

Date: 21/03/2019

Qty. | Description

1 NB 80-160/167 AF2ABQQE



Product No.: 98423647

Non-self-priming, single-stage, centrifugal volute pump designed according to ISO 5199 with dimensions and rated performance according to EN 733 (10 bar).

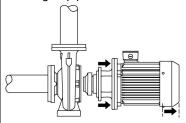
Flanges are PN 16 with dimensions according to EN 1092-2. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover and impeller without disturbing the pump housing or pipework.

The unbalanced rubber bellows seal is according to DIN EN 12756.

The pump is close-coupled to a fan-cooled asynchronous motor.

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.

The back pull-out design means that the pump can be serviced by a single person without disturbing the pump housing or pipe work.



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.

Pump

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 or cast iron.

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.

Primary seal:

- Rotating seal ring material: silicon carbide (SiC)
- Stationary seat material: silicon carbide (SiC)



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This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

Secondary seal material: EPDM (ethylene-propylene rubber)

EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.

The pump housing has no feet.

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 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.

Further product details

Technical data

Controls:

Frequency converter: NONE

Liquid:

Pumped liquid: Water
Liquid temperature range: -25 .. 120 °C
Liquid temperature during operation: 20 °C
Density: 998.2 kg/m³

Technical:

Rated flow: 200 m³/h
Rated head: 28.56 m
Actual impeller diameter: 167 mm
Nominal impeller diameter: 160 mm



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Shaft seal arrangement: Single Code for shaft seal: BQQE

Curve tolerance: ISO9906:2012 3B

Materials:

Pump housing: Cast iron

EN-GJL-250 ASTM class 35

Wear ring: Brass
Impeller: Cast iron
EN-GJL-200

ASTM class 30

Shaft: Stainless steel

EN 1.4301 AISI 304

Installation:

Maximum ambient temperature: 60 °C
Maximum operating pressure: 16 bar
Pipe connection standard: EN 1092-2
Size of inlet connection: DN 100
Size of outlet connection: DN 80
Pressure rating for pipe connection: PN 16

Pump housing with feet: N

Electrical data:

IE Efficiency class: IE3
P2: 22 kW
Mains frequency: 50 Hz

Rated voltage: 3 x 380-415D/660-690Y V

Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 %

Number of poles: 2

Enclosure class (IEC 34-5): 55 Dust/Jetting

Insulation class (IEC 85): F

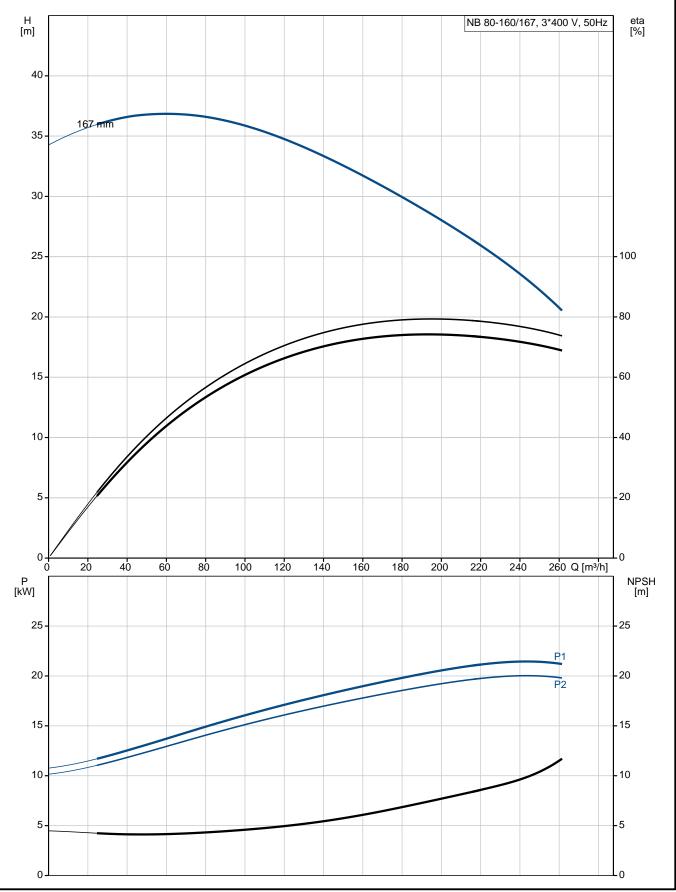
Others:

Minimum efficiency index, MEI â%¥: 0.70
Net weight: 185 kg
Gross weight: 210 kg
Shipping volume: 0.707 m³
Country of origin: HU
Custom tariff no.: 84137051



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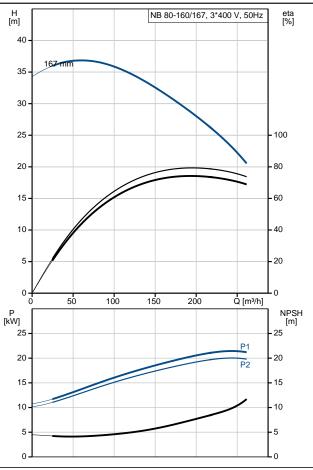
98423647 NB 80-160/167 AF2ABQQE 50 Hz

