

Freecooling liquid chillers SBSF series, scroll compressors R410A, plate / shell and tube evaporator, condenser with copper tubes and aluminium finned core and axial fans												
Cooling Application	Model	095	120	145	160	190	240	290	330	380	430	
NOMINAL COOLING CAPACITY (1)	kW	94	116	155	172	181	223	295	328	388	433	
TOTAL COMPRESSORS NOMINAL ABSORBED POWER (1)	kW	23.8	33.1	36.9	43.1	47.0	65.4	78.8	93.0	100.0	121.8	
EER		3.42	3.15	3.50	3.41	3.33	3.07	3.29	3.15	3.38	3.17	
ESEER		4.55	4.23	4.78	4.65	4.58	4.27	4.48	4.31	4.51	4.33	
AIR TEMPERATURE 100% FREE COOLING (Inlet/Outlet water temperature = +12/+7 °C)	°C	1.3	-0.4	2.6	1.9	1.6	-0.1	1.0	0.1	1.1	0.2	
COMPRESSORS	nr.	2	2	2	2	4	4	4	4	4	6	
REFRIGERATING CIRCUITS	nr.	1	1	2	2	2	2	2	2	2	2	
PARTITION STEP	nr.	2	2	2	2	4	4	4	4	4	4	
REFRIGERANT		R410A										
HYDRAULIC SECTION												
NOMINAL WATER FLOW	m ³ /h	16.2	19.9	26.6	29.6	31.1	38.4	50.8	56.4	66.7	74.4	
WATER FLOW RANGE	m ³ /h	13÷23	16÷23	21÷36	25÷45	25÷45	30÷55	36÷66	40÷73	47÷87	58÷107	
TYPE OF EVAPORATOR		Plate evaporator				Shell and tube evaporator						
EVAPORATOR CIRCUIT PRESSURE DROP (3)	kPa	72	70	65	63	60	55	68	76	79	79	
FREE COOLING CIRCUIT PRESSURE DROP (4)	kPa	149	165	122	128	129	149	145	167	150	163	
AVAILABLE PRESSURE (5)	kPa	310	278	212	244	241	215	202	230	242	225	
MAXIMUM PUMP ABSORBED POWER (5)	P3	kW	6.12	6.12	6.12	10.25	10.25	10.25	16.22	16.22	16.22	16.22
MAXIMUM PUMP ABSORBED CURRENT (5)		A	10.40	10.40	10.40	17.40	17.40	17.40	26.60	26.60	26.60	26.60
AVAILABLE PRESSURE (6)	kPa	447	416	449	435	487	467	463	436	485	465	
MAXIMUM PUMP ABSORBED POWER (6)	P5	kW	8.30	12.04	12.04	12.04	19.94	19.94	19.94	19.94	31.88	31.88
MAXIMUM PUMP ABSORBED CURRENT (6)		A	14.10	20.20	20.20	20.20	32.70	32.70	32.70	32.70	53.50	53.50
HYDRAULIC CONNECTIONS (VICTAULIC, IN STANDARD CONFIGURATION)	DN	DN50	DN65	DN65	DN65	DN125	DN125	DN125	DN125	DN150	DN150	
TANK VOLUME (7) (8)	dm ³	150	150	300	300	300	300	380	380	500	500	
EXPANSION VESSEL VOLUME (9)	nr. x liters	1 x 19										
FAN SECTION (AXIAL)												
RV "fan speed cut-phase regulator" included												
TOTAL AIR FLOW	m ³ /h	34000	34000	68000	68000	68000	68000	102000	102000	136000	136000	
FANS	nr.	2	2	4	4	4	4	6	6	8	8	
TOTAL FANS ABSORBED POWER	kW	3.68	3.68	7.36	7.36	7.36	7.36	11.04	11.04	14.72	14.72	
FANS ABSORBED CURRENT	A	7.66	7.66	15.32	15.32	15.32	15.32	22.98	22.98	30.64	30.64	
TOTAL ELECTRIC DATA												
IP54 protection rating, chillers suitable for outdoor installation												
NOMINAL ABSORBED POWER (10)	kW	27.5	36.8	44.3	50.5	54.4	72.8	89.8	104.0	114.7	136.5	
MAXIMUM ABSORBED CURRENT (F.L.A.) (10)	A	67.7	80.5	104.5	119.2	135.3	161.1	201.4	230.8	267.8	298.3	
MAXIMUM PEAK CURRENT (L.R.A.) (10)	A	211.7	269.1	331.9	369.9	279.3	349.6	428.8	481.5	518.5	525.7	
MAXIMUM PEAK CURRENT WITH SOFT START OPTION (L.R.A.) (10)	A	176.9	224.1	277.5	307.9	244.5	304.6	374.4	419.5	456.5	471.3	
ELECTRIC FEED	V/Ph/Hz	400/3/50										
NOISE DATA												
SOUND PRESSURE FOR STANDARD CONFIGURATION (2) (10)	dB(A)	59.8	61.1	64.1	64.1	62.8	64.1	66.4	66.4	67.2	67.9	
SOUND PRESSURE FOR LOW NOISE CONFIGURATION (2) (10)	dB(A)	59.3	59.8	62.8	62.8	62.3	62.8	64.8	64.8	65.8	66.2	
DIMENSIONS AND WEIGHT												
LENGTH	mm	1930	1930	3230	3230	3230	3230	4530	4530	5830	5830	
WIDTH	mm	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210	
HEIGHT	mm	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	
WEIGHT EMPTY (10)	kg	1120	1280	1950	1990	1990	2300	2900	2950	3730	4020	
WEIGHT OPERATING (10)	kg	1170	1340	2070	2120	2120	2440	3080	3140	4000	4300	

