



water passion

1959

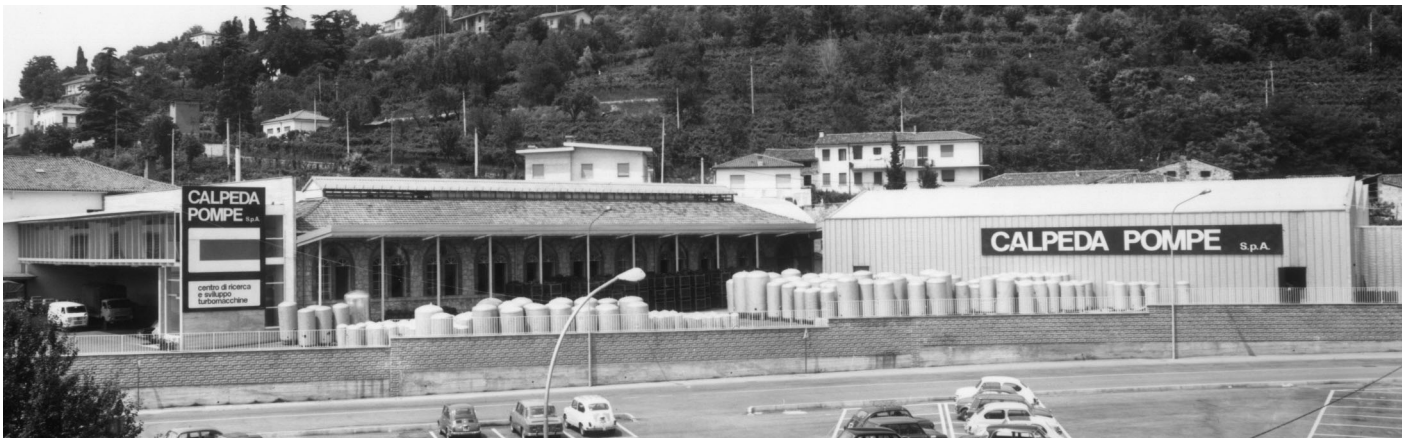
WHO WE ARE

WE WANT TO CONTINUE THAT WHICH WAS STARTED MANY YEARS AGO BY VINICIO METTIFOGO, FOUNDER AND PIONEER.

Calpeda is a family owned company with an history of 61 years.

Today, we are a reality that has evolved over the years, always looking to the future with a spirit that has brought us to being a respected reference point in the great world of water.

Our history has taken our tradition and strength to you, acknowledged for our professionalism, quality, reliability and service.



2020

CALPEDA TODAY

Employees: 250
Offices: Montorso V. (Vicenza) Italy
Main factory: 30,000 sq. metres (covered)
Types of pumps: more than 2,000
Power outputs: from 0.5 kW to 200 kW





Construction

Close-coupled self-priming shallow-well pump with built-in ejector.

Applications

For drawing water out of a well.
For lifting water containing air or other gases.
For increasing water pressure from flooded suction applications.
As pressure boosting pump for central water systems with low pressure (follow local specifications if increasing network pressure).
For garden use.
For washing with a jet of water.

Operating conditions

Liquid temperature: 0 °C to +35 °C.
Ambient temperature up to +40 °C.
Suction lift up to 9 m.
Maximum permissible pressure in the pump casing: 8 bar.
Continuous duty.

Motor

2-pole induction motor, 50 Hz (n ≈ 2800 rpm).
NGL: three-phase 230/400 V ± 10%.
NGLM: single-phase 230 V ± 10%, with thermal protector.
Capacitor inside the terminal box.
Insulation class F.
Protection IP 54.
Classification scheme IE3 for three-phase motors from 0,75 kW.
Constructed in accordance with: EN 60034-1; EN 60034-30-1.
EN 60335-1, EN 60335-2-41.

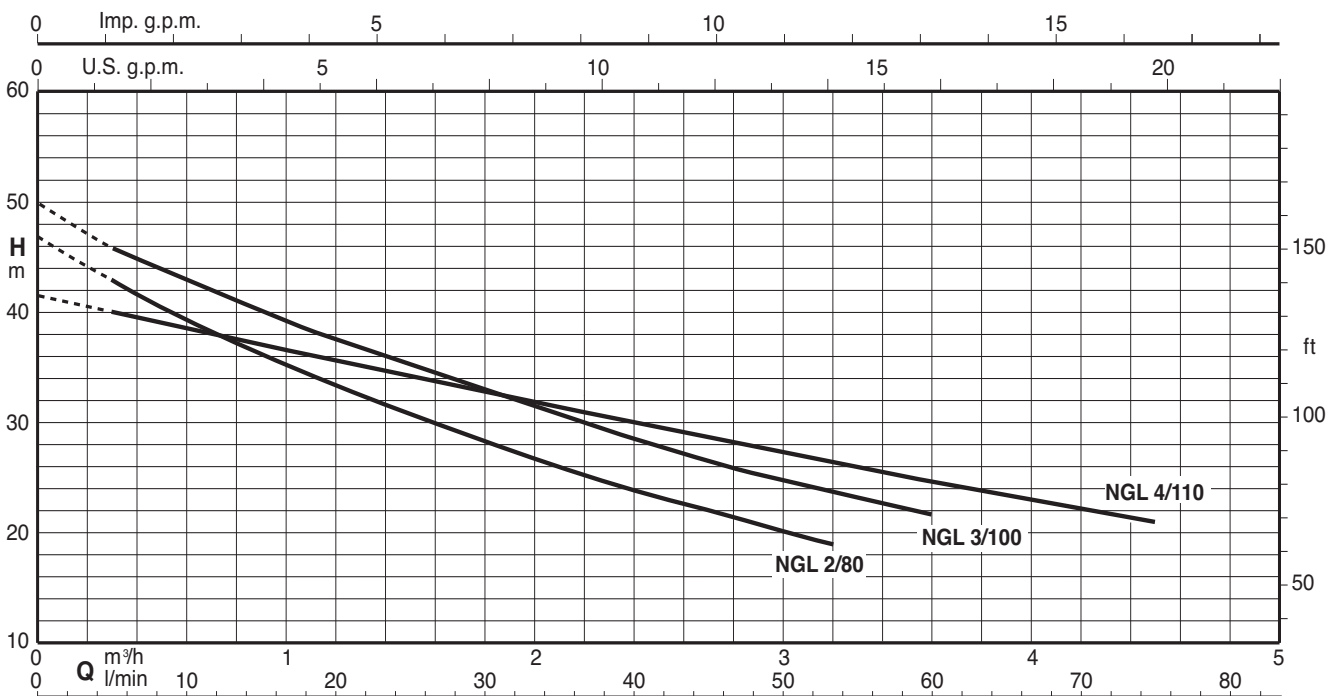
Special features on request

- Other voltages.
- Frequency 60 Hz (as per 60 Hz data sheet).

Materials

| Component | Material |
|-----------------------------|---|
| Pump casing | Cast iron GJL 200 EN 1561 |
| Casing cover | Cr-Ni steel 1.4301 EN 10088 (AISI 304) |
| Impeller | PPO-GF20 (Noryl) |
| Wear ring impeller-diffuser | Cr-Ni steel 1.4301 EN 10088 (AISI 304) |
| Diffuser | PPO-GF20 (Noryl) |
| Ejector | PPO-GF20 (Noryl) |
| Shaft | Chrome steel 1.4104 EN 10088 (AISI 430) |
| Mechanical seal | Carbon - Ceramic - NBR |

Characteristic curves n ≈ 2800 rpm



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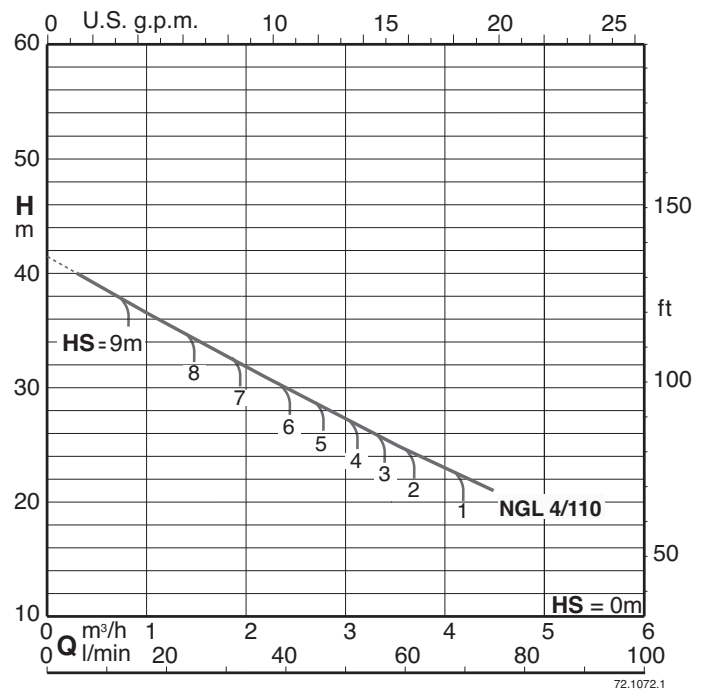
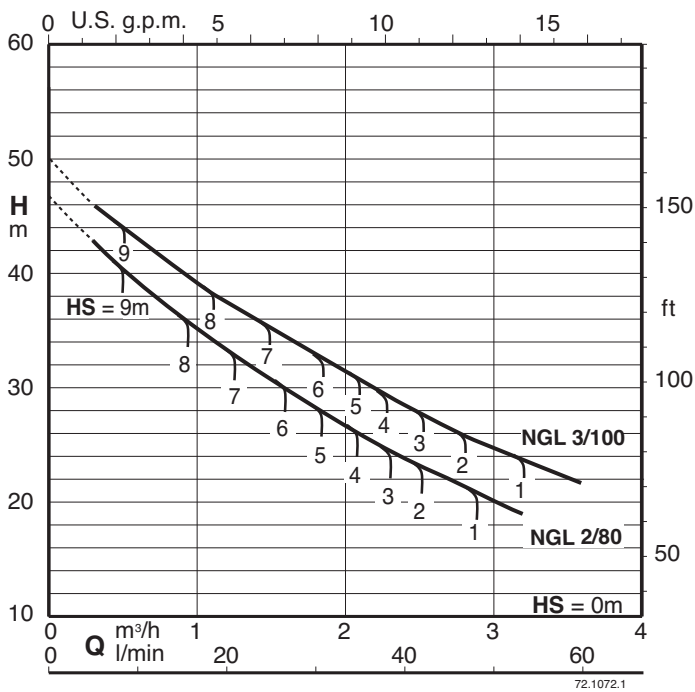
Performance n ≈ 2800 rpm

