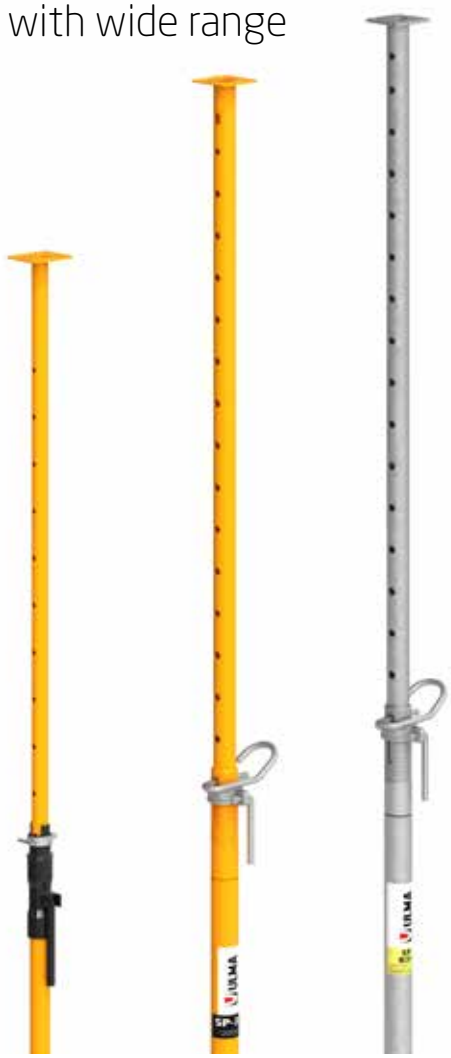
TELESCOPIC STEEL PROPS

CATALOGUE-MANUAL

// Lightweight and with wide range



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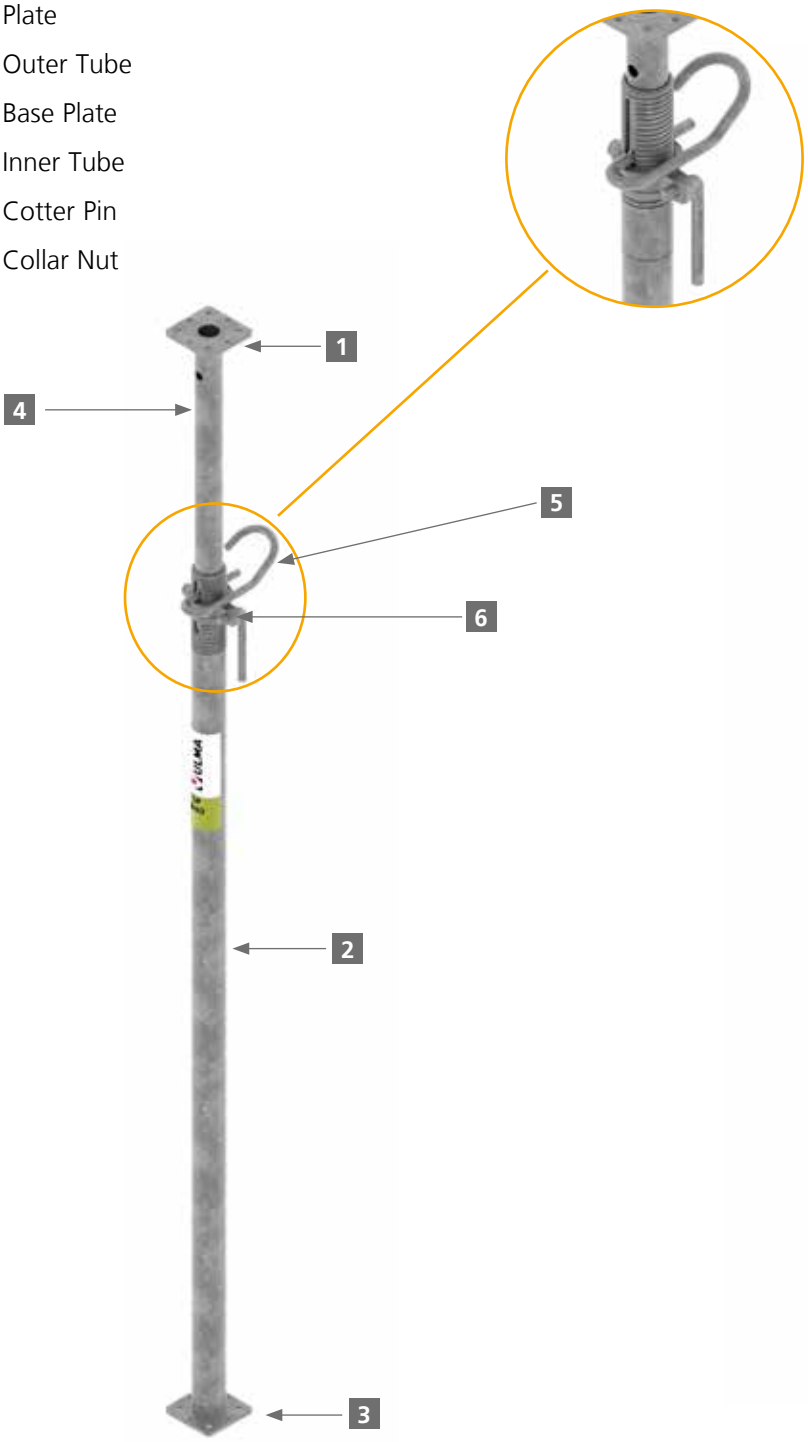
ULMA

