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DELTA Test Report



TEST Reg. no. 19

IP65 Tightness test of G-Spot Moving Head Profile

Performed for SGM A/S

DANAK-19/14122

Project no.: T208225

Page 1 of 20

Including 2 annexes

19 May 2014

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Title IP65 Tightness test of G-Spot Moving Head Profile

Test object 1 pc. G-Spot Moving Head Profile

Report no. DANAK-19/14122

Project no. T208225

Test period 14 - 15 May 2014

Client SGM A/S
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Manufacturer SGM A/S

Specifications IEC60529:2001 Edition 2.1 "Degrees of protection provided by enclosures (IP Code)"

Results See Chapter 1, Summary

Test personnel Charlotte Jervelund

Date 19 May 2014

Responsible 

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1. Summary

1.1 Introduction

Tightness tests have been performed on a G-Spot Moving Head Profile in order to evaluate the degree of protection against dust and water provided by the enclosure of the tested objects.

The G-Spot Moving Head Profile was tested to ingress of dust according to IEC 60529 Edition 2.1, IP6X. Thus, the test was performed as for Category 1: Enclosures where the normal working cycle of the equipment causes reductions in air pressure within the enclosure below that of the surrounding air, for example, due to thermal cycling effects.

Further, the G-Spot Moving Head Profile was tested to ingress of water according to IEC 60529 Edition 2.1, IPX5. The G-Spot Moving Head Profile was tested by spraying the enclosure from all practicable horizontal directions with a stream of water and with a 6.3 mm nozzle. The distance was between 2.5 and 3.0 m and the test object was exposed for 60 s at each of the front and the back and 30 s at each side. The total duration was 3 min.

The test object was unpowered during the dust exposure whereas it was powered and rotating during the water exposure.

The test results relate to the tested object only.

1.2 Conclusion

Neither dust nor water was observed inside the G-Spot Moving Head Profile during the visual inspection performed after the IP6X and IPX5 exposures. Thus the degree of protection against dust and water corresponds to IP65 (as described in IEC 60529:2001 Edition 2.1) for the G-Spot Moving Head Profile.

2. Test object

As received from the client 14 May 2014.

Name of test object	G-Spot Moving Head Profile
Model / type	-
Serial no.	19A051410051
Manufacturer	SGM A/S
Supply voltage	None
Comments	None

2.1 Visual inspection

Immediate visual inspections were carried out by DELTA after the tests, to check for ingress of dust and water.



3. Tests and results

3.1 Tightness test, dust

Test specification

IEC 60529. Edition 2.1, IP6X

Severity

IP6X (dust-tight):

Category	:	1 (air pressure reduction)
Test means	:	Temperature stabilised surroundings
Test powder	:	Talcum
Air pressure	:	2 kPa (20 mbar) below normal air pressure
Duration	:	8 hours.

After the exposure, the test object is wiped off on all external surfaces. It is then carefully opened and visually inspected for ingress of dust.

The test object was unpowered during the exposure.

Acceptance conditions for first characteristic number 6

The protection is satisfactory if no deposit of dust is observable inside the enclosure at the end of the test.

Results

The test was performed as specified, with 8 hours of exposure.

No dust was observed inside the G-Spot Moving Head Profile during the visual inspection performed after the IP6X exposure. Thus the degree of protection against dust corresponds to IP6X (as described in IEC 60529 Edition 2.1, IP6X) for the G-Spot Moving Head Profile.

See Photos nos. 1 to 10 in Annex 1.



3.2 Tightness test, water spray

Test specification

IEC 60529. Edition 2.1, IPX5

Severity

Water flow	:	12.5 l/min
Nozzle diameter	:	6.3 mm
Distance	:	2.5 – 3.0 m
Duration	:	1 min./m ² , 3 min. in total

After the exposure, the test object is wiped off on all external surfaces. It is then carefully opened and visually inspected for ingress of water.

The test object was powered and rotating during the exposure.

Acceptance conditions for second characteristic number 5

In general, if any water has entered, it shall not be sufficient to interfere with the correct operation of the equipment or impair safety.

Test result

The test was performed as specified.

