

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

QF20k Standard Motor

Product Wetted Materials (Standard):	
Pump Housing	SS316L
Valve Plate	SS316L
Diaphragms	TPE
Valves	EPDM
O-rings	EPDM

Certificates/Proofs (Optional):

Elastomere (product wetted)	USP <88> Cl. VI; FDA21CFR177; BSE/TSE Safe
Stainless Steel Parts (product wetted)	3.1; Surface Roughness; Ferrite Content

Motor (Standard):

Rated speed	1460/474 min ⁻¹ (50 Hz)
Voltage	230/400 V
Power	4 KW

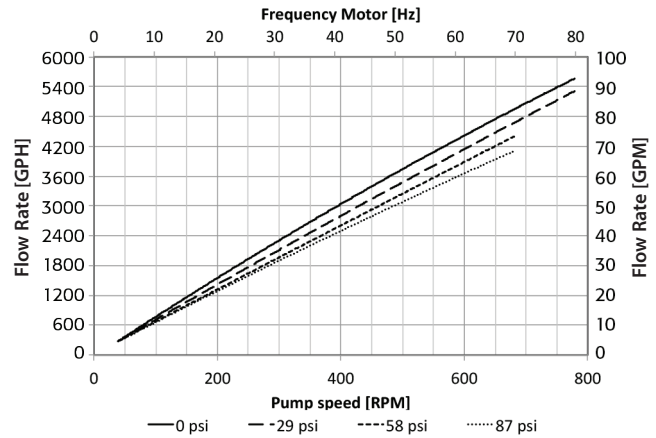
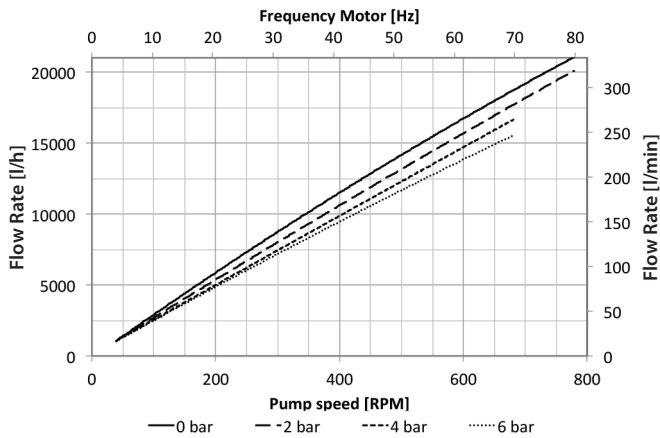
Pump Dimension with Motor and Housing:

Length	1152.5 mm (45.37")
Width	400 mm (15.75")
Height	416 mm (16.38")

Pump Weight with Motor and Housing:

	217 kg (478 lb.)
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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

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