



**TEAM**  
AIR POWER

**SBS / SBSF / SBSF-OPT  
SERIES**



# DISCOVER HITEMA® CUSTOMIZED APPLICATIONS

choose your customized configuration



**ENR/ENRF SERIES**  
1,6kW ÷ 440kW

**CSE SERIES**  
30kW ÷ 377kW

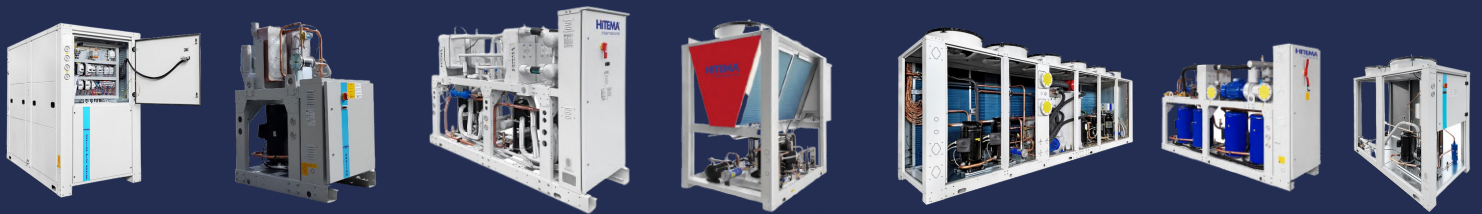
**CFT SERIES**  
7,9kW ÷ 410kW

**ENR-IR SERIES**  
8kW ÷ 200kW

**ENRC SERIES**  
7,4kW ÷ 375kW

**HNR SERIES**  
14kW ÷ 95kW  
15kW ÷ 104kW

## UNTIL 400KW



**ENW SERIES**  
3,8kW ÷ 424kW

**CFTW SERIES**  
50kW ÷ 371kW

**HFTW SERIES**  
100kW ÷ 400kW  
80kW ÷ 370kW

**SBS-HP SERIES**  
61,2kW - 81,4kW -  
105,8kW

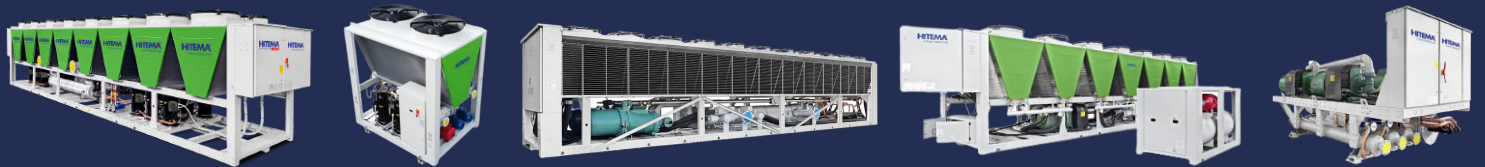
**HFT SERIES**  
16kW ÷ 345kW

**CFTC SERIES**  
50kW ÷ 370kW

**MTC SERIES**  
8kW ÷ 430kW

## CUSTOMIZED FOR YOU

with more than 100 OPTIONS available it is easy to customized your Chillers



**SBS/SBSF SERIES**  
**SBSF-OPT SERIES**  
94kW ÷ 1288kW

**SBS-MC SERIES**  
95kW ÷ 180kW

**NOVA/NOVAF SERIES**  
266kW ÷ 2136kW

**DTS/DTSF SERIES** NEW!  
**ISV-ISVF SERIES**  
266kW ÷ 2136kW

**EWB SERIES**  
291kW ÷ 2240kW

## UNTIL 3000KW



**CWB SERIES**  
291kW ÷ 2240kW

**HBS SERIES**  
211kW - 750kW

**TFW SERIES**  
250kW ÷ 3000kW

**TFV/TFVF SERIES**  
250kW ÷ 1215kW

**PRP/HPRP SERIES**  
130kW ÷ 520kW  
55kW ÷ 330kW

**HYD SERIES**  
400L ÷ 5000L

# SBS SERIES

*Air-Cooled liquid Chillers  
EC axial fans  
IP54 protection rating  
Suitable for OUTDOOR installation*



