FRYO Pi™ SERIES

INVERTER AIR-TO-WATER HEAT PUMP WITH SPLIT HYDRONIC UNIT FOR HEATING - AIR CONDITIONING AND D.H.W. PRODUCTION WITHOUT BOILER

FRYO 13Pi FRYO 9Pi

A++ R410A

FRYO Pi are high efficiency inverter heat pumps, to satisfy any need in residential, commercial or industrial sector about heating, air conditioning and domestic hot water production. Standard remote control.

HEATING - AIR CONDITIONING AND D.H.W. PRODUCTION (THROUGH EXTERNAL WATER STORAGE TANK)

MODEL		COP ✱	min./max HEAT OUTPUT	min./max ABSORBED ELECTR. POWER	NOMINAL COOLING OUTPUT	ELECTRICAL SUPPLY	SIZE mm			NET WEIGHT
TYPE	P/N	min./max	kW	kW	kW	V/Hz	W	D	H	kg
FRYO 9Pi	F093150	4,03/4,65	4,33/10,1	0,93/2,50	6,84	230/50	1.053	354	754	63
FRYO 13Pi	F133150	3,89/4,77	4,20/12,6	0,88/3,24	10,3	230/50	1.258	460	1.195	113

TECHNICAL FEATURES AND BASIC COMPONENTS

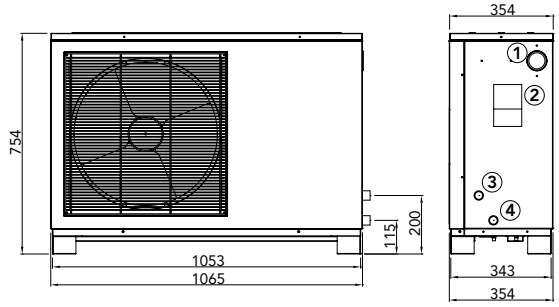
- BLDC twin rotary compressor
- Electronic expansion valve
- Hi and low pressure switches
- Dehydrating filter
- 4-way reversing valve
- Hi and low pressure sensors
- Stainless steel plate heat exchanger
- High efficiency external coil
- Suction temperature sensor
- Discharge temperature sensor
- Inverter high head pump
- Cooling circuit pressure gauge
- Differential switch
- Silenced inverter fan/s
- Remote control
- Cable heater

REMOTE CONTROL

PRESSURE GAUGE

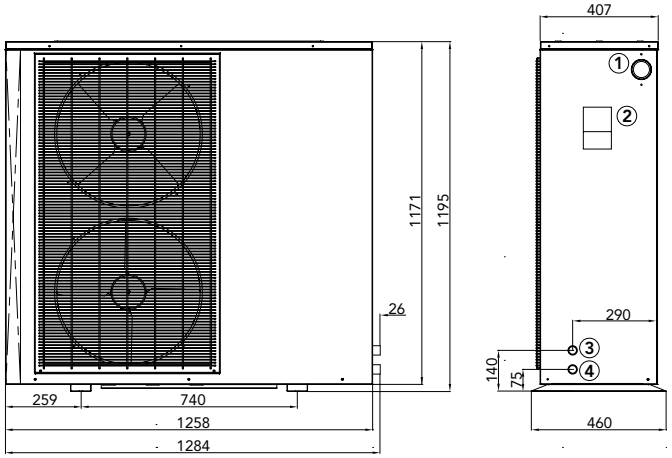
CABLE HEATER

SIZE AND CONNECTIONS FRYO 9PI



1 - Cooling circuit pressure gauge
2 - Pre-wired terminal box for electric connections
3 - Supply
4 - Return

SIZE AND CONNECTIONS FRYO 13PI



✱ Operating conditions: T outdoors 7°C, T wet bulb 6°C, T supply 35°C, T return 30°C

