

Airfield Lighting

Product Description

Installation of Inset Fittings

Shallow Base and Adaptor Ring



Note: *This page is blank for convenient double-sided printing.*

1. INTRODUCTION

Utilisation

- Ground Fixing of Inset Fittings

Compliance with standards

- FAA: AC 150/5345-42C

2. MAIN ADVANTAGES

- Quick and low cost installation of Airfield Lighting Inset Fittings in an already existing layout.
- Easy upgrade and modification of existing Lighting System (especially with side access shallow bases).
- Electrical connection of inset fittings with isolating transformer(s) installed in manhole located on the side of the runway or taxiway. The access to isolating transformer and primary cables during airport operations are possible.

3. TECHNICAL CHARACTERISTICS

- The shallow base is in anodised Aluminium alloy casting.
- All studs and nuts are stainless steel.
- Each shallow base is supplied equipped with its M10 fixing studs.

Note: 8" Shallow Bases are equipped of two Fixing Studs, 2" and 16" Shallow Bases are equipped of six Fixing Studs.

- The accessories of the shallow base are supplied separately and must be mounted on the base before installation.
- The connection of side Access shallow bases connector(s) to the secondary wires is made by means of crimped junction and thermo retracting sleeves. Connection of single core cables with conductor section from 2.5 to 6 mm² and external diameter lower than 8 mm are possible.

Packing data

Designation	Volume in m ³	Dimensions in mm	Weight in kg
8" 100 mm Shallow Base	0.006	230 x 230 x 105	2.4
8" 133 mm Shallow Base	0.007	230 x 230 x 140	2.6
12" 100 mm Shallow Base	0.013	350 x 350 x 105	4.4
12" 150 mm Shallow Base	0.015	350 x 350 x 155	5.0
16" 183 mm Shallow Base	0.038	455 x 455 x 185	5.5
Sight Telescope	0.043	350 x 350 x 680	5.0
Positioning Jig for 8" Shallow Base	0.015	350 x 350 x 155	4.0
Positioning Jig for 12" Shallow Base	0.038	460 x 460 x 185	6.0
Positioning Jig for 16" Shallow Base	0.038	550 x 550 x 240	8.0
12"/8" Adaptor Ring	0.008	330 x 330 x 70	3.4
16"/12" Adaptor Ring	0.038	455 x 455 x 185	7.1
SR8/8" Adaptor Ring	0.008	330 x 330 x 70	3.2
SR8/CAA 8" Adaptor Ring	0.008	330 x 330 x 70	3.2
SR9/CAA 8" Adaptor Ring	0.011	350 x 350 x 105	8.5

SR9/12" Adaptor Ring	0.011	350 x 350 x 105	5.3
SR12/16" Adaptor Ring	0.049	515 x 515 x 185	5.5

The accessories (Shallow Base and Adaptor Ring) described in this document allow ground fixing of all the airfield lighting inset fittings.

SHALLOW BASES

- The different types of shallow bases supplied by THORN allow direct mounting of all the standard 8", 12" and 16" inset fittings.
- Depending of the design of the Secondary Cables leading choose by the installer (Use of buried conduits or use saw cuts) two types of Shallow bases are available.

1. For installation using Conduits already Buried in the layout to lead the Secondary Cables (see Fig 1 here after), a Shallow Base with Bottom Entry is necessary.

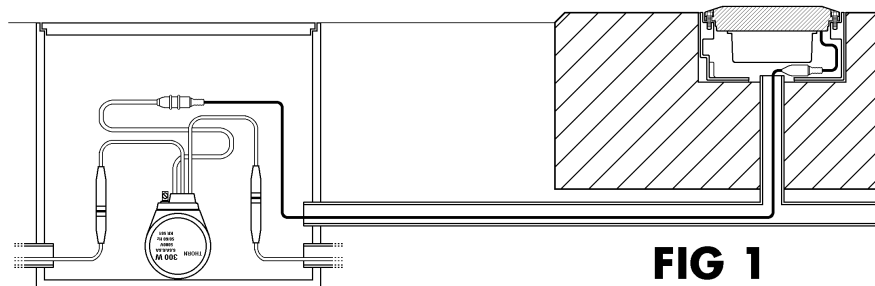


FIG 1

2. For using Saw Cuts made in the layout to lead the Secondary Cables (see Fig 2 here after), a Shallow Base with Side Entry is necessary. In this case the Shallow Base is supplied equipped with one (or two*) FAA L823 Type II Class A Style 7 Receptacle(s).

