



TECHNICAL DATA

AIR-TO-WATER HEAT PUMPS IGLU Inuit Mono



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The sequence of IGLU TECH products configuration

- X1 – IGLU Aleut/IGLU Aleut WT/IGLU Aleut I/IGLU Aleut WTI – AL;
- X1 – IGLU ALEUT WTI (1800x600x600) – AS;
- X1 – IGLU Inuit Split/IGLU Inuit Split WT – IN;
- X1 – IGLU Max – MA;
- X1 – IGLU Inuit Mono/IGLU Inuit Mono WT – MB;
- X2 – Capacity of pump – 5/7/9... kW;
- X3 – Kind of compressor (I – inverter/F – fixed speed);
- X4 – Water tank – (W);
- X5 – Active cooling – (A);
- X6 – Passive cooling – (P);
- X7 – Construction – Split (S);
- X8 – Unit location – Inside/Outside, (I/O);
- X9 – Energy supply:
 - Sr - single phase 1P 230 V;
 - Tr - triple phase 3P 400V;
 - Sn – single phase to north 2P 110 V;
 - Tn – triple phase to north 3P 110 V;
- X10 – Agent (R 410A – a; R 407C – b; R32 – c; R 290– d);
- N – not applicable;

Technical data of IGLU Inuit Mono 5 – 16 kW air-to-water heat pumps

Models			IGLU Inuit Mono 5	IGLU Inuit Mono 8	IGLU Inuit Mono 12	IGLU Inuit Mono 16	
Air-water used							
CAPACITY	Heating	A2W Condition #1. (A7/W35) ^{1)*}	W	5,000	8,000	12,000	16,000
		A2W condition #2	W	5,000	8,000	12,000	16,000
		A2W condition #3	W	5,000	8,000	12,000	16,000
		A2/W35 ^{4)*}	W	5,000	8,000	12,000	16,000
	Cooling	A-7/W35 ^{4)*}	W	5,000	8,000	12,000	16,000
		A2W Condition #1. (A35/W18) ^{1)*}	W	5,000	8,000	12,000	14,000
Power Input	Heating	A2W condition #2	W	3,900	5,700	9,000	10,400
		A2W Condition #1. (A7/W35) ^{1)*}		980	1,630	2,500	3,550
		A2W condition #2		1,320	2,160	3,240	4,570
		A2W condition #3		1,610	2,670	4,000	5,520
		A2/W35 ^{4)*}		1,160	1,900	2,790	4,100
	Cooling	A-7/W35 ^{4)*}	1,670	2,670	4,000	5,710	
		A2W Condition #1. (A35/W18) ^{1)*}	1,280	2,050	3,000	3,680	
	Cooling	A2W condition #2	1,279	1,900	3,103	3,714	
		A2W Condition #1.	A	4,63	2,56	3,92	5,57
	Heating	6,05		3,22	4,71	5,77	
Cooling	6,24	3,39		5,08	7,17		
Heating	7,61	4,19		6,28	8,66		
Current	MCA (Minimum circuit amperes)		A	16,1	16,1	16,1	16,1
	MFA (Maximum fuse amperes)			17,6	17,7	17,7	17,7
COP (Nominal Heating) A2W condition #1				5,10	4,91	4,80	4,51
EER (Nominal Cooling) A2W condition #1				3,91	3,90	4,00	4,51
EER (Nominal Cooling) A2W condition #2				3,05	3,00	2,90	2,80
COP	A2W condition #2		W/W	3,80	3,70	3,70	3,50
	A2W condition #3			3,10	3,00	3,00	2,90
	A2/W35 ^{4)*}			4,30	4,20	4,30	3,90
	A-7/W35 ^{4)*}			3,00	3,00	3,00	2,80
PdesignH (LWT 35°C)				5,500	8,000	12,000	15,500
PdesignH (LWT 55°C)				5,500	8,000	12,000	15,500
SCOP Class (35°C)				A+++	A+++	A+++	A+++
SCOP Class (55°C)				A++	A++	A++	A++
SCOP (35°C)				5,10	4,85	4,90	4,70
SCOP (55°C)				3,60	3,55	3,65	3,55
SEER				4,20	4,30	4,80	5,00