FRYO Pi™ SERIES

TECHNICAL FEATURES FRYO PI		UM	9	13
Power supply		V/Hz/Ph	220-240/50/1	220-240/50/1
Refrigerant		kg	R410A/2,45	R410A/2,95
Min./Max. heating output (1)		kW	4,33/10,10	4,2/12,6
Min./Max. absorbed power (1)		W	975/2153	926/3072
C.O.P Min./Max.(1)		W/W	4,02/4,65	3,89/4,77
Min./Max. heating output (2)		kW	4,19/9,53	3,76/11,5
Min./Max. heating absorbed power (2)		W	1230/2990	1267/3723
C.O.P Min./Max. (2)		W/W	3,12/3,55	2,97/3,28
Min./Max. cooling output (3)		kW	4,10/6,84	4,29/10,37
Min./Max. cooling absorbed power (3)		W	1230/3280	957/3156
E.E.R Min./Max.(3)		W/W	2,09/3,32	3,29/4,63
Min./Max. cooling output (4)		kW	2,34/5,05	2,34/7,91
Min./Max. cooling absorbed power (4)		W	1080/3200	1000/3012
E.E.R Min./Max. (4)		W/W	1,58/2,40	2,33/3,12
Circuit maximum pressure		bar	42	42
Pump rated output		W	87	87
Pump maximum head		m	7,5	7,5
Compressor	Type		Twin Rotary	
	Quantity/System		1	1
	Oil		FV50S	FV50S
Fan	Quantity		1	2
	Air flow	m³/h	3000	4200
	Rated output	W	60	120
Air side heat exchanger	Surface	m²	0,542	1,5
	Rows / Inch	N° / "	2 Rows/1/4"	
	Pipe diameter	"	3/8 O.D	3/8 O.D
Sound pressure level	Outdoors	dB (A)	56	59
Water side heat exchanger	Type		Plate heat exchanger	
	Material		Steel - Copper	
	Pressure drops	kPa	23	26
	Connection	"	G1"	G1"
Allowable water flow	Minimum flow	l/s	0,26	0,37
	Rated flow	l/s	0,43	0,61
	Maximum flow	l/s	0,51	0,73
Hydraulic connection		"	1"	1"
Size (WxDxH)	Net	mm	1053×354×754	1258×460×1195
	Packing	mm	1140×460×810	1335×490×1240
Weight	Net	kg	62,5	113,0
	Packing	kg	72,5	123,0
Room temperature	Heating	°C	-25~50	-25~50
	Cooling	°C	0~55	0~55
Inlet water temperature		°C	7~75	7~75
Adjustable temperature range (heating mode)		°C	25-55	25-55
Water volume		kg	4,5	4,5
Water maximum pressure		MPa	0,7	0,7

(1) Heating operating conditions: Inlet/supply water temperature: 30°C/35 °C, room temperature: DB/WB 7/6°C
(2) Heating operating conditions: Inlet/supply water temperature: 40°C/45°C, room temperature: DB/WB 7/6°C
(3) Cooling operating conditions: Inlet/supply water temperature: 23°C/18 °C, room temperature: 35°C
(4) Cooling operating conditions: Inlet/supply water temperature: 12°C/7°C, room temperature: 35°C
(5) Technical features are subject to change without prior notice. For actual technical features of the unit, please refer to the label on the unit.

ERP PRODUCT FICHE

Low-temperature (30/35) chart for medium-temperature zones	
The name or brand of the supplier	COSMOGAS
Model	FRYO 9Pi
Air-to-water heat pump	YES
Water-to-water heat pump	NO
Brine-to-water heat pump	NO
Low-temperature heat pump	YES
Equipped with a supplementary heater	YES
Heat pump combination heater	NO
Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application..	
Parameters shall be declared for average climate conditions.	

