



Air cooled liquid chillers **NOVA series**, screw compressors R513a, shell and tube evaporator, brazed-plate economizers, condenser with copper tubes and aluminium finned core and axial fans. Each model is equipped as standard with 2 refrigerant circuits, 2 compressors each with partition steps per compressor 50-75-100. Electrical feed 400V/3ph/50Hz. Special design with exception to above description is available for \*\* and \*\*\* marked models: refer to notes.

#### Available Models configuration:

ECO.M2: standard configuration, with economizer and standard compressor motor size  
HE.M2: High efficiency configuration with EC fans, optimized coil design and standard compressor motor size  
NE.M2 = chiller without economizer, with standard compressor motor size

#### DESIGN INFORMATION:

All models are available also with M1 configuration that allow a bigger envelope for high ambient and/or leaving water temperature. The overall performances between m1 and m2 motor are very similar, with the exception of peak current (as reported below in the technical information).  
The marking F "X" indicates the number of Fans used in the chiller: it's possible to obtain intermediate performances by adding two fans to the smaller unit closer to required cooling capacity: this is possible for all the models with 2 refrigerant circuits.  
Refer to technical department for custom made solutions.

#### TECHNICAL DATA

<b>PERFORMANCES</b>		Model	663/F4**	693/F4**	783/F6	793/F6	863/F6	873/F8	883/F8	893/F10
NOMINAL COOLING CAPACITY (1)	ECO.M2	kW	283	352	495	543	587	683	750	856
TOTAL NOMINAL ABSORBED POWER (1)		kW	68,36	87,56	122,24	140,64	159,84	170,32	201,72	217,00
EER (1)		kW/kW	4,14	4,02	4,05	3,86	3,67	4,01	3,72	3,94
NOMINAL COOLING CAPACITY (1)	HE.M2	kW	288	359	488	557	598	699	768	874
TOTAL NOMINAL ABSORBED POWER (1)		kW	66,0	83,0	111,2	133,2	149,0	159,9	188,7	204,2
EER (1)		kW/kW	4,36	4,32	4,38	4,18	4,01	4,37	4,07	4,28
NOMINAL COOLING CAPACITY (1)	NE.M2	kW	246	319	455	504	527	635	683	796
TOTAL NOMINAL ABSORBED POWER (1)		kW	67,4	76,8	115,2	129,0	138,6	155,3	177,9	198,2
EER (1)		kW/kW	3,65	4,15	3,95	3,90	3,80	4,09	3,84	4,02
<b>Standard values for SEPR Calculation, ECO.M2 Configuration (STD)</b>										
COOLING CAPACITY (2)		kW	258	308	446	476	534	614	699	773
TOTAL NOMINAL ABSORBED POWER (2)		kW	74	91	132	152	174	185,5	217,5	235,4
EER (2)		kW/kW	3,2	3,1	3,1	2,9	2,9	3,1	3,0	3,0
SEPR (HT) (3)			5,62	5,54	5,51	5,27	5,03	5,40	5,12	5,37
<b>HYDRAULIC SECTION</b>										
NOMINAL WATER FLOW		m3/h	44,4	53,1	76,9	82,1	92,0	105,9	120,6	133,2
WATER FLOW RANGE		m3/h	20÷54	26÷67	36÷94	40÷100	50÷125	70÷140	55÷135	75÷180
HYDRAULIC CONNECTIONS (FLANGED)		DN	125	125	125	125	150	150	150	150
<b>FAN SECTION (AXIAL)</b>										
RV "fan speed cut-phase regulator" included										
FANS		nr.	4	4	6	6	6	8	8	10
MAXIMUM FANS ABSORBED POWER		kW	7,76	7,76	11,64	11,64	11,64	15,52	15,52	19,40
<b>TOTAL ELECTRIC DATA</b>										
IP54 protection rating, chillers suitable for outdoor installation										
MAXIMUM ABSORBED CURRENT (F.L.A) (4)		A	147,6	231,6	311,4	347,4	333,4	395,2	423,2	467,0
MAXIMUM PEAK CURRENT (L.R.A) (4)		A	419,6	631,6	752,4	871,4	853,4	1014,2	1170,2	1276,0
MAXIMUM PEAK CURRENT WITH M1 CONFIGURATION (L.R.A) (4)		A	547,6	672,6	931,4	1054,4	1060,4	1172,2	1277,2	1338,0
<b>NOISE DATA</b>										
SOUND PRESSURE FOR STANDARD CONFIGURATION (4) (5)		dB(A)	64,3	65,6	65,9	65,7	68,3	69,8	68,8	69,4
SOUND PRESSURE FOR LOW NOISE CONFIGURATION (4) (5)		dB(A)	62,3	63,0	64,0	63,9	65,4	66,7	66,2	66,9
<b>DIMENSIONS AND WEIGHT</b>										
LENGTH		mm	3100	3100	4050	4050	4050	5000	5000	5950
WIDTH		mm	2210	2210	2210	2210	2210	2210	2210	2210
HEIGHT		mm	2450	2450	2450	2450	2450	2450	2450	2450
WEIGHT EMPTY FOR STANDARD CONFIGURATION (4)		kg	3150	3300	4200	4450	4700	4850	5100	5800

