

Head Pressure Control Valves

High and Low Ambient Stability

The design of air conditioning systems utilizing air cooled condensing units involves two main problems that must be solved if the system is to operate reliably and economically **high ambient** and **low ambient** operation. If the condensing unit is properly sized, it will operate satisfactorily during extremely high ambient temperatures. However, some units will be required to operate at ambient temperatures below their design dry bulb temperature during most of the year, the solution to low ambient operation is more complex.



Without good head pressure control during low ambient operation, the system can experience both running cycle and off-cycle problems. Since the pressure differential across the thermostatic expansion valve port affects the rate of refrigerant flow, low head pressure generally causes insufficient refrigerant to be fed to the evaporator. Failure to have sufficient head pressure will result in low suction pressure and/or iced evaporator coils. The primary off-cycle problem is refrigerant migration to the condenser. Insufficient flow through the TEV will cause a low suction pressure. The typical method of maintaining normal head pressure in a refrigeration system during periods of low ambient temperature is to restrict liquid flow from the condenser to the receiver, and at the same time divert hot gas to the inlet of the receiver. This backs liquid refrigerant up into the condenser reducing its capacity which in turn increases the condensing pressure. At the same time the hot gas raises liquid pressure in the receiver, allowing the system to operate normally. **Parker Sporlan Head Pressure Control** for systems with air cooled condensers can be accomplished using one of several valve options; the non-adjustable OROA-5, the adjustable ORI/ORD combination, or the economical LAC Series.

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Valve Nomenclature/Ordering Instructions

LAC

LAC	-	4	-	DS	-	100/80	-	3/8"	X	3/8"	X	3/8"
Valve Type Low Ambient Control		Valve Size		Dual Setting Omit for standard dome element		Valve Setting (s) (psig) - Specify one setting for		Discharge Connection (inches)		Condensed Connection (inches)		Receiver Connection (inches)
LAC	-	5	-	180	-	5/8"	X	5/8"	X	3/8"		ODF
Valve Type Low Ambient Control		Valve Size		Valve Setting(s) (psig)		Discharge Connection (inches)		Condensed Connection (inches)		Receiver Connection (inches)		Solder Connections

ORI

ORI	-	6	-	65/225	-	7/8" ODF	-	With Strainer	-	H
Valve Type Open on rise of Inlet Pressure		Port Size Eighths of an Inch		Nominal Adjustment Range (psig)		Connection Solder		Inlet Strainer (Optional)		Designates High Pressure Bellows

OROA

OROA	-	5	-	180	-	5/8" ODF	-	With Strainer
Valve Type Open on rise of Outlet		Port Size Eighths of an Inch		Pressure Setting (psig)		Connection Solder		Inlet Strainer (Optional)

ORD-4

ORD	-	4	-	20
Valve Type Open on rise of Differential Pressure		Port Size Eighths of an Inch		Opening Pressure Differential (psi)

Materials and Construction Details

Valve Type	LAC-4,-5,-10		ORI-6,-10	ORD-4	OROA
Body Material	Brass		Brass	Copper	Brass
Seat	Metal to Metal		Metal to Metal	Metal to Metal	Metal to Metal
Element Type and Material	Domed Steel	Remote Bulb only for R410A LAC-5-HP, -10-HP valves	Bellows - Brass	Bellows - Brass	Diaphragm Stainless Steel
Type of Joints	Knife Edge, Metal to Metal		Hermetic Construction	Hermetic Construction	Hermetic Construction
Connections	ODF Copper		ODF Copper	ODF Copper	ODF Copper
MRP	46.9 barg (680 psig) R410A only		31 barg (450 psig)	31 barg (450 psig)	31 barg (450 psig)
	LAC-4 =34.5 barg (500 psig)	LAC-5, -10 = 31 barg (450 psig)			
Max External Leakage	.10 oz/yr @ 300 psig (2.8 g/yr @ 20 barg)				
UL	SA-5460				
Compatibility	All HFC, HCFC, Refrigerants and blends				

When installing these valves with solder connections, the internal parts should be protected from overheating by using a Parker calorie discharger (TB2) - see page 269 - or by wrapping the valve with a wet cloth.

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6



Selection Tables

Low Ambient Capacities - kW of Refrigeration

Capacities are based on -20°C evaporator temperature, 35°C condenser, 6°C subcooled liquid.

Refrigerant Valve Setting barg	Minimum Ambient Design Temp. °C	Pressure Drop Across Valve bar	Valve Type				
			LAC-4	LAC-5	LAC-10	OROA-5	ORD-4
22 407C (12.4 barg)	-30	0.07	5.96	10.6	25.4	-	-
		0.14	8.38	14.9	35.7	-	-
		0.35	13.1	23.6	55.5	-	-
		1.6	26.9	49.6	112	54.4	54.4
		2	29.8	55.2	123	83.3	83.3
	-20	0.07	6.38	11.3	27.1	-	-
		0.14	8.97	16	38	-	-
		0.35	14	25.2	59.1	-	-
		1.6	28.8	53	119	61.3	61.3
		2	31.8	59	131	93.8	93.8
	-10	0.07	6.91	12.2	29.2	-	-
		0.14	9.71	17.2	40.8	-	-
		0.35	15.2	27.2	63.5	-	-
		1.6	31.1	57.2	127	71.2	71.2
		2	34.3	63.7	140	109	109
134a (6.9 barg)	-30	0.07	4.86	8.65	20.9	-	-
		0.14	6.83	12.2	29.2	-	-
		0.35	10.7	19.2	45.4	-	-
		1.6	21.4	40.1	88.8	40.6	40.6
		2	23.5	44.5	96.6	62.4	62.4
	-20	0.07	5.24	9.3	22.4	-	-
		0.14	7.36	13.1	31.3	-	-
		0.35	11.5	20.7	48.5	-	-
		1.6	23.1	43.1	94.9	45.7	45.7
		2	25.3	47.8	103	70.2	70.2
	-10	0.07	5.73	10.1	24.3	-	-
		0.14	8.05	14.3	34	-	-
		0.35	12.5	22.6	52.7	-	-
		1.6	25.2	47.1	103	53.3	53.3
		2	27.6	52.2	112	81.8	81.8
R-410A (20.3 barg)	-30	0.07	6.06	10.8	20.3	-	-
		0.14	8.54	15.2	28.5	-	-
		0.35	13.4	24	44.4	-	-
		0.7	18.8	33.9	61.8	-	-
		2	23.5	44.5	96.6	62.4	62.4
	-20	0.07	6.48	11.5	21.6	-	-
		0.14	9.13	16.2	30.3	-	-
		0.35	14.3	25.6	47.2	-	-
		0.7	20	36.1	65.6	-	-
		2	25.3	47.8	103	70.2	70.2
	-10	0.07	7	12.4	23.2	-	-
		0.14	9.85	17.5	32.5	-	-
		0.35	15.4	27.6	50.6	-	-
		0.7	21.6	38.9	70.4	-	-
		2	27.6	52.2	112	81.8	81.8

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Selection Tables

Low Ambient WINTER Capacities - kW of Refrigeration

Capacities are based on -20°C evaporator temperature, 35°C condenser, 6°C subcooled liquid.

