

		Valve Type ¹	Key words	Drive type	Performance						Fittings				Leakage rate			Refrigerants ⁷	
					Capacity ²	KV	MWP ³	MOPD ⁴	Refrigerant Temperature	Environment Temperature	Material	Ø	Connection	Mechanical Strainer	Internal ⁵ Direct Flow	Internal ⁵ Reverse Flow	External ⁶	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 3/8" 1/2" 10mm IDM 12mm 16mm	Brazing	Optional	< 50	< 50	< 2	R1233zd R1234ze R134a R22 R404A R407A R407C R407E R407F R407H R410A R417A R427A R448A R449A R450A R507A R452A R513A R744	R1234yf R1270 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) - 80 (PED) 650 (UL) - 870 (PED)	35 508	-40÷70 -40÷158	-30÷70 -22÷158	Copper	12mm 16mm 5/8" 1/2"	Brazing	AISI 304 150µm	< 50	< 50	< 2	R1234ze R134a R22 R404A R407A R407C R407E R407F R407H R410A R417A R427A R448A R449A R450A R507A R452A R513A R744	R1234yf R32 R290 R452B R454A R454B R454C R455A 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	R1233zd R1234ze R134a R22 R404A R407A R407C R407E R407F R407H R410A R417A R427A R448A R449A R450A R507A R452A R513A R744	R1234yf R1270 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	18-22mm 7/8"-1/8" 22-28mm 3/4"-7/8"	Brazing	AISI 304 150µm	< 100	< 100	< 2	R1234ze R134a R22 R404A R407A R407C R407E R407F R407H R410A R417A R427A R448A R449A R450A R452A R507A R513A	R1234yf R452B R454A R454B R454C R455A R32
	E4V-B	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 R407A R407C R407E R407F 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	28-35mm 1.1/8" 1.3/8"	Brazing	n.a	< 50	< 80	< 2	R1233zd R1234ze R134a R22 R404A R407A R407C R407E R407F R407H R410A R417A R427A R448A R449A R450A R452A R507A R513A	R1234yf R1270 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	35mm	Brazing	n.a	< 100	< 200	< 2	R1234ze R134a R22 R404A R407A R407C R407E R407F 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	35-42mm 1.5/8"	Brazing	n.a	< 100	< 200	< 2	R1234ze R134a R22 R404A R407A R407C R407E R407F 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	54mm 1.5/8"	Brazing	n.a	< 100	< 200	< 2	R1234ze R134a R22 R404A R407A R407C R407E R407F 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 R407A R407C R407E R407F R407H R410A R417A R427A R448A R449A R450A R452A R507A R513A	R1234yf
CO ₂	E2V-C	H	Hermetic All SS HighPressures TwoFittingsTypes Demountable	Unipolar or 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 12mm 13.1mm IDF 3/8"	TIG Swagelok Brazing	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	Unipolar or 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	18-22mm 22-28mm 3/4"-7/8" 7/8"-1/8"	Brazing	AISI 304 150µm	n.a	n.a	< 2	R1234ze R134a R22 R404A R407A R407C R407E R407F R407H R410A R417A R427A R448A R449A R450A R507A R452A R513A R744	R1234yf R452B R454A R454B R454C R455A
	E3V - H	D	HighTemp. Demountable Modular install Filter included	Unipolar or 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 R407A R407C R407E R407F R407H R410A R417A R427A R448A R449A R450A R507A R452A R513A R744	R1234yf R452B R454A R454B R454C R455A
	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	n.a	< 2	R1234ze R134a R22 R404A R407A R407C R407E R407F 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_{ev} = 7°C (45°F) t_{cond} = 45°C (113°F) SC = 5 K (9°R)

3. MWP may decrease for some Group 1 Refrigerants or for some specific models

4. MOPD may decrease with bigger orifices for the same valve or certification or motor
5. Internal leakage rate of N2 @ DP 30 bar

