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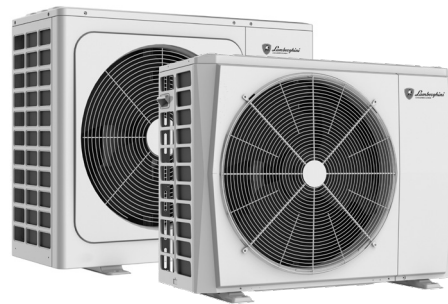
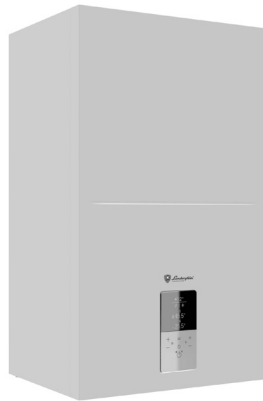
IDOLA S 3.2 HYBRID 28H

POMPE DI CALORE IBRIDE REVERSIBILI ARIA-ACQUA

PER INSTALLAZIONE SPLITTATA ABBINABILE AD UN BOLLITORE SANITARIO ESTERNO
AIR-WATER REVERSIBLE HYBRID HEAT PUMPS FOR SPLIT INSTALLATION COMBINED
WITH AN EXTERNAL SANITARY BOILER



Cod. 3QE47420 - Rev. 00 - 11/2021



IDOLA S 3.2 HYBRID 28H

IT

BOLLETTINO TECNICO

EN

TECHNICAL DATA MANUAL

Dati ERP / ERP data

Modello		4	6	8	10	UM
Classe di efficienza in riscaldamento	bassa temperatura (acqua prodotta 35°C)	186	191	200	201	ηs (%)
		← A+++				class
	media temperatura (acqua prodotta 55°C)	128	136	130	135	ηs (%)
		← A++				class
SEER	acqua prodotta 7°C	4,99	5,34	5,83	5,98	W/W
	acqua prodotta 18°C	7,77	8,21	8,95	8,78	W/W

NOTA: Classe di efficienza calcolata secondo regolamento europeo 811/2013. I valori si riferiscono ad unità prive di eventuali opzioni o accessori.

NOTA: Declared according to **European regulation 811/2013**. The values are referred to units without options and accessories.

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DATI ERP PER RISCALDAMENTO AMBIENTE / ERP DATA FOR SPACE HEATING

For low - temperature application (35°C)												
Mod	Average				Colder				Warmer			
	Energy efficiency class	Indoor unit sound power	Outdoor unit sound power	Prated	Seasonal energy efficiency	Annual energy consumption	Prated	Seasonal energy efficiency	Annual energy consumption	Prated	Seasonal energy efficiency	Annual energy consumption
IDOLA S 3.2 HYBRID 28H 4	A+++	39	55	6	186	2408	5	155	2841	5	258	1095
IDOLA S 3.2 HYBRID 28H 6	A+++	39	57	7	191	2911	6	162	3373	6	262	1197
IDOLA S 3.2 HYBRID 28H 8	A+++	39	59	8	200	3312	7	165	4091	8	281	1423
IDOLA S 3.2 HYBRID 28H 10	A+++	39	60	9	201	3714	8	165	4545	8	281	1588

For medium - temperature application (55°C)												
Mod	Average				Colder				Warmer			
	Energy efficiency class	Indoor unit sound power	Outdoor unit sound power	Prated	Seasonal energy efficiency	Annual energy consumption	Prated	Seasonal energy efficiency	Annual energy consumption	Prated	Seasonal energy efficiency	Annual energy consumption
IDOLA S 3.2 HYBRID 28H 4	A++	39	56	4	128	2768	3	104	3115	5	164	1549
IDOLA S 3.2 HYBRID 28H 6	A++	39	58	6	136	3381	4	112	3640	5	165	1601
IDOLA S 3.2 HYBRID 28H 8	A++	39	59	7	130	4089	6	113	4920	8	176	2254
IDOLA S 3.2 HYBRID 28H 10	A++	39	60	8	135	4576	7	118	5491	8	184	2308

SCHEDA PRODOTTO CALDAIA / GAS BOILER PRODUCT FICHE

Condensing boiler: YES			
Low-temperature boiler (**): YES			
B1 Boiler: NO			
Combination heater: NO			
Cogeneration space heater: NO			
Item	Symbol	Unit	Value
Seasonal space heating energy efficiency class (from A+++ to D)			A
Rated heat output	P_n	kW	28
Seasonal space heating energy efficiency	η_s	%	94
Useful heat out put			
Useful heat output at rated heat output and high-temperature regime (*)	P₄	kW	27,9
Useful heat output at 30% of rated heat output and low-temperature regime (**)	P₁	kW	8,1
Useful efficiency			
Useful efficiency at rated heat output and high-temperature regime (*)	η_4	%	88,1
Useful efficiency at 30% of rated heat output and low-temperature regime (**)	η_1	%	98,6
Auxiliary electricity consumption			
At full load	el_{max}	kW	0,032
At part load	el_{min}	kW	0,013
In standby mode	PSB	kW	0,004
Other items			
Standby heat loss	P_{stby}	kW	0,042
Ignition burner power consumption	P_{ign}	kW	0,000
Annual energy consumption	QHE	GJ	86
Sound power level	LWA	dB	49
Emissions of nitrogen oxides	NO_x	mg/kWh	34

(*) High-temperature regime means 60°C return temperature at heater inlet and 80°C feed temperature at heater outlet.

(**) Low temperature means for condensing boilers 30°C, for low-temperature boilers 37°C and for other heaters 50°C return temperature (at heater inlet).

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 4 - Modo riscaldamento - Clima medio - Bassa temperatura (35°C) / Heating mode - Average climate - Low temperature (35°C)

Technical data sheet for hybrid heat pump

Model(s):		IDOLA S 3.2 HYBRID 28H 4					
Heat source (air, water, brine, direct expansion)				air			
Heat sink (water, brine)				water			
Tipo di combustibile fossile (liquido / gas)				gas			
Low temperature heat pump:				no			
Heat pump combination heater:				no			
Parameters are declared for low-temperature application (35°C).							
Parameters are declared for average climate conditions.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -10°C	Prated = Pdesignh	5,52	kW	Seasonal space heating energy efficiency	η _s	186	%
Annual energy consumption	Q _{HE}	2408	kWh	Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared capacity for heating				Declared coefficient of performance for heating			
T _i = -7 °C	P _{dh}	4,88	kW	T _j = -7 °C	COP _d	3,19	-
T _i = + 2 °C	P _{dh}	3,06	kW	T _j = + 2 °C	COP _d	4,78	-
T _i = + 7 °C	P _{dh}	1,93	kW	T _j = + 7 °C	COP _d	6,13	-
T _i = +12°C	P _{dh}	1,48	kW	T _j = +12°C	COP _d	7,50	-
T _j = T _{HP,off}	P _{dh}	4,48	kW	T _j = T _{HP,off}	COP _d	3,54	-
T _j = T _{fb,off}	P _{dh}	4,48	kW	T _j = T _{fb,off}	COP _d	3,54	-
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature heat pump off	T _{hp,off}	-7	°C	Switch temperature boiler off	T _{fb,off}	-7	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—				
Heat pump: power input in modes other than active				Boiler			
Off mode	P _{OFF}	0,014	kW	Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Thermostat-off mode	P _{TO}	0,024	kW	Useful heat output at 30% of rated heat output and high tempera- ture regime (3)	P ₁	8,1	kW
Standby mode	P _{SB}	0,014	kW	Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Crankcase heater mode	P _{CK}	0	kW	Useful efficiency at 30% of rated heat output and high tempera- ture regime (3)	η ₁	98,64	%
Other items				Power input of electrical auxiliaries at full load	elmax	0,032	kW
Capacity control of heat pump	fisso/varia- bile	Variable		Power input of electrical auxiliaries at part load	elmin	0,013	kW
For air-to-water HP: Rated air flow rate	Q _{airsource}	2770	m ³ /h	Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Sound power level, indoors	L _{WA}	39	dB(A)	Stand-by losses	P _{stby}	0,042	kW
Sound power level, outdoors	L _{WA}	55	dB(A)	Power input of ignition burner fossil fuel	P _{ign}	0,000	kW
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy						

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING
IDOLA S 3.2 HYBRID 28H 4 - Modo riscaldamento - Clima più freddo - Bassa temperatura (35°C) / Heating mode - Colder climate - Low temperature (35°C)
Technical data sheet for hybrid heat pump

Model(s):		IDOLA S 3.2 HYBRID 28H 4					
Heat source (air, water, brine, direct expansion)				air			
Heat sink (water, brine)				water			
Tipo di combustibile fossile (liquido / gas)				gas			
Low temperature heat pump:				no			
Heat pump combination heater:				no			
Parameters are declared for low-temperature application (35°C).							
Parameters are declared for colder climate conditions.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -22°C	Prated = Pdesignh	4,56	kW	Seasonal space heating energy efficiency	η_s	155	%
Annual energy consumption	Q _{HE}	2841	kWh	Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared capacity for heating				Declared coefficient of performance for heating			
T _i = -7 °C	P _{dh}	2,76	kW	T _j = -7 °C	COP _d	3,49	-
T _i = + 2 °C	P _{dh}	1,77	kW	T _j = + 2 °C	COP _d	4,95	-
T _i = + 7 °C	P _{dh}	1,17	kW	T _j = + 7 °C	COP _d	5,53	-
T _i = +12°C	P _{dh}	1,43	kW	T _j = +12°C	COP _d	6,40	-
T _j = T _{HP,off}	P _{dh}	2,54	kW	T _j = T _{HP,off}	COP _d	3,81	-
T _j = T _{fb,off}	P _{dh}	2,54	kW	T _j = T _{fb,off}	COP _d	3,81	-
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	3,724	kW	For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature heat pump off	T _{hp,off}	-15	°C	Switch temperature boiler off	T _{fb,off}	-15	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—				
Heat pump: poer input in modes other than active				Boiler			
Off mode	P _{OFF}	0,014	kW	Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Thermostat-off mode	P _{TO}	0,024	kW	Useful heat output at 30% of rated heat output and high tempera- ture regime (3)	P ₁	8,1	kW
Standby mode	P _{SB}	0,014	kW	Useful efficiency at rated heat output and high temperature regime (3)	η_4	88,06	%
Crankcase heater mode	P _{CK}	0	kW	Useful efficiency at 30% of rated heat output and high tempera- ture regime (3)	η_1	98,64	%
Other items				Power input of electrical auxiliaries at full load	elmax	0,032	kW
Capacity control of heat pump	fisso/varia- bile	Variable		Power input of electrical auxiliaries at part load	elmin	0,013	kW
For air-to-water HP: Rated air flow rate	Q _{airsource}	2770	m ³ /h	Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Sound power level, indoors	L _{WA}	-	dB(A)	Stand-by losses	P _{stby}	0,042	kW
Sound power level, outdoors	L _{WA}	-	dB(A)	Power input of ignition burner fossil fuel	P _{ign}	0,000	kW
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy						

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 4 - Modo riscaldamento - Clima più caldo - Bassa temperatura (35°C) / Heating mode - Warmer climate - Low temperature (35°C)

Technical data sheet for hybrid heat pump

Model(s):		IDOLA S 3.2 HYBRID 28H 4	
Heat source (air, water, brine, direct expansion)			air
Heat sink (water, brine)			water
Tipo di combustibile fossile (liquido / gas)			gas
Low temperature heat pump:			no
Heat pump combination heater:			no
Parameters are declared for low-temperature application (35°C).			
Parameters are declared for warmer climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = 2°C	Prated = Pdesighn	5,35	kW
Annual energy consumption	Q _{HE}	1095	kWh
Declared capacity for heating			
T _i = - 7 °C	P _{dh}	-	kW
T _i = + 2 °C	P _{dh}	5,35	kW
T _i = + 7 °C	P _{dh}	3,56	kW
T _i = +12°C	P _{dh}	1,64	kW
T _j = T _{HP,off}	P _{dh}	5,35	kW
T _j = T _{fb,off}	P _{dh}	5,35	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW
Switch temperature heat pump off	T _{hp,off}	2	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	2770	m ³ /h
Sound power level, indoors	L _{WA}	-	dB(A)
Sound power level, outdoors	L _{WA}	-	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	258	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = - 7 °C	COP _d	-	-
T _j = + 2 °C	COP _d	3,95	-
T _j = + 7 °C	COP _d	5,92	-
T _j = +12°C	COP _d	7,91	-
T _j = T _{HP,off}	COP _d	3,95	-
T _j = T _{fb,off}	COP _d	3,95	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	2	°C

Boiler			
Item	Symbol	Value	Unit
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesighn), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 4 - Modo riscaldamento - Clima medio - Media temperatura (55°C) / Heating mode - Average climate - Medium temperature (55°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 4						
Hear source (air, water, brine, direct expansion)							air
Heat sink (water, brine)							water
Tipo di combustibile fossile (liquido / gas)							gas
Low temperature heat pump:							no
Heat pump combination heater:							no
Parameters are declared for medium-temperature application (55°C).							
Parameters are declared for average climate conditions.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -10°C	Prated = Pdesignh	4,40	kW	Seasonal space heating energy efficiency	η_s	128	%
Annual energy consumption	Q _{HE}	2768	kWh	Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared capacity for heating				Declared coefficient of performance for heating			
T _i = - 7 °C	P _{dh}	3,89	kW	T _j = - 7 °C	COP _d	2,17	-
T _i = + 2 °C	P _{dh}	2,38	kW	T _j = + 2 °C	COP _d	3,30	-
T _i = + 7 °C	P _{dh}	2,95	kW	T _j = + 7 °C	COP _d	4,03	-
T _i = +12°C	P _{dh}	1,32	kW	T _j = +12°C	COP _d	5,17	-
T _j = T _{HP,off}	P _{dh}	3,56	kW	T _j = T _{HP,off}	COP _d	2,42	-
T _j = T _{fb,off}	P _{dh}	3,56	kW	T _j = T _{fb,off}	COP _d	2,42	-
For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature heat pump off	T _{hp,off}	-7	°C	Switch temperature boiler off	T _{fb,off}	-7	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—				
Heat pump: poer input in modes other than active				Boiler			
Off mode	P _{OFF}	0,014	kW	Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Thermostat-off mode	P _{TO}	0,024	kW	Useful heat output at 30% of rated heat output and high tempera- ture regime (3)	P ₁	8,1	kW
Standby mode	P _{SB}	0,014	kW	Useful efficiency at rated heat output and high temperature regime (3)	η_4	88,06	%
Crankcase heater mode	P _{CK}	0	kW	Useful efficiency at 30% of rated heat output and high tempera- ture regime (3)	η_1	98,64	%
Other items				Power input of electrical auxiliaries at full load	el _{max}	0,032	kW
Capacity control of heat pump	fisso/varia- bile	Variable		Power input of electrical auxiliaries at part load	el _{min}	0,013	kW
For air-to-water HP: Rated air flow rate	Q _{airsource}	2770	m ³ /h	Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Sound power level, indoors	L _{WA}	39	dB(A)	Stand-by losses	P _{stby}	0,042	kW
Sound power level, outdoors	L _{WA}	56	dB(A)	Power input of ignition burner fossil fuel	P _{ign}	0,000	kW
Contact details	Ferrolì s.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy						

