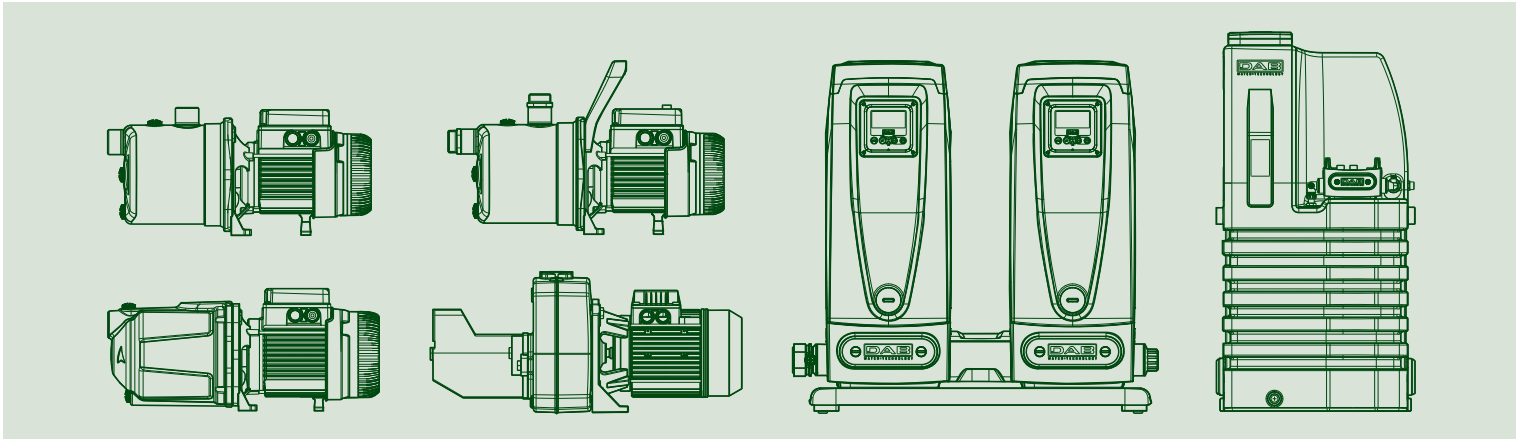


SELF-PRIMING MULTISTAGE CENTRIFUGAL PUMPS



TECHNICAL CATALOGUE



THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and its partner
CISQ/IMQ-CSQ
hereby certify that the organization

DWT HOLDING SPA
VIA MARCO POLO 14 - 35035 MESTRINO (PD)
BRENDOLA (VI) - CASTELLO DI GODEGO (TV) - BIENTINA (PI) -
SAN GERMANO DEI BERICI (VI) - GESSATE (MI) -
PRC CHINA

for the following field of activities
Design, production, sale and assistance of components and electronic controls for pumps, electropumps, and pump sets for cold and hot water for civil, industrial and agricultural use

has implemented and maintains a
Quality Management System
which fulfills the requirements of the following standard

ISO 9001:2008

Issued on: 2013 - 09 - 23 Expiry date: 2015 - 06 - 15

Registration Number: **IT - 824**



Michael Drechsel
Michael Drechsel
President of IQNET



Ing. Claudio Provetti
Ing. Claudio Provetti
President of CISQ

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All. 1 di 1
Ann. 1 of 1



ALLEGATO CERTIFICATO n. **9101.COGE**
ANNEX CERTIFICATE

(*) Unità Operative:
(*) Operative Units:

DAB PUMPS SPA
VIA BONANNO PISANO 1 - 56031 BIENTINA (PI)

TESLA SRL
VIA DEL LAVORO 3 - 36040 SAN GERMANO DEI BERICI (VI)

TESLA SRL
VIA BERGAMO 2 - 20060 GESSATE (MI)

DAB PUMPS QINGDAO CO. LTD.
40 KAITUO ROAD, QINGDAO DEVELOPMENT ZONE - SHANGDONG PROVINCE, PRC CHINA

| DATE: | PRIMA CERTIFICAZIONE FIRST CERTIFICATION | EMISSIONE CORRENTE CURRENT ISSUE | SCADENZA EXPIRY |
|-------|---|-------------------------------------|--------------------|
| | 1995-07-17 | 2013-09-23 | 2015-06-15 |

Spavetti
ING S.p.A. - VIA GUNTILIANO, 43 - 20138 MILANO



EA: 18, 19

SOCCORSO DA PARTE
DELLE AUTORITA'
PER LA SICUREZZA
DELLE PERSONE
E DEI BENI

La validità del certificato è subordinata a sorveglianza annuale e ricambio completo del Sistema di Gestione con periodici interventi
The validity of the certificate is subjected to annual audit and replacement of the whole management system within three years

CISQ è la Federazione Italiana di Organismi di Certificazione del Sistema di Gestione Aziendale.
CISQ is the Italian Federation of management system Certification Bodies.



FEDERAZIONE
CISQ
www.cisq.com



CERTIFICATO N.
CERTIFICATE N. **9101.COGE**

SI CERTIFICA CHE IL SISTEMA QUALITÀ DI
WE HEREBY CERTIFY THAT THE QUALITY SYSTEM OPERATED BY
DWT HOLDING SPA
VIA MARCO POLO 14 - 35035 MESTRINO (PD)

UNITÀ OPERATIVE
OPERATIVE UNITS
DAB PUMPS
VIA MARCO POLO 14 - 35035 MESTRINO (PD)
DAB PUMPS
VIA EINAUDI 2 - 35040 BRENDOLA (VI)
DAB PUMPS
VIA E. FERMI 6-8-10 - 31030 CASTELLO DI GODEGO (TV)

Vedere gli Allegati per le altre Unità Operative (n° 1 pagina)
View the Annexes for the other Operative Units (n° 1 page)

E' CONFORME ALLA NORMA
IS IN COMPLIANCE WITH THE STANDARD
ISO 9001:2008

PER LE SEGUENTI ATTIVITÀ:
FOR THE FOLLOWING ACTIVITIES

Progettazione, produzione, vendita e assistenza di componenti e controlli elettronici per pompe, elettropompe e gruppi di pompaggio per acqua fredda e calda ad uso civile, industriale ed agricolo
Design, production, sale and assistance of components and electronic controls for pumps, electropumps, and pump sets for cold and hot water for civil, industrial and agricultural use

Riferirsi al manuale della qualità per l'applicabilità dei requisiti della norma ISO 9001:2008
Refer to quality manual for details of applications to ISO 9001:2008 requirements

IL PRESENTE CERTIFICATO E' SOGGETTO AL RISPETTO DEL
REGOLAMENTO PER LA CERTIFICAZIONE DEI SISTEMI DI GESTIONE.
THE USE AND THE VALIDITY OF THE CERTIFICATE SHALL SATISFY THE
REQUIREMENTS OF THE RULES FOR CERTIFICATION OF MANAGEMENT SYSTEMS

| DATE: | PRIMA CERTIFICAZIONE FIRST CERTIFICATION | EMISSIONE CORRENTE CURRENT ISSUE | SCADENZA EXPIRY |
|-------|---|-------------------------------------|--------------------|
| | 1995-07-17 | 2013-09-23 | 2015-06-15 |

Spavetti
ING S.p.A. - VIA GUNTILIANO, 43 - 20138 MILANO



EA: 18, 19

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PER LA SICUREZZA
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CISQ is the Italian Federation of management system Certification Bodies.



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TECHNICAL DATA

Operating range:

from 0.4 to 10.5 m³/h with head up to 62 metres.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range:

for domestic use: from 0°C to +35°C (EN 60335-2-41)

for other use: from 0°C to +40°C

Maximum ambient temperature: +40°C

Maximum operating pressure: 8 bar (800 kPa)

Installation: fixed in a horizontal position.

Special executions on request: different frequencies and/or voltage.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220/240 V / 50 Hz
three phase 230/400 V - 50 Hz

APPLICATIONS

Self priming centrifugal pump with excellent suction capacity even in the presence of air bubbles.

Suitable for pumping water with low levels of sandy impurities.

Especially used in domestic water supply installations. Suitable for small farms and gardening, small scale industrial services and where self priming is necessary.

CONSTRUCTIONAL FEATURES OF THE PUMP

Cast-iron motor support and pump body.

Motor support in die cast aluminium.

Impeller, diffuser, venturi tube and sand guard in technopolymer

Stainless steel wear ring.

Carbon/ceramic mechanical seal.

CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous type, closed, with external air cooling.

Rotor mounted on oversized greased-for-life ball bearings, to guarantee low noise and long life.

Incorporated thermo-amperometric protection and permanently inserted capacitor in the single phase version.