Item	Symbol	Value	Unit
Rated heat output	Prated	6,407	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7°C	Pdh	5,66	kW
Tj = +2°C	Pdh	3,45	kW
Tj = +7°C	Pdh	2,22	kW
Tj = +12°C	Pdh	0,99	kW
Tj = bivalent temperature	Pdh	5,66	kW
Tj = operation limit temp.	Pdh	5,15	kW
For air-to-water heat pumps: Tj = -15 °C(if TOL < -20 °C)	Pdh		kW
Bivalent temperature	Tbiv	-7	°C
Cycling interval capacity for heating	Pcych		kW
Degradation coefficient	Cdh	0,9	-
Power consumption in modes other than active mode			
Off mode	Poff	0	kW
Thermostat-off mode	Pto	0,16	kW
Stand-by mode	Psb	0,016	kW
Crankcase heating mode	Pck	0,032	kW
Other items			
Capacity control	Variabile		
Sound power level, indoors/ outdoors	Lwa	30/56	dB
Annual energy consumption	Qhe		kWh o GJ

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	156,6	%
Declared coefficient of performance or primary energy ratio for part load at indoor temp. 20°C and outdoor temp. Tj			
Tj = -7°C	COPd	2,64	-
Tj = +2°C	COPd	3,85	-
Tj = +7°C	COPd	5,14	-
Tj = +12°C	COPd	6,87	-
Tj = bivalent temperature	COPd	2,64	-
Tj = operation limit temp.	COPd	2,27	-
For air-to-water heat pumps: Tj = -15 °C(if TOL < -20 °C)	COPd		-
For air-to-water heat pumps: operating limit temperature	TOL	-10	°C
Cycling interval efficiency	COPcyc or PERcyc		-
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output	Psup		kW
Type of energy input	electrical		
For air-to-water heat pumps: rated air flow rate, outdoors	-	3000	m3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	-		m3/h

For heat pump combination heater			
Declared load profile	-		
Daily electricity consumption	Qelec		kWh
Annual electricity consumption	AEC		kWh

Water heating energy efficiency	ηwh		%
Daily fuel consumption	Qfuel		kWh
Annual fuel consumption	AFC		GJ

Contact	COSMOGAS S.r.l. via Leonardo da Vinci, 16 47014 Meldola (FC) - ITALY

FRYO Pi™ SERIES

ERP PRODUCT FICHE

Low-temperature (30/35) chart for medium-temperature zones	
The name or brand of the supplier	COSMOGAS
Model	FRYO 13Pi
Air-to-water heat pump	YES
Water-to-water heat pump	NO
Brine-to-water heat pump	NO
Low-temperature heat pump	YES
Equipped with a supplementary heater	YES
Heat pump combination heater	NO
Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application..	
Parameters shall be declared for average climate conditions.	

Item	Symbol	Value	Unit
Rated heat output	Prated	9,556	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7°C	Pdh	8,453	kW
Tj = +2°C	Pdh	5,146	kW
Tj = +7°C	Pdh	3,308	kW
Tj = +12°C	Pdh	1,470	kW
Tj = bivalent temperature	Pdh	8,453	kW
Tj = operation limit temp.	Pdh	7,164	kW
For air-to-water heat pumps: Tj = -15 °C(if TOL < -20 °C)	Pdh		kW
Bivalent temperature	Tbiv	-7	°C
Cycling interval capacity for heating	Pcych		kW
Degradation coefficient	Cdh	0,9	-
Power consumption in modes other than active mode			
Off mode	Poff	0	kW
Thermostat-off mode	Pto	0,17	kW
Stand-by mode	Psb	0,032	kW
Crankcase heating mode	Pck	0,017	kW
Other items			
Capacity control	Variabile		
Sound power level, indoors/ outdoors	Lwa	30/59	dB
Annual energy consumption	Qhe		kWh o GJ

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	152,9	%
Declared coefficient of performance or primary energy ratio for part load at indoor temp. 20°C and outdoor temp. Tj			
Tj = -7°C	COPd	2,74	-
Tj = +2°C	COPd	3,72	-
Tj = +7°C	COPd	4,93	-
Tj = +12°C	COPd	6,44	-
Tj = bivalent temperature	COPd	2,74	-
Tj = operation limit temp.	COPd	2,50	-
For air-to-water heat pumps: Tj = -15 °C(if TOL < -20 °C)	COPd		-
For air-to-water heat pumps: operating limit temperature	TOL	-10	°C
Cycling interval efficiency	COPcyc or PERcyc		-
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output	Psup		kW
Type of energy input	electrical		
For air-to-water heat pumps: rated air flow rate, outdoors	-	4100	m3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	-		m3/h

