



# VOGEL - Multi-stage Pumps

## Design MPE



*Engineered for life*

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## VOGEL - Multi-stage Pumps, series MPE

Design according ISO 5199 / EN 25199



### Performance Range:

Capacity up to	300m <sup>3</sup> /h	(1320USgpm)
Head up to	850m	(2780feet)
Speed up to	2950/3550min <sup>-1</sup>	(2950/3550rpm)

### Size:

DN 65 - 125 DN 125 Discharge (2,5" - 5")

Design MP - refer to brochure 2200.1.B

Design P - refer to brochure 2300.1.B

### Temperature:

max. 140°C (284°F) without cooling

max. 180°C (356°F) with cooling

### Casing Pressure:

max. 100bar (1450psig)

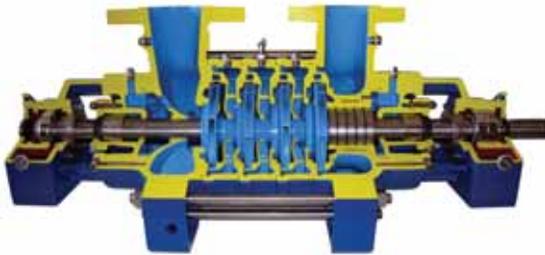
For detailed operation limits refer to technical datasheets or quotation.

### Handled Liquids:

Clean or slightly contaminated fluids  
(without bigger solids)