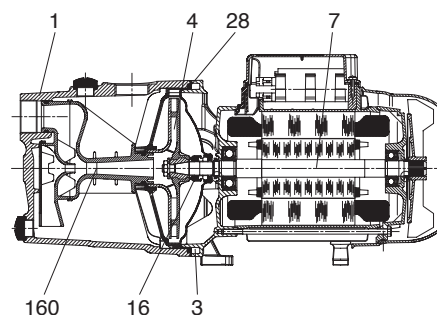
It is recommended to use overload protection for three phase motor protection, in compliance with current legislation.

Manufactured pursuant to CEI 2-3 and CEI 61-69 (EN 60335-2-41).

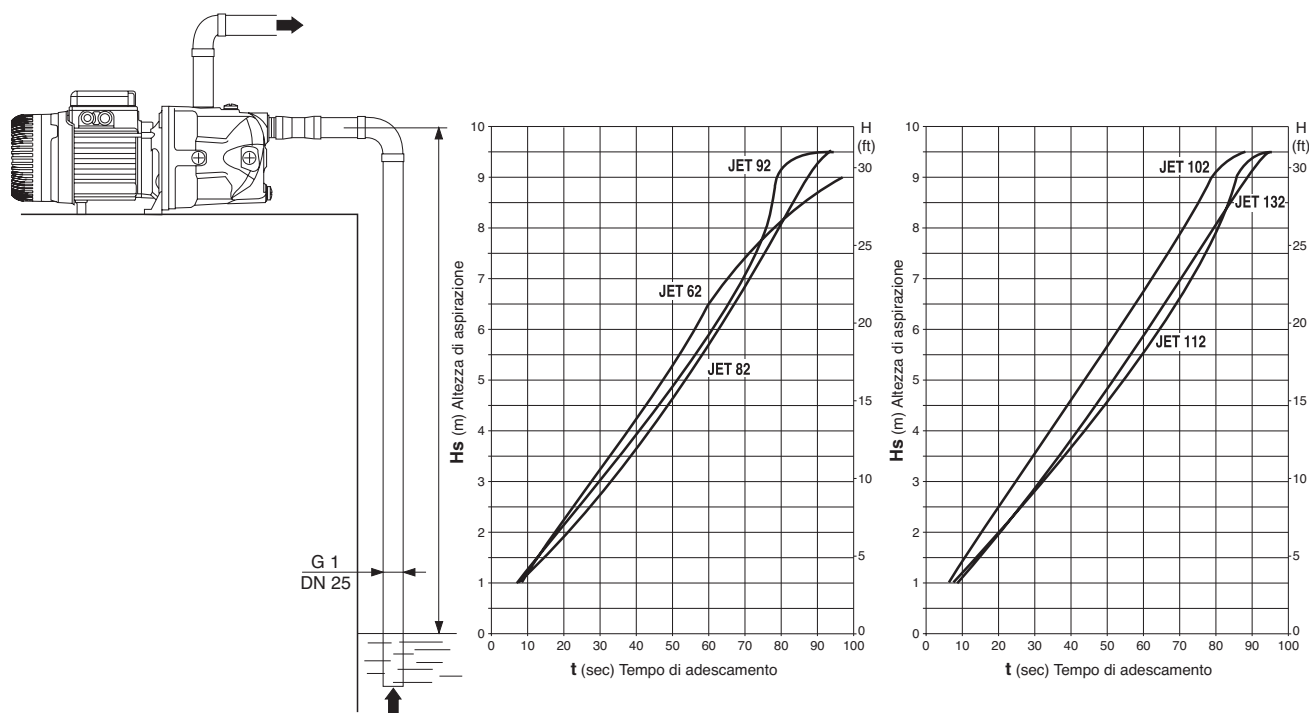
MATERIALS

| N° | PARTS * | MATERIALS |
|-----|-------------------------------|---|
| 1 | PUMP BODY | 200 UNI ISO 185 CAST IRON |
| 3 | FRAME | DIE CAST ALUMINIUM |
| 4 | IMPELLER | TECHNOPOLYMER A |
| 7 | SHAFT WITH ROTOR | AISI 416 STAINLESS STEEL X12 CrS13 - UNI 6900/71 |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |
| 160 | VENTURI DIFFUSER NOZZEL GROUP | TECHNOPOLYMER A |

