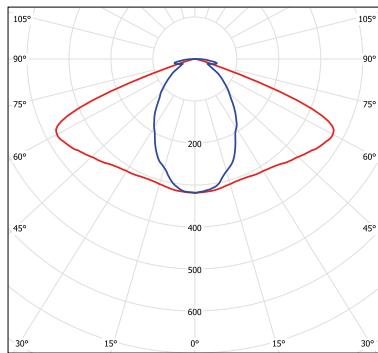


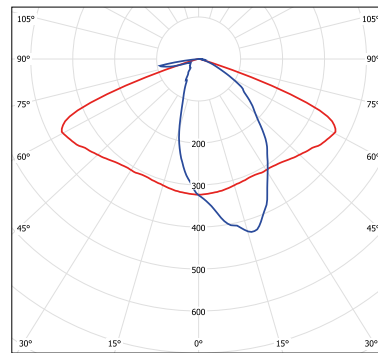
PARK LIGHTING / PARK LUMINAIRES

DROP LED

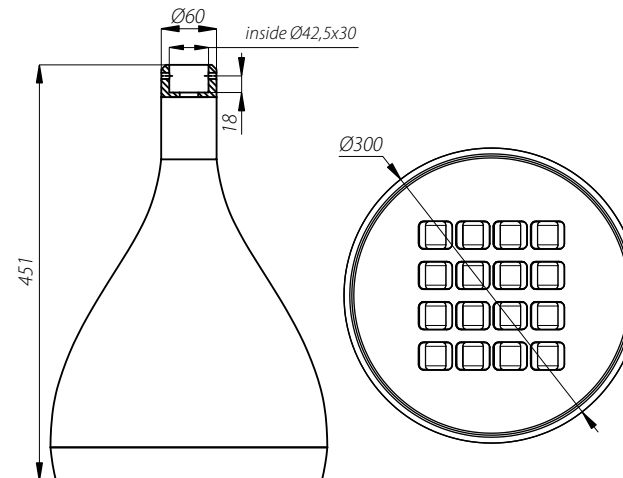
- protection degree: IP66
- insulation class: II
- supply voltage: 120-277 V AC, 50/60 Hz
- light source: CREE XM-L2
- material: anodised aluminium alloy
- colour: inox/graphite
- assembly: on extension arm or wall bracket with spigot ending $\varnothing 42$ mm length 30 mm
- recommended assembly height: 5-6 m
- luminaire is adapted to work in temperatures between -40°C and $+40^{\circ}\text{C}$



Light distribution curve for luminaire DROP LED, symmetric



Light distribution curve for luminaire DROP LED, asymmetric



Luminaire DROP LED on column 5 m high with extension arm (set DROP I LED)

Name	The colour temperature of light [K]	Code	Power / Number of LEDs [W/pcs]	Total power [W]	Luminous flux [lm]*	Lighting efficiency [lm/W]	Weight [kg]
DROP LED 48	5 000	214933/6/A 214933/6/S	48/16	55	6 650	121	6,5
	3 500	214933/3/A 214933/3/S			5 200	95	

* due to LED precision class, the value tolerance is +/-3%

A – asymmetric optical system

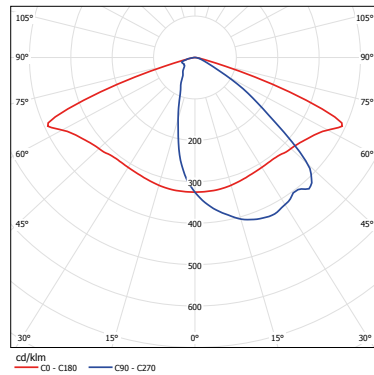
S – symmetric optical system



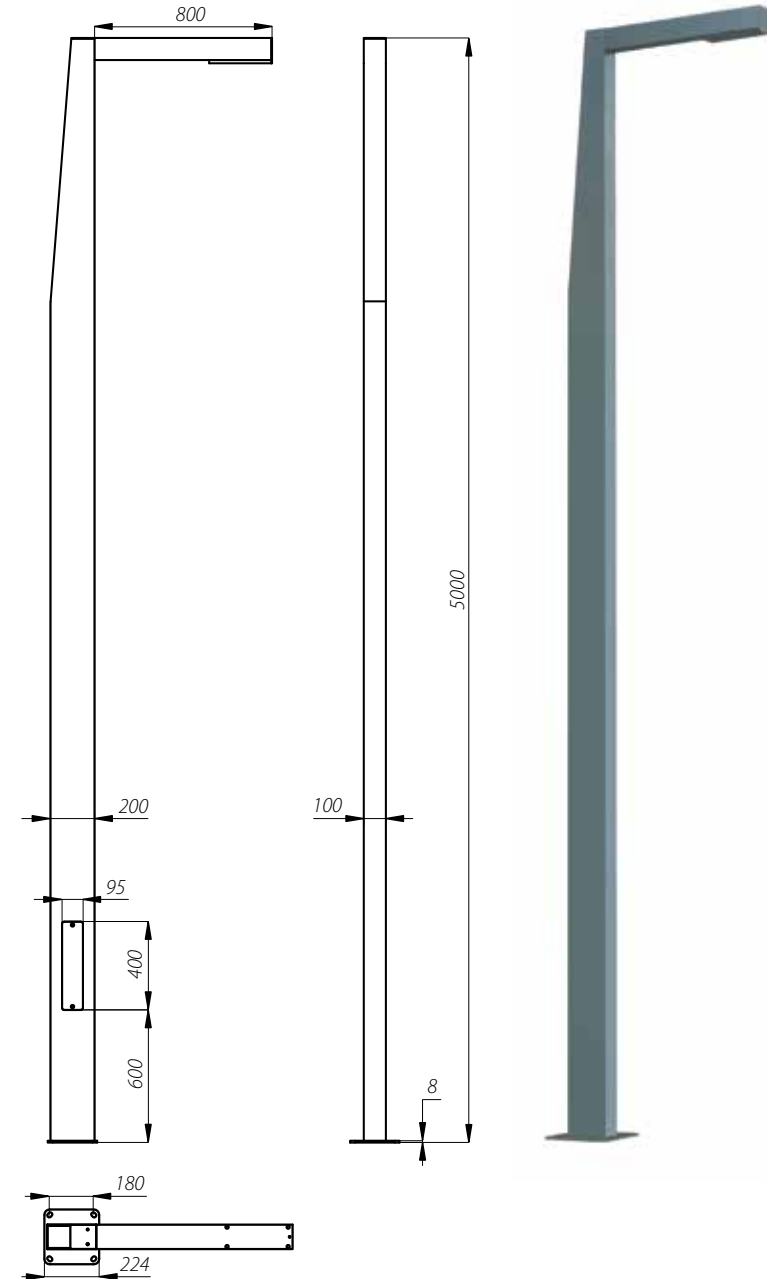
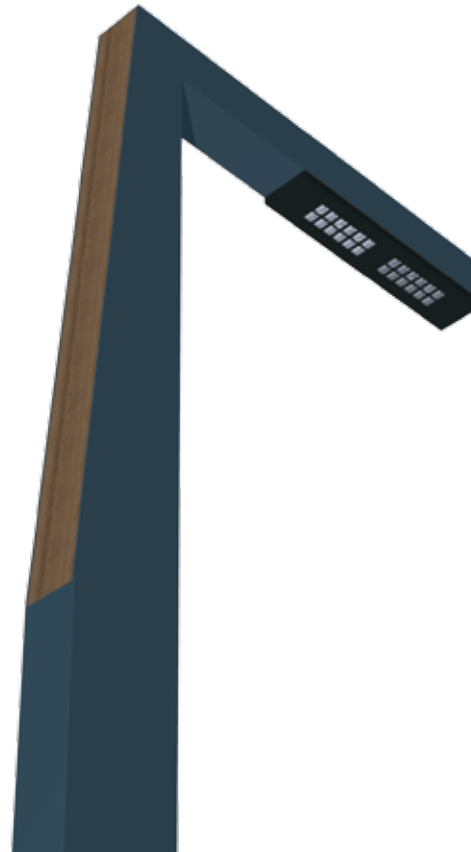
PARK LIGHTING

CORE LED

- protection degree: IP66
- insulation class: II
- supply voltage: 120-277 V AC, 50/60 Hz
- light source: CREE XT-E
- material: anodised aluminium alloy
- standard colour: graphite/black
- assembly: upwards or downwards
 - decorative element made of exotic wood
- luminaire is adapted to work in temperatures between -40°C and +55°C



Light distribution curve for CORE LED



Name	Colour temperature [K]	Code	Power / number of LEDs [W/pcs]	Total power [W]	Luminous flux [lm]*	Lighting efficiency [lm/W]	Concrete footing/Reinforcement basket
CORE LED 24	5 000	216530/6	24/12	31	2 300	74	B-50 / Z-50
CORE LED 48	5 000	216533/6	48/24	55	4 550	83	B-50 / Z-50

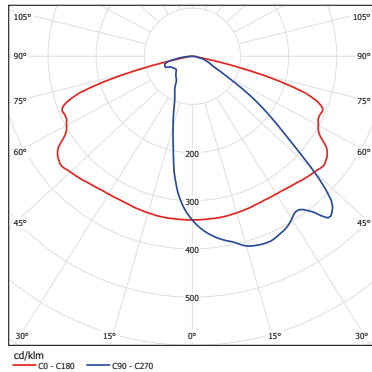
* due to LED precision class, the value tolerance is +/-3%



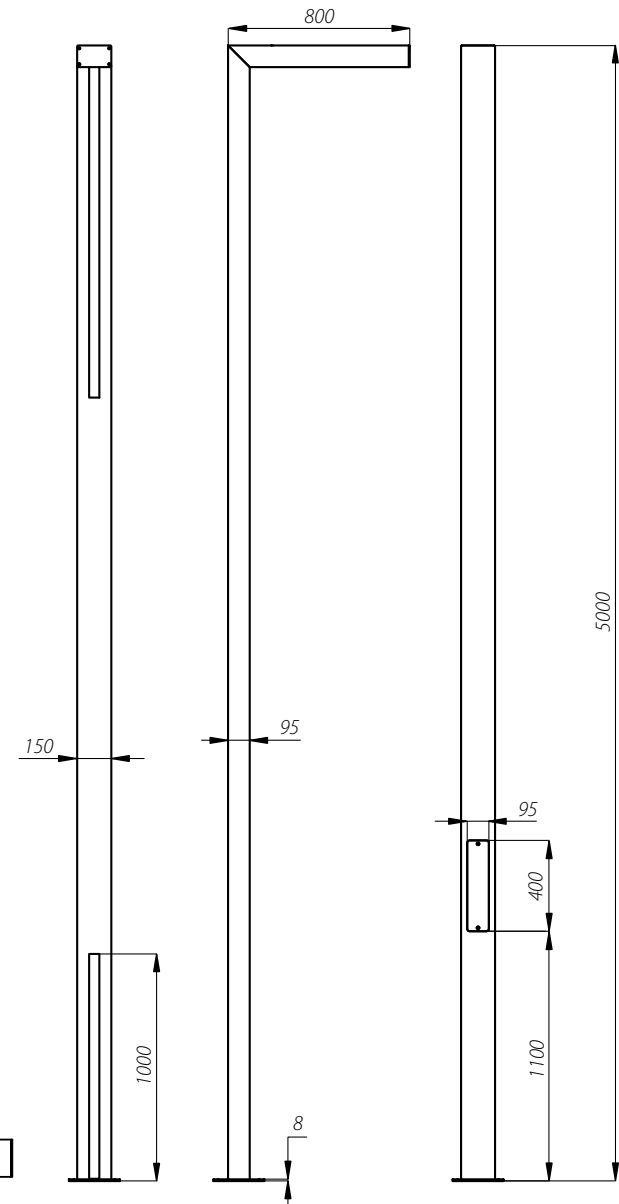
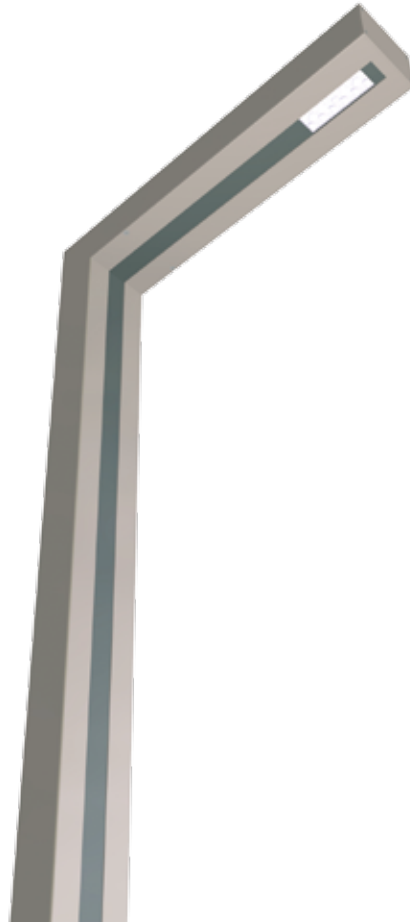
PARK LIGHTING

CUT LED

- protection degree: IP66
- insulation class: II
- supply voltage: 120-277 V AC, 50/60 Hz
- light source: CREE XT-E
- material: anodised aluminium alloy
- standard colour: inox
- decorative element made of aluminium in grey colour or PMMA (possibility to make decorative backlight of decorative elements)
- luminaire is adapted to work in temperatures between -40°C and +55°C



Light distribution curve for CUT LED



Name	Colour temperature [K]	Code	Power / number of LEDs [W/pcs]	Total power [W]	Luminous flux [lm]*	Lighting efficiency [lm/W]	Concrete footing/Reinforcement basket
CUT LED 24	5 000	216030/6	24/12	31	2 300	74	B-50 / Z-50
CUT LED 48	5 000	216033/6	48/24	55	4 550	83	B-50 / Z-50

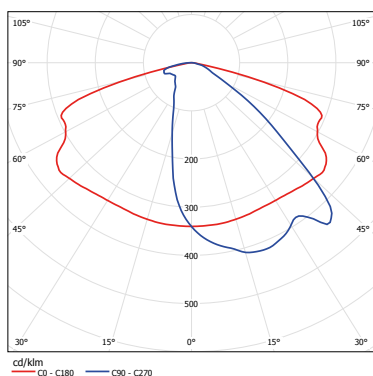
* due to LED precision class, the value tolerance is +/-3%



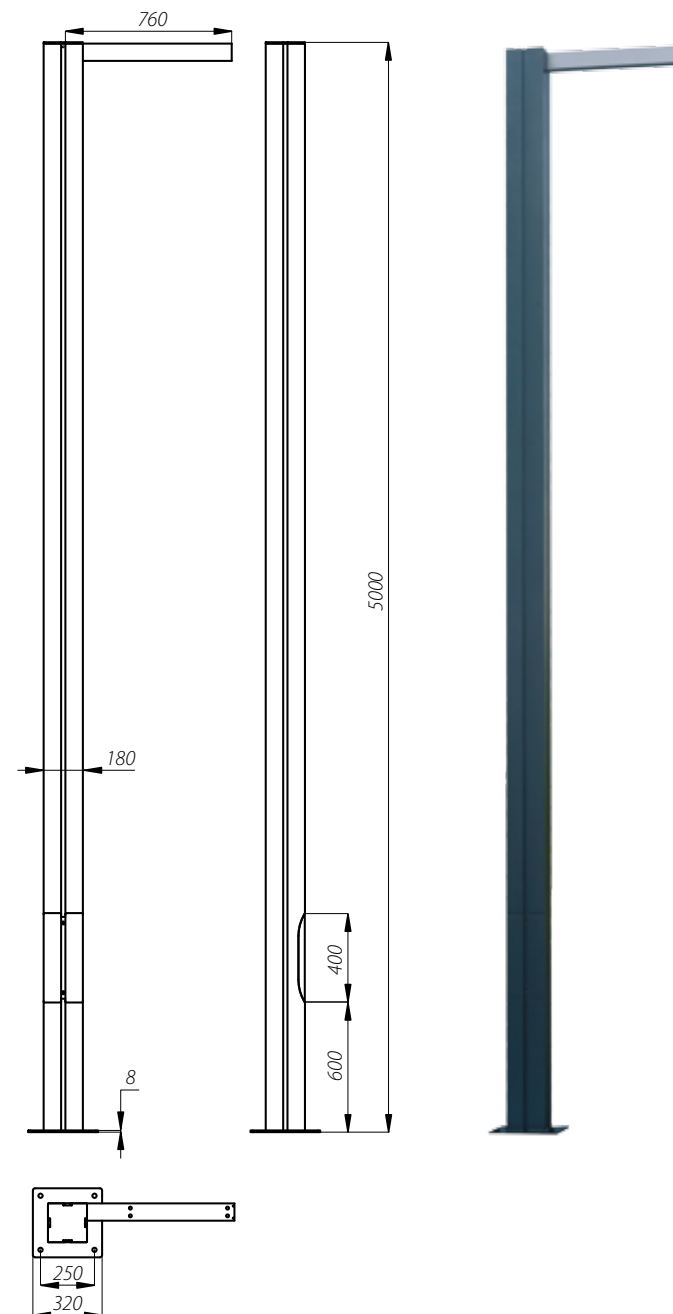
PARK LIGHTING / LIGHTING SETS

STICK LED

- protection degree: IP66
- insulation class: II
- supply voltage: 120-277 V AC, 50/60 Hz
- light source: CREE XT-E
- material: anodised aluminium alloy
- standard colour: inox/grey
- possible to produce any configuration of the lighting arms from 1 to 4
- luminaire is adapted to work in temperatures between -40°C and +55°C



Light distribution curve for STICK LED



Name	Colour temperature [K]	Code	Power / number of LEDs [W/pcs]	Total power [W]	Luminous flux [lm]*	Lighting efficiency [lm/W]	Concrete footing/Reinforcement basket
STICK LED 24	5 000	217030/6	24/12	31	2 300	74	B-60/Z-60
STICK LED 48	5 000	217033/6	48/24	55	4 550	83	
STICK II LED 24	5 000	217130/6	2 x 24/2 x 12	2 x 31	2 x 2 300	74	
STICK II LED 48	5 000	217133/6	2 x 48/2 x 24	2 x 55	2 x 4 550	83	
STICK III LED 24	5 000	217430/6	3 x 24/3 x 12	3 x 31	3 x 2 300	74	
STICK III LED 48	5 000	217433/6	3 x 48/3 x 24	3 x 55	3 x 4 550	83	
STICK IV LED 24	5 000	217630/6	4 x 24/4 x 12	4 x 31	4 x 2 300	74	
STICK IV LED 48	5 000	217633/6	4 x 48/4 x 24	4 x 55	4 x 4 550	83	

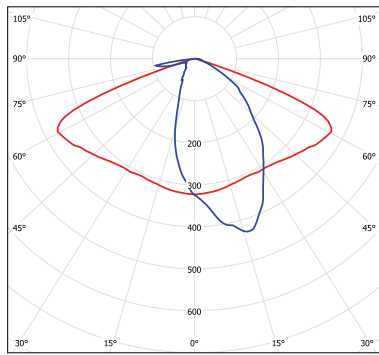
* due to LED precision class, the value tolerance is +/-3%



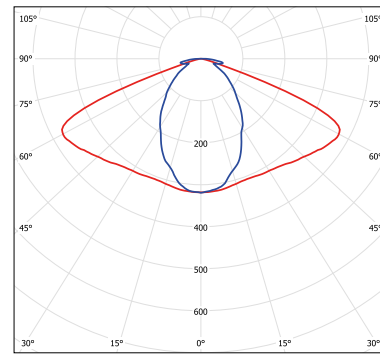
PARK LIGHTING

DROP I LED / DROP II LED

- protection degree: IP66
- insulation class: II
- supply voltage: 120-277 V AC, 50/60 Hz
- light source: CREE XM-L2
- material: anodised aluminium alloy
- standard colour: inox/graphite
- luminaire is adapted to work in temperatures between -40°C and +40°C



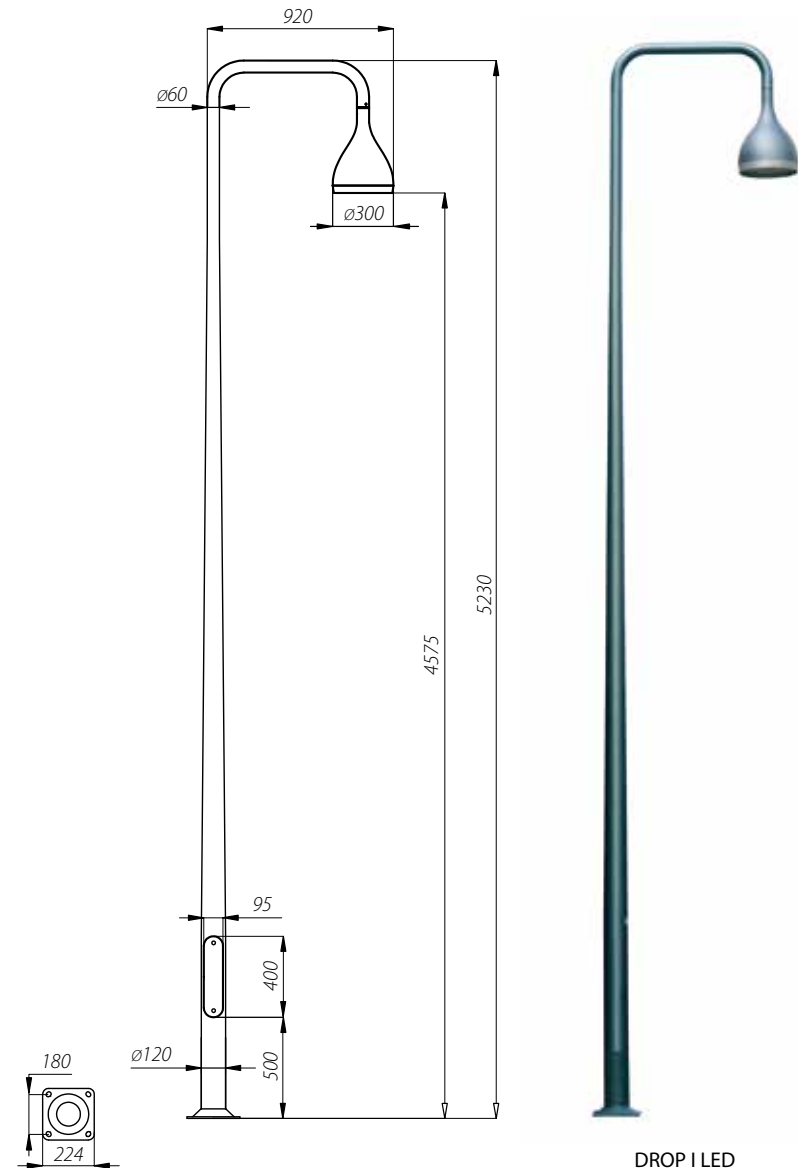
Light distribution curve for DROP I LED/DROP II LED, asymmetric



Light distribution curve for DROP I LED/DROP II LED, symmetric

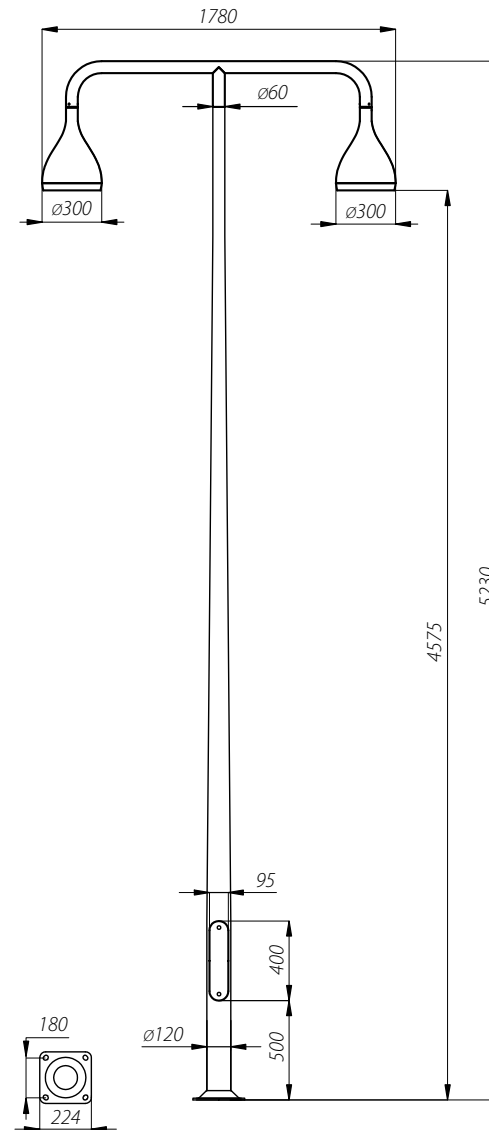
Name	Colour temperature [K]	Code	Power / number of LEDs [W/pcs]	Total power [W]	Luminous flux [lm]*	Lighting efficiency [lm/W]	Concrete footing/Reinforcement basket
DROP I LED 48	5 000	215033/6/A 215033/6/S	48 / 16	55	6 650	121	B-50 / Z-50
	3 500	215033/3/A 215033/3/S			5 200	95	
DROP II LED 48	5 000	215133/6/A 215133/6/S	2 x 48 / 2 x 16	2 x 55	2 x 6 650	121	
	3 500	215133/3/A 215133/3/S			2 x 5 200	95	

* due to LED precision class, the value tolerance is +/-3%
 S – symmetric optical system
 A – asymmetric optical system



DROP I LED

DROP I LED / DROP II LED



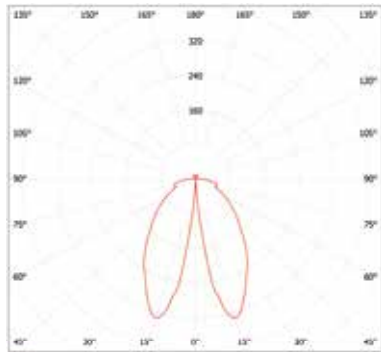
DROP II LED

PARK LIGHTING

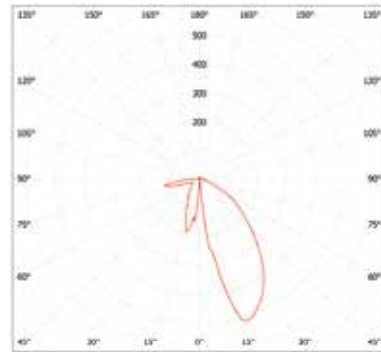
PARK LIGHTING / LIGHTING SETS

FLEXI LED

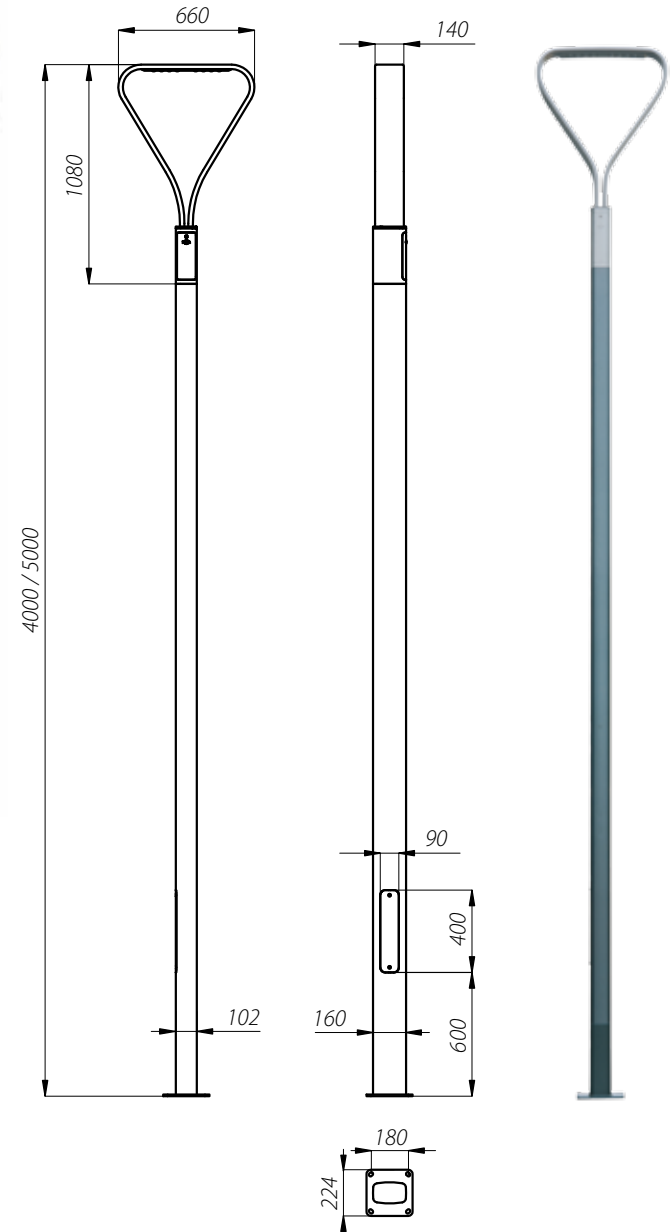
- protection degree: IP66
- insulation class: II
- supply voltage:
 - 120-277 V AC, 50/60 Hz (FLEXI LED 48)
 - 220-240 V AC, 50/60 Hz (FLEXI LED 24)
- light source: CREE XT-E
- material: anodised aluminium alloy
- standard colour: inox/graphite
- luminaire is adapted to work in temperatures between -40°C and +55°C



Light distribution curve for FLEXI LED, symmetric



Light distribution curve for FLEXI LED, asymmetric



Name	Colour temperature [K]	Code	Power / number of LEDs [W/pcs]	Total power [W]	Luminous flux [lm]*	Lighting efficiency [lm/W]	Concrete footing/Reinforcement basket
FLEXI LED 24	5 000	215530/6/S	24 / 8	28	2 550	88	B-50 / Z- 50
		215530/6/A			2 350	81	
	3 500	215530/3/S			2 000	69	
		215530/3/A			1 850	64	
FLEXI LED 48	5 000	215533/6/S	48 / 16	55	5 100	93	
		215533/6/A			4 700	85	
	3 500	215533/3/S			3 950	72	
		215533/3/A			3 700	67	

* due to the precision class of diodes tolerance is +/-3%

S – symmetric optics

A – asymmetric optics

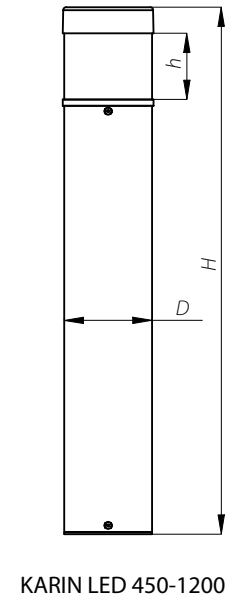
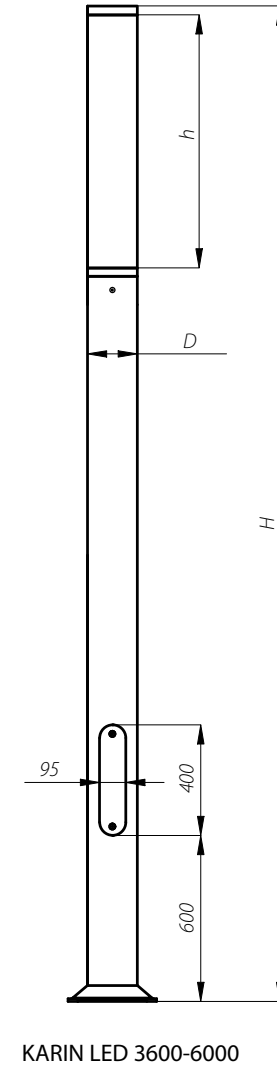


PARK LIGHTING

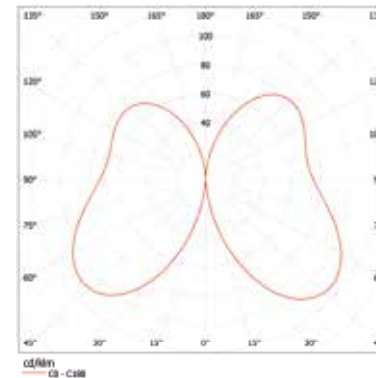
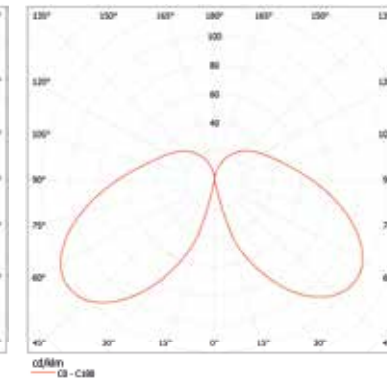
PARK LIGHTING / LIGHTING COLUMNS

KARIN LED

- protection degree: IP65
- insulation class: II
- supply voltage:
 - 100-240 V AC, 50/60 Hz (KARIN 450-1200 LED)
 - 120-277 V AC, 50/60 Hz (KARIN 2400-6000 LED)
- light source: CREE XT-E
- lamp-diffuser: frosted PMMA
- material: anodised aluminium alloy



KARIN LED


 Light distribution curve for column
KARIN LED 4800

 Light distribution curve for column
KARIN LED 450-1200

Name	Colour temperature [K]	Code	Power / number of LEDs [W/pcs]	Total power [W]	Luminous flux [lm]*	Lighting efficiency [lm/W]	Height H [mm]	Lamp-diffuser height h [mm]	Diameter D [mm]	Concrete footing/Reinforcement basket				
KARIN 450 LED	5 000	45200/6/C..	16/8	21	1 050	50	450	113	150	B-0 / Z-0				
	3 500	45200/3/C..			1 000	48								
KARIN 600 LED	5 000	45210/6/C..			1 050	50	600							
	3 500	45210/3/C..			1 000	48								
KARIN 900 LED	5 000	45220/6/C..			1 050	50	900							
	3 500	45220/3/C..			1 000	48								
KARIN 1200 LED	5 000	45230/6/C..			1 050	50	1200			B-0A / Z-0A				
	3 500	45230/3/C..			1 000	48								
KARIN 1200W LED	5 000	45232/6/C..			1 050	50								
	3 500	45232/3/C..			1 000	48								
KARIN 2400 LED	5 000	45240/6/C..			32 / 16	39	2 150			55	2 400	908	150	B-50 / Z-50
KARIN 3600 LED	5 000	45250/6/C..			48 / 24	58	4 550			78	3 600	915	180	B-60 / Z-60
KARIN 4800 LED	5 000	45260/6/C..	88 / 44	100	7 100	71	4 800	915	200	B-60 / Z-60				
KARIN 6000 LED	5 000	45270/6/M	116 / 58	134	9 150	68	6 000	915	300	B-71 / Z-71				