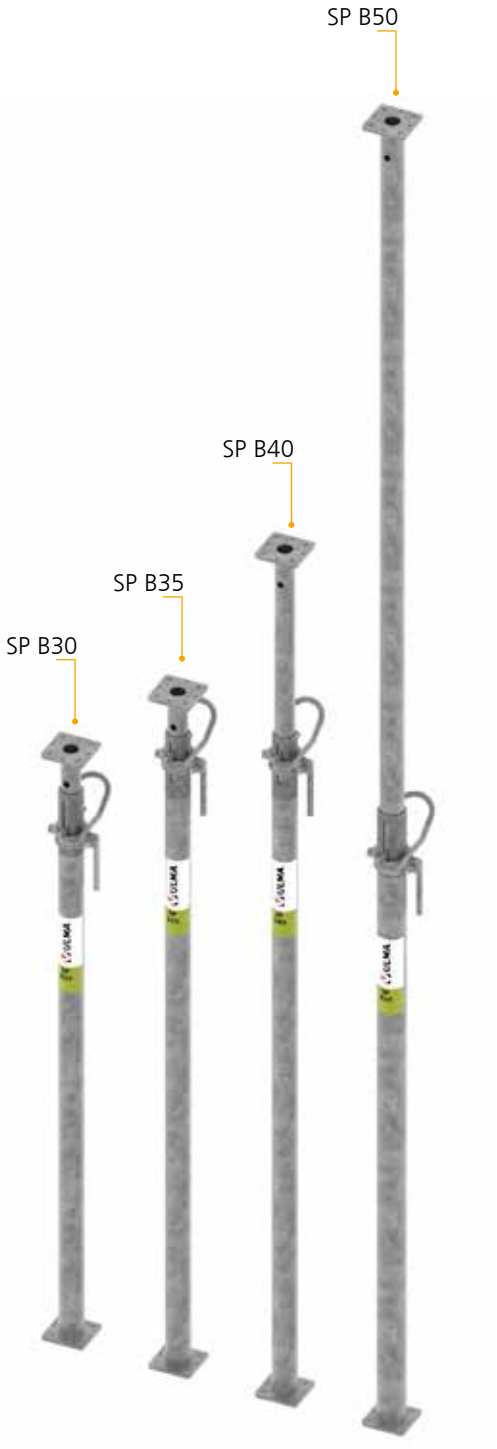
- Designed for the **shoring of slab formwork** and other several applications on site.
- Range of props: SP B, SP, NORMAL and STRONG props.
- High performance cost-effective props.
- **Props designed and manufactured according to UNE-180201.**

SP B PROPS

// System Components

1 Plate
2 Outer Tube
3 Base Plate
4 Inner Tube
5 Cotter Pin
6 Collar Nut





▸ Range of SP B Props

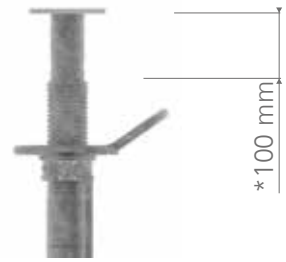
// Features

- **Galvanized** prop.
- Range of props:

SP B PROPS	USAGE LENGTH (min. - max.)	WORKING LOADS (max. - min.)
SP B30	1.75 m - 3.0 m	33.0 kN - 26.0 kN
SP B35	2.0 m - 3.5 m	33.0 kN - 25.0 kN
SP B40	2.5 m - 4.0 m	33.0 kN - 20.0 kN
SP B50	3.85 m - 5.0 m	33.0 kN - 22.0 kN

Closed Prop Length = Min. Usage Length - 20 mm approx.

- System for fast prop striking included in the cotter pin.
- Collar nut with projection for simplified adjustment of the prop.
- Safe working thanks to the distance protecting the operator against hand crushing (*).



- Unintentional disengagement system for the inner tube, cotter pin and collar nut.
- Collar nut thread designed to ease the evacuation of dirt and concrete remains.

	SP B PROP			
	Working Loads (kN)			
Height (m)	SP B30	SP B35	SP B40	SP B50
1.75	33.0			
1.8	33.0			
1.9	33.0			
2.0	33.0	33.0		
2.1	33.0	33.0		
2.2	32.0	33.0		
2.3	31.0	33.0		
2.4	30.0	33.0		
2.5	29.0	32.0	33.0	
2.6	28.0	31.0	33.0	
2.7	27.5	30.0	33.0	
2.8	27.0	29.0	33.0	
2.9	26.5	28.0	33.0	
3.0	26.0	27.5	32.0	
3.1		27.0	31.0	
3.2		26.5	30.0	
3.3		26.0	29.0	
3.4		25.5	28.0	
3.5		25.0	27.0	
3.6			26.0	
3.7			24.5	
3.8			23.0	
3.85			22.0	33.0
3.9			21.5	33.0
4.0			20.0	33.0
4.1				33.0
4.2				31.0
4.3				29.0
4.4				27.0
4.5				26.0
4.6				25.0
4.7				24.0
4.8				23.0
4.9				22.5
5.0				22.0

SP B30, SP B35, SP B40 and SP B50 props are also available with Class B load requirements defined in EN1065. Z-8.311-989 certification. For more information, see CERTIFIED STEEL PROPS CATALOGUE-MANUAL.

// Benefits

- **Guaranteed high safety levels:**

. Hands anti-crush protection integrated.

. Simple and quick adjustment of the collar nut.

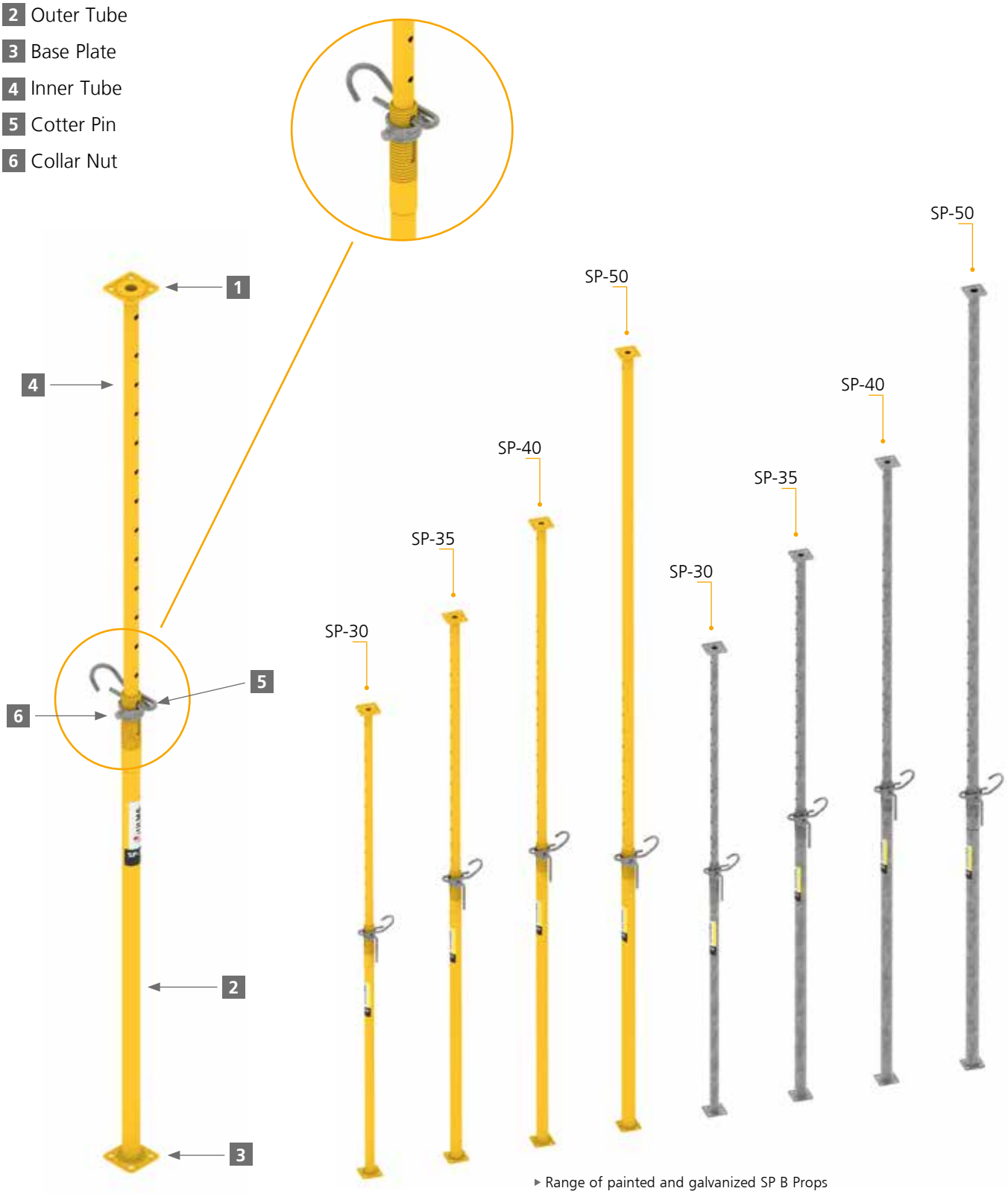
. Prop components with unintentional disengagement system.

