

AIR HORN



IBUKI

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DATE	REV.	REMARKS	CHECK

[illegible]

A100E

AIR HORN
エアホーンWHISTLE (Above 130dB)
汽笛 (130dB以上)OUTLINE VIEW
外形図MASS
質量
Abt 7kg1/3rd-OCTAVE BANDLEVEL
オクターブバンドレベル

130dB/1m

FUNDAMENTAL FREQUENCY
基本周波数

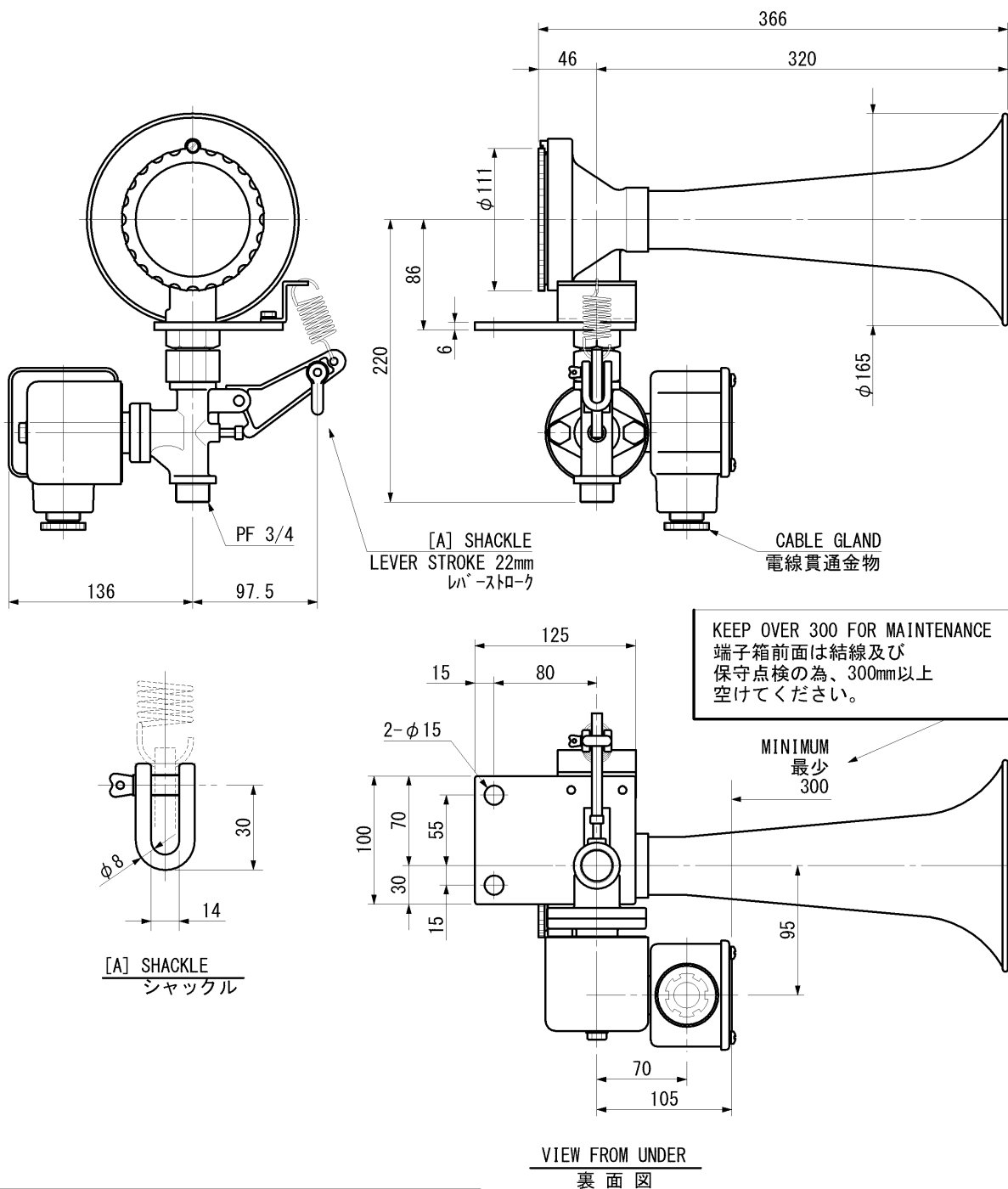
APPROX. 310Hz

PROTECTION GRADE
保護等級

IP 56

AIR PRESSURE RANGE
空気圧力範囲

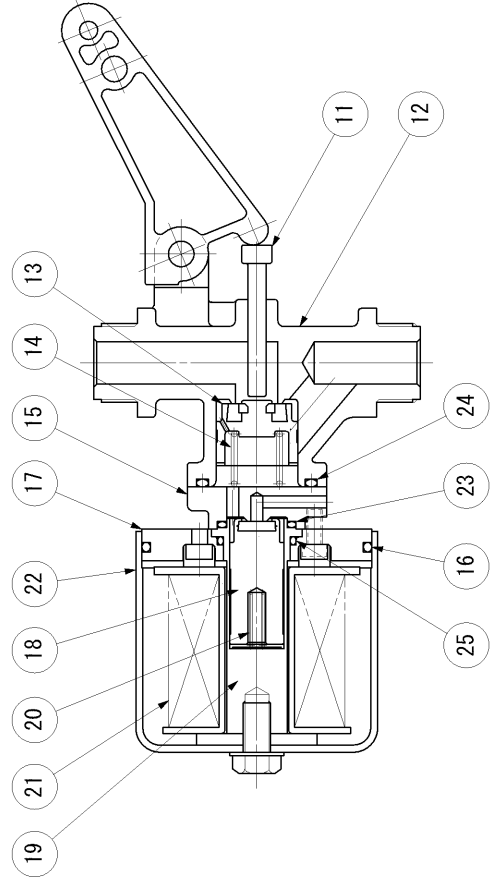
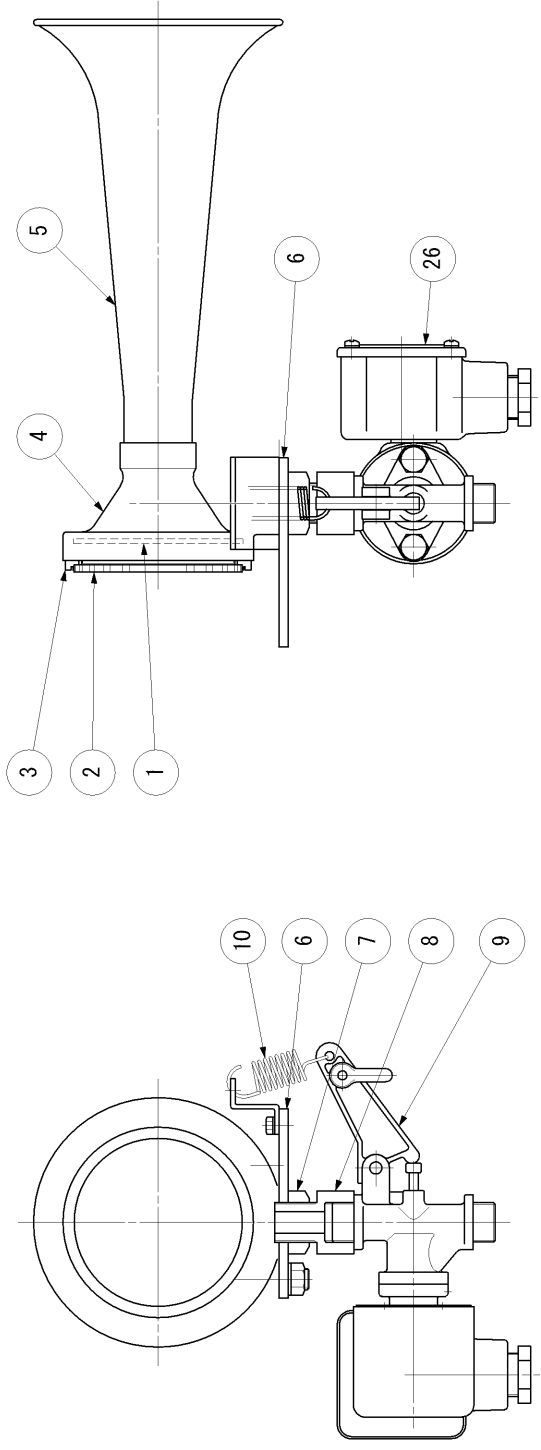
0.4~1.0MPa

