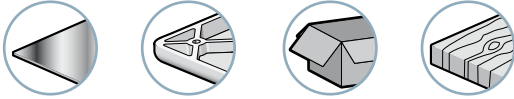


# GVPD series

# Vacuum pumps with blow-off and electric vacuum control



## Branch-specific applications



## Description

GVPD series vacuum pumps control vacuum generation and blow-off (adjustable flow). Controlling the force and duration of blow-off accelerates gripping/release rates, cleans objects before gripping and improves releasing process for large diameter suction pads.

## Advantages

- Integrated electric vacuum and blow-off control
- Can be adapted to all branches
- Optimized performance for handling all types of objects
- Reduced wiring and easy-to-use
- Modular design thanks to the different options
- Light and compact
- No clogging thanks to the through type silencer
- Silent operation

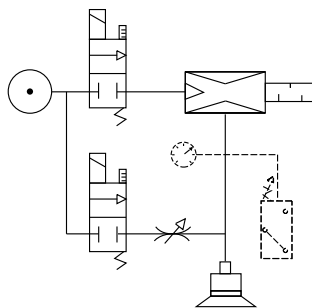
## Characteristics

model	Ø nozzle (mm)	air consumed (NI/min)	max. vacuum (%)			air drawn in (NI/min)		
			X	T	N	X	T	N
GVPD 12	1.2	67	40	75	90	150	63	45
GVPD 15	1.5	100	50	75	90	180	95	70
GVPD 20	2	180	50	75	90	250	160	125
GVPD 25	2.5	270	50	75	90	360	240	200
GVPD 30	3	400	50	75	90	450	330	265

As standard, versions N and T are delivered with silencer S and version X with silencer K. Only exception, the GVPD 30 is fitted with silencer K.

## Evacuation time in seconds per liter

% vacuum	10			20			30			40			50			60			70			80			85		
versions	X	T	N	X	T	N	X	T	N	X	T	N	X	T	N	X	T	N	X	T	N	X	T	N	X	T	N
<b>GVPD 12</b>	0.05	0.10	0.14	0.11	0.22	0.30	0.22	0.37	0.49	0.62	0.55	0.71	-	0.78	0.97	-	1.16	1.33	-	1.92	1.81	-	-	2.66	-	-	3.42
<b>GVPD 15</b>	0.04	0.07	0.09	0.09	0.15	0.20	0.15	0.24	0.32	0.27	0.36	0.46	-	0.52	0.63	-	0.77	0.85	-	1.27	1.16	-	-	1.71	-	-	2.20
<b>GVPD 20</b>	0.03	0.04	0.06	0.06	0.09	0.12	0.11	0.14	0.19	0.19	0.22	0.28	-	0.31	0.38	-	0.46	0.52	-	0.76	0.71	-	-	1.04	-	-	2.13
<b>GVPD 25</b>	0.02	0.03	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.14	0.14	0.16	-	0.21	0.22	-	0.30	0.30	-	0.50	0.41	-	-	0.60	-	-	0.77
<b>GVPD 30</b>	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.11	0.10	0.12	-	0.15	0.17	-	0.22	0.23	-	0.37	0.31	-	-	0.45	-	-	0.58



## Specifications

Supply	Non-lubricated filtered air, 2 to 6 bar
Optimum pressure	4 bar
Voltage	24V DC
Power	0.7 W
Material	POM - 2017A – Cu Zn – PA6 15% FG
Temperature	0 to 60°C / 32 to 140°F
Number of valve operations	10 million
Operating frequency	Maximum 2 Hz
Function	N.C. (N.O. on request)