* In contact with liquid



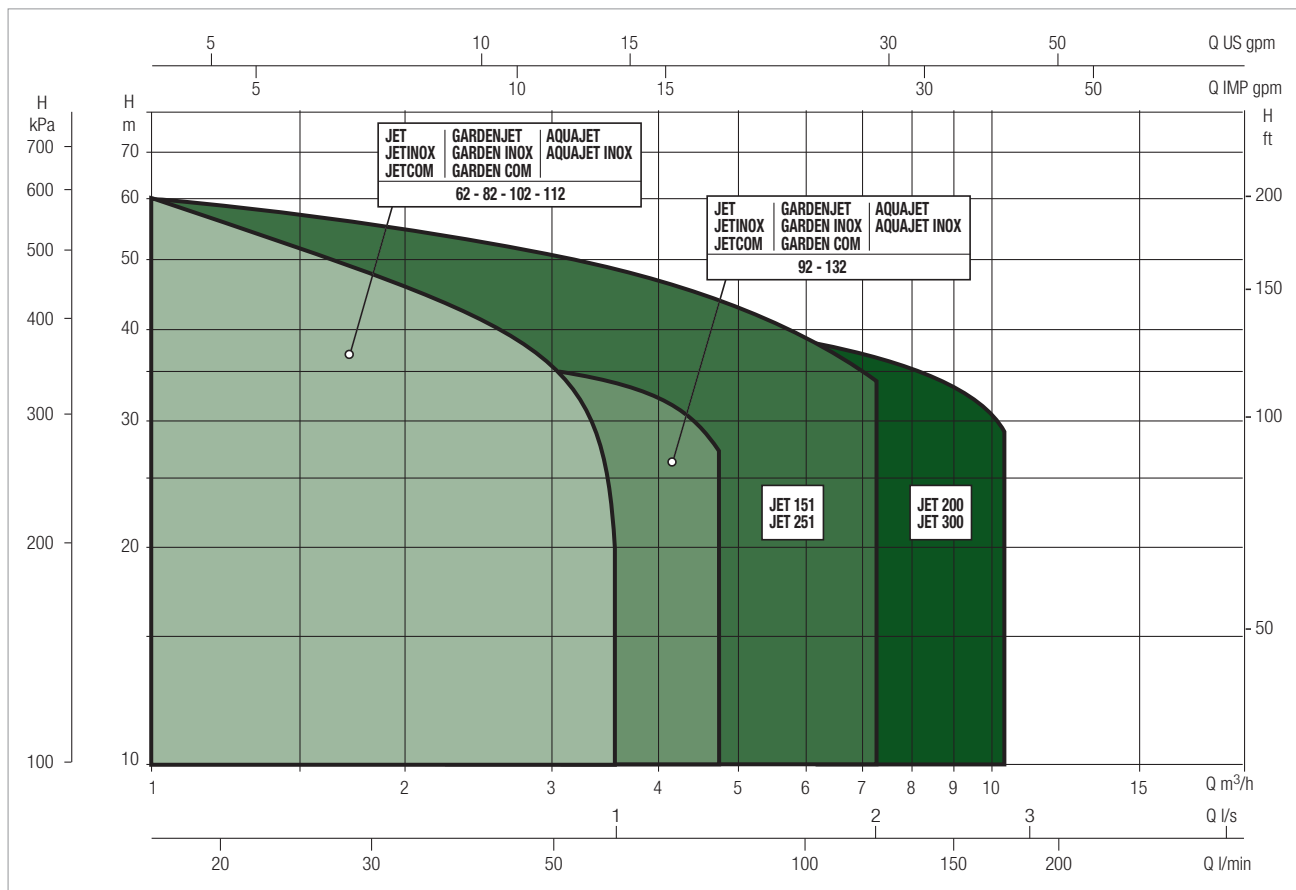
SELF PRIMING CAPACITY



PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

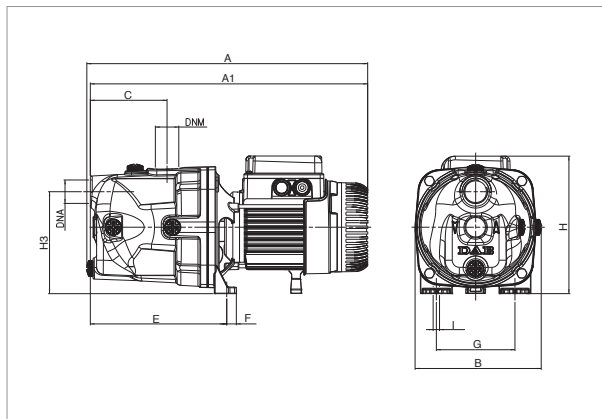


JET SELECTION TABLE

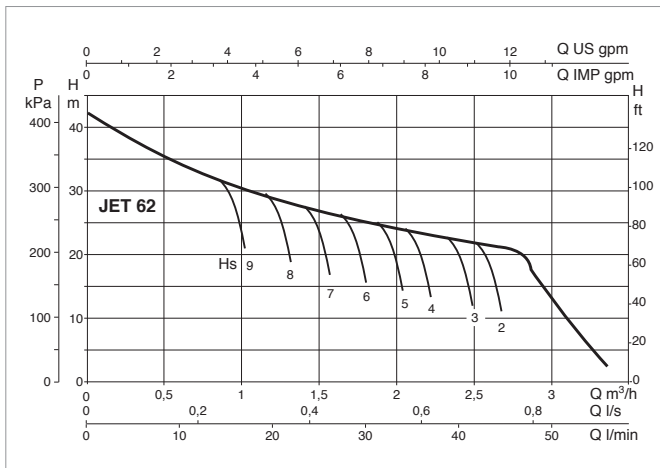
| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3 | 3.6 | 4.2 | 4.8 |
|-----------|---------------------|------|------|------|------|------|------|------|------|------|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| JET 62 M | H (m) | 42 | 35 | 29.2 | 25.6 | 22.9 | 21.1 | | | |
| JET 82 M | | 47 | 40 | 34 | 30 | 26.2 | 23.5 | 20.3 | | |
| JET 82 T | | 47 | 40 | 34 | 30 | 26.2 | 23.5 | 20.3 | | |
| JET 102 M | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | |
| JET 102 T | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | |
| JET 112 M | | 61 | 54 | 47.8 | 42.8 | 38.8 | 34.8 | 20 | | |
| JET 112 T | | 61 | 54 | 47.8 | 42.8 | 38.8 | 34.8 | 20 | | |
| JET 92 M | | 36.2 | 33.5 | 31 | 28.4 | 26 | 24 | 21.8 | 19.6 | 17 |
| JET 132 M | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 |
| JET 132 T | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 |

JET 62 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

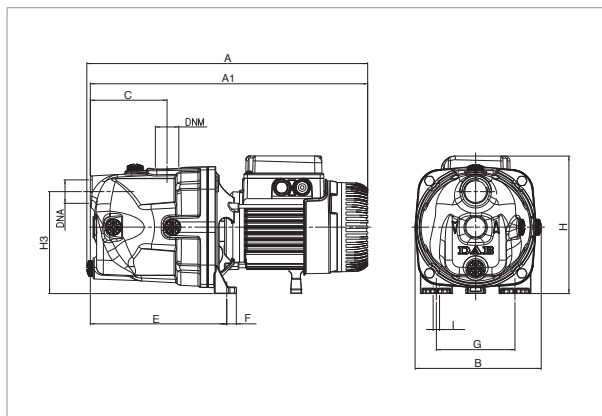


| MODEL | ELECTRICAL DATA | | | | | | |
|----------|-----------------------|--------------|------------|-----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JET 62 M | 1x220-240 V ~ | 0.72 | 0.44 | 0.6 | 3.12 | 12.5 | 450 |

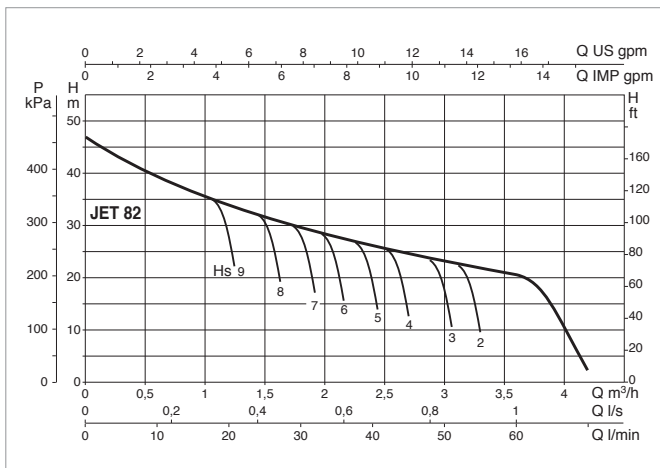
| MODEL | A | A1 | B | C | E | F | G | H | H3 | I Ø | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|--------|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| JET 62 | 395 | 390 | 178 | 108 | 192 | 14 | 111 | 193 | 144 | 9 | 1" | 1" | 470 | 240 | 240 | 0.022 | 10.5 |

JET 82 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

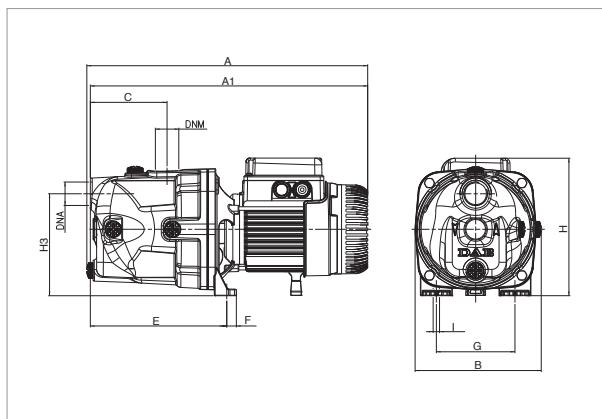


| MODEL | ELECTRICAL DATA | | | | | | |
|----------|-----------------------|--------------|------------|-----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JET 82 M | 1x220-240 V ~ | 0.85 | 0.6 | 0.8 | 3.8 | 12.5 | 450 |
| JET 82 T | 3x230-400 V ~ | 0.86 | 0.6 | 0.8 | 2.8-1.6 | - | - |

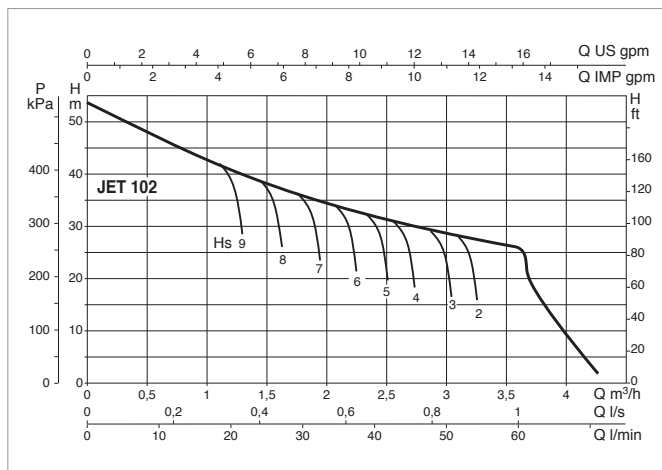
| MODEL | A | A1 | B | C | E | F | G | H | H3 | I Ø | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|--------|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| JET 82 | 395 | 395 | 178 | 108 | 192 | 14 | 111 | 193 | 144 | 9 | 1" | 1" | 470 | 240 | 240 | 0.022 | 10.7 |

JET 102 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

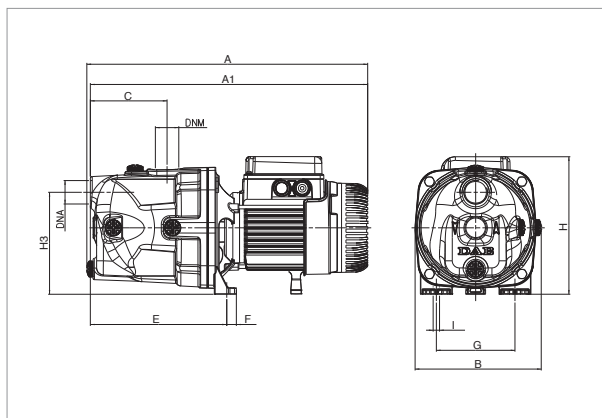


| MODEL | ELECTRICAL DATA | | | | | | |
|-----------|-----------------------|--------------|------------|----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JET 102 M | 1x220-240 V ~ | 1.13 | 0.75 | 1 | 5.1 | 16 | 450 |
| JET 102 T | 3x230-400 V ~ | 1.04 | 0.75 | 1 | 3.3-1.9 | - | - |

