



ENGINEERING
TOMORROW

Danfoss

Quick reference

Danfoss scroll compressors **SM SY SZ**

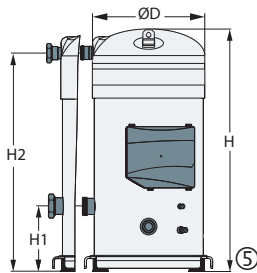
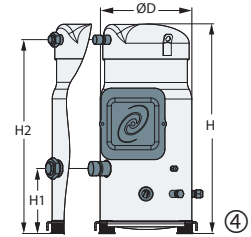
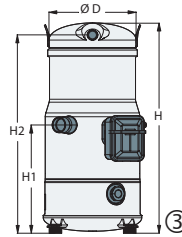
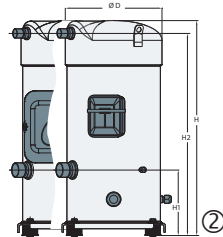
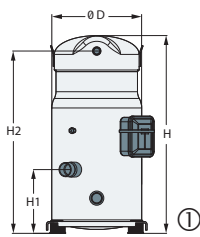
R407C - R134a - R22 - 60 Hz



<http://danfoss.us.com/>

Quick reference

Product range single compressors



	Model	Motor voltage code				Dimensions (inch)			
		200-230V/3~/60Hz	400V/3~/50Hz-460V/3~/60Hz	500V/3~/50Hz-575V/3~/60Hz	380V/3~/60Hz	D	H	H1	H2
		3	4	7	9				
①	SM/SZ084-090-100	●	●	●	●	10.0	20.0	5.6	18.3
	SM/SZ110-120	●	●	●	●	10.0	22.0	7.0	20.3
②	SM/SZ148-161	●	●	●	●	10.5	23.3	7.1	21.9
③	SM112	●	●	●	●	9.6	21.1	10.9	19.8
	SM124-147	●	●	●	●	9.6	21.3	10.9	20.0
④	SM/SZ175-185	○ ●	○ ●	○ ●	○ ●	12.4	26.7	7.1	25.2
	SY185	○ ●	○ ●	○ ●	○ ●	12.4	26.7	7.1	25.2
	SY/SZ240	○ ●	○ ●	○ ●	○ ●	13.5	28.6	7.7	25.8
⑤	SY/SZ300	○ ●	○ ●	○ ●	○ ●	13.5	29.1	7.7	26.2
	SZ380	○ ●	○ ●	○ ●	○ ●	13.5	30.0	7.7	27.1

○ Rotolock version ● Brazed version

Technical specifications

Model	Nominal Cap. 60 Hz	Nominal cooling capacity ①		Power input	Max. Operating current	COP ②	E.E.R. ②	Sound power	Swept volume	Displacement ③	Oil charge	Net weight ④	
	TR	W	Btu/h	kW	A ②	W/W	Btu/h / W	dB(A)	cu.in/rev	cu.ft/h	oz	lbs	
R22 single	SM084	7	24600	84000	7.4	17	3.34	11.4	74	6.99	849	110	141
	SM090	7.5	26400	90100	7.8	17	3.37	11.5	75	7.35	894	110	143
	SM100	8	27500	93900	8.1	18	3.38	11.5	75	7.76	943	110	143
	SM110	9	31600	107800	9.3	20	3.38	11.5	78	8.80	1069	110	161
	SM112	9.5	34000	116000	9.6	21	3.53	12.1	78	9.25	1124	112	141
	SM120	10	36700	125300	10.8	24	3.4	11.6	78	10.17	1236	110	161
	SM124	10.5	37700	128700	10.6	23	3.56	12.2	77	10.34	1257	112	142
	SM147	12	43600	148800	12.2	26	3.58	12.2	78	11.81	1435	112	148
	SM148	12	43800	149500	13	29	3.37	11.5	83	12.14	1476	122	194
	SM161	13	47600	162500	14.1	31	3.39	11.6	84	13.22	1606	122	194
	SM175	14	51100	174400	15.3	34	3.34	11.4	82.5	14.22	1728	210	220
	SM/SY185	15	55300	188700	16.3	35	3.39	11.6	82.5	15.25	1853	210	220
	SY240	20	74100	252900	22.1	47	3.35	11.4	85	21.22	2579	272	331
	SY300	25	94500	322500	27.5	58	3.43	11.7	86	26.70	3245	272	346
SY380	30	115300	393500	33.4	69	3.46	11.8	92	32.42	3939	285	348	
R407C single	SZ084	7	22500	76800	7.1	17	3.19	10.9	74	6.99	849	110	141
	SZ090	7.5	24400	83300	7.6	17	3.2	10.9	77	7.35	894	110	143
	SZ100	8	26500	90400	8.2	18	3.24	11.1	77	7.76	943	110	143
	SZ110	9	30100	102700	9.3	20	3.24	11.1	81	8.80	1069	110	161
	SZ120	10	34800	118800	10.7	24	3.24	11.1	81	10.17	1236	110	161
	SZ148	12	42600	145400	13.3	29	3.19	10.9	83	12.14	1476	122	194
	SZ161	13	46000	157000	14.3	31	3.21	11.0	83	13.22	1606	122	194
	SZ175	14	48700	166200	15.3	34	3.19	10.9	84	14.22	1728	210	220
	SY/SZ185	15	51800	176800	16.4	35	3.15	10.8	84	15.25	1853	210	220
	SY/SZ240	20	71100	242700	22.7	47	3.14	10.7	87	21.22	2579	272	331
	SY/SZ300	25	87900	300000	27.5	58	3.2	10.9	87.5	26.70	3245	272	346
	SZ380	30	107300	366200	33.5	69	3.2	10.9	91	32.42	3939	285	348

