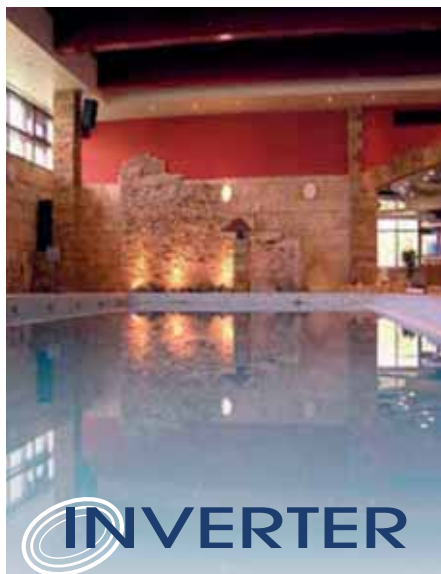


Dry-Pool

DAESY-DRESY-DTESY-DEESY 108÷2140

Dehumidification capacity: 8÷140 l/h



- **R410A**
- **Integrated regulation**
- **Double panels**
- **Thermal cut profiles**
- **Version with brushless EC fans**

Air and/or water cooled centrifugal fan POOL DEHUMIDIFIERS.
Range with scroll hermetic compressors and R410A refrigerant gas.

Construction features

- Frame and load-bearing structure: extruded profiles aluminium alloy with a cross section of 40 x 40 mm, thermal cut-type with concealed screws. Balloon sealing gaskets fitted onto the profile. • Aluminium base.
- Panelling: 25 mm double sheet steel (galvanised steel plate on the inside and pre-painted with RAL 9002 on the outside). Hot-injected polyurethane insulation (average density 40 kg/m³).
- Compressor: scroll type, rotary, hermetic complete with thermal protection and casing heater.
- Evaporating coil: made with copper pipes and fins with a condensate drain pan.
- Condensing coil: made with copper pipes and aluminium fins.
- Water side heat exchanger (DRESY-DTESY-DEESY): braze-welded plates in special stainless steel for chlorinated water or tube and shell in Cu/Ni for water treated with saline chlorination. The heat exchanger in the DEESY models features stainless steel braze-welded plates that are not suitable for chlorinated water. Water flow differential pressure switch.
- Fan: double intake centrifugal fan with external motor and belt transmission with variable-pitch pulleys. Standard set up with vertical air delivery. Available static pressure of 100 Pa.
- Filters: class G3 fitted inside the intake.
- Cooling circuit: separate from the aeraulic circuit and complete with a dryer filter, humidity indicator, high and low gas pressure gauges, load connections, high and low pressure side safety pressure switch, thermostatic expansion valve, liquid receiver (DRESY-DTESY-DEESY version), high pressure safety valve and R410A refrigerant load.
- Electrical panel: set up for 230V-1ph+N-50Hz power supply (mod. 108 single-phase) and 400V-3ph+N-50Hz (mod. 108÷2140 three-phase). It is complete with master switch with door-lock device, circuit breaker switches, power contactors, auxiliary circuit protection fuses, microprocessor electronic control board.

Versions

- DAESY: dehumidifier with 100% pool air side heat exchange.
- DRESY: dehumidifier with 45% pool water side recovery unit.
- DTESY: dehumidifier with 100% pool water side recovery unit.
- DEESY: dehumidifier with 100% pool water side recovery unit and possibility of 100% heat exchange on an external dry-cooler.

Options

- Pre-painted steel roof for outdoor installation.
- Intake opposite side horizontal air delivery.
- Intake side horizontal air delivery.