## For all orders, please specify:

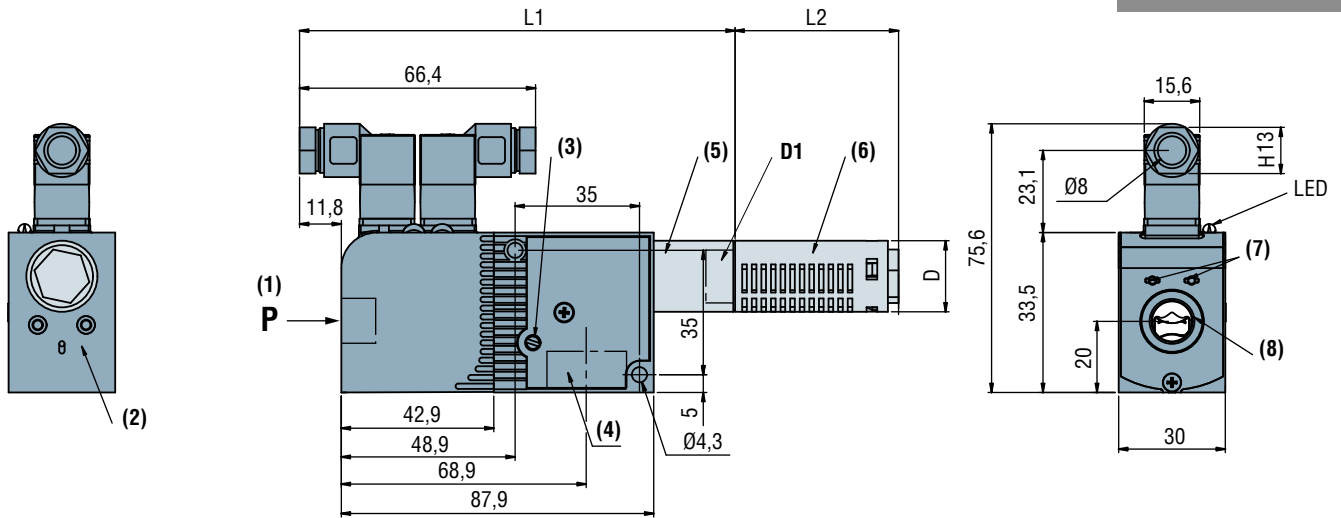
**Model + Nozzle diameter + Characteristic + Silencer + Fitting + Control**

1: Model	2: Nozzle diameter	3: Characteristic	4: Silencer	5: C.A. fitting	6: Controls
GVPD	12 1.2 mm 15 1.5 mm 20 2 mm 25 2.5 mm 30 3 mm	X 50 % vacuum T 75 % vacuum N 90 % vacuum	- Without silencer S <sup>(1)</sup> Diffuser K Through-type	14 1/4 G BSPP	E1 24 V DC N.F. E other voltages on request

(1) no silencer (S) for nozzle Ø 30.

E.g. **GVPD 25 N K 14 E1**

(GVPD series vacuum pump, nozzle diameter 2.5mm, 90% vacuum with through type silencer, 1/4 gas pressure fitting and 24V DC N.C. control)



- (1) 4 bar compressed air tank
- (2) Vacuum switch option mounting zone
- (3) Blow-off adjustment
- (4) Vacuum 1/2 Gas
- (5) Exhaust
- (6) Silencer model S or K
- (7) Manual controls
- (8) 1/4 Gas

models	L1 (mm)		L2 (mm)			D (mm)		D1 (gas)	
	X	N/T	S(N/T)	K(N/T)	K(X)	X	N/T	X	N/T
<b>GVPD12</b>	118	123	46	68	121	30	20	1/2	1/4
<b>GVPD15</b>	118	133	46	68	121	30	20	1/2	1/4
<b>GVPD20</b>	118	118	62	121	121	30	30	1/2	1/2
<b>GVPD25</b>	118	118	62	121	121	30	30	1/2	1/2
<b>GVPD30</b>	190	190	-	121	121	30	30	1/2	1/2

## Additional information

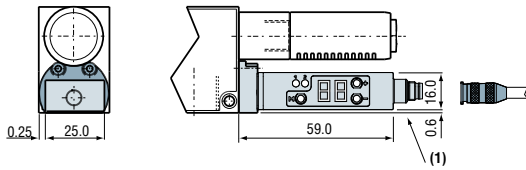
### Options

- Vacuum switches see page 8/10.
- Other options see pages 8/11 and 8/12.
- Silencer see page 11/3.

### Curves

See page 8/13.

# customer-mounted **Modular vacuum pump options**



Delivered with M8 cable (2 meters)  
(1) M8 connector

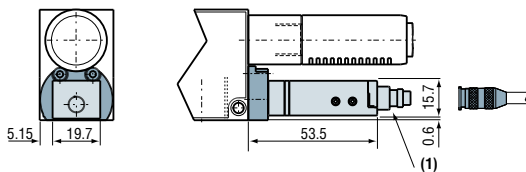
## Electronic vacuum switch with display

### GVO PSA 100 C option

(See exact characteristics page 12/1)

Our top-of-the-range electronic vacuum switch, the PSA 100, has an LED display showing the vacuum value in different units. It also has two separate outputs with independently regulated hysteresis, N.O. or N.C.

