

# LBC 34xx/12 Horn Loudspeakers

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**BOSCH**  
Invented for life



- ▶ High efficiency drivers
- ▶ Up to 45 W (max. power)
- ▶ Wide opening angle
- ▶ Excellent speech reproduction
- ▶ Simple power setting

Bosch high-efficiency horn loudspeakers provide excellent speech reproduction and sound distribution for a wide scope of outdoor applications. They are ideal for sports grounds, parks, exhibitions, factories and swimming pools.

## System overview

The LBC 3481/12 is a circular horn loudspeaker, and the LBC 3491/12 is a rectangular model. Both are 10 W, and are made from ABS.

The LBC 3492/12 is a circular, 20 W horn loudspeaker with a large horn measuring 354 mm in diameter. It is made from a combination of aluminum with ABS for optimum strength and low weight. The edge of the horn is covered with a PVC profile for protection against impact damage.

The LBC 3493/12 is a circular, 30 W horn loudspeaker with a large horn measuring 400 mm in diameter. It is made from a combination of aluminum with ABS for optimum strength and low weight. The edge of the horn is covered with PVC for protection against impact damage.

## Functions

All four models are for direct connection to a 100 V line output and are finished in light grey (RAL 7035). The horns are water and dust protected. The horn loudspeakers include a 100 V transformer with taps on the primary winding to allow different power settings. Nominal full-power, half-power or quarter-power radiation (in 3 dB steps) can easily be selected by connecting the amplifier output to the appropriate tap. A 2 m four-core cable is fitted to the horns. Each core is a different color, and is connected to one of the primary taps on the transformer. The horn loudspeakers are supplied complete with sturdy adjustable mounting brackets, allowing the sound beam to be accurately directed.

## Certifications and approvals

All Bosch loudspeakers are designed to withstand operating at their rated power for 100 hours in accordance with IEC 268-5 Power Handling Capacity (PHC) standards. Bosch has also developed the Simulated Acoustical Feedback Exposure (SAFE) test to demonstrate that they can withstand two times their rated power for short durations. This ensures extra reliability under extreme conditions, leading to

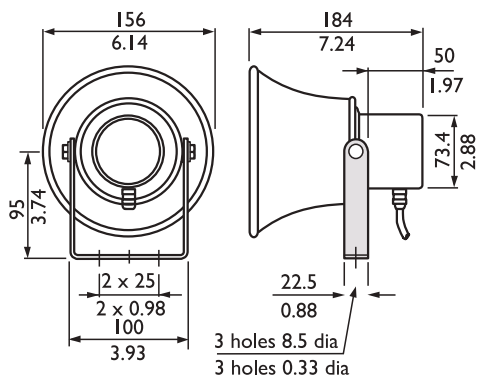
higher customer satisfaction, longer operating life, and much less chance of failure or performance deterioration.

Safety	acc. to EN 60065
Self-extinguishing	acc. to UL 94 V0
Water and dust protection	acc. to EN 60529-IP65

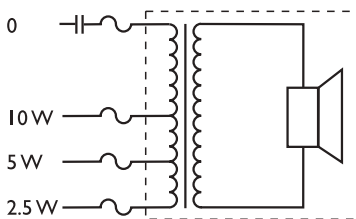
Region	Certification	
Europe	CE	Declaration of Conformity
	CE	

