

**Free-cooling liquid chillers ENRF series, scroll compressors, R410A / R32 / R454B refrigerant, coaxial / shell and tube evaporator, thermostatic expansion valve, condenser and free-cooling coil with copper tubes and aluminium finned fins, AC axial fans regulated with cut phase fan speed regulator. Electrical feed 400V/3ph/50Hz (60Hz version as option). IP54 protection rating, chillers suitable for outdoor installation. Inbuilt water storage tank and single pump P3 as standard.**

Type of available evaporators:

CX = HITEMA coaxial evaporator, convoluted tube in tube exchanger installed inside the water storage tank

ST = shell and tube evaporator, with high thickness copper tubes (0,41mm)

B-ES = stainless steel brazed plate evaporator

Type of available expansion elements

VTS = Thermostatic expansion valve

ETS = Electronic expansion valve (available as option)

**TECHNICAL DATA**

<b>PERFORMANCES</b>		<b>Model</b>	<b>010</b>	<b>012</b>	<b>016</b>	<b>022</b>	<b>030</b>	<b>038</b>	<b>045</b>	<b>055</b>
NOMINAL COOLING CAPACITY	W 12°C/7°C @ 35°C (1)	kW	9,5	12,0	14,4	23,4	29,8	38,6	45,2	57,7
TOTAL NOMINAL ABSORBED POWER		kW	4,9	6,1	7,6	9,7	11,3	16,5	18,4	22,2
EER		kW/kW	2,41	2,33	2,19	2,77	2,97	2,70	2,80	2,89
SEPR (HT) (4)		-	4,52	4,53	5,79	5,48	5,42	5,72	5,58	5,62
AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY	30%EG 15°C/10°C @ 30°C (2)	°C	-0,3	-2,2	-3,6	0,7	0,1	2,0	1,0	0,5
NOMINAL WATER FLOW		m3/h	1,6	2,1	2,5	4,0	5,1	6,6	7,8	9,9
MECHANICAL MODE PRESSURE DROPS (5) (7) (8)		kPa	27	28	35	49	47	56	58	60
FREE COOLING MODE PRESSURE DROPS (6) (7) (8)		kPa	47	57	76	75	76	74	82	107
NOMINAL COOLING CAPACITY	30%EG 15°C/10°C @ 30°C (2)	kW	10,6	13,3	16,0	26,0	33,1	42,9	50,2	64,1
TOTAL NOMINAL ABSORBED POWER		kW	4,7	5,8	7,1	9,2	10,7	15,7	17,4	20,9
EER		kW/kW	2,87	2,77	2,61	3,28	3,53	3,18	3,30	3,43
AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY		°C	1,0	-1,3	-3,1	1,8	1,0	3,5	2,1	1,5
NOMINAL WATER FLOW	30%EG 15°C/10°C @ 30°C (2)	m3/h	2,0	2,5	3,0	4,9	6,3	8,1	9,5	12,1
MECHANICAL MODE PRESSURE DROPS (5) (7) (8)		kPa	45	46	58	82	78	93	96	99
FREE COOLING MODE PRESSURE DROPS (6) (7) (8)		kPa	78	94	126	124	126	123	136	177
