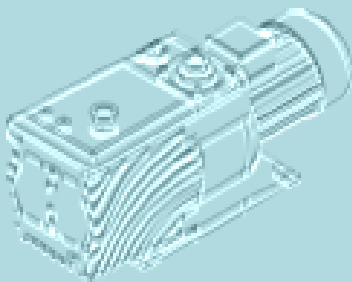
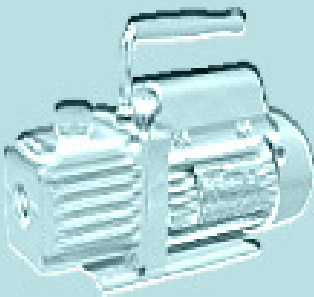
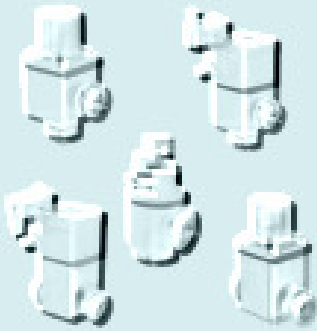


# Hilberg & Partner GmbH



## Vacuum Components Catalog 2006

The company **HILBERG & PARTNER GmbH** is a successful specialist in the field of vacuum- and plant technology as well as the planning, constructing and manufacturing of vacuum plants of various ranges of application.

**Extensive consulting and first class services are guaranteed.**

Specialist for vacuum- and plant technology for more than 20 years.

# Hilberg & Partner GmbH



## GD – J Series

Angle Valve, manually operated

A1

## GDQ – J/ISO - K Series

Angle Valve, electropneumatically operated

A2

## GDQ – J Series

Angle Valve, electropneumatically operated

A3

## GDQ – Series

Straight Through Valve, electropneumatically operated

A4

## GD – Series

Straight Through Valve (Bellow-seal), manually operated

A5



## TRP - Series (6, 12, 24, 36)

Two-Stage Rotary Vane Vacuum Pumps

B1

## TRP – Series (48, 60, 90)

Two-Stage Rotary Vane Vacuum Pumps

B2



## VE – Series (125, 145, 180)

Single-Stage Vacuum Pumps

C1

## VE – Series (225, 245, 280)

Two-Stage Vacuum Pumps

C2



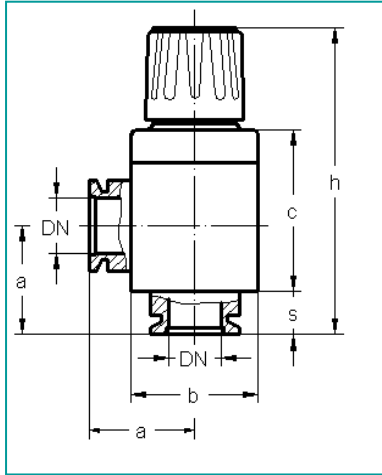
## GD- J Series

### Angle Valve, manually operated

A1

Used for general vacuum applications. Rotary knob opens/closes valve by hand. Its working substance is air or non-corrosive gas.

Vacuum Valves



### Specification:

- Pressure range:  $1 \times 10^{-8}$  Pa -  $2 \times 10^5$  Pa
- Open and close under any differential pressure within the permissible pressure range
- Leakage rate:  $< 1.3 \times 10^{-7}$  Pa·l·s<sup>-1</sup>
- Life: > 200.000 times
- Installation position: in any direction
- Clearly visible open and close position indicator
- Temperature-resistant: up to 80° C

- **Valve Body:** Stainless Steel, Aluminium
- **Bellow:** Stainless Steel
- **Gasket:** FPM O-ring (Viton)
- **Inner Part:** Stainless Steel
- **DN:** 10KF; 16KF; 25KF; 40KF

Dimensions		DN 10KF	DN 16KF	DN 25KF	DN 40KF
a	mm	30	40	50	65
b	mm	36	36	60	80
c	mm	53(49)	55(49)	74(69)	95(83)
h	mm	104	114	144	174
s	mm	11(15)	22(25)	24(29)	25(37)

