


اطلاعات فنی | TECHNICAL DATA

SBSF	MODEL	SBSF.095	SBSF.120	SBSF.145	SBSF.160	SBSF.190	SBSF.240	SBSF.290	SBSF.330
Type		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
System		air cooled	air cooled	air cooled	air cooled	air cooled	air cooled	air cooled	air cooled
Cooling capacity	kW	94.1	115.7	146.5	170.4	180.8	223.1	295.3	327.8
E.E.R. at design point	kW/kW	3.42	3.15	3.56	3	3.33	3.07	3.29	3.15
Inlet water fluid temperature	°C	12	12	12	12	12	12	12	12
Outlet water fluid temperature	°C	7	7	7	7	7	7	7	7
Fluid type	Type	water	water	water	water	water	water	water	water
Minimum ambient temperature	°C	-20	-20	-20	-20	-20	-20	-20	-20
Design ambient temperature	°C	35	35	35	35	35	35	35	35
Elevation a.s.l.	m	0	0	0	0	0	0	0	0
Type of refrigerant gas	R	410A	410A	410A	410A	410A	410A	410A	410A
Electrical feed according EN 60204-1	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Electrical cabinet	IP	54	54	54	54	54	54	54	54
COMPRESSOR DATA									
Number of compressors	N°	2	2	2	2	4	4	4	4
Number of circuits	N°	1	1	1	1	2	2	2	2
Compressor E.E.R.	kW/kW	3.95	3.5	4.33	3.45	3.85	3.41	3.75	3.52
Total Compressors Nominal Absorbed Power	kW	23.8	33.1	33.8	49.4	47	65.4	78.8	93
Total Compressors Running current RLA	A	41.9	58.3	59.6	85.5	82.8	115.3	138.9	163.9
Steps	N°	2	2	2	2	4	4	4	4
FREE - COOLING INTEGRATED									
Cooling capacity	kW	94.1	115.7	146.5	170.4	180.8	223.1	295.3	327.8
Ambient temperature for 100% Free Cooling	°C	1.3	-0.4	2.8	1.2	1.6	0	1	0.1
Inlet water fluid temperature	°C	12	12	12	12	12	12	12	12
Outlet water fluid temperature	°C	7	7	7	7	7	7	7	7
Free cooling pressure drop (Free Cooling Coil+Evaporator+Valves+piping)	kPa	121.14	149.4	106.34	112.69	113.89	133.6	129.47	151.28
EVAPORATOR DATA									
Number of evaporators	N°	1	1	1	1	1	1	1	1
Type of evaporator	Type	Plate	Plate	ST	ST	ST	ST	ST	ST
Nominal flow rate	m ³ /h	16.14	19.84	25.12	29.22	31	38.26	50.64	56.21
Minimum flow rate	m ³ /h	13.0	16.0	21.0	25.0	25.0	30.0	36.0	40.0
Maximum flow rate	m ³ /h	23.0	23.0	36.0	45.0	45.0	55.0	66.0	73.0
Pressure drops (evaporator+valves+piping)	kPa	58.44	62.33	57.24	55.7	52.28	47.25	59.82	68.24
Hydraulic connections	BSP/DN	DN65	DN65	DN80	DN80	DN80	DN80	DN100	DN100
PROCESS PUMP DATA									
Pump P3 (optional)									
Maximum pump absorbed power	kW	6.12	6.12	6.12	10.20	10.20	10.20	10.20	16.22
Maximum pump absorbed current	A	10.40	10.40	10.40	17.40	17.40	17.40	17.40	26.60
Available pressure with single pump (WP option)	kPa	337.21	293.84	216.82	256.46	253.80	229.19	218.55	254.37
Available pressure with double pump (DP option)	kPa	327.39	279.23	208.87	245.82	241.48	210.93	204.94	237.78
TANK DATA (optional)									
Volume (optional)	dm ³	150	150	300	300	300	300	380	380
Expansion vessel volume (XV option)	dm ³	19	19	19	19	19	19	19	19
AIR AXIAL FANS AND CONDENSER DATA									
Number of condenser coils	N°	2	2	4	4	4	4	6	6
Number of fans	N°	2	2	4	4	4	4	6	6
Total absorbed power	kW	3.68	3.68	7.36	7.36	7.36	7.36	11.04	11.04
Total absorbed current	A	7.66	7.66	15.32	15.32	15.32	15.32	22.98	22.98
Total air flow	m ³ /h	34000	34000	68000	68000	68000	68000	102000	102000
TOTAL ELECTRIC DATA (standard configuration)									
Nominal absorbed power	kW	27.48	36.78	41.16	56.76	54.36	72.76	89.84	104.04
Maximum absorbed current (FLA)	A	67.7	80.5	103.1	133.8	135.3	161.1	201.4	230.8
Maximum peak current (LRA)	A	211.7	269.1	346.7	384.6	279.3	349.6	428.8	481.5
Maximum peak current with soft-start (LRA) (SF option)	A	176.9	224.1	289.2	322.6	244.5	304.6	374.4	419.5
NOISE DATA									
Sound pressure level at 10m according ISO3744	dBA	55.5	58.5	60.1	61.5	58.6	61.5	64.2	64.2
Sound pressure level at 10m (low noise version)	dBA	54.0	55.5	57.8	58.6	57.0	58.6	60.9	60.9
Sound pressure level at 10m (super low noise version)	dBA	51.0	52.5	54.8	55.6	54.0	55.6	57.9	57.9
Sound pressure level at 10m (extra low noise version)	dBA	51.8	54.1	56.0	57.1	54.8	57.1	59.7	59.7
DIMENSIONS									
Structure in galvanized steel	RAL	7035	7035	7035	7035	7035	7035	7035	7035
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	kg	1120	1280	1950	1990	1990	2300	2900	2950
FREE SPACE									
Electrical panel side	mm	1500	1500	1500	1500	1500	1500	1500	1500
Opposite side of electrical panel	mm	1500	1500	1500	1500	1500	1500	1500	1500
Condensing coil sides	mm	2500	2500	2500	2500	2500	2500	2500	2500