① at ARI standard rating conditions: 45°F evaporating temperature, 130°F condensing temperature, 15°F subcooling, 20°F superheat

② for 45°F evap. temp.; 130°F cond. temp. under nominal voltage 460V / 3/ 60Hz, -10%

③ displacement at nominal speed: 3500 rpm at 60 Hz

④ net weight with oil charge

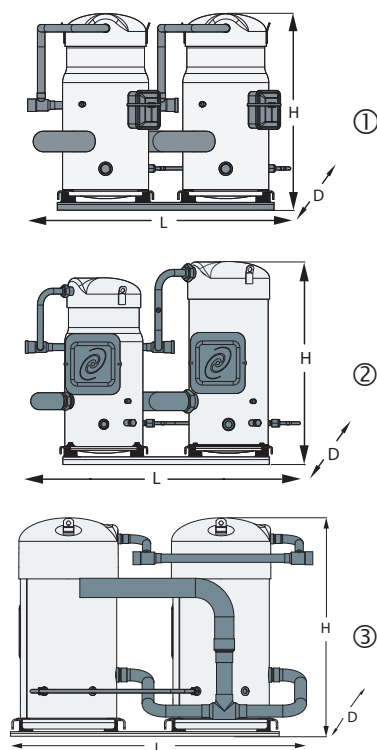
TR = Ton of Refrigeration

COP = Coefficient Of Performance

EER = Energy Efficiency Ratio

Quick reference

Product range tandem compressors



	Model	Composition	Voltage code				Dimensions (inch)		
			3	4	7	9	L	D	H
			200-230V/3~/50	400V/3~/50 460V/3~/60	500V/3~/50 575V/3~/60	380V/3~/60			
①	SM/SZ170	S084 + S084	●	●	●	●	29.8	17.0	20.9
	SM/SZ180	S090 + S090	●	●	●	●	29.8	17.0	20.9
	SM/SZ200	S100 + S100	●	●	●	●	29.8	17.0	20.9
	SM/SZ220	S110 + S110	●	●	●	●	30.6	17.4	22.9
	SM/SZ242	S120 + S120	●	●	●	●	30.6	17.4	22.9
	SM248	S124 + S124	○	○	○	○	33.2	17.5	22.2
	SM272	S124 + S147	○	○	○	○	33.2	17.5	22.2
	SM294	S147 + S147	○	○	○	○	33.2	17.5	22.2
	SM/SZ296	S148 + S148	●	●	●	●	36.4	17.2	24.2
	SM/SZ322	S161 + S161	●	●	●	●	36.4	17.2	24.2
②	SM/SZ350	S175 + S175	●	●	●	●	39.5	19.5	28.2
	SM/SZ370	S185 + S185	●	●	●	●	39.5	19.5	28.2
	SM/SZ268	S148 + S120	●	●	●	●	36.6	17.4	24.2
	SM/SZ271	S161 + S110	●	●	●	●	36.6	17.4	24.2
	SM/SZ281	S161 + S120	●	●	●	●	36.6	17.4	24.2
	SY/SZ425	S240 + S185	○	○	○	○	40.5	21.7	28.7
③	SY/SZ485	S300 + S185	○	○	○	○	40.5	21.7	29.1
	SY/SZ482	S240 + S240	○	○	○	○	38.7	20.1	28.7
	SY/SZ540	S300 + S240	○	○	○	○	38.7	20.1	29.1
	SY/SZ600	S300 + S300	○	○	○	○	38.7	20.1	29.1
	SY/SZ620	S240 + S380	○	○	○	○	41.7	23.4	30.3
	SY/SZ680	S300 + S380	○	○	○	○	41.7	23.4	30.3
	SY/SZ760	S380 + S380	○	○	○	○	41.7	23.4	30.3

● Factory built tandems

○ Tandems to be achieved by assembly of individual compressors. Specific outline drawings of tandems, trio and quadro units are available, refer to FRCC.PC.005.