* For bi-directional Fitting it is possible to drive the two light beam separately. In this case, the corresponding Fitting and its Shallow Base must each one be equipped of two FAA connectors (Plug for the Fitting and Receptacle for the Shallow Base).

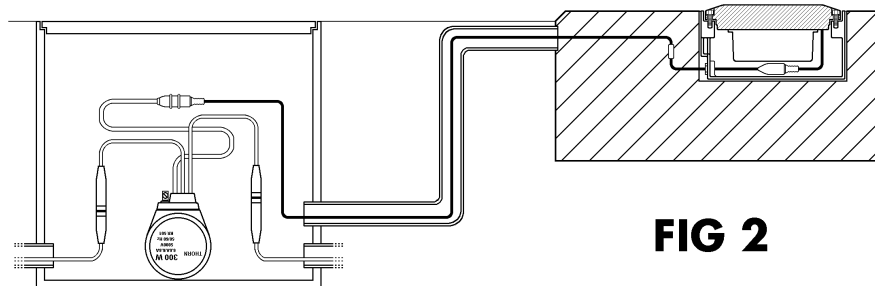


FIG 2

ADAPTOR RINGS

The different types of Adaptor Rings supplied by THORN allow mounting of all the standard 8", 12" and 16" inset fittings on support having larger diameter. The support can be of the same standard or of a different standard (British standard SR8, SR9, SR 19 or CAA standard).

4. DESIGN

WITH SIDE ACCESS

Base

1. Shallow Base (8", 12" or 16")
2. M10 Fixing Studs (2 for 8" or 6 for 12")

Accessories

3. M10 Autolock Fixing Nuts (2 for 8" or 6 for 12")
4. Water tightness Gasket
5. FAA type Receptacle (1 or 2)
6. Compression Packer (1 or 2)
7. Two Single core Cables (1 or 2)
8. Crimped Junctions (2 or 4)
9. Thermo retracting Sleeves (2 or 4)

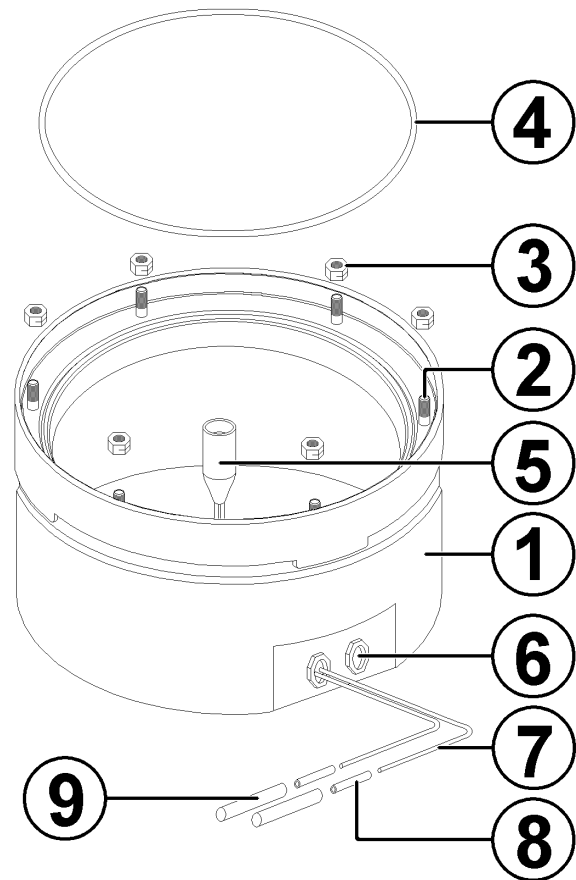
WITH BOTTOM ACCESS

Base

1. Shallow Base (8", 12" or 16")

Accessories

2. M10 Fixing Studs (2 for 8" or 6 for 12")
3. M10 Autolock Fixing Nuts (2 for 8" or 6 for 12")
4. Water tightness Gasket



