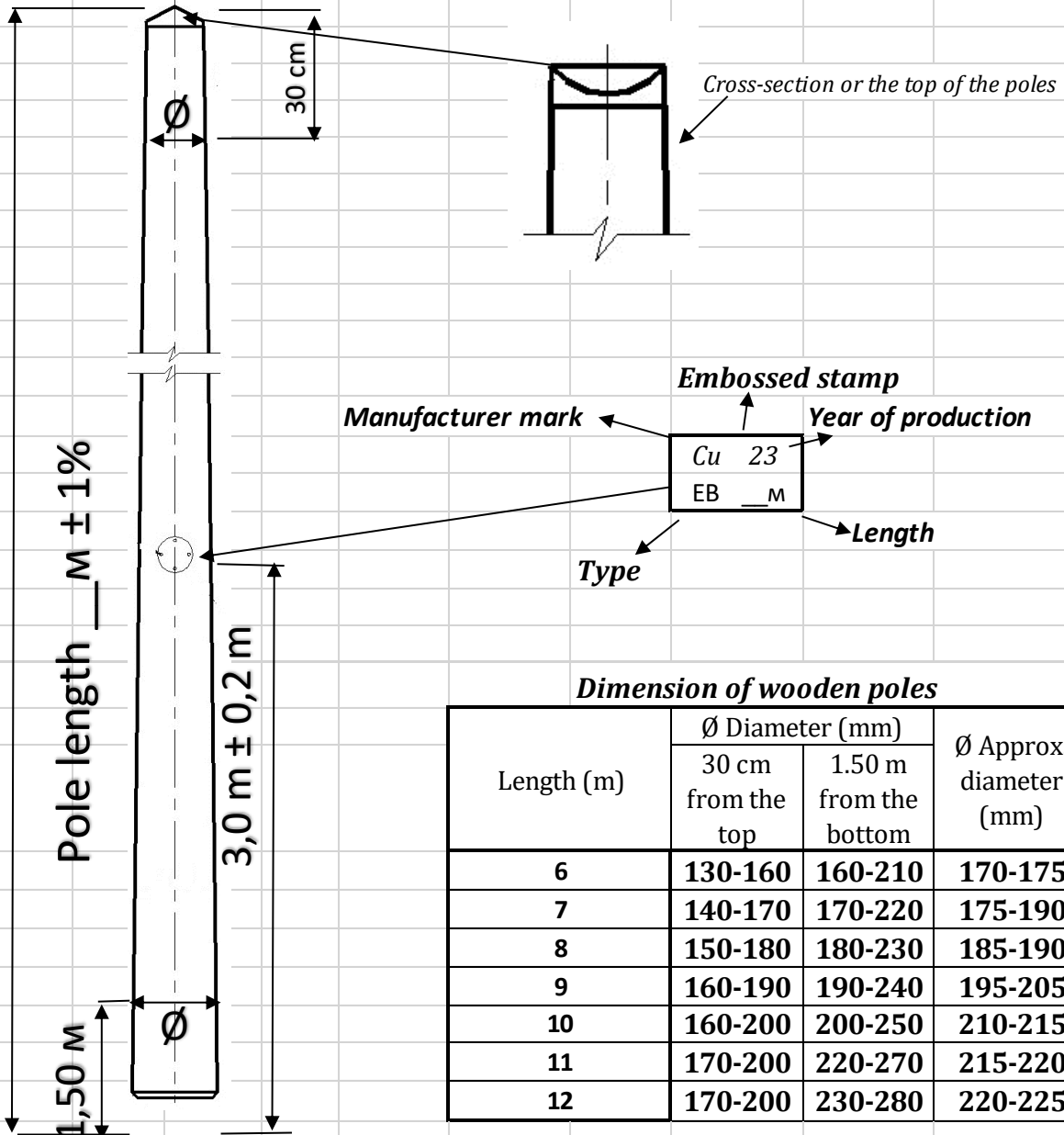
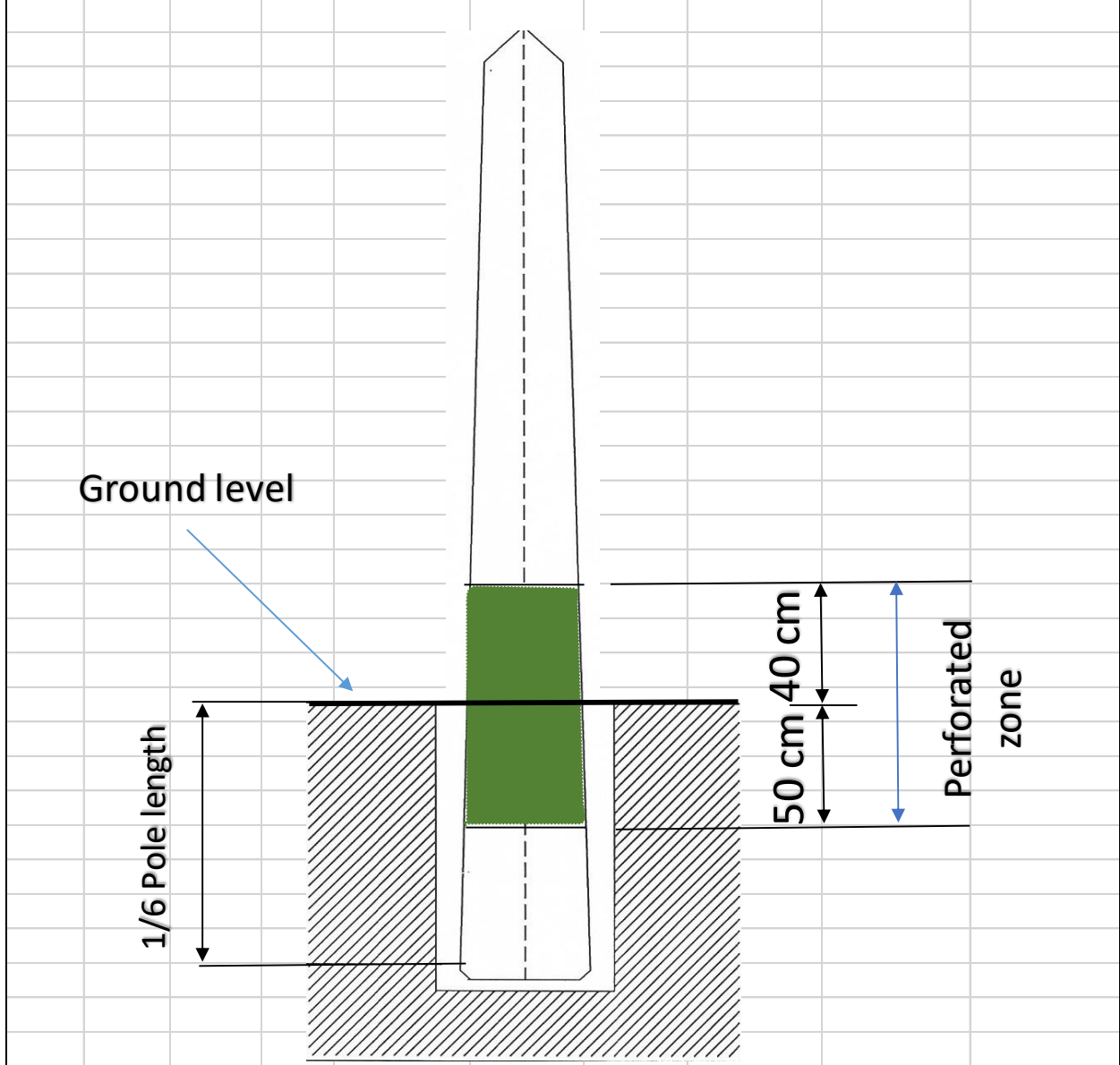


