

SOLENOID VALVES

PARKER ANA-LOID™ VALVE

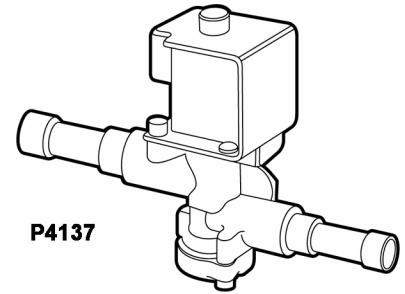
Linear-Proportional Solenoid Control Valve

Linear-Proportional Solenoid Control Valve

- Standard capacity up to 5 tons.
- Provides precise proportional flow control.
- Packless design (no packing gland or stem seal) eliminates pressure vessel leaks.
- Extremely long life (excess of 50 million cycles) with virtually no wear.
- Quiet operation with no A/C hum or pole face click.
- Handles liquids, gases or mixtures in a wide range of pressures and temperatures.
- Bi-directional.
- Available in a variety of materials to suit specific application: stainless steel, aluminum, brass, plastic.
- Can be used with analog D.C. source or high frequency (1000 Hz) pulse width modulation source.
- Very low friction and low hysteresis.
- Flow vs. current curve can be characterized.
- Available in standard orifice sizes up to .125 (contact Parker for larger orifice sizes).

Representative Hysteresis Loop for 3 Ton Valve (R-22)

Proportional vs. Ordinary Solenoids:



SOLENOID VALVES

PARKER SOLENOID VALVE NOMENCLATURE

Example: RB21ME7...R23-120/60

R*	B	21	M	E	7	R23-120/60
Type	Body Material	Nominal Capacity	Bypass	Connection	Connection Size	Coil Nomenclature
R -Refrigeration (normally closed)	B -Brass	Tonnage (R-12) 1= 1Ton 3= 3Ton 6= 6Ton 9= 9Ton 15 = 15 Ton 21 = 21 Ton 41 = 41 Ton 81 = 81 Ton	M -Manual Bypass (Not applicable to normally open valves)	E-Ext. End F-Flare P-Pipe S -Solder	Size of End Connection in eights (in.) Example: 3= 3/8" 13 = 1-5/8"	R-23 = Normally Closed Valves OR-23 = Normally Open Valves

Ordering Information

To order a solenoid valve assembly less the coil, specify valve model number as defined above.

Example: RB21ME7 (normally closed)
ORB21E7 (normally open)

The valve body assembly, identification plate and coil retainer are all included.

Coil Assemblies

To order coil assembly only, specify the coil type, voltage and frequency.

Example: R-23, 120 V-60 Hz (normally closed)
OR-23, 120 V-60 Hz (normally open)

Valve Component Data

Unless otherwise stated, the components used in Jackes-Evans Solenoid Valves are as follows:

Body: Forged or Bar Stock Brass
Internal Parts: Stainless Steel
Springs: Stainless Steel
Pilot Seats: NeoPrene
Diaphragms: Teflon®

Applications/Compatibility

Jackes-Evans Refrigeration Solenoid Valves are designed for typical liquid line, suction line discharge line and hot gas valve applications and are compatible with virtually all of today's CFC, HFC, and HCFC refrigerants and blends.

* These valves are not designed for ammonia applications.

*For R-123 applications, different seals must be used. Please consult the factory.

Valve & Coil (Factory Assembled)

To order a complete valve coil assembly specify the valve model number with the coil type, voltage and frequency.

Example: RB21ME7 with R-23-120 V-60 Hz

Parts Kit

All currently manufactured Jackes-Evans valves are completely serviceable. If it is necessary to replace one internal part, all internal parts should also be replaced at that time. Therefore, standard service kits include the plunger assembly, diaphragm assembly and bonnet seal. Bonnet assemblies are also available but seldom need replacement.

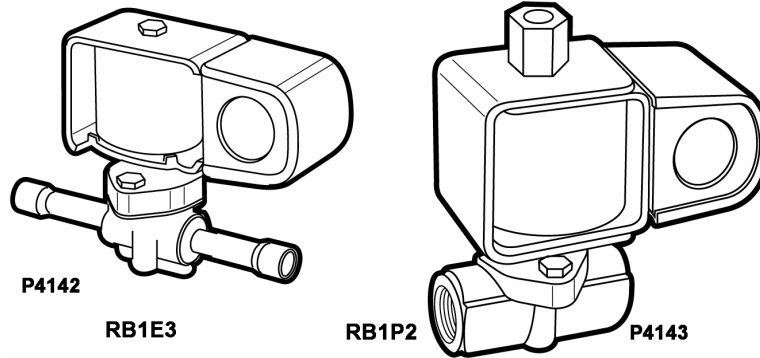
Packaging

When placing your order, specify individual or bulk packaging. If this information is not specified, it becomes the factory's option.

SOLENOID VALVES

PARKER JACKES-EVANS

1 to 9 Tons (Normally Closed)



