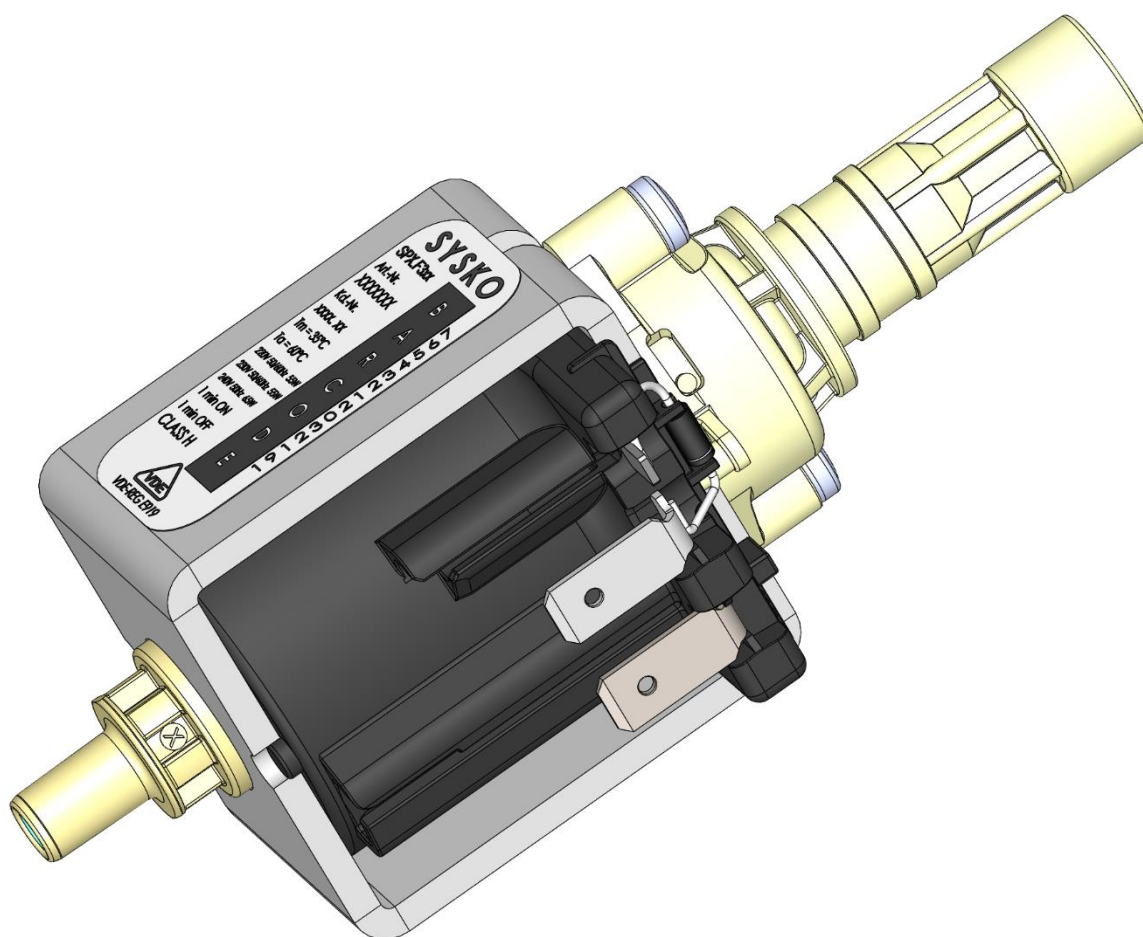


SPX.F3xx - Oscillating Piston Pump



GENERAL

Important: the values given in the following specification relate exclusively to the pump alone and not installed in the appliance. The suitability and long-term durability of the pump in the appliance must be tested separately and is in the sole responsibility of the appliance manufacturer.