# OVERVIEW OF THE WOODEN POLES



<i>Type of wood</i>		<b>Pine, Spruce and Fir</b>	Surface protection
			<b>Impregnation</b>
	<b>Date</b>	<b>Sign</b>	<b>Name</b>
Created	January 1st 2023		<b>Wooden poles</b>
Approved	January 1st 2023		
<b>Sarajevoinvest LTD</b>			<b>Code</b> 7001, 8001, 9001, 10001, 11001 и 12001
			<b>Page</b> <b>1/1</b>

## *Scetch of the perforated pole*



<i>Type of the wood</i>		<b><i>Spruce, Pine, Fir</i></b>	Impregnated solution <b><i>Impralit KDS b</i></b>	
	<b>Date</b>		<b>Name</b>	
<b>Created</b>	1.1.2023. g.		<b><i>Scetch of the perforated pole</i></b>	
<b>Approved</b>	1.1.2023. g.			
<b><i>Sarajevoinvest ltd</i></b>			<b>Code</b>	<b>Page</b>
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## *Technical description of the wooden pole*

### Impregnated pole for telecommunications and electrical power lines

For impregnated poles, conifers white pine (Pinus Silvestris), black pine (Pinus Nigro) and then larch, spruce and fir are used in accordance with the prescribed standards.

It is recommended to use wood from winter felling from November 1st to April 1st. Wood that is not overripe, worm-eaten with a neat texture, with large cracks, fungi and any damage is used.