The manufacturer reserves the right to modify specifications without notice.

Updated on 19/02/2019

#### Data referred to:

- (1) Data referred to Inlet/Outlet water temperature = +15/10 °C 30% etil. Glycol., air temperature 30°C
- (2) Inlet/Outlet water temperature = +12/+7°C - Condenser air temperature = +35°C
- (3) SEPR: data comply with the European Regulation (EU) 2016/2281, referring to high temperature process chillers
- (4) Data referred to standard chiller configuration NT.NP (chiller without pump and without tank) at (2) conditions
- (5) Sound pressure level referred to measures according to normative ISO3744, pressure level at distance of 10 m, referred to free field on reflecting surface.

\*\*Model 663 is the only one equipped with brazed plate evaporators instead of shell and tube in order to obtain a compact design.

\*\*Model 983/F24 and 993/F24 are designed with three independent refrigerant circuits and special shell and tube evaporator



Air cooled liquid chillers **NOVA series**, screw compressors R513a, shell and tube evaporator, brazed-plate economizers, condenser with copper tubes and aluminium finned core and axial fans. Each model is equipped as standard with 2 refrigerant circuits, 2 compressors each with partition steps per compressor 50-75-100. Electrical feed 400V/3ph/50Hz. Special design with exception to above description is available for \*\* and \*\*\* marked models: refer to notes.

**Available Models configuration:**

ECO.M2: standard configuration, with economizer and standard compressor motor size  
HE.M2: High efficiency configuration with EC fans, optimized coil design and standard compressor motor size  
NE.M2 = chiller without economizer, with standard compressor motor size

**DESIGN INFORMATION:**

All models are available also with M1 configuration that allow a bigger envelope for high ambient and/or leaving water temperature. The overall performances between m1 and m2 motor are very similar, with the exception of peak current (as reported below in the technical information).  
The marking F "X" indicates the number of Fans used in the chiller: it's possible to obtain intermediate performances by adding two fans to the smaller unit closer to required cooling capacity: this is possible for all the models with 2 refrigerant circuits.  
Refer to technical department for custom made solutions.

