

Variable-speed pumps for flexible machining processes



Group PXA
immersion pumps with
frequency converter for

- power output
up to 6.3 kW
- speed range
360 to 3,600 rpm

- Maximum flexibility thanks to optimum adaptation to machining processes
- Universal delivery rates with just one pump
- Comfortable integration in the machine's control system
- Lower operating costs due to saved energy
- Solution for original equipment manufacturers and retrofitters
- Assured output regardless of voltage fluctuations in the power supply network



Why immersion pumps with an integrated electronic frequency converter are a simple and economical solution:

Immersion pumps with an integrated electronic frequency converter

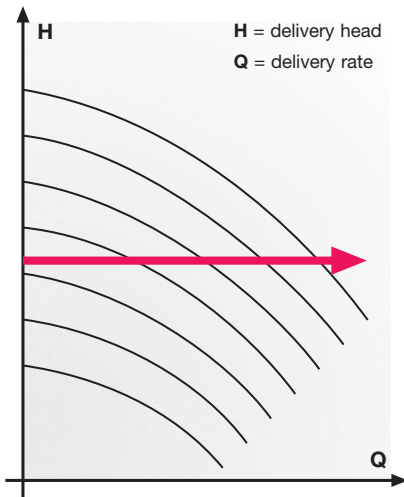
- do not require a separate control cabinet
- are easy to put into operation
- integrate automatic control of the pump.

If needed, one pump can perform the task of multiple pumps (without variable-speed capability).

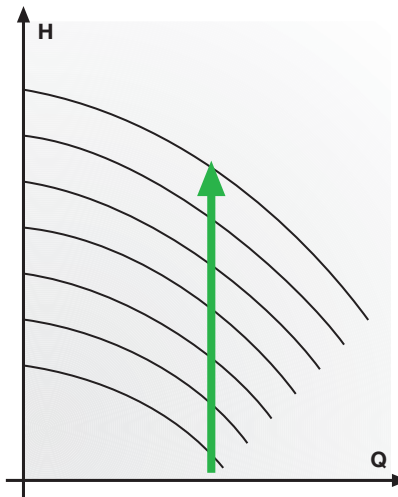
VOGEL Spandau Pumps with integrated frequency converters are the variable-speed solution for any new filtration system in which workflow optimization is important.

Thanks to complete separation of the motor and pump it is also easy for retrofitters to integrate variable-speed operation.

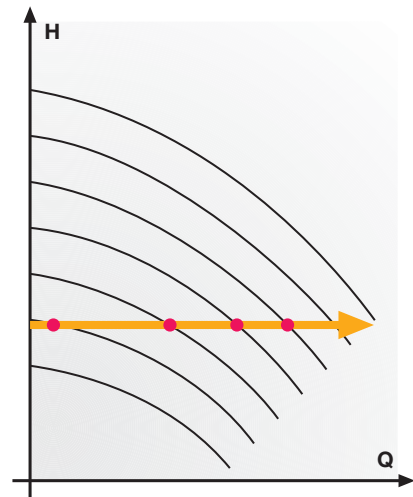
Control principle of pumps with frequency converters



