



# Rotary Vane Vacuum and Pressure Pumps



### **Product Features**

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

### **Typical Applications**

- Automotive
- Medical
- Analysis
- Automation
- Fuel Cell



# **Rotary Vane Vacuum and Pressure Pumps**



### **Product Overview**

Model	Flow	Max. pressure	Max. vacuum	Page
G 01-K-LC	2,2 l/min	80 mbar	-70 mbar	3
G 01-K-EB	1,4 l/min	40 mbar	-40 mbar	4
G 01 EB	1,6 l/min	180 mbar	-200 mbar	5
G 01-4 EB	1,4 l/min	280 mbar	-290 mbar	6
BL-G 01-4	1,0 l/min	135 mbar	-130 mbar	7
G 02-LC	3,1 l/min	210 mbar	-210 mbar	8
G 02-4-LC	3,1 l/min	340 mbar	-290 mbar	9
G 02-8-LC	3,2 l/min	600 mbar	-500 mbar	10
G 02 EB	3,6 l/min	190 mbar	-190 mbar	11
G 02-4 EB	3,7 l/min	310 mbar	-310 mbar	12
G 02-8	2,7 l/min	500 mbar	-450 mbar	13
BL-G 02-4	2,4 l/min	200 mbar	-220 mbar	14
G 04 EB	6,8 l/min	150 mbar	-160 mbar	15
G 04-4 EB	5,1 l/min	240 mbar	-260 mbar	16
G 04-8	4,4 l/min	260 mbar	-250 mbar	17
G 045-LC	7,5 l/min	900 mbar	-630 mbar	18
G 045	6,1 l/min	750 mbar	-700 mbar	19
W 045	4,0 l/min	500 mbar	-450 mbar	20
G 07	21 l/min	1400 mbar	-770 mbar	21
G07-N	23 l/min	1100 mbar	-800 mbar	22
G 08	15,5 l/min	1400 mbar	-830 mbar	23
G 08-T	38 l/min	1400 mbar	-930 mbar	24
W 08	16,5 l/min	800 mbar	-760 mbar	25
BL-G 085 M	8,5 l/min	450 mbar	-500 mbar	26
G 09	11 l/min	370 mbar	-350 mbar	27



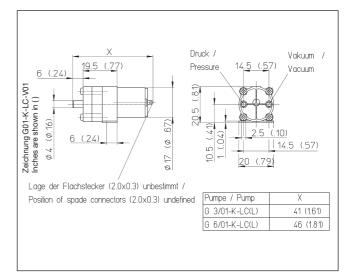
# **Rotary Vane Pump G 01-K-LC**



Flow	2,2 l/min
Max. pressure	80 mbar
Max. vacuum	-70 mbar





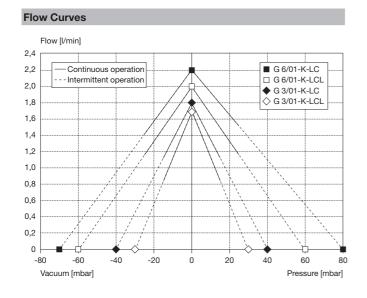


Pneumatic Data				
Description	G 3/01-K-LCL	G 3/01-K-LC	G 6/01-K-LCL	G 6/01-K-LC
Part number	50026	50008	50027	50017
Max. flow	1,7 l/min	1,8 l/min	2,0 l/min	2,2 l/min
Max. intermittent pressure	30 mbar	40 mbar	60 mbar	80 mbar
Max. continuous pressure	15 mbar	15 mbar	25 mbar	25 mbar
Max. intermittent vacuum	-30 mbar	-40 mbar	-60 mbar	-70 mbar
Max. continuous vacuum	-15 mbar	-15 mbar	-25 mbar	-25 mbar

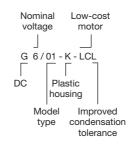
Electrical Data				
Motor type	Permanent magnet	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage*	3 V DC	3 V DC	6 V DC	6 V DC
Min. current consumption	0,26 A	0,27 A	0,17 A	0,18 A
Max. current consumption	0,35 A	0,38 A	0,23 A	0,27 A
Protection class	IP40	IP40	IP40	IP40
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

General Data				
Ambient temperature	0 to 40 °C			
Weight	0,02 kg	0,02 kg	0,03 kg	0,03 kg
Direction of rotation	cw/ccw	cw/ccw	cw/ccw	cw/ccw

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



Model key:



500... Stock programme

Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum

All listed values are measured at standard atmospheric conditions.



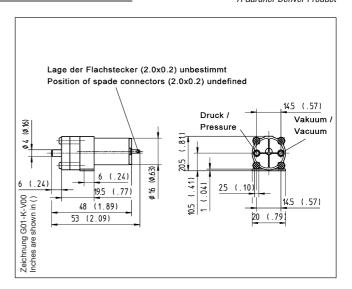
# **Rotary Vane Pump G 01-K-EB**



Flow	1,4 l/min
Max. pressure	40 mbar
Max. vacuum	-40 mbar





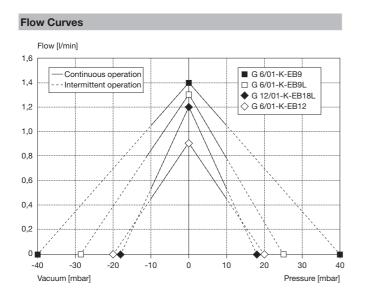


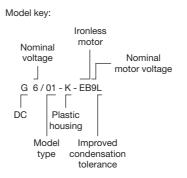
Pneumatic Data				
Description	G 6/01-K-EB12	G 6/01-K-EB9L	G 6/01-K-EB9	G 12/01-K-EB18L
Part number	50251	50094	50250	50080
Max. flow	0,9 l/min	1,3 l/min	1,4 l/min	1,2 l/min
Max. intermittent pressure	20 mbar	25 mbar	40 mbar	18 mbar
Max. continuous pressure	10 mbar	10 mbar	10 mbar	10 mbar
Max. intermittent vacuum	-20 mbar	-28 mbar	-40 mbar	-18 mbar
Max. continuous vacuum	-10 mbar	-10 mbar	-10 mbar	-10 mbar

Electrical Data				
Motor type	Permanent magnet	Permanent magnet	Permanent magnet	Permanent magnet
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	60 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			
Weight	0,04 kg	0,04 kg	0,04 kg	0,04 kg
Direction of rotation	cw/ccw	cw/ccw	cw/ccw	cw/ccw

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.





50... Stock programme
Current consumption:
Min.: at open flow
Max.: at max. intermittent vacuum

All listed values are measured at standard atmospheric conditions.



