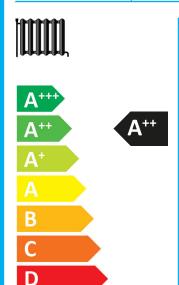
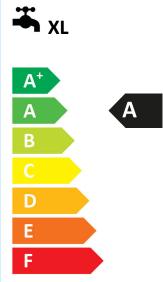


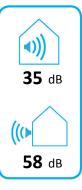
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NOVELAN

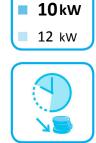
L12 Split-CS 12











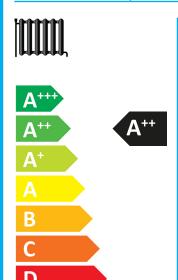
13 kW

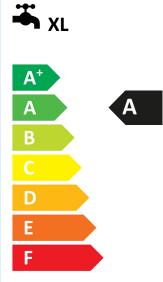


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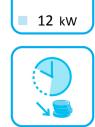
L12 Split-CS 12











13 kW

10 kW

2019

811/2013

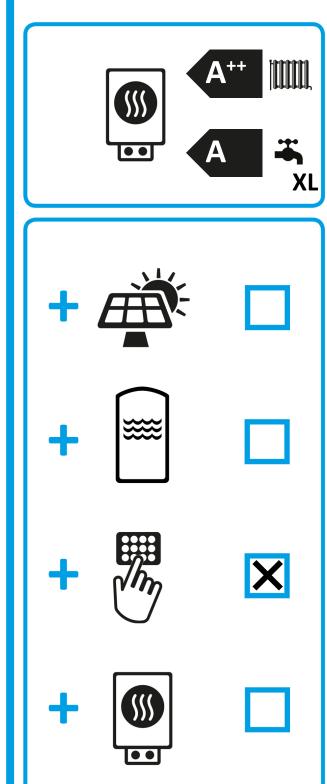


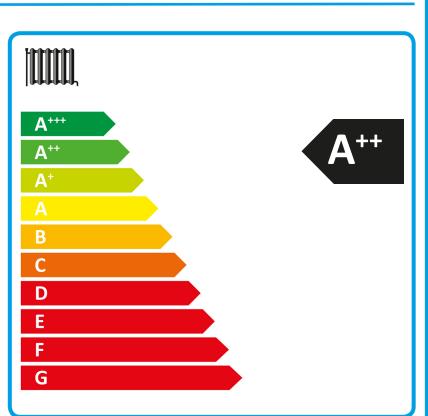
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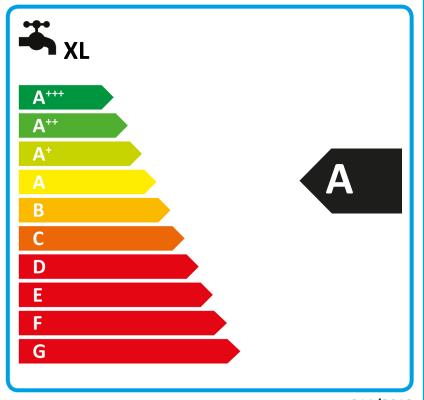
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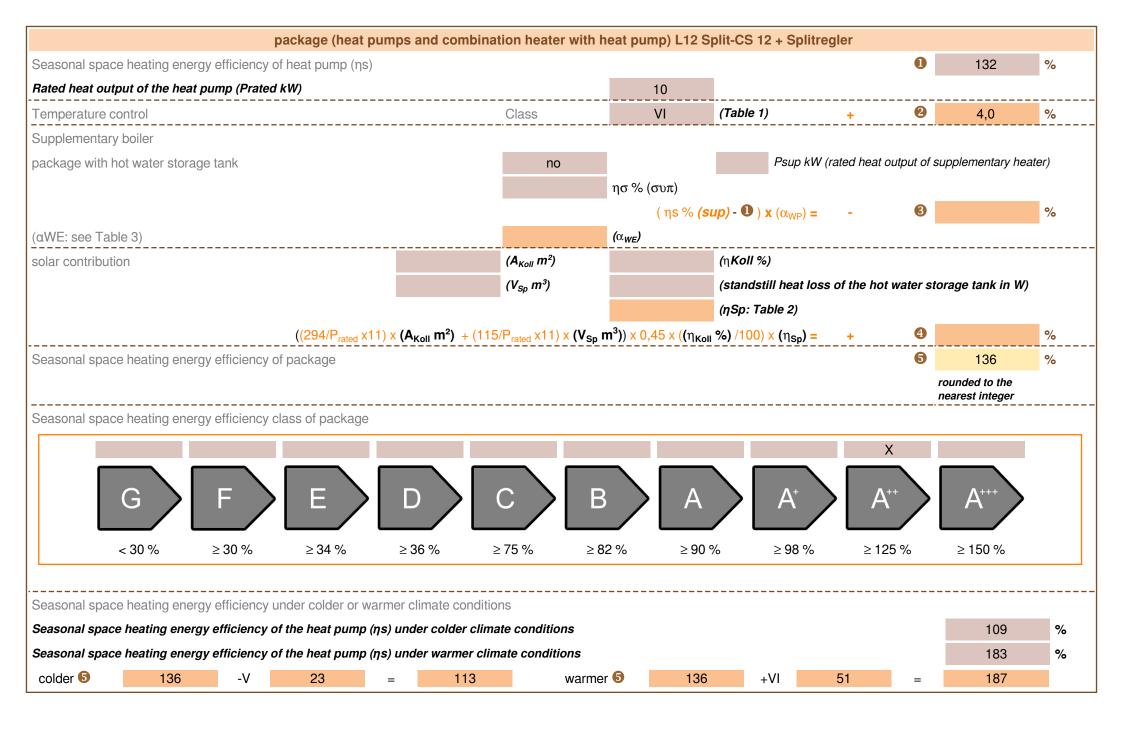
NOVELAN

