

## **Electric Horns**

# Model KB-15G-BASE Electronic Horn/Hailer

The Kahlenberg KB-15G is an Electronic Horn/Hailing system for marine use that produces a horn signal in excess of 120 dB (1/3 Octave Band), and is certified for vessels up to 20 meters in length. In addition, the KB-15G-BASE provides voice amplification with adjustable volume control for hailing. Auxiliary inputs are included for connection of other audio sources such as public address systems.



- 120 decibels of Horn and Hailing Power
- Type Approved for Vessels up to 20 Meters in Length
- Operates with any Kahlenberg Signal Control
   Timer for automatic fog signaling or simple push button for horn signal
- "Black Box" under console control unit with remote console mount microphone jack included
- Multiple Horns can be controlled from single station for hailing and/or horn signal
- Auxiliary input provided for use with other audio sources

#### TECHNICAL DATA

<u>Fundamental Frequency</u>: 698 Hz (Horn Signal)

<u>S.P.L. (1/3 Octave @ 1 Meter):</u> 121 dB S.P.L. (dB(A)): 121 dB

\_\_\_\_\_

Electrical Power Required: 12 or 24 Volt D.C., 30 Watts

<u>Ingress Protection:</u> IP67

Material:

Polyamide, Stainless Steel Fasteners and Mounting Bracket

Operating Temperature Range: -30 deg. F (-34 C)-120 deg. F (49 C.)

Net Weight: 4 lbs., 1.8 kg.

Dimensions:

11.25" x 9.3" x 10.6" (286 x 237 x 269.5mm)

Kahlenberg Industries, Inc.

1700 12th Street, P.O. Box 358 Two Rivers, Wisconsin, 54241



# SOUND SIGNALING EQUIPMENT AIR HORNS

### MODEL S-OA AIR HORN

THE KAHLENBERG S-OA MARINE AIR HORN IS IMO CERTIFIED FOR BOATS UP TO 65 FEET (20 METERS) IN LENGTH. AS WITH ALL KAHLENBERG AIR HORNS FOR PLEASURE CRAFT, THE S-OA HAS BEEN DEVELOPED TO MAXIMIZE AUDIBILITY, WITH A RICHNESS OF TONE BASED ON MUSICAL INSTRUMENT DESIGN. CONSTRUCTED ENTIRELY OF BRONZE AND BRASS IT IS BUILT FOR A LIFETIME OF SERVICE.



#### **TECHNICAL DETAILS**

Frequency: 322 Hz

**S.P.L. Output:** 131 dB (A) @ 1 Meter **Air Consumption:** 9 C.F.M., 4.2 l/s

**Operating Pressure:** 50 to 200 p.s.i. (3.5 to 14 bar) **Electric Power:** 12 or 24 Volt D.C. (Compressor)

**Material:** Bronze and Cast Brass **Net Weight:** 4.75 lbs., 2.15 kg

**Finishes:** Kahlenberg Chrome Plate, TGIC Sky White Powdercoat, Gold PVD,

Black Chrome PVD

Certification: ABS, NMMA Certified A-23

#### FEATURES AND BENEFITS OF THE S-OA AIR HORN INCLUDE:

- Output exceeds other horns of similar size.
- Made entirely of brass with bronze diaphragm:
  (Function of the horn guaranteed for as long as you own it.)
- Low air consumption:
  Allows for use of a very small compressor/tank kit as compared to other air horns.
- Easy Installation: Compact Compressor Pump, Fittings, and tubing are easily installed when supplied, (see P449-17 and P449-18 Compressor Systems and V-69-K Valve Kit.)

KAHLENBERG INDUSTRIES, INC. 1700 12TH STREET, P.O. BOX 358 TWO RIVERS, WI 54241 U.S.A. WWW.KAHLENBERG.COM



# SOUND SIGNALING EQUIPMENT AIR HORNS

### MODEL D-OA AIR HORN

THE KAHLENBERG D-OA MARINE AIR HORN IS IMO CERTIFIED FOR BOATS UP TO 65 FEET (20 METERS) IN LENGTH.

