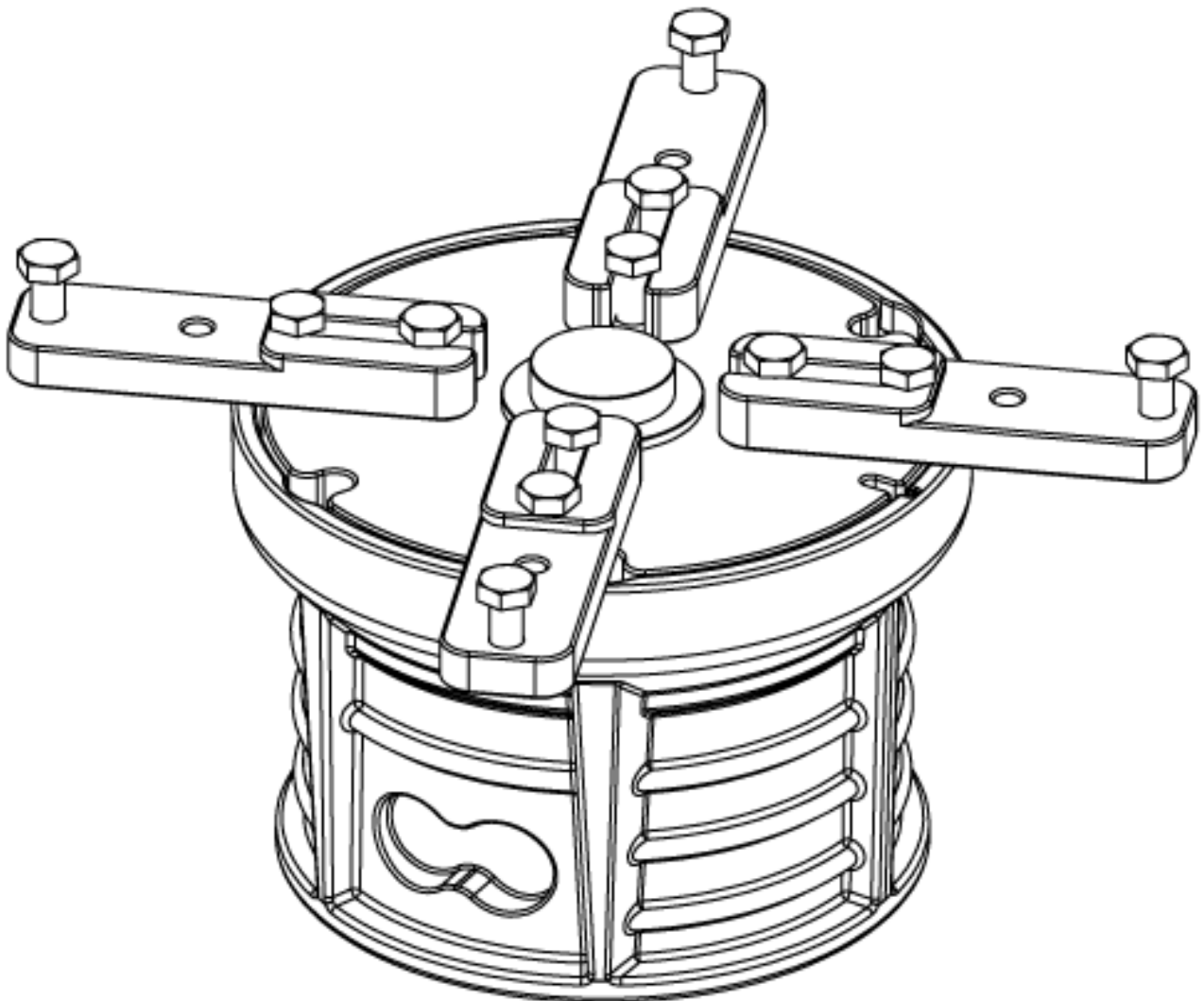


Airfield Light Base Installation User manual



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Disclaimer/Standard Warranty

All products manufactured by Hangdakang Mechanical & Electrical technology (Wuhan) co. LTD, hereinafter referred to as HDK, meet the requirements of CAAC, ICAO and IEC. All warranties given by HDK exclude all cases of gross negligence and handling of all products.

