



# The Vertical Array Systems

LOUDSPEAKER SYSTEMS FOR INSTALL APPLICATIONS

Mobile Audio | Concert Sound | Fixed Installation | Pro Entertainment



**DYNACORD**  
GERMAN ENGINEERING EXCELLENCE

English



## The Vertical Array Systems

LOUDSPEAKER SYSTEMS



■ **The loudspeaker cabinets in the Vertical Array Systems satisfy the highest standards in terms of acoustic performance, operational safety features and reliability. This is re-enforced by the high production quality synonymous with goods „Made in Germany“.**

Their attractive, yet discrete styling qualify them for deployment or installation in the most elegant surroundings. Thanks to their aluminum housings, Vertical Array speakers are genuine lightweights products, yet extremely robust. Vertical Array speakers are suitable for live music applications; but in fixed installations they stand out as the ideal stylish solution for any premium audio installation.

They represent a convincing solution for a multitude of premium sound reinforcement applications.

- *Versatility and flexibility*
- *Premium sound performance*
- *Zero compromise on loudspeaker components and crossover design*
- *Exemplary intelligibility even in acoustically difficult environments*
- *Excellent dispersion characteristics*
- *Very high SPL*
- *Maximum operational safety (thermal loudspeaker protection)*
- *High-quality, ultra-compact design*
- *Light weight due to aluminum housing*
- *5-year manufacturer's warranty*
- *Combine the advantages of a slimline construction with outstanding live performance*
- *Made in Germany*

YOUR VIDEO IS ONLY AS GOOD AS ITS SOUND. WHERE SPACE IS LIMITED BUT HIGH AUDIO QUALITY REQUIRED VERTICAL ARRAY IS THE RIGHT CHOICE.



## TS 100

### 2-WAY FULL RANGE CABINET



■ **Both the acoustic and the mechanical design of the TS 100 two-way full range cabinet, with its power handling of 150W / RMS, are optimized for multifunctional applications.**

With a weight of only 7.1 kg, the TS 100 displays its true metal in mobile use, forming an extremely light PA system (in combination, for example, with the PowerSub 312) with very high sound pressure levels while maintaining outstanding sound quality.

For the low- and medium frequency ranges, the extremely low-distortion DND 6130-16 neodymium chassis is used. The high frequencies are handled by an HPT94 constant directivity horn that can be rotated through 90° with extreme ease for horizontal applications.

The driver, an Electro-Voice DH3, is renowned for its brilliant high-frequency reproduction. All loudspeakers are electronically protected from thermal overload.



THE TS 100'S PREMIUM AUDIO PERFORMANCE AND COMPACT DESIGN ARE THE IDEAL SOLUTION FOR HIGH CLASS AUDIO INSTALLS IN BOARDROOMS, LOUNGES, FOYERS AND OTHER DEMANDING VENUES.



It's certified mounting accessories and unobtrusive styling make the TS 100 suitable for even the most elegant surroundings.

The range of applications of the TS 100 is all-embracing, ranging from entertainment installations in bistros, clubs and restaurants to AV applications in places like boardrooms, trade fairs and hotels as well as front-fill in theatres.

The base of the cabinet is equipped with an end-cap to receive a mounting pole. For installation applications, a second end-cap without an opening is included which is very

simple to replace one type of end-cap with the other to maintain an aesthetically desirable result.

The TS 100 is available in either black or white (TS 100W).

For fixed installation, the WMK-10 (WMK-10W) mounting kit is available.

The optional FB-TS400 flying kit facilitates suspension of the device safely from a truss.

Linear phase FIR (finite impulse response) factory presets are available as well as presets for conventional digital controllers.

INTELLIGIBILITY IS ONE HIGHLY CRITICAL REQUIREMENT FOR USE OF SOUND SYSTEMS AT CONGRESSES OR INDUSTRY / COMPANY EVENTS. LARGER AUDIO SYSTEMS ARE TYPICALLY NOT ACCEPTED FOR SUCH APPLICATIONS. WITH VERTICAL ARRAY YOU HAVE THE SOLUTION FOR SUCH DEMANDING SITUATIONS.





## TS 200

### 2-WAY FULL RANGE CABINET

■ **The TS 200 is an extremely compact, two-way high-performance loudspeaker, with a nominal power handling capacity of 300W / RMS, suitable for a multitude of highly demanding tasks.**

Its high SPL and precisely controlled coverage pattern make it a prime candidate for tasks far more challenging than any you would associate with a box of its size. Whether deployed in mobile applications

as a medium-sized FOH system in combination with passive (e.g. SUB 18) or active (e.g. PowerSub 312 or PSD 215) subwoofers, or full-range as a fill or delay in larger systems, the TS 200 displays its outstanding acoustic and mechanical performance to impressive effect.