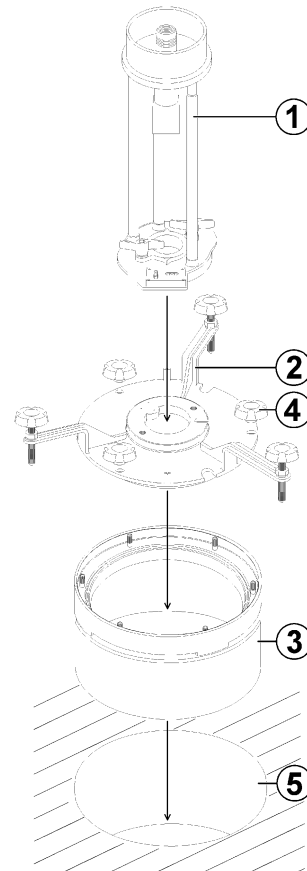
5. INSTALLATION

Installation of Shallow Bases

- As for Airfield Lighting the orientations and the levels of the Inset light fittings depend directly of the orientations and the levels of their supporting bases, the installation of the base must be made using accurate special tools.
- For its installation a shallow base have to be glue in a hole previously drill in the layout. This operation is made using special Resin to glue the Base and using dedicated Positioning Jig and sight telescope for orientation and level adjustment.
- The Positioning jigs are available in three sizes dedicated to installation of 8", 12" or 16" shallow bases.

INSTALLATION TOOLS

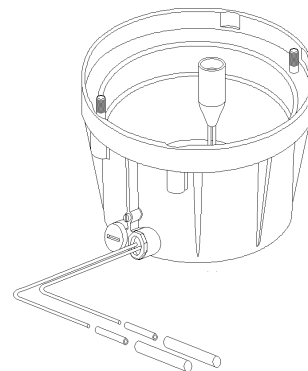
1. Sight Telescope
2. Positioning Jig
3. Shallow Base
4. Bolts allowing Fixation of Shallow Base on the Jig
5. Installation Hole



Approximate quantity of resin necessary to glue one Shallow base

Diameter of the base in inches	Depth of the base in mm	Resin in litre
8"	100	1,1
8"	133	1,4
12"	100	1,6
12"	150	2,0
16"	183	4,1
8"MK2(*)	133	2,4

(*) 8"MK2 133 mm
 New design of 8" 133 mm shallow base



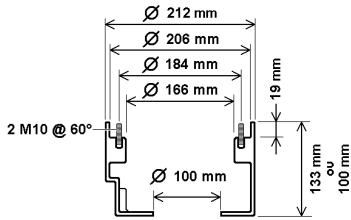
6. SIZES

Diameter: The THORN Shallow Bases have been designed to permit installation of standard Airfield Lighting Inset Fittings of 16, 12 and 8 inches.

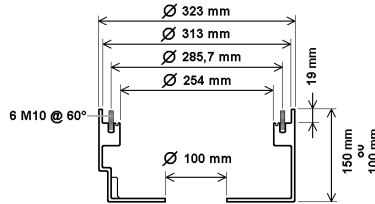
Depth: In order to accept fittings in all existing version (Long Cover or Short Cover), the following depth are available: 100 mm (8" and 12"), 133 mm (8"), 150 mm (12"), 183 mm (16").

Others: The drawings here after give the other sizes of the shallow bases.