<b>FRIGORIFIC SECTION</b>										
COMPRESSORS / REFRIGERATING CIRCUITS / PARTITION STEP		nr.	1/1/1	1/1/1	1/1/1	1/1/1	1/1/1	1/1/1	1/1/1	1/1/1
KIND OF EVAPORATOR		-	CX	CX	CX	CX	CX	CX	CX	CX
<b>HYDRAULIC SECTION</b>										
WATER FLOW RANGE (8)		m3/h	1,2÷2,9	1,2÷2,9	1,2÷2,9	3,5÷8,0	4,0÷8,0	5,5÷12,0	6,0÷12,0	6,0÷12,0
MAXIMUM PUMP ABSORBED POWER (WP OR OPTION DP)	P3 (3)	kW	0,98	0,98	0,98	1,28	1,28	2,20	2,20	2,20
MAXIMUM PUMP ABSORBED CURRENT (WP OR OPTION DP)		A	1,78	1,78	1,78	2,37	2,37	4,24	4,24	4,24
MAXIMUM PUMP ABSORBED POWER (OPTION PH OR DPH)	P5 (3)	kW	2,17	1,10	1,10	1,47	2,94	2,94	2,94	2,94
MAXIMUM PUMP ABSORBED CURRENT (OPTION PH OR DPH)		A	2,17	2,17	2,17	2,86	5,83	5,83	5,83	5,83
HYDRAULIC CONNECTIONS (THREADED / FLANGED)		BSP / DN	3/4"	3/4"	3/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
TANK VOLUME (7) (10)		dm³	50	50	50	270	270	270	270	270
EXPANSION VESSEL VOLUME (OPTION XV) (11)		liters	5	5	5	12	12	12	12	12
<b>FAN SECTION (AXIAL)</b>										
FANS		nr.	1	1	1	2	2	2	2	2
MAXIMUM FANS ABSORBED POWER	AC	kW	0,72	0,72	0,81	1,62	1,62	3,88	3,88	3,88
MAXIMUM FANS ABSORBED CURRENT		A	1,41	1,41	1,54	3,08	3,08	7,80	7,80	7,80
TOTAL AIR FLOW		m3/h	6115	6115	6800	13800	13000	30000	30000	28000
<b>TOTAL ELECTRIC DATA</b>										
MAXIMUM ABSORBED CURRENT (F.L.A) (8)		A	11,1	12,9	15,2	21,4	24,7	36,5	42,0	48,5
MAXIMUM PEAK CURRENT (L.R.A) (8)		A	49,8	64,8	67,8	104,4	120,4	144,2	178,2	229,2
MAXIMUM PEAK CURRENT WITH SOFT START (OPTION SF) (L.R.A) (8)		A	NA	NA	NA	NA	NA	116,2	143,4	184,2
<b>NOISE DATA</b>										
SOUND PRESSURE FOR STANDARD CONFIGURATION (8) (9)		dB(A)	49,7	49,7	53,2	56,6	56,6	58,5	58,6	59,6
SOUND PRESSURE FOR LOW NOISE CONFIGURATION (OPTION LNJ) (8) (9)		dB(A)	NA	NA	NA	56,4	56,4	58,3	58,3	58,6
<b>DIMENSIONS AND WEIGHT</b>										
LENGTH		mm	1360	1360	1360	1610	1610	2220	2220	2220
WIDTH		mm	720	720	720	860	860	1100	1100	1100
HEIGHT		mm	1585	1585	1585	1550	1550	2120	2120	2120
WEIGHT EMPTY FOR STANDARD CONFIGURATION (7) (8)		kg	260	265	275	460	470	635	650	740
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (7) (8)		kg	315	320	330	745	755	930	950	1035