- **Cost-effective** thanks to an optimized design.
- **High durability for multiple reuse,** thanks to the galvanization that provides excellent protection against corrosion.
- Simple and quick maintenance. The collar nut has a thread designed to remove dirt and concrete remains.

SP PROPS

// System Components

1 Plate
2 Outer Tube
3 Base Plate
4 Inner Tube
5 Cotter Pin
6 Collar Nut



▸ Range of painted and galvanized SP B Props

// Features

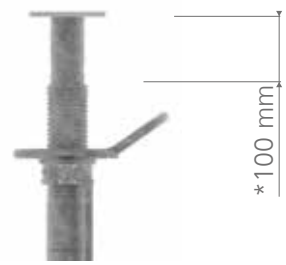
- In this range, there are two types of props:
  . **Hot-dip galvanized** props.
  . Props **coated with polyester resins** props.

- Range of props:

SP PROP	USAGE LENGTH (min. - max.)	WORKING LOADS (max. - min.)
SP-30	1.75 m - 3.0 m	30.0 kN - 20.0 kN
SP-35	2.0 m - 3.5 m	30.0 kN - 24.0 kN
SP-40	2.5 m - 4.0 m	30.0 kN - 20.0 kN
SP-50	3.85 m - 5.0 m	26.0 kN - 20.0 kN

Closed Prop Length = Min. Usage Length - 20 mm approx.

- System for fast prop striking included in the cotter pin.
- Collar nut with projection for simplified adjustment of the prop.
- Safe working thanks to the distance protecting the operator against hand crushing (*).



- Unintentional disengagement system for the inner tube, cotter pin and collar nut.
- Collar nut thread designed to ease the evacuation of dirt and concrete remains.

	SP PROPS**			
	Working Loads (kN)			
Height (m)	SP-30	SP-35	SP-40	SP-50
1.75	30.0			
1.8	30.0			
1.9	30.0			
2.0	30.0	30.0		
2.1	30.0	30.0		
2.2	30.0	30.0		
2.3	30.0	30.0		
2.4	30.0	30.0		
2.5	28.0	30.0	30.0	
2.6	26.0	30.0	30.0	
2.7	24.0	30.0	30.0	
2.8	22.0	29.0	30.0	
2.9	21.0	28.0	30.0	
3.0	20.0	27.0	30.0	
3.1		26.0	30.0	
3.2		25.5	30.0	
3.3		25.0	29.0	
3.4		24.5	28.0	
3.5		24.0	27.0	
3.6			26.0	
3.7			24.5	
3.8			23.0	
3.85			22.0	26.0
3.9			21.5	26.0
4.0			20.0	26.0
4.1				26.0
4.2				26.0
4.3				26.0
4.4				26.0
4.5				25.0
4.6				24.0
4.7				23.0
4.8				22.0
4.9				21.0
5.0				20.0

** Valid for galvanized SP props and SP props coated with polyester resins.

// Benefits

- **Guaranteed high safety levels:**

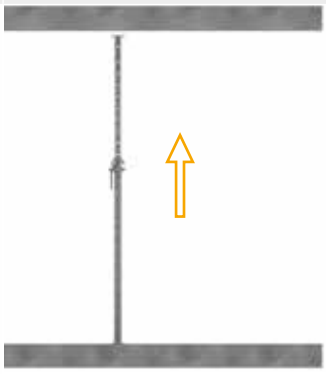
. Hands anti-crush protection integrated.
. Simple and quick adjustment of the collar nut.
. Prop components with unintentional disengagement system

- **Cost-effective** thanks to an optimized design.
- **High durability for multiple reuse.**
- Simple and quick maintenance. The collar nut has a thread designed to remove dirt and concrete remains.

// SP B y SP Prop assembly process

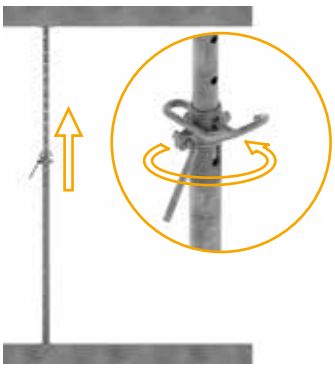
1. Lower the collar nut until releasing the slot of the prop thread by using the handle.

2. Extend the inner tube of the prop until reaching the desired height.



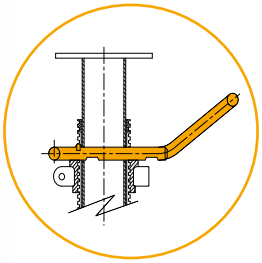
3. Insert the cotter pin into the hole closest to the collar nut.

