



The pumps listed on this data sheet represent a cross-section of the large number of possibilities for each pump type. Based on our modular pump design, all pumps can be customised exactly to meet the needs of your application - within days and at standard pricing. Please contact us for details.



SP 270 EC
coreless motor



SP 270 EC-LC
iron core motor



SP 270 EC-BLa / -BLp
brushless motor


PRODUCT FEATURES

- High efficiency for mobile devices
- Durable design
- Smallest size and low weight
- Low vibration and sound level
- Suitable for any mounting orientation
- Oil-free, maintenance-free, leak-tight

TYPICAL APPLICATIONS

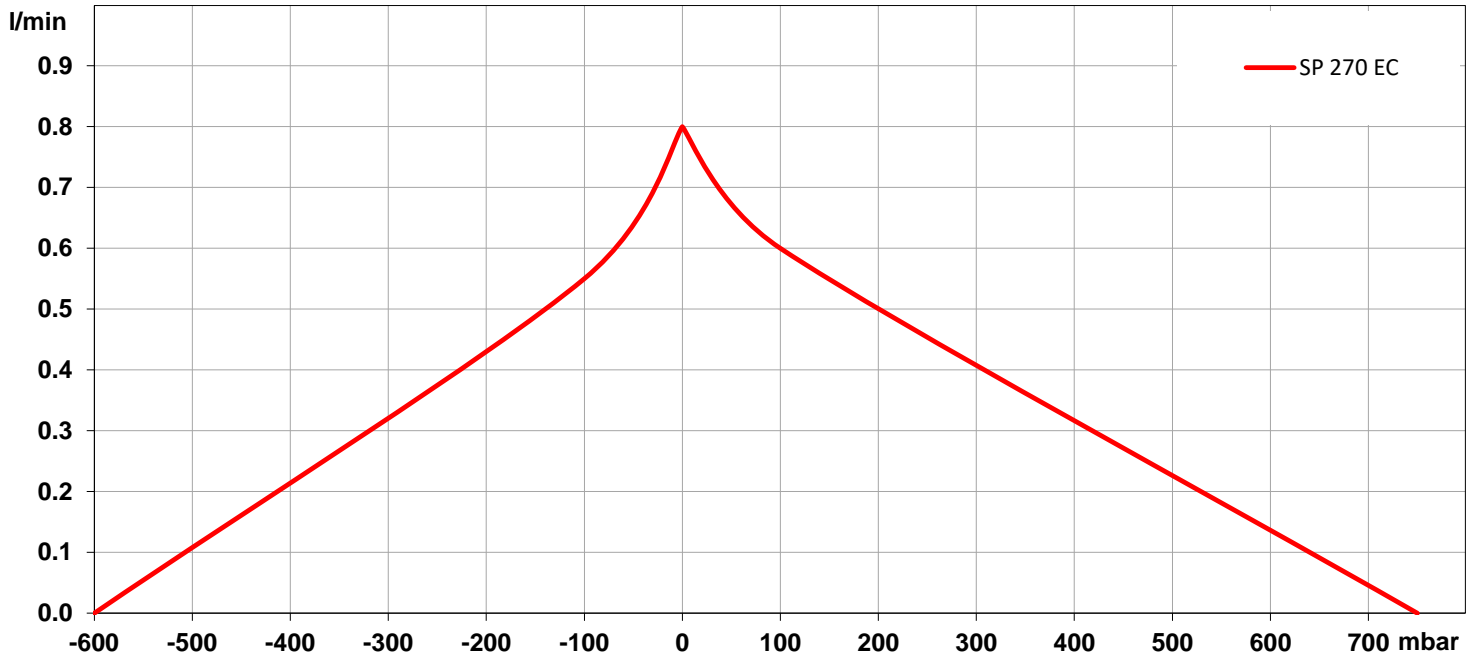
- Exhaust and flue gas analysis
- Respiratory gas analysis
- Fuel cells
- Gas analysis
- Personal gas detectors
- Air sampling
- Pipetting



