



# calorex®

**Take control of your pool heating & cooling with the  
Calorex 34 range & Calorex new Pro-Pac range**

تحكم في تسخين وتبريد حوض السباحة مع  
كالوركس فئة 34 والفئة الجديدة كالوركس برو-باك

full range of heat pumps for indoor & outdoor use  
zero ozone depleting R134a refrigerant  
specifically designed for Gulf climatic conditions

## THE CHALLENGE:

To provide the swimming pool design engineer with a solution to **temperature control** which will reliably and **economically heat or cool** a swimming pool, regardless of ambient air temperature and location



### Enjoyable swimming

Dependable swimming pool temperature control is a key feature to enjoyable swimming.

For a swim to be refreshing and invigorating the pool water must be the right temperature for the swimmer, regardless of the influence of seasonal weather.

### السباحة الممتعة

حيث التحكم في درجة حرارة حوض السباحة هو مفتاح السباحة الممتعة. من 28 الى 32 درجة مئوية هو المجال المقبول للسباحة على وجه العموم.

للحفاظ على درجة الحرارة المريحة للسباحة في المناطق المشابهة لمنطقة الخليج, حيث السباحة ممكنة على مدار العام, تحتاج أحواض السباحة الى التسخين خلال الشتاء والتبريد خلال الصيف.

Calorex are world leaders in heat pump technology and were the first to develop heat cool units for swimming pools

### Winter heating

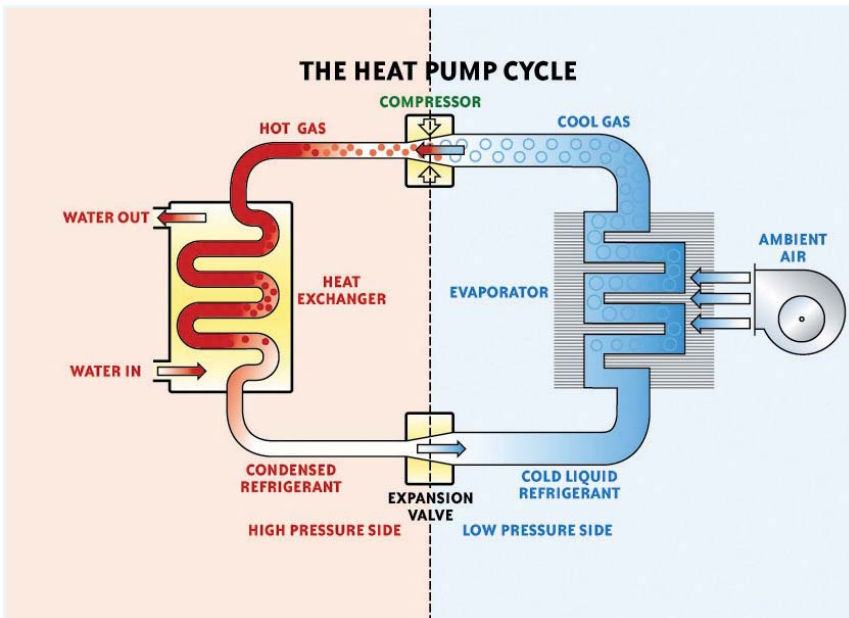
During winter, swimming pools continually evaporate water and radiate heat. The combination of these factors causes heat loss which must be replaced through a heater if comfortable water temperatures are to be maintained.

### Summer cooling

During summer, swimming pools are subjected to massive solar gain. Coupled with high ambient humidities which prevent pools from cooling through evaporation, swimming pool water will become uncomfortably hot unless dynamically cooled.

### Key benefits of a Calorex heat cool system:

- 1 Designed for the Gulf climate
- 2 Reduced energy consumption
- 3 No additional equipment required
- 4 Simple installation & long service life
- 5 Suitable for all year round pool use
- 6 Minimal maintenance
- 7 Low operating costs



## THE SOLUTION!

The Calorex answer to this challenge is the **34 range and the Pro-Pac range** - providing a heat cool unit for every size of pool and plant room

### Why heat pumps?

Heat pumps are widely accepted as the most economic and effective method of heating and cooling your swimming pool.

