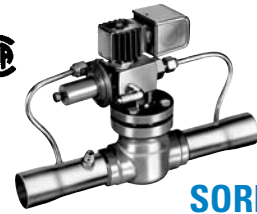


EVAPORATOR PRESSURE REGULATING VALVES

(S)ORIT-12, -15 and -20 Features

- High side pilot for improved temperature control and low ΔP operation
- Adjustable
- Optional solenoid “stop” feature to close valve during defrost
- Normally open design allows system evacuation without manual operator



SORIT

Specifications

VALVE TYPE	PORT SIZE mm	ADJUSTMENT RANGE bar	STANDARD COIL RATINGS *MKC-1		CONNECTIONS ODF SOLDER Inches
			VOLTS/CYCLES	WATTS	
(S)ORIT-12	19.8	0/6.90	24/50-60	10	1-1/8
(S)ORIT-15	25.4		120/50-60		1-3/8
(S)ORIT-20	33.3		208-240/50-60 120-208-240/50-60		1-5/8

*Available with junction box or conduit boss at no extra charge. For voltage other than listed consult Bulletin 30-10.

These EPRs are pilot operated using “high side” pressure and require a pilot supply connection from the compressor discharge to operate. They are designed to be “normally open” providing an unparalleled ability to operate with virtually no suction line pressure drop. The pilot operated design does not require the “allowable evaporator pressure change” necessary with the direct acting models, and can be simply sized based on design evaporator temperature and available pressure drop across the valve at full load conditions.

Capacities – kW

Capacities based on 15°C condensing temperature, 0°K superheat at the evaporator, and 14°K superheat at the valve.

VALVE TYPE	EVAPORATOR TEMPERATURE °C	REFRIGERANT															
		22				134a				404A				507			
		PRESSURE DROP ACROSS VALVE – bar															
		0.03	0.10	0.40	0.70	0.03	0.10	0.40	0.70	0.03	0.10	0.40	0.70	0.03	0.10	0.40	0.70
(S)ORIT-12	5	7.64	13.9	27.3	35.5	6.09	11.0	21.4	27.4	7.41	13.5	26.6	34.6	7.17	13.0	25.7	33.5
	-5	6.40	11.6	22.7	29.3	4.95	8.94	17.1	21.5	6.11	11.1	21.7	28.1	5.92	10.8	21.1	27.3
	-15	5.29	9.59	18.5	23.6	3.95	7.11	13.3	16.3	4.96	8.99	17.4	22.4	4.82	8.74	17.0	21.8
	-25	4.30	7.76	14.7	18.5	—	—	—	—	3.96	7.16	13.7	17.3	3.86	6.97	13.4	16.9
(S)ORIT-15	5	12.6	22.9	44.8	57.9	10.1	18.2	34.9	44.0	12.3	22.3	43.7	56.5	11.9	21.6	42.3	54.8
	-5	10.6	19.2	37.1	47.4	8.18	14.7	27.6	34.1	10.1	18.3	35.6	45.7	9.79	17.8	34.6	44.4
	-15	8.75	15.8	30.1	37.8	6.53	11.7	21.1	25.0	8.20	14.8	28.4	36.0	7.97	14.4	27.7	35.2
	-25	7.11	12.8	23.7	29.0	—	—	—	—	6.55	11.8	22.1	27.4	6.38	11.5	21.6	26.9
(S)ORIT-20	5	27.7	50.3	98.5	127	22.1	40.0	76.8	97.4	26.9	48.9	95.9	124	26.0	47.3	92.8	121
	-5	23.2	42.1	81.6	105	17.9	32.3	60.9	75.7	22.1	40.2	78.2	101	21.5	39.0	76.0	97.9
	-15	19.2	34.7	66.3	83.7	14.3	25.6	46.8	56.1	18.0	32.5	62.6	79.5	17.5	31.6	61.0	77.7
	-25	15.6	28.0	52.4	64.5	—	—	—	—	14.4	25.9	48.8	60.8	14.0	25.2	47.8	59.6

Refrigerant Liquid Temperature Correction Factors

REFRIGERANT	LIQUID TEMPERATURE ENTERING VALVE °C										
	-15°	-10°	-5°	0°	5°	10°	15°	20°	30°	35°	40°
	CORRECTION FACTOR, CF LIQUID TEMPERATURE										
R-22	1.21	1.17	1.14	1.11	1.07	1.04	1.00	0.96	0.91	0.87	0.84
R-134a	1.25	1.21	1.17	1.14	1.09	1.05	1.00	0.95	0.89	0.84	0.81
R-404A	1.31	1.27	1.22	1.16	1.12	1.06	1.00	0.94	0.86	0.79	0.74
R-507	1.32	1.28	1.22	1.16	1.12	1.06	1.00	0.94	0.86	0.80	0.75

*ARI standard capacities are based on 38°C saturated liquid temperature. Use the correction factor for 40°C liquid temperature and the capacities at 5°C evaporator temperature to determine approximate ARI standard capacity ratings.

Example: The capacity of a (S)ORIT-12 using R-404A, evaporator temperature of -5°C, 0.1 bar pressure drop across the valve and a liquid temperature of 10°C, is equal to 11.1 x 1.06 = 11.8 kW.

Installation

When installing these valves with solder connections, the internal parts should be protected from overheating by wrapping the valve with a wet cloth.

(S)ORIT – Valve Nomenclature/Ordering Instructions

S	ORI	T	15	0/100	1-3/8" ODF	120/50-60
Solenoid Stop Feature (optional)	Valve Type: Open on Rise of Inlet Pressure	Pressure Tap on Inlet Connection	Valve Size	Adjustment Range – psig*	Connections ODF Solder	Electrical Specifications for Solenoid Stop Feature (optional)

* Other pressure ranges are available.