SERIES: SBS-SBSF	DATE: 20/09/2021
CODE: TTD-SBS-01	UPDATE: -
CHECKED BY	M. Burba



**Air-cooled liquid chillers SBS series, scroll compressors, R410A / R32 / R454B refrigerant, brazed plate / shell and tube evaporator, condenser coil with copper tubes and aluminium fins, EC axial fans. 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:  
VTS = Thermostatic expansion valve  
ETS = Electronic expansion valve (available as option)

**TECHNICAL DATA**

<b>PERFORMANCES</b>		Model	095	120	145	160	190	240	290	330
NOMINAL COOLING CAPACITY	W 12°C/7°C @ 35°C (1)	kW	98,4	122,6	144,7	161,2	189,0	236,0	288,9	319,9
TOTAL NOMINAL ABSORBED POWER		kW	25,9	34,1	44,3	52,0	51,4	68,0	88,6	103,6
EER		kW/kW	3,80	3,60	3,27	3,10	3,68	3,47	3,26	3,09
SEPR (HT) (3)		-	5,06	5,05	5,05	5,06	5,04	5,06	5,03	5,00
NOMINAL WATER FLOW		m <sup>3</sup> /h	16,9	21,1	24,9	27,7	32,5	40,5	49,6	55,0
MECHANICAL MODE PRESSURE DROPS (4) (5) (6)		kPa	50	54	55	54	47	40	41	47
<b>FRIGORIFIC SECTION</b>										
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	4/2/4
KIND OF EXPANSION ELEMENT	-	VTS	VTS	VTS	VTS	VTS	VTS	VTS	VTS	VTS
KIND OF EVAPORATOR	-	B-ES	B-ES	B-ES	B-ES	ST	ST	ST	ST	ST
<b>HYDRAULIC SECTION</b>										
WATER FLOW RANGE (6)	m <sup>3</sup> /h	13,0÷23,0	16,0÷23,0	16,0÷42,0	20,0÷42,0	23,0÷42,0	29,0÷53,0	36,0÷66,0	38,0÷70,0	
MAXIMUM PUMP ABSORBED POWER (WP OR OPTION DP)	P3 (2)	kW	3,46	4,56	4,56	4,56	8,30	8,30	8,30	8,30
MAXIMUM PUMP ABSORBED CURRENT (WP OR OPTION DP)		A	6,33	7,75	7,75	7,75	14,10	14,10	14,10	14,10
MAXIMUM PUMP ABSORBED POWER (OPTION PH OR DPH)	P5 (2)	kW	6,12	10,20	10,20	10,20	16,22	16,22	16,22	16,22
MAXIMUM PUMP ABSORBED CURRENT (OPTION PH OR DPH)		A	10,40	17,40	17,40	17,40	26,60	26,60	26,60	26,60
HYDRAULIC CONNECTIONS (FLANGED/VICTAULIC) (8)	DN	DN65	DN65	DN80	DN80	DN80	DN80	DN100	DN100	DN100
TANK VOLUME (5) (9)	dm <sup>3</sup>	150	150	150	150	300	300	300	300	300
EXPANSION VESSEL NUMBER x VOLUME (OPTION XV) (10)	liters	1x8	1x8	1x8	1x8	1x19	1x19	1x19	1x19	1x19
<b>FAN SECTION (AXIAL)</b>										
FANS	nr.	2	2	2	2	4	4	4	4	4
MAXIMUM FANS ABSORBED POWER	EC	kW	3,68	3,68	3,68	3,68	7,36	7,36	7,36	7,36
MAXIMUM FANS ABSORBED CURRENT		A	7,66	7,66	7,66	7,66	15,32	15,32	15,32	15,32
TOTAL AIR FLOW	m <sup>3</sup> /h	41200	41200	41200	41200	82400	82400	82400	82400	82400
<b>TOTAL ELECTRIC DATA</b>										
MAXIMUM ABSORBED CURRENT (F.L.A) (6)	A	67,7	80,5	96,9	111,6	135,3	161,1	193,8	223,1	223,1
MAXIMUM PEAK CURRENT (L.R.A) (6)	A	211,7	269,1	324,3	362,3	279,3	349,6	421,2	473,8	473,8
MAXIMUM PEAK CURRENT WITH SOFT START (OPTION SF) (L.R.A) (6)	A	176,9	224,1	269,9	300,3	244,5	304,6	366,8	411,8	411,8
<b>NOISE DATA</b>										
SOUND PRESSURE FOR STANDARD CONFIGURATION (6) (7)	dB(A)	58,2	60,0	61,8	61,8	61,2	63,0	64,8	64,8	64,8
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (6) (7)	dB(A)	57,4	58,2	59,1	59,1	60,4	61,2	62,1	62,1	62,1
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (6) (7)	dB(A)	54,8	56,1	57,5	57,5	57,8	59,1	60,6	60,6	60,6
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (6) (7)	dB(A)	54,4	55,2	56,1	56,1	57,4	58,2	59,1	59,1	59,1
<b>DIMENSIONS AND WEIGHT</b>										
LENGTH	mm	1610	1610	1610	1610	2910	2910	2910	2910	2910
WIDTH	mm	2210	2210	2210	2210	2210	2210	2210	2210	2210
HEIGHT	mm	2500	2500	2500	2500	2500	2500	2500	2500	2500
WEIGHT EMPTY FOR STANDARD CONFIGURATION (5) (6)	kg	1030	1200	1250	1280	1900	2220	2320	2350	2350
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (5) (6)	kg	1050	1225	1280	1310	1950	2290	2410	2450	2450

