Information for heat pump space heaters and heat pump combination heaters Warm climate and Medium temperature

CTC AB Ljungby



Model(s):	CTC CombiAir 6				
Air-to-water heat pump:	Yes	Energy efficiency class:	-	-	
Water-to-water heat pump:	No	Controller class:	VI	-	
Brine-to-water heat pump:	No	Controller contribution:	4	%	
Low-temperature heat pump:	No	Package efficiency:	182	%	
Equipped with a supplementary heater:	No	Package efficiency class:	-	-	
Heat pump combination heater:	No				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η _s	178	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door temperat	cure 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and oເ	ary energy rat itdoor tempe	io for rature T j
T j = − 7 °C	Pdh	-	kW	T j = − 7 °C	COPd	-] -
T j = + 2 °C	Pdh	5,5	kW	T j = +2 °C	COPd	1,98	- 1
T j = + 7 °C	Pdh	3,5	kW	T j = +7 °C	COPd	3,86	- 1
T j = + 12 °C	Pdh	1,8	kW	T j = +12 °C	COPd	6,07	-
T j = bivalent temperature	Pdh	5,5	kW	T j = bivalent temperature	COPd	1,98	-
T j = operation limit temperature	Pdh	5,5	kW	T j = operation limit temperature	COPd	1,98	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	-	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	-	-
Bivalent temperature	T _{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	СОРсус	-	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater			_
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,011	kW				
Standby mode	P _{SB}	0,011	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2340	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/53	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	_	m3/h
Annual energy consumption	Q _{HE}	1617	kWh	exchanger			
For heat pump combination h	eater:					-	-
Declared load profile	-	Efficiency class		Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ust be deposited ct's life cycle, it m that the product product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or resel t's refrigerant, compressor oil and electrical/elec shold waste is not permitted.	gineer for correc ller offering a se ctronic equipme	ct waste manager rvice of that type nt are properly d	ment. At the . It is of isposed of.
Contact details	CTC AB, Box 309,	SE-341 26 Ljur	ngby Tel +46	372 88000 www.ctc.se		F0140	231218

Information for heat pump space heaters and heat pump combination heaters Warm climate and Low temperature

CTC AB Ljungby



Model(s):	CTC CombiAir 6MR + CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:	-	-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	269	%			
Equipped with a supplementary heater:	No	Package efficiency class:	-	-			
Heat pump combination heater:	No						

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η _s	265	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door temperat	cure 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	ary energy rat Itdoor tempe	tio for rature T j
T j = − 7 °C	Pdh	-	kW	T j = – 7 °C	COPd	-] _
T j = + 2 °C	Pdh	5,6	kW	T j = +2 °C	COPd	3,14	-
T j = + 7 °C	Pdh	3,6	kW	T j = +7 °C	COPd	5,98	- 1
T j = + 12 °C	Pdh	1,8	kW	T j = +12 °C	COPd	8,54	-
T j = bivalent temperature	Pdh	5,6	kW	T j = bivalent temperature	COPd	3,14	-
T j = operation limit temperature	Pdh	5,6	kW	T j = operation limit temperature	COPd	3,14	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	-	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	-	-
Bivalent temperature	T _{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	СОРсус	-	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater			
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,011	kW				
Standby mode	P _{SB}	0,011	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2340	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/53	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	-	m3/h
Annual energy consumption	Q _{HE}	1110	kWh	flow rate, outdoor heat exchanger			-
For heat pump combination h	eater:						
Declared load profile	-	Efficiency class	-	Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ust be deposited ct's life cycle, it n that the product product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or resel t's refrigerant, compressor oil and electrical/elec shold waste is not permitted.	gineer for correct ler offering a se ctronic equipme	t waste manager rvice of that type nt are properly d	ment. At the e. It is of isposed of.
Contact details	CTC AB, Box 309,	SE-341 26 Ljur	ngby Tel +46	372 88000 www.ctc.se		F0140	231218

Information for heat pump space heaters and heat pump combination heaters Average climate and Medium temperature

