

NSM

1402/9603
cooling only

Air/Water chillers for outdoor installation
Screw compressors, shell and tube heat exchangers and axial fans
Cooling capacity 302÷2100kW

RIB4a



Aermech
participate in the EUROVENT
program: LCP, up to 600 kW
the products are present on the site

* Not certified model



- **HIGH EFFICIENCY ALSO AT PARTIAL LOADS**
- **MICROCHANNEL COIL**
- **QUICK AND EASY INSTALLATION**
- **NIGHT MODE**

Characteristics

Outdoor chillers for the production of chilled water with high-efficiency screw compressors, with cooling capacity adjustment via continuous modulation. Axial fans, microchannel external coils, plant side shell and tube heat exchanger.

In the units (with desuperheater or total recovery) there is also the possibility of producing hot water for free. The base, the structure and the panels are made of steel treated with rustproof polyester paint.

Versions

NSM_°	Standard
NSM_L	Standard low noise
NSM_A	High efficiency
NSM_E	High efficiency low noise
NSM_U	Very high efficiency
NSM_N	Very high efficiency low noise

Operational limits: Work up to 50°C of outdoor air temperature at full load, depending on size and version. For further details refer to the selection software/technical documentation.

- Unit with 2/3 refrigerant circuits designed to provide maximum efficiency at full load, ensuring high efficiency at partial loads also and ensuring continuity in case one of the circuits stop.
- The full range uses aluminium microchannel coils, ensuring very high levels of efficiency. This allows using less refrigerant compared to traditional copper coils.
- The possibility of using the electronic thermostatic valve brings significant benefits, in particular when the refrigerant is working at partial loads to the benefit of energy efficiency of the unit. It is supplied as standard from size 5202÷6402 and 8403÷9603, optional for all other sizes.
- Standard differential pressure switch
- Possibility of integrated hydronic kit that encloses the main hydraulic components; it is available in different configurations with one or two pumps, with different static pressures available
- Microprocessor adjustment, with keyboard and LCD display, for easy consultation and

intervention on the unit via a menu available in several languages.

Adjustment includes complete management of the alarms and their log.

- The presence of a programmable timer allows setting time bands of operation and a possible second set-point
 - The temperature control takes place with the integral proportional logic, based on the water output temperature.
 - Night Mode: it is possible to set a silenced operation profile.
- Perfect for night operation, since it guarantees greater acoustic comfort in the evenings, and a high efficiency in the time of greater load.

The DCPX accessory (standard in the low noise versions) or the "J" inverter fan is compulsory for the Night Mode in the non-low noise versions.

Unit Configurator

By suitably combining the numerous options available it is possible to configure each model in such a way as to meet the most demanding of system requirements.

Field	Description
1,2,3	NSM
4,5,6,7	Sizes 1402-1602-1802-2002-2202-2352-2502-2652-2802-3002-3202 (dual circuit) 3402-3602-3902-4202-4502-4802-5202-5602-6002-6402 (dual circuit) 6503-6703-6903-7203-8403-9603 (triple circuit)
8	Operational limits <ul style="list-style-type: none">◦ Standard (temperature of water produced up to +4 °C)Y Low temperature (temperature of water produced from +4°C a -6°C) (4)X Electronic thermostatic valve (temperature of water produced up to +4 °C) (5)Z Low temperature electronic thermostatic valve (temperature of water produced from +4°C a -6°C) (4)
9	Model <ul style="list-style-type: none">◦ Cooling OnlyC Motor condensing unit (6)
10	Heat recovery <ul style="list-style-type: none">◦ Without heat recoveryD With desuperheater (7)T With total recovery (7)
11	Version <ul style="list-style-type: none">◦ StandardL Low noise StandardA High efficiencyE Low noise high efficiencyU Very high efficiencyN Low noise very high efficiency
12	Coils <ul style="list-style-type: none">◦ Aluminium microchannelO Painted aluminium microchannelR Copper - CopperS Copper - Thinned
13	Fans <ul style="list-style-type: none">◦ StandardM LargerJ Inverter
14	Power supply <ul style="list-style-type: none">◦ 400V/3/50Hz with fuses8 400V/3/50Hz with magnet circuit breakers2 230V/3/50Hz with fuses (8)4 230V/3/50Hz with magnet circuit breakers (8)5 500V/3/50Hz with fuses (9)9 500V/3/50Hz with magnet circuit breakers (9)
15-16	Integrated hydronic kit <ul style="list-style-type: none">00 Without hydronic kitPA Pumping unit (pump A)PB Pumping unit (pump B)PC Pumping unit (pump C)PD Pumping unit (pump D)PE Pumping unit (pump E)PF Pumping unit (pump F)PG Pumping unit (pump G)PH Pumping unit (pump H)PI Pumping unit (pump I)PJ Pumping unit (pump J)DA Pumping unit (pump A and reserve pump)DB Pumping unit (pump B and reserve pump)DC Pumping unit (pump C and reserve pump)DD Pumping unit (pump D and reserve pump)DE Pumping unit (pump E and reserve pump)DF Pumping unit (pump F and reserve pump)DG Pumping unit (pump G and reserve pump)DH Pumping unit (pump H and reserve pump)DI Pumping unit (pump I and reserve pump)DJ Pumping unit (pump J and reserve pump)

