



BAKIRAL[®]

ESE LIGHTNING ROD PROTECTION SYSTEMS



ESE LIGHTNING ROD CONDUCTOR EXPERT MANUFACTURER COMPANY



NFC 17 102

ISO 9001-2008

ISO 14001:2004

OHSAS 18001-2007

30 Years Stainless Steel Warranty

ESE LIGHTNING ROD PROTECTION CATALOG



THOR



THOR-M



THOR-S



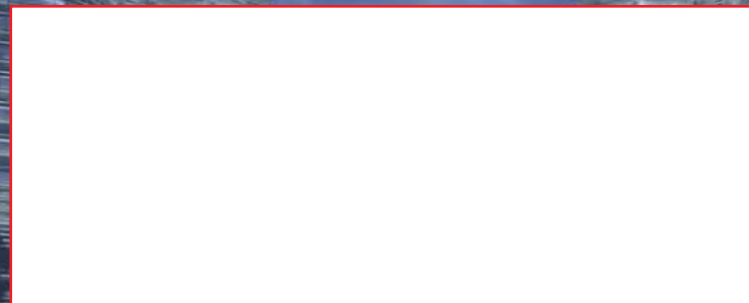
ALFA



ALFA-S



BETA





BAKIRAL[®]

ESE LIGHTNING ROD PROTECTION SYSTEMS



ESE LIGHTNING ROD CONDUCTOR EXPERT MANUFACTURER COMPANY

NFC 17 102

ISO 9001-2008

ISO 14001:2004

OHSAS 18001-2007

30 Years Stainless Steel Warranty

ESE LIGHTNING ROD PROTECTION CATALOG



THOR



THOR-M



THOR-S



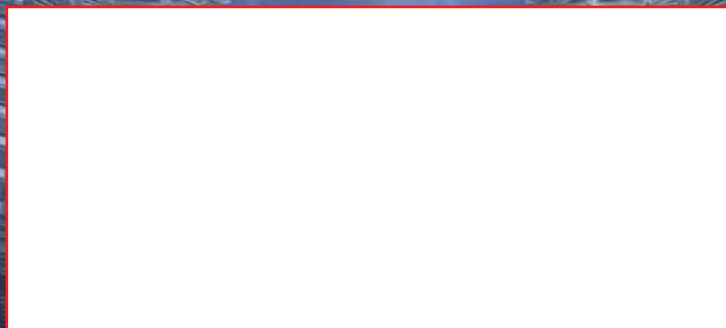
ALFA



ALFA-S



BETA



BAKIRAL®

ESE LIGHTNING ROD PROTECTION SYSTEMS

THOR ACTIVE ESE LIGHTNING ROD CONDUCTOR

**CHROMIUM
HIGH QUALITY**

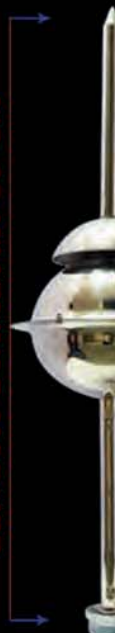
**NFC 17 102
CERTIFICATE**



**ISO 9001:2008
ISO 14001:2004
OHSAS 18001:2007 CERTIFICATE
NFC 17-102 (APPENDIX C)**



LENGTH DIAMETER 88 CM



**POWERFUL
EARLY STREAMER
EMISSION
SAFETY
PROTECTION**

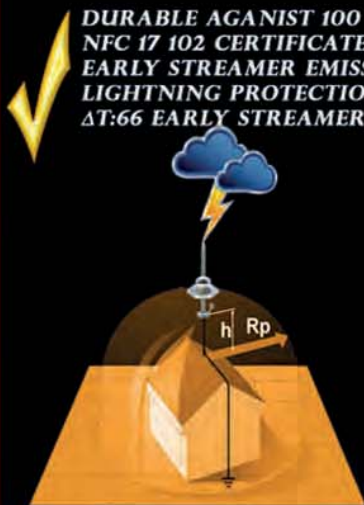
RADIUS:26 CM

**PROFESSIONAL
INTERNATIONAL
ESE LIGHTNING
PROTECTION**

WEIGHT:5 KG

30 YEARS STAINLESS STEEL WARRANTY !

**DURABLE AGAINST 100 °C (CELSIUS) HEAT. TESTED 100 KA IN NFC 17 102 LABORATORY
NFC 17 102 CERTIFICATE
EARLY STREAMER EMISSION LIGHTNING PROTECTION
LIGHTNING PROTECTION RADIUS:230 METERS (RP) FOR H:5 METERS
ΔT:66 EARLY STREAMER EMISSION TIME**



