Airfield Lighting

Manual

Bi- and Unidirectional Inset Halogen Lights (Multiple Fittings)

- Approach (INL-AP*, INL-RN*, INL-RET*)
- Runway (INL-RE*, INL-RC, INL-RT, INL-HSE, INL-REO*, INL-RTI)
- Taxiway (IN-TO, IN-TT, IN-SB, IN-OMA, INL-RG, ILP-T)

*12" fittings

SAFEGATE GROUP

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

MANUAL

BI- AND UNIDIRECTIONAL HIGH-INTENSITY INSET HALOGEN LIGHTS

(MULTIPLE FITTINGS)

CONTENTS

Section	Description	Page No.
1.	**INTRODUCTION**	**5**
1.1	SAFETY INSTRUCTIONS	5
1.1.1	**Product Safety**	**5**
1.1.2	**Electrical Maintenance**	**5**
1.1.3	**Mechanical Maintenance**	**5**
1.2	DESCRIPTION OF THE FITTINGS	5
1.2.1	**Overview of Fittings Types**	**6**
1.2.2	**Base Options**	**7**
1.3	DELIVERY OF THE FITTING	9
2.	**INSTALLATION**	**10**
2.1	INSTALLING THE FITTING	10
3.	**MAINTENANCE**	**12**
3.1	BASIC MAINTENANCE PROGRAMME	13
3.2	WORKSHOP MAINTENANCE	13
3.2.1	**Disassembling/ Assembling an 8” Fitting**	**14**
3.2.2	**Disassembling/ Assembling a 12” Fitting**	**16**
3.2.3	**Replacing a Lamp on 8” Fittings**	**17**
3.2.4	**Replacing a Lamp on 12” Fittings**	**19**
3.2.5	**Replacing a Lamp Holder on 8” Fittings**	**21**
3.2.6	**Replacing a Lamp Holder on 12” Fittings**	**23**
3.2.7	**Replacing a Lamp Fixing Spring on 8” Fittings**	**25**
3.2.8	**Replacing a Filter on 8” Fittings**	**26**
3.2.9	**Replacing a Filter on 12” Fittings**	**29**
3.2.10	**Replacing a Prism and a Gasket on 8” Fittings**	**31**
3.2.11	**Replacing a Prism and a Gasket on 12” Fittings**	**34**
3.2.12	**Replacing a Cut Out Device on 8” Fittings**	**36**
3.2.13	**Replacing a Cut Out Device on 12” Fittings**	**38**
3.2.14	**Replacing a Supply Terminal on 8” Fittings**	**39**
3.2.15	**Replacing a Supply Terminal on 12” Fittings**	**40**
3.2.16	**Replacing a Power Supply Cable on 8” Fittings**	**41**
3.2.17	**Replacing a Power Supply Cable on 12” Fittings**	**43**
3.2.18	**Replacing a Deviator on 8” Fittings**	**44**
3.2.19	**Replacing a Deviator on 12” Fittings (Toe In)**	**45**
3.2.20	**Replacing a Water Tightness Valve on 8” and 12” Fittings**	**46**
4.	**SUPPORT**	**47**
4.1	SAFEGATE GROUP WEBSITE	47

4.2 RE-CYCLING 47
4.2.1 Local Authority Re-cycling 47
4.2.2 Safegate Group Re-cycling 47
4.3 SPARE PARTS 47

Documentation

This document includes Airfield Lighting information with a focus on safety, installation and maintenance procedures.

***Note**: It is very important to read this document before any work is started.*

Original documentation is created in English (U.K.).

Images and texts used in this document are reference examples only and may not exactly depict a customer product.

For more information, see www.safegate.com.

Copyright

History

Version	Date	Description
1.0	November 2009	First Release
1.1	March 2014	Second Release

***Note**: This page is to be updated with every authorised change to the document.*

Abbreviations and Terms

This document may include abbreviations and terms.

Abbreviation	Term
APP	Approach
CAA	Civil Aviation Authority
CU	Concentrator Unit
FAA	Federal Aviation Administration
HEL	Heliport
ICAO	International Civil Aviation Organization
IEC	International Electrotechnical Committee
LMS	Light Monitor and Switch unit
NATO	North Atlantic Treaty Organization
STAC	Service Technique de l'Aviation Civile (France)
STANAG	Standardization Agreement (NATO)

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1. INTRODUCTION

In this section you can find a general description and safety instructions related to the installation and usage of the fitting.

Inset lights are 8” or 12” fittings with numerous lighting options for approach, runway, taxiway and heliport site requirements at airports.

1.1 SAFETY INSTRUCTIONS

Make sure you read this section and are familiar with safety precautions before any work is started.

1.1.1 Product Safety

Airfield lighting fixtures in a constant current circuits are connected in a circuit via isolating transformers with currents between 2.0 – 6.6A in the primary circuits.. The primary voltages, depending on the circuitry, are usually several kilovolts and therefore lethal. Although the open circuit voltages of the isolating transformers are much lower, the peak voltage while opening the secondary circuit under current is also hazardous. So it is vitally important to follow all the safety regulations with adequate circumspection.

In the design of this equipment all the practical safety aspects have been taken into account. It is also important to strictly follow existing international or national regulations, the instructions established by civil aviation authority or airport operator and the following instructions.

1.1.2 Electrical Maintenance

Valid safety regulations must always be followed. Never carry out any maintenance or maintenance measures before the current is confirmed as safely disconnected. Use extreme caution when disconnecting or connecting high voltage primary connectors.

WARNING! *PRIOR TO THE COMMENCEMENT OF WORK ALL ELECTRICAL SERVICES MUST BE ISOLATED FROM THE SUPPLY AND CONNECTED TO EARTH. FULL DETAILS OF THE WORK INVOLVED MUST BE GIVEN TO THE AUTHORISED PERSON RESPONSIBLE FOR THE ELECTRICAL ENGINEERING SERVICES AT THE AIRPORT WITH REGARD TO THE DURATION OF THE WORK AND SO ON. IT IS RECOMMENDED THAT PRIOR TO STARTING ANY CUTTING WORK, THE NATURE AND LOCATION OF SERVICES SUCH AS CABLE DUCTS AND THE LIKE SHOULD BE IDENTIFIED. ANY INSTALLATION OR MAINTENANCE WORK SHOULD ONLY BE CARRIED OUT BY TRAINED AND EXPERIENCED PERSONNEL. ALSO, WHEN WORKING ON CIRCUITS USING AIRFIELD SMART POWER SYSTEM (ASP) THE SCM MUST BE TUNED OFF.*

1.1.3 Mechanical Maintenance

When maintaining mechanical components, it is important to follow the instructions for electrical maintenance.

1.2 DESCRIPTION OF THE FITTINGS

Each unit is supplied completely assembled, tested and sealed, ready for installation. The electrical connection is made via one or more cable assemblies; each cable is equipped with an FAA L-823 2-pole plug, as standard.

For some applications, optional cut-out devices (relays or film disks) are available. Each devices form an electrical bypass over the lamp after the lamp failure.

Each unit is individually packed in a durable cardboard box, labelled with its reference mane and code. Product documentation is available at www.safegate.com or on request, one set of fitting documents is delivered with fittings.

1.2.1 Overview of Fittings Types

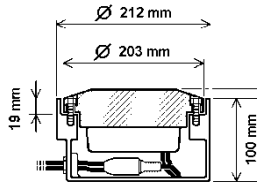
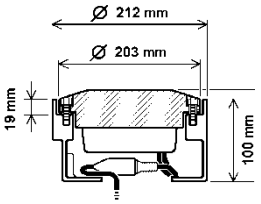
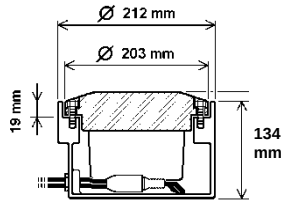
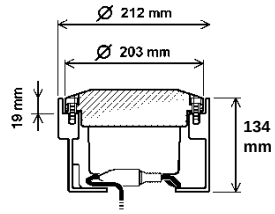
The fittings described in this manual are uni-, bi- or omnidirectional fittings with lamp colour, dichroic filter prisms and one or two connector options. The lights are designed according to airfield placement and functionality configurations, as follows:

Approach (APP)	Runway (RWY)	Taxiway (TWY)
INL-AP * INL-RN * INL-RET *	INL-RE * INL-RC INL-RT INL-HSE INL-REO * INL-RTI	IN-OM INL-RG ILP-T IN-TO IN-TT IN-SB
***Note**: * An asterix denotes a 12" fitting; all other types are 8" fittings.*		

For more information, see www.safegate.com.

1.2.2 Base Options

The fittings can be installed on 8” or 12” bases with options for different requirements.

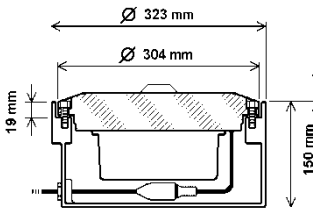
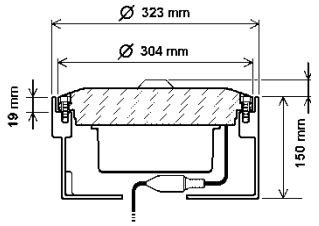
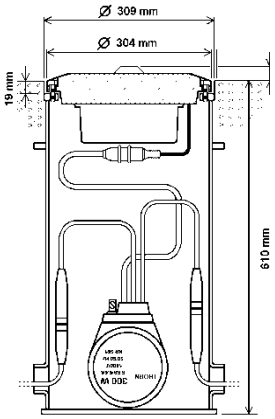
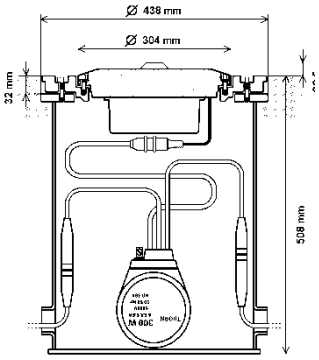
Base options for 8” fittings	Image examples
• 8" shallow base 100 mm deep with side Entry.	
• 8" shallow base 100 mm deep with bottom Entry.	
• 8" shallow base 134 mm deep with side Entry.	
• 8" shallow base 134 mm deep with bottom Entry.	
• FAA L-868B deep base with a 12" to 8" adapter ring. • Other particular base using an appropriate adapter ring.	

Note: *When the fitting is equipped with cut-out relays, a long cover is required and the minimum depth of the base must be 134 mm.*

A support must be correctly adjusted in terms of alignment, angle setting and height before installation of a fitting.

Bases may be in line with the runway or turned 4 degrees, depending on site requirements.

For more information, see base documentation, www.safegate.com or contact Safegate Group.

Base options for 12” fittings	Image examples
• 12" shallow base 150 mm deep with side Entry.	
• 12" shallow base 150 mm deep with bottom Entry.	
• FAA L-868B deep base.	
• FAA L-868C or FAA LB-1 deep base with a 16” to 12” adapter ring.	
Note: *Bases must be properly adjusted for alignment, angle setting and height before fitting installation.* *For more information, see base documentation, www.safegate.com or contact Safegate Group.*	

1.3 DELIVERY OF THE FITTING

Each unit is supplied completely assembled, tested and sealed, ready for installation. The electrical connection is made via one or more cable assemblies; each cable is equipped with an FAA L-823 2-pole plug, as standard.

For some applications, optional cut-out devices (relays or film disks) are available. Each devices form an electrical bypass over the lamp after the lamp failure.

Each unit is individually packed in a durable cardboard box, labelled with its reference mane and code. Product documentation is available at www.safegate.com or on request, one set of fitting documents is delivered with fittings.

2. INSTALLATION

In this section you can find a description of the different steps for successful installation of the fittings. Before you start, make sure you have read and understand §1.1 Safety Instructions.

The following tools and accessories are required for installation and removal of the fitting:

- An angled socket wrench: 16 mm (for installation on THORN bases).
- A torque limiting spanner with an adaptor: 16 mm.
- Two big screwdrivers.
- A brush or cloth.

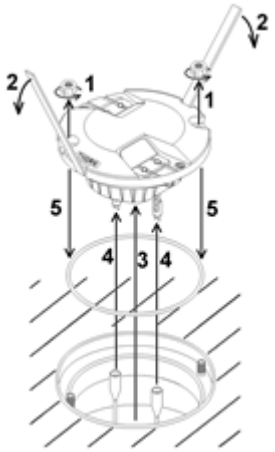
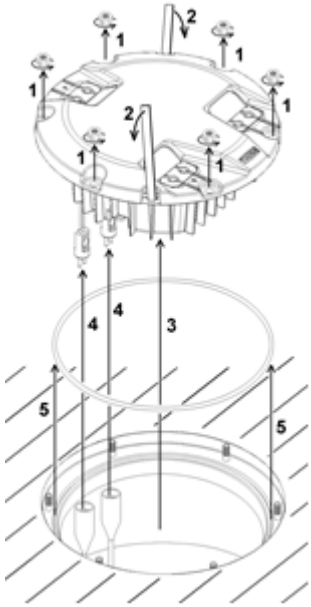
Note: *If the base is correctly installed to receive the fitting, no other specific tool is required. For more information, see base documentation, www.safegate.com or contact Safegate Group.*

The installation steps refer to:

1. Installing the fitting

2.1 INSTALLING THE FITTING

When opening a fitting box, verify the fitting characteristics correspond to site design requirements, for example type, colour and so on.