The manufacturer reserves the right to modify specifications without notice.

Last update: 28/07/2021  
Revision: 03-2021

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) Data referred to standard chiller configuration as indicated in frigorific section, with different evaporator this data can change
- (6) Data referred to standard chiller configuration NP (no pump) and EC fans
- (7) Sound pressure level referred to measures according to normative ISO3744, pressure level at distance of 10 m, referred to free field on reflecting surface
- (8) Flanged connections with one of next options: Pump, Double pump, Tank. Flanged connections standard for models 095÷160
- (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 includes the soft start (SF) option

**Air-cooled liquid chillers SBS series, scroll compressors, R410A / R32 / R454B refrigerant, brazed plate / shell and tube evaporator, condenser coil with copper tubes and aluminium fins, EC axial fans. 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:  
VTS = Thermostatic expansion valve  
ETS = Electronic expansion valve (available as option)

**TECHNICAL DATA**

<b>PERFORMANCES</b>		Model	330/F6	380	430	470	470/F8	530	570	610
NOMINAL COOLING CAPACITY	W 12°C/7°C @ 35°C (1)	kW	345,5	387,0	433,3	464,8	490,9	527,4	563,0	603,0
TOTAL NOMINAL ABSORBED POWER		kW	97,8	110,6	132,8	147,4	141,8	154,4	168,3	186,5
EER		kW/kW	3,53	3,50	3,26	3,15	3,46	3,42	3,34	3,23
SEPR (HT) (3)		-	5,04	5,03	5,52	5,54	5,52	5,50	5,57	5,54
NOMINAL WATER FLOW		m <sup>3</sup> /h	59,3	66,5	74,4	79,9	84,3	90,6	96,7	103,6
MECHANICAL MODE PRESSURE DROPS (4) (5) (6)		kPa	55	57	56	60	67	59	52	56
<b>FRIGORIFIC SECTION</b>										
COMPRESSORS / REFRIGERATING CIRCUITS / PARTITION STEP	nr.	4/2/4	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	VTS	ETS	ETS	ETS	ETS	ETS	ETS
KIND OF EVAPORATOR	-	ST	ST	ST	ST	ST	ST	ST	ST	ST
<b>HYDRAULIC SECTION</b>										
WATER FLOW RANGE (6)	m <sup>3</sup> /h	38,0÷70,0	47,0÷87,0	60,0÷110,0	62,0÷120,0	62,0÷120,0	79,0÷145,0	79,0÷145,0	81,0÷150,0	
MAXIMUM PUMP ABSORBED POWER (WP OR OPTION DP)	P3 (2)	kW	8,30	10,20	10,20	10,20	10,20	16,22	16,22	16,22
MAXIMUM PUMP ABSORBED CURRENT (WP OR OPTION DP)		A	14,10	17,40	17,40	17,40	17,40	26,60	26,60	26,60
MAXIMUM PUMP ABSORBED POWER (OPTION PH OR DPH)	P5 (2)	kW	16,22	24,85	24,85	24,85	24,85	24,85	31,88	31,88
MAXIMUM PUMP ABSORBED CURRENT (OPTION PH OR DPH)		A	26,60	42,40	42,40	42,40	42,40	42,40	53,50	53,50
