

Disclaimer

# KOMFORT

english



Our commitment: excellence



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# 1. Product data sheet and technical characteristics

## 1.1. Table of technical characteristics



### Komfort ladders

Comfortable and safe. All of the models incorporate the new Komfort steps designed by Astrapool. This system gives better security, resistance and a larger supporting surface which reduces effort and eases access into the swimming pool.

**Compact, original and bright style.** The set has a clean appearance, with no visible screws.




**More comfort:** a supporting surface area of 70% greater than the current edition, guaranteeing excellent distribution of weight and balanced support.

**Better ergonomics:** a surface area adapted to the light curve of the underside of the foot, improving the quality of support.

**More safety:** non-skid zones incorporated onto the step.

### Technical characteristics

- Ø 43 mm handrail made of AISI-316 POLISHED stainless steel.
- Innovative latest generation step, made of high quality plastic.
- Fixing to the floor with bolts in models Komfort -1000 and -650. In the Komfort Split model the fixing to the pool is with shims.

			
NR. OF STEPS	KOMFORT SPLIT LADDER	KOMFORT 1000 LADDER	KOMFORT 650 LADDER
3	41324	42867	43269
4	41325	42868	43270

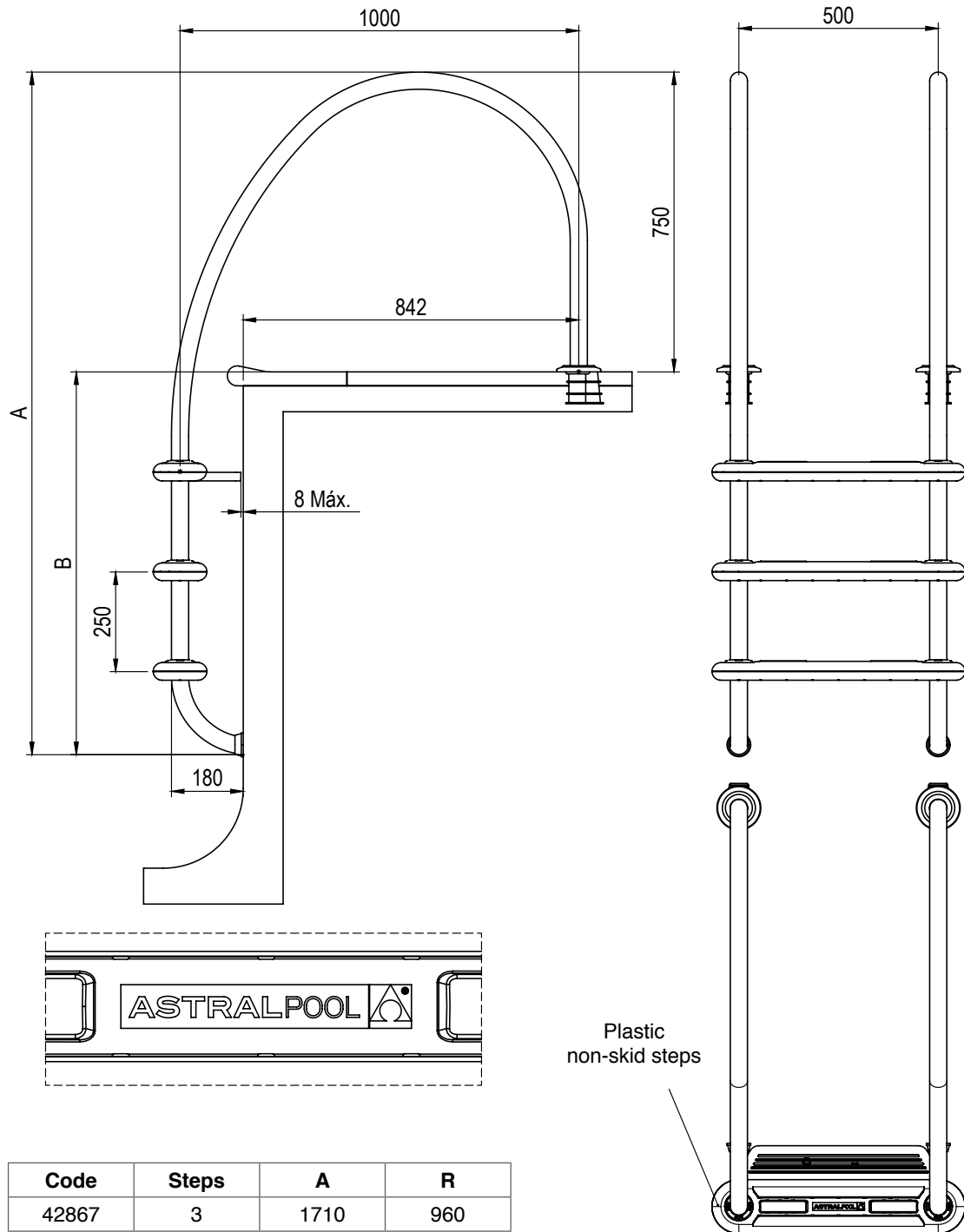
## 1.2. Packaging

CODE	PACKAGING DIMENSIONS (mm)	VOLUME (m <sup>3</sup> )
41324	420x770x200	0,065
41325	310x1020x200	0,064
42867	2000x1100x70	0,154
42868	2000x1100x70	0,154
43269	2000x720x70	0,105
43270	2000x720x70	0,105

CODE	PALLETISED DIMENSIONS (mm)	VOLUME (m <sup>3</sup> )	EMBALLAGE PAR PALETTE
41324	1200x1000x2150	2,58	24
41325	1200x1000x2150	2,58	32
42867	1200x1000x2150	2,58	14
42868	1200x1000x2150	2,58	14
43269	1200x800x2150	2,06	17
43270	1200x800x2150	2,06	17

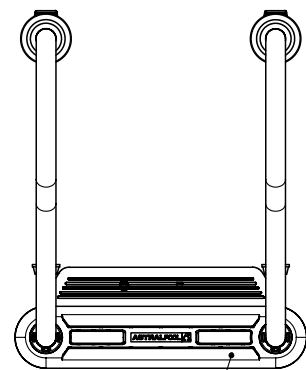
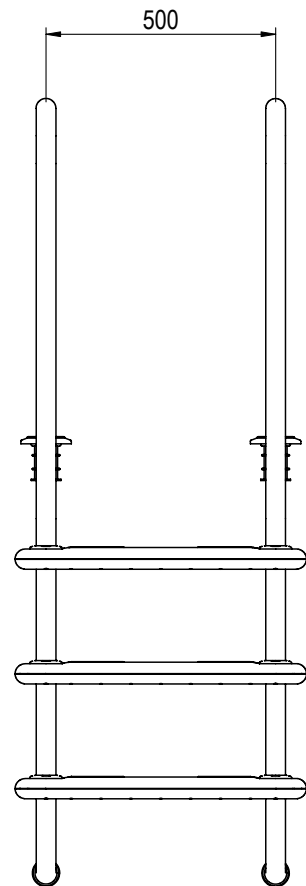
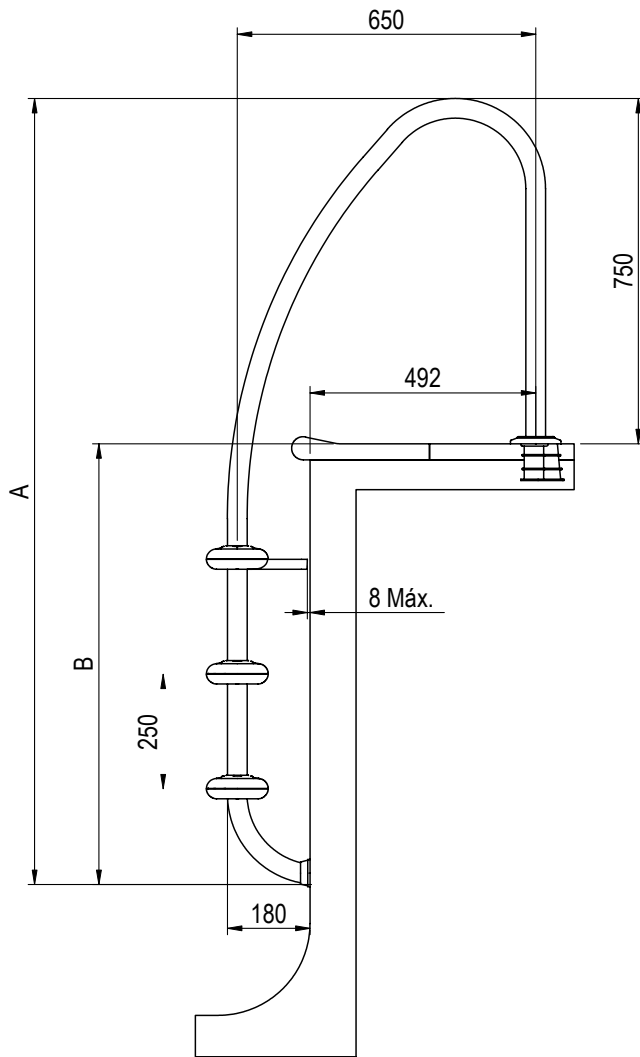
## 1.3. General dimensions (mm)

