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	Description
1	NBE 40-200/177 AAF2AESBQQEFWA
,	Note! Product picture may differ from actual product Product No.: 99104677
	Non-self-priming, single-stage, centrifugal volute pump designed according to ISO 5199 with dimensions and rated performance according to EN 733 (10 bar).
	Flanges are PN 16 with dimensions according to EN 1092-2. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover and impeller without disturbing the pump housing or pipework.
	The unbalanced rubber bellows seal is according to DIN EN 12756.
-	The pump is close-coupled to a fan-cooled, permanent-magnet synchronous motor. The motor includes a frequency converter and PI controller in the motor terminal box. This enables continuously variable control of the motor speed, which again enables adaptation of the performance to a given requirement.
0	The product's minimum efficiency index (MEI) is greater or equal to 0.70. This is by the Commission Regulation (EU) considered as an indicative benchmark for best-performing water pump available on the market as from 1 January 2013.
t	An external sensor can be connected if controlled pump operation is required for flow, differential pressure or temperature control.
-	The operating panel on the motor terminal box features a four-inch TFT display, push-buttons and the Grundfos Eye indicator.
-	The display gives an intuitive and user-friendly interface to all functions. The push-buttons are used to navigate through the menu structure to access pump and performance data on site and enable setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop".
-	 The Grundfos Eye indicator on the operating panel provides visual indication of pump status: "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)
	 "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)
6	 "Alarm": Motor has stopped (flashing red indicator lights). Communication with the pump is also possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".
-	The back pull-out design means that the pump can be serviced by a single person without disturbing the pump housing or pipes.
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	Cast-iron parts have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface.
Ι'	
	Pump



	Date:	15/08/2022			
Description					
The pump housing has both a priming and a drain hole closed by plugs. The impeller is a closed impeller with double-curved blades with smooth surfaces. The impeller is statically balanced according to ISO 1940-1 class G6.3 and hydraulically balanced to compensate for axial thrust.					
Wear rings used in pump housing and for impeller are made of bronze/brass.					
Motor stool and pump cover are made of cast iron (EN-GJL-250). Coupling guards are fitted to the motor stool. The pump cover is provided with a manual air vent screw for venting of the pump housing and the shaft seal chamber.					
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.					
Seal faces:					
Rotating seal ring material: si	· · ·				
Stationary seat material: silice	· · · ·	· · · -			
offers good resistance against abras	nigher corrosion resistance is rec sive particles.	quired. The high hardness of this material pairing			
Secondary seal material: EPDM (eth	•				
EPDM has excellent resistance to he The pump housing has feet.		r mineral oils.			
Motor					
	cooled motor with principal dime	nsions to IEC and DIN standards. Electrical			
The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.					
The motor requires no external motor protection. The motor control unit incorporates protection against slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.					
The terminal box holds terminals for these connections:					
 one dedicated digital input 					
 two analog inputs, 0(4)-20 m/ 					
- 5 V voltage supply to potentic					
- one configurable digital input	• •				
- Grundfos Digital Sensor input	•				
 24 V voltage supply for sense 					
 two signal-relay outputs (pote GENIbus connection 	ential-free contacts)				
 interface for Grundfos CIM field 	aldhus module				
Further product details					
Cast-iron parts have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as					
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a thin, well-controlled layer on the su Technical data Controls:	ere an electrical field around the irface. uilt-in	products ensures deposition of paint particles as			
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a thin, well-controlled layer on the su Technical data Controls: Frequency converter: Pressure sensor: Liquid:	ırface.	products ensures deposition of paint particles as			
a thin, well-controlled layer on the su Technical data Controls: Frequency converter: Bu Pressure sensor: N Liquid: Pumped liquid: W	ırface. uilt-in	products ensures deposition of paint particles as			
a thin, well-controlled layer on the su Technical data Controls: Frequency converter: Bu Pressure sensor: N Liquid: Pumped liquid: W. Liquid temperature range: -20 Selected liquid temperature: 20	ırface. uilt-in ater	products ensures deposition of paint particles as			

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Pump speed on which pump data are based: 1450 rpm

