Ejectors

Compact ejector FEK-VD

FEZER
Simply move more.

Description
Compact ejector with integrated vacuum- and blow-off valve, exchangeable vacuum filter and a vacuum sensor with LCD display to supervise and visualise the vacuum and to control the air saving automatic. Additionally electrical signals can be passed on to a higher control which allows a time diagnosis of the compact ejector. There are 4 powers available with high grade of evacuation (HV) or high suction volume (HS).

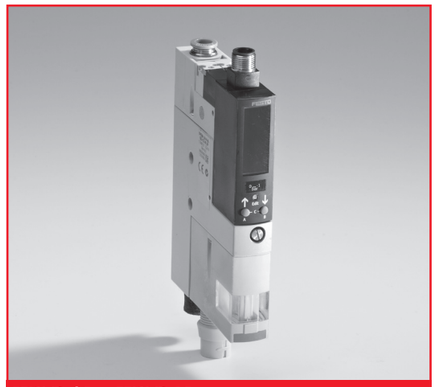
Vacuum valve
The compressed air supply is controlled by solenoid valve. This valve is avaiable as NC/NO.
- NC - vacuum generation with active voltage
- NO - vacuum generation with inactive voltage

Blow-off impulse
A second integrated valve is activated when the vacuum valve is switched off and automatically opens a blow-off impulse. This impulse is adjustable 0 ... 10s.

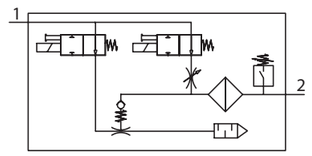
Vacuum sensor
The integrated vacuum sensor possesses two digital switching exits. These exists are available as openers or closers. Additionally the switching functions can be appointed as threshold or window comparators.

Air saving automatic
The integrated air saving automatic makes the ejector work only when required i.e. if an upper threshold value is reached the vacuum valve switches off. An integrated non-return valve prevents the reduction of the vacuum. Leakage (rough surfaces, porous materials), however, slowly decreases the vacuum until a lower threshold value is reached. The vacuum valve opens automatically and increases the vacuum back to the upper threshold value.

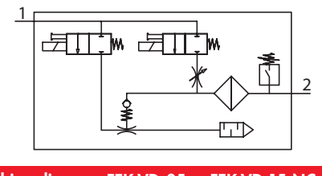
Condition monitoring and diagnosis
The most important operating parameters like vacuum, evacuation and ventilation time are constantly supervised and controlled against the set must values. Discrepancies are shown on the display and an electrical signal is submitted to the higher control.
This allows to take maintenance measures in time and keep up the operation safety.



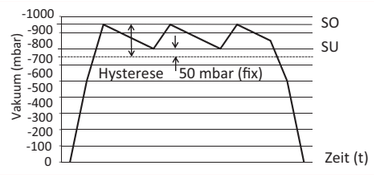
FEK-VD-05 ... FEK-VD-15



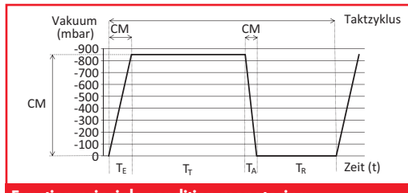
Switching diagram FEK-VD-05 ... FEK-VD-15-NO



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



Function principle integrated air saving automatic



Function principle condition monotoring

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Article number

Type	High vacuum HV	High suction volume HS
FEK-VD-05- ... -NO-2P	1.44.3.0002	1.44.3.0001
FEK-VD-05- ... -NO-2N	1.44.3.0004	1.44.3.0003
FEK-VD-05- ... -NC-2P	1.44.3.0006	1.44.3.0005
FEK-VD-05- ... -NC-2N	1.44.3.0008	1.44.3.0007
FEK-VD-07- ... -NO-2P	1.44.3.0010	1.44.3.0009
FEK-VD-07- ... -NO-2N	1.44.3.0012	1.44.3.0011
FEK-VD-07- ... -NC-2P	1.44.3.0014	1.44.3.0013
FEK-VD-07- ... -NC-2N	1.44.3.0016	1.44.3.0015
FEK-VD-10- ... -NO-2P	1.44.3.0018	1.44.3.0017
FEK-VD-10- ... -NO-2N	1.44.3.0020	1.44.3.0019
FEK-VD-10- ... -NC-2P	1.44.3.0022	1.44.3.0021
FEK-VD-10- ... -NC-2N	1.44.3.0024	1.44.3.0023
FEK-VD-15- ... -NO-2P	1.44.3.0026	1.44.3.0025
FEK-VD-15- ... -NO-2N	1.44.3.0028	1.44.3.0027
FEK-VD-15- ... -NC-2P	1.44.3.0030	1.44.3.0029
FEK-VD-15- ... -NC-2N	1.44.3.0032	1.44.3.0031

