 Ω	
Flux density	1.0	)1 T
Minimum recommended crossover (12 dB / oct)	1.500 Hz	

The D405Ti is a 2" exit high-frequency compression driver features high sensitivity, low distortion and smooth extended frequency. It combines a stable structure for mid-frequency reproduction and a low mass that enables high frequency reproduction. RPD400TI replacement diaphragm

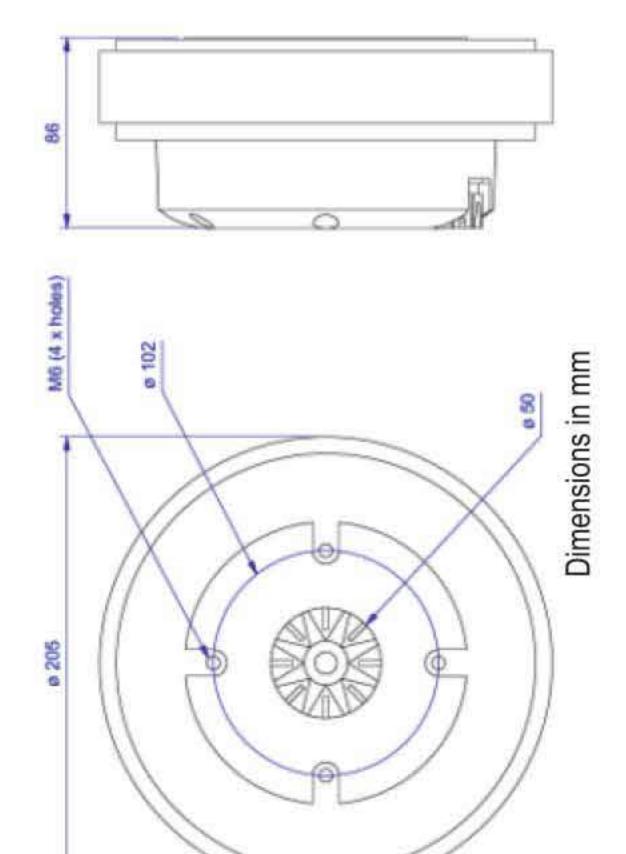
RESPONSE AND IMPEDANCE CURVES W/ HL4750-SLF HORN INSIDE AN ANECHOIC CHAMBER, 1 W / 1 m



200 Sto Sk Hz	10k 20k
MODEL NO:	D405Ti
Nominal Impedance	8Ω
Minimum Impedance @ 3750 Hz	7.3Ω
Power Handing	
Musical Program (w/ xover 800 Hz 12 dB / oct)	200W
Musical Program (w/ xover 1200 Hz 12 dB / oct)	250W
Sensitivity	
On horn 283V@1m on Axis <sup>2</sup>	109 dB SPL
On plane-wave tube 0.0894V <sup>3</sup>	114 dB SPL
Frequency response @ -10dB	400 to 1800 hz
Throat diameter	50(2)
Diaphragm material	Titanium
Voice Coil diameter	100(4)
Re	6.0 Ω
Flux density	1.70 T
Minimum recommended crossover (12 dB / oct)	800 Hz