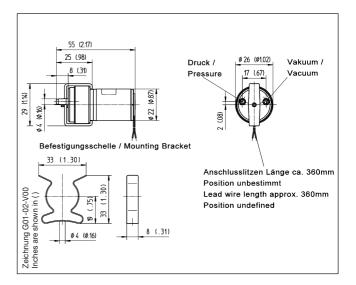
# **Rotary Vane Pump G 01 EB**



Flow	1,6 l/min
Max. pressure	180 mbar
Max. vacuum	-200 mbar







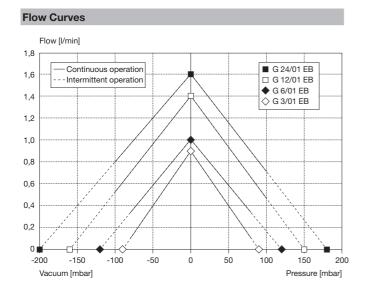
Pneumatic Data				
Description	G 3/01 EB	G 6/01 EB	G 12/01 EB	G 24/01 EB
Part number	50083	50081	50096	50099
Max. flow	0,9 l/min	1,0 l/min	1,4 l/min	1,6 l/min
Max. intermittent pressure	90 mbar	120 mbar	150 mbar	180 mbar
Max. continuous pressure	80 mbar	80 mbar	100 mbar	100 mbar
Max. intermittent vacuum	-90 mbar	-120 mbar	-160 mbar	-200 mbar
Max. continuous vacuum	-80 mbar	-80 mbar	-100 mbar	-100 mbar

Electrical Data				
Motor type	Permanent magnet	Permanent magnet	Permanent magnet	Permanent magnet
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			
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.



Model key:

Nominal voltage

G 6/01 EB

Ironless motor

Model type

500... Stock programme
Current consumption:
Min.: at open flow
Max.: at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



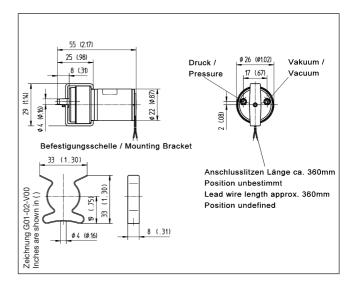
# **Rotary Vane Pump G 01-4 EB**



Flow	1,4 l/min
Max. pressure	280 mbar
Max. vacuum	-290 mbar







Pneumatic Data				
Description	G 3/01-4 EB	G 6/01-4 EB	G 12/01-4 EB	G 24/01-4 EB
Part number	50086	50088	50090	50092
Max. flow	0,9 l/min	1,0 l/min	1,4 l/min	1,4 l/min
Max. intermittent pressure	170 mbar	180 mbar	280 mbar	280 mbar
Max. continuous pressure	100 mbar	100 mbar	100 mbar	100 mbar
Max. intermittent vacuum	-190 mbar	-200 mbar	-280 mbar	-290 mbar
Max. continuous vacuum	-100 mbar	-100 mbar	-100 mbar	-100 mbar

Electrical Data				
Motor type	Permanent magnet	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage*	3 V DC	6 V DC	12 V DC	24 V DC
Min. current consumption	0,17 A	0,10 A	0,11 A	0,06 A
Max. current consumption	0,51 A	0,32 A	0,31 A	0,17 A
Protection class	IP50	IP50	IP50	IP50
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

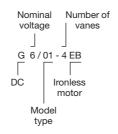
General Data				
Ambient temperature	-30 to 50 °C			
Weight	0,1 kg	0,1 kg	0,1 kg	0,1 kg
Direction of rotation	cw/ccw	cw/ccw	cw/ccw	cw/ccw

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

#### **Flow Curves** Flow [l/min] 1,6 ■ G 24/01-4 EB Continuous operation ☐ G 12/01-4 EB - Intermittent operation ◆ G 6/01-4 EB ♦ G 3/01-4 EB 1,2 1,0 8,0 0,6 0,4 0,2 Ω -400 -300 -200 -100 100 200 300 400 Vacuum [mbar] Pressure [mbar]

#### Model key:



Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.

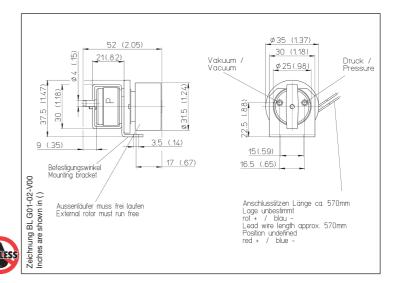


# Rotary Vane Pump BL-G 01-4



Flow	1,0 l/min
Max. pressure	135 mbar
Max. vacuum	-130 mbar





Pneumatic Data			
Description	BL-G 12/01-4		
Part number	50130		
Max. flow	1,0 l/min		
Max. intermittent pressure	135 mbar		
Max. continuous pressure	100 mbar		
Max. intermittent vacuum	-130 mbar		
Max. continuous vacuum	-100 mbar		

Electrical Data	
Motor type*	Brushless
Nominal voltage	12 V DC
Min. current consumption	0,19 A
Max. current consumption	0,22 A
Protection class	IP00
Motor bearing	Ball bearing

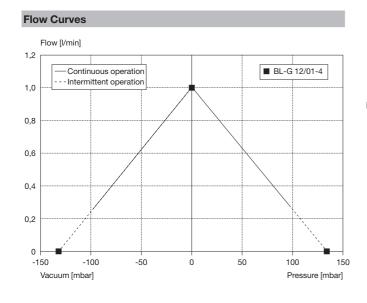
General Data		
Ambient temperature	0 to 40 °C	
Weight	0,1 kg	
Direction of rotation	CCW	

<sup>\*</sup> with integrated electronics

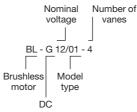
All listed values are measured at standard atmospheric conditions.

Warning: reversing polarity will damage electronics.

Mounting on bracket only. Do not allow force on either motor or pump head. Motor bearing can be damaged.



