

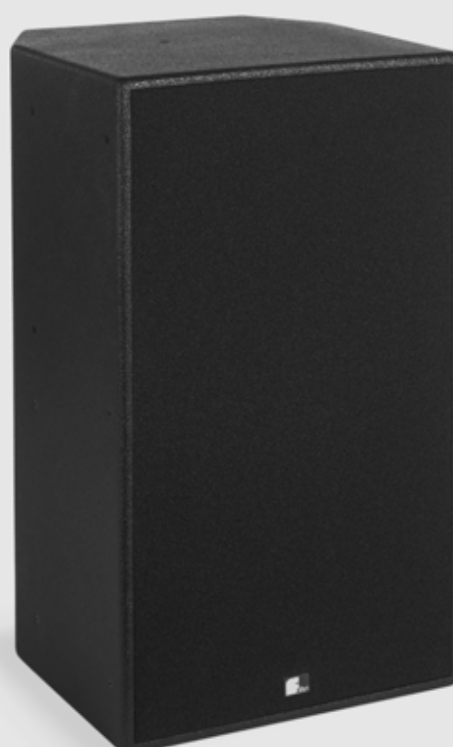
Data sheet

**AT-661w**



# Arc-Series

Architectural Sound Design.



## AT-661w loudspeaker



**The Fohhn® AT-661w is a fullrange outdoor system. The system is fully weatherproof, with a robust housing constructed from VSM material.**

### Description

The new AT-661w is a high powered, fully horn loaded, passive, full-range system designed for stadium, arena and large hall use.

Developed to replace Fohhn's current AT-66 Arc-Series model, the AT-661w is remarkable for its brand new horn construction that offers the best possible directivity, as well as outstanding speech intelligibility and sound quality. The system is fully weatherproof, with a robust housing constructed from VSM material. All internal components are made from aluminium and drivers are specially coated for added protection.

Based on conventional two-way speaker technology, the 700W AT-661w is equipped with 2 x 10" low-mid speakers and a 1.4" high frequency compression driver with self-resetting IPC (Intelligent Protection Circuit) high frequency protection. The loudspeaker offers a wide dynamic range (50Hz-20kHz) and a maximum SPL of 138dB. With a dispersion angles of 90° x 60° (height/width) it can either be used for full range applications, or as a mid-high system in combination with selected Fohhn subwoofers. Supplied as standard in black or white, the AT-661w will also be available in all RAL colours.

### Optional versions

Optional 100 volts version. All RAL colours

### Connections

2x 4-pin terminal with removable watertight cable gland

### Applications

Sports stadiums, arenas, halls, large venues, theaters, musicals, theme parks, discos and and similar venues.

## AT-661w loudspeaker

### Technical specifications

#### electro-acoustical features

acoustic design	passive fully horn loaded point source speaker system, 2-way, vented, weather resistant
components <sup>[1]</sup>	2x 10" long excursion with impregnated cone, 1,4" compression driver on rotatable CD-Horn with self-resetting IPC[*]-HF protection, neodymium magnets
power rating (nominal) <sup>[1]</sup>	600 W
power rating (program) <sup>[2]</sup>	1200 W
power rating (peak) <sup>[3]</sup>	2400 W
sensitivity <sup>[4]</sup>	105 dB
maximum SPL <sup>[3]</sup>	138 dB
frequency range <sup>[5]</sup>	65 Hz – 20 kHz
nominal dispersion (h x v) <sup>[6]</sup>	90° x 60°
nominal impedance	4 ohms

#### features

enclosure	weatherproof VSM / aluminium housing
protection grille	steel, ball impact resistant, powder coated
rigging points	8 x M6 threads
connections	2x 4-pin terminal with removable watertight cable gland
standard colours	scratch-proof polyurethane coating, black
frontal design	acoustic foam, same colour as enclosure
dimensions (W x H x D)	455 x 840 x 465 mm
weight <sup>[7]</sup>	32 kg

#### optional features

integrated 100 V-transformer	on request
optional colours	all RAL-colours
weather protection	scratch-proof plastic coating, impregnated speaker membranes

<b>CAAD simulation data</b>	EASE
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The manufacturer reserves the right to make technical modifications according to legal regulations stipulating the continual improvement of product features.

