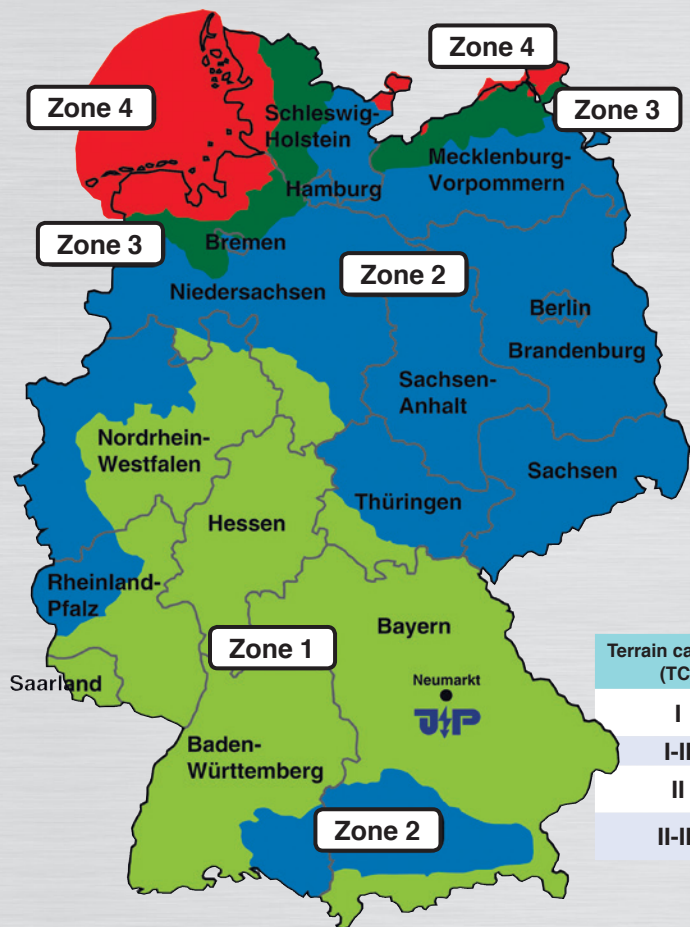




Overview of gust wind speed according to (DIN) EN 1991-1-4 (part of Eurocode) Example: Map of Germany



Terrain category (TC)	Description of terrain category (TC)
I	"Open sea; free lakes with at least 5 km surface wind direction; smooth, flat land without barriers."
I-II	Coastline territory, applicable in Zone 3 in most cases.
II	"Terrain with hedges, individual farmsteads, houses or tree, for example agricultural areas."
II-III	Inland, applicable in Zone 1 and Zone 2 in most cases (local land profile is often not clearly defined between TC II & III)

Height above ground in m	Zone 1 $v_{b,0}$ 22.5 m/s		Zone 2 $v_{b,0}$ 25.0 m/s		Zone 3 $v_{b,0}$ 27.5 m/s	Zone 4 $v_{b,0}$ 30.0 m/s
	TC II-III	TC II	TC II-III	TC II	TC I-II	TC I
0	100 km/h	106 km/h	111 km/h	118 km/h	133 km/h	151 km/h
5	100 km/h	109 km/h	111 km/h	120 km/h	137 km/h	160 km/h
10	106 km/h	118 km/h	118 km/h	131 km/h	150 km/h	171 km/h
15	115 km/h	124 km/h	127 km/h	137 km/h	158 km/h	178 km/h
20	121 km/h	129 km/h	134 km/h	142 km/h	165 km/h	182 km/h
25	126 km/h	132 km/h	139 km/h	146 km/h	170 km/h	186 km/h
30	130 km/h	135 km/h	144 km/h	149 km/h	174 km/h	190 km/h
40	138 km/h	140 km/h	152 km/h	154 km/h	181 km/h	195 km/h
50	143 km/h	143 km/h	158 km/h	158 km/h	186 km/h	199 km/h
60	147 km/h	147 km/h	162 km/h	162 km/h	189 km/h	202 km/h
70	150 km/h	150 km/h	165 km/h	165 km/h	192 km/h	205 km/h
100	156 km/h	156 km/h	172 km/h	172 km/h	198 km/h	212 km/h

Notifications regarding static safety:

A 1.5-fold stability safety applies to load-carrying constructions (houses, halls, bridges, radio towers) regarding the measured typical wind loads, i.e. load-carrying constructions must resist 1.5 times of the wind uplifting pressure.

