



Fire Alarm Loudspeakers

- Wall-mounted Loudspeakers EST-W6
- Ceiling-mounted Loudspeakers EST-S136
- Ceiling-mounted Loudspeakers EST-S206B
- Horn-type Loudspeakers EST-T1510
- Line Array Loudspeakers Columns ABT-LA30 / ABT-LA60
- Ceiling-mounted Loudspeakers ABT-S276/AB / ABT-S106 / ABT-S2010, ABT-S2710 / ABT-S186
- Sound Projectors MCR-SMSP20
- Horn-type Loudspeakers ABT-T2215 / ABT-T2430
- High Power Loudspeaker ABT-HP240EN / ABT-HP120EN

EN 54-24

EST-W6

EN 54-24

Wall-mounted Loudspeakers

- Compliance with EN 54-24
- Compliance with BS5839-8 standard (Thermal protection)
- Easy and quick to mount
- Modern and elegant design
- High quality sound of both speech and music
- Ideal for on-wall or in-wall mounting

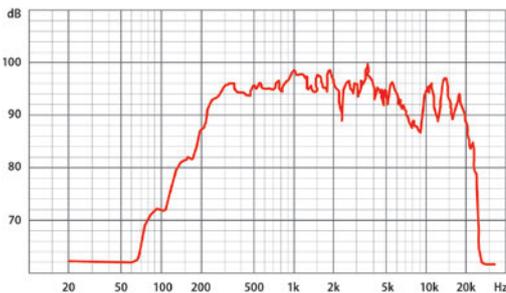


The EST-W6 is an elegant multi-function loudspeaker designed to guarantee the highest acoustic parameters. Its solid casing offers an effective protection against acts of vandalism. The loudspeaker can be mounted either on a wall or on a ceiling. Additionally, the EST-W6 can be fixed as an recessed speaker and therefore it is an ideal solution for

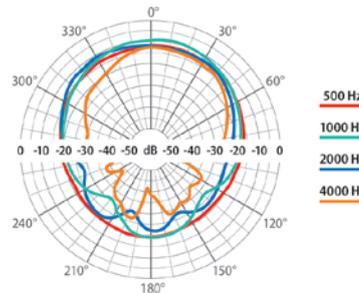
rooms where aesthetic factors play a significant role. The loudspeaker offers adjustable power regulation through connectivity to applicable transformer tapings thus allowing suitable acoustic pressure (the level of sound) within areas of sound emission adequately to the acoustic conditions existing in those areas.



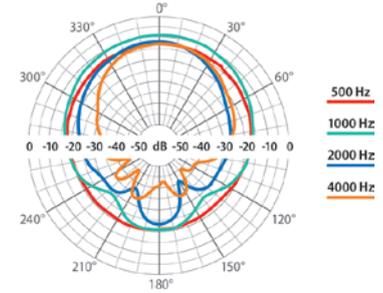
Frequency band:



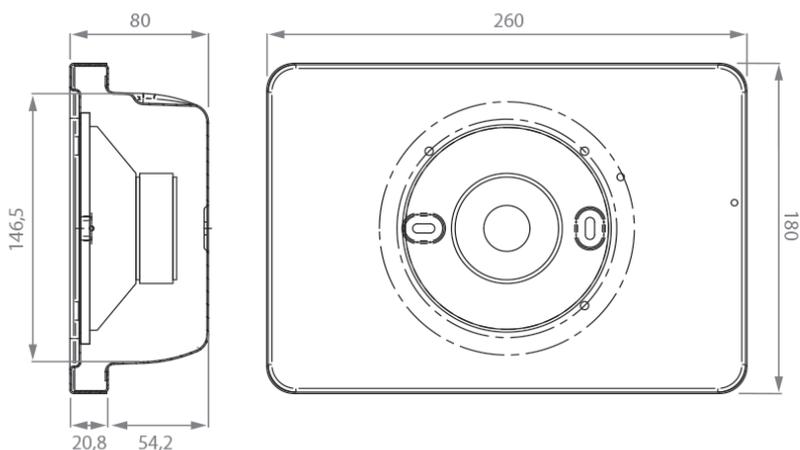
Circular chart of directional characteristic – horizontal:



Circular chart of directional characteristic – vertical:



		EST-W6
Electrical		
Rated power, W		6
Tappings 100 V line according to EN 54-24, W		6 / 3 / 1,5 / 0,75
Tappings 70V line, W		3 / 1,5 / 0,75 / 0,37
Transformer impedance, Ω		1667 / 3333 / 6667 / 13333
Driver impedance, Ω		8
Effective frequency range, Hz		120–20 000
Sensitivity @ 4 m, 1 W, dB		80
SPL @ 4 m, Rated power, dB		87
SPL @ 1 m, 1 W, dB, Test signal bandwidth 300Hz–6kHz		94
SPL @ 1 m, Rated power, dB, Test signal bandwidth 300Hz–6kHz		101
Dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]		180 / 180 / 163 / 80
Environmental		
Environmental type / IP Rating according to EN 54-24		A / IP21C
IP Rating		32
Min/Max Amb Temp		-10°C / 55°C
Mechanical		
Dimensions, mm		260 x 180 x 80
Net Weight, kg		1,75
Colour		White (RAL 9003)
Material		Steel
Mounting		Screw
Option		
For DC line monitoring		-
Colour optional		RAL Palette

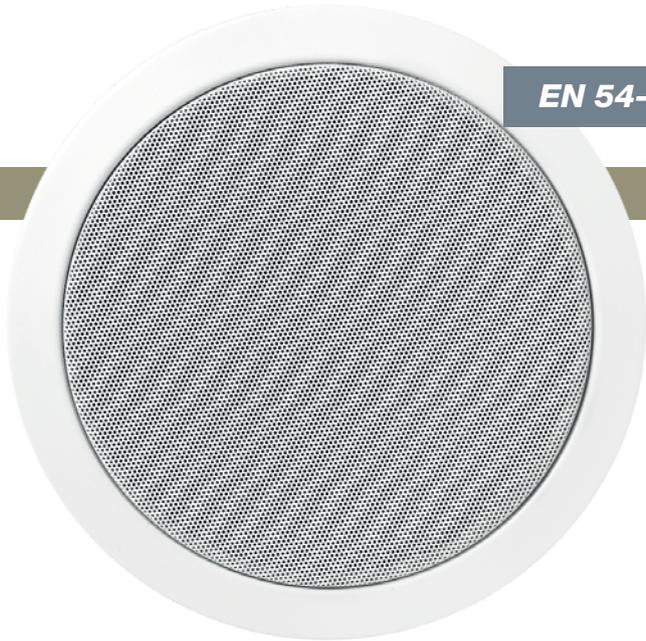


EST-S136

EN 54-24

Ceiling-mounted Loudspeakers

- Compliance with EN 54-24
- Compliance with BS5839-8 standard (Thermal protection)



Ceiling-mounted fire alarm loudspeakers EST-S136 are designed for applications which require the minimum size at the maximum sound quality. Their parameters have been carefully selected to match the operating requirements in the rooms exposed to after-sound and high-humidity.

Thanks to the most advanced technologies the EST-S series loudspeakers combine excellent acoustic parameters and high aesthetics with resistance to mechanical damages and varying weather conditions. They are distinguished by easy and quick installation.

Quality standards and audio characteristics have been confirmed through tests and trials in an anechoic chamber, resistance and integrity testing equipment, as well as chambers for resistance to weather and air humidity testing.

The need to maintain the best acoustic parameters, even with easily installed fire-protecting screens, was the idea underlying the design process. The EST-S series loudspeakers ensure a balanced sound which is extremely important in emission of highly understandable speech and reliable music reproduction.

The series of ceiling-mounted EST-S loudspeakers is noticeable thanks to its elegant looks. The loudspeaker part which becomes visible after the installation is protected by

means of electroplating and covered by a common and aesthetic white paint coat (RAL 9003) – optionally available other colours (RAL palette).

The entire EST-S series is equipped with a standardized fire dome made of soft steel and supplied with two cable penetrations with rubber glands. Special jig for sling assembling facilitates quick installation. The delivery comprises the 1-metre long sling. Two ceramic blocks and fireproof wiring coupled with temperature limit fuse are located under the screen. This solution ensures 100% protection of the sound-transmitting line from any break or short-circuits which may be produced as a result of loudspeaker burn. The individual power rating is selected by means of connection with applicable transformer branch.

EST-S series loudspeakers equipped with fire dome and thermal protections entirely comply with EN 54-24 Standards. In order to ensure 100% consistency with the highest quality standards we test our loudspeakers following the most meticulous procedures that warrant high parameters of sound emission, safety, and reliability.

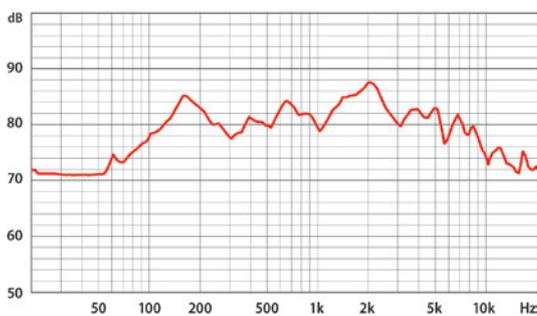
In spite of the fact our loudspeakers are designed for the highest reliability under fire conditions, their acoustic parameters and attractive low prices make them successful in any and all public address systems.