| 3~ | 230V | | 400V | | 1~ | 230V | | P1 | P2 | | Q | Q | | | | | | | | | | | |
|------------------|------|-----|-------------------|-----|------|------|------|----------------|------|------|------|------|------|-------|------|------|----|------|-----|---|-----|-----|---|
| | | | A | | | A | A | | kW | kW | | HP | m³/h | l/min | 0 | 0,3 | 1 | 2 | 2,4 | 3 | 3,2 | 3,6 | 4 |
| NGL 2/80 | 2,8 | 1,6 | NGLM 2/80 | 3,8 | 0,8 | 0,55 | 0,75 | H _m | 46,8 | 43 | 35,2 | 26,7 | 23,9 | 20,2 | 19,1 | | | | | | | | |
| NGL 3/100 | 3 | 1,7 | NGLM 3/100 | 4,5 | 0,95 | 0,65 | 0,9 | | 50 | 45,9 | 39,4 | 31,3 | 28,5 | 24,8 | 23,7 | 21,7 | | | | | | | |
| NGL 4/110 | 3,7 | 2,2 | NGLM 4/110 | 5,4 | 1 | 0,75 | 1 | | 41,6 | 40 | 36,6 | 31,9 | 30 | 27,3 | 26,4 | 24,6 | 23 | 21,1 | | | | | |

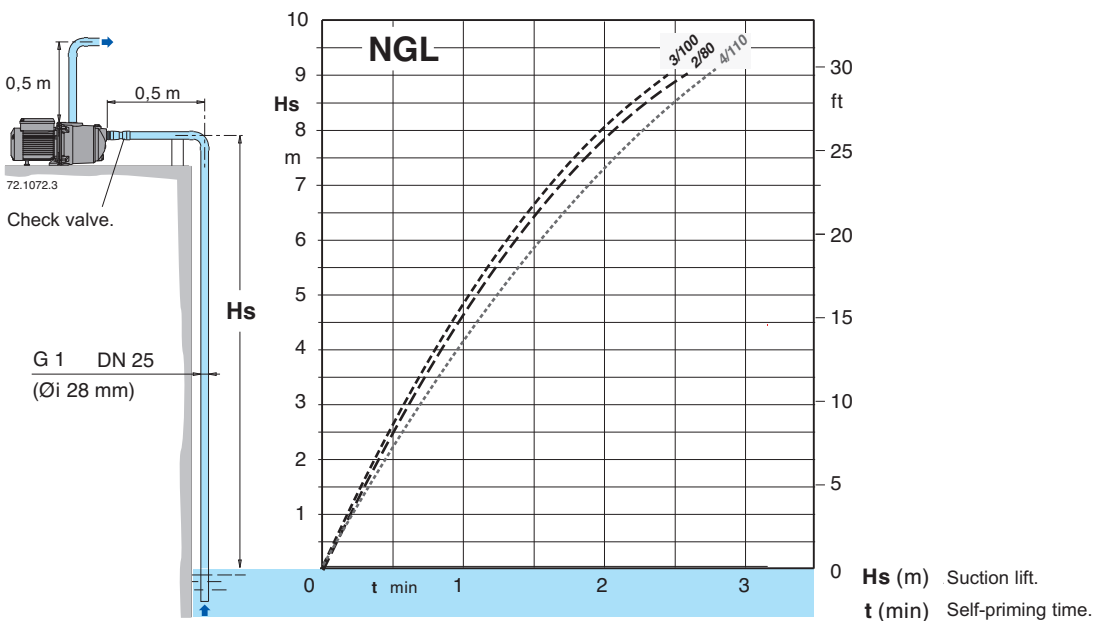
P1 Max. power input. P2 Rated motor power output.

Tolerances according to UNI EN ISO 9906:2012

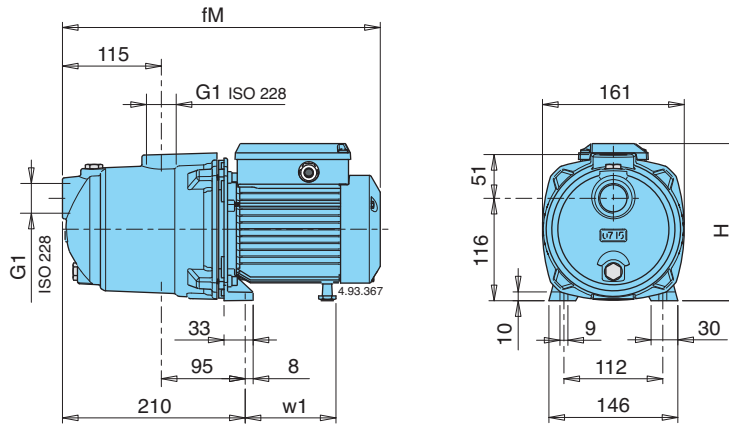
Characteristic Curves for different suction lifts Hs



Self-priming capability

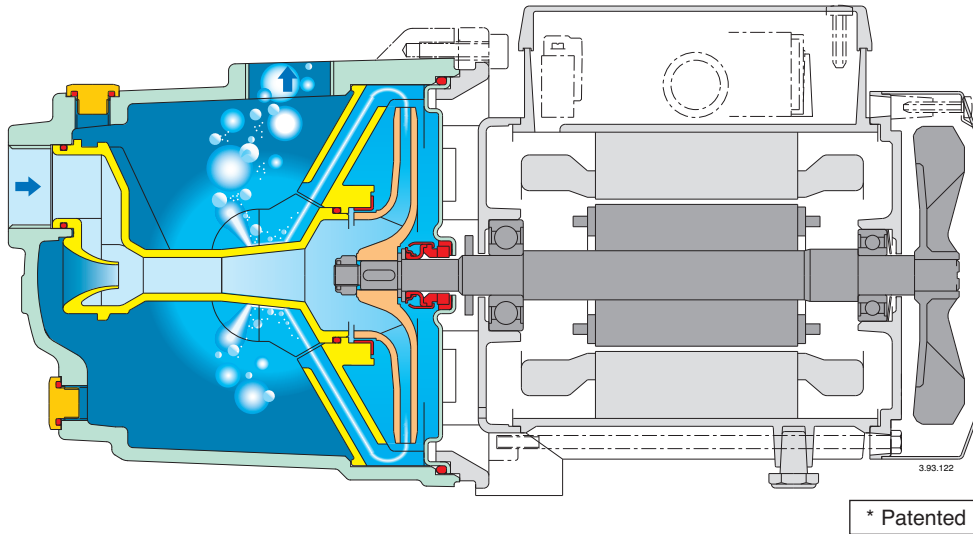


Dimensions and weights



| TYPE | Dimensions mm | | | Net weight kg | |
|------------------|------------------|-----|-----|------------------|------|
| | fM | H | w1 | NGL | NGLM |
| NGL 2/80 | 362 | 176 | 102 | 9,8 | 9,9 |
| NGL 3/100 | 391 | 192 | 112 | 11,1 | 12,1 |
| NGL 4/110 | 391 | 192 | 112 | 13,1 | 13,1 |

Features



A different pump with new features

An exclusive diffuser design with flow control device* provides for compact construction, fast self-priming capability and low noise.

Reliable

With new design features the NGL is more robust and forgiving when temporary abnormal operating conditions may exist.

Compact

The NGL is smaller than conventional pumps of a similar type, allowing for installation in restricted spaces and providing for easier retrofit applications.

Safe

Fast air evacuation reduces the risk of air-pockets developing at the mechanical seal preventing the danger of seal failure due to a lack of flushing and cooling.

