

Description

Compact ejector with integrated vacuum and blow-off valve, exchangeable vacuum filter and a vacuum sensor with LED display to supervise the underpressure and display the condition of switching exit and solenoid valves. There are 4 powers available with high grade of evacuation (HV) or high suction volume (HS).

Vacuum valve

The compressed air supply is controlled by solenoid valve. This valve is available with functions NC/NO. Control via switching entrance of a higher system.

- NC - Vacuum is generated with active voltage
- NO - Vacuum is generated with inactive voltage

Blow-off impulse

A second integrated solenoid valve opens the blow-off impulse whose intensity is adjustable. Control via switching entrance of a higher system.

Vacuum sensor

The integrated vacuum sensor possesses a digital switching exit, configured as a threshold comparator. The switching function is configured as a threshold comparator. The switching point is set at teach funktion minus a reserve of 35%. The hysteresis to the switching point has a fixed value of 20 mbar.

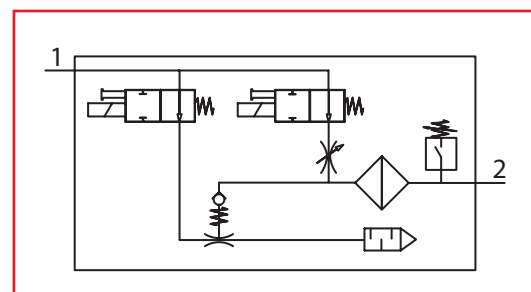
- $SP = TP - 35\% * TP$

Air saving automatic

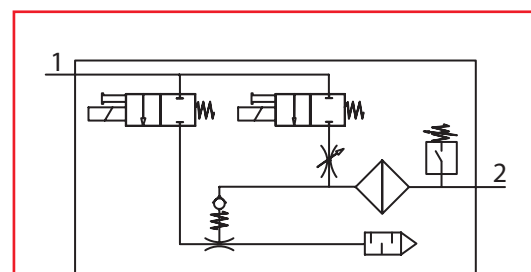
A higher control can also establish an air saving automatic in the range of the reserve. If the vacuum exceeds the switching point it can be shut off. On again reaching the switching point the vacuum valve is re-activated and vacuum is again created.



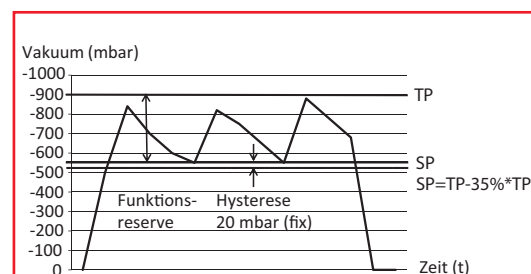
FEK-VE-05 ... FEK-VE-15



Switching diagram FEK-VE-05 ... FEK-VE-15-NO



Switching diagram FEK-VE-05 ... FEK-VE-15-NC



Principle of external air saving automatic

Article number

Type	High vacuum HV	High suction volume HS
FEK-VE-05- ... -NO-1P	1.44.3.0063	1.44.3.0036
FEK-VE-05- ... -NO-1N	1.44.3.0064	1.44.3.0035
FEK-VE-05- ... -NC-1P	1.44.3.0050	1.44.3.0034
FEK-VE-05- ... -NC-1N	1.44.3.0049	1.44.3.0033
FEK-VE-07- ... -NO-1P	1.44.3.0054	1.44.3.0040
FEK-VE-07- ... -NO-1N	1.44.3.0053	1.44.3.0039
FEK-VE-07- ... -NC-1P	1.44.3.0052	1.44.3.0038
FEK-VE-07- ... -NC-1N	1.44.3.0051	1.44.3.0037
FEK-VE-10- ... -NO-1P	1.44.3.0058	1.44.3.0044
FEK-VE-10- ... -NO-1N	1.44.3.0057	1.44.3.0043
FEK-VE-10- ... -NC-1P	1.44.3.0056	1.44.3.0042
FEK-VE-10- ... -NC-1N	1.44.3.0055	1.44.3.0041
FEK-VE-15- ... -NO-1P	1.44.3.0062	1.44.3.0048
FEK-VE-15- ... -NO-1N	1.44.3.0061	1.44.3.0047
FEK-VE-15- ... -NC-1P	1.44.3.0060	1.44.3.0046
FEK-VE-15- ... -NC-1N	1.44.3.0059	1.44.3.0045

