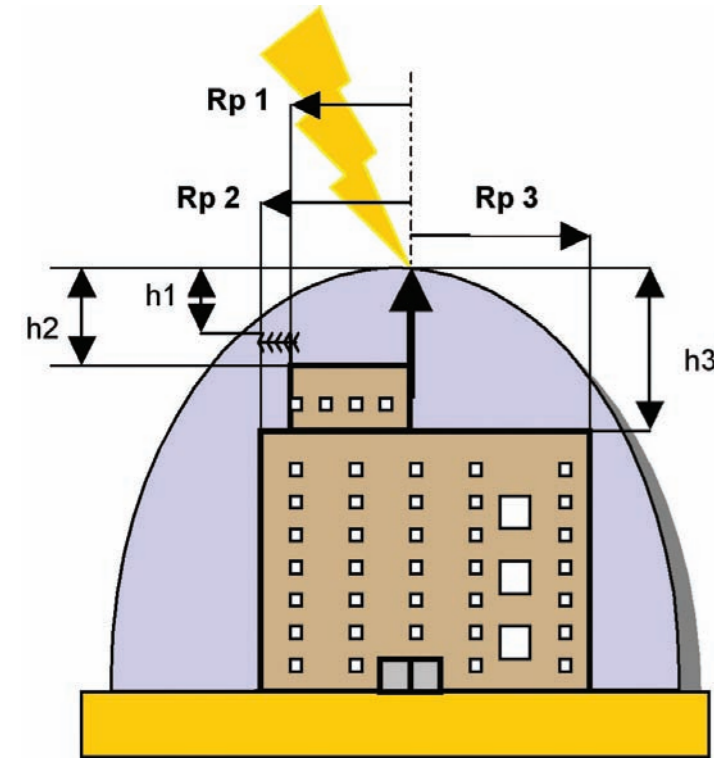


Radius of Protection



- R_p** : radius of protection in an horizontal plane situated at a vertical distance h of the rod.
- R_p** = $\sqrt{[h(2D-h)+\Delta L(2D+\Delta L)]}$ for h ≥ 5m.
For h < 5m, use the table hereunder.
- h** : height of the top of the point of SkyLance above the area to protect.
- D** : striking distance as defined in NFC 17-102, 20m for Level of Protection 1 (LP1), 45m for Level of Protection 2 (LP2), 60m for Level of Protection 3 (LP3).
- ΔL** : $10^6 \times \Delta T$, where 10^6 represents the velocity of lightning.
- ΔT** : initiation advance measured during H.V. laboratory tests following the Appendix C of the French standard NFC 17-102.

Radius of Protection

They are calculated with the formula of R_p given above. The recommended radius of protection, following the French Standard NFC 17-102, are given in the table hereunder:

h (m)	Recommended Radius of Protection of SKYLANCE (m)								
	LP1			LP2			LP3		
	SL25	SL45	SL65	SL25	SL45	SL65	SL25	SL45	SL65
2	17	25	38	23	32	46	26	36	50
3	26	38	53	34	48	65	38	57	72
4	34	51	68	46	65	83	48	72	92
5	42	63	83	57	80	102	64	89	112
6	42	63	83	58	81	102	65	90	112
10	43	63	84	59	82	103	67	91	113
15	43	64	84	60	82	104	68	92	114
20	44	64	84	63	84	105	72	94	116
45	45	65	85	65	86	107	75	97	118
60	45	65	85	70	90	110	83	103	124

h (in meters) : height of the top of the point of SkyLance above the area to protect
LP: Level of Protection following Appendix B of the NFC 17-102.



Maintenance through test on site

It is strongly recommended to inspect regularly the lightning protection system and installation. **SERELI** has developed a test kit enabling the installers to test **SKYLANCE** on site, even from several meters of distance.

The special test kit includes :

- a portable H.V. test instrument to check the operational status of the **SKYLANCE**,
- an extendable insulated pole.

Some SKYLANCE References



Scientific Atlanta, France



Charles De Gaulle airport Hyatt Hotel in Paris

Distributor

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SERELI
SKYLANCE® is Trademark of SERELI

SKYLANCE®

HIGH VOLTAGE PULSE LIGHTNING CONDUCTOR

CONFORMS TO
NFC 17-102

EFFICIENCY
TESTS
CERTIFIED
BY THE
LCIE

© SERELI December 2004 - Picture of lightning - Cover and inside - by Alex HERMANT "Orage à Les Mées", France, octobre 2000 - Design - Laurent PHILIPPE

SERELI

SERELI 20 years of experience in Design of E.S.E Lightning Conductors

Since 1985 **SERELI** has manufactured more than 40,000 units E.S.E lightning conductors installed in more than 50 countries around the world.