### 1.3.1. KOMFORT 1000 LADDER



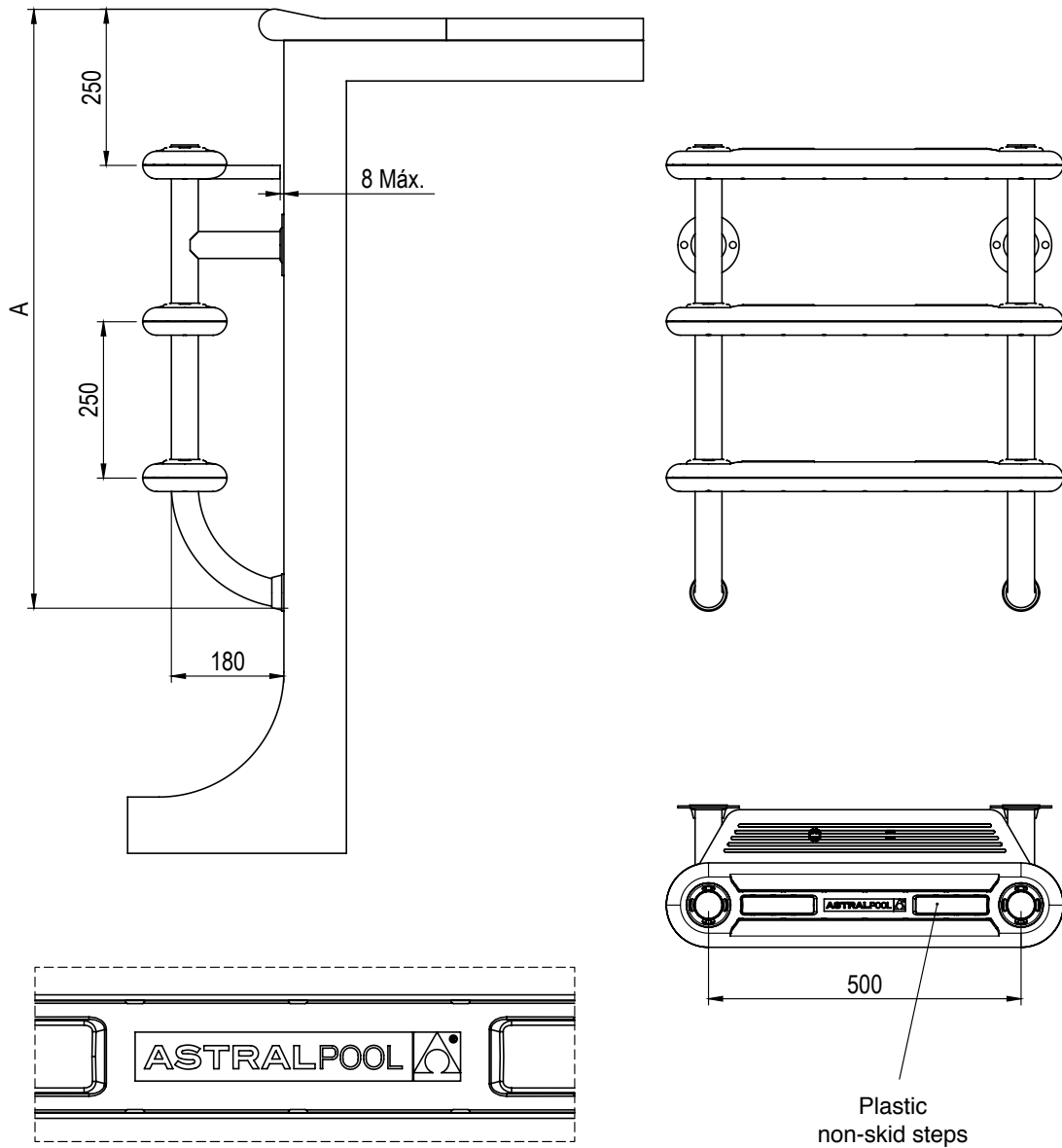
Code	Steps	A	R
42867	3	1710	960
42868	4	1960	1210

