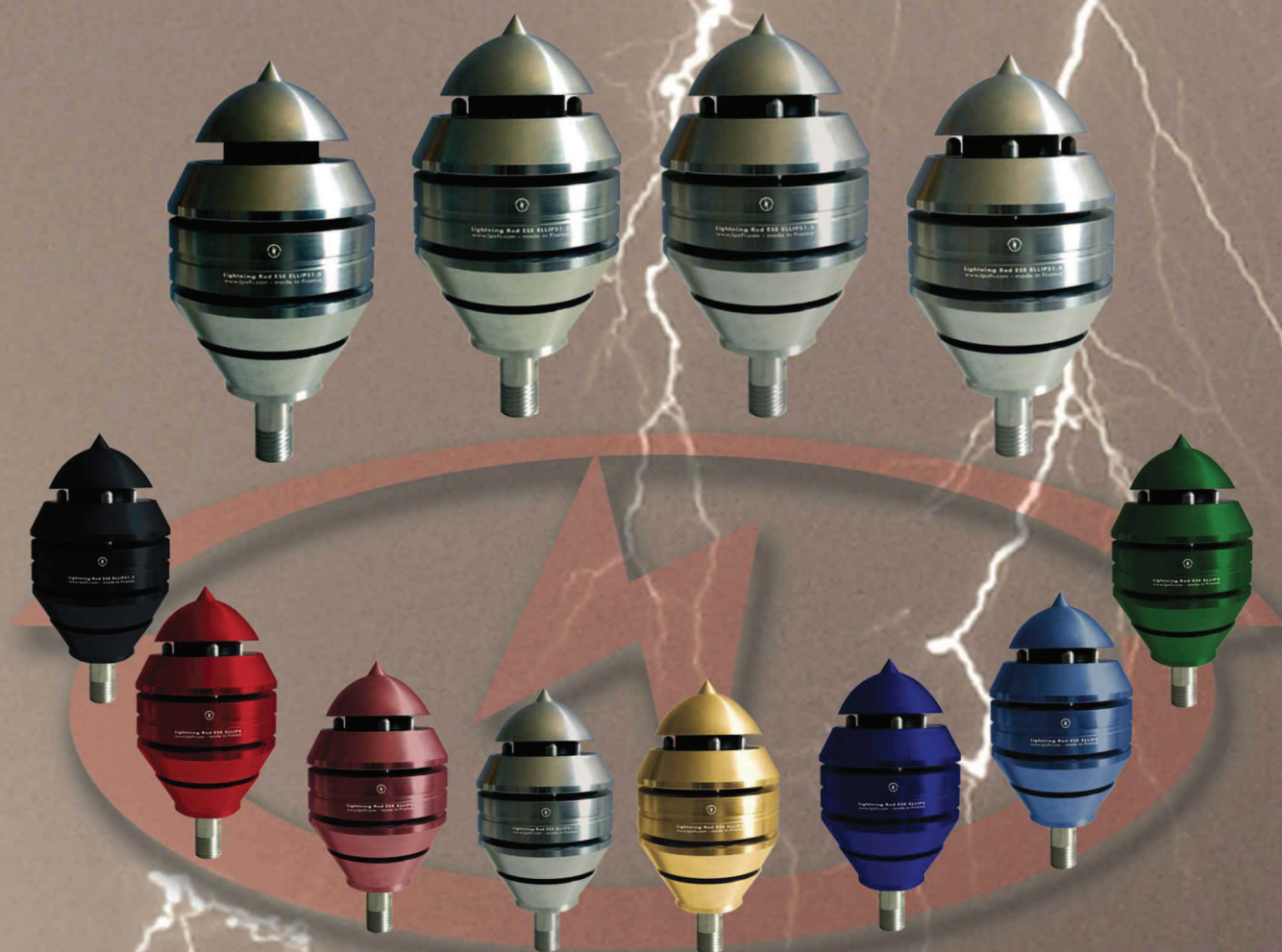


Early Streamer Emitter

www.ellipsese.com



MADE IN
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LPS France. Groupe CEMASO - BP 80055 - F-33460 MARGAUX. France - www.cemaso.com
Phone : +33 (0) 557 226 577 / Fax : +33 (0) 517 476 563



