

TP, TPD, TPE, TPED, TPE2, TPE2 D, TPE3, TPE3 D

In-line circulator pumps

50 Hz



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6. TP Series 100 and 200 pumps



Fig. 9 TP Series 100 and TP Series 200

Technical data

Flow rate:	Up to 90 m ³ /h
Head:	Up to 27 m
Liquid temperature, TP Series 100:	-25 to +120 °C
Liquid temperature, TP Series 200:	-25 to +140 °C
Maximum operating pressure:	Up to 16 bar
Direction of rotation:	Counterclockwise

Construction

Grundfos TP Series 100 and Series 200 pumps are single-stage, close-coupled pumps with in-line inlet and outlet ports of identical diameter.

The pumps are fitted with a fan-cooled asynchronous motor. Motor and pump shafts are connected via a rigid two-part coupling.

TP Series 100 pumps with union connection are available as single-head, TP, pumps.

TP Series 200 pumps are available as single-head, TP, and twin-head, TPD, pumps.

TP Series 200 pumps have PN 6 or PN 10 flanges.

The pumps are fitted with an unbalanced mechanical shaft seal.

The pumps are of the top-pull-out design, that is you can remove the power head (motor, pump head and impeller) for maintenance or service while the pump housing remains in the pipes.

The twin-head pumps are designed with two parallel power heads. A flap valve in the common outlet port is opened by the flow of the pumped liquid and prevents backflow of liquid into the idle pump head.

As radial and axial forces are absorbed by the fixed bearing in the motor drive-end, the pump requires no bearing.

The pumps are fitted with high-efficiency motors.

Pumps with a bronze or stainless-steel pump housing are suitable for circulation of domestic hot water.

Materials

TP Series 100

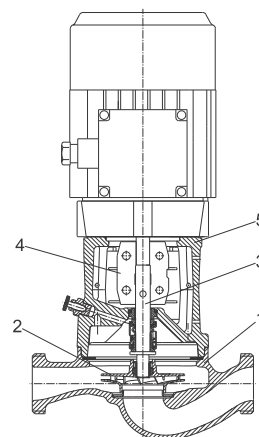
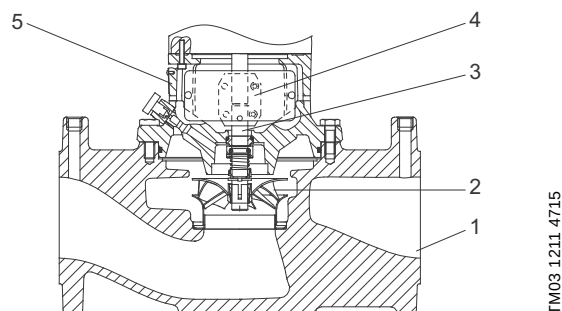


Fig. 10 Sectional drawing of TP Series 100 with union connection

Material specification, Series 100

Pos.	Component	Material	EN/DIN
1	Pump housing	Cast iron EN-GJL-150, EN-GJL-200, stainless steel	EN-JL 1020 EN-JL 1030 1.4308
2	Impeller	Composite PES/PP 30 % GF	
3	Shaft	Stainless steel	1.4057
4	Coupling	Cast iron EN-GJL-400	0.7040
5	Pump head	Cast iron EN-GJL-200, stainless steel	EN-JL 1030 1.4308
	Secondary seals	EPDM	
	Rotating seal face	Silicon carbide	
	Stationary seat	Carbon (resin-impregnated), silicon carbide	

TP Series 200

TM03 1211 4715

Fig. 11 Sectional drawing of TP Series 200 with flange connection

Material specification, Series 200

Pos.	Component	Material	EN/DIN
1	Pump housing	Cast iron EN-GJL-250, bronze CuSn10	EN-JL 1040 2.1093
2	Impeller	Stainless steel	1.4301
3	Shaft	Stainless steel	1.4305
4	Coupling	Cast iron EN-GJL-400	0.7040
5	Pump head	Cast iron EN-GJL-250, bronze	0.6025 2.1093
	Secondary seals	EPDM	
	Rotating seal face	Silicon carbide	
	Stationary seat	Carbon (resin-impregnated), silicon carbide	

Mechanical shaft seal

Two types of unbalanced mechanical shaft seal are available as standard:

- **BQBE**

The BQBE shaft seal is a rubber bellows seal with silicon carbide/carbon seal faces and secondary seals of EPDM.