1.1 Application of the pump

For various appliances like coffee machines, capsule machines, vending- and multi-beverage machines, steam iron and other applications

2 TECHNICAL SPECIFICATION

2.1 Pump types

2.1.1 Standard

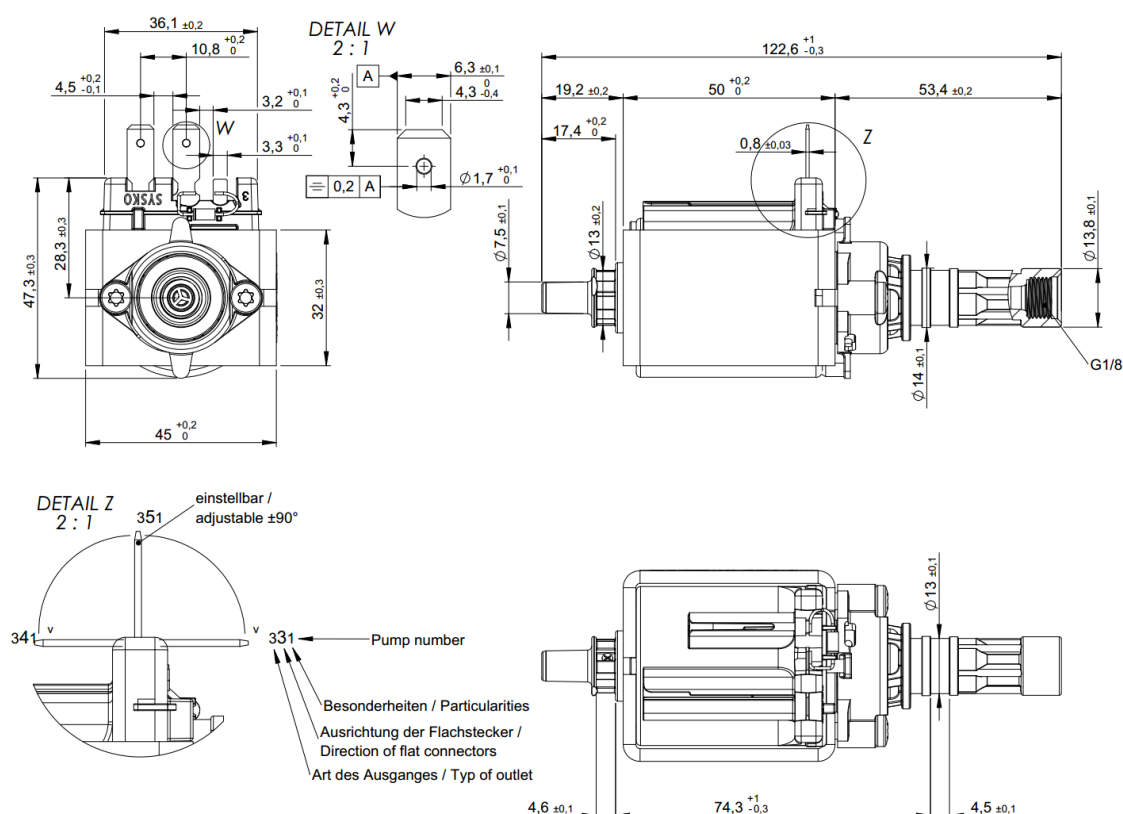
Pump SPX.F3 with or without diode
with thermal fuse (Option)

2.1.2 Voltage versions

Nominal voltages:

EU: 220/230V 50/60 Hz and 240V 50Hz
BR: 120/127V 50/60Hz
UL: 110/120V 60Hz
JP: 100V 50/60Hz / 110V/60Hz

2.2 Mechanical dimensions (in mm):



2.3 Electrical connection:

Flat tabs: flat connector 6,3x0,8 possible plug-in direction +/-90° upon request

2.4 Technical characteristics

2.4.1 Power consumption

voltage version	
220V 50/60 Hz	55 Watt
230V 50/60 Hz	55 Watt
240V 50 Hz	65 Watt
100V 50/60 Hz	55 Watt
110V 60 Hz	55Watt
120V 50/60 Hz	55 Watt
127V 50/60 Hz	65 Watt
110V 60Hz	55Watt
120V 60Hz	55Watt