In fact, the only area in which this box is deficient is weight: its weight of less than 10kg represents a dramatic advance in lightweight engineering in this class.



Very high intelligibility even in acoustically problematic rooms is another of the great strengths of this loudspeaker.

For the low and medium frequency ranges, two extremely low-distortion DND 6130-16 neodymium chassis in an array configuration are used. The high frequency range is transduced by an Electro-Voice DH3 into an HPT94 constant directivity horn that can be rotated with ease through 90° for horizontal applications. The integrated crossover is phase-optimized and furthermore, it provides all loudspeakers with electronic protection against thermal overload.

With its elegant, slender profile, the TS 200 is especially suitable for situations in which tasteful

and unobtrusive styling is called for, yet no compromise in terms of sound quality or pressure level has been allowed.

As well as in a host of mobile applications, the TS 200 features really stand out in the fixed installation market. Ultra-compact cabinets capable of delivering very high sound pressure levels make the challenge for the acoustic & interior designers easier to overcome whenever the appearance of the loudspeakers is of critical or decisive importance to the interior design.

In such circumstances the closed cabinet base included in the delivery can be substituted for the one with the top-hat for a mounting pole intended for mobile applications.



IN HIGH CLASS LUXURY ENVIRONMENTS THE DESIGN OF A SPEAKER SYSTEM IS AS IMPORTANT AS ITS UNSURPASSED AUDIO PERFORMANCE. VERTICAL ARRAY OFFERS THE RIGHT CHOICE FOR LOUNGES, CLUBS, BARS AND SIMILAR VENUES.



The optional FB-TS400 flying kit facilitates suspension of the device safely from a truss.

The TS 200 is available in either black or white (TS 200W). For fixed installation, the WMK-10 (WMK-10W) mounting kit is available.

Linear phase FIR (finite impulse response) factory presets are available as well as presets for conventional digital controllers.





## TS 400

### FULL RANGE VERTICAL ARRAY CABINET

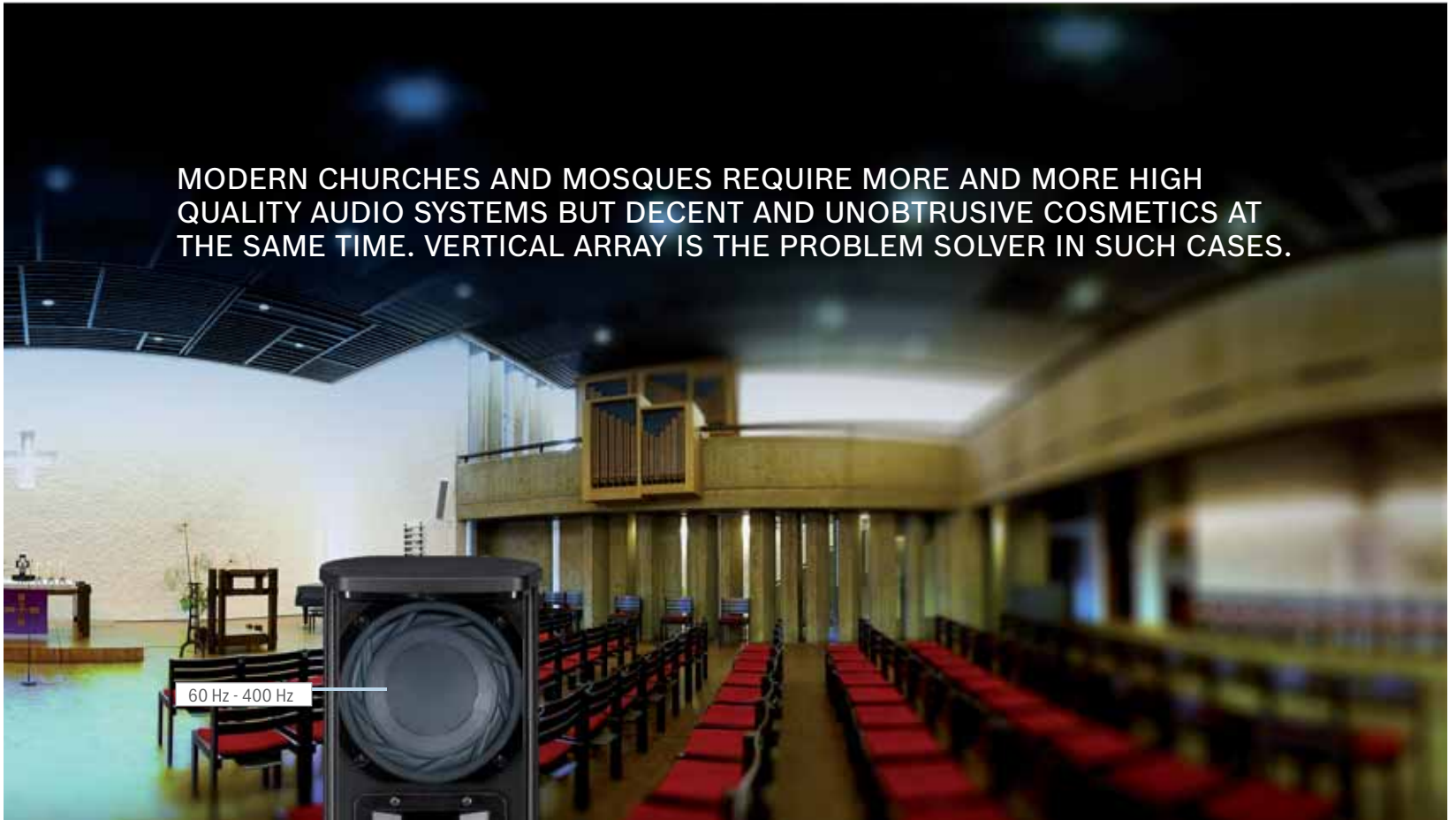
■ **The TS 400 is a compact, powerful and versatile loudspeaker system for mobile and installation applications.**