CTC AB Ljungby



Model(s):	CTC CombiAir 6MR + CTC EcoLogic					
Air-to-water heat pump:	Yes	Energy efficiency class:	A++	-		
Water-to-water heat pump:	Νο	Controller class:	VI	-		
Brine-to-water heat pump:	Νο	Controller contribution:	4	%		
Low-temperature heat pump:	Νο	Package efficiency:	143	%		
Equipped with a supplementary heater:	Νο	Package efficiency class:	A++	-		
Heat pump combination heater:	No					

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η _s	139	%
Declared capacity for heating and outdoor temperature T j	for part load at ind	door temperat	ture 20 °C	Declared coefficient of performal part load at indoor temperature	nce or prima 20 °C and ou	iry energy rat tdoor tempe	io for rature T j
T j = – 7 °C	Pdh	5,0	kW	T j = – 7 °C	COPd	1,95	-
T j = + 2 °C	Pdh	2,9	kW	T j = +2 °C	COPd	3,51	-
T j = + 7 °C	Pdh	1,9	kW	T j = +7 °C	COPd	4,99	-
T j = + 12 °C	Pdh	1,7	kW	T j = +12 °C	COPd	6,33	-
T j = bivalent temperature	Pdh	5,0	kW	T j = bivalent temperature	COPd	1,95	-
T j = operation limit temperature	Pdh	4,6	kW	T j = operation limit temperature	COPd	1,75	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	-	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	-	-
Bivalent temperature	T _{biv}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	СОРсус	-	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode	r	Supplementary heater			
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	1,0	kW
Thermostat-off mode	P _{TO}	0,011	kW				
Standby mode	P _{SB}	0,011	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2340	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/53	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	3250	kWh	flow rate, outdoor heat exchanger			
For heat pump combination h	eater:						
Declared load profile	-	Efficiency class		Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ust be deposited a ct's life cycle, it m that the product' product as house	at a recycling station or with the installation eng ust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec nold waste is not permitted.	gineer for correct ler offering a se tronic equipme	t waste manager rvice of that type nt are properly di	nent. At the . It is of sposed of.
Contact details	CTC AB, Box 309,	SE-341 26 Ljur	ngby Tel +46 3	872 88000 www.ctc.se		F0140	231218

Information for heat pump space heaters and heat pump combination heaters **Average climate and Low temperature**

CTC AB Ljungby



Model(s):	CTC CombiAir 6MR + CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:	A+++	-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	204	%			
Equipped with a supplementary heater:	No	Package efficiency class:	A+++	-			
Heat pump combination heater:	No						

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η _s	200	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door temperat	ure 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	ary energy rat itdoor tempe	io for rature T j
T j = – 7 °C	Pdh	4,5	kW	T j = – 7 °C	COPd	3,04	-
T j = + 2 °C	Pdh	2,7	kW	T j = +2 °C	COPd	5,00	-
T j = + 7 °C	Pdh	1,8	kW	T j = +7 °C	COPd	6,67	-
T j = + 12 °C	Pdh	1,8	kW	T j = +12 °C	COPd	8,54	-
T j = bivalent temperature	Pdh	5,2	kW	T j = bivalent temperature	COPd	2,61	-
T j = operation limit temperature	Pdh	5,2	kW	T j = operation limit temperature	COPd	2,61	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	-	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	-	-
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	СОРсус	-	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater			
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	P _{TO}	0,011	kW				
Standby mode	P _{SB}	0.011	kW	Type of energy input		Electric	
Crankcase heater mode	Рск	0.000	kW				
Other items	ch						
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2340	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/53	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat	-	-	m3/h
Annual energy consumption	Q _{HE}	2116	kWh	exchanger			
For heat pump combination h	eater:						-
Declared load profile	-	Efficiency class	-	Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ust be deposited ct's life cycle, it m that the product product as house	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel c's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	gineer for correcter ler offering a ser stronic equipme	t waste manager rvice of that type nt are properly di	nent. At the . It is of sposed of.
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Information for heat pump space heaters and heat pump combination heaters **Cold climate and Medium temperature**

