



Strojirenský zkušební ústav, s.p., Brno, Česká republika
Engineering Test Institute, Public Enterprise, Brno, Czech Republic

TEST CERTIFICATE

Number **O-B-00136-24**

Customer **SUNEX S.A.**
ul. Piaskowa 7
47-400 Racibórz
POLAND

Product **Outdoor air/water heat pump – monobloc**

Type designation / Trademark **NEXUS M17 PRO**

Test methods **ČSN EN 14511-2:2023, ČSN EN 14511-3:2023,
ČSN EN 14825:2023; ČSN EN 12102-1:2023, EHPA Testing
regulation – Testing of Air/Water Heat Pumps, version 2.4a**

Basis of certificate **Test reports:
39-17312/T of 2024-01-30
39-17312/H of 2023-10-25
Technical documents of SUNEX S.A.**

Reference heating season **„C“ = colder
(Reference design temperature $T_{design} = -22\text{ }^{\circ}\text{C}$)**

Results:

LOW TEMPERATURE

(Reference water temperature $35\text{ }^{\circ}\text{C}$)

MEDIUM TEMPERATURE

(Reference water temperature $55\text{ }^{\circ}\text{C}$)

19.33	P_{designh} [kW] ... Full load heating			19.10	
3.86 ^(a)	SCOP [-] ... Seasonal coefficient of performance			3.21 ^(a)	
Outdoor temperature	Heating declared capacity	Coefficient of performance at the declared capacity	Outdoor temperature	Heating declared capacity	Coefficient of performance at the declared capacity
T_j [°C]	P_{dh} [kW]	COP_d [-]	T_j [°C]	P_{dh} [kW]	COP_d [-]
T _j = -7	11.700	3.299	T _j = -7	11.560	2.624
T _j = +2 ^(a)	7.100	5.235	T _j = +2 ^(a)	7.000	4.321
T _j = +7 ^(a)	6.344	6.547	T _j = +7	6.296	5.480
T _j = +12	6.579	7.031	T _j = +12 ^(a)	6.324	5.701
T _j = TOL = -22	8.884	2.350	T _j = TOL = -22 ^(a)	8.865	1.723
T _j = T _{ivalent} = -7	11.700	3.299	T _j = T _{ivalent} = -7	11.560	2.624
T _j = -15	10.359	2.861	T _j = -15	9.983	2.129

LOW TEMPERATURE

(Reference water temperature 35 °C)

**MEDIUM TEMPERATURE**

(Reference water temperature 55 °C)

Power consumption in modes other than „active mode“:

15.7	Off mode	P_{off}	[W]	15.7
15.7	Thermostat off mode	P_{to}	[W]	15.7
15.7	Standby mode	P_{sb}	[W]	15.7
0	Crankcase heater mode	P_{ck}	[W]	0

Annual electricity consumption for heating according to:

12336 ^(a)	ČSN EN 14825:2023	Q_{HE}	[kWh]	14682 ^(a)
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Seasonal Space heating energy efficiency

151.5 ^(a)	ČSN EN 14825:2023	η_s	[%]	125.3 ^(a)
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Liquid flow rate in outdoor heating exchanger:

–	Source liquid	Min/Max	[m³/h]	–
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Liquid flow rate in indoor heating exchanger:

1.1165 / 2.0137	Heating water	Min/Max	[m³/h]	0.6684 / 1.2406
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Sound power level at condition A7W55* (at 35 rps):**NEXUS M17 PRO** L_{WA} 52.2 ± 1.5 dB(A)

Accuracy class 2 (Engineering)

(*) Comment to abbreviated marking:

„A“ air, „7“ inlet temperature (dry-bulb temperature) in °C, „W“ water, „35“ outlet temperature in °C.

* The technical data were declared by the manufacturer or calculated of data declared by the manufacturer and were not tested by the Testing Laboratory

Specification of conditions:

Compressor speed control	Variable	Heating water volume flow rate (indoor heat exchanger)	Variable
Outlet water temperature (indoor heat exchanger)	Variable	Source liquid volume flow rate (outdoor heat exchanger)	–
Function	Reversible		

Engineering Test Institute, Public Enterprise, confirms by this Test Certificate that the testing of the product in question was performed with the results as stated above. Engineering Test Institute, Public Enterprise, is an accredited Testing Laboratory 1045.1.

Brno, 2024-01-30

Ing. Mario Jankola

Heating Equipment and Construction Products Manager

- END OF TEST CERTIFICATE -





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Engineering Test Institute, Public Enterprise, Brno, Czech Republic

TEST CERTIFICATE

Number **O-B-00135-24**

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47-400 Racibórz
POLAND

Product

Outdoor air/water heat pump – monobloc

Type designation / Trade mark

NEXUS M17 PRO

Test methods

ČSN EN 14511-2:2023, ČSN EN 14511-3:2023,
ČSN EN 14825:2023, ČSN EN 12102-1:2023, EHPA Testing
regulation – Testing of Air/Water Heat Pumps, version 2.4a

Basis of certificate

Test reports:
39-17312/T of 2024-01-30
39-17312/H of 2023-10-25
Technical documents of SUNEX S.A.

