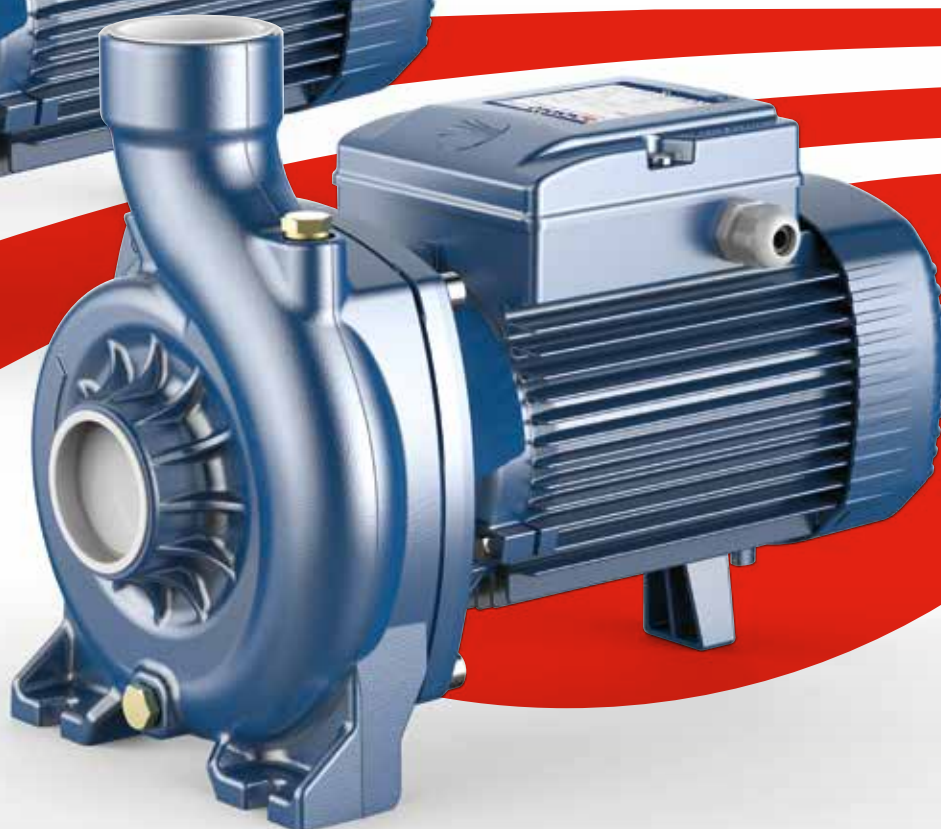


NGA-PRO NGA

Pumps with open impeller



NGA-PRO



NGA

MADE IN ITALY



Cast iron pumps with open impeller



Clean water



Domestic use



Agricultural use



Industrial use



- ※ NGA electric pumps are ideal for pumping liquids that are laden with impurities with suspended solids up to 20 mm diameter. Robust, compact and efficient, they have been designed to ensure a long service life, thanks to the Epoxy Electro Coating treatment of the hydraulic parts, the generous thickness of the various components and a high efficiency electric motor characterised by a marked silence and reliability.
- ※ The hydraulic parts have been completely redesigned using advanced fluid dynamics software, which has made it possible to achieve high hydraulic efficiency and to extend the range of performance to suit all types of application.

PERFORMANCE RANGE

- Flow rate up to **900 l/min** (54 m³/h)
- Head up to **20.5 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature from **-10 °C to +90 °C**
- Ambient temperature from **-10 °C to +40 °C**
- Max working pressure in pump body
6 bar NGA 1 - NGA 2
10 bar NGA 3
- Continuous service **S1**

Passage of suspended solids up to

- **Ø 12 mm** per **NGA 1 - NGA 2**
- **Ø 20 mm** per **NGA 3**

INSTALLATION AND USE

Suitable for use with clean water and liquids that are not chemically aggressive towards the materials from which the pump is made.

The open impeller design allows **liquids containing relatively high levels of impurities** to be pumped without the risk of the impeller clogging. **NGA** pumps are particularly suitable for pumping liquids that are not completely clean, guaranteeing the passage of solids up

to 20 mm and therefore applications such as: transfers from canals or rivers, reservoirs, tanks, etc.

The pump should be installed in an enclosed environment, or at least sheltered from inclement weather.

OPTIONS AVAILABLE ON REQUEST

- Special mechanical seal
- Pump body with threaded ports NPT ANSI B 1.20.1
- Other voltages or 60 Hz frequency
- Supply of ISO 228/1 flanges for intake and delivery ports in AISI 316 stainless steel.