- **BQQE**

The BQQE shaft seal is a rubber bellows seal with silicon carbide/silicon carbide seal faces and secondary seals of EPDM.

For more information about common pumped liquids with recommended shaft seals, .

Shaft seal specification

Unbalanced shaft seal	TP Series 100	Version KU according to EN 12756
	TP, TPD Series 200	Version NU according to EN 12756
Shaft diameter	12 and 16 mm	
Rubber bellows	EPDM	
Seal faces	Silicon carbide/carbon	
	Silicon carbide/silicon carbide	

Special shaft seals are available for partly conditioned water or other liquids containing abrasive or crystallising particles..

Connections

TP Series 100 pumps with union connection have inlet and outlet union threads to ISO 228-1.

TP Series 200 pumps up to DN 65 are fitted with combination flanges PN 6 / PN 10. DN 80 or DN 100 pumps have either PN 6 or PN 10 flanges. You can connect all flanges to flanges in accordance with EN 1092-2 and ISO 7005-2.

Features and benefits

TP Series 100 and Series 200 pumps have these features and benefits:

Optimised hydraulics for high efficiency

- Reduced power consumption.

High-efficiency motors

- TP pumps are fitted with high-efficiency motors. High-efficiency motors offer reduced energy consumption. TP pumps are primarily fitted with motors that meet the legislative requirements of the EuP IE3 grade. For further information, .

Top-pull-out design

- Easy dismantling in case of service.

In-line design

- Contrary to end-suction pumps, in-line pumps allow straight pipes and thus often reduced installation costs.

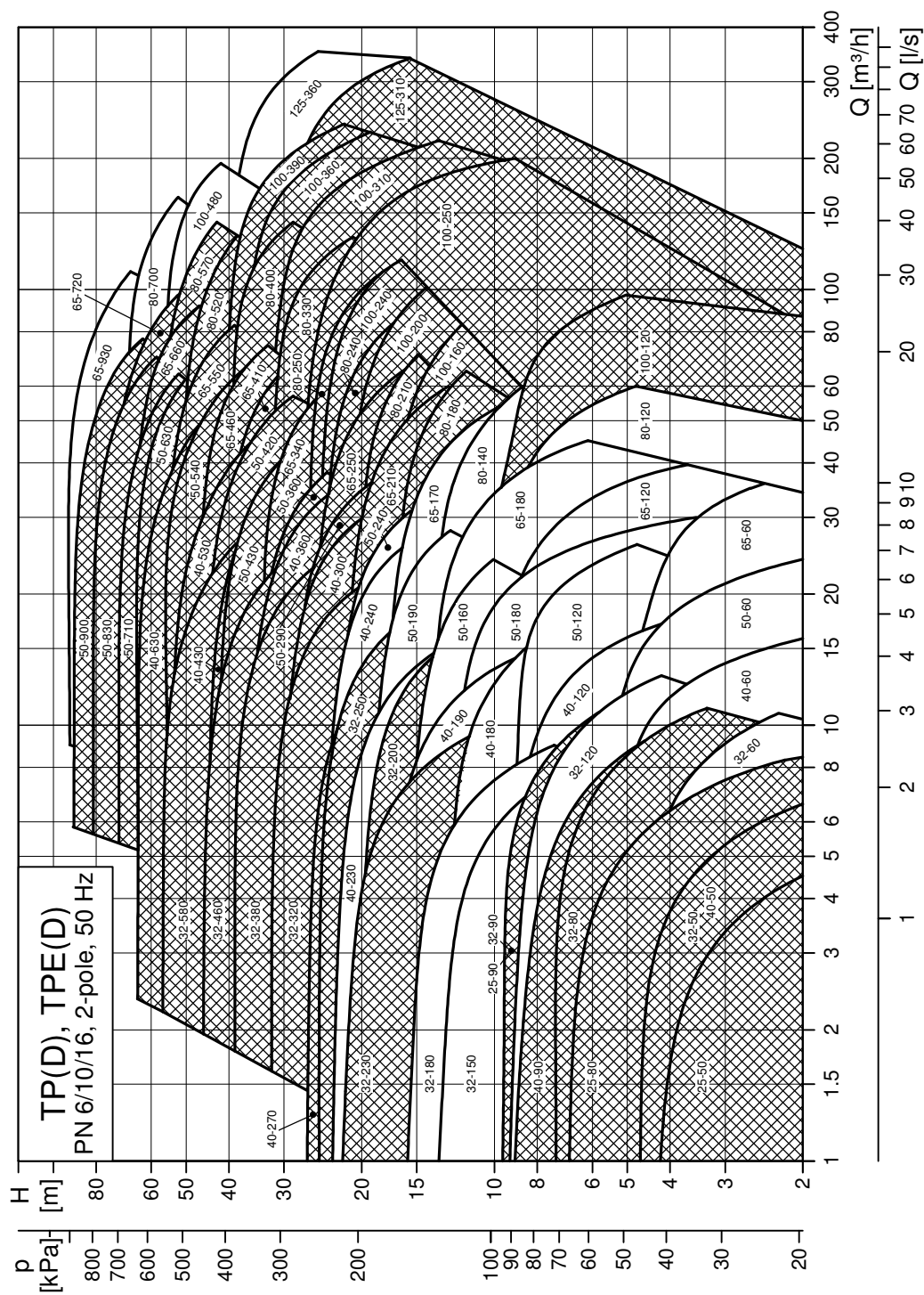
Pump housing and pump head are electrocoated to improve the corrosion resistance

