

CATALOGUE CARD KM S | L | XL KARTA KATALOGOWA KM S | L | XL

GENERAL INFORMATION | INFORMACJE OGÓLNE

EN

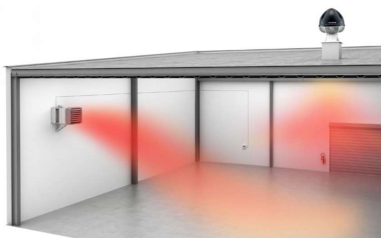


- It is designed for delivering fresh air to the room.
- KM S mixing chamber is dedicated to operate with LEO S units. KM L mixing chamber is dedicated to operate with LEO L. KM XL mixing chamber is dedicated to operate with LEO XL units. Easy to mount thanks to small size and weight.
- Mixing chamber is equipped with filter coarse 80% class (PN-EN ISO 16890-1E).
- Steel casing.

PL

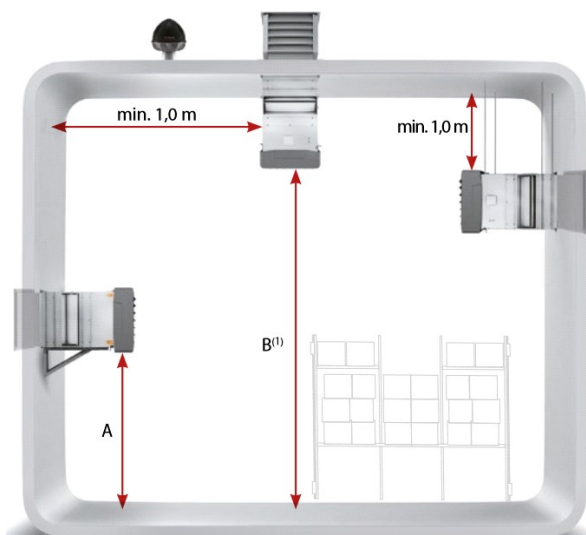
- Umożliwia ona dostarczenie świeżego (zewnątrznego) powietrza do pomieszczenia.
- Komora mieszania KM S przystosowana jest do współpracy z nagrzewnicami powietrza LEO S. Komora mieszania KM L przystosowana jest do współpracy z nagrzewnicami powietrza LEO L. Komora mieszania KM XL przystosowana jest do współpracy z nagrzewnicami powietrza LEO XL.
- Standardowo komora wyposażona jest w filtr kasetowy klasy coarse 80% (PN-EN ISO 16890-1E).
- Możliwa jest filtracja powietrza zewnętrznego i recyrkulacyjnego lub tylko zewnętrznego.
- Komora dostępna jest w wykonaniu z blachy ocynkowanej.

CONTROL SYSTEM KM I AUTOMATYKA KM



- Regulation of dampers depends on outside air temperature | regulacja przepustnic względem temperatury zewnętrznej
- smooth regulation of supplied air temperature | kontrola temperatury powietrza nawiewanego do pomieszczenia
- balance, overpressure or underpressure to roof fans | bilans, nadciśnienie lub podciśnienie względem wentylatorów dachowych
- antifreeze protection | ochrona przeciwzamrożeniowa urządzenia
- possibility of connection to BMS | możliwość podłączenia do BMS
- possibility to connect gas detection unit | możliwość pracy względem czujnika CO₂ lub wilgoci
- integration with Flowair System | integracja do Systemu Flowair

INSTALLATION I MOŻLIWOŚĆ MONTAŻU

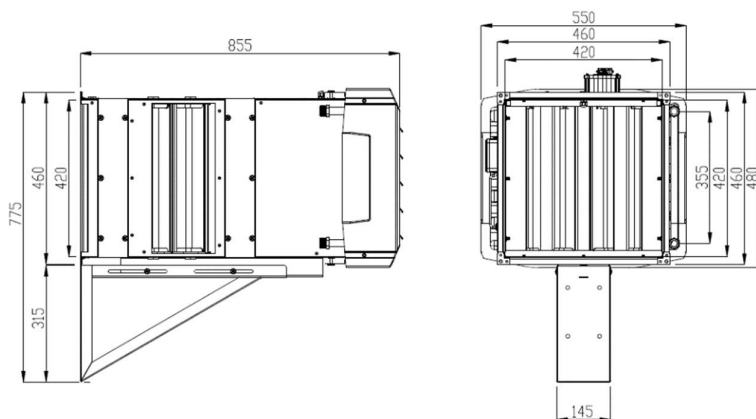


| | A | B |
|-------------|---------|---------|
| S1 + KM S | <3,0 | 2,5-4,5 |
| S2 + KM S | <3,0 | 2,5-4,0 |
| S3 + KM S | <3,0 | 2,5-4,0 |
| L1 + KM L | 2,5-5,0 | 2,5-6,5 |
| L2 + KM L | 2,5-5,0 | 2,5-6,0 |
| L3 + KM L | 2,5-5,0 | 2,5-5,5 |
| XL2 + KM XL | 2,5-5,0 | 2,5-7,0 |
| XL3 + KM XL | 2,5-5,0 | 2,5-6,0 |

- (1) For air blades installed vertically. When mounting under a ceiling, the mounting height should be selected depending on the non-isothermal vertical range. | Przy pionowym ułożeniu kierownic powietrza. Przy montażu podstropowym wysokość montażu należy dobrać w zależności od zasięgu pionowego nieizotermicznego.