This also applies to air termination poles, the failure or tilting of which can cause major economic damage, subsequent damage or personal damage on exposed positions (above a main building entrance, above a railway track etc.)

The builder or the owner must consider whether the a/m criteria apply to the planned site. If the a/m criteria do not apply, he must assume a 1.0-fold stability safety regarding the characteristic wind loads acc. to standard, i.e. the lightning termination rod can withstand only the maximum characteristic load (=1.5-fold) before it fails or collapses.

For example, a 4m air termination pole positioned at a distance of 10m from the edge of a flat roof with attic can protect an air conditioning against lightning strikes. In case of any doubt whether a 1.0-fold stability safety can be chosen, contact the insurance company. A 1.5-fold stability safety is always a safe approach.



Air termination pole selection guide

Height of air termination pole	Wind Zone	Air termination pole base frame Ord. no.	Concrete base Ord. no.	Max. wind speed		SET-no.
				Static safety factor 1.0	Static safety factor 1.5	
3.0m (Ord. no. 912 000)	Zone 1	499 000	4x 499 100	211 km/h	172 km/h	912 089
	Zone 2	499 000	4x 499 100	211 km/h	172 km/h	
	Zone 3	499 000	4x 499 100	211 km/h	172 km/h	
3.5m (Ord. no. 912 001)	Zone 1	499 000	4x 499 100	177 km/h	145 km/h	912 090
	Zone 2	499 000	4x 499 100	177 km/h	145 km/h	
	Zone 3	499 000	4x 499 101	200 km/h	163 km/h	
4.0m (Ord. no. 912 002)	Zone 1	499 000	4x 499 100	150 km/h	122 km/h	912 705
	Zone 2	499 000	4x 499 101	168 km/h	137 km/h	912 091
	Zone 3	499 000	8x 499 100	200 km/h	163 km/h	912 710
4.5m (Ord. no. 912 003)	Zone 1	499 005	3x 103 101	143 km/h	116 km/h	912 715
	Zone 2	499 005	3x 103 110	154 km/h	126 km/h	912 092
	Zone 3	499 005	3x 103 118	172 km/h	141 km/h	912 720
5.0m (Ord. no. 912 004)	Zone 1	499 005	3x 103 101	139 km/h	114 km/h	912 725
	Zone 2	499 005	3x 103 110	151 km/h	123 km/h	912 093
	Zone 3	499 005	3x 103 118	168 km/h	137 km/h	912 730
5.5m (Ord. no. 912 005) (Ord. no. 912 005 S)	Zone 1	499 005	3x 103 110	134 km/h	110 km/h	912 735
	Zone 2	499 005	3x 103 118	149 km/h	121 km/h	912 094
	Zone 3	499 006	6x 103 103	167 km/h	136 km/h	912 740
6.0m (Ord. no. 912 006)	Zone 1	499 006	6x 103 103	164 km/h	134 km/h	912 095
	Zone 2	499 006	6x 103 103	164 km/h	134 km/h	
	Zone 3	499 006	6x 103 103	164 km/h	134 km/h	
6.5m (Ord. no. 912 007)	Zone 1	499 006	6x 103 103	155 km/h	127 km/h	912 096
	Zone 2	499 006	6x 103 103	155 km/h	127 km/h	
	Zone 3	499 006	6x 103 101	170 km/h	139 km/h	
7.0m (Ord. no. 912 008)	Zone 1	499 006	6x 103 103	136 km/h	111 km/h	912 750
	Zone 2	499 006	6x 103 101	148 km/h	121 km/h	912 097
	Zone 3	499 006	6x 103 110	160 km/h	131 km/h	912 755
7.5m (Ord. no. 912 009)	Zone 1	499 006	6x 103 101	141 km/h	116 km/h	912 760
	Zone 2	499 006	6x 103 110	153 km/h	125 km/h	912 098
	Zone 3	499 006	6x 103 118	168 km/h	137 km/h	912 765
8.0m (Ord. no. 912 010)	Zone 1	499 006	6x 103 118	147 km/h	120 km/h	912 099
	Zone 2	499 006	6x 103 118	147 km/h	120 km/h	
	Zone 3	499 007	10x 103 118	183 km/h	149 km/h	
9.0m (Ord. no. 912 011)	Zone 1	499 007	10x 103 118	163 km/h	133 km/h	914 185
	Zone 2	499 007	10x 103 118	163 km/h	133 km/h	
	Zone 3	499 007	10x 103 118	163 km/h	133 km/h	
10.0m (Ord. no. 912 013)	Zone 1	499 007	10x 103 118	141 km/h	115 km/h	914 186
	Zone 2	499 007	10x 103 118	141 km/h	115 km/h	
	Zone 3	on request				
11.0m (Ord. no. 912 015)	Zone 1	499 009 / complete SET		181 km/h	141 km/h	912 061
	Zone 2	499 009 / complete SET		181 km/h	141 km/h	
	Zone 3	on request				
12.0m (Ord. no. 912 019)	Zone 1	499 009 / complete SET		177 km/h	145 km/h	912 070
	Zone 2	499 009 / complete SET		177 km/h	145 km/h	
	Zone 3	on request				

