

Air-cooled liquid chillers SBSF series, scroll compressors, R410A / R32 / R454B refrigerant, brazed plate / shell and tube evaporator, condenser and freecooling coil with copper tubes and aluminium fins, AC axial fans controlled by cut-phase speed regulator. 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.

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
VTS = Thermostatic expansion valve
ETS = Electronic expansion valve (available as option)

TECHNICAL DATA

PERFORMANCES		Model	095	120	145	160	190	240	290	330
NOMINAL COOLING CAPACITY	W 12°C/7 °C @ 35°C (1)	kW	94,1	115,7	146,5	170,4	180,8	223,1	295,3	327,8
TOTAL NOMINAL ABSORBED POWER		kW	27,5	36,8	41,2	56,8	54,4	72,8	89,8	104,0
EER		kW/kW	3,42	3,15	3,56	3,00	3,33	3,07	3,29	3,15
SEPR (HT) (3)		-	5,07	5,02	5,07	5,04	5,05	5,01	5,03	5,03
AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY		°C	1,30	-0,40	2,80	1,20	1,60	-0,05	1,00	0,10
NOMINAL WATER FLOW		m3/h	16,2	19,9	25,2	29,3	31,1	38,4	50,8	56,4
MECHANICAL MODE PRESSURE DROPS (4) (6) (7)		kPa	59	63	58	56	53	48	60	69
FREE COOLING MODE PRESSURE DROPS (5)		kPa	122	150	107	113	115	135	130	152
FRIGORIFIC SECTION										
COMPRESSORS / REFRIGERATING CIRCUITS / PARTITION STEP		nr.	2/1/2	2/1/2	2/1/2	2/1/2	4/2/4	4/2/4	4/2/4	4/2/4
KIND OF EXPANSION ELEMENT		-	VTS	VTS	VTS	VTS	VTS	VTS	VTS	VTS
KIND OF EVAPORATOR		-	B-ES	B-ES	B-ES	B-ES	ST	ST	ST	ST
HYDRAULIC SECTION										
WATER FLOW RANGE (7)		m3/h	1,3÷2,3	1,6÷2,3	2,1÷3,6	2,5÷4,5	2,5÷4,5	3,0÷5,5	3,6÷6,6	4, 0÷7,3
MAXIMUM PUMP ABSORBED POWER (WP OR OPTION DP)	P3 (2)	kW	6,12	6,12	6,12	10,20	10,20	10,20	10,20	16,22
MAXIMUM PUMP ABSORBED CURRENT (WP OR OPTION DP)		A	10,40	10,40	10,40	17,40	17,40	17,40	17,40	26,60
MAXIMUM PUMP ABSORBED POWER (OPTION PH OR DPH)	P5 (2)	kW	8.3*	12.04*	12,04	12,04	19,94	19,94	19,94	19,94
MAXIMUM PUMP ABSORBED CURRENT (OPTION PH OR DPH)		A	14,10	20,20	20,20	20,20	32,70	32,70	32,70	32,70
HYDRAULIC CONNECTIONS (FLANGED)		DN	DN65	DN65	DN80	DN80	DN80	DN80	DN100	DN100
TANK VOLUME (6) (9)		dm³3	150	150	300	300	300	300	380	380
EXPANSION VESSEL NUMBER x VOLUME (OPTION XV) (10)		liters	1x8	1x8	1x19	1x19	1x19	1x19	2x19	2x19
FAN SECTION (AXIAL)										
FANS		nr.	2	2	4	4	4	4	6	6
MAXIMUM FANS ABSORBED POWER	AC	kW	3,68	3,68	7,36	7,36	7,36	7,36	11,04	11,04
MAXIMUM FANS ABSORBED CURRENT		A	7,66	7,66	15,32	15,32	15,32	15,32	22,98	22,98
TOTAL AIR FLOW		m3/h	34000	34000	68000	68000	68000	68000	102000	102000
TOTAL ELECTRIC DATA										
MAXIMUM ABSORBED CURRENT (F.L.A) (7)		A	67,7	80,5	103,1	133,8	135,3	161,1	201,4	230,8
MAXIMUM PEAK CURRENT (L.R.A) (7)		A	211,7	269,1	346,7	384,6	279,3	349,6	428,8	481,5
MAXIMUM PEAK CURRENT WITH SOFT START (OPTION SF) (L.R.A) (7)		A	176,9	224,1	289,2	322,6	244,5	304,6	374,4	419,5
NOISE DATA										
SOUND PRESSURE FOR STANDARD CONFIGURATION (7) (8)		dB(A)	55,5	58,5	60,1	61,5	58,6	61,5	64,2	64,2
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (7) (8)		dB(A)	54,0	55,5	57,8	58,6	57,0	58,6	60,9	60,9
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (7) (8)		dB(A)	51,8	54,1	56,0	57,1	54,8	57,1	59,7	59,7
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (7) (8)		dB(A)	51,0	52,5	54,8	55,6	54,0	55,6	57,9	57,9
DIMENSIONS AND WEIGHT										
LENGTH		mm	1610	1610	3300	3300	3300	3300	4600	4600
WIDTH		mm	2210	2210	2210	2210	2210	2210	2210	2210
HEIGHT		mm	2500	2500	2500	2500	2500	2500	2500	2500
WEIGHT EMPTY FOR STANDARD CONFIGURATION (6) (7)		kg	1120	1280	1950	1990	1990	2300	3250	3270
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (6) (7)		kg	1170	1340	2070	2120	2120	2440	3550	3590