Better self-priming

The NGL are capable of lifting water from depths of 9 m in less than 3 minutes, offers new possibilities on suction lift applications and provides better trouble free service on normal shallow-well suction lift duties, also with a long suction pipe above the water level.

Low noise

The new diffuser and flow control device* guide the fluid from the impeller into the central part of the pump casing, reducing turbulence and velocity, with effective use of the surrounding liquid in dampening the noise of flow.



Construction

Close-coupled self-priming shallow-well pump with built-in ejector.

A high-quality pump for domestic water supply. Designed with environmental considerations, featuring a stainless steel casing.

Applications

For drawing water out of a well.

For lifting water containing air or other gases.

For increasing water pressure from flooded suction applications.

As pressure boosting pump for central water systems with low pressure (follow local specifications if increasing network pressure).

For garden use.

For washing with a jet of water.

Operating conditions

Liquid temperature: 0 °C to +35 °C.

Ambient temperature up to +40 °C.

Suction lift up to 9 m.

Maximum permissible pressure in the pump casing: 8 bar.

Continuous duty.

Motor

2-pole induction motor, 50 Hz (n ≈ 2800 rpm).

NGX: three-phase 230/400 V ± 10%.

NGXM: single-phase 230 V ± 10%, with thermal protector.

Capacitor inside the terminal box.

Insulation class F.

Protection IP 54.

Classification scheme IE3 for three-phase motors from 0,75 kW.

Constructed in accordance with: EN 60034-1; EN 60034-30-1.
EN 60335-1, EN 60335-2-41.

Special features on request

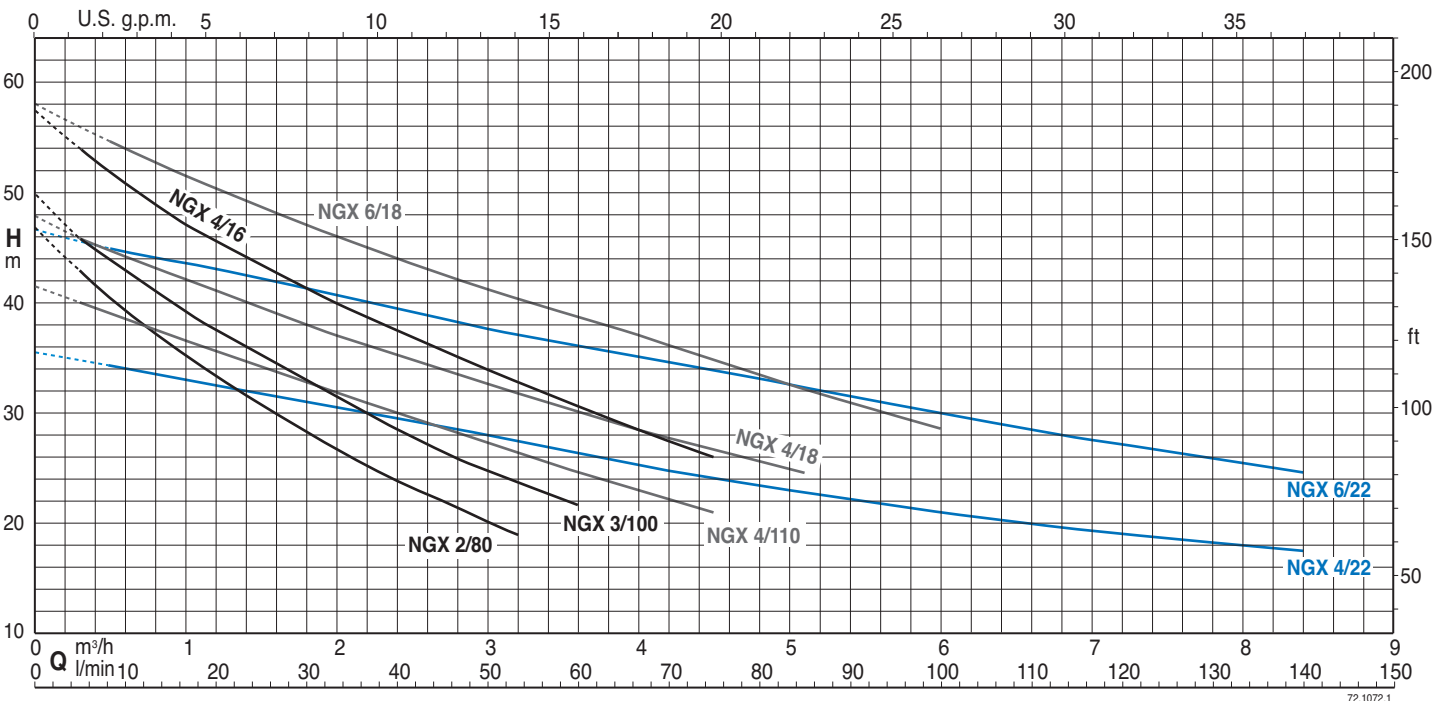
- Other voltages.

- Frequency 60 Hz (as per 60 Hz data sheet).

Materials

| Component | Material |
|-----------------------------|---|
| Pump casing | Cr-Ni steel 1.4301 EN 10088 (AISI 304) |
| Casing cover | Cr-Ni steel 1.4301 EN 10088 (AISI 304) |
| Impeller | Brass P-Cu Zn 40 Pb 2 UNI 5705 (PPO-GF20 (Noryl) for NGX 2/80,3/100,4/110) |
| Wear ring impeller-diffuser | Cr-Ni steel 1.4301 EN 10088 (AISI 304) |
| Diffuser | PPO-GF20 (Noryl) |
| Ejector | PPO-GF20 (Noryl) |
| Shaft | Chrome steel 1.4104 EN 10088 (AISI 430) Cr-Ni steel 1.4305 EN 10088 (AISI 303) for NGX 6 |
| Mechanical seal | Carbon - Ceramic - NBR |

Characteristic curves n ≈ 2800 rpm



Performance $n \approx 2800$ rpm

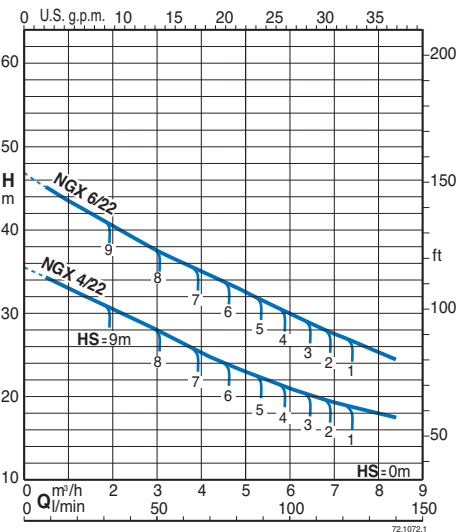
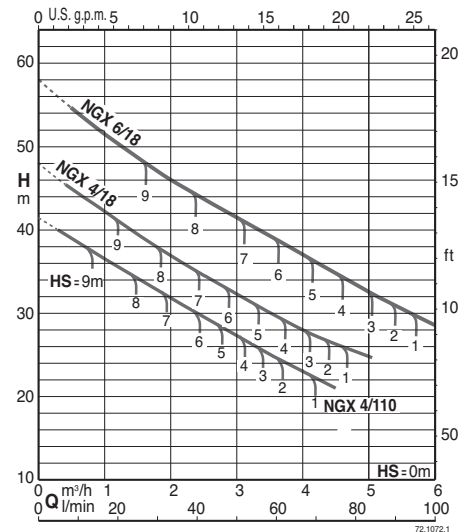
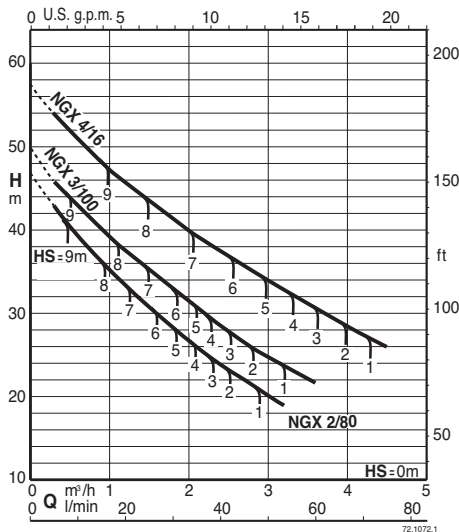
| 3~ | 230V 400V | | 1~ | 230V P1 | | P2 | | Q | | | | | | | | | | | | |
|-----------|-----------|-----|------------|---------|------|------|------|--------|-------------------|------|------|------|------|------|------|------|-----|------|-----|--|
| | A | A | | A | kW | kW | HP | | m ³ /h | 0 | 0,3 | 1 | 2 | 2,4 | 3 | 3,2 | 3,6 | 4 | 4,5 | |
| NGX 2/80 | 2,8 | 1,6 | NGXM 2/80 | 3,8 | 0,8 | 0,55 | 0,75 | H m | 46,8 | 43 | 35,2 | 26,7 | 23,9 | 20,2 | 19,1 | | | | | |
| NGX 3/100 | 3 | 1,7 | NGXM 3/100 | 4,5 | 0,95 | 0,65 | 0,9 | | 50 | 45,9 | 39,4 | 31,3 | 28,5 | 24,8 | 23,7 | 21,7 | | | | |
| NGX 4/110 | 3,7 | 2,2 | NGXM 4/110 | 5,4 | 1 | 0,75 | 1 | | 41,6 | 40 | 36,6 | 31,9 | 30 | 27,3 | 26,4 | 24,6 | 23 | 21,1 | | |