**Installation/configuration notes**

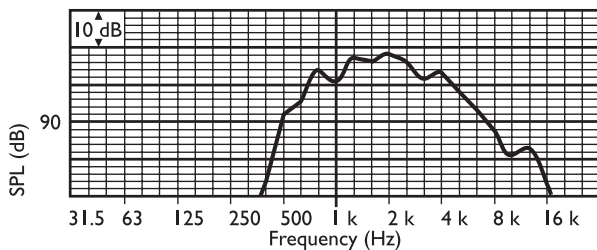
**LBC 3481/12**



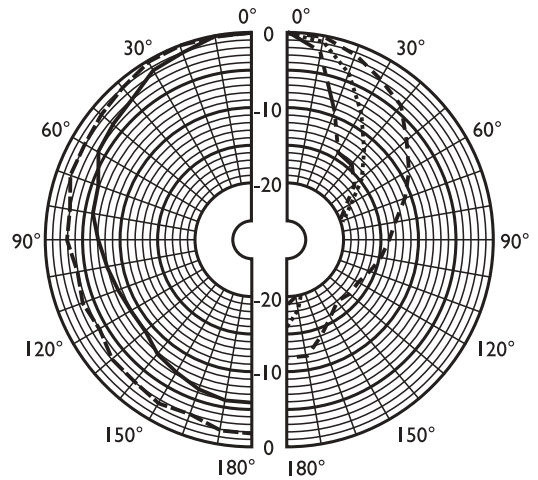
Dimensions in mm (in)



Circuit diagram



Frequency response



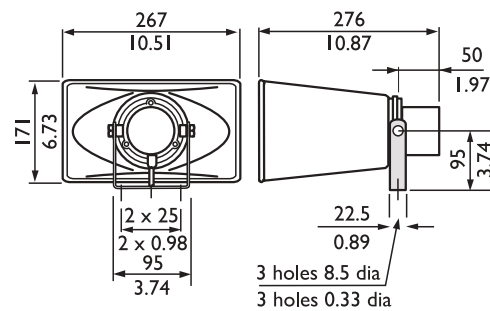
- 250 Hz
- - - 500 Hz
- 1000 Hz
- - - 2000 Hz
- ..... 4000 Hz
- - - 8000 Hz

Polar diagram (measured with pink noise)

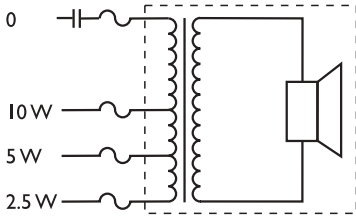
	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	-	-	94	10 3	10 5	98	86
SPL max.	-	-	104	11 3	11 5	10 8	96
Q-factor	-	-	1.7	3.5	7.8	25. 7	52. 5
Efficiency	-	-	1.82	7.0 8	5.1 3	0.3 1	0.0 1
H. angle	-	-	180	16 0	95	50	30
V. angle	-	-	180	16 0	95	50	30

Acoustical performance specified per octave

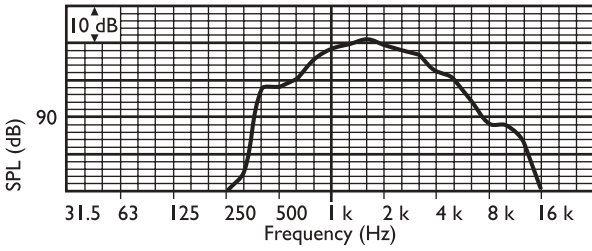
**LBC 3491/12**



Dimensions in mm (in)



