MINIATURE Series

THOMAS

FEATURES

> Maintenance free
> Oil-less
> Compact
> Pulsation free
> High flow
> Low vibration
> No valves
> Reversible

TYPICAL APPLICATIONS

> Automotive
> Medical
> Analysis
> Automation
> Fuell Cell

BASE MODEL

G01
G02
BL-G 02
G 04
G 045
G 07
G 08
G 09









Rotary

Rotary Vane Vacuum and Pressure Pumps

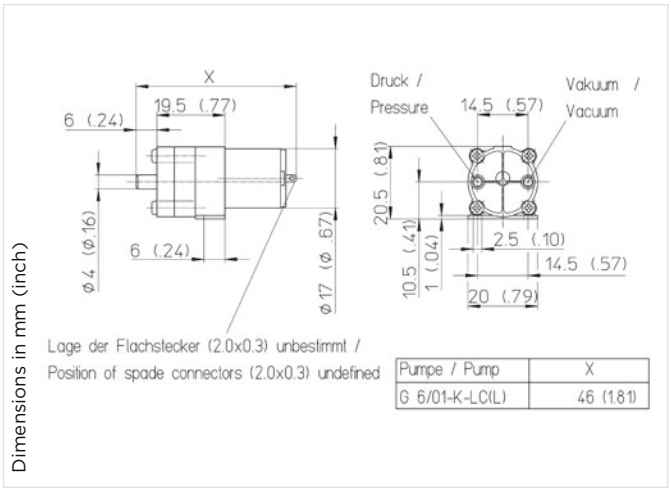
PRODUCT OVERVIEW

Model	Flow	Max. pressure	Max. vacuum	Page
G 01-K-LC	2,2 l/min	70 mbar	6.5 %	**3**
G 01-K-EB	1,4 l/min	40 mbar	4 %	**4**
G 01 EB	1,6 l/min	180 mbar	20 %	**5**
G 01-4 EB	1,4 l/min	280 mbar	29 %	**6**
G 02 EB	3,6 l/min	190 mbar	19 %	**7**
G 02-4 EB	3,7 l/min	310 mbar	31 %	**8**
G 02-8	2,7 l/min	410 mbar	37 %	**9**
BL-G 02-4	2,1 l/min	200 mbar	19 %	**10**
G 04 EB	6,8 l/min	150 mbar	16 %	**11**
G 04-4 EB	5,1 l/min	240 mbar	26 %	**12**
G 04-8	4,4 l/min	260 mbar	25 %	**13**
G 045-LC	6,5 l/min	750 mbar	63 %	**14**
G 045	6,1 l/min	750 mbar	70 %	**15**
G 07	21 l/min	1400 mbar	77 %	**16**
G 08	15,5 l/min	1400 mbar	83 %	**17**
G 08-T	36 l/min	1400 mbar	93 %	**18**
G 09	11 l/min	370 mbar	35 %	**19**

Rotary Vane Pump **G 01-K-LC**

Flow	**2.2 l/min**
Max. pressure	**70 mbar**
Max. vacuum	**6.5 %**





PNEUMATIC DATA

Description	G 6/01-K-LCL	G 6/01-K-LC
Part number	**50027**	**50017**
Max. flow	2.0 l/min	2.2 l/min
Max. intermittent pressure	55 mbar	70 mbar
Max. intermittent vacuum	5.5 %	6.5 %

ELECTRICAL DATA

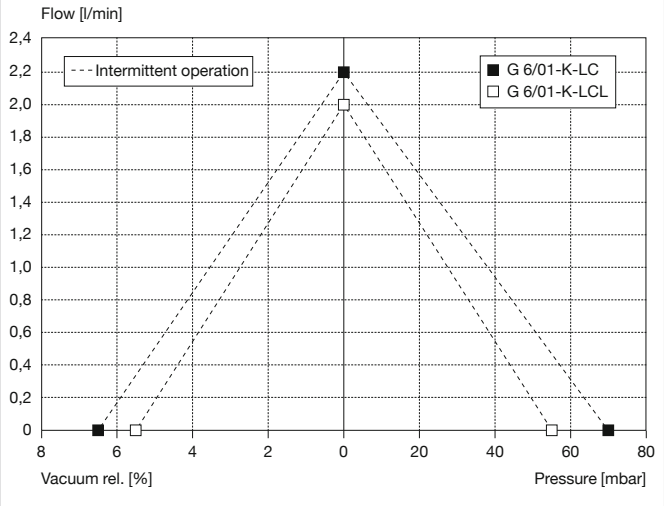
Motor type	Permanent magnet	Permanent magnet
Nominal voltage	6 V DC	6 V DC
Min. current consumption	0.17 A	0.18 A
Max. current consumption	0.23 A	0.27 A
Protection class	IP40	IP40
Motor bearing	Sleeve bearing	Sleeve bearing

GENERAL DATA

Ambient temperature	0 to 40 °C	0 to 40 °C
Weight	0.03 kg	0.03 kg
Direction of rotation	cw/ccw	cw/ccw

All listed values are measured at standard atmospheric conditions.

FLOW CURVES

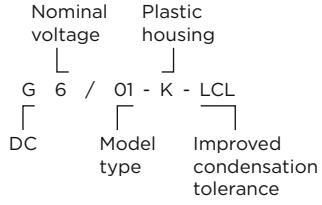


CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

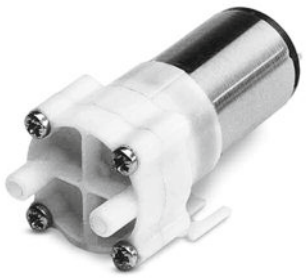
500... Stock programme

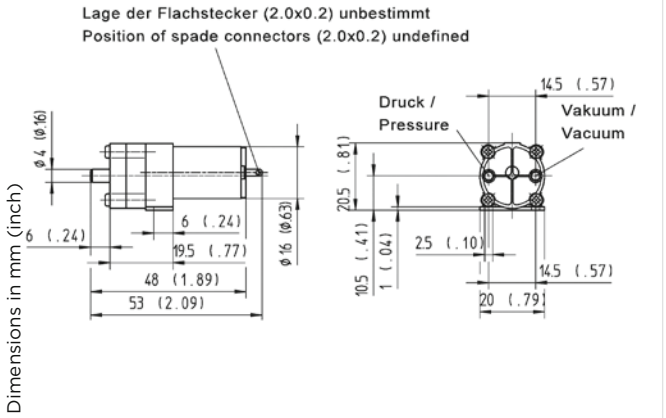
Model key:



Rotary Vane Pump **G 01-K-EB**

Flow	**1.4 l/min**
Max. pressure	**40 mbar**
Max. vacuum	**4 %**





PNEUMATIC DATA

Description	G 6/01-K-EB12	G 6/01-K-EB9L	G 6/01-K-EB9	G 12/01-K-EB18L
Part number	50251	**50094**	50250	50080
Max. flow	0.9 l/min	1.2 l/min	1.4 l/min	1.2 l/min
Max. intermittent pressure	20 mbar	25 mbar	40 mbar	18 mbar
Max. continuous pressure	-	10 mbar	-	10 mbar
Max. intermittent vacuum	2 %	2.8 %	4 %	1.8 %
Max. continuous vacuum	-	1 %	-	1 %

ELECTRICAL DATA

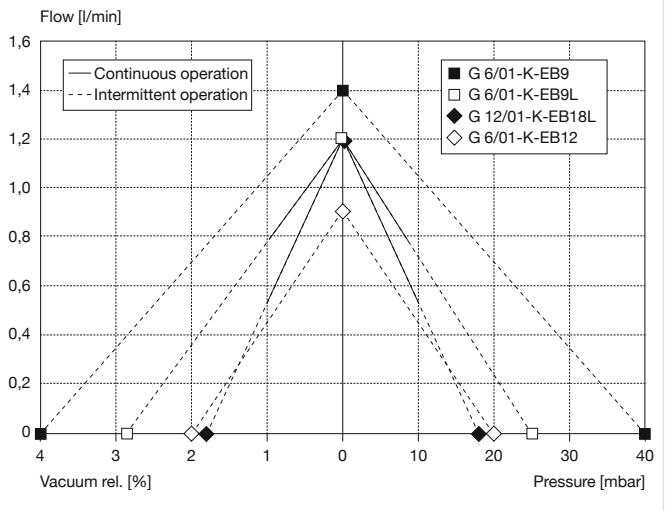
Motor type	Ironless Core DC	Ironless Core DC	Ironless Core DC	Ironless Core DC
Nominal voltage	6 V DC	6 V DC	6 V DC	12 V DC
Min. current consumption	18 mA	36 mA	50 mA	25 mA
Max. current consumption	30 mA	65 mA	70 mA	48 mA
Protection class	IP50	IP50	IP50	IP50
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

GENERAL DATA

Ambient temperature	-20 to 40 °C	-20 to 40 °C	-20 to 40 °C	-20 to 40 °C
Weight	0.04 kg	0.04 kg	0.04 kg	0.04 kg
Direction of rotation	cw/ccw	cw/ccw	cw/ccw	cw/ccw

All listed values are measured at standard atmospheric conditions.