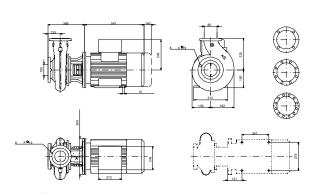


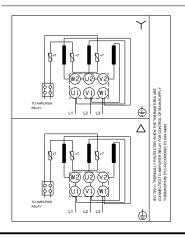


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Description Value General information: NB 80-160/167 AF2ABQQE Product No: 98423647 EAN number: 5711494761630 Price: 4.574,00 GBP Technical: Rated flow: Rated flow: 200 m³/h Rated head: 28.56 m Actual impeller diameter: 160 mm Nominal impeller diameter: 160 mm Shaft diameter: 24 mm Code for shaft seal: BQQE Curve tolerance: ISO9906:2012 3B Pump possion: A Materials: ISO9906:2012 3B Pump housing: Cast iron EN-GJL-250 ASTM class 35 Wear ring: Brass Impeller: Cast iron Wear ring: Brass Impeller: Cast iron EN-GJL-200 ASTM class 35 Wear ring: Brass Impeller: Cast iron Masterial code: A A Installation: Maximum ambient temperature:		
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Nominal impeller diameter: 160 mm Shaft seal arrangement: Single Shaft diameter: 24 mm Code for shaft seal: BQQE Curve tolerance: ISO9906:2012 3B Pump version: A Materials: EN-GJL-250 Pump housing: Cast iron EN-GJL-250 ASTM class 35 Wear ring: Brass Impeller: Cast iron EN-GJL-200 ASTM class 30 Shaft: Stainless steel EN-GJL-200 ASTM class 30 Shaft: Stainless steel EN 1.4301 AISI 304 Material code: A Installation: Maximum ambient temperature: 60 °C Maximum ambient temperature: 60 °C Maximum operating pressure: 16 bar Pipe connection standard: EN 1092-2 Size of inlet connection: DN 100 Size of outlet connection: DN 80 Pressure rating for pipe connection: PN 16 Pump housing with feet: N	Rated head:	28.56 m
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Shaft diameter: 24 mm Code for shaft seal: BQQE Curve tolerance: ISO9906:2012 3B Pump version: A Materials: Fump housing: Cast iron EN-GJL-250 ASTM class 35 Wear ring: Brass Impeller: Cast iron EN-GJL-200 ASTM class 30 Shaft: Stainless steel EN 1.4301 AISI 304 Material code: A Installation: Maximum ambient temperature: 60 °C Maximum operating pressure: 16 bar Pipe connection standard: EN 1092-2 Size of outlet connection: DN 80 Pressure rating for pipe connection: PN 16 Pump housing with feet: N Connect code: F2 Liquid: Water Liquid temperature range: -25 120 °C Liquid temperature during operation: 20 °C Density: 998.2 kg/m³ Electrical data: IE3 IE Efficiency class: IE3	Nominal impeller diameter:	160 mm
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Shaft: Stainless steel EN 1.4301 AISI 304 Material code: A Installation: Maximum ambient temperature: 60 °C Maximum operating pressure: 16 bar Pipe connection standard: EN 1092-2 Size of inlet connection: DN 100 Size of outlet connection: DN 80 Pressure rating for pipe connection: PN 16 Pump housing with feet: N Connect code: F2 Liquid: Pumped liquid: Water Liquid temperature range: -25 120 °C Liquid temperature during operation: 20 °C Density: 998.2 kg/m³ Electrical data: IE Efficiency class: IE3 P2: 22 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F		EN-GJL-200
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Maximum operating pressure: Pipe connection standard: Size of inlet connection: DN 100 Size of outlet connection: Pressure rating for pipe connection: Pump housing with feet: Connect code: F2 Liquid: Pumped liquid: Vater Liquid temperature range: Liquid temperature during operation: Density: Pelectrical data: IE Efficiency class: IE Efficiency class: P2: Rated voltage: Starting current: Starting current: Cos phi - power factor: Pipe density at 1/2 load: Motor efficiency at 1/2 load: Number of poles: Enclosure class (IEC 34-5): IEC Number of poles: Enclosure class (IEC 35): F	Installation:	
Pipe connection standard: EN 1092-2 Size of inlet connection: DN 100 Size of outlet connection: DN 80 Pressure rating for pipe connection: PN 16 Pump housing with feet: N Connect code: F2 Liquid: Pumped liquid: Water Liquid temperature range: -25 120 °C Liquid temperature during operation: 20 °C Density: 998.2 kg/m³ Electrical data: IE Efficiency class: IE3 P2: 22 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	Maximum ambient temperature:	60 °C
Size of inlet connection: Size of outlet connection: Pressure rating for pipe connection: Pump housing with feet: Connect code: F2 Liquid: Pumped liquid: Liquid temperature range: Liquid temperature during operation: Density: Pelectrical data: IE Efficiency class: P2: Mains frequency: Rated voltage: Rated voltage: Starting current: Cos phi - power factor: Motor efficiency at 3/4 load: Motor efficiency at 1/2 load: N DN 100 PN 16		16 bar
Size of outlet connection: Pressure rating for pipe connection: Pump housing with feet: Connect code: F2 Liquid: Pumped liquid: Liquid temperature range: Liquid temperature during operation: Density: Pelectrical data: IE Efficiency class: IE Saber 1 S	Pipe connection standard:	EN 1092-2