Characteristics

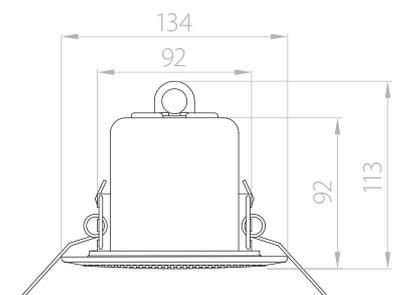
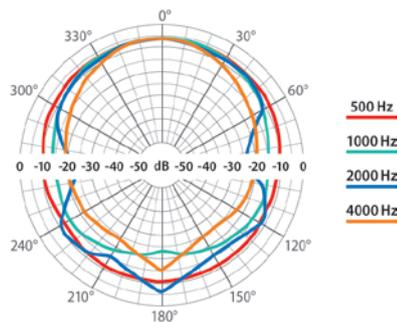
- Minimum dimensions
- A and C working environment, ideal for bathrooms
- The highest level of speech intelligibility
- Elegant looks
- 6 W transformer allowing a precise selection of loudspeaker output power
- 100% protection of line from breaks and short-circuits

		EST-S136
Electrical		
Rated power, W		6
Tappings 100 V line according to EN 54-24, W		6 / 3 / 1,5 / 0,75
Tappings 70V line, W		3 / 1,5 / 0,75 / 0,38
Transformer impedance, Ω 100V		1667 / 3333 / 6667 / 13333
Driver impedance, Ω		8
Effective frequency range, Hz		60–20000
Sensitivity @ 4m, 1W, dB		68
SPL @ 4m, Rated power, dB		78
SPL @ 1m, 1 W, dB, Test signal bandwidth 300 Hz–6 kHz		82
SPL @ 1m, Rated power, dB, Test signal bandwidth 300 Hz–6 kHz		90
Dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]		180 / 180 / 170 / 90
Environmental		
Environmental type / IP Rating according to EN 54-24		A, C / IP21C
IP Rating		32
Min/Max Amb Temp		-10°C / 55°C
Mechanical		
Dimensions, mm		Height 113 / ϕ 134
Net Weight, kg		0,82
Colour		White (RAL 9003)
Material		Steel
Mounting		Spring clamp
Cut-out, mm		ϕ 106
Option		
For DC line monitoring		–
Colour optional		RAL Palette

Frequency band:



Circular chart of directional characteristic:



EST-S206B

EN 54-24

Ceiling-mounted Loudspeakers

- Compliance with EN 54-24
- Certificate of Conformity: 1438-CPR-0634
- Compliance with BS5839-8 standard (Thermal protection)



Ceiling mounted fire alarm EST-S206B loudspeaker is designed for operations at high acoustic levels and the highest reduction in power supply. Actual wide band high efficiency ensures the best understanding of verbal messages. Its parameters have been carefully selected to comply with suspended ceiling applications, both at standard and considerably elevated ceiling-to-floor distance.

Thanks to the most advanced technologies EST-S206B loudspeaker combines excellent acoustic parameters and high aesthetics with resistance to mechanical damages. It is distinguished by easy and quick installation.

Quality standards and audio characteristics have been confirmed through tests and trials in an anechoic chamber, resistance and integrity testing equipment, as well as chambers for resistance to weather and air humidity testing.

The EST-S206B loudspeaker ensure a balanced sound which is extremely important in emission of highly understandable speech.

The EST-S206B loudspeaker is noticeable thanks to its elegant looks. The loudspeaker part which becomes visible after the installation is covered by a common and aesthetic white paint coat (RAL 9003) – optionally

available other colours (RAL palette).

EST-S206B is equipped with a standardized fire dome made of soft steel and supplied with two cable penetrations with rubber glands. Special jig for sling assembling facilitates quick installation. Ceramic blocks and fireproof wiring coupled with temperature limit fuse are located inside fire dome.

The individual power rating is selected by means of connection with applicable transformer branch.

EST-S206B loudspeaker equipped with fire dome and thermal protections entirely comply with EN 54-24 Standards. In order to ensure 100% consistency with the highest quality standards we test our loudspeaker following the most meticulous procedures that warrant high parameters of sound emission, safety, and reliability.

In spite of the fact our loudspeaker is designed for the highest reliability under fire conditions, their acoustic parameters and attractive low prices make them successful in any and all public address systems.

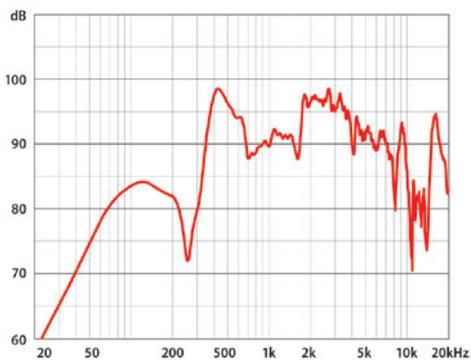
Characteristics

- The highest level of speech intelligibility
- Elegant looks
- 6 W transformer allowing a precise selection of loudspeaker output power
- 100% protection of line from breaks and short-circuits

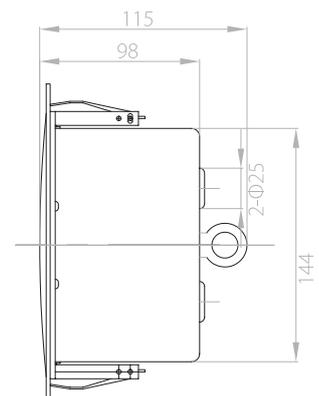
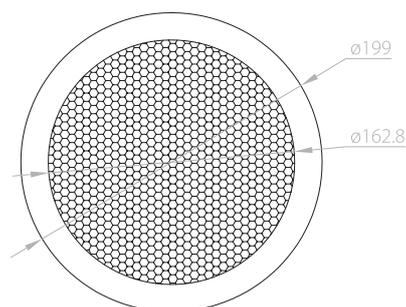
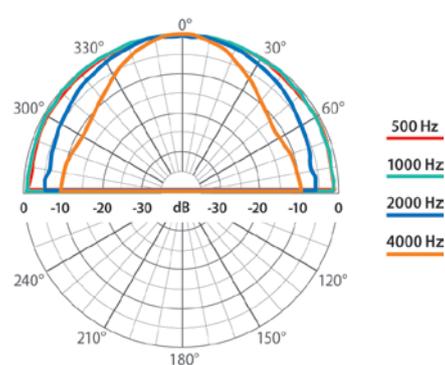


		EST-S206B
Electrical		
Rated power, W		6
Tappings 100 V line according to EN 54-24, W		6 / 3 / 1,5 / 0,75
Tappings 70 V line, W		3 / 1,5 / 0,75 / 0,37
Transformer impedance, Ω		1667 / 3333 / 6667 / 13333
Driver impedance, Ω		8
Effective frequency range, Hz		120–20 000
Sensitivity @ 4 m, 1 W, dB		81
SPL @ 4 m, Rated power, dB		88
SPL @ 1 m, 1 W, dB, Test signal bandwidth 300 Hz–6 kHz		93
SPL @ 1 m, Rated power, dB, Test signal bandwidth 300 Hz–6 kHz		101
Dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]		180 / 180 / 95 / 70
Environmental		
Environmental type / IP Rating according to EN 54-24		A / IP21C
IP Rating		32C
Min/Max Amb Temp		-10°C / 55°C
Mechanical		
Dimensions, mm		Height 115, ϕ 199
Net Weight, kg		1,13
Colour		White (RAL 9003)
Material		Steel
Mounting		Spring clamp
Cut-out, mm		ϕ 175
Option		
For DC line monitoring		-
Colour optional		RAL Palette

Frequency band:



Circular chart of directional characteristic:



EST-T1510

EN 54-24

Horn-type Loudspeakers

- Compliance with EN 54-24
- Compliance with BS5839-8 standard (Thermal protection)



Horn-type fire alarm EST-T loudspeakers are designed for either simple or most complex and sophisticated sound-transmitting applications. They combine excellent acoustic parameters and high aesthetics with resistance to mechanical damages and varying weather conditions as well as simple assembling and low price. Quality standards and audio characteristics have been confirmed through tests and trials in an anechoic chamber, resistance and integrity testing equipment, as well as chambers for resistance to weather and air humidity testing.

The EST-T series comprises highly efficient loudspeakers which produce sounds featuring directional characteristics and operate in any atmospheric conditions (A, B, C environmental type). Thanks to their balanced frequency band they guarantee high understanding of verbal communication. Their casings are made of ABS UL94V0, a synthetic material featuring high resistance to mechanical damages and self-extinguishing properties. Loudspeakers are perfectly protected from dust and humidity (IP66). The assembling jig ensures adjusting the inclination for the optimum coverage of the area of communications.

EST-T loudspeakers are applied on circulation routes and inside the rooms with high reverberation time as well as in widespread outdoor area broadcasting. They are perfect for sport sites, at swimming pools, in expo

and industrial halls, warehouses, open and underground car parks, and in open areas such as stadiums, parks, etc.

EST-T loudspeakers entirely comply with global requirements concerning evacuation systems, including the standards such as BS5839 Part 8 and EN 54-24. They have been certified for product compliance and acceptance by CNBOP. Ceramic blocks, internal flame-resistant wiring, and temperature limit fuses protect the broadcasting line from short-circuits or breaks and ensure continuous operations even in case of fire-produced damages or burns. The loudspeaker located in the zone of fire is isolated from the sound-transmitting line. A special design eliminates the risk of fall of any of its burnt components, which ensures safe fire escape process.

