

EWYQ-G

Air to water heat
pump multiscroll

Product manual


XS (High Efficiency - Standard Noise) - Cooling Capacity from 77,8 to 165 Kw
XR (High Efficiency - Extra Low Noise) - Cooling Capacity from 75,2 to 155 Kw

Performance according to EN14511
Eurovent certified
Refrigerant: R410A

CODE	
Date	
Supersedes	

Table of content

EWYQ-G

General characteristics 	3
Technical specifications cooling mode	
EWYQ G XS	5
EWYQ G XR	6
Technical specifications heating mode	
EWYQ G XS	7
EWYQ G XR	7
Electrical specifications	8
Sound levels	10
Performance in cooling mode	
EWYQ G XS	11
EWYQ G XR	13
Performance in heating mode	
EWYQ G XS	15
EWYQ G XR	17

Cabinet and structure The cabinet is made of galvanized steel sheet and painted to provide a high resistance to corrosion. Colour Ivory White (Munsell code 5Y7.5/1) (\pm RAL7044).The base frame has an eye-hook to lift the unit with ropes for an easy installation. The weight is uniformly distributed along the profiles of the base and this facilitates the arrangement of the unit.

Compressor The compressor is hermetic orbiting scroll compressor complete with motor over-temperature and over-current devices. An oil heater, which starts automatically, keeps the oil from being diluted by the refrigerant when the compressor stops. The compressors are connected in Tandem on a single refrigerating circuit and are fitted on rubber antivibration mounts and complete with oil charge.

Refrigerant Units have been optimized to operate with R-410A, refrigerant with zero ODP (Ozone Depletion Potential). R-410A has been the logical choice for our multiple scroll chiller because today it is one of the most promising refrigerants in terms of efficiency, stability and environmental impact. R-410A offers a small swept volume, a good heat exchange capacity and leads to reduced component sizes of items such as heat exchangers and tubing.

Evaporator (Plate Heat Exchanger) The unit is equipped with a direct expansion plate to plate type evaporator. This heat exchanger is made of stainless steel brazed plates and is covered with a 20mm closed cell insulation material. The exchanger is equipped with an electric heater for protection against freezing. The evaporator is manufactured in accordance to PED approval.

Condenser The condenser is manufactured with internally enhanced seamless copper tubes arranged in a staggered row pattern and mechanically expanded into lanced and rippled aluminum condenser fins with full fin collars. An integral sub-cooler circuit provides sub-cooling to effectively eliminate liquid flashing and increase cooling capacity without increasing the power input.

Condenser fans (\varnothing 450 mm) The condenser fans are propeller type with high efficiency design blades to maximize performances. The material of the blades is glass reinforced resin and each fan is protected by a guard. Fan motors are internally protected from overtemperature and are IP54.

Electronic expansion valve The unit is equipped with the most advanced electronic expansion valves to achieve precise control of refrigerant mass flow. As today's system requires improved energy efficiency, tighter temperature control, wider range of operating conditions and incorporate features like remote monitoring and diagnostics, the application of electronic expansion valves becomes mandatory.

Electronic expansion valves possess unique features: short opening and closing time, high resolution, positive shut-off function to eliminate use of additional solenoid valve, continuous modulation of mass flow without stress in the refrigerant circuit and corrosion resistance stainless steel body.

Electronic expansion valves are typically working with lower ΔP between high and low pressure side, than a thermostatic expansion valve. The electronic expansion valve allows the system to work with low condenser pressure (winter time) without any refrigerant flow problems and with a perfect chilled water leaving temperature control.

Refrigerant circuit Each unit has 1 refrigerant circuit that includes:

- Compressors
- Refrigerant
- Evaporator
- Air Cooled Condenser
- Electronic expansion valve
- Charging valves
- High pressure switch
- High pressure transducers
- Low pressure transducers
- Suction temperature sensor

Electrical control panel Power and control are located in the main panel that is manufactured to ensure protection against all weather conditions. The electrical panel is IP54 and (when opening the doors) internally protected against possible accidental contact with live parts. The main panel is fitted with a main switch interlocked door that shuts off power supply when opening.

Power Section

The power section includes compressors and fans protection devices, compressors and fans starters and control circuit power supply.

Unit controller

Unit controller is installed as standard; it can be used to modify unit set-points and check control parameters. A built-in display shows chiller operating status plus temperatures and pressures of water, refrigerant, programmable values, set-points. A sophisticated software with predictive logic, selects the most energy efficient combination of compressors and EEXV to keep stable operating conditions to maximise chiller energy efficiency and reliability.

The unit controller is able to protect critical components based on external signs from its system (such as motor temperatures, refrigerant gas and oil pressures, correct phase sequence, pressure switches and evaporator). The input coming from the high pressure switch cuts all digital output from the controller in less than 50ms, this is an additional security for the equipment.

Fast program cycle (200ms) for a precise monitoring of the system. Floating point calculations supported for increased accuracy in Pressure / Temperature conversions.

Control section - main features

Control Section has the following feature.

- Management of the refrigerant circuit capacity.
- Full routine operation at condition of:
 - high thermal load
- high evaporator entering water temperature (start-up)
- Display of evaporator entering/leaving water temperature.
- Display of condensing-evaporating temperature and pressure, suction superheat.
- Leaving water evaporator temperature regulation.
- Compressor and pumps hours counter.
- Display of Status Safety Devices.
- Number of starts and compressor working hours.
- Optimized management of compressor load.
- Re-start in case of power failure (automatic / manual).
- Soft Load (optimized management of the compressor load during the start-up).
- OAT (Outside Ambient temperature) Reset.
- Start at high evaporator water temperature.
- Return Reset (Set Point Reset based on return water temperature).
- Set point Reset (optional).
- Application and system upgrade with commercial SD cards.

Safety device / logic for each refrigerant circuit

The following devices / logics are available.

- High pressure (pressure switch).
- High pressure (transducer).
- Low pressure (transducer).
- High motor winding temperature.
- No pressure change at start.

System security

The following securities are available.

- Phase monitor.
- Freeze protection.

Unit controller

Unit controller built-in terminal has the following features.

- 164x44 dots liquid crystal display with white back lighting. Supports Unicode fonts for multi-lingual.
- Key-pad consisting of 3 keys.
- Push'n'Roll control for an increased usability.
- Memory to protect the data.
- General faults alarm relays.
- Password access to modify the setting.
- Application security to prevent application tampering or hardware usability with third party applications.
- Service report displaying all running hours and general conditions.
- Alarm history memory to allow an easy fault analysis.

Supervising systems (on request)**Unit controller remote communication**

Unit controller is able to communicate to BMS (Building Management System) based on the most common protocols as:

- ModbusRTU
- LonWorks, now also based on the international 8040 Standard Chiller Profile and LonMark Technology.
- BacNet BTP certifief over IP and MS/TP (class 4) (Native).
- Ethernet TCP/IP.