CONSUMPTION
消費量FREE AIR
自由空気 15L/S

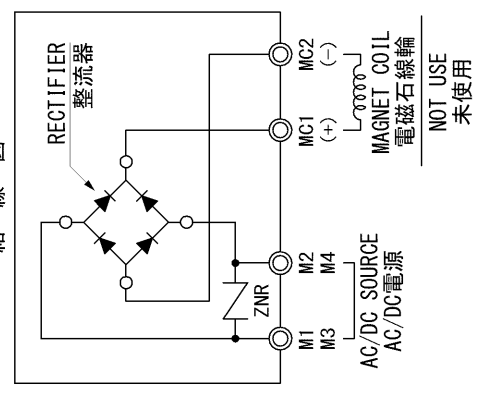
SOURCE 電源	EXCITING CUR. 励磁電流
AC220V, 1 ϕ , 50Hz	0.1 A
AC100~115V, 1 ϕ , 50Hz	0.2 A
DC 24V	0.8 A

IBUKI KOGYO CO.,LTD.
伊吹工業株式会社

D. W. N.	M. Kawamura	C. K. D.	Y. Ueda	C. K. D.	
DATE	AUG. -23. 2010	SCALE	1/6	DWG. NO	SOJ-1290C



CONNECTION DIAGRAM
結線図



 IBUKI IBUKI KOGYO CO.,LTD. 伊吹工業株式会社	A100E AIR HORN エアホーン	WHISTLE (Above 130dB) 汽笛 (130dB以上) CONSTRUCTION VIEW 構造図	DATE REV. REMARKS	D. W. N.	Y. Ueda
				C. K. D.	F. Shintaku
				DATE	FEB. -10. 2010
				SCALE	1/5
				DWG. NO	SSJ-1290C

PARTS LIST 部品リスト		A100E		
NO.	PART NAME	MATERIAL		
1	Diaphragm 振動板	Phos. Bronze C5210		
2	Back cover バックカバー	Bronze casting C3712		
3	Set screw for back ring バックアップリング止めねじ	Brass wire C3601		
4	Body 本体	Bronze casting CAC403		
5	Horn ラッパ	Aluminium alloy casting AC7A-F		
6	Mounting plate 取付板	Steel plate SS400		
7	Lock nut ロックナット	Brass C3601		
8	Socket ソケット	Brass C3601		
9	Lever 手動レバー	Brass forging C3712		
10	Lever spring 手動レバー用ばね	Stainless steel SUS316		
11	Valve push rod 弁押棒	Stainless steel SUS304		
12	Valve box 弁箱	Brass forging C3712		
13	Valve 弁	Brass C3601		
14	Valve spring 弁用ばね	Stainless steel SUS316		
15	Valve box cover 弁箱ふた	Brass forging C3712		
16	Packing (O ring) パッキン (O リング)	Synthetic rubber 合成ゴム		
17	Magnet base 電磁石台	Rolled steel SS330		
18	Plunger プランジャ	Stainless steel SUS403		
19	Magnet core 電磁石固定鉄心	Stainless steel SUS403		
20	Magnet spring 電磁石用ばね	Stainless steel SUS316		
21	Magnet coil 電磁石コイル			
22	Magnet yoke 電磁石継鉄	Steel plate SPCC		
23	Packing (O ring) パッキン (O リング)	Synthetic rubber 合成ゴム		
24	Packing (O ring) パッキン (O リング)	Synthetic rubber 合成ゴム		
25	Packing (O ring) パッキン (O リング)	Synthetic rubber 合成ゴム		
26	Terminal box for magnet 電磁石端子箱	FRP		
D.W.N.		M.Kawamura	 IBUKI KOGYO CO.,LTD. 伊吹工業株式会社	DWG.No PJ-1290C

