

Diaphragm Pumps MPC for Chemical Applications

The diaphragm pumps for chemical applications -Type MPC- are resistant to aggressive solvents and acidic vapors typically used in laboratory processes. The diaphragms and all gas contaminated parts are made from PTFE and PTFE compounds. The pump and connection heads are carbon fiber reinforced to provide electrical conductivity and prevent electrostatic charging. A long life and minimal maintenance make these pumps a great option.

Ranges of application:

- for oil-free applications
- alternative to water jet pumps
- vacuum distillation
- vacuum drying
- vacuum filtration
- vacuum concentration
- degassing processes
- lifting of solvent and acidic vapors
- as backing pump

Scope of delivery:

Diaphragm pump for chemical applications complete with ON/OFF switch and integrated protective switchgear for the motor, hose nozzles for hose inside diameters 8 mm and/or small flanges DN 16 KF and optimized vibration damping feet.

Note:

Country specific mains connection cable separately to the pump, see page 146.



NEW
MPC 301 E

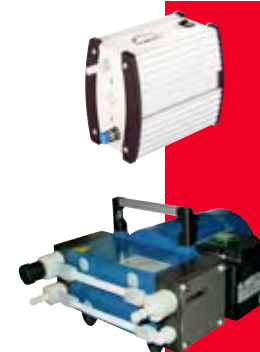
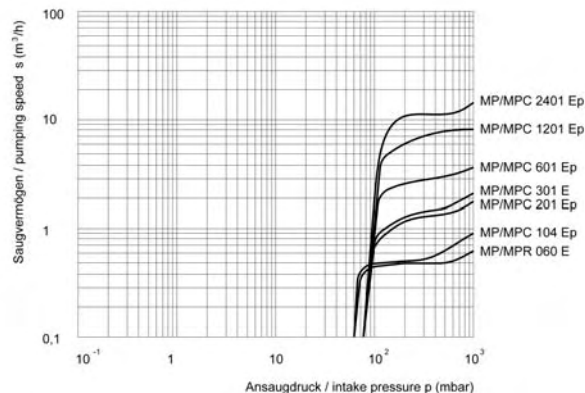


NEW
MPR 060 E
with power pack

Diaphragm Pumps MPC, Ultimate Pressure < 75 mbar

Special characteristics:

- one-stage chemically resistant diaphragm pumps
- suction/pressure flanges: hose nozzle DN 8 for hose inside diameter 8 mm or small flange DN 16 KF



Technical Features

Type	Ult. pressure total DIN 28432 mbar	Pumping speed 50/60 Hz m³/h l/min	Dimensions (W/D/H) mm	Weight kg	Motor power W	Connections suction/pressure side
MPR 060 E	< 60	0.6/- 14/-	115/165/145	2.8	20	DN 6/8 / DN 6/8
MPC 104 Ep	< 60	0.9/1.0 15/16.6	235/140/290	6.0	68	DN 8 / DN 8
MPC 201 Ep	< 75	1.8/2.0 30/33	195/235/145	6.5	60	DN 8 / DN 8
MPC 301 E	< 75	2.3/2.5 38/41	162/260/252	8.9	180	DN 8 / DN 8
MPC 601 Ep	< 75	3.8/4.2 63/70	230/265/169	11.2	180	DN 8 / DN 8
MPC 1201 Ep	< 75	8.3/9.1 138/151	230/380/169	18.3	180	DN 8 / DN 8
MPC 2401 Ep	< 75	15.5/17.0 258/283	540/300/240	32.8	370/440	DN 16 KF / DN 16 KF

Ordering Information

Type	Mains supply V / Hz	Mandatory accessories Connection cable	PU pcs.	Order-No.
MPR 060 E with power pack 24 V DC	90-260 / 50/60	yes	1	420322
MPC 104 Ep	230 / 50/60	yes	1	4000572
MPC 104 Ep	115/230 / 50/60	yes	1	4000572-01
MPC 201 Ep	230 / 50/60 CEE	no	1	400173
MPC 201 Ep	230 / 50/60 UK	no	1	400173-02
MPC 201 Ep	230 / 50/60 CH	no	1	400173-03
MPC 201 Ep	115 / 50/60 US	no	1	400173-04
MPC 301 E	230 / 50/60	yes	1	4000742
MPC 301 E	115 / 50/60	yes	1	4000742-01
MPC 601 Ep	230 / 50/60	yes	1	4000492
MPC 601 Ep	115 / 50/60	yes	1	4000492-03
MPC 601 Ep	230/400 / 50/60 CEE	no	1	4000492-04
MPC 1201 Ep	230 / 50/60	yes	1	4000532
MPC 1201 Ep	115 / 50/60	yes	1	4000532-03
MPC 1201 Ep	230/400 / 50/60 CEE	no	1	4000532-04
MPC 2401 Ep	230 / 50/60	yes	1	4001792
MPC 2401 Ep	115 / 50/60	yes	1	4001792-03
MPC 2401 Ep	230/400 / 50/60 CEE	no	1	4001792-04

