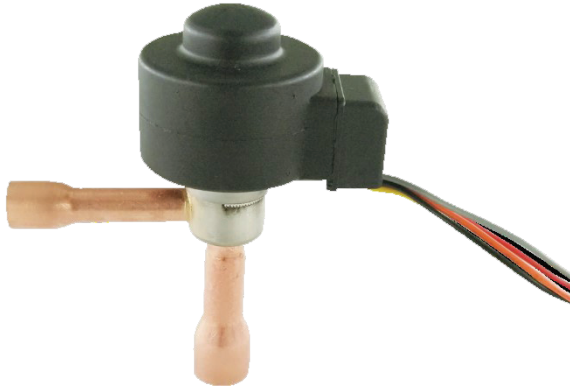


## LPF SERIES | *Electric Expansion Valve*



LPF series Electric Expansion Valves are designed for use in refrigeration systems. The valve port is designed with PTFE (Teflon™), creating a tight seat equivalent to a solenoid valve thus preventing liquid refrigerant from migrating to the evaporator and compressor.

### FEATURES

- TIGHT SEATING, AS GOOD AS A SOLENOID VALVE (<1ML/MIN)
- QUICK-CONNECT STATOR FOR EASY INSTALLATION
- IP67 RATED STATOR WORKS SAFELY IN HARSH ENVIRONMENTS
- COMPATIBLE WITH OIL-FREE SYSTEMS (NOT INCLUDING LPF45-XXX THROUGH LPF62-XXX)
- INLET STRAINER, 100 MESH
- LPFXXT-XXX: 1,305 PSIG (90 BAR) DESIGN FOR R-744 (CO<sub>2</sub>) APPLICATION

### GENERAL SPECIFICATION

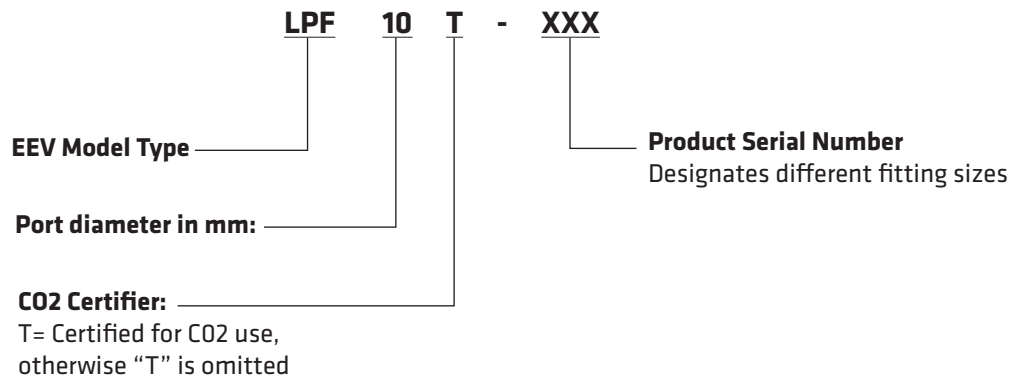
- 500 steps (full stroke); 32 ± 20 opening steps
- Fluid temperature range: -40°F to +158°F
  - LPF03(T)-XXX through LPF32(T)-XXX: -40°F to 158°F (-40°C to +70°C)
  - LPF45-XXX through LPF62-XXX: -22°F to +158°F (-30°C to +70°C)
- Ambient temperature and relative humidity range:
  - LPF03(T)-XXX through LPF62-XXX: -22°F to +140°F (-40°C to +60°C); 0 to 95% RH
  - LPF45-XXX through LPF 62-XXX: -22°F to +140°F (-30°C to +60°C); 0 to 95% RH
- Design Pressures:
  - LPF03-XXX through LPF32-XXX: MWP=600 psig (42 bar); MOPD=500 psi (35 bar)
  - LPF45-XXX through LPF62-XXX: MWP=710 psig (49 bar); MOPD=500 psi (35 bar)
  - LPF03T-XXX through LPF24T-XXX: MWP=1,305 psig (90 bar); MOPD=725 psi (50 bar)
  - LPF30T-XXX through LPF32T-XXX: MWP=1,305 psig (90 bar); MOPD=500 psi (35 bar)
- Certifications: UL/CSA file no. MH25894 for A1/A2/A2L/A3 refrigerants