Pressure rating for pipe connection: Pump housing with feet: Connect code: F2 Liquid: Pumped liquid: Uiquid temperature range: Liquid temperature during operation: Density: Pelectrical data: IE Efficiency class: P2: Mains frequency: Rated voltage: Rated voltage: Starting current: Cos phi - power factor: Power factor: Rated speed: Efficiency at 3/4 load: P3.7 % Motor efficiency at 1/2 load: Motor efficiency at 1/2 load: Number of poles: Enclosure class (IEC 85): F	Size of inlet connection:	DN 100
Pump housing with feet: F2 Liquid: Pumped liquid: Water Liquid temperature range: -25 120 °C Liquid temperature during operation: 20 °C Density: 998.2 kg/m³ Electrical data: IE Efficiency class: IE3 P2: 22 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	Size of outlet connection:	DN 80
Connect code: F2 Liquid: Pumped liquid: Water Liquid temperature range: -25 120 °C Liquid temperature during operation: 20 °C Density: 998.2 kg/m³ Electrical data: IE Efficiency class: IE3 P2: 22 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	Pressure rating for pipe connection:	PN 16
Liquid:Pumped liquid:WaterLiquid temperature range:-25 120 °CLiquid temperature during operation:20 °CDensity:998.2 kg/m³Electrical data:IE Efficiency class:IE3P2:22 kWMains frequency:50 HzRated voltage:3 x 380-415D/660-690Y VRated current:39.5/22.8 AStarting current:830 %Cos phi - power factor:0.90-0.90Rated speed:2950 rpmEfficiency:IE3 92,7%Motor efficiency at full load:92.7 %Motor efficiency at 1/2 load:94.4 %Number of poles:2Enclosure class (IEC 34-5):55 Dust/JettingInsulation class (IEC 85):F	Pump housing with feet:	N
Pumped liquid: Water Liquid temperature range: -25 120 °C Liquid temperature during operation: 20 °C Density: 998.2 kg/m³ Electrical data: IE Efficiency class: IE3 P2: 22 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	Connect code:	F2
Liquid temperature range: Liquid temperature during operation: Density: 998.2 kg/m³ Electrical data: IE Efficiency class: P2: 22 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 1/2 load: Number of poles: Enclosure class (IEC 34-5): Insulation class (IEC 85): F		
Liquid temperature during operation: 20 °C Density: 998.2 kg/m³ Electrical data: IE Efficiency class: IE3 P2: 22 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	Pumped liquid:	Water
Density: 998.2 kg/m³ Electrical data: IE Efficiency class: IE Efficiency class: IE3 P2: 22 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F		-25 120 °C
Electrical data: IE Efficiency class: IE3 P2: 22 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	Liquid temperature during operation:	20 °C
IE Efficiency class: IE3 P2: 22 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F		998.2 kg/m³
P2: 22 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F		
Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 1/2 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	IE Efficiency class:	IE3
Rated voltage: 3 x 380-415D/660-690Y V Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	P2:	22 kW
Rated current: 39.5/22.8 A Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	• •	50 Hz
Starting current: 830 % Cos phi - power factor: 0.90-0.90 Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F		3 x 380-415D/660-690Y V
Cos phi - power factor: Rated speed: Efficiency: Efficiency at full load: Motor efficiency at 3/4 load: Motor efficiency at 1/2 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: Enclosure class (IEC 34-5): Insulation class (IEC 85): F	Rated current:	39.5/22.8 A
Rated speed: 2950 rpm Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	Starting current:	830 %
Efficiency: IE3 92,7% Motor efficiency at full load: 92.7 % Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	Cos phi - power factor:	0.90-0.90
Motor efficiency at full load: 92.7 % Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	•	<u>'</u>
Motor efficiency at 3/4 load: 93.7 % Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F		IE3 92,7%
Motor efficiency at 1/2 load: 94.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F		92.7 %
Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	-	93.7 %
Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F	Motor efficiency at 1/2 load:	
Insulation class (IEC 85):		2
		55 Dust/Jetting
Motor protec: PTC		F
	Motor protec:	PTC









Date: 21/03/2019

Description	Value
Motor No:	87470023
Mount. design. acc. IEC 34-7:	IM B35
Controls:	
Frequency converter:	NONE
Others:	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	185 kg
Gross weight:	210 kg
Shipping volume:	0.707 m ³
Country of origin:	HU
Custom tariff no.:	84137051



Date: 21/03/2019

98423647 NB 80-160/167 AF2ABQQE 50 Hz