2.4.2 ON-OFF interval times / operating times

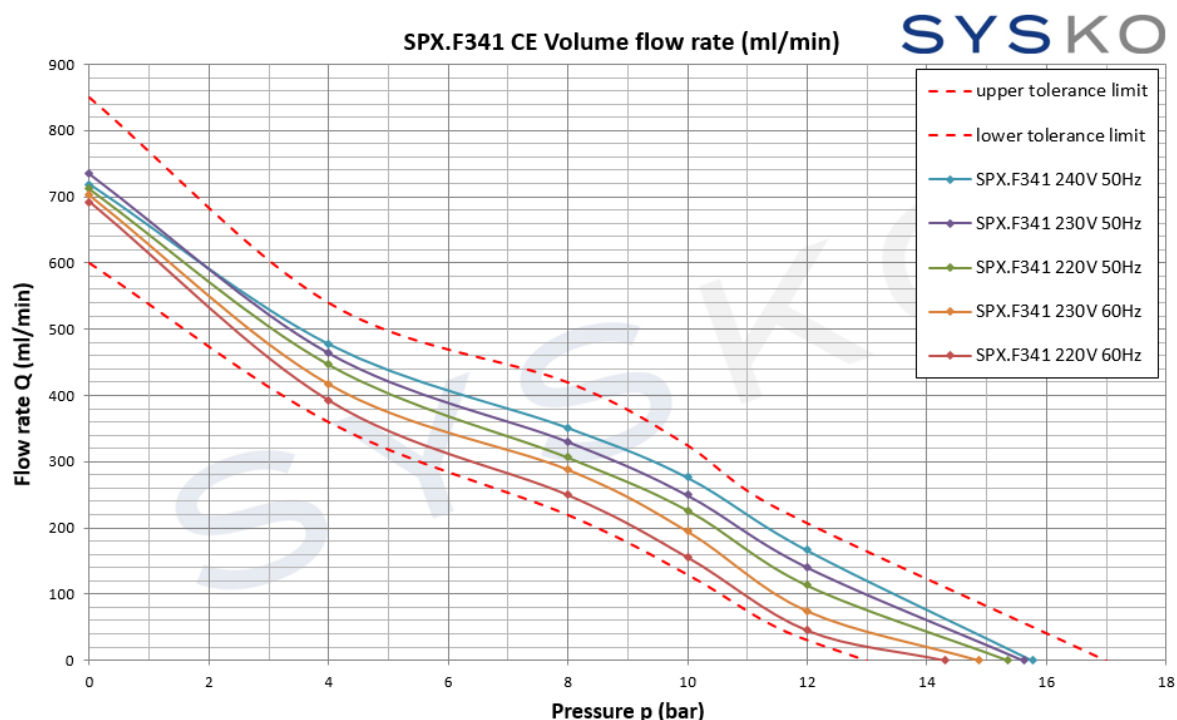
Voltage version	
220/230V 50-60Hz / 240V 50Hz	1min on / 1min off
100V 50/60 Hz / 110V 60Hz	1min on / 1min off
120/127V 50/60Hz	1min on / 1min off
110/120V 60Hz	1min on / 1min off

