


















ELECTRONIC EXPANSION VALVES: High Efficiency Products

	Valve Type <sup>1</sup>	Key words	Drive type	Performance						Fittings				Leakage rate			Refrigerants <sup>7</sup>			
				Capacity <sup>2</sup>	KV	MWP <sup>3</sup>	MOPD <sup>4</sup>	Refrigerant Temperature	Environment Temperature	Material	Ø	Connection	Mechanical Strainer	Internal <sup>5</sup> Direct Flow	Internal <sup>5</sup> Reverse Flow	External <sup>6</sup>	PED Group 2	PED Group 1		
				[kW] [Tons]	[m³/h] [GPM]	[barg] [PSig]	[bar] [PSI]	[°C] [°F]	[°C] [°F]					[cm³/min]	[cm³/min]	[gr/year]				
STANDARD	E2V - F		H	OEM design Hermetic SS Body	Unipolar or Bipolar	0.2÷58.5 0.056÷16.6	0.01÷0.37 0.01÷0.43	45 (UL) - 60 (PED) 650 (UL) - 870 (PED)	35 508	-40÷70 -40÷158	-30÷70 -22÷158	Copper	8mm IDM 5/16" 10mm IDM 12mm	Brazing	Optional	< 50	< 50	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R507A R452A R513A R744	R1234yf R32 R290 R600 R600a R452B R454A R454B R454C R455A
	E2V - B/U		H	All application Hermetic SS Body	Unipolar or Bipolar	0.2÷58.5 0.056÷16.6	0.01÷0.37 0.01÷0.43	45 (UL) - 60 (PED) 650 (UL) - 870 (PED)	35 508	-40÷70 -40÷158	-30÷70 -22÷158	Brass Copper	3/8"	SAE flare	Optional	< 50	< 50	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R507A R452A R513A R744	R1234yf R32 R290 R600 R600a R452B R454A R454B R454C R455A
	E2V - Z		D	Demountable Modular install IP69k stator OneBodySize Filter included	Unipolar or Bipolar	0.25÷69.6 0.071÷19.8	0.012÷0.44 0.012÷0.55	45 (UL) - 60 (PED) 650 (UL) - 870 (PED)	35 508	-40÷70 -40÷158	-30÷70 -22÷158	Copper	12mm 16mm 5/8"	Brazing	AISI 304 150µm	< 50	< 50	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R507A R452A R513A R744	R1234yf R32 R290 R600 R600a
	E3V - B		H	All application Hermetic SS Body	Unipolar or Bipolar	6÷201 1.7÷57.3	0.31÷1.27 0.36÷1.46	45 (UL) - 60 (PED) 650 (UL) - 870 (PED)	40 580	-40÷70 -40÷158	-30÷70 -22÷158	Copper	16mm 5/8" 22mm 7/8"	Brazing	Optional	< 100	< 100	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R507A R452A R513A R744	R1234yf R32 R290 R600 R600a R452B R454A R454B R454C R455A
	E3V - S		D	Demountable Modular install Filter included	Unipolar or Bipolar	11÷210 3.1÷60.1	0.53÷1.33 0.61÷1.53	45 (UL) - 60 (PED) 650 (UL) - 870 (PED)	35 508	-40÷70 -40÷158	-30÷70 -22÷158	Copper	16mm 5/8" 22mm 7/8"	Brazing	AISI 304 150µm	< 100	< 100	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R452A R507A R513A	R1234yf
	E4V		D	Demountable Modular install	Bipolar	36÷403 10.3÷114.8	1.77÷2.55 2.05÷2.95	45 (UL) - 45 (PED) 650 (UL) - 650 (PED)	35 508	-40÷70 -40÷158	-30÷70 -22÷158	Copper	28-35mm 1.1/8-1.3/8"	Brazing	n.a	< 50	< 80	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R452A R507A R513A	R1234yf
	E4V - F		H	OEM design Hermetic	Bipolar	34÷360 9.7÷102.6	1.68÷2.28 1.94÷2.64	48 (UL) - 48 (PED) 696 (UL) - 696 (PED)	40 580	-40÷70 -40÷158	-30÷70 -22÷158	Copper	28mm 1.1/8" 1.3/8"	Brazing	n.a	< 50	< 80	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R452A R507A R513A	R1234yf R32 R290 R600 R600a R452B R454A R454B R454C R455A
	E5V		D	Modular install SightGlass Big capacities	Bipolar	86÷965 24.5÷275.0	4.2÷6.1 4.8÷7.1	45 (UL) - 45 (PED) 650 (UL) - 650 (PED)	35 508	-40÷70 -40÷158	-30÷70 -22÷158	Copper	1.3/8"	Brazing	n.a	< 100	< 200	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R452A R507A R513A	R1234yf
	E6V		D		Bipolar	194÷1850 55.3÷527.0	9.5÷11.7 11.0÷13.5	45 (UL) - 45 (PED) 650 (UL) - 650 (PED)	28 406	-40÷70 -40÷158	-30÷70 -22÷158	Copper	1.3/8" 42mm 1.5/8"	Brazing	n.a	< 100	< 200	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R452A R507A R513A	R1234yf
	E7V		D		Bipolar	319÷2989 90.9÷851.6	15.6÷18.9 18.0÷21.9	42 (UL) - 45 (PED) 609 (UL) - 650 (PED)	28 406	-40÷70 -40÷158	-30÷70 -22÷158	Copper	1.5/8" 2.1/8"	Brazing	n.a	< 100	< 200	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R452A R507A R513A	R1234yf
E7V TWIN		D	Bipolar		637÷6234 181.5÷1776.0	15.6÷37.8 18.0÷43.8	25 (UL) - 25 (PED) 360 (UL) - 360 (PED)	28 406	-40÷70 -40÷158	-30÷70 -22÷158	Copper	3"ODF	Brazing	n.a	< 100	< 200	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R452A R507A R513A	R1234yf	
CO <sub>2</sub>	E2V - CS		H	Hermetic All SS HighPressures TwoFittingsTypes	Bipolar	0.2÷23.72 0.057÷6.76	0.01÷0.15 0.01÷0.29	140 (UL) - 140 (PED) 1305 (UL) - 1305 (PED)	120 1740	-40÷70 -40÷158	-30÷70 -22÷158	AISI 316	10mm 13.1mm IDF	TIG Swagelok	Optional	< 50	< 50	< 2	R134a R22 R404A R407C R407H R410A R417A R507A R744	n.a
	E3V - C		D	Demountable Filter included HighPressures All SS	Bipolar	7.5÷174.0 2.1÷49.6	0.37÷1.10 0.43÷1.26	120 (UL) - 140 (PED) 1740 (UL) - 2030 (PED)	90 1305	-40÷70 -40÷158	-30÷70 -22÷158	AISI 316	5/8" 7/8"	TIG	AISI 304 150µm	< 150	n.a	< 2	R744	n.a
HOT GAS	E2V - H		D	HighTemp. Demountable Modular install Filter included	Bipolar	1.1÷74.8 0.03÷21.3	0.05÷0.47 0.058÷0.54	45 (UL) - 60 (PED) 650 (UL) - 870 (PED)	35 508	-40÷100 -40÷215	-30÷70 -22÷158	Copper	12mm 16mm 5/8"	Brazing	AISI 304 150µm	n.a	n.a	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R507A R452A R513A R744	R1234yf
	E3V - H		D	HighTemp. Demountable Modular install Filter included	Bipolar	11÷210 3.1÷59.8	0.53÷1.33 0.61÷1.54	45 (UL) - 60 (PED) 650 (UL) - 870 (PED)	35 508	-40÷100 -40÷215	-30÷70 -22÷158	Copper	12mm 16mm 5/8"	Brazing	AISI 304 150µm	n.a	n.a	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R507A R452A R513A R744	R1234yf
	E4V - H		D	HighTemp. Demountable Modular install	Bipolar	38÷403 10.8÷114.8	1.88÷2.55 2.16÷2.93	45 (UL) - 45 (PED) 650 (UL) - 650 (PED)	35 508	-40÷100 -40÷215	-30÷70 -22÷158	Copper	28-35mm 1.1/8-1.3/8"	Brazing	n.a	n.a	< 2	R1234ze R134a R22 R404A R407C R407H R410A R417A R427A R448A R449A R450A R507A R452A R513A R744	R1234yf	
AMMONIA	E2V - BS		H	Hermetic All SS	Bipolar	0.2÷58.5 0.056÷16.6	0.01÷0.37 0.01÷0.43	45 (UL) - 60 (PED) 650 (UL) - 870 (PED)	26 377	-40÷70 -40÷158	-30÷70 -22÷158	AISI 316	10mm 13.1mm IDF	TIG	Optional	< 50	< 50	< 2	R1234ze R134a R22 R404A R407C R410A R417A R448A R449A R450A R507A R513A R744	R717 R1234yf R290 R600 R600a