#### Model key:



Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum



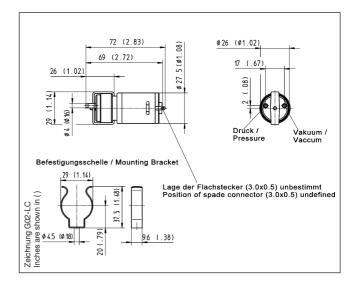
# **Rotary Vane Pump G 02-LC**



Flow	3,1 l/min
Max. pressure	210 mbar
Max vacuum	-210 mhar







Pneumatic Data		
Description	G 6/02-LC	G 12/02-LC
Part number	50136	50137
Max. flow	3,0 l/min	3,1 l/min
Max. intermittent pressure	190 mbar	210 mbar
Max. continuous pressure	80 mbar	80 mbar
Max. intermittent vacuum	-180 mbar	-210 mbar
Max. continuous vacuum	-80 mbar	-80 mbar

Electrical Data		
Motor type	Permanent magnet	Permanent magnet
Nominal voltage*	6 V DC	12 V DC
Min. current consumption	0,34 A	0,18 A
Max. current consumption	0,60 A	0,34 A
Protection class	IP20	IP20
Motor bearing	Sleeve bearing	Sleeve bearing

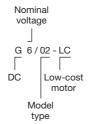
General Data			
Ambient temperature	0 to 40 °C	0 to 40 °C	
Weight	0,1 kg	0,1 kg	
Direction of rotation	CW	CW	

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

#### **Flow Curves** Flow [l/min] 3.3 ■ G 12/02-LC 3,0 -Continuous operation ☐ G 6/02-LC - Intermittent operation 2,7 2.4 2.1 1,8 1,5 1,2 0,9 0,6 0,3 Ω Vacuum [mbar] Pressure [mbar]

Model key:



Current consumption:

Min.: at open flow

Max.: at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



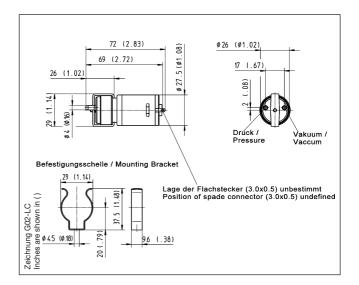
# Rotary Vane Pump G 02-4-LC



Flow	3,1 l/min
Max. pressure	340 mbar
Max. vacuum	-290 mbar







Pneumatic Data		
Description	G 6/02-4-LC	G 12/02-4-LC
Part number	50158	50159
Max. flow	3,1 l/min	2,6 l/min
Max. intermittent pressure	340 mbar	250 mbar
Max. continuous pressure	80 mbar	80 mbar
Max. intermittent vacuum	-290 mbar	-230 mbar
Max. continuous vacuum	-80 mbar	-80 mbar

Electrical Data		
Motor type	Permanent magnet	Permanent magnet
Nominal voltage*	6 V DC	12 V DC
Min. current consumption	0,45 A	0,18 A
Max. current consumption	0,80 A	0,35 A
Protection class	IP20	IP20
Motor bearing	Sleeve bearing	Sleeve bearing

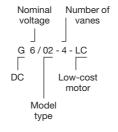
General Data			
Ambient temperature	0 to 40 °C	0 to 40 °C	
Weight	0,1 kg	0,1 kg	
Direction of rotation	CW	CW	

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

#### **Flow Curves** Flow [l/min] 3.3 ■ G 6/02-4-LC 3,0 -Continuous operation ☐ G 12/02-4-LC - Intermittent operation 2,7 2.4 2.1 1,8 1,5 1,2 0,9 0,6 0,3 Ω -400 -300 -200 -100 100 200 300 400 Vacuum [mbar] Pressure [mbar]

#### Model key:



Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



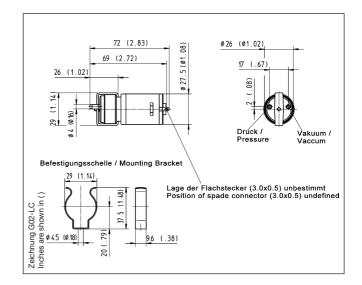
# Rotary Vane Pump G 02-8-LC



Flow	3,2 l/min
Max. pressure	600 mbar
Max vacuum	-500 mbar







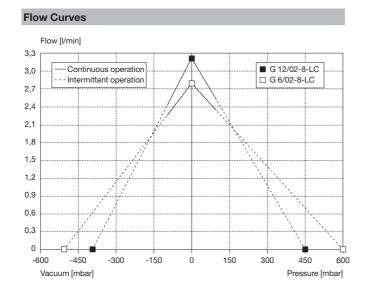
Pneumatic Data			
Description	G 6/02-8-LC	G 12/02-8-LC	
Part number	50162	50166	
Max. flow	2,8 l/min	3,2 l/min	
Max. intermittent pressure	600 mbar	450 mbar	
Max. continuous pressure	100 mbar	100 mbar	
Max. intermittent vacuum	-500 mbar	-400 mbar	
Max. continuous vacuum	-100 mbar	-100 mbar	

Electrical Data		
Motor type	Permanent magnet	Permanent magnet
Nominal voltage*	6 V DC	12 V DC
Min. current consumption	0,75 A	0,30 A
Max. current consumption	1,35 A	0,55 A
Protection class	IP20	IP20
Motor bearing	Sleeve bearing	Sleeve bearing

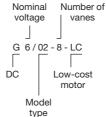
General Data			
Ambient temperature	0 to 40 °C	0 to 40 °C	
Weight	0,1 kg	0,1 kg	
Direction of rotation	cw/ccw	cw/ccw	

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.



Model key:



501... Stock programme

Current consumption:

Min.: at open flow

Max.: at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



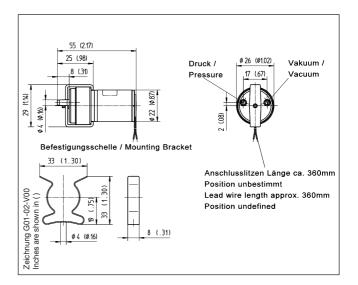
# **Rotary Vane Pump G 02 EB**



Flow	3,6 l/min
Max. pressure	190 mbar
Max vacuum	-190 mbar







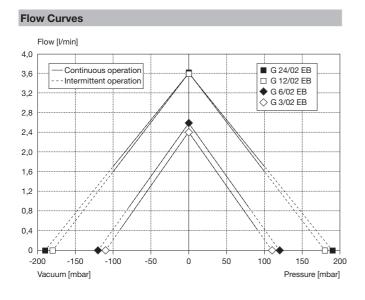
Pneumatic Data				
Description	G 3/02 EB	G 6/02 EB	G 12/02 EB	G 24/02 EB
Part number	50084	50103	50095	50098
Max. flow	2,4 l/min	2,6 l/min	3,6 l/min	3,6 l/min
Max. intermittent pressure	110 mbar	120 mbar	180 mbar	190 mbar
Max. continuous pressure	90 mbar	80 mbar	100 mbar	100 mbar
Max. intermittent vacuum	-110 mbar	-120 mbar	-180 mbar	-190 mbar
Max. continuous vacuum	-90 mbar	-80 mbar	-100 mbar	-100 mbar

Electrical Data				
Motor type	Permanent magnet	Permanent magnet	Permanent magnet	Permanent magnet
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			
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.