SERELI has more than 20 years experience in the development and manufacture of lightning protection equipment and markets a comprehensive range of products, including :

- E.S.E lightning conductors,
- surge protective devices for data lines,
- high frequency earthing system measuring instruments,
- lightning counters and mast spark gaps.

SKYLANCE is the latest and most advanced E.S.E. lightning conductor developed through **SERELI's** wide and extensive experience in this field.

SERELI's experience extends to the field of Radio and High Frequency activity and works closely with major European cable and satellite providers.



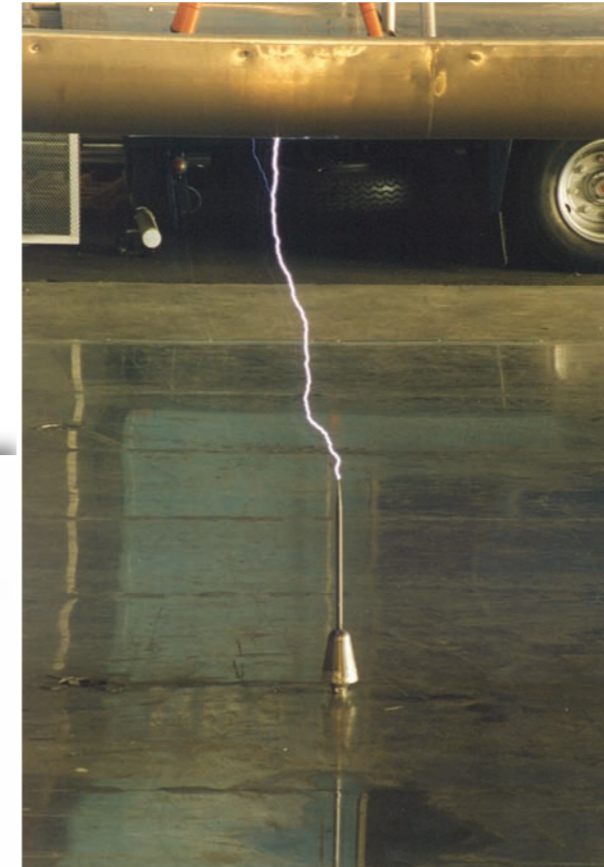
The manufacturing test consists of the detailed verification of **SKYLANCE's** signal using a high voltage generator, an HV probe, the result is displayed on an oscilloscope. This control is essential because the quality of the signal influences the efficiency of the lightning conductor.



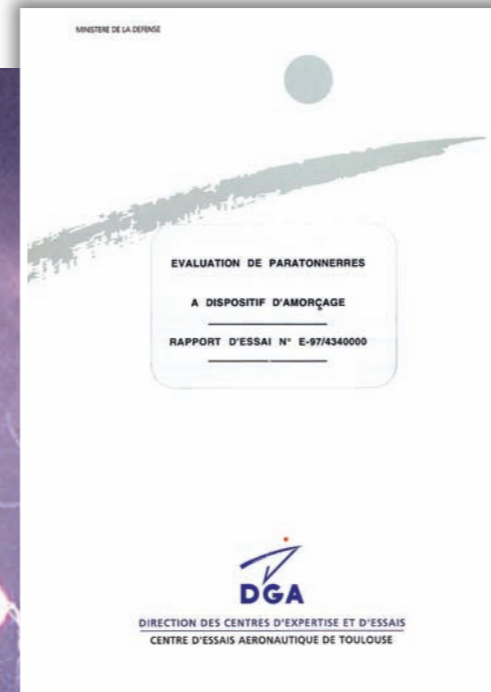
SKYLANCE the must of E.S.E Lightning Conductors

SKYLANCE, incorporates an improved Early Streamer Emission system that enhances its efficiency to capture lightning as compared with other lightning conductors.

The design of **SKYLANCE** has been optimised during numerous V.H.V. laboratory tests, and its performance has been measured in one of the largest French V.H.V. laboratories, the Centre d'Essais Aéronautique de Toulouse – CEAT – belonging to the French Ministry of Defence.