Install		
(a) Unscrew the fixing bolt. (b) Remove the fitting with two big screwdrivers. (c) Carefully lift the fitting. (d) Disconnect the supply connector. (e) Remove the O-ring gasket. ***Note:*** *After removing a fitting, it is recommended to clean all contact surfaces, replace the O-ring gasket and the lock nuts in preparation for or before re-installation.* ***WARNING!*** *WHEN A FITTING HAS BEEN REMOVED FROM ITS BASE, THE BASE MUST BE EITHER FITTED WITH A COVER OR A RESERVE FITTING PUT IN ITS PLACE.*	**8" fitting**	**12" fitting**
		

Remove

(a) Place the O-ring gasket (see figure step **1**) on the 8” fitting or for the 12” fitting in the base.

Note: *New 8” fittings are delivered with the O-ring gasket in place.*
For previously used fittings, it is recommended to replace the O-ring gasket and the lock nuts before re-installation.

Check the fitting corresponds to site installation position, for example colour and direction.

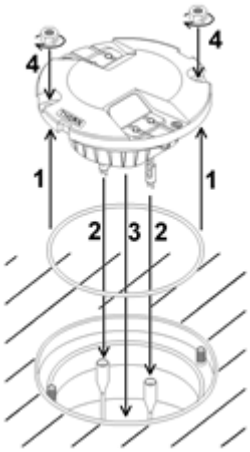
(b) Connect the fitting connector(s) to the base supply cable(s) (see **2**).
If the fitting has two connectors, be careful not to invert the connections. The connectors corresponding to the fitting windows A and B are marked on the cover with A and B.
For 12” fittings, cables are marked.

(c) Install the fitting on the base (see **3**).

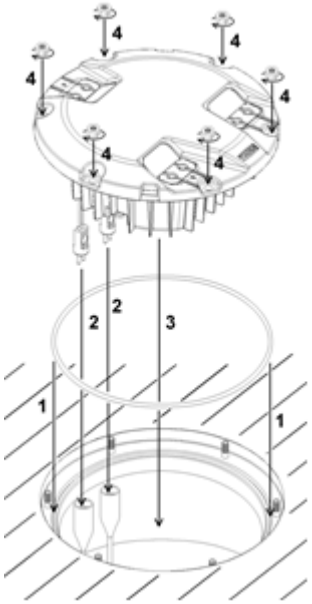
(d) For installation on THORN bases, use a 16 mm torque limiting box spanner to secure the fixing bolts (see **4**) to a torque of 35 Nm (= 3.5 kg m). For other manufacturers refer to their specifications.

(e) When all fittings are installed, check each fitting for proper functionality.

8” fitting



12” fitting



3. MAINTENANCE

In this section you can find a description of the different steps for the maintenance of the fittings.

Before you start, make sure you have read and understand §1.1 Safety Instructions.

Find out the location of the light unit that needs maintenance. If the purpose is to replace an existing light unit with new one, make sure that corresponding unit is available.

WARNING! *WHEN A FITTING HAS BEEN REMOVED FROM ITS BASE, THE BASE MUST BE EITHER FITTED WITH A COVER OR A RESERVE FITTING PUT IN ITS PLACE.*

IT IS RECOMMENDED THAT ONLY AUTORIZED PERSONNEL DISASSEMBLE FITTINGS WITH PRIOR AGREEMENT FROM SAFEGATE.

Airfield Smart Power SafeControl (ASP-SC)

It is possible to use the same physical channel on the series circuit cable, which transfers power to the lamp on the circuit, with an ASP-SC system for communication. This implies that whenever there is power available to the lamps, the ASP-SC system has access to its communications channel, providing control and monitoring availability. No extra communication cables or connectors are needed which minimizes maintenance and maximizes reliability.
For more information, see www.safegate.com.

The following tools and accessories are required for maintenance actions:

- An open end wrench, 22 mm.
- Angled socket wrenches: 7 mm, 10 mm, 16 mm (for installation on THORN bases), 22 mm.
- Angled box wrenches: 7 mm, 12 mm.
- A torque limiting spanner with 16 mm and 7 mm adaptors.
- Allen keys: 3 mm, 5 mm.
- Screwdrivers: a small flat, a medium flat and two big screwdrivers.
- Anti-seize component (shall be used on all fasteners except where helicoils are used).
- Special sealing compound for valve water tightness.
- A brush or cloth.

3.1 BASIC MAINTENANCE PROGRAMME

There are recommended maintenance tasks to ensure that the equipment is in correct operating condition.

Maintenance tasks	
Daily	• General visual check of the fitting.
Weekly	• Visual inspection of the fitting. • Removal of dust from external surfaces of the fitting.
Monthly	• Check of the optical window, check for mechanical damage. • Check for proper fixing of the fitting in its base.
Yearly	• Detailed inspection of the fitting. • Check of the body resistance, check for mechanical damage (for example cracks around prism windows). • Cleaning of the optical windows.
Note*: The basic maintenance program is intended for fittings at a standard airport site in normal operating conditions, for example for INL-AP light fittings.* If Maintenance is carried out in a workshop, always check if the fitting is water tight, after disassembly/assembly, before installation in the field. For more information see § 3.2.1 Disassembling/ Assembling an 8” Fitting.	

A daily function check is referred to in the document:
ICAO, Airport Services Manual Part 9, Airport Maintenance Practice and FAA AC 150/5340-26A, Maintenance of airport visual aids facilities.

The light is designed for outdoor operation, however storing the light outside without using it is a risk for damage to light components. For a longer storage time (more than a week), it is recommended to store the light indoors in a dry and dust free environment and at room temperature. Proper storage ensures trouble free replacement procedures. It is strongly recommended not to store any electrical equipment outside.

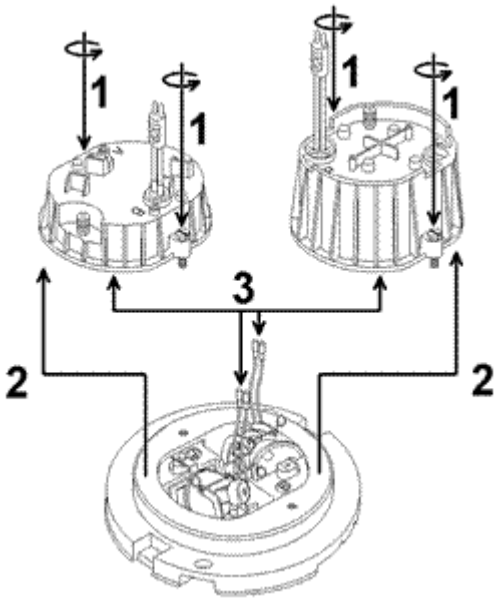
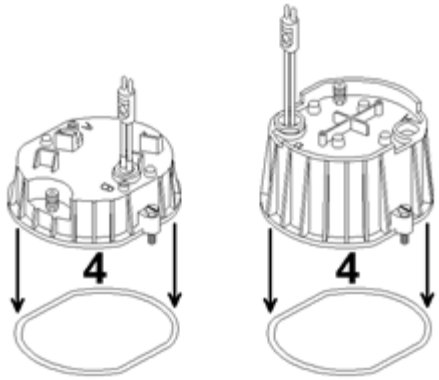
3.2 WORKSHOP MAINTENANCE

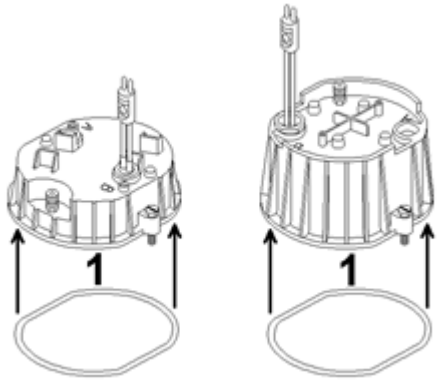
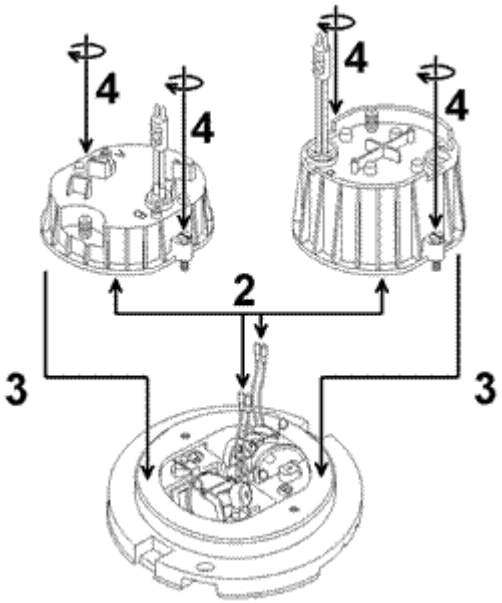
It is important to always make sure that the fitting is depressurized before disassembly for maintenance work.

Before you start, make sure you have read and understand §1.1 Safety Instructions.

Note*: Only the most common maintenance procedures are instructed in following paragraphs. Construction of the luminaire allows a full disassembling and replacement of all the parts if required*.

3.2.1 Disassembling/ Assembling an 8” Fitting

Disassemble	
(a) Unscrew the two cover screws using an angled socket wrench of 10 mm (or a screwdriver). (b) Lift up the cover. (c) Disconnect the lamps from the supply terminals (long cover) or from the supply cables (short cover).	
(d) Remove the O-ring gasket from the cover.	

Assemble	
Carefully clean all contact surfaces of the fitting and the cover. (a) Place a new O-ring gasket on the cover. ***Note**: The O-ring gasket must be change each time the fitting is open.* (b) Place the cover over the body and connect the lamps on the supply terminals (long cover) or on the supply cables (short cover).	
(c) Put the cover back in place and tighten the two screws using a torque limiting spanner n° 10 to a torque of 8 N m (equivalent to 0.8 kg m or 8 g cm).	

Water tightness check

It is recommended to verify that the fitting is water tight:

(a) Remove the water tightness test valve cap.

(b) Fill up the fitting with compressed air (test pressure = 130 kPa).

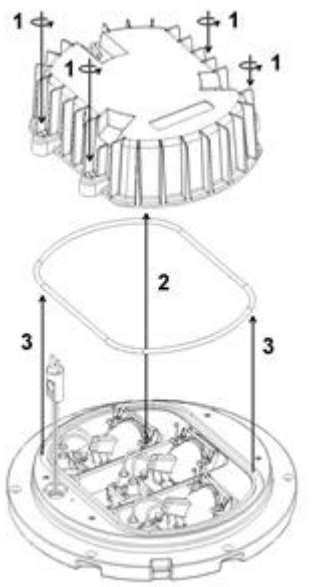
(c) Put the fitting in water, wait 3 minutes and check if air bubbles leave the fitting.

- If air bubbles leave the fitting (between cover and body or between prism and body or water tightness valve and body), the fitting is not water tight. Disassemble the fitting once again to check/clean all contact surfaces and check gaskets. Replace if necessary.
- Alternatively, deflate the fitting and replace the water tightness test valve cap. The fitting is ready to be re-installed in the field.

3.2.2 Disassembling/ Assembling a 12" Fitting

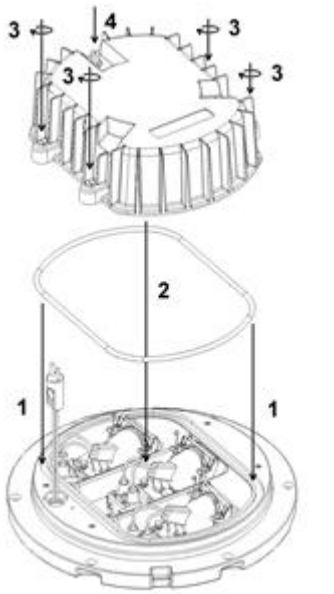
Disassemble

(a) Unscrew the four cover screws using a box spanner n° 10.
(b) Remove the cover.
(c) Remove the O ring gasket.



Assemble

(a) Carefully clean all contact surfaces of the fitting, the cover and the parts housing the O-ring gasket.
(b) Set a new O-ring gasket on the fitting.
(c) Place the cover back in position and check the lamp wires are correctly set inside the fitting and are not trapped when closing the fitting.
(d) Fasten the four screws using a torque limiting spanner n° 10 to a torque of 8 N m (equivalent to 0.8 kg m or 8 g cm).