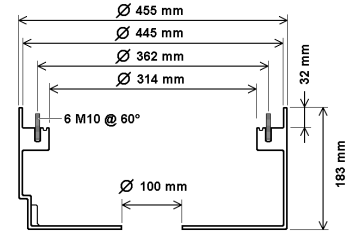
8" Shallow Base
 Depth = 100 mm or 133 mm
 Bottom Access



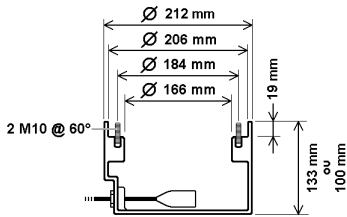
12" Shallow Base
 Depth = 100 mm or 150 mm
 Bottom Access



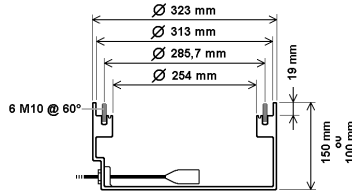
16" Shallow Base
 Depth = 183 mm
 Bottom Access



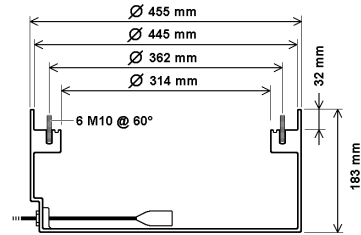
8" Shallow Base
 Depth = 100 mm or 133 mm
 Side Access



12" Shallow Base
 Depth = 100 mm or 150 mm
 Side Access



16" Shallow Base
 Depth = 183 mm
 Side Access



7. TECHNICAL CHARACTERISTICS

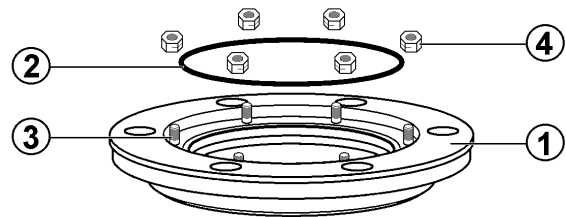
Adaptor Rings

- The adaptor ring is in anodised Aluminium alloy casting.
- All studs and nuts are stainless steel.
- All the adaptor rings are supplied equipped with their M10 fixing studs.

Note: The 8" adaptor rings are equipped of two fixing studs. The 12" adaptor rings are equipped of six fixing studs.

- All the adaptor rings are supplied with autolock fixing nuts (two or six) and with a water tightness gasket.

1. Adaptor Ring (12" or 16")
2. Water tightness Gasket
3. M10 Studs (2 for 8" fitting or 6 for 12" fitting)
4. M10 Autolock Fixing Nuts (2 or 6) (2 for 8" fitting or 6 for 12" fitting)



Different types of Adaptor Ring (*)

The Adaptor Rings allow mounting of Inset Airfield Lighting fitting on supports with diameter greater than the diameter of the fittings and on supports of a standard different than the standard of the fittings.

The supports are shallow bases (12" Fig 2 and 16" Fig 3) or FAA type deep base (L-868B Fig 1 and L-868C or LB1 Fig 4).

1. For mounting of Standard Fittings on Standard Supports with bigger diameter, two types of Adaptor Rings are available:
 - 12" / 8" adaptor to mount an 8" fitting on a 12" support.
 - 16" / 12" adaptor to mount a 12" fitting on a 16" support.

