

# Swedish design and manufacture since 1967 The safe choice with premium products





#### Top quality swimming pool equipment

Invest in genuine Swedish high quality products from Pahlén. Acid-proof stainless steel swimming pool equipment with beautiful design, optimal cleaning system for clean, clear, sparkling water, energy efficient heat pumps and automatic cleaning and dosing equipment that saves both time and money.

With 50 years experience of manufacture of quality products for swimming pools we guarantee reliability and a long-term investment. Your pool will come to be the place where your family and friends naturally congregate for many years to come.

High quality products and operations. Pahlén is a genuine Swedish company with 50 years experience in manufacturing quality products for pools.



#### Small private, large public

Pahlén provides equipment for both small private pools and public facilities. Our products are made of bronze, stainless steel, titanium and thermoplastic. The highest quality materials ensure long life and reliability.

#### Environmental profile

Pahlén AB produces and offers cost-effective, high-quality products that are safe for the consumer and the environment. Our environmental work is conducted in a comprehensive manner taking account of the individual and the society as a whole, as well as activities for continual environmental improvement, technological development and resource efficiency.

## CEO Stefan Pahlén

Since our establishment in 1967, quality and service have been the watchwords of our operations. Pahlén develops and manufactures innovative and qualitative pool equipment in the premium sector. As each swimming pool facility is a long term investment for pleasure, enjoyment and quality of life, our product development is highly focused on reliability, energy and the environment.

Our employees are characterized as competent, committed and involved in the contact with our customers and suppliers. In all stages, externally and internally, our business is characterized by long-term cooperation in constant development.





## Discover our news

Experience a much more natural swimming technology with Jet Swim Motion, a counter current with brand new flow technology. Jet Massage a complete massage station that can be combined as desired, with up to 6 nozzles in two different strengths.



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## Pahlén pumps - The right circulation for your pools wellbeing



**Exclusive pumps for efficient circulation.** The pump creates suction in the skimmer and pushes the water through the filter, the heater and then back into the pool via the inlets. The pump and motor are integrated into a compact single unit, with a pre-filter housing. The strainer basket in the pre-filter effectively collects twigs, leaves, insects etc. and is easy removable for cleaning. To ensure good quality, water in a private pool should be circulated at least 4-6 times per day.

## Pool pumps



#### P01/EcoP01

Pool pumps of bronze run quiet and stable. A speed controlled pump reduces the operating costs compared with conventional pumps.



#### P2000/P2000FLO

Pool pumps of bronze run quiet and stable.

Equipped with a strainer basket making it easy to remove dirt such as leaves. Available in two versions; with or without pre-filter.



#### P85/P85FLO

Pool pumps of bronze run quiet and stable.

Pool pump P85 is available in two versions; with or without pre-filter.



#### PT750/PT750FLO

Pool pumps of bronze run quiet and stable.

Pumps without pre-filters for various purposes where the only requirement is distributing water. Suitable for i.e. spas, circulation, solar heating, fountains and waterfalls.



#### WaterVISE/EcoVISE/FloVISE

Pumps of thermoplast/bronze.

Proven and rigid bronze material in pump housing and impeller, stainless steel shaft and mechanical seal with thermoplastic pre-filter, which ensures long lasting endurance.



#### Side channel blower

For air massage in spa pools and swimming pools.

The side channel blower can be started from the poolside using pneumatic.



#### P01 0.37-1.5kW

Pool pumps of bronze run quiet and stable. The pump impeller is also made of bronze and it is fitted to a shaft made of acid proof stainless steel. Equipped with a strainer basket making it easy to remove dirt such as leaves and insects.

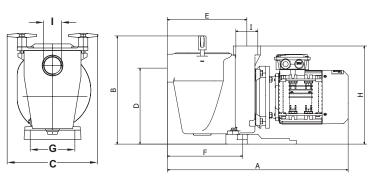
Swedish-made quality bronze pumps with optimum performance.

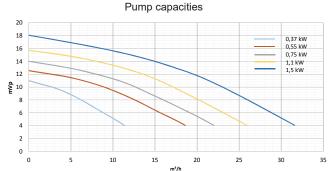
Technical of	data		Voltage/Ampere				
Item no.	Туре	kW 50Hz	230/1 ~	230/3 ~	400/3 ~	kg	
120100	T37	0.37	-	2.1	1.2	18.3	
120200	S37	0.37	3,4	-	-	18.3	
120105	T55	0.55	-	2.8	1.6	19	
120205	S55	0.55	4,3	-	-	19	
120110	T75	0.75	-	2.9	1.7	23.5	
120210	S75	0.75	5.5	-	-	23.5	
120115	T110	1.1	-	4.2	2.4	26.8	
120215	S110	1.1	6.6	-	-	26.8	
120120	T150	1.5	-	5.2	3.0	28	
120220	S150	1.5	9.6	-	-	28	

#### **Features**

- Pump housing and pump impeller made of bronze
- Pump shaft made of acid proof stainless steel
- · High-quality motors
- · Equipped with drain plug
- · Third-party tested and certified

Also available in 60 Hz version. Contact Pahlén AB for information.





Dimensions									
Item no.	Α	В	С	D	E	F	G	Н	I
120100, 120200	466	285	245	210	202	160	126,5	255	2"
120105, 120205	466	285	245	210	202	160	126,5	255	2"
120110, 120210	484	285	245	210	202	160	126,5	255	2"
120115, 120215	502	285	245	210	202	160	126,5	255	2"
120120, 120220	521	285	245	210	202	160	126,5	255	2"



#### EcoP01 0,75kW

Pool pumps of bronze run quiet and stable. The pump impeller is also made of bronze and it is fitted to a shaft made of acid proof stainless steel. Equipped with a strainer basket making it easy to remove dirt such as leaves and insects.

A speed controlled pump reduces the operating costs compared with conventional pumps. Lower speeds give lower energy consumption and quieter operation.

An existing pool pump P01 can be advantageously upgraded with EcoP01 drive side to get the same characteristics as EcoP01.

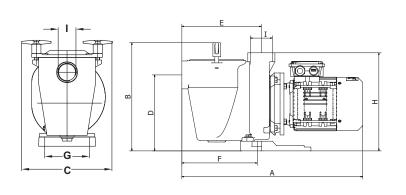
Technical	data	Voltage/ Ampere		
Item no.	Туре	kW 50Hz	230/1 ~	kg
117210	EcoP01 V75	0,75	4,4	18
631083	EcoP01 drive end	0,75	_	9

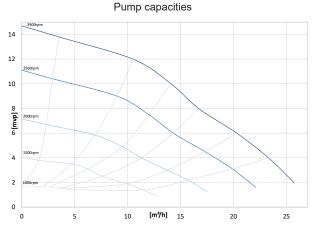
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- · Pump housing and pump impeller made of bronze
- · Pump shaft made of acid proof stainless steel
- · High-quality motors
- Three selectable adjustable program speeds
- · Timer functions for flexible operating conditions
- · Equipped with drain plug

Accessories						
Item no.						
117100	External switch Eco					

# Speed-controlled quality pump in bronze with optimal performance and maximum energy saving.





Dimensions									
Item no.	Α	В	С	D	E	F	G	Н	I
117210	466	285	245	210	202	160	126,5	255	2"



#### P2000 1.5-4.0kW

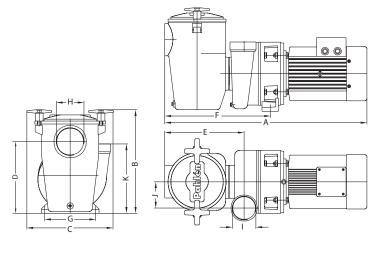
Pool pumps of bronze run quiet and are stable. The pump impeller, pre-filter, pumphousing is also made of bronze and it is fitted to a shaft made of acid proof stainless steel. Equipped with a strainer basket making it easy to remove dirt such as leaves.

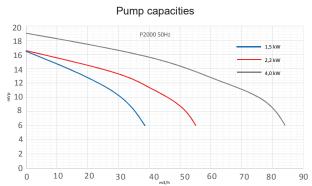
Technical	data		Voltage		
Item no.	Туре	kW 50Hz	230/3 ~	400/3 ~	kg
112201	T150	1.5	5.2	3.0	35.8
112211	T220	2.2	8.0	4.6	37.8
112221	T400	4.0	-	8.0	45.8

Also available in 60 Hz version. Contact Pahlén AB for information.

#### **Features**

- Pump housing and pump impeller made of bronze
- Pump shaft made of acid proof stainless steel
- High-quality motors
- Pre-filter made of bronze with filter basket of composite material
- Equipped with drain plug
- · Third-party tested and certified





Dimensions											
Item no.	Α	В	С	D	E	F	G	Н	I	J	K
112201	620	335	275	225	250	330	130	3"	21/2"	82	220
112211	620	335	275	225	250	330	130	3"	21/2"	82	220
112221	710	335	275	225	250	330	130	3"	21/2"	82	220



#### P2000FLO 1.5-4.0kW

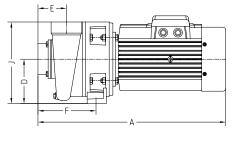
Pumps without pre-filters for various purposes where the only requirement is distributing water. Suitable for i.e. spas, circulation, solar heating, fountains and waterfalls.

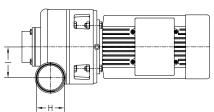
Technical d	lata		Voltage/Ampere				
Item no.	Туре	kW 50Hz	230/3 ~	400/3 ~	kg		
115201	T150	1.5	5.2	3.0	25.7		
115211	T220	2.2	8.0	4.6	27.7		
115221	T400	4.0	-	8.0	35		

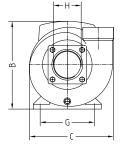
Also available in 60 Hz version. Contact Pahlén AB for information.

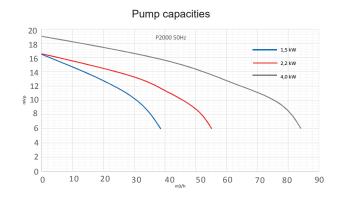
#### **Features**

- Pump housing and pump impeller made of bronze
- · Pump shaft made of acid proof stainless steel
- High-quality motors
- Equipped with drain plug
- With or without pre-filter
- Third-party tested and certified









Dimensions										
Item no.	А	В	С	D	Е	F	G	Н	I	J
115201	445	245	230	122	77	155	130	2½"	82	220
115211	445	245	230	122	77	155	130	2½"	82	220
115221	540	285	230	122	77	155	130	21/2"	82	220





#### P85/P85FLO 5.5kW

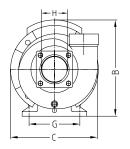
Pool pumps of bronze run quiet and are stable. The pump impeller is also made of bronze and it is fitted to a shaft made of acid proof stainless steel. Pool pump P85 is available in two versions; with or without pre-filter.

Pumps without pre-filters for various purposes where the only requirement is distributing water. Suitable for i.e. spas, circulation, solar heating, fountains and waterfalls. The pool pump is equipped with a strainer basket which makes it easy to remove dirt such as leaves.

#### **Features**

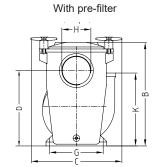
- Pump housing and pump impeller made of bronze
- Pump shaft made of acid proof stainless steel
- High-quality motors
- Pre-filter made of bronze with filter basket
- · Equipped with drain plug
- · Two different versions. With or without pre-filter
- Third-party tested and certified

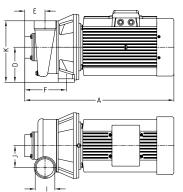
#### Without pre-filter

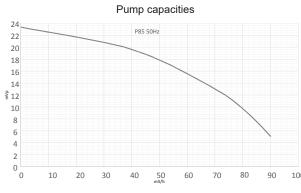


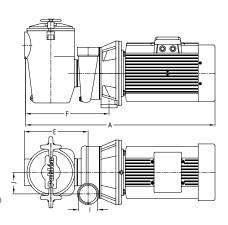
Technical da	ıta		Voltage/Ampere				
		kW					
Item no.	Type	50Hz	400/3 ~	690/3 ~	kg		
11224	T550	5.5	10.2	5.9	59		
11524	T550	5.5	10.2	5.9	50		

Also available in 60 Hz version. Contact Pahlén AB for information.









Dimensions												
Item no.	Туре	Α	В	С	D	Е	F	G	Н	I	J	K
11224	T550 (with pre-filter)	815	330	275	250	240	315	140	3"	2½"	82	235
11524	T550 (without pre-filter)	640	275	275	137	77	155	140	2½"	21/2"	82	235





Pool pumps of bronze run quiet and are stable. The pump impeller is also made of bronze and it is fitted to a shaft made of acid proof stainless steel. Pool pump 7.5kW is available in two versions; with or without pre-filter. Pumps without pre-filters for various purposes where the only requirement is distributing water. Suitable for i.e. spas, circulation, solar heating, fountains and waterfalls.

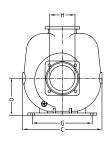
The pool pump with pre-filter is equipped with a strainer basket which makes it easy to remove dirt such as leaves.

#### **Features**

- Pump housing and pump impeller made of bronze
- Pump shaft made of acid proof stainless steel
- High-quality motors
- Pre-filter made of bronze with filter basket
- Equipped with drain plug
- Two different versions. With or without pre-filter
- Third-party tested and certified

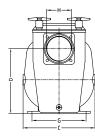


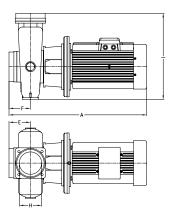
#### Without pre-filter

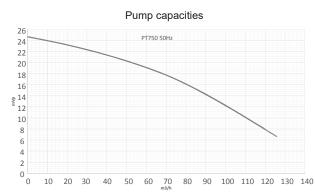


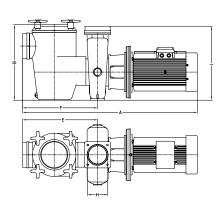
Technical da	ata			Voltage/	'Ampere	
Item no.	Туре	kW 50Hz	Voltage	400/3 ~	690/3 ~	kg
12225	T750	7.5	400/690	13.7	7.9	108
12227	T750	7.5	400/690	13.7	7.9	79











Dimensions										
Item no.	Туре	Α	В	С	D	E	F	G	Н	I
12225	T750 (with pre-filter)	995	410	360	300	390	390	260	110	430
12227	T750 (without pre-filter)	720	-	360	160	115	115	260	110	430



#### WaterVISE pre-filter pump 0.25-1.10 kW

Pumphousing and impeller with optimal construction, designed to ensure energy efficiency and quiet operation.

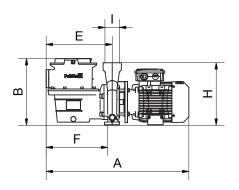
Proven and rigid bronze material in pump housing and impeller, stainless steel shaft and mechanical seal with thermoplastic pre-filter, which ensures long lasting endurance.

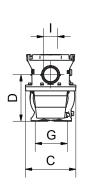
The pre-filter, with an easily detachable, transparent securing lid, is versatile with up to seven different inlet-positions. This allows flexible and compact installation. 2" thread inlet/outlet connections.

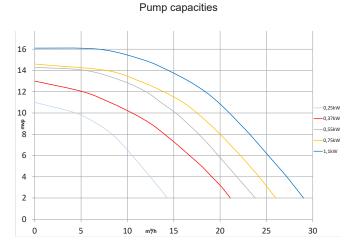
Technical da	ata		Voltage/Ampere					
Item no.	Type	kW 50Hz	3~230V	1~230V	3~400V			
118100	HS25	0.25	-	1.95	-			
118101	HS37	0.37	-	3,4	-			
118121	HT37	0.37	2.1	-	1.2			
118102	HS55	0.55	-	4,1	-			
118122	HT55	0.55	2.8	-	1.6			
118103	HS75	0.75	-	5.5	-			
118123	HT75	0.75	2.9	-	1.7			
118104	HS110	1.10	-	6.6	-			
118124	HT110	1.1	4.2	-	2.4			

#### **Features**

- Pump housing and pump impeller made of bronze
- · Pump shaft in acid proof stainless steel
- · High-quality motors
- · Versatile pre-filter allowing different inlet-positions
- · Higher performance/energy ratio
- Reduced sound levels
- · Third-party tested and certified







Dimensions										
Item no.	Туре	Α	В	С	D	E	F	G	Н	I
118100	HS25	489	280	196	181	257	239	125	243	2"
118101	HS37	519	280	196	181	257	239	125	243	2"
118121	HT37	519	280	196	181	257	239	125	243	2"
118102	HS55	519	280	196	181	257	239	125	243	2"
118122	HT55	519	280	196	181	257	239	125	243	2"
118103	HS75	537	280	196	181	257	239	125	243	2"
118123	HT75	537	280	196	181	257	239	125	243	2"
118104	HS110	555	280	196	181	257	239	125	243	2"
118124	HT110	555	280	196	181	257	239	125	243	2"



## EcoVISE variable speed pump 0.75 kW

Three selectable program speeds ensure silent operation, energy savings and more efficient filtration. Built on the same design and performance as WaterVISE, with a high efficiency, motor. Integrated timer functions and external control of selected speeds.

Technical da	ata		Vo	oltage/Ampe	ere	
Item no.	Туре	kW 50Hz	3~230V	1~230V	3~400V	kg
117103	HV75	< 0.75	-	4.4	-	13

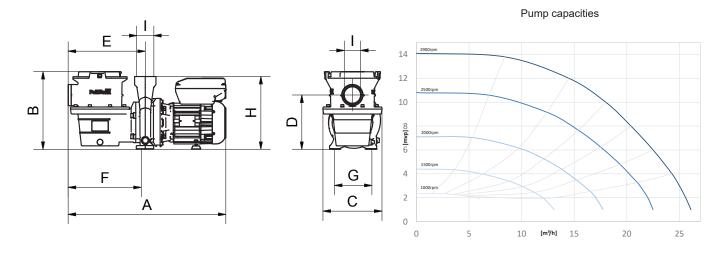
#### Accessories

#### Item no.

117100 External switch Eco

#### **Features**

- WaterVISE design and performance
- High efficiency, synchronous motor
- Three adjustable selectable program speeds
- Timer functions for flexible operating conditions
- External speed control as accessories
- Maximum energy savings



Dimensions	Dimensions									
Item no.	Туре	Α	В	С	D	Е	F	G	Н	I
117103	HV75	525	280	196	181	257	239	125	243	2"

## Pumpar

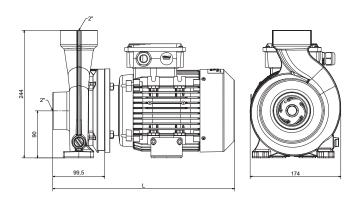


## FloVISE massage pump 0.25-1.10 kW

Pump with optimal construction, designed to ensure energy efficiency and quiet operation. Proven and rigid bronze material in pump housing and impeller, stainless steel shaft and mechanical seal, which ensures long lasting endurance.

