

## 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                   |

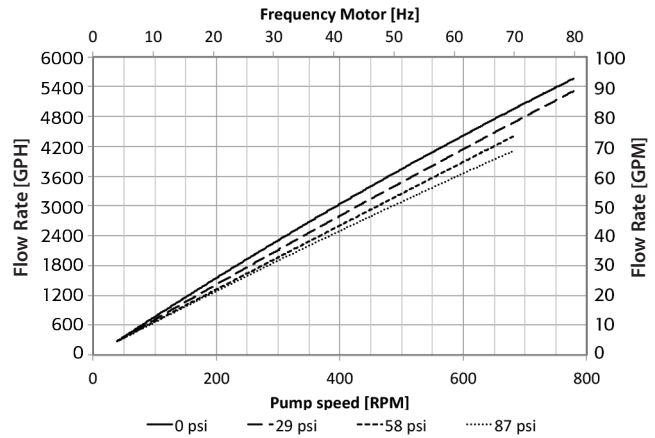
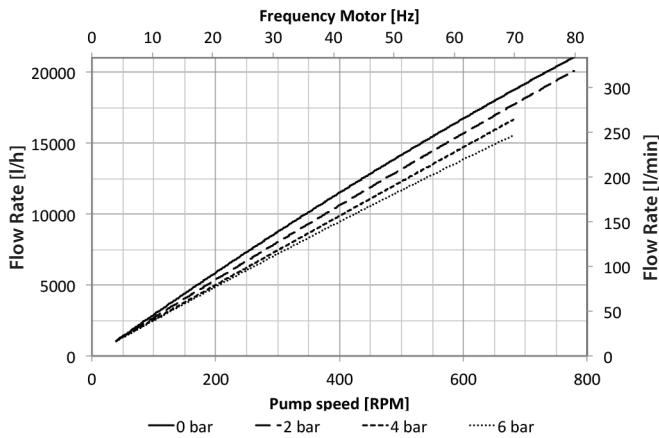
| QF20k Standard Motor                          |                                            |
|-----------------------------------------------|--------------------------------------------|
| <b>Product Wetted Materials (Standard):</b>   |                                            |
| Pump Housing                                  | 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.)                           |

Other connection specifications, materials and motors available on request.

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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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Fluid Systems  
Part of Pump Solutions Group  
A DOVER COMPANY

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  
info@almatec.de