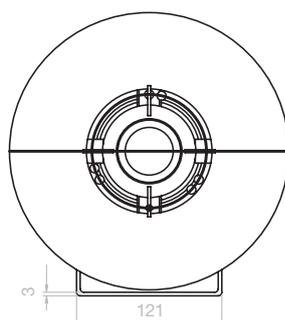
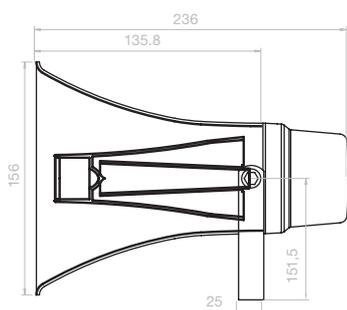
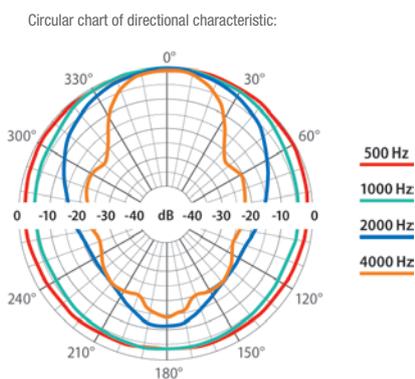
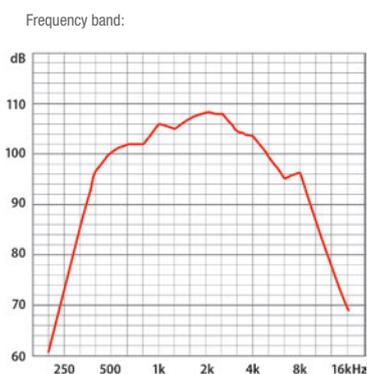
The individual rated power is selected by means of connection with applicable transformer branch. All the EST-T loudspeakers are designed so as to ensure continuous operations at rated parameters for at least 100 hours (consistent with IEC-268-5 Standard).

In spite of the fact our loudspeakers are designed for the highest reliability under fire conditions, they can be also used in any and all public address systems.

Characteristics

- Directional characteristic of sound emission and the highest verbal communication understanding
- All the working environments – A, B and C
- Wall and ceiling installation
- Protection from dust and humidity: IP66 rating
- Casing made of self-extinguishing ABS UL94V0 plastic, with steel assembling jig
- 100% line protection from short-circuit and break in fire conditions

		EST-T1510
Electrical		
Rated power, W		10
Tappings 100 V line according to EN 54-24, W		10 / 5 / 2,5 / 1,25
Tappings 70V line, W		5 / 2,5 / 1,25 / 0,62
Transformer impedance, Ω 100V		1000 / 2000 / 4000 / 8000
Driver impedance, Ω		8
Effective frequency range, Hz		340–9000
Sensitivity @ 4 m, 1 W, dB		86
SPL @ 4 m, Rated power, dB		96
SPL @ 1 m, 1 W, dB, Test signal bandwidth 300Hz–6kHz		103
SPL @ 1 m, Rated power, dB, Test signal bandwidth 300Hz–6kHz		113
Dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]		240 / 200 / 88 / 45
Environmental		
Environmental type / IP Rating according to EN 54-24		B / IP33C
IP Rating		66
Min/Max Amb Temp		-25°C / 70°C
Mechanical		
Dimensions, mm		Lenght 236, ϕ 156
Net Weight, kg		1,75
Colour		Light Grey (RAL 7035)
Material		ABS UL94V0
Mounting		Screw, U Type Bracket
Option		
For DC line monitoring		-
Colour optional		RAL Palette



ABT-LA30 / ABT-LA60

EN 54-24

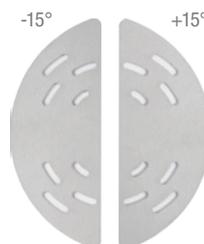
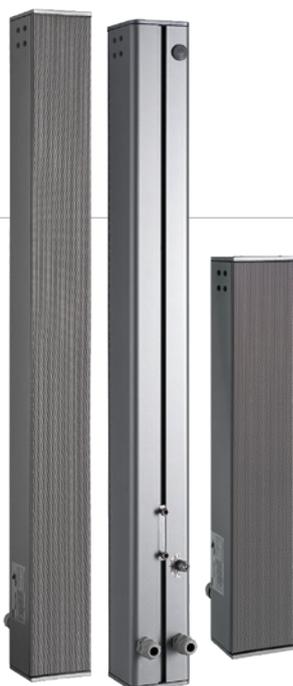
Line Array Loudspeakers Columns

- Compliance with EN 54-24
- Certificate of Conformity issued by CNBOP: 1438-CPR-0574
- Compliance with BS5839-8 standard (Thermal protection)

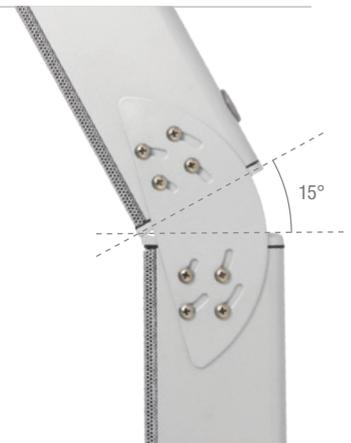
ABT-LA fire-alarm loudspeakers mean a new quality among the facilities of the kind. ABT-LA30 and ABT-LA60 units are line-array loudspeaker columns, which means they ensure considerably farther reach than conventional units at simultaneous maintenance of high uniformity of sound level in the area of broadcasting. Being line-array acoustic sources, ABT-LA columns feature a unique high directionality in vertical plane so that the sound they generate will rather go exactly towards the controlled audiospace instead of unwanted areas, such as e.g. ceiling or floor. ABT-LA columns are mostly designed for the rooms with high reverberation time as well as for other places where the quality of speech is reduced due to unfavourable conditions.

The ABT-LA design allows easy mechanical and electrical integration of the two columns into a single consistent unit which becomes a loudspeaker with higher power output and farther reach. It makes a better use of the benefits offered by the line-array source. Variable geometry of the column allows generating two sound beams to be randomly sent at various angles to the two different areas. Sound transfer band of the ABT-LA columns has been designed to achieve the highest possible fidelity of speech signal reproduction and to ensure unchallenged parameters of the quality of speech, all as required by the standards applicable to the Voice Evacuation Systems.

Solid aluminium enclosure, steel assembly jigs, and IP 65 guarantee long-term failure-free operations under any conditions, both in outdoor and indoor environments. The columns are entirely dustproof and resistant to the impact of direct water jet.



Connect angle:
-15° ÷ +15°



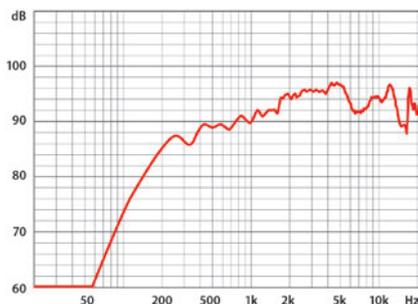
	ABT-LA30	ABT-LA60
Electrical		
Maximum power, W	48	96
Rated power, W	30	60
Tappings 100 V line according to EN 54-24, W	30 / 15 / 7,5 / 3,8	60 / 30 / 15 / 7,5
Tappings 70 V line	15 / 7,5 / 3,8 / 1,9	30 / 15 / 7,5 / 3,8
Transformer impedance, Ω 100V	333,3 / 666,6 / 1333,3 / 2631,5	166,6 / 333,3 / 666,6 / 1333,3
Driver impedance, Ω	12	6
Effective frequency range, Hz	141–20 000	136–20 000
Sensitivity @ 4 m, 1 W, dB	77	79
SPL @ 4m, Rated power, dB	90	94
SPL @ 1 m, 1 W, dB, Test signal bandwidth 300Hz–6kHz*	93	95
SPL @ 1 m, Rated power, db, Test signal bandwidth 300Hz–6kHz*	105	109
Horizontal dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]	360 / 220 / 185 / 120	360 / 215 / 185 / 115
Vertical dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]	250 / 75 / 35 / 15	95 / 35 / 15 / 5
Environmental		
Environmental type / IP Rating according to EN 54-24	B / IP33C	B / IP33C
IP Rating**	65	65
Min/Max Amb Temp	-25°C / 70°C	-25°C / 70°C
Mechanical		
Dimensions HxWxD, mm	510 × 80 × 110	870 × 80 × 110
Net Weight, kg	3,1	4,9
Colour	Silver (RAL 9006)	Silver (RAL 9006)
Enclosure material	Aluminium	Aluminium
Option		
For DC line monitoring	Capacitor	Capacitor
Colour optional	RAL Palette	RAL Palette
Ease Model	✓	✓

* calculated from line-array far field measurement at 8 m

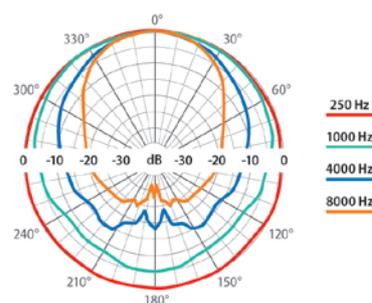
** parameters not confirmed by CNBOP-PIB

ABT-LA 30

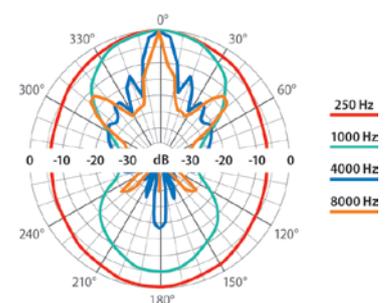
Frequency band:



Circular chart of directional characteristic – horizontal:

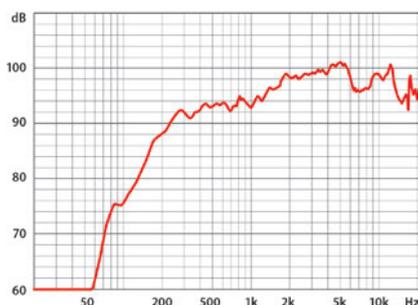


Circular chart of directional characteristic – vertical:

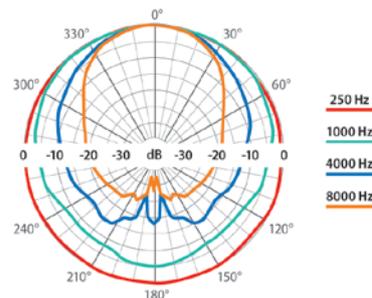


ABT-LA 60

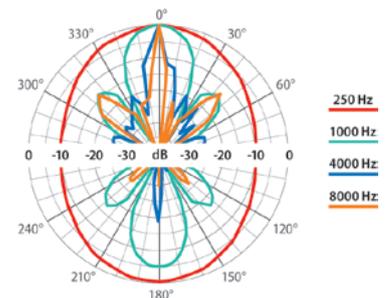
Frequency band:



Circular chart of directional characteristic – horizontal:



Circular chart of directional characteristic – vertical:



ABT-S276/AB

EN 54-24

Ceiling-mounted AB Loudspeaker

- Compliance with EN 54-24
- Certificate of Conformity issued by CNBOP: 1438-CPR-0414
- Compliance with BS5839-8 standard (Thermal protection)
- 6-watt transformer enabling precise handling of loudspeaker power
- Optimised level of speech intelligibility
- Operation of two A/B loudspeaker lines



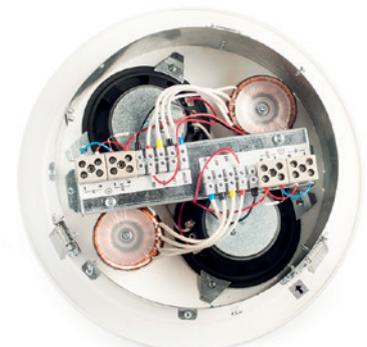
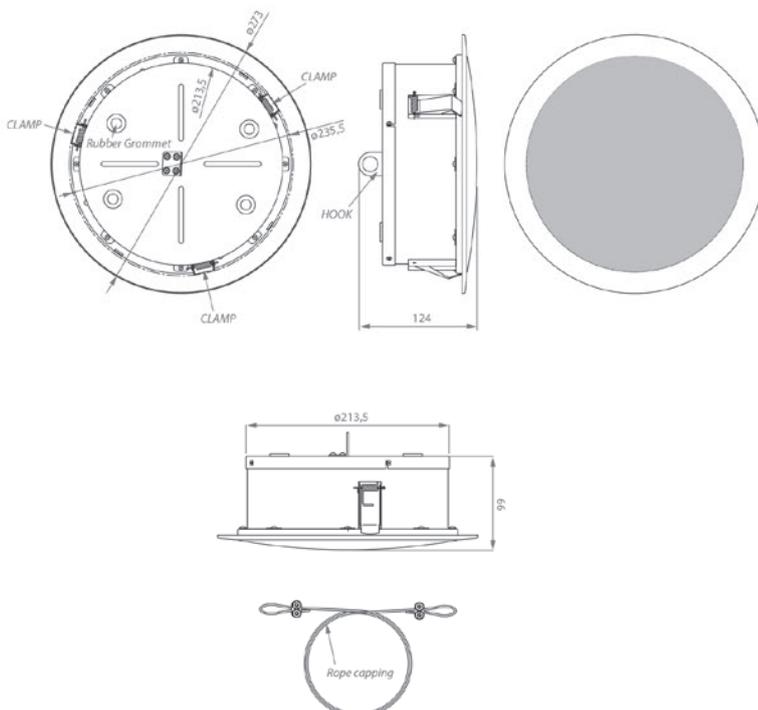
The ceiling-mounted ABT-S276/AB loudspeaker has been designed to guarantee the highest acoustic quality of speech and sound recordings even in difficult conditions. It is meant to be mounted on ceilings (incl. suspended ones).

Unlike the standard ceiling fire alarm loudspeakers, the ABT-S276/AB is equipped with two in-built electro-acoustic transducers, two transformers and two separate sets of ceramic clamps and fuses, which allows connectivity of two independent A/B

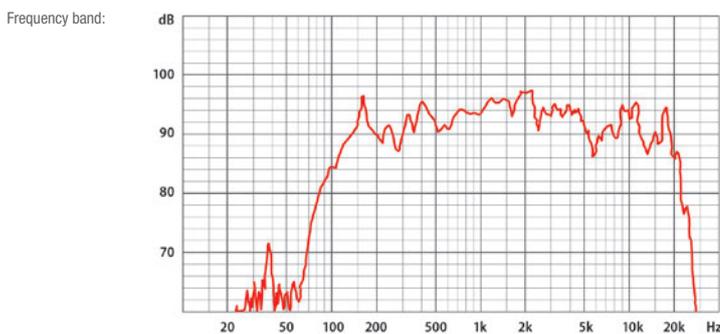
loudspeaker lines. ABT-S276/AB has been designed for application in rooms of such size and acoustic conditions that the design proposes one ceiling-mounted loudspeaker of VES standard. In case of a single fault on the loudspeaker line, there is no loss of the sound coverage area in rooms with installed ceiling-mounted ABT-S276/AB loudspeakers.

ABT-S276/AB is equipped with an additional mounting lug allowing attachment of a safety steel line fastened on the other side with a steel pin secured to construction

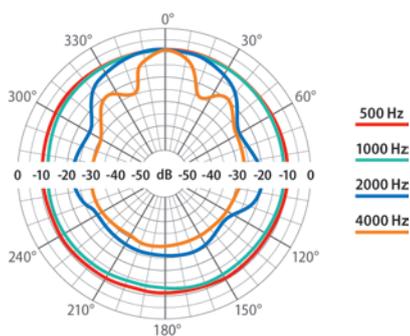
elements of adequate fire-resistance e.g. the ceiling. Such a solution enables mounting the loudspeaker to surfaces of zero fire-resistance rating. The loudspeaker offers adjustable power regulation through connectivity to applicable transformer tapings thus enabling application of suitable acoustic pressure (the level of sound) within areas of sound emission adequately to the character and acoustic conditions existing in those areas.



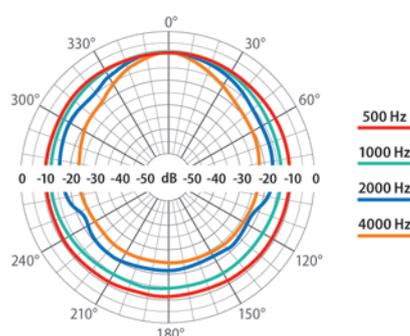
		ABT-S276/AB
Electrical		
Number of transducers		2
Rated power, W		2x 6
Tappings 100 V line according to EN 54-24, W		2x 6 / 3 / 1,5 / 0,75
Tappings 70V line, W		2x 3 / 1,5 / 0,75 / 0,37
Transformer impedance, Ω 100V		2x 1667 / 3333 / 6666 / 13333
Driver impedance, Ω		8
Effective frequency range, Hz		100 – 20 000
Sensitivity @ 4 m, 1 W, dB		85
SPL @ 4 m, Rated power, dB		91
SPL @ 1 m, 1 W, dB, Test signal bandwidth 300Hz–6kHz		97
SPL @ 1 m, Rated power, dB, Test signal bandwidth 300Hz–6kHz		103
Dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]		180 / 175 / 163 / 90
Environmental		
Environmental type / IP Rating according to EN 54-24		A / IP21C
IP Rating		32
Min/Max Amb Temp		-10°C / 55°C
Mechanical		
Dimensions, mm		Height 124 mm , \varnothing 273
Net Weight, kg		2,29
Colour		White (RAL 9003)
Material		Steel
Mounting		Spring clamp
Option		
For DC line monitoring		Capacitor
Colour optional		RAL Palette
Ease Model		
		✓



Circular chart of directional characteristic – horizontal:



Circular chart of directional characteristic – vertical:



ABT-S106

EN 54-24

Ceiling-mounted loudspeakers

- Compliance with EN 54-24
- Certificate of Conformity: 1438-CPR-0635
- Compliance with BS5839-8 standard (Thermal protection)



Ceiling-mounted fire alarm loudspeakers ABT-S106 are designed for applications which require the minimum size at the maximum sound quality. Their parameters have been carefully selected to match the operating requirements in the rooms exposed to after-sound and high-humidity.

Thanks to the most advanced technologies the ABT-S series loudspeakers combine excellent acoustic parameters and high aesthetics with resistance to mechanical damages and varying weather conditions. They are distinguished by easy and quick installation.

Quality standards and audio characteristics have been confirmed through tests and trials in an anechoic chamber, resistance and integrity testing equipment, as well as chambers for resistance to weather and air humidity testing.

The need to maintain the best acoustic parameters, even with easily installed fire-protecting screens, was the idea underlying the design process. The ABT-S series loudspeakers ensure a balanced sound which is extremely important in emission of highly understandable speech and reliable music reproduction.