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 4 - Modo riscaldamento - Clima più freddo - Media temperatura (55°C) / Heating mode - Colder climate - Medium temperature (55°C)

Technical data sheet for hybrid heat pump

Model(s):		IDOLA S 3.2 HYBRID 28H 4					
Heat source (air, water, brine, direct expansion)							air
Heat sink (water, brine)							water
Tipo di combustibile fossile (liquido / gas)							gas
Low temperature heat pump:							no
Heat pump combination heater:							no
Parameters are declared for medium-temperature application (55°C).							
Parameters are declared for colder climate conditions.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -22°C	Prated = P _{designh}	3,37	kW	Seasonal space heating energy efficiency	η_s	104	%
Annual energy consumption	Q _{HE}	3115	kWh	Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared capacity for heating				Declared coefficient of performance for heating			
T _j = -7 °C	P _{dh}	2,14	kW	T _j = -7 °C	COP _d	2,32	-
T _j = + 2 °C	P _{dh}	1,28	kW	T _j = + 2 °C	COP _d	2,99	-
T _j = + 7 °C	P _{dh}	1,01	kW	T _j = + 7 °C	COP _d	3,76	-
T _j = +12°C	P _{dh}	1,36	kW	T _j = +12°C	COP _d	4,89	-
T _j = T _{HP,off}	P _{dh}	1,95	kW	T _j = T _{HP,off}	COP _d	2,47	-
T _j = T _{fb,off}	P _{dh}	1,95	kW	T _j = T _{fb,off}	COP _d	2,47	-
For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	2,748	kW	For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature heat pump off	T _{hp,off}	-15	°C	Switch temperature boiler off	T _{fb,off}	-15	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,9	—				
Heat pump: poer input in modes other than active				Boiler			
Off mode	P _{OFF}	0,014	kW	Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Thermostat-off mode	P _{TO}	0,024	kW	Useful heat output at 30% of rated heat output and high tempera- ture regime (3)	P ₁	8,1	kW
Standby mode	P _{SB}	0,014	kW	Useful efficiency at rated heat output and high temperature regime (3)	η_4	88,06	%
Crankcase heater mode	P _{CK}	0	kW	Useful efficiency at 30% of rated heat output and high tempera- ture regime (3)	η_1	98,64	%
Other items				Power input of electrical auxiliaries at full load	elmax	0,032	kW
Capacity control of heat pump	fisso/varia- bile	Variable		Power input of electrical auxiliaries at part load	elmin	0,013	kW
For air-to-water HP: Rated air flow rate	Q _{airsource}	2770	m ³ /h	Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Sound power level, indoors	L _{WA}	-	dB(A)	Stand-by losses	P _{stby}	0,042	kW
Sound power level, outdoors	L _{WA}	-	dB(A)	Power input of ignition burner fossil fuel	P _{ign}	0,000	kW
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy						

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 4 - Modo riscaldamento - Clima più caldo - Media temperatura (55°C) / Heating mode - Warmer climate - Medium temperature (55°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 4		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for medium-temperature application (55°C).			
Parameters are declared for warmer climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = 2°C	Prated = Pdesignh	4,84	kW
Annual energy consumption	Q _{HE}	1549	kWh
Declared capacity for heating			
T _i = - 7 °C	P _{dh}	-	kW
T _i = + 2 °C	P _{dh}	4,84	kW
T _i = + 7 °C	P _{dh}	3,23	kW
T _i = +12°C	P _{dh}	1,47	kW
T _j = T _{HP,off}	P _{dh}	4,84	kW
T _j = T _{fb,off}	P _{dh}	4,84	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW
Switch temperature heat pump off	T _{hp,off}	2	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,9	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	2770	m ³ /h
Sound power level, indoors	L _{WA}	-	dB(A)
Sound power level, outdoors	L _{WA}	-	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	164	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = - 7 °C	COP _d	-	-
T _j = + 2 °C	COP _d	2,52	-
T _j = + 7 °C	COP _d	3,68	-
T _j = +12°C	COP _d	5,15	-
T _j = T _{HP,off}	COP _d	2,52	-
T _j = T _{fb,off}	COP _d	2,52	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	2	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 6 - Modo riscaldamento - Clima medio - Bassa temperatura (35°C) / Heating mode - Average climate - Low temperature (35°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 6		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for low-temperature application (35°C).			
Parameters are declared for average climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -10°C	Prated = Pdesignh	6,82	kW
Consumo di energia annuale	Q _{HE}	2911	kWh
Declared capacity for heating			
T _i = -7 °C	P _{dh}	6,03	kW
T _i = + 2 °C	P _{dh}	3,88	kW
T _i = + 7 °C	P _{dh}	2,40	kW
T _i = +12°C	P _{dh}	1,39	kW
T _j = T _{HP,off}	P _{dh}	5,55	kW
T _j = T _{fb,off}	P _{dh}	5,55	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW
Switch temperature heat pump off	T _{hp,off}	-7	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	2770	m ³ /h
Sound power level, indoors	L _{WA}	39	dB(A)
Sound power level, outdoors	L _{WA}	57	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	191	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = -7 °C	COP _d	3,09	-
T _j = + 2 °C	COP _d	4,85	-
T _j = + 7 °C	COP _d	6,63	-
T _j = +12°C	COP _d	7,58	-
T _j = T _{HP,off}	COP _d	3,48	-
T _j = T _{fb,off}	COP _d	3,48	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	-7	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 6 - Modo riscaldamento - Clima più freddo - Bassa temperatura (35°C) / Heating mode - Colder climate - Low temperature (35°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 6		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for low-temperature application (35°C).			
Parameters are declared for colder climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -22°C	Prated = Pdesignh	5,63	kW
Annual energy consumption	Q _{HE}	3373	kWh
Declared capacity for heating			
T _i = -7 °C	P _{dh}	3,42	kW
T _i = + 2 °C	P _{dh}	2,06	kW
T _i = + 7 °C	P _{dh}	1,47	kW
T _i = +12°C	P _{dh}	1,44	kW
T _j = T _{HP,off}	P _{dh}	3,12	kW
T _j = T _{fb,off}	P _{dh}	3,12	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	4,596	kW
Switch temperature heat pump off	T _{hp,off}	-15	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	2770	m ³ /h
Sound power level, indoors	L _{WA}	-	dB(A)
Sound power level, outdoors	L _{WA}	-	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	162	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = -7 °C	COP _d	3,59	—
T _j = + 2 °C	COP _d	5,21	—
T _j = + 7 °C	COP _d	6,24	—
T _j = +12°C	COP _d	6,71	—
T _j = T _{HP,off}	COP _d	3,95	—
T _j = T _{fb,off}	COP _d	3,95	—
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	—
Switch temperature boiler off	T _{fb,off}	-15	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING
IDOLA S 3.2 HYBRID 28H 6 - Modo riscaldamento - Clima più caldo - Bassa temperatura (35°C) / Heating mode - Warmer climate - Low temperature (35°C)
Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 6		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for low-temperature application (35°C).			
Parameters are declared for warmer climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = 2°C	Prated = Pdesignh	5,94	kW
Annual energy consumption	Q _{HE}	1197	kWh
Declared capacity for heating			
T _i = - 7 °C	P _{dh}	-	kW
T _i = + 2 °C	P _{dh}	5,94	kW
T _i = + 7 °C	P _{dh}	3,99	kW
T _i = +12°C	P _{dh}	1,80	kW
T _j = T _{HP,off}	P _{dh}	5,94	kW
T _j = T _{fb,off}	P _{dh}	5,94	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW
Switch temperature heat pump off	T _{hp,off}	2	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	2770	m ³ /h
Sound power level, indoors	L _{WA}	-	dB(A)
Sound power level, outdoors	L _{WA}	-	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	262	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = - 7 °C	COP _d	-	-
T _j = + 2 °C	COP _d	3,91	-
T _j = + 7 °C	COP _d	5,89	-
T _j = +12°C	COP _d	8,21	-
T _j = T _{HP,off}	COP _d	3,91	-
T _j = T _{fb,off}	COP _d	3,91	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	2	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 6 - Modo riscaldamento - Clima medio - Media temperatura (55°C) / Heating mode - Average climate - Medium temperature (55°C)

Technical data sheet for hybrid heat pump

Model(s):		IDOLA S 3.2 HYBRID 28H 6		
Heat source (air, water, brine, direct expansion)				air
Heat sink (water, brine)				water
Tipo di combustibile fossile (liquido / gas)				gas
Low temperature heat pump:				no
Heat pump combination heater:				no
Parameters are declared for medium-temperature application (55°C).				
Parameters are declared for average climate conditions.				
Item	Symbol	Value	Unit	
Rated heat output ⁽³⁾ at T _{designh} = -10°C	Prated = Pdesignh	5,70	kW	Seasonal space heating energy efficiency
Annual energy consumption	Q _{HE}	3381	kWh	Emissions of nitrogen oxides
Declared capacity for heating				Declared coefficient of performance for heating
T _i = -7 °C	P _{dh}	5,05	kW	T _j = -7 °C
T _i = +2 °C	P _{dh}	3,12	kW	T _j = +2 °C
T _i = +7 °C	P _{dh}	2,09	kW	T _j = +7 °C
T _i = +12°C	P _{dh}	1,28	kW	T _j = +12°C
T _j = T _{HP,off}	P _{dh}	4,62	kW	T _j = T _{HP,off}
T _j = T _{fb,off}	P _{dh}	4,62	kW	T _j = T _{fb,off}
For air-to-water heat pumps: T _i = -15 °C (if TOL < -20 °C)	P _{dh}	-	kW	For air-to-water HP : Operation limit temperature (maximum -7°C)
Switch temperature heat pump off	T _{hp,off}	-7	°C	Switch temperature boiler off
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—	T _{fb,off}
Heat pump: poer input in modes other than active				Boiler
Off mode	P _{OFF}	0,014	kW	Useful heat output at rated heat output and high temperature regime (3)
Thermostat-off mode	P _{TO}	0,024	kW	Useful heat output at 30% of rated heat output and high tempera- ture regime (3)
Standby mode	P _{SB}	0,014	kW	Useful efficiency at rated heat output and high temperature regime (3)
Crankcase heater mode	P _{CK}	0	kW	Useful efficiency at 30% of rated heat output and high tempera- ture regime (3)
Other items				Power input of electrical auxiliaries at full load
Capacity control of heat pump	fisso/varia- bile	Variable		Power input of electrical auxiliaries at part load
For air-to-water HP: Rated air flow rate	Q _{airsource}	2770	m ³ /h	Power input of electrical auxiliaries in stand-by mode
Sound power level, indoors	L _{WA}	39	dB(A)	Stand-by losses
Sound power level, outdoors	L _{WA}	58	dB(A)	Power input of ignition burner fossil fuel
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy			

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 6 - Modo riscaldamento - Clima più freddo - Media temperatura (55°C) / Heating mode - Colder climate - Medium temperature (55°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 6		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for medium-temperature application (55°C).			
Parameters are declared for colder climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -22°C	Prated = Pdesignh	4,26	kW
Annual energy consumption	Q _{HE}	3640	kWh
Declared capacity for heating			
T _i = -7 °C	P _{dh}	2,70	kW
T _i = + 2 °C	P _{dh}	1,61	kW
T _i = + 7 °C	P _{dh}	1,02	kW
T _i = +12°C	P _{dh}	1,37	kW
T _j = T _{HP,off}	P _{dh}	2,46	kW
T _j = T _{fb,off}	P _{dh}	2,46	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	3,475	kW
Switch temperature heat pump off	T _{hp,off}	-15	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,9	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	2770	m ³ /h
Sound power level, indoors	L _{WA}	-	dB(A)
Sound power level, outdoors	L _{WA}	-	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	112	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = -7 °C	COP _d	2,46	-
T _j = + 2 °C	COP _d	3,36	-
T _j = + 7 °C	COP _d	3,94	-
T _j = +12°C	COP _d	5,27	-
T _j = T _{HP,off}	COP _d	2,66	-
T _j = T _{fb,off}	COP _d	2,66	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	-15	°C