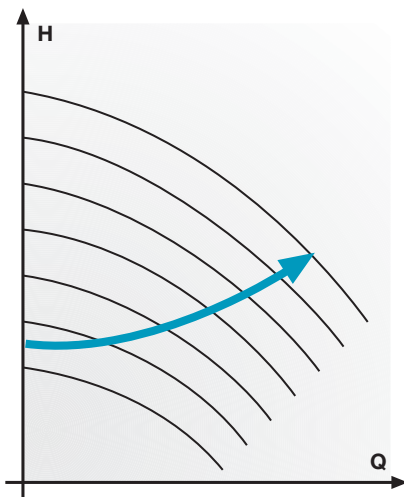
Control with constant pressure



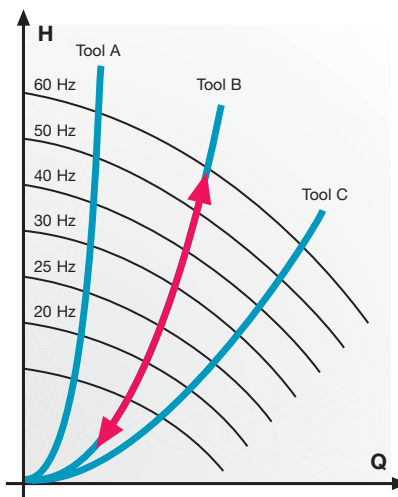
Control with constant delivery rate



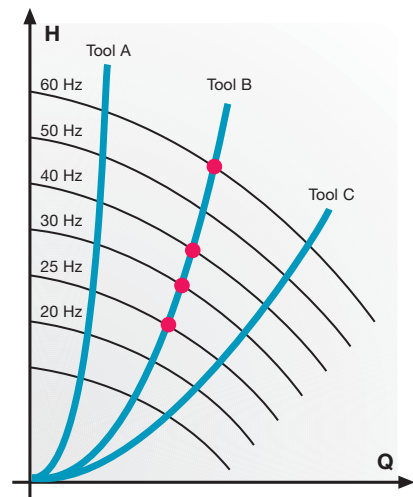
Control with fixed programmable delivery rates



Control based on system characteristics



Infinitely adjustable pressure control by way of analog signals



Fixed programmable pressure stages (fixed frequency) by way of digital actuation

Speed control

The speed is controlled by a sensor (PI controller) or an external, specified value. It adapts the electrical power in-put to the needs of the application, thereby saving energy. Different working points in the characteristics field can be selected for optimal adjustment of the pump to the application. The points can be infinitely variable or defined.

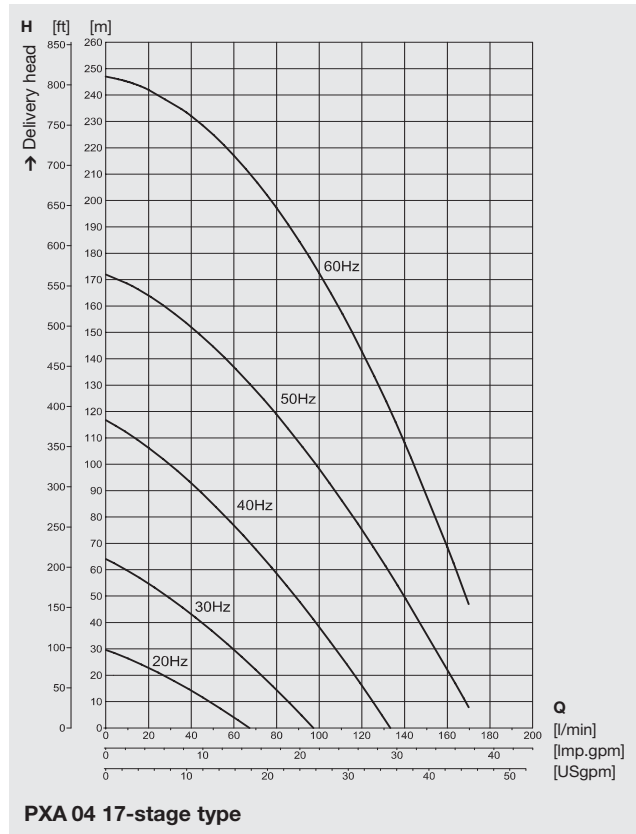
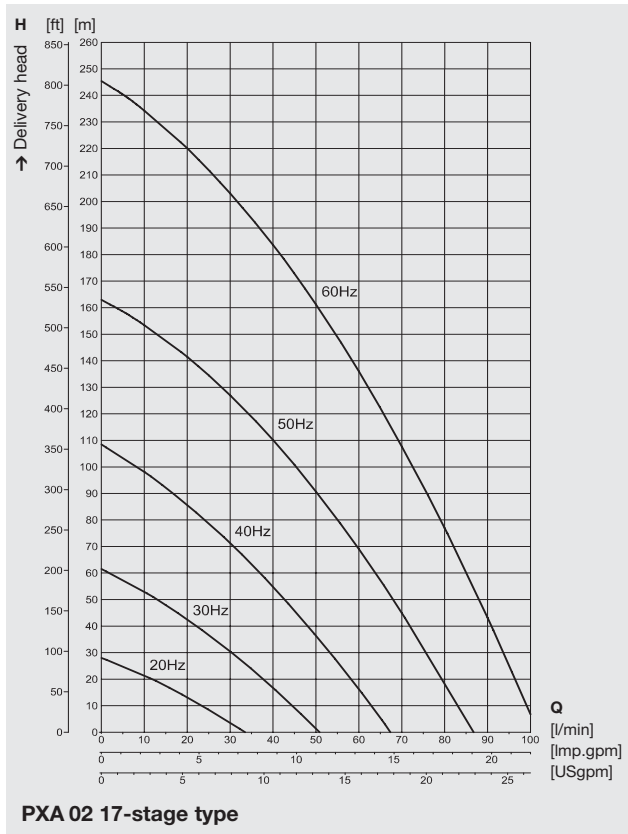
Control