**$RP2 = H(2D-H) + \Delta L(2D+\Delta L)$ $H \geq 5$ MT
MOUNTING LEVEL CAN BE 5 METER OR UP
V: THE MOVING VELOCITY OF IONS OCCUR
AROUND AIR TERMINAL TO LIGHTNING AND
IN STANDART $V=1M/\mu S$**

**FOR PROTECTION LEVEL I D=20 M
FOR PROTECTION LEVEL II D=45 M
FOR PROTECTION LEVEL III D=60 M
 ΔL (M): CALCULATED FROM $V(M/\mu S) \cdot \Delta T(\mu S)$
D: THE ADVANCE STEP OF THE LIGHTNING OR THE JUMPING
DISTANCE OF LIGHTNING DURING WAY.**

**ΔL: THE DETECTING DISTANCE TO LIGHTNING IN AT TIMES.
THIS PARAMETER IS VARIABLE ACCORDING TO THE PRODUCED ESE AIR TERMINAL AND DETERMINED TO TEST
ACCORDING TO THE VARIABLE AND SPECIAL OF PROTECTION IN LABORATORY. H: HEIGHT OF THE POINT OF ESE AIR TERMINAL
(M) RP: RADIUS PROTECTION (M) THOR AIR TERMINALS ARE ELECTRONIC AREA EFFECTIVE LIGHTNING RODS, AND THOR
ACTIVE LIGHTNING ROD IS CONSTRUCTED OF NONCORROSIVE MATERIAL TO AVOID CHEMICAL CORROSION. THE AIR TERMINAL'S
HEAD FUNCTIONS IN BOTH CASES OF POSITIVE LIGHTNING AND NEGATIVE LIGHTNING. THOR TESTED SUCCESSFULLY AND HAD
NFC 17 102 WITH FRANCE STANDARDS ESE LIGHTNING CONDUCTOR PROTECTION.
IT HAS ACTIVE AND PASSIVE IONIZATION ELECTRODES. IT OPTIMIZES IONIZATION IN THE ATMOSPHERE IN THE MOST GUARANTEE
MANNER BY DETECTING THE POTENTIAL DIFFERENTIATION BETWEEN THE POINT WHERE THE LIGHTNING CONDUCTOR IS
LOCATED AND THE GROUND BY MEANS OF ITS PASSIVE ELECTRODES.
THE ION PRODUCTIVITY IS MAXIMIZED WITH THE PARTICIPATION OF INTERNAL ION GENERATOR SYSTEM TO THIS IONIZATION
DISPERSION. IT CONTROLS THE VENTURI SYSTEM AND IONIZATION BY MEANS OF THE AERODYNAMIC STRUCTURE OF ACTIVE
IONIZATION AND DIRECTION ELECTRODES. THE RESISTANCE TO LIGHTNING CURRENT HAS BEEN TESTED IN MIDDLE EAST
TECHNICAL UNIVERSITY ELECTRICAL AND ELECTRONIC ENGINEERING LABOTORY. THOR IS MADE OF STAINLESS 304 A MATERIAL.
30 YEAR WARRANTY AGAINST CORROSION.**

NFC 17 102 STANDARD PROTECTION

h (m)	(Rp)) Half Protection Radius (m)		
	(ΔL=60m)		
	Protection Level		
	I	II	III
5	79	97	107
10	79	99	109
20	80	102	113
30	80	104	116
60	80	105	120

**THOR ESE LIGHTNING ROD CONDUCTOR APPROVED BY NFC 17 102
NFC STANDARD LIGHTNING NORMS: ΔT:60 EARLY STREAMER EMISSION TIME
NFC 17 102 STANDARD LIGHTNING ROD PROTECTION RADIUS:214 METERS(H:5)
THOR'S VALUES ABOVE STANDARD LIGHTNING PROTECTION RESULTS
THOR TESTED ΔT:66 IN NFC 17 102 LABORATORY APPROVAL HIGH TECHNOLOGY
THOR ESE ACTIVE LIGHTNING ROD LIGHTNING PROTECTION RADIUS :230 METERS (H:5)**



BAKIRAL®

ESE LIGHTNING ROD PROTECTION SYSTEMS

THOR-S ACTIVE ESE LIGHTNING ROD CONDUCTOR(EU)

**CHROMIUM
HIGH QUALITY**

**NFC 17 102
CERTIFICATE**



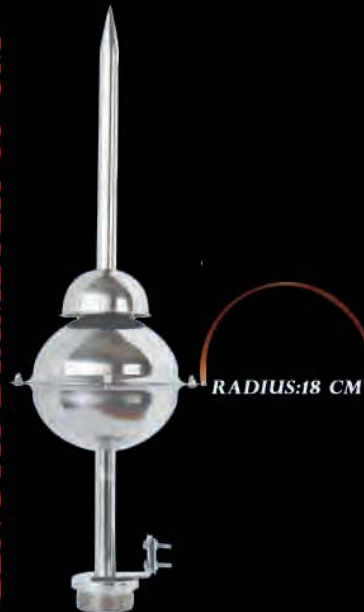
ISO 9001:2008

ISO 14001:2004

OHSAS 18001:2007 CERTIFICATE

NFC 17-102 (APPENDIX C)