FLOW CURVES



CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

50... Stock programme

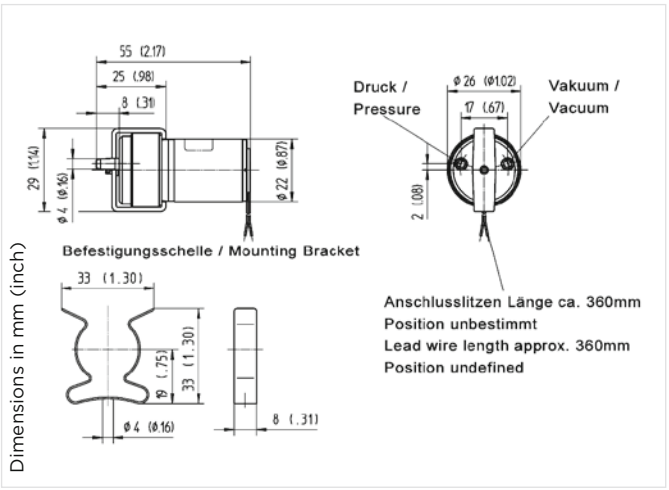
Model key:

Nominal voltage	Plastic housing	Nominal motor voltage
G 6 /	01 - K -	EB9L
DC	Model type	Ironless motor / Improved condensation tolerance

Rotary Vane Pump **G 01 EB**

Flow	**1.6 l/min**
Max. pressure	**180 mbar**
Max. vacuum	**20 %**





PNEUMATIC DATA

Description	G 3/01 EB	G 6/01 EB	G 12/01 EB	G 24/01 EB
Part number	50083	50081	**50096**	50099
Max. flow	0.9 l/min	1.0 l/min	1.4 l/min	1.6 l/min
Max. intermittent pressure	90 mbar	120 mbar	150 mbar	180 mbar
Max. continuous pressure	80 mbar	80 mbar	100 mbar	100 mbar
Max. intermittent vacuum	9 %	12 %	16 %	20 %
Max. continuous vacuum	8 %	8 %	10 %	10 %

ELECTRICAL DATA

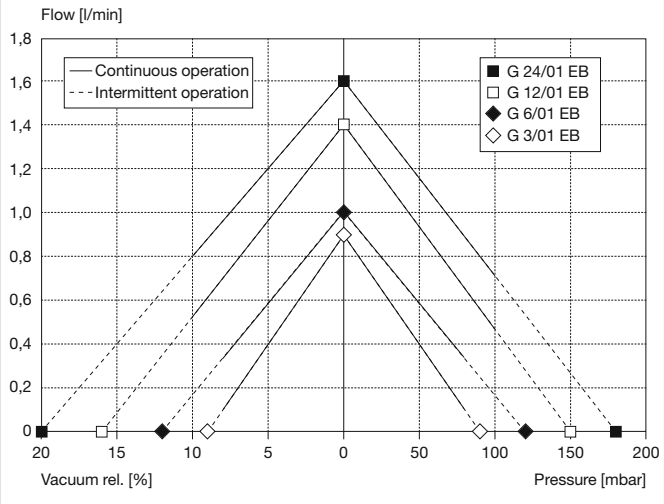
Motor type	Ironless Core DC	Ironless Core DC	Ironless Core DC	Ironless Core DC
Nominal voltage	3 V DC	6 V DC	12 V DC	24 V DC
Min. current consumption	0.12 A	0.07 A	0.09 A	0.05 A
Max. current consumption	0.28 A	0.19 A	0.20 A	0.13 A
Protection class	IP50	IP50	IP50	IP50
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

GENERAL DATA

Ambient temperature	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C
Weight	0.1 kg	0.1 kg	0.1 kg	0.1 kg
Direction of rotation	cw	cw	cw	cw

Pumps include mounting bracket.
All listed values are measured at standard atmospheric conditions.

FLOW CURVES



CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

Model key:

Nominal voltage — Ironless motor

G 6 / 01 - EB

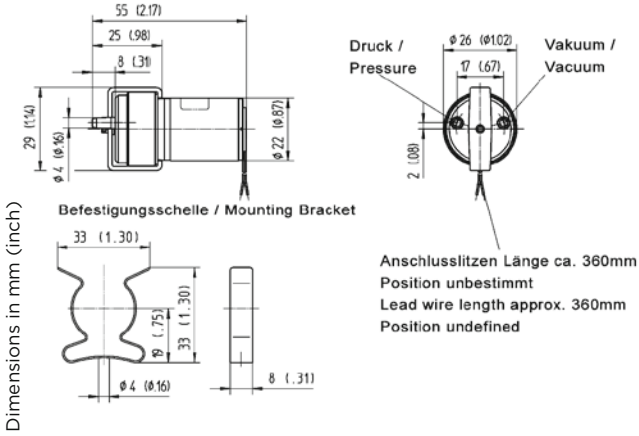
DC — Model type

500... Stock programme

Rotary Vane Pump **G 01-4-EB**

Flow	**1.4 l/min**
Max. pressure	**280 mbar**
Max. vacuum	**29 %**





PNEUMATIC DATA

Description	G 6/01-4 EB	G 12/01-4 EB	G 24/01-4 EB
Part number	50088	**50090**	**50092**
Max. flow	1.0 l/min	1.4 l/min	1.4 l/min
Max. intermittent pressure	180 mbar	280 mbar	280 mbar
Max. continuous pressure	100 mbar	100 mbar	100 mbar
Max. intermittent vacuum	20 %	28 %	29 %
Max. continuous vacuum	10 %	10 %	10 %

ELECTRICAL DATA

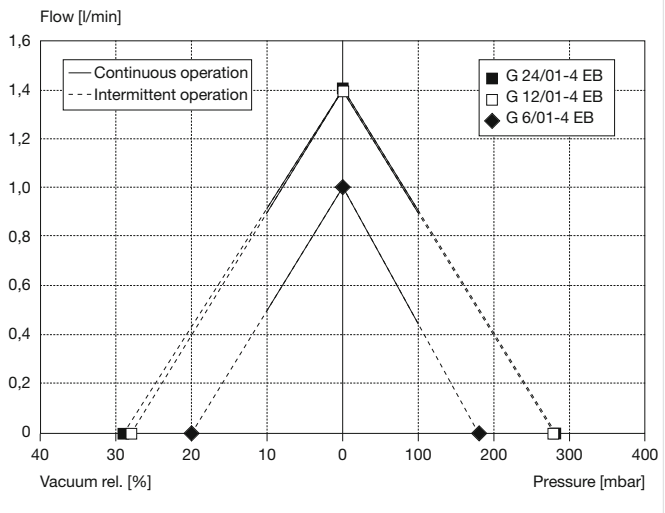
Motor type	Ironless Core DC	Ironless Core DC	Ironless Core DC
Nominal voltage	6 V DC	12 V DC	24 V DC
Min. current consumption	0.10 A	0.11 A	0.06 A
Max. current consumption	0.32 A	0.31 A	0.17 A
Protection class	IP50	IP50	IP50
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

GENERAL DATA

Ambient temperature	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C
Weight	0.1 kg	0.1 kg	0.1 kg
Direction of rotation	cw/ccw	cw/ccw	cw/ccw

Pumps include mounting bracket.
All listed values are measured at standard atmospheric conditions.