Cold and hot water

Condensate



### Applications:

General industry

Snow-making systems

Steel mills

Sugar industry

Pulp and paper industry

Power plants

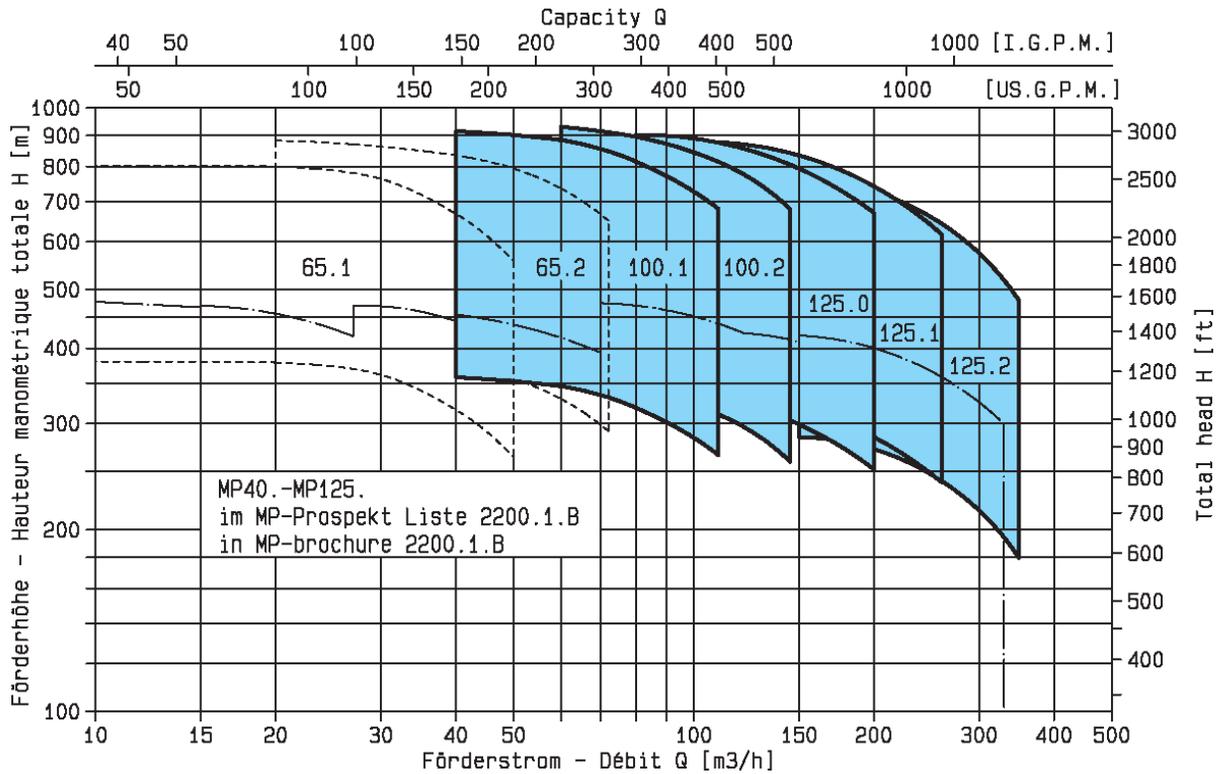
Reverse Osmosis

Mine dewatering

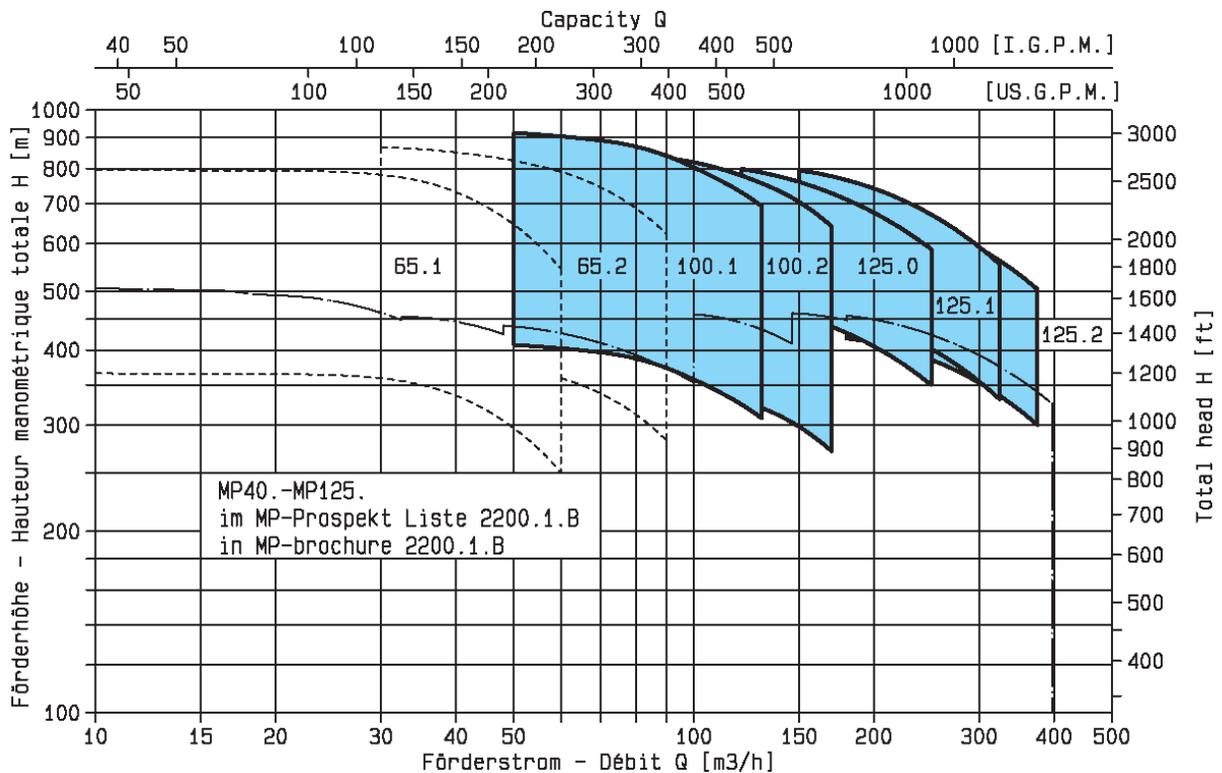


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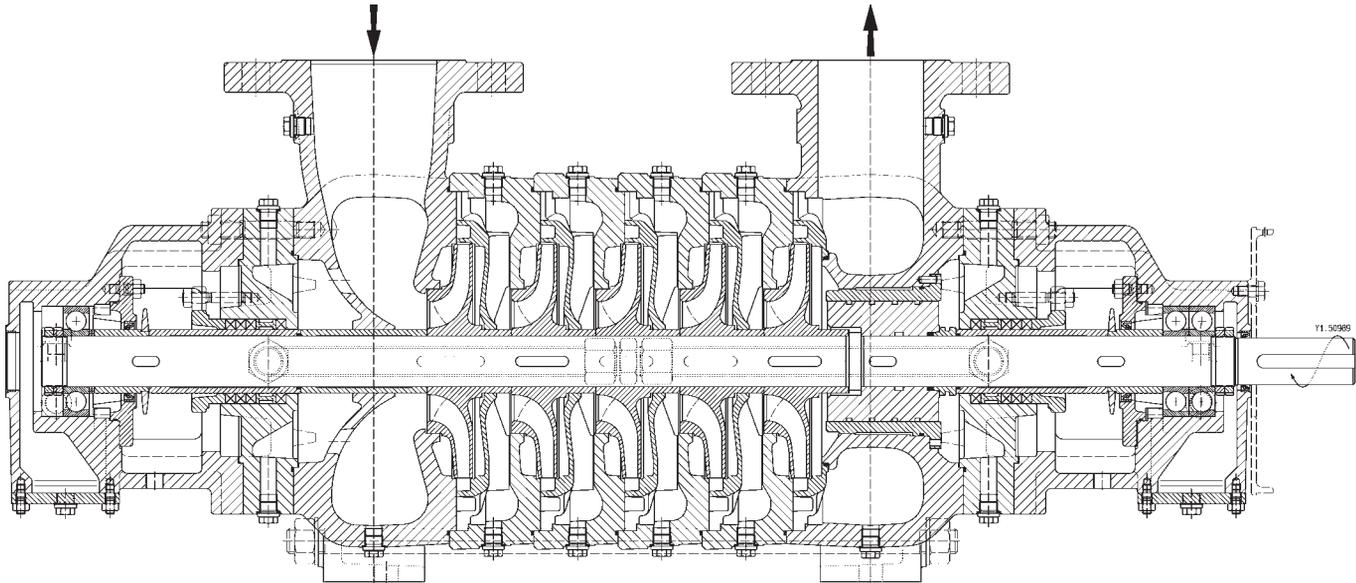
### Hydraulic Performance 2950rpm



### Hydraulic Performance 3550rpm



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### Design Features:

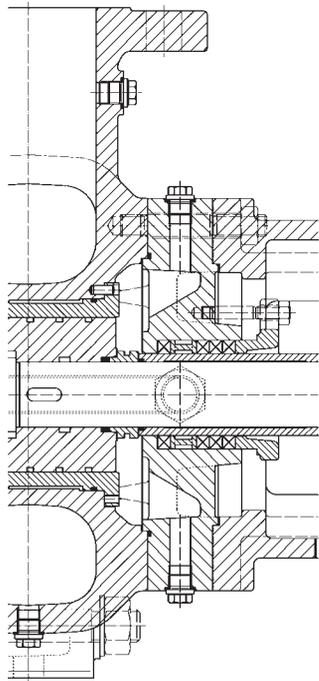
The construction is based on 100 years of experience in manufacturing of multi-stage pumps and is designed for smooth running with extremely low vibration level, reliable operation, lowest wear as well as long life time in particular of shaft seals and pump bearings. This is reflected in a considerable drop of lifecycle cost to lowest possible level.

- Horizontal, „in-between“ bearing design, with stiff shaft for lowest shaft deflection.
- Efficiency optimized closed impellers and diffusers avoid radial loads and minimize shaft loads and shaft deflection.
- Thrust balancing by a balancing drum with pressure balancing at the discharge side shaft seal considerably reduces the loads on pump bearings and shaft seals.