In case of avoidable defects or failure of one of HDK products, caused by mechanical, electrical or physical defects, they will be repaired by means of appropriate delivery of spare parts or repair.

Replacement and delivery of spare parts shall be subject to the requirements of correct storage of the products, correct installation of the products, correct maintenance of the products and the submission of a written complaint to HDK regarding the avoidable defects.

Hangdakang Mechanical & Electrical technology (Wuhan) co. LTD reserves the right to inspect the avoidable defective or damaged products in its own company facilities.

The obligations of Hangdakang Mechanical & Electrical technology (Wuhan) co. LTD is limited with regard to the cost of the labor required for disassembly and assembly of the product and the delivery of the corresponding products.

Hangdakang Mechanical & Electrical technology (Wuhan) co. LTD cannot be held responsible for injury or damage resulting from any incorrect use of the equipment. All products and their equipment are explicitly designed for their intended use only. Any other use is considered incorrect and is excluded from any warranty.

Included are:

- Use HDK products outside of their intended operating use.
- Any changes or modifications to products that are not explicitly approved.
- Use of unauthorized, incompatible or unapproved tools by HDK or local regulations.

Local regulations on labour safety must always be followed in addition to those of HDK.

HDK reserves the right of interpretation within the scope permitted by law.

1. Safety

Airfield Ground Lighting is installed in high voltage series circuits, where the primary voltage is usually from several hundred to thousand volts and can be fatal if not operated properly. International or national standards referring to the electrical safety and safety of electrical operations should be strictly implemented during the operation and at any stage where powered lighting products are handled or maintained. Correct safety code must be followed during any operation in lighting circuit (On and Off state).

Pay attention to all safety instructions in this user manual. Negligence in following safety practices and instructions can result in serious injury, accident, or death. Safety instructions are categorized following the IEC standard and accompanied by an icon accordingly. Safety instructions and icons are listed and explained below:

DANGER:

Risk of electrical shock or flashover. Before any operations disconnect the equipment from line voltage, never connect or disconnect live circuits. Failure to observe "Danger" may result in severe injury, death, or equipment damage.

WARNING:

Failure to observe "Warning" may result in personal injury, death or equipment damage.

CAUTION:

Ignoring or violating "Caution" may cause damage to equipment.

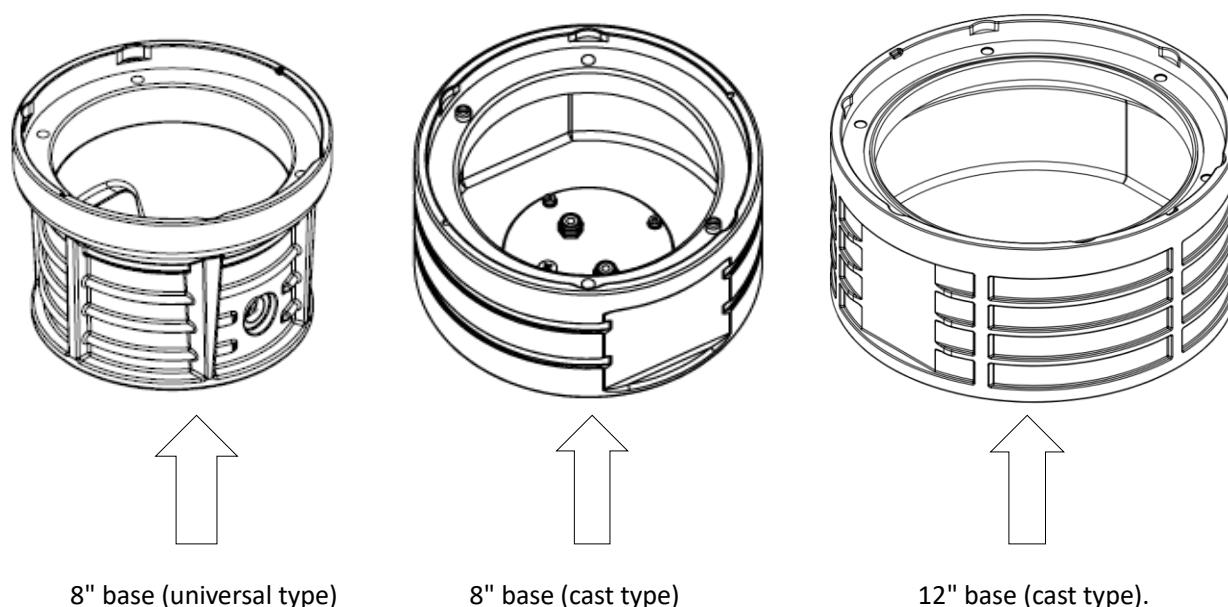
Note:

Explanations and supplements to parts of the description.

2.Introduction

The airfield light installation base series (hereinafter referred to as the base) and its mounting accessories produced by Hangdakang are made of high-quality aluminum alloy materials, which are strong and durable. This series of bases has the characteristics of strong pressure bearing capacity, wide range of applications, strong corrosion resistance, etc., and has a variety of sizes and wire entry methods to choose from. The products are designed and produced in accordance with ICAO, CAAC, IEC, FAA and other airfield light installation base standards, and are suitable for airports in various environments.

Figure 1 – Airfield Light Base Series



2.1. Product model

This manual is applicable to the installation base series of airfield light fixtures produced by Hangdakang, which is divided into different models according to the size and power cord entry method, and its accessories can be adapted to the size according to the base model, and the list of bases and accessories is shown in Table 1:

Table 1 List of Bases and Accessories

Product Name	Model	FAA Types
8" shallow barrel base (universal type).	AT-8SB	L-868 size A
8" shallow barrel base (cast type)	AT-8SB-W	L-868 size A
12" shallow barrel base (cast type).	AT-12SB-W	L-868 size B
12" to 8" adapter ring	AT-AR12-8	/
Inset Light Base Installation Tool	AT-IT	/

2.2. Product features:

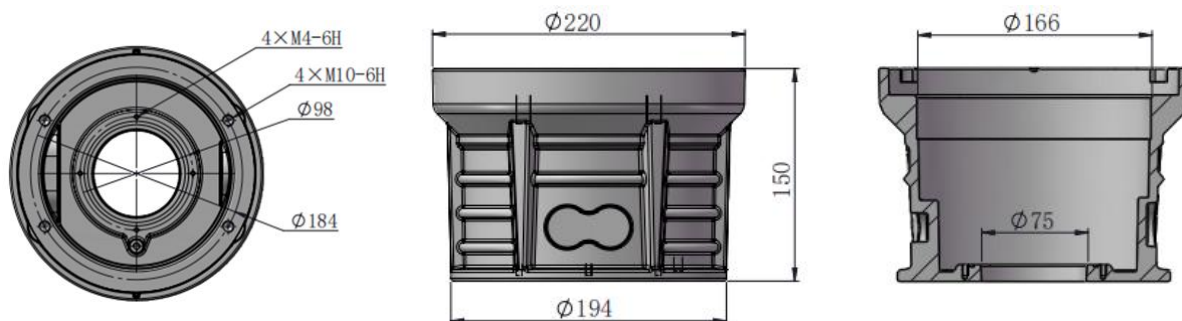
The whole series of bases are made of high-quality aluminum alloy materials, and the surface is anodized, which greatly enhances the corrosion resistance of the base. The base is gravity-cast in one piece, ensuring a solid and reliable structure. The new structural design can effectively prevent the base from falling out and rotating, and reduce the amount of surface adhesive. According to the size of the lamp, the purpose of the base, and the power cord feeding method of the base, users can order the required products more conveniently, and the performance indicators of the base meet the following standards:

(current version)

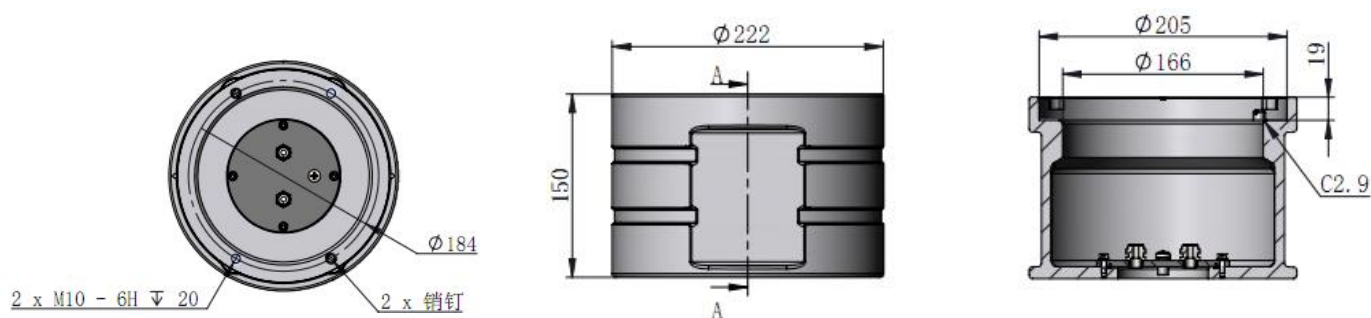
- ICAO Annex 14, Volume 1, & Aerodrome Design Manual
- FAA AC 150/5345-46 & AC 150/5345-42

2.3. Mechanical Properties

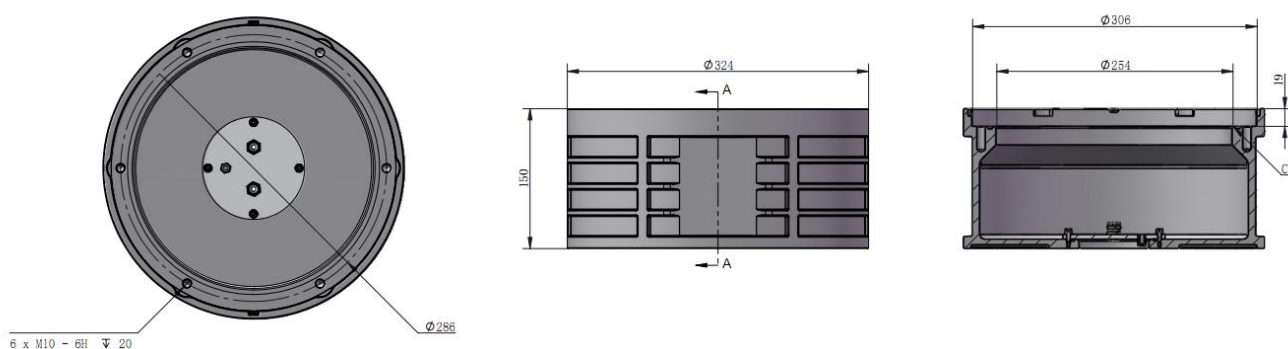
Figure 2 - Main Dimensions of The Base and Accessories