TECHNICAL DATA I DANE TECHNICZNE

LEO S1 | S2 | S3 + KM S



| | LEO S1 + KM S | | | LEO S2 + KM S | | | LEO S3 + KM S | | |
|------------------------------------------------------------------------------------------------|-------------------------------|------|------|---------------|------|------|---------------|------|------|
| | III | II | I | III | II | I | III | II | I |
| Gear Bieg | | | | | | | | | |
| Max airflow [m ³ /h]* Max. strumień przepływu powietrza [m ³ /h]* | 1200 | 850 | 550 | 1100 | 800 | 500 | 1000 | 700 | 450 |
| Power supply [V/Hz] Zasilanie [V/Hz] | 230/50 | | | | | | | | |
| Max current consumption [A] Max. pobór prądu [A] | 0,5 | 0,4 | 0,3 | 0,6 | 0,4 | 0,3 | 0,6 | 0,4 | 0,3 |
| Max power consumption [W] Max. pobór mocy [W] | 120 | 90 | 70 | 130 | 90 | 70 | 130 | 90 | 70 |
| IP/Insulation class IP/Klasa izolacji | 54 /F | | | | | | | | |
| Max acoustic pressure level [dB(A)]** Max. poziom ciśnienia akustycznego [dB(A)]** | 56,3 | 50,7 | 43,9 | 56,3 | 50,7 | 43,9 | 56,3 | 50,7 | 43,9 |
| Horizontal range*** [m] Zasięg poziomy*** [m] | 8,0 | 6,0 | 4,0 | 7,5 | 5,5 | 3,5 | 7,0 | 5,0 | 3,0 |
| Vertical range**** [m] Zasięg pionowy**** [m] | 3,4 | 2,6 | 1,8 | 3,2 | 2,4 | 1,7 | 2,9 | 2,2 | 1,5 |
| Max heating water temperature [°C] Max. temp. wody grzewczej [°C] | 120 | | | | | | | | |
| Max operating pressure [MPa] Max. ciśnienie robocze [MPa] | 1,6 | | | | | | | | |
| Connection Przyłącze | ½" | | | | | | | | |
| Installation Środowisko pracy | Indoor Wewnątrz pomieszczeń | | | | | | | | |
| Max working temperature [°C] Max. temperatura pracy [°C] | 60 | | | | | | | | |
| Device mass [kg] Masa urządzenia [kg] | 25,9 | | | 26,8 | | | 27,9 | | |
| Mass of device filled with water [kg] Masa urządzenia napełnionego wodą [kg] | 26,6 | | | 28,0 | | | 29,3 | | |

* Max. air flow with installed filter coarse 80% and wall air intake. | Max. wydajność przy pracy urządzenia z filtrem coarse 80% oraz czeprnią powietrza .

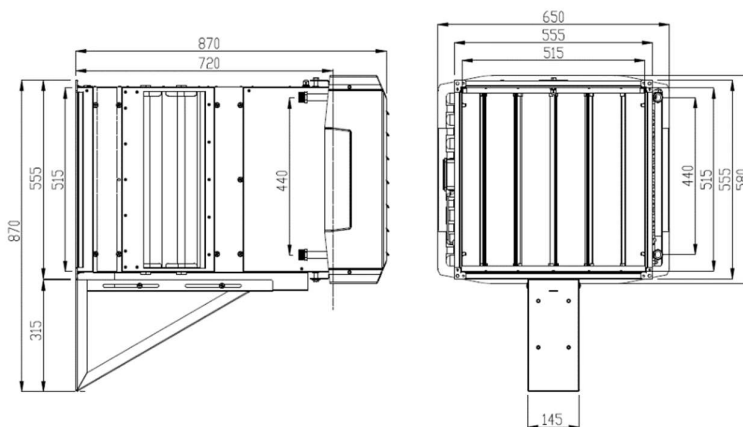
** Acoustic pressure level has been measured 5 m from the unit in a 1500m³ space with a medium sound absorption coefficient | poziom ciśnienia akustycznego dla pomieszczenia o średniej zdolności pochłaniania dźwięku, objętości 1500m³, w odległości 5 m od urządzenia

*** Horizontal isothermal range for 0,5 m/s border air stream speed | zasięg poziomy strumienia izotermicznego, przy prędkości granicznej 0,5 m/s.

**** Vertical nonisothermal range for ΔT = 5°C and for 0,5 m/s border air stream speed | zasięg pionowy strumienia nieizotermicznego przy ΔT = 5°C, przy prędkości granicznej 0,5 m/s

TECHNICAL DATA I DANE TECHNICZNE

LEO L1 | L2 | L3 + KML



| | LEO L1 + KML | | | LEO L2 + KML | | | LEO L3 + KML | | |
|----------------------------------------------------------------------------------------------|-------------------------------|------|------|--------------|------|------|--------------|------|------|
| | III | II | I | III | II | I | III | II | I |
| Gear Bieg | III | II | I | III | II | I | III | II | I |
| Max airflow [m ³ /h]* Max. strumień przepływu powietrza [m ³ /h]* | 2600 | 1600 | 800 | 2400 | 1500 | 700 | 2250 | 1350 | 600 |
| Power supply [V/Hz] Zasilanie [V/Hz] | 230/50 | | | | | | | | |
| Max current consumption [A] Max. pobór prądu [A] | 1,4 | 1,2 | 0,6 | 1,5 | 1,2 | 0,6 | 1,5 | 1,2 | 0,6 |
| Max power consumption [W] Mak. pobór mocy [W] | 330 | 240 | 120 | 340 | 240 | 120 | 340 | 240 | 120 |
| IP/ Insulation class IP/Klasa izolacji | 54 /F | | | | | | | | |
| Max acoustic pressure level [dB(A)]** Max. poziom ciśnienia akustycznego [dB(A)]** | 64,1 | 54,5 | 42,1 | 64,1 | 54,5 | 42,1 | 64,1 | 54,5 | 42,1 |
| Horizontal range*** [m] Zasięg poziomy*** [m] | 14,5 | 9,0 | 4,5 | 13,5 | 8,5 | 4,0 | 12,5 | 7,5 | 3,5 |
| Vertical range**** [m] Zasięg pionowy**** [m] | 5,3 | 3,5 | 2,0 | 5,0 | 3,3 | 1,8 | 4,7 | 3,0 | 1,6 |
| Max heating water temperature [°C] Max. temp. wody grzewczej [°C] | 120 | | | | | | | | |
| Max operating pressure [MPa] Max. ciśnienie robocze [MPa] | 1,6 | | | | | | | | |
| Connection Przyłącze | 3/4" | | | | | | | | |
| Installation Środowisko pracy | Indoor Wewnątrz pomieszczeń | | | | | | | | |
| Max working temperature [°C] Max. temperatura pracy [°C] | 60 | | | | | | | | |
| Device mass [kg] Masa urządzenia [kg] | 34,3 | | | 35,5 | | | 37,8 | | |
| Mass of device filled with water [kg] Masa urządzenia napełnionego wodą [kg] | 35,3 | | | 37,5 | | | 40,5 | | |

* Max. air flow with installed filter coarse 80% and wall air intake. | Max. wydajność przy pracy urządzenia z filtrem coarse 80% oraz czeprnią powietrza .