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ELLIPS

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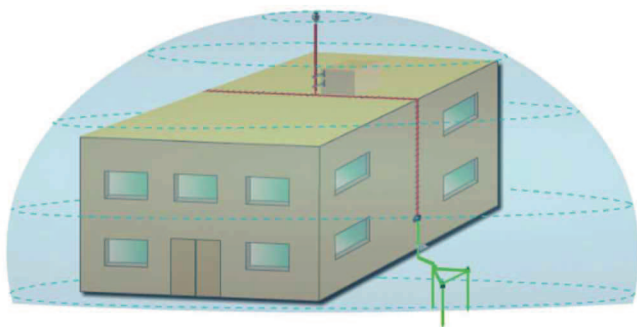
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FRANCE**

ELLIPS Early Streamer Emission (ESE) lightning rod is the result of over 10 years of research and laboratory experiments and field tests.

Combining advanced materials and technologies, ELLIPS ESE lightning rod is thought out to optimize the whole of your lightning protections system. Each ELLIPS ESE lightning rod can be tested by wired-controlled tester or remote-controlled tester (ELLIPS Contact options).

ELLIPS aesthetics and colors allow its integration within all possible drafts and structures (8 colors available - not effect on operation).

We manufacture the ELLIPS ESE lightning rods range and accessories exclusively in France.



ELLIPS ESE lightning rod is inspired by recent advances in our knowledge of lightning, electromagnetism, high voltage and fluid mechanics effects ...

The natural ionization (spark-over) is enhanced by our ELLIPS system independently any energy source. ELLIPS ESE lightning rods trigger spark-over in advance and become the preferential impact point.

Our unique and patented system is composed without any electronic or mechanical component which would prove too fragile and unreliable.

The simplicity of its design and operation combined with its qualitative manufacture and assembly allow us to provide every ELLIPS lightning rod with a 15 year warranty.

ELLIPS ESE lightning rods coloration is an aesthetic option and has no effect on the operation of the lightning protection system.



PHASE 1

1. Natural tracer



PHASE 2

2. ELLIPS triggering spark-over in advance



PHASE 3

3. ELLIPS captures the lightning strike



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Protection area



ELLIPS ESE lightning rods ensure up to a 120 meters radius protection zone in the best conditions. ELLIPS ESE lightning rods must be chosen according to the structure to find the best compromise cost / effectiveness.

Protection of open areas



ELLIPS ESE lightning rod becomes the preferential impact point in open areas (sports stadium, storage area, uncovered area ...). Frequently, an ELLIPS lightning rod protects a complete property.

Study



Lightning protection system study with ELLIPS ESE lightning rods is easy thanks to the flexibility of its implementation.

Implementation



ELLIPS lightning rods implementation is simple. A thoughtfully designed range of accessories enables easy adaptation on all structures.

Qualification required for implementation



The installer's qualification for the ELLIPS ESE lightning rods implementation is classic and is not an obstacle to obtain an excellent lightning protection installation.

Aesthetics (Architecture Integration)



ELLIPS ESE lightning rods and some accessories are available in 8 standard colors. Whatever the building or the structure, ELLIPS blends into its environment. Specific colors are also available at request.

Budget implementation

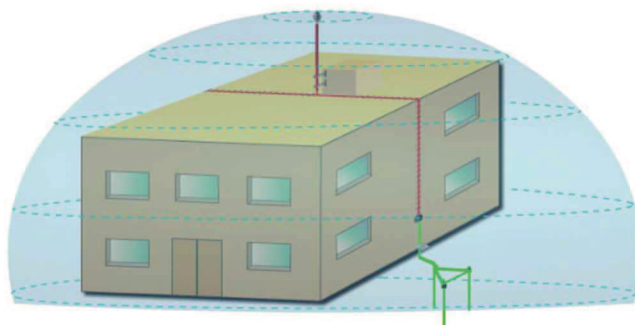


In favor of a large area of protection and ease of implementation ELLIPS ESE lightning rods ensure a low cost solution compared to other solutions.