Outdoor units					
Nominal Water Flow Rate (heating/cooling)	LPM	14,4/14,4	23,1/23,1	34,6/34,6	46,2/40,4
Water Flow Rate, min/max	LPM	7/48	7/48	7/58	7/58
Ambient Temperature, Heating	°C	from -25 to +35			
Ambient Temperature, Cooling	°C	from +10 to +46			
Ambient Temperature, DHW (domestic hot water)	°C	from -25 to +43			
Refrigerant Factory Charging	g	630	870	1,250	1,250
Refrigerant Type	kg	R290			
Dimensions (WxHxD)	mm	998x850x500	998x850x500	1,270x1,018x530	1,270x1,018x530
Weight (without packaging)	kg	86	98	140	140
Sound pressure level, heating/cooling	db	41/41	45/45	47/47	51/51
Sound power level, heating/cooling	db	55/55	59/59	60/60	65/65
Compressor					
Compressor Type		Rotary	Rotary	Scroll	Scroll
Starting method		Inverter driven			
Fan					
Air Flow Rate, heating	m ³ /min	52	65	95	95
Air Flow Rate, cooling	m ³ /min	55	69	90	94
Power network connection					
Electrical connections		1F 220~240 V		3F 380V ~415V	
Unit		Indoor unit	Outdoor unit	(Indoor + outdoor unit)	
MFA : Maximum fuse amperes	A	32	20	40	
Piping Connections					
Water Pipe Connections, Inlet/Outlet (on outdoor unit)	BSPP male	1 "	1 "	1 "	1 "
Water Pipe Connections, Inlet/Outlet (on indoor unit)	BSPP female	1" $\frac{1}{4}$	1" $\frac{1}{4}$	1" $\frac{1}{4}$	1" $\frac{1}{4}$
Diameter for inter connection	mm	28	28	28	28
Indoor units					
Ambient Temperature	°C	from +5 to +35			
Min. flow heating leaving temperature	°C	15			
Max. flow heating leaving temperature	°C	75			
Min. flow cooling temperature	°C	5			
Max. flow cooling temperature	°C	25			
Water pressure (Max)	bar	3			
Electric supplementary heater power	kW	3 / 6	3 / 6 / 9		
Dimensions indoor (width x height x depth)	mm	535x640x481			
Weight indoor (without packaging)	kg	44	46	48	50

- NOTE:**
- 1) A2W Condition #1 : (Heating) Water In/Out 30°C/35°C, Outdoor Air 7°C[DB]/6°C[WB]; (Cooling) Water In/Out 23°C/18°C, Outdoor Air 35°C[DB].
 - 2) A2W Condition #2 : (Heating) Water In/Out 40°C/45°C, Outdoor Air 7°C[DB]/6°C[WB]; (Cooling) Water In/Out 12°C/7°C, Outdoor Air 35°C[DB].
 - 3) A2W Condition #3 : (Heating) Water In/Out 47°C/55°C, Outdoor Air 7°C[DB]/6°C[WB].
 - 4) A2W Condition : (A2W35) Water In/Out -/35°C, Outdoor Air 2°C[DB]/1°C[WB]; (A-7/W35) Water In/Out -/35°C, Outdoor Air -7°C[DB]/- (※ Peak Capacity)
 - 5) Select wire size based on the value of MCA
 - 6) Sound pressure level is obtained in an anechoic room. - Sound pressure level is a relative value, depending on the distance and acoustic environment.
 - Sound pressure level may differ depending on operation condition.
 - dBA = A-weighted sound pressure level
 - Reference acoustic pressure 0 dB = 20uPa
 - 7) Sound power level is an absolute value that a sound source generates. - dBA = A-weighted Sound power level
 - Reference power : 1pW
 - Measured according to ISO 3741
 - 8) These products contain R290 (GWP=3) which is fluorinated greenhouse gas.
 - 9) The system is operated in (-25°C ≤ Outdoor temp. < -20°C) condition, but no guarantee of capacity.

Annex to the technical characteristics according to European Commission Regulation No 813/2013

Technical data of IGLU Inuit Mono 5 variable capacity heat pump

Model	IGLU Inuit Mono 5
Air-to-water heat pump	Yes
Water-to-water heat pump	No
Ground-to-water heat pump	No
Low temperature heat pump	No
Equipped with supplementary heater	Yes
Heat pump combination heater	Yes

Parameters applied using **medium** temperature are declared. Parameters are declared under average climatic conditions.

