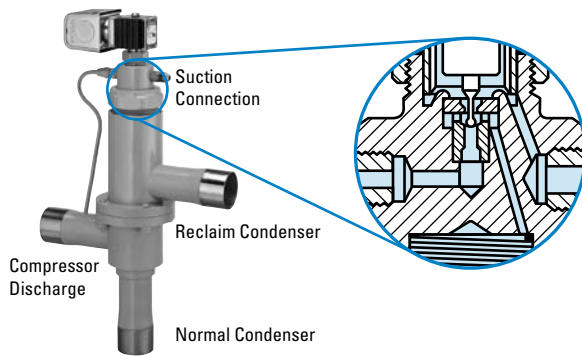


3-WAY HEAT RECLAIM VALVES

22, 134a, 404A, 407C, 409A, 410A, 507

Sporlan Heat Reclaim Valves are tight synthetic seating three way valves designed specifically to divert hot gas from the normal to auxiliary condenser.



is open, the cavity above the piston is open to suction. Pump out of the reclaim condenser is controlled by the bleed rate through the piston. After the reclaim condenser has been pumped out, and the valve continues to operate in the normal condenser mode, **all flow ceases**, thus eliminating high to low side bleed and the resulting capacity loss.

"C" Type

Normal (Outdoor) Condenser – De-energized – With the pilot valve de-energized, high side pressure is prevented from entering cavity above the piston-seat assembly. At the same time the upper pilot port is opened to suction pressure. The resulting pressure differential across the piston moves the piston-seat assembly to close the reclaim (upper) main port. The non bleed piston prevents high to low side bleed with the system operating in the normal condenser mode.

"B" and "C" Type

Reclaim (Reheat) Condenser – Energized – When the pilot valve is energized, high side pressure is permitted to flow thru the lower pilot port. At the same time the upper pilot port is closed to suction. High side pressure on top of the piston moves the piston-seat assembly to close the normal condenser port and open the reclaim (upper) main port. With the upper pilot port closed there is no high to low side bleed loss with the system operating in the reclaim mode.

Operation "B" Type

Normal (Outdoor) Condenser – De-energized – With the pilot valve de-energized, high side pressure is prevented from entering the cavity above the piston-seat assembly. At the same time the upper pilot port is opened to suction pressure. The resulting pressure differential across the piston moves the piston-seat assembly to close the reclaim (upper) main port. When the upper pilot port

Capacity – kW

Capacities are based on 38°C condensing temperature isentropic compression plus 28°C, evaporator temperature as shown plus 14°C superheat suction gas.

EVAPORATOR TEMP. °C	REFRIGERANT																							
	22								134a								404A							
	PRESSURE DROP – bar																							
	0.14				0.28				0.14				0.28				0.14				0.28			
B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	
5	16.8	35.9	103	249	23.4	50.3	149	357	14.1	29.9	85.5	206	19.5	41.9	123	295	15.0	32.1	93.9	226	20.8	44.9	135	324
0	16.6	35.3	102	245	23.0	49.5	146	351	13.8	29.3	83.7	202	19.1	41.0	120	289	14.6	31.3	91.7	220	20.3	43.9	132	316
-5	16.3	34.7	99.9	240	22.6	48.6	144	345	13.5	28.6	81.8	197	18.7	40.1	118	283	14.2	30.5	89.3	215	19.7	42.8	128	308
-10	16.0	34.1	98.1	236	22.2	47.7	141	339	13.2	28.0	79.9	192	18.2	39.2	115	276	13.8	29.7	86.9	209	19.2	41.6	125	300
-15	15.7	33.4	96.2	231	21.8	46.8	138	332	12.8	27.3	77.9	188	17.8	38.2	112	269	13.5	28.9	84.4	203	18.7	40.4	121	291
-20	15.4	32.8	94.2	227	21.3	45.9	135	325	12.5	26.6	75.9	183	17.4	37.3	109	262	13.0	28.0	81.8	197	18.1	39.2	118	282
-25	15.1	32.1	92.2	222	20.9	44.9	133	318	12.2	25.9	73.9	178	16.9	36.3	106	255	12.6	27.1	79.2	190	17.5	37.9	114	273
-30	14.7	31.4	90.1	217	20.4	43.9	130	311	—	—	—	—	—	—	—	—	12.2	26.2	76.5	184	16.9	36.6	110	264
-35	14.4	30.7	88.0	212	20.0	42.9	127	304	—	—	—	—	—	—	—	—	11.8	25.2	73.7	177	16.3	35.3	106	254
-40	14.1	29.9	85.8	207	19.5	41.9	123	296	—	—	—	—	—	—	—	—	11.3	24.3	70.9	170	15.7	34.0	102	245