1.3.2. KOMFORT 650 LADDER



Code	Steps	A	R
43269	3	1710	960
43270	4	1960	1210

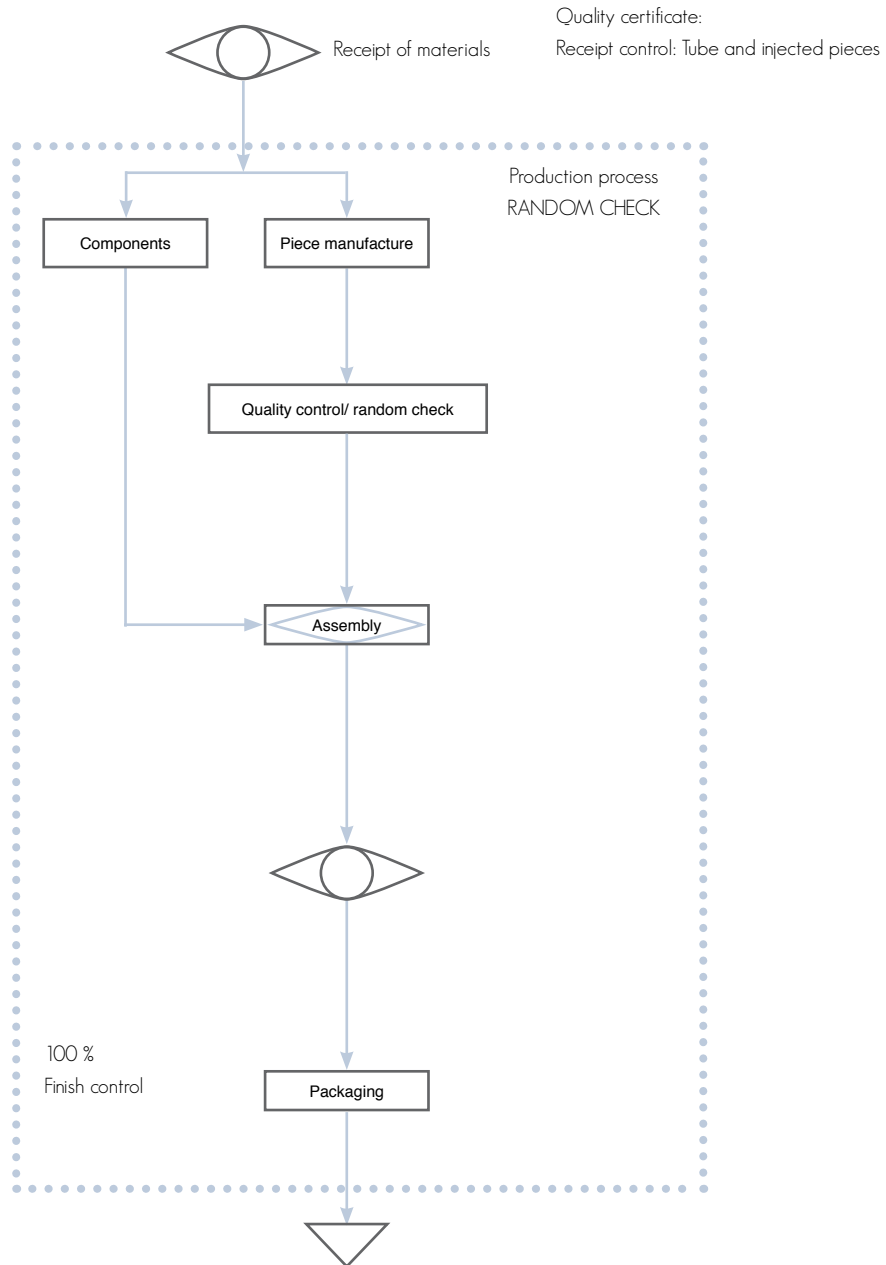
### 1.3.3. KOMFORT SPLIT LADDER



Code	Steps	A
41324	3	960
41325	4	1210

## 2. Quality control checklist

### QUALITY CONTROL CHECK LIST



	Process operation
	Self-control operation
	Control
	Stock



**METALAST S.A.U CERTIFIES THAT:**

The KOMFORT ladders, manufactured by METALAST S.A.U. have been designed following the standards set by METALAST S.A.U.

These include:

- Control points and necessary tests to ensure the conformity of the product, in accordance with the requirements established by regulation ISO 9001:2000 in its points on:
  - Product production.
  - Product analysis and improvement.
- Each ladder will undergo a visual inspection of its appearance.



Quality Control Manager Metalast, S.A.U.

3. Available certificates about the product, the production process and the systems implemented in the company



## 4. Warranty certificate

### 4.1. GENERAL PROVISIONS

4.1.1 In accordance with these provisions, the vendor guarantees the products that it sells against any manufacturing defect that affects its conformity or suitability for the use for which they have been designed.

4.1.2 Warranty period: five (5) years of warranty from the date of acquisition by the user or final purchaser. The warranty includes: material and workmanship; it does NOT include: delivery costs, travel costs of repair personnel, or any other cost resulting from the actions carried out by the claim.

4.1.3 The application of the warranty will be managed through the distributor or point of sale authorised by it, at the time of detecting the defect.

4.1.4 In order to apply the warranty, the buyer should be able to prove the purchase and delivery dates of the product.

4.1.5 In order to apply the warranty, the user should have followed to the letter all the instructions on maintenance and installation of the product established by the manufacturer (see section 7.5.1. MAINTENANCE).

4.1.6 When more than six months have passed since the acquisition of the product by the buyer and there is a claim of non-conformity, the latter should verify the origin and existence of the defect.

4.1.7 Parts substituted or repaired by virtue of this warranty will not extend the warranty period of the product; it will only be extended for the part in question.

4.1.8 These warranty conditions can only be modified or extended by a clause reflected in the conditions of the sales contract.

4.1.9 This warranty does not affect consumers' statutory rights.

### 4.2. EXCLUSIONS

Excluded from the warranty are imperfections or damage caused by:

4.2.1 Negligence or carelessness in installation, handling, transport and use.

4.2.2 Insufficient or inappropriate maintenance of environmental conditions as well as the product or accessory.

4.2.3 Total or partial modifications to the product without written authorisation from the manufacturer.

4.2.4 Causes of force majeure, such as fire, frost, flooding, lightning or any other unforeseen catastrophe of any origin.

4.2.5 Wear and tear caused by normal use of the product.

4.2.6 Causes external to or beyond the scope of the product, such as storing the product outdoors or in enclosed places alongside chemical products where there may be adverse environmental conditions.

4.2.7 Spillage of chemical agents or products on the product.

4.2.8 Anything that, although not included in these points, can be excluded for not being attributable to the material or its manufacturing process

### 4.3. RESPONSIBILITIES

4.3.1 The manufacturer will not take responsibility for loss or damage that may occur due to future changes or modifications made to the product.

## 5. Design standard and general characteristics

KOMFORT ladder steps have an innovative design with an ergonomic support surface. Their ribbed interior offers sturdiness and their striking colour (Orange RAL-2010) makes it easy to see the steps in the water.

The ladders are easy to assemble. The necessary tools are provided with the product.

The handrails are made of AISI-316 stainless steel. The surface has a bright polished finish.

The KOMFORT ladder has been designed in accordance with the European regulations:

- EN 13451 – 1 Swimming pool equipment Part 1.
- EN 13451 – 2 Swimming pool equipment Part 2.

The use of this ladder is recommended only for the use of swimming pools with a PH and disinfectant level within the limits corresponding to the following regulations. Use as reference:

- pH 6,8 – 8
- Residual free chlorine 0,4 – 1,5 mg/l
- Bromine 1 – 3 mg/l

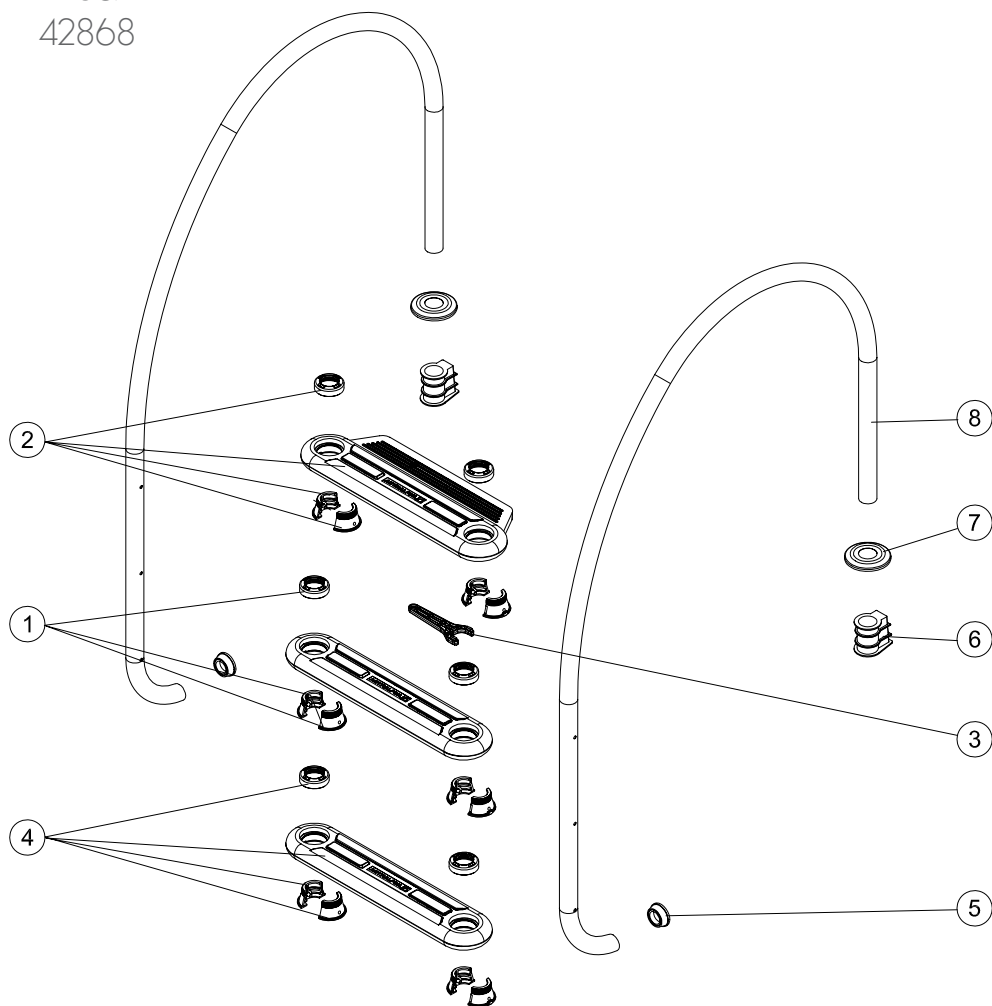
The ladder is suitable for salt water swimming pools which have a salt concentration of no more than 4% and for swimming pools which have salt electrolysis, as long as the equipotential current has been installed correctly and that correct maintenance is carried out. The ladder is NOT SUITABLE for use with ozone.