CTC AB Ljungby



Model(s):	CTC CombiAir 6MR + CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	123	%			
Equipped with a supplementary heater:	No	Package efficiency class:		-			
Heat pump combination heater:	No						

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η _s	119	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door temperat	cure 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and oເ	ary energy rat itdoor tempe	tio for trature T j
T j = - 7 °C	Pdh	3,5	kW	T j = - 7 °C	COPd	2,52] -
T j = +2 °C	Pdh	2,2	kW	T j = +2 °C	COPd	3,79	
$I_J = + / C$	Pdh	1,7	kW	$I_{J} = +7 °C$	COPd	5,56	
$J = + 12^{\circ}C$	Pan	1,/	KVV	$I_{J} = +12$ °C	СОРа	6,33	-
T j = bivalent temperature	Pdh	4,2	kW	T j = bivalent temperature	COPd	1,99	-
T j = operation limit temperature	Pdh	3,2	kW	T j = operation limit temperature	COPd	1,34	
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	4,0	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,72	_
Bivalent temperature	T _{biv}	-12	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	СОРсус	-	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater			_
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	5,7	kW
Thermostat-off mode	P _{TO}	0,011	kW				
Standby mode	P _{SB}	0,011	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2340	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/53	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	-	m3/h
Annual energy consumption	Q _{HE}	4604	kWh	exchanger			
For heat pump combination h	eater:						
Declared load profile	-	Efficiency class	-	Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ust be deposited ct's life cycle, it m that the product product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or rese t's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	gineer for correc ller offering a se ctronic equipme	ct waste manage rvice of that type nt are properly d	ment. At the here is of here is the ison ison ison ison ison ison ison ison
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Information for heat pump space heaters and heat pump combination heaters **Cold climate and Low temperature**

CTC AB Ljungby



Model(s):	CTC CombiAi	CTC CombiAir 6MR + CTC EcoLogic					
Air-to-water heat pump:	Yes	Energy efficiency class:	-	-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	165	%			
Equipped with a supplementary heater:	No	Package efficiency class:	-	-			
Heat pump combination heater:	No						

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η _s	161	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door temperat	cure 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	iry energy rat itdoor tempe	tio for rature T j
T j = − 7 °C	Pdh	3,6	kW	T j = – 7 °C	COPd	3,37] -
T j = + 2 °C	Pdh	2,5	kW	T j = +2 °C	COPd	5,19	-
T j = + 7 °C	Pdh	1,8	kW	T j = +7 °C	COPd	6,67	-
T j = + 12 °C	Pdh	1,8	kW	T j = +12 °C	COPd	8,48	-
T j = bivalent temperature	Pdh	4,3	kW	T j = bivalent temperature	COPd	2,71	-
T j = operation limit temperature	Pdh	3,8	kW	T j = operation limit temperature	COPd	2,08	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	4,6	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	2,43	-
Bivalent temperature	T _{biv}	-12	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	СОРсус	-	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater			_
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	5,8	kW
Thermostat-off mode	P _{TO}	0,011	kW		l		
Standby mode	P _{SB}	0,011	kW	Type of energy input	l	Electric	
Crankcase heater mode	Р _{СК}	0,000	kW		l		
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2340	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/53	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	_	m3/h
Annual energy consumption	Q _{HE}	3487	kWh	exchanger			
For heat pump combination h	eater:						-
Declared load profile	-	Efficiency class	-	Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q_{elec}	-	kWh	Daily fuel consumption	\mathbf{Q}_{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ust be deposited ct's life cycle, it n that the product product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or resel t's refrigerant, compressor oil and electrical/elec shold waste is not permitted.	gineer for correc ler offering a ser ctronic equipmen	t waste manager rvice of that type nt are properly d	ment. At the e. It is of isposed of.
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Information for heat pump space heaters and heat pump combination heaters Warm climate and Medium temperature