- Electrocoating includes:
 1. Alkaline cleaning.
 2. Pretreatment with zinc phosphate coating.
 3. Cathodic electrocoating, epoxy.
 4. Curing of paint film at 200 to 250 °C.
 For low-temperature applications at a high humidity, Grundfos offers TP pumps with extra surface treatment to avoid corrosion. These pumps are available on request.

Stainless-steel impeller and neck ring

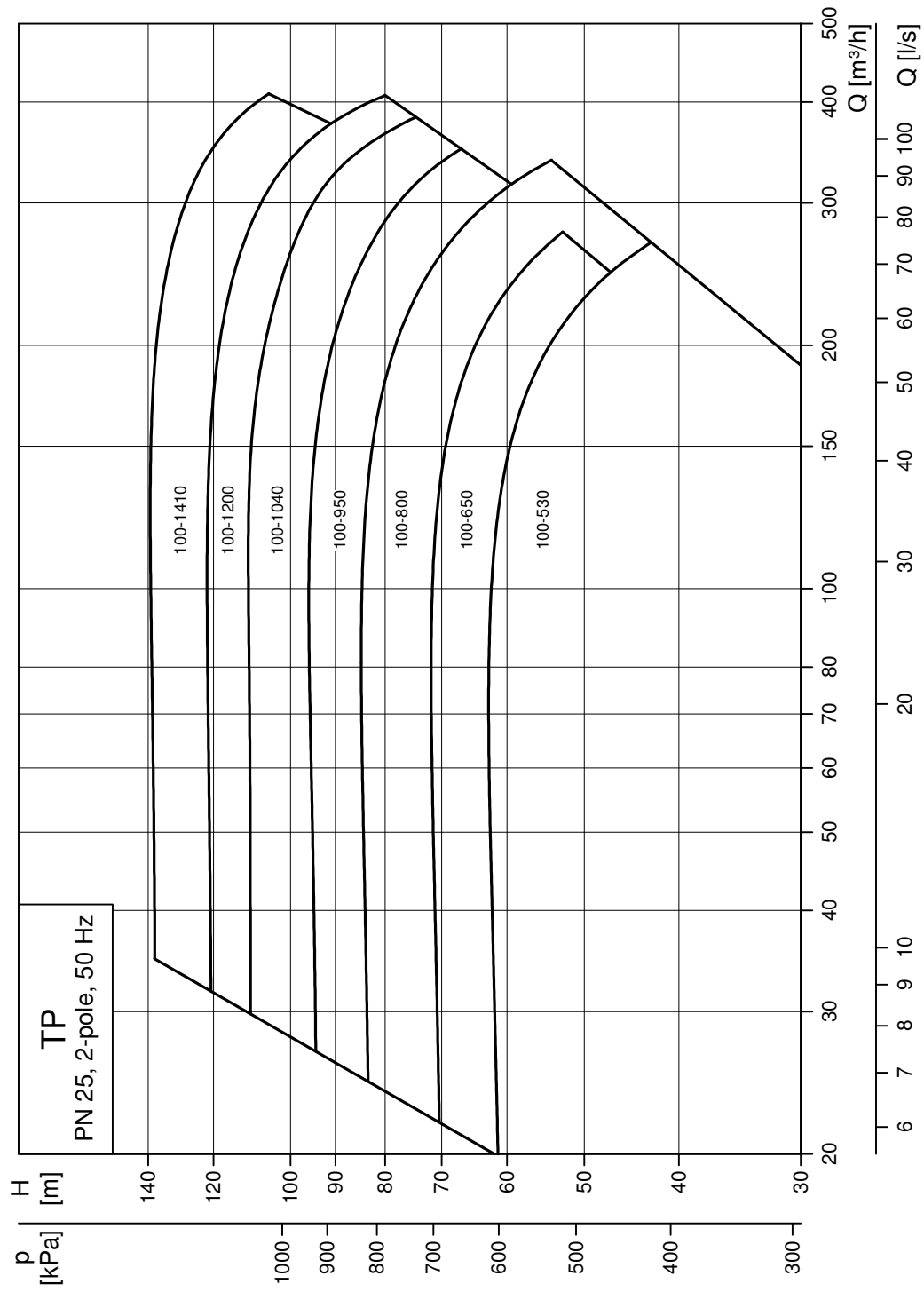
- Wear-free operation with high efficiency.

Performance range, 2-pole, PN 6, 10, 16

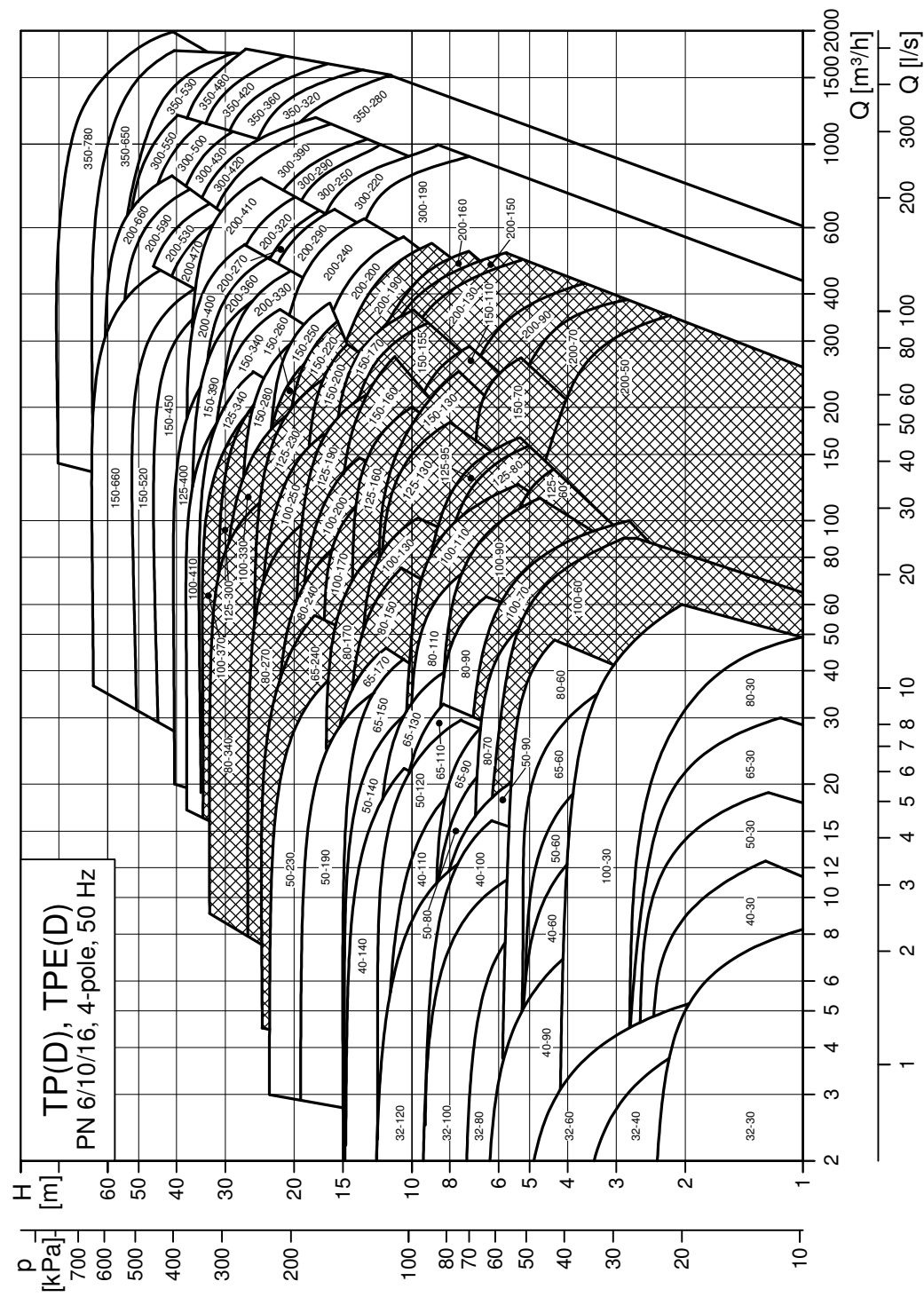


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Performance range, 2-pole, PN 25

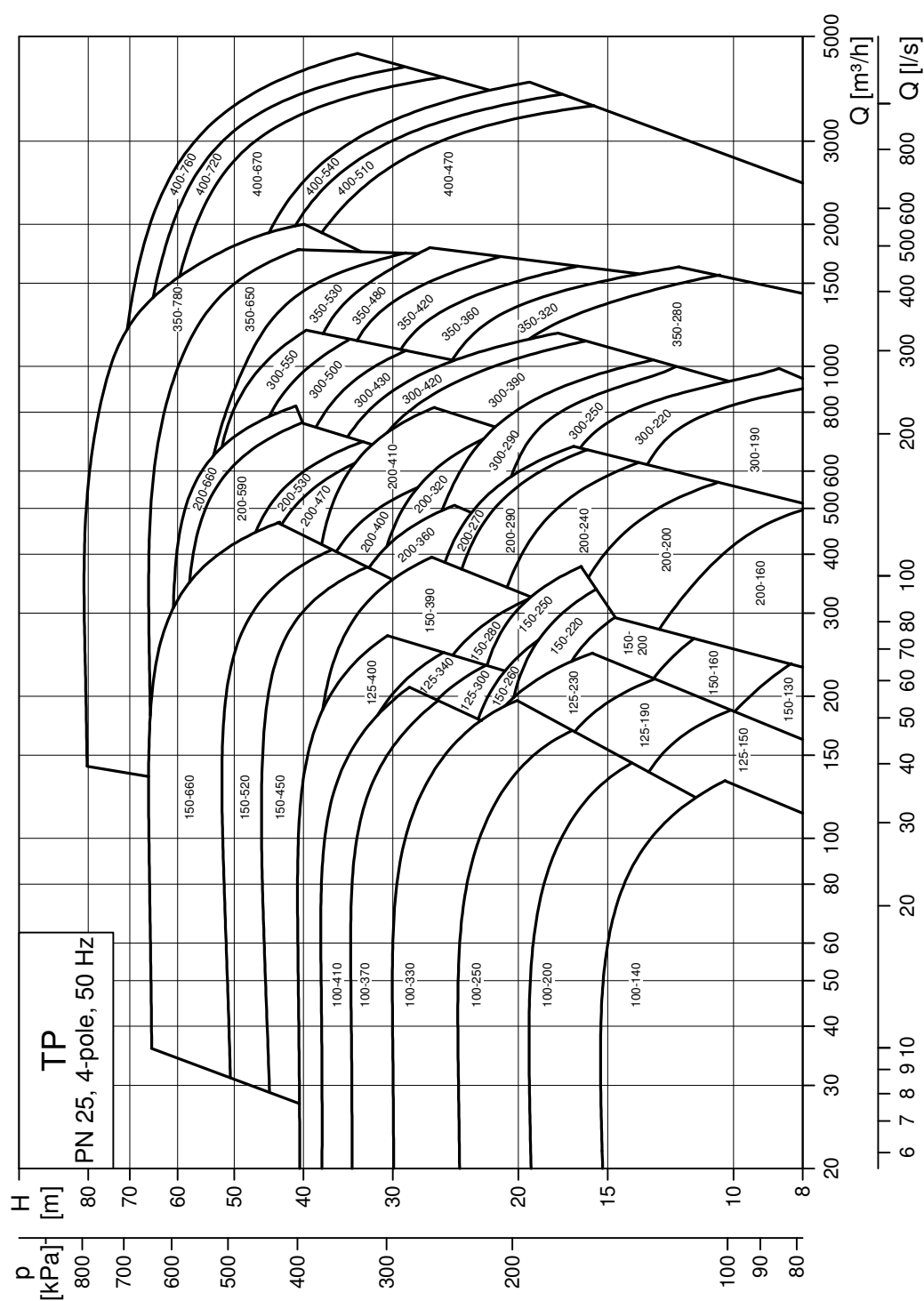


Performance range, 4-pole, PN 6, 10, 16

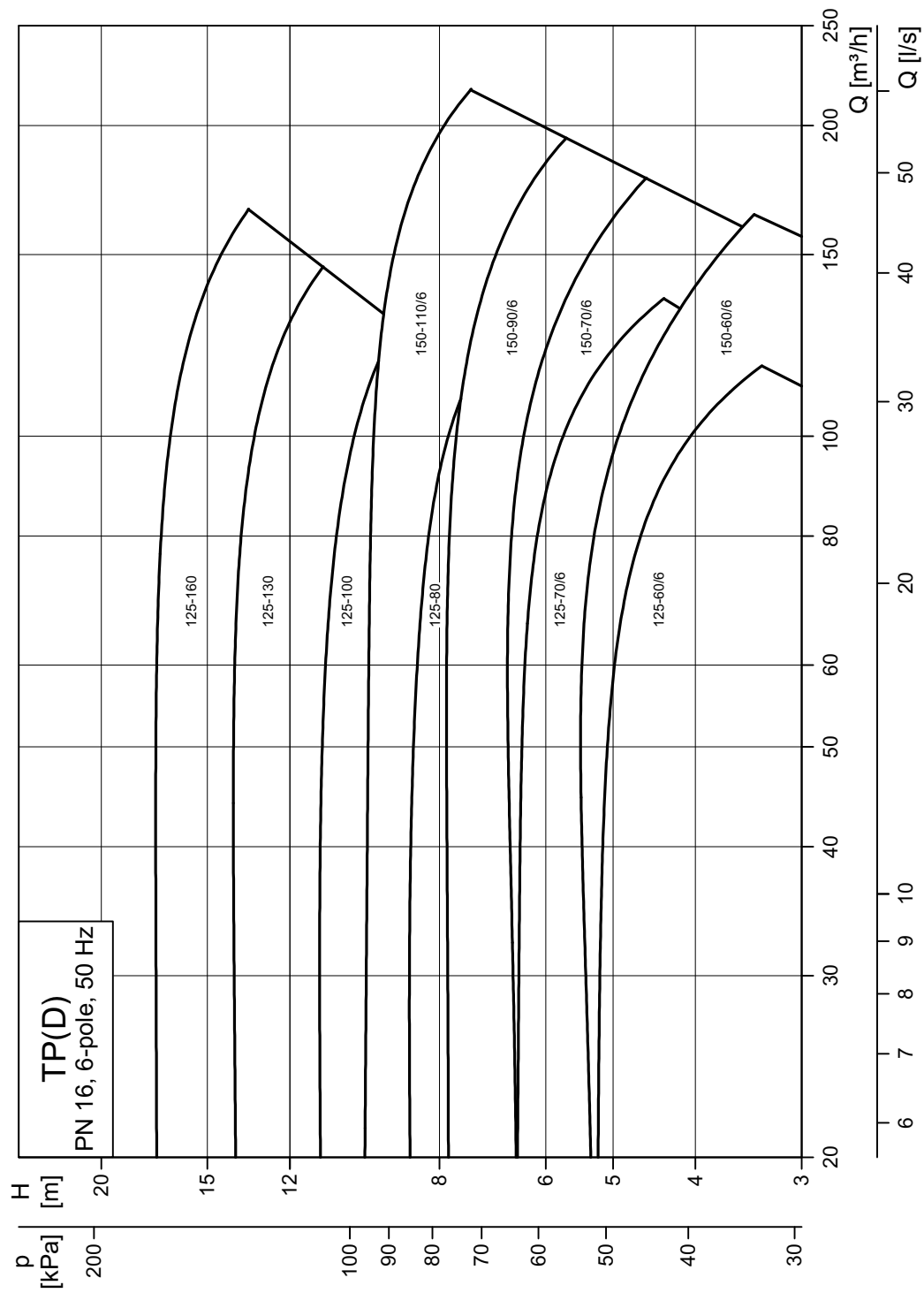


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Performance range, 4-pole, PN 25



Performance range, 6-pole, PN 16



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