Dimensions in brackets apply to stainless steel valve bodies

Technical Data		DN 10KF	DN 16KF	DN 25KF	DN 40KF
Conductance at molecular flow	l/s	1,6	3,0	12	32
AL body weight	kg	0,28	0,30	0,72	1,46
SS body weight	kg	0,42	0,42	1,24	2,38
Life		>200.000 times			

	DN 10KF	DN 16KF	DN 25KF	DN 40KF
Order: AL body	28700	28701	28702	28703
Order: SS body	28800	28801	28802	28803

## GDQ- J/ ISO-K Series

Angle Valve, electropneumatically operated

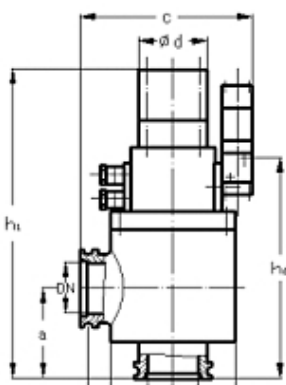
A2

Vacuum Valves

Used for general vacuum applications. It takes electrical sign as the sign to express the valve is closed down or open. It is a switch device in high vacuum system and turns off automatically by spring when the electricity/air current is interrupted. Its working substance is air or non-corrosive gas.

### Specification:

- Pressure range:  $1 \times 10^{-8}$  Pa -  $2 \times 10^5$  Pa
- Power: 220V, 50Hz, 6W
- Compressed air: 5 -  $9 \times 10^5$  Pa
- Leakage rate:  $1.3 \times 10^{-7}$  Pa·l·s<sup>-1</sup>
- Life: >200.000 times
- Opening/Closing time: <1 s
- Can be worked against atmospheric pressure
- Clearly visible open and closed position indicator included
- Electrical position indicator
- Installation position: in any direction
- Temperature-resistant: up to 80 °C



- **Valve body:** Aluminium, Stainless steel
- **Bellow:** Stainless steel
- **Gaskets:** FPM O-ring (Viton)
- **Inner Part:** Stainless steel
- **DN:** 63 ISO-K; 80 ISO-K; 100 ISO-K; 160 ISO-K

Dimensions		DN 63 ISO-K	DN 80 ISO-K	DN 100 ISO-K	DN 160 ISO-K
a	mm	30	on request	50	65
c	mm	180		220	248
d (Ø)	mm	58		58	58
h1	mm	320		370	432
h2	mm	207		247	297
D (Ø)	mm	128		172	234

Technical Data		DN 63 ISO-K	DN 80 ISO-K	DN 100 ISO-K	DN 160 ISO-K
Conductance at molecular flow	l/s	160	on request	480	1200
AL body weight	kg	4,8		7	12
SS body weight	kg	5,6		8	
Compressed air connection		5 - $9 \times 10^5$ Pa			
Opening/Closing time		<1s			
Life		>200.000 times			

	DN 63 ISO-K	DN 80 ISO-K	DN 100 ISO-K	DN 160 ISO-K
Order: AL body	28725	on request	29726	29727
Order: SS body	28825		29826	

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## GDQ- J Series

Angle Valve, electropneumatically operated

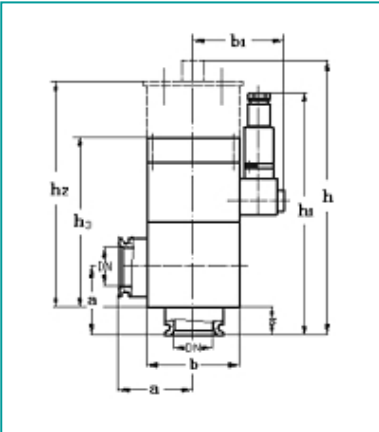
A3



Used for general vacuum applications. It takes electrical sign as the sign to express the valve is closed down or open. It is a switch device in high vacuum system and turns off automatically by spring when the electricity/air current is interrupted. Its working substance is air or non-corrosive gas.