(4) The Y/Z option is not compatible with motor condensing units C; with option D and T

(5) sizes from 5202÷6402 and 8403÷9603 come standard with the electronic thermostatic valve

(6) The motor condensing units are not configurable with option D and T, and with the integrated hydronic kit

(7) The models with total recovery are not configurable with the integrated hydronic kit

(8) 230V/3/50Hz available only for sizes from 1402÷2202

(9) 500V/3/50Hz available only for sizes from 1402÷3202

Operation of pumps in parallel

TF Double static pressure pump (pump F)

TG Double static pressure pump (pump G)

TH Double static pressure pump (pump H)

TI Double static pressure pump (pump I)

TJ Double static pressure pump (pump J)

Technical Data

Mod NSM		*4802	*5202	*5602	*6002	*6402	*6503	*6703	*6903
Cooling capacity	° kW	1096	1165	1192	1234	1323	1390	1436	1576
	L kW	1074	1120	1181	1251	1292	1393	1434	1601
	A kW	1157	1211	1273	1349	1399	1459	1529	1678
	E kW	1157	1204	1264	1320	1387	1462	1525	1666
	U kW	1182	1231	1299	1359	1417	1502	1576	1689
	N kW	1167	1216	1265	1315	1365	1450	n.d.	n.d.
Total input power	° kW	388	403	431	453	460	489	517	560
	L kW	395	429	443	453	477	492	524	557
	A kW	372	389	411	433	451	466	493	535
	E kW	371	388	406	422	444	469	489	534
	U kW	357	380	401	418	428	453	473	522
	N kW	353	375	397	410	428	450	n.d.	n.d.
EER	° W/W	2,82	2,89	2,77	2,72	2,87	2,85	2,78	2,82
	L W/W	2,72	2,61	2,67	2,76	2,71	2,83	2,74	2,87
	A W/W	3,11	3,11	3,10	3,12	3,10	3,13	3,10	3,14
	E W/W	3,12	3,11	3,12	3,13	3,13	3,12	3,12	3,12
	U W/W	3,31	3,24	3,24	3,25	3,31	3,31	3,33	3,23
	N W/W	3,31	3,25	3,19	3,20	3,19	3,22	n.d.	n.d.
ESEER	° W/W	3,85	3,90	3,85	3,80	3,85	3,90	3,80	3,85
	L W/W	3,89	3,88	3,90	3,89	3,87	3,91	3,87	3,92
	A W/W	3,98	3,97	3,99	3,98	3,96	4,00	3,96	4,01
	E W/W	4,10	4,01	4,02	4,02	4,10	4,10	4,12	4,01
	U W/W	4,18	4,09	4,10	4,11	4,19	4,19	4,22	4,09
	N W/W	4,10	4,13	4,05	4,07	4,05	4,09	n.d.	n.d.
Water flow rate	° l/h	189160	201040	205680	213030	228500	239870	247790	271650
	L l/h	185350	193220	203720	215910	222970	240090	247230	276220
	A l/h	199680	208790	219570	232740	241410	251620	263620	289610
	E l/h	199490	207680	217720	227490	239130	252090	262970	287420
	U l/h	203880	212380	223920	234170	244270	259100	271780	291410
	N l/h	201310	209810	218040	226640	235280	249980	n.d.	n.d.
Total pressure drop	° kPa	42	46	48	55	62	44	46	30
	L kPa	46	33	36	42	45	33	34	45
	A kPa	53	38	42	49	52	36	39	49
	E kPa	36	38	24	24	29	35	40	49
	U kPa	38	40	26	26	31	37	42	51
	N kPa	44	44	26	26	30	37	n.d.	n.d.