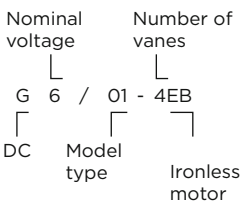
FLOW CURVES



CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

Model key:

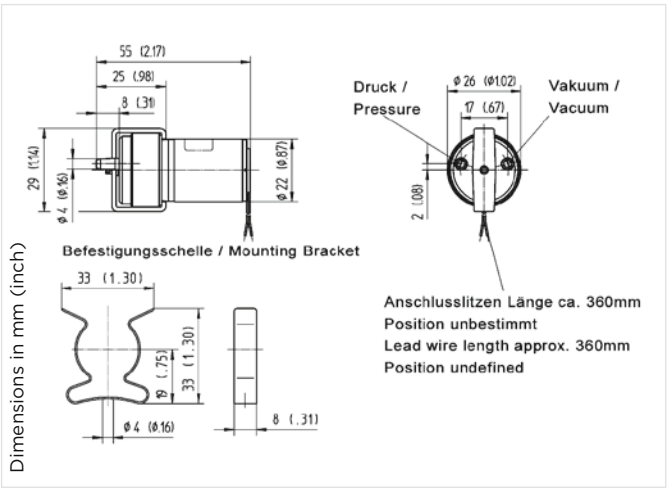


500... Stock programme

Rotary Vane Pump **G 02 EB**

Flow	**3.6 l/min**
Max. pressure	**190 mbar**
Max. vacuum	**19 %**





PNEUMATIC DATA

Description	G 3/02 EB	G 6/02 EB	G 12/02 EB	G 24/02 EB
Part number	**50084**	**50103**	**50095**	50098
Max. flow	2.4 l/min	2.6 l/min	3.6 l/min	3.6 l/min
Max. intermittent pressure	110 mbar	120 mbar	180 mbar	190 mbar
Max. continuous pressure	90 mbar	80 mbar	100 mbar	100 mbar
Max. intermittent vacuum	11 %	12 %	18 %	19 %
Max. continuous vacuum	9 %	8 %	10 %	10 %

ELECTRICAL DATA

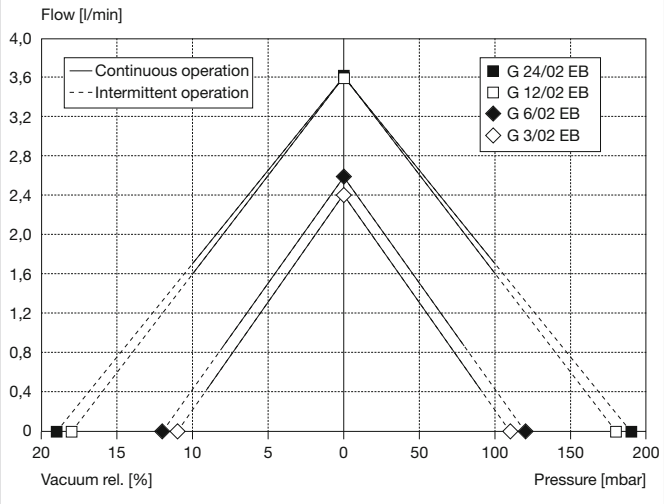
Motor type	Ironless Core DC	Ironless Core DC	Ironless Core DC	Ironless Core DC
Nominal voltage	3 V DC	6 V DC	12 V DC	24 V DC
Min. current consumption	0.16 A	0.09 A	0.09 A	0.07 A
Max. current consumption	0.53 A	0.30 A	0.33 A	0.18 A
Protection class	IP50	IP50	IP50	IP50
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

GENERAL DATA

Ambient temperature	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C
Weight	0.1 kg	0.1 kg	0.1 kg	0.1 kg
Direction of rotation	cw	cw	cw	cw

Pumps include mounting bracket.
All listed values are measured at standard atmospheric conditions.

FLOW CURVES



CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

50... Stock programme

Model key:

Nominal voltage — Ironless motor

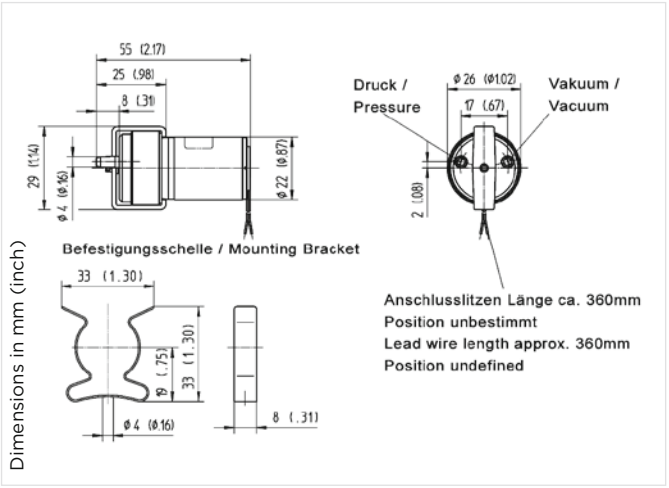
G 6 / 02 - EB

DC — Model type

Rotary Vane Pump **G 02-4-EB**

Flow	**3.7 l/min**
Max. pressure	**310 mbar**
Max. vacuum	**31 %**





PNEUMATIC DATA

Description	G 6/02-4 EB	G 12/02-4 EB	G 24/02-4 EB
Part number	**50089**	**50091**	50093
Max. flow	2.6 l/min	3.5 l/min	3.7 l/min
Max. intermittent pressure	230 mbar	310 mbar	310 mbar
Max. continuous pressure	100 mbar	100 mbar	100 mbar
Max. intermittent vacuum	23 %	31 %	31 %
Max. continuous vacuum	10 %	10 %	10 %

ELECTRICAL DATA

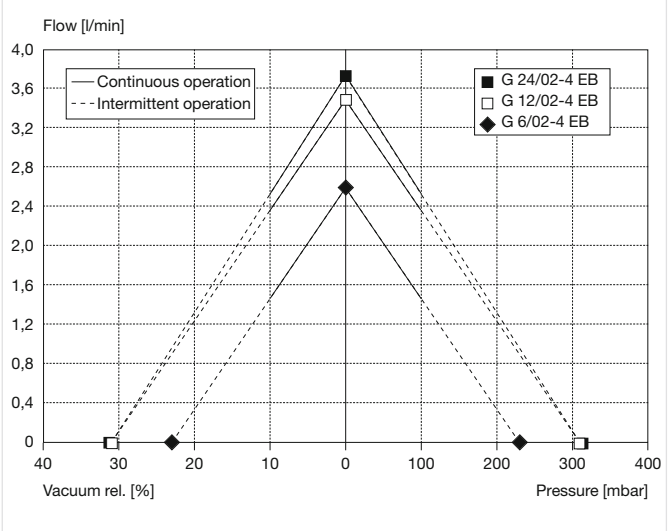
Motor type	Ironless Core DC	Ironless Core DC	Ironless Core DC
Nominal voltage	6 V DC	12 V DC	24 V DC
Min. current consumption	0.13 A	0.15 A	0.09 A
Max. current consumption	0.53 A	0.51 A	0.27 A
Protection class	IP50	IP50	IP50
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

GENERAL DATA

Ambient temperature	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C
Weight	0.1 kg	0.1 kg	0.1 kg
Direction of rotation	cw/ccw	cw/ccw	cw/ccw

Pumps include mounting bracket.
All listed values are measured at standard atmospheric conditions.

FLOW CURVES



CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

Model key:

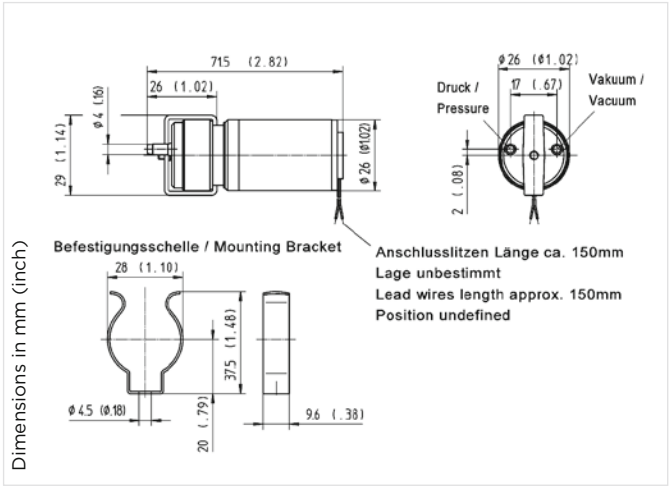
Nominal voltage		Number of vanes	
G	6 /	02 -	4EB
DC		Model type	Ironless motor