Water tightness check

It is recommended to verify that the fitting is water tight:

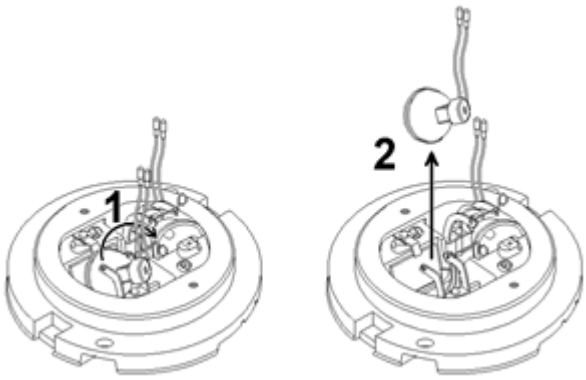
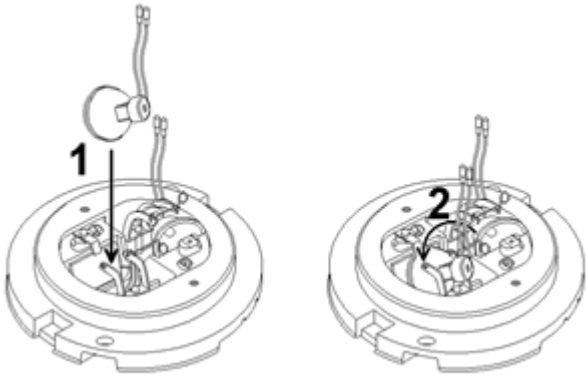
(a) Remove the water tightness test valve cap.
(b) Fill up the fitting with compressed air (test pressure = 130 kPa).
(c) Put the fitting in water, wait 3 minutes and check if air bubbles leave the fitting.
- If air bubbles leave the fitting (between cover and body or between prism and body or water tightness valve and body), the fitting is not water tight. Disassemble the fitting once again to check/clean all contact surfaces and check gaskets. Replace if necessary.
- Alternatively, deflate the fitting and replace the water tightness test valve cap. The fitting is ready to be re-installed in the field.

3.2.3 Replacing a Lamp on 8" Fittings

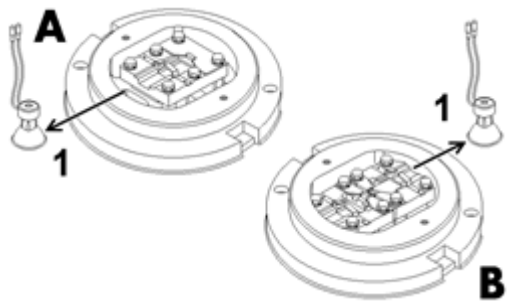
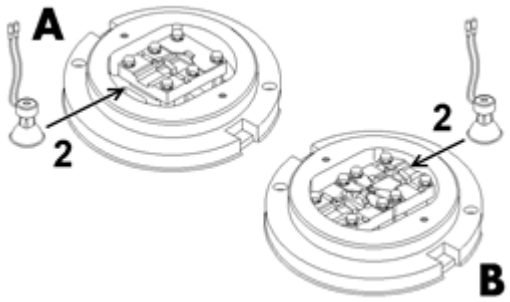
For 50mm lamps, the position is indicated on the lamp.

***Note**: For a 40W lamp, be aware of the lamp orientation and cabling before removal.*

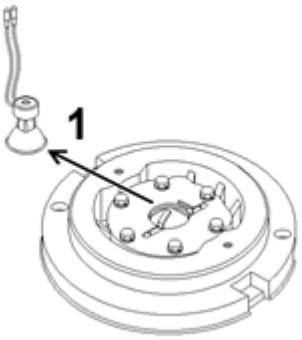
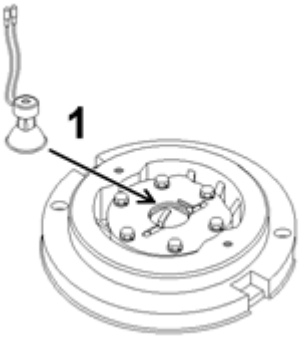
3.2.3.1 Replacing a lamp on: INL-RC; INL-RT; INL-HSE; INL-RTI; INL-RG

Remove	
(a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting). (b) Unlock and open the fixing barrette of the lamp fixing spring. ***Note**: Be aware of lamp orientation and cabling before removal.* (c) Remove the lamp from its support.	
Replace	
(a) Put a new lamp on the lamp support with the correct orientation and cabling. (b) Close and lock the fixing barrette of the lamp fixing spring. (c) Assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting). ***Note**: If the fitting is equipped with a film disk cut out, it must also be replaced with a failed lamp. For preventative maintenance re-lamping, it is not necessary to replace the film disk cut out.*	

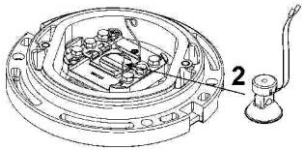
3.2.3.2 Replacing a lamp on: IN-TT; IN-TO; IN-SB

Remove		
(a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting). (b) Remove the lamp from the fixing spring of the lamp support, by sliding it out to the side.	**A: IN-TO (centred)**	**B: IN-TT or IN-SB**
		
Replace		
(a) Install a new lamp in the fixing spring of the lamp holder, by sliding it in from the side. (b) Assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting). ***Note**: If the fitting is equipped with a film disk cut out, it must also be replaced with a failed lamp. For preventative maintenance re-lamping, it is not necessary to replace the film disk cut out.*		

3.2.3.3 Replacing a lamp on: IN-OMA

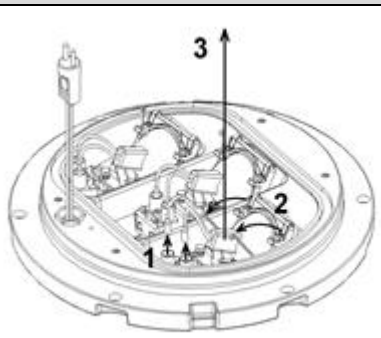
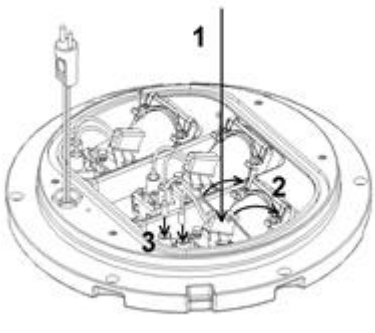
Remove	
(a) Disassemble the fitting ((see § 3.2.1 Disassembling/ Assembling an 8" Fitting). (b) Remove the lamp from the fixing spring of the lamp support, by sliding it out to the side.	
Replace	
(a) Install a new lamp in the fixing spring of the lamp holder, by sliding it in from the side. (b) Assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting). ***Note**: If the fitting is equipped with a film disk cut out, it must also be replaced with a failed lamp. For preventative maintenance re-lamping, it is not necessary to replace the film disk cut out.*	

3.2.3.4 Replacing a lamp on ILP-T

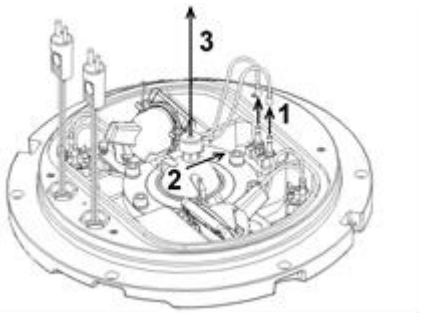
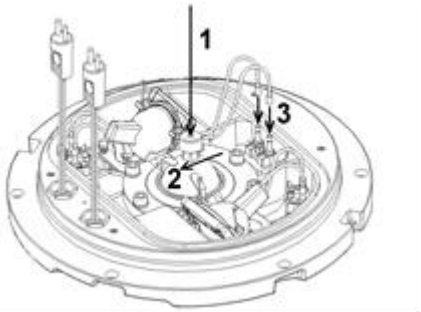
Remove	
(a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting). (b) Detach the lamp spring and remove the lamp.	**ILP-TB (1 lamp centred)** 
Replace	
(a) Put the lamp in its holder then block it with the spring. (b) Assemble the fitting ((see § 3.2.1 Disassembling/ Assembling an 8" Fitting). ***Note**: If the fitting is equipped with a film disk cut out, it must also be replaced with a failed lamp. For preventative maintenance re-lamping, it is not necessary to replace the film disk cut out.*	

3.2.4 Replacing a Lamp on 12" Fittings

3.2.4.1 Replacing a lamp on: INL-AP; INL-RN; INL-RET; INL-RE

Remove	
(a) Disassemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12" Fitting). (b) Disconnect the lamp from its terminal. (c) Release the lamp fixing spring. (d) Remove the lamp from the lamp holder.	
Replace	
(a) Install a new lamp on the lamp holder. ***Note**: The arrow (Top) marked on the lamp reflector must be aimed to the top of the fitting*. (b) Fasten the lamp fixing spring. (c) Connect the lamp to the terminal. (d) Assemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12" Fitting). ***Note**: If the fitting is equipped with a film disk cut out, it must also be replaced with a failed lamp. For preventative maintenance re-lamping, it is not necessary to replace the film disk cut out.*	

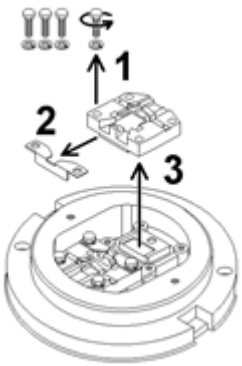
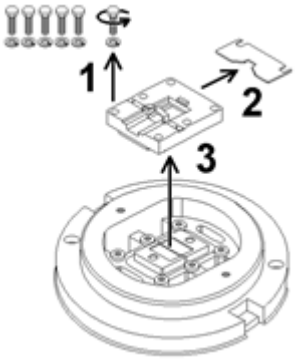
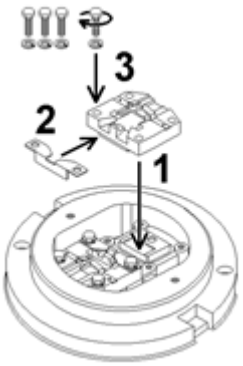
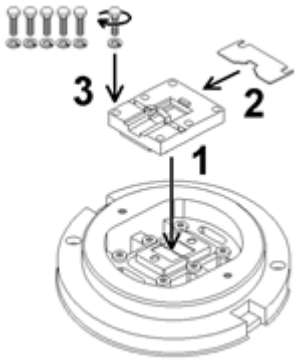
3.2.4.2 Replacing a lamp on INL-REO

Remove	
(a) Disassemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12" Fitting). (b) Disconnect the lamp from its terminal. (c) Release the lamp from the fixing springs, by sliding it to the side. (d) Remove the lamp from the lamp holder.	
Replace	
(a) Install a new lamp on the lamp holder. ***Note**: The arrow (Top) marked on the lamp reflector must be aimed to the top of the fitting*. (b) Fasten the lamp fixing spring. (c) Connect the lamp to the terminal. (d) Assemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12" Fitting). ***Note**: If the fitting is equipped with a film disk cut out, it must also be replaced with a failed lamp. For preventative maintenance re-lamping, it is not necessary to replace the film disk cut out.*	

3.2.5 Replacing a Lamp Holder on 8” Fittings

The fittings include screws for lamp holders.