No water was observed inside the G-Spot Moving Head Profile during the visual inspection performed after the IPX5 exposure. Thus the degree of protection against water corresponds to IPX5 (as described in IEC 60529 Edition 2.1, IPX5) for the G-Spot Moving Head Profile.

See Photos nos. 11 to 20 in Annex 1.



Annex 1

Photos





Photo 1. IP6X Test G-Spot Moving Head Profile before exposure.



Photo 2. IP6X The G-Spot Moving Head Profile after exposure.



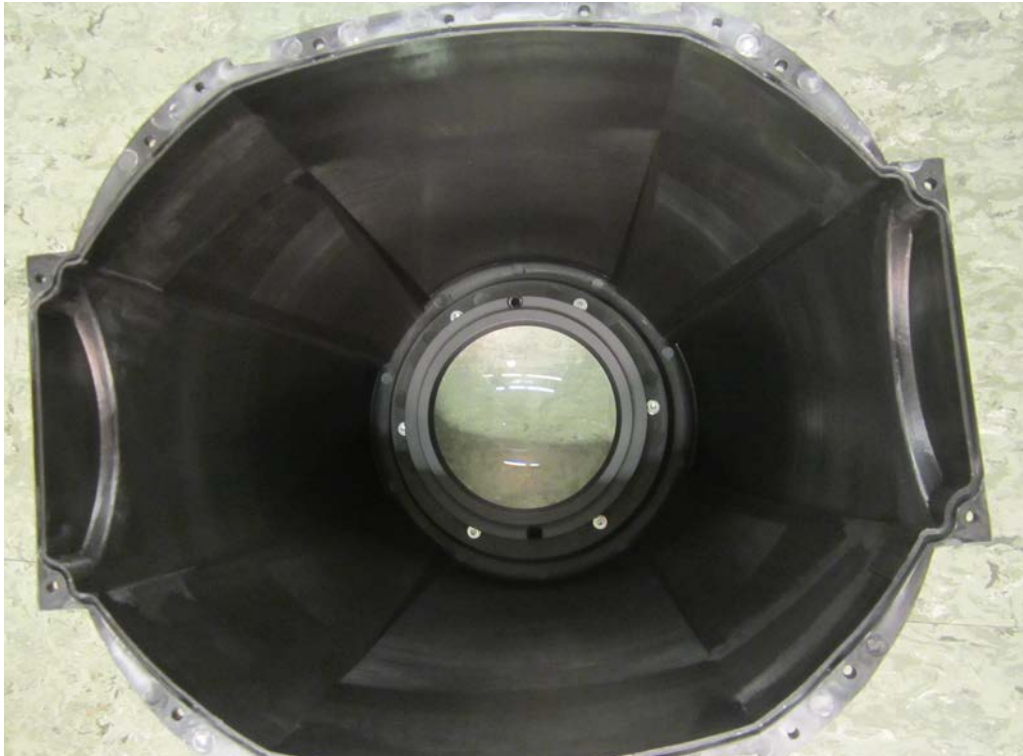


Photo 3. IP6X No dust observed inside G-Spot Moving Head Profile.