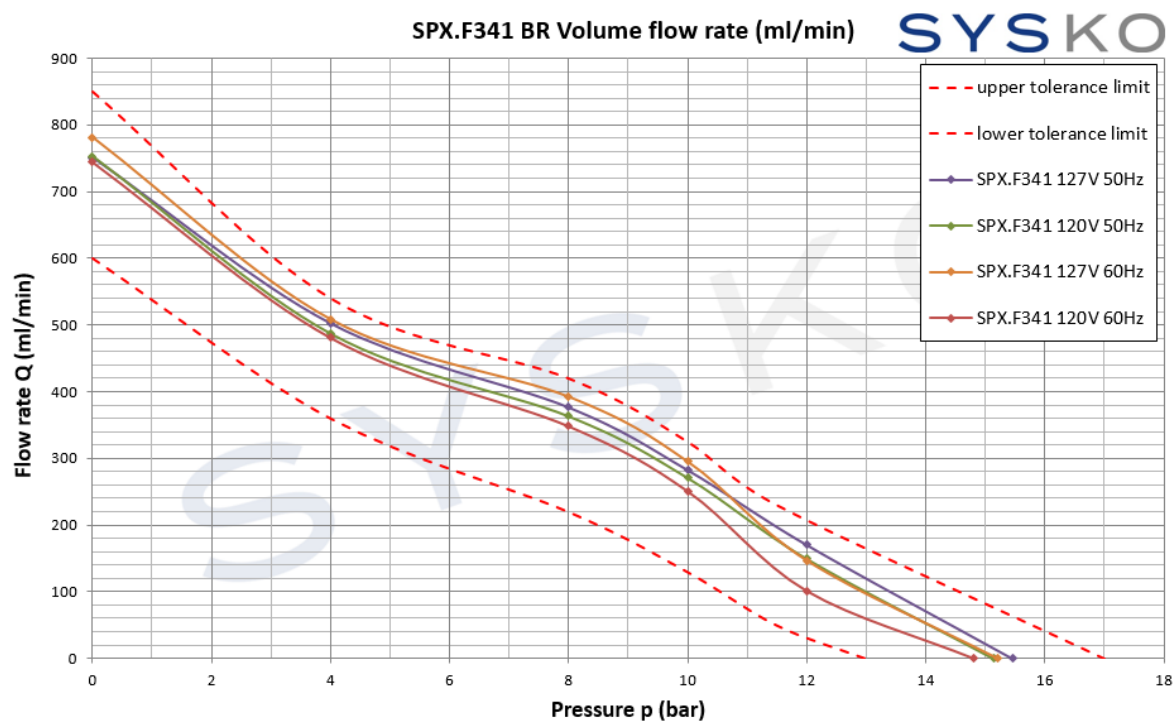
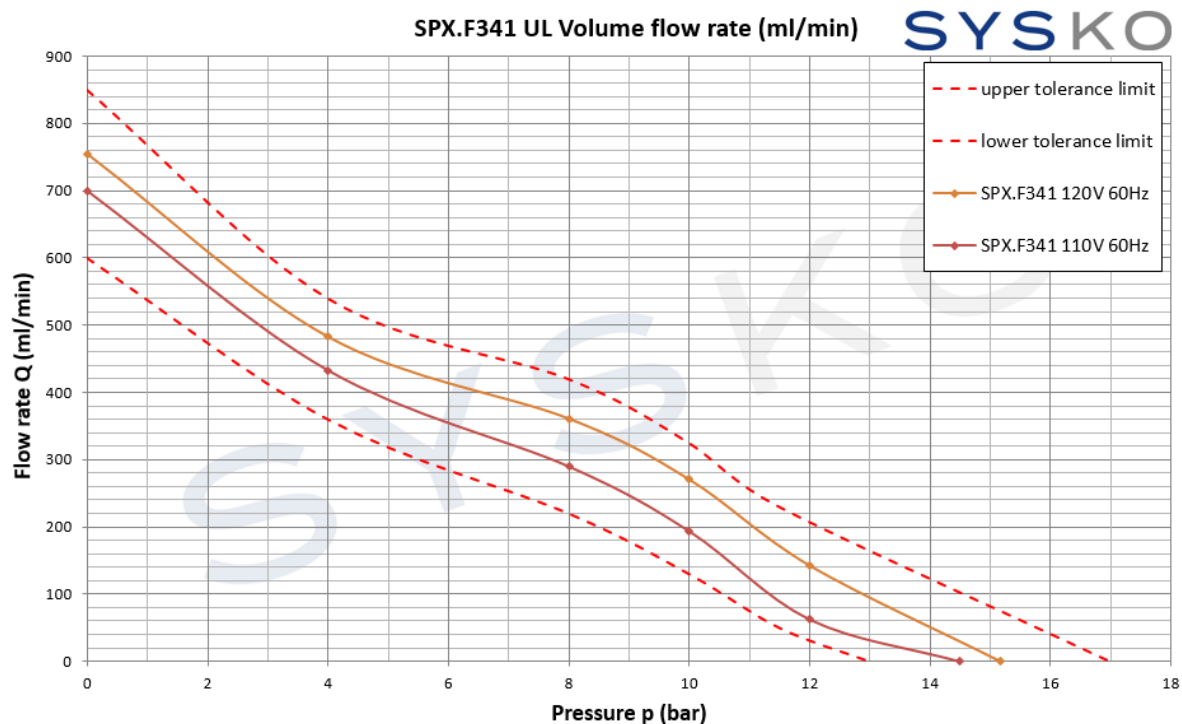
2.4.3 Type labels