For whirlpool, bathtub and spa applications.

Technical	Technical data Rated current (A)											
Item no.	Model	kW 50Hz	Voltage (V)	3~230V	1~230V	3~400V						
119100	TS25	0,25 kW	230	-	1,9	-						
119101	TS37	0,37 kW	230	-	3,4	-						
119121	TT37	0,37 kW	230/400	2,1	-	1,2						
119102	TS55	0,55 kW	230	-	4,3	-						
119122	TT55	0,55 kW	230/400	2,8	-	1,6						
119103	TS75	0,75 kW	230	-	5,5	-						
119123	TT75	0,75 kW	230/400	2,9	-	1,7						
119104	TS110	1,10 kW	230	-	6,6	-						
119124	TT110	1,10 kW	230/400	4,3	-	2,5						



#### Pump capacities 18 16 14 12 -0,25kW 10 -0,37kW op mvp -0,55kW -0,75kW 6 4 2 0 0 25 30

Dimensions		
Item no.	Type	L
118100	HS25	278 mm
118101	HS37	308 mm
118121	HT37	308 mm
118102	HS55	308 mm
118122	HT55	308 mm
118103	HS75	328 mm
118123	HT75	328 mm
118104	HS110	348 mm
118124	HT110	348 mm

## Side channel blower



#### Side channel blower

For air massage in spa pools and swimming pools. The side channel blower can be started from the poolside using a pneumatic control. The blower can be installed horizontally or vertically. Pipe connections are made via an air loop 50 cm above the water surface. Blower housing, blower wheel and side channel in cast aluminium.

#### Filter and silencer

Accessory. Equip the side channel blowers with silencers for extra quiet operation and a filter that prevents small particles from entering the pool.

#### **Features**

- Blower housing, blower wheel and silencer housing made of aluminium
- · Mounted vertically or horizontally
- · Can be equipped with a silencer
- · Can be fitted with a filter
- Constant air flow

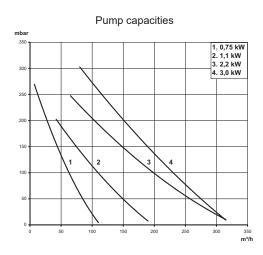
Technical d	Technical data Voltage/Ampere								Dimensions (mm)			
Item no.	Type	kW	230	400	dB	Connection	kg	Α	В	С		
81200	SC10C-075T	0.75	3.3	1.9	73	1½"	18.5	296	330	340		
81201	SC20A-110T	1.1	4.3	2.5	75	1½"	22	360	360	400		
81202	SC30A-220T	2.2	8.0	4.6	78	2"	36	395	445	450		
81203	SC30C-300T	3.0	11.3	6.5	81	2"	40	395	445	450		

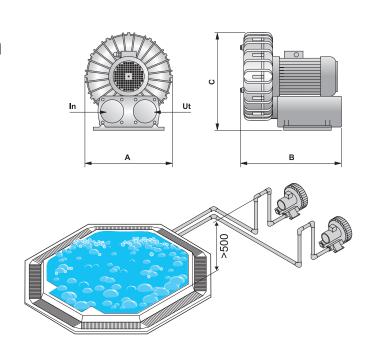




Accessori	es						
Item no.							
81210	Filter to SC10 & SC20 (0.75-1.1kW)						
81213	Filter to SC30 (2.2-3.0kW)						
81211	Silencer to SC10 & SC20 (0.75-1.1kW)						
81212	Silencer to SC30 (2.2-3.0kW)						

Wonderful air massage for spa and pool, made of aluminum for optimum quality and durability.





## Jet Swim



Jet Swim is the ideal tool for training, exercise and fun. Jet Swim is the perfect accessory for exercise, fitness and fun. With a Jet Swim counter current unit installed in the pool, the training effect is that of a much larger pool. By swimming "on the spot", you can

## For training, exercise and fun



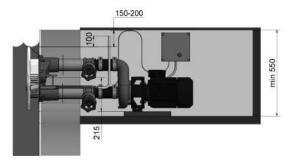
train and practice your swimming technique at the same time as building up your strength and endurance. Jet Swim counter current unit also functions as a massage and rehabilitating muscle trainer. Of course, the children also love to swim in the lively, bubbling current of water.

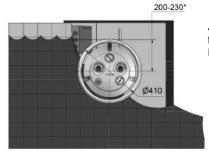


#### Jet Swim 2000

An exclusive counter current unit with many different settings. With pump capacity of 71 m³/h it is easy for you to build up your strength and physical fitness. Start your Jet Swim by pressing a button on the front. The flow pattern is set by means of the adjustable jets to suit your personal needs. The air flow that is mixed with the jet streams, is adjusted by turning the air knob on the front. It is just as simple to adjust the water flow.

Jet Swim 2000 is also available in 3-phase 230V/50Hz or 460V/60Hz. Contact Pahlén AB for information.

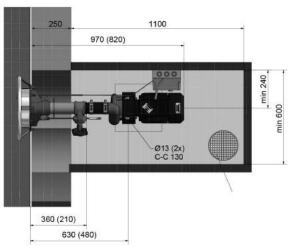




Jet Swim unit 2000 for pool cover Item no.1302005



All dimensions in mm. Dimensions within brackets refers to mounting kit item.nr 1302010.



#### **Features**

- · Bronze and acid proof stainless steel
- Pump capacity at 71 m<sup>3</sup>/h
- Adjustable water flow
- · Adjustable jet streams
- · Adjustable setting of the air mixture
- · Polished stainless steel front
- High-class motor
- Meets requrements of pool standard EN13451, EN16582, EN16713

Technical da	ta					
Type	Motor	Voltage, 50Hz	Power, 230/400	Pump capacity	Pipe connection	Materials
2000	4.0 kW	230/400 V	13.9/8.0 A	71 m³/h	2 ½"	Bronze/stainless steel

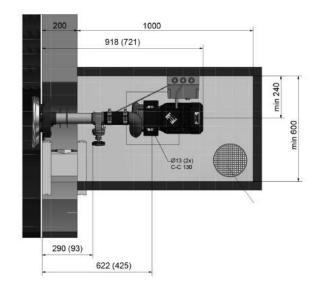
Jet Swim 20	00	Type of pool						
Item no.	Туре	Wood/plastic/ steel with liner Concrete liner		Concrete pool without liner	Fibreglass/PP- plastic			
33029	Complete unit - concrete		Х					
33028	Complete unit - liner	x						
1302000	Jet Swim unit	x	x	x	x			
1302005*	Jet Swim unit for pool cover	x	X	X	x			
1302010	Assembly kit	x			x			
1302020	Assembly kit		X	x				
1302015**	Screw kit				x			
1302080	Pump	x	X	X	x			
1302090	Control box 400/3~	x	X	X	X			

<sup>\*</sup>For floating pool cover.

<sup>\*\*</sup>For fiberglass/PP pool a complementary set of screws is needed.



# 

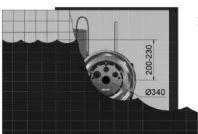


#### Jet Swim 1200

With a motor capacity of 2.2kW and pump capacity of 46 m³/h it is easy for you to train your swimming technique and build up your physical fitness. Start your Jet Swim by pressing a button on the front.

The jet stream are varied in power by rotating the turnable front. Resistance can be changed in three different steps, two for the jet stream and one for the air mixture.

Jet Swim 1200 is also available in 3-phase 230V/50Hz or 460V/60Hz. Contact Pahlén AB for information.



All dimensions in mm. Dimensions within brackets refers to mounting kit item.nr 1301210.

#### **Features**

- · Bronze and acid proof stainless steel
- Pump capacity at 46 m³/h
- · Adjustable water flow
- · Adjustable setting of the air mixture
- · Polished stainless steel front
- · High-class motor

Technical dat	a					
Type	Motor	Voltage, 50Hz	Power, 230/400	Pump capacity	Pipe connection	Materials
1200	2.2 kW	230/400 V	8.0/4.6 A	46 m³/h	2"	Bronze/stainless steel

A complete Jet Swim consists of jet unit, assembly kit, pump and control box.

Jet Swim 1	200	Typ av poolstomme						
Item no.	Туре	Wood/plastic/ steel with liner	Concrete liner	Concrete pool without liner	Fibreglass/ PP-plastic			
33027	Complete unit - concrete			Х				
33026	Complete unit - concrete liner		X					
33025	Complete unit - liner	x						
1301200	Jet Swim unit	x	X	X				
1301210	Assembly kit	x						
1301220	Assembly kit		X					
1301230	Assembly kit			X				
1301280	Pump	X	X	X				
1301290	Control box 400/3~	x	x	x				









Jet Swim Motion is made of acid-proof stainless steel and has a completely new flow technique with two oval nozzles, of which the lower is directed downward for a more even distribution of the streams. This provides a much more natural swimming technique compared to most counter-current units found on the market.

With a motor power of 2.2 kW and with jet streams of 46 m³/h, you can easily exercise your strength and physical fitness. Jet Swim Motion is started by pressing a pushbutton on the front. The air mixture in the jet streams are adjusted seamlessly in order to suit your personal needs. In its modern minimalistic design, a discreet handle is hidden and integrated in the front.

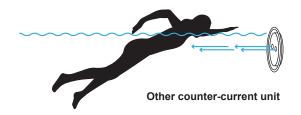
Jet Swim Motion is available in both Classic and Marine design and meets the requirements for the pool standard EN 16582.

#### **Features**

- · New flow technique with two oval nozzles
- · Seamlessly adjustable setting of the air mixture
- · Modern and minimalistic design
- · Integrerated handle
- · Pneumatic start button
- Meets requirements of pool standard EN 16582
- High-class motor







Technical data						
	Motor			Pump capacity		
Motion	2.2 kW	230/400 V	8,0/4,6 A	46 m³/h	2"	PC/stainless steel

A complete Jet Swim Motion consists of jet unit, assembly kit, pump and control box.

Jet Swim M	otion	Type of pool						
Item no.	Туре	Wood/plastic/ steel with liner	Concrete liner	Concrete pool without liner	Fibreglass/ PP-plastic			
33041	Complete unit - Classic	X			X*			
33042	Complete unit - Classic		Х	X				
33043	Complete unit - Marine	х			X*			
33044	Complete unit - Marine		Х	X				
1301300	Motion Classic unit	X	Х	X	X			
1301305	Motion Marine unit	X	Х	X	X			
1301310	Assembly kit	x			X			
1301320	Assembly kit		Х	X				
1301285	Jet Swim Pump 2.2kW 50Hz	x	Х	X	X			
1301390	Control box 400/3~	X	Х	X	X			

<sup>\*</sup>Additional assembly kit is required for fiberglass/PP-plastic



Jet Massage in Classic model

#### Jet Massage

Jet Massage consists of a standalone inlet, outlet and start button that combines as desired and up to 6 nozzles. All nozzles are made of acid-proof stainless steel and is available in both Marine and Classic designs. The massage station can be controlled with a Pahlén circulation pump (e.g. FloVISE or P2000FLO) and Pahlén control box. Recomended flow capacity max 8-10 m³/h per nozzle.

#### **Features**

- 2 nozzles soft and medium
- · Combine as desired and up to 6 nozzles
- · Both for private pools and public facilities
- Meets requirements of pool standard EN 16713
- · Available in both Classic and Marine design
- Meets the requirements of pool standard EN13451, EN16582, EN16713

		Wood/plastic/steel with liner	Concrete liner	Pipe connection
Item no.	Туре	Standard	350	
13005571	Start button Classic 350		x	
13005570	Massage Soft Classic 350		Х	Ø50mm
13005572	Massage Medium Classic 350		Х	Ø50mm
13005561	Start button Classic	Х		
13005560	Massage Soft Classic	X		Ø50mm
13005562	Massage Medium Classic	X		Ø50mm
13005551	Start button Marine 350		х	
13005550	Massage Soft Marine 350		Х	Ø50mm
13005552	Massage Medium Marine 350		х	Ø50mm
13005541	Start button Marine	X		
13005540	Massage Soft Marine	X		Ø50mm
13005542	Massage Medium Marine	X		Ø50mm

For options to fiberglass/PP-plastic contact Pahlén AB for more information.

#### Massage station configurations

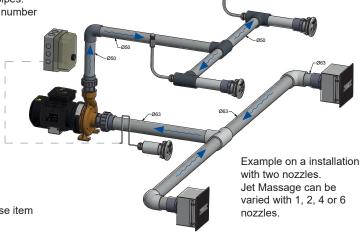
Complete Jet Massage consists of 1-6 massage nozzles, a start button, at least 2 outlets, a separate circulation pump, a control box, connections and pipes. The number of massage nozzles governs the size of the pump and the number of outlets.

Number of massage nozzles	Number of outlets	Pump
1	2	FloVISE 0,55 kW
2	2	FloVISE 1,1 kW
4	3	P2000 2,2 kW
6	4	P2000 4,0 kW

#### Jet massage-unit

When ordering Jet Massage units according to configurations above, use item no. as in example shown below.

Example of Item no:	А	В	С
Marine design = 36 Classic design = 35	350 = 2 Standard = 0	Soft = 0 Medium = 1	No. of nozzles 1, 2, 4, 6
36ABC	362BC	3620C	36204
35ABC	350BC	3501C	35012



Accessories	
Item no.	
636200	Massage nozzle Soft as option
636201	Massage nozzle Medium as option

## Heating - Heat exchangers



Pahlén pool heat exchangers for fast and flexible heating. A heat exchanger is used to transfer heat energy from one medium to another without the two media being mixed. All the models can be installed and connected to electric, firewood, pellets or oil-fired boilers, heat pump or solar panel systems. The heat exchangers are designed and made of materials that permit their use for a wide variety of needs and in many different types of installations.

## Easily installed to your existing heat source



#### Maxi-Flo

Made of acid proof stainless steel or titanium.

Maxi-Flo is a tube heat exchanger with excellent heating properties and is simple to install.



#### Hi-Flow

Made of acid proof stainless steel or titanium.

Hi-Flow is a spiral heat exchanger for installations that operate under high pressure.



#### Hi-Temp

Made of acid proof stainless steel.

Hi-Temp is a spiral heat exchanger made of fiberglass reinforced thermoplastic for extra durability, and a coil of acid proof stainless steel.



#### Hi-Temp titanium

Made of titanium.

Hi-Temp is a spiral heat exchanger made of fiberglass reinforced thermoplastic for extra durability, and a coil of titanium for salt water pools.



#### Aqua MEX

Made of acid proof stainless steel or titanium.

Outer jacket of fiberglass reinforced thermoplastic. Aqua MEX is a heat exchanger which can be equipped with digital control and circulation pump. Use acid proof stainless steel in fresh water pools and titanium in saltwater pools.



#### **Features**

- Titanium
- · Twisted tubes for the heating medium
- Available in 75 and 200kW
- · Suits all installations
- · Mounted vertically

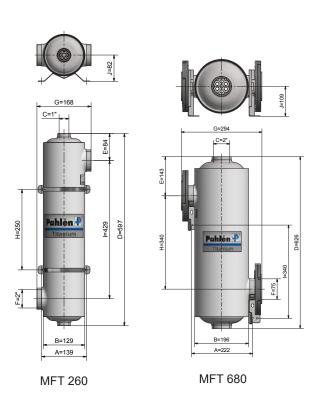
#### Maxi-Flo titanium 75-200kW

Maxi-Flo titanium is a tube heat exchanger made of titanium for the most demanding installations where there is a high risk of corrosion. Titanium is ideal for swimming pools with salt water or where a salt chlorinator is used.

Titanium for maximum heat transfer. Connects to boiler, heat pump, solar panel system or other heat source. Suits all installations.

Maximum pressure secondary circuit (pool water) 75 kW is 5 bar/200 kW 4 bar and primary circuit (hot water) is 10 bar for both.

Suitable for pools up to 1000 m<sup>3</sup>.





Maxi-Flo Titanium is a tube heat exchanger with twisted tube pipes for optimal heating. Titanium is the ideal material when a salt chlorinator is used.

Dimension	Dimensions												
Item no.	Туре	kW	Heating surface m <sup>2</sup>	Α	В	С	D	E	F	G	kg		
11377	MFT260	75	0.77	139	Ø 129	1"	597	84	2"	167	9.8		
11380	MFT680	200	2.11	201	Ø 196	2"	612	146	DN65	294	23.8		

Technical of	Technical data												
Item no.	Туре	ary, hot water	Secon	dary, pool water									
		kW	kBtu/h	kcal	l/min	press. drop H (m)	l/min	press. drop H (m)					
11377	MFT260	75	260	64 488	35	0.9	300	1.8					
11380	MFT680	200	680	172 000	95	0.1	600	3					

Capacity at a temperature difference of 60°C



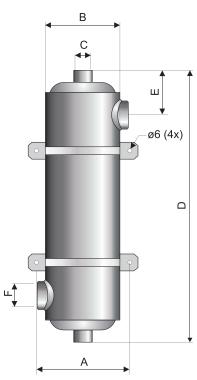
#### Maxi-Flo 40-120kW

Maxi-Flo is a tube heat exchanger with excellent heating properties. It is made of acid proof stainless steel for optimum service life. Simple installation using the stainless steel adjustable attachments that are included.

Maximum pressure secondary circuit (pool water) is 5 bar and primary circuit (hot water) is 10 bar.

Suitable for pools up to 450 m<sup>3</sup>





#### **Features**

- · Acid proof stainless steel
- · Precision-welded outer jacket
- 37 seamless pipes equipped with flow restrictors for hot water
- · Adjustable brackets of acid proof stainless steel
- Four sizes: 40, 60, 75 and 120 kW
- · Connects to existing heat source
- · Can be connected in series when needed.
- · Mounted vertically

Maxi-Flo is a tube heat exchanger with excellent heating properties, made of acid proof stainless steel for optimum life.

Dimensions											
Item no.	kW	Α	В	С	D	E	F				
11365	40	139	129	1"	355	92	1½"				
11366	60	139	129	1"	485	92	1½"				
11367	75	139	129	1"	600	85	2"				
11368	120	139	129	1½"	1070	85	2"				

Technical da	ata								
Item no.	Туре		Capacity		Prim	ary, hot water	Seco		
		kW	kBtu/h	kcal	l/min	press. drop H (m)	l/min	press. drop H (m)	kg
11365	MF135	40	135	34 394	25	0.05	200	0.8	3.4
11366	MF200	60	200	51 590	30	0.15	250	1.4	4.5
11367	MF260	75	260	64 488	35	0.4	300	1.0	5.6
11368	MF400	120	400	103 181	50	0.5	360	1.5	9.3

10083002 Coupling 2" in case of series connection of 11367 or 11368.

Capacity at a temperature difference of 60°C



#### Hi-Flow titanium 28-75kW

Hi-Flow titanium is a spiral heat exchanger made of titanium for the most demanding installations where there is a high risk of corrosion. Titanium is ideal for swimming pools with salt water or where a salt chlorinator is used. Adjustable stainless steel attachments included.