Refrigerant Valve Setting barg	Minimum Ambient Design Temp. °C	Pressure Drop Across Valve bar	Valve Type				
			LAC-4	LAC-5	LAC-10	OROA-5	ORD-4
404A (14.5 barg)	-30	0.07	4.37	7.75	18.7	-	-
		0.14	6.15	11.0	26.2	-	-
		0.35	9.63	17.3	40.9	-	-
		1.6	19.9	36.5	83.0	39.5	39.5
		2	22.0	40.6	91.5	60.4	60.4
	-20	0.07	4.64	8.2	19.7	-	-
		0.14	9.52	11.6	27.7	-	-
		0.35	10.2	18.3	43.1	-	-
		1.6	21.1	38.6	87.4	44	44
		2	23.3	43.0	96.3	67.4	67.4
	-10	0.07	4.98	8.78	21.1	-	-
		0.14	7.00	12.4	29.5	-	-
		0.35	10.9	19.6	45.9	-	-
		1.6	22.5	41.3	92.9	50.7	50.7
		2	24.9	46.0	102	77.6	77.6
507 (14.5 barg)	-30	0.07	4.12	7.32	17.6	-	-
		0.14	5.8	10.3	24.8	-	-
		0.35	9.10	16.3	38.6	-	-
		1.6	18.8	34.5	78.5	37.2	37.2
		2	20.8	38.4	86.5	57	57
	-20	0.07	4.40	7.79	18.7	-	-
		0.14	6.20	11.0	26.3	-	-
		0.35	9.70	17.4	40.9	-	-
		1.6	20.0	36.7	83.0	41.9	41.9
		2	22.1	40.9	91.5	64.1	64.1
	-10	0.07	4.75	8.38	20.1	-	-
		0.14	6.68	11.8	28.1	-	-
		0.35	10.4	18.7	43.8	-	-
		1.6	21.5	39.5	88.6	48.7	48.7
		2	23.8	43.9	97.6	74.6	74.6

6

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Selection Tables

High Ambient SUMMER Capacities - kW of Refrigeration

Capacities are based on -20°C evaporator temperature, 43°C condenser, 6°C subcooled liquid.

Refrigerant Valve Setting barg	Pressure Drop Across Valve bar	Valve Type						
		LAC-4	LAC-5	LAC-10	OROA-5	ORI-6	ORI-10	ORD-4
22 407C (12.4 barg)	0.07	9.13	19.5	41.5	37	26.0	69.2	
	0.14	12.8	27.6	57.7	52.1	37.8	95.6	-
	0.21	15.5	33.9	69.9	63.7	47.0	116	-
	0.28	17.8	39.1	80.1	73.5	54.9	132	-
	0.35	19.9	43.7	89.0	82.1	61.9	147	-
134a (6.9 barg)	0.07	8.15	17.4	37.1	33	18.2	45.6	-
	0.14	11.4	27.4	51.5	46.5	26.4	63	-
	0.21	13.9	30.2	62.4	56.9	32.9	76.1	-
	0.28	15.9	34.9	71.5	65.6	38.5	87.0	-
410A (20.3 barg)	0.07	8.7	18.6	29.3	-	-	-	-
	0.14	12.2	26.3	40.7	-	-	-	-
	0.21	14.8	32.2	49.3	-	-	-	-
	0.28	17.0	37.2	56.5	-	-	-	-
	0.35	18.9	41.6	62.8	-	-	-	-

High Ambient SUMMER Capacities - kW of Refrigeration

Capacities are based on -20°C evaporator temperature, 43°C condenser, 6°C subcooled liquid.

Refrigerant Valve Setting barg	Pressure Drop Across Valve bar	Valve Type						
		LAC-4	LAC-5	LAC-10	OROA-5	ORI-6	ORI-10	ORD-4
404A (14.5 barg)	0.07	5.71	12.2	26.0	23.0	17.5	48.4	-
	0.14	7.98	17.2	36.1	32.5	25.4	66.8	-
	0.21	9.7	21.1	43.8	39.7	31.7	80.7	-
	0.28	11.2	24.4	50.2	45.8	37.0	92.3	-
	0.35	12.4	27.2	55.8	51.2	41.7	102	-
507 (14.5 barg)	0.07	5.58	11.9	25.5	22.6	17.8	49.3	-
	0.14	7.8	16.9	35.3	31.8	25.8	68.1	-
	0.21	9.49	20.7	42.8	38.9	32.1	82.3	-
	0.28	10.9	23.9	49.1	44.9	37.5	94.1	-
	0.35	12.2	26.7	54.5	50.1	42.4	104	-

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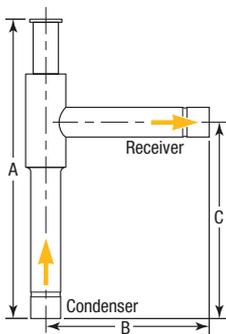
Valve Dimensions

Specifications and Dimensions

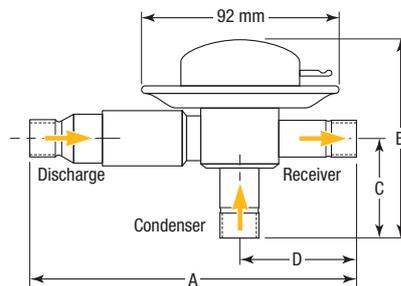
Valve Type	Standard Factory Setting bar	Connections ODF Solder Inches		Dimensions mm								Weight kg		Replacement Parts		
		Inlet(s)	Outlet	A	B	C	D	E	F	G	I	Net	Ship			
ORI-6-65/225-H	8.3	5/8	5/8	250	128	162	-						0.45	0.57	Inlet Strainer	825-5
		7/8	7/8													825-7
		1-1/8	1-1/8													825-9
ORI-10-65/225-H	8.3	1-1/8	1-1/8	280	139	167	-						1.13	1.25	Inlet Strainer	825-9
		1-3/8	1-3/8													825-11
ORD-4-20	1.4	5/8	5/8	167	25	-	-	-	-	-	-	-	0.15	0.23	Inlet Strainer	825-5
OROA-5	6.9, 12.4 or 14.5	(1) 5/8 (2) 5/8	5/8	151	95	48	55						0.91	1.02	Inlet Strainer	825-5
		(1) 5/8 (2) 7/8	7/8	157	102	54	61									825-7

(1) Discharge Connection
(2) Condenser Connection

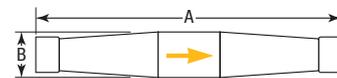
ORI



OROA



ORD-4



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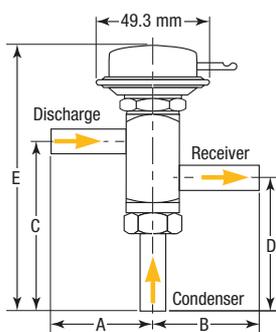
Valve Dimensions