Cooling (14511:2011)

Evaporator water temperature (in/out) 12°C/7°C; External air temperature 35°C

GENERAL DATA	4802	5202	5602	6002	6402	6503	6703	6903	
Electrical data									
(1)									
Total input current	° A	641	668	712	749	766	806	857	927
	(1) L A	638	693	716	736	776	793	849	914
	(1) A A	614	647	685	725	758	772	821	897
	(1) E A	598	628	656	686	724	764	792	861
	(1) U A	597	634	671	706	725	762	795	870
	(1) N A	569	605	643	668	700	731	n.d.	n.d.
Compressors									
Compressors									
Circuits									
Refrigerant									
System side exchanger									
Exchanger	type					two screw			
	(1)	°	1	1	1	1	1	1	
	L	°	1	1	1	1	2	2	
	A	°	1	1	1	1	2	2	
	E	°	1	1	2	2	2	2	
	U	°	1	1	2	2	2	2	
fans	N	°	2	2	2	2	n.d.	n.d.	
	°	14	16	16	18	18	18	20	
	L	°	18	18	20	22	24	28	
	A	°	18	18	20	22	24	28	
	E	°	22	22	24	26	28	30	
	U	°	22	22	24	26	28	30	
Air flow rate cooling mode	N	°	28	30	32	32	34	n.d.	
	° m ³ /h	252000	288000	288000	288000	324000	324000	324000	
	L	m ³ /h	207000	288000	320000	352000	352000	276000	
	A	m ³ /h	288000	324000	360000	396000	384000	384000	
	E	m ³ /h	253000	253000	276000	299000	322000	345000	
	U	m ³ /h	352000	352000	384000	416000	448000	480000	
Sound data	N	m ³ /h	322000	345000	368000	368000	391000	n.d.	
	° dB(A)	101	102	102	102	102	102	103	
	L dB(A)	93	93	94	94	94	94	94	
	A dB(A)	101	102	102	102	102	102	102	
	E dB(A)	94	94	94	94	94	94	94	
	U dB(A)	101	102	102	102	102	102	102	
Power supply					V/ph/Hz		400V/3/50Hz		

* Not certified model EUROVENT
n.d. versions not available

Technical Data

Mod NSM		*7203	*8403	*9603
Cooling capacity	° kW	1667	1739	1856
	L kW	1645	1754	1941
	A kW	1748	1904	2100
	E kW	1749	n.d.	n.d.
	U kW	1768	n.d.	n.d.
	N kW	n.d.	n.d.	n.d.
Total input power	° kW	575	659	731
	L kW	587	660	714
	A kW	560	614	673
	E kW	563	n.d.	n.d.
	U kW	541	n.d.	n.d.
	N kW	n.d.	n.d.	n.d.
EER	° W/W	2,90	2,64	2,54
	L W/W	2,80	2,66	2,72
	A W/W	3,12	3,10	3,12
	E W/W	3,11	n.d.	n.d.
	U W/W	3,27	n.d.	n.d.
	N W/W	n.d.	n.d.	n.d.
ESEER	° W/W	3,85	3,80	3,80
	L W/W	3,90	3,87	3,89
	A W/W	3,99	3,96	3,99
	E W/W	4,05	n.d.	n.d.
	U W/W	4,14	n.d.	n.d.
	N W/W	n.d.	n.d.	n.d.
Water flow rate	° l/h	287330	299790	320050
	L l/h	283850	302520	334990
	A l/h	301740	328430	362460
	E l/h	301590	n.d.	n.d.
	U l/h	305050	n.d.	n.d.
	N l/h	n.d.	n.d.	n.d.
Total pressure drop	° kPa	33	36	40
	L kPa	47	34	45
	A kPa	53	41	52
	E kPa	45	n.d.	n.d.
	U kPa	46	n.d.	n.d.
	N kPa	n.d.	n.d.	n.d.

Cooling (14511:2011)

Evaporator water temperature (in/out) 12°C/7°C; External air temperature 35°C

		7203	8403	9603
GENERAL DATA				
Electrical data				
Total input current	(1) ° A	966	1103	1230
	(1) L A	960	1067	1163
	(1) A A	936	1017	1132
	(1) E A	898	n.d.	n.d.
	(1) U A	896	n.d.	n.d.
	(1) N A	n.d.	n.d.	n.d.
Compressors		type	two screw	
Compressors	n°	3	3	3
Circuits	n°	3	3	3
Refrigerant		type	R134a	
System side exchanger		type	shell and tube	
Exchanger	° n°	1	1	1
	L n°	2	2	2
	A n°	2	2	2
	E n°	2	n.d.	n.d.
	U n°	2	n.d.	n.d.
	N n°	n.d.	n.d.	n.d.
Ventilatori standard		type	axial	
fans	° n°	22	22	22
	L n°	28	30	34
	A n°	28	30	34
	E n°	32	n.d.	n.d.
	U n°	32	n.d.	n.d.
	N n°	n.d.	n.d.	n.d.
Air flow rate cooling mode	° m³/h	396000	396000	396000
	L m³/h	322000	345000	490000
	A m³/h	448000	480000	588000
	E m³/h	368000	n.d.	n.d.
	U m³/h	512000	n.d.	n.d.
	N m³/h	n.d.	n.d.	n.d.
Sound data				
Sound power	° dB(A)	103	103	103
	L dB(A)	94	94	95
	A dB(A)	102	103	104
	E dB(A)	95	n.d.	n.d.
	U dB(A)	102	n.d.	n.d.
	N dB(A)	n.d.	n.d.	n.d.
Power supply	V/ph/Hz		400V/3/50Hz	