HYDRAULIC CONNECTIONS (FLANGED/VICTAULIC) (8)	DN	DN100	DN100	DN125	DN125	DN125	DN150	DN150	DN150	
TANK VOLUME (5) (9)	dm <sup>3</sup>	300	380	380	380	380	500	500	500	
EXPANSION VESSEL NUMBER x VOLUME (OPTION XV) (10)	liters	1x19	1x19	1x19	1x19	1x19	2x19	2x19	2x19	
<b>FAN SECTION (AXIAL)</b>										
FANS	nr.	6	6	6	6	8	8	8	8	
MAXIMUM FANS ABSORBED POWER	EC	kW	11,04	11,04	11,04	11,04	14,72	14,72	14,72	14,72
MAXIMUM FANS ABSORBED CURRENT		A	22,98	22,98	22,98	22,98	30,64	30,64	30,64	30,64
TOTAL AIR FLOW	m <sup>3</sup> /h	123600	123600	123600	123600	164800	164800	164800	164800	
<b>TOTAL ELECTRIC DATA</b>										
MAXIMUM ABSORBED CURRENT (F.L.A) (6)	A	230,8	260,1	290,6	320,0	327,7	357,0	386,4	415,4	
MAXIMUM PEAK CURRENT (L.R.A) (6)	A	481,5	510,9	518,0	570,7	578,4	607,7	637,1	749,6	
MAXIMUM PEAK CURRENT WITH SOFT START (OPTION SF) (L.R.A) (6)	A	419,5	448,9	463,6	508,7	516,4	545,7	575,1	668,0	
<b>NOISE DATA</b>										
SOUND PRESSURE FOR STANDARD CONFIGURATION (6) (7)	dB(A)	65,5	65,5	66,5	66,5	67,0	67,0	67,0	68,2	
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (6) (7)	dB(A)	63,3	63,3	63,9	63,9	64,7	64,7	64,7	65,4	
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (6) (7)	dB(A)	61,4	61,4	62,3	62,3	62,9	62,9	62,9	63,9	
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (6) (7)	dB(A)	60,3	60,3	60,9	60,9	61,7	61,7	61,7	62,4	
<b>DIMENSIONS AND WEIGHT</b>										
LENGTH	mm	4210	4210	4210	4210	5900	5900	5900	5900	
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 (5) (6)	kg	2740	2850	3270	3320	3900	3950	4050	4100	
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (5) (6)	kg	2840	2950	3400	3460	4000	4070	4180	4250	

The manufacturer reserves the right to modify specifications without notice.

Last update: 28/07/2021  
Revision: 03-2021

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) Data referred to standard chiller configuration as indicated in frigorific section, with different evaporator this data can change
- (6) Data referred to standard chiller configuration NP (no pump) and EC fans
- (7) Sound pressure level referred to measures according to normative ISO3744, pressure level at distance of 10 m, referred to free field on reflecting surface
- (8) Flanged connections with one of next options: Pump, Double pump, Tank. Flanged connections standard for models 095÷160
- (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 includes the soft start (SF) option