AS WITH ALL KAHLENBERG AIR HORNS FOR PLEASURE CRAFT, THE D-OA HAS BEEN DEVELOPED TO MAXIMIZE AUDIBILITY, WITH A RICHNESS OF TONE BASED ON MUSICAL INSTRUMENT DESIGN. CONSTRUCTED ENTIRELY OF BRONZE AND BRASS IT IS BUILT FOR A LIFETIME OF SERVICE.



#### **TECHNICAL DETAILS**

**Frequency:** 322 & 254 Hz

**S.P.L. Output:** 133 dB (A) @ 1 Meter **Air Consumption:** 17.6 C.F.M., 8.3 l/s

**Operating Pressure:** 50 to 200 p.s.i. (3.5 to 14 bar) **Electric Power:** 12 or 24 Volt D.C. (Compressor)

**Material:** Bronze and Cast Brass

Net Weight: 9 lbs., 4 kg

Finish: Kahlenberg Chrome Plate Finish,

TGIC Sky White Powdercoat, Gold or Black Chrome PVD

Certification: ABS, NMMA Certified A-23

#### FEATURES AND BENEFITS OF THE D-OA AIR HORN INCLUDE:

- Output exceeds other horns of similar size.
- Made entirely of brass with bronze diaphragm:
  (Function of the horn guaranteed for as long as you own it.)
- Low air consumption:
  Allows for use of a very small compressor/tank kit as compared to other air horns.
- Easy Installation: Compact Compressor Pump, Fittings, and tubing are supplied, (see P449-17 and P449-18 Compressor Systems and V-69-K Valve Kit.)

KAHLENBERG INDUSTRIES, INC. 1700 12TH STREET, P.O. BOX 358 TWO RIVERS, WI 54241 U.S.A. WWW.KAHLENBERG.COM



#### **SOUND SIGNALING EQUIPMENT**

Accessories - Air Compressors

### Model P449-17/P449-34 Air Compressor System

The Kahlenberg P449-17/P449-34 Compressed Air Systems are quiet, oil-less compressor solutions incorporating a compact, continuous duty compressor pump, pressure switch, air guage, and all tubing and fittings specifically arranged for marine use.



#### **Technical Details**

Voltage: 12 V.D.C. (P449-17) Voltage: 24 V.D.C. (P449-34)

Max Current: 21A @12 Volts, 12 A @ 24 Volts

FAD @ 7 bar: ..85 CFM, 24 l/min Max Pressure: 150 p.s.i., 10.31 bar

Weight: 14 lbs., 6.4 kg, Compressor and Tank

Noise Level: 69 dB(A)@ 1 meter

Thermal Protection: Yes

Duty Cycle: 33% Vibration Isolated: Yes Wire Size: 12 AWG min.

#### Features and benefits of the P449-17 and P449-34 include:

Quiet Operation: 69dB(A) @ 1 meter

Oil-less Operation:

Minimizes maintenance by eliminating oil in air lines.

Easy Installation:

Fittings, air tank, and tubing are supplied, as are safety valve and air gauge.
All fittings are instant connect. The only wiring required is connection of the compressor assembly to line voltage.

The P449-17/P449-34 Compressor System provides output sufficient for Kahlenberg Air Horn Models
S-0A and D-0A

Kahlenberg Industries, Inc. 1700 12th Street, P.O. Box 358 Two Rivers, WI 54241 U.S.A. www.kahlenberg.com



# SOUND SIGNALING EQUIPMENT AIR HORNS

### MODEL T-OA AIR HORN

THE KAHLENBERG T-OA MARINE AIR HORN IS IMO CERTIFIED FOR BOATS UP TO 65 FEET (20 METERS) IN LENGTH. AS WITH ALL KAHLENBERG AIR HORNS FOR PLEASURE CRAFT, THE T-OA HAS BEEN DEVELOPED TO MAXIMIZE AUDIBILITY, WITH A RICHNESS OF TONE BASED ON MUSICAL INSTRUMENT DESIGN. CONSTRUCTED ENTIRELY OF BRONZE AND BRASS IT IS BUILT FOR A LIFETIME OF SERVICE.