Technical data

Type	Vacuum* (mbar)	Suction volume*		Air consumption*		Pressure** (bar)		Noise level* dB (A)	Temp. (°C)	Weight (kg)
		(m³/h)	(l/s)	(m³/h)	(l/s)	max.	opt.			
FEK-VE-05-HV ...	-930	0,36	0,10	0,47	0,13	2 ... 8	5,1	51	0 ... +50	0,365
FEK-VE-05-HS ...	-620	0,78	0,22	0,58	0,16	2 ... 8	6,0	45	0 ... +50	0,365
FEK-VE-07-HV ...	-930	0,96	0,27	1,26	0,35	2 ... 8	4,1	58	0 ... +50	0,365
FEK-VE-07-HS ...	-750	1,89	0,53	1,73	0,48	2 ... 8	6,0	53	0 ... +50	0,365
FEK-VE-10-HV ...	-930	1,12	0,31	2,19	0,61	2 ... 8	3,5	73	0 ... +50	0,370
FEK-VE-10-HS ...	-880	2,70	0,75	3,17	0,88	2 ... 8	6,0	64	0 ... +50	0,370
FEK-VE-15-HV ...	-930	3,03	0,84	4,57	1,27	2 ... 8	3,6	77	0 ... +50	0,370
FEK-VE-15-HS ...	-900	5,32	1,48	6,91	1,92	2 ... 8	6,0	70	0 ... +50	0,370

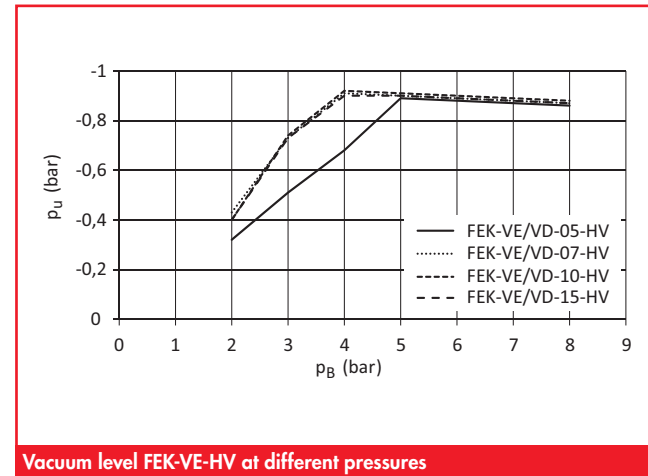
* at optimum pressure

** dry, filtered, oil-free compressed air

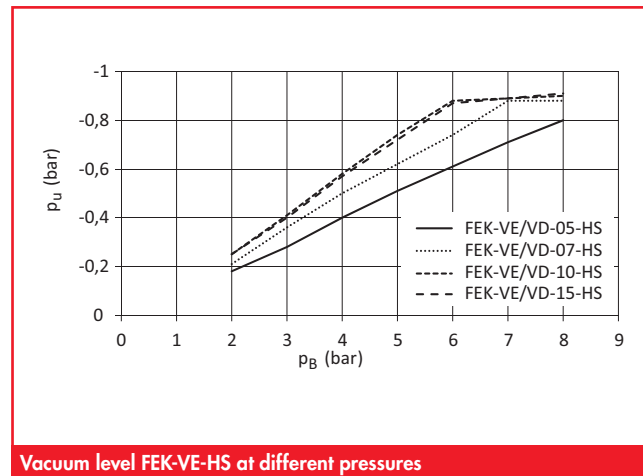
Technical data vacuum sensor VE

Operating voltage range:	(V DC)	20,4 ... 27,6	Electrical connection:	M12x1, 5-polig
max. exit current:	(mA)	100	Switching exit:	1xPNP, 1xNPN
residual current:	(mA)	< 0,1	Switch element function:	closer
Switching time on/off:	(ms)	< 4	Switching function:	threshold comparator
Threshold range	(bar)	-1 ... 0	Switching cond. display:	optical
Hysteresis range	(bar)	fest, 20 mbar	Display type:	LED
Switching precision	% FS*	1,5	Pole safety:	for all electrical connections
Repeat precision:	% FS*	0,6	Safety type:	IP 65

