

Vacuum

Ex stock from Norgren Express now, single stage and multi stage vacuum pumps, a wide range of suction cups, plus switches, gauges and silencers. Use the fast find guide to get the part you need to get the job done. For rapid advice or order support, call the Express Team Today.



Fast Find Guide

VACUUM PUMPS

M/58112
Single stage



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M/58102
Multi stage



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VACUUM CUPS & BELLOWS

M/58300, M/58400
Ø 6 ... 150 mm



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**Flexible connectors
for vacuum cups**



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for vacuum cups**



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VACUUM SWITCHES

18D Pneumatic
-1 ... 1 bar



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50D Pneumatic
-1 ... 0 bar, -1 ... 1 bar



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**33D
Pneumatic/Allfluid**
-1 ... 1 bar



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ACCESSORIES

Gauges



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Silencers



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NORGREN EXPRESS.

The fast track to rail success

If your business is working with the rail industry, you probably already know about Norgren. After all, we have over 25 years in supporting companies just like yours, with applications ranging from oil carryover through pantographs to water control.

If your doing a refurbishment project, Norgren Express can advise you on the spares you need – everything from airline equipment and valves, to specialist fittings.

Looking for standard airline spares? You'll find them in the Olympian section, pages 193 to 202. And don't forget, Norgren Express can supply many more specialist rail products.



AIRLINE



VALVES



FITTINGS

Visit www.norgren.com/rail
or call the Express Team today for rapid
support on your rail refurbishment projects



When you need it fast.

MULTI STAGE VACUUM PUMPS M/58102



- Fast response
- Compact, lightweight
- Low sound level
- Compressed air driven
- Simple installation
- Standard and non-return valve types

TECHNICAL DATA

Medium:
Compressed air, filtered and non-lubricated

Operating pressure:
6 bar maximum

Operating temperature:
-20°C to +80°C for M/58102/10 to M/58102/30
-20°C to +60°C for M/58102/60 to M/58102/120

Consult our Technical Service for use below +2°C

Vacuum:
-0,87 bar maximum

Models

Model	Type	Silencer**	Induced air (NL/min)*	Air consumption (NL/min)*	kg
M/58102/10	Standard	Ported	80	49	0,080
M/58102/20	Standard	Ported	160	98	0,095
M/58102/30	Standard	Ported	240	144	0,110
M/58102/60	Standard	Integral	480	285	0,855
M/58102/90	Standard	Integral	708	471	1,105
M/58102/120	Standard	Integral	910	528	1,150
M/58102/N/10	Non-return valve	Ported	80	49	0,080
M/58102/N/20	Non-return valve	Ported	160	98	0,095
M/58102/N/30	Non-return valve	Ported	240	144	0,110
M/58102/N/60	Non-return valve	Integral	480	285	0,855
M/58102/N/90	Non-return valve	Integral	708	471	1,105
M/58102/N/120	Non-return valve	Integral	910	528	1,150

*Values given are theoretical and apply to an operating pressure of 6 bar.

**For models with ported silencer, use silencer number M/58019

Vacuum flow performance

Model	INDUCED AIR (NL/MIN), FREE AIR								
	0 bar	-0,1 bar	-0,2 bar	-0,3 bar	-0,4 bar	-0,5 bar	-0,6 bar	-0,7 bar	-0,8 bar
M/58102/10	80	55	32	28	25	18	13	5	1,5
M/58102/20	160	110	64	56	50	36	26	10	3
M/58102/30	240	165	96	84	75	54	39	15	4,5
M/58102/60	480	270	182	168	150	108	78	30	9
M/58102/90	708	427	273	252	225	162	117	45	13,5
M/58102/120	910	568	355	336	300	216	156	60	18

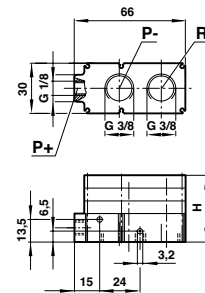
Time (sec) for evaluation of 1 litre volume to vacuum