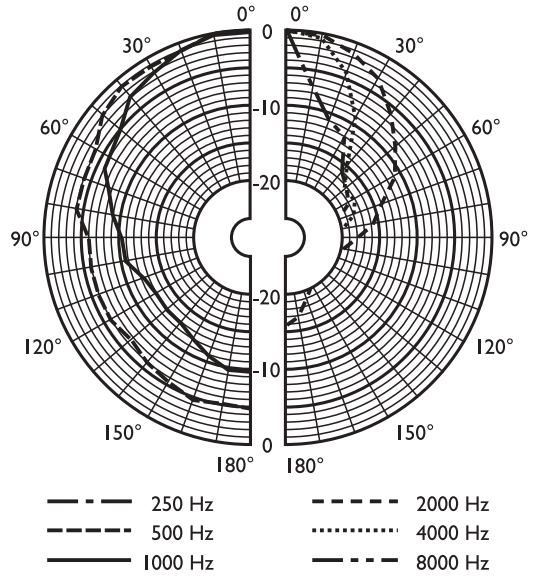
Circuit diagram



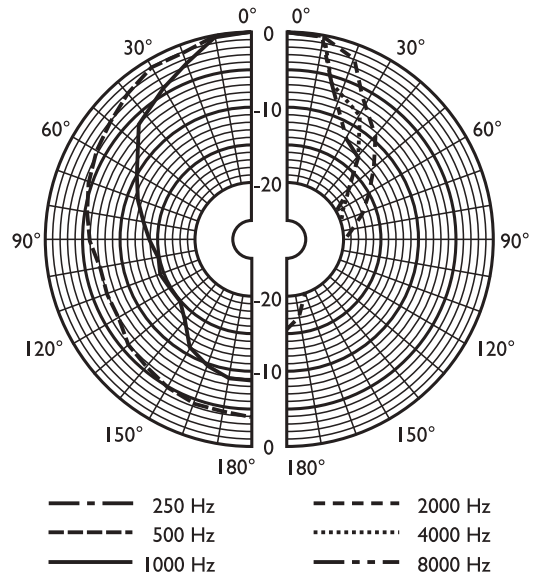
Frequency response

	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	-	-	99	108	111	106	97
SPL max.	-	-	109	118	121	116	107
Q-factor	-	-	2.7	6.5	15.8	40.7	75.9
Efficiency	-	-	3.72	12.3	10	1.23	0.08
H. angle	-	-	180	90	55	40	30
V. angle	-	-	180	130	80	45	15

Acoustical performance specified per octave

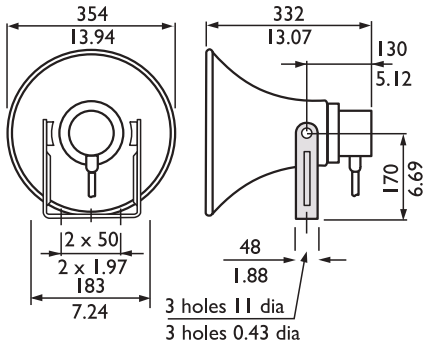


Polar diagram vertical (measured with pink noise)

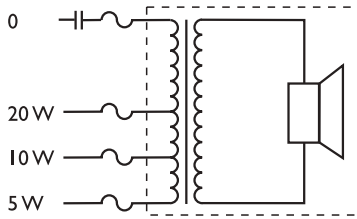


Polar diagram horizontal (measured with pink noise)

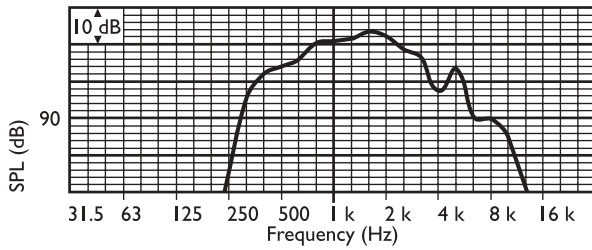
**LBC 3492/12**



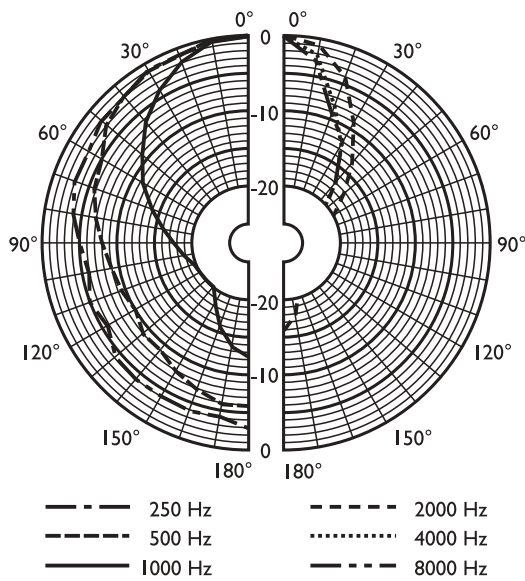
Dimensions in mm (in)