EWYQ G-XS

MODEL		075	085	100	110	120	140	160	
Capacity - Cooling *	kW	77.8	88.1	101	117	127	147	165	
Capacity control - Type		Step	Step	Step	Step	Step	Step	Step	
Capacity control - Minimum capacity	%	50.0	44.0	50.0	44.0	50.0	43.0	50.0	
Unit power input - Cooling *	kW	27.0	31.5	36.0	39.5	44.7	50.2	57.8	
EER *		2.88	2.80	2.81	2.97	2.84	2.92	2.85	
ESEER		3.90	3.94	3.97	4.03	3.92	3.96	3.96	
IPLV		4.40	4.47	4.40	4.49	4.40	4.50	4.50	
CASING									
Colour **		IW	IW	IW	IW	IW	IW	IW	
Material **		GPSS	GPSS	GPSS	GPSS	GPSS	GPSS	GPSS	
DIMENSIONS									
Height	mm	1800	1800	1800	1800	1800	1800	1800	
Width	mm	1195	1195	1195	1195	1195	1195	1195	
Length	mm	2826	2826	2826	3426	3426	4026	4026	
WEIGHT									
Unit Weight	kg	850	912	1077	1183	1213	1333	1394	
Operating Weight	kg	858	921	1088	1194	1224	1344	1411	
WATER HEAT EXCHANGER									
Type **		BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	
Water Volume	l	8	9	11	11	11	11	17	
Nominal water flow rate	l/s	3.7	4.2	4.8	5.6	6.1	7.0	7.9	
Nominal Water pressure drop ***	kPa	8	8	9	12	14	18	20	
Insulation material **		CC	CC	CC	CC	CC	CC	CC	
AIR HEAT EXCHANGER									
Type **		HFP	HFP	HFP	HFP	HFP	HFP	HFP	
FAN									
Type **		DPT	DPT	DPT	DPT	DPT	DPT	DPT	
Drive **		DOL	DOL	DOL	DOL	DOL	DOL	DOL	
Diameter	mm	450	450	450	450	450	450	450	
Nominal air flow	l/s	10042	10042	9861	13148	13148	16435	16435	
Quantity	No.	6	6	6	8	8	10	10	
Speed	rpm	1360	1360	1360	1360	1360	1360	1360	
Motor input	kW	2.7	2.7	2.7	3.6	3.6	4.5	4.5	
COMPRESSOR									
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	
Oil charge	l	7	8	9	12	14	14	14	
Quantity	No.	2	2	2	2	2	2	2	
SOUND LEVEL ****									
Sound Power - Cooling	dB(A)	84	85	87	89	89	89	89	
Sound Pressure - Cooling	dB(A)	66	68	70	71	71	71	71	
REFRIGERANT CIRCUIT									
Refrigerant type		R410A	R410A	R410A	R410A	R410A	R410A	R410A	
Refrigerant charge	kg	17	18	24	29	28	32	35	
N. of circuits	No.	1	1	1	1	1	1	1	
PIPING CONNECTIONS									
Evaporator water inlet/outlet		2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	

* Cooling capacity, unit power input in cooling and EER are based on the following conditions: evaporator 12.0/7.0°C; ambient 35.0°C, unit at full load operation;

** IW: Ivory White - GPSS: Galvanized and Painted Steel Sheet - PHE: Plate Heat Exchanger - S&T: Single Pass Shell & Tube.

**CC: Closed Cell - HFP: High efficiency fin and tube type - DPT: Direct Propeller Type - DOL: Direct On Line - VFD: Inverter - BRS: Brushless.

*** If red contact factory. **** Details on measurement methods in the Sound Data section

Unit performances are referred to ideal running conditions that are reproducible in laboratory test environment in accordance to recognized industry standards (i.e. EN14511). Weights and dimensions are indicative -For specific values refer to certified drawing issued by factory.

Data are referred to unit with standard options only. For specific information about additional options refer to databook specific section.

EWYQ G-XR

MODEL		075	085	100	110	120	140	160	
Capacity - Cooling *	kW	75.2	84.5	95.0	111	120	139	155	
Capacity control - Type		Step	Step	Step	Step	Step	Step	Step	
Capacity control - Minimum capacity	%	50.0	44.0	50.0	44.0	50.0	43.0	50.0	
Unit power input - Cooling *	kW	27.7	32.7	38.6	41.5	47.4	52.8	61.5	
EER *		2.71	2.59	2.46	2.68	2.52	2.64	2.51	
ESEER		3.85	3.90	3.79	3.92	3.76	3.86	3.79	
IPLV		4.35	4.41	4.29	4.42	4.27	4.40	4.35	
CASING									
Colour **		IW	IW	IW	IW	IW	IW	IW	
Material **		GPSS	GPSS	GPSS	GPSS	GPSS	GPSS	GPSS	
DIMENSIONS									
Height	mm	1800	1800	1800	1800	1800	1800	1800	
Width	mm	1195	1195	1195	1195	1195	1195	1195	
Length	mm	2826	2826	2826	3426	3426	4026	4026	
WEIGHT									
Unit Weight	kg	880	942	1107	1213	1243	1363	1424	
Operating Weight	kg	888	951	1118	1224	1254	1374	1441	
WATER HEAT EXCHANGER									
Type **		BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	
Water Volume	l	8	9	11	11	11	11	17	
Nominal water flow rate	l/s	3.6	4.0	4.5	5.3	5.7	6.7	7.4	
Nominal Water pressure drop ***	kPa	8	8	8	11	12	16	18	
Insulation material **		CC	CC	CC	CC	CC	CC	CC	
AIR HEAT EXCHANGER									
Type **		HFP	HFP	HFP	HFP	HFP	HFP	HFP	
FAN									
Type **		DPT	DPT	DPT	DPT	DPT	DPT	DPT	
Drive **		DOL	DOL	DOL	DOL	DOL	DOL	DOL	
Diameter	mm	450	450	450	450	450	450	450	
Nominal air flow	l/s	7859	7859	7101	9468	9468	11835	11835	
Quantity	No.	6	6	6	8	8	10	10	
Speed	rpm	1108	1108	1108	1108	1108	1108	1108	
Motor input	kW	2.3	2.3	2.3	3.0	3.0	3.8	3.8	
COMPRESSOR									
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	
Oil charge	l	7	8	9	12	14	14	14	
Quantity	No.	2	2	2	2	2	2	2	
SOUND LEVEL ****									
Sound Power - Cooling	dB(A)	80	82	84	86	86	86	86	
Sound Pressure - Cooling	dB(A)	62	65	66	68	68	67	67	
REFRIGERANT CIRCUIT									
Refrigerant type		R410A	R410A	R410A	R410A	R410A	R410A	R410A	
Refrigerant charge	kg	17	18	24	29	28	32	35	
N. of circuits	No.	1	1	1	1	1	1	1	
PIPING CONNECTIONS									
Evaporator water inlet/outlet		2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	

* Cooling capacity, unit power input in cooling and EER are based on the following conditions: evaporator 12.0/7.0°C; ambient 35.0°C, unit at full load operation;

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*** If red contact factory. **** Details on measurement methods in the Sound Data section

Unit performances are referred to ideal running conditions that are reproducible in laboratory test environment in accordance to recognized industry standards (i.e. EN14511). Weights and dimensions are indicative -For specific values refer to certified drawing issued by factory.

Data are referred to unit with standard options only. For specific information about additional options refer to databook specific section.