It can be used full range, or in active 2-way systems for applications requiring subwoofers. It will typically perform in active 2-way systems but can also be used as a fullrange cabinet. DYNACORD PSD 215 or PSD 218 powered subwoofers ideally allow for such active 2-way system combinations.

Vertical pattern control is a requirement for highest sound quality and speech intelligibility, especially in difficult acoustic spaces. The TS 400 was designed to provide a very even and smooth coverage over a very wide bandwidth by using spaced and filtered woofers as array elements.

The 2.5 way design places elements at the ends of the column for maximum distance to lower the effective controlled frequency.

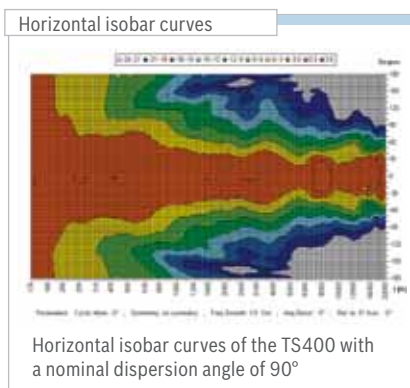
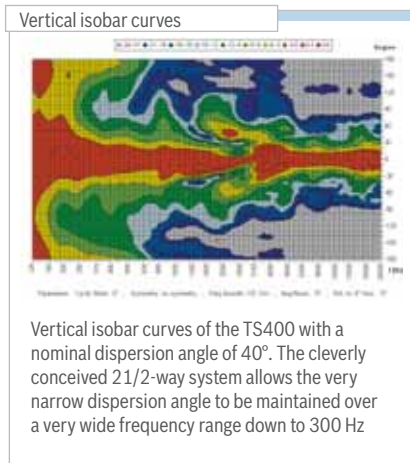
MODERN CHURCHES AND MOSQUES REQUIRE MORE AND MORE HIGH QUALITY AUDIO SYSTEMS BUT DECENT AND UNOBTRUSIVE COSMETICS AT THE SAME TIME. VERTICAL ARRAY IS THE PROBLEM SOLVER IN SUCH CASES.



The MF-elements and the HF-element are placed in the middle of the cabinet for a smooth transition of the mids to the HF and to extend the coverage control. Each group of elements has its own bandpass filter to optimize the array's performance to provide good attenuation at 90° off-axis and evenly cover the audience area front to rear with half the rate of attenuation of a non "steered" cluster.

The TS 400 is equipped with DND 6130-16 Neodymium woofers and one Electro-Voice DH3 compression driver coupled with a 90° by 40° constant directivity horn providing very high SPL and excellent coverage. Power handling is 600W RMS / 2.400W peak.

Separate protection circuits for the LF-, MF- and HF- elements are used to protect all transducers at the highest power levels. The TS 400 enclosure is aluminum for a very robust but lightweight design with a look that fits any environment.



EVEN IN LARGER CLUBS AND EVENT VENUES SPACE IS ALWAYS A HIGHLY LIMITING FACTOR. VERTICAL ARRAY SPEAKERS OFFER THE RIGHT SOLUTIONS FOR HIGH POWER SOUND SYSTEMS IN PREMIUM AUDIO QUALITY LIKE SHOWN HERE IN THE MILLA-CLUB IN MUNICH.



When installed on a subwoofer / pole mount the TA-TS400 tilt adaptor can be used to precisely aim the system for optimum audience coverage. This adaptor also fits for TS 100 / TS 200.