Maximum pressure secondary circuit (pool water) is 5 bar and primary circuit (hot water) is 30 bar.

Suitable for pools up to 300 m<sup>3</sup>

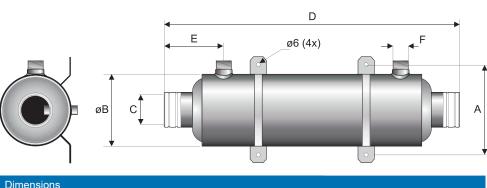
Hi-Flow is a spiral heat exchanger made of titanium, the ideal material when a salt chlorinator is used. Suitable for installations with high pressure.

#### **Features**

- Titanium
- · Connections with interior thread (secondary side)
- · Coil for the heating medium
- Pocket for temperature probe
- · Adjustable brackets of acid proof stainless steel
- · Three sizes 28, 40 and 75 kW
- · Connects to existing heat source
- · Mounted horisontally

ata								
Type	Capacity		Prim	ary, hot water	Secon			
	kW	kBtu/h	kcal	l/min	press. drop H (m)	l/min	press. drop H (m)	kg
T28	28	95	24 075	20	1.0	300	1.1	1.9
T40	40	135	34 393	40	2.3	350	1.7	2.0
T75	75	260	64 488	45	5.2	350	1.7	2.9
	T28 T40	kW           T28         28           T40         40	Type         Capacity           kW         kBtu/h           T28         28         95           T40         40         135	Type         Capacity           kW         kBtu/h         kcal           T28         28         95         24 075           T40         40         135         34 393	Type         Capacity         Prim           kW         kBtu/h         kcal         I/min           T28         28         95         24 075         20           T40         40         135         34 393         40	Type         Capacity         Primary, hot water           kW         kBtu/h         kcal         I/min         press. drop H (m)           T28         28         95         24 075         20         1.0           T40         40         135         34 393         40         2.3	Type         Capacity         Primary, hot water         Secondary           kW         kBtu/h         kcal         I/min         press. drop H (m)         I/min           T28         28         95         24 075         20         1.0         300           T40         40         135         34 393         40         2.3         350	Type         Capacity         Primary, hot water         Secondary. pool water           kW         kBtu/h         kcal         I/min         press. drop H (m)         I/min         press. drop H (m)           T28         28         95         24 075         20         1.0         300         1.1           T40         40         135         34 393         40         2.3         350         1.7

Capacity at a temperature difference of 60°C for 11332 and 11333. Capacity at a temperature difference of 70°C for 11334.



Dimensions	;							
Item no.	kW	Α	В	С	D	E	F	G
11332	28	139	113	1 ½"	470	95	1"	51
11333	40	139	127	1 ½"	510	108	1"	51
11334	75	139	127	1 ½"	754	108	1"	51



Hi-Flow is a spiral heat exchanger for installations with high pressure made of stainless steel for optimal durability.

#### Hi-Flow 13-75kW

Hi-Flow is a spiral heat exchanger made of acid proof stainless steel for installations that operate under high pressure. Simple installation with the included adjustable stainless steel attachments.

Maximum pressure secondary circuit (pool water) is 8 bar and primary circuit (hot water) is 30 bar.

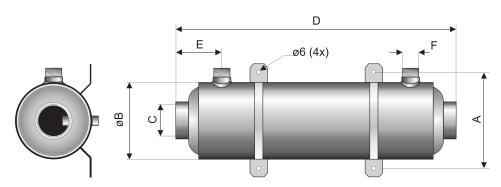
Suitable for pools up to 300  $\,\mathrm{m}^3$ 

#### **Features**

- · Acid proof stainless steel
- Precision-welded outer jacket
- · Coil for heating medium
- Pocket for temperature probe
- Adjustable brackets of acid proof stainless steel
- Four sizes: 13, 28, 40 and 75 kW
- · Connects to existing heat source
- · Mounted horisontally

Technical	Technical data									
Item no.	Item no. Type Capacity			Primary, hot water			dary, pool water			
		kW	kBtu/h	kcal	l/min	press. drop H (m)	l/min	press. drop H (m)	kg	
11391	HF13	13	45	11 177	25	0.9	200	0.6	1.9	
11392	HF28	28	95	24 075	25	1.7	300	1.6	3.2	
11393	HF40	40	135	34 393	60	1.3	300	1.6	3.4	
11394	HF75	75	260	64 488	60	2.6	300	1.1	5.3	

Capacity at a temperature difference of 60°C for 11391 and 11392. Capacity at a temperature difference of 70°C for 11393 and 11394.



Dimensions	6						
Item no.	kW	Α	В	С	D	E	F
11391	13	139	129	1 ½"	235	72	3/4"
11392	28	139	129	1 ½"	407	75	3/4"
11393	40	139	129	1 ½"	455	85	1"
11394	75	139	129	2"	702	85	1"



Hi-Temp titanium is a spiral heat exchanger made of thermoplastic with a high glass content for extra durability and titanium.

#### Hi-Temp titanium 40-75kW

Hi-Temp titanium is a spiral heat exchanger made of thermoplastic with a high glass content for extra durability. With a coil of titanium for the most demanding installations where there is a high risk of corrosion, such as in pools with salt water or where a salt chlorinator is used.

Maximum pressure secondary circuit (pool water) is 4 bar and primary circuit (hot water) is 5 bar.

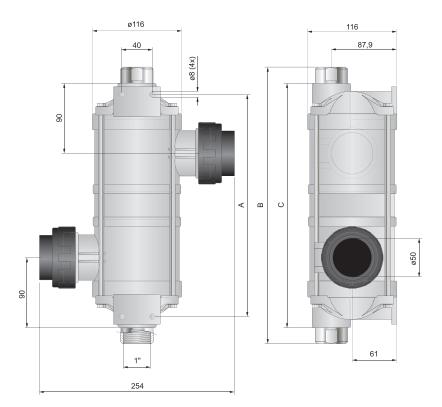
Suitable for pools up to 300 m<sup>3</sup>.

#### **Features**

- · Outer jacket of thermoplastic
- · Hot water coil made of titanium
- Integrated wall-mounting
- Slip connections for bonding of Ø 50 mm pipes
- · Two sizes 40 and 75kW
- · Connects to existing heat source
- · Mounted horisontally or vertically

Technical da	ata									
Item no.	Туре		Capacity		Pri	Primary, hot water		Secondary, pool water		
		kW	kBtu/h	kcal	l/min	press. drop H (m)	l/min	press. drop H (m)	kg	
11322	HTT 40	40	135	34 393	52	1.5	300	1.1	2.3	
11324	HTT 75	75	260	64 488	58	2.5	300	1.2	3.5	

Capacity at a temperature difference of 60°C



Dimensions	6			
Item no.	kW	Α	В	С
11322	40	418	375	277
11324	75	670	625	452

Also available with connections 1  $\frac{1}{2}$ " pipe or 1  $\frac{1}{2}$ " threaded, on secondary side.



Hi-Temp is a spiral heat exchanger made of thermoplastic with a high glass content for extra durability.

#### Hi-Temp 40-75kW

Hi-Temp is a spiral heat exchanger made of thermoplastic with a high glass content for extra durability, and with a coil of acid proof stainless steel.

Maximum pressure secondary circuit (pool water) is 4 bar and primary circuit (hot water) is 5 bar.

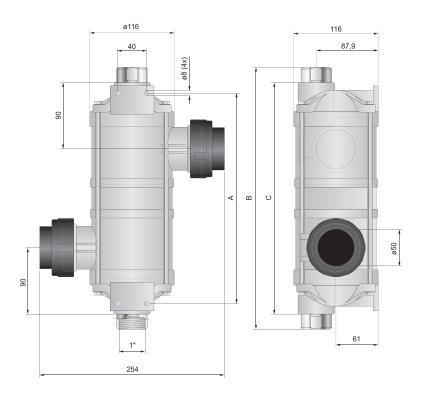
Suitable for pools up to 300 m<sup>3</sup>.

#### **Features**

- · Outer jacket of thermoplastic
- · Hot water coil made of acid proof stainless steel
- · Integrated wall-mounting
- Slip connections for bonding of Ø 50 mm pipes
- Two sizes 40 and 75 kW
- · Connects to existing heat source
- · Mounted horisontally or vertically

Technical of	Technical data									
Item no.	Type	Capacity		Prim	Primary, hot water		Secondary, pool water			
		kW	kBtu/h	kcal	l/min	press. drop H (m)	l/min	press. drop H (m)	kg	
11312	HT40	40	135	34 393	34	1.9	300	1.3	1.8	
11314	HT75	75	260	64 488	43	5.5	300	1.7	2.3	

Capacity at a temperature difference of 60°C



Dimensions				
Item no.	kW	Α	В	С
11312	40	277	360	315
11314	75	454	535	492

Also available with connections 1  $\frac{1}{2}$ " pipe or 1  $\frac{1}{2}$ " threaded, on secondary side.



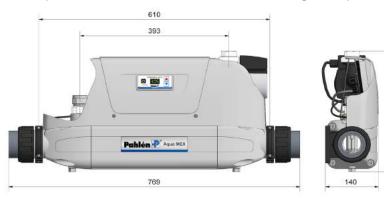
#### Aqua MEX

Aqua MEX is made of high quality materials, fiberglass reinforced polypropylene and a high effective coil made of titanium. Our line gives the best possible heating capacity and resistance against aggressive water. Aqua MEX is compact, fully equipped, easy to install and use.

The heat exchanger has a straight flow with a low pressure drop and with slip connections for  $\varnothing$  63 mm pipes.

Maximum pressure secondary circuit (pool water) is 4 bar and primary circuit (hot water) is 6 bar.

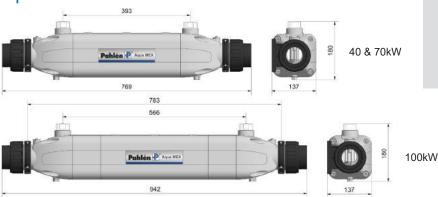
Aqua MEX fully equipped has a three-step single-phase built-in circulation pump for the primary (hot) water as well as built-in temperature sensor, flow switch and check valve. Digital temperature control and display.



#### **Features**

- Aqua MEX fully equipped comes complete with flow switch, check valve, temperature sensor, three-step single-phase circulation pump and electronics
- · Economic lower installation and operation costs
- Capacity range 40, 70kW. Standard also available as 100kW
- Digital control and display
- The housing and cabinet are made of fiberglass reinforced polypropylene
- Straight flow Ø 63 mm (2") pipe
- · Coil made of titanium or stainless steel
- Connects to existing heat source
- IP44 (International Protection Rating)
- Standard version without controller and pump
- · Mounted horisontally

#### Aqua MEX Standard



Item no. with T refers to the Aqua MEX with a coil of titanium.

Technical	data										
Item no.	Fully equipped	Item no.	Standard		Capacity		Pri	mary, hot water	Seco	Secondary, pool water	
				kW	kBtu/h	kcal	l/min	press. drop H (m)	l/min	press. drop H (m)	
113951	AM-FE40	11316	AM40	40	135	34 393	20	0.6	250	0.4	
113952	AM-FE40T	11326	AM40T	40	135	34 393	20	0.4	250	0.5	
113953	AM-FE70	11317	AM70	70	240	60 200	30	1.6	300	0.5	
113954	AM-FE70T	11327	AM70T	70	240	60 200	30	1.4	300	0.6	
		11318	AM100	100	340	86 000	40	2.5	340	0.7	
		11328	AM100T	100	340	86 000	40	2.3	340	0.8	

Capacity at a temperature difference of 60°C

## Temperature control



#### Item no.

128470	MidiTemp

#### MidiTemp

A compact unit for digital setting and view of temperature for operation and control of heating products, both in already existing or new installations. Control panel with on/off mode and programmable set value 5 - 45°C.

The controller has an input for external flow switch and/or overheating limit control. 230V output for operating a wide range of heating applications; heat exchangers, solar panels, electric heaters etc.

The controller will give a more precise temperature regulation compared to an analogue thermostat. Built-in safety features for overheat protection, flow switch for low pool circulation and alarm for temperatures above 45°C. Provides a safe operation for both users and pool components.

#### Electronic digital control panel

- Built-in safety features for overheat protection for temperatures above 45°C
- Energy efficient
- Easy to set desired temperature
- Clear digits shows the pool temperature and the temperature set
- Indicates when heater is operating

Technical data				
Power connection	220-240VAC 1~N 50Hz			
Max effect	230W			
Sealing class	IP44			
Dimensions L x W x H	170 x 50 x 160 mm			
Connection cabel	3 x 0,75 mm <sup>2</sup> , 1.5 m long			
Switch on at 0.5°C under set to	emperature			
Switch off 0.5°C above set tem	perature			
Connections				
Control voltage	230 VAC 50Hz max 1A			
Protection switches	Potential free/dry contacts			

#### **Features**

- Electronic control panel with LED
- · Remote view and control
- Precise temperature setting
- Controller output gives 230V (max 1A) to control a variety of heating applications; e.g. pumps, contactors, valves etc.
- · Length of sensorcabe 1400 mm
- Built-in protection and alarm against excessive temperature or sensor failures
- Flow switch input with time-delayed output heating aborted with alarm when reached low pool circulation



Sensor well/Saddle clamp



Flow switch

Accessories				
Item no.				
14009100	Sensor well R1/2" L=70 mm			
128604	Saddle clamp 63 x ½" PN10 PP			
12870	Flow switch, external connection 1/2"			

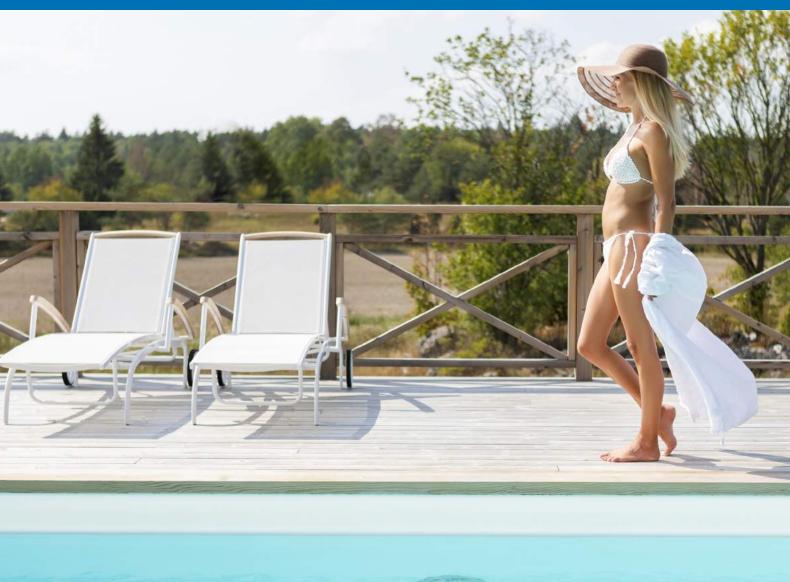


#### **Thermostat**

For setting and automatic control of water temperature.					
Item no.	Temperature range	Connection			
12840	0-40°C	R½"			

Equipped with probe 160 mm.

## Heat pump - An effective and energy saving alternative



Latest inverter technology heat pump with superior energy efficiency and quiet operation.

## Effective and energy efficient heat pump designed to withstand harsh climates.

Heat pumps exploit the energy in the air, they are effective and energy efficient, easy to install and takes up little space near the pool. The pool heat pump is equipped with a quiet rotation compressor for optimal efficiency rating, minimal vibration and long service life. Digital control includes several functions and permits easy setting of pool temperature. The materials used in the heat pump are designed to withstand harsh climates. The casing is made of thermoplastic and the condenser, the pools heat exchanger, is made of titanium.

## Heat pumps



#### **PVP Inverter**

Wide temperature range with a superior energy efficiency. Low noise emissions and starting currents. Five year warranty for compressor and heat exchanger.

Digital control with extended features. Monitors low and high pressures, low water flow and delta temperature (in/out).

The unit also controls the supply voltage and all sensors. Prepared for Wi-Fi control.

Tested according to the European standard EN14511 by an independent test institute TÜV.

#### Smart and silence mode

Silence mode is used for quieter operation at night. Smart mode adjusts automatically to the air temperature and water temperature for rapidly heating the pool to the desired temperature.

Accessories					
Item no.					
14983407	Ground stand for heatpump, PVP10, PVP13, PVP17				
14983407	Wall stand for heatpump, PVP10, PVP13				
14950181	Bypass-kit cc280-390, PVP10 - PVP17				
14950182	Bypass-kit cc620-650, PVP28, PVP35				

#### Features

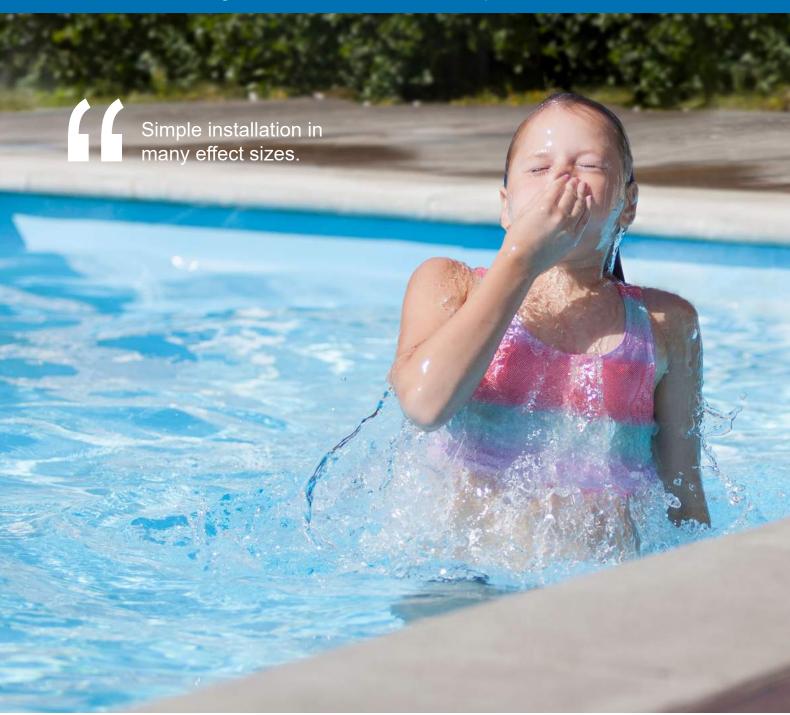
- · Frequency-controlled compressor
- Sizes from 9.8 27.5 kW
- Operation down to -7°C outdoor temperature
- · Drip tray heater
- Electronic expansion valve
- · Hot gas defrosting on demand
- Speed-controlled DC fan
- Large condenser surface area
- · Superior COP and energy efficiency
- Wi-Fi modul as option

PVP inverter						
Item no.		Type 10 14983311	Type 13 14983315	Type 17 14983316	Type 28 14983318	Type 35 14983317
Heating capacity in smart mode	Air +26°C, water +26°C**	2.1-9.8 kW	2.9-13.3 kW	3.4-17.3 kW	6.5-27.0 kW	7,0-35,2kW
	Air +15°C, water +26°C*	1.5-6.8 kW	2.1-9.4 kW	2.3-11.4 kW	4.5-18.0 kW	4,8-24,0kW
COP in smart mode	Air +26°C, water +26°C**	6.9-15.3	6.4-15.4	5.9-15.5	6.2-15.2	5.5-15.5
	Air +15°C, water +26°C*	4.6-7.7	4.4-7.8	4.3-7.8	4.5-7.9	4.5-8.0
COP at 50% capacity	Air +26°C, water +26°C**	10.7	10.6	10.8	11.0	10.6
	Air +15°C, water +26°C*	6.6	6.5	6.3	6.7	7.0
Sound pressure	at 1m dB(A)	38.6-49.9	41.3-54.0	43.1 -53.8	43.5-54.9	42.6-54.7
	at 10m dB(A)	18.6-29.9	21.3-34.0	23.1-33.8	23.5-34.9	22.6-34.7
Rated power at air +15°C (kW)		0.2-1.4	0.27-2.1	0.3-2.6	0.53-3.9	0.63-5.15
Rated operating current at air +15°C (A)		0.91-6.1	1.17-9.1	1.3-11.3	0.76-5.6	0.91-7.4
Electric connection		230V/1 ~		400V/3 ~		
Recommended water flow (m³/h)		3-4	5-7	6.5-8.5	10-12	12-18
Water connection in-out (mm)		Ø 50 mm				
Weight (kg)		49	52	63	93	117 kg
Refrigerant		R410A				
Refrigerant amount		0.85 kg	1.15 kg	1.25 kg	2.6 kg	3,0 kg
Recommended max pool volume		35 m³	60 m³	75 m³	120 m³	169 m³

<sup>\*</sup>Data at air temperature +15°C/water +26°C/humidity 70%

<sup>\*\*</sup>Data at air temperature +26°C/water +26°C/humidity 80%

## Heating - Electric heaters, simple and effective



Pahlén's electric heaters heats the water easily and effectively. An electric heater is easy to be connected to the existing power mains in order to deliver full power round the clock. Water from the system flows through the heater and is heated by the heating element. The materials used are acid proof stainless steel, Incoloy 825, titanium and thermoplastic. All electric heaters are designed for continuous flow with the lowest possible pressure drop.