MODEL NO	Port Size (in)	Connection (in)	VALVE SERIES	NOMINAL CAPACITY (Tons)*				
				R-12	R-22	R-502	R-134a	R-507/R-404A**
RB1P1	7/64	1/8 NPT	RB1	0.76	0.48	0.67	0.89	0.61
RB1P2	7/64	1/4 NPT	RB1	0.76	0.48	0.67	0.89	0.61
RB1F2	7/64	1/4 SAE	RB1	0.76	0.48	0.67	0.89	0.61
RB1E2	7/64	1/4 ODF	RB1	0.76	0.48	0.67	0.89	0.61
RB1E3	7/64	3/8 ODF	RB1	0.76	0.48	0.67	0.89	0.61
RB1P3	7/64	3/8 NPT	RB1	0.76	0.48	0.67	0.89	0.61
RB3P2	1/4	1/4 NPT	RB3	3.5	4.5	3.0	4.0	2.8
RB3F2	1/4	1/4 SAE	RB3	3.5	4.5	3.0	4.0	2.8
RB3E2	1/4	1/4 ODF	RB3	3.5	4.5	3.0	4.0	2.8
RB3P3	1/4	3/8 NPT	RB3	3.5	4.5	3.0	4.0	2.8
RB3F3	1/4	3/8 SAE	RB3	3.5	4.5	3.0	4.0	2.8
RB3E3	1/4	3/8 ODF	RB3	3.5	4.5	3.0	4.0	2.8
RB3ME3	1/4	3/8 ODF	RB3	3.5	4.5	3.0	4.0	2.8
RB3E4	1/4	1/2 ODF	RB3	3.5	4.5	3.0	4.0	2.8
RB3ME4	1/4	1/2 ODF	RB3	3.5	4.5	3.0	4.0	2.8
RB6F4	3/8	1/2 SAE	RB6	6.0	7.5	5.8	8.1	5.6
RB6E4	3/8	1/2 ODF	RB6	6.0	7.5	5.8	8.1	5.6
RB6ME4	3/8	1/2 ODF	RB6	6.0	7.5	5.8	8.1	5.6
RB6E5	3/8	5/8 ODF	RB6	6.0	7.5	5.8	8.1	5.6
RB6ME5	3/8	5/8 ODF	RB6	6.0	7.5	5.8	8.1	5.6
RB9P4	15/32	1/2 NPT	RB9	9.3	12.0	8.5	11.3	7.8
RB9F4	15/32	1/2 SAE	RB9	9.3	12.0	8.5	11.3	7.8
RB9E4	15/32	1/2 ODF	RB9	9.3	12.0	8.5	11.3	7.8
RB9ME4	15/32	1/2 ODF	RB9	9.3	12.0	8.5	11.3	7.8
RB9F5	15/32	5/8 SAE	RB9	9.3	12.0	8.5	11.3	7.8
RB9E5	15/32	5/8 ODF	RB9	9.3	12.0	8.5	11.3	7.8
RB9ME5	15/32	5/8 ODF	RB9	9.3	12.0	8.5	11.3	7.8

*Nominal capacity @ 2 psi liquid pressure drop, liquid capacity based on 40° F evaporator, 10° F superheat, 101° F condenser.

**R-507 includes Allied Signal's AZ-50. R-404A includes DuPont's HP-62.

SOLENOID VALVES

PARKER JACKES-EVANS

10 to 83 Tons (Normally Closed)

MODEL NO	Port Size (in)	Connection (in)	VALVE SERIES	NOMINAL CAPACITY (Tons)*				
				R-12	R-22	R-502	R-134a	R-507/R-404A**
RB15P4	9/16	1/2 NPT	RB15	14	19	13	17	12
RB15MP4	9/16	1/2 NPT	RB15	14	19	13	17	12
RB15E5	9/16	5/8 ODF	RB15	14	19	13	17	12
RB15ME5	9/16	5/8 ODF	RB15	14	19	13	17	12
RB15E7	9/16	7/8 ODF	RB15	14	19	13	17	12
RB15ME7	9/16	7/8 ODF	RB15	14	19	13	17	12
RB15E9	9/16	1-1/8 ODF	RB15	14	19	13	17	12
RB21P6	7/8	3/4 NPT	RB21	23	30	20	26	18
RB21MP6	7/8	3/4 NPT	RB21	23	30	20	26	18
RB21E7	7/8	7/8 ODF	RB21	23	30	20	26	18
RB21ME7	7/8	7/8 ODF	RB21	23	30	20	26	18
RB21E9	7/8	1-1/8 ODF	RB21	23	30	20	26	18
RB21ME9	7/8	1-1/8 ODF	RB21	23	30	20	26	18
RB41P8	1	1 NPT	RB41	37	48	33	42	29
RB41MP8	1	1 NPT	RB41	37	48	33	42	29
RB41E9	1	1-1/8 ODF	RB41	37	48	33	42	29
RB41ME9	1	1-1/8 ODF	RB41	37	48	33	42	29
RB41E11	1	1-3/8 ODF	RB41	37	48	33	42	29
RB41ME11	1	1-3/8 ODF	RB41	37	48	33	42	29
RB81E13	1-1/4	1-5/8 ODF	RB81	83	107	72	101	70
RB81ME13	1-1/4	1-5/8 ODF	RB81	83	107	72	101	70
RB81E17	1-1/4	2-1/8 ODF	RB81	83	107	72	101	70
RB81ME17	1-1/4	2-1/8 ODF	RB81	83	107	72	101	70

*Nominal capacity @ 2 psi liquid pressure drop, liquid capacity based on 40° F evaporator, 10° F superheat, 101° F condenser.

**R-507 includes Allied Signal's AZ-50. R-404A includes DuPont's HP-62.

1 to 83 Tons (Normally Open)

MODEL NO	Port Size (in)	Connection (in)	VALVE SERIES	NOMINAL CAPACITY (Tons)*				
				R-12	R-22	R-502	R-134a	R-507/R-404A**
RB15P4	9/16	1/2 NPT	RB15	14	19	13	17	12
RB15MP4	9/16	1/2 NPT	RB15	14	19	13	17	12
RB15E5	9/16	5/8 ODF	RB15	14	19	13	17	12
RB15ME5	9/16	5/8 ODF	RB15	14	19	13	17	12
RB15E7	9/16	7/8 ODF	RB15	14	19	13	17	12
RB15ME7	9/16	7/8 ODF	RB15	14	19	13	17	12
RB15E9	9/16	1-1/8 ODF	RB15	14	19	13	17	12
RB21P6	7/8	3/4 NPT	RB21	23	30	20	26	18
RB21MP6	7/8	3/4 NPT	RB21	23	30	20	26	18
RB21E7	7/8	7/8 ODF	RB21	23	30	20	26	18
RB21ME7	7/8	7/8 ODF	RB21	23	30	20	26	18
RB21E9	7/8	1-1/8 ODF	RB21	23	30	20	26	18
RB21ME9	7/8	1-1/8 ODF	RB21	23	30	20	26	18
RB41P8	1	1 NPT	RB41	37	48	33	42	29
RB41MP8	1	1 NPT	RB41	37	48	33	42	29
RB41E9	1	1-1/8 ODF	RB41	37	48	33	42	29
RB41ME9	1	1-1/8 ODF	RB41	37	48	33	42	29
RB41E11	1	1-3/8 ODF	RB41	37	48	33	42	29
RB41ME11	1	1-3/8 ODF	RB41	37	48	33	42	29
RB81E13	1-1/4	1-5/8 ODF	RB81	83	107	72	101	70
RB81ME13	1-1/4	1-5/8 ODF	RB81	83	107	72	101	70
RB81E17	1-1/4	2-1/8 ODF	RB81	83	107	72	101	70
RB81ME17	1-1/4	2-1/8 ODF	RB81	83	107	72	101	70

*Nominal capacity @ 2 psi liquid pressure drop, liquid capacity based on 40° F evaporator, 10° F superheat, 101° F condenser..