- PNP as standard
- M8 connector.
- Connection cable, see page 8/14.



Delivered with M8 cable (2 meters)  
(1) M8 4 pole connector

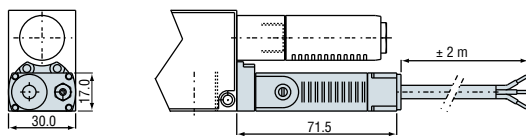
## Electronic vacuum switch

### GVO PSP 100 C (M5), PSP 100 L (M5) option

(See characteristics page 12/2)

The vacuum data collected is always very reliable even with a large number of suction pads, thanks to the precision of the PSP 100. It has one output with hysteresis adjustment.

- PNP as standard
- M8 connector
- Connection cable, see page 8/14.



GVO PSE 100 E with cable (length 2 metres)

## Vacuum switch with electrical signal

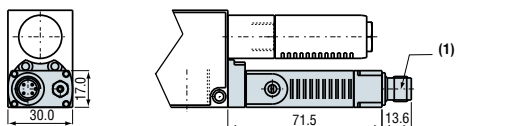
### GVO PSE 100 E or EC option

(See characteristics page 12/5)

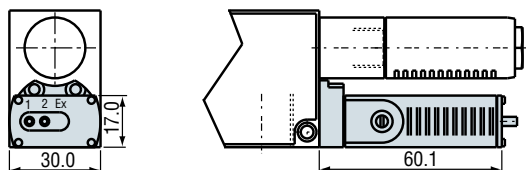
The PSE 100 E or EC vacuum switch indicates the level of vacuum in the suction pad circuit. For a small number of suction pads (5 to 10 maximum). This indication is enough to prove an object is gripped. Hysteresis (125mbar) must also be taken into account according to the use of the vacuum switch data.

Check that the vacuum pump supply pressure generates a level of pressure equal to the threshold setting.

For connection cable, see page 8/14.



GVO PSE 100 EC with M12 connector (delivered without connection cable)  
(1) M12 male connector



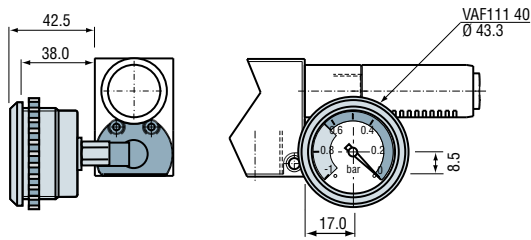
## Vacuum switch with pneumatic signal

### GVO PSE 100 P N.O. or N.C. option

(see characteristics page 12/6)

For use in fully pneumatic applications or explosive environments. The vacuum switch enables a pressure data message to be given when a vacuum threshold is reached.

# customer-mounted **Modular vacuum pump options**

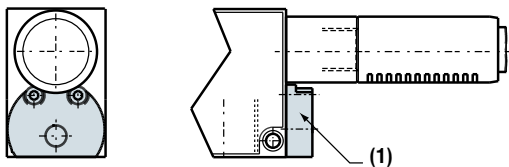


## Vacuum gauge

### GVO VAF 111 40 option

(See characteristics page 12/8)

The vacuum gauge displays the level of vacuum in the suction pad circuit. This option makes it simple to keep the status of the vacuum circuit under constant surveillance.

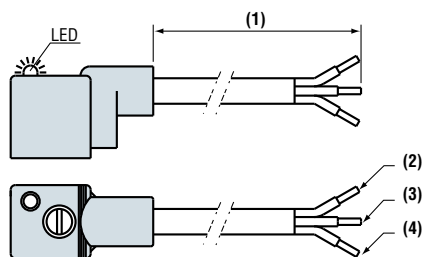


(1) Plug

## Plug to shut off vacuum data

### GVOB option

This plug option makes it possible to shut off the vacuum signal to avoid affecting operation of the vacuum pump if a GVO option is removed.