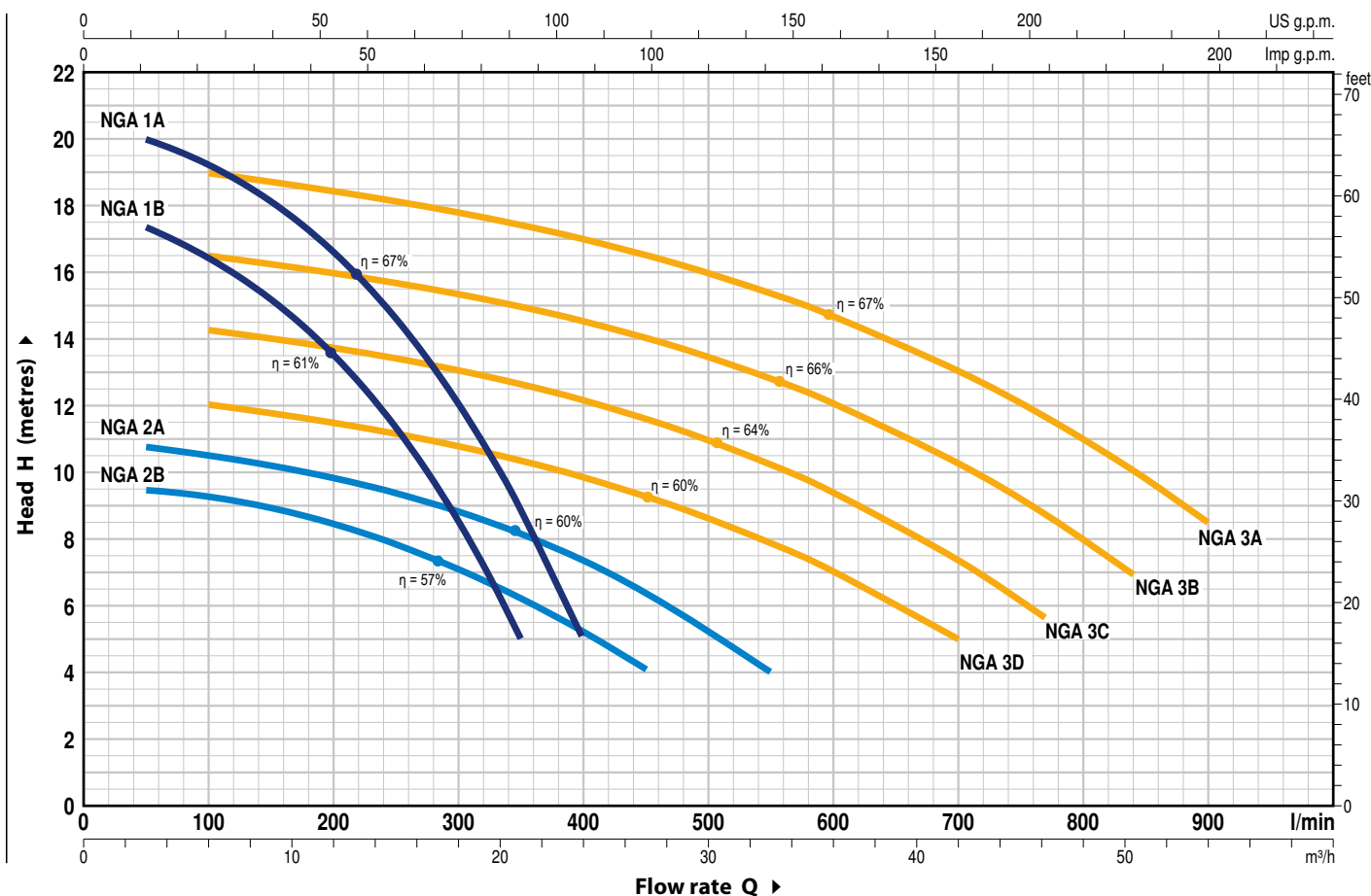
- On request up to 110°

WARRANTY

2 years in accordance with our general conditions of sale

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz $n = 2900 \text{ min}^{-1}$ HS = 0 m



MODEL		POWER (P ₂)			Q										
Single-phase	Three-phase	kW	HP	▲		m³/h	0	3	6	9	12	15	18	21	24
NGAm 1B	NGA 1B	0.55	0.75	IE3	H	metres	18	17.4	16.4	15.2	13.5	11.3	8.7	5	
NGAm 1A	NGA 1A	0.75	1		H	metres	20.5	20	19.3	18.1	16.6	14.7	12.1	9	5

MODEL		POWER (P ₂)			Q										
Single-phase	Three-phase	kW	HP	▲		m³/h	0	3	6	12	18	24	27	33	42
NGAm 2B	NGA 2B	0.55	0.75	IE3	H	metres	9.5	9.4	9.3	8.4	7	5.2	4		
NGAm 2A	NGA 2A	0.75	1			metres	11	10.8	10.5	9.8	8.8	7.4	6.4	4	
NGAm 3D	NGA 3D	1.1	1.5			metres	12.5	–	12	11.5	10.8	9.8	9.3	7.8	5
NGAm 3C	NGA 3C	1.5	2			metres	14.8	–	14.4	13.8	13.1	12.2	11.7	10.3	7.4
NGAm 3B	NGA 3B	1.8	2.5			metres	17	–	16.5	16	15.3	14.5	14	12.8	10.3
NGAm 3A	NGA 3A	2.2	3			metres	19.5	–	19	18.4	17.8	17	16.5	15.4	13

Q = Flow rate H = Total manometric head HS = Suction height
▲ Three-phase motor efficiency class (IEC 60034-30-1)

Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.



