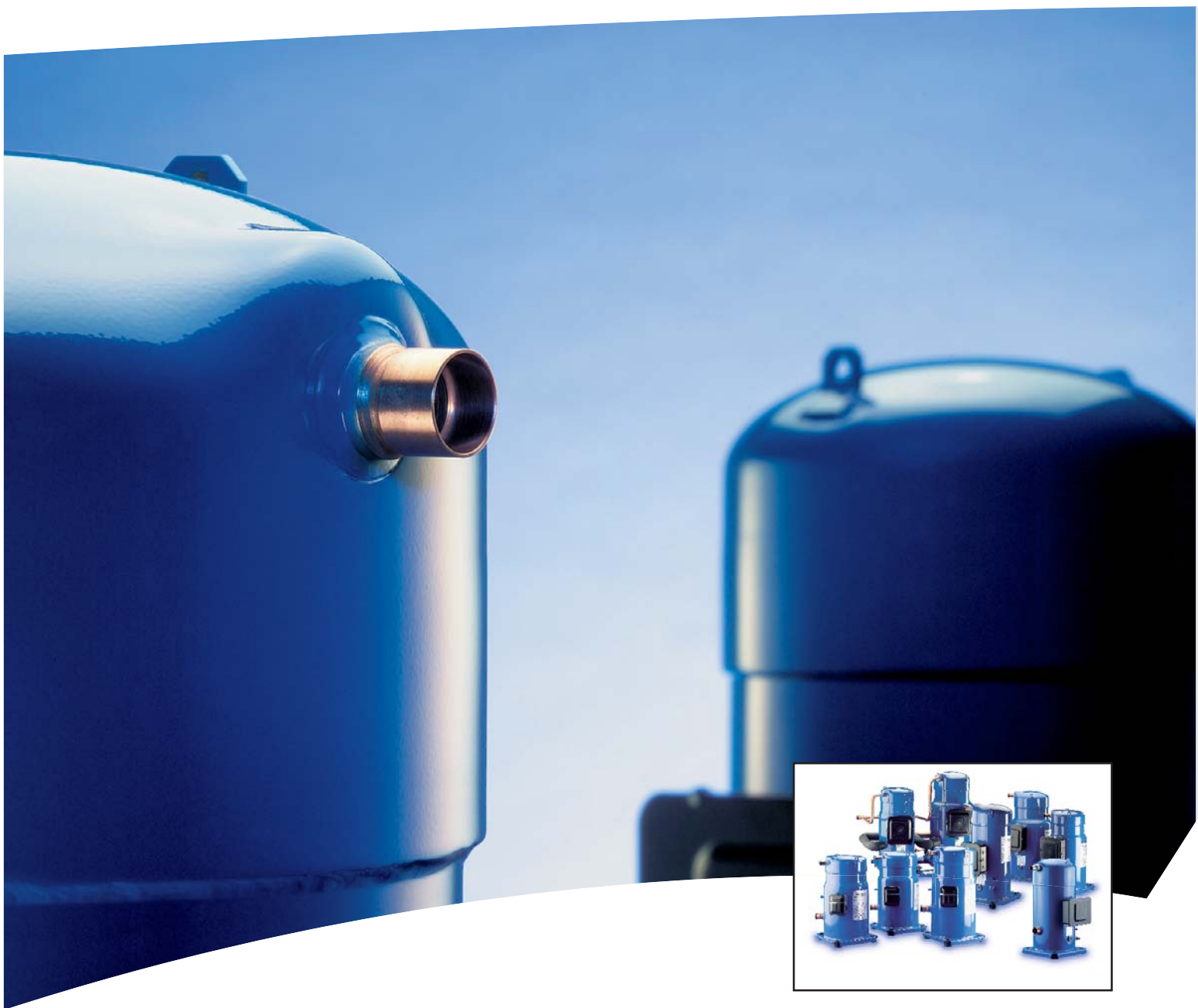


MAKING MODERN LIVING POSSIBLE

Danfoss



Performer[®] scroll compressors

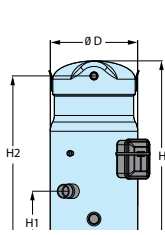
SM - SY - SZ

R407C - R134a - R22 - 50 Hz

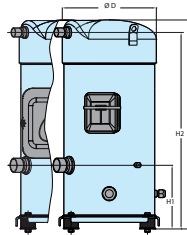
Quick reference

QUICK REFERENCE

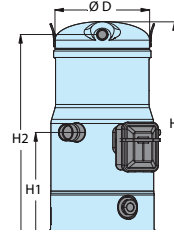
PRODUCT RANGE SINGLE COMPRESSORS



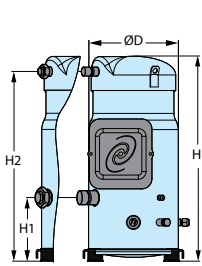
	D	H	H1	H2
S084-090-100	254	508	142	465
S110-120	254	558	178	515



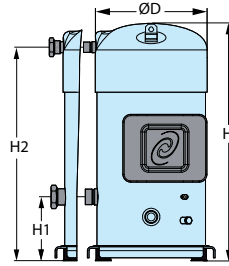
	D	H	H1	H2
S148-161	266	591	180	556



	D	H	H1	H2
S112	243	535	278	504
S124-147	243	540	278	509



	D	H	H1	H2
S115-125	254	581	180	537
S160	266	631	180	596
S175-185	316	678	180	641



	D	H	H1	H2
S240	344	727	196	654
S300	344	738	196	665
S380	344	762	196	689

All dimensions in mm

Model	Motor voltage code		
	400V/3/50Hz - 460V/3/60Hz	230/3/50	500/3/50 - 575/3/60
	4	6	7
SM/SZ084-090-100-110-120	●	●	●
SM/SZ148-161	●	●	●
SM112-124-147	●		
SM/SZ115-125-160-175-185	○ ●	○ ●	○ ●
SY185	○ ●		
SY/SZ240-300	○ ●	○ ●	○ ●
SY/SZ380 *	●		