Nameplate reference

Family, lubricant & refrigerant SZ SY	Nominal capacity 185 300	-	Voltage 4 7	Version R CA	Evolution index C A	Single compressors Single compressors																															
<p>Family, lubricant & refrigerant SM: Scroll, Mineral oil, R22/R417A* SY: Scroll, POE lubricant, R22/R417A (and R407C for SY185-240-300) SZ: Scroll, POE lubricant, R407C - R134a (and R404A, R507A for SZ084 to SZ185)</p> <p>Nominal capacity in thousand Btu/h at 60 Hz, R22, ARI conditions</p> <p>Motor voltage code 3: 200-230V/3~/60 Hz 4: 380-400V/3~/50 - 460V/3~/60 Hz 380-415V/3~/50 - 460V/3~/60 Hz** 6: 230V/3~/50 Hz 7: 500V/3~/50 Hz - 575V/3~/60 Hz 9: 380V/3~/60 Hz 380-400V/3~/60Hz**</p> <p>* When SM compressors are used with R417A, the factory charged mineral oil 160P must be replaced by polyolester oil 160SZ ** SY/SZ380</p>	<table border="1"> <thead> <tr> <th>Motor protection type</th> <th>Connection</th> <th>Module voltage</th> <th>Applies to</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Internal overload protector</td> <td>V : brazed</td> <td></td> <td>S 084-090-100-110-120-148-161</td> </tr> <tr> <td>A : brazed</td> <td></td> <td>S 112-124-147</td> </tr> <tr> <td rowspan="4">Internal thermostat</td> <td>C : brazed</td> <td></td> <td rowspan="4">S 175-185</td> </tr> <tr> <td>R : rotolock</td> <td></td> </tr> <tr> <td>P : brazed</td> <td>24 V AC</td> </tr> <tr> <td>X : brazed</td> <td>230 V</td> </tr> <tr> <td rowspan="6">Electronic protection module</td> <td>S : rotolock</td> <td>24 V AC</td> <td rowspan="2">S 240 - 300</td> </tr> <tr> <td>Y : rotolock</td> <td>230 V</td> </tr> <tr> <td>CA : C: brazed</td> <td>A: 24V AC</td> <td rowspan="4">S 380</td> </tr> <tr> <td>CB : B: 115/230V</td> <td></td> </tr> <tr> <td>PA : P: rotolock</td> <td>A: 24V AC</td> </tr> <tr> <td>PB : B: 115/230V</td> <td></td> </tr> </tbody> </table>	Motor protection type	Connection	Module voltage	Applies to	Internal overload protector	V : brazed		S 084-090-100-110-120-148-161	A : brazed		S 112-124-147	Internal thermostat	C : brazed		S 175-185	R : rotolock		P : brazed	24 V AC	X : brazed	230 V	Electronic protection module	S : rotolock	24 V AC	S 240 - 300	Y : rotolock	230 V	CA : C: brazed	A: 24V AC	S 380	CB : B: 115/230V		PA : P: rotolock	A: 24V AC	PB : B: 115/230V	
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Internal overload protector	V : brazed		S 084-090-100-110-120-148-161																																		
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	Y : rotolock	230 V																																			
	CA : C: brazed	A: 24V AC	S 380																																		
	CB : B: 115/230V																																				
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	PB : B: 115/230V																																				

Further reference

For more exhaustive information on Danfoss scroll compressors single & tandem units, please refer to the following documents:

Online datasheet generator:

www.danfoss.com/odsg - a tool providing user-friendly access to full technical data, performance data & outline drawings for each individual compressor.

Selection and application guidelines for SM, SY and SZ Danfoss single scroll compressors - reference FRCC.PC.003. and for SM, SY and SZ Danfoss scroll compressors in parallel installation - reference FRCC.PC.005.

Above documents and datasheet generator are available on the Danfoss Commercial Compressors internet website: <http://cc.danfoss.com>