The manufacturer reserves the right to modify specifications without notice.

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 Revision: 01-2021

Data referred to:

(1) Data referred to inlet/outlet water temperature = +12/+7 °C, ambient temperature = +35°C, fluid = Water

(2) Data referred to inlet/outlet water temperature = +15/+10 °C, ambient temperature = +30°C, fluid = 70% Water + 30% Ethylene Glycol

(3) Available pressure can be calculated from Hitema Online Selection Software

(4) SEPR: data comply with the European Regulation (EU) 2016/2281, referring to high temperature process chillers

(5) Pressure drops taken in account: evaporator, valves, piping ; (6) Pressure drops taken in account: evaporator, valves, piping, free-cooling coil

(7) Data referred to standard chiller configuration as indicated in frigorific section, with different evaporator this data can change

(8) Data referred to standard chiller configuration WP (single pump P3) and AC fans

(9) Sound pressure level referred to measures according to normative ISO3744, pressure level at distance of 10 m, referred to free field on reflecting surface

(10) To avoid excessive start/stop of the compressors a minimum water volume for the entire plant must be guarantee, the tank supplied by Hitema can be not enough

(11) The expansion vessel volume is calculated considering 40°C of deltaT between water temperature with chiller stopped and chiller active, 1/2bar of hydraulic circuit pre-charge and considering only the water volume of the unit

\* For the configurations NT.NP (no tank, no pump), NT.WP (no tank, single pump P3), and NT.PH (no tank, single pump P5) the chiller width will be 1105mm

**Free-cooling liquid chillers ENRF series, scroll compressors, R410A / R32 / R454B refrigerant, coaxial / shell and tube evaporator, thermostatic expansion valve, condenser and free-cooling coil with copper tubes and aluminium finned fins, AC axial fans regulated with cut phase fan speed regulator. Electrical feed 400V/3ph/50Hz (60Hz version as option). IP54 protection rating, chillers suitable for outdoor installation. Inbuilt water storage tank and single pump P3 as standard.**

Type of available evaporators: CX = HITEMA coaxial evaporator, convoluted tube in tube exchanger installed inside the water storage tank ST = shell and tube evaporator, with high thickness copper tubes (0,41mm) B-ES = stainless steel brazed plate evaporator	Type of available expansion elements CP = Capillary tube VTS = Thermostatic expansion valve ETS = Electronic expansion valve (available as option)
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**TECHNICAL DATA**