EWYQ G-XS

MODEL		075	085	100	110	120	140	160	
Capacity - Heating *	kW	82.2	91.2	110	127	138	156	170	
Unit power input - Heating *	kW	26.2	29.2	34.0	39.0	43.2	50.0	54.3	
COP *	---	3.14	3.12	3.24	3.25	3.20	3.11	3.13	
SCOP **	---	3.35	3.31	3.62	3.58	3.63	3.53	3.58	
HEAT EXCHANGER - EVAPORATOR									
Nominal water flow rate	l/s	4.0	4.4	5.3	6.1	6.7	7.5	8.2	
Nominal Water pressure drop	kPa	10	9	11	14	17	22	23	

EWYQ G-XR

MODEL		075	085	100	110	120	140	160	
Capacity - Heating *	kW	82.2	91.2	110	127	138	156	170	
Unit power input - Heating *	kW	26.2	29.2	34.0	39.0	43.2	50.0	54.3	
COP *	---	3.14	3.12	3.24	3.25	3.20	3.11	3.13	
SCOP **	---	3.35	3.31	3.62	3.58	3.63	3.53	3.58	
HEAT EXCHANGER - EVAPORATOR									
Nominal water flow rate	l/s	4.0	4.4	5.3	6.1	6.7	7.5	8.2	
Nominal Water pressure drop	kPa	10	9	11	14	17	22	23	

Fluid: Water

* Heating capacity, unit power input and COP are instantaneous ratings (based on the following conditions: air exchanger 7.0 - 90%°C; water exchanger 40.0/45.0, unit at full load operation) which may differ from FAW data calculated according to EN14825.

** SCOP is referred to Average climate region, Low temperature application, variable outlet, at the follows bivalent temperatures (according to the model):

75, T_{biv} -3; 85, T_{biv}-2; 100, T_{biv}-4; 110, T_{biv}-5; 120, T_{biv}-7; 140, T_{biv}-7; 160, T_{biv}-7. Ref. EN14825

EWYQ G-XS

MODEL		075	085	100	110	120	140	160	
POWER SUPPLY									
Phases	Nr	3	3	3	3	3	3	3	
Frequency	Hz	50	50	50	50	50	50	50	
Voltage	V	400	400	400	400	400	400	400	
Voltage tolerance Minimum	%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	
Voltage tolerance Maximum	%	+10%	+10%	+10%	+10%	+10%	+10%	+10%	
UNIT									
Maximum starting current	A	242	298	304	361	369	424	439	
Nominal running current cooling	A	53	58	62	69	77	87	98	
Maximum running current	A	70	75	81	91	99	116	131	
Maximum current for wires sizing	A	77	83	89	100	109	128	144	
FANS									
Nominal running current cooling	A	6	6	6	8	8	10	10	
COMPRESSORS									
Phases	Nr	3	3	3	3	3	3	3	
Voltage	V	400	400	400	400	400	400	400	
Voltage tolerance Minimum	%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	
Voltage tolerance Maximum	%	+10%	+10%	+10%	+10%	+10%	+10%	+10%	
Maximum running current	A	62	67	73	81	89	104	119	
Starting method	---	DOL	DOL	DOL	DOL	DOL	DOL	DOL	

Fluid: Water

Allowed voltage tolerance $\pm 10\%$. Voltage unbalance between phases must be within $\pm 3\%$.

Maximum starting current: starting current of biggest compressor + current of the other compressors at maximum load + fans current at maximum load. In case of inverter driven units, no inrush current at start up is experienced.

Nominal current in cooling mode is referred to the following conditions: evaporator 12/7°C; ambient 35°C; compressors + fans current.

Maximum running current is based on max compressor absorbed current in its envelope and max fans absorbed current

Maximum unit current for wires sizing is based on minimum allowed voltage

Maximum current for wires sizing: (compressors full load ampere + fans current) $\times 1,1$.

Electrical data are subject to modification without notice. Please refer to unit nameplate data

EWYQ G-XR

MODEL		075	085	100	110	120	140	160	
POWER SUPPLY									
Phases	Nr	3	3	3	3	3	3	3	
Frequency	Hz	50	50	50	50	50	50	50	
Voltage	V	400	400	400	400	400	400	400	
Voltage tolerance Minimum	%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	
Voltage tolerance Maximum	%	+10%	+10%	+10%	+10%	+10%	+10%	+10%	
UNIT									
Maximum starting current	A	242	298	304	361	369	424	439	
Nominal running current cooling	A	55	60	66	72	81	91	105	
Maximum running current	A	70	75	81	91	99	116	131	
Maximum current for wires sizing	A	77	83	89	100	109	128	144	
FANS									
Nominal running current cooling	A	6	6	6	8	8	10	10	
COMPRESSORS									
Phases	Nr	3	3	3	3	3	3	3	
Voltage	V	400	400	400	400	400	400	400	
Voltage tolerance Minimum	%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	
Voltage tolerance Maximum	%	+10%	+10%	+10%	+10%	+10%	+10%	+10%	
Maximum running current	A	62	67	73	81	89	104	119	
Starting method	---	DOL	DOL	DOL	DOL	DOL	DOL	DOL	

Fluid: Water

Allowed voltage tolerance $\pm 10\%$. Voltage unbalance between phases must be within $\pm 3\%$.

Maximum starting current: starting current of biggest compressor + current of the other compressors at maximum load + fans current at maximum load. In case of inverter driven units, no inrush current at start up is experienced.

Nominal current in cooling mode is referred to the following conditions: evaporator 12/7°C; ambient 35°C; compressors + fans current.

Maximum running current is based on max compressor absorbed current in its envelope and max fans absorbed current

Maximum unit current for wires sizing is based on minimum allowed voltage

Maximum current for wires sizing: (compressors full load ampere + fans current) $\times 1,1$.

Electrical data are subject to modification without notice. Please refer to unit nameplate data

EWYQ G-XS

MODEL	Sound pressure level at 1 m from the unit (rif. 2 x 10 ⁻⁵ Pa)									Power
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	dB(A)	dB(A)
075	75.0	66.0	63.0	64.0	61.0	57.0	50.0	44.0	66.0	84.0
085	77.0	67.0	65.0	66.0	63.0	59.0	52.0	45.0	68.0	85.0
100	78.0	69.0	67.0	68.0	65.0	61.0	54.0	47.0	70.0	87.0
110	80.0	71.0	68.0	69.0	66.0	62.0	55.0	48.0	71.0	89.0
120	80.0	71.0	68.0	70.0	66.0	62.0	56.0	49.0	71.0	89.0
140	80.0	70.0	68.0	69.0	66.0	62.0	55.0	48.0	71.0	89.0
160	80.0	70.0	68.0	69.0	66.0	62.0	55.0	48.0	71.0	89.0

EWYQ G-XR

MODEL	Sound pressure level at 1 m from the unit (rif. 2 x 10 ⁻⁵ Pa)									Power
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	dB(A)	dB(A)
075	68.0	59.0	59.0	61.0	57.0	53.0	45.0	37.0	62.0	80.0
085	70.0	62.0	61.0	63.0	60.0	56.0	48.0	39.0	65.0	82.0
100	72.0	63.0	63.0	65.0	61.0	58.0	49.0	41.0	66.0	84.0
110	73.0	65.0	64.0	66.0	63.0	59.0	51.0	42.0	68.0	86.0
120	73.0	65.0	64.0	67.0	63.0	59.0	51.0	42.0	68.0	86.0
140	73.0	65.0	64.0	66.0	63.0	59.0	51.0	42.0	67.0	86.0
160	73.0	65.0	64.0	66.0	63.0	59.0	51.0	42.0	67.0	86.0

