

TP 80-250/2-A-F-A-BAQE 400D 50HZ

Grundfos pump 96108701



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<https://www.lenntech.com/grundfos/TP000/96108701/TP-80-250-2-A-F-A-BAQE.html>

info@lenntech.com

tel. +31 152 610 900

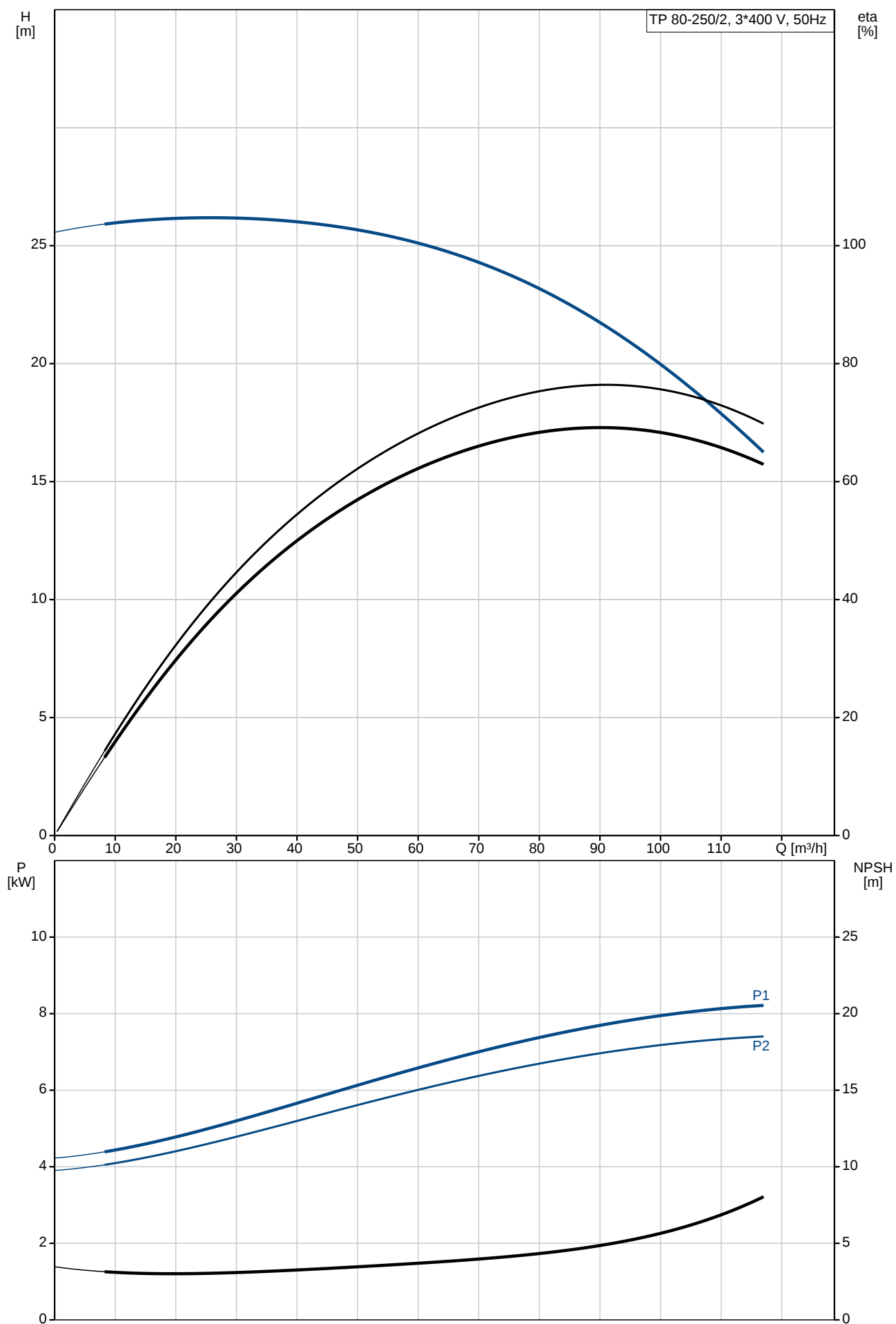
fax. +31 152 616 289

Position	Qty.	Description
	1	TP 80-250/2 A-F-A-BAQE  Product No.: On request Single-stage, close-coupled, volute pump with in-line suction and discharge ports of identical diameter. The pump is of the top-pull-out design, i.e. the power head (motor, pump head and impeller) can be removed for maintenance or service while the pump housing remains in the pipework. The pump is fitted with an unbalanced rubber bellows seal. The shaft seal is according to EN 12756. Pipework connection is via PN 16 DIN flanges (EN 1092-2 and ISO 7005-2). The pump is fitted with a fan-cooled asynchronous motor. Further product details Pump Pump housing and pump head are electrocoated to improve the corrosion resistance. Electrocoating includes: 1) Alkaline-based cleaning. 2) Pretreatment with zinc phosphate coating. 3) Cathodic electrocoating (epoxy). 4) Curing of paint film at 200-250 °C.  1: Pump housing 2: Impeller 3: Stub shaft 4: Pump head/motor stool 5: Wear rings The pump housing is provided with a replaceable brass neck ring to reduce the amount of liquid running from the outlet side of the impeller to the inlet side. The impeller is secured to the shaft with a nut. The pump is fitted with an unbalanced rubber bellows seal with torque transmission across the spring and around the bellows. Due to the bellows, the seal does not wear the shaft, and the axial movement is not prevented by deposits on the shaft. Primary seal: • Rotating seal ring material: carbon graphite, metal-impregnated • Stationary seat material: silicon carbide (SiC) This material pairing has a very good corrosion resistance and is especially suitable for water up to 120 °C. However, seal life will be reduced at temperatures above 90 °C. The material pairing is not recommended for liquids containing particles as this will result in heavy wear on the SiC face. Secondary seal material: EPDM (ethylene-propylene rubber) EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils. A circulation of liquid through the duct of the air vent screw ensures lubrication and cooling of the shaft seal.

Position	Qty.	Description