### Electric heaters for all types of pools



### Compact 3-18kW

Made of titanium/Nic-Tech or acid proof stainless steel/Incoloy 825. Supplied with thermostat, overheating cut out, a flow switch or pressure switch.



### Aqua compact 3-18kW

Made of thermoplastic with heating element of Incoloy 825 or titanium. Supplied with thermostat, overheating cut out, flow switch.



### Aqua spa 1.5-3.0kW

Made of thermoplastic with heating element of Incoloy 825. A small, compact heater for spa pools and small swimming pools. Adjustable thermostat, overheating cut out and flow switch are standard.



### Aqua air1.5kW

Made of acid proof stainless steel. Air heater supplied as standard with a thermostat and overheating cut out.



### Aqua HL 3-15kW

Made of thermoplastic with heating element of Incoloy 825 or titanium. Electric swimming pool heater features digital control and electronic thermostat. Built-in overheating cut out and flow switch are standard.



### MidiHeat 18-72kW

MidiHeat is manufactured from materials of the highest quality. With digital or analogue temperature control. Effective heater for larger swimming pools. Overheating cut out and flow switch are standard.



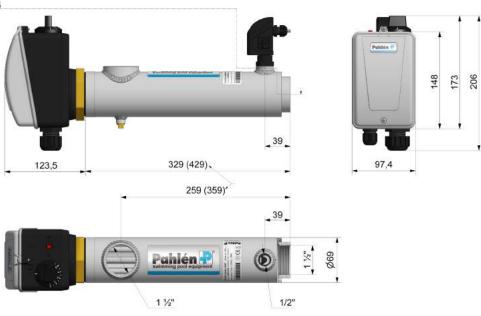
### Compact 3-18kW

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/ Incoloy 825.

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

Suitable for private pools up to 100 m<sup>3</sup>



Dimensions for 9 - 18kW within brackets



### With pressure switch. Max 4 bar

Unipolar thermostat 0-45°C, pressure switch, tripolar high limit control 60°C

**Ampere** 

18

22

27

3.2

32

3.2

			3-ph	ase	
Item no.	Type	kW	230V	400V	kg
13982206	13P60	6.0	15	9	2.8
13982209	13P90	9.0	23	14	3.2
Unipolar the high limit cor		5°C, pr	essure sw	vitch, unip	olar
13982403	11P30	3.0	8	5	2.8
13982406	11P60	6.0	15	9	2.8
13982409	11P90	9.0	23	14	3.2

### With flow switch. Max 2.5 bar

11P120

11P150

11P180

13982412

13982415

13982418

Unipolar thermostat 0-45°C, flow switch, unipolar high limit control 60°C

12.0

15.0

18.0

31

38

46

			Amp 3-ph		
Item no.	Type	kW	230V	400V	kg
13981403*	11F30*	3.0	8	5	2.4
13981406*	11F60*	6.0	15	9	2.4
13981409*	11F90*	9.0	23	14	2.7
13981412*	11F120*	12.0	31	18	2.7
13981415*	11F150*	15.0	38	22	2.7
13981418*	11F180*	18.0	46	27	2.7
Tripolar high	limit control	60°C, f	low swite	ch	
13981506	03F60	6.0	15	9	2.9
13981509	03F90	9.0	23	14	3.3

### With flow switch. Max 2.5 bar

Unipolar thermostat 0-45°C, flow switch, tripolar high limit control 60°C

			Amp 3-ph		
Item no.	Type	kW	230V	400V	kg
13981203	13F30	3.0	8	5	3.1
13981206	13F60	6.0	15	9	3.1
13981209	13F90	9.0	23	14	3.1
Unipolar high	limit control	60°C, flo	ow switch	ı	
13981306	01F60	6.0	15	9	2.9
13981309	01F90	9.0	23	14	3.3
13981312	01F120	12.0	31	18	3.3
13981315	01F150	15.0	38	22	3.3
13981318	01F180	18.0	46	27	3.3

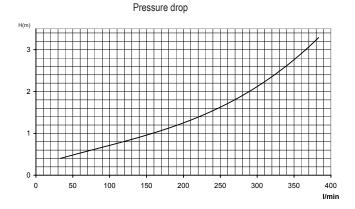
\*Available with outer jacket made of titanium and Nic-Tech treated heating element. These heaters are designed for pools with very aggressive water, large quantities of chlorides and where there is a high risk for corrosion, e.g. in pools with salt water.

When ordering titanium model, choose compact electric heater and add a "T" after the item no. Applies to the following article 139814xxT.

Technical data		
	With flow switch	With pressure switch
Max temperature	60°C	60°C
Max pressure	2.5 bar	4 bar
Min. flow 3-9kW	85 l/min	20 l/min
Min. flow 12-18kW	85 l/min	40 l/min

### **Features**

- · Body and pipework of acid proof stainless steel
- · Heating elements of Incoloy 825
- Selected models with body made of titanium and Nic-Tech treated heating elements
- Equipped with thermostat, overheating cut out and flow switch
- Small and compact
- · Adjustable brackets of acid proof stainless steel
- Connection 1 ½"



For installations where aggressive water increases the risk of corrosion, we recommend a body of titanium with a Nic-Tech treated heating element.



### Aqua compact 3-18kW

Electric heater made of thermoplastic for extra strength. Heating element made of Incoloy 825 or titanium for extra safety in installations where there is a high risk of corrosion, e.g. salt water pools.

Supplied with a thermostat for adjusting pool temperature as well as overheating cut out and flow switch. Minimum flow 90 l/min.

Max. pressure: 2.5 bar.

Suitable for private pools up to 100 m<sup>3</sup>

Technical	data									
Heating element Incoloy 825			Heating el	Heating element titanium				Ampere 3-phase		
Item no.	Type	kg	Item no.	Type	kg	kW	230V 3~	400V 3~		
141600	AC30	1.7	141600T	AC30T	1.7	3.0	8	5		
141601	AC60	1.7	141601T	AC60T	1.7	6.0	15	9		
141602	AC90	1.7	141602T	AC90T	1.7	9.0	23	14		
141603	AC120	2.2	141603T	AC120T	2.1	12.0	31	18		
141604	AC150	2.2	141604T	AC150T	2.1	15.0	38	22		
141605	AC180	2.2	141605T	AC180T	2.1	18.0	46	27		

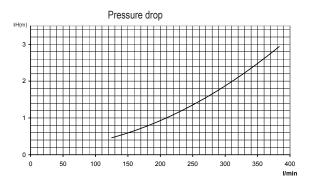
Also available with connections 1  $\frac{1}{2}$ " pipe add a "A" after the item no. or 1  $\frac{1}{2}$ " threaded add a "B" after the item no.

### Features

- Electric heater made of fiberglass reinforced thermoplastic
- · Housing of thermoplastic
- Horizontal installation, eliminates air pockets and damage to the electric heating element
- · Heating elements of Incoloy 825 or titanium
- · Equipped with overheating cutout and flow switch
- Slip connections for bonding of Ø 50 mm pipes







For pools with salt water or chlorinator we recommend a heating element of titanium.



### Aqua spa 1.5-3.0kW

A small, compact heater for spa pools and small swimming pools. It is available with capacities from 1.5 to 3 kW.

The heater is made of thermoplastic and has a heating element made of Incoloy 825. Adjustable thermostat, overheating cut out and flow switch are standard.

Minimum flow 90 I/min. 1-phase 230V.

Suitable for spa, hot tubs and smaller pools.

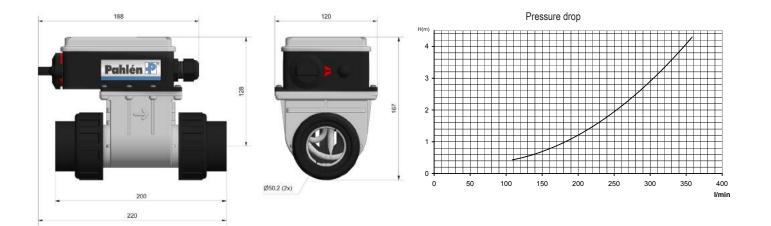
Technical o	lata					
Item no.	Type	kW	Length mm	Pipe connection	Amp.	kg
141650	AS15	1.5	200	Ø 50 mm	7	1.0
141651	AS20	2.0	200	Ø 50 mm	9	1.0
141652	AS30	3.0	200	Ø 50 mm	13	1.0

Also available with connections 1  $\frac{1}{2}$ " pipe add a "A" after the item no. or 1  $\frac{1}{2}$ " threaded add a "B" after the item no.

### **Features**

- · Three capacities: 1.5kW, 2kW and 3kW
- · Housing of thermoplastic
- Minimal dimensions
- · Heating element of Incoloy 825
- Equipped with thermostat 0-45°C
- · Overheating cut out and flow switch
- Slip connections for bonding of  $\emptyset$  50 mm pipes

Specially designed for smaller pools and hot tubs. Small and compact making it easy to install in areas with limited space.





Technical o	data				
Item no.	kW	Length mm	Pipe connection	Amp.	kg
12700	1.5	360	Ø 51 mm	7	2.5

### Aqua air 1.5kW

Air heater is for instance used for air massage in spa pools. The incoming air is heated and mixed with the water.

The heater has a power output of 1.5 kW and is made of acid proof stainless steel.

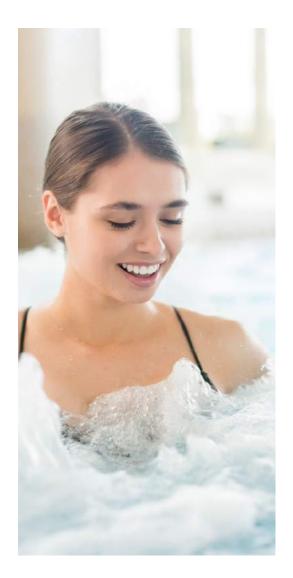
Supplied as standard with a thermostat and overheating cut out.

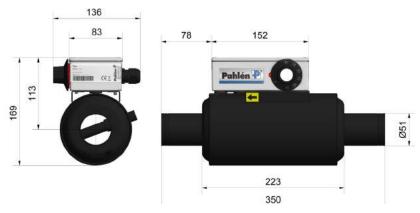
1-phase 230V.

Suitable for all types of hot tubs and spas.

### **Features**

- · Made of acid proof stainless steel
- · Minimal dimensions
- Adjustable thermostat 30-80°C
- · Heating element acid proof stainless steel
- Overheating cut out
- Ø 51 mm pipes





Heat the incoming air in your hot tub easily and effectively with Pahlén's electric air heater.



### Aqua HL 3-15kW

Aqua HL has a digital control, where the desired pool temperature can easily be set and the current pool temperature is shown in the LED display. In addition to an overheating protection and a flow switch, the heater has built-in contactors, that simplifies the connection of the heater.

Rated output 3-15 kW. Made of thermoplastic with heating element made of Incoloy 825 or titanium.

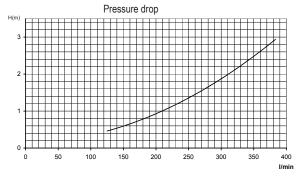
Suitable for private pools up to 100 m<sup>3</sup>. Minimum flow 90 l/min.

- Capacity range 3-15kW
- · Aqua HL comes with contactors and electronics
- · Digital control and display
- · Made of reinforced thermoplastic
- Horizontal installation
- · Heating elements of Incoloy 825 or titanium
- Equipped with overheating limit control and flow switch
- Dual built-in contactors as per electrical safety standards
- · Third-party tested and certified
- Slip connections for bonding of Ø 50 mm pipes





Dimensions for 12 - 15kW within brackets



data						
ement, Incolo	oy 825	Heating elem	ent, titanium		Ampere 3-phase/kW	Ampere 3-phase/kW
Type	kg	Item no.	Type	kg	400V	415V
D30	2.6	141800T	D30T	2.6	3.0kW 5A	3.5kW 5A
D60	2.6	141801T	D60T	2.6	6.0kW 9A	6.5kW 9A
D90	2.6	141802T	D90T	2.6	9.0kW 13A	10kW 14A
D120	3.0	141803T	D120T	3.0	12.0kW 18A	13kW 18A
D150	3.0	141804T	D150T	3.0	15.0kW 22A	16.2kW 23A
					1-phase 230V	3-phase 230V
DS30-230	2.6	141820T	DS30T-230	2.6	3.0kW 13A	-
DS60-230	2.6	141821T	DS60T-230	2.6	6.0kW 26A	-
D30-230	2.6	141830T	D30T-230	2.6	-	3kW 8A
D60-230	2.6	141831T	D60T-230	2.6	-	6kW 15A
D90-230	2.6	141832T	-	2.6	-	9kW 23A
	D30 D60 D90 D120 D150  D830-230 D860-230 D60-230	Pement, Incoloy 825  Type kg  D30 2.6  D60 2.6  D90 2.6  D120 3.0  D150 3.0  DS30-230 2.6  DS60-230 2.6  D30-230 2.6  D60-230 2.6	Type         kg         Item no.           D30         2.6         141800T           D60         2.6         141801T           D90         2.6         141802T           D120         3.0         141803T           D150         3.0         141804T           DS30-230         2.6         141820T           DS60-230         2.6         141821T           D30-230         2.6         141830T           D60-230         2.6         141831T	Type         kg         Item no.         Type           D30         2.6         141800T         D30T           D60         2.6         141801T         D60T           D90         2.6         141802T         D90T           D120         3.0         141803T         D120T           D150         3.0         141804T         D150T    DS30-230  2.6  141820T  DS60-230  2.6  141821T  DS60T-230  D30T-230  D60-230  2.6  141831T  D60T-230	Type         kg         Heating element, titanium           Type         kg         Item no.         Type         kg           D30         2.6         141800T         D30T         2.6           D60         2.6         141801T         D60T         2.6           D90         2.6         141802T         D90T         2.6           D120         3.0         141803T         D120T         3.0           D150         3.0         141804T         D150T         3.0           DS30-230         2.6         141820T         DS30T-230         2.6           D30-230         2.6         141821T         DS60T-230         2.6           D30-230         2.6         141830T         D30T-230         2.6           D60-230         2.6         141831T         D60T-230         2.6	Type         kg         Item no.         Type         kg         400V           D30         2.6         141800T         D30T         2.6         3.0kW 5A           D60         2.6         141801T         D60T         2.6         6.0kW 9A           D90         2.6         141802T         D90T         2.6         9.0kW 13A           D120         3.0         141803T         D120T         3.0         12.0kW 18A           D150         3.0         141804T         D150T         3.0         15.0kW 22A           1-phase 230V           DS30-230         2.6         141820T         DS30T-230         2.6         3.0kW 13A           DS60-230         2.6         141821T         DS60T-230         2.6         6.0kW 26A           D30-230         2.6         141830T         D30T-230         2.6         -           D60-230         2.6         141831T         D60T-230         2.6         -



### MidiHeat 18-72kW

MidiHeat is manufactured from materials of the highest quality. The casing made of powder coated zinc sheet not only gives the product a very stable construction, it also makes the product highly resistant against corrosion.

MidiHeat has a temperature range of 8-45°C. Heating elements of titanium does not only make the heating highly effective, it also makes the heating element fully corrosion free.

#### Additional safety

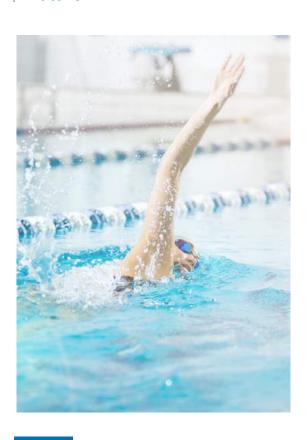
For the optimal safety and in accordance with applicable electrical safety standards MidiHeat has two built-in contactors for each heating element. A built-in flow switch and an overheating protection accompanied by an external input for pool water circulation.

Connections for bonding of  $\emptyset$  63 mm tube. Minimum Flow 170 l/min. Max flow 300 l/min. Max pressure: 2 bar.

MidiHeat functions extremely well in fresh water pools and in pools fitted with a salt chlorinator.

MidiHeat is also available in an analog version.

Fast and efficient heating in an new smart design, modern materials and built for the future.