4. Make a final adjustment by turning the collar nut until the prop is fixed firmly in its position.

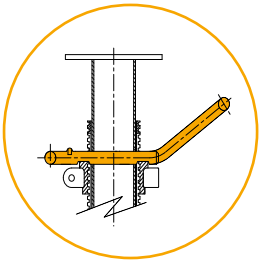


// SP B y SP Prop disassembly process

1. Hit the end of the cotter pin in working position until it rests down on the collar nut. The cotter pin and the inner tube will lower 2.5 mm.



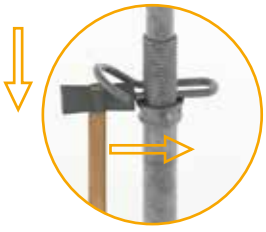
Cotter pin in working position



Cotter pin in stripping position

2. Loosen the collar nut manually with the handle or if necessary by hitting the protrusion of the collar nut at one side with a hammer until the prop is released.

3. Remove the cotter pin from the hole with a hammer blow. This is conveniently done by holding the inner tube tight.

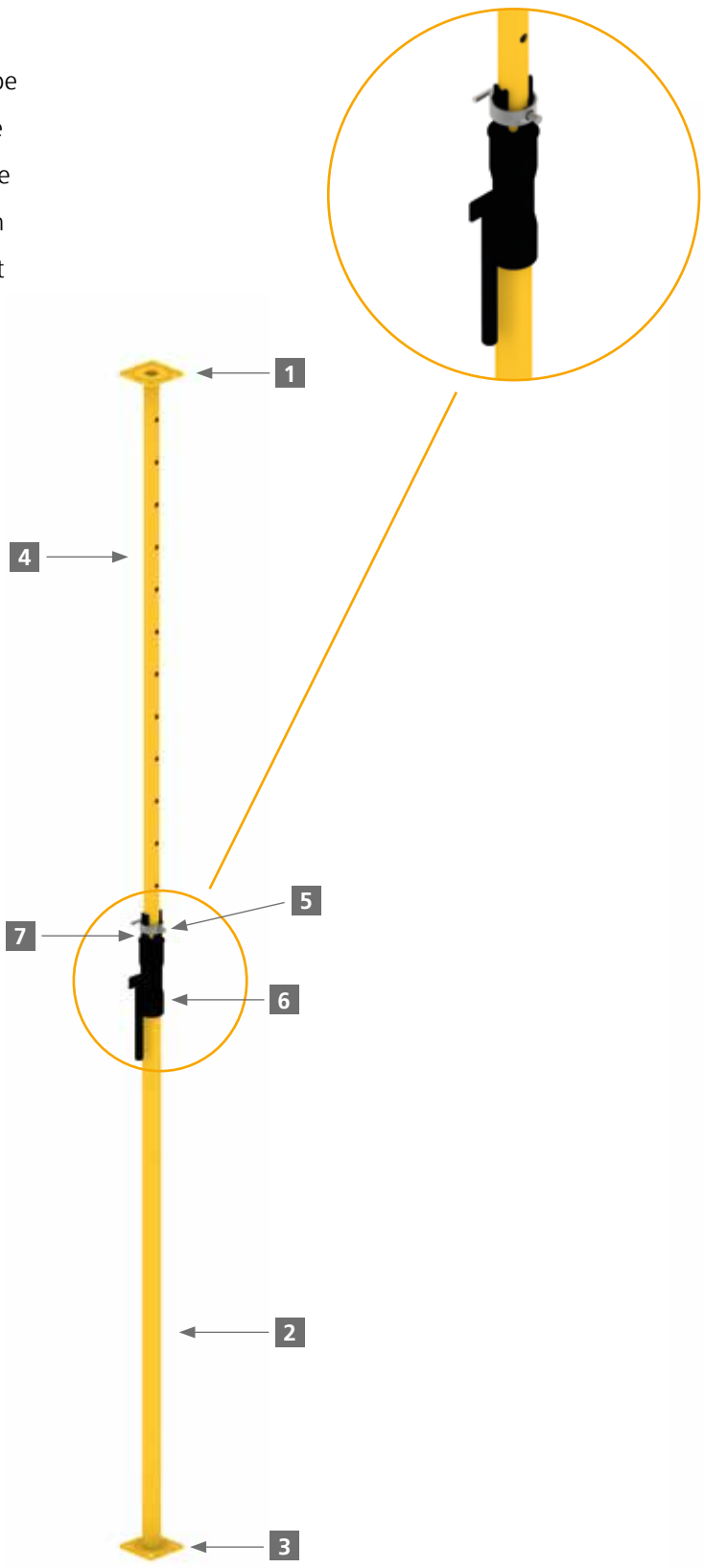


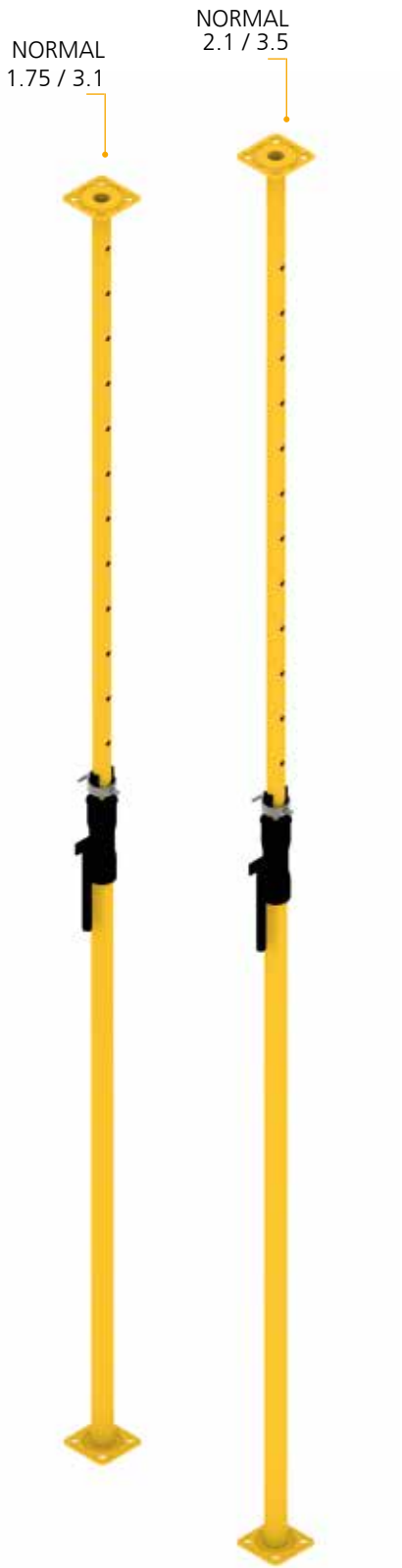
4. Place the prop into the pallet.

