

Product datasheet: Space heater to Regulation (EU) No 811/2013 (S.I. 2019 No. 539 / Programme 2)

		TTF 13 M
		190045
Manufacturer		tecalor
Space heating energy efficiency class under average climate conditions, medium-temperature applications		A++
Energy efficiency class, space heating under average climate conditions, low-temperature applications		A+++
Rated heating output under average climate conditions for medium-temperature applications (P rated)	kW	12
Rated heating output under average climate conditions for low-temperature applications (P rated)	kW	13
Seasonal space heating energy efficiency under average climate conditions for medium-temperature applications (\ensuremath{N} s)	%	126
Seasonal space heating energy efficiency under average climate conditions for low-temperature applications (\ensuremath{N} s)	%	197
Annual energy consumption under average climate conditions for medium-temperature applications (QHE)	kWh/a	7384
Annual energy consumption under average climate conditions for low-temperature applications (QHE)	kWh/a	5233
Sound power level, indoor	dB(A)	53
Rated heating output under colder climate conditions for medium-temperature applications (P rated)	kW	15
Rated heating output under colder climate conditions for low-temperature applications (P rated)	kW	16
Rated heating output under warmer climate conditions for medium-temperature applications (P rated)	kW	12
Rated heating output under warmer climate conditions for low-temperature applications (P rated)	kW	13
Seasonal space heating energy efficiency under colder climate conditions for medium-temperature applications (η s)	%	132
Seasonal space heating energy efficiency under colder climate conditions for low-temperature applications (η s)	%	204
Seasonal space heating energy efficiency under warmer climate conditions for medium-temperature applications (η s)	%	128
Seasonal space heating energy efficiency under warmer climate conditions for low-temperature applications (η_s)	%	201
Annual energy consumption under colder climate conditions for medium-temperature applications (QHE)	kWh/a	10639
Annual energy consumption under colder climate conditions for low-temperature applications (QHE)	kWh/a	7468
Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE)	kWh/a	4727
Annual energy consumption under warmer climate conditions for low-temperature applications (QHE)	kWh/a	3324
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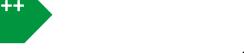








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Manufacturer		tecalor
Seasonal space heating energy efficiency under average climate conditions for low-temperature applications (η_s)	%	197
Temperature control class		VII
Contribution of temperature control to space heating energy efficiency	%	4
Space heating energy efficiency of package under average climate conditions	%	130
Space heating energy efficiency of package under colder climate conditions	%	136
Space heating energy efficiency of package under warmer climate conditions	%	132
Value of differential between space heating energy efficiency under average climate conditions and that under colder climate conditions	%	6
Value of differential between space heating energy efficiency under warmer climate conditions and that under average climate conditions	%	2
Energy efficiency class, space heating under average climate conditions, low-temperature applications		A+++
Space heating energy efficiency class of package under average climate conditions		A++

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Manufacturer Mear source			TTF 13 M
Heat source With auxiliary heater Combination heater with heat pump Rated heating output under colder climate conditions for medium-temperature applications (P rated) Rated heating output under average climate conditions for medium-temperature applications (P rated) Rated heating output under average climate conditions for medium-temperature applications (P rated) Rated heating output under awarrer climate conditions for medium-temperature applications (P rated) Rated heating output under warmer climate conditions for medium-temperature applications (P rated) Tj = 7 °C heating output, partial load range under colder climate conditions (Pdh) Tj = 7 °C heating output, partial load range under average climate conditions (Pdh) Tj = 2 °C heating output, partial load range under average climate conditions (Pdh) Tj = 2 °C heating output, partial load range under average climate conditions (Pdh) Tj = 7 °C heating output, partial load range under average climate conditions (Pdh) Tj = 7 °C heating output, partial load range under average climate conditions (Pdh) Tj = 7 °C heating output, partial load range under average climate conditions (Pdh) Tj = 7 °C heating output, partial load range under average climate conditions (Pdh) Tj = 7 °C heating output, partial load range under average climate conditions (Pdh) Tj = 7 °C heating output, partial load range under average climate conditions (Pdh) Tj = 12 °C heating output, partial load range under average climate conditions (Pdh) Tj = 12 °C heating output, partial load range under average climate conditions (Pdh) Tj = 12 °C heating output, partial load range under warmer climate conditions (Pdh) Tj = 12 °C heating output, partial load range under colder climate conditions (Pdh) Tj = 12 °C heating output, partial load range under warmer climate conditions (Pdh) Tj = 0 heating output, partial load range under warmer climate conditions (Pdh) Tj = 0 heating output, partial load range under warmer climate conditions (Pdh) Tj = 0 heating output, partial loa			190045
