REDCATT - THE HEART OF YOUR SOUND

www.redcatt.net

PERFORMANCE LOUDSPEAKERS

INNOVATION & RESEARCH

At REDCATT, we agree that research and development (R&D) is the backbone of a globally competitive, knowledge-driven company.

R&D investment helps develop new products and services that drive growth, innovations and improvements.

By combining science and engineering at every aspect of our operation helped us to succeed in the highly competitive audio market.

REDCATT®

INNOVATION & RESEARCH

Design

Redcatt engineers have developed REDCATT branded transducers utilizing either neodymium or ferrite based magnetic circuits, capable of delivering the highest level of performance, providing a consistent, high integrity magnetic flux gaps, ultra low distortion characteristics and high efficiency cooling designs. The magnetic circuit designs are optimized to generate the minimum amount of flux modulation, providing exceptional stability.

REDCATT engineers use many modern Finite Element Analysis and Modeling software tools to optimize the design from electro-acoustic, mechanical and manufacturability perspective. The combination of computer aided technologies and years of design experience in the field of audio products ensures our designs are achieving and exceeding the set goals.

We have implement the latest 3D printing equipment technologies to speed up our development time and shorten the sample delivery times to our customers. In many cases we are able to validate the fresh designs within hours after they have been modeled in our computers.

INNOVATION & RESEARCH

Components

REDCATT transducers always aim to use the best available components, and the best available technology to manufacture them. The level of precision, consistency and overall quality achieved on all our components guaranties the highest performance of our transducers. Our latest investments into the state of the art CNC machining technologies is helping us to achieve our quality goals without compromises.

Voice coils
Our in house wounded voice coils using inside/outside winding, aluminum or copper ribbon wires. The extensive usage of Polyimide former materials, specialty winding adhesives and high temperature wires allow us to push the power handling of the transducers to the new heights while the voice coils are capable to handle temperatures exceeding 350°C, beyond thermal requirement of modern audio systems. We pay great attention to all related and necessary reliability testings of our voice coils.

Spiders
In many our woofer designs, REDCATT double or triple silicone sealed spiders functioning as an air pump expelling the hot air and drawing-in cool air every time the cone assembly moves. Combined spider air-pump with highly efficient air flow magnetic structure designs greatly reduces power compression.

Cones
The cones one and the dust cap are mostly made using an advanced REDCATT pulps with carbon or glass fiber reinforcement. The cones are also extensively treated to withstand harsh environments and high humidity.
Metal parts in the speaker assembly are coated for extreme weatherization protection.

Magnetic structure designs
Our engineers utilized the use of modern FEM software to design, analyze and improve the magnetic circuits. Our designs sport highly efficient based magnetic circuits capable of delivering the highest level of performance, providing a consistent, high integrity magnetic flux gaps, ultra low distortion characteristic and high efficiency cooling systems. The magnetic circuit designs are optimized to generate the minimum amount of flux modulation, providing exceptional stability.

REDCATT®

21" | 21XR

Neodymium Woofer

REDCAT

Key features:

- LINEAR CONE EXCURSION 60MM PEAK TO PEAK !!
- NONPARALLEL LOW DISTORTION AT LOW FREQUENCIES, THE COIL IS ALWAYS IN THE GAP!
- PATENTED DESIGN, INNOVATIVE MAGNETIC STRUCTURE & VENTING SYSTEM

Design notes:

21XR was designed as the flagship sub-woofer speaker for professional audio segment.
The basic characters and design concept remains the same across the XR series of speakers. We have used newly designed 3 roll waterproof fabric surround that fully supports the high cone excursions of this incredible loudspeaker. The target was to push the envelope of possibilities We are giving you a product that will not limit you to achieve even your wildest sub-woofer dreams. With the cone excursion 60mm this incredible driver will deliver insane amounts of low frequencies, reason we have also nicknamed this driver a "widow-maker".

Motor Design

The magnetic design incorporates large neodymium magnets placed along the voice coil winding. This has allowed us to push the cone excursion to 60mm peak to peak. Unique gap venting ensures good air circulation and greatly improves the reliability of this driver. We have also developed a new technique for manufacturing deep copper caps.

The design further utilizes triple, uncommonly large, spiders, spaced with spacer, hot-pressed tinsel wires onto the top spider, reinforced cone edge, reinforced surround to cone joint, reinforced spider to basket joints, etc.

Specifications:

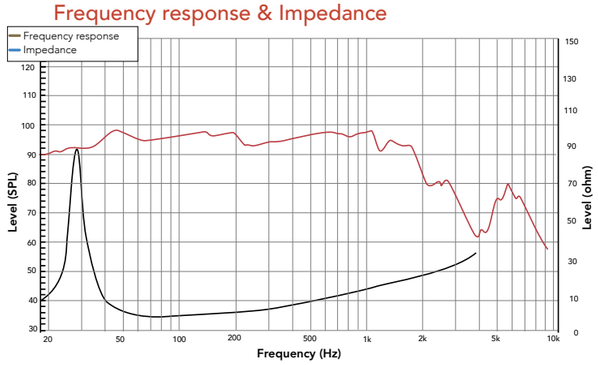
General specs	
Nominal Diameter:	21in.
Rated Impedance:	4 ohm
Power handling	
AES Power:	1800 Watts
Program Power:	3600 Watts
Peak Power:	7200 Watts
Voice Coil	
Diameter:	5.3 in.
Winding wire:	Copper square
Former:	TIL
Winding height:	21 mm

T/S Parameters	
Resonant frequency:	27 Hz
Re:	4.5 ohm
Qes:	0.41
Qms:	10.95
Qts:	0.4
Vas:	301.7 liters
Sd:	1662 cm²
Sensitivity:	96.2 dB
Mms:	445.7 grams
Bl:	28.8
Le:	0.62 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper w. CF
Spider:	Triple nomex
Plate thickness:	66 mm
Peak to peak linear cone Displacement	60 mm
Overall diameter:	549 mm
Bolt circle diameter:	525 mm
Baffle cutout dia.:	503 mm
Number of mounting holes:	8
Depth (flange to rear):	287 mm
Net weight:	37 kg

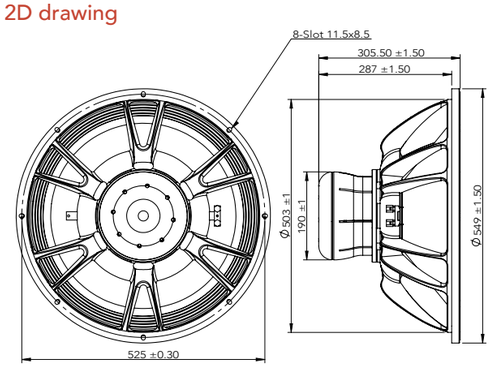
Ordering codes:	
4 ohm version:	21XRX4-347
8 ohm version:	21XRX8-347
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC21XRX4-347
8 ohm version:	RC21XRX8X8-347
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



21" | 21NPW

Neodymium Woofer

REDCAT

Key features:

- 5.3" DIAMETER VOICE COIL
- 3600 WATTS PROGRAM POWER HANDLING
- TRIPLE SILICONE SPIDER, HEAVY DUTY FIBER REINFORCED CONE WITH LARGE SURROUND

Design notes:

The 21NPW is a high efficiency, (97 dB 1watt / 1 meter) 21-inch woofer with incredibly linear frequency response characteristics, extreme high power handling capability while generating low harmonic distortion artifacts. The 21NPW uses a lightweight carbon fiber loaded cone assembly along with a high excursion triple roll constant geometry surround. This combination provides remarkable strength, high efficiency and a peak to peak maximum excursion of 50mm (2in).

Power Handling

At the core of the 21NPW is it's voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures in excess of 350C, well beyond the thermal requirements of modern professional audio systems. The 21NPW delivers incredible performance.

REDCATT has implemented a triple layer/ silicone spider design to ensure long term Fs memory, consistency and diminish anomalies associated with spider deterioration.

Specifications:

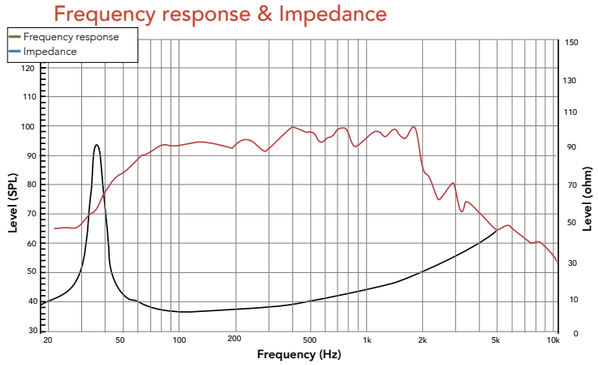
General specs	
Nominal Diameter:	21 in.
Rated Impedance:	4 ohm
Power handling	
AES Power:	1800 Watts
Program Power:	3600 Watts
Peak Power:	7200 Watts
Voice Coil	
Diameter:	5.3 in.
Winding wire:	Copper
Former:	Glass-fiber
Winding height:	33 mm

T/S Parameters	
Resonant frequency:	34 Hz
Re:	3.0 ohm
Qes:	0.32
Qms:	12
Qts:	0.31
Vas:	168 liters
Sd:	1665 cm²
Sensitivity:	98 dB
Mms:	480 grams
Bl:	32
Le:	0.83 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with CF
Spider:	Triple nomex
Plate thickness:	12 mm
Peak to peak linear cone Displacement	15 mm
Overall diameter:	546 mm
Bolt circle diameter:	520 mm
Baffle cutout dia.:	98 dB
Number of mounting holes:	8
Depth (flange to rear):	250 mm
Net weight:	13.4 kg

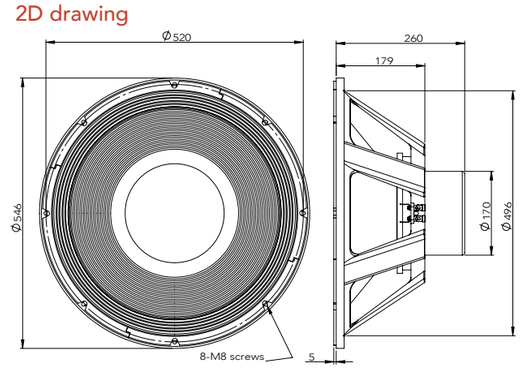
Ordering codes:	
4 ohm version:	21NPWX4-018
8 ohm version:	21NPWX8-018
16 ohm version:	-NA-
Recone kits:	
4 ohm version:	RC21NPWX4-018
8 ohm version:	RC21NPWX8-018
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



18″ | 181NPW

Neodymium Woofer

REDCATT

Key features:

- 5.3″ DIAMETER VOICE COIL, HIGH POWER HANDLING
- IMPROVED COIL AND MAGNET AIR-VENTILATION SYSTEM, HIGH TEMP. CAPABLE VOICE COIL WINDING
- CARBON FIBER REINFORCED PAPER CONE, TRIPLE SILICONE SPIDER, LARGE WATERPROOF SURROUND

Design notes:

The 181NPW is a high efficiency, (97 dB 1watt / 1 meter) 18-inch woofer with incredibly linear frequency response characteristics, extreme high power handling capability while generating low harmonic distortion artifacts. The 181NPW uses a lightweight carbon fiber loaded cone assembly along with a high excursion triple roll constant geometry surround. This combination provides remarkable strength, high efficiency and a peak to peak maximum excursion of 35mm.

Power Handling
At the core of the 181NPW is it's voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures in excess of 350C, well beyond the thermal requirements of modern professional audio systems. The 181NPW delivers incredible performance.

REDCATT has implemented a triple layer/ silicone spider design to ensure long term shape memory, consistency and diminish anomalies associated with spider deterioration.

Specifications:

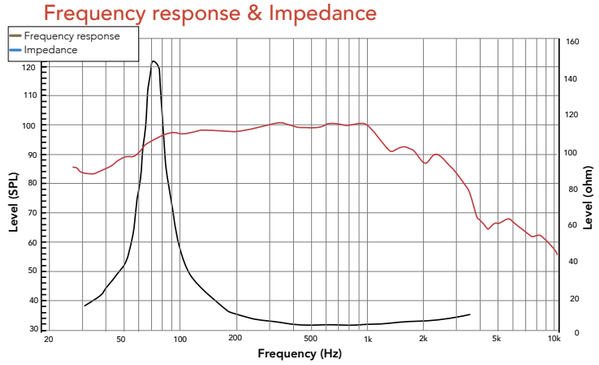
General specs	
Nominal Diameter:	18 in.
Rated Impedance:	4 ohm
Power handling	
AES Power:	1500 Watts
Program Power:	3000 Watts
Peak Power:	6000 Watts
Voice Coil	
Diameter:	5.3 in.
Winding wire:	Copper
Former:	GF
Winding height:	32.8 mm

T/S Parameters	
Resonant frequency:	31 Hz
Re:	3.25 ohm
Qes:	0.218
Qms:	17.33
Qts:	0.216
Vas:	159 liters
Sd:	1257 cm²
Sensitivity:	96.5 dB
Mms:	361 grams
Bl:	32.6
Le:	0.83 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with CF
Spider:	Nomex
Plate thickness:	14 mm
Peak to peak linear cone Displacement	15.5 mm
Overall diameter:	468 mm
Bolt circle diameter:	442 mm
Baffle cutout dia.:	428 mm
Number of mounting holes:	8
Depth (flange to rear):	22
Net weight:	13.8 kg

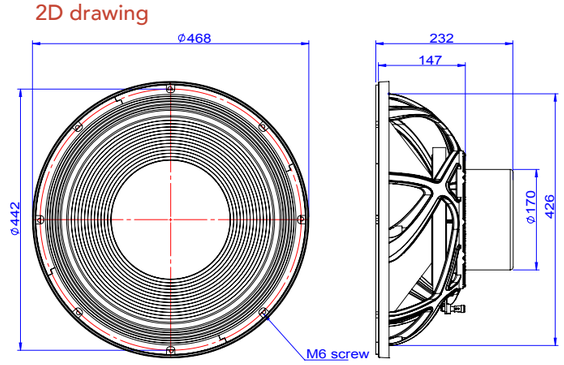
Ordering codes:	
4 ohm version:	181NPWX4-099
8 ohm version:	181NPWX8-099
16 ohm version:	-NA-
Recone kits:	
4 ohm version:	RC181NPWX4-099
8 ohm version:	RC181NPWX8-099
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



18″ | 18XR

Neodymium Sub-Woofer

REDCATT

Key features:

- CONE **EXCURSION 56MM !!** PATENTED DESIGN.
- 1 DEMODULATION COPPER RING, POWERFUL AND INNOVATIVE MOTOR STRUCTURE, INNOVATIVE VENTING SYSTEM
- EXTRA LARGE DOUBLE SPIDER WITH SPACER, WOVEN-IN TINSEL WIRES. REINFORCED CONE EDGE, OPTIMIZED SURROUND

Design notes:

The 18XR is a truly groundbreaking subwoofer. REDCATT team has spent countless hours creating something outstanding. Where the conventional sub-woofers stop performing due to the design limitations, the XR series just starts and shines. With huge excursion, high BI, newly designed suspension system, we are giving you a product that will not limit you to achieve even your wildest sub-woofer dreams.

Motor Design
The magnetic design incorporates large neodymium magnets placed along the voice coil winding. This has allowed us to push the cone excursion to 56mm peak to peak. Unique gap venting ensures good air circulation and greatly improves the reliability of this driver. We have also developed a new technique for manufacturing deep copper caps.

The design further utilizes two, uncommonly large, spiders, spaced apart with spacer, hot-pressed tinsel wires onto the top spider, reinforced cone. The suspension is designed for large excursions. Large lightweight surround sports resonant control features that we fully FEM designed and optimized to provide the best possible performance under large excursions.

Specifications:

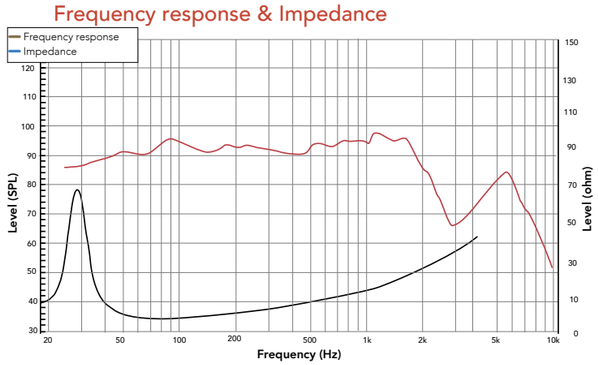
General specs	
Nominal Diameter:	18 in.
Rated Impedance:	4 ohm
Power handling	
AES Power:	1200 Watts
Program Power:	2400 Watts
Peak Power:	4800 Watts
Voice Coil	
Diameter:	4 in.
Winding wire:	CCAW square
Former:	TIL
Winding height:	22 mm

T/S Parameters	
Resonant frequency:	32 Hz
Re:	3.0 ohm
Qes:	0.36
Qms:	6.9
Qts:	0.34
Vas:	167 liters
Sd:	1256.6 mm²
Sensitivity:	95 dB
Mms:	322 grams
Bl:	25
Le:	1.01 mH

Design details	
Surround Material:	Foam
Cone material:	Paper with CF
Spider:	Double nomex
Plate thickness:	56 mm
Peak to peak linear cone Displacement	42 mm
Overall diameter:	468 mm
Bolt circle diameter:	442 mm
Baffle cutout dia.:	422 mm
Number of mounting holes:	8
Depth (flange to rear):	257.20 mm
Net weight:	14.2 kg

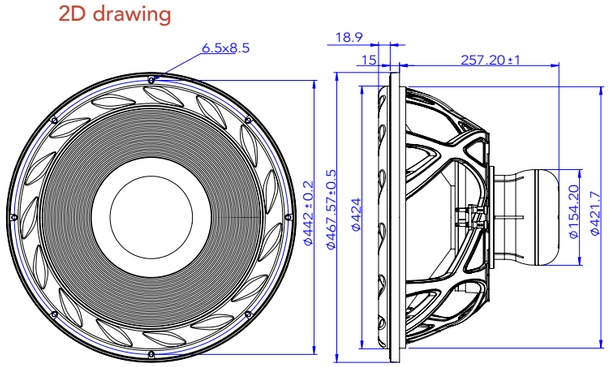
Ordering codes:	
4 ohm version:	18XRX4-304
8 ohm version:	18XRX8-304
16 ohm version:	-NA-
Recone kits:	
4 ohm version:	RC18XRX4-304
8 ohm version:	RC18XRX8-304
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



18″ | 181XR

Neodymium Woofer

REDCATT

Key features:

- CONE **EXCURSION 56MM !!** PATENTED DESIGN.
- 1 DEMODULATION COPPER RING, POWERFUL AND INNOVATIVE MOTOR STRUCTURE, INNOVATIVE VENTING SYSTEM
- EXTRA LARGE DOUBLE SPIDER WITH SPACER, WOVEN-IN TINSEL WIRES. REINFORCED CONE EDGE, OPTIMIZED SURROUND

Design notes:

Designed based upon the 18XR, the 181XR was designed for professional audio segment.
The basic characters and design concept remains the same for the 181XR. We have used newly designed 4 roll waterproof fabric surround that fully supports the high cone excursions of this incredible loudspeaker. The target was to push the envelope of possibilities We are giving you a product that will not limit you to achieve even your wildest sub-woofer dreams.

Motor Design
The magnetic design incorporates large neodymium magnets placed along the voice coil winding. This has allowed us to push the cone excursion to 56mm peak to peak. Unique gap venting ensures good air circulation and greatly improves the reliability of this driver. We have also developed a new technique for manufacturing deep copper caps.

The design further utilizes dual, uncommonly large, spiders, spaced with spacer, hot-pressed tinsel wires onto the top spider, reinforced cone edge, reinforced surround to cone joint, reinforced spider to basket joints, etc.

Specifications:

General specs	
Nominal Diameter:	18 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	1200 Watts
Program Power:	2400 Watts
Peak Power:	4800 Watts
Voice Coil	
Diameter:	4 in.
Winding wire:	CCAW square
Former:	TIL
Winding height:	22 mm

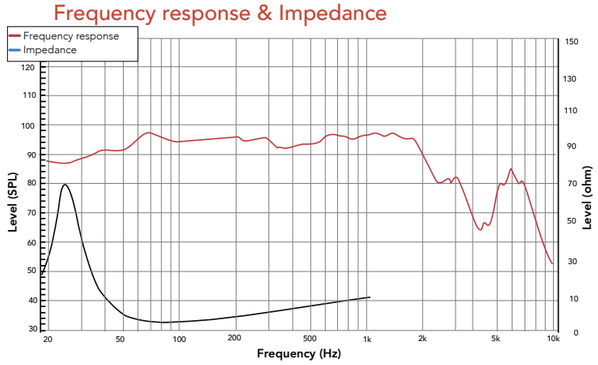
T/S Parameters	
Resonant frequency:	26 Hz
Re:	3.3 ohm
Qes:	0.2
Qms:	5.5
Qts:	0.19
Vas:	286 liters
Sd:	1256 cm^2
Sensitivity:	97 dB
Mms:	285 grams
Bl:	28
Le:	0.83 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper CF
Spider:	Double nomex
Plate thickness:	56 mm
Peak to peak linear cone Displacement	42 mm
Overall diameter:	468 mm
Bolt circle diameter:	442 mm
Baffle cutout dia.:	422 mm
Number of mounting holes:	8
Depth (flange to rear):	257.2 mm
Net weight:	14.2 kg

Ordering codes:	
4 ohm version:	18XRX4-350B
8 ohm version:	18XRX8-350B
16 ohm version:	-NA-

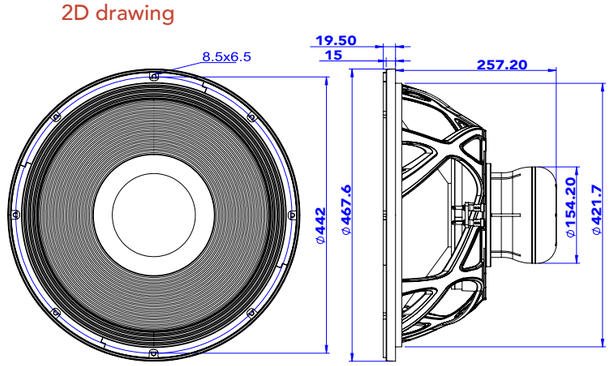
Recone kits:	
4 ohm version:	RC18XRX4-350B
8 ohm version:	RC18XRX8-350B
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



18″ | 18NPW

Neodymium Woofer

REDCATT

Key features:

- STRONG GLASS FIBER LOADED CONE
- HIGH TEMPERATURE VOICE COIL, DOUBLE LAYER SILICONE SPIDER
- HIGH POWER HANDLING

Design notes:

The 18NPW is a high efficiency, (98 dB 1watt / 1 meter) 18-inch woofer with incredibly linear frequency response characteristics, extreme high power handling capability while generating low harmonic distortion artifacts. The 18NPW uses a lightweight, but strong, glass fiber loaded cone assembly along with a high excursion triple roll constant geometry surround. This combination provides remarkable strength, high efficiency and a peak to peak maximum excursion of 30mm.

Power Handling
At the core of the 18NPW is it's voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures in excess of 350°C, well beyond the thermal requirements of modern professional audio systems. The 18NPW delivers incredible performance.

REDCATT has implemented a double layer/silicone spider design to ensure long term Fs memory, consistency and diminish anomalies associated with spider deterioration. The sealed spider works as a air pump and pushes the air trough out motor to increase heat transfer and cooling of the parts.

Specifications:

General specs	
Nominal Diameter:	18 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	1200 Watts
Program Power:	2400 Watts
Peak Power:	4800 Watts
Voice Coil	
Diameter:	4 in.
Winding wire:	Copper
Former:	TIL
Winding height:	23.7 mm

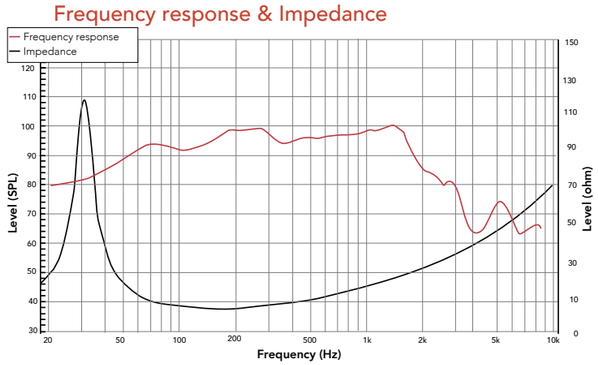
T/S Parameters	
Resonant frequency:	32 Hz
Re:	5.2 ohm
Qes:	0.29
Qms:	7.44
Qts:	0.28
Vas:	293 liters
Sd:	1257 cm^2
Sensitivity:	99 dB
Mms:	192 grams
Bl:	26.2
Le:	0.98 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper GF
Spider:	Double nomex
Plate thickness:	14 mm
Peak to peak linear cone Displacement	11 mm
Overall diameter:	150 mm
Bolt circle diameter:	1250 m^2
Baffle cutout dia.:	98 dB
Number of mounting holes:	58 grams
Depth (flange to rear):	22
Net weight:	0.83 mH

Ordering codes:	
4 ohm version:	18NPWX4-017
8 ohm version:	18NPWX8-017
16 ohm version:	-NA-

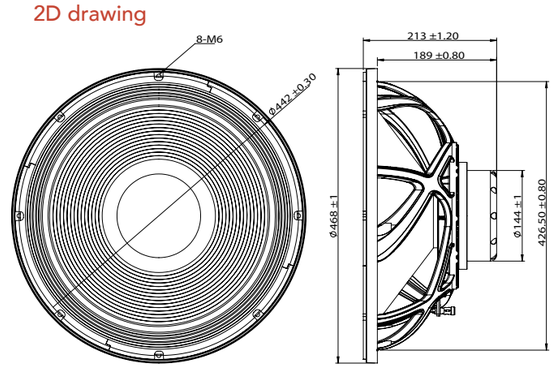
Recone kits:	
4 ohm version:	RC18NPWX4-017
8 ohm version:	RC18NPWX8-017
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



18" | 18FIND

Ferrite Woofer

REDCAT

Key features:

- EXTENDED FREQUENCY RESPONSE
- OPTIMIZED VENTING SYSTEM
- HIGH POWER HANDLING

Design notes:

The 18FIND is a high efficiency, (97 dB 1watt / 1 meter) 18-inch woofer with incredibly linear frequency response characteristics, high power handling capability while generating low harmonic distortion artifacts. The 18FIND uses a lightweight glass fiber loaded cone assembly along with a high excursion triple roll constant geometry surround. This combination provides remarkable strength, high efficiency and a peak to peak maximum excursion of 30mm.

Power Handling
At the core of the 18FIND is it's voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures in excess of 250C, well beyond the thermal requirements of modern professional audio systems.

REDCATT has implemented a silicone spider design to ensure long term shape memory, consistency and diminish anomalies associated with spider deterioration.

Specifications:

General specs	
Nominal Diameter:	18 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	1000 Watts
Program Power:	2000 Watts
Peak Power:	4000 Watts
Voice Coil	
Diameter:	4 in.
Winding wire:	Copper
Former:	Glass Fiber
Winding height:	23.7 mm

T/S Parameters	
Resonant frequency:	34 Hz
Re:	5.2 ohm
Qes:	0.45
Qms:	9
Qts:	0.43
Vas:	235 liters
Sd:	1257 cm^2
Sensitivity:	97.2 dB
Mms:	203 grams
Bl:	22.5
Le:	0.99 mH

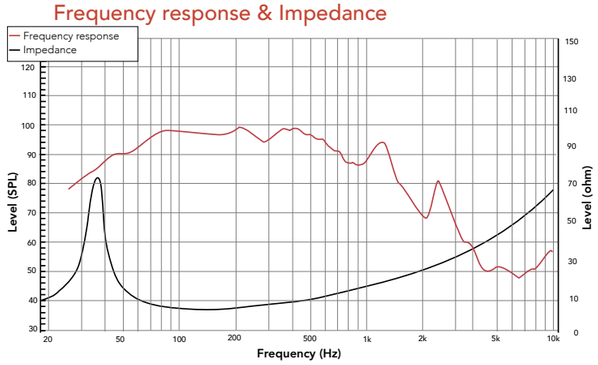
Design details	
Surround Material:	Sealed fabric
Cone material:	Paper with GF
Spider:	Single nomex
Plate thickness:	12 mm
Peak to peak linear cone Displacement	11 mm
Overall diameter:	468 mm
Bolt circle diameter:	442 mm
Baffle cutout dia.:	426.5 mm
Number of mounting holes:	8
Depth (flange to rear):	184 mm
Net weight:	0.83 mH

Ordering codes:	
4 ohm version:	18FINDX4-036
8 ohm version:	18FINDX8-036
16 ohm version:	-NA-

Recone kits:

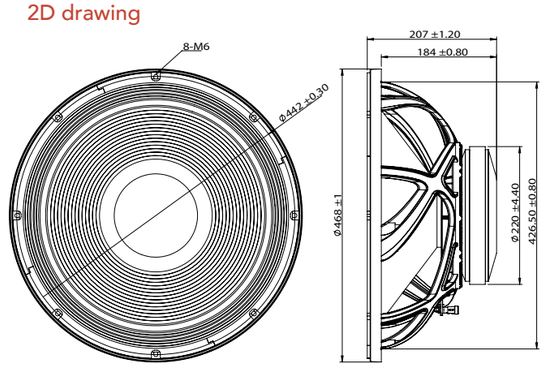
4 ohm version:	RC18FINDX4-036
8 ohm version:	RC18FINDX8-036
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured free air

2D drawing



18" | 182FIND

Ferrite Woofer

REDCAT

Key features:

- INSIDE / OUTSIDE WOUND COIL
- REINFORCED HALF PRESSED CONE
- SILICONE NOMEX SPIDER

Design notes:

The 182FIND is a high efficiency, (98 dB 1watt / 1 meter) 18-inch woofer with extended linear frequency response characteristics. The 182FIND uses durable half-pressed paper cone assembly along with a high excursion triple roll constant geometry surround. This combination provides remarkable strength at any given situation, high efficiency and a peak to peak maximum excursion of 25mm (1in).

Power Handling
At the core of the 182FIND is it's voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures in excess of 250C, well beyond the thermal requirements of modern professional audio systems. Voice coil winding is wound inside and outside of the former in the 1-3 split.

REDCATT has implemented a silicone spider design to ensure long term shape memory, consistency and diminish anomalies associated with spider deterioration.

Specifications:

General specs	
Nominal Diameter:	18 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	1000 Watts
Program Power:	2000 Watts
Peak Power:	4000 Watts
Voice Coil	
Diameter:	4 in.
Winding wire:	Copper
Former:	Glass fiber
Winding height:	25.5 mm

T/S Parameters	
Resonant frequency:	36 Hz
Re:	5.3 ohm
Qes:	0.27
Qms:	9.2
Qts:	0.26
Vas:	161 liters
Sd:	1257 cm^2
Sensitivity:	98.4 dB
Mms:	268.6 grams
Bl:	34.4
Le:	4.05 mH

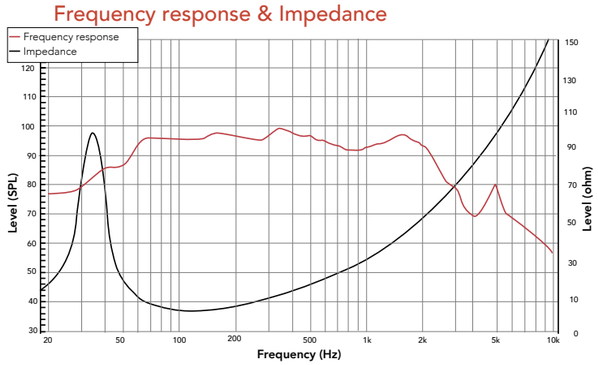
Design details	
Surround Material:	Sealed fabric
Cone material:	Paper with GF
Spider:	Single nomex
Plate thickness:	14 mm
Peak to peak linear cone Displacement	20 mm
Overall diameter:	468mm
Bolt circle diameter:	440 mm
Baffle cutout dia.:	426 mm
Number of mounting holes:	8
Depth (flange to rear):	189 mm
Net weight:	0.83 mH

Ordering codes:	
4 ohm version:	182FINDX4-127
8 ohm version:	182FINDX4-127
16 ohm version:	-NA-

Recone kits:

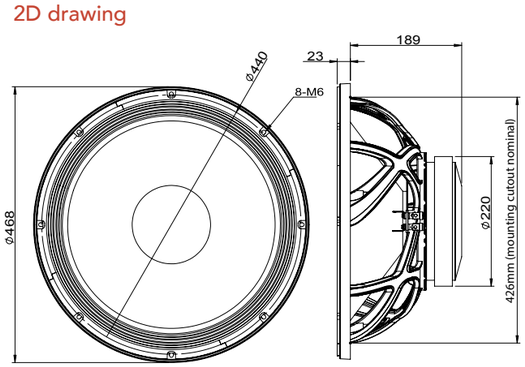
4 ohm version:	RC101NPMX4-434B
8 ohm version:	RC101NPMX8-434B
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured free air

2D drawing



18" | 183FIND

Ferrite Woofer

REDCAT

Key features:

- OPTIMIZED FERRITE MAGNETIC STRUCTURE
- LIGHTWEIGHT, YET STRONG PAPER CONE
- HI SPL

Design notes:

183FIND is a cost-effective solution for subwoofers. Its lightweight yet strong cone allows the magnetic circuit to be size optimized while delivering a seizable amount of sound pressure. With its high efficiency (98 dB 1watt / 1 meter) and high power handling capabilities, this woofer will excel in all applications with tight budgets. The cone shape and material was developed to provide an optimum low-frequency response, making the woofer good choice for subwoofer systems.

Power Handling

At the core of the 183FIND is its voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures above 280°C. The winding with high-temperature specification copper wire ensures the long life of the voice coil, without the costly service cycles. The cone is also extensively treated to withstand harsh environments and high humidity. Metal parts in the speaker assembly are coated for extreme weatherization protection.

Specifications:

General specs	
Nominal Diameter:	18 in.
Rated Impedance:	8 Ohm

Power handling	
AES Power:	600 Watts
Program Power:	800 Watts
Peak Power:	1600 Watts

Voice Coil	
Diameter:	3 in.
Winding wire:	Copper
Former:	Glass fiber
Winding height:	20 mm

T/S Parameters	
Resonant frequency:	35 Hz
Re:	5.7 ohm
Qes:	0.487
Qms:	11.45
Qts:	0.467
Vas:	288 liters
Sd:	1231 cm^2
Sensitivity:	97.6 dB
Mms:	152 grams
Bl:	20
Le:	0.81 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with GF
Spider:	Single conex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	10.5 mm
Overall diameter:	462.5 mm
Bolt circle diameter:	442 mm
Baffle cutout dia.:	422 mm
Number of mounting holes:	8
Depth (flange to rear):	184 mm
Net weight:	9.1 kg

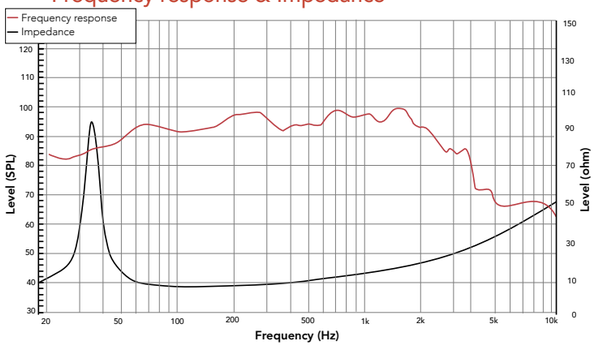
Ordering codes:

4 ohm version:	183FINDX4-291
8 ohm version:	183FINDX8-291
16 ohm version:	-NA-

Recone kits:

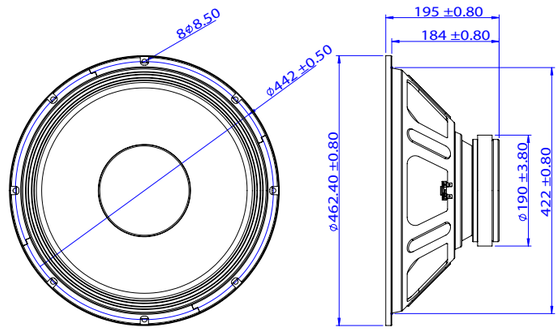
4 ohm version:	RC183FINDX4-291
8 ohm version:	RC183FINDX8-291
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured free air

2D drawing



Info@redcatt.net www.redcatt.net

15" | 15FIND

Ferrite Woofer

REDCATT

Key features:

- GLASS FIBER AND RIB REINFORCED PAPER CONE
- FEM OPTIMIZED AIR CIRCULATION
- SILICONE SEALED SURROUND

Design notes:

The 15FIND is a high efficiency, (95.5 dB 1watt / 1 meter) 15-inch woofer with incredibly linear frequency response characteristics, extreme high power handling capability while generating low harmonic distortion artifacts. The 15FIND uses a lightweight, but strong, glass fiber loaded cone assembly along with a high excursion triple roll constant geometry surround. This combination provides remarkable strength, high efficiency and a peak to peak maximum excursion of 38mm (1.5in).

Power Handling
At the core of the 15FIND is it's voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures in excess of 250°C, well beyond the thermal requirements of modern professional audio systems. Winding if winded on the outside and inside of the former.

REDCATT has implemented a silicone spider design to ensure long term Fs memory, consistency and diminish anomalies associated with spider deterioration. The sealed spider works as a air pump and pushes the air trough out motor to increase heat transfer and cooling of the parts.

Specifications:

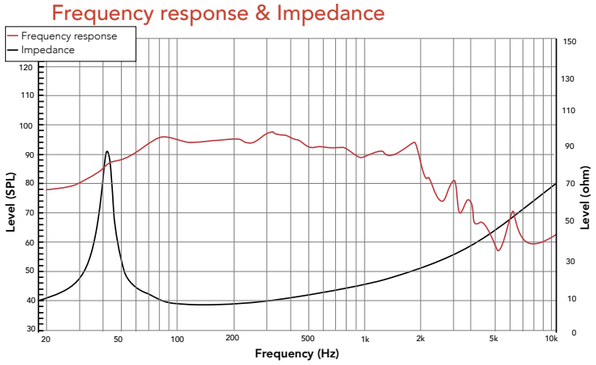
General specs	
Nominal Diameter:	15 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	1000 Watts
Program Power:	2000 Watts
Peak Power:	4000 Watts
Voice Coil	
Diameter:	4 in.
Winding wire:	Copper
Former:	Glass Fiber
Winding height:	24 mm

T/S Parameters	
Resonant frequency:	41 Hz
Re:	5.6 ohm
Qes:	0.468
Qms:	8.34
Qts:	0.44
Vas:	103 liters
Sd:	881 cm^2
Sensitivity:	95.5 dB
Mms:	160 grams
Bl:	22.5
Le:	1.54 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with GF
Spider:	Single nomex
Plate thickness:	12 mm
Peak to peak linear cone Displacement	12 mm
Overall diameter:	392 mm
Bolt circle diameter:	374 mm
Baffle cutout dia.:	360 mm
Number of mounting holes:	8
Depth (flange to rear):	150 mm
Net weight:	12.4 kg

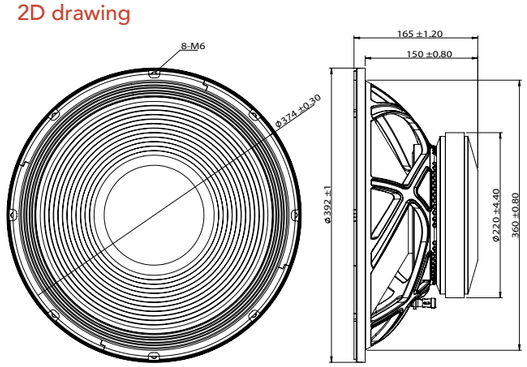
Ordering codes:	
4 ohm version:	15FINDX4-035
8 ohm version:	15FINDX8-035
16 ohm version:	-NA-
Recone kits:	
4 ohm version:	RC15FINDX4-035
8 ohm version:	RC15FINDX8-035
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured in enclosure 180l, tuned to 38Hz

2D drawing



15" | 152FIND

Ferrite Woofer

REDCATT

Key features:

- EXTENDED FREQUENCY RESPONSE
- LIGHTWEIGHT CARBON FIBER LOADED PAPER CONE
- HIGH SPL

Design notes:

The 152FIND is a high efficiency, (99.5 dB 1watt / 1 meter) 15-inch woofer with incredibly linear frequency response characteristics, high power handling capability while generating low harmonic distortion artifacts. The 152FIND uses a lightweight carbon fiber loaded cone assembly along with a high excursion triple roll constant geometry surround. This combination provides remarkable strength, high efficiency and a peak to peak maximum excursion of 14mm (0.55in).