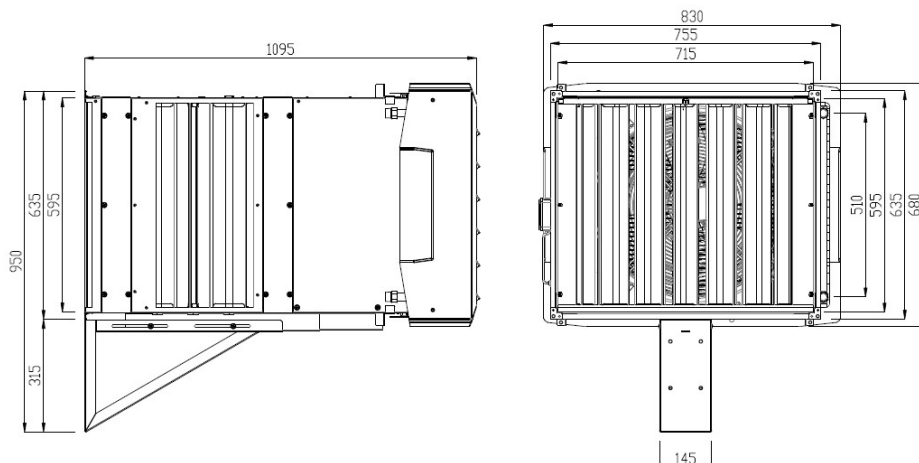
** Acoustic pressure level has been measured 5 m from the unit in a 1500m³ space with a medium sound absorption coefficient | poziom ciśnienia akustycznego dla pomieszczenia o średniej zdolności pochłaniania dźwięku, objętości 1500m³, w odległości 5 m od urządzenia

*** Horizontal isothermal range for 0,5 m/s border air stream speed | zasięg poziomy strumienia izotermicznego, przy prędkości granicznej 0,5 m/s.

**** Vertical nonisothermal range for ΔT = 5°C and for 0,5 m/s border air stream speed | zasięg pionowy strumienia nieizotermicznego przy ΔT = 5°C, przy prędkości granicznej 0,5 m/s

TECHNICAL DATA I DANE TECHNICZNE

LEO XL2 I XL3 + KM XL



| | LEO XL2 + KM XL | | | LEO XL3 + KM XL | | |
|----------------------------------------------------------------------------------------------|-------------------------------|------|------|-----------------|------|------|
| Gear Bieg | III | II | I | III | II | I |
| Max airflow [m ³ /h]* Max. strumień przepływu powietrza [m ³ /h]* | 3700 | 2700 | 1600 | 3100 | 2200 | 1300 |
| Power supply [V/Hz] Zasilanie [V/Hz] | 230/50 | | | | | |
| Max current consumption [A] Max. pobór prądu [A] | 2,3 | 1,8 | 1,4 | 2,4 | 1,8 | 1,4 |
| Max power consumption [W] Mak. pobór mocy [W] | 520 | 370 | 270 | 550 | 370 | 270 |
| IP/ Insulation class IP/Klasa izolacji | 54 /F | | | | | |
| Max acoustic pressure level [dB(A)]** Max. poziom ciśnienia akustycznego [dB(A)]** | 67,5 | 61,1 | 52,3 | 67,5 | 61,1 | 52,3 |
| Horizontal range*** [m] Zasięg poziomy*** [m] | 16,5 | 12,0 | 7,0 | 14,0 | 10,0 | 6,0 |
| Vertical range**** [m] Zasięg pionowy**** [m] | 5,8 | 4,4 | 2,9 | 4,9 | 3,7 | 2,4 |
| Max heating water temperature [°C] Max. temp. wody grzewczej [°C] | 120 | | | | | |
| Max operating pressure [MPa] Max. ciśnienie robocze [MPa] | 1,6 | | | | | |
| Connection Przyłącze | 3/4" | | | | | |
| Installation Środowisko pracy | Indoor Wewnątrz pomieszczeń | | | | | |
| Max working temperature [°C] Maks. temperatura pracy [°C] | 60 | | | | | |
| Device mass [kg] Masa urządzenia [kg] | 53,6 | | | 57,9 | | |
| Mass of device filled with water [kg] Masa urządzenia napełnionego wodą [kg] | 56,3 | | | 62,0 | | |

* Max. air flow with installed filter coarse 80% and wall air intake. | Max. wydajność przy pracy urządzenia z filtrem coarse 80% oraz czepnią powietrza .

** Acoustic pressure level has been measured 5 m from the unit in a 1500m³ space with a medium sound absorption coefficient | poziom ciśnienia akustycznego dla pomieszczenia o średniej zdolności pochłaniania dźwięku, objętości 1500m³, w odległości 5 m od urządzenia

*** Horizontal isothermal range for 0,5 m/s border air stream speed | zasięg poziomy strumienia izotermicznego, przy prędkości granicznej 0,5 m/s.