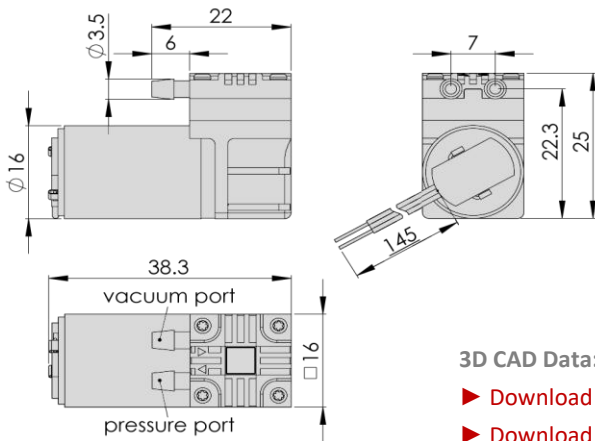
TYPE	SP 270 EC		
Operating Voltage [Vdc]	3	5	 12
Art. No.	7s20097	7s20098	7s20099
max. Nominal Current [mA]	150	120	60
PERFORMANCE			
max. Flow [l/min]	0.80	0.80	0.80
max. Pressure [bar]	0.75	0.75	0.75
max. Vacuum [mbar]	-600	-600	-600
MOTOR			
Standard Motor	coreless		
Standard Bearings	sintered bearings		
Motor Connection	2 wires		
Optional Motor	n/a		
Optional Bearings	ball bearings		
MATERIALS			
Standard Pump Head	PPS		
Optional Pump Head	customer specific (upon request)		
Standard Diaphragm	EPDM		
Optional Diaphragm	FKM / customer specific (upon request)		
Standard Valves	EPDM		
Optional Valves	FKM / customer specific (upon request)		
Standard Gaskets	EPDM		
Optional Gaskets	FKM / customer specific (upon request)		
PNEUMATIC CONNECTION			
Standard Connectors	barbed connectors		
Optional Connectors	manifold		
DIMENSIONS + WEIGHT			
Dimensions [mm] W x H x L	16 x 25 x 38.3		
Weight [g]	27		
OPERATING CONDITIONS			
Storage Temperature [°C]	-10 – +40 (extended temperature ranges on request)		
Ambient Temperature [°C]	-10 – +40 (extended temperature ranges on request)		
Temperature of Media [°C]	0 – +40 (extended temperature ranges on request)		
Acceptable Humidity [%rH]	5 – 80 (non condensing)		



PERFORMANCE DIAGRAM | SP 270 EC



DRAWING | SP 270 EC



3D CAD Data:


- ▶ Download STEP
- ▶ Download IGES

All dimensions given in [mm]. Drawing shows standard orientation of pneumatic connectors (3 alternative orientations possible).

You can also download the 3D CAD files from the SP website:

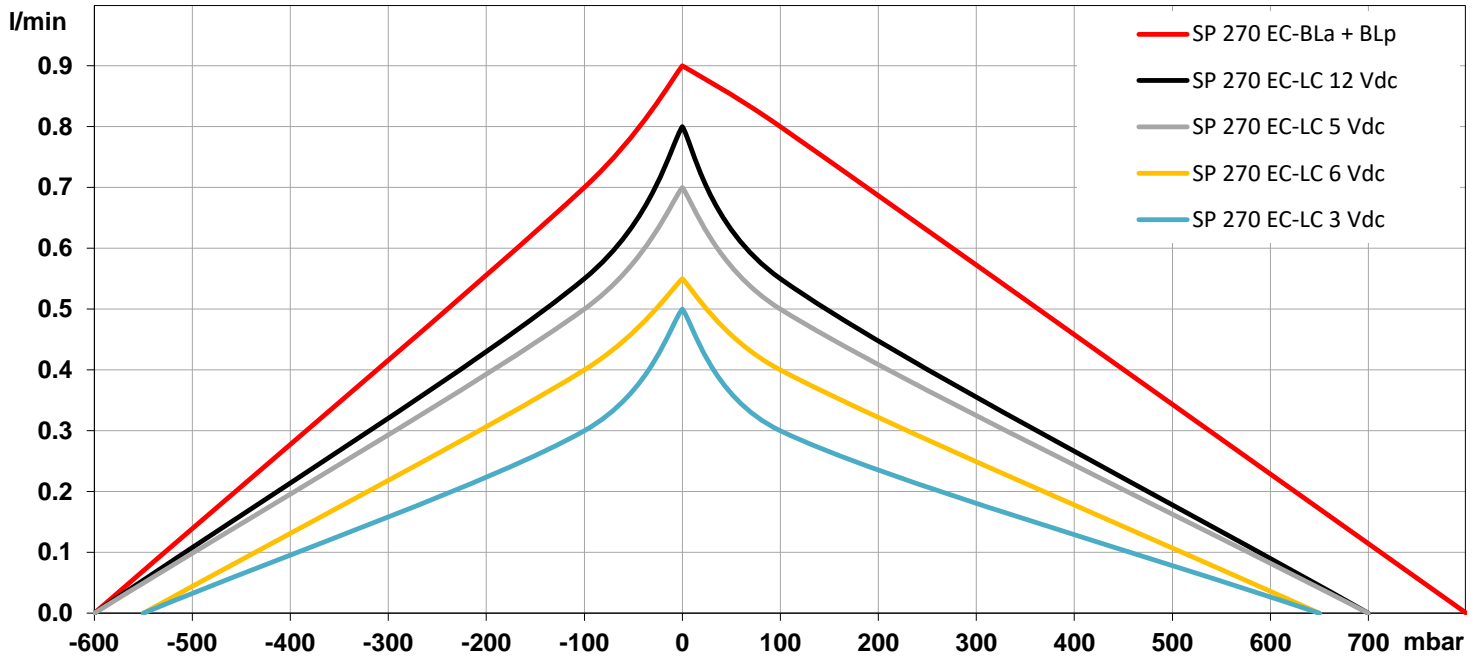
▶ www.schwarzer.com/download



TYPE	SP 270 EC-LC				SP 270 EC-BLa	SP 270 EC-BLp
Operating Voltage [Vdc]	3	 5	6	12	12	12
Art. No.	7s20093	7s20094	7s20095	7s20096	7s20100	7s20101
max. Nominal Current [mA]	150	130	90	60	120	120
PERFORMANCE						
max. Flow [l/min]	0.50	0.70	0.55	0.80	0.90	0.90
max. Pressure [bar]	0.65	0.70	0.65	0.70	0.80	0.80
max. Vacuum [mbar]	-550	-600	-550	-600	-600	-600
MOTOR						
Standard Motor	iron core			brushless (analogue)		brushless (PWM)
Standard Bearings	sintered bearings			ball bearings		
Motor Connection	soldering lugs			6 wires with plug		
Optional Motor	n/a			n/a		
Optional Bearings	n/a			n/a		
MATERIALS						
Standard Pump Head	PPS					
Optional Pump Head	customer specific (upon request)					
Standard Diaphragm	EPDM					
Optional Diaphragm	FKM / customer specific (upon request)					
Standard Valves	EPDM					
Optional Valves	FKM / customer specific (upon request)					
Standard Gaskets	EPDM					
Optional Gaskets	FKM / customer specific (upon request)					
PNEUMATIC CONNECTION						
Standard Connectors	barbed connectors					
Optional Connectors	manifold					
DIMENSIONS + WEIGHT						
Dimensions [mm] W x H x L	16 x 26 x 36.8				16 x 25 x 37.4	
Weight [g]	24				23	
OPERATING CONDITIONS						
Storage Temperature [°C]	-10 – +40 (extended temperature ranges on request)					
Ambient Temperature [°C]	-10 – +40 (extended temperature ranges on request)					
Temperature of Media [°C]	0 – +40 (extended temperature ranges on request)					
Acceptable Humidity [%rH]	5 – 80 (non condensing)					

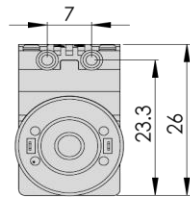
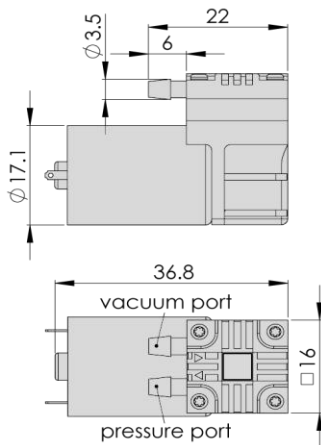