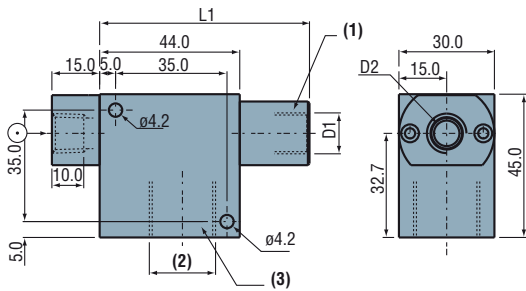
- (1) L(2 meters)
- (2) Brown
- (3) Blue
- (4) Yellow-Green (Earth)

## GVO CA 24 V option, (110 V or 220 V on request)

with anti-interference on electric valve control: factory-mounted.

Use of an anti-interference is recommended on the valve control when using electrically-controlled pumps. This anti-interference protects the equipment and ensures the valve control is reliable in electrically polluted environments.

- As standard for 24V DC and CA control
- On request for other models

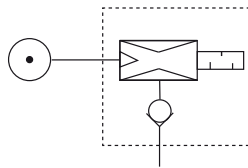


### GVO AL and GVO AL NPT option (for GVP vacuum pump)

Body and flange 1/4 Gas in aluminum.

■ Note: It is no longer possible to mount vacuum gauge options.

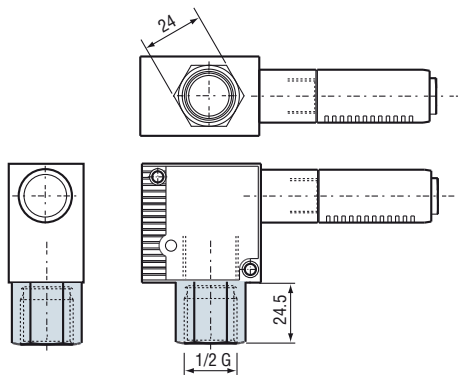
- |                             |             |
|-----------------------------|-------------|
| L1 = L1 GVP (plastic) - 1mm | (1) Exhaust |
| D1 = D1 (GVP N, T and X)    | (2) 1/2 Gas |
| D2 = 1/4 Gas for GVO AL     | (3) Vacuum  |
| 1/4 NPT for GVO AL NPT      |             |



### Check valve option - Ref. 02090101 (for GVPD vacuum pump)

Check valve option.

Requires blow-off downstream from the valve for release.



### GVO P option

with 1/2 protective extension

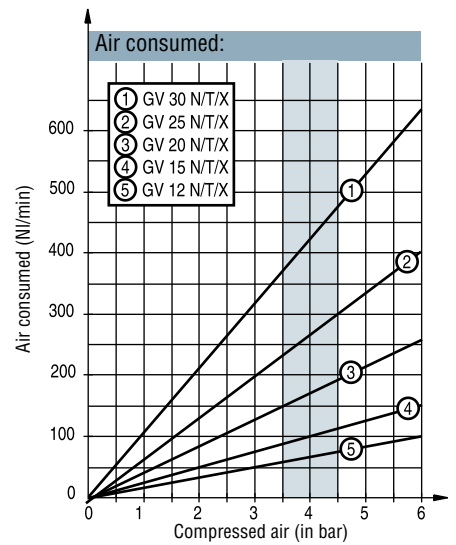
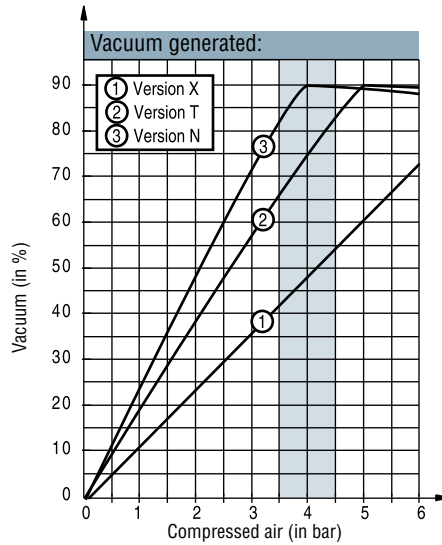
The 1/2 extension is recommended for double valve models or with pneumatic vacuum switch to protect components during mounting or installation.

The extension is fitted with a 400 micron stainless steel filtration grid as standard.