**** Vertical nonisothermal range for ΔT = 5°C and for 0,5 m/s border air stream speed | zasięg pionowy strumienia nieizotermicznego przy ΔT = 5°C, przy prędkości granicznej 0,5 m/s

HEATING CAPACITY I TABELA MOCY GRZEWCZYCH

| LEO S1 + KM S | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------------|------|-------|-------|------|---------------------|-------|-------|------|------|---------------------|-------|------|------|-------|---------------------|------|------|-------|-------|---------------------|--|--|--|--|
| Tp1 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | | | | |
| [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | | | | |
| Tw1 / Tw2 = 120/90°C | | | | | Tw1 / Tw2 = 90/70°C | | | | | Tw1 / Tw2 = 70/50°C | | | | | Tw1 / Tw2 = 60/40°C | | | | | Tw1 / Tw2 = 40/30°C | | | | |
| III : V = 1200 [m³/h], 100 % fresh air 100 % świeżego powietrza | | | | | | | | | | | | | | | | | | | | | | | | |
| -25,0 | * | | | | * | | | | | | | | | | | | | | | | | | | |
| -20,0 | 11,0 | 326 | 1,3 | 7,0 | | | | | | | | | | | | | | | | | | | | |
| -15,0 | 10,5 | 313 | 1,2 | 11,0 | 8,3 | 368 | 1,8 | 5,5 | | | | | | | | | | | | | | | | |
| -10,0 | 10,1 | 299 | 1,2 | 15,0 | 7,9 | 348 | 1,6 | 9,5 | | | | | | | | | | | | | | | | |
| -5,0 | 9,6 | 286 | 1,1 | 19,0 | 7,4 | 328 | 1,5 | 13,5 | 5,2 | 229 | 0,8 | 8,0 | | | | | | | | | | | | |
| 0,0 | 9,2 | 273 | 1,0 | 22,5 | 7,0 | 307 | 1,3 | 17,0 | 4,8 | 208 | 0,7 | 11,5 | 3,5 | 153 | 0,4 | 8,5 | 2,6 | 228 | 0,9 | 6,5 | | | | |
| 5,0 | 8,7 | 259 | 0,9 | 26,5 | 6,5 | 287 | 1,1 | 21,0 | 4,3 | 186 | 0,6 | 15,5 | 3,0 | 129 | 0,3 | 12,5 | 2,1 | 182 | 0,6 | 10,0 | | | | |
| 10,0 | 8,3 | 246 | 0,8 | 30,0 | 6,0 | 266 | 1,0 | 25,0 | 3,8 | 164 | 0,5 | 19,0 | 2,3 | 100 | 0,2 | 15,5 | 1,5 | 125 | 0,3 | 13,5 | | | | |
| 15,0 | 7,8 | 232 | 0,7 | 34,0 | 5,6 | 245 | 0,9 | 28,5 | 3,2 | 142 | 0,4 | 23,0 | 1,7 | 74 | 0,1 | 19,0 | 1,0 | 86 | 0,2 | 17,5 | | | | |
| 20,0 | 7,3 | 219 | 0,7 | 38,0 | 5,1 | 224 | 0,7 | 32,5 | 2,7 | 118 | 0,3 | 26,5 | 1,4 | 61 | 0,1 | 23,5 | 0,7 | 60 | 0,1 | 21,5 | | | | |
| LEO S2 + KM S | | | | | | | | | | | | | | | | | | | | | | | | |
| Tp1 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | | | | |
| [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | | | | |
| Tw1 / Tw2 = 120/90°C | | | | | Tw1 / Tw2 = 90/70°C | | | | | Tw1 / Tw2 = 70/50°C | | | | | Tw1 / Tw2 = 60/40°C | | | | | Tw1 / Tw2 = 40/30°C | | | | |
| III : V = 1100 [m³/h], 100 % fresh air 100 % świeżego powietrza | | | | | | | | | | | | | | | | | | | | | | | | |
| -25,0 | 22,9 | 682 | 8,2 | 37,0 | 18,5 | 817 | 12,2 | 25,0 | 14,6 | 637 | 8,3 | 14,5 | 12,6 | 548 | 6,6 | 9,0 | * | | | | | | | |
| -20,0 | 22,0 | 656 | 7,7 | 39,5 | 17,6 | 778 | 11,2 | 27,5 | 13,7 | 599 | 7,4 | 17,0 | 11,7 | 509 | 5,8 | 11,5 | 9,4 | 818 | 14,4 | 5,5 | | | | |
| -15,0 | 21,2 | 630 | 7,1 | 42,0 | 16,8 | 739 | 10,2 | 30,5 | 12,8 | 560 | 6,6 | 19,5 | 10,8 | 470 | 5,0 | 14,0 | 8,5 | 740 | 12,0 | 8,0 | | | | |
| -10,0 | 20,3 | 604 | 6,6 | 45,0 | 15,9 | 700 | 9,2 | 33,0 | 11,9 | 521 | 5,8 | 22,0 | 9,9 | 431 | 4,3 | 16,5 | 7,6 | 661 | 9,8 | 10,5 | | | | |
| -5,0 | 19,4 | 578 | 6,1 | 47,5 | 15,0 | 661 | 8,3 | 35,5 | 11,0 | 481 | 5,0 | 24,5 | 9,0 | 391 | 3,6 | 19,0 | 6,7 | 582 | 7,9 | 13,0 | | | | |
| 0,0 | 18,5 | 552 | 5,6 | 50,0 | 14,1 | 622 | 7,4 | 38,0 | 10,1 | 442 | 4,3 | 27,0 | 8,1 | 351 | 3,0 | 21,5 | 5,8 | 503 | 6,1 | 15,5 | | | | |
| 5,0 | 17,7 | 526 | 5,1 | 52,5 | 13,2 | 582 | 6,6 | 40,5 | 9,2 | 402 | 3,7 | 29,5 | 7,1 | 311 | 2,4 | 24,0 | 4,9 | 422 | 4,5 | 18,0 | | | | |
| 10,0 | 16,8 | 500 | 4,7 | 55,0 | 12,3 | 543 | 5,8 | 43,0 | 8,3 | 362 | 3,0 | 32,0 | 6,2 | 270 | 1,9 | 26,5 | 3,9 | 341 | 3,1 | 20,5 | | | | |
| 15,0 | 15,9 | 474 | 4,3 | 57,5 | 11,4 | 504 | 5,1 | 45,5 | 7,4 | 322 | 2,5 | 34,5 | 5,3 | 229 | 1,4 | 29,0 | 3,0 | 257 | 1,9 | 23,0 | | | | |
| 20,0 | 15,1 | 448 | 3,8 | 59,5 | 10,5 | 464 | 4,4 | 48,0 | 6,4 | 281 | 1,9 | 37,0 | 4,3 | 186 | 1,0 | 31,5 | 1,9 | 166 | 0,9 | 25,0 | | | | |