<sup>[1]</sup> according to IEC-60268-5 long term

<sup>[2]</sup> according to IEC-60268-5 short term

<sup>[3]</sup> Peak, 20 ms with bandpass filtered pink noise signal according to IEC 60268-2 at one octave above the lower limit of the frequency range

<sup>[4]</sup> 2,83 V at 8 ohms (2 V at 4 ohms, 4 V at 16 ohms) at a distance of 1 meter under anechoic fullspace conditions

<sup>[5]</sup> -10 dB under anechoic halfspace-conditions

<sup>[6]</sup> horizontal x vertical at -6 dB, rotatable horn

<sup>[7]</sup> net weight without optional equipment

<sup>[\*]</sup> Intelligent Protection Circuit. Voltage-controlled semiconductor circuit protecting the HF-driver against overload highly effective and with very short attack time.

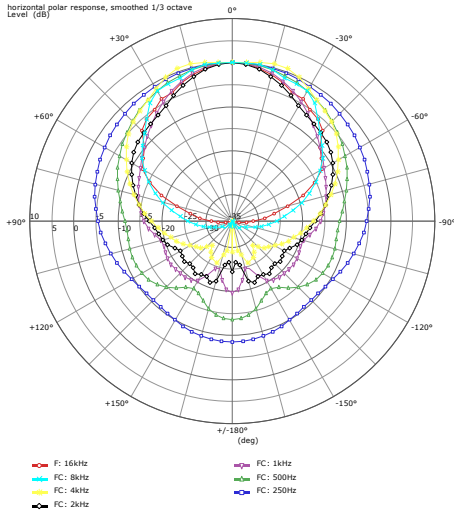


Fig. 1: Horizontal polar pattern

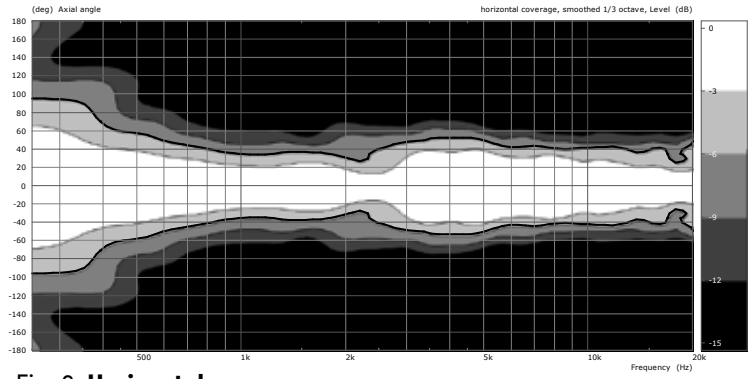


Fig. 2: Horizontal coverage

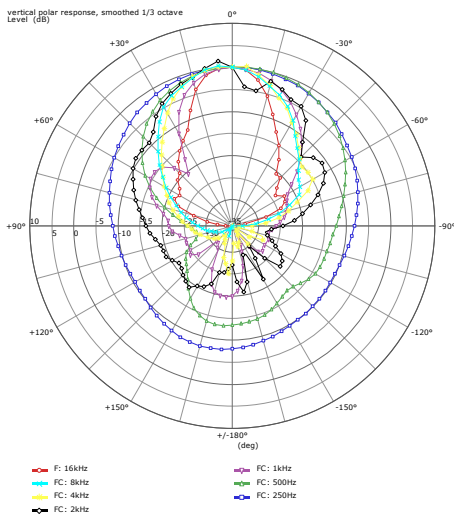


Fig. 3: Vertical polar pattern

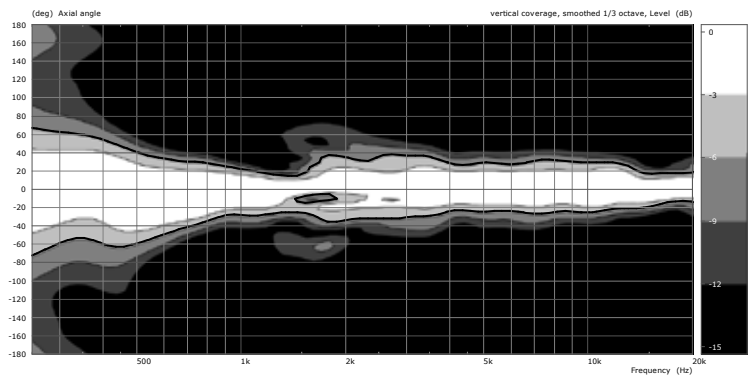


Fig. 4: Vertical coverage