21.1 m³/h

8 m

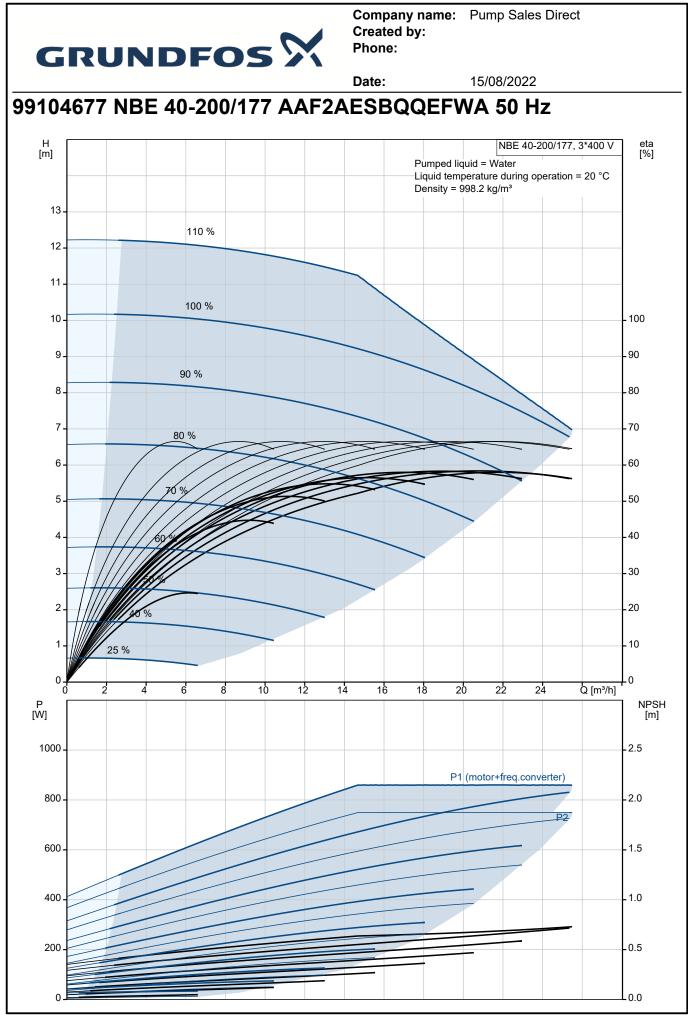
Technical:

Rated flow:

Rated head:



Description				
Actual impeller diameter:	177 mm			
Nominal impeller diameter:	200			
Shaft seal arrangement:	Single			
Code for shaft seal:	BQQE			
Curve tolerance:	ISO9906:2012 3B2			
Bearing design:	Standard			
Matariala				
	Cast iron			
p	-			
Wear ring:				
Impenet.				
Internal nume house costing				
Shan:				
	AISI 304			
Installation:				
Range of ambient temperature:	-20 50 °C			
Maximum operating pressure:	16 bar			
Pipe connection standard:	EN 1092-2			
Size of inlet connection:	DN 65			
Size of outlet connection:	DN 40			
	-			
Support block (Yes/No):	N			
	155			
	86.7 %			
	4			
Enclosure class (IEC 34-5):	IP55			
Insulation class (IEC 85):	F			
Motor No:	99305833			
Bearing insulation type N-end:	STEEL BEARING			
Others:				
	0.70			
Danish VVS No.:	386101202			
	Shaft seal arrangement: Code for shaft seal: Curve tolerance: Bearing design: Materials: Pump housing: Wear ring: Impeller: Internal pump house coating: Shaft: Installation: Range of ambient temperature: Maximum operating pressure: Pipe connection standard: Size of inlet connection: Pressure rating for connection: Size of outlet connection: Pressure rating for connection: Bearing lubrication: Pump housing with feet: Support block (Yes/No): Electrical data: IE Efficiency class: Rated power - P2: Mains frequency: Rated voltage: Rated current: Cos phi - power factor: Rated speed: Efficiency: Motor efficiency at full load: Number of poles: Enclosure class (IEC 34-5): Insulation class (IEC 85): Motor No: Bearing insulation type N-end: Others:	Shaft seal arrangement:SingleCode for shaft seal:BQQECurve tolerance:ISO9906:2012 3B2Bearing design:StandardMaterials:Pump housing:Pump housing:Cast ironEN-GJL-250ASTM class 35Wear ring:BrassImpeller:Cast ironEN-GJL-200ASTM class 30Internal pump house coating:CEDShaft:Stainless steelEN 1.4301AISI 304Installation:Range of ambient temperature:Range of ambient temperature:-20 50 °CMaximum operating pressure:PN 65Pipe connection standard:EN 1092-2Size of outlet connection:DN 40Pressure rating for connection:PN 16Bearing lubrication:GreasePump housing with feet:YesSupport block (Yes/No):NElectrical data:IE5Rated power - P2:0.75 kWMains frequency:50 HzRated outrage:3 x 380-500 VRated querent:1.70-1.50 ACos phi - power factor:0.83-0.711Rated speed:180-2000 rpmEfficiency:86.7%Motor efficiency at full load:86.7 %Number of poles:4Enclosure class (IEC 34-5):IP55Insulation type N-end:STEEL BEARINGOthers:Minimum efficiency index, MEI ≥:0.70Net weight:65 kgShipping volume:0.315 m³	Shaft seal arrangement:SingleCode for shaft seal:BQQECurve tolerance:ISO9906:2012 3B2Bearing design:StandardMaterials:Pump housing:Cast ironEN-GJL-250ASTM class 35Wear ring:BrassImpeller:Cast ironEN-GJL-200ASTM class 30Internal pump house coating:CEDShaft:Stainless steelEN 1.4301AISI 304Installation:Pipe connection:Range of ambient temperature:-20 50 °CMaximum operating pressure:16 barPipe connection:DN 40Pressure rating for connection:DN 40Pressure rating for connection:PN 40Pressure rating for connection:N 40Pressere rating for connection: <td< td=""><td>Shaft seal arrangement:SingleCode for shaft seal:BQQECurve tolerance:ISO9906:2012 3B2Bearing design:StandardMaterials:EN-GJL-250ASTM class 35ASTM class 35Wear ring:BrassImpeller:Cast ironEN-GJL-200ASTM class 30Internal pump house coating:CEDShaft:Stainless steelEN 4301AIS1 304Installation:EN 4301Range of ambient temperature:-2050 °CMaximum operating pressure:16 barPipe connection:DN 65Size of outlet connection:DN 40Pressure rating for connection:PN 16Bearing lubrication:GreasePump housing with feet:YesSupport block (Yes/No):NElectrical data:IE5IE Efficiency class:IE5Rated voltage:3 x 380-500 VRated voltage:3 x 380-500 VRated voltage:86.7%Number of poles:4Enclosure class (IEC 34-5):IP55Insulation type N-end:STEL BEARINGOthers:Minismer greating by 333Bearing insulation type N-end:STEL BEARINGOthers:Minismer fficiency index, MEI ≥:0.70Net weight:48 kgGross weight:65 kgShipping volume:0.315 m²</td></td<>	Shaft seal arrangement:SingleCode for shaft seal:BQQECurve tolerance:ISO9906:2012 3B2Bearing design:StandardMaterials:EN-GJL-250ASTM class 35ASTM class 35Wear ring:BrassImpeller:Cast ironEN-GJL-200ASTM class 30Internal pump house coating:CEDShaft:Stainless steelEN 4301AIS1 304Installation:EN 4301Range of ambient temperature:-2050 °CMaximum operating pressure:16 barPipe connection:DN 65Size of outlet connection:DN 40Pressure rating for connection:PN 16Bearing lubrication:GreasePump housing with feet:YesSupport block (Yes/No):NElectrical data:IE5IE Efficiency class:IE5Rated voltage:3 x 380-500 VRated voltage:3 x 380-500 VRated voltage:86.7%Number of poles:4Enclosure class (IEC 34-5):IP55Insulation type N-end:STEL BEARINGOthers:Minismer greating by 333Bearing insulation type N-end:STEL BEARINGOthers:Minismer fficiency index, MEI ≥:0.70Net weight:48 kgGross weight:65 kgShipping volume:0.315 m ²