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updated on 26/09/2016

Data referred to:

- (1) Inlet/Outlet water temperature = +12/+7 °C - Condenser air temperature = +35°C; fouling factor = 0.000043 m²K/W
- (2) Sound pressure level referred to measures according to normative ISO3744, pressure level at distance of 10 m, referred to free field on reflecting surface
- (3) Considered: free-cooling valve + evaporator + piping pressure drop (no free-cooling)
- (4) Considered: free-cooling valve + free-cooling coils + one-way valve + evaporator + piping pressure drop
- (5) Data referred to WP option (chiller with inbuilt pump P3)

- (6) Data referred to PH option (chiller with inbuilt pump P5)
- (7) Data referred to CST / SST option (chiller with inbuilt tank)
- (8) Minimum water content for the hydraulic circuit to be verified
- (9) Data referred to XV option (expansion vessel kit)
- (10) Data referred to standard chiller configuration NT.NP (chiller without pump and without tank)

Freecooling liquid chillers SBSF series, scroll compressors R410A, plate / shell and tube evaporator, condenser with copper tubes and aluminium finned core and axial fans											
Cooling Application	Model	470	530	570	610	660	720	840	930	1030 *	
NOMINAL COOLING CAPACITY (1)	kW	466	521	553	592	662	700	801	917	1033	
TOTAL COMPRESSORS NOMINAL ABSORBED POWER (1)	kW	137.0	143.0	157.2	176.0	184.2	202.8	239.6	276.4	313.8	
EER		3.07	3.23	3.15	3.05	3.21	3.11	3.02	3.00	2.98	
ESEER		4.21	4.40	4.29	4.17	4.31	4.21	4.20	4.20	4.19	
AIR TEMPERATURE 100% FREE COOLING (Inlet/Outlet water temperature = +12/+7 °C)	°C	-0.4	0.5	0.0	-0.6	0.1	-0.5	-0.5	-0.5	-0.5	
COMPRESSORS	nr.	6	6	6	6	6	6	6	6	6	
REFRIGERATING CIRCUITS	nr.	2	2	2	2	2	2	2	2	2	
PARTITION STEP	nr.	4	4	4	4	4	4	4	4	4	
REFRIGERANT	R410A										
HYDRAULIC SECTION											
NOMINAL WATER FLOW	m ³ /h	80.1	89.7	95.2	101.9	113.8	120.5	137.8	157.7	177.6	
WATER FLOW RANGE	m ³ /h	62÷115	78÷142	78÷142	84÷143	84÷148	84÷157	98÷183	113÷210	141÷230	
TYPE OF EVAPORATOR	Shell and tube evaporator										
EVAPORATOR CIRCUIT PRESSURE DROP (3)	kPa	84	86	78	83	94	98	88	97	101	
FREE COOLING CIRCUIT PRESSURE DROP (4)	kPa	177	171	170	174	179	191	181	186	192	
AVAILABLE PRESSURE (5)	kPa	206	228	225	218	206	219	224	213	198	