The series of ceiling-mounted ABT-S loudspeakers is noticeable thanks to its elegant looks. The loudspeaker part which becomes visible after the installation is protected

by means of electroplating and covered by a common and aesthetic white paint coat (RAL 9003) – optionally available other colours (RAL palette).

The entire ABT-S series is equipped with a standardized fire dome made of soft steel and supplied with two cable penetrations with rubber glands. Special jig for sling assembling facilitates quick installation. The delivery comprises the 1-metre long sling. Two ceramic blocks and fireproof wiring coupled with temperature limit fuse are located under the screen. This solution ensures 100% protection of the sound-transmitting line from any break or short-circuits which may be produced as a result of loudspeaker burn. The individual power rating is selected by means of connection with applicable transformer branch.

ABT-S series loudspeakers equipped with fire dome and thermal protections entirely comply with EN 54-24 Standards. In order to ensure 100% consistency with the highest quality standards we test our loudspeakers following the most meticulous procedures that warrant high parameters of sound emission, safety, and reliability.

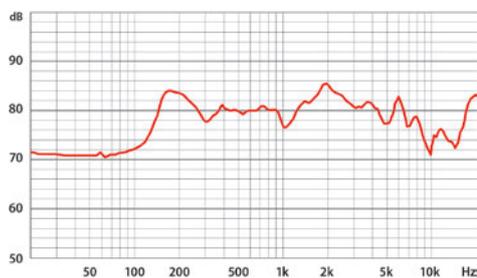
In spite of the fact our loudspeakers are designed for the highest reliability under fire conditions, their acoustic parameters and attractive low prices make them successful in any and all public address systems.

Characteristics

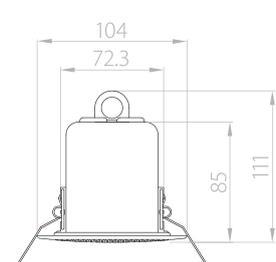
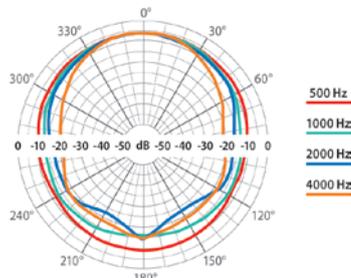
- Minimum dimensions
- A and C working environment, ideal for bathrooms
- Exceptionally reliable reproduction of full band music
- The highest level of speech intelligibility
- Elegant looks
- 6 W transformer allowing a precise selection of loudspeaker output power
- 100% protection of line from breaks and short-circuits

	ABT-S106
Electrical	
Rated power, W	6
Tappings 100 V line according to EN 54-24, W	6 / 3 / 1,5 / 0,75
Tappings 70V line, W	3 / 1,5 / 0,75 / 0,38
Transformer impedance, Ω 100 V	1667 / 3333 / 6667 / 13333
Driver impedance, Ω	8
Effective frequency range, Hz	100–20000
Sensitivity @ 4 m, 1 W, dB	65
SPL @ 4 m, Rated power, dB	76
SPL @ 1 m, 1 W, dB, Test signal bandwidth 300 Hz–6 kHz	80
SPL @ 1 m, Rated power, dB, Test signal bandwidth 300 Hz–6 kHz	88
Dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]	180 / 180 / 170 / 150
Environmental	
Environmental type / IP Rating according to EN 54-24	A, C / IP21C
IP Rating	32
Min/Max Amb Temp	-10°C / 55°C
Mechanical	
Dimensions, mm	Height 111, ϕ 104
Net Weight, kg	0,72
Colour	White (RAL 9003)
Material	Steel
Mounting	Spring clamp
Cut-out, mm	ϕ 85
Option	
For DC line monitoring	Capacitor
Colour optional	RAL Palette
Ease Model	✓

Frequency band:



Circular chart of directional characteristic:

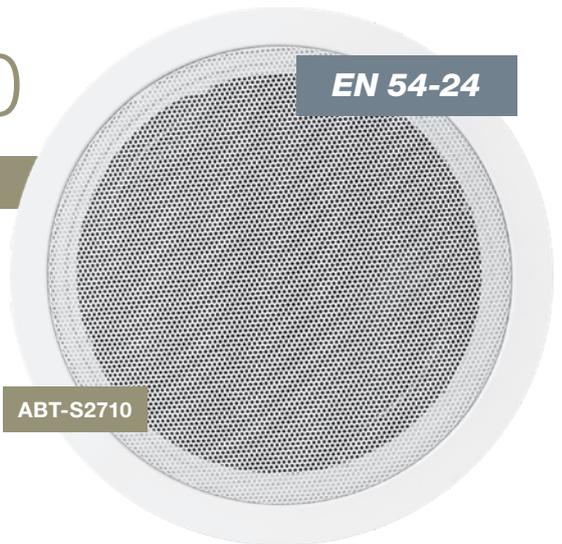


ABT-S2010 / ABT-S2710

EN 54-24

Ceiling-mounted loudspeakers

- Compliance with EN 54-24
- Certificate of Conformity: 1488-CPR-0170/W
- Compliance with BS5839-8 standard (Thermal protection)



Ceiling mounted fire alarm ABT-S2010 and ABT-S2710 loudspeakers are designed for operations at high acoustic levels and the highest reduction in power supply. Actual wide band high efficiency ensures the best understanding of verbal messages. Their parameters have been carefully selected to comply with false ceiling applications, both at standard and considerably elevated ceiling-to-floor distance.

Thanks to the most advanced technologies the ABT-S series loudspeakers combine excellent acoustic parameters and high aesthetics with resistance to mechanical damages and varying weather conditions. They are distinguished by easy and quick installation.

Quality standards and audio characteristics have been confirmed through tests and trials in an anechoic chamber, resistance and integrity testing equipment, as well as chambers for resistance to weather and air humidity testing.

The need to maintain the best acoustic parameters, even with easily installed fire-protecting screens, was the idea underlying the design process. The ABT-S series loudspeakers ensure a balanced sound which is extremely important in emission of highly understandable speech and reliable music reproduction.

The series of ceiling-mounted ABT-S loudspeakers is noticeable thanks to its elegant looks. The loudspeaker part which becomes

visible after the installation is protected by means of electroplating and covered by a common and aesthetic white paint coat (RAL 9003) – optionally available other colours (RAL palette).

The entire ABT-S series is equipped with a standardized fire dome made of soft steel and supplied with two cable penetrations with rubber glands. Special jig for sling assembling facilitates quick installation. The delivery comprises the 1-metre long sling. Two ceramic blocks and fireproof wiring coupled with temperature limit fuse are located under the screen. This solution ensures 100% protection of the sound-transmitting line from any break or short-circuits which may be produced as a result of loudspeaker burn. The individual power rating is selected by means of connection with applicable transformer branch.

ABT-S series loudspeakers equipped with fire dome and thermal protections entirely comply with EN 54-24 Standards. In order to ensure 100% consistency with the highest quality standards we test our loudspeakers following the most meticulous procedures that warrant high parameters of sound emission, safety, and reliability.

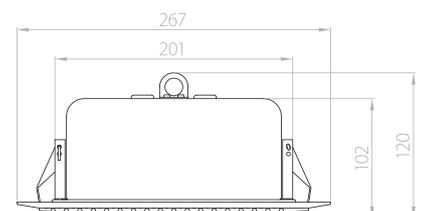
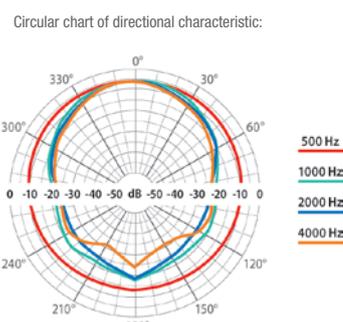
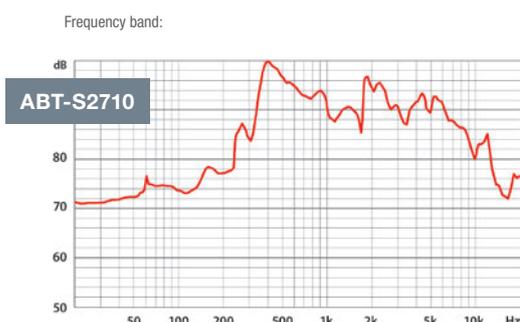
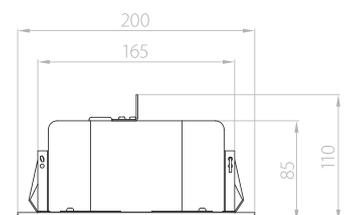
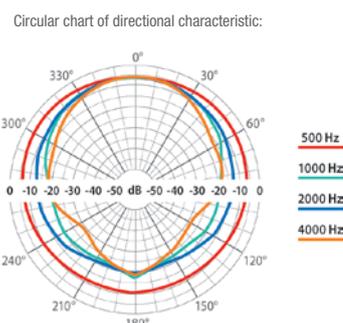
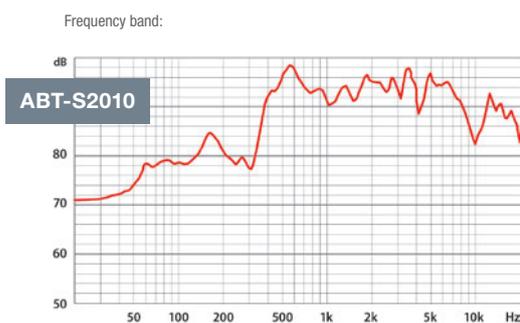
In spite of the fact our loudspeakers are designed for the highest reliability under fire conditions, their acoustic parameters and attractive low prices make them successful in any and all public address systems.