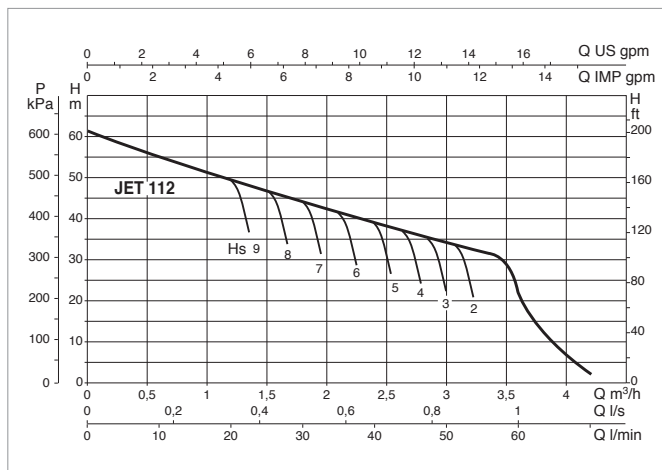
| MODEL | A | A1 | B | C | E | F | G | H | H3 | I Ø | DNA GAS | DNA GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|---------|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| JET 102 | 414 | 409 | 178 | 108 | 197 | 14 | 111 | 203 | 144 | 9 | 1" | 1" | 470 | 240 | 240 | 0.022 | 12.5 |

JET 112 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

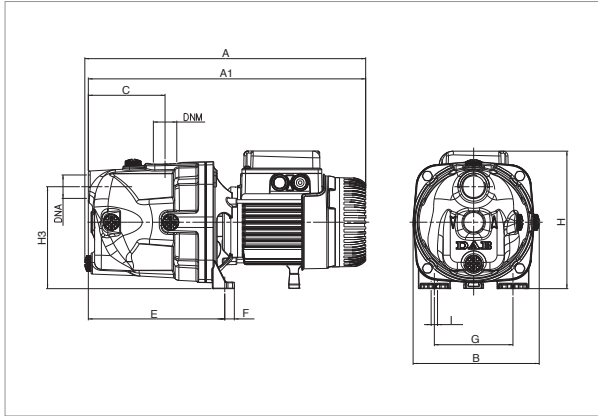


| MODEL | ELECTRICAL DATA | | | | | | |
|-----------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JET 112 M | 1x220-240 V ~ | 1.4 | 1 | 1.36 | 6.2 | 25 | 450 |
| JET 112 T | 3x230-400 V ~ | 1.35 | 1 | 1.36 | 4.3-2.5 | - | - |

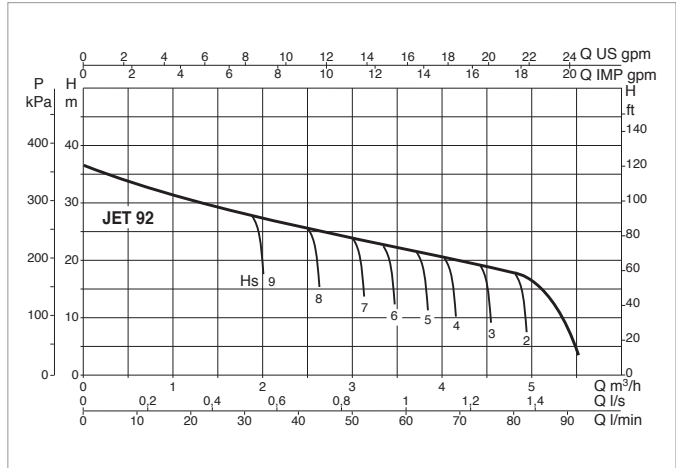
| MODEL | A | A1 | B | C | E | F | G | H | H3 | I Ø | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|-----------|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| JET 112 M | 414 | 409 | 178 | 108 | 192 | 14 | 111 | 203 | 144 | 9 | 1" | 1" | 470 | 240 | 240 | 0.022 | 13.5 |
| JET 112 T | 430 | 409 | 178 | 108 | 192 | 14 | 111 | 203 | 144 | 9 | 1" | 1" | 470 | 240 | 240 | 0.022 | 15.1 |

JET 92 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

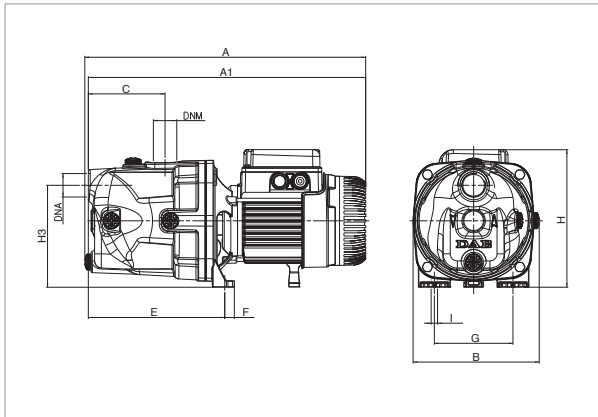


| MODEL | ELECTRICAL DATA | | | | | | |
|----------|-----------------------|--------------|------------|----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JET 92 M | 1x220-240 V ~ | 0.94 | 0.75 | 1 | 4.2 | 14 | 450 |

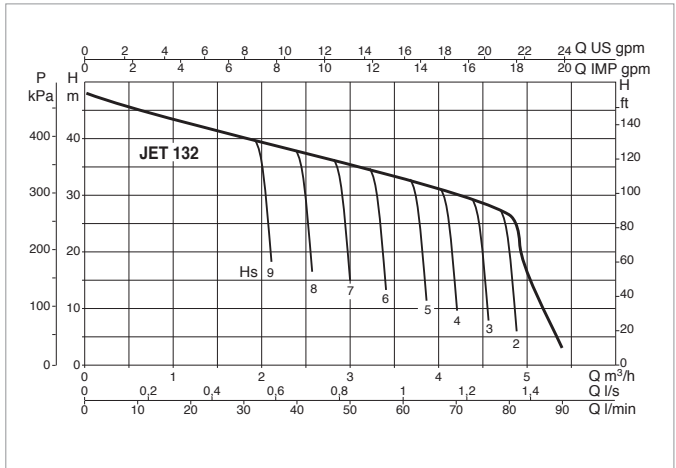
| MODEL | A | A1 | B | C | E | F | G | H | H3 | I Ø | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|--------|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| JET 92 | 395 | 390 | 178 | 108 | 192 | 14 | 111 | 193 | 144 | 9 | 1" | 1" | 470 | 240 | 240 | 0.022 | 11.7 |

JET 132 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.



| MODEL | ELECTRICAL DATA | | | | | | |
|-----------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JET 132 M | 1x220-240 V ~ | 1.49 | 1 | 1.36 | 6.6 | 25 | 450 |
| JET 132 T | 3x230-400 V ~ | 1.43 | 1 | 1.36 | 4.7-2.7 | - | -- |

| MODEL | A | A1 | B | C | E | F | G | H | H3 | I Ø | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|-----------|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| JET 132 M | 414 | 409 | 263 | 108 | 192 | 14 | 111 | 203 | 144 | 9 | 1" | 1" | 470 | 240 | 240 | 0.022 | 13.5 |
| JET 132 T | 430 | 409 | 263 | 108 | 192 | 14 | 111 | 203 | 144 | 9 | 1" | 1" | 470 | 240 | 240 | 0.022 | 15.1 |

JET 151-251-200-300

SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS



JET 151-251



JET 200-300

TECHNICAL DATA

Operating range:

from 0.4 to 10.5 m³/h with head up to 62 metres.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range:

for domestic use: from 0°C to +35°C (EN 60335-2-41)

for other use: from 0°C to +40°C

Maximum ambient temperature: +40°C

Maximum operating pressure: 8 bar (800 kPa)

Installation: fixed in a horizontal position.

Special executions on request: different frequencies and/or voltage.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220/240 V / 50 Hz
three phase 230/400 V - 50 Hz

APPLICATIONS

Self priming centrifugal pump with excellent suction capacity even in the presence of air bubbles.

Suitable for pumping water with low levels of sandy impurities.

Especially used in domestic water supply installations.

Suitable for small farms and gardening, small scale industrial services and where self priming is necessary.

CONSTRUCTIONAL FEATURES OF THE PUMP

Cast-iron motor support and pump body.

Impeller, diffuser, venturi tube and sand guard in technopolymer

Twin impeller on the JET 151 and 251 versions.

Stainless steel wear ring.

Carbon/ceramic mechanical seal.

CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous type, closed, with external air cooling.

Rotor mounted on oversized greased-for-life ball bearings, to guarantee low noise and long life.

Incorporated thermo-amperometric protection and permanently inserted capacitor in the single phase version.

It is recommended to use overload protection for three phase motor protection, in compliance with current legislation.