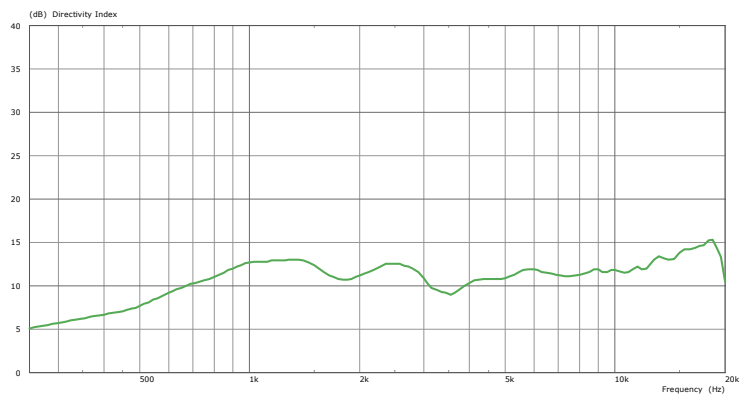


Fig. 5: Directivity index

Fig. 6: Frequency response

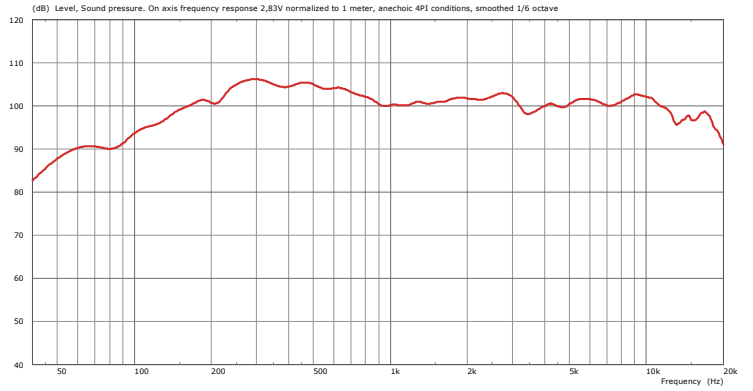


Fig. 7: Impedance

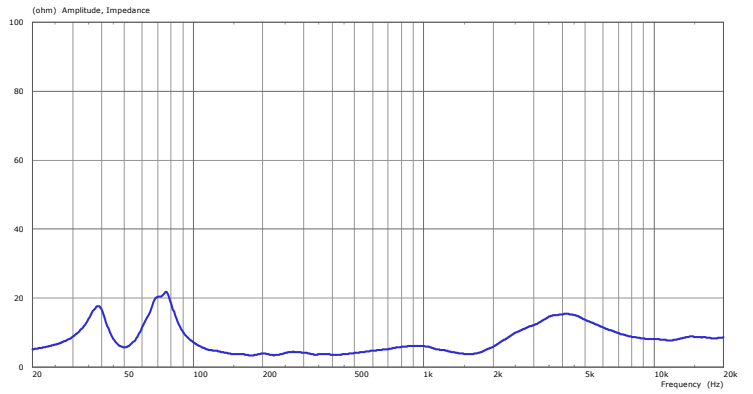
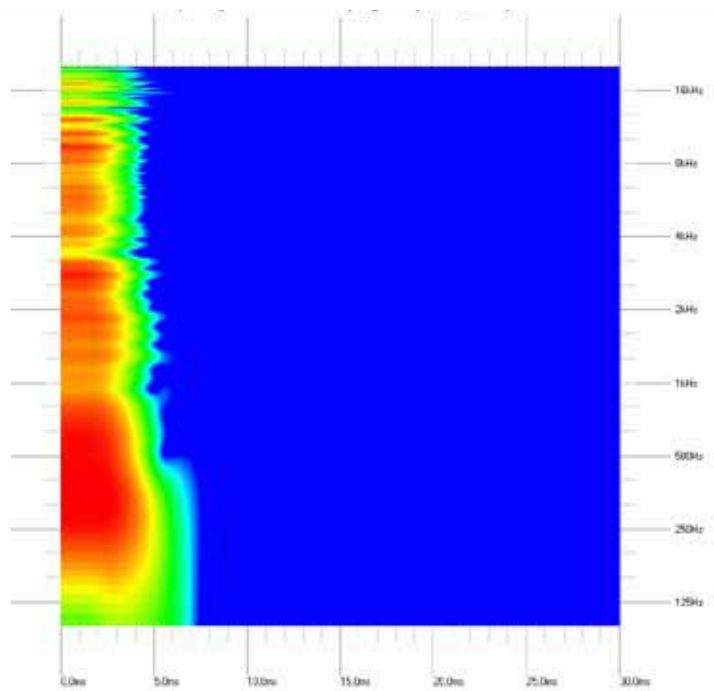


Fig. 8: Spectral decay



## Controlling Arc-Series speakers

### 1. Fohhn system DSP amplifiers

Fohhn offers a range of specially adapted system DSP amplifiers for controlling Arc speaker systems, which guarantee maximum sound performance and operational reliability for your Fohhn products. As manufacturers of speaker, amplifier and DSP technology, we know our systems inside and out right down to the smallest detail and are therefore in a perfect position to provide our users with the best overall system.

#### Fohhn System DSP amplifier are offering following advantages:

##### Integrated high-performance DSP technology:

- quick set-up,
- minimal space requirements in electronics cabinet,
- minimal cable requirements,
- fewer cable faults,
- controller and amplifier can be controlled and monitored using the same software.

##### Dual DSP technology

The DSP amplifiers contain 2 separate DSP engines with enormous capacity and processing power for 5 digital audio devices (DSP-1) and Fohhn specific speaker databases (DSP-2).

##### Remote monitoring and control

Integrated temperature and operating time monitor, status indicator / protection, remote control capability / network compatibility using a laptop, wall installation modules or media control systems.

### Fohhn® dual DSP technology

#### DSP-1: Integrated digital audio devices

Each amplifier channel has a:

- programmable 10 band parametric EQ,
- compressor/limiter/noise gate,
- delay,
- X-over function,
- top-quality pink noise and swepttone generator

#### DSP-2: Speaker management

An integrated speaker database guarantees excellent sound quality and protection for all Fohhn speaker types. A sophisticated algorithm developed by Fohhn engineers and adapted to each speaker allows the individual monitoring and adjustment of bass, mid and high ranges.