Characteristics

- High efficiency
- High acoustic pressure level
- Exceptionally reliable full band music reproduction
- The highest level of speech intelligibility
- Elegant looks
- 10 W transformer allowing precise selection of loudspeaker output power
- 100% protection of line from breaks and short-circuits



	ABT-S2010	ABT-S2710
Electrical		
Rated power, W	10	10
Tappings 100 V line according to EN 54-24, W	10 / 5 / 2,5 / 1,25	10 / 5 / 2,5 / 1,25
Tappings 70V line, W	5 / 2,5 / 1,25 / 0,625	5 / 2,5 / 1,25 / 0,625
Transformer impedance, Ω 100V	1000 / 2000 / 4000 / 8000	1000 / 2000 / 4000 / 8000
Driver impedance, Ω	8	8
Effective frequency range, Hz	150–20000	100–20000
Sensitivity @ 4 m, 1 W, dB	77	78
SPL @ 4 m, Rated power, dB	90	92
SPL @ 1 m, 1 W, dB, Test signal bandwidth 300 Hz–6 kHz	94	95
SPL @ 1 m, Rated power, dB, Test signal bandwidth 300 Hz–6 kHz	104	105
Dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]	180 / 170 / 115 / 55	180 / 170 / 90 / 60
Environmental		
Environmental type / IP Rating according to EN 54-24	A / IP21C	A / IP21C
IP Rating	32	32
Min/Max Amb Temp	-10°C / 55°C	-10°C / 55°C
Mechanical		
Dimensions, mm	Height 110, \varnothing 200	Height 120, \varnothing 267
Net Weight, kg	1,4	1,75
Colour	White (RAL 9003)	
Material	Steel	
Mounting	Spring clamp	
Cut-out, mm	\varnothing 172	\varnothing 222
Option		
For DC line monitoring	Capacitor	
Colour optional	RAL Palette	
Ease Model	✓	

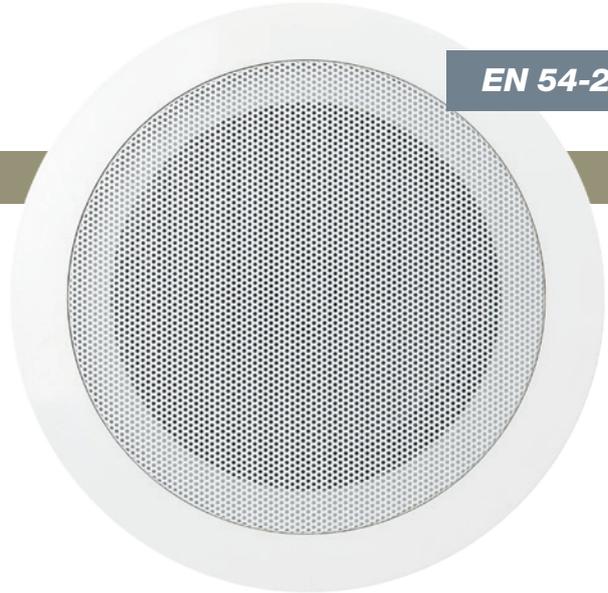


ABT-S186

EN 54-24

Ceiling-mounted loudspeakers

- Full compliance with EN 54-24 Standard
- Compliance with BS5839-8 standard (Thermal protection)
- Certificate of Conformity: 1438-CPR-0648



Ceiling mounted fire alarm ABT-S186 loudspeaker is designed for operations at high acoustic levels. Actual wide band high efficiency ensures the best understanding of verbal messages. Its parameters have been carefully selected to comply with suspended ceiling applications.

Thanks to the most advanced technologies ABT-S186 loudspeaker combines excellent acoustic parameters and high aesthetics. It is distinguished by easy and quick installation.

Quality standards and audio characteristics have been confirmed through tests and trials in an anechoic chamber, resistance and integrity testing equipment, as well as chambers for resistance to weather and air humidity testing.

The ABT-S186 loudspeaker ensure a balanced sound which is extremely important in emission of highly understandable speech.

ABT-S186 is equipped with a standardized fire dome made of ABS and supplied with two cable penetrations with rubber glands.

The individual power rating is selected by means of connection with applicable transformer branch.

ABT-S186 loudspeaker equipped with fire dome, ceramic block and thermal protections entirely comply with EN 54-24 Standard. In order to ensure 100% consistency with the highest quality standards we test our loudspeakers following the most meticulous procedures that warrant high parameters of sound emission, safety, and reliability.

In spite of the fact our loudspeaker is designed for the highest reliability under fire conditions, their acoustic parameters and attractive low prices make them successful in any and all public address systems.

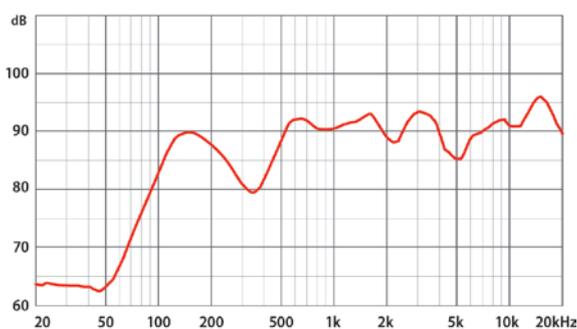
Characteristics

- The highest level of speech intelligibility
- Elegant looks
- 6 W transformer allowing a precise selection of loudspeaker output power
- 100% protection of line from breaks and short-circuits

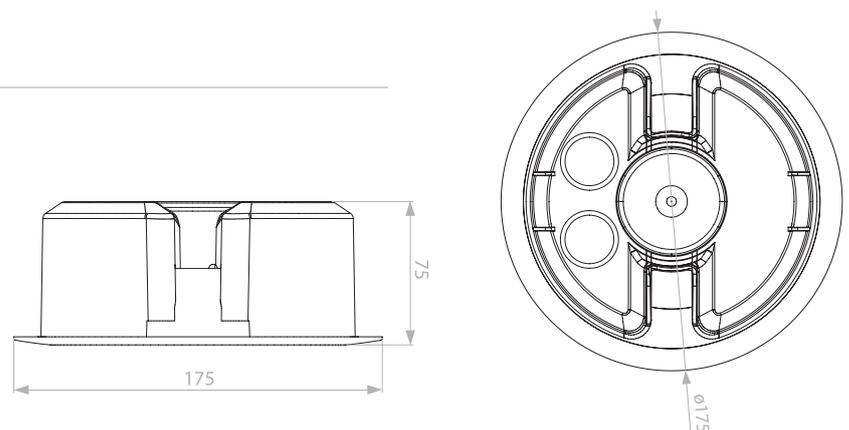
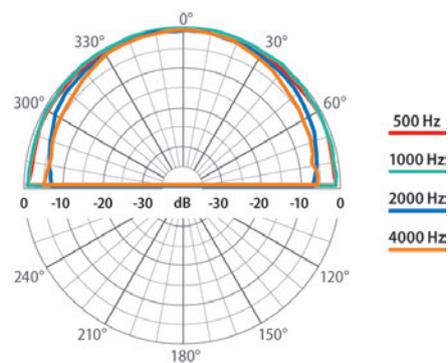


		ABT-S186
Electrical		
Rated power, W		6
Tappings 100 V line according to EN 54-24, W		6 / 3 / 1,5 / 0,75
Tappings 70 V line, W		3 / 1,5 / 0,75 / 0,37
Transformer impedance, Ω		1667 / 3333 / 6667 / 13333
Driver impedance, Ω		8
Effective frequency range, Hz		120–20 000
Sensitivity @ 4 m, 1 W, dB		79
SPL @ 4 m, Rated power, dB		86
SPL @ 1 m, 1 W, dB, Test signal bandwidth 300 Hz–6 kHz		91
SPL @ 1 m, Rated power, dB, Test signal bandwidth 300 Hz–6 kHz		99
Dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]		180 / 180 / 150 / 90
Environmental		
Environmental type / IP Rating according to EN 54-24		A / IP21C
IP Rating		32C
Min/Max Amb Temp		-10°C / 55°C
Mechanical		
Dimensions, mm		Height 75, ϕ 175
Net Weight, kg		0,66
Colour		White (RAL 9003)
Material		ABS
Mounting		Spring clamp
Cut-out, mm		ϕ 150
Option		
For DC line monitoring		Capacitor (ABT-S186C)

Frequency band:



Circular chart of directional characteristic:



MCR-SMSP20

EN 54-24

Sound Projectors

- Compliance with EN 54-24
- Certificate of Conformity issued by ITB: 1488-CPR-0167/W
- Compliance with BS5839-8 standard (Thermal protection)



Fire alarm MCR-SMSP20 loudspeakers have been designed and manufactured for the most demanding customers as well as to meet the requirements of the most complex and sophisticated sound transmitting applications. Thanks to the contribution of advanced technologies they combine excellent acoustic parameters and high aesthetics with resistance to mechanical damages and varying weather conditions as well as low prices. Their additional quality is an exceptionally quick and simple installation.

Quality standards and audio characteristics have been confirmed through tests and trials in an anechoic chamber, resistance and integrity testing equipment, as well as chambers for resistance to weather and air humidity testing. The need to maintain the best acoustic parameters was the idea underlying the design process.