**TECHNICAL DATA**

<b>PERFORMANCES</b>		Model	963/F12	973/F12	983/F14	993/F18	9103/F18	9113/F20	983/F24***	993/F24***	
NOMINAL COOLING CAPACITY (1)	ECO.M2	kW	1014	1129	1323	1493	1594	1628	1996	2174	
		TOTAL NOMINAL ABSORBED POWER (1)	kW	259,28	295,08	345,56	381,92	430,92	427,20	488,46	565,26
		EER (1)	kW/kW	3,91	3,83	3,83	3,91	3,70	3,81	4,09	3,85
NOMINAL COOLING CAPACITY (1)	HE.M2	kW	1044	1162	1362	1530	1633	1668	2036	2232	
		TOTAL NOMINAL ABSORBED POWER (1)	kW	242,08	279,08	324,36	362,12	411,72	405,60	465,36	530,16
		EER (1)	kW/kW	4,31	4,16	4,20	4,22	3,97	4,11	4,38	4,21
NOMINAL COOLING CAPACITY (1)	NE.M2	kW	934	1044	1221	1403	1486	1536	1861	2036	
		TOTAL NOMINAL ABSORBED POWER (1)	kW	233,08	267,48	311,96	351,92	391,92	397,60	449,46	517,26
		EER (1)	kW/kW	4,01	3,90	3,91	3,99	3,79	3,86	4,14	3,94
<b>Standard values for SEPR Calculation, ECO.M2 Configuration (STD)</b>											
COOLING CAPACITY (2)	kW	911	1010	1187	1323	1403	1555	1798	1967		
TOTAL NOMINAL ABSORBED POWER (2)	kW	280,7	315,9	367,2	394,9	450,9	468,8	524,8	627,1		
EER (2)	kW/kW	3,0	3,0	3,0	3,1	2,9	3,1	3,1	2,9		
SEPR (HT) (3)		5,32	5,25	5,33	5,46	5,11	5,42	5,66	5,17		
<b>HYDRAULIC SECTION</b>											
NOMINAL WATER FLOW	m3/h	157,0	174,1	204,6	228,0	241,9	268,1	309,9	339,1		
WATER FLOW RANGE	m3/h	90÷220	98÷250	108÷275	160÷350	160÷390	180÷390	200÷400	200÷450		
HYDRAULIC CONNECTIONS (FLANGED)	DN	150	200	200	200	200	250	250	250		
<b>FAN SECTION (AXIAL)</b>											
RV "fan speed cut-phase regulator" included											
FANS	nr.	12	12	14	18	18	20	24	24		
MAXIMUM FANS ABSORBED POWER	kW	23,28	23,28	27,16	34,92	34,92	38,80	46,56	46,56		
<b>TOTAL ELECTRIC DATA</b>											
IP54 protection rating, chillers suitable for outdoor installation											
MAXIMUM ABSORBED CURRENT (F.L.A) (4)	A	606,8	666,8	694,6	790,2	896,2	972,0	1053,6	1173,6		
MAXIMUM PEAK CURRENT (L.R.A) (4)	A	1690,8	1798,8	2227,6	2459,2	3003,2	3395,0	2586,6	2842,6		
MAXIMUM PEAK CURRENT WITH M1 CONFIGURATION (L.R.A) (4)	A	2089,8	2275,8	2764,6	2860,2	3200,2	NA	3123,6	2888,6		
<b>NOISE DATA</b>											
SOUND PRESSURE FOR STANDARD CONFIGURATION (4) (5)	dB(A)	70,4	70,5	71,3	72,3	72,8	74,1	73,3	73,9		
SOUND PRESSURE FOR LOW NOISE CONFIGURATION (4) (5)	dB(A)	67,8	67,9	68,6	69,7	70,0	71,0	70,8	71,1		
<b>DIMENSIONS AND WEIGHT</b>											
LENGTH	mm	6900	6900	7850	9750	9750	10700	12500	12500		
WIDTH	mm	2210	2210	2210	2210	2210	2210	2210	2210		
HEIGHT	mm	2450	2450	2450	2450	2450	2450	2450	2450		
WEIGHT EMPTY FOR STANDARD CONFIGURATION (4)	kg	6800	7000	7700	9600	9800	10800	12000	12200		

The manufacturer reserves the right to modify specifications without notice.

Updated on 19/02/2019

Data referred to:

- (1) Data referred to Inlet/Outlet water temperature = +15/10 °C 30% etil. Glycol., air temperature 30°C
- (2) Inlet/Outlet water temperature = +12/+7°C - Condenser air temperature = +35°C
- (3) SEPR: data comply with the European Regulation (EU) 2016/2281, referring to high temperature process chillers
- (4) Data referred to standard chiller configuration NT.NP (chiller without pump and without tank) at (2) conditions
- (5) Sound pressure level referred to measures according to normative ISO3744, pressure level at distance of 10 m, referred to free field on reflecting surface.

\*\*\*Model 663 is the only one equipped with brazed plate evaporators instead of shell and tube in order to obtain a compact design.

\*\*Model 983/F24 and 993/F24 are designed with three independent refrigerant circuits and special shell and tube evaporator