Circuit diagram



Frequency response

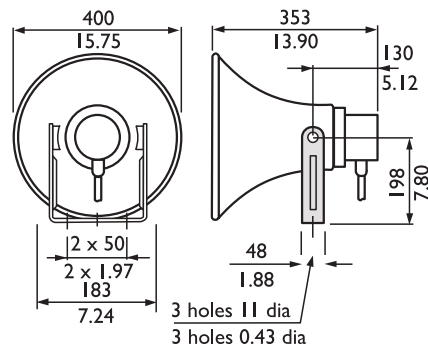


Polar diagram (measured with pink noise)

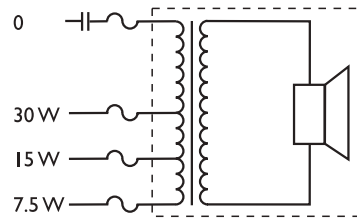
	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	-	93	105	110	112	104	90
SPL max.	-	106	118	123	125	117	103
Q-factor	-	2.2	3.5	10.7	30.9	57.5	75.9
Efficiency	-	1.15	11.22	11.75	6.46	0.55	0.02
H. angle	-	180	145	80	45	35	30
V. angle	-	180	145	80	45	35	30

Acoustical performance specified per octave

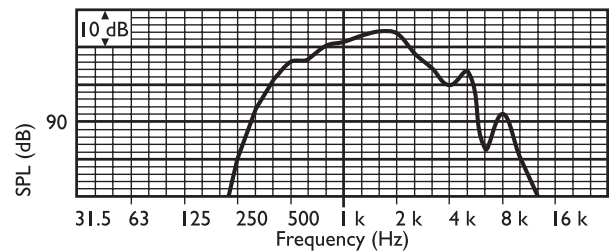
**LBC 3493/12**



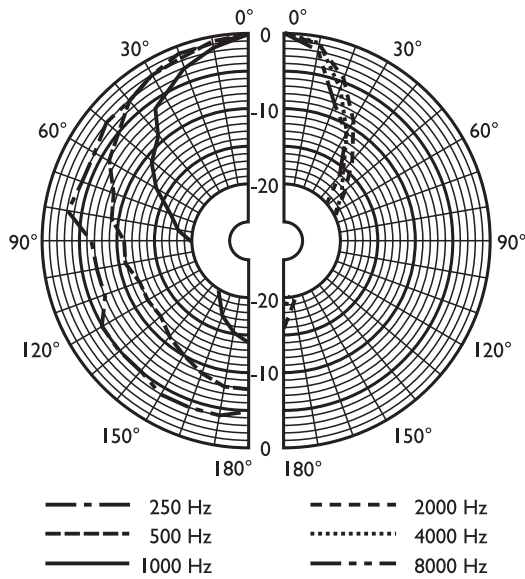
Dimensions in mm (in)



Circuit diagram



Frequency response



Polar diagram (measured with pink noise)

	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	-	92	105	11 1	11 2	10 4	90
SPL max.	-	107	120	12 6	12 7	11 9	10 5
Q-factor	-	2.6	5.1	15. 1	37. 2	61. 7	74. 1
Efficiency	-	0.78	7.76	10. 47	5.3 7	0.4 1	0.0 2
H. angle	-	180	120	70	45	40	30
V. angle	-	180	120	70	45	40	30

Acoustical performance specified per octave

**Ordering information**

**LBC 3481/12 Horn Loudspeaker, Circular, 10 W**

Horn loudspeaker 10 W, circular, ABS material, water and dust protected according IP65, fixed 2 m, 4-wire connection cable, light gray RAL 7035.

Order number **LBC3481/12**

**LBC 3491/12 Horn Loudspeaker, Rectangular, 10 W**

Horn loudspeaker 10 W, rectangular, ABS material, water and dust protected according IP65, fixed 2 m, 4-wire connection cable, light gray RAL 7035.