Model	-0,1 bar	-0,2 bar	-0,3 bar	-0,4 bar	-0,5 bar	-0,6 bar	-0,7 bar	-0,8 bar	-0,85 bar
M/58102/10	0,070	0,200	0,450	0,750	1,150	1,730	2,610	4,130	5,820
M/58102/20	0,035	0,100	0,230	0,370	0,570	0,860	1,320	2,070	2,920
M/58102/30	0,023	0,070	0,150	0,250	0,380	0,580	0,870	1,380	1,940
M/58102/60	0,012	0,034	0,080	0,120	0,190	0,290	0,440	0,690	0,970
M/58102/90	0,007	0,023	0,050	0,080	0,130	0,190	0,290	0,460	0,650
M/58102/120	0,006	0,017	0,040	0,060	0,100	0,150	0,220	0,350	0,490

Note: Values given in the tables are theoretical and apply to an operating pressure of 6 bar.

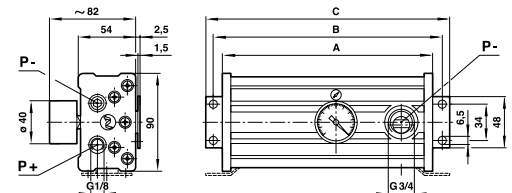
Recommended tube size (internal diameter)

Model	Compressed air	Vacuum	Exhaust
M/58102/10	> Ø 3	> Ø 7	> Ø 9
M/58102/20	> Ø 3	> Ø 7	> Ø 9
M/58102/30	> Ø 4	> Ø 9	> Ø 9
M/58102/60	> Ø 4	> Ø 19	-
M/58102/90	> Ø 5	> Ø 19	-
M/58102/120	> Ø 5	> Ø 22	-



Dimensions

Model	H
M/58102/10	24,5
M/58102/20	32
M/58102/30	39,5



Dimensions

Model	A	B	C
M/58102/60	136	154	168
M/58102/90	196	214	228
M/58102/120	196	214	228

VACUUM CUPS & BELLOWS M/58300, M/58400

Ø 6 ... 150 mm

Flat cups ideal where minimal movement is required for pliable materials

Bellows cups ideal where level compensation is required

TECHNICAL DATA

Medium:

Vacuum

Operating temperature:

-10°C to +70°C for nitrile rubber cups -30°C to +200°C for silicone cups

Consult our Technical Service for use below +2°C



MATERIALS

M/58***/01

Cups: nitrile rubber

Connection fittings: aluminium

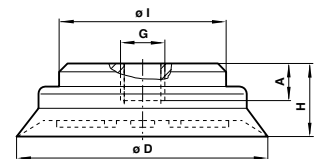
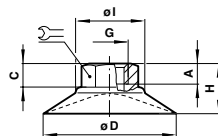
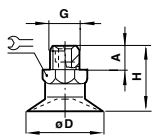
M/58***/02

Cups: silicone

Connection fittings: aluminium

Material Characteristics

	Nitrile rubber	Silicone
Wear resistance	Good	Fair
Oil resistance	Excellent	Fair
Weather resistance	Good	Excellent
Ozone resistance	Fair	Excellent

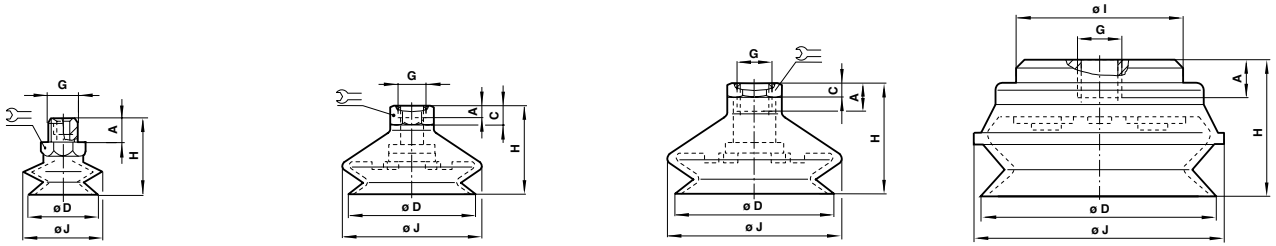


Dimensions (Flat cups)