NOTE

All data subject to change

* 45 feet container required for shipment.

With glycol percentage over 30% and leaving water temperature lower than 0°C, pump need to be checked by technical department


اطلاعات فنی | TECHNICAL DATA

SBSF	MODEL	SBSF.380	SBSF.430	SBSF.470	SBSF.470/F10	SBSF.530	SBSF.570	SBSF.570/F12	SBSF.610
Type		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
System		air cooled	air cooled	air cooled	air cooled	air cooled	air cooled	air cooled	air cooled
Cooling capacity	kW	387.8	432.6	465.5	483.7	521.4	553.4	577.5	592.3
E.E.R. at design point	kW/kW	3.38	3.17	3.07	3.28	3.23	3.15	3.34	3.05
Inlet water fluid temperature	°C	12	12	12	12	12	12	12	12
Outlet water fluid temperature	°C	7	7	7	7	7	7	7	7
Fluid type	Type	water	water	water	water	water	water	water	water
Minimum ambient temperature	°C	-20	-20	-20	-20	-20	-20	-20	-20
Design ambient temperature	°C	35	35	35	35	35	35	35	35
Elevation a.s.l.	m	0	0	0	0	0	0	0	0
Type of refrigerant gas	R	410A	410A	410A	410A	410A	410A	410A	410A
Electrical feed according EN 60204-1	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Electrical cabinet	IP	54	54	54	54	54	54	54	54
COMPRESSOR DATA									
Number of compressors	N°	4	6	6	6	6	6	6	6
Number of circuits	N°	2	2	2	2	2	2	2	2
Compressor E.E.R.	kW/kW	3.88	3.55	3.4	3.75	3.65	3.52	3.83	3.37
Total Compressors Nominal Absorbed Power	kW	100	121.8	137	128.9	143	157.2	150.8	176
Total Compressors Running current RLA	A	176.2	214.6	241.4	223.7	252	277	260.3	310.2
Steps	N°	4	4	4	4	4	4	4	4
FREE - COOLING INTEGRATED									
Cooling capacity	kW	387.8	432.6	465.5	483.7	521.4	553.4	577.5	592.3
Ambient temperature for 100% Free Cooling	°C	1.1	0.2	-0.4	1	0.5	0	1.1	-0.6
Inlet water fluid temperature	°C	12	12	12	12	12	12	12	12
Outlet water fluid temperature	°C	7	7	7	7	7	7	7	7
Free cooling pressure drop (Free Cooling Coil+Evaporator+Valves+piping)	kPa	134.89	147.24	160.89	173.73	155.09	154.91	168.88	158.66
EVAPORATOR DATA									
Number of evaporators	N°	1	1	1	1	1	1	1	1
Type of evaporator	Type	ST	ST	ST	ST	ST	ST	ST	ST
Nominal flow rate	m3/h	66.5	74.18	79.82	82.95	89.41	94.9	99.03	101.57
Minimum flow rate	m3/h	47.0	58.0	62.0	62.0	78.0	78.0	78.0	84.0
Maximum flow rate	m3/h	87.0	107.0	115.0	115.0	142.0	142.0	142.0	143.0
Pressure drops (evaporator+valves+piping)	kPa	71.27	71.28	75.98	82.1	77.8	69.85	76.09	75.11
Hydraulic connections	BSP/DN	DN100	DN125	DN125	DN125	DN150	DN150	DN150	DN150
PROCESS PUMP DATA									
Pump P3 (optional)									
Maximum pump absorbed power	kW	16.22	16.22	16.22	16.22	24.85	24.85	24.85	24.85
Maximum pump absorbed current	A	26.60	26.60	26.60	26.60	42.20	42.20	42.20	42.20
Available pressure with single pump (WP option)	kPa	265.42	247.31	228.57	212.78	266.15	263.57	247.52	256.24
Available pressure with double pump (DP option)	kPa	257.17	236.47	216.65	199.66	250.35	246.58	228.43	247.99
TANK DATA (optional)									
Volume (optional)	dm3	500	500	500	500	500	500	500	500
Expansion vessel volume (XV option)	dm3	19	19	19	19	19	19	19	19
AIR AXIAL FANS AND CONDENSER DATA									
Number of condenser coils	N°	8	8	8	10	10	10	12	10
Number of fans	N°	8	8	8	10	10	10	12	10
Total absorbed power	kW	14.72	14.72	14.72	18.4	18.4	18.4	22.08	18.4
Total absorbed current	A	30.64	30.64	30.64	38.3	38.3	38.3	45.96	38.3
Total air flow	m3/h	136000	136000	136000	170000	170000	170000	204000	170000
TOTAL ELECTRIC DATA (standard configuration)									
Nominal absorbed power	kW	114.72	136.52	151.72	147.3	161.4	175.6	172.88	194.4
Maximum absorbed current (FLA)	A	267.8	298.3	327.7	335.3	364.7	394.0	401.7	423.0
Maximum peak current (LRA)	A	518.5	525.7	578.4	586.0	615.4	644.8	652.4	757.3
Maximum peak current with soft-start (LRA) (SF option)	A	456.5	471.3	516.4	524.0	553.4	582.8	590.4	675.7
NOISE DATA									
Sound pressure level at 10m according ISO3744	dBA	64.5	65.8	65.8	66.0	66.0	66.0	66.2	67.4
Sound pressure level at 10m (low noise version)	dBA	61.6	62.4	62.4	62.9	62.9	62.9	63.3	63.9
Sound pressure level at 10m (super low noise version)	dBA	58.6	59.4	59.4	59.9	59.9	59.9	60.3	60.9
Sound pressure level at 10m (extra low noise version)	dBA	60.1	61.3	61.3	61.6	61.6	61.6	61.9	62.9
DIMENSIONS									
Structure in galvanized steel	RAL	7035	7035	7035	7035	7035	7035	7035	7035
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	kg	3730	4020	4100	4830	4830	4930	5600	5000
FREE SPACE									
Electrical panel side	mm	1500	1500	1500	1500	1500	1500	1500	1500
Opposite side of electrical panel	mm	1500	1500	1500	1500	1500	1500	1500	1500
Condensing coil sides	mm	2500	2500	2500	2500	2500	2500	2500	2500