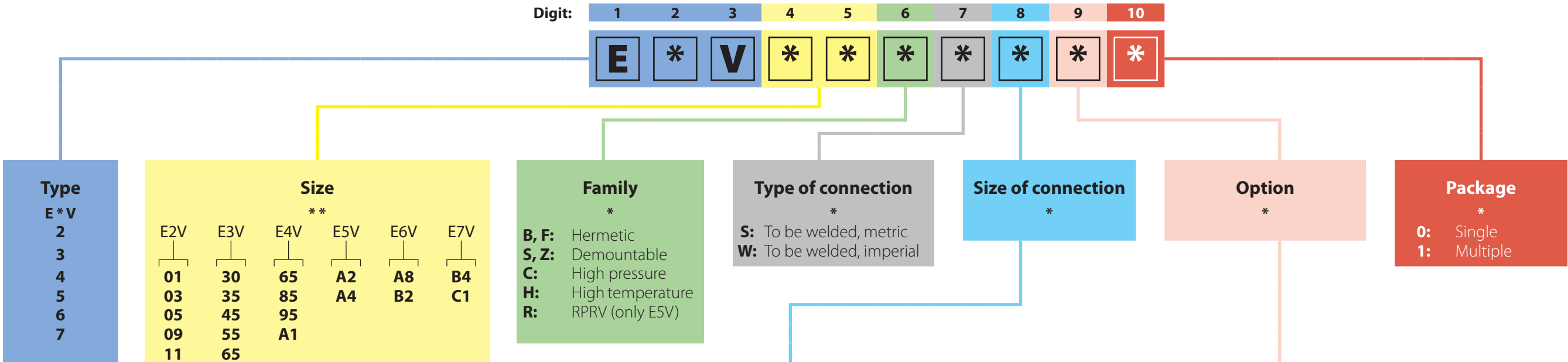
6. External leakage rate of R134a @ P = 45 barg

7. Refrigerants list may vary

For further details see products technical leaflets available on our website or contact us at carel@carel.com

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



Type of connection	Inlet/Outlet	E2V-F	E2V-S/-Z/-H	E2V-C	E3V-H/-S	E3V-C	E3V-B	E4V-B/-H	E4V-F	E5V	E6V	E7V
S (mm)	8x8 (5/16")	A										
	10x10	B	0									
	12x12	F	F	F								
	13x13			1								
	16x16 (5/8")	M	M				M					
	18x22				R							
	22x22						R					
	22x28				S							
	28x28								S			
	28x35							T				
	35x35 (1.3/8")								T			
	35x35									T	T	
W (inches)	42x42										V	
	54x54											Z
	3/8x3/8	A		A								
	1/2x1/2	F	F									
	3/4x7/8				R							
	7/8x1/8				S							
	7/8x7/8					R	R					
	5/8x5/8					M						
	1.1/8x1.1/8								S			
	1.1/8x1.3/8							T				
	1.1/8x1.5/8										V	V

Type	E2V				E3V			E4V	E5V	E6V/E7V
Family	S/Z	C	F	H	S/H	C	B	-	-	-
Option (*)	0	Bip, W SG	Bip	Bip		Bip, W SG	Bip		W SG	W SG
	1	Bip, W/O SG		Uni, CL 1m	Bip, W/O SG	Bip, W/O SG		Bip	W/O SG	W/O SG
	2	Uni, W SG, CL 1m		Uni, CL 2m		Uni, W SG, CL 1m				
	3	Uni, W/O SG, CL 1m		Uni, CL 0.3m		Uni, W/O SG, CL 1m		Uni, W/O SG, CL 1m		
	4	Uni, W SG, CL 2m		Uni, CL 0.7m		Uni, W SG, CL 2m			W SG, W gas HNBR	W SG, W gas HNBR
	5	Uni, W/O SG, CL 2m				Uni, W/O SG, CL 2m		Uni, W/O SG, CL 2m		
	6	Uni, W SG, CL 3m				Uni, W SG, CL 3m				
	7	Uni, W/O SG, CL 3m				Uni, W/O SG, CL 3m		Uni, W/O SG, CL 3m		
	A	W/O S, W SG							W/O S, W SG	
	B	W/O S, W/O SG							W/O S, W/O SG	
	C		W/O S	W/O S	W/O S	W/O S, W/O SG		W/O S		

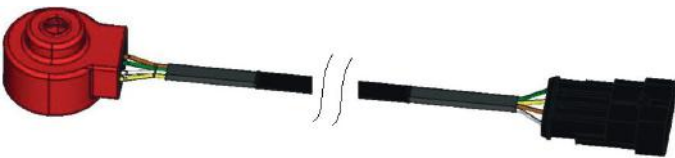
Note: W/O = without; W = with; S= stator; SG = sight glass; Uni. = unipolar; Bip. = bipolar; CL = cable length; gas. = gasket