For heat pump combination heater							
Declared load profile	-			Water heating energy efficiency	ηwh		%
Daily electricity consumption	Qelec		kWh	Daily fuel consumption	Qfuel		kWh
Annual electricity consumption	AEC		kWh	Annual fuel consumption	AFC		GJ
Contact	COSMOGAS S.r.l. via Leonardo da Vinci, 16 47014 Meldola (FC) - ITALY						

ACCORDING TO EN14511-2007

OUTPUT & COP

FRYO Pi/ECOTWIN/ECOTOWER 9 kW							
Ambient temperature	Compressor working frequency	Outlet water temperature	Heating capacity	Input power with water pump power	COP with water pump power	Input power without water pump power	COP without water pump power
°C	Hz	°C	W	W	W/W	W	W/W
DB12/WB11	F1/30	25,0	6039,0	1057,0	5,7	977,0	6,2
	F2/36		7162,0	1204,0	5,9	1124,0	6,4
	F3/42		7524,0	1375,0	5,5	1295,0	5,8
	F4/48		8386,0	1561,0	5,4	1481,0	5,7
	F5/52		8908,0	1670,0	5,3	1590,0	5,6
	F6/56		9590,0	1781,0	5,4	1701,0	5,6
	F7/61		10292,0	1993,0	5,2	1913,0	5,4
	F8/66		10975,0	2228,0	4,9	2148,0	5,1
	F9/70		11155,0	2336,0	4,8	2256,0	4,9
	F10/74		-	-	-	-	-
	F1/30	35,0	5320,0	1247,0	4,3	1167,0	4,6
	F2/36		6534,0	1441,0	4,5	1361,0	4,8
	F3/42		7283,0	1625,0	4,5	1545,0	4,7
	F4/48		7789,0	1832,0	4,3	1752,0	4,4
	F5/52		8578,0	1958,0	4,4	1878,0	4,6
	F6/56		8658,0	2068,0	4,2	1988,0	4,4
	F7/61		9832,0	2331,0	4,2	2251,0	4,4
	F8/66		10843,0	2586,0	4,2	2506,0	4,3
	F9/70		11936,0	2712,0	4,4	2632,0	4,5
	F10/74		-	-	-	-	-
	F1/30	45,0	5078,0	1512,0	3,4	1432,0	3,5