Model key:

Nominal voltage

G 6/02 EB

Ironless motor

Model type

50... Stock programme
Current consumption:
Min.: at open flow

Max.: at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



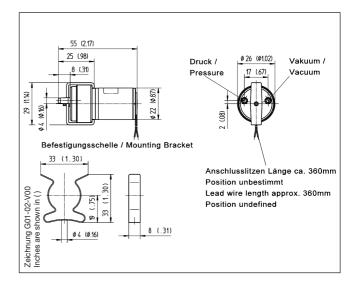
# Rotary Vane Pump G 02-4 EB



Flow	3,7 l/min
Max. pressure	310 mbar
Max vacuum	-310 mhar







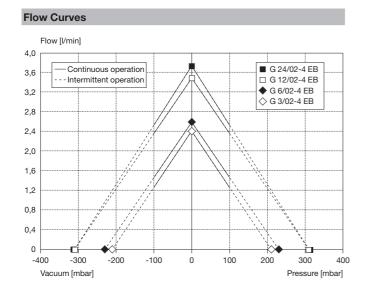
Pneumatic Data				
Description	G 3/02-4 EB	G 6/02-4 EB	G 12/02-4 EB	G 24/02-4 EB
Part number	50087	50089	50091	50093
Max. flow	2,4 l/min	2,6 l/min	3,5 l/min	3,7 l/min
Max. intermittent pressure	210 mbar	230 mbar	310 mbar	310 mbar
Max. continuous pressure	100 mbar	100 mbar	100 mbar	100 mbar
Max. intermittent vacuum	-210 mbar	-230 mbar	-310 mbar	-310 mbar
Max. continuous vacuum	-100 mbar	-100 mbar	-100 mbar	-100 mbar

Electrical Data				
Motor type	Permanent magnet	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage*	3 V DC	6 V DC	12 V DC	24 V DC
Min. current consumption	0,22 A	0,13 A	0,15 A	0,09 A
Max. current consumption	0,93 A	0,53 A	0,51 A	0,27 A
Protection class	IP50	IP50	IP50	IP50
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

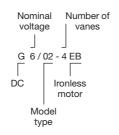
General Data				
Ambient temperature	-30 to 50 °C			
Weight	0,1 kg	0,1 kg	0,1 kg	0,1 kg
Direction of rotation	cw/ccw	cw/ccw	cw/ccw	cw/ccw

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.



Model key:



500... Stock programme

Current consumption:

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

wax.. at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



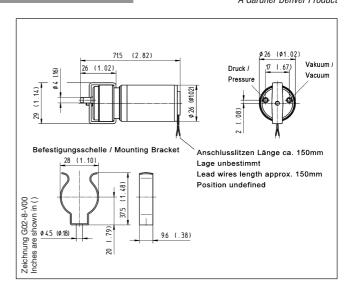
# **Rotary Vane Pump G 02-8**



Flow	2,7 l/min
Max. pressure	500 mbar
Max vacuum	-450 mbar







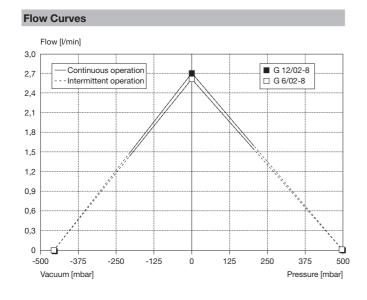
Pneumatic Data		
Description	G 6/02-8	G 12/02-8
Part number	50163	50165
Max. flow	2,6 l/min	2,7 l/min
Max. intermittent pressure	500 mbar	500 mbar
Max. continuous pressure	200 mbar	200 mbar
Max. intermittent vacuum	-450 mbar	-450 mbar
Max. continuous vacuum	-200 mbar	-200 mbar

Electrical Data		
Motor type	Permanent magnet	Permanent magnet
Nominal voltage*	6 V DC	12 V DC
Min. current consumption	0,23 A	0,11 A
Max. current consumption	0,70 A	0,32 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.



Nominal voltage vanes

G 6 / 02 - 8

DC (Ironless motor)

Model type

Model key:

501... Stock programme Current consumption:

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

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.

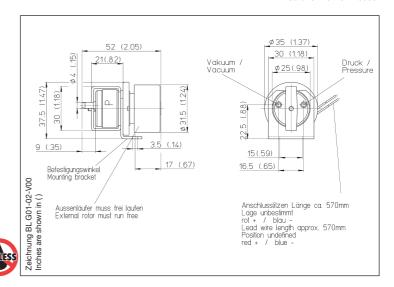


# Rotary Vane Pump BL-G 02-4



Flow	2,4 l/min
Max. pressure	200 mbar
Max. vacuum	-220 mbar





Pneumatic Data			
Description	BL-G 12/02-4		
Part number	50149		
Max. flow	2,4 l/min		
Max. intermittent pressure	200 mbar		
Max. continuous pressure	100 mbar		
Max. intermittent vacuum	-220 mbar		
Max. continuous vacuum	-100 mbar		

Electrical Data	
Motor type*	Brushless
Nominal voltage	12 V DC
Min. current consumption	0,22 A
Max. current consumption	0,34 A
Protection class	IP00
Motor bearing	Ball bearing

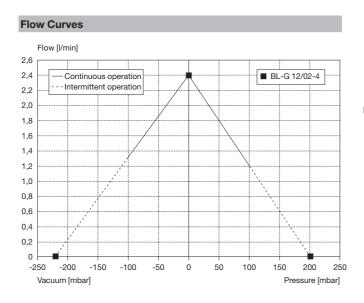
General Data		
Ambient temperature	0 to 40 °C	
Weight	0,1 kg	
Direction of rotation	CCW	

<sup>\*</sup> with integrated electronics

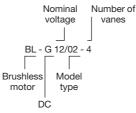
All listed values are measured at standard atmospheric conditions.

Warning: reversing polarity will damage electronics.

Mounting on bracket only. Do not allow force on either motor or pump head. Motor bearing can be damaged.



### Model key:



Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum



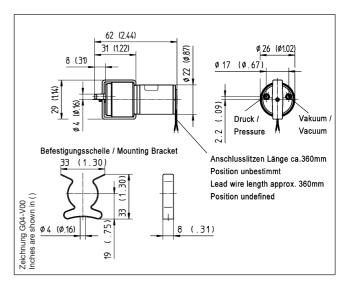
# **Rotary Vane Pump G 04 EB**



Flow	6,8 l/min
Max. pressure	150 mbar
Max. vacuum	-160 mbar







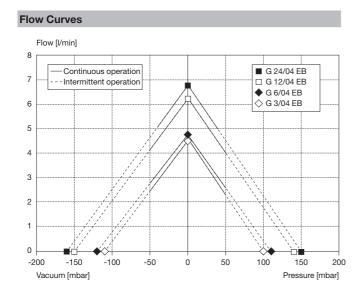
Pneumatic Data				
Description	G 3/04 EB	G 6/04 EB	G 12/04 EB	G 24/04 EB
Part number	50085	50102	50097	50104
Max. flow	4,5 l/min	4,7 l/min	6,2 l/min	6,8 l/min
Max. intermittent pressure	100 mbar	110 mbar	140 mbar	150 mbar
Max. continuous pressure	50 mbar	50 mbar	50 mbar	40 mbar
Max. intermittent vacuum	-110 mbar	-120 mbar	-150 mbar	-160 mbar
Max. continuous vacuum	-50 mbar	-50 mbar	-50 mbar	-40 mbar

Electrical Data				
Motor type	Permanent magnet	Permanent magnet	Permanent magnet	Permanent magnet
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	Ball bearing/Sleeve bea	ring Ball bearing	Ball bearing

General Data				
Ambient temperature	-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.