Factory fitted accessories

- FM M6 - Highly efficient compact delivery air pre-filters, Class (EN 779:2012) M6, glass fibre filtration medium, to replace the standard G3 (only available with VM EC accessory).
- BRA (*) - Integral hot water coil complete with 3-way valve fully managed by micro-processor and 2-way balancing valve on the bypass.
- BA EXT - Technical compartment to house the BA accessory in machines installed outdoors.
- BA RAP (***) - Additional copper/pre-painted aluminium hot water coil.
- BA BRR (***) - Additional copper/copper hot water coil.
- RAP (***) - Copper/pre-painted aluminium condensing coil.
- BRR (***) - Copper/copper condensing coil.
- BE (**) - Supplementary electrical coil managed by micro-processor with step input logic.
- VM100 - Delivery fan with available static pressure of 100 Pa. The accessory differs depending on the composition of the selected machine (D~ESY+BA; D~ESY+DAHR; D~ESY+BA+DAHR). The presence of the DAFC module and/or BE accessory does not modify the available static pressure.
- VM150 - Delivery fan with available static pressure of 150 Pa. The accessory differs depending on the composition of the selected machine (D~ESY; D~ESY+BA; D~ESY+DAHR; D~ESY+BA+DAHR). The presence of the DAFC module and/or BE accessory does not modify the available static pressure.
- VM200 - Delivery fan with available static pressure of 200 Pa. The accessory differs depending on the composition of the selected machine



(D~ESY; D~ESY+BA; D~ESY+DAHR; D~ESY+BA+DAHR). The presence of the DAFC module and/or BE accessory does not modify the available static pressure.

- VM EC - Brushless EC type of delivery fan with impeller made of corrosion resistant composite plastic with backward curved wing profile blades.
- Static and dynamic balancing of the entire assembly (motor/impeller), built in accordance with standard DIN ISO 1940. G6.3 balancing grade.
- External rotor motor with electronic commutation (EC), with integrated electronics and protected against overload through active temperature management.
- Programmable relay for reporting faults. Integrated motor protection and motor heating operation.
- Motor with IP54 protection rating, thermal class 155.
- Energy efficiencies higher than the second phase objectives (year 2015) of EU Regulation 327/2011, on the methods of application of European Directive 2009/125/EC.
- Complies with product EMC and EC Standards.
- Motor and fan are fixed to a sturdy and compact structure in galvanised sheet steel including galvanised steel intake bell mouth and integrated pressure probe to measure the air flow.
- The fan is equipped with constant flow control and work point display. Maximum available static pressure (referred to D~ESY + BA+ DAHR configuration)=500Pa.
- VMEPOX - Delivery fan treatment with epoxy paint (not available for VM EC version).
- DSP Base (****) - Double humidity setpoint by digital input.
- DSP Ev (****) - Double humidity setpoint by digital input.