Cost of Maintenance

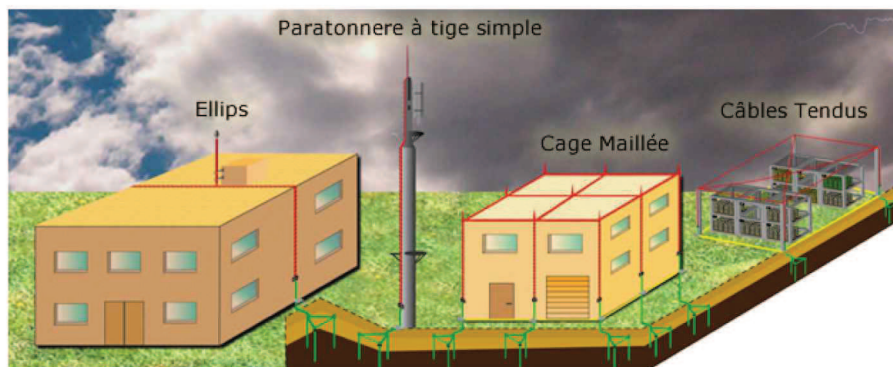
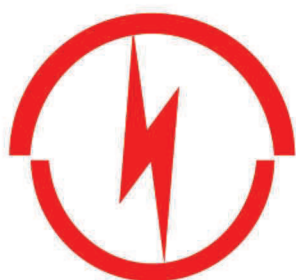


ELLIPS ESE lightning rods do not require extensive maintenance (ensuring 15 years). Periodic inspections costs are low thanks to a simple protection system.



Normalisations / Standards

	Argentine	IRAM 2426
	Espagne	UNE 21186
	France	NF C 17-102
	Macédoine	MKS N.B4 810
	Portugal	NP 4426
	Roumanie	I-20
	Slovaquie	STN 34 1391
	RF Yougoslavie	JUS N.B4.810



	Ellips	Lightning rod single-point	Meshed cage	Tensioned cables
Protection zone	5 green smiley faces	5 red sad face smiley faces	3 red sad face smiley faces	3 red sad face smiley faces
Protection of open areas	5 green smiley faces	5 red sad face smiley faces	5 red sad face smiley faces	3 green smiley faces
Study	5 green smiley faces	3 green smiley faces	5 red sad face smiley faces	3 red sad face smiley faces
Implementation	5 green smiley faces	5 green smiley faces	5 red sad face smiley faces	3 green smiley faces
Qualification required for implementation	3 green smiley faces	5 green smiley faces	5 red sad face smiley faces	5 red sad face smiley faces
Aesthetic (Architecture Integration)	5 green smiley faces	3 green smiley faces	5 red sad face smiley faces	5 red sad face smiley faces
Budget implementation	5 green smiley faces	5 green smiley faces	5 red sad face smiley faces	5 red sad face smiley faces
Cost of Maintenance	5 green smiley faces	5 green smiley faces	5 red sad face smiley faces	5 red sad face smiley faces
Standards	NF C 17-102	NF-EN 62305	NF-EN 62305	NF-EN 62305
Appropriate structures	Any structure and its environment or open areas	Small size structure (Towers, antennas...)	Structure containing computer systems or pyrotechnic materials	Open storage area



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OUR ENGAGEMENTS

LPS France is engaging over the entire ELLIPS range.



- Patented Technologies
- Manufactured in our factory in France
- Laboratory validation tests
- Reliability and robustness proven in extreme conditions
- Conforms to NF C 17-102, UNE 21-186, EN 50164-1, EN 62305
- Laser marking
- Optional wired-controlled tester or remote-controlled tester available in the whole ELLIPS range
- No electromagnetic interference (radar, radio ...)
- ELLIPS range is 100% recyclable.
- 15 years warranty.



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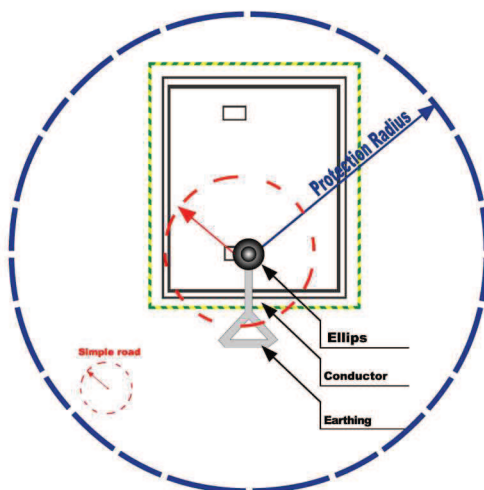
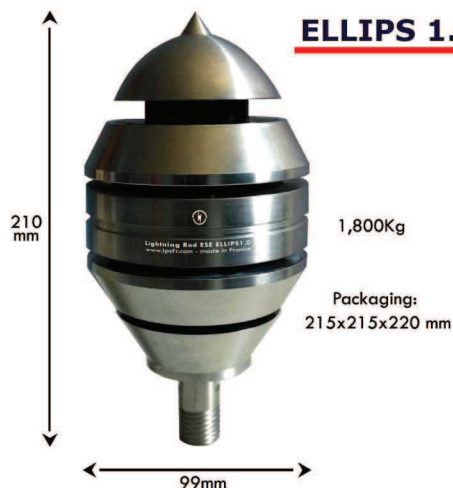
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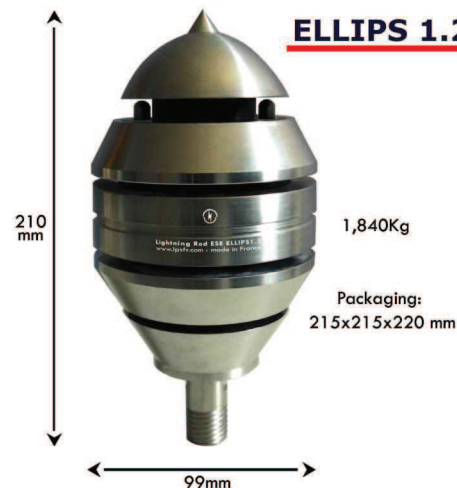