Power Handling
At the core of the 152FIND is it's voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures in excess of 280C, well beyond the thermal requirements of modern professional audio systems.

The 152FIND cone and dust cap are made using an advanced carbon fiber loaded REDCATT pulp. The woofer cone is also extensively treated to withstand harsh environments and high humidity. Metal parts in the speaker assembly are coated for extreme weatherization protection.

Specifications:

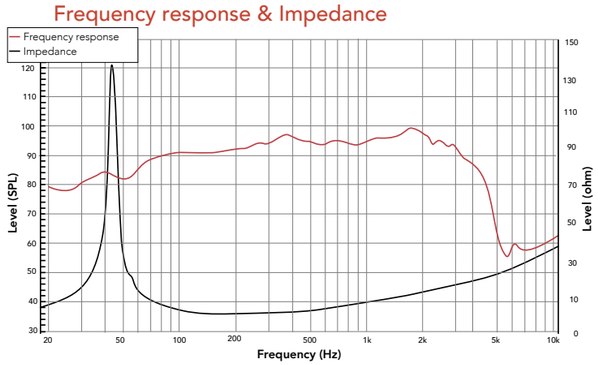
General specs	
Nominal Diameter:	15 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	800 Watts
Program Power:	1600 Watts
Peak Power:	3200 Watts
Voice Coil	
Diameter:	3 in.
Winding wire:	CCAW
Former:	TIL
Winding height:	18.9 mm

T/S Parameters	
Resonant frequency:	45 Hz
Re:	4.5 ohm
Qes:	0.44
Qms:	15
Qts:	0.43
Vas:	123 liters
Sd:	830 cm^2
Sensitivity:	98 dB
Mms:	100 grams
Bl:	17.5
Le:	0.54 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with GF
Spider:	Single nomex
Plate thickness:	10 mm
Peak to peak linear cone Displacement	10 mm
Overall diameter:	392 mm
Bolt circle diameter:	373 mm
Baffle cutout dia.:	360 mm
Number of mounting holes:	8
Depth (flange to rear):	137 mm
Net weight:	12.5 kg

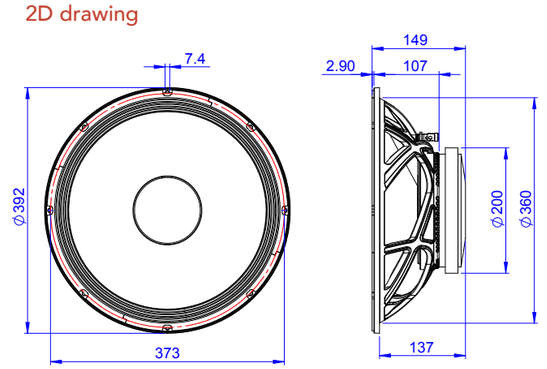
Ordering codes:	
4 ohm version:	152FINDX4-115
8 ohm version:	152FINDX8-115
16 ohm version:	-NA-
Recone kits:	
4 ohm version:	RC152FINDX4-115
8 ohm version:	RC152FINDX8-115
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured in 180l enclosure, tuned to 48Hz

2D drawing



15" | 152FIND

Ferrite Sub-Woofer

REDCAT

Key features:

- EXTENDED LOW FREQUENCY RESPONSE
- CARBON FIBER REINFORCED CONE
- HIGH EXCURSION RUBBER SURROUND

Design notes:

The 152FIND-333 is a high efficiency, (95 dB 1watt / 1 meter) 15-inch woofer with linear frequency response characteristics and high power handling capability. The 152FIND-333 uses a lightweight carbon fiber loaded cone assembly along with a high excursion rubber surround. This combination greatly improves low-frequency response and provides great level of control over the moving cone at high excursion levels. We have designed a lightweight surround, using our own rubber compound. As the result, the SPL is not compromised and the woofer can be used in professional audio applications, where high amounts of low frequencies are required.

Power Handling
At the core of the 152FIND-333 is it's voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures in excess of 280C, well beyond the thermal requirements of modern professional audio systems.
The 152FIND-333 cone is extensively treated to withstand harsh environments and high humidity. Metal parts in the speaker assembly are coated for extreme weatherization protection.

Specifications:

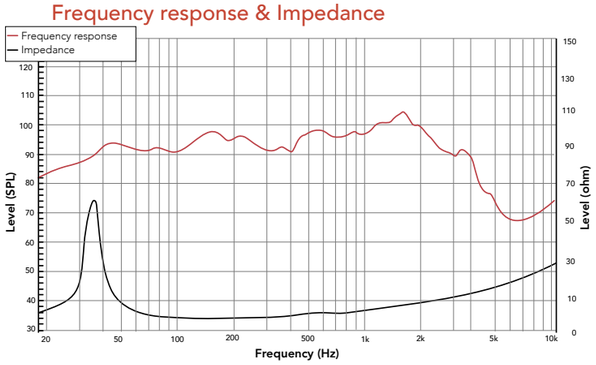
General specs	
Nominal Diameter:	15 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	800 Watts
Program Power:	1600 Watts
Peak Power:	3200 Watts
Voice Coil	
Diameter:	3 in.
Winding wire:	CCAW
Former:	TIL
Winding height:	18.9 mm

T/S Parameters	
Resonant frequency:	37 Hz
Re:	4.5 ohm
Qes:	0.49
Qms:	9.6
Qts:	0.47
Vas:	125 liters
Sd:	804.25 cm^2
Sensitivity:	95 dB
Mms:	137 grams
Bl:	17.50
Le:	0.538 mH

Design details	
Surround Material:	Rubber
Cone material:	Paper with CF
Spider:	Single conex
Plate thickness:	10 mm
Peak to peak linear cone Displacement	9.5 mm
Overall diameter:	392 mm
Bolt circle diameter:	375 mm
Baffle cutout dia.:	360 mm
Number of mounting holes:	8
Depth (flange to rear):	143 mm
Net weight:	12.5 kg

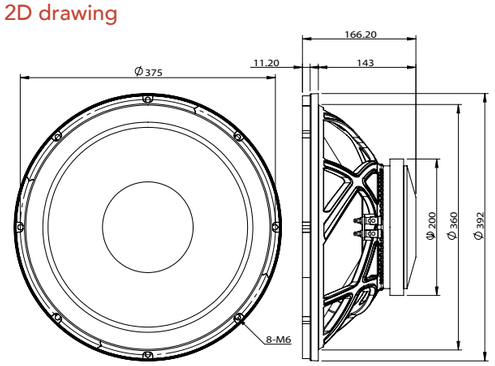
Ordering codes:	
4 ohm version:	152FINDX4-333
8 ohm version:	152FINDX8-333
16 ohm version:	-NA-
Recone kits:	
4 ohm version:	RC152FINDX4-333
8 ohm version:	RC152FINDX8-333
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



15" | 154FIND

Ferrite Mid-Woofer

REDCAT

Key features:

- COST EFFECTIVE DESIGN, YET WITH HIGH SPL, EXTENDED MID FREQUENCY
- GOOD POWER HANDLING
- LIGHTWEIGHT PAPER CONE, CONEX SPIDER

Design notes:

The 154FIND is a cost-effective solution for two-way and multi-way systems, together with subwoofers. It's lightweight yet strong cone allows the magnetic circuit to be size optimized while delivering a seizable amount of sound pressure. With its high efficiency (97 dB 1watt / 1 meter) and high power handling capabilities, this woofer will excel in all applications with tight budgets. The cone shape and material was developed to extend mid-frequency response, making the woofer good choice for two-way and multi-way systems.

Power Handling
At the core of the 154FIND is its voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures above 280°C. The winding with high temperature handling copper wire ensures the long life of the voice coil, without the costly service cycles.
The cone is also extensively treated to withstand harsh environments and high humidity. Metal parts in the speaker assembly are coated for extreme weatherization protection.

Specifications:

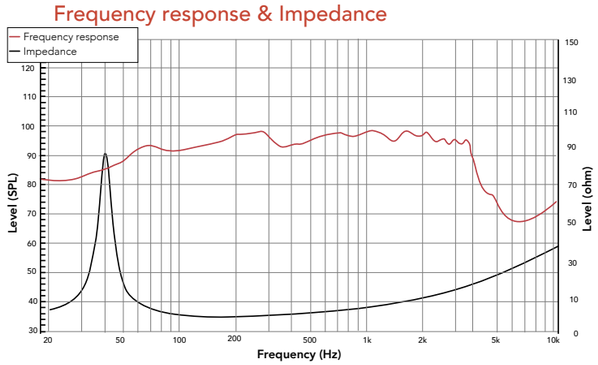
General specs	
Nominal Diameter:	15 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	500 Watts
Program Power:	1000 Watts
Peak Power:	2000 Watts
Voice Coil	
Diameter:	2.5 in.
Winding wire:	Copper
Former:	Glass fiber
Winding height:	17 mm

T/S Parameters	
Resonant frequency:	41 Hz
Re:	5.5 ohm
Qes:	0.447
Qms:	9.16
Qts:	0.426
Vas:	181 liters
Sd:	897 cm^2
Sensitivity:	98 dB
Mms:	8
Bl:	17.4
Le:	0.68 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with CF
Spider:	Single conex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	9 mm
Overall diameter:	387 mm
Bolt circle diameter:	374 mm
Baffle cutout dia.:	355 mm
Number of mounting holes:	8
Depth (flange to rear):	155 mm
Net weight:	7.9 kg

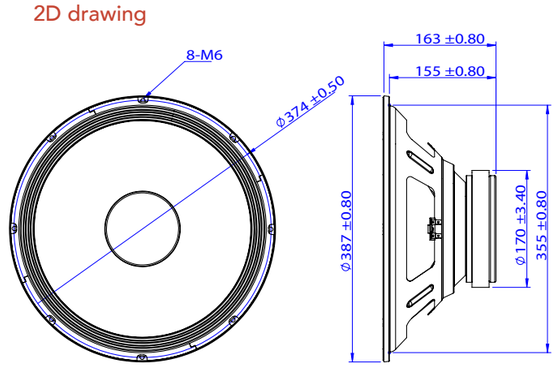
Ordering codes:	
4 ohm version:	154FINDX4-298
8 ohm version:	154FINDX8-298
16 ohm version:	-NA-
Recone kits:	
4 ohm version:	RC154FINDX4-298
8 ohm version:	RC154FINDX8-298
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



15" | 15FPM

Ferrite Mid-Woofer

REDCATT

Key features:

- CARBON FIBER REINFORCED PAPER CONE
- SQUARE ALUMINUM WINDING WIRE (ALR)
- GREAT OPTION FOR POWERFUL 2-WAY SYSTEMS

Design notes:

The 15FPM is a high efficiency, (98 dB 1watt / 1 meter) 15-inch woofer with incredibly linear frequency response characteristics. The 15FPM uses a lightweight, but strong, carbon fiber loaded cone assembly along with a high excursion triple roll constant geometry surround. Cone material was specifically developed with 2-way or multi-way application in mind. The 15FPM has extended mid frequency range, providing possibility for cross overs at higher frequencies.

Power Handling
At the core of the 15FPM is it's voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures in excess of 250°C, well beyond the thermal requirements of modern professional audio systems. The coil is wound on the outside of the former. Winding material is aluminum ribbon, material that provides ideal transient response.

REDCATT has implemented a silicone spider design to ensure long term Fs memory, consistency and diminish anomalies associated with spider deterioration. The sealed spider works as a air pump and pushes the air trough out motor to increase heat transfer and cooling of the parts.

Specifications:

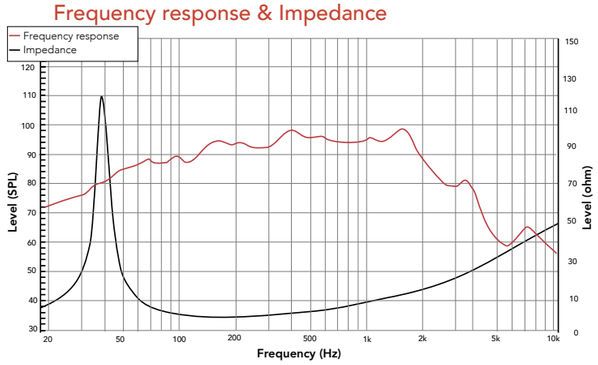
General specs	
Nominal Diameter:	15 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	1000 Watts
Program Power:	2000 Watts
Peak Power:	4000 Watts
Voice Coil	
Diameter:	4 in.
Winding wire:	AL-R
Former:	Glass fiber
Winding height:	21 mm

T/S Parameters	
Resonant frequency:	40 Hz
Re:	5.5 ohm
Qes:	0.35
Qms:	7.90
Qts:	0.34
Vas:	142 liters
Sd:	881 cm^2
Sensitivity:	97.8 dB
Mms:	123 grams
Bl:	22
Le:	1.22 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with CF
Spider:	Single nomex
Plate thickness:	12 mm
Peak to peak linear cone Displacement	12 mm
Overall diameter:	392 mm
Bolt circle diameter:	374 mm
Baffle cutout dia.:	360 mm
Number of mounting holes:	8
Depth (flange to rear):	150 mm
Net weight:	12.4 kg

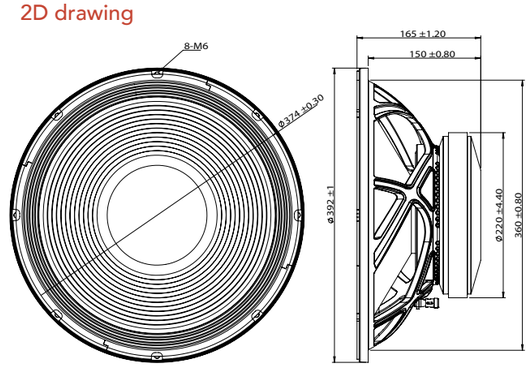
Ordering codes:	
4 ohm version:	15FPMX4-063
8 ohm version:	15FPMX8-063
16 ohm version:	-NA-
Recone kits:	
4 ohm version:	RC15FPMX4-063
8 ohm version:	RC15FPMX8-063
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured in box

2D drawing



15" | 15NPW

Neodymium Woofer

REDCATT

Key features:

- CARBON FIBER LOADED PAPER CONE
- DOUBLE SILICONE SPIDER
- HIGH POWER HANDLING

Design notes:

The 15NPW is a high efficiency, (97 dB 1watt / 1 meter) 15-inch woofer with linear frequency response characteristics, high power handling capability while generating low harmonic distortion artifacts. The 15NPW uses a lightweight carbon fiber loaded cone assembly along with a high excursion triple roll constant geometry surround. This combination provides remarkable strength, high efficiency and a peak to peak maximum excursion of 38mm. Woofer features REDCATT double silicone sealed spider.

Power Handling
At the core of the 15NPW is it's voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures in excess of 350degC, well beyond the thermal requirements of modern professional audio systems.

The 15NPW cone and dust cap are made using an advanced carbon fiber loaded REDCATT pulp. The woofer cone is also extensively treated to withstand harsh environments and high humidity. Metal parts in the speaker assembly are coated for extreme weatherization protection.

Specifications:

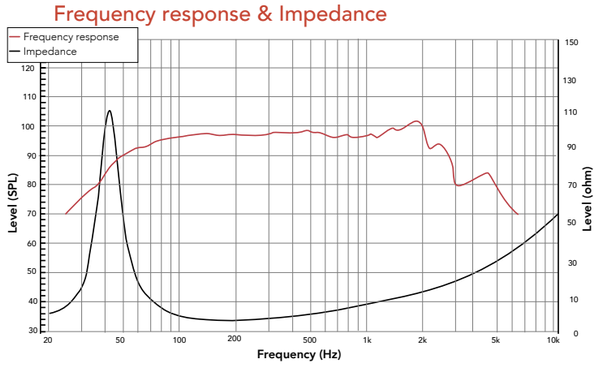
General specs	
Nominal Diameter:	15 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	1200 Watts
Program Power:	2400 Watts
Peak Power:	4800 Watts
Voice Coil	
Diameter:	4 in.
Winding wire:	Copper
Former:	Glass Fiber
Winding height:	24 mm

T/S Parameters	
Resonant frequency:	42 Hz
Re:	5.7 ohm
Qes:	0.325
Qms:	9.5
Qts:	0.314
Vas:	99 liters
Sd:	881 cm^2
Sensitivity:	97.5 dB
Mms:	155 grams
Bl:	27
Le:	1.45 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper CF
Spider:	Dual sil...
Plate thickness:	Nomex
Peak to peak linear cone Displacement	14 mm
Overall diameter:	12 mm
Bolt circle diameter:	392 mm
Baffle cutout dia.:	372 mm
Number of mounting holes:	360 mm
Depth (flange to rear):	8
Net weight:	155.5 mm

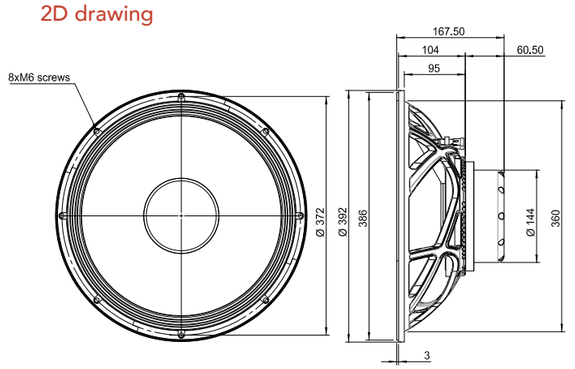
Ordering codes:	
4 ohm version:	15NPWX4-016
8 ohm version:	15NPWX8-016
16 ohm version:	-NA-
Recone kits:	
4 ohm version:	RC15NPWX4-016
8 ohm version:	RC15NPWX8-016
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



15" | 15NPM

Neodymium Mid-Woofer

REDCATT

Key features:

- EXTENDED FREQUENCY RESPONSE
- 2 DEMODULATION RINGS, LIGHTWEIGHT CARBON FIBER LOADED PAPER CONE
- HI BL, DOUBLE AIR-GAP, POWERFUL MOTOR STRUCTURE

Design notes:

The 15NPM is a truly unique full range woofer. We have designed cutting edge product, using the best available materials and highly optimized design for the best performance in its class. It delivers very high efficiency, (97 dB 1watt / 1 meter), incredibly linear frequency response characteristics with extended HF frequency response, high power handling capability, while generating ultra low harmonic distortion artifacts. The 15NPM uses a lightweight carbon fiber loaded cone assembly along with a high excursion triple roll constant geometry surround. This combination provides remarkable strength, high efficiency and a peak to peak linear excursion of 22mm (0.9in).

Magnetic Circuit

The magnetic circuit sports two aluminum shorting rings, double air-gap front plate. The cooling system and the air flow has been designed using modern FEM techniques and further optimized to provide the highest levels of cooling efficiency. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability..

Specifications:

General specs	
Nominal Diameter:	15 in.
Rated Impedance:	8 Ohm

Power handling	
AES Power:	900 Watts
Program Power:	1600 Watts
Peak Power:	3200 Watts

Voice Coil	
Diameter:	4 in.
Winding wire:	Al. Square
Former:	TIL
Winding height:	12.5 mm

T/S Parameters	
Resonant frequency:	58 Hz
Re:	4.6 ohm
Qes:	0.78
Qms:	16
Qts:	0.75
Vas:	53.70 liters
Sd:	855 cm²
Sensitivity:	96 dB
Mms:	142 grams
Bl:	17
Le:	0.68 mH

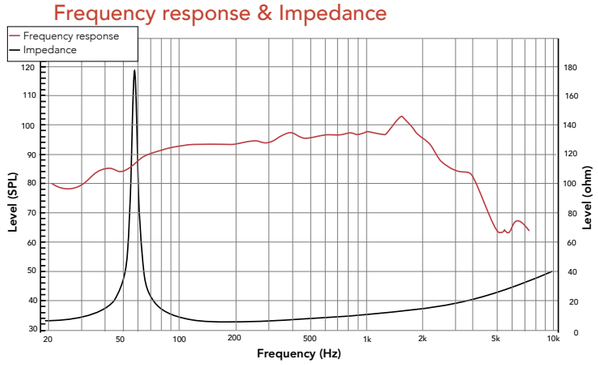
Design details	
Surround Material:	Fabric
Cone material:	Paper w. CF
Spider:	Single nomex
Plate thickness:	12.5 mm
Peak to peak linear cone Displacement	18 mm
Overall diameter:	392 mm
Bolt circle diameter:	372 mm
Baffle cutout dia.:	360 mm
Number of mounting holes:	8
Depth (flange to rear):	150 mm
Net weight:	7.8 kg

Ordering codes:	
4 ohm version:	15NPMX4-262
8 ohm version:	15NPMX8-262
16 ohm version:	-NA-

Recone kits:

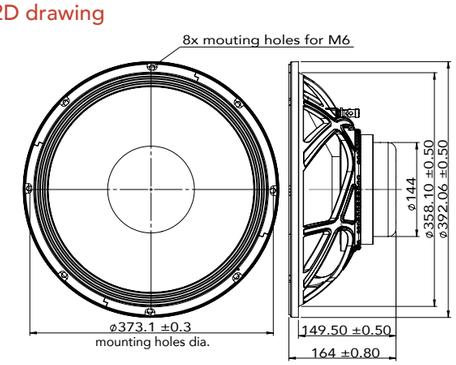
4 ohm version:	RC15NPMX4-262
8 ohm version:	RC15NPMX8-262
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured in Box

2D drawing



15" | 15FHW

Ferrite Sub-Woofer

REDCATT

Key features:

- HI SENSITIVITY, LOW RESONANT FREQUENCY
- NOMEX SPIDER
- STRONG, YET LIGHTWEIGHT CONE

Design notes:

The 15FHW is an ultra low frequency sub-woofer, designed to deliver large amounts of very low frequencies. With 90 dB 1watt / 1 meter sensitivity, you find this 15-inch sub-woofer with incredibly linear frequency response characteristics ideally assembled in sub-woofers for hi-fi, gaming, studios or cinema. The 15FHW uses a strong paper cone, along with a high excursion single roll rubber surround. Rubber surround material was specifically developed for this application. The shape of the surround roll was FEM optimized to ensure low distortion in whole working range.

Power Handling

At the core of the 15FHW is it's voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures in excess of 200°C, well beyond the thermal requirements of modern professional audio systems.

REDCATT has implemented a Nomex(r) spider design to ensure long term Fs memory, consistency and diminish anomalies associated with spider deterioration.

Specifications:

General specs	
Nominal Diameter:	15 in.
Rated Impedance:	8 Ohm

Power handling	
AES Power:	400 Watts
Program Power:	800 Watts
Peak Power:	1600 Watts

Voice Coil	
Diameter:	3 in.
Winding wire:	Copper
Former:	TIL
Winding height:	19.7 mm

T/S Parameters	
Resonant frequency:	19 Hz
Re:	5.6 ohm
Qes:	0.56
Qms:	10
Qts:	0.53
Vas:	293 liters
Sd:	804 cm²
Sensitivity:	90 dB
Mms:	172
Bl:	15.6
Le:	1.3 mH

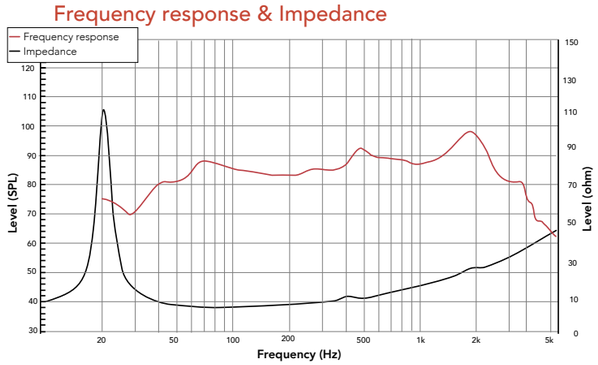
Design details	
Surround Material:	Rubber
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	10 mm
Peak to peak linear cone Displacement	22 mm
Overall diameter:	385 mm
Bolt circle diameter:	371 mm
Baffle cutout dia.:	347 mm
Number of mounting holes:	8
Depth (flange to rear):	180 mm
Net weight:	7.7 kg

Ordering codes:	
4 ohm version:	-NA-
8 ohm version:	15FHWX8-089
16 ohm version:	-NA-

Recone kits:

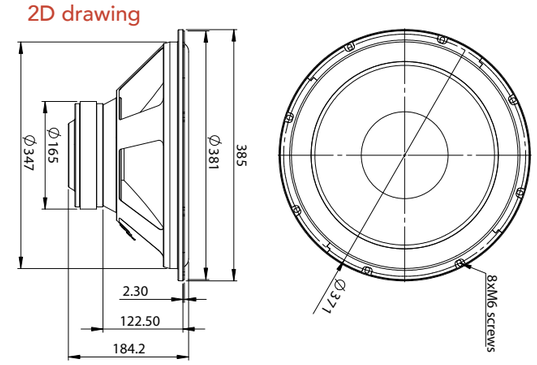
4 ohm version:	-NA-
8 ohm version:	RC15FHWX8-089
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured in box

2D drawing



12" | 122NPW

Neodymium Woofer

REDCATT

Key features:

- CARBON FIBER FILLED PAPER CONE
- DOUBLE SILICONE SPIDER
- HIGH POWER HANDLING

Design notes:

The 122NPW is a high efficiency, (97 dB 1watt / 1 meter) 12-inch woofer with incredibly linear frequency response characteristics, extreme high power handling capability while generating low harmonic distortion artifacts. The 122NPW uses a lightweight carbon fiber loaded cone assembly along with a high excursion triple roll constant geometry surround. This combination provides remarkable strength, high efficiency and a peak to peak maximum excursion of 22mm (0.9in). Woofer features REDCATT double silicone sealed spider.

Power Handling

At the core of the 122NPW is it's voice coil technology featuring a composite Polyimide former material capable of withstanding peak temperatures in excess of 350degC, well beyond the thermal requirements of modern professional audio systems.

The woofer cone is also extensively treated to withstand harsh environments and high humidity. Metal parts in the speaker assembly are coated for extreme weatherization protection.

Specifications:

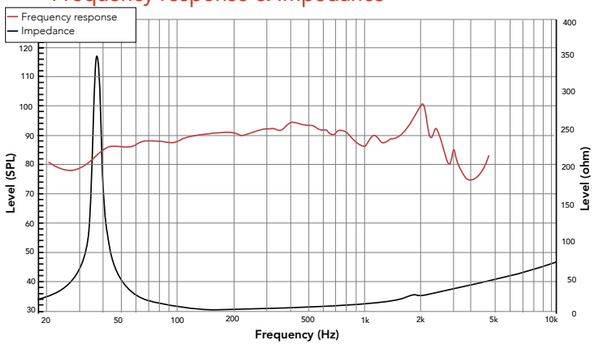
General specs	
Nominal Diameter:	12 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	800 Watts
Program Power:	1600 Watts
Peak Power:	3200 Watts
Voice Coil	
Diameter:	4 in.
Winding wire:	Copper
Former:	TIL
Winding height:	25.5 mm

T/S Parameters	
Resonant frequency:	42 Hz
Re:	5.5 ohm
Qes:	0.2
Qms:	12
Qts:	0.2
Vas:	73 liters
Sd:	551 cm²
Sensitivity:	96 dB
Mms:	110 grams
Bl:	27
Le:	1.28 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with CF
Spider:	Dual sil....
Plate thickness:	Nomex
Peak to peak linear cone Displacement	12 mm
Overall diameter:	14 mm
Bolt circle diameter:	322 mm
Baffle cutout dia.:	302 mm
Number of mounting holes:	287 mm
Depth (flange to rear):	8
Net weight:	164 mm

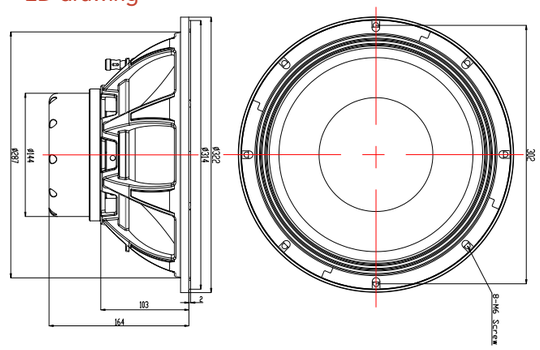
Ordering codes:	
4 ohm version:	122NPWX4-102
8 ohm version:	122NPWX8-102
16 ohm version:	-NA-
Recone kits:	
4 ohm version:	RC122NPWX4-102
8 ohm version:	RC122NPWX8-102
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured in box

2D drawing



12" | 12NPM

Neodymium Mid-Woofer

REDCATT

Key features:

- CARBON FIBER LOADED PAPER CONE
- VERY HIGH EFFICIENCY
- LIGHTWEIGHT MECHANICAL STRUCTURE

Design notes:

The 12NPM is a high efficiency, (98.5 dB 1watt / 1 meter) 12-inch mid bass woofer with incredibly linear frequency response characteristics, extreme high power handling capability while generating low harmonic distortion artifacts.-
The 12NPM uses a lightweight carbon fiber loaded cone assembly along with a precision double roll constant geometry surround. This combination provides remarkable strength, high efficiency and a excursion linearity of 7.5mm.

Magnetic Circuit

REDCATT engineers have developed a lightweight, inside-neodymium slug based magnetic circuit capable of delivering the highest level of performance providing a consistent, high integrity magnetic flux gap, ultra low distortion characteristic and high efficiency cooling system. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Specifications:

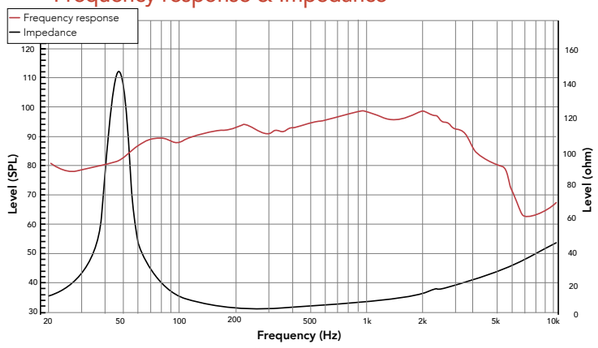
General specs	
Nominal Diameter:	12 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	500 Watts
Program Power:	1000 Watts
Peak Power:	2000 Watts
Voice Coil	
Diameter:	3 in.
Winding wire:	CCAW
Former:	Glass Fiber
Winding height:	19 mm

T/S Parameters	
Resonant frequency:	48 Hz
Re:	4.6 ohm
Qes:	0.312
Qms:	4.1
Qts:	0.29
Vas:	64.8 liters
Sd:	531 cm²
Sensitivity:	99.2 dB
Mms:	57.5 grams
Bl:	16.6
Le:	0.59 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with CF
Spider:	Single nomex
Plate thickness:	10 mm
Peak to peak linear cone Displacement	18 mm
Overall diameter:	315 mm
Bolt circle diameter:	298 mm
Baffle cutout dia.:	284.5 mm
Number of mounting holes:	8
Depth (flange to rear):	132 mm
Net weight:	3.9 kg

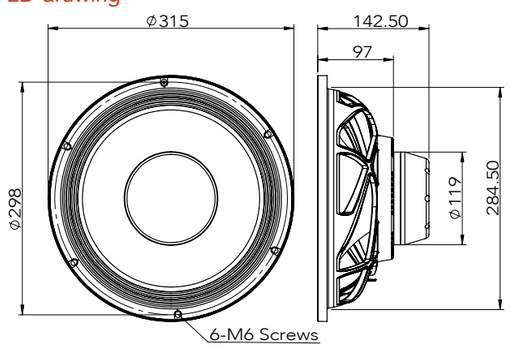
Ordering codes:	
4 ohm version:	12NPMX4-054
8 ohm version:	12NPMX8-242
16 ohm version:	12NPMX16-054
Recone kits:	
4 ohm version:	RC12NPMX4-054
8 ohm version:	RC12NPMX8-242
16 ohm version:	RC12NPMX16-054

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



12" | 121FIND

Ferrite Mid-Woofer

REDCATT

Key features:

- EXTENDED FREQUENCY RESPONSE
- PROVEN COST EFFECTIVE DESIGN
- GOOD POWER HANDLING, NOMEX SPIDER, WATER-REPELLENT & NON-FLAMMABLE PAPER CONE

Design notes:

The 121FIND is a high efficiency, (96.5 dB 1watt/ 1 meter) 12inch woofer with incredibly linear frequency response characteristics, high power handling capability while generating low harmonic distortion artifacts. 121FIND uses lightweight cone which movement is controlled by "M" shaped surround. Pistonic behavior and the long term stability
Is supported by Nomex spider. The woofer cone is treated to withstand harsh environments and high humidity.

The 121FIND was design for its best use in the 2-way applications, where excellent midrange response is required. Speaker provides good low frequency extension and delivers seizable amounts of low frequencies.
The metal parts in the speaker are coated and tested to ensure extreme weatherization protection.

Specifications:

General specs	
Nominal Diameter:	12 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	250 Watts
Program Power:	300 Watts
Peak Power:	600 Watts
Voice Coil	
Diameter:	2 in.
Winding wire:	CCAW
Former:	Glass Fiber
Winding height:	12 mm

T/S Parameters	
Resonant frequency:	64 Hz
Re:	3.0 ohm
Qes:	0.6
Qms:	9.9
Qts:	0.57
Vas:	48 liters
Sd:	531 cm^2
Sensitivity:	96.5 dB
Mms:	50.9 grams
Bl:	10.5
Le:	0.5 mH

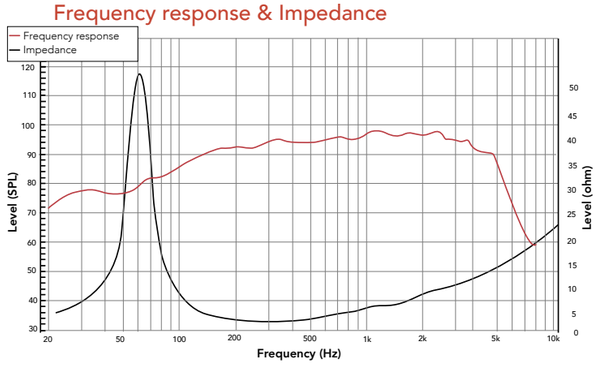
Design details	
Surround Material:	Fabric
Cone material:	Paper with GF
Spider:	Single nomex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	14 mm
Overall diameter:	320 mm
Bolt circle diameter:	302 mm
Baffle cutout dia.:	282.5 mm
Number of mounting holes:	8
Depth (flange to rear):	134.5 mm
Net weight:	7.0 kg

Ordering codes:	
4 ohm version:	121FINDX4-233
8 ohm version:	121FINDX8-233
16 ohm version:	-NA-

Recone kits:

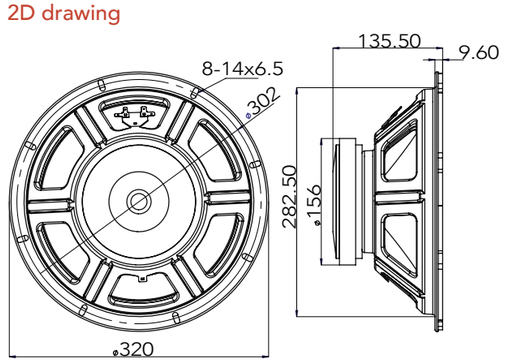
4 ohm version:	RC121FINDX4-233
8 ohm version:	RC121FINDX8-233
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



12" | 123FPM

Ferrite Mid-Woofer

REDCATT

Key features:

- EXTENDED FREQUENCY RESPONSE
- RIB REINFORCED PAPER CONE
- HIGH POWER HANDLING

Design notes:

The 123FPM is a high efficiency, (98.5 dB 1watt / 1 meter) 12-inch mid bass woofer with incredibly linear frequency response characteristics. The 123FPM uses a lightweight rib-reinforced cone assembly along with a precision double roll constant geometry surround. This combination provides remarkable strength, high efficiency and a excursion linearity of 12mm.

Magnetic Circuit
REDCATT engineers have developed a lightweight, inside-neodymium slug based magnetic circuit capable of delivering the highest level of performance providing a consistent, high integrity magnetic flux gap, ultra low distortion characteristic and high efficiency cooling system. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Specifications:

General specs	
Nominal Diameter:	12 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	300 Watts
Program Power:	600 Watts
Peak Power:	1200 Watts
Voice Coil	
Diameter:	2.5 in.
Winding wire:	CCAW
Former:	Glass Fiber
Winding height:	13.5 mm

T/S Parameters	
Resonant frequency:	47 Hz
Re:	45 ohm
Qes:	0.365
Qms:	8.02
Qts:	0.35
Vas:	99.5 liters
Sd:	531 cm^2
Sensitivity:	98 dB
Mms:	49.5 grams
Bl:	14.7
Le:	0.72 mH

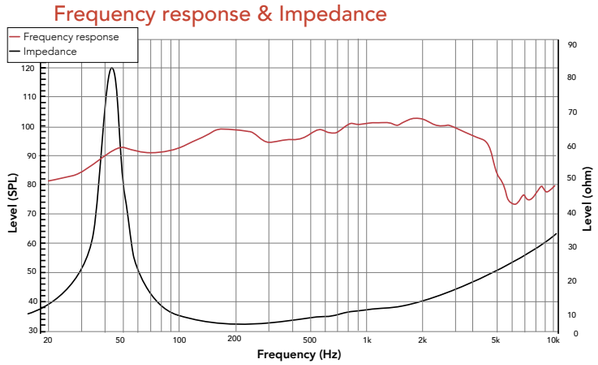
Design details	
Surround Material:	Fabric
Cone material:	Paper with GF
Spider:	Single nomex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	12 mm
Overall diameter:	320 mm
Bolt circle diameter:	302 mm
Baffle cutout dia.:	282 mm
Number of mounting holes:	8
Depth (flange to rear):	128 mm
Net weight:	7.6 kg

Ordering codes:	
4 ohm version:	123FPMX4-188
8 ohm version:	-NA-
16 ohm version:	-NA-

Recone kits:

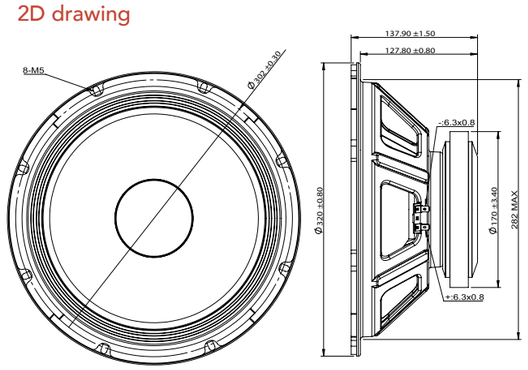
4 ohm version:	RC123FPMX4-188
8 ohm version:	-NA-
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



12" | 121NPM

Neodymium Mid-Woofer

REDCATT

Key features:

- VERY HIGH EFFICIENCY MID-WOOFER
- LINEAR FREQUENCY RESPONSE, LOW HARMONIC DISTORTION
- LIGHTWEIGHT CARBON FIBER LOADED PAPER CONE, NOMEX SPIDER

Design notes:

The 121NPM is a ultra high efficiency, (101dB 1watt / 1 meter) 12-inch mid bass woofer with incredibly linear frequency response characteristics, extreme high power handling capability while generating low harmonic distortion artifacts.-
The 121NPM uses a lightweight carbon fiber loaded cone assembly along with a precision double roll constant geometry surround. This combination provides remarkable strength, high efficiency and a excursion linearity of 7.5mm.