Model key:

Nominal voltage

G 6 / 04 EB

Ironless motor

Model type

50... Stock programme Current consumption:

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

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



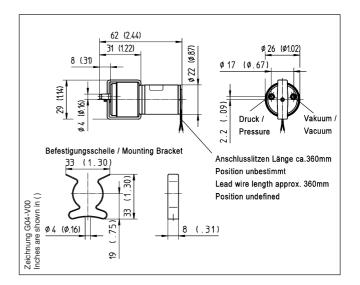
# **Rotary Vane Pump G 04-4 EB**



Flow	5,1 l/min
Max. pressure	240 mbar
Max. vacuum	-260 mbar







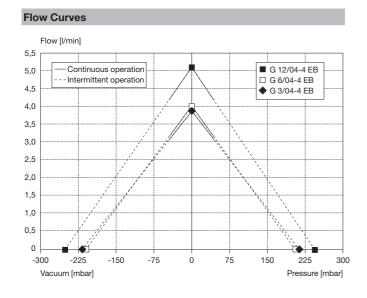
Pneumatic Data				
Description	G 3/04-4 EB	G 6/04-4 EB	G 12/04-4 EB	
Part number	50082	50101	50100	
Max. flow	3,8 l/min	4,0 l/min	5,1 l/min	
Max. intermittent pressure	210 mbar	200 mbar	240 mbar	
Max. continuous pressure	50 mbar	50 mbar	50 mbar	
Max. intermittent vacuum	-220 mbar	-210 mbar	-260 mbar	
Max. continuous vacuum	-50 mbar	-50 mbar	-50 mbar	

Electrical Data			
Motor type	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage*	3 V DC	6 V DC	12 V DC
Min. current consumption	0,52 A	0,30 A	0,29 A
Max. current consumption	1,53 A	0,85 A	0,70 A
Protection class	IP50	IP50	IP50
Motor bearing	Ball bearing	Ball bearing/Sleeve bea	ring Ball bearing

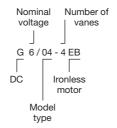
General Data			
Ambient temperature	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C
Weight	0,1 kg	0,1 kg	0,1 kg
Direction of rotation	cw/ccw	cw/ccw	cw/ccw

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.



Model key:



50... Stock programme

Current consumption:

Min.: at open flow

Max.: at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



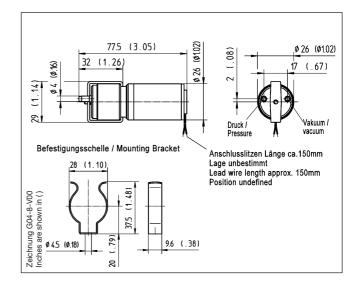
# **Rotary Vane Pump G 04-8**



Flow	4,4 l/min
Max. pressure	260 mbar
Max. vacuum	-250 mbar







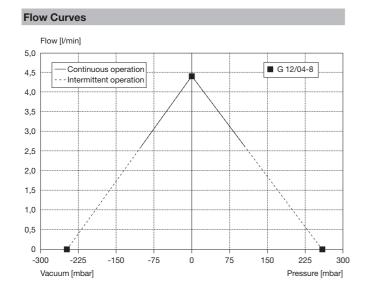
Pneumatic Data		
Description	G 12/04-8	
Part number	50119	
Max. flow	4,4 l/min	
Max. intermittent pressure	260 mbar	
Max. continuous pressure	100 mbar	
Max. intermittent vacuum	-250 mbar	
Max. continuous vacuum	-100 mbar	

Electrical Data		
Motor type	Permanent magnet	
Nominal voltage*	12 V DC	
Min. current consumption	0,21 A	
Max. current consumption	0,51 A	
Protection class	IP50	
Motor bearing	Ball bearing	

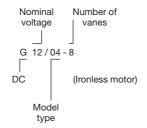
General Data		
Ambient temperature	-30 to 50 °C	
Weight	0,14 kg	
Direction of rotation	cw/ccw	

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.



#### Model key:



Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



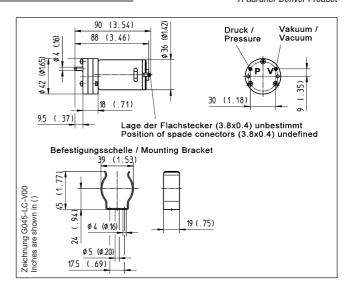
# **Rotary Vane Pump G 045-LC**



Flow	7,5 l/min
Max. pressure	900 mbar
Max. vacuum	-630 mbar







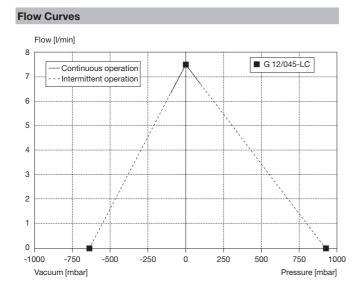
Pneumatic Data		
Description	G 12/045-LC	
Part number	50202	
Max. flow	7,5 l/min	
Max. intermittent pressure	900 mbar	
Max. continuous pressure	100 mbar	
Max. intermittent vacuum	-630 mbar	
Max. continuous vacuum	-100 mbar	

Electrical Data		
Motor type	Permanent magnet	
Nominal voltage*	12 V DC	
Min. current consumption	1,8 A	
Max. current consumption	3,2 A	
Protection class	IP20	
Motor 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.