500... Stock programme

Rotary Vane Pump **G 02-8**

Flow	**2.7 l/min**
Max. pressure	**410 mbar**
Max. vacuum	**37 %**





PNEUMATIC DATA

Description	G 6/02-8	G 12/02-8
Part number	50163	**50165**
Max. flow	2.6 l/min	2.7 l/min
Max. intermittent pressure	410 mbar	410 mbar
Max. continuous pressure	200 mbar	200 mbar
Max. intermittent vacuum	37 %	37 %
Max. continuous vacuum	20 %	20 %

ELECTRICAL DATA

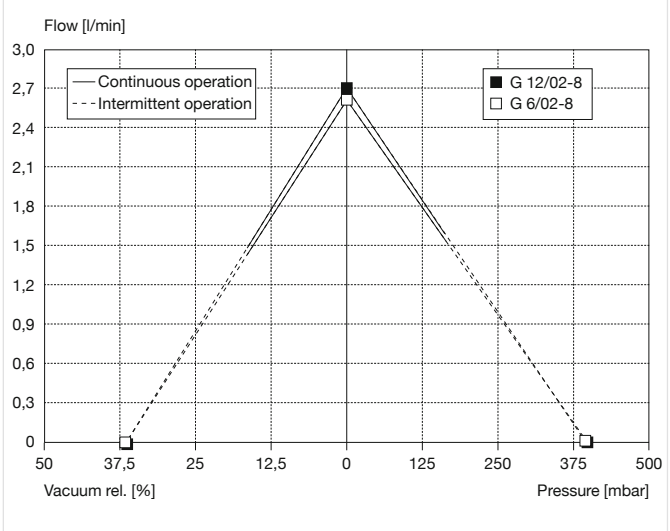
Motor type	Ironless Core DC	Ironless Core DC
Nominal voltage	6 V DC	12 V DC
Min. current consumption	0.23 A	0.11 A
Max. current consumption	0.70 A	0.35 A
Protection class	IP50	IP50
Motor bearing	Ball bearing	Ball bearing

GENERAL DATA

Ambient temperature	-30 to 50 °C	-30 to 50 °C
Weight	0.13 kg	0.13 kg
Direction of rotation	cw/ccw	cw/ccw

Pumps include mounting bracket.
All listed values are measured at standard atmospheric conditions.

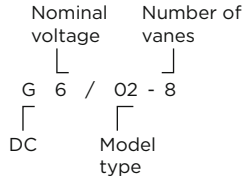
FLOW CURVES



CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

Model key:

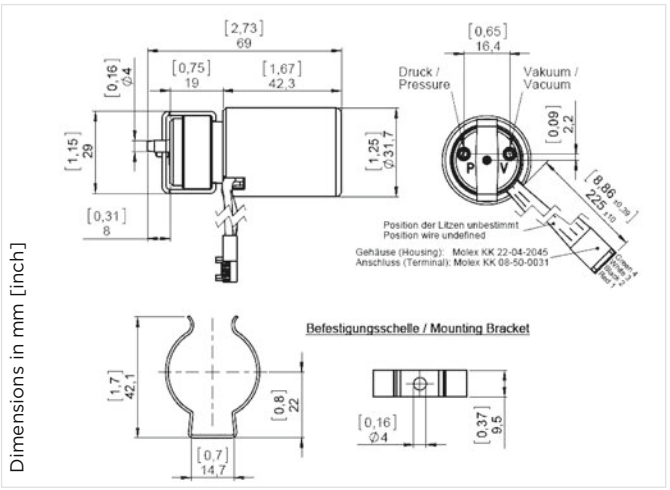


501... Stock programme

Rotary Vane Pump **BL-G 02-4**

Flow	**2.4 l/min**
Max. pressure	**200 mbar**
Max. vacuum	**22 %**





PNEUMATIC DATA

Description	BL-G 12/02-4
Part number	50180
Max. flow	2.1 l/min
Max. intermittent pressure	200 mbar
Max. continuous pressure	150 mbar
Max. intermittent vacuum	19 %
Max. continuous vacuum	15 %

ELECTRICAL DATA

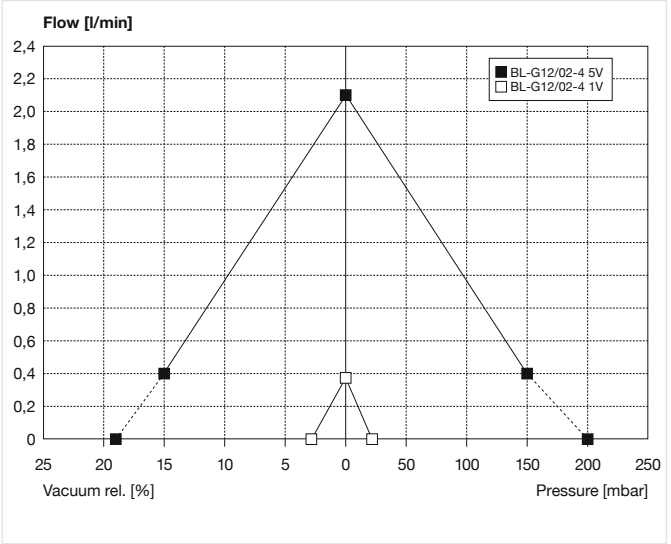
Motor type		Brushless DC
Nominal voltage		12 V DC
Drive electronics		integrated with reverse supply voltage protection
Min. current consumption		0.16 A
Max. current consumption		0.33 A
Protection class		IP00
Motor bearing		Ball bearing
Connector	Housing:	Molex KK 22-01-2045
	Terminal:	Molex KK 08-50-0031

GENERAL DATA

Ambient temperature	0 to 50 °C
Weight	0.13 kg
Direction of rotation	cw

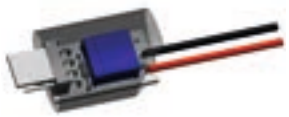
Pumps include mounting bracket.
Above performance values are based on max. control voltage 5V.
All listed values are measured at standard atmospheric conditions and at 50Hz.

FLOW CURVES



WIRING DIAGRAM

	Function	Colour	Control
Pin 1	V Supply	Red	12 V DC (max. voltage range: 10..18 V DC) 24 V DC (max. voltage range: 10..28 V DC)
Pin 2	Ground	Black	Ground for V supply (PIN 1) and Speed Control (PIN 3)
Pin 3	Speed Control	White	analog: 0..5 V DC (max. 28V) PWM: 6..20 kHz - 14..96% Speed voltage input threshold: 0.2 V
Pin 4	Tacho out	Green	18 pulses per revolution Pulse time „LOW“: 195 µs Output level „LOW“: 0 / max. 0.5 V Output level „HIGH“: min. 4 V / max. 5 V



Optional: Adapter for 2-wire duty incl. potentiometer for speed adjustment
part number 29011932

CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

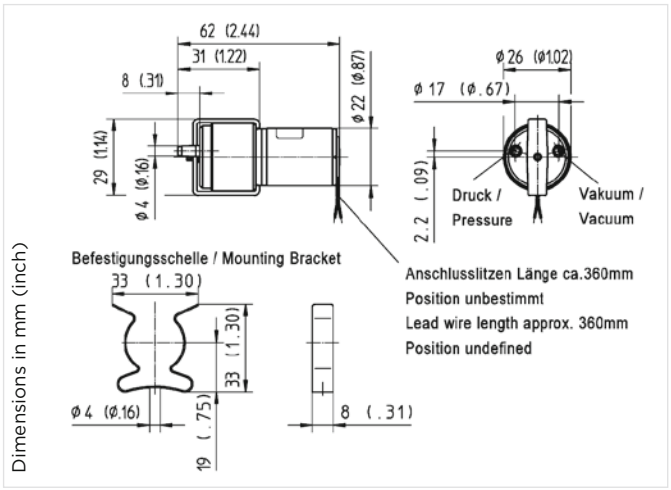
Model key:

BL	-	G	12	/	02	-	4
Brushless motor			Nominal voltage		Model type		Number of vanes

Rotary Vane Pump **G 04 EB**

Flow	**6.8 l/min**
Max. pressure	**150 mbar**
Max. vacuum	**16 %**





PNEUMATIC DATA

Description	G 3/04 EB	G 6/04 EB	G 12/04 EB	G 24/04 EB
Part number	50085	**50102**	**50097**	**50104**
Max. flow	4.5 l/min	4.7 l/min	6.2 l/min	6.8 l/min
Max. intermittent pressure	100 mbar	110 mbar	140 mbar	150 mbar
Max. continuous pressure	50 mbar	50 mbar	50 mbar	40 mbar
Max. intermittent vacuum	11 %	12 %	15 %	16 %
Max. continuous vacuum	5 %	5 %	5 %	4 %