L12 Split-CS 12 + Splitregler









manufacturer:	NOVELAN				
model:	L12 Split-CS 12				
	•				
Information concerning energy efficiency class and rated	heat output:				
load profile water heating	XL				
	average / low	average / medium			
energy efficiency class space heater:	A++	A++	-		
energy efficiency class waterheating		Α	-		
rated heat output:	12	10	kW		
annual final energy consumption space heater	5361	6137	kWh		
annual electricity consumption waterheating	1702		kWh		
energy efficiency space heater:	174	132	%		
	98				
	98	35	% dB		
energy efficiency waterheating sound power level indoors	'	35	· ·		
sound power level indoors special precautions concerning assembly, installation or	maintenance	'	dB		
sound power level indoors	maintenance	'	dB		
sound power level indoors special precautions concerning assembly, installation or	maintenance	'	dB		
sound power level indoors special precautions concerning assembly, installation or a least of the content of t	maintenance ualified specialist personnel in c	ompliance with local regulations	dB		
sound power level indoors special precautions concerning assembly, installation or a All instructional work in this manual may only be carried out by quadditional information	maintenance ualified specialist personnel in c	ompliance with local regulations medium	dB		
sound power level indoors special precautions concerning assembly, installation or a All instructional work in this manual may only be carried out by quadditional information rated heat output colder climate rated heat output warmer climate	maintenance ualified specialist personnel in c	ompliance with local regulations medium 13	dB dB s. kW		
sound power level indoors special precautions concerning assembly, installation or a large of the second of the s	maintenance ualified specialist personnel in c low 12 12	ompliance with local regulations medium 13 12	dB 3. kW kW		
sound power level indoors special precautions concerning assembly, installation or a concerning assembly installation or a concerning assembly installation or a concerning assembly installation or a concerning assembly, installation or a concerning assembly assembly as a concerning assembly as a concerning assembly as a concerning assembly as a concerning as a c	maintenance ualified specialist personnel in c low 12 12 7920	ompliance with local regulations medium 13 12 11461	dB ss. kW kW		
sound power level indoors special precautions concerning assembly, installation or a concerning assembly as	maintenance ualified specialist personnel in c low 12 12 7920 2765	ompliance with local regulations medium 13 12 11461	dB ss. kW kWh kWh		
sound power level indoors special precautions concerning assembly, installation or a concerning assembly installation or a concerning assembly, installation or a concerning assembly assembly, installation or a concerning assembly assem	maintenance ualified specialist personnel in c low 12 12 7920 2765 1903	ompliance with local regulations medium 13 12 11461	dB s. kW kW kWh		
sound power level indoors special precautions concerning assembly, installation or a concerning assembly installation or a concerning assembly installation or a concerning assembly installation or a concerning assembly, installation or a concerning assembly assem	maintenance ualified specialist personnel in c low 12 12 12 7920 2765 1903 1551	medium 13 12 11461 3445	dB s. kW kWh kWh kWh		
sound power level indoors special precautions concerning assembly, installation or a All instructional work in this manual may only be carried out by quadditional information rated heat output colder climate rated heat output warmer climate annual energy consumption space heater colder climate annual energy consumption space heater warmer climate	maintenance ualified specialist personnel in c low 12 12 7920 2765 1903 1551 140	medium 13 12 11461 3445	dB s. kW kW kWh kWh kWh kWh		