Magnetic Circuit
REDCATT engineers have developed a lightweight, neodymium outside ring based magnetic circuit capable of delivering the highest level of performance providing a consistent, high integrity magnetic flux gap, ultra low distortion characteristic and high efficiency cooling system. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Specifications:

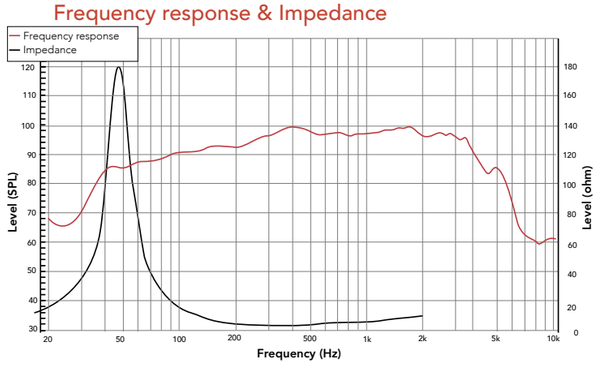
General specs	
Nominal Diameter:	12 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	500 Watts
Program Power:	1000 Watts
Peak Power:	2000 Watts
Voice Coil	
Diameter:	3 in.
Winding wire:	CCAW
Former:	TIL
Winding height:	13 mm

T/S Parameters	
Resonant frequency:	46 Hz
Re:	6.2 ohm
Qes:	0.175
Qms:	8.4
Qts:	0.17
Vas:	86 liters
Sd:	531 cm^2
Sensitivity:	101 dB
Mms:	56 grams
Bl:	24
Le:	0.59 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with CF
Spider:	Single nomex
Plate thickness:	10 mm
Peak to peak linear cone Displacement	15.5 mm
Overall diameter:	315 mm
Bolt circle diameter:	298 mm
Baffle cutout dia.:	285 mm
Number of mounting holes:	8
Depth (flange to rear):	122 mm
Net weight:	3.7 kg

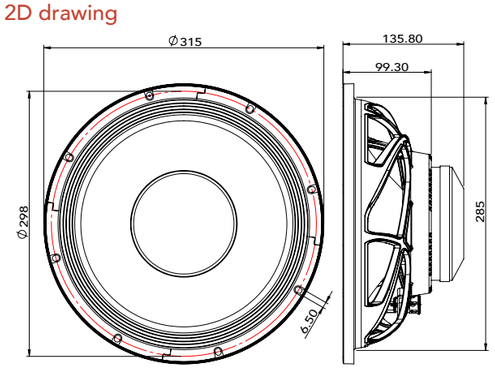
Ordering codes:	
4 ohm version:	121NPMX4-079
8 ohm version:	121NPMX8-079
16 ohm version:	121NPMX16-079
Recone kits:	
4 ohm version:	RC121NPMX4-079
8 ohm version:	RC121NPMX8-079
16 ohm version:	RC121NPMX16-079

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



10" | 101NPM

Neodymium Mid-Woofer

REDCATT

Key features:

- ULTRA LIGHTWEIGHT, DESIGNED FOR PORTABLE PRODUCTS
- HIGH EFFICIENCY, LOW HARMONIC DISTORTION
- CARBON FIBER LOADED PAPER CONE

Design notes:

The 101NPM is a high efficiency, (96 dB 1watt / 1 meter) 10-inch mid-woofer with incredibly linear frequency response characteristics, high power handling capability, while generating ultra low harmonic distortion artifacts. The 101NPM uses a lightweight glass fiber loaded cone assembly along with a high excursion triple roll surround. This combination provides a lightweight, yet strong, piston, high efficiency and a peak to peak maximum excursion of 8mm (0.31in).

Magnetic Circuit
REDCATT engineers have developed a ultra lightweight, inside neodymium slug based magnetic circuit, capable of delivering the highest level of performance, providing a consistent, high integrity magnetic flux gap, ultra low distortion characteristic and high efficiency cooling system. The magnetic structure has integrated two aluminum shorting rings. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Specifications:

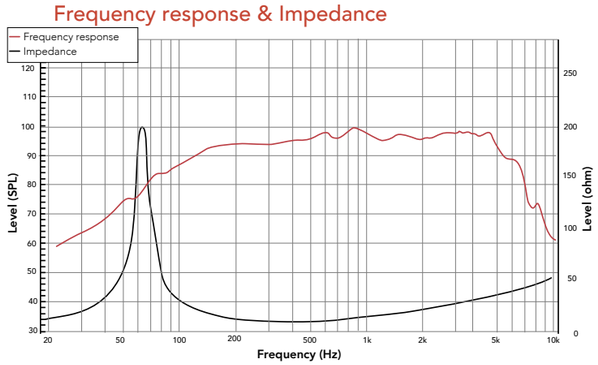
General specs	
Nominal Diameter:	10 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	150 Watts
Program Power:	300 Watts
Peak Power:	600 Watts
Voice Coil	
Diameter:	2 in.
Winding wire:	CCAW
Former:	Glass Fiber
Winding height:	14 mm

T/S Parameters	
Resonant frequency:	51 Hz
Re:	5 ohm
Qes:	0.56
Qms:	6.4
Qts:	0.52
Vas:	56.4 liters
Sd:	363 cm^2
Sensitivity:	95.3 dB
Mms:	32 grams
Bl:	9.7
Le:	0.46 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with CF
Spider:	Single nomex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	15.2 mm
Overall diameter:	261.5 mm
Bolt circle diameter:	246 mm
Baffle cutout dia.:	229 mm
Number of mounting holes:	8
Depth (flange to rear):	111.5 mm
Net weight:	2.9 kg

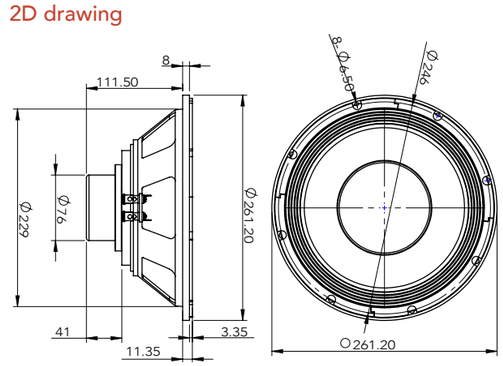
Ordering codes:	
2 ohm version:	101NPMX4-119
8 ohm version:	101NPMX8-119
16 ohm version:	-NA-
Recone kits:	
2 ohm version:	RC101NPMX4-119
8 ohm version:	RC101NPMX8-119
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



12" | 12XR

Neodymium Woofer

REDCAT

Key features:

- VERY HIGH CONE EXCURSION, WITH VERY LOW THD
- CAPABLE TO HANDLE VERY LOW FREQUENCIES
- HIGH POWER HANDLING, COPPER CAP, STITCHED TINSEL WIRES

Design notes:

The 12XR was designed around our new approach to the magnetic system. Our XR series speaker motors were designed so the voice coil winding doesn't leave the gap for most of the cone excursion. The desired cone excursion is carefully evaluated and incorporated into the design. The 12XR allows the designer to design sub-woofers with very large cone excursions, without the otherwise present harmonic distortion due to the voice coil leaving the magnetic gap. If you like the sound of a clean, undistorted bass, then the 12XR is the right transducer for your application.

Motor Design
The magnetic design incorporates large neodymium magnets placed along the voice coil winding. This has allowed us to push the cone excursion to 28mm peak to peak. Unique gap venting ensures good air circulation and greatly improves the reliability of this driver. We have also developed a new technique for manufacturing deep copper caps.

The design further sports a large spider on top of which is hot-pressed tinsel wires. Cone is carbon fiber reinforced, with a lightweight foamed rubber surround. The suspension was designed for large excursions.

Specifications:

General specs	
Nominal Diameter:	12 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	500 Watts
Program Power:	1000 Watts
Peak Power:	2000 Watts
Voice Coil	
Diameter:	2.5 in.
Winding wire:	Copper
Former:	TIL
Winding height:	17 mm

T/S Parameters	
Resonant frequency:	35 Hz
Re:	5.5 ohm
Qes:	0.52
Qms:	3.7
Qts:	0.46
Vas:	76.5 liters
Sd:	510 cm^2
Sensitivity:	92 dB
Mms:	95 grams
Bl:	15
Le:	0.2 mH

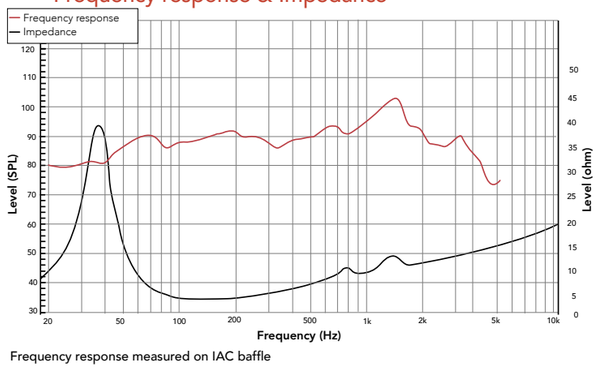
Design details	
Surround Material:	Foam
Cone material:	Paper with CF
Spider:	Single nomex
Plate thickness:	31 mm
Peak to peak linear cone Displacement	28 mm
Overall diameter:	320 mm
Bolt circle diameter:	299 mm
Baffle cutout dia.:	281 mm
Number of mounting holes:	8
Depth (flange to rear):	172 mm
Net weight:	5.5 kg

Ordering codes:	
4 ohm version:	12XRX4-270
8 ohm version:	12XRX8-270
16 ohm version:	-NA-

Recone kits:

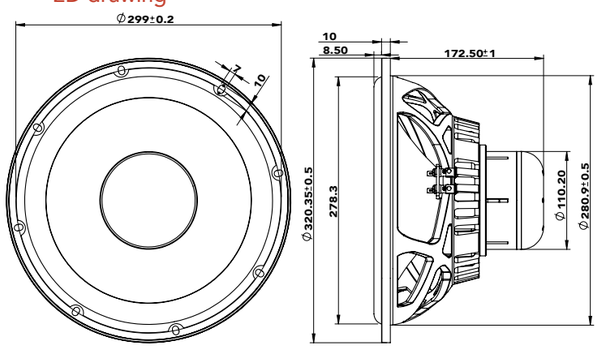
4 ohm version:	RC12XRX4-270
8 ohm version:	RC12XRX8-270
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



12" | 121XR

Neodymium X-Woofer

REDCAT

Key features:

- EXTENDED FREQUENCY RESPONSE, HIGH EXCURSION, ULTRA LOW THD
- STATIC DEMODULATION COIL, LARGE SPIDER WITH STITCHED TINSEL WIRES
- CARBON FIBER LOADED PAPER CONE

Design notes:

The 121XR was designed to be simply the best driver for 2-way and multi-way systems on the market, yet this driver will also shine in sub-woofer applications. The combination of our XR patented technology with static shorting coil brings an nonparallel opportunity to the audio designers. The common request for 2-way speakers is "more of everything". Designers wishes for more bass, more mids. Well, there you have it! But not only that. We bring this with clarity in the mid-frequencies and undistorted bass. Our designers were able to achieve THD below 0.5% from 20Hz up to 2.5kHz. There isn't another driver like this on the market.

Motor Design
The magnetic design incorporates large neodymium magnets placed along the voice coil winding, together with the 2nd and static coil placed on the pole piece. This has allowed us to push the cone excursion to 30mm peak to peak, while lowering the inductance. The shorting coil covers the complete main coil excursion. This is also an improvement compared to some previous designs on the market. Unique gap venting ensures good air circulation and greatly improves the reliability of this driver.

Specifications:

General specs	
Nominal Diameter:	12 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	500 Watts
Program Power:	1000 Watts
Peak Power:	2000 Watts
Voice Coil	
Diameter:	2.5 in.
Winding wire:	Copper
Former:	TIL
Winding height:	18.3 mm

T/S Parameters	
Resonant frequency:	47 Hz
Re:	5.7 ohm
Qes:	0.39
Qms:	1.4
Qts:	0.3
Vas:	74.5 liters
Sd:	531 cm^2
Sensitivity:	97 dB
Mms:	60.6
Bl:	16.3
Le:	0.18 mH

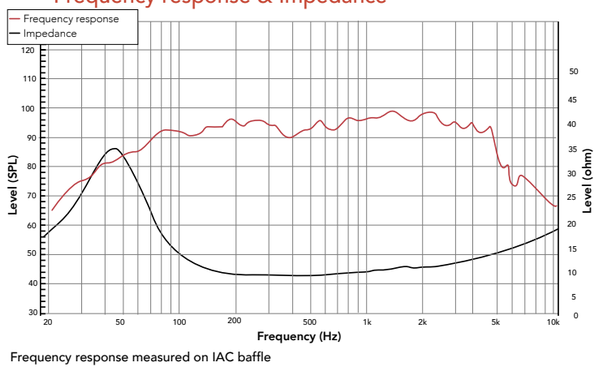
Design details	
Surround Material:	Fabric
Cone material:	Paper with CF
Spider:	Single nomex
Plate thickness:	27.5 mm
Peak to peak linear cone Displacement	31 mm
Overall diameter:	320 mm
Bolt circle diameter:	299 mm
Baffle cutout dia.:	281 mm
Number of mounting holes:	8
Depth (flange to rear):	172 mm
Net weight:	5.5 kg

Ordering codes:	
4 ohm version:	121XRX4-352
8 ohm version:	121XRX8-352
16 ohm version:	121XRX16-352

Recone kits:

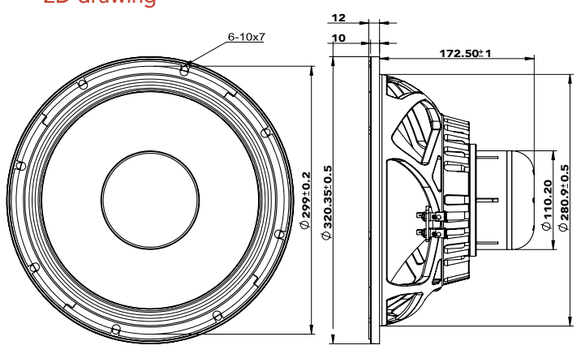
4 ohm version:	RC121XRX4-352
8 ohm version:	RC121XRX8-352
16 ohm version:	RC121XRX16-352

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



XR SERIES DELIVERS THE HIGHEST LEVELS OF PERFORMANCE

- high cone displacement
- high power handling
- extremely low LF distortion

ORDER YOUR SAMPLE AND SEE YOURSELF!

12" | 123NPM

Neodymium Mid-Woofer

REDCAT

Key features:

- HIGH SENSITIVITY, EXTENDED FREQUENCY RESPONSE
- 3 DEMODULATION RINGS, POWERFUL MOTOR STRUCTURE, DUAL AIR-GAP
- HIGH POWER HANDLING

Design notes:

The 123NPM is a truly unique full range woofer. We have designed cutting edge product, using the best avail-able materials and highly optimized design for the best performance in its class. It delivers very high efficiency, (96 dB 1watt / 1 meter), incredibly linear frequency response characteristics with extended HF frequency response, extreme high power handling capability, while generating ultra low harmonic distortion artifacts. The 123NPM uses a lightweight carbon fiber loaded cone assembly along with a high excursion triple roll constant geometry surround. This combination provides remarkable strength, high efficiency and a peak to peak linear excursion of 22mm (0.9in).

Magnetic Circuit

The magnetic circuit features two aluminum shorting rings, double air-gap front plate. The cooling system and the air flow has been designed using the modern FEM techniques and further optimized to provide the highest levels of cooling efficiency. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Specifications:

General specs	
Nominal Diameter:	12 in.
Rated Impedance:	8 Ohm

Power handling	
AES Power:	800 Watts
Program Power:	1600 Watts
Peak Power:	3200 Watts

Voice Coil	
Diameter:	4 in.
Winding wire:	ALU square
Former:	TIL
Winding height:	23 mm

T/S Parameters	
Resonant frequency:	39 Hz
Re:	4.6 ohm
Qes:	0.43
Qms:	13
Qts:	0.4
Vas:	38 liters
Sd:	551 cm²
Sensitivity:	96 dB
Mms:	99 grams
Bl:	19
Le:	0.6 mH

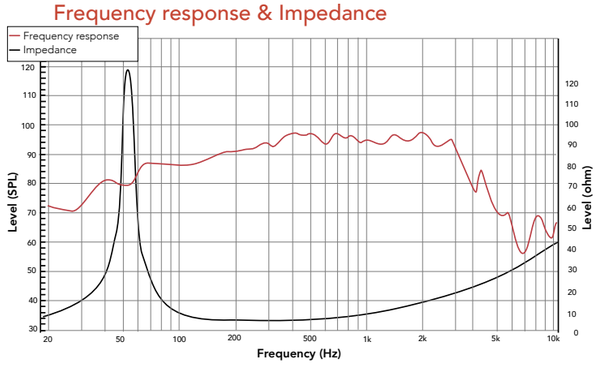
Design details	
Surround Material:	Fabric
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	12.5 mm
Peak to peak linear cone Displacement	22 mm
Overall diameter:	320 mm
Bolt circle diameter:	302 mm
Baffle cutout dia.:	284.5 mm
Number of mounting holes:	8
Depth (flange to rear):	140.5 mm
Net weight:	6.3 kg

Ordering codes:	
4 ohm version:	123NPMX4-185
8 ohm version:	123NPMX8-185
16 ohm version:	123NPMX16-185

Recone kits:

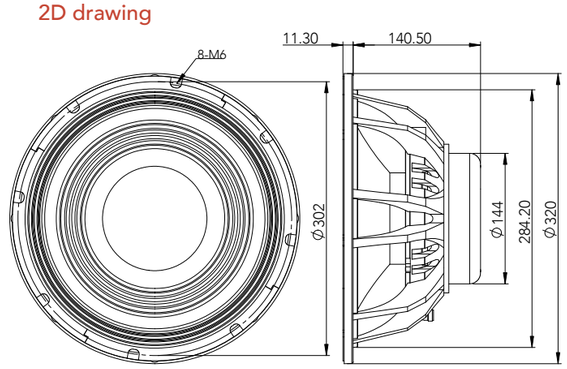
4 ohm version:	RC123NPMX4-185
8 ohm version:	RC123NPMX8-185
16 ohm version:	RC123NPMX16-185

Frequency response & Impedance



Frequency response measured in box

2D drawing



10" | 10FHW

Ferrite Sub-Woofer

REDCAT

Key features:

- GOOD LOW FREQUENCY EXTENSION
- ALUMINUM CHASSIS, ALUMINUM CONE, NOMEX SPIDER WITH ATTACHED TINSEL WIRE
- HIGH POWER HANDLING

Design notes:

The 10FHW is a high efficiency, (84dB 1watt / 1 meter) 10-inch sub-woofer speaker with extended low frequency response and high power handling capability. The 10FHW uses a strong anodized aluminum cone assembly along with a single roll rubber surround. Spider is Nomex material with stitched-on tinsel wires. This ensures long lasting performance even in high powered applications. The chosen material combination provides remarkable strength, high efficiency and sustained output under extreme conditions.

Magnetic Circuit

REDCATT engineers have developed a ferrite based magnetic circuit, capable of delivering the highest level of performance, providing a consistent, high integrity magnetic flux gap, ultra low distortion characteristic and high efficiency cooling system. The magnetic structure has integrated two aluminum shorting rings. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Specifications:

General specs	
Nominal Diameter:	10 in.
Rated Impedance:	4 Ohm

Power handling	
AES Power:	100 Watts
Program Power:	200 Watts
Peak Power:	400 Watts

Voice Coil	
Diameter:	1.3 in.
Winding wire:	Copper
Former:	Aluminum
Winding height:	18.5 mm

T/S Parameters	
Resonant frequency:	35 Hz
Re:	3.5 ohm
Qes:	0.7
Qms:	5.6
Qts:	0.65
Vas:	59 liters
Sd:	346 cm²
Sensitivity:	89 dB
Mms:	49 grams
Bl:	8.5
Le:	1.4 mH

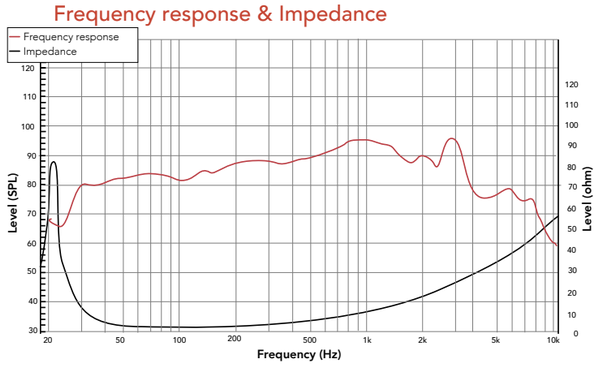
Design details	
Surround Material:	Rubber
Cone material:	Aluminum
Spider:	Single nomex
Plate thickness:	6 mm
Peak to peak linear cone Displacement	20 mm
Overall diameter:	269 mm
Bolt circle diameter:	257 mm
Baffle cutout dia.:	238 mm
Number of mounting holes:	8
Depth (flange to rear):	114.5 mm
Net weight:	10.0 kg

Ordering codes:	
4 ohm version:	10FHWX4-288
8 ohm version:	10FHWX8-288
16 ohm version:	-NA-

Recone kits:

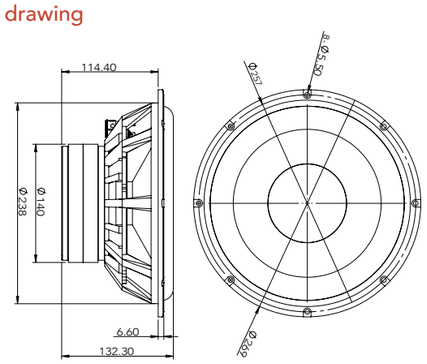
4 ohm version:	RC10FHWX4-288
8 ohm version:	RC10FHWX8-288
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured in box

2D drawing



10" | 101FHW

Ferrite Sub-Woofer

REDCAT

Key features:

- GLASS FIBER LOADED PAPER CONE AND DUSTCAP
- NOMEX SPIDER WITH STITCHED TINSEL WIRES
- EXCELLENT LOW FREQUENCY RESPONSE

Design notes:

The 101FHW is a high efficiency, (86dB 1watt / 1 meter) 10-inch woofer speaker with extended low frequency response and high power handling capability. The 101FHW uses a strong glass fiber reinforced paper cone assembly along with a single roll rubber surround. Spider is Nomex material with stitched-in tinsel wires. This ensures long lasting performance even in high powered applications. The chosen material combination provides remarkable strength, high efficiency and sustained output under extreme conditions.

The 101FHW cone and dust cap are made using glass fiber loaded paper pulp. All "soft" parts are bonded together using state of the art high temperature adhesives. Metal parts in the speaker assembly are coated for extreme weatherization protection. Speaker push terminals are gold plated to ensure the best connection.

Specifications:

General specs	
Nominal Diameter:	10 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	200 Watts
Program Power:	400 Watts
Peak Power:	800 Watts
Voice Coil	
Diameter:	2 in.
Winding wire:	Copper
Former:	Aluminum
Winding height:	32 mm

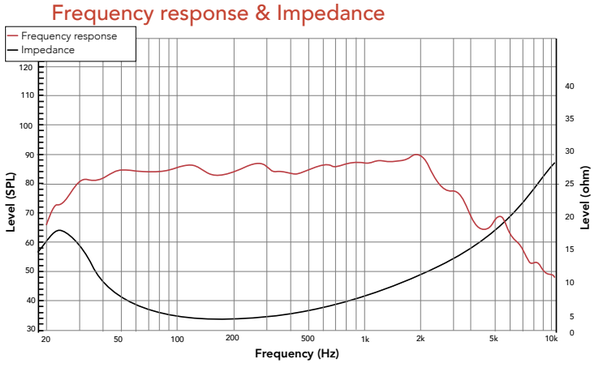
T/S Parameters	
Resonant frequency:	26 Hz
Re:	3.6 ohm
Qes:	0.36
Qms:	1.26
Qts:	0.28
Vas:	61 liters
Sd:	346 cm²
Sensitivity:	87.5 dB
Mms:	102 grams
Bl:	13
Le:	0.813 mH

Design details	
Surround Material:	Rubber
Cone material:	Paper with GF
Spider:	Nomex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	32 mm
Overall diameter:	269 mm
Bolt circle diameter:	257 mm
Baffle cutout dia.:	238 mm
Number of mounting holes:	8
Depth (flange to rear):	116 mm
Net weight:	5.2 kg

Ordering codes:	
4 ohm version:	101FHWX4-118
8 ohm version:	101NPMX8-118
16 ohm version:	-NA-

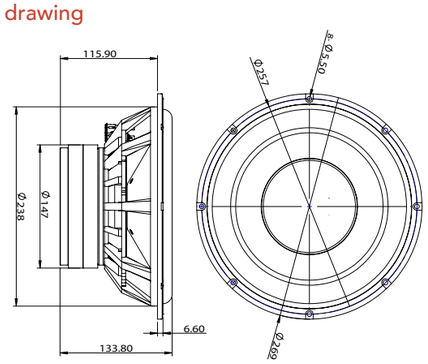
Recone kits:	
4 ohm version:	RC101FHWX4-118
8 ohm version:	RC101FHWX8-118
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured in box

2D drawing



10" | 10NPM

Neodymium Mid-Woofer

REDCAT

Key features:

- HI SENSITIVITY, HI POWER HANDLING
- CARBON FIBER LOADED PAPER CONE, NOMEX SPIDER
- EXCELLENT FREQUENCY RESPONSE

Design notes:

The 10NPM is a high efficiency, (98.5 dB 1watt / 1 meter) 10-inch mid bass woofer with incredibly linear frequency response characteristics, extreme high power handling capability while generating low harmonic distortion artifacts.- The 10NPM uses a lightweight carbon fiber loaded cone assembly along with a precision double roll constant geometry surround. This combination provides remarkable strength, high efficiency and a excursion linearity of 7.5mm.

Magnetic Circuit
REDCATT engineers have developed a lightweight, inside-neodymium slug based magnetic circuit capable of delivering the highest level of performance providing a consistent, high integrity magnetic flux gap, ultra low distortion characteristic and high efficiency cooling system. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Specifications:

General specs	
Nominal Diameter:	10 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	400 Watts
Program Power:	800 Watts
Peak Power:	1600 Watts
Voice Coil	
Diameter:	3 in.
Winding wire:	CCAW
Former:	Glass fiber
Winding height:	19 mm

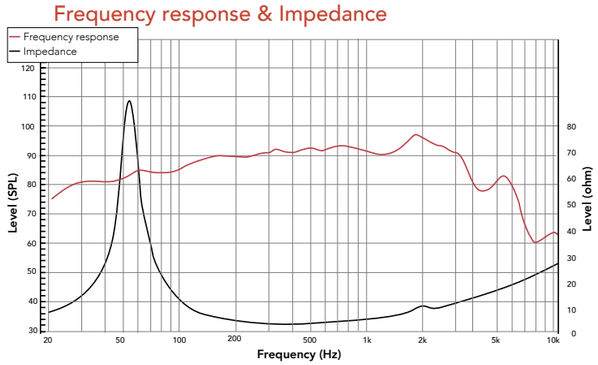
T/S Parameters	
Resonant frequency:	59 Hz
Re:	3.7 ohm
Qes:	0.254
Qms:	8.29
Qts:	0.25
Vas:	28.2 liters
Sd:	363 cm²
Sensitivity:	96 dB
Mms:	49 grams
Bl:	16.3
Le:	0.4 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with CF
Spider:	Single nomex
Plate thickness:	10 mm
Peak to peak linear cone Displacement	15 mm
Overall diameter:	262 mm
Bolt circle diameter:	246 mm
Baffle cutout dia.:	233.5 mm
Number of mounting holes:	8
Depth (flange to rear):	115 mm
Net weight:	2.9 kg

Ordering codes:	
4 ohm version:	10NPMX4-101
8 ohm version:	10NPMX8-162
16 ohm version:	10NPMX16-319

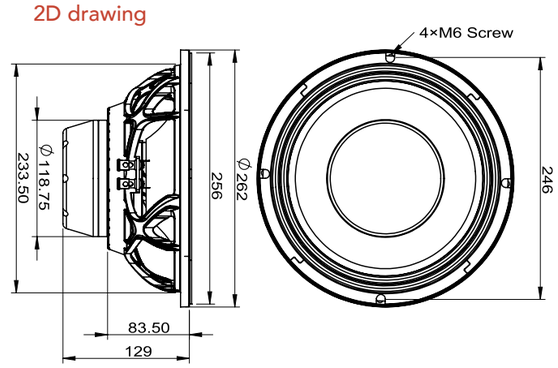
Recone kits:	
4 ohm version:	RC10NPMX4-101
8 ohm version:	RC10NPMX8-162
16 ohm version:	RC10NPMX16-319

Frequency response & Impedance



Frequency response measured in box

2D drawing



10" | 10FIND

Ferrite Mid-Woofer

Key features:

- GLASS FIBER LOADED PAPER CONE
- 2 DEMODULATION RINGS, POWERFUL MOTOR STRUCTURE
- HIGH SPL, LOW THD

Design notes:

The 10FIND is a high efficiency, (97 dB 1watt / 1 meter) 10-inch woofer with linear frequency response characteristics, high power handling capability, while generating ultra low harmonic distortion artifacts. The 10FIND uses a lightweight glass fiber loaded cone assembly along with a high excursion double roll surround. This combination provides a lightweight, yet strong, piston.

Magnetic Circuit
REDCATT engineers have developed a ferrite based magnetic circuit, capable of delivering the highest level of performance, providing a consistent, high integrity magnetic flux gap, ultra low distortion characteristic and high efficiency cooling system. The magnetic structure has integrated two aluminum shorting rings. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Specifications:

General specs	
Nominal Diameter:	10 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	250 Watts
Program Power:	500 Watts
Peak Power:	1000 Watts
Voice Coil	
Diameter:	2.5 in.
Winding wire:	CCAW
Former:	Glass Fiber
Winding height:	13.5 mm

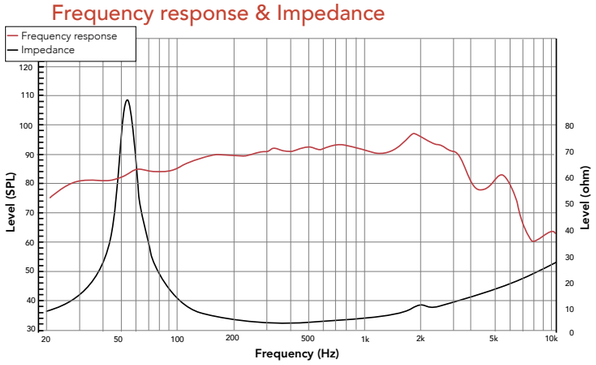
T/S Parameters	
Resonant frequency:	59 Hz
Re:	5.8 ohm
Qes:	0.387
Qms:	10.2
Qts:	0.373
Vas:	33.8 liters
Sd:	346 cm²
Sensitivity:	95.8 dB
Mms:	37 grams
Bl:	14.5
Le:	0.83 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with GF
Spider:	Single nomex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	16 mm
Overall diameter:	262 mm
Bolt circle diameter:	246 mm
Baffle cutout dia.:	230 mm
Number of mounting holes:	8
Depth (flange to rear):	107.5 mm
Net weight:	4.55 kg

Ordering codes:	
4 ohm version:	10FINDX4-033
8 ohm version:	10FINDX8-033
16 ohm version:	-NA-

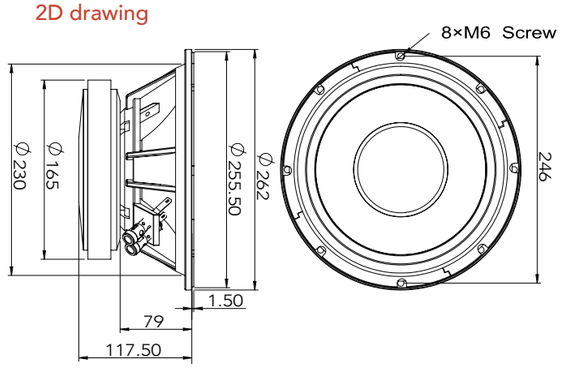
Recone kits:	
4 ohm version:	RC10FINDX4-033
8 ohm version:	RC10FINDX8-033
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



Info@redcatt.net www.redcatt.net

8" | 8FIND

Ferrite Mid-Woofer

Key features:

- EXTENDED FREQUENCY RESPONSE, HIGH EFFICIENCY
- CARBON FIBER LOADED AND REINFORCED PAPER CONE
- NOMEX SPIDER

Design notes:

The 8FIND is a high efficiency, (96 dB 1watt / 1 meter) 8-inch mid bass woofer with incredibly linear frequency response characteristics, high power handling capability while generating low harmonic distortion artifacts.
The 8FIND uses a lightweight carbon fiber loaded cone assembly along with a precision double roll surround. This combination provides remarkable strength, high efficiency and a excursion linearity of 7.5mm.

Magnetic Circuit
REDCATT engineers have developed an efficient, ferrite based magnetic circuit, capable of delivering the highest level of performance providing a consistent, high integrity magnetic flux gap, low distortion characteristic. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Specifications:

General specs	
Nominal Diameter:	8 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	200 Watts
Program Power:	400 Watts
Peak Power:	800 Watts
Voice Coil	
Diameter:	2 in.
Winding wire:	CCAW
Former:	Glass Fiber
Winding height:	12.4 mm

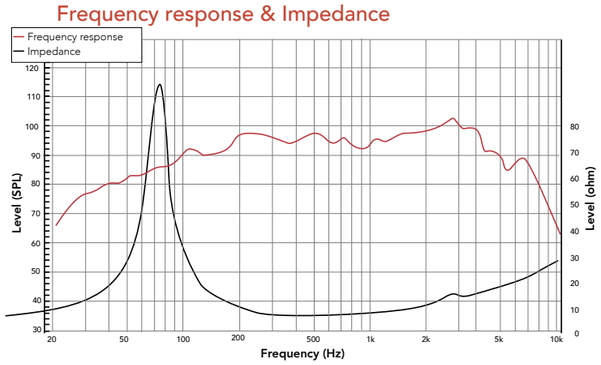
T/S Parameters	
Resonant frequency:	68 Hz
Re:	5.9 ohm
Qes:	0.3
Qms:	6.24
Qts:	0.28
Vas:	18.3 liters
Sd:	226 cm²
Sensitivity:	96.5 dB
Mms:	21.7 grams
Bl:	13.7
Le:	0.83 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper with GF
Spider:	Single nomex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	13 mm
Overall diameter:	209.5 mm
Bolt circle diameter:	197.5 mm
Baffle cutout dia.:	184 mm
Number of mounting holes:	8
Depth (flange to rear):	88.5 mm
Net weight:	4.2 kg

Ordering codes:	
4 ohm version:	8FINDX4-030
8 ohm version:	8FINDX8-030
16 ohm version:	-NA-

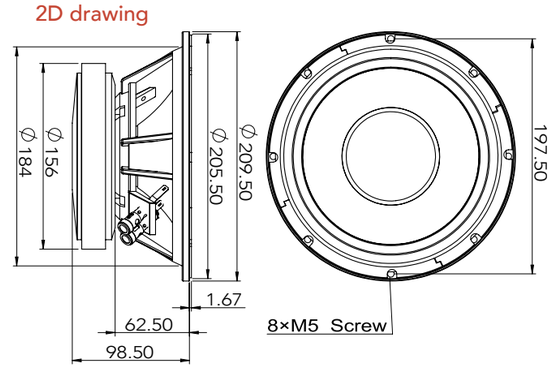
Recone kits:	
4 ohm version:	RC8FINDX4-030
8 ohm version:	RC8FINDX8-030
16 ohm version:	-NA-

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



info@redcatt.net www.redcatt.net

8" | 81FIND

Ferrite Mid-Woofer

Key features:

- EXTENDED FREQUENCY RESPONSE
- IDEAL FOR SMALL AND PORTABLE 2-WAY SYSTEMS
- AFFORDABLE, YET VERY CAPABLE DESIGN FOR COST SENSITIVE PRODUCT

Design notes:

The 81FIND is a high efficiency, (96 dB 1watt / 1 meter) 8-inch woofer with linear frequency response characteristics, good power handling capability while generating low harmonic distortion artifacts. The 81FIND uses a lightweight glass-fiber loaded cone assembly along with a high excursion M-roll surround. This combination provides a lightweight, yet strong, piston.

Magnetic Circuit

Ferrite based magnetic circuit, capable of delivering the good level of performance, providing a consistent, high integrity magnetic flux gap, low distortion characteristic and high-efficiency cooling system. The metal parts are extensively coated to provide the maximum weather protection.

This driver has been chosen by many audio engineers for smaller sized, or portable audio products. It has proven its capability over and over again all around the world, many times in challenging applications or environments. 81FIND is proven design that delivers good balance between performance and cost.

Specifications:

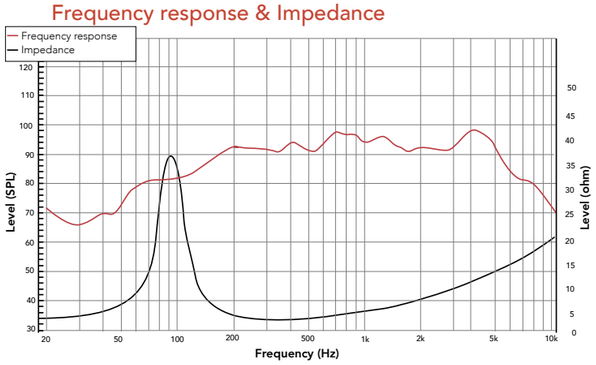
General specs	
Nominal Diameter:	8 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	200 Watts
Program Power:	400 Watts
Peak Power:	800 Watts
Voice Coil	
Diameter:	2 in.
Winding wire:	CCAW
Former:	SIL
Winding height:	12.5 mm

T/S Parameters	
Resonant frequency:	94 Hz
Re:	4.5 ohm
Qes:	0.56
Qms:	6.27
Qts:	0.51
Vas:	10 liters
Sd:	227 cm^2
Sensitivity:	96 dB
Mms:	20.9 grams
Bl:	19
Le:	0.31 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	5.6 mm
Overall diameter:	209 mm
Bolt circle diameter:	197 mm
Baffle cutout dia.:	194 mm
Number of mounting holes:	8
Depth (flange to rear):	91.5 mm
Net weight:	2.75 kg

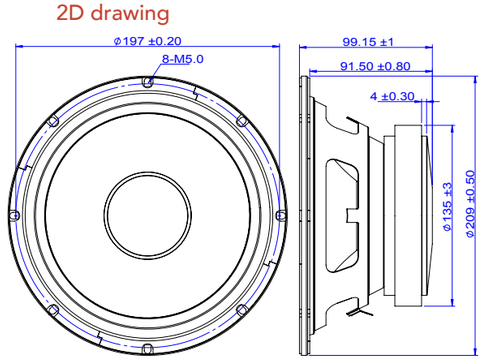
Ordering codes:	
4 ohm version:	81FINDX4-290
8 ohm version:	81FINDX8-290
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC81FINDX4-290
8 ohm version:	RC81FINDX8-290
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



8" | 81FIND

Ferrite Mid-Woofer

Key features:

- EXTENDED FREQUENCY RESPONSE
- IDEAL FOR SMALL AND PORTABLE 2-WAY SYSTEMS
- AFFORDABLE, YET VERY CAPABLE DESIGN FOR COST SENSITIVE PRODUCT

Design notes:

This 81FIND model is a version of 81FIND-290. It is a high efficiency, (96 dB 1watt / 1 meter) 8-inch woofer with linear frequency response characteristics, good power handling capability while generating low harmonic distortion artifacts. The 81FIND uses a lightweight glass-fiber loaded cone assembly along with a high excursion M-roll surround. This combination provides a lightweight, yet strong, piston.

Magnetic Circuit

Ferrite based magnetic circuit, capable of delivering the good level of performance, providing a consistent, high integrity magnetic flux gap, low distortion characteristic and high-efficiency cooling system. The metal parts are extensively coated to provide the maximum weather protection.

This driver has been chosen by many audio engineers for smaller sized, or portable audio products. It has proven its capability over and over again all around the world, many times in challenging applications or environments. 81FIND is proven design that delivers good balance between performance and cost.