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ELLIPS 1.0



ELLIPS 1.2



PROTECTION RADIUS

Level Protection	I	II	III	IV
Δh				
2	8	11	13	15
3	12	16	19	24
4	17	26	26	34
5	21	29	32	43
10	23	36	37	48
20	24	40	41	55
60	30	48	53	64

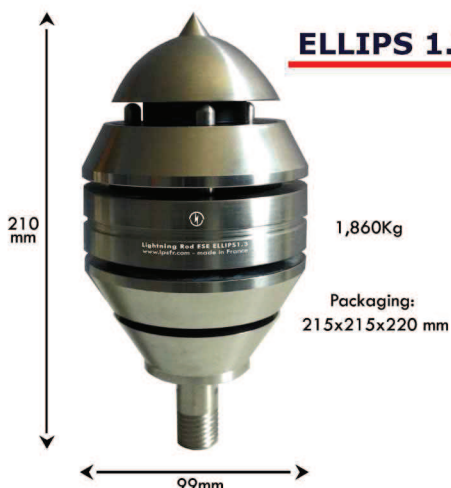
Comply with the limit NF C 17102 -Interpretation 007 - April 2011

PROTECTION RADIUS

Level Protection	I	II	III	IV
Δh				
2	17	19	23	26
3	25	29	34	39
4	34	39	46	52
5	42	49	57	65
10	44	51	61	69
20	45	52	63	75
60	45	52	65	79

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ELLIPS 1.3



ELLIPS 1.4



PROTECTION RADIUS

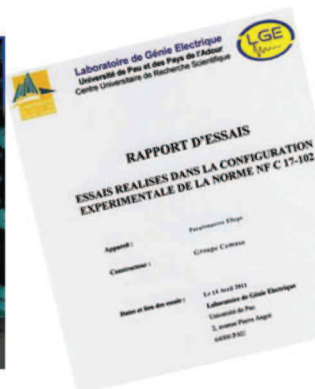
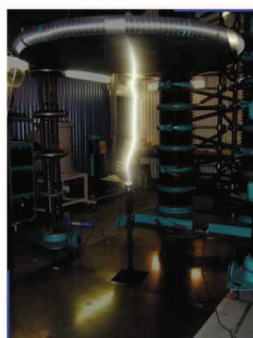
Level Protection	I	II	III	IV
Δh				
2	25	28	32	36
3	38	41	48	53
4	51	57	65	72
5	62	71	81	89
10	63	72	83	92
20	65	74	86	97
60	66	75	90	105

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PROTECTION RADIUS

Level Protection	I	II	III	IV
Δh				
2	32	34	40	44
3	48	52	59	65
4	64	69	78	87
5	79	86	97	107
10	79	88	99	109
20	80	89	102	113
60	80	90	105	120