Specifications and Dimensions

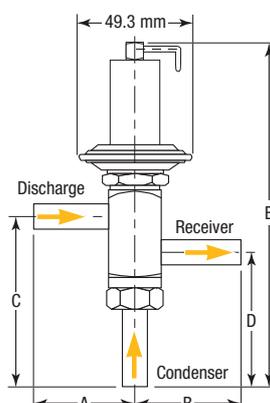
Valve Type	Standard Factory Setting bar	Connections ODF Solder Inches		Dimensions - mm										Weight kg			
		Inlet(s)	Outlet	A	B	C	D	E		F	G	I	Net	Ship			
LAC-4	6.9, 12.4 or 14.5	1/4	1/4	45	48	77	61	120							0.34	0.39	
		3/8	3/8												0.36	0.40	
		1/2	1/2												0.37	0.41	
LAC-4-DS		3/8	3/8	45	48	77	61	155							0.40	0.46	
		1/2	1/2												0.43	.49	
LAC-5		1/2	1/2	42	41	96	76	Dome Element	155	Bulb Element	142					1.13	1.20
		5/8	5/8	44	43	98	78		157		144					1.16	1.22
		7/8	7/8	57	55	110	91		170		157					1.18	1.25
		1-1/8	1-1/8	61	60	114	95		173		161					1.25	1.32
LAC-10		(1) 1-3/8 (2) 7/8	7/8	72	68	112	88	Dome Element	176	Bulb Element	163					1.45	1.55
	(1) 1-3/8 (2) 1-1/8	1-1/8	65		123	98	187		174		1.49					1.59	

(1) Discharge Connection
(2) Condenser Connection

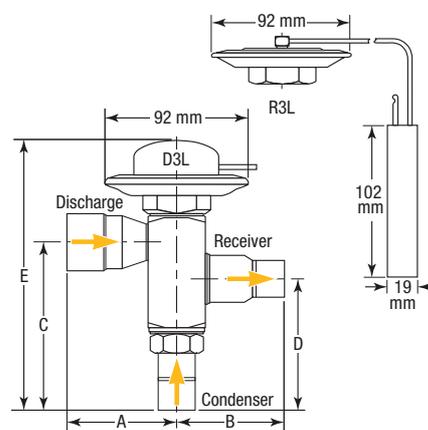
LAC-4



LAC-4-DS



LAC-5 & 10



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Order Selection Guide

Head Pressure Control Valves

Valve Type	Connections - Inches		Standard Factory Setting psig	Standard Factory Setting barg	Part Number	
	Discharge	Condenser/Receiver				
LAC-4	3/8 ODF	3/8 ODF	100	6.9	903017	
	1/2 ODF	1/2 ODF			903031	
	3/8 ODF	3/8 ODF	180	12.4	903024	
	1/2 ODF	1/2 ODF			903038	
LAC-4-DS	3/8 ODF	3/8 ODF	100/180	6.9/12.4	903080	
	1/2 ODF	1/2 ODF			903085	
LAC-4-HP	1/2 ODF	1/2 ODF	295	20.3	903111	
LAC-5	5/8 ODF	5/8 ODF	180	12.4	903029	
	7/8 ODF	7/8 ODF	180	12.4	903033	
		1/2 x 1/2 ODF, 5/8 x 5/8 ODF, 7/8 x 7/8 ODF, 1-1/8 x 1-1/8 ODF	100, 180	6.9/12.4	Special order valve	
	LAC-5-HP	5/8 ODF	5/8 ODF	295	20.3	903107
	LAC-10		7/8 x 7/8 ODF, 1-3/8 x 1-3/8 ODF	100, 180	6.9/12.4	Special order valve
LAC-10-HP	1-3/8 ODF	7/8 ODF	295	20.3	903106	
	1-3/8 ODF	1-1/8 ODF			903109	
ORI-6-65/225H	5/8 ODF	5/8 ODF	120	8.3	900826	
	7/8 ODF	7/8 ODF			900833	
	1-1/8 ODF	1-1/8 ODF			900847	
ORI-10-65/225H	1-1/8 ODF	1-1/8 ODF			900861	
	1-3/8 ODF	1-3/8 ODF			900882	
ORD-4	5/8 ODF	5/8 ODF	20	1.4	902877	
			25	1.7	902884	
			30	2.07	902891	
			35	2.4	902898	
OROA-5	5/8 ODF	5/8 ODF	100	6.9	902905	
	5/8 ODF	7/8 ODF			902912	
	5/8 ODF	5/8 ODF	180	12.4	902919	
	5/8 ODF	7/8 ODF			902926	
OROAB-5	5/8 ODF	5/8 ODF	100	6.9	902933	
	5/8 ODF	7/8 ODF			902940	
	5/8 ODF	5/8 ODF	180	12.4	902947	
	5/8 ODF	7/8 ODF			902954	
OROAC-5 OROAD-5	5/8 x 5/8 ODF, 5/8 x 7/8 ODF		100	6.9	Special order valve	
			180	12.4		



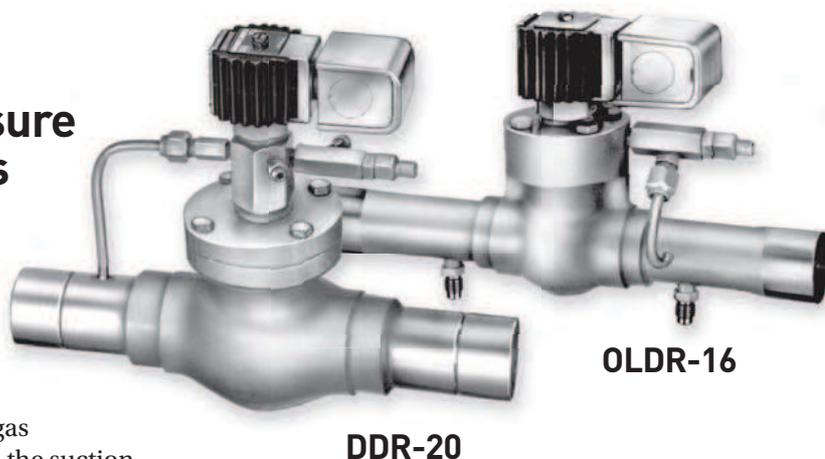
Maximum Pressure Drop Between Compressor and Receiver - bar	Head Pressure Component Selection
Below 0.97	OROA-5-100 or -180 ORD-4-20 & ORI
1 - 1.3	OROAB-5-100 or -180 ORD-4-25 & ORI
1.4 - 1.65	OROAC-5-100 or -180 ORD-4-30 & ORI
1.7 - 2	OROAD-5-100 or -180 ORD-4-35 & ORI

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Defrost Differential Pressure Regulating Valves

In many supermarket applications refrigerant gas from the discharge line or from the top of the receiver is used for defrost. This method of defrost diverts a portion of the hot gas or cool gas (from the top of the receiver) to the suction line and back through the evaporator being defrosted.



The gas condenses in the evaporator and flows in reverse, through check valves, around the TEV and liquid line solenoid valve. Liquid refrigerant then flows to the liquid header where it is distributed to evaporators not in the defrost cycle. In order for this reverse flow to occur, the pressure of the defrost header must be greater than the pressure of the liquid header. The difference in pressure is known as the defrost differential.

Several methods are used to obtain the defrost differential. The (O)LDR is designed to maintain a differential pressure between the receiver and the liquid header. Parker Sporlan liquid line differential valves have a solenoid bypass feature that allows the valve to remain full open or modulate to maintain a differential.

We supply two versions of liquid line differential valves:

The **OLDR** is in the **full open position** when the coil is de-energized, and it's in differential operation mode when the coil is energized.