Boiler			
Item	Symbol	Value	Unit
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 6 - Modo riscaldamento - Clima più caldo - Media temperatura (55°C) / Heating mode - Warmer climate - Medium temperature (55°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 6		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for medium-temperature application (55°C).			
Parameters are declared for warmer climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = 2°C	Prated = Pdesignh	5,03	kW
Annual energy consumption	Q _{HE}	1601	kWh
Declared capacity for heating			
T _i = - 7 °C	P _{dh}	-	kW
T _i = + 2 °C	P _{dh}	5,03	kW
T _i = + 7 °C	P _{dh}	3,31	kW
T _i = +12°C	P _{dh}	1,60	kW
T _j = T _{HP,off}	P _{dh}	5,03	kW
T _j = T _{fb,off}	P _{dh}	5,03	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW
Switch temperature heat pump off	T _{hp,off}	2	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,9	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	2770	m ³ /h
Sound power level, indoors	L _{WA}	-	dB(A)
Sound power level, outdoors	L _{WA}	-	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	165	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = - 7 °C	COP _d	-	-
T _j = + 2 °C	COP _d	2,48	-
T _j = + 7 °C	COP _d	3,67	-
T _j = +12°C	COP _d	5,24	-
T _j = T _{HP,off}	COP _d	2,48	-
T _j = T _{fb,off}	COP _d	2,48	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	2	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 8 - Modo riscaldamento - Clima medio - Bassa temperatura (35°C) / Heating mode - Average climate - Low temperature (35°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 8		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for low-temperature application (35°C).			
Parameters are declared for average climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -10°C	Prated = Pdesignh	8,12	kW
Annual energy consumption	Q _{HE}	3312	kWh
Declared capacity for heating			
T _i = -7 °C	P _{dh}	7,19	kW
T _i = + 2 °C	P _{dh}	4,65	kW
T _i = + 7 °C	P _{dh}	2,90	kW
T _i = +12°C	P _{dh}	1,63	kW
T _j = T _{HP,off}	P _{dh}	6,62	kW
T _j = T _{fb,off}	P _{dh}	6,62	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW
Switch temperature heat pump off	T _{hp,off}	-7	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	4030	m ³ /h
Sound power level, indoors	L _{WA}	39	dB(A)
Sound power level, outdoors	L _{WA}	59	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	200	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = -7 °C	COP _d	3,35	-
T _j = + 2 °C	COP _d	5,09	-
T _j = + 7 °C	COP _d	6,81	-
T _j = +12°C	COP _d	8,10	-
T _j = T _{HP,off}	COP _d	3,73	-
T _j = T _{fb,off}	COP _d	3,73	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	-7	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING
IDOLA S 3.2 HYBRID 28H 8 - Modo riscaldamento - Clima più freddo - Bassa temperatura (35°C) / Heating mode - Colder climate - Low temperature (35°C)
Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 8		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for low-temperature application (35°C).			
Parameters are declared for colder climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -22°C	Prated = Pdesignh	6,98	kW
Annual energy consumption	Q _{HE}	4091	kWh
Declared capacity for heating			
T _i = -7 °C	P _{dh}	4,46	kW
T _i = + 2 °C	P _{dh}	2,70	kW
T _i = + 7 °C	P _{dh}	1,66	kW
T _i = +12°C	P _{dh}	1,66	kW
T _j = T _{HP,off}	P _{dh}	4,07	kW
T _j = T _{fb,off}	P _{dh}	4,07	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	5,691	kW
Switch temperature heat pump off	T _{hp,off}	-15	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	4030	m ³ /h
Sound power level, indoors	L _{WA}	-	dB(A)
Sound power level, outdoors	L _{WA}	-	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	165	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = -7 °C	COP _d	3,66	-
T _j = + 2 °C	COP _d	5,21	-
T _j = + 7 °C	COP _d	6,54	-
T _j = +12°C	COP _d	7,07	-
T _j = T _{HP,off}	COP _d	4,00	-
T _j = T _{fb,off}	COP _d	4,00	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	-15	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 8 - Modo riscaldamento - Clima più caldo - Bassa temperatura (35°C) / Heating mode - Warmer climate - Low temperature (35°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 8		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for low-temperature application (35°C).			
Parameters are declared for warmer climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = 2°C	Prated = Pdesignh	7,57	kW
Annual energy consumption	Q _{HE}	1423	kWh
Declared capacity for heating			
T _i = - 7 °C	P _{dh}	-	kW
T _i = + 2 °C	P _{dh}	7,57	kW
T _i = + 7 °C	P _{dh}	5,22	kW
T _i = +12°C	P _{dh}	2,45	kW
T _j = T _{HP,off}	P _{dh}	7,57	kW
T _j = T _{fb,off}	P _{dh}	7,57	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW
Switch temperature heat pump off	T _{hp,off}	2	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	4030	m ³ /h
Sound power level, indoors	L _{WA}	-	dB(A)
Sound power level, outdoors	L _{WA}	-	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	281	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = - 7 °C	COP _d	-	-
T _j = + 2 °C	COP _d	3,98	-
T _j = + 7 °C	COP _d	6,26	-
T _j = +12°C	COP _d	8,91	-
T _j = T _{HP,off}	COP _d	3,98	-
T _j = T _{fb,off}	COP _d	3,98	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	2	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 8 - Modo riscaldamento - Clima medio - Media temperatura (55°C) / Heating mode - Average climate - Medium temperature (55°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 8		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for medium-temperature application (55°C).			
Parameters are declared for average climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -10°C	Prated = Pdesignh	6,60	kW
Annual energy consumption	Q _{HE}	4089	kWh
Declared capacity for heating			
T _i = -7 °C	P _{dh}	5,84	kW
T _i = + 2 °C	P _{dh}	3,76	kW
T _i = + 7 °C	P _{dh}	2,43	kW
T _i = +12°C	P _{dh}	1,40	kW
T _j = T _{HP,off}	P _{dh}	5,38	kW
T _j = T _{fb,off}	P _{dh}	5,38	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW
Switch temperature heat pump off	T _{hp,off}	-7	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	4030	m ³ /h
Sound power level, indoors	L _{WA}	39	dB(A)
Sound power level, outdoors	L _{WA}	59	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	130	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = -7 °C	COP _d	2,16	-
T _j = + 2 °C	COP _d	3,30	-
T _j = + 7 °C	COP _d	4,34	-
T _j = +12°C	COP _d	5,14	-
T _j = T _{HP,off}	COP _d	2,41	-
T _j = T _{fb,off}	COP _d	2,41	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	-7	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 8 - Modo riscaldamento - Clima più freddo - Media temperatura (55°C) / Heating mode - Colder climate - Medium temperature (55°C)

Technical data sheet for hybrid heat pump

Model(s):		IDOLA S 3.2 HYBRID 28H 8					
Heat source (air, water, brine, direct expansion)				air			
Heat sink (water, brine)				water			
Tipo di combustibile fossile (liquido / gas)				gas			
Low temperature heat pump:				no			
Heat pump combination heater:				no			
Parameters are declared for medium-temperature application (55°C).							
Parameters are declared for colder climate conditions.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -22°C	Prated = Pdesignh	5,78	kW	Seasonal space heating energy efficiency	η_s	113	%
Annual energy consumption	Q _{HE}	4920	kWh	Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared capacity for heating				Declared coefficient of performance for heating			
T _i = -7 °C	P _{dh}	3,86	kW	T _j = -7 °C	COP _d	2,45	-
T _i = + 2 °C	P _{dh}	2,21	kW	T _j = + 2 °C	COP _d	3,35	-
T _i = + 7 °C	P _{dh}	1,44	kW	T _j = + 7 °C	COP _d	4,11	-
T _i = +12°C	P _{dh}	1,47	kW	T _j = +12°C	COP _d	5,19	-
T _j = T _{HP,off}	P _{dh}	3,50	kW	T _j = T _{HP,off}	COP _d	2,65	-
T _j = T _{fb,off}	P _{dh}	3,50	kW	T _j = T _{fb,off}	COP _d	2,65	-
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	4,713	kW	For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature heat pump off	T _{hp,off}	-15	°C	Switch temperature boiler off	T _{fb,off}	-15	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,9	—				
Heat pump: poer input in modes other than active				Boiler			
Off mode	P _{OFF}	0,014	kW	Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Thermostat-off mode	P _{TO}	0,024	kW	Useful heat output at 30% of rated heat output and high tempera- ture regime (3)	P ₁	8,1	kW
Standby mode	P _{SB}	0,014	kW	Useful efficiency at rated heat output and high temperature regime (3)	η_4	88,06	%
Crankcase heater mode	P _{CK}	0	kW	Useful efficiency at 30% of rated heat output and high tempera- ture regime (3)	η_1	98,64	%
Other items				Power input of electrical auxiliaries at full load	elmax	0,032	kW
Capacity control of heat pump	fisso/varia- bile	Variable		Power input of electrical auxiliaries at part load	elmin	0,013	kW
For air-to-water HP: Rated air flow rate	Q _{airsource}	4030	m ³ /h	Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Sound power level, indoors	L _{WA}	-	dB(A)	Stand-by losses	P _{stby}	0,042	kW
Sound power level, outdoors	L _{WA}	-	dB(A)	Power input of ignition burner fossil fuel	P _{ign}	0,000	kW
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy						

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 8 - Modo riscaldamento - Clima più caldo - Media temperatura (55°C) / Heating mode - Warmer climate - Medium temperature (55°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 8		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for medium-temperature application (55°C).			
Parameters are declared for warmer climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = 2°C	Prated = Pdesignh	7,55	kW
Annual energy consumption	Q _{HE}	2254	kWh
Declared capacity for heating			
T _i = - 7 °C	P _{dh}	-	kW
T _i = + 2 °C	P _{dh}	7,55	kW
T _i = + 7 °C	P _{dh}	4,86	kW
T _i = +12°C	P _{dh}	2,32	kW
T _j = T _{HP,off}	P _{dh}	7,55	kW
T _j = T _{fb,off}	P _{dh}	7,55	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW
Switch temperature heat pump off	T _{hp,off}	2	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,9	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	4030	m ³ /h
Sound power level, indoors	L _{WA}	-	dB(A)
Sound power level, outdoors	L _{WA}	-	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	176	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = - 7 °C	COP _d	-	-
T _j = + 2 °C	COP _d	2,59	-
T _j = + 7 °C	COP _d	3,92	-
T _j = +12°C	COP _d	5,55	-
T _j = T _{HP,off}	COP _d	2,59	-
T _j = T _{fb,off}	COP _d	2,59	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	2	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 10 - Modo riscaldamento - Clima medio - Bassa temperatura (35°C) / Heating mode - Average climate - Low temperature (35°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 10		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for low-temperature application (35°C).			
Parameters are declared for average climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -10°C	Prated = Pdesignh	9,17	kW
Annual energy consumption	Q _{HE}	3714	kWh
Declared capacity for heating			
T _i = - 7 °C	P _{dh}	8,11	kW
T _i = + 2 °C	P _{dh}	5,18	kW
T _i = + 7 °C	P _{dh}	3,32	kW
T _i = +12°C	P _{dh}	1,65	kW
T _j = T _{HP,off}	P _{dh}	7,46	kW
T _j = T _{fb,off}	P _{dh}	7,46	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW
Switch temperature heat pump off	T _{hp,off}	-7	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/varia- bile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	4030	m ³ /h
Sound power level, indoors	L _{WA}	39	dB(A)
Sound power level, outdoors	L _{WA}	60	dB(A)
Contact details	Ferrol s.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	201	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = - 7 °C	COP _d	3,23	-
T _j = + 2 °C	COP _d	5,09	-
T _j = + 7 °C	COP _d	7,08	-
T _j = +12°C	COP _d	8,41	-
T _j = T _{HP,off}	COP _d	3,64	-
T _j = T _{fb,off}	COP _d	3,64	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	-7	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 10 - Modo riscaldamento - Clima più freddo - Bassa temperatura (35°C) / Heating mode - Colder climate - Low temperature (35°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 10						
Heat source (air, water, brine, direct expansion)	air						
Heat sink (water, brine)	water						
Tipo di combustibile fossile (liquido / gas)	gas						
Low temperature heat pump:	no						
Heat pump combination heater:	no						
Parameters are declared for low-temperature application (35°C).							
Parameters are declared for colder climate conditions.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -22°C	Prated = Pdesignh	7,75	kW	Seasonal space heating energy efficiency	η _s	165	%
Annual energy consumption	Q _{HE}	4545	kWh	Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared capacity for heating				Declared coefficient of performance for heating			
T _i = -7 °C	P _{dh}	4,83	kW	T _j = -7 °C	COP _d	3,60	-
T _i = + 2 °C	P _{dh}	2,94	kW	T _j = + 2 °C	COP _d	5,26	-
T _i = + 7 °C	P _{dh}	1,92	kW	T _j = + 7 °C	COP _d	7,08	-
T _i = +12°C	P _{dh}	1,66	kW	T _j = +12°C	COP _d	7,22	-
T _j = T _{HP,off}	P _{dh}	4,41	kW	T _j = T _{HP,off}	COP _d	3,97	-
T _j = T _{fb,off}	P _{dh}	4,41	kW	T _j = T _{fb,off}	COP _d	3,97	-
For air-to-water heat pumps: T _i = -15 °C (if TOL < -20 °C)	P _{dh}	6,324	kW	For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature heat pump off	T _{hp,off}	-15	°C	Switch temperature boiler off	T _{fb,off}	-15	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—				
Heat pump: poer input in modes other than active				Boiler			
Off mode	P _{OFF}	0,014	kW	Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Thermostat-off mode	P _{TO}	0,024	kW	Useful heat output at 30% of rated heat output and high tempera- ture regime (3)	P ₁	8,1	kW
Standby mode	P _{SB}	0,014	kW	Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Crankcase heater mode	P _{CK}	0	kW	Useful efficiency at 30% of rated heat output and high tempera- ture regime (3)	η ₁	98,64	%
Other items				Power input of electrical auxiliaries at full load	elmax	0,032	kW
Capacity control of heat pump	fisso/varia- bile	Variable		Power input of electrical auxiliaries at part load	elmin	0,013	kW
For air-to-water HP: Rated air flow rate	Q _{airsource}	4030	m ³ /h	Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Sound power level, indoors	L _{WA}	-	dB(A)	Stand-by losses	P _{stby}	0,042	kW
Sound power level, outdoors	L _{WA}	-	dB(A)	Power input of ignition burner fossil fuel	P _{ign}	0,000	kW
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy						

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 10 - Modo riscaldamento - Clima più caldo - Bassa temperatura (35°C) / Heating mode - Warmer climate - Low temperature (35°C)