		The flanges have tappings for mounting of pressure gauges. The motor stool forms connection between the pump housing and the motor, and is equipped with a manual air vent screw for venting of the pump housing and the shaft seal chamber. The sealing between motor stool and pump housing is an O-ring. The central part of the motor stool is provided with guards for protection against the shaft and coupling. The pump shaft is fastened directly on the motor shaft with key and set screws. Motor The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034. The motor is flange-mounted with free-hole flange (FF). Motor-mounting designation in accordance with IEC 60034-7: IM B 5, IM V 1 (Code I) / IM 3001, IM 3011 (Code II). The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1. The motor has thermistors (PTC sensors) in the windings in accordance with DIN 44081/DIN 44082. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions. Thermal switches must be connected to an external control circuit in a way which ensures that the automatic reset cannot cause accidents. The motors must be connected to a motor-protective circuit breaker according to local regulations. The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center. Technical data Liquid: Pumped liquid: Water Liquid temperature range: 0 .. 120 °C Liquid temperature during operation: 20 °C Density: 998.2 kg/m³ Technical: Rated flow: 90.4 m³/h Rated head: 21.7 m Actual impeller diameter: 145 mm Primary shaft seal: BAQE Curve tolerance: ISO9906:2012 3B Materials: Pump housing: Cast iron EN-JL1040 ASTM A48-40 B Impeller: Cast iron EN-JL1030 ASTM A48-30 B Installation: Range of ambient temperature: -30 .. 60 °C Maximum operating pressure: 16 bar Flange standard: DIN Pipe connection: DN 80 Pump inlet: DN 80 Pump outlet: DN 80 Pressure rating: PN 16 (@): 440 mm Flange size for motor: FF265 Electrical data: Motor type: 132SB IE Efficiency class: IE3

Position	Qty.	Description
		Rated power - P2: 7.5 kW Power (P2) required by pump: 7.5 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 14,4-14,0/8,30-8,10 A Starting current: 780-910 % Cos phi - power factor: 0.88-0.86 Rated speed: 2910-2920 rpm Efficiency: IE3 90,1% - IE3 90,4% Motor efficiency at full load: 90.1-90.4 % Motor efficiency at 3/4 load: 90.8 % Motor efficiency at 1/2 load: 90.8 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Others: Minimum efficiency index, MEI $\geq$: 0.68 ErP status: EuP Standalone/Prod. Net weight: 111 kg Gross weight: 128 kg Shipping volume: 0.39 m³ Danish VVS No.: 382764251