- speed
- pressure, delivery rate, delivery head via integrated PI function

Specified value

- Local: analog via control button
- Local / remote controlled: digitally programmable via microconsole or PC (up to 4 preset speeds possible)
- Remote-controlled: analog 0-10 V / 4-20 mA
- Limitation of minimum and maximum speed
- Gentle start thanks to programmable ramp-up time

Characteristics field of PXA pumps with frequency converter (H₂O, 20 °C)



Electrical versions

The drive motors comply with VDE regulations, European motor standards (DIN EN 60034-1/02.99) and the requirements underlying the CE mark.

Designs in conformity with non-European regulations, e.g. **CSA**, **UL** or special requirements, e.g. the USA or Japan, are possible.

Degree of protection IP 65

Direction of rotation clockwise
as viewed from above looking
down on the motor's ventilation side

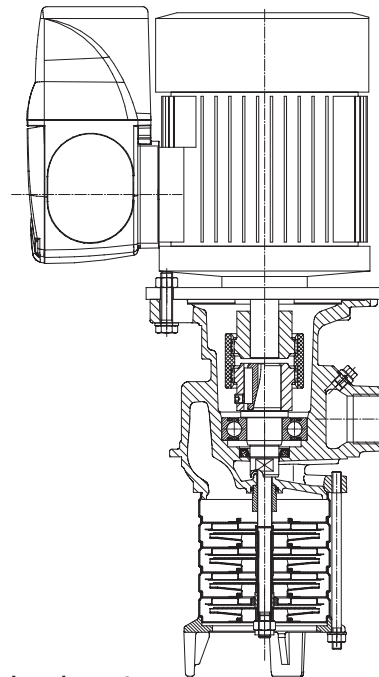
Insulation class F

Ambient temperature max. 40 °C
(DIN EN 60034-1/02.99) at a max. of 1000 m above sea level

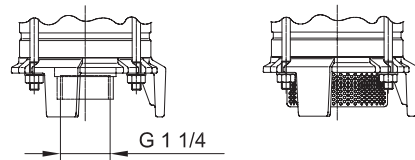
Frequency 6-60 Hz

Electrical parameters 200-480 V ± 10 %;
50-60 Hz ± 5 %

Sectional drawing



Additional equipment



base for extension tube

for intake strainer



A brand of the SKF Group

Willy Vogel AG

Motzener Strasse 35/37
12277 Berlin, Germany
P.O. Box 970444 · 12704 Berlin
Tel. +49 (0) 30 - 720 02-0
Fax +49 (0) 30 - 720 02-111
info@vogel-berlin.de
www.vogelag.com

Willy Vogel AG

2. Industriestrasse 4
68766 Hockenheim
Germany
Tel. +49 (0) 62 05 - 27-0
Fax +49 (0) 62 05 - 27-132
info@vogel-berlin.de
www.vogelag.com

Vogel France SAS

Rue Robert Amy, B.P. 70130
49404 Saumur cedex
France
Tel. +33 (0) 241 404 200
Fax +33 (0) 241 404 242
info@vogelfrance.com
www.vogelfrance.com