**R-507 includes Allied Signal's AZ-50. R-404A includes DuPont's HP-62.

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PARKER JACKES-EVANS

1 to 83 Tons (Normally Open)

MODEL NO	Port Size (in)	Connection (in)	VALVE SERIES	NOMINAL CAPACITY (Tons)*				
				R-12	R-22	R-502	R-134a	R-507/R-404A**
ORB1P2	7/54	1/4 NPT	ORB1	--	--	--	--	--
ORB1F2	7/54	1/4 SAE	ORB1	--	--	--	--	--
ORB1E2	7/54	1/4 ODF	ORB1	--	--	--	--	--
ORB1P3	7/54	3/8 NPT	ORB1	--	--	--	--	--
ORB1E3	7/54	3/8 ODF	ORB1	--	--	--	--	--
ORB3P2	1/4	1/4 NPT	ORB3	3.5	4.5	3.09	4.0	2.8
ORB3F2	1/4	1/4 SAE	ORB3	3.5	4.5	3.09	4.0	2.8
ORB3P3	1/4	3/8 NPT	ORB3	3.5	4.5	3.09	4.0	2.8
ORB3F3	1/4	3/8 SAE	ORB3	3.5	4.5	3.09	4.0	2.8
ORB3E3	1/4	3/8 ODF	ORB3	3.5	4.5	3.09	4.0	2.8
ORB3E4	1/4	1/2 ODF	ORB3	3.5	4.5	3.09	4.0	2.8
ORB6F4	3/8	1/2 SAE	ORB6	6.0	7.5	5.8	8.1	5.6
ORB6E4	3/8	1/2 ODF	ORB6	6.0	7.5	5.8	8.1	5.6
ORB6E5	3/8	5/8 ODF	ORB6	6.0	7.5	5.8	8.1	5.6
ORB9P3	15/32	3/8 NPT	ORB9	9.3	12.0	8.5	11.3	7.3
ORB9P4	15/32	1/2 NPT	ORB9	9.3	12.0	8.5	11.3	7.3
ORB9E4	15/32	1/2 ODF	ORB9	9.3	12.0	8.5	11.3	7.3
ORB9F5	15/32	5/8 SAE	ORB9	9.3	12.0	8.5	11.3	7.3
ORB9E5	15/32	5/8 ODF	ORB9	9.3	12.0	8.5	11.3	7.3
ORB15P4	9/16	1/2 NPT	ORB15	14	19	13	17	12
ORB15E5	9/16	5/8 ODF	ORB15	14	19	13	17	12
ORB15E7	9/16	7/8 ODF	ORB15	14	19	13	17	12
ORB21P6	7/8	3/4 NPT	ORB21	23	30	20	26	18
ORB21E7	7/8	7/8 ODF	ORB21	23	30	20	26	18
ORB41P8	1	1 NPT	ORB41	37	48	33	42	29
ORB41E9	1	1-1/8 ODF	ORB41	37	48	33	42	29
ORB41E11	1	1-3/8 ODF	ORB41	37	48	33	42	29
ORB81E13	1-1/4	1-5/8 ODF	ORB81	83	107	72	101	70
ORB81E17	1-1/4	2-1/8 ODF	ORB81	83	107	72	101	70

*Nominal capacity R-12 @ 2 psi liquid pressure drop.

**R-507 includes Allied Signal's AZ-50. R-404A includes DuPont's HP-62.

SOLENOID VALVES

PARKER SOLENOID VALVES CAPACITY TABLES

R-12

MODEL NO.	LIQUID LINE CAPACITIES ¹				SUCTION LINE CAPACITIES ²					DISCHARGE LINE CAPACITIES ³					
	1 psi	2 psi	3 psi	5 psi	40°	20°	0°	-20°	-40°	2 psi	5 psi	10 psi	25 psi	50 psi	10 psi
RB1	.53	.76	.95	1.2	.08	.07	.05	.05	.04	.14	.22	.31	.47	.63	.70
RB3	2.4	3.5	4.4	5.8	.33	.26	.21	.18	1.4	.63	.99	1.4	2.1	2.8	3.1
RB6	4.3	6.0	7.4	9.8	.58	.45	.37	.31	.24	1.1	1.8	2.5	3.8	5.0	5.5
RB9	6.6	9.3	11	15	.94	.76	.60	.53	.41	1.8	2.8	3.9	5.9	7.9	8.7
RB15	10	14	17	22	1.4	1.1	.91	.81	.63	2.7	4.2	5.9	9.0	12	13
RB21	16	23	28	36	2.2	1.8	1.4	1.2	.94	4.1	6.5	9.1	14	19	20
RB41	26	37	45	58	3.2	2.6	2.0	1.8	1.4	6.8	11	15	23	31	34
RB81	59	83	102	132	7.6	6.0	4.7	3.5	2.6	17	27	38	58	77	96

