

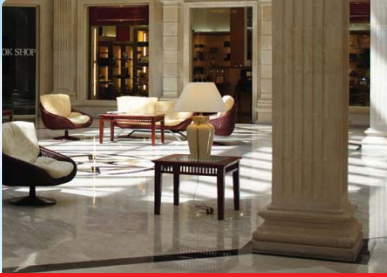






calorex®

## Energy Efficient Commercial Hot Water and Space Heating

Harness the heat you don't have to pay for  
with our range of hot water heat pumps





-  Hot water production to 68°C
-  Space heating through fan coils, radiators, under floor system
-  Heat recovery from plant rooms, kitchens, laundry etc.
-  Space cooling as a by product of the heating process

Calorex heat pumps provide a sustainable heating solution which, compared to fossil fuel or direct electric systems, will dramatically cut operating costs and carbon emission.

### Why a Calorex heat pump?

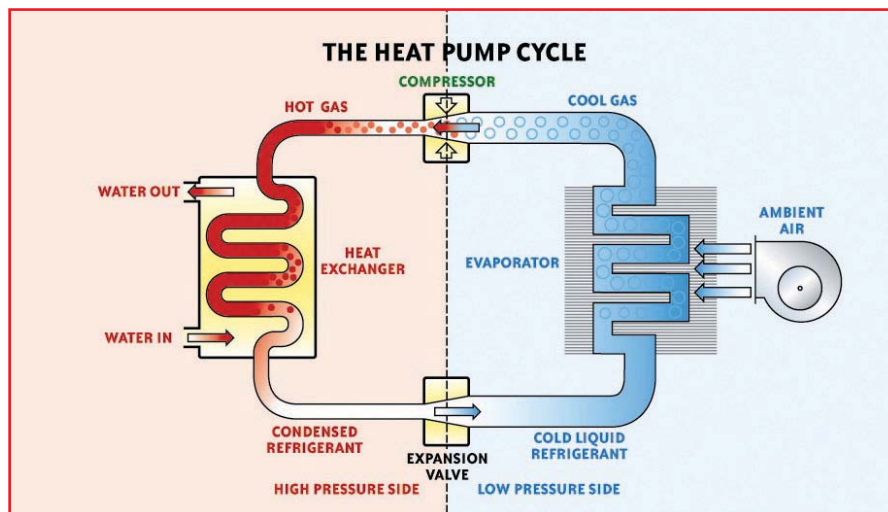
Calorex is Europe's leading and largest manufacturer of air to water heat pumps and is renowned for its innovation, range and quality of product. A proud claim supported by over 30 years of design, manufacture and operational experience with thousands of units operating in many countries throughout the world.

### Easy installation

Calorex heat pumps are simple to install, require little maintenance and alleviate the need for fuel storage tanks and flues that are normally associated with fossil fuel heating systems. Further, due to their unique ability to collect and enhance "free" heat from the air around them they are environmentally friendly and exceptionally inexpensive to operate.

### Heat Pump Features

- Range of capacities from 6kW to 140kW
- R134A ozone friendly refrigerant ensures reliable operation up to 68°C
- Fully weatherproof polyester or epoxy coated cabinet
- High electrical and mechanical circuit protection
- Seamless 90/10 cupro-nickel heat exchanger allows the units to be used in direct systems for potable water - WRAS approved
- Choice of centrifugal fans (34 range only) - allows ducting from plant rooms or distribution of cold air for space cooling
- Manufactured in the UK to ISO9001 Standards
- 34 Range and Pro-Pac share common refrigerating circuits



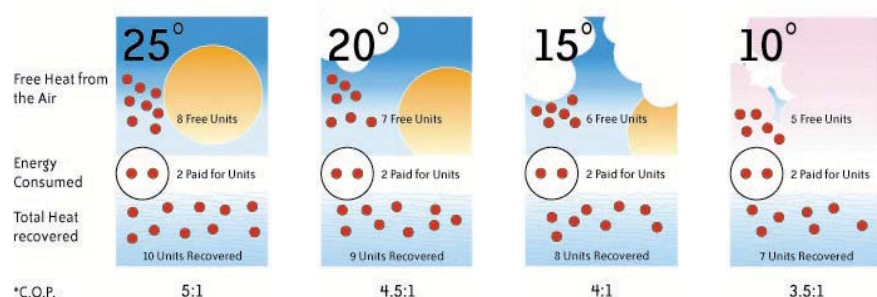
### How a Calorex Air to Water Hot Water Heat Pump works

Calorex hot water heat pumps are electro mechanical machines that extract energy from an air source and upgrade this energy to a usable form of heat that is rejected to a water system.