Separately supplied accessories

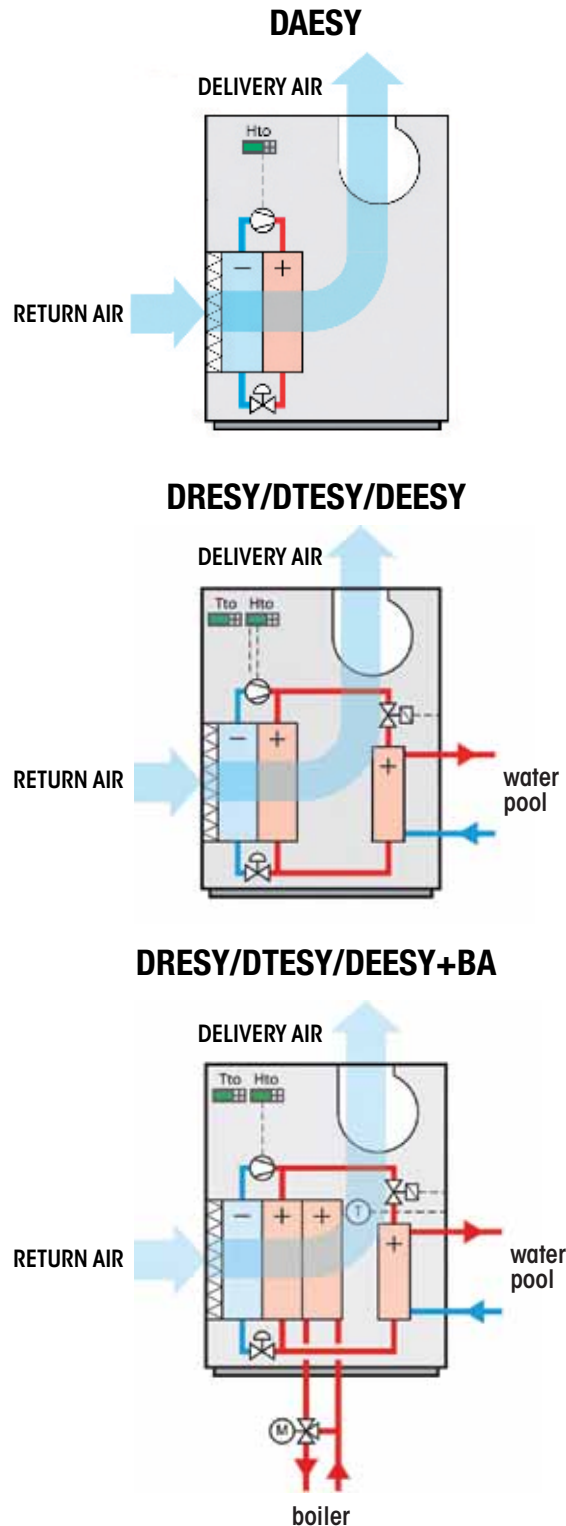
- KFM F8 - Additional module with highly efficient compact delivery air pre-filters, Class (EN 779:2012) F8, glass fibre filtration medium, (only available with VM EC accessory).
- KUSB Ev - RS485/USB serial converter for Advanced control.
- KRS485 Ev - RTU Modbus protocol RS485 serial interface for Advanced control.
- FTT10 Ev - Lon serial interface (standard electric FTT10) for Advanced control.
- KBE - Serial interface for Bacnet ip protocol.
- KBM - RS485 interface for Bacnet ms/tp protocol.
- KTR Ev - Remote keyboard for Advanced control. The remote keyboard is not available for machines fitted with basic control.
- KRJ1220 - 20 m-long connection cable for KTR.
- KRJ1230 - 30 m-long connection cable for KTR.
- KRJ200 - KTR remote control kit for distances between 50 and 200 m.

(*) Not available together with the BE accessory.

(**) Not available together with the BA accessory.

(***) Accessory that requires longer delivery time, please check when ordering.

(~) Extended to all A, R, T, E versions.



Dry-Pool

DAESY-DRESY-DTESY-DEESY 108÷2140

ADDITIONAL FRESH AIR HANDLING UNIT MODULES

DAFC: FREE-COOLING MODULE.

Construction features

- Fan: dual intake centrifuge with backward impeller blades that are statically and dynamically balanced, taper fitted onto the steel shaft and supported by moveable ball bearings. External motor with IE2 efficiency class, equipped with internal thermal protection, actuated by pulley transmission, which is made of cast iron and has a variable pitch. The motor is installed on a belt-tensioner slide fixed to the fan on a robust double profile galvanised steel structure with high efficiency rubber anti-vibration mountings positioned in between. Air return with horizontal flow. Available static pressure of 100 Pa.
- Structure and frame: thermal cut extruded aluminium alloy profiles with a 40x40mm section 25mm thick double plate panelling (galvanised internally and pre-painted externally) with interposed highly effective and soundproofing injected polyurethane insulation. Interlocking seals in the balloon type profile.
- Motorised dampers: in the aluminium wing profile. The 3 dampers (external air intake, recirculation, expulsion) are sized for 100% capacity and fitted with factory-mounted modulating actuators.