Reference heating season

„W“ = warmer
(Reference design temperature $T_{design} = +2\text{ °C}$)

Results:

LOW TEMPERATURE

(Reference water temperature 35 °C)

MEDIUM TEMPERATURE

(Reference water temperature 55 °C)

11.87	$P_{designh}$ [kW] ... Full load heating				12.46
5.99 ^(a)	SCOP [-] ... Seasonal coefficient of performance				4.52 ^(a)
Outdoor temperature	Heating declared capacity	Coefficient of performance at the declared capacity	Outdoor temperature	Heating declared capacity	Coefficient of performance at the declared capacity
T_j [°C]	P_{dh} [kW]	COP_d [-]	T_j [°C]	P_{dh} [kW]	COP_d [-]
–	–	–	–	–	–
$T_j = +2$	11.868	3.307	$T_j = +2$	12.463	2.459
$T_j = +7$ ^(a)	7.600	5.973	$T_j = +7$ ^(a)	8.000	4.367
$T_j = +12$ ^(a)	6.425	6.693	$T_j = +12$ ^(a)	6.101	5.158
$T_j = TOL = +2$	11.868	3.307	$T_j = TOL = +2$	12.463	2.459
$T_j = T_{ivalent} = +2$	11.868	3.307	$T_j = T_{ivalent} = +2$	12.463	2.459

LOW TEMPERATURE

(Reference water temperature 35 °C)

**MEDIUM TEMPERATURE**

(Reference water temperature 55 °C)

Power consumption in modes other than „active mode“:

15.7	Off mode	P_{off}	[W]	15.7
15.7	Thermostat off mode	P_{To}	[W]	15.7
15.7	Standby mode	P_{sb}	[W]	15.7
0	Crankcase heater mode	P_{ck}	[W]	0

Annual electricity consumption for heating according to:

2645 ^(a)	ČSN EN 14825:2023	Q_{HE}	[kWh]	3685 ^(a)
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Seasonal Space heating energy efficiency

236.7 ^(a)	ČSN EN 14825:2023	η_s	[%]	177.7 ^(a)
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Liquid flow rate in outdoor heating exchanger:

–	Source liquid	Min/Max	[m³/h]	–
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Liquid flow rate in indoor heating exchanger:

1.1165 / 2.0137	Heating water	Min/Max	[m³/h]	0.6684 / 1.2408
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Sound power level at condition A7W55* (at 35 rps):**NEXUS M17 PRO** L_{WA} 52.2 ± 1.5 dB(A)

Accuracy class 2 (Engineering)

(*) Comment to abbreviated marking:

„A“ air, „T“ inlet temperature (dry-bulb temperature) in °C, „W“ water, „35“ outlet temperature in °C.

(*) The technical data were declared by the manufacturer or calculated of data declared by the manufacturer and were not tested by the Testing Laboratory

Specification of conditions:

Compressor speed control	Variable	Heating water volume flow rate (indoor heat exchanger)	Variable
Outlet water temperature (indoor heat exchanger)	Variable	Source liquid volume flow rate (outdoor heat exchanger)	–
Function	Reversible		

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ČSN EN 14825:2023, ČSN EN 12102-1:2023, EHPA Testing
regulation – Testing of Air/Water Heat Pumps, version 2.4a

Basis of certificate

Test reports:
39-17312/T of 2024-01-30
39-17312/H of 2023-10-25
Technical documents of SUNEX S.A.

Reference heating season

„A“ = average
(Reference design temperature $T_{design} = -10\text{ °C}$)

Results:

LOW TEMPERATURE

(Reference water temperature 35 °C)

MEDIUM TEMPERATURE

(Reference water temperature 55 °C)

13.20	$P_{designh}$ [kW] ... Full load heating				12.85
4.81	SCOP [-] ... Seasonal coefficient of performance				3.83
Outdoor temperature T_j [°C]	Heating declared capacity P_{dh} [kW]	Coefficient of performance at the declared capacity COP_d [-]	Outdoor temperature T_j [°C]	Heating declared capacity P_{dh} [kW]	Coefficient of performance at the declared capacity COP_d [-]
$T_j = -7$	11.679	3.059	$T_j = -7$	11.365	2.278
$T_j = +2$	7.092	4.709	$T_j = +2$	6.885	3.898
$T_j = +7$	6.430	6.519	$T_j = +7$	6.112	4.975
$T_j = +12$	6.519	6.985	$T_j = +12$	6.270	5.505
$T_j = TOL = -10$	10.817	2.821	$T_j = TOL = -10$	10.534	2.024
$T_j = T_{designh} = -7$	11.679	3.059	$T_j = T_{designh} = -7$	11.365	2.278