LENGTH DIAMETER 65 CM



RADIUS:18 CM

**THOR-S
(WEIGHT:3.85 KG)**

30 YEARS STAINLESS STEEL WARRANTY !

DURABLE AGAINST 100 °C (CELSIUS) HEAT. TESTED 100 KA IN NFC 17 102 LABORATORY

NFC 17 102 CERTIFICATE

EARLY STREAMER EMISSION LIGHTNING PROTECTION

LIGHTNING PROTECTION RADIUS: 250 METERS (RP) FOR H:5 METERS

ΔT:76 EARLY STREAMER EMISSION TIME



$RP2 = H(2D-H) + \Delta L(2D+\Delta L) H \geq 5 MT$
MOUNTING LEVEL CAN BE 5 METER OR UP
V: THE MOVING VELOCITY OF IONS OCCUR
ARROUND AIR TERMINAL TO LIGHTNING AND
IN STANDART $V=1M/\mu S$

FOR PROTECTION LEVEL I D=20 M

FOR PROTECTION LEVEL II D=45 M

FOR PROTECTION LEVEL III D=60 M

ΔL (M): CALCULATED FROM $V(M/\mu S) \cdot \Delta T(\mu S)$

D: THE ADVANCE STEP OF THE LIGHTNING OR THE JUMPING DISTANCE OF LIGHTNING DURING WAY.

AL: THE DEECTING DISTANCE TO LIGHTNING IN AT TIMES.
THIS PARAMETER IS VALIABLE ACCORDING TO THE PRODUCED ESE AIR TERMINAL AND DETERMINED TO TEST
ACCORDING TO THE VALIABLE AND SPECIAL OF PRODECTION IN LABORATORY.H: HEIGHT OF THE POINT OF ESE AIR TERMINAL
(M) RP: RADIUS PROTECTION (M) THOR. AIR TERMINALS ARE ELECTRONIC AREA EFFECTIVE LIGHTNING RODS ,AND THOR
ACTIVE LIGHTNING ROD IS CONSTRUCTED OF NONCORROSIVE MATERIAL TO AVOID CHEMICAL CORROSION. THE AIR TERMINAL'S
HEAD FUNCTIONS IN BOTH CASES OF POSITIVE LIGHTNING AND NEGATIVE LIGHTNING.THOR TESTED SUCCESSFULLY AND HAD
NFC 17 102 WITH FRANCE STANDARDS ESE LIGHTNING CONDUCTOR PROTECTION.
IT HAS ACTIVE AND PASSIVE IONIZATION ELECTRODES.IT OPTIMIZES IONIZATION IN THE ATMOSPHERE IN THE MOST GUARANTEE
MANNER BY DETECTING THE POTENTIAL DIFFERENTIATION BETWEEN THE POINT WHERE THE LIGHTNING CONDUCTOR IS
LOCATED AND THE GROUND BY MEANS OF ITS PASSIVE ELECTRODES.
THE ION PRODUCTIVITY IS MAXIMIZED WITH THE PARTICIPATION OF INTERNAL ION GENERATOR SYSTEM TO THIS IONIZATION
DISPERSION. IT CONTROLS THE VENTURI SYSTEM AND IONIZATION BY MEANS OF THE AERODYNAMIC STRUCTURE OF ACTIVE
IONIZATION AND DIRECTION ELECTRODES.THE RESISTANCE TO LIGHTNING CURRENT HAS BEEN TESTED IN ' MIDDLE EAST
TECHNICAL UNIVERSITY ELECTRICAL AND ELECTRONIC ENGINEERING LABOTORY.THOR IS MADE OF STAINLESS 304 A MATERIAL.
30 YEAR WARRANTY AGAINST CORROSION.



NFC 17 102 STANDARD PROTECTION

h (m)	(Rp)) Half Protection Radius (m)		
	(ΔL=60m) Protection Level		
	I	II	III
5	79	97	107
10	79	99	109
20	80	102	113
30	80	104	116
60	80	105	120

THOR-S ESE LIGHTNING ROD CONDUCTOR APPROVED BY NFC 17 102
STANDARD NFC 17 102 STANDARD NORMS:ΔT 60 μS .(EARLY STREAMER EMISSION)

THOR-S TEDTED IN NFC 17 102 LABORATORY: ΔT = 76 μS .