<b>PERFORMANCES</b>		<b>Model</b>	<b>061</b>	<b>070</b>	<b>075</b>	<b>090</b>	<b>100</b>	<b>130</b>	<b>160</b>	<b>185</b>
<b>W 12°C/7°C @ 35°C (1)</b>	NOMINAL COOLING CAPACITY	kW	60,5	69,6	74,7	87,4	101,7	118,0	150,0	174,0
	TOTAL NOMINAL ABSORBED POWER	kW	23,4	25,6	28,7	34,3	37,3	47,6	59,1	67,3
	EER	kW/kW	3,03	3,15	2,95	2,84	3,01	2,84	2,83	2,85
	SEPR (HT) (4)	-	6,10	6,06	5,80	5,78	5,76	5,61	5,54	5,62
	AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY	°C	2,5	2,2	1,7	2,0	1,5	1,5	1,2	1,5
	NOMINAL WATER FLOW	m <sup>3</sup> /h	10,4	12,0	12,8	15,0	17,5	20,3	25,8	29,9
	MECHANICAL MODE PRESSURE DROPS (5) (7) (8)	kPa	33	33	26	42	58	66	78	88
	FREE COOLING MODE PRESSURE DROPS (6) (7) (8)	kPa	58	63	60	85	112	121	120	128
<b>30%EG 15°C/10°C @ 30°C (2)</b>	NOMINAL COOLING CAPACITY	kW	67,2	77,3	83,9	97,0	112,9	131,0	166,5	193,1
	TOTAL NOMINAL ABSORBED POWER	kW	22,1	24,1	27,0	32,3	35,0	44,9	55,6	63,1
	EER	kW/kW	3,61	3,75	3,52	3,37	3,57	3,38	3,35	3,40
	AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY	°C	4,1	3,7	3,1	3,5	2,8	2,8	2,4	2,8
	NOMINAL WATER FLOW	m <sup>3</sup> /h	12,7	14,6	15,9	18,4	21,4	24,8	31,5	36,6
	MECHANICAL MODE PRESSURE DROPS (5) (7) (8)	kPa	55	55	44	69	96	109	129	145
	FREE COOLING MODE PRESSURE DROPS (6) (7) (8)	kPa	96	104	102	140	185	200	199	212
	<b>FRIGORIFIC SECTION</b>									
COMPRESSORS / REFRIGERATING CIRCUITS / PARTITION STEP	nr.	2/1/2	2/1/2	2/1/2	2/1/2	2/1/2	4/2/4	4/2/4	4/2/4	
KIND OF EVAPORATOR	-	CX	CX	CX	CX	CX	ST	ST	ST	
<b>HYDRAULIC SECTION</b>										
WATER FLOW RANGE (8)	m <sup>3</sup> /h	8,6÷19,0	10,0÷22,0	10,0÷22,0	10,0÷22,0	11,5÷23,0	14,0÷27,0	17,6÷31,0	26,0÷35,0	
MAXIMUM PUMP ABSORBED POWER (WP OR OPTION DP)	P3 (3)	kW	3,46	3,46	3,46	3,46	3,46	6,12	6,12	6,12
MAXIMUM PUMP ABSORBED CURRENT (WP OR OPTION DP)		A	6,33	6,33	6,33	6,33	6,33	10,40	10,40	10,40
MAXIMUM PUMP ABSORBED POWER (OPTION PH OR DPH)	P5 (3)	kW	6,12	6,12	8,30	8,30	8,30	12,04	12,04	12,04
MAXIMUM PUMP ABSORBED CURRENT (OPTION PH OR DPH)		A	10,40	10,40	14,10	14,10	14,10	20,20	20,20	20,20
HYDRAULIC CONNECTIONS (THREADED / FLANGED)	BSP / DN	2"	2"	2"	2"	2"	DN65	DN65	DN65	
TANK VOLUME (7) (10)	dm <sup>3</sup>	410	410	410	410	410	390	500	500	
EXPANSION VESSEL VOLUME (OPTION XV) (11)	liters	19	19	19	19	19	19	19	19	
<b>FAN SECTION (AXIAL)</b>										
FANS	nr.	2	2	2	3	3	4	5	5	
MAXIMUM FANS ABSORBED POWER	AC	kW	3,88	3,88	3,88	5,82	5,82	7,76	9,70	9,70
MAXIMUM FANS ABSORBED CURRENT		A	7,80	7,80	7,80	11,70	11,70	15,60	19,50	19,50
TOTAL AIR FLOW		m <sup>3</sup> /h	36000	36000	36000	49500	54000	66000	72000	71000
<b>TOTAL ELECTRIC DATA</b>										
MAXIMUM ABSORBED CURRENT (F.L.A) (8)	A	52,6	57,9	63,1	78,0	84,5	102,9	127,9	149,9	
MAXIMUM PEAK CURRENT (L.R.A) (8)	A	151,4	173,4	178,6	222,0	273,0	201,7	243,4	293,9	
MAXIMUM PEAK CURRENT WITH SOFT START (OPTION SF) (L.R.A) (8)	A	127,8	145,4	150,6	187,2	228,0	178,1	215,4	259,1	
<b>NOISE DATA</b>										
SOUND PRESSURE FOR STANDARD CONFIGURATION (8) (9)	dB(A)	59,1	59,2	59,3	60,8	61,4	61,8	62,9	63,0	
SOUND PRESSURE FOR LOW NOISE CONFIGURATION (OPTION LNJ) (8) (9)	dB(A)	58,8	58,8	58,9	60,4	60,6	61,5	62,5	62,5	
<b>DIMENSIONS AND WEIGHT</b>										
LENGTH	mm	3355	3355	3355	3355	4355	4355	5350	5350	
WIDTH	mm	1105	1105	1105	1105	1105	1105	1105	1105	
HEIGHT	mm	2205	2205	2205	2205	2205	2205	2205	2205	
WEIGHT EMPTY FOR STANDARD CONFIGURATION (7) (8)	kg	1120	1125	1150	1180	1480	1675	1910	2000	
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (7) (8)	kg	1590	1595	1620	1650	1970	2180	2515	2670	

The manufacturer reserves the right to modify specifications without notice.