Quick reference

Performance data SM / SY R22

Model	To	0		10		20		30		40		45		50	
	Tc	Qo	Pe	Qo	Pe	Qo	Pe	Qo	Pe	Qo	Pe	Qo	Pe	Qo	Pe
SM084	100	35 300	5.10	45 800	5.13	58 100	5.15	72 400	5.17	88 800	5.19	97 900	5.20	107 500	5.20
	130	-	-	-	-	47 700	7.44	60 700	7.42	75 700	7.40	84 000	7.38	92 900	7.36
SM090	100	38 900	5.52	49 900	5.57	63 000	5.61	78 300	5.64	96 100	5.67	105 900	5.67	116 500	5.68
	130	-	-	-	-	52 500	7.83	65 800	7.84	81 400	7.84	90 000	7.83	99 300	7.81
SM100	100	41 000	5.74	52 700	5.79	66 300	5.84	82 200	5.87	100 500	5.90	110 700	5.91	121 500	5.92
	130	-	-	-	-	55 300	8.16	69 200	8.17	85 200	8.16	94 000	8.15	103 500	8.14
SM110	100	47 200	6.55	60 500	6.60	76 100	6.64	94 300	6.68	115 200	6.72	126 700	6.73	139 000	6.74
	130	-	-	-	-	63 500	9.35	79 400	9.36	97 700	9.36	107 800	9.36	118 600	9.35
SM112	100	51 800	6.46	65 700	6.60	82 000	6.76	101 000	6.93	123 000	7.13	135 300	7.24	148 400	7.35
	130	-	-	-	-	69 800	9.26	86 300	9.38	105 400	9.54	116 000	9.63	127 500	9.73
SM120	100	55 000	7.54	70 500	7.57	88 600	7.61	109 600	7.65	133 700	7.70	147 100	7.72	161 300	7.75
	130	-	-	-	-	73 800	10.79	92 300	10.80	113 600	10.81	125 300	10.82	137 900	10.82
SM124	100	58 500	6.93	73 900	7.09	92 000	7.31	113 200	7.59	137 900	7.92	151 600	8.10	166 300	8.30
	130	-	-	-	-	77 600	10.04	95 800	10.22	117 000	10.46	128 800	10.61	141 600	10.76
SM147	100	68 000	8.09	85 100	8.28	105 300	8.49	128 800	8.69	156 000	8.91	171 200	9.02	187 500	9.13
	130	-	-	-	-	90 100	11.57	110 900	11.80	135 200	12.06	148 700	12.19	163 200	12.33
SM148	100	66 600	8.85	84 500	8.98	105 500	9.09	130 200	9.19	158 800	9.28	174 800	9.33	191 800	9.38
	130	-	-	-	-	88 800	12.72	110 400	12.86	135 500	12.97	149 600	13.02	164 700	13.07
SM161	100	72 300	9.57	91 800	9.71	114 700	9.83	141 500	9.93	172 600	10.03	190 000	10.09	208 500	10.14
	130	-	-	-	-	96 500	13.75	120 000	13.90	147 300	14.02	162 600	14.08	179 000	14.13
SM175	100	77 400	10.42	98 700	10.61	123 500	10.79	152 200	10.96	185 100	11.12	203 200	11.19	222 500	11.25
	130	-	-	-	-	103 500	14.84	129 000	15.03	158 200	15.21	174 300	15.29	191 500	15.37
SM185	100	82 400	11.07	105 000	11.27	131 400	11.46	161 900	11.64	196 900	11.81	216 200	11.88	236 800	11.95
	130	-	-	-	-	110 100	15.76	137 200	15.96	168 300	16.15	185 400	16.24	203 700	16.32
SY185	100	82 500	11.00	104 900	11.15	131 400	11.30	162 700	11.44	199 200	11.57	219 600	11.64	241 500	11.71
	130	-	-	-	-	111 200	15.59	138 600	15.90	170 800	16.18	188 800	16.32	208 300	16.45
SY240	100	112 400	14.84	143 000	15.09	179 000	15.41	221 000	15.81	269 800	16.31	296 900	16.60	325 900	16.91
	130	-	-	-	-	150 100	21.04	186 600	21.43	229 100	21.89	252 800	22.15	278 200	22.42