- ※ **NGA-PRO electric pumps, with all the parts in contact with the pumped liquid manufactured in AISI 316 stainless steel, are ideal for pumping fluids relatively laden with impurities with suspended solids up to 20 mm diameter. Robust, compact and efficient, they have been designed to ensure a long working life, thanks to the generous thickness of the steel components and a high efficiency electric motor characterised by a marked silence and reliability.**
- ※ **The hydraulic parts have been completely redesigned with advanced fluid dynamics software in order to achieve high hydraulic efficiencies and extend the performance range to suit all applications.**

PERFORMANCE RANGE

- Flow rate up to **900 l/min** (54 m³/h)
- Head up to **20.5 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature from **-10 °C to +90 °C**
- Ambient temperature from **-10 °C to +40 °C**
- Max working pressure in pump body
6 bar NGA 1-PRO, NGA 2-PRO
10 bar NGA 3-PRO
- Continuous service **S1**

Passage of suspended solids up to

- **Ø 12 mm** for **NGA 1-PRO, NGA 2-PRO**
- **Ø 20 mm** for **NGA 3-PRO**

INSTALLATION AND USE

Suitable for use with clean water and liquids that are not chemically aggressive towards the materials from which the pump is made.

The open impeller design allows **liquids containing relatively high levels of impurities** to be pumped without the risk of the impeller clogging. All of the components in contact with the pumped liquid are constructed in **stainless steel AISI 316**.

NGA PRO pumps are particularly suitable for pumping liquids that

are not completely clean, guaranteeing the passage of solids up to 20 mm and therefore applications such as: washing, circulation of cooling liquids, tanks etc.

The pump should be installed in an enclosed environment, or at least sheltered from inclement weather.

OPTIONS AVAILABLE ON REQUEST

- Special mechanical seal
- Standardised mechanical seal with anti-rotation (NGA 3-PRO)
- Pump body with threaded ports NPT ANSI B 1.20.1
- Other voltages or 60 Hz frequency
- Supply of ISO 228/1 flanges for intake and delivery ports in AISI 316 stainless steel



