

Air-cooled liquid chillers ISV series, inverter screw compressors, R134A / R513A / R1234ze refrigerant, shell and tube evaporator, brazed plate economizer, condenser and freecooling coil with copper tubes and aluminium fins, EC axial fans r. Electrical feed 400V/3ph/50Hz (60Hz version as option). IP54 protection rating, chillers suitable for outdoor installation. Additional modules (2 fans) can be added to improve efficiency (before the order). Inbuilt water storage tank and single pump P3 as option. Microchannel condenser coils as option.

Type of available evaporators:

ST = shell and tube evaporator, with high thickness copper tubes (0,41mm)
B-ES = stainless steel brazed plate evaporator

Type of available expansion elements:

ETS = Electronic expansion valve (available as option)

TECHNICAL DATA

PERFORMANCES		Model	300	350	390	440	480	520	600	680
NOMINAL COOLING CAPACITY	W 12°C/7°C @ 35°C (1)	kW	301,0	351,0	392,0	441,0	483,0	532,0	608,0	691,0
TOTAL NOMINAL ABSORBED POWER		kW	92,4	104,6	119,5	130,9	151,4	162,1	178,4	212,2
EER		kW/kW	3,26	3,35	3,28	3,37	3,19	3,28	3,41	3,26
SEPR (HT) (3)		-	5,04	5,01	5,04	5,55	5,54	5,52	5,57	5,55
AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY		°C	0,55	1,64	0,81	1,61	0,87	1,55	1,68	0,77
NOMINAL WATER FLOW		m ³ /h	51,7	60,3	67,3	75,8	83,0	91,4	104,5	118,7
MECHANICAL MODE PRESSURE DROPS (4) (6) (7)		kPa	58	58	58	53	53	61	49	48
FREE COOLING MODE PRESSURE DROPS (5)		kPa	128,00	125,70	125,60	108,00	119,16	124,65	106,72	120,57
FRIGORIFIC SECTION										
COMPRESSORS / REFRIGERATING CIRCUITS / CAPACITY CONTROL	nr.	1/1/27÷108%	1/1/25÷100%	1/1/20÷101%	1/1/20÷100%	1/1/16÷102%	1/1/16÷100%	2/2/26÷102%	2/2/25÷100%	
KIND OF EXPANSION ELEMENT	-	ETS	ETS	ETS	ETS	ETS	ETS	ETS	ETS	
KIND OF EVAPORATOR	-	ST	ST	ST	ST	ST	ST	ST	ST	
ECONOMIZER		NO	YES	NO	YES	NO	YES	NO	YES	
TYPE OF ECONOMIZER	type	plate	plate	plate	plate	plate	plate	plate	plate	
HYDRAULIC SECTION										
WATER FLOW RANGE (7)	m ³ /h	36,0÷72,0	42,0÷80,0	42,0÷84,0	52,0÷105,0	57,0÷113,0	57,0÷113,0	68,0÷137,0	81,0÷162,0	
MAXIMUM PUMP ABSORBED POWER (WP OR OPTION DP)	P3 (2)	kW	10,20	16,22	16,22	16,22	16,22	24,85	24,85	24,85
MAXIMUM PUMP ABSORBED CURRENT (WP OR OPTION DP)		A	17,40	26,60	26,60	26,60	26,60	42,20	42,20	42,20
MAXIMUM PUMP ABSORBED POWER (OPTION PH OR DPH)	P5 (2)	kW	19,94	19,94	31,88	31,88	31,88	39,09	39,09	39,09
MAXIMUM PUMP ABSORBED CURRENT (OPTION PH OR DPH)		A	32,70	32,70	53,50	53,50	53,50	65,60	65,60	65,60
HYDRAULIC CONNECTIONS (FLANGED/VICTAULIC) (9)	DN	DN100	DN100	DN100	DN125	DN125	DN150	DN150	DN150	
TANK VOLUME (6) (10)	dm ³	380	380	500	500	500	500	500	500	
EXPANSION VESSEL NUMBER x VOLUME (OPTION XV) (11)	liters	1x19	2x19	2x19	2x19	2x19	2x19	2x19	2x19	
FAN SECTION (AXIAL)										
FANS	nr.	6	8	8	10	10	12	14	14	
MAXIMUM FANS ABSORBED POWER	EC	kW	11,04	14,72	14,72	18,40	18,40	22,08	25,76	25,76
MAXIMUM FANS ABSORBED CURRENT		A	22,98	30,64	30,64	38,30	38,30	45,96	53,62	53,62
TOTAL AIR FLOW		m ³ /h	123600	164800	164800	206000	206000	247200	288400	288400
TOTAL ELECTRIC DATA										
MAXIMUM ABSORBED CURRENT (F.L.A) (7)	A	243,0	250,6	290,6	298,3	378,3	386,0	433,6	493,6	
NOISE DATA										
SOUND PRESSURE FOR STANDARD CONFIGURATION (7) (8)	dB(A)	68,6	68,8	69,7	69,9	70,8	70,9	71,7	71,7	
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (7) (8)	dB(A)	64,9	65,4	66,1	66,5	67,1	67,4	68,2	68,2	
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (7) (8)	dB(A)	64,0	64,3	65,1	65,4	66,2	66,4	67,2	67,2	
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (7) (8)	dB(A)	61,9	62,4	63,1	63,5	64,1	64,4	65,2	65,2	
DIMENSIONS AND WEIGHT										
LENGTH	mm	4600	5900	5900	7200	7200	8500	9800	9800	
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 (6) (7)	kg	3150	3850	4000	4700	4750	5400	6600	6800	
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (6) (7)	kg	3350	4100	4270	5020	5090	5790	7040	7260	