C... – choice of anodising colour

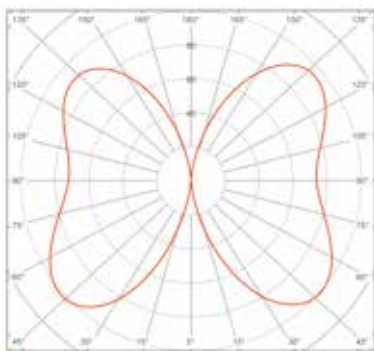
M – painted according RAL palette

* due to the precision class of diodes tolerance is +/-3%

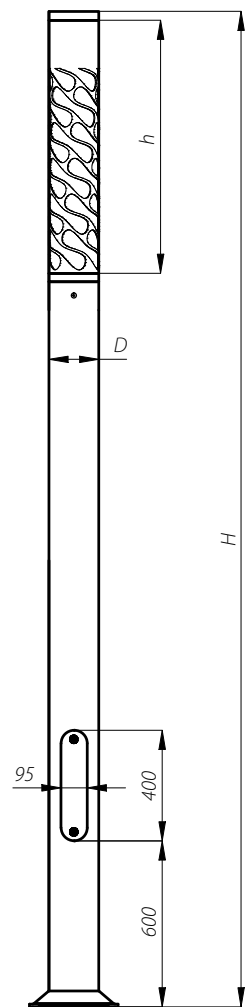
PARK LIGHTING / LIGHTING COLUMNS

KARIN DECOR LED

- protection degree: IP65
- insulation class: II
- supply voltage: 100-277 V AC, 50/60 Hz (KARIN DECOR 2400-4800 LED)
- light source: CREE XT-E
- lamp-diffuser: frosted PMMA
- material: anodised aluminium alloy
- decorative element on the lamp diffuser



Light distribution curve for columns
KARIN DECOR LED



KARIN DECOR LED 3600-4800



Name	Colour temperature [K]	Code	Power / number of LEDs [W/ pcs]	Total power [W]	Luminous flux [lm]*	Lighting efficiency [lm/W]	Height H [mm]	Lamp-diffuser height h [mm]	Diameter D [mm]	Concrete footing/Reinforcement basket
KARIN DECOR 2400 LED	5 000	45241/6/C..	32/16	39	1 600	41	2 400	908	150	B-50 / Z-50
KARIN DECOR 3600 LED	5 000	45251/6/C..	48/24	58	3 400	59	3 600	915	180	B-60 / Z-60
KARIN DECOR 4800 LED	5 000	45261/6/C..	88/44	100	5 350	54	4 800	915	200	B-60 / Z-60

* due to the precision class of diodes tolerance is +/-3%
C... – choice of anodising colour



PARK LIGHTING

SA BOLLARDS

SAM bollards – white cylindrical diffuser PC-UV

SAP bollards – transparent cylindrical diffuser PC-UV with steel louvre reflector

Types of bollards:

on concrete footing and rooted (marked "dz" in the name)
with round and flat cap (marked .../P in the product code)

Types of light sources:

S – sodium: 50W, 70W

MH – metal halide 70W, 100W

E/Z – 23W compact fluorescent lamps

Technical information:

- protection degree: IP65
- insulation class: II
- supply voltage: 230 V AC, 50 Hz

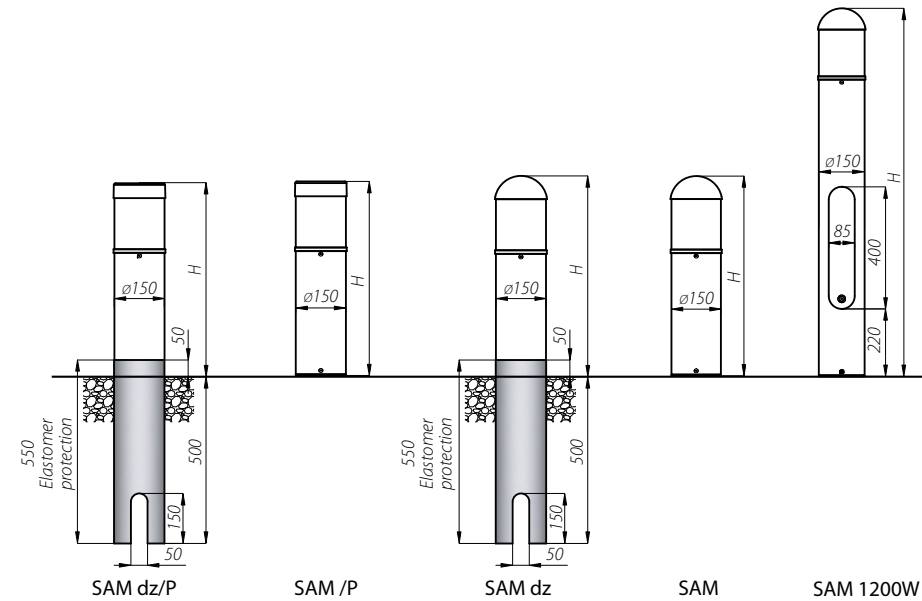


Name	Light source Cap	Code						Height H [mm]	Concrete footing
		S-50W E-27	S-70W E-27	MH-70W E-27	MH-70W Electronic E-27	MH-100W E-27	Fluorescent lamp 23W E-27		
SAM 600	round	45001/C..	45002/C..	45002/C..	45003E/C..	45004/C..	45006/C..	600	B-0, B-0A Z-0, Z-0A
	flat	45001/C../P	45002/C../P	45002/C../P	45003E/C../P	45004/C../P	45006/C../P	580	
SAM 600 dz	round	45060/C..	45061/C..	45062/C..	45062E/C..	45063/C..	45066/C..	600	X
	flat	45060/C../P	45061/C../P	45062/C../P	45062E/C../P	45063/C../P	45066/C../P	580	
SAM 900	round	45008/C..	45009/C..	45010/C..	45010/C..	45011/C..	45014/C..	900	B-0, B-0A Z-0, Z-0A
	flat	45008/C../P	45009/C../P	45010/C../P	45010/C../P	45011/C../P	45014/C../P	880	
SAM 900 dz	round	45067/C..	45068/C..	45069/C..	45069E/C..	45070/C..	45073/C..	900	X
	flat	45067/C../P	45068/C../P	45069/C../P	45069E/C../P	45070/C../P	45073/C../P	880	
SAM 1200	round	45015/C..	45016/C..	45017/C..	45017E/C..	45018/C..	45021/C..	1 200	B-0A / Z-0A
	flat	45015/C../P	45016/C../P	45017/C../P	45017E/C../P	45018/C../P	45021/C../P	1 180	
SAM 1200 dz	round	45074/C..	45075/C..	45076/C..	45076E/C..	45077/C..	45080/C..	1 200	X
	flat	45074/C../P	45075/C../P	45076/C../P	45076E/C../P	45077/C../P	45080/C../P	1 180	
SAM 1200 W	round	45022/C..	45023/C..	45024/C..	45024E/C..	45025/C..	45028/C..	1 200	B-0A / Z-0A
	flat	45022/C../P	45023/C../P	45024/C../P	45024E/C../P	45025/C../P	45028/C../P	1 180	
SAM 1200 W dz	round	45081/C..	45082/C..	45083/C..	45083E/C..	45084/C..	45087/C..	1 200	X
	flat	45081/C../P	45082/C../P	45083/C../P	45083E/C../P	45084/C../P	45087/C../P	1 180	

C... – choice of anodising colour. W – bollard with niche chamber.



SA BOLLARDS

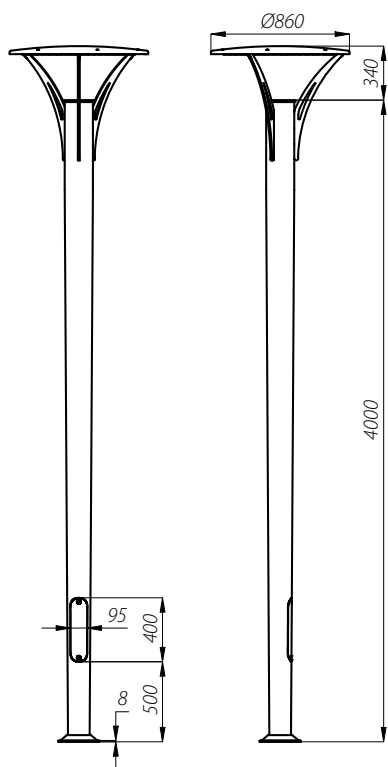


Name	Light source Cap	Code						Height H [mm]	Concrete footing
		S-50W E-27	S-70W E-27	MH-70W E-27	MH-70W Electronic E-27	MH-100W E-27	Fluorescent lamp 23W E-27		
SAP 600	round	45030/C..	45031/C..	45032/C..	45032E/C..	45033/C..	45036/C..	600	B-0, B-0A Z-0, Z-0A
	flat	45030/C../P	45031/C../P	45032/C../P	45032E/C../P	45033/C../P	45036/C../P	580	
SAP 600 dz	round	45088/C..	45089/C..	45090/C..	45090E/C..	45091/C..	45094/C..	600	X
	flat	45088/C../P	45089/C../P	45090/C../P	45090E/C../P	45091/C../P	45094/C../P	580	
SAP 900	round	45037/C..	45038/C..	45039/C..	45039E/C..	45040/C..	45043/C..	900	B-0, B-0A Z-0, Z-0A
	flat	45037/C../P	45038/C../P	45039/C../P	45039E/C../P	45040/C../P	45043/C../P	880	
SAP 900 dz	round	45095/C..	45096/C..	45097/C..	45097E/C..	45098/C..	45101/C..	900	X
	flat	45095/C../P	45096/C../P	45097/C../P	45097E/C../P	45098/C../P	45101/C../P	880	
SAP 1200	round	45044/C..	45045/C..	45046/C..	45046E/C..	45047/C..	45050/C..	1200	B-0A / Z-0A
	flat	45044/C../P	45045/C../P	45046/C../P	45046E/C../P	45047/C../P	45050/C../P	1180	
SAP 1200 dz	round	45102/C..	45103/C..	45104/C..	45104E/C..	45105/C..	45108/C..	1200	X
	flat	45102/C../P	45103/C../P	45104/C../P	45104E/C../P	45105/C../P	45108/C../P	1180	
SAP 1200 W	round	45051/C..	45052/C..	45053/C..	45053E/C..	45054/C..	45056/C..	1200	B-0A / Z-0A
	flat	45051/C../P	45052/C../P	45053/C../P	45053E/C../P	45054/C../P	45056/C../P	1180	
SAP 1200 W dz	round	45109/C..	45110/C..	45111/C..	45111E/C..	45112/C..	45115/C..	1200	X
	flat	45109/C../P	45110/C../P	45111/C../P	45111E/C../P	45112/C../P	45115/C../P	1180	

C... – choice of anodising colour. W – bollard with niche chamber.

SAL DECO-1 / SAL DECO-1 LED

- **protection degree:** IP65
- **construction:** electrical equipment built in the upper part of the column and closed by refractory glass; cap with external reflector in the form of convex mirrored squares; 3 arms connect column with round roof
- **material:** anodised aluminium alloy



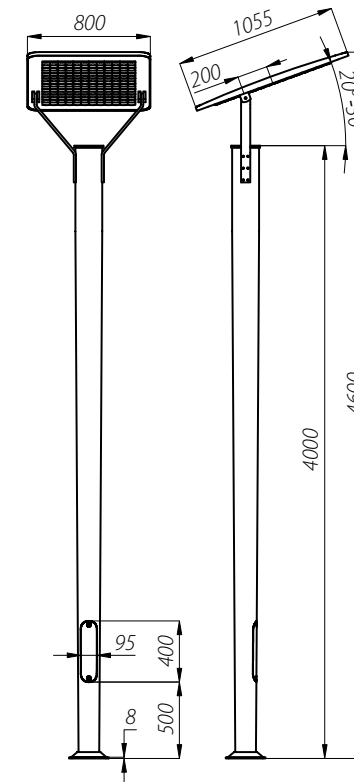
Name	Code	Light source	Insulation class	Supply voltage [V]	Supply current [A]	Power / number of LEDs [W/pcs]	Total power [W]	Luminous flux [lm]*	Concrete footing/ Reinforcement basket
SAL DECO-1	42920/C..	MH-150W lamp cap G12	I	230 V AC, 50/60 Hz	0,85	–	167	4 860	B-51A / Z-51A
SAL DECO-1 LED	42928/C..	CREE MK-R 5000 K	II	120-277 V AC, 50/60 Hz	0,7	65/8	73	7 450	B-51A / Z-51A

C... - choice of anodising colour

* due to the precision class of diodes tolerance is +/-3%

SAL DECO-2 / SAL DECO-2 LED

- **protection degree:** IP65
- **construction:** electrical equipment built in the upper part of the column and closed by refractory glass; cap with external reflector in the form of convex mirrored squares; 2 arms connect column with rectangular roof
- **material:** anodised aluminium alloy



Name	Code	Light source	Insulation class	Supply voltage [V]	Supply current [A]	Power / number of LEDs [W/pcs]	Total power [W]	Luminous flux [lm]*	Concrete footing/ Reinforcement basket
SAL DECO-2	42921/C..	MH-150W lamp cap G12	I	230 V AC, 50/60 Hz	0,85	–	167	4 600	B-51A / Z-51A
SAL DECO-2 LED	42929/C..	CREE MK-R 5000 K	II	120-277 V AC, 50/60 Hz	0,7	65/8	73	7 450	B-51A / Z-51A

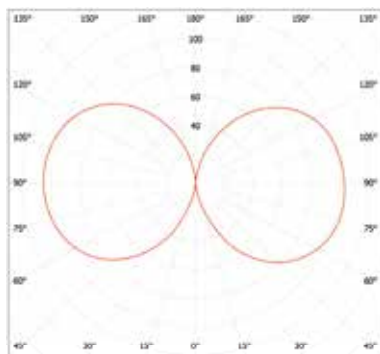
C... - choice of anodising colour

* due to the precision class of diodes tolerance is +/-3%

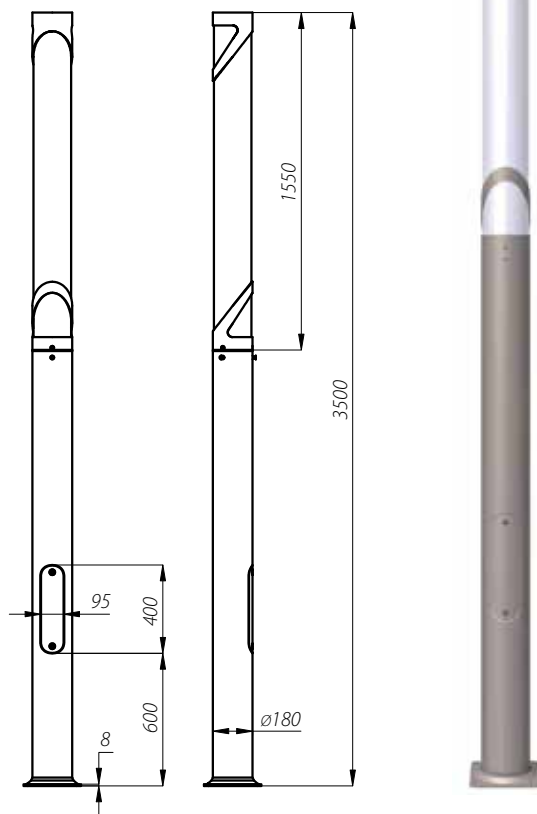


SAL DECO-3 / SAL DECO-3 LED

- **protection degree:** IP65
- cylindrical white lamp-diffuser PC-UV, aluminium decorative elements
- **material:** anodised aluminium alloy



Distribution curve for SAL DECO-3 LED



Name	Code	Light source	Insulation class	Supply voltage [V]	Supply current [A]	Power / number of LEDs [W/pcs]	Total power [W]	Luminous flux [lm]*	Concrete footing/ Reinforcement basket
SAL DECO-3	42922/C..	MH-150W lamp cap G12	I	230 V AC, 50/60 Hz	0,85	-	167	4 030	B-51/ Z-51
SAL DECO-3 LED	42923/C..	CREE XT-E 5000 K	II	120-277 V AC, 50/60 Hz	0,7	48/24	56	2 500	B-51/ Z-51

C... – choice of anodising colour

* due to the precision class of diodes tolerance is +/-3%



PARK LIGHTING



○ STREET LIGHTING

Our lighting gives the unique nature of each street. We specialize in products made of anodised aluminium, which not only protects the products against corrosion, but also gives them a decorative nature. Wide choice of street columns, extension arms, masts and luminaires will adjust the lighting to the nature of the street.

Combination of anodised aluminium technology and innovative LED light source makes that ROSA lighting is durable, economical, ecological, and at the same time aesthetic. We offer the possibility of making a complete street lighting tailored to our customers needs.

STRAIGHT COLUMNS Ø146 MM

Columns with base plate

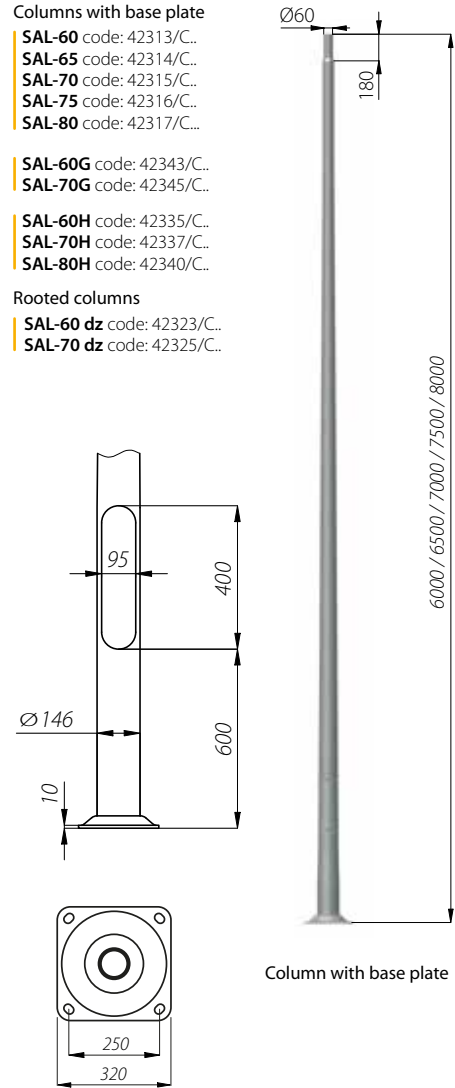
- SAL-60** code: 42313/C..
- SAL-65** code: 42314/C..
- SAL-70** code: 42315/C..
- SAL-75** code: 42316/C..
- SAL-80** code: 42317/C...

- SAL-60G** code: 42343/C..
- SAL-70G** code: 42345/C..

- SAL-60H** code: 42335/C..
- SAL-70H** code: 42337/C..
- SAL-80H** code: 42340/C..

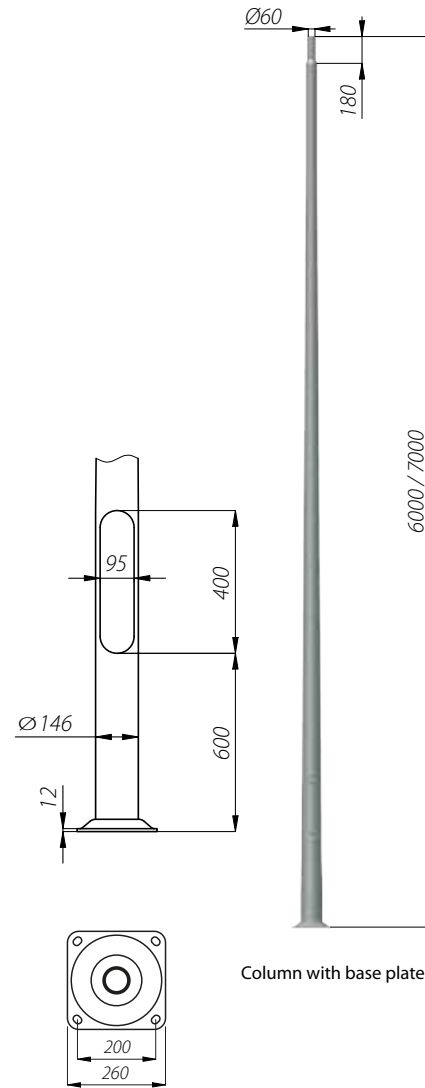
Rooted columns

- SAL-60 dz** code: 42323/C..
- SAL-70 dz** code: 42325/C..



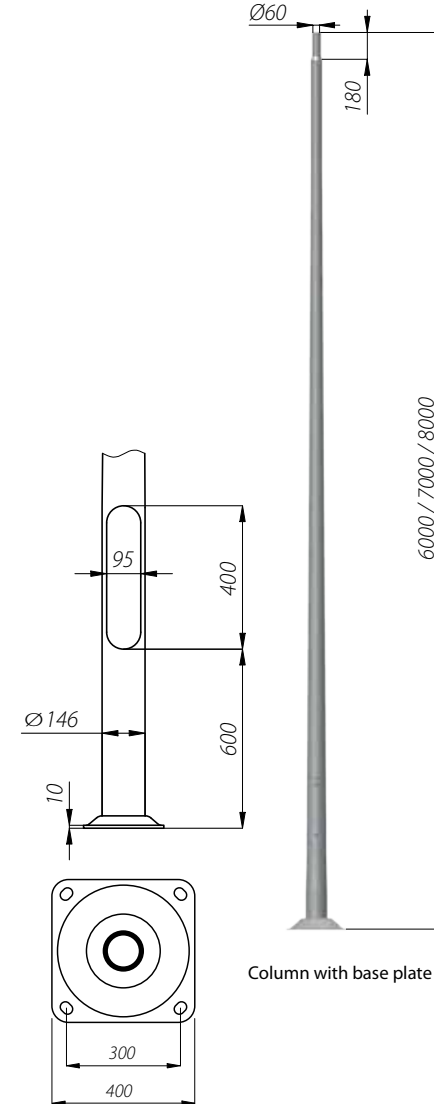
Column with base plate

SAL-...
B-60/Z-60



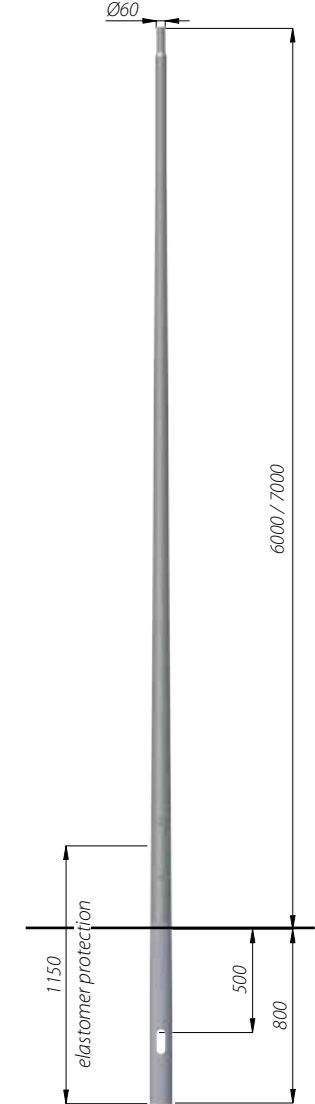
Column with base plate

SAL-...G
B-51A/Z-51A



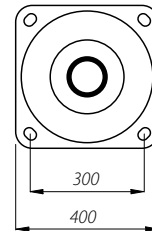
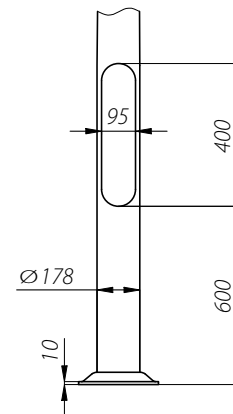
Column with base plate

SAL-...H
B-71/Z-71

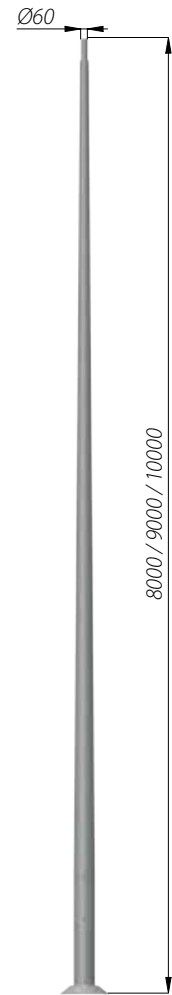


Rooted column

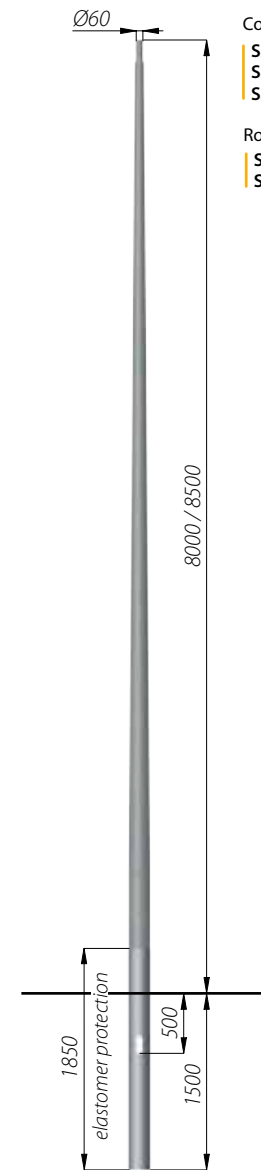
STRAIGHT COLUMNS Ø178 MM



SAL-...K
B-70/Z-70
B-71/Z-71



Column with base plate



Rooted column

Columns with base plate

- SAL-80K** code: 42630/C..
- SAL-90K** code: 42632/C..
- SAL-100K** code: 42634/C..

Rooted columns

- SAL-80K dz** code: 42606/C..
- SAL-85K dz** code: 42607/C..

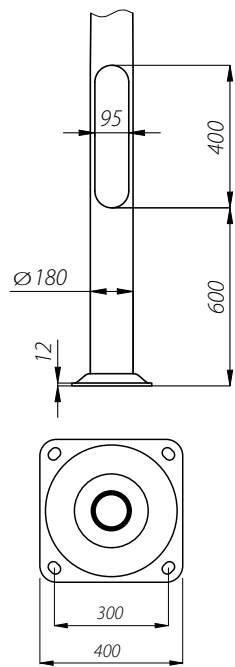
STRAIGHT COLUMNS Ø180 MM

Columns with base plate

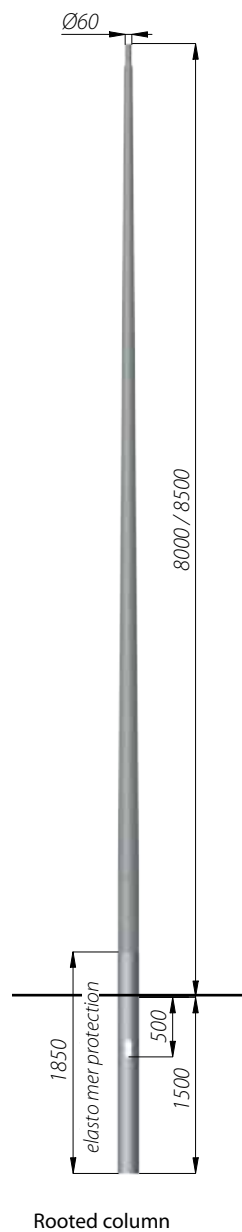
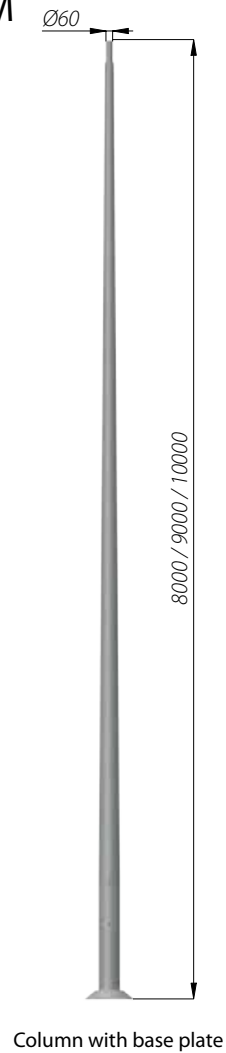
- SAL-80M** code: 42755/C..
- SAL-90M** code: 42757/C..
- SAL-100M** code: 42759/C..

Rooted columns

- SAL-80M dz** code: 42706/C..
- SAL-85M dz** code: 42707/C..



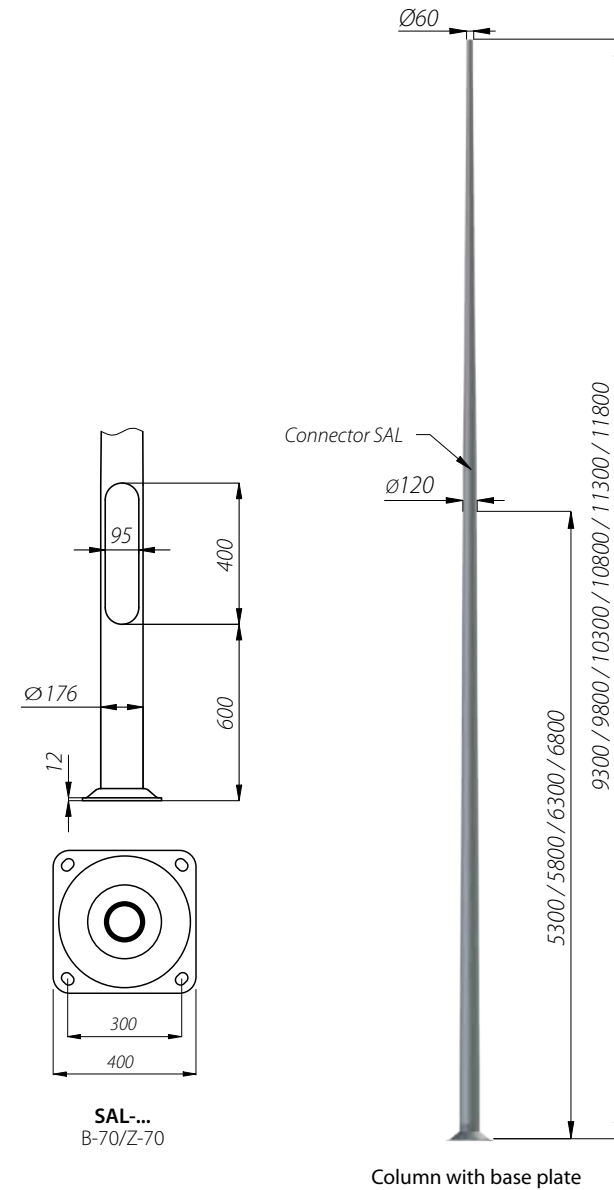
SAL-...M
B-70/Z-70
B-71/Z-71



TWO-PIECE ALUMINIUM COLUMNS Ø176 MM



Astana / Kazakhstan



Columns with base plate

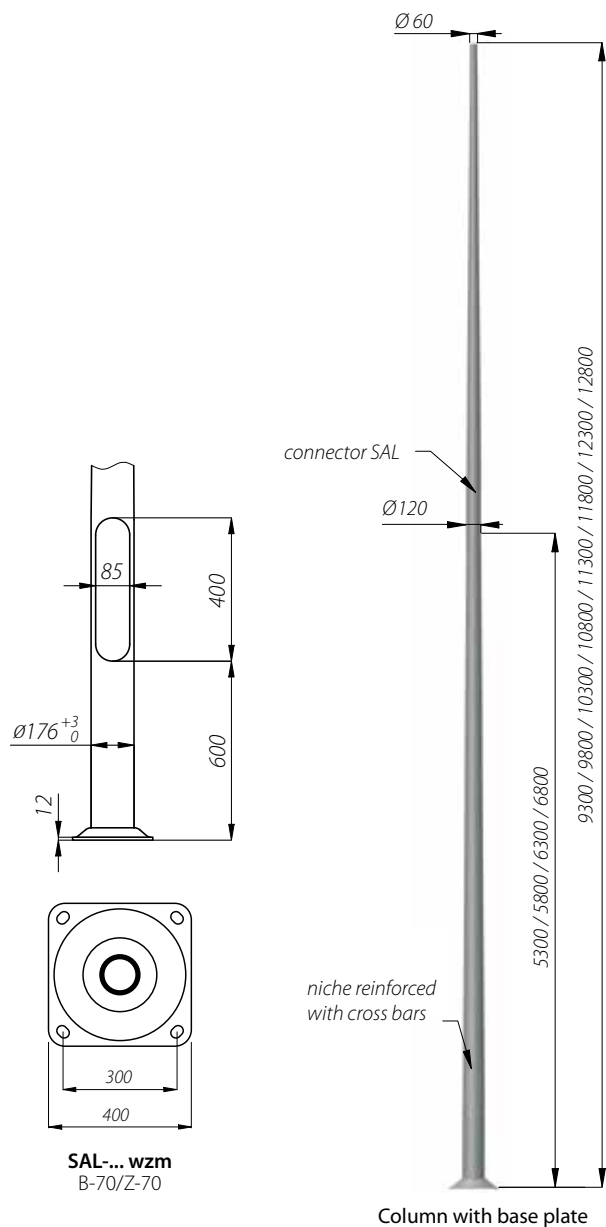
- SAL-9,3** code: 42456/C..
- SAL-9,8** code: 42457/C..
- SAL-10,3** code: 42458/C..
- SAL-10,8** code: 42459/C..
- SAL-11,3** code: 42460/C..
- SAL-11,8** code: 42461/C..

Column with base plate

TWO-PIECE ALUMINIUM REINFORCED COLUMNS Ø176 MM

Columns with base plate

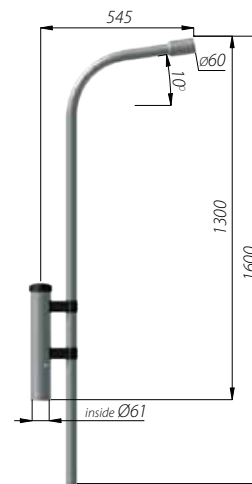
- SAL-9,3 wzm code: 42476/C..
- SAL-9,8 wzm code: 42477/C..
- SAL-10,3 wzm code: 42478/C..
- SAL-10,8 wzm code: 42479/C..
- SAL-11,3 wzm code: 42470/C..
- SAL-11,8 wzm code: 42471/C..
- SAL-12,3 wzm code: 42472/C..
- SAL-12,8 wzm code: 42473/C..



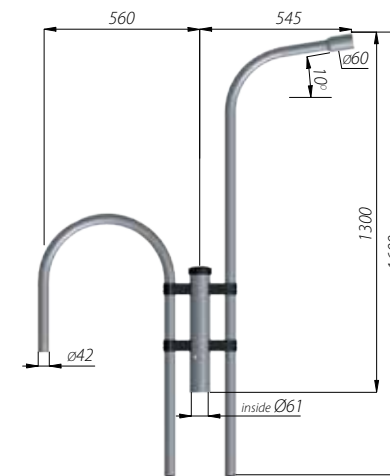
STREET LIGHTING / EXTENSION ARMS FOR ALUMINIUM COLUMNS

EXTENSION ARMS WA

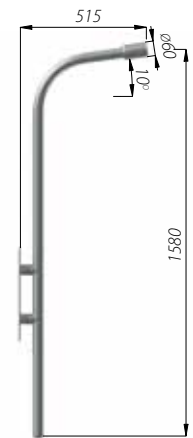
- **application:** columns SAL with spigot ending $\varnothing 60$ mm, wall bracket KA with one arm for wall mounting
- **material:** anodised aluminium alloy



WA-15/1U
code: 471150/C...
street luminaires



WA-15/2
code: 471152/C...
luminaire OW
street luminaires

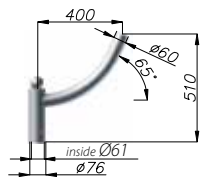


KA-15
code: 478150/C...
street luminaires

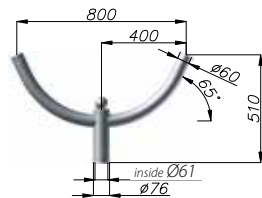
STREET LIGHTING / EXTENSION ARMS FOR ALUMINIUM COLUMNS

EXTENSION ARMS WR

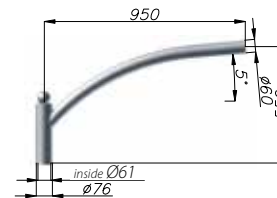
- **application:** columns SAL with spigot ending $\varnothing 60$ mm
- **material:** anodised aluminium alloy
- **luminaires:** street luminaires with spigot ending $\varnothing 60$ mm, except WR17 for luminaires with spigot ending $\varnothing 42$ mm (OW, DROP)



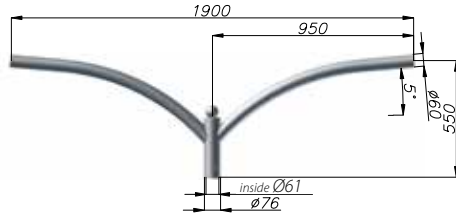
WR-1/1
code: 472011/C..