Model	M/58301/0	M/58302/0	M/58303/0	M/58304/0	M/58305/0	M/58306/0	M/58307/0	M/58308/0	M/58309/0	M/58310/0	M/58311/0	M/58312
Ø D	6	8	10	15	20	25	30	40	50	80	120	150
A	4,5	4,5	4,5	4,5	8	8	8	6	6	13	9,5	9,5
C	-	-	-	-	-	-	-	9	11	3,5	-	-
G	M 5	M 5	M 5	M 5	G1/8 A	G1/8 A	G1/8 A	G1/8	G1/8	G1/8	G1/2	G1/2
H	15	16	20	21	19,5	20	20,5	23	26	21,5	34,5	41,5
Ø I	-	-	-	-	-	-	-	24	26	53	65	65
⌀ I	8	8	8	8	14	14	14	14	14	19	-	-

VACUUM CUPS & BELLOWS M/58300, M/58400

Ø 6 ... 150 mm



Dimensions (Bellows cups)

Model	M/58403/0	M/58404/0	M/58405/0	M/58407/0	M/58408/0	M/58409/0	M/58410/0	M/58411/0	M/58412/0
Ø	10	15	20	30	40	50	75	110	150
A	5	5	7,5	7,5	6	6	12	9,5	9,5
C	-	-	-	-	9	9	4	-	-
Ø D	11	16	22	33	43	53	78	110	150
G	M 5	M 5	G1/8 A	G1/8 A	G1/8	G1/8	G1/8	G1/2	G1/2
H	26	29	30,5	39	37	43	50	66,5	85,5
Ø I	-	-	-	-	-	-	-	65	65
Ø J	12	17	24	36	46	59	83	122	167
	7	7	14	17	17	17	21	-	-

Models

FLAT		Dia. Ø mm	Force (N)		
Model Nitrile	Model Silicone		-0,2 bar	-0,6 bar	-0,9 bar
M/58301/01	M/58301/02	6	0,5	1,5	2,3
M/58302/01	M/58302/02	8	1	2,5	3,5
M/58303/01	M/58303/02	10	1,5	4	6
M/58304/01	M/58304/02	15	2,7	8	12
M/58305/01	M/58305/02	20	5	15,5	23
M/58306/01	M/58306/02	25	9	26,5	40
M/58307/01	M/58307/02	30	11	34	51
M/58308/01	M/58308/02	40	19	57,5	86
M/58309/01	M/58309/02	50	30	91	135
M/58310/01	M/58310/02	80	86	260	390
M/58311/01	M/58311/02	120	180	540	810
M/58312/01	M/58312/02	150	280	842	1250

BELLOWS		Dia. Ø mm	Force (N)		
Model Nitrile	Model Silicone		-0,2 bar	-0,6 bar	-0,9 bar
M/58403/01	M/58403/02	10	1,5	3,5	5
M/58404/01	M/58404/02	15	3	6	8
M/58405/01	M/58405/02	20	6	10	14
M/58407/01	M/58407/02	30	12	22	28
M/58408/01	M/58408/02	40	22	40	50
M/58409/01	M/58409/02	50	34	66	84
M/58410/01	M/58410/02	75	75	170	230
M/58411/01	M/58411/02	110	140	350	460
M/58412/01	M/58412/02	150	300	700	900

Note: Theoretical values are given in this table. Always allow a safety factor of > 2

VACUUM ACCESSORIES

FLEXIBLE CONNECTORS FOR VACUUM CUPS

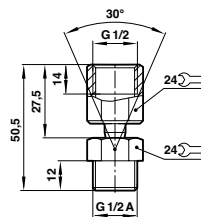
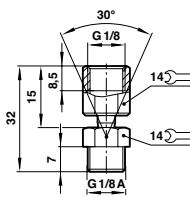
For use where a vertical offset motion is involved on curved surfaces