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) 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, valves, 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 AC 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) 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
- (10) 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 is not available with Tank (T) option

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

*** 45 feet container needed for shipment

Air-cooled liquid chillers SBSF series, scroll compressors, R410A / R32 / R454B refrigerant, brazed plate / shell and tube evaporator, condenser and freecooling coil with copper tubes and aluminium fins, AC axial fans controlled by cut-phase speed regulator. Electrical feed 400V/3ph/50Hz (60Hz version as option). IP54 protection rating, chillers suitable for outdoor installation.

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Type of available expansion elements
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ETS = Electronic expansion valve (available as option)

TECHNICAL DATA

PERFORMANCES		Model	380	430	470	470/F10	530	570	570/F12	610
NOMINAL COOLING CAPACITY	W 12°C/7°C @ 35°C (1)	kW	387,8	432,6	465,5	483,7	521,4	553,4	577,5	592,3
TOTAL NOMINAL ABSORBED POWER		kW	114,7	136,5	151,7	147,3	161,4	175,6	172,9	194,4
EER		kW/kW	3,38	3,17	3,07	3,28	3,23	3,15	3,34	3,05
SEPR (HT) (3)		-	5,04	5,50	5,53	5,50	5,50	5,53	5,50	5,55
AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY		°C	1,10	0,20	-0,40	1,00	0,50	0,00	1,10	-0,60
NOMINAL WATER FLOW		m3/h	66,7	74,4	80,1	83,2	89,7	95,2	99,3	101,9
MECHANICAL MODE PRESSURE DROPS (4) (6) (7)		kPa	72	72	77	83	78	70	77	76
FREE COOLING MODE PRESSURE DROPS (5)		kPa	136	148	162	175	156	156	170	160
FRIGORIFIC SECTION										
COMPRESSORS / REFRIGERATING CIRCUITS / PARTITION STEP		nr.	4/2/4	6/2/4	6/2/4	6/2/4	6/2/4	6/2/4	6/2/4	6/2/4
KIND OF EXPANSION ELEMENT		-	VTS	VTS	ETS	ETS	ETS	ETS	ETS	ETS
KIND OF EVAPORATOR		-	ST	ST	ST	ST	ST	ST	ST	ST
HYDRAULIC SECTION										
WATER FLOW RANGE (7)		m3/h	4,7÷8,7	5,8÷10,7	6,2÷11,5	6,2÷11,5	7,8÷14,2	7,8÷14,2	7,8÷ 14,2	8,4÷14,3
MAXIMUM PUMP ABSORBED POWER (WP OR OPTION DP)	P3 (2)	kW	16,22	16,22	16,22	16,22	24,85	24,85	24,85	24,85
MAXIMUM PUMP ABSORBED CURRENT (WP OR OPTION DP)		A	26,60	26,60	26,60	26,60	42,20	42,20	42,20	42,20
MAXIMUM PUMP ABSORBED POWER (OPTION PH OR DPH)	P5 (2)	kW	31,88	31,88	31,88	31,88	39,09	39,09	39,09	39,09
MAXIMUM PUMP ABSORBED CURRENT (OPTION PH OR DPH)		A	53,50	53,50	53,50	53,50	65,60	65,60	65,60	65,60
