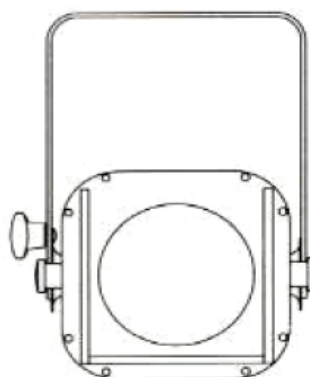


USER MANUAL

STR 650-1000 R+PF



Index

1. General description.....	3
1.1.Characteristics	3
1.2.Technical data	4
1.3.Photometric data.....	5
1.4.Dimensions.....	6
2. Accessories	7
3. Installation	8
3.1.Power supply connection.....	9
3.2.Colour filter installation.....	9
3.3.Gobo holder and iris installation.....	9
4. Operation.....	11
4.1.Aperture angle adjustment.....	11
4.2.Zoom	11
5. Maintenance	12
5.1.Regular cleaning.....	12
5.2.Lamp replacement	12
5.3.Lens replacement	13
6. Most common problems.....	14
Statement of compliance	15

1. General description

THEATRE lighting family of Strong is composed of a set of projectors for 650W or 1000W lamps. For this reason they are appropriate in facilities where high-power lighting is required, for instance: theatres, showrooms, etc.

STR 650-1000 R+PF is a profile projector.

Moreover, this range includes some accessories which increase the functions of the projectors.

1.1. Characteristics

- High-performance lamp by aspheric lens.
- Zoom plus plano-convex lens for aperture and focus selection.
- Aperture and focus adjustment by heat-resistant side knobs.
- Front cassette for filter holder and protection grille.
- Direct access to accessories (iris and gobo holder).
- Made of aluminium profiles and iron plate. Painted with black oven-dried epoxy.
- Four cold-laminated steel blades (profile) are included with the projector
- Lamp not included.
- STR 650-1000 R+PF reference is 21000010.

1.2. Technical data

<i>Power supply</i>	Single-phase 230V 50Hz
<i>Lamps</i>	T-12 650W // T-11 1000W
<i>Lamp holder</i>	Gx9,5
<i>Aperture angle</i>	Minimum: 14° // Maximum: 41°
<i>Lenses</i>	Plane +3,5 Ø150 mm Plane +6,5 Ø100 mm Plane +4 Ø100 mm Aspheric Ø60 mm
<i>Aluminium reflector</i>	99,9 quality, Ø100 mm
<i>Power supply cable</i>	3x1,5mm ² 1metro
<i>Maximum projector temperature</i>	160 °C
<i>Minimum distance to objects</i>	2 m (at the light beam)
<i>Maximum room temperature</i>	40 °C
<i>Weight</i>	10 Kg.
<i>Dimensions</i>	565x220x220 mm