DAFC - Factory fitted accessories

- VR150: return fan with available static pressure of 150 Pa.
- VR200: return fan with available static pressure of 200 Pa.
- VR EC: Brushless EC type of RETURN fan with impeller made of composite corrosion resistant plastic with backward wing profile blades.
- Static and dynamic balancing of the entire assembly (motor-impeller), constructed in accordance with standard DIN ISO 1940. Degree of balancing G6.3.
- External electronic commutation rotor motor (EC) with integrated electronics and protection against overloads due to active temperature management.
- Programmable relay to signal faults. Motor protection and integrated heating motor operation.
- IP54 motor protection rating, thermal class 155.
- Greater energy efficiencies than the target values of the second tier (2015) of Commission Regulation (EU) 327/2011, regarding the application methods of the European Directive 2009/125/EC.
- In compliance with product EMC and EC regulations.
- Motor and fan are mounted on a robust and compact galvanised steel sheet structure with a galvanised steel suction nozzle and integrated pressure probe for measuring the air flow
- The fan is fitted with constant flow control and a display of the working point.
- Maximum available static pressure (referred to the DAHR configuration)=500 Pa
- VREPOX: return fan treatment with epoxy paint (not available for VR EC version).
- EXT: steel pre-painted roof covering for outdoor installation.

DAHR: HEAT RECOVERY MODULE.

Construction features

- Fan: dual intake centrifuge with backward impeller blades that are statically and dynamically balanced, taper fitted onto the steel shaft and supported by moveable ball bearings. External motor equipped with internal thermal protection, actuated by pulley transmission, which is made of cast iron and has a variable pitch. The motor is installed on a belt-tensioner slide fixed to the fan on a robust double profile galvanised steel structure with high efficiency rubber anti-vibration mountings positioned in between. Air return with horizontal flow. Available static pressure of 100 Pa.
- Structure and frame: thermal cut extruded aluminium alloy profiles with a 40x40mm section 25mm thick double plate panelling (galvanised internally and pre-painted externally) with interposed highly effective and soundproofing injected polyurethane insulation. Interlocking seals in the balloon type profile.
- Heat recovery: static horizontal crossed flow with pre-painted aluminium exchanger pack complete with a condensate drain pan and support frame. Nominal performance not less than 55%. 48 thick filter (mounted on the outdoor air inlet) of class G3 corrugated synthetic cell type (UNI EN 779) with 87% average weight arrestance.
- Motorised dampers: in the aluminium wing profile. The 4 dampers (external air intake, recirculation, expulsion, by-pass) are sized for 100% capacity and fitted with factory-mounted modulating actuators.

DAHR - Factory fitted accessories

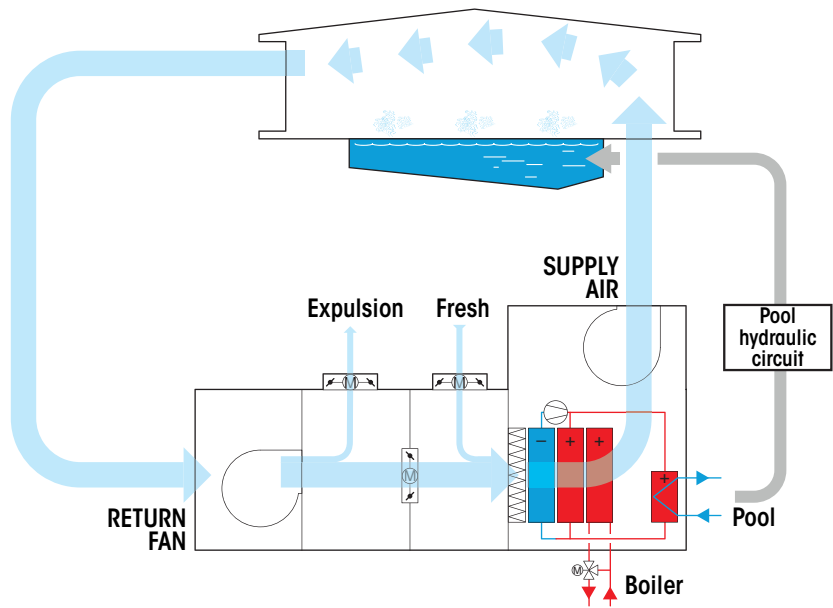
- FAE M6: compact high efficiency outdoor air pre-filters, Class M6 (EN 779:2012), filtering means made of fibreglass, which replaces the standard G3 (only available with VM-R EC accessory).
- VR150: return fan with available static pressure of 150 Pa.
- VR200: return fan with available static pressure of 200 Pa.
- VR EC: Brushless EC type of RETURN fan with impeller made of composite corrosion resistant plastic with backward wing profile blades.
- Static and dynamic balancing of the entire assembly (motor-impeller), constructed in accordance with standard DIN ISO 1940. Degree of balancing G6.3.
- External electronic commutation rotor motor (EC) with integrated electronics and protection against overloads due to active temperature management.
- Programmable relay to signal faults. Motor protection and integrated heating motor operation.
- IP54 motor protection rating, thermal class 155.
- Greater energy efficiencies than the target values of the second tier (2015) of Commission Regulation (EU) 327/2011, regarding the application methods of the European Directive 2009/125/EC.
- In compliance with product EMC and EC regulations.
- Motor and fan are mounted on a robust and compact galvanised steel sheet structure with a galvanised steel suction nozzle and integrated pressure probe for measuring the air flow.