Technical data sheet for hybrid heat pump

Model(s):		IDOLA S 3.2 HYBRID 28H 10					
Heat source (air, water, brine, direct expansion)				air			
Heat sink (water, brine)				water			
Tipo di combustibile fossile (liquido / gas)				gas			
Low temperature heat pump:				no			
Heat pump combination heater:				no			
Parameters are declared for low-temperature application (35°C).							
Parameters are declared for warmer climate conditions.							
Item	Symbol	Value	Unit				
Rated heat output ⁽³⁾ at T _{designh} = 2°C	Prated = Pdesignh	8,44	kW	Seasonal space heating energy efficiency			
Annual energy consumption	Q _{HE}	1588	kWh	Emissions of nitrogen oxides			
Declared capacity for heating				Declared coefficient of performance for heating			
T _i = - 7 °C	P _{dh}	-	kW	T _j = - 7 °C	COP _d	-	-
T _i = + 2 °C	P _{dh}	8,44	kW	T _j = + 2 °C	COP _d	3,84	-
T _i = + 7 °C	P _{dh}	5,52	kW	T _j = + 7 °C	COP _d	6,18	-
T _i = +12°C	P _{dh}	2,62	kW	T _j = +12°C	COP _d	9,04	-
T _j = T _{HP,off}	P _{dh}	8,44	kW	T _j = T _{HP,off}	COP _d	3,84	-
T _j = T _{fb,off}	P _{dh}	8,44	kW	T _j = T _{fb,off}	COP _d	3,84	-
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature heat pump off	T _{hp,off}	2	°C	Switch temperature boiler off	T _{fb,off}	2	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—				
Heat pump: poer input in modes other than active				Boiler			
Off mode	P _{OFF}	0,014	kW	Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Thermostat-off mode	P _{TO}	0,024	kW	Useful heat output at 30% of rated heat output and high tempera- ture regime (3)	P ₁	8,1	kW
Standby mode	P _{SB}	0,014	kW	Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Crankcase heater mode	P _{CK}	0	kW	Useful efficiency at 30% of rated heat output and high tempera- ture regime (3)	η ₁	98,64	%
Other items				Power input of electrical auxiliaries at full load	elmax	0,032	kW
Capacity control of heat pump	fisso/varia- bile	Variable		Power input of electrical auxiliaries at part load	elmin	0,013	kW
For air-to-water HP: Rated air flow rate	Q _{airsource}	4030	m ³ /h	Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Sound power level, indoors	L _{WA}	-	dB(A)	Stand-by losses	P _{stby}	0,042	kW
Sound power level, outdoors	L _{WA}	-	dB(A)	Power input of ignition burner fossil fuel	P _{ign}	0,000	kW
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy						

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 10 - Modo riscaldamento - Clima medio - Media temperatura (55°C) / Heating mode - Average climate - Medium temperature (55°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 10		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for medium-temperature application (55°C).			
Parameters are declared for average climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -10°C	Prated = Pdesignh	7,67	kW
Annual energy consumption	Q _{HE}	4576	kWh
Declared capacity for heating			
T _i = -7 °C	P _{dh}	6,78	kW
T _i = + 2 °C	P _{dh}	4,29	kW
T _i = + 7 °C	P _{dh}	2,77	kW
T _i = +12°C	P _{dh}	1,58	kW
T _j = T _{HP,off}	P _{dh}	6,23	kW
T _j = T _{fb,off}	P _{dh}	6,23	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW
Switch temperature heat pump off	T _{hp,off}	-7	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,90	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	4030	m ³ /h
Sound power level, indoors	L _{WA}	39	dB(A)
Sound power level, outdoors	L _{WA}	60	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	135	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = -7 °C	COP _d	2,24	-
T _j = + 2 °C	COP _d	3,42	-
T _j = + 7 °C	COP _d	4,52	-
T _j = +12°C	COP _d	5,50	-
T _j = T _{HP,off}	COP _d	2,51	-
T _j = T _{fb,off}	COP _d	2,51	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	-7	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 10 - Modo riscaldamento - Clima più freddo - Media temperatura (55°C) / Heating mode - Colder climate - Medium temperature (55°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 10		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for medium-temperature application (55°C).			
Parameters are declared for colder climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = -22°C	Prated = Pdesignh	6,71	kW
Annual energy consumption	Q _{HE}	5491	kWh
Declared capacity for heating			
T _i = -7 °C	P _{dh}	4,27	kW
T _i = + 2 °C	P _{dh}	2,57	kW
T _i = + 7 °C	P _{dh}	1,66	kW
T _i = +12°C	P _{dh}	1,48	kW
T _j = T _{HP,off}	P _{dh}	3,89	kW
T _j = T _{fb,off}	P _{dh}	3,89	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	5,477	kW
Switch temperature heat pump off	T _{hp,off}	-15	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,9	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	4030	m ³ /h
Sound power level, indoors	L _{WA}	-	dB(A)
Sound power level, outdoors	L _{WA}	-	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	118	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = -7 °C	COP _d	2,54	-
T _j = + 2 °C	COP _d	3,51	-
T _j = + 7 °C	COP _d	4,37	-
T _j = +12°C	COP _d	5,38	-
T _j = T _{HP,off}	COP _d	2,76	-
T _j = T _{fb,off}	COP _d	2,76	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	-15	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RISCALDAMENTO AMBIENTE / ERP TECHNICAL DATA SHEET FOR SPACE HEATING

IDOLA S 3.2 HYBRID 28H 10 - Modo riscaldamento - Clima più caldo - Media temperatura (55°C) / Heating mode - Warmer climate - Medium temperature (55°C)

Technical data sheet for hybrid heat pump

Model(s):	IDOLA S 3.2 HYBRID 28H 10		
Heat source (air, water, brine, direct expansion)	air		
Heat sink (water, brine)	water		
Tipo di combustibile fossile (liquido / gas)	gas		
Low temperature heat pump:	no		
Heat pump combination heater:	no		
Parameters are declared for medium-temperature application (55°C).			
Parameters are declared for warmer climate conditions.			
Item	Symbol	Value	Unit
Rated heat output ⁽³⁾ at T _{designh} = 2°C	Prated = Pdesignh	8,06	kW
Annual energy consumption	Q _{HE}	2308	kWh
Declared capacity for heating			
T _i = - 7 °C	P _{dh}	-	kW
T _i = + 2 °C	P _{dh}	8,06	kW
T _i = + 7 °C	P _{dh}	5,55	kW
T _i = +12°C	P _{dh}	2,53	kW
T _j = T _{HP,off}	P _{dh}	8,06	kW
T _j = T _{fb,off}	P _{dh}	8,06	kW
For air-to-water heat pumps: T _i = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW
Switch temperature heat pump off	T _{hp,off}	2	°C
Degradation coefficient ⁽⁴⁾	C _{dh}	0,9	—
Heat pump: poer input in modes other than active			
Off mode	P _{OFF}	0,014	kW
Thermostat-off mode	P _{TO}	0,024	kW
Standby mode	P _{SB}	0,014	kW
Crankcase heater mode	P _{CK}	0	kW
Other items			
Capacity control of heat pump	fisso/variabile	Variable	
For air-to-water HP: Rated air flow rate	Q _{airsource}	4030	m ³ /h
Sound power level, indoors	L _{WA}	-	dB(A)
Sound power level, outdoors	L _{WA}	-	dB(A)
Contact details	Ferrolis.p.a. via Ritonda 78A - S.Bonifacio (VR) - Italy		

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η _s	184	%
Emissions of nitrogen oxides	NO _x	-	mg/kWh
Declared coefficient of performance for heating			
T _j = - 7 °C	COP _d	-	-
T _j = + 2 °C	COP _d	2,59	-
T _j = + 7 °C	COP _d	4,09	-
T _j = +12°C	COP _d	5,82	-
T _j = T _{HP,off}	COP _d	2,59	-
T _j = T _{fb,off}	COP _d	2,59	-
For air-to-water HP : Operation limit temperature (maximum -7°C)	COP _d	-	-
Switch temperature boiler off	T _{fb,off}	2	°C

Boiler			
Useful heat output at rated heat output and high temperature regime (3)	P ₄	27,9	kW
Useful heat output at 30% of rated heat output and high temperature regime (3)	P ₁	8,1	kW
Useful efficiency at rated heat output and high temperature regime (3)	η ₄	88,06	%
Useful efficiency at 30% of rated heat output and high temperature regime (3)	η ₁	98,64	%
Power input of electrical auxiliaries at full load	elmax	0,032	kW
Power input of electrical auxiliaries at part load	elmin	0,013	kW
Power input of electrical auxiliaries in stand-by mode	P _{SB}	0,004	kW
Stand-by losses	P _{stby}	0,042	kW
Power input of ignition burner fossil fuel	P _{ign}	0,000	kW

(3) For heat pumps and heat pump combination heaters, the nominal heat output (Prated) is equal to the design load for heating (Pdesignh), and the nominal heat output of the boiler (Psup) is equal to the additional capacity for heating (sup (Tj)).

(4) If Cdh is not determined by measurements the default value of Cdh is = 0.9

FOGLIO DATI TECNICI ERP PER RAFFREDDAMENTO AMBIENTE ERP TECHNICAL DATA SHEET FOR SPACE COOLING

IDOLA S 3.2 HYBRID 28H 4 - Modo raffreddamento - Clima Medio - Bassa temperatura (7°C) / Cooling mode - Average climate - Low temperature (7°C)

Model(s):				IDOLA S 3.2 HYBRID 28H 4			
Outdoor side heat exchanger of chiller:				Air to water			
Indoor side heat exchanger chiller:				Water			
Type:				Compressor driven vapour compression			
Driver of compressor:				Electric motor			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	4.7	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	197	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	4.66	kW	$T_j=+35^\circ\text{C}$	EER_d	3.52	-
$T_j=+30^\circ\text{C}$	P_{dc}	3.66	kW	$T_j=+30^\circ\text{C}$	EER_d	4.76	-
$T_j=+25^\circ\text{C}$	P_{dc}	2.21	kW	$T_j=+25^\circ\text{C}$	EER_d	5.72	-
$T_j=+20^\circ\text{C}$	P_{dc}	0.94	kW	$T_j=+20^\circ\text{C}$	EER_d	5.72	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	2770	m ³ /h
Sound power level, indoors / outdoors	L_{WA}	39 / 56	dB				
Emissions of nitrogen oxides (if applicable)	$NO_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m ³ /h
GWP of the refrigerant	-	675	kg CO ₂ eq (100years)				
Standard rating conditions used	Low temperature application						
Contact details	Ferroli spa - 37047 San Bonifacio (Verona) Italy - Via Ritonda 78/A - tel. +39.045.6139411 - fax +39.045.6100933 - www.ferroli.com						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0.9. (**) From 26 September 2018.							

FOGLIO DATI TECNICI ERP PER RAFFREDDAMENTO AMBIENTE ERP TECHNICAL DATA SHEET FOR SPACE COOLING

IDOLA S 3.2 HYBRID 28H 4 - Modo raffreddamento - Clima Medio - Media temperature (18°C) / Cooling mode - Average climate - Medium temperature (18°C)

Model(s):				IDOLA S 3.2 HYBRID 28H 4			
Outdoor side heat exchanger of chiller:				Air to water			
Indoor side heat exchanger chiller:				Water			
Type:				Compressor driven vapour compression			
Driver of compressor:				Electric motor			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	4.5	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	308	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	4.51	kW	$T_j=+35^\circ\text{C}$	EER_d	5.54	-
$T_j=+30^\circ\text{C}$	P_{dc}	3.44	kW	$T_j=+30^\circ\text{C}$	EER_d	7.23	-
$T_j=+25^\circ\text{C}$	P_{dc}	2.19	kW	$T_j=+25^\circ\text{C}$	EER_d	8.94	-
$T_j=+20^\circ\text{C}$	P_{dc}	1.13	kW	$T_j=+20^\circ\text{C}$	EER_d	10.48	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	2770	m^3/h
Sound power level, indoors / outdoors	L_{WA}	39 / 56	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Medium temperature application						
Contact details	Ferroli spa - 37047 San Bonifacio (Verona) Italy - Via Ritonda 78/A - tel. +39.045.6139411 - fax +39.045.6100933 - www.ferroli.com						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

FOGLIO DATI TECNICI ERP PER RAFFREDDAMENTO AMBIENTE ERP TECHNICAL DATA SHEET FOR SPACE COOLING

IDOLA S 3.2 HYBRID 28H 6 - Modo raffreddamento - Clima Medio - Bassa temperatura (7°C) / Cooling mode - Average climate - Low temperature (7°C)

Model(s):				IDOLA S 3.2 HYBRID 28H 6			
Outdoor side heat exchanger of chiller:				Air to water			
Indoor side heat exchanger chiller:				Water			
Type:				Compressor driven vapour compression			
Driver of compressor:				Electric motor			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	6.3	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	211	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	6.35	kW	$T_j=+35^\circ\text{C}$	EER_d	2.93	-
$T_j=+30^\circ\text{C}$	P_{dc}	4.76	kW	$T_j=+30^\circ\text{C}$	EER_d	4.53	-
$T_j=+25^\circ\text{C}$	P_{dc}	3.02	kW	$T_j=+25^\circ\text{C}$	EER_d	6.32	-
$T_j=+20^\circ\text{C}$	P_{dc}	1.39	kW	$T_j=+20^\circ\text{C}$	EER_d	7.20	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	2770	m^3/h
Sound power level, indoors / outdoors	L_{WA}	39 / 58	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Low temperature application						
Contact details	Ferrolli spa - 37047 San Bonifacio (Verona) Italy - Via Ritonda 78/A - tel. +39.045.6139411 - fax +39.045.6100933 - www.ferrolli.com						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

FOGLIO DATI TECNICI ERP PER RAFFREDDAMENTO AMBIENTE ERP TECHNICAL DATA SHEET FOR SPACE COOLING

IDOLA S 3.2 HYBRID 28H 6 - Modo raffreddamento - Clima Medio - Media temperature (18°C) / Cooling mode - Average climate - Medium temperature (18°C)

Model(s):				IDOLA S 3.2 HYBRID 28H 6			
Outdoor side heat exchanger of chiller:				Air to water			
Indoor side heat exchanger chiller:				Water			
Type:				Compressor driven vapour compression			
Driver of compressor:				Electric motor			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	6.5	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	325	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	6.55	kW	$T_j=+35^\circ\text{C}$	EER_d	4.69	-
$T_j=+30^\circ\text{C}$	P_{dc}	4.84	kW	$T_j=+30^\circ\text{C}$	EER_d	7.16	-
$T_j=+25^\circ\text{C}$	P_{dc}	3.26	kW	$T_j=+25^\circ\text{C}$	EER_d	9.64	-
$T_j=+20^\circ\text{C}$	P_{dc}	1.41	kW	$T_j=+20^\circ\text{C}$	EER_d	11.48	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	2770	m^3/h
Sound power level, indoors / outdoors	L_{WA}	39 / 58	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x (**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Medium temperature application						
Contact details	Ferrolli spa - 37047 San Bonifacio (Verona) Italy - Via Ritonda 78/A - tel. +39.045.6139411 - fax +39.045.6100933 - www.ferrolli.com						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

FOGLIO DATI TECNICI ERP PER RAFFREDDAMENTO AMBIENTE ERP TECHNICAL DATA SHEET FOR SPACE COOLING

IDOLA S 3.2 HYBRID 28H 8 - Modo raffreddamento - Clima Medio - Bassa temperatura (7°C) / Cooling mode - Average climate - Low temperature (7°C)