HYDRAULIC CONNECTIONS (FLANGED)		DN	DN100	DN125	DN125	DN125	DN150	DN150	DN150	DN150
TANK VOLUME (6) (9)		dm³	500	500	500	500	500	500	500	500
EXPANSION VESSEL NUMBER x VOLUME (OPTION XV) (10)		liters	2x19	2x19	2x19	2x19	2x19	2x19	2x19	2x19
FAN SECTION (AXIAL)										
FANS		nr.	8	8	8	10	10	10	12	10
MAXIMUM FANS ABSORBED POWER	AC	kW	14,72	14,72	14,72	18,40	18,40	18,40	22,08	18,40
MAXIMUM FANS ABSORBED CURRENT		A	30,64	30,64	30,64	38,30	38,30	38,30	45,96	38,30
TOTAL AIR FLOW		m3/h	136000	136000	136000	170000	170000	170000	204000	170000
TOTAL ELECTRIC DATA										
MAXIMUM ABSORBED CURRENT (F.L.A) (7)		A	267,8	298,3	327,7	335,3	364,7	394,0	401,7	423,0
MAXIMUM PEAK CURRENT (L.R.A) (7)		A	518,5	525,7	578,4	586,0	615,4	644,8	652,4	757,3
MAXIMUM PEAK CURRENT WITH SOFT START (OPTION SF) (L.R.A) (7)		A	456,5	471,3	516,4	524,0	553,4	582,8	590,4	675,7
NOISE DATA										
SOUND PRESSURE FOR STANDARD CONFIGURATION (7) (8)		dB(A)	64,5	65,8	65,8	66,0	66,0	66,0	66,2	67,4
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (7) (8)		dB(A)	61,6	62,4	62,4	62,9	62,9	62,9	63,3	63,9
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (7) (8)		dB(A)	60,1	61,3	61,3	61,6	61,6	61,6	61,9	62,9
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (7) (8)		dB(A)	58,6	59,4	59,4	59,9	59,9	59,9	60,3	60,9
DIMENSIONS AND WEIGHT										
LENGTH		mm	5900	5900	5900	7200	7200	7200	8500	7200
WIDTH		mm	2210	2210	2210	2210	2210	2210	2210	2210
HEIGHT		mm	2500	2500	2500	2500	2500	2500	2500	2500
WEIGHT EMPTY FOR STANDARD CONFIGURATION (6) (7)		kg	3730	4020	4100	4830	4830	4930	5600	5000
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (6) (7)		kg	4000	4300	4400	4970	4970	5100	5930	5200

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Revision: 02-2021

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- (4) Pressure drops taken in account: evaporator, valves, 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 AC 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) 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
- (10) 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 is not available with Tank (T) option

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

*** 45 feet container needed for shipment

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Type of available expansion elements

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ETS = Electronic expansion valve (available as option)

