

2-way solenoid valves series 110, 200, 240 normally closed

Features

- Compact size
- No disassembly necessary for soldering

Standards

- 240 RA 16T11 and 20 are  marked per PED

Accessories

- Actuation coil and cable assemblies available for various voltages, see 'Coils ESC and Cable Assemblies'



Capacity data

Type	Nominal Capacity (kW)														Kv-Value (m ³ /h)	Δp Min (bar)
	Liquid															
	R134a	R22	R404A R507	R407C	R450A	R452A	R454A	R454C	R455A	R513A	R1234yf	R1234ze	R448A	R449A		
110 RB 2	3.5	3.8	2.5	3.6	3.3	2.5	3.2	2.8	3.0	3.1	2.6	3.2	3.3	3.2	0.2	0.05
200 RB 3	6.6	7.1	4.6	6.8	6.1	4.7	5.9	5.2	5.6	5.8	4.8	5.9	6.1	6.0	0.4	
200 RB 4	15.5	16.8	10.9	16.1	14.5	11.0	14.0	12.4	13.1	13.8	11.4	13.9	14.5	14.2	0.9	
200 RB 6	27.3	29.5	18.9	28.0	25.4	19.4	24.6	21.8	23.1	24.2	20.0	24.5	25.5	25.0	1.6	
240 RA 8	36.3	39.3	25.2	37.3	33.8	25.8	32.7	29.0	30.7	32.2	26.6	32.6	34.0	33.3	2.3	
240 RA 9	76.2	82.5	52.9	78.4	71.0	54.2	68.7	60.9	64.5	67.7	55.9	68.5	71.3	69.8	4.8	
240 RA 12	85.7	92.8	59.5	88.1	79.9	61.0	77.3	68.6	72.5	76.1	62.9	77.0	80.2	78.6	5.4	
240 RA 16	139.1	150.5	96.5	142.9	129.5	98.9	-	-	-	123.5	-	124.9	130.1	127.4	8.8	
240 RA 20	202.6	219.3	140.7	208.3	188.7	144.1	-	-	-	179.9	-	182.0	189.6	185.7	12.8	

Type	Nominal Capacity (kW)														Kv-Value (m ³ /h)	Δp Min (bar)
	Hot Gas															
	R134a	R22	R404A R507	R407C	R450A	R452A	R454A	R454C	R455A	R513A	R1234yf	R1234ze	R448A	R449A		
110 RB 2	1.6	2.0	1.7	2.1	1.4	111.8	2.0	1.8	2.0	1.5	1.3	1.3	2.0	2.0	0.2	0.05
200 RB 3	3.0	3.7	3.2	3.9	2.9	76.9	4.1	3.6	3.9	3.0	2.6	2.6	4.0	4.0	0.4	
200 RB 4	7.1	8.8	7.5	9.2	6.5	47.2	9.2	8.1	8.8	6.8	5.9	5.8	9.1	9.0	0.9	
200 RB 6	12.5	15.4	13.1	16.1	11.6	41.9	16.4	14.3	15.7	12.1	10.5	10.4	16.2	15.9	1.6	
240 RA 8	16.7	20.5	17.4	21.4	16.6	20.1	23.5	20.6	22.5	17.3	15.1	14.9	23.2	22.9	2.3	
240 RA 9	35.1	43.1	36.5	44.9	34.7	14.0	49.1	43.0	47.0	36.2	31.4	31.1	48.5	47.8	4.8	
240 RA 12	39.4	48.4	41.1	50.5	39.0	7.9	55.2	48.4	52.8	40.7	35.4	35.0	54.5	53.8	5.4	
240 RA 16	64.0	78.5	66.6	81.9	63.5	3.5	-	-	-	66.3	-	57.0	88.9	87.6	8.8	
240 RA 20	93.2	114.4	97.1	119.3	92.4	1.7	-	-	-	96.4	-	82.9	129.3	127.5	12.8	

Type	Nominal Capacity Q _n (kW)														Kv-Value (m ³ /h)	Δp Min (bar)
	Suction Gas															
	R134a	R22	R404A R507	R407C	R450A	R452A	R454A	R454C	R455A	R513A	R1234yf	R1234ze	R448A	R449A		
240 RA 8	4.2	5.6	4.6	5.2	3.7	22.1	5.3	4.5	4.8	4.0	3.6	3.4	5.1	5.0	2.3	0.05
240 RA 9	8.8	11.7	9.7	10.9	7.8	15.2	11.2	9.4	9.9	8.4	7.6	7.1	10.6	10.5	4.8	
240 RA 12	9.9	13.1	10.9	12.3	8.8	9.3	12.5	10.6	11.2	9.4	8.5	8.0	11.9	11.8	5.4	
240 RA 16	16.0	21.3	17.7	19.9	14.3	8.3	-	-	-	15.3	-	13.1	19.4	19.2	8.8	
240 RA 20	23.3	31.0	25.7	29.0	20.8	4.0	-	-	-	22.3	-	19.0	28.3	27.9	12.8	

Note 1: Nominal capacities at +38°C Condensing Temperature, +4°C Evaporating Temperature, Subcooling 1 K, Superheat 0K. 0.15 bar pressure drop between valve inlet and outlet in liquid applications. 1 bar pressure drop for hot gas applications. +18 °C Suction Gas temperature. For selection of other operating conditions, please use Copeland Select software.

Selection table

Type		Part No.	Connection Solder / ODF	
			mm	Inch
110 RB 2	T2	801 217	6	
	T2	801 210		1/4
	T3	801 209	10	
200 RB 3	T3	801 239	10	
200 RB 4	T3	801 176	10	
	T3	801 190		3/8
	T4	801 178	12	
	T4	801 179		1/2
200 RB 6	T4	801 182	12	
	T4	801 183		1/2
	T5	801 186	16	5/8
240 RA 8	T5	801 160		5/8
	T7	801 143	22	7/8
240 RA 9	T5	801 161	16	5/8
	T7	801 162	22	7/8
	T9	801 142		1-1/8
240 RA 12	T7	801 163	22	7/8
	T9	801 144		1-1/8
240 RA 16	T9	801 164		1-1/8
	T11	801 166	35	1-3/8
240 RA 20	T11-M	801 172	35	1-3/8
	T13-M	801 224	42	
	T13-M	801 173		1-5/8
	T17-M	801 174	54	2-1/8

Special Versions:

- Manual stems standard on Series 240 RA 20.

Options:

- Actuation coils available for various voltages, see 'Coils ESC and Cable Assemblies'