Manufactured pursuant to CEI 2-3 and CEI 61-69 (EN 60335-2-41).

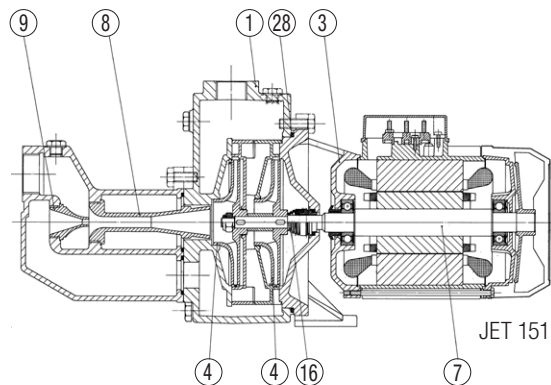
JET 151-251-200-300

SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS

MATERIALS

| N° | PARTS* | MATERIALS |
|-----|----------------------------------|---|
| 1 | PUMP BODY | GJL 200 UNI EN 1561 CAST IRON |
| 3 | FRAME | GJL 200 UNI EN 1561 CAST IRON |
| 4 | IMPELLER | PPO-GF 20 (Noryl™) |
| 7 | SHAFT WITH ROTOR | AISI 303 STAINLESS STEEL X8CrNiS18-9 UNI EN 10088 (UNI 6900: 71) |
| 8-9 | VENTURI DIFFUSER NOZZLE GROUP | PPO-GF 20 (Noryl™) |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |

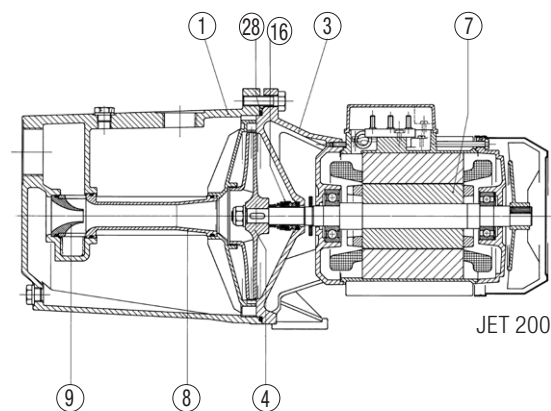
* In contact with liquid



MATERIALS

| N° | PARTS* | MATERIALS |
|-----|----------------------------------|---|
| 1 | PUMP BODY | GJL 200 UNI EN 1561 CAST IRON |
| 3 | FRAME | GJL 200 UNI EN 1561 CAST IRON |
| 4 | IMPELLER | PPO-GF 20 (Noryl™) |
| 7 | SHAFT WITH ROTOR | AISI 303 STAINLESS STEEL X8CrNiS18-9 UNI EN 10088 (UNI 6900: 71) |
| 8-9 | VENTURI DIFFUSER NOZZLE GROUP | PPO-GF 20 (Noryl™) |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |

* In contact with liquid



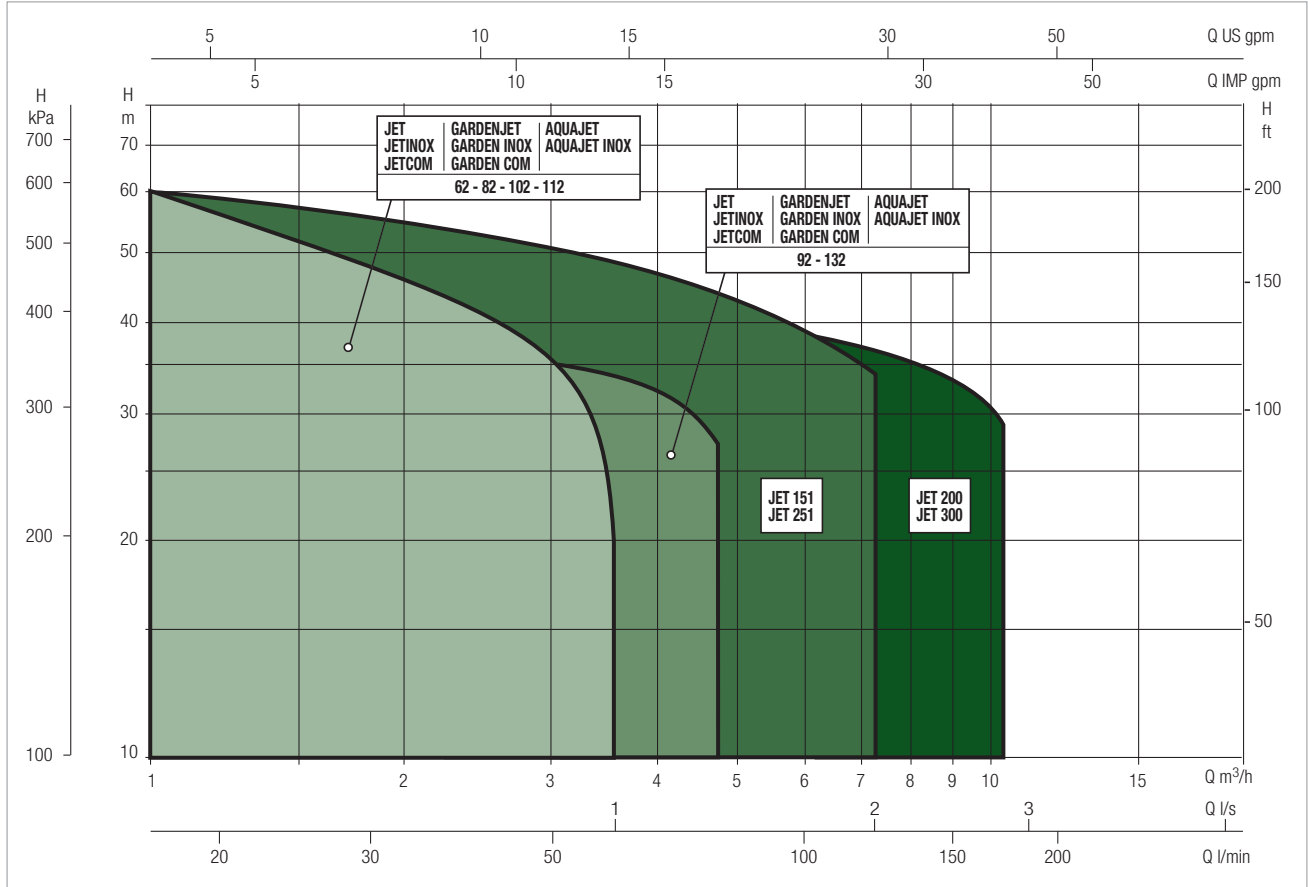
JET 151-251-200-300

SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS

PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

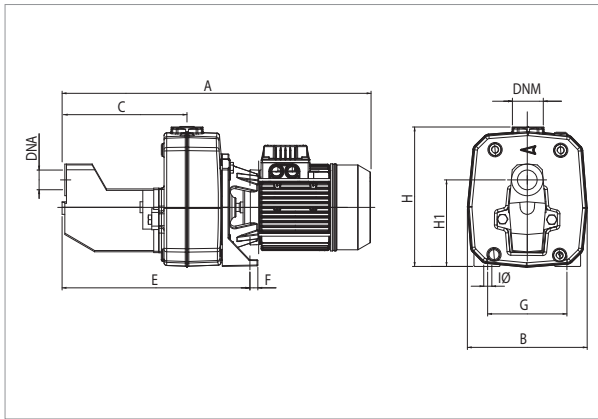


SELECTION TABLE - JET 151-251-200-300

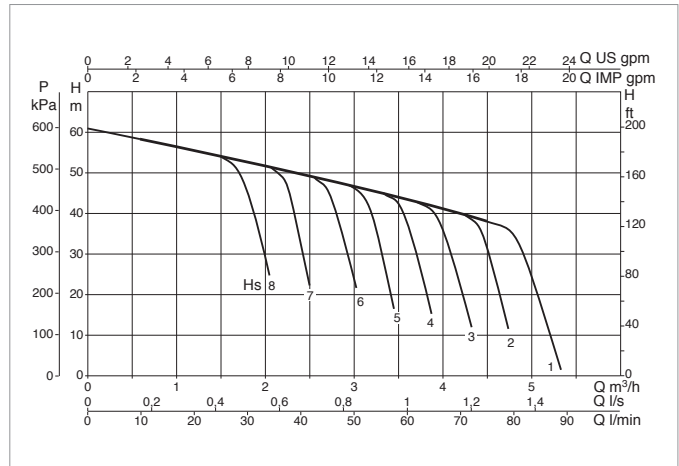
| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 | 6 | 7.2 | 9 | 9.6 | 10.5 |
|-----------|---------------------|----|------|-----|------|------|------|------|-----|------|------|------|-----|------|------|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | 150 | 160 | 175 |
| JET 151 M | H (m) | 61 | 58.2 | 56 | 53 | 50 | 46 | 43 | 36 | | | | | | |
| JET 151 T | | 61 | 58.2 | 56 | 53 | 50 | 46 | 43 | 36 | | | | | | |
| JET 251 M | | 62 | 60 | 58 | 56 | 54 | 51 | 48.5 | 46 | 43.5 | 39 | 34.2 | | | |
| JET 251 T | | 62 | 60 | 58 | 56 | 54 | 51 | 48.5 | 46 | 43.5 | 39 | 34.2 | | | |
| JET 200 M | | 41 | | | 37.5 | 36.5 | 35.2 | 34 | 33 | 31.8 | 29.5 | 27.2 | 24 | 22.8 | 21.3 |
| JET 200 T | | 41 | | | 37.5 | 36.5 | 35.2 | 34 | 33 | 31.8 | 29.5 | 27.2 | 24 | 22.8 | 21.3 |
| JET 300 M | | 51 | | | 48 | 47 | 46 | 44.5 | 43 | 42 | 40 | 37 | 33 | 32 | 29 |
| JET 300 T | | 51 | | | 48 | 47 | 46 | 44.5 | 43 | 42 | 40 | 37 | 33 | 32 | 29 |

JET 151 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

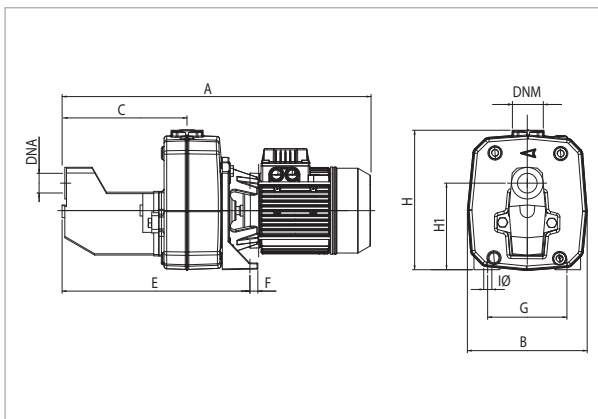


| MODEL | ELECTRICAL DATA | | | | | | |
|-----------|-----------------------|--------------|------------|-----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JET 151 M | 1x220-240 V ~ | 1.6 | 1.1 | 1.5 | 7.2 | 31.5 | 450 |
| JET 151 T | 3x230-400 V ~ | 1.6 | 1.1 | 1.5 | 5.2-3 | - | - |

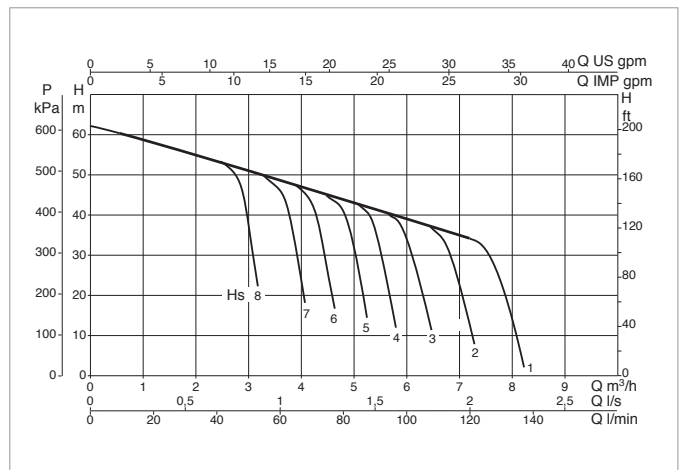
| MODEL | A | B | C | E | F | G | I Ø | H | H1 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|---------|-----|-----|-----|-----|----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | L/A | L/B | H | | |
| JET 151 | 558 | 210 | 221 | 350 | 20 | 145 | 11 | 255 | 158 | 1 1/4" | 1" | 612 | 248 | 279 | 0.042 | 31 |

JET 251 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

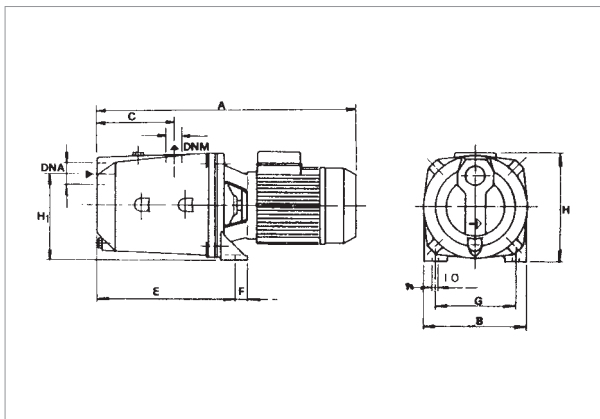


| MODEL | ELECTRICAL DATA | | | | | | |
|-----------|-----------------------|--------------|------------|-----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JET 251 M | 1x220-240 V ~ | 2 | 1.85 | 2.5 | 10 | 40 | 450 |
| JET 251 T | 3x230-400 V ~ | 2 | 1.85 | 2.5 | 6.9-4 | - | - |

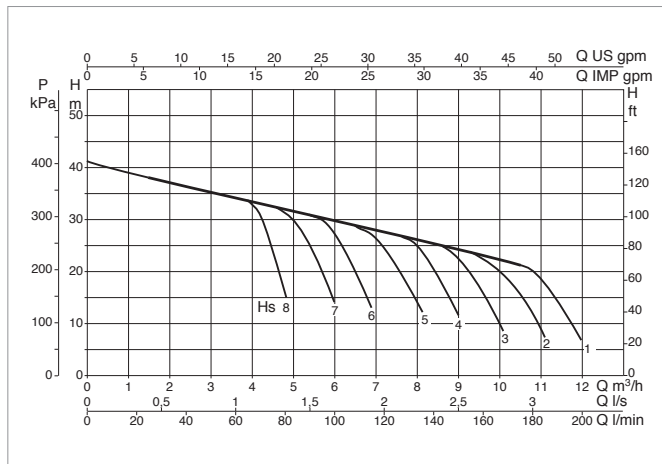
| MODEL | A | B | C | E | F | G | I Ø | H | H1 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|-----------|-----|-----|-----|-----|----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | L/A | L/B | H | | |
| JET 251 M | 632 | 210 | 221 | 350 | 20 | 145 | 11 | 255 | 158 | 1 1/4" G | 1" G | 657 | 248 | 279 | 0.045 | 35 |
| JET 251 T | 558 | 210 | 221 | 350 | 20 | 145 | 11 | 255 | 158 | 1 1/4" G | 1" G | 612 | 248 | 279 | 0.042 | 31 |

JET 200 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

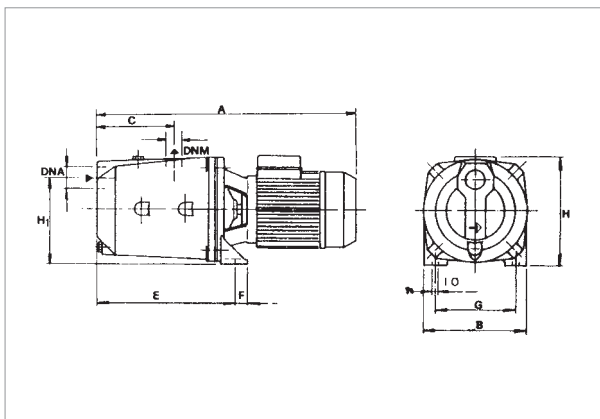


| MODEL | ELECTRICAL DATA | | | | | | |
|-----------|-----------------------|--------------|------------|----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JET 200 M | 1x220-240 V ~ | 2.0 | 1.5 | 2 | 9 | 31.5 | 450 |
| JET 200 T | 3x230-400 V ~ | 2.0 | 1.5 | 2 | 6.8-3.9 | - | - |