Insulated lightning protection

Air termination poles for Zone 4 on request.

For the installation of air termination poles in Zone 4, further requirements regarding material (near to coast, material selection etc.) must be respected!



Air termination pole - free-standing up to a max. height of 12.0 m

Note: Air termination pole selection guide on page 131.

Air termination pole - stainless steel V2A with aluminium air termination tip. Multi-component, on each other pluggable system with screw locking.

Type	Height of pole	Pole parts	PU	Ord. no.
JP-LPH 3.0 F	3.0 m	2-part, 1.5 m / 1.5 m	1	912 000
JP-LPH 3.5 F	3.5 m	2-part, 2.0 m / 1.5 m	1	912 001
JP-LPH 4.0 F	4.0 m	2-part, 2.5 m / 1.5 m	1	912 002
JP-LPH 4.5 F	4.5 m	2-part, 3.5 m / 1.0 m	1	912 003
JP-LPH 5.0 F	5.0 m	2-part, 3.5 m / 1.5 m	1	912 004
JP-LPH 5.5 F	5.5 m	2-part, 4.0 m / 1.5 m	1	912 005
JP-LPH 6.0 F	6.0 m	3-part, 2.0 m / 2.0 m / 2.0 m	1	912 006
JP-LPH 6.5 F	6.5 m	3-part, 2.5 m / 2.0 m / 2.0 m	1	912 007
JP-LPH 7.0 F	7.0 m	3-part, 3.0 m / 2.0 m / 2.0 m	1	912 008
JP-LPH 7.5 F	7.5 m	3-part, 3.5 m / 2.0 m / 2.0 m	1	912 009
JP-LPH 8.0 F	8.0 m	3-part, 4.0 m / 2.0 m / 2.0 m	1	912 010
JP-LPH 9.0 F	9.0 m	3-part, 4.0 m / 2.5 m / 2.5 m	1	912 011
JP-LPH 10.0 F	10.0 m	3-part, 5.0 m / 2.5 m / 2.5 m	1	912 013
JP-LPH 11.0 F	11.0 m	3-part, 5.0 m / 3.5 m / 2.5 m	1	912 015
JP-LPH 12.0 F	12.0 m	3-part, 6.0 m / 3.5 m / 2.5 m	1	912 019

Additional air termination pole heights on request!