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conditions (Pdh) Tj = 12 °C heating output, partial load range under warmer climate conditions (Pdh) Tj = dual mode temperature under colder climate conditions (Pdh) KW 12,7 Tj = dual mode temperature under average climate conditions (Pdh) KW 12,0 Tj = dual mode temperature under average climate conditions (Pdh) KW 12,0 Tj = operating temperature limit under colder climate conditions (Pdh) KW 12,0 Tj = operating temperature limit under average climate conditions (Pdh) KW 12,0 Tj = operating temperature limit under average climate conditions (Pdh) KW 12,0 Tj = operating temperature limit under warmer climate conditions (Pdh) KW 12,0 Tj = operating temperature limit under warmer climate conditions (Pdh) KW 12,0 Tj = operating temperature limit under warmer climate conditions (Pdh) KW 12,0 To air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (Pdh) Dual mode temperature under colder climate conditions (Tbiv) °C -15 Dual mode temperature under average climate conditions (Tbiv) °C -10		kW	13,0
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Tj = dual mode temperature under average climate conditions (Pdh) kW 12,0 Tj = dual mode temperature under warmer climate conditions (Pdh) kW 12,0 Tj = operating temperature limit under colder climate conditions (Pdh) kW 12,0 Tj = operating temperature limit under average climate conditions (Pdh) kW 12,0 Tj = operating temperature limit under average climate conditions (Pdh) kW 12,0 Tj = operating temperature limit under warmer climate conditions (Pdh) kW 12,0 For air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (Pdh) kW 12,0 Dual mode temperature under colder climate conditions (Tbiv) °C -15 Dual mode temperature under average climate conditions (Tbiv) °C -10		kW	12,7
Tj = dual mode temperature under warmer climate conditions (Pdh) kW 12,0 Tj = operating temperature limit under colder climate conditions (Pdh) kW 12,0 Tj = operating temperature limit under average climate conditions (Pdh) kW 12,0 Tj = operating temperature limit under warmer climate conditions (Pdh) kW 12,0 For air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (Pdh) kW 12,0 Dual mode temperature under colder climate conditions (Tbiv) °C -15 Dual mode temperature under average climate conditions (Tbiv) °C -10	Tj = dual mode temperature under colder climate conditions (Pdh)	kW	12,3
Tj = operating temperature limit under colder climate conditions (Pdh) kW 12,0 Tj = operating temperature limit under average climate conditions (Pdh) kW 12,0 Tj = operating temperature limit under warmer climate conditions (Pdh) kW 12,0 For air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (Pdh) kW 12,0 Dual mode temperature under colder climate conditions (Tbiv) °C -15 Dual mode temperature under average climate conditions (Tbiv) °C -10	Tj = dual mode temperature under average climate conditions (Pdh)	kW	12,0
Tj = operating temperature limit under average climate conditions (Pdh) kW 12,0 Tj = operating temperature limit under warmer climate conditions (Pdh) kW 12,0 For air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (Pdh) kW 12,0 Dual mode temperature under colder climate conditions (Tbiv) °C -15 Dual mode temperature under average climate conditions (Tbiv) °C -10	Tj = dual mode temperature under warmer climate conditions (Pdh)	kW	12,0
Tj = operating temperature limit under warmer climate conditions (Pdh) kW 12,0 For air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (Pdh) kW 12,0 Dual mode temperature under colder climate conditions (Tbiv) °C -15 Dual mode temperature under average climate conditions (Tbiv) °C -10	Tj = operating temperature limit under colder climate conditions (Pdh)	kW	12,0
For air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (Pdh) kW 12,0 Dual mode temperature under colder climate conditions (Tbiv) °C -15 Dual mode temperature under average climate conditions (Tbiv) °C -10	Tj = operating temperature limit under average climate conditions (Pdh)	kW	12,0
Dual mode temperature under colder climate conditions (Tbiv) °C -15 Dual mode temperature under average climate conditions (Tbiv) °C -10	Tj = operating temperature limit under warmer climate conditions (Pdh)	kW	12,0
Dual mode temperature under average climate conditions (Tbiv) °C -10	For air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (Pdh)		12,0
Dual mode temperature under warmer climate conditions (Tbiv) C 2			
Construction to the street of	· · · · · · · · · · · · · · · · · · ·	<u>°C</u>	2
Seasonal space heating energy efficiency under colder climate $\%$ conditions for medium-temperature applications (η s)		%	132
Seasonal space heating energy efficiency under average climate $\%$ conditions for medium-temperature applications (η s)		%	126
Seasonal space heating energy efficiency under warmer climate $\%$ conditions for medium-temperature applications (η s)		%	128
Tj = -7 °C COP, partial load range under colder climate conditions (COPd) $3,26$			3,26
Tj = -7 °C COP, partial load range under average climate conditions (COPd) 2,75			2,75
Tj = 2 °C COP, partial load range under colder climate conditions (COPd) 3,69	Tj = 2 °C COP, partial load range under colder climate conditions (COPd)		3,69
Tj = 2 °C COP, partial load range under average climate conditions (COPd)			3,28
