SCHMALZ

NEW

Intelligent, Autonomous and Flexible Vacuum Generation

Vacuum Generator ECBPi

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Intelligent Collaboration Redefined.

Intelligent, Autonomous and Flexible
Vacuum Generation – for Collaborative Robots

Electrical Vacuum Generator – CobotPump ECBPi

Schmalz presents the CobotPump ECBPi – a new generation of intelligent vacuum generators that do not need compressed air. Their areas of application include mobile robotics, for example in autonomous warehouses or stationary handling tasks with collaborative robots (cobots).

Application

- Intelligent electrical vacuum generator for handling airtight and slightly porous workpieces
- Integrated interface for controlling and monitoring the handling process
- For use in mobile robotics, fully automated small parts handling and stationary handling tasks

Highlights

- Connection via IO-Link allows process monitoring and predictive maintenance from the machine to the cloud
- Condition monitoring reduces errors and downtime – this ensures the availability of the system
- NFC interface features direct access to processes and the device via smartphone
- Energy efficient thanks to integrated automatic adaptation of the performance to the handling process

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Schmalz Vacuum Generator ECBPi

Intelligent Vacuum Generation with a wide Variety of Options for Adaptation and Integration

Flexible connection: The CobotPump can be quickly and easily combined with common lightweight robots using various flange plates.

Everything under control: The CobotPump features an integrated speed control function, which regulates the performance of the pump to suit the process or workpiece. Simple parameterization on the device, via NFC or using IO-Link.
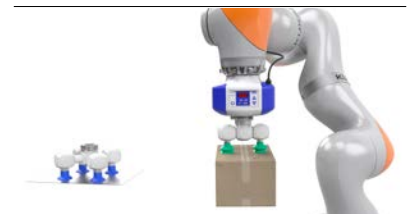
Simple switching: Easily configure and connect grippers for the CobotPump to create a tailored solution for the specific application. The quick-change adapter minimizes switching times.

A smart solution: The CobotPump features NFC. The NFC interface allows users to conveniently read out data on their smartphones, including process data, operating instructions and error messages.

① Collaborative robot
   (all common cobot models)

② Robot flange for
   mechanical connection
   of the electrical vacuum
   generator ECBPi

③ Flange adapter plate

④ M12 8-pin plug connection or terminal
   block as digital interface between the
   CobotPump and the robot

⑤ Flange for gripper connection

⑥ Flexibly configurable grippers from
   the modular system for vacuum
   end effectors VEE

Schmalz Vacuum Generator ECBPi

Application and Integration Examples

A wide Variety of Autonomous, Collaborative Applications

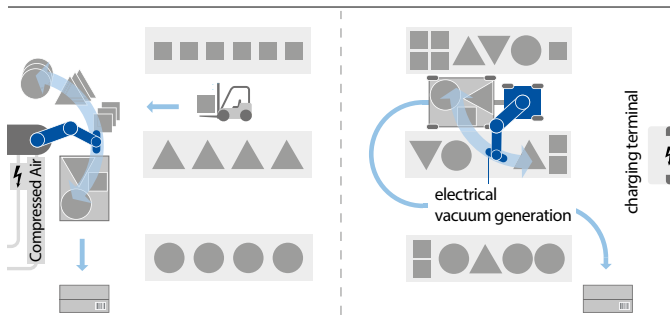### Smart Assistance in Collaborative Work

Conventional way of working

Collaborative way of working with people and robots

Today, some steps require several employees, but robots are increasingly taking on new tasks to work hand-in-hand with people.

- The CobotPump is ideal for stationary handling tasks with collaborative robots

Autonomous Movement

Conventional warehouse

Autonomous warehouse

In conventional warehouses, gripping systems are confined to a stationary power supply, meaning that they are limited to one defined handling task.

- The CobotPump generates a vacuum without compressed air, so no conventional hoses are needed
- The vacuum generator ECBPi is perfect for use in mobile robotics

Simple Integration into the Robot

Quick and Flexible Connection

Simple connection to the robot and fieldbus using IO-Link with a plug connection or terminal block

- The CobotPump makes process data transparent using an IO-Link interface in the field-bus system. Ideal for targeted process monitoring and control
- The CobotPump can also be operated with conventional signal transmission without an IO-Link, in what is known as SIO mode (standard IO mode)
- Connection with a terminal block (TB-8) simplifies the connection process and reduces cable assembly costs

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Schmalz Vacuum Generator ECBPi

Max. 12 l/min Suction Rate

Ordering Code for Electrical Vacuum Generator ECBPi

ECBPi	–	24V-DC	–	M12-8
1		2		3

1 – Abbreviated designation

Code	Version
ECBPi	Electrical CobotPump

2 – Voltage

Code	Operating voltage
24V-DC	24V-DC

3 – Electrical connection

Code	Type
M12-8	M12, 8-pin plug
TB-8	Terminal strip

Note on ordering: The electrical vacuum generator ECBPi comes ready to connect.
Available accessories: Flange plate