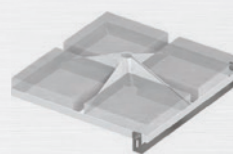
Air termination pole base frame with roof inclination adjustment up to 5°.

For concrete bases 300 x 300 mm to position air termination poles \varnothing 42 mm (e.g. 111 496).

Specification	Footprint	PU	Ord. no.
Stainless steel V2A	ca. 650 x 650 mm	1	499 000
Support plate (one side aluminium-laminated)	ca. 650 x 650 mm	1	499 010
Roof inclination adjustment, inclination up to 10°		1	499 700

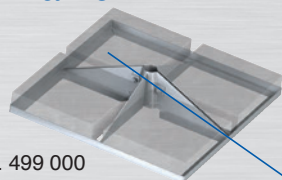


Roof inclination adjustment up to 5°



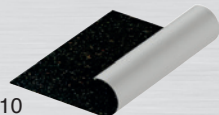
Roof inclination adjustment up to 10°
Ord. no. 499 700.

Air termination pole base frame



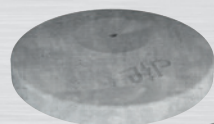
Ord. no. 499 000

Support plate

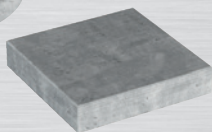


Ord. no. 499 010

Concrete base



Ord. no. 103 103



Ord. no. 499 100

Concrete base

Specification	Weight	PU	Ord. no.
Concrete base round	12 kg	1	103 103
with female thread M16	16 kg	1	103 101
for the base frame	20 kg	1	103 110
	25 kg	1	103 118
Concrete base, 300 x 300 x 60 mm	12 kg	1	499 100
Concrete base, 300 x 300 x 80 mm	16 kg	1	499 101
Support plate, plastic black - without plasticizer		1	103 102

Air termination rod SET - stainless steel V2A with air termination tip aluminium.

with stainless steel V2A angular frame V2A 50x50x5mm for 2 or 3 concrete bases.

Specification	Footprint (mm)	Concrete base (optional)	Wind speed Static safety factor 1.5	Height	Ord. no.
Stainless steel V2A / aluminium	ca. 930 x 380	2x 16 kg (Ord. no. 103 101)	150 km/h	2.5 m	912 500
Stainless steel V2A / aluminium	ca. 970 x 420	2x 25 kg (Ord. no. 103 118)	157 km/h	3.0 m	912 501
Stainless steel V2A / aluminium	ca. 970 x 830	3x 25 kg (Ord. no. 103 118)	147 km/h	3.5 m	912 502

Note:

Concrete bases (round) and support plates (ord. no. 103 102) must be ordered separately.

Air termination rod SET



Ord. no. 912 500



Ord. no. 912 502



Air termination pole base frame

with a 2- or 3-part base frame for roof inclinations up to 3°.

Air termination pole base frame, with **2-part base frame** and 3 safety braces for 3 round concrete bases for air termination poles \varnothing 42 mm (max. 5.5 m pole height).

Specification	Pole base frame	Footprint	PU	Ord. no.
Stainless steel V2A	2-part	ca. 1350 x 1350 mm	1	499 005

Air termination pole base frame, with **2-part base frame** and 3 safety braces for 6 round concrete bases for air termination poles \varnothing 60 mm (max. 8.0 m pole height).

Specification	Pole base frame	Footprint	PU	Ord. no.
Stainless steel V2A	2-part	ca. 1850 x 1850 mm	1	499 006

Air termination pole base frame, with **3-part base frame** and 3 safety braces for 6 round concrete bases for air termination poles \varnothing 60 mm (max. 10.0 m pole height).

