Refrigeration Dryers

SMARD SRD | MRD SERIES

BENEFITS AND FEATURES

- Lower energy consumption
- Corrosion-free air circuit, made of copper and stainless steel
- Powder-coated housing
- Unique heat-exchanger technology

Technical Data	SC 5 - 10	SC 18 - 30	SC 47 - 53	80	105 - 310
Inlet / Outlet	Right	On rear	Right side panel (inlet), rear (outlet)		
Bypass	○				
Refrigerant	R134a			R407c	
Air cooling	standard				
Water cooling	–				
Heat Exchanger	Copper tubes		Stainless steel plates (copper-welded)		
IP rating	IP23				
Dew point indication	Analogue gauge				Digital LED, with alarm lamp
Potential free alarm contact	–		○		
Time-controlled condensate drain	●				–
Electronic level-controlled drain	–		○		●

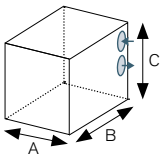
General Data	
Medium	Compressed Air
Housing	Steel
Colour - Top Panel	RAL 9001 (white), powder-coated
Colour - Housing	Grey, powder-coated
Location	Indoors

● standard ○ optional – not available

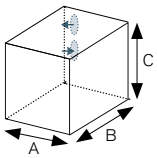
Deltech®

Model	Flow Rate	Connection	Dimensions A	B	C	Weight	el. Connection	Power Consumption
	m³/h		mm			kg	V/Ph/Hz	kW
Smard SC 5	20	3/8"	344	320	390	15	230/1/50	0.24
Smard SC 10	30					19		
Smard SC 18	60	3/4"	368	419	575	29	230/1/60	0.34
Smard SC 24	80					29		0.42
Smard SC 30	100		500	523	570	41		0.58
Smard 47	140	1"	363	891	601	50	230/1/50	0.58
Smard 53	160					53		0.60
Smard 80	240			951		58		0.87
Smard 105	315	2"	483	1,011	761	72		1.10
Smard 120	360					78		1.30
Smard 157	470					86		1.48
Smard 194	580		533	1,191	811	100		1.90
Smard 227	680					112		2.45
Smard 273	820			1,291		134		2.55
Smard 310	1,000		583	1,361		155		2.70

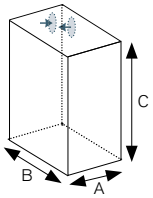
* ISO 7183, based on the intake volume of the compressor at +20°C and 1 bar (a), operating pressure 7 bar (g), inlet temperature +35°C, ambient or cooling water temperature +25°C, pressure dew point +3°C | Technical data and specification are subject to change without prior notice



SC 5 - SC 10



SC 18 - SC 30



SC 47 - Smard 310

Design data*		Min.	Nom.	Max.
Operating pressure		3 bar (g)	7 bar (g)	16 bar (g)
Inlet temperature		+4.4° C	+35° C	+49° C
Ambient temperature	SC 5 - SC 30	+4.4° C	+25° C	+49° C
	47 - 310	+4.4° C	+25° C	+43° C

* The following correction factors need to be used to select the correct unit for other operating conditions.
Deltech® refrigerant compressed air dryers are best used with a Deltech® PF pre-filter and a HF after-filter.

Correction factors for different operating pressures in bar (g) (F_1)														
bar (g)	3	4	5	6	**7**	8	9	10	11	12	13	14	15	16
Smard SC 5 - 30	0.84	0.90	0.93	0.97	**1.00**	1.02	1.04	1.06	1.07	1.08	1.09	1.10	1.10	1.11
Smard 47 - 310	0.79	0.87	0.92	0.96	**1.00**	1.03	1.07	1.10	1.13	1.16	1.18	1.21	1.22	1.24

Correction factors for different inlet temperatures in °C (F_2)				
°C	**+35**	+40	+45	+49
Smard SC 5 - 30	**1.00**	0.86	0.75	0.69
Smard 47 - 310	**1.00**	0.85	0.71	0.63

Correction factors for different ambient temperatures in °C (F_3)					
°C	**+25**	+30	+35	+40	+43
Smard SC 5 - SC30	**1.00**	1.00	1.00	1.00	1.00
Smard 47 - Smard 310	**1.00**	0.92	0.85	0.80	0.78

Selection example		Calculation
Compressor capacity (V_1)	520 m³/h	$V_2 = \frac{V_1}{F_1 \cdot F_2 \cdot F_3} = \frac{520}{1.1 \cdot 0.71 \cdot 0.85} = 783$ m³/h
Operating pressure (F_1)	10 bar (g)	
Inlet temperature (F_2)	+45 °C	
Ambient temperature (F_3)	+35 °C	
V_2	Required dryer capacity	Selection: Smard 273

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