**Air-cooled liquid chillers SBS series, scroll compressors, R410A / R32 / R454B refrigerant, brazed plate / shell and tube evaporator, condenser coil with copper tubes and aluminium fins, EC axial fans. 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:  
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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>		Model	610/F10	660	660/F10	720	840	930	1030	1230
NOMINAL COOLING CAPACITY	W 12°C/7°C @ 35°C (1)	kW	629,3	645,6	675,8	717,6	842,3	965,6	1021,7	1287,5
TOTAL NOMINAL ABSORBED POWER		kW	181,6	205,1	198,2	214,0	252,2	305,3	333,6	407,0
EER		kW/kW	3,47	3,15	3,41	3,35	3,34	3,16	3,06	3,16
SEPR (HT) (3)		-	5,51	5,56	5,50	5,57	5,57	5,53	5,50	5,57
NOMINAL WATER FLOW		m <sup>3</sup> /h	108,1	110,9	116,1	123,3	144,7	165,9	175,5	221,2
MECHANICAL MODE PRESSURE DROPS (4) (5) (6)		kPa	61	59	64	73	74	69	72	84
<b>FRIGORIFIC SECTION</b>										
COMPRESSORS / REFRIGERATING CIRCUITS / PARTITION STEP	nr.	6/2/4	6/2/4	6/2/4	6/2/4	9/3/6	9/3/6	9/3/6	12/4/8	
KIND OF EXPANSION ELEMENT	-	ETS	ETS	ETS	ETS	ETS	ETS	ETS	ETS	
KIND OF EVAPORATOR	-	ST	ST	ST	ST	ST	ST	ST	ST	
<b>HYDRAULIC SECTION</b>										
WATER FLOW RANGE (6)	m <sup>3</sup> /h	81,0÷150,0	81,0÷150,0	81,0÷150,0	86,0÷161,0	102,0÷180,0	108,0÷200,0	115,0÷215,0	142,0÷251,0	
MAXIMUM PUMP ABSORBED POWER (WP OR OPTION DP)	P3 (2)	kW	16,22	16,22	16,22	16,22	23,51	23,51	31,88	31,88
MAXIMUM PUMP ABSORBED CURRENT (WP OR OPTION DP)		A	26,60	26,60	26,60	26,60	39,00	39,00	53,50	53,50
MAXIMUM PUMP ABSORBED POWER (OPTION PH OR DPH)	P5 (2)	kW	31,88	31,88	31,88	39,09	39,09	39,09	47,31**	47,31**
MAXIMUM PUMP ABSORBED CURRENT (OPTION PH OR DPH)		A	53,50	53,50	53,50	65,60	65,60	65,60	77,60	77,60
HYDRAULIC CONNECTIONS (FLANGED/VICTAULIC) (8)	DN	DN150	DN150	DN150	DN150	DN150	DN200	DN200	DN200	
TANK VOLUME (5) (9)	dm <sup>3</sup>	500	500	500	500	500	500	500	700	
EXPANSION VESSEL NUMBER x VOLUME (OPTION XV) (10)	liters	2x19	2x19	2x19	2x19	2x19	2x19	2x19	1x60	
<b>FAN SECTION (AXIAL)</b>										
FANS	nr.	10	8	10	10	12	12	12	16	
MAXIMUM FANS ABSORBED POWER	EC	kW	18,40	14,72	18,40	18,40	22,08	22,08	22,08	29,44
MAXIMUM FANS ABSORBED CURRENT		A	38,30	30,64	38,30	38,30	45,96	45,96	45,96	61,28
TOTAL AIR FLOW	m <sup>3</sup> /h	206000	164800	206000	206000	247200	247200	247200	329600	
<b>TOTAL ELECTRIC DATA</b>										
MAXIMUM ABSORBED CURRENT (F.L.A) (6)	A	423,0	444,4	452,0	481,0	579,6	666,6	710,1	888,8	
MAXIMUM PEAK CURRENT (L.R.A) (6)	A	757,3	778,6	786,3	815,3	830,3	1000,8	1044,3	1223,0	
MAXIMUM PEAK CURRENT WITH SOFT START (OPTION SF) (L.R.A) (6)	A	675,7	697,0	704,7	733,7	768,3	919,2	962,7	1141,4	
<b>NOISE DATA</b>										
SOUND PRESSURE FOR STANDARD CONFIGURATION (6) (7)	dB(A)	68,5	69,1	69,3	70,0	68,8	70,8	71,6	72,1	
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (6) (7)	dB(A)	66,0	65,9	66,5	66,9	66,5	67,7	68,2	68,9	
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (6) (7)	dB(A)	64,3	64,6	65,0	65,6	64,7	66,4	NA	NA	
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (6) (7)	dB(A)	63,0	62,9	63,5	63,9	63,5	64,7	NA	NA	
<b>DIMENSIONS AND WEIGHT</b>										
LENGTH	mm	7200	5900	7200	7200	8890	8890	8890	11490	
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 (5) (6)	kg	4750	4170	4820	4900	5900	6050	6200	7600	
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (5) (6)	kg	4820	4330	4950	5070	6220	6450	6670	8100	

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- (4) Pressure drops taken in account: evaporator, piping
- (5) Data referred to standard chiller configuration as indicated in frigorific section, with different evaporator this data can change
- (6) Data referred to standard chiller configuration NP (no pump) and EC fans
- (7) Sound pressure level referred to measures according to normative ISO3744, pressure level at distance of 10 m, referred to free field on reflecting surface
- (8) Flanged connections with one of next options: Pump, Double pump, Tank. Flanged connections standard for models 095÷160
- (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 includes the soft start (SF) option