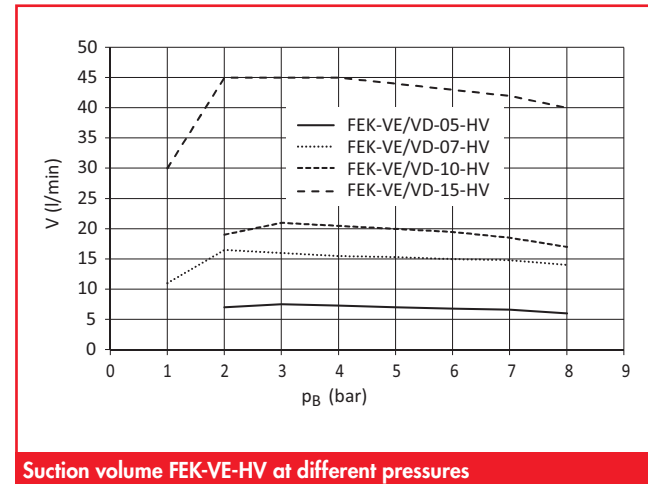
Compact ejector FEK-VE



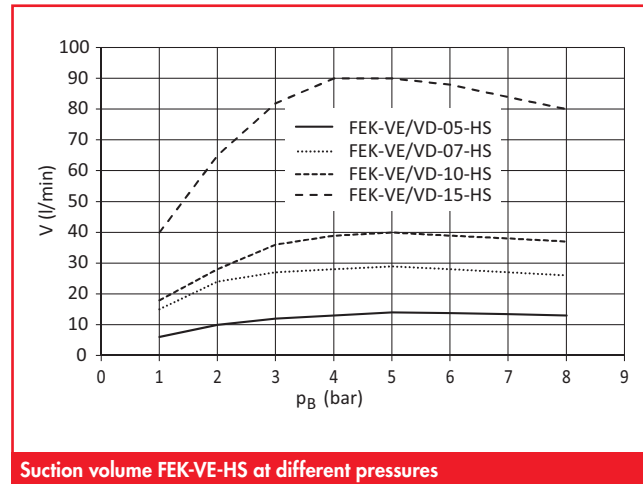
Vacuum level FEK-VE-HV at different pressures



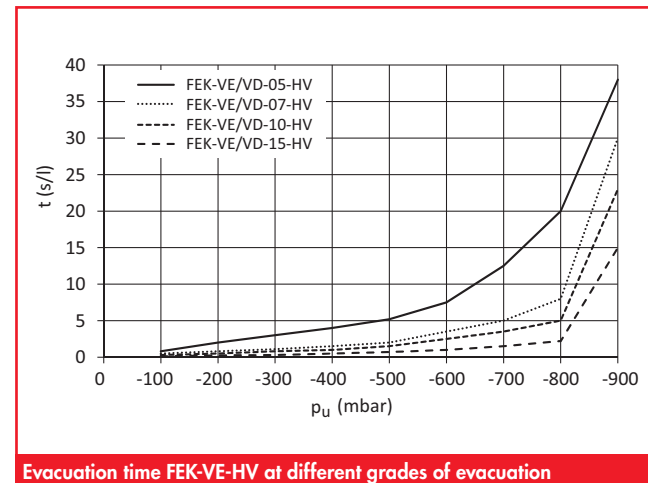
Vacuum level FEK-VE-HS at different pressures



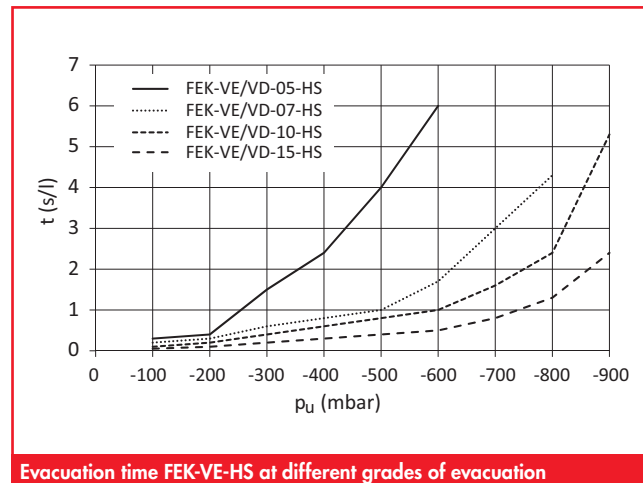
Suction volume FEK-VE-HV at different pressures