Specifications:

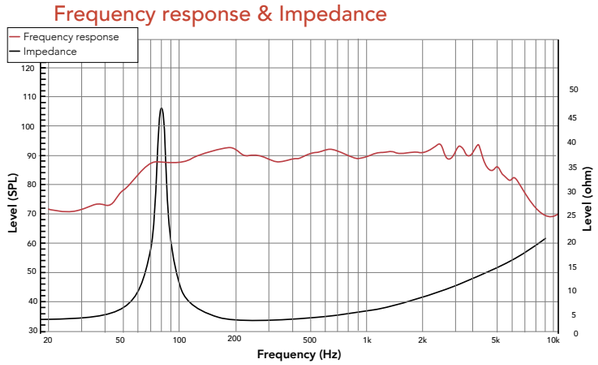
General specs	
Nominal Diameter:	8 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	200 Watts
Program Power:	400 Watts
Peak Power:	800 Watts
Voice Coil	
Diameter:	2 in.
Winding wire:	CCAW
Former:	Kapton
Winding height:	13.2 mm

T/S Parameters	
Resonant frequency:	84 Hz
Re:	3.2 ohm
Qes:	0.7
Qms:	11.30
Qts:	0.66
Vas:	9.7 liters
Sd:	213.8 cm^2
Sensitivity:	92 dB
Mms:	23.8
Bl:	7.6
Le:	0.83 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper w. GF
Spider:	Single nomex
Plate thickness:	6 mm
Peak to peak linear cone Displacement	7.2 mm
Overall diameter:	209 mm
Bolt circle diameter:	197 mm
Baffle cutout dia.:	194 mm
Number of mounting holes:	8
Depth (flange to rear):	91.5 mm
Net weight:	2.5 kg

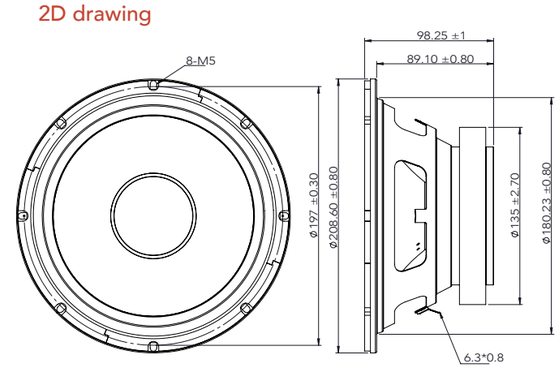
Ordering codes:	
4 ohm version:	81FINDX4-370
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC81FINDX4-370
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



8" | 8FHW

Ferrite Mid-Woofer

REDCAT

Key features:

- MID-WOOFER DESIGNED FOR OUTDOOR OR INDOOR APPLICATIONS
- UV STABILIZED POLYPROPYLENE CONE AND RUBBER SURROUND
- COMPONENTS ARE TREATED TO SURVIVE HARSH OUTDOOR ENVIRONMENTS

Design notes:

8FHW was designed as mid-woofer, with extended frequency response to low frequencies, as well as good extension into the mid-frequencies. All parts are intensively treated for outdoor usage, cone, surround material are with UV stabilizers. The used adhesives make sure the driver is waterproof.

The cone utilizes polypropylene material and rubber surround. This combination sports sizable amounts of low frequencies and good behavior in the higher mid-frequencies.

Specifications:

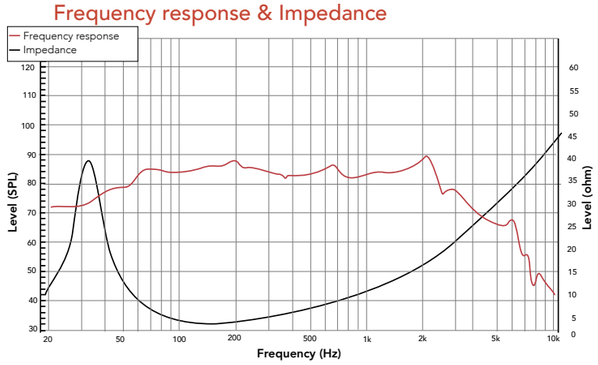
General specs	
Nominal Diameter:	8 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	100 Watts
Program Power:	200 Watts
Peak Power:	400 Watts
Voice Coil	
Diameter:	1.2 in.
Winding wire:	CCAW
Former:	Aluminum
Winding height:	15 mm

T/S Parameters	
Resonant frequency:	35 Hz
Re:	3.2 ohm
Qes:	0.3
Qms:	4.7
Qts:	0.3
Vas:	45.3 liters
Sd:	213.8 cm^2
Sensitivity:	90.8 dB
Mms:	28 grams
Bl:	8
Le:	0.67 mH

Design details	
Surround Material:	Rubber
Cone material:	Polypropylene
Spider:	Single nomex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	8.7 mm
Overall diameter:	209.5 mm
Bolt circle diameter:	197.5 mm
Baffle cutout dia.:	184.5 mm
Number of mounting holes:	8
Depth (flange to rear):	86.5 mm
Net weight:	2.3 kg

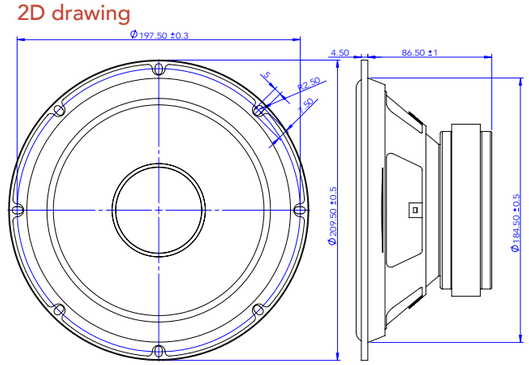
Ordering codes:	
4 ohm version:	8FHWX4-382
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC8FHWX4-382
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



8" | 8FHW

Ferrite Woofer

REDCAT

Key features:

- HEAVY-DUTY RUBBER SURROUND AND PAPER CONE
- IDEAL FOR SMALL SUBWOOFERS, HI-FI APPLICATIONS
- HIGH POWER HANDLING

Design notes:

The 8FHW is 8-inch low frequency woofer with linear frequency response characteristics, high power handling capability while generating low harmonic distortion artifacts.
The single roll rubber surround design allows the cone to travel in long linear motion. Together with lightweight, yet strong cone,this combination provides remarkable strength, high efficiency and a excursion linearity of 13mm (one direction).

Magnetic Circuit
REDCATT engineers have developed an efficient, ferrite based magnetic circuit, capable of delivering the high level of performance providing a consistent, high integrity magnetic flux gap, low distortion characteristic. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Specifications:

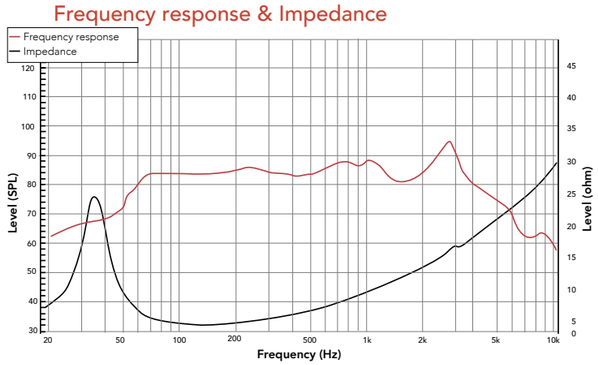
General specs	
Nominal Diameter:	8 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	200 Watts
Program Power:	300 Watts
Peak Power:	600 Watts
Voice Coil	
Diameter:	1.4 in.
Winding wire:	Copper
Former:	GF
Winding height:	8.8 mm

T/S Parameters	
Resonant frequency:	35.9 Hz
Re:	4.11 ohm
Qes:	0.73
Qms:	3.9
Qts:	0.61
Vas:	27.3 liters
Sd:	213.8 cm^2
Sensitivity:	84.3 dB
Mms:	46.6
Bl:	7.7
Le:	0.81 mH

Design details	
Surround Material:	Rubber
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	23 mm
Overall diameter:	150 mm
Bolt circle diameter:	1250 mm
Baffle cutout dia.:	98 mm
Number of mounting holes:	58 grams
Depth (flange to rear):	22 mm
Net weight:	10.0 kg

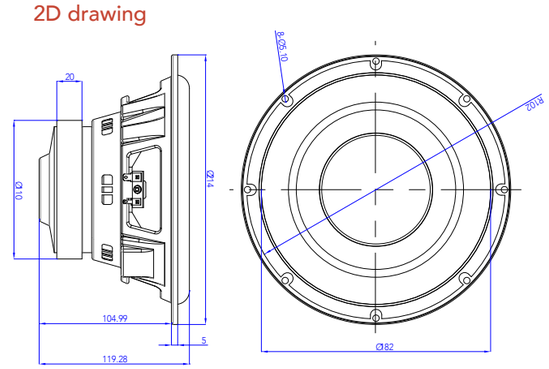
Ordering codes:	
4 ohm version:	8FHWX4-088
8 ohm version:	8FHWX8-088
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC8FHWX4-088
8 ohm version:	RC8FHWX8-088
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured in vented enclosure

2D drawing



8" | 8FHM

Ferrite Mid-Woofer

REDCAT

Key features:

- EXTENDED FREQUENCY RESPONSE
- 1K CARBON-FIBER NOMEX CORE HONEYCOMB CONE
- IDEAL FOR HIGH QUALITY HI-FI APPLICATIONS, STUDIO MONITORS

Design notes:

The 8FHM is a high efficiency, (91 dB 1watt / 1 meter) 8-inch mid-woofer with incredibly linear frequency response characteristics and ultra low harmonic distortion artifacts. The 8FHM uses a lightweight 1k carbon fiber material, assembled from both sides of Nomex honey-comb core. This unique cone provides the ideal weight to strength ratio. The rubber surround has been FEM modeled and optimized. The honeycomb cone with high end 1k carbon fiber material provides remarkable strength, while pushing the cone break-up modes to high frequencies, significantly extending the working range of the speaker.

The cone

The 8FHM cone is made using 1k carbon fiber hone-comb, placed from both sides of Nomex core, while the dustcap is made off hard-anodization reinforced aluminum. The dustcap shape and the hard anodizing are further improving the high frequency behavior.

Specifications:

General specs	
Nominal Diameter:	8 in.
Rated Impedance:	4 Ohm

Power handling	
AES Power:	50 Watts
Program Power:	100 Watts
Peak Power:	200 Watts

Voice Coil	
Diameter:	1.4 in.
Winding wire:	CCAW
Former:	Kapton
Winding height:	18 mm

T/S Parameters	
Resonant frequency:	43 Hz
Re:	3.6 ohm
Qes:	0.4
Qms:	15.2
Qts:	0.4
Vas:	39.9 liters
Sd:	216.4 cm²
Sensitivity:	91 dB
Mms:	24.5 grams
Bl:	7.8
Le:	0.32 mH

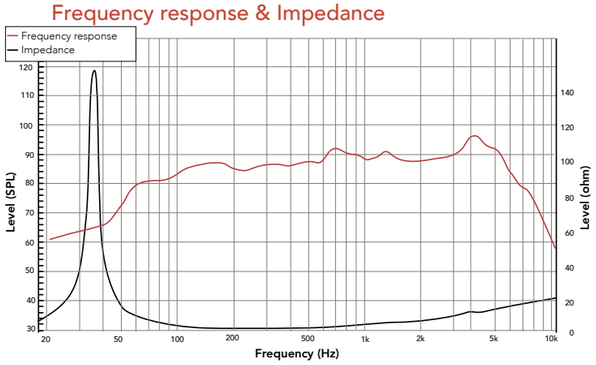
Design details	
Surround Material:	Rubber
Cone material:	CF honeycomb
Spider:	Single nomex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	13 mm
Overall diameter:	150 mm
Bolt circle diameter:	1250 mm
Baffle cutout dia.:	98 mm
Number of mounting holes:	8
Depth (flange to rear):	22 mm
Net weight:	10.0 kg

Ordering codes:	
4 ohm version:	8FHMX4-091
8 ohm version:	N/A
Round basket 4ohm:	8FHMX4-211

Recone kits:

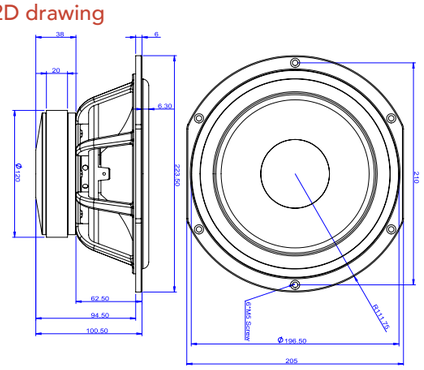
4 ohm version:	RC8FHM-091
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



8" | 82FHM

Ferrite Mid-Woofer

REDCAT

Key features:

- EXTENDED FREQUENCY RESPONSE
- HARD ANODIZED ALUMINUM CONE WITH RUBBER SURROUND
- ALUMINUM BASKET

Design notes:

82FHM is mid-woofer driver, designed for hi-fi, studio monitors and outdoor applications. Design sports hard-anodized aluminum cone and dustcap. These two key components extend the working range of the woofer. The parameters were optimized for usage in sealed enclosures.

All metal parts are coated to further increase weatherized protection, surround has UV stabilizers.

Strong aluminum basket was used in this design which further improves the mechanical fatigue and allow the speaker to be used in demanding portable products.

Further more, we have developed new magnetic circuit for this model. Our clever engineering takes the best balance between the performance and cost. Rest assure we have FEM optimized air-venting of this design that minimizes the air-noise and greatly improves voice coil winding venting.

Specifications:

General specs	
Nominal Diameter:	8 in.
Rated Impedance:	8 Ohm

Power handling	
AES Power:	100 Watts
Program Power:	200 Watts
Peak Power:	400 Watts

Voice Coil	
Diameter:	1.4 in.
Winding wire:	CCAW
Former:	Aluminum
Winding height:	16 mm

T/S Parameters	
Resonant frequency:	36 Hz
Re:	6 ohm
Qes:	0.7
Qms:	0.2.8
Qts:	0.56
Vas:	43.4 liters
Sd:	213.8 cm²
Sensitivity:	87.85 dB
Mms:	29.3
Bl:	7.5
Le:	0.42 mH

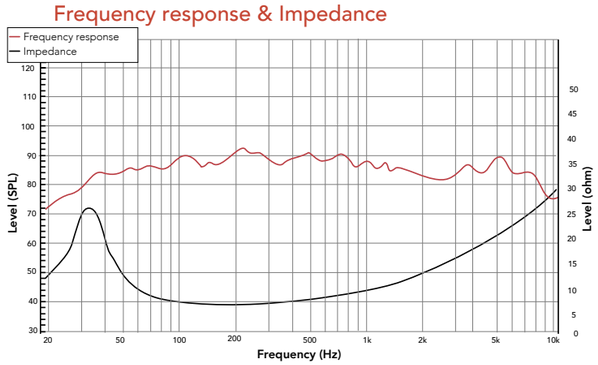
Design details	
Surround Material:	Rubber
Cone material:	Aluminum
Spider:	Single nomex
Plate thickness:	15 mm
Peak to peak linear cone Displacement	16.8 mm
Overall diameter:	223.5 mm
Bolt circle diameter:	210 mm
Baffle cutout dia.:	189 mm
Number of mounting holes:	6
Depth (flange to rear):	89.5 mm
Net weight:	1.8 kg

Ordering codes:	
4 ohm version:	N/A
8 ohm version:	82FHMX8-445A
16 ohm version:	N/A

Recone kits:

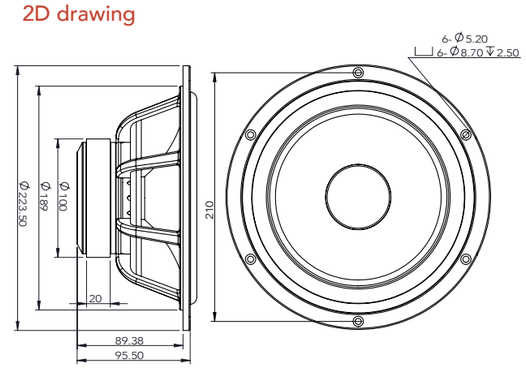
4 ohm version:	N/A
8 ohm version:	RC82FHMX8-445A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



8" | 81FHW

Ferrite Woofer

REDCAT

Key features:

- GOOD LOW FREQUENCY RESPONSE
- LIGHTWEIGHT SURROUND, STIFF PAPER CONE
- AFFORDABLE WOOFER

Design notes:

The 81FHW woofer was designed with smaller hi-fi subwoofers in mind. The woofer works well in vented enclosures or combined with a passive radiator. Optimized magnetic structure delivers good level of performance and balancing well performance vs cost.

We have chosen lightweight foam surround in this design. Our extensive development and testing of this material yielded in custom formulation of the raw material we use for the surround and guaranties its long lasting performance.

Specifications:

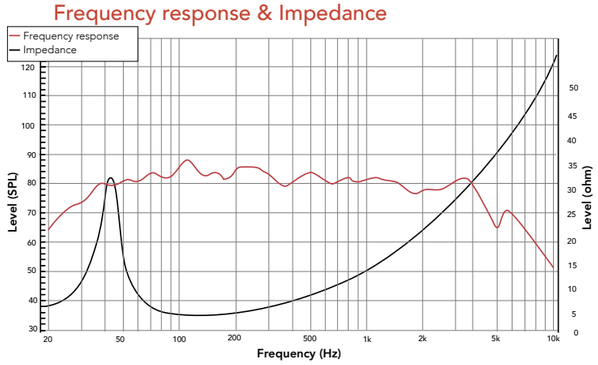
General specs	
Nominal Diameter:	8 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	50 Watts
Program Power:	100 Watts
Peak Power:	200 Watts
Voice Coil	
Diameter:	1.4 in.
Winding wire:	Copper
Former:	Aluminum
Winding height:	18 mm

T/S Parameters	
Resonant frequency:	44 Hz
Re:	3.93 ohm
Qes:	0.62
Qms:	5.4
Qts:	0.56
Vas:	17.5 liters
Sd:	201 cm^2
Sensitivity:	85.9 dB
Mms:	43 grams
Bl:	8.7
Le:	0.9 mH

Design details	
Surround Material:	Foam
Cone material:	Paper
Spider:	Single conex
Plate thickness:	6 mm
Peak to peak linear cone Displacement	18.6 mm
Overall diameter:	150 mm
Bolt circle diameter:	1250 mm
Baffle cutout dia.:	98 mm
Number of mounting holes:	8
Depth (flange to rear):	22 mm
Net weight:	10.0 kg

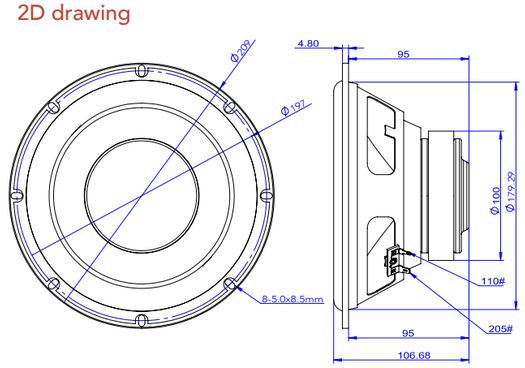
Ordering codes:	
4 ohm version:	81FHWX4-289
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC81FHWX4-289
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



8" | 8NPM

Neodymium Mid-Woofer

REDCAT

Key features:

- HI SENSITIVITY
- HI POWER HANDLING
- DESIGNED FOR APPLICATIONS WHERE ARE SIZABLE AMOUNTS OF MID-FREQUENCIES REQUIRED

Design notes:

The 8NPM is a high efficiency, (97dB 1watt / 1 meter) 8-inch mid-woofer with extended mid frequency response and high power handling capability. The 8NPM uses a lightweight half pressed paper cone along with a double roll fabric surround. Spider is made of Nomex material with optimized shape for well controlled pistonic motion. The used high quality components ensure long lasting performance even in high powered applications. The chosen material combination provides remarkable strength, high efficiency and sustained output under extreme conditions.

Power Handling

The voice coil featuring Kapton former material capable of withstanding peak temperatures in excess of 280C, well beyond the thermal requirements of modern audio systems. Former strength provides the ideal transfer of power between the voice coil and the cone assembly and assists in reducing distortion artifacts. By combining this material with state of the art adhesives and our winding voice coil technology, the 8NPM delivers incredibly high performance.

Specifications:

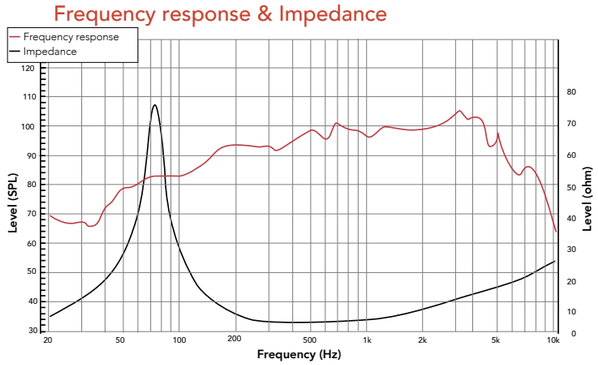
General specs	
Nominal Diameter:	8 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	200 Watts
Program Power:	400 Watts
Peak Power:	800 Watts
Voice Coil	
Diameter:	2 in.
Winding wire:	CCAW
Former:	Kapton
Winding height:	15.4 mm

T/S Parameters	
Resonant frequency:	78 Hz
Re:	5.2 ohm
Qes:	0.34
Qms:	3.65
Qts:	0.3
Vas:	13 liters
Sd:	224.5 cm^2
Sensitivity:	97 dB
Mms:	20
Bl:	13
Le:	0.54 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	6 mm
Peak to peak linear cone Displacement	12.4 mm
Overall diameter:	209.5 mm
Bolt circle diameter:	197.5 mm
Baffle cutout dia.:	184 mm
Number of mounting holes:	8
Depth (flange to rear):	87.30 mm
Net weight:	1.8 kg

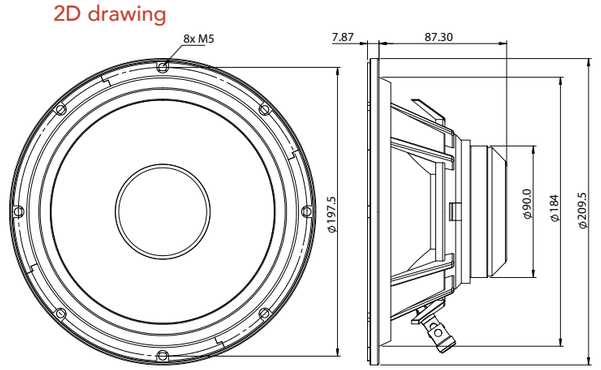
Ordering codes:	
4 ohm version:	8NPMX4-157
8 ohm version:	8NPMX8-157
16 ohm version:	8NPMX16-157
Recone kits:	
4 ohm version:	RC8NPMX4-157
8 ohm version:	RC8NPMX8-157
16 ohm version:	RC8NPMX16-157

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing




SAMPLE

8" | 81NPM

Neodymium Mid-Woofer

REDCAT

Key features:

- EXTENDED FREQUENCY RESPONSE
- 2 DEMODULATION RINGS POWERFUL MOTOR STRUCTURE
- DESIGNED FOR 2-WAY AND MULTI-WAY SPEAKER SYSTEMS

Design notes:

The 81NPM was designed for good reproduction of voice. With an extended low-frequency response, this mid-woofer is highly suitable for two-way and multi-way systems. It's high power handling capabilities extend the ideal usage as a mid-range driver in line-array systems. The 81NPM uses a lightweight half-pressed paper cone reinforced by our proprietary cone treatment, which also works as weatherization protection. The used high-quality components ensure long-lasting performance even in high powered applications. The chosen material combination provides remarkable strength, high efficiency and sustained output under extreme conditions.

Power Handling
The voice coil sports Kapton former material capable of withstanding peak temperatures above 300°C, well beyond the thermal requirements of modern audio systems. Former strength provides the ideal transfer of power between the voice coil and the cone assembly and assists in reducing distortion artifacts. By combining this material with state of the art adhesives and our winding voice coil technology, the 81NPM delivers incredibly high performance.

Specifications:

General specs	
Nominal Diameter:	8 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	400 Watts
Program Power:	800 Watts
Peak Power:	1600 Watts
Voice Coil	
Diameter:	3 in.
Winding wire:	CCAW
Former:	TIL
Winding height:	22.5 mm

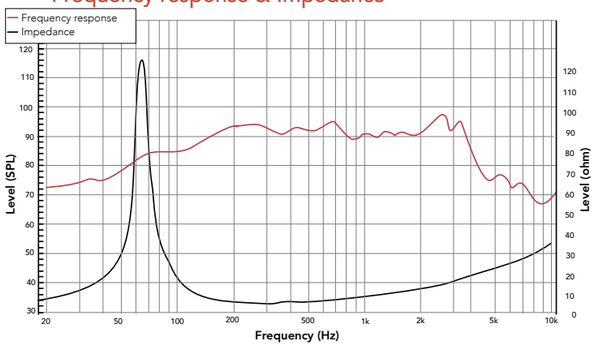
T/S Parameters	
Resonant frequency:	63 Hz
Re:	4.9 ohm
Qes:	0.29
Qms:	4.65
Qts:	0.27
Vas:	11.2 liters
Sd:	221.7 cm^2
Sensitivity:	94 dB
Mms:	40 grams
Bl:	17
Le:	0.53 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper w. CF
Spider:	Single nomex
Plate thickness:	10.5 mm
Peak to peak linear cone Displacement	17 mm
Overall diameter:	210 mm
Bolt circle diameter:	195 mm
Baffle cutout dia.:	187 mm
Number of mounting holes:	6
Depth (flange to rear):	100 mm
Net weight:	3.2 kg

Ordering codes:	
4 ohm version:	81NPMX4-263
8 ohm version:	81NPMX8-273
16 ohm version:	81NPMX16-263

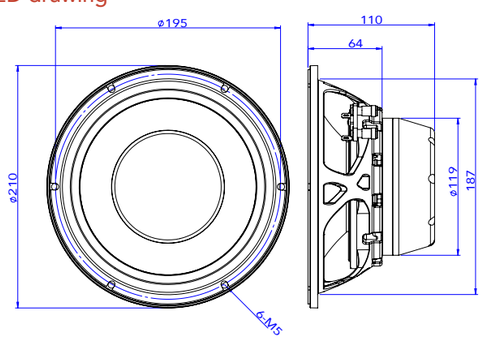
Recone kits:	
4 ohm version:	RC81NPMX4-263
8 ohm version:	RC81NPMX8-273
16 ohm version:	RC81NPMX16-263

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



8" | 81XR

Neodymium Woofer

REDCAT

Key features:

- NONPARALLEL VOICE AND LOW FREQUENCY REPRODUCTION QUALITY
- PATENTED MAGNETIC CIRCUIT AND AIR VENTING DESIGN
- EXTREMELY LOW HARMONIC DISTORTION

Design notes:

The 81XR was designed to be simply the best driver for 2-way and multi-way systems on the market, yet this driver will also shine in sub-woofer applications. The combination of our XR patented technology with static shorting coil brings an nonparallel opportunity to the audio designers. The common request for 2-way speakers is "more of everything". Designers wishes for more bass, more mids. Well, there you have it! But not only that. We bring this with clarity in the mid-frequencies and undistorted bass. Our designers were able to achieve THD below 0.5% from 20Hz up to 2.5kHz. There isn't another driver like this on the market.

Motor Design
The magnetic design incorporates large neodymium magnets placed along the voice coil winding, together with the 2nd and static coil placed on the pole piece. This has allowed us to push the cone excursion to 30mm peak to peak, while lowering the inductance. The shorting coil covers the complete main coil excursion. This is also an improvement compared to some previous designs on the market that utilizes static coil. Unique gap side venting ensures good air circulation, lowers air noise and greatly improves the reliability of this driver.

Specifications:

General specs	
Nominal Diameter:	8 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	250 Watts
Program Power:	400 Watts
Peak Power:	800 Watts
Voice Coil	
Diameter:	2.5 in.
Winding wire:	CCAW Square
Former:	TIL
Winding height:	18.3 mm

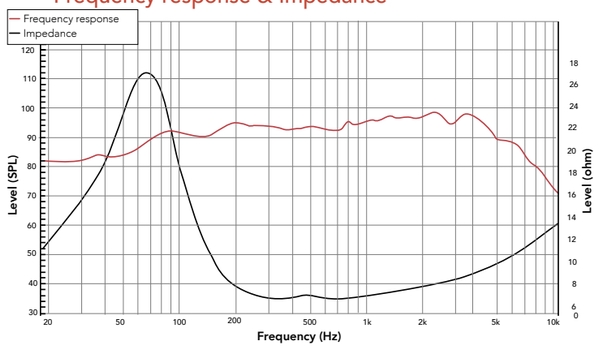
T/S Parameters	
Resonant frequency:	73 Hz
Re:	5.6 ohm
Qes:	0.35
Qms:	1.5
Qts:	0.3
Vas:	7.8 liters
Sd:	201 cm^2
Sensitivity:	93 dB
Mms:	35
Bl:	16
Le:	0.17 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper w. CF
Spider:	Single nomex
Plate thickness:	27.4 mm
Peak to peak linear cone Displacement	34 mm
Overall diameter:	210 mm
Bolt circle diameter:	195 mm
Baffle cutout dia.:	185 mm
Number of mounting holes:	8
Depth (flange to rear):	128 mm
Net weight:	5.5 kg

Ordering codes:	
4 ohm version:	81XRX4-424
8 ohm version:	81XRX8-424
16 ohm version:	N/A

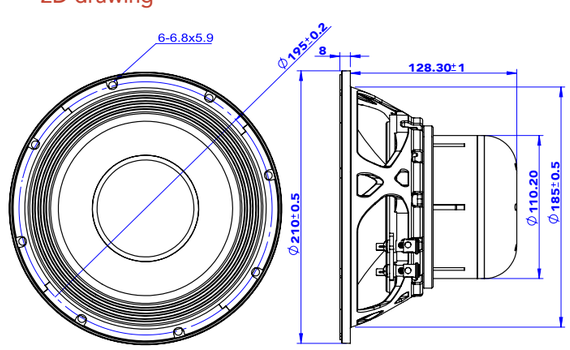
Recone kits:	
4 ohm version:	RC81XRX4-424
8 ohm version:	RC81XRX8-424
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



6.5″ | 61FIND

Ferrite Mid-Woofer

REDCAT

Key features:

- EXTENDED FREQUENCY RESPONSE
- LIGHTWEIGHT, YET STRONG PAPER CONE. WEATHER SEALED, FIRE-RETARDANT MATERIALS
- AFFORDABLE DESIGN

Design notes:

61FIND continues our series of affordable ferrite mid-woofers. The driver was designed with ferrite magnetic circuit, combined with lightweight, yet strong, paper cone and fabric surround. In the heart of the 61FIND is 2″ CCAW high temperature wire wound on TIL former. This combination provides remarkable strength, great temperature resistance and ensures high level of move force transfer onto the cone without sound artifacts.

All steel parts are extensively treated for weather protection. Cone neck was furthermore treated with fire-retardants. That together with non-flammable Nomex spider and TIL voice coil former allows the designers accommodate this driver in UL listed products.

Specifications:

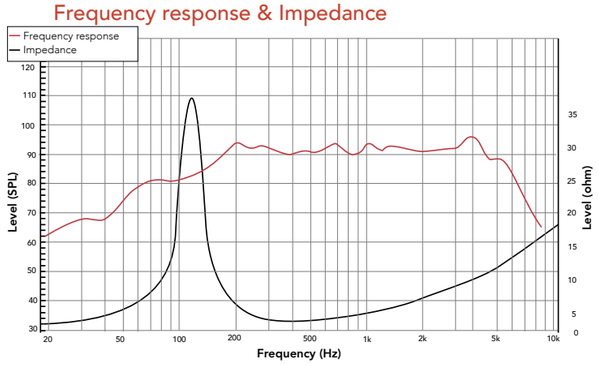
General specs	
Nominal Diameter:	6.5 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	150 Watts
Program Power:	300 Watts
Peak Power:	600 Watts
Voice Coil	
Diameter:	32 in.
Winding wire:	CCAW
Former:	TIL
Winding height:	12.0 mm

T/S Parameters	
Resonant frequency:	121 Hz
Re:	3.1 ohm
Qes:	0.47
Qms:	6.85
Qts:	0.44
Vas:	3 liters
Sd:	137 cm^2
Sensitivity:	94 dB
Mms:	15.4 grams
Bl:	8.8
Le:	0.23 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	8 mm
Peak to peak linear cone Displacement	13.5 mm
Overall diameter:	165.2 mm
Bolt circle diameter:	156.6 mm
Baffle cutout dia.:	144.5 mm
Number of mounting holes:	4
Depth (flange to rear):	78 mm
Net weight:	1.7 kg

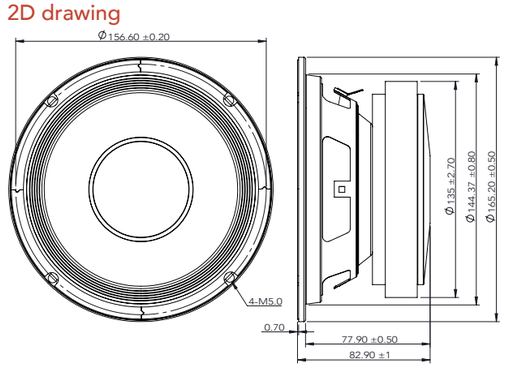
Ordering codes:	
4 ohm version:	61FINDX4-332A
8 ohm version:	61FINDX8-332A
16 ohm version:	61FINDX16-332B
Recone kits:	
4 ohm version:	RC61FINDX4-332A
8 ohm version:	RC61FINDX8-332A
16 ohm version:	RC61FINDX16-332B

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



6.5″ | 61FHM

Ferrite Mid-Woofer

REDCAT

Key features:

- EXTENDED FREQUENCY RESPONSE
-

Design notes:

61FHM mid-woofer was designed for outdoor applications, yet it will shine in hi-fi home and studio applications as well.

Optimized ferrite based magnetic circuit with good air-venting features ensures long lasting performance.

Our engineers have chosen polypropylene cone with rubber surround for this model. Both of these components are produced with UV stabilizers. Furthermore, REDCATT state of the art adhesives and dispensing techniques ensures waterproof seals in all weather exposed glue joints. Sealing to the exposure can be guaranteed by EVA gaskets or based upon a request by Form In Place Gaskets.

The audio system designers can rest assured we have extensively tested this product with UV exposure, salt exposure and waterproofing.

The extended mid-frequency response allows the systems to be used with higher resonance frequency HF units. For the best performance in the audio systems, we recommend usage in vented enclosures.

Specifications:

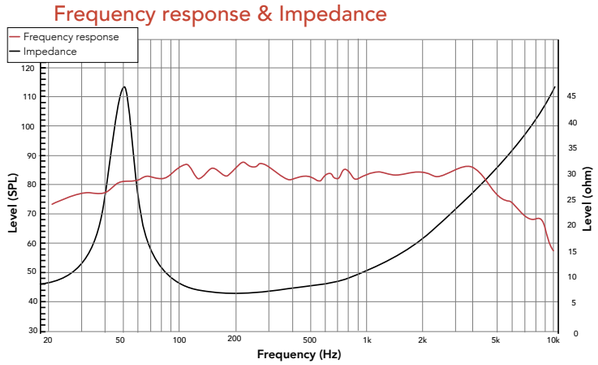
General specs	
Nominal Diameter:	6.5 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	80 Watts
Program Power:	160 Watts
Peak Power:	320 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	CCAW
Former:	Aluminum
Winding height:	12.4 mm

T/S Parameters	
Resonant frequency:	45 Hz
Re:	3.2 ohm
Qes:	0.42
Qms:	5.0
Qts:	0.4
Vas:	22 liters
Sd:	143 cm^2
Sensitivity:	89.6 dB
Mms:	17
Bl:	6.2
Le:	0.83 mH

Design details	
Surround Material:	Rubber
Cone material:	Polypropylene
Spider:	Single nomex
Plate thickness:	6 mm
Peak to peak linear cone Displacement	13.2 mm
Overall diameter:	165.5 mm
Bolt circle diameter:	157 mm
Baffle cutout dia.:	143 mm
Number of mounting holes:	4
Depth (flange to rear):	68 mm
Net weight:	-- Kg

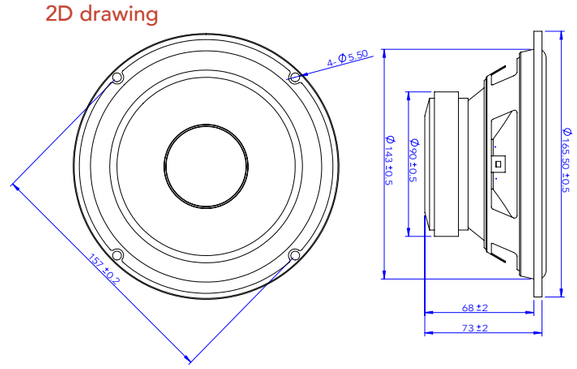
Ordering codes:	
4 ohm version:	61FHMX4-381
8 ohm version:	61FHMX8-381
16 ohm version:	N/A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



6.5" | 61FHM

Ferrite Mid-Woofer

REDCATT

Key features:

- EXTENDED FREQUENCY RESPONSE
- HARD ANODIZED ALUMINUM CONE, ALUMINUM BASKET
- DESIGNED FOR HI-FI AND OUTDOOR APPLICATIONS

Design notes:

61FHM mid-woofer was designed for outdoor applications, yet it will shine in hi-fi home and studio applications as well.

Optimized ferrite based magnetic circuit with good air-venting features ensures long lasting performance.

Our engineers have chosen hard-anodized cone with rubber surround for this model. Both of these components are produced with UV stabilizers. Furthermore, REDCATT state of the art adhesives and dispensing techniques ensures waterproof seals in all weather exposed glue joints. Sealing to the exposure can be guaranteed by EVA gaskets or based upon a request by Form In Place Gaskets.

The audio system designers can rest assured we have extensively tested this product with UV exposure, salt exposure and waterproofing.

The extended mid-frequency response allows the systems to be used with higher resonance frequency HF units. For the best performance in the audio systems, we recommend usage in sealed enclosures. In this model the aluminum cone further improves the mid-frequency response and lowers the harmonic distortion artifacts.

Specifications:

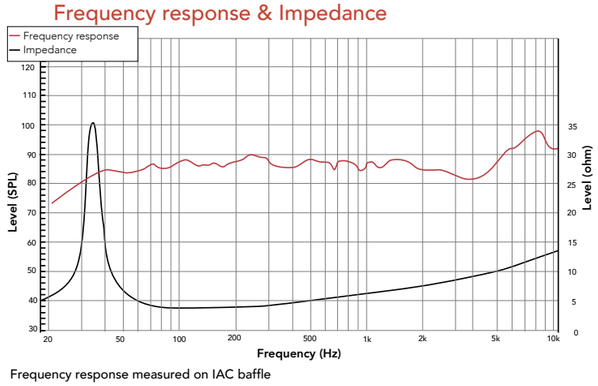
General specs	
Nominal Diameter:	4 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	80 Watts
Program Power:	160 Watts
Peak Power:	320 Watts
Voice Coil	
Diameter:	1.5 in.
Winding wire:	CCAW
Former:	GF
Winding height:	16 mm

T/S Parameters	
Resonant frequency:	39 Hz
Re:	3.3 ohm
Qes:	0.48
Qms:	14.8
Qts:	0.47
Vas:	24.7 liters
Sd:	132.7 cm^2
Sensitivity:	87.7 dB
Mms:	16.8 grams
Bl:	5.3
Le:	0.1 mH

Design details	
Surround Material:	Rubber
Cone material:	Polypropylene
Spider:	Nomex
Plate thickness:	5 mm
Peak to peak linear cone Displacement	16.8 mm
Overall diameter:	181.5 mm
Bolt circle diameter:	169.5 mm
Baffle cutout dia.:	151 mm
Number of mounting holes:	6
Depth (flange to rear):	86.6 mm
Net weight:	1.6 kg

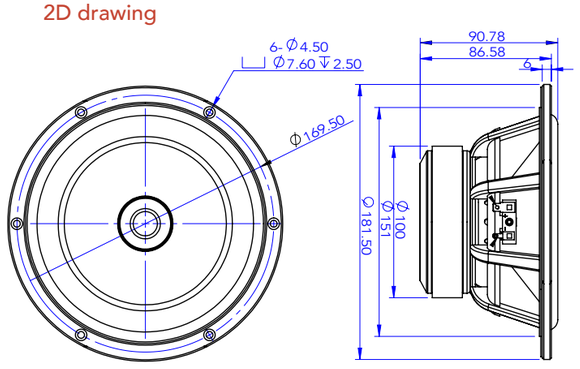
Ordering codes:	
4 ohm version:	101NPMX4-430B
8 ohm version:	101NPMX8-430B
16 ohm version:	101NPMX16-430B
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



6" | 6FHM

Ferrite Mid-Woofer

REDCATT

Key features:

- 3 LAYER CONE, CONSISTING HI-END 1K CARBON FIBER ON NOMEX HONEYCOMB CORE
- FEM OPTIMIZED MOTOR STRUCTURE
- LOW HARMONIC DISTORTION

Design notes:

The 6FHM is a high efficiency, (91 dB 1watt / 1 meter) 6-inch mid-woofer with incredibly linear frequency response characteristics and ultra low harmonic distortion artifacts. The 6FHM uses a lightweight 1k carbon fiber material, assembled on both sides of Nomex honey-comb core. This unique cone provides the ideal weight to strength ratio. The rubber surround has been FEM modeled and optimized. The honeycomb cone with high-end 1k carbon fiber material provides remarkable strength, while pushing the cone break-up modes to high frequencies, significantly extending the working range of the speaker.