Simple to install



Models

Model	Type	Size
M/58001	Flexible connector	G1/8
M/58002	Flexible connector	G1/2



LEVEL COMPENSATORS FOR VACUUM CUPS

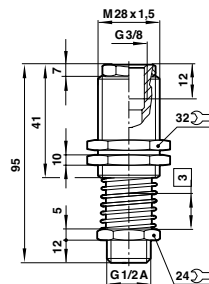
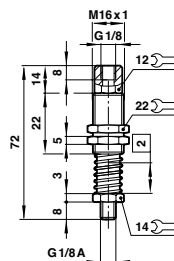
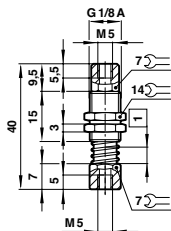
Allows for variations in product positioning

For use with uneven product forms



Models

Model	Type	Size	Stroke/travel □
M/58007	Level compensator	M5	5mm max.
M/58008	Level compensator	G1/8	15mm max.
M/58009	Level compensator	G1/2	25mm max.



ELECTRO-MECHANICAL VACUUM SWITCH

18D Series

-1 ... 1 bar

- Gold-plated contacts
- High cycle life
- Vibration resistant to 15 g
- Microswitch approved by UL and CSA
- Intrinsically safe operation
- Direct interface to Excelon air line units

TECHNICAL DATA

Medium:

Neutral, gaseous and liquid fluids

Operation:

Diaphragm

Operating pressure:

-1 ... 1 bar

Over pressure:

80 bar max.

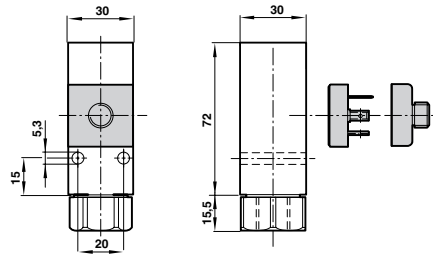
Ambient temperature:

-10°C ... +80°C

Consult our Technical Service for use below +2°C

Repeatability:

±3%, of full scale



Models

Model	Pressure range	Fluid connection (bar)	Electrical connection	Switching pressure difference (bar)	Max. over pressure (bar)	Electrical connector M12 x 1		
						Straight x 2 m long	Straight x 5 m long	90° x 2 m long
	-1 ... 0	G1/4	DIN EN 175301-803 Form A	0,15 ... 0,18	80	-	-	-
	-1 ... 1	G1/4	DIN EN 175301-803 Form A	0,25 ... 0,35	80	-	-	-
	-1 ... 0	G1/4	M12 x 1	0,15 ... 0,18	80	0523057000000000	0523052000000000	0523058000000000

Accessories



ELECTRONIC VACUUM SWITCH 50D Series

-1 ... 0 bar, -1 ... 1 bar

Fast error detection through changing colour displays

Easy to use vacuum switch with clear display and intuitive programming

Flexible assembly with DIN panel or wall mounting

User selected connection; rear or base

LABS free materials, conforming to RoHS



TECHNICAL DATA

Medium:

Compressed air, filtered (40 µm), lubricated and non-lubricated

Temperature:

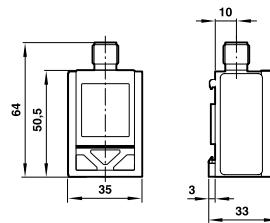
Fluid 0°C ... +60°C

Ambient 0°C ... +60°C

Please consult our technical service for use below +2°C

Display:

Pressure units bar, psi, kPa, InHg Vacuum

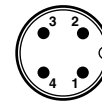


Electrical parameters





Electrical connection:	M12 x 1
Power supply:	UB = 24 V d.c. (17 ... 30 V d.c.)