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		Date:	15/08/	2022	
Description	Value	H [m]		NBE 40-200/177, 3*400 V	eta [%]
General information:	Fullo	[]	Pumped liqui		1 1,01
Product name:	NBE 40-200/177	13	Liquid temper	rature during operation = 20 °C 8.2 kg/m³	-
Product name.	AAF2AESBQQEFWA	12 -	110		
Product No:	99104677				
EAN number:	5712606839629	11	100 %		
Technical:		10 _			100
Pump speed on which pump data	1450 rpm	9_			90
are based:	1450 Ipili	8 -	90 %		80
Rated flow:	21.1 m³/h				
Rated head:	8 m	7-	80 %		70
Actual impeller diameter:	177 mm	6-	THA		60
Nominal impeller diameter:	200	5_	10%		50
Shaft seal arrangement:	Single				
Shaft diameter:	24 mm	4-			- 40
					- 30
Code for shaft seal:	BQQE	2-	la su		20
Curve tolerance:	ISO9906:2012 3B2		90 %		
Pump version:	A	1-	25 %		10
Bearing design:	Standard	o 🖊			Lo
Materials:		O O	5 10	15 20 Q [m³/h]	
Pump housing:	Cast iron	P [W]			NPS [m]
Pump housing:	EN-GJL-250	1000 -			2.5
Pump housing:	ASTM class 35			P1 (motor+freq.converter)	
Wear ring:	Brass	800 -		P2	2.0
Impeller:	Cast iron	600 -		12	1.5
Impeller:	EN-GJL-200	000 -	///		T '
Impeller:	ASTM class 30	400			1.0
Internal pump house coating:	CED	_ 2			
Material code:	A	200 -			0.5
Code for rubber:	E				
	_	0			L 0.0
Shaft:	Stainless steel				
Shaft:	EN 1.4301	245.	5 274 100	40	
Shaft:	AISI 304	100	0		P
Installation:					CJ
Range of ambient temperature:	-20 50 °C				AS.
Maximum operating pressure:	16 bar	s la			
Pipe connection standard:	EN 1092-2	Y			
Size of inlet connection:	DN 65	100	-	20 285	
Size of outlet connection:	DN 40				000
Pressure rating for connection:	PN 16				
Bearing lubrication:	Grease	<u>* *•°</u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			\rightarrow
Pump housing with feet:	Yes			313	
Support block (Yes/No):	N				
Connect code:	F2	Ψ		T	
Liquid:	• =		232		
Pumped liquid:	Water				
Liquid temperature range:	-25 120 °C				
			<u> </u>		
Selected liquid temperature:	20 °C				
Density:	998.2 kg/m³	PE	ØÐ		
Electrical data:					
E Efficiency class:	IE5				
Rated power - P2:	0.75 kW	O	11 GND 11 DH OCC 11 DH OCC 11 DH OCC		
Mains frequency:	50 Hz	THE AND A			
Rated voltage:	3 x 380-500 V				
Rated current:	1.70-1.50 A	-11 V 00			
Cos phi - power factor:	0.83-0.71	- <u>317</u> 6 -117 6			
Rated speed:	180-2000 rpm				
Efficiency:	86.7%		8 GRNbus R 7 GND 73 +34 V		
Motor efficiency at full load:	86.7 %				
Number of poles:	4				