## SBSF SERIES

*Freecooling liquid chillers  
EC axial fans  
IP54 protection rating  
Suitable for OUTDOOR installation*



SERIES: SBS-SBSF	DATE: 29/09/2021
CODE: TTD-SBSF-01	UPDATE: -
CHECKED BY:	M. Burba



**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, EC axial fans. 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	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	m <sup>3</sup> /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)	m <sup>3</sup> /h	13,0÷23,0	16,0÷23,0	21,0÷36,0	25,0÷45,0	25,0÷45,0	30,0÷55,0	36,0÷66,0	40,0÷73,0	
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)	dm <sup>3</sup>	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	EC	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	m <sup>3</sup> /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)	56,1	58,8	60,6	61,8	59,1	61,8	64,4	64,4
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (7) (8)	dB(A)	54,8	56,1	58,5	59,1	57,8	59,1	61,4	61,4
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (7) (8)	dB(A)	52,5	54,5	56,6	57,6	55,5	57,6	60,1	60,1
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (7) (8)	dB(A)	51,8	53,1	55,5	56,1	54,8	56,1	58,4	58,4

**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.

Last update: 28/07/2021  
Revision: 03-2021

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, 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 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) 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, EC axial fans. 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	380	430	470	470/F10	530	570	570/F12	610
NOMINAL COOLING CAPACITY	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	m <sup>3</sup> /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)	m <sup>3</sup> /h	47,0÷87,0	58,0÷107,0	62,0÷115,0	62,0÷115,0	78,0÷142,0	78,0÷142,0	78,0÷142,0	84,0÷143,0
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)	dm <sup>3</sup>	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	EC 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	m <sup>3</sup> /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)	64,8	66,0	66,0	66,3	66,3	66,3	66,5	67,6
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (7) (8)	dB(A)	62,2	62,9	62,9	63,4	63,4	63,4	63,9	64,3
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (7) (8)	dB(A)	60,6	61,6	61,6	62,0	62,0	62,0	62,3	63,1
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (7) (8)	dB(A)	59,2	59,9	59,9	60,4	60,4	60,4	60,9	61,3

**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

The manufacturer reserves the right to modify specifications without notice.

Last update: 28/07/2021  
Revision: 03-2021

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, 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 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) 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, EC axial fans. 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	610/F12	660	660/F14	720	720/F14	840	930	1030
NOMINAL COOLING CAPACITY	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	m <sup>3</sup> /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)	m <sup>3</sup> /h	84,0÷143,0	84,0÷148,0	84,0÷148,0	84,0÷157,0	84,0÷157,0	98,0÷183,0	113,0÷210,0	141,0÷230,0
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)	dm <sup>3</sup>	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	EC 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	m <sup>3</sup> /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)	67,8	68,8	68,9	69,6	69,7	71,3	71,3	71,3
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (7) (8)	dB(A)	64,7	65,3	65,6	65,9	66,2	67,7	67,7	67,7
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (7) (8)	dB(A)	63,4	64,3	64,5	65,0	65,1	na	na	na
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (7) (8)	dB(A)	61,7	62,3	62,6	62,9	63,2	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

The manufacturer reserves the right to modify specifications without notice.

Last update: 28/07/2021  
Revision: 03-2021

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, 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 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) 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

