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# CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES



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**1. POLE MOUNTED TRANSFORMER**

(20)/0.4 kV to 100(250) kVA Type STSC 12(24) - 100(250) for Overhead (Aerial) Distribution Line

**STANDARD LARGE CROSSARM KB 1600/30.5 G (TSK)**

**STANDARD SUSPENSION CROSSARM FOR POLE MOUNTED SUPPORTS OF MEDIUM VOLTAGE FUSES**

**STANDARD TRANSFORMER SUPPORTING CROSSARM**

**2. POLE MOUNTED TRANSFORMER**

(20)/0.4 kV to 100(250) kVA Type STSC 12(24) - 100(250) for Overhead (Aerial) Distribution Line

**STANDARD POLE**

**3. POLE MOUNTED TRANSFORMER**

(20)/0.4 kV to 100(250) kVA Type STSC 12(24) - 100(250) for Overhead (Aerial) Distribution Line

**STANDARD LARGE CROSSARM KB 1600/30.5 G (TSZ)**

**STANDARD SUSPENSION CROSSARM FOR POLE MOUNTED SUPPORTS OF MEDIUM VOLTAGE FUSES**

**STANDARD TRANSFORMER SUPPORTING CROSSARM**

**4. POLE MOUNTED TRANSFORMER**

(20)/0.4 kV to 100(250) kVA Type STSC 12(24) - 100(250) for Overhead (Aerial) Distribution Line

**STANDARD POLE**

**5. ROUND CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES . for 20 and 10 kV distribution lines**

**SPECIAL POLE TYPE**

**6. ROUND CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES . for 20 and 10 kV distribution lines**

**SPECIAL POLE TYPE**

**7. ROUND CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES . for low-voltage distribution lines**

**STANDARD POLE TYPE**

**8. ROUND CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES . for 20 and 10 kV distribution lines**

**STANDARD POLE TYPE**

**9. REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE**

for 20 and 10 kV distribution lines

**STANDARD LARGE CROSSARMS G POLE TOP DESIGN**

**10. REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE**

for 20 and 10 kV distribution lines

**SPECIAL LARGE CROSSARMS D POLE TOP DESIGN**

**11. REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE**

for 20 and 10 kV distribution lines

**SPECIAL LARGE CROSSARMS G POLE TOP DESIGN**

**12. REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE**

for 20 and 10 kV distribution lines

**SPECIAL LARGE CROSSARMS G POLE TOP DESIGN**

**13. REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE**

for 20 and 10 kV distribution lines

**STANDARD SMALL CROSSARMS**

**14. REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE**

for 20 and 10 kV distribution lines

**SPECIAL SMALL CROSSARMS**

**15. REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE**

for 20 and 10 kV distribution lines

**SPECIAL TERMINATION CROSSARM WITH RADIAL LINE DISCONNECTOR**

**16. REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE**

for 20 and 10 kV distribution lines

**STANDARD TRANSFORMER SUPPORTING CROSSARM**

**17. CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES FOR PUBLIC LIGHTING IN OVERHEAD LOW**

**VOLTAGE DISTRIBUTION SYSTEM**

**18. CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES FOR PUBLIC LIGHTING IN OVERHEAD LOW**

**VOLTAGE DISTRIBUTION SYSTEM**

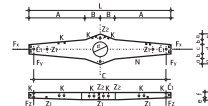
**19. CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES . LIVE APPEARANCE**

**20. PICTURES**

**POLE MOUNTED TRANSFORMER**

(20)/0.4 kV to 100(250) kVA Type STSC 12(24) - 100(250) for Overhead (Aerial) Distribution Line

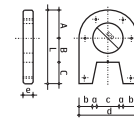
**STANDARD LARGE CROSSARM KB 1600/30.5 G (TSK)**



Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)										
			Fx	Fy	Fz	L	A	B	C	a	b	c	d	e	f	g
KB 1600/30.5 G (TSK)	G	30,5	510	740	310	314	123	25	300	11	8	12	28	4	8	12

**Application** Anchorage crossarm for pole mounted transformer - Type STSC

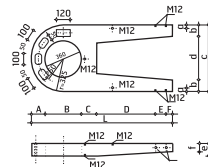
**STANDARS SUSPENSION CROSSARM FOR POLE MOUNTED SUPPORTS OF MEDIUM VOLTAGE FUSES**



Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)										
			Fx	Fy	Fz	L	A	B	C	a	b	c	d	e		
KB 80/30	G	32,5	700	-	80	780	330	250	200	30	150	300	660	110		