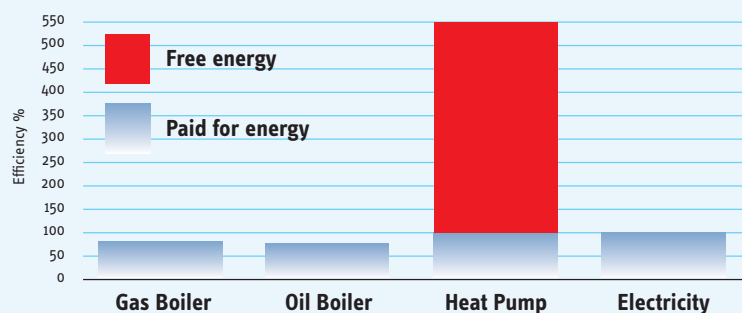
Unlike electric flow heaters and boilers that can only provide pool heating, Calorex heat cool pumps will automatically either heat or cool your pool without the need for additional equipment.

As an added bonus, a Calorex heat cool pump will produce up to five times the energy it consumes, dramatically reducing the energy consumption of your swimming pool.



**calorex**®

### Heating method efficiency comparison



### Why Calorex?

Calorex were the first to develop heat cool units for swimming pools and in doing so set the standard for proven performance and reliability. We have thousands of units in operation throughout the Gulf States, the oldest installed in 1981.

As further testament to our commitment for manufacturing quality, Calorex is an ISO 9001 accredited company under Lloyds register and all our products are tested in accordance with EU standards.

Calorex is also a founder member of the Microgeneration Scheme (MCS), a UK Government controlled initiative that demands independent product witness testing as part of a tough quality control procedure.

Our heat cool pumps are specifically designed for swimming pool heating and cooling; they are not converted air conditioning units. This means that all components used in their construction are designed to give maximum efficiency and reliability at swimming pool conditions, even in the toughest climates.



## 34 RANGE

Our 34 range heat cool pumps are **specifically designed for swimming pool heating and cooling - proven over the years to set the benchmark standard**

### Designed for plant room installation

Over the years, the 34 range has proven to set the benchmark standard for swimming pool heating and cooling.

Given the challenges that swimming pool designers face in locating plant so that it cannot be seen or heard, the 34 range is designed with plant room installation in mind, alleviating the difficulties associated with external siting.

Thanks to its centrifugal fan with variable external pressure capabilities, the 34 range can be ducted without loss of performance and comes with a stainless steel drip tray and heavily insulated cabinet as standard.

### Key points at a glance:

- ✓ Capacities from 8kW to 70kW
- ✓ Zero ozone depleting R134a refrigerant - unlike R22 and R407C, R134a will operate reliably throughout every possible Gulf climatic condition
- ✓ Designed and manufactured in the UK to CE standards
- ✓ Fully automatic operation
- ✓ Compliant scroll compressors
- ✓ Water flow switch (only 3034 & 7034 models)
- ✓ Weather and corrosion resistant construction including plastisol coated galvanised steel cabinet and epoxy coated coils
- ✓ 90/10 marine grade heat exchangers
- ✓ Manufactured under ISO 9001 Accreditation



Designed for ducted installation within a plant room or for outdoor installation

### R134a - the correct refrigerant in harsh conditions

R134a is a non ozone depleting refrigerant which is specifically designed for high temperature applications. The refrigerant within a heat pump circuit is the life blood of its operation and will determine operational efficiency and reliability.

The operating envelope of R134a is far greater than that of other commonly used refrigerants. This ensures that the heat pump will have a larger safety margin and always operate well within its capabilities, even in temperatures of 55°C and beyond.