Ordering Data for Electrical Vacuum Generator ECBPi

Type	Part no.
ECBPi 24V-DC M12-8	10.03.01.00314
ECBPi 24V-DC TB-8	10.03.01.00364

Ordering Data for Accessories for Electrical Vacuum Generator ECBPi

Type	Part no.
FLAN-PL 63x13 AL-EL	10.03.01.00313
FLAN-PL 90x16 AL-EL	10.03.01.00357
FLAN-PL 63x13.5 AL-EL	10.03.01.00358
FLAN-PL 63x19.5 AL-EL	10.03.01.00373

Technical Data for Electrical Vacuum Generator ECBPi

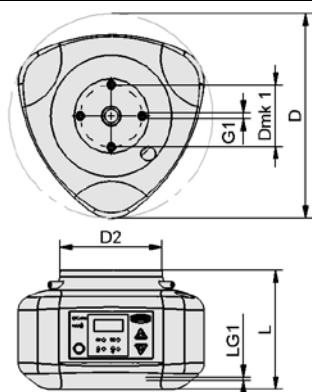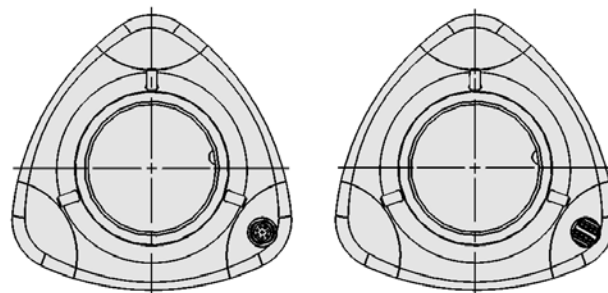| Type	Suction rate [l/min]	Rated power [W]	Voltage [V]	Rated current [A]	Temperature range [C°]	Weight [g]
ECBPi 24V-DC M12-8	12	13	24V-DC	0.6	5 to 40	775
ECBPi 24V-DC TB-8	12	13	24V-DC	0.6	5 to 40	775

Schmalz Vacuum Generator ECBPi

Max. 12 l/min Suction Rate
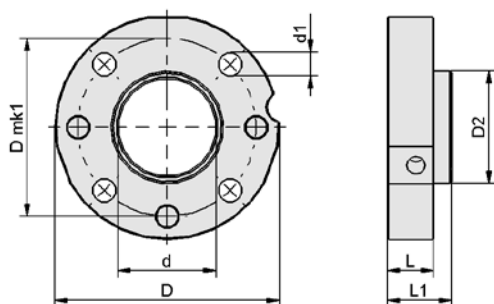
Design Data for Electrical Vacuum Generator ECBPi

ECBPi…

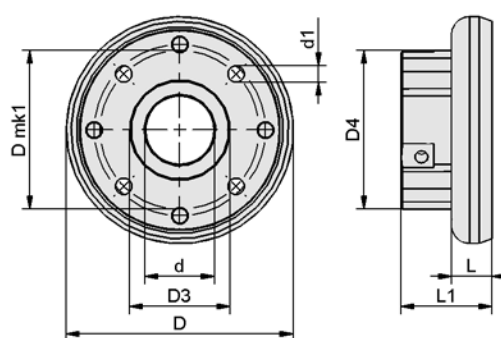ECBPi… connection options M12-8 and TB-8

Type	Dimensions in mm					
	D	Dmk 1	D2	G1	L	LG1
ECBPi 24V-DC M12-8	151.5	46	76.0	M4-IG	88.6	6.0
ECBPi 24V-DC TB-8	151.5	46	76.0	M4-IG	88.6	6.0