## 6. Diagram

Komfort 1000 ladder

Codes: 42867

42868

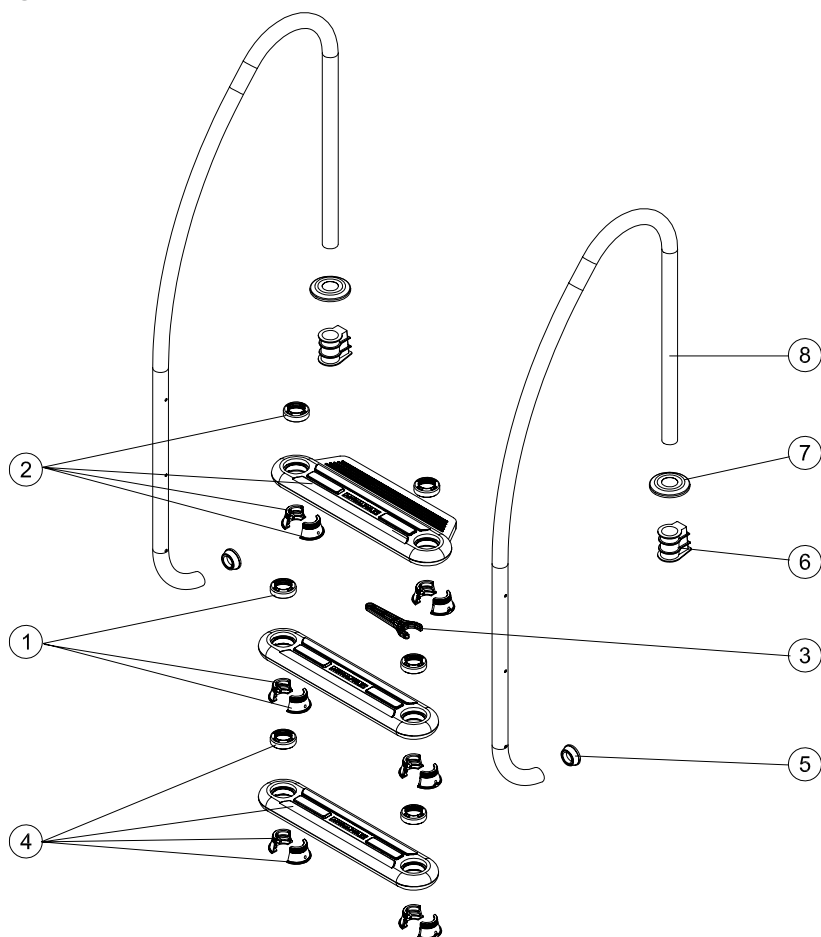


POS. ITEM	CODE	DESCRIPTION
1	4401012901	FIXING SET FOR STEP
2	4401012902	SET DOUBLE STEP
3	4401012903	FIXING KEY
4	4401012904	STEP KIT
5	4401012905	LADDER END CAP
6	4401010101	LADDER ANCHOR
7	4401010102	ESCUTCHEON AISI 304
8	32654R0200	HANDRAIL TWO-PART LADDER 3 STEPS AISI-316
8	32655R0200	HANDRAIL TWO-PART LADDER 3 STEPS AISI-316