The cone

The 6FHM cone is made using 1k carbon fiber honey-comb, placed from both sides of Nomex core, while the dustcap is made off hard-anodization reinforced aluminum. The dustcap shape and the hard anodizing are further improving the mid to high frequency behavior.

Specifications:

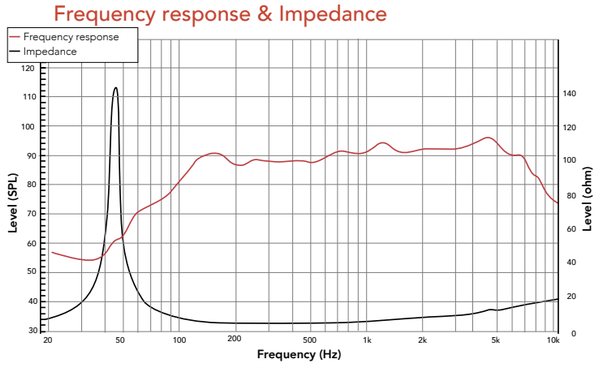
General specs	
Nominal Diameter:	6 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	40 Watts
Program Power:	80 Watts
Peak Power:	160 Watts
Voice Coil	
Diameter:	1.25 in.
Winding wire:	CCAW square
Former:	Kapton
Winding height:	15 mm

T/S Parameters	
Resonant frequency:	45 Hz
Re:	3.6 ohm
Qes:	0.31
Qms:	16.1
Qts:	0.3
Vas:	22 liters
Sd:	143 cm^2
Sensitivity:	90.8 dB
Mms:	16
Bl:	7.3
Le:	0.83 mH

Design details	
Surround Material:	Rubber
Cone material:	CF honeycomb
Spider:	Single nomex
Plate thickness:	6 mm
Peak to peak linear cone Displacement	14.4 mm
Overall diameter:	181.5 mm
Bolt circle diameter:	169.5 mm
Baffle cutout dia.:	151 mm
Number of mounting holes:	6
Depth (flange to rear):	84 mm
Net weight:	2.4 kg

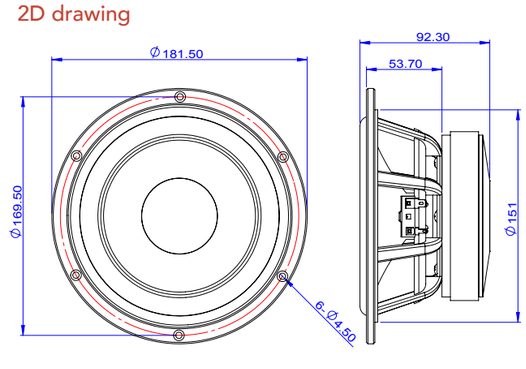
Ordering codes:	
4 ohm version:	6FHMX4-152
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC6FHMX4-152
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



6" | 6NPM

Neodymium Midrange

Key features:

- VERY HIGH EFFICIENCY MID-RANGE
- ULTRA LOW HARMONIC DISTORTION
- HIGH POWER HANDLING

Design notes:

The 6NPM is a very high efficiency, (101.8 dB 1watt / 1 meter in 1l enclosure) 6-inch midrange speaker with incredibly linear frequency response characteristics and ultra low harmonic distortion artifacts. The 6NPM has extremely high sound quality. The 6NPM uses a lightweight paper pulp, specifically developed for this application. This unique cone provides the ideal weight to strength ratio.

Voice Coil

At the core of the 6NPM is it's voice coil technology featuring edge wounded aluminum ribbon wire. Unique lightweight and very short former provides the ideal transfer of power between the voice coil and the cone assembly and assists in reducing the distortion artifacts. By combining this material with the state of the art adhesives, the 6NPM delivers incredible performance. The neodymium magnet is in a direct contact with the CNC exposed aluminum section of the basket, hold in place by our thermal transfer adhesives. This design dramatically improves the heat transfer. Further more, based upon a request, we have developed added on aluminum heat-sink. The heat-sink is a recommended optional accessory for applications in sealed mid-range, low volume enclosures.

Specifications:

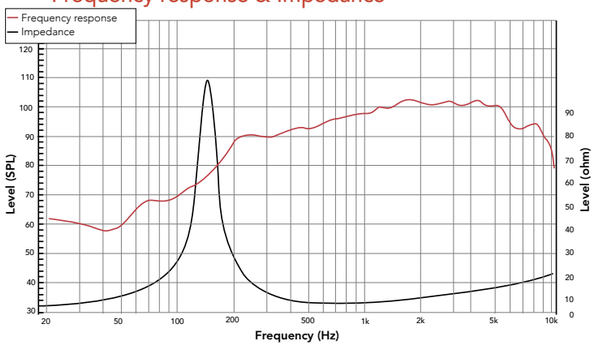
General specs	
Nominal Diameter:	6 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	120 Watts
Program Power:	240 Watts
Peak Power:	480 Watts
Voice Coil	
Diameter:	1.75 in.
Winding wire:	AL square
Former:	GF
Winding height:	6.8 mm

T/S Parameters	
Resonant frequency:	145 Hz
Re:	7 ohm
Qes:	0.37
Qms:	4.94
Qts:	0.35
Vas:	3.7 liters
Sd:	143 cm^2
Sensitivity:	97.4 dB
Mms:	9.3 grams
Bl:	12.7
Le:	0.07 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	6 mm
Peak to peak linear cone Displacement	8 mm
Overall diameter:	162 mm
Bolt circle diameter:	172 mm
Baffle cutout dia.:	145 mm
Number of mounting holes:	4
Depth (flange to rear):	52.5 mm
Net weight:	1.2 kg

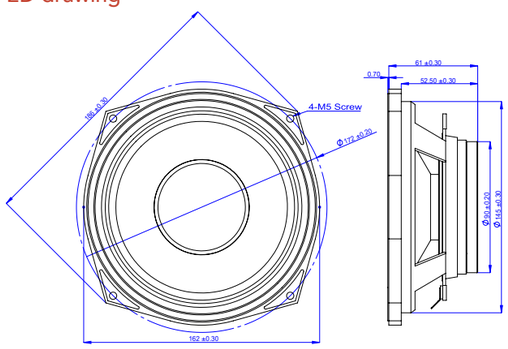
Ordering codes:	
4 ohm version:	6NPMX4-164
8 ohm version:	6NPMX8-164
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC6NPMX4-164
8 ohm version:	RC6NPMX8-164
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



6" | 6XR

Neodymium Mid-Woofer

Key features:

- EXTENDED FREQUENCY RESPONSE
- 3 DEMODULATION RING POWERFUL MOTOR STRUCTURE
- HIGH POWER HANDLING

Design notes:

The 6XR was designed to be simply the best driver for 2-way and multi-way systems on the market, yet this driver will also shine in small sub-woofer applications. Our XR patented technology brings an nonparallel opportunity to the audio designers. This mid-woofer brings clarity in the mid-frequencies and undistorted bass.

Motor Design

The magnetic design incorporates large neodymium magnets placed along the voice coil winding. Cone excursion can reach up to 30mm peak to peak. Unlike the 61XR, the 6XR is designed without secondary static voice coil. In this design, we have simplified the magnetic structure and further increased the amounts of low frequencies.

Our extensive R&D on the surround foam material has yielded material that has proven its benefits over and over again. The surround is extremely light, yet it allows the cone excursion as the traditional, but heavier, rubber surround.

6XR best application is in hi-quality home hi-fi applications and studio monitors where the requirements for precise sound reproduction without distortion artifacts are required.

Specifications:

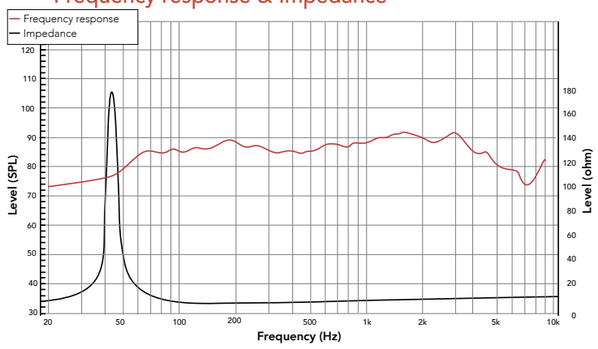
General specs	
Nominal Diameter:	6 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	100 Watts
Program Power:	200 Watts
Peak Power:	400 Watts
Voice Coil	
Diameter:	1.7 in.
Winding wire:	CCAW
Former:	TIL
Winding height:	10 mm

T/S Parameters	
Resonant frequency:	45 Hz
Re:	3.2 ohm
Qes:	0.35
Qms:	19.6
Qts:	0.34
Vas:	15 liters
Sd:	132.7 cm^2
Sensitivity:	89.2 dB
Mms:	19.8
Bl:	7.2
Le:	0.17 mH

Design details	
Surround Material:	Foam
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	26.5 mm
Peak to peak linear cone Displacement	20 mm
Overall diameter:	181.5 mm
Bolt circle diameter:	169.5 mm
Baffle cutout dia.:	151 mm
Number of mounting holes:	6
Depth (flange to rear):	94 mm
Net weight:	-- Kg

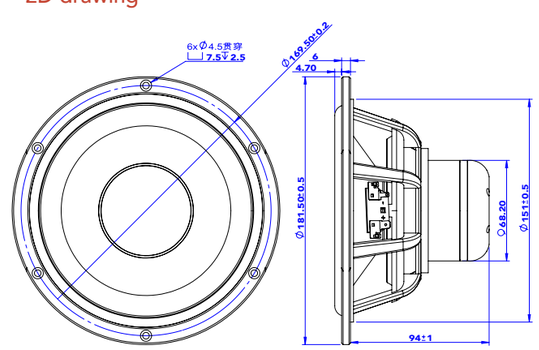
Ordering codes:	
4 ohm version:	6XRX4-404B
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC6XRX4-404B
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



6.5" | 61NPM

Neodymium Mid-Woofer

REDCAT

Key features:

- VERY GOOD PERFORMANCE IN MID FREQUENCIES
- COMPACT DESIGN THAT DELIVERS VERY HIGH PERFORMANCE
- HIGH POWER HANDLING

Design notes:

61NPM was developed for all applications where compact and lightweight t mid-woofer is required.

The driver delivers very good performance in mid-frequencies, with a good extension into the low frequencies.

Neodymium based magnetic circuit was optimized to deliver the highest level of performance.

Lightweight paper cone with glass fibers is attached to "M" roll fabric surround. It provides great combination that delivers very good performance across wide range of frequencies.

Our newly designed basket was structurally reinforced and supports the magnetic structure with ease. Furthermore, the driver sports front and rear gaskets, thus you can mount it into the baffle as front or rear mount.

Specifications:

General specs	
Nominal Diameter:	6.5 in.
Rated Impedance:	8 Ohm

Power handling	
AES Power:	80 Watts
Program Power:	160 Watts
Peak Power:	320 Watts

Voice Coil	
Diameter:	1.5 in.
Winding wire:	Copper
Former:	Kapton
Winding height:	10.6 mm

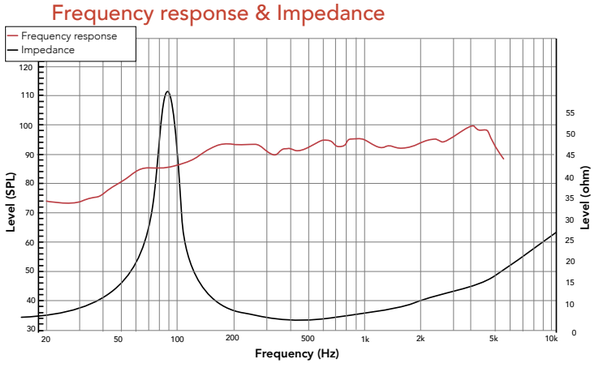
T/S Parameters	
Resonant frequency:	95.2 Hz
Re:	5.4 ohm
Qes:	0.4
Qms:	5.7
Qts:	0.38
Vas:	6.8 liters
Sd:	143.1 cm^2
Sensitivity:	95.4 dB
Mms:	11.9 grams
Bl:	0.7
Le:	0.4 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	6 mm
Peak to peak linear cone Displacement	9.6 mm
Overall diameter:	167 mm
Bolt circle diameter:	155 mm
Baffle cutout dia.:	145.9 mm
Number of mounting holes:	4
Depth (flange to rear):	61.5 mm
Net weight:	0.8 Kg

Ordering codes:	
4 ohm version:	61NPMX4-466A
8 ohm version:	61NPMX8-466A
16 ohm version:	N/A

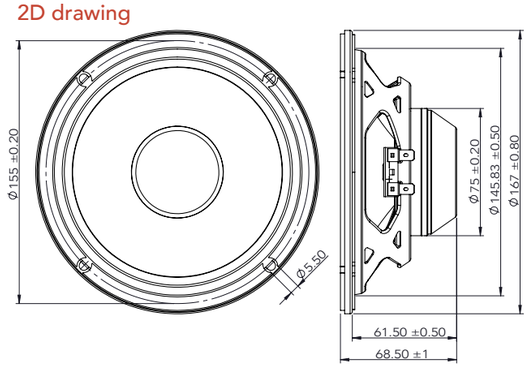
Recone kits:	
4 ohm version:	RC61NPMX4-466A
8 ohm version:	RC61NPMX8-466A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



Info@redcatt.net www.redcatt.net

6" | 61XR

Neodymium Mid-Woofer

REDCAT

Key features:

- EXTENDED FREQUENCY RESPONSE, INCREDIBLE SOUND REPRODUCTION CLARITY
- SECONDARY AND STATIC SHORTING COIL
- HIGH POWER HANDLING

Design notes:

The 61XR was designed to be simply the best driver for 2-way and multi-way systems on the market, yet this driver will also shine in sub-woofer applications. The combination of our XR patented technology with static shorting coil brings an nonparallel opportunity to the audio designers. The common request for 2-way speakers is "more of everything". Designers wishes for more bass, more mids. Well, there you have it! But not only that. We bring this with clarity in the mid-frequencies and undistorted bass.

Motor Design
The magnetic design incorporates large neodymium magnets placed along the voice coil winding, together with the 2nd and static coil placed on the pole piece. This has allowed us to push the cone excursion to 30mm peak to peak, while lowering the inductance. The shorting coil covers the complete main coil excursion. This is also an improvement compared to some previous designs on the market.

Our extensive R&D on the surround foam material has yielded material that has proven its benefits over and over again. The surround is extremely light, yet it allows the cone excursion as the traditional, but heavier, rubber surround.

61XR best application is in hi-quality home hi-fi applications and studio monitors where the requirements for precise sound reproduction without distortion artifacts are required.

Specifications:

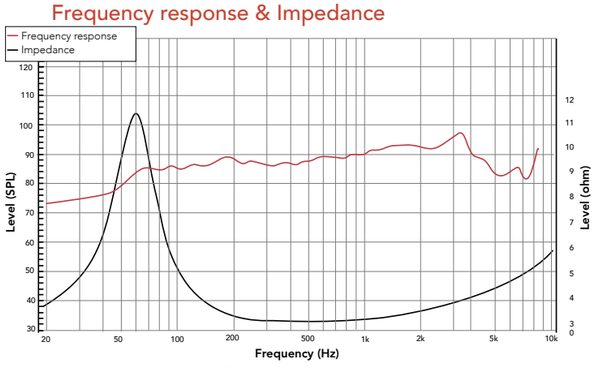
General specs	
Nominal Diameter:	6 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	100 Watts
Program Power:	200 Watts
Peak Power:	400 Watts
Voice Coil	
Diameter:	1.7 in.
Winding wire:	CCAW square
Former:	TIL
Winding height:	12 mm

T/S Parameters	
Resonant frequency:	52.5 Hz
Re:	3.0 ohm
Qes:	0.65
Qms:	1.87
Qts:	0.48
Vas:	13.1 liters
Sd:	132.7 cm^2
Sensitivity:	88 dB
Mms:	17.5 grams
Bl:	5.2
Le:	0.08 mH

Design details	
Surround Material:	Foam
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	26.5 mm
Peak to peak linear cone Displacement	26 mm
Overall diameter:	181.5 mm
Bolt circle diameter:	169.5 mm
Baffle cutout dia.:	151 mm
Number of mounting holes:	6
Depth (flange to rear):	94 mm
Net weight:	-- Kg

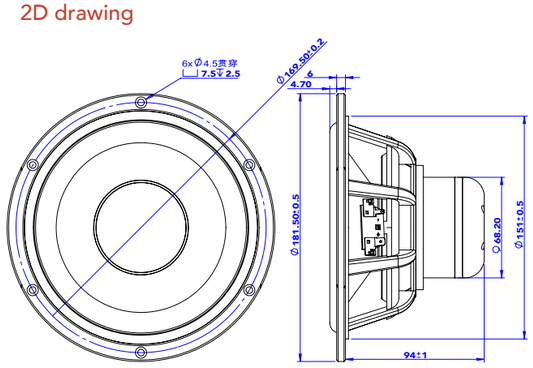
Ordering codes:	
4 ohm version:	61XRX4-404D
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC61XRX4-404D
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



5" | 5FR

Ferrite Mid-Woofer

REDCAT

Key features:

- WIDE RANGE FREQUENCY RESPONSE
- RUBBER SURROUND, CUSTOM PAPER PULP CONE
- DESIGNED FOR HI-FI, STUDIO DESK-TOP, COLUMNS OR OTHER MULTI-WAY SYSTEMS

Design notes:

5FR delivers a good balance of low-mid frequencies. Extended frequency response opens opportunity do design compact audio systems with sizable amounts of low frequencies, yet wit great clarity in mid to high frequency region. The optimized behavior of this driver in the mid-frequency region allows the audio engineers design simplified passive crossovers or DSP without the needs for large equalizations.

The magnetic structure was designed around large high-grade ferrite magnet. All steel parts are extensively coated to cope with the most demanding environments.

The cone paper pulp and surround were fully developed by REDCATT engineers and address all major break-up modes. The speaker has improved off-axes frequency response.

The newly designed steel basket with front and rear gaskets allow this mid-woofer to be mounted from the front and rear.

Specifications:

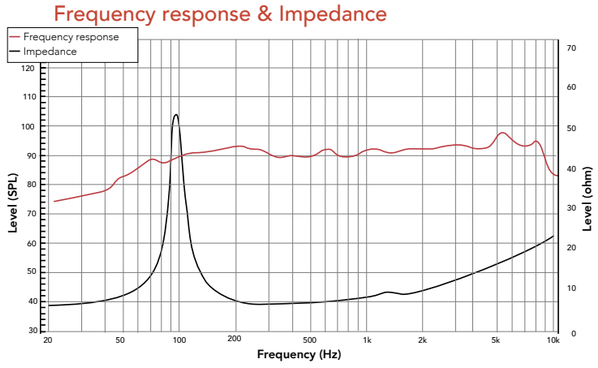
General specs	
Nominal Diameter:	5 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	70 Watts
Program Power:	140 Watts
Peak Power:	280 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	Copper
Former:	Kapton
Winding height:	9 mm

T/S Parameters	
Resonant frequency:	102.5 Hz
Re:	5.7 ohm
Qes:	0.74
Qms:	9.2
Qts:	0.0.7
Vas:	3.35 liters
Sd:	89.9 cm^2
Sensitivity:	90.4 dB
Mms:	8.2
Bl:	6.4
Le:	0.5 mH

Design details	
Surround Material:	Rubber
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	5 mm
Peak to peak linear cone Displacement	9.4 mm
Overall diameter:	130.5 mm
Bolt circle diameter:	139 mm
Baffle cutout dia.:	113.5 mm
Number of mounting holes:	4
Depth (flange to rear):	61 mm
Net weight:	-- Kg

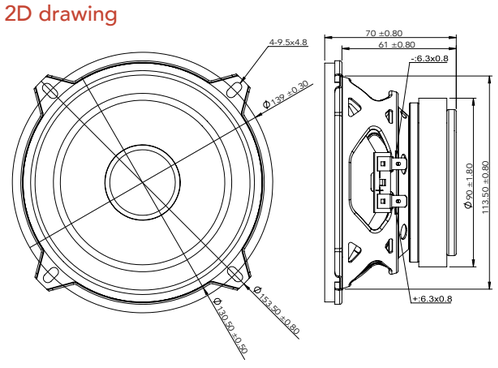
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	5FRX8-465A
16 ohm version:	5FRX16-465A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	RC5FRX8-465A
16 ohm version:	RC5FRX16-465A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



5" | 5FHW

Ferrite Woofer

Key features:

- SMALL SUB-WOOFERS, HI-FI APPLICATIONS
- DESIGNED FOR INDOOR OR OUTDOOR APPLICATIONS

Design notes:

The 5FHW was designed for woofer applications in either home hi-fi or outdoor speaker systems.

Our engineers have designed polypropylene cone and dustcap for this driver, combined with ferrite magnetic circuit.

Overall, this model provides great level of balance between the performance and cost.

The cone, dust cap and surround material are produced with UV stabilizers. Furthermore, the state of the art REDCATT adhesives dispensing and selection ensures the driver is waterproof and thus can be used in outdoor applications.

Specifications:

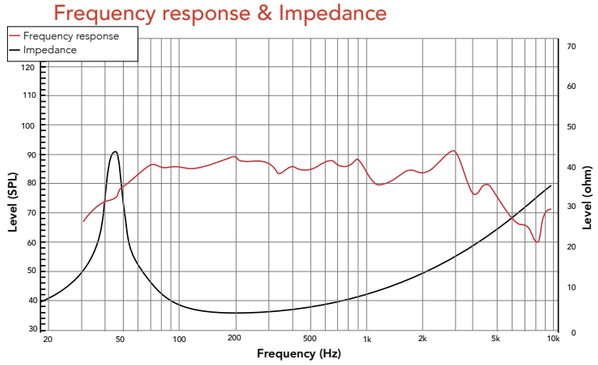
General specs	
Nominal Diameter:	5 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	60 Watts
Program Power:	120 Watts
Peak Power:	240 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	Copper
Former:	Aluminum
Winding height:	12.4 mm

T/S Parameters	
Resonant frequency:	50 Hz
Re:	3.3 ohm
Qes:	0.3
Qms:	4.6
Qts:	0.3
Vas:	8.4 liters
Sd:	86.6 cm^2
Sensitivity:	87.6 dB
Mms:	13.1 grams
Bl:	6.2
Le:	0.52 mH

Design details	
Surround Material:	Rubber
Cone material:	Polypropylene
Spider:	Single conex
Plate thickness:	6 mm
Peak to peak linear cone Displacement	14 mm
Overall diameter:	131 mm
Bolt circle diameter:	123 mm
Baffle cutout dia.:	112 mm
Number of mounting holes:	4
Depth (flange to rear):	60 mm
Net weight:	0.85 kg

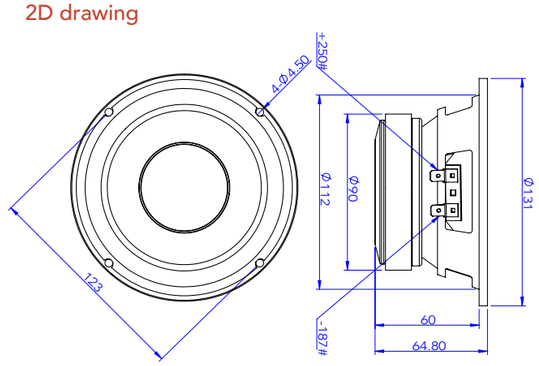
Ordering codes:	
4 ohm version:	5FHWX4-380
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC5FHWX4-380
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



4" | 4FR

Ferrite Mid-Woofer

Key features:

- OPTIMIZED FULL-RANGE PERFORMANCE
- GOOD LOW FREQUENCY BEHAVIOR
- AFFORDABLE DESIGN

Design notes:

4FR ferrite based mid-woofer was developed for applications where small size mid-woofer is required. Low resonant frequency and large cone excursion delivers seizable amounts of low frequencies. Yet, this driver delivers very good performance in mid-high frequency range.

Our engineers have chosen lightweight, yet strong, paper cone with rubber surround. Cone optimized shape brings remarkable strength of the piston and greatly improves harmonic distortion artifacts.

Overall this model delivers very good performance and is well balanced between performance - cost.

Specifications:

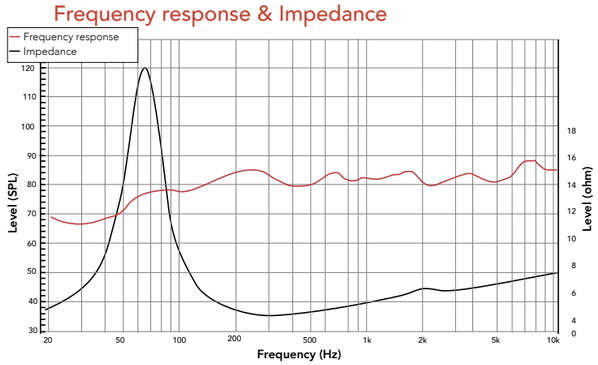
General specs	
Nominal Diameter:	4 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	25 Watts
Program Power:	50 Watts
Peak Power:	100 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	Copper
Former:	TIL
Winding height:	10.6 mm

T/S Parameters	
Resonant frequency:	69.6 Hz
Re:	3.68 ohm
Qes:	0.5
Qms:	3.1
Qts:	0.43
Vas:	2.8 liters
Sd:	50.3 dB
Sensitivity:	85.2
Mms:	6.6
Bl:	4.6
Le:	0.06 mH

Design details	
Surround Material:	Rubber
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	5 mm
Peak to peak linear cone Displacement	11.4 mm
Overall diameter:	Sq.105 mm
Bolt circle diameter:	106 mm
Baffle cutout dia.:	93.6 mm
Number of mounting holes:	4
Depth (flange to rear):	57 mm
Net weight:	0.85 kg

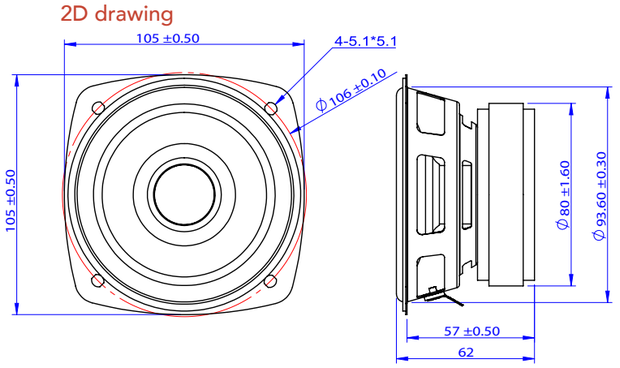
Ordering codes:	
4 ohm version:	4FRX4-322
8 ohm version:	4FRX8-322
16 ohm version:	4FRX16-359
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



4" | 4FR

Ferrite Mid-Woofer

REDCAT

Key features:

- EXTENDED LF FREQUENCY RESPONSE
- 2-WAY SPEAKER SYSTEMS
- USAGE IN OUTDOOR OR IN-DOOR APPLICATIONS

Design notes:

4FR Mid-woofer was designed with outdoor applications in mind. All speaker parts are coated to provide good protection against weather elements. The surround, cone and dust cap are produced with UV stabilizers. Our state of the art glue application and glue selection ensures the glue joints are waterproof.

Magnet circuit is designed around sizable ferrite magnet. Consistent and wide Bl field add to the well balanced performance of this driver.

Polypropylene cone and dustcap are lightweight solution and deliver the highest levels of performance. Large surround roll extends the peak to peak cone displacement and greatly improves the LF performance.

The best application is in 2-way or multi-way speaker systems that can be designed for indoor or outdoor usage in Hi-Fi or professional products.

Specifications:

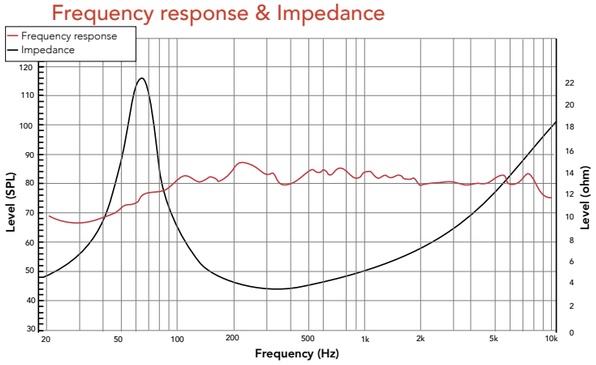
General specs	
Nominal Diameter:	4 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	60 Watts
Program Power:	120 Watts
Peak Power:	240 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	CCAW
Former:	Aluminum
Winding height:	4.1 mm

T/S Parameters	
Resonant frequency:	70.5 Hz
Re:	3.2 ohm
Qes:	0.42
Qms:	3.0
Qts:	0.37
Vas:	2.6 liters
Sd:	50.3 cm^2
Sensitivity:	86.3 dB
Mms:	7.1 grams
Bl:	4.9
Le:	0.26 mH

Design details	
Surround Material:	Rubber
Cone material:	Polypropylene
Spider:	Nomex
Plate thickness:	5 mm
Peak to peak linear cone Displacement	7.4 mm
Overall diameter:	116 mm
Bolt circle diameter:	109 mm
Baffle cutout dia.:	94.65 mm
Number of mounting holes:	4
Depth (flange to rear):	54.6 mm
Net weight:	0.8 kg

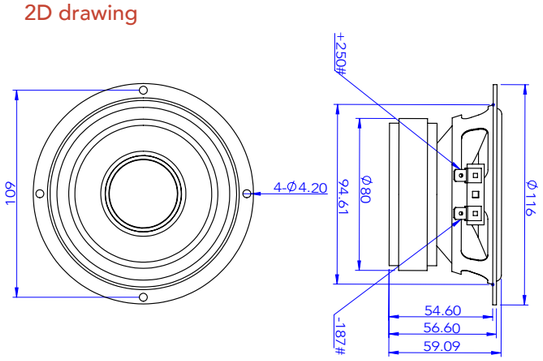
Ordering codes:	
4 ohm version:	4FRX4-385
8 ohm version:	N/A
16 ohm version:	4FRX16-385
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



4" | 41FR

Ferrite Mid-Woofer

REDCAT

Key features:

- VERY GOOD PERFORMANCE AT AFFORDABLE PRICE
- EXCELLENT HF EXTENSION
- CAN BE USED IN ARRAY APPLICATIONS, OR 2-WAY SYSTEMS, POSSIBLE TO USE WITHOUT HF DRIVER

Design notes:

41FR is ferrite based mid-woofer, developed for applications where small size mid-woofer is required. This version was developed with extended HF response and in some cases could be used as full-range driver. Yet, this driver delivers very good performance low frequency range as well.

Our engineers have chosen light-weight, yet strong, paper cone with rubber surround. Cone optimized shape brings remarkable strength of the piston and greatly improves harmonic distortion artifacts.

Overall this model delivers very good performance and is well balanced between performance - cost.

Specifications:

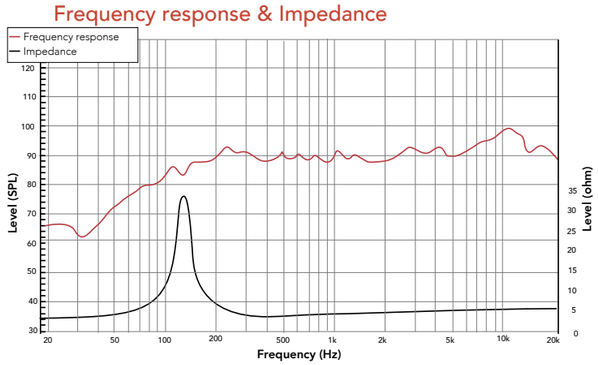
General specs	
Nominal Diameter:	3 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	40 Watts
Program Power:	80 Watts
Peak Power:	160 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	CCAW
Former:	TIL
Winding height:	7.6 mm

T/S Parameters	
Resonant frequency:	141.4 Hz
Re:	3.0 ohm
Qes:	0.74
Qms:	13.5
Qts:	0.7
Vas:	1.2 liters
Sd:	50.3 cm
Sensitivity:	90 dB
Mms:	3.7
Bl:	3.7
Le:	0.05 mH

Design details	
Surround Material:	Rubber
Cone material:	Paper
Spider:	Nomex
Plate thickness:	5 mm
Peak to peak linear cone Displacement	6.6 mm
Overall diameter:	105.5 mm
Bolt circle diameter:	106 mm
Baffle cutout dia.:	93.6 mm
Number of mounting holes:	4
Depth (flange to rear):	55.9 mm
Net weight:	0.75 kg

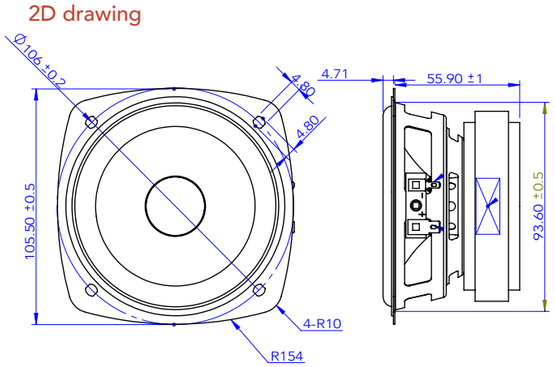
Ordering codes:	
4 ohm version:	41FRX4-360
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



4" | 40NFR

Neodymium Full-range

REDCATT

Key features:

- FULL-RANGE FREQUENCY RESPONSE
- UNIQUE CONE MATERIAL
- FOR COLUMN SYSTEMS, DESKTOP HIGH PERFORMANCE 2 WAY OR ONE-WAY SPEAKERS, HI-FI APPLICATIONS

Design notes:

The 40NFR is a very high efficiency, (91dB 1watt / 1 meter) 4-inch full range speaker with linear frequency response characteristics and high power handling capability while generating low harmonic distortion artifacts. The 40NFR uses a unique exponential cone, made off very lightweight glass-carbon fiber woven fabric, along with a NBR single roll geometry surround. The combination provides remarkable strength, high efficiency and sustained output under extreme conditions.

Magnetic circuit design

REDCATT engineers have developed neodymium based magnetic circuit, capable of delivering the highest level of performance, providing a consistent, high integrity magnetic flux gap, low distortion characteristic. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

The compact size of the magnetic circuit ensures the speaker can fit in tight space of modern audio product designs.

Specifications:

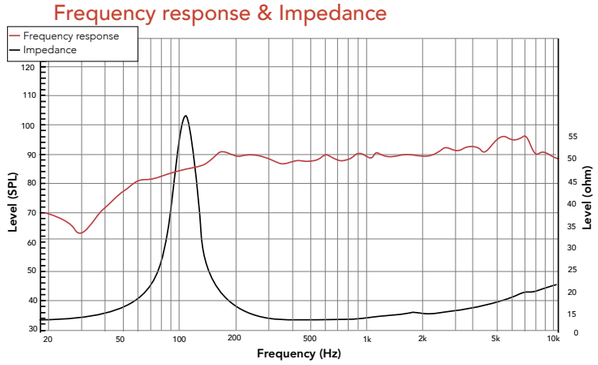
General specs	
Nominal Diameter:	4 in.
Rated Impedance:	16 Ohm
Power handling	
AES Power:	25 Watts
Program Power:	50 Watts
Peak Power:	100 Watts
Voice Coil	
Diameter:	0.75 in.
Winding wire:	CCAW
Former:	Kapton
Winding height:	5 mm

T/S Parameters	
Resonant frequency:	108 Hz
Re:	12.8 ohm
Qes:	1.16
Qms:	4.8
Qts:	0.93
Vas:	2.5 liters
Sd:	58.1 cm^2
Sensitivity:	87.3 dB
Mms:	4.2 grams
Bl:	5.6
Le:	0.83 mH

Design details	
Surround Material:	Rubber
Cone material:	GF+CF
Spider:	Single nomex
Plate thickness:	4 mm
Peak to peak linear cone Displacement	6.2 mm
Overall diameter:	103.5 mm
Bolt circle diameter:	115 mm
Baffle cutout dia.:	93 mm
Number of mounting holes:	4
Depth (flange to rear):	50 mm
Net weight:	0.27 kg

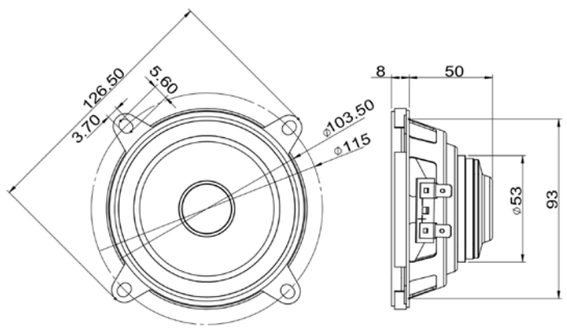
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	40NFRX8-239
16 ohm version:	40NFRX16-239
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



4" | 41NFR

Neodymium Full-Range

REDCATT

Key features:

- FULL-RANGE FREQUENCY RESPONSE
- EXTENDED LF RESPONSE
- FRONT OR REAR MOUNTING

Design notes:

41NFR was introduced as part of our new range of smaller transducers. The model is focusing on improvements in frequency response, both in LF and Mid-Freq. Powerful neodymium ring based magnetic structure delivers the highest levels of moving force onto the voice coil with minimum distortion artifacts.

The cone and rubber surround were further FEM modeled and deliver incredible performance.

41NFR was designed for column speakers, micro line-array systems and two-way audio systems. Due to its good performance in high frequencies, this driver can be used without HF unit, which opens new opportunities for the system engineers to design compact, yet good sounding products.

Our newly developed basket with typical REDCATT shapes, utilizes tall front EVA gasket and 1mm rear gasket. The driver can be thus mounted from both sides of the baffle.

Specifications:

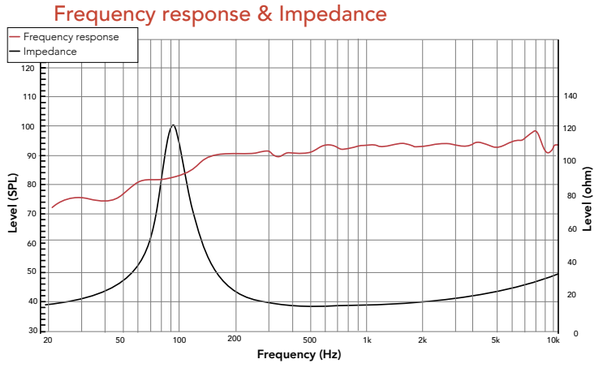
General specs	
Nominal Diameter:	4 in.
Rated Impedance:	16 Ohm
Power handling	
AES Power:	60 Watts
Program Power:	120 Watts
Peak Power:	240 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	Copper
Former:	Kapton
Winding height:	11 mm

T/S Parameters	
Resonant frequency:	98 Hz
Re:	12 ohm
Qes:	0.4
Qms:	4.9
Qts:	0.37
Vas:	2.2 liters
Sd:	56.8 cm^2
Sensitivity:	90.4 dB
Mms:	5.6
Bl:	10.1
Le:	0.6 mH

Design details	
Surround Material:	Rubber
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	5 mm
Peak to peak linear cone Displacement	9.4 mm
Overall diameter:	104.5 mm
Bolt circle diameter:	115 mm
Baffle cutout dia.:	92.2 mm
Number of mounting holes:	4
Depth (flange to rear):	51.2 mm
Net weight:	0.75 kg

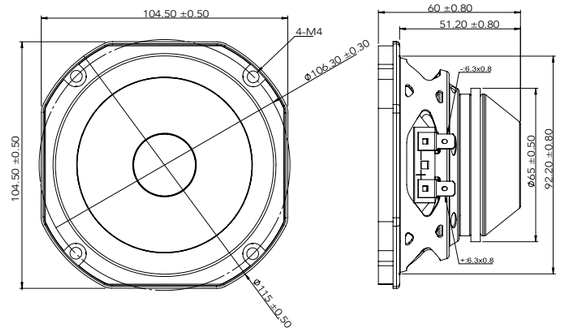
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	41NFRX8-464A
16 ohm version:	41NFRX16-464A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



3.5" | 35FR

Ferrite Full-Range

REDCAT

Key features:

- EXTENDED FREQUENCY RESPONSE
- BL SYMMETRY
- FEM OPTIMIZED PAPER CONE AND SURROUND

Design notes:

35FR was developed as full-range ferrite magnet driver. It has an excellent HF extension and provides good level of LF performance.