Nominal voltage

G 12/045 - LC

C Low-cost motor

Model type

Model key:

502... Stock programme Current consumption:

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

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



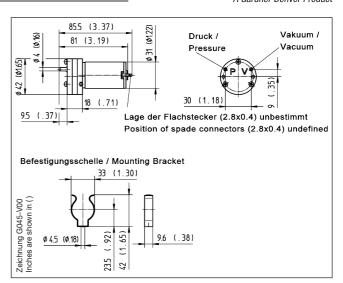
# **Rotary Vane Pump G 045**



Flow	6,1 l/min
Max. pressure	750 mbar
Max. vacuum	-700 mbar







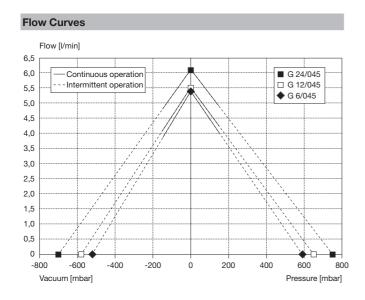
Pneumatic Data				
Description	G 6/045	G 12/045	G 24/045	
Part number	50199	50200	50201	
Max. flow	5,4 l/min	5,5 l/min	6,1 l/min	
Max. intermittent pressure	590 mbar	650 mbar	750 mbar	
Max. continuous pressure	150 mbar	150 mbar	150 mbar	
Max. intermittent vacuum	-520 mbar	-580 mbar	-700 mbar	
Max. continuous vacuum	-150 mbar	-150 mbar	-150 mbar	

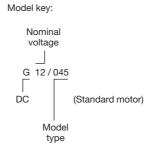
Electrical Data			
Motor type	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage*	6 V DC	12 V DC	24 V DC
Min. current consumption	1,20 A	0,64 A	0,33 A
Max. current consumption	2,47 A	1,36 A	0,77 A
Protection class	IP30	IP30	IP30
Motor bearing	Ball bearing	Ball bearing	Ball bearing

General Data				
Ambient temperature	10 to 40 °C	10 to 40 °C	10 to 40 °C	
Weight	0,25 kg	0,25 kg	0,25 kg	
Direction of rotation	cw/ccw	cw/ccw	cw/ccw	

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.





50... Stock programme
Current consumption:
Min.: at open flow

Max.: at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



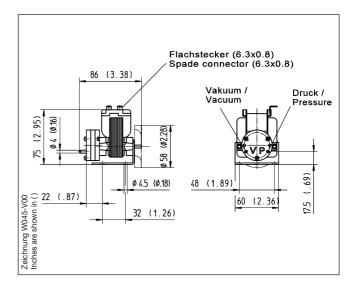
# **Rotary Vane Pump W 045**



Flow	4,0 l/min
Max. pressure	500 mbar
Max. vacuum	-450 mbar







Pneumatic Data			
Description	W 045-S 230/50	W 045-S 110/60	
Part number	50413	50414	
Max. flow	3,5 l/min	4,0 l/min	
Max. intermittent pressure	380 mbar	500 mbar	
Max. continuous pressure	150 mbar	150 mbar	
Max. intermittent vacuum	-410 mbar	-450 mbar	
Max. continuous vacuum	-150 mbar	-150 mbar	

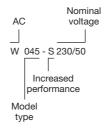
Electrical Data		
Motor type	Shaded pole	Shaded pole
Nominal voltage	230 V/50 Hz	110 V/60 Hz
Min. current consumption	0,18 A	0,45 A
Max. current consumption	0,21 A	0,50 A
Insulation class	E	E
Protection class	IP00	IP00
Motor bearing	Sleeve bearing	Sleeve bearing

General Data			
Ambient temperature	0 to 40 °C	0 to 40 °C	
Weight	0,55 kg	0,55 kg	
Direction of rotation	cw	CW	

All listed values are measured at standard atmospheric conditions.

#### **Flow Curves** Flow [l/min] 4,5 ■ W 045-S 110/60 -Continuous operation 4,0 ☐ W 045-S 230/50 - Intermittent operation 3,5 3,0 2,5 2,0 1,5 1,0 0,5 0 -600 -450 -300 -150 150 300 450 600 Vacuum [mbar] Pressure [mbar]

### Model key:



Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum



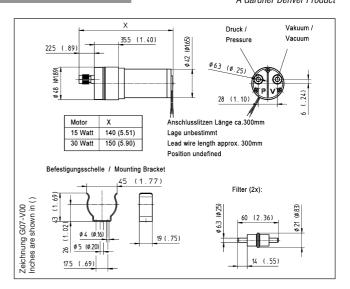
# **Rotary Vane Pump G 07**



Flow	21 I/min
Max. pressure	1,4 bar
Max. vacuum	-770 mbar







Pneumatic Data				
Description	G 12/07-15 Watt	G 12/07-30 Watt	G 24/07-15 Watt	G 24/07-30 Watt
Part number	50336	50369	50218	50221
Max. flow	17,0 l/min	16,0 l/min	17,5 l/min	21,0 l/min
Max. intermittent pressure	1,3 bar	1,4 bar	1,0 bar	1,4 bar
Max. continuous pressure	0,3 bar	0,3 bar		0,2 bar
Max. intermittent vacuum	-760 mbar	-760 mbar	-750 mbar	-770 mbar
Max. continuous vacuum	-300 mbar	-300 mbar		-200 mbar

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	1,9 A	2,0 A	1,1 A	1,9 A
Max. current consumption	3,2 A	3,4 A	1,6 A	2,5 A
Protection class	IP40	IP40	IP40	IP40
Motor bearing	Ball bearing	Ball bearing	Ball bearing	Ball bearing

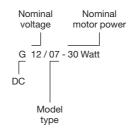
General Data				
Ambient temperature	-10 to 40 °C			
Weight	0,6 kg	0,7 kg	0,6 kg	0,7 kg
Direction of rotation	CW	CW	CW	CW

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** Flow [l/min] 22 20 -Continuous operation ■ G 24/07-30 Watt ☐ G 24/07-15 Watt - Intermittent operation 18 G 12/07-15 Watt ♦ G 12/07-30 Watt 16 14 12 10 8 6 -800 -600 -400 -200 0,4 0,8 1,2 Vacuum [mbar] Pressure [bar]

#### Model key:



Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



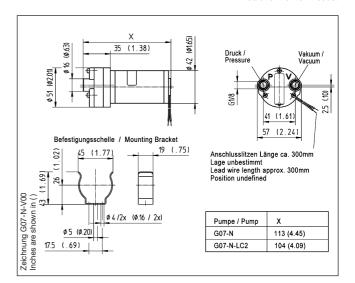
# **Rotary Vane Pump G 07-N**



Flow	23 I/min
Max. pressure	1,1 bar
Max. vacuum	-800 mbar







Pneumatic Data				
Description	G 12/07-N	G 24/07-N	G 24/07-N rev.	G 12/07-N LC2
Part number	50316	50311	50220	50300
Max. flow	20 l/min	18 l/min	17 l/min	23 l/min
Max. intermittent pressure	0,90 bar	0,80 bar	0,70 bar	1,10 bar
Max. continuous pressure	0,25 bar	0,30 bar	0,30 bar	
Max. intermittent vacuum	-700 mbar	-720 mbar	-550 mbar	-800 mbar
Max. continuous vacuum	-250 mbar	-300 mbar	-300 mbar	

Electrical Data				
Motor type	Permanent magnet	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage*	12 V DC	24 V DC	24 V DC	12 V DC
Min. current consumption	2,6 A	0,8 A	0,9 A	3,7 A
Max. current consumption	4,6 A	1,6 A	2,0 A	7,4 A
Protection class	IP40	IP40	IP40	IP20
Motor bearing	Ball bearing	Ball bearing	Ball bearing	Sleeve bearing

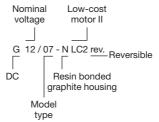
General Data				
Ambient temperature	-10 to 40 °C			
Weight	0,5 kg	0,5 kg	0,5 kg	0,4 kg
Direction of rotation	CW	CW	cw/ccw	CW

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

#### **Flow Curves** Flow [l/min] 24 22 ■ G 12/07-N LC2 -Continuous operation ☐ G 12/07-N -- Intermittent operation 20 ◆ G 24/07-N 18 16 14 12 10 8 6 2 0 -800 -600 -400 -200 0,3 0,6 0,9 Vacuum [mbar] Pressure [bar]

Model key:



50... Stock programme

Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum

ype

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.