As a further bonus, heat cool units that use R134a require less air flow than units which use alternative refrigerants, thus making their operation inherently quieter and more efficient.

# PRO-PAC RANGE

Our Pro-Pac range, which is designed for **non ducted** installations, shares the **same core technology** as our well proven **34 range**

## Reliability and efficiency

Designed for external installation, Pro-Pac units offer an economic solution to swimming pool heating and cooling, with the same reliability and efficiency as 34 range units.



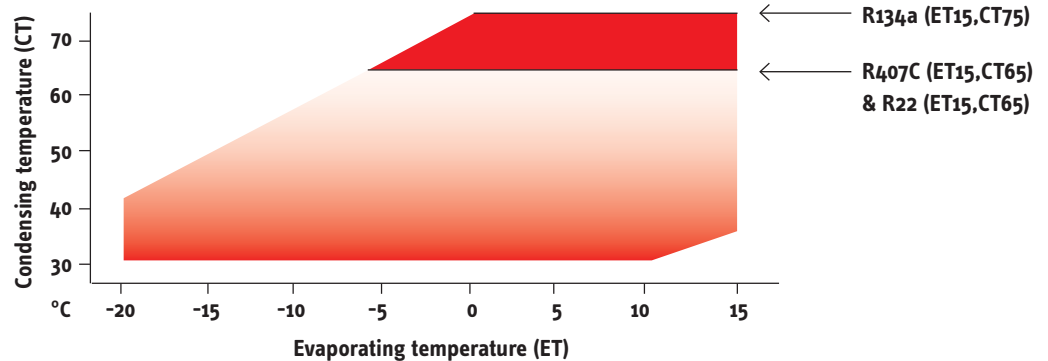
Heat cool units designed for non-ducted plant rooms or outdoor installation

## Key points at a glance:

- ✔ Capacities from 30kW to 140kW
- ✔ Zero ozone depleting R134a refrigerant - ensures reliable, efficient operation regardless of air temperature
- ✔ Titanium heat exchanger
- ✔ Designed and manufactured in the UK to CE standards
- ✔ Fully automatic operation
- ✔ Scroll compressors
- ✔ Water flow switch on all models
- ✔ Comprehensive circuit protection
- ✔ Axial vertical flow fans
- ✔ Weather-proof construction
- ✔ Digital thermostat
- ✔ Titanium or Cupro-nickel heat exchangers



Typical operating envelope, demonstrating the benefit of high temperature R134a refrigerant



# SPECIFICATION: 34 Range

	Units	AW634AHC	AW1222BHC	AW3034BHC	AW7034BHC	AW3034EHC	AW7034EHC
<b>Duty</b>							
<b>@ Air on 20°C/85%RH</b>							
Heat output to water (@28°C)	Heating kW	8	17.5	44	70	44	70
Electrical input	kW	1.7	3	8.2	12.8	8.2	12.8
<b>@ Air on 45°C/50%RH</b>							
Cooling to water (@32°C)	Cooling kW	6.5	11	27	45	27	45
Electrical input	kW	2.0	3.3	9.2	15.7	9.2	15.7
<b>Electrical Data</b>							
Electrical supply	v/ph/Hz	240/1/50	400/3/50	400/3/50	220/3/60	220/3/60	220/3/60
Minimum supply capacity	amps	10	11	21	36	35	60
Maximum supply capacity	amps	13	16	35	60	50	90
Max starting current standard (LRA)	amps	32	58	126	126	205	282
<b>Air Data</b>							
Nominal air flow	m <sup>3</sup> /hr	1500	3000	10000	11700	10000	11700
Fan external resistance (standard)	mmWG	0	0	0	0	0	0
<b>Water Data</b>							
Water flow ±10%	l/min	33	33	66	130	66	130
Pressure drop (water)	M hd	2.1	3.9	2.5	5.3	2.5	5.3
Water connections	inches	3/4" BSPM	3/4" BSPM	1 1/2" BSPM	1 1/2" BSPM	1 1/2" BSPM	1 1/2" BSPM
Condensate water connections	inches	3/4" BSPM	3/4" BSPM	1 1/2" BSPM	1 1/2" BSPM	1 1/2" BSPM	1 1/2" BSPM
<b>General Data</b>							
Gas type		R134a	R22	R134a	R134a	R134a	R134a
Compressor type		Recip	Recip	Scroll	Scroll	Scroll	Scroll
Fan type		1 x Centrifugal		1 x Centrifugal			1 x Centrifugal
Sound pressure level @3m	dB(A)	63	65	72	68	72	68
<b>Dimension Data</b>							
Width (unpacked)	mm	820	1060	1700	1950	1700	1950
Depth (unpacked)	mm	702	705	1090	1340	1090	1340
Height (unpacked)	mm	762	807	1212	1212	1212	1212
Weight (unpacked)	kg	111	157	411	690	411	690