## LPF SERIES | *Electric Expansion Valve*

### ELECTRICAL PARAMETERS

- Rated voltage: 12V DC ( $\pm 10\%$ ), rectangular wave
- Excitation mode: 1 - 2 phase excitation, unipolar actuation
- Excitation rate: 30 - 90pps (30-40pps for LPF45-XXX through LPF62-XXX)
- Full stroke time: 6s @ 90pps (13s @ 40pps for LPF45-XXX through LPF62-XXX)
- Coil current: 260 mA/phase (20°C)
- Coil resistance:  $46 \pm 3.7 \Omega$ /phase (20°C)
- Insulation class of coil: E
- Protection class: IP 67
- Compatible with Sanhua SEC series controller

### MODEL DESIGNATION



## LPF SERIES | *Electric Expansion Valve*

### REFRIGERANT CAPACITY TABLES

#### Air Conditioning

Model No.	Refrigerant					
	R-410A		R-454B		R-32	
	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr
LPF03	0.24	2,880	0.28	3,360	0.32	4,200
LPF05	0.37	4,440	0.44	5,280	0.54	6,480
LPF08	0.66	7,920	0.78	9,360	0.96	11,520
LPF10	1.06	12,720	1.25	15,000	1.54	18,480
LPF14	2.12	25,440	2.51	30,120	3.08	36,960
LPF18	3.18	38,160	3.76	45,120	4.63	55,560
LPF24	5.29	63,480	6.27	75,240	7.71	92,520
LPF30	7.15	85,800	8.46	101,520	10.4	124,800
LPF32	7.94	95,280	9.40	112,800	11.6	139,200
LPF45	13.20	158,400	15.7	188,400	19.3	231,600
LPF52	18.50	222,000	21.9	262,800	27.0	324,000
LPF55	23.80	285,600	28.2	338,400	34.7	416,000
LPF62	29.10	349,200	34.5	414,000	42.4	508,800

Conditions: 45°F evap temperature,  
100°F liquid temperature

#### CO2

Model No.	Refrigerant			
	R-744 (CO2)			
	Med. Temp. Ref.		Low Temp. Ref.	
	tons	BTU/hr	tons	BTU/hr
LPF03T	0.29	3,480	0.45	5,400
LPF05T	0.45	5,400	0.70	8,400
LPF08T	0.81	9,720	1.25	15,000
LPF10T	1.29	15,480	2.01	24,120
LPF14T	2.58	30,960	4.02	48,240
LPF18T	3.87	46,440	6.02	72,240
LPF24T	6.45	77,400	10.0	120,000
LPF30T	8.70	104,400	13.6	163,200
LPF32T	9.67	1116,040	15.1	181,200
LPF45T	16.1	193,200	25.1	301,200
LPF52T	22.6	271,200	35.1	421,200
LPF55T	29.0	348,000	45.2	542,400
LPF62T	35.5	426,000	55.2	662,400

Medium Temperature:  
25°F evap temperature,  
45°F liquid temperature  $\Delta P=150$  psi

Low Temperature:  
-10°F evap temperature,  
45°F liquid temperature  $\Delta P=350$  psi

Note:

1. LPF stator is sold separately
2. Nominal capacity is at 480 fully open pulses of linear flow curve
3. If your system capacity is between two valve sizes, always select the a larger valve to avoid a capacity restriction.

## LPF SERIES | *Electric Expansion Valve*

### REFRIGERANT CAPACITY TABLES continued

#### Medium Temperature Refrigeration

Model No.	Refrigerant							
	R-404A/ R-507		R-290		R-407A/ R-407F		R-448A/ R-449A	
	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr
LPF03	0.14	1,680	0.24	2,880	0.19	2,280	0.19	2,280
LPF05	0.22	2,640	0.38	4,560	0.29	3,480	0.29	3,480
LPF08	0.39	4,680	0.68	8,160	0.53	6,360	0.53	6,360
LPF10	0.62	7,440	1.08	12,960	0.84	10,080	0.84	10,080
LPF14	1.24	14,880	2.16	25,920	1.68	20,160	1.68	20,160
LPF18	1.86	22,320	3.25	39,000	2.52	30,240	2.53	30,360
LPF24	3.10	37,200	5.41	64,920	4.20	50,400	4.21	50,520
LPF30	4.19	50,280	7.31	87,720	5.67	68,040	5.68	68,160
LPF32	4.65	55,800	8.12	97,440	6.30	75,600	6.31	75,720
LPF45	7.75	93,000	13.5	162,000	10.5	126,000	10.5	126,000
LPF52	10.9	130,800	18.9	226,800	14.7	176,000	14.7	176,400
LPF55	14.0	168,000	24.4	292,800	18.9	226,800	18.9	226,800
LPF62	17.1	205,200	29.8	357,600	23.1	277,200	23.1	277,200