ELECTRICAL DATA

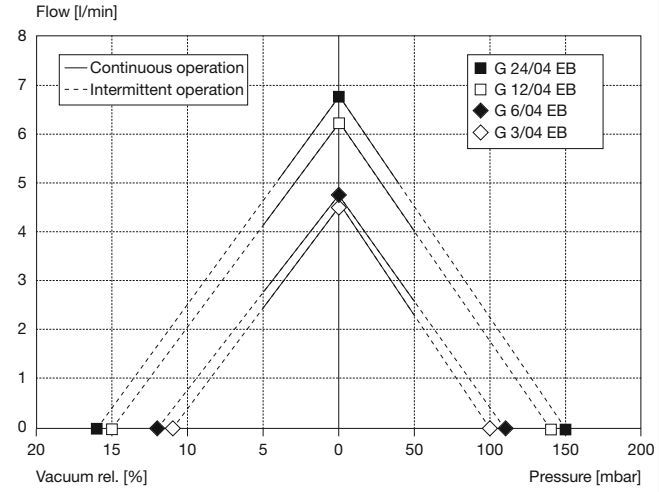
Motor type	Ironless Core DC	Ironless Core DC	Ironless Core DC	Ironless Core DC
Nominal voltage	3 V DC	6 V DC	12 V DC	24 V DC
Min. current consumption	0.26 A	0.16 A	0.18 A	0.11 A
Max. current consumption	0.80 A	0.48 A	0.47 A	0.26 A
Protection class	IP50	IP50	IP50	IP50
Motor bearing	Ball bearing/ Sleeve bearing	Ball bearing/ Sleeve bearing	Ball bearing/ Sleeve bearing	Ball bearing/ Sleeve bearing

GENERAL DATA

Ambient temperature	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C
Weight	0.1 kg	0.1 kg	0.1 kg	0.1 kg
Direction of rotation	cw	cw	cw	cw

Pumps include mounting bracket.
All listed values are measured at standard atmospheric conditions.

FLOW CURVES

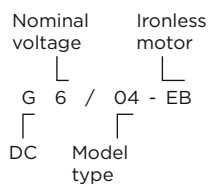


CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

50... Stock programme

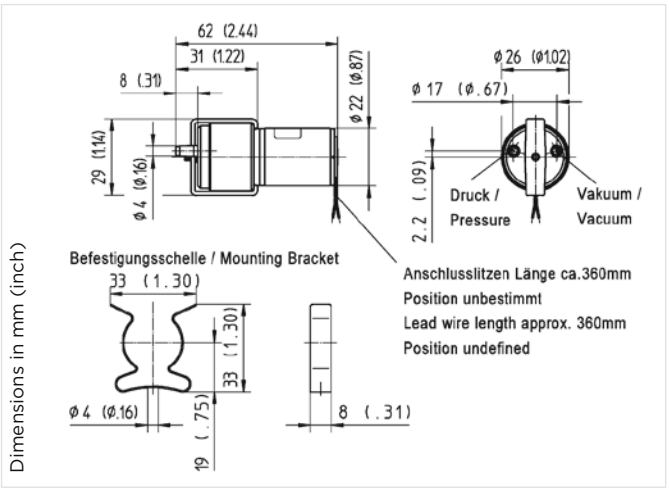
Model key:



Rotary Vane Pump **G 04-4-EB**

Flow	**5.1 l/min**
Max. pressure	**240 mbar**
Max. vacuum	**26 %**





PNEUMATIC DATA

Description	G 6/04-4 EB	G 12/04-4 EB
Part number	**50101**	**50100**
Max. flow	4.0 l/min	5.1 l/min
Max. intermittent pressure	200 mbar	240 mbar
Max. continuous pressure	50 mbar	50 mbar
Max. intermittent vacuum	21 %	26 %
Max. continuous vacuum	5 %	5 %

ELECTRICAL DATA

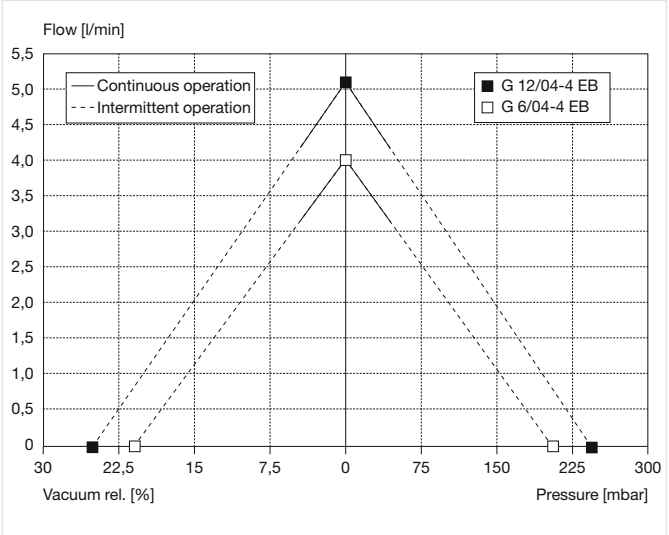
Motor type	Ironless Core DC	Ironless Core DC
Nominal voltage	6 V DC	12 V DC
Min. current consumption	0.30 A	0.29 A
Max. current consumption	0.85 A	0.70 A
Protection class	IP50	IP50
Motor bearing	Ball bearing/Sleeve bearing	Ball bearing/Sleeve bearing

GENERAL DATA

Ambient temperature	-30 to 50 °C	-30 to 50 °C
Weight	0.1 kg	0.1 kg
Direction of rotation	cw/ccw	cw/ccw

Pumps include mounting bracket.
All listed values are measured at standard atmospheric conditions.

FLOW CURVES



CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

Model key:

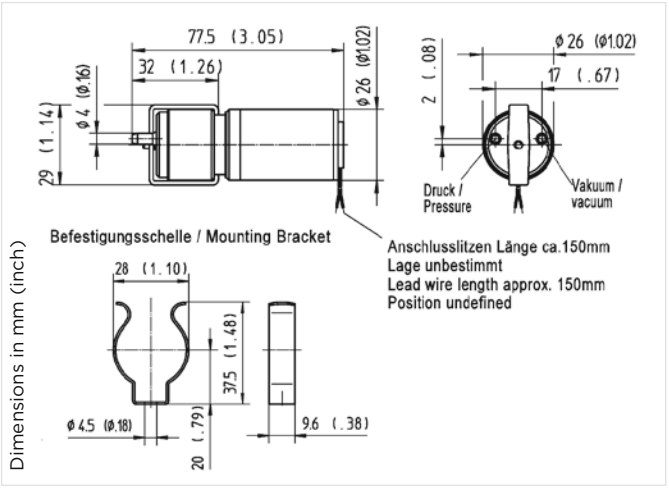
Nominal voltage		Number of vanes	
G	6 /	04 -	4EB
DC		Model type	Ironless motor

50... Stock programme

Rotary Vane Pump **G 04-8**

Flow	**4.4 l/min**
Max. pressure	**260 mbar**
Max. vacuum	**25 %**





PNEUMATIC DATA

Description	G 12/04-8
Part number	50119
Max. flow	4.4 l/min
Max. intermittent pressure	260 mbar
Max. continuous pressure	100 mbar
Max. intermittent vacuum	25 %
Max. continuous vacuum	10 %

ELECTRICAL DATA

Motor type	Ironless Core DC
Nominal voltage	12 V DC
Min. current consumption	0.21 A
Max. current consumption	0.51 A
Protection class	IP50
Motor bearing	Ball bearing

GENERAL DATA

Ambient temperature	-30 to 50 °C
Weight	0.14 kg
Direction of rotation	cw/ccw

Pumps include mounting bracket.
All listed values are measured at standard atmospheric conditions.

CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

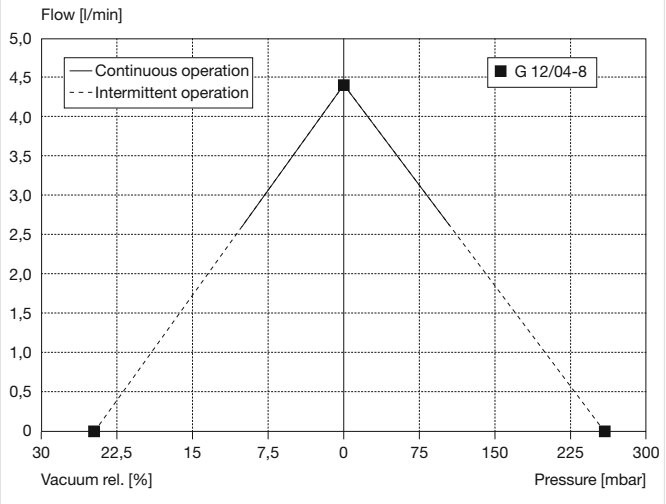
Model key:

Nominal voltage — Number of vanes

G 12 / 04 - 8

DC — Model type

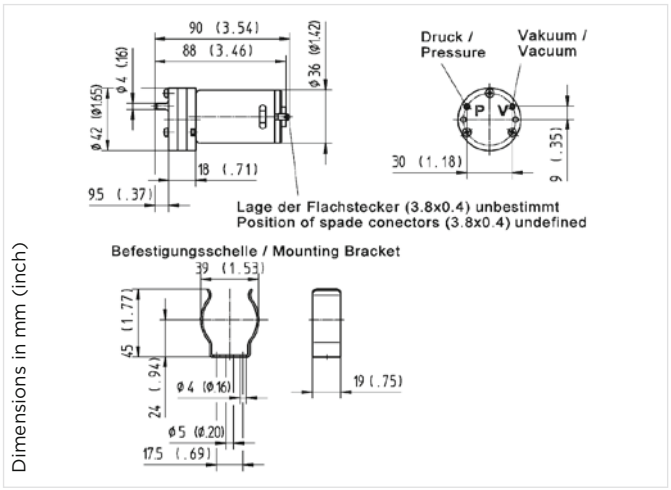
FLOW CURVES



Rotary Vane Pump **G 045-LC**

Flow	**7.5 l/min**
Max. pressure	**900 mbar**
Max. vacuum	**63 %**





PNEUMATIC DATA

Description	G 12/045-LC
Part number	**50213**
Max. flow	6.5 l/min
Max. intermittent pressure	750 mbar
Max. continuous pressure	100 mbar
Max. intermittent vacuum	63 %
Max. continuous vacuum	10 %

ELECTRICAL DATA

Motor type	Permanent magnet
Nominal voltage	12 V DC
Min. current consumption	1.8 A
Max. current consumption	3.5 A
Protection class	IP20
Motor bearing	Ball bearing/Sleeve bearing

GENERAL DATA

Ambient temperature	-10 to 40 °C
Weight	0.25 kg
Direction of rotation	cw/ccw

Pumps include mounting bracket.
All listed values are measured at standard atmospheric conditions.

CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

502... Stock programme

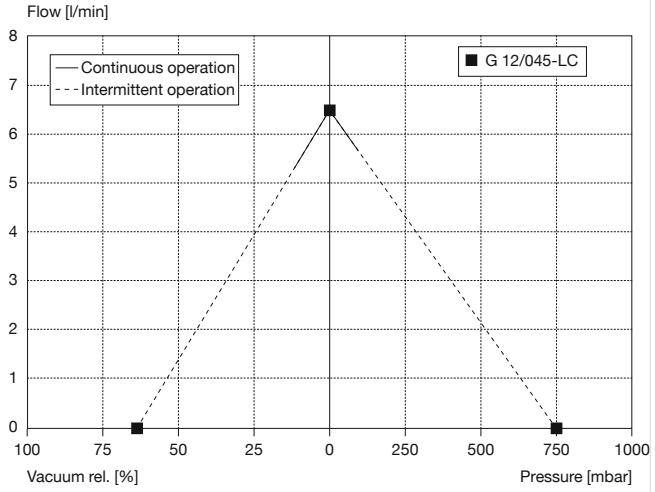
Model key:

Nominal voltage

G 12 / 045 - LC

DC — Model type

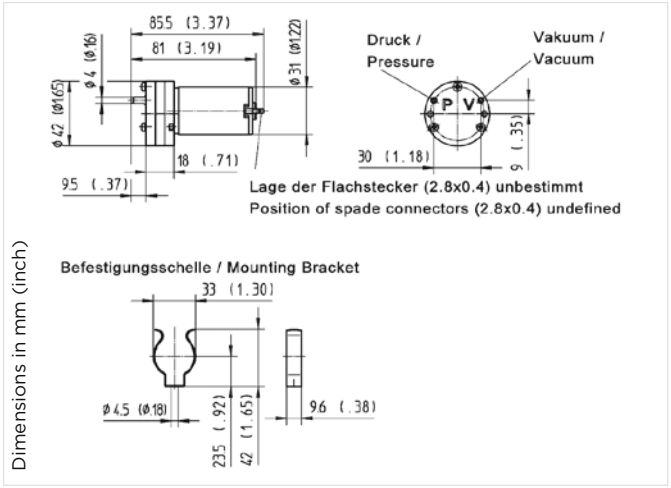
FLOW CURVES



Rotary Vane Pump **G 045**

Flow	**6.1 l/min**
Max. pressure	**750 mbar**
Max. vacuum	**70 %**





PNEUMATIC DATA

Description	G 12/045	G 24/045
Part number	**50200**	**50201**
Max. flow	5.5 l/min	6.1 l/min
Max. intermittent pressure	650 mbar	750 mbar
Max. continuous pressure	150 mbar	150 mbar
Max. intermittent vacuum	58 %	70 %
Max. continuous vacuum	15 %	15 %

ELECTRICAL DATA

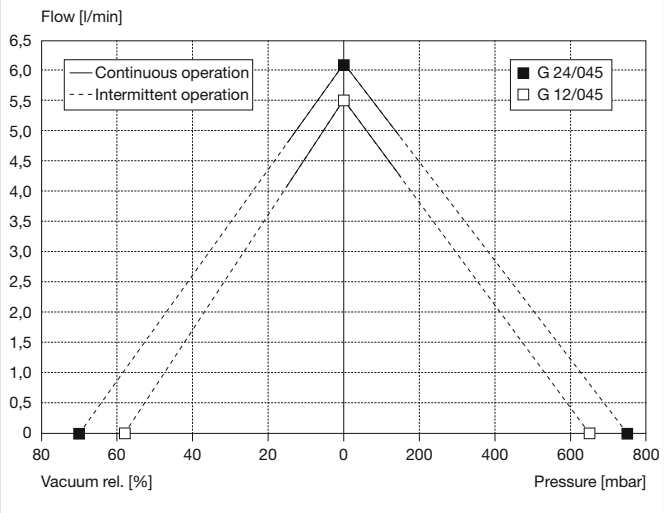
Motor type	Permanent magnet	Permanent magnet
Nominal voltage	12 V DC	24 V DC
Min. current consumption	0.64 A	0.33 A
Max. current consumption	1.36 A	0.77 A
Protection class	IP30	IP30
Motor bearing	Ball bearing	Ball bearing

GENERAL DATA

Ambient temperature	10 to 40 °C	10 to 40 °C
Weight	0.25 kg	0.25 kg
Direction of rotation	cw/ccw	cw/ccw

Pumps include mounting bracket.
All listed values are measured at standard atmospheric conditions.