On request TP 80-250/2 A-F-A-BAQE 50 Hz



TP 80-250/2, 3*400 V, 50Hz

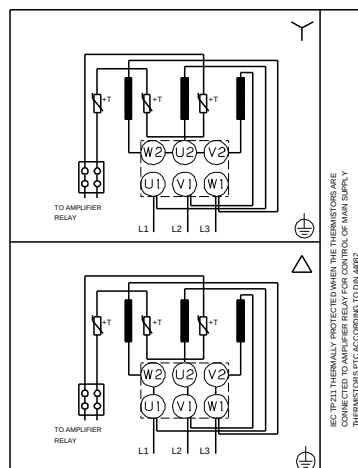
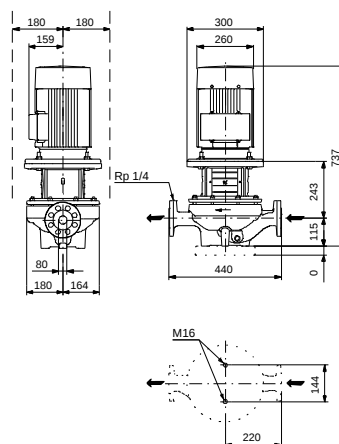
The figure displays two performance graphs for the TP 80-250/2 pump at 3*400 V, 50Hz.

Top Graph: Head (H) and Efficiency (eta) vs. Flow Rate (Q)

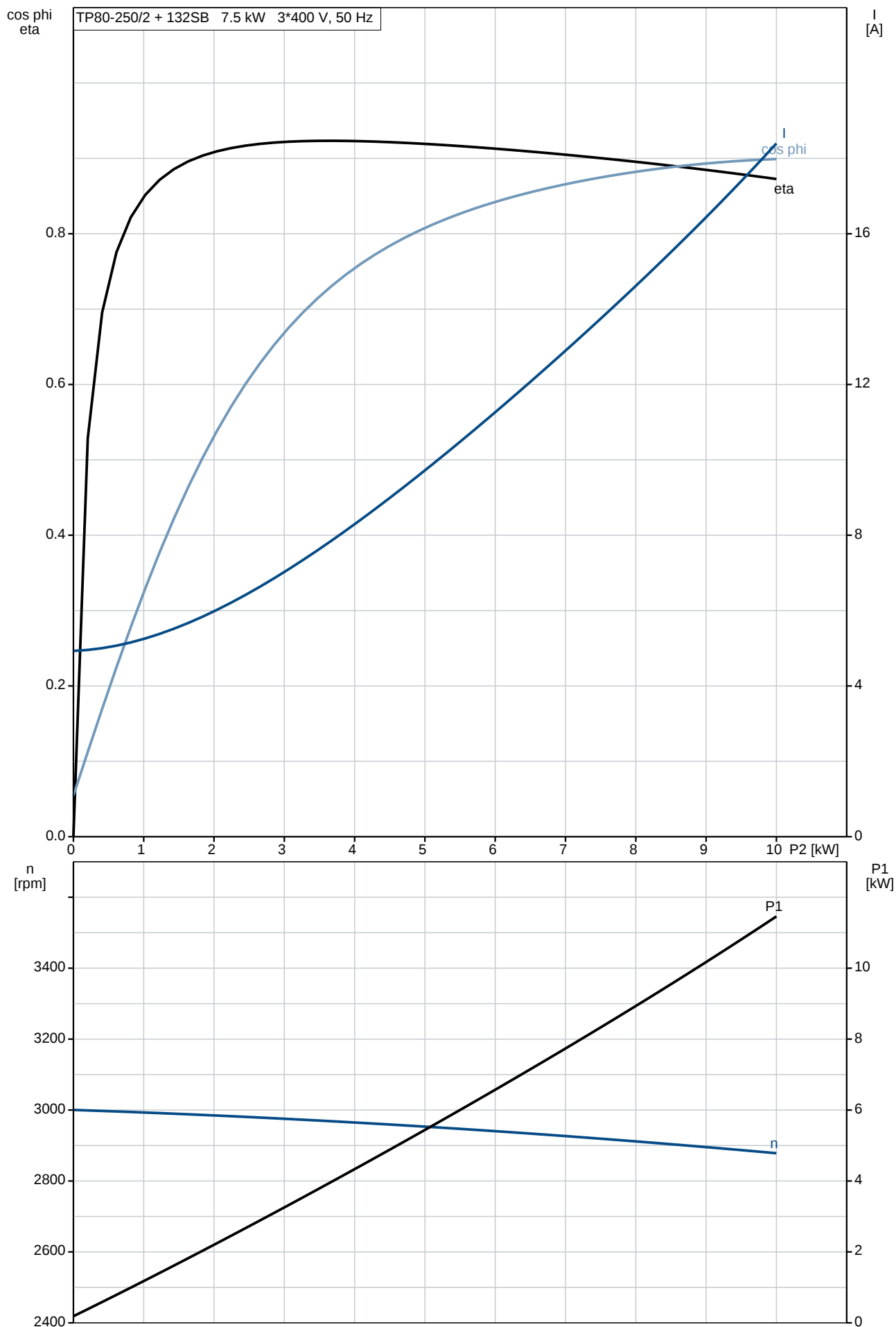
- X-axis:** Flow Rate (Q) in m^3/h , ranging from 0 to 120.
- Left Y-axis:** Head (H) in meters (m), ranging from 0 to 25.
- Right Y-axis:** Efficiency (eta) in percent (%), ranging from 0 to 100.
- Curves:**
 - Head (H):** Two black curves showing head decreasing as flow rate increases. The upper curve starts at approximately 25.5 m at 0 m^3/h and ends at approximately 17.5 m at 120 m^3/h . The lower curve starts at approximately 25.5 m at 0 m^3/h and ends at approximately 16.5 m at 120 m^3/h .
 - Efficiency (eta):** Two blue curves showing efficiency increasing with flow rate. The upper curve starts at approximately 100% at 0 m^3/h and ends at approximately 65% at 120 m^3/h . The lower curve starts at approximately 100% at 0 m^3/h and ends at approximately 60% at 120 m^3/h .