SOUND LEVEL AT DISTANCE ****

EWYQ G-XS

MODEL	DISTANCE						
	1 m	5 m	10 m	15 m	20 m	25 m	50 m
075	66.0	57.1	52.0	48.8	46.5	44.6	38.8
085	68.0	59.1	54.0	50.8	48.5	46.6	40.8
100	70.0	61.1	56.0	52.8	50.5	48.6	42.8
110	71.0	62.3	57.3	54.1	51.8	50.0	44.2
120	71.0	62.3	57.3	54.1	51.8	50.0	44.2
140	71.0	62.5	57.5	54.4	52.1	50.3	44.5
160	71.0	62.5	57.5	54.4	52.1	50.3	44.5

EWYQ G-XR

MODEL	DISTANCE						
	1 m	5 m	10 m	15 m	20 m	25 m	50 m
075	62.0	53.1	48.0	44.8	42.5	40.6	34.8
085	65.0	56.1	51.0	47.8	45.5	43.6	37.8
100	66.0	57.1	52.0	48.8	46.5	44.6	38.8
110	68.0	59.3	54.3	51.1	48.8	47.0	41.2
120	68.0	59.3	54.3	51.1	48.8	47.0	41.2
140	67.0	58.5	53.5	50.4	48.1	46.3	40.5
160	67.0	58.5	53.5	50.4	48.1	46.3	40.5

**** Value are referred to:evaporator 12/7°C, air ambient 35°C, full load operation. For aircooled Eurovent certified units,sound power level is measured in accordance with ISO9614 and Eurovent 8/1 and certified by Eurovent.Sound pressure level is calculated from sound power level. Eurovent certification refers to the overall sound power level only.Sound pressure in frequency bands is for information only and not considered binding. For other units,sound pressure level is measured in accordance with ISO3744.Sound power level is calculated from sound pressure level.

EWYQ G-XS

		075						085					
Twout	Tain	25	30	35	40	43	46	25	30	35	40	43	46
5	Pf kW	83	78.4	73.5	68.2	64.8		94.5	89	83.2	76.9	73	
	Pa kW	22.6	24.5	26.6	29	30.6		26.2	28.4	31	33.9	35.9	
	qw l/s	4.0	3.7	3.5	3.3	3.1		4.5	4.2	4.0	3.7	3.5	
	dpw kPa	10	9	8	7	6		10	9	7	6	6	
7	Pf kW	87.9	83	77.8	72.2	68.6		100	94.2	88.1	81.5	77.3	
	Pa kW	23	24.9	27	29.4	31		26.7	28.9	31.5	34.5	36.4	
	qw l/s	4.2	4.0	3.7	3.5	3.3		4.8	4.5	4.2	3.9	3.7	
	dpw kPa	11	10	8	7	7		11	10	8	7	6	
9	Pf kW	92.9	87.8	82.3	76.3	72.5		106	99.6	93.1	86.2	81.8	
	Pa kW	23.4	25.3	27.4	29.8	31.4		27.2	29.5	32.1	35	37	
	qw l/s	4.4	4.2	3.9	3.7	3.5		5.1	4.8	4.5	4.1	3.9	
	dpw kPa	12	11	10	8	7		12	11	9	8	7	
11	Pf kW	98.2	92.7	86.9	80.6	76.6		112	105	98.2	90.9	86.3	
	Pa kW	23.8	25.7	27.8	30.2	31.8		27.7	30	32.6	35.6	37.6	
	qw l/s	4.7	4.4	4.2	3.9	3.7		5.3	5.0	4.7	4.4	4.1	
	dpw kPa	14	12	11	9	8		13	12	10	9	8	
13	Pf kW	104	97.8	91.6	85	80.8		118	111	104	95.8	91	
	Pa kW	24.2	26.1	28.3	30.7	32.3		28.3	30.6	33.2	36.2	38.2	
	qw l/s	5.0	4.7	4.4	4.1	3.9		5.6	5.3	5.0	4.6	4.4	
	dpw kPa	15	13	12	10	9		15	13	12	10	9	
15	Pf kW	109	103	96.5	89.5	85.1		124	117	109	101	95.8	
	Pa kW	24.6	26.6	28.7	31.1	32.7		28.9	31.2	33.8	36.9	38.9	
	qw l/s	5.2	4.9	4.6	4.3	4.1		5.9	5.6	5.2	4.8	4.6	
	dpw kPa	17	15	13	11	10		17	15	13	11	10	

		100						110					
Twout	Tain	25	30	35	40	43	46	25	30	35	40	43	46
5	Pf kW	109	102	95.6	88.5	84.1		125	118	111	103	97.8	
	Pa kW	29.8	32.4	35.4	38.9	41.2		32.9	35.7	38.9	42.5	44.9	
	qw l/s	5.2	4.9	4.6	4.2	4.0		6.0	5.6	5.3	4.9	4.7	
	dpw kPa	10	9	8	7	6		13	12	10	9	8	
7	Pf kW	115	108	101	93.9	89.2		132	125	117	109	104	
	Pa kW	30.4	33	36	39.5	41.9		33.5	36.3	39.5	43.1	45.5	
	qw l/s	5.5	5.2	4.8	4.5	4.3		6.3	6.0	5.6	5.2	5.0	
	dpw kPa	11	10	9	8	7		15	13	12	10	9	
9	Pf kW	122	115	107	99.4	94.4		140	132	124	115	110	
	Pa kW	31	33.6	36.7	40.2	42.6		34	36.9	40.1	43.7	46.2	
	qw l/s	5.8	5.5	5.1	4.8	4.5		6.7	6.3	5.9	5.5	5.3	
	dpw kPa	13	11	10	8	8		17	15	13	11	10	
11	Pf kW	129	121	113	105	99.8		148	140	131	122	116	
	Pa kW	31.6	34.3	37.4	40.9	43.4		34.6	37.5	40.7	44.4	46.8	
	qw l/s	6.2	5.8	5.4	5.0	4.8		7.1	6.7	6.3	5.8	5.6	
	dpw kPa	14	13	11	9	9		19	17	15	13	12	
13	Pf kW	136	128	119	111	105		156	148	139	129	123	
	Pa kW	32.3	35	38.1	41.7	44.1		35.3	38.1	41.4	45.1	47.5	
	qw l/s	6.5	6.1	5.7	5.3	5.0		7.5	7.1	6.6	6.2	5.9	
	dpw kPa	16	14	12	10	9		21	19	16	14	13	
15	Pf kW	143	134	126	117	111		165	156	146	136	130	
	Pa kW	33	35.7	38.9	42.5	45		35.9	38.8	42.1	45.8	48.2	
	qw l/s	6.9	6.5	6.0	5.6	5.3		7.9	7.5	7.0	6.5	6.2	
	dpw kPa	17	15	14	12	11		23	21	18	16	14	