THOR-S ESE LIGHTNING ROD CONDUCTOR' VALUES ABOVE STANDARD PROTECTION
NFC 17 102 LIGHTNING PROTECTION RADIUS NORMS:214 METERS

THOR-S LIGHTNING ROD CONDUCTOR LIGHTNING PROTECTION RADIUS:250 METERS

THOR-S ESE LIGHTNONG ROD CONDUCTOR HAVE A PERFECTLY EARLY STREAMER

EMISSION AND LIGHTNING PROTECTION WITH HIGH TECHNOLOGY

BY APPROVAL NFC 17 102.

THOR-S PROVIDES SAFETY LIGHTNING PROTECTION ON LIGHTNING ROD PROJECTS

BAKIRAL®

ESE LIGHTNING ROD PROTECTION SYSTEMS

ALFA ACTIVE ESE LIGHTNING ROD CONDUCTOR(EU)

POWERFUL EARLY STREAMER EMISSION

CHROMIUM HIGH QUALITY

NFC 17 102
CERTIFICATE



ISO 9001-2008
ISO 14001:2004

OHSAS 18001-2007 CERTIFICATE
NFC 17-102 (APPENDIX C)

LENGTH DIAMETER 80 CM



RADIUS:18 CM

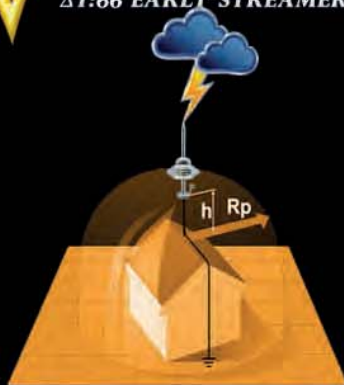
ALFA
(WEIGHT:4.2 KG)

30 YEARS STAINLESS STEEL WARRANTY !

DURABLE AGAINST 100 °C (CELSIUS) HEAT. TESTED 100 KA IN NFC 17 102 LABORATORY
NFC 17 102 CERTIFICATE

EARLY STREAMER EMISSION LIGHTNING PROTECTION
LIGHTNING PROTECTION RADIUS: 250 METERS (RP) FOR H:5 METERS
ΔT:66 EARLY STREAMER EMISSION TIME

$RP2 = H(2D-H) + \Delta L(2D+\Delta L)$ $H \geq 5$ MT
MOUNTING LEVEL CAN BE 5 METER OR UP
V: THE MOVING VELOCITY OF IONS OCCUR
AROUND AIR TERMINAL TO LIGHTNING AND
IN STANDART $V=1M/\mu S$



FOR PROTECTION LEVEL I D=20 M

FOR PROTECTION LEVEL II D=45 M

FOR PROTECTION LEVEL III D=60 M

ΔL (M): CALCULATED FROM $V(M/\mu S) \cdot \Delta T(\mu S)$

D: THE ADVANCE STEP OF THE LIGHTNING OR THE JUMPING
DISTANCE OF LIGHTNING DURING WAY.

ΔL: THE DETECTING DISTANCE TO LIGHTNING IN ΔT TIMES.

THIS PARAMETER IS VARIABLE ACCORDING TO THE PRODUCED ESE AIR TERMINAL AND DETERMINED TO TEST
ACCORDING TO THE VARIABLE AND SPECIAL OF PROTECTION IN LABORATORY. H: HEIGHT OF THE POINT OF ESE AIR TERMINAL
(M) RP: RADIUS PROTECTION (M) THOR AIR TERMINALS ARE ELECTRONIC AREA EFFECTIVE LIGHTNING RODS AND THOR
ACTIVE LIGHTNING ROD IS CONSTRUCTED OF NONCORROSIVE MATERIAL TO AVOID CHEMICAL CORROSION. THE AIR TERMINAL'S
HEAD FUNCTIONS IN BOTH CASES OF POSITIVE LIGHTNING AND NEGATIVE LIGHTNING. THOR TESTED SUCCESSFULLY AND HAD
NFC 17 102 WITH FRANCE STANDARDS ESE LIGHTNING CONDUCTOR PROTECTION.

IT HAS ACTIVE AND PASSIVE IONIZATION ELECTRODES. IT OPTIMIZES IONIZATION IN THE ATMOSPHERE IN THE MOST GUARANTEE
MANNER BY DETECTING THE POTENTIAL DIFFERENTIATION BETWEEN THE POINT WHERE THE LIGHTNING CONDUCTOR IS
LOCATED AND THE GROUND BY MEANS OF ITS PASSIVE ELECTRODES.