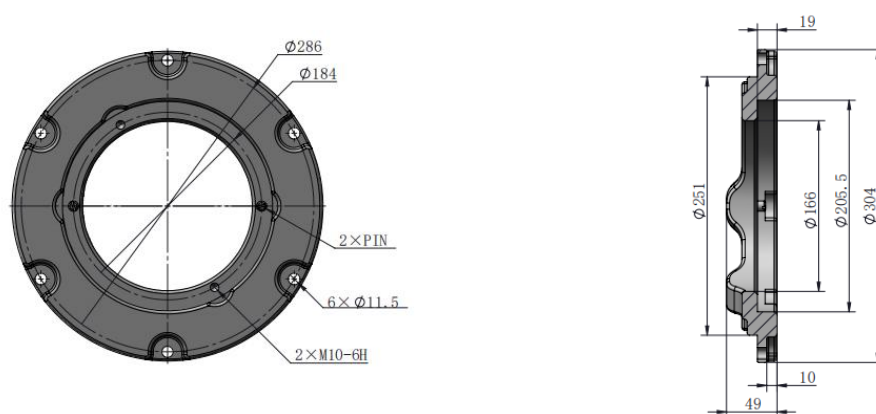
8" shallow base (universal type)



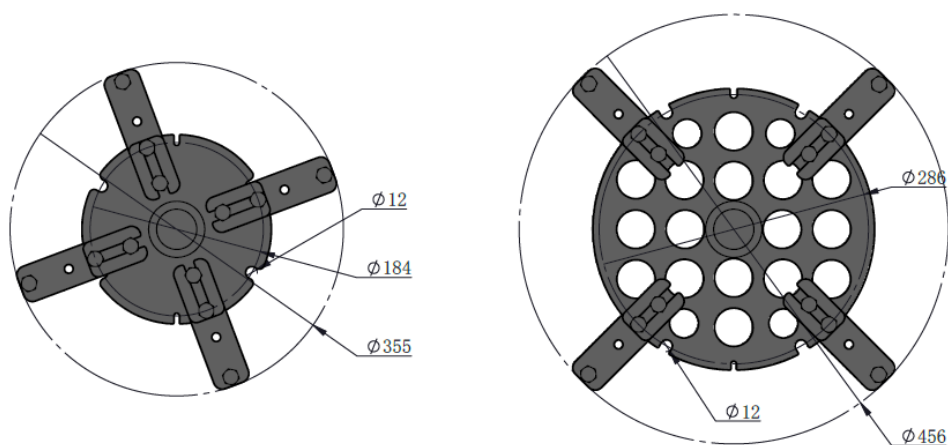
8" shallow base (cast type)



12" shallow base (cast type)



12" to 8" adapter ring



Inset light installation base tool

3. Installation

WARNING: Before any operations, make sure that circuit is disconnected from the voltage supply, switch off the CCR to power off the circuit and strictly prohibit cutting the cable plug to install so as not to affect the air tightness and after-sales service of the lamp



For installation location requirements for luminaires, refer to MH5001 Technical Standard for Civil Airport Flight Areas and ICAO Annex 14, Volume 1 to determine the installation location of luminaires.

3.1. Tools Required

Installation tools and materials are as follows:

- Measuring equipment
- Cutting equipment with diamond blades
- Cable seam sealing materials and insulating tapes
- Base mounting tool (including calibration device)
- Electrical connection tools (including wire strippers, heat guns, etc.)
- Pavement potting adhesive
- Wedge block (several)
- External laser level
- Hammer
- 17mm open-end wrench
- Inset light base mounting tool

3.2. Unpacking Unit

Please check carefully whether the package is intact. After opening the package, please promptly claim compensation from the carrier if the product and accessories in the package are damaged.

When receiving the light fixture cargo, please confirm whether the product information on the cargo list is consistent with the actual construction design. At the same time, please check whether the quantity, type, specification, color and other characteristics of the light fixtures on the cargo list are consistent with those of the actual cargo. If you find any problem, please contact the supplier as soon as possible.