○ Rotolock version ● Brazed version * SY380 only available for 400/3/50Hz

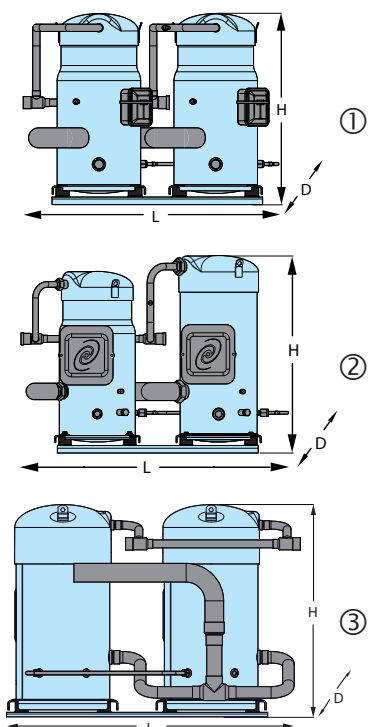
TECHNICAL SPECIFICATIONS

Model	Nominal tons 60 Hz	Nominal cooling capacity ①		Power input ①	Max. operating current	COP ①	E.E.R. ①	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)	cm³/rev	m³/h	dm³	kg	
R22	SM084	7	20 400	69 600	6.12	17	3.33	11.4	70	114.5	19.92	3.3	64
	SM090	7.5	21 800	74 400	6.54	17	3.33	11.4	70	120.5	20.97	3.3	65
	SM100	8	23 100	79 000	6.96	18	3.33	11.3	70	127.2	22.13	3.3	65
	SM110	9	25 900	88 600	7.82	20	3.32	11.3	75	144.2	25.09	3.3	73
	SM112	9.5	27 600	94 400	7.92	21	3.49	11.9	75	151.5	26.36	3.3	64
	SM115	9.5	28 000	95 600	8.31	22	3.37	11.5	76	155.0	26.97	3.8	78
	SM120	10	30 100	102 800	8.96	24	3.36	11.5	75	166.6	28.99	3.3	73
	SM124	10	31 200	106 300	8.75	23	3.56	12.2	73	169.5	29.50	3.3	64
	SM125	10	30 100	102 800	8.93	24	3.37	11.5	76	166.6	28.99	3.8	78
	SM147	12	36 000	123 000	10.08	26	3.58	12.2	74	193.5	33.70	3.3	67
	SM148	12	36 100	123 100	10.80	29	3.34	11.4	79	199.0	34.60	3.6	88
	SM160	13	39 100	133 500	11.60	29	3.37	11.5	79.5	216.6	37.69	4.0	90
	SM161	13	39 000	133 200	11.59	31	3.37	11.5	79.5	216.6	37.69	3.6	88
	SM175	14	42 000	143 400	12.46	34	3.37	11.5	80	233.0	40.54	6.2	100
	SM/SY185	15	45 500	155 300	13.62	35	3.34	11.4	80	249.9	43.48	6.2	100
	SY240	20	61 200	208 700	18.20	47	3.36	11.5	82	347.8	60.50	8.0	150
SY300	25	78 200	267 000	22.83	58	3.43	11.7	82	437.5	76.10	8.0	157	
SY380	30	92 000	313 900	26.82	69	3.43	11.7	85	531.2	92.40	8.4	158	
R407C	SZ084	7	19 300	66 000	6.13	17	3.15	10.7	71	114.5	19.92	3.3	64
	SZ090	7.5	20 400	69 600	6.45	17	3.16	10.8	72	120.5	20.97	3.3	65
	SZ100	8	21 600	73 700	6.84	18	3.15	10.8	73	127.2	22.13	3.3	65
	SZ110	9	24 600	84 000	7.76	20	3.17	10.8	77	144.2	25.09	3.3	73
	SZ115	9.5	26 900	91 700	8.49	22	3.16	10.8	77	155.0	26.97	3.8	78
	SZ120	10	28 600	97 600	8.98	24	3.18	10.9	77	166.6	28.99	3.3	73
	SZ125	10	28 600	97 500	8.95	24	3.19	10.9	78	166.6	28.99	3.8	78
	SZ148	12	35 100	119 800	10.99	29	3.19	10.9	79	199.0	34.60	3.6	88
	SZ160	13	37 600	128 200	11.58	29	3.24	11.1	80.5	216.6	37.69	4.0	90
	SZ161	13	37 900	129 500	11.83	31	3.21	10.9	79	216.6	37.69	3.6	88
	SZ175	14	40 100	136 900	12.67	34	3.17	10.8	81	233.0	40.54	6.2	100
	SZ185	15	43 100	147 100	13.62	35	3.16	10.8	81	249.9	43.48	6.2	100
	SZ240	20	59 100	201 800	18.60	47	3.18	10.9	83.5	347.8	60.50	8.0	150
	SZ300	25	72 800	248 300	22.70	58	3.20	10.9	84	437.5	76.10	8.0	157
	SZ380	30	89 600	305 900	27.60	69	3.25	11.1	86.5	531.2	92.40	8.4	158

① at ARI standard rating conditions: 7.2°C evaporating temperature, 54.4°C condensing temperature, 8.3 K subcooling, 11.1 K superheat,
 ② for +15°C evap. temp.; +68°C cond. temp. under nominal voltage 400V / 3 / 50 Hz, -10%
 ③ displacement at nominal speed: 2900 rpm at 50 Hz,
 ④ net weight with oil charge