TECHNICAL DATA

PERFORMANCES		Model	610/F12	660	660/F14	720	720/F14	840	930	1030
NOMINAL COOLING CAPACITY	W 12°C/7°C @ 35°C (1)	kW	616,1	661,7	682,5	700,4	720,4	856,4	957,7	1018,3
TOTAL NOMINAL ABSORBED POWER		kW	189,6	206,3	203,3	224,9	219,7	261,0	310,2	337,5
EER		kW/kW	3,25	3,21	3,36	3,11	3,28	3,28	3,09	3,02
SEPR (HT) (3)		-	5,53	5,50	5,51	5,56	5,55	5,56	5,53	5,56
AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY		°C	0,60	0,05	1,00	-0,45	0,50	0,90	-0,48	-0,60
NOMINAL WATER FLOW		m3/h	106,0	113,8	117,4	120,5	123,9	147,0	164,7	175,1
MECHANICAL MODE PRESSURE DROPS (4) (6) (7)		kPa	82	86	92	91	96	81	90	94
FREE COOLING MODE PRESSURE DROPS (5)	kPa	173	164	175	176	186	167	172	178	
FRIGORIFIC SECTION										
COMPRESSORS / REFRIGERATING CIRCUITS / PARTITION STEP		nr.	6/2/4	6/2/4	6/2/4	6/2/4	6/2/4	9/3/6	9/3/6	9/3/6
KIND OF EXPANSION ELEMENT		-	ETS	ETS	ETS	ETS	ETS	ETS	ETS	ETS
KIND OF EVAPORATOR		-	ST	ST	ST	ST	ST	ST	ST	ST
HYDRAULIC SECTION										
WATER FLOW RANGE (7)		m3/h	8,4÷14,3	8,4÷14,8	8,4÷14,8	8,4÷15,7	8,4÷15,7	9,8÷18,3	11, 3÷21,0	14,1÷23,0
MAXIMUM PUMP ABSORBED POWER (WP OR OPTION DP)	P3 (2)	kW	24,85	24,85	24,85	31,88	31,88	31,88	31,88	31,88
MAXIMUM PUMP ABSORBED CURRENT (WP OR OPTION DP)		A	42,20	42,20	42,20	53,50	53,50	53,50	53,50	53,50
MAXIMUM PUMP ABSORBED POWER (OPTION PH OR DPH)	P5 (2)	kW	39,09	39,09	39,09	57,65*	57,65*	57,65**	57,65**	57,65**
MAXIMUM PUMP ABSORBED CURRENT (OPTION PH OR DPH)		A	65,60	65,60	65,60	93,50	93,50	93,50	93,50	93,50
HYDRAULIC CONNECTIONS (FLANGED)		DN	DN150	DN150	DN150	DN150	DN150	DN150	DN200	DN200
TANK VOLUME (6) (9)		dm³3	500	500	500	500	500	700	700	700
EXPANSION VESSEL NUMBER x VOLUME (OPTION XV) (10)		liters	2x19	2x19	2x19	2x19	2x19	1x60	1x60	1x60
FAN SECTION (AXIAL)										
FANS		nr.	12	12	14	12	14	18	18	18
MAXIMUM FANS ABSORBED POWER	AC	kW	22,08	22,08	25,76	22,08	25,76	33,12	33,12	33,12
MAXIMUM FANS ABSORBED CURRENT		A	45,96	45,96	53,62	45,96	53,62	68,94	68,94	68,94
TOTAL AIR FLOW		m3/h	204000	204000	238000	204000	238000	306000	306000	306000
TOTAL ELECTRIC DATA										
MAXIMUM ABSORBED CURRENT (F.L.A) (7)		A	430,7	459,7	467,4	488,7	496,4	602,2	689,4	733,1
MAXIMUM PEAK CURRENT (L.R.A) (7)		A	764,9	793,9	801,6	822,9	830,6	852,9	1023,6	1067,3
MAXIMUM PEAK CURRENT WITH SOFT START (OPTION SF) (L.R.A) (7)		A	683,3	712,3	720,0	741,3	749,0	790,9	942,0	985,7
NOISE DATA										
SOUND PRESSURE FOR STANDARD CONFIGURATION (7) (8)		dB(A)	67,6	68,6	68,7	69,4	69,5	71,2	71,2	71,2
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (7) (8)		dB(A)	64,2	64,9	65,2	65,5	65,8	67,3	67,3	67,3
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (7) (8)		dB(A)	63,1	64,0	64,2	64,8	64,9	na	na	na
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (7) (8)		dB(A)	61,2	61,9	62,2	62,5	62,8	na	na	na
DIMENSIONS AND WEIGHT										
LENGTH	mm	8500	8500	9800	8500	9800	12790***	12790***	12790***	
WIDTH	mm	2210	2210	2210	2210	2210	2210	2210	2210	
HEIGHT	mm	2500	2500	2500	2500	2500	2500	2500	2500	
WEIGHT EMPTY FOR STANDARD CONFIGURATION (6) (7)		kg	5600	5600	6700	5700	6700	8250	8250	8250
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (6) (7)		kg	5930	5930	7230	6050	7230	8900	8900	8900

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

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