Parameter	Conventional representation	Value	Measurement unit	Parameter	Conventional representation	Value	Measurement unit
Rated thermal power	P_{rated}	5,5	kW	Seasonal energy efficiency for space heating	η_s	141	%
Declared part load heating capacity at 20 °C indoor temperature and outdoor temperature T_j				Declared efficiency coefficient or ratio of primary energy to radiant heat output at room temperature 20 °C and outdoor temperature T_j			
$T_j = -7\text{ °C}$	P_{dh}	4,9	kW	$T_j = -7\text{ °C}$	COP_d or PER_d	2,15	-
$T_j = +2\text{ °C}$	P_{dh}	3,0	kW	$T_j = +2\text{ °C}$	COP_d or PER_d	3,56	-
$T_j = +7\text{ °C}$	P_{dh}	1,9	kW	$T_j = +7\text{ °C}$	COP_d or PER_d	4,85	-
$T_j = +12\text{ °C}$	P_{dh}	1,7	kW	$T_j = +12\text{ °C}$	COP_d or PER_d	5,80	-
$T_j = (T_{biv})$ - bivalent temperature mode	P_{dh}	4,9	kW	$T_j = (T_{biv})$ - bivalent temperature mode	COP_d or PER_d	2,15	-
T_j = operating limit temperature	P_{dh}	4,8	kW	T_j = operating limit temperature	COP_d or PER_d	1,90	°C
Air-to-water heat pump: $T_j = -15\text{ °C}$ (where TOL < -20°C)	P_{dh}	-	kW	Air-to-water heat pump: $T_j = -15\text{ °C}$ (where TOL < -20°C)	COP_d or PER_d	-	-
Bivalent temperature	T_{biv}	-7	°C	Air-to-water heat pump: operating limit temperature	TOL	-10	°C
Power in cyclic heating mode	P_{cyc}	-	kW	Cyclical efficiency	COP_{cyc} or PER_{cyc}	-	- or %
Decreased efficiency in cyclic mode	C_{dh}	0,9	-	Heating water limit operating temperature	WTOL	75	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,022	kW	Rated thermal power	P_{sup}	3/6	kW
Thermostat-off mode	P_{TO}	0,022	kW	Type of energy input	Electricity		
Standby mode	P_{SB}	0,022	kW				
Crankcase heater mode	P_{CK}	0,000	kW				
Other parameters							
Capacity control	Variable			Air-to-water heat pump: rated air flow rate, outdoor	-	5520	m ³ /h
Sound power level, indoors/outdoors	L_{WA}	40/55	dB	Ground-to-water heat pump: water flow, outdoor heat exchanger	-	-	m ³ /h
Emissions of nitrogen oxides	NO_x	-	mg/kWh				
For heat pump combination heater							
Declared load profile	-			Water heating Energy efficiency – η_{wh}	-	-	%
	Daily electricity consumption Q_{elec}	-	kWh	Daily fuel consumption Q_{fuel}	-	-	kWh
Contact details	IGLU TEC UAB			Ukmerges st. 364-3, Vilnius, Lithuania			

Technical data of IGLU Inuit Mono 8 variable capacity heat pump

Model	IGLU Inuit Mono 8
Air-to-water heat pump	Yes
Water-to-water heat pump	No
Ground-to-water heat pump	No
Low temperature heat pump	No
Equipped with supplementary heater	Yes
Heat pump combination heater	Yes

Parameters applied using **medium** temperature are declared. Parameters are declared under average climatic conditions.