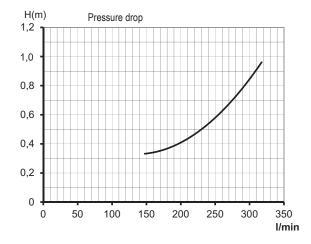




### Digital control panel for the MidiHeat Digital

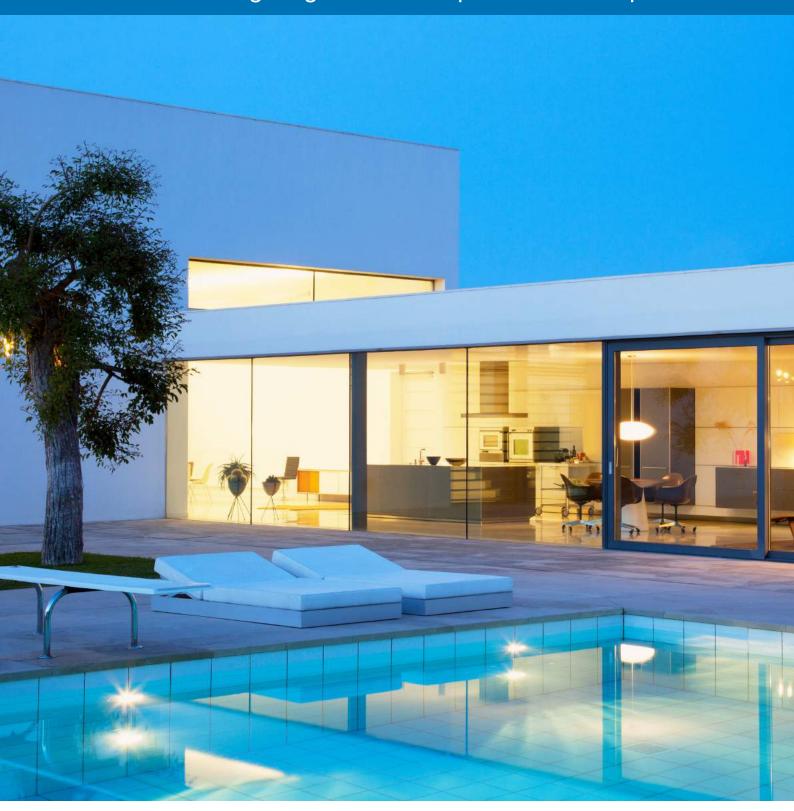
- Digital temperature control 8-45°C
- Master-/slave connect up to nine heaters and control them with a master
- Activation delay adjustable delay time for sequential start of the heating elements, 5-60 seconds
- Temperature offset manually adjust the actual pool temperature, up to ±4°C
- Restore factory settings option for resetting all settings
- Error codes automatic storing of the last ten error messages

- · MidiHeat has two built-in contactors for each element
- · Capacity 18-72kW
- Connect up to nine heaters and control them with a master unit
- MidiHeat is made of powder coated zinc sheet. Heat barrel in glass-fiber reinforced polypropylene
- · Heating elements of titanium
- · Equipped with overheating limit control and flow switch
- · Third-party tested and certified



						Connec-	Min.flow	Max. flow	Max press.
Capacity	Item no.	3~400V	3~415V	Item no.	3~230V	tion Ø 63	170 l/min	300 l/min	2 bar
8kW = 2x9kW	1511018T	18kW 26A	19,5kW 27A	1511218T	18kW 45A	•	•	•	•
kW = 2x12kW	15110101 1511024T	24kW 35A	26kW 36A	15112101 1511224T	24kW 61A	•	•	•	
kW = 2x15kW	1511030T	30kW 43A	32kW 45A	1511230T	30kW 74A	•	•	•	•
kW = 3x12kW	1511036T	36kW 52A	39kW 54A	1511236T	36kW 90A	•	•	•	•
kW = 3x15kW	1511045T	45kW 66A	49kW 69A	1511245T	45kW 114A	•	•	•	•
kW = 4x15kW	1511060T	60kW 87A	65kW 90A	1511260T	60kW 151A	•	•	•	•
2kW = 4x18kW	1511072T	72kW 104A	78kW 108A	-	-	•	•	•	•
echnical data Mi	diHeat Analo	g EHA 380 - 4 <sup>-</sup>	15V/230V						
Capacity	Item no.	3~400V	3~415V	Item no.	3~230V	Connection Ø 63	Min.flow 170 l/min	Max. flow 300 l/min	Max press. 2 bar
. ,	Item no. 1512018T	<b>3~400V</b> 18kW 26A	<b>3~415V</b> 19,5kW 27A	Item no. 1512218T	<b>3~230V</b> 18kW 45A				•
<b>Capacity</b> 8kW = 2x9kW 4kW = 2x12kW						tion Ø 63	170 l/min	300 l/min	2 bar
8kW = 2x9kW	1512018T	18kW 26A	19,5kW 27A	1512218T	18kW 45A	tion Ø 63	170 l/min	300 l/min	2 bar
8kW = 2x9kW $4kW = 2x12kW$ $0kW = 2x15kW$	1512018T 1512024T	18kW 26A 24kW 35A	19,5kW 27A 26kW 36A	1512218T 1512224T	18kW 45A 24kW 61A	tion Ø 63	170 l/min	300 l/min	2 bar •
8kW = 2x9kW $4kW = 2x12kW$ $4kW = 2x15kW$ $4kW = 3x12kW$	1512018T 1512024T 1512030T	18kW 26A 24kW 35A 30kW 43A	19,5kW 27A 26kW 36A 32kW 45A	1512218T 1512224T 1512230T	18kW 45A 24kW 61A 30kW 74A	tion Ø 63	170 l/min •	300 l/min .	2 bar • •
8kW = 2x9kW 4kW = 2x12kW	1512018T 1512024T 1512030T 1512036T	18kW 26A 24kW 35A 30kW 43A 36kW 52A	19,5kW 27A 26kW 36A 32kW 45A 39kW 54A	1512218T 1512224T 1512230T 1512236T	18kW 45A 24kW 61A 30kW 74A 36kW 90A	tion Ø 63	170 l/min	300 l/min	2 bar • •

### Underwater lighting - Creates a pleasant atmosphere



Create a beautiful pool with Pahlén lights. An exclusive light series for those who are in search for high quality and appearance. The polished stainless steel front raises the quality feel in your pool.

### Swimming pool lighting



### Marine

Made of acid proof stainless steel with polished front. Available in PAR 56 halogen and LED.



### Classic

Made of acid proof stainless steel with polished front. Available in PAR 56 halogen and LED.



### 200 lights

Made of acid proof stainless steel with polished front. Easy to install in the pool.



### LED spots

Made of acid proof stainless steel. Available in warm or cold white and RGB.



### **External lights**

Made of acid proof stainless steel with polished front. Easy to install in existing pools.



### Accessories

Stainless steel junction box, cable conduit, safety transformer and niche fixtures.

### Pool lighting recommendations



Our recommendation	ons		
Poolsize	Rec. number of inlet	Rec. number of skimmer	Rec. number of lights
3 x 6 m <30 m <sup>3</sup>	2	1	1
4 x 8 m <50 m <sup>3</sup>	2	1	2
5 x 10 m <75 m <sup>3</sup>	4	2	3
6 x 12 m <110 m <sup>3</sup>	4	2	4





### Marine LED/300

Swimming pool lighting made of acid proof stainless steel with polished front. Under water lighting in the pool creates a pleasant atmosphere. Pool lights makes it possible to use the pool around-the-clock, at the same time as it provides added safety when swimming in the evening.

#### **Features**

WITH LED

- Supplied with a 4 m long 2-wire connecting cable
- LED lamp and cable in one unit. No loose parts, easy to replace
- RGB with 16 different programs, 25W, 1450 Lumen, 120° angle
- White LED, 28W, 2100 Lumen, 9000 Kelvin, 120° angle

### **Features**

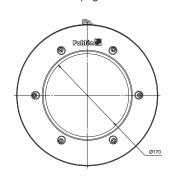
WITH STANDARD PAR 56 300W halogen

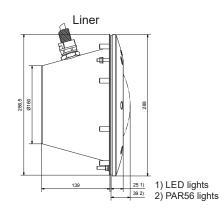
- · Complete unit for simple installation
- Supplied with a 2.5 m long 2-wire connecting cable
- · The water level does not need to be lowered when replacing bulbs
- · Easy to replace. Glass and reflector in one unit
- White, 3800 Lumen, 2700 Kelvin

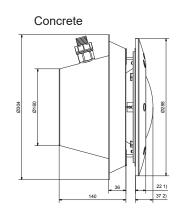
Concrete	pool	
Item no.	Туре	
124281	A-25RGB	LED RGB colored 25W, 12V, IP68. Complete unit with niche.
124381	A-28CW	LED White 28W, 12V, IP68. Complete unit with niche.
124380	A-2	PAR56 White 300W, 12V, IP68. Complete unit with niche.

Liner pool		
Item no.	Туре	
124291	CA-25RGB	LED RGB colored 25W, 12V, IP68. Complete with lamp unit, niche, gasket, screws and a flange.
124391	CA-28CW	LED White 28W, 12V, IP68. Complete with lamp unit, niche, gasket, screws and a flange.
124390	CA-2	PAR56 White 300W, 12V, IP68. Complete with lamp unit, niche, gasket, screws and a flange.
124710	Replacemen	t kit for upgrading Classic existing lighting to Marine.
15530127	Fixing kit for	Marine 300 CA fiberglass/PP pool
822610	Concrete kit	for 300 light, waterproofing with membrane

Accessories see page 55.









### Classic LED

Swimming pool LED light with 16 different programs that provide a fantastic light display in the pool. The LED lights produce a soft and pleasant glow, they are energy effective.

The swimming pool lighting can also be set to produce a fixed glow in red, green, blue or white. Also available in a version with just a fixed white glow.

Made of acid proof stainless steel with polished front. Suits all types of installations. Supplied as a complete unit with a niche for simple installation.

Accessories see page 55.

### LED RGB colored, 25W, 12V, IP68

Item no.	Туре	
123281	A-25RGB	For concrete pools. Supplied complete with niche.
123291	CA-25RGB	For liner pools. Supplied complete with lamp unit, niche, gasket, screws and a flange.

### LED white, 28W, 12V, IP68

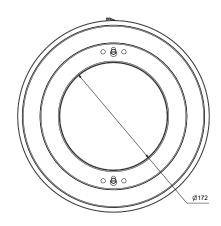
Item no.	Туре	
123381	A-28CW	For concrete pools. Supplied complete with niche.
123391	CA-28CW	For liner pools. Supplied complete with lamp unit, niche, gasket, screws and a flange.

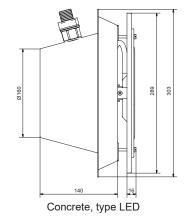
### Accessories Item no.

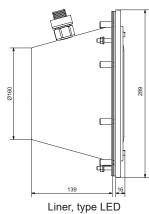
822610 Concrete kit for 300 light, waterproofing with membrane More accessories see page 55.



- Acid proof stainless steel
- LED lamp and cable in one unit
- · Supplied as standard with a 4 m long 2-wire connecting cable
- RGB with 16 different programs, 25W, 1450 Lumen, 120° angle
- White LED, 28W 2100 Lumen, 9000 Kelvin, 120° angle
- Colour synchronization with installation of more than one coloured light through mutal transformer
- Suitable for all types of swimming pools









### Classic 300

Swimming pool lighting made of acid proof stainless steel with polished front. Supplied as a complete unit with a niche for simple installation. PAR 56, 300W, halogen.

#### **Features**

- · Polished front
- · Made of acid proof stainless steel
- PAR 56 300W, halogen, type Sealbeam, glass and reflector in one unit
- 3800 Lumen, 2700 Kelvin
- Type 300 supplied as standard with a 2.5 m long 2-wire connecting cable
- The water level does not need to be lowered when replacing bulbs
- Suitable for all types of swimming pools

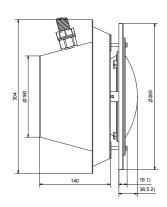
300W, 12V, IP68					
Item no.	Type				
12250	A-2	With 2.5 m cable. For concrete pools. Supplied complete with niche.			
12250M5	A-5	As above with 5 m cable.			
12250M10	A-10	As above with 10 m cable.			
12250M15	A-15	As above with 15 m cable.			
12270	CA-2	With 2.5 m cable. For liner pools. Supplied complete with lamp unit, niche, gasket, screws and a flange.			
12270M5	CA-5	As above with 5 m cable.			
12270M10	CA-10	As above with 10 m cable.			
12270M15	CA-15	As above with 15 m cable			

Under water lighting creates a pleasant atmosphere, makes it possible to use the pool aroundthe-clock and provides extra safety when swimming in the evening.

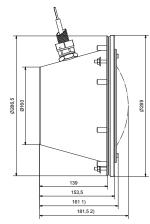
#### Accessories

#### Item no.

15530123 Fixing kit for Classic 300 CA fiberglass/PP pool
822610 Concrete kit for 300 light, waterproofing with membrane
Accessories see page 55.

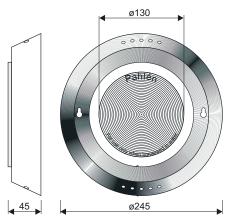


Concrete type 300A



Liner type 300CA





### Light 200

Swimming pool light made of acid proof stainless steel with polished front. Equipped with tempered glass and two 75W halogen bulbs.

#### **Features**

- · Polished front
- · Made of acid proof stainless steel
- · Halogen bulbs
- Supplied as standard with a 2.5 m long 2-wire connecting cable
- · The water level does not need to be lowered when replacing bulbs
- Suitable for all types of swimming pools



#### Item no.

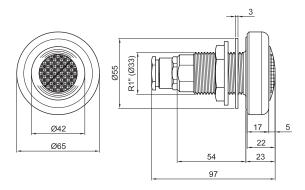
122600 Halogen 150W (2 x 75W). Mounting kit is not included.

Accessorie	Accessories				
122610	Same as item no. 122600 but including high temperature cut out. Mounting kit is not included.				
122601	Mounting kit for liner pools, complete with brackets, screws and water tight cable gland.				
122602	Mounting kit for concrete pools, complete with brackets, screws and water tight cable gland.				



Non leak flange

Spa light

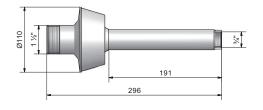


### Spa light

Spa light ideal for lighting in spas, pool stairs, fountains or as spotlights in the pool.

The front is made of polished acid proof stainless steel, with the lamp housing made of chromeplated brass. Supplied as a complete unit and suits all installations.

Spa light 50W				
Item no.				
12265	This unit is supplied as standard with 2.5 m heat resistant silicon cable, fittings and gaskets.			
12265M15	As above with 15 m cable.			
12631	Non leak flange for concrete pool			
12632	Non leak flange for liner pool			





### Spotlight LED

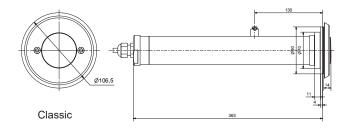
Spotlight ideal for lighting in spas, pool stairs, fountains or as spotlights in the pool. Made of acid proof stainless steel with a polished front. Supplied as a complete unit.

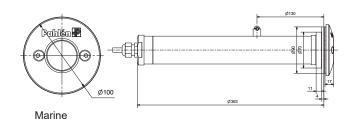
Cold and warm white are dimmable.

Spotlight LED				
Art.nr.	Тур			
125840	CA-6CW	Spotlight LED Classic 350, cold white		
125841	CA-6WW	Spotlight LED Classic 350, warm white		
125842	CA-10RGB	Spotlight LED Classic 350, RGB		
124840	CA-6CW	Spotlight LED Marine 350, cold white		
124841	CA-6WW	Spotlight LED Marine 350, warm white		
124842	CA-10RGB	Spotlight LED Marine 350, RGB		
822600	Concrete kit	for 300 light, waterproofing with membrane		

### **Features**

- Polished front
- · Acid proof stainless steel
- For fitting in pool walls, stairs etc
- · For pools with liner
- For concrete/Insulating blocks, length 350 mm
- Cold white, 6W, 600 Lumen, 5000 Kelvin, 116° angle
- Warm white, 6W, 540 Lumen, 3300 Kelvin, 116° angle
- Color RGB, 10W 400 Lumen, 116° angle
- 12V



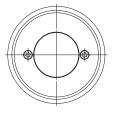


Spotlight LED				
Art.nr.	Тур			
125845	CA-6CW	Spotlight LED Classic, cold white		
125846	CA-6WW	Spotlight LED Classic, warm white		
125847	CA-10RGB	Spotlight LED Classic, RGB		
124845	CA-6CW	Spotlight LED Marine, cold white		
124846	CA-6WW	Spotlight LED Marine, warm white		
124847	CA-10RGB	Spotlight LED Marine, RGB		

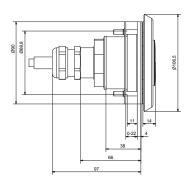


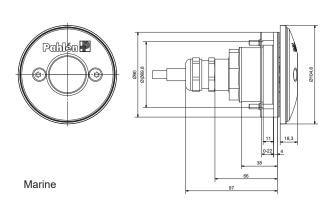


Marine



Classic







### External corner light

With a polished light unit made of acid proof stainless steel for optimum finish and quality.

Easy to install in existing pools.

Highly effective PAR 56 bulb, 300W, halogen.

### Type

304

External light 300W, 12V, IP68 for mounting in the pool corner. Delivered with polished attachment for mounting under the pool coping or deck.

### **Features**

- Polished front
- Made of acid proof stainless steel
- PAR 56 300W, halogen, glass and reflector in one unit
- Supplied as standard with a 2.5 m long 2-wire connecting cable
- The water level does not need to be lowered when replacing bulbs
- Easy to replace. Glass and reflector in one unit
- Suitable for all types of pools
- Suitable for existing pools

# 150 645 820 157

### External wall light

With a polished light unit made of acid proof stainless steel for optimum finish and quality.

Easy to install in existing pools.

Highly effective PAR 56 bulb, 300W, halogen.

#### Item no. Type

12290 303 External light 300W, 12V, IP68 for mounting on the pool wall. Delivered with polished attachment for mounting under the pool coping or deck.

### Accessories



### Cable conduit

Accessories. Protects the cable between the junction box and the lamp unit.

#### Item no.

12330	Protects the cable between the junction box and the lamp unit, length 900 mm.
12854	Jointing sleeve internal ¾" PVC. For extension of cable conduit.



### Safety transformer

Accessories. Transformer with built-in fuse

#### Item no.

12340	Transformer 300W, 12/230V, IP54 with built-in fuse.
12273	Transformer 60W, 12/230V, IP54 with built-in fuse.



### Junction box

Accessories. Stainless steel junction box for jointing between lights and transformer. Connection 3/4" for cable conduit. Sealing sleeve PG16.

#### Item no.

12310	Cable seal in the base, with attachment for cable
	conduit and connection block.



### Niche fixtures

Accessories. Niche fixtures in stainless steel. Recommended for wall type concrete with liner. Recommended for concrete liner pools.