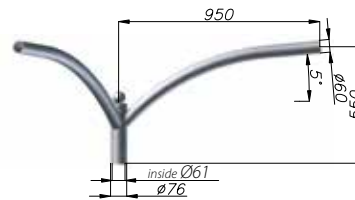
WR-1/2
code: 472012/C..



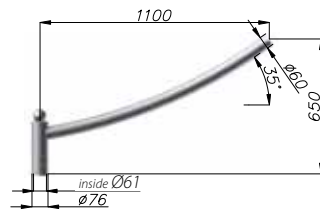
WR-2/1
code: 472021/C..



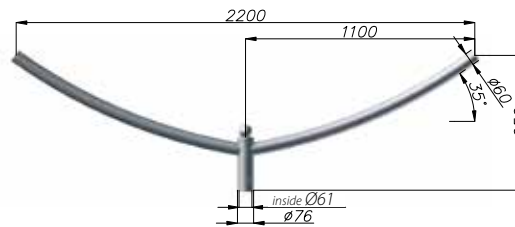
WR-2/2
code: 472022/C..



WR-2/3
code: 472023/C..



WR-3/1
code: 472031/C..



WR-3/2
code: 472032/C..

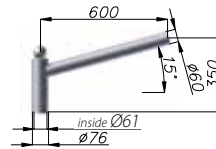
The use of extension arms must always be verified with the permissible load for the wind zone (technical data sheets)

C... – choice of anodising colour

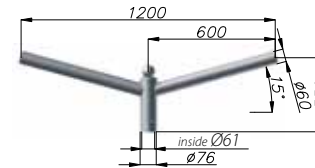


Limanowa / Poland

EXTENSION ARMS WR



WR-4/1
code: 472041/C..



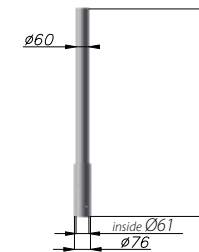
WR-4/2
code: 472042/C..



WR-5A/1
code: 472501/C..



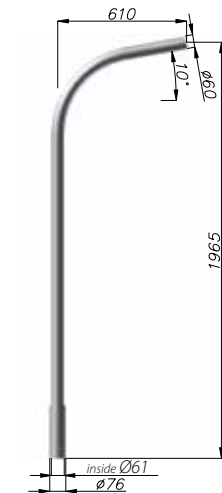
WR-5A/2
code: 472502/C..



WR-6A/1
code: 472600/C..



WR-8A/1
code: 472801/C.



WR-8/1
code: 472081/C..



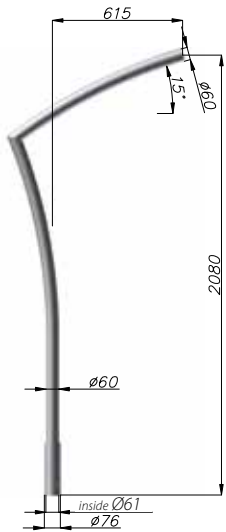
Tychy / Poland



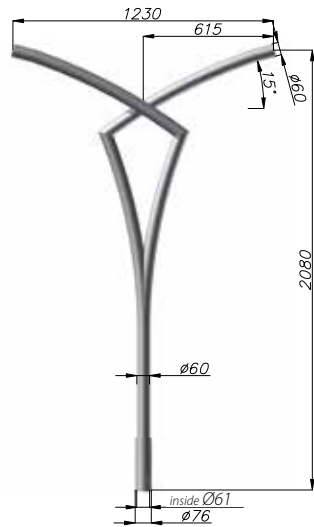
Plock / Poland

The use of extension arms must always be verified with the permissible load for the wind zone (technical data sheets)

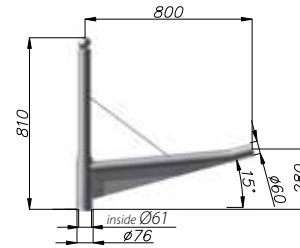
EXTENSION ARMS WR



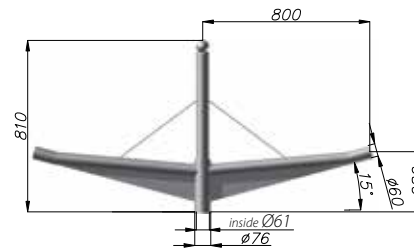
WR-9/1
code: 472091/C..



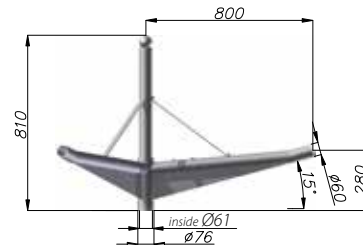
WR-9/2
code: 472092/C..



WR-13/1
code: 472131/C..



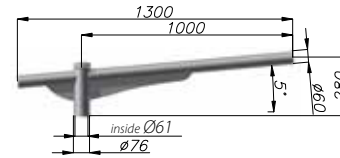
WR-13/2
code: 472132/C..



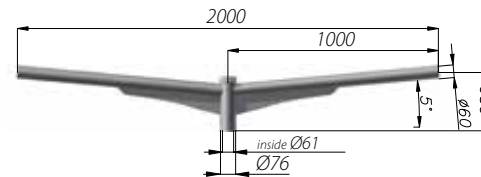
WR-13/3
code: 472133/C..



EXTENSION ARMS WR



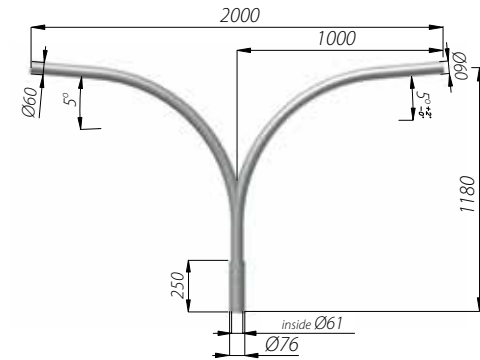
WR-15/1
code: 472151/C..



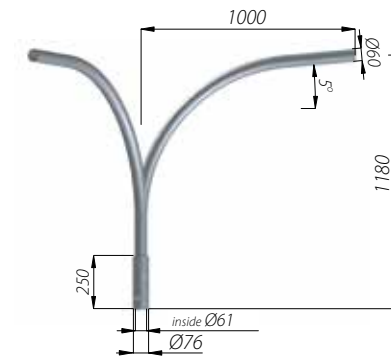
WR-15/2
code: 472152/C..



WR-14/1
code: 472141/C..



WR-14/2
code: 472142/C..



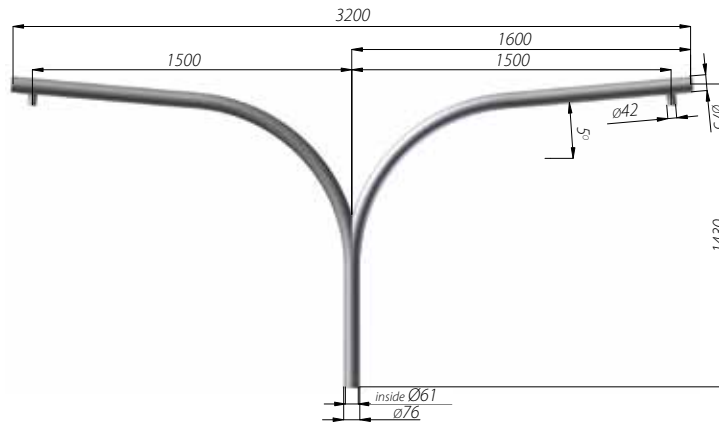
WR-14/3
code: 472143/C..



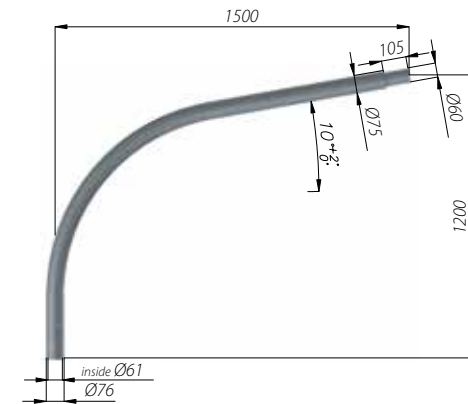
EXTENSION ARMS WR



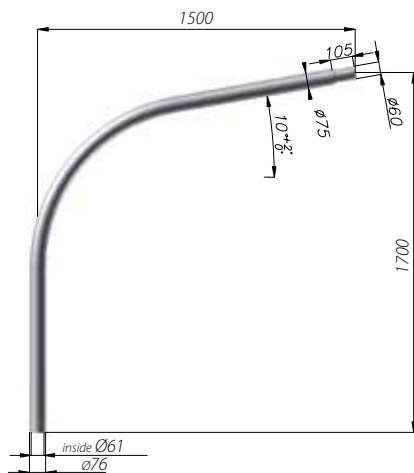
WR-17/1
code: 472171/C...



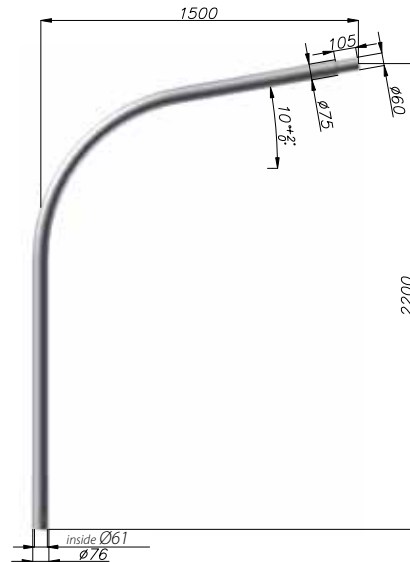
WR-17/2
code: 472172/C...



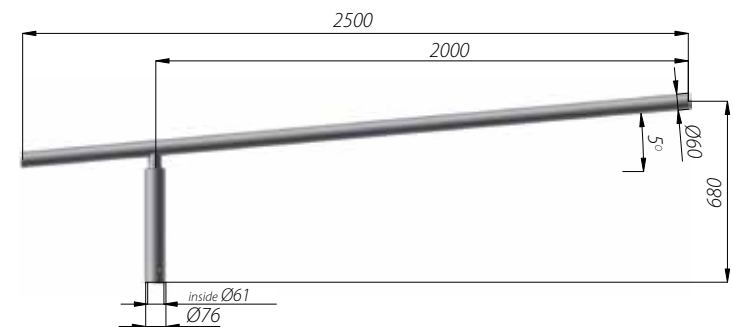
WR-18
code: 472181/C..



WR-18A
code: 472811/C..



WR-18B
code: 472821/C..

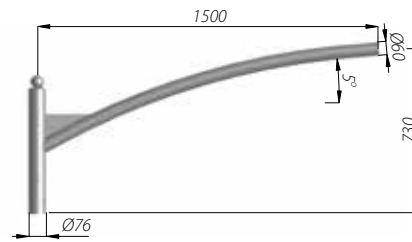


WR-61
code: 472611/C..

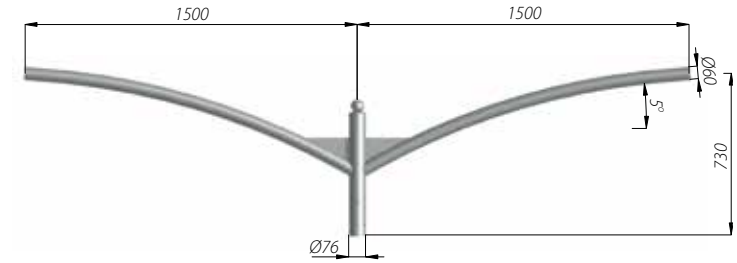
The use of extension arms must always be verified with the permissible load for the wind zone (technical data sheets)

STREET LIGHTING / EXTENSION ARMS FOR ALUMINIUM COLUMNS

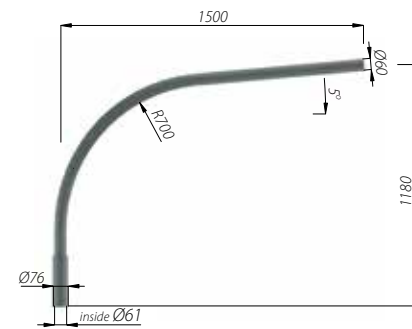
EXTENSION ARMS WR



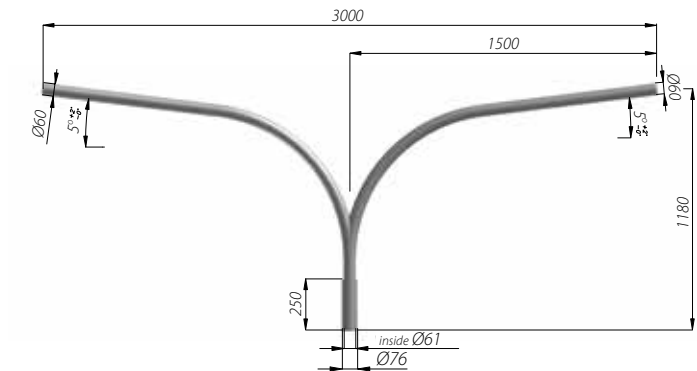
WR-T1-1,5
code: 472101/C..



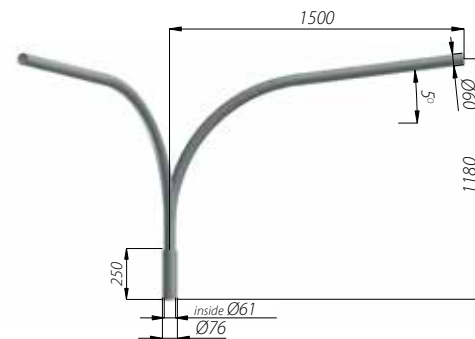
WR-T2-1,5
code: 472102/C..



WR-14/1/1,5/5
code: 47214115/C..



WR-14/2/1,5/5
code: 47214215/C..



WR-14/3/1,5/5
code: 47214315/C..

The use of extension arms must always be verified with the permissible load for the wind zone (technical data sheets)

C... – choice of anodising colour



Ostrołęka / Poland

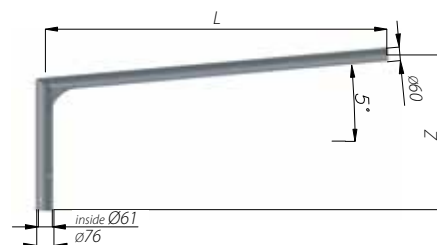
EXTENSION ARMS WRP

- **application:** columns SAL with spigot ending $\varnothing 60$ mm
- **material:** anodised aluminium alloy
- **luminaires:** street luminaires

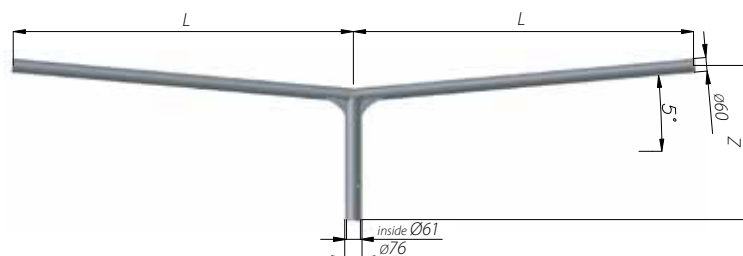
EXTENSION ARMS WRP

- WRP 1/1,0/0,7/5 code: 47219111/C...
- WRP 1/1,0/1,2/5 code: 47219112/C...
- WRP 1/1,5/0,7/5 code: 47219121/C...
- WRP 1/1,5/1,2/5 code: 47219122/C...
- WRP 2/1,0/0,7/5 code: 47219211/C...
- WRP 2/1,0/1,2/5 code: 47219212/C...
- WRP 2/1,5/0,7/5 code: 47219221/C...
- WRP 2/1,5/1,2/5 code: 47219222/C...
- WRP 3/1,0/0,7/5 code: 47219311/C...
- WRP 3/1,0/1,2/5 code: 47219312/C...
- WRP 3/1,5/0,7/5 code: 47219321/C...
- WRP 3/1,5/1,2/5 code: 47219322/C...

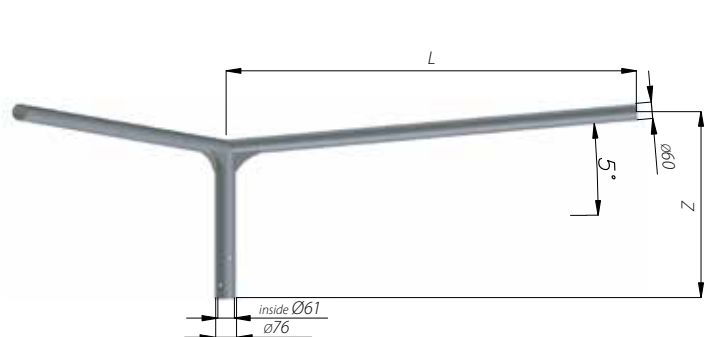
L – height of extension arm
 Z – outreach length
 5° – the angle of the arm
 1/2/3 – number of arms



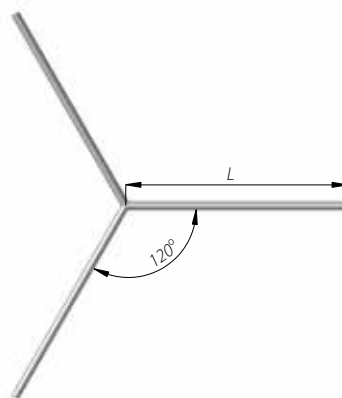
WRP 1/L/Z/5



WRP 2/L/Z/5



WRP 3/L/Z/5

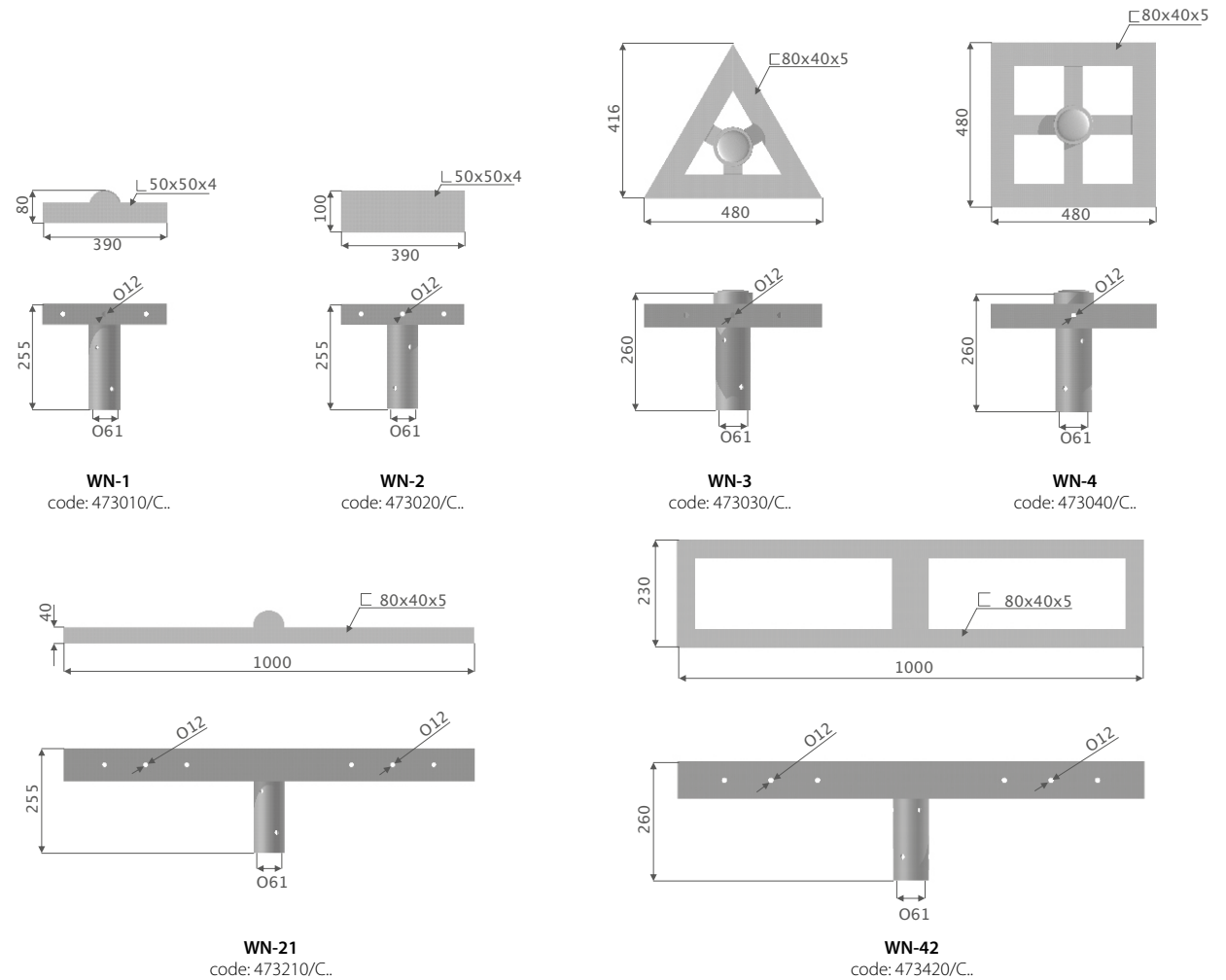


The use of extension arms must always be verified with the permissible load for the wind zone (technical data sheets)

STREET LIGHTING / EXTENSION ARMS FOR ALUMINIUM COLUMNS

EXTENSION ARMS WN

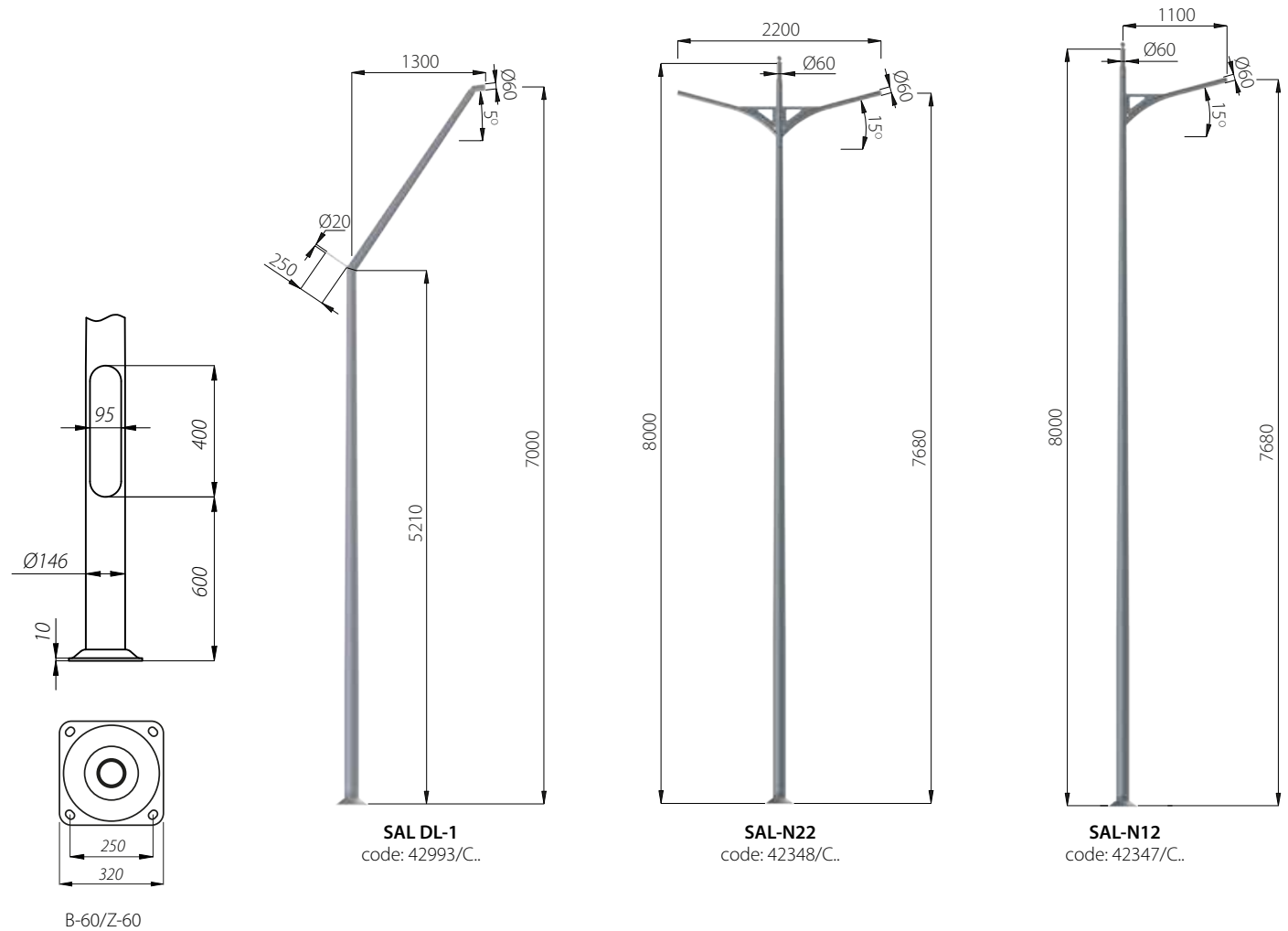
- **application:** columns SAL with spigot ending $\varnothing 60$ mm
- **material:** anodised aluminium alloy
- **luminaires:** floodlights



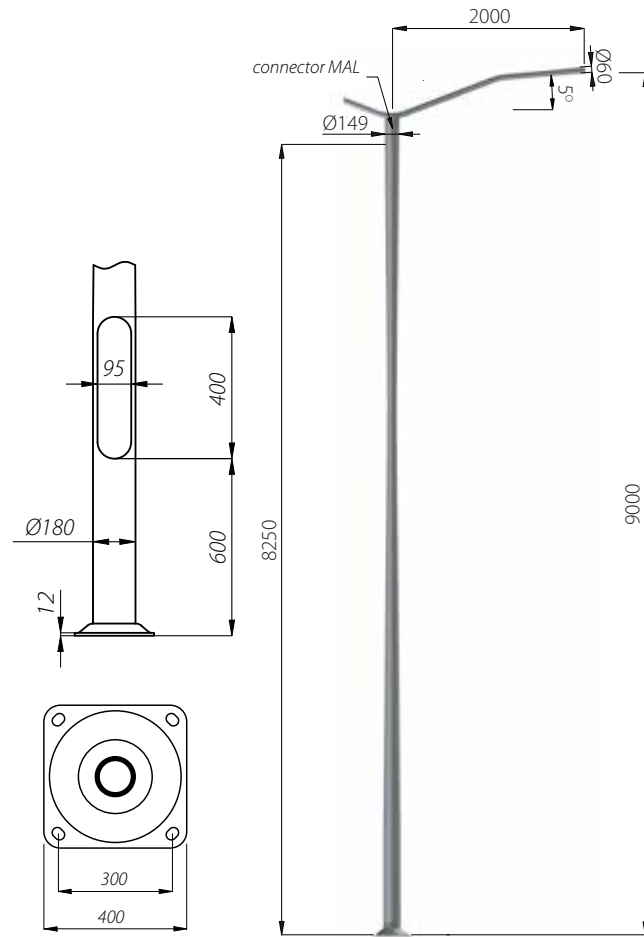
Ukraine

STREET LIGHTING

COLUMNS WITH WELDED EXTENSION ARMS

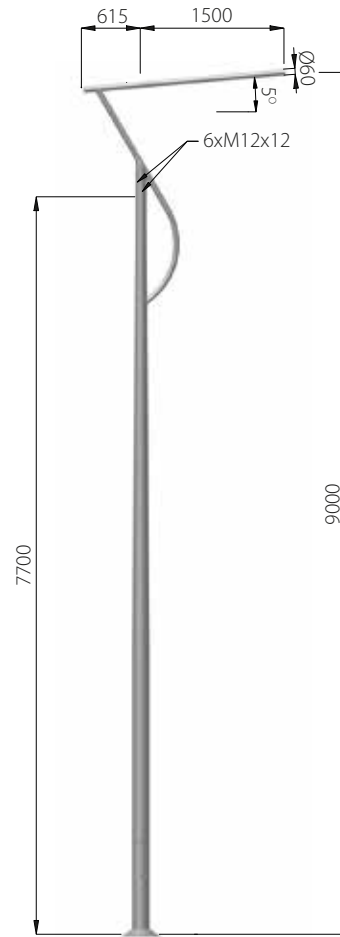


COLUMNS WITH WELDED EXTENSION ARMS

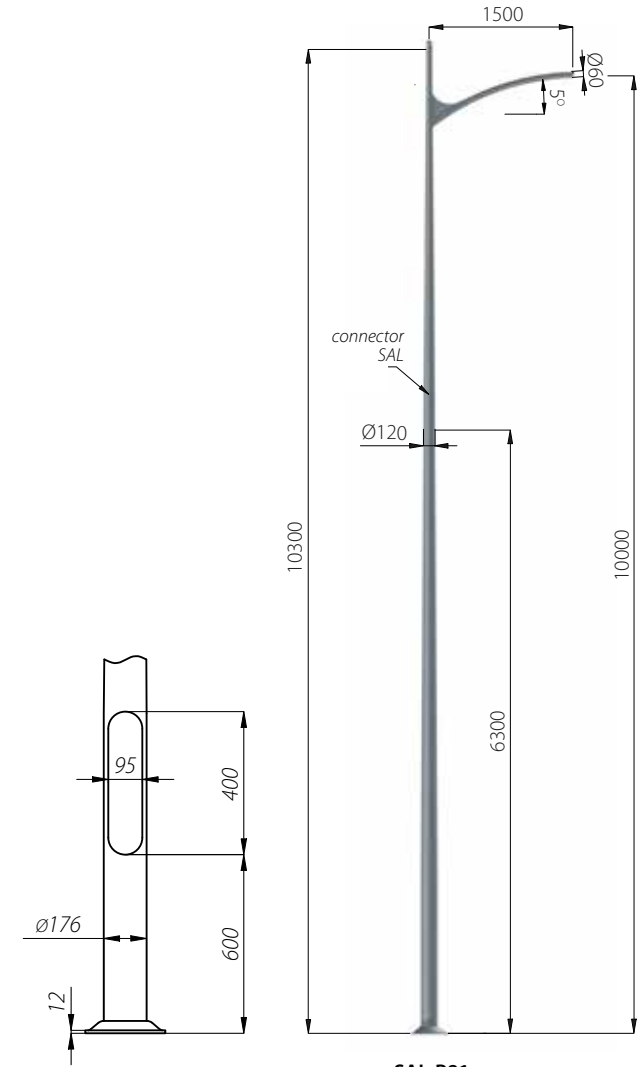


B-70/Z-70
B-71/Z-71

SAL-P61
code: 42487/C..



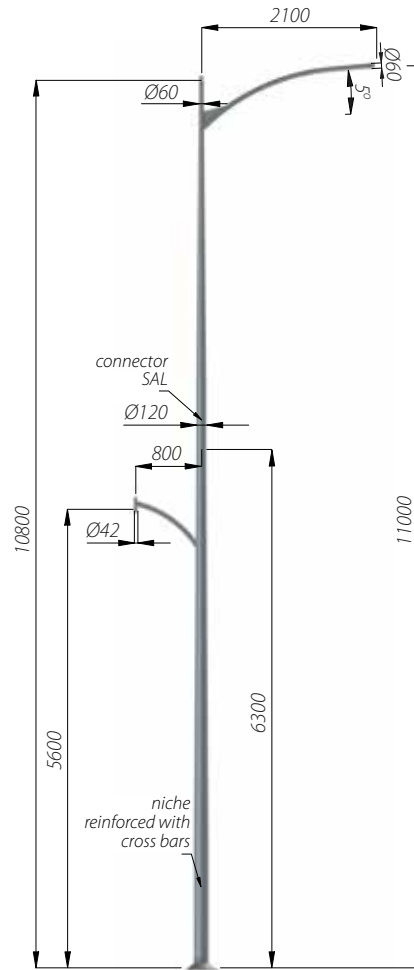
SAL-P-71
code: 42488/C..



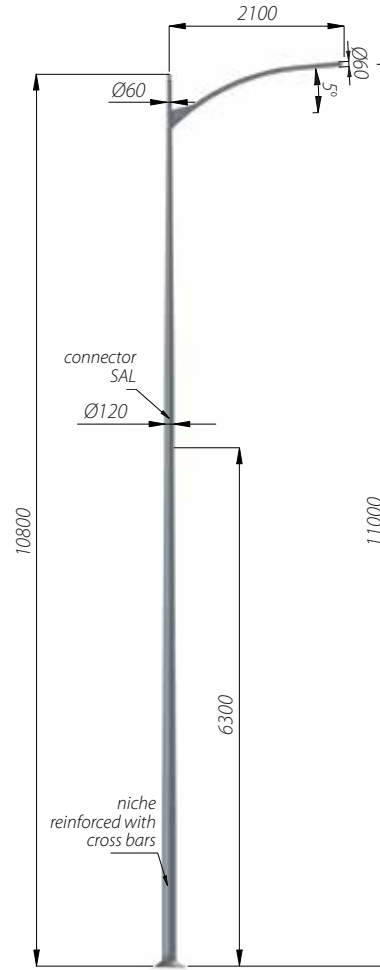
SAL-P81
code: 42489/C..

STREET LIGHTING

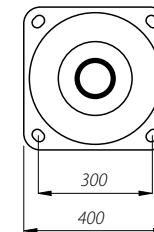
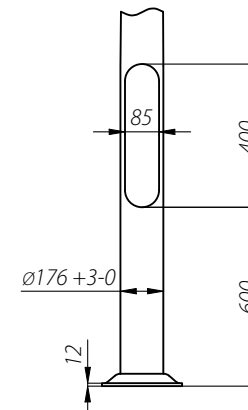
COLUMNS WITH WELDED EXTENSION ARMS



SAL-S1 wzm
code: 42464/C..



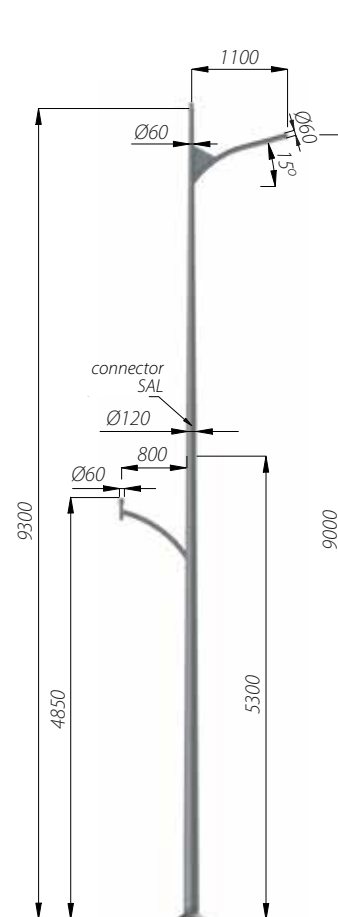
SAL-T1 wzm
code: 42466/C..