R-22

MODEL NO.	LIQUID LINE CAPACITIES ¹				SUCTION LINE CAPACITIES ²					DISCHARGE LINE CAPACITIES ³					
	1 psi	2 psi	3 psi	5 psi	40°	20°	0°	-20°	-40°	2 psi	5 psi	10 psi	25 psi	50 psi	10 psi
RB1	.69	.98	1.2	1.6	.12	.10	.08	.06	.05	.20	.32	.45	.70	.96	1.3
RB3	3.0	4.5	5.7	7.5	.48	.39	.31	.25	.20	.92	1.4	2.0	3.1	4.3	5.7
RB6	5.1	7.5	9.5	12.6	.81	.65	.54	.43	.34	1.5	2.4	3.4	5.4	7.3	9.6
RB9	8.6	12	15	20	1.4	1.1	.90	.71	.55	2.6	4.0	5.7	8.8	12	16
RB15	13	19	24	32	2.1	1.7	1.4	1.1	.86	3.9	6.1	8.6	13	8	24
RB21	20	30	36	48	3.3	2.7	2.2	1.7	1.3	6.0	9.5	13	21	28	37
RB41	33	48	60	79	4.7	3.8	3.1	2.4	1.9	9.9	16	22	34	47	61
RB81	76	107	131	169	11.4	9.3	7.3	5.7	4.3	26	40	57	88	121	159

R-502

MODEL NO.	LIQUID LINE CAPACITIES ¹				SUCTION LINE CAPACITIES ²					DISCHARGE LINE CAPACITIES ³					
	1 psi	2 psi	3 psi	5 psi	40°	20°	0°	-20°	-40°	2 psi	5 psi	10 psi	25 psi	50 psi	10 psi
RB1	.47	.67	.83	1.1	.10	.08	.06	.05	.03	.16	.26	.36	.56	.77	1.0
RB3	2.1	3.0	3.8	55.1	.39	.31	.24	.19	.15	.73	1.1	1.6	2.5	3.5	4.6
RB6	4.1	5.8	7.1	9.2	.61	.49	.38	.30	.23	1.1	1.8	2.6	4.0	5.6	7.3
RB9	5.8	8.5	10	14	1.1	.88	.71	.54	.42	2.0	3.2	4.5	7.1	9.7	13
RB15	8.9	13	16	21	1.7	1.3	1.1	.83	.65	3.1	4.9	6.9	11	15	19
RB21	14	20	24	32	2.6	2.1	1.7	1.3	1.0	4.8	7.6	11	16	23	30
RB41	22	33	41	54	3.8	3.0	2.4	1.8	1.4	7.9	12	17	27	37	50
RB81	51	72	89	115	9.1	7.3	5.7	4.3	3.2	20	32	44	69	95	126

R-134a

MODEL NO.	LIQUID LINE CAPACITIES ¹				SUCTION LINE CAPACITIES ²					DISCHARGE LINE CAPACITIES ³					
	1 psi	2 psi	3 psi	5 psi	40°	20°	0°	-20°	-40°	2 psi	5 psi	10 psi	25 psi	50 psi	10 psi
RB1	.63	.89	1.1	1.4	.10	.09	.07	.07	—	.18	.30	.41	.62	.82	.92
RB3	2.8	4.0	4.9	6.3	.43	.34	.29	.25	—	.82	1.3	1.8	2.8	3.7	4.0
RB6	5.7	8.1	9.9	12.8	.76	.59	.49	.41	—	1.5	2.4	3.3	5.0	6.6	7.2
RB9	8	11.3	13.9	17.9	1.2	1.0	.80	.70	—	2.4	3.7	5.1	7.7	7.9	11.4
RB15	12	17	21	27	1.8	1.4	1.2	1.1	—	2.5	5.5	7.7	12	16	17
RB21	19	26	32	42	2.9	2.4	1.8	1.6	—	5.4	8.5	12	18	25	26
RB41	29	42	51	66	4.2	3.4	2.6	2.4	—	8.9	14	20	30	41	45
RB81	71	101	124	160	11.3	8.8	6.6	4.9	—	27	42	59	90	121	151

SOLENOID VALVES

SOLENOID VALVES

PARKER SOLENOID VALVES CAPACITY TABLES

R-507 & R-404A

MODEL NO.	LIQUID LINE CAPACITIES ¹				SUCTION LINE CAPACITIES ²					DISCHARGE LINE CAPACITIES ³					
	1 psi	2 psi	3 psi	5 psi	40°	20°	0°	-20°	-40°	2 psi	5 psi	10 psi	25 psi	50 psi	100 psi
RB1	.43	.61	.75	.97	.43	.09	.07	.05	.04	.18	.28	.40	.62	.85	1.2
RB3	2.0	2.8	3.4	4.4	.72	.35	.28	.22	.18	.82	1.2	1.8	2.8	3.8	5.1
RB6	3.9	5.6	6.8	8.8	1.2	.58	.48	.38	.30	1.3	2.1	3.0	4.8	6.5	8.5
RB9	5.5	7.8	9.5	12.3	1.9	.98	.80	.63	.49	2.3	3.6	5.1	7.8	10.7	14.2
RB15	.83	11.7	14.3	18.5	2.9	1.5	1.2	.98	.77	3.5	5.4	7.7	11.6	16	21
RB21	12.8	18	22	29	4.2	2.4	2.0	1.5	1.2	5.3	8.5	11.6	18.7	25	33
RB41	20	29	35	45	10.1	3.4	2.8	2.1	1.7	8.8	14	20	30	42	54
RB81	49	70	85	110	.43	8.3	6.5	5.0	3.8	23	36	51	78	108	142

NOTES:

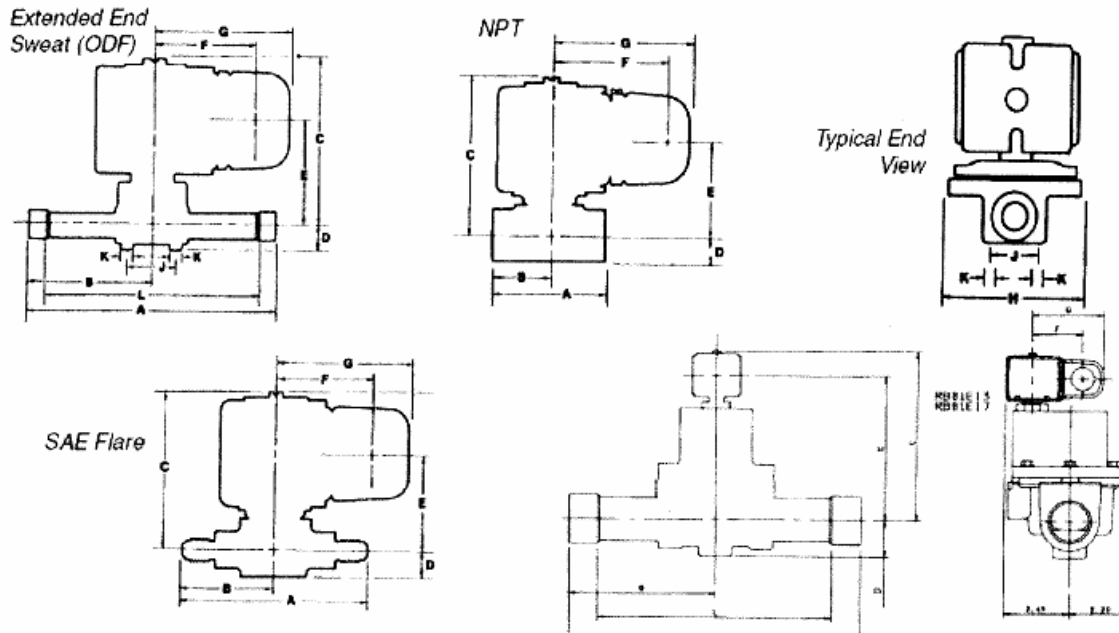
1. Liquid capacity based on 40° F evaporator, 10° F superheat, 101° F condenser.
2. Suction line capacity for specified evaporator temperature plus 25° F superheat, 101° F condenser and 1 psi pressure drop across valve.
3. Hot gas bypass capacity based on isometric compression from 40° F evaporator plus 25° F superheat to 101° F condenser plus 50° F superheat.
4. For information on other alternative refrigerants, contact the factory.

Temperature Correction Factors

EVAPORATOR TEMPERATURE (°F)	40	30	20	10	0	-10	-20	-30	-40	LIQUID TEMPERATURE (°F)	90	100	110	120	130
Correction Factor	1.00	.96	.92	.88	.84	.80	.77	.74	.71	Correction factor	1.05	1.00	.95	.90	.86

SOLENOID VALVES

PARKER SOLENOID VALVE DIMENSIONS



All dimensions in inches

VALVE TYPE	CONNECTION SIZES	OVERALL LENGTH	INLET TO CENTER-LINE	CENTER-LINE TO TOP	CENTER-LINE TO BOTTOM	CENTER-LINE TO CENTER-LINE OF JUNCTION BOX	CENTER-LINE TO CENTER-LINE OF JUNCTION BOX	CENTER-LINE TO END OF JUNCTION BOX	MAXIMUM WIDTH	MOUNTING HOLE CENTER-LINE	MOUNTING HOLE THREAD DIMENSIONS	INSIDE LAY-IN LENGTH
		A	B	C	D	E	F	G	H	J	K	L
RB1P2	1/4 HPT	2.12	1.06	2.97	0.50	1.88	1.84	2.59	1.88	0.75	8-32	N.A.
RB1P3	3/8 NPT	2.12	1.06	2.97	0.50	1.88	1.84	2.59	1.88	0.75	8-32	N.A.
RB1E2	1/4 ODF	4.62	2.31	2.97	0.50	1.88	1.84	2.59	1.88	0.75	8-32	3.94
RB1E3	3/8 ODF	4.62	2.31	2.97	0.50	1.88	1.84	2.59	1.88	0.75	8-32	3.94
RB1F2	1/4 SAE	3.50	1.75	2.97	0.50	1.88	1.84	2.59	1.88	0.75	8-32	N.A.
RB3P2	1/4 NPT	2.12	1.06	3.28	0.50	2.17	1.84	2.59	1.88	0.75	8-32	N.A.
RB3P3	3/8 NPT	2.12	1.06	3.28	0.50	2.17	1.84	2.59	1.88	0.75	8-32	N.A.
RB3E3	3/8 ODF	4.62	2.31	3.28	0.50	2.17	1.84	2.59	1.88	0.75	8-32	3.94
RB3E4	1/2 ODF	5.00	2.50	3.28	0.50	2.17	1.84	2.59	1.88	0.75	8-32	4.22
RB3F2	1/4 SAE	3.50	1.75	3.28	0.50	2.17	1.84	2.59	1.88	0.75	8-32	N.A.
RB3F3	3/8 SAE	3.50	1.75	3.28	0.50	2.17	1.84	2.59	1.88	0.75	8-32	N.A.
RB6E4	1/2 ODF	5.00	2.50	3.34	0.50	2.23	1.84	2.59	1.88	0.75	8-32	4.22
RB6E5	5/8 ODF	6.50	3.25	3.34	0.50	2.23	1.84	2.59	1.88	0.75	8-32	5.50
RB5F4	1/2 SAE	3.94	1.97	3.34	0.50	2.23	1.84	2.59	1.88	0.75	8-32	N.A.
RB9P3	3/8 NPT	2.94	1.28	3.31	0.84	2.09	1.84	2.59	2.19	1.50	10-24	N.A.
RB9P4	1/2 NPT	2.94	1.28	3.31	0.84	2.09	1.84	2.59	2.19	1.50	10-24	N.A.
RB9E4	1/2 ODF	5.66	2.83	3.31	0.84	2.22	1.84	2.59	2.19	1.50	10-24	4.88
RB9E5	5/8 ODF	6.87	3.44	3.31	0.84	2.22	1.84	2.59	2.19	1.50	10-24	5.88
RB9F5	5/8 SAE	3.94	1.97	3.31	0.84	2.09	1.84	2.59	2.19	1.50	10-24	N.A.
RB15P4	1/2 NPT	3.44	1.45	3.34	0.56	2.25	1.84	2.59	2.44	N.A.	N.A.	N.A.
RB15E5	5/8 ODF	6.87	3.44	3.34	0.84	2.25	1.84	2.59	2.44	1.50	10-24	5.88
RB21P6	3/4 NPT	3.84	1.66	3.45	0.69	2.41	1.84	2.59	2.84	N.A.	N.A.	N.A.
RB21E7	7/8 ODF	7.50	3.67	3.45	1.00	2.41	1.84	2.59	2.84	1.75	1/4-20	5.97
RB41P8	1 NPT	4.44	1.95	4.62	0.84	3.55	1.84	2.59	3.19	N.A.	N.A.	N.A.
RB41E9	1-1/8 ODF	10.06	5.03	3.93	1.16	2.84	1.84	2.59	3.19	1.75	1/4-20	8.22
RB81E13	1-5/8 ODF	11.06	5.53	6.32	1.10	5.39	1.84	2.59	N.A.	N.A.	N.A.	8.87
RB81E17	2-1/8 ODF	11.06	5.53	6.32	1.10	5.39	1.84	2.59	N.A.	N.A.	N.A.	8.87

NOTE: Normally open valve: Add 1/2 in. to overall height of valve.
Allow 2 in. above valve to remove coil assembly.