EWYQ G-XS

		120						140					
Twout	Tain	25	30	35	40	43	46	25	30	35	40	43	46
5	Pf kW	136	128	120	111	106		156	148	138	129	123	
	Pa kW	37.2	40.4	44	48.1	50.8		41.8	45.4	49.4	54	57.1	
	qw l/s	6.5	6.1	5.7	5.3	5.0		7.5	7.1	6.6	6.1	5.9	
	dpw kPa	16	14	12	11	9		21	18	16	14	13	
7	Pf kW	144	136	127	118	112		165	156	147	136	130	
	Pa kW	37.8	41	44.7	48.8	51.4		42.5	46.1	50.2	54.8	57.8	
	qw l/s	6.9	6.5	6.1	5.6	5.3		7.9	7.5	7.0	6.5	6.2	
	dpw kPa	18	16	14	12	11		23	21	18	16	14	
9	Pf kW	152	143	134	124	118		175	165	155	144	137	
	Pa kW	38.5	41.7	45.4	49.5	52.1		43.2	46.8	50.9	55.5	58.6	
	qw l/s	7.3	6.9	6.4	6.0	5.7		8.4	7.9	7.4	6.9	6.6	
	dpw kPa	20	17	15	13	12		26	23	20	18	16	
11	Pf kW	160	151	142	131	125		184	174	164	152	145	
	Pa kW	39.2	42.4	46.1	50.2	52.9		44	47.6	51.7	56.4	59.4	
	qw l/s	7.7	7.2	6.8	6.3	6.0		8.8	8.4	7.9	7.3	7.0	
	dpw kPa	22	20	17	15	13		29	26	23	20	18	
13	Pf kW	169	159	149	139	132		194	184	173	161	153	
	Pa kW	39.9	43.1	46.8	51	53.6		44.8	48.4	52.6	57.2	60.3	
	qw l/s	8.1	7.6	7.2	6.6	6.3		9.3	8.8	8.3	7.7	7.3	
	dpw kPa	24	22	19	16	15		32	29	25	22	20	
15	Pf kW	177	168	157	146	139		205	194	182	169	161	
	Pa kW	40.6	43.9	47.6	51.7	54.4		45.6	49.3	53.4	58.1	61.2	
	qw l/s	8.5	8.0	7.5	7.0	6.7		9.8	9.3	8.7	8.1	7.7	
	dpw kPa	27	24	21	18	17		36	32	28	24	22	

		160					
Twout	Tain	25	30	35	40	43	46
5	Pf kW	177	166	156	144	137	
	Pa kW	48	52.1	56.8	62.2	65.7	
	qw l/s	8.4	8.0	7.4	6.9	6.5	
	dpw kPa	23	20	18	15	14	
7	Pf kW	187	176	165	153	145	
	Pa kW	48.9	53	57.8	63.1	66.7	
	qw l/s	8.9	8.4	7.9	7.3	6.9	
	dpw kPa	26	23	20	17	15	
9	Pf kW	198	186	174	161	153	
	Pa kW	49.8	54	58.8	64.2	67.7	
	qw l/s	9.5	8.9	8.3	7.7	7.3	
	dpw kPa	29	25	22	19	17	
11	Pf kW	209	197	184	170	162	
	Pa kW	50.8	55.1	59.9	65.3	68.8	
	qw l/s	10.0	9.4	8.8	8.2	7.8	
	dpw kPa	32	28	25	21	19	
13	Pf kW	220	207	194	179	171	
	Pa kW	51.9	56.2	61	66.4	70	
	qw l/s	10.5	9.9	9.3	8.6	8.2	
	dpw kPa	36	32	28	24	21	
15	Pf kW	231	218	204	189	179	
	Pa kW	53	57.3	62.2	67.7	71.3	
	qw l/s	11.1	10.5	9.8	9.1	8.6	
	dpw kPa	39	35	31	26	24	

EWYQ G-XR

		075						085					
Twout	Tain	25	30	35	40	43	46	25	30	35	40	43	46
5	Pf kW	80.8	76.2	71.2	65.7	62.1		91.5	85.9	80	73.6	69.6	
	Pa kW	23.1	25.1	27.3	29.8	31.4		27	29.4	32.1	35.2	37.3	
	qw l/s	3.9	3.6	3.4	3.1	3.0		4.4	4.1	3.8	3.5	3.3	
	dpw kPa	9	8	7	6	5		9	8	7	6	5	
7	Pf kW	85.5	80.5	75.2	69.5	65.7		96.7	90.8	84.5	77.8	73.6	
	Pa kW	23.5	25.5	27.7	30.2	31.9		27.6	29.9	32.7	35.8	37.9	
	qw l/s	4.1	3.8	3.6	3.3	3.1		4.6	4.3	4.0	3.7	3.5	
	dpw kPa	10	9	8	7	6		10	9	8	7	6	
9	Pf kW	90.2	85	79.4	73.3	69.4		102	95.8	89.2	82.1	77.6	
	Pa kW	24	26	28.2	30.7	32.3		28.1	30.5	33.3	36.4	38.5	
	qw l/s	4.3	4.1	3.8	3.5	3.3		4.9	4.6	4.3	3.9	3.7	
	dpw kPa	11	10	9	8	7		11	10	9	7	7	
11	Pf kW	95.2	89.6	83.7	77.3	73.2		108	101	93.9	86.5	81.8	
	Pa kW	24.4	26.4	28.7	31.2	32.8		28.7	31.2	34	37.1	39.2	
	qw l/s	4.6	4.3	4.0	3.7	3.5		5.1	4.8	4.5	4.1	3.9	
	dpw kPa	13	11	10	8	8		12	11	10	8	7	
13	Pf kW	100	94.3	88	81.3	77		113	106	98.8	91	86.1	
	Pa kW	24.9	26.9	29.2	31.7	33.3		29.4	31.8	34.6	37.8	39.9	
	qw l/s	4.8	4.5	4.2	3.9	3.7		5.4	5.1	4.7	4.4	4.1	
	dpw kPa	14	13	11	9	8		14	12	11	9	8	
15	Pf kW	105	99.2	92.6	85.5	81		119	111	104	95.6	61.7	
	Pa kW	25.4	27.4	29.7	32.2	33.8		30.1	32.5	35.4	38.6	20.8	
	qw l/s	5.1	4.8	4.4	4.1	3.9		5.7	5.3	5.0	4.6	3.0	
	dpw kPa	16	14	12	10	9		15	13	12	10	4	

		100						110					
Twout	Tain	25	30	35	40	43	46	25	30	35	40	43	46
5	Pf kW	103	96.7	89.9	82.6	78.1		120	113	105	97.2	92.1	
	Pa kW	31.6	34.5	37.8	41.7	44.3		34.4	37.4	40.8	44.7	47.3	
	qw l/s	4.9	4.6	4.3	3.9	3.7		5.7	5.4	5.0	4.6	4.4	
	dpw kPa	9	8	7	6	5		12	11	9	8	7	
7	Pf kW	109	102	95	87.3	82.5		127	119	111	103	97.5	
	Pa kW	32.3	35.2	38.6	42.5	45.2		35.1	38.1	41.5	45.5	48.1	
	qw l/s	5.2	4.9	4.5	4.2	3.9		6.1	5.7	5.3	4.9	4.7	
	dpw kPa	10	9	8	7	6		14	12	11	9	8	
9	Pf kW	115	108	100	92.2	87.1		134	126	118	109	103	
	Pa kW	33.1	36	39.4	43.4	46		35.8	38.8	42.3	46.3	48.9	
	qw l/s	5.5	5.2	4.8	4.4	4.2		6.4	6.0	5.6	5.2	4.9	
	dpw kPa	11	10	9	7	6		15	13	12	10	9	
11	Pf kW	121	114	106	97.1	56.4		141	133	124	115	109	
	Pa kW	33.9	36.8	40.3	44.3	20.5		36.5	39.6	43.1	47.1	49.7	
	qw l/s	5.8	5.4	5.1	4.6	2.7		6.8	6.4	5.9	5.5	5.2	
	dpw kPa	13	11	10	8	3		17	15	13	11	10	
13	Pf kW	127	119	111	102	59.9		149	140	131	121	115	
	Pa kW	34.7	37.7	41.2	45.2	20.8		37.2	40.4	43.9	47.9	50.5	
	qw l/s	6.1	5.7	5.3	4.9	2.9		7.1	6.7	6.3	5.8	5.5	
	dpw kPa	14	12	11	9	3		19	17	15	12	11	
15	Pf kW	134	125	117	107	63.4		156	147	137	127	121	
	Pa kW	35.6	38.6	42.2	46.2	21.1		38	41.2	44.7	48.8	51.4	
	qw l/s	6.4	6.0	5.6	5.1	3.0		7.5	7.1	6.6	6.1	5.8	
	dpw kPa	15	13	12	10	3		21	18	16	14	12	