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ELLIPS 1.0

Lightning Rod ESE

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Δt : 10 μs

1,800Kg

Packaging:
215x215x220 mm

99mm



Antique



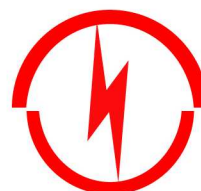
Ruby



Onyx



Natural



Amber



Opal



Topaz

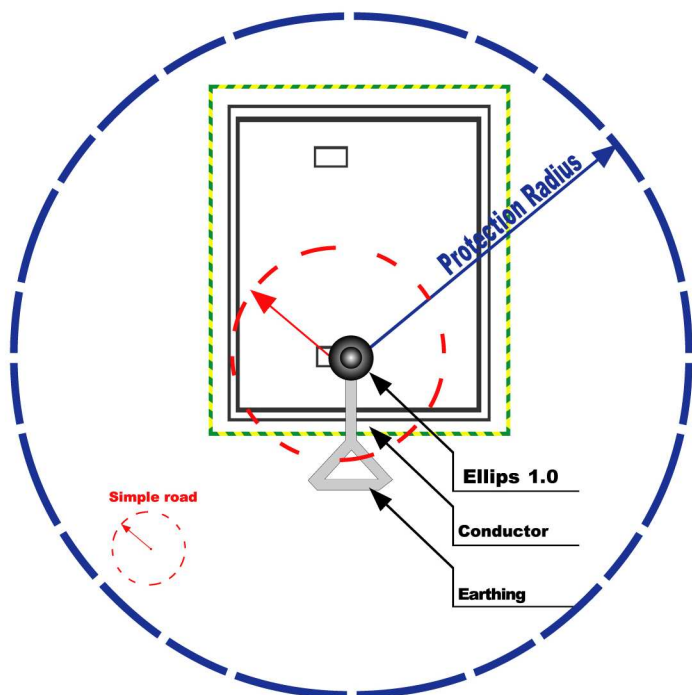


Emerald

PROTECTION RADIUS

Level Protection	I	II	III	IV
Δh				
2	8	11	13	15
3	12	16	19	24
4	17	26	26	34
5	21	29	32	43
10	23	36	37	48
20	24	40	41	55
60	30	48	53	64

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ELLIPS 1.2

Lightning Rod ESE

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Δt : 25 μs

1,840Kg

Packaging:
215x215x220 mm



Antique



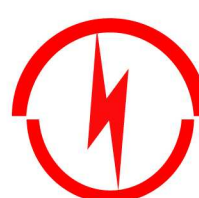
Ruby



Onyx



Natural



Amber



Opal



Topaz

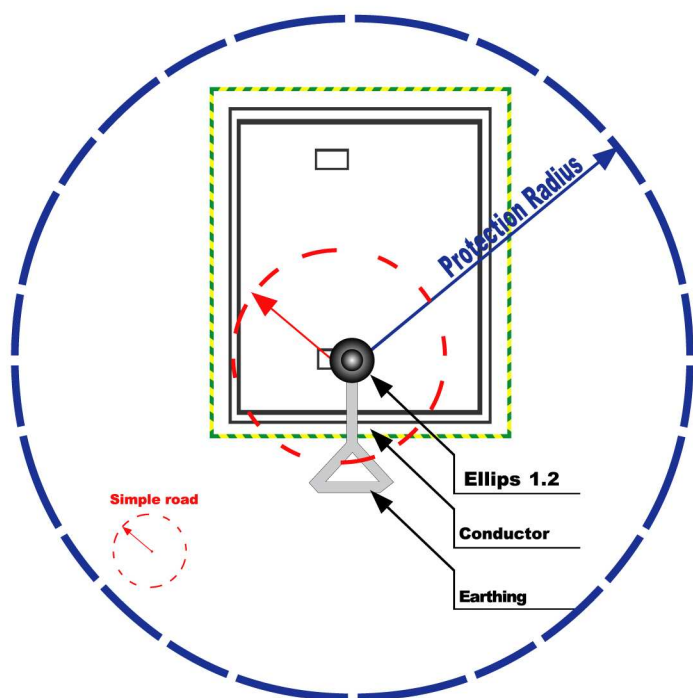


Emerald

PROTECTION RADIUS

Level Protection Δh	I	II	III	IV
2	17	19	23	26
3	25	29	34	39
4	34	39	46	52
5	42	49	57	65
10	44	51	61	69
20	45	52	63	75
60	45	52	65	79