Suction volume FEK-VE-HS at different pressures

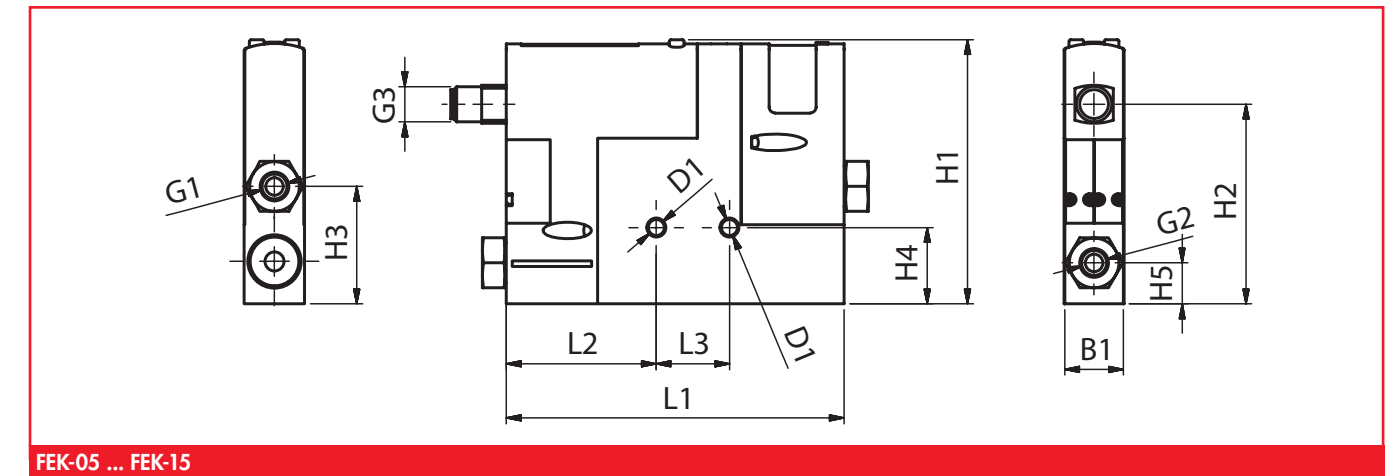


Evacuation time FEK-VE-HV at different grades of evacuation



Evacuation time FEK-VE-HS at different grades of evacuation

Compact ejector FEK-VE



FEK-05 ... FEK-15

Dimensions

Type	L1	L2	L3	B1	H1	H2	H3	H4	H5	D1	G1	G2	G3
FEK-VE-05- ...	115	51	25	20,5	90	68	40	26	14,5	5,5	6	6	M12x1
FEK-VE-07- ...	161	51	25	20,5	90	68	40	26	14,5	5,5	8	8	M12x1
FEK-VE-10- ...	161	51	25	20,5	90	68	40	26	14,5	5,5	8	8	M12x1
FEK-VE-15- ...	161	57	25	20,5	90	68	40	26	14,5	5,5	8	8	M12x1

Evacuation and ventilation time (s) for 1l volume

Type	Vacuum level (mbar)									Ventilation time at max. vacuum level*
	-100	-200	-300	-400	-500	-600	-700	-800	-900	
FEK-VE-05-HV	1,0	2,0	3,0	4,0	6,0	7,5	12,5	18	0,02	
FEK-VE-05-HS	0,3	0,8	1,5	2,4	4,0	6,0	---	---	0,02	
FEK-VE-07-HV	0,5	1,0	1,5	2,0	2,5	3,5	5,0	8,0	0,01	
FEK-VE-07-HS	0,2	0,3	0,6	0,8	1,0	1,6	3,0	---	0,01	
FEK-VE-10-HV	0,4	0,9	1,3	1,6	2,0	2,8	3,8	5,0	0,01	
FEK-VE-10-HS	0,1	0,2	0,4	0,6	0,8	1,0	1,3	2,4	0,01	
FEK-VE-15-HV	0,3	0,5	0,8	1,0	1,3	1,6	1,9	2,5	0,01	
FEK-VE-15-HS	0,1	0,1	0,2	0,3	0,4	0,6	0,8	1,1	0,01	

* at optimum pressure with max. blow-off impulse