EWYQ G-XR

		120						140					
Twout	Tain	25	30	35	40	43	46	25	30	35	40	43	46
5	Pf kW	130	122	113	104	98.6		150	141	132	122	115	
	Pa kW	39.2	42.7	46.6	50.9	53.7		43.8	47.6	52	56.9	60.1	
	qw l/s	6.2	5.8	5.4	5.0	4.7		7.2	6.7	6.3	5.8	5.5	
	dpw kPa	14	13	11	9	8		19	17	15	13	11	
7	Pf kW	137	128	120	110	104		158	149	139	129	122	
	Pa kW	40	43.5	47.4	51.7	54.6		44.6	48.5	52.8	57.8	61	
	qw l/s	6.5	6.1	5.7	5.3	5.0		7.6	7.1	6.7	6.2	5.8	
	dpw kPa	16	14	12	10	9		21	19	16	14	13	
9	Pf kW	144	135	126	116	110		167	157	147	136	129	
	Pa kW	40.8	44.3	48.2	52.6	55.4		45.5	49.4	53.8	58.7	62	
	qw l/s	6.9	6.5	6.0	5.6	5.3		8.0	7.5	7.0	6.5	6.2	
	dpw kPa	18	16	14	12	10		24	21	18	16	14	
11	Pf kW	152	143	133	122	116		176	166	155	143	136	
	Pa kW	41.6	45.2	49.1	53.5	56.3		46.4	50.3	54.7	59.7	63	
	qw l/s	7.3	6.8	6.4	5.9	5.5		8.4	7.9	7.4	6.9	6.5	
	dpw kPa	20	17	15	13	11		26	23	20	17	16	
13	Pf kW	160	150	140	129	122		185	174	163	150	143	
	Pa kW	42.5	46.1	50	54.4	57.3		47.3	51.3	55.8	60.8	64	
	qw l/s	7.7	7.2	6.7	6.2	5.8		8.9	8.4	7.8	7.2	6.8	
	dpw kPa	22	19	17	14	13		29	26	23	19	17	
15	Pf kW	167	157	147	135	79.4		194	183	171	158	150	
	Pa kW	43.4	47	51	55.4	26.1		48.4	52.4	56.8	61.9	65.1	
	qw l/s	8.0	7.6	7.0	6.5	3.8		9.3	8.8	8.2	7.6	7.2	
	dpw kPa	24	21	18	16	5		32	29	25	21	19	

		160					
Twout	Tain	25	30	35	40	43	46
5	Pf kW	168	158	147	135	127	
	Pa kW	50.7	55.2	60.4	66.2	70	
	qw l/s	8.0	7.5	7.0	6.4	6.1	
	dpw kPa	21	18	16	13	12	
7	Pf kW	178	166	155	142	134	
	Pa kW	51.8	56.4	61.5	67.3	71.1	
	qw l/s	8.5	8.0	7.4	6.8	6.4	
	dpw kPa	23	20	18	15	13	
9	Pf kW	187	175	163	150	142	
	Pa kW	53	57.6	62.8	68.6	72.4	
	qw l/s	9.0	8.4	7.8	7.2	6.8	
	dpw kPa	26	23	20	17	15	
11	Pf kW	197	185	172	158	149	
	Pa kW	54.2	58.9	64.1	69.9	73.7	
	qw l/s	9.4	8.9	8.2	7.6	7.1	
	dpw kPa	29	25	22	18	16	
13	Pf kW	207	194	180	166	97.1	
	Pa kW	55.5	60.2	65.5	71.3	33.4	
	qw l/s	9.9	9.3	8.6	7.9	4.7	
	dpw kPa	32	28	24	20	7	
15	Pf kW	217	204	189	174	103	
	Pa kW	56.9	61.6	66.9	72.9	33.9	
	qw l/s	10.4	9.8	9.1	8.3	4.9	
	dpw kPa	35	31	26	22	8	

EWYQ G-XS

			075						085					
Twout	Tain		-5	0	2	5	7	10	-5	0	2	5	7	10
30	Pt	kW	61.5	69.9	73.6	79.4	83.6	90.4	67.8	76.8	80.8	87.2	91.7	99.1
	Pat	kW	19.2	19.5	19.6	19.8	20	20.2	21.4	21.7	21.8	22.1	22.2	22.4
	qw	l/s	3.0	3.4	3.5	3.8	4.0	4.3	3.3	3.7	3.9	4.2	4.4	4.8
	dpw	kPa	5	7	8	9	10	11	5	7	7	8	9	11
35	Pt	kW	61.6	69.8	73.4	79.2	83.2	89.8	68	76.9	80.8	87.1	91.6	98.8
	Pat	kW	21	21.3	21.4	21.6	21.8	22	23.4	23.7	23.9	24.1	24.2	24.5
	qw	l/s	3.0	3.4	3.5	3.8	4.0	4.3	3.3	3.7	3.9	4.2	4.4	4.8
	dpw	kPa	5	7	8	9	10	11	5	7	7	8	9	11
40	Pt	kW	61.7	69.8	73.3	78.9	82.8	89.1	68.4	77.1	80.9	87	91.4	98.4
	Pat	kW	23.1	23.4	23.5	23.7	23.8	24.1	25.8	26.1	26.2	26.4	26.5	26.8
	qw	l/s	3.0	3.4	3.5	3.8	4.0	4.3	3.3	3.7	3.9	4.2	4.4	4.7
	dpw	kPa	5	7	8	9	10	11	5	7	7	8	9	11
45	Pt	kW	61.7	69.7	73	78.4	82.2	88.3	68.9	77.4	81.1	87	91.2	97.9
	Pat	kW	25.5	25.7	25.8	26	26.2	26.4	28.5	28.8	28.9	29.1	29.2	29.5
	qw	l/s	3.0	3.4	3.5	3.8	4.0	4.3	3.3	3.7	3.9	4.2	4.4	4.7
	dpw	kPa	5	7	8	9	10	11	5	7	7	8	9	11
50	Pt	kW		69.4	72.7	77.8	81.5	87.2		77.7	81.3	87	91	97.5
	Pat	kW		28.5	28.6	28.7	28.8	29.1		31.9	32.1	32.2	32.4	32.6
	qw	l/s		3.4	3.5	3.8	3.9	4.2		3.8	3.9	4.2	4.4	4.7
	dpw	kPa		7	8	9	9	11		7	7	8	9	10
55	Pt	kW												
	Pat	kW												
	qw	l/s												
	dpw	kPa												
			100						110					
Twout	Tain		-5	0	2	5	7	10	-5	0	2	5	7	10
30	Pt	kW	84	95.6	101	109	115	125	96	110	116	125	132	143
	Pat	kW	24.9	25.3	25.5	25.7	25.9	26.3	28.6	29	29.2	29.6	29.8	30.2
	qw	l/s	4.0	4.6	4.8	5.3	5.5	6.0	4.6	5.3	5.6	6.0	6.3	6.9
	dpw	kPa	7	8	9	11	12	14	8	11	12	14	16	18
35	Pt	kW	83.2	94.4	99.5	108	114	123	95.4	109	114	124	130	141
	Pat	kW	27.2	27.6	27.7	28	28.2	28.5	31.2	31.7	31.9	32.2	32.4	32.8
	qw	l/s	4.0	4.5	4.8	5.2	5.5	5.9	4.6	5.2	5.5	5.9	6.3	6.8
	dpw	kPa	6	8	9	11	12	14	8	11	12	14	15	18
40	Pt	kW	82.7	93.5	98.3	106	112	121	95	108	113	122	128	139
	Pat	kW	29.9	30.2	30.4	30.7	30.9	31.2	34.2	34.7	34.9	35.2	35.5	35.9
	qw	l/s	4.0	4.5	4.7	5.1	5.4	5.8	4.6	5.2	5.5	5.9	6.2	6.7
	dpw	kPa	6	8	9	10	12	13	8	10	12	13	15	17
45	Pt	kW	82.5	92.8	97.4	105	110	119	94.9	107	112	121	127	136
	Pat	kW	33	33.4	33.5	33.8	34	34.3	37.7	38.2	38.4	38.7	39	39.4
	qw	l/s	4.0	4.5	4.7	5.1	5.3	5.7	4.6	5.2	5.4	5.8	6.1	6.6
	dpw	kPa	6	8	9	10	11	13	8	10	11	13	14	17
50	Pt	kW		92.4	96.7	104	109	117		106	111	119	125	134
	Pat	kW		37.1	37.2	37.5	37.7	38		42.2	42.4	42.8	43	43.4
	qw	l/s		4.5	4.7	5.0	5.3	5.7		5.1	5.4	5.8	6.0	6.5
	dpw	kPa		8	9	10	11	13		10	11	13	14	16
55	Pt	kW												
	Pat	kW												
	qw	l/s												
	dpw	kPa												