| 3~ | 230V 400V | | 1~ | 230V P1 | | P2 | | Q | | | | | | | | | | | | | | | | | | |
|------------|-----------|-----|-----------|---------|-----|-----|-----|--------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|--|--|
| | A | A | | A | kW | kW | HP | | m ³ /h | 0 | 0,5 | 1 | 2 | 2,4 | 3 | 4 | 4,5 | 5 | 5,5 | 6 | 6,5 | 7 | 8 | 8,4 | | |
| NGX 4/16 | 4,5 | 2,6 | NGXM 4/16 | 7 | 1,6 | 1,1 | 1,5 | H m | 57,5 | 54 | 47,3 | 40 | 37,5 | 34 | 28,5 | 26 | | | | | | | | | | |
| NGX 4/18 | 4,5 | 2,6 | NGXM 4/18 | 7 | 1,6 | 1,1 | 1,5 | | 48 | 46 | 42,5 | 37 | 35 | 32,5 | 28,5 | 27 | 25 | | | | | | | | | |
| NGX 4/22 | 4,5 | 2,6 | NGXM 4/22 | 7 | 1,6 | 1,1 | 1,5 | | 35,5 | 34,8 | 33 | 30,5 | 29,5 | 28 | 25,3 | 24 | 23 | 22 | 21 | 20,3 | 19,5 | 18 | 17,5 | | | |
| NGX 6/18/A | 7,5 | 4,3 | NGXM 6/18 | 9,2 | 2 | 1,5 | 2 | | 58 | 54,7 | 51,5 | 46 | 44 | 41,3 | 37 | 34,7 | 32,5 | 30,5 | 28,5 | | | | | | | |
| NGX 6/22/A | 7,5 | 4,3 | NGXM 6/22 | 9,2 | 2 | 1,5 | 2 | | 46,5 | 45 | 43,5 | 40,5 | 39,3 | 37,5 | 35 | 33,5 | 32,5 | 31,2 | 30 | 28,5 | 27,5 | 25,5 | 24,5 | | | |

P1 Max. power input. P2 Rated motor power output.

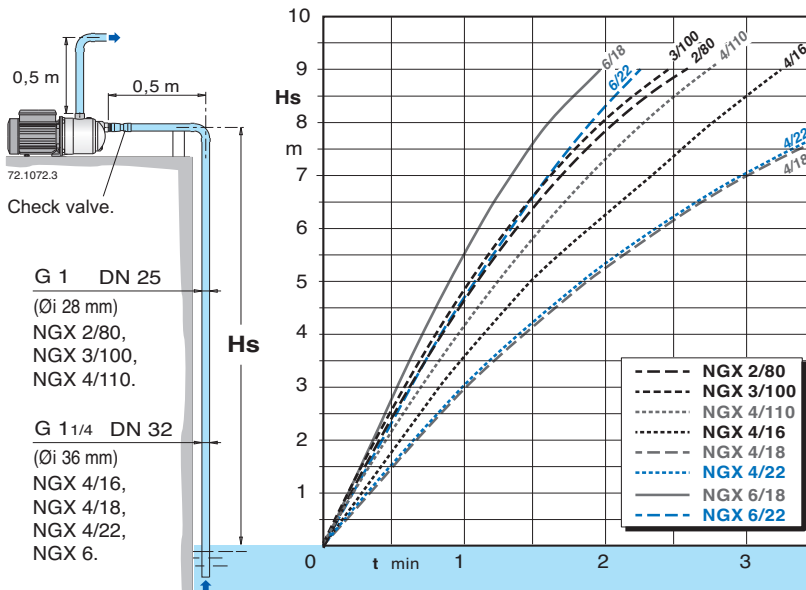
Tolerances according to UNI EN ISO 9906:2012

Characteristic curves for different suction lifts Hs

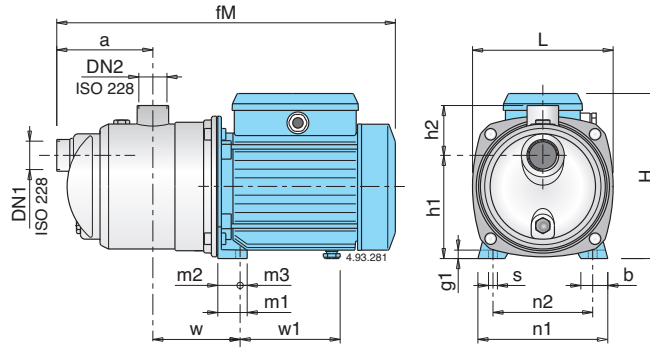


Self-priming capability

50 Hz ($n \approx 2800$ 1/min), H₂O, T = 20°C, Pa = 1000 hPa (mbar)

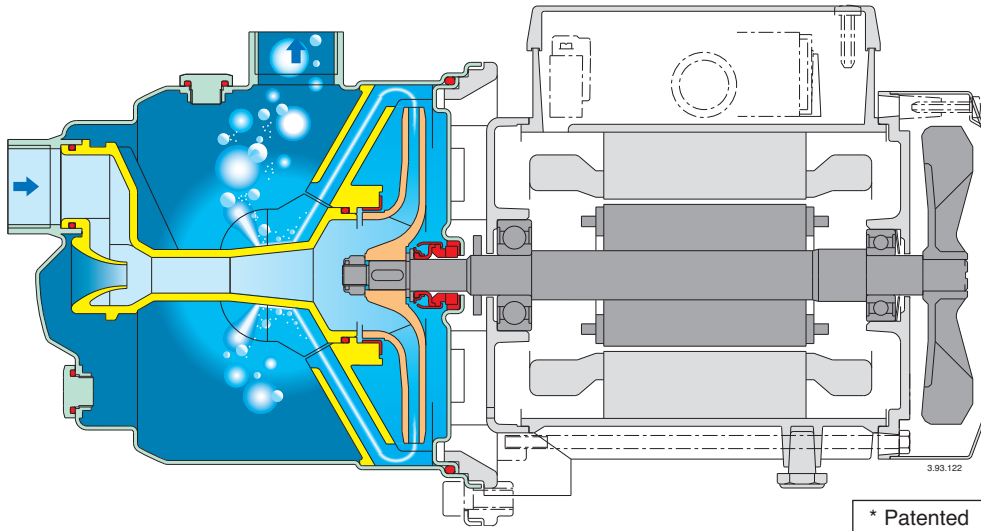


Dimensions and weights



| TYPE | DN1 ISO 228 | DN2 ISO 228 | Dimensions mm | | | | | | | | | | | | | | | Net weight kg | | |
|------------|----------------|----------------|------------------|-----|-----|-----|----|-----|-------|------|----|-----|-----|-----|----|-----|----|------------------|------|------|
| | | | fM | a | w | h1 | h2 | H | L | m1 | m2 | m3 | n1 | n2 | b | s | g1 | w1 | NGX | NGXM |
| NGX 2/80 | | | 362 | | | | | 176 | | | | | | | | | | 102 | 6,9 | 7,1 |
| NGX 3/100 | G 1 | G 1 | 391 | 115 | 95 | 116 | 61 | 192 | 161 | 33 | 25 | 8 | 146 | 112 | 30 | 9 | 10 | 112 | 8,3 | 9,2 |
| NGX 4/110 | | | 391 | | | | | 192 | | | | | | | | | | 112 | 10,2 | 10,2 |
| NGX 4/16 | | | | | | | | | | | | | | | | | | | | |
| NGX 4/18 | G 1 1/4 | G 1 | 462 | 140 | 113 | 152 | 68 | 225 | 213,5 | 37,5 | 28 | 9,5 | 185 | 155 | 33 | 9,5 | 11 | 147 | 14,5 | 14,8 |
| NGX 4/22 | | | | | | | | | | | | | | | | | | | | |
| NGX 6/18/A | G 1 1/4 | G 1 | 488,5 | 140 | 113 | 152 | 68 | 240 | 213,5 | 37,5 | 28 | 9,5 | 185 | 155 | 33 | 9,5 | 11 | 157,5 | 17,8 | 18,2 |
| NGX 6/22/A | | | | | | | | | | | | | | | | | | | | |

Features



A different pump with new features

An exclusive diffuser design with flow control device* provides for compact construction, fast self-priming capability and low noise.

Reliable

With new design features the NGX is more robust and forgiving when temporary abnormal operating conditions may exist.

Compact

The NGX is smaller than conventional pumps of a similar type, allowing for installation in restricted spaces and providing for easier retrofit applications.

Safe

Fast air evacuation reduces the risk of air-pockets developing at the mechanical seal preventing the danger of seal failure due to a lack of flushing and cooling.

Better self-priming

The NGX are capable of lifting water from depths of 9 m in less than 4 minutes, offers new possibilities on suction lift applications and provides better trouble free service on normal shallow-well suction lift duties, also with a long suction pipe above the water level.