**Application** Suspension crossarm for pole mounted supports of medium voltage fuses and anchorage crossarm for low-voltage conductors

**STANDARD TRANSFORMER SUPPORTING CROSSARM**



Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)										
			Fx	Fy	Fz	L	A	B	C	a	b	c	d	e	f	
KB 1200/36 KNT	G	36	-	-	1300	1350	150	350	140	30	100	640	440	160	80	

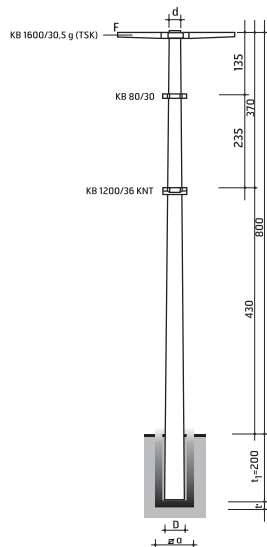
**Application** Transformer support

## STANDARD POLE

STSC 12(24) - 100(250) is a distribution transformer for 10(24)/0.4 kV to 100(250) kV mounted on the SB 1600/10 Type STSB 12(24) - 100(250) pole. It is used to supply electricity to places, industrial facilities, building sites and other users where its application is justified due to its small size and low maintenance costs. The transformer meets the technical conditions. All the transformer station equipment can be easily mounted to the pole and the crossarms by means of simple bolts. Poles are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead low voltage power lines.

POLE AND CROSSARM TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLES BELOW

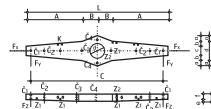
Pole type	Nominal horizontal force F (daN)	Length (cm)	Planting depth t1 (cm)	D (cm)	d (cm)
SB 1600/10	1600	1000	200	43,0	28,0



## POLE MOUNTED TRANSFORMER

(20)/0.4 kV to 100(250) kVA Type STSC 12(24) - 100(250) for Overhead (Aerial) Distribution Line

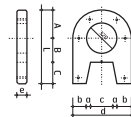
### STANDARD LARGE CROSSARM KB 1600/30.5 G (TSZ)



Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)										
			Fx	Fy	Fz	L	A	B	C	a	b	c	d	e	f	g
KB 1600/30.5 G (TSZ)	G	30,5	510	740	310	314	123	25	300	11	8	12	28	4	8	12

**Application** Anchorage crossarm for pole mounted transformer - Type STSC

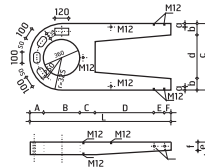
### STANDARS SUSPENSION CROSSARM FOR POLE MOUNTED SUPPORTS OF MEDIUM VOLTAGE FUSES



Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)								
			Fx	Fy	Fz	L	A	B	C	a	b	c	d	e
KB 80/30	G	32,5	700	-	80	780	330	250	200	30	150	300	660	110

**Application** Suspension crossarm for pole mounted supports of medium voltage fuses and anchorage crossarm for low - voltage conductors

### STANDARD TRANSFORMER SUPPORTING CROSSARM



Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)									
			Fx	Fy	Fz	L	A	B	C	a	b	c	d	e	f
KB 1200/36 KNT	G	36	-	-	1300	1350	1500	350	140	30	100	640	440	160	80

**Application** Transformer support



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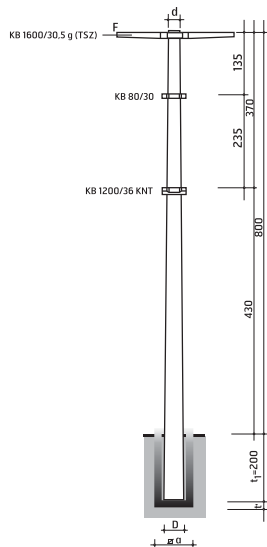
## STANDARD POLE

STSC 12(24) – 100(250) is a distribution transformer for 10(24)/0.4 kV to 100(250) kV mounted on the SB 1600/10 Type STSB 12(24) - 100(250) pole.

It is used to supply electricity to places, industrial facilities, building sites and other users where its application is justified due to its small size and low maintenance costs.

The transformer meets the technical conditions. All the transformer station equipment can be easily mounted to the pole and the crossarms by means of simple bolts.

Poles are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead low voltage power lines.



POLE AND CROSSARM TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLES BELOW.

Pole type	Nominal horizontal force F (daN)	Length (cm)	Planting depth t1 (cm)	D (cm)	d (cm)
SB 1600/10	1600	1000	200	43,0	28,0



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## ROUND CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES for 20 and 10 kV distribution lines

The poles are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead medium voltage power lines.