THE ION PRODUCTIVITY IS MAXIMIZED WITH THE PARTICIPATION OF INTERNAL ION GENERATOR SYSTEM TO THIS IONIZATION
DISPERSION. IT CONTROLS THE VENTURI SYSTEM AND IONIZATION BY MEANS OF THE AERODYNAMIC STRUCTURE OF ACTIVE
IONIZATION AND DIRECTION ELECTRODES. THE RESISTANCE TO LIGHTNING CURRENT HAS BEEN TESTED IN MIDDLE EAST
TECHNICAL UNIVERSITY ELECTRICAL AND ELECTRONIC ENGINEERING LABORATORY. THOR IS MADE OF STAINLESS 304-A MATERIAL.
30 YEAR WARRANTY AGAINST CORROSION.

NFC 17 102 STANDARD PROTECTION

h (m)	(Rp) Half Protection Radius (m) (ΔL=60m)		
	Protection Level		
	I	II	III
5	79	97	107
10	79	99	109
20	80	102	113
30	80	104	116
60	80	105	120

ALFA ESE LIGHTNING ROD CONDUCTOR APPROVED BY NFC 17 102
STANDARD NFC 17 102 STANDARD NORMS: ΔT:60 (EARLY STREAMER EMISSION)
ALFA TESTED IN NFC 17 102 LABORATORY: ΔT:66 μS

ALFA ESE LIGHTNING ROD CONDUCTOR VALUES ABOVE STANDARD PROTECTION
NFC 17 102 LIGHTNING PROTECTION RADIUS NORMS: 214 METERS

ALFA LIGHTNING ROD CONDUCTOR LIGHTNING PROTECTION RADIUS: 230 METERS

ALFA ESE LIGHTNING ROD CONDUCTOR HAVE A PERFECTLY EARLY STREAMER
EMISSION AND LIGHTNING PROTECTION WITH HIGH TECHNOLOGY
BY APPROVAL NFC 17 102.

ALFA PROVIDES SAFETY LIGHTNING PROTECTION ON LIGHTNING ROD PROJECTS



BAKIRAL®

ESE LIGHTNING ROD PROTECTION SYSTEMS

ALFA-S ACTIVE ESE LIGHTNING ROD CONDUCTOR(EU)

POWERFUL
EARLY STREAMER EMISSION

CHROMIUM
HIGH QUALITY

LENGTH DIAMETER 65 CM

NFC 17 102
CERTIFICATE



ISO 9001:2008
ISO 14001:2004
OHSAS 18001:2007 CERTIFICATE
NFC 17-102 (APPENDIX C)



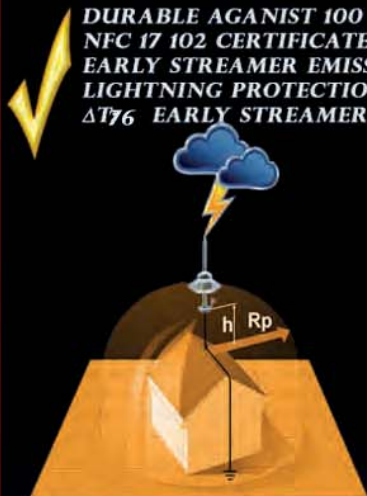
ALFA-S (WEIGHT:3.8 KG) ALFA-S CONIC (WEIGHT:4.1 KG)

RADIUS:18CM



30 YEARS STAINLESS STEEL WARRANTY !

DURABLE AGAINST 100 °C (CELSIUS) HEAT. TESTED 100 KA IN NFC 17 102 LABORATORY
NFC 17 102 CERTIFICATE
EARLY STREAMER EMISSION LIGHTNING PROTECTION
LIGHTNING PROTECTION RADIUS:250 METERS (RP) FOR H:5 METERS
ΔT76 EARLY STREAMER EMISSION TIME



$RP2 = H(2D-H) + \Delta L(2D+\Delta L)$ $H \geq 5$ MT
MOUNTING LEVEL CAN BE 5 METER OR UP
V: THE MOVING VELOCITY OF IONS OCCUR
AROUND AIR TERMINAL TO LIGHTNING AND
IN STANDART $V=1M/\mu S$

FOR PROTECTION LEVEL I $D=20$ M
FOR PROTECTION LEVEL II $D=45$ M
FOR PROTECTION LEVEL III $D=60$ M
 ΔL (M): CALCULATED FROM $V(M/\mu S) \cdot \Delta T(\mu S)$
D: THE ADVANCE STEP OF THE LIGHTNING OR THE JUMPING
DISTANCE OF LIGHTNING DURING WAY.