#### **TECHNICAL DETAILS**

**Frequency:** 322, 295, & 254 Hz **S.P.L. Output:** 131.2 dB (A) @ 1 Meter **Air Consumption:** 21.5 C.F.M., 10 l/s

**Operating Pressure:** 50 to 200 p.s.i. (3.5 to 14 bar) **Electric Power:** 12 or 24 Volt D.C. (Compressor)

**Material:** Bronze and Cast Brass **Net Weight:** 16 lbs., 7.25 kg

Finishes: Kahlenberg Chrome Plate, TGIC Sky White

Powdercoat, Unfinished Brass **Certification:** ABS, NMMA Certified A-23

#### FEATURES AND BENEFITS OF THE T-OA AIR HORN INCLUDE:

- Output exceeds other horns of similar size.
- Made entirely of brass with bronze diaphragm:
  (Function of the horn guaranteed for as long as you own it.)
- Low air consumption:
  Allows for use of a very small compressor/tank kit as compared to other air horns.
- Easy Installation: Compact Compressor Pump, Fittings, and tubing are easily installed when supplied, (see P449-23 and P449-24 Compressor Systems and V-69-K Valve Kit.)

KAHLENBERG INDUSTRIES, INC. 1700 12TH STREET, P.O. BOX 358 TWO RIVERS, WI 54241 U.S.A. WWW.KAHLENBERG.COM



#### SOUND SIGNALING EQUIPMENT

Accessories - Air Compressors

### Model P449-23, P449-35 Air Compressor Systems

The Kahlenberg P449-23/P449-35 Compressed Air Systems are quiet, oil-less compressor solutions incorporating a compact, continuous duty compressor pump, pressure switch, air guage, and all tubing and fittings specifically arranged for marine use.



**Technical Details** 

Voltage: 12 V.D.C. (P449-23) Voltage: 24 V.D.C. (P449-35)

Max Current: 21A @12 Volts, 12 A @ 24 Volts

FAD @ 7 bar: ..85 CFM, 24 l/min Max Pressure: 150 p.s.i., 10.31 bar

Weight: 20 lbs., 9 kg, Compressor and Tank

Noise Level: 69 dB(A)@ 1 meter

Thermal Protection: Yes

Duty Cycle: 33% Vibration Isolated: Yes Wire Size: 12 AWG min.

Features and benefits of the P449-23 and P449-35 include:

Quiet Operation: 69dB(A) @ 1 meter

Oil-less Operation:

Minimizes maintenance by eliminating oil in air lines.

Easy Installation:

Fittings, air tank, and tubing are supplied, as are safety valve and air gauge.
All fittings are instant connect. The only wiring required is connection of the compressor assembly to line voltage.

The P449-23/P449-35 Compressor System provides output sufficient for Kahlenberg Air Horn Models
T-0A and S-330

Kahlenberg Industries, Inc. 1700 12th Street, P.O. Box 358 Two Rivers, WI 54241 U.S.A. www.kahlenberg.com



## **Electric Horns**

# Model KB-30A Electronic Horn/Hailer

The Kahlenberg KB-30A is an Electronic Horn/Hailing system for marine use that produces a horn signal in excess of 130 dB (1/3 Octave Band) as required for vessels up to 75 meters in length, as well as voice amplification and amplification of additional audio sources. The KB-30A System consists of two major components being the horn/driver unit, and control/microphone unit.



- 100 Watts of Horn and Hailing Power
- Type Approved for Vessels up to 75 Meters in Length
- "Black Box" under console control unit with remote console mount microphone and microphone jack included
- Operates with any Kahlenberg Signal Control Timer for Automatic Restricted Visibility and Maneuvering Codes including SOLAS General Alarm Code, or simple push button for Horn Signal
- Multiple Horns can be controlled from single station for hailing/talkback and/or horn signal
- Full Time Heater included to eliminate moisture and prevent freezing in horn driver unit
- Auxiliary Audio Inputs Included

#### **TECHNICAL DATA**

Fundamental Frequency: 695 Hz

S.P.L. (1/3 Octave @ 1 Meter): 133 dB

S.P.L. (dB(A)): 132 dB

Electrical Power Required: 24 Volt D.C., 100 Watts

Ingress Protection: IP66

#### Material:

All Aluminum Alloy, protected 316 Stainless Steel Fasteners

Operating Temperature Range: -40 deg. F (-40 C) to 130 deg. F (54 C.)