- The fan is fitted with constant flow control and a display of the working point.
- Maximum available static pressure (referred to the DAHR configuration)=500 Pa.
- VREPOX: return fan treatment with epoxy paint (not available for VR EC version).
- EXT: steel pre-painted roof covering for outdoor installation.
- KFR M6: additional module with compact high efficiency return air filters, Class M6 (EN 779:2012), filtering means made of fibreglass (only available with VM-R EC accessory).

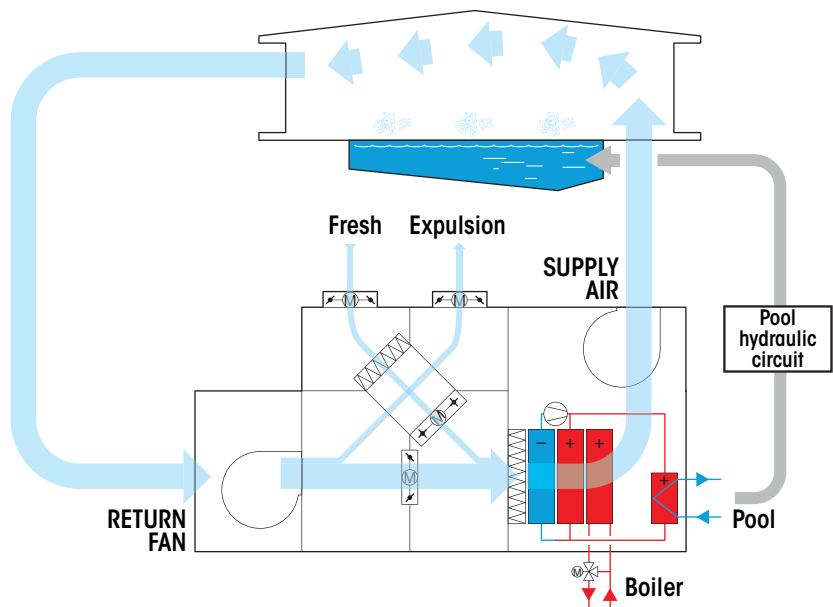
ATTENTION: the additional outdoor air handling modules must be ordered with the dehumidifier as they effect the electronic control. You cannot order the two modules separately.