#### Item no.

112900 Niche fixtures, for lights and skimmers, set of 4.

### Concrete kit

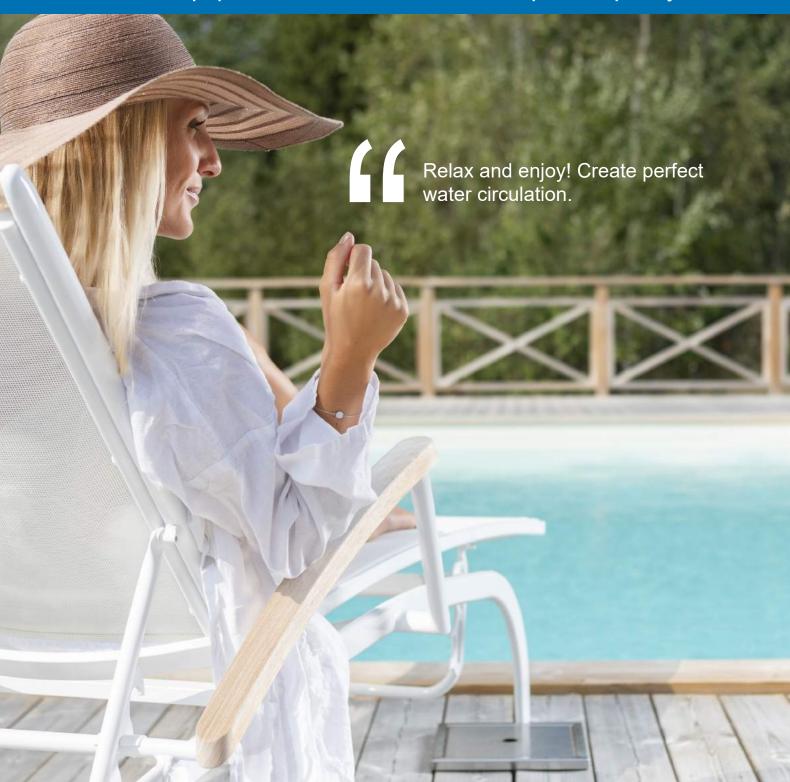
Accessories

822610 For 300 light, waterproofing with membrane

Due to service and parts, we recommend Pahlén original accessories only.



### Pool equipment - Stainless steel for optimal quality



Create a beautiful pool with Pahlén Marine. An exclusive series of inlets, outlets and skimmers to match your wish for high quality and appearance standard. All Pahlén equipment for swimming pools comes out with polished stainless steel fronts.



### Marine

Made of acid proof stainless steel. Available with short neck, standard neck and extended neck.



### Classic

Made of acid proof stainless steel. Available with short neck, standard neck, extended neck and wide.



### Wall and bottom outlets

Made of acid proof stainless steel. Prevents stagnant water at the bottom of the pool.



### **Inlets**

Made of acid proof stainless steel. Distributes the waterflow and returns cleaned and heated water to the pool.



### Wall inlet - Bottom inlets

Made of acid proof stainless steel. The nozzle is secured by barbs inside the pipe.



### Suction nozzles

Made of acid proof stainless steel. Prevents the water from becoming stagnant.



### **Skimmer Marine**

Water leaves the pool through the skimmer which increases the surface flow rate and moves surface debris into the skimmer. The debris are collected in a filter basket and the water flows on to the sand filter for particle cleaning.

Flow capacity max 12 m<sup>3</sup>/h.

### **Features**

- · Adjustable collar
- · Acid proof stainless steel
- Large, high-capacity filter basket
- · Connection for water level control
- Flap weir made of stainless steel
- · Suitable for all liner pools
- Skimmers available with short neck, standard neck and extended neck

Short		Standard		Extended		Skimmer liner pool
Item no.	Туре	Item no.	Туре	Item no.	Type	
124971	CA-K	124981	CA-S	124991	CA-L	Complete with screws and gasket.
124978	CA-KNR	124988	CA-SNR	124998	CA-LNR	Same as above but with openings for water filling, overflow and cable bushing for water level control.
124700		124700		124700		Replacement kit for upgrading Classic skimmer to Marine (liner).

#### Fixture kit

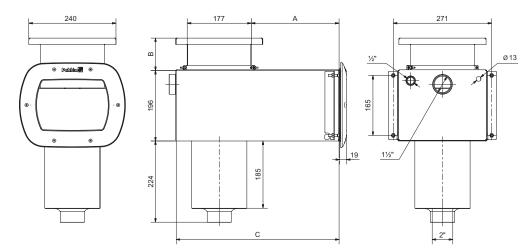
Item no.

112900 Fixture kit, set of 4. Recommended for concrete pool with liner.

Accessories for fiberglass/PP pool

Item no.

15530104 Screw kit, bracket Marine skimmer, fiberglass/PP pool.



Dimensions						
Item no.	Α	В	С			
124971	60	30-120	270			
124978	60	30-120	270			
124981	240	30-120	450			
124988	240	30-120	450			
124991	440	30-120	650			
124998	440	30-120	650			

Type A



Type B



### Skimmer grille

Skimmer grilles prevent large objects from entering the skimmer and for additional safety precausions. Applicable for liner pools and compatible with both new and existing Marine design skimmers.

Item no.	Type	
124705	Α	Skimmer front mesh
124706	В	Skimmer front grille



### **Skimmer Classic**

Water leaves the pool through the skimmer which increases the surface flow rate and moves surface debris into the skimmer. The debris are collected in a filter basket and the water flows on to the sand filter for particle cleaning.

Flow capacity max 12 m<sup>3</sup>/h.

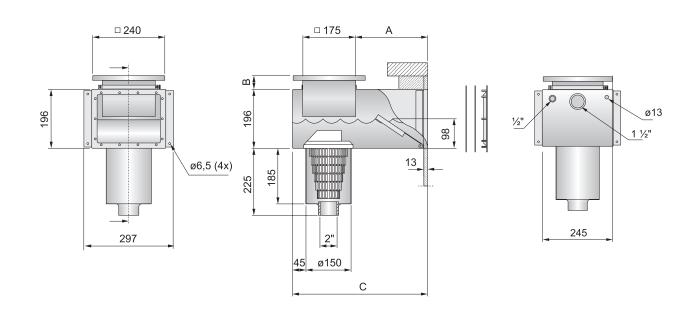
- Polished front
- · Acid proof stainless steel
- · Vertically adjustable collar
- · Flap weir made of stainless steel
- · Polished, pattern-rolled cover
- Equipped with large, high-capacity filter basket
- · Connection for water level control

Short		Standard		Extended		Skimmer liner pool
Item no.	Туре	Item no.	Туре	Item no.	Туре	
112971	CA-K	112981	CA-S	112991	CA-L	Complete with screws and gasket.
112978	CA-KNR	112988	CA-SNR	112998	CA-LNR	Same as above but with openings for water filling, overflow and cable bushing for water level control.

Fixture kit	
Item no.	
112900	Fixture kit, set of 4. Recommended for concrete pool with liner.

Accessories for fiberglass/PP pool		
Item no.		
11266	Frame skimmer fiberglass/PP pool	

Dimensions			
Item no.	Α	В	С
112971	60	30-120	270
112978	60	30-120	270
112981	240	30-120	450
112988	240	30-120	450
112991	440	30-120	650
112998	440	30-120	650





### Skimmer

Water leaves the pool via a skimmer, which makes the flow rate at the surface increase and moves particles on the water surface into the skimmer. For embedment in concrete pools with tile or mosaic.

These particles are collected in a filter basket. Made of acid proof stainless steel.

Flow capacity max 12 m<sup>3</sup>/h.

#### **Features**

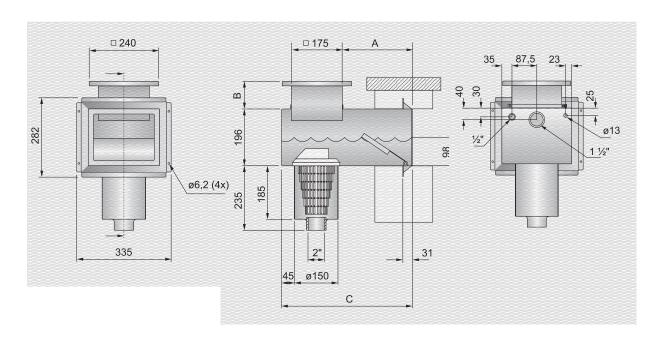
- · Acid proof stainless steel
- · Vertically adjustable collar
- · Flap weir made of stainless steel
- · Polished, pattern-rolled cover
- Equipped with large, high-capacity filter basket
- Connection for water level control

Short		Standard		Extended		
	Item no.	Туре	Item no.	Туре	Item no.	Туре
	112972	A-K	112982	A-S	112992	A-L
	112979	A-KNR	112989	A-SNR	112999	A-LNR

Flange for embedment in concrete wall.

Same as above but with openings for water filling, overflow and cable bushing for water level control.

Dimensions	;		
Item no.	Α	В	С
112972	60	30-120	270
112979	60	30-120	270
112982	240	30-120	450
112989	240	30-120	450
112992	440	30-120	650
112999	440	30-120	650





## Item no.Type112970CA-SWSkimmer Classic Wide 385112960CA-SW6Skimmer Classic Wide 6° 385

### Classic Wide/Wide6° 385

Open wide skimmer in a exclusive design. Classic Wide 385 gives high water level with efficient extraction of debris and circulation for liner swimming pools.

Classic Wide 6° 385 is especially developed for fiber glass-\PP pools with 6 degree angle walls.

Flow capacity max 12 m<sup>3</sup>/h.

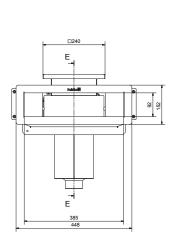
### **Features**

- · Acid proof stainless steel
- · Vertically adjustable collar 30-70 mm
- · Polished front
- Opening: 385 x 92 mm
- · Flap weir made of stainless steel
- Filtration outlet internal thread 2"
- Overflow outlet internal thread 1 ½"
- Water refill inlet internal thread ½"
- Connection for water level control Ø 13 mm
- Large, high-capacity strainer basked

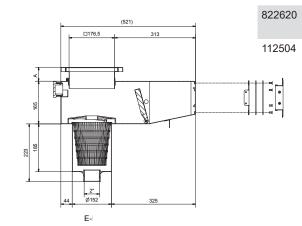
Accessories
Item no.

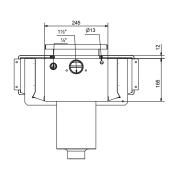
Suitable for fiberglass/PP pool with 6 degree angle walls

with membrane



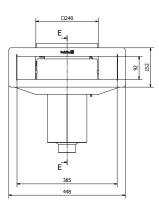
Item no.112970



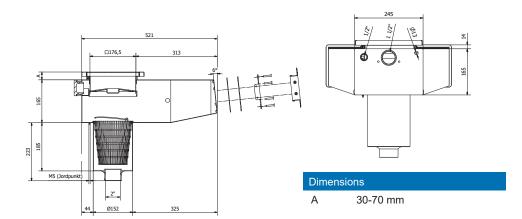


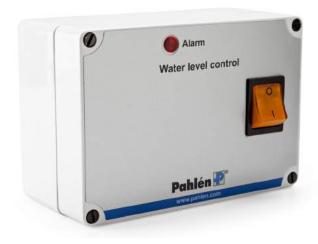
Concrete-kit skimmer WIDE waterproofing

Bracket for level control skimmer/wide



Item no.112960





### Water level control

Tops up the water level automatically when it gets too low in the pool. Can be installed in all types of pools, spas, ponds etc.

Progammable refilling time and equipped with warning light.

#### Item no.

11250	Electronic level control incl. sensor. Built-in safety device with programmable refilling time for solenoid valve.
112501	Solenoid valve ½", soft closing.
112503	Cover made of stainless steel for level control.
112505	Non leak flange for cable of level control.
112504	Bracket for level control skimmer/wide





Features

- Automatic water filling
- Adjustable water filling time
- Equipped with red warning light
- Suitable for all types of pool

Alerts if the water level is too low and refills when needed.





### Wall and bottom outlet

Made of acid proof stainless steel. For deeper swimming pools it is a good idea to install a bottom outlet to prevent stagnant water at the bottom of the pool. Can also be used as outlet for water curtain or massage nozzle. Can be mounted in the wall or in the bottom of the pool.

Recommended flow capacity max 20 m<sup>3</sup>/h.

### **Features**

- · Polished front grating
- · Acid proof stainless steel
- Suitable for all types of pools

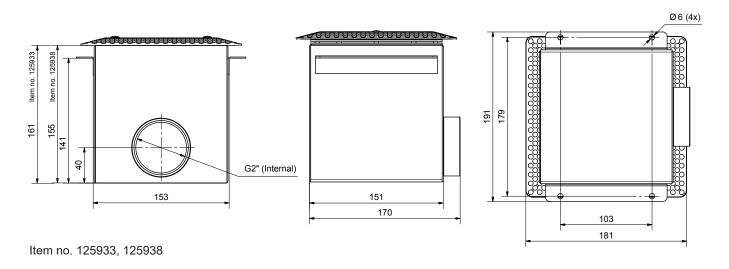
Item no.	Type (side)	Item no.	Type (bottom)	
125933	CA-WBS	125931	CA-WBB	For liner pools. Complete with flange, rubber gasket and screws. The polished grate is detachable with two screws.
125938	A-WBS	125936	A-WBB	For concrete pools. With flanges for embedding in the concrete floor. The polished grate is detachable with two screws.
126751	NLF-20 Non	leak flange	. Acid proof stainl	ess steel, with sealing flange. Inside and outside thread 2". Length 600 mm.

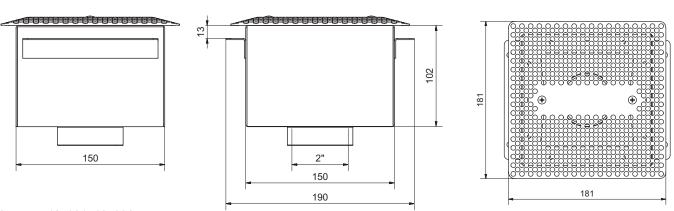
121952 Non leak flange. Acid proof stainless steel, with sealing flange. Outside thread 2". Length 250 mm.

### Accessories for fiberglass/PP pool

#### Item no.

15530132 Fixing kit for wall and bottom outlet fiberglass/PP pool.





Item no. 125931, 125936



### **Inlet Marine**

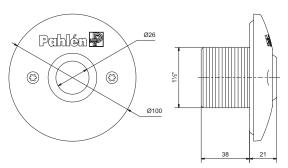
A round, compact and elegant inlet with a polished front. Depending on the size of the pool, you will need two or more inlets that effectively distributes the waterflow and returns cleaned and heated water to the pool. Made of bronze and acid proof stainless steel.

Recommended flow capacity max 6 m<sup>3</sup>/h.

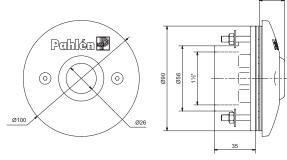
Item no.	Type	
124500	CA	For liner pools. With screws and rubber gasket.
124505	Α	For concrete pools. Acid proof stainless steel.
124720	Replace	ement kit for upgrading Classic inlet to Marine (liner)

#### **Features**

- · Acid proof stainless steel and bronze
- Adjustable nozzle Ø 26 mm
- Suitable for all types of swimming pools

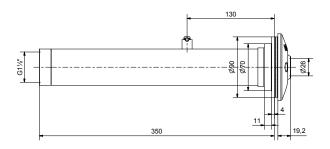


Item no. 124505



Item no. 124500





### **Inlet Marine 350**

Complete inlet with casting tube, including screws, flange and rubber gasket.

Recommended flow capacity max 6 m<sup>3</sup>/h.

Item no.	Туре	
124815	CA	Marine, concrete/liner

- All stainless steel
- Internal thread 1 ½"
- Adjustable jet nozzles Ø 26 mm.
- For concrete/insulating blocks, length 350 mm

Accessories			
Art.nr.	Тур		
822600	Concrete kit, waterproofing with membrane		



### **Inlet Classic**

Ø104

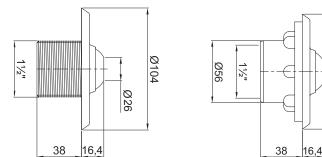
The water returns to the pool cleaned and heated via the inlets. These can be directed slightly upwards to facilitate cleaning of the surface water. Made of bronze with front of acid proof stainless steel.

Recommended flow capacity max 6 m<sup>3</sup>/h.

Item no.	Type	
125990	CA	For liner pools. With screws and rubber gasket.
126090	Α	For concrete pools. Acid proof stainless steel.

#### **Features**

- · Acid proof stainless steel, polished front
- Adjustable nozzle Ø 26 mm
- · Suitable for all types of pools

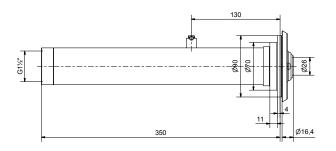


Item no. 126090

Item no. 125990

# Accessories fiberglass/PP pool Item no. 15530110 Fixing kit for inlet fiberglass/PP pool





### Inlet Classic 350

Complete inlet with casting tube, including screws, flange and rubber gasket.

Recommended flow capacity max 6 m<sup>3</sup>/h.

Item no.	Туре	
125815	CA	Classic, concrete/liner

- All stainless steel
- Internal thread 1 ½"
- Adjustable jet nozzles  $\varnothing$  26 mm.
- For concrete/insulating blocks, length 350 mm

Accessories	
Art.nr.	Тур
822600	Concrete kit, waterproofing with membrane



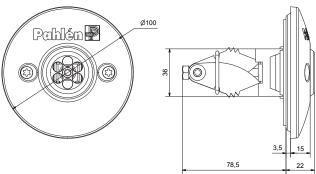
### Inlet anchoring bracket Marine

Wall inlets are designed for mounting onto the end of a molded PVC pipe, PN10/16 with an outer diameter  $\varnothing$  50 or  $\varnothing$  63 The nozzle is secured by barbs inside the pipe. The pools flow can be directed by turning the ball in the desired direction.

Recommended flow capacity max 10 m<sup>3</sup>/h.

#### **Features**

- · Anchoring bracket
- Adjustable nozzle mesh Ø 7 mm
- For mounting in a concrete pool with casting pipes
- Acid-proof stainless steel
- PVC pipe PN10/16 with an outer diameter of Ø 50 or Ø 63 mm



Item no.	Type	
126102	Α	Marine inlet anchoring bracket

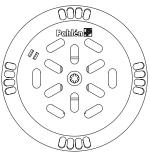


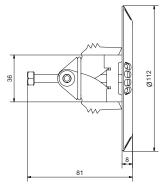
### Bottom inlet anchoring bracket

A bottom inlet designed for mounting onto the end of a molded PVC pipe, PN10/16 with an outer diameter  $\varnothing$  50 or  $\varnothing$  63. The nozzle is secured by barbs inside the pipe. The flow can be regulated in eight different positions on the front of the inlet.

Recommended flow capacity max 15 m<sup>3</sup>/h.