### 1.1 Amplifier recommendations for the Arc-Series



#### D-2.1500

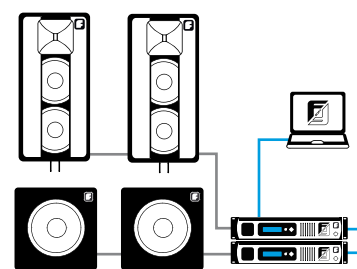
**2 channel operation**, 2x 1500 W / 4 ohms, 2x 900 W / 8 ohms, Fohhn Audio DSP, display, remote control

#### D-4.1200

**4+2 channel operation**, 4x 1200 W / 4 ohms, 4x 750 W / 8 ohms

**2x DSP line out channels for controlling a conventional amplifier**  
Fohhn Audio DSP, display, remote control

	Arc-Tops										Linea				Arc-Subs							
	AT-05	AT-061	AT-07	AT-08	AT-09	AT-10	AT-22	AT-221w	AT-35	AT-40	AT-50	AT-661w	AL-10-150	LX-10/11	LX-100/150	LX-500/501	LX-600/601	AS-10	AS-22	AS-31	AS-40	
D-2.750	x	x	x	x	x	x	x	x					x	x	x			x	x			
D-4.750	x	x	x	x	x	x	x	x					x	x	x			x	x			
D-2.1500									x	x	x	x			x	x	x			x	x	
D-4.1200									x	x	x	x		x	x					x	x	



2x Sub passive / 2x Top passive  
2x DSP amplifier

## Controlling Arc-Series speakers

### 2. Standard amplifiers combined with Fohhn controllers

#### Standard amplifiers / 100V amplifiers / multichannel amplifiers combined with Fohhn FC-9 DSP system controllers

All of the speaker systems in the Fohhn Arc-Series can be operated in combination with standard amplifiers (e.g. Bittner amplifiers). Each Fohhn speaker model has a linear design, neutral sound adaptation function and is fitted with an integrated crossover with electronic tweeter protection.

We recommend integrating the FC-9 Fohhn DSP system controller for applications involving standard multichannel amplifiers, 100V amplifiers or monitored amplifiers according to EN 60849.

The FC-9 guarantees maximum sound quality, operational reliability and performance features that no other standard controller can offer in combination with our Fohhn speakers.

#### Sound quality. Reliability. Intelligent control.

- \* Fohhn DSPs guarantee maximum sound performance
- \* 5 premium audio tools such as Parametric EQ are integrated
- \* Integral speaker and amplifier database for maximum operating reliability
- \* Remote monitoring/operation, network-compatible
- \* Automatic amplifier calibration function CAS
- \* 8 input switching contacts for easy system integration
- \* Perfect adaptation to all standard amplifiers

#### FC-9 DSP system controller



DIN EN 60849 (VDE 0828)

#### Bittner amplifiers



**BITTNER**  
AUDIO

In addition to our special Fohhn® DSP amplifiers, we also offer the complete range of **amplifiers manufactured by Bittner Audio** for low-ohm or 100 volt applications. Bittner Audio offers solutions such as multichannel amplifiers with eight standard channels and **important features for integration in electroacoustic emergency warning systems according to DIN EN 60849 (VDE 0828)**. Contact us for more information!

#### Advantages of the FC-9 controller:

##### Perfect adaptation to all standard amplifiers

Automatic amplifier calibration function and integrated amplifier database for perfect adaptation.

##### Dual DSP technology

The FC-9 contains 2 separate DSP engines with enormous capacity and processing power for Fohhn specific speaker databases and 5 digital audio devices.

##### Integrated speaker database

Guarantees excellent sound quality and protection for all Fohhn speaker types.

A sophisticated algorithm developed by Fohhn engineers and adapted to each speaker allows the individual monitoring and adjustment of bass, mid and high ranges.

##### Remote monitoring and control

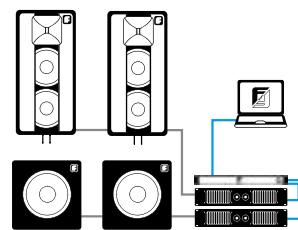
Remote control capability / network compatibility using a laptop, wall installation modules or media control systems.