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 Revision: 01-2021

Data referred to:

- (1) Data referred to inlet/outlet water temperature = +12/+7 °C, ambient temperature = +35°C, fluid = Water
- (2) Data referred to inlet/outlet water temperature = +15/+10 °C, ambient temperature = +30°C, fluid = 70% Water + 30% Ethylene Glycol
- (3) Available pressure can be calculated from Hitema Online Selection Software
- (4) SEPR: data comply with the European Regulation (EU) 2016/2281, referring to high temperature process chillers
- (5) Pressure drops taken in account: evaporator, valves, piping ; (6) Pressure drops taken in account: evaporator, valves, piping, free-cooling coil
- (7) Data referred to standard chiller configuration as indicated in frigorific section, with different evaporator this data can change
- (8) Data referred to standard chiller configuration WP (single pump P3) and AC fans
- (9) Sound pressure level referred to measures according to normative ISO3744, pressure level at distance of 10 m, referred to free field on reflecting surface
- (10) To avoid excessive start/stop of the compressors a minimum water volume for the entire plant must be guarantee, the tank supplied by Hitema can be not enough
- (11) The expansion vessel volume is calculated considering 40°C of deltaT between water temperature with chiller stopped and chiller active, 1/2bar of hydraulic circuit pre-charge and considering only the water volume of the unit

\* For the configurations NT.NP (no tank, no pump), NT.WP (no tank, single pump P3), and NT.PH (no tank, single pump P5) the chiller width will be 1105mm

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B-ES = stainless steel brazed plate evaporator

Type of available expansion elements  
CP = Capillary tube  
VTS = Thermostatic expansion valve  
ETS = Electronic expansion valve (available as option)

**TECHNICAL DATA**

<b>PERFORMANCES</b>		<b>Model</b>	<b>200</b>	<b>230</b>	<b>280</b>	<b>340</b>	<b>370</b>		
NOMINAL COOLING CAPACITY	kW	W 12°C/7°C @ 35°C (1)	200,0	226,0	276,0	325,0	355,0		
			TOTAL NOMINAL ABSORBED POWER	77,5	86,7	107,1	117,3	133,9	
			EER	2,97	2,96	2,85	3,04	2,87	
			SEPR (HT) (4)	-	5,46	5,42	5,22	5,17	5,06
			AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY	°C	0,7	0,5	-1,2	-7,0	-8,2
			NOMINAL WATER FLOW	m3/h	34,4	38,8	47,4	55,8	61,0
MECHANICAL MODE PRESSURE DROPS (5) (7) (8)	kPa	64	53	60	68	77			
FREE COOLING MODE PRESSURE DROPS (6) (7) (8)	kPa	102	98	120	117	122			
NOMINAL COOLING CAPACITY	kW	30%EG 15°C/10°C @ 30°C (2)	222,0	250,9	306,4	360,8	394,1		
			TOTAL NOMINAL ABSORBED POWER	72,9	81,5	100,3	109,7	124,9	
			EER	3,54	3,52	3,41	3,63	3,44	
			AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY	°C	1,8	1,5	-0,7	-8,3	-9,9
			NOMINAL WATER FLOW	m3/h	42,1	47,5	58,0	68,3	74,6
			MECHANICAL MODE PRESSURE DROPS (5) (7) (8)	kPa	106	79	90	102	116
FREE COOLING MODE PRESSURE DROPS (6) (7) (8)	kPa	169	147	180	175	183			
<b>FRIGORIFIC SECTION</b>									
COMPRESSORS / REFRIGERATING CIRCUITS / PARTITION STEP	nr.	4/2/4	4/2/4	4/2/4	4/2/4	4/2/4			
KIND OF EVAPORATOR	-	ST	ST	ST	ST	ST			
<b>HYDRAULIC SECTION</b>									
WATER FLOW RANGE (8)	m3/h	26,0÷46,0	26,0÷46,0	31,0÷58,0	38,0÷72,0	42,0÷80,0			
MAXIMUM PUMP ABSORBED POWER (WP OR OPTION DP)	P3 (3) kW	10,25	10,25	10,25	10,25	10,25			
MAXIMUM PUMP ABSORBED CURRENT (WP OR OPTION DP)	A	17,40	17,40	17,40	17,40	17,40			
MAXIMUM PUMP ABSORBED POWER (OPTION PH OR DPH)	P5 (3) kW	19,94	19,94	19,94	19,94	19,94			
MAXIMUM PUMP ABSORBED CURRENT (OPTION PH OR DPH)	A	32,70	32,70	32,70	32,70	32,70			
HYDRAULIC CONNECTIONS (THREADED / FLANGED)	BSP / DN	DN80	DN80	DN100	DN100	DN100			
TANK VOLUME (7) (10)	dm³	500	500	500	500	500			
EXPANSION VESSEL VOLUME (OPTION XV) (11)	liters	40	40	40	40	40			
<b>FAN SECTION (AXIAL)</b>									
FANS	nr.	5	6	6	6	6			
MAXIMUM FANS ABSORBED POWER	AC kW	9,70	11,64	11,64	11,64	11,64			
MAXIMUM FANS ABSORBED CURRENT	A	19,50	23,40	23,40	23,40	23,40			
TOTAL AIR FLOW	m3/h	80000	84000	84000	84000	84000			
<b>TOTAL ELECTRIC DATA</b>									
MAXIMUM ABSORBED CURRENT (F.L.A) (8)	A	169,8	186,6	219,2	248,6	278,0			
MAXIMUM PEAK CURRENT (L.R.A) (8)	A	358,3	375,1	446,6	499,3	528,7			
MAXIMUM PEAK CURRENT WITH SOFT START (OPTION SF) (L.R.A) (8)	A	313,3	330,1	392,2	437,3	466,7			
<b>NOISE DATA</b>									
SOUND PRESSURE FOR STANDARD CONFIGURATION (8) (9)	dB(A)	63,7	64,8	66,1	66,1	66,1			
SOUND PRESSURE FOR LOW NOISE CONFIGURATION (OPTION LNJ) (8) (9)	dB(A)	62,8	63,6	64,4	64,4	64,4			
<b>DIMENSIONS AND WEIGHT</b>									
LENGTH	mm	6350	6350	6350	6350	6350			
WIDTH	mm	1305*	1305*	1305*	1305*	1305*			
HEIGHT	mm	2180	2180	2180	2180	2180			
WEIGHT EMPTY FOR STANDARD CONFIGURATION (7) (8)	kg	2465	2695	2820	2920	2980			
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (7) (8)	kg	3130	3365	3510	3625	3700			