Low noise

The new diffuser and flow control device* guide the fluid from the impeller into the central part of the pump casing, reducing turbulence and velocity, with effective use of the surrounding liquid in dampening the noise of flow.



Construction

Close-coupled self-priming shallow well jet pumps with built-in ejector.

NG: version with pump casing and lantern bracket in cast iron.
B-NG: version with pump casing and lantern bracket in bronze (the pumps are supplied fully painted).

Applications

For drawing water out of a well.
As pressure boosting pump for central water systems with low pressure (follow local specifications if increasing network pressure).
For clean liquids or slightly dirty surface water.
For garden use.
For washing with a jet of water.

Operating conditions

Liquid temperature up to 40 °C.
Ambient temperature up to 40 °C.
Maximum permissible working pressure up to 10 bar.
Continuous duty.

Motor

2-pole induction motor, 50 Hz (n ≈ 2900 rpm).
NG: three-phase 230/400 V ± 10%.
NGM: single-phase 230 V ± 10%, with thermal protector.
Capacitor inside the terminal box.

Insulation class F.
Protection IP 54.
Classification scheme IE3 for three-phase motors from 0,75 kW.
Constructed in accordance with: EN 60034-1; EN 60034-30-1.
EN 60335-1, EN 60335-2-41.

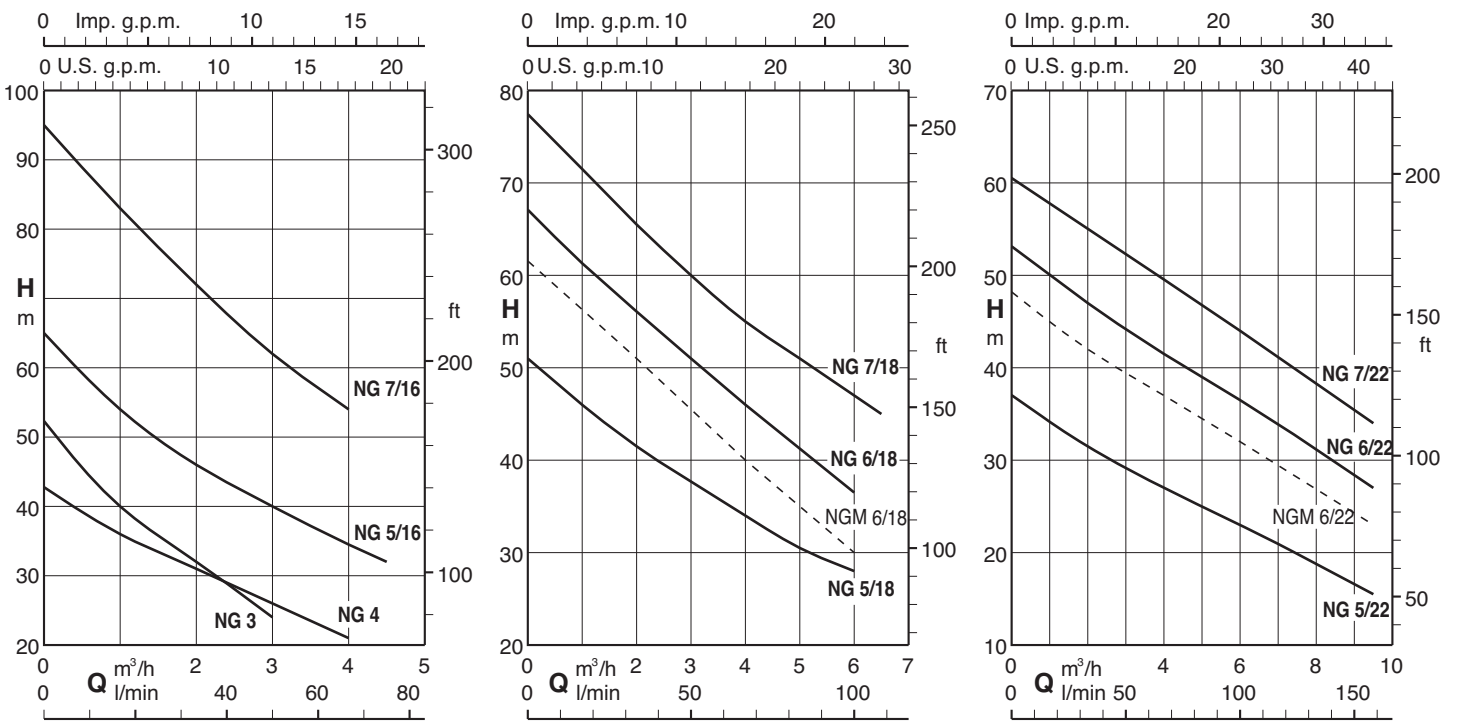
Special features on request

- Other voltages. - Frequency 60 Hz (as per 60 Hz data sheet).
- Protection IP 55.
- Special mechanical seal

Materials

| Components | NG | B-NG |
|---|---|---|
| Pump casing Cover with lantern bracket Diffuser plate | Cast iron GJL 200 EN 1561 | Bronze G-Cu Sn 10 EN 1982 |
| Impeller | Brass P- Cu Zn 40 Pb 2 UNI 5705 | |
| Shaft | Cr steel 1.4104 EN 10088 (AISI 430) for NG 3-4 Cr-Ni steel 1.4305 EN 10088 (AISI 303) for NG 5-6-7 | Cr-Ni-Mo steel 1.4401 EN 10088 AISI 316 |
| Diffuser | PPO-GF20 (Noryl) | |
| Nozzle | PPO-GF20 (Noryl) | |
| Mechanical seal | Carbon - Ceramic - NBR | |

Characteristic curves for suction lift Hs = 1 m n ≈ 2900 rpm



Performance for suction lift Hs = 1 m n ≈ 2900 rpm

| 3 ~ | 230V 400V | | 1 ~ | 230V | | P ₁ | | P ₂ | | Q m ³ /h l/min | H m | | | | | | | | | | | | | | | |
|--------------|-----------|-----|--------------|------|------|----------------|------|----------------|------|---------------------------------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| | A | A | | A | kW | kW | HP | 0,25 | 0,5 | | 1 | 1,5 | 2 | 2,5 | 3 | 3,5 | 4 | 4,5 | 5 | 5,5 | 6 | 6,5 | 7 | 8 | 9 | 9,5 |
| B- NG 3/A | 3 | 1,7 | B- NGM 3/A | 4,5 | 0,9 | 0,55 | 0,75 | 49 | 45,5 | 40 | 36 | 32 | 28 | 24 | | | | | | | | | | | | |
| B- NG 4/B | 3,7 | 2,2 | B- NGM 4/A | 5,7 | 1 | 0,75 | 1 | 41 | 39 | 36 | 33 | 31 | 29 | 26 | 24 | 21 | | | | | | | | | | |
| B- NG 5/16/A | 4,7 | 2,7 | B- NGM 5/16E | 7,4 | 1,64 | 1,1 | 1,5 | | 59 | 54 | 50 | 46 | 43 | 40 | 37 | 34,5 | 32 | | | | | | | | | |
| B- NG 5/18/A | 4,7 | 2,7 | B- NGM 5/18E | 7,4 | 1,68 | 1,1 | 1,5 | | 48,5 | 46 | 43,5 | 41,5 | 39,5 | 38 | 35,5 | 34 | 32 | 30,5 | 29 | 28 | | | | | | |
| B- NG 5/22/A | 4,7 | 2,7 | B- NGM 5/22E | 7,4 | 1,55 | 1,1 | 1,5 | | 35,5 | 34,5 | 33 | 31,5 | 30,5 | 29,5 | 28 | 27 | 26 | 25 | 23,5 | 23 | 21,5 | 20,5 | 18,5 | 16,5 | 15,5 | |
| B- NG 6/18/A | 7,5 | 4,3 | | | | 1,5 | 2 | | 64,5 | 62 | 59 | 56 | 54 | 51 | 48,5 | 46 | 43,5 | 41,5 | 39 | 36,5 | | | | | | |
| | | | B- NGM 6/18E | 9,2 | 2 | 1,5 | 2 | | 59 | 57 | 54 | 51 | 48 | 45 | 43 | 40 | 37,5 | 35 | 33 | 30 | | | | | | |
| B- NG 6/22/A | 7,5 | 4,3 | | | | 1,5 | 2 | | 51,5 | 50 | 48,5 | 47 | 46 | 44,5 | 43 | 41,5 | 40 | 39 | 37,5 | 36,5 | 35 | 33,5 | 31 | 28,5 | 27 | |
| | | | B- NGM 6/22E | 9,2 | 2 | 1,5 | 2 | | 47 | 45 | 43,5 | 42 | 41 | 40 | 38 | 37 | 36 | 35 | 33 | 32 | 31 | 30 | 27 | 24 | 23 | |
| B- NG 7/16/B | 9,15 | 5,3 | | | | 2,2 | 3 | | 89 | 83 | 77 | 72 | 67 | 62 | 58 | 54 | | | | | | | | | | |
| B- NG 7/18/B | 9,15 | 5,3 | | | | 2,2 | 3 | | 74,5 | 71,5 | 68,5 | 65,5 | 63 | 60 | 57,5 | 55 | 53 | 51 | 49 | 47 | 45 | | | | | |
| B- NG 7/22/B | 9,15 | 5,3 | | | | 2,2 | 3 | | 59 | 57,5 | 56,5 | 55 | 54 | 52,5 | 51 | 50 | 48,5 | 47 | 45,5 | 44 | 42,5 | 41,5 | 38 | 35 | 34 | |