Specification	Pole base frame	Footprint	PU	Ord. no.
Stainless steel V2A	3-part	ca. 1850 x 1850 mm	1	499 007

Note:

Concrete bases (round) and support plates (ord. no. 103 102) must be ordered separately.

Air termination pole base frame - SET incl. 36 concrete bases with 4 safety braces and turnbuckle. For air termination poles \varnothing 60 mm (max. 12.0 m pole height).

Specification	Footprint	PU	Ord. no.
Stainless steel V2A	ca. 3400 x 3400 mm	1	499 009

Roof inclination adjustment for air termination poles

NEW!

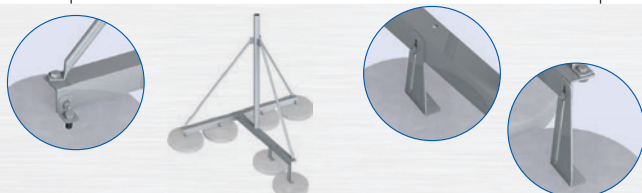
Roof inclination adjustment, complete angle SET, stainless steel V2A with screw accessories.

Specification	for base frames with 3 round concrete bases	PU	Ord. no.
Stainless steel V2A	ord. no. 499 005	1	499 500



Roof inclination adjustment, complete angle SET, stainless steel V2A with screw accessories.

Specification	for base frames with 6 round concrete bases	PU	Ord. no.
Stainless steel V2A	ord. no. 499 006	1	499 600



Base frame



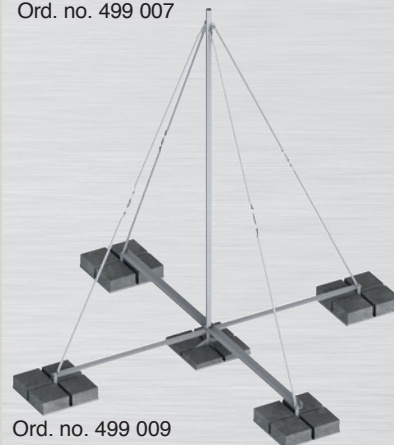
Ord. no. 499 005



Ord. no. 499 006



Ord. no. 499 007



Ord. no. 499 009



Ord. no. 499 500



Ord. no. 499 600

Insulated lightning protection



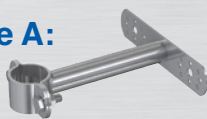
Air termination pole for wall mounting unsupported for poles up to max. 12.0 m length

Air termination pole - stainless steel V2A with aluminium air termination tip.
Multi-component, on each other pluggable system with screw locking.
Incl. connection lug with clamping screw "KS" and slip-proofing.

Height of pole	Necessary wall fastener	Pole parts	PU	Ord. no.
3.0 m	2x Type A	2-part, 1.5 m / 1.5 m	1	912 000 W
3.5 m	2x Type A	2-part, 2.0 m / 1.5 m	1	912 001 W
4.0 m	2x Type A	2-part, 2.5 m / 1.5 m	1	912 002 W
4.5 m	2x Type B	2-part, 3.5 m / 1.0 m	1	912 003 W
5.0 m	2x Type B	2-part, 3.5 m / 1.5 m	1	912 004 W
5.5 m	2x Type B	2-part, 4.0 m / 1.5 m	1	912 005 W
6.0 m	2x Type C	3-part, 2.0 m / 2.0 m / 2.0 m	1	912 006 W
6.5 m	2x Type C	3-part, 2.5 m / 2.0 m / 2.0 m	1	912 007 W
7.0 m	2x Type C	3-part, 3.0 m / 2.0 m / 2.0 m	1	912 008 W
7.5 m	2x Type C	3-part, 3.5 m / 2.0 m / 2.0 m	1	912 009 W
8.0 m	2x Type C	3-part, 4.0 m / 2.0 m / 2.0 m	1	912 010 W
9.0 m	3x Type C	3-part, 4.0 m / 2.5 m / 2.5 m	1	912 011 W
10.0 m	3x Type C	3-part, 5.0 m / 2.5 m / 2.5 m	1	912 013 W
11.0 m	3x Type C	3-part, 5.0 m / 3.5 m / 2.5 m	1	912 015 W
12.0 m	3x Type C	3-part, 6.0 m / 3.5 m / 2.5 m	1	912 019 W