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ELLIPS 1.3

Lightning Rod ESE

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Δt : 45 μs

1,860Kg

Packaging:
215x215x220 mm



Antique



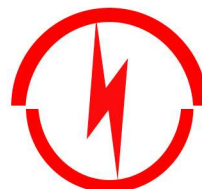
Ruby



Onyx



Natural



Amber



Opal



Topaz

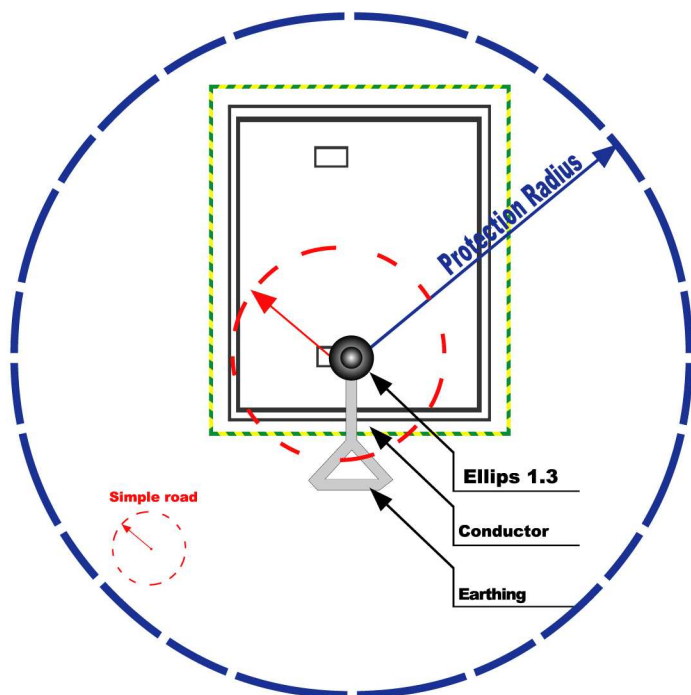


Emerald

PROTECTION RADIUS

Level Protection	I	II	III	IV
Δh				
2	25	28	32	36
3	38	41	48	53
4	51	57	65	72
5	62	71	81	89
10	63	72	83	92
20	65	74	86	97
60	66	75	90	105

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ELLIPS 1.4

Lightning Rod ESE

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210 mm

Δt : 60 μs

1,880Kg

Packaging:
215x215x220 mm

99mm



Antique



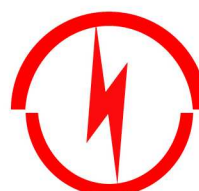
Ruby



Onyx



Natural



Amber



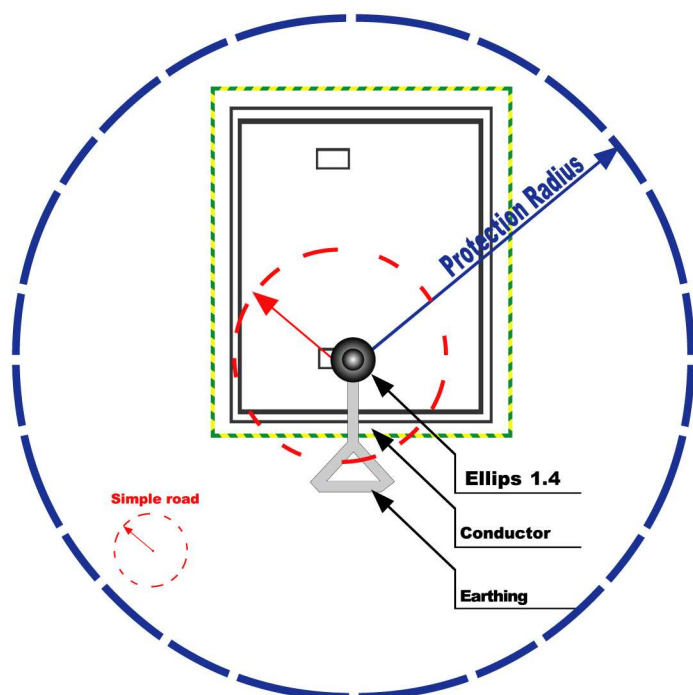
Opal



Topaz



Emerald



PROTECTION RADIUS

Level Protection	I	II	III	IV
Δh				
2	32	34	40	44
3	48	52	59	65
4	64	69	78	87
5	79	86	97	107
10	79	88	99	109
20	80	89	102	113
60	80	90	105	120

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ELLIPS
Early Streamer Emitter



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Lightning Protection Systems France (LPS France) is your expert to find your lightning protection solutions.

LPS France manufactures and proposes the ELLIPS ESE lightning rods range and the ELLEC SP lightning arrestors range.

LPS France designs, manufactures and implements lightning protections systems adapted to all your projects thanks our worldwide extensive network of agents and installers.



www.lpsfr.com



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