Conditions: 25°F evap temperature, 100°F liquid temperature, 125 psi ΔP across EEV

Model No.	Refrigerant							
	R-452A		R-454A		R-454C		R-455A	
	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr
LPF03	0.14	1,680	0.19	2,280	0.17	2,040	0.17	2,040
LPF05	0.22	2,640	0.29	3,480	0.26	3,120	0.27	3,240
LPF08	0.39	4,680	0.52	6,240	0.47	5,640	0.48	5,760
LPF10	0.63	7,560	0.84	10,080	0.76	9,120	0.77	9,240
LPF14	1.26	15,120	1.68	20,160	1.51	18,120	1.53	18,360
LPF18	1.89	22,680	2.52	30,240	2.27	27,240	2.30	27,600
LPF24	3.15	37,800	4.19	50,280	3.78	45,360	3.83	45,960
LPF30	4.25	51,000	5.66	67,920	5.10	61,200	5.18	62,160
LPF32	4.73	56,760	6.29	75,480	5.67	68,040	5.75	69,000
LPF45	7.88	94,560	10.5	126,000	9.44	113,280	9.58	114,960
LPF52	11.0	132,000	14.7	176,400	13.2	158,400	13.4	160,800
LPF55	14.2	170,400	18.9	226,800	17.0	204,000	17.3	207,600
LPF62	17.3	207,600	23.1	277,200	20.8	249,600	21.1	253,200

Conditions: 25°F evap temperature, 100°F liquid temperature, 125 psi ΔP across EEV

## LPF SERIES | *Electric Expansion Valve*

### REFRIGERANT CAPACITY TABLES continued

#### Medium Temperature Refrigeration

Model No.	Refrigerant					
	R-134a		R-450A		R-513A	
	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr
LPF03	0.16	1,920	0.15	1,800	0.13	1,560
LPF05	0.25	3,000	0.23	2,760	0.21	2,520
LPF08	0.45	5,400	0.42	5,040	0.37	4,440
LPF10	0.72	8,640	0.67	8,040	0.59	7,080
LPF14	1.44	17,280	1.33	15,960	1.18	14,160
LPF18	2.16	25,920	2.00	24,000	1.77	21,240
LPF24	3.60	43,200	3.33	39,960	2.95	35,400
LPF30	4.86	58,320	4.49	53,880	3.98	47,760
LPF32	5.40	64,800	4.99	59,880	4.42	53,040
LPF45	9.00	108,000	8.32	99,840	7.36	88,320
LPF52	12.6	151,200	11.6	139,200	10.3	123,320
LPF55	16.2	194,400	15.0	180,000	13.3	159,600
LPF62	19.8	237,600	18.3	219,600	16.2	194,400

Conditions: 25°F evap temperature, 100°F liquid temperature, 80 psi ΔP across EEV

## LPF SERIES | *Electric Expansion Valve*

### REFRIGERANT CAPACITY TABLES continued

#### Low Temperature Refrigeration

Model No.	Refrigerant							
	R-404A/ R-507		R-290		R-407A/ R-407F		R-448A/ R-449A	
	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr
LPF03	0.14	1,680	0.24	2,880	0.19	2,280	0.19	2,280
LPF05	0.21	2,520	0.38	4,560	0.30	3,600	0.30	3,600
LPF08	0.38	4,560	0.68	8,160	0.53	6,360	0.53	6,360
LPF10	0.61	7,320	1.09	13,080	0.85	10,200	0.85	10,200
LPF14	1.23	14,760	2.18	26,160	1.71	20,520	1.71	20,520
LPF18	1.84	22,080	3.26	39,120	2.56	30,720	2.56	30,720
LPF24	3.06	36,720	5.44	65,280	4.26	51,120	4.27	51,240
LPF30	4.14	49,680	7.34	88,080	5.76	69,120	5.77	69,240
LPF32	4.59	55,080	8.16	97,920	6.40	76,800	6.41	76,920
LPF45	7.66	91,920	13.6	163,200	10.7	128,400	10.7	128,400
LPF52	10.7	128,400	19.0	228,000	14.9	178,800	15.0	180,000
LPF55	13.8	165,600	24.5	294,000	19.2	230,400	19.2	230,400
LPF62	16.8	201,600	29.9	358,800	23.4	280,800	23.5	282,000