The driver was designed for usage in sealed speaker systems. It could be in column speakers, 2-way or 1-way speakers. It is also possible design a speaker system with a passive radiator to further extend the low frequency range.

Voice coil is wound with CCAW hi temperature wire directly on the Kapton former, ensuring good power handling and high temperature stability.

This driver brings good balance between performance and cost.

Depending on intended usage, we can deliver the driver either as 4, 8 or 16 ohm version.

Specifications:

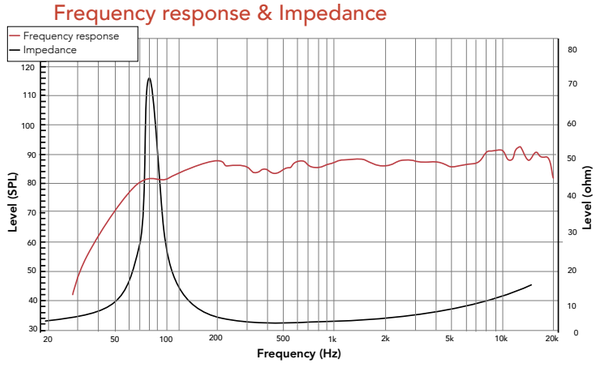
General specs	
Nominal Diameter:	3.5 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	30 Watts
Program Power:	60 Watts
Peak Power:	120 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	CCAW
Former:	Kapton
Winding height:	8.7 mm

T/S Parameters	
Resonant frequency:	141 Hz
Re:	6.4 ohm
Qes:	0.73
Qms:	7.5
Qts:	0.7
Vas:	1 liter
Sd:	40.7 cm^2
Sensitivity:	88.9 dB
Mms:	3 grams
Bl:	4.8
Le:	0.25 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	4 mm
Peak to peak linear cone Displacement	8.8 mm
Overall diameter:	92.5 mm
Bolt circle diameter:	101.1 mm
Baffle cutout dia.:	80.6 mm
Number of mounting holes:	4
Depth (flange to rear):	54.6 mm
Net weight:	0.62 kg

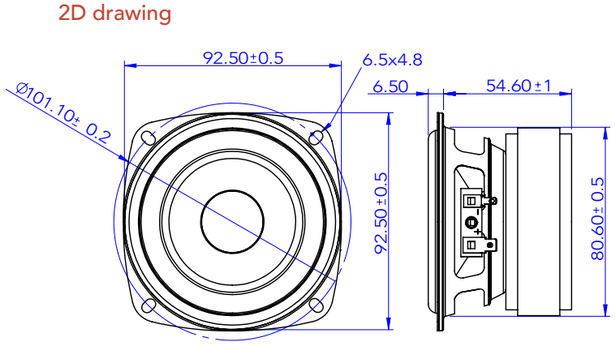
Ordering codes:	
4 ohm version:	35FRX4-406B
8 ohm version:	35FRX8-406B
16 ohm version:	35FRX16-406B
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



3.5" | 35FR

Ferrite Full-Range

REDCAT

Key features:

- MIGHTY DRIVER DELIVERING THE HIGHEST PERFORMANCE
- VERY GOOD LF EXTENSION, LARGE PEAK TO PEAK CONE DISPLACEMENT

Design notes:

35FR was developed as full-range ferrite magnet driver. It has an excellent HF extension and provides extended level of LF performance.

The driver was designed for usage in sealed speaker systems. It could be in column speakers, 2-way or 1-way speakers. It is also possible design a speaker system with a passive radiator to further extend the low frequency range.

Voice coil is wound with copper hi temperature wire directly on the aluminum former, ensuring good power handling and high temperature stability.

This driver brings good balance between performance and cost.

Depending on intended usage, we can deliver the driver either as 4 or 8 ohm version.

Specifications:

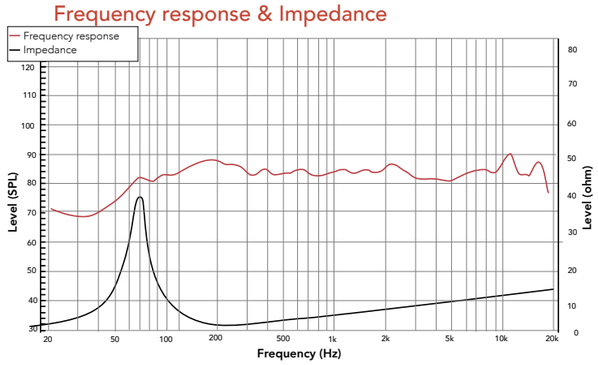
General specs	
Nominal Diameter:	3.5 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	40 Watts
Program Power:	80 Watts
Peak Power:	160 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	Copper
Former:	Aluminum
Winding height:	6.9 mm

T/S Parameters	
Resonant frequency:	75.3 Hz
Re:	3.7 ohm
Qes:	0.44
Qms:	5.2
Qts:	0.41
Vas:	1.2 liters
Sd:	38.5 cm^2
Sensitivity:	84.8 dB
Mms:	7.8
Bl:	5.55
Le:	0.2 mH

Design details	
Surround Material:	Rubber
Cone material:	Paper
Spider:	Single nomex
Plate thickness:	8 mm
Peak to peak linear cone displacement	12 mm
Overall diameter:	92.5 mm
Bolt circle diameter:	101 mm
Baffle cutout dia.:	85 mm
Number of mounting holes:	4
Depth (flange to rear):	48 mm
Net weight:	0.75 kg

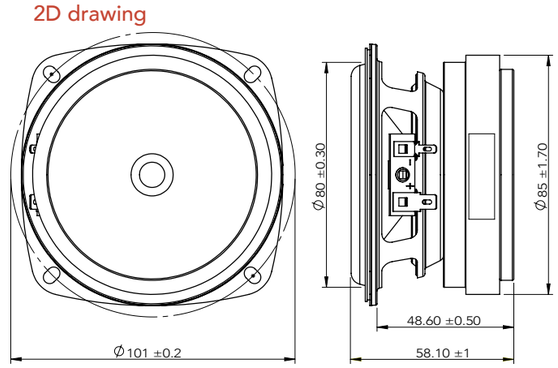
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	35FRX4-155
16 ohm version:	35FRX8-155
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



35FR | ALL THE BASS YOU WANT SHAKE THE ROOM

3" | 32NFR — Neodymium Full-Range

REDCAT

Key features:

- FULL-RANGE COVERAGE
- VERY COMPACT DESIGN
- SUITABLE FOR ARRAY, COLUMNS, OR USAGE WITHOUT HF DRIVERS

Design notes:

32NFR delivers incredible . It comes together with other speaker models as the next generation of our full-range drivers. Well balanced frequency response from LF to HF, low harmonic distortion, and on top of that all packed in a lightweight and compact mechanical structure.

The driver was designed around neodymium ring magnet. Magnetic circuit delivers the highest level of performance, with minimum modulation distortion.

The cone and surround were newly designed and optimized specifically for this model. Progressive roll surround further improves the frequency response.

Our newly designed basket with typical REDCATT visual aspects sports front and rear gaskets, thus the driver can be easily mounted on both sides of baffle. Large basket openings minimize turbulences and air noise. Space bellow spider is also vented. This further improves the temperature stability of this model. The mounting surface has a flange all around, feature that greatly improves mechanical rigidity.

Specifications:

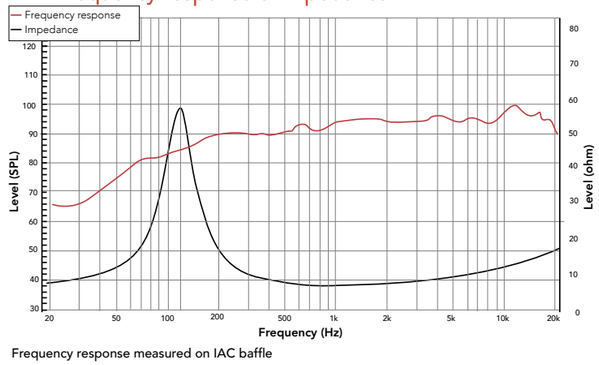
General specs	
Nominal Diameter:	3 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	40 Watts
Program Power:	80 Watts
Peak Power:	160 Watts
Voice Coil	
Diameter:	0.8 in.
Winding wire:	CCAW
Former:	Kapton
Winding height:	6.4 mm

T/S Parameters	
Resonant frequency:	121.4 Hz
Re:	5.7 ohm
Qes:	0.34
Qms:	4.2
Qts:	0.31
Vas:	1.1 liters
Sd:	33.2 cm^2
Sensitivity:	91.3 dB
Mms:	2.4
Bl:	5.53
Le:	0.05 mH

Design details	
Surround Material:	Rubber
Cone material:	Paper
Spider:	Nomex
Plate thickness:	4 mm
Peak to peak linear cone	7 mm
Overall diameter:	82.5 mm
Bolt circle diameter:	84.5 mm
Baffle cutout dia.:	45 mm
Number of mounting holes:	4
Depth (flange to rear):	45 mm
Net weight:	0.35 kg

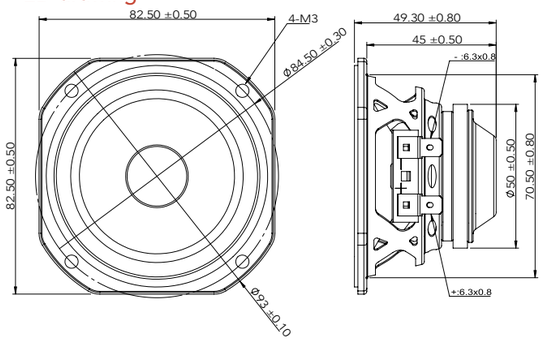
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	32NFRX8-463A
16 ohm version:	32NFRX16-463A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



3" | 30FF

Ferrite Full-Range

REDCATT

Key features:

- FULL-RANGE FREQUENCY RESPONSE
- AFFORDABLE SMALL DRIVER THAT FITS ALL BUDGETS
- VERY POPULAR IN ARRAY AND COLUMN APPLICATIONS

Design notes:

The 30FF is a high efficiency, (86dB 1watt / 1 meter) 3-inch full range speaker with linear frequency response characteristics and high power handling capability while generating low harmonic distortion artifacts. The 30FF uses a lightweight exponential pressed cone assembly along with a NBR single roll geometry surround. The combination provides remarkable strength, high efficiency and sustained output under extreme conditions.

Power Handling
At the core of the 30FF is it's voice coil technology featuring a Kapton former material capable of withstanding peak temperatures in excess of 240C, well beyond the thermal requirements of modern professional audio systems and providing optimal structural strength and thermal characteristics. Former strength provides the ideal transfer of power between the voice coil and the cone assembly and assists in reducing distortion artifacts. By combining this material with state of the art adhesives and our winding voice coil technology, the 30FF delivers very high performance.

The best application is in column speakers, two-way and multi-way audio systems. Due to its good HF extension, the HF units are not required.

Specifications:

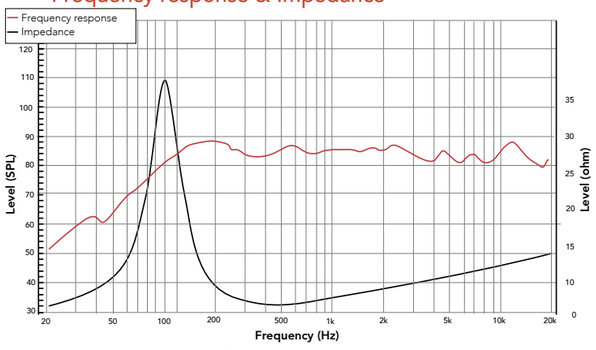
General specs	
Nominal Diameter:	3 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	20 Watts
Program Power:	40 Watts
Peak Power:	80 Watts
Voice Coil	
Diameter:	0.75 in.
Winding wire:	CCAW
Former:	Kapton
Winding height:	6.4 mm

T/S Parameters	
Resonant frequency:	116 Hz
Re:	5.6 ohm
Qes:	0.92
Qms:	5
Qts:	0.78
Vas:	0.71 liters
Sd:	28.3 cm^2
Sensitivity:	84.4 dB
Mms:	3 grams
Bl:	3.65
Le:	0.34 mH

Design details	
Surround Material:	Rubber
Cone material:	Paper w. GF
Spider:	Single nomex
Plate thickness:	4 mm
Peak to peak linear cone Displacement	4 mm
Overall diameter:	79 mm
Bolt circle diameter:	86 mm
Baffle cutout dia.:	77 mm
Number of mounting holes:	4
Depth (flange to rear):	46.9 mm
Net weight:	0.72 kg

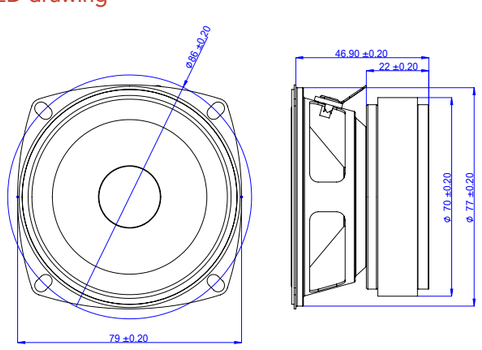
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	30FFX8-264
16 ohm version:	30FFX16-264
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



3" | 31NFR

Neodymium Full-Range

REDCATT

Key features:

- EXTENDED FREQUENCY RESPONSE
- HARD ANODIZED ALUMINUM CONE
- USAGE IN HI-FI, COLUMNS, OUTDOOR AND PORTABLE PRODUCTS

Design notes:

The 31NFR is a high efficiency, (84dB 1watt / 1 meter) 3-inch full range speaker with very linear frequency response characteristics and high power handling capability. The 31NFR uses a lightweight anodized aluminum cone assembly along with a NBR single roll geometry surround. The combination provides high efficiency, extended high frequency response and sustained output under variety of conditions, while generating low harmonic distortion over the working range of this speaker.

Magnetic circuit design
REDCATT engineers have developed neodymium based magnetic circuit with small form factor, high integrity magnetic flux gap and low distortion characteristic. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability.

Copper demodulation cup is assembled over the t-pole.

Specifications:

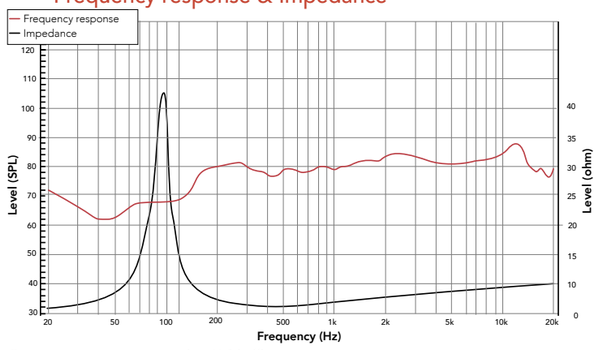
General specs	
Nominal Diameter:	3 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	25 Watts
Program Power:	50 Watts
Peak Power:	100 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	CCAW
Former:	AL
Winding height:	8.7 mm

T/S Parameters	
Resonant frequency:	94 Hz
Re:	6.4 ohm
Qes:	0.85
Qms:	5.4
Qts:	0.74
Vas:	1.1 liter
Sd:	28.3 cm^2
Sensitivity:	83.4 dB
Mms:	2.9
Bl:	3.6
Le:	0.06 mH

Design details	
Surround Material:	Rubber
Cone material:	Aluminum
Spider:	Single nomex
Plate thickness:	4 mm
Peak to peak linear cone Displacement	6 mm
Overall diameter:	Sq. 70.7 mm
Bolt circle diameter:	83 mm
Baffle cutout dia.:	71.5 mm
Number of mounting holes:	4
Depth (flange to rear):	47.5 mm
Net weight:	0.4 kg

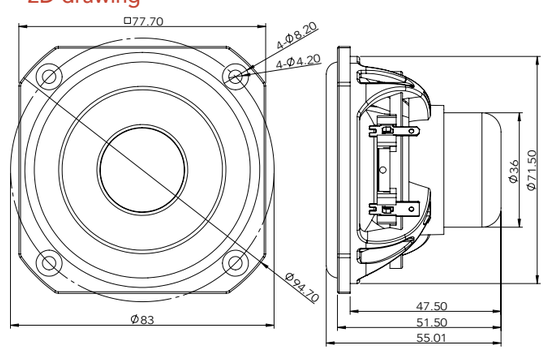
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	31NFRX8-434B
16 ohm version:	N/A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



2.5" | 25FR

Neodymium Full-Range

REDCATT

Key features:

- FULL-RANGE FREQUENCY RESPONSE
- 1 DEMODULATION RING, POWERFUL MOTOR STRUCTURE
- A VERY SMALL FORM FACTOR

Design notes:

25FR was designed around neodymium ring magnet. The magnetic structure delivers very high level of magnetic force, while generating minimum amount of modulation distortion.

The lightweight, yet strong, paper cone with attached rubber surround was designed and optimized to deliver the highest level of performance in full-range applications.

Unique basket shape allows the driver to be mounted into plastic enclosures of small thickness. However the chassis can be used with ease in other enclosure materials, such as MDF.

This speaker finds its best application in columns or multi-way Hi-Fi products. Due to its excellent HF response, further usage of HF units is not required.

The small form-factor allows this product to be used in space limited applications or portable products.

Specifications:

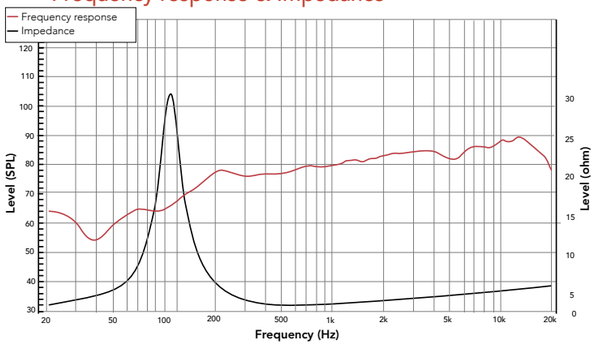
General specs	
Nominal Diameter:	2.5 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	20 Watts
Program Power:	40 Watts
Peak Power:	80 Watts
Voice Coil	
Diameter:	0.8 in.
Winding wire:	CCAW
Former:	Kapton
Winding height:	3 mm

T/S Parameters	
Resonant frequency:	121.7 Hz
Re:	3.5 ohm
Qes:	0.58
Qms:	0.4.9
Qts:	0.52
Vas:	0.53 liters
Sd:	21.2 cm^2
Sensitivity:	84.7 dB
Mms:	2.1 grams
Bl:	3.1
Le:	0.06 mH

Design details	
Surround Material:	Rubber
Cone material:	Paper
Spider:	Nomex
Plate thickness:	3 mm
Peak to peak linear cone Displacement	8.8 mm
Overall diameter:	65.5 mm
Bolt circle diameter:	54.45 mm
Baffle cutout dia.:	69 mm
Number of mounting holes:	4
Depth (flange to rear):	35 mm
Net weight:	0.25 kg

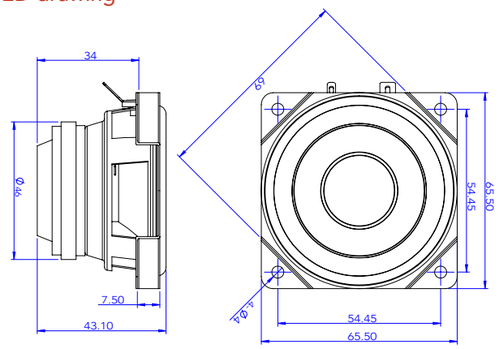
Ordering codes:	
4 ohm version:	25FRX4-134
8 ohm version:	25FRX8-134
16 ohm version:	N/A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



2" | 22NFR

Neodymium Full-Range

REDCATT

Key features:

- FULL-RANGE FREQUENCY RESPONSE
- OPTIMIZED FREQUENCY RESPONSE
- USAGE IN HOME HI-FI, TV BARS, COLUMNS SYSTEMS AND ARRAYS

Design notes:

This small, but mighty, driver was designed for application where full-range frequency response from one unit is required.

Magnetic circuit is designed with neodymium slug and u-cup steel. This circuit delivers very good level of performance in compact and a cost effective way.

Very lightweight cone with attached rubber surround ensures good pistonic behavior across wide frequency range.

REDCATT has designed new basket for this application. The basket features front flange all around, which improves the mechanical rigidity of the chassis. The driver can be either front or back mounted onto the baffle.

Due to its compact size, yet excellent acoustical performance, the 22NFR can be used in variety of applications, from column speakers, multi-way systems, portable products, etc.

Specifications:

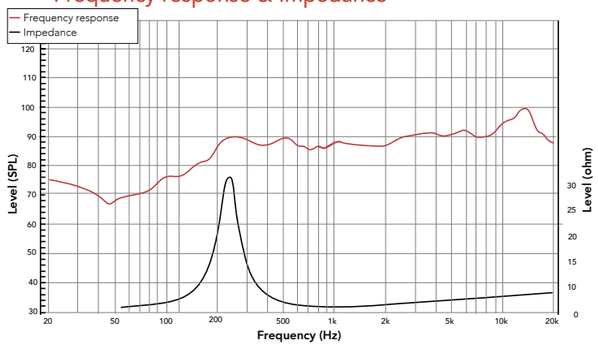
General specs	
Nominal Diameter:	2 in.
Rated Impedance:	8 Ohm
Power handling	
AES Power:	20 Watts
Program Power:	40 Watts
Peak Power:	80 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	CCAW
Former:	Kapton
Winding height:	5.44 mm

T/S Parameters	
Resonant frequency:	256.5 Hz
Re:	5.9 ohm
Qes:	0.98
Qms:	5.5
Qts:	0.83
Vas:	0.14 liters
Sd:	19.6 cm^2
Sensitivity:	87.1 dB
Mms:	1.5
Bl:	3.9
Le:	0.06 mH

Design details	
Surround Material:	Fabric
Cone material:	Paper
Spider:	Nomex
Plate thickness:	2.5 mm
Peak to peak linear cone Displacement	3 mm
Overall diameter:	60.2 mm
Bolt circle diameter:	64 mm
Baffle cutout dia.:	52.6 mm
Number of mounting holes:	4
Depth (flange to rear):	35.5 mm
Net weight:	0.18 kg

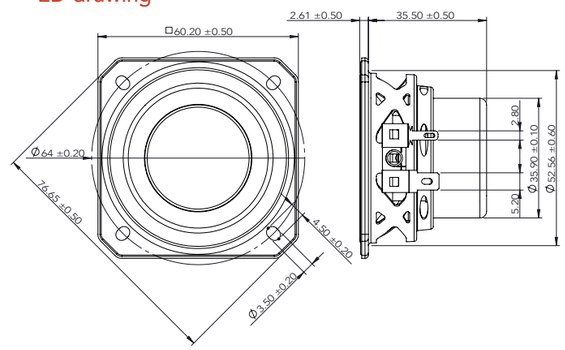
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	22NFRX8-462A
16 ohm version:	22NFRX16-462A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



2" | 20NFR

Neodymium Full-Range

REDCAT

Key features:

- VERY COMPACT AND AFFORDABLE DESIGN
- LIGHTWEIGHT CONE ASSEMBLY

Design notes:

20NFR was designed for applications where true full-range frequency response from one driver is required. From low to up to 17kHz, this driver truly delivers that. With additional DSP, the driver can be used from about 60Hz up.

We have developed very lightweight foam surround material. This material is our preference anywhere where we are designing larger cone excursions, yet lightweight piston is required. It delivers excellent acoustical properties without the mass penalties.

The magnetic circuit was designed around neodymium slug magnets, with u-cup style steel. The circuit delivers very high performance in very small and lightweight form factor.

Specifications:

General specs	
Nominal Diameter:	2 in.
Rated Impedance:	4 Ohm

Power handling	
AES Power:	10 Watts
Program Power:	20 Watts
Peak Power:	40 Watts

Voice Coil	
Diameter:	0.8 in.
Winding wire:	AL
Former:	Kapton
Winding height:	8.2 mm

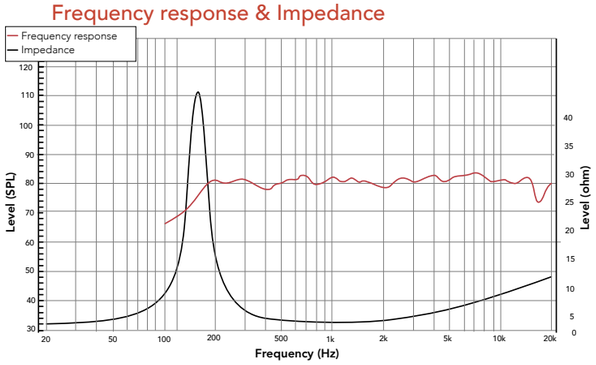
T/S Parameters	
Resonant frequency:	165 Hz
Re:	3.5 ohm
Qes:	0.54
Qms:	8.1
Qts:	0.5
Vas:	0.13 liters
Sd:	11.3 cm^2
Sensitivity:	83 dB
Mms:	1.3 grams
Bl:	2.95
Le:	0.1 mH

Design details	
Surround Material:	Foam
Cone material:	Paper
Spider:	Nomex
Plate thickness:	3 mm
Peak to peak linear cone Displacement	4.6 mm
Overall diameter:	48 mm
Bolt circle diameter:	56 mm
Baffle cutout dia.:	42.9 mm
Number of mounting holes:	4
Depth (flange to rear):	29 mm
Net weight:	0.15 kg

Ordering codes:	
4 ohm version:	20NFRX4-345A
8 ohm version:	20NFRX8-345A
16 ohm version:	20NFRX16-345A

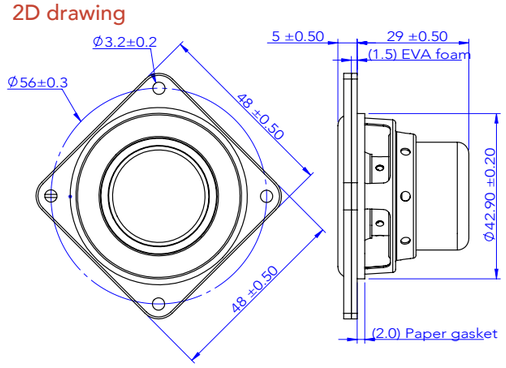
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



Info@redcatt.net www.redcatt.net

ONE TO RULE THEM ALL...

REDCAT®

THE HEART OF YOUR SOUND

COAXIAL TRANSDUCERS

6" CX6F-140F Coaxial Ferrite-Neodymium Driver

REDCAT

Key features:

- LF AND HF COMBINED MAGNETIC CIRCUIT
- COMPACT, BUT POWERFUL SPEAKER
- MAGNETIC CIRCUIT COMBINING FERRITE AND NEODYMIUM MAGNETS

Design notes:

The CX6F-140F is a high efficiency, (95dB 1watt / 1 meter) 6.5-inch coaxial speaker with very linear frequency response characteristics and high power handling capability. The mid-woofer utilizes REDCATT developed paper pulp cone that has proven its performance in many our successful designs. The HF section was designed around our most successful dome assembly as used in 140FCD. The mini waveguide is CNC machined from single piece of aluminum, given the whole assembly incredible precision. The combination of used materials with our state of the art quality production yields in well performing driver even in the most demanding extreme conditions.

Magnetic circuit design
REDCATT engineers have developed ferrite-neodymium based magnetic circuit, capable of delivering the highest level of performance in a small form factor. The combination of ferrite and neodymium delivers an excellent magnetic performance. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability. Aluminum demodulation ring is assembled in the HF section.

Specifications:

General specs (LF/HF)	
Nominal Diameter:	6in (36mm)
Rated Impedance:	4 / 4 Ohm

Power handling (LF/HF)	
AES Power:	200 / 35 Watts
Program Power:	400 / 70 Watts
Peak Power:	800 / 140 Watts

Voice Coil (LF/HF)	
Diameter:	1.75 in. / 36mm
Winding wire:	CCAW / ALU
Former:	TIL / Kapton
Winding height:	10.3 mm / N/A

T/S Parameters (LF/HF)	
Resonant frequency:	112 / 1,000 Hz
Re:	3.1 / 3.8 ohm
Qes:	0.49 / N/A
Qms:	6.8 / N/A
Qts:	0.46 / N/A
Vas:	5.4 liters / N/A
Sd:	141cm² / N/A
Sensitivity:	95 / 108 dB
Mms:	10.4 g / N/A
Bl:	6.8
Le:	0.23 mH / N/A

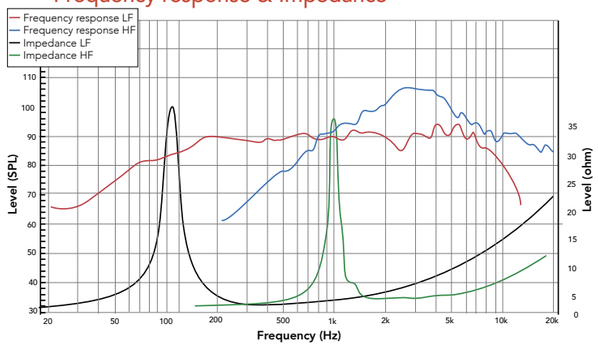
Design details (LF/HF)	
Surround Material:	fabric / poly.
Cone/ dome material:	paper / poly.
Spider:	Nomex
Plate thickness:	6 mm / N/A
Peak to peak linear cone Displacement	8.8 mm / N/A
Overall diameter:	165.2 mm
Bolt circle diameter:	156.6 mm
Baffle cutout dia.:	143.9 mm
Number of mounting holes:	4
Depth (flange to rear):	93.95 mm
Net weight:	2.0 kg

Ordering codes:	
4 ohm version:	CX6-140FX4-361B
8 ohm version:	N/A
16 ohm version:	N/A

Recone kits:

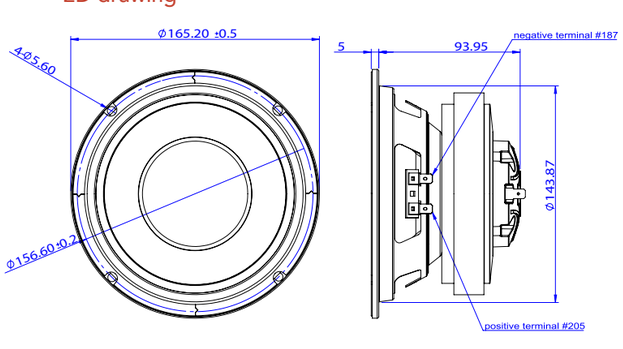
:	RCCX-140FX4-361B-C
:	RCCX-140FX4-361B-D

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



8" CX8F-140F Coaxial Ferrite-Neodymium Driver

REDCAT

Key features:

- LF AND HF INTEGRATED FERRITE-NEODYMIUM MAGNETIC CIRCUIT
- ALUMINUM SYMMETRICAL HORN
- GOOD OFF-AXES FREQUENCY RESPONSE

Design notes:

The CX8F-140F is a high efficiency, (95dB 1watt / 1 meter) 8-inch coaxial speaker with very linear frequency response characteristics and high power handling capability. The mid-woofer utilizes REDCATT developed paper pulp cone that has proven its performance in many ours successful designs. The HF section was designed around our most successful dome assembly as used in 140FCD and has integrated symmetrical aluminum horn. The combination of used materials with our state of the art quality production yields in well performing driver even in the most demanding and extreme weather conditions.

Magnetic circuit design
REDCATT engineers have developed ferrite-neodymium based magnetic circuit, capable of delivering the highest level of performance in a small form factor. The combination of ferrite and neodymium delivers an excellent magnetic performance. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability. Aluminum demodulation ring is assembled in the HF section.

Specifications:

General specs (LF/HF)	
Nominal Diameter:	533mm (21in.)
Rated Impedance:	4 / 8 Ohm

Power handling (LF/HF)	
AES Power:	250 / 35 Watts
Program Power:	500 / 70 Watts
Peak Power:	1000 / 140 Watts

Voice Coil (LF/HF)	
Diameter:	2 in. / 36mm
Winding wire:	CCAW / ALU
Former:	TIL / Poly.
Winding height:	12 mm / N/A

T/S Parameters (LF/HF)	
Resonant frequency:	100 / 1,000 Hz
Re:	3.2 / 3.8 ohm
Qes:	0.6 / N/A
Qms:	7.7 / N/A
Qts:	0.56 / N/A
Vas:	9.2 liters / N/A
Sd:	213.8cm² / N/A
Sensitivity:	94.8 / 108 dB
Mms:	18.1 g / N/A
Bl:	7.7
Le:	0.3 / 0.15 mH

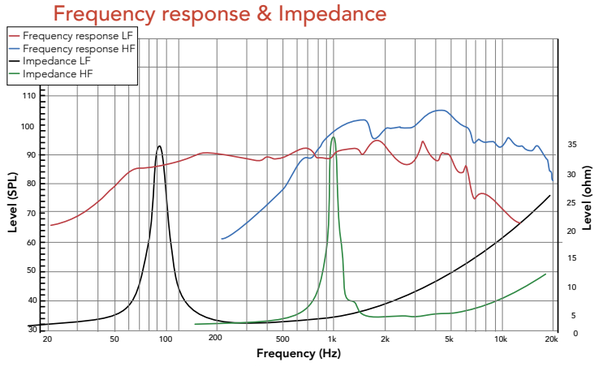
Design details (LF/HF)	
Surround Material:	fabric / poly.
Cone/ dome material:	paper / poly.
Spider:	Nomex
Plate thickness:	8 mm / N/A
Peak to peak linear cone Displacement	16 mm / N/A
Overall diameter:	208.6 mm
Bolt circle diameter:	197 mm
Baffle cutout dia.:	178.3 mm
Number of mounting holes:	8
Depth (flange to rear):	107.4 mm
Net weight:	2.8 kg

Ordering codes:	
4 ohm version:	CX8F-140FX4-374
8 ohm version:	N/A
16 ohm version:	N/A

Recone kits:

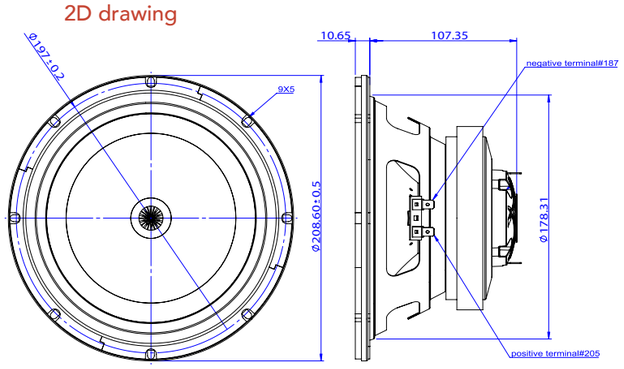
:	RCCX8F-140F-374C
:	RCCX8F-140F-434D

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



10″ | CX10F-140F Coaxial Ferrite-Neodymium Driver

REDCATT

Key features:

- LF AND HF INTEGRATED FERRITE-NEODYMIUM MAGNETIC CIRCUIT
- ALUMINUM SYMMETRICAL HORN
- GOOD OFF-AXES FREQUENCY RESPONSE

Design notes:

The CX10F-140F is a high efficiency, (95dB 1watt / 1 meter) 8-inch coaxial speaker with very linear frequency response characteristics and high power handling capability. The mid-woofer utilizes REDCATT developed paper pulp cone that has proven its performance in many ours successful designs. The HF section was designed around our most successful dome assembly as used in 140FCD and has integrated symmetrical aluminum horn. The combination of used materials with our state of the art quality production yields in well performing driver even in the most demanding and extreme weather conditions.

Magnetic circuit design
REDCATT engineers have developed ferrite-neodymium based magnetic circuit, capable of delivering the highest level of performance in a small form factor. The combination of ferrite and neodymium delivers an excellent magnetic performance. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability. Aluminum demodulation ring is assembled in the HF section.

Specifications:

General specs (LF/HF)	
Nominal Diameter:	10in
Rated Impedance:	4 / 4 Ohm

Power handling (LF/HF)	
AES Power:	250 / 35 Watts
Program Power:	500 / 70 Watts
Peak Power:	1000 / 140 Watts

Voice Coil (LF/HF)	
Diameter:	2 in. / 36mm
Winding wire:	CCAW / ALU
Former:	TIL / Poly
Winding height:	12 mm / N/A

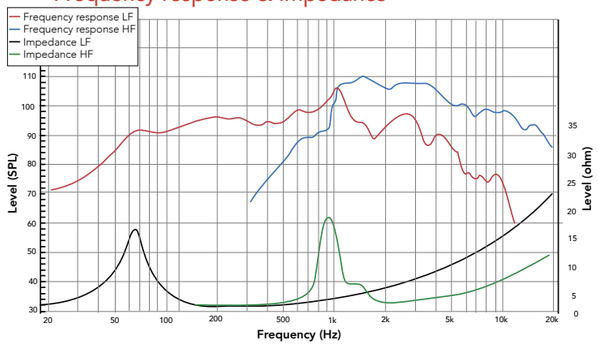
T/S Parameters (LF/HF)	
Resonant frequency:	61 / 1,800 Hz
Re:	3.2 / 5.4 ohm
Qes:	0.6 / N/A
Qms:	4.4 / N/A
Qts:	0.5 / N/A
Vas:	39.1 liters / N/A
Sd:	346.4cm² / N/A
Sensitivity:	95 / 109 dB
Mms:	29 grams / N/A
Bl:	7.8
Le:	0.3 / 0.15 mH

Design details (LF/HF)	
Surround Material:	fabric / poly.
Cone/ dome material:	paper / poly.
Spider:	Nomex
Plate thickness:	8 mm / N/A
Peak to peak linear cone Displacement	14.2 mm / N/A
Overall diameter:	256 mm
Bolt circle diameter:	245 mm
Baffle cutout dia.:	234 mm
Number of mounting holes:	8
Depth (flange to rear):	120.7 mm
Net weight:	2.9 Kg

Ordering codes:	
4 ohm version:	CX10F-140FX4-375
8 ohm version:	N/A
16 ohm version:	N/A

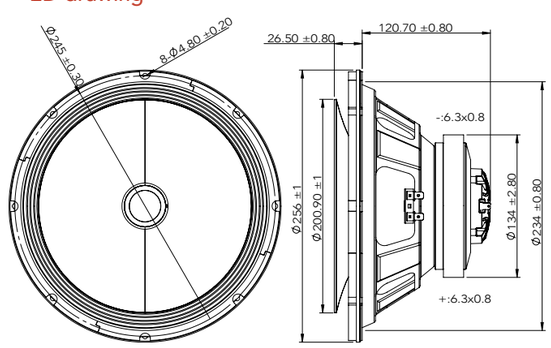
Recone kits:	
Woofer:	RCCX10F-140FX4-375C
Dome:	RCCX10F-140FX4-375D

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



12″ | CX12F-140F Coaxial Ferrite-Neodymium Driver

REDCATT

Key features:

- INTEGRATED ALUMINUM SYMMETRICAL HORN
- HIGH SENSITIVITY
-

Design notes:

The CX12F-140F is a high efficiency, (96.5 dB 1watt / 1 meter) 12-inch coaxial speaker with very linear frequency response characteristics and high power handling capability. The mid-woofer utilizes REDCATT developed paper pulp cone that has proven its performance in many ours successful designs. The HF section was designed around our most successful dome assembly as used in 140FCD and has integrated symmetrical aluminum horn. The combination of used materials with our state of the art quality production yields in well performing driver even in the most demanding and extreme weather conditions.