QUICK REFERENCE

PRODUCT RANGE TANDEM COMPRESSORS



Outline n°	Model	Composition	Voltage code			Dimensions (mm)		
			4 400/3/50 460/3/60	6 230/3/50	7 500/3/50 575/3/60	L	D	H
①	SM/SZ170	S084 + S084	●	●	●	757	432	532
	SM/SZ180	S090 + S090	●	●	●	757	432	532
	SM/SZ200	S100 + S100	●	●	●	757	432	532
	SM/SZ220	S110 + S110	●	●	●	777	443	582
	SM/SZ230	S115 + S115	●	●	●	836	480	603
	SM/SZ242	S120 + S120	●	●	●	777	443	582
	SM248	S124 + S124	○			844	445	564
	SM/SZ250	S125 + S125	●	●	●	836	480	603
	SM272	S124 + S147	○			844	445	564
	SM294	S147 + S147	○			844	445	564
	SM/SZ296	S148 + S148	●	●	●	924	438	614
	SM/SZ320	S160 + S160	●	●	●	911	480	657
	SM/SZ322	S161 + S161	●	●	●	924	438	614
	SM/SZ350	S175 + S175	●	●	●	1004	495	717
	②	SM/SZ370	S185 + S185	●	●	●	1004	495
SM/SZ268		S148 + S120	●	●	●	930	441	614
SM/SZ271		S161 + S110	●	●	●	930	441	614
SM/SZ281		S161 + S120	●	●	●	930	441	614
SM/SZ285		S160 + S125	●	●	●	884	480	657
SM/SZ290		S175 + S115	●	●	●	924	496	705
SM/SZ310		S185 + S125	●	●	●	924	496	705
SY/SZ425		S240 + S185	○	○	○	1029	552	729
SY/SZ485		S300 + S185	○	○	○	1029	552	740
SY/SZ482		S240 + S240	○	○	○	984	510	730
SY/SZ540		S300 + S240	○	○	○	984	510	740
SY/SZ600		S300 + S300	○	○	○	984	510	740
SY/SZ620		S240 + S380	○			1058	595	770
SY/SZ680		S300 + S380	○			1058	595	770
SY/SZ760		S380 + S380	○			1063	595	770

● 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 AA	Evolution index C A	Single compressors Single compressors
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Family, lubricant & refrigerant
SM: Scroll, Mineral oil, R22
SY: Scroll, POE lubricant, R22 (and R407C for SY185-240-300)
SZ: Scroll, POE lubricant, R407C - R134a (and R404A, R507A for SZ084 to SZ185)

Nominal capacity
in thousand Btu/h at 60 Hz, R22, ARI conditions

Motor voltage code
3: 200-230V/3~/60 Hz
4: 380-400V/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

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 115-125-160-175-185
	R : rotolock		
Electronic protection module	J : brazed	24 V DC	
	P : brazed	24 V AC	
	U : brazed	115 V	
	X : brazed	230 V	
	K : rotolock	24 V DC	
	S : rotolock	24 V AC	
	W : rotolock	115 V	S 240 - 300
	Y : rotolock	230 V	
	AF : A: brazed	F: 24V DC	S 380 *
	AA	A: 24V AC	
	AB	B: 115/230V	
	MA : M: rotolock	A: 24V AC	
	MB	B: 115/230V	
	CA : C: brazed	A: 24V AC	
	CB	B: 115/230V	
	CF	F: 24V DC	

* SY380 only available for 400V/3~/50 Hz, SZ380 available for both 400V/3~/50 Hz and 460V/3~/60 Hz

FURTHER REFERENCE

For more exhaustive information on Performer® 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 Performer® single scroll compressors - ref. FRCC.PC.003. and for SM, SY and SZ Performer® scroll compressors in parallel installation - ref. FRCC.PC.005.