- · Anchoring bracket
- · Adjustable flow
- For mounting in a concrete pool with casting pipes
- · Acid-proof stainless steel
- PVC pipe PN10/16 with an outer diameter of Ø 50 or Ø 63 mm





Item no.	Туре	
126110	Α	With anchoring bracket



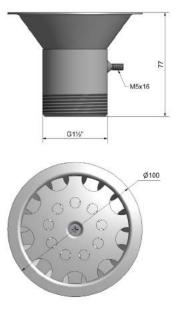
### Bottom inlet nozzle

Made of acid proof stainless steel with polished adjustable front. Recommended for larger pools and public facilities. Placed in the bottom of the pool to ensure the water keeps circulating. Suitable for concrete pools.

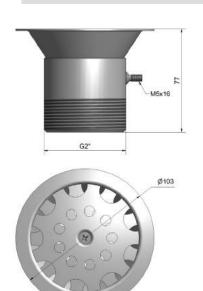
12550 Recommended flow capacity max 6 m $^3$ /h. 12560 Recommended flow capacity max 8 m $^3$ /h.

Item no.	Type	
12550	A-1	Adjustable for different flows. Outside thread 1 $\frac{1}{2}$ ". For concrete pools.
12560	A-2	As above but with outside thread 2".

- · Polished front
- · Acid proof stainless steel
- Adjustable water flow
- Suitable for concrete pools







Item no.12560





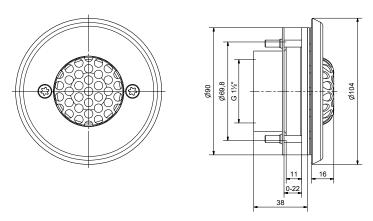
### Suction nozzle Classic

A suction nozzle is recommended near the bottom of the pool to prevent the water from becoming stagnant.

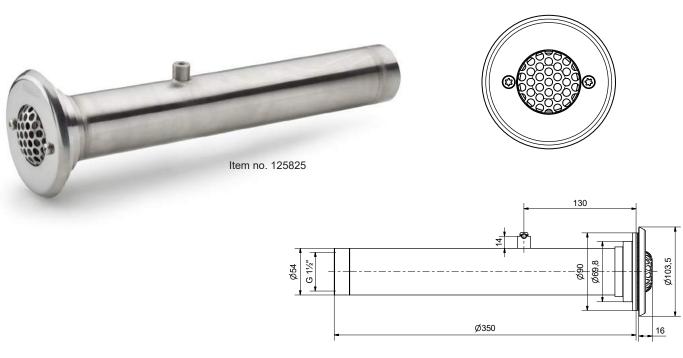
Recommended flow capacity max 2 m<sup>3</sup>/h.

Item no.	Type	
125820	CA	Bronze, front with acid proof stainless steel, screws and rubber gasket. Grille opening. Inside thread 1½". For liner pools.
12650	Α	Acid proof stainless steel. Grille opening. Outside thread 1 $\frac{1}{2}$ ". For concrete pools.
125825	CA	Suction nozzle Classic 350. Acid proof stainless steel. Inside thread 1½. For concrete and liner pools.

Accessories	
Item no.	
15530110	Fixing kit for nozzle fiberglass\PP pool
822600	Concrete kit waterproofing with membrane



- · Polished front
- · Acid proof stainless steel
- Suitable for all types of pools





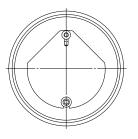
### Vacuum hose connection Classic

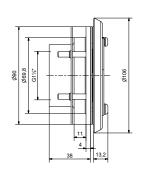
Made of bronze, front with acid proof stainless steel. If the pool is equipped with an overflow, a vacuum hose connection is used for the vacuum hose during cleaning of your pool.

Item no.	Type	
125830	CAA	Acid proof stanless steel. For concrete and liner pools. Inside thread 1 $\frac{1}{2}$ ".
125835	CA	Classic 350. Acid proof stanless steel. For concrete and liner pools. Inside thread 1 ½".

### **Features**

- · Polished front
- · Acid proof stainless steel
- Suitable for all types of pools
- Suction nozzle with cover equipped with turning cover



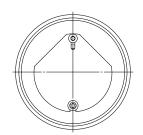


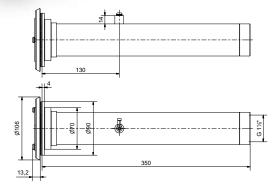


#### Accessories

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15530110	Fixing kit for nozzle fiberglass\PP pool
822600	Concrete kit waterproofing with membrane





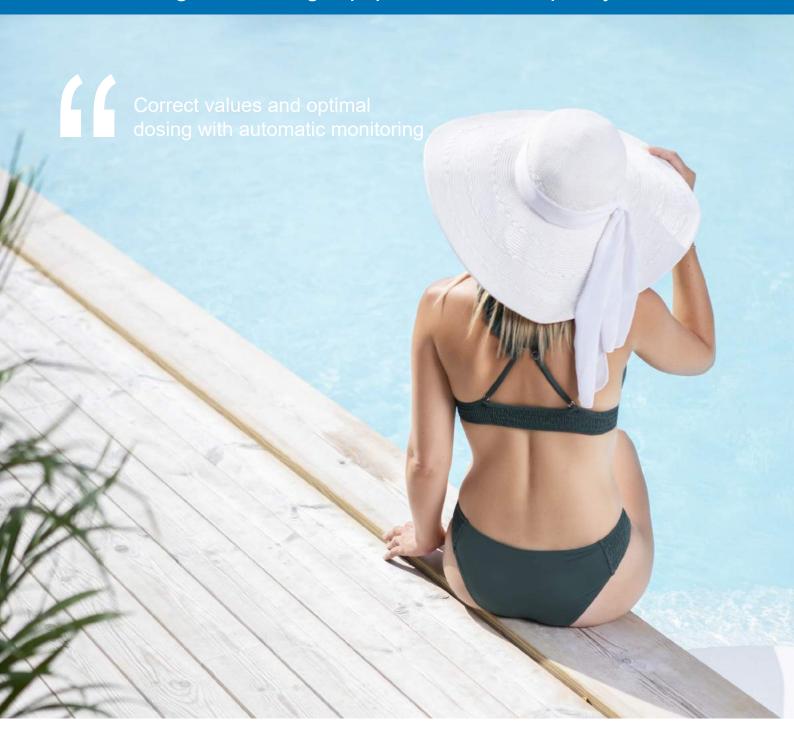
### Non leak flange

Non leak flange in acid proof stainless steel. For inlets and suction nozzles in concrete walls.



Accessories for concrete pools		
Item no.	Туре	
12670	NLF290	With sealing flange. Inside and outside thread 1 ½". Length 290 mm.
12675	NLF600	As above but with length 600 mm.
12640	NLF255	With sealing flange. Inside thread 1 ½". Length 255 mm.
126751	NLF600	With sealing flange. Inside and outside thread 2". Length 600 mm.
126952	NLF250	With sealing flange. Inside and outside thread 2". Length 250 mm.

### Measuring and dosing equipment - Water quality that lasts



Reduce the needs of expensive chemicals. With a Pahlén Autodos installed in the system, water quality is continuously monitored and a suitable dose of chemicals are supplied, leading to a better consumption, as chlorine and pH levels are maintained at a constant level and unnecessary high values are eliminated. An optimum solution that results in lower costs and favors both bathers and environment. Additional control and disinfection are obtained with a Pahlén CO<sub>2</sub> unit and UV light.

### Measuring and dosing equipment



### **Autodos**

Monitoring and dosing system for pH and chlorine in the form of redox, free chlorine and combined chlorine.



### MiniMaster

Offers you continuous monitoring and automatic dosing.







### Dosing pumps

Dosing pumps for injecting chlorine or pH-regulating agents.





### pH-MaxiDos and pH-MiniDos

Safer, dependable and easy to use systems for pH reduction in the pool by carbon dioxide gas.



Auto UV titanium

Reduce your chlorine content by up to 70% with UV light.

### Measuring and dosing equipment



### MiniMaster for private pools

pH and free chlorine or redox. Dual channel version with electrode kit for pH and free chlorine measuring or with pH and redox (ORP) measuring. MiniMaster is also available in a single channel version with electrode kit for monitoring pH or free chlorine. MiniMaster measuring unit offers you continuous monitoring and automatic dosing (disinfection) to safeguard water quality in the same way as in public pools. With a MiniMaster installed in your pool, you need never again to worry about your water quality – The MiniMaster handles it all automatically.

### Suits most types of pools

MiniMaster is available in several versions to suit most pool types. A MiniMaster equipped with all the options is a complete measuring and dosing unit. The water's pH level is measured with the help of pH electrodes and chlorine and redox levels are checked using a free chlorine or redox electrode. Clear and easy-to-see LEDs show the status of your water quality.

Technical data					
	pH & chlorine	pH & redox	Chlorine	рН	
Power consumption excl. dosing equipment	4W	4W	2W	2W	
Power consumption dosing equipment (max)	2X100W	2 x 100W	100W	100W	
Rated current	1A				
Rated voltage	220-240 1~N 50/60Hz				
Temperature range	0 to +45°C				
IP class	IP44				

Measures and doses chemicals automatically. Provides optimal water quality with automatic monitoring.

- Digital LED control panel
- Flow meter
- Pre filter
- Tiltable flow cell module
- Transparent flow cell
- Automatic measurement of water quality
- Operates dosing equipment for chlorine and pH

MiniMaster-kit				
Item no.	Complete kit with MiniMaster, electrode kit, dosing pump, saddle clamp and collecting vessel			
33034	MiniMaster-package chlorine & CO <sub>2</sub>			
33033	MiniMaster-package chlorine & acid			
33036	MiniMaster-package redox & acid			
33037	MiniMaster-package redox & CO <sub>2</sub>			

Ordering guide						
MiniMaster and electrode kit						
Item no.	pH & chlorine	pH & redox	chlorine	рН		
416620 MiniMaster	•					
416621 Electrode kit	•					
416600 MiniMaster			•			
416601 Electrode kit			•			
416610 MiniMaster				•		
416611 Electrode kit				•		
416630 MiniMaster		•				
416631 Electrode kit		•				
Option						
413335 Peristaltic pump	•	•	•	•		
414810 pH - MiniDos CO <sub>2</sub>	•	•		•		
Chemicals not included.						







# For additional options and disinfection

# pH - MiniDos CO<sub>2</sub>

Option. Dependable and easy to use system for pH reduction in the pool by CO<sub>2</sub> gas. Read more on page 81.





Option. Disinfects the water using ultraviolet light and can reduce the pool water's chlorine content by up to 70%. Auto UV titanium creates bacteria-free water with minimum chlorine smell. Read more on page 80.

# Peristaltic pump

Option. In order for dosing to take place accurately and correctly, a pump is used since this provides steady, uniform dosing of liquid chemicals. The pump is factory-calibrated to function with most pools as soon as the MiniMaster is started up. If necessary, dosing capacity can be adjusted to suit your specific pool.



Technical data	
Max pressure	1.5 bar
Suction height	1.5 m
Pump output	3.5W
Hose material	Resistant to chlorine and acid
Max. capacity	4 l/h



#### **Autodos**

Autodos is a well known, and reliable technology when it comes to measuring and dosing. Autodos is available in a variety of versions and can monitor pH and chlorine in the form of redox, free chlorine and combined chlorine.

Pahlén's own developed Autodos is available for all requirements, from the Autodos M1 which is a single-channel instrument for monitoring of pH, redox, free chlorine or total chlorine, to the most advanced Autodos M3 which is a three-channel instrument for monitoring of pH, free chlorine and combined chlorine or redox.

#### RAM

Manage and analyze Autodos on internet cloud service. Read more on page 76-77.

#### **Features**

- Measures free chlorine, pH, redox, combined and total chlorine
- · Automatic chemical dosing
- · Dosing output: on/off, frequency pulse or 4-20mA
- · Temperature sensor
- · Electronic flow meter
- Alarm and built-in safety functions
- · User access protection
- pH and flow compensated free chlorine measurement
- Option Modbus RS485 for external monitoring, logging and alarm management
- · Gas-proof electronic housing safeguards long life operation

Autodos is easy to use and provides exact readings for accurate monitoring and disinfection of pool water. It is also extremely easy to monitor and control the water quality.

## **Ordering Guide**

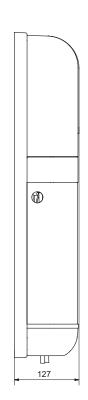
A complete Autodos consists of Autodos and electrode kit (sold separately). For additional control, a dosing pump and external cable can be purchased. Additional accessories such as chemical tank, collecting vessels and mixers are also recommended. Electrode kit is supplied complete with buffer agents. Chemicals not included.

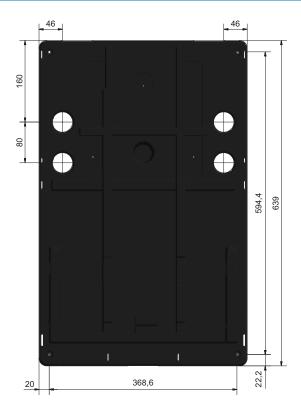


Autodos M1	Autodos M2	Autodos M3		
Item no.	Item no.	Item no.		
416500 Autodos M1 free chlorine	416540 Autodos M2 pH and free chlorine	416560 Autodos M3 pH, free chlorine		
416510 Autodos M1 pH	416550 Autodos M2 pH and redox	and redox		
416520 Autodos M1 redox	416541 Electrode kit M2, PB200	416570 Autodos M3 pH, free and combined chlorine  416561 Electrode kit M3 PB200 free chlorine, pH and redox		
416530 Autodos M1 total chlorine	free chorine, pH			
416501 Electrode kit M1, PB200 free chlorine	416542 Electrode kit M2 CLE3 - 10ppm free chlorine, pH			
416502 Electrode kit M1 CLE3 - 10ppm free chlorine	416543 Electrode kit M2 CLE3 - 20ppm free chlorine, pH	416562 Electrode kit M3 CLE3 - free chlorine 10ppm, pH and redox		
416511 Electrode kit M1 pH	416551 Electrode kit M2 redox, pH	416571 Electrode kit M3 PB200 - free and		
416521 Electrode kit M1 redox	4 1000 1 Electrode Nit WZ Todox, pri	CTE combined chlorine , pH		
416521 Electrode kit M1 redox	410331 Electrode Kit MZ Tedox, pn	CTE combined chlorine , pH		

416531 Electrode kit M1 CTE1 total chlorine











For additional options and disinfection

# Increased disinfection - UV light

Auto-UV titanium

Option. Disinfects the water using ultraviolet light and can reduce the pool water's chlorine content by up to 70%. Auto UV titanium creates bacteria-free water with minimum chlorine smell.

Read more on page 80.

# Extra monitoring with CO<sub>2</sub>

pH-MaxiDos

Option. A dependable and easy to use unit for pH reduction in the pool. Read more on page 81.





# Pahlén Cloud Service Two choices of gateways for Ethernet connection or Mobile network uplink. Cloud service access by any platform; PC, smartphone, tablet. Cloud service Cloud service

# Autodos® RAM Remote Access Monitoring

With Autodos® RAM it is easy to analyze your Autodos-system online. A turnkey solution for a complete IT-infrastructure without building own network management. The cloud service is online and all data is stored on remote secure global servers.

Graphical log data for every value measured by Autodos. Built-in reporting tool for accessing detailed weekly export report. Additional features for historical comparison of values, Google maps function for easy overview, managing and access to several projects and systems.

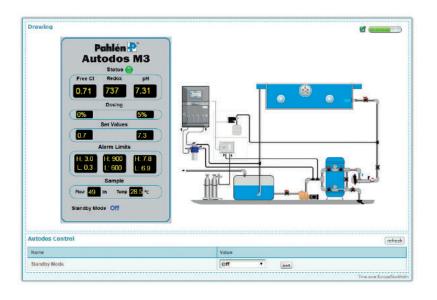
#### **Features**

50 000 log points included/system and year

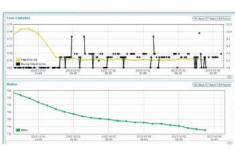
PC/Smartphone/Tablet

- · Regular reports
- History logs with measured data and alarms
- Up to 9 system languages available
- · Map function showing system locations
- Two user login for individual project access with customized user rights
- · Report module for online data or trend analysis
- Active alarms online or via e-mail/SMS
- No software needed, access via web browsers; e.g. Firefox, Safari or Chrome etc.

# Manage and analyze Autodos on internet cloud service.









# System components

- System compability with Autodos M1-M2-M3 \*
- Modbus-RTU communication interface
- Gateway modules for Ethernet (WAN) or mobile (GPRS/3G) uplink
- \* Autodos software from version 5.6

#### Item no.

416209

- Internal communication module Autodos



## EC220 - Gateway Mobile

Wireless gateway
Modbus-RTU interface
Metal casing, wall mount
Dimensions 92 x 115 x 25 mm
Operating temperature -30 to +65 °C
Power supply 9-24 V DC

Network access: Custom/standard SIM through GPRS Quad band Class 12. 850/900/1800/1900 MHz SIM card not included.

Item no.	Туре	
416230	EC220	- External web-module for GPRS/3G uplink - Including subscription cloud-service 12 month.



## EC310 - Gateway Ethernet

- Modbus-RTU interface
- Metal casing, wall mount
- Dimensions 92 x 135 x 27 mm
- Operating temperature -40 to +65 °C
- Power supply 12-48 VDC

Network access: Ethernet 10/100 Mbit/s

Item no.	Type	
416231	EC310	<ul><li>External web-module for Ethernet uplink</li><li>Including subscription cloud-service 12 month</li></ul>



# Accessories

## Dosing pumps with reliable dosing

Dosing pumps for injecting liquide chlorine or pH-regulating agents. The pumps are microprocessor-controlled and magnetically operated for maximum dependability and dosing precision. The pumps offer a wide range of settings. The liquid end is manufactured from plexiglass and the suction and pressure details are of PVDF. These materials are chosen for their known resistance to the majority of chemicals used in water treatment. The pump can be controlled on/off or externally by pulses from a monitoring and controlling device, for example by using an Autodos with an external cable (optional).



#### Beta/4B

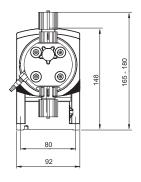
Dosing pump Beta with plexiglass liquid end (NPE) excl. Beta/4B 0400 PPT. All pumps have on/off or frequency control and are supplied with injection and foot valves and 2 m of suction and 5 m of pressure hose.

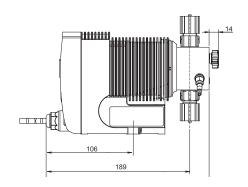
Technical	data				
Item no.	Type	Connection mm	Max capacity I/h	Max capacity ml/stroke	At max pressure bar
413330*	Beta/4B 0400	6 x 4	0.8	0.07	4
413331	Beta/4B 0402	12 x 6	2.9	0.27	4
413332	Beta/4B 0408	12 x 6	8.1	0.75	4
413333	Beta/4B 0220	12 x 9	19.0	1.76	2
413334	Beta/5B 0232	12 x 9	32.0	2.96	2

<sup>\*</sup> Beta/4B 0400 is a flocculation pump.