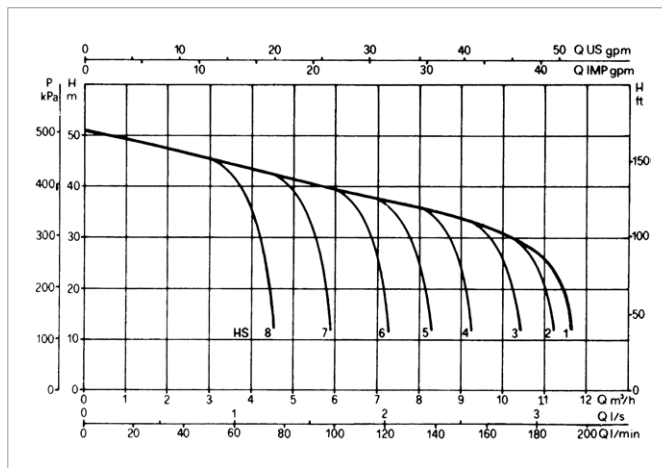
| MODEL | A | B | C | E | F | G | I Ø | H | H1 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|---------|-----|-----|-----|-----|----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | L/A | L/B | H | | |
| JET 200 | 521 | 214 | 151 | 282 | 20 | 160 | 11 | 227 | 175 | 1 1/2" | 1 1/4" | 612 | 248 | 279 | 0.042 | 27 |

JET 300 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.



| MODEL | ELECTRICAL DATA | | | | | | |
|-----------|-----------------------|--------------|------------|----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JET 300 M | 1x220-240 V ~ | 2.7 | 2.2 | 3 | 12 | 40 | 450 |
| JET 300 T | 3x230-400 V ~ | 2.7 | 2.2 | 3 | 8.5-4.9 | - | - |

| MODEL | A | B | C | E | F | G | I Ø | H | H1 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|-----------|-----|-----|-----|-----|----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | L/A | L/B | H | | |
| JET 300 M | 521 | 214 | 151 | 282 | 20 | 160 | 11 | 235 | 175 | 1 1/2" | 1 1/4" | 612 | 248 | 279 | 0.045 | 31.5 |
| JET 300 T | 595 | 214 | 151 | 282 | 20 | 160 | 11 | 227 | 175 | 1 1/2" | 1 1/4" | 657 | 248 | 279 | 0.042 | 30 |

**TECHNICAL DATA****Operating range:**

from 0.4 to 10.5 m³/h with head up to 62 metres.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral.

Liquid temperature range:

for domestic use: from 0°C to +35°C (EN 60335-2-41)

for other use: from 0°C to +40°C

Maximum suction depth: 8 metres.

Maximum ambient temperature: +50°C

Maximum operating pressure: 8 bar (800 kPa)

Installation: fixed in a horizontal position.

Special executions on request: alternative voltages and/or frequencies.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220-240 V / 50 Hz
three phase 230-400 V / 50 Hz

APPLICATIONS

Self priming centrifugal pump with excellent suction capacity even in the presence of air bubbles.

Suitable for pumping water with low levels of sandy impurities.

Especially used in domestic water supply installations.

Suitable for small farms and gardening, small scale industrial services and where self priming is necessary.

CONSTRUCTIONAL FEATURES OF THE PUMP

Pump body, seal holder cover and wear ring in stainless steel.

Motor support in die cast aluminium.

Impeller, diffuser, venturi tube in technopolymer.

Carbon/ceramic mechanical seal.

CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous type, closed, with external air cooling.

Rotor mounted on oversized greased-for-life ball bearings, to guarantee low noise and long life.

Incorporated thermo-amperometric protection and permanently inserted capacitor in the single phase version.

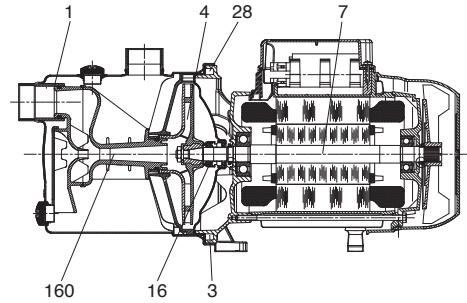
It is recommended to use overload protection for three phase motor protection, in compliance with current legislation.

Manufacture pursuant to CEI 2-3 and CEI 61-69 (EN 60335-2-41) standard.

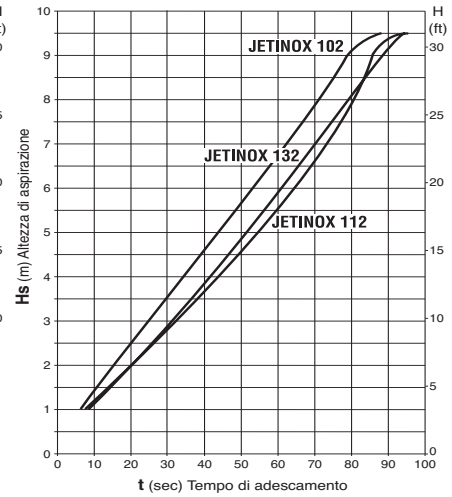
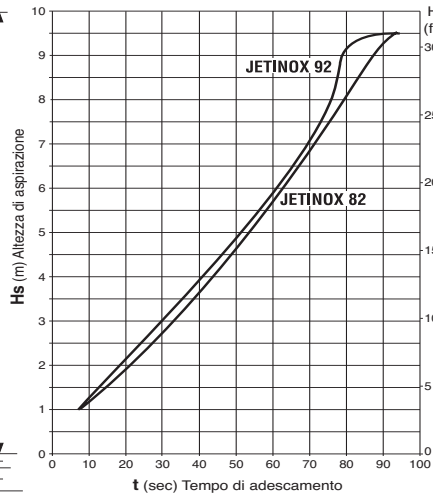
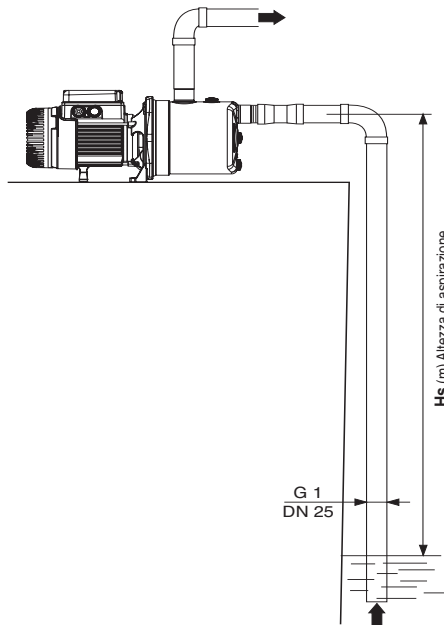
MATERIALS

| N° | PARTS * | MATERIALS |
|-----|-------------------------------|--|
| 1 | PUMP BODY | AISI 304 STAINLESS STEEL X5 CRNi 1810 - UNI 6900/71 |
| 4 | IMPELLER | TECHNOPOLYMER A |
| 7 | SHAFT WITH ROTOR | AISI 416 STAINLESS STEEL X12 CrS13 - UNI 6900/71 |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |
| 36 | SEAL HOLDER COVER | AISI 304 STAINLESS STEEL X5 CRNi 1810 - UNI 6900/71 |
| 160 | VENTURI DIFFUSER NOZZEL GROUP | TECHNOPOLYMER A |