CTC AB Ljungby



Model(s):	CTC CombiAir 6			
Air-to-water heat pump:	Yes	Energy efficiency class:	-	-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	182	%
Equipped with a supplementary heater:	Yes	Package efficiency class:	-	-
Heat pump combination heater:	Yes			

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η _s	178	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door temperat	ure 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	ary energy rat itdoor tempe	io for rature T j
T j = − 7 °C	Pdh		kW	T j = – 7 °C	COPd] -
T j = + 2 °C	Pdh	5,5	kW	T j = +2 °C	COPd	1,98	- 1
T j = + 7 °C	Pdh	3,5	kW	T j = +7 °C	COPd	3,86	-
T j = + 12 °C	Pdh	1,8	kW	T j = +12 °C	COPd	6,07	-
T j = bivalent temperature	Pdh	5,5	kW	T j = bivalent temperature	COPd	1,98	-
T j = operation limit temperature	Pdh	5,5	kW	T j = operation limit temperature	COPd	1,98	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	-	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	-	-
Bivalent temperature	T _{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	СОРсус	-	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater			_
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,011	kW				
Standby mode	P _{SB}	0,011	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2340	m3/h
Sound power level, indoors/ outdoors	L _{WA}	- / 53	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	1617	kWh	flow rate, outdoor heat exchanger			
For heat pump combination h	eater:						
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	97	%
Daily electricity consumption	Qelec	8,243	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1813	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ist be deposited ct's life cycle, it n that the product product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or resel t's refrigerant, compressor oil and electrical/elec shold waste is not permitted.	gineer for correct ler offering a se ctronic equipme	t waste manager rvice of that type nt are properly d	ment. At the . It is of isposed of.
Contact details	CTC AB, Box 309,	SE-341 26 Ljur	ngby Tel +46	372 88000 www.ctc.se		F0140	231218

Information for heat pump space heaters and heat pump combination heaters Warm climate and Low temperature

CTC AB Ljungby



Model(s):	CTC CombiAir 6			
Air-to-water heat pump:	Yes	Energy efficiency class:	-	-
Water-to-water heat pump:	Νο	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	269	%
Equipped with a supplementary heater:	Yes	Package efficiency class:	-	-
Heat pump combination heater:	Yes			

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η _s	265	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door temperat	ure 20 °C	Declared coefficient of performa part load at indoor temperature	ince or prima 20 °C and ou	iry energy rat tdoor tempe	io for rature T j
T j = – 7 °C	Pdh	-	kW	T j = − 7 °C	COPd	-	-
T j = + 2 °C	Pdh	5,6	kW	T j = +2 °C	COPd	3,14	-
T j = + 7 °C	Pdh	3,6	kW	T j = +7 °C	COPd	5,98	-
T j = + 12 °C	Pdh	1,8	kW	T j = +12 °C	COPd	8,54	-
T j = bivalent temperature	Pdh	5,6	kW	T j = bivalent temperature	COPd	3,14	-
T j = operation limit temperature	Pdh	5,6	kW	T j = operation limit temperature	COPd	3,14	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	-	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	-	-
Bivalent temperature	T _{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	СОРсус	-	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater			
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,011	kW				
Standby mode	P _{SB}	0,011	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items	-						
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2340	m3/h
Sound power level, indoors/ outdoors	L _{WA}	- / 53	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	-	m3/h
Annual energy consumption	Q _{HE}	1110	kWh	flow rate, outdoor heat exchanger			
For heat pump combination he	eater:						
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	97	%
Daily electricity consumption	Qelec	8,243	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1813	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ust be deposited ct's life cycle, it m that the product product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or rese t's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	gineer for correc ller offering a sei ctronic equipme	t waste manager rvice of that type nt are properly di	nent. At the . It is of sposed of.
Contact details	CTC AB, Box 309,	SE-341 26 Ljur	ngby Tel +46	372 88000 www.ctc.se		F0140	231218

Information for heat pump space heaters and heat pump combination heaters Average climate and Medium temperature

CTC AB Ljungby



Model(s):	CTC CombiAir 6MR + CTC EcoZenith i360						
Air-to-water heat pump:	Yes	Energy efficiency class:	A++	-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	143	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:	A+++	-			
Heat nump combination heater:	Yes						