SY300	100	145 600	17.64	184 100	18.19	229 600	18.83	283 100	19.53	345 200	20.29	379 900	20.68	417 000	21.07
	130	-	-	-	-	191 700	25.48	238 100	26.23	292 300	27.08	322 600	27.55	355 200	28.04
SY380	100	178 700	22.23	225 700	22.61	281 000	23.15	345 800	23.79	421 100	24.52	463 000	24.89	507 900	25.27
	130	-	-	-	-	234 100	32.12	290 900	32.48	357 000	33.04	393 800	33.38	433 300	33.75
SM170	100	69 600	10.18	90 200	10.24	114 400	10.30	142 600	10.34	174 900	10.38	192 800	10.39	211 800	10.40
	130	-	-	-	-	94 000	14.87	119 600	14.84	149 200	14.79	165 500	14.76	182 900	14.72
SM180	100	76 600	11.04	98 400	11.13	124 200	11.21	154 300	11.28	189 300	11.33	208 700	11.34	229 500	11.35
	130	-	-	-	-	103 400	15.66	129 700	15.68	160 300	15.66	177 300	15.64	195 600	15.62
SM200	100	80 800	11.48	103 700	11.58	130 700	11.66	162 000	11.74	198 100	11.79	218 000	11.81	239 400	11.82
	130	-	-	-	-	109 000	16.31	136 300	16.32	167 800	16.31	185 200	16.29	203 900	16.27
SM220	100	92 900	13.10	119 200	13.19	150 000	13.27	185 700	13.35	226 900	13.42	249 600	13.45	273 800	13.48
	130	-	-	-	-	125 100	18.69	156 300	18.71	192 400	18.71	212 400	18.70	233 700	18.69
SM242	100	108 300	15.07	138 800	15.14	174 500	15.21	215 900	15.30	263 500	15.39	289 700	15.44	317 700	15.48
	130	-	-	-	-	145 500	21.56	181 900	21.59	223 700	21.61	246 900	21.62	271 600	21.63
SM268	100	119 700	16.39	152 600	16.55	191 200	16.70	236 200	16.84	288 200	16.98	317 000	17.05	347 800	17.13
	130	-	-	-	-	160 200	23.51	199 700	23.66	245 400	23.78	270 800	23.84	298 000	23.89
SM271	100	117 700	16.10	150 000	16.30	188 000	16.50	232 300	16.60	283 500	16.70	311 900	16.80	342 300	16.90
	130	-	-	-	-	157 600	23.10	196 300	23.30	241 300	23.40	266 300	23.40	293 200	23.50
SM281	100	125 400	17.11	159 800	17.28	200 300	17.44	247 400	17.58	301 800	17.73	332 000	17.81	364 300	17.89
	130	-	-	-	-	167 800	24.54	209 100	24.70	257 000	24.83	283 600	24.89	312 100	24.95
SM296	100	131 100	18	166 400	17.95	207 900	18.17	256 500	18.36	312 900	18.55	344 300	18.65	377 900	18.75
	130	-	-	-	-	174 900	25.42	217 400	25.70	267 000	25.93	294 700	26.03	324 400	26.13
SM322	100	142 500	19	180 900	19.41	226 000	19.64	278 800	19.85	340 100	20.05	374 200	20.16	410 800	20.27
	130	-	-	-	-	190 100	27.49	236 300	27.78	290 200	28.03	320 300	28.14	352 600	28.25
SM350	100	152 500	21	194 400	21.20	243 200	21.57	299 800	21.91	364 600	22.22	400 300	22.36	438 400	22.49
	130	-	-	-	-	203 900	29.66	254 100	30.04	311 600	30.39	343 400	30.56	377 200	30.71
SM370	100	162 200	22	206 800	22.52	258 800	22.91	318 900	23.27	387 900	23.60	425 900	23.75	466 400	23.89
	130	-	-	-	-	216 900	31.49	270 300	31.90	331 500	32.28	365 300	32.45	401 300	32.61