* In contact with liquid



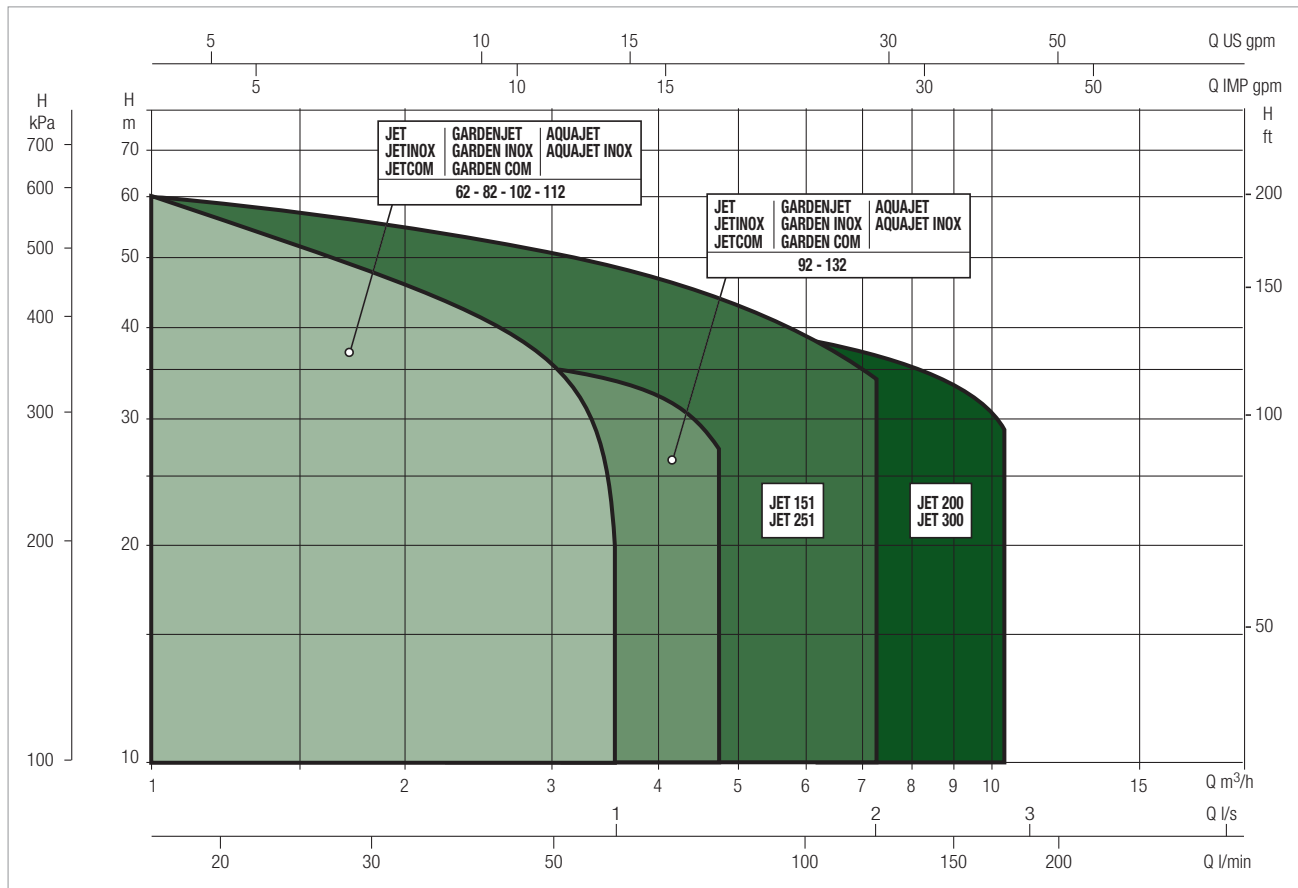
SELF PRIMING CAPACITY



PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

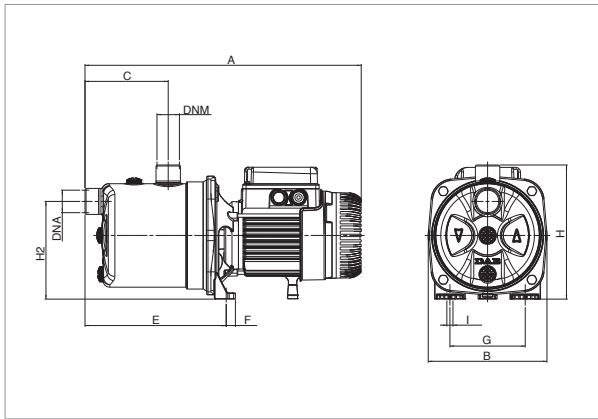


JETINOX SELECTION TABLE

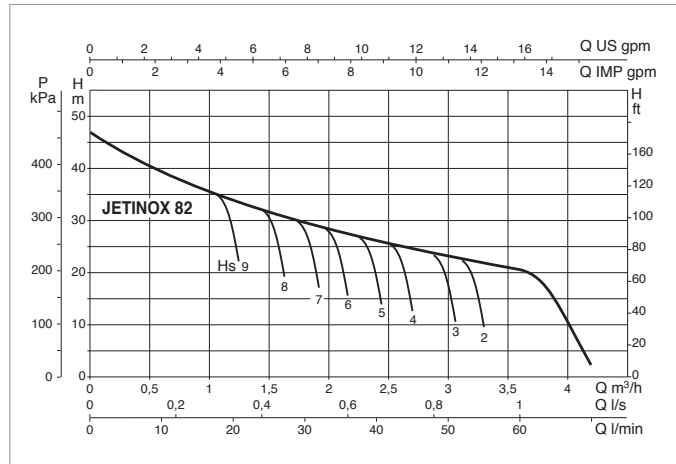
| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 |
|---------------|---------------------|------|------|------|------|------|------|------|------|------|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| JETINOX 82 M | H (m) | 47 | 40 | 34 | 30 | 26.2 | 23.5 | 20.3 | | |
| JETINOX 82 T | | 47 | 40 | 34 | 30 | 26.2 | 23.5 | 20.3 | | |
| JETINOX 102 M | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | |
| JETINOX 102 T | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | |
| JETINOX 112 M | | 61 | 54 | 47.8 | 42.8 | 38.8 | 34.8 | 20 | | |
| JETINOX 112 T | | 61 | 54 | 47.8 | 42.8 | 38.8 | 34.8 | 20 | | |
| JETINOX 92 M | | 36.2 | 33.5 | 31 | 28.4 | 26 | 24 | 21.8 | 19.6 | 17.5 |
| JETINOX 132 M | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 |
| JETINOX 132 T | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 |

JET 82 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +50°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

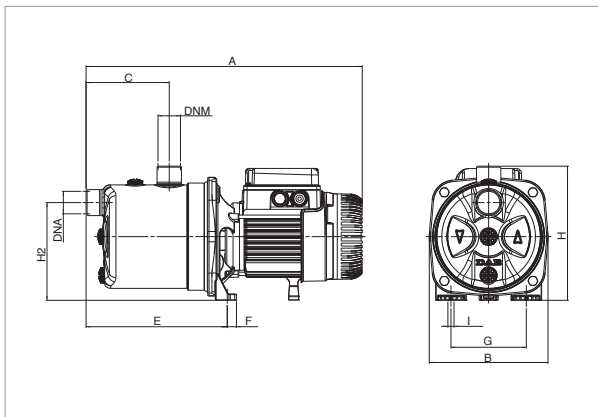


| MODEL | ELECTRICAL DATA | | | | | | |
|--------------|-----------------------|--------------|------------|-----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JETINOX 82 M | 1x220-240 V ~ | 0.85 | 0.6 | 0.8 | 3.8 | 12.5 | 450 |
| JETINOX 82 T | 3x230-400 V ~ | 0.86 | 0.6 | 0.8 | 2.8-1.6 | - | - |

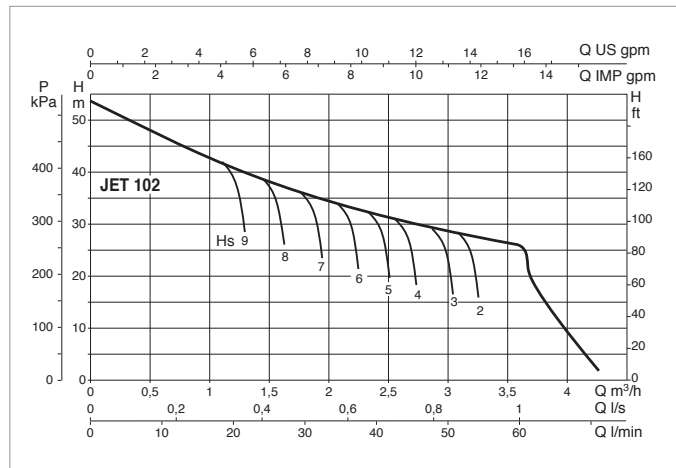
| MODEL | A | B | C | E | F | G | H | H1 | H2 | I Ø | L | DNG GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|------------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|---|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | L/A | L/B | H | | |
| JETINOX 82 | 406 | 174 | 122 | 207 | 14 | 111 | 197 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 7.8 |

JET 102 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +50°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

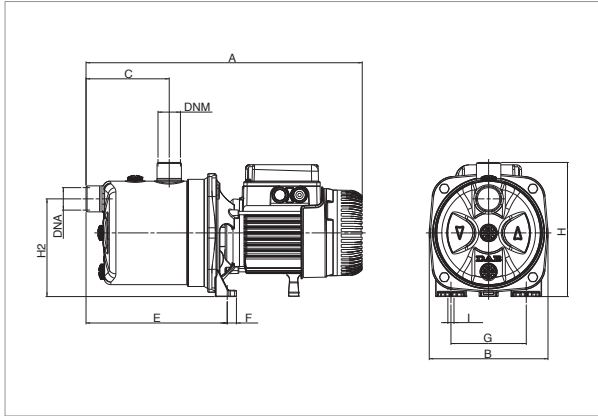


| MODEL | ELECTRICAL DATA | | | | | | |
|---------------|-----------------------|--------------|------------|----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JETINOX 102 M | 1x220-240 V ~ | 1.13 | 0.75 | 1 | 5.1 | 16 | 450 |
| JETINOX 102 T | 3x230-400 V ~ | 1.04 | 0.75 | 1 | 3.3-1.9 | - | - |