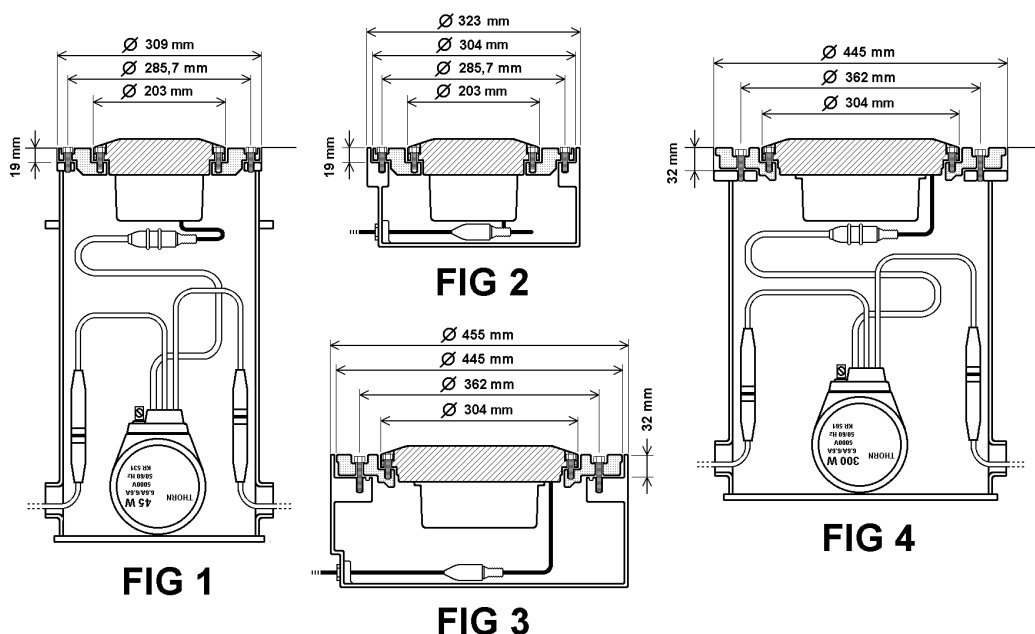
2. For mounting of fittings on support of different standards with a bigger diameter, specific studies answering to the customer request can be made. Nevertheless the standard products are available:

Mounting of Standard Fittings on SR British Standard Supports

- SR8/ 8" adaptor to mount an 8" fitting on a SR8 support.
- SR9 / 12" adaptor to mount a 12" fitting on a SR9 support.
- SR12 / 16" adaptor to mount a 16" fitting on a SR12 support.

Mounting of CAA Type Fittings on SR British Standard Supports

- SR8/ CAA 8" adaptor to mount a CAA 8 " fitting on a SR8.
- SR9/ CAA 8" adaptor to mount a CAA 8 " fitting on a SR9.



8. ORDER CODES

Component	Order code
SHALLOW BASE	
Diameter of the base	8", 8"MK2, 12" or 16"
Depth of the base	
<ul style="list-style-type: none"> • 8" Shallow base • 12" Shallow base • 16" Shallow base 	100 mm or 133 mm 100 mm or 150 mm 183 mm
Type of base	
<ul style="list-style-type: none"> • Bottom Access • Side Access 	BELOW
- Base equipped with 1 Connector	1 CONN
- Base equipped with 2 Connectors	2 CONN
INSTALLATION TOOLS FOR SHALLOW BASE	
Sight telescope	8"
<ul style="list-style-type: none"> • 8" positioning jig • 12" positioning jig • 16" positioning jig 	12" 16"
ADAPTATOR RING (*)	
Diameter of the support	12" or 16"
<ul style="list-style-type: none"> • Standard support • British SR Support 	SR8, SR9 or SR12
Diameter of the fitting	
<ul style="list-style-type: none"> • Standard fitting • 8" CAA standard fitting 	8" or 12" CAA 8"
(*) See the list of available standard adaptor ring page 5 of this document	

9. SPECIFICATION

- The shallow Bases and Adaptor Rings will allow ground fixing of all the airfield lighting inset fittings.
- The different types of shallow bases supplied by THORN allow direct mounting of all the standard 8", 12" and 16" inset fittings.
- In order to allow installation using conduits already buried in the layout as well as installation using saw cuts made in the layout, the shallow bases will exist in two types allowing respectively for secondary cables access by the bottom or by the side of the base.
- The shallow bases with side access will be fitted with one or two secondary receptacle(s) FAA L823 Type II Class A Style 7.
- The adaptor rings supplied by THORN will allow mounting of all the standard 8", 12" and 16" inset fittings on support having larger diameter. The support can be of the same standard or of a different standard (British standard SR8, SR9, SR 19 or CAA standard)