- Rigid construction with pump feet integrated to pump casings ensures deform-less transmission of pipework loads into foundation.
- Suction- and discharge casing executed with „universal“ casing feet for easy change of flange directions.
- Thermal expansion of the pump rotor is balanced internally by a floating bearing at suction side, without affecting the shaft alignment.
- Maintenance friendly design enables the change of bearings and shaft seals without pump disassembly.

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### Shaft Sealing:

Due to the balancing drum with pressure balancing pipe the pressure at the discharge side shaft seal is reduced to a level only slightly higher than at suction side. Therefore the lifetime of a gland packing respectively mechanical seal is considerably increased.



### Stuffing Box:

Stuffing box with shaft sleeve and lantern ring. Standard execution with internal flushing. External flushing option available, which is required when vacuum is present during non operation.

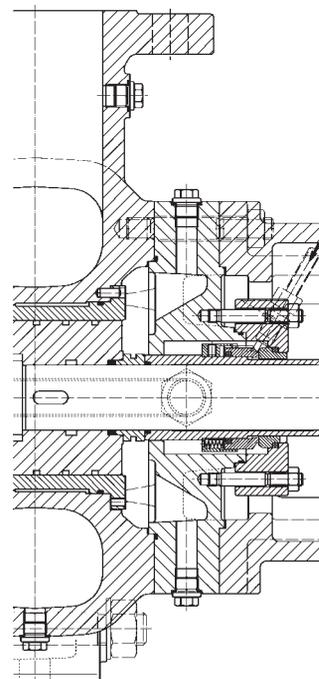
Up to temperatures of 120°C (248°F)

### Mechanical Seal:

Balanced single mechanical seals acc. to EN 12756 (DIN 24960) at both sides. Standard execution with internal flushing. External flushing option available.