LOW TEMPERATURE

(Reference water temperature 35 °C)

**MEDIUM TEMPERATURE**

(Reference water temperature 55 °C)

Power consumption in modes other than „active mode“:

15.7	Off mode	P _{off}	[W]	15.7
15.7	Thermostat off mode	P _{to}	[W]	15.7
15.7	Standby mode	P _{sa}	[W]	15.7
0	Crankcase heater mode	P _{ck}	[W]	0

Annual electricity consumption for heating according to:

5665	ČSN EN 14825:2023	Q _{HE}	[kWh]	6931
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Seasonal Space heating energy efficiency

189.6	ČSN EN 14825:2023	η _s	[%]	150.2
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Liquid flow rate in outdoor heating exchanger:

–	Source liquid	Min/Max	[m³/h]	–
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Liquid flow rate in indoor heating exchanger:

1.1165 / 2.0137	Heating water	Min/Max	[m³/h]	0.6684 / 1.2406
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Sound power level at condition A7W55* (at 35 rps):**NEXUS M17 PRO**L_{WA} 52.2 ± 1.5 dB(A)

Accuracy class 2 (Engineering)

(*) Comment to abbreviated marking:

„A“ air, „7“ inlet temperature (dry-bulb temperature) in °C, „W“ water, „35“ outlet temperature in °C.

Specification of conditions:

Compressor speed control	Variable	Heating water volume flow rate (indoor heat exchanger)	Variable
Outlet water temperature (indoor heat exchanger)	Variable	Source liquid volume flow rate (outdoor heat exchanger)	–
Function	Reversible		

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ČSN EN 14511-4:2023, ČSN EN 12102-1:2023, EHPA Testing
regulation – Testing of Air/Water Heat Pumps, version 2.4a**

Basis of certificate **Test reports:
39-17312/T of 2024-01-30
39-17312/H of 2023-10-25
Technical documents of SUNEX S.A.**

Temperature application **LOW TEMPERATURE,
(Reference water temperature 35 °C)
MEDIUM TEMPERATURE
(Reference water temperature 55 °C)**

Results:

Temperature conditions*	A7/W35	A7/W55
Corrected heat capacity [kW]	16.708	15.798
Effective electric power input [kW]	3.956	5.386
Coefficient of performance [-]	4.223	2.933
Compressor settings [rps]	95	95

(*) Comment to abbreviated marking: e.g. A7/W35

A (air), 7 (input air – dry bulb temperature in °C) / W (water), 35 (output heating (cooling) water temperature in °C).





Sound power level at temperature condition A7/W55* (at 35 rps):

NEXUS M17 PRO

Sound power level

L_{WA} 52.2 ± 1.5 dB(A)

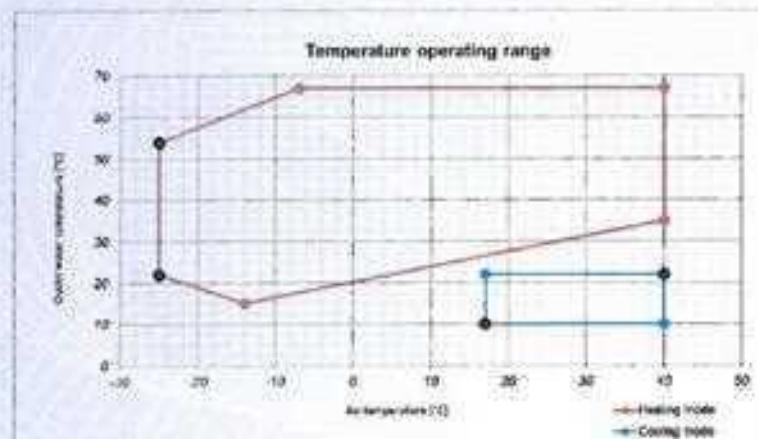
Accuracy class

Engineering (grade 2)

(*) Comment to abbreviated marking: e.g. A7/W55

A (air), 7 (input air – dry bulb temperature in °C) / W (water), 55 (output heating (cooling) water temperature in °C).

Temperature operating range:



Liquid flow rate for:

Heating mode

Minimum 0.6684 m³/h

Maximum 2.9020 m³/h

Cooling mode

Minimum 0.6684 m³/h

Maximum 2.9020 m³/h

Complies with
ČSN EN 14511-4:2023, articles:

4.2.1.2, 4.2.1.3, 4.5, 4.6

Specification of conditions:

Compressor speed control	Variable	Heating water volume flow rate (indoor heat exchanger)	Variable
Outlet water temperature (indoor heat exchanger)	Variable	Source liquid volume flow rate (outdoor heat exchanger)	—
Function	Reversible		

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