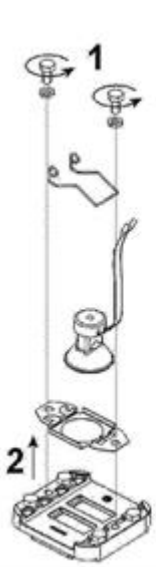
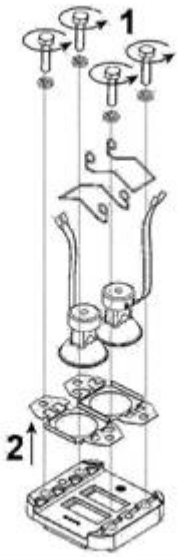
3.2.5.1 Replacing a lamp holder on: IN-TT; IN-TO; IN-SB

<table>
<tr><th colspan="3">Remove</th></tr>
<tr><td rowspan="2">(a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8” Fitting) and remove the lamp (see § 3.2.3.2 Replacing a lamp on: IN-TT; IN-TO; IN-SB).
(b) Using an angled socket wrench 10 mm, unscrew and remove the fixing screws of the lamp holder.
(c) Remove the lamp fixing plate.
(d) Remove the lamp holder from the body of the fitting.</td><td>IN-TT/SB (4 screws)</td><td>IN-TO (6 screws)</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><th colspan="3">Replace</th></tr>
<tr><td>(a) Place a new equipped lamp holder on the fitting.
(b) Place the lamp fixing plate in position.
(c) Fasten the lamp holder using the fixing screws.
(d) Put the lamp in place (see § 3.2.3.2 Replacing a lamp on: IN-TT; IN-TO; IN-SB) and assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8” Fitting).</td><td> 
</td><td> 
</td></tr>
</table>

3.2.5.2 Replacing a lamp holder on: ILP-T

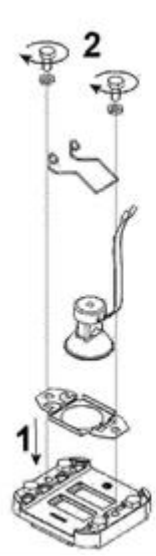
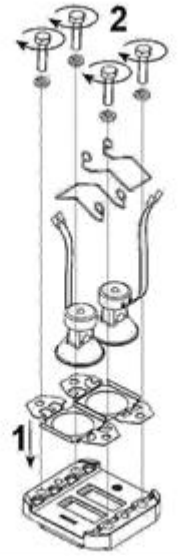
Remove

(a) Disassemble the fitting ((see § 3.2.1 Disassembling/ Assembling an 8" Fitting) and remove the lamp (see § 3.2.3.4 Replacing a lamp on ILP-T).
(b) Using an angled socket wrench 10 mm, unscrew and remove the fixing screws of the lamp holder.
(c) Remove the lamp holder.
(d) Remove the lamp spring from the lamp holder.
(e) Put the lamp spring on the lamp holder. ***Note**: Make sure the orientation of the lamp is correct, as shown.*

ILP-TB (1 lamp centred)	**ILP-TB (2 lamps)**	**ILP-TU**
		

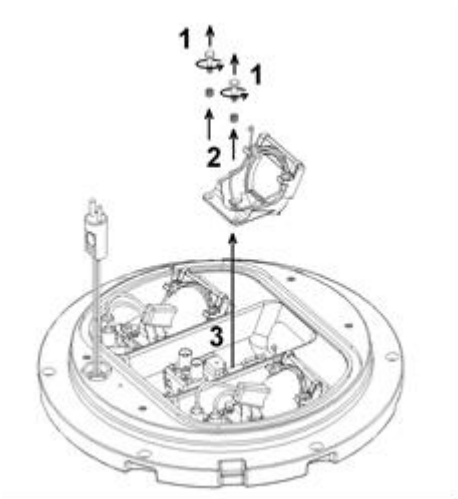
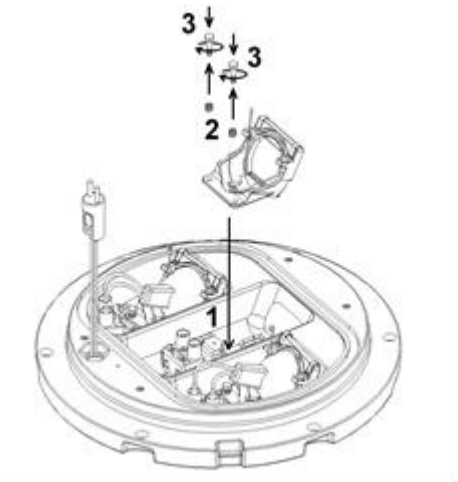
Replace

(a) Place the lamp fixing plate in position.
(b) Fasten the lamp holder using the fixing screws and washers.
(c) Put the lamp in place see § 3.2.3.4 Replacing a lamp on ILP-T) and assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting).

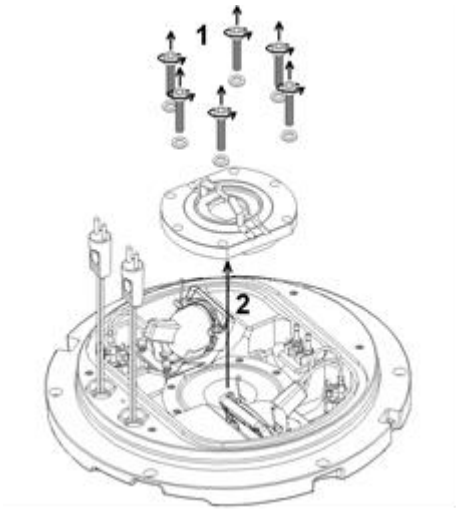
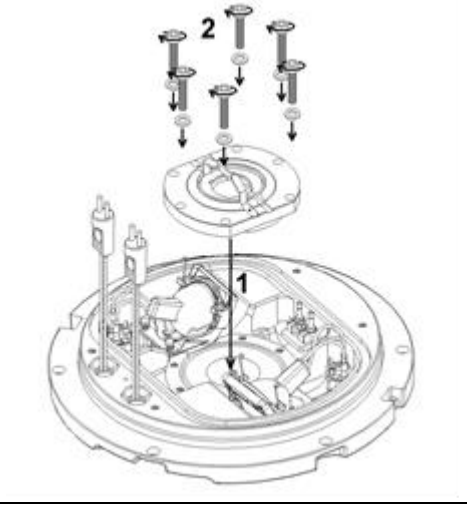
		

3.2.6 Replacing a Lamp Holder on 12” Fittings

3.2.6.1 Replacing a lamp holder on: INL-AP; INL-RN; INL-RET; INL-RE

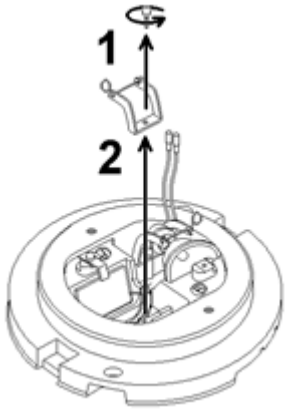
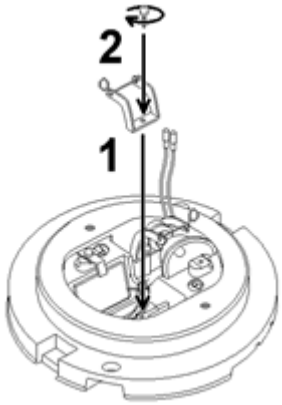
Remove	
(a) Disassemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12” Fitting) and remove the lamp (see § 3.2.4.1 Replacing a lamp on: INL-AP; INL-RN; INL-RET; INL-RE). (b) Using a box spanner n° 7, unscrew and remove the two fixing screws from the lamp holder. (c) Remove the two holder mounting springs and washers. (d) Remove the lamp holder from the body of the fitting. (e) Remove the filter from the lamp holder, if required.	
Replace	
(a) Install a new filter on the lamp holder, if required. (b) Place a new lamp holder on the fitting. (c) Set the two lamp holder mounting springs and their washers on the two fixing screws. (d) Fasten the lamp holder using the fixing screws. (e) Put the lamp in place (see § 3.2.4.1 Replacing a lamp on: INL-AP; INL-RN; INL-RET; INL-RE) and assemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12” Fitting).	

3.2.6.2 Replacing a lamp holder on: INL-REO

Remove	
(a) Disassemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12" Fitting) and remove the lamp (see § 3.2.4.2 Replacing a lamp on INL-REO). (b) Using an Allen key n° 5, unscrew and remove the six fixing screws and washers from the lamp holder. (c) Remove the lamp holder from the body of the fitting. (d) Remove the filter from the lamp holder, if required.	
Replace	
(a) Install a new filter on the lamp holder, if required. (b) Place a new lamp holder on the fitting. (c) Set the washers on the six fixing screws and fasten the lamp holder using the fixing screws. (d) Put the lamp in place (see § 3.2.4.2 Replacing a lamp on INL-REO) and assemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12" Fitting).	

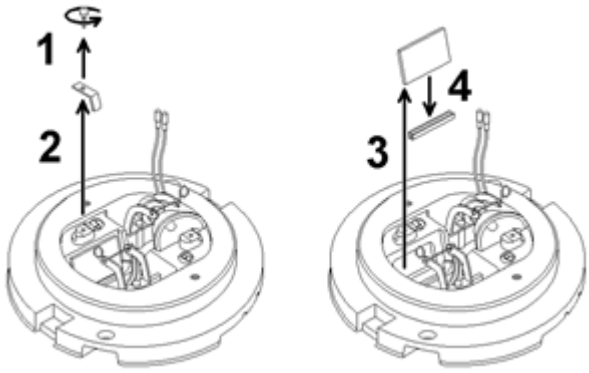
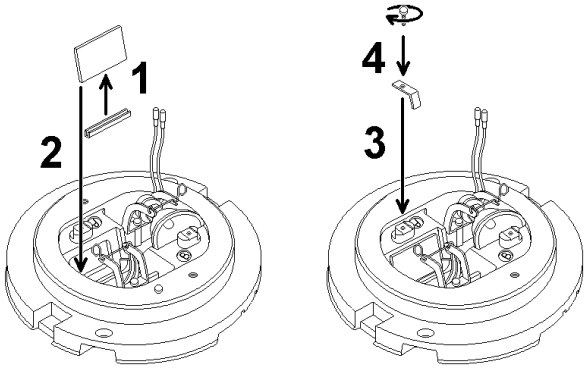
3.2.7 Replacing a Lamp Fixing Spring on 8” Fittings

3.2.7.1 Replacing a lamp fixing spring on: INL-RC; INL-RT; INL-HSE; INL-RTI; INL-RG

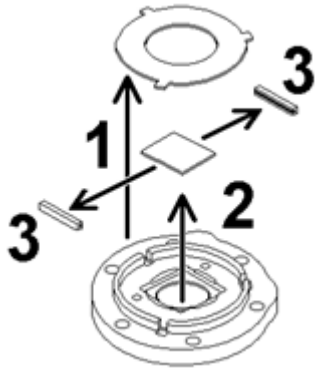
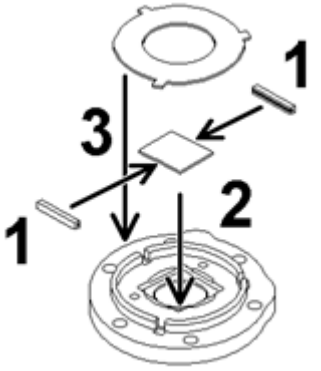
Remove	
(a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8” Fitting) and remove the lamp (see § 3.2.3.1 Replacing a lamp on: INL-RC; INL-RT; INL-HSE; INL-RTI; INL-RG). (b) Using an angled socket wrench 7 mm, unscrew the lamp fixing spring. (c) Remove the lamp fixing spring.	
Replace	
(a) Place the lamp fixing spring in position. (b) Using an angled socket wrench 7 mm, fasten the lamp fixing spring with the screw. (c) Put the lamp in place (see § 3.2.3.1 Replacing a lamp on: INL-RC; INL-RT; INL-HSE; INL-RTI; INL-RG) and assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8” Fitting).	

3.2.8 Replacing a Filter on 8” Fittings

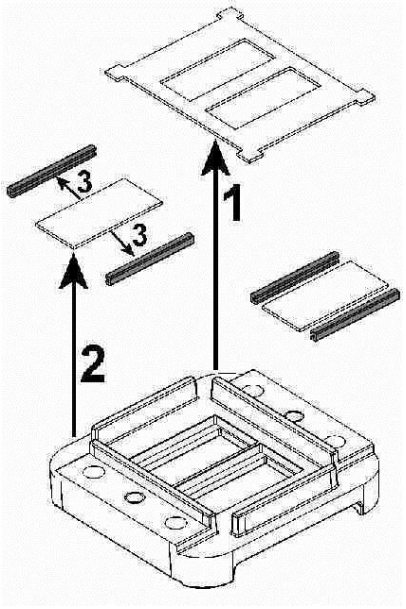
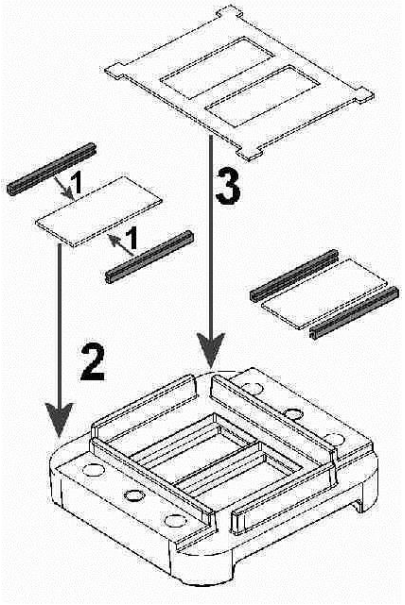
3.2.8.1 Replacing a filter on: INL-RC; INL-RT; INL-HSE; INL-RTI; INL-RG

Remove	
(a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8” Fitting) and remove the lamp (see § 3.2.3.1 Replacing a lamp on: INL-RC; INL-RT; INL-HSE; INL-RTI; INL-RG). (b) Using an angled socket wrench 7 mm, unscrew the filter fixing spring. (c) Remove the filter fixing spring. (d) Remove the filter from the fitting. (e) Remove the protection gasket from the filter	
Replace	
(a) Mount the protection gasket on the new filter. ***Note**: It is recommended to change the protection gasket each time a deviator or a filter is replaced*. (b) Install the filter and protection gasket in the fitting body. (c) Place the lamp fixing spring in position. (d) Using an angled socket wrench 7 mm, fasten the lamp fixing spring with the screw. (e) Put the lamp in place (see § 3.2.3.1 Replacing a lamp on: INL-RC; INL-RT; INL-HSE; INL-RTI; INL-RG) and assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8” Fitting).	