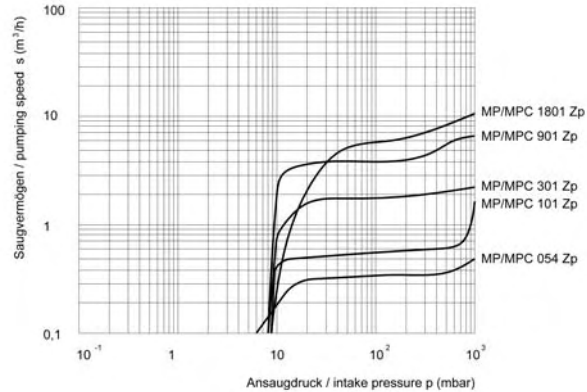
Note:
Country specific
mains connection
cable separately
to the device, see
page 146.



Diaphragm Pumps MPC, Ultimate Pressure < 8 mbar

Special characteristics:

- two-stage chemically resistant diaphragm pumps
- suction/pressure flanges: hose nozzle DN 8 for hose inside diameter 8 mm or small flange DN 16 KF



Technical Features

Type	Ult. pressure total DIN 28432 mbar	Pumping speed 50/60 Hz m³/h l/min		Dimensions (W/D/H) mm	Weight kg	Motor power W	Connections suction/pressure side
MPC 054 Zp	< 5	0.5/0.55	8/9.1	235/140/290	6.0	68	DN 8 / DN 8
MPC 101 Zp	< 8	1.0/1.1	16.7/18	195/235/145	6.5	60	DN 8 / DN 8
MPC 301 Zp	< 8	2.3/2.5	38/41	230/265/169	11.2	180	DN 8 / DN 8
MPC 901 Zp	< 8	6.8/7.5	113/125	230/380/169	18.3	180	DN 8 / DN 8
MPC 1801 Zp	< 8	12.0/13.3	201/222	540/300/240	32.8	370/440	DN 16 KF / DN 16 KF

Ordering Information

Type	Mains supply V / Hz	Mandatory accessories Connection cable	PU pcs.	Order-No.
MPC 054 Zp	230 / 50/60	yes	1	4000542
MPC 054 Zp	115/230 / 50/60	yes	1	4000542-01
MPC 101 Zp	230 / 50/60 CEE	no	1	400171
MPC 101 Zp	230 / 50/60 UK	no	1	400171-01
MPC 101 Zp	230 / 50/60 CH	no	1	400171-07
MPC 101 Zp	115 / 50/60 US	no	1	400171-06
MPC 301 Zp	230 / 50/60	yes	1	4000482
MPC 301 Zp	115 / 50/60	yes	1	4000482-03
MPC 301 Zp	230/400 / 50/60 CEE	no	1	4000482-04
MPC 901 Zp	230 / 50/60	yes	1	4000522
MPC 901 Zp	115 / 50/60	yes	1	4000522-03
MPC 901 Zp	230/400 / 50/60 CEE	no	1	4000522-04
MPC 1801 Zp	230 / 50/60	yes	1	4001552
MPC 1801 Zp	115 / 50/60	yes	1	4001552-03
MPC 1801 Zp	230/400 / 50/60 CEE	no	1	4001552-04

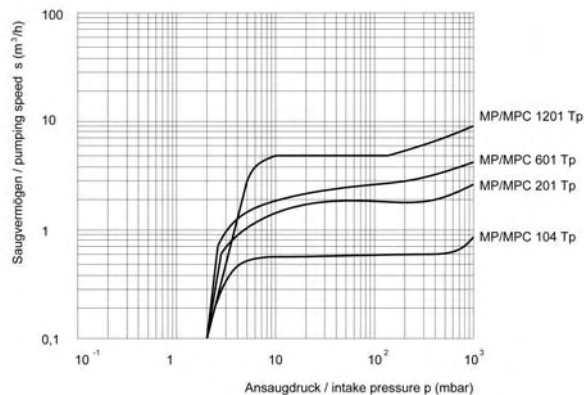


Note:
Country specific
mains connection
cable separately
to the device, see
page 146.