Net Weight: 13 lbs., 5.9 kg.,

#### Finishes:

Matterhorn (Sky White) TGIC Powder-

#### **Dimensions**:

16.5" x 16.3" x 17.5" (420x414x445)

1700 12th Street, P.O. Box 358 Two Rivers, Wisconsin, 54241



## Marine Air Horns

## Model S-330 Air Horn

The Kahlenberg S-330 Air Horn has been designed to minimize air consumption, and maximize sound pressure output, while retaining the superior finish and durable construction Kahlenberg Air Horns are famous for. The S-330 is much lighter, and significantly smaller than other horns of similar output, yet is certified to IMO Requirements for vessels up to 75 Meters in length, and can be powered by extremely small compressed air systems to minimize associated cost and space requirements on board.



- FOR VESSELS LESS THAN 75 METERS IN LENGTH
- MEETS OR EXCEEDS IMO REQUIREMENTS
- LOW AIR CONSUMPTION, OPERATES ON A WIDE RANGE OF AIR PRESSURE
- HIGHLY RELIABLE, VIRTUALLY NO MAINTENANCE
- TGIC SKY WHITE POWDERCOAT FINISH OR CHROME PLATE

#### **TECHNICAL DATA**

Fundamental Frequency: 330 Hz

S.P.L. (1/3 Octave @ 1 Meter): 132 dB S.P.L. (dB(A)): 136 dB

#### Air Consumption:

9 C.F.M. @ 100 p.s.i., 4.2 l/s @ 7 bar

#### Air Pressure Required:

50 to 200 p.s.i., 3.5 to 14 bar (Higher pressures with optional regulators)

#### **Electrical Power Required:**

Any standard A.C. or D.C. Voltage

Material: Cast Bronze and Spun Brass

Net Weight: 4.75 lbs., 2.15 kg.,

#### Finishes:

TGIC Sky White Powdercoat, Chrome Plate, Gold or Black Chrome PVD

#### **Dimensions**:

18.7" x 6.5" x 6.8" (474x165x173)



# **Electric Horn**

AUDIBILITY RANGE: 1 NAUTICAL MILES CERTIFIED FOR CLASS III MARINE VESSELS



- Horn is electrically powered and IMO certified for vessels over 20 meters but under 75 meters in length
- Horn construction: High strength aluminum bell, supporting frame, stainless steel diaphragm and fasteners
- Self draining design to prevent condensation and corrosion
- Driver unit is totally enclosed, marine type, IP56, and equipped with 150 watt/120 Volt anti-condensation strip heater
- Requires no external air or steam source
- \* Signal will produce a sound pressure level of approximately 71 dB @ 5 km in calm, cool conditions without topographical interference. Signal strength at distance can vary dramatically depending on environmental and geographical conditions. Please consult factory for more detailed information.

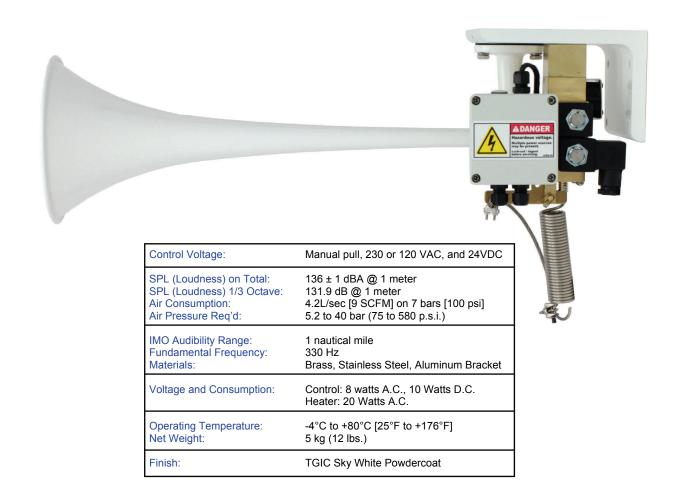
Control and Heater:	120/230V [50-60 Hz]			
SPL (Loudness) on Total: SPL (Loudness) 1/3 Octave: Power Consumption:	132 dBA @ 1 meter > 131 dB @ 1 meter 500 W			
Audibility: Fundamental Frequency:	1 nautical miles (IMO) 300 Hz ± 20 Hz			
Operating Voltage: Operating Temperature:	24 V.D.C. (115/230 volt A.C. with optional M-477 Power Supply) -40°C to +45°C [-22°F to +113°F]			
Finish: Degree of Protection:	Alodine Treatment, Primed and Enamel coated IP 56			
Basic Dimension: Net Weight:	949x541x394cm [37x21x15.5"] 22 kg [49 lbs]			