Parameter	Conventional representation	Value	Measurement unit	Parameter	Conventional representation	Value	Measurement unit
Rated thermal power	P_{rated}	8,0	kW	Seasonal energy efficiency for space heating	η_s	139	%
Declared part load heating capacity at 20 °C indoor temperature and outdoor temperature T_j				Declared efficiency coefficient or ratio of primary energy to radiant heat output at room temperature 20 °C and outdoor temperature T_j			
$T_j = -7$ °C	P_{dh}	7,1	kW	$T_j = -7$ °C	COP_d or PER_d	2,02	-
$T_j = +2$ °C	P_{dh}	4,3	kW	$T_j = +2$ °C	COP_d or PER_d	3,44	-
$T_j = +7$ °C	P_{dh}	2,8	kW	$T_j = +7$ °C	COP_d or PER_d	5,05	-
$T_j = +12$ °C	P_{dh}	2,4	kW	$T_j = +12$ °C	COP_d or PER_d	6,00	-
$T_j = (T_{biv})$ - bivalent temperature mode	P_{dh}	7,1	kW	$T_j = (T_{biv})$ - bivalent temperature mode	COP_d or PER_d	2,02	-
T_j = operating limit temperature	P_{dh}	7,3	kW	T_j = operating limit temperature	COP_d or PER_d	1,90	°C
Air-to-water heat pump: $T_j = -15$ °C (where TOL < -20 °C)	P_{dh}	-	kW	Air-to-water heat pump: $T_j = -15$ °C (where TOL < -20 °C)	COP_d or PER_d	-	-
Bivalent temperature	T_{biv}	-7	°C	Air-to-water heat pump: operating limit temperature	TOL	-10	°C
Power in cyclic heating mode	P_{cyc}		kW	Cyclical efficiency	COP_{cyc} or PER_{cyc}	-	- or %
Decreased efficiency in cyclic mode	C_{dh}	0,9	-	Heating water limit operating temperature	WTOL	75	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,022	kW	Rated thermal power	P_{sup}	3/6/9	kW
Thermostat-off mode	P_{TO}	0,022	kW	Type of energy input	Electricity		
Standby mode	P_{SB}	0,022	kW				
Crankcase heater mode	P_{CK}	0,000	kW				
Other parameters							
Capacity control	Variable			Air-to-water heat pump: rated air flow rate, outdoor	-	5520	m ³ /h
Sound power level indoors/outdoors	L_{WA}	40/59	dB	Ground-to-water heat pump: water flow, outdoor heat exchanger	-	-	m ³ /h
Emissions of nitrogen oxides	NO_x	-	mg/kWh				
For heat pump combination heater							
Declared load profile	-			Water heating Energy efficiency – η_{wh}		-	%
Daily electricity consumption Q_{elec}		-	kWh	Daily fuel consumption	Q_{fuel}	-	kWh

Technical data of IGLU Inuit Mono 12 variable capacity heat pump

Model	IGLU Inuit Mono 12
Air-to-water heat pump	Yes
Water-to-water heat pump	No
Ground-to-water heat pump	No
Low temperature heat pump	No
Equipped with supplementary heater	Yes
Heat pump combination heater	Yes

Parameters applied using **medium** temperature are declared. Parameters are declared under average climatic conditions.

Parameter	Conventional representation	Value	Measurement unit	Parameter	Conventional representation	Value	Measurement unit
Rated thermal power	P_{rated}	12,0	kW	Seasonal energy efficiency for space heating	η_s	143	%
Declared part load heating capacity at 20 °C indoor temperature and outdoor temperature T_j				Declared efficiency coefficient or ratio of primary energy to radiant heat output at room temperature 20 °C and outdoor temperature T_j			
$T_j = -7\text{ °C}$	P_{dh}	10,6	kW	$T_j = -7\text{ °C}$	COP_d or PER_d	2,15	-
$T_j = +2\text{ °C}$	P_{dh}	6,5	kW	$T_j = +2\text{ °C}$	COP_d or PER_d	3,60	-
$T_j = +7\text{ °C}$	P_{dh}	4,2	kW	$T_j = +7\text{ °C}$	COP_d or PER_d	4,88	-
$T_j = +12\text{ °C}$	P_{dh}	4,2	kW	$T_j = +12\text{ °C}$	COP_d or PER_d	5,95	-
$T_j = (T_{biv})$ - bivalent temperature mode	P_{dh}	10,6	kW	$T_j = (T_{biv})$ - bivalent temperature mode	COP_d or PER_d	2,15	-
T_j = operating limit temperature	P_{dh}	11,5	kW	T_j = operating limit temperature	COP_d or PER_d	1,85	°C
Air-to-water heat pump: $T_j = -15\text{ °C}$ (where TOL < -20°C)	P_{dh}	-	kW	Air-to-water heat pump: $T_j = -15\text{ °C}$ (where TOL < -20°C)	COP_d or PER_d	-	-
Bivalent temperature	T_{biv}	-7	°C	Air-to-water heat pump: operating limit temperature	TOL	-10	°C
Power in cyclic heating mode	P_{cyc}		kW	Cyclical efficiency	COP_{cyc} or PER_{cyc}	-	- or %
Decreased efficiency in cyclic mode	C_{dh}	0,9	-	Heating water limit operating temperature	WTOL	75	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,022	kW	Rated thermal power	P_{sup}	3/6/9	kW
Thermostat-off mode	P_{TO}	0,022	kW	Type of energy input	Electricity		
Standby mode	P_{SB}	0,022	kW				
Crankcase heater mode	P_{CK}	0,000	kW				
Other parameters							
Capacity control	Variable			Air-to-water heat pump: rated air flow rate, outdoor	-	5700	m ³ /h
Sound power level indoors/outdoors	L_{WA}	44/60	dB	Ground-to-water heat pump: water flow, outdoor heat exchanger	-	-	m ³ /h
Emissions of nitrogen oxides	NO_x	-	mg/kWh				
For heat pump combination heater							
Declared load profile	-			Water heating Energy efficiency – η_{wh}	-	-	%
	Daily electricity consumption Q_{elec}	-	kWh	Daily fuel consumption	Q_{fuel}	-	kWh