Technical data

Type	Vacuum* (mbar)	Suction volume* (m³/h)	Suction volume* (l/s)	Air consumption* (m³/h)	Air consumption* (l/s)	Pressure** (bar) max.	Pressure** (bar) opt.	Noise level* dB (A)	Temperature (°C)	Weight (kg)
FEK-VD-05-HV ...	-930	0,36	0,10	0,47	0,13	2 ... 8	5,1	51	0 ... +50	0,370
FEK-VD-05-HS ...	-620	0,78	0,22	0,58	0,16	2 ... 8	6,0	45	0 ... +50	0,370
FEK-VD-07-HV ...	-930	0,96	0,27	1,26	0,35	2 ... 8	4,1	58	0 ... +50	0,370
FEK-VD-07-HS ...	-750	1,89	0,53	1,73	0,48	2 ... 8	6,0	53	0 ... +50	0,370
FEK-VD-10-HV ...	-930	1,12	0,31	2,19	0,61	2 ... 8	3,5	73	0 ... +50	0,395
FEK-VD-10-HS ...	-880	2,70	0,75	3,17	0,88	2 ... 8	6,0	64	0 ... +50	0,395
FEK-VD-15-HV ...	-930	3,03	0,84	4,57	1,27	2 ... 8	3,6	77	0 ... +50	0,395
FEK-VD-15-HS ...	-900	5,32	1,48	6,91	1,92	2 ... 8	6,0	70	0 ... +50	0,395

* *at optimum pressure*
** *dry, filtered, oil-free compressed air*

Technical data vacuum sensor VD

Operating voltage range:	(V DC)	20,4 ... 27,6	Electrical connection	M12x1, 5 cores
max. exit current:	(mA)	100	Switching exit:	2xPNP, 2xNPN
Residual current:	(mA)	< 0,1	Switch element function:	opener/closer
Switching time on/off:	(ms)	< 4	Switching function:	Window comparator
Threshold range	(bar)	-0,99 ... 0		Threshold comparator
Hysteresis range	(bar)	-0,90 ... 0	Switching condition display	optical via LCD display
Switching precision	% FS*	1,5	Display type:	4 digits, background illuminated display
Repeat precision:	% FS*	0,6	Pole safety:	for all electrical connections
Hysteresis	% FS*	2 at fixed hysteresis	Safety type	IP 65

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Kompaktejektor FEK-VD

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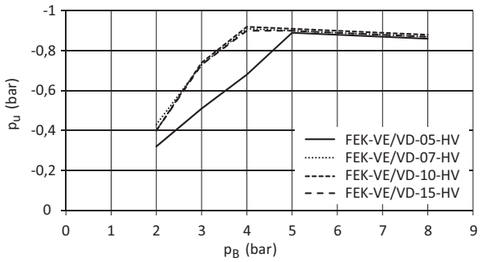
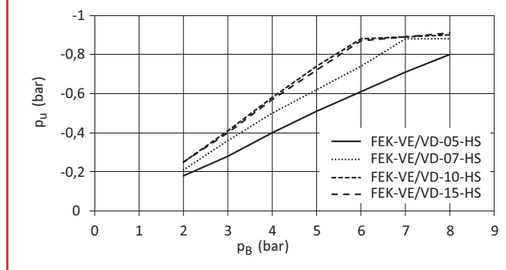
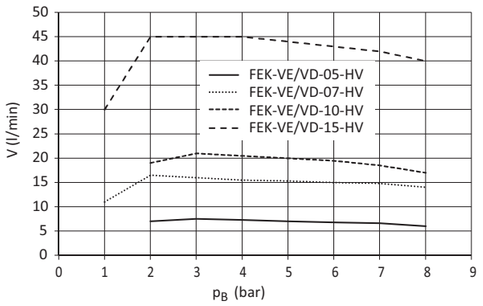