NOTE

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* 45 feet container required for shipment.

With glycol percentage over 30% and leaving water temperature lower than 0°C, pump need to be checked by technical department

TR45 option required with ambient temperature higher than 40°C

LW option required with leaving water temperature lower than 4°C


اطلاعات فنی | TECHNICAL DATA

SBSF	MODEL	SBSF.610/F12	SBSF.660	SBSF.660/F14	SBSF.720	SBSF.720/F14	SBSF.840	SBSF.930	SBSF.1030
Type		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
System		air cooled	air cooled	air cooled	air cooled	air cooled	air cooled	air cooled	air cooled
Cooling capacity	kW	616.1	661.7	682.5	700.4	720.4	856.4	957.7	1018.3
E.E.R. at design point	kW/kW	3.25	3.21	3.36	3.11	3.28	3.28	3.09	3.02
Inlet water fluid temperature	°C	12	12	12	12	12	12	12	12
Outlet water fluid temperature	°C	7	7	7	7	7	7	7	7
Fluid type	Type	water	water	water	water	water	water	water	water
Minimum ambient temperature	°C	-20	-20	-20	-20	-20	-20	-20	-20
Design ambient temperature	°C	35	35	35	35	35	35	35	35
Elevation a.s.l.	m	0	0	0	0	0	0	0	0
Type of refrigerant gas	R	410A	410A	410A	410A	410A	410A	410A	410A
Electrical feed according EN 60204-1	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Electrical cabinet	IP	54	54	54	54	54	54	54	54
COMPRESSOR DATA									
Number of compressors	N°	6	6	6	6	6	9	9	9
Number of circuits	N°	2	2	2	2	2	3	3	3
Compressor E.E.R.	kW/kW	3.68	3.59	3.85	3.45	3.72	3.76	3.46	3.35
Total Compressors Nominal Absorbed Power	kW	167.5	184.2	177.5	202.8	193.9	227.9	277.1	304.4
Total Compressors Running current RLA	A	286.8	324.6	303.9	357.4	330.1	401.6	488.3	536.4
Steps	N°	4	4	4	4	4	6	6	6
FREE - COOLING INTEGRATED									
Cooling capacity	kW	616.1	661.7	682.5	700.4	720.4	856.4	957.7	1018.3
Ambient temperature for 100% Free Cooling	°C	0.6	0	1	-0.5	0.5	0.9	-0.5	-0.6
Inlet water fluid temperature	°C	12	12	12	12	12	12	12	12
Outlet water fluid temperature	°C	7	7	7	7	7	7	7	7
Free cooling pressure drop (Free Cooling Coil+Evaporator+Valves+piping)	kPa	171.76	163.45	173.72	175.05	185.4	166.67	170.82	177.22
EVAPORATOR DATA									
Number of evaporators	N°	1	1	1	1	1	1	1	1
Type of evaporator	Type	ST	ST	ST	ST	ST	ST	ST	ST
Nominal flow rate	m ³ /h	105.65	113.47	117.04	120.11	123.54	146.86	164.23	174.62
Minimum flow rate	m ³ /h	84.0	84.0	84.0	84.0	84.0	98.0	113.0	141.0
Maximum flow rate	m ³ /h	143.0	148.0	148.0	157.0	157.0	183.0	210.0	230.0
Pressure drops (evaporator+valves+piping)	kPa	81.36	86	91.43	90.21	95.54	80.74	89.78	93.09