The poles are used in overhead medium voltage distribution systems.

The poles are centrifuged and made of steam high-quality concrete, MB C 30/37.

Reinforcement: (longitudinal and cross) reinforcing steel B 500 A.

Concrete protective sheath from pole surface to reinforcement is minimum 2 cm, which is for medium aggressive media.

Continuous slope increase from pole top to base is 15 mm/m1.

Pole wall thickness is minimal at the top (6 cm). Its continuous increase to the pole base is 5 mm/m1.

### SPECIAL POLE TYPE

**Application** For installing cables down dropper

A - steel tube and M20 insulator fixing nut

Z<sub>1</sub> - Z<sub>4</sub> - M<sub>12</sub> earthing bush

N<sub>1</sub> - N<sub>10</sub> - M<sub>12</sub> cable support fixing bush

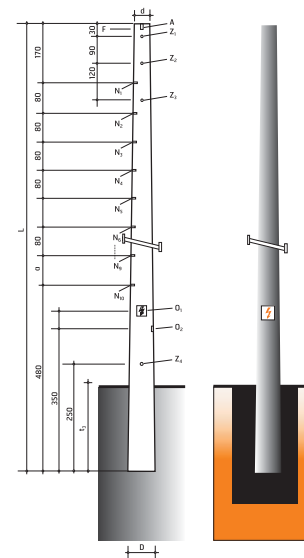
O<sub>1</sub> - working safety symbol is given by the user

O<sub>2</sub> - technical data sheet is given by the user

POLE TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.

Item	Pole type	Force F (daN)	Length L (cm)	d (cm)	D (cm)	Bush-to-bush distance		Planting depth t3 (cm)	
						a (cm)	N (br)		
SB	1600		1200	28,5	46,5	70	6	200	
			1300			48	10		8
			1400			49,5	30		9
SB	1600		1200	34,5	52,2	70	9	230	
			1300	33	52,2	10	5		
			1400	33	54	30	9		
SB	3150		1200	34,5	52,2	70	6	230	
			1300	33	52,2	10	8		
			1400	33	54	30	9		





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## ROUND CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES

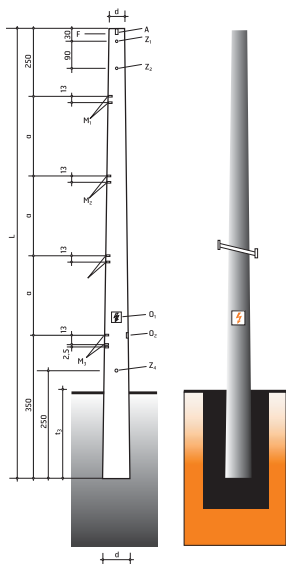
for 20 and 10 kV distribution lines

The poles are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead medium voltage power lines. The poles are used in overhead medium voltage distribution systems.

The poles are centrifuged and made of steam high-quality concrete, MB C 30/37.

Reinforcement: (longitudinal and cross) reinforcing steel B 500 A.

Concrete protective sheath from pole surface to reinforcement is minimum 2 cm, which is for medium aggressive media. Continuous slope increase from pole top to base is 15 mm/m<sup>1</sup>. Pole wall thickness is minimal at the top (6 cm). Its continuous increase to the pole base is 5 mm/m<sup>1</sup>.



### SPECIAL POLE TYPE

**Application** For a) linear disconnector  
b) radial disconnector

A - steel tube and M20 insulator fixing nut

Z<sub>1</sub>; Z<sub>2</sub>; Z<sub>4</sub> - M<sub>12</sub> thread earthing bush

M<sub>1</sub>; M<sub>2</sub>; M<sub>3</sub> - M<sub>16</sub> bush for installation of operating tubes

M<sub>4</sub> - M<sub>16</sub> bush for installation of manual operating mechanism

O<sub>1</sub> - working safety symbol is given by the user

O<sub>2</sub> - technical data sheet is given by the user

### POLE TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.

Pole type	Length L (cm)	d (cm)	D (cm)	Bush-to-bush distance		Planting depth t3 (cm)
				a (cm)	N (br)	
SB	1600	1200	28,5	46,5	200	200
	2500					230
	3150					



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## ROUND CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES

for low-voltage distribution lines

The poles are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead medium voltage power lines. The poles are used in overhead low-voltage distribution systems.

The poles are centrifuged and made of steam high-quality concrete, MB C 30/37.