Efficiency tests to French Standard NFC 17-102 performed in the CEAT using a 5MV Marx generator, and a 400/2500 μ s waveform.



NF C 17-102 Testing Procedure witnessed by LCIE

SKYLANCE time gain and performance have been tested and validated in the high voltage laboratory of the Centre de Genie Electrique of Lyon, France.

This test was witnessed and the results certified by The LCIE, the Laboratoire Central des Industries Electriques, to follow Appendix C of the French standard NFC 17-102.

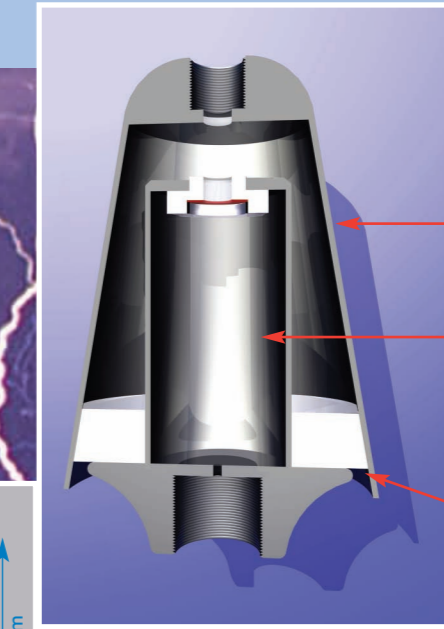
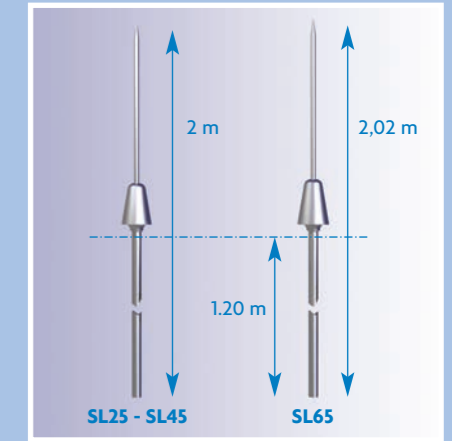


Technical Specifications of the SKYLANCE range

SKYLANCE is constructed using stainless steel 304L. This enables **SKYLANCE** to be weatherproof, anti-corrosive and ensures maximum mechanical strength.

The points are 620mm long for SL25, SL45 and SL65. Security screws are used to improve the blocking of the point and the rod.

SKYLANCE is designed to withstand the most severe thunderstorm conditions and high intensity lightning strikes.



SKYLANCE is the latest and most advanced in the series of lightning conductors manufactured by **SERELI**. The **SKYLANCE** boasts new improved performance through the integration of **SERELI's** extensive experience in lightning conductor design.

- ☒ the H.V. block participates, with the point, in the process of lightning capture enhancement,
- ☒ the stainless-steel H.V. block integrates internal security features enabling **SKYLANCE** to withstand important mechanical constraints and very high intensity lightning currents,
- ☒ the **SKYLANCE** sparking airgap is protected from rain and pollutant.

Stainless-steel connectors are used to fix the down conductor to the rod of the **SKYLANCE**.

Several types of conductors can be used with this connector :

- > 25 x 3 mm tape
- > 30 x 2 mm tape
- > 10 mm round conductor

Range of SKYLANCE

Description	ΔT (μ s)	Rod (in m)	Point (in m)	H.V. block (in m)	Total length (in m)	Total Weight (in kg)
SL25, SKYLANCE complete with point & rod	30	1.20	0.62	0,18	2.00	7
SL45, SKYLANCE complete with point & rod	50	1.20	0.62	0,18	2.00	7
SL65, SKYLANCE complete with point & rod	70	1.20	0.62	0,20	2.02	7,5

The ΔT given in this table are the values measured in the V.H.V. laboratory and witnessed by LCIE, less 10 to 20 μ s, as a precaution.

Know-how of a Specialist & Manufacturing Process

Longer life span

The enclosed sparking air-gap of the lightning conductor ensures that it will not be affected by rain and pollutants, thereby greatly improving the life span of the **SKYLANCE** units.

Manufacturing process

For the manufacture of **SKYLANCE**, **SERELI** uses the state of the art industrial processes and proven techniques acquired through long years of experience in this field.

Factory Tests

SKYLANCE units are individually tested at **SERELI** laboratory before being dispatched and each unit is accompanied by its factory test certificate.