MCR-SMSP20 loudspeaker models emitting the sound which features directional characteristic and high efficiency. 5-inch 2-cone wide band loudspeakers used in these series are excellent alternative solution for horn-type units due to wide frequency band. They prove excellent in both musical and verbal applications. Loudspeakers are enclosed in round casings made of extruded aluminium; they feature a high class of protection from humidity. Thanks to directional characteristic of sound propagation our loudspeakers are mostly applied on circulation routes and in wide area sound emission. Due to resistance to weather conditions the loudspeakers prove excellent in industrial halls, warehouses, as well as partly open spaces exposed to outdoor weather conditions.

Apart from high mechanical and functional resistance MCR-SMSP20 loudspeakers entirely comply with global requirements for systems, including also the British Standard No. BS5839 Part 8 and EN 54-24. They have been certified by ITB.

Technical solutions applied in the design ensure continuous operations of sound-transmitting line connected with the loudspeaker even in the case the latter is damaged or burnt as a result of fire. The said protection is composed of ceramic blocks installed inside the loudspeaker, internal fireproof wiring, and temperature limit fuse. Two sound-transmission cable penetrations in the casing are insulated by means of two cable glands. Inside the fire zone the loudspeaker is isolated from the entire line, which ensures line continuity and uninterrupted broadcasting of emergency messages. The individual power rating is selected by means of connection with applicable transformer branch.

MCR-SMSP20 is designed for continuous operations at rated parameters for at least 100 hours in compliance with the IEC-268-5 Standard.

To be quite sure our loudspeakers comply with the highest quality standards we test them thoroughly following the most meticulous procedures that warrant excellent parameters of sound emission, safety and reliability.

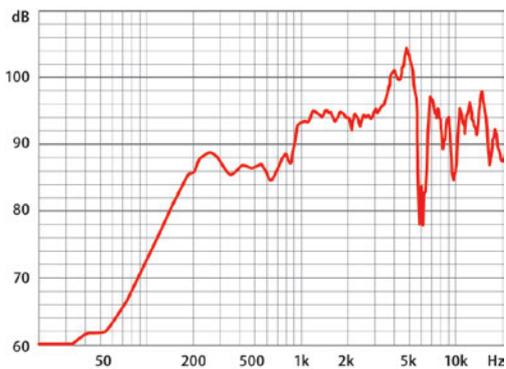
Characteristics

- Designed to achieve directional characteristic of sound emission
- 20 W transformer with multiple branches ensuring accurate selection of output power
- Enclosed in an advance and functional cylindrical casing made of extruded aluminium
- Ideal for either ceiling or wall installation
- Fireproof casing with ceramic block and thermal fuse
- Fireproof internal wiring
- High sound quality in music and speech emission

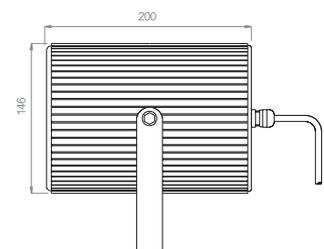
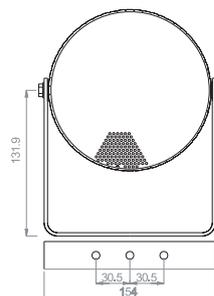
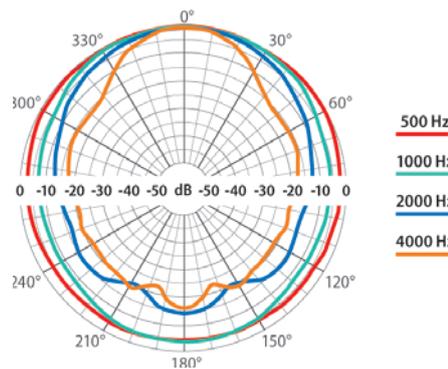


		MCR-SMSP20
Electrical		
Rated power, W		20
Tappings 100 V line according to EN 54-24, W		20 / 10 / 5 / 2,5
Tappings 70V line, W		10 / 5 / 2,5 / 1,25
Transformer impedance, Ω 100V		500 / 1000 / 2000 / 4000
Driver impedance, Ω		8
Effective frequency range, Hz		150–20000
Sensitivity @ 4m, 1 W, dB		78
SPL @ 4m, Rated power, dB		92
SPL @ 1m, 1 W, dB, Test signal bandwidth 300Hz–6kHz		92
SPL @ 1m, Rated power, dB, Test signal bandwidth 300Hz–6kHz		105
Dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]		360 / 230 / 120 / 65
Environmental		
Environmental type / IP Rating according to EN 54-24		B / IP33C
IP Rating*		66
Min/Max Amb Temp		-25°C / 70°C
Mechanical		
Dimensions, mm		Lenght 200, ϕ 146
Net Weight, kg		2,45
Colour		Light Grey (RAL 7035)
Material		Aluminium
Mounting		Screw, U Type bracket
Option		
Colour optional		RAL Palette
Ease Model		✓

Frequency band:



Circular chart of directional characteristic:



ABT-T2215 / ABT-T2430

EN 54-24

Horn-type Loudspeakers

- Compliance with EN 54-24
- Certificate of Conformity issued by CNBOP: 1438-CPR-0640
- Compliance with BS5839-8 standard (Thermal protection)



Horn-type fire alarm ABT-T loudspeakers are designed for either simple or most complex and sophisticated sound-transmitting applications. They combine excellent acoustic parameters and high aesthetics with resistance to mechanical damages and varying weather conditions as well as simple assembling and low price. Quality standards and audio characteristics have been confirmed through tests and trials in an anechoic chamber, resistance and integrity testing equipment, as well as chambers for resistance to weather and air humidity testing.

The ABT-T series comprises highly efficient loudspeakers which produce sounds featuring directional characteristics and operate in any atmospheric conditions (A, B, C environmental type). Thanks to their balanced frequency band they guarantee high understanding of verbal communication. Their casings are made of ABS UL94V0, a synthetic material featuring high resistance to mechanical damages and self-extinguishing properties. Loudspeakers are perfectly protected from dust and humidity (IP66). The assembling jig ensures adjusting the inclination for the optimum coverage of the area of communications.

ABT-T loudspeakers are applied on circulation routes and inside the rooms with high reverberation time as well as in widespread outdoor area broadcasting. They are perfect for sport sites, at swimming pools, in expo

and industrial halls, warehouses, open and underground car parks, and in open areas such as stadiums, parks, etc.

ABT-T loudspeakers entirely comply with global requirements concerning evacuation systems, including the standards such as BS5839 Part 8 and EN 54-24. They have been certified for product compliance and acceptance by CNBOP. Ceramic blocks, internal flame-resistant wiring, and temperature limit fuses protect the broadcasting line from short-circuits or breaks and ensure continuous operations even in case of fire-produced damages or burns. The loudspeaker located in the zone of fire is isolated from the sound-transmitting line. A special design eliminates the risk of fall of any of its burnt components, which ensures safe fire escape process.

Our ABT-T loudspeaker offer comprises two power rating models, i.e. 15 W, and 30 W. The individual rated power is selected by means of connection with applicable transformer branch. All the ABT-T loudspeakers are designed so as to ensure continuous operations at rated parameters for at least 100 hours (consistent with IEC-268-5 Standard).

In spite of the fact our loudspeakers are designed for the highest reliability under fire conditions, they can be also used in any and all public address systems.

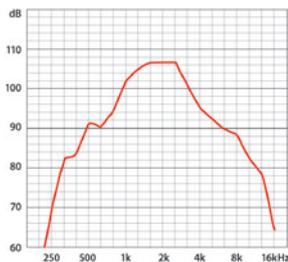
Characteristics

- Directional characteristic of sound emission and the highest verbal communication understanding
- All the working environments – A, B and C
- Wall and ceiling installation
- Protection from dust and humidity: IP66 rating
- Casing made of self-extinguishing ABS UL94V0 plastic, with steel assembling jig
- 100% line protection from short-circuit and break in fire conditions

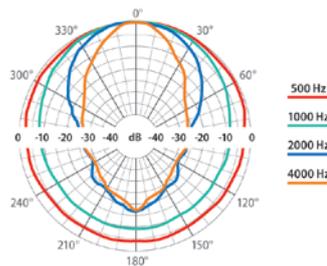
	ABT-T2215	ABT-T2430
Electrical		
Rated power, W	15	30
Tappings 100 V line according to EN 54-24, W	15 / 7,5 / 3,75 / 1,87	30 / 15 / 7,5 / 3,75
Tappings 70V line, W	7,5 / 3,75 / 1,87 / 0,94	15 / 7,5 / 3,75 / 1,87
Transformer impedance, Ω 100V	667 / 1330 / 2770 / 5330	333 / 666 / 1330 / 2660
Driver impedance, Ω	8	8
Effective frequency range, Hz	460–9000	400–7500
Sensitivity @ 4 m, 1 W, dB	87	88
SPL @ 4 m, Rated power, dB	100	103
SPL @ 1 m, 1 W, dB, Test signal bandwidth 300Hz–6kHz	104	105
SPL @ 1 m, Rated power, dB, Test signal bandwidth 300Hz–6kHz	116	120
Dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]	180 / 121 / 68 / 36	180 / 120 / 75 / 41
Environmental		
Environmental type / IP Rating according to EN 54-24	B / IP33C	B / IP33C
IP Rating	66	66
Min/Max Amb Temp	-25°C / 70°C	-25°C / 70°C
Mechanical		
Dimensions, mm	Lenght 284, \varnothing 216	Lenght 325, \varnothing 233
Net Weight, kg	1,95	2,20
Colour	Light Grey (RAL 7035)	
Material	ABS UL94V0	
Mounting	Screw, U Type Bracket	
Option		
For DC line monitoring	Capacitor	
Colour optional	RAL Palette	
Ease Model	✓	