### Specification:

- Pressures range:  $1 \times 10^{-8}$  Pa -  $2 \times 10^5$  Pa
- Power: 220V, 50Hz, 6W (other voltages on request)
- Compressed air: 5 -  $9 \times 10^5$  Pa
- Leakage rate:  $1.3 \times 10^{-7}$  Pa·l·s<sup>-1</sup>
- Life : >200.000 times
- Opening/Closing time: <0,5 s
- Can be worked against atmospheric pressure
- Clearly visible open and closed position indicator included
- Electrical position indicator, can be retrofitted
- Installation position: in any direction
- Temperature-resistant: up to 80 °C



- **Valve body:** Aluminium, Stainless Steel
- **Bellow:** Stainless steel
- **Gaskets:** FPM O-ring (Viton)
- **Inner Part:** Stainless steel
- **DN:** 10KF; 16KF; 25KF; 40KF

Dimensions		DN 10KF	DN 16KF	DN 25KF	DN 40KF
a	mm	30	40	50	65
b	mm	36	36	60	80
b <sub>1</sub>	mm	46	46	60	80
h	mm	155	168	198	232
h <sub>1</sub>	mm	137	150	170	190
h <sub>2</sub>	mm	129(135)	132(125)	159(152)	192(180)
h <sub>3</sub>	mm	91(87)	93(87)	120(114)	152(142)
s	mm	11(15)	22(25)	24(29)	25(37)

Dimensions in brackets apply to stainless steel valve bodies

Technical Data		DN 10KF	DN 16KF	DN 25KF	DN 40KF
Conductance at molecular flow	l/s	1,6	3,0	12	32
AL body weight	kg	0,5	0,5	1,2	2,5
SS body weight	kg	0,6	0,65	1,7	3,3
Compressed air connection		5 - $9 \times 10^5$ Pa			
Opening/Closing time		<0,5s			
Life		>200.000 times			

	DN 10KF	DN 16KF	DN 25KF	DN 40KF
Order: AL body	28720	28721	28722	28723
Order: SS body	28820	28821	28822	28823

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## GDQ- Series

Straight Through Valve, electropneumatically operated

A4

Vacuum Valves

Used for general vacuum applications. It is a switch device in high vacuum system and turns off automatically by spring when the electricity/air current is interrupted.

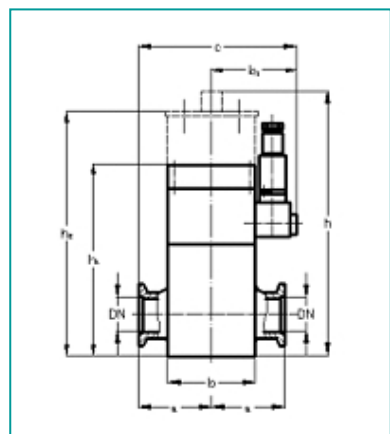
### Specification:

- Pressure range:  $1 \times 10^{-8}$  Pa -  $2 \times 10^5$  Pa
- Power: 220V, 50Hz, 6W (other voltages on request)
- Compressed air:  $5 - 9 \times 10^5$  Pa
- Leakage rate:  $1.3 \times 10^{-7}$  Pa·l·s<sup>-1</sup>
- Life: >200.000 times
- Opening/Closing time: <0,5 s
- Can be worked against atmospheric pressure
- Clearly visible open and closed position indicator included
- Electrical position indicator, can be retrofitted
- Installation position: in any direction
- Temperature-resistant: up to 80° C

Dimensions		DN 16KF	DN 25KF	DN 40KF
a	mm	30	50	65
b	mm	36	60	80
b <sub>1</sub>	mm	46	60	70
h	mm	158	188	231
h <sub>1</sub>	mm	138	164	190
h <sub>2</sub>	mm	152	171	216
h <sub>3</sub>	mm	114	133	216

Technical Data		DN 16KF	DN 25KF	DN 40KF
Conductance at molecular flow	l/s	1,8	7,5	19
SS body weight	kg	0,7	2,0	4,6
Compressed air connection		5 - 9x105 Pa		
Opening/Closing time		<0,5s		
Life		>200.000 times		