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η _s	139	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door temperat	ture 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	iry energy rat tdoor tempe	io for rature T j
T j = – 7 °C	Pdh	5,0	kW	T j = – 7 °C	COPd	1,95	-
T j = + 2 °C	Pdh	2,9	kW	T j = +2 °C	COPd	3,51	-
T j = + 7 °C	Pdh	1,9	kW	T j = +7 °C	COPd	4,99	-
T j = + 12 °C	Pdh	1,7	kW	T j = +12 °C	COPd	6,33	-
T j = bivalent temperature	Pdh	5,0	kW	T j = bivalent temperature	COPd	1,95	-
T j = operation limit temperature	Pdh	4,6	kW	T j = operation limit temperature	COPd	1,75	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	-	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	-	-
Bivalent temperature	T _{biv}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	СОРсус	-	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater		<u>.</u>	
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	1,0	kW
Thermostat-off mode	Р _{то}	0,011	kW		1		
Standby mode	P _{SB}	0,011	kW	Type of energy input	1	Electric	
Crankcase heater mode	Р _{СК}	0,000	kW		1		
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2340	m3/h
Sound power level, indoors/ outdoors	L _{WA}	- / 53	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	3250	kWh	flow rate, outdoor heat exchanger			
For heat pump combination h	eater:			· · · · · · · · · · · · · · · · · · ·			
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	9730%	%
Daily electricity consumption	Qelec	8,243	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1813	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ust be deposited a ct's life cycle, it m that the product product as house	at a recycling station or with the installation eng ust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	gineer for correct ler offering a ser stronic equipmen	t waste manager rvice of that type nt are properly di	nent. At the . It is of sposed of.
Contact details	CTC AB, Box 309.	SE-341 26 Liur	ngby Tel +46 3	372 88000 www.ctc.se		F0140	231218

Information for heat pump space heaters and heat pump combination heaters **Average climate and Low temperature**

CTC AB Ljungby



Model(s):	CTC CombiAir 6MR + CTC EcoZenith i360						
Air-to-water heat pump:	Yes	Energy efficiency class:	A+++	-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	204	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:	A+++	-			
Heat pump combination heater:	Yes						

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η _s	200	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door temperat	ure 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	iry energy rat tdoor tempe	io for rature T j
T j = − 7 °C	Pdh	4,5	kW	T j = – 7 °C	COPd	3,04	-
T j = + 2 °C	Pdh	2,7	kW	T j = +2 °C	COPd	5,00	-
T j = + 7 °C	Pdh	1,8	kW	T j = +7 °C	COPd	6,67	-
T j = + 12 °C	Pdh	1,8	kW	T j = +12 °C	COPd	8,54	-
T j = bivalent temperature	Pdh	5,2	kW	T j = bivalent temperature	COPd	2,61	-
T j = operation limit temperature	Pdh	5,2	kW	T j = operation limit temperature	COPd	2,61	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	-	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	-	-
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	СОРсус	-	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater			_
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,011	kW				
Standby mode	P _{SB}	0,011	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2340	m3/h
Sound power level, indoors/ outdoors	L _{WA}	- / 53	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	-	m3/h
Annual energy consumption	Q _{HE}	2116	kWh	flow rate, outdoor heat exchanger			
For heat pump combination h	eater:						
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	97	%
Daily electricity consumption	Qelec	8,243	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1813	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ust be deposited ct's life cycle, it m that the product product as house	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel s's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	gineer for correct ler offering a sei tronic equipment	t waste manager rvice of that type nt are properly di	nent. At the . It is of sposed of.
Contact details	CTC AB, Box 309,	SE-341 26 Ljur	ngby Tel +463	372 88000 www.ctc.se		F0140	231218

Information for heat pump space heaters and heat pump combination heaters **Cold climate and Medium temperature**