3.2.8.2 Replacing a filter on IN-OMA

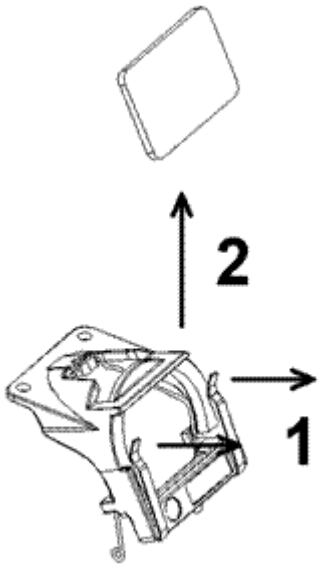
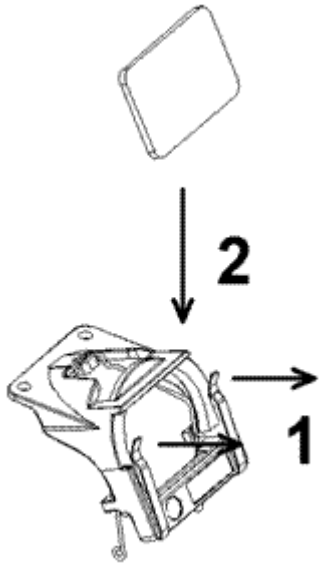
Remove	
(a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting) remove the lamp (see § 3.2.3.3 Replacing a lamp on: IN-OMA) and the lamp holder (see § 3.2.5.1 Replacing a lamp holder on: IN-TT; IN-TO; IN-SB). (b) Remove the protection Teflon plate from the lamp holder. (c) Remove the filter(s) and the gasket from the lamp holder. (d) Remove the gaskets from the filter(s).	
Replace	
(a) Mount the protection gasket on the new filter. ***Note**: It is recommended to change the protection gasket each time a deviator or filter is replaced.* (b) Install the filter and protection gasket in the lamp holder. ***Note**: Verify that the colour(s) of the filter(s) (Blue, Green, Yellow or Red) corresponding to function(s).* (c) Place the Teflon plate on the lamp holder. (d) Put the lamp in place (see § 3.2.3.3 Replacing a lamp on: IN-OMA) and assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting).	

3.2.8.3 Replacing a filter on: IN-TT; IN-TO; IN-SB; ILP-T

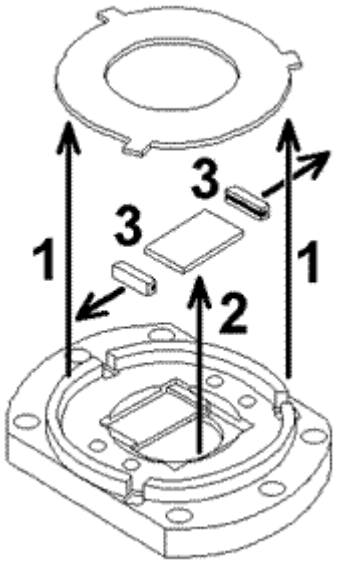
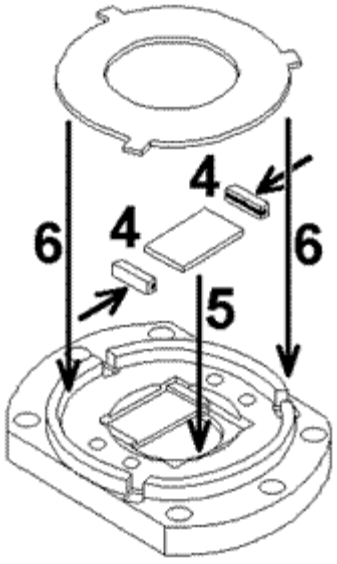
Remove	
(a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting) and remove the lamp (see § 3.2.3 Replacing a Lamp on 8" Fittings), the prism clamp and the lamp holder (see § 3.2.5 Replacing a Lamp Holder on 8" Fittings). (b) Remove the protection Teflon plate from the prism clamp. (c) Remove the filter(s) and the gaskets from the lamp holder. (d) Remove the gaskets from the filter(s).	
Replace	
(a) Mount the protection gasket on the new filter(s). ***Note**: It is recommended to change the protection gasket each time a deviator (not applicable for ILP-T) or a filter is replaced.* (b) Install the filter(s) and protection gasket in the prism clamp. ***Note**: Verify that the colour(s) of the filter(s) (Blue, Green, Yellow or Red) corresponding to function(s).* (c) Place the Teflon plate on the prism clamp. (d) Place the prism clamp and lamp holder in position (see § 3.2.5 Replacing a Lamp Holder on 8" Fittings) and assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting).	

3.2.9 Replacing a Filter on 12” Fittings

3.2.9.1 Replacing a filter on: INL-AP; INL-RN; INL-RET; INL-RE

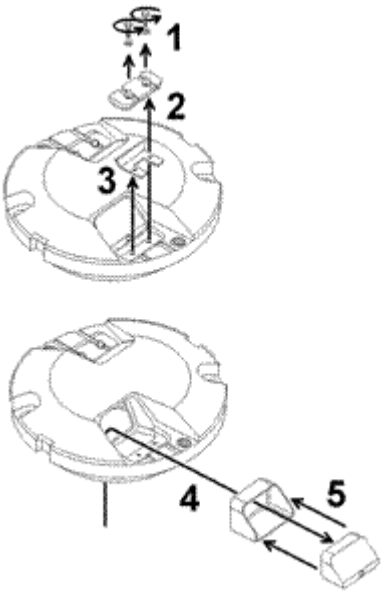
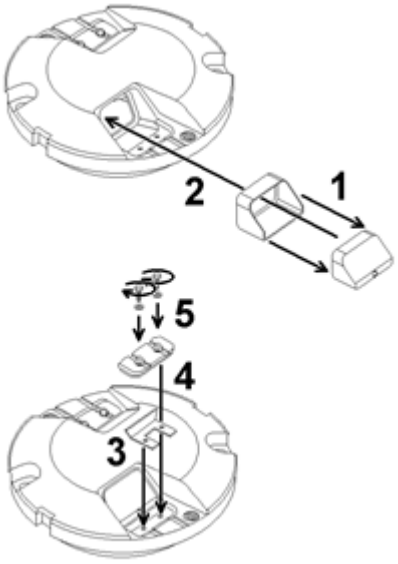
Remove	
(a) Disassemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12” Fitting), remove the lamp (see § 3.2.4.1 Replacing a lamp on: INL-AP; INL-RN; INL-RET; INL-RE) and the lamp holder (see § 3.2.6.1 Replacing a lamp holder on: INL-AP; INL-RN; INL-RET; INL-RE). (a) Pull up the two filter fixing springs to release. (b) Remove the filter.	
Replace	
(a) Pull up the two filter fixing springs. (b) Carefully place a new filter in position. (c) Place the lamp holder in position (see § 3.2.6.1 Replacing a lamp holder on: INL-AP; INL-RN; INL-RET; INL-RE), place a lamp in the lamp holder (see § 3.2.4.1 Replacing a lamp on: INL-AP; INL-RN; INL-RET; INL-RE), and assemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12” Fitting).	

3.2.9.2 Replacing a filter on INL-REO

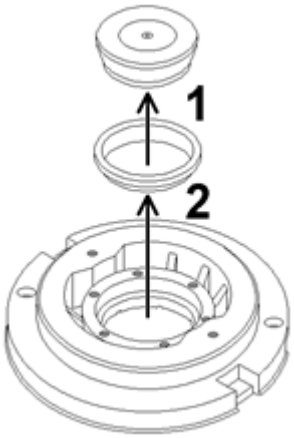
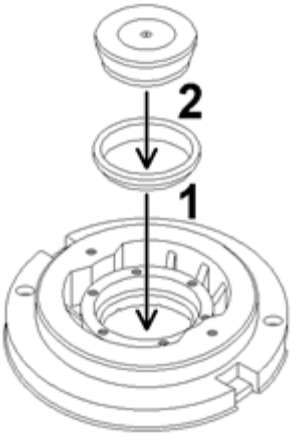
Remove	
(a) Disassemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12" Fitting), remove the lamp (see § 3.2.4.2 Replacing a lamp on INL-REO) and the lamp holder (see § 3.2.6.2 Replacing a lamp holder on: INL-REO). (b) Remove the protection Teflon plate from the lamp holder. (c) Remove the filter from the lamp holder. ***Note:*** *When a fitting includes colour on only one side, the MI lamp support is equipped with one half filter corresponding to the colour and with one half diffusing filter (White) used to block the colour filter in the window*. (d) Remove the two prism protection gaskets.	
Replace	
(a) Place the two new protection gaskets on the prism. (b) Place a new filter on the lamp holder. (c) Place the Teflon plate on the lamp holder. (d) Place the lamp holder in position (see § 3.2.6.2 Replacing a lamp holder on: INL-REO), place a lamp in the lamp holder (see § 3.2.4.2 Replacing a lamp on INL-REO) and assemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12" Fitting).	

3.2.10 Replacing a Prism and a Gasket on 8" Fittings

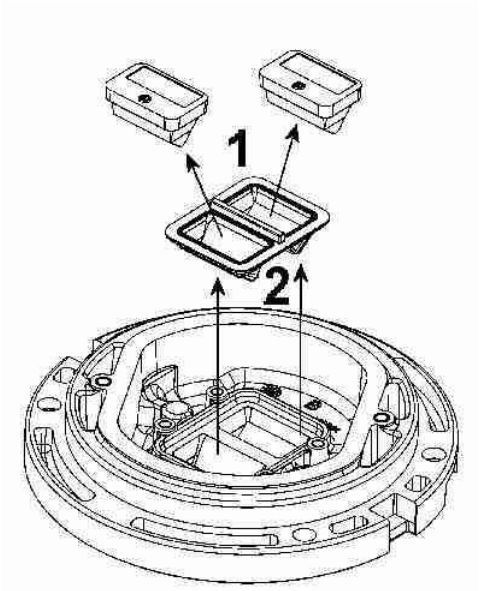
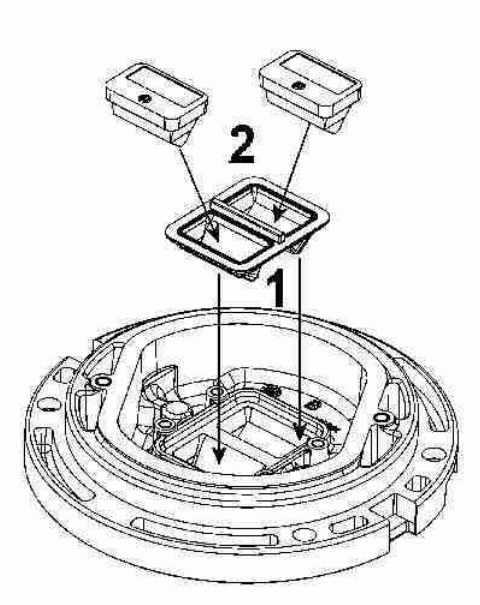
3.2.10.1 Replacing a prism and a gasket on: INL-RC; INL-RT; INL-HSE; INL-RTI; INL-RG

Remove	
(a) Make sure the correct prism type is to be used (check prism markings). (b) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting) remove the filter (see § 3.2.8.1 Replacing a filter on: INL-RC; INL-RT; INL-HSE; INL-RTI; INL-RG). (c) Using an angled socket wrench 7 mm, unscrew and remove the prism fixing clamp screws and washers. (d) Remove the prism fixing clamp. (e) Remove the Teflon protection plate. (f) From inside the fitting body, push the prism to remove the prism and its gasket from the fitting body. (g) Remove the prism gasket from the prism. ***Note:*** *INL-RT includes deviator instead of a prism with built-in deviation.*	
Replace	
(a) Mount a new gasket on the new prism. ***Note:*** *It is recommended to change the protection gasket each time a prism is removed.* (b) Insert the prism, gasket and the Teflon protection in the fitting body window. (c) Place the Teflon protection plate in position. (d) Place the prism fixing clamp in position. (e) Place the screws, with washers, on the fixing clamp and fasten the screws on the fixing clamp using a torque limiting spanner with an adaptor for 7 mm to a torque of 3.0 N m. (f) Place the filter in position (see § 3.2.8.1 Replacing a filter on: INL-RC; INL-RT; INL-HSE; INL-RTI; INL-RG) and assemble the fitting ((see § 3.2.1 Disassembling/ Assembling an 8" Fitting).	