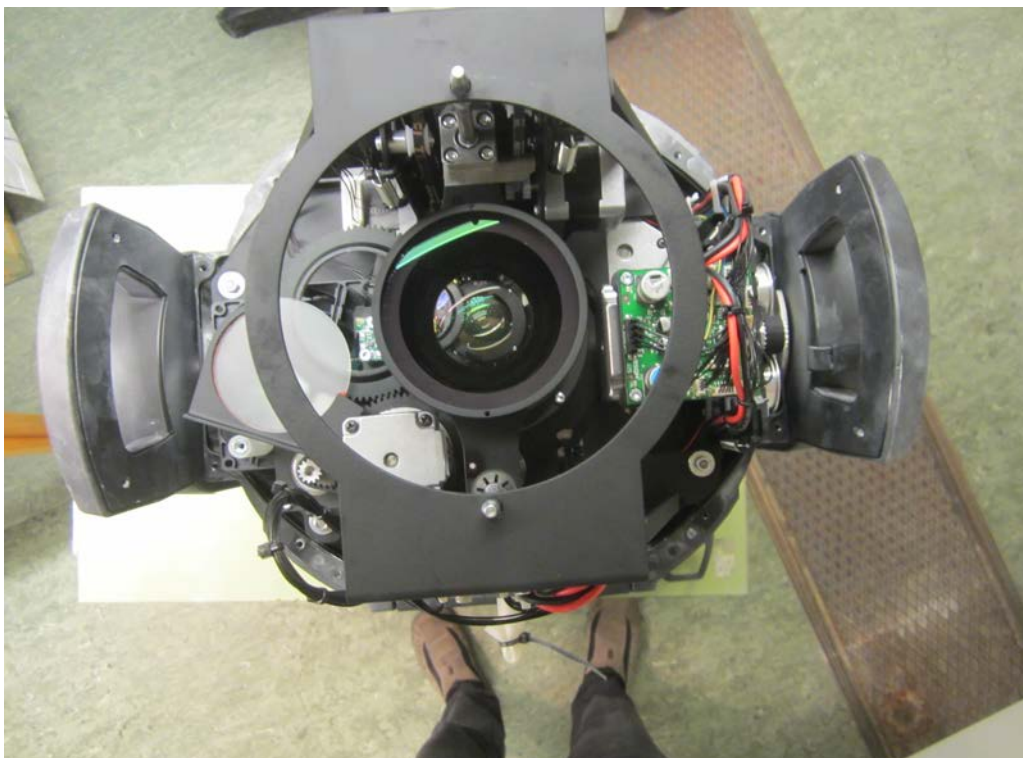


Photo 4. IP6X No dust observed inside the G-Spot Moving Head Profile.





Photo 5. IP6X No dust observed inside the G-Spot Moving Head Profile.



Photo 6. IP6X No dust observed inside the G-Spot Moving Head Profile.



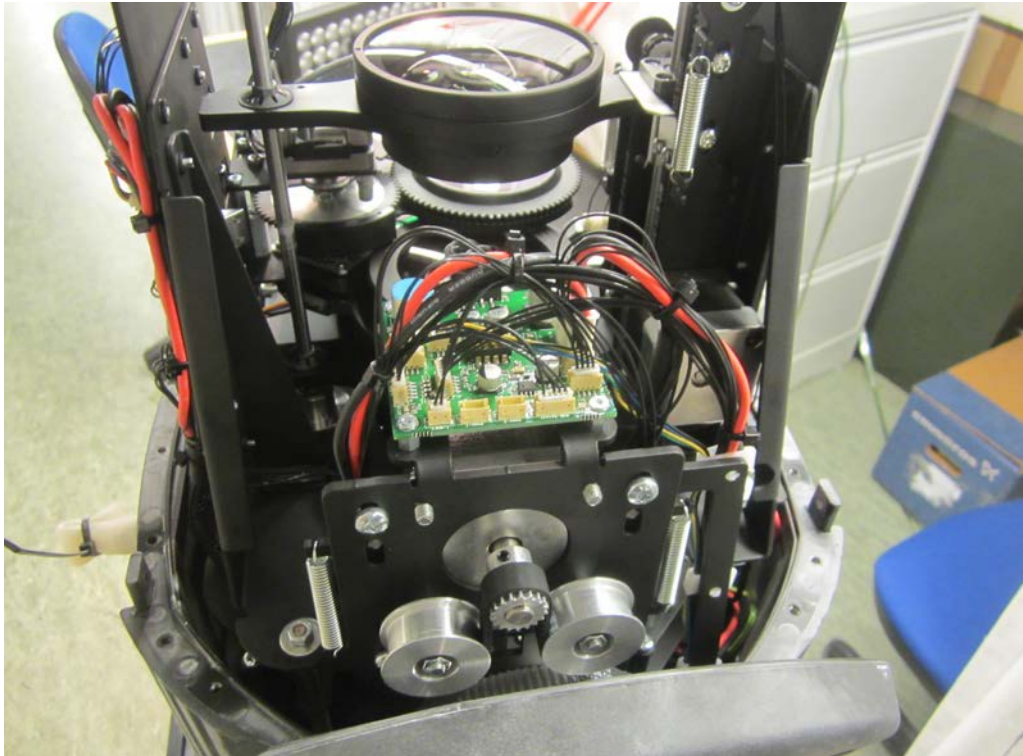


Photo 7. IP6X No dust observed inside the G-Spot Moving Head Profile.