Model(s):				IDOLA S 3.2 HYBRID 28H 8			
Outdoor side heat exchanger of chiller:				Air to water			
Indoor side heat exchanger chiller:				Water			
Type:				Compressor driven vapour compression			
Driver of compressor:				Electric motor			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	7.4	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	230	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	7.38	kW	$T_j=+35^\circ\text{C}$	EER_d	3.39	-
$T_j=+30^\circ\text{C}$	P_{dc}	5.72	kW	$T_j=+30^\circ\text{C}$	EER_d	4.71	-
$T_j=+25^\circ\text{C}$	P_{dc}	3.62	kW	$T_j=+25^\circ\text{C}$	EER_d	6.65	-
$T_j=+20^\circ\text{C}$	P_{dc}	1.64	kW	$T_j=+20^\circ\text{C}$	EER_d	8.55	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4030	m^3/h
Sound power level, indoors / outdoors	L_{WA}	39 / 59	dB				
Emissions of nitrogen oxides (if applicable)	$NO_x (**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Low temperature application						
Contact details	Ferrolli spa - 37047 San Bonifacio (Verona) Italy - Via Ritonda 78/A - tel. +39.045.6139411 - fax +39.045.6100933 - www.ferrolli.com						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

FOGLIO DATI TECNICI ERP PER RAFFREDDAMENTO AMBIENTE ERP TECHNICAL DATA SHEET FOR SPACE COOLING

IDOLA S 3.2 HYBRID 28H 8 - Modo raffreddamento - Clima Medio - Media temperature (18°C) / Cooling mode - Average climate - Medium temperature (18°C)

Model(s):				IDOLA S 3.2 HYBRID 28H 8			
Outdoor side heat exchanger of chiller:				Air to water			
Indoor side heat exchanger chiller:				Water			
Type:				Compressor driven vapour compression			
Driver of compressor:				Electric motor			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	8.4	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	355	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	8.37	kW	$T_j=+35^\circ\text{C}$	EER_d	5.09	-
$T_j=+30^\circ\text{C}$	P_{dc}	6.47	kW	$T_j=+30^\circ\text{C}$	EER_d	7.02	-
$T_j=+25^\circ\text{C}$	P_{dc}	4.31	kW	$T_j=+25^\circ\text{C}$	EER_d	10.67	-
$T_j=+20^\circ\text{C}$	P_{dc}	1.80	kW	$T_j=+20^\circ\text{C}$	EER_d	13.61	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4030	m^3/h
Sound power level, indoors / outdoors	L_{WA}	39 / 59	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x (**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Medium temperature application						
Contact details	Ferrolli spa - 37047 San Bonifacio (Verona) Italy - Via Ritonda 78/A - tel. +39.045.6139411 - fax +39.045.6100933 - www.ferrolli.com						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

FOGLIO DATI TECNICI ERP PER RAFFREDDAMENTO AMBIENTE ERP TECHNICAL DATA SHEET FOR SPACE COOLING

IDOLA S 3.2 HYBRID 28H 10 - Modo raffreddamento - Clima Medio - Bassa temperatura (7°C) / Cooling mode - Average climate - Low temperature (7°C)

Model(s):				IDOLA S 3.2 HYBRID 28H 10			
Outdoor side heat exchanger of chiller:				Air to water			
Indoor side heat exchanger chiller:				Water			
Type:				Compressor driven vapour compression			
Driver of compressor:				Electric motor			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	8.7	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	236	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	8.73	kW	$T_j=+35^\circ\text{C}$	EER_d	3.21	-
$T_j=+30^\circ\text{C}$	P_{dc}	6.68	kW	$T_j=+30^\circ\text{C}$	EER_d	4.47	-
$T_j=+25^\circ\text{C}$	P_{dc}	4.26	kW	$T_j=+25^\circ\text{C}$	EER_d	7.02	-
$T_j=+20^\circ\text{C}$	P_{dc}	1.94	kW	$T_j=+20^\circ\text{C}$	EER_d	9.54	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4030	m^3/h
Sound power level, indoors / outdoors	L_{WA}	39 / 60	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Low temperature application						
Contact details	Ferroli spa - 37047 San Bonifacio (Verona) Italy - Via Ritonda 78/A - tel. +39.045.6139411 - fax +39.045.6100933 - www.ferroli.com						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

FOGLIO DATI TECNICI ERP PER RAFFREDDAMENTO AMBIENTE ERP TECHNICAL DATA SHEET FOR SPACE COOLING

IDOLA S 3.2 HYBRID 28H 10 - Modo raffreddamento - Clima Medio - Media temperature (18°C) / Cooling mode - Average climate - Medium temperature (18°C)

Model(s):				IDOLA S 3.2 HYBRID 28H 10			
Outdoor side heat exchanger of chiller:				Air to water			
Indoor side heat exchanger chiller:				Water			
Type:				Compressor driven vapour compression			
Driver of compressor:				Electric motor			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	10.0	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	348	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	10.01	kW	$T_j=+35^\circ\text{C}$	EER_d	4.64	-
$T_j=+30^\circ\text{C}$	P_{dc}	7.71	kW	$T_j=+30^\circ\text{C}$	EER_d	6.45	-
$T_j=+25^\circ\text{C}$	P_{dc}	5.03	kW	$T_j=+25^\circ\text{C}$	EER_d	10.36	-
$T_j=+20^\circ\text{C}$	P_{dc}	2.32	kW	$T_j=+20^\circ\text{C}$	EER_d	14.98	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4030	m^3/h
Sound power level, indoors / outdoors	L_{WA}	39 / 60	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Medium temperature application						
Contact details	Ferrolli spa - 37047 San Bonifacio (Verona) Italy - Via Ritonda 78/A - tel. +39.045.6139411 - fax +39.045.6100933 - www.ferrolli.com						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

TABELLE PRESTAZIONALI - MODO RISCALDAMENTO / CAPACITY TABLES - HEATING MODE

IDOLA S 3.2 HYBRID 28H 4 - Prestazioni riscaldamento / Heating capacity

"Tw. out °C"	"DB/WB °C"	Heating Capacity [W]						COP					
		130%	100%	90%	70%	50%	30%	130%	100%	90%	70%	50%	30%
25	-25	2053	1899	1566	1232	/	/	1.74	1.78	1.79	1.80	/	/
25	-20	3086	2824	2276	1728	/	/	2.36	2.45	2.48	2.50	/	/
25	-15	3602	3260	2989	2718	1682	/	3.03	3.17	3.35	3.53	3.25	/
25	-10	4465	4001	3414	2828	2241	1654	3.36	3.60	3.63	3.65	3.68	3.70
25	-7	5112	4678	3798	2917	2037	1156	3.67	3.85	3.89	3.93	3.97	4.01
25	-5	5180	4692	3858	3024	2190	1356	4.03	4.22	4.26	4.30	4.34	4.38
25	-2	5296	4841	3982	3122	2263	1403	4.55	4.71	4.75	4.80	4.84	4.88
25	0	5412	4990	4105	3220	2335	1450	5.06	5.19	5.24	5.28	5.33	5.37
25	2	5629	5182	4310	3439	2567	1695	5.28	5.45	5.52	5.58	5.65	5.71
25	5	5994	5479	4601	3723	2844	1966	5.83	6.04	6.10	6.16	6.22	6.28
25	7	6376	4603	4215	3826	2354	1955	6.67	6.98	7.41	7.84	7.28	6.96
25	10	6370	5725	4781	3837	2893	1949	6.68	7.13	7.21	7.30	7.38	7.46
25	12	6232	5625	4748	3870	2992	2114	6.69	7.21	7.29	7.39	7.48	7.56
25	15	6026	5476	4698	3919	3141	2362	6.71	7.32	7.42	7.52	7.62	7.72
25	20	5864	5358	4878	4398	2639	/	7.24	7.96	8.48	9.00	8.41	/
25	25	5701	5081	4109	3136	/	/	7.91	8.75	9.00	9.25	/	/
25	30	5776	5177	4249	3321	/	/	8.41	9.37	9.64	9.90	/	/
25	35	5850	5290	4605	3920	/	/	8.96	10.05	10.34	10.63	/	/
25	40	6298	5777	5030	4282	/	/	10.84	12.23	12.59	12.94	/	/
25	43	6566	6076	5304	4531	/	/	12.20	13.87	14.28	14.68	/	/
25	-25	1796	1652	1384	1115	/	/	1.48	1.52	1.54	1.55	/	/
25	-20	2829	2575	2416	2257	1528	/	1.82	1.86	1.96	2.07	1.90	/
25	-15	3407	3066	2830	2595	1652	/	2.78	2.88	3.04	3.21	2.95	/
25	-10	4290	3916	3375	2834	2292	1751	3.23	3.40	3.43	3.45	3.48	3.50
25	-7	5034	4607	3751	2895	2038	1182	3.51	3.65	3.68	3.71	3.73	3.76
25	-5	5076	4618	3803	2987	2172	1356	3.72	3.86	3.89	3.92	3.95	3.98
25	-2	5173	4709	3890	3071	2251	1432	4.03	4.16	4.19	4.23	4.26	4.29
25	0	5269	4800	3977	3154	2330	1507	4.34	4.46	4.50	4.54	4.57	4.61
25	2	5436	4944	4141	3339	2536	1733	4.51	4.70	4.74	4.79	4.83	4.87
25	5	5746	5188	4388	3588	2788	1988	4.85	5.03	5.08	5.13	5.18	5.23
25	7	6222	4355	4018	3682	2339	1853	5.40	5.65	6.00	6.35	5.89	5.60
25	10	6033	5281	4403	3525	2646	1768	5.16	5.41	5.48	5.54	5.61	5.67
25	12	5907	5193	4385	3577	2768	1960	5.01	5.30	5.37	5.44	5.51	5.57
25	15	5717	5062	4358	3655	2951	2247	4.78	5.13	5.20	5.28	5.35	5.42
25	20	5743	5113	4736	4360	2814	/	5.75	6.22	6.63	7.04	6.58	/
25	25	5768	5237	4320	3403	/	/	7.21	7.85	8.08	8.30	/	/
25	30	5836	5327	4458	3589	/	/	7.48	8.20	8.44	8.68	/	/
25	35	5903	5436	4725	4014	/	/	7.77	8.57	8.83	9.08	/	/
25	40	6379	5773	5024	4274	/	/	9.51	10.57	10.88	11.19	/	/
25	43	6665	6085	5309	4532	/	/	10.80	12.08	12.44	12.80	/	/
25	-25	1711	1560	1371	1181	/	/	1.29	1.31	1.32	1.33	/	/
25	-20	2444	2205	1812	1418	/	/	1.43	1.48	1.50	1.51	/	/
25	-15	3253	2901	2674	2447	1548	/	2.39	2.48	2.62	2.76	2.54	/
25	-10	4136	3824	3296	2769	2241	1713	2.85	2.95	2.97	3.00	3.02	3.04
25	-7	4986	4700	3837	2974	2110	1247	3.11	3.10	3.16	3.22	3.28	3.34
25	-5	5018	4371	3632	2893	2154	1415	3.27	3.41	3.44	3.46	3.49	3.51
25	-2	5058	4387	3645	2903	2161	1419	3.51	3.63	3.66	3.69	3.71	3.74
25	0	5098	4403	3658	2913	2167	1422	3.74	3.85	3.88	3.92	3.95	3.98
25	2	5280	4400	3712	3024	2335	1647	3.87	4.00	4.06	4.12	4.17	4.23
25	5	5677	5080	4291	3502	2713	1924	4.33	4.49	4.53	4.58	4.62	4.66
25	7 *	6255	4200	3890	3579	2308	1920	4.96	5.10	5.43	5.77	5.39	5.01
25	10	6067	5355	4496	3636	2777	1917	4.82	4.97	5.03	5.09	5.15	5.21
25	12	5941	5267	4463	3659	2855	2050	4.73	4.92	4.98	5.05	5.11	5.17
25	15	5753	5136	4414	3693	2971	2249	4.59	4.84	4.91	4.98	5.05	5.12
25	20	5774	5094	4775	4456	3007	/	5.13	5.46	5.82	6.18	5.78	/
25	25	5805	5121	4323	3525	/	/	5.85	6.27	6.45	6.63	/	/
25	30	5781	5319	4553	3786	/	/	6.51	7.01	7.22	7.43	/	/
25	35	5966	5538	4726	3914	/	/	7.27	7.89	8.13	8.36	/	/
25	40	6359	5731	5123	4515	/	/	8.57	9.37	9.65	9.93	/	/
25	43	6594	5996	5372	4748	/	/	9.50	10.46	10.77	11.08	/	/
25	-25	1531	1418	1253	1087	/	/	1.18	1.19	1.20	1.20	/	/
25	-20	2166	1984	1685	1386	/	/	1.24	1.26	1.28	1.29	/	/
25	-15	2934	2658	2151	1643	/	/	1.97	2.02	2.05	2.07	/	/
25	-10	4017	3599	3364	3128	2089	/	2.43	2.49	2.63	2.78	2.56	/
25	-7	4667	4265	3873	3480	2063	/	2.70	2.81	2.98	3.16	2.93	/
25	-5	4738	4214	3831	3449	2056	/	2.82	2.96	3.14	3.32	3.07	/
25	-2	4827	4373	3963	3554	2088	/	3.00	3.09	3.28	3.47	3.21	/
25	0	4916	4533	4096	3659	2119	/	3.18	3.23	3.42	3.61	3.34	/
25	2	5183	4772	4339	3906	2329	/	3.35	3.44	3.66	3.87	3.60	/
25	5	5588	5107	4666	4226	2576	/	3.77	3.86	4.09	4.33	4.01	/
25	7	6259	4381	3665	2948	/	/	4.41	4.64	4.71	4.78	/	/
25	10	5912	5241	4843	4445	2841	/	4.63	4.83	5.13	5.44	5.06	/
25	12	5948	5258	4870	4481	2890	/	4.79	5.05	5.37	5.70	5.31	/
25	15	6002	5284	4910	4536	2964	/	5.04	5.38	5.73	6.08	5.68	/
25	20	6076	5593	4736	3878	/	/	5.48	5.89	6.06	6.23	/	/
25	25	5910	5473	4894	4314	/	/	6.06	6.55	6.75	6.94	/	/
25	30	5886	5480	4756	4032	/	/	6.39	6.97	7.17	7.37	/	/
25	35	5861	5504	4774	4044	/	/	6.77	7.43	7.65	7.87	/	/
25	40	6334	5777	5169	4560	/	/	7.88	8.70	8.96	9.22	/	/
25	43	6617	6088	5459	4830	/	/	8.63	9.60	9.89	10.17	/	/
25	-25	1371	1285	1075	864	/	/	1.10	1.09	1.10	1.10	/	/
25	-20	1976	1832	1529	1225	/	/	1.13	1.14	1.15	1.15	/	/
25	-15	2505	2222	1913	1603	/	/	1.56	1.59	1.60	1.61	/	/
25	-10	3588	3254	2714	2174	/	/	2.02	2.05	2.07	2.09	/	/
25	-7	4538	4300	3905	3510	2081	/	2.29	2.35	2.49	2.62	2.42	/
25	-5	4627	4195	3844	3494	2157	/	2.45	2.54	2.68	2.83	2.60	/
25	-2	4833	4327	3956	3584	2190	/	2.67	2.77	2.93	3.08	2.83	/
25	0	5039	4460	4068	3675	2222	/	2.89	3.00	3.17	3.34	3.07	/
25	2	5251	5100	4609	4118	2387	/	2.97	3.00	3.21	3.43	3.23	/
25	5	5601	4824	4451	4078	2591	/	3.27	3.42	3.62	3.82	3.52	/
25	7	5962	4300	3760	3219	2800	/	3.67	3.80	3.86	3.91	4.00	/
25	10	6051	5477	5145	4813	3274	/	3.90	4.05	4.30	4.54	4.21	/
25	12	6110	5555	4909	4261	/	/	4.02	4.18	4.37	4.56	/	/
25	15	6199	5673	4554	3434	/	/	4.21	4.37	4.48	4.58	/	/
25	20	6122	5633	4715	3796	/	/	4.66	4.88	5.00	5.12	/	/
25	25	6045	5668	5010	4352	/	/	5.25	5.53	5.67	5.81	/	/
25	30	6020	5674	5049	4424	/	/	5.62	5.97	6.12	6.27	/	/
25	35	5994	5698	5067	4436	/	/	6.05	6.47	6.64	6.80	/	/
25	40	6377	5890	5368	4846	/	/	6.86	7.38	7.57	7.76	/	/
25	43	6606	6154	5654	5153	/	/	7.39	8.01	8.22	8.42	/	/