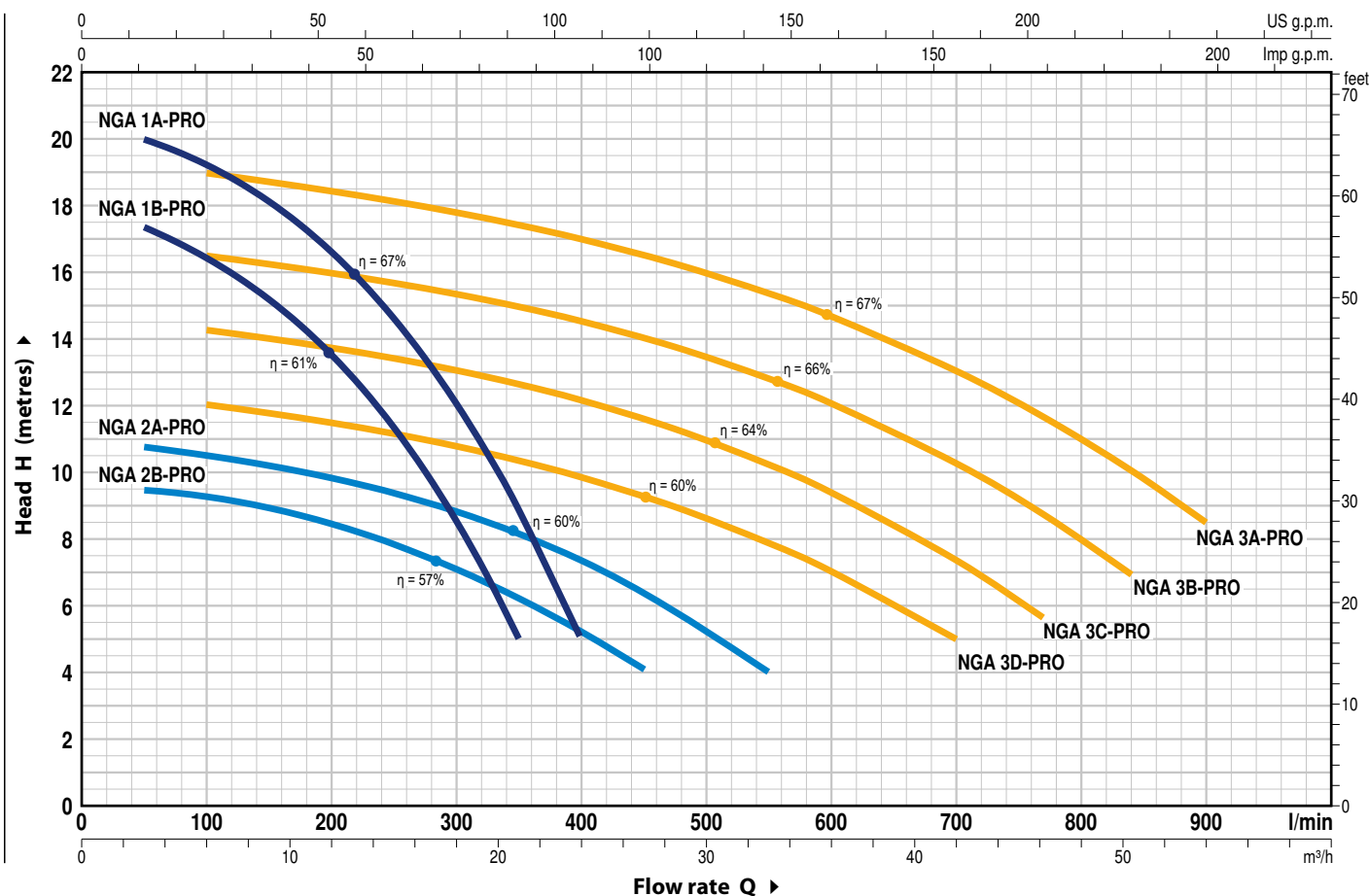
- On request up to 110°

WARRANTY

2 years in accordance with our general conditions of sale

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 2900 min⁻¹ HS = 0 m



MODEL		POWER (P ₂)			Q										
Single-phase	Three-phase	kW	HP	▲		m ³ /h	0	3	6	9	12	15	18	21	24
NGAm 1B - PRO	NGA 1B - PRO	0.55	0.75	IE3	H	l/min	0	50	100	150	200	250	300	350	400
NGAm 1A - PRO	NGA 1A - PRO	0.75	1		metres		18	17.4	16.4	15.2	13.5	11.3	8.7	5	
							20.5	20	19.3	18.1	16.6	14.7	12.1	9	5

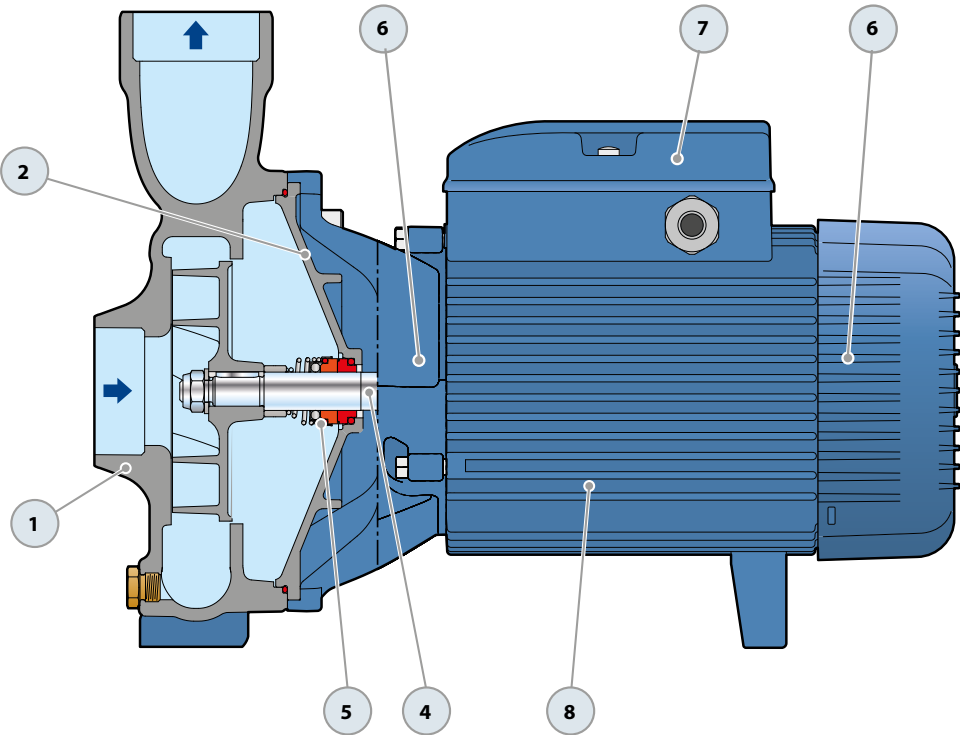
MODEL		POWER (P ₂)			Q													
Single-phase	Three-phase	kW	HP	▲		m ³ /h	0	3	6	12	18	24	27	33	42	46.2	50.4	54
NGAm 2B - PRO	NGA 2B - PRO	0.55	0.75	IE3	H	l/min	0	50	100	200	300	400	450	550	700	770	840	900
NGAm 2A - PRO	NGA 2A - PRO	0.75	1		metres		9.5	9.4	9.3	8.4	7	5.2	4					
NGAm 3D - PRO	NGA 3D - PRO	1.1	1.5				11	10.8	10.5	9.8	8.8	7.4	6.4	4				
NGAm 3C - PRO	NGA 3C - PRO	1.5	2				12.5	–	12	11.5	10.8	9.8	9.3	7.8	5			
NGAm 3B - PRO	NGA 3B - PRO	1.8	2.5				14.8	–	14.4	13.8	13.1	12.2	11.7	10.3	7.4	5.7		
NGAm 3A - PRO	NGA 3A - PRO	2.2	3				17	–	16.5	16	15.3	14.5	14	12.8	10.3	8.8	7	
							19.5	–	19	18.4	17.8	17	16.5	15.4	13	11.5	10	8.5