# Performance curves for modular vacuum pumps

## GVP, GVPS, GVPD

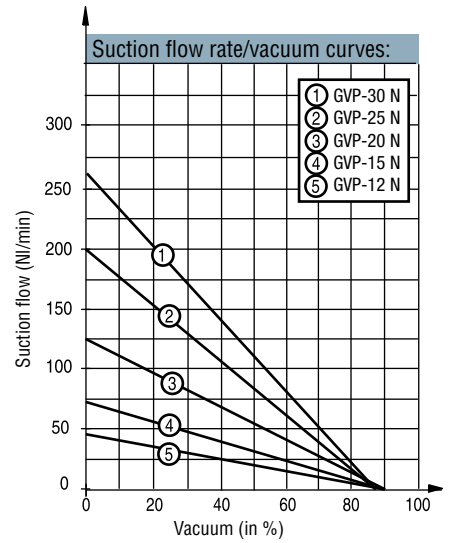
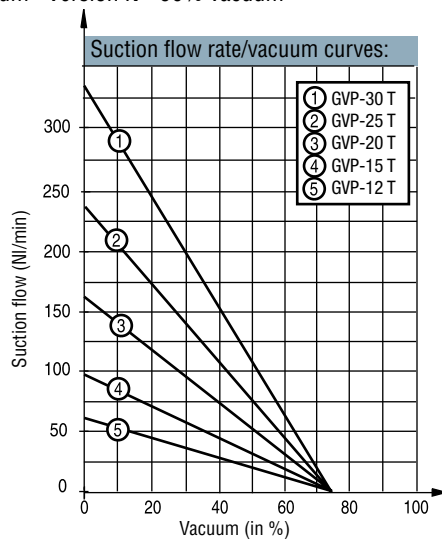
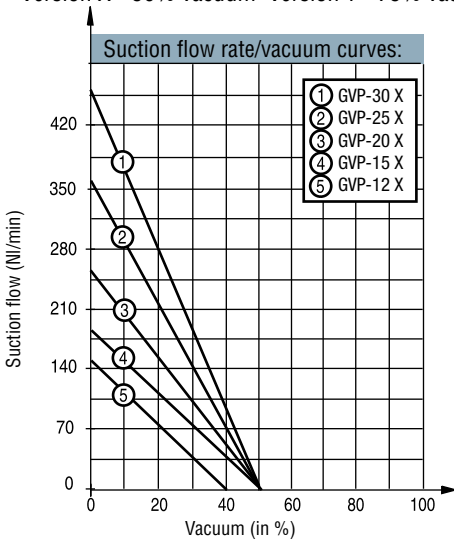
■ Pressure 4 bar



■ Supply pressure 4 bar

Version X - 50% vacuum    Version T - 75% vacuum

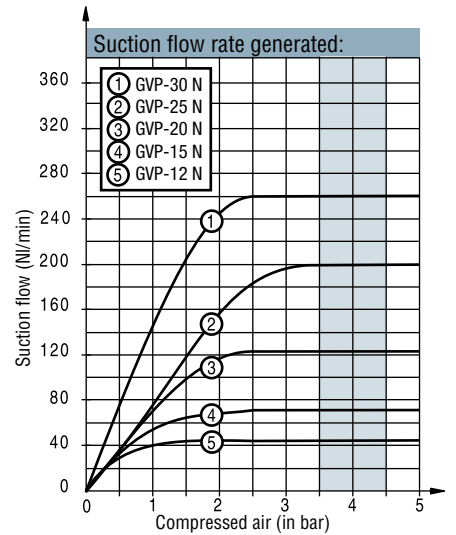
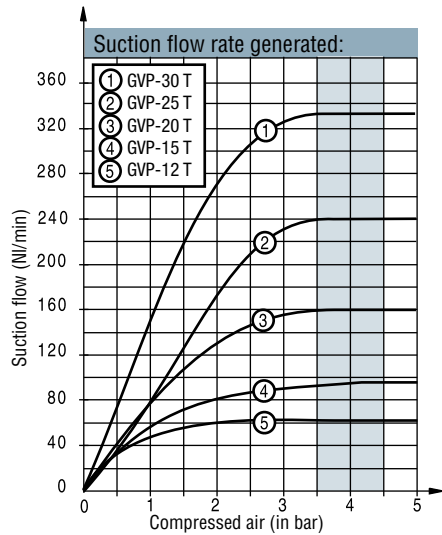
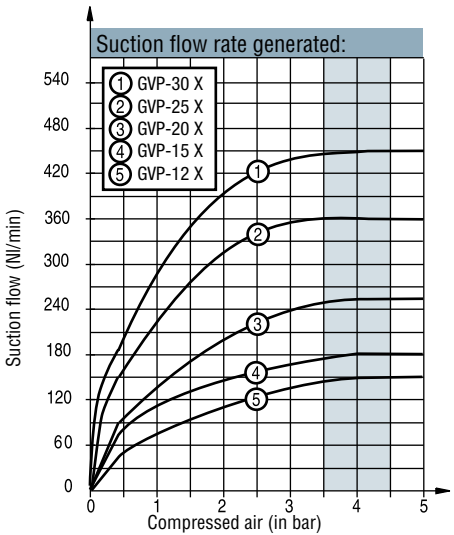
Version N - 90% vacuum