1.3. Photometric data

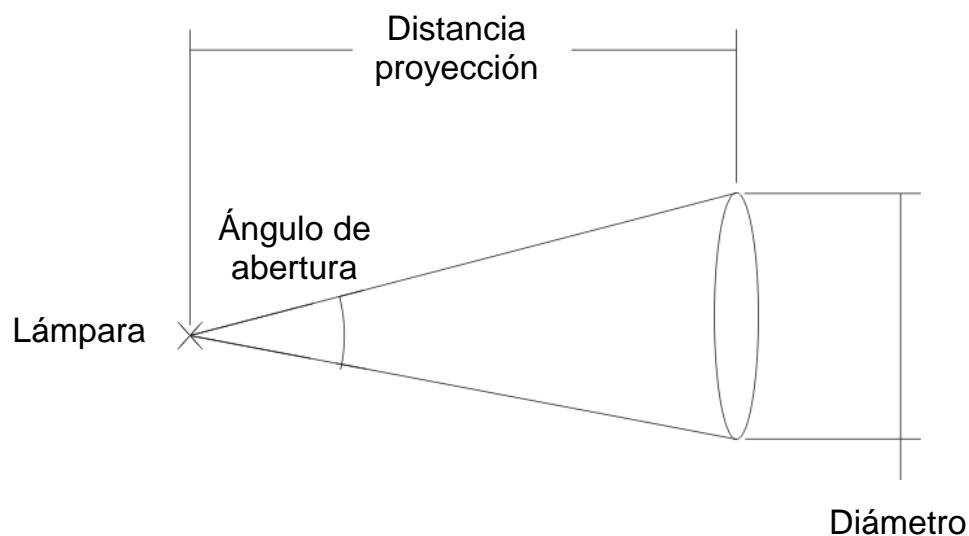


Fig. 1: Light beam

Projection distance [m]	Lamp [W]	Aperture angle [°]	Diameter [cm]	Luminance [lx]	
				Centre	Round
3	650	10 (minimum)	73	3711	2148
		63 (maximum)	257	570	116
	1000	10 (minimum)	73	5663	2774
		63 (maximum)	257	841	137
5	650	10 (minimum)	203	760	173
		63 (maximum)	455	208	35
	1000	10 (minimum)	203	1107	311
		63 (maximum)	455	340	51

1.4. Dimensions

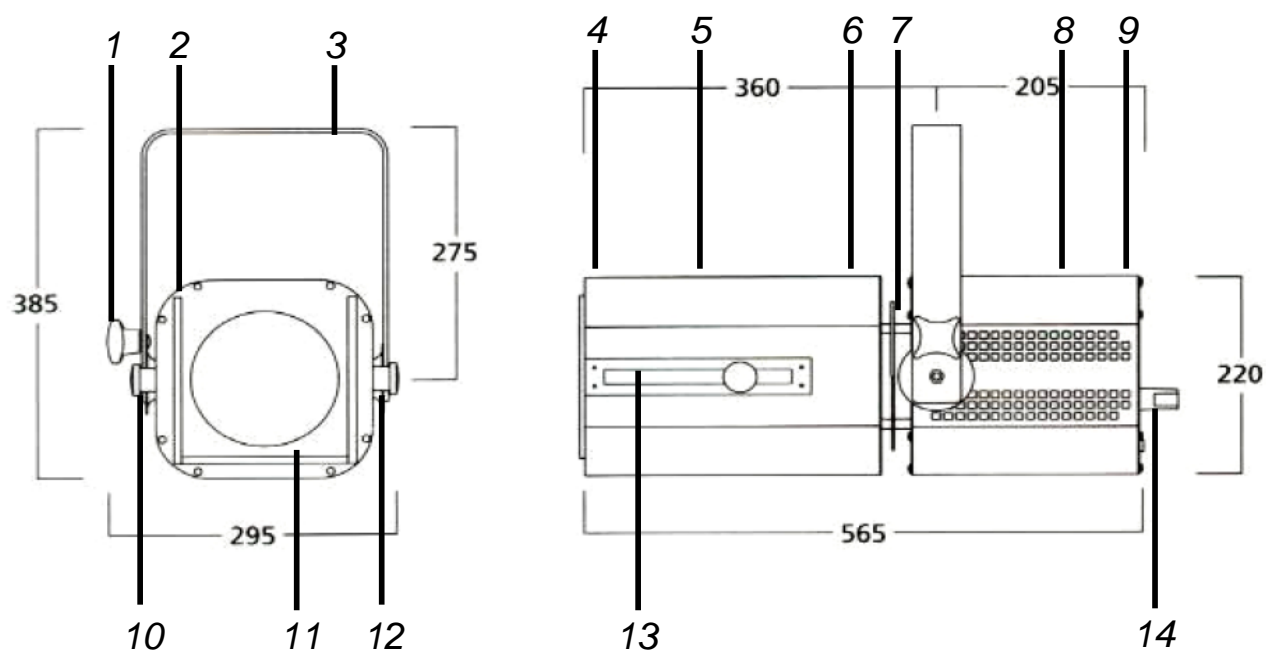


Fig. 2

- | | | |
|---------------------------|---------------------------|--------------------------|
| 1. Fastening knob | 6. Secondary fixing ring | 11. Filter holder groove |
| 2. Filter holder fastener | 7. Iris/portagobos groove | 12. Zoom knob |
| 3. Handle | 8. Rear lid | 13. Knob groove |
| 4. Front lid screw | 9. Rear lid fastener | 14. Focal adjustment nut |
| 5. Front lid | 10. Focusing knob | |

2. Accessories

The accessory range consists of the following products:

- STR 650-1000 R Iris:

Iris

Dimensions: 222x125 mm.

Weight: 0,3 Kg.