Order number **LBC3491/12**

**LBC 3492/12 Horn Loudspeaker, Circular, 20 W**

Horn loudspeaker 20 W, circular, aluminum/ABS material, water and dust protected according IP65, fixed 2 m, 4-wire connection cable, light gray RAL 7035.

Order number **LBC3492/12**

**LBC 3493/12 Horn Loudspeaker, Circular, 30 W**

Horn loudspeaker 30 W, circular, aluminum/ABS material, water and dust protected according IP65, fixed 2 m, 4-wire connection cable, light gray RAL 7035.

Order number **LBC3493/12**





**Accessories**

**LBC 1256/00 EVAC Connection Adapter**

Emergency connection adapter, 3-pole screw ceramic connector with a pre-mounted thermal fuse, to be installed in series with the 100 V primary connection of a loudspeaker unit, set of 100 pieces.

Order number **LBC1256/00**

## Technical Specifications

	LBC 3481/12 Horn Loudspeaker, Circular, 10 W	LBC 3491/12 Horn Loudspeaker, Rectangular, 10 W	LBC 3492/12 Horn Loudspeaker, Circular, 20 W	LBC 3493/12 Horn Loudspeaker, Circular, 30 W
				
<b>Electrical</b>				
Max power	15 W	15 W	30 W	45 W
Rated power (PHC)	10 / 5 / 2.5 W	10 / 5 / 2.5 W	20 / 10 / 5 W	30 / 15 / 7.5 W
Sound pressure level at rated power / 1 W (1 kHz, 1 m)	113 dB / 103 dB (SPL)	118 dB / 108 dB (SPL)	123 dB / 110 dB (SPL)	126 dB / 111 dB (SPL)
Sound pressure level at rated power / 1 W (2 kHz, 1 m)	115 dB / 105 dB (SPL)	121 dB / 111 dB (SPL)	125 dB / 112 dB (SPL)	127 dB / 112 dB (SPL)
Effective frequency range (-10 dB)	500Hz to 7kHz	480Hz to 5.5kHz	380Hz to 5.5kHz	380Hz to 5kHz
Opening angle horizontal vertical	1 kHz / 4 kHz (-6 dB) 160° / 50° 160° / 50°	1 kHz / 4 kHz (-6 dB) 90° / 40° 130° / 45°	1 kHz / 4 kHz (-6 dB) 80° / 35° 80° / 35°	1 kHz / 4 kHz (-6 dB) 70° / 40° 70° / 40°
Rated voltage	100 V	100 V	100 V	100 V
Rated impedance	1000 ohm	1000 ohm	500 ohm	333 ohm
Connection	2 m, 4-wire cable	2 m, 4-wire cable	2 m, 4-wire cable	2 m, 4-wire cable
<b>Mechanical</b>				
Dimensions (L x W)	-	267 x 171 mm 10.51 x 6.73 in	-	-
Aperture (L x W)	-	-	-	-
Aperture diameter	156 mm (6.14 in)	171 x 267 mm (6.73 x 10.51 in)	354 mm (13.94 in)	400 mm (15.75 in)
Overall length	184 mm (7.24 in)	276 mm (10.87 in)	332 mm (13.07 in)	353 mm (13.90 in)
Color	Light grey (RAL 7035)	Light grey (RAL 7035)	Light grey (RAL 7035)	Light grey (RAL 7035)
Weight	1.25 kg (2.75 lb)	1.4 kg (3.08 lb)	2.65 kg (5.83 lb)	3 kg (6.6 lb)
<b>Environmental</b>				
Operating temperature	-25 °C to +55 °C (-13 °F to +131 °F)	-25 °C to +55 °C (-13 °F to +131 °F)	-25 °C to +55 °C (-13 °F to +131 °F)	-25 °C to +55 °C (-13 °F to +131 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)	-40 °C to +70 °C (-40 °F to +158 °F)	-40 °C to +70 °C (-40 °F to +158 °F)	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	<95%	<95%	<95%	<95%

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