##### 8 input switching contacts

The FC-9 has 8 input contacts. The inputs can be utilized to switch between the different presets of the FC-9, as well as other Fohhn-Net devices. With two inputs and two pushbuttons (shutters) connected to them, a volume control can be realized as well.

##### 4 inputs / 6 outputs (24 nodes)

A programmable 10-band parametric EQ, compressor/ limiter/noise gate, delay, X-over function, top-quality pink noise and swepttone generator are available at each output, allowing you to conveniently adapt the Fohhn system to the room acoustics or your own personal requirements.



2x Sub passive / 2x Top passive  
2x standard amplifiers  
1x DSP system controller FC-9

## Remote control and network ability of Fohhn devices with integrated DSP

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### FR-10

remote control wall panel designed for the remote operation of Fohhn devices with integrated DSP.



### Description

The FR-10 is a wall mount remote control module designed for the remote operation of Fohhn DSP amplifiers, DSP controllers and active Fohhn speakers systems. The FR-10 is extremely easy to operate because the controls are so well arranged. It is virtually impossible for the end customer to make operating errors because the only operating elements are the 8 labelled buttons.

### Easy handling

Control up to 32 Fohhn devices individually with this stylish FR-10 wall panel. 8 programmable buttons can be configured to control the overall volume of a system, the volume in different zones or presets for different room effects, for example. The system also has a special function that confirms whether all commands have been executed successfully. The buttons indicate this by changing red or green shortly after they are pressed. For example, if a device is not switched on, the button changes red to indicate that a command could not be executed. This additional monitoring function ultimately contributes to the overall operating reliability of your system. The wall panel is easy to configure using a standard computer with intuitive Fohhn-Net Remote software installed.

### Connections

Two terminal strips (paralleled). Alternative connection via standard 4-wire telephone cable.

### Applications

The FR-10 is ideal for training rooms, hotels, churches, halls, restaurants or any venue where a simple, efficient system is required to control your audio equipment from a central location.

The FR-10 is also ideal for projects where complex media control systems are not viable or inappropriate, but the user wishes to control the speaker system centrally.

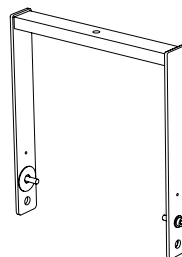


## Accessories for AT-661w

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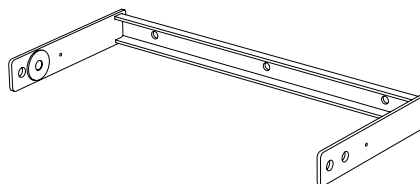
### VAT-661w