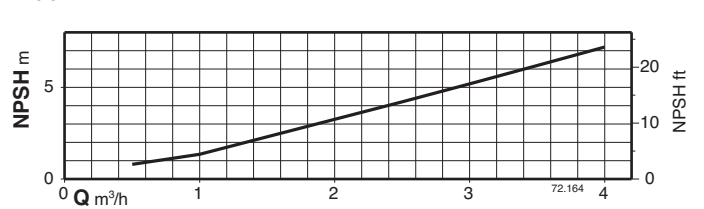
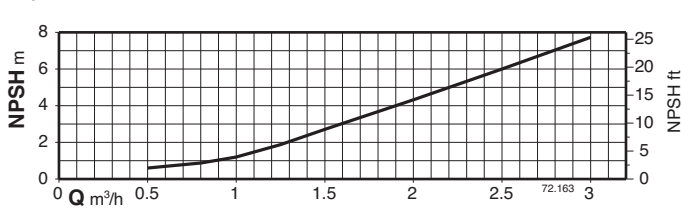
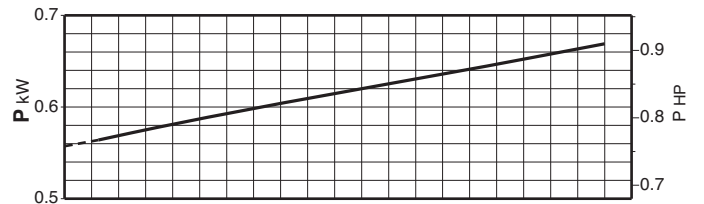
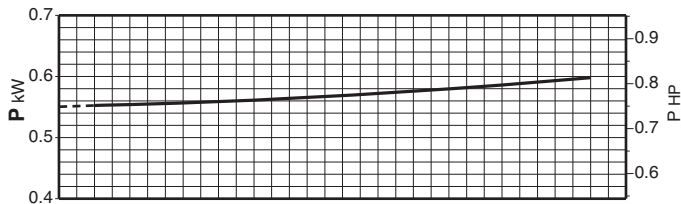
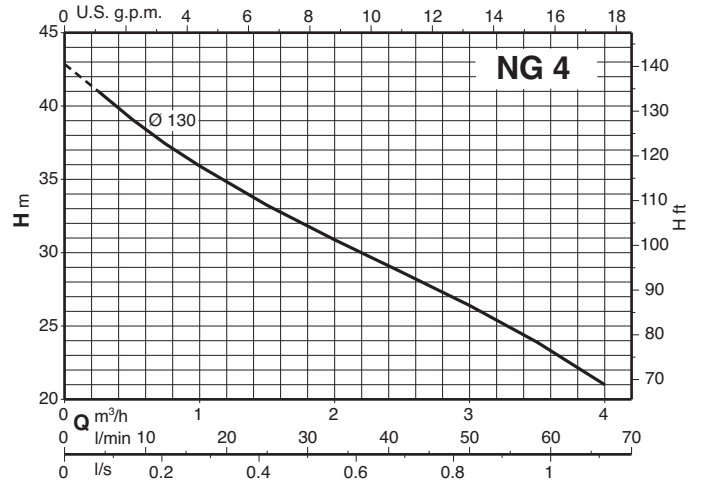
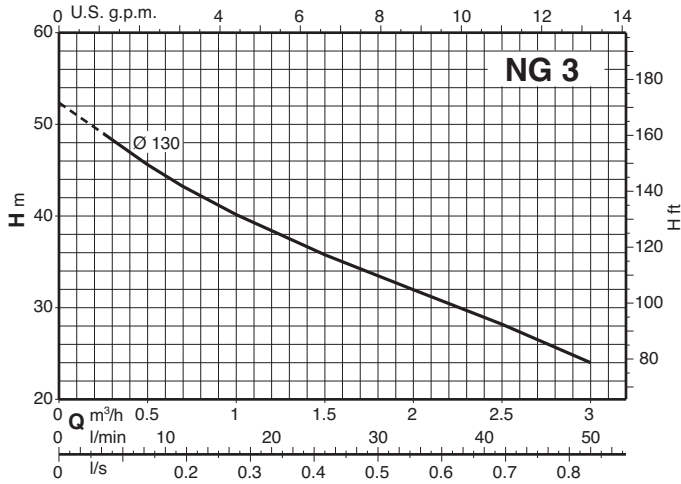
P1 Max. power input.

P2 Rated motor power output.

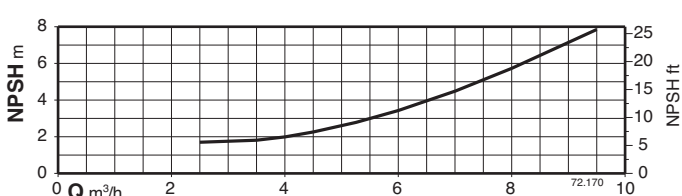
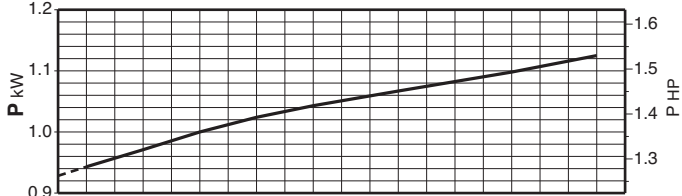
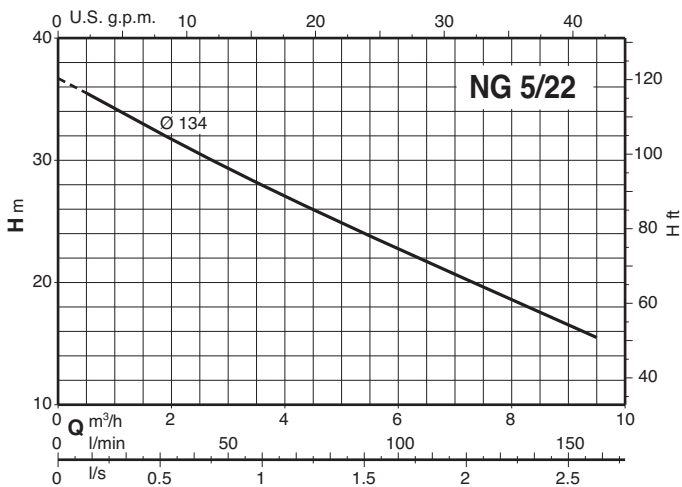
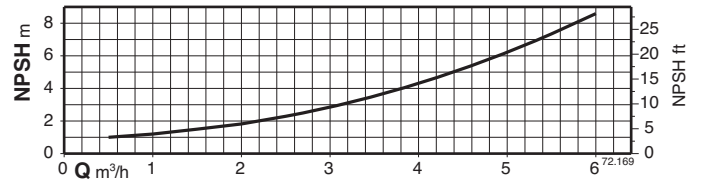
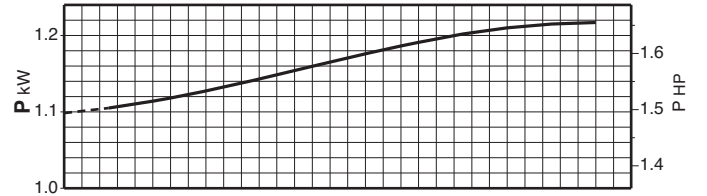
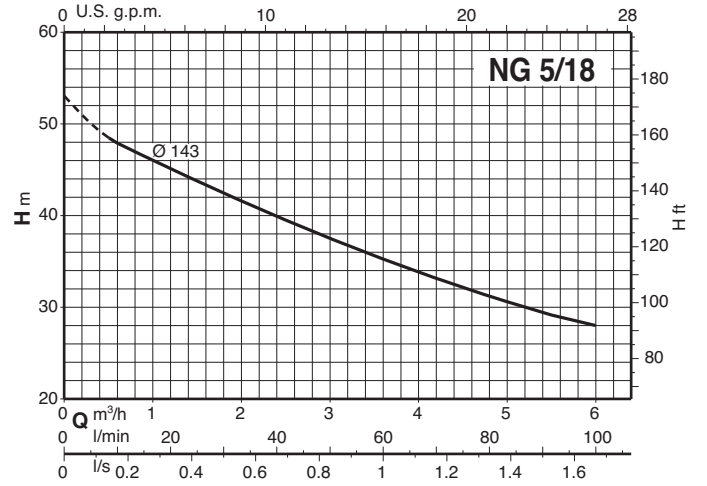
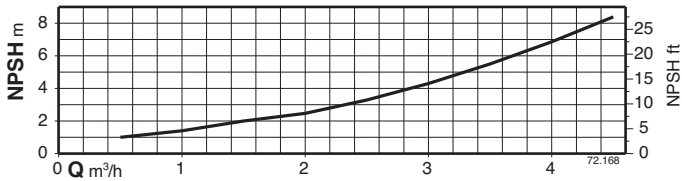
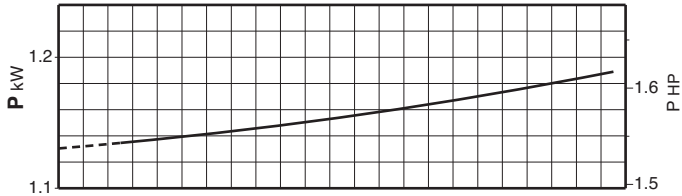
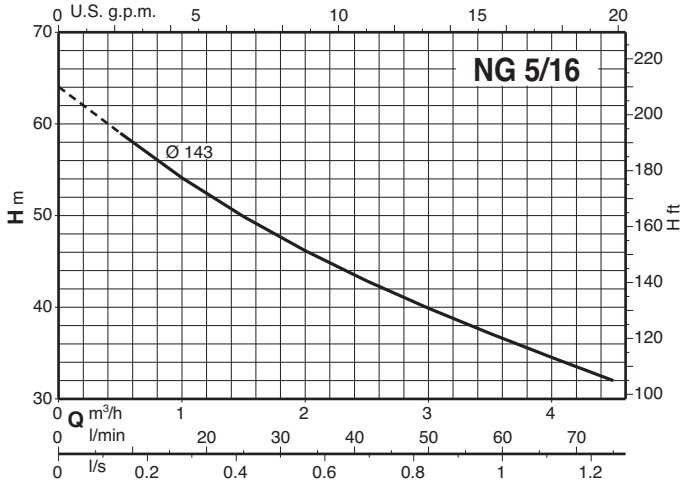
B-NG, B-NGM = Bronze construction.