3.2.10.2 Replacing a prism and a gasket on: IN-OMA

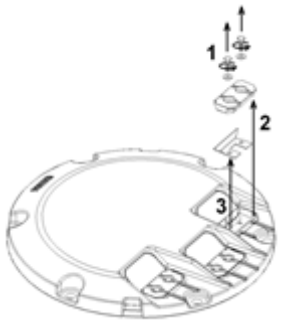
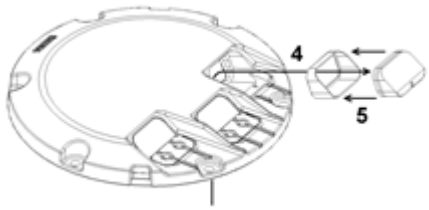
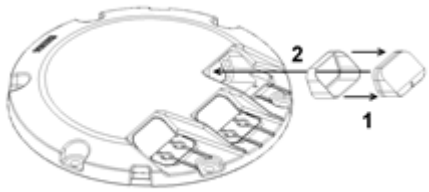
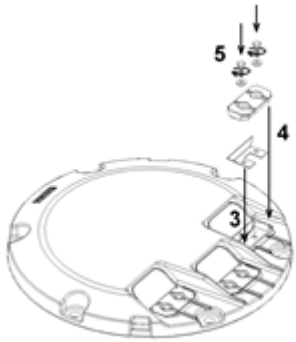
Remove	
(a) Make sure the correct prism type is to be used (check prism markings). (b) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting) and remove the lamp (see § 3.2.3.3 Replacing a lamp on: IN-OMA). (c) From outside the fitting body, push the prism. (d) Remove the prism and the gasket from the fitting body. (e) Carefully clean the contact surfaces of the window on the fitting body.	
Replace	
(a) Mount the new gasket in the fitting body. ***Note**: It is recommended to change the gasket each time a prism is removed*. (b) Insert the prisms in the gasket in the fitting body window. (c) Place the lamp in position (see § 3.2.3.3 Replacing a lamp on: IN-OMA) and assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting).	

3.2.10.3 Replacing a prism and a gasket on: IN-TT; IN-TO; IN-SB; ILP-T

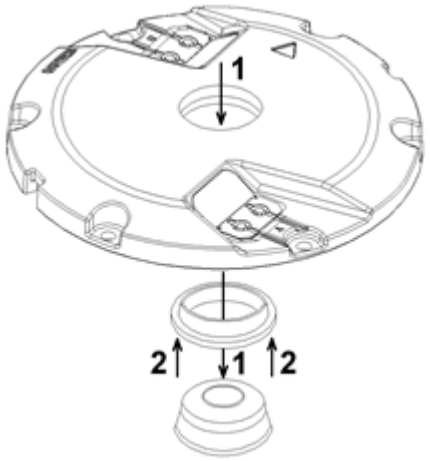
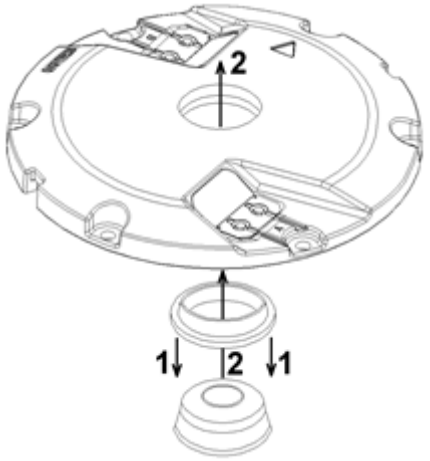
Remove	
(a) Make sure the correct prism type is to be used (check prism markings). (b) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting) remove the lamp (see § 3.2.3 Replacing a Lamp on 8" Fittings) and remove the prism clamp and the lamp holder (see § 3.2.5 Replacing a Lamp Holder on 8" Fittings). (c) From outside the fitting body, push the prisms to remove the prisms and gasket. (d) Remove the gasket from the fitting body. (e) Carefully clean the contact surfaces of the window on the fitting body.	
Replace	
(a) Mount the new gasket in the fitting body. ***Note**: It is recommended to change the gasket each time a prism is removed*. (b) Insert the prisms in the gasket in the fitting body window. ***Note:** Verify the new prisms correspond to the fitting type (**W**, **N**)*. (c) Place the prism clamp and lamp holder in position (see § 3.2.5 Replacing a Lamp Holder on 8" Fittings), place the lamp in position, in front of the prism (see § 3.2.3 Replacing a Lamp on 8" Fittings) and assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting). ***Note**: For bi-directional lights L and R versions, the prism marked A2 must be installed on the A-side and the prism marked B2 on the B-side. The arrow on the fitting body shows the centre of the curve.*	

3.2.11 Replacing a Prism and a Gasket on 12” Fittings

3.2.11.1 Replacing a prism and a gasket on: INL-AP; INL-RN; INL-RET; INL-RE

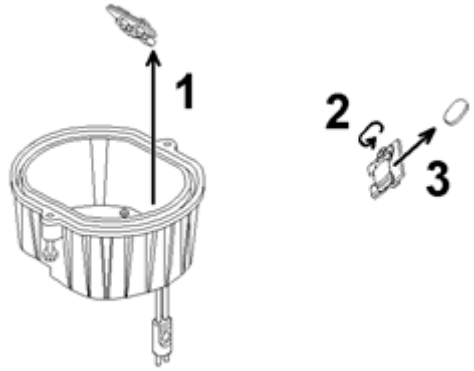
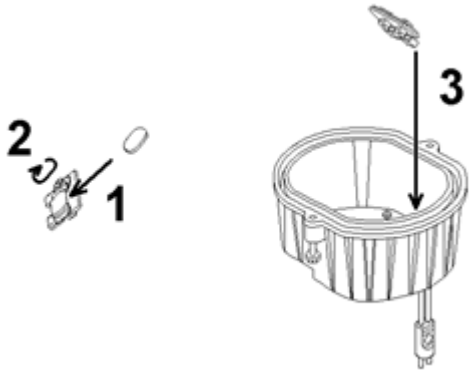
Remove	
(a) Disassemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12” Fitting), remove the lamp (see § 3.2.4.1 Replacing a lamp on: INL-AP; INL-RN; INL-RET; INL-RE) and remove the lamp holder (see § 3.2.6.1 Replacing a lamp holder on: INL-AP; INL-RN; INL-RET; INL-RE). (b) Unscrew two fixing screws to the prism clamp using a box spanner n°7. Remove the two screws and washers. (c) Remove the prism clamp, use a small screwdriver to lift it, if necessary. (d) Remove the Teflon protection plate.	
(e) Remove the prism and its gasket from the fitting body. From inside the fitting, push on the rear side of the prism. (f) Remove the prism gasket from the prism. (g) Carefully clean the contact surfaces on the window of the fitting body.	
Replace	
(a) Place the new gasket on the new prism. (b) Place the prism and gasket in the window of the fitting, by pushing it carefully. Check the prism and gasket are correctly positioned.	
(a) Place the Teflon protection plate in position. (b) Place the prism fixing clamp in position. (c) Place the screws, with washers, on the fixing clamp. Fasten the two screws and washers on the fixing clamp using a torque limiting spanner with an adaptor for 7 mm to a torque of 3.0 N m. (d) Place the lamp holder in position (see § 3.2.6.1 Replacing a lamp holder on: INL-AP; INL-RN; INL-RET; INL-RE), place the lamp in the lamp holder (see § 3.2.4.1 Replacing a lamp on: INL-AP; INL-RN; INL-RET; INL-RE) and assemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12” Fitting).	

3.2.11.2 Replacing a prism and a gasket on INL-REO

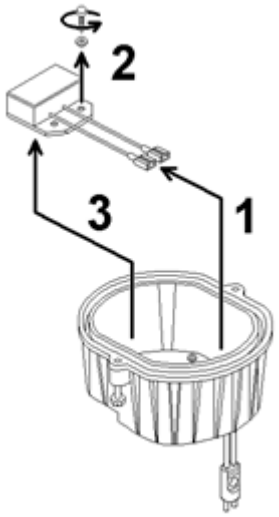
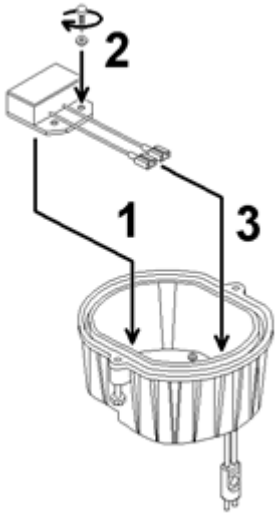
Remove	
(a) Make sure the correct prism type is to be used (check prism markings). (b) Disassemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12" Fitting), remove the lamp (see § 3.2.4.2 Replacing a lamp on INL-REO) and the lamp holder (see § 3.2.6.2 Replacing a lamp holder on: INL-REO). (c) From outside, push on the prism to remove it from the body of the fitting. (d) Remove the gasket from the prism. (e) Carefully clean the contact surfaces on the window of the fitting body.	
Replace	
(a) Place the new gasket on the new prism. (b) Place the prism and gasket in the window of the fitting, by pushing it carefully. Check the prism and gasket are correctly positioned. (c) Place the lamp holder in position (see § 3.2.6.2 Replacing a lamp holder on: INL-REO), place the lamp in the lamp holder (see § 3.2.4.2 Replacing a lamp on INL-REO) and assemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12" Fitting).	

3.2.12 Replacing a Cut Out Device on 8" Fittings

3.2.12.1 Replacing a cut out device - film disk version

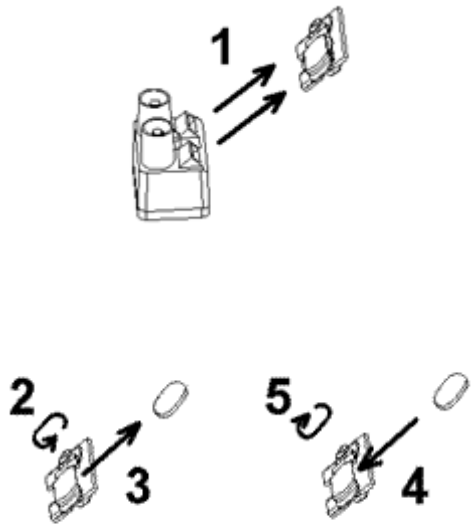
Remove	
Note: *The film disk cut out device can only be mounted on fittings with long covers. The film disk cut out must be changed each time a lamp is replaced.* (a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting). (b) Remove the film disk holder from the supply terminal. (c) Unscrew (but not remove) the holder spring fixing screw. (d) Remove the film disk from the holder.	
Replace	
(a) Place a new film disk on the holder and carefully slip the film disk between the spring and the screw head. ***Note:*** *The largest contact of the film disk must be in contact with the spring and the smaller contact of the film disk must be in contact with the screw.* (b) Fasten the holder spring fixing screw. (c) Mount the film disk holder on the supply terminal. (d) Assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting).	

3.2.12.2 Replacing a cut out - relay version

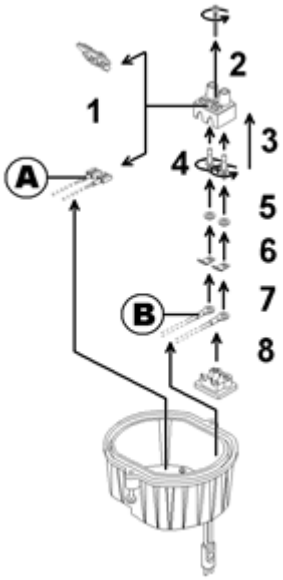
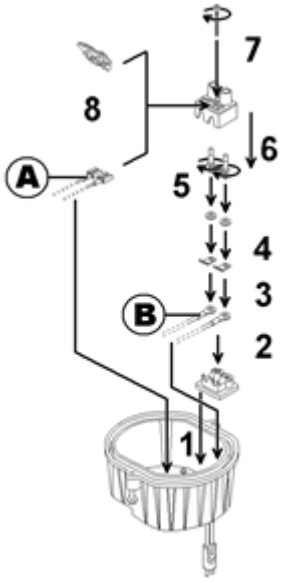
Remove	
Note: *The film disk cut out device can only be mounted on fittings with long covers. The film disk cut out must be changed each time a lamp is replaced.* (a) Disassemble the fitting ((see § 3.2.1 Disassembling/ Assembling an 8" Fitting). (b) Disconnect the two connectors of the cut out relay from the supply terminal. (c) Using a medium flat screwdriver, unscrew and remove the fixing screw of the cut out relay. (d) Remove the cut out relay from the cover.	
Replace	
(a) Place a new cut out relay in the cover. (b) Fasten the fixing screw of the cut out relay. (c) Connect the two connectors of the cut out relay to the supply terminal. (d) Assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting).	