Frequency band:

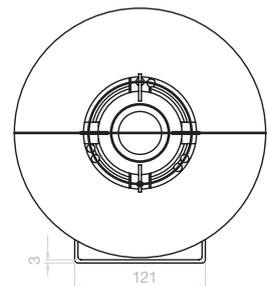
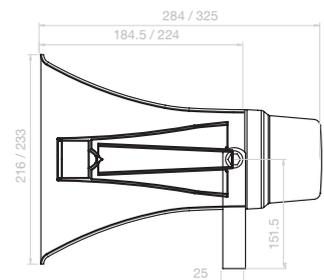
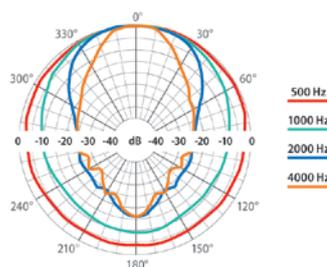
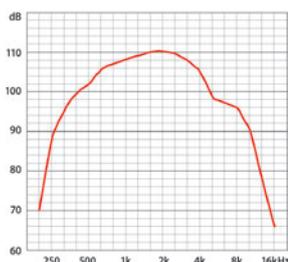
ABT-T2215



Circular chart of directional characteristic:



ABT-T2430



ABT-HP240EN ABT-HP120EN

EN 54-24

High Power Loudspeaker

- Compliance with EN 54-24
- Certificate of Conformity issued by CNBOP: 1438-CPR-0482
- 240 W and 120 W transformers 100V
- Highest level of speech intelligibility
- Waterproof housing IP65
- Wide frequency range suitable for music
- Compliance with BS5839-8 standard (Thermal protection)



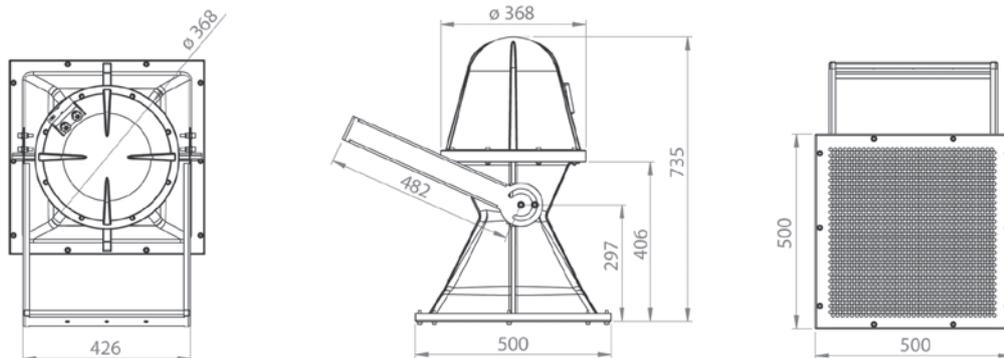
ABT-HP240EN and ABT-HP120HP are powerful loudspeakers designed for sport venues. They are two-way loudspeaker equipped with electroacoustic transducers 12" + 1,75" and 8" + 1,3". These speakers sets have a wide effective frequency band, which is perfect for

the transmission of verbal and musical communication.

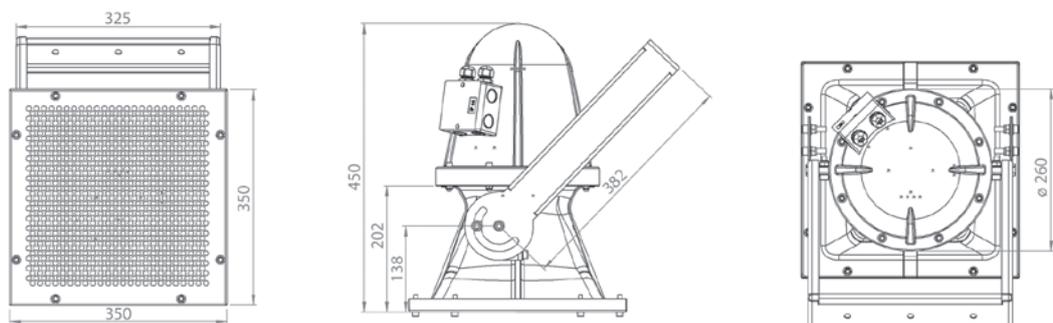
Universal mounting method allows to mount the speakers in a simple manner. Waterproof housing makes that it can be successfully used outdoors (stadiums, halls, etc.).

ABT-HP240EN and ABT-HP120EN are equipped with the necessary instrumentation required to connect them to the voice evacuation system. Between the ceramic block and speaker transformer there is installed thermal fuse isolating transformer from a loudspeaker line.

ABT-HP240EN



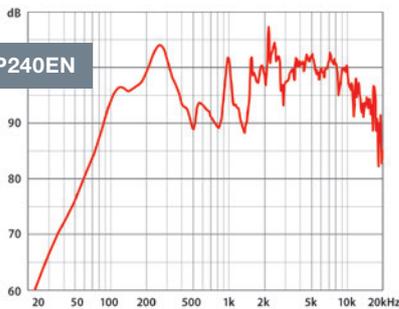
ABT-HP120EN



	ABT-HP240EN66	ABT-HP240EN94	ABT-HP120EN66	ABT-HP120EN94
Electrical				
Number of transducers	2	2	2	2
Rated power, W	240	240	120	120
Tappings 100 V line according to EN 54-24, W	240 / 120 / 60	240 / 120 / 60	120 / 60 / 30	120 / 60 / 30
Tappings 70V line, W	120 / 60 / 30	120 / 60 / 30	60 / 30 / 15	60 / 30 / 15
Transformer impedance @100 V, Ω	42 / 84 / 167	42 / 84 / 167	84 / 167 / 333	84 / 167 / 333
Driver impedance, Ω	8	8	8	8
Effective frequency range, Hz	65 – 20 000	65 – 20 000	85 – 20 000	85 – 20 000
Sensitivity @ 4 m, 1 W, dB	84	84	81	81
SPL @ 4 m, Rated power, dB	108	108	105	105
SPL @ 1 m, 1 W, dB	96	96	93	93
SPL @ 1 m, Rated power, dB	120	120	117	117
Horizontal dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]	110 / 60 / 65 / 55	110 / 60 / 85 / 55	160 / 90 / 45 / 35	165 / 120 / 80 / 60
Vertical dispersion at 500 Hz / 1 kHz / 2 kHz / 4 kHz, [°]	105 / 60 / 65 / 55	105 / 65 / 80 / 65	160 / 90 / 45 / 35	160 / 100 / 65 / 45
Environmental				
Environmental type / IP Rating according to EN 54-24			B / IP33C	
IP Rating			IP65	
Min/Max Amb Temp			-25°C / 70°C	
Mechanical				
Dimensions, mm	500 × 500 × 735	500 × 500 × 735	350 × 350 × 450	350 × 350 × 450
Net Weight, kg	29	29	16	16
Colour			Black (RAL 9005)	
Material			Glass fiber	
Mounting			U Type Bracket	
Option				
Colour optional			RAL Palette	
Ease Model				
			✓	

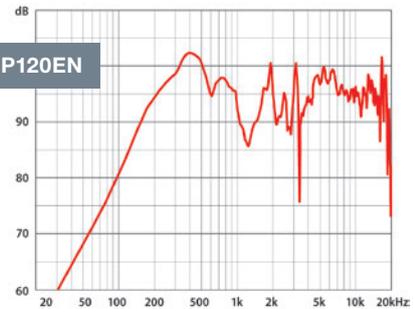
Frequency band:

ABT-HP240EN



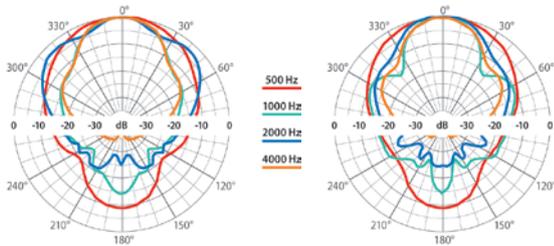
Frequency band:

ABT-HP120EN

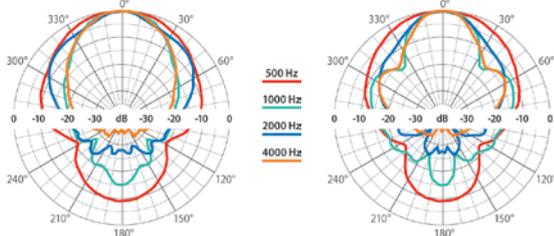


horizontal << circular chart of directional characteristic >> vertical

ABT-HP240EN66

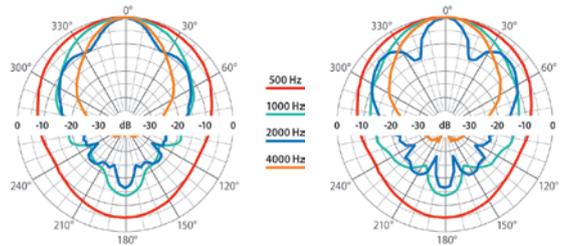


ABT-HP240EN94



horizontal << circular chart of directional characteristic >> vertical

ABT-HP120EN66



ABT-HP120EN94