The **LDR** is in **differential operation mode** when the coil is de-energized, and it is in the full open position when the coil is energized.

The **DDR-20** is designed to create a differential pressure between its inlet (discharge) pressure and the receiver pressure.

A solenoid bypass feature is incorporated in the valve so that the valve can be made to go full open when there is no need for a differential to be created. Energizing the solenoid coil opens the valve fully.

Location and Piping

The (O)LDR valves is located between the receiver and the liquid header. The DDR-20 is located in the discharge line before the condenser. The two types of defrost differential valves (liquid line and discharge line) are not to be applied on the same system.

Adjustment Range and Pressure Settings

All defrost differential valves are set by turning the adjusting stem located under the cap on the pilot differential valve. The adjustment range is 0.3 to 3.5 bar. The (O)LDR has a factory setting of 1.2 bar and the DDR-20 has a factory setting of 2 bar. Turning the stem clockwise increases the setting, counter clockwise decreases the setting.

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Valve Nomenclature/Ordering Instructions

OLDR

0	-	LDR	-	16	-	5-50	-	1-3/8" ODF	-	120/50-60
Normally Open		Liquid Differential Regulator		Valve Size		Adjustment Range psl		Connection (Inches)		Electrical Specifications

DDR

DDR	-	20	-	5/50	-	1-5/8" ODF	-	120/50-60
Discharge Differential Regulator		Valve Size		Adjustment Range psl		Connection (Inches)		Electrical Specifications

When installing these valves with solder connections, the internal parts should be protected from overheating by using a Parker calorie discharger (TB2) - see page 269 - or by wrapping the valve with a wet cloth.

Specifications

Valve Type	Port Size mm	Differential Setpoint Range	Connections - Inches Inlet x Outlet	Coil	MRP	MOPD
OLDR-16	25.4	0.34/3.4 bar	1-1/8 ODF x 1-1/8 ODF or 1-3/8 ODF x 1-3/8 ODF	MKC-1	27.5 bar	20.5 bar
LDR-16				OMKC-1		
OLDR-20	33.3		1-5/8 ODF x 1-5/8 ODF or 2-1/8 ODF x 2-1/8 ODF	MKC-2		
LDR-20				OMKC-2		
DDR-20	33.3		1-5/8 ODF x 1-5/8 ODF	MKC-2		

Selection Tables

Capacities in kW

Capacities based on 5°C evaporator temperature, 38°C condensing temperature, 14°K superheat return gas, discharge gas temperature 28°C above isentropic compression.

Valve Type	Refrigerant								
	134a			404A & 507			407C		
	Pressure Drop Across Valve - bar								
	0.14	0.21	0.35	0.14	0.21	0.35	0.14	0.21	0.35
LDR-16, OLDR-16	155	190	246	110	135	174	153	187	242
LDR-20, OLDR-20	343	420	543	243	298	384	338	414	534
DDR-20	27	33	42	29	35	45	34	41	53

Accurate at the time of going to print.

For all requests, consult your nearest Parker Sporlan Wholesaler or contact us on: racecustomerservice@parker.com / www.parker.com/race



Order Selection Guide

Valve Type*	Connection - Inches Inlet x Outlet	Coil Type Required	Part Number
OLDR-16-5/50	1-1/8 ODF x 1-1/8 ODF	MKC-1	4093-00
	1-3/8 ODF x 1-3/8 ODF		4092-00
OLDR-20-5-50	1-5/8 ODF x 1-5/8 ODF	MKC-2	3941-00
	2-1/8 ODF x 2-1/8 ODF		3942-00
DDR-20-5/50	1-5/8 ODF x 1-5/8 ODF	MKC-2	307105
LDR-16-5/50	1-3/8 ODF x 1-3/8 ODF	OMKC-1	4095-00
LDR-20-5/50	1-5/8 ODF x 1-5/8 ODF	OMKC-2	3890-00
	2-1/8 ODF x 2-1/8 ODF		3891-00

* All PRV's are supplied less coil.

DIN Coils

Part Number	Type	Power	Electrical Connections
310683	MKC-1E 24 V / 50-60 Hz	10 W	DIN connector (not included)
310678	MKC-1E 120 V / 50-60 Hz	10 W	DIN connector (not included)
310679	MKC-1E 220-240 V / 50 Hz	10 W	DIN connector (not included)
310682	MKC-1E 208-240 V / 50-60 Hz	10 W	DIN connector (not included)
310040	MKC-1E 12 V DC	15 W	DIN connector (not included)
310041	MKC-1E 24 V DC	15 W	DIN connector (not included)
310675	MKC-2E 24 V / 50-60 Hz	15 W	DIN connector (not included)
310677	MKC-2E 120 V / 50-60 Hz	15 W	DIN connector (not included)
310681	MKC-2E 220-240 V / 50 Hz	15 W	DIN connector (not included)
310674	MKC-2E 208-240 V / 50-60 Hz	15 W	DIN connector (not included)
310688	OMKC-1E 220-240 V / 50 Hz	10 W	DIN connector (not included)
313009	OMKC-2E 120 V / 50-60 Hz	15 W	DIN connector (not included)
313010	OMKC-2E 220-240 V / 50 Hz	15 W	DIN connector (not included)
313012	OMKC-2E 208-240 V / 50-60 Hz	15 W	DIN connector (not included)
600000R	PG 9/11 DIN connector for MKC-1E and MKC-2E coils		

For all requests, consult your nearest Parker Sporlan Wholesaler or contact us on:
racecustomerservice@parker.com / www.parker.com/race



Evaporator Pressure Regulating Valves

The Parker Sporlan line of **Evaporator Pressure Regulating Valves (EPRV)** are designed to provide an accurate and economical means of balancing system capacity and load requirements during "low" loads and/or while maintaining different evaporator conditions on multitemperature evaporator systems. These valves control evaporator temperature by maintaining evaporator pressure.

As the evaporator load increases the **ORI** valves will **Open on Rise** of **Inlet** pressure above the valve's setting to provide more flow capacity to meet the evaporator load.

When the evaporator load decreases the valves will modulate closed to maintain the pressure setting of the valve. Parker Sporlan offers a number of **Evaporator Pressure Regulating Valves** types in various sizes, and with optional features to accommodate almost any application requirements.

For more complete information on any of the **Evaporator Pressure Regulating Valves** types, see your nearest Parker Sporlan Wholesaler.