NORMAL PROPS

// System Components

1 Plate
2 Outer Tube
3 Base Plate
4 Inner Tube
5 Cotter pin
6 Collar Nut
7 Regulator





▸ Range of NORMAL Props

// Features

- The NORMAL Prop, that is coated with polyester resins, has been designed for shoring horizontal formwork systems, and for other shoring requirements that may arise on the construction site.
- Range of props:

NORMAL PROPS	USAGE LENGTH (min. - max.)	WORKING LOADS (max. - min.)
NORMAL 1.75 / 3.1	1.75 m - 3.1 m	23.0 kN - 8.5 kN
NORMAL 2.1 / 3.5	2.1 m - 3.5 m	23.0 kN - 7.1 kN

// Benefits

- **High assembly rates:**

. Its lightness allows high execution rates.

. Quick and easy adjustment of the nut, thanks to the regulator that allows to position the cotter pin with a single movement.

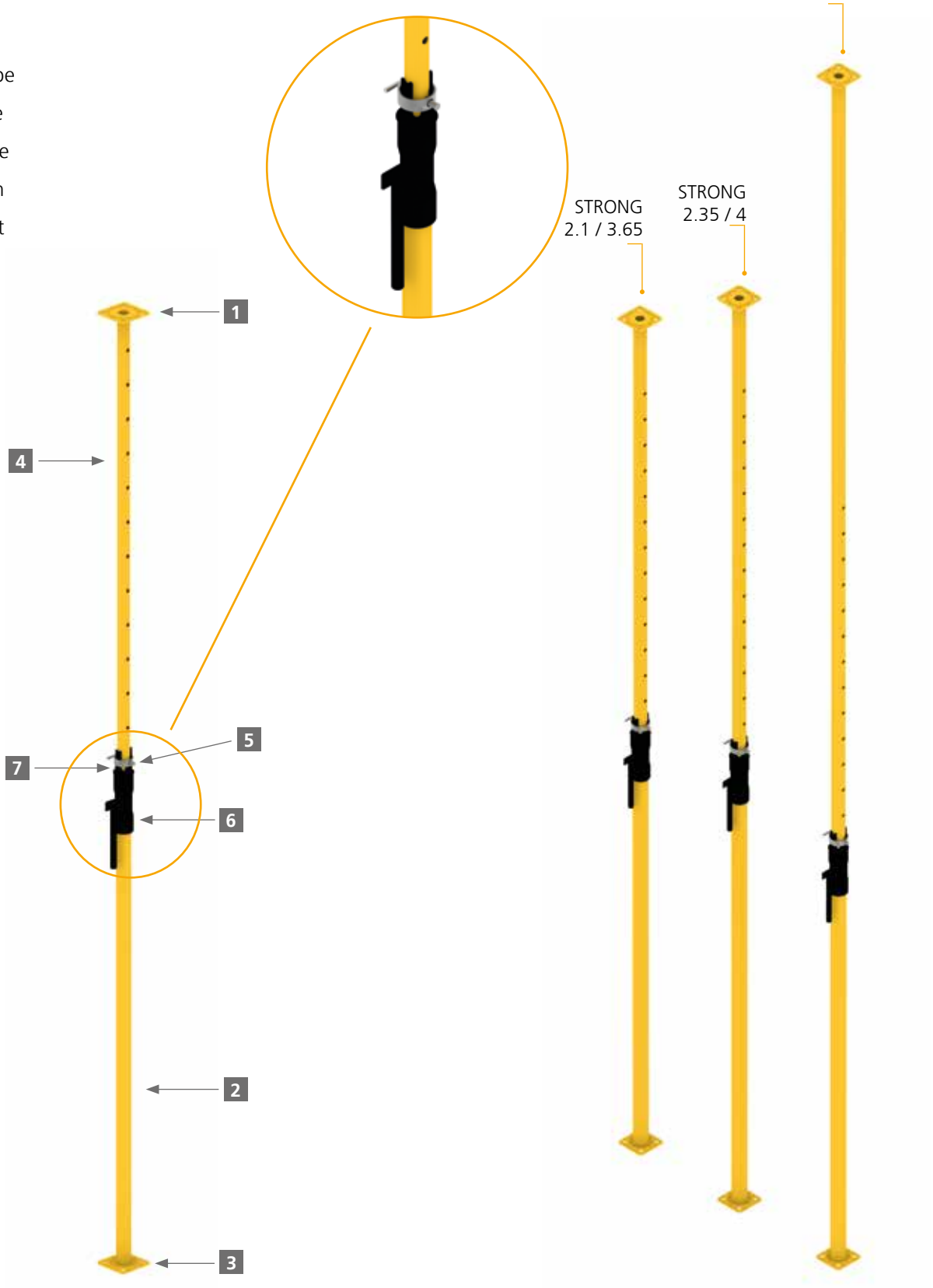
- Simple and quick maintenance. The collar nut has a thread designed to remove dirt and concrete remains.

	NORMAL PROP	
	Working Loads (kN)	
Height (m)	NORMAL 1.75 - 3.1	NORMAL 2.1 - 3.5
1.75	23.0	
1.8	23.0	
1.9	23.0	
2.0	23.0	
2.1	23.0	23.0
2.2	21.7	22.6
2.3	20.4	22.1
2.4	19.1	21.7
2.5	17.6	20.5
2.6	15.9	18.5
2.7	14.2	16.5
2.8	12.5	14.2
2.9	11.2	12.9
3.0	9.8	11.6
3.1	8.5	10.2
3.2		9.4
3.3		8.5
3.4		7.7
3.5		7.1

STRONG PROPS

// System Components

1 Plate
2 Outer Tube
3 Base Plate
4 Inner Tube
5 Cotter pin
6 Collar Nut
7 Regulator



▸ Range of STRONG Props

// Features

▸ The STRONG Prop has the same design as NORMAL Prop. Nevertheless, it has a higher load capacity.