### Unrivalled efficiency

Unlike other heating systems a Calorex heat pump is capable of delivering up to 5 times more energy than it consumes and unlike solar systems Calorex heat pumps don't need the sun to shine in order to provide this efficiency.

### Illustration of heat pump efficiency at differing air temperatures



$\text{Total Heat Recovered} \div \text{Energy Consumed} = \text{Coefficient of Performance (C.O.P.)}$



- ✓ Up to 400% running cost and carbon savings against electric heating
- ✓ Up to 48% running cost and carbon savings against fossil fuel system
- ✓ No flues or storage tanks
- ✓ Easy to retrofit
- ✓ Minimal service requirements

The **Calorex range** of hot water heat pumps are a quality range of packaged units specifically designed for heating hot water to 68°C

- Hot water production up to 68°C
- Non ozone depleting R134a technology provides long service life
- WRAS approved heat exchangers - the units can safely be connected directly to a calorifier
- Option: Reverse cycle defrost allows operation down to -15°C
- Option: Soft start
- Choice of fan speed

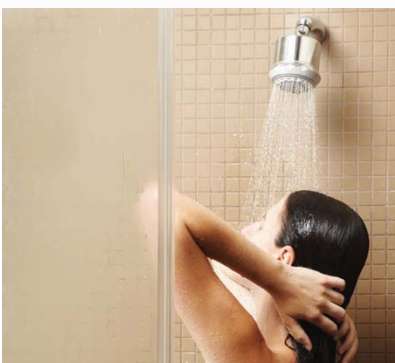
### Calorex 34 range

Designed for outdoor or plant room installation, all 34 range are provided with centrifugal fans as standard. A choice of fan external static pressure offers flexible installation and an ability for the units to provide cold air through a ducted system.



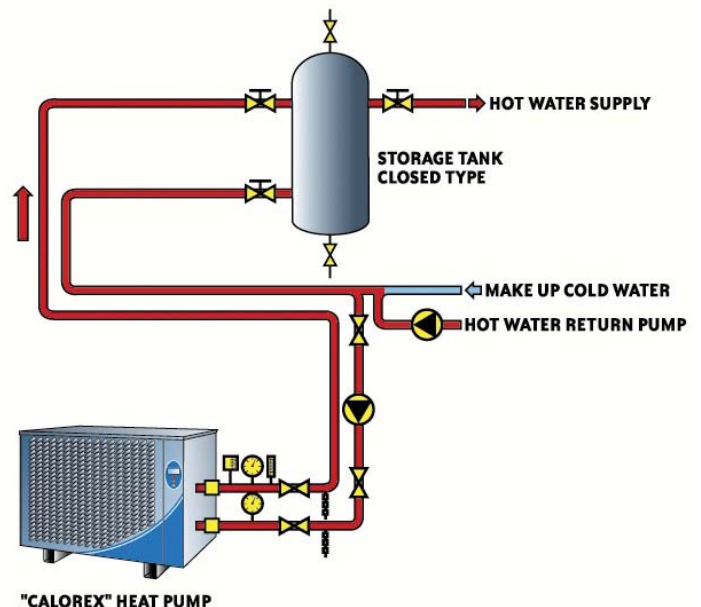
### Calorex Pro-Pac range

Pro-Pac heat pumps can be installed outside or in a plant room that has adjacent outside walls. Pro-Pac can be supplied with high speed axial fans



Calorex heat pumps are charged with non-toxic, biodegradable, CFC-free refrigerant, which has no detrimental impact on the earth's protective ozone layer.