	DN 16KF	DN 25KF	DN 40KF
Order: SS body	28921	28922	28923



- **Valve Body:** Stainless Steel
- **Bellow:** Stainless Steel
- **Gasket:** FPM O-ring (Viton)
- **Inner Part:** Stainless Steel
- **DN:** 16KF; 25KF; 40KF

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## GD- Series

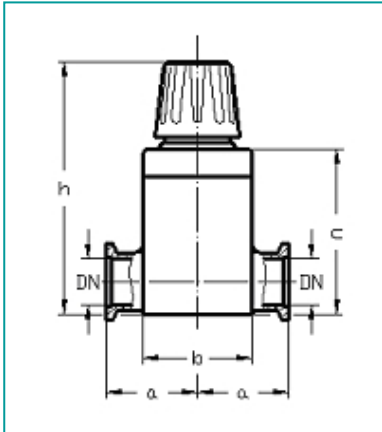
### Straight Through Valve (Bellow-seal), manually operated

A5

Used for general vacuum applications. Rotary knob opens/closes valve by hand.

#### Specification:

- Pressure range:  $1 \times 10^{-8}$  Pa -  $2 \times 10^5$  Pa
- Open and close under any differential pressure within the permissible pressure range
- Leakage rate:  $< 1.3 \times 10^{-7}$  Pa·l·s<sup>-1</sup>
- Life: >200.000 times
- Installation position: in any direction
- Clearly visible open and close position indicator
- Temperature-resistant: up to 80 °C



- **Valve Body:** Stainless Steel
- **Bellow:** Stainless Steel
- **Gasket:** FPM O-ring (Viton)
- **Inner Part:** Stainless steel
- **DN:** 16KF; 25KF; 40KF

Dimensions		DN 16KF	DN 25KF	DN 40KF	
a	mm	40	50	65	
b	mm	36	60	80	
c	mm	65	91	121	
h	mm	103	137	174	

Technical Data		DN 16KF	DN 25KF	DN 40KF	
Conductance at molecular flow	l/s	1,8	7,5	19	
SS body weight	kg	0,5	1,5	3,2	
Life		>200.000 times			

	DN 16KF	DN 25KF	DN 40KF	
Order: SS body	28901	28902	28903	

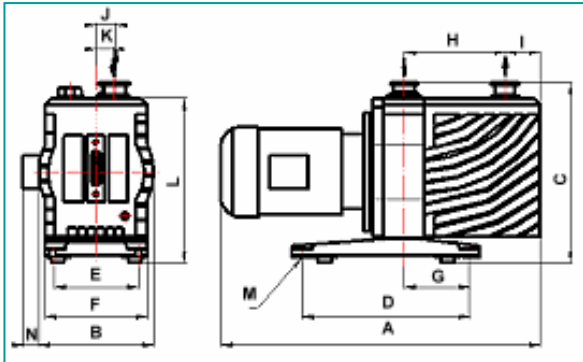


## TRP- Series (6, 12, 24, 36)

### Two-Stage Rotary Vane Vacuum Pumps

B1

The TRP series pumps are two-stage oil-sealed rotary vane vacuum pumps with gas ballast valve. These pumps are used for vacuum applications as required by industry, research and development.



#### Advantages / features

- Low ultimate pressure
- Constant pressure oil-circulating system
- Convenient control of 2- stage gas ballast valve
- Improved anti-suckback valve system
- Low noise level
- Easy maintenance and repair

#### Dimensions

TRP-6, TRP-12, TRP-24, TRP-36

Dimensions (mm)	A	B	C	D	E	F	G	H	I	J	K	L	M	N
TRP-6	470	165	252	240	120	146	94	120	50	24	28	229	9 (∅)	53
TRP-12	475	165	252	240	120	146	94	145	50	24	28	229	9 (∅)	53
TRP-24	535	205	288	310	140	180	147	156	75	40	34	262	12 (∅)	48
TRP-36	565	205	288/296	310	140	180	147	186	75	40	34	262	12 (∅)	48