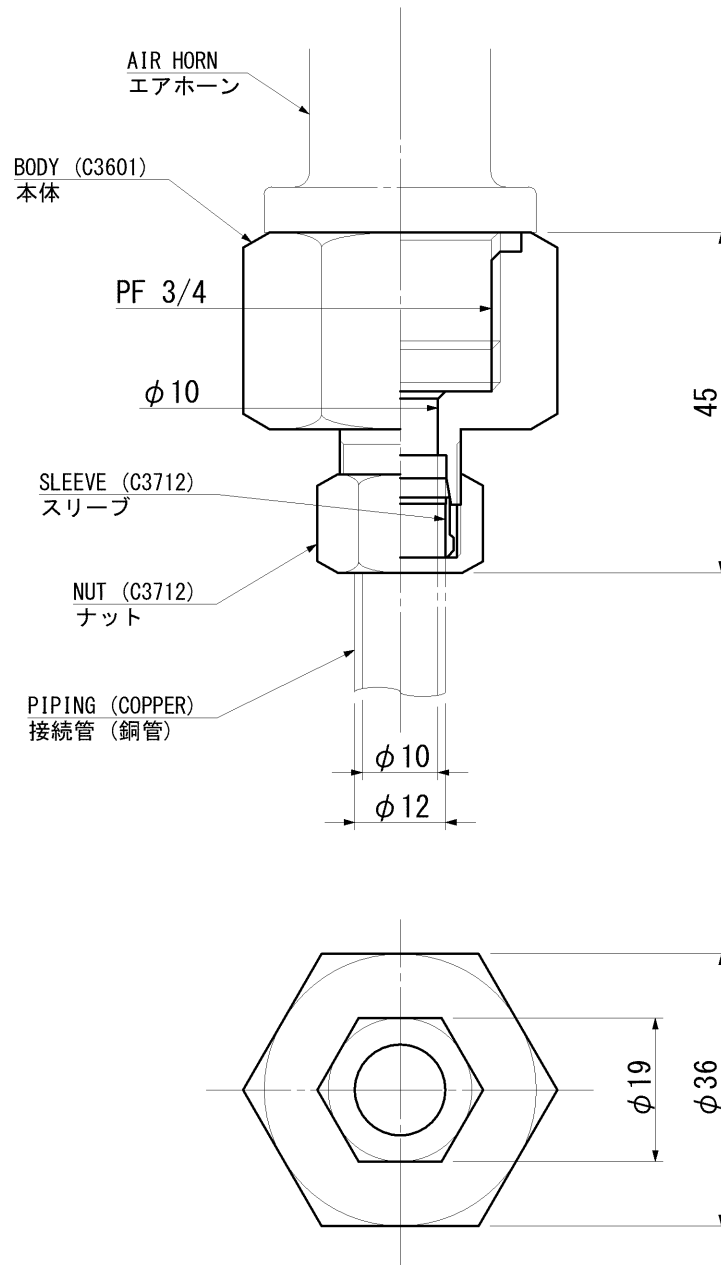
φ12 PIPE FITTING'S
くい込み継手

WITH AIR HORN
エアホーン用

OUTLINE VIEW
外形図

MASS
質量

Abt
0.25kg



IBUKI KOGYO CO.,LTD.
伊吹工業株式会社

D. W. N.	M. Kawamura	C. K. D.	Y. Ueda	C. K. D.	
DATE	FEB. -10. 2010	SCALE	1/1	DWG. NO	A-5

INSTRUCTIONS

1. Items relating to safety

1.1. WARNINGS

Completely clean the air line to remove all dusts and rusts, etc. from the line before installing the whistle.

Do not put face and hands close to the blowout hole.

When servicing the whistle at a high place, provide a safety scaffold and wear a lifeline.

Always switch off power first when working on the whistle.
Make sure that no voltage exists.

Before sounding the whistle for test, be sure the area is cleared of all unauthorized personal and all personal in the area wear ear protection (e.g. earplugs).

Close the air supply valve and bleed all pressure from the air line before accessing the air horn for servicing (e.g. replacement of diaphragm, valve adjustment).

Do not put face and hands close to the blowout hole.

2. Electric shock safety guidelines

2.1. General

2.1.1. Effect of electric shock to human body

- (1) Electric shock has very high degree of risk of bodily injury.

Even relatively low, the current flowing through heart, lung and other critical organs can result in personal injury or even death.

- (2) In general, when working with low AC volts, for example, around 100 volts, people tend to ignore the risk involved.

Remember that a power source capable of flowing 50 mA at 100 VAC, 60/50 Hz can be dangerous to human body.

100 mA current can result in serious personal injury from electric shock.

2.1.2. Symptoms of electric shock

Typical symptoms of electric shock are usually not chronic.