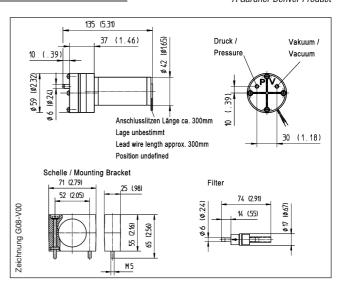
# **Rotary Vane Pump G 08**



Flow	15,5 l/min
Max. pressure	1,4 bar
Max. vacuum	-830 mbar







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	-800 mbar	-830 mbar	-740 mbar
Max. continuous vacuum	-300 mbar	-300 mbar	-300 mbar

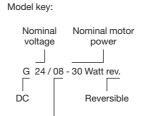
Electrical Data			
Motor type	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage*	12 V DC	24 V DC	24 V DC
Min. current consumption	1,5 A	0,8 A	0,6 A
Max. current consumption	3,2 A	1,6 A	1,8 A
Protection class	IP40	IP40	IP40
Motor bearing	Ball bearing	Ball bearing	Ball bearing

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** Flow [l/min] 16 -Continuous operation - Intermittent operation ■ G 12/08-30 Watt 12 ☐ G 24/08-30 Watt ◆ G 24/08-30 Watt rev. 10 8 Ω -1000 -800 -600 -400 -200 0,5 1,0 Vacuum [mbar] Pressure [bar]



Model type 503... Stock programme
Current consumption:
Min.: at open flow

Max.: at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.

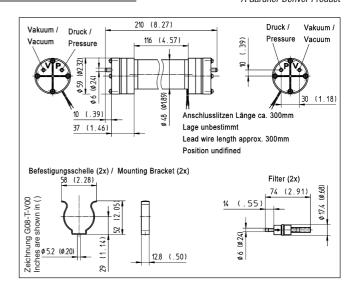


# Rotary Vane Pump G 08-T



Flow	38 I/min
Max. pressure	1,4 bar
Max. vacuum	-930 mbar





Pneumatic Data				
Prieumatic Data				
Description	G 12/08-T (-S)	G 12/08-T (-S)	G 24/08-T (-S)	G 24/08-T (-S)
Part number	50241 (50242)	50241 (50242)	50238 (50239)	50238 (50239)
	connected in series	connected in parallel	connected in series	connected in parallel
Max. flow	17 (19) l/min	33 (35) I/min	19 (21) I/min	36 (38) I/min
Max. intermittent pressure	1,4 (1,0) bar	1,4 (1,0) bar	1,4 (1,0) bar	1,4 (1,0) bar
Max. intermittent vacuum	-930 (-930) mbar	-840 (-850) mbar	-930 (-930) mbar	-840 (-850) mbar

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	3,2 A	3,2 A	1,9 A	1,9 A
Max. current consumption	5,0 A	6,2 A	2,5 A	3,6 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			
Weight	1,3 kg	1,3 kg	1,3 kg	1,3 kg
Direction of rotation	CW	CW	CW	CW

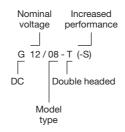
Pumps include mounting bracket (2x) and filter (2x).

These pumps are **not** suitable for continuous operation.

All listed values are measured at standard atmospheric conditions.

#### **Flow Curves** Flow [l/min] 39 36 - - Intermittent operation 33 ■ G 24/08-T 50238 Ps. 30 ☐ G 12/08-T 50241 Ps. 27 ◆ G 24/08-T 50238 Rs. ♦ G 12/08-T 50241 Rs. 24 21 18 15 12 9 6 3 0 -1000 -800 -600 -200 0,5 1,0 Pressure [bar] Vacuum [mbar]

#### Model key:



Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum

<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.

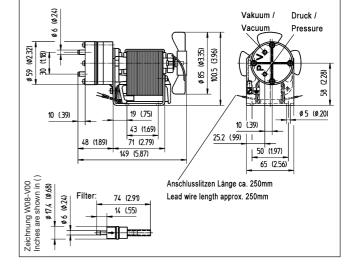


# **Rotary Vane Pump W 08**



Flow	16,5 l/min
Max. pressure	800 mbar
Max. vacuum	-760 mbar





Pneumatic Data		
Description	W 08 230/50	W 08 115/60
Part number	50419	50427
Max. flow	14,0 l/min	16,5 l/min
Max. intermittent pressure	800 mbar	800 mbar
Max. continuous pressure	150 mbar	150 mbar
Max. intermittent vacuum	-750 mbar	-760 mbar
Max. continuous vacuum	-150 mbar	-150 mbar

Electrical Data		
Motor type	Shaded pole	Shaded pole
Nominal voltage	230 V/50 Hz	115 V/60 Hz
Min. current consumption	0,7 A	1,5 A
Max. current consumption	0,9 A	2,0 A
Insulation class	F	F
Protection class	IP00	IP00
Motor bearing	Ball bearing	Ball bearing

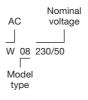
General Data			
Ambient temperature	0 to 40 °C	0 to 40 °C	
Weight	1,7 kg	1,7 kg	
Direction of rotation	cw	CW	

Pumps include filter.

All listed values are measured at standard atmospheric conditions.