Tolerances according to UNI EN ISO 9906:2012

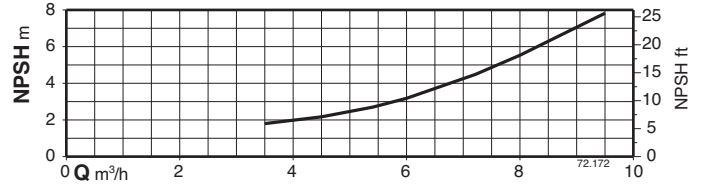
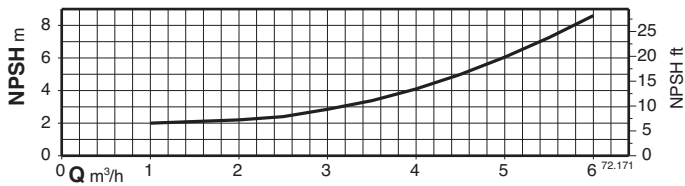
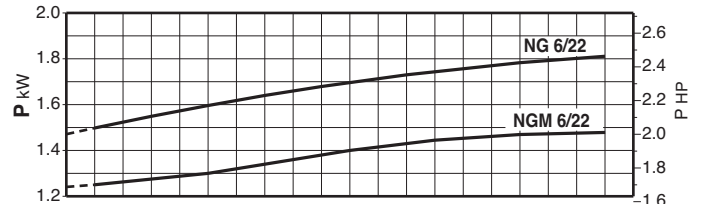
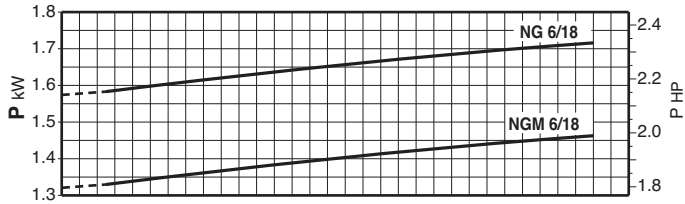
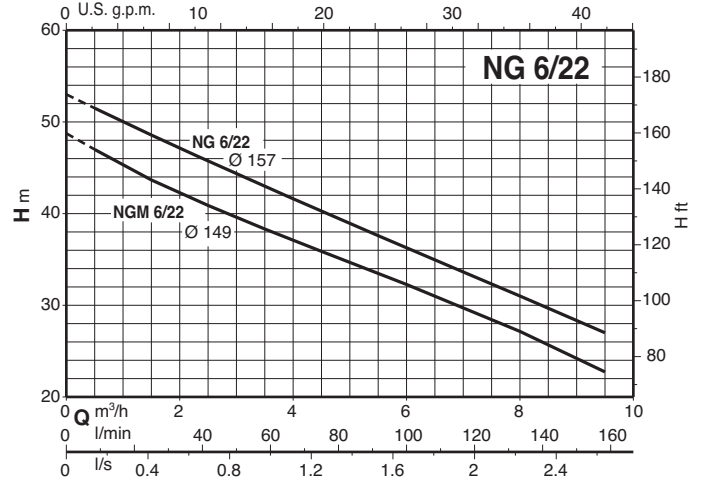
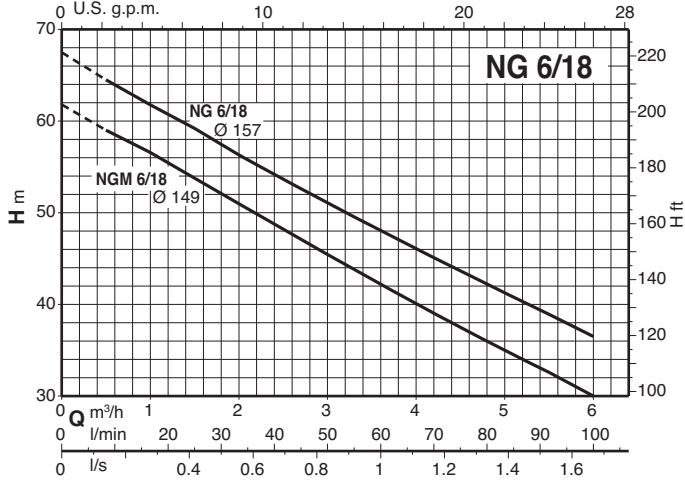
Characteristic curves $n \approx 2900$ rpm