■ Supply pressure 4 bar

Version X - 50% vacuum    Version T - 75% vacuum

Version N - 90% vacuum



# The range of modular and intelligent vacuum pumps

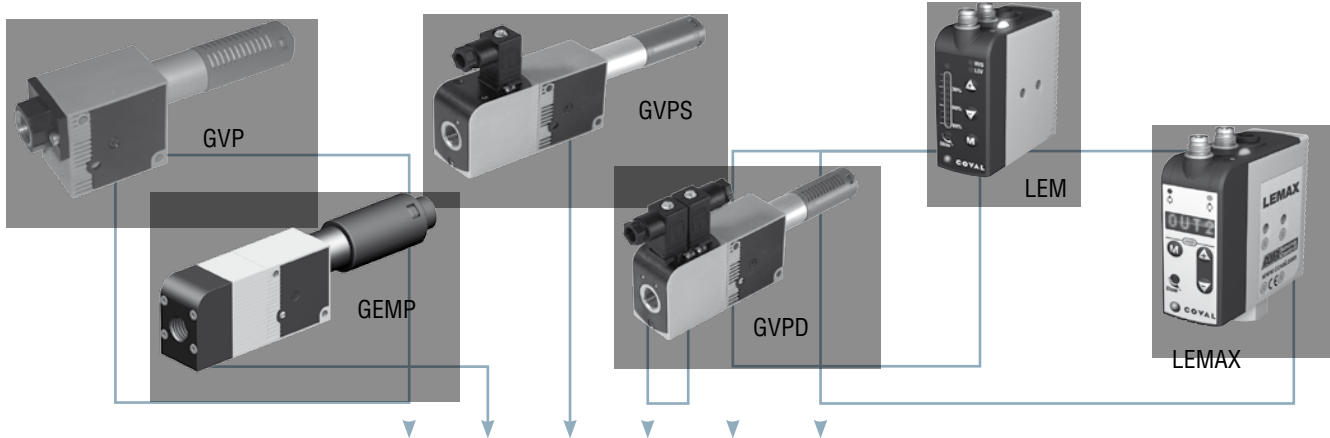
## Advantages



- Reduced energy consumption
- Reduced noise levels
- Increased life expectancy
- Can be adapted to all branches
- Technical development of the Coval valve resulting from technological advances in aerospace and automotive applications.

## New optimized fluidics

The COVAL range of modular vacuum pumps operates with a pressure supply of 4 bar.

Developed by COVAL over the years, this range is the result of research and optimized technical solutions. Thanks to the new fluidics, this range of vacuum pumps offer an optimized performance.



Model	MODULAR VACUUM PUMPS				INTELLIGENT VACUUM PUMPS					
	GVP	GEMP	GVPS	GVPD	LEM	LEMAX	GEM	GVMAX--V3	GVMAX--V2	GVMAX
Compressed air control (Suction)			■	■	■	■	■	■	■	■
Blow-off control				■	■	■	■	■	■	■
Integrated pressure regulator		■			■	■	■	■		
Powerful blow-off						■		■		
Electronic vacuum switch with display	□	□	□	□	■	■	■	■	■	■
Electronic vacuum switch	□	□	□	□	■	■	■			
Vacuum switch with electrical contact	□	□	□	□			■			
Vacuum check-valve	□		□	□	□	■	□	■	■	■
Electric control			■	■	■	■	■	■	■	■
Pneumatic control										■
 Twin Tech (Integration & Intelligence)					■	■	■	■		
 ASC (Air saving Control)						■				
Automatic vacuum regulation						■		■	■	■
M8 connections					■	■				
M12 connections							■	■	■	

■ : Standard or integrated    □ : Option