▸ Range of props:

STRONG PROP	USAGE LENGTH (min. - max.)	WORKING LOADS (max. - min.)
STRONG 2.1 / 3.65	2.1 m - 3.65 m	26.0 kN - 14.5 kN
STRONG 2.35 / 4	2.35 m - 4 m	26.0 kN - 11.9 kN
STRONG 3.65 / 5.25	3.65 m - 5.25 m	15.0 kN - 5.4 kN

// Benefits

▸ **High assembly rates:**

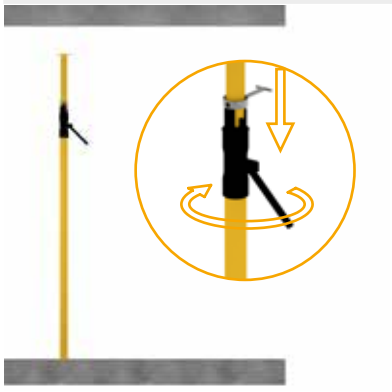
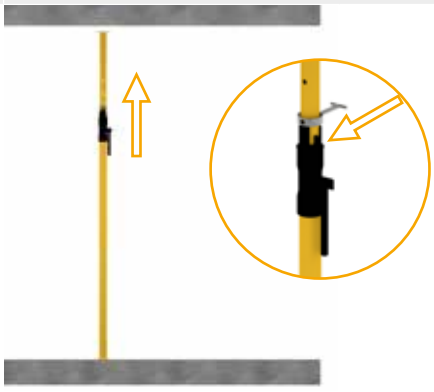
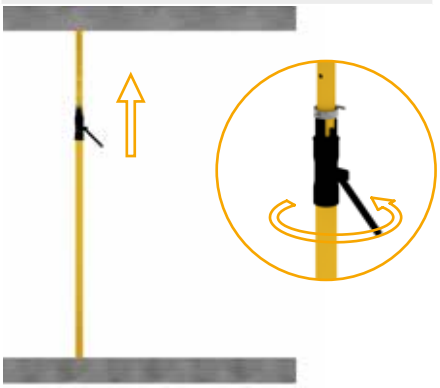
. Its lightness allows high execution rates.

. Quick and easy adjustment of the nut, thanks to the regulator that allows to position the cotter pin with a single movement.

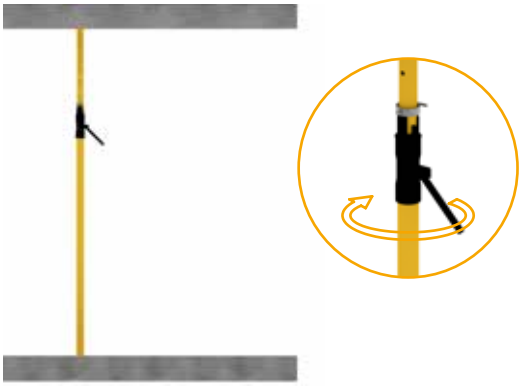
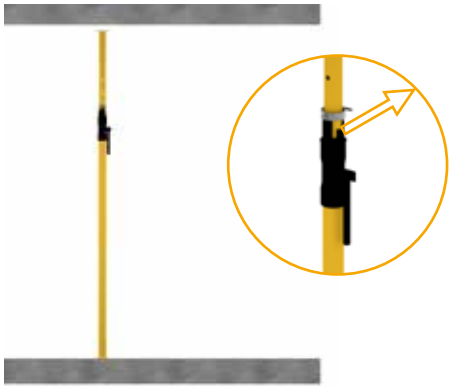
▸ Simple and quick maintenance. The collar nut has a thread designed to remove dirt and concrete remains.

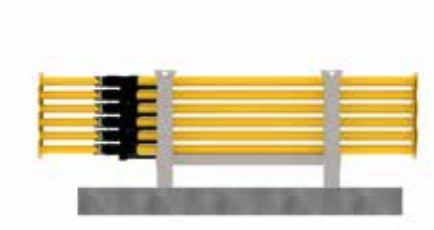
	STRONG PROP		
	Working Loads (kN)		
Height (m)	STRONG 2.1 - 3.65	STRONG 2.35 - 4	STRONG 3.65 - 5.25
2.1	26.0		
2.2	26.0		
2.3	26.0		
2.35	26.0	26.0	
2.4	26.0	26.0	
2.5	26.0	26.0	
2.6	26.0	26.0	
2.7	26.0	26.0	
2.8	26.0	26.0	
2.9	24.8	25.4	
3.0	23.7	24.8	
3.1	22.5	24.2	
3.2	20.8	23.0	
3.3	19.3	21.5	
3.4	17.9	20.4	
3.5	16.6	19.1	
3.6	15.2	17.9	
3.65	14.5	17.2	15.0
3.7		16.2	14.7
3.8		14.6	13.8
3.9		13.2	13.3
4.0		11.9	12.6
4.1			12.1
4.2			11.7
4.3			11.3
4.4			10.9
4.5			8.4
4.6			8.2
4.7			7.9
4.8			7.6
4.9			7.1
5.0			6.6
5.1			6.1
5.2			5.6
5.25			5.4

// NORMAL and STRONG Prop assembly process

1. Use the handle to lower the adjustment nut to the minimum extension.	2. Extend the inner tube to the required height and insert the pin in the hole closest to the colar nut. Use the regulator to adjust the height.	3. Make the final adjustment by turning the adjustment nut until the prop is firmly fixed in position.
		

// NORMAL and STRONG disassembly process

1. Loose the adjustment nut until the prop is released.	2. Remove the cotter pin from the hole where it was inserted while holding the inner tube with one hand.
	

3. Move the inner tube back to its lowest position.	4. Place the prop into the pallet.
	

// Handling and maintenance conditions

Receiving materials on site

. Fence, close or demarcate the working area, where applicable.

The storage area should be identified and duly marked before material arrives to the building site.

Material unloading

Unloading with forklift

. The material will arrive bundled and strapped to the building site.

. The person-in-charge of the material reception will check the state of the pallets or packages.

. The forklift route will be highlighted to prevent accidents with pedestrians.

. The forklift operator will place the material following the instructions of the warehouse keeper.

. Neither the warehouse keeper, nor the receptionist should ever get in the way of the forklift.

Unloading with crane

. The unloading assistant will not be placed under the suspended loads.

. To guide the load to its place, the unloading assistant will wait until the load is almost completely lowered to the ground.

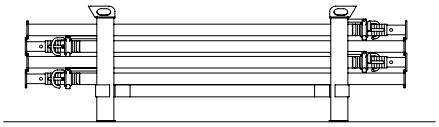
Manual unloading

. The props will be moved by hand with cotter pins and collar nuts in fixed position to disable inner tube movement.

. One person alone shall never handle loads of more than 25 kg.

Storage

. The prop is delivered in pallets. After use on site, the props are stacked in the pallet by placing them in both directions seeking to balance the load, and finally are strapped.