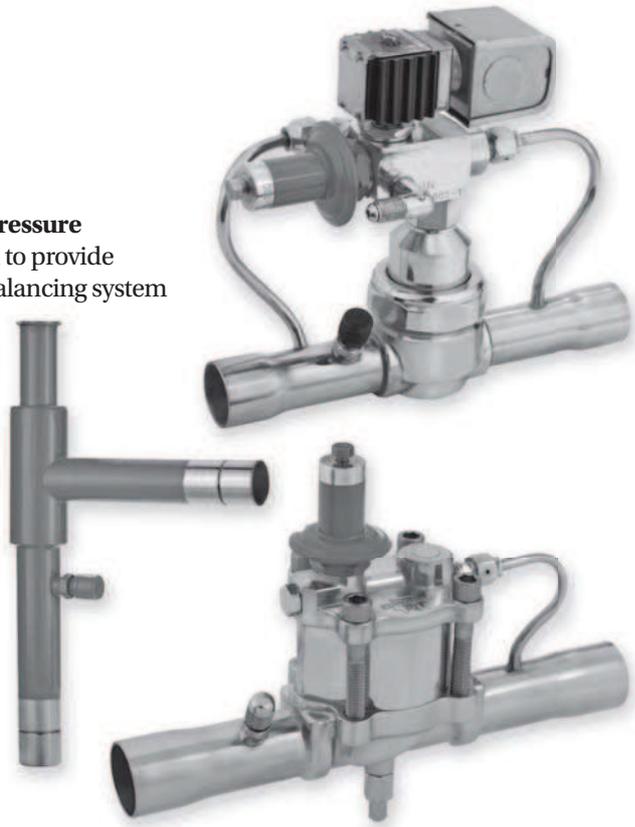
Application

- Maintain minimum evaporator temperature to avoid frost on air coils and provide improved humidity control
- Evaporator temperature control for food merchandisers (single and multiple evaporator systems)
- Evaporator temperature control on water chilling units

Required Sizing Information

- Refrigerant type
- Evaporator design capacity
- Design evaporator temperature or minimum evaporator pressure
- Available pressure drop
- Allowable evaporator pressure change (only applies to direct acting models)

For all requests, consult your nearest Parker Sporlan Wholesaler or contact us on: racecustomerservice@parker.com / www.parker.com/race



ORIT-6 & -10 Type

These direct acting valves are offered in two sizes. The direct acting design although economical requires an evaporator pressure change above the minimum evaporator pressure setting to provide the rated flow capacity.



Benefits

- Direct acting (most economical)
- Adjustable
- Hermetic construction (no gaskets or seals)
- Corrosion resistant construction
- Inlet pressure tap (standard)
- Inlet strainer (standard on ODF models)

Valve Nomenclature/Ordering Instructions

ORIT

ORI	-	T	-	6	-	0/50	-	7*8" ODF
Valve Type Open on Rise of Inlet Pressure		Pressure Tap on Inlet Connection		Port Size in Eighths of an Inch		Adjustment Range psig*		Connection ODF Solder or SAE Flare

* Other pressure ranges are available

Installation

When installing these valves with solder connections, the internal parts should be protected from overheating by using a Parker calorie discharger (TB2) - see page 269 - or by wrapping the valve with a wet cloth.

Specifications & Materials/Details of Construction

Valve Type	ORIT-6, -10
Body Material	Bellows - Brass
Seat	Metal to Metal
Connections	ODF Copper or SAE Brass
PS(MWP)	ORIT6: 21 barg (304.5 psig) - ORIT10: 14 barg (103 psig)
Test Pressure	27.6 barg (400 psig)
Max. Fluid Temp.	116°C (240°F)
Max. Ambient Temp.	68.3°C (155°F)
Max External Leakage	.10 oz/yr @ 300 psig (2.8 g/yr @ 20 barg)
UL	SA-5460-SFJQ
Compatibility	All HFC, HCFC Refrigerants and blends

Valve Type	Port Size mm	Adjustment Range	Standard Connections In Bold
ORIT-6	19	0/3.45	1/2 & 5/8 SAE Flare* 1/2, 5/8, 7/8 & 1-1/8 ODF Solder
ORIT-10	31	2.07/6.90 bar	7/8, 1-1/8 & 1-3/8 ODF Solder

*Not available with inlet strainer.



Selection Tables

Valves should be selected for the desired maximum variation in evaporator pressure using the capacity multipliers below.

Allowable Evaporator Pressure Change - bar	0.14	0.28	0.41	0.55	0.69	0.83	0.97	
Capacity	ORIT-6, 10-0/50	0.3	0.6	0.8	1	1.2	1.3	1.4
Multiplier	ORIT-6, 10-30/100	-	0.2	0.6	0.7	0.9	1	1.1

Capacities in kW

Capacities based on 38°C condensing temperature, 0°C subcooling, 6°K superheat, 0.55 bar evaporator pressure change for 0/3.45 barg adjustment range, and a 0.83 bar evaporator pressure change for 2.07/6.90 barg adjustment range.

Valve Type	Evaporator Temperature °C	Saturated Pressure - bar (Reference)					Refrigerant														
		Refrigerant					22		134a			404A			407C			507			
		22	134a	404A	407C	507	Pressure Drop Across Valve - bar														
						0.1	0.4	0.7	0.1	0.4	0.7	0.1	0.4	0.7	0.1	0.4	0.7	0.1	0.4	0.7	
ORIT-6	5	4.83	2.48	6.03	4.35	6.32	3.85	7.16	8.75	2.89	5.01	5.60	3.36	6.30	7.78	3.57	6.54	7.87	3.31	6.22	7.70
	-5	3.21	1.42	4.12	2.77	4.34	3.19	5.73	6.73	2.29	3.67	3.77	2.71	4.94	5.90	2.87	5.04	5.75	2.68	4.90	5.90
	-15	1.95	0.63	2.62	1.57	2.79	2.58	4.39	4.79	1.76	2.45	2.45	2.14	3.72	4.19	2.24	3.67	3.82	2.12	3.74	4.28
ORIT-10	5	4.83	2.48	6.03	4.35	6.32	9.45	18.7	24.4	7.25	14.2	18.3	8.23	16.3	21.3	8.79	17.3	22.6	8.08	16.0	21.0
	-5	3.21	1.42	4.12	2.77	4.34	7.88	15.5	20.2	5.83	11.3	14.4	6.69	13.2	17.2	7.13	14.0	18.1	6.59	13.0	16.9
	-15	1.95	0.63	2.62	1.57	2.79	6.48	12.6	16.3	4.60	8.77	11.0	5.35	10.5	13.6	5.70	11.1	14.2	5.28	10.4	13.4
ORIT-10	5	4.83	2.48	6.03	4.35	6.32	5.23	10.1	12.8	3.55	6.58	8.01	4.19	8.12	10.4	4.46	8.52	10.7	4.15	8.07	10.4
	-5	3.21	1.42	4.12	2.77	4.34	6.48	12.6	16.3	4.60	8.77	11.0	5.35	10.5	13.6	5.70	11.1	14.2	5.28	10.4	13.4
	-15	1.95	0.63	2.62	1.57	2.79	6.48	12.6	16.3	4.60	8.77	11.0	5.35	10.5	13.6	5.70	11.1	14.2	5.28	10.4	13.4

Order Selection Guide

Direct Acting Type - With inlet strainer (40 MESH) where applicable

Type	Connections Inches	Adjustment Range psig	Adjustment Range barg	Part Number
ORIT-6	1/2 ODF	0/50	0/3.45	901093
	5/8 ODF			901096
	7/8 ODF			901103
	1/2 ODF	30/100	2.07/6.9	901101
	5/8 ODF			901173
	7/8 ODF			901180
	1/2 SAE	0/50	0/3.45	901117
	5/8 SAE			901124
	1/2 SAE			901194
	5/8 SAE	30/100	2.07/6.9	901201
1-1/8 ODF	0/50, 30/100	0/3.45, 2.07/6.9	Special order valve	
ORIT-10	7/8 ODF	0/50	0/3.45	901131
	1-1/8 ODF			901138
	1-3/8 ODF			901166
	7/8 ODF	30/100	2.07/6.89	901208
	1-1/8 ODF			901229
	1-3/8 ODF			901250