technical data of the temperature controller							
manufacturer:	NOVELAN						
model:	Splitregler						
controller class	VI	-					
contribution of the controller to the energy efficiency space heater	4,0	%					

Native-to-water heat pump: (yes/no) Native-to-water heat pump: (yes/no) Native-to-water heat pump: (yes/no) No	Model				L12 Split-CS 12				
Nater-to-water heat pump: (yes/no)	Air-to-water heat pump: (yes/no)				·				
cov-temperature heat pump; (yes/no) coupped with supplementary heater; (yes/no) polication; (down-medium) medium m	Brine-to-water heat pump: (yes/no)				no				
Equipped with supplementary heater: (yes/no) yes combination heater with: (yes/no) yes publication: (low/modum) Ilmate: (colder/average/warmer) Item Symbol Value Unit Value	Water-to-water heat pump: (yes/no)				no				
Sembination heater with: (yes/no) Sembination heaters and heat pumps: (yes/no) Sembination heaters with: (ye	Low-temperature heat pump: (yes/no)				no				
Implication: (low/medium) medium	Equipped with supplementary heater: (yes/no)				no				
term Symbol Value Unit Item Sated heat output Prated 10 KW Seasonal space heating nergy efficiency 13 132,0 % Seasonal space heating nergy efficiency Unit Stated heat output Prated 10 KW Seasonal Space heating nergy efficiency 13 132,0 % Seasonal Space heating nergy efficiency 14 132,0 % Seasonal Space heating nergy efficiency 15 132,0 % Seasonal Space heating nergy efficien	combination heater with: (yes/no))			yes				
Symbol Value Unit Item Symbol Value Unit Item Seasonal space heating ns 132,0 % Seasonal space heating ns 132,0 Seasonal space heating ns 132,0 Seasonal space heating ns 132,0 Seasonal space heati	application: (low/medium)				medium				
Rated heat output Prated 10 kW Seasonal space heating energy efficiency ns 132.0 %	climate: (colder/average/warmer)				average				
Declared Coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj	Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
	Rated heat output	Prated	10	kW		ηS	132,0	%	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $				ndoor		Declared coefficient of performance for part load at indoor			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Tj = -7°C	Pdh	8,9	kW	Tj = -7°C	COPd	1,99	-	
Fig. = +12°C Pdh 5,0 kW Tj = +12°C COPd 6,91 - Tj = bivalent temperature Pdh 9,2 kW Tj = bivalent temperature COPd 1,90 - Tj = operation limit temperature Pdh 9,2 kW Tj = operation limit temperature COPd 1,90 - Tj = operation limit temperature COPd 1,92 - To = to air-to-water heat pumps: Tj Pdh - KW For air-to-water heat pumps: Tj Pdh - KW Por air-to-water heat pumps: Tj Pdh - Tj Pdh	Tj = +2°C	Pdh	5,5	kW	Tj = +2°C	COPd	3,22	-	
Tj = bivalent temperature Pdh 9,2 kW Tj = bivalent temperature COPd 1,90 - Tj = operation limit temperature Pdh 8,1 kW Tj = operation limit temperature COPd 1,90 - Tj = operation limit temperature Pdh 8,1 kW Tj = operation limit temperature COPd 1,92 - Tor air-to-water heat pumps: Tj = -15°C (if TOL < -20°C) Bivalent temperature T _{biv} -8 °C For air-to-water heat pumps: Tj = -15°C (if TOL < -20°C) Bivalent temperature T _{biv} -8 °C For air-to-water heat pumps: ToL -10 °C Cycling interval capacity for eating water operating limit temperature Coperation limit temperature ToL -10 °C Coperation limit temperature Top air to-water heat pumps: Tj Coperation limit temperature Top air to-water heat pumps: Tj Coperation limit temperature Top air to-water heat pumps: Tj Coperation limit temperature Top air to-water hea	Tj = +7°C	Pdh	3,6	kW	Tj = +7°C	COPd	4,61	-	
Tj = operation limit temperature Pdh 8,1 kW Tj = operation limit temperature COPd 1,92 - For air-to-water heat pumps: Tj Pdh - kW For air-to-water heat pumps: Tj COPd For air-to-water heat pumps: ToL -10 °C Coperation limit temperature T	Tj = +12°C	Pdh	5,0	kW	Tj = +12°C	COPd	6,91	-	
For air-to-water heat pumps: Tj	Tj = bivalent temperature	Pdh	9,2	kW	Tj = bivalent temperature	COPd	1,90	-	
= -15 °C (if TOL < -20 °C) Bivalent temperature T _{biv} -8 °C For air-to-water heat pumps: Operation limit temperature Cycling interval capacity for leating Degradation co-efficient (**) Cdh 1,0 - Heating water operating limit temperature Degradation co-efficient (**) Cdh 1,0 - Heating water operating limit temperature Supplementary heater Power consumption in modes other than active mode Supplementary heater Definode Popp 0,002 kW Rated heat output Psup 1,9 kW Thermostat-off mode Popp 0,003 kW Type of energy input electrical Brain-to-water heat pumps: Rated air flow rate, outdoors Conditions of nitrogen oxides NO _x - mg/kWh Declared load profile XL Water heating energy efficiency Declared load profile air deutschland GmbH Industriestr. 3 95359 Kasendorf Germany To For heat pump space heaters and heat pump combination heaters. To Condition is equal to the design load for heating energy for heating sup(Tj).	Tj = operation limit temperature	Pdh	8,1	kW	Tj = operation limit temperature	COPd	1,92	-	
