

PEV SERIES**PULSE EXPANSION VALVE**

PEV series pulse expansion valves are specially designed for use in refrigeration systems to precisely control the flow of refrigerant into the evaporator. Due to its solenoid valve structure, the flow is regulated by pulse width control (duration of on/off power).

**FEATURES**

- 90 BAR DESIGN FOR R744 REFRIGERANT
- LOWER KV VALUES CAN BE ACHIEVED (PEV0 IS ONLY 0.003M3/H)
- SOLENOID VALVE STRUCTURE, WITH DIRECT SHUT-OFF FUNCTION IN CASE OF SUDDEN POWER FAILURE
- THE VALVE BODY CAN BE REMOVED AND THE BUILT-IN FILTER CAN BE REPLACED FOR EASY CLEANING AND MAINTENANCE

GENERAL SPECIFICATIONS

- Applicable for all common HCFC, HFC and HFO refrigerants such as R134a, R22, R404A, R407A/F, R407C, R407H, R410A, R448A, R449A, R449B, R450A, R452A, R513A, R507A and R744 (Co2), but not applicable for R22
- Medium temperature TS min./max.: -60°C to +70°C (Outlet side of Valve)
- Ambient temperature min./max.: -40°C to +55°C
- Max. working pressure: 90 bar
- Min. OPD: 0 bar

PULSE EXPANSION VALVE



ELECTRICAL PARAMETERS

- Recommended period of cycle time: 6 seconds
- Regulation range (capacity range): 10%-100%
- Voltage range: -15%~10%
- Insulation class of coil: F
- Protection class: IP 67

GENERAL CHARACTERISTICS

Valve Model	U11 Code Multi-Pack	kV m3/h	MWP [Bar]	MOPD [Bar]	Dimensions		Weight (g)
				liquid state	Øe inlet	Ød outlet	
PEV0-1	10386000502	0.003	90	35* (35)**	3/8	1/2	185
PEV0-2	10386001602				10mm	12mm	
PEV1-1	10386000402	0.009			3/8	1/2	
PEV1-2	10386001502				10mm	12mm	
PEV2-1	10386000702	0.016			3/8	1/2	
PEV2-2	10386001402				10mm	12mm	
PEV3-1	10386000102	0.024		35* (30)**	3/8	1/2	
PEV3-2	10386001202			10mm	12mm		
PEV3.5-1	10386000802	0.035		30* (23)**	3/8	1/2	
PEV3.5-2	10386001302			10mm	12mm		
PEV4-1	10386000302	0.046		30* (18)**	3/8	1/2	
PEV4-2	10386001102			10mm	12mm		
PEV5-1	10386000602	0.064		25* (12)**	3/8	1/2	
PEV5-2	10386001002			10mm	12mm		
PEV6-1	10386000202	0.114		18* (8)**	3/8	1/2	
PEV6-2	10386000902			10mm	12mm		

*Maximum Operating Pressure Differential with nominal voltage / 50Hz and 60Hz

**Maximum Operating Pressure Differential with 85% of the nominal voltage / 50 Hz and 60Hz

PULSE EXPANSION VALVE



DIMENSIONS

Condition 1: Tc/Te/Sc/SH: 45oC/-10oC/2K/6K
0oC/-20oC/2K/6K for R744

Valve Model	Maximal Cooling Capacity [kW]							
	R134a	R404A	R407F	R448A	R449A	R450A	R452A	R513A
PEV0	0.26	0.23	0.36	0.32	0.32	0.22	0.24	0.21
PEV1	0.75	0.66	1.06	0.95	0.93	0.65	0.69	0.62
PEV2	1.32	1.16	1.86	1.66	1.63	1.15	1.22	1.08
PEV3	2.34	2.06	3.30	2.94	2.88	2.04	2.16	1.92
PEV3.5	2.96	2.61	4.18	3.73	3.66	2.58	2.74	2.44
PEV4	3.91	3.44	5.52	4.92	4.83	3.41	3.61	3.22
PEV5	5.44	4.80	7.69	6.86	6.72	4.74	5.03	4.48
PEV6	9.33	8.22	13.18	11.75	11.52	8.13	8.62	7.68