#### **Features**

- High precision
- Magnetic dosing pump
- Adjustable capacity
- Multifunctional valve (option)
- Wear resistant operation
- External cable (option)





## Concept

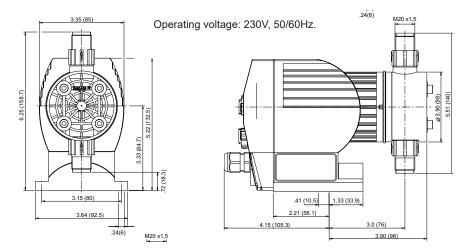
Dosing pump with liquid end of PVDF. The pump has on/off or frequency control and is supplied with injection and foot valves and 2 m of suction of pressure hose and a 5 m external cable.

Technical	data				
Item no.	Туре	Connection mm	Max capacity I/h	Max capacity ml/stroke	At max pressure bar
413340	Concept plus 1002	6 x 4	2.6	0.24	5



#### **Features**

- High precision
- Chemical resistant material
- Realible
- Easy installation
- Small and compact
- Simple adjustment
- External cable included



# Accessories



## Chemical cabinet

Intended for storage of liquid chlorine or acid. The cabinet is made of PP plastic with a well welded bottom, which acts as a fitting for possible leakage.

Possibility for connection of ventilation Ø125 mm. As an additional security to prevent any unauthorized access e.g. a padlock can be connected. The cabinet is intended for storage of 1st 25l standard container or 1st 35l chemical vessel (item. no. 41501).

#### Item no.

413300 Ø 125 utside 400 x 400 x 1050 mm (W x D x H)

#### **Features**

- Collecting vessel
- · Possibility of ventilation
- Lockable



#### External cable for frequency controlled pump

Item no.

41366 External cable Beta, 2-wire 5 m



#### Wall mounting bracket

Item no.

41378 Wall mounting bracket BETA/Concept



#### Float switch

#### Item no.

41372 Float switch BETA 2 m cable41373 Float switch BETA 5 m cable



#### Complete flocculation station

#### Item no.

41330 Flocculation station incl. 60 I tank and pump.BETA/4B 0400 and dosing valve, foot valve, suction and pressure hose.



#### Chemical tank

Store your "liquid" chlorine or acid in a safe tank.

#### Item no.

41501	Chemical tank 35 l
41502	Chemical tank 60 l
41503	Chemical tank 100 l
41500	Chemical tank 140 l



#### Mixers for different sizes of tanks.

Item no.	
41516	Mixer manual 35/60 I
41515	Mixer manual 100 l
41517	Mixer manual 140 l
41518	Mixer manual 250/500 I



#### Collecting vessel

Ensures that no liquids get mixed in case of leakage from chemical tank.

41512	Collecting vessel for 35 I
41507	Collecting vessel for 60 I
41513	Collecting vessel for 100/140 I



#### Multi function valve

#### Item no.

413745 1,5-6 bar Beta/B 0400 - 0220, Concept

413755 1,5-6 bar Beta/B 0232

# **UV-disinfection**



## Auto-UV titanium

The Pahlén Auto-UV titanium is designed for disinfection of water in pools and spas. With the Auto-UV titanium you can reduce your chlorine content by up to 70%. The result is also a swimming pool with less combined chlorine, which makes a more pleasant bathing environment without irritations like red eyes, the smell of chlorine or the risk of allergies. Optimal neutralisation of bacteria, viruses and algae.

The UV lamp produces short-wave ultraviolet UVC radiation with a 254 nm wavelength. This wavelength is optimal for neutralising bacteria, viruses and algae. As a result your pool water is crystal-clear and pleasant. When the Auto-UV is in operation this is shown by a blue indicator at the top of the unit.

# Safe and efficient disinfection of your pool water



#### Electronic panel with LEDs

- Operation indicator shows the number of hours the unit has been in operation
- Timer flashes when 1000 hours of operating time remain
- Display indicates when the UV lamp has come to the end of its lifetime.

With the Auto-UV titanium you can reduce your chlorine content by up to 70%.

#### **Features**

- · UV lamp encased in casing made of titanium
- Electronic box contains adjustment control, timer and on/off switch
- Digital counter
- · Built-in indicator for alerting when lamp needs to be replaced
- UV lamp for optimal neutralisation of bacteria, viruses and algae
- Reduces the concentration of combined chlorine in the pool
- · Light indicator shows operation status in a blue light
- Delivered complete in one single unit
- Easy to install



Technical	data									
Item no.	Lamp	Lifetime lamp	Voltage 1∼	Current	UVC-radiation wavelength	UVC- radiation	Max pressure	Max flow	Connection	Max water temperature
417760	75W	9000 h	220-240	0.5 Amp	254 nm	25W	4 bar	250 l/min	2"	45°C
417770	130W	9000 h	220-240	0.8 Amp	254 nm	43W	4 bar	250 l/min	2"	45°C

# CO<sub>2</sub> - pH regulation



#### Item no.

414810

Complete with control unit, valve 5 bar for one bottle, injector and check valve with connection ½", 5 m gas hose 6 x 8 mm. Gas bottle not included.

#### pH - MiniDos

Pahlén pH-MiniDos is stable and easy to use for stabilizing the pH value with  ${\rm CO_2}$  (carbon dioxide). For use in private pools.

pH-MiniDos is a control unit that is easily operated via MiniMaster. The MiniMaster measures the waters pH and sends signals to the pH-MiniDos, which with high precision, doses the exact amount of CO<sub>2</sub> needed for the pool.

#### **Features**

- · High safety
- User-friendly
- Reduces the water's corrosiveness and stabilizes pH value
- · Operated via MiniMaster
- · Operational indication light for dosage
- · Safety bracket for gas bottle

A stable and correct pH-level is important to both the environment and safety aspect for the bathers.



#### Item no.

414800

Complete with control unit  ${\rm CO}_2$  valve 6 bar for one bottle, injector and check valve with connection ½", 10 m gas hose 6 x 8 mm. Gas bottle not included.

## pH-MaxiDos

pH-MaxiDos is a dependable and easy to use for pH stabilization in the pool. The unit is controlled via Autodos and suits all pool types. The gas flow is easy to adjust and is read off the flow meter. Connection with an external alarm function possible. For use in public facilities.

#### **Features**

- · High safety
- · User-friendly
- Reduces the water's corrosiveness and stabilizes pH value
- Operated via Autodos
- · External alarm function
- Operational indication light for dosage
- · Safety bracket for gas bottle



CO<sub>2</sub>-Alarm

#### CO<sub>2</sub>-alarm

Item no.

414820 CO<sub>2</sub>-alarm for increased safety

If the gas bottle is installed in a closed space, a CO<sub>2</sub>-alarm should be installed for increased safety in case of leakage. The alarm measures the CO<sub>2</sub> level in the installed space. The alarm is fitted with a clear LED-display that changes color depending on the status.

Green = Normal, Yellow = Increased, Red = High



Flash siren

Two different modes available:

- Flash light and buzzer
- Flash light only

# Water quality - Keep an eye on the values!



Simple instruments for your swimming pool monitoring and maintenance. A cloudy pool can mean that the pH value and chlorine levels are wrong. Many bathers, sun oils and other contaminants in the water make the pool water out of balance, so that bacteria and algae begin to flourish. Taking care of ones pool should be a natural part of bathing and should be as simple and fast as possible.

# Test instruments and pool care



Digital, advanced monitoring equipment for larger pools and public facilities.

## Advanced monitoring equipment

Autocheck 3i is a digital photometric monitoring equipment for free and total chlorine, pH, cyanuric acid, calcium hardness and total alkalinity. Digital readouts. Date and time in real time.

Autocheck 3i has built in date and time for storing measurements. Up to 16 measurements can be stored before the first is overwritten.

Measure range: Chlorine (free and total) 0.05-6.0 mg/l

pH 6.5-8.4

Cyanuric acid 0–160 mg/l Calcium hardness 50–500 mg/l Total alkalinity 5–200 mg/l

#### **Features**

- · Factory-calibrated
- Easy to use
- Illuminated display
- · Automatic switch-off
- Tablet reagent for water parameter included

#### Item no.

212994

Equipment for free and total chlorine, pH, cyanuric acid, calcium hardness and total alkalinity.



## Autocheck 15

Autocheck 15 is a very simple but effective digital measuring instrument.

Autocheck 15 helps you test your values quickly and accurately. The integrated test chamber is filled by immersing it in water. A test tablet is added and the values measured photometrically. The result is displayed on the digital screen.

Autocheck 15 measures with accuracy the water's chlorine content (free and total), alkalinity, pH and cyanuric acid photometrically.

Measure range: Chlorine 0.1-6.0 mg/l

pH 6.5-8.4

Cyanuric acid 1–160 mg/l Total alkalinity 0–300 mg/l Brom 0,2 - 13,5 mg/l

#### Item no.

212993

For high accurancy measuring of the pools chlorine content (free and total), pH, cyanuric acid, and total alkalinity.

#### **Features**

- Waterproof
- Digital display
- · Easy to use
- Comes with battery and test tablets

As with professional equipment, Autocheck 15 reads the water quality photometrically and displays the results digitally.

# Test instruments and pool care



## Salt meter SD 90

SD90 is a small and compact measuring unit for measuring salinity. Up to 25 different separate readings with date, time and temperature can be stored. An illuminated LCD display shows the results and temperature simultaneously, while other information with date and time are displayed with a simple press of a button.

Measure range: 0-2000 ppm 2-20 ppt

0-2 %





Accessories					
Item no.					
212981	Measuring glass Ø 24 mm to Autocheck I, II and III				
212982	Measuring glass Ø 16 mm to Autocheck II				
212901	Measuring glass cuvette square				
212985	Tablet crusher/stiring rod				



Accessories						
Item no.		Autocheck I	Autocheck II	Autocheck III/3i	Autocheck 10	Autocheck 15
212916	Free chlorine DPD No.1, 100 tablets	Х	Х	Х		X
212915	Free chlorine DPD No.1, 500 tablets	X	X	X		X
212926	pH phenol red, 100 tablets	х	Х	X		х
212925	pH phenol red, 500 tablets	X	X	X		X
212936	Total chlorine DPD No.3, 100 tablets	х	х	X		X
212935	Total chlorine DPD No.3, 500 tablets	Х	Х	X		X
212956	Cyanuric acid, 100 tablets	Х	Х	Х		X
212966	Alkalinity, 100 tablets		X	X		X
212976	Calcium hardness, 100 tablets**		х	Х		
212971	Calcium hardness 1-2, 10 tablets*			X		
212870	pH phenol red, 50 tablets				x	
212910	DPD1 free chlorine, 50 tablets				X	
212930	DPD3 total chlorine, 50 tablets				X	
212950	Cyanuric acid, 50 tablets				X	

<sup>\*</sup>Only for use in Autocheck 3i

<sup>\*\*</sup>Only for use in Autocheck 3

# Test instruments and pool care



## Vacuum cleaner trolley

In large pools and public facilities, it is more practical to use a vacuum cleaner trolley. Stainless steel container with a filter cartridge, filter area  $9.7~\rm m^2$ , which gives the filter a long operating time.

Pump 0.55 kW made of bronze, with high capacity ( $12 \text{ m}^3\text{/h}$ ). Air evacuation from the suction hose is handled automatically by the pump. Supplied with 25 meters of cable and motor cut out for a singlephase electrical connection.

#### **Features**

- · Pump made of bronze
- · Stainless steel container
- · Equipped with replaceable filter cartridge
- · Convenient operation as all equipment is fitted to one trolley
- · Supplied complete with ground fault relay

#### Item no.

31225 Vaccum cleaner trolley

#### Accessories

#### Item no.

17010116 Vacuum hose, silver (sold in /m, max 25 m)

17010015 Vacuum hose end adapter

Practical for larger pools and public facilities.



# Dimensioning heat exchanger online

# Pahlén has developed a calculation program for Pahlén's range of heat exchangers.

A heat exchanger is to transfer energy (heat) from one medium to another, e.g. from electric, firewood, pellets or oil-fired boilers, heat pump or solar panel systems. The heat exchangers can not create energy on their own. The heat source should match the heating requirements for the pool.

## Pahlén has an extensive experience in dimensioning and heat calculation

Our calculation program for heat exchangers can be used to assist in decision making. The heat requirement for each pool is unique and is affected by a variety of factors such as isolated/non-isolated pool, above ground pool/inground pool, pool cover, etc.

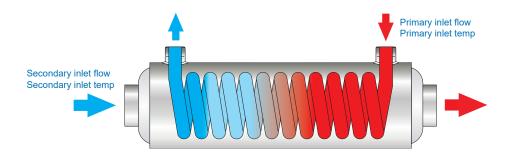
A heat exchanger consists of a primary side where the hot water comes from the heat source and a secondary side where the pool water passes through the heat exchanger. To ensure an optimum heat transfer the flows meet crosswise.

## What does the program do and how do you use it?

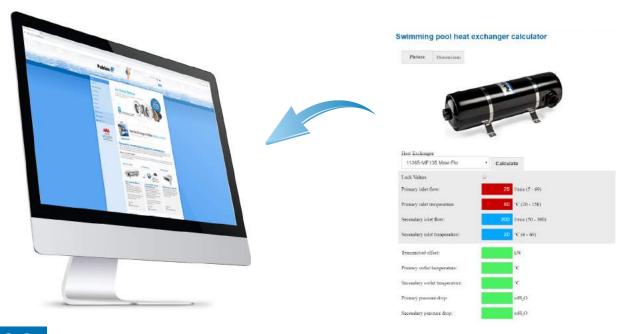
In the calculation program the type of heat exchanger is chosen in the drop list. Then a nominel inlet temperature and the flow for the primary side is shown together with the desired pool temperature and the flow of the pool circulation to the secondary side.

It is free to modify the values as long as they are within the limits (in parentheses). The calculate button gives transferred heating power and output temperatures. You will also get the calculated pressure drop across for each side shown in H(m) (defined as mH<sub>2</sub>O).

If you want to change heat exchanger you can lock the operating mode with the "lock button" to be able to compare the transmitted power with another heat exchanger model. The tabs picture/dimensions show a picture and dimensions of the selected heat exchanger.



You can easily and conveniently dimension your heat exchanger online if you don't know which one to choose!



# Calculation of electric heaters

## Calculation of electric heaters



MidiHeat 18-72kW



Compact 3-18kW



Aqua HL line 3-15kW



Aqua compact 3-18kW



Aqua spa 1.5-3kW

## Example

The amount of hours in theory it takes to heat up your pool based on volume and the capacity (kw) of the heaters. Example: the pool is  $100 \text{ m}^3$  and a heater of 24 kW takes 87 hours to heat up to  $28 ^{\circ}\text{C}$  from  $10 ^{\circ}\text{C}$ .

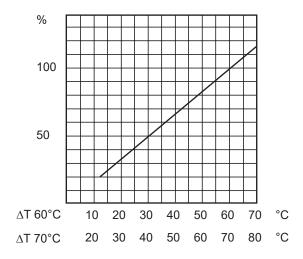
					ΔT=1	8 (10°C - 28	°C)				
kW Volume	6	9	12	15	18	24	30	36	45	60	72
25 m <sup>3</sup>	87	58	44	35	29	22	17	15	12	9	7
45 m³	157	105	78	63	52	39	31	26	21	16	13
70 m³	-	163	122	98	81	61	49	41	33	24	20
100 m <sup>3</sup>	-	-	174	140	116	87	70	58	47	35	29
150 m³	-	-	-	-	-	131	105	87	70	52	44
200 m <sup>3</sup>	-	-	-	-	-	-	140	116	93	70	58
250 m³	-	-	-	-	-	-	-	145	116	87	73
300 m <sup>3</sup>	-	-	-	-	-	-	-	-	140	105	87
350 m³	-	-	-	-	-	-	-	-	-	122	102

# Dimensioning of heat exchangers

# Dimensioning of tube- and spiral heat exchangers

The capacity of a heat exchanger varies according to the liquid flow through the primary (hot) and the secondary (cold) circuits and the temperature difference between both media. From the table of capacities a nominal thermal output for each heat exchanger may be obtained. This output is based upon given liquid flow through both circuits, which is quoted in the table, and a temperature difference between the incoming primary and secondary media.

As an example heat exchanger type MF 135 has a thermal output of 40 kW when the liquid flow is 25 l/min on the primary side, 200 l/min on the secondary side, and the temperature difference between both incoming media is 60°C. By the use of diagrams A and B, the thermal output may be calculated for other liquid flows and temperature differences than those quoted in the table.



## Diagram A Nominal heat effect

Shows the variation in thermal output with changes in temperature differences between the incoming media. This output is virtually proportional to this temperature difference.

Difference in temperature between incoming warm water (primary) and incoming cold water (secondary)

# Theoretical heat calculation

Examples of calculation formulas for heating pools without any heat loss

1. Power required to increase water temperature by  $\Delta T$  degrees in a fixed time (t), assuming no heat loss.

Formula:  $P = 1.16 \times \Delta T \times V$ 

2. Time taken to increase water temperature by  $\Delta T$  degrees from a fixed power input, assuming no heat loss.

Formula:  $t = 1.16 \times \Delta T \times V$ P
P
P
Power in kW
T
Time in hours

 $\Delta T$  = Temperature difference °C

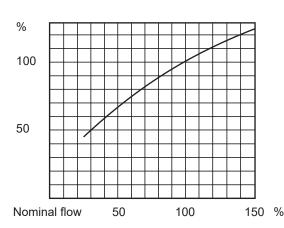
1.16 = Constant V = Volume in m<sup>3</sup>

Example: Time taken to heat 30 m³ of water from 5°C to 25°C with a

6 kW heater, assuming no heat loss: t = 1.16 x (25-5) x 30 =116 hours

6

Ask the experts for help or calculate it your self! The right dimension gives you a warm and comfortable pool.



# Diagram B Nominal heat effect

Represents the variation in thermal output with changes in liquid flow. This diagram is based upon the nominal values given in the table of capacities, which values represent 100% on the graph.

If the flow in both primary and secondary circuits is in the same relationship to the nominal values, then the rate of the thermal output from the heat exchanger may be read from the graph.

If, however, the flow in both circuits do not have the same relationship to the nominal values, the thermal output can be approximated as the average of the two separate readings from the graph.

# Pahlén showroom, Upplands Väsby, Sweden

# Pahléns first class show room

All Pahlén products are clearly exposed in a relaxing and pleasant environment. For further inspiration, you find the most common type of pools demonstrated, obviously with Pahlén products installed. Welcome to Pahlén!







# Notes

# Notes











Pahlén Pool System is supplied in the form of a complete circulation systems with efficient cleaning, heating and lighting for the most common pool sizes. They are sold in basic and premium versions, with or without various options.

Contact your nearest Pahlén dealer.

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