

# QF20kSU

## Quaternary Diaphragm Pumps

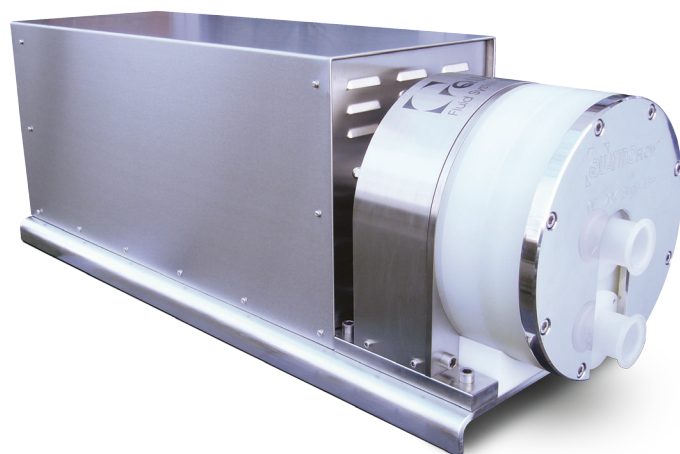
### Single-Use – Biotech/Biopharma

#### Features

- Fully disposable machined polypropylene pump chamber
- Easy replacement
- 4-piston technology
- Gentle product treatment
- Low pulsation
- Linear flow characteristic
- Self-priming
- Safe dry-run operation
- Elimination of cleaning validation and cross contamination

#### Applications

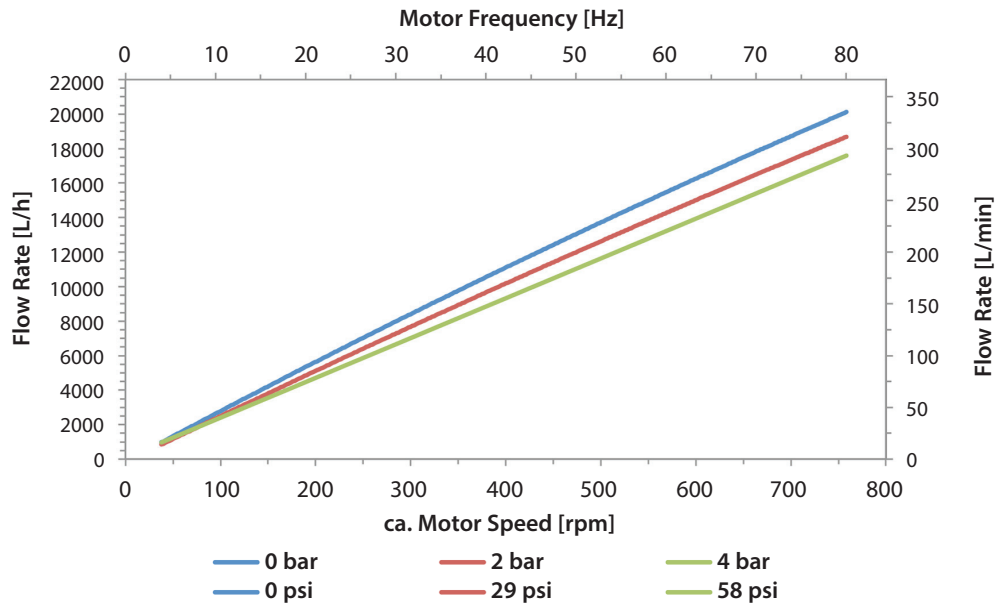
- Filtration systems (TFF, etc.)
- Chromatography systems
- Feeding pump
- Virus filtration
- Sterile filtration