Electrical connection M12 x 1

PIN-	Signal	Cable colour
1	Supply voltage	Brown
2	Out 2 (PNP; NPN; analogue)	White
3	0 V	Blue
4	Out 1 (PNP; NPN)	Black



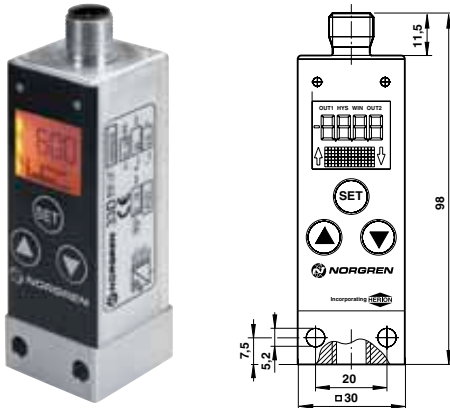
Models

Model	Pressure range (bar)	Over pressure	Fluid connection	Output signal	Accessories			
					Wall Mounting clip	Electrical connector M12 x 1 Straight x 2 m long	Straight x 5 m long	90° x 2 m long
	-1 ... 0	5	G1/4	2 x PNP				
DS-E1V10P4B2PR00	-1 ... 0	5	4 mm Dia. Push-in fitting	2 x PNP				
DS-E1V11F4B2PR00	-1 ... +1	5	G1/4	2 x PNP				
DS-E1V11P4B2PR00	-1 ... +1	5	4 mm Dia. Push-in fitting	2 x PNP				

ELECTRONIC VACUUM SWITCH

33D Series Pneumatic/Allfluid

-1 ... 1 bar



Display of system pressure and unit (pressure unit programmable)

Compact and robust design

Easy programming of set points and additional functions

Transistor output signals 1 x PNP/2 x PNP/1 x PNP + 4 to 20 mA

Electronic lock

Switching status indicated by LED

Standard M12x1 electrical connection (IP 65)

TECHNICAL DATA

Medium:

Filtered compressed air, lubricated or unlubricated, neutral gases

Display:

LCD 4 digits illuminated, pressure unit programmable for bar, psi, mpa

Mounting position:

Optional

Operating pressure:

-1 to 1 bar

Ambient temperature:

-10°C to 60°C

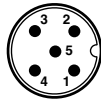
Consult our Technical Service for use below +2°C

Electrical parameters

Electrical connection:	M12 x 1
Power supply:	10 ... 32 V d.c. (polarity safe) digital models 15 ... 32 V d.c. (polarity safe) analogue models

Electrical connection M12 x 1

PIN-	Signal	Cable colour
1	Supply voltage	Brown
2	Out 2 (PNP) / analog 4 ... 20 mA	White
3	0 V	Blue
4	Out 1 (PNP)	Black
5	PE	Grey



Models

Model	Pressure range (bar)	Over pressure	Fluid connection	Output signal
0863012000000000	-1 ... 1	10	G1/4	1 x PNP
0863022000000000	-1 ... 1	10	G1/4	2 x PNP
0863042000000000	-1 ... 1	10	G1/4	1 x PNP / analogue 4 to 20 mA
0863016000000000	-1 ... 1	10	Flange	1 x PNP



Accessories

Electrical connector M12 x 1		90°	90°
Straight	Straight	x 2 m long	x 5 m long
x 2 m long	x 5 m long		



0523057000000000	0523052000000000	0523058000000000	0523053000000000
0523057000000000	0523052000000000	0523058000000000	0523053000000000
0523057000000000	0523052000000000	0523058000000000	0523053000000000
0523057000000000	0523052000000000	0523058000000000	0523053000000000

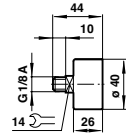
VACUUM ACCESSORIES

VACUUM GAUGES

0 to -1 bar calibration
Accurate vacuum level indication

Models

Model	Range
M/58080	0 ... -1 bar



SILENCERS

Compact
Optimum air silencing characteristics

Models

Model	Port size
M/58019	G3/8