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

QUICK REFERENCE
ORDERING REFERENCE

Model	Connections	Motor protection	SM /SY compressors in industrial pack			SZ compressors in industrial pack		
			4	6	7	4	6	7
			460/3/60 380-400/3/50	230/3/50	575/3/60 500/3/50	460/3/60 380-400/3/50	230/3/50	575/3/60 500/3/50
S 084	Brazed	Internal	SM084-4VM	SM084-6VM	SM084-7VM	SZ084-4VM	SZ084-6VM	SZ084-7VM
S 090	Brazed	Internal	SM090-4VM	SM090-6VM	SM090-7VM	SZ090-4VM	SZ090-6VM	SZ090-7VM
S 100	Brazed	Internal	SM100-4VM	SM100-6VM	SM100-7VM	SZ100-4VM	SZ100-6VM	SZ100-7VM
S 110	Brazed	Internal	SM110-4VM	SM110-6VM	SM110-7VM	SZ110-4VM	SZ110-6VM	SZ110-7VM
S 115	Brazed	Thermostat	SM115-4CAM	SM115-6CAM	SM115-7CAM	SZ115-4CAM	SZ115-6CAM	SZ115-7CAM
	Brazed	Module 24V AC	SM115-4PBM	-	SM115-7PBM	SZ115-4PBM	-	SZ115-7PBM
	Rotolock	Thermostat	SM115-4RM	SM115-6RM	SM115-7RM	SZ115-4RM	SZ115-6RM	SZ115-7RM
	Rotolock	Module 24V AC	SM115-4SBM	-	SM115-7SBM	SZ115-4SBM	-	SZ115-7SBM
S 120	Brazed	Internal	SM120-4VM	SM120-6VM	SM120-7VM	SZ120-4VM	SZ120-6VM	SZ120-7VM
S 125	Brazed	Thermostat	SM125-4CAM	SM125-6CAM	SM125-7CAM	SZ125-4CAM	SZ125-6CAM	SZ125-7CAM
	Brazed	Module 24V AC	SM125-4PBM	-	SM125-7PBM	SZ125-4PBM	-	SZ125-7PBM
	Brazed	Module 24V DC	SM125-4JBM	-	-	SZ125-4JBM	-	-
	Rotolock	Thermostat	SM125-4RM	SM125-6RM	SM125-7RM	SZ125-4RM	SZ125-6RM	SZ125-7RM
	Rotolock	Module 24V AC	SM125-4SBM	-	SM125-7SBM	SZ125-4SBM	-	SZ125-7SBM
	Rotolock	Module 24V DC	SM125-4KBM	-	-	SZ125-4KBM	-	-
S 148	Brazed	Internal	SM148-4VAM	SM148-6VAM	SM148-7VAM	SZ148-4VAM	SZ148-6VAM	SZ148-7VAM
S 160	Brazed	Thermostat	SM160-4CBM	SM160-6CBM	SM160-7CAM	SZ160-4CBM	SZ160-6CBM	SZ160-7CAM
	Brazed	Module 24V AC	SM160-4PBM	-	SM160-7PBM	SZ160-4PBM	-	SZ160-7PBM
	Brazed	Module 24V DC	SM160-4JBM	-	-	SZ160-4JBM	-	-
	Rotolock	Thermostat	SM160-4RAM	SM160-6RAM	SM160-7RAM	SZ160-4RAM	SZ160-6RAM	SZ160-7RAM
	Rotolock	Module 24V AC	SM160-4SBM	-	SM160-7SBM	SZ160-4SBM	-	SZ160-7SBM
	Rotolock	Module 24V DC	SM160-4KBM	-	-	SZ160-4KBM	-	-
S 161	Brazed	Internal	SM161-4VAM	SM161-6VAM	SM161-7VAM	SZ161-4VAM	SZ161-6VAM	SZ161-7VAM
S 175	Brazed	Thermostat	SM175-4CAM	SM175-6CAM	SM175-7CAM	SZ175-4CAM	SZ175-6CAM	SZ175-7CAM
	Brazed	Module 24V AC	SM175-4PCM	-	SM175-7PCM	SZ175-4PCM	-	SZ175-7PCM
	Rotolock	Thermostat	SM175-4RM	SM175-6RM	SM175-7RM	SZ175-4RM	SZ175-6RM	SZ175-7RM
	Rotolock	Module 24V AC	SM175-4SCM	-	SM175-7SCM	SZ175-4SCM	-	SZ175-7SCM
S 185	Brazed	Thermostat	SM185-4CAM	SM185-6CAM	SM185-7CAM	SZ185-4CAM	SZ185-6CAM	SZ185-7CAM