## D405Ti 2" Throat

**200W RMS** 

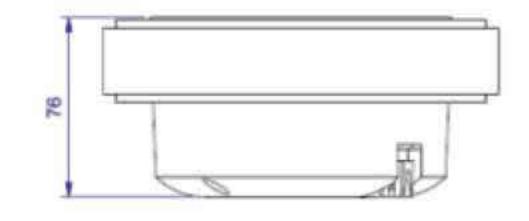


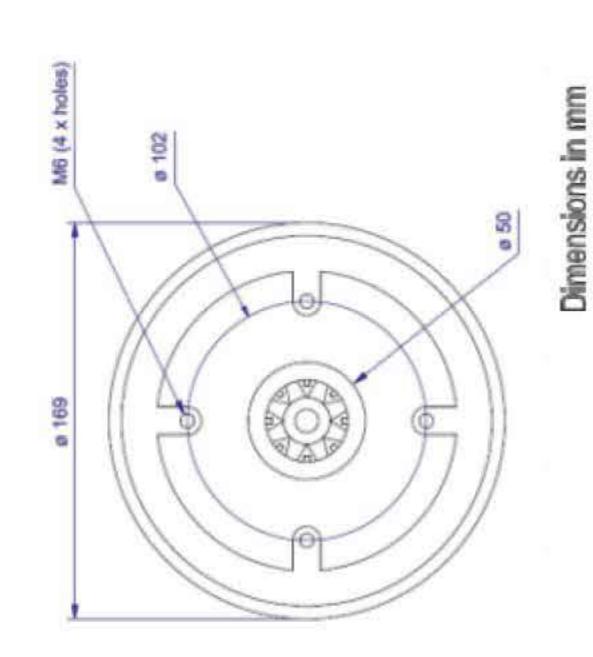


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## D305

2" Throat 100W RMS PHENOLIC





#### RESPONSE AND IMPEDANCE CURVES W/ HL4750-SLF HORN INSIDE AN ANECHOIC CHAMBER, 1 W / 1 m

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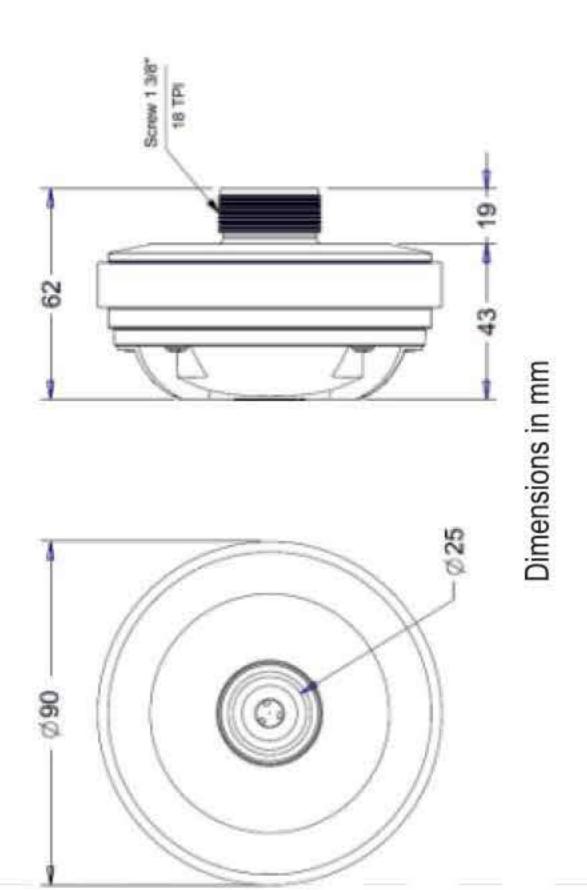
MODEL NO:	D305
Nominal Impedance	8Ω
Minimum Impedance @ 3750 Hz	7.3Ω
Power Handing	
Musical Program (w/ xover 800 Hz 12 dB / oct)	200VV
Musical Program (w/ xover 1200 Hz 12 dB / oct)	250VV
Sensitivity	
On horn 283V@1m on Axis <sup>2</sup>	109 dB SPL
On plane-wave tube 0.0894V3	114 dB SPL
Frequency response @ -10dB	400 to 1800 hz
Throat diameter	50(2)
Diaphragm material	Titanium
Voice Coil diameter	100(4)
Re	6.0 Ω
Flux density	1.70 T
Minimum recommended crossover (12 dB / oct)	800 Hz



MODEL NO:	D202Ti	
Nominal Impedance	3	3Ω
Minimum Impedance @ 4280 Hz	6.	.7Ω
RMS power Using Crossover	<b>ACTIVE</b>	PASSIVE
AES (HPF 15KHz - 12dB /oit)4	16	40W
AES (HPF 20KHz - 12dB /oit)4	24	60W
Music Program power using crossover		
(HPF 15KHz - 12dB /oit)⁴	32	80W
(HPF 20KHz - 12dB /oit)⁴	48	120W
Sensitivity		
On horn 283V@1m on Axis <sup>2</sup>	106 c	IB SPL
On plane-wave tube 0.0894V <sup>3</sup>	111 d	IB SPL
Frequency response @ -10dB	1000 to	20000 Hz
Throat diameter	25	5 (1)
Diaphragm material	Tita	ınium
Voice Coil diameter	44	(1.7)
Re	6.	0 Ω
Flux density	1.0	01 T
Minimum recommended crossover (12 dB / oct)	1.50	00 Hz
RESPONSE AND IMPEDANCE CURVES W/ HL4750-S	E HORN INS	IDE

RESPONSE AND IMPEDANCE CURVES W/ HL4750-SLF HORN INSIDE AN ANECHOIC CHAMBER, 1 W / 1 m

## D202Ti 1" Throat 60W RMS







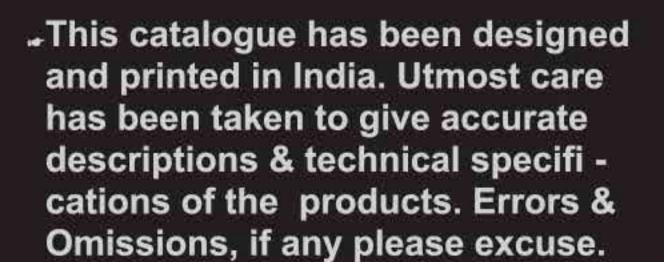


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