Material lifting

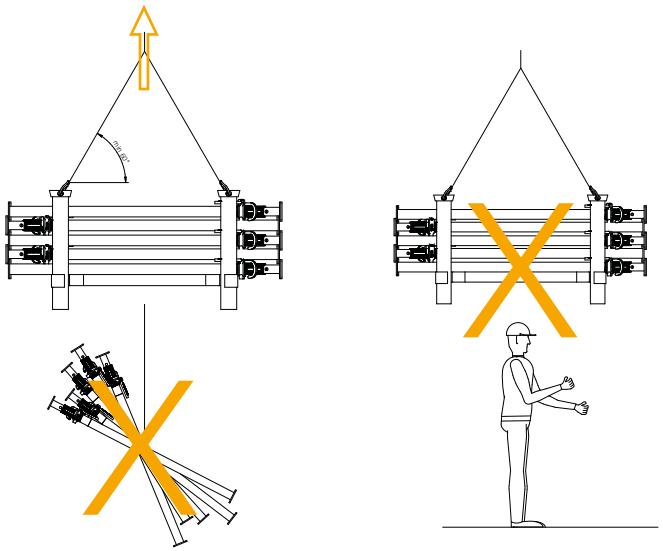
. Props are lifted to (or lowered from) the slab (or any other location) in packages strapped at both ends; the whole package is lifted with rigging slings from the hook of the tower crane.

. Previously to the lifting or lowering of props, safety hooks and slings must be checked.

. Never attach lifting slings to the packaging straps.

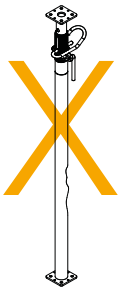
. The handling of packages or pallets with a single sling could cause the displacement of the package with respect to its centre of gravity, and might result in the falling down of material.

. No crossing below suspended loads; no passing of working areas of construction machinery.



Criteria to remove damaged items from service

. Criteria for the identification of innappropriate props for use because they might pose an accident risk to workers handling the material or a failure risk of the loaded prop:

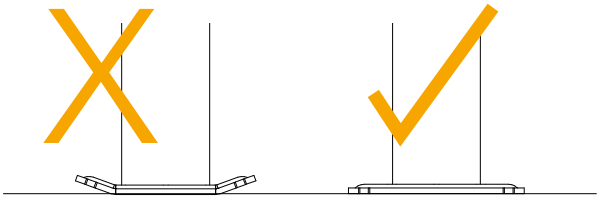


. **Deformations:** outer tube heavily dented or bent.

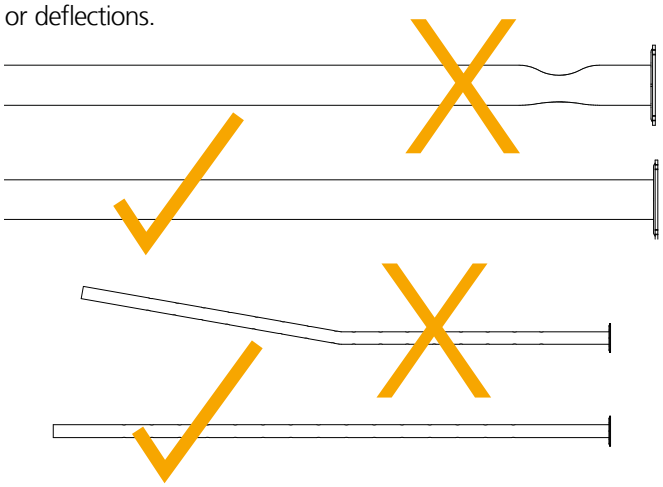
. **Poor condition:** internal or external corrosion.

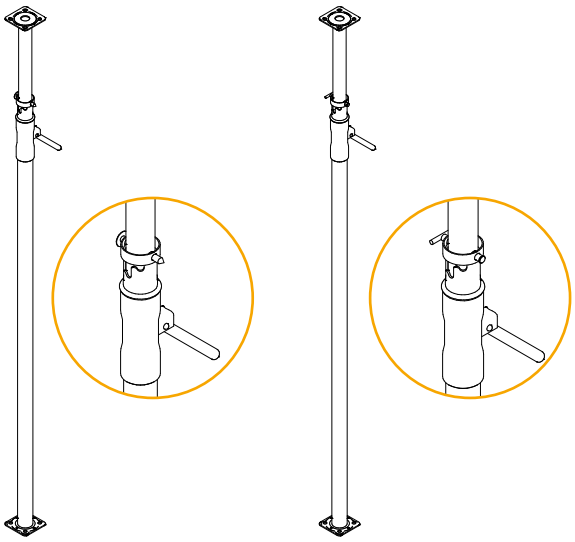
. **Check that the parts making up the prop are in place:** no missing cotter, pin, collar nut, etc.

. **Base plates:** Ensure that the base plates are not bent. The condition of the plates affects the prop's functioning.

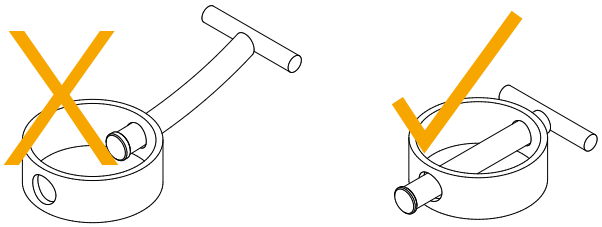


. **Tubes:** Remove the outer and inner tubes with large buclikgs or deflections.





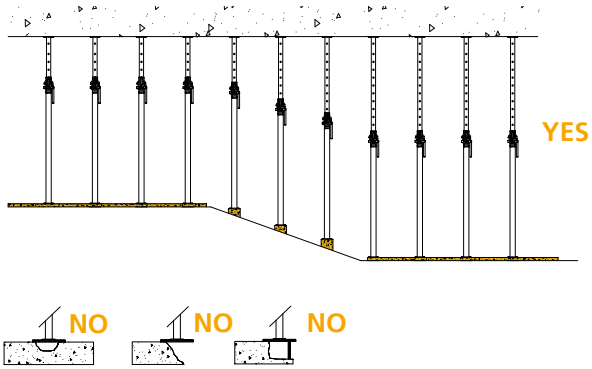
. **Pins:** Ensure the straightness of the pin.



// General safety tips

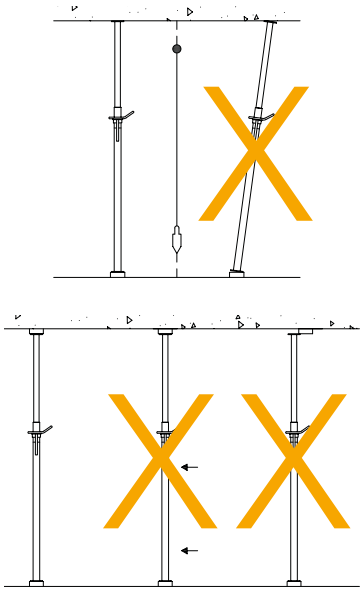
For the use of ULMA products, the current regulations on safety of state or professional organizations of each country must be respected.

