TECHNICAL DOCUMENTATION

according Directive 2010/30/EU and corresponding Regulation (EU) No. 811/2013 (Energy Labelling),

Dircetive 2009/125/EC and corresponding Regulation (EU) No. 813/2013 (Ecodesign)

iDM
DIE **ENERGIE**FAMILIE

Model:	iPump A 2-7
Type of heat pump:	Air-to-water heat pump
Low-temperature heat pump: (Yes/No)	Yes
Temperature application: (35°C/55°C)	low temperature (35°C)
Equipped with supplementary heater: (Yes/No)	Yes
Heat pump combination heater: (Yes/No)	Yes

		Climate condition						Climate condition			
		cold	average	warm				cold	average	warm	
Rated heat output	P_{rated}	5,8	5,4	6,3	kW	**Seasonal space heating efficiency**	η_s	178	202	281	%

Outdoor temperature T_j		Declared capacity for part load (indoor temperature = 20 °C)				Outdoor temperature Tj		Declared capacity for part load (indoor temperature = 20 °C)			
T_j = − 15 °C	P_{dh}	4,8	-	-	kW	T_j = − 15 °C	COP_d	2,80	-	-	---
T_j = − 7 °C	P_{dh}	3,5	4,9	-	kW	T_j = − 7 °C	COP_d	3,90	3,38	-	---
T_j = +2 °C	P_{dh}	2,2	2,9	6,3	kW	T_j = +2 °C	COP_d	5,88	5,23	3,45	---
T_j = +7 °C	P_{dh}	2,0	2,0	4,2	kW	T_j = +7 °C	COP_d	7,89	1,95	6,12	---
T_j = +12 °C	P_{dh}	2,3	2,3	2,3	kW	T_j = +12 °C	COP_d	9,64	2,31	2,26	---
T_j = Bivalenz temperature (T_{biv})	P_{dh}	4,8	5,4	6,3	kW	T_j = Bivalenz temperature (T_{biv})	COP_d	2,80	2,95	3,45	---
T_j = Operation limit temperature (TOL)	P_{dh}	4,4	5,4	6,3	kW	T_j = Operation limit temperature (TOL)	COP_d	2,67	2,95	3,45	---
Bivalenz temperature (Tbiv)	T_{biv}	-15,0	-10,0	2,0	°C	Operation limit temperature	TOL	-18,0	-10,0	2,0	°C
Cycling interval capacity for heating	P_{cych}				kW	Cycling interval capacity for heating	COP_{cyc}				---
Degradation co-efficient	C_{dh}	0,9	0,9		---	Heating water operating limit temperature	WTOL	62	62	62	°C

Power consumption in modes other than active mode						Supplementary heater					
Thermostat-off mode	P_{TO}	0,025	0,025	0,025	kW	Rated heat output (*)	P_{sup}	1-6	1-6	1-6	kW
Standby mode	P_{SB}	0,022	0,022	0,022	kW						
Off-mode	P_{OFF}	0,022	0,022	0,022	kW	Type of energy input		electrical			
Crankase heater mode	P_{CK}	0	0	0	kW						

Other items						For air-to-water heat pumps:					
Capacity control		variable				Rated air flow rate, outdoors	---		2.500		m³/h
Sound power levels, indoors/outdoors	L_{WA}	42.3/45.7	42.3/45.7	42.3/45.7	dB	For water- or brine-to-water heat pumps:					
Annual energy consumption	Q_{HE}	3.136	2.166	1.304	kWh	Rated brine or water flow rate, outdoor heat exchanger	---	n.a.	n.a.	n.a.	m³/h

For heat pump combination heater:											
Declared load profile		XL				Water heating energy efficiency	η_{wh}		95,8		%
Daily electricity consumption	Q_{elec}	8,180			kWh	Daily fuel consumption	Q_{fuel}	n.a.	n.a.	n.a.	kWh
Annual electricity consumption	AEC	1.749			kWh	Annual fuel consumption	AFC	n.a.	n.a.	n.a.	GJ

Contact details:
IDM-Energiesysteme, Seblas 16-18, 9971 Matrei i.O., Austria

TECHNICAL DOCUMENTATION

according Directive 2010/30/EU and corresponding Regulation (EU) No. 811/2013 (Energy Labelling),