### TYPICAL INSTALLATION DIAGRAM FOR "CALOREX" HOT WATER HEAT PUMP



# Technical support and service:

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

# Contact:

Calorex Heat Pumps Limited, Maldon CM9 4XD United Kingdom  
UK Tel: +44 (0)1621 856611 e-mail: sales@calorex.com  
www.calorex.com

## Air to water heat pumps for hot water heating up to 68°C during ambient temperatures from 10°C to 50°C (-15°C to 50°C optional)

MODEL		834BH	1234BH	1534BH	3034BH	7034BH	Pro-Pac 30H	Pro-Pac 45H	Pro-Pac 70H	Pro-Pac 90H	Pro-Pac 140H
<b>Duty - Output to Water @ 30°C/55°C</b>											
Air on 30°C/90%RH	kW	7.8/6.9	10.2/9.0	15.1/13.3	29.2/25.7	46.2/40.7	24.5/21.6	30.6/27.0	46.2/40.7	61.2/53.9	92.3/81.4
Electrical input	kW	1.64/2.6	2.1/3.3	3.2/5.1	6.4/9.9	9.8/15.4	5.1/8.0	6.5/10.2	9.1/14.8	13.0/20.5	18.4/30.0
Air on 20°C/65%RH	kW	7.1/6.3	9.3/8.3	13.3/11.9	26.5/24.0	42.0/37.4	22.0/19.9	28.0/24.0	42.0/37.4	56.0/49.5	84.0/74.8
Electrical input	kW	1.5/2.2	1.8/2.8	2.9/4.4	5.7/8.6	8.7/13.4	4.4/7.0	5.8/8.9	8.1/12.8	11.5/17.7	16.2/25.5
Air on 10°C/85%RH	kW	6.0/5.3	7.9/7.0	11.2/10.0	22.4/20.0	35.0/31.7	18.9/16.8	23.5/20.1	35.5/31.7	47.1/42.0	71.0/63.3
Electrical input	kW	1.4/2.1	1.7/2.7	2.7/4.1	5.4/8.1	8.2/12.5	4.2/6.5	5.5/8.3	7.6/11.9	10.9/16.6	15.2/23.9
Air on 0°C/90%RH	kW	-	-	-	15.6/13.7	24.7/21.7	13.2/11.6	16.4/14.4	24.7/21.7	32.8/28.8	49.5/43.4
Electrical input	kW	-	-	-	4.9/7.4	7.5/11.5	3.8/6.0	5.0/7.6	6.9/10.9	9.9/15.2	13.8/21.8
<b>Electrical Data</b>											
Electrical supply	1 phase	230/50hz	230/50hz	-	-	-	-	-	-	-	-
	3 phase	400/50hz	400/50hz	400/50hz	400/50hz	400/50hz	400/50hz	400/50hz	400/50hz	400/50hz	400/50hz
Minimum supply capacity (A)	1 phase	15.7	21.3	-	-	-	-	-	-	-	-
	3 phase	7.8	9.5	13.65	25	40	16	25	42	50	84
Recommended supply fuse (A)	1 phase	25	35	-	-	-	-	-	-	-	-
	3 phase	13	16	20	35	63	25	40	60	70	125
<b>Air data</b>											
Nominal air flow	m <sup>3</sup> /hr	2650	3200	4000	10000	12500	5200	10000	14000	20000	28000
External static (standard units)	Pa	0	0	0	0	0	0	0	0	0	0
External static (uprated units)	Pa	150	150	Variable to 250 pa			60	60	60	60	60
<b>Water data</b>											
Water flow	l/min	33	33	33	66	130	33	66	133	133	266
Pressure drop	m hd	5.8	7	8.3	4.5	3.9	3.5	4.5	5.3	3.9	5.3
Water connection	Inches	3/4 BSPM			1 1/2 BSPM		1 BSPM	1 1/2 BSPM			2 BSPM
<b>General data</b>											
Compressor	type	1 x recip	1 x scroll	1 x scroll	1 x scroll	1 x scroll	1 x scroll	1 x scroll	1 x scroll	2 x scroll	2 x scroll
Condenser	type	Wras approved Cu tube in tube									
Sound pressure level at 10m	dB (A)	45	48	51	58	57	51	53	57	62	60
Sound pressure level at 3m	dB (A)	57	59	62	69	68	62	64	68	73	71
<b>Dimensions (unpacked)</b>											
Weight	Kg	119	130	156	393	569	219	329	549	599	858
Width	mm	1060	1060	1210	1700	1950	1555	1665	1810	2065	2210
Depth	mm	705	705	755	1090	1340	790	1060	1190	1190	1650
Height	mm	807	807	807	1212	1212	1080	1310	1310	1330	1340

### Options

Soft start Reverse cycle defrost (excluding 834/1234 and 1534)  
High pressure fans Top or rear air discharge (3034 and 7034 only)  
RS 485 compatible thermostat (Pro Pac only)

Calorex reserve the right to modify this specification at any time. For accurate sizing please contact Calorex



Hot Water V5