Magnetic circuit design
REDCATT engineers have developed ferrite-neodymium based magnetic circuit, capable of delivering the highest level of performance in a small form factor. The combination of ferrite and neodymium delivers an excellent magnetic performance. The magnetic circuit design is optimized to generate the minimum amount of flux modulation, providing exceptional stability. Aluminum demodulation ring is assembled in the HF section.

Specifications:

General specs (LF/HF)	
Nominal Diameter:	12in
Rated Impedance:	4 / 4 Ohm

Power handling (LF/HF)	
AES Power:	300 / 35 Watts
Program Power:	500 / 70 Watts
Peak Power:	800 / 140 Watts

Voice Coil (LF/HF)	
Diameter:	2 in. / 36mm
Winding wire:	CCAW / ALU
Former:	TIL / Poly
Winding height:	12 mm / N/A

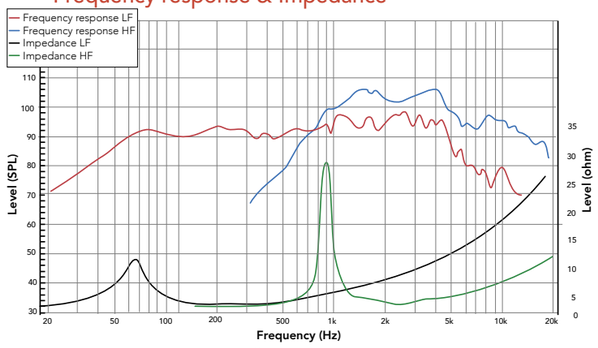
T/S Parameters (LF/HF)	
Resonant frequency:	62 / 1,000 Hz
Re:	3.2 / 3.8 ohm
Qes:	0.7 / N/A
Qms:	11.1 / N/A
Qts:	0.66 / N/A
Vas:	62.5 liters / N/A
Sd:	530.9cm² / N/A
Sensitivity:	96.3 / 108 dB
Mms:	42.1 grams / N/A
Bl:	8.6
Le:	0.26 / 0.15 mH

Design details (LF/HF)	
Surround Material:	Fabric / poly.
Cone/ dome material:	Paper / poly.
Spider:	Nomex
Plate thickness:	8 mm / N/A
Peak to peak linear cone Displacement	11.2 mm / N/A
Overall diameter:	320 mm
Bolt circle diameter:	301.5 mm
Baffle cutout dia.:	278 mm
Number of mounting holes:	8
Depth (flange to rear):	140 mm
Net weight:	5.3 kg

Ordering codes:	
4 ohm version:	CX12F-140FX4-376
8 ohm version:	N/A
16 ohm version:	N/A

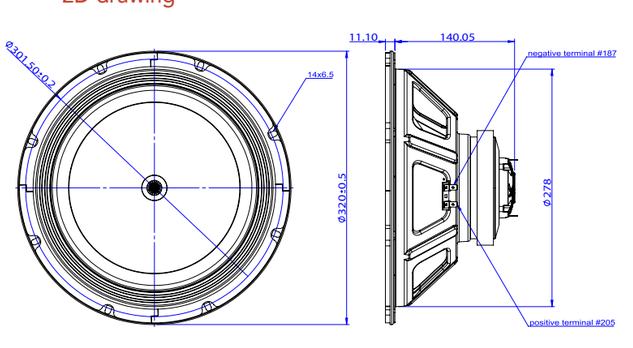
Recone kits:	
:	RCCX12F-140F-376C
:	RCCX12F-140F-376D

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



0.6 | 16TN

Neodymium Tweeter

REDCAT

Key features:

- SMALL FORM FACTOR
- HF RANGE UP TO 20KHZ

Design notes:

The 16TN tweeter was designed with a small form factor in mind. It finds its best use in applications where the baffle space is limited. It is a high performance, high frequency device with extended HF frequency range well over 20kHz. .

Diaphragm Assembly
The driver features a 16mm Poly-silk diaphragm formed as single piece with suspension. The dome rests on plastic carrier that also consists two mounting holes.

The dome is carefully attached to a 16mm aluminum former voice coil. Further, a common sized connector is used. Optionally, the connector can be replaced by another type that would suit the best your application, or completely replaced by conventional fast-on terminals.

Magnetic system uses high-temperature grade neodymium, ensuring the longevity of this tweeter.

Specifications:

General specs	
Nominal Diameter:	16mm
Rated Impedance:	4 Ohm

Power handling	
AES Power:	5 Watts
Program Power:	10 Watts
Peak Power:	20 Watts

Voice Coil	
Diameter:	0.6 in.
Winding wire:	CCAW
Former:	Aluminum

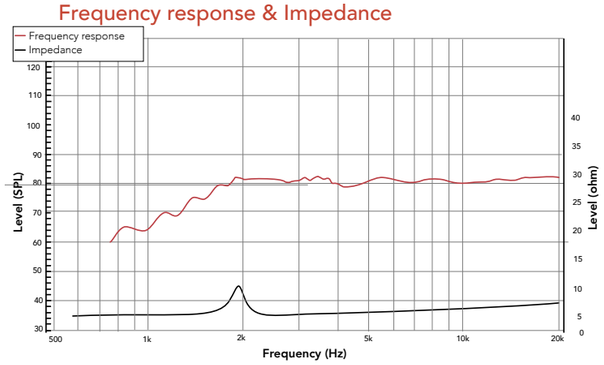
T/S Parameters	
Resonant frequency:	2,000 Hz
Nominal sensitivity	82 dB
Re:	4 ohm
Le:	
Flux density:	

Design details	
Dome Material:	Poly-silk
Surround material:	Poly-silk
Magnet material:	Neodymium
Overall diameter:	12 mm
Bolt circle diameter:	31.8 mm
Throat diameter:	-- --
Number of mounting holes:	2
Depth (front to rear):	13.5 mm
Net weight:	20 grams

Ordering codes:	
4 ohm version:	16TNX4-182
8 ohm version:	N/A
16 ohm version:	N/A

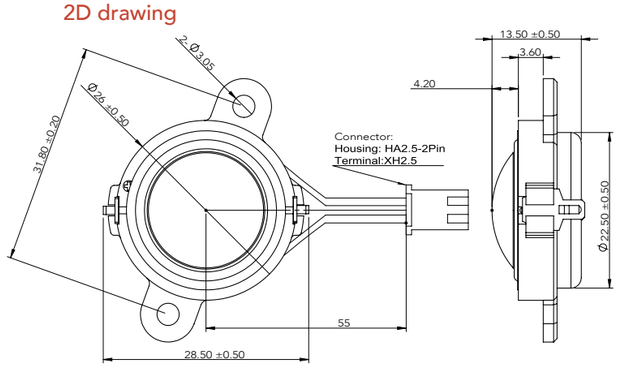
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



0.8 | 20TN

Neodymium Tweeter

REDCAT

Key features:

- LOW RESONANT FREQUENCY
- INTEGRATED WAVEGUIDE

Design notes:

The 20TN tweeter has a lower resonance frequency, making the crossover design a non-complicated task. The tweeter comes with a small waveguide, but based upon request, the tweeter can be also delivered as a "bare" tweeter and assembled with your own waveguide.

The best application is in tabletop studio monitors, prosumer products, bookshelf speakers, TV bars, micro line-arrays, etc.

Specifications:

General specs	
Nominal Diameter:	20mm
Rated Impedance:	8 Ohm

Power handling	
AES Power:	10 Watts
Program Power:	20 Watts
Peak Power:	40 Watts

Voice Coil	
Diameter:	0.8 in.
Winding wire:	CCAW
Former:	Kapton

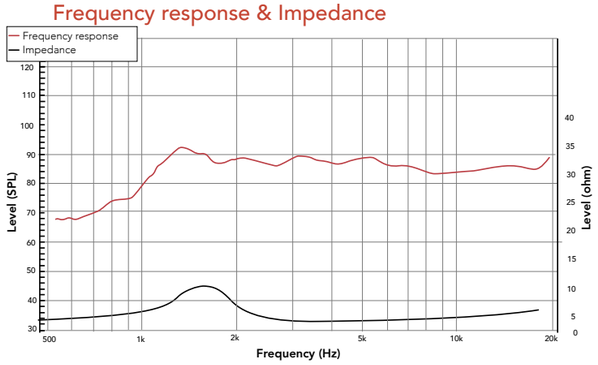
T/S Parameters	
Resonant frequency:	1,500 Hz
Nominal sensitivity	87
Re:	7.2 ohm
Le:	
Flux density:	

Design details	
Dome Material:	Poly-silk
Surround material:	Poly-silk
Magnet material:	Neodymium
Overall diameter:	50.5 mm
Bolt circle diameter:	44 mm
Throat diameter:	-- --
Number of mounting holes:	4
Depth (front to rear):	
Net weight:	25 grams

Ordering codes:	
4 ohm version:	N/A
8 ohm version:	20TNX8-383
16 ohm version:	N/A

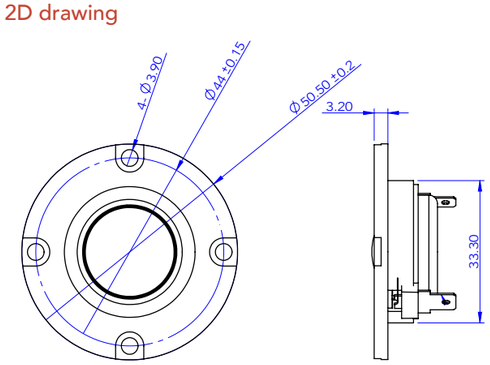
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

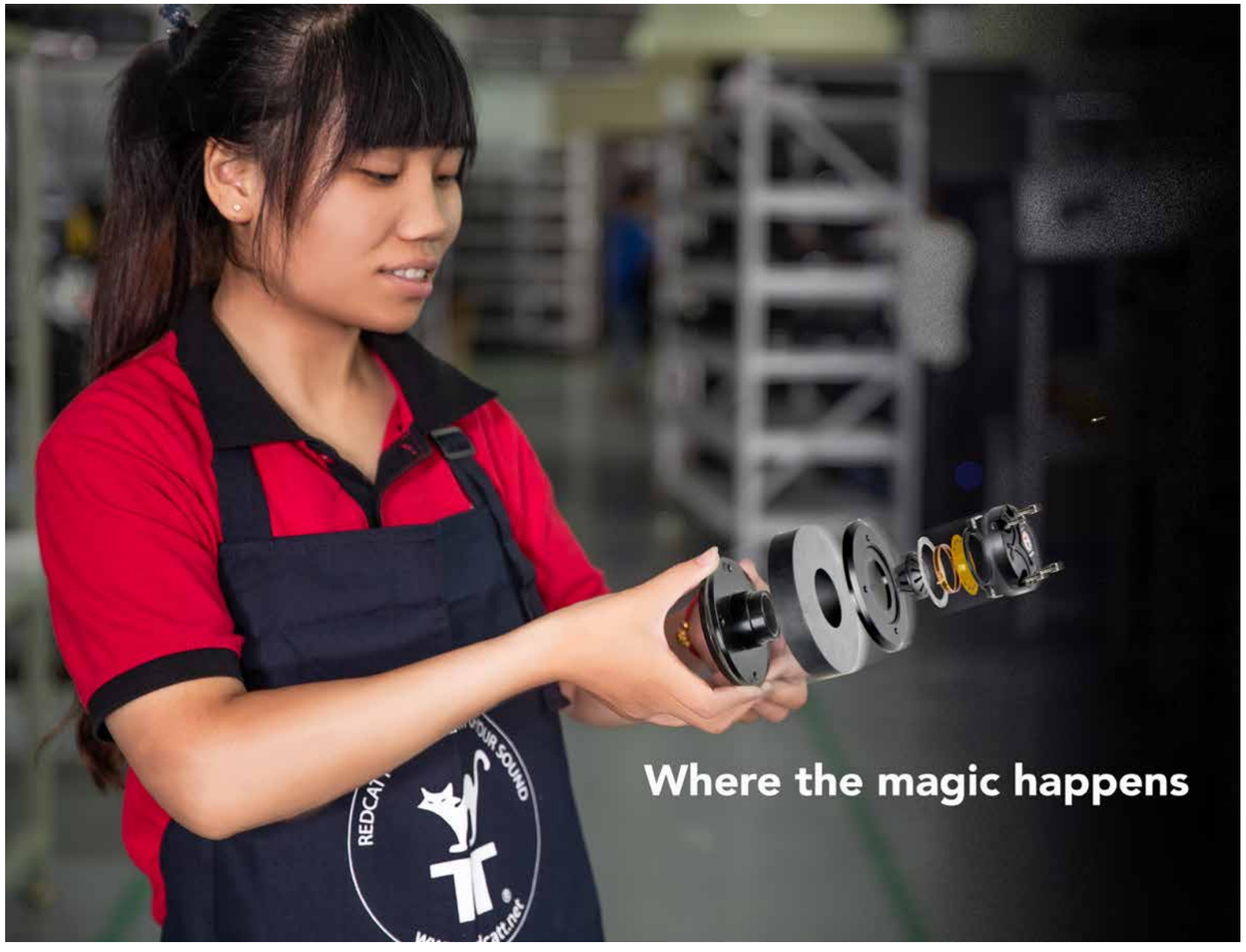
2D drawing



201NTi

Perfect solution for your HF needs
3-inch Neo Compression Driver

REDCATT - THE HEART OF YOUR SOUND
www.redcatt.net



0.8 | 201TN

Neodymium Tweeter

REDCAT

Key features:

- EASY CROSSOVER DESIGN
- OPTIMIZED FREQUENCY RE-SPONSE

Design notes:

The 201TN tweeter has a lower resonance frequency, making the crossover design a non-complicated task. The tweeter is delivered as a "bare" tweeter and shall assembled with your own waveguide or to a baffle with integrated waveguide.
The best application is in tabletop studio monitors, prosumer products, bookshelf speakers, TV bars, micro line-arrays, etc.

Specifications:

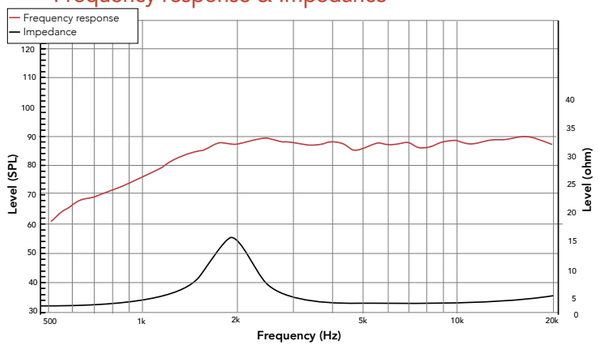
General specs	
Nominal Diameter:	20 mm
Rated Impedance:	4 Ohm
Power handling	
AES Power:	10 Watts
Program Power:	20 Watts
Peak Power:	40 Watts
Voice Coil	
Diameter:	0.8 in.
Winding wire:	CCAW
Former:	Kapton

T/S Parameters	
Resonant frequency:	1,900 Hz
Nominal sensitivity	88 dB
Re:	7.8 ohm
Le:	
Flux density:	

Design details	
Dome Material:	Poly-silk
Surround material:	Poly-silk
Magnet material:	Neodymium
Overall diameter:	31.5 mm
Bolt circle diameter:	43.5 mm
Throat diameter:	-- --
Number of mounting holes:	2
Depth (front to rear):	15.35 mm
Net weight:	32 grams

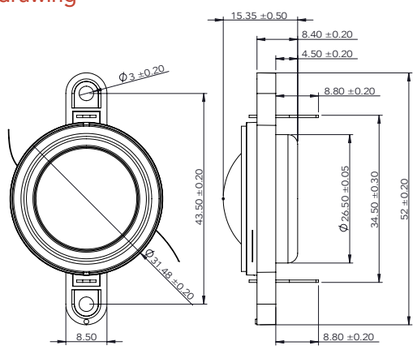
Ordering codes:	
4 ohm version:	201TNX4-399
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1" | 25TN

Neodymium Tweeter

REDCAT

Key features:

- VERY HIGH SENSITIVITY
- EXCELLENT OFF AXES RE-SPONSE
- VERY HIGH POWER HANDLING CAPABILITY

Design notes:

The 25TN tweeter has a very low resonance frequency, making it possible to work with larger sized mid-woofers.

The tweeter has a designed-in acoustical phase plug, that ensures the off-axis good response and also increases acoustical pressure. Integrated small waveguide makes the usage of this tweeter very easy.

Dual neodymium high-temperature grade neodymium magnets deliver a high-density flux field for the CCAW coil with a minimum amount of flux modulation.

The tweeter has well-balanced performance and very low har- monic distortion even at high powers.

This tweeter can be used in all application where high SPL and low Fs is required. Line-array systems, Hi-Fi center channels, 2-way and multi-way systems.

Specifications:

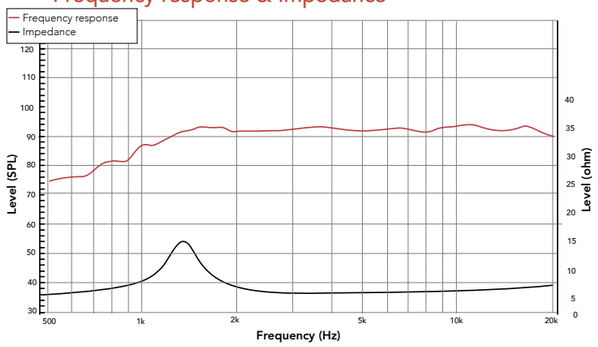
General specs	
Nominal Diameter:	25mm
Rated Impedance:	4 Ohm
Power handling	
AES Power:	15 Watts
Program Power:	30 Watts
Peak Power:	60 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	CCAW
Former:	Kapton

T/S Parameters	
Resonant frequency:	1,350 Hz
Nominal sensitivity	93.5 dB
Re:	4
Le:	
Flux density:	

Design details	
Dome Material:	Poly-silk
Surround material:	Poly-silk
Magnet material:	Neodymium
Overall diameter:	54.5 mm
Bolt circle diameter:	58 mm
Throat diameter:	-- --
Number of mounting holes:	4
Depth (front to rear):	21.5 mm
Net weight:	25 grams

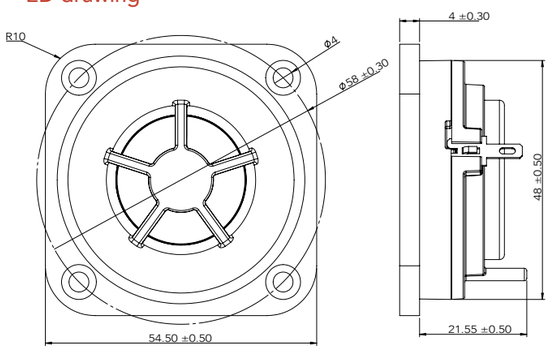
Ordering codes:	
4 ohm version:	25TNX4-386B
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1" | 251TN

Neodymium Tweeter

REDCAT

Key features:

- INTEGRATED WAVEGUIDE
- CAN BE USED IN ARRAY APPLICATIONS
- ALUMINUM DOME

Design notes:

The 251TN tweeter delivers incredible performance. The aluminum dome excels in higher frequencies with bright, undistorted sound. The dome is carefully attached to a poly-silk composite surround.

The tweeter is assembled on a small wave-guide, making a further application a breeze. The shape of the waveguide was carefully considered to fit narrow hight applications, such as TV Bars. The tweeters can be also vertically stacked for array-like columns.

Specifications:

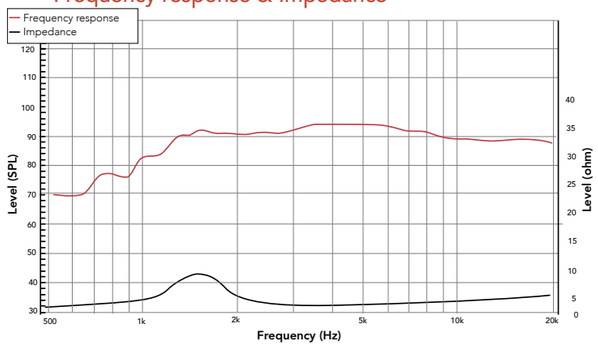
General specs	
Nominal Diameter:	25 mm
Rated Impedance:	4 Ohm
Power handling	
AES Power:	12 Watts
Program Power:	24 Watts
Peak Power:	48 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	CCAW
Former:	Kapton

T/S Parameters	
Resonant frequency:	1,500 Hz
Nominal sensitivity	92 dB
Re:	4.2
Le:	
Flux density:	

Design details	
Dome Material:	Poly-silk
Surround material:	Poly-silk
Magnet material:	Neodymium
Overall diameter:	70.5x 62.4 mm
Bolt circle diameter:	63.5 mm
Throat diameter:	-- --
Number of mounting holes:	4
Depth (front to rear):	11.7 mm
Net weight:	34 grams

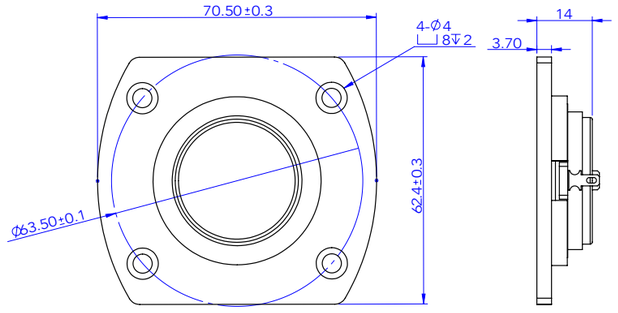
Ordering codes:	
4 ohm version:	241TNX4-384
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1" | 25TF

Ferrite Tweeter

REDCAT

Key features:

- EXTENSION OF WORKING RANGE TO 30KHZ
- LOW RESONANT FREQUENCY
- TITANIUM NITRIDE DOME

Design notes:

The 25TF tweeter has incredibly linear frequency response characteristics, high power handling capability while generating ultra low harmonic distortion artifacts.

The 25TF Dome utilizes REDCATT in-house unique titanium coating technology. Nitride is extremely hard ceramic material. We deposit the nitride from both sides of the titanium dome. The coated dome has dramatically improved flexural rigidity (aka stiffness), compared to the pure titanium dome. The coating has dramatic effect onto the distortion artifacts. The 3rd harmonic distortion stays bellow 0.05% in the working range. Extended high frequency response without major dome breakup modes and improved transient response are the other positive effects of REDCATT Titanium-Nitride Domes.
The 25TF has implemented FEM tuned rear resonant chamber. The chamber is improving the tweeter behavior at low frequencies and further lowering the harmonic distortion. All tweeter parts are bonded together using state of the art high temperature adhesives. Metal parts in the tweeter assembly are coated for extreme weatherization protection.
This tweeter can be used in all applications requiring high quality HF devices. Best mounting is on a flat baffle without any waveguide.

Specifications:

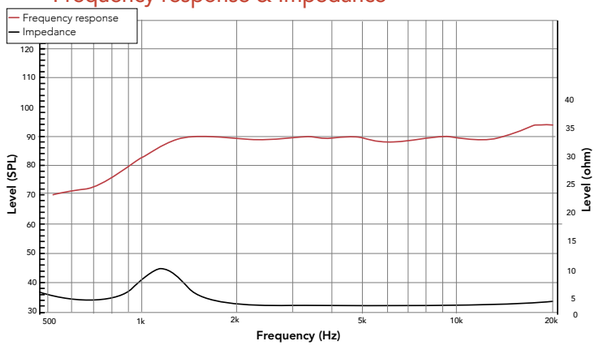
General specs	
Nominal Diameter:	25mm
Rated Impedance:	8 Ohm
Power handling	
AES Power:	20 Watts
Program Power:	40 Watts
Peak Power:	80 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	CCAW
Former:	Aluminum

T/S Parameters	
Resonant frequency:	1,200 Hz
Nominal sensitivity	91.5 dB
Re:	6.5 ohm
Le:	
Flux density:	

Design details	
Dome Material:	Titanium
Surround material:	Foam
Magnet material:	Ferrite
Overall diameter:	122.5 mm
Bolt circle diameter:	108 mm
Throat diameter:	-- --
Number of mounting holes:	4
Depth (front to rear):	49.1 mm
Net weight:	600 grams

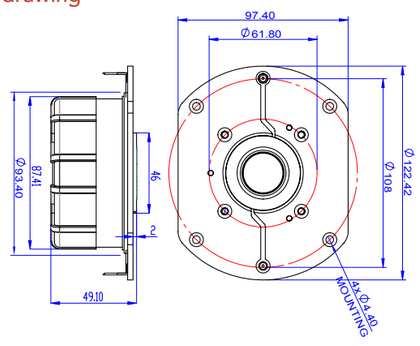
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	25TFX8-065
16 ohm version:	N/A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1" | 25TF

Ferrite Tweeter

REDCAT

Key features:

- ALUMINUM DOME
- INTEGRATED WAVEGUIDE
- DESIGNED FOR OUTDOOR AND INDOOR APPLICATIONS, WEATHER SEALED

Design notes:

25TF ferrite based tweeter was design for high quality audio applications. It sports aluminum dome, carefully attached to poly-silk surround. Furthermore, the magnetic system and dome sub-assembly is inbuilt into carrier that is later further assembled with our waveguide.

The magnetic circuit delivers robust and consistent B field. Its design has been FEM optimized and features small resonant chamber. All metal parts are coated for weather protection.

The dome is carefully attached to CCAW winding voice coil, wound on a Kapton former. Our precision adhesive dispensing ensures consistency and reliability of all our products.

The best application of this device is in studio monitors, 2-way Hi-Fi systems as well as outdoor products.

Specifications:

General specs	
Nominal Diameter:	25mm
Rated Impedance:	4 Ohm

Power handling	
AES Power:	40 Watts
Program Power:	80 Watts
Peak Power:	160 Watts

Voice Coil	
Diameter:	1 in.
Winding wire:	CCAW
Former:	Kapton

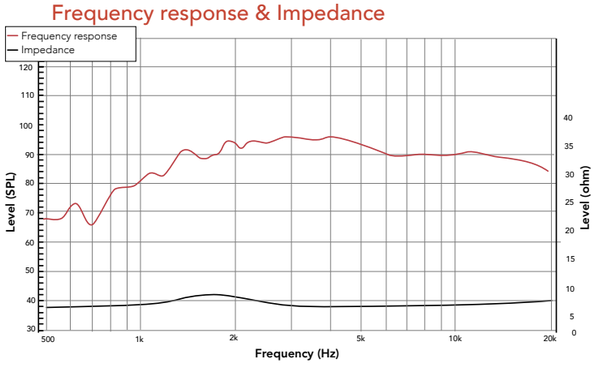
T/S Parameters	
Resonant frequency:	1,550 Hz
Nominal sensitivity	93 dB
Re:	4.1 ohm
Le:	
Flux density:	

Design details	
Dome Material:	Aluminum
Surround material:	Poly-silk
Magnet material:	Ferrite
Overall diameter:	103.5 mm
Bolt circle diameter:	93.5 mm
Throat diameter:	-- --
Number of mounting holes:	4
Depth (front to rear):	30 mm
Net weight:	400 grams

Ordering codes:	
4 ohm version:	25TFX4-431A
8 ohm version:	N/A
16 ohm version:	N/A

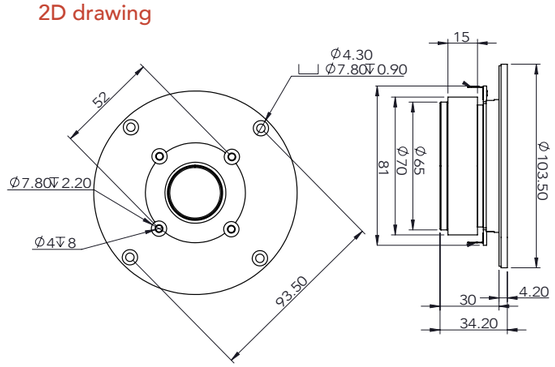
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1" | 25TF

Ferrite Tweeter

REDCAT

Key features:

- POLY-SILK DOME
- WEATHER SEALED DESIGN

Design notes:

25TF ferrite based tweeter was design for high quality audio applications. It sports single piece poly-silk dome, formed together with surround. Furthermore, the magnetic system and dome sub-assembly is inbuilt into carrier that is later further assembled with our waveguide.

The magnetic circuit delivers robust and consistent B field. Its design has been FEM optimized and features small resonant chamber. All metal parts are coated for weather protection.

The dome is carefully attached to CCAW winding voice coil, wound on a Kapton former. Our precision adhesive dispensing ensures consistency and reliability of all our products.

This version of 25TF style tweeter shares all components with aluminum dome version 25TF. The difference is only the dome itself. While aluminum dome delivers crisp HF, the poly-silk dome is dampened in the high frequencies and has a smoother roll off. Each version has its own application, that perhaps depends on personal preferences of the audio engineer.

The best application of this device is in studio monitors, 2-way Hi-Fi systems as well as outdoor products.

Specifications:

General specs	
Nominal Diameter:	533mm (21in.)
Rated Impedance:	4 Ohm

Power handling	
AES Power:	1800 Watts
Program Power:	3600 Watts
Peak Power:	7200 Watts

Voice Coil	
Diameter:	3 in.
Winding wire:	CCAW
Former:	Aluminum

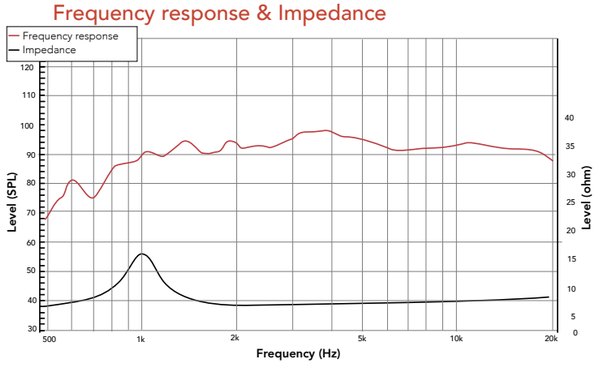
T/S Parameters	
Resonant frequency:	1,100 Hz
Nominal sensitivity	93.5 dB
Re:	4.1 ohm
Le:	
Flux density:	

Design details	
Dome Material:	Poly-silk
Surround material:	Poly-silk
Magnet material:	Ferrite
Overall diameter:	103.5 mm
Bolt circle diameter:	93.5 mm
Throat diameter:	-- --
Number of mounting holes:	4
Depth (front to rear):	30 mm
Net weight:	400 grams

Ordering codes:	
4 ohm version:	25TFX4-431B
8 ohm version:	N/A
16 ohm version:	N/A

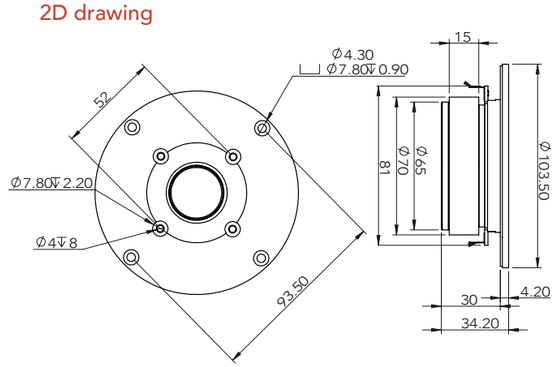
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1.3" | 33TN

Neodymium Tweeter

REDCAT

Key features:

- FREQUENCY RANGE 1,200HZ ~ 25KHZ
- VERY SUITABLE FOR LINE-ARRAY APPLICATIONS
- HIGH POWER HANDLING CAPABILITY

Design notes:

33TN tweeter was developed for system applications where high SPL and high power handling is required. The tweeter is supplied as "bullet" in general terms, however based upon a request, our engineers can recommend or design wave-guide for your application.

The tweeter sports large surround and usually tall dome. This combination provides excellent low frequency behavior and smooth frequency response.

The magnetic structure utilizes high grade neodymium magnets and u-cup style steel. Overall the structure delivers very high performance with consistent BL field.

Connection is made with solder lugs. Based upon request, we can deliver this tweeter with soldered wire harness as per your specifications.

Intended applications are array systems, hi-SPL 2-way and multi-way speaker systems and automotive applications.

Specifications:

General specs	
Nominal Diameter:	33mm
Rated Impedance:	8 Ohm

Power handling	
AES Power:	40 Watts
Program Power:	80 Watts
Peak Power:	160 Watts

Voice Coil	
Diameter:	1.3 in.
Winding wire:	CCAW
Former:	Aluminum

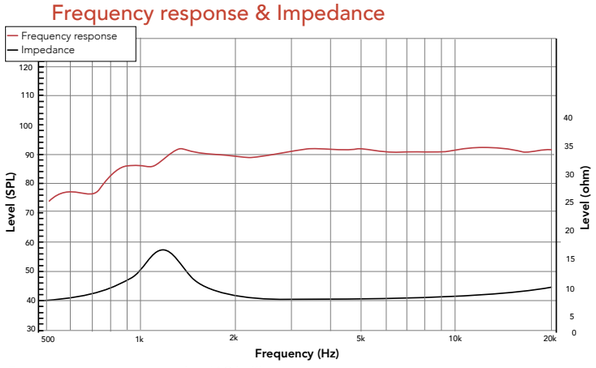
T/S Parameters	
Resonant frequency:	1,150 Hz
Nominal sensitivity	91 dB
Re:	6.1 ohm
Le:	
Flux density:	

Design details	
Dome Material:	Poly-silk
Surround material:	Poly-silk
Magnet material:	Neodymium
Overall diameter:	48 mm
Bolt circle diameter:	N/A
Throat diameter:	-- --
Number of mounting holes:	N/A
Depth (front to rear):	9.2 mm
Net weight:	58 grams

Ordering codes:	
4 ohm version:	N/A
8 ohm version:	33TNX8-410B
16 ohm version:	33TNX16-410B

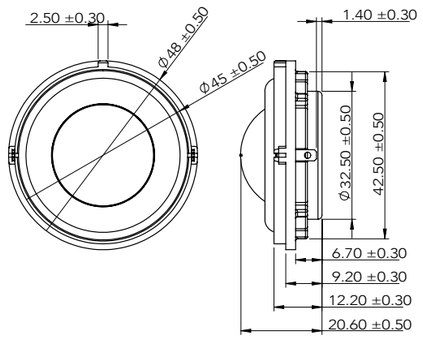
Recone kits:	
4 ohm version:	N/A
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



info@redcatt.net www.redcatt.net

1" | 101FCD

Ferrite Compression Driver

REDCATT

Key features:

- COMPACT SIZE
- HIGH SPL

Design notes:

The 101FCD compression driver is a very high performance high frequency device ideal for professional loudspeaker systems. The driver's ferrite based magnetic circuit provides a robust, high force BL field, providing precision control of the Polyimide diaphragm assembly. The unit delivers extended frequency response and high power handling through 1.0inch exit throat.

Diaphragm Assembly

The driver features a 25mm Polyimide diaphragm formed as single piece with Polyimide suspension that consists resonance control features lowering harmonic distortion at low frequencies.

The dome is carefully attached to a high temperature Nomex voice coil former that withstands the long term power characteristics typically seen in professional applications. The acoustic output exits through a bullet phase plug and a 1.0 inch throat aperture. Nominal sensitivity is 108 dB 1watt / 1 meter.

REDCATT uses state of the art adhesives in all assembly steps. Our voice coil to dome bonding is unique process, developed to greatly improve the power handling capabilities. REDCATT unique and precise adhesives dispensing, combined with our in-house developed dome treatments are further improving the long term reliability of this product.

Specifications:

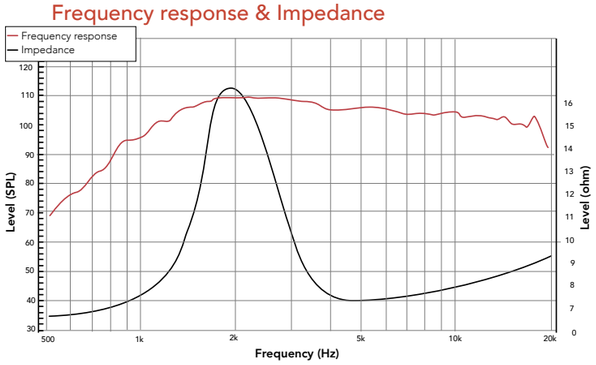
General specs	
Nominal Diameter:	25mm
Rated Impedance:	8 Ohm
Power handling	
AES Power:	15 Watts
Program Power:	30 Watts
Peak Power:	60 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	CCAW
Former:	Kapton

T/S Parameters	
Resonant frequency:	1,900 Hz
Nominal sensitivity	108 dB
Re:	7.6 ohm
Le:	
Flux density:	

Design details	
Dome Material:	Polyimide
Surround material:	Polyimide
Magnet material:	Ferrite
Overall diameter:	87.5 mm
Bolt circle diameter:	72 mm
Throat diameter:	1 inch
Number of mounting holes:	2
Depth (front to rear):	54 mm
Net weight:	600 grams

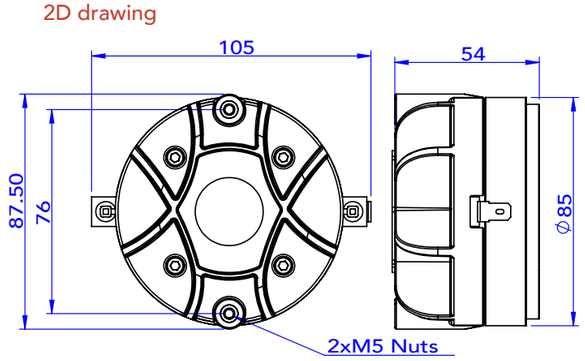
Ordering codes:	
4 ohm version:	
8 ohm version:	101FCDX8-159
16 ohm version:	101FCDX16-159
Recone kits:	
4 ohm version:	
8 ohm version:	RC101FCDX8-159
16 ohm version:	RC101FCDX16-159

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1" | 101NCD

Neodymium Compression Driver

REDCATT

Key features:

- ULTRA COMPACT
- NEODYMIUM BASED MAGNETIC CIRCUIT
- USE IN 2-WAY AND MULTI-WAY SYSTEMS

Design notes:

The 101NCD compression driver is a very high performance high frequency device ideal for professional loudspeaker systems. The driver's neodymium based magnetic circuit provides a robust, high force BL field providing precision control of the Polyimide diaphragm assembly. The unit delivers extended frequency response and high power handling through 1.0inch exit throat.

101NCD ultra compact design ensures the driver can be used in enclosure designs where the space is very limited, such as line array systems.

Diaphragm Assembly

The driver features a 25mm Polyimide diaphragm formed as single piece with Polyimide suspension.

The dome is carefully attached to a high temperature Kapton voice coil former that withstands the long term power characteristics typically seen in professional applications. The acoustic output exits through a bullet phase plug and a 1.0 inch throat aperture. Nominal sensitivity is 108.5 dB 1watt / 1 meter.

Specifications:

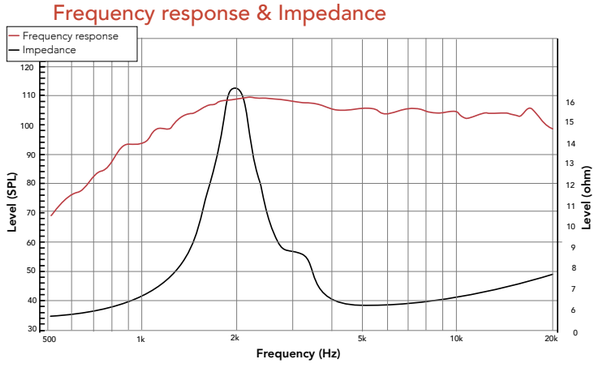
General specs	
Nominal Diameter:	25mm
Rated Impedance:	8 Ohm
Power handling	
AES Power:	15 Watts
Program Power:	30 Watts
Peak Power:	60 Watts
Voice Coil	
Diameter:	1 in.
Winding wire:	CCAW
Former:	Kapton

T/S Parameters	
Resonant frequency:	1,900 Hz
Nominal sensitivity	108.5 dB
Re:	6.6 ohm
Le:	
Flux density:	

Design details	
Dome Material:	Polyimide
Surround material:	Polyimide
Magnet material:	Ferrite
Overall diameter:	64 mm
Bolt circle diameter:	53 mm
Throat diameter:	1 inch
Number of mounting holes:	2
Depth (front to rear):	37.5 mm
Net weight:	450 grams

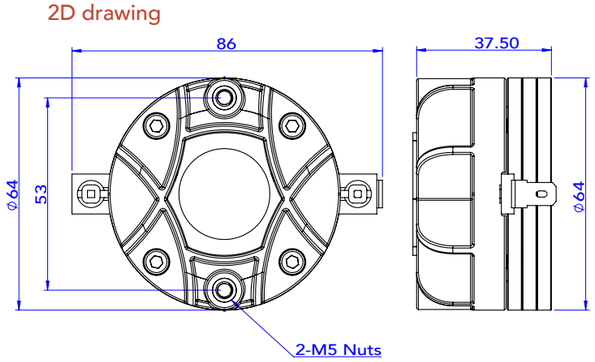
Ordering codes:	
4 ohm version:	
8 ohm version:	101NCDX8-160
16 ohm version:	101NCDX16-160
Recone kits:	
4 ohm version:	
8 ohm version:	RC101NCDX8-160
16 ohm version:	RC101NCDX16-160

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1.4" | 141FCD

Ferrite Compression Driver

REDCATT

Key features:

- COMPACT DESIGN
- DELIVERED WITH MOUNTING STEEL PLATE
- LOW RESONANT FREQUENCY

Design notes:

The 141FCD compression driver is a high performance high frequency device ideal for professional loudspeaker systems. It's core is designed based on our very 140FCD model. In fact the dome assembly is shared between these two models. The driver's ferrite based magnetic circuit was modified to fit applications with a limited space and lower budget. Furthermore, we have added steel face-plate for easier assembly on production lines for high-volume productions.