Hydraulic connections	BSP/DN	DN150	DN150	DN150	DN150	DN150	DN150	DN200	DN200
PROCESS PUMP DATA									
Pump P3 (optional)									
Maximum pump absorbed power	kW	24.85	24.85	24.85	31.88	31.88	31.88	31.88	31.88
Maximum pump absorbed current	A	42.20	42.20	42.20	53.50	53.50	53.50	53.50	53.50
Available pressure with single pump (WP option)	kPa	240.58	243.98	231.45	238.07	227.09	240.41	232.08	222.73
Available pressure with double pump (DP option)	kPa	231.54	233.44	220.32	226.35	214.66	223.45	220.94	210.00
TANK DATA (optional)									
Volume (optional)	dm ³	500	600	600	600	600	600	700	700
Expansion vessel volume (XV option)	dm ³	19	38	38	38	38	38	38	38
AIR AXIAL FANS AND CONDENSER DATA									
Number of condenser coils	N°	12	12	14	12	14	18	18	18
Number of fans	N°	12	12	14	12	14	18	18	18
Total absorbed power	kW	22.08	22.08	25.76	22.08	25.76	33.12	33.12	33.12
Total absorbed current	A	45.96	45.96	53.62	45.96	53.62	68.94	68.94	68.94
Total air flow	m ³ /h	204000	204000	238000	204000	238000	306000	306000	306000
TOTAL ELECTRIC DATA (standard configuration)									
Nominal absorbed power	kW	189.58	206.28	203.26	224.88	219.66	261.02	310.22	337.52
Maximum absorbed current (FLA)	A	430.7	459.7	467.4	488.7	496.4	602.2	689.4	733.1
Maximum peak current (LRA)	A	764.9	793.9	801.6	822.9	830.6	852.9	1023.6	1067.3
Maximum peak current with soft-start (LRA) (SF option)	A	683.3	712.3	720.0	741.3	749.0	790.9	942.0	985.7
NOISE DATA									
Sound pressure level at 10m according ISO3744	dBA	67.6	68.6	68.7	69.4	69.5	71.2	71.2	71.2
Sound pressure level at 10m (low noise version)	dBA	64.2	64.9	65.2	65.5	65.8	67.3	67.3	67.3
Sound pressure level at 10m (super low noise version)	dBA	61.2	61.9	62.2	62.5	62.8	na	na	na
Sound pressure level at 10m (extra low noise version)	dBA	63.1	64.0	64.2	64.8	64.9	na	na	na
DIMENSIONS									
Structure in galvanized steel	RAL	7035	7035	7035	7035	7035	7035	7035	7035
Length	mm	8500	8500	9800	8500	9800	12400***	12400***	12400***
Width	mm	2210	2210	2210	2210	2210	2210	2210	2210
Height	mm	2500	2500	2500	2500	2500	2500	2500	2500
WEIGHT									
Empty	kg	5600	5600	6700	5700	6700	8250	8250	8250
FREE SPACE									
Electrical panel side	mm	1500	1500	1500	1500	1500	1500	1500	1500
Opposite side of electrical panel	mm	1500	1500	1500	1500	1500	1500	1500	1500
Condensing coil sides	mm	2500	2500	2500	2500	2500	2500	2500	2500

NOTE

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* 45 feet container required for shipment.

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