Valve Model	Maximal Cooling Capacity [kW]							
	R454B	R454C	R455A	R1234yf	R1234ze	R290	R410A	R744
PEV0	0.46	0.28	0.30	0.18	0.20	0.35	0.40	0.54
PEV1	1.34	0.81	0.88	0.53	0.58	1.01	1.15	1.57
PEV2	2.36	1.43	1.55	0.92	1.02	1.76	2.02	2.75
PEV3	4.18	2.53	2.75	1.64	1.80	3.13	3.58	4.88
PEV3.5	5.30	3.20	3.48	2.08	2.29	3.96	4.54	6.18
PEV4	6.99	4.23	4.59	2.74	3.02	5.23	6.00	8.16
PEV5	9.74	5.89	6.40	3.82	4.21	7.29	8.35	11.36
PEV6	16.69	10.09	10.97	6.54	7.21	12.49	14.31	19.48

PULSE EXPANSION VALVE



Condition 2: $T_c/T_e/S_c/S_H$: 45°C/-35°C/2K/6K
 -10°C/-40°C/2K/6K for R744

Valve Model	Maximal Cooling Capacity [kW]							
	R134a	R404A	R407F	R448A	R449A	R450A	R452A	R513A
PEV0	0.24	0.21	0.35	0.31	0.30	0.21	0.22	0.19
PEV1	0.71	0.61	1.02	0.90	0.88	0.60	0.63	0.57
PEV2	1.24	1.07	1.80	1.58	1.55	1.06	1.11	1.00
PEV3	2.20	1.90	3.18	2.80	2.74	1.87	1.97	1.76
PEV3.5	2.79	2.40	4.04	3.55	3.47	2.37	2.50	2.24
PEV4	3.68	3.17	5.33	4.69	4.58	3.13	3.30	2.95
PEV5	5.12	4.42	7.42	6.53	6.38	4.36	4.60	4.11
PEV6	8.78	7.58	12.71	11.19	10.94	7.47	7.88	7.05

Valve Model	Maximal Cooling Capacity [kW]							
	R454B	R454C	R455A	R1234yf	R1234ze	R290	R410A	R744
PEV0	0.47	0.26	0.28	0.16	0.18	0.33	0.40	0.62
PEV1	1.35	0.75	0.81	0.47	0.53	0.96	1.15	1.81
PEV2	2.38	1.32	1.43	0.82	0.93	1.69	2.02	3.17
PEV3	4.21	2.33	2.53	1.46	1.64	2.99	3.58	5.63
PEV3.5	5.34	2.96	3.21	1.85	2.08	3.80	4.54	7.13
PEV4	7.05	3.90	4.24	2.44	2.75	5.01	5.99	9.41
PEV5	9.82	5.44	5.91	3.40	3.82	6.98	8.35	13.11
PEV6	16.83	9.32	10.12	5.83	6.56	11.96	14.30	22.47