3.2.13 Replacing a Cut Out Device on 12” Fittings

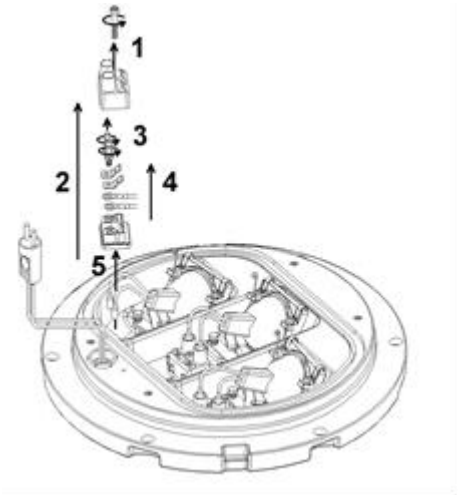
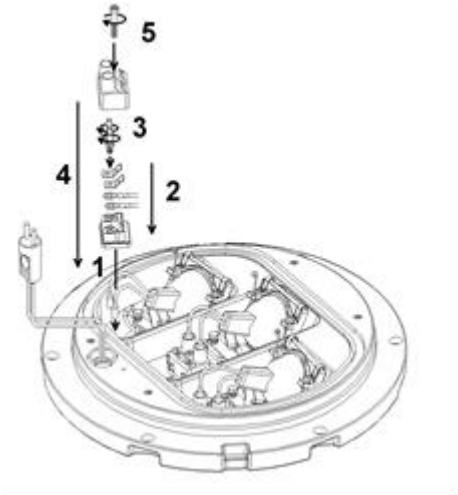
3.2.13.1 Replacing a cut out device - film disk version

Remove	
(a) Disassemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12” Fitting). (b) Remove the film disk holder from the supply terminal. (c) Loosen (but do not remove) the holder spring fixing screw. (d) Remove the film disk from the holder. (e) Place a new film disk on the holder and carefully slip the film disk between the spring and the screw head. (f) Fasten the holder spring fixing screw.	
Replace	
(a) Mount the film disk holder on the supply terminal. (b) Assemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12” Fitting).	

3.2.14 Replacing a Supply Terminal on 8" Fittings

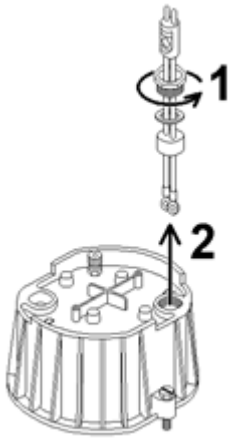
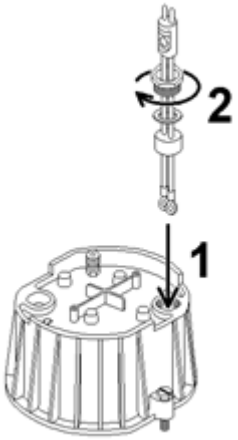
Remove	
(a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting). (b) If necessary, remove the film disk cut out holder from the terminal. (c) If necessary, disconnect the cut out relay from the supply terminal (A). (d) Unscrew and remove the terminal fixing screw using Allen key n°3. (e) Remove the terminal cover. (f) Remove the two terminal connectors using an angled box wrench 7 mm. (g) Remove the washers. (h) Remove the cut out device connectors. (i) Remove the supply cable connectors (B) and the terminal body.	
Replace	
(a) Position the supply cable connectors (**B**) on the terminal body. (b) Position the cut out device connectors. (c) Position the washers. (d) Fasten the terminal connectors using an angled box wrench 7 mm. (e) Place the new terminal body in position. (f) Place the cover on the terminal and insert the fixing screw in the terminal. (g) Fasten the terminal fixing screw using Allen key n°3. (h) If necessary mount the film disk cut out holder on the terminal or connect the cut out relay on the supply terminal (**A**). (i) Assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting). ***Note**: Cable fixing under the connectors as shown may differ, depending on the light.*	

3.2.15 Replacing a Supply Terminal on 12" Fittings

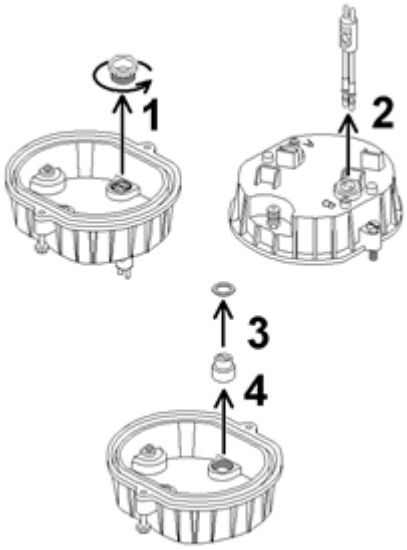
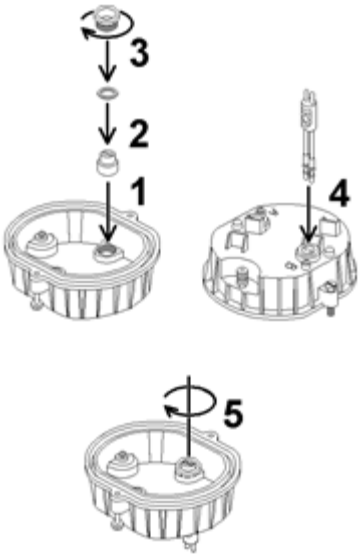
Remove	
(a) Disassemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12" Fitting) and disconnect the lamp from the terminal. ***Note:*** *If necessary, remove the film disk cut out holder*. (b) Unscrew and remove the terminal fixing screw and washer using Allen key n°3. (c) Remove the terminal cover. (d) Unscrew the two terminal connectors using a box spanner n°7. (e) Remove the two terminals and washers. (f) Remove the film disk connectors, the supply cable connectors and then the terminal body.	
Replace	
(a) Place the supply cable connectors, the film disk connectors, the two terminal connectors and their washers on a new terminal body. (b) Fasten the terminal connectors using a box spanner n°7 (torque = 2.5 N m). (c) Place the new terminal body in position. (d) Insert the fixing screw and washer in the terminal body. (e) Fasten the terminal fixing screw (torque = 2 N m). (f) Connect the lamp on the terminal, if necessary place the film disk cut out holder in position and assemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12" Fitting).	

3.2.16 Replacing a Power Supply Cable on 8” Fittings

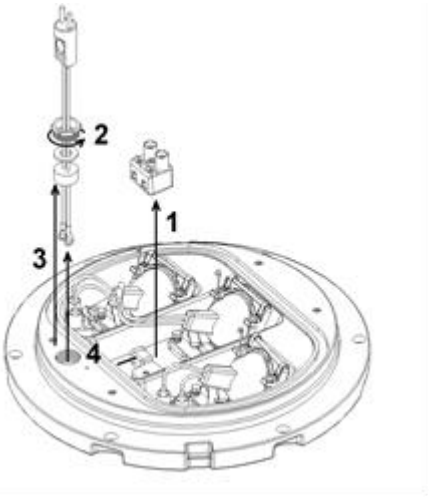
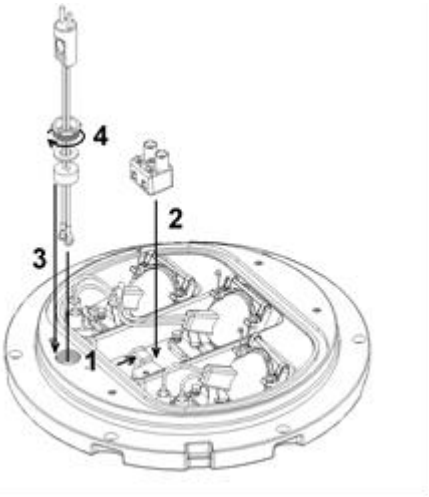
3.2.16.1 Replacing a power supply cable – long cover

Remove	
(a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8” Fitting). (b) Open the Supply terminal and disconnect the supply cable from the supply terminal (see § 3.2.14 Replacing a Supply Terminal on 8” Fittings). (c) From outside the cover, unscrew and remove the compression packer threaded nut using an open end wrench 22 mm. (d) From outside the cover pull and remove the power supply cable equipped with its compression packer. (e) Carefully clean the cover hole.	
Replace	
(a) Using a new power supply cable equipped with complete compression packer, pull 5 cm of cable out the rubber of the compression packer. (b) From outside, pass the end of the cable through the hole of the cover and then install the rubber and the compression packer washer in the hole. (c) Connect the supply cable on the supply terminal and close the supply terminal (see § 3.2.14 Replacing a Supply Terminal on 8” Fittings). (d) From outside the cover, pull on the supply cable leaving a minimal length of cable inside the cover, thread and lock the compression packer nut using an open end wrench 22 mm. (e) Assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8” Fitting). ***Note**: Protection sheaths are included, not shown in the figure.*	

3.2.16.2 Replacing a power supply cable – short cover

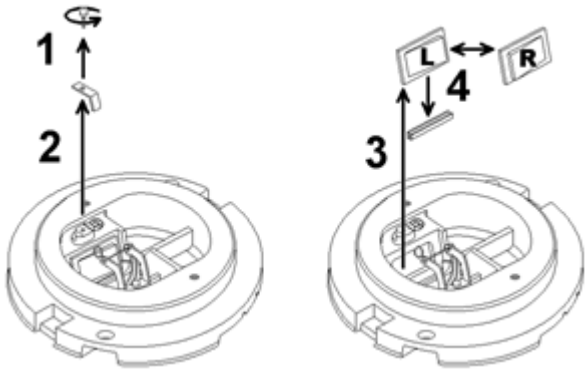
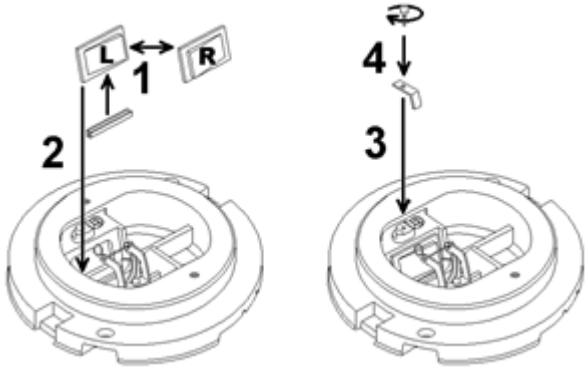
Remove	
(a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting). (b) From inside the cover, unscrew and remove the compression packer threaded nut using an angled socket wrench 22 mm. (c) From outside the cover pull the power supply cable strongly in order to remove it from the rubber of the compression packer. (d) From inside the cover, remove from the washer from the cover hole. (e) From inside the cover, remove the rubber compression packer from the cover hole.	
Replace	
(a) Position the new rubber inside the cover. (b) Position the new washer inside the cover. (c) Screw on the compression packer threaded nut loosely (with a few threads). (d) From outside the cover, pull firmly on the supply cable to mount the two ends of the cable in the rubber of the compression packer. Push the cable in the rubber until the two ends of the cable are inside the cover, approximately 4 mm from the top of the rubber. Check the connectors are securely in place by pulling the cables. (e) From inside the cover, fasten the compression packer threaded nut using an angled socket wrench of 22 mm. (f) Assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting).	