MAXIMUM PUMP ABSORBED POWER (5)	P3	kW	16.22	24.85	24.85	24.85	24.85	31.88	31.88	31.88	31.88
MAXIMUM PUMP ABSORBED CURRENT (5)		A	26.60	42.20	42.20	42.20	42.20	53.50	53.50	53.50	53.50
AVAILABLE PRESSURE (6)	kPa	444	462	459	451	436	477	483	471	455	
MAXIMUM PUMP ABSORBED POWER (6)	P5	kW	31.88	39.15	39.15	39.15	39.15	57.65	57.65	57.65	57.65
MAXIMUM PUMP ABSORBED CURRENT (6)		A	53.50	65.70	65.70	65.70	65.70	93.50	93.50	93.50	93.50
HYDRAULIC CONNECTIONS (VICTAULIC, IN STANDARD CONFIGURATION)	DN	DN150	DN150	DN150	DN150	DN150	DN150	DN200	DN200	DN200	
TANK VOLUME (7) (8)	dm ³	500	500	500	500	600	600	600	700	700	
EXPANSION VESSEL VOLUME (9)	nr. x liters	1 x 19					2 x 19				
FAN SECTION (AXIAL)											
RV "fan speed cut-phase regulator" included											
TOTAL AIR FLOW	m ³ /h	136000	170000	170000	170000	204000	204000	238000	272000	306000	
FANS	nr.	8	10	10	10	12	12	14	16	18	
TOTAL FANS ABSORBED POWER	kW	14.72	18.40	18.40	18.40	22.08	22.08	25.76	29.44	33.12	
FANS ABSORBED CURRENT	A	30.64	38.30	38.30	38.30	45.96	45.96	53.62	61.28	68.94	
TOTAL ELECTRIC DATA											
IP54 protection rating, chillers suitable for outdoor installation											
NOMINAL ABSORBED POWER (10)	kW	151.7	161.4	175.6	194.4	206.3	224.9	265.4	305.8	346.9	
MAXIMUM ABSORBED CURRENT (F.L.A.) (10)	A	327.7	364.7	394.0	423.0	459.7	488.7	578.2	667.7	757.2	
MAXIMUM PEAK CURRENT (L.R.A.) (10)	A	578.4	615.4	644.8	757.3	793.9	822.9	1129.5	1219.0	1308.5	
MAXIMUM PEAK CURRENT WITH SOFT START OPTION (L.R.A.) (10)	A	516.4	553.4	582.8	675.7	712.3	741.3	996.3	1085.8	1175.3	
ELECTRIC FEED	V/Ph/Hz	400/3/50									
NOISE DATA											
SOUND PRESSURE FOR STANDARD CONFIGURATION (2) (10)	dB(A)	67.9	68.4	68.4	69.3	70.3	70.9	71.2	71.4	71.7	
SOUND PRESSURE FOR LOW NOISE CONFIGURATION (2) (10)	dB(A)	66.2	66.9	66.9	67.3	68.3	68.6	69.0	69.4	69.8	
DIMENSIONS AND WEIGHT											
LENGTH	mm	5830	7130	7130	7130	8430	8430	9730	11030	12330	
WIDTH	mm	2210	2210	2210	2210	2210	2210	2210	2210	2210	
HEIGHT	mm	2450	2450	2450	2450	2450	2450	2450	2450	2450	
WEIGHT EMPTY (10)	kg	4100	4830	4930	5000	5600	5700	6700	7450	8250	
WEIGHT OPERATING (10)	kg	4400	4970	5100	5200	5930	6050	7230	8050	8900	

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* For shipment in a container of this mod. the delivery time can be longer than other mod. of SBSF