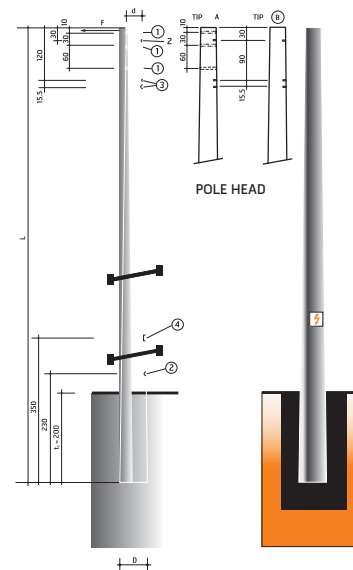
Reinforcement: (longitudinal and cross) reinforcing steel B 500 A.

Concrete protective sheath from pole surface to reinforcement is minimum 2 cm.

Continuous slope increase from pole top to base is 15 mm/m<sup>1</sup>.

Pole wall thickness is minimal at the top (6 cm). Its continuous increase to the

pole base is 5 mm/m<sup>1</sup>.



### STANDARD POLE

d - Pole diameter

1 - Fixing hole, diam. 18 mm

2 - M12 earthing bush

3 - Lamp fixing bush, 2 x M10

4 - Technical data sheet is given by the user

### POLE TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.

Pole type	Nominal horizontal force F (daN)	Length L (cm)	Planting depth t1 (cm)	D (cm)		d (cm)	
				L=900	L=1000		
SB...n	900 and 1000	200	200	28,5	30,0	16,0	
				33,0	34,5	19,5	
				37,5	39,0	24,0	
				41,5	43	28,0	

## ROUND CENTRIFUGED REINFORCED CONCRETE ELECTRIC POLES

for 20 and 10 kV distribution lines

The poles are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead medium voltage power lines. The poles are used in overhead medium voltage distribution systems.

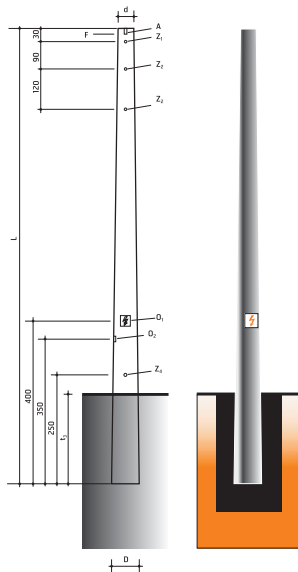
The poles are centrifuged and made of steam high-quality concrete, MB C 30/37.

Reinforcement: (longitudinal and cross) reinforcing steel B 500 A.

Concrete protective sheath from pole surface to reinforcement is minimum 2 cm.

Continuous slope increase from pole top to base is 15 mm/m1.

Pole wall thickness is minimal at the top (6 cm). Its continuous increase to the pole base is 5 mm/m1.



### STANDARD POLE TYPE

**Application** Suspension pole, Anchorage pole - angular, termination, breaking, radial

A - steel tube and M20 insulator fixing nut

Z<sub>1</sub>; Z<sub>2</sub>; Z<sub>4</sub> - M<sub>12</sub> earthing bush in every pole

Z<sub>3</sub> - M<sub>12</sub> earthing bush on pole types SB 1600, SB 2500 and 3150

O<sub>1</sub> - working safety symbol is given by the user

O<sub>2</sub> - technical data sheet is given by the user

### POLE TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.

Pole type	Length L (cm)	d (cm)	D (cm)	Bush-to-bush distance		Planting depth t3 (cm)
				a (cm)	N (br)	
SB	1600	1200	28.5	46.5	200	200
	2500		34.5	52.5		
	3150					

## REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE

for 20 and 10 kV distribution lines

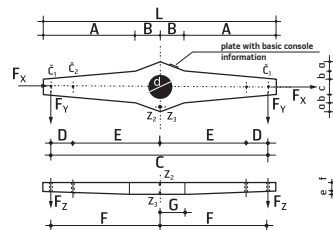
The crossarm are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead medium voltage power lines.

The crossarm are used in overhead medium voltage distribution systems.

The crossarm can be suspending, anchoring and specially constructed are made of steam high-quality concrete, MB C 30/37.

Reinforcement: (longitudinal and cross) reinforcing steel B 500 A.

Concrete protective sheath from crossarm surface to reinforcement is minimum 2 cm, which is for medium aggressive media.



### STANDARD LARGE CROSSARMS G POLE TOP DESIGN



CROSSARM TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.

Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)														
			F <sub>x</sub>	F <sub>y</sub>	F <sub>z</sub>	L	A	B	C	D	E	F	G	a	b	c	d	e	f	g
KB 315	D	19	170	500	620	200	80	20	180	30	60	90	20	7	7	10	24	4	10	14
KB 500	D	24	170	500	620	200	80	20	180	30	60	90	20	7	7	10	24	4	10	14
KB 1600 (1000)	D	33	550	740	770	240	95	25	220	30	80	110	25	11	6	16	28	3	9	12
KB 3150 (2500)	D	37	830	990	910	240	90	30	220	30	80	110	30	9	9	20	38	4	10	14

**Application** Suspension crossarms KB 315 and KB 500, Anchorage crossarms KB 1600 and KB 3150

Ĉ<sub>1</sub>; Ĉ<sub>2</sub> - steel tube for cable suspension, diam. 22 mm

Z<sub>2</sub> - M<sub>12</sub> thread bush for crossarm earthing to concrete pole

Z<sub>3</sub> - M<sub>12</sub> for earthing radial crossarm to concrete pole

Crossarm hole d depends on the concrete pole used.



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## REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE

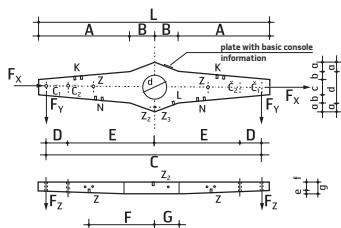
for 20 and 10 kV distribution lines

The crossarm are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead medium voltage power lines.

The crossarm are used in overhead medium voltage distribution systems. The crossarm can be suspending, anchoring and specially constructed are made of steam high-quality concrete, Grade 45.

Reinforcement: (longitudinal and cross) reinforcing steel B 500 A.

Concrete protective sheath from crossarm surface to reinforcement is minimum 2 cm.



### SPECIAL LARGE CROSSARMS D POLE TOP DESIGN



CROSSARM TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.

Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)														
			F <sub>x</sub>	F <sub>y</sub>	F <sub>z</sub>	L	A	B	C	D	E	F	G	a	b	c	d	e	f	g
KB 1600	D	33	170	510	410	240	95	25	220	30	80	5	15	11	6	16	28	3	9	12
			37	240	740	480	240	90	30	220	30	80	50	15	9	9	20	38	4	10
KB 2500	D	39	280	990	550	240	90	30	220	30	80	50	15	9	9	20	38	4	10	14
			37	280	990	550	240	90	30	220	30	80	50	15	9	9	20	38	4	10

**Application** Terminal, for support of overvoltage arrester and cable terminations KB 1600, KB 2500 and KB 3150

C<sub>1</sub>; C<sub>2</sub> - steel tube for cable suspension, diam. 22 mm

Z<sub>2</sub> - M<sub>12</sub> thread bush for crossarm earthing to concrete pole

Z - M<sub>12</sub> for earthing of cathode overvoltage arresters

K - M<sub>12</sub> thread for mounting overvoltage support

N - M<sub>12</sub> thread bush for fixing cable terminations

L - M<sub>12</sub> thread bush for fixing cable support

Crossarm hole d depends on the concrete pole used.



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## REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE

for 20 and 10 kV distribution lines

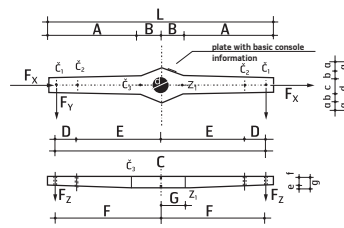
The crossarm are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead medium voltage power lines.

The crossarm are used in overhead medium voltage distribution systems.

The crossarm can be suspending, anchoring and specially constructed are made of steam high-quality concrete, MB C 30/37.

Crossarm reinforcement: (longitudinal and cross) reinforcing steel B 500 A.

Concrete protective sheath from crossarm surface to reinforcement is minimum 2 cm.



### STANDARD LARGE CROSSARMS G POLE TOP DESIGN



CROSSARM TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.

Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)														
			F <sub>x</sub>	F <sub>y</sub>	F <sub>z</sub>	L	A	B	C	D	E	F	G	a	b	c	d	e	f	g
KB 315	G	17	160	500	620	334	137	30	320	30	130	160	30	6	5	10	20	6	8	14
			21,5	160	500	620	334	137	30	320	30	130	160	30	6	5	10	20	6	8
KB 3150	G	37	160	500	770	334	137	30	320	30	130	160	30	6	6	10	20	6	8	14
			21,5	160	500	770	334	137	30	320	30	130	160	30	6	6	10	20	6	8
KB 3150 (2500)	D	37	830	990	510	240	90	30	220	30	80	110	30	9	9	20	38	4	10	14
			39	830	990	510	240	90	30	220	30	80	110	30	9	9	20	38	4	10

**Application** Terminal, for support of overvoltage arrester and cable terminations KB 1600, KB 2500 and KB 3150

C<sub>1</sub>; C<sub>2</sub>; C<sub>3</sub> - steel tube for cable suspension, diam. 22 mm

Z<sub>2</sub> - M<sub>12</sub> thread bush for crossarm earthing to concrete pole

Crossarm hole d depends on the concrete pole used.



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## REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE

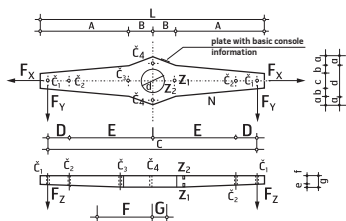
for 20 and 10 kV distribution lines

The crossarm are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead medium voltage power lines.

The crossarm are used in overhead medium voltage distribution systems. The crossarm can be suspending, anchoring and specially constructed are made of steam high-quality concrete, MB C 30/37.

Crossarm reinforcement: (longitudinal and cross) reinforcing steel B 500 A.

Concrete protective sheath from crossarm surface to reinforcement is minimum 2 cm.



### SPECIAL LARGE CROSSARMS G POLE TOP DESIGN



CROSSARM TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.

Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)														
			F <sub>x</sub>	F <sub>y</sub>	F <sub>z</sub>	L	A	B	C	D	E	F	G	a	b	c	d	e	f	g
KB 1000	G	30,5	510	740	650	334	137	30	320	30	130	30	30	9	10,5	17	38	4	10	14
KB 1600	G	30,5	510	740	650	334	137	30	320	30	130	30	30	9	10,5	17	38	4	10	14
KB 2500	G	36,5	990	990	760	334	137	30	320	30	130	30	30	11	10,5	17	38	4	10	14
KB 3150	D	36,5	990	990	760	334	137	30	320	30	130	30	30	11	10,5	17	38	4	10	14

**Application** For support of overvoltage arrester and cable terminations

C<sub>1</sub>; C<sub>2</sub> - steel tube for cable suspension, diam. 22 mm

Z<sub>2</sub> - M<sub>12</sub> thread bush for crossarm earthing to concrete pole

Z - M<sub>12</sub> for earthing of cathode overvoltage arresters

K - M<sub>12</sub> thread for mounting overvoltage support

N - M<sub>12</sub> thread bush for fixing cable terminations

L - M<sub>12</sub> thread bush for fixing cable support

Crossarm hole d depends on the concrete pole used.



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## REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE

for 20 and 10 kV distribution lines

The crossarm are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead medium voltage power lines.

The crossarm are used in overhead medium voltage distribution systems.

The crossarm can be suspending, anchoring and specially constructed are made of steam high-quality concrete, MB C 30/37.

Crossarm reinforcement: (longitudinal and cross) reinforcing steel B 500 A.

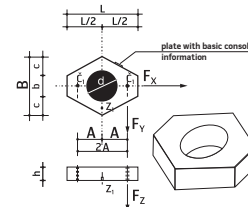
Concrete protective sheath from crossarm surface to reinforcement is minimum 2 cm.

### STANDARD SMALL CROSSARMS

CROSSARM TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.

Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)												
			F <sub>x</sub>	F <sub>y</sub>	F <sub>z</sub>	L	A	B	b	c	h							
KB 315	D	17	170	500	620	40	13	10	11	30	10							
KB 500	D	21,5	170	500	620	40	13	32	10	11	10							
KB 1600 (1000)	D	30,5	1070	990	910	52	19	50	18	16	10							
KB 3150 (2500)	D	35 36,5	1070	990	910	70	26	55	20	17,5	10							



**Application** Suspension crossarms KB 315 and KB 500

Anchorage crossarms KB 1600 and 3150

C<sub>1</sub>; C<sub>2</sub> - steel tube for cable suspension, diam. 22 mm

Z<sub>1</sub> - M<sub>12</sub> thread bush for crossarm earthing to concrete pole

Crossarm hole d depends on the concrete pole used.





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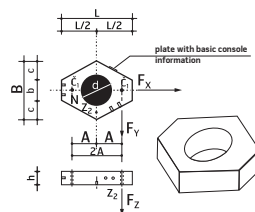


## SPECIAL SMALL CROSSARMS

CROSSARM TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.

Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)					
			F <sub>x</sub>	F <sub>y</sub>	F <sub>z</sub>	L	A	B	b	c	h
KB 1600 (1000)	D	30,5	1070	990	910	52	19	50	18	16	10
KB 3150 (2500)	D	35 36,5	1070	990	910	70	26	55	20	17,5	10



**Application** Terminal, for support of overvoltage arresters and cable terminations KB 1600, KB 2500 and KB 3150

- C<sub>1</sub> - steel tube for cable suspension, diam. 22 mm
- Z<sub>2</sub> - M<sub>12</sub> thread bush for crossarm earthing to concrete pole
- K - M<sub>12</sub> thread for mounting overvoltage support
- N - M<sub>12</sub> thread bush for fixing cable terminations

Crossarm hole d depends on the concrete pole used.

## REINFORCED CONCRETE CROSSARMS FOR ROUND REINFORCED CONCRETE ELECTRICAL POLE

for 20 and 10 kV distribution lines

The crossarm are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead medium voltage power lines.

The crossarm are used in overhead medium voltage distribution systems.

The crossarm can be suspending, anchoring and specially constructed are made of steam high-quality concrete, MB C 30/37.

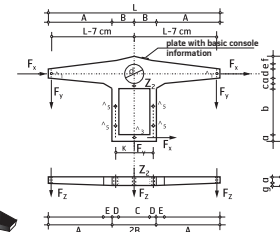
Crossarm reinforcement: (longitudinal and cross) reinforcing steel B 500 A.

Concrete protective sheath from crossarm surface to reinforcement is minimum 2 cm.

### SPECIAL TERMINATION CROSSARM WITH RADIAL LINE DISCONNECTOR

CROSSARM TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.



Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)															
			F <sub>x</sub>	F <sub>y</sub>	F <sub>z</sub>	L	A	B	C	D	E	H	a	b	c	d	e	f	g	h	
KB 1600	G	30	170	510	470	314	127	30	40	10	14	175	10	105	14	12	11,5	12,5	4	14	
KB 2500	G	37	220	740	540	314	127	30	40	10	14	175	10	105	14	12	11,5	12,5	4	14	
		38,5																			
KB 3150	G	37 38,5	208	990	830	610	314	127	30	40	10	14	175	10	105	14	12	11,5	12,5	4	14

**Application** Terminal with radial line disconnecter

- C<sub>1</sub>; C<sub>3</sub> - steel tube for cable suspension, diam. 22 mm
- Z<sub>2</sub> - M<sub>12</sub> thread bush for crossarm earthing to concrete pole
- N - M<sub>12</sub> thread bush for fixing cable terminations
- L - M<sub>12</sub> thread bush for fixing cable support

Crossarm hole d depends on the concrete pole used.



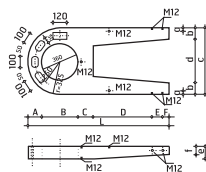
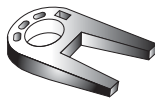
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## STANDARD TRANSFORMER SUPPORTING CROSSARM

CROSSARM TYPES, LENGTHS, NOMINAL FORCES AND SIZES ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.



Crossarm type	Pole top design	Hole d (cm)	Nominal force (daN)			Sizes (cm)													
			F <sub>x</sub>	F <sub>y</sub>	F <sub>z</sub>	L	A	B	C	D	E	H	a	b	c	d	e	f	
KB	1200	G	36			1300	1350	150	350	140	550	100	60	30	100	640	440	160	80

**Application** Transformer support

**Note** The crossarm reinforcing steel is welded (galvanized) to earthing bushes.



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## CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES FOR PUBLIC LIGHTING IN OVERHEAD LOW - VOLTAGE DISTRIBUTION SYSTEM

The pole are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead medium voltage power lines.

### Application

for illumination in small towns, housing estates and villages. Overhead distribution lines: self-supporting cables (SKS). Lamos are fixed to the pole either directly or on to a special reinforced concrete arm.

Lamp mass - 15 kg.

### Lamps used for illumination

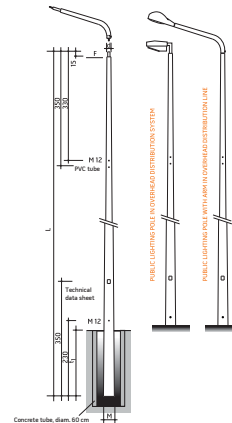
Type LVC 16-250 (400) W  
Type Sphere L-111-250(400) W and other corresponding lamp types.