* Not certified model EUROVENT

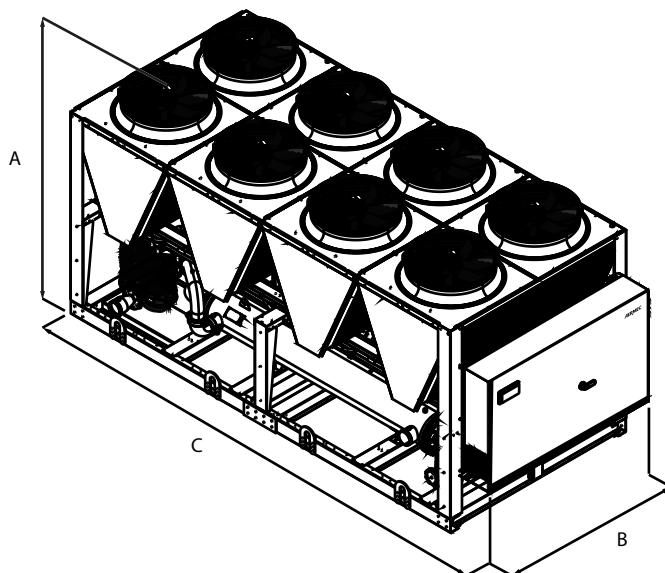
(1) The electrical data of the versions without hydronic module integrated

Sound power

Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification.

Note: For more information, refer to the selection program Magellan or the technical documentation available on the website

Dimensions (mm)



Mod. NSM		Vers	1402	1602	1802	2002	2202	2352	2502	2652
Height (mm)	A	all	2450	2450	2450	2450	2450	2450	2450	2450
Width (mm)	B	all	2200	2200	2200	2200	2200	2200	2200	2200
		°	3970	3970	3970	5160	5160	5160	5160	5160
		L	5160	5160	5160	6350	6350	6350	7140	
Depth (mm)	C	A	5160	5160	5160	6350	6350	6350	7140	
		E	5160	5160	6350	6350	6350	7140	7140	8330
		U	5160	5160	6350	6350	6350	7140	7140	8330
		N	6350	6350	7140	7140	7140	8330	8330	9520
Mod. NSM		Vers	2802	3002	3202	3402	3602	3902	4202	4502
Height (mm)	A	all	2450	2450	2450	2450	2450	2450	2450	2450
Width (mm)	B	all	2200	2200	2200	2200	2200	2200	2200	2200
		°	5160	6350	6350	6350	7140	7140	8330	
		L	7140	7140	8330	8330	9520	9520	9520	10710
Depth (mm)	C	A	7140	7140	7140	8330	8330	9520	9520	10710
		E	8330	8330	8330	9520	9520	10710	11900	11900
		U	8330	8330	8330	9520	9520	10710	11900	11900
		N	9520	9520	9520	10710	11900	13090	13090	15470
Mod. NSM		Vers	4802	5202	5602	6002	6402	6503	6703	6903
Height (mm)	A	all	2450	2450	2450	2450	2450	2450	2450	2450
Width (mm)	B	all	2200	2200	2200	2200	2200	2200	2200	2200
		°	8330	9520	9520	9520	10710	11110	11110	11900
		L	10710	10710	11900	13090	13090	14280	14280	16660
Depth (mm)	C	A	10710	10710	11900	13090	13090	14280	14280	16660
		E	13090	13090	14280	15470	16660	16660	17850	17850
		U	13090	13090	14280	15470	16660	16660	17850	17850
		N	16660	17850	19040	19040	19040	20230	n.d.	n.d.
Mod. NSM		Vers	7203	8403	9603					
Height (mm)	A	all	2450	2450	2450					
Width (mm)	B	all	2200	2200	2200					
		°	13090	13090	13090					
		L	16660	17850	20230					
Depth (mm)	C	A	16660	17850	20230					
		E	19040	n.d.	n.d.					
		U	19040	n.d.	n.d.					
		N	n.d.	n.d.	n.d.					

For transport reasons, the sizes of the units with the depth of more than 13090 mm are shipped separately. For more information, please refer to the technical manual and / or installation.