V - airflow | przepływ powietrza
 PT - heat capacity | moc grzewcza
 Tp1 - inlet air temp. | temperatura powietrza na wlocie do aparatu
 Tp2 - outlet air temp. | temperatura powietrza na wylocie z aparatu
 * Too low air temperature at the outlet of the device | Zbyt niska temperatura powietrza na wylocie z urządzenia

Tw1 - inlet water temp. | temperatura wody na zasilaniu wymiennika
 Tw2 - outlet water temp. | temperatura wody na powrocie z wymiennika
 Qw - water flow rate | strumień przepływu wody grzewczej
 Δpw - pressure drop of water | spadek ciśnienia wody w wymienniku



LEO S3 + KM S

| Tp1 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 |
|-------------------------------------------------------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|------|
| [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] |
| Tw1 / Tw2 = 120/90°C | | | | Tw1 / Tw2 = 90/70°C | | | | Tw1 / Tw2 = 70/50°C | | | | Tw1 / Tw2 = 60/40°C | | | | Tw1 / Tw2 = 40/30°C | | | | |
| III : V = 1000 [m³/h], 100 % fresh air 100 % świeżego powietrza | | | | | | | | | | | | | | | | | | | | |
| -25,0 | 27,6 | 821 | 6,1 | 57,0 | 22,3 | 985 | 9,1 | 41,5 | 17,5 | 764 | 6,1 | 27,0 | 15,0 | 653 | 4,8 | 19,5 | 12,4 | 1074 | 12,5 | 12,0 |
| -20,0 | 26,5 | 789 | 5,7 | 59,0 | 21,2 | 937 | 8,3 | 43,0 | 16,4 | 715 | 5,5 | 28,5 | 13,9 | 605 | 4,2 | 21,5 | 11,3 | 978 | 10,6 | 13,5 |
| -15,0 | 25,4 | 757 | 5,3 | 60,5 | 20,1 | 888 | 7,6 | 45,0 | 15,3 | 667 | 4,8 | 30,5 | 12,8 | 556 | 3,6 | 23,0 | 10,2 | 882 | 8,8 | 15,5 |
| -10,0 | 24,3 | 724 | 4,9 | 62,5 | 19,0 | 840 | 6,8 | 46,5 | 14,2 | 619 | 4,2 | 32,0 | 11,7 | 508 | 3,1 | 24,5 | 9,1 | 785 | 7,1 | 17,0 |
| -5,0 | 23,3 | 692 | 4,5 | 64,0 | 17,9 | 792 | 6,1 | 48,0 | 13,0 | 571 | 3,6 | 33,5 | 10,5 | 459 | 2,6 | 26,5 | 7,9 | 688 | 5,6 | 18,5 |
| 0,0 | 22,2 | 660 | 4,1 | 65,5 | 16,9 | 744 | 5,5 | 50,0 | 11,9 | 522 | 3,1 | 35,5 | 9,4 | 410 | 2,1 | 28,0 | 6,8 | 591 | 4,3 | 20,0 |
| 5,0 | 21,1 | 628 | 3,8 | 67,0 | 15,8 | 695 | 4,9 | 51,5 | 10,8 | 473 | 2,6 | 37,0 | 8,3 | 360 | 1,7 | 29,5 | 5,7 | 492 | 3,1 | 22,0 |
| 10,0 | 20,0 | 596 | 3,4 | 69,0 | 14,7 | 647 | 4,3 | 53,0 | 9,7 | 424 | 2,1 | 38,5 | 7,1 | 310 | 1,3 | 31,0 | 4,5 | 391 | 2,1 | 23,5 |
| 15,0 | 19,0 | 564 | 3,1 | 70,5 | 13,6 | 599 | 3,7 | 54,5 | 8,6 | 375 | 1,7 | 40,0 | 5,9 | 258 | 0,9 | 32,5 | 3,3 | 286 | 1,2 | 24,5 |
| 20,0 | 17,9 | 533 | 2,8 | 72,0 | 12,5 | 551 | 3,2 | 56,0 | 7,4 | 325 | 1,3 | 41,5 | 4,7 | 203 | 0,6 | 33,5 | 1,7 | 143 | 0,4 | 25,0 |