Before impregnation, the remaining bark and skin is mechanically removed from the wood and the thickenings are carefully and smoothly removed, so that they are level with the outer surface.

Each pole is cut exactly on the axis at the thicker end, and the edges are easily hemmed to prevent damage during installation.

The thinner part of the pole is cut in the form of a gable roof.


Poles produced by Sarajevoinvest ltd are classified as:

I- Normal poles

<b>Length in meters</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
<b>Diameter in cm</b>						
<b>30 cm from the top</b>						
	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>17</b>	<b>17</b>

The lengths of the poles according to the table above are calculated from the section (bottom) to the top of the roof.

Permitted length deviation is: up to 9m +5cm and over 9m +10cm.

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			<b>Impregnation</b>
	<b>Date</b>	<b>Sign</b>	Name
Created	January 1st 2023		<b>Wooden poles</b>
Approved	January 1st 2023		
<b>Sarajevoinvest LTD</b>			Code
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			<b>1/2</b>

The pole volume is calculated based on the diameter in the middle, taking that diameter as the diameter of the base of the roller that has the length of the pole.

The storage of the poles before impregnation must be in the form of a winch and on dry land that is exposed to air flow.

The winch is made in such a way that two poles are placed on the bottom as a base 30 cm high from the ground made of concrete or impregnated poles. Two poles are used for the base of the winch only when 7 and 8 meter poles are used. All longer poles must have 3 posts on the bases as a base to prevent them from warping. The distance between the poles in one row is at least 3 cm, and the rows are separated from each other by 3 or 4 transversely placed poles. In each winch, there should be stacked poles of one length, which depends on the impregnation schedule. The height of the winch should not exceed 3 m, and the distance between the winches should not exceed 1 m.

Before impregnation, the humidity of the poles is measured using a hygrometer or by measuring the mass of the poles on a scale.

Determination of humidity can be determined:

- a) Visually - through air gaps that should be clearly visible
- b) By measuring the weight of raw poles, which should amount to:

- For pine 600 kg/cubic
- For spruce and fir 550 kg/cubic

Each impregnated pole is marked with an imprinted seal that contains the pole designation, length of the pole, year of impregnation and manufacturer's logo.

<i>Type of wood</i>		<b>Pine, Spruce and Fir</b>	Surface protection				
			<b>Impregnation</b>				
	<b>Date</b>	<b>Sign</b>	<b>Name</b>				
Created	January 1st 2023		<b>Wooden poles</b>				
Approved	January 1st 2023						
<b>Sarajevoinvest LTD</b>			<table border="1"> <tr> <td><b>Code</b></td> <td><b>Page</b></td> </tr> <tr> <td>7001,8001,90 01,10001,110 01 и 12001</td> <td><b>2/2</b></td> </tr> </table>	<b>Code</b>	<b>Page</b>	7001,8001,90 01,10001,110 01 и 12001	<b>2/2</b>
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## ***Instructions for storage and transport***

After impregnation, TT (EV) poles are placed on the manufacturer's site in bulk and must remain there for 7 days in order for the fixation process to be carried out and the protective agent to bind to the wood mass.

After the fixation period, the TT (EV) poles are shipped to the customer's destination. Shipping is done by truck transport.

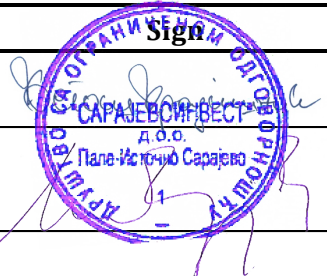
### **STORAGE**

When the poles are brought to the customer's warehouse and they are not installed immediately, they must be stacked densely at the customer's warehouse. The reason for dense stacking is that in the summer months, due to the high heat, the poles crack along their length and the sunbeams exceed the permitted length, and they must not be installed.

### **TRANSPORTATION**

The poles are shipped from the seller's warehouse by rail and special trucks designed for the transport of long timber. If they are transported by rail, lumber wagons are used, the main purpose of which is to transport long timber. When loading wooden poles, care must be taken not to cause mechanical damage, and the poles must be placed in the wagons in a horizontal position.

When the transport is carried out by special trucks, the pillars are supported in a horizontal position on two supports. The support on the front side is at the second meter of the length of the pole and at the end of the truck is at 1 meter from the end. When loading and unloading, take care not to cause mechanical damage to the poles.

<i>Type of wood</i>		<b><i>Pine, Spruce and Fir</i></b>	Surface protection
			<b><i>Impregnation</i></b>
	<b>Date</b>	<b>Sign</b>	<b>Name</b>
Created	January 1st 2023		<b><i>Instructions for storage and transport</i></b>
Approved	January 1st 2023		
<b><i>Sarajevoinvest LTD</i></b>			<b>Code</b>
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## ***Installation instructions***

In order for the wooden pole to last longer in overhead telephone lines, there are certain technical conditions that must be applied.