3.2.17 Replacing a Power Supply Cable on 12” Fittings

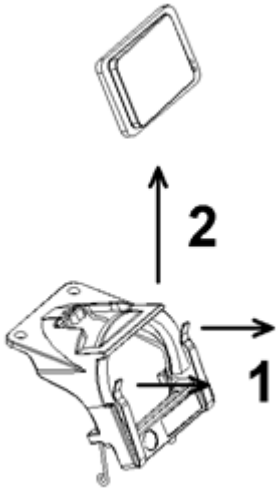
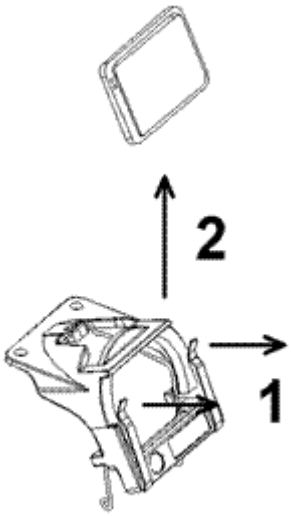
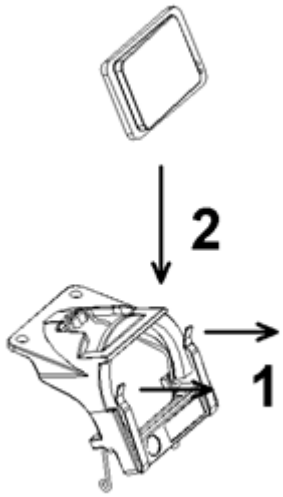
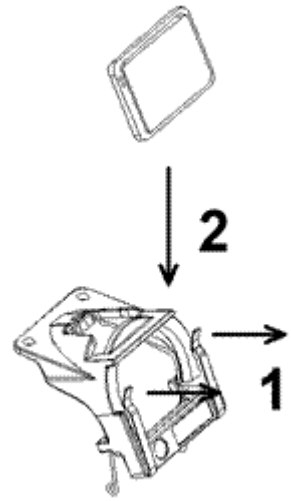
Remove	
(a) Disassemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12” Fitting). (b) Remove the supply terminals (see § 3.2.15 Replacing a Supply Terminal on 12” Fittings). (c) Loosen the compression packer nut. (d) Remove the compression packer nut using an open end spanner n°22. (e) Remove the cable and its compression packer from the fitting. (f) Clean carefully the cover hole.	
Replace	
(a) Feed the cable into the fitting. (b) Mount the compression packer in the fitting and loosely fasten the compression packer nut by only a few threads (do not tighten). (c) Connect the supply cable on the supply terminals and place the supply terminals in position see § 3.2.15 Replacing a Supply Terminal on 12” Fittings). (d) Pull the wires of the supply cable one by one in order until there is a minimal length inside the fitting. There must also be equal lengths of the two wires to the supply cable on the outside of the fitting. (e) Fasten the compression packer nut. (f) Assemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12” Fitting).	

3.2.18 Replacing a Deviator on 8" Fittings

3.2.18.1 Replacing a deviator on: INL-RT; INL-RTI

Remove	
(a) Disassemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting) and remove the lamp (see § 3.2.3.1 Replacing a lamp on: INL-RC; INL-RT; INL-HSE; INL-RTI; INL-RG). (b) Using an angled socket wrench 7 mm, unscrew the deviator/filter fixing spring screw. (c) Remove the deviator/filter fixing spring and screw. (d) Remove the deviator or the filter from the fitting body. (e) Remove the protection gasket from the deviator or the filter.	
Replace	
(a) Mount the protection gasket on the new deviator or filter. **Note:** For a deviator, carefully mount for a position which corresponds to the INL-RT fitting type, such as Toe-in Left (**L**) or Toe-in Right (**R**). The light beam is always deviated to the thick side of the deviator. *It is recommended to change the protection gasket each time a deviator or a filter is removed.* (b) Install the deviator or the filter and its protection gasket in the fitting body. (c) Place the deviator/filter fixing spring and its screw in position. (d) Using an angled socket wrench 7 mm, fasten the deviator/filter fixing spring screw. (e) Place the lamp in position (see § 3.2.3.1 Replacing a lamp on: INL-RC; INL-RT; INL-HSE; INL-RTI; INL-RG) and assemble the fitting (see § 3.2.1 Disassembling/ Assembling an 8" Fitting).	

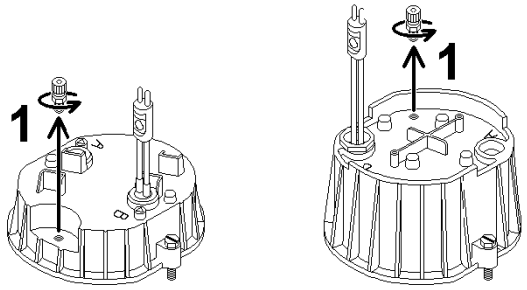
3.2.19 Replacing a Deviator on 12” Fittings (Toe In)

<table>
<tr><th colspan="3">Remove</th></tr>
<tr><td rowspan="2">(a) Disassemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12” Fitting) remove the lamp (see § 3.2.4 Replacing a Lamp on 12” Fittings) and remove the lamp holder (see § 3.2.6 Replacing a Lamp Holder on 12” Fittings).
(b) Check the deviator positioning on the lamp holder before removing it.
Note: Pay attention to the correct positioning of the deviator on the lamp holder, such as where the deviator thin and thick sides are placed on the holder. On a deviator the light beam is always deviated to the thick side of the deviator.
(c) Pull up to release the two deviator fixing springs and remove the deviator.</td><th>Right</th><th>Left</th></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><th colspan="3">Replace</th></tr>
<tr><td>(a) Pull up the two deviator fixing springs.
(b) Place the deviator in the correct position.
Note: Check the position of the deviator in another lamp holder, if necessary. On a deviator the light beam is always deviated to the thick side of the deviator.
(c) Place the lamp holder in position (see § 3.2.6 Replacing a Lamp Holder on 12” Fittings), place the lamp in position (see § 3.2.4 Replacing a Lamp on 12” Fittings) and assemble the fitting (see § 3.2.2 Disassembling/ Assembling a 12” Fitting).</td><td> 
</td><td> 
</td></tr>
</table>

3.2.20 Replacing a Water Tightness Valve on 8” and 12” Fittings

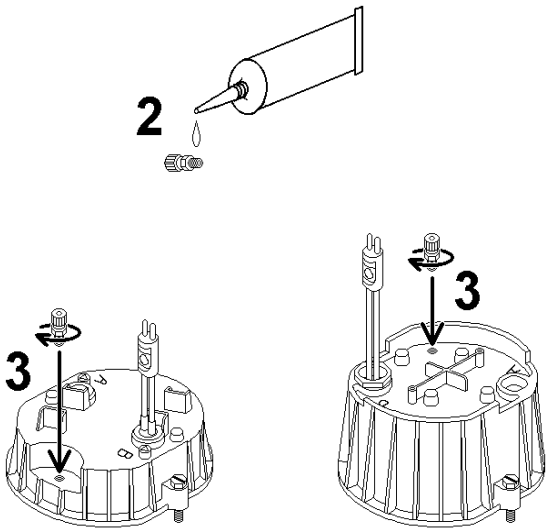
Remove

(a) Disassemble the fitting ((see § 3.2.1 Disassembling/ Assembling an 8” Fitting).
(b) Using an angled box wrench n°12 (12 mm), undo the valve on the cover.
(c) Remove the valve from the cover.



Replace

(a) Poor a few drops of sealing compound for water tightness on the threads of the new valve.
(b) Install the new valve, using an angled box wrench to fasten the new valve on the cover.
(c) Assembly the fitting (see § 3.2.1 Disassembling/ Assembling an 8” Fitting).



Water tightness check

It is recommended to verify that the fitting is water tight:
(a) Remove the water tightness test valve cap.
(b) Fill up the fitting with compressed air (test pressure = 130 kPa).
(c) Put the fitting in water, wait 3 minutes and check if air bubbles leave the fitting.

- If air bubbles leave the fitting (between cover and body or between prism and body or water tightness valve and body), the fitting is not water tight. Disassemble the fitting once again to check/clean all contact surfaces and check gaskets. Replace if necessary.
- Alternatively, deflate the fitting and replace the water tightness test valve cap. The fitting is ready to be re-installed in the field.

4. SUPPORT

4.1 SAFEGATE GROUP WEBSITE

The Safegate Group Website, www.safegate.com, offers information regarding our airport solutions, products, company, news, links, downloads, references, contacts and more.
***Note**: There is also a **Client/Partner login** area for the latest information and updates, if available.*

4.2 RE-CYCLING

4.2.1 Local Authority Re-cycling

The disposal of Safegate Group products is to be made at an applicable collection point for the recycling of electrical and electronic equipment. The correct disposal of equipment prevents any potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling. The recycling of materials helps to conserve natural resources. For more detailed information about recycling of products, contact your local authority city office.

4.2.2 Safegate Group Re-cycling

Safegate Group is fully committed to environmentally-conscious manufacturing with strict monitoring of our own processes as well as supplier components and sub-contractor operations. Safegate Group offers a re-cycling program for our products to all customers worldwide, whether or not the products were sold within the EU.

Safegate Group products and/or specific electrical and electronic component parts which are fully removed/separated from any customer equipment and returned will be accepted for our recycling program.

All items returned must be clearly labelled as follows:

- **For ROHS/WEEE Re-cycling**
- Sender contact information (Name, Business Address, Phone number).
- Main Unit Serial Number.

Safegate Group will continue to monitor and update according for any future requirements for EU directives as and when EU member states implement new regulations and or amendments. It is our aim to maintain our compliance plan and assist our customers.
***Note**: For more information, see www.safegate.com, or contact Safegate Group Support via email at support@safegate.com or phone +46 40 699 1740.*

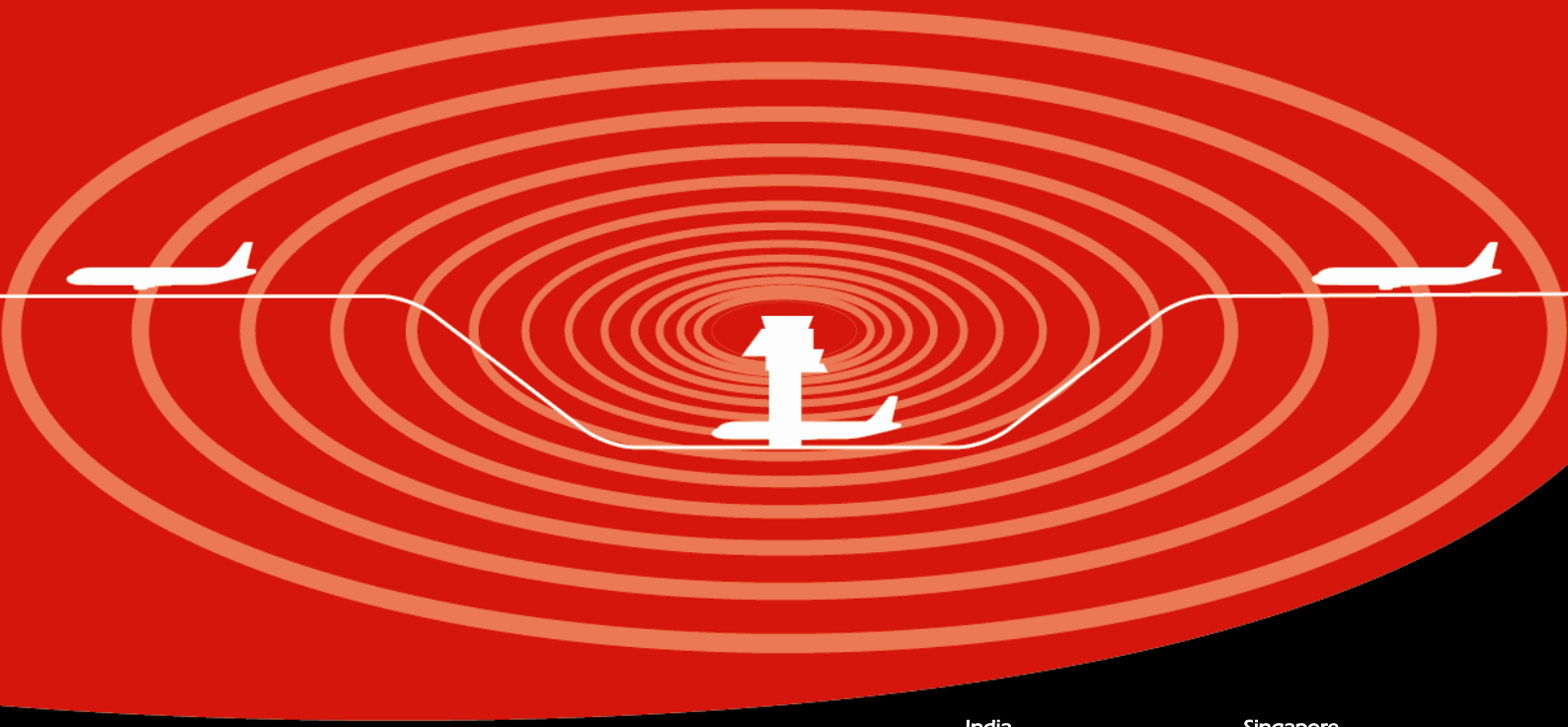
4.3 SPARE PARTS

Spare parts are available for Airfield Lighting. For more information see the Spare Parts List document.

***Note**: Contact Safegate Group for assistance with ordering spare parts.*

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.
To a larger extent than today's systems, A-SMGCS will rely on automated processes to give both pilots and traffic controllers exact information about positions and directions. Safegate Group delivers complete A-SMGCS solutions already, as well as all vital parts relating to it.
Safegate Group can check your airport into the future – today!



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SAFEGATE GROUP

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