The manufacturer reserves the right to modify specifications without notice.

Last update: 28/07/2021

Data referred to:

- (1) Data referred to inlet/outlet water temperature = +12/+7 °C, ambient temperature = +35°C, fluid = Water
- (2) Available pressure can be calculated from Hitema Online Selection Software
- (3) SEPR: data comply with the European Regulation (EU) 2016/2281, referring to high temperature process chillers in the configuration with brazed plate or shell and tube evaporator and without pump. Any added option that modify cooling capacity or absorbed power of the chiller will not be considered in the SEPR value
- (4) Pressure drops taken in account: evaporator, piping
- (5) Pressure drops taken in account: evaporator, valves, piping, free-cooling coil
- (6) Data referred to standard chiller configuration as indicated in frigorific section, with different evaporator this data can change
- (7) Data referred to standard chiller configuration NP (no pump) and EC fans
- (8) Sound pressure level referred to measures according to normative ISO3744, pressure level at distance of 10 m, referred to free field on reflecting surface
- (9) Flanged connections with one of next options: Pump, Double pump, Tank. Flanged connections standard for models 095÷160
- (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 50°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

** pump P5 includes the soft start (SF) option

Air-cooled liquid chillers ISV series, inverter screw compressors, R134A / R513A / R1234ze refrigerant, shell and tube evaporator, brazed plate economizer, condenser and freecooling coil with copper tubes and aluminium fins, EC axial fans r. Electrical feed 400V/3ph/50Hz (60Hz version as option). IP54 protection rating, chillers suitable for outdoor installation. Additional modules (2 fans) can be added to improve efficiency (before the order). Inbuilt water storage tank and single pump P3 as option. Microchannel condenser coils as option.

Type of available evaporators:

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

B-ES = stainless steel brazed plate evaporator

Type of available expansion elements:

ETS = Electronic expansion valve (available as option)

