



# Lightning protection Early Streamer Emission

## Active<sup>2D</sup>® Early Streamer Emission



The operating principle of the **Active<sup>2D</sup>®** consists, not only, to initiate the upward leader, but moreover, provides enough energy to ensure its propagation until the junction with the downward leader.

A first device, named « **impulse device** », stores the electrostatic energy present in the atmosphere at the approach of a stormy cloud and releases the excitation of the ascending discharge at the right time.

A second device, named « **power device** », collects and stores the solar energy in several strong power capacitors.

The **Active<sup>2D</sup>®** lightning conductor is in this way permanently pre-loaded of an important energy which enables him to support the propagation of the ascendant tracer.

Close to the storm activity, an integrated sensor measuring the surrounding electric field value, releases the impulse device like most of usual Early Streamer Emission. Those lightning conductors almost immediately reverse the polarity of their head, creating a sudden amplification of the electrical field.

The innovation comes from the use of a second integrated sensor which measures the intensity of the electrical discharge current which is formed on the lightning conductor's head.

When the downward leader enters in the protection area of the lightning conductor, the measured current strongly increases. As soon as this current is higher than the characteristics threshold, the power capacitors discharge and release the necessary energy for the propagation of the leader.

In this last device, the lightning conductor's head acts as a capture device. Therefore, the head is electrically insulated from the ground.

## Characteristics

<b>Reference :</b>	<b>AFB10302D / AFB10602D</b>
<b>Assembly :</b>	Fitting of the lightning rod in the elevation rod AFC1004MR, installation and clamping with the FRANKLIN FRANCE fixing systems according to height and snow and wind resistance
<b>Use :</b>	Outside protection of the buildings
<b>Display :</b>	Can be tested with remote tester AFV0101TT and AFV2000TT - Wired test with tester AFV0050TT
<b>Material :</b>	Stainless steel
<b>Dimensions :</b>	1000 x Ø max 220mm
<b>Weight :</b>	6,90 kg
<b>Standards :</b>	NFC 17102 - 2011

Franklin Technologie ® - A full range of lighting and overvoltage protection.  
In the continue framework of its products, Franklin France shall be entitled to modify specifications  
without notice





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## Characteristics

Model	t (μs)	Reference	Counter	Remote tester AFV0101TT
Active <b>ZE</b> ® 30	30	AFB 1030 2D	without	without
Active <b>ZE</b> ® 60	60	AFB 1060 2D	without	without
Active <b>ZE</b> ® 30	30	AFB 1730 2D	with	without
Active <b>ZE</b> ® 60	60	AFB 1760 2D	with	without
Active <b>ZE</b> ® 30	30	AFB 1830 2D	without	with
Active <b>ZE</b> ® 60	60	AFB 1860 2D	without	with

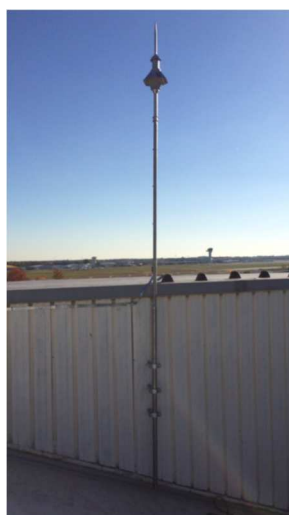
Rp (m)	Active <b>ZE</b> ® 30				Active <b>ZE</b> ® 60			
	T = 30 μs				T = 60 μs			
h (m)	I	II	III	IV	I	II	III	IV
2	19	21	25	28	31	34	39	43
4	38	43	51	57	63	69	78	85
5	48	55	63	71	79	86	97	107
6	48	55	64	72	79	87	97	107
8	49	56	65	73	79	87	98	108
10	49	57	66	75	79	88	99	109
20	50	59	71	81	80	89	102	113
30	50	60	73	85	80	90	104	116
60	50	60	75	90	80	90	105	120

France : A restriction of 40% on each radius of protection will be applied on sites submitted to lightning decree in force.



Complete lightning rod conditioned in reinforced cardboard  
 - Weight : 6,9Kg  
 - Dimensions : 320 x 320 x 500 mm

Active **ZE**® fixed with brackets AFZ0420PD / telescopic tripod AFD3300FS and slabs AFH8045DA



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