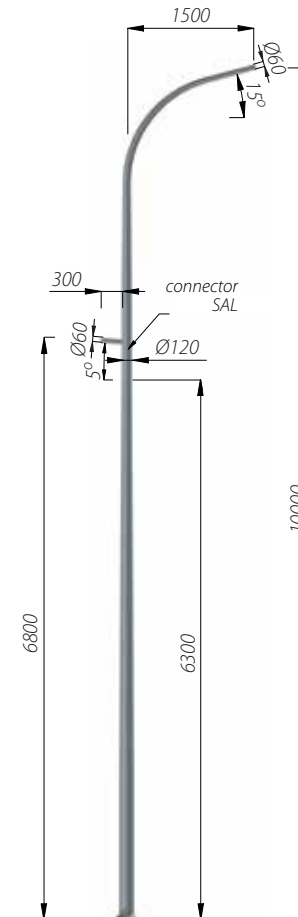
B-70/Z-70



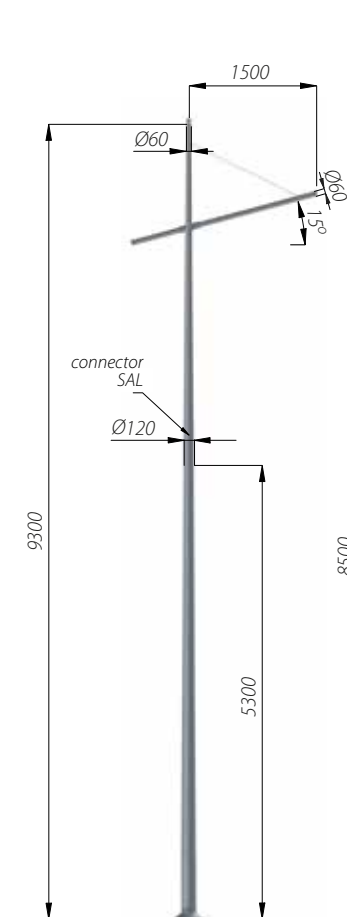
COLUMNS WITH WELDED EXTENSION ARMS



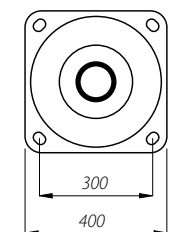
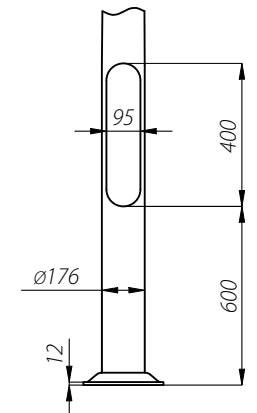
SAL-U1
code: 42465/C..



SAL-W1 wzm
code: 42469/C..

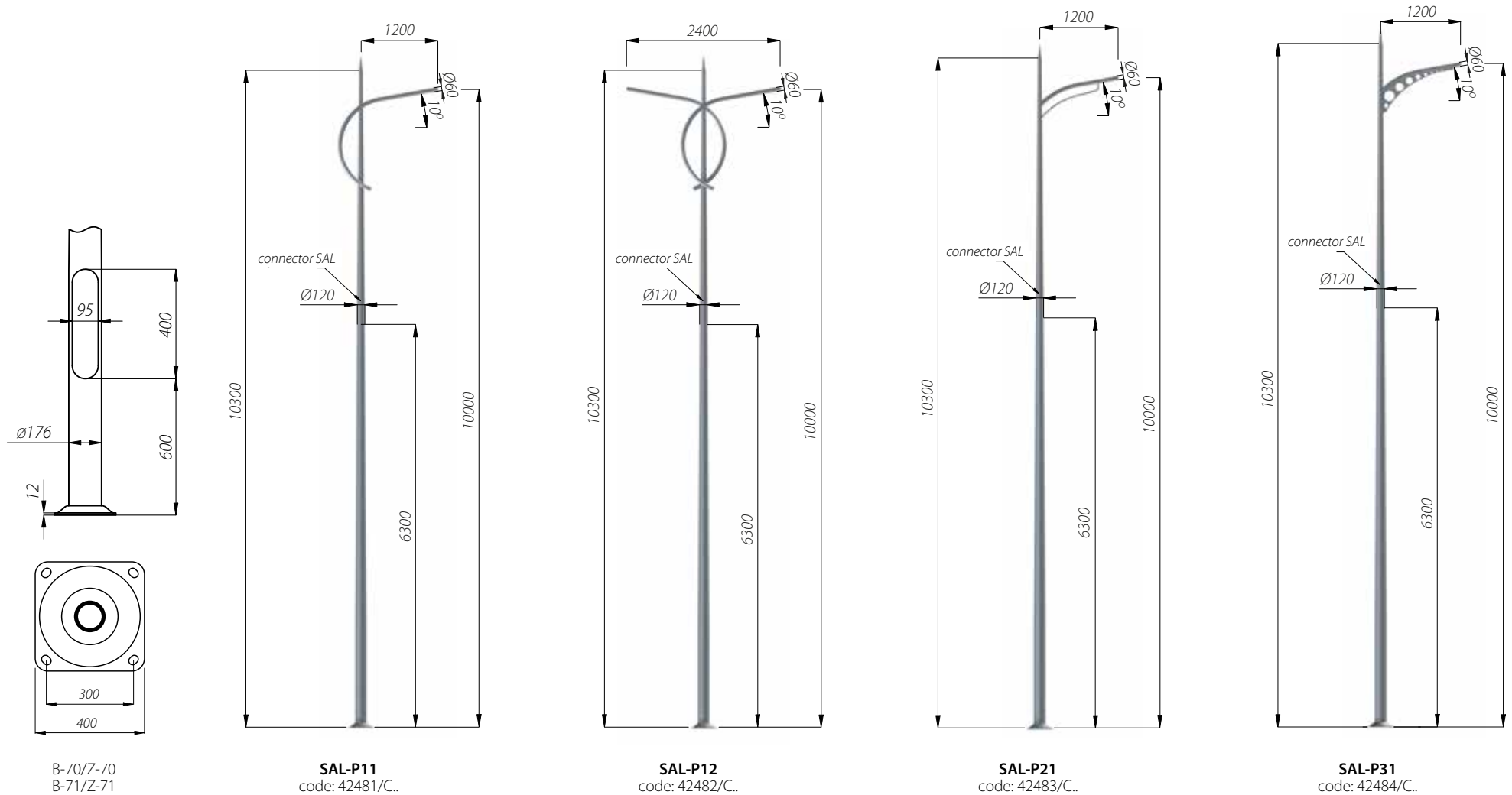


SAL-Z1 wzm
code: 42474/C..



B-70/Z-70

COLUMNS WITH WELDED EXTENSION ARMS





Doha / Qatar



Andrychów / Poland

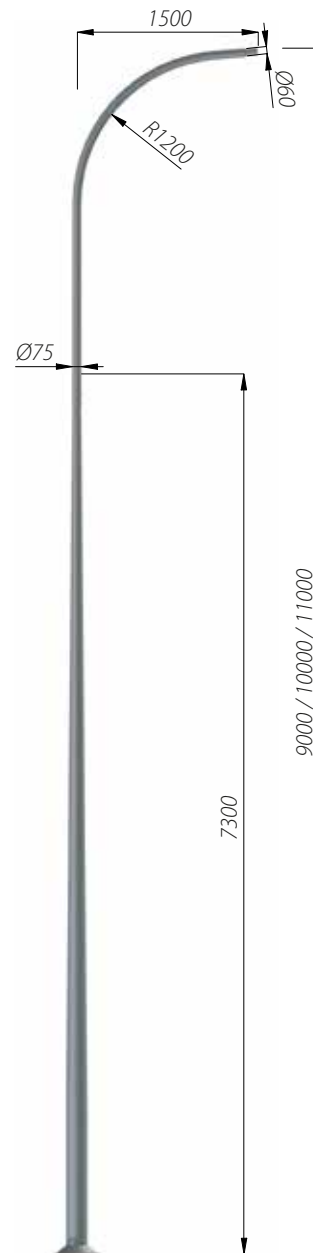
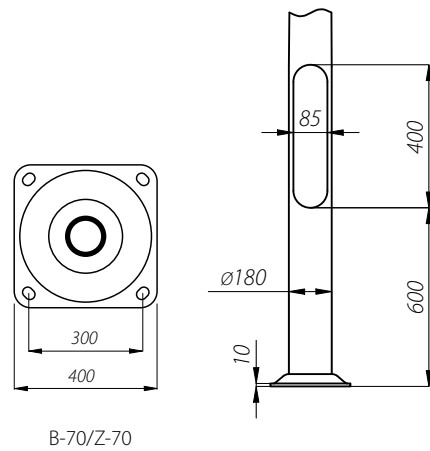


Valašské Meziříčí / Czech Republic

STREET LIGHTING

STREET LIGHTING / TWO-PIECE ALUMINIUM COLUMNS

TWO-PIECE COLUMNS Ø180 MM



Name	Code	Length of the arm [m]	Number of arms	Height H [m]	Height of lower part of the column [m]	Concrete footing/reinforcement basket
SAL-9 W&N	42720	1,5	1	9	7,3	B-70/Z-70
SAL-10 W&N	42721	1,5	1	10	7,3	B-70/Z-70
SAL-11 W&N	42722	1,5	1	11	7,3	B-70/Z-70

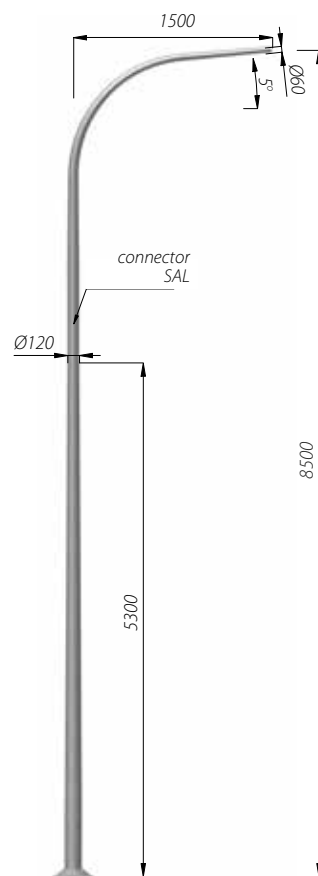


STREET LIGHTING

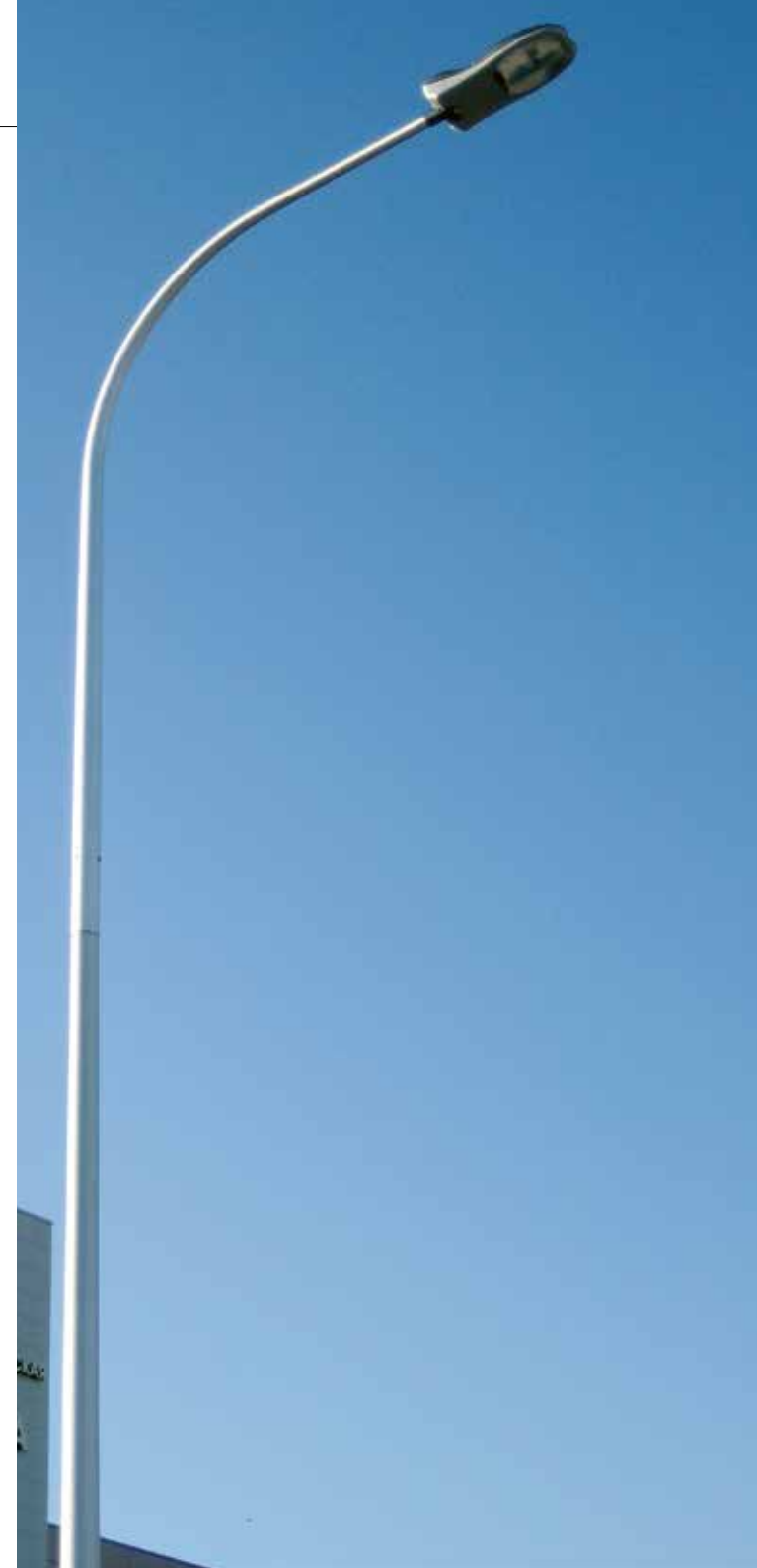
TWO-PIECE COLUMNS WITH CURVED EXTENSION ARMS Ø176 MM

Name	Length of the arm [m]	Code			Height of the column [m]	Height of upper part of the column D [m]	Height of lower part of the column D [m]	Concrete footing/ reinforcement basket
		Number of arms						
		1	2	3				
SAL-8,5 WŁ	1,5	42410/C..	42411/C..	42412/C..	8,5	3,2	5,3 + 0,35	B-70 / Z-70
	2,0	42413/C..	42414/C..	42415/C..				B-71 / Z-71
	2,5	42416/C..	42417/C..	42418/C..				–
SAL-9 WŁ	1,5	42419/C..	42420/C..	42421/C..	9	3,2	5,8 + 0,35	B-70 / Z-70
	2,0	42422/C..	42423/C..	42424/C..				B-71 / Z-71
	2,5	42425/C..	42426/C..	42427/C..				–
SAL-9,5 WŁ	1,5	42428/C..	42429/C..	42430/C..	9,5	3,7	5,8 + 0,35	B-70 / Z-70
	2,0	42431/C..	42432/C..	42433/C..				B-71 / Z-71
	2,5	42434/C..	42435/C..	42436/C..				–
SAL-10 WŁ	1,5	42437/C..	42438/C..	42439/C..	10	3,7	6,3 + 0,35	B-70 / Z-70
	2,0	42440/C..	42441/C..	42442/C..				B-71 / Z-71
	2,5	42443/C..	42444/C..	42445/C..				–
SAL-10,5 WŁ	1,5	42446/C..	42447/C..	42448/C..	10,5	4,2	6,3 + 0,35	B-70 / Z-70
	2,0	42449/C..	42450/C..	42480/C..				B-71 / Z-71
SAL-11 WŁ	1,5	42451/C..	42452/C..	–	11	4,7	6,3 + 0,35	B-70 / Z-70
	2,0	42453/C..	–	–				B-71 / Z-71
SAL-11,5 WŁ	1,5	42454/C..	–	–	11,5	4,7	6,8 + 0,35	B-71 / Z-71
SAL-12 WŁ	1,5	42455/C..	–	–	12	5,2	6,8 + 0,35	B-71 / Z-71

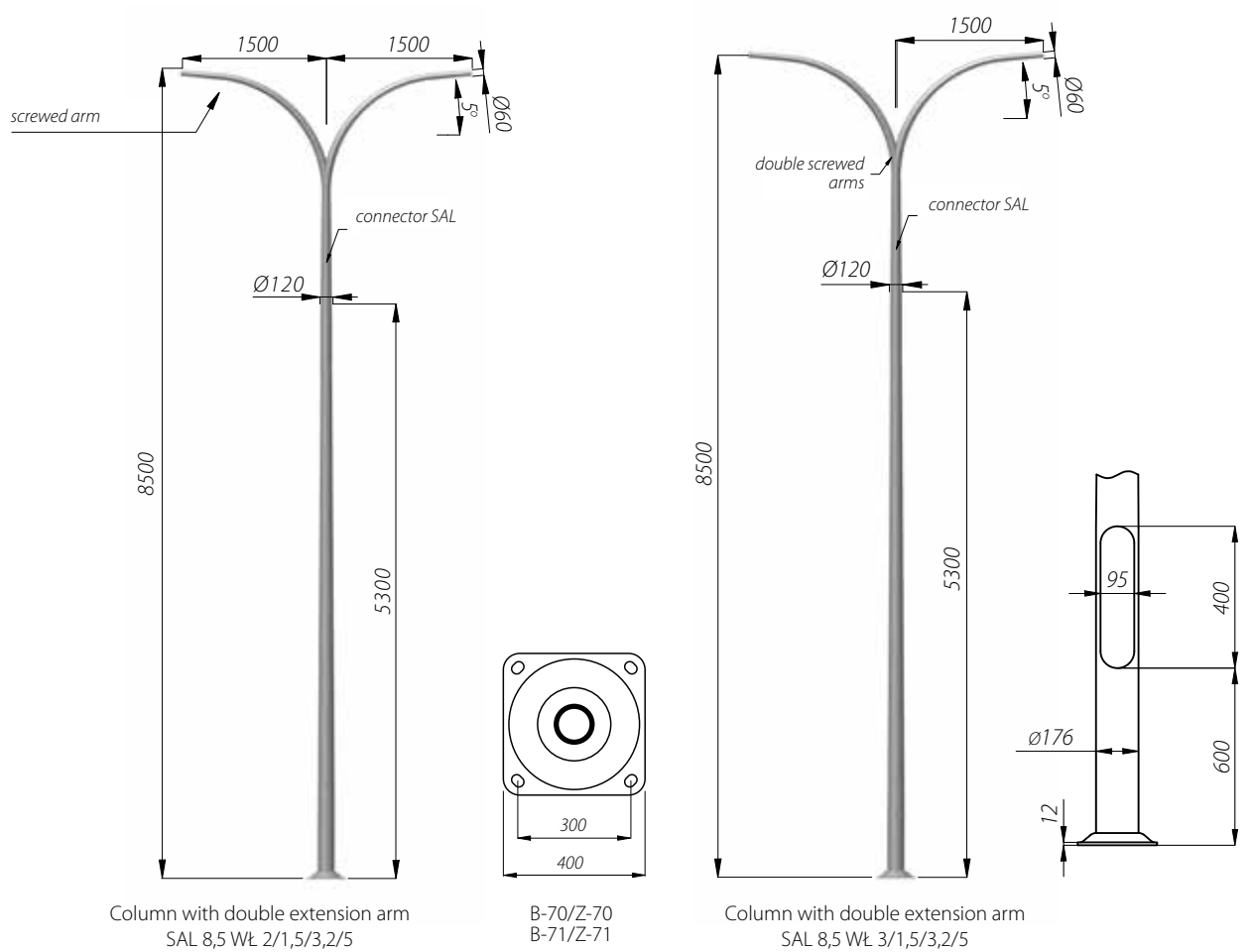
C... – choice of anodising colour



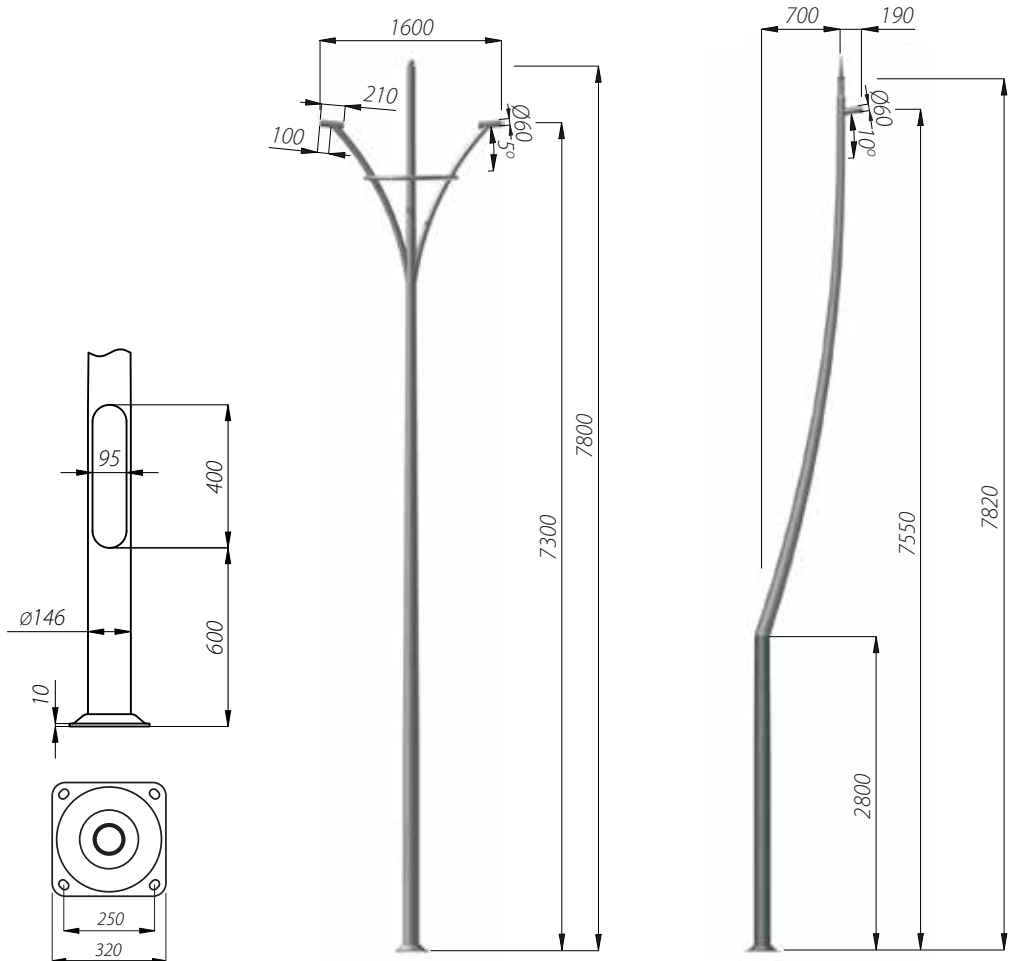
Column with single extension arm
SAL 8,5 WŁ 1/1,5/3,2/5



TWO-PIECE COLUMNS WITH CURVED EXTENSION ARMS



DECORATIVE COLUMNS



B-60/Z-60

SAL DS-80
code: 42978/C..

SAL DS-81
code: 42937/C..

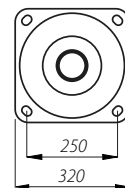
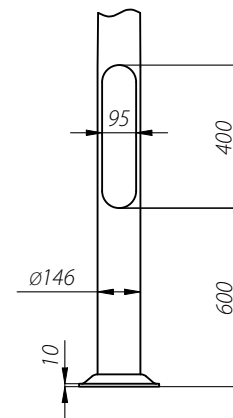


Bukareszt / Romania

DECORATIVE COLUMNS



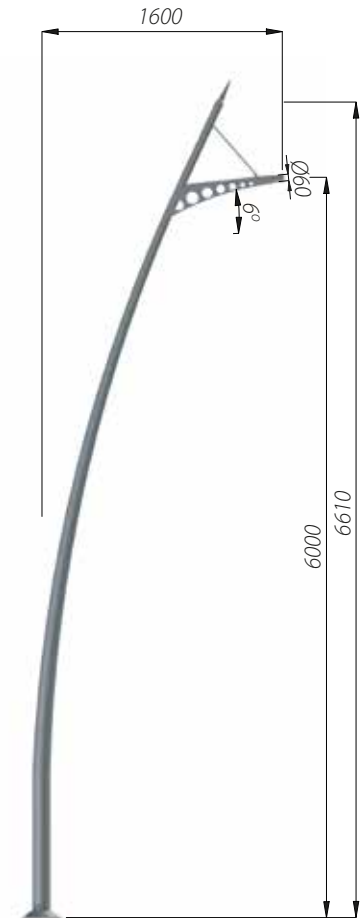
Sucha Beskidzka / Poland



B-60/Z-60



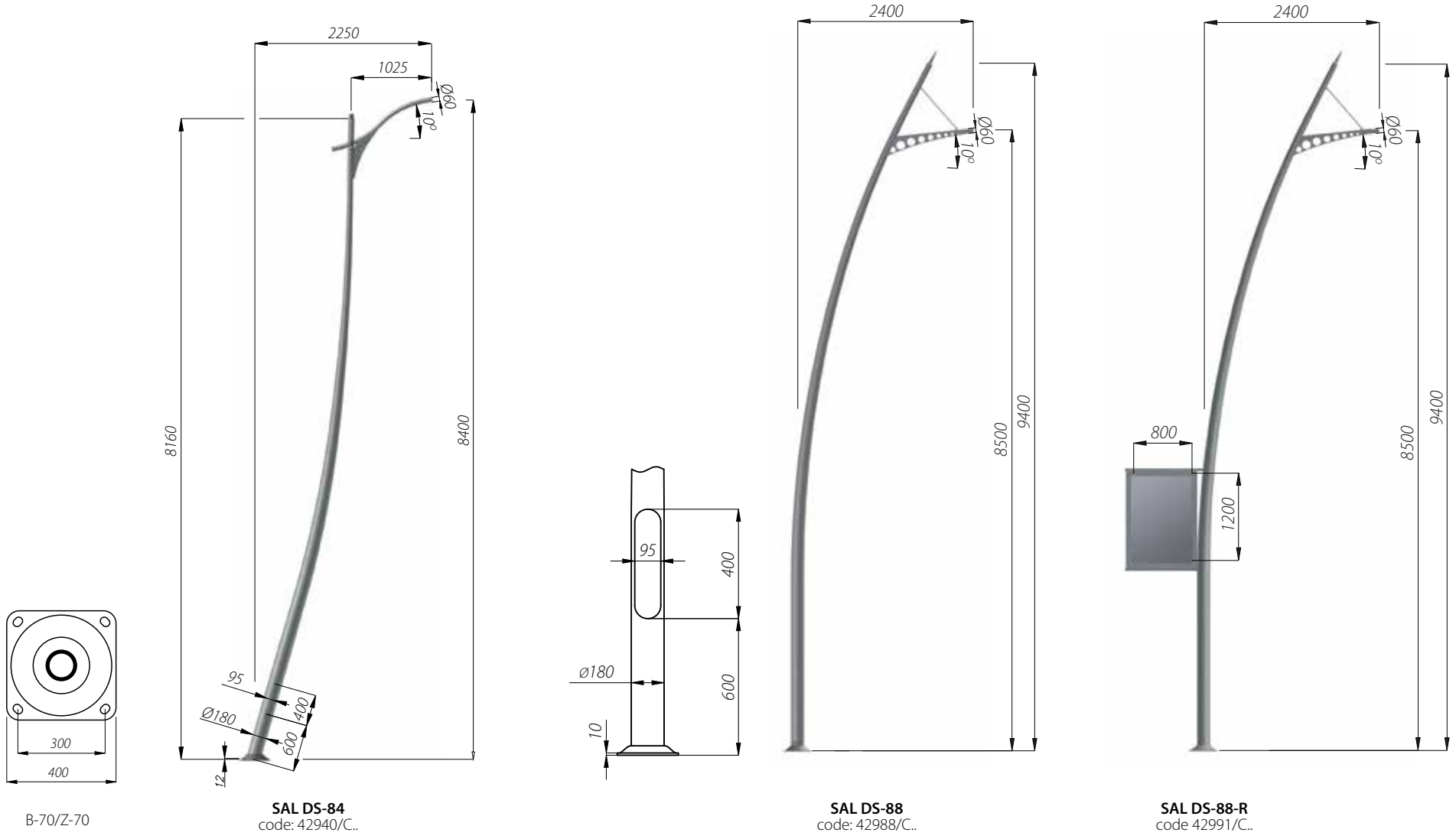
SAL DS-86
code: 42942/C..



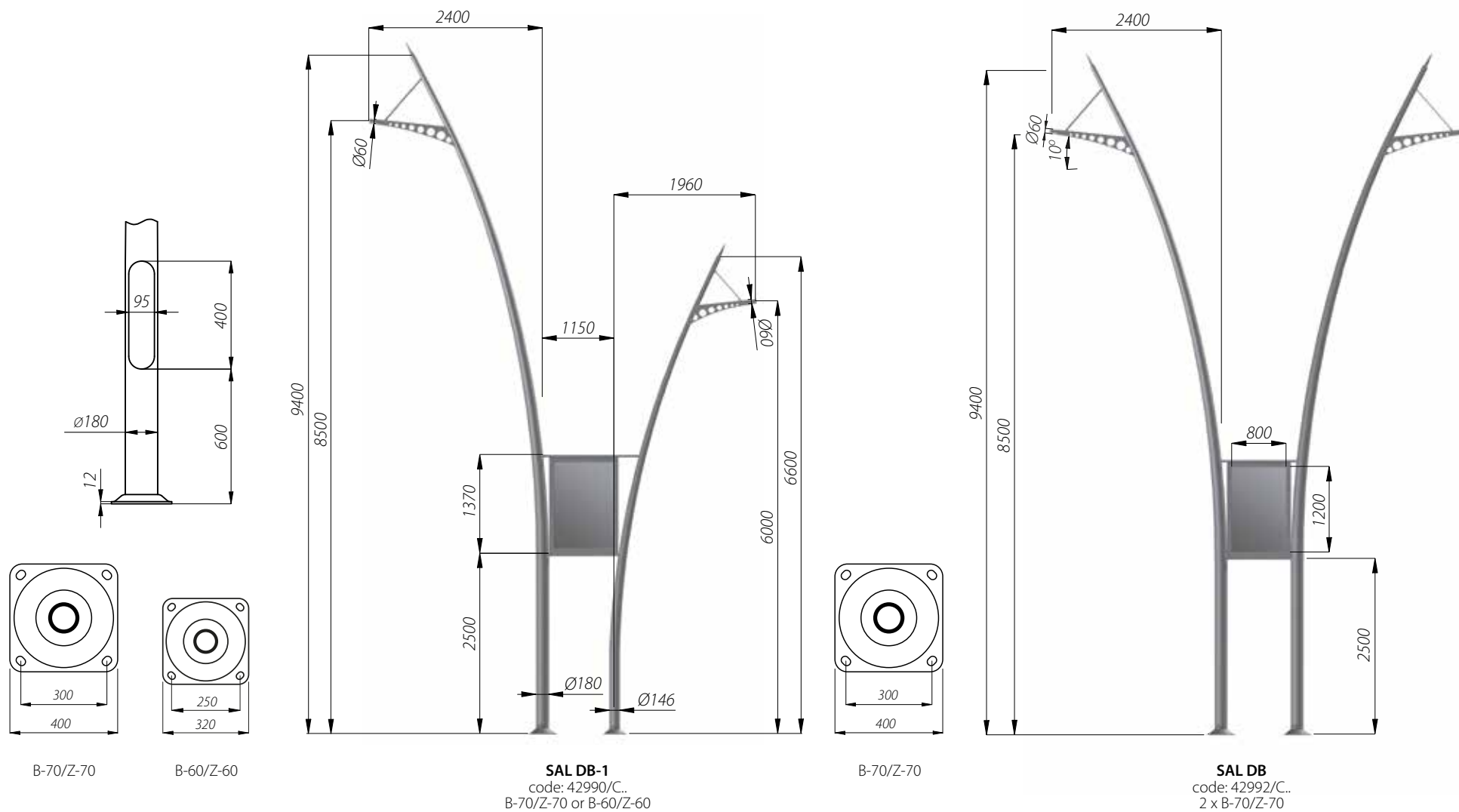
SAL DS-87
code: 42976/C..

STREET LIGHTING

DECORATIVE COLUMNS



DECORATIVE COLUMNS



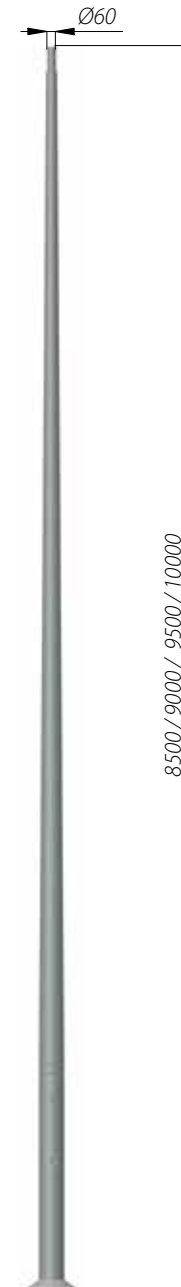
STREET LIGHTING

LOWERING AND RAISING COLUMNS MP

- column can be laid on two flat surface perpendicular to the column wiring chamber,
- lowering and raising the column using a special mechanism,
- two types of mechanisms for lowering and raising the columns: manual mechanism (consisting of two clamps located on column separation point) and articulated mechanism (with an additional transmission enabling operation using an electric drill),
- purchase of one mechanism (manual or articulated) is sufficient to handle all types of columns.

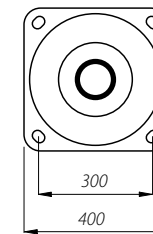
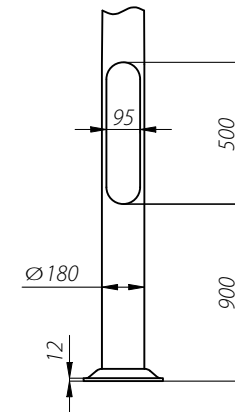


Column double clamp device SAL-...M/P



Columns with base plate

SAL-85M/P	code: 42930/C..
SAL-90M/P	code: 42931/C..
SAL-95M/P	code: 42932/C..
SAL-100M/P	code: 42933/C..