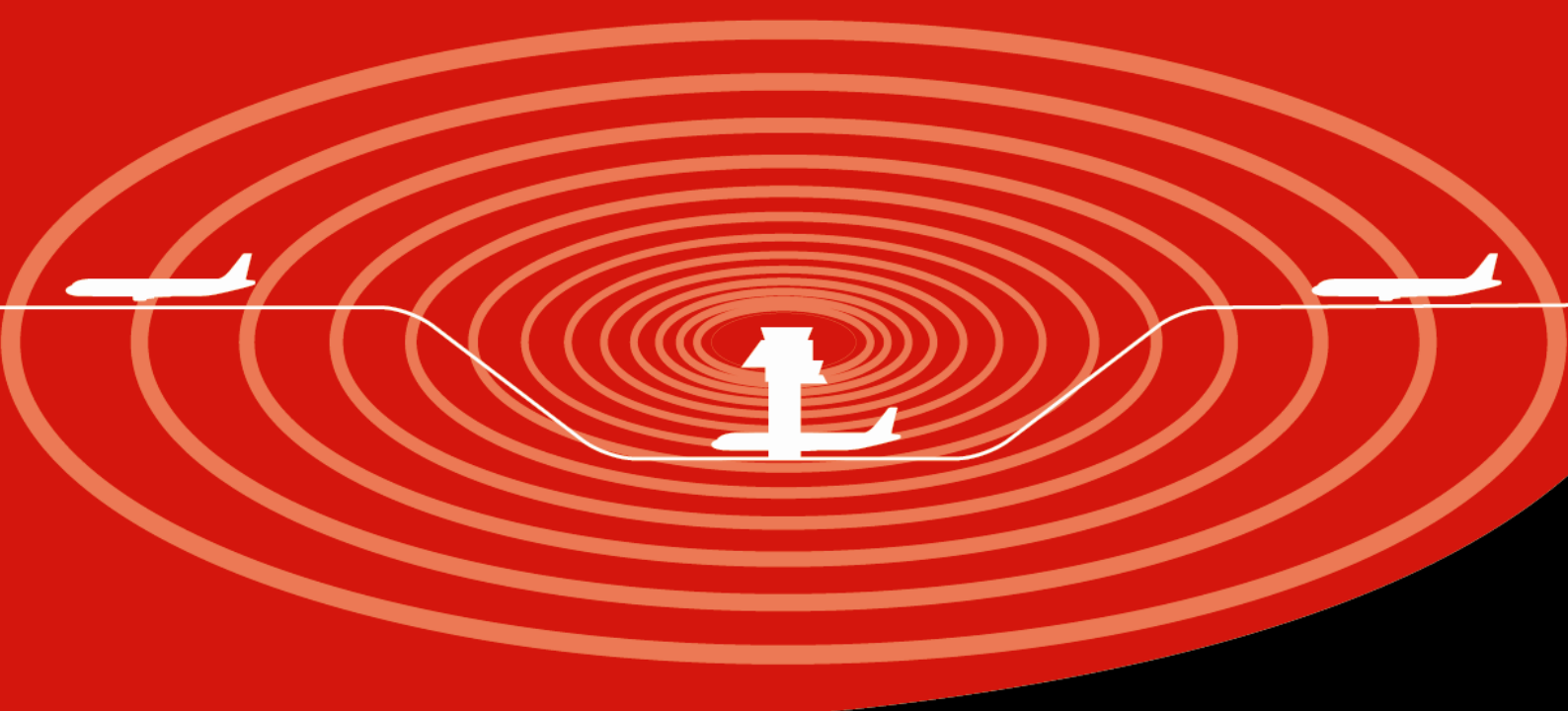
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Check in to the future

How many aircraft can your airport handle today? Can this number be increased without adverse effects on the airport's safety level? It is a known fact that traffic volume will rise in the foreseeable future. More movements will demand monitoring of the entire airport. Requirements will be sharpened and the development of an integrated system

controlling not only ground movements but also air traffic close to the airport is of the highest interest. The International Civil Aviation Organization (ICAO) already describes A-SMGCS, Advanced Surface Movement Guidance and Control System, as the answer to the future modern airport need to control the entire airport space in one superior system.

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Airfield Lighting

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