"Tw. out °C"	"DB/WB °C"	Heating Capacity [W]						COP					
		130%	100%	90%	70%	50%	30%	130%	100%	90%	70%	50%	30%

TABELLE PRESTAZIONALI - MODO RISCALDAMENTO / CAPACITY TABLES - HEATING MODE

IDOLA S 3.2 HYBRID 28H 6 - Prestazioni riscaldamento / Heating capacity

"Tw_out °C"	"DB/WB °C"	Heating Capacity [W]						COP					
		130%	100%	90%	70%	50%	30%	130%	100%	90%	70%	50%	30%
25	-25	2566	2374	1957	1540			1.72	1.76	1.77	1.78		
25	-20	3642	3332	2686	2039			2.34	2.43	2.45	2.47		
25	-15	4430	4010	3677	3343	2069		2.97	3.11	3.28	3.46	3.18	
25	-10	5753	5149	4433	3717	3000	2284	3.41	3.61	3.64	3.66	3.69	3.71
25	-7	6553	6239	5073	3906	2740	1573	3.71	3.86	3.90	3.95	3.99	4.03
25	-5	6536	5939	4899	3859	2818	1778	3.98	4.17	4.21	4.25	4.28	4.32
25	-2	6515	5963	4912	3861	2810	1759	4.41	4.57	4.61	4.66	4.70	4.74
25	0	6494	5987	4925	3864	2802	1740	4.85	4.98	5.02	5.07	5.11	5.15
25	2	6678	6148	5113	4078	3043	2008	4.96	5.11	5.17	5.23	5.29	5.35
25	5	7038	6432	5401	4370	3339	2308	5.37	5.56	5.62	5.67	5.73	5.78
25	7	7581	6753	5743	4734	3724	2714	5.87	6.18	6.25	6.31	6.38	6.44
25	10	7428	6677	5576	4475	3374	2273	6.12	6.52	6.60	6.68	6.75	6.83
25	12	7326	6614	5583	4551	3520	2489	6.21	6.68	6.77	6.86	6.94	7.02
25	15	7174	6520	5593	4666	3739	2812	6.35	6.93	7.03	7.12	7.22	7.31
25	20	6934	6336	5768	5201	3120		7.15	7.85	8.37	8.88	8.30	
25	25	6693	5966	4824	3681			8.32	9.21	9.47	9.73		
25	30	6741	6042	4959	3876			9.53	10.62	10.93	11.23		
25	35	6789	6139	5344	4549			10.34	11.60	11.94	12.27		
25	40	7256	6656	5795	4934			11.42	12.89	13.27	13.64		
25	43	7536	6973	6087	5200			12.01	13.65	14.05	14.44		
30	-25	2245	2065	1730	1394			1.46	1.51	1.52	1.53		
30	-20	3339	3038	2850	2663	1803		1.80	1.85	1.95	2.05	1.88	
30	-15	4190	3771	3481	3192	2032		2.73	2.83	2.99	3.15	2.90	
30	-10	5496	4891	4204	3517	2830	2143	2.99	3.12	3.14	3.17	3.19	3.21
30	-7	6296	6053	4902	3751	2599	1448	3.28	3.36	3.40	3.43	3.47	3.50
30	-5	6317	5890	4831	3773	2714	1655	3.52	3.63	3.66	3.70	3.73	3.76
30	-2	6344	5877	4843	3808	2774	1739	3.92	4.02	4.06	4.10	4.13	4.17
30	0	6371	5864	4854	3843	2833	1822	4.31	4.40	4.45	4.49	4.54	4.58
30	2	6477	5874	4920	3965	3011	2056	4.38	4.50	4.55	4.60	4.64	4.69
30	5	6813	6062	5127	4193	3258	2323	4.51	4.64	4.69	4.73	4.78	4.82
30	7	7455	6271	5367	4462	3558	2653	4.81	5.21	5.25	5.29	5.33	5.37
30	10	7268	6322	5262	4202	3142	2082	5.24	5.49	5.56	5.62	5.69	5.75
30	12	7239	6341	5351	4361	3371	2380	5.47	5.79	5.87	5.94	6.01	6.09
30	15	7195	6370	5485	4599	3714	2828	5.82	6.24	6.33	6.42	6.50	6.59
30	20	6966	6202	5745	5288	3413		6.28	6.79	7.24	7.68	7.18	
30	25	6736	6115	5045	3974			7.16	7.79	8.02	8.24		
30	30	6832	6236	5219	4201			8.02	8.79	9.05	9.30		
30	35	6927	6379	5545	4710			9.43	10.41	10.72	11.02		
30	40	7373	6673	5807	4940			10.15	11.28	11.61	11.94		
30	43	7641	6976	6086	5196			10.94	12.24	12.60	12.96		
35	-25	2139	1951	1714	1476			1.28	1.30	1.31	1.32		
35	-20	2884	2602	2138	1673			1.42	1.46	1.48	1.49		
35	-15	4001	3569	3290	3010	1904		2.34	2.43	2.57	2.71	2.49	
35	-10	5111	4508	3886	3264	2641	2019	2.57	2.66	2.68	2.70	2.72	2.74
35	-7	6211	6000	4870	3739	2609	1478	2.86	3.00	3.02	3.03	3.05	3.06
35	-5	6247	5716	4713	3710	2706	1703	3.09	3.19	3.22	3.25	3.27	3.30
35	-2	6300	5726	4729	3732	2735	1738	3.44	3.54	3.57	3.60	3.63	3.66
35	0	6353	5737	4746	3755	2763	1772	3.79	3.89	3.92	3.96	3.99	4.02
35	2	6531	5500	4634	3768	2902	2036	3.86	3.90	3.98	4.06	4.14	4.22
35	5	6881	6158	5202	4246	3289	2333	4.25	4.42	4.46	4.51	4.55	4.59
35	7 *	7409	6350	5446	4542	3638	2734	4.76	4.95	5.04	5.14	5.23	5.32
35	10	7387	6406	5447	4488	3529	2570	4.86	5.04	5.12	5.20	5.28	5.36
35	12	7354	6491	5449	4408	3366	2324	5.02	5.17	5.23	5.30	5.36	5.42
35	15	7261	6482	5571	4661	3750	2839	5.28	5.57	5.65	5.73	5.81	5.89
35	20	6982	6268	5875	5482	3700		5.91	6.28	6.70	7.11	6.65	
35	25	6702	6134	5178	4222			6.31	6.75	6.95	7.15		
35	30	6831	6286	5380	4474			7.27	7.84	8.07	8.30		
35	35	6959	6460	5513	4565			8.17	8.87	9.14	9.40		
35	40	7285	6565	5869	5172			9.02	9.86	10.16	10.45		
35	43	7480	6801	6094	5386			9.87	10.86	11.19	11.51		
40	-25	1914	1772	1566	1359			1.17	1.17	1.18	1.19		
40	-20	2556	2342	1989	1636			1.23	1.25	1.27	1.28		
40	-15	3608	3269	2645	2021			1.93	1.98	2.01	2.03		
40	-10	4833	4330	4047	3764	2513		2.22	2.27	2.40	2.54	2.34	
40	-7	5789	5606	4827	4048	3269	2490	2.50	2.54	2.59	2.63	2.68	2.72
40	-5	5965	5652	5092	4533	2589		2.74	2.87	3.04	3.22	2.98	
40	-2	6230	5794	5249	4704	2759		3.00	3.14	3.32	3.50	3.22	
40	0	6495	5936	5406	4876	2929		3.26	3.40	3.59	3.78	3.47	
40	2	6645	5951	5449	4947	3044		3.52	3.61	3.84	4.06	3.78	
40	5	6962	6363	5814	5265	3209		3.69	3.78	4.01	4.24	3.93	
40	7	7128	6444	5917	5391	3357		3.99	4.14	4.40	4.65	4.32	
40	10	7371	6587	6017	5447	3317		4.21	4.39	4.67	4.94	4.60	
40	12	7453	6763	6185	5606	3431		4.37	4.60	4.90	5.19	4.84	
40	15	7577	7027	6436	5845	3601		4.61	4.92	5.24	5.57	5.20	
40	20	7212	6552	5548	4543			4.70	5.05	5.20	5.34		
40	25	6646	6155	5504	4852			5.11	5.53	5.69	5.85		
40	30	6556	6104	5298	4491			6.01	6.55	6.75	6.94		
40	35	6465	6071	5266	4461			6.87	7.54	7.77	7.99		
40	40	7118	6492	5809	5125			7.34	8.11	8.35	8.59		
40	43	7509	6909	6196	5482			8.27	9.20	9.48	9.75		
45	-25	1714	1606	1343	1080			1.09	1.08	1.09	1.09		
45	-20	2332	2162	1804	1446			1.12	1.13	1.14	1.14		
45	-15	3081	2733	2353	1972			1.53	1.56	1.57	1.58		
45	-10	4643	4211	3513	2814			2.07	2.10	2.12	2.14		
45	-7	5573	5400	4920	4440	2673		2.35	2.40	2.54	2.68	2.48	
45	-5	5844	5496	5036	4575	2823		2.54	2.61	2.74	2.87	2.61	
45	-2	6096	5586	5132	4679	2921		2.68	2.78	2.93	3.07	2.81	
45	0	6348	5675	5229	4782	3020		2.82	2.94	3.11	3.27	3.01	
45	2	6581	5800	5356	4912	3131		2.95	3.00	3.24	3.48	3.32	
45	5	6991	6131	5657	5183	3293		3.29	3.45	3.65	3.84	3.54	
45	7	7134	6300	5076	3852	3546		3.58	3.70	3.79	3.88	3.92	
45	10	7318	6624	6222	5821	3959		3.78	3.83	4.07	4.30	3.99	
45	12	7361	6766	6374	5182			3.93	4.03	4.21	4.39		
45	15	7425	6978	6601	6224			4.16	4.32	4.43	4.53		
45	20	7416	6824	6411	6038			4.42	4.62	4.74	4.86		
45	25	7207	6758	6374	5998			4.74	4.99	5.12	5.24		
45	30	7049	6645	6263	5888			5.05	5.35	5.49	5.63		
45	35	6891	6551	6175	5799			5.42	5.79	5.94	6.09		
45	40	7337	6777	6177	5576			6.12	6.59	6.76	6.92		
45	43	7605	7085	6509	5932			7.02	7.61	7.81	8.00		

"Tw_out °C"	"DB/WB °C"	Heating Capacity [W]						COP						
		130%	100%	90%	70%	50%	30%	130%	100%	90%	70%	50%	30%	
50	-25													
50	-20	2187	2036	1773	1509			1.07	1.08	1.09	1.09			
50</														