SOLENOID VALVES

PARKER JACKES-EVANS SOLENOID VALVE

NORMALLY CLOSED REFRIGERATION SOLENOID VALVES — RB SERIES

PART NO	MODEL NO	Port Size (in)	Cv	Connection (in)	Ship Wt (lb)
71198	RB1P1	7/64	0.22	1/8 FPT	0.75
71151	RB1P2	7/64	0.22	1/4 FPT	0.75
71152	RB1P3	7/64	0.22	3/8 FPT	0.75
71159	RB1F2	7/64	0.22	1/4 Male SAE	0.75
71163	RB1E2	7/64	0.22	1/4 ODF Extended Ends	0.75
71172	RB1E3	7/64	0.22	3/8 ODF Extended Ends	0.75
71211	RB3P2	1/4	1.07	1/4 FPT	0.75
71212	RB3P3	1/4	1.07	3/8 FPT	0.75
71219	RB3F2	1/4	1.07	1/4 Male SAE	0.75
71220	RB3F3	1/4	1.07	3/8 Male SAE	0.75
71233	RB3E3	1/4	1.07	3/8 ODF Extended Ends	0.75
71215	RB3S3	1/4	1.07	3/8 ODF Extended Ends	0.75
71234	RB3E4	1/4	1.07	1/2 ODF Extended Ends	0.75
71318	RB3ME3	1/4	1.07	3/8 ODF Extended Ends	0.75
71299	RB3ME4	1/4	1.07	1/2 ODF Extended Ends	0.75
71216	RB3S4	1/4	1.07	1/2 ODF Short Ends	0.75
71368	RB6F4	3/8	2.00	1/2 Male SAE	1.00
71371	RB6E4	3/8	2.00	1/2 ODF Extended Ends	1.00
71372	RB6ME4	3/8	2.00	1/2 ODF Extended Ends	1.00
71374	RB6E5	3/8	2.00	5/8 ODF Extended Ends	1.00
71375	RB6ME5	3/8	2.00	5/8 ODF Extended Ends	1.00
71396	RB9MP3	15/32	2.86	3/8 FPT	1.50
71406	RB9F5	15/32	2.86	5/8 Male SAE	1.50
71418	RB9E5	15/32	2.86	5/8 ODF Extended Ends	1.50
71403	RB9S5	15/32	2.86	5/8 ODF Short Ends	1.50
71447	RB9E4	15/32	2.86	1/2 ODF Extended Ends	1.50
71391	RB9P3	15/32	2.86	3/8 FPT	1.50
71417	RB9F4	15/32	2.86	1/2 Male SAE	1.50
71400	RB9S4	15/32	2.86	1/2 ODF Short Ends	1.50
71449	RB9ME5	15/32	2.86	5/8 ODF Extended Ends	1.50
71410	RB9MS5	15/32	2.86	5/8 ODF Short Ends	1.50
71450	RB9ME4	15/32	2.86	1/2 ODF Extended Ends	1.50
71409	RB9MS4	15/32	2.86	1/2 ODF Short Ends	1.50
71398	RB9MP4	15/32	2.86	1/2 FPT	1.50
71484	RB15MP4	9/16	4.46	1/2 FPT	2.00
71401	RB15ME5	9/16	4.46	5/8 ODF Extended Ends	2.00
71499	RB15E5	9/16	4.46	5/8 ODF Extended Ends	2.00
71504	RB15ME7	9/16	4.46	7/8 ODF Extended Ends	3.50
71498	RB15E7	9/16	4.46	7/8 ODF Extended Ends	2.00
71481	RB15P4	9/16	4.46	1/2 FPT	2.00
71544	RB21MP6	7/8	7.16	3/4 FPT	3.00
71541	RB21P6	7/8	7.16	3/4 FPT	3.00
71547	RB21E7	7/8	7.16	7/8 ODF Extended Ends	3.00
71563	RB21ME7	7/8	7.16	7/8 ODF Extended Ends	3.00
71562	RB21ME9	7/8	7.16	1-1/8 ODF Extended Ends	4.50
71634	RB41MP8	1	10.30	1 FPT	4.50
71631	RB41P8	1	10.30	1 FPT	4.50
71644	RB41ME9	1	10.30	1-1/8 ODF Extended Ends	4.50
71643	RB41E9	1	10.30	1-1/8 ODF Extended Ends	4.50
71637	RB41S9	1	10.30	1-1/8 ODF Short Ends	4.50
71648	RB41ME11	1	10.30	1-3/8 ODF Extended Ends	4.50
71647	RB41E11	1	10.30	1-3/8 ODF Extended Ends	6.00
71652	RB81ME13	1-1/4	25.00	1-5/8 ODF Extended Ends	11.00
71654	RB81ME17	1-1/4	25.00	2-1/8 ODF Extended Encs	11.00