### Pole type

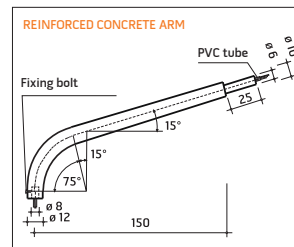
SB 315/12 jn (pole for public illumination in overhead distribution system) SB 315/12 jnL (pole with concrete arm for public illumination in overhead distribution system).

### Pole planting

The pole is fixed into a concrete shaft (diam. 60 cm) planted in the earth.



## REINFORCED CONCRETE ARM



POLE TYPES, LENGTHS, NOMINAL FORCES, MASS AND SIZES FOR POLE AND ARM ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.

Pole type	Nominal horizontal force F (daN)	Length (m)	Planting depth t1 (cm)	D (cm)	d (cm)	Mass (kg)		
SB 315/12.Jn	315	12	200	33	15	1125		
		13				39	19,5	900
		14				40,5	19,5	1825
SB 500/12.Jn	500	12	200	37,5	19,5	1400		
		13				39	19,5	1600
		14				40,5	19,5	1800
SB 650/12.Jn	650	12	200	37,5	19,5	1700		
		13				39	19,5	1800
		14				40,5	19,5	1925

## CENTRIFUGED REINFORCED CONCRETE ELECTRICAL POLES FOR PUBLIC LIGHTING IN OVERHEAD LOW - VOLTAGE DISTRIBUTION SYSTEM

The pole are made according to customers conditions in accordance with technical regulations and standards in the Country that are delivered, and apply for the construction of overhead medium voltage power lines.

### Application

or illumination of public and urban roads, crossroads and streets, harbours, coach and bus terminals etc.

Public cable lines: Cable PP 00-A 4x25 mm. Lamps are fixed to the pole either directly or on to a special reinforced concrete arm. Lamp mass - 15 kg.

### Lamps used for illumination

Type LVC 16-250 (400) W

Type Sphere L-111-250(400) W

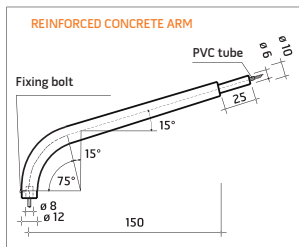
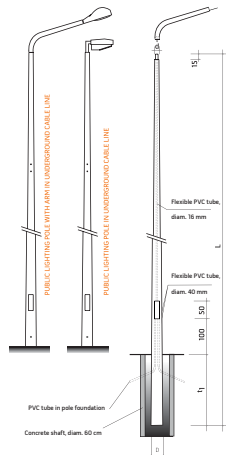
and other corresponding lamp types

### Pole type

SB PK/12 jn (pole for public illumination in underground distribution system SB PK/12 jnL (pole with concrete arm for public illumination in underground distribution system).

### Pole planting

The pole is fixed into a concrete shaft (diam. 60 cm) planted in the earth.

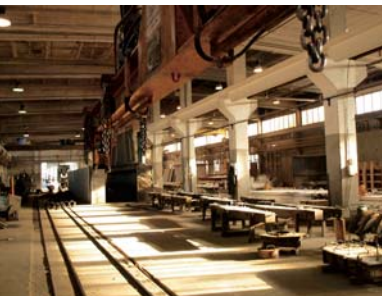


POLE TYPES, LENGTHS, NOMINAL FORCES, MASS AND SIZES FOR POLE AND ARM ARE GIVEN IN THE TABLE BELOW.

Detailed information on request.

Pole type	Length (m)	Planting depth t1 (cm)	D (cm)	d (cm)	Mass (kg)
SB 315/12jn	12	200	33	15	1125
/13jn	13	200	39	19,5	1625
/14jn	14	200	40,5	19,5	1825





Company **Zagorje - Tehnobeton d.d.**  
located in Varazdin, Croatia.

One of business specialization is production of round centrifuged reinforced concrete poles which are used in low and medium voltage distribution lines.

This poles can also be used for public lightning, overhead telephone distribution lines and electrification of railway. Specifically designed concrete supplements can be added to poles which are used or as girders of the additional (larger) number of cables on overhead lines or as girders of pole-mounted substations of capacities to 250 kV.

Company also produces concrete precast elements which are used in construction and energetics sector such as concrete housings for transformers.

Capacity of factory is 25.000 poles of different sizes per year.

Technical characteristics of all products are fitted to regulations and norms established by the client.

Company's management system is certified with  
EN ISO 9001:2008 and EN ISO 14001:2004 standard.



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