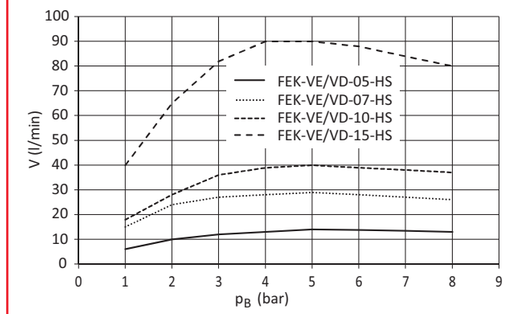
Vacuum level FEK-VD-HV at different Pressures



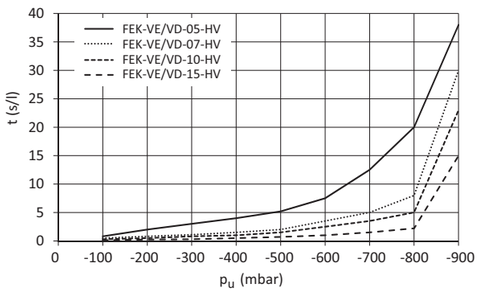
Vacuum level FEK-VD-HS at different Pressures



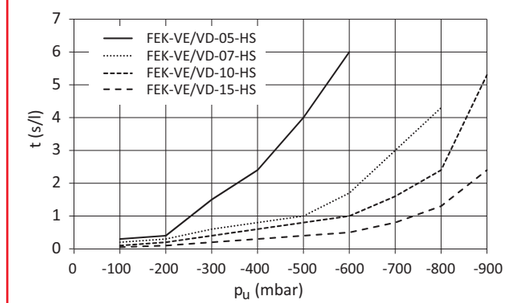
Suction volume FEK-VD-HV at different Pressures



Suction volume FEK-VD-HS at different Pressures



Evacuation time FEK-VD-HV at different Grades of evacuation



Evacuation time FEK-VD-HS at different Grades of evacuation

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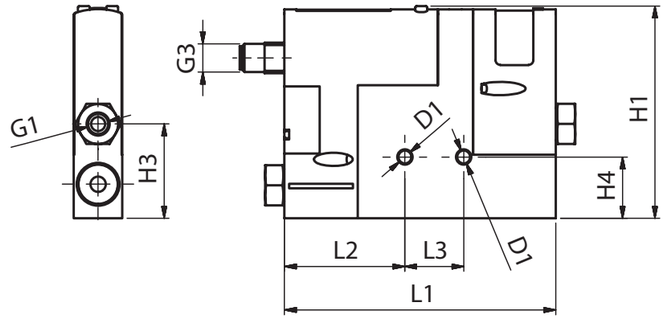

FEK-VD-05 ... FEK-VD-15

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	
FEK-VD-05-HV	1,0	2,0	3,0	4,0	6,0	7,5	12,5	18	0,02
FEK-VD-05-HS	0,3	0,8	1,5	2,4	4,0	6,0	---	---	0,02
FEK-VD-07-HV	0,5	1,0	1,5	2,0	2,5	3,5	5,0	8,0	0,01
FEK-VD-07-HS	0,2	0,3	0,6	0,8	1,0	1,6	3,0	---	0,01
FEK-VD-10-HV	0,4	0,9	1,3	1,6	2,0	2,8	3,8	5,0	0,01
FEK-VD-10-HS	0,1	0,2	0,4	0,6	0,8	1,0	1,3	2,4	0,01
FEK-VD-15-HV	0,3	0,5	0,8	1,0	1,3	1,6	1,9	2,5	0,01
FEK-VD-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