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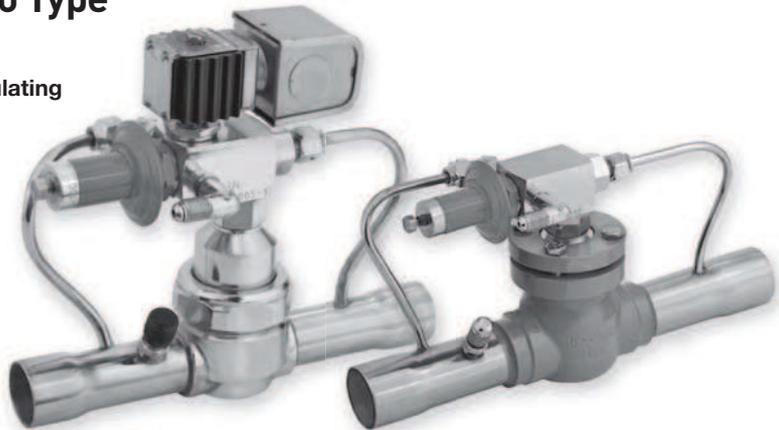


(S)ORIT-12, -15 & -20 Type

These **Evaporator Pressure Regulating Valves** 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.



Benefits

- High side pilot for improved temperature control and low ΔP operation
- Adjustable settings up to 150 psig (10.3 barg)
- Optional solenoid "stop" feature to close valve during defrost
- Normally open design allows system evacuation without manual operator

Valve Nomenclature/Ordering Instructions

(S)ORIT

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*		Connection ODF Solder		Electrical Specifications for Solenoid Stop Feature (optional)

* Other pressure ranges are available.

Installation

When installing these valves with solder connections, the internal parts should be protected from overheating by using a Parker calorie discharger (TB2) - see page 269 - or by wrapping the valve with a wet cloth.

For all requests, consult your nearest Parker Sporlan Wholesaler or contact us on: racecustomerservice@parker.com / www.parker.com/race



Specifications & Materials / Details of Construction

Valve Type	ORIT-12,-15,-20	SORIT-12,-15,-20
Connections	ODF Copper	
MRP	31 barg (450 psig)	
MOPD	20.7 barg (300 psig) SORIT only	
Max. Fluid Temp.	116°C (240°F)	
Min. Ambient/Fluid Temp.	-40°C (-40°F)	
Max. Ambient Temp.	48.9°C (120°F)	
Max External Leakage	.10 oz/yr @ 300 psig (2.8 g/yr @ 20 barg)	
UL	SA-5460	MH-4576
Compatibility	All HFC, HCFC Refrigerants and blends	

Valve Type	Port Size mm	Adjustment Range barg	Standard Coil Ratings MKC-1 Volt/Hz	Watts	Connections ODF Solder Inches
(S)ORIT-12	19.8	0/6.90	24 V / 50-60 Hz	10	1-1/8
(S)ORIT-15	25.4		120 V / 50-60 Hz		1-3/8
(S)ORIT-20	33.3		208-240 V / 50-60 Hz 120-208-240 V / 50-60 Hz		1-5/8

Selection Tables

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

6

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 $11.1 \times 1.06 = 11.8$ kW.

For all requests, consult your nearest Parker Sporlan Wholesaler or contact us on: racecustomerservice@parker.com / www.parker.com/race



Refrigerant Liquid Temperature Correction Factors.

Refrigerant	Liquid Temperature °C										
	-15°	-10°	-5°	0°	5°	10°	15°	20°	30°	35°	40°
Correction Factor, CF											
R-22	1.21	1.17	1.14	1.11	1.07	1.04	1	0.96	0.91	0.87	0.84
R-134a	1.25	1.21	1.17	1.14	1.09	1.05	1	0.95	0.89	0.84	0.81
R-404A	1.31	1.27	1.22	1.16	1.12	1.06	1	0.94	0.86	0.79	0.74
R-507	1.32	1.28	1.22	1.16	1.12	1.06	1	0.94	0.86	0.8	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.

Order Selection Guide

Valve Type*	Connection Inches	Adjustment Range psig Externally Pilot Operated Type	Adjustment Range barg Externally Pilot Operated Type	Coil Type Required	Part Number
ORIT-12	1-1/8 ODF				901590
ORIT-15	1-3/8 ODF	0/100	0/6.9	-	901597
ORIT-20	1-5/8 ODF				901604

Externally Pilot Operated Type - WITH Solenoid Stop

SORIT-12	1-1/8 ODF				901611
SORIT-15	1-3/8 ODF	0/100	0/6.9	MKC-1	901618
SORIT-20	1-5/8 ODF				901625

* All PRV's are supplied less coil.

Din Coils

Part Number	Type	Power	Electrical Connections
310683	MKC-1E 24 V / 50-60 Hz	10 W	DIN connector (not included)
310678	MKC-1E 120 V / 50-60 Hz	10 W	DIN connector (not included)
310679	MKC-1E 220-240 V / 50 Hz	10 W	DIN connector (not included)
310682	MKC-1E 208-240 V / 50-60 Hz	10 W	DIN connector (not included)
310040	MKC-1E 12 V DC	15 W	DIN connector (not included)
310041	MKC-1E 24 V DC	15 W	DIN connector (not included)
600000R	PG 9/11 DIN connector for MKC-1E and MKC-2E coils		

For all requests, consult your nearest Parker Sporlan Wholesaler or contact us on:
racecustomerservice@parker.com / www.parker.com/race



(S)ORIT-PI-2, -3, -4 & -5 Type

These **Evaporator Pressure Regulating Valves** are **Piloted Internally** using the natural pressure drop across the valve to operate and do not require a "high side" pilot connection. Like the (S)ORIT valves, 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.



Benefits

- **Piloted internally (no high side connection required)**
- **Adjustable settings 0-6.9 barg (0-150 psig)**
- **Optional solenoid stop feature to close valve during system defrost**
- **Optional electric open feature for "two temperature operation"**
- **Corrosion resistant construction**
- **Manual lift stem to allow system evacuation**

Valve Nomenclature/Ordering Instructions

(S)ORIT

S	ORI	T	-	PI	-	2	7	-	S	E	0/100
Solenoid Stop Feature (optional)	Valve Type Open on Rise of Inlet Pressure	Pressure Tap on Inlet Connection		Piloted Internally		Port Size in 1/4 of an Inch	Fitting Size in 1/8 of an Inch		Solenoid Stop Feature (optional)	Electric Open Feature (optional)	Adjustment Range psig*

* Other pressure ranges are available.

Installation

When installing these valves with solder connections, the internal parts should be protected from overheating by using a Parker calorie discharger (TB2) - see page 269 - or by wrapping the valve with a wet cloth.