EWYQ G-XS

		120						140					
Twout	Tain	-5	0	2	5	7	10	-5	0	2	5	7	10
30	Pt kW	105	119	126	136	143	155	117	133	140	151	159	172
	Pat kW	31.5	32	32.2	32.6	32.9	33.3	36.4	37	37.2	37.6	38	38.5
	qw l/s	5.0	5.7	6.0	6.5	6.9	7.4	5.6	6.4	6.7	7.3	7.6	8.3
	dpw kPa	10	13	14	17	18	22	12	16	18	20	23	27
35	Pt kW	105	119	125	135	142	153	117	133	140	150	158	171
	Pat kW	34.5	35	35.3	35.6	35.9	36.3	40	40.5	40.8	41.2	41.5	42
	qw l/s	5.0	5.7	6.0	6.5	6.8	7.3	5.6	6.4	6.7	7.2	7.6	8.2
	dpw kPa	10	13	14	16	18	21	12	16	17	20	22	26
40	Pt kW	104	118	124	133	140	151	118	133	139	149	157	169
	Pat kW	37.9	38.5	38.7	39.1	39.3	39.8	44.1	44.6	44.8	45.2	45.5	46
	qw l/s	5.0	5.7	6.0	6.4	6.7	7.3	5.7	6.4	6.7	7.2	7.6	8.1
	dpw kPa	10	13	14	16	18	20	12	16	17	20	22	26
45	Pt kW	104	117	123	132	138	149	118	132	139	149	156	167
	Pat kW	41.7	42.3	42.6	43	43.2	43.7	48.7	49.2	49.4	49.8	50	50.5
	qw l/s	5.0	5.7	5.9	6.4	6.7	7.2	5.7	6.4	6.7	7.2	7.5	8.1
	dpw kPa	10	12	14	16	17	20	13	16	17	20	22	25
50	Pt kW		116	122	130	136	146		132	138	147	154	165
	Pat kW		46.7	46.9	47.3	47.6	48		54.3	54.5	54.9	55.2	55.7
	qw l/s		5.6	5.9	6.3	6.6	7.1		6.4	6.7	7.1	7.4	8.0
	dpw kPa		12	13	15	17	19		16	17	20	21	24
55	Pt kW												
	Pat kW												
	qw l/s												
	dpw kPa												
		160											
Twout	Tain	-5	0	2	5	7	10						
30	Pt kW	127	144	151	164	172	186						
	Pat kW	39.7	40.1	40.3	40.7	41	41.4						
	qw l/s	6.1	6.9	7.3	7.8	8.3	8.9						
	dpw kPa	13	16	18	21	23	27						
35	Pt kW	128	144	151	163	172	185						
	Pat kW	43.8	44.1	44.3	44.6	44.8	45.3						
	qw l/s	6.1	6.9	7.3	7.8	8.2	8.9						
	dpw kPa	13	16	18	21	23	27						
40	Pt kW	129	145	152	163	171	184						
	Pat kW	48.4	48.7	48.8	49.1	49.3	49.7						
	qw l/s	6.2	7.0	7.3	7.8	8.2	8.9						
	dpw kPa	13	16	18	21	23	26						
45	Pt kW	130	145	152	163	170	183						
	Pat kW	53.7	53.8	53.9	54.1	54.3	54.7						
	qw l/s	6.3	7.0	7.3	7.8	8.2	8.8						
	dpw kPa	13	16	18	21	23	26						
50	Pt kW		146	152	162	169	181						
	Pat kW		59.7	59.7	59.9	60.1	60.4						
	qw l/s		7.0	7.3	7.8	8.2	8.8						
	dpw kPa		17	18	20	22	26						
55	Pt kW												
	Pat kW												
	qw l/s												
	dpw kPa												