B-70/Z-70

LOWERING AND RAISING COLUMNS M/P



Column diagram SAL-...M/P:

1. Mount mechanism (manual or articulated) on the column and double lock
2. Remove door of wiring chamber
3. Release 3 column securing bolts
4. Mount the drilling machine in mechanism
5. Lower of the column
6. Install/ maintain luminaire
7. Raise the column
8. Refit 3 column securing bolts
9. Refit column door
10. Remove double collar accessory

LOWERING AND RAISING COLUMNS P

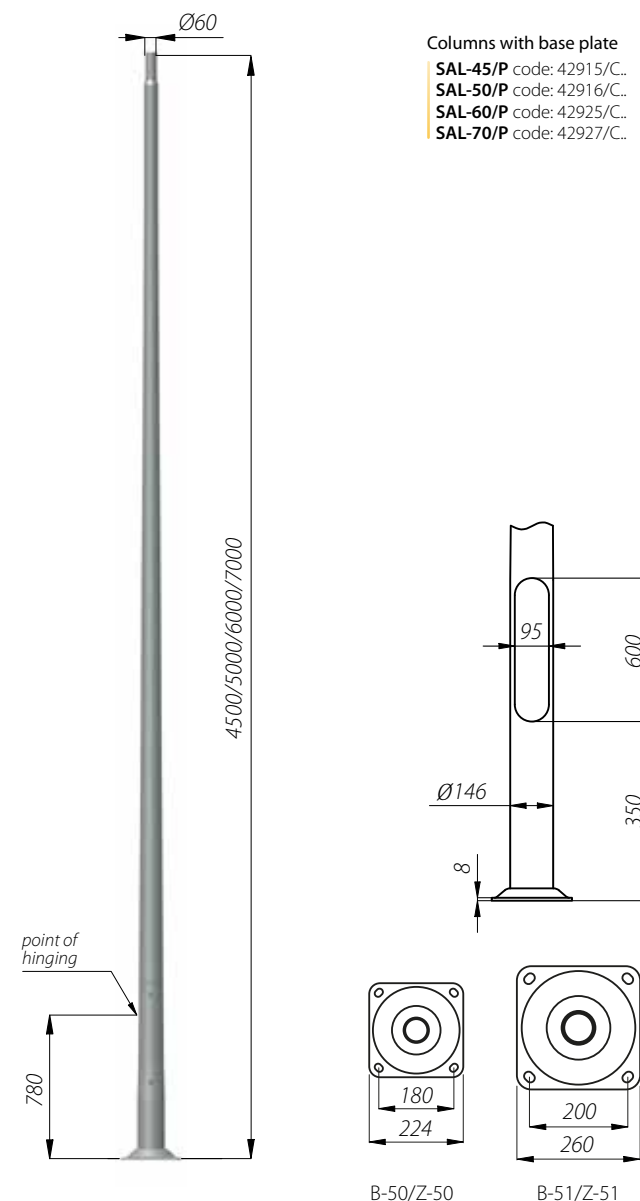
Designed for mounting on tennis courts, ski areas, car parks, gardens, residences, roadway junctions, airports, platforms, bridges and for difficult access areas.

Advantages:

- possibility of safe changing/maintenance of luminaire, camera, floodlight from ground level,
- low cost of maintenance accessories mounted on the top of the column,
- easy and safe way of lowering and raising column which can be performed by one person only,
- column can be laid on two flat surfaces which are perpendicular to the wiring chamber.

Technical information for lowering and raising columns SAL-.../P:

- inclination angle of column: from 0° to 90°,
- manual lowering and raising of column.



LOWERING AND RAISING COLUMNS P



France



Column diagram of column SAL-.../P:

1. Remove door
2. Remove hinge securing bolt
3. Hold column and pull out hinge safety pin
4. Manually lower column
5. Install/ maintain the luminaire
6. Manually raise the column
7. Replace hinge safety pin and securing bolt
8. Refit column door

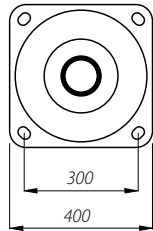
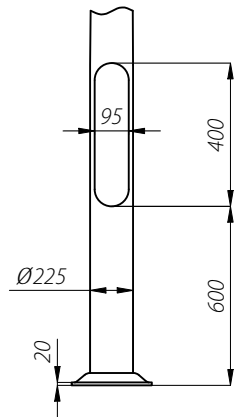
STRAIGHT LIGHT MASTS Ø225 MM

Columns with base plate

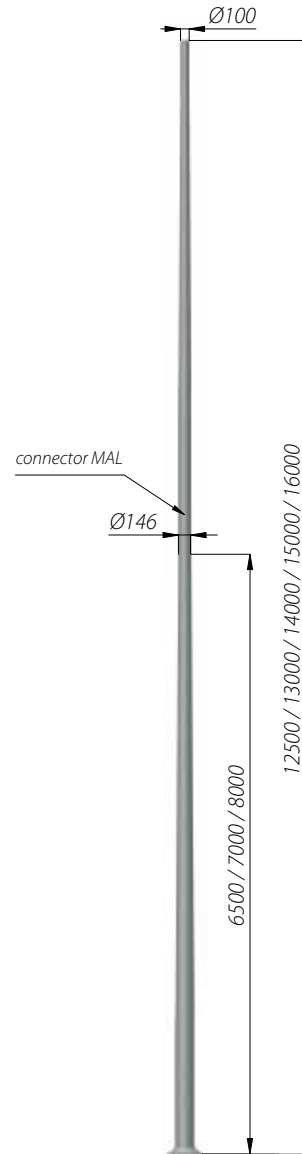
MAL-12,5	code: 42501/C...
MAL-13	code: 42502/C...
MAL-14	code: 42504/C...
MAL-15	code: 42506/C...
MAL-16	code: 42508/C...

Reinforced columns

MAL-12,5 wzm	code: 42551/C...
MAL-13 wzm	code: 42552/C...
MAL-14 wzm	code: 42554/C...
MAL-15 wzm	code: 42556/C...
MAL-16 wzm	code: 42558/C...



B-80/Z-80



MAL-...
MAL-... wzm*

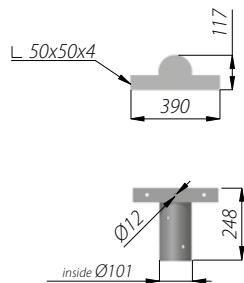
* Reinforcement of the tube with a thickness of 5 mm, up to height of 1150 mm.
C... – choice of anodising colour



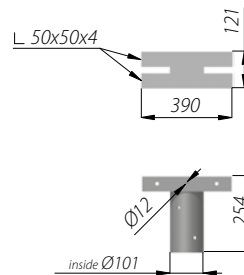
Wrocław / Poland

WM EXTENSION ARMS FOR MASTS

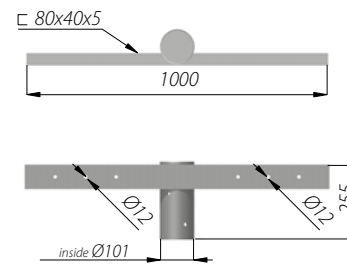
- **application:** masts MAL with spigot ending $\varnothing 60$ mm
- **material:** anodised aluminium alloy
- **luminaires:** floodlights



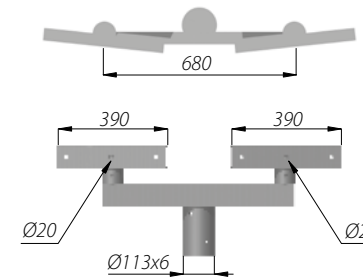
WM-1
code: 474010/C...



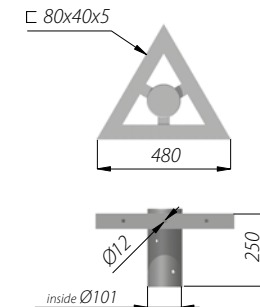
WM-2
code: 474020/C...



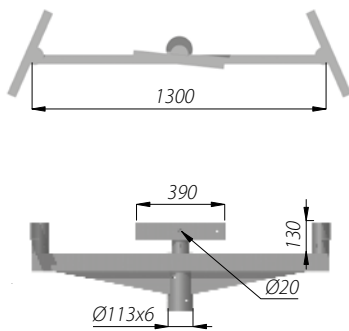
WM-21
code: 474210/C...



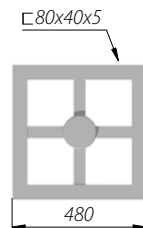
WM-21 REG
code: 474211/C...



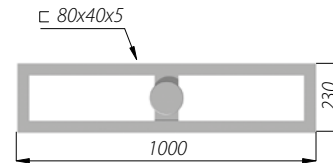
WM-3
code: 474030/C...



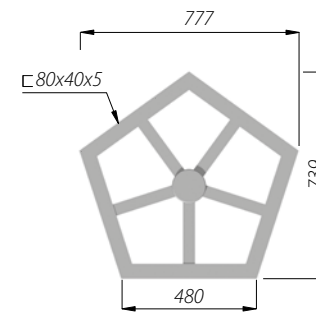
WM-31 REG
code: 474311/C...



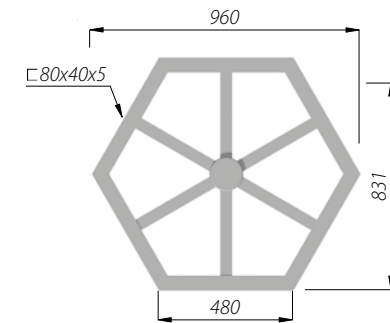
WM-4
code: 474040/C...



WM-42
code: 474420/C...



WM-5
code: 474050/C...

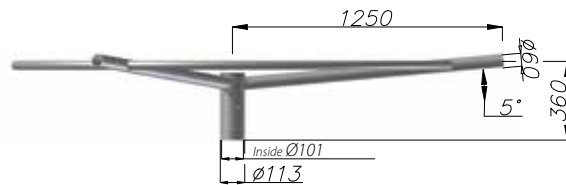


WM-6
code: 474060/C...

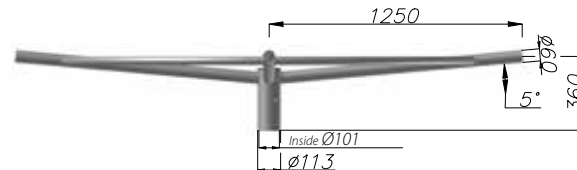
STREET LIGHTING / EXTENSION ARMS FOR MASTS

WRK EXTENSION ARMS FOR MASTS

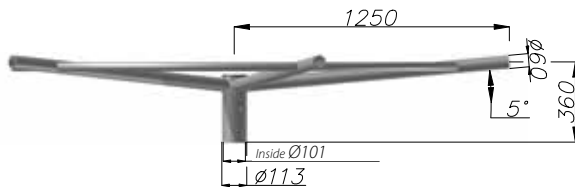
- **application:** masts MAL with spigot ending $\varnothing 100$ mm
- **material:** anodised aluminium alloy
- **luminaires:** floodlights, street luminaires



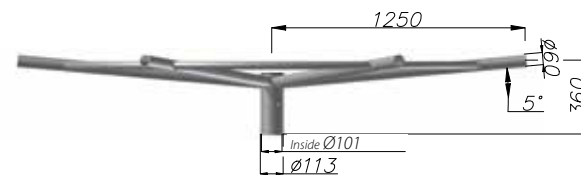
WRK-3
code: 475030/C...



WRK-4
code: 475040/C...



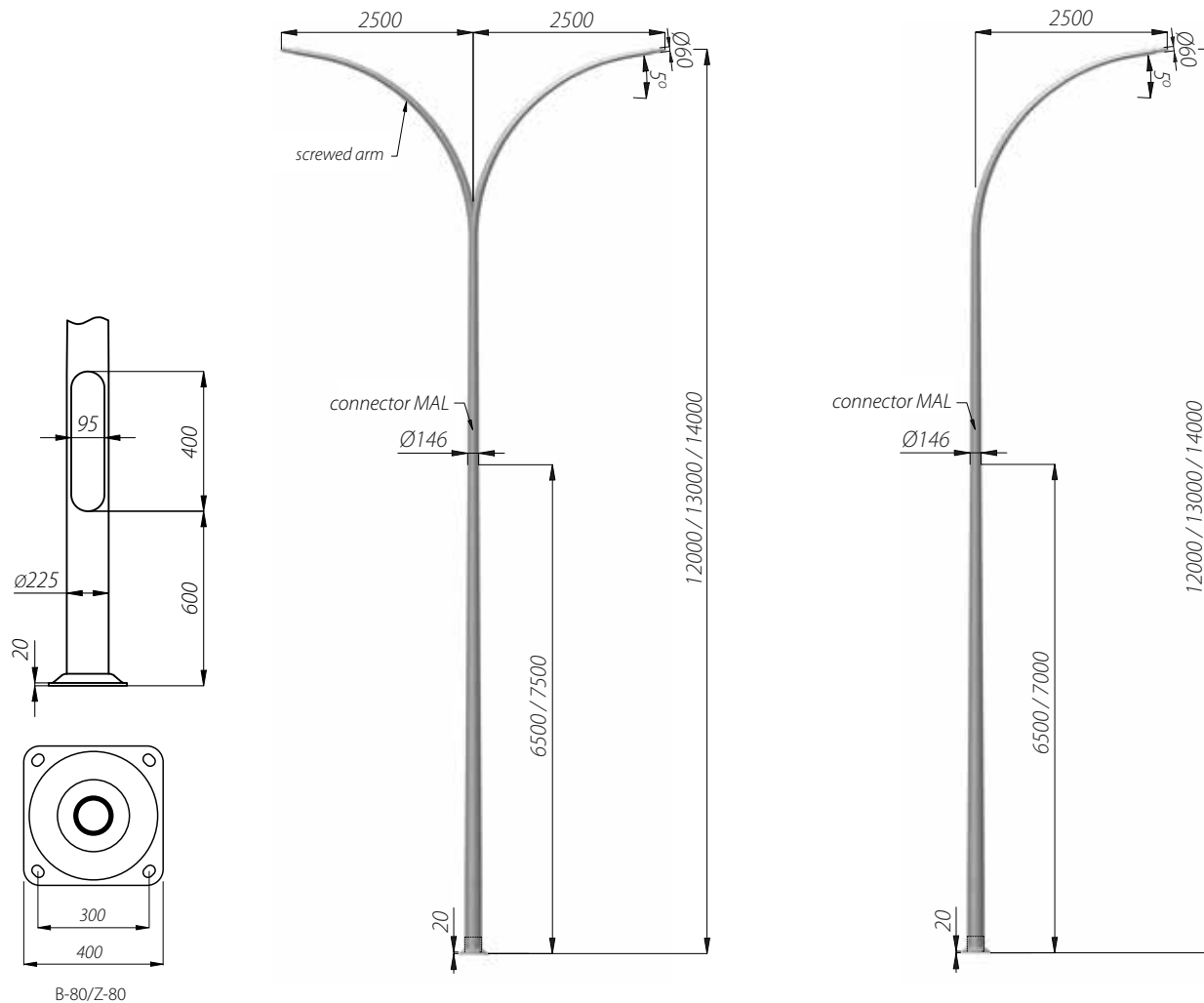
WRK-5
code: 475050/C...



WRK-6
code: 475060/C...



LIGHT MASTS WITH CURVED EXTENSION ARMS

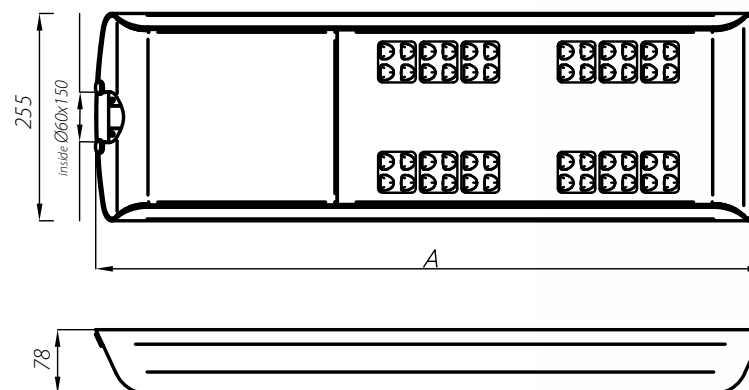


Light masts

MAL 12 WŁ 1/2,5/5,5/5 single	code: 42509/C...
MAL 12 WŁ 2/2,5/5,5/5 double	code: 42510/C...
MAL 13 WŁ 1/2,5/5,5/5 single	code: 42511/C...
MAL 13 WŁ 2/2,5/5,5/5 double	code: 42512/C...
MAL 14 WŁ 1/2,5/6,5/5 single	code: 42513/C...
MAL 14 WŁ 2/2,5/6,5/5 double	code: 42514/C...

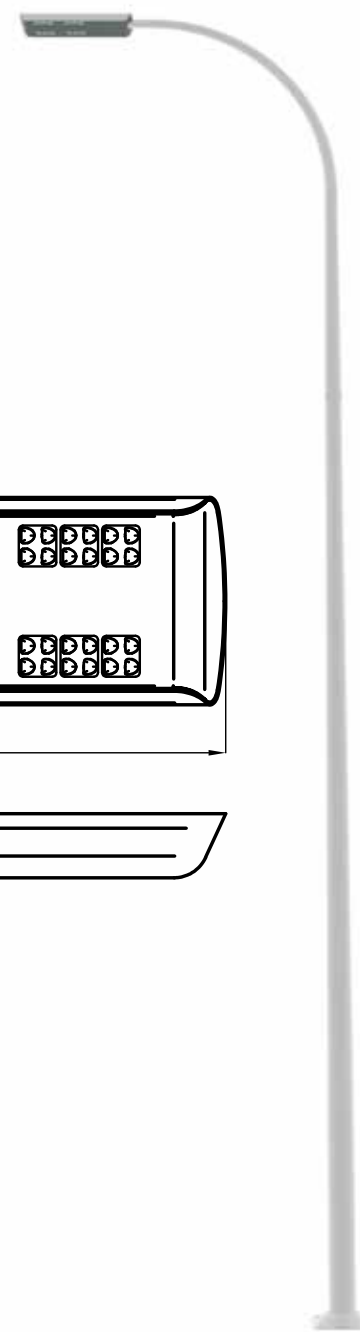
CUDDLE LED

- **protection degree:** IP66 for optic and driver
- **insulation class:** II
- **supply voltage:** 120-277 V AC, 50/60 Hz
- **light source:** CREE X-TE or CREE XM-L2
- **material:** anodised aluminium alloy
- **colour:** inox/black (possibility of anodising in other colours)
- **assembly:** on extension arm
- **recommended mounting height:** from 6 to 12 m depending on the optics
- luminaire is adapted to work in temperatures between -40°C and +55°C
- **optics:** optics available for the removable module can be found on page 17 of the catalogue



Name	Colour temperature [K]	Code	Power/LEDs amount [W/pcs]	Total power [W]	Luminous flux [lm]*	Luminous efficiency [lm/W]	Length A [mm]	Weight [kg]
CUDDLE LED 48 (XT-E)	5 000	222333/6	48 / 24	55	5 000	91	600	8
	3 500	222333/3			3 900	71		
CUDDLE LED 72 (XM-L2)	5 000	222335/6	72 / 24	80	10 000	125		
	3 500	222335/3			7 750	97		
CUDDLE LED 96 (XT-E)	5 000	222337/6	96 / 48	105	10 000	95	820	9
	3 500	222337/3			7 800	74		
CUDDLE LED 144 (XM-L2)	5 000	222341/6	144 / 48	155	20 150	130		
	3 500	222341/3			15 550	100		

* due to the precision class of diodes tolerance is +/-3%

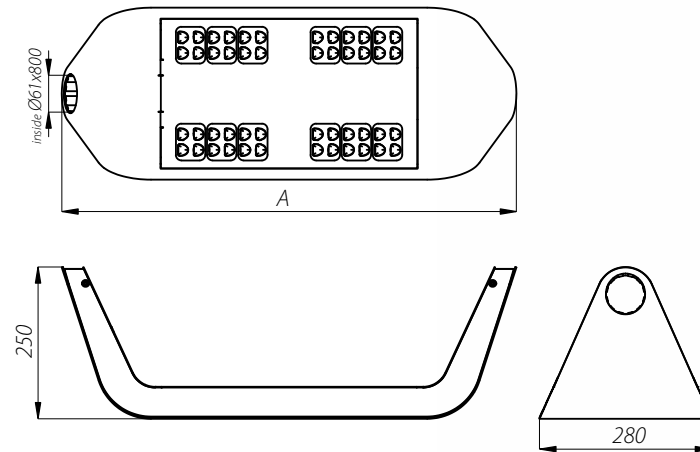




STREET LIGHTING

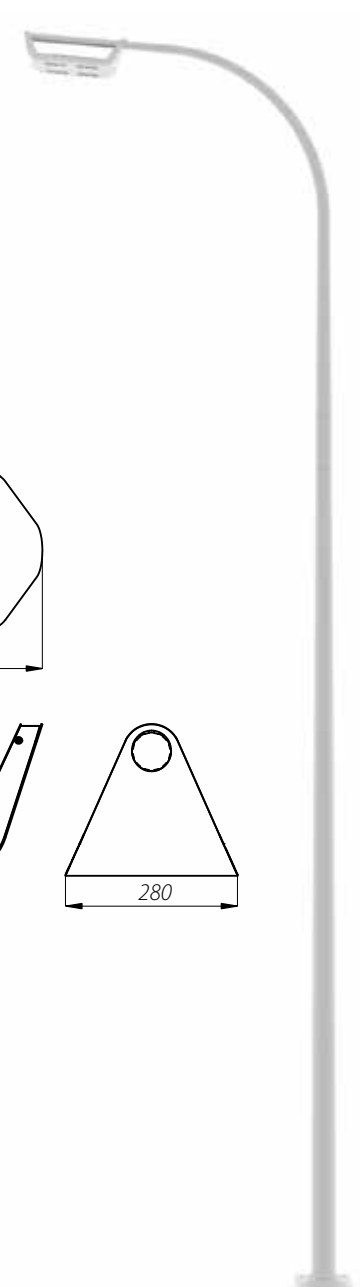
FLOAT LED

- **protection degree:** IP66 for optic and driver
- **insulation class:** II
- **supply voltage:** 120-277 V AC, 50/60 Hz
- **light source:** CREE X-TE or CREE XM-L2
- **material:** anodised aluminium alloy
- **colour:** inox/black (possibility of anodising in other colours)
- **assembly:** on extension arm
- **recommended mounting height:** from 6 to 12 m depending on the optics
- luminaire is adapted to work in temperatures between -40°C and +40°C
- **optics:** optics available for the removable module can be found on page 17 of the catalogue



Name	Colour temperature [K]	Code	Power/LEDs amount [W/pcs]	Total power [W]	Luminous flux [lm]*	Luminous efficiency [lm/W]	Length A [mm]	Weight [kg]
FLOAT LED 48 (XT-E)	5 000	222433/6	48 / 24	55	5 000	91	605	8,1
	3 500	222433/3			3 900	71		
FLOAT LED 72 (XM-L2)	5 000	222435/6	72 / 24	80	10 000	125		
	3 500	222435/3			7 750	97		
FLOAT LED 96 (XT-E)	5 000	222437/6	96 / 48	105	10 000	95	745	9,6
	3 500	222437/3			7 800	74		
FLOAT LED 144 (XM-L2)	5 000	222441/6	144 / 48	155	20 150	130		
	3 500	222441/3			15 500	100		

* due to the precision class of diodes tolerance is +/-3%

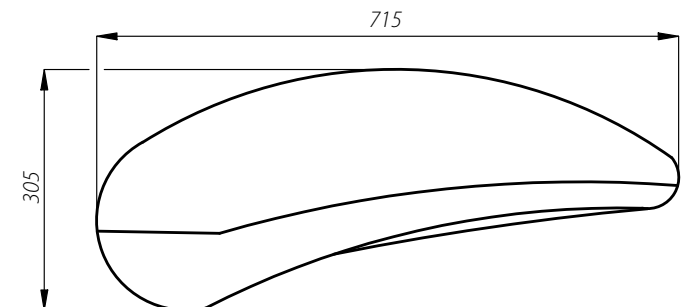
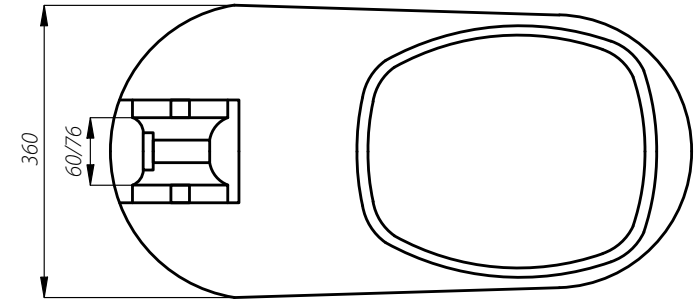




STREET LIGHTING

LUNOIDA

- **protection degree:** IP67 for optic, IP45 wiring chamber
- **insulation class:** I, II
- **material:**
 - body – die cast aluminium alloy
 - cover – UV resistant technical polymer
 - diffuser – flat tempered glass
 - reflector – pressed aluminium sheet
- **colour:** body – RAL 7038 structure, cover – plastic in RAL 7035
- **assembly:** pole top $\varnothing 60$ mm \div 76 mm and length 100 mm or on extension arm
- **luminaire regulation:** 0° to 110° every $4,5^\circ$
- reposition the light source – for luminaire with light source up to 150 W

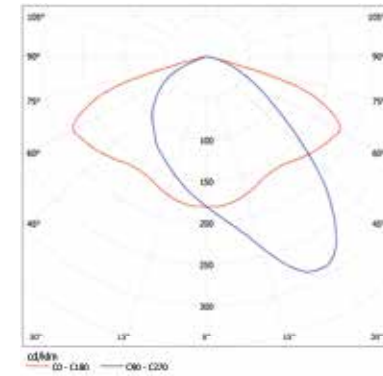


Name	Code		Power [W]	Light source	Weight [kg]	
	I insulation class	II insulation class			I insulation class	II insulation class
LUNOIDA S-70	220102	220202	70	Sodium E-27	8,9	9,0
LUNOIDA S-100	220103	220203	100	Sodium E-40	9,3	9,4
LUNOIDA S-150	220104	220204	150		9,9	10
LUNOIDA S-250	220105	220205	250		11,2	11,3
LUNOIDA S-400	220106	220206	400		12,4	12,5
LUNOIDA MH-70	220107	220207	70	Metal halide E-27	8,9	9,0
LUNOIDA MH-100	220108	220208	100		9,2	9,3
LUNOIDA MH-150	220109	220209	150		9,8	9,9
LUNOIDA MH-250	220110	220210	250	Metal halide E-40	11,2	11,3
LUNOIDA MH-400	220111	220211	400		12,4	12,5

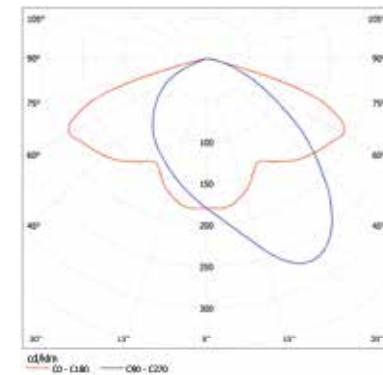
LUNOIDA



Tychy / Poland



Distribution curve for luminaire LUNOIDA S-150 W

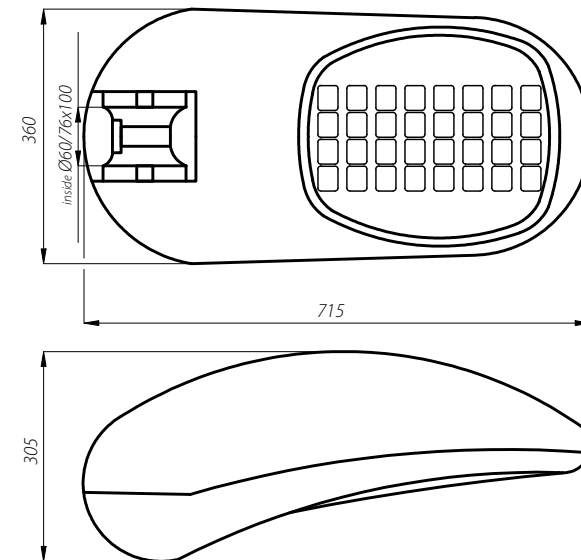


Distribution curve for luminaire LUNOIDA S-250 W

STREET LIGHTING

LUNOIDA LED

- protection degree: IP66
- insulation class: II
- supply voltage: 120-277 V AC, 50/60 Hz
- light source: CREE XM-L2
- material: body and cover – die cast aluminium alloy
- colour: body and cover – RAL 7038
- assembly: pole top $\varnothing 60$ mm \div 76 mm and length 100 mm or on extension arm
- height of mounting: 8-10 m
- luminaire regulation: 0° to 110° every 4,5°
- luminaire is adapted to work in temperatures between -40°C and +40°C

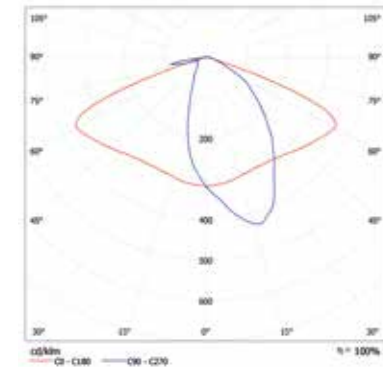


Name	Colour temperature [K]	Code	Power/LEDs amount [W/ pcs]	Total power [W]	Luminous flux [lm]*	Length A [mm.]	Weight [kg]
LUNOIDA LED 60	5 000	220234/6	60 / 20	68	8 300	122	12
	3 500	220234/3			6 450	95	
LUNOIDA LED 72	5 000	220235/6	72 / 24	80	10 000	125	
	3 500	220235/3			7 750	97	
LUNOIDA LED 84	5 000	220236/6	84 / 28	93	11 600	125	
	3 500	220236/3			9 050	97	
LUNOIDA LED 96	5 000	220237/6	96 / 32	105	13 300	127	
	3 500	220237/3			10 400	99	

* due to the precision class of diodes tolerance is +/-3%

STREET LIGHTING / STREET LUMINAIRES

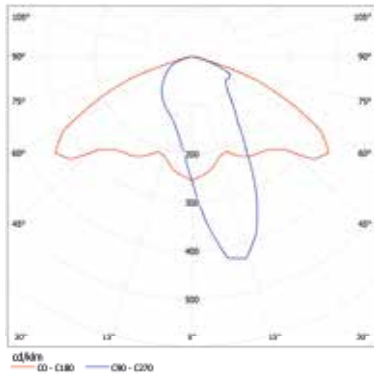
LUNOIDA LED



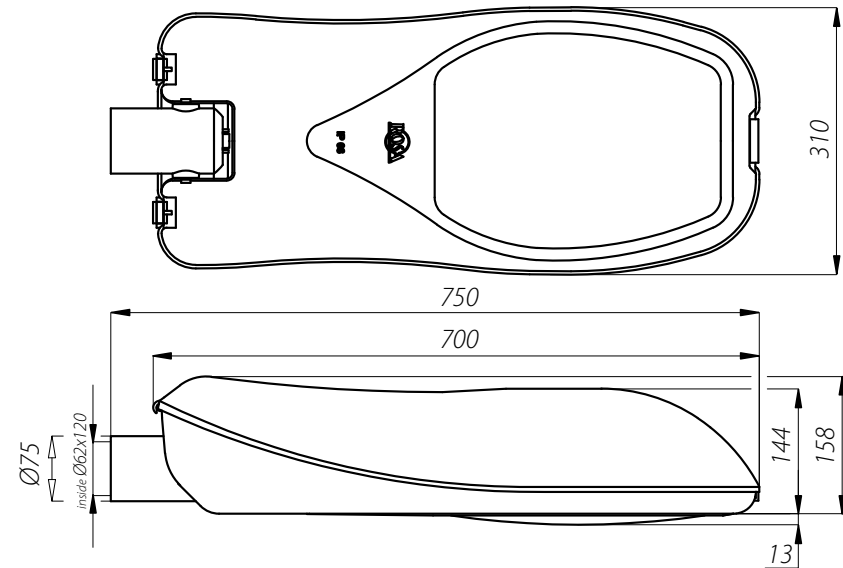
Distribution curve for luminaire
LUNOIDA LED

MAGNOLIA

- **protection degree:** IP66 for optics and wiring chamber
- **insulation class:** II
- **supply voltage:** 230 V AC
- **material:**
 - body and cover – die cast aluminium alloy
 - diffuser – slightly convex tempered glass, reflector: pressed aluminium sheet
- **colour:** body – RAL 9006, cover – SILVER RENOIR (polyester powder paint)
- **assembly:** pole top with spigot ending $\varnothing 60$ mm and length 120 mm or on extension arm
- **luminaire regulation:** from -5° to 20° every $2,5^\circ$
- reposition of the light source – for the luminaire with light source up to 150 W
- low windage factor 0,5



Distribution curve for luminaire MAGNOLIA



Name	Code	Power [W]	Light source	Weight [kg]
MAGNOLIA S-70	220502	70	Sodium E-27	8,3
MAGNOLIA S-100	220503	100	Sodium E-40	8,6
MAGNOLIA S-150	220504	150		9,3
MAGNOLIA S-250	220505	250		10,4
MAGNOLIA MH-70	220507	70		Metal halide E-27
MAGNOLIA MH-100	220508	100	8,5	
MAGNOLIA MH-150	220509	150	9,2	
MAGNOLIA MH-250	220510	250	Metal halide E-40	



Dubna / Russia



Szczecinek / Poland



Dubna / Russia

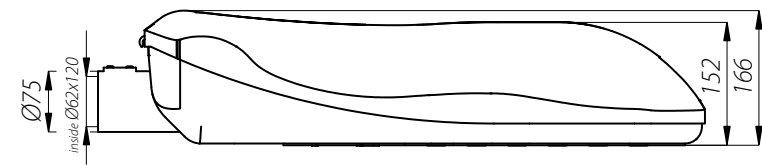
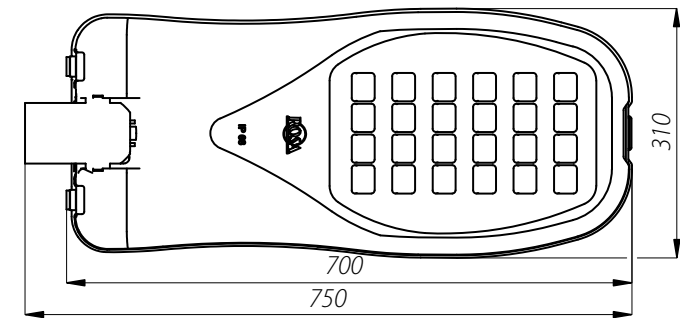


Nowa Sól / Poland

STREET LIGHTING

MAGNOLIA LED

- **protection degree:** IP66 for optics and driver
- **insulation class:** II
- **supply voltage:** 120-277 V AC, 50/60 Hz
- **light source:** XM-L2
- **material:** body and cover – die cast aluminium-alloy
- **colour:** body – RAL 9006, cover – SILVER RENOIR (polyester powder paint)
- **assembly:** pole top Ø60 mm or on extension arm
- **recommended mounting height:** 8-10 m
- **luminaire regulation:** from -5° to 20° every 2,5°
- luminaire is adapted to work in temperatures between -40°C and +40°C



Name	Colour temperature [K]	Code	Power/LEDs amount [W/pcs]	Total power [W]	Luminous flux [lm]*	Length A [mm]	Weight [kg]
MAGNOLIA LED 60	5 000	220534/6	60 / 20	68	8 300	122	11
	3 500	220534/3			6 450	95	
MAGNOLIA LED 72	5 000	220535/6	72 / 24	80	10 000	125	
	3 500	220535/3			7 750	97	
MAGNOLIA LED 84	5 000	220536/6	84 / 28	93	11 600	125	
	3 500	220536/3			9 050	97	
MAGNOLIA LED 96	5 000	220537/6	96 / 32	105	13 300	127	
	3 500	220537/3			10 400	99	