Specifications & Materials / Details of Construction

Valve Type	ORIT-PI	SORIT-PI
Connections	ODF Copper	
MRP	27.6 barg (400 psig)	
MOPD	13.1 barg (190 psig) SORIT-PI model only	
Max. Fluid Temp.	116°C (240°F)	
Min. Ambient/Fluid Temp.	-40°C (-40°F)	
Max. Ambient Temp.	48.9°C (120°F)	
Max External Leakage	.10 oz/yr @ 300 psig (2.8 g/yr @ 20 barg)	
UL	SA-5460	MH-4576
Compatibility	All HFC, HCFC Refrigerants and blends	

Valve Type	Port Size mm	Adjustment Range barg	Standard Coil Ratings MKC-1 Volt/Cycles	MKC-1 Watts	Connections ODF Solder Inches
(S)ORIT-PI-2	12.7		24 V / 50-60 Hz	10	5/8, 7/8, 1-1/8, 1-3/8
(S)ORIT-PI-3	19.1	0/6.90 or	120 V / 50-60 Hz		7/8, 1-1/8, 1-3/8, 1-5/8
(S)ORIT-PI-4	25.4	5.17/10.3	208-240 V / 50-60 Hz		1-1/8, 1-3/8, 1-5/8, 2-1/8
(S)ORIT-PI-5	31.8		120-208-240 V / 50-60 Hz		1-3/8, 1-5/8, 2-1/8

Accurate at the time of going to print.



Selection Tables

Capacities in kW

Capacities based on 15°C liquid 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	0.1	0.4	0.7	0.03	0.1	0.4	0.7	0.03	0.1	0.4	0.7	0.03	0.1	0.4	0.7
(S)ORIT-PI-2	5	2.78	8.66	20.3	27.6	2.22	6.92	16.6	20.9	2.7	8.4	19.6	27	2.61	8.13	18.9	26.2
	-5	2.33	7.26	17.7	22.6	1.81	5.63	13.1	16.1	2.22	6.93	16.3	21.8	2.15	6.71	15.7	21.2
	-15	1.93	6.01	14.4	17.9	1.45	4.51	9.99	11.7	1.81	5.63	13.6	17.1	1.76	5.47	13.2	16.7
	-25	1.57	4.9	11.3	13.6	-	-	-	-	1.44	4.5	10.5	12.9	1.41	4.38	10.3	12.7
(S)ORIT-PI-3	5	3.55	20.3	40.1	53.6	2.84	16.3	32.3	40.9	3.45	19.7	38.7	52.3	3.33	19	37.4	50.7
	-5	2.98	17.1	34.3	44	2.31	13.3	25.6	31.8	2.84	16.3	32	42.3	2.75	15.8	31	41.2
	-15	2.47	14.2	27.9	35.2	1.85	10.7	19.7	23.5	2.31	13.3	26.3	33.4	2.24	12.9	25.6	32.6
	-25	2.01	11.6	22	27.1	-	-	-	-	1.85	10.7	20.5	25.5	1.8	10.4	20.1	25
(S)ORIT-PI-4	5	7.72	27.3	54.6	72.1	6.17	21.8	43.5	55.5	7.49	26.5	53	70.3	7.24	25.6	51.2	68.1
	-5	6.48	22.9	46.1	59.4	5.02	17.7	34.6	43.4	6.18	21.8	43.7	57.1	5.99	21.1	42.3	55.5
	-15	5.36	18.9	37.6	47.8	4.02	14.2	26.8	32.6	5.02	17.7	35.4	45.3	4.88	17.2	34.5	44.2
	-25	4.36	15.4	29.8	37.2	-	-	-	-	4.01	14.2	27.7	34.9	3.91	13.8	27.1	34.2
(S)ORIT-PI-5	5	22	42.2	83.1	108	17.6	33.6	65.2	83.6	21.3	41	80.9	105	20.6	39.6	78.3	102
	-5	18.4	35.4	69.1	89.3	14.3	27.2	52.1	65.8	17.6	33.7	66.1	85.7	17	32.7	64.2	83.3
	-15	15.3	29.2	56.4	72.1	11.4	21.6	40.5	49.8	14.3	27.3	53.1	68.2	13.9	26.6	51.7	66.6
	-25	12.4	23.6	44.9	56.4	-	-	-	-	11.4	21.8	41.7	52.8	11.1	21.2	40.8	51.7

Refrigerant Liquid Temperature - Correction Factors

Refrigerant	Liquid Temperature °C											
	-15°	-10°	-5°	0°	5°	10°	15°	20°	30°	35°	40°	
	Correction Factor, CF											
R-22	1.21	1.17	1.14	1.11	1.07	1.04	1	0.96	0.91	0.87	0.84	
R-134a	1.25	1.21	1.17	1.14	1.09	1.05	1	0.95	0.89	0.84	0.81	
R-404A	1.31	1.27	1.22	1.16	1.12	1.06	1	0.94	0.86	0.79	0.74	
R-507	1.32	1.28	1.22	1.16	1.12	1.06	1	0.94	0.86	0.8	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-PI-3 using R-22, evaporator temperature of -15°C, 0.1 bar pressure drop across the valve and a liquid temperature of 10°C, is equal to 14.2 x 1.04 = 14.8 kW.

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Order Selection Guide

Valve Type *	Connection Inches	Adjustment Range psig	Adjustment Range barg	Coil Type Required	Part Number
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Internally Pilot Operated Type

ORIT-PI-2-S	5/8 ODF	0/100	0/6.9	-	149072
	7/8 ODF				149073
	1-1/8 ODF				149074
	1-3/8 ODF				149075
ORIT-PI-3-S	7/8 ODF				149104
	1-1/8 ODF				149076
	1-3/8 ODF				149077
	1-5/8 ODF				149078
ORIT-PI-4-S	1-1/8 ODF				149079
	1-3/8 ODF				149080
	1-5/8 ODF				149081
	2-1/8 ODF				149082
ORIT-PI-5-S	1-3/8 ODF				149083
	1-5/8 ODF				149084
	2-1/8 ODF				149085

Internally Pilot Operated Type - With Electric Open Feature

ORIT-PI-2-SE	5/8 ODF	0/100	0/6.9	MKC-1	149090
	7/8 ODF				149107
	1-1/8 ODF				149089
	1-3/8 ODF				special order valve
ORIT-PI-3-SE	7/8 ODF				special order valve
	1-1/8 ODF				149102
	1-3/8 ODF				special order valve
	1-5/8 ODF				149088
ORIT-PI-4-SE	1-1/8 ODF				special order valve
	1-3/8 ODF				149094
	1-5/8 ODF				special order valve
	2-1/8 ODF				special order valve
ORIT-PI-5-SE	1-3/8 ODF				special order valve
	1-5/8 ODF				149086
	2-1/8 ODF				special order valve

* all valves are supplied less coil

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Order Selection Guide

Valve Type **	Connection Inches	Adjustment Range psig	Adjustment Range barg	Coil Type Required	Part Number
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Internally Pilot Operated Type - With Solenoid Stop

SORIT-PI-2-S	5/8 ODF	0/100	0/6.9	MKC-1	149019
	7/8 ODF				149020
	1-1/8 ODF				149018
	1-3/8 ODF				149024
SORIT-PI-3-S	7/8 ODF				149035
	1-1/8 ODF				149037
	1-3/8 ODF				149039
SORIT-PI-4-S	1-5/8 ODF				149041
	1-1/8 ODF				149049
	1-3/8 ODF				149051
	1-5/8 ODF				149053
SORIT-PI-5-S	2-1/8 ODF				149057
	1-3/8 ODF				149060
	1-5/8 ODF				149062
	2-1/8 ODF				149067