#### Technical data

Pump specification	Type	TRP-6	TRP-12	TRP-24	TRP-36
Pumping speed (at 50 / 60 Hz)	m <sup>3</sup> /h	4,5 / 5,5	9 / 11	18 / 22	26 / 32
Ultimate partial pressure	Pa	4×10 <sup>-2</sup>	4×10 <sup>-2</sup>	4×10 <sup>-2</sup>	4×10 <sup>-2</sup>
Ultimate total pressure	Pa	4×10 <sup>-1</sup>	4×10 <sup>-1</sup>	4×10 <sup>-1</sup>	4×10 <sup>-1</sup>
Oil capacity	l	1,3	1,1	1,4	1,8
Connection, inlet	DN	25KF	25KF	25KF	25/40KF
Connection, outlet	DN	25KF	25KF	25KF	25KF
Motor power (single/3-Ph.)	kW	0,4	0,4	0,75	0,75
Revolution speed (at 50 Hz)	U/min	1450	1450	1450	1450
Weight	kg	23	25	37	39

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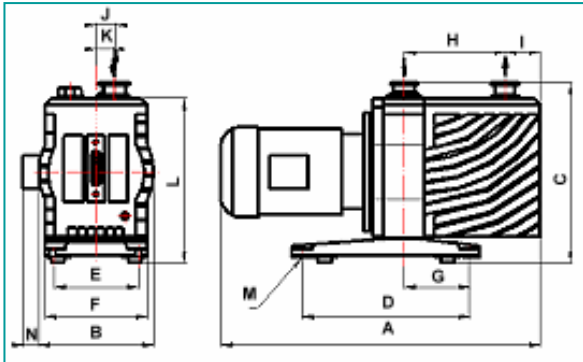


## TRP- Series (48, 60, 90)

### Two-Stage Rotary Vane Vacuum Pumps

B2

The TRP series pumps are two-stage oil-sealed rotary vane vacuum pumps with gas ballast valve. These pumps are used for vacuum applications as required by industry, research and development.



#### Advantages / features

- Low ultimate pressure
- Constant pressure oil-circulating system
- Convenient control of 2- stage gas ballast valve
- Improved anti-suckback valve system
- Low noise level
- Easy maintenance and repair

#### Dimensions

TRP-48, TRP-60, TRP-90

Dimensions (mm)	A	B	C	D	E	F	G	H	I	J	K	L	M	N
TRP-48	680	250	335	485	155	215	290	235	80	28	45	310	14 (∅)	20
TRP-60	730	280	410	550	185	245	310	245	95	28	45	385	14 (∅)	0
TRP-90	801/780	280	410	600	185	245	360	295	95	28	45	385	14 (∅)	0

#### Technical data

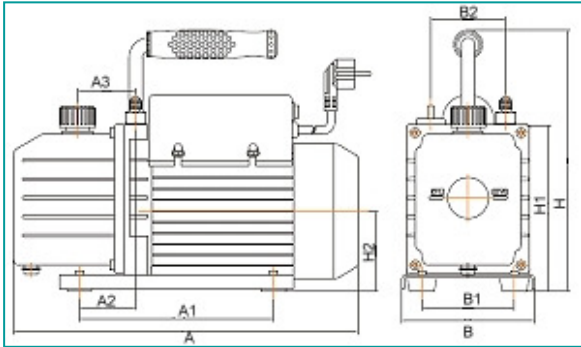
Pump specification	Type	TRP-48	TRP-60	TRP-90
Pumping speed (at 50 / 60 Hz)	m <sup>3</sup> /h	42 / 50	52 / 60	60 / 72
Ultimate partial pressure	Pa	4×10 <sup>-2</sup>	4×10 <sup>-2</sup>	4×10 <sup>-2</sup>
Ultimate total pressure	Pa	4×10 <sup>-1</sup>	4×10 <sup>-1</sup>	4×10 <sup>-1</sup>
Oil capacity	l	3,8	5,5	6,5
Connection, inlet	DN	40KF	40KF	40KF
Connection, outlet	DN	40KF	40KF	40KF
Motor power (single/3-Ph.)	kW	1,5	2,2	2,2
Revolution speed (at 50 Hz)	U/min	1450	1450	1450
Weight	kg	64	83	88



## VE- Series (125, 145, 180)

### Single-Stage Vacuum Pumps

VE series vacuum pumps are one-stage oil-sealed rotary vane vacuum pumps. These pumps are used for vacuum applications as required by industry, refrigeration systems, research and development.



