

Refrigeration Dryer

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

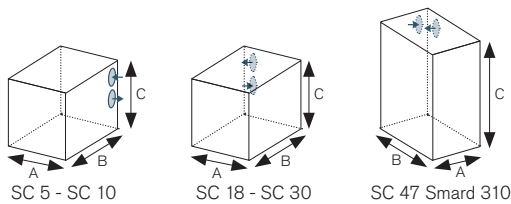


Technical Data	SC 5 - 10	SC 18 - 30	SC 47 - 53	80	105 - 310
Inlet / Outlet	Right	On rear	Right side panel (inlet), rear (outlet)		
Bypass			○		
Aircooling		●			
Refrigerant	R134a			R407c	
Water cooling			-		
Heat exchanger	Copper tubes		Stainless steel plates (copper welded)		
IP rating	IP23				
Dew 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

Model	Flow Rate*	Connection	Dimensions			Weight	el. Connection	Power Consumption	
			A	B	C				
	m ³ /h		mm			kg	V/Ph/Hz	kW	
Smard SC 5	20	R 3/8"	344	320	390	15	230/1/50 230/1/60	0.24	
Smard SC 10	30					19			
Smard SC 18	60					29			
Smard SC 24	80	R 3/4"	368	419	575	41			0.34
Smard SC 30	100					500			523
Smard 47	140	R 1"	393	891	601	50	230/1/50	0.58	
Smard 53	160					53			
Smard 80	240					58			
Smard 105	315	R 2"	483	1.011	761	72			1.10
Smard 120	360					78			1.30
Smard 157	470					86			1.48
Smard 194	580					100			1.90
Smard 227	680					533			1.191
Smard 273	820	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



Design Data*		Min.	Nom.	Max.	
Operating pressure		3 bar (g)	7 bar (g)	16 bar (g)	10 bar (g)
Inlet temperature			+35°C		
Ambient temperature	Smard SC 5 - 30	+4°C	+25°C	+50°C	+55°C
	Smard 47 - 310			+45°C	+50°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® SF 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	0.63
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 - 30	1.00	1.00	1.00	1.00	1.00
Smard 47 - 310	1.00	0.92	0.85	0.80	0.78

Selection example	Calculation
Compressor capacity (V ₁)	520 m ³ /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

$$V_2 = \frac{V_1}{F_1 \cdot F_2 \cdot F_3} = \frac{520}{1.1 \cdot 0.71 \cdot 0.85} = 783 \text{ m}^3/\text{h}$$

Selection: Smard 273

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