

GENERAL INSTRUCTIONS KAHLENBERG AIR HORNS

1. GENERAL DESCRIPTION OF THE HORN:

The Kahlenberg air horn is of the diaphragm type and consists of three principal parts, the horn body, projector, and bracket.

Kahlenberg air horns are made in a wide variety of configurations with up to eight (8) projectors on one unit and five (5) diaphragm sizes. Integral valves are treated with a separate instruction sheet when necessary.

2. INSTALLATION:

WARNING: These air horns produce extreme loudness, which can cause permanent hearing damage. All personnel involved in the operation and maintenance of this equipment must wear hearing protectors when testing near horns. Permanent hearing loss may occur if testing near the horn without hearing protection.

For mounting the air horn, a supporting bracket with drilled boltholes is provided. On the larger models provision is also made for attaching a steadying bracket near the top of the horn.

When the air horn is installed, or when the air connections are opened, or when air pipes are altered, care must be taken to thoroughly blow out all chips, water, and dirt from the lines before they are connected to the whistle valve. After this is done, protection for the air horn and valve is normally provided by a Kahlenberg combination strainer and water settling chamber (M-100 or M-101) which should be installed in the air pipe leading to the whistle valve and located inside to prevent freezing, and in a convenient position for draining. For Models S-0A, D-0A, and T-0A, when used with Kahlenberg Compressor Systems, or when using nylon or similar plastic tubing, a strainer such as the M-100 or M-101 may not be necessary if oil and/or condensation are not present in the air supply.

As a general rule, size of pipe between air tank and whistle valve should not be less than ½" pipe size. If pipe is over 50 feet long, use ¾", and over 100 feet long, use 1". For air pressures less than 250 lbs. on large vessels use pipe one size larger than size given. For Models S-0A, D-0A, T-0A, S-1 and D-1, smaller tubing may be used and is typically 5/16" for S-0A, D-0A and T-0A. For Model S-1 and D-1 installations, 3/8" outside diameter tubing may be used for installations requiring less than 30 feet of tube from air receiver to whistle valve. When installations do not fall well within general guidelines as stated above, exact pipe size calculations for specific installations can be obtained by calling the Kahlenberg sales department.

IMPORTANT: To avoid a "Tail" (slow cut off) on the whistle blast, the length of pipe or tube between horn and whistle valve should be as short as possible, preferably not over 36 inches.

3. CARE OF AIRHORN:

The air horn should be inspected externally at regular intervals for loose bolts, loose cap screws, gasket leaks, etc. Internal inspection is not required unless the horn does not blow with its normal tone. In such case, determine which of the horns, if the horn is of the multiple type, is off tone, and remove the cap screws holding the cover on the back of the horn body or chamber. Carefully remove and inspect the diaphragm, clean it off, and wipe out any water and dirt which may have accumulated in the horn chamber and make sure that the air passage hole, which is small in size and through which the air enters the horn chamber, is not blocked or partially blocked by dirt or chips. If necessary, check the air passages through the bracket and other parts of the horn and blow them out with air.

If the diaphragm is bent, cracked, or otherwise damaged, it should be replaced with a new one. Inspect the narrow sounding rim in the body against which the diaphragm presses for burrs or chips embedded on this narrow and important face. Avoid any damage to this face. Do not file or scrape this surface. Inspect also the wide seat in the body against which the rim of the diaphragm fits. See that it is clean, smooth, and free from dirt and embedded chips because the diaphragm must seat against this uniform and true. Likewise, inspect the seat in the cover, which comes in contact with the diaphragm. To reassemble the horn, put the diaphragm back in carefully and then put the cover on, inserting the series of cap screws around the rim of the cover and pulling these screws down carefully and evenly. They should be tightened firmly, but not too tight.

