## Electric Heaters

## Pahlén's electric heaters heats the water easily and effectively.

All Pahlén heaters are compact and can be installed in all kind of swimming pools, spas and large public facilities. The materials used are acid proof stainless steel AISI 316L, Incoloy 825, titanium and thermoplastic. All electric heaters are designed for continuous flow with the lowest possible pressure drop.

## Compact 3-18kW

Supplied with a thermostat and overheating cut out. A flow switch or pressure switch protects the heating element from damage if the flow to the heater is insufficient.

These electric heaters are available in both titanium/Nic-Tech and acid proof stainless steel AISI316L/Incoloy 825.

All compact electric heaters are delivered with a 2 " heating element. Max. pressure: 4 bar.

## With flow switch. Max 2.5 bar

Unipolar thermostat $0-45^{\circ} \mathrm{C}$, pressure switch, unipolar
high limit control $60^{\circ} \mathrm{C}$

| Item no. | Type | Ampere <br> 3-phase |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | kW | 230 V | 400 V | kg |
| 13981403* | 11F30 | 3.0 | 8 | 5 | 2.8 |
| 13981406* | 11F60 | 6.0 | 15 | 9 | 2.8 |
| 13981409* | 11 F90 | 9.0 | 23 | 14 | 3.2 |
| 13981412* | 11F120 | 12.0 | 31 | 18 | 3.2 |
| 13981415* | 11F150 | 15.0 | 38 | 22 | 3.2 |
| 13981418* | 11F180 | 18.0 | 46 | 27 | 3.2 |



| Technical data | With flow switch | With pressure switch |
| :--- | :---: | :---: |
| Max temperature | $60^{\circ} \mathrm{C}$ | $60^{\circ} \mathrm{C}$ |
| Max pressure | 2.5 bar | 4 bar |
| Min. flow 3-9kW min | $85 \mathrm{I} /$ | $20 \mathrm{l} / \mathrm{min}$ |
| Min. flow $12-18 \mathrm{~kW}$ | $85 \mathrm{l} / \mathrm{min}$ | $40 \mathrm{l} / \mathrm{min}$ |

With pressure switch. Max 4 bar
Unipolar thermostat $0-45^{\circ} \mathrm{C}$, pressure switch, unipolar high limit control $60^{\circ} \mathrm{C}$

|  | Ampere <br> 3-phase <br> Item no. |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Type | kW | $\mathbf{2 3 0 V}$ | $\mathbf{4 0 0 V}$ | $\mathbf{k g}$ |  |
| 13982403 | 11P30 | 3.0 | 8 | 5 | 2.8 |
| 13982406 | 11 P 60 | 6.0 | 15 | 9 | 2.8 |
| 13982409 | 11 P 90 | 9.0 | 23 | 14 | 3.2 |
| 13982412 | 11P120 | 12.0 | 31 | 18 | 3.2 |
| 13982415 | 11P150 | 15.0 | 38 | 22 | 3.2 |
| 13982418 | 11P180 | 18.0 | 46 | 27 | 3.2 |

*Available with outer jacket made of titanium and Nic-Tech treated heating element.

Titanium heaters are designed for pools with very aggressive water, large quantities of chlorides and where there is a high risk for corrosion, e.g. in pools with salt water.

When ordering titanium model, add a " $T$ " after the item no. Applies to the following article 139814xxT.