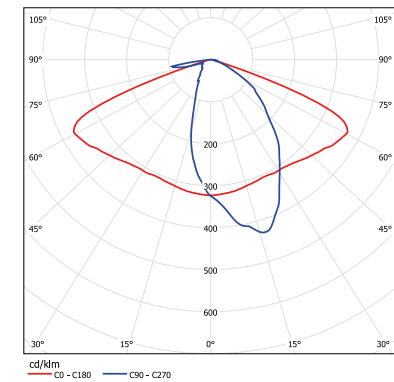
* due to the precision class of diodes tolerance is +/-3%

STREET LIGHTING / STREET LUMINAIRES

MAGNOLIA LED



Ostrów Mazowiecki / Poland

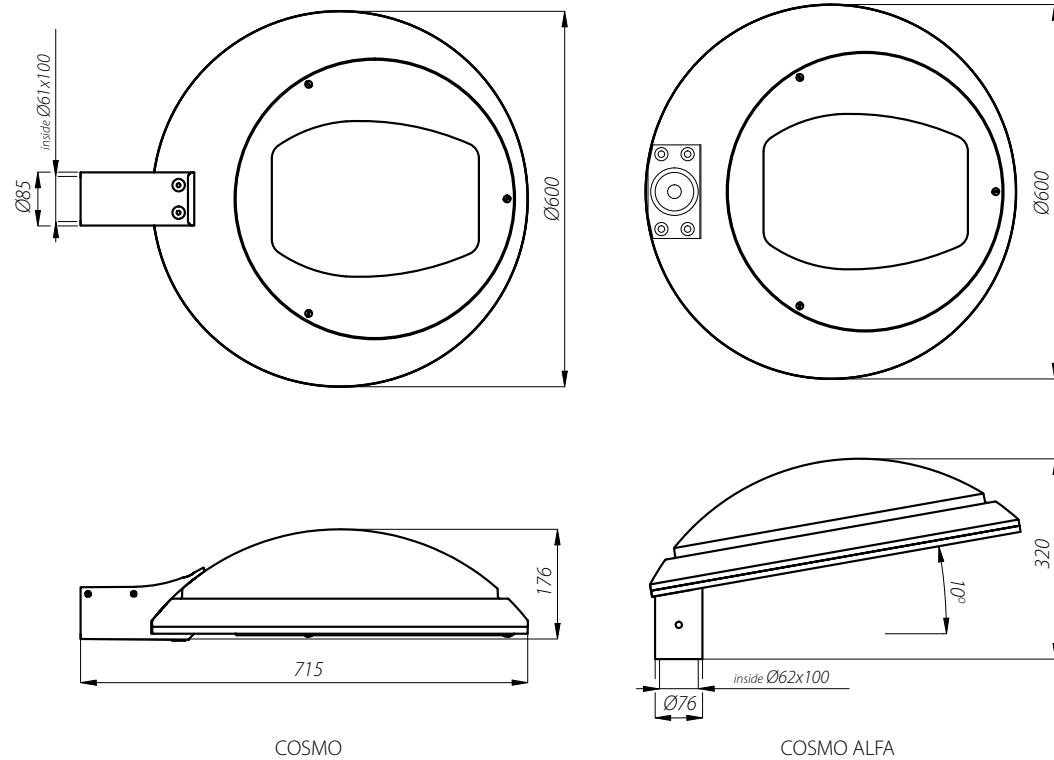


Distribution curve for luminaire
MAGNOLIA LED

Luminaire MAGNOLIA LED
on the column SAL DS-84 with height of 8,4 m

COSMO

- **protection degree:** IP66 for optics, IP44 for wiring chamber
- **insulation class** I
- **material:**
 - body – die cast aluminium alloy
 - cover – formed aluminium sheet
 - handle – COSMO: aluminium cast, COSMO ALFA: aluminium alloy
 - diffuser – flat tempered glass
 - reflector – pressed from polished aluminium sheet
- **colours:** polyester powder paint in any RAL colours
- **assembly:**
 - COSMO – designed for mounting on extension arm with spigot ending $\varnothing 60$ and length 110 mm
 - COSMO ALFA – pole top mounted with spigot ending $\varnothing 60$ and length 100 mm
- reposition the light source – for luminaire with light source up to 150 W



Name	Code	Power [W]	Light source	Weight [kg]
COSMO S-70	221002	70	Sodium E-27	9,1
COSMO ALFA S-70	221202			8,9
COSMO S-100	221003	100	Sodium E-40	9,3
COSMO ALFA S-100	221203			9,1
COSMO S-150	221004	150	Sodium E-40	9,8
COSMO ALFA S-150	221204			9,6
COSMO S-250	221005	250	Sodium E-40	11
COSMO ALFA S-250	221205			10,8
COSMO MH-70	221007	70	Metal halide E-27	9,1
COSMO ALFA MH-70	221207			8,9
COSMO MH-100	221008	100	Metal halide E-27	9,2
COSMO ALFA MH-100	221208			9,2
COSMO MH-150	221009	150	Metal halide E-27	9,7
COSMO ALFA MH-150	221209			9,5
COSMO MH-250	221010	250	Metal halide E-40	11
COSMO ALFA MH-250	221210			10,6

COSMO



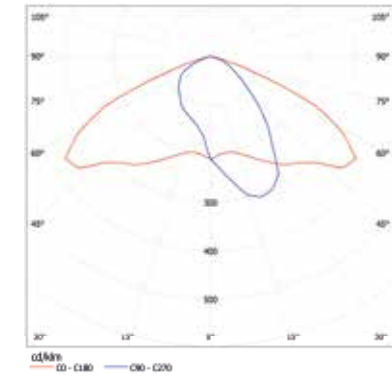
Moskwa / Russia



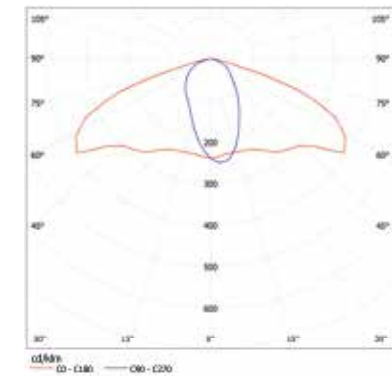
Valašské Meziříčí / Czech Republic



Leszno / Poland



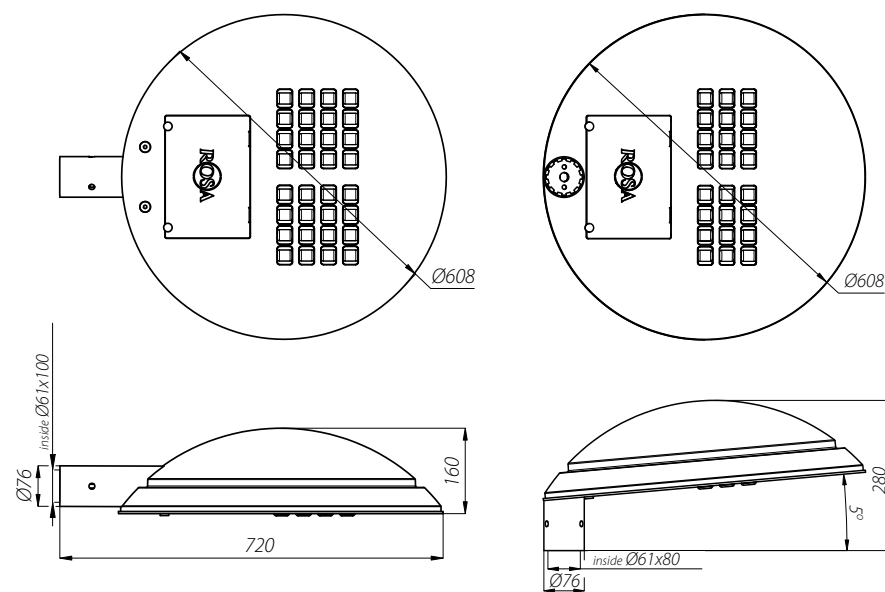
Distribution curve for luminaire COSMO S-150 W



Distribution curve for luminaire COSMO S-250 W

COSMO LED

- **protection degree:** IP66 for optics and driver
- **insulation class:** II
- **supply voltage:** 120-277 B AC, 50/60 Hz
- **light source:** CREE XM-L2
- **material:**
 - body and handle – aluminium alloy
 - cover – formed aluminium sheet
- **standard colour:** inox/black (possibility of anodising in other colours)
- **assembly:**
 - COSMO LED ALFA – pole top mounted with spigot ending $\varnothing 60$ on the column 8-10 m high
 - COSMO LED – for mounting on extension arm with spigot ending $\varnothing 60$
- luminaire is adapted to work in temperatures between -40°C and $+55^{\circ}\text{C}$



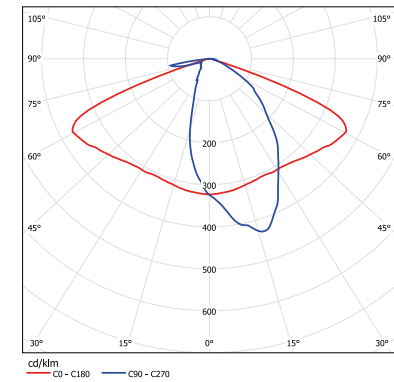
COSMO LED

COSMO ALFA

Name	Colour temperature [K]	Code	Power/LEDs amount [W/pcs]	Total power [W]	Luminous flux [lm]*	Luminous efficiency [lm/W]	Weight [kg]
COSMO LED 72	5 000	221035/6	72/24	80	10 000	125	11,5
	3 500	221035/3			7 750	97	
COSMO LED ALFA 72	5 000	221235/6	72/24	80	10 000	125	
	3 500	221235/3			7 750	97	
COSMO LED 96	5 000	221037/6	96/32	105	13 300	127	
	3 500	221037/3			10 400	99	
COSMO LED ALFA 96	5 000	221237/6	96/32	105	13 300	127	
	3 500	221237/3			10 400	99	

* due to the precision class of diodes tolerance is +/-3%

COSMO LED



Distribution curve for luminaire
COSMO LED 72

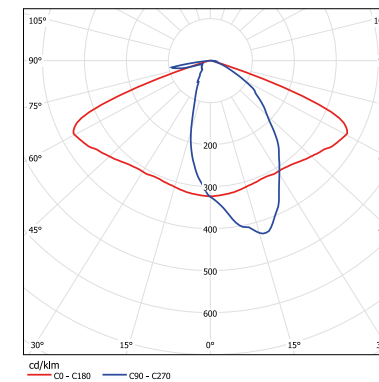
Luminaire COSMO LED
on the column SAL DS-85 in the height of 8,16 m

URSA I LED

- **protection degree:** IP66 for optics and driver
- **insulation class:** II
- **supply voltage:** 120-277 V AC, 50/60 Hz
- **light source:** CREE XM-L2
- **material:** anodised aluminium alloy
- **colours:** inox/graphite (possibility of anodising in other colours)
- **assembly:**
 - URSA I LED – designed for mounting on extension arm Ø60
 - URSA I LED ALFA – pole top mounted Ø60 mm
- **recommended mounting height:** 6-8 m
- luminaire is adapted to work in temperatures between -40°C and +55°C



Name	Colour temperature [K]	Code	Power/LEDs amount [W/pcs]	Total power [W]	Luminous flux [lm]*	Luminous efficiency [lm/W]	Weight [kg]	Length A [mm]
URSA I LED 48	5 000	221833/6	48/16	55	6 650	121	6	558
	3 500	221833/3			5 200	95		
URSA I LED ALFA 48	5 000	221933/6	48/16	55	6 650	121	6	558
	3 500	221933/3			5 200	95		
URSA I LED 60	5 000	221834/6	60/20	68	8 300	122	7	639
	3 500	221834/3			6 450	95		
URSA I LED ALFA 60	5 000	221934/6	60/20	68	8 300	122	7	639
	3 500	221934/3			6 450	95		
URSA I LED 72	5 000	221835/6	72/24	80	10 000	125	8	720
	3 500	221835/3			7 750	97		
URSA I LED ALFA 72	5 000	221935/6	72/24	80	10 000	125	8	720
	3 500	221935/3			7 750	97		

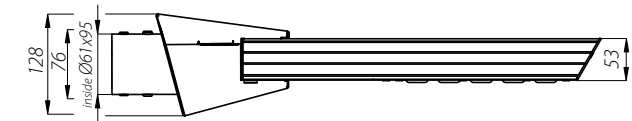
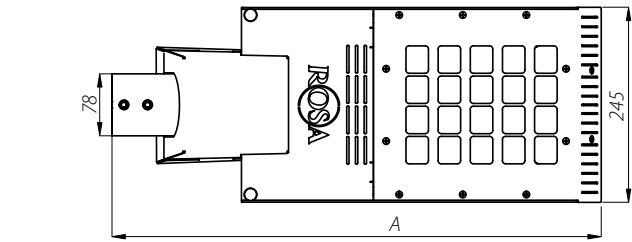
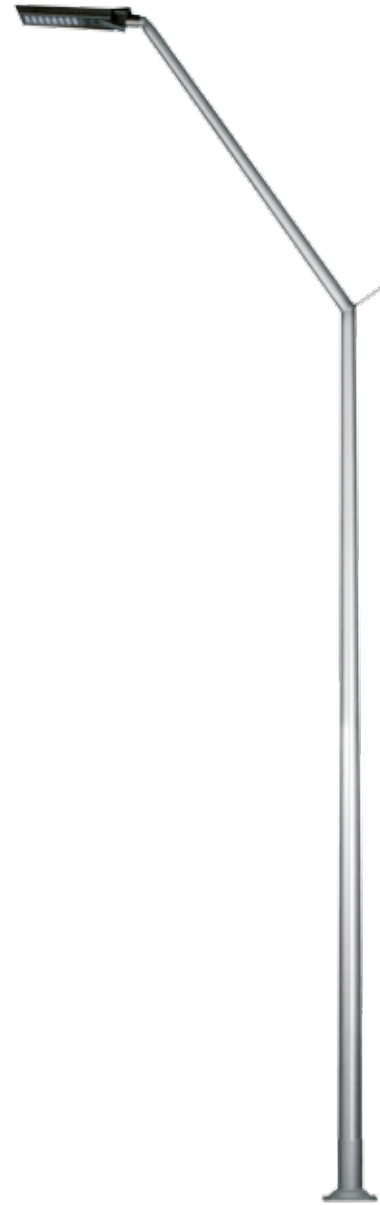


Distribution curve for luminaire
URSA I LED

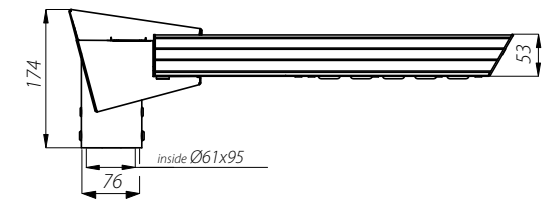
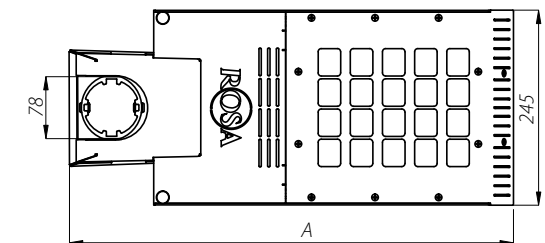
URSA I LED



Busko Zdrój / Poland



URSA I LED

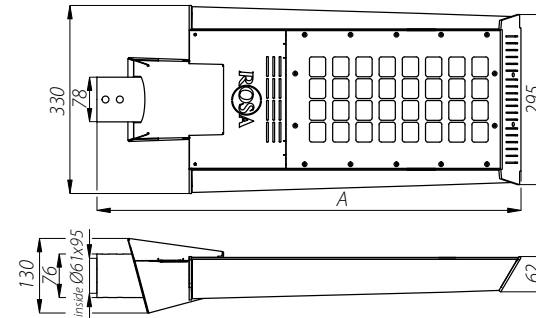


URSA I LED ALFA

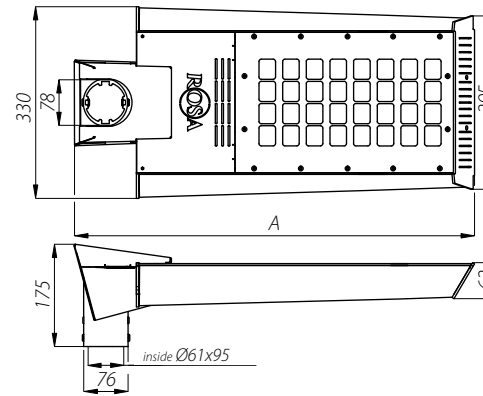
Luminaire URSA I LED on the column
SAL DL-1 in the height of 7 m

URSA II LED

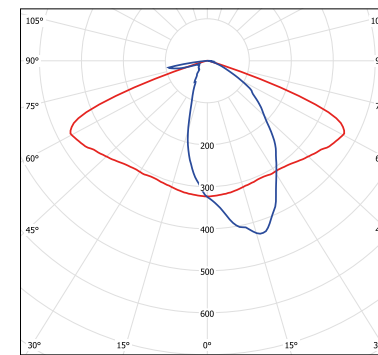
- **protection degree:** IP66 for optics and driver
- **insulation class:** II
- **supply voltage:** 120-277 V AC, 50/60 Hz
- **light source:** CREE XM-L2
- **material:** anodised aluminium alloy
- **colours:** inox/graphite (possibility of anodising in other colours)
- **assembly:**
 - URSA II LED – designed for mounting on extension arm $\varnothing 60$
 - URSA II LED ALFA – pole top mounted $\varnothing 60$ mm on columns 8-12 m high
- luminaire is adapted to work in temperatures between -40°C and $+55^{\circ}\text{C}$



URSA II LED



URSA II LED ALFA


 Distribution curve for luminaire
URSA II LED

 Luminaire URSA II LED on the column
SAL P-58 in the height of 10,8 m

Name	Colour temperature [K]	Code	Power/LEDs amount [W/pcs]	Total power [W]	Luminous flux [lm]*	Luminous efficiency [lm/W]	Weight [kg]	Length A [mm]
URSA II LED 84	5 000	222036/6	84/28	93	11 600	125	8,5	760
	3 500	222036/3			9 050	97		
URSA II LED ALFA 84	5 000	222136/6	84/28	93	11 600	125	8,5	760
	3 500	222136/3			9 050	97		
URSA II LED 96	5 000	222037/6	96/32	105	13 300	127	9	801
	3 500	222037/3			10 400	99		
URSA II LED ALFA 96	5 000	222137/6	96/32	105	13 300	127	9	801
	3 500	222137/3			10 400	99		
URSA II LED 120	5 000	222039/6	120/40	130	16 800	129	10	882
	3 500	222039/3			12 950	100		
URSA II LED ALFA 120	5 000	222139/6	120/40	130	16 800	129	10	882
	3 500	222139/3			12 950	100		
URSA II LED 144	5 000	222041/6	144/48	155	20 150	130	11	967
	3 500	222041/3			15 500	100		
URSA II LED ALFA 144	5 000	222141/6	144/48	155	20 150	130	11	967
	3 500	222141/3			15 500	100		

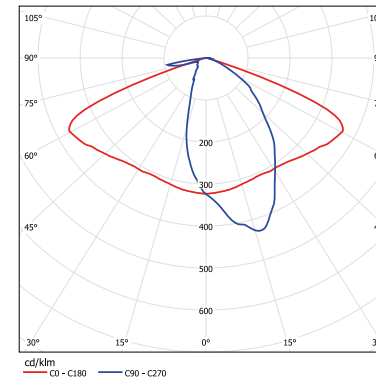
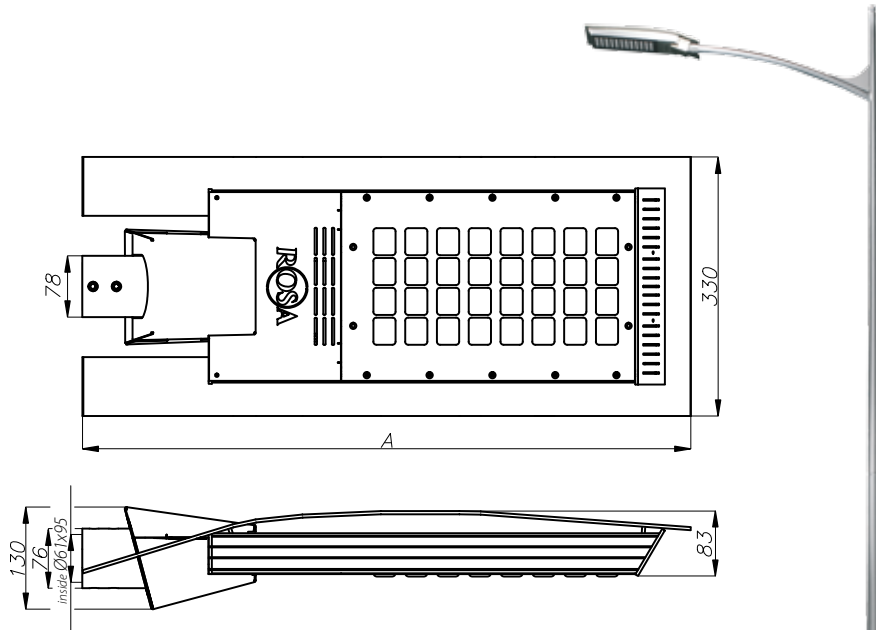
* due to the precision class of diodes tolerance is +/-3%



STREET LIGHTING

ANDROMEDA LED

- **protection degree:** IP66 for optics and driver
- **insulation class:** II
- **supply voltage:** 120-277 V AC, 50/60 Hz
- **light source:** CREE XM-L2
- **material:** anodised aluminium alloy
- **colours:** inox/graphite (possibility of anodising in other colours)
- **assembly:** on extension arm Ø60
- **recommended mounting height:** 8-10 m
- luminaire is adapted to work in temperatures between -40°C and +55°C



Distribution curve for luminaire
ANDROMEDA LED

Name	Colour temperature [K]	Code	Power/LEDs amount [W/pcs]	Total power [W]	Luminous flux [lm]*	Luminous efficiency [lm/W]	Weight [kg]	Length A [mm]
ANDROMEDA LED 72	5 000	222235/6	72/24	80	10 000	125	9	770
	3 500	222235/3			7 750	97		
ANDROMEDA LED 96	5 000	222237/6	96/32	105	13 300	127	10	901
	3 500	222237/3			10 400	99		
ANDROMEDA LED 120	5 000	222239/6	120/40	130	16 800	129	11	982
	3 500	222239/3			12 950	100		
ANDROMEDA LED 144	5 000	222241/6	144/48	155	20 150	130	12	1063
	3 500	222241/3			15 500	100		

* due to the precision class of diodes tolerance is +/-3%

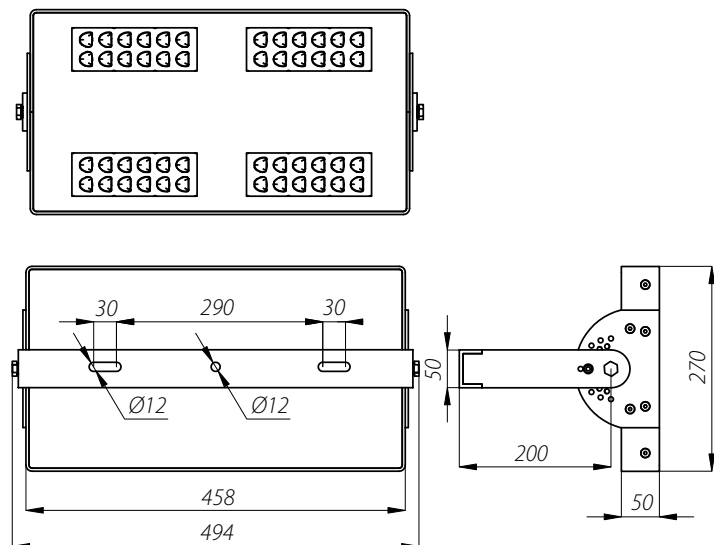
Luminaire ANDROMEDA LED on the column SAL P-81 in the height of 10 m



STREET LIGHTING

ARTEMIS LED

- **protection degree:** IP66 for optics and driver
- **insulation class:** II
- **supply voltage:** 120-277 V AC, 50/60 Hz
- **light source:** CREE XM-L2
- **material:** anodised aluminium alloy
- **colours:** inox/black
- **assembly:** screwed to extension arm
- possibility to adjust the inclination angle from 0° to 180°
- **recommended mounting height:** 8-10 m
- luminaire is adapted to work in temperatures between -40°C and +55°
- mounting height depends on applied optical system



Name	Colour temperature [K]	Code	Power/LEDs amount [W/pcs]	Total power [W]	Luminous flux [lm]*	Luminous efficiency [lm/W]	Weight [kg]
ARTEMIS LED	5 000	229041/6	144/48	155	20 150	130	8
	3 500	229041/3			15 500	100	

* due to the precision class of diodes tolerance is +/-3%

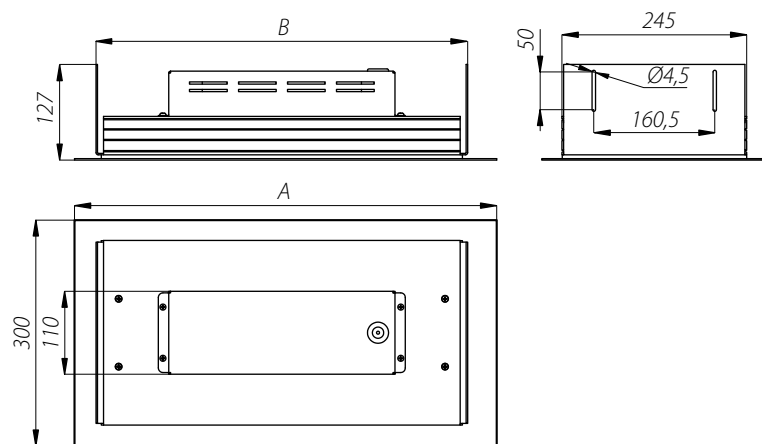


STREET LIGHTING

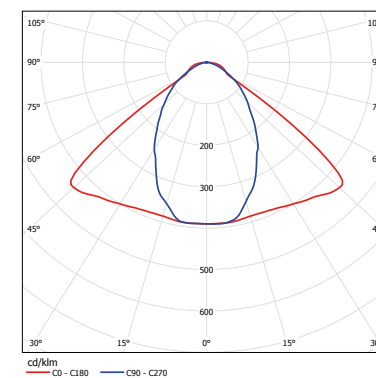
LIBRA LED

Industrial luminaire LIBRA LED is designed to illuminate the production halls, warehouses, petrol stations, etc.. The luminaire is mounted in the ceiling after the preparation of the appropriate hole.

- **protection degree:** IP66
- **insulation class:** II
- **supply voltage:** 120-277 V AC, 50/60 Hz
- **light source:** CREE XM-L2
- **material:** anodised aluminium alloy
- **colour:** natural (possibility of anodising in other colours)



Name	Colour temperature [K]	Code	Power/LEDs amount [W/pcs]	Total power [W]	Luminous flux [lm]*	Luminous efficiency [lm/W]	Weight [kg]	Length A [mm]	Length of the ceiling hole B [mm]
LIBRA LED 72	5 000	230535/6	72/24	80	10 000	125	7,7	427	360
	3 500	230535/3			7 750	97			
LIBRA LED 96	5 000	230537/6	96/32	105	13 300	127	9,3	519	452
	3 500	230537/3			10 400	99			
LIBRA LED 120	5 000	230539/6	120/40	130	16 800	129	10	560	493
	3 500	230539/3			12 950	100			
LIBRA LED 144	5 000	230541/6	144/48	155	20 150	130	11,2	642	572
	3 500	230541/3			15 500	100			



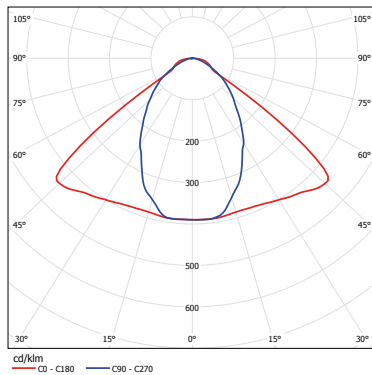
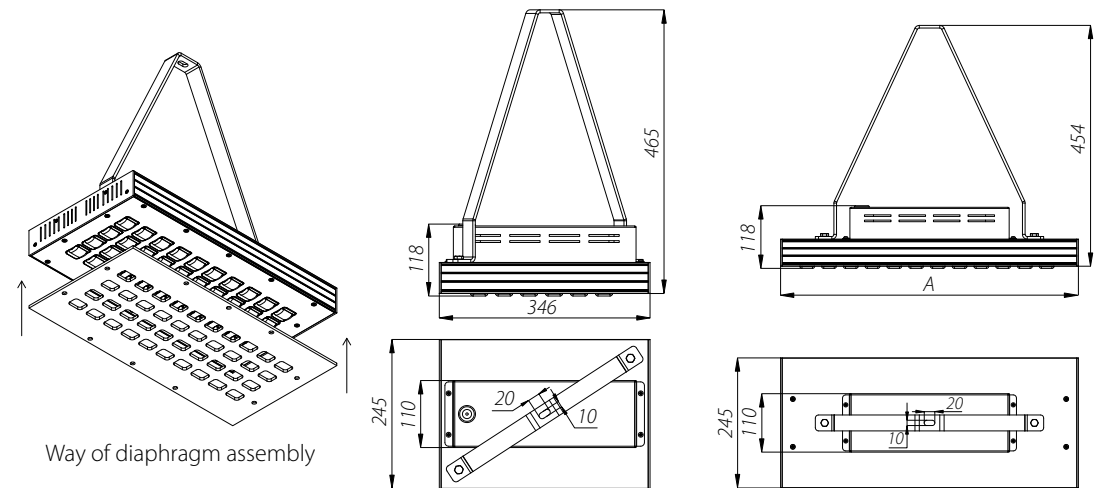
Distribution curve for luminaire
LIBRA LED

* due to the precision class of diodes tolerance is +/-3%

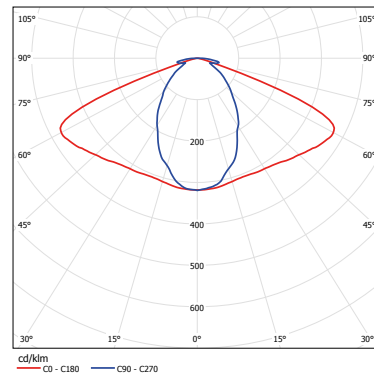
TAURUS LED

Luminaire TAURUS LED is designed to illuminate the production halls, warehouses, magazines, etc.. Luminaire is suspended to the support construction.

- **protection degree:** IP66
- **insulation class:** II
- **supply voltage:** 120-277 V AC, 50/60 Hz
- **light source:** CREE XM-L2
- **material:** anodised aluminium alloy
- **colour:** natural (possibility of anodising in other colours)
- **additional elements:** diaphragm reducing glare



Distribution curve for industrial luminaire TAURUS LED with diaphragm



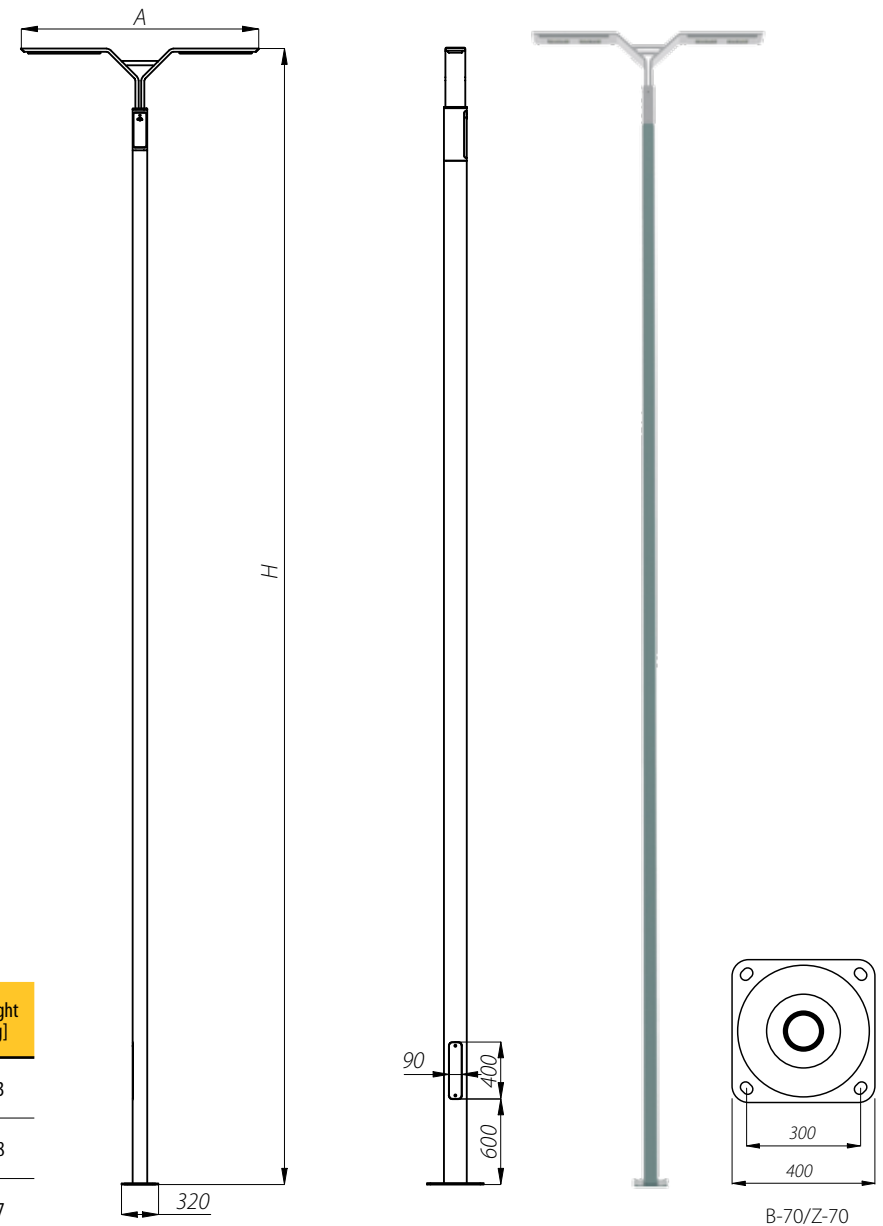
Distribution curve for industrial luminaire TAURUS LED

Name	Colour temperature [K]	Code	Power/LEDs amount [W/pcs]	Total power [W]	Luminous flux [lm]*	Luminous efficiency [lm/W]	Weight [kg]	Length A [mm]
TAURUS LED 72	5 000	230135/6	72/24	80	10 000	125	6,3	346
	3 500	230135/3			7 750	97		
TAURUS LED 96	5 000	230137/6	96/32	105	13 300	127	7,5	438
	3 500	230137/3			10 400	99		
TAURUS LED 120	5 000	230139/6	120/40	130	16 800	129	8,3	479
	3 500	230139/3			12 950	100		
TAURUS LED 144	5 000	230141/6	144/48	155	20 150	130	9,2	561
	3 500	230141/3			15 500	100		

* due to the precision class of diodes tolerance is +/-3%

GULLWING LED

- **protection degree:** IP66 for optic and driver
- **insulation class:** II
- **supply voltage:** 120-277 V AC, 50/60 Hz
- **light source:** CREE XM-L2
- **material:** anodised aluminium alloy
- **colour:** inox/graphite (possibility of anodising in other colours)
- **recommended mounting height:** from 8 to 10 m in configuration on median (dividing roadway), depending on the optics
- luminaire is adapted to work in temperatures between -40°C and +55°C
- optics: optics available for the removable module can be found on page 17 of the catalogue



Name	Colour temperature [K]	Code	Power/LEDs amount [W/pcs]	Total power [W]	Luminous flux [lm]*	Luminous efficiency [lm/W]	Height H [m]	Length A [mm]	Weight [kg]
GULLWING LED 2 x 72	5 000	218035/6	2 x 72/24	2 x 80	2 x 10 000	125	8	1,68	53
	3 500	218035/3			2 x 7 750	97			
GULLWING LED 2 x 108	5 000	218038/6	2 x 108/36	2 x 118	2 x 14 950	127	9	2,37	68
	3 500	218038/3			2 x 11 700	99			
GULLWING LED 2 x 144	5 000	218041/6	2 x 144/48	2 x 155	2 x 20 150	130	10	2,88	77
	3 500	218041/3			2 x 15 500	100			

* due to the precision class of diodes tolerance is +/-3%



STREET LIGHTING

OTHER PRODUCTS / ALUMINIUM COLUMNS FOR TRAFFIC SIGNAL LIGHTS

STRAIGHT COLUMNS

Columns for traffic signal lights

Columns for traffic signal lights are designed for installing traffic lights on crossroads, pedestrian crossings etc.