3.3. Light Base Mounting

3.3.1. Pavement Pre-excavation Trench Construction

- carefully read the instruction manual of the drilling machinery;
- Use diamond blade drilling machinery to drill holes of specified size (design value) in the pavement;
- Smooth the bottom of the hole and remove gravel, etc.;
- Use compressed air to blow the inside of the hole clean and dry;
- The secondary conduit of the lamp is sealed well to ensure that the secondary cable will not affect the construction or be damaged.

3.3.2. Cutting Cable Ducts (seams)

- If the lamp is designed to be side inlet, it is necessary to cut the seam on the pavement surface to embed the secondary wire pipe. According to the structure and design of the runway, there are many ways to lay cables, only one method is described here, the cable groove is opened along the drawn line using sawing machinery;
- The depth and width of the cut are determined according to the number of cables to be laid (or according to the design drawings);
- When determining the longitudinal angle of the cable duct, the issue of the

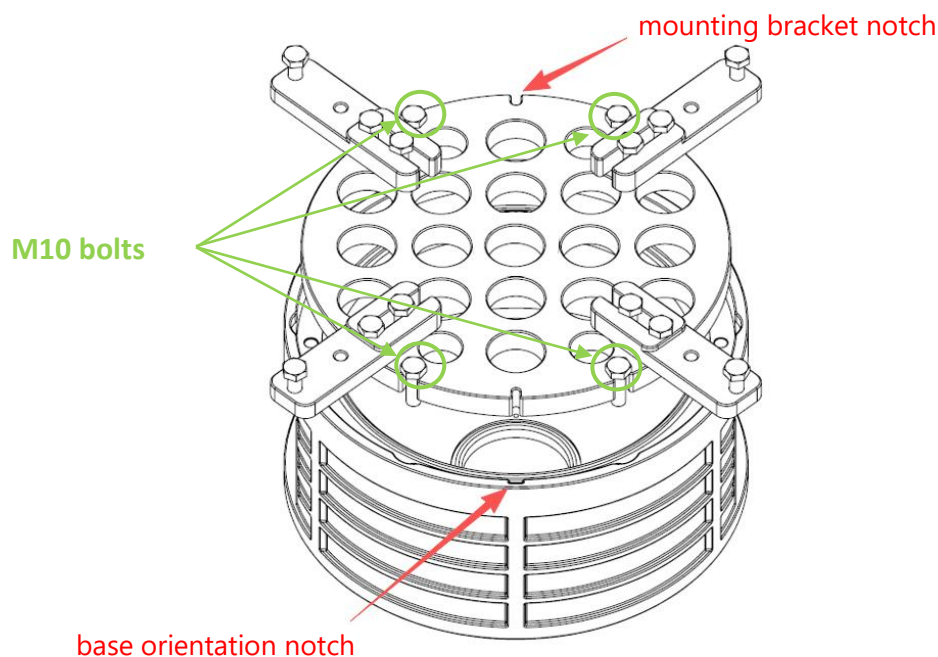
maximum bending radius specified by the cable type must be taken into account. See manufacturer's technical data. The general recommendation for the longitudinal angle of the cable duct is that the turning angle is not greater than 50°;

- Use a hammer to remove residue inside the tank, and the bottom of the tank is blown smooth and smooth using iron bars and compressed air.

3.3.3. Install The Tool to The Base

Install the notch on the special mounting bracket aligned (collinear) with the directional grooves of the light base and lock the four M10 bolts.