Komfort 650 ladder

Codes: 43269

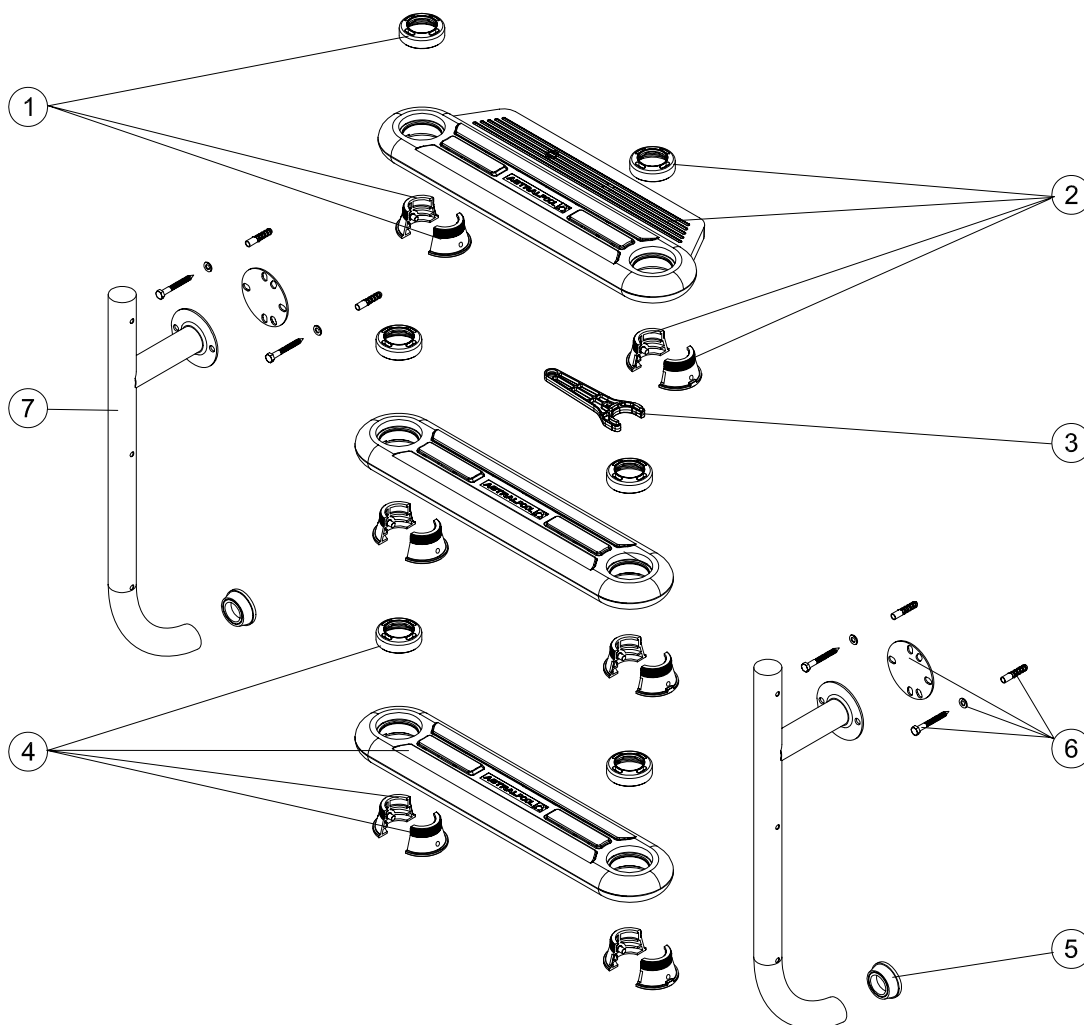
43270



POS. ITEM	CODE	DESCRIPTION
1	4401012901	FIXING SET FOR STEP
2	4401012902	SET DOUBLE STEP
3	4401012903	FIXING KEY
4	4401012904	STEP KIT
5	4401012905	LADDER END CAP
6	4401010101	LADDER ANCHOR
7	4401010102	ESCUTCHEON AISI 304
8	43269R0200	HANDRAIL TWO-PART LADDER 3 STEPS AISI-316
8	43270R0200	HANDRAIL TWO-PART LADDER 3 STEPS AISI-316

Komfort Split ladder

Codes: 41324  
41325



POS. ITEM	CODE	DESCRIPTION
1	4401012901	FIXING SET FOR STEP
2	4401012902	SET DOUBLE STEP
3	4401012903	FIXING KEY
4	4401012904	STEP KIT
5	4401012905	LADDER END CAP
6	4401012906	FLANGE SET
7	01457R0200	SHORT 3 TREAD LADDER HANDRAIL AISI-316
7	01458R0200	SHORT 4 TREAD LADDER HANDRAIL AISI-316



## 7. Recommendations

### 7.1. PACKAGING

Komfort ladders are delivered in an adequately packed and sealed cardboard box, on which the positioning and stacking logistics are indicated, so as to ensure correct storage of the ladder. Any failure to follow the instructions for storage could result in imperfections of the product.

### 7.2. STORAGE

Store the Komfort ladder in a place which is protected from bad weather and which does not have a very high level of humidity.

Do not keep the cardboard box in humid conditions for an extended period of time because it could cause warping at the bottom of the pallet.

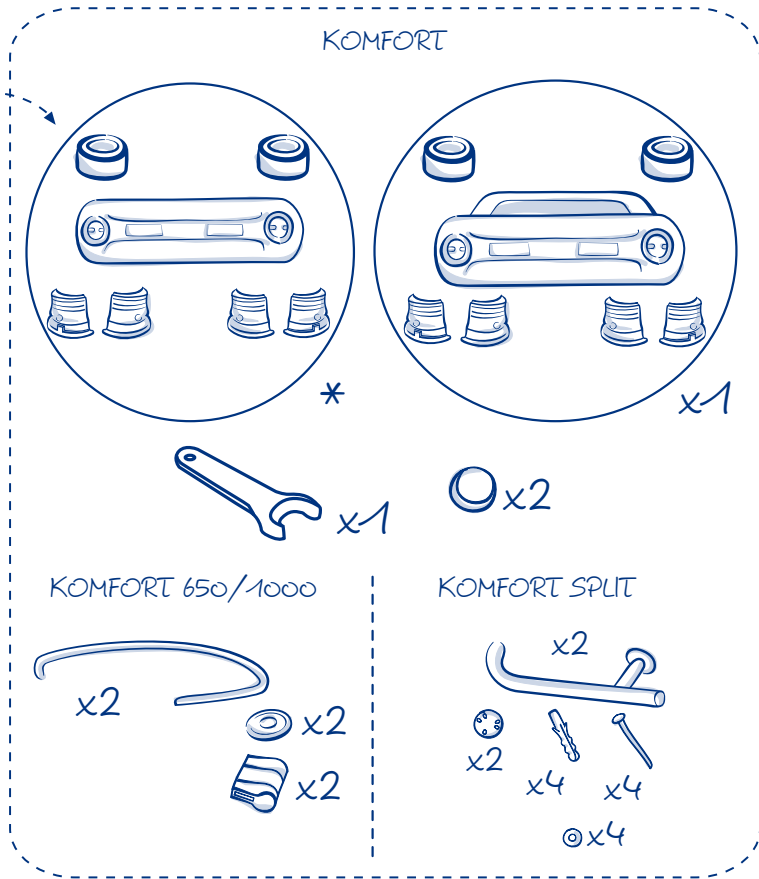
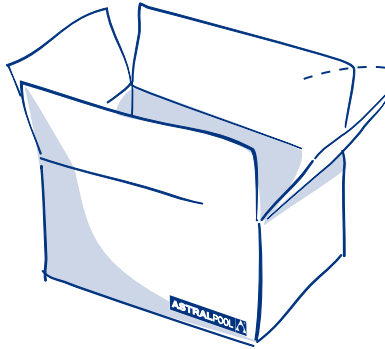
### 7.3. TRANSPORT

Transport the Komfort ladder boxes in adequately bundled pallets.

Unpack the ladder once at the final destination. If this is not possible, the ladders must be handled with the greatest care. Any friction, knock or contact with rough surfaces could produce imperfections on the exterior finish.

## 7.4. INSTALLATION

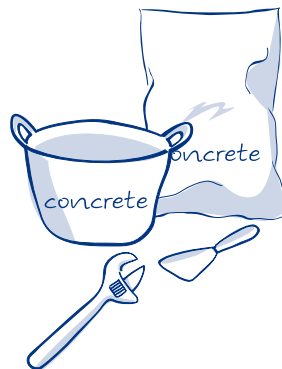
### 7.4.1 COMPONENTS



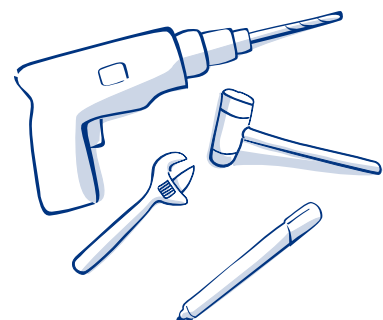
	*
41324, 42867, 43263	x2
41325, 42868, 43270	x3



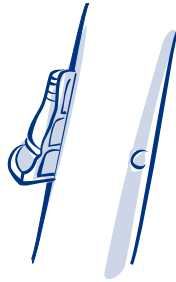
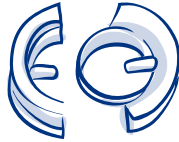
KOMFORT 650/1000