Examples of combinations between the dehumidifier and the additional module

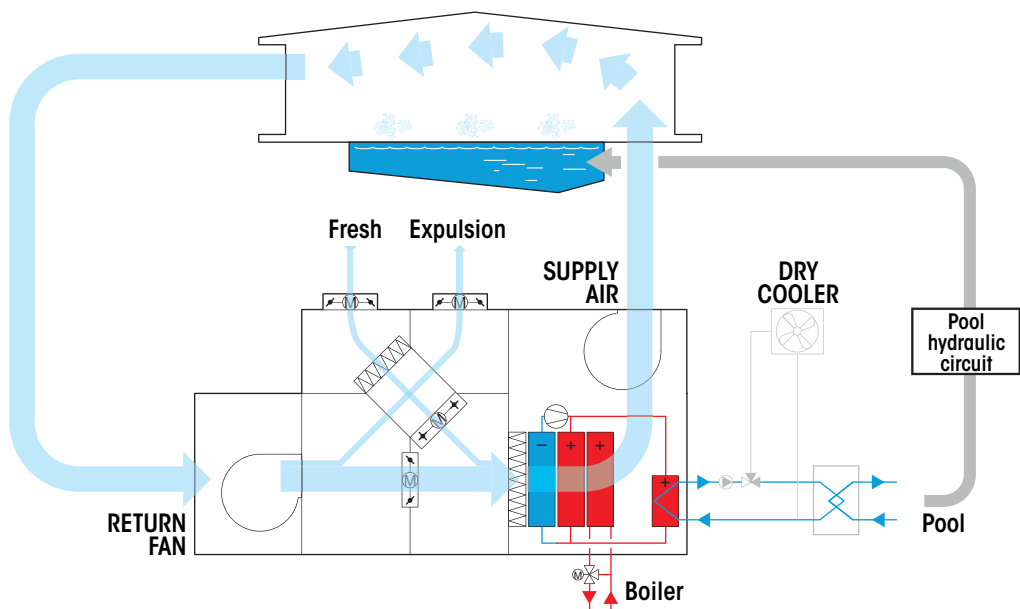
DRESY/DTESY + BA + DAFC



DRESY/DTESY + BA + DAHR



DEESY + BA + DAHR



Dry-Pool

DAESY-DRESY-DTESY-DEESY 108÷2140

DAESY-DRESY-DTESY-DEESY MODEL		108	112	115	118	122	128	131	136
② Dehumidification capacity	l/h	7,7	11,3	13,1	16,5	19,5	25,2	28,0	33,0
② 100% heating capacity transferred to the air	kW	12,6	18,8	23,0	30,1	33,9	43,7	49,6	57,6
② Total absorbed power	kW	3,2	4,9	5,4	7,0	7,4	10,0	11,3	13,1
Scroll/step compressor	no.	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
Fans/Motors	no.	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
⑤ Available static	Pa	100	100	100	100	100	100	100	100
⑤ Max available static EC Version	Pa	500	500	500	500	500	500	500	500
Nominal air flow rate	m³/h	2.200	3.000	3.500	4.500	4.700	6.200	7.200	8.200
DIMENSIONS		108	112	115	118	122	128	131	136
L - Width	mm	790	790	850	850	850	850	850	850
H - Height	mm	1.380	1.380	1.580	1.580	1.890	1.890	1.890	1.890
P - Depth	mm	1.300	1.300	1.600	1.600	1.600	1.600	1.600	2.100
DRESY MODEL		108	112	115	118	122	128	131	136
① Dehumidification capacity	l/h	7,8	11,3	14,5	18,1	21,6	27,4	30,5	36,2
① 45% heating capacity transferred to the water	kW	6,9	10,1	11,4	13,8	15,9	19,6	23,4	27,3
① Total absorbed power	kW	2,6	4,1	4,4	5,6	5,8	8,3	9,4	10,5
DTESY MODEL		108	112	115	118	122	128	131	136
③ Dehumidification capacity	l/h	8,5	12,3	14,5	18,2	21,3	27,4	-	-
③ 100% heating capacity transferred to the water	kW	14,7	20,8	24,8	31,9	35,6	45,4	-	-
③ Total absorbed power	kW	2,7	4,3	4,5	5,8	6,0	8,5	-	-
DEESY MODEL		108	112	115	118	122	128	131	136
④ Dehumidification capacity	l/h	8,3	11,9	14,2	18,2	21,3	26,6	30,1	35,9
④ 100% heating capacity transferred to the water	kW	14,7	19,7	23,7	30,7	35,6	45,4	50,2	58,6
④ Total absorbed power	kW	2,8	4,5	4,8	5,9	6,4	8,9	10,0	11,3