Notes:

1. H : Hermetic ; D : Demountable
2. Capacity refers to : R410A t<sub>ev</sub> = 7°C (45°F) t<sub>cond</sub> = 45°C (113°F) SC = 5 K (9°R)
3. MWP may decrease for some Group 1 Refrigerants
4. MOPD may decrease with bigger orifices for the same valve or certification
5. Internal leakage rate of N2 @ DP 30 bar
6. External leakage rate of R134a @ P = 45 barg
7. Refrigerants list may vary

For further details see products technical leaflets available on our website or contact us at [carel@carel.com](mailto:carel@carel.com)

Valve proposition	
B/U	Hermetically sealed for all applications
F	Hermetically sealed designed for OEMs
S/Z	Modular installation with filter included
C/CS	For high pressure installations
H	Designed for high temperature applications
E4V, E5V, E6V, E7V	Demountable for high capacity applications

Referring to R410A T <sub>ev</sub> : 7°C, T <sub>cond</sub> : 45°C, SK: 5K					Correction Factors kW = kW <sub>REF</sub> / CF
R32	R1234yf	R1234ze	R407C	R417A	
0,67	2,05	1,87	0,16	1,50	(kW <sub>REF</sub> relative to Capacity column)
Referring to R134A T <sub>ev</sub> : -10°C, T <sub>cond</sub> : 45°C, SK: 5K					
R404A	R717	R290	R448A	R449A	(kW <sub>REF</sub> relative to Capacity column)
1,14	0,15	0,75	0,81	0,82	