PULSE EXPANSION VALVE

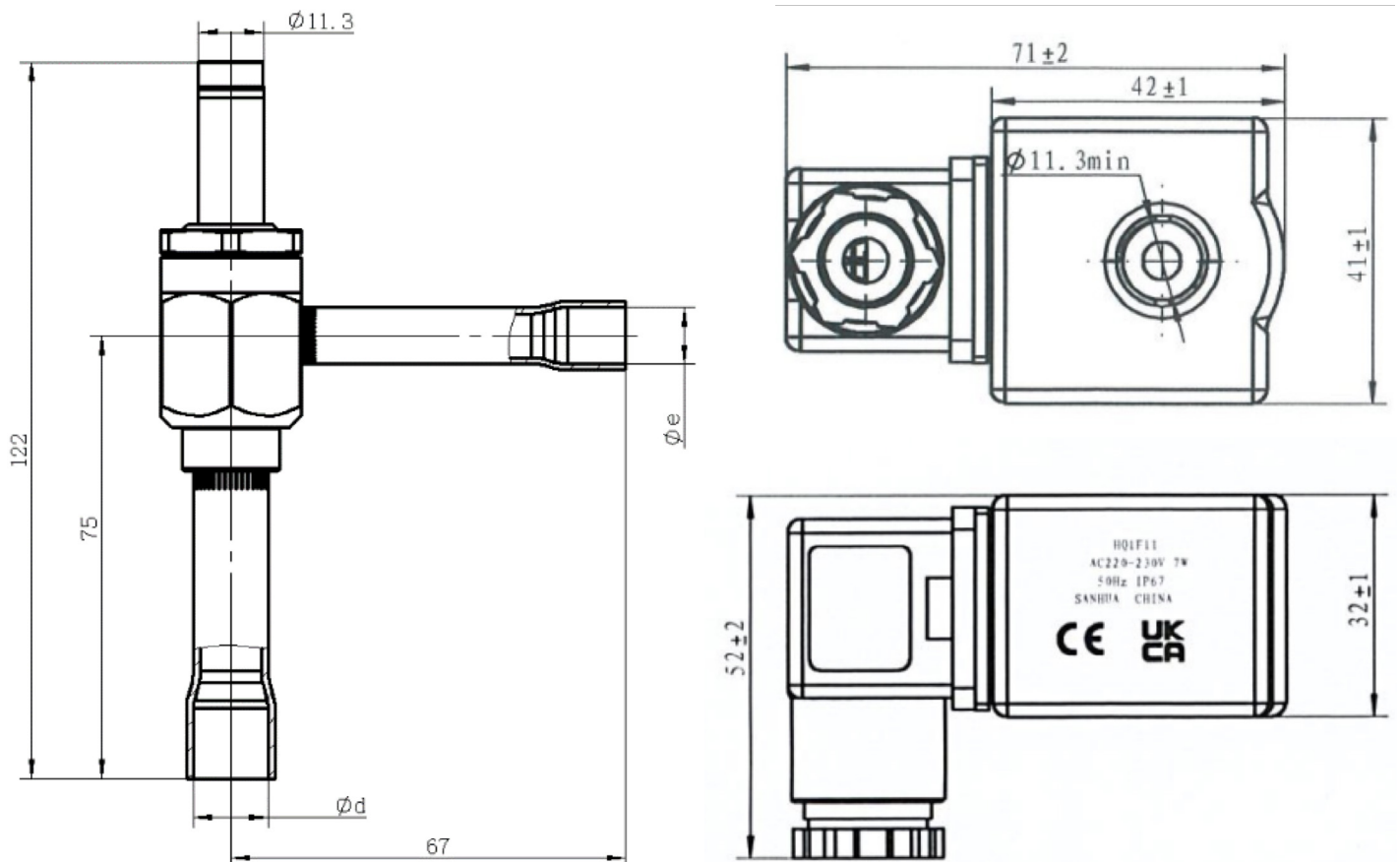


COIL MODEL

Model	U11 Code Multi-Pack	Rated Voltage	Frequency	Power	Insulation Class	Ingress Protection	Weight (g)
HQ1F11	10780001202	AC220~230V	50HZ	7W	F	IP 67	185.9
HQ1D17	10780001302	AC120V	50HZ	6W			
HQ1D80	10780001602	AC120V	60Hz	6w			
HQ1K17	10780001402	AC24V	50HZ	6W			
HQ1K80	10780001502	AC24V	60Hz	6w			

DIMENSIONS

(unit is mm)



PULSE EXPANSION VALVE



SPAREPARTS

Model	PEV-K01	PEV-K02	PEV-K03	PEV-K04	PEV-K05
U11 code	20386002302	20386002402	20386002702	20386002502	20386002602
picture					

ACCESSORY

Product	Description	U11 code
Solenoid valve tester	Permanent magnet for PEV (for installation and testing purpose)	10108000102