LEO L1 + KML

| Tp1 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 |
|-------------------------------------------------------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|------|
| [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] |
| Tw1 / Tw2 = 120/90°C | | | | Tw1 / Tw2 = 90/70°C | | | | Tw1 / Tw2 = 70/50°C | | | | Tw1 / Tw2 = 60/40°C | | | | Tw1 / Tw2 = 40/30°C | | | | |
| III : V = 2600 [m³/h], 100 % fresh air 100 % świeżego powietrza | | | | | | | | | | | | | | | | | | | | |
| -25,0 | 31,0 | 923 | 6,6 | 10,5 | * | | | | * | | | | * | | | | * | | | |
| -20,0 | 29,8 | 887 | 6,1 | 14,0 | 24,0 | 1057 | 8,9 | 7,5 | | | | | | | | | | | | |
| -15,0 | 28,6 | 851 | 5,7 | 17,5 | 22,7 | 1003 | 8,1 | 11,0 | | | | | | | | | | | | |
| -10,0 | 27,4 | 815 | 5,2 | 21,5 | 21,5 | 948 | 7,3 | 14,5 | 15,8 | 689 | 4,4 | 8,0 | * | | | | * | | | |
| -5,0 | 26,2 | 779 | 4,8 | 25,0 | 20,2 | 893 | 6,6 | 18,0 | 14,5 | 634 | 3,8 | 11,5 | | | | | | | | |
| 0,0 | 24,9 | 743 | 4,4 | 28,5 | 19,0 | 838 | 5,9 | 21,5 | 13,2 | 578 | 3,2 | 15,0 | | | | | | | | |
| 5,0 | 23,7 | 706 | 4,0 | 32,0 | 17,7 | 783 | 5,2 | 25,0 | 11,9 | 522 | 2,7 | 18,5 | 8,9 | 389 | 1,6 | 15,0 | 6,2 | 537 | 3,1 | 12,0 |
| 10,0 | 22,5 | 669 | 3,6 | 35,5 | 16,5 | 727 | 4,5 | 28,5 | 10,6 | 466 | 2,2 | 22,0 | 7,6 | 330 | 1,2 | 18,5 | 4,8 | 420 | 2,0 | 15,5 |
| 15,0 | 21,3 | 633 | 3,3 | 39,0 | 15,2 | 672 | 3,9 | 32,0 | 9,3 | 408 | 1,7 | 25,5 | 6,2 | 270 | 0,9 | 22,0 | 3,4 | 296 | 1,1 | 19,0 |
| 20,0 | 20,0 | 596 | 3,0 | 42,5 | 14,0 | 616 | 3,3 | 35,5 | 8,0 | 350 | 1,3 | 29,0 | 4,7 | 205 | 0,5 | 25,0 | 1,4 | 124 | 0,2 | 21,5 |

V - airflow | przepływ powietrza

PT - heat capacity | moc grzewcza

Tp1 - inlet air temp. | temperatura powietrza na wlocie do aparatu

Tp2 - outlet air temp. | temperatura powietrza na wylocie z aparatu

* Too low air temperature at the outlet of the device | Zbyt niska temperatura powietrza na wylocie z urządzenia

Tw1 - inlet water temp. | temperatura wody na zasilaniu wymiennika

Tw2 - outlet water temp. | temperatura wody na powrocie z wymiennika

Qw - water flow rate | strumień przepływu wody grzewczej

Δpw - pressure drop of water | spadek ciśnienia wody w wymienniku



LEO L2 + KML

| Tp1 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 |
|-------------------------------------------------------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|------|
| [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] |
| Tw1 / Tw2 = 120/90°C | | | | Tw1 / Tw2 = 90/70°C | | | | Tw1 / Tw2 = 70/50°C | | | | Tw1 / Tw2 = 60/40°C | | | | Tw1 / Tw2 = 40/30°C | | | | |
| III : V = 2400 [m³/h], 100 % fresh air 100 % świeżego powietrza | | | | | | | | | | | | | | | | | | | | |
| -25,0 | 47,2 | 1405 | 7,0 | 40,0 | 38,2 | 1686 | 10,4 | 27,5 | 29,9 | 1308 | 7,0 | 16,0 | 25,7 | 1119 | 5,5 | 10,5 | * | | | |
| -20,0 | 45,4 | 1351 | 6,5 | 42,5 | 36,4 | 1604 | 9,5 | 30,0 | 28,0 | 1226 | 6,2 | 18,5 | 23,8 | 1038 | 4,8 | 13,0 | 19,4 | 1677 | 12,0 | 6,5 |
| -15,0 | 43,5 | 1296 | 6,0 | 45,0 | 34,5 | 1522 | 8,6 | 32,5 | 26,2 | 1145 | 5,5 | 21,0 | 21,9 | 956 | 4,1 | 15,0 | 17,5 | 1514 | 10,0 | 9,0 |
| -10,0 | 41,7 | 1242 | 5,6 | 47,5 | 32,6 | 1440 | 7,8 | 35,0 | 24,3 | 1063 | 4,8 | 23,5 | 20,0 | 873 | 3,5 | 17,5 | 15,6 | 1349 | 8,1 | 11,5 |
| -5,0 | 39,9 | 1187 | 5,1 | 50,0 | 30,8 | 1358 | 7,0 | 37,5 | 22,4 | 980 | 4,2 | 26,0 | 18,1 | 790 | 2,9 | 20,0 | 13,7 | 1184 | 6,5 | 14,0 |
| 0,0 | 38,0 | 1132 | 4,7 | 52,0 | 28,9 | 1276 | 6,3 | 39,5 | 20,5 | 898 | 3,6 | 28,0 | 16,2 | 707 | 2,4 | 22,0 | 11,7 | 1018 | 4,9 | 16,0 |
| 5,0 | 36,2 | 1078 | 4,3 | 54,5 | 27,1 | 1194 | 5,6 | 42,0 | 18,6 | 815 | 3,0 | 30,5 | 14,3 | 622 | 1,9 | 24,5 | 9,8 | 850 | 3,6 | 18,5 |
| 10,0 | 34,4 | 1023 | 3,9 | 57,0 | 25,2 | 1112 | 4,9 | 44,5 | 16,7 | 731 | 2,5 | 33,0 | 12,3 | 537 | 1,5 | 27,0 | 7,8 | 679 | 2,4 | 20,5 |
| 15,0 | 32,6 | 969 | 3,6 | 59,0 | 23,3 | 1029 | 4,3 | 46,5 | 14,8 | 647 | 2,0 | 35,0 | 10,3 | 450 | 1,1 | 29,0 | 5,8 | 502 | 1,4 | 23,0 |
| 20,0 | 30,7 | 915 | 3,2 | 61,5 | 21,5 | 947 | 3,7 | 49,0 | 12,8 | 562 | 1,5 | 37,5 | 8,2 | 359 | 0,7 | 31,0 | 3,5 | 302 | 0,6 | 24,5 |
| LEO L3 + KML | | | | | | | | | | | | | | | | | | | | |
| Tp1 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 |
| [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] |
| Tw1 / Tw2 = 120/90°C | | | | Tw1 / Tw2 = 90/70°C | | | | Tw1 / Tw2 = 70/50°C | | | | Tw1 / Tw2 = 60/40°C | | | | Tw1 / Tw2 = 40/30°C | | | | |
| III : V = 2250 [m³/h], 100 % fresh air 100 % świeżego powietrza | | | | | | | | | | | | | | | | | | | | |
| -25,0 | 60,9 | 1813 | 10,5 | 64,5 | 48,9 | 2160 | 15,4 | 47,0 | 38,8 | 1697 | 10,6 | 32,0 | 33,6 | 1466 | 8,4 | 24,5 | 27,2 | 2362 | 21,1 | 15,0 |
| -20,0 | 58,6 | 1744 | 9,8 | 66,0 | 46,6 | 2058 | 14,1 | 48,5 | 36,5 | 1595 | 9,5 | 33,5 | 31,3 | 1365 | 7,4 | 26,0 | 24,9 | 2160 | 18,0 | 16,5 |
| -15,0 | 56,3 | 1676 | 9,1 | 67,5 | 44,3 | 1956 | 12,9 | 50,0 | 34,1 | 1494 | 8,4 | 35,0 | 29,0 | 1263 | 6,5 | 27,5 | 22,6 | 1957 | 15,1 | 18,0 |
| -10,0 | 54,0 | 1608 | 8,4 | 69,0 | 42,0 | 1854 | 11,7 | 51,5 | 31,8 | 1392 | 7,4 | 36,5 | 26,6 | 1160 | 5,5 | 29,0 | 20,2 | 1754 | 12,4 | 19,5 |
| -5,0 | 51,7 | 1539 | 7,8 | 70,5 | 39,7 | 1752 | 10,5 | 53,0 | 29,5 | 1289 | 6,5 | 38,0 | 24,3 | 1057 | 4,7 | 30,5 | 17,9 | 1550 | 9,9 | 21,0 |
| 0,0 | 49,4 | 1472 | 7,2 | 72,0 | 37,4 | 1651 | 9,4 | 54,5 | 27,1 | 1187 | 5,6 | 39,5 | 21,9 | 953 | 3,9 | 32,0 | 15,5 | 1344 | 7,7 | 22,5 |
| 5,0 | 47,2 | 1404 | 6,6 | 73,5 | 35,1 | 1549 | 8,4 | 56,0 | 24,8 | 1084 | 4,7 | 41,0 | 19,5 | 849 | 3,2 | 33,5 | 13,1 | 1137 | 5,7 | 24,0 |
| 10,0 | 44,9 | 1336 | 6,0 | 75,0 | 32,8 | 1447 | 7,4 | 57,5 | 22,4 | 980 | 3,9 | 42,5 | 17,0 | 743 | 2,5 | 34,5 | 10,7 | 926 | 4,0 | 25,5 |
| 15,0 | 42,6 | 1269 | 5,5 | 76,5 | 30,5 | 1345 | 6,5 | 59,0 | 20,0 | 876 | 3,2 | 44,0 | 14,6 | 635 | 1,9 | 36,0 | 8,2 | 710 | 2,5 | 27,0 |
| 20,0 | 40,4 | 1203 | 5,0 | 78,0 | 28,2 | 1244 | 5,7 | 60,5 | 17,6 | 770 | 2,6 | 45,0 | 12,0 | 523 | 1,4 | 37,0 | 5,5 | 479 | 1,3 | 28,0 |