Diaphragm Assembly

The driver features a 36mm Polyimide diaphragm formed as single piece with Polyimide suspension. The suspension has designed and FEM optimized venting features to lover the harmonic distortion. The dome is carefully attached to a high temperature Nomex voice coil former that withstands the long term power characteristics typically seen in professional applications. The acoustic output exits through a radial phase plug and a 1.0 inch throat aperture. Nominal sensitivity is 105 dB 1watt / 1 meter.

REDCATT uses state of the art adhesives in all assembly steps. Our voice coil to dome bonding is unique process, developed to greatly improve the power handling capabilities. REDCATT unique and precise adhesives dispensing, combined with our in-house developed dome treatments are further improving the long term reliability of this product.

Specifications:

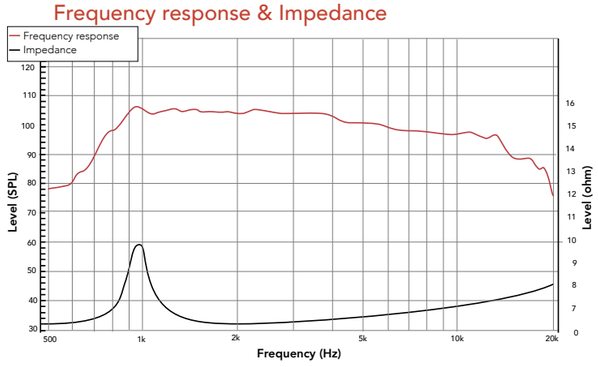
General specs	
Nominal Diameter:	1.4 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	30 Watts
Program Power:	60 Watts
Peak Power:	120 Watts
Voice Coil	
Diameter:	36 mm
Winding wire:	Al
Former:	Kapton

T/S Parameters	
Resonant frequency:	900 Hz
Nominal sensitivity	105 dB
Re:	2.5 ohms
Le:	
Flux density:	

Design details	
Dome Material:	Polyimide
Surround material:	Polyimide
Magnet material:	Ferrite
Overall diameter:	72 mm
Bolt circle diameter:	84.85 mm
Throat diameter:	1 inch
Number of mounting holes:	4 + 4
Depth (front to rear):	49.5 mm
Net weight:	900 grams

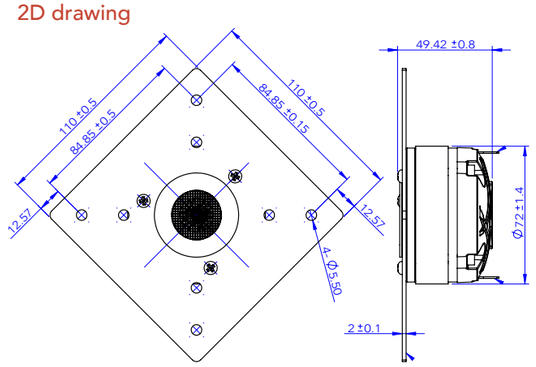
Ordering codes:	
4 ohm version:	141FCDX4-372
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC141FCDX4-372
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1.4" | 141FCD

Ferrite Compression Driver

REDCATT

Key features:

- LOW RESONANT FREQUENCY
- MOUNTING PLASTIC ADAPTER WITH THREAD
- FOR APPLICATIONS WITH LIMITED SPACE

Design notes:

The 141FCD compression driver is a high performance high frequency device ideal for professional loudspeaker systems. It's core is designed based on our very 140FCD model. In fact the dome assembly is shared between these two models. The driver's ferrite based magnetic circuit was modified to fit applications with a limited space and lower budget. Furthermore, we have added mounting adapter with 1 3/8" 18TPI thread to easy and fast mounting onto the horn throats that incorporate this thread.

Diaphragm Assembly

The driver features a 36mm Polyimide diaphragm formed as single piece with Polyimide suspension. The suspension has designed and FEM optimized venting features to lover the harmonic distortion. The dome is carefully attached to a high temperature Nomex voice coil former that withstands the long term power characteristics typically seen in professional applications. The acoustic output exits through a radial phase plug and a 1.0 inch throat aperture. Nominal sensitivity is 105 dB 1watt / 1 meter.

REDCATT uses state of the art adhesives in all assembly steps. Our voice coil to dome bonding is unique process, developed to greatly improve the power handling capabilities. REDCATT unique and precise adhesives dispensing, combined with our in-house developed dome treatments are further improving the long term reliability of this product.

Specifications:

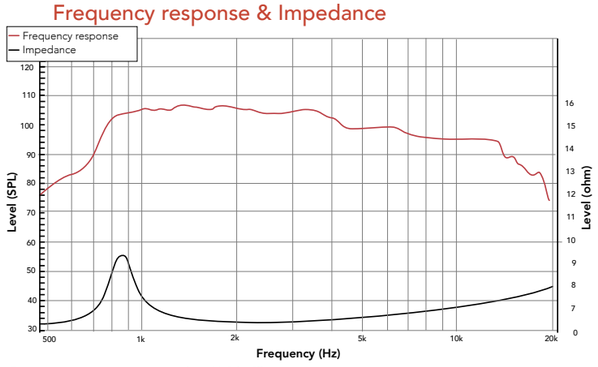
General specs	
Nominal Diameter:	1.4 in.
Rated Impedance:	4 Ohm
Power handling	
AES Power:	30 Watts
Program Power:	60 Watts
Peak Power:	120 Watts
Voice Coil	
Diameter:	36 mm
Winding wire:	Al
Former:	Kapton

T/S Parameters	
Resonant frequency:	900 Hz
Nominal sensitivity	105 dB
Re:	2.5
Le:	
Flux density:	

Design details	
Dome Material:	Polyimide
Surround material:	Polyimide
Magnet material:	Ferrite
Overall diameter:	72 mm
Bolt circle diameter:	Thread 1-3/8"
Throat diameter:	1 inch
Number of mounting holes:	N/A
Depth (front to rear):	65.7 mm
Net weight:	850 grams

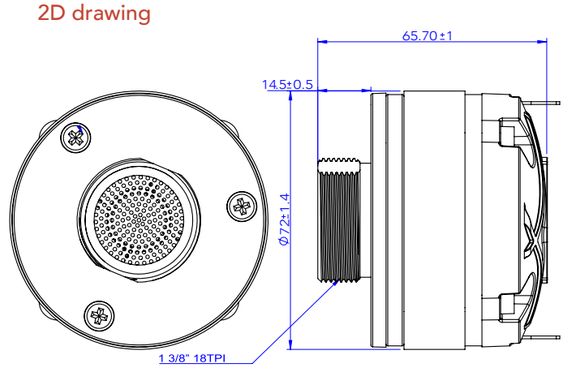
Ordering codes:	
4 ohm version:	141FCDX4-337
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC141FCDX4-337
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1.4" | 140FCD

Ferrite Compression Driver

REDCATT

Key features:

- HIGH PERFORMANCE, HIGH QUALITY COMPRESSION DRIVER
- FITS ANY BUDGET
- DESIGNED FOR USAGE IN 2-WAY & multi-way SYSTEMS

Design notes:

The 140FCD compression driver is a very high performance high frequency device ideal for professional loudspeaker systems. The driver's ferrite based magnetic circuit provides a robust, high force BL field, providing precision control of the Polyimide diaphragm assembly. The unit delivers extended frequency response and high power handling through 1.0inch exit throat. REDCATT has developed unique motor system magnetic gap volume tuning. This feature dramatically improves THD and improves the transient response of the driver.

Diaphragm Assembly

The driver features a 36mm Polyimide diaphragm formed as single piece with Polyimide suspension. The suspension has designed and FEM optimized venting features to lover the harmonic distortion.

The dome is carefully attached to a high temperature Nomex voice coil former that withstands the long term power characteristics typically seen in professional applications. The acoustic output exits through a radial phase plug and a 1.0 inch throat aperture. Nominal sensitivity is 110.5 dB 1watt / 1 meter.

REDCATT uses state of the art adhesives in all assembly steps. Our voice coil to dome bonding is unique process, developed to greatly improve the power handling capabilities. REDCATT unique and precise adhesives dispensing, combined with our in-house developed dome treatments are further improving the long term reliability of this product.

Specifications:

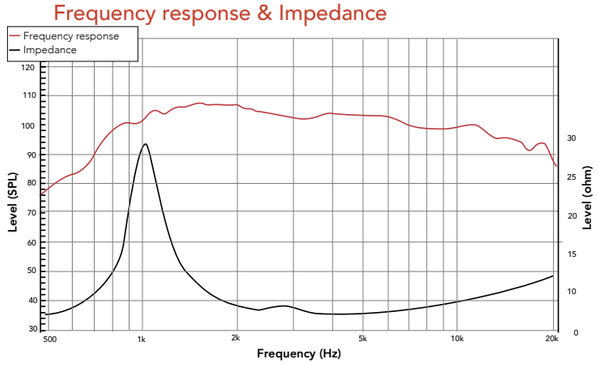
General specs	
Nominal Diameter:	1.4"
Rated Impedance:	4 Ohm
Power handling	
AES Power:	30 Watts
Program Power:	60 Watts
Peak Power:	120 Watts
Voice Coil	
Diameter:	36mm
Winding wire:	Al
Former:	Kapton

T/S Parameters	
Resonant frequency:	1,000 Hz
Nominal sensitivity	106 dB
Re:	4.2 ohms
Le:	
Flux density:	

Design details	
Dome Material:	Polyimide
Surround material:	Polyimide
Magnet material:	Ferrite
Overall diameter:	100 mm
Bolt circle diameter:	76 mm
Throat diameter:	1.0 inch
Number of mounting holes:	4
Depth (front to rear):	45 mm
Net weight:	900 grams

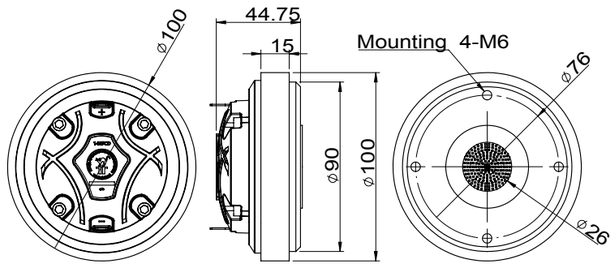
Ordering codes:	
4 ohm version:	140FCDX4-087
8 ohm version:	N/A
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC140FCDX4-087
8 ohm version:	N/A
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1.4" | 140NCD

Neodymium Compression Driver

REDCATT

Key features:

- VERY HIGH PERFORMANCE AT SMALL SIZE
- 2-WAY AND MULTI-WAY SPEAKER SYSTEMS

Design notes:

The 140NCD compression driver is a high performance high frequency device ideal for professional loudspeaker systems. In a ultra compact size, the driver's neodymium based magnetic circuit provides a robust, high force BL field providing precision control of the Polyimide diaphragm assembly. The unit delivers extended frequency response and high power handling through 1.3inch exit throat. The suspension has designed and FEM optimized venting features to lover the harmonic distortion. The venting holes also improves the control over the dome movements at low frequencies.

140NCD ultra compact design ensures the driver can be used in enclosure designs where the space is very limited, such as line array systems.

Magnetic Circuit Design

Redcatt has focused on designing an optimized neodymium based magnetic circuit capable of delivering the highest level of performance and value. The neodymium circuit is optimized to generate the minimum amount of flux modulation providing exceptional stability. This effort has resulted in a device that offers uncompromising performance featuring high efficiency, exceptional transient response and controlled distortion characteristics, all that in very compact size.

Specifications:

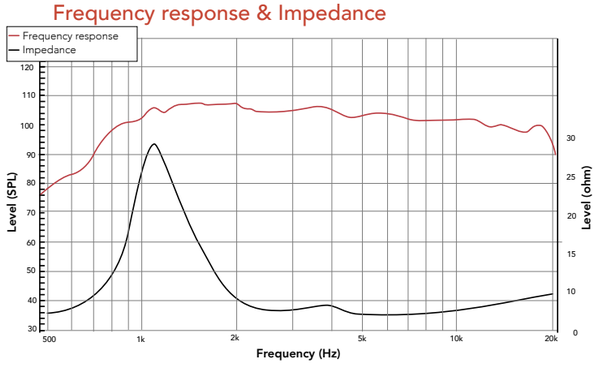
General specs	
Nominal Diameter:	1.4 in
Rated Impedance:	8 Ohm
Power handling	
AES Power:	30 Watts
Program Power:	40 Watts
Peak Power:	120 Watts
Voice Coil	
Diameter:	36 mm
Winding wire:	Al
Former:	Kapton

T/S Parameters	
Resonant frequency:	1,100 Hz
Nominal sensitivity	109 dB
Re:	7.2
Le:	
Flux density:	

Design details	
Dome Material:	Polyimide
Surround material:	Polyimide
Magnet material:	Neodymium
Overall diameter:	95 mm
Bolt circle diameter:	76 mm
Throat diameter:	1.3 inch
Number of mounting holes:	4
Depth (front to rear):	49.5 mm
Net weight:	700 grams

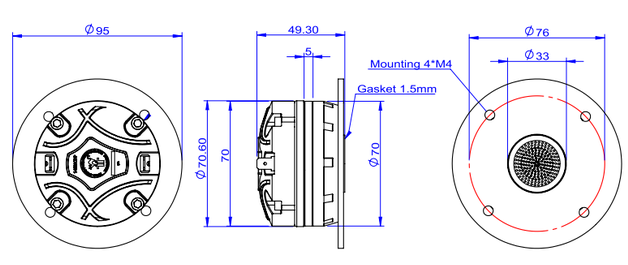
Ordering codes:	
4 ohm version:	140NCDX4-077
8 ohm version:	140NCDX8-077
16 ohm version:	N/A
Recone kits:	
4 ohm version:	RC140NCDX4-077
8 ohm version:	RC140NCDX8-077
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1.8" | 180FCD

Ferrite Compression Driver

REDCATT

Key features:

- EXTENDED FREQUENCY RESPONSE
- FEM OPTIMIZED MAGNETIC STRUCTURE
- USE IN LARGER SPEAKER SYSTEMS

Design notes:

The 180FCD compression driver is a very high performance high frequency device ideal for professional loudspeaker systems. The driver's dome is carefully attached to based magnetic circuit provides a robust, high force BL field, providing precision control of the Polyimide diaphragm assembly.

Diaphragm Assembly

The driver features a 44mm Polyimide diaphragm formed as single piece with Polyimide suspension.

The dome is assembled to a high temperature Nomex voice coil former that withstands the long term power characteristics typically seen in professional applications. The acoustic output exits through a bullet phase plug and a 1.0 inch throat aperture. Nominal sensitivity is 108.5 dB 1watt / 1 meter.

REDCATT uses state of the art adhesives in all assembly steps. Our voice coil to dome bonding is unique process, developed to greatly improve the power handling capabilities. REDCATT unique and precise adhesives dispensing, combined with our in-house developed dome treatments are further improving the long term reliability of this product.

Specifications:

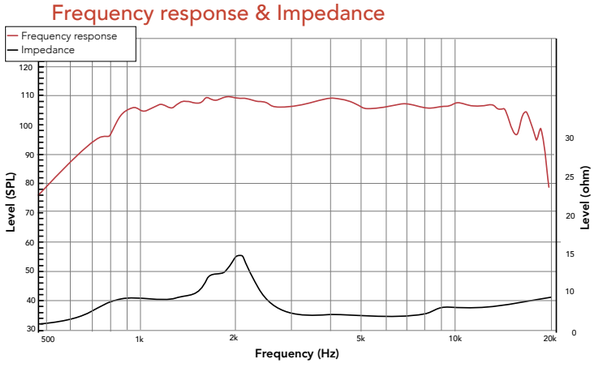
General specs	
Nominal Diameter:	1.8 inch
Rated Impedance:	8 Ohm
Power handling	
AES Power:	55 Watts
Program Power:	100 Watts
Peak Power:	200 Watts
Voice Coil	
Diameter:	44 mm
Winding wire:	Al
Former:	Kapton

T/S Parameters	
Resonant frequency:	1,600 Hz
Nominal sensitivity	109 dB
Re:	7.4
Le:	
Flux density:	

Design details	
Dome Material:	Polyimide
Surround material:	Polyimide
Magnet material:	Ferrite
Overall diameter:	120 mm
Bolt circle diameter:	76 & 57 mm
Throat diameter:	1 inch
Number of mounting holes:	2 + 3
Depth (front to rear):	68 mm
Net weight:	2.1 kg

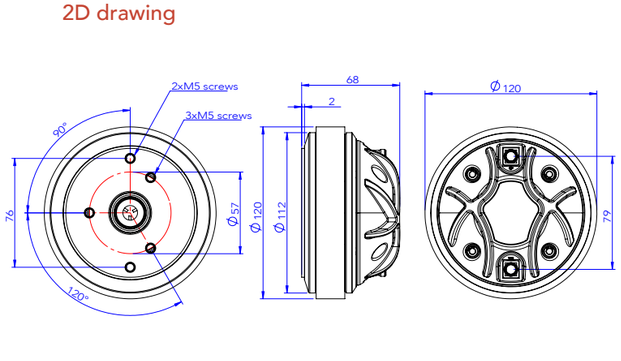
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	180FCDX8-044
16 ohm version:	N/A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	RC180FCDX8-044
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



1.8" | 180FCD

Ferrite Compression Driver

REDCATT

Key features:

- DRIVER DELIVERING HIGH SPL AT AFFORDABLE COST
- ROBUST, HIGH BL MAGNETIC CIRCUIT

Design notes:

The 180FCD compression driver is a very high-performance, high-frequency device ideal for professional loudspeaker systems, such as larger 2-way systems.

Diaphragm Assembly

The driver sports a 44mm polyimide diaphragm formed as a single piece with the suspension. The voice coil is attached to the dome with our state of the art adhesives and precise bonding equipment.

The acoustic output exits through a circumferential phase plug and a 1.0-inch throat aperture. Nominal sensitivity is 109.5 dB 1watt / 1 meter.

REDCATT uses state of the art adhesives in all assembly steps. Our voice coil to dome bonding is a unique process, developed to greatly improve the power handling capabilities. REDCATT unique and precise adhesives dispensing, combined with our in-house developed dome treatments are further improving the long term reliability of this product.

Specifications:

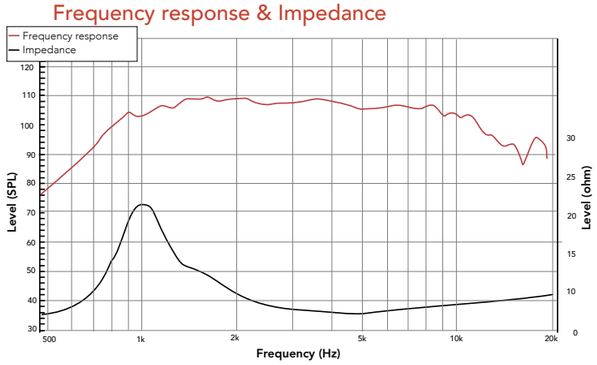
General specs	
Nominal Diameter:	1.8 inch
Rated Impedance:	8 Ohm
Power handling	
AES Power:	55 Watts
Program Power:	100 Watts
Peak Power:	200 Watts
Voice Coil	
Diameter:	44 mm
Winding wire:	Al
Former:	Kapton

T/S Parameters	
Resonant frequency:	1,100 Hz
Nominal sensitivity	109.5 dB
Re:	7.4
Le:	
Flux density:	

Design details	
Dome Material:	Polyimide
Surround material:	Polyimide
Magnet material:	Ferrite
Overall diameter:	120 mm
Bolt circle diameter:	76 & 57 mm
Throat diameter:	1 inch
Number of mounting holes:	2 + 3
Depth (front to rear):	68 mm
Net weight:	2.1 kg

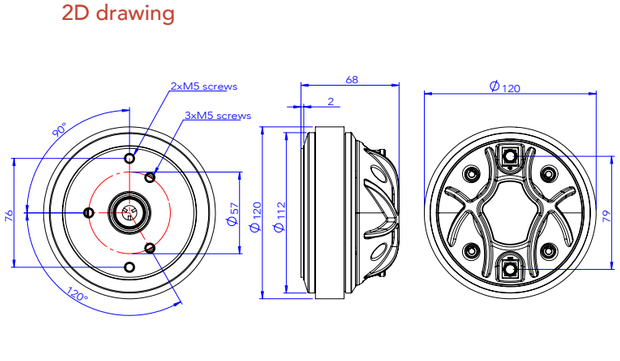
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	180FCDX8-330
16 ohm version:	N/A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	RC180FCDX8-330
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



REDCATT HAS IN-HOUSE PRECISION DOME FORMING AND ASSEMBLY.

1.8" | 180NCD Neodymium Compression Driver

REDCATT

Key features:

- VERY COMPACT DESIGN
- POWERFUL NEODYMIUM MAGNETIC CIRCUIT
- BEST USE IN HIGH PERFORMING SPEAKER SYSTEMS AND ARRAYS

Design notes:

The 180NCD compression driver is a high performance high frequency device ideal for professional loudspeaker systems. In a ultra compact size, the driver's neodymium based magnetic circuit provides a robust, high force BL field providing precision control of the Polyimide diaphragm assembly. The unit delivers extended frequency response and high power handling through 1.0 inch exit throat. The suspension has designed and FEM optimized venting features to lover the harmonic distortion. The venting holes also improves the control over the dome movements at low frequencies. REDCATT has developed unique phase plug. Phase plug is FEM optimized to lower the distortion artifacts at mid frequencies.

180NCD ultra compact design ensures the driver can be used in enclosure designs where the space is very limited, such as line array systems.

Magnetic Circuit Design

Redcatt has focused on designing an optimized neodymium based magnetic circuit capable of delivering the highest level of performance and value. This effort has resulted in a device that offers uncompromising performance featuring high efficiency, exceptional transient response and controlled distortion characteristics, all

Specifications:

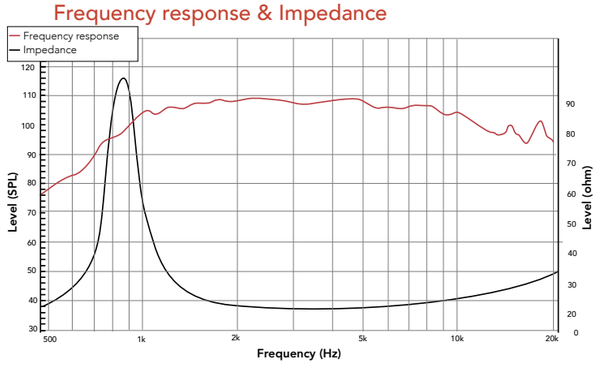
General specs	
Nominal Diameter:	1.8 inch
Rated Impedance:	16 Ohm
Power handling	
AES Power:	60 Watts
Program Power:	80 Watts
Peak Power:	160 Watts
Voice Coil	
Diameter:	44 mm
Winding wire:	Al
Former:	Kapton

T/S Parameters	
Resonant frequency:	1,000 Hz
Nominal sensitivity	109.5 dB
Re:	15 ohms
Le:	
Flux density:	

Design details	
Dome Material:	Polyimide
Surround material:	Polyimide
Magnet material:	Ferrite
Overall diameter:	81 mm
Bolt circle diameter:	57 mm
Throat diameter:	1 inch
Number of mounting holes:	3 & 2
Depth (front to rear):	47 mm
Net weight:	700 grams

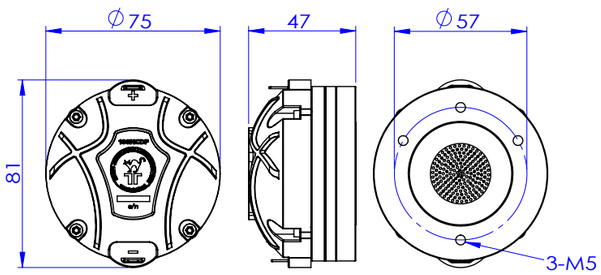
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	180NCDX8-086
16 ohm version:	180NCDX16-086
Recone kits:	
4 ohm version:	N/A
8 ohm version:	RC180NCDX8-086
16 ohm version:	RC180NCDX16-086

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



3" | 200FCD Ferrite Compression Driver

REDCATT

Key features:

- VERY LOW RESONANT FREQUENCY
- COPPER CAP DEMODULATION RING, POWERFUL MOTOR STRUCTURE
- DESIGNED FOR LARGE SPEAKER SYSTEMS WHERE HIGH SPL IS REQUIRED

Design notes:

The 200FCD compression driver is a very high performance high frequency device ideal for large professional loudspeaker systems. The driver uses all components that were designed and manufacture with one objective in mind - be the best. The driver's phase plug is CNC machined from solid aluminum with unbeaten level of precision. The dome is carefully attached to the voice coil with our sandwich joint, improving the transfer of the high frequencies and further improving power handling and reliability of the driver.

Diaphragm Assembly

The driver features a 75mm pure titanium diaphragm. Suspension is formed from Polyimide material.

The acoustic output exits through an aluminum, radial 3 slot phase plug and a 2.0 inch throat aperture. Nominal sensitivity is 108.5 dB 1watt / 1 meter.

REDCATT uses state of the art adhesives in all assembly steps. Our voice coil to dome bonding is unique process, developed to greatly improve the power handling capabilities. REDCATT unique and precise adhesives dispensing, combined with our in-house developed dome treatments are further improving the long term reliability of this product.

Specifications:

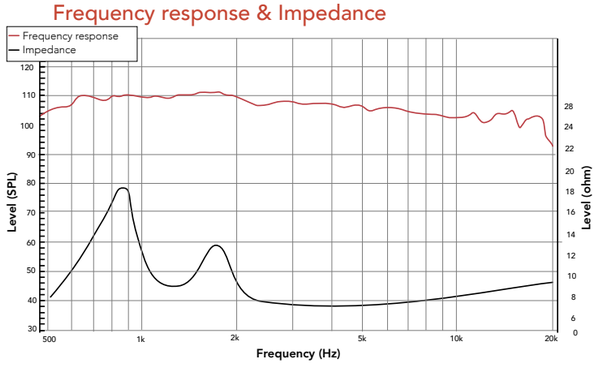
General specs	
Nominal Diameter:	3 inch
Rated Impedance:	8 Ohm
Power handling	
AES Power:	110 Watts
Program Power:	220 Watts
Peak Power:	440 Watts
Voice Coil	
Diameter:	3 in.
Winding wire:	Al
Former:	Kapton

T/S Parameters	
Resonant frequency:	380 Hz
Nominal sensitivity	108.5 dB
Re:	7.4 ohms
Le:	
Flux density:	

Design details	
Dome Material:	Titanium
Surround material:	Polyimide
Magnet material:	Ferrite
Overall diameter:	178 mm
Bolt circle diameter:	102 mm
Throat diameter:	2 inch
Number of mounting holes:	4
Depth (front to rear):	90 mm
Net weight:	6.3 kg

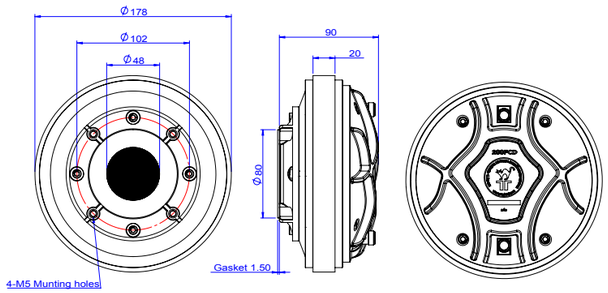
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	200FCDX8-049
16 ohm version:	N/A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	RC200FCDX8-049
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



3" | 202FCD — Ferrite Compression Driver

Key features:

- DESIGNED FOR APPLICATIONS WITH LOW BUDGET
- POLYIMIDE SURROUND WITH PURE TITANIUM DOME

Design notes:

The 202FCD compression driver is a high-performance, high-frequency device ideal for professional loudspeaker systems. The driver's ferrite based magnetic circuit provides a robust, high force BL field providing precision control of the pure titanium diaphragm assembly. Featuring 1.4inch exit throat. The suspension is made of polyimide material, providing optimum control over the diaphragm movement. The design has been optimized to have a great level of performance at very affordable price levels. The drivers are suitable for 2-way and multi-way speaker systems.

Dome Assembly Design

REDCATT has designed the pure titanium dome to be bonded to the polyimide surround. This solution greatly improves the control of the dome pistonic motion, having a positive effect on the transient response.

REDCATT uses state of the art adhesives in all assembly steps. Our voice coil to dome bonding is a unique process, developed to greatly improve the power handling capabilities. REDCATT unique and precise adhesives dispensing, combined with our in-house developed dome treatments are further improving the long term reliability of this product.

Specifications:

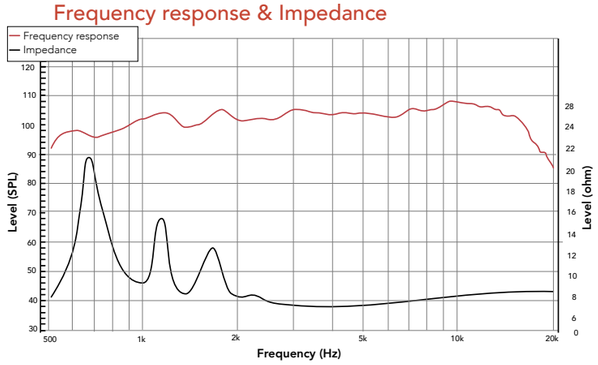
General specs	
Nominal Diameter:	3 inch
Rated Impedance:	8 Ohm
Power handling	
AES Power:	90 Watts
Program Power:	180 Watts
Peak Power:	360 Watts
Voice Coil	
Diameter:	3 in.
Winding wire:	Al
Former:	Kapton

T/S Parameters	
Resonant frequency:	580 Hz
Nominal sensitivity	106.5 dB
Re:	7.8
Le:	
Flux density:	

Design details	
Dome Material:	Titanium
Surround material:	Polyimide
Magnet material:	Ferrite
Overall diameter:	170 mm
Bolt circle diameter:	102 mm
Throat diameter:	1.4 inch
Number of mounting holes:	4
Depth (front to rear):	67.7 mm
Net weight:	6 kg

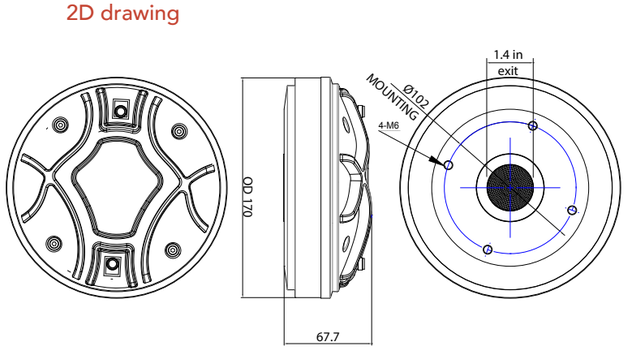
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	202FCDX8-104
16 ohm version:	N/A
Recone kits:	
4 ohm version:	N/A
8 ohm version:	RC202FCDX8-104
16 ohm version:	N/A

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



3" | 201NTi — Neodymium Compression Driver

Key features:

- VERY COMPACT DESIGN
- PURE TITANIUM DOME WITH SURROUND INTEGRATED RESONANCE CONTROL FEATURES
- PORTABLE PRODUCTS, 2-WAY AND MULTI-WAY SYSTEMS, LINE-ARRAY APPLICATIONS

Design notes:

The 201NTi compression driver is based on the design of our successful 200NTi. We have shared the same dome assembly between these two models, while we have packed the driver into a smaller form factor. Not any compromises have been made to the sound character. This driver is here to supports your needs in the applications where the space is limited. The driver's Neodymium based magnetic circuit provides a robust, high force BL field, delivering precision control of the pure titanium diaphragm assembly, featuring 1.4inch exit throat.

Dome Assembly Design

REDCATT has designed the dome and the surround of this compression driver as a single part. The voice coil former is attached to the dome as "L" sandwich. This solution greatly improves the transfer of all frequencies onto the dome, with a good transient response. It also dramatically improves the power handling capability of the driver.

REDCATT uses state of the art adhesives in all assembly steps. Our voice coil to dome bonding is a unique process, developed to greatly improve the power handling capabilities. REDCATT unique and precise adhesives dispensing, combined with our in-house developed dome treatments are further improving the long term reliability of this product.

Specifications:

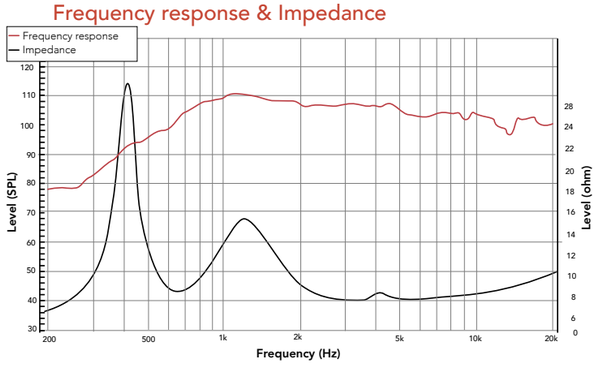
General specs	
Nominal Diameter:	3 inch
Rated Impedance:	8 Ohm
Power handling	
AES Power:	110 Watts
Program Power:	220 Watts
Peak Power:	440 Watts
Voice Coil	
Diameter:	3 in.
Winding wire:	Al
Former:	Kapton

T/S Parameters	
Resonant frequency:	420 Hz
Nominal sensitivity	107 dB
Re:	8.2
Le:	
Flux density:	

Design details	
Dome Material:	Titanium
Surround material:	Titanium
Magnet material:	Neodymium
Overall diameter:	112 mm
Bolt circle diameter:	102 mm
Throat diameter:	1.4 inch
Number of mounting holes:	4
Depth (front to rear):	61.7 mm
Net weight:	1.95 kg

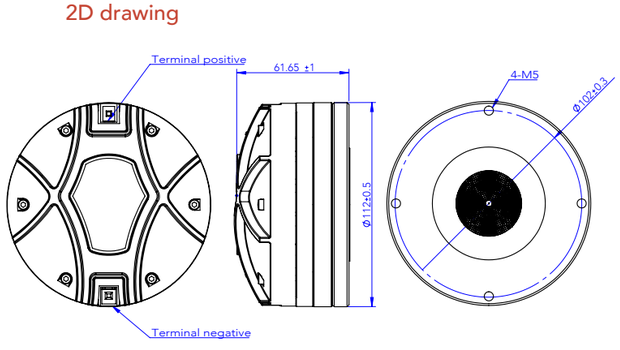
Ordering codes:	
4 ohm version:	N/A
8 ohm version:	201NCDX8-316
16 ohm version:	201NCDX16-316
Recone kits:	
4 ohm version:	N/A
8 ohm version:	RC201NCDX8-316
16 ohm version:	RC201NCDX16-316

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



3" | 200NTi

Neodymium Compression Driver

REDCAT

Key features:

- ULTRA HIGH FORCE MAGNETIC SYSTEM WITH BACK PRESSURE REGULATION FEATURES
- VERY HIGH SPL
- CNC MACHINED, PRECISE ALUMINUM PHASE PLUG

Design notes:

The 200NTi compression driver is a high performance high frequency device ideal for professional loudspeaker systems.
The driver's advanced neodymium based magnetic circuit provides a compact, yet robust, ultra high force BL field with precision control of the pure titanium diaphragm assembly. The unit delivers incredibly linear frequency response and very high power handling through 1.4inch exit throat.
The driver features a 75mm pure titanium diaphragm formed as single piece with titanium suspension consisting resonance control features. REDCATT uses advanced manufacturing and quality control techniques, resulting in superb consistency of all our compression drivers.

Magnetic Circuit Design

Redcatt has focused on designing an optimized lightweight neodymium based magnetic circuit capable of delivering the highest level of performance. This effort has resulted in a device that offers uncompromising performance featuring high efficiency, exceptional transient response and controlled distortion characteristics. The annular phase plug is CNC machined from a single block of aircraft grade aluminum. Our phase plug is true high-tech masterpiece. The reached shape and aligning tolerances are beyond what have been commercially produced

Specifications:

General specs	
Nominal Diameter:	3 inch
Rated Impedance:	8 Ohm

Power handling	
AES Power:	100 Watts
Program Power:	200 Watts
Peak Power:	400 Watts

Voice Coil	
Diameter:	3 in.
Winding wire:	Al
Former:	Kraft

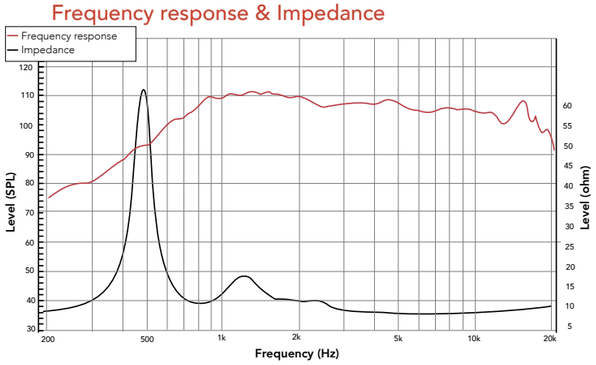
T/S Parameters	
Resonant frequency:	530 Hz
Nominal sensitivity	111 dB
Re:	7.8
Le:	
Flux density:	

Design details	
Dome Material:	Titanium
Surround material:	Titanium
Magnet material:	Neodymium
Overall diameter:	130 mm
Bolt circle diameter:	102 mm
Throat diameter:	1.4 inch
Number of mounting holes:	4
Depth (front to rear):	60 mm
Net weight:	3.1 kg

Ordering codes:	
4 ohm version:	N/A
8 ohm version:	200NTiX8-043
16 ohm version:	200NTiX16-043

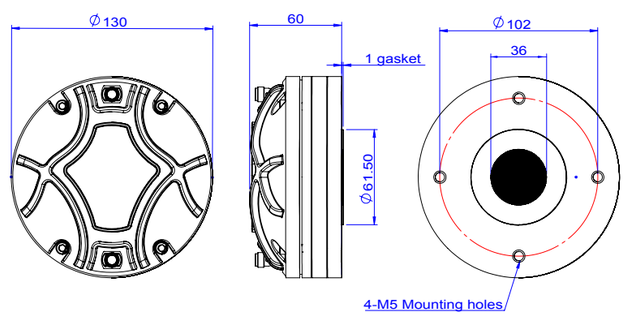
Recone kits:	
4 ohm version:	N/A
8 ohm version:	RC200NTiX8-043
16 ohm version:	RC200NTiX16-043

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing



info@redcatt.net www.redcatt.net

CONTACT DETAILS:

REDCATT
Rm. 501, Bld. D,
Xinlong Xinzhi Valley,
209 Center Jinlu
Dalang Town
523785 Dongguan
China

email: info@redcatt.net
tel.: +86 0769-83181898

SCAN TO DOWNLOAD ELECTRONIC VERSION OF OUR CATALOG

FILE SIZE 8.6MB
PDF FORMAT

Ver: 01-0322