. Prop support must be horizontal, on a level surface and with stable base. In case of an inclined plane, a wedgeshaped shoe will be placed.

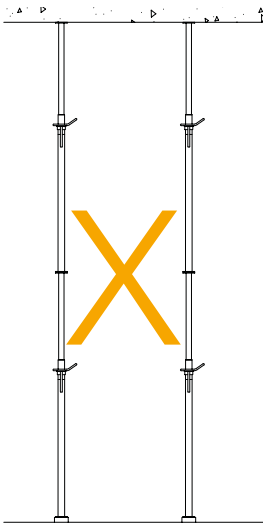


. The prop must be plumbed.

. The load acting on the prop must be vertical and centred. No horizontal loads must act on the prop.



. Props must be used as single units and never be overlayed on top of each other.



. Do not dismantle the prop nor replace prop parts by others, strange to the product.

. Only use the handle to tighten or loosen the props by hand. Do not hit the handle with the hammer.

. Do not hit the prop base for striking.

. Do not use any bent props with torn holes or welding nor with signs of deep corrosion.

. Do not overlap nor add or weld strange parts to the prop to extend it, or to other ends, without the agreement of the Technical Department of ULMA.

Preventive and corrective measures

. If there are special erection instructions available, these must be strickly followed. Otherwise, the erection process described in the user guide of the product is taken as reference.

. The general instructions of the manufacturer must be followed.

. Internal safety standards must be fulfilled.

. The use of personal protective equipment is required at all times. Workers must be provided with personal protective equipment and know how to use it.

. Personal protective equipment must include at least: Safety helmet, safety footwear, gloves and tool holder belt.

. If necessary, also use anti-fall harness, lifelines, goggles or protective masks, hearing protection, breathing masks, reflective jackets and any other required items to fulfil the health and safety guidelines on the building site.

. Check formwork and prop erection before concrete pouring.

. Pouring has to be done from heights which do not cause strong shaking of the formwork or the props.

. Formwork stripping and prop removal is only carried out when the concrete strength is sufficiently high.

. After removal, props should not be irregularly piled up.

// Legal References

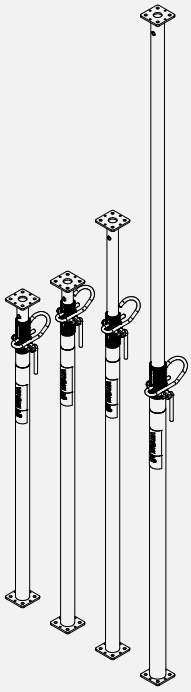
. Council Directive 89/391/ EEC (Safety and health at work).

. Council Directive 89/656/EEC (Personal protective equipment).

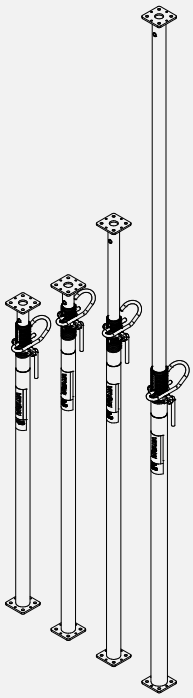
. Council Directive 95/63/EEC (Work equipment).

. Council Directive 92/57/EEC (Construction sites).

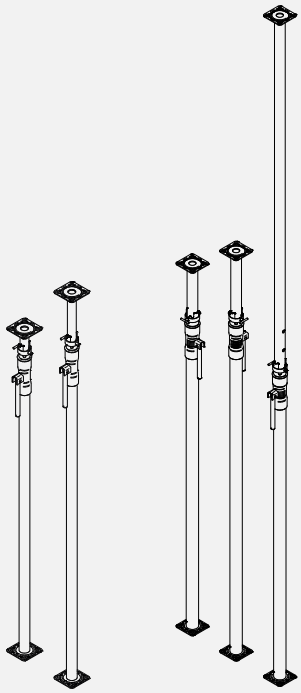
Basic components		kg
SP B30 Prop	2200230	14.6
SP B35 Prop	2200235	16.2
SP B40 Prop	2200240	18.1
SP B50 Prop	2200250	25.1



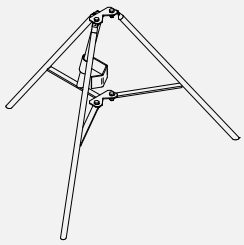
SP-30 Prop	2170030	11.4
SP-35 Prop	2170035	15.3
SP-40 Prop	2170040	17.5
SP-50 Prop	2170050	23.7
SP-30 Prop P	2170300	11
SP-35 Prop P	2170135	14.9
SP-40 Prop P	2170400	16.9
SP-50 Prop P	2170500	22.9



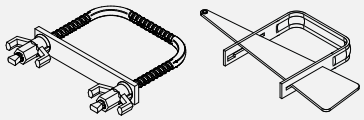
		kg
NORMAL Prop 1.75/3.1	2150000	9.8
NORMAL Prop 2.1/3.5	2150500	10.6
STRONG Prop 2.1/3.65	2154300	13.8
STRONG Prop 2.35/4	2159333	14.8
STRONG Prop 3.65/5.25	2154400	18.6



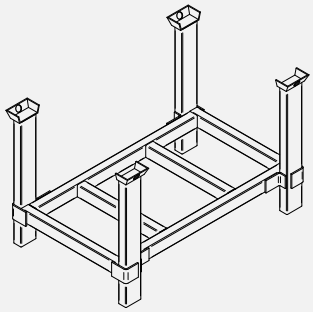
Tripod 42-87 mm	2170355	7.0
Universal tripod	2220090	11.2

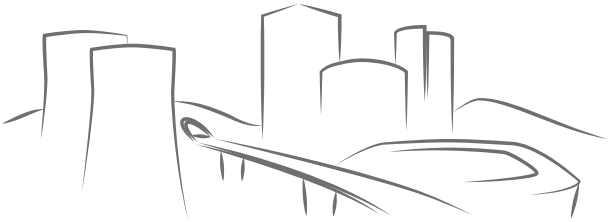


Prop bracing clamp	2170526	2.3
Clamp SP-EP	2170356	1.6



Pallet P1	2200067	45.5
Pallet E1	1800000	53





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