EWYQ G-XR

			075						085					
Twout	Tain		-5	0	2	5	7	10	-5	0	2	5	7	10
30	Pt	kW	61.5	69.9	73.6	79.4	83.6	90.4	67.8	76.8	80.8	87.2	91.7	99.1
	Pat	kW	19.2	19.5	19.6	19.8	20	20.2	21.4	21.7	21.8	22.1	22.2	22.4
	qw	l/s	3.0	3.4	3.5	3.8	4.0	4.3	3.3	3.7	3.9	4.2	4.4	4.8
	dpw	kPa	5	7	8	9	10	11	5	7	7	8	9	11
35	Pt	kW	61.6	69.8	73.4	79.2	83.2	89.8	68	76.9	80.8	87.1	91.6	98.8
	Pat	kW	21	21.3	21.4	21.6	21.8	22	23.4	23.7	23.9	24.1	24.2	24.5
	qw	l/s	3.0	3.4	3.5	3.8	4.0	4.3	3.3	3.7	3.9	4.2	4.4	4.8
	dpw	kPa	5	7	8	9	10	11	5	7	7	8	9	11
40	Pt	kW	61.7	69.8	73.3	78.9	82.8	89.1	68.4	77.1	80.9	87	91.4	98.4
	Pat	kW	23.1	23.4	23.5	23.7	23.8	24.1	25.8	26.1	26.2	26.4	26.5	26.8
	qw	l/s	3.0	3.4	3.5	3.8	4.0	4.3	3.3	3.7	3.9	4.2	4.4	4.7
	dpw	kPa	5	7	8	9	10	11	5	7	7	8	9	11
45	Pt	kW	61.7	69.7	73	78.4	82.2	88.3	68.9	77.4	81.1	87	91.2	97.9
	Pat	kW	25.5	25.7	25.8	26	26.2	26.4	28.5	28.8	28.9	29.1	29.2	29.5
	qw	l/s	3.0	3.4	3.5	3.8	4.0	4.3	3.3	3.7	3.9	4.2	4.4	4.7
	dpw	kPa	5	7	8	9	10	11	5	7	7	8	9	11
50	Pt	kW		69.4	72.7	77.8	81.5	87.2		77.7	81.3	87	91	97.5
	Pat	kW		28.5	28.6	28.7	28.8	29.1		31.9	32.1	32.2	32.4	32.6
	qw	l/s		3.4	3.5	3.8	3.9	4.2		3.8	3.9	4.2	4.4	4.7
	dpw	kPa		7	8	9	9	11		7	7	8	9	10
55	Pt	kW												
	Pat	kW												
	qw	l/s												
	dpw	kPa												
			100						110					
Twout	Tain		-5	0	2	5	7	10	-5	0	2	5	7	10
30	Pt	kW	84	95.6	101	109	115	125	96	110	116	125	132	143
	Pat	kW	24.9	25.3	25.5	25.7	25.9	26.3	28.6	29	29.2	29.6	29.8	30.2
	qw	l/s	4.0	4.6	4.8	5.3	5.5	6.0	4.6	5.3	5.6	6.0	6.3	6.9
	dpw	kPa	7	8	9	11	12	14	8	11	12	14	16	18
35	Pt	kW	83.2	94.4	99.5	108	114	123	95.4	109	114	124	130	141
	Pat	kW	27.2	27.6	27.7	28	28.2	28.5	31.2	31.7	31.9	32.2	32.4	32.8
	qw	l/s	4.0	4.5	4.8	5.2	5.5	5.9	4.6	5.2	5.5	5.9	6.3	6.8
	dpw	kPa	6	8	9	11	12	14	8	11	12	14	15	18
40	Pt	kW	82.7	93.5	98.3	106	112	121	95	108	113	122	128	139
	Pat	kW	29.9	30.2	30.4	30.7	30.9	31.2	34.2	34.7	34.9	35.2	35.5	35.9
	qw	l/s	4.0	4.5	4.7	5.1	5.4	5.8	4.6	5.2	5.5	5.9	6.2	6.7
	dpw	kPa	6	8	9	10	12	13	8	10	12	13	15	17
45	Pt	kW	82.5	92.8	97.4	105	110	119	94.9	107	112	121	127	136
	Pat	kW	33	33.4	33.5	33.8	34	34.3	37.7	38.2	38.4	38.7	39	39.4
	qw	l/s	4.0	4.5	4.7	5.1	5.3	5.7	4.6	5.2	5.4	5.8	6.1	6.6
	dpw	kPa	6	8	9	10	11	13	8	10	11	13	14	17
50	Pt	kW		92.4	96.7	104	109	117		106	111	119	125	134
	Pat	kW		37.1	37.2	37.5	37.7	38		42.2	42.4	42.8	43	43.4
	qw	l/s		4.5	4.7	5.0	5.3	5.7		5.1	5.4	5.8	6.0	6.5
	dpw	kPa		8	9	10	11	13		10	11	13	14	16
55	Pt	kW												
	Pat	kW												
	qw	l/s												
	dpw	kPa												

EWYQ G-XR

		120						140					
Twout	Tain	-5	0	2	5	7	10	-5	0	2	5	7	10
30	Pt kW	105	119	126	136	143	155	117	133	140	151	159	172
	Pat kW	31.5	32	32.2	32.6	32.9	33.3	36.4	37	37.2	37.6	38	38.5
	qw l/s	5.0	5.7	6.0	6.5	6.9	7.4	5.6	6.4	6.7	7.3	7.6	8.3
	dpw kPa	10	13	14	17	18	22	12	16	18	20	23	27
35	Pt kW	105	119	125	135	142	153	117	133	140	150	158	171
	Pat kW	34.5	35	35.3	35.6	35.9	36.3	40	40.5	40.8	41.2	41.5	42
	qw l/s	5.0	5.7	6.0	6.5	6.8	7.3	5.6	6.4	6.7	7.2	7.6	8.2
	dpw kPa	10	13	14	16	18	21	12	16	17	20	22	26
40	Pt kW	104	118	124	133	140	151	118	133	139	149	157	169
	Pat kW	37.9	38.5	38.7	39.1	39.3	39.8	44.1	44.6	44.8	45.2	45.5	46
	qw l/s	5.0	5.7	6.0	6.4	6.7	7.3	5.7	6.4	6.7	7.2	7.6	8.1
	dpw kPa	10	13	14	16	18	20	12	16	17	20	22	26
45	Pt kW	104	117	123	132	138	149	118	132	139	149	156	167
	Pat kW	41.7	42.3	42.6	43	43.2	43.7	48.7	49.2	49.4	49.8	50	50.5
	qw l/s	5.0	5.7	5.9	6.4	6.7	7.2	5.7	6.4	6.7	7.2	7.5	8.1
	dpw kPa	10	12	14	16	17	20	13	16	17	20	22	25
50	Pt kW		116	122	130	136	146		132	138	147	154	165
	Pat kW		46.7	46.9	47.3	47.6	48		54.3	54.5	54.9	55.2	55.7
	qw l/s		5.6	5.9	6.3	6.6	7.1		6.4	6.7	7.1	7.4	8.0
	dpw kPa		12	13	15	17	19		16	17	20	21	24
55	Pt kW												
	Pat kW												
	qw l/s												
	dpw kPa												
		160											
Twout	Tain	-5	0	2	5	7	10						
30	Pt kW	127	144	151	164	172	186						
	Pat kW	39.7	40.1	40.3	40.7	41	41.4						
	qw l/s	6.1	6.9	7.3	7.8	8.3	8.9						
	dpw kPa	13	16	18	21	23	27						
35	Pt kW	128	144	151	163	172	185						
	Pat kW	43.8	44.1	44.3	44.6	44.8	45.3						
	qw l/s	6.1	6.9	7.3	7.8	8.2	8.9						
	dpw kPa	13	16	18	21	23	27						
40	Pt kW	129	145	152	163	171	184						
	Pat kW	48.4	48.7	48.8	49.1	49.3	49.7						
	qw l/s	6.2	7.0	7.3	7.8	8.2	8.9						
	dpw kPa	13	16	18	21	23	26						
45	Pt kW	130	145	152	163	170	183						
	Pat kW	53.7	53.8	53.9	54.1	54.3	54.7						
	qw l/s	6.3	7.0	7.3	7.8	8.2	8.8						
	dpw kPa	13	16	18	21	23	26						
50	Pt kW		146	152	162	169	181						
	Pat kW		59.7	59.7	59.9	60.1	60.4						
	qw l/s		7.0	7.3	7.8	8.2	8.8						
	dpw kPa		17	18	20	22	26						
55	Pt kW												
	Pat kW												
	qw l/s												
	dpw kPa												

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