Special attention is called to the following, -- on most air horn models there is a small breathing hole provided in the back cover. This hole also acts as a drain for water accumulating from condensation or sweating. The hole is drilled through the back of the cover at a point below and in line with the center of the circular Kahlenberg stainless steel name plate which is located in the center of the back cover of each horn. Make sure this hole is open and clear and not clogged with dirt or paint. Putting the cover back on the airhorn body with the name plate reading horizontal, or as nearly horizontal, as the bolt holes permit, automatically brings this vent-drain hole in the lowest or proper gravity draining position.

If trouble is experienced with the tone of one of the horns on a multiple horn, and it cannot be remedied in the field by inspection of the interior of the horn and proceeding as described above, this projector and body should be removed and returned to the Kahlenberg factory or the airhorn body assembly, (body, cap, and diaphragm) replaced with a new assembly. If necessary, the entire horn, less whistle valve, may be returned to the factory for repairs.

4. CLEANING OF CHROME PLATED AIR HORNS:

Chrome plated air horns require special care of the exterior surfaces. Especially when operating in saltwater environments, the horn should be routinely washed down with fresh water once a week, or as soon as possible after salt water has been in contact with the finish. This practice will drastically improve the lifetime of the finish. Water entering the interior of the horn will not damage the unit, however, directing a stream of water directly into the sound producing diaphragm may briefly clog the horn with water.

Only if saltwater spots cannot be removed with a soft cloth, soap, and fresh water, the chrome should be polished using a non-abrasive polishing product such as "Flitz" or "Simi-chrome" chrome polish. After polishing or routine cleaning, a pure carnauba car wax or polymer can be applied also. Be sure to buff off excess wax immediately.

BE CERTAIN NOT TO USE A WAX CONTAINING ABRASIVES SUCH AS COLLINITE #850 METAL WAX. OBVIOUS ABRASIVE SCRATCHES ON CHROME FINISH WILL VOID ALL WARRANTY CLAIMS.

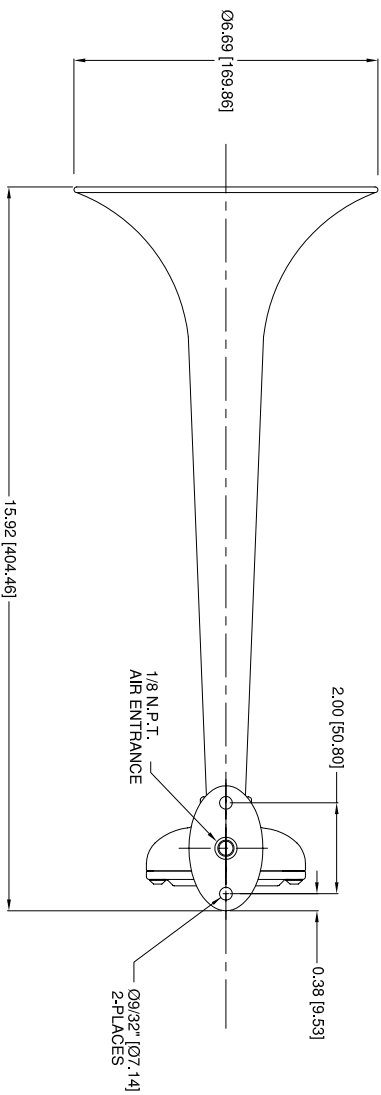
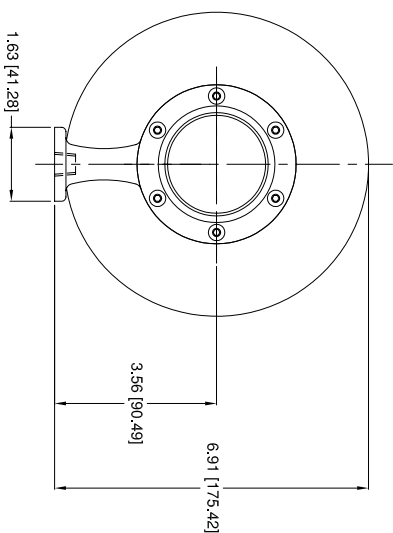
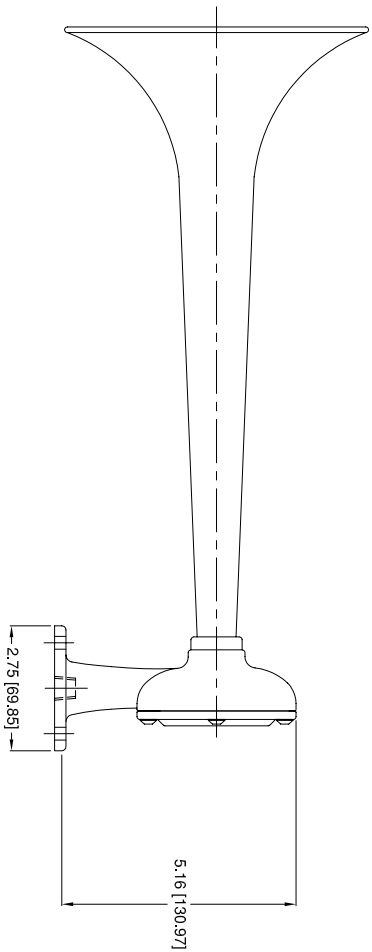
5. WORKING PRESSURE: For Models S-0A, D-0A, and T-0A, the working pressure range is 50 to 200 lbs. per square inch. The working pressure range for all other models is 100 to 250 p.s.i.. If air pressure to the horn exceeds these working pressure ranges, use a reducing valve between air tank and horn and reduce the pressure.