V - airflow | przepływ powietrza

PT - heat capacity | moc grzewcza

Tp1 - inlet air temp. | temperatura powietrza na wlocie do aparatu

Tp2 - outlet air temp. | temperatura powietrza na wylocie z aparatu

* Too low air temperature at the outlet of the device | Zbyt niska temperatura powietrza na wylocie z urządzenia

Tw1 - inlet water temp. | temperatura wody na zasilaniu wymiennika

Tw2 - outlet water temp. | temperatura wody na powrocie z wymiennika

Qw - water flow rate | strumień przepływu wody grzewczej

Δpw - pressure drop of water | spadek ciśnienia wody w wymienniku



LEO XL2 + KM XL

| Tp1 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 |
|-------------------------------------------------------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|------|
| [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] |
| Tw1 / Tw2 = 120/90°C | | | | Tw1 / Tw2 = 90/70°C | | | | Tw1 / Tw2 = 70/50°C | | | | Tw1 / Tw2 = 60/40°C | | | | Tw1 / Tw2 = 40/30°C | | | | |
| III : V = 3700 [m³/h], 100 % fresh air 100 % świeżego powietrza | | | | | | | | | | | | | | | | | | | | |
| -25,0 | 87,1 | 2592 | 20,1 | 51,5 | 70,4 | 3106 | 29,7 | 37,0 | 55,5 | 2428 | 20,1 | 23,5 | 48,0 | 2091 | 15,9 | 17,0 | 39,3 | 3411 | 40,8 | 9,5 |
| -20,0 | 83,7 | 2492 | 18,7 | 53,5 | 67,0 | 2957 | 27,2 | 39,0 | 52,1 | 2279 | 17,9 | 25,5 | 44,6 | 1943 | 13,9 | 19,0 | 35,9 | 3115 | 34,6 | 11,5 |
| -15,0 | 80,3 | 2392 | 17,3 | 55,5 | 63,6 | 2807 | 24,7 | 41,0 | 48,7 | 2130 | 15,9 | 27,5 | 41,2 | 1794 | 12,1 | 21,0 | 32,5 | 2818 | 28,9 | 13,5 |
| -10,0 | 77,0 | 2292 | 16,0 | 57,5 | 60,2 | 2658 | 22,4 | 43,0 | 45,3 | 1981 | 13,9 | 29,5 | 37,7 | 1644 | 10,3 | 23,0 | 29,1 | 2519 | 23,6 | 15,5 |
| -5,0 | 73,6 | 2192 | 14,8 | 59,5 | 56,8 | 2508 | 20,1 | 44,5 | 41,9 | 1831 | 12,1 | 31,5 | 34,3 | 1494 | 8,7 | 25,0 | 25,6 | 2220 | 18,8 | 17,5 |
| 0,0 | 70,3 | 2093 | 13,6 | 61,5 | 53,5 | 2359 | 18,0 | 46,5 | 38,4 | 1682 | 10,4 | 33,5 | 30,8 | 1344 | 7,2 | 27,0 | 22,1 | 1919 | 14,5 | 19,5 |
| 5,0 | 66,9 | 1993 | 12,4 | 63,0 | 50,1 | 2209 | 16,0 | 48,5 | 35,0 | 1531 | 8,7 | 35,5 | 27,4 | 1192 | 5,8 | 29,0 | 18,7 | 1616 | 10,6 | 21,0 |
| 10,0 | 63,6 | 1894 | 11,3 | 65,0 | 46,7 | 2060 | 14,1 | 50,5 | 31,5 | 1380 | 7,3 | 37,5 | 23,8 | 1039 | 4,5 | 30,5 | 15,1 | 1311 | 7,3 | 23,0 |
| 15,0 | 60,3 | 1795 | 10,3 | 67,0 | 43,3 | 1911 | 12,3 | 52,5 | 28,1 | 1228 | 5,9 | 39,0 | 20,3 | 884 | 3,4 | 32,5 | 11,5 | 1001 | 4,5 | 25,0 |
| 20,0 | 57,0 | 1698 | 9,3 | 69,0 | 39,9 | 1762 | 10,6 | 54,0 | 24,6 | 1075 | 4,6 | 41,0 | 16,7 | 727 | 2,4 | 34,5 | 7,8 | 680 | 2,3 | 26,5 |