# SBSF-OPT SERIES

*Optimized freecooling liquid chillers*

*EC axial fans*

*IP54 protection rating*

*Suitable for OUTDOOR installation*



SERIES: SBSF-SBSF	DATE: 29/09/2021
CODE: ITD-SBSF-OPT-01	UPDATE: -
CHECKED BY:	M. Buiba



**Air-cooled liquid chillers SBSF-OPT series, scroll compressors, R410A / R32 / R454B refrigerant, brazed plate / shell and tube evaporator, condenser coil with copper tubes and aluminium fins, integrated and optimized free-cooling coils, EC axial fans. 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	kW	99,8	124,4	148,6	179,0	186,4	230,9	297,3	331,8
TOTAL NOMINAL ABSORBED POWER	kW	29,2	36,9	42,9	50,6	56,5	74,2	93,7	108,3
EER	kW/kW	3,42	3,38	3,46	3,53	3,30	3,11	3,17	3,06
SEPR (HT) (3)	-	5,02	5,04	5,02	5,03	5,06	5,06	5,05	5,05
AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY	°C	<b>3,85</b>	<b>2,73</b>	<b>4,60</b>	<b>3,90</b>	<b>2,74</b>	<b>3,60</b>	<b>3,80</b>	<b>3,20</b>
NOMINAL WATER FLOW	m <sup>3</sup> /h	17,2	21,4	25,6	30,8	32,1	39,7	51,1	57,1
MECHANICAL MODE PRESSURE DROPS (4) (6) (7)	kPa	72	70	65	63	60	55	68	76
FREE COOLING MODE PRESSURE DROPS (5)	kPa	149	165	122	128	129	149	145	167

**FRIGORIFIC SECTION**

COMPRESSORS / REFRIGERATING CIRCUITS / PARTITION STEP	nr.	2/1/2	2/1/2	4/2/4	4/2/4	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	ST	ST	ST	ST	ST	ST

**HYDRAULIC SECTION**

WATER FLOW RANGE (7)	m <sup>3</sup> /h	13,0÷23,0	16,0÷23,0	21,0÷36,0	25,0÷45,0	25,0÷45,0	30,0÷55,0	36,0÷66,0	40,0÷73,0	
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	8,30	12,03	12,03	12,03	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)	dm <sup>3</sup>	150	150	300	300	300	300	380	380	
EXPANSION VESSEL NUMBER x VOLUME (OPTION XV) (10)	liters	1x12	1x12	1x19	1x19	1x19	1x19	2x19	2x19	

**FAN SECTION (AXIAL)**

FANS	nr.	4	4	6	6	6	6	8	8	
MAXIMUM FANS ABSORBED POWER	EC	kW	7,36	7,36	11,04	11,04	11,04	11,04	14,72	14,72
MAXIMUM FANS ABSORBED CURRENT		A	15,32	15,32	22,98	22,98	22,98	22,98	30,64	30,64
TOTAL AIR FLOW	m <sup>3</sup> /h	68000	68000	102000	102000	102000	102000	136000	136000	

**TOTAL ELECTRIC DATA**

MAXIMUM ABSORBED CURRENT (F.L.A) (7)	A	75,3	88,2	110,4	83,0	143,0	168,7	209,1	238,4
MAXIMUM PEAK CURRENT (L.R.A) (7)	A	219,3	276,8	225,9	227,0	287,0	357,3	436,5	489,2
MAXIMUM PEAK CURRENT WITH SOFT START (OPTION SF) (L.R.A) (7)	A	184,5	231,8	197,9	192,2	252,2	312,3	382,1	427,2

**NOISE DATA**

SOUND PRESSURE FOR STANDARD CONFIGURATION (7) (8)	dB(A)	58,2	60,0	59,8	59,6	60,3	62,5	64,8	64,8
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (7) (8)	dB(A)	57,4	58,2	59,1	59,1	59,3	60,3	62,2	62,2
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (7) (8)	dB(A)	57,2	57,7	59,0	58,9	59,1	59,6	61,2	61,2
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (7) (8)	dB(A)	52,7	53,8	54,3	54,2	54,6	56,0	58,0	58,0

**DIMENSIONS AND WEIGHT**

LENGTH	mm	3300	3300	4600	4600	4600	4600	5900	5900
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	1670	1830	2690	2810	2810	3230	3490	3540
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (6) (7)	kg	1776	1946	2940	2960	2960	3400	3726	3786

The manufacturer reserves the right to modify specifications without notice.

Last update: 28/07/2021  
Revision: 03-2021

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, 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 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) 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

Air-cooled liquid chillers **SBSF-OPT series**, scroll compressors, R410A / R32 / R454B refrigerant, brazed plate / shell and tube evaporator, condenser coil with copper tubes and aluminium fins, **integrated and optimized free-cooling coils**, EC axial fans. 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	380	430	470	530	570	610	660	720
NOMINAL COOLING CAPACITY	kW	386,5	430,3	464,1	514,9	545,0	606,2	667,6	706,8
TOTAL NOMINAL ABSORBED POWER	kW	121,2	143,1	159,2	170,5	186,6	200,0	216,5	232,1
EER	kW/kW	3,19	3,01	2,91	3,02	2,92	3,03	3,08	3,05
SEPR (HT) (3)	-	5,01	5,57	5,50	5,53	5,53	5,56	5,50	5,52
AIR TEMPERATURE FOR 100% FREE COOLING CAPACITY	°C	<b>3,60</b>	<b>3,00</b>	<b>2,50</b>	<b>3,00</b>	<b>2,60</b>	<b>3,00</b>	<b>3,20</b>	<b>2,80</b>
NOMINAL WATER FLOW	m3/h	66,5	74,0	79,8	88,6	93,7	104,3	114,8	121,6
MECHANICAL MODE PRESSURE DROPS (4) (6) (7)	kPa	79	79	84	86	78	83	94	98
FREE COOLING MODE PRESSURE DROPS (5)	kPa	150	163	177	171	170	174	179	191