Design Data for Accessories for Electrical Vacuum Generator ECBPi

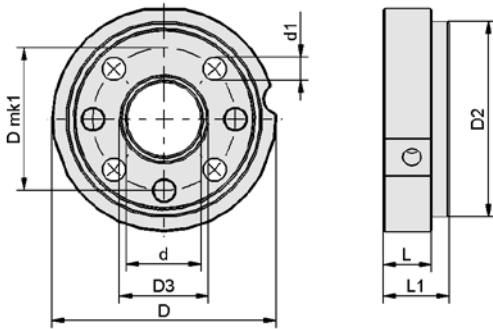

FLAN-PL 63x13 AL-EL

FLAN-PL 90x16 AL-EL

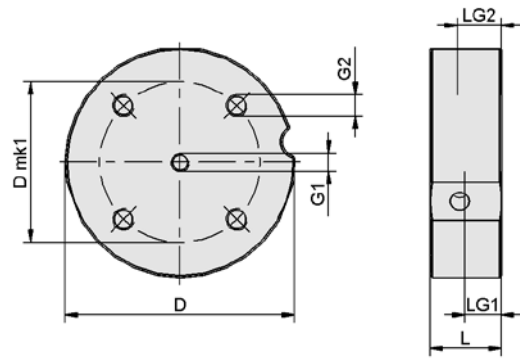WWW.SCHMALZ.COM/ECBPI

Schmalz Vacuum Generator ECBPi

Max. 12 l/min Suction Rate

Design Data for Accessories for Electrical Vacuum Generator ECBPi

FLAN-PL 63x13.5 AL-EL

FLAN-PL 63x19.5 AL-EL

Type	Dimensions in mm												
	d	d1	D	Dmk1	D2	D3	D4	G1	G2	L	LG1	LG2	L1
FLAN-PL 63x13 AL-EL	27.5	6.6	63	50	31.5	-	-	-	-	13.0	-	-	18.0
FLAN-PL 90x16 AL-EL	27.5	6.6	90	63	-	40	63	-	-	16.0	-	-	36.0
FLAN-PL 63x13.5 AL-EL	21.0	6.6	63	40	55.0	25	-	-	-	13.5	-	-	18.5
FLAN-PL 63x19.5 AL-EL	-	-	63	44	-	-	-	M5-IG	M6-IG	19.5	10	12	-

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Germany – Glatten   Russia – Moscow

Canada – Mississauga   Poland – Poznan   South Korea – Anyang

United States – Raleigh   Spain – Erandio   Japan – Yokohama
                             Turkey – Istanbul

France – Champs-sur-Marne   China – Shanghai

Italy – Novara   ASIA

Mexico – Querétaro

India – Pune

SOUTH AMERICA   AFRICA   AUSTRALIA
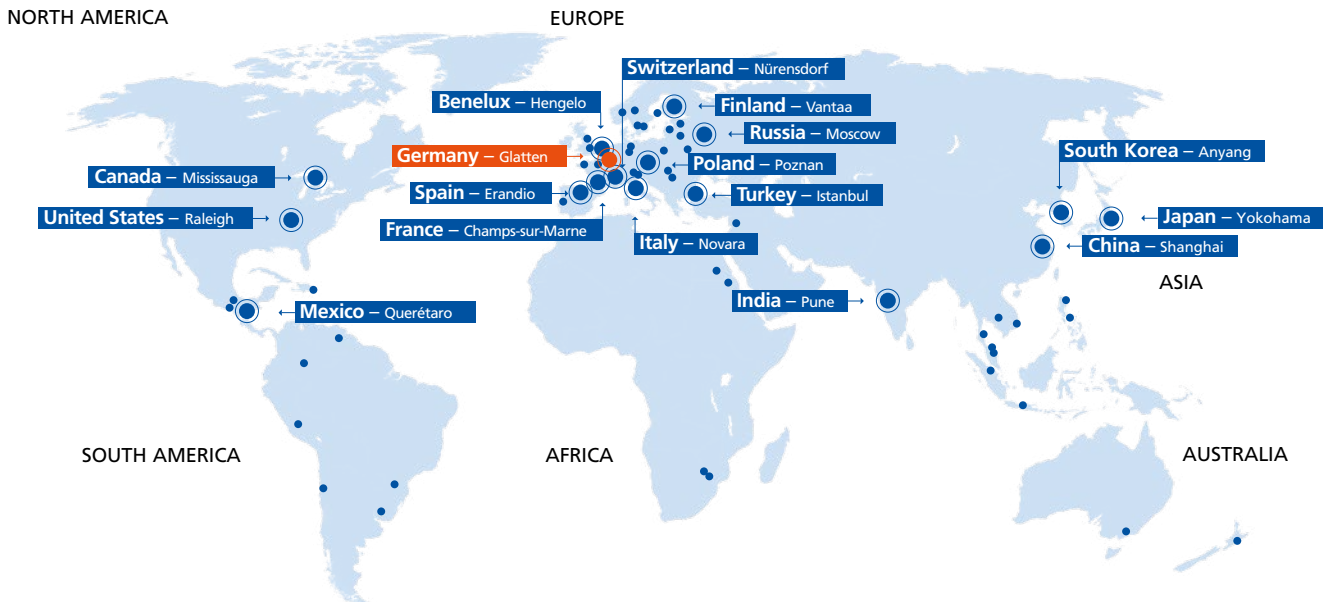
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Schmalz Benelux – Hengelo (NL)   **Schmalz Mexico** – Querétaro
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● Headquarters   **• Sales Partners**

Schmalz Germany – Glatten   You can find the Schmalz sales partner in your
                                            country at: WWW.SCHMALZ.COM/SALESNETWORK

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