TECHNICAL DATA

PERFORMANCES		Model	770	850	910
NOMINAL COOLING CAPACITY	W 12°C/7°C @ 35°C (1)	kW	785,0	868,0	926,0
TOTAL NOMINAL ABSORBED POWER		kW	238,4	257,3	293,1
EER		kW/kW	3,29	3,37	3,16
SEPR (HT) (3)		-	5,57	5,56	5,51
AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY		°C	0,77	0,93	0,42
NOMINAL WATER FLOW		m ³ /h	134,9	149,1	159,1
MECHANICAL MODE PRESSURE DROPS (4) (6) (7)		kPa	55	64	68
FREE COOLING MODE PRESSURE DROPS (5)		kPa	136,1	132,9	145,8
FRIGORIFIC SECTION					
COMPRESSORS / REFRIGERATING CIRCUITS / CAPACITY CONTROL	nr.	2/2/20±102%	2/2/20±102%	2/2/17±106%	
KIND OF EXPANSION ELEMENT	-	ETS	ETS	ETS	
KIND OF EVAPORATOR	-	ST	ST	ST	
ECONOMIZER					
TYPE OF ECONOMIZER	type	plate	plate	plate	
HYDRAULIC SECTION					
WATER FLOW RANGE (7)	m ³ /h	94,0÷188,0	102,0÷203,0	108,0÷210,0	
MAXIMUM PUMP ABSORBED POWER (WP OR OPTION DP)	P3 (2)	kW	31,88	31,88	31,88
MAXIMUM PUMP ABSORBED CURRENT (WP OR OPTION DP)		A	53,50	53,50	53,50
MAXIMUM PUMP ABSORBED POWER (OPTION PH OR DPH)	P5 (2)	kW	57.65*	57.65**	57.65**
MAXIMUM PUMP ABSORBED CURRENT (OPTION PH OR DPH)		A	93,50	93,50	93,50
HYDRAULIC CONNECTIONS (FLANGED/VICTAULIC) (9)	DN	DN150	DN150	DN150	
TANK VOLUME (6) (10)	dm ³	500	700	700	
EXPANSION VESSEL NUMBER x VOLUME (OPTION XV) (11)	liters	2x19	1x60	1x60	
FAN SECTION (AXIAL)					
FANS	nr.	16	18	18	
MAXIMUM FANS ABSORBED POWER	EC	kW	29,44	33,12	33,12
MAXIMUM FANS ABSORBED CURRENT		A	61,28	68,94	68,94
TOTAL AIR FLOW		m ³ /h	329600	370800	370800
TOTAL ELECTRIC DATA					
MAXIMUM ABSORBED CURRENT (F.L.A) (7)	A	581,3	588,9	748,9	
NOISE DATA					
SOUND PRESSURE FOR STANDARD CONFIGURATION (7) (8)	dB(A)	72,7	72,8	73,7	
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (7) (8)	dB(A)	69,1	69,3	70,0	
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (7) (8)	dB(A)	68,1	68,3	69,1	
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (7) (8)	dB(A)	66,1	66,3	67,0	
DIMENSIONS AND WEIGHT					
LENGTH	mm	11100	12400	12400	
WIDTH	mm	2210	2210	2210	
HEIGHT	mm	2450	2450	2450	
WEIGHT EMPTY FOR STANDARD CONFIGURATION (6) (7)	kg	7600	8400	8600	
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (6) (7)	kg	8110	8970	9200	

The manufacturer reserves the right to modify specifications without notice.

Last update: 28/07/2021
Revision: #R1F1

Data referred to:

- (1) Data referred to inlet/outlet water temperature = +12/+7 °C, ambient temperature = +35°C, fluid = Water
- (2) Available pressure can be calculated from Hitema Online Selection Software
- (3) SEPR: data comply with the European Regulation (EU) 2016/2281, referring to high temperature process chillers in the configuration with brazed plate or shell and tube evaporator and without pump. Any added option that modify cooling capacity or absorbed power of the chiller will not be considered in the SEPR value
- (4) Pressure drops taken in account: evaporator, piping
- (6) Data referred to standard chiller configuration as indicated in frigorific section, with different evaporator this data can change
- (7) Data referred to standard chiller configuration NP (no pump) and EC fans
- (8) Sound pressure level referred to measures according to normative ISO3744, pressure level at distance of 10 m, referred to free field on reflecting surface
- (9) Flanged connections with one of next options: Pump, Double pump, Tank. Flanged connections standard for models 095÷160
- (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 50°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

** pump P5 includes the soft start (SF) option