Tj = 2 °C COP, partial load range under warmer climate conditions (COPd) 2,62			2,62
Tj = 7 °C COP, partial load range under colder climate conditions (COPd) 4,12	Tj = 7 °C COP, partial load range under colder climate conditions (COPd)		4,12
Tj = 7 °C COP, partial load range under average climate conditions (COPd)			3,70
Tj = 7 °C COP, partial load range under warmer climate conditions (COPd) 3,03			3,03

Tj = 12 °C COP, partial load range under average climate conditions (COPd) 3,87 Tj = 12 °C COP, partial load range under warmer climate conditions (COPd) 3,87 Tj = dual mode temperature under colder climate conditions (COPd) 2,62 Tj = dual mode temperature under average climate conditions (COPd) 3,87 Tj = dual mode temperature under warmer climate conditions (COPd) 3,87 Tj = operating temperature limit under colder climate conditions (COPd) 2,62 Tj = operating temperature limit under average climate conditions (COPd) 2,62 Tj = operating temperature limit under average climate conditions (COPd) 2,62 Tj = operating temperature limit under average climate conditions (COPd) 2,62 Tj = operating temperature limit under average climate conditions (COPd) 2,62 Tj = operating temperature limit of heating water under average climate conditions (WTOL) 2,62 Operating temperature limit of heating water under average climate conditions (WTOL) W 0 Operating temperature limit of heating water under average climate conditions (WTOL) W 0 Power consumption, off-mode (Poff) W 0 Power consumption, standby state (PSB) W 3 Power consumption, operating state, with crankcase heating (PCK) W 0 Rated heating output of auxiliary heater under average climate conditions for medium-temperature applications (QHE)	$T_{\rm J} = 12$ °C COP, partial load range under colder climate conditions (COPd)		4,48
COPd 3,87 Tj = dual mode temperature under colder climate conditions (COPd) 3,03 Tj = dual mode temperature under average climate conditions (COPd) 2,62 Tj = dual mode temperature under warmer climate conditions (COPd) 3,87 Tj = operating temperature limit under colder climate conditions (COPd) 2,62 Tj = operating temperature limit under average climate conditions (COPd) 2,62 Tj = operating temperature limit under average climate conditions (COPd) 2,62 Tj = operating temperature limit under warmer climate conditions (COPd) 2,62 Tj = operating temperature limit under warmer climate conditions (COPd) 2,62 Tj = operating temperature limit of heating water under average climate conditions (WTOL) 2,62 Coperating temperature limit of heating water under average climate conditions (WTOL) The consumption, off-mode (Poff) W 0 O Power consumption, off-mode (Poff) W 3 O O Power consumption, thermostat off-mode (PTO) W 3 O O O O O O O O O			423,00
Tj = dual mode temperature under average climate conditions (COPd) 2,62 Tj = dual mode temperature under warmer climate conditions (COPd) 3,87 Tj = operating temperature limit under colder climate conditions (COPd) 2,62 Tj = operating temperature limit under average climate conditions (COPd) 2,62 Tj = operating temperature limit under warmer climate conditions (COPd) 2,62 Tj = operating temperature limit under warmer climate conditions (COPd) 2,62 For air source heat pumps: Tj = -15 °C (if TOL < -20 °C) (COPd)	,		3,87
Tj = dual mode temperature under warmer climate conditions (COPd) 3,87 Tj = operating temperature limit under colder climate conditions 2,62 Tj = operating temperature limit under average climate conditions 2,62 (COPd) 2,62 For air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (COPd)	Tj = dual mode temperature under colder climate conditions (COPd)		3,03
Tj = operating temperature limit under colder climate conditions (COPd) 2,62 Tj = operating temperature limit under average climate conditions (COPd) 2,62 Tj = operating temperature limit under warmer climate conditions (COPd) 2,62 For air source heat pumps: Tj = -15 °C (if TOL< - 20 °C) (COPd)	Tj = dual mode temperature under average climate conditions (COPd)		2,62
Tj = operating temperature limit under average climate conditions (COPd) Tj = operating temperature limit under warmer climate conditions (COPd) Tj = operating temperature limit under warmer climate conditions (COPd) Por air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (COPd) Operating temperature limit of heating water under average climate conditions (WTOL) Power consumption, off-mode (Poff) Power consumption, thermostat off-mode (PTO) Power consumption, standby state (PSB) Power consumption, operating state, with crankcase heating (PCK) Rated heating output of auxiliary heater under average climate conditions (PSUP) Type of energy supply, auxiliary heater Output control Sound power level, indoor Annual energy consumption under colder climate conditions for medium-temperature applications (OHE) Annual energy consumption under average climate conditions for medium-temperature applications (OHE) Annual energy consumption under average climate conditions for medium-temperature applications (OHE) Annual energy consumption under average climate conditions for medium-temperature applications (OHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (OHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (OHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (OHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (OHE) Annual energy consumption under warmer climate conditions for kWh/a Annual energy consumption under warmer climate conditions for medium-temperature applications (OHE)	Tj = dual mode temperature under warmer climate conditions (COPd)		3,87