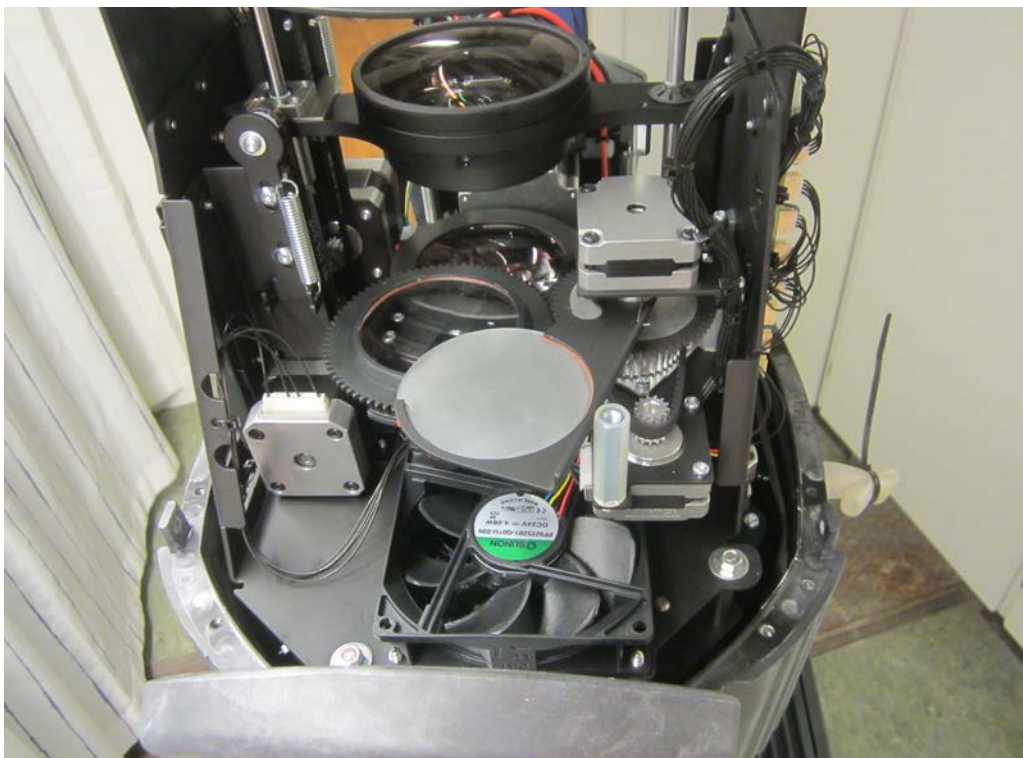


Photo 8. IP6X No dust observed inside the G-Spot Moving Head Profile.





Photo 9. IP6X No dust observed inside the G-Spot Moving Head Profile.



Photo 10. IP6X No dust observed inside the G-Spot Moving Head Profile.





Photo 11. IPX5 Before exposure.



Photo 12. IPX5 During exposure.





Photo 13. IPX5 During exposure.



Photo 14. IPX5 During exposure.





Photo 15. IPX5 During exposure.