	F2/36		5918,0	1746,0	3,4	1666,0	3,6
	F3/42		6761,0	1973,0	3,4	1893,0	3,6
	F4/48		7423,0	2231,0	3,3	2151,0	3,5
	F5/52		8085,0	2368,0	3,4	2288,0	3,5
	F6/56		8888,0	2515,0	3,5	2435,0	3,7
	F7/61		9088,0	2816,0	3,2	2736,0	3,3
	F8/66		10353,0	3093,0	3,3	3013,0	3,4
	F9/70		10152,0	3217,0	3,2	3137,0	3,2
	F10/74		-	-	-	-	-
DB7/WB6	F1/30	25,0	4795,0	1097,0	4,4	1017,0	4,7
	F2/36		5557,0	1247,0	4,5	1167,0	4,8
	F3/42		6821,0	1410,0	4,8	1330,0	5,1
	F4/48		6440,0	1593,0	4,0	1513,0	4,3
	F5/52		7142,0	1669,0	4,3	1589,0	4,5
	F6/56		8105,0	1781,0	4,6	1701,0	4,8
	F7/61		8948,0	1980,0	4,5	1900,0	4,7
	F8/66		9771,0	2162,0	4,5	2082,0	4,7
	F9/70		8266,0	2277,0	3,6	2197,0	3,8
	F10/74		10453,0	2391,0	4,4	2311,0	4,5
	F1/30	35,0	4329,0	1250,0	3,5	1170,0	3,7
	F2/36		5058,0	1424,0	3,6	1344,0	3,8
	F3/42		5947,0	1602,0	3,7	1522,0	3,9
	F4/48		7080,0	1815,0	3,9	1735,0	4,1
	F5/52		7424,0	1935,0	3,8	1855,0	4,0
	F6/56		8335,0	2059,0	4,0	1979,0	4,2
	F7/61		9346,0	2301,0	4,1	2221,0	4,2
	F8/66		9164,0	2524,0	3,6	2444,0	3,7
	F9/70		9650,0	2664,0	3,6	2584,0	3,7
	F10/74		10156,0	2788,0	3,6	2708,0	3,8
	F1/30	45,0	4193,0	1505,0	2,8	1425,0	2,9
	F2/36		4554,0	1724,0	2,6	1644,0	2,8
	F3/42		6100,0	1951,0	3,1	1871,0	3,3
	F4/48		6500,0	2185,0	3,0	2105,0	3,1
	F5/52		7082,0	2319,0	3,1	2239,0	3,2
	F6/56		7544,0	2454,0	3,1	2374,0	3,2
	F7/61		8707,0	2716,0	3,2	2636,0	3,3
	F8/66		9129,0	2973,0	3,1	2893,0	3,2
	F9/70		9369,0	3109,0	3,0	3029,0	3,1
	F10/74		9530,0	3270,0	2,9	3190,0	3,0