KOMFORT SPLIT



### 7.4.2 ASSEMBLE EXTERIOR WEDGES



### 7.4.3 ASSEMBLE INTERIOR WEDGES

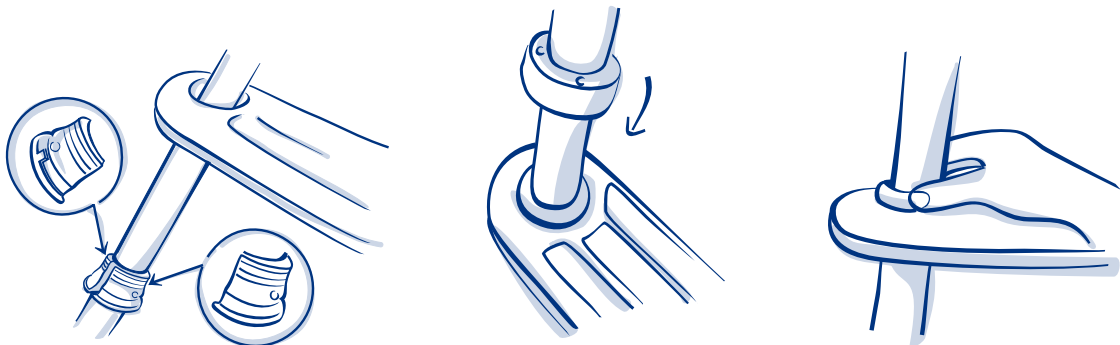


### 7.4.4 ASSEMBLE STEP BODY AND NUTS

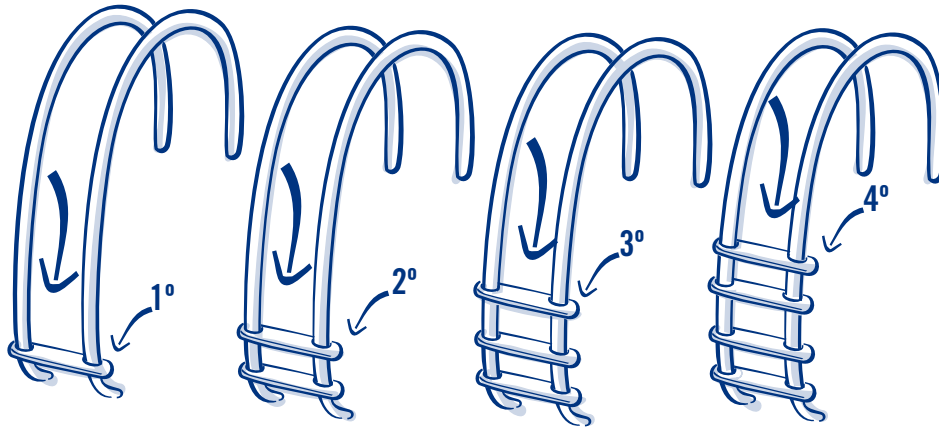
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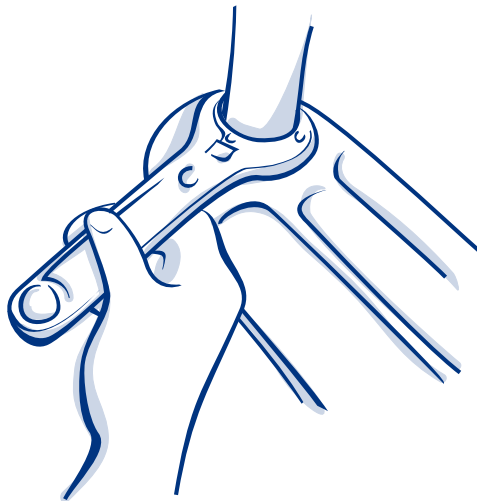
2



### 7.4.5 SEQUENCE FOR ASSEMBLING STEPS (repeat steps 2 to 6 for each step)



### 7.4.6 TIGHTENING THE NUTS



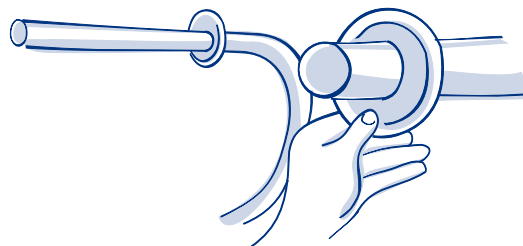
### 7.4.7 ASSEMBLY OF END CAPS AND ANCHORS

Komfort 650/1000

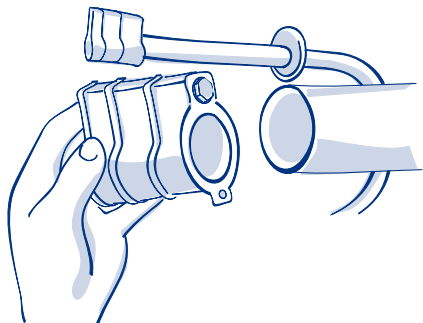
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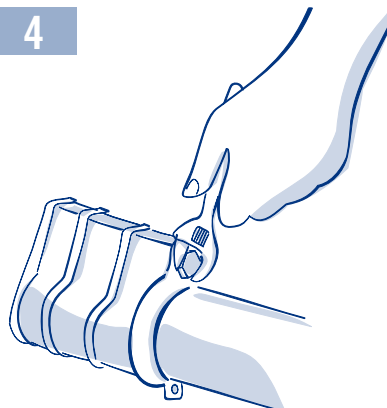
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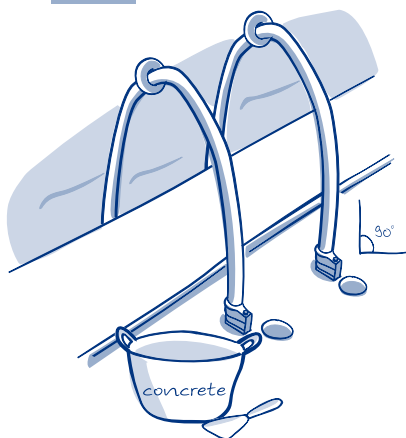
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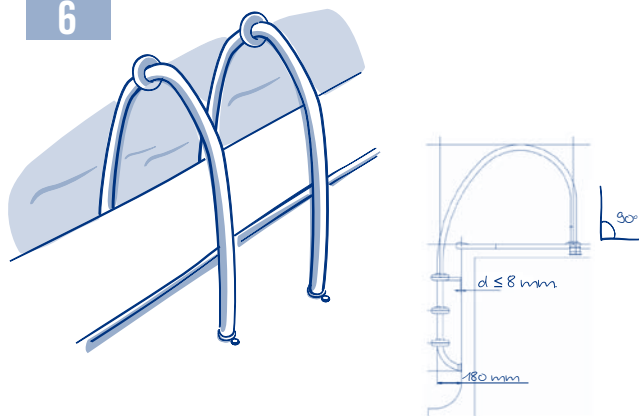
4



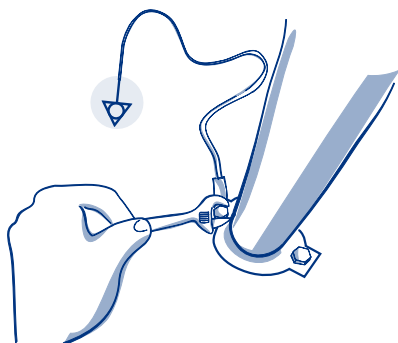
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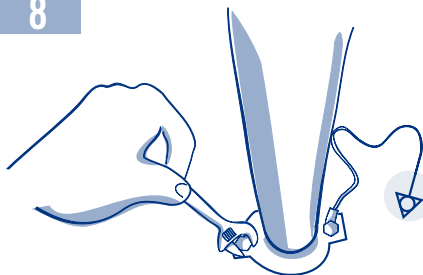
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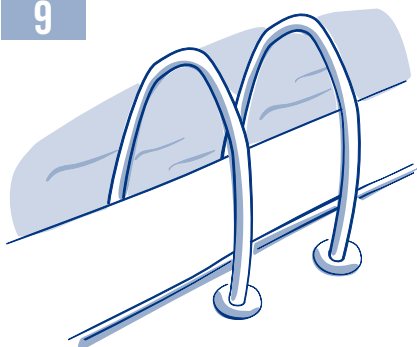
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8