DAESY-DRESY-DTESY-DEESY MODEL		237	242	250	254	262	271	281	294	2111	2126	2140
② Dehumidification capacity	l/h	34,0	38,3	43,6	49,3	56,0	64,8	72,4	83,4	96,4	110,7	126,0
② 100% heating capacity transferred to the air	kW	59,8	67,8	78,1	88,0	100,5	116,4	121,7	143,2	183,3	204,8	231,7
② Total absorbed power	kW	9,0	15,1	18,5	20,1	22,1	27,0	32,1	35,9	44,9	53,7	60,0
Scroll/step compressor	no.	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
Fans/Motors	no.	1/1	1/1	1/1	1/1	1/1	1/1	1/1	3/3	3/3	3/3	3/3
⑤ Available static	Pa	100	100	100	100	100	100	100	100	100	100	100
⑤ Max available static EC Version	Pa	500	500	500	500	500	500	500	500	500	500	500
Nominal air flow rate	m³/h	9.000	9.300	11.000	12.400	14.400	16.500	18.000	21.000	22.000	25.000	27.000
DIMENSIONS		237	242	250	254	262	271	281	294	2111	2126	2140
L - Width	mm	850	850	850	1.230	1.230	1.230	1.230	1.230	1.230	1.230	1.230
H - Height	mm	1.890	1.890	1.890	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.300
P - Depth	mm	2.270	2.270	2.270	2.870	2.870	2.870	2.870	3.370	3.870	3.870	3.870
DRESY MODEL		237	242	250	254	262	271	281	294	2111	2126	2140
① Dehumidification capacity	l/h	37,3	42,0	48,7	53,9	61,2	71,0	80,7	93,7	111,1	127,1	144,6
① 45% heating capacity transferred to the water	kW	27,4	31,8	39,0	41,4	46,8	56,1	61,0	69,7	84,2	96,7	109,6
① Total absorbed power	kW	10,8	11,9	14,2	16,0	18,1	21,8	25,2	28,5	34,6	40,9	45,4
DTESY MODEL		237	242	250	254	262	271	281	294	2111	2126	2140
③ Dehumidification capacity	l/h	37,3	41,7	48,3	53,5	-	-	-	-	-	-	-
③ 100% heating capacity transferred to the water	kW	61,5	69,5	81,0	89,6	-	-	-	-	-	-	-
③ Total absorbed power	kW	11,1	12,2	14,6	16,5	-	-	-	-	-	-	-
DEESY MODEL		237	242	250	254	262	271	281	294	2111	2126	2140
④ Dehumidification capacity	l/h	37,3	41,0	48,1	52,4	60,2	70,3	78,8	91,6	109,8	124,8	142,4
④ 100% heating capacity transferred to the water	kW	60,8	68,2	79,8	89,6	101,5	118,0	126,3	147,5	184,7	206,8	232,3
④ Total absorbed power	kW	11,3	12,8	15,3	17,3	19,1	23,1	26,7	30,1	35,8	43,1	48,5

Data at the following conditions:

- ① Transferring heat to the air and the water. Ambient air temperature: 27°C, 65% RH in/out pool water temperature: 26/32°C.
- ② Transferring heat only to the air. Ambient temperature: 27°C, 65% RH
- ③ Transferring heat only to the water. Ambient air temperature: 27°C, 65% RH 26/32°C in/out pool water temperature.
- ④ Transferring heat only to the water of the Dry-Cooler. Ambient air temperature: 27°C, 65% RH 31/37°C in/out water temperature.
- ⑤ Without the BA accessory and/or the DAHR additional module.