Conditions: -10°F evap temperature, 100°F liquid temperature

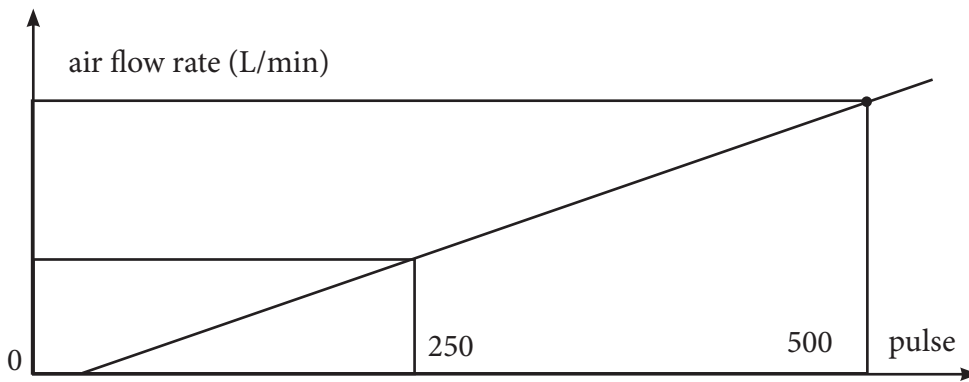
Model No.	Refrigerant							
	R-452A		R-454A		R-454C		R-455A	
	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr
LPF03	0.14	1,680	0.24	2,280	0.19	2,040	0.17	2,040
LPF05	0.21	2,640	0.38	3,600	0.30	3,120	0.27	3,240
LPF08	0.38	4,680	0.68	6,360	0.53	5,640	0.48	5,760
LPF10	0.61	7,440	1.09	10,200	0.85	9,000	0.77	9,240
LPF14	1.23	14,880	2.18	20,520	1.71	18,120	1.53	18,360
LPF18	1.84	22,320	3.26	30,720	2.56	27,120	2.30	27,600
LPF24	3.06	37,200	5.44	51,240	4.26	45,240	3.84	46,080
LPF30	4.14	50,280	7.34	69,120	5.76	61,080	5.18	62,160
LPF32	4.59	55,920	8.16	76,800	6.40	67,800	5.75	69,000
LPF45	7.66	93,120	13.6	128,400	10.7	113,040	9.59	115,080
LPF52	10.7	130,800	19.0	178,800	14.9	158,400	13.4	160,800
LPF55	13.8	168,000	24.5	230,400	19.2	204,000	17.3	207,600
LPF62	16.8	205,200	29.9	282,000	23.4	248,400	21.1	253,200

Conditions: -10°F evap temperature, 100°F liquid temperature

## LPF SERIES | *Electric Expansion Valve*

### TECHNICAL DATA

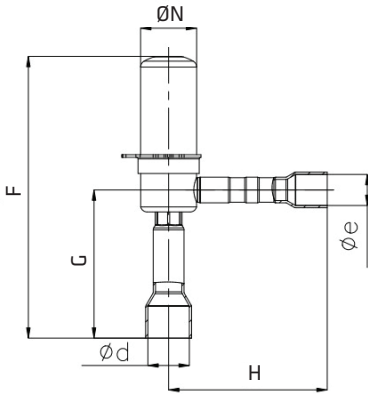
Stator Model	D=Cable length ft (m)	E=Insulation length ft (m)	Number of wires	Weights Oz (g)
PQ-M24012-000007	5 (1.5)	4.6 (1.4)	5	4.95 (140.2)
PQ-M24012-000008	10 (3.0)	8.9 (2.7)	5	
PQ-M24012-000009	20 (6.0)	17.8 (5.4)	5	
PQ-M24012-000010	30 (9.0)	26.7 (8.1)	5	