# MODEL S-330-DVM Air Horn

# Single Tone Heated Air Horn

IMO / COAST GUARD CERTIFIED FOR CLASS III MARINE VESSELS
20 TO 75 METERS IN LENGTH



- Constructed of brass, with titanium diaphragm, and stainless steel fasteners to withstand the harsh marine environment
- Heated combination manual override and dual electric solenoid operating valve for redundancy providing safety of vessel and crew
- Heater is water tight and thermostatically controlled
- Lightweight design facilitates mount to vertical or horizontal surfaces



# "330" Series Air Horns

## Model D-330 Air Horn

The Kahlenberg D-330 Air Horn has been designed to minimize air consumption, and maximize sound pressure output, while retaining the superior finish and durable construction Kahlenberg Air Horns are famous for. The D-330 is lighter, and smaller than other horns of similar output, yet is certified to IMO Requirements for vessels up to 75 Meters in length, and can be powered by very small compressed air systems to minimize associated cost and space requirements on board.



- FOR VESSELS LESS THAN 75 METERS IN LENGTH
- MEETS OR EXCEEDS IMO REQUIREMENTS
- LOW AIR CONSUMPTION, OPERATES ON A WIDE RANGE OF AIR PRESSURE
- HIGHLY RELIABLE, VIRTUALLY NO MAINTENANCE

#### TECHNICAL DATA

Fundamental Frequency: 330 & 280

Hz

S.P.L. (1/3 Octave @ 1 Meter): 133 dB

S.P.L. (dB(A)): 136 dB

Air Consumption:

18 C.F.M. @ 100 p.s.i., 8.4 l/s @ 7 bar

Air Pressure Required:

50 to 200 p.s.i., 3.5 to 14 bar (Higher pressures with optional regula-

tors)

Electrical Power Required:

Any standard A.C. or D.C. Voltage

Material: Cast Bronze and Spun Brass

Net Weight: 9 lbs., 4.3 kg.,

Finishes:

Kahlenberg Chrome Plate, TGIC Sky White Powdercoat, Gold or Black Chrome PVD

**Dimensions**:

20.5" x 15.5" x 8.5" (524x394x217)



# Chimetone **Air Horns**

## **Model D-2 Air Horn**

Designed for use on vessels up to 75 Meters in length, the Kahlenberg Model D-2 Air Horn is an extremely durable unit built for a lifetime of trouble-free service. The unique dual tone sound of the D-2 Air Horn has made it a favorite of commercial vessel operators around the world. This horn is also available as Model D-2CVL including manual/electric combination valve, air strainer, and whistle light installed...



#### **TECHNICAL DATA**

Fundamental Frequency: 266 and 212 Hz S.P.L.: (1/3 Octave @ 1 Meter): 132 dB

**Air Consumption:** 

29 C.F.M. @ 100 p.s.i., 8 l/s @ 7 bar

Air Pressure Required:

100 to 250 p.s.i., 7 to 17 bar (Higher pressures with optional regulators)

Electrical Power Required:

Any standard A.C. or D.C. Voltage

Material: Cast Bronze and Spun Brass

Net Weight: 33 lbs., 15 kg.,

D-2CVL: 44 lbs., 20 kg.

None, White Powdercoat or Chrome Plate

**Dimensions:** 

20.5" x 15.5" x 8.5" (524x394x217)

- FOR VESSELS LESS THAN 75 METERS IN LENGTH
- **MEETS OR EXCEEDS IMO REQUIREMENTS**
- LOW AIR CONSUMPTION, OPERATES ON A WIDE RANGE OF AIR PRESSURE
- HIGHLY RELIABLE, VIRTUALLY NO MAINTENANCE
- OPTIONAL DIRECTLY MANIFOLDED MANUAL/SOLENOID VALVES, AIR STRAINER AND MANEUVERING LIGHT



# Chimetone Air Horns

## Model D-2CVL Air Horn

Designed for use on vessels up to 75 Meters in length, the Kahlenberg Model D-2CVL Air Horn is an extremely durable unit built for a lifetime of trouble-free service. The unique dual tone sound of the D-2 Air Horn has made it a favorite of commercial vessel operators around the world. This horn includes manual/electric combination valve, air strainer, and whistle light installed.



