

Silicon Carbide Shell & Tube Heat Exchanger CORRESIC®-SR Series

Data Sheet
(SR-1)

Design Parameters

- 1 bar to +6 (+10) bar max. allowable pressure
- 10 (-30)°C to +180 (+220)°C max. allowable temperature

Materials Used and Material Options

Tubes:	Pressureless sintered, single-phase α -SiC (SSiC) SSiC tubes $\text{Ø}14 \times 1.5 \text{ mm}$, $\text{Ø}19 \times 2.3 \text{ mm}$
Sealing system tube / tubesheet:	Double sealing FFKM/FFKM resp. FFKM/FKM
Tube sheet:	Steel, PFA lined
Shell:	Carbon steel, stainless steel, glass lined
Headers:	Carbon steel, stainless steel, glass lined, PTFE-lined

General information

- According to specific process requirements corrosive exposure is possible on shell side, tube side or both sides.
- For vertical, horizontal and inclined installation.
- Bundle resp. shell with standardized design.
- Hoods may be adjusted to specific requirements according to the process (please see the hood examples on the right).

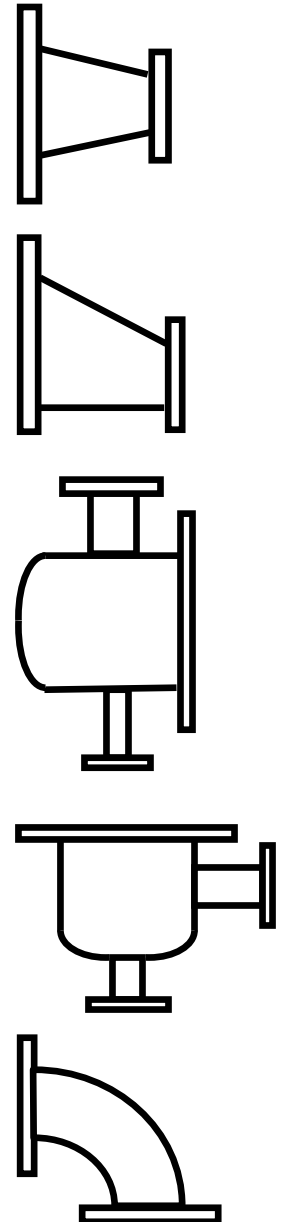
Identification

- SR is the abbreviation of CORRESIC® silicon carbide shell & tube heat exchanger.
- Example:

SR30-20-14-CS-GL

Material of construction: hoods, glass lined
Material of construction: shell, carbon steel
Outside pipe diameter, (in mm)
SiC bundle length, (in dm)
Nominal diameter of shell, (in cm)

Hood Examples



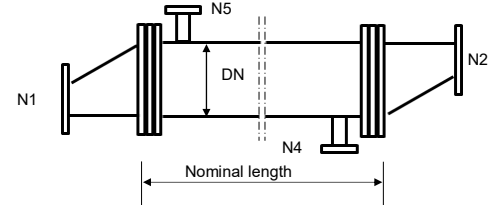
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DN	Length [m] Tube	No. of Tubes		Transfer Area [m ²]		Cross Section Tubes [cm ²]		Corss Section Shell [cm ²]	
		Ø 14	Ø 19	Ø 14	Ø 19	Ø 14	Ø 19	Ø 14	Ø 19
100	1	11		0,4		10,5		70	
	1,5			0,7					
	2			0,9					
	2,5			1,2					
	3			1,4					
	3,5			1,6					
	4			1,9					
125	1	17	8	0,7	0,4	16,2	13,4	105	106
	1,5			1,0	0,7				
	2			1,4	0,9				
	2,5			1,8	1,1				
	3			2,2	1,4				
	3,5			2,5	1,6				
	4			2,9	1,9				
150	1	27	16	1,0	0,8	25,7	26,8	154	147
	1,5			1,6	1,3				
	2			2,2	1,8				
	2,5			2,8	2,3				
	3			3,4	2,7				
	3,5			4,0	3,2				
	4			4,6	3,7				
200	1	51	34	1,9	1,7	48,5	56,9	248	225
	1,5			3,0	2,8				
	2			4,2	3,8				
	2,5			5,3	4,8				
	3			6,4	5,8				
	3,5			7,5	6,8				
	4			8,7	7,8				
250	1	92	56	3,4	2,8	87,4	93,8	383	361
	1,5			5,4	4,5				
	2			7,4	6,1				
	2,5			9,5	7,8				
	3			11,5	9,5				
	3,5			13,5	11,2				
	4			15,5	12,8				
300	1	136	84	5,0	4,2	129,2	140,6	534	500
	1,5			8,0	6,7				
	2			11,0	9,2				
	2,5			14,0	11,7				
	3			17,0	14,2				
	3,5			20,0	16,7				
	4			23,0	19,2				
	4,5			25,9	21,8				

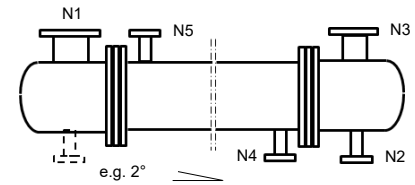
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DN	Length [m] Tube	No. of Tubes		Transfer Area [m ²]		Cross Section Tubes [cm ²]		Corss Section Shell [cm ²]	
		Ø 14	Ø 19	Ø 14	Ø 19	Ø 14	Ø 19	Ø 14	Ø 19
400	1	222	140	7,8	6,7	211	234	840	780
	1,5			12,7	10,8				
	2			17,6	15,0				
	2,5			22,4	19,2				
	3			27,3	23,4				
	3,5			32,2	27,6				
500	4			37,1	31,7				
	4,5			42,0	35,9				
	1	348	207	11,9	9,6	331	347	1313	1256
	1,5			19,6	15,8				
	2			27,2	22,0				
	2,5			34,9	28,1				
3			42,5	34,3					
3,5			50,2	40,5					
4			57,8	46,7					
4,5			65,5	52,9					

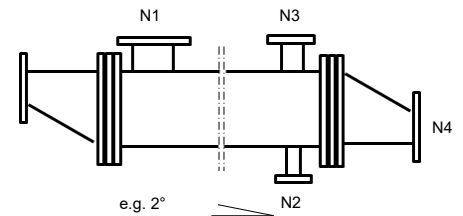
Heat exchanger, liquid / liquid



Condenser, tube side



Condenser, shell side



Recommended nominal nozzle diameter in mm

	DN	Prod. in N1	Prod. out N2	Inert N3	Serv. in N4	Serv. out N5
liquid / liquid	100	50	50		50	50
	125	50	50		50	50
	150	80	80		80	80
	200	80	80		80	80
	250	100	100		100	100
	300	150	150		150	150
	400	150	150		150	150
	500	200	200		200	200

	DN	Prod. in N1	Prod. out N2	Inert N3	Serv. in N4	Serv. out N5
Condensation	100	80	40	50	50	50
	125	80	40	50	50	50
	150	100	50	80	80	80
	200	100	50	80	80	80
	250	150	80	100	100	100
	300	200	80	100	100	100
	400	200	80	100	100	100
	500	250	80	100	150	150

Vertical or horizontal installation possible!