CTC AB Ljungby



Model(s):	CTC CombiAir 6N			
Air-to-water heat pump:	Yes	Energy efficiency class:	-	-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	Νο	Controller contribution:	4	%
Low-temperature heat pump:	Νο	Package efficiency:	123	%
Equipped with a supplementary heater:	Yes	Package efficiency class:	-	-
Heat pump combination heater:	Yes			

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η _s	119	%
Declared capacity for heating f and outdoor temperature T j	or part load at in	door temperat	ure 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	iry energy rat tdoor tempe	io for rature T j
T j = – 7 °C	Pdh	3,5	kW	T j = – 7 °C	COPd	2,52] - [
T j = + 2 °C	Pdh	2,2	kW	T j = +2 °C	COPd	3,79	1 -
T j = + 7 °C	Pdh	1,7	kW	T j = +7 °C	COPd	5,56	-
T j = + 12 °C	Pdh	1,7	kW	T j = +12 °C	COPd	6,33	-
T j = bivalent temperature	Pdh	4,2	kW	T j = bivalent temperature	COPd	1,99	-
T j = operation limit temperature	Pdh	3,2	kW	T j = operation limit temperature	COPd	1,34	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	4,0	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,72	-
Bivalent temperature	T _{biv}	-12	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	СОРсус	-	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater			
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	5,7	kW
Thermostat-off mode	Р _{то}	0,011	kW				
Standby mode	P _{SB}	0,011	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items		11					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2340	m3/h
Sound power level, indoors/ outdoors	L _{WA}	- / 53	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	-	m3/h
Annual energy consumption	Q _{HE}	4604	kWh	flow rate, outdoor heat exchanger			-
For heat pump combination he	eater:						
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	97	%
Daily electricity consumption	Qelec	8,243	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1813	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ist be deposited it's life cycle, it n that the product product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or rese t's refrigerant, compressor oil and electrical/ele shold waste is not permitted.	gineer for correc Iler offering a sei ctronic equipmei	t waste manager rvice of that type nt are properly d	nent. At the . It is of isposed of.
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Information for heat pump space heaters and heat pump combination heaters **Cold climate and Low temperature**

CTC AB Ljungby



Model(s):	CTC CombiAir 6MR + CTC EcoZenith i360						
Air-to-water heat pump:	Yes	Energy efficiency class:	-	-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	165	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:	-	-			
Heat pump combination heater:	Yes						

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η _s	161	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door temperat	ure 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	iry energy ra tdoor tempe	tio for erature T j
T j = − 7 °C	Pdh	3,6	kW	T j = – 7 °C	COPd	3,37] -
T j = + 2 °C	Pdh	2,5	kW	T j = +2 °C	COPd	5,19	
T j = + 7 °C	Pdh	1,8	kW	T j = +7 °C	COPd	6,67] -
T j = + 12 °C	Pdh	1,8	kW	T j = +12 °C	COPd	8,48	-
T j = bivalent temperature	Pdh	4,3	kW	T j = bivalent temperature	COPd	2,71	-
T j = operation limit temperature	Pdh	3,8	kW	T j = operation limit temperature	COPd	2,08] -
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	4,6	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	2,43	_
Bivalent temperature	T _{biv}	-12	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	СОРсус	-	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater			
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	5,8	kW
Thermostat-off mode	P _{TO}	0,011	kW				
Standby mode	P _{SB}	0,011	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2340	m3/h
Sound power level, indoors/ outdoors	L _{WA}	- / 53	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	-	m3/h
Annual energy consumption	Q _{HE}	3487	kWh	flow rate, outdoor heat exchanger			
For heat pump combination h	eater:						
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	97	%
Daily electricity consumption	Q _{elec}	8,243	kWh	Daily fuel consumption	\mathbf{Q}_{fuel}	NA	kWh
Annual electricity consumption	AEC	1813	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ist be deposited ct's life cycle, it m that the product product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or rese t's refrigerant, compressor oil and electrical/elec shold waste is not permitted.	gineer for correc Iler offering a se ctronic equipme	t waste manage rvice of that type nt are properly c	ment. At the e. It is of lisposed of.
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