#### **TECHNICAL DATA**

Fundamental Frequency: 266, 212 Hz

S.P.L.: (1/3 Octave @ 1 Meter): 132 dB

#### Air Consumption:

29 C.F.M. @ 100 p.s.i., 8 l/s @ 7 bar

#### Air Pressure Required:

100 to 250 p.s.i., 7 to 17 bar (Higher pressures with optional regulators)

#### **Electrical Power Required:**

Any standard A.C. or D.C. Voltage

Material: Cast Bronze and Spun Brass

Net Weight: 44 lbs., 20 kg.

#### Finish:

None, or TGIC Sky White Powdercoat

#### **Dimensions:**

20.5" x 15.5" x 19.25" (524x394x489)

- FOR VESSELS LESS THAN 75 METERS IN LENGTH
- MEETS OR EXCEEDS IMO REQUIREMENTS
- LOW AIR CONSUMPTION, OPERATES ON A WIDE RANGE OF AIR PRESSURE
- HIGHLY RELIABLE, VIRTUALLY NO MAINTENANCE
- DIRECTLY MANIFOLDED MANUAL/SOLENOID VALVE, AIR STRAINER AND MANEU-VERING LIGHT



# **Single Tone Air Horns**



- Ruggedly constructed to withstand the harsh marine environment with cast marine aluminum bell, stainless steel diaphragm and fasteners
- Patented three piece hermetically sealed stainless steel diaphragm assembly
- Self draining design to prevent water condensation and corrosion

Control:	External Manual, Electric Solenoid, or Combination Manual/Electric Valve				
Operating Temperature:	-4°C to +80°C [24°F to +176°F]				
Finish:	Primed and painted marine grey, white optional				
Degree of Protection:	IP56				
Air Consumption*:	50L/sec [106 SCFM] on 8.3 bar [120 psi]				
Air Consumption, KM-135, KM-	-110: 64L/sec [136 SCFM] on 8.3 bar [120 psi]				

Model Number	Vessel Length	IMO Audibility Range	Fundamental Frequency	S.P.L.	Basic Dimensions	Net Weight
Woder Number	vessei Leilgili	INO Addibility Range	riequency	(1/3 Octave)	Dasic Differsions	ivet vveignt
KM-110	Over 200 Meters	2 Nautical Miles	110 Hz	143 dB	1368x559x559 mm (54x22x22 in)	21 kg (46 lbs)
KM-135	Over 200 Meters	2 Nautical Miles	135 Hz	143 dB	1071x508x508 mm (42x20x20 in)	17 kg (37 lbs)
KM-165*	Over 75 Meters	2 Nautical Miles	165 Hz	143 dB	864x457x457 mm (34x18x18 in)	14 kg (31 lbs)
KM-250*	75 to 200 Meters	1.5 Nautical Miles	250 Hz	138 dB	557x343x343 mm (22x14x14 in)	9 kg (20 lbs)



# MODEL KM-DVM-H Air Horns

# Single Tone Heated Air Horns



Control:	Manual pull, 230 or 120 VAC, 24VDC (8 watts)
Voltage and Consumption: Operating Temperature:	Combined Heaters: 70 watts -40°C to +80°C [-40°F to +176°F]
Finish: Degree of Protection:	Primed and painted marine grey, white optional IP56
Air Consumption*:	50L/sec [106 SCFM] on 8.3 bar [120 psi]
Air Consumption, KM-110, KM-	135: 64L/sec [136 SCFM] on 8.3 bar [120 psi]

- Ruggedly constructed to withstand the harsh marine environment
- Heated, thermostatically controlled combination manual override and dual electric solenoid valves (230 or 120 VAC / 24VDC) AND heated diaphragm assembly.
- Valve assembly is field adjustable for air pressure of 5 to 40 bar (75-580 p.s.i.)
- Horn construction: cast marine aluminum bell, brass valve assembly, stainless steel diaphragm and fasteners
- Patented three piece hermetically sealed stainless steel diaphragm assembly
- Self draining design to prevent water condensation and corrosion