Test performed after 30 minutes continuous operating based upon EN4511-2007 standard - results do not take into account defrostings

OUTPUT & COP

FRYO Pi/ECOTWIN/ECOTOWER 9 kW							
Ambient temperature	Compressor working frequency	Outlet water temperature	Heating capacity	Input power with water pump power	COP with water pump power	Input power without water pump power	COP without water pump power
°C	Hz	°C	W	W	W/W	W	W/W
DB2/WB1	F1/30	25,0	4574,0	1119,0	4,1	1039,0	4,4
	F2/36		5116,0	1254,0	4,1	1174,0	4,4
	F3/42		5778,0	1413,0	4,1	1333,0	4,3
	F4/48		6280,0	1591,0	3,9	1511,0	4,2
	F5/52		6601,0	1675,0	3,9	1595,0	4,1
	F6/56		6962,0	1773,0	3,9	1693,0	4,1
	F7/61		7303,0	1952,0	3,7	1872,0	3,9
	F8/66		7845,0	2171,0	3,6	2091,0	3,8
	F9/70		8581,0	2288,0	3,8	2208,0	3,9
	F10/74		8988,0	2377,0	3,8	2297,0	3,9
	F1/30	35,0	4353,0	1277,0	3,4	1197,0	3,6
	F2/36		5577,0	1434,0	3,9	1354,0	4,1
	F3/42		6159,0	1611,0	3,8	1531,0	4,0
	F4/48		6661,0	1806,0	3,7	1726,0	3,9
	F5/52		6962,0	1905,0	3,7	1825,0	3,8
	F6/56		7202,0	2011,0	3,6	1931,0	3,7
	F7/61		7724,0	2257,0	3,4	2177,0	3,5
	F8/66		8246,0	2489,0	3,3	2409,0	3,4
	F9/70		8386,0	2597,0	3,2	2517,0	3,3
	F10/74		9570,0	2733,0	3,5	2653,0	3,6
	F1/30	45,0	3491,0	1500,0	2,3	1420,0	2,5
	F2/36		4193,0	1709,0	2,5	1629,0	2,6
	F3/42		4614,0	1922,0	2,4	1842,0	2,5
	F4/48		5096,0	2151,0	2,4	2071,0	2,5
	F5/52		5597,0	2287,0	2,4	2207,0	2,5
	F6/56		5959,0	2402,0	2,5	2322,0	2,6
	F7/61		6460,0	2655,0	2,4	2575,0	2,5
	F8/66		7122,0	2919,0	2,4	2839,0	2,5
	F9/70		7664,0	3035,0	2,5	2955,0	2,6
	F10/74		8125,0	3170,0	2,6	3090,0	2,6
DB-7/WB-8	F1/30	25,0	3150,0	1138,0	2,8	1058,0	3,0
	F2/36		3451,0	1270,0	2,7	1190,0	2,9
	F3/42		4193,0	1413,0	3,0	1333,0	3,1
	F4/48		4494,0	1564,0	2,9	1484,0	3,0
	F5/52		4915,0	1657,0	3,0	1577,0	3,1
	F6/56		5397,0	1750,0	3,1	1670,0	3,2
	F7/61		5457,0	1907,0	2,9	1827,0	3,0
	F8/66		5918,0	2074,0	2,9	1994,0	3,0
	F9/70		6280,0	2147,0	2,9	2067,0	3,0
	F10/74		6902,0	2222,0	3,1	2142,0	3,2
	F1/30	35,0	3491,0	1332,0	2,6	1252,0	2,8
	F2/36		3631,0	1411,0	2,6	1331,0	2,7
	F3/42		4173,0	1569,0	2,7	1489,0	2,8
	F4/48		4735,0	1734,0	2,7	1654,0	2,9
	F5/52		4935,0	1836,0	2,7	1756,0	2,8
	F6/56		5397,0	1937,0	2,8	1857,0	2,9
	F7/61		5938,0	2147,0	2,8	2067,0	2,9
	F8/66		6340,0	2354,0	2,7	2274,0	2,8
	F9/70		6781,0	2450,0	2,8	2370,0	2,9
	F10/74		7443,0	2558,0	2,9	2478,0	3,0
	F1/30	45,0	2648,0	1467,0	1,8	1387,0	1,9
	F2/36		3230,0	1661,0	1,9	1581,0	2,0
	F3/42		3711,0	1865,0	2,0	1785,0	2,1
	F4/48		4193,0	2050,0	2,0	1970,0	2,1
	F5/52		4474,0	2169,0	2,1	2089,0	2,1
	F6/56		4835,0	2277,0	2,1	2197,0	2,2
	F7/61		5196,0	2522,0	2,1	2442,0	2,1
	F8/66		5492,0	2731,0	2,0	2651,0	2,1
	F9/70		5637,0	2856,0	2,0	2776,0	2,0
	F10/74		6019,0	2984,0	2,0	2904,0	2,1