SOLENOID VALVES

SOLENOID VALVES

PARKER JACKES-EVANS SOLENOID VALVE

COILS FOR NORMALLY CLOSED (RB) REFRIGERATION VALVES

PART NO	MODEL NO	Volts	Hz	Wt (lb)	Va Holding	VA Inrush
75690	R-23MM-24	24 AC	50/60	11	15	36
75740	R-23MM-120	120 AC	50/60	11	15	36
75730	R-23MM-208	208 AC	60	11	15	36
75750	R-23MM-240	240 AC	50/60	11	15	36
75760	R-23MM-480	480 AC	50/60	11	15	36
75370	R23MM 120/240	120/240 AC	50/60	11	15	36
75758	R23MM 240Space	240 AC	50/60	11	15	36
75780	R-23MM 12V DC	12 DC	N/A	16	1.33	N/A
75790	R-23MM 24V DC	24 DC	N/A	16	0.67	N/A

NORMALLY OPEN REFRIGERATION SOLENOID VALVES — ORB SERIES

PART NO	MODEL NO	Port Size (in)	Cv	Connection (in)	Ship Wt (lb)
71153	ORB1P2	7/64	0.22	1/4 FPT	.075
71164	ORB1E2	7/64	0.22	1/4 ODF Extended Ends	.075
71154	ORB1P3	7/64	0.22	3/8 FPT	.075
71171	ORB1E3	7/64	0.22	3/8 ODF Extended Ends	.075
71161	ORB1F2	7/64	0.22	1/4 Male SAE	.075
71213	ORB3P2	1/4	1.07	1/4 FPT	.075
71214	ORB3P3	1/4	1.07	3/8 FPT	.075
71236	ORB3E3	1/4	1.07	3/8 ODF Extended Ends	.075
71217	ORB3S3	1/4	1.07	3/8 ODF Short Ends	.075
71237	ORB3E4	1/4	1.07	1/2 ODF Extended Ends	.075
71221	ORB3F2	1/4	1.07	1/4 Male SAE	.075
71222	ORB3F3	1/4	1.07	3/8 Male SAE	.075
71370	ORB6F4	3/8	2.00	1/2 Male SAE	1.00
71376	ORB6E5	3/8	2.00	5/8 ODF Extended Ends	1.00
71373	ORB6E4	3/8	2.00	1/2 ODF Extended Ends	1.00
71394	ORB9P4	15/32	2.86	1/2 FPT	1.50
71392	ORB9P3	15/32	2.86	3/8 FPT	1.50
71448	ORB9E4	15/32	2.86	1/2 ODF Extended Ends	1.50
71407	ORB9F5	15/32	2.86	5/8 Male SAE	1.50
71452	ORB9E5	15/32	2.86	5/8 ODF Extended Ends	1.50
71482	ORB15P4	9/16	4.46	1/2 FPT	2.00
71502	ORB15E5	9/16	4.46	5/8 ODF Extended Ends	2.00
71542	ORB21P6	7/8	7.16	3/4 FPT	3.25
71564	ORB21E7	7/8	7.16	7/8 ODF Extended Ends	3.25
71632	ORB41P8	1	10.30	1 FPT	4.50
71645	ORB41E9	1	10.30	1-1/8 ODF Extended Ends	4.50
71638	ORB41S9	1	10.30	1-1/8 ODF Short Ends	4.50
71646	ORB41E11	1	10.30	1-3/8 ODF Extended Ends	4.50
71653	ORB81E13	1-1/4	25.00	1-5/8 ODF Extended Ends	10.00
71655	ORB81E17	1-1/4	25.00	2-1/8 ODF Extended Ends	10.00

COILS FOR NORMALLY OPEN (ORB) REFRIGERATION VALVES

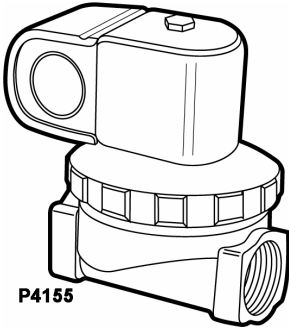
PART NO	MODEL NO	Volts	Hz	Wt (lb)	Va Holding	VA Inrush
74690	OR23-24	24 AC	50/60	11	15	36
74740	OR23-120	120 AC	50/60	11	15	36
74750	OR23-240	240 AC	50/60	11	15	36
74760	OR23-480	480 AC	50/60	11	15	36
74370	OR23-120/240	120/240 AC	50/60	11	15	36
74758	OR23-240 Spade	240 AC	50/60	11	15	36
74780	OR23-12V DC	12 DC	N/A	16	1.33	N/A
74790	OR23-24V DC	24 DC	N/A	16	0.67	N/A

SOLENOID VALVES

PARKER GENERAL PURPOSE SOLENOID VALVES

Two-Way Solenoid Valves — Type I (Normally Closed Only)

Type I Two-Way Normally Closed (AC) Voltages



VALVE MODEL NO	PIPE SIZE	ORIFICE	Cv	OPERATING PRESSURE DIFFERENTIAL				°F MAXIMUM TEMP	COIL TYPE
				Minimum PSI	Maximum (MOPD) PSI Air Inert Gas	Maximum (MOPD) PSI Water	Maximum (MOPD) PSI Light Oil 300		
GP200	1/4	5/16	.98	1	150	150	150	225	G-23
GP300	3/8	1/2	3.00	1	150	150	150	225	G-23
GP400	1/2	1/2	3.60	1	150	150	150	225	G-23
GP600	3/4	3/4	7.40	1	150	150	150	225	G-23
GP10A	1	1	12.20	1	150	150	150	225	G-23

Flow Capacities — Water GPM

MODEL NO.		1 psi	2 psi	5 psi	10 psi	15 psi	25 psi	50 psi
Type I Normally Closed	Type III Normally Closed							
GP200	GP207	.98	1.36	2.16	3.90	3.78	4.90	6.90
GP300	GP307	3.00	4.23	6.70	9.50	11.60	15.00	21.20
GP400	GP407	3.60	5.09	8.05	11.38	13.94	18.00	25.46
GP600	GP607	7.40	10.40	16.70	23.60	29.00	37.50	53.00
GP10A	GP1007	12.20	17.30	27.30	39.00	43.70	62.00	88.00

