High Temp. Water Sourced Heat Pump

EW-HT-G05 0182 – 0302

MITSUBISHI ELECTRIC HYDRONICS & IT COOLING SYSTEMS

WATER SOURCED HEAT PUMP **HEATING ONLY**

Water-to-water heating only heat pump, offering very high temperature water production.
Heating Capacity: 73 – 129kW

EW-HT-G05 represents a modern, low carbon, and low environmental impact solution for providing high temperature hot water. A water-to-water "booster" type machine, the EW-HT-G05 utilises specially optimised components to provide outlet water temperatures of up to 80°C. This makes it an ideal replacement for boilers in space heating, industrial processes and even indirect domestic water applications.

High Temperature

80°C

High Efficiency Performance

3.73 COP*1

3.19 SCOP*2

*1 EW-HT-G05 0302 in compliance with EN14511 value.
*2 EW-HT-G05 0302 in compliance with Reg. EU 813/2013.

Key Features

High Temperature Optimised Scroll Compressors

The EW-HT-G05 features newly developed scroll-type compressors designed to work with low-GWP R513A refrigerant and provide high outlet water temperatures.
They provide reduced vibration and low oil circulation rate. Compressors' suction valves supplied as standard.

Low GWP Refrigerant

New generation refrigerant R513A, has reduced greenhouse effect in comparison with traditional HFC refrigerants (Global Warming Potential GWP of R513A = 573, GWP of R134a = 1300 as per IPCC rev. 5) and has zero impact on the ozone layer. It is also non-toxic and non-flammable (ASHRAE 34, ISO 817: class A1).

Heat Exchanger

The AISI 316 stainless steel braze-welded heat exchanger is protected with a differential water pressure switch and insulated with durable and effective closed-cell neoprene.
The heat exchangers dual circuit technology ensures delivery of high temperature water even at part load when traditional independent circuit machines cannot.

Maximum Reliability

With two independent refrigerant circuits, the unit is designed for maximum efficiency at full load, ensuring uninterrupted operation even in the event of a temporary stop of one of the two circuits.

Electronic Expansion Valve Supplied as Standard

The use of the electronic expansion valve generates considerable benefits, especially in cases of variable demand and at different working conditions. Its implementation into these units is aimed at enhancing the efficiency of the refrigeration circuit and optimising system performance across a wide range of operating conditions.

Wide Operating Range

Capable of delivering hot water up to 80°C (with a minimum ΔT of 10K) the EW-HT-G05 range is suitable for most heating applications and indirect domestic hot water production, with evaporator leaving water temperature up to 40°C.

Efficient Boiler Replacement Solution for Commercial Installations

An effective carbon reduction solution for centralised heating in buildings, such as apartment complexes, to retain the existing radiator-based distribution system while integrating an environmentally friendly heat source.

Capacity Range

VERSION		HEATING CAPACITY
EW-HT-G05	VERY HIGH TEMPERATURE	73 – 129 kW

Performance data overleaf.

Specifications

EW-HT-G05

		EW-HT-G05			
		0182	0202	0262	0302
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE					
HEATING ONLY (GROSS VALUE)					
Heating capacity (1)	kW	72.91	85.93	105.10	129.20
Total power input (1)	kW	19.80	22.90	28.60	34.30
COP (1)	kW/kW	3.68	3.75	3.68	3.77
HEATING ONLY (EN14511 VALUE)					
Heating capacity (1) (2)	kW	73.00	86.00	105.20	129.30
COP (1) (2)	kW/kW	3.64	3.71	3.64	3.73
ENERGY EFFICIENCY					
SEASONAL EFFICIENCY IN HEATING (REG. EU 813/2013))					
PDesign (3) (10)	kW	42.00	48.00	60.00	74.00
SCOP (3) (8) (10)		3.15	3.11	3.10	3.19
Performance ηs (3) (9) (10)	%	118	116	116	120
Seasonal efficiency class (3) (9) (10)		A+	A+	A+	-
EXCHANGERS					
HEAT EXCHANGER USER SIDE IN HEATING					
Water flow (1)	L/s	2.23	2.63	3.21	3.95
Pressure drop at the heat exchanger (1)	kPa	15.90	14.00	14.20	15.80
HEAT EXCHANGER SOURCE SIDE IN HEATING					
Water flow (1)	l/s	2.62	3.11	3.78	4.68
Pressure drop at the heat exchanger (1)	kPa	19.30	17.70	18.20	20.90
REFRIGERANT CIRCUIT					
Compressors nr.	N°	2	2	2	2
No. Circuits	N°	2	2	2	2
Theoretical refrigerant charge	kg	8.4	8.8	10.5	10.9
NOISE LEVEL					
Total sound pressure (4)	dB(A)	58	58	60	60
Total sound power level in heating (5) (6)	dB(A)	74	74	76	76
SIZE AND WEIGHT					
A - Length (7)	mm	1,203	1,203	1,203	1,203
B - Width (7)	mm	873	873	873	873
H - Height (7)	mm	1,496	1,496	1,496	1,496
Operating weight (7)	kg	405	415	435	450

(1) Plant (side) heat exchanger water (in/out) 70,00°C/78,00°C; Source (side) heat exchanger water (in/out) 45,00°C/40,00°C.

(2) Values in compliance with EN14511.

(3) Parameter calculated for MEDIUM TEMPERATURE applications in AVERAGE climate conditions according to [REGULATION (EU) N. 813/2013].

(4) Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.

(5) Sound power on the basis of measurements taken in compliance with ISO 9614.

(6) Sound power level in heating, indoors.

(7) Unit in standard configuration, without optional accessories. See DataBook.

(8) Seasonal coefficient of performance.

(9) Seasonal space heating energy efficiency.

(10) Type of calculation with fixed flow and variable temperature.

The units highlighted in this publication contain [GWP100 572] fluorinated greenhouse gases. Data highlighted in green are Eurovent Certified

Optional Extras

- User Interface versions including KIPlink Bluetooth control
- BMS Interface – such as BACnet and Modbus
- Soft start
- Onboard staging control
- Refrigerant leak detector
- Acoustical enclosure
- Pressure relief valves
- Compressor discharge valve

For more information please visit our website
or call our Applied Products Sales Team.
www.mitsubishi-electric.co.nz | 0800 784 382

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