ΔL : THE DETECTING DISTANCE TO LIGHTNING IN ΔT TIMES.
THIS PARAMETER IS VARIABLE ACCORDING TO THE PRODUCED ESE AIR TERMINAL AND DETERMINED TO TEST
ACCORDING TO THE VARIABLE AND SPECIAL OF PROTECTION IN LABORATORY. H: HEIGHT OF THE POINT OF ESE AIR TERMINAL
(M) RP: RADIUS PROTECTION (M) THOR AIR TERMINALS ARE ELECTRONIC AREA EFFECTIVE LIGHTNING RODS AND THOR
ACTIVE LIGHTNING ROD IS CONSTRUCTED OF NONCORROSIVE MATERIAL TO AVOID CHEMICAL CORROSION. THE AIR TERMINAL'S
HEAD FUNCTIONS IN BOTH CASES OF POSITIVE LIGHTNING AND NEGATIVE LIGHTNING. THOR TESTED SUCCESSFULLY AND HAD
NFC 17 102 WITH FRANCE STANDARDS ESE LIGHTNING CONDUCTOR PROTECTION.
IT HAS ACTIVE AND PASSIVE IONIZATION ELECTRODES. IT OPTIMIZES IONIZATION IN THE ATMOSPHERE IN THE MOST GUARANTEE
MANNER BY DETECTING THE POTENTIAL DIFFERENTIATION BETWEEN THE POINT WHERE THE LIGHTNING CONDUCTOR IS
LOCATED AND THE GROUND BY MEANS OF ITS PASSIVE ELECTRODES.
THE ION PRODUCTIVITY IS MAXIMIZED WITH THE PARTICIPATION OF INTERNAL ION GENERATOR SYSTEM TO THIS IONIZATION
DISPERSION. IT CONTROLS THE VENTURI SYSTEM AND IONIZATION BY MEANS OF THE AERODYNAMIC STRUCTURE OF ACTIVE
IONIZATION AND DIRECTION ELECTRODES. THE RESISTANCE TO LIGHTNING CURRENT HAS BEEN TESTED IN MIDDLE EAST
TECHNICAL UNIVERSITY ELECTRICAL AND ELECTRONIC ENGINEERING LABORATORY. THOR IS MADE OF STAINLESS 304 A MATERIAL.
30 YEAR WARRANTY AGAINST CORROSION.



NFC 17 102 STANDARD PROTECTION

h (m)	(Rp) Half Protection Radius (m)		
	(ΔL=60m)		
	Protection Level		
	I	II	III
5	79	97	107
10	79	99	109
20	80	102	113
30	80	104	116
60	80	105	120

ALFA-S ESE LIGHTNING ROD CONDUCTOR APPROVED BY NFC 17 102
NFC 17 102 STANDARD NORMS: $\Delta T = 60 \mu S$ (EARLY STREAMER EMISSION)
ALFA-S TESTED IN NFC 17 102 LABORATORY: $\Delta T: 76 \mu S$
ALFA-S ESE LIGHTNING ROD CONDUCTOR VALUES ABOVE STANDARD PROTECTION
NFC 17 102 LIGHTNING PROTECTION RADIUS NORMS: 214 METERS
ALFA-S LIGHTNING ROD CONDUCTOR LIGHTNING PROTECTION RADIUS: 250 METERS
ALFA-S ESE LIGHTNING ROD CONDUCTOR HAVE A PERFECTLY EARLY STREAMER
EMISSION AND LIGHTNING PROTECTION WITH HIGH TECHNOLOGY
BY APPROVAL NFC 17 102.
ALFA-S PROVIDES SAFETY LIGHTNING PROTECTION ON LIGHTNING ROD PROJECTS



BAKIRAL®

ESE LIGHTNING ROD PROTECTION SYSTEMS



BETA ACTIVE ESE LIGHTNING ROD CONDUCTOR(EU) PROFESSIONAL ESE LIGHTNING SAFETY PROTECTION

**CHROMIUM
HIGH QUALITY**

**NFC 17 102
CERTIFICATE**



ISO 9001:2008

ISO 14001:2004

OHSAS 18001:2007 CERTIFICATE

NFC 17-102 (APPENDIX C)