Images herein attached are exemplifying and do not represent the whole Carel's portfolio

E2VSTA031* - E2VSTA032* - E2VSTA037*



E2VSTAS23*



E2VSTA020*



STATOR							
EEV Family	Code	Unipolar	Bipolar	Stator IP	Cable	Length [m]	Terminal
E2V	E2VSTA031*	●		67	YES	1	JST
	E2VSTA032*	●		67	YES	2	JST
	E2VSTA033*	●		67	YES	0.3	Superseal
	E2VSTA037*	●		67	YES	0.7	JST
	E2VSTAS31*	●		69K	YES	1	JST
	E2VSTAS32*	●		69K	YES	2	JST
	E2VSTAS33*	●		69K	YES	0.3	Superseal
	E2VSTA020*		●	67	NO	-	-
	E2VSTAS22*		●	69K	YES	2	Free
	E2VSTAS23*		●	69K	YES	0.3	Superseal
E3V	E3VSTA031*	●		67	YES	1	JST
	E3VSTA032*	●		67	YES	2	JST
	E3VSTA033*	●		67	YES	0.3	Superseal
	E3VSTA035*	●		67	YES	0.5	Superseal
	E3VSTA020*		●	67	NO	-	-
E4V&E7V	E4VE7VSTA*		●	67	NO	-	-
E5V&E6V	E5VE6VSTA*		●	67	NO	-	-

Note: Last digit = 0 : single pack; Last digit = 1 : multiple pack

E2VCAB**00



E2VCAB**10



E2VCABS*U0



CABLES						
Code	Unipolar	Bipolar	Shield	Length [m]	Stator	Driver
E2VCAB0300		●	NO	3	Direct	Free
E2VCAB0310		●	NO	3	Superseal	Free
E2VCAB0600		●	NO	6	Direct	Free
E2VCAB0610		●	NO	6	Superseal	Free
E2VCAB0900		●	NO	9	Direct	Free
E2VCAB0910		●	NO	9	Superseal	Free
E2VCABS300		●	YES	3	Direct	Free
E2VCABS310		●	YES	3	Superseal	Free
E2VCABS600		●	YES	6	Direct	Free
E2VCABS610		●	YES	6	Superseal	Free
E2VCABS900		●	YES	9	Direct	Free
E2VCABS910		●	YES	9	Superseal	Free
E2VCABSA50		●	YES	15	Direct	Free
E2VCABS3U0	●		YES	3	Superseal	JST
E2VCABS6U0	●		YES	6	Superseal	JST
E2VCABS9U0	●		YES	9	Superseal	JST

For further details see products technical leaflets available on our website or contact us at carel@carel.com

ExV - VALVES COMPONENTS DESCRIPTION

Accessory	Description
E2VFIL0000	AISI 304 wired mesh 500 um filter 3/8" (10 pcs)
E2VFIL0100	AISI 304 wired mesh 500 um filter 12 mm (10 pcs)
E2VFIL0200	AISI 304 wired mesh 500 um filter 16 mm (10 pcs)
E2VFIL0300	AISI 304 wired mesh 500 um filter 3/8" (10 pcs)
E2VFIL0400	AISI 304 wired mesh 150 um filter (10 pcs)
E3VFIL0000	AISI 304 wired mesh 500 um filter for E3V (10 pcs)
E3VFIL0100	AISI 304 wired mesh 200 um filter for E3V-C
E3VFIL0200	AISI 304 wired mesh 200 um filter 22 mm or 7/8" for E3V-B
E2VORI0000	O-Ring 11.1X1.78 mm (neoprene) and teflon gasket (20 pcs)
E2VORI0100	O-Ring 8.73X1.78 mm (neoprene), O-Ring 11.1X1.78 mm (neoprene) and teflon gasket (10 pcs)

Accessory	Description
E3VORI0300	O-Ring 2.62X20.29 mm (EPDM) (10 pcs)
E3VORI0600	O-Ring 11.1X1.78 mm (neoprene) and teflon gasket (10 pcs)
E4VORI0000	O-Ring 1.78X20.35 mm (neoprene) and O-Ring 28.25X2.62 mm (neoprene) (20 pcs)
E5VORI0100	O-Ring 1.78X20.35 mm (neoprene) and O-Ring 20X2X24 mm (neoprene) (10 pcs)
E7VORI0000	O-Ring 1.78X20.35 mm (neoprene) and O-Ring 34.59X2.62 mm (neoprene) (20 pcs)
E2VSGH0000	Sightglass for E2V and E3V
E4VSGH0000	Sightglass for E4V E5V E6V and E7V
E4VSGH0010	Sightglass for E4V E5V E6V and E7V with hum. indicator