LEO XL3 + KM XL

| Tp1 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 | PT | Qw | Δpw | Tp2 |
|-------------------------------------------------------------------|-------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|---------------------|------|-------|-------|------|
| [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] | [kW] | [l/h] | [kPa] | [°C] |
| Tw1 / Tw2 = 120/90°C | | | | Tw1 / Tw2 = 90/70°C | | | | Tw1 / Tw2 = 70/50°C | | | | Tw1 / Tw2 = 60/40°C | | | | Tw1 / Tw2 = 40/30°C | | | | |
| III : V = 3100 [m³/h], 100 % fresh air 100 % świeżego powietrza | | | | | | | | | | | | | | | | | | | | |
| -25,0 | 101,1 | 3008 | 13,5 | 81,0 | 81,1 | 3578 | 19,7 | 60,0 | 64,6 | 2826 | 13,6 | 42,5 | 56,3 | 2452 | 10,9 | 34,0 | 45,2 | 3921 | 27,1 | 22,5 |
| -20,0 | 97,3 | 2895 | 12,6 | 82,0 | 77,3 | 3410 | 18,0 | 61,0 | 60,8 | 2659 | 12,2 | 43,5 | 52,4 | 2285 | 9,6 | 35,0 | 41,4 | 3590 | 23,1 | 23,5 |
| -15,0 | 93,5 | 2783 | 11,7 | 83,0 | 73,5 | 3242 | 16,5 | 62,0 | 57,0 | 2492 | 10,9 | 44,5 | 48,6 | 2117 | 8,4 | 36,0 | 37,6 | 3257 | 19,4 | 24,5 |
| -10,0 | 89,7 | 2670 | 10,8 | 83,5 | 69,7 | 3075 | 14,9 | 63,0 | 53,1 | 2324 | 9,6 | 45,5 | 44,7 | 1949 | 7,3 | 37,0 | 33,7 | 2924 | 16,0 | 25,5 |
| -5,0 | 85,9 | 2558 | 10,0 | 84,5 | 65,9 | 2908 | 13,5 | 64,0 | 49,3 | 2156 | 8,4 | 46,5 | 40,8 | 1779 | 6,2 | 37,5 | 29,9 | 2590 | 12,9 | 26,0 |
| 0,0 | 82,2 | 2447 | 9,2 | 85,5 | 62,1 | 2741 | 12,1 | 64,5 | 45,4 | 1988 | 7,2 | 47,5 | 36,9 | 1610 | 5,2 | 38,5 | 26,0 | 2254 | 10,0 | 27,0 |
| 5,0 | 78,4 | 2335 | 8,5 | 86,5 | 58,3 | 2574 | 10,8 | 65,5 | 41,6 | 1819 | 6,2 | 48,0 | 33,0 | 1438 | 4,2 | 39,5 | 22,1 | 1915 | 7,5 | 28,0 |
| 10,0 | 74,7 | 2225 | 7,8 | 87,0 | 54,6 | 2408 | 9,6 | 66,5 | 37,7 | 1650 | 5,2 | 49,0 | 29,0 | 1265 | 3,4 | 40,0 | 18,1 | 1571 | 5,3 | 29,0 |
| 15,0 | 71,1 | 2115 | 7,1 | 88,0 | 50,8 | 2242 | 8,4 | 67,5 | 33,8 | 1479 | 4,3 | 50,0 | 25,0 | 1088 | 2,6 | 40,5 | 14,1 | 1219 | 3,4 | 29,5 |
| 20,0 | 67,4 | 2007 | 6,4 | 89,0 | 47,1 | 2077 | 7,3 | 68,0 | 29,9 | 1307 | 3,4 | 50,5 | 20,8 | 907 | 1,9 | 41,5 | 9,8 | 849 | 1,8 | 30,0 |

V - airflow | przepływ powietrza
PT - heat capacity | moc grzewcza
Tp1 - inlet air temp. | temperatura powietrza na wlocie do aparatu
Tp2 - outlet air temp. | temperatura powietrza na wylocie z aparatu

Tw1 - inlet water temp. | temperatura wody na zasilaniu wymiennika
Tw2 - outlet water temp. | temperatura wody na powrocie z wymiennika
Qw - water flow rate | strumień przepływu wody grzewczej
Δpw - pressure drop of water | spadek ciśnienia wody w wymienniku