Test performed after 30 minutes continuous operating based upon EN4511-2007 standard - results do not take into account defrostings

ACCORDING TO EN14511-2007

OUTPUT & COP

FRYO Pi/ECOTWIN/ECOTOWER 13 kW							
Ambient temperature	Compressor working frequency	Outlet water temperature	Heating capacity	Input power with water pump power	COP with water pump power	Input power without water pump power	COP without water pump power
°C	Hz	°C	W	W	W/W	W	W/W
DB12/WB11	F1/30	25,0	5307,9	802,3	6,6	712,3	7,5
	F2/36		6120,4	950,8	6,4	860,8	7,1
	F3/42		7238,4	1096,9	6,6	1006,9	7,2
	F4/48		8121,9	1269,1	6,4	1179,1	6,9
	F5/55		9503,7	1435,4	6,6	1345,4	7,1
	F6/61		10383,4	1652,3	6,3	1562,3	6,6
	F7/67		11244,5	1884,1	6,0	1794,1	6,3
	F8/73		12616,0	2124,2	5,9	2034,2	6,2
	F9/82		13817,2	2573,3	5,4	2483,3	5,6
	F10/85		14308,7	2757,3	5,2	2667,3	5,4
	F1/30	35,0	4836,7	918,0	5,3	828,0	5,8
	F2/36		6107,4	1122,1	5,4	1032,1	5,9
	F3/42		7101,9	1296,5	5,5	1206,5	5,9
	F4/48		7809,9	1507,8	5,2	1417,8	5,5
	F5/55		8765,8	1741,4	5,0	1651,4	5,3
	F6/61		10151,0	2001,5	5,1	1911,5	5,3
	F7/67		11227,8	2250,5	5,0	2160,5	5,2
	F8/73		12173,0	2508,4	4,9	2418,4	5,0
	F9/82		13501,4	3022,4	4,5	2932,4	4,6
	F10/85		14198,8	3192,3	4,4	3102,3	4,6
	F1/30	45,0	4346,2	1261,6	3,4	1171,6	3,7
	F2/36		5225,0	1504,5	3,5	1414,5	3,7
	F3/42		6389,3	1738,0	3,7	1648,0	3,9
	F4/48		7229,0	1973,9	3,7	1883,9	3,8
	F5/55		8622,2	2125,6	4,1	2035,6	4,2
	F6/61		9342,0	2410,8	3,9	2320,8	4,0
	F7/67		10316,7	2704,6	3,8	2614,6	3,9
	F8/73		11066,7	3014,8	3,7	2924,8	3,8
	F9/82		12775,3	3694,3	3,5	3604,3	3,5
	F10/85		13276,7	3892,8	3,4	3802,8	3,5
DB7/WB6	F1/30	25,0	4061,7	841,4	4,8	751,4	5,4
	F2/36		5374,2	1007,1	5,3	917,1	5,9
	F3/42		6393,2	1142,5	5,6	1052,5	6,1
	F4/48		7202,6	1309,7	5,5	1219,7	5,9
	F5/55		7915,2	1484,3	5,3	1394,3	5,7
	F6/61		8563,1	1672,3	5,1	1582,3	5,4
	F7/67		9610,2	1897,5	5,1	1807,5	5,3
	F8/73		10951,2	2133,0	5,1	2043,0	5,4
	F9/82		11934,4	2529,9	4,7	2439,9	4,9
	F10/85		12239,7	2685,7	4,6	2595,7	4,7
	F1/30	35,0	4151,6	936,3	4,4	846,3	4,9
	F2/36		5336,3	1127,7	4,7	1037,7	5,1
	F3/42		5716,5	1313,1	4,4	1223,1	4,7
	F4/48		6606,2	1510,0	4,4	1420,0	4,7
	F5/55		7706,0	1739,3	4,4	1649,3	4,7
	F6/61		8718,2	1977,8	4,4	1887,8	4,6
	F7/67		9558,4	2219,0	4,3	2129,0	4,5
	F8/73		10455,9	2470,1	4,2	2380,1	4,4
	F9/82		11624,0	2910,2	4,0	2820,2	4,1
	F10/85		12600,0	3251,0	3,9	3161,0	4,0
	F1/30	45,0	3764,5	1277,3	2,9	1187,3	3,2
	F2/36		4863,2	1519,5	3,2	1429,5	3,4
	F3/42		5513,7	1728,0	3,2	1638,0	3,4
	F4/48		6378,4	1957,3	3,3	1867,3	3,4
	F5/55		7192,5	2214,3	3,2	2124,3	3,4
	F6/61		8101,2	2488,0	3,3	2398,0	3,4
	F7/67		8725,6	2762,0	3,2	2672,0	3,3
	F8/73		9368,9	3034,3	3,1	2944,3	3,2
	F9/82		10858,2	3545,8	3,1	3455,8	3,1
	F10/85		11480,0	3733,3	3,1	3643,3	3,2

Test performed after 30 minutes continuous operating based upon EN4511-2007 standard - results do not take into account defrostings