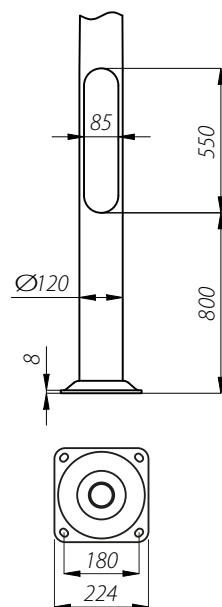
Types of columns for traffic signal lights:

- straight columns
- columns with outreach
- gates

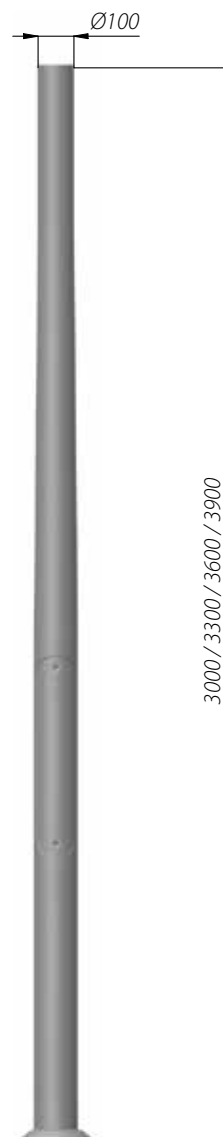
- **material:** anodised aluminium
- **base plate:** made of sheet aluminium, welded on a robotized workstation
- **base diameter:** $\varnothing 120$ mm for straight columns and $\varnothing 225$ mm for columns with outreach and for gates
- **assembly:** concrete footing or reinforcement basket

Columns with base plate

- SAL SYG 3** code: 42801/C..
- SAL SYG 3,3** code: 42802/C..
- SAL SYG 3,6** code: 42803/C..
- SAL SYG 3,9** code: 42804/C..



B-50/Z-50



Fontenay-sous-Bois / France

OTHER PRODUCTS / ALUMINIUM COLUMNS FOR TRAFFIC SIGNAL LIGHTS

COLUMNS WITH OUTREACH

Columns with base plate

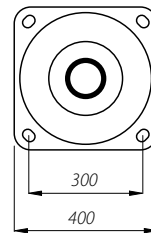
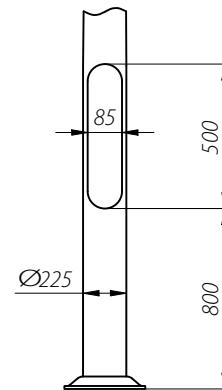
- SAL SYG 65-4 code: 42810/C..
- SAL SYG 65-7 code: 42811/C..



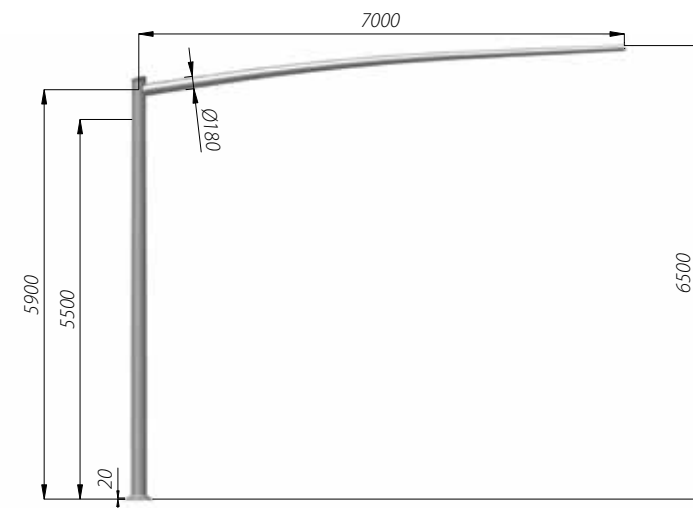
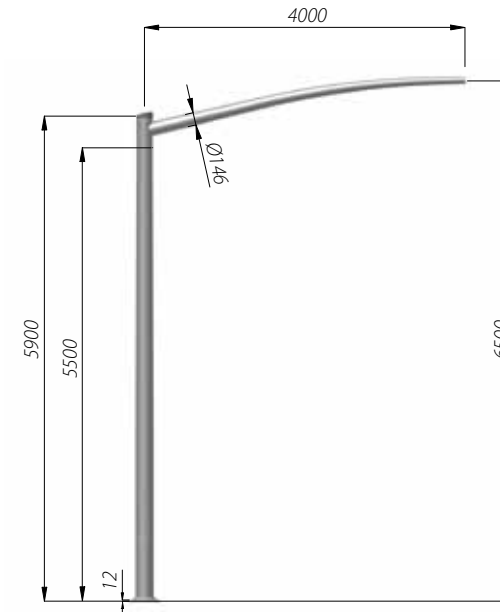
Bieruń / Poland



Tychy / Poland



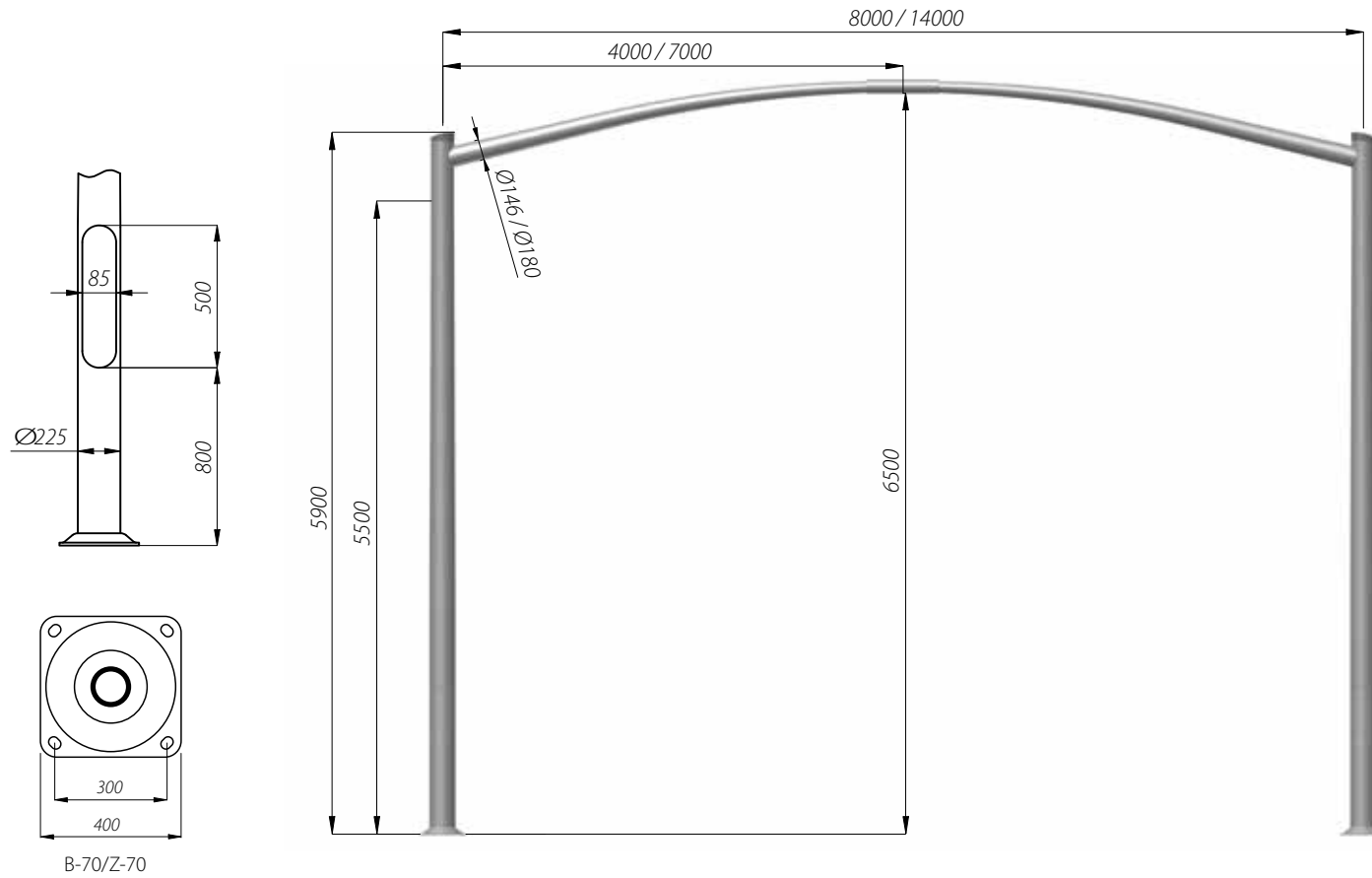
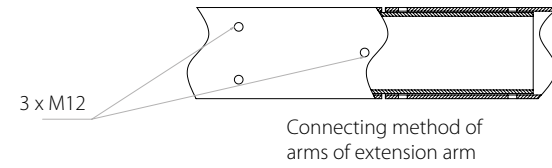
B-70/Z-70



GATE

Columns with base plate

- SAL SYG 8** code: 42830/C..
- SAL SYG 14** code: 42831/C..



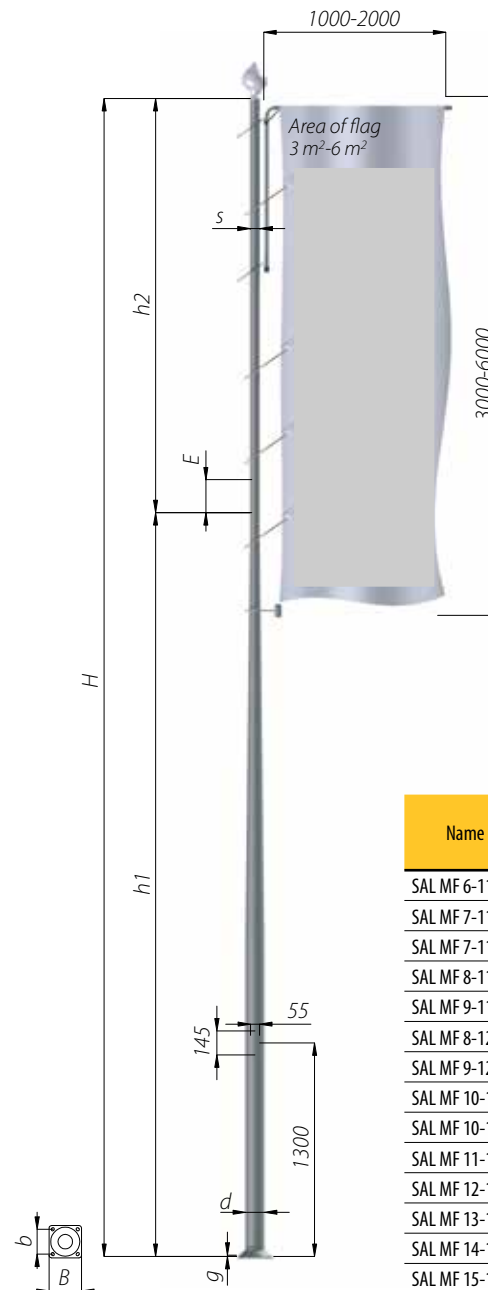
FLAG POLES

Flag poles are used to hang flags with area from 3 m² to 6 m²

- **material:** anodised aluminium alloy
- **construction:** consists of two sections, bottom part – conical, upper part – cylindrical
- **routing head:** made of plastic, together with cord placed inside the pole which allows the flag to move depending on the wind direction
- **cord:** braided spiral, resistant, 4 mm diameter, white colour
- **flag bob:** grey plasticized metal
- **clamping rings for fixing flag:** 7 pieces as standard
- **niche chamber:** equipped in locks cord

Additional accessories for flag poles:

- **cross-bar for flag of the following lengths:** 1 m, 1,5 m, 2 m
- **top:** gold or silver decorative bal



Name	Code	Height [m]			Diameter at base plate [mm]	Thickness of the base [mm]	Concrete footing/reinforcement basket
		H	h1+E	h2			
SAL MF 6-114	42950/C..	6	4,5+0,2	1,5	Ø114	8	B-50 / Z-50
SAL MF 7-114-1	42951/C..	7	4,5+0,2	2,5	Ø114	8	B-50 / Z-50
SAL MF 7-114-2	42952/C..	7	4,5+0,2	2,5	Ø114	12	B-51 / Z-51
SAL MF 8-114	42953/C..	8	4,5+0,2	3,5	Ø114	12	B-51 / Z-51
SAL MF 9-114	42954/C..	9	4,5+0,2	4,5	Ø114	12	B-51 / Z-51
SAL MF 8-120	42955/C..	8	6,0+0,2	2	Ø120	12	B-51 / Z-51
SAL MF 9-120	42956/C..	9	6,0+0,2	3	Ø120	12	B-51 / Z-51
SAL MF 10-120	42957/C..	10	6,0+0,2	4	Ø120	12	B-51 / Z-51
SAL MF 10-146	42958/C..	10	6,82+0,2	3,18	Ø146	10	B-71 / Z-71
SAL MF 11-146	42959/C..	11	6,82+0,2	4,18	Ø146	10	B-71 / Z-71
SAL MF 12-146	42960/C..	12	6,82+0,2	5,18	Ø146	10	B-71 / Z-71
SAL MF 13-180	42961/C..	13	9,82+0,2	3,18	Ø180	12	B-70 / Z-70
SAL MF 14-180	42962/C..	14	9,82+0,2	4,18	Ø180	12	B-70 / Z-70
SAL MF 15-180	42963/C..	15	9,82+0,2	5,18	Ø180	12	B-70 / Z-70
SAL MF 16-180	42964/C..	16	9,82+0,2	6,18	Ø180	12	B-70 / Z-70

INDIVIDUAL PROJECTS



INDIVIDUAL PROJECTS

We make architects' dreams come true and create entirely new solutions, which go beyond the standard catalogue offer. With us, even the most original ideas become reality.





○ OTHER PRODUCTS

ROSA outdoor lighting stands on solid foundations. We know how important is the base that's why we provide our customers complete solutions, which include the concrete foundations and reinforcement baskets. We are also aware of the importance of the detail, therefore we enriched our offer with decorative elements, that you cannot pass by indifferently.

CONCRETE FOUNDATIONS

Application:

- buried concrete footings are used as foundations for lighting columns

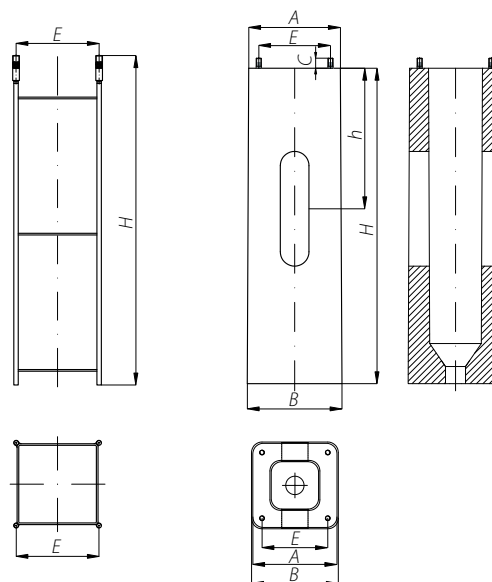
Technical information:

- concrete class C25/30 according standard EN 206-1,
- steel reinforcement basket,
- screws spigot endings hot galvanized,
- concrete footings for aluminium columns and masts are supplied with thermo-shrinkable sleeves installed on the screws endings, what protects against corrosion on screw,
- side holes and vertical hole to provide power cables,
- surface is covered with an impregnate agent (certified asphalted anion emulsion),
- square section (aluminium columns and masts as well pole SP-5W and SP-31W) or round (plastic coated poles).

Advantages:

- single-element construction makes easy foundation of products in the ground,
- fast and easy assembly with no seasoning required,
- high quality due to the semi-automatic computer-controlled production line using the method of vibropressing.

All concrete footings comply with standard EN 14991:2007 and have Certificate of Factory Production Control 1488-CPD-0208/Z.

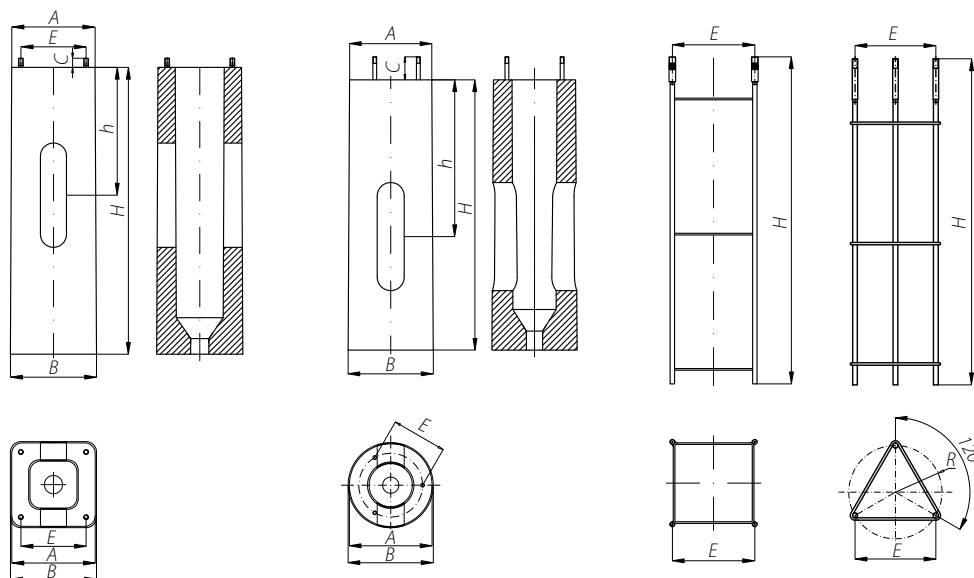


Concrete footings and reinforcement baskets in street lighting.

Type of concrete footing	B-60	B-70	B-70	B-71	B-80
Code	311160	311170	311170B	311171	311180
Shape	square				
Size A x B x H [mm]	320 x 330 x 1000	400 x 410 x 1200	400 x 410 x 1100	400 x 410 x 1000	400 x 430 x 1500
Bolts spacing E [mm]	250	300	300	300	300
Height of pin [mm]	35	45	45	45	50
Connection elements	4008/40009	4012/1013	4012/1013	4012/4013	4012
Type of reinforcement basket	Z-60	Z-70	Z-70B	Z-71	Z-80
Code	311206	311207	311207B	311271	311208
Shape	square				
Height H [mm]	985	1190	1090	965	1500
Connection elements	4008/4009	4012/4013	4012/4013	4012/4013	4012
Application	SALØ146	SALØ176, SAL Ø178K, SALØ180M	SALØ176, SAL Ø178K, SALØ180M	SALØ146H, SALØ176, SAL Ø178K, SALØ180M	MALØ225



ADDITIONAL ELEMENTS



Application:

- buried concrete filled reinforcement baskets are used as foundations for lighting columns

Technical information:

- steel reinforcement basket,
- oxide paint as a protection against corrosion resistant,
- screws spigot endings hot galvanized,
- in reinforcement baskets for aluminium columns and masts are used thermo-shrinkable sleeves put on the screws endings in place of base plate deposition, what protects against corrosion on screw,
- square section (aluminium columns and masts as well pole SP-5W and SP-31W) or triangle (plastic coated poles).

Advantages:

- light weight facilitates transport
- for installation on customer footings

ADDITIONAL ELEMENTS

- stainless washer, hot galvanized nut or hot galvanized ripable nut are the connection elements sets available for columns SAL, MAL.
- stainless washer, hot galvanized nut, rubber cover plate for poles type S, SP, SM.

The manufacturer recommends using original concrete footings, reinforcement baskets and connection elements guarantee stability and safety of whole construction.

Concrete footings and reinforcement baskets in park lighting.

Type of concrete footing	B-20	B-30	B-40	B-40B	B-50A	B-50	B-51A	B-51	B-60	B-60T	B-71T
Code	311120	311130	311140	311140B	311150A	311150	311151A	311151	311160	311160T	311171T
Shape	round				square						
Size A x B x H [mm]	Ø250 x Ø255 x 700	Ø305 x Ø315 x 800	Ø305 x Ø315 x 1000	Ø305 x Ø315 x 800	240 x 255 x 1000	240 x 255 x 900	260 x 275 x 1200	260 x 275 x 1000	320 x 330 x 1000	320 x 330 x 1000	400 x 410 x 1000
Bolt spacing E [mm]	190	236	236	236	180	180	200	200	250	250	300
Height of pin [mm]	50	85	85	85	30	30	35	35	35	90	110
Connection elements	311002	311003	311003	311003	4006 / 4007	4006 / 4007	4008 / 4009	4008 / 4009	4008 / 4009	4008 / 4009	4008 / 4009

Type of reinforcement basket	Z-20	Z-30	Z-40	Z-40B	–	Z-50	Z-51A	Z-51	Z-60	Z-60T	Z-71T
Code	311202	311203	311204	311204B	–	311205	311251A	311251	311206	311260T	311271T
Shape	triangle				square						
Height H [mm]	700	825	1025	935	–	870	1180	975	985	1060	1055
Connection elements	311002	311003	311003	311003	–	4006 / 4007	4008 / 4009	4008 / 4009	4008 / 4009	4008 / 4009	4008 / 4009

Application	S-13, S-23, SP-2	S-21, S-21W, S-22, S-30, S-30W, S-31, S-31W, S-32	S-52W, S-54W, SP-4, SP-4W, SM-1W, SM-2W, SM-3W	S-40, S-40W, SP-3, SP-3W	SALØ114/B60, SALØ120	SALØ114/B60, SALØ120	SALØ114/D60, SALØ114/D75, SALØ120E, SALØ146G, SAL DECO-1, SAL DECO-2	SALØ114/D60, SALØ114/D75, SALØ120E	SALØ146	SP-31W	SP-5W
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CONNECTION BOXES

Connection box is an integral part of almost any lighting construction. It is used to connect power cables and electrical protection of luminaires mounted on columns and poles. It can be used in all columns and poles, where internal diameter is greater than 95 mm. The priority in the design of connection boxes is the safety of use, therefore they are made from high quality materials, excellent insulation properties and high mechanical strength.

- **protection degree:** IP54
- **insulation class:** II
- **rated voltage:** 500V
- **rated current:** 80A
- **fuse:** D01/E14, 2-16 A, 400 V, AC
- **casings dimensions:** 1. TB, NTB: 273 mm x 90 mm x 76 mm (for TB-11, TB-12: 273 mm x 90 mm x 64 mm)
- **material:**
 - integrated terminal strip – made of PTB material (butylene polyterephthalate), with high insulation parameters and high mechanical resistance
 - connection cover and clamp/cable protection – made of transparent polycarbonate,
 - connection box base – made of polycarbonate reinforced by fibre glass, cable opening/ outlets are protected with gaskets
- **assembly:** installed on the aluminium rail on the back wall of the column using two screws M6

Advantages:

- small dimensions,
- quick, easy mounting due to the construction,
- all connection boxes are for 2-3 cables,
- construction of terminal strip (open from the top) enables cable installation.



Fuses

Type of fuse	Weight [kg]
D01/E14 6A	0,01
D01/E14 10A	0,01
D01/E14 16A	0,01



Connection box installed in aluminium column



Connection box installed in plastic coated pole

CONNECTION BOXES NTB

- 5 tracks connection boxes for feeder cables with cross-section from 5 x 6 mm² up 5 x 16 mm²
- max. 3 cables
- the possibility of splitting load into particular phases
- the possibility of moving the fuse-sockets



The possibility of moving the fuse-sockets in the connection box NTB-1

Name	Code	Number of fuse-sockets [pcs]		Weight [kg]
NTB-1	324110	1	fuse-socket mounted on L1 phase, there is a possibility of moving the fuse-socket on phase L2 or L3 by screwing-out two bolts	0,71
NTB-2	324120	2	fuse-socket mounted on L1 and L2 phase, there is a possibility of moving the fuse-socket into phase L3 by screwing-out two bolts	0,73
NTB-3	324130	3	fuse-sockets on three phases L1, L2, L3.	0,76

CONNECTION BOXES TB

Connection boxes TB-1 and TB-2

- connection box with 4 tracks for feeder cables with cross-section from 4 x 10 mm² up 4 x 35 mm²
- max. 3 cables
- the possibility of moving the fuse-sockets



Name	Code	Number of fuse-sockets [pcs]		Weight [kg]
TB-1	324010	1	fuse-socket mounted on L1 phase, there is a possibility of moving the fuse-socket on phase L3 by screwing-out two bolts	0,71
TB-2	324020	2	fuse-socket mounted on two phases L1 and L2	0,74

Connection boxes TB-11 and TB-12

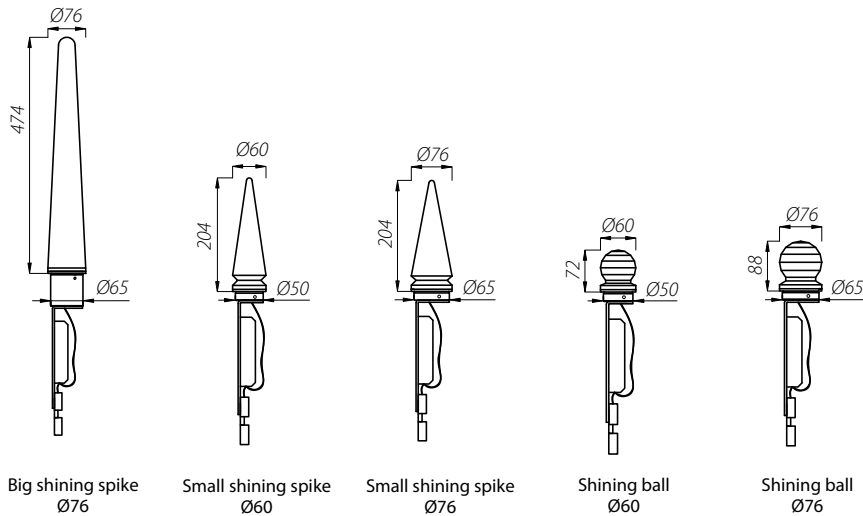
- connection box with 4 tracks for feeder cables with cross-section from 4 x 10 mm² up 4 x 35 mm²
- max. 2 cables
- simplified installation of cables ensure easier and more ergonomic operation
- smaller size provides more opportunities of applications
- the possibility of moving the fuse-sockets



Name	Code	Number of fuse-sockets [pcs]		Weight [kg]
TB-11	324011	1	fuse-socket mounted on L1 phase, there is a possibility of moving the fuse-socket on phase L2 by screwing-out two bolts	0,71
TB-12	324012	2	fuse-socket mounted on two phases L1 and L2	0,74

DECORATIVE ELEMENTS

- **application:** aluminium columns with spigot endings Ø60 mm and Ø76 mm
- **protection degree:** IP20
- **insulation class:** II
- **voltage:** 220-240 V, AC, 50/60 Hz
- **material:** PMMA
- **colours:** blue, green, red, white
- **LED module:** LED CREE XP-E
- **LED power:** 1 W – small shining spike and shining ball, 9 W – big shining spike
- **assembly:** with 3 screws M5, after mounting holes in the column



Name	Colour	Code/mounting diameter [mm]	
		Ø76	Ø60
Big shining spike	Blue	4 038	–
	Green	4 039	–
	Red	4 040	–
	White	4 041	–
Small shining spike	Blue	4 050	4 034
	Green	4 051	4 035
	Red	4 052	4 036
	White	4 053	4 037
Shining ball	Blue	4 046	4 030
	Green	4 047	4 031
	Red	4 048	4 032
	White	4 049	4 033



DECORATIVE ELEMENTS



Big shining spike



Small shining spike

Shining ball



○ TECHNICAL INFORMATION

General characteristics of aluminium lighting columns and masts with base plate.

Column type	Code	Column height H [m]	Net weight [kg]	Approximate unit volume [m ³]*	Permissible mass of luminaire and extension arms [kg]	Top mounted luminaires	Type of used extension arms	Type of concrete footing	Type of reinforcement basket	Connection elements [code]	Rivets connection elements [code]
PARK LIGHTING											
Straight aluminium columns Ø114 mm base diameter											
SAL-3/B60 anodised	42120/C...	3,00	8,30	0,067	20	OP, OPA-1, OS-1, OS-1 LED, OS-11 LED, OZ, ELBA, ELBA LED, ATLANTIS LED, MIRA LED, MIZAR LED, ISKRA LED ALFA, CORONA LED, COSMO LED ALFA, COSMO DELTA LED, VEGA LED ALFA, VEGA LED BETA	WA-1, WA-4, WA-14/1	B-50	Z-50	4006	4007
SAL-3,5/B60 anodised	42101/C...	3,50	9,80	0,078	20						
SAL-4/B60 anodised	42102/C...	4,00	11,40	0,090	20						
SAL-4,5/B60 anodised	42103/C...	4,50	12,90	0,100	20						
SAL-3/D60 anodised	42122/C...	3,00	8,70	0,087	20	OP, OPA-1, OS-1, OS-1 LED, OS-11 LED, OZ, ELBA, ELBA LED, ATLANTIS LED, MIRA LED, MIZAR LED, ISKRA LED ALFA, CORONA LED, COSMO LED ALFA, COSMO DELTA LED, VEGA LED ALFA, VEGA LED BETA	WA-1, WA-4, WA-14/1	B-51	Z-51	4008	4009
SAL-3,5/D60 anodised	42114/C...	3,50	10,20	0,100	20						
SAL-4/D60 anodised	42115/C...	4,00	11,70	0,115	20						
SAL-4,5/D60 anodised	42116/C...	4,50	13,03	0,130	20						
Straight aluminium columns Ø120 mm base diameter											
SAL-4 anodised	42201/C...	4,00	13,90	0,090	20	OP, OPA-1, OZ, ELBA, ELBA LED, ATLANTIS LED, MIRA LED, MIZAR LED, ISKRA LED ALFA, CORONA LED, COSMO LED ALFA, COSMO DELTA LED, VEGA LED ALFA, VEGA LED BETA	WA-1, WA-5/1, WA-14/1, WN-1, additional: WA-5/2, WA-8/2, (to a maximum height 4,5 m), WA-14/2 (to a maximum height 5,0 m), WA-4, WR-1/1, WR-4/1, WN-2 (to a maximum height 5,5 m)	B-50	Z-50	4006	4007
SAL-4,5 anodised	42202/C...	4,50	15,90	0,101	20						
SAL-5 anodised	42203/C...	5,00	16,40	0,112	20						
SAL-5,5 anodised	42205/C...	5,50	19,00	0,123	20						
SAL-6 anodised	42207/C...	6,00	21,10	0,134	20	OP, OPA-1, OZ, ELBA, ELBA LED, ATLANTIS LED, MIRA LED, MIZAR LED, ISKRA LED ALFA, CORONA LED, COSMO LED ALFA, COSMO DELTA LED, VEGA LED ALFA, VEGA LED BETA	WA-1, WA-5/1, WA-14/1, WN-1, additional: WA-5/2, WA-8/2, (to a maximum height 4,5 m) WA-4, WA-14/2, WR-1/1, WR-4/1, WN-2 (to a maximum height 5,0 m)	B-51	Z-51	4008	4009
SAL-4E anodised	42217/C...	4,00	14,30	0,116	20						
SAL-4,5E anodised	42218/C...	4,50	16,40	0,130	20						
SAL-5E anodised	42219/C...	5,00	17,40	0,145	20						
SAL-6E anodised	42223/C...	6,00	21,50	0,174	20						
Aluminium columns Ø120 mm base diameter with welded extension arms											
SAL-A1 anodised	42209/C...	4,00	15,10	0,263	10	OP, OPA-1, OZ, OS-1, OS-1 LED, OS-11 LED, ELBA, ELBA LED, ATLANTIS LED, VEGA LED ALFA, ISKRA LED ALFA, MIZAR LED, VEGA LED BETA, MIRA LED, CORONA LED, COSMO LED ALFA, COSMO DELTA LED	OW, DROP	B-50	Z-50	4006	4007
SAL-A2 anodised	42210/C...	4,00	16,40	0,397	10						
SAL-C1 anodised	42213/C...	4,50	17,00	0,290	10			B-50	Z-50	4006	4007
SAL-C2 anodised	42214/C...	4,50	18,00	0,435	10			B-50	Z-50	4006	4007
SAL-D1 anodised	42215/C...	4,00	16,60	0,282	10	OP, OPA-1, OZ, OS-1, OS-1 LED, OS-11 LED, ELBA, ELBA LED, ATLANTIS LED, VEGA LED ALFA, ISKRA LED ALFA, MIZAR LED, VEGA LED BETA, MIRA LED, CORONA LED, COSMO LED ALFA, COSMO DELTA LED		B-50	Z-50	4006	4007
SAL-D2 anodised	42216/C...	4,00	16,80	0,431	10						