Tj = operating temperature limit under warmer climate conditions (COPd) 2,62 For air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (COPd) 2,62 Operating temperature limit of heating water under average climate conditions (WTOL) Power consumption, off-mode (Poff) W 0 Power consumption, thermostat off-mode (PTO) W 3 Power consumption, standby state (PSB) W 3 Power consumption, operating state, with crankcase heating (PCK) W 0 Rated heating output of auxiliary heater under average climate conditions (PSUP) Type of energy supply, auxiliary heater under average climate conditions (PSUP) Sound power level, indoor dB(A) 53 Annual energy consumption under colder climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE)	Tj = operating temperature limit under colder climate conditions (COPd)		2,62
COPd COPD	, , , , , , , , , , , , , , , , , , , ,		2,62
Operating temperature limit of heating water under average climate conditions (WTOL) Power consumption, off-mode (Poff) Power consumption, thermostat off-mode (PTO) Power consumption, thermostat off-mode (PTO) Power consumption, standby state (PSB) Power consumption, standby state (PSB) Power consumption, operating state, with crankcase heating (PCK) Rated heating output of auxiliary heater under average climate conditions (PSUP) Type of energy supply, auxiliary heater Output control Sound power level, indoor Annual energy consumption under colder climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE)			2,62
Conditions (WTOL) Power consumption, off-mode (Poff) Power consumption, thermostat off-mode (PTO) Power consumption, thermostat off-mode (PTO) Power consumption, standby state (PSB) Power consumption, operating state, with crankcase heating (PCK) Rated heating output of auxiliary heater under average climate conditions (PSUP) Type of energy supply, auxiliary heater Output control Sound power level, indoor Annual energy consumption under colder climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE)	For air source heat pumps: Tj = -15 °C (if TOL< -20 °C) (COPd)		2,62
Power consumption, thermostat off-mode (PTO) Power consumption, standby state (PSB) Power consumption, operating state, with crankcase heating (PCK) Rated heating output of auxiliary heater under average climate conditions (PSUP) Type of energy supply, auxiliary heater Output control Sound power level, indoor Annual energy consumption under colder climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) KWh/a 4727		°C	60
Power consumption, standby state (PSB) Power consumption, operating state, with crankcase heating (PCK) Rated heating output of auxiliary heater under average climate conditions (PSUP) Type of energy supply, auxiliary heater Output control Sound power level, indoor Annual energy consumption under colder climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE)	Power consumption, off-mode (Poff)	W	0
Power consumption, operating state, with crankcase heating (PCK) W 0 Rated heating output of auxiliary heater under average climate conditions (PSUP) Type of energy supply, auxiliary heater Output control elektrisch Sound power level, indoor dB(A) 53 Annual energy consumption under colder climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE)	Power consumption, thermostat off-mode (PTO)	W	3
Rated heating output of auxiliary heater under average climate conditions (PSUP) Type of energy supply, auxiliary heater Output control Sound power level, indoor Annual energy consumption under colder climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) kWh/a 4727	Power consumption, standby state (PSB)	W	3
Conditions (PSUP) Type of energy supply, auxiliary heater Output control Sound power level, indoor Annual energy consumption under colder climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) KWh/a 4727	Power consumption, operating state, with crankcase heating (PCK)	W	0
Output controlfestSound power level, indoordB(A)53Annual energy consumption under colder climate conditions for medium-temperature applications (QHE)kWh/a10639Annual energy consumption under average climate conditions for medium-temperature applications (QHE)kWh/a7384Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE)kWh/a4727	3 1 , 3	kW	0,0
Sound power level, indoor dB(A) 53 Annual energy consumption under colder climate conditions for medium-temperature applications (QHE) kWh/a 10639 Annual energy consumption under average climate conditions for medium-temperature applications (QHE) kWh/a 7384 Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) kWh/a 4727	Type of energy supply, auxiliary heater		elektrisch
Annual energy consumption under colder climate conditions for medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) kWh/a kWh/a 4727	Output control		fest
medium-temperature applications (QHE) Annual energy consumption under average climate conditions for medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) kWh/a 4727	Sound power level, indoor	dB(A)	53
medium-temperature applications (QHE) Annual energy consumption under warmer climate conditions for medium-temperature applications (QHE) kWh/a 4727		kWh/a	10639
medium-temperature applications (QHE)		kWh/a	7384
Flow rate on heat source side m³/h 31	3, 1	kWh/a	4727
	Flow rate on heat source side	m³/h	31