QF20kSU Standard Motor	
<b>Flow Rate Maximum:</b>	
Eccentric Shaft 7°	16,000 lph (267 lpm)
<b>Flow Rate Minimum:</b>	
Eccentric Shaft 7°	1,000 lph (16.7 lpm)
<b>Pressure:</b>	
Temperature of Fluid < 40° C (104° F)	4 bar (58 psi)
Temperature of Fluid > 40° C (104° F)	4 bar (58 psi)
<b>Maximum Temperature:</b>	
Fluid	60° C (140° F)
<b>Suction Lift Dry at 1200 rpm:</b>	
Eccentric Shaft 7°	4-4.5 m (13.1-14.7 ft)
<b>Volume Specifications:</b>	
Approximated Volume per Revolution at Free Output	470 ml
Filling Volume Without Connectors	2,950 ml
<b>Connection Specification (Standard):</b>	
Connectors	2" TC
Position of Connectors	Front

QF20kSU Standard Motor	
<b>Product Wetted Materials (Standard):</b>	
Pump Chamber	PP
Valve Plate	PP
Diaphragms	TPE
Valves	EPDM / SS316L
O-rings	EPDM
<b>Certificates/Proofs (Optional):</b>	
Elastomere (product wetted)	USP <88> Cl. VI; FDA21CFR177; BSE/TSE Safe; USP 87/381/661
<b>Motor (Standard):</b>	
Rated speed	1,460/474 min <sup>-1</sup> (50Hz)
Voltage	230/400 V
Power	4 KW
<b>Pump Dimension with Motor and Housing:</b>	
Length	1,152.5 mm (45.37")
Width	400 mm (15.75")
Height	416 mm (16.38")
<b>Pump Weight with Motor and Housing:</b>	
	190 kg (419 lb.)

## Performance Chart



Depending on the selected motor/frequency drive combination, the motor frequency and the resulting pump speed might differ.

## Accessories

### Control Box



- Variable speed controller with integrated touch pad for manual speed control
- Configurable for remote speed control with 4-20 mA analogue input
- 400 V, 3P
- Hygienic 1.4301 housing, IP 54
- Easy plug & play installation

### Diaphragm Sensor

- Sensor installed in ring drive unit
- Detection of all liquids
- Signal output to a controller, if diaphragm is ruptured

**QUATTROFLOW™**  
Fluid Systems

ALMATEC Maschinenbau GmbH  
Carl-Friedrich-Gauß-Str. 5  
47475 Kamp-Lintfort, Germany  
O: +49/2842/961-0, F: +49/2842/961-40  
info@almatec.de  
quattroflow.com

Authorized PSG® Partner:

**MICRO**

www.micro.ie

# QF20k

## Quaternary Diaphragm Pumps

### Multiple-Use – Biotech/Biopharma

#### Features

- 4-piston technology
- Gentle product treatment
- No particle generation
- Low pulsation
- Hygienic design
- Self-priming
- Safe dry-run operation

#### Applications

- Filtration systems (TFF, etc.)
- Chromatography systems
- Feeding pump
- Virus filtration
- Sterile filtration

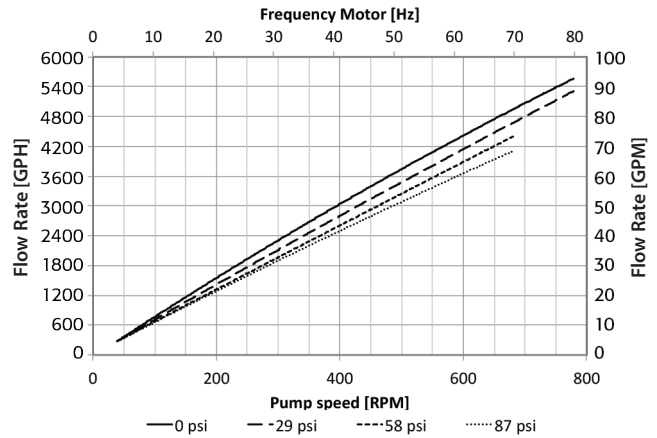
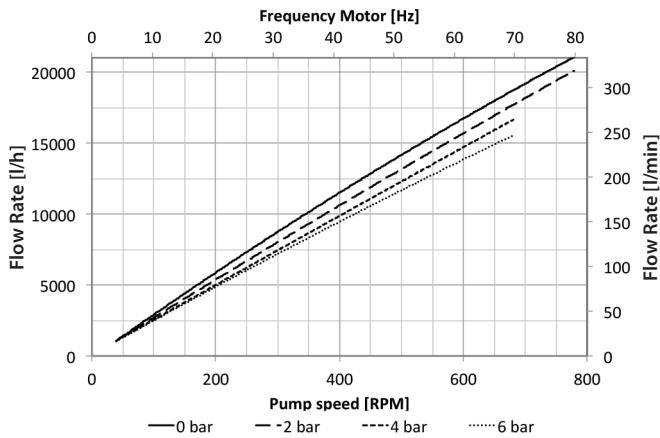