TABELLE PRESTAZIONALI - MODO RISCALDAMENTO / CAPACITY TABLES - HEATING MODE

IDOLA S 3.2 HYBRID 28H 8 - Prestazioni riscaldamento / Heating capacity

"Tw_out °C"	"DB/WB °C"	Heating Capacity [W]						COP					
		130%	100%	90%	70%	50%	30%	130%	100%	90%	70%	50%	30%
25	-25	4446	4113	3391	2668			2.25	2.29	2.31	2.33		
	-20	5683	5200	4191	3182			2.80	2.90	2.93	2.96		
	-15	6899	6244	5725	5206	3222		3.34	3.49	3.69	3.89	3.58	
	-10	7446	6664	5737	4810	3683	2956	3.68	3.89	3.92	3.95	3.98	4.01
	-7	7637	7270	5911	4552	3192	1833	3.76	3.97	4.00	4.03	4.06	4.09
	-5	8047	7250	5985	4720	3454	2189	4.02	4.25	4.28	4.31	4.34	4.37
	-2	8296	7425	6119	4812	3506	2199	4.39	4.57	4.61	4.64	4.68	4.71
	0	8546	7600	6252	4905	3557	2209	4.77	4.89	4.93	4.98	5.02	5.06
	2	8661	7769	6461	5153	3844	2536	5.20	5.36	5.43	5.49	5.56	5.62
	5	9033	8095	6798	5500	4203	2905	5.95	6.17	6.23	6.29	6.35	6.41
	7	9508	8595	7297	6000	4702	3404	6.54	6.84	6.92	6.99	7.07	7.14
	10	10064	9046	7555	6063	4572	3080	7.44	7.93	8.02	8.12	8.21	8.30
	12	9982	9011	7607	6203	4799	3394	7.98	8.59	8.70	8.82	8.92	9.03
	15	9859	8959	7686	6412	5139	3865	8.79	9.59	9.72	9.86	9.99	10.12
	20	9653	8821	8031	7241	4344		10.14	11.14	11.87	12.60	11.77	
	25	9417	8393	6786	5179			10.44	11.55	11.88	12.21		
	30	9181	8229	6754	5279			11.03	12.29	12.64	12.99		
	35	9548	8635	7516	6397			11.31	12.68	13.05	13.42		
	40	10026	9197	8007	6817			11.57	13.06	13.44	13.82		
	43	10326	9555	8340	7125			12.25	13.92	14.33	14.73		
	-25	3999	3679	3082	2484			1.96	2.03	2.05	2.06		
	-20	5087	4629	4343	4057	2747		2.37	2.43	2.57	2.70	2.48	
	-15	6443	5799	5354	4908	3125		2.87	2.98	3.15	3.32	3.05	
	-10	7280	6479	5569	4659	3749	2839	3.33	3.49	3.52	3.54	3.57	3.59
	-7	7467	7109	5761	4413	3065	1717	3.40	3.53	3.56	3.58	3.61	3.63
-5	7966	7205	5926	4646	3367	2087	3.69	3.81	3.84	3.88	3.91	3.94	
-2	8229	7495	6188	4880	3573	2265	3.96	4.07	4.11	4.14	4.18	4.21	
0	8493	7785	6450	5115	3779	2444	4.23	4.34	4.38	4.42	4.45	4.49	
2	8649	7855	6578	5302	4025	2748	4.50	4.64	4.70	4.75	4.81	4.86	
5	8952	8083	6837	5590	4344	3097	4.94	5.13	5.18	5.23	5.27	5.32	
7	9199	8215	7026	5837	4648	3459	5.32	5.57	5.63	5.69	5.75	5.81	
10	9278	8122	6771	5420	4069	2718	5.84	6.12	6.19	6.27	6.34	6.41	
12	9324	8200	6927	5654	4380	3107	6.34	6.71	6.80	6.89	6.97	7.06	
15	9393	8316	7160	6004	4847	3691	7.09	7.60	7.71	7.82	7.92	8.03	
20	9507	8465	7841	7218	4658		8.33	9.00	9.59	10.19	9.52		
25	8998	8169	6739	5309			8.75	9.52	9.80	10.07			
30	8489	7749	6485	5221			9.16	10.04	10.34	10.63			
35	8829	8130	7067	6003			9.45	10.43	10.74	11.04			
40	9270	8389	7300	6211			10.02	11.13	11.46	11.79			
43	9548	8717	7605	6493			11.27	12.61	12.98	13.35			
-25	3590	3274	2876	2477			1.64	1.67	1.68	1.69			
-20	4735	4271	3509	2746			2.11	2.17	2.20	2.22			
-15	6105	5446	5020	4594	2906		2.43	2.53	2.67	2.82	2.59		
-10	7084	6248	5386	4523	3661	2798	3.15	3.26	3.28	3.31	3.33	3.35	
-7	7266	7000	5704	4409	3113	1817	3.21	3.20	3.26	3.32	3.38	3.44	
-5	7685	6994	5787	4581	3374	2167	3.22	3.30	3.34	3.37	3.41	3.44	
-2	8053	7332	6066	4800	3534	2268	3.49	3.59	3.63	3.66	3.70	3.73	
0	8420	7669	6344	5020	3695	2370	3.77	3.88	3.91	3.95	3.98	4.01	
2	8477	7100	5999	4897	3796	2694	3.95	4.10	4.17	4.24	4.30	4.37	
5	8856	8084	6829	5573	4318	3062	4.56	4.73	4.78	4.82	4.87	4.91	
7 *	9105	8400	7140	5880	4620	3360	5.07	5.15	5.25	5.35	5.44	5.54	
10	8942	7893	6626	5360	4093	2826	5.42	5.58	5.65	5.72	5.78	5.85	
12	8999	7980	6764	5549	4333	3116	5.67	5.90	5.97	6.05	6.12	6.20	
15	9085	8111	6971	5832	4692	3552	6.04	6.37	6.46	6.55	6.64	6.73	
20	9328	8374	7849	7325	4944		7.09	7.53	8.03	8.53	7.98		
25	8751	8009	6761	5513			7.64	8.18	8.42	8.66			
30	8173	7521	6437	5353			7.78	8.39	8.64	8.88			
35	8500	7890	6733	5576			8.05	8.74	9.00	9.26			
40	8925	8044	7191	6337			8.49	9.28	9.56	9.84			
43	9193	8358	7489	6619			9.11	10.03	10.33	10.63			
-25	3344	3097	2736	2374			1.55	1.56	1.57	1.58			
-20	4320	3957	3361	2765			1.77	1.80	1.82	1.83			
-15	5566	5043	4080	3117			2.26	2.32	2.35	2.37			
-10	6872	6157	5754	5352	3573		2.62	2.68	2.84	2.99	2.76		
-7	7048	6710	6057	5404	3115		2.67	2.79	2.96	3.13	2.90		
-5	7451	6864	6209	5554	3234		2.90	3.01	3.20	3.39	3.15		
-2	7923	7302	6601	5900	3426		3.11	3.19	3.39	3.58	3.32		
0	8395	7740	6993	6247	3618		3.32	3.37	3.57	3.77	3.48		
2	8502	7804	7094	6383	3802		3.40	3.54	3.74	3.94	3.63		
5	8781	8026	7333	6641	4048		3.84	3.93	4.17	4.41	4.08		
7	8852	8002	7348	6694	4169		4.18	4.34	4.61	4.88	4.53		
10	8700	7774	7101	6429	3915		4.30	4.48	4.76	5.05	4.70		
12	8849	7944	7264	6585	4029		4.63	4.87	5.18	5.50	5.12		
15	9073	8198	7509	6819	4201		5.12	5.46	5.82	6.17	5.76		
20	9446	8583	7267	5951			5.93	6.37	6.56	6.74			
25	9148	8472	7575	6678			6.34	6.86	7.06	7.26			
30	8849	8239	7151	6062			6.84	7.46	7.68	7.89			
35	9203	8643	7497	6350			7.05	7.74	7.97	8.20			
40	9663	8814	7886	6957			7.31	8.08	8.32	8.56			
43	9953	9158	8212	7266			7.86	8.74	9.00	9.26			
-25	2815	2638	2206	1773			1.30	1.29	1.29	1.29			
-20	3697	3427	2860	2292			1.61	1.62	1.63	1.64			
-15	5288	4690	4037	3384			2.00	2.03	2.05	2.06			
-10	6770	6141	5122	4103			2.47	2.50	2.53	2.55			
-7	6944	6600	6053	5506	3410		2.52	2.55	2.71	2.87	2.67		
-5	7444	6791	6252	5712	3595		2.69	2.75	2.91	3.07	2.84		
-2	7767	6975	6391	5806	3582		2.81	2.90	3.07	3.23	2.98		
0	8090	7160	6530	5900	3568		2.94	3.05	3.22	3.39	3.12		
2	8308	7400	6780	6161	3801		3.04	3.25	3.43	3.61	3.31		
5	8694	7624	7035	6445	4095		3.38	3.54	3.74	3.95	3.64		
7	8979	8300	7611	7122	4849		3.82	3.85	4.13	4.40	4.15		
10	8735	7906	7427	6948	4726		3.90	3.95	4.19	4.43	4.11		
12	8805	8005	7074	6143			4.09	4.19	4.38	4.57			
15	8909	8153	6545	4936			4.38	4.55	4.66	4.77			
20	9083	8358	6995	5631			5.02	5.25	5.38	5.51			
25	9007	8445	7465	6485			5.80	6.11	6.27	6.42			
30	8930	8418	7491	6564			6.23	6.61	6.78	6.95			
35	9287	8829	7851	6873			6.34	6.77	6.95	7.12			
40	9752	9007	8209	7411			6.46	6.95	7.13	7.31			
43	10044	9358	8596	7834			6.83	7.40	7.59	7.78			

"Tw_out °C"	"DB/WB °C"	Heating Capacity [W]						COP						
		130%	100%	90%	70%	50%	30%	130%	100%	90%	70%	50%	30%	
50	-25													
	-20	3175	2956	2574	2191			1.41	1.42	1.43	1.44			
	-15	4669	4160	3691	3222			1.73	1.76	1.78	1.79			
	-10	6317	5755	5022	4289			2.20	2.23	2.26	2.28			
	-7	6479	6168	5710	5253	3382		2.24	2.31	2.44	2.56	2.35		
	-5	7345	6587	6143	5699	3775		2.46	2.52	2.67	2.81	2.59		
	-2	7728	6988	6501	6015	3948		2.60	2.66	2.81	2.96	2.72		
	0	8111	7389	6859	6330	4120		2.75	2.79	2.95	3.11	2.86		
	2	8176	7369	6882	6396	4260	</							

TABELLE PRESTAZIONALI - MODO RISCALDAMENTO / CAPACITY TABLES - HEATING MODE

IDOLA S 3.2 HYBRID 28H 10 - Prestazioni riscaldamento / Heating capacity

*Tw_out °C	DB/WB °C	Heating Capacity [W]						COP					
		130%	100%	90%	70%	50%	30%	130%	100%	90%	70%	50%	30%
25	-25	4680	4329	3569	2808			2.27	2.32	2.34	2.35		
25	-20	5982	5473	4412	3350			2.82	2.93	2.96	2.99		
25	-15	7263	6573	6027	5481	3392		3.37	3.53	3.73	3.93	3.61	
25	-10	8372	7493	6451	5409	4366	3324	3.60	3.81	3.84	3.86	3.89	3.91
25	-7	8721	8285	6737	5189	3641	2093	3.81	3.92	3.98	4.03	4.09	4.14
25	-5	8997	8126	6693	5260	3826	2393	4.10	4.29	4.34	4.39	4.43	4.48
25	-2	9215	8227	6772	5317	3862	2407	4.50	4.68	4.73	4.77	4.82	4.86
25	0	9433	8328	6851	5375	3898	2421	4.90	5.06	5.11	5.15	5.20	5.24
25	2	9719	8621	7170	5720	4269	2818	5.18	5.34	5.41	5.47	5.54	5.60
25	5	10242	9087	7631	6174	4718	3261	5.72	5.95	6.01	6.07	6.12	6.18
25	7	10494	10220	8604	6989	5373	3757	5.94	6.05	6.16	6.27	6.37	6.48
25	10	11196	10063	8404	6745	5085	3426	7.04	7.50	7.59	7.68	7.77	7.86
25	12	11286	10189	8604	7018	5432	3846	7.46	8.03	8.13	8.24	8.34	8.44
25	15	11420	10379	8904	7428	5953	4477	8.10	8.83	8.95	9.08	9.20	9.32
25	20	10808	9876	8992	8107	4864		9.05	9.94	10.59	11.25	10.51	
25	25	9943	8863	7166	5469			9.59	10.61	10.92	11.22		
25	30	9774	8761	7191	5620			10.15	11.31	11.64	11.96		
25	35	10165	9192	8002	6811			10.73	12.03	12.38	12.73		
25	40	10673	9791	8525	7258			11.52	13.01	13.39	13.76		
25	43	10993	10172	8879	7585			12.03	13.67	14.07	14.47		
30	-25	4210	3873	3244	2614			1.98	2.05	2.07	2.08		
30	-20	5354	4873	4572	4270	2891		2.39	2.46	2.59	2.73	2.50	
30	-15	6782	6104	5635	5166	3289		2.90	3.01	3.18	3.35	3.08	
30	-10	8144	7248	6230	5212	4194	3176	3.22	3.37	3.40	3.42	3.45	3.47
30	-7	8483	8182	6624	5067	3509	1951	3.41	3.51	3.54	3.58	3.61	3.64
30	-5	8862	8205	6734	5264	3793	2322	3.60	3.70	3.74	3.77	3.81	3.84
30	-2	9109	8230	6797	5365	3932	2499	3.82	3.93	3.97	4.00	4.04	4.07
30	0	9357	8254	6860	5465	4071	2676	4.05	4.15	4.19	4.23	4.26	4.30
30	2	9568	8677	7268	5858	4449	3039	4.34	4.52	4.56	4.61	4.65	4.69
30	5	10072	9005	7616	6228	4839	3450	4.80	4.99	5.04	5.09	5.13	5.18
30	7	10275	9983	8453	6923	5393	3863	5.21	5.40	5.47	5.55	5.62	5.69
30	10	10414	9116	7600	6084	4567	3051	5.64	5.91	5.98	6.05	6.12	6.19
30	12	10497	9232	7799	6366	4933	3501	5.98	6.33	6.41	6.49	6.57	6.65
30	15	10622	9405	8098	6790	5483	4175	6.49	6.96	7.06	7.16	7.25	7.35
30	20	10756	9577	8871	8166	5270		7.96	8.60	9.17	9.74	9.10	
30	25	9896	8984	7411	5838			8.44	9.18	9.45	9.72		
30	30	9073	8282	6931	5580			8.79	9.63	9.92	10.20		
30	35	9436	8689	7553	6416			9.15	10.10	10.40	10.69		
30	40	9908	8966	7802	6638			9.81	10.90	11.22	11.54		
30	43	10205	9317	8128	6939			10.61	11.87	12.22	12.57		
35	-25	3778	3446	3027	2607			1.66	1.68	1.70	1.71		
35	-20	4985	4496	3694	2891			2.13	2.20	2.22	2.24		
35	-15	6427	5733	5284	4836	3059		2.46	2.56	2.70	2.85	2.62	
35	-10	7885	6955	5995	5035	4075	3115	2.98	3.08	3.10	3.13	3.15	3.17
35	-7	8314	8	2054				3.11	3.05	3.37			
35	-5	8799	8164	6743	5323	3902	2481	3.33	3.41	3.45	3.49	3.53	3.57
35	-2	9131	8249	6831	5412	3994	2575	3.54	3.64	3.68	3.71	3.75	3.78
35	0	9463	8335	6918	5502	4085	2668	3.76	3.86	3.89	3.93	3.96	3.99
35	2	9719	8200	6907	5614	4320	3027	3.97	4.00	4.09	4.17	4.26	4.34
35	5	10132	9068	7660	6252	4843	3435	4.51	4.68	4.73	4.77	4.82	4.86
35	7 *	10322	10000	8452	6905	5357	3809	4.93	4.95	5.06	5.17	5.28	5.39
35	10	10031	8855	7434	6013	4591	3170	5.13	5.28	5.35	5.41	5.48	5.54
35	12	10111	8967	7601	6235	4868	3502	5.44	5.66	5.73	5.81	5.88	5.96
35	15	10232	9134	7851	6568	5284	4001	5.90	6.22	6.31	6.40	6.49	6.58
35	20	10673	9582	8982	8381	5657		6.72	7.14	7.61	8.09	7.56	
35	25	9819	8987	7587	6186			7.12	7.63	7.85	8.07		
35	30	8895	8186	7006	5826			7.95	8.57	8.83	9.08		
35	35	9251	8587	7328	6069			8.30	9.01	9.28	9.55		
35	40	9713	8754	7825	6896			8.47	9.26	9.54	9.81		
35	43	10005	9097	8150	7203			9.25	10.18	10.49	10.79		
40	-25	3520	3260	2880	2499			1.57	1.57	1.59	1.60		
40	-20	4548	4166	3538	2910			1.79	1.82	1.84	1.85		
40	-15	5859	5308	4295	3281			2.28	2.34	2.37	2.40		
40	-10	7638	6843	6396	5948	3972		2.67	2.74	2.90	3.06	2.82	
40	-7	7956	7430	6725	6021	3517		2.83	2.93	3.12	3.31	3.08	
40	-5	8460	7560	6869	6177	3671		2.88	2.96	3.15	3.35	3.13	
40	-2	8857	7896	7173	6449	3830		3.02	3.08	3.27	3.47	3.22	
40	0	9254	8232	7477	6721	3988		3.16	3.20	3.39	3.58	3.31	
40	2	9578	8791	7992	7193	4287		3.35	3.46	3.68	3.89	3.62	
40	5	10096	9228	8432	7635	4654		3.83	3.92	4.16	4.39	4.07	
40	7	10448	10145	9216	8286	4921		4.18	4.29	4.57	4.85	4.53	
40	10	9935	8878	8110	7342	4471		4.17	4.35	4.62	4.90	4.55	
40	12	10015	8990	8221	7452	4559		4.42	4.66	4.95	5.26	4.89	
40	15	10134	9157	8387	7617	4692		4.80	5.12	5.45	5.79	5.40	
40	20	10679	9703	8216	6728			5.66	6.08	6.26	6.44		
40	25	9825	9099	8136	7172			6.00	6.49	6.68	6.87		
40	30	8852	8242	7153	6064			6.72	7.32	7.54	7.75		
40	35	9206	8645	7499	6352			6.97	7.65	7.88	8.10		
40	40	9666	8817	7889	6960			7.34	8.11	8.35	8.59		
40	43	9956	9161	8215	7268			8.07	8.98	9.25	9.51		
45	-25	2963	2776	2322	1967			1.31	1.30	1.31	1.31		
45	-20	3892	3608	3011	2413			1.63	1.64	1.65	1.66		
45	-15	5566	4937	4250	3562			2.02	2.05	2.07	2.08		
45	-10	7376	6690	5580	4470			2.38	2.41	2.44	2.46		
45	-7	7683	7350	6734	6117	3772		2.52	2.55	2.71	2.87	2.67	
45	-5	8181	7433	6847	6261	3951		2.65	2.72	2.88	3.04	2.80	
45	-2	8535	7650	7011	6372	3936		2.76	2.84	3.00	3.17	2.92	
45	0	8889	7866	7174	6482	3920		2.87	2.97	3.14	3.31	3.04	
45	2	9244	8500	7247	6644	4230		3.01	3.20	3.38	3.56	3.28	
45	5	9786	8582	7919	7255	4609		3.40	3.55	3.76	3.97	3.66	
45	7	10279	10000	9277	8553	5551		3.77	3.75	4.03	4.31	4.09	
45	10	9873	8937	8395	7853	5341		3.67	3.72	3.94	4.17	3.86	
45	12	9952	9049	7996	6943			3.89	3.98	4.16	4.34		
45	15	10070	9216	7398	5579			4.22	4.38	4.49	4.59		
45	20	10283	9462	7919	6375			4.86	5.08	5.21	5.34		
45	25	9460	8871	7841	6811			5.15	5.43	5.57	5.70		
45	30	9923	9354	8324	7293			6.15	6.53	6.70	6.86		
45	35	10320	9811	8724	7637			6.40	6.84	7.02	7.19		
45	40	10836	10009	9122	8235			6.79	7.31	7.50	7.68		
45	43	11161	10398	9552	8706			7.58	8.21	8.43	8.64		