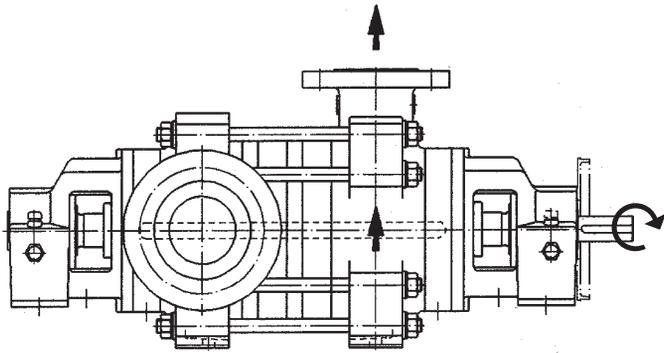
Up to temperatures of 140°C (284°F) without cooling  
> 140°C (284°F) up to 180°C (356°F) with cooling.

Cartridge mechanical seals, in single or double design, are available on request.



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### Design Versions:



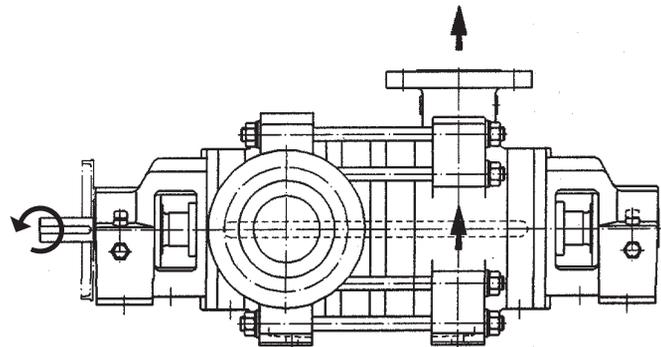
**Drive-end at discharge side  
Standard execution**

Sense of rotation clockwise seen from drive side

### Drive-end at suction side - optional

Flexibility at installations with limited space

Sense of rotation counter clockwise seen from drive side.

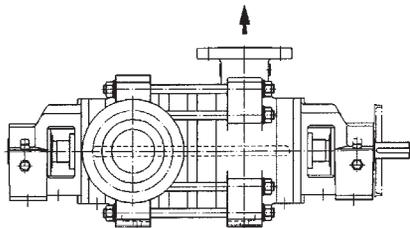


### Branch Directions:

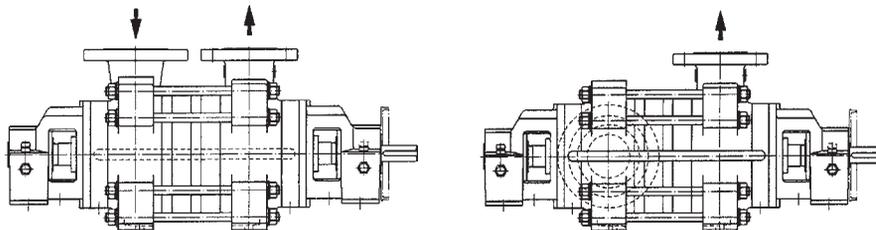
#### Standard Branch Direction:

Discharge branch at drive side, vertically upwards

Suction branch at non-drive side, horizontally left seen from drive side



#### Optional Branch Directions:



Discharge as well as suction branch direction can be horizontally left or right or vertically upwards (both branches in the same direction only possible for 3 or higher number of stages).

The design with integral casing feet enables changing of the branch directions using the same components.

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### Materials:

Material Code	Impeller	Diffuser	Suction- and Stage casing	Discharge casing	Bearing frame	Shaft	Sleeve
141	0.6025	0.6025	0.7040	1.0619	0.6025	1.4021	1.4021
341	1.4408	0.6025	0.7040	1.0619	0.6025	1.4021	1.4021

Balancing drum 1.4021, balancing bush 1.4313

Other materials upon request

**ISO 9001 quality certification guarantees  
high quality standards and reliability of our products.**

### Accessories:

- Baseframe in welded design
- Flexible coupling
- Coupling guard, made of stainless steel 1.4571 in standard execution
- Motor
- Speed controllers
- Minimum flow- and non return valves
- Special accessories according to customer requirements





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### Liability of manufacturer and/or supplier

The mentioned limits of operation and/or application are only a general information and may not be applied for every case. The permitted range of operation and/or application for the specific case is to be obtained from our acknowledgement of order and/or the instructions for installation, operation and maintenance, sent with the goods.

Liste 2800.1.B

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