6. ORDERING REPAIR PARTS: When ordering airhorn repair parts, refer to the Airhorn Parts List. Give quantity wanted, the part number, name of part and the model number and serial number of the horn. The latter numbers are stamped on the circular stainless steel name plate located in the center of the back cover on each horn body. "Zero Series Horns" may have the serial number stamped on the underside of the horn body assembly.

When ordering whistle valve repair parts, refer to the Whistle Valve Parts List. Give quantity wanted, the part number, name of part, and the model number and serial number of the whistle valve from the name plate, which is attached to whistle valves of the electric solenoid type. In the case of plain manual whistle valves give the pipe thread size and the name of the valve, which is usually cast in letters on the surface of the valve body.

Kahlenberg Industries, Inc.
P.O. Box 358, 1700 12th St.
Two Rivers, WI 54241 U.S.A.
Ph: 920-793-4507
Fx: 920-793-1346
www.kahlenberg.com

REV.	BY	DATE	DESCRIPTION	APP'D.
A	ZJN	03/01/11	REVISED WITH UPDATED BODY/STAND & COVER	EMK



TECHNICAL DATA

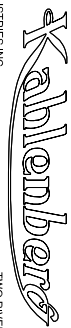
Frequency: 322 Hz
 Sound Pressure Level (dB(A) @ 1 meter): 131.0 dB
 Sound Pressure Level (1/3 octave at 1 meter): 122.9 dB
 Air Consumption: 9 C.F.M. @ 100 P.S.I.
 Air Pressure Req: 50 to 200 P.S.I.
 Electric Power: N/A
 Material: Spun Brass and Cast Bronze
 Net Weight: 4.75 Lbs.
 Shipping Weight: 9 Lbs.

CONFIDENTIAL

INFORMATION CONTAINED HEREIN IS CONFIDENTIAL, IT IS THE PROPERTY OF KAHLEMBERG INDUSTRIES INC. IT IS TO BE USED SOLELY FOR THE PURPOSE PROVIDED, AND IT IS NOT TO BE DISCLOSED TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF KAHLEMBERG INDUSTRIES INCORPORATED.