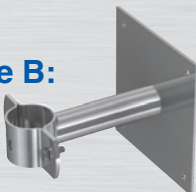
Wall fastener

Type A:



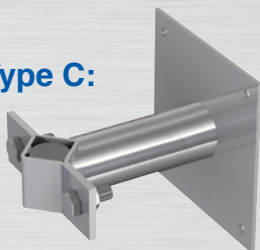
Ord. no. 490 550

Type B:



Ord. no. 490 560

Type C:



Ord. no. 490 570

Fixing anchors



Ord. no. 490 548

Wall fastener for poles with a max. height of 4.0 m and \varnothing 42 mm.
Hole pattern for rivet and screw mounting and 2 x \varnothing 10.5 mm.

Specification	Wall distance	PU	Ord. no.
Completely in stainless steel V2A for \varnothing 42 mm	150 mm	1	490 550
pole clamp with 2 x screws M10	200 mm	1	490 551
spring lock washer and nut in V2A	250 mm	1	490 552
	300 mm	1	490 553

Wall fastener for poles with a max. height of 5.5 m and \varnothing 42 mm.
Hole pattern 4x \varnothing 10,5 mm.

Specification	Wall distance	PU	Ord. no.
Completely in stainless steel V2A for \varnothing 42 mm	150 mm	1	490 560
pole clamp with 2 x screws M10,	200 mm	1	490 561
spring lock washer and nut in V2A	250 mm	1	490 562
mounting plate V2A: 200 x 200 x 8 mm	300 mm	1	490 563
hole pattern mounting plate: \square 170 x 170 mm			

Wall fastener for poles with a max. height of 12.0 m and \varnothing 60 mm.
Hole pattern 4 x \varnothing 12.5 mm.

Specification	Wall distance	PU	Ord. no.
Completely in stainless steel V2A for \varnothing 60 mm	150 mm	1	490 570
pole clamp with 2 x screws M16,	200 mm	1	490 571
spring lock washer and nut in V2A	250 mm	1	490 572
mounting plate V2A: 300 x 300 x 8 mm	300 mm	1	490 573
hole pattern mounting plate: \square 260 x 260 mm			

Fixing anchors, stainless steel V4A for wall fastener on concrete walls.

Specification	PU	Ord. no.
M10 for wall fastener Type A and Type B	1	490 548
M12 for wall fastener Type C	1	490 549



Telescopic-air termination pole, free-standing aluminium with base frame for roof inclinations up to 10°

Benefits:

- Less space required for storage and in transport vehicle (**transport / delivery length ca. 2 m**).
- Adjustment of roof inclination up to max. 10°.
- Easy transport in lifts, staircases and through roof openings.
- Shorter and easier assembly of the air termination pole with self-locking set screws M8 or M10.
- Pole heights in the SET adjustable up to 4.35 m, 5.5 m, 6.5 m & 8.0 m.
- Statically calculated according to Eurocode (EC)

Telescopic-air termination pole-SET in aluminium, freestanding incl. base frame with roof inclination adjustment, concrete bases and support plates.