Internally Pilot Operated Type - With Solenoid Stop and Electric Open Feature

SORIT-PI-2-SE	5/8 ODF	0/100	0/6.9	(2 coils required) MKC-1	149023
	7/8 ODF				149021
	1-1/8 ODF				149022
	1-3/8 ODF				149033
SORIT-PI-3-SE	7/8 ODF				149095
	1-1/8 ODF				149048
	1-3/8 ODF				149047
SORIT-PI-4-SE	1-5/8 ODF				149096
	1-1/8 ODF				149097
	1-3/8 ODF				149058
	1-5/8 ODF				149059
SORIT-PI-5-SE	2-1/8 ODF				149098
	1-3/8 ODF				149061
	1-5/8 ODF				149065
	2-1/8 ODF				149070

** All valves are supplied less coil.

Din Coils

Part Number	Type	Power	Electrical Connections
310683	MKC-1E 24 V / 50-60 Hz	10 W	DIN connector (not included)
310678	MKC-1E 120 V / 50-60 Hz	10 W	DIN connector (not included)
310679	MKC-1E 220-240 V / 50 Hz	10 W	DIN connector (not included)
310682	MKC-1E 208-240 V / 50-60 Hz	10 W	DIN connector (not included)
310040	MKC-1E 12 V DC Hz	15 W	DIN connector (not included)
310041	MKC-1E 24 VDC	15 W	DIN connector (not included)
600000R	PG 9/11 DIN connector for MKC-1E and MKC-2E coils		

Accurate at the time of going to print.



Replacement Parts Kits for Pressure Regulating Valves

Valve Type	Kit No.	Description	Part Number
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Evaporator Pressure Regulating Valve Internal Parts Kits

(S)ORIT-12	KS-ORI-12	Adaptor, Pilot-Body \"T\" Seal, Piston Assembly, Bottom Spring	958005
(S)ORIT-15 CDA-15	KS-ORI/CDA-15	Pilot-Body \"T\" Seal, Piston Assembly, Sleeve, Sleeve \"O\" Ring, Bottom Spring	958007
(S)ORIT-20 CDA-20	KS-ORI/CDA-20	Pilot-Body Gasket, Piston Assembly, Sleeve, Sleeve \"O\" Ring, Bottom Spring	958009

Evaporator Pressure Regulating Valve Conversion Kits

(S)ORIT-PI-4 or 3	SK-PI-4 TO 2	Body O-Ring (2), Guide Pin O-Ring (2), Seat O-Ring, Piston Spring, Guide Pin (2), Strainer and Pin Assembly, Capacity Reducer (except SK-PI 4), Piston Sleeve and Assembly	958161
(S)ORIT-PI-4 or 2	SK-PI-4 TO 3		958162
(S)ORIT-PI-3 or 2	SK-PI-4		958165
(S)ORIT-PI-5	SK-PI-5 TO 3		958163
(S)ORIT-PI-5	SK-PI-5 TO 4		958164

Head Pressure Control Valve Parts Kits

ORI-6-65/225-H	KO-6-100/290	100/290 Replacement Spring Kit	908017
ORI-10-65/225-H	KO-10-100/290		908019

Head Pressure Control Valve Pilot Valve Kits

ORIT-15-65/225	KS-ORI-15-65/225	Piston Assembly, Body Sleeve, Spring, Tetrseal, O-Ring	958036
ORIT-20-65/225	KS-ORI-20-65/225	Piston Assembly, Body Sleeve, Spring, Gasket, O-Ring	958038
CROT-12-65/225	KS-CRO-12-65/225	Piston Assembly, Body Sleeve, Spring, (2) Tetrseals	958046
CROT-15-65/225	KS-CRO-15-65/225	Piston Assembly, Body Sleeve, Spring, Tetrseal, O-Ring	958050

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Replacement Parts Kits for Pressure Regulating Valves

Valve Type	Kit No.	Description	Part Number
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Discharge Bypass Valve Parts Kits

ADRS(E)-2	K-1800E-1	0/30 Replacement Spring Kit	908023	
ADRP(E)-3	K-1800E-2	0/80 Replacement Spring Kit	908025	
ADRHE-6				
ADRS(E)-2	A-8-0/30	Adjustable Spring Type Element	908027	
	A-8-0/80		908029	
ADRP(E)-3	A-3-0/30		908028	
ADRHE-6	A-3-0/80		908030	
DRP(E)-3	B-3P-25/35-AR		Adjustable Remote Bulb Type Element	908031
	B-3P-32/44-AR			908033
	B-3P-55/70-AR	908035		
	B-3P-65/80-AR	908037		
DRHE-6	B-3H-25/35-AR	908032		
	B-3H-32/44-AR	908034		
	B-3H-55/70-AR	908036		
	B-3H-65/80-AR	908038		
DRS(E)-2	D-8-*	Non-Adjustable Dome Type Element		-
DRP(E)-3	D-3P-*			-
DRH(E)-6	D-3H-*		-	
LAC-5,LAC-10	D-3L-*		-	
DRS(E)-2	R-8-*	Non-Adjustable Remote Bulb Type Element	-	
DRP(E)-3	R-3P-*		-	
DRHE-6	R-3H-*		-	

Discharge Bypass Valve Internal Parts Kits

SHGB(E)-8	KS-SHGB-8	Piston Assy, Body Sleeve, Spring Tetra seal, Sleeve \"/>
SHGB(E)-15	KS-SHGB-15	

* Specify pressure setting.

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Replacement Parts Kits for Pressure Regulating Valves

Valve Type	Kit No.	Description	Part Number
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Discharge Bypass Valve Pilot Valve Kits

HGB(E)-8	K-HGB(E)-8	Pilot Assy, Tetrseal, Inlet Strainer, Cap Screws (4)	958156
SHGB(E)-8	K-SHGB(E)-8-0/100		958110
	K-SHGB(E)-8-0/75		958157
	K-SHGB(E)-8-0/55		958158
SHGB(E)-15	K-Y917		958022

Defrost Differential Valve Pilot Differential Assembly Kits

DDR-20	K-XUL	Piston Valve, Restrictor Assembly Strainer, Gasket	381125
LDR-15, LDR-20, OLDR-15, OLDR-20	KS-XTT-1	Pilot Valve	382640

Defrost Differential Valve Internal Parts Kits

DDR-20	KS-DDR-20	Piston Assembly, Body Sleeve, Spring, Gasket O-Ring	381122
LDR-15	KS-XTM	Valve Operator Assembly, Piston Assembly, Tube Gasket, Tetrseal Gasket, Closing Spring, Piston Ring, Backing Spring, O-Ring Suction Tube	381632
OLDR-15	KS-OLDR-15	Piston Assembly, Plunger Assembly, Kick-Off Spring, Piston Ring, Ring Spring O-Ring, (2) Tetrseals, Closing Spring	381649
OLDR-16	KS-OLDR-16		381653
LDR-20	KS-XT0	Valve Operator Assembly, Piston Assembly, Tube Gasket, Tetrseal Gasket, Closing Spring, Piston Ring, Backing Spring	381634
OLDR-20	KS-OLDR-20	Piston Assembly, Plunger Assembly, Kick-Off Spring, Piston Ring, Ring Spring Closing Spring, Tetrseal Gasket	381650

6

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