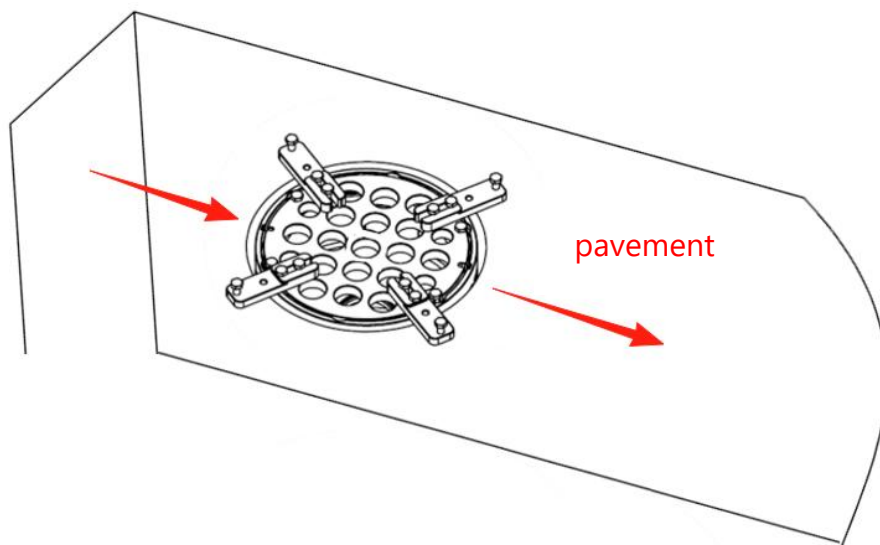
Figure 3 – Install The Tool to The Base



3.3.4. Place the Base

Place the assembled light base into the groove and rotate the special mounting tool to ensure that the direction marking groove on the base (with laser guidance) is roughly parallel to the runway direction.

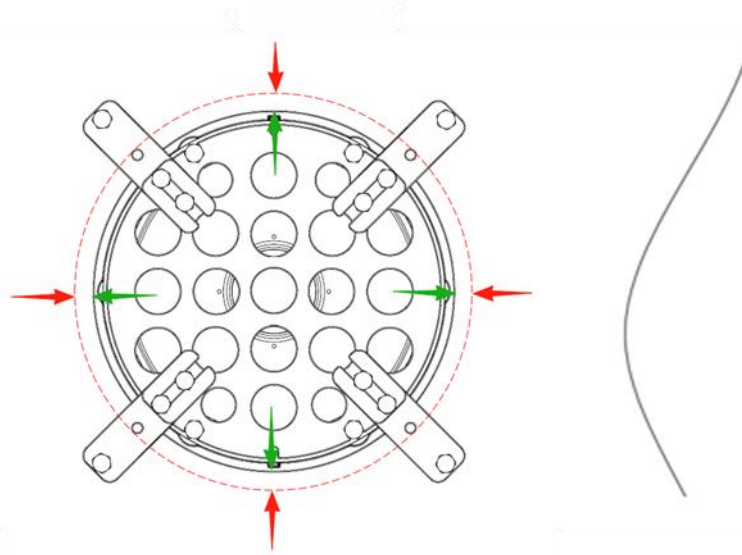
Figure 4 - Installation Tool and Light Base Seated



3.3.5. Adjust The Position of The Base in The Pre-dug Groove

Visually move the base fine-tuned so that the base is exactly in the center of the groove.