EVAPORATOR TEMP. °C	REFRIGERANT																							
	407C								409A								507							
	PRESSURE DROP – bar																							
	0.14				0.28				0.14				0.28				0.14				0.28			
B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	B5D	8D	12D	16D	
5	17.6	37.7	109	263	24.5	52.8	157	377	15.1	32.2	92.2	222	21.0	45.1	133	318	14.5	31.1	91.2	219	20.1	43.6	131	314
0	17.3	36.9	107	257	24.0	51.7	154	369	14.8	31.5	90.3	217	20.6	44.2	130	312	14.1	30.4	89.0	214	19.6	42.5	128	307
-5	16.9	36.1	105	252	23.4	50.6	150	361	14.5	30.9	88.4	213	20.1	43.2	127	305	13.8	29.6	86.7	208	19.1	41.4	125	299
-10	16.5	35.3	102	246	22.9	49.4	147	352	14.2	30.2	86.4	208	19.7	42.3	124	298	13.4	28.8	84.4	203	18.6	40.3	121	291
-15	16.1	34.4	99.6	240	22.4	48.2	143	344	13.9	29.5	84.4	203	19.2	41.3	121	291	13.0	28.0	82.0	197	18.1	39.2	118	283
-20	15.7	33.6	97.1	233	21.8	47.0	140	335	13.5	28.8	82.4	198	18.8	40.3	118	284	12.7	27.2	79.6	191	17.6	38.0	114	274
-25	15.3	32.7	94.4	227	21.2	45.7	136	326	13.2	28.1	80.3	193	18.3	39.4	115	277	12.3	26.3	77.1	185	17.0	36.8	111	266
-30	14.9	31.8	91.8	221	20.6	44.5	132	317	—	—	—	—	—	—	—	—	11.9	25.5	74.5	179	16.5	35.6	107	257
-35	14.4	30.8	89.1	214	20.0	43.2	128	307	—	—	—	—	—	—	—	—	11.5	24.6	71.9	173	15.9	34.4	103	248
-40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.0	23.7	69.3	167	15.3	33.2	99.7	239

3-WAY HEAT RECLAIM VALVES

22, 134a, 404A, 407C, 409A, 410A, 507

Specifications – For Refrigerants 22, 134a, 404A, 407C, 409A, 507

MKC-1 COIL						
TYPE	CONNECTION ODF SOLDER Inches	PORT SIZE	MOPD bar	MAXIMUM RATED PRESSURE bar	STANDARD COIL RATINGS	
			AC		VOLTS/CYCLES	WATTS
5BD5B, 5BD5C	5/8	5/8	20.6	31.0	24/50-60 120/50-60 208-240/50-60 120-208-240/50-60	10
8D7B, 8D7C	7/8	3/4				
8D9B, 8D9C	1-1/8					
12D11B, 12D11C	1-3/8	1-1/4				
12D13B, 12D13C	1-5/8					
12D17B	2-1/8					
16D17B, 16D17C	2-1/8	2				

Available with junction box or conduit boss at no extra charge. For other voltages and cycles, consult your nearest Sporlan Wholesaler or email europocold@parker.com.

Selection

- For a given refrigerant, select a valve having a port size with capacity most closely matching the evaporator maximum load requirements in tons at the design evaporator temperature. Take into account the allowable pressure drop across the valve port.
- Select the proper coil assembly for the valve type and match the voltage requirements. All AC voltage options are available. For voltages not listed in coil specification, consult your nearest Sporlan Wholesaler or email europocold@parker.com and request Bulletin 30-10.

Heat Reclaim Systems with Head Pressure Control with Split Condenser Control with Integral Check Valve

When employing heat reclaim on a refrigeration system, the addition of **head pressure control** is important not only to maintain liquid pressure at the expansion valve inlet, but also to assure availability of quality hot gas at the reclaim heat exchanger.

Split condenser valves are important to minimize the required refrigerant charge for wintertime operation.

3-Way heat reclaim valves with Integral check valves are important to minimize installation costs.

Valve Nomenclature/Ordering Instructions

When ordering complete valves, specify Valve Type, Voltage and Cycles. When ordering Valve Body ONLY, specify Valve Type. When ordering Coil Assembly ONLY, specify Coil Type, Voltage and Cycles. **Example: MKC-1 120/50-60; MKC-2 120/50-60.**

MKC	1	120	/ 50-60
Coil Type	Site	Voltage	Cycles

Specifications – For Refrigerant 410A

VALVE SERIES	TYPE	STANDARD CONNECTION Inches	PORT SIZE	MOPD	MRP	STANDARD COIL RATINGS		
			mm	bar*	bar**	VOLTS/CYCLES	WATTS	COIL
B5D	B5D5B	5/8	16	27.6	44.8	24/50-60 120/50-60 208-240/50-60 120-208-240/50-60	10	MKC-1
	B5D5C							
8D	8D7B-HP	7/8	19	27.6	44.8			
	8D7C-HP							
	8D9B-HP	1-1/8						

* MOPD stands for Maximum Operating Pressure Differential.

** MRP stands for Maximum Rated Pressure.

■ Available with conduit boss, junction box, or DIN at no extra charge.

■ Dual voltage 4-wire coils, 120-208-240/50-60 are available at slight additional cost.

For other voltages and cycles, consult your nearest Sporlan Wholesaler or email europocold@parker.com

Evaporator Capacities kW - bar - °C

TYPE	EVAPORATOR TEMPERATURE °C	PRESSURE DROP – bar	
		0.15	0.3
B5D	4	20.5	28.4
	0	20.2	28.0
	-5	19.9	27.6
	-10	19.5	27.1
8D	4	44.0	61.5
	0	43.3	60.7
	-5	42.6	59.6
	-10	41.8	58.5

Capacities are based on 38°C condensing temperature isentropic compression plus 28°C, evaporator temperature as shown plus 14°C superheat suction gas. For capacities at other conditions, use the Sporlan Selection Program or contact europocold@parker.com. All capacity ratings are in accordance with ARI Standard No. 760-80.