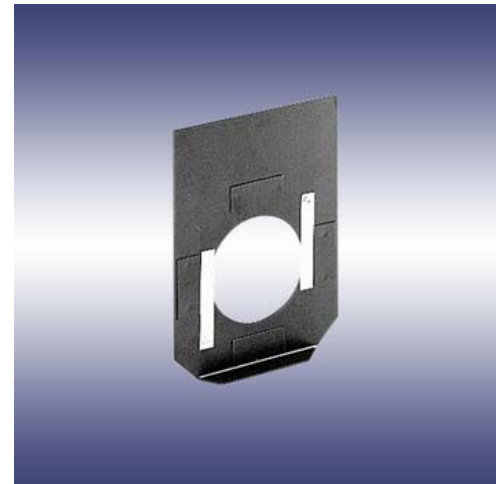


- STR 650-1000 R PG:

Gobo holder

Dimensions: 225x125 mm.

Weight: 0,25 Kg.

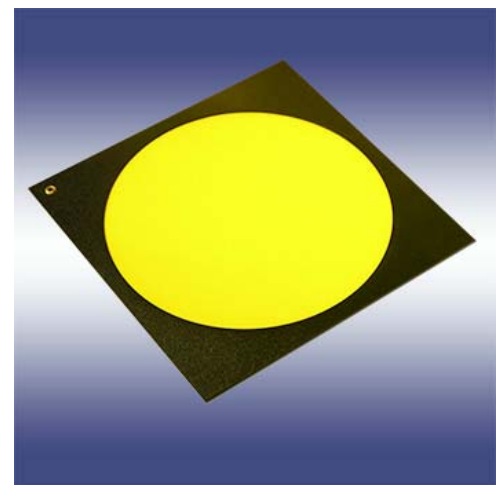


- STR 650-1000 PF:

Filter holder

Dimensions: 180x185 mm.

Weight: 0,15 Kg.



3. Installation

ATTENTION: Before touching the spotlight surface, be sure that it has not been working recently due to the high temperatures of the projector while working because you risk burning yourself. For the same reason, fix the projector away from inflammable surfaces.

First of all, you must be sure that the distance between the projector and the closest object in the light beam should be greater than 2 meters. Otherwise, the object could reach high temperatures which could damage it. It is also recommended placing the projector at 0,2 meters of any object around it. As well, do not put the unit closed to objects which could emit heat such as heaters and radiators.

The unit is not prepared for working in wet environments (relative humidity greater than 90%). So it can not work under raining conditions.

It must be positioned for not interfering with its proper ventilation.

This projector is equipped with a handle (see 3 at figure 2) to allow to fast it at tube structures and surfaces.

The projector handle can be turned and braked by a knob that allows the proper orientation of the device.

The spotlight must be fixed at a point completely stable and capable of supporting the weight of the equipment (6 kg) via the handle, attaching it to this point with the anchor holes. Always use M12 steel screws to set the spotlight.

Once the projector is hanging, vertical inclination can be adjusted by the lateral fastening knob (see 1 in figure 2). Unscrew it to orientate the projector and screw it when you consider that the light beam is correct.

Additionally, the unit includes a ring which is used as secondary clamp (see 6 in figure 2). This extra fixing system is installed by passing a steel safety cable through the ring and around a bar, joining both ends of the cable.

3.1. Power supply connection

During handling and installation of the unit disconnect it from the current.

The spotlight is power supplied when connecting the supply hose to a 230-volt 50-hertz single phase mains with ground. Before connecting the spotlight you must be sure that the voltage supplied is correct.

3.2. Colour filter installation

WARNING: Use colour filters suitable for the temperatures that can reach this lighting projector.

This projector incorporates a holder for colour filters (see 11 in figure 2).

To install a filter, move the filter holder fastener (see 2 in figure 2) by pushing it laterally and insert the colour filter in front of the safety grille so that it is placed between the inner grooves.

Finally, proceed closing the filter holder lid in the same way as for the opening.

3.3. Gobo holder and iris installation

Gobo holder and/or iris can be installed easily in this spotlight (see the *Accessories* section).

Firstly, insert the desired gobo into the holder.

Either gobo holder or iris installation is performed in the same way. To proceed with it insert the accessory into the groove for this purpose (see 7 in figure 2). It is supported in the proper position.

Turn on the projector and check the effect correctness, which can be adjusted by zooming and adjusting the light beam (for details see *Operation* section).

4. Operation

The projector can be positioned manually varying the inclination. To do this, loosen the fastening knob (see 1 in figure 2) and position it by holding the back plastic handle (see 14 in figure 2).

Be careful not to touch the metal parts because the focus can reach high temperatures.

To fix it again, turn the fastening knob clockwise until fixed it.