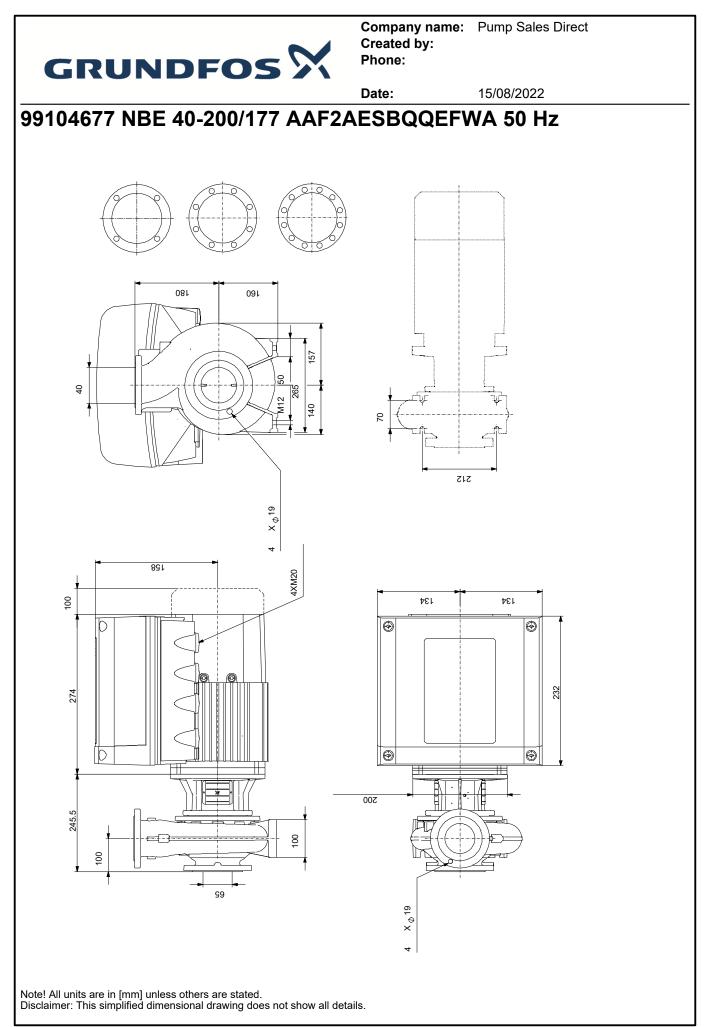
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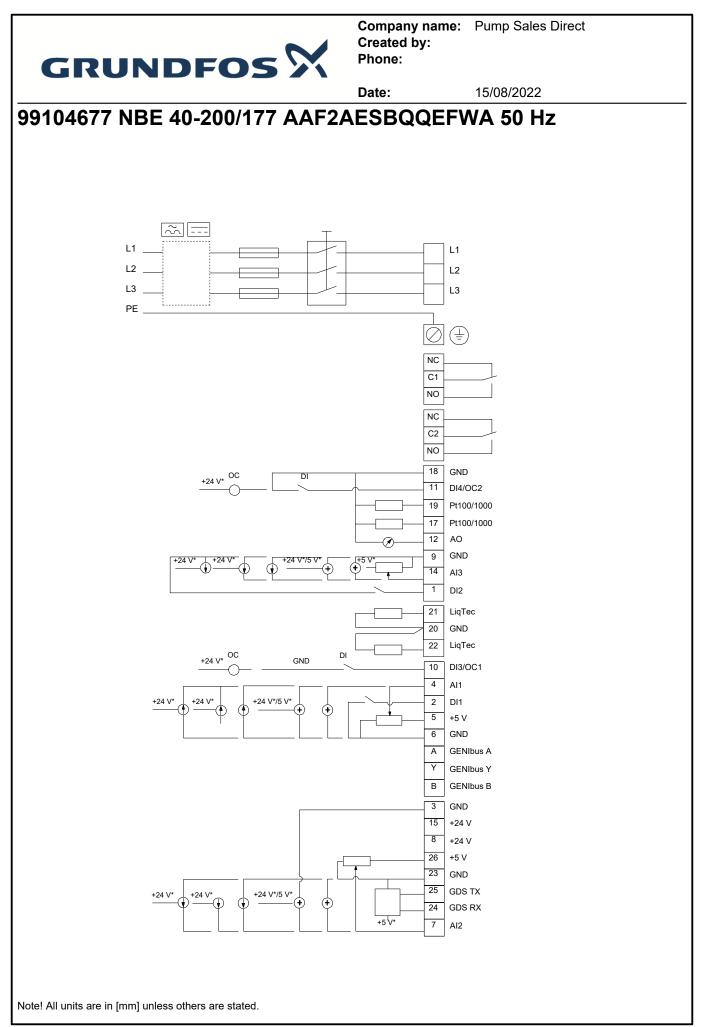


15/08/2022

Date:

Description	Value
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	ELEC
Motor No:	99305833
Mount. design. acc. IEC 34-7:	IM V1/B5
Bearing insulation type N-end:	STEEL BEARING
Controls:	
Control panel:	HMI300 - Graphical
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Pressure sensor:	Ν
Others:	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	48 kg
Gross weight:	65 kg
Shipping volume:	0.315 m³
Danish VVS No.:	386101202







Date: 15/08/2022						
Order Data:						
Position	Your pos.	Product name	Amount	Product No	Total	
		NBE 40-200/177	1	99104677	Price o reque	