The optional mounting bracket WMK-25 allows for wall-mount applications with up to 30° of tilt. The optional FB-TS400 Flying Kit allows flying the TS400. It can be adjusted to any aiming angle. The optional carrying bag CB-TS400 is the ideal accessory for easy, protected transportation of the TS 400.

WMK-25



FB-TS400





IN MANY APPLICATIONS EVENT PROMOTERS, CLUB-OWNERS AND ARTISTS DO NO LONGER WANT TO SEE “BLACK WOODEN SPEAKER TOWERS” LEFT AND RIGHT OF THE STAGE. HOWEVER, WHILE THESE PEOPLE REQUIRE UNOBTRUSIVE SET-UPS THEY ARE NOT WILLING TO COMPROMISE IN AUDIO PERFORMANCE AND SOUND PRESSURE LEVELS. VERTICAL ARRAY SPEAKERS ARE THE PERFECT SOLUTION IN SUCH CASES.

# Technical Specifications

## VERTICAL ARRAY SYSTEMS



Type / Name	TS 100 / TS 100W	TS 200 / TS 200W	TS 400 / TS 400W	PS 312
<b>Cabinet</b>	Full Range	Full Range	Full Range	Subwoofer
<b>Configuration</b>	Passive 2-Way	Passive 2-Way	Passive 2.5-Way	Powered 3-Channel
<b>Components</b>	1 x 6" / 1"	2 x 6" / 1"	4 x 6" / 1"	1 x 12"
<b>Impedance</b>	16 Ohms	8 Ohms	4 Ohms	-
<b>Rated Power RMS</b>	150 W	300 W	600 W	2 x 250 W MH 1 x 800 W LF
<b>Peak Power</b>	600 W	1200 W	2400 W	-
<b>Max. Amplifier Output Capability</b>	-	-	-	1300 W
<b>SPL 1 W / 1 m</b>	94 dB	97 dB	97 dB	-
<b>Max. SPL 1 m / calc.</b>	122 dB	128 dB	131 dB	123 dB
<b>Freq. Range (-10 dB)</b>	90 Hz - 20 kHz	90 Hz - 20 kHz	74 Hz - 20 kHz	44 Hz - 130 Hz
<b>Coverage (H x V)</b>	90° x 40°	90° x 40°	90° x 40°	-
<b>Dimensions (W x H x D) mm</b>	199 x 350 x 239.5	199 x 513.5 x 239.5	199 x 935 x 281	445 x 380 x 445
<b>Net. Weight</b>	7.1 kg	9.8 kg	17 kg	22.5 kg
<b>Wheels</b>	-	-	-	-

## ACCESSORIES



Type / Name	WMK-10 / WMK-10W	SH-TS100(W)	SH-TS200(W)	WMK-25 / WMK-25W
<b>Art.No.</b>	F.01U.119.022 / F.01U.119.032	F.01U.283.242	F.01U.283.243	F.01U.260.845 / F.01U.288.668
<b>Description</b>	Rotatable Wall-Mount-Kit, black / white, max.10 kg for TS 100(W)	SH-TS100 Carrying Bag for TS 100(W)	SH-TS200 Carrying Bag for TS 200(W)	Rotatable Wall-Mount-Kit black / white for TS 400(W)



PSD 215	PSD 218	PS 112	PSE 215	PSE 218
Subwoofer	Subwoofer	Subwoofer	Subwoofer	Subwoofer
Powered 2-Channel	Powered 2-Channel	Vented-Direct Radiator	Vented-Direct Radiator	Vented-Direct Radiator
1 x 15"	1 x 18"	1 x 12"	1 x 15"	1 x 18"
-	-	8 Ohms	8 Ohms	8 Ohms
1000 W TOP 1000 W SUB	1000 W TOP 1000 W SUB	400 W	500 W	500 W
-	-	1600 W	2000 W	2000 W
3200 W	3200 W	-	-	-
-	-	92 dB	98 dB	98 dB
128 dB	130 dB	124 dB	131 dB	131 dB
40 Hz - X-Over	34 Hz - X-Over	43 Hz - 350 Hz (internal Hi-Cut)	38 Hz - 3.5kHz	32 Hz - 3.5kHz
-	-	-	-	-
640 x 465 x 694	759 x 575 x 694	445 x 380 x 445	640 x 465 x 694	759 x 575 x 694
37.2 kg	45.2 kg	20 kg	31.6 kg	39.6 kg
2.4 kg	2.4 kg	-	2.4 kg	2.4 kg



Type / Name	FB-TS400	CB-TS400	TA-TS400
<b>Art-No.</b>	F.01U.267.862	F.01U.215.168	F.01U.267.861
<b>Description</b>	Flying Kit for TS 400(W)	Carrying Bag for TS 400(W)	Tilt adaptor

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