A wooden post that is buried in the ground is buried at 1/6 of its length.

### ***HOW TO MOUNT THE POLE***


Dig a hole in the ground 1/6 the length of the post, the diameter of the hole must be twice the diameter of the post. The pole is inserted into the excavated hole with its thicker end. It is placed strictly vertically and reinforced with gravel. In the event that there is no gravel, the pole can be reinforced with earth from the excavation. When the pole is reinforced with earth, its service life is reduced by 1/3.

Fine sand, gravel and excavated soil are used as building materials for strengthening in exceptional cases.

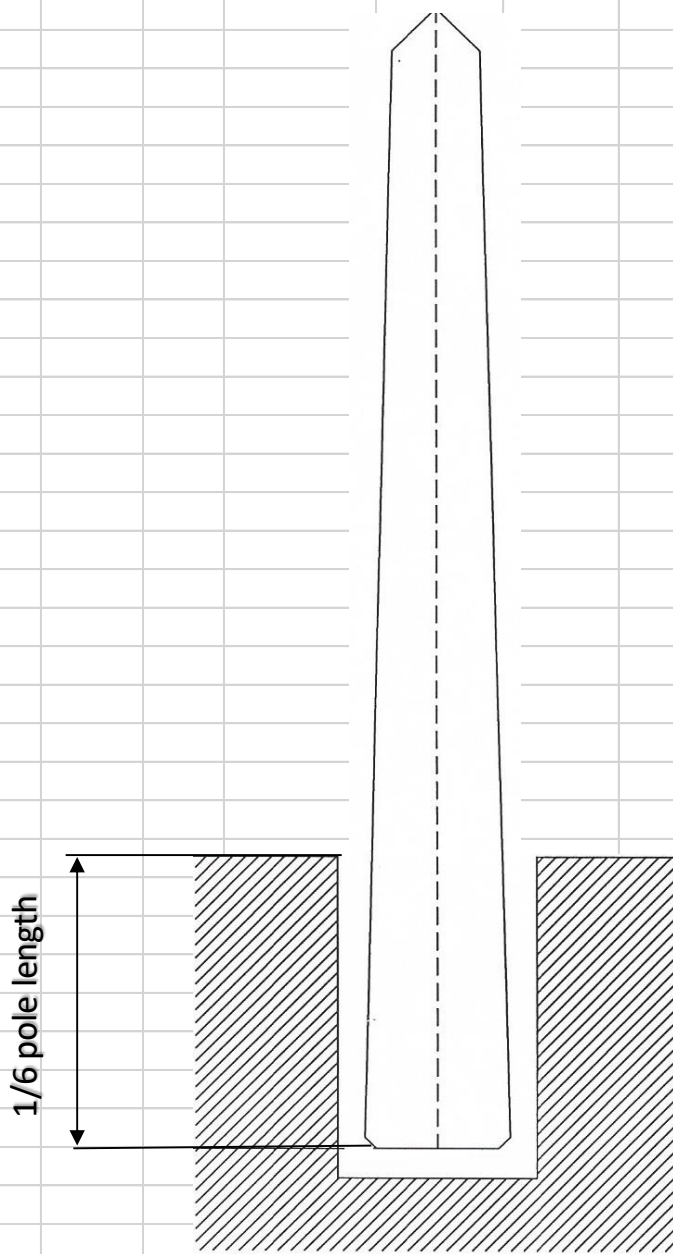
The tools used for installation are hydraulic drills for drilling holes, and their diameter must be twice the diameter of the pole.

### ***ASSEMBLY PROCEDURE***

Into the excavated hole with a diameter twice as large as the diameter of the pole, a pole is inserted with its thicker end in a strictly vertical position 1/6 of its length, then fine sand or gravel is inserted around the column and compacted with water. After 24 hours, equipment and cables can be hung on the pole.

<i>Type of wood</i>		<b><i>Pine, Spruce and Fir</i></b>	Surface protection	
			<b><i>Impregnation</i></b>	
	<b>Date</b>	<b>Sign</b>	<b>Name</b>	
Created	January 1st 2023		<b><i>Installation instruction</i></b>	
Approved	January 1st 2023			
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# Installation instructions - technical presentation



Type of wood		<b>Pine, Spruce and Fir</b>	Surface protection
			<b>Impregnation</b>
	Date	Sign	Name
Created	January 1st 2023		<b>Installation instruction</b>
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