Legend: **To:** Evaporating temperature in °F **Qo:** Cooling capacity in Btu/h Superheat = 20 °F Voltage: 460 V / 3 / 60 Hz
Tc: Condensing temperature in °F **Pe:** Power input in kW Subcooling = 15 °F

Quick reference
Performance data SZ R134a

Model	To	10		20		30		40		45		50	
	Tc	Qo	Pe	Qo	Pe	Qo	Pe	Qo	Pe	Qo	Pe	Qo	Pe
SZ084	100	29 500	3.50	38 100	3.50	48600	3.50	61 000	3.50	68 000	3.50	75700	3.50
	130	-	-	31 500	5.00	40400	5.00	51 100	5.10	57 100	5.10	63700	5.10
SZ090	100	31 200	3.70	40 400	3.70	51300	3.70	64 400	3.70	71 800	3.70	79700	3.70
	130	-	-	33 300	5.30	42700	5.30	53 900	5.30	60 300	5.30	67200	5.30
SZ100	100	33 200	3.90	42 900	3.90	54500	3.90	68 200	3.90	75 900	3.90	84300	3.90
	130	-	-	35 300	5.60	45300	5.60	57 100	5.60	63 800	5.60	71100	5.60
SZ110	100	38 200	4.40	49 200	4.50	62400	4.50	77 800	4.50	86 500	4.50	95800	4.50
	130	-	-	40 500	6.30	51900	6.40	65 300	6.40	72 800	6.40	81000	6.40
SZ120	100	44 800	5.10	57 600	5.20	72800	5.20	90 500	5.30	100 400	5.30	111100	5.30
	130	-	-	47 200	7.30	60500	7.40	76 000	7.40	84 700	7.40	94100	7.40
SZ148	100	50 900	6.40	66 000	6.60	84200	6.60	105 800	6.60	118 100	6.60	131400	6.50
	130	-	-	54 100	9.20	69800	9.40	88 500	9.40	99 100	9.40	110700	9.30
SZ160	100	55 500	6.60	71 800	6.80	91500	6.80	114 900	6.90	128 100	6.90	142500	6.90
	130	-	-	59 400	9.40	76200	9.60	96 200	9.70	107 500	9.70	119800	9.70
SZ161	100	61 500	7.20	79 100	7.30	100300	7.40	125 200	7.50	139 300	7.50	154500	7.50
	130	-	-	64 800	10.10	83200	10.20	105 000	10.30	117 300	10.40	130600	10.40
SZ175	100	65 400	7.70	84 200	7.80	106700	7.90	133 300	8.00	148 300	8.00	164400	8.00
	130	-	-	69 000	10.80	88500	10.90	111 800	11.10	124 900	11.10	139100	11.20
SZ185	100	87 700	10.70	113 200	10.90	144000	11.00	180 700	11.20	201 500	11.30	224000	11.40
	130	-	-	92 700	14.80	119100	15.00	150 700	15.30	168 600	15.40	188100	15.50
SZ240	100	109 400	13.20	140 100	13.60	177300	13.90	222 000	14.10	247 500	14.30	275300	14.40
	130	-	-	115 100	18.60	146700	19.10	185 000	19.50	206 900	19.60	230900	19.80
SZ300	100	136 400	16.20	174 700	16.70	220900	17.00	276 300	17.30	307 700	17.40	341900	17.50
	130	-	-	144 200	22.30	183800	22.80	231 500	23.10	258 700	23.20	288400	23.30
SZ380	100	58 000	7.00	75 100	7.00	95700	7.00	120 200	7.00	134 000	7.00	149000	7.00
	130	-	-	62 000	10.00	79600	10.00	100 600	10.10	112 500	10.10	125500	10.10
SZ170	100	61 500	7.30	79 500	7.40	101100	7.40	126 900	7.40	141 400	7.40	157100	7.40
	130	-	-	65 600	10.50	84100	10.60	106 200	10.60	118 800	10.70	132400	10.70
SZ180	100	65 400	7.80	84 500	7.80	107300	7.90	134 300	7.90	149 600	7.90	166000	7.90
	130	-	-	69 600	11.10	89200	11.20	112 600	11.30	125 800	11.30	140000	11.30
SZ200	100	75 200	8.80	97 000	8.90	122800	9.00	153 300	9.00	170 400	9.00	188800	9.00
	130	-	-	79 700	12.60	102200	12.70	128 600	12.80	143 500	12.80	159600	12.80
SZ220	100	88 300	10.20	113 500	10.30	143300	10.50	178 300	10.60	197 800	10.60	218800	10.60
	130	-	-	93 100	14.60	119200	14.70	149 700	14.80	166 900	14.90	185300	14.90
SZ242	100	94 300	11.50	121 800	11.70	154600	11.90	193 400	11.90	215 200	11.90	238800	11.80
	130	-	-	99 800	16.50	128300	16.70	162 000	16.80	181 100	16.80	201700	16.80
SZ268	100	92 300	11.10	119 200	11.20	151500	11.30	189 800	11.40	211 400	11.40	234700	11.40
	130	-	-	98 300	15.70	126100	15.90	159 100	16.10	177 600	16.10	197800	16.10
SZ271	100	98 800	11.70	127 500	11.90	161800	12.10	202 300	12.20	225 100	12.20	249700	12.20
	130	-	-	105 000	16.70	134600	16.90	169 600	17.10	189 300	17.10	210600	17.20
SZ281	100	100 400	12.90	130 100	13.10	165800	13.30	208 500	13.20	232 700	13.20	258900	13.10
	130	-	-	106 600	18.50	137400	18.70	174 300	18.80	195 200	18.70	218000	18.70
SZ296	100	109 300	13.30	141 500	13.50	180200	13.70	226 300	13.80	252 400	13.80	280600	13.80
	130	-	-	116 900	18.90	150100	19.10	189 500	19.30	211 800	19.40	235900	19.40
SZ322	100	121 100	14.40	155 900	14.60	197500	14.80	246 700	14.90	274 400	15.00	304300	15.00
	130	-	-	127 600	20.20	163900	20.40	206 800	20.70	231 100	20.80	257400	20.90
SZ350	100	128 900	15.30	165 900	15.60	210200	15.80	262 600	15.90	292 100	16.00	323900	16.00
	130	-	-	135 900	21.60	174400	21.80	220 200	22.10	246 000	22.20	274000	22.30
SZ370	100	128 900	15.3	165 900	15.6	210 200	15.8	262 600	15.9	292 100	16.0	323 900	16.0
	130	-	-	135 900	21.6	174 400	21.8	220 200	22.1	246 000	22.2	274 000	22.3