**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	47,0÷87,0	58,0÷107,0	62,0÷115,0	78,0÷142,0	78,0÷142,0	84,0÷143,0	84,0÷148,0	84,0÷157,0	
MAXIMUM PUMP ABSORBED POWER (WP OR OPTION DP)	P3 (2)	kW	16,22	16,22	16,22	16,22	16,22	19,94	19,94	31,88
MAXIMUM PUMP ABSORBED CURRENT (WP OR OPTION DP)		A	26,60	26,60	26,60	26,60	26,60	32,70	32,70	53,50
MAXIMUM PUMP ABSORBED POWER (OPTION PH OR DPH)	P5 (2)	kW	31,88	31,88	31,88	39,09	39,09	39,09	39,09	57,65
MAXIMUM PUMP ABSORBED CURRENT (OPTION PH OR DPH)		A	53,50	53,50	53,50	65,60	65,60	65,60	65,60	93,50
HYDRAULIC CONNECTIONS (FLANGED)	DN	DN100	DN125	DN125	DN150	DN150	DN150	DN150	DN150	
TANK VOLUME (6) (9)	dm³3	500	500	500	500	500	500	700	700	
EXPANSION VESSEL NUMBER x VOLUME (OPTION XV) (10)	liters	2x19	2x19	2x19	2x19	2x19	2x19	1x60	1x60	

**FAN SECTION (AXIAL)**

FANS	nr.	10	10	10	12	12	14	16	16	
MAXIMUM FANS ABSORBED POWER	EC	kW	18,40	18,40	18,40	22,08	22,08	25,76	29,44	29,44
MAXIMUM FANS ABSORBED CURRENT		A	38,30	38,30	38,30	45,96	45,96	53,62	61,28	61,28
TOTAL AIR FLOW	m3/h	170000	170000	170000	204000	204000	238000	272000	272000	

**TOTAL ELECTRIC DATA**

MAXIMUM ABSORBED CURRENT (F.L.A) (7)	A	275,5	306,0	335,3	372,3	401,7	438,4	475,0	504,0
MAXIMUM PEAK CURRENT (L.R.A) (7)	A	526,2	533,4	586,0	623,1	652,4	772,6	809,2	838,2
MAXIMUM PEAK CURRENT WITH SOFT START (OPTION SF) (L.R.A) (7)	A	464,2	479,0	524,0	561,1	590,4	691,0	727,6	756,6

**NOISE DATA**

SOUND PRESSURE FOR STANDARD CONFIGURATION (7) (8)	dB(A)	65,1	66,3	66,3	66,5	66,5	68,0	69,1	69,8
SOUND PRESSURE FOR LOW NOISE OPTION (LNJ) (7) (8)	dB(A)	62,8	63,4	63,4	63,9	63,9	65,0	65,9	66,4
SOUND PRESSURE FOR SUPER LOW NOISE OPTION (SLN) (7) (8)	dB(A)	62,0	62,4	62,4	63,0	63,0	63,9	64,7	65,1
SOUND PRESSURE FOR EXTRA LOW NOISE OPTION (ELN) (7) (8)	dB(A)	58,5	59,4	59,4	59,8	59,8	61,1	62,0	62,6

**DIMENSIONS AND WEIGHT**

LENGTH	mm	7200	7200	7200	8500	8500	9800	11100	11100
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	4320	4610	4690	5420	5520	6180	6780	6880
WEIGHT OPERATIVE FOR STANDARD CONFIGURATION (6) (7)	kg	4646	4946	5046	5616	5746	6492	7222	7342

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Last update: 28/07/2021  
Revision: 03-2021

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