LENGTH DIAMETER 80 CM

**POWERFUL
EARLY STREAMER EMISSION**



RADIUS:18 CM

**BETA
(WEIGHT:3.85 KG)**



30 YEARS STAINLESS STEEL WARRANTY !

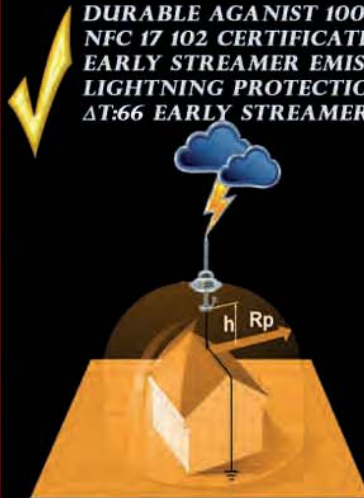
DURABLE AGAINST 100 °C (CELSIUS) HEAT.TESTED 100 KA IN NFC 17 102 LABORATORY

NFC 17 102 CERTIFICATE

EARLY STREAMER EMISSION LIGHTNING PROTECTION

LIGHTNING PROTECTION RADIUS: 250 METERS (RP) FOR H:5 METERS

ΔT:66 EARLY STREAMER EMISSION TIME



**RP2 = H(2D-H) + ΔL(2D+ΔL) H≥5 MT
MOUNTING LEVEL CAN BE 5 METER OR UP
V: THE MOVING VELOCITY OF IONS OCCUR
ARROUND AIR TERMINAL TO LIGHTNING AND
IN STANDART V=1M/μS**

FOR PROTECTION LEVEL I D=20 M

FOR PROTECTION LEVEL II D=45 M

FOR PROTECTION LEVEL III D=60 M

ΔL (M): CALCULATED FROM V(M/μS).ΔT(μS)

**D: THE ADVANCE STEP OF THE LIGHTNING OR THE JUMPING
DISTANCE OF LIGHTNING DURING WAY.**

**ΔL: THE DEECTING DISTANCE TO LIGHTNING IN ΔT TIMES.
THIS PARAMETER IS VALIABLE ACCORDING TO THE PRODUCED ESE AIR TERMINAL AND DETERMINED TO TEST
ACCORDING TO THE VARIABLE AND SPECIAL OF PRODECTION IN LABORATORY.H: HEIGHT OF THE POINT OF ESE AIR TERMINAL
(M) RP: RADIUS PROTECTION (M) THOR AIR TERMINALS ARE ELECTRONIC AREA EFFECTIVE LIGHTNING RODS AND THOR
ACTIVE LIGHTNING ROD IS CONSTRUCTED OF NONCORROSIVE MATERIAL TO AVOID CHEMICAL CORROSION. THE AIR TERMINAL'S
HEAD FUNCTIONS IN BOTH CASES OF POSITIVE LIGHTNING AND NEGATIVE LIGHTNING.THOR TESTED SUCCESSFULLY AND HAD
NFC 17 102 WITH FRANCE STANDARDS ESE LIGHTNING CONDUCTOR PROTECTION.
IT HAS ACTIVE AND PASSIVE IONIZATION ELECTRODES.IT OPTIMIZES IONIZATION IN THE ATMOSPHERE IN THE MOST GUARANTEE
MANNER BY DETECTING THE POTENTIAL DIFFERENTIATION BETWEEN THE POINT WHERE THE LIGHTNING CONDUCTOR IS
LOCATED AND THE GROUND BY MEANS OF ITS PASSIVE ELECTRODES.
THE ION PRODUCTIVITY IS MAXIMIZED WITH THE PARTICIPATION OF INTERNAL ION GENERATOR SYSTEM TO THIS IONIZATION
DISPERSION. IT CONTROLS THE VENTURI SYSTEM AND IONIZATION BY MEANS OF THE AERODYNAMIC STRUCTURE OF ACTIVE
IONIZATION AND DIRECTION ELECTRODES.THE RESISTANCE TO LIGHTNING CURRENT HAS BEEN TESTED IN MIDDLE EAST
TECHNICAL UNIVERSITY ELECTRICAL AND ELECTRONIC ENGINEERING LABOTORY.THOR IS MADE OF STAINLESS 304 A MATERIAL.
30 YEAR WARRANTY AGAINST CORROSION.**

NFC 17 102 STANDARD PROTECTION

h (m)	(Rp)) Half Protection Radius (m)		
	(ΔL=60m)		
	Protection Level		
	I	II	III
5	79	97	107
10	79	99	109
20	80	102	113
30	80	104	116
60	80	105	120

**BETA ESE LIGHTNING ROD CONDUCTOR APPROVED BY NFC 17 102
STANDARD NFC 17 102 STANDARD NORMS:ΔT:60 μS EARLY STREAMER EMISSION)
BETA TEDTED IN NFC 17 102 LABORATORY: ΔT = 66 μS**

**BETA ESE LIGHTNING ROD CONDUCTOR' VALUES ABOVE STANDARD PROTECTION
NFC 17 102 LIGHTNING PROTECTION RADIUS NORMS:214 METERS**