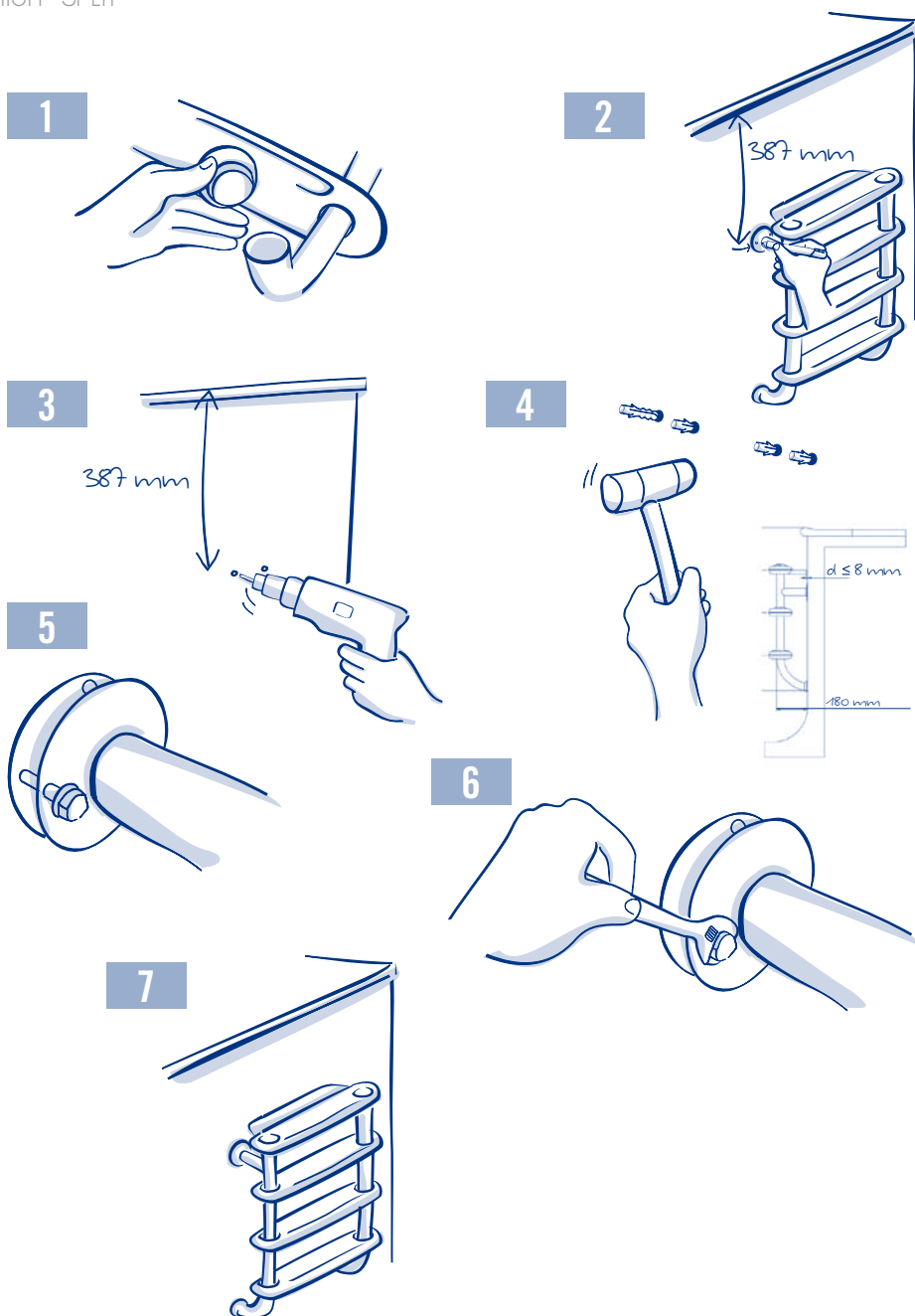
9



10



Komfort SPLIT



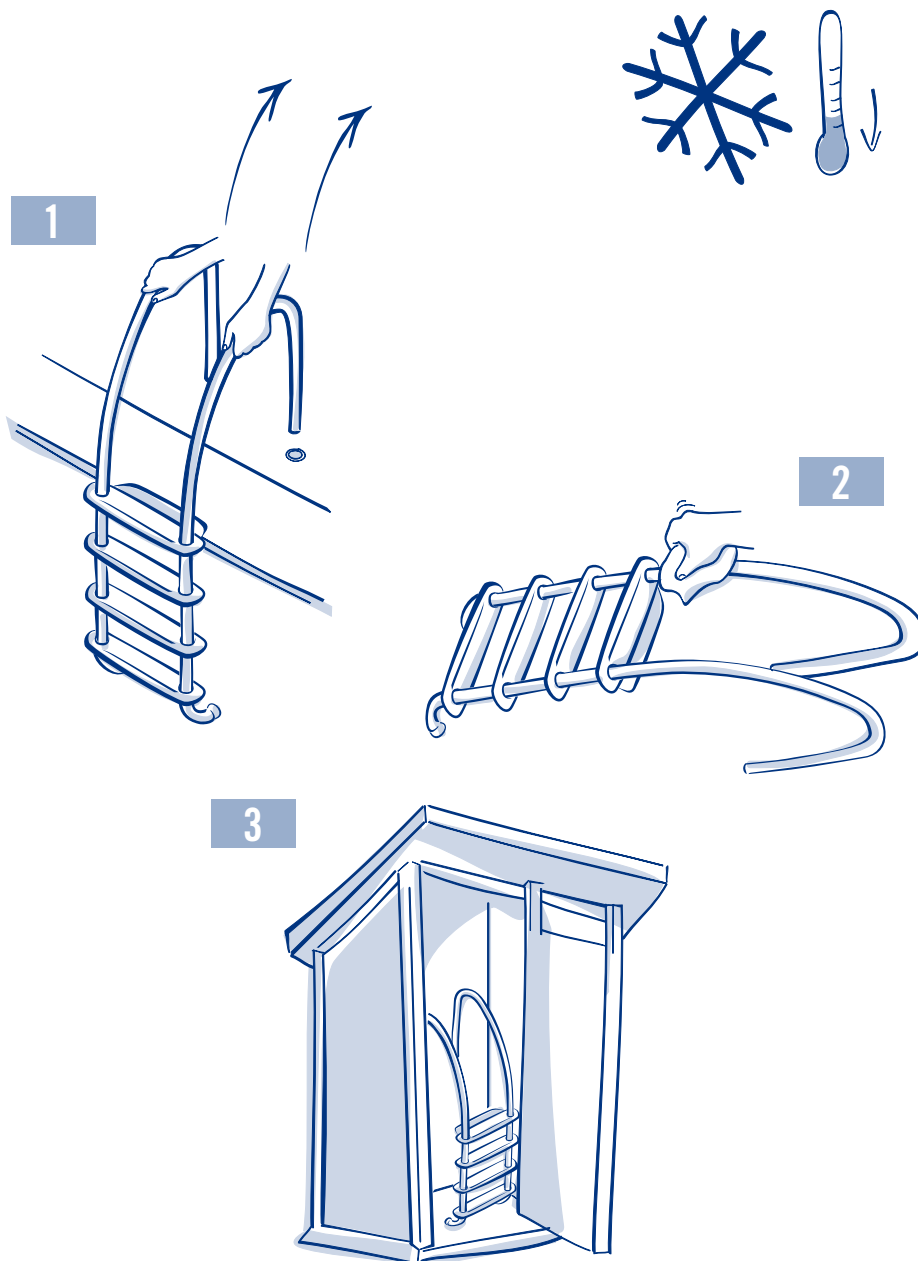
## 7.5. MAINTENANCE AND DISMANTLING

### 7.5.1 MAINTENANCE:

- Maintenance of the ladder should be done as often as the owner of the installation sees as appropriate, depending on the environmental conditions to which the ladder is subjected. Cleaning should be done with fresh water. A visual inspection should be carried out, making sure that there are no deposits on the surface of the ladder. Maintenance should be more frequent and thorough in more corrosive environments.
- The water should remain adequately circulated and be maintained as clean as possible, following strictly the factory instructions on correct amounts of chemical products (PH, chlorine concentration, salt, etc.).
- Manual or sudden dosages of chemical products should not be done near to the stainless steel, so as to avoid high concentrations of chemicals, and stains caused by splashes.
- Make sure that there are no deposits of dust, salt, concrete, dirt, nor contact with any other metals (mainly iron), as this will increase the corrosion process.
- When the swimming pool is first cleaned (before it is filled) and with any further maintenance cleaning, you should remove any stainless steel elements so as to avoid there being left any trace of the cleaning products on the steel. Any stainless steel elements which cannot be removed must be rinsed with abundant running water.
- In covered swimming pools there will be a larger concentration of corrosive vapours from chemical products, so it is important to clean more frequently.
- In foreseen cases, a good connection with the equipotential current of the swimming pool should be made to ensure correct insulation, lengthening the life of the product.