Accessory	Description
E2VATT**H0	E2V-H spare actuator (**: valve size)
E2VATT**S0	E2V-S spare actuator (**: valve size)
E3VATT**H0	E3V-H spare actuator (**: valve size)
E3VATT**C0	E3V-C spare actuator (**: valve size)
E3VATT**S0	E3V-S spare actuator (**: valve size)
E2VATT**Z*	E2V-Z spare actuator (**: valve size, last digit: 0 = 1 pc; 1 = 10 pcs)
E4VATT**B0	E4V-B spare actuator (**: valve size)
E4VATT**H0	E4V-H spare actuator (**: valve size)
E5VATT***0	E5V spare actuator (***: valve size)
E6VATT****	E6V spare actuator (***: valve size, last digit: 0 = 1 pc; 1 = 5 pcs)

Accessory	Description
E7VATT****	E7V spare actuator (***: valve size, last digit: 0=1 pc; 1=5 pcs)
E2VNUT0200	Fastening nut for E2V and E3V (20 pcs)
E2VNUT0300	Fastening nut for E2V and E3V (100 pcs)
E4VNUT0000	Fastening nut for E4V, E5V, E6V and E7V (20 pcs)
E4VNUT0100	Fastening nut for E4V, E5V, E6V and E7V (100 pcs)
E2VMAG0000	Manual actuator for E2V
E3VMAG0000	Manual actuator for E3V, E5V and E6V
E4VMAG0000	Manual actuator for E4V and E7V
EEVMAG0000	Manual actuators for E2V, E3V, E4V, E5V, E6V and E7V

Legend:

Filter

O-Ring

Sight glass (including O-Ring)

Actuator (Includes filer (only for E2V and E3V) and O-Ring)

Nut

Magnet

					Filter								O-Ring							Sight glass ^a			Actuator ^b										Nut				Magnet								
					E2VFIL0000	E2VFIL0100	E2VFIL0200	E2VFIL0300	E2VFIL0400	E3VFIL0000	E3VFIL0100	E3VFIL0200	E2VORI0000	E2VORI0100	E3VORI0300	E3VORI0600	E4VORI0000	E5VORI0100	E7VORI0000	E2VSGH0000	E4VSGH0000	E4VSGH0010	E2VATT**H0	E2VATT**S0	E2VATT**Z*	E3VATT**H0	E3VATT**C0	E3VATT**S0	E4VATT**B0	E4VATT**H0	E5VATT***0	E6VATT****	E7VATT****	E2VNUT0200	E2VNUT0300	E4VNUT0000	E4VNUT0100	E2VMAG0000	E3VMAG0000	E4VMAG0000	EEVMAG0000				
STANDARD	E2V**		F	S	A/B/F																																								
			W	F																																									
			S	F/M																																									
			W	F																																									
	E2V**		S	S	F/M																																								
			W	F																																									
	E2V**		Z	S	F/M																																								
			W	F																																									
	E3V**		B	S	M																																								
			W	R																																									
E3V**		S	S/W	R/S																																									
E4V**		B	S	T																																									
		W																																											
E4V**		F	S	S/T																																									
		W	S																																										
E5V**		A	S	T																																									
E6V**		A	S	T/V																																									
		W	V																																										
E7V**		A	S	Z																																									
		W	V																																										
CO ₂	E2V**		C	S	0																																								
			1/F																																										
	Z		0																																										
	W		A																																										
E3V**		C	W	M																																									
		R																																											
HOT GAS	E2V**		H	S	F/M																																								
			W																																										
	E3V**		H	S	R/S																																								
	W		T																																										
E4V**		H	S	T																																									
		W																																											
AMMONIA	E2V**		B	S	0																																								
			1																																										

Notes:

- **:
- a:
- b:

Filter



O-Ring



Sight glass



Actuator



Nut



Magnet



Images here in attached are exemplifying and do not represent the whole Carel's portfolio.

For further details see products technical leaflets available on our website or contact us at carel@carel.com