#### Advantages / features :

- Low Ultimate pressure
- Portability: easy to carry
- Security: thermal protector in the motor
- Reliability: forced-feed lubrication system
- Suitable for all power supply
- Special individual design for customers

### Dimensions

VE125, VE145, VE180

Dimensions		A	A1	A2	A3	B	B1	B2	H	H1	H2
VE125	mm	285	138	38	50	124	76	-	228	138	68
VE145	mm	315	176	52	53	124	84	68	237	151	73
VE180	mm	395	214	78	73	145	99	74	266	179	86

### Technical Data

Model		VE125	VE145	VE180
Pumping speed (50 Hz)	m <sup>3</sup> / h	1	2	3
Total ultimate pressure	Pa (mbar)	50 (5 x 10 <sup>-1</sup> )	50 (5 x 10 <sup>-1</sup> )	50 (5 x 10 <sup>-1</sup> )
Oil capacity	l	0,25	0,25	0,8
Motor	kW ( hp)	0,18 (0,25)	0,22 (0,3)	0,55 (0,75)
Inlet connection *	DN	KF 16	KF 16	KF 16
Voltage (single-phase)	V	220; 50Hz / 110; 60 Hz	220; 50Hz / 110; 60 Hz	220; 50Hz / 110; 60 Hz
Weight	kg	6,8	8,9	15,5

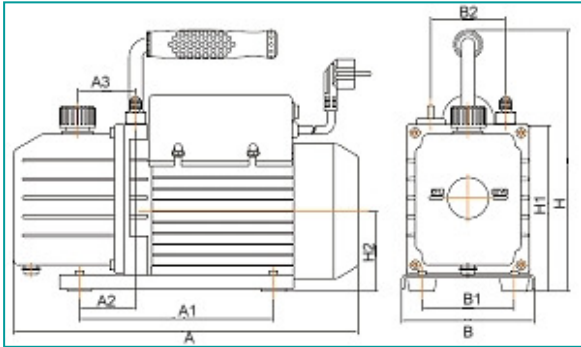
\* Other inlet connections on request



## VE- Series (225, 245, 280)

### Two-Stage Vacuum Pumps

VE series vacuum pumps are two-stage oil-sealed rotary vane vacuum pumps. These pumps are used for vacuum applications as required by industry, refrigeration systems, research and development.



#### Advantages / features :

- Low Ultimate pressure
- Portability: easy to carry
- Security: thermal protector in the motor
- Reliability: forced-feed lubrication system
- Suitable for all power supply
- Special individual design for customers

### Dimensions

VE225, VE245, VE280

Dimensions		A	A1	A2	A3	B	B1	B2	H	H1	H2
VE225	mm	315	176	52	53	124	84	68	237	151	73
VE245	mm	335	176	52	61	138	84	76	250	163	75
VE280	mm	395	214	78	73	145	99	74	266	179	86

### Technical Data

Model		VE225	VE245	VE280
Pumping speed (50 Hz)	m <sup>3</sup> / h	2	3,5	6
Total ultimate pressure	Pa (mbar)	5 (5 x 10 <sup>-2</sup> )	5 (5 x 10 <sup>-2</sup> )	5 (5 x 10 <sup>-2</sup> )
Oil capacity	l	0,28	0,34	0,56
Motor	kW ( hp)	0,22 (0,3)	0,365 (0,5)	0,73 (1)
Inlet connection *	DN	KF 16	KF 16	KF 16
Voltage (single-phase)	V	220; 50Hz / 110; 60 Hz	220; 50Hz / 110; 60 Hz	220; 50Hz / 110; 60 Hz
Weight	kg	9	11,4	17

\* Other inlet connections on request