- Options:**
- Chiller only
  - Heater only
  - Rear or top outlet on 3034 or 7034

- Soft start
- High pressure fan

**Note:**  
Consult Calorex for accurate sizing

# SPECIFICATION: Pro-Pac Range

	Units	Pro-Pac 30	Pro-Pac 45	Pro-Pac 70	Pro-Pac 90	Pro-Pac 140
<b>Duty</b>						
<b>Air on @ 20°C/85%RH</b>						
Heat output to water (@28°C)	<b>Heating</b> kW	30	45	70	90	140
Electrical input	kW	6	8.2	12.8	16.4	25.6
<b>Air on @ 45°C/50%RH</b>						
Cooling to water (@32°C)	<b>Cooling</b> kW	21	32	49	64	98
Electrical input	kW	6.4	9.2	15.7	18.4	31.4
<b>Electrical Data: 400 V</b>						
Electrical supply	v/ph/Hz	400/3N/50				
Minimum supply capacity	amps	16	25	42	50	84
Maximum supply capacity	amps	25	40	60	70	125
Maximum starting current standard (LRA)	amps	123	102	96	102	96
Maximum starting current soft start (LRA)	amps	36	34	33	34	33
<b>NOTE: Refer to Calorex for 60Hz supply</b>						
<b>Air Data</b>						
Nominal air flow	m <sup>3</sup> /hr	5200	10000	14000	20000	28000
Fan external resistance (standard)	mmWG	0	0	0	0	0
<b>Water Data</b>						
Water flow ±10%	l/min	33	66	133	133	266
Pressure drop (water)	M hd	3.5	4.5	5.3	3.9	5.3
Water connections	inches	1" 1/2 BSPM				2" BSPM
Condensate water connections (Optional factory fit)	inches	1 1/2" BSPM (OPTIONAL)				
<b>General Data</b>						
Gas charge (R134a)	kg	10	18	32	18 x 2	32 x 2
Compressor type		1 x Scroll	1 x Scroll	2 x Scroll	2 x Scroll	4 x Scroll
Fan type		1 x Axial	1 x Axial	1 x Axial	2 x Axial	2 x Axial
Sound pressure level @3m	dB(A)	62	64	68	70	71
<b>Dimension Data</b>						
Width (unpacked)	mm	1525	1665	1810	2065	2210
Depth (unpacked)	mm	790	1060	1190	1190	1650
Height (unpacked)	mm	1080	1310	1310	1330	1340
Weight (unpacked)	kg	219	329	549	599	1065

- Options:**
- Chiller only
  - Heater only
  - 3ph, 60Hz versions

- Soft start
- High pressure fan
- Condensate insulation kit for plant room installation

**Note:**  
Consult Calorex for accurate sizing

## Technical support and service:

Comprehensive technical support is provided by our experienced and well qualified team

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[www.calorex.com](http://www.calorex.com)

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