Vertical bracket for AT-661w pivots and tilts



### QAT-661w

Horizontal bracket for AT-661w



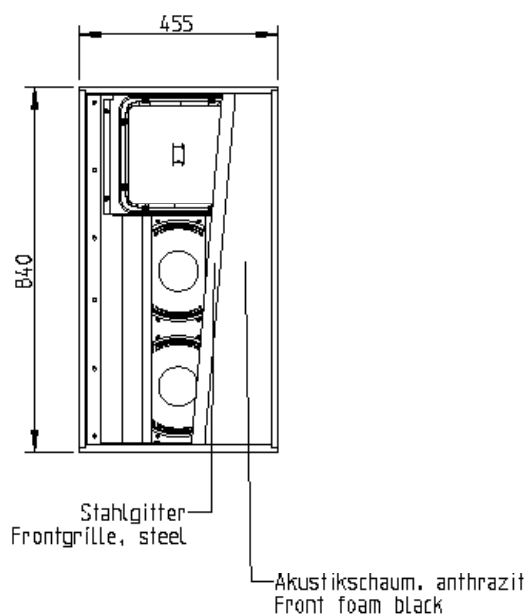
### EB-8

Ring stud DIN 580, zinc, for safety M8 thread  
for AT-201/30/35/40/50/66

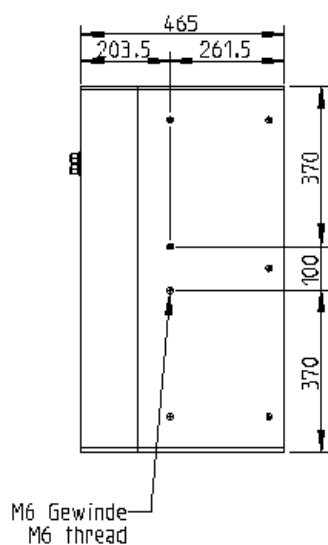


## Views of AT-661w

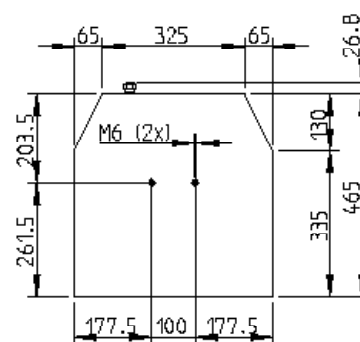
### Front view



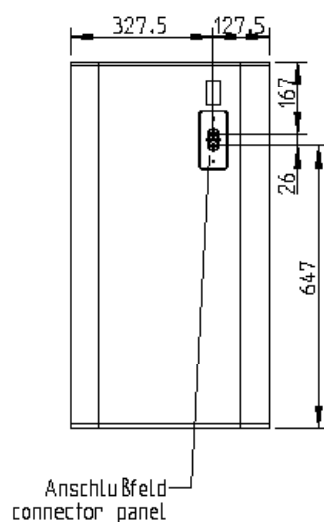
### Side view



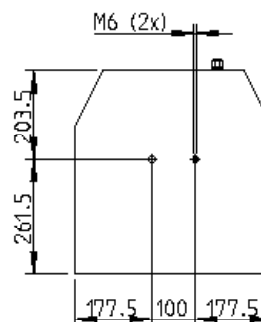
### Top View



### Rear view



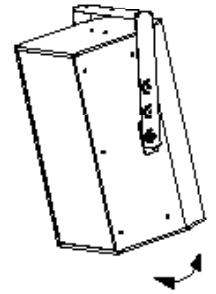
### Bottom view



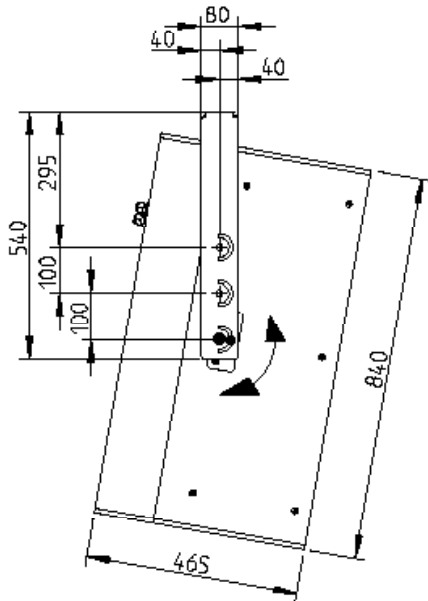
# VAT-661w



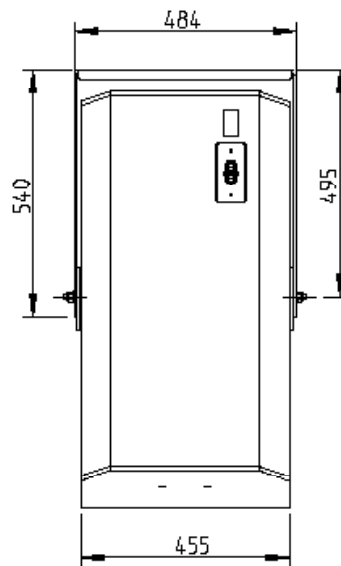