Q = Flow rate H = Total manometric head HS = Suction height
▲ Three-phase motor efficiency class (IEC 60034-30-1)

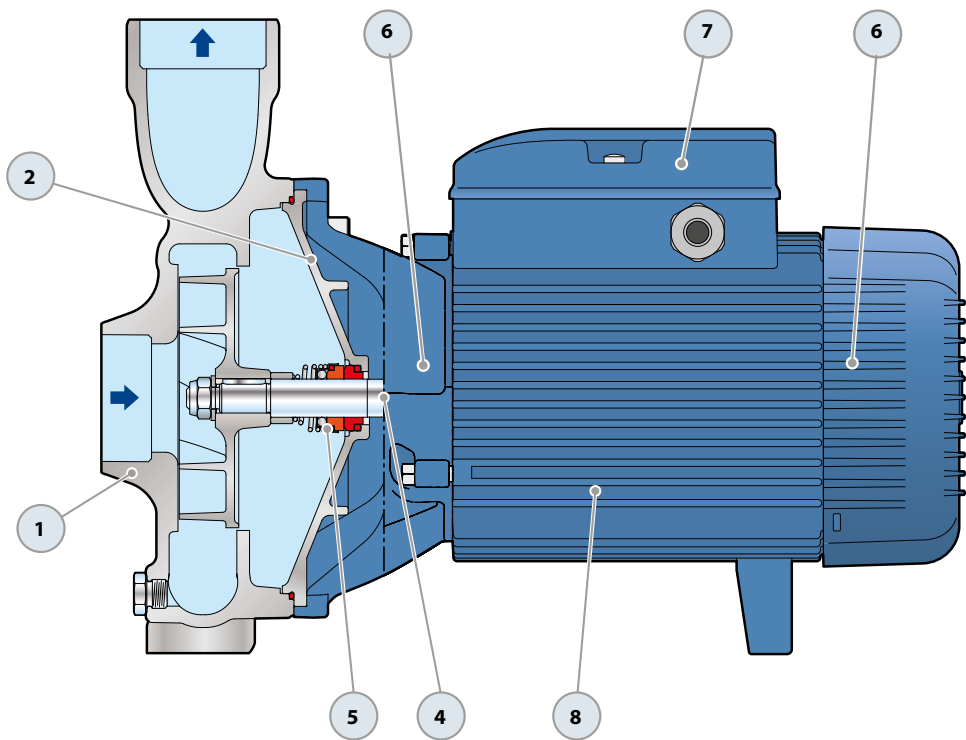
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

Cast iron pumps with open impeller

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS						
1	PUMP BODY	Cast iron JL 250 with an Epoxy Electro Coating treatment, with threaded ports in compliance with ISO 228/1						
2	BODY BACKPLATE	Cast iron JL 200 for NGA3 , stainless steel AISI 304 for NGA1, NGA2						
3	IMPELLER	Open impeller in cast iron JL 250 with an Epoxy Electro Coating treatment						
4	MOTOR SHAFT	Stainless steel AISI 316L						
5	MECHANICAL SEAL	<i>Pump</i>	<i>Seal</i>	<i>Shaft</i>	<i>Materials</i>			
		<i>Model</i>	<i>Model</i>	<i>Diameter</i>	<i>Stationary ring</i>	<i>Rotational ring</i>	<i>Elastomer</i>	<i>Spring</i>
		NGA 1, NGA 2	AR-14	Ø 14 mm	Graphite	Ceramic	NBR	AISI 316
		NGA 3	FN-18	Ø 18 mm	Graphite	Ceramic	NBR	AISI 316
6	BEARINGS	<i>Pump</i>	<i>Model</i>					
		NGA 1, NGA 2	6203 ZZ / 6203 ZZ					
		NGA 3	6204 ZZ / 6204 ZZ					
7	CAPACITOR							
8	ELECTRIC MOTOR	NGAm-PRO: single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding NGA-PRO: three-phase 230/400 V - 50 Hz. ➡ The three-phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1) – Insulation: class F – Protection: IP X4 (NGA 1/2) - IP X5 (NGA 3)						