In the case of unconsciousness or apparent death, do not give the victim of electric shock up for dead.

Intead, immediately render first aid and resuscitation such as artificial respiration and heart massage.

Continuous resuscitation for several hours may revive by victim.

- (1) In the case of breathless, perform artificial respiration until the respiratory center recovers the respiratory function.
- (2) In the case of serious electric shock, the face of the victim turns pale, the heart palsates faintly or stops.
- (3) In the case of unconsciousness, the victim's body becomes rigor in three minutes.

2.2. To prevent electric shock

Personnel in charge of operation, maintenance, repair, etc., of the whistle and the supervisor must strictly observe applicable electric safety standards and regulations and implement the following special precautions and handling techniques to assure positive prevention of electric shock.

- (1) Personal injury and property damage caused by electric shock often resulted from live power line which should have been off.

Verify that the power switch is off and verify that power line is dead by using a voltmeter and the like.

- (2) Do not solely rely on safety and protective system.

Always protect against failure of these system.

- (3) Wear rubberized/insulated gloves and shoes.

Place insulating material (e.g. rubber mat) between the surface.

- (4) Do not turn on and off power during service except for unavoidable case.

When power is off during service, the work area should be designated to caution people that power must be kept off.

- (5) When operating the power switch, always use the right hand while keeping the left hand off the body (stretch the left hand backward).

- (6) Always have another member of staff stand near the power disconnecting device capable of turning off power quickly in the case of electric shock.

INSTRUCTIONS

IBUKI A100E TYPE AIR HORN

(Whistle for vessels of 20m or more but less than 75m)

1. General

The IBUKI Air Horn is equipped with diaphragms which are vibrated by compressed air. The air supply can be controlled via a solenoid valve electrically or manually.

2. Operation

Refer to the instructions for IBUKI Whistle Controller.

3. Installation

- (1) The whistle shall be placed as high as practicable on the vessel, in order to reduce interception of the emitted sound by obstructions and also to minimize hearing damage risk to personnel.
- (2) The whistle shall be firmly fixed with bolts and nuts.
- (3) The place for the whistle shall be sufficiently large for inspection and maintenance, and behind the whistle a space of at least 200mm is required to exchange diaphragms.

4. Disassembly and reassembly

4.1. Disassembly ... Refer to the Drawing No. SSJ-1290C

- (1) Screw off the back ring and take out the diaphragms.
- (2) Remove the magnet terminal box cover, and disconnect cable wires from the terminal block.
- (3) Screw off the magnet yoke clamping bolt, and remove the magnet yoke with the magnet coil, the magnet spring and the plunger.
- (4) Disconnect the magnet coil lead wire and the rectifier (diode) from the terminal block, and pull out the magnet coil.
- (5) Remove the magnet base and the valve box cover, and take out the valve spring and the valve from the valve box.

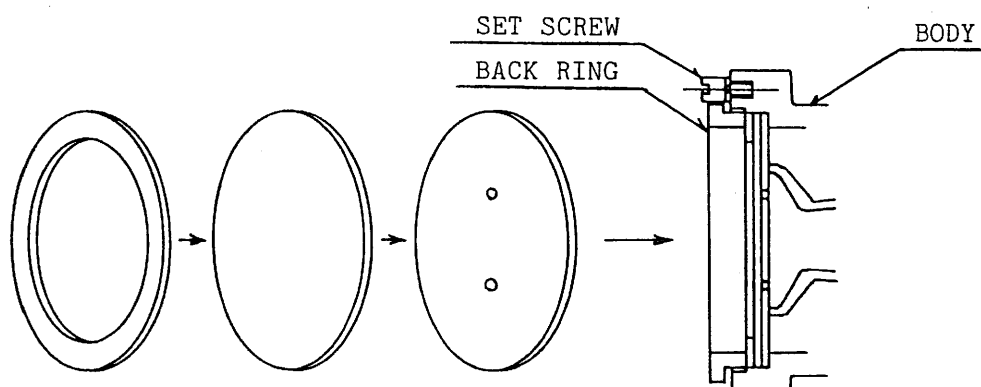
4.2. Reassembly

- (1) For reassembly the described procedure for disassembly is reversed.
- (2) Thoroughly clean the fitting joints for reassembly.
- (3) Make sure that all fastening/clamping bolts are fastened securely.
Be sure to avoid undue application of force in fastening them.