FLOW CURVES



CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

50... Stock programme

Model key:

Nominal voltage

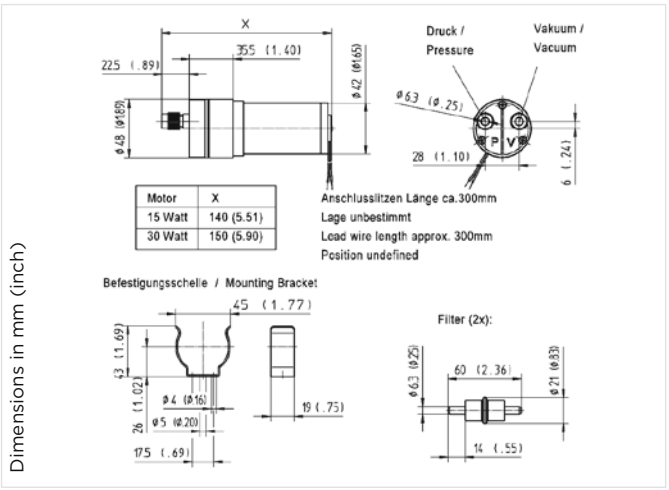
G 12 / 045

DC — Model type

Rotary Vane Pump **G 07**

Flow	**21 l/min**
Max. pressure	**1.4 bar**
Max. vacuum	**77 %**





PNEUMATIC DATA

Description	G 12/07-15 Watt	G 24/07-15 Watt	G 24/07-30 Watt
Part number	50336	**50218**	50221
Max. flow	17.0 l/min	17.5 l/min	21.0 l/min
Max. intermittent pressure	1.3 bar	1.0 bar	1.4 bar
Max. continuous pressure	0.3 bar		0.2 bar
Max. intermittent vacuum	76 %	75 %	77 %
Max. continuous vacuum	30 %		20 %

ELECTRICAL DATA

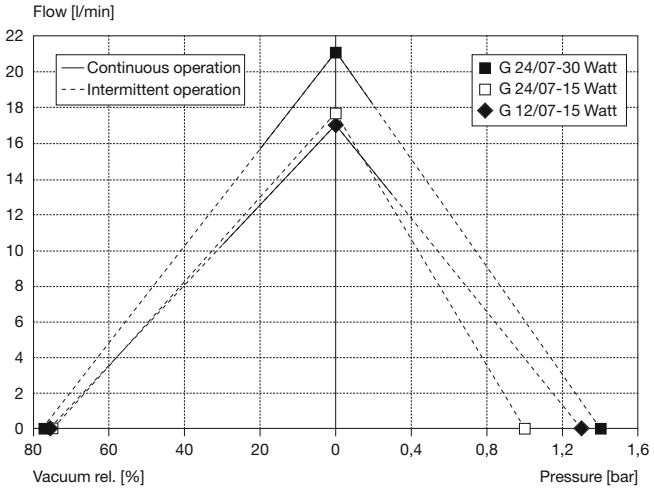
Motor type	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage	12 V DC	24 V DC	24 V DC
Min. current consumption	1.9 A	1.1 A	1.9 A
Max. current consumption	3.2 A	1.6 A	2.5 A
Protection class	IP40	IP40	IP40
Motor bearing	Ball bearing	Ball bearing	Ball bearing

GENERAL DATA

Ambient temperature	-10 to 40 °C	-10 to 40 °C	-10 to 40 °C
Weight	0.6 kg	0.6 kg	0.7 kg
Direction of rotation	cw	cw	cw

Pumps include tube connector (2x) G 1/8 to tube I.D. 6 mm, mounting bracket and filter (2x).
All listed values are measured at standard atmospheric conditions.

FLOW CURVES



CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

Model key:

Nominal voltage — Nominal motor power

G 12 / 07 - 30 Watt

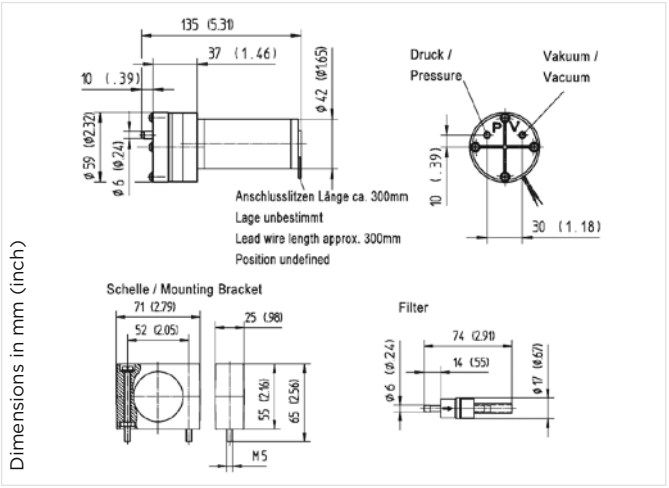
DC — Model type

50... Stock programme

Rotary Vane Pump **G 08**

Flow	**15.5 l/min**
Max. pressure	**1.4 bar**
Max. vacuum	**83 %**





PNEUMATIC DATA

Description	G 12/08-30 Watt	G 24/08-30 Watt	G 24/08-30 Watt rev.
Part number	**50325**	**50358**	50360
Max. flow	15.5 l/min	15.5 l/min	15.5 l/min
Max. intermittent pressure	1.2 bar	1.4 bar	1.2 bar
Max. continuous pressure	0.3 bar	0.3 bar	0.3 bar
Max. intermittent vacuum	80 %	83 %	74 %
Max. continuous vacuum	30 %	30 %	30 %

ELECTRICAL DATA

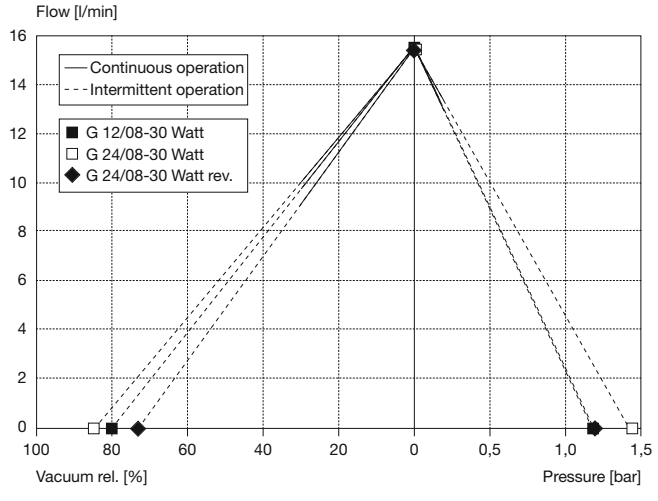
Motor type	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage	12 V DC	24 V DC	24 V DC
Min. current consumption	1.5 A	0.8 A	0.6 A
Max. current consumption	3.2 A	1.6 A	1.8 A
Protection class	IP40	IP40	IP40
Motor bearing	Ball bearing	Ball bearing	Ball bearing

GENERAL DATA

Ambient temperature	-10 to 40 °C	-10 to 40 °C	-10 to 40 °C
Weight	0.75 kg	0.75 kg	0.75 kg
Direction of rotation	cw	cw	cw/ccw

Pumps include mounting bracket and filter.
All listed values are measured at standard atmospheric conditions.

FLOW CURVES



CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

503... Stock programme

Model key:

Nominal voltage — Nominal motor power

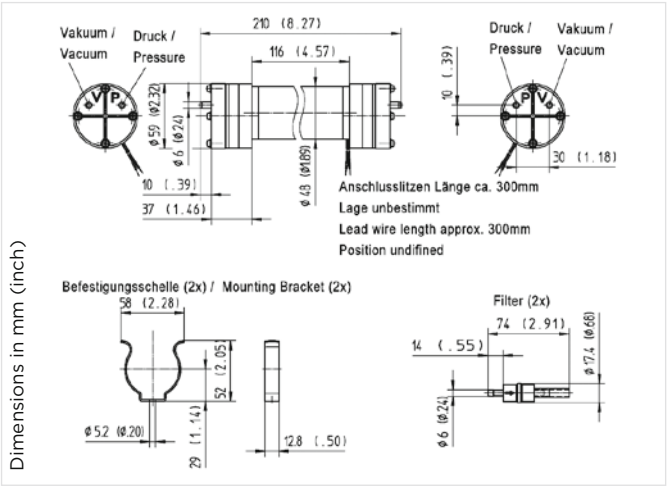
G 24 / 08 - 30 Watt rev.