BETA LIGHTNING ROD CONDUCTOR LIGHTNING PROTECTION RADIUS:230 METERS

BETA ESE LIGHTNING ROD CONDUCTOR HAVE A PERFECTLY EARLY STREAMER

EMISSION AND LIGHTNING PROTECTION WITH HIGH TECHNOLOGY

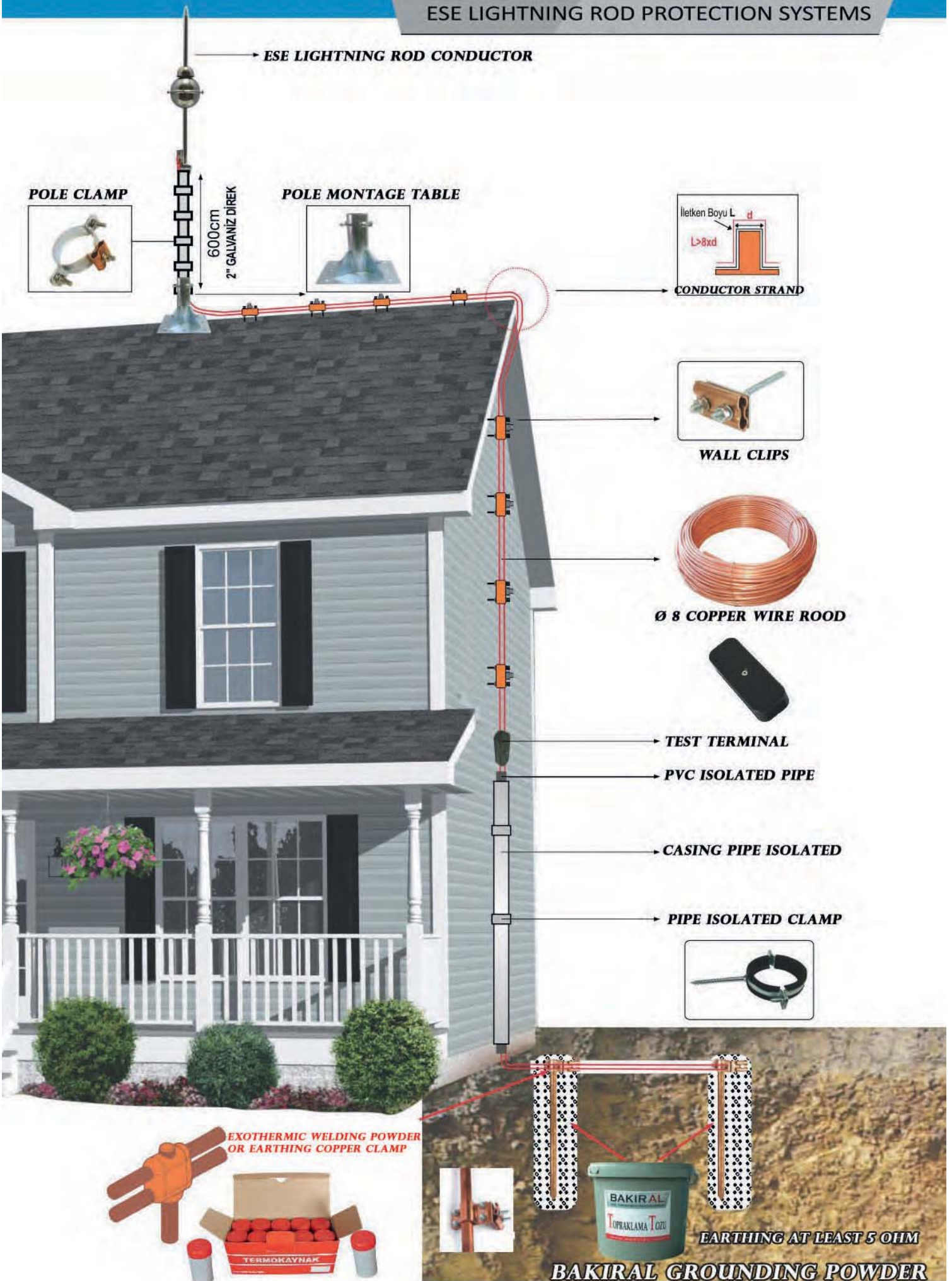
BY APPROVAL NFC 17 102.

BETA PROVIDES SAFETY LIGHTNING PROTECTION ON LIGHTNING ROD PROJECTS



BAKIRAL®

ESE LIGHTNING ROD PROTECTION SYSTEMS



BAKIRAL®

ESE LIGHTNING ROD PROTECTION SYSTEMS

NFC 17 102



THOR

THOR-M

ALFA

BETA

THOR-S

ALFA-S(CONIC)

**BAKIRAL ESE LIGHTNING ROD CONDUCTOR & FARADAY CAGE MONTAGE
EARTHING MONTAGE FASTENER PRODUCTS**