5. Precautions

- (1) Be sure to turn off the power switch when the cover of the whistle terminal box is opened.
- (2) Be sure to close the air main valve and purge air from the piping before hand is put into the whistle e.g. for replacing the diaphragms, adjusting the valve.
- (3) The diaphragms are to be attached in the following order.

The back ring shall be adjusted to make a clear sound on blowing test.



- (4) Experience shows that ingress of foreign matter into the whistle operating valve can often cause damage to the valve seat.

Therefore, be sure to sweep clean the air piping before installing the whistle.

An air filter is recommended to be installed upstream of the whistle.



This certificate is issued under the authority given in Merchant Shipping Notice No MSN 1874 (M+F) Annex 2 as amended to date.

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Certificate No: LR26256719MC

Issue Date: 02/12/2025

Expiry Date: 01/12/2030

Certificate Of Type Approval (MCA)

This is to certify that LLOYD'S REGISTER, specified as a "person" under the terms of The Merchant Shipping (Marine Equipment) Regulations 2016 (SI2016 No. 1025), did undertake the relevant type approval procedures of the equipment identified below which was found to be in compliance with the Regulations for preventing Collisions at Sea, 1972 (COLREG 72) as amended, requirements subject to any conditions in the Design Appraisal Document hereto.

Manufacturer	Ibuki Kogyo Co., Ltd.
Address	7-28 Takadono 1-Chome, Akashi-ku, Osaka, Japan
Type	Sound Signal Appliances
Description	A100 (Manually Controlled Compressed Air Powered Air Horn), A100E (Air Operated Horn When Fitted with Electric and Manual Control), or A100EH (Air Operated Horn When Fitted With a Heater)
Trade Name	A100 - A100E - A100EH
Specified Standard	The Convention on the International Regulations for Preventing Collisions at Sea 1972 (COLREGs), Annex III/1 1(a) to (d) inclusive, as amended EN60945 (2002) including IEC 60945 Corrigendum I(2008)

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The attached Design Appraisal Document forms part of this certificate.

This certificate remains valid up to the expiry date, unless cancelled or revoked, or until such date where it is superseded by the requirements of the associated approval scheme, whichever is sooner, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

Lijo Thomas

Fire & Safety - Senior Surveyor to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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DESIGN APPRAISAL DOCUMENT

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Certificate No:

LR26256719MC

Reference:

UKITSO/LSA/TA/LT/MB/TSO/25-051347/PRJ111005102217

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR26256719MC

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System 2019 and this Design Appraisal Document forms part of the Certificate.

The undernoted documents have been appraised for compliance with the relevant International Conventions and UK legislation for the Type Approval of Marine Equipment for use on Merchant Ships Registered in the United Kingdom.

This Design Appraisal Document forms part of the Certificate that is issued under the authority given in the MCA Merchant Shipping Notice No MSN 1874.

This Design Appraisal Document forms part of the Certificate.

This Certificate is a Renewal of Certificate Number LR21170586MC

APPROVAL DOCUMENTATION

Instructions of use IBUKI A100 Air Horn for vessels of 20m or more but less than 75m, H7078, undated.

Instructions of use IBUKI A100E Air Horn for vessels of 20m or more but less than 75m, H8062, undated.

Instructions of use IBUKI A100EH Air Horn for vessels of 20m or more but less than 75m, undated.

Product Quality Assurance (PQA) Report Number PRJ111005102217, dated 24/02/2026.

<u>Drawing No.</u>	<u>Date.</u>	<u>Drawing Title.</u>
SOJ-1200C	02/27/1979	A100 Air Horn
PJ-1200C	02/27/1979	A100 Part List
SSJ-1200C	02/27/1979	A100 Air Horn Construction View
SOJ-1290C	02/27/1979	A100E Air Horn
PJ-1290C	02/27/1979	A100E Part List
SSJ-1290C	02/27/1979	A100E Air Horn Construction View
SOJ-1240C	02/27/1979	A100EH Air Horn
PJ-1240C	02/27/1979	A100EH Part List
SSJ-1240C	02/27/1979	A100EH Air Horn Construction View

TEST REPORTS

MIRA Test Report No. K 124341, Measurement of the Sound Output of IBUKI Ship Air Horn Model A100E, dated 18/02/1986.