#### Technical Data

QF20k Standard Motor	
<b>Flow Rate Maximum:</b>	
Eccentric Shaft 7°	20000 l/h (5283 gph)
<b>Flow Rate Minimum:</b>	
Eccentric Shaft 7°	1000 l/h (265 gph)
<b>Pressure:</b>	
Temperature of Fluid < 40° C (104° F)	6 bar (87 psi)
Temperature of Fluid > 40° C (104° F)	4 bar (58 psi)
<b>Maximum Temperature:</b>	
Fluid	80° C (176° F)
CIP	90° C (194° F)
SIP	130° C (260° F)
Autoclave	130° C (260° F)
<b>Suction Lift Dry at 330 rpm:</b>	
Eccentric Shaft 7°	4-4.5 m (13.1-14.7 ft)
<b>Volume Specifications:</b>	
Approximated Volume per Revolution at Free Output	470 ml
Filling Volume Without Connectors	2950 ml
<b>Connection Specification (Standard):</b>	
Connectors	2" TC
Position of Connectors	Front

QF20k Standard Motor	
<b>Product Wetted Materials (Standard):</b>	
Pump Housing	SS316L
Valve Plate	SS316L
Diaphragms	TPE
Valves	EPDM
O-rings	EPDM
<b>Certificates/Proofs (Optional):</b>	
Elastomere (product wetted)	USP <88> Cl. VI; FDA21CFR177; BSE/TSE Safe
Stainless Steel Parts (product wetted)	3.1; Surface Roughness; Ferrite Content
<b>Motor (Standard):</b>	
Rated speed	1460/474 min-1 (50 Hz)
Voltage	230/400 V
Power	4 KW
<b>Pump Dimension with Motor and Housing:</b>	
Length	1152.5 mm (45.37")
Width	400 mm (15.75")
Height	416 mm (16.38")
<b>Pump Weight with Motor and Housing:</b>	
	217 kg (478 lb.)

## Performance Charts



Depending on the selected motor/frequency drive combination, the motor frequency and the resulting pump speed might differ.

## Accessories

### Control Box



- Variable speed controller with integrated touch pad for manual speed control
- Configurable for remote speed control with 4-20 mA analogue input
- 400 V, 3P
- Hygienic 1.4301 housing, IP 54
- Easy plug & play installation



### Power Box

- Plug & Play installation
- Protects system and pump from overpressure
- Configurable pressure switch setpoint
- Reset button for pump reset
- To be used with pressure switch (also available)

### Diaphragm Sensor

- Sensor installed in ring drive unit
- Detection of all liquids
- Signal output to a controller, if diaphragm is ruptured

Distributed by:



QF20k

© 2014 ALMATEC



ALMATEC Maschinenbau GmbH  
 Carl-Friedrich-Gauß-Str. 5  
 47475 Kamp-Lintfort, Germany  
 O: +49/2842/961-0, F: +49/2842/961-40  
[www.quattroflow.com](http://www.quattroflow.com)  
 info@almatec.de