Operation limit temperature Cycling interval capacity for Pcych - kW Cycling interval efficiency COPcyc	For air-to-water heat pumps: Tj = -15°C (if TOL < -20°C)	Pdh	-	kW		COPd	-	-	
Degradation co-efficient (**) Codh 1,0	Bivalent temperature	T _{biv}	-8	°C		TOL	-10	°C	
Power consumption in modes other than active mode Off mode Poff mode Poff Dougle Rated Poff Poff Dougle Rated Poff Rated heat output Poff Poff Ra	Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-	
Off mode	Degradation co-efficient (**)	Cdh	1,0	-		WTOL	58	°C	
Thermostat-off mode	Power consumption in modes	other thai	active mod	<u>. </u>	Supplementary heater	•		•	
Thermostat-off mode	Off mode	P _{OFF}	0,002	kW	Rated heat output	Psup	1,9	kW	
Standby mode	Thermostat-off mode		0,020	kW	Type of energy input		electrical	•	
Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger For heat pump combination heater: Declared load profile XL Water heating energy efficiency Daily electricity consumption Qelec 7,752 KWh Daily fuel consumption Qiuel Ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany Poesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).	Standby mode		0,015	kW					
Capacity control variable Variable For air-to-water heat pumps: Rated air flow rate, outdoors For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat pumps: Rated brine or water flow rate, outdoor heat pumps: Rated brine or water flow rate, outdoor heat pumps: Rated brine or water flow rate, outdoor heat pumps: Rated brine or water flow rate, outdoor heat pump combination heater: Declared load profile XL Water heating energy efficiency Air beating energy efficiency Air beating energy Air beating energy Air beating energy Air beat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating edesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).	Crankcase heater mode	P _{CK}	0,035	kW					
Rated air flow rate, outdoors For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger For heat pump combination heater: Declared load profile XL Water heating energy efficiency Ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany *) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating energy supplementary capacity for heating sup(Tj).	Other items								
pumps: Rated brine or water flow rate, outdoor heat exchanger Emissions of nitrogen oxides NO _X - mg/kWh For heat pump combination heater: Declared load profile XL Water heating energy efficiency η_{wh} 98 % Daily electricity consumption Q _{elec} 7,752 kWh Daily fuel consumption Qfuel - kWh Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany *) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating energy efficiency η_{wh} 1 or heating energy efficiency η_{wh} 1 or heating energy efficiency η_{wh} 2 or heating energy efficiency η_{wh} 2 or heating energy efficiency η_{wh} 3 or heating energy efficiency η_{wh} 3 or heating energy efficiency η_{wh} 4 or heating energy efficiency η_{wh} 5 or heating energy efficiency η_{wh} 6 or heating energy efficiency η_{wh} 9 or heating energy efficie	Capacity control	variable			• •	-	4.380	m ³ /h	
For heat pump combination heater: Declared load profile XL Water heating energy efficiency η_{wh} 98 % Daily electricity consumption Q_{elec} 7,752 kWh Daily fuel consumption Qfuel - kWh Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany *Y) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Presign, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).	sound power level, indoors/outdoors	L _{WA}	35 / 58	dB	pumps: Rated brine or water flow rate, outdoor heat	-	-	m ³ /h	
Declared load profile XL Water heating energy efficiency \$\eta_{wh}\$ 98 % Daily electricity consumption Q_{elec} 7,752 kWh Daily fuel consumption Qfuel - kWh Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany *) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).	Emissions of nitrogen oxides	NO _X	-	mg/kWh					
Daily electricity consumption Q _{elec} 7,752 kWh Daily fuel consumption Qfuel - kWh Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany *) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).	For heat pump combination h	eater:							
ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany *) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).	Declared load profile		XL		Water heating energy efficiency	η_{wh}	98	%	
*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).	Daily electricity consumption	Q _{elec}	7,752	kWh	Daily fuel consumption	Qfuel	-	kWh	
Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).	Contact details	ait deutsch	land GmbH In	dustriestr. 3	95359 Kasendorf Germany				
								eating	
	(**) If Cdh is not determined by m	neasuremen	t then the defa	ault degrada	tion coefficient is Cdh = 0,9.				