Bottom Graph: Power (P) and NPSH vs. Flow Rate (Q)

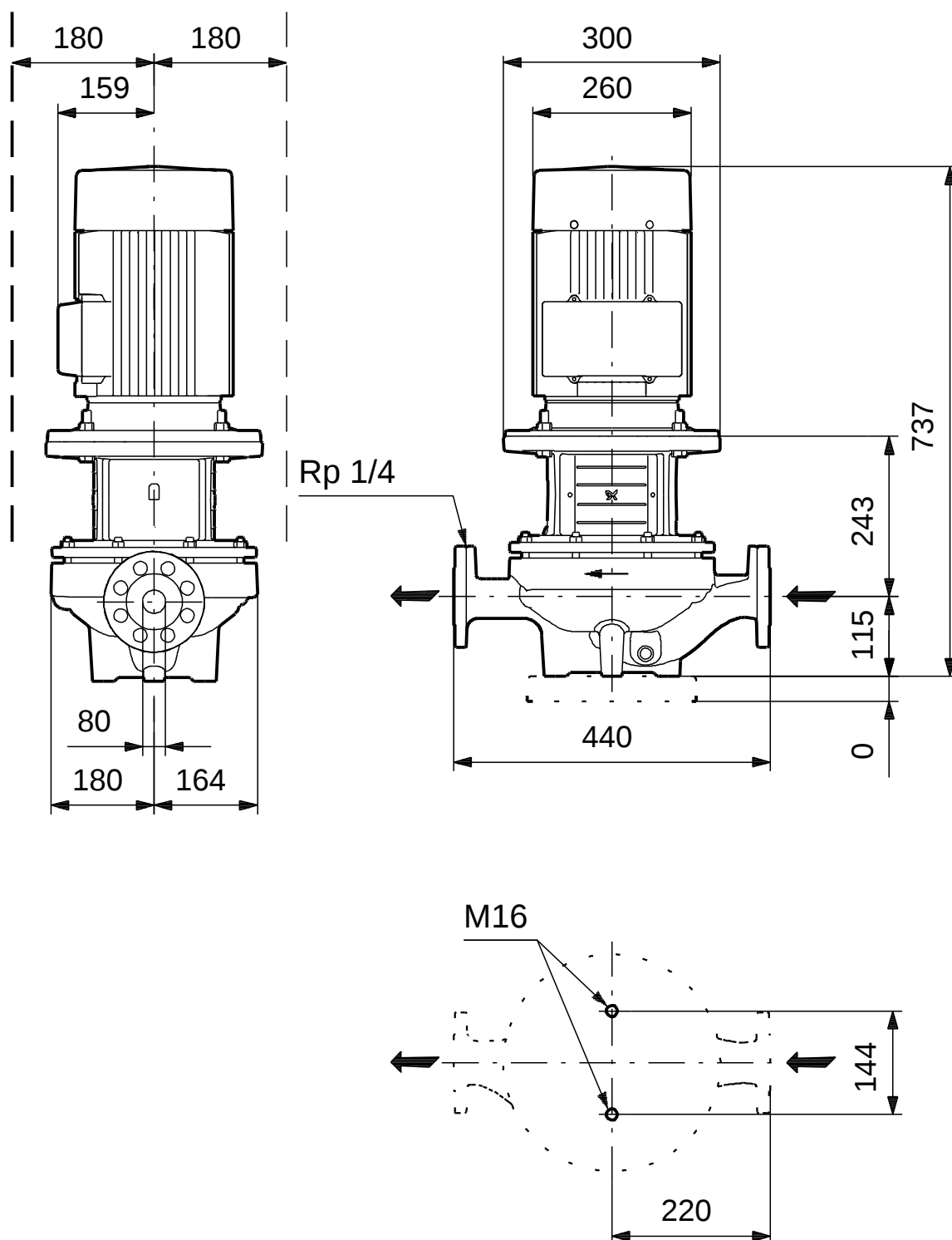
- X-axis:** Flow Rate (Q) in m^3/h , ranging from 0 to 120.
- Left Y-axis:** Power (P) in kilowatts (kW), ranging from 0 to 10.
- Right Y-axis:** Net Positive Suction Head (NPSH) in meters (m), ranging from 0 to 25.
- Curves:**
 - Power (P):** Two black curves showing power increasing with flow rate. The upper curve starts at approximately 1.5 kW at 0 m^3/h and ends at approximately 3.5 kW at 120 m^3/h . The lower curve starts at approximately 1.5 kW at 0 m^3/h and ends at approximately 3.0 kW at 120 m^3/h .
 - NPSH:** Two blue curves showing required NPSH increasing with flow rate. The upper curve (labeled P1) starts at approximately 10 m at 0 m^3/h and ends at approximately 22 m at 120 m^3/h . The lower curve (labeled P2) starts at approximately 10 m at 0 m^3/h and ends at approximately 20 m at 120 m^3/h .



On request TP 80-250/2 A-F-A-BAQE 50 Hz



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Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view



Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view (TM057026 for MGE model H/I)