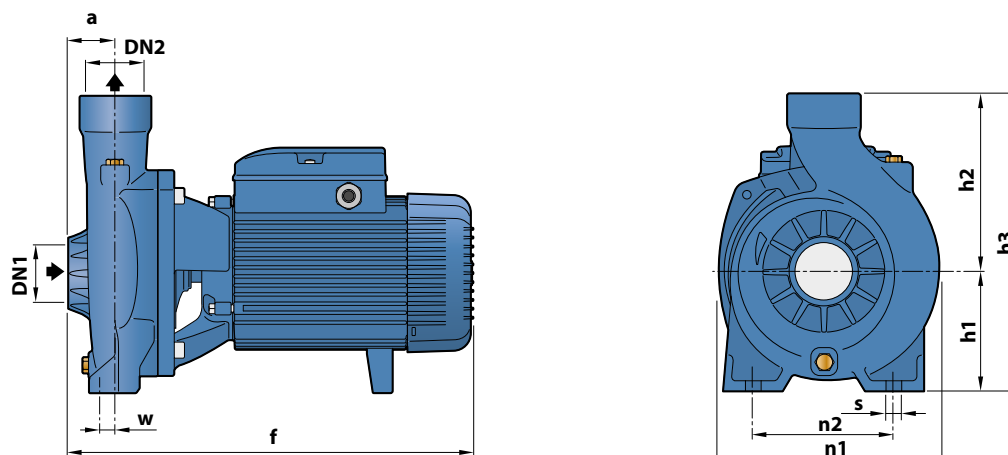


POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS						
1	PUMP BODY	Stainless steel AISI 316 complete with threaded ports in compliance with ISO 228/1						
2	BODY BACKPLATE	Stainless steel AISI 316						
3	IMPELLER	Open impeller in stainless steel AISI 316						
4	MOTOR SHAFT	Stainless steel AISI 431						
5	MECHANICAL SEAL	<i>Pump</i>	<i>Seal</i>	<i>Shaft</i>	<i>Materials</i>			
		<i>Model</i>	<i>Model</i>	<i>Diameter</i>	<i>Stationary ring</i>	<i>Rotational ring</i>	<i>Elastomer</i>	<i>Spring</i>
		NGA 1-PRO, NGA 2-PRO	AR-145	Ø 14 mm	Graphite	Ceramic	Viton	AISI 316
		NGA 3-PRO	FN-18 V6	Ø 18 mm	Graphite	Ceramic	Viton	AISI 316
6	BEARINGS	<i>Pump</i>	<i>Model</i>					
		NGA 1-PRO, NGA 2-PRO	6203 ZZ / 6203 ZZ					
		NGA 3-PRO	6204 ZZ / 6204 ZZ					
7	CAPACITOR							
8	ELECTRIC MOTOR	NGAm: single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding NGA: three-phase 230/400 V - 50 Hz. ➡ The three-phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1) – Insulation: class F – Protection: IP X4 (NGA 1/2-PRO) - IP X5 (NGA 3-PRO)						



DIMENSIONS AND WEIGHTS

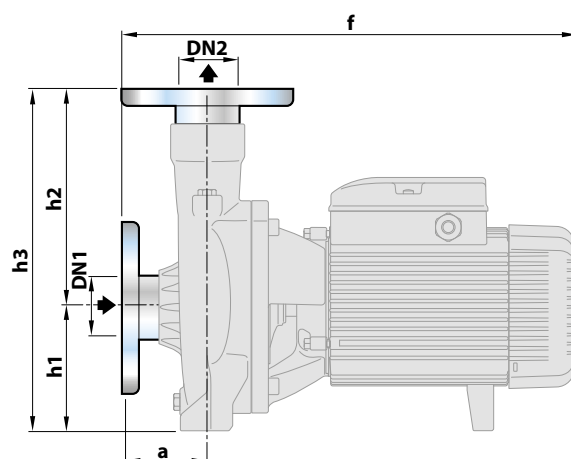
WITH THREADED PORTS



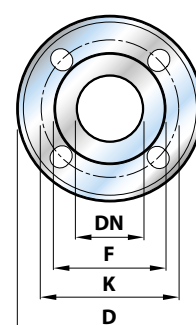
MODEL		PORTS		DIMENSIONS mm									kg	
Single-phase	Three-phase	DN1	DN2	a	f	h1	h2	h3	n1	n2	w	s	1~	3~
NGAm 1B	NGA 1B	1½"	1½"	40	299	92	135	227	190	160	6	11	12.9	12.7
NGAm1A	NGA 1A			13.1									13.0	
NGAm 2B	NGA 2B			13.2									13.0	
NGAm 2A	NGA 2A			13.4									13.3	
NGAm 3D	NGA 3D	2"	2"	48	387	120	178	298	217	140	18	11.5	20.2	21.0
NGAm 3C	NGA 3C				21.9								21.9	
NGAm 3B	NGA 3B				24.5								24.5	
NGAm 3A	NGA 3A				24.5								24.5	