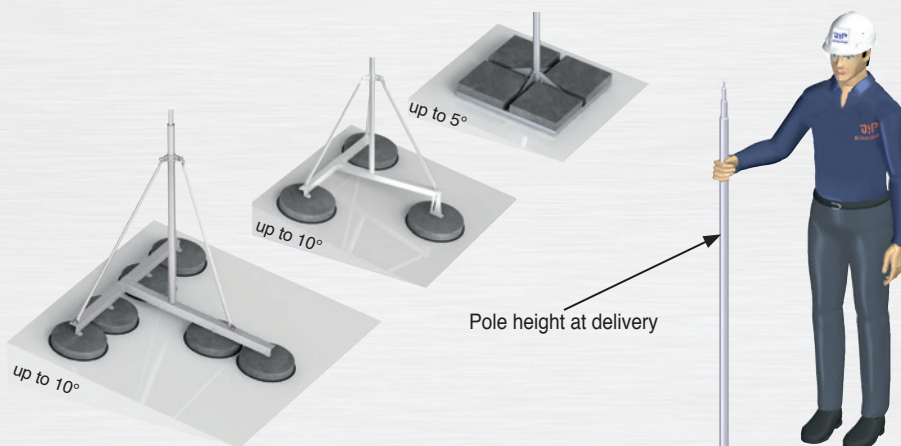
Height of pole	Pole parts	Base frame	Concrete base	Ord. no.
up to 4.35 m	4-part	499 000 (5°)	4x 16 kg	912 601
up to 5.50 m	4-part	912 300 (10°)	3x 25 kg	912 600
up to 6.50 m	5-part	912 310 (10°)	6x 12 kg	912 602
up to 8.00 m	6-part	912 311 (10°)	6x 25 kg	912 603

Note: The air termination pole base frame must be secured against slipping from a roof inclination of 5°.

Roof inclination adjustment up to 10° (ord. no. 499 700) for the base frame (ord. no. 499 000) see on page 132.

Wind speed according to Eurocode:

Height of pole	SET ord. no.	Wind speed	
		Static safety factor 1.0	Static safety factor 1.5
up to 4.35 m	912 601	146 km/h	119 km/h
up to 5.50 m	912 600	161 km/h	130 km/h
up to 6.50 m	912 602	142 km/h	116 km/h
up to 8.00 m	912 603	155 km/h	127 km/h



NEW!



Telescopic-air termination pole aluminium for wall mounting unsupported up to 6.5 m air termination pole height (mounting length 1.5m)

Height of pole	Pole parts	Necessary wall fastener	PU	Ord. no.
up to 4.35 m	4-part	2x Type A, (on page 134)	1	912 401
up to 5.35 m	4-part	2x Type B, (on page 134)	1	912 400
up to 6.50 m	5-part	2x Type C, (on page 134)	1	912 402
up to 8.00 m	6 part	2x Type C, (on page 134)	1	912 403

Ord. no. 912 603



Lightning protection - air termination pole

for block foundations

This system was developed to protect objects and installations, such as areas with potentially explosive atmospheres, power distributors, transformer stations, biogas plants or other facilities with especially hazardous areas.

To ensure compliance with the valid standard EN 62305 1-4 we recommend the installation of an insulated lightning air termination system using air termination poles. With this method, it is also possible to completely encase larger objects within a protective zone and avoid bridging horizontally installed air termination conductors.

The air termination pole is embedded in a concrete block foundation that must be prefabricated on site according to our instructions. Please request our data sheet JP-LPH/BFM, with all the important information about the block foundation.

Lightning protection pole - Steel, hot galvanized (inside and outside). Multi-part, conic pluggable system with air termination rod (0.3 m - 1.5 m) and earthing connection.

Type	Height (H)	Pole diameter		Weight (entire pole)	Parts	Ord. no.
		top	bottom			
JP-LPH 9.5	9.5 m	58 mm	153 mm	ca. 100 kg	3 -part	920 700
JP-LPH 10.5	10.5 m	58 mm	153 mm	ca. 101 kg	3 -part	920 701
JP-LPH 11.5	11.5 m	89 mm	189 mm	ca. 158 kg	3 -part	920 702
JP-LPH 14.0	14.0 m	58 mm	189 mm	ca. 181 kg	4 -part	920 703
JP-LPH 15.0	15.0 m	89 mm	224 mm	ca. 256 kg	4 -part	920 704
JP-LPH 16.0	16.0 m	89 mm	224 mm	ca. 257 kg	4 -part	920 705
JP-LPH 17.5	17.5 m	108 mm	264 mm	ca. 361 kg	4 -part	920 706
JP-LPH 18.5	18.5 m	108 mm	264 mm	ca. 362 kg	4 -part	920 707
JP-LPH 20.5	20.5 m	89 mm	264 mm	ca. 385 kg	5 -part	920 708
JP-LPH 22.0	22.0 m	139 mm	344 mm	ca. 737 kg	3 -part	920 709
JP-LPH 25.0	25.0 m	108 mm	344 mm	ca. 790 kg	4 -part	920 710
JP-LPH 28.0	28.0 m	89 mm	344 mm	ca. 813 kg	5 -part	920 711