Diaphragm Pumps MPC, Ultimate Pressure < 2 mbar

Special characteristics:

- three-stage chemically resistant diaphragm pumps
- suction/pressure flanges: hose nozzle DN 8 for hose inside diameter 8 mm or small flange DN 16 KF



Technical Features

Type	Ult. pressure total DIN 28432 mbar	Pumping speed 50/60 Hz m³/h l/min		Dimensions (W/D/H) mm	Weight kg	Moto- power W	Connections suction/pressure side
MPC 104 Tp	< 2	0.8/0.9	13/15	235/140/340	7.1/7.9	60	DN 8 / DN 8
MPC 201 Tp	< 2	2.0/2.2	33/36	200/260/150	10.3	90	DN 8 / DN 8
MPC 601 Tp	< 2	4.5/4.9	75/81	230/380/169	18.3	180	DN 8 / DN 8
MPC 1201 Tp	< 2	8.3/9.1	135/151	540/300/240	32.8	370/440	DN 16 KF / DN 16 KF

Note:
Country specific
mains connection
cable separately
to the device, see
page 146.

Ordering Information

Type	Mains supply V / Hz	Mandatory accessories Connection cable	PU pcs.	Order-No.
MPC 104 Tp	230 / 50/60	yes	1	400082
MPC 104 Tp	115 / 50/60	yes	1	400082-03
MPC 201 Tp	230 / 50/60 CEE	no	1	400177
MPC 201 Tp	230 / 50/60 UK	no	1	400177-01
MPC 201 Tp	230 / 50/60 CH	no	1	400177-08
MPC 201 Tp	115 / 50/60 US	no	1	400177-05
MPC 601 Tp	230 / 50/60	yes	1	4000512
MPC 601 Tp	115 / 50/60	yes	1	4000512-03
MPC 601 Tp	230/400 / 50/60 CEE	no	1	4000512-04
MPC 1201 Tp	230 / 50/60	yes	1	4001782
MPC 1201 Tp	115 / 60	yes	1	4001782-03
MPC 1201 Tp	230/400 / 50/60 CEE	no	1	4001782-04



Diaphragm Pumps MPC for Chemical Applications

The new generation of intelligent vacuum engineering, ecoflex diaphragm pumps are equipped with a state of the art vacuum control by controlling the pumping speed of the pumps. The vacuum is precisely adjusted to the needs of the process, resulting in more effective and reproducible processes. The additional pressure reduc-

tion allows the distillation of gas mixtures almost automatically and without fractionated operation. Operation costs can be reduced by 80%, and ecoflex diaphragm pumps guarantee a positive economical and ecological balance.

Chemically resistant ecoflex diaphragm pumps (MPC) are resistant to aggressive solvents and acidic vapors. The diaphragms and gas contacting parts consist of PTFE and PTFE compounds. The pump and connection heads are carbon fiber reinforced to provide electrical conductivity and prevent electrostatic charging.

Special characteristics

- two- or three-stage chemically resistant diaphragm pumps
- precisely regulated vacuum
- process orientated pumping speed
- automatic vacuum adjustment
- accurate processes with distillation, drying etc.
- optimal condensation due to constant vacuum
- optimal product yield
- low noise level
- reduced wear and tear
- long service intervals
- reduced operating costs by reduced energy consumption
- long life span
- selection of different process cycles
- menu-led programming via the display of the vacuum controller
- operating over windows via PC (optional)
- serial interface RS 232 for PC connection
- storage of all program and measuring data



Scope of delivery:

- diaphragm pump with special motor and vacuum control box VCB 424
- connections: hose nozzle DN 8 for hose inside diameters 8 mm



Diaphragm Pumps MPC, Ultimate Pressure < 8 mbar, ecoflex

The pumping speed diagram of the ecoflex diaphragm pumps is identical to the one of the standard types listed on pages 32 - 33.