WITH FLANGED PORTS

MODEL		PORTS		DIMENSIONS mm				
Single-phase	Three-phase	DN1	DN2	a	f	h1	h2	h3
NGAm 1B	NGA 1B	40	40	60	334	92	156	248
NGAm1A	NGA 1A							
NGAm 2B	NGA 2B							
NGAm 2A	NGA 2A			52	342			
NGAm 3D	NGA 3D	50	50	70	408	120	200	320
NGAm 3C	NGA 3C							
NGAm 3B	NGA 3B							
NGAm 3A	NGA 3A				428			

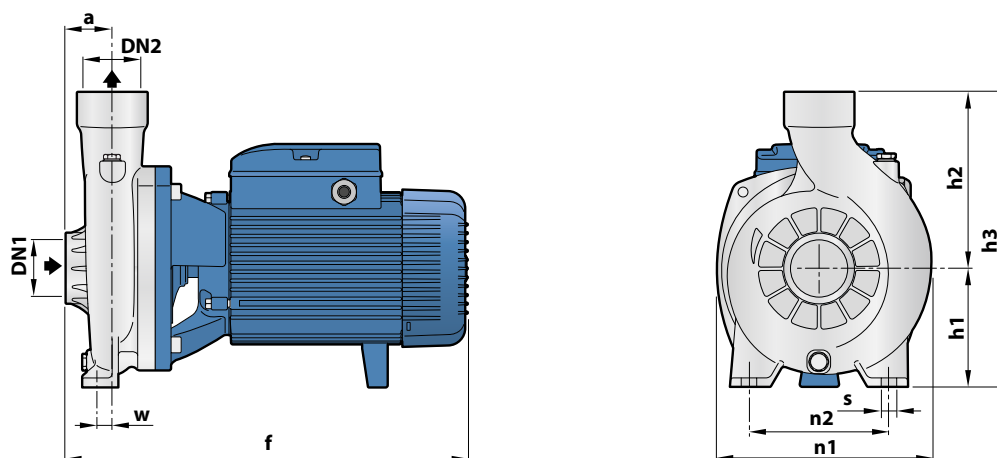


FLANGES	D	K	F	HOLES	
DN	mm	mm	mm	N°	Ø (mm)
40	150	110	78	4	18
50	165	125	99	4	18



DIMENSIONS AND WEIGHTS

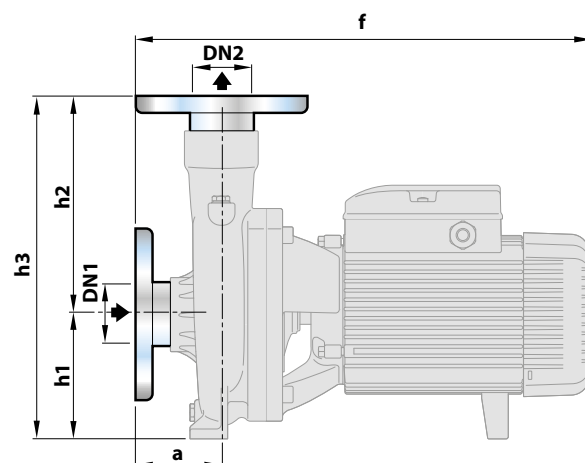
WITH THREADED PORTS



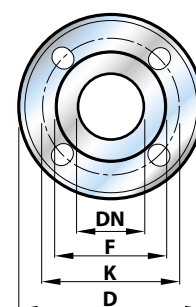
MODEL		PORTS		DIMENSIONS mm									kg	
Single-phase	Three-phase	DN1	DN2	a	f	h1	h2	h3	n1	n2	w	s	1~	3~
NGAm 1B - PRO	NGA 1B - PRO	1½"	1½"	40	299	92	135	227	190	160	6	11	12.5	12.5
NGAm1A - PRO	NGA 1A - PRO			12.7									12.7	
NGAm 2B - PRO	NGA 2B - PRO			12.9									12.9	
NGAm 2A - PRO	NGA 2A - PRO			13.1									13.1	
NGAm 3D - PRO	NGA 3D - PRO	2"	2"	48	387	120	178	298	217	140	18	11.5	21.4	22.2
NGAm 3C-- PRO	NGA 3C - PRO				23.1								23.1	
NGAm 3B - PRO	NGA 3B - PRO				25.7								25.7	
NGAm 3A - PRO	NGA 3A - PRO				25.7								25.7	