OUTPUT & COP

FRYO Pi/ECOTWIN/ECOTOWER 13 kW							
Ambient temperature	Compressor working frequency	Outlet water temperature	Heating capacity	Input power with water pump power	COP with water pump power	Input power without water pump power	COP without water pump power
°C	Hz	°C	W	W	W/W	W	W/W
DB2/WB1	F1/30	25,0	3853,2	892,5	4,3	802,5	4,8
	F2/36		4479,7	1043,2	4,3	953,2	4,7
	F3/42		5504,3	1182,2	4,7	1092,2	5,0
	F4/48		6393,0	1343,9	4,8	1253,9	5,1
	F5/55		6902,4	1493,1	4,6	1403,1	4,9
	F6/61		7636,3	1693,8	4,5	1603,8	4,8
	F7/67		8544,5	1907,0	4,5	1817,0	4,7
	F8/73		9556,7	2110,8	4,5	2020,8	4,7
	F9/82		10545,5	2486,0	4,2	2396,0	4,4
	F10/85		11420,7	2637,0	4,3	2547,0	4,5
	F1/30	35,0	3486,2	945,1	3,7	855,1	4,1
	F2/36		4265,2	1104,0	3,9	1014,0	4,2
	F3/42		5045,2	1311,9	3,8	1221,9	4,1
	F4/48		5679,0	1462,6	3,9	1372,6	4,1
	F5/55		6762,1	1748,0	3,9	1658,0	4,1
	F6/61		7695,5	1959,3	3,9	1869,3	4,1
	F7/67		8192,8	2148,5	3,8	2058,5	4,0
	F8/73		9230,7	2635,1	3,5	2545,1	3,6
	F9/82		10246,5	2942,3	3,5	2852,3	3,6
	F10/85		10579,6	3102,4	3,4	3012,4	3,5
	F1/30	45,0	3401,2	1278,1	2,7	1188,1	2,9
	F2/36		4040,8	1505,6	2,7	1415,6	2,9
	F3/42		4643,8	1715,3	2,7	1625,3	2,9
	F4/48		5436,0	1915,7	2,8	1825,7	3,0
	F5/55		6323,9	2164,5	2,9	2074,5	3,0
	F6/61		7073,2	2522,6	2,8	2432,6	2,9
	F7/67		7835,7	2761,4	2,8	2671,4	2,9
	F8/73		8464,0	2989,7	2,8	2899,7	2,9
	F9/82		9866,6	3470,1	2,8	3380,1	2,9
	F10/85		10234,0	3648,0	2,8	3558,0	2,9
DB-7/WB-8	F1/30	25,0	2800,3	835,5	3,4	745,5	3,8
	F2/36		3641,5	995,0	3,7	905,0	4,0
	F3/42		4253,4	1123,8	3,8	1033,8	4,1
	F4/48		4661,0	1262,1	3,7	1172,1	4,0
	F5/55		5209,6	1495,4	3,5	1405,4	3,7
	F6/61		6038,6	1670,5	3,6	1580,5	3,8
	F7/67		6472,3	1856,1	3,5	1766,1	3,7
	F8/73		7159,2	2038,9	3,5	1948,9	3,7
	F9/82		8220,9	2344,8	3,5	2254,8	3,6
	F10/85		8543,0	2493,2	3,4	2403,2	3,6
	F1/30	35,0	2593,4	1015,5	2,6	925,5	2,8
	F2/36		3420,0	1252,5	2,7	1162,5	2,9
	F3/42		3733,8	1411,5	2,6	1321,5	2,8
	F4/48		4480,7	1564,9	2,9	1474,9	3,0
	F5/55		5254,2	1761,5	3,0	1671,5	3,1
	F6/61		5793,6	1970,2	2,9	1880,2	3,1
	F7/67		6398,8	2175,4	2,9	2085,4	3,1
	F8/73		6828,8	2377,0	2,9	2287,0	3,0
	F9/82		7603,8	2740,7	2,8	2650,7	2,9
	F10/85		8071,3	2871,1	2,8	2781,1	2,9
	F1/30	45,0	2102,4	1230,4	1,7	1140,4	1,8
	F2/36		2565,2	1442,3	1,8	1352,3	1,9
	F3/42		3109,4	1625,3	1,9	1535,3	2,0
	F4/48		3945,4	1832,4	2,2	1742,4	2,3
	F5/55		4446,3	2072,4	2,1	1982,4	2,2
	F6/61		5285,9	2285,1	2,3	2195,1	2,4
	F7/67		5702,9	2526,8	2,3	2436,8	2,3
	F8/73		6467,0	2767,4	2,3	2677,4	2,4
	F9/82		7577,2	3199,4	2,4	3109,4	2,4
	F10/85		7548,6	3353,0	2,3	3263,0	2,3

Test performed after 30 minutes continuous operating based upon EN4511-2007 standard - results do not take into account defrostings