Column type	Code	Column height H [m]	Net weight [kg]	Approximate unit volume [m ³]*	Permissible mass of luminaire and extension arms [kg]	Top mounted luminaires	Type of used extension arms	Type of concrete footing	Type of reinforcement basket	Connection elements [code]	Rivets connection elements [code]	
Straight aluminium columns Ø146 mm base diameter												
SAL-60 anodised	42313/C...	6,00	25,40	0,265	30	OP, OPA-1, ELBA, MIRA LED, MIZAR LED, VEGA LED ALFA, VEGA LED BETA, OZ, ELBA LED, ISKRA LED ALFA, CORONA LED, ATLANTIS LED, COSMO LED ALFA, COSMO DELTA LED	WA-4, WA-5/1, WA-5/2, WA-14/1, WA-14/2, WA-20/1, WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-2/3, WR-3/1, WR-3/2, WR-3/3, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8A/1, WR-13/1, WR-13/2, WR-13/3, WR-14/1, WR-15/1, WR-15/2, WR-18, WR-31, WR-61, WN-1, WN-2, WN-21	B-60	Z-60	4008	4009	
Aluminium columns Ø146 mm base diameter with welded extension arms												
SAL-K1 anodised	42330/C...	6,00	26,50	0,670	10	OW, DROP		B-60	Z-60	4008	4009	
SAL-K2 anodised	42306/C...	6,00	27,60	0,972	10			B-60	Z-60	4008	4009	
SAL-M1 anodised	42308/C...	6,00	26,90	0,661	10			B-60	Z-60	4008	4009	
SAL-M2 anodised	42309/C...	6,00	28,30	0,951	10			B-60	Z-60	4008	4009	
SAL-O1 anodised	42333/C...	6,00	28,20	0,835	10			B-60	Z-60	4008	4009	
SAL-O2 anodised	42312/C...	6,00	30,90	1,350	10			B-60	Z-60	4008	4009	
SAL-R1 anodised	42334/C...	6,00	29,90	0,831	10			B-60	Z-60	4008	4009	
SAL-R2 anodised	42311/C...	6,00	32,60	1,306	10			B-60	Z-60	4008	4009	
Decorative aluminium columns												
SAL DS-51 anodised	42224/C...	6,00	24,2	0,804	10	park luminaires with fixing Ø60 and the parameters of weight and windage not exceeding the data of strength table located in the product card		B-51	Z-51	4008	4009	
SAL DS-52 anodised	42225/C...	5,50	23,4	0,735	20			B-51	Z-51	4008	4009	
SAL DP-31 anodised	42910/C...	3,00	12,6	0,067	20			B-50	Z-50	4006	4007	
SAL DP-42 anodised	42911/C...	4,00	16,2	0,090	20			B-50	Z-50	4006	4007	
SAL DP-44 anodised	42913/C...	4,30	16,8	0,090	20			B-50	Z-50	4006	4007	
SAL DP-45 anodised	42914/C...	4,00	17,3	0,140	20			B-50	Z-50	4006	4007	
SAL DP-46 anodised	42943/C...	4,00	16,8	0,090	20			B-50	Z-50	4006	4007	
SAL DP-38 anodised	42945/C...	3,00	9,5	0,087	20			B-51	Z-51	4008	4009	
SAL DP-48 anodised	42946/C...	4,00	11,7	0,116	20			B-51	Z-51	4008	4009	
SAL DP-58 anodised	42947/C...	5,00	13,4	0,145	20			B-51	Z-51	4008	4009	
SAL DL-2 anodised	42994/C...	5,50	21,5	0,714	15			B-51	Z-51	4008	4009	
SAL DL-3 anodised	42995/C...	6,00	24,8	0,186	11-13			CORONA LED, COSMO DELTA LED	B-51	Z-51	4008	4009
SAL DL-5 anodised	42997/C...	4,50	24,9	0,159	9,5			VEGA LED BETA	B-51	Z-51	4008	4009

Column type	Code	Column height H [m]	Net weight [kg]	Approximate unit volume [m ³]*	Permissible mass of luminaire and extension arms [kg]	Top mounted luminaires	Type of used extension arms	Type of concrete footing	Type of reinforcement basket	Connection elements [code]	Rivets connection elements [code]
STREET LIGHTING											
Straight aluminium columns Ø146 mm base diameter											
SAL-60 anodised	42313/C...	6,00	25,40	0,265	30	street luminaires floodlights	WA-4, WA-5/1, WA-5/2, WA-14/1, WA-14/2, WA-15/1U, WA-15/2, WA-20/1, WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-2/3, WR-3/1, WR-3/2, WR-3/3, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8A/1, WR-13/1, WR-13/2, WR-13/3, WR-14/1, WR-15/1, WR-15/2, WR-18, WR-31, WR-61, WN-1, WN-2, WN-21	B-60	Z-60	4008	4009
SAL-65 anodised	42314/C...	6,50	27,30	0,287	30		WA-15/1 U, WA-15/2, WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-2/3, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8A/1, WR-12/1, WR-13/1, WR-13/2, WR-14/1, WR-15/1, WR-15/2, WR-18, WR-31, WR-61, WN-1, WN-2, WN-21				
SAL-70 anodised	42315/C...	7,00	30,00	0,309	30		WA-15/1 U, WR-1/1, WR-1/2, WR-2/1, WR-3/1, WR-4/1, WR-4/2, WR-5A/1, WR-6A/1, WR-8A/1, WR-13/1, WR-14/1, WR-15/1, WN-1, WN-2, WN-21				
SAL-75 anodised	42316/C...	7,50	32,60	0,331	30		WA-15/1 U, WR-1/1, WR-1/2, WR-2/1, WR-3/1, WR-4/1, WR-4/2, WR-13/1, WR-15/1, WN-1, WN-2,				
SAL-80 anodised	42317/C...	8,00	35,12	0,353	30		WA-15/1 U, WR-1/1, WR-2/1, WR-3/1, WR-4/1, WR-15/1, WN-1,				
SAL-60G anodised	42343/C...	6,00	24,80	0,186	30	street luminaires floodlights	WA-4, WA-5/1, WA-5/2, WA-14/1, WA-14/2, WA-15/1U, WA-15/2, WA-20/1, WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-13/1, WR-13/2, WR-15/1, WR-15/2, WN-1, WN-2, WN-21	B-51A	Z-51A	4008	4009
SAL-70G anodised	42345/C...	7,00	29,40	0,271	30		WR-1/1, WR-1/2, WR-2/1, WR-3/1, WR-4/1, WR-4/2, WR-13/1, WR-15/1, WN-1, WN-2, WN-21				
SAL-60H anodised	42335/C...	6,00	27,10	0,392	30	street luminaires floodlights	WA-4, WA-5/1, WA-5/2, WA-14/1, WA-14/2, WA-15/1U, WA-15/2, WA-20/1, WA-20/2, WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-2/3, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8/1, WR-8A/1, WR-9/1, WR-12/1, WR-13/1, WR-13/2, WR-13/3, WR-14/1, WR-15/1, WR-15/2, WR-17/1, WR-18, WR-18A, WR-31, WR-61, WN-1, WN-2, WN-21	B-71	Z-71	4012	4013
SAL-70H anodised	42337/C...	7,00	31,70	0,458	30		WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8A/1, WR-13/1, WR-13/2, WR-14/1, WR-15/1, WR-15/2, WR-18, WR-61, WN-1, WN-2, WN-21				
SAL-80H anodised	42340/C...	8,00	36,90	0,523	30		WR-1/1, WR-2/1, WR-3/1, WR-4/1, WR-15/1, WN-1,				

Column type	Code	Column height H [m]	Net weight [kg]	Approximate unit volume [m ³]*	Permissible mass of luminaire and extension arms [kg]	Top mounted luminaires	Type of used extension arms	Type of concrete footing	Type of reinforcement basket	Connection elements [code]	Rivets connection elements [code]
Aluminium columns Ø146 mm base diameter with welded extension arms											
SAL-N22 anodised	42348/C...	8,00	40,20	1,940	15	street luminaires		B-60	Z-60	4008	4009
SAL-N12 anodised	42347/C...	8,00	37,70	1,210	15						
Aluminium columns Ø176 mm base diameter with curved extension arms											
SAL-8,5 Wł 1/1,5/3,2/5 single anodised	42410/C...	8,50	47,60	0,630	15	street luminaires with fixing Ø60 and the parameters of weight and windage not exceeding the data of strength table located in the product card		B-71	Z-71	4012	4013
SAL-8,5 Wł 1/2,0/3,2/5 single anodised	42413/C...	8,50	49,70	0,700	15			B-70	Z-70		
SAL-8,5 Wł 1/2,5/3,2/5 single anodised	42416/C...	8,50	50,70	0,760	15			B-70	Z-70		
SAL-9 Wł 1/1,5/3,2/5 single anodised	42419/C...	9,00	50,80	0,670	15			B-71	Z-71		
SAL-9 Wł 1/2,0/3,2/5 single anodised	42422/C...	9,00	52,80	0,730	15			B-70	Z-70		
SAL-9 Wł 1/2,5/3,2/5 single anodised	42425/C...	9,00	53,90	0,800	15			B-70	Z-70		
SAL-9,5 Wł 1/1,5/3,7/5 single anodised	42428/C...	9,50	52,80	0,700	15			B-71	Z-71		
SAL-9,5 Wł 1/2,0/3,7/5 single anodised	42431/C...	9,50	53,90	0,780	15			B-70	Z-70		
SAL-9,5 Wł 1/2,5/3,7/5 single anodised	42434/C...	9,50	55,90	0,860	15			B-70	Z-70		
SAL-10 Wł 1/1,5/3,7/5 single anodised	42437/C...	10,00	56,00	0,740	15			B-71	Z-71		
SAL 10 Wł 1/2,0/3,7/5 single anodised	42440/C...	10,00	57,00	0,820	15			B-70	Z-70		
SAL 10 Wł 1/2,5/3,7/5 single anodised	42443/C...	10,00	59,10	0,890	15			B-70	Z-70		
SAL 10,5 Wł 1/1,5/4,2/5 single anodised	42446/C...	10,50	57,00	0,780	15			B-71	Z-71		
SAL 10,5 Wł 1/2,0/4,2/5 single anodised	42449/C...	10,50	59,10	0,870	15			B-70	Z-70		
SAL 10,5 Wł 1/2,5/4,2/5 single anodised	42480/C...	10,50	61,20	0,950	15			B-70	Z-70		
SAL 11 Wł 1/1,5/4,7/5 single anodised	42451/C...	11,00	59,10	0,820	15			B-71	Z-71		
SAL 11 Wł 1/2,0/4,7/5 single anodised	42453/C...	11,00	61,20	0,920	15			B-71	Z-71		
SAL 11,5 Wł 1/1,5/4,7/5 single anodised	42454/C...	11,50	62,30	0,850	15			B-71	Z-71		
SAL 12 Wł 1/1,5/5,2/5 single anodised	42455/C...	12,00	64,30	0,890	15			B-70	Z-70		
SAL 8,5 Wł 2/1,5/3,2/5 double anodised	42411/C...	8,50	53,20	0,690	15			B-71	Z-71		
SAL 8,5 Wł 2/2,0/3,2/5 double anodised	42414/C...	8,50	57,00	0,770	15			B-70	Z-70		
SAL 8,5 Wł 2/2,5/3,2/5 double anodised	42417/C...	8,50	59,00	0,850	15			B-70	Z-70		
SAL 9 Wł 2/1,5/3,2/5 double anodised	42420/C...	9,00	56,40	0,730	15			B-71	Z-71		
SAL 9 Wł 2/2,0/3,2/5 double anodised	42423/C...	9,00	60,10	0,810	15	B-70	Z-70				
SAL 9 Wł 2/2,5/3,2/5 double anodised	42426/C...	9,00	62,20	0,890	15	B-70	Z-70				

Column type	Code	Column height H [m]	Net weight [kg]	Approximate unit volume [m ³]*	Permissible mass of luminaire and extension arms [kg]	Top mounted luminaires	Type of used extension arms	Type of concrete footing	Type of reinforcement basket	Connection elements [code]	Rivets connection elements [code]				
SAL 9,5 Wł2/1,5/3,7/5 double anodised	42429/C...	9,50	58,50	0,770	15	street luminaires with fixing Ø60 and the parameters of weight and windage not exceeding the data of strength table located in the product card		B-71	Z-71	4012	4013				
SAL 9,5 Wł2/2,0/3,7/5 double anodised	42432/C...	9,50	60,50	0,860	15			B-70	Z-70						
SAL 9,5 Wł2/2,5/3,7/5 double anodised	42435/C...	9,50	64,30	0,950	15			B-70	Z-70						
SAL 10 Wł2/1,5/3,7/5 double anodised	42438/C...	10,00	61,60	0,800	15			B-71	Z-71						
SAL 10 Wł2/2,0/3,7/5 double anodised	42441/C...	10,00	63,70	0,890	15			B-70	Z-70						
SAL 10 Wł2/2,5/3,7/5 double anodised	42444/C...	10,00	67,40	0,990	15			B-70	Z-70						
SAL 10,5 Wł2/1,5/4,2/5 double anodised	42447/C...	10,50	62,10	0,840	15			B-71	Z-71						
SAL 10,5 Wł2/2,0/4,2/5 double anodised	42450/C...	10,50	65,70	1,000	15			B-70	Z-70						
SAL 11 Wł2/1,5/4,7/5 double anodised	42452/C...	11,00	64,20	0,880	15			B-71	Z-71						
SAL 8,5 Wł3/1,5/3,2/5 triple anodised	42412/C...	8,50	57,30	1,020	15			B-70	Z-70	4012	4013				
SAL 8,5 Wł3/2,0/3,2/5 triple anodised	42415/C...	8,50	62,70	1,210	15										
SAL 8,5 Wł3/2,5/3,2/5 triple anodised	42418/C...	8,50	65,80	1,390	15										
SAL 9 Wł3/1,5/3,2/5 triple anodised	42421/C...	9,00	60,40	1,060	15										
SAL 9 Wł3/2,0/3,2/5 triple anodised	42424/C...	9,00	65,90	1,250	15										
SAL 9 Wł3/2,5/3,2/5 triple anodised	42427/C...	9,00	68,90	1,430	15										
SAL 9,5 Wł3/1,5/3,7/5 triple anodised	42430/C...	9,50	62,50	1,150	15										
SAL 9,5 Wł3/2,0/3,7/5 triple anodised	42433/C...	9,50	65,70	1,350	15										
SAL 9,5 Wł3/2,5/3,7/5 triple anodised	42436/C...	9,50	71,00	1,570	15										
SAL 10 Wł3/1,5/3,7/5 triple anodised	42439/C...	10,00	65,60	1,190	15										
SAL 10 Wł3/2,0/3,7/5 triple anodised	42442/C...	10,00	68,90	1,380	15										
SAL 10 Wł3/2,5/3,7/5 triple anodised	42445/C...	10,00	74,20	1,610	15										
SAL 10,5 Wł3/1,5/4,2/5 triple anodised	42448/C...	10,50	65,90	1,230	15										
Straight aluminium columns Ø176 mm base diameter															
SAL-9,3 anodised	42456/C...	9,30	47,60	0,437	30					street luminaires with fixing Ø60 and the parameters of weight and windage not exceeding the data of strength table located in the product card	WR-1/1, WR-4/1, WN-1, additional: WR-2/2, WR-3/2, WR-15/2 (only to the height 9,3 m), WR-4/2, WR-61, WN-21 (only to the height 9,8 m), WR-1/2, WR-13/1, WR-15/1, WN-2 (only to the height 10,3 m), WR-2/1, WR-3/1, (only to the height 10,8 m),	B-70	Z-70	4012	4013
SAL-9,8 anodised	42457/C...	9,80	50,30	0,473	30										
SAL-10,3 anodised	42458/C...	10,30	53,90	0,509	30										
SAL-10,8 anodised	42459/C...	10,80	56,00	0,513	30										
SAL-11,3 anodised	42460/C...	11,30	57,00	0,516	30										
SAL-11,8 anodised	42461/C...	11,80	60,20	0,550	30										

Column type	Code	Column height H [m]	Net weight [kg]	Approximate unit volume [m ³]*	Permissible mass of luminaire and extension arms [kg]	Top mounted luminaires	Type of used extension arms	Type of concrete footing	Type of reinforcement basket	Connection elements [code]	Rivets connection elements [code]	
SAL-9,3 wzm anodised	42476/C...	9,30	53,50	0,432	30	street luminaires with fixing Ø60 and the parameters of weight and windage not exceeding the data of strength table located in the product card	WR-1/1, WR-2/1, WR-3/1, WR-4/1, WN-1, additional: WR-2/3, WR-3/3, WR-13/2, WR-15/2, WN-3 (only to the height 10,8 m), WR-2/2, WR-3/2 (only to the height 11,3 m), WR-1/2, WR-4/2, WR-61, WN-2, WN-21 (only to the height 11,8 m), WR-13/1, WR-15/1 (only to the height 12,3 m)	B-70	Z-70	4012	4013	
SAL-9,8 wzm anodised	42477/C...	9,80	57,20	0,473	30							
SAL-10,3 wzm anodised	42478/C...	10,30	61,10	0,509	30							
SAL-10,8 wzm anodised	42479/C...	10,80	63,20	0,513	30							
SAL-11,3 wzm anodised	42470/C...	11,30	64,20	0,516	30							
SAL-11,8 wzm anodised	42471/C...	11,80	67,80	0,550	30							
SAL-12,3 wzm anodised	42472/C...	12,30	69,90	0,553	30							
SAL-12,8 wzm anodised	42473/C...	12,80	72,00	0,556	30							
Aluminium columns Ø176 mm base diameter with welded extension arms												
SAL-S1 wzm anodised	42464/C...	11,00	68,40	2,240	15	luminaires with fixing Ø60 and Ø42		B-70	Z-70	4012	4013	
SAL-W1 anodised	42469/C...	10,00	56,50	0,916	15	street luminaires with fixing Ø60 and the parameters of weight and windage not exceeding the data of strength table located in the product card		B-70	Z-70			
SAL-U1 anodised	42465/C...	9,30	51,00	1,790	15			B-70	Z-70			
SAL-T1 wzm anodised	42466/C...	11,00	67,30	1,120	15			B-70	Z-70			
SAL-Z1 wzm anodised	42474/C...	9,30	53,00	0,980	15			B-70	Z-70			
SAL-P11 anodised	42481/C...	10,30	59,40	1,030	15			B-70	Z-70			
SAL-P12 anodised	42482/C...	10,30	64,30	1,420	15			B-71	Z-71			
SAL-P21 anodised	42483/C...	10,30	57,10	0,980	15			B-70	Z-70			
SAL-P31 anodised	42484/C...	10,30	59,90	0,980	15			B-70	Z-70			
SAL-P61 anodised	42487/C...	9,00	59,50	0,800	15			B-70	Z-70			
SAL-P71 anodised	42488/C...	9,00	60,30	0,873	15			B-71	Z-71			
SAL-P81 anodised	42489/C...	10,30	58,80	0,803	15			B-71	Z-71			
Straight aluminium mast Ø225 mm base diameter												
MAL-12,5 anodised	42501/C...	12,50	93,80	0,640		street luminaires with fixing Ø60 and the parameters of weight and windage not exceeding the data of strength table located in the product card	WM-1, WM-2, WM-21, additional: WRK-5 (only to the height 13 m) WRK-3, WRK-4, WM-42, WM-5, WM-6 (only to the height 14 m) WM-3, WM-4 (only to the height 15 m)	B-80	Z-80	4014		
MAL-13 anodised	42502/C...	13,00	98,70	0,680				B-80	Z-80			
MAL-14 anodised	42504/C...	14,00	107,60	0,760				B-80	Z-80			
MAL-15 anodised	42506/C...	15,00	111,10	0,770				B-80	Z-80			
MAL-16 anodised	42508/C...	16,00	115,20	0,780				B-80	Z-80			
MAL-12,5 wzm anodised	42551/C...	12,50	101,20	0,640				WRK-3, WM-1, WM-2, WM-21, WM-3, WM-4, WM-5, additional: WRK-6 (only to the height 13 m) WRK-5, (only to the height 14 m) WRK-4, WM-42, WM-6 (only to the height 15 m)	B-80			Z-80
MAL-13 wzm anodised	42552/C...	13,00	106,20	0,680					B-80			Z-80
MAL-14 wzm anodised	42554/C...	14,00	114,90	0,760					B-80			Z-80
MAL-15 wzm anodised	42556/C...	15,00	118,40	0,770					B-80			Z-80
MAL-16 wzm anodised	42558/C...	16,00	122,50	0,780					B-80			Z-80

Column type	Code	Column height H [m]	Net weight [kg]	Approximate unit volume [m ³]*	Permissible mass of luminaire and extension arms [kg]	Top mounted luminaires	Type of used extension arms	Type of concrete footing	Type of reinforcement basket	Connection elements [code]	Rivets connection elements [code]	
Aluminium masts Ø225 mm base diameter with curved extension arms												
MAL-12 Wł 1/2,5/5,5/5 single anodised	42509/C...	12,00	93,40	0,840	20	street luminaires with fixing Ø60 and the parameters of weight and windage not exceeding the data of strength table located in the product card		B-80	Z-80	4014		
MAL-13 Wł 1/2,5/5,5/5 single anodised	42511/C...	13,00	103,20	0,930	20							
MAL-14 Wł 1/2,5/6,5/5 single anodised	42513/C...	14,00	108,40	1,100	20							
MAL-12 Wł 2/2,5/5,5/5 double anodised	42510/C...	12,00	106,80	1,150	20							
MAL-13 Wł 2/2,5/5,5/5 double anodised	42512/C...	13,00	116,60	1,210	20							
MAL-14 Wł 2/2,5/6,5/5 double anodised	42514/C...	14,00	121,80	1,270	20							
Straight aluminium columns Ø178 mm base diameter												
SAL-80K anodised	42630/C...	8,0	37,4	0,525	30	street luminaires with fixing Ø60 and the parameters of weight and windage not exceeding the data of strength table located in the product card	WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8A/1, WR-13/1, WR-13/2, WR-14/1, WR-15/1, WR-15/2, WR-18, WR-61, WRP1/1,0/0,7/5, WRP1/1,0/1,2/5, WRP1/1,5/0,7/5, WRP1/1,5/1,2/5, WRP2/1,0/0,7/5, WRP2/1,0/1,2/5, WRP2/1,5/0,7/5, WRP2/1,5/1,2/5, WN-1, WN-2, WN-21, WN-3	B-70 or B-71	Z-70 or Z-71	4012	4013	
SAL-90K anodised	42632/C...	9,0	42,7	0,589	30							WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-13/1, WR-14/1, WR-15/1, WR-15/2, WR-18, WR-61, WRP1/1,0/0,7/5, WRP1/1,5/0,7/5, WRP2/1,0/0,7/5, WN-1, WN-2, WN-21, WN-3
SAL-100K anodised	42634/C..	10,0	47,5	0,654	30							WR-2/1, WR-3/1, WR-14/1, WR-15/1, WR-15/2, WR-18, WR-61, WRP1/1,0/0,7/5
Straight aluminium columns Ø180 mm base diameter												
SAL-80M anodised	42755/C...	8,0	42,7	0,523	50	luminaires with fixing Ø60 and the parameters of weight and windage not exceeding the data of strength table located in the product card	WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-2/3, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8/1, WR-8A/1, WR-9/1, WR-9/2, WR-12/1, WR-13/1, WR-13/2, WR-14/1, WR-15/1, WR-15/2, WR-15/3, WR-17/1, WR-17/2, WR-18, WR-18A, WR-18B, WR-61, WRP1/1,0/0,7/5, WRP1/1,0/1,2/5, WRP1/1,5/0,7/5, WRP1/1,5/1,2/5, WRP2/1,0/0,7/5, WRP2/1,0/1,2/5, WRP2/1,5/0,7/5, WRP2/1,5/1,2/5, WRP3/1,0/0,7/5, WRP3/1,0/1,2/5, WRP3/1,5/0,7/5, WRP3/1,5/1,2/5, WN-1, WN-2, WN-21, WN-3, WN-4, WN-42	B-70 or B-71	Z-70 or Z-71	4012	4013	

Column type	Code	Column height H [m]	Net weight [kg]	Approximate unit volume [m ³]*	Permissible mass of luminaire and extension arms [kg]	Top mounted luminaires	Type of used extension arms	Type of concrete footing	Type of re-inforcement basket	Connection elements [code]	Rivets connection elements [code]
SAL-90M anodised	42757/C...	9,0	49,3	0,589	50	luminaires with fixing Ø60 and the parameters of weight and windage not exceeding the data of strength table located in the product card	WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-2/3, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8A/1, WR-13/1, WR-13/2, WR-13/3, WR-14/1, WR-15/1, WR-15/2, WR-15/3, WR-17/1, WR-17/2, WR-18, WR-18A, WR-61, WRP1/1,0/0,7/5, WRP1/1,0/1,2/5, WRP1/1,5/0,7/5, WRP1/1,5/1,2/5, WRP2/1,0/0,7/5, WRP2/1,0/1,2/5, WRP2/1,5/0,7/5, WRP2/1,5/1,2/5, WRP3/1,0/0,7/5, WRP3/1,0/1,2/5, WRP3/1,5/0,7/5, WRP3/1,5/1,2/5, WN-1, WN-2, WN-21, WN-3, WN-4, WN-42	B-70 or B-71	Z-70 or Z-71	4012	4013
SAL-100M anodised	42759/C...	10,0	55,1	0,654	30		WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-2/3, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8A/1, WR-13/1, WR-13/2, WR-14/1, WR-15/1, WR-15/2, WR-15/3, WR-18, WR-61, WRP1/1,0/0,7/5, WRP1/1,0/1,2/5, WRP1/1,5/0,7/5, WRP1/1,5/1,2/5, WRP2/1,0/0,7/5, WRP2/1,0/1,2/5, WRP2/1,5/0,7/5, WRP2/1,5/1,2/5, WRP3/1,0/0,7/5, WRP3/1,0/1,2/5, WN-1, WN-2, WN-21, WN-3, WN-4, WN-42				
Columns for traffic signal lights											
Stup SAL SYG 3 anodised natural	42801/C...	3,0	13,3	0,083	30	Lights and signs with fixing Ø100 and parameters of weight and windage not exceeding the data of strength table located in the product card		B-50	Z-50	4006	4007
Stup SAL SYG 3,3 anodised natural	42802/C...	3,3	14,4	0,091	30			B-50	Z-50	4006	4007
Stup SAL SYG 3,6 anodised natural	42803/C...	3,6	15,6	0,099	30			B-50	Z-50	4006	4007
SAL SYG 3,9 anodised natural	42804/C...	3,9	16,7	0,107	30			B-50	Z-50	4006	4007
Stup SAL SYG 65-4 anodised natural	42810/C...	6,5	90,2	0,840	30	Lights and signs with parameters of weight and windage not exceeding the data of strength table located in the product card		B-80	Z-80	4014	
Stup SAL SYG 65-7 anodised natural	42811/C...	6,5	119,4	1,040	30			B-80	Z-80	4014	
Stup SAL SYG 8 anodised natural	42830/C...	6,5	186,0	1,680	30			B-80	Z-80	4014	
Stup SAL SYG 14 anodised natural	42831/C...	6,5	243,1	2,080	30			B-80	Z-80	4014	
Decorative aluminium columns											
SAL DS-80 anodised	42978/C...	7,80	42,8	1,520	10	street luminaires with fixing Ø60 and parameters of weights from strength table which is located in the product card		B-60	Z-60	4008	4009
SAL DS-81 anodised	42937/C...	7,82	36,0	0,607	20			B-60	Z-60	4008	4009
SAL DS-84 anodised	42940/C...	8,40	48,2	1,570	20			B-70	Z-70	4012	4013
SAL DS-86 anodised	42942/C...	7,70	36,2	0,790	20			B-60	Z-60	4008	4009
SAL DS-87 anodised	42976/C...	6,60	34,1	0,661	15			B-60	Z-60	4008	4009
SAL DS-88 anodised	42988/C...	9,40	60,6	1,895	15			B-70	Z-70	4012	4013
SAL DS-88-R anodised	42991/C...	9,40	81,3	1,963	15			B-70	Z-70	4012	4013
SAL DB anodised	42992/C...	9,40	142,6	3,860	15			B-70	Z-70	4012	4013
SAL DB-1 anodised	42990/C...	9,4 \ 6,6	116,1	2,620	15			B-60, B-70	Z-60, Z-70	4008, 4012	4009, 4013
SAL DL-1 anodised	42993/C...	7,00	32,7	1,090	15			B-70	Z-70	4012	4013

Column type	Code	Column height H [m]	Net weight [kg]	Approximate unit volume [m ³]*	Permissible mass of luminaire and extension arms [kg]	Top mounted luminaires	Type of used extension arms	Type of concrete footing	Type of reinforcement basket	Connection elements [code]	Rivets connection elements [code]	
Aluminium lowering and raising columns												
SAL-45/P anodised	42915/C...	4,5	21,6	0,130	13,5	luminaires with fixing Ø60 and the parameters of weight and windage not exceeding the data of strength table located in the product card	WR-1/1, WR-4/1, WN-1, WA-1, WA-4, WA-5/1, WA-14/1,	B-51/	Z-51	4008	4009	
SAL-50/P anodised	42916/C...	5,0	23,8	0,145	10,5			B-51	Z-51	4008	4009	
SAL-60/P anodised	42925/C...	6,0	29,7	0,174	6		WA-1	B-51A	Z-51A	4008	4009	
SAL-70/P anodised	42927/C...	7,0	33,0	0,203	10		WR-1/1, WR-4/1, WN-1, WA-1, WA-4, WA-5/1, WA-14/1,	B-51A	Z-51A	4008	4009	
SAL-85M/P anodised	42930/C...	8,5	51,1	0,556	42		WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8/1, WR-8A/1, WR-9/1, WR-13/1, WR-13/2, WR-14/1, WR-15/1, WR-15/2, WR-17/1, WR-18, WR-18A, WR-18B, WR-61, WRP1/1,0/0,7/5, WRP1/1,0/1,2/5, WRP1/1,5/0,7/5, WRP1/1,5/1,2/5, WRP2/1,0/0,7/5, WRP2/1,0/1,2/5, WRP2/1,5/0,7/5, WRP2/1,5/1,2/5, WN-1, WN-2, WN-21	B-70	Z-70	4012	4013	
SAL-90M/P anodised	42931/C...	9,0	54,4	0,589	37,5				B-70	Z-70	4012	4013
SAL-95M/P anodised	42932/C...	9,5	57,6	0,621	33				B-70	Z-70	4012	4013
SAL-100M/P anodised	42933/C...	10,0	60,2	0,654	28,5				B-70	Z-70	4012	4013
							additional: WR-17/2, (only to the height 8,5 m), WR-9/2, (only to the height 9,5 m)					

Column type	Code	Column height above the ground H [m]	Total length of the column H+h [m]	Net weight [kg]	Approximate unit volume [m ³]*	Top mounted luminaires	Type of extension arms	Permissible mass of luminaire and extension arms [kg]
PARK LIGHTING								
Straight aluminium columns Ø114 mm base diameter								
SAL-3/B60 dZ anodised	42124/C...	3,00	3,80	9,1	0,02	OP, OPA-1, OS-1, OS-1 LED, OS-11 LED, OZ, ELBA, ELBA LED, ATLANTIS LED, MIRA LED, MIZAR LED, VEGA LED, VEGA LED ALFA, VEGA LED BETA	WA-1, WA-4, WA-14/1	20
SAL-3,5/B60 dZ anodised	42108/C...	3,50	4,30	11	0,03		20	
SAL-4/B60 dZ anodised	42111/C...	4,00	4,80	12,4	0,04		20	
SAL-4,5/B60 dZ anodised	42107/C...	4,50	5,30	13,8	0,04		WA-1, WA-4, WA-5/1, WA-14/1	20
Straight aluminium columns Ø120 mm base diameter								
SAL-4 dZ anodised	42231/C...	4,00	4,80	16,8	0,04	OP, OPA-1, OS-1, OS-1 LED, OS-11 LED, OZ, ELBA, ELBA LED, ATLANTIS LED, MIRA LED, MIZAR LED, VEGA LED, VEGA LED ALFA, VEGA LED BETA	WA-1, WA-4, WA-5/1, WA-14/1, WA-14/2, WR-1/1, WR-4/1, WN-1, WN-2	20
SAL-4,5 dZ anodised	42232/C...	4,50	5,30	18,8	0,04		20	
SAL-5 dZ anodised	42233/C...	5,00	5,80	20,9	0,05		additional: WA-5/2 (only to the height 4,5 m),	20
Straight aluminium columns Ø146 mm base diameter								
SAL-55 dZ anodised	42322/C...	5,50	6,30	27,2	0,07	OP, OPA-1, OZ, ELBA, ELBA LED, ATLANTIS LED, MIRA LED, MIZAR LED, VEGA LED, VEGA LED ALFA, VEGA LED BETA	WA-1, WA-4, WA-5/1, WA-5/2, WA-14/1, WA-14/2, WA-20/1	30
SAL-60 dZ anodised	42323/C...	6,00	6,80	29,6	0,08	OP, OPA-1, ELBA, MIRA LED, MIZAR LED, VEGA LED ALFA, VEGA LED BETA		30
Decorative aluminium columns								
SAL DP-38 dZ anodised	42965/C...	3,00	3,80	12,7	0,03	OP, OPA-1, OS-1, OS-1 LED, ELBA, ELBA LED, ATLANTIS LED, MIRA LED, MIZAR LED,		20
SAL DP-48 dZ anodised	42966/C...	4,00	4,80	15,2	0,04			20
SAL DP-58 dZ anodised	42967/C...	5,00	5,80	17,8	0,05			20

Column type	Code	Column height above the ground H [m]	Total length of the column H+h [m]	Net weight [kg]	Approximate unit volume [m ³]*	Top mounted luminaires	Type of extension arms	Permissible mass of luminaire and extension arms [kg]
STREET LIGHTING								
Straight aluminium columns Ø146 mm base diameter								
SAL-60 dZ anodised	42323/C...	6,00	6,80	29,6	0,08	street luminaires	WA-15/1U, WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8A/1, WR-13/1, WR-13/2, WR-14/1, WR-15/1, WR-15/2, WR-18, WR-61, WN-1, WN-2, WN-21	30
SAL-70 dZ anodised	42325/C...	7,00	8,00	32,5	0,09		WA-15/1 U, WR-1/1, WR-1/2, WR-2/1, WR-3/1, WR-4/1, WR-4/2, WR-13/1, WR-15/1, WN-1, WN-2, WN-21	30
Straight aluminium columns Ø178 mm base diameter								
SAL-80K dZ anodised	42606/C...	8,00	9,50	40,8	0,11	street luminaires	WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8A/1, WR-13/1, WR-13/2, WR-14/1, WR-15/1, WR-15/2, WR-18, WR-61, WRP1/1,0/0,7/5, WRP1/1,0/1,2/5, WRP1/1,5/0,7/5, WRP1/1,5/1,2/5, WRP2/1,0/0,7/5, WRP2/1,0/1,2/5, WRP2/1,5/0,7/5, WRP2/1,5/1,2/5, WN-1, WN-2, WN-21, WN-3	30
SAL-85K dZ anodised	42607/C...	8,50	10,00	43,2	0,11		WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-13/1, WR-13/2, WR-14/1, WR-15/1, WR-15/2, WR-61, WRP1/1,0/0,7/5, WRP1/1,5/0,7/5, WRP2/1,0/0,7/5, WRP2/1,5/0,7/5, WN-1, WN-2, WN-21, WN-3	30
SAL-80M dZ anodised	42706/C...	8,00	9,50	48,2	0,11	street luminaires	WR-1/1, WR-1/2, WR-2/1, WR-2/2, WR-2/3, WR-3/1, WR-3/2, WR-4/1, WR-4/2, WR-5A/1, WR-5A/2, WR-6A/1, WR-8A/1, WR-13/1, WR-13/2, WR-13/3, WR-14/1, WR-15/1, WR-15/2, WR-15/3, WR-17/1, WR-17/2, WR-18, WR-18A, WR-61, WRP1/1,0/0,7/5, WRP1/1,0/1,2/5, WRP1/1,5/0,7/5, WRP1/1,5/1,2/5, WRP2/1,0/0,7/5, WRP2/1,0/1,2/5, WRP2/1,5/0,7/5, WRP2/1,5/1,2/5, WRP3/1,0/0,7/5, WRP3/1,0/1,2/5, WRP3/1,5/0,7/5, WRP3/1,5/1,2/5, WN-1, WN-2, WN-21, WN-3, WN-4, WN-42	50
SAL-85M dZ anodised	42707/C...	8,50	10,00	51,3	0,12		additional: WR-8/1, WR-9/1, WR-9/2, WR-18B, (only to maximum height 8 m),	50