## Traverse mount



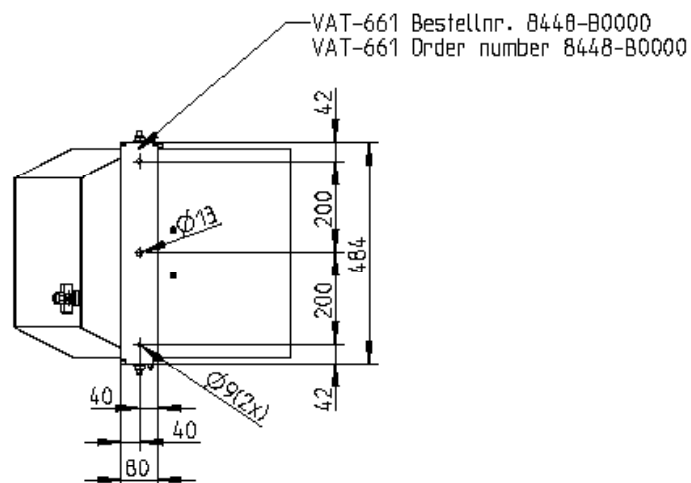
## Side view



## Rear view



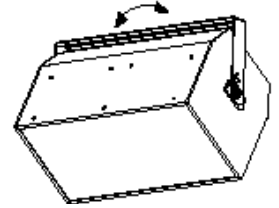
## Top view



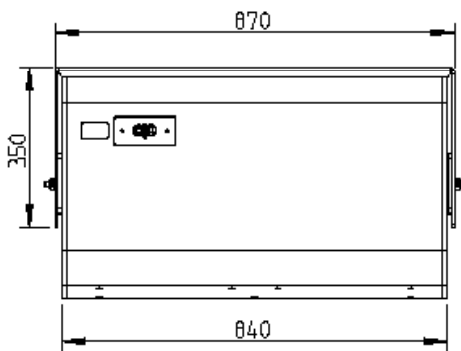
# QAT-661w



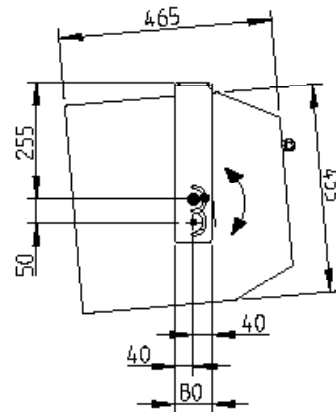
## Horizontal mount



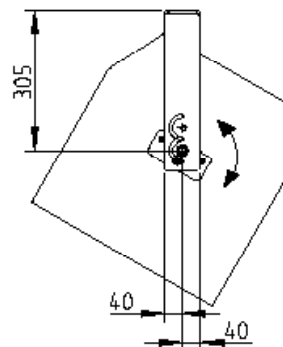
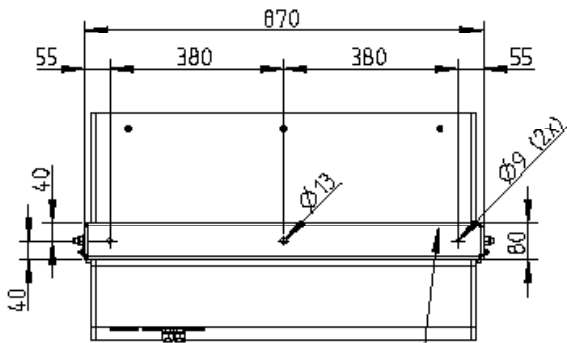
## Rear view



## Side view



## Top view



QAT-661 Bestellnr. 8447-B0000  
QAT-661 order number 8447-B0000

**FOHNN.**  
SOUNDS PERFECT.  
IS PERFECT.



■ GERMAN QUALITY  
■ ENGINEERED AND MADE  
■ BY FOHNN®

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