Note:

All air termination poles are suitable for Wind Zone 2 up to 150 km/h. Wind Zone 3/4 and other dimensions on request.



Insulated lightning protection



Lightning protection - air termination pole – SET with prefabricated concrete foundation

Benefits:

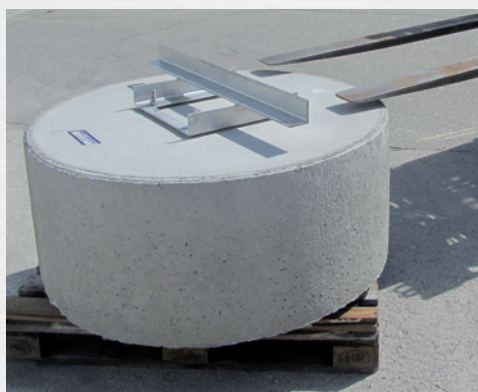
- Air termination pole entirely in stainless steel.
- Prefabricated foundation including transport aid.
- Air termination pole max. 4m pole-part length.
- No trench works.
- Statically tested, taking into account
 - Ice accretion.
 - Gust reaction factor.
 - Static safety factor 1.5, required due to building authorities.
- Everything from one source.

Air termination pole - SET with flange plate, complete in stainless steel with aluminium tip and prefabricated foundation for max. Wind Zone 2 including transport aid.

Type	Height (H)	Foundation	Total weight	Ord. no.
JP-BFF 10.0	10.0 m	ø 0.96 m / FH 0.5 m	ca. 970 kg	912 200
JP-BFF 11.0	11.0 m	ø 0.96 m / FH 0.5 m	ca. 975 kg	912 201
JP-BFF 12.0	12.0 m	ø 0.96 m / FH 0.5 m	ca. 985 kg	912 202
JP-BFF 13.0	13.0 m	ø 1.16 m / FH 0.5 m	ca. 1420 kg	912 203
JP-BFF 14.0	14.0 m	ø 1.16 m / FH 0.5 m	ca. 1425 kg	912 204
JP-BFF 15.0	15.0 m	ø 1.16 m / FH 0.75 m	ca. 2030 kg	912 205
JP-BFF 16.0	16.0 m	ø 1.16 m / FH 0.75 m	ca. 2085 kg	912 206
JP-BFF 17.0	17.0 m	ø 1.16 m / FH 1.0 m	ca. 2790 kg	912 207
JP-BFF 18.0	18.0 m	ø 1.16 m / FH 1.0 m	ca. 2800 kg	912 208

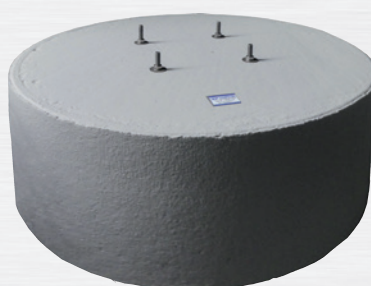
Note:

All air termination poles are suitable for Wind Zone 2 up to 150 km/h.
Wind Zone 3/4 and other dimensions on request.



Prefabricated foundation incl. transport aid

Prefabricated foundation with 4 anchors made of stainless steel (M16 or M20) for easy installation of the air termination pole.



Air termination pole -SET



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