Model				L12 Split-CS 12				
Air-to-water heat pump: (yes/no)				yes				
Brine-to-water heat pump: (yes/no)				no				
Water-to-water heat pump: (yes/no)				no				
Low-temperature heat pump: (yes/no)				no				
Equipped with supplementary heater: (yes/no)				no				
combination heater with: (yes/no))			yes				
application: (low/medium)				low				
climate: (colder/average/warmer)				average				
Item	Symbol	Value	Unit	Item Symbol Value				
Rated heat output	Prated	12	kW	Seasonal space heating energy efficiency	ηS	174,0	%	
Declared coefficient of perfor temperature 20°C and outdoor			ndoor	Declared coefficient of performance for part load at indoor temperature 20 °C and outdoor temperature Tj				
Tj = -7°C	Pdh	10,3	kW	Tj = -7°C	COPd	2,93	-	
Tj = +2°C	Pdh	6,3	kW	Tj = +2°C	COPd	4,37	-	
Tj = +7°C	Pdh	4,1	kW	Tj = +7°C	COPd	5,53	-	
Tj = +12°C	Pdh	4,8	kW	Tj = +12°C	COPd	7,59	-	
Tj = bivalent temperature	Pdh	10,2	kW	Tj = bivalent temperature	COPd	2,93	-	
Tj = operation limit temperature	Pdh	9,3	kW	Tj = operation limit temperature	COPd	2,68	-	
For air-to-water heat pumps: Tj = -15°C (if TOL < -20°C)	Pdh	-	kW	For air-to-water heat pumps: Tj = -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	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-	
Degradation co-efficient (**)	Cdh	1,0	-	Heating water operating limit temperature	WTOL	58	°C	
Power consumption in modes	other thai	n active mod	<u>. </u>	Supplementary heater	•			
Off mode	P _{OFF}	0,002	kW	Rated heat output	Psup	2,2	kW	
Thermostat-off mode	P _{TO}	0,020	kW	Type of energy input		electrical	•	
Standby mode	P _{SB}	0,015	kW					
Crankcase heater mode	P _{CK}	0,035	kW					
Other items								
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4.380	m ³ /h	
sound power level, indoors/outdoors	L _{WA}	35 / 58	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h	
Emissions of nitrogen oxides	NO _X	-	mg/kWh					
For heat pump combination h	eater:							
Declared load profile		-		Water heating energy efficiency	η_{wh}	-	%	
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Qfuel	-	kWh	
Contact details	ait deutsch	land GmbH In	dustriestr. 3	95359 Kasendorf Germany	•	-	-	
				the rated heat output Prated is equ equal to the supplementary capac			eating	
(**) If Cdh is not determined by m		•						
·								