Legend: **To:** Evaporating temperature in °F **Qo:** Cooling capacity in Btu/h **Superheat = 20 °F** **Voltage: 460 V / 3 / 60 Hz**
Tc: Condensing temperature in °F **Pe:** Power input in kW **Subcooling = 15 °F**

Quick reference

Performance data SZ R407C

Model	To	0			10		20		30		40		45		50	
	Tc	Qo	Pe	Qo	Pe	Qo	Pe	Qo	Pe	Qo	Pe	Qo	Pe	Qo	Pe	
SZ084	100	30900	4.80	41900	4.80	54 800	4.80	69700	4.80	86800	4.80	96 300	4.80	106400	4.70	
	130	-	-	-	-	39 700	7.10	53100	7.10	68500	7.10	76 900	7.10	86000	7.00	
SZ090	100	33900	5.10	45200	5.20	58 700	5.30	74500	5.30	92800	5.30	103 000	5.30	113900	5.20	
	130	-	-	-	-	44 800	7.60	58500	7.60	74500	7.60	83 300	7.60	92800	7.60	
SZ100	100	37100	5.50	48900	5.60	63 000	5.70	79800	5.70	99500	5.70	110 500	5.70	122400	5.70	
	130	-	-	-	-	50 500	8.10	64600	8.10	81200	8.20	90 500	8.20	100500	8.20	
SZ110	100	42600	6.30	55900	6.30	71 900	6.40	90800	6.50	112900	6.50	125 300	6.50	138700	6.50	
	130	-	-	-	-	57 600	9.20	73500	9.30	92200	9.30	102 800	9.30	114100	9.30	
SZ120	100	49800	7.20	65100	7.30	83 500	7.40	105200	7.50	130700	7.50	144 900	7.40	160100	7.40	
	130	-	-	-	-	66 900	10.70	85300	10.80	106800	10.80	118 900	10.80	131900	10.70	
SZ148	100	61000	8.90	79300	9.00	101 200	9.10	127200	9.30	158000	9.40	175 300	9.40	194000	9.50	
	130	-	-	-	-	82 600	13.10	104700	13.20	130700	13.30	145 400	13.40	161400	13.40	
SZ161	100	65800	9.50	85600	9.70	109 200	9.80	137300	9.90	170500	10.00	189 100	10.10	209300	10.10	
	130	-	-	-	-	89 200	14.10	112900	14.20	141000	14.30	156 900	14.30	174100	14.40	
SZ175	100	71000	10.10	92100	10.30	117 600	10.40	147800	10.60	183300	10.70	203 200	10.70	224600	10.70	
	130	-	-	-	-	94 100	14.90	119400	15.10	149300	15.20	166 200	15.30	184300	15.40	
SY/SZ185	100	75500	10.90	98000	11.10	125 100	11.20	157200	11.40	195000	11.50	216 100	11.50	238900	11.50	
	130	-	-	-	-	100 100	16.00	127100	16.20	158900	16.40	176 800	16.40	196100	16.50	
SY/SZ240	100	99700	14.90	131000	15.30	168 500	15.70	213100	16.00	265800	16.40	295 500	16.60	327500	16.70	
	130	-	-	105600	21.20	137 000	21.70	174200	22.10	218100	22.50	242 800	22.70	269500	22.90	
SY/SZ300	100	130800	17.90	167400	18.30	211 600	18.70	264900	19.10	329000	19.40	365 400	19.60	405100	19.80	
	130	-	-	134100	25.60	170 800	26.10	215300	26.70	269100	27.20	300 000	27.50	333800	27.80	
SZ380	100	157800	21.70	202900	22.20	257 100	22.80	321700	23.40	398000	24.00	440 900	24.30	487300	24.60	
	130	-	-	164300	31.30	210 000	31.90	264700	32.50	329600	33.20	366 300	33.50	406000	33.90	
SZ170	100	60900	9.50	82600	9.60	107 900	9.60	137300	9.60	171000	9.60	189 700	9.50	209500	9.40	
	130	-	-	-	-	78 300	14.10	104600	14.20	134800	14.10	151 500	14.10	169400	14.10	
SZ180	100	66800	10.30	89100	10.40	115 700	10.50	146800	10.50	182900	10.50	203 000	10.50	224500	10.50	
	130	-	-	-	-	88 300	15.20	115300	15.20	146700	15.30	164 200	15.30	182900	15.30	
SZ200	100	73200	11.00	96400	11.20	124 200	11.30	157200	11.40	196000	11.50	217 700	11.50	241100	11.50	
	130	-	-	-	-	99 600	16.10	127300	16.30	159900	16.30	178 300	16.40	198100	16.40	
SZ220	100	83900	12.50	110200	12.70	141 600	12.80	178800	12.90	222500	12.90	246 900	12.90	273100	12.90	
	130	-	-	-	-	113 400	18.40	144800	18.50	181700	18.60	202 400	18.60	224700	18.60	
SZ242	100	98000	14.50	128300	14.70	164 500	14.80	207300	14.90	257400	14.90	285 400	14.90	315400	14.80	
	130	-	-	-	-	131 700	21.40	168000	21.50	210500	21.50	234 300	21.50	259900	21.40	
SZ268	100	109100	16.10	142300	16.30	181 900	16.50	229000	16.70	284300	16.90	315 300	16.90	348800	16.90	
	130	-	-	-	-	147 300	23.80	187100	23.90	234000	24.10	260 400	24.10	288900	24.20	
SZ271	100	106800	15.80	139400	16.00	178 400	16.20	224700	16.30	279200	16.50	309 800	16.50	342800	16.60	
	130	-	-	-	-	144 500	23.30	183600	23.50	229800	23.60	255 800	23.60	283800	23.70	
SZ281	100	113800	16.70	148400	17.00	189 800	17.20	238900	17.30	296600	17.50	329 000	17.50	363900	17.50	
	130	-	-	-	-	153 700	24.80	195200	25.00	244100	25.10	271 700	25.10	301400	25.10	
SZ296	100	120200	17.80	156200	18.00	199 300	18.20	250600	18.50	311200	18.80	345 300	18.90	382200	18.90	
	130	-	-	-	-	162 800	26.20	206200	26.30	257500	26.60	286 500	26.70	317900	26.80	
SZ322	100	129700	19.00	168600	19.30	215 100	19.50	270500	19.80	335800	20.00	372 600	20.10	412400	20.20	
	130	-	-	-	-	175 600	28.10	222400	28.40	277800	28.60	309 100	28.70	343000	28.70	
SZ350	100	139800	20.20	181500	20.60	231 600	20.90	291200	21.10	361100	21.30	400 300	21.40	442400	21.50	
	130	-	-	-	-	185 300	29.80	235300	30.10	294200	30.40	327 300	30.60	363000	30.70	
SZ370	100	148700	21.80	193100	22.10	246 400	22.40	309700	22.70	384100	22.90	425 800	23.00	470600	23.10	
	130	-	-	-	-	197 200	32.00	250300	32.40	313000	32.70	348 200	32.90	386200	33.00	