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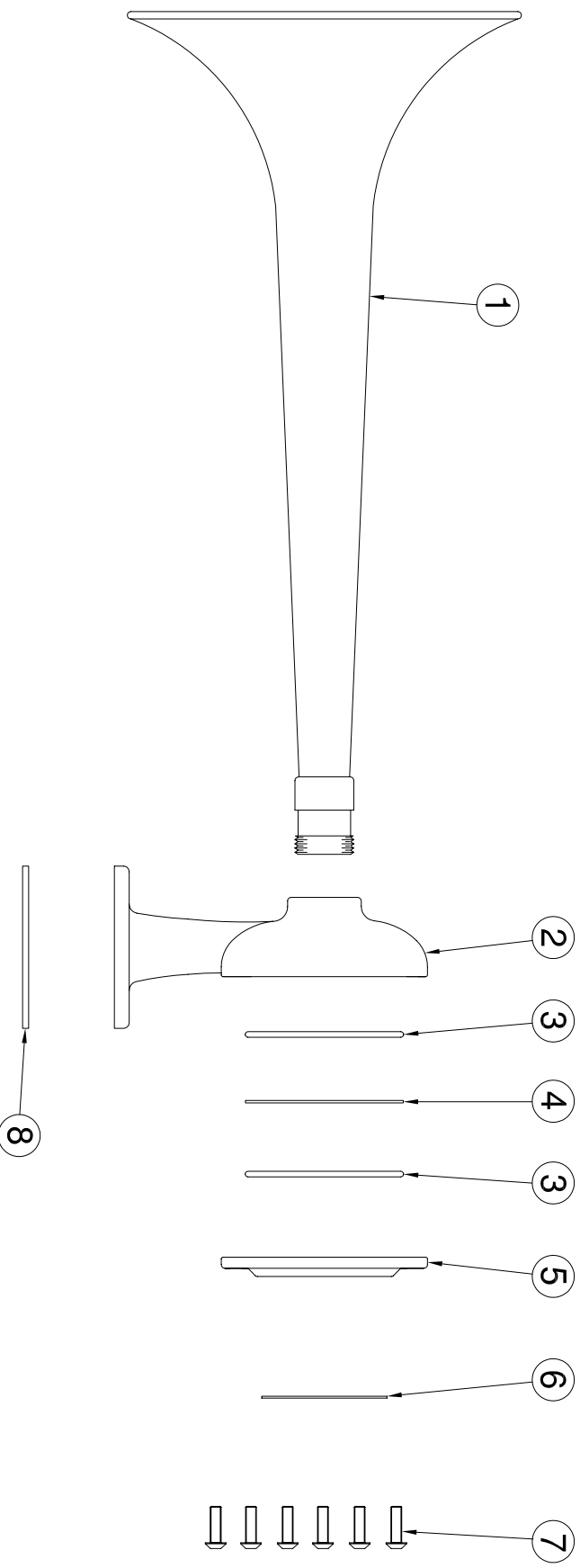
KAHLEMBERG INDUSTRIES INC. TWO RIVERS, WISCONSIN 54241



**OUTLINE DIMENSIONS
S-0A AIRHORN**

DR.	DATE	CKD.	SCALE	DRWG. NO.	REV.
ZJN	06/12/03	EMK	N.T.S.	3-6236	A

REV.	BY	DATE	DESCRIPTION	APP'D.
A	ZJN	03/01/11	REVISED WITH UPDATED BODY/STAND & COVER	EMK



NO	PART #	DESCRIPTION	DWG. #	REQ
1	P131-82 P132-82	PROJ. ASSEMBLY (BRASS) PROJ. ASSEMBLY (CHROME) PROJ. ASSEMBLY (WHITE)	3-6231	1
2	P019-22 P019-22	BODY/STAND (BRASS) BODY/STAND (CHROME) BODY/STAND (WHITE)	3-6596	1
3	P321-17	O RING		2
4	P028-25	DIAPHRAGM	2-5495	1
5	P020-22 P020-22	COVER (BRASS) COVER (CHROME) COVER (WHITE)	3-6597	1
6	P133-01	NAMEPLATE		1
7	W102-001SS	SCREW, 10-24 X 5/8 BUTTUN HD. CAP		6
8	P051-07	GASKET	2-5377	1