PERFORMANCE DIAGRAM | SP 270 EC-LC ▪ SP 270 EC-BLa ▪ SP 270 EC-BLp



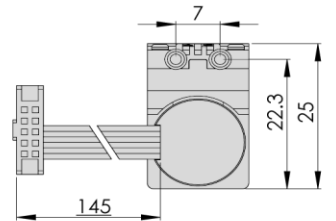
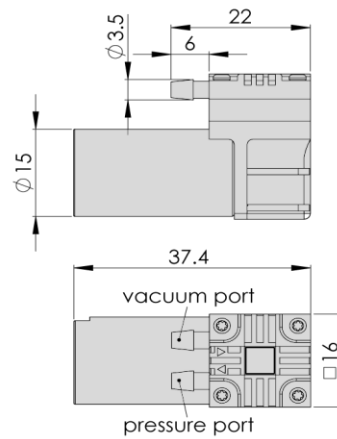
DRAWING | SP 270 EC-LC

DRAWING | SP 270 EC-BLa ▪ SP 270 EC-BLp



3D CAD Data:

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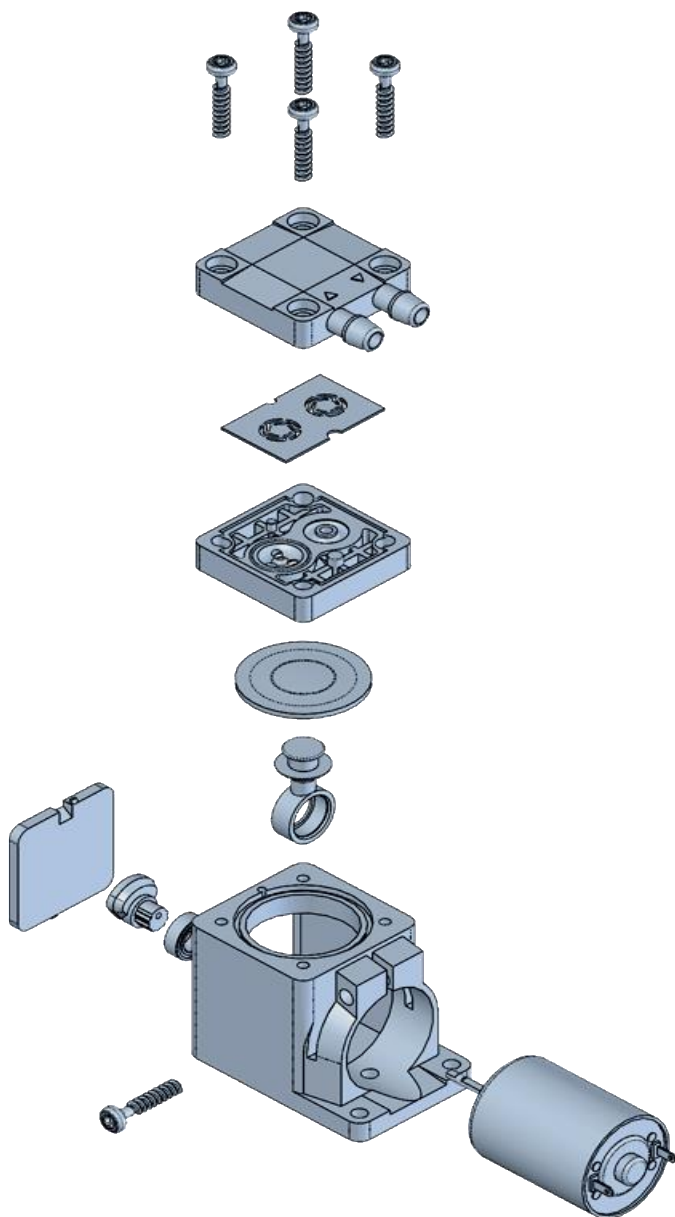
DISCLAIMER

Flow values are subject to the standard conditions specified in DIN 1343. The use of other materials may cause deviations in performance values. The technical data shown on this data sheet represents the typical mean values achieved by the products in our standard testing procedure. All data provided is for information only and does not represent production values. Standard products are subject to change without notice.

08.05.2025

CUSTOMISING

The pumps in this data sheet represent our standard types. All pumps can be customised exactly to your specific requirements in all parameters.



Pump heads

Different materials available

Connectors

Barbed fittings, internal threads and manifold mounting available. Selectable port direction.

Valves

Different designs and materials available.

Flow channels

Pressure- or vacuum-optimised.

Diaphragm

Application-specific designs. Free choice of materials, geometry, hardness, etc.

Connection rods

Available in different lengths.

Eccentric

Stroke and bearing selectable.

Housings

With individual mounting options and installation positions.

Drives

Iron core, coreless, shaded pole and brushless motors with choice of operating voltages and individual wiring.