*Tw_out °C	DB/WB °C	Heating Capacity [W]						COP						
		130%	100%	90%	70%	50%	30%	130%	100%	90%	70%	50%	30%	
50	-25													
50	-20	3342	3111	2709	2306			1.42	1.44	1.45	1.45			

TABELLE PRESTAZIONALI - MODO RAFFREDDAMENTO / CAPACITY TABLES - COOLING MODE

IDOLA S 3.2 HYBRID 28H 8 - Prestazioni raffreddamento / Cooling capacity

"Tw_out °C"	"DB/WB °C"	Cooling Capacity [W]						EER									
		130%	100%	90%	70%	50%	30%	130%	100%	90%	70%	50%	30%				
5	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	20	5683	4430	4049	3668	2239	/	4.96	5.21	5.53	5.85	5.42	/	/	/	/	/
	25	6474	5128	4651	4173	2460	/	4.36	4.61	4.87	5.14	4.73	/	/	/	/	/
	30	7266	5844	5292	4740	2775	/	3.85	4.10	4.33	4.56	4.19	/	/	/	/	/
	35	7395	5746	5173	4600	2618	/	3.22	3.45	3.65	3.84	3.54	/	/	/	/	/
40	6609	5395	4851	4308	2437	/	2.62	2.81	2.95	3.09	2.80	/	/	/	/	/	
43	5092	4181	3494	2806	2119	1431	2.23	2.32	2.33	2.35	2.36	2.37	/	/	/	/	
7	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	20	6462	5121	4623	4125	2379	/	5.18	5.52	5.85	6.19	5.73	/	/	/	/	/
	25	7245	5830	5015	4200	3384	2569	4.56	4.87	4.92	4.96	5.01	5.05	/	/	/	/
	30	8029	6557	5634	4711	3788	2865	4.03	4.31	4.35	4.38	4.42	4.45	/	/	/	/
	35	8195	7450	6298	5196	4093	2991	3.21	3.35	3.51	3.64	3.76	3.89	/	/	/	/
40	7113	5892	5308	4724	2697	1877	2.86	3.08	3.25	3.41	3.12	2.89	/	/	/	/	
43	5443	4351	3709	3068	2426	1784	2.39	2.49	2.51	2.52	2.54	2.55	/	/	/	/	
10	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	15	5972	4479	3613	2747	/	/	6.84	7.24	7.47	7.69	/	/	/	/	/	/
	20	7063	5711	4908	4106	3303	2500	5.46	5.86	5.93	5.99	6.06	6.12	/	/	/	/
	25	7817	6417	5477	4538	3598	2658	4.81	5.17	5.24	5.30	5.37	5.43	/	/	/	/
	30	8570	7141	6089	5036	3984	2931	4.25	4.54	4.60	4.65	4.71	4.76	/	/	/	/
	35	8769	7199	6498	5797	3341	/	3.80	4.09	4.35	4.60	4.28	/	/	/	/	/
40	7421	6273	5669	5065	2936	/	3.14	3.38	3.58	3.77	3.48	/	/	/	/	/	
43	5643	4436	4021	3607	2122	/	2.58	2.67	2.83	2.99	2.76	/	/	/	/	/	
15	-5	6387	5143	4236	3328	/	/	10.07	11.38	11.62	11.86	/	/	/	/	/	/
	0	6173	4979	4105	3230	/	/	8.69	9.94	10.16	10.38	/	/	/	/	/	/
	5	5959	4774	4406	4038	2568	/	7.30	7.96	8.52	9.08	8.55	/	/	/	/	/
	10	6288	5053	4686	4320	2801	/	8.54	9.32	10.00	10.69	10.11	/	/	/	/	/
	15	7334	6161	5682	5204	3300	/	7.38	7.83	8.37	8.91	8.37	/	/	/	/	/
	20	8380	6986	6368	5750	3469	/	6.22	6.69	7.13	7.58	7.09	/	/	/	/	/
	25	9263	7836	7092	6348	3705	/	5.52	5.87	6.25	6.63	6.18	/	/	/	/	/
	30	10145	8707	7869	7032	4078	/	4.93	5.28	5.61	5.95	5.53	/	/	/	/	/
	35	10214	8416	7680	6943	4208	/	4.43	4.77	5.10	5.44	5.12	/	/	/	/	/
40	8883	7730	7033	6336	3790	/	3.51	3.79	4.02	4.25	3.93	/	/	/	/	/	
43	6732	5359	4924	4488	2801	/	3.16	3.32	3.52	3.73	3.46	/	/	/	/	/	
18	-5	7402	5972	4908	3843	/	/	10.51	12.01	12.22	12.42	/	/	/	/	/	/
	0	6808	5501	4525	3549	/	/	9.28	10.69	10.91	11.13	/	/	/	/	/	/
	5	6214	4963	4581	4198	2670	/	8.04	8.88	9.48	10.09	9.46	/	/	/	/	/
	10	7199	5767	5349	4931	3198	/	9.05	10.00	10.71	11.41	10.75	/	/	/	/	/
	15	8336	7067	6475	5883	3630	/	7.71	8.32	8.93	9.54	9.03	/	/	/	/	/
	20	9473	8006	7360	6714	4202	/	6.36	6.86	7.31	7.76	7.24	/	/	/	/	/
	25	10401	8918	8140	7362	4467	/	5.75	6.20	6.60	6.99	6.51	/	/	/	/	/
	30	11329	9852	8979	8106	4886	/	5.26	5.65	6.01	6.37	5.93	/	/	/	/	/
	35*	11131	8300	7847	7295	4863	/	4.69	5.05	5.41	5.76	5.43	/	/	/	/	/
40	9692	8541	7823	7104	4376	/	3.81	4.15	4.40	4.65	4.30	/	/	/	/	/	
43	7546	6230	5707	5184	3196	/	3.48	3.71	3.93	4.15	3.84	/	/	/	/	/	
20	-5	8213	6683	5498	4312	/	/	10.82	12.50	12.70	12.89	/	/	/	/	/	/
	0	7256	5914	4870	3826	/	/	9.76	11.31	11.55	11.79	/	/	/	/	/	/
	5	6298	5053	4670	4286	2740	/	8.69	9.69	10.34	10.99	10.29	/	/	/	/	/
	10	7911	6367	5912	5458	3556	/	9.45	10.55	11.29	12.02	11.31	/	/	/	/	/
	15	9108	7833	7147	6462	3916	/	7.94	8.70	9.39	10.08	9.62	/	/	/	/	/
	20	10305	8868	8216	7564	4885	/	6.43	6.95	7.40	7.85	7.33	/	/	/	/	/
	25	11253	9823	9036	8249	5176	/	5.92	6.46	6.87	7.28	6.78	/	/	/	/	/
	30	12200	10801	9921	9040	5636	/	5.54	5.94	6.33	6.72	6.28	/	/	/	/	/
	35	11740	10249	9444	8639	5459	/	4.89	5.26	5.64	6.03	5.70	/	/	/	/	/
40	10234	9183	8467	7751	4909	/	4.07	4.47	4.74	5.01	4.64	/	/	/	/	/	
43	8151	6977	6385	5792	3554	/	3.75	4.06	4.30	4.53	4.18	/	/	/	/	/	
25	-5	8735	7096	5850	4603	/	/	12.31	14.03	14.37	14.71	/	/	/	/	/	/
	0	7756	6312	5209	4105	/	/	11.05	12.86	13.10	13.34	/	/	/	/	/	/
	5	6777	5499	5076	4654	2962	/	9.78	10.76	11.52	12.28	11.57	/	/	/	/	/
	10	8300	6755	6266	5776	3747	/	10.53	11.60	12.45	13.30	12.59	/	/	/	/	/
	15	9726	8169	7615	7060	4668	/	8.67	9.55	10.32	11.09	10.61	/	/	/	/	/
	20	11151	9708	9039	8369	5509	/	6.81	7.50	7.99	8.49	7.93	/	/	/	/	/
	25	12757	11264	10413	9663	6123	/	6.33	7.09	7.54	7.99	7.44	/	/	/	/	/
	30	14363	12859	11870	10880	6923	/	6.00	6.61	7.01	7.41	6.86	/	/	/	/	/
	35	13586	12390	11478	10566	6820	/	5.42	5.94	6.35	6.77	6.36	/	/	/	/	/
40	12275	11137	10375	9613	6342	/	4.34	4.89	5.16	5.42	4.97	/	/	/	/	/	
43	10042	7943	6602	5061	/	/	4.03	4.41	4.50	4.58	/	/	/	/	/	/	

IDOLA S 3.2 HYBRID 28H 10 - Prestazioni raffreddamento / Cooling capacity

"Tw_out °C"	"DB/WB °C"	Cooling Capacity [W]						EER									
		130%	100%	90%	70%	50%	30%	130%	100%	90%	70%	50%	30%				
5	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	20	6198	4832	4416	4001	2442	/	4.86	5.11	5.42	5.73	5.31	/	/	/	/	/
	25	7130	5647	5121	4596	2709	/	4.24	4.49	4.74	5.00	4.60	/	/	/	/	/
	30	8062	6484	5872	5260	3080	/	3.71	3.95	4.17	4.39	4.03	/	/	/	/	/
	35	8126	6314	5685	5055	2877	/	3.12	3.28	3.47	3.66	3.37	/	/	/	/	/
40	6609	5395	4851	4308	2437	/	2.62	2.81	2.95	3.09	2.80	/	/	/	/	/	
43	5092	4181	3494	2806	2119	1431	2.23	2.32	2.33	2.35	2.36	2.37	/	/	/	/	
7	-5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	0	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	15	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	20	6722	5356	4840	4323	2504	/	4.98	5.31	5.63	5.96	5.52	/	/	/	/	/
	25	7728	6253	5383	4512	3642	2771	4.37	4.68	4.72	4.77	4.81	4.85	/	/	/	/
	30	8633	717														



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