#### **Flow Curves** Flow [l/min] 18 ■ W 08 115/60 -Continuous operation 16 □ W 08 230/50 - Intermittent operation 14 12 10 8 6 2 0 -800 -600 -400 -200 200 400 600 800 Vacuum [mbar] Pressure [mbar]

### Model key:



Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum

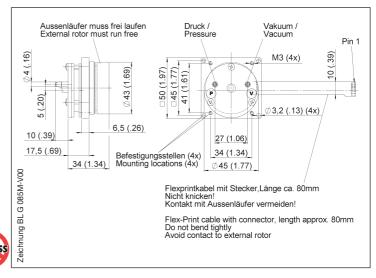


### **Rotary Vane Pump BL-G 085 M**



Flow	8,5 l/min
Max. pressure	450 mbar
Max. vacuum	-500 mbar





Pneumatic Data		
Description	BL-G 12/085 M	
Part number	50209	
Max. flow	8,5 l/min	
Max. intermittent pressure	450 mbar	
Max. continuous pressure	150 mbar	
Max. intermittent vacuum	-500 mbar	
Max. continuous vacuum	-150 mbar	

Electrical Data	
Motor type*	Brushless
Nominal voltage	12 V DC
Min. current consumption	0,7 A
Max. current consumption	2,0 A
Protection class	IP00
Motor bearing	Ball bearing
Electrical connection	Flex-Print connector, 11 poles, pitch 1.0 mm, top contact style

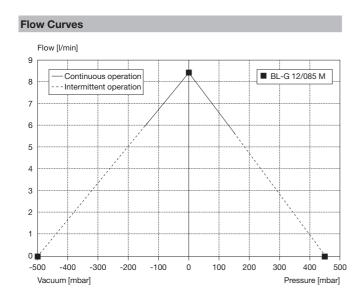
General Data		
Ambient temperature	-40 to 60 °C	
Weight	0,15 kg	
Direction of rotation	cw/ccw	

<sup>\*</sup> without electronics

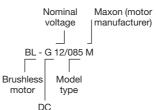
All listed values are measured at standard atmospheric conditions.

Please contact Thomas if further information regarding electrical connection and electronics is required.

Use provided mounting locations only. Do not allow force on either motor or pump head. Motor bearing can be damaged.







Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum

### Pin allocation:

Pin 1 4,5 - 18 VDC Pin 2 Hall sensor 3 Pin 3 Hall sensor 1 Pin 4 Hall sensor 2 Pin 5 GND Pin 6 Motor winding 3 Pin 7 Motor winding 2

Pin 7 Motor winding 2 Pin 8 Motor winding 1

#### Option:

Adaptor for Flex-Print connector to terminal board, part number 63003

BL-G 12/085 M (50209) inclusive separate electronics (63002) + adaptor (63003) for Flex-Print connector, part number 50210



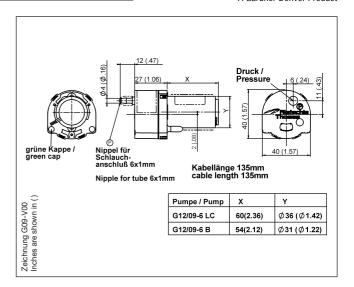
### **Rotary Vane Pump G 09**



Flow	11 l/min
Max. pressure	370 mbar
Max. vacuum	-350 mbar







Pneumatic Data		
Description	G 12/09-6 LC	G 12/09-6 B
Part number	50532	50330
Max. flow	9,0 l/min	11,0 l/min
Max. intermittent pressure	350 mbar	370 mbar
Max. continuous pressure	150 mbar	200 mbar
Max. intermittent vacuum	-350 mbar	-320 mbar
Max. continuous vacuum	-150 mbar	-200 mbar

Electrical Data	trical Data	
Motor type	Permanent magnet	Permanent magnet
Nominal voltage*	12 V DC	12 V DC
Min. current consumption	0,7 A	0,7 A
Max. current consumption	1,8 A	1,8 A
Protection class	IP20	IP30
Motor bearing	Sleeve bearing	Ball bearing

General Data		
Ambient temperature	-20 to 50 °C	-20 to 50 °C
Weight	0,30 kg	0,24 kg
Direction of rotation	cw/ccw	cw/ccw

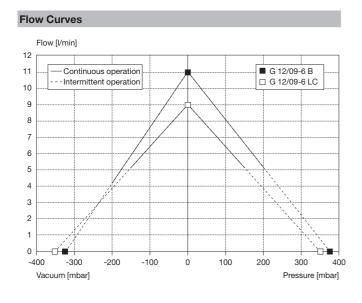
<sup>\*</sup> Please contact Thomas if speed control via Pulse-Width-Modulation is required.

All listed values are measured at standard atmospheric conditions.

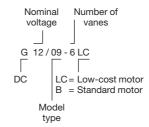
For vacuum operation: change electrical polarity.

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.



Model key:



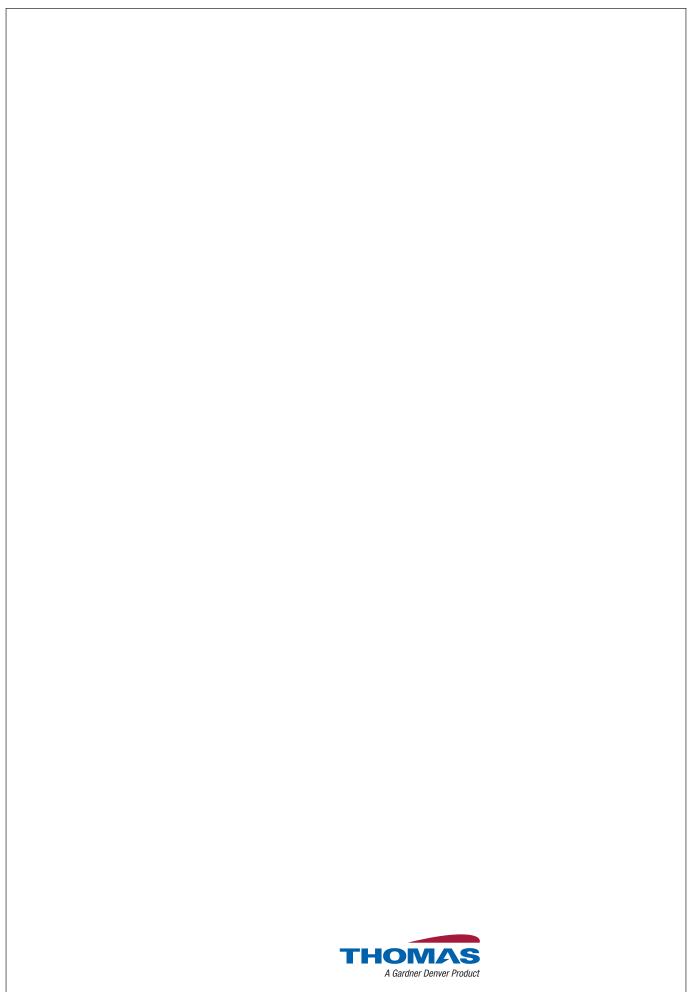
50... Stock programme

Current consumption: Min.: at open flow

Max.: at max. intermittent vacuum

Option:

G 12/09-6 LC noise reduced, part number 50533.
Photo see frontcover.
Mounting bracket for:
G 12/09-6 LC, part number 31911
G 12/09-6 LC noise reduced, part number 31914
G 12/09-6 B, part number 31947



Printed in Germany. Art.-Nr.: 17000115 07/2006

Carbon Neutral printed

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