Technical data of IGLU Inuit Mono 16 variable capacity heat pump

Model	IGLU Inuit Mono 16
Air-to-water heat pump	Yes
Water-to-water heat pump	No
Ground-to-water heat pump	No
Low temperature heat pump	No
Equipped with supplementary heater	Yes
Heat pump combination heater	Yes

Parameters applied using **medium** temperature are declared. Parameters are declared under average climatic conditions.

Parameter	Conventional representation	Value	Measurement unit
Rated thermal power	P_{rated}	15,5	kW
Declared part load heating capacity at 20 °C indoor temperature and outdoor temperature T_j			
$T_j = -7\text{ °C}$	P_{dh}	13,7	kW
$T_j = +2\text{ °C}$	P_{dh}	8,4	kW
$T_j = +7\text{ °C}$	P_{dh}	5,4	kW
$T_j = +12\text{ °C}$	P_{dh}	4,2	kW
$T_j = (T_{biv})$ - bivalent temperature mode	P_{dh}	13,7	kW
T_j = operating limit temperature	P_{dh}	13,3	kW
Air-to-water heat pump: $T_j = -15\text{ °C}$ (where TOL < -20°C)	P_{dh}	-	kW
Bivalent temperature	T_{biv}	-7	°C
Power in cyclic heating mode	P_{cyc}		kW
Decreased efficiency in cyclic mode	C_{dh}	0,9	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	0,022	kW
Thermostat-off mode	P_{TO}	0,022	kW
Standby mode	P_{SB}	0,022	kW
Crankcase heater mode	P_{CK}	0,000	kW
Other parameters			
Capacity control	Variable		
Sound power level indoors/outdoors	L_{WA}	44/65	dB
Emissions of nitrogen oxides	NO_x	-	mg/kWh
For heat pump combination heater			
Declared load profile	-		
Daily electricity consumption Q_{elec}	-	-	kWh
Supplementary heater			
Rated thermal power	P_{sup}	3/6/9	kW
Type of energy input	Electricity		
Seasonal energy efficiency for space heating			
Seasonal energy efficiency for space heating	η_s	139	%
Declared efficiency coefficient or ratio of primary energy to radiant heat output at room temperature 20 °C and outdoor temperature T_j			
$T_j = -7\text{ °C}$	COP_d or PER_d	1,95	-
$T_j = +2\text{ °C}$	COP_d or PER_d	3,43	-
$T_j = +7\text{ °C}$	COP_d or PER_d	5,18	-
$T_j = +12\text{ °C}$	COP_d or PER_d	6,58	-
$T_j = (T_{biv})$ - bivalent temperature mode	COP_d or PER_d	1,95	-
T_j = operating limit temperature	COP_d or PER_d	1,75	°C
Air-to-water heat pump: $T_j = -15\text{ °C}$ (where TOL < -20°C)	COP_d or PER_d	-	-
Air-to-water heat pump: operating limit temperature	TOL	-10	°C
Cyclical efficiency	COP_{cyc} or PER_{cyc}	-	- or %
Heating water limit operating temperature	WTOL	75	°C
Air-to-water heat pump: rated air flow rate, outdoor			
Air-to-water heat pump: rated air flow rate, outdoor	-	5700	m ³ /h
Ground-to-water heat pump: water flow, outdoor heat exchanger			
Ground-to-water heat pump: water flow, outdoor heat exchanger	-	-	m ³ /h
Water heating Energy efficiency – η_{wh}			
Water heating Energy efficiency – η_{wh}	-	-	%
Daily fuel consumption Q_{fuel}			
Daily fuel consumption	Q_{fuel}	-	kWh