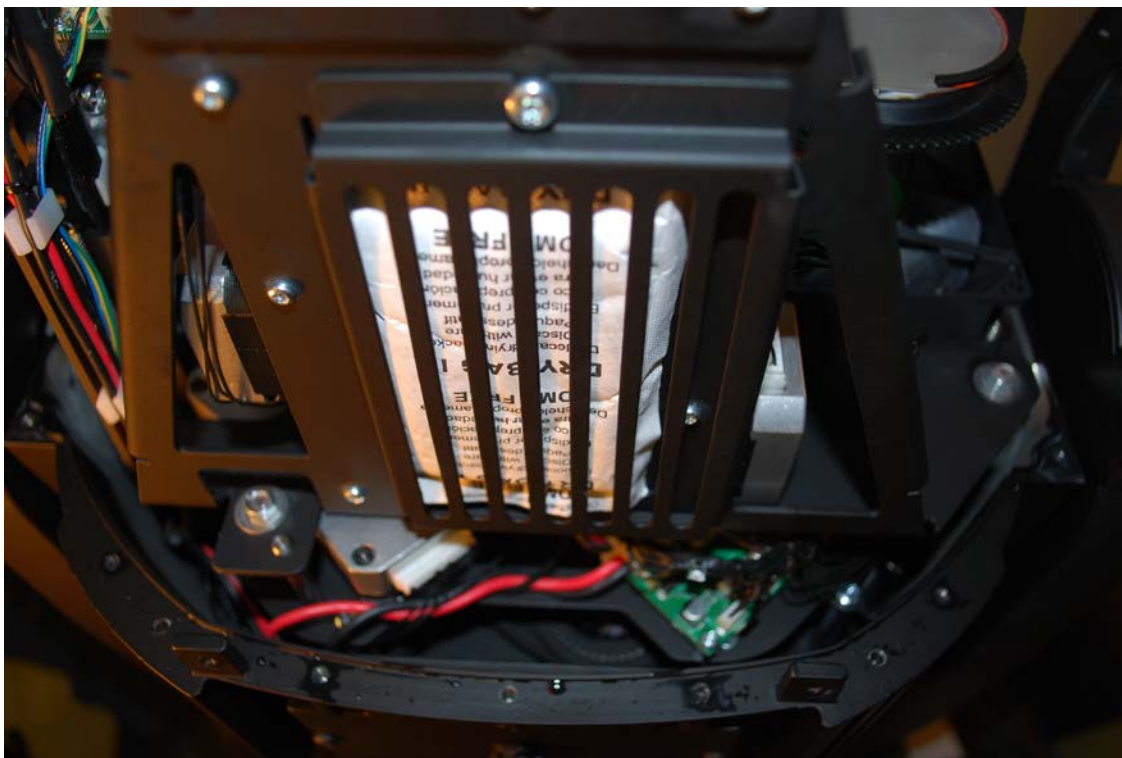


Photo 16. IPX5 No water observed inside the G-Spot Moving Head Profile.