	Brazed	Module 24 V AC	SM185-4PCM	-	SM185-7PCM	SZ185-4PCM	-	SZ185-7PCM
	Brazed	Module 24 V DC	SM185-4JCM	-	-	SZ185-4JCM	-	-
	Brazed	Module 230 V	SM185-4XCM	-	-	SZ185-4XCM	-	-
	Rotolock	Thermostat	SM185-4RM	SM185-6RM	SM185-7RM	SZ185-4RM	SZ185-6RM	SZ185-7RM
	Rotolock	Module 24 V AC	SM185-4SCM	-	SM185-7SCM	SZ185-4SCM	-	SZ185-7SCM
	Rotolock	Module 24 V DC	SM185-4KCM	-	-	SZ185-4KCM	-	-
	Rotolock	Module 230 V	SM185-4YCM	-	-	SZ185-4YCM	-	-
SY185 **	Brazed	Thermostat	SY185-4CAM	-	-			
	Rotolock	Thermostat	SY185-4RM	-	-			
S 240	Brazed	Module 24V AC	SY240A4AAM	SY240A6AAM	SY240A7AAM	SZ240A4AAM	SZ240A6AAM	SZ240A7AAM
	Brazed	Module 115-230V AC	SY240A4ABM	SY240A6ABM	SY240A7ABM	SZ240A4ABM	SZ240A6ABM	SZ240A7ABM
	Rotolock	Module 24V AC	SY240A4MAM	SY240A6MAM	SY240A7MAM	SZ240A4MAM	SZ240A6MAM	SZ240A7MAM
	Rotolock	Module 115-230V AC	SY240A4MBM	SY240A6MBM	SY240A7MBM	SZ240A4MBM	SZ240A6MBM	SZ240A7MBM
S 300	Brazed	Module 24V AC	SY300A4AAM	SY300A6AAM	SY300A7AAM	SZ300A4AAM	SZ300A6AAM	SZ300A7AAM
	Brazed	Module 115-230V AC	SY300A4ABM	SY300A6ABM	SY300A7ABM	SZ300A4ABM	SZ300A6ABM	SZ300A7ABM
	Rotolock	Module 24V AC	SY300A4MAM	SY300A6MAM	SY300A7MAM	SZ300A4MAM	SZ300A6MAM	SZ300A7MAM
	Rotolock	Module 115-230V AC	SY300A4MBM	SY300A6MBM	SY300A7MBM	SZ300A4MBM	SZ300A6MBM	SZ300A7MBM
S 380	Brazed	Module 24V AC	SY380A4CAM *	-	-	SZ380A4CAM	-	-
	Brazed	Module 115-230V AC	SY380A4CBM *	-	-	SZ380A4CBM	-	-

* SY380 only available for 400V/3~/50 Hz

** No module version available

SM/SY and SZ compressors in single pack: use numbers from above table and replace the last digit by «1». Example: SY240A4A1

Model	Connections	Motor protection	SM112-124-147 compressors in industrial pack			SM112-124-147 compressors in single pack		
			4	6	7	4	6	7
			460/3/60 380-400/3/50	230/3/50	575/3/60 500/3/50	460/3/60 380-400/3/50	230/3/50	575/3/60 500/3/50
SM112	Brazed	Internal	120H0612	-	-	120H0611	-	-
SM124	Brazed	Internal	120H0186	-	-	120H0185	-	-
SM147	Brazed	Internal	120H0311	-	-	120H0191	-	-



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We focus on our core business of making quality products, components and systems that enhance performance and reduce total life cycle costs – the key to major savings.



Controls for Commercial Refrigeration



Controls for Industrial Refrigeration



Electronic Controls & Sensors



Industrial Automation



Household Compressors



Commercial Compressors



Sub-Assemblies



Thermostats



Brazen plate heat exchanger

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