LPF(T)03-xxx through LPF(T)32-xxx

## LPF SERIES | Electric Expansion Valve

### TECHNICAL DATA



Valve Model	Dimensions					Weights Oz (g)
	"F"	"G"	"H"	Øe outlet	Ød outlet	
	inches (mm)	inches (mm)	inches (mm)	inches	inches	
LPF03-001	3.43 (87)	1.80 (45.8)	1.93 (49)	3/8	1/2	1.8 (52)
LPF05-001	3.43 (87)	1.80 (45.8)	1.93 (49)	3/8	1/2	1.8 (52)
LPF08-001	3.43 (87)	1.80 (45.8)	1.93 (49)	3/8	1/2	1.8 (52)
LPF08-002	3.43 (87)	1.80 (45.8)	1.93 (49)	1/4	1/4	1.6 (44)
LPF10-002	3.43 (87)	1.80 (45.8)	1.93 (49)	3/8	1/2	1.8 (52)
LPF10-003	3.43 (87)	1.80 (45.8)	1.93 (49)	1/4	3/8	1.7 (48)
LPF14-002	3.43 (87)	1.80 (45.8)	1.93 (49)	3/8	1/2	1.8 (52)
LPF14-003	3.43 (87)	1.80 (45.8)	1.93 (49)	1/4	3/8	1.7 (48)
LPF18-002	3.43 (87)	1.80 (45.8)	1.93 (49)	3/8	1/2	1.8 (52)
LPF24-002	3.43 (87)	1.80 (45.8)	1.93 (49)	3/8	1/2	1.8 (52)
LPF30-001	3.43 (87)	1.80 (45.8)	1.93 (49)	3/8	1/2	1.9 (53)
LPF32-001	3.43 (87)	1.80 (45.8)	1.93 (49)	3/8	1/2	1.9 (53)
LPF32-002	3.43 (87)	1.80 (45.8)	1.93 (49)	1/4	3/8	1.7 (48)
LPF45-001	4.57 (116)	2.46 (62.5)	2.25 (57.2)	5/8	5/8	3.7 (104)
LPF52-001	4.57 (116)	2.46 (62.5)	2.25 (57.2)	5/8	5/8	3.7 (104)
LPF55-001	4.57 (116)	2.46 (62.5)	2.25 (57.2)	5/8	5/8	3.7 (104)
LPF62-001	4.57 (116)	2.46 (62.5)	2.25 (57.2)	5/8	5/8	3.7 (104)
LPF03T-001	3.48 (88.5)	1.80 (45.8)	1.93 (49)	3/8	1/2	2.1 (60)
LPF05T-001	3.48 (88.5)	1.80 (45.8)	1.93 (49)	3/8	1/2	2.1 (60)
LPF08T-001	3.48 (88.5)	1.80 (45.8)	1.93 (49)	3/8	1/2	2.1 (60)
LPF08T-002	3.33 (84.5)	1.65 (41.8)	1.77 (45)	1/4	1/4	1.6 (45)
LPF10T-002	3.48 (88.5)	1.80 (45.8)	1.93 (49)	3/8	1/2	2.1 (60)
LPF10T-003	3.48 (88.5)	1.80 (45.8)	1.77 (45)	1/4	3/8	1.7 (49)
LPF14T-002	3.48 (88.5)	1.80 (45.8)	1.93 (49)	3/8	1/2	2.1 (60)
LPF14T-003	3.48 (88.5)	1.80 (45.8)	1.77 (45)	1/4	3/8	1.7 (49)
LPF18T-002	3.48 (88.5)	1.80 (45.8)	1.93 (49)	3/8	1/2	2.1 (60)
LPF24T-002	3.48 (88.5)	1.80 (45.8)	1.93 (49)	3/8	1/2	2.1 (60)
LPF30T-001	3.48 (88.5)	1.80 (45.8)	1.93 (49)	3/8	1/2	2.1 (60)
LPF32T-001	3.48 (88.5)	1.80 (45.8)	1.93 (49)	3/8	1/2	2.1 (60)
LPF32T-002	3.48 (88.5)	1.80 (45.8)	1.77 (45)	1/4	3/8	1.7 (49)