4.1. Aperture angle adjustment

The beam angle, and consequently the diameter projected by the light beam, can be changed manually through the focusing knob placed on one side of the projector (see 10 in figure 2).

First, turn left to loosen it. Then slide it along the guide (marked with numbers from 1 to 12 for more precision) forward or backward until the beam of light is adequate. Then, turn the knob clockwise to lock into this position.

4.2. Zoom

The light beam can be changed manually through the zoom knob placed on one side of the projector (see 12 in figure 2) which is opposite to the focusing knob.

First, turn left to loosen it. Then slide it along the guide (marked with numbers from 1 to 5 for more precision) forward or backward until the beam of light is adequate. Then, turn the knob clockwise to lock into this position.

5. Maintenance

WARNING: Before touching the projector surface make sure that it has not been on recently because it can operate at high temperatures with a risk of burns.

5.1. Regular cleaning

To prevent the growth of dust and dirt which may impair the proper operation of the equipment, it should be cleaned regularly.

For cleaning it, use a soft, slightly and damp cloth (if the equipment is very dirty, apply a little liquid detergent to the cloth).

WARNING: Do not use solvents or products containing alcohol. Make sure that no liquid get inside the equipment.

The lens cleaning must be made with a soft cloth. Water may be used but dry it with a dry cloth to remove all traces of water and dust.

5.2. Lamp replacement

Before proceeding to change the lamp, make sure that the spotlight has not been running recently because it could be hot; if so let it cool for a few minutes.

To begin with the lamp replacement, turn the rear lid fastener (see 9 in figure 2) 180° and pull it so that the rear cover (see 8 in figure 2) will slide allowing you to see inside the projector where is the lamp.

Carefully remove the lamp from the socket, holding it by the plastic part.

WARNING: Do not touch the glass of the lamp because it could affect the service life of the product. If during the installation you touch the lamp glass, wipe with a cloth moistened with alcohol.

When you remove the lamp replace with a new one of the same characteristics (Gx9.5 lamp holder).

Then, reinsert, first the pins, the lamp into the socket by pushing.

Make sure the lamp is properly held. Finally, slide the front cover in order to close it and rotate the rear lid fastener 180°, while pushing it toward the rear surface of the projector, until you hear a "click" which means that is fixed.

Connect the spotlight and check that the lamp is functioning properly.

5.3. Lens replacement

Firstly, unscrew the front lid screw (see 4 in figure 2) and remove the front cover of the projector (see 5 in Figure 2).

Inside there are two lenses: the zoom one (in front of the lamp) and the beam adjustment lens (furthest from the lamp). Adjust the position of the latter one for making it accessible (see *Aperture angle adjustment* section).

Unscrew the screws which hold the lens and the metal bracket to the movable part of the projector. Then the bracket and the lens can be removed. Replace it and insert the new lens and the support at its original position. Screw it to the mobile structure of the projector and make sure it is properly held.

Finally close the upper cover (see 5 in figure 2) and screw it (see 4 in figure 2).

6. Most common problems

Problem	Usual Cause	Solution
Unit does not start	No current reaching the unit	Check mains connections
	Lamp does not work	Replace the lamp following the instructions of <i>Maintenance</i>

If the problem persists despite these measures, please contact to FRESNEL's Technical Service Department.

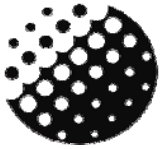
Tel: (+34) 93 274 54 28

Tel: (+34) 93 360 02 30

Fax: (+34) 93 274 47 47



If you want to do without this product, do not mix it with the ordinary waste. There are specific methods and systems for dividing electronic and electromagnetic used products that are described in 2002/96/EC directive, which is in force in the European Community countries.



FRESNEL S.A.

STATEMENT OF COMPLIANCE

DC-01

DATE: 01/01/12

We declare that the product:

Mark:

STRONG

Models:

STR 650-1000 R+PF

Year of construction:

2012

Conforms to the following EC directives:

2006/95/EC: In relation to the safety requirements for material intended for use within specific voltage limits.

2004/108/EC: In relation to the electromagnetic compatibility of equipment, systems and installations.

Sole administrator

Ángel Torrecillas Redón

Barcelona, January 1st of 2012

Fresnel S.A.

C/ Potosí 40
08030 Barcelona
Spain
Tel: +34 93 360 02 30
Fax: +34 93 274 47 47
strong@strong.es
<http://www.strong.es>