CTS EMC Consultants Test Report No: 5215, Air Pressure of Air Horn operated by a solenoid valve, dated 31/10/1997.

Prototype Test Report No. IDOC-T0002, A100, A100E & A100EH, dated 15/04/2011, witnessed by LR Surveyor.

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**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR26256719MC****CONDITIONS OF CERTIFICATION****1. Horn Dimensions:**

	<u>A100 Manual</u>	<u>A100E Solenoid & Manual</u>	<u>A100EH Solenoid & Manual with Heater</u>
Horn Diameter (mm)	165	165	165
Overall Length (mm)	366	366	418
Mass (Kg)	4.6	6.6	12.7

2. The A100, A100E and A100EH horns may only be fitted to vessels of greater than 20 metres but less than 75 metres in length.
3. The onboard arrangements and installation of this horn is not part of this certificate, all such arrangements are to be to the satisfaction of the attending surveyor.
4. Each horn is to be delivered with a copy of this certificate.
5. Instructions for use and maintenance are to be supplied with each horn and that it is connected to a compressed air supply at a minimum working pressure of 7 Kgf/cm².
6. The Sound Signal Appliances have been appraised against also the standards mentioned under IMO Resolution A.694 (17) - General Requirements for Shipborne Radio Equipment Forming Part of the Global Maritime Distress and Safety System (GMDSS) and for Electronic Navigational Aids.
7. The Air Horn shall be marked clearly accordingly to the requirements of Resolution A.694 (17).
8. The Air Horn shall be delivered complete with their technical documentation accordingly to the requirements of Resolution A.694 (17).
9. **Installation on board:** The arrangements and installation of this equipment on board the vessel are not part of this design appraisal or certificate. All such arrangements are to be to the satisfaction of the Surveyors attending on board; the fitting of the equipment to be in accordance with the manufacturer's instructions the requirements of COLREGs 72 and Resolution A.694 (17), as amended, and any additional requirement of the State whose flag the vessel is entitled to fly.
10. **Variants of the approved design:** Where this equipment is proposed to be supplied to a purchaser's specification which requests omission of one or more of the facilities necessary to meet the performance requirements referred to above, the purchaser is required to request the vessel's Flag State to consider issue of an Exemption Certificate for that ship to omit such facilities. Only when the exemption has been granted by the Flag State may a variant of the approved design be supplied under this certificate.
11. Should the specified standards be amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.



DESIGN APPRAISAL DOCUMENT

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Certificate No:

LR26256719MC

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UKITSO/LSA/TA/LT/MB/TSO/25-051347/PRJ111005102217

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR26256719MC

12. Should a change of Place of Production from that stated below be required from that stated below be required, i.e. where the final stages of manufacture/assembly/testing of this product the new place of production is to be advised to us prior to the change taking place. This certificate will require to be updated for approval to be maintained.
13. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype.

NOTE: This sound signal appliance has been tested to the requirements of EN60945 (2002) including IEC 60945 Corrigendum I (2008) for electromagnetic compatibility only.

PLACE OF PRODUCTION

Ibuki Kogyo Co., Ltd.
7-28 Takadono 1-Chome
Asahi-Ku
Osaka
Japan

Lijo Thomas
Senior Specialist
Fire & Safety, Statutory Discipline Team
UK&I Technical Support Office, Marine & Offshore
Lloyd's Register EMEA

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Tokyo 101-0041, Japan

Tel:(03) 3251-4153

Fax:(03) 3251-4158

INSPECTION CERTIFICATE OF ARTICLES FOR SHIP USE OF APPROVED TYPE

NO. 26-5672

Date Jun., 23, 2026

This is to certify that the following article satisfies the regulations of AnnexⅢ of the Convention on the International Regulations for Preventing Collisions at sea, 1972.

This is also to certify that it meets all the requirements of the design, manufacturing, test and inspection specifications of Ibuki Kogyo Co., Ltd.

Description and Type : WHISTLE CLASSⅢ
(For vessels of 20m or more but less than 75m in length)
A100E TYPE AIR HORN

Quantity : 1 unit

Manufacture Number : 99311

Fundamental Frequency : 310 Hz

Sound Pressure Level : More than 130 dB/1m

IBUKI KOGYO CO., LTD.

K. Murata, Eng. Design Dept.