To: Evaporating temperature in °F
Tc: Condensing temperature in °F

Qo: Cooling capacity in Btu/h
Pe: Power input in kW

Superheat = 20 °F
 Subcooling = 15 °F

Voltage: 460 V / 3 / 60 Hz

Quick reference
Ordering reference

Model	Connections	Motor protection	SM /SY compressors in single pack				SZ compressors in single pack			
			3	4	7	9	3	4	7	9
			200-230/3/60	460/3/60 380-400/3/50	575/3/60 500/3/50	380/3/60	200-230/3/60	460/3/60 380-400/3/50	575/3/60 500/3/50	380/3/60
S 084	Brazed	Internal	SZ084-3VI	SZ084-4VI	SZ084-7VI	SZ084-9VI	SZ084-3VI	SZ084-4VI	SZ084-6VI	SZ084-7VI
S 090	Brazed	Internal	SZ090-3VI	SZ090-4VI	SZ090-7VI	SZ090-9VI	SZ090-3VI	SZ090-4VI	SZ090-6VI	SZ090-7VI
S 100	Brazed	Internal	SZ100-3VI	SZ100-4VI	SZ100-7VI	SZ100-9VI	SZ100-3VI	SZ100-4VI	SZ100-6VI	SZ100-7VI
S 110	Brazed	Internal	SZ110-3VI	SZ110-4VI	SZ110-7VI	SZ110-9VI	SZ110-3VI	SZ110-4VI	SZ110-6VI	SZ110-7VI
S 120	Brazed	Internal	SZ120-3VI	SZ120-4VI	SZ120-7VI	SZ120-9VI	SZ120-3VI	SZ120-4VI	SZ120-6VI	SZ120-7VI
S 148	Brazed	Internal	SZ148-3VAI	SZ148-4VAI	SZ148-7VAI	SZ148-9VAI	SZ148-3VAI	SZ148-4VAI	SZ148-6VAI	SZ148-7VAI
S 161	Brazed	Internal	SZ161-3VAI	SZ161-4VAI	SZ161-7VAI	SZ161-9VAI	SZ161-3VAI	SZ161-4VAI	SZ161-6VAI	SZ161-7VAI
S 175	Brazed	Thermostat	SM175-3CAI	SM175-4CAI	SM175-7CAI	SM175-9CAI	SZ175-3CAI	SZ175-4CAI	SZ175-7CAI	SZ175-9CAI
	Brazed	Module 24V AC	SM175-3PCI	SM175-4PCI	SM175-7PCI	-	SZ175-3PCI	SZ175-4PCI	SZ175-7PCI	-
	Rotolock	Thermostat	SM175-3RI	SM175-4RI	SM175-7RI	SM175-9RI	SZ175-3RI	SZ175-4RI	SZ175-7RI	SZ175-9RI
	Rotolock	Module 24V AC	SM175-3SCI	SM175-4SCI	SM175-7SCI	-	SZ175-3SCI	SZ175-4SCI	SZ175-7SCI	-
S 185	Brazed	Thermostat	SM185-3CAI	SM185-4CAI	SM185-7CAI	SM185-9CAI	SZ185-3CAI	SZ185-4CAI	SZ185-7CAI	SZ185-9CAI
	Brazed	Module 24 V AC	SM185-3PCI	SM185-4PCI	SM185-7PCI	-	SZ185-3PCI	SZ185-4PCI	SZ185-7PCI	-
	Brazed	Module 230 V	-	SM185-4XCI	-	SM185-9XCI	-	SZ185-4XCI	-	SZ185-9XCI
	Rotolock	Thermostat	SM185-3RI	SM185-4RI	SM185-7RI	SM185-9RI	SZ185-3RI	SZ185-4RI	SZ185-7RI	SZ185-9RI
	Rotolock	Module 24 V AC	SM185-3SCI	SM185-4SCI	SM185-7SCI	-	SZ185-3SCI	SZ185-4SCI	SZ185-7SCI	-
	Rotolock	Module 230 V	-	SM185-4YCI	-	SM185-9YCI	-	SZ185-4YCI	-	SZ185-9YCI
SY185	Brazed	Thermostat	-	SY185-4CAI	-	-	-	-	-	-
	Rotolock	Thermostat	-	SY185-4RI	-	-	-	-	-	-
S 240	Brazed	Module 24V AC	SY240A3CAI	SY240A4CAI	SY240A7CAI	SY240A9CAI	SZ240A3CAI	SZ240A4CAI	SZ240A7CAI	SZ240A9CAI
	Brazed	Module 115-230V AC	SY240A3CBI	SY240A4CBI	SY240A7CBI	SY240A9CBI	SZ240A3CBI	SZ240A4CBI	SZ240A7CBI	SZ240A9CBI
	Rotolock	Module 24V AC	SY240A3PAI	SY240A4PAI	SY240A7PAI	SY240A9PAI	SZ240A3PAI	SZ240A4PAI	SZ240A7PAI	SZ240A9PAI
	Rotolock	Module 115-230V AC	SY240A3PBI	SY240A4PBI	SY240A7PBI	SY240A9PBI	SZ240A3PBI	SZ240A4PBI	SZ240A7PBI	SZ240A9PBI
S 300	Brazed	Module 24V AC	SY300A3CAI	SY300A4CAI	SY300A7CAI	SY300A9CAI	SZ300A3CAI	SZ300A4CAI	SZ300A7CAI	SZ300A9CAI
	Brazed	Module 115-230V AC	SY300A3CBI	SY300A4CBI	SY300A7CBI	SY300A9CBI	SZ300A3CBI	SZ300A4CBI	SZ300A7CBI	SZ300A9CBI
	Rotolock	Module 24V AC	SY300A3PAI	SY300A4PAI	SY300A7PAI	SY300A9PAI	SZ300A3PAI	SZ300A4PAI	SZ300A7PAI	SZ300A9PAI
	Rotolock	Module 115-230V AC	SY300A3PBI	SY300A4PBI	SY300A7PBI	SY300A9PBI	SZ300A3PBI	SZ300A4PBI	SZ300A7PBI	SZ300A9PBI
S 380	Brazed	Module 24V AC	-	SY380A4CAI	-	-	-	SZ380A4CAI	-	-
	Brazed	Module 115-230V AC	-	SY380A4CBI	-	120H1115	-	SZ380A4CBI	-	120H1113

SM/SY and SZ compressors in industrial pack:

Use numbers from above table and replace the last digit by «M». Example: SY240A4CAM, except for compressors with voltage code 7 which are not available in industrial pack
 SY 380 Code 9 is available in industrial pack: 120H1116
 SZ 380 Coed 9 is available in industrial pack: 120H1114

Model	Connections	Motor protection	SM112-124-147 compressors in industrial pack				SM112-124-147 compressors in single pack			
			3	4	7	9	3	4	7	9
			200-230/3/60	460/3/60 380-400/3/50	575/3/60 500/3/50	380/3/60	200-230/3/60	460/3/60 380-400/3/50	575/3/60 500/3/50	380/3/60
SM112	Brazed	Internal	120H0610	120H0612	-	120H0614	120H0609	120H0611	-	120H0613
SM124	Brazed	Internal	120H0184	120H0186	-	120H0188	120H0183	120H0185	-	120H0187
SM147	Brazed	Internal	120H0190	120H0311	-	120H0198	120H0189	120H0191	-	120H0197

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Danfoss Scrolls

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Our products can be found in a variety of applications such as rooftops, chillers, residential air conditioners, heatpumps, coldrooms, supermarkets, milk tank cooling and industrial cooling processes.

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