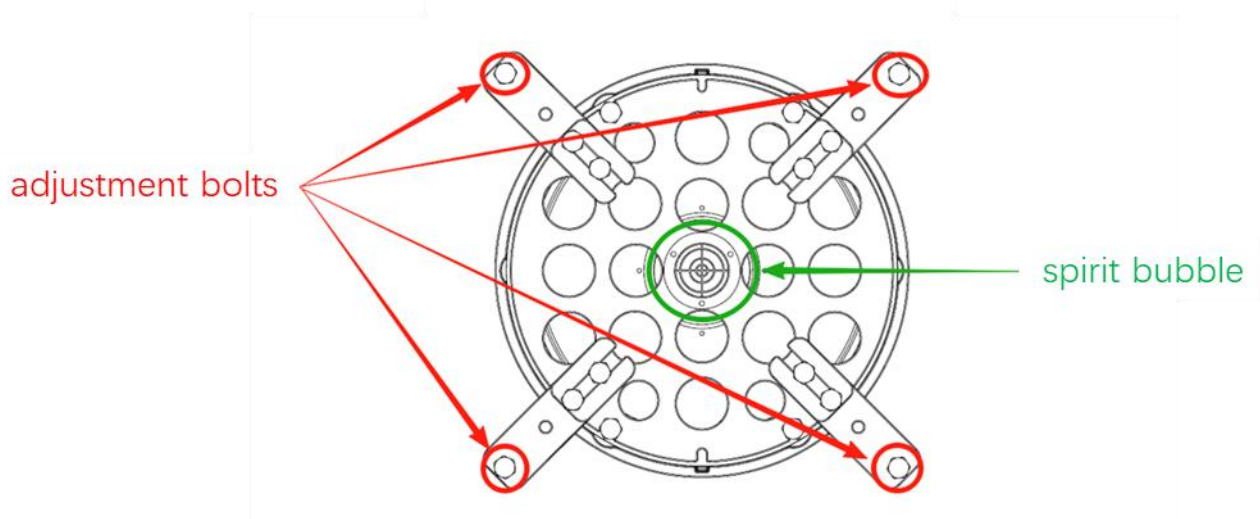
Figure 5 - The Position of the Adjustment Base in The Pre-dug Groove



3.3.6. Adjust The Level of The Base Relative to The Pavement

By rotating the 4 adjustment bolts, observe the horizontal bubble ruler to make the base level relative to the pavement (The spirit bubble is centered at the crosshair, indicating level).

Figure 6 – Adjust the Level of the Light Base



3.3.7. Adjust The Base to be Parallel to The Runway

Open a similar external laser auxiliary device, fine-tune the base, and make the base completely parallel to the runway direction by observing the two lasers in front and behind, and use some pre-prepared wedge blocks to get stuck between the base and the digging groove to prevent the base from displacement during subsequent potting.)

3.3.8. Fixed Base and Finished installation

- Mix the fixing compound for the base of the lamp with appropriate amount according to the instructions for use.
- Fill the appropriate amount of fixing mixture between the groove and the base, and the height should be about 2 cm lower than the pavement, and wait until the fixing mixture is dry and hard, and then fill the side seam with potting material to the level of the pavement.
- The mounting tool is still connected to the base, because it is specially made, so the fixing point of the device is very stable on the pavement, and the base will not shake or displace.
- The mounting tool can be removed when the light base is fully secured.

WARNING: After the base is installed, all tools and parts on site should be carefully inspected and taken away to avoid "FOD".



4. Maintenance

According to CCAR-140-R1 Civil Airport Operation Safety Management Regulations, MH/T5083-2024 Civil Airport Navigation Lighting System Maintenance Regulations, ICAO, Airport Services Manual Part 9, Airport Maintenance Practice and FAA AC 150/5340-26, Maintenance of airport visual aid If the lamp is removed from the base, the inside of the base should be cleaned and kept dry before the lamp is put back on, and the sealing ring between the lamp and the base should also be replaced.

5.Support

5.1. Customer Service

If you need after-sales service, you can contact us through the after-sales service hotline or sales consultant.

After-sales service hotline

China: +86-27-63498449

Please prepare the following information in advance in order to get the service quickly:

- Product name and serial number
- Airport code or company name
- Your phone and email address

5.2. Recycling

Improper disposal of scrapped electronic equipment may have a negative impact on the environment and human health. Regarding the recycling of electronic products, please follow the local laws and regulations.

5.3. About HDK

Handakang Electrical & Mechanical Technology Corp. Ltd., established in 2003 in Wuhan/China is an already locally known provider of Airfield Lighting, Navigation Aids, Frangible Mast Systems and Heavy Duty Support Equipment. In 2017 HDK started to create a new LED Airfield Lighting Portfolio supported by known capacities from Europe, to become THE supplier for Airfield Customers in China, Asia, Europe and all over the World for reliable, efficient and innovative Airfield Lighting Products at highest quality.

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