			Fundamental	S.P.L.		
Model Number	Vessel Length	IMO Audibility Range	Frequency	(1/3 Octave)	Basic Dimensions	Net Weight
KM-110-DVM-H	Over 200 Meters	2 Nautical Miles	110 Hz	143 dB	1378x559x559 mm (54x22x22 in)	24 kg (52 lbs)
KM-135-DVM-H	Over 200 Meters	2 Nautical Miles	135 Hz	143 dB	1071x508x508 mm (43x20x20 in)	20 kg (43 lbs)
KM-165-DVM-H*	Over 75 Meters	2 Nautical Miles	(165 Hz)	143 dB	864x457x457 mm (34x18x18 in)	17 kg (37 lbs)
KM-250-DVM-H*	75 to 200 Meters	1.5 Nautical Miles	250 Hz	138 dB	557x343x343 mm (22x14x14 in)	12 kg (27 lbs)



# **Model Z-320-SC Navigation Horn**

The Kahlenberg Model Z-320-SC Self-Contained Air Horn represents a new concept in sound signaling for vessels over 75 meters in length. Using an internal direct drive air source, this new horn requires only one low amperage A.C. single phase or three phase connection for power.

Completely contained in a thermostatically controlled, heated IP-56 enclosure, the Z-330-SC offers a new standard for reliability and longevity in harsh marine environments, previously only matched by pneumatic horns which required an external air source.



- TYPE APPROVED FOR VESSELS 75-200 METERS
- SELF-CONTAINED, NO AIR SUPPLY REQUIRED
- INTERNAL CONTROLLED HEATING
- HIGHLY RELIABLE, LOWEST INSTALLATION COST
- EXCEPTIONAL CORROSION RESISTANCE
- RATED FOR CONTINUOUS DUTY
- AVAILABLE IN SINGLE OR THREE PHASE 50/60 HZ A.C. VERSIONS

#### **TECHNICAL DATA**

Fundamental Frequency: 330 Hz

S.P.L. (1/3 Octave @ 1 Meter): 138 dB

S.P.L. (dBA): 147.5 dB

#### Electrical Power Required:

110-240 Volts A.C. 1 Ph. 50/60Hz 230/460 Volts A.C. 3Ph 50/60Hz

#### Power Consumption:

8.6 Amps @ 230 Volts (1ph) 2.4 Amps @ 460 Volts (3ph)

Materials: Brass horn body, reinforced fiberglass enclosure, alumimum base

Ingress Protection: IP56

#### Max./Min. Amb. Temp.:

60 deg./-40deg. C. 140 deg./-40 deg. F.

#### Net Weight:

106 lbs./48 kg (3 Ph. Version 123.5 lbs/56 kg (1 Ph. Version)

#### **Dimensions:**

35.25" x 21" x 20.45" (895x533x520)



# **KPH Series Electric Piston Horns**



- Horn construction: High strength aluminum bell (KPH-90 reinforced fiberglass), supporting frame, aluminum crankcase, stainless steel cylinder and fasteners
- Self draining design to prevent condensation and corrosion
- Oil free, heated crankcase and piston cylinder assembly
- Motor is totally enclosed, IEEE45 marine type, IP56, insulation class F and equipped with anti-condensation strip heater

Control and Heater:	120/230V [50-60 Hz]			
Power Consumption:	15 amp on 460/3/60 (other voltage available)			
Operating Voltage:	460/3/60, 380/3/50 (other voltages available)			
Operating Temperature:	-40°C to +45°C [-22°F to +113°F]			
Finish:	Alodine Treated, Primed and Epoxy coated			
Degree of Protection:	IP 56			

M	lodel Number	Vessel Length	IMO Audibility Range	Frequency	(1/3 Octave)	Basic Dimensions	Net Weight
	KPH-90C	Over 200 Meters	2 Nautical Miles	90 Hz	(143 dB)	1518x844x949 mm (60x34x38 in)	126 kg (277 lbs)
	Over 75 Meters (and				400   (000    )		
	KPH-130C	over 200 meters)	2 Nautical Miles	130 Hz	143 dB	999x635x845 mm (40x25x34 in)	100 kg (220 lbs)