Dircetive 2009/125/EC and corresponding Regulation (EU) No. 813/2013 (Ecodesign)

iDM DIE **ENERGIE**FAMILIE

Model:	iPump A 2-7
Type of heat pump:	Air-to-water heat pump
Low-temperature heat pump: (Yes/No)	Yes
Temperature application: (35°C/55°C)	high temperature (55°C)
Equipped with supplementary heater: (Yes/No)	Yes
Heat pump combination heater: (Yes/No)	Yes

		Climate condition						Climate condition			
		cold	average	warm				cold	average	warm	
Rated heat output	P_{rated}	**4,6**	**4,3**	**6,5**	**kW**	**Seasonal space heating efficiency**	η_s	**129**	**150**	**192**	**%**
Outdoor temperature T_j		Declared capacity for part load (indoor temperature = 20 °C)				**Outdoor temperature Tj**		Declared capacity for part load (indoor temperature = 20 °C)			
T_j = − 15 °C	P_{dh}	3,7	-	-	kW	T_j = − 15 °C	COP_d	2,04	-	-	---
T_j = − 7 °C	P_{dh}	2,8	4,0	-	kW	T_j = − 7 °C	COP_d	2,83	2,49	-	---
T_j = +2 °C	P_{dh}	1,9	2,3	6,5	kW	T_j = +2 °C	COP_d	4,10	3,66	2,31	---
T_j = +7 °C	P_{dh}	2,4	2,3	4,2	kW	T_j = +7 °C	COP_d	6,15	2,29	3,98	---
T_j = +12 °C	P_{dh}	2,8	2,8	2,7	kW	T_j = +12 °C	COP_d	9,17	2,82	2,72	---
T_j = Bivalenz temperature (T_{biv})	P_{dh}	3,7	4,5	6,5	kW	T_j = Bivalenz temperature (T_{biv})	COP_d	2,04	2,11	2,31	---
T_j = Operation limit temperature (TOL)	P_{dh}	3,4	4,5	6,5	kW	T_j = Operation limit temperature (TOL)	COP_d	1,86	2,11	2,31	---
Bivalenz temperature (Tbiv)	T_{biv}	-15,0	-10,0	2,0	°C	Operation limit temperature	TOL	-18,0	-10,0	2,0	°C
Cycling interval capacity for heating	P_{cych}				kW	Cycling interval capacity for heating	COP_{cyc}				---
Degradation co-efficient	C_{dh}	0,9	0,9	0,9	---	Heating water operating limit temperature	WTOL	62	62	62	°C
Power consumption in modes other than active mode						**Supplementary heater**					
Thermostat-off mode	P_{TO}	0,025	0,025	0,025	kW	Rated heat output (*)	P_{sup}	1-6	1-6	1-6	kW
Standby mode	P_{SB}	0,022	0,022	0,022	kW	Type of energy input		electrical			
Off-mode	P_{OFF}	0,022	0,022	0,022	kW						
Crankase heater mode	P_{CK}	0	0	0	kW						
Other items						**For air-to-water heat pumps:**					
Capacity control		variable				Rated air flow rate, outdoors	---		2.500		m³/h
Sound power levels, indoors/outdoors	L_{WA}	42.3/45.7	42.3/45.7	42.3/45.7	dB	**For water- or brine-to-water heat pumps:**					
Annual energy consumption	Q_{HE}	3.407	2.368	1.900	kWh	Rated brine or water flow rate, outdoor heat exchanger	---	n.a.	n.a.	n.a.	m³/h
For heat pump combination heater:											
Declared load profile		**XL**				**Water heating energy efficiency**	η_{wh}		95,8		%
Daily electricity consumption	Q_{elec}	8,180			kWh	Daily fuel consumption	Q_{fuel}	n.a.	n.a.	n.a.	kWh
Annual electricity consumption	AEC	1.749			kWh	Annual fuel consumption	AFC	n.a.	n.a.	n.a.	GJ

Contact details:

IDM-Energiesysteme, Seblas 16-18, 9971 Matrei i.O., Austria