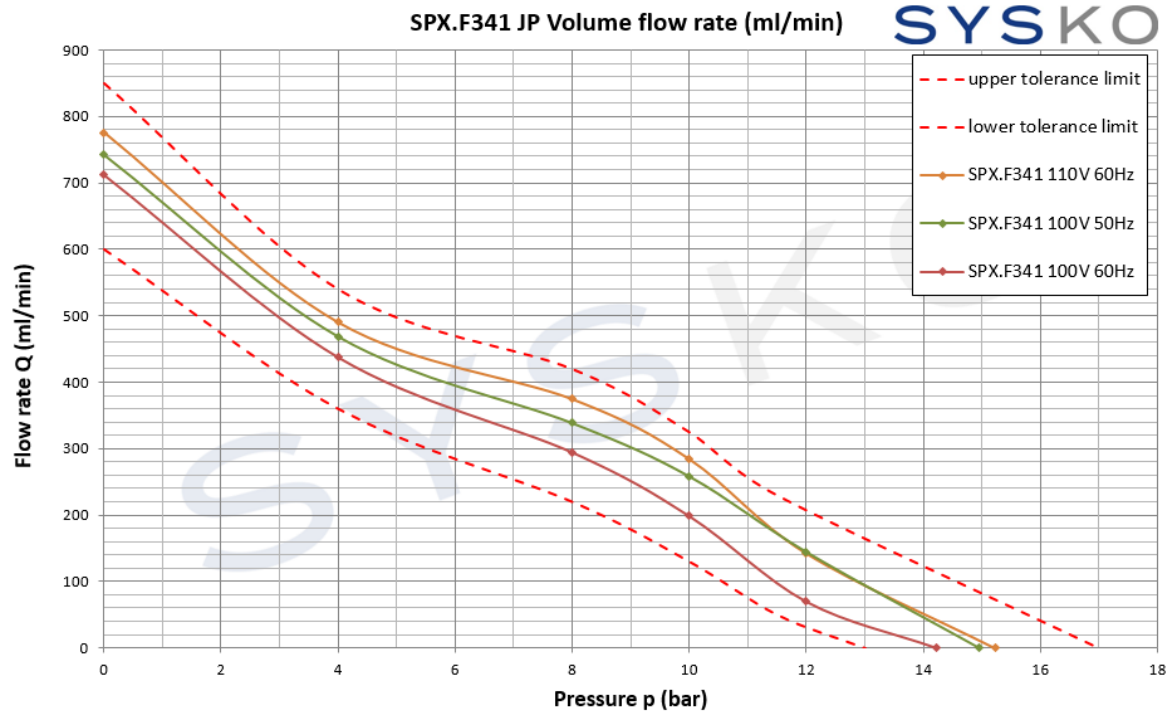


2.5 Backpressure-flow-diagram (measured with manual operated test bench)

back pressure	0 bar	4 bar	8 bar	10 bar	11,5 bar
flow rate max (ml/min)	850	540	420	325	230
flow rate min (ml/min)	600	360	220	130	50
max. pressure (bar)	15 ± 2				







2.5.1 Measuring method

Outputs (flow) are measured with a scale

Test sequence pmax , 0, 4, 8, 10 and 11,5 bar each 30 sec, ml/min by doubling the weight

2.6 Self-priming ability of the pump

2.6.1 Demands for SPX.F3

suction height min. 50 mbar or 50 cm water column

suction pressure of the pump with air or water-air mixture must be > 1,5 bar

2.7 Overtemperature protection

Thermal Fuse welded with connector after over molding of the coil. Protection of the pump against overtemperature by improper operation must be determined by measurements in the device.

2.8 Sound level (sound pressure level / not enclosed in a housing)

Sound pressure level

< 61 dB(A) 0-4 bar (distance microphone 28cm)

< 59 dB(A) >4 bar (distance microphone 28cm)

3 Approvals

3.1 CE

Compliant with EN 60335-1 / EN 60335-2-41 / EN 62233
Testing institut: VDE with CB-Report und factory inspection
Electrical isolation: protection class 2, isolation class H (180°C)

3.2 UL

Compliant with: UL 778 - Motor-Operated Water Pumps,
CSA C22.2 No. 108-14 - Liquid Pumps

3.3 Food requirements

All components and materials which come into contact with water meet food-grade and the EU Drinking water Directive.
NSF in progress.

4 General conditions

4.1 Temperatures

Ambient temperature: $T_u < 60^{\circ}\text{C}$
Max / min water temperature: $T_m < 35^{\circ}\text{C} / > 2^{\circ}\text{C}$

4.2 Ideal fluids

Water: drinking water quality / tap water quality

5 Quality

5.1 Validation plan

Upon request only.