Steam Capacities — Pounds Per Hour

MODEL NO.		5 PSIG INLET PRESSURE		10 PSIG INLET PRESSURE			MODEL NUMBERS	25 PSIG INLET PRESSURE			50 PSIG INLET PRESSURE		
Type III	Type IV	Pressure Drop (psi)		Pressure Drop (psi)			Type IV	Pressure Drop (psi)			Pressure Drop (psi)		
		2	4	2	5	7		5	10	15	10	20	30
GP207	GP257	19.40	27.40	21.40	33.90	40.30	GP357	42.30	60.00	73.00	76.00	107.00	130.00
GP307	GP357	56.50	79.90	63.30	100.00	118.30	GP457	126.80	179.30	219.60	228.90	323.70	396.50
GP407	GP457	67.80	95.90	75.90	120.00	142.00	GP657	152.20	215.20	263.60	274.70	388.50	475.80
GP607	GP657	147.00	211.00	162.00	261.00	312.00	GP1057	326.00	462.00	565.00	581.00	821.00	1005.00
GP1007	GP1057	245.00	346.00	270.00	431.00	511.00	GP257	538.00	760.00	927.00	956.00	1348.00	1667.00

TYPE II												
*32F24C2199ACF	—	—	—	—	—	—	77.00	123.00	175.00	214.00	278.00	390.00
**48F24C2199ACF	—	—	—	—	—	—	177.00	280.00	395.00	485.00	625.00	870.00

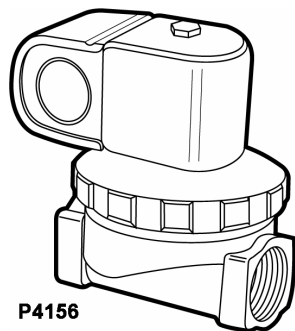
*GP20
**GP30

SOLENOID VALVES

SOLENOID VALVES

PARKER TWO-WAY SOLENOID VALVES — TYPE III

Valve Specifications — Type III



P4156

VALVE MODEL NO	PIPE SIZE	ORIFICE	Cv	OPERATING PRESSURE DIFFERENTIAL				°F MAXIMUM TEMP	COIL TYPE	AC COIL WATTAGE	DC COIL WATTAGE
				Minimum PSI	Maximum (MOPD) PSI Air Inert Gas	Maximum (MOPD) PSI Water	Maximum (MOPD) PSI Light Oil 300				
GP207	1/4	5/16	.98	1	150	150	150	240	G-23	9.0	14.0
GP307	3/8	1/2	3.00	1	150	150	150	240	G-23	9.0	14.0
GP407	1/2	1/2	3.60	1	150	150	150	240	G-23	9.0	14.0
GP607	3/4	3/4	7.40	1	150	150	150	240	G-23	9.0	14.0
GP1007	1	1	12.20	1	150	150	150	240	G-23	9.0	14.0

PARKER TWO-WAY SOLENOID VALVES — TYPE IV

Applications

These valves are recommended for steam service up to 50 psig saturated steam. NOTE: Do not apply on systems where steam is regulated to 50 psig or below from above 50 psig. Damage to the valve will result.

General Specifications

Type IV two-way solenoid valves have a brass body with a stainless steel seat insert and an ethylene propylene (EPT) diaphragm and seal. These valves are available with ¼ inch NPT through 1 inch NPT connection; normally closed only. They are not available with an explosion proof coil enclosure.

Materials

Body Forged Brass with Stainless Steel Seat
 Bonnet Forged Brass
 Diaphragms EPT
 Enclosing Tube 300 Series Stainless Steel
 Plunger 430 Series Stainless Steel
 Plunger Seat Disc EPT
 Springs 300 Series Stainless Steel
 Seal EPT

Valve Specifications — Type IV

VALVE MODEL NO	PIPE SIZE	ORIFICE	Cv	OPERATING PRESSURE DIFFERENTIAL			°F MAXIMUM TEMP	COIL TYPE	AC COIL WATTAGE
				Minimum PSI	Maximum (MOPD) PSI Steam/Water	Maximum (MOPD) PSI Water			
GP257	1/4	5/16	.98	1	50/150	300	150	G-23	9.0
GP357	3/8	1/2	3.00	1	50/150	300	150	G-23	9.0
GP457	1/2	1/2	3.60	1	50/150	300	150	G-23	9.0
GP657	3/4	3/4	7.40	1	50/150	300	150	G-23	9.0
GP1057	1	1	12.20	1	50/150	300	150	G-23	9.0

SOLENOID VALVES

SOLENOID VALVES

GENERAL PURPOSE SOLENOID VALVE

GP SERIES

PART NO	MODEL NO	PORT SIZE	Cv	CONNECTIONS (in FPT)	SHIP WT (lb)
70221	GP200	5/16	.98	1/4	0.75
70222	GP207	5/16	.98	1/4	.075
70223	GP257	5/16	.98	1/4	.075
70392	GP300	1/2	3.35	3/8	1.00
70393	GP307	1/2	3.35	3/8	1.00
70394	GP357	1/2	3.35	3/8	1.00
70561	GP4	1/2	3.35	1/2	1.00
70562	GP400	1/2	3.35	1/2	1.00
70563	GP407	1/2	3.35	1/2	1.00
70564	GP457	1/2	3.35	1/2	1.00
70712	GP600	3/4	7.40	3/4	2.00
70713	GP607	3/4	7.40	3/4	2.00
70714	GP657	3/4	7.40	3/4	2.00
70810	GP10A	1	12.20	1	4.25
70808	GP1007	1	12.20	1	4.25
70777	GP1057	1	12.20	1	4.25

SOLENOID COILS FOR GENERAL PURPOSE VALVES

PART NO	MODEL NO	WATTS	VOLTS	Hz	VA	
					HOLDING	INRUSH
77300	G23-24V	9	24 VAC	50/60	12	30
77310	G23-120	9	120 VAC	50/60	12	30
77311	G23-120 Boss	9	120 VAC	50/60	12	30
77320	G23-240	9	208/240 VAC	50/60	12	30
77340	G23-480	9	480 VAC	50/60	12	30
77360	G23-120/240	9	120/240 VAC	50/60	12	30
75520	G23-12V DC	14	12 VDC	--	--	--
75530	G23-24V DC	14	24 VDC	--	--	--