DC — Model type — Reversible

Rotary Vane Pump **G 08-T**

Flow	**36 l/min**
Max. pressure	**1.4 bar**
Max. vacuum	**93 %**





PNEUMATIC DATA

Description	G 12/08-T	G 12/08-T	G 24/08-T	G 24/08-T
Part number	50241 connected in series	50241 connected in parallel	**50238** connected in series	**50238** connected in parallel
Max. flow	17 l/min	33 l/min	19 l/min	36 l/min
Max. intermittent pressure		1.4 bar		1.4 bar
Max. intermittent vacuum	93 %	84 %	93 %	84 %

ELECTRICAL DATA

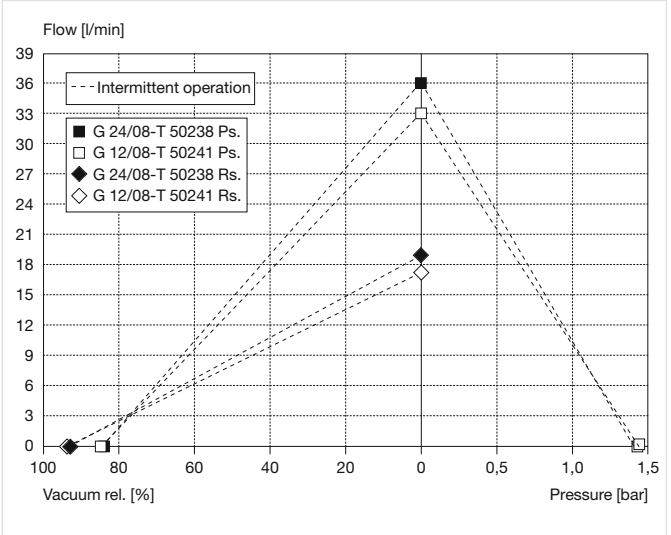
Motor type	Permanent magnet	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage	12 V DC	12 V DC	24 V DC	24 V DC
Min. current consumption	4.0 A	4.0 A	2.0 A	2.0 A
Max. current consumption	5.0 A	8.0 A	2.5 A	4.0 A
Protection class	IP40	IP40	IP40	IP40
Motor bearing	Ball bearing	Ball bearing	Ball bearing	Ball bearing

GENERAL DATA

Ambient temperature	-10 to 40 °C	-10 to 40 °C	-10 to 40 °C	-10 to 40 °C
Weight	1.3 kg	1.3 kg	1.3 kg	1.3 kg
Direction of rotation	cw	cw	cw	cw

Pumps include mounting bracket (2x) and filter (2x).
These pumps are **not** suitable for continuous operation.
All listed values are measured at standard atmospheric conditions.

FLOW CURVES



CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

50... Stock programme

Model key:

Nominal voltage — Double headed

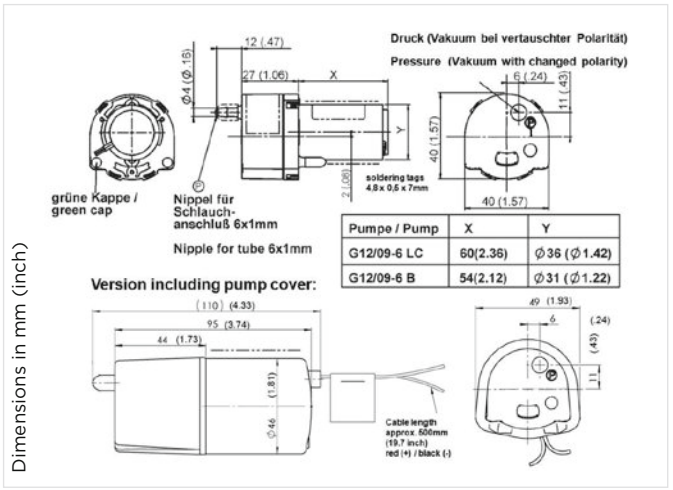
G 12 / 08 - T

DC — Model type

Rotary Vane Pump **G 09**

Flow	**11 l/min**
Max. pressure	**370 mbar**
Max. vacuum	**35 %**





Pumpe / Pump	X	Y
G12/09-6 LC	60(2.36)	⌀36 (⌀1.42)
G12/09-6 B	54(2.12)	⌀31 (⌀1.22)

PNEUMATIC DATA

Description	G 12/09-6 B	G 12/09-6 LC	G 24/09-6 LC
Part number	50330	**50555/50556** 1)	**50554/50552** 1)
Max. flow	11.0 l/min	9.0 l/min	9.0 l/min
Max. intermittent pressure	370 mbar	350 mbar	350 mbar
Max. continuous pressure	200 mbar	150 mbar	150 mbar
Max. intermittent vacuum	32 %	35 %	35 %
Max. continuous vacuum	20 %	15 %	15 %

ELECTRICAL DATA

Motor type	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage	12 V DC	12 V DC	24 V DC
Min. current consumption	0.7 A	0.7 A	0.4 A
Max. current consumption	1.8 A	2.2 A	1.3 A
Protection class	IP30	IP20	IP20
Motor bearing	Ball bearing	Ball bearing/Sleeve bearing	Ball bearing/Sleeve bearing

GENERAL DATA

Ambient temperature	-20 to 50 °C	-20 to 50 °C	-20 to 50 °C
Weight	0.24 kg	0.30 kg	0.30 kg
Direction of rotation	cw/ccw	cw/ccw	cw/ccw

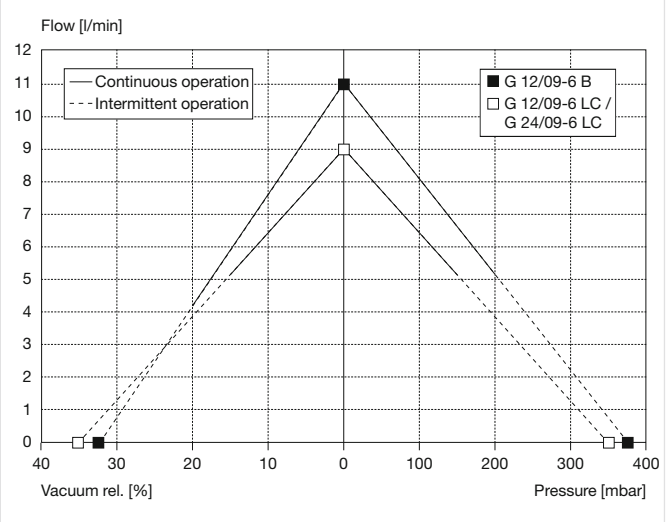
ACCESSORIES

Optional mounting bracket (part number)	31947	31911/31914	31911/31914

1) Pump including EPDM-cover for sound reduction.
All listed values are measured at standard atmospheric conditions.

For vacuum operation: change electrical polarity.
For noise reduction: do not remove green cap. To optimise flow: remove green cap.
Mounting on motor body only. Do not allow force on pump head.

FLOW CURVES



CURRENT CONSUMPTION

Min.: at open flow
Max.: at max. intermittent operation

50... Stock programme

Model key:

Nominal voltage — Number of vanes

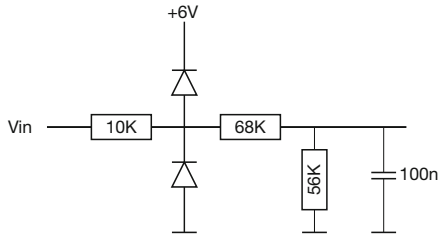
G 12 / 09 - 6 LC

DC — Model type — LC = Low-cost motor, B = Standard motor

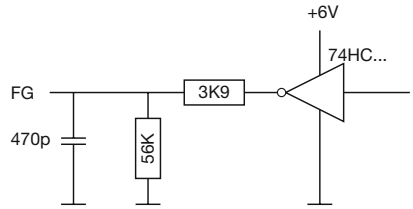
Wiring diagram (Brushless DC motor)

	Function	Colour	Control
Pin 1	V Supply	Red	12 V DC (max. voltage range: 10..18 V DC) 24 V DC (max. voltage range: 10..28 V DC)
Pin 2	Ground	Black	Ground for V supply (PIN 1) and Speed Control (PIN 3)
Pin 3	Speed Control	White	analog: 0..5 V DC (max. 28V) PWM: 6..20 kHz - 14..96% Speed voltage input threshold: 0.2 V
Pin 4	Tacho out	Green	18 pulses per revolution Pulse time „LOW“: 195 µs Output level „LOW“: 0 / max. 0.5 V Output level „HIGH“: min. 4 V / max. 5 V

Speed Input

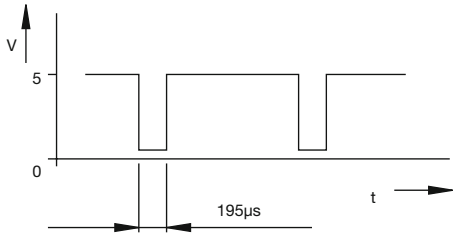


Speed Output



Optional: Adapter for 2-wire duty
incl. potentiometer for
speed adjustment

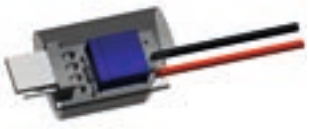
Speed Output signal



Options / Accessories

P/N 29011932 **Adapter for BLDC motor**
4-2 wire w/ manual speed control
12 V DC “red”

P/N 29011933 **Adapter for BLDC motor**
4-2 wire w/ manual speed control
24 V DC “black”



Notes

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