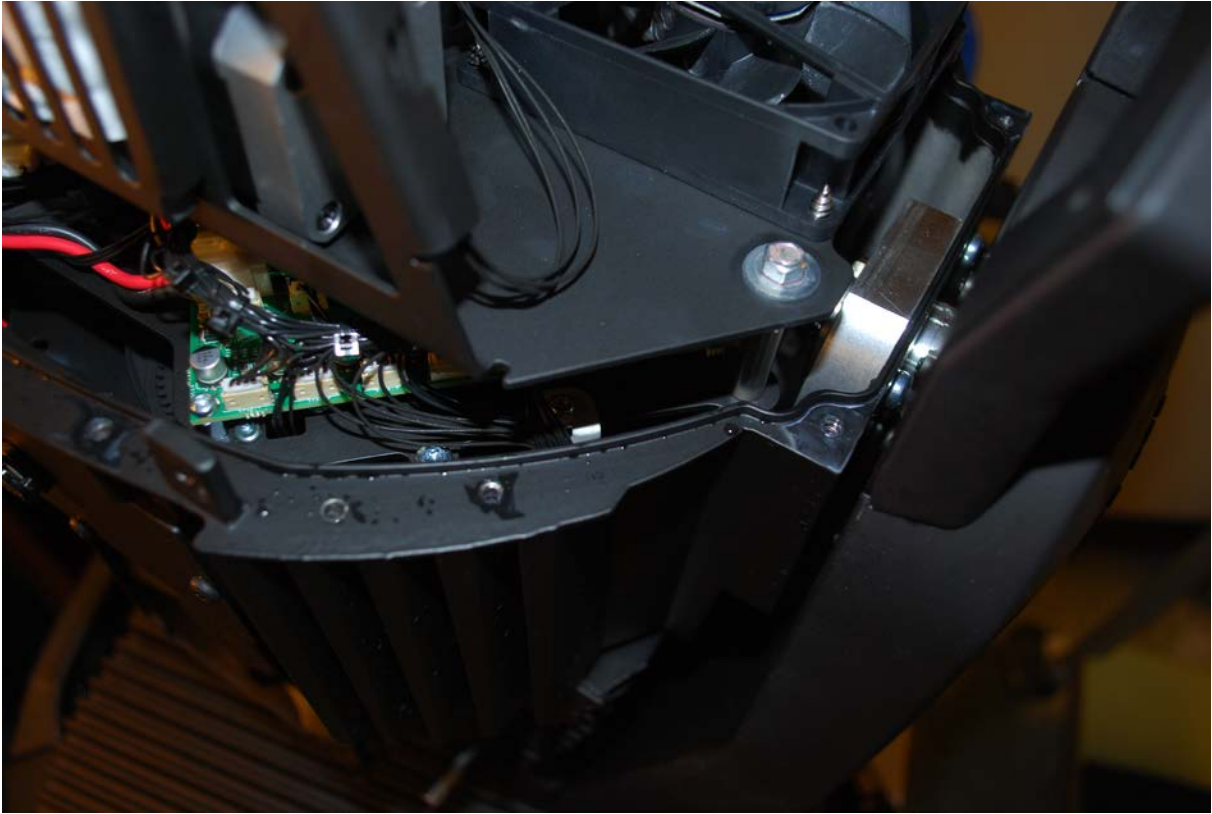


Photo 17. IPX5 No water observed inside the G-Spot Moving Head Profile.

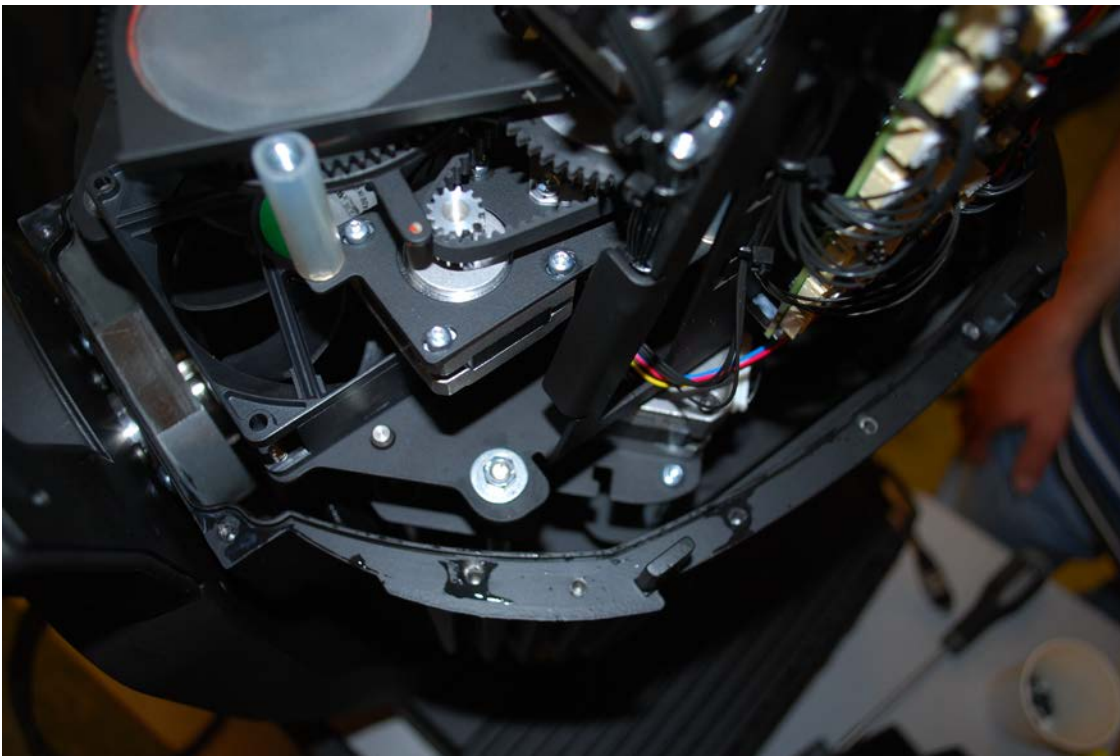


Photo 18. IPX5 No water observed inside the G-Spot Moving Head Profile.





Photo 19. IPX5 No water observed inside the G-Spot Moving Head Profile.



Photo 20. IPX5 No water observed inside the G-Spot Moving Head Profile.



Annex 2

List of instruments



List of instruments

NO.	DESCRIPTION	MANUFACTURER
EVFGT-34	Water test facility	DELTA
EVFGT-49	IP dust chamber	WEISS TECHNIK