7.5.2 DISMANTLING:  
Komfort 650/1000

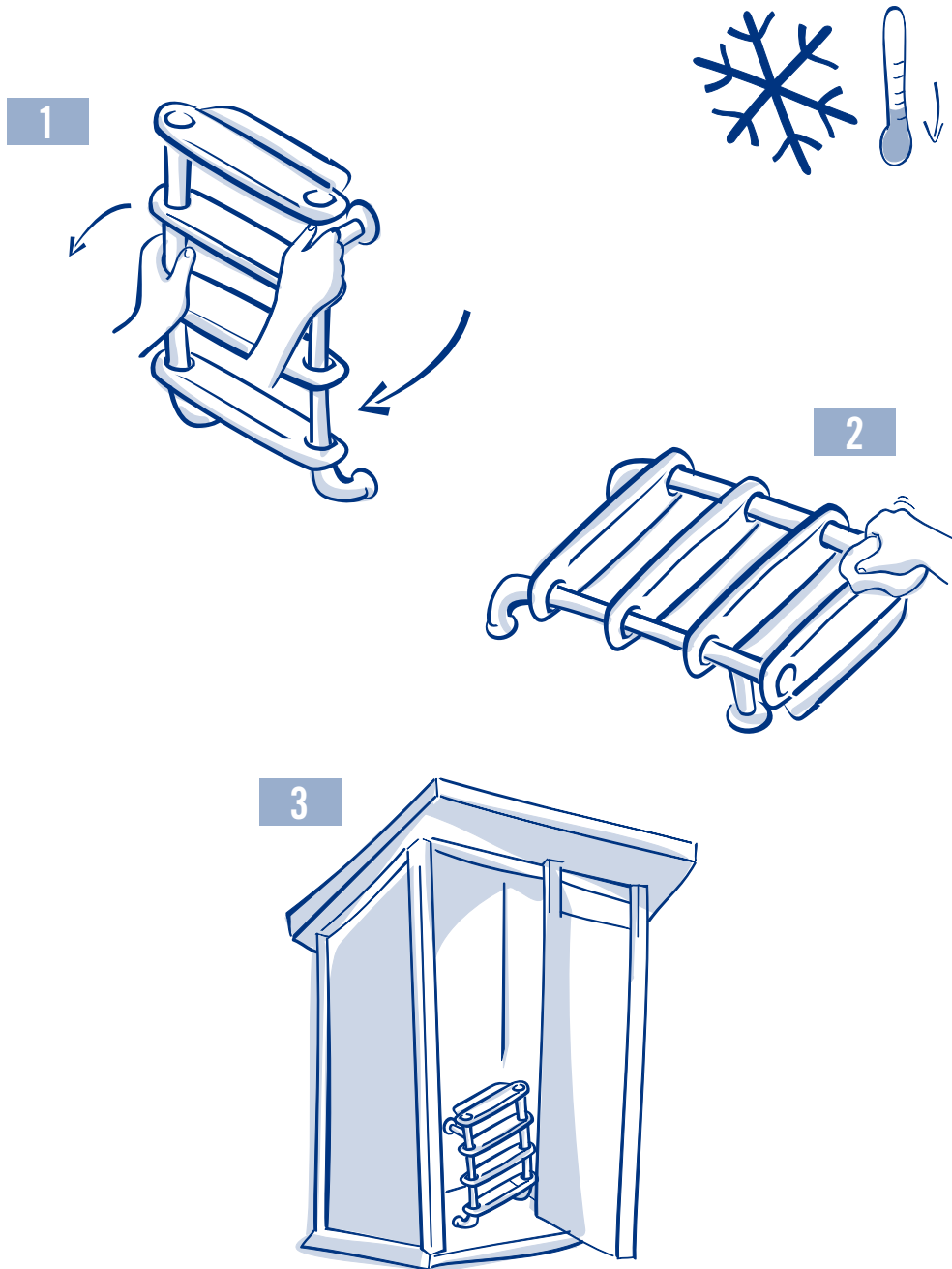
- 1.- Dismantle the ladder from the anchors, loosening the screws.
- 2.- Clean with fresh water and dry.
- 3.- Store the ladder in a safe and humidity free place.





Komfort SPLIT

- 1.- Dismantle the ladder from the anchors, loosening the screws.
- 2.- Clean with fresh water and dry.
- 3.- Store the ladder in a safe and humidity free place.



## 8. Table of chemical resistance

PRODUCT	CONCENTRATION	TEMPERATURE °C	RESISTANCE
Chlorine	0,5 - 2 gr/m <sup>3</sup>	27°	<b>yes</b>
Bromine	2 - 5 gr/m <sup>3</sup>	27°	<b>yes</b>
Salt electrolysis NA Cl + (VCC 12-24 V)	Concentration NA Cl 3500 - 5500 ppm	27°	<b>yes</b>

**Attention:**

Values valid for swimming pools with:

Water pH: 7,2 - 7,6.

Water hardness: 150 - 250 ppm

## 9. Table of errors

- |                                |                                       |
|--------------------------------|---------------------------------------|
| 1. Stair is not stable         | 4. Rust on the steel hand-rails       |
| 2. The close nut does not turn | 5. Small discharge of electric static |
| 3. Deterioration of the step   |                                       |

1	2	3	4	5	CAUSES	SOLUTIONS
●					The anchor screw is not tightened	Tighten the anchor screw
●					The torque-drive is missing from the plastic nut	Tighten the plastic nuts
●					The upper step is separated from the wall	Change the distance of the anchors in the swimming pool
	●				Wedge support is badly mounted	Mount the wedges correctly
	●				Badly aligned wedge support	Align the wedges
		●	●		Pool water in bad condition	Check the correct maintenance for the pool water (pH levels, bromine , etc.)
		●	●		Inadequate maintenance	Maintain the components as indicated by the manufacturer
		●	●		Cleaning of the components with inadequate substances	Do not clean the components with inadequate substances or substances which are not specifically for the material
				●	There is no connection to the equipotential current	Connect the equipotential current of the anchor

## 10. Table "DO AND DON'T"

	DO	DO NOT
Transport and storage	<p>Check the packing and that the stacking instructions have been fulfilled.</p> <p>Always transport the ladder in its box</p>	<p>Leave the box outside or in humid spaces.</p> <p>Drag the ladder.</p>
Installation	<p>Cement the anchor to a flat base.</p> <p>Follow the instruction manual.</p>	<p>Leave the anchor unattached or unscrewed.</p>
Use	<p>Regularly clean the stainless steel. (see page 20)</p> <p>Regularly clean the plastic.</p>	<p>Use the ladder with more than one person at a time.</p> <p>Use chemical products in high concentration as they may damage the components of the ladder.</p>

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