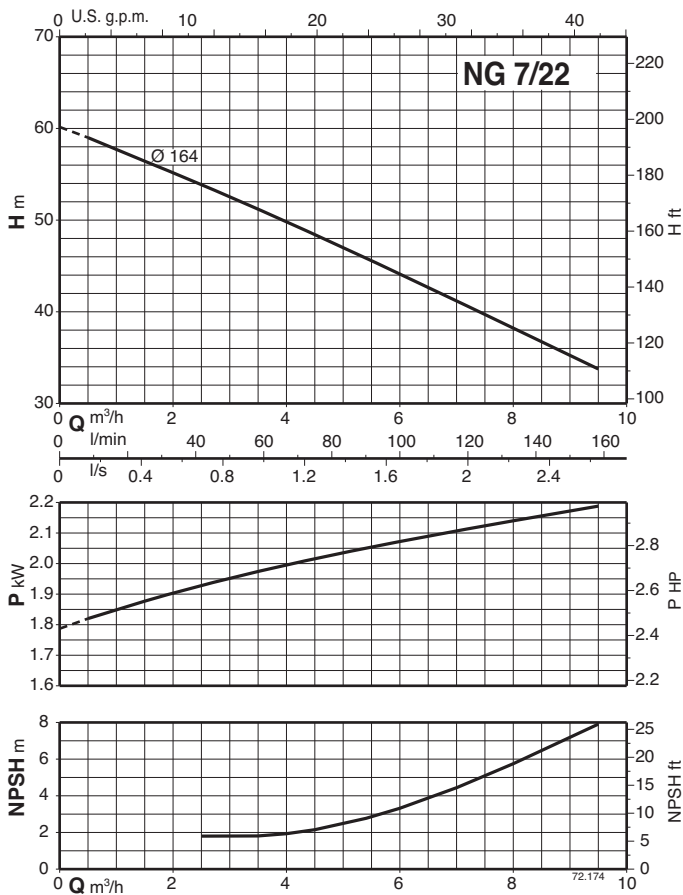
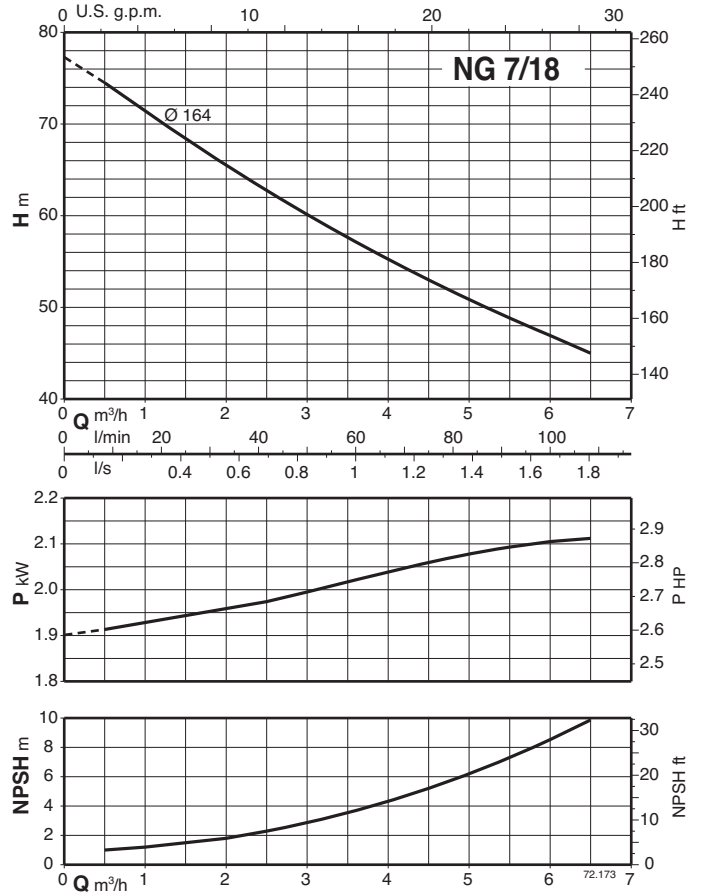
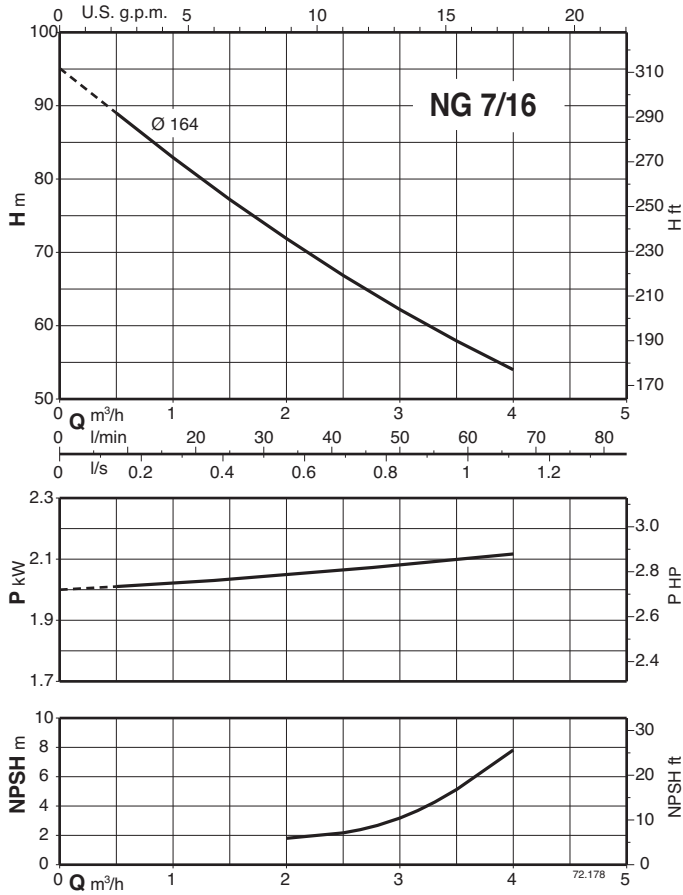
Characteristic curves $n \approx 2900$ rpm



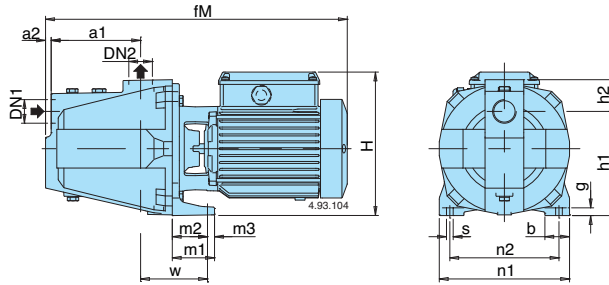
Characteristic curves $n \approx 2900$ rpm



Characteristic curves $n \approx 2900$ rpm



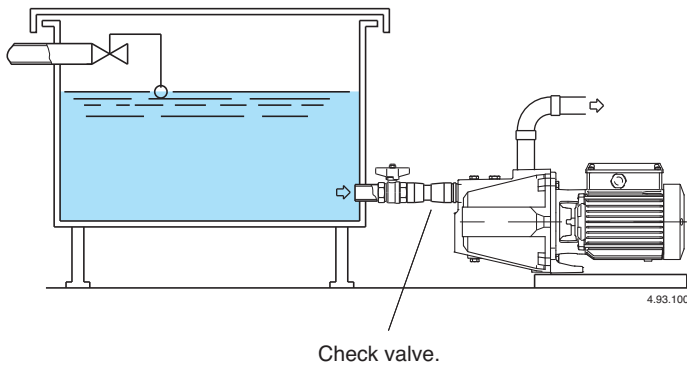
Dimensions and weights



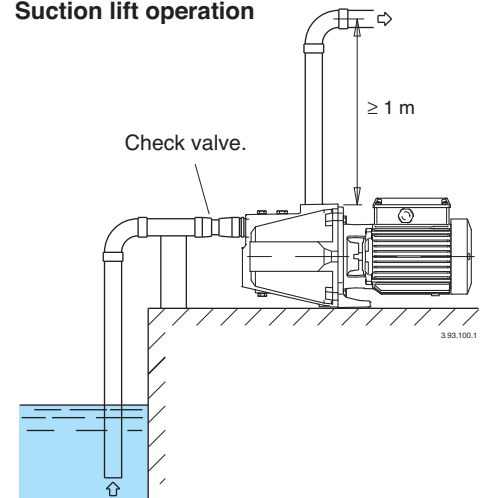
| TYPE | DN ₁ | DN ₂ | mm | | | | | | | | | | | | | | | | kg | |
|----------------------------|--------------------------------|-----------------|---------|-----|----|-------------------|-----|----|-----|----|----|----|-----|-----|----|------|-----|----|------|------|
| | | | ISO 228 | | a1 | a2 | fM | h1 | h2 | H | m1 | m2 | m3 | n1 | n2 | b | s | w | g | NG |
| NG 3/A NG 4/B | B-NG 3/A B-NG 4/B | G 1 | G 1 | 127 | 8 | 430 | 150 | 43 | 207 | 60 | 52 | 8 | 185 | 155 | 35 | 9,5 | 100 | 11 | 18,4 | 20,8 |
| NG 5/A NG 6/A NG 7/B | B-NG 5E B-NG 6E B-NG 7/A | G 1 1/2 | G 1 | 160 | 10 | 560 560 600 | 165 | 57 | 240 | 60 | 50 | 10 | 215 | 175 | 40 | 11,5 | 115 | 11 | 29,2 | 31,6 |
| | | | | | | | | | | | | | | | | | | | 30,8 | 32,9 |
| | | | | | | | | | | | | | | | | | | | 31,3 | 33,4 |

Installation examples

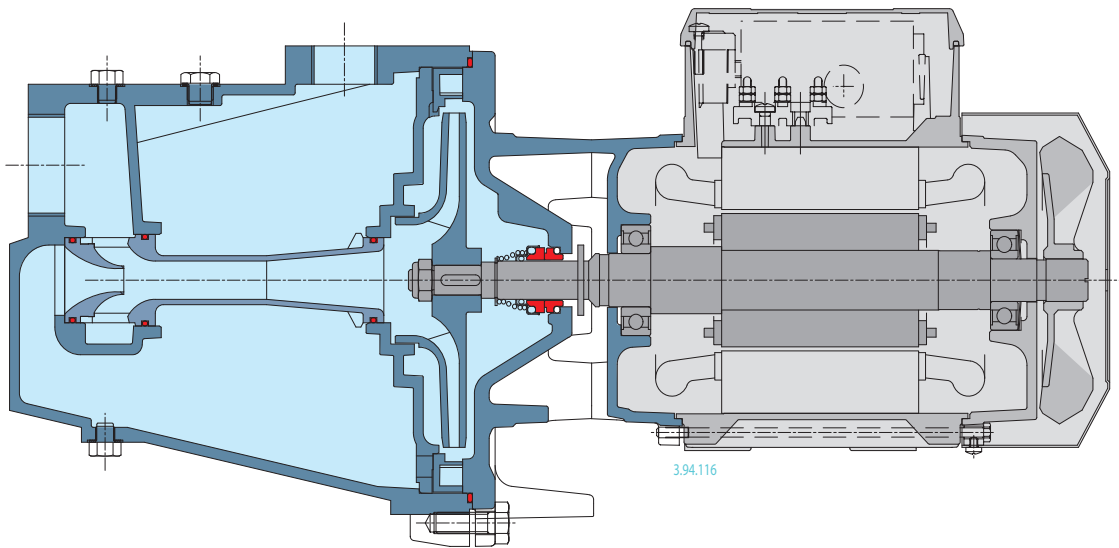
Positive suction head operation



Suction lift operation



Features



Robust

The mechanical structure of the hydraulic parts in contact with the pumped liquid are dimensioned to guarantee the maximum resistance to mechanical stress.

Self priming

The hydraulic design allows the pump to self prime even with the high suction lifts or with long suction pipe runs above the water level.

Flexible

The option to choose between cast iron and bronze materials for the hydraulic parts in contact with the pumped liquid allows NG series pumps to be selected for use with different types of liquids.