Technical Features

Type	Ult. pressure total DIN 28432 mbar	Pumping speed 50/60 Hz m³/h l/min		Dimensions (W/D/H) mm	Weight kg	Motor power W	Connections suction/pressure side
MPC 301 Zp ecoflex	< 8	2.6	38	260/310/190	15.5	200	DN 8 / DN 8

Ordering Information

Type	Mains supply V / Hz	Mandatory accessories Connection cable	PU pcs.	Order-No.
MPC 301 Zp ecoflex	230 / 50/60 CEE	no	1	4200112
MPC 301 Zp ecoflex	230 / 50/60 UK	no	1	4200112-01
MPC 301 Zp ecoflex	230 / 50/60 CH	no	1	4200112-02
MPC 301 Zp ecoflex	115 / 50/60 US	no	1	4200112-05



Diaphragm Pumps MPC, Ultimate Pressure < 2 mbar, ecoflex



Technical Features

Type	Ult. pressure total DIN 28432 mbar	Pumping speed 50/60 Hz m³/h l/min		Dimensions (W/D/H) mm	Weight kg	Motor power W	Connections suction/pressure side
MPC 601 Tp ecoflex	< 2	4.9	75	260/420/190	22.6	390	DN 8 / DN 8
MPC 1201 Tp ecoflex	< 2	8.3	138	540/300/320	34.0	370	DN 16 KF / DN 16 KF

Ordering Information

Type	Mains supply V / Hz	Mandatory accessories Connection cable	PU pcs.	Order-No.
MPC 601 Tp ecoflex	230 / 50/60 CEE	no	1	4200132
MPC 601 Tp ecoflex	230 / 50/60 UK	no	1	4200132-01
MPC 601 Tp ecoflex	230 / 50/60 CH	no	1	4200132-02
MPC 601 Tp ecoflex	115 / 50/60 US	no	1	4200132-05
MPC 1201 Tp ecoflex	230 / 50/60	yes	1	4200152

Note:
Country specific
mains connection
cable separately
to the device, see
page 146.

Diaphragm Pumps MPC for Chemical Applications, ATEX Approved

For the evacuation of combustible atmospheres inside or outside of a highly combustible environment, an evaluation of the process is to be executed after guideline 1999/92/EG (ATEX 137) by the user. According to the results from this evaluation a suitable device of category 1, 2 or 3 has to be selected to fulfill the demands for zone 0, 1 or 2 requirements to and the regulations of the guideline 94/9/EG (ATEX 95).

The ILMVAC GmbH developed different diaphragm pump types on the basis of experiences of many years for EX applications. They provide the application in the device category 2 or 3 / zone 1 or 2. All devices are provided with inspection certificate and fulfill the demands relevant to the ATEX guideline.

Diaphragm pump MPC 301 Zp, Ex ATEX Cat.2

Ex-Designation II 2G c II B T4x
Type Examination Certificate no. IBExU 04 ATEX B017X
Inert gas flushing of the drive 20 l/h
Sound pressure level < 44 dB(A)
Three-phase a.c. motor without motor protection switch, switch and cable

Diaphragm pump MPC 601 Tp, Ex ATEX Cat.2

Ex-Designation II 2G c II B T4x
Type Examination Certificate no. IBExU 04 ATEX B018X
Inert gas flushing of the drive 20 l/h
Sound pressure level < 44 dB(A)
Three-phase a.c. motor without motor protection switch, switch and cable

Diaphragm Pumps MPC, ATEX Approved



Technical Features

Type	Ult. pressure total DIN 28432 at 1500 min ⁻¹ mbar	Pumping speed 50 Hz at 1500 min ⁻¹ m ³ /h l/min	Dimensions (W/D/H) mm	Weight kg	Motor power W	Connections suction/pressure side
MPC 301 Zp, Ex ATEX Cat.2	< 8	2.3 38	240/300/260	22.9	180	DN 8
MPC 601 Tp, Ex ATEX Cat.2	< 2	4.5 75	240/425/272	29.7	370	DN 16 KF

Ordering Information

Type	Mains supply V / Hz	Mandatory accessories Connection cable	PU pcs.	Order-No.
MPC 301 Zp, Ex ATEX Kat.2	400 / 50	no	1	4000481-04
MPC 601 Tp, Ex ATEX Kat.2	400 / 50	no	1	4000511-04