WITH FLANGED PORTS

MODEL		PORTS		DIMENSIONS mm				
Single-phase	Three-phase	DN1	DN2	a	f	h1	h2	h3
NGAm 1B - PRO	NGA 1B - PRO	40	40	60	334	92	156	248
NGAm1A - PRO	NGA 1A - PRO			52	342			
NGAm 2B - PRO	NGA 2B - PRO							
NGAm 2A - PRO	NGA 2A - PRO							
NGAm 3D - PRO	NGA 3D - PRO	50	50	70	408	120	200	320
NGAm 3C - PRO	NGA 3C - PRO				428			
NGAm 3B - PRO	NGA 3B - PRO							
NGAm 3A - PRO	NGA 3A - PRO							



FLANGES	D	K	F	HOLES	
DN	mm	mm	mm	N°	Ø (mm)
40	150	110	78	4	18
50	165	125	99	4	18



ABSORPTION

MODEL	VOLTAGE	
	230 V	240 V
Single-phase		
NGAm 1B	5.6 A	5.1 A
NGAm1A	6.2 A	5.9 A
NGAm 2B	4.2 A	4.1 A
NGAm 2A	4.6 A	4.4 A
NGAm 3D	7.5 A	7.2 A
NGAm 3C	9.0 A	8.6 A
NGAm 3B	10.5 A	10.1 A
NGAm 3A	12.5 A	12.0 A

MODEL	VOLTAGE					
	230 V	400 V	690 V	240 V	415 V	720 V
Three-phase						
NGA 1B	3.5 A	2.0 A	1.2 A	3.3 A	1.9 A	1.1 A
NGA 1A	4.0 A	2.3 A	1.3 A	3.8 A	2.2 A	1.3 A
NGA 2B	3.3 A	1.9 A	1.1 A	3.2 A	1.8 A	1.1 A
NGA 2A	3.8 A	2.2 A	1.3 A	3.7 A	2.1 A	1.2 A
NGA 3D	5.0 A	2.9 A	1.7 A	4.8 A	2.8 A	1.6 A
NGA 3C	6.1 A	3.5 A	2.0 A	5.8 A	3.4 A	1.9 A
NGA 3B	7.4 A	4.3 A	2.5 A	7.1 A	4.1 A	2.4 A
NGA 3A	8.3 A	4.8 A	2.8 A	8.0 A	4.6 A	2.7 A

ABSORPTION

MODEL	VOLTAGE	
	230 V	240 V
Single-phase		
NGAm 1B - PRO	5.6 A	5.1 A
NGAm1A - PRO	6.2 A	5.9 A
NGAm 2B - PRO	4.2 A	4.1 A
NGAm 2A - PRO	4.6 A	4.4 A
NGAm 3D - PRO	7.5 A	7.2 A
NGAm 3C - PRO	9.0 A	8.6 A
NGAm 3B - PRO	10.5 A	10.1 A
NGAm 3A - PRO	12.5 A	12.0 A

MODEL	VOLTAGE					
	230 V	400 V	690 V	240 V	415 V	720 V
Three-phase						
NGA 1B - PRO	3.5 A	2.0 A	1.2 A	3.3 A	1.9 A	1.1 A
NGA 1A - PRO	4.0 A	2.3 A	1.3 A	3.8 A	2.2 A	1.3 A
NGA 2B - PRO	3.3 A	1.9 A	1.1 A	3.2 A	1.8 A	1.1 A
NGA 2A - PRO	3.8 A	2.2 A	1.3 A	3.7 A	2.1 A	1.2 A
NGA 3D - PRO	5.0 A	2.9 A	1.7 A	4.8 A	2.8 A	1.6 A
NGA 3C - PRO	6.1 A	3.5 A	2.0 A	5.8 A	3.4 A	1.9 A
NGA 3B - PRO	7.4 A	4.3 A	2.5 A	7.1 A	4.1 A	2.4 A
NGA 3A - PRO	8.3 A	4.8 A	2.8 A	8.0 A	4.6 A	2.7 A

CAPACITOR

MODEL	CAPACITANCE
	(230 V o 240 V)
Single-phase	
NGAm 1B	16 µF - 450 VL
NGAm1A	20 µF - 450 VL
NGAm 2B	16 µF - 450 VL
NGAm 2A	20 µF - 450 VL
NGAm 3D	31.5 µF - 450 VL
NGAm 3C	45 µF - 450 VL
NGAm 3B	50 µF - 450 VL
NGAm 3A	50 µF - 450 VL

CAPACITOR

MODEL	CAPACITANCE
	(230 V o 240 V)
Single-phase	
NGAm 1B - PRO	16 µF - 450 VL
NGAm1A - PRO	20 µF - 450 VL
NGAm 2B - PRO	16 µF - 450 VL
NGAm 2A - PRO	20 µF - 450 VL
NGAm 3D - PRO	31.5 µF - 450 VL
NGAm 3C - PRO	45 µF - 450 VL
NGAm 3B - PRO	50 µF - 450 VL
NGAm 3A - PRO	50 µF - 450 VL

NGA



*The features and specifications here in stated are in no way binding for the manufacturer.
The manufacturer is free to modify the product at any time without previous notice.*

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MADE IN ITALY

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