O.D. 3-6236

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<p>KAHLBERG INDUSTRIES INC. TWO RIVERS, WISCONSIN 54241</p>		<p>PARTS LIST S-02A AIRHORN, FIG. 110 AH/36236/S/00000/NF (CH) (WH)</p>			
DR.	DATE	CKD.	SCALE	DRWG. NO.	REV.
ZJN	12/18/03	EMK	N.T.S.	3-6239	A



Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product. This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 30/SEP/2019. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until 12/NOV/2019 subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Product Name: Ship Sound Signal, Horn
Model Name(s): K-460, K-380, S-0A/S-0A-T, D-0A & T-0A

Presented to:
KAHLENBERG INDUSTRIES, INC.
1700 12TH STREET
P.O. BOX 358
TWO RIVERS
United States

Intended Service:	Marine & Offshore Applications - For use Onboard Marine Vessels of all Types of Less Than 20m (65ft) LOA
Description:	Air Operated Sound Signaling Device.
Tier:	3
Ratings:	Frequency: 250-700 Hz; Sound Pressure Level: (1/3) octave at 1m): > 120 dB; See attached "pdf" Technical Data.
Service Restrictions:	Marine Vessels of all Types of Less Than 20m (65ft) LOA. Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined. >>
Comments:	The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. Satisfies the International Regulations for Preventing Collisions at Sea, 1972, Rules 32, including Annex III paragraphs a through d.
Notes / Documentation:	Supporting Data: Dwg No. 3-6456 Rev. A, 3-6419 Rev. B, 3-6236 Rev. A, 3-6751, 3-6237 Rev. A, 3-6242 Rev. A;
Term of Validity:	This Product Design Assessment (PDA) Certificate 14-HS1271674-PDA, dated

13/Nov/2014 remains valid until 12/Nov/2019 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

ABS Rules:

Rules for Conditions of Classification, Part 1 2014 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following: Steel Vessels: 4-8-3/Table 1B & 2; Steel Vessels Under 90 Meters (295 feet) in Length: 4-6-3/Table 1; Offshore Support Vessels (OSV Rules): 4-8-3/Table 1B & 2; Rules for Conditions of Classification, Part 1 - 2014 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following: Mobile Offshore Drilling Units: 4-3-3/Table 1; Offshore Installations: 3-6/5.1;

National Standards:

International Standards:

International Regulations for Preventing Collisions at Sea, 1972, (Consolidated 2003)

Government Authority:

UK Maritime and Coastguard Agency (MCA)

EUMED:

Others:

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	14-HS1271674-PDA	13/NOV/2014	12/NOV/2019



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.



February 22, 2005

Erick Kahlenberg
Kahlenberg Bros. Co.
1700 12th St.
Two Rivers, WI 54241

Dear Mr. Kahlenberg:

Thank you for your continued participation in the NMMA marine component Type Accepted Program. The registered TA numbers are listed below.

Component: Horns 12 to 20 Meters

Model Number

S-0A

T-0A

NMMA Number

2457392

2457393

Manufacturer ID: 7009 Number of components: 2

Best Regards,
Engineering Standards

Alice Brown

Alice Brown
Certification Coordinator



February 22, 2005

Erick Kahlenberg
Kahlenberg Bros. Co.
1700 12th St.
Two Rivers, WI 54241

Dear Mr. Kahlenberg:

Thank you for your continued participation in the NMMA marine component Type Accepted Program. The registered TA numbers are listed below.

Component: Horns 05 to 12 Meters

Model Number

S-0A

T-0A

NMMA Number

2457394

2457395

Manufacturer ID: 7009

Number of components: 2

Best Regards,
Engineering Standards

Alice Brown

Alice Brown
Certification Coordinator