The manufacturer reserves the right to modify specifications without notice.

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Data referred to:

- (1) Data referred to inlet/outlet water temperature = +12/+7 °C, ambient temperature = +35°C, fluid = Water
- (2) Data referred to inlet/outlet water temperature = +15/+10 °C, ambient temperature = +30°C, fluid = 70% Water + 30% Ethylene Glycol
- (3) Available pressure can be calculated from Hitema Online Selection Software
- (4) SEPR: data comply with the European Regulation (EU) 2016/2281, referring to high temperature process chillers
- (5) Pressure drops taken in account: evaporator, valves, piping ; (6) Pressure drops taken in account: evaporator, valves, piping, free-cooling coil
- (7) Data referred to standard chiller configuration as indicated in frigorific section, with different evaporator this data can change
- (8) Data referred to standard chiller configuration WP (single pump P3) and AC fans
- (9) Sound pressure level referred to measure according to normative ISO3744, pressure level at distance of 10 m, referred to free field on reflecting surface
- (10) To avoid excessive start/stop of the compressors a minimum water volume for the entire plant must be guarantee, the tank supplied by Hitema can be not enough
- (11) The expansion vessel volume is calculated considering 40°C of deltaT between water temperature with chiller stopped and chiller active, 1/2bar of hydraulic circuit pre-charge and considering only the water volume of the unit

\* For the configurations NT.NP (no tank, no pump), NT.WP (no tank, single pump P3), and NT.PH (no tank, single pump P5) the chiller width will be 1105mm