Parts list TP 80-250/2, Product No. On request
Valid from 1.1.2011 (1152)

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
+	Motor				1	pcs
-	Nut				1	pcs
66	Washer				1	
66a	Spring lock washer				1	
67	Nut		Thread: M14		1	
-	Motor stool cpl.				1	pcs
1a	Motor stool				1	
7	Coupling guard				2	
77a	Pan head screw				4	
-	Pump housing cpl.				1	pcs
6	Pump housing				1	
19	Plug				1	
20	Pipe plug		Thread: R 3/8		2	
36	Nut		Thread: M10		6	
-	Shaft seal cpl.				1	pcs
72a	O-ring		Diameter: 177,39		1	
			Material type: EPDM			
			Thickness: 3,53			
105	Shaft seal		Material type: BAQE		1	
-	Stub shaft				1	pcs
9	Socket set screw		Length (mm): 6		2	
			Thread: M8			
11	Parallel key		Dimension: 6X6X35		1	
51	Pump shaft				1	
19	Plug				2	pcs
49	Impeller				1	pcs

Disclaimer: The information about the Grundfos pump in this document may be outdated.

Data may be subject to alterations without further notice.

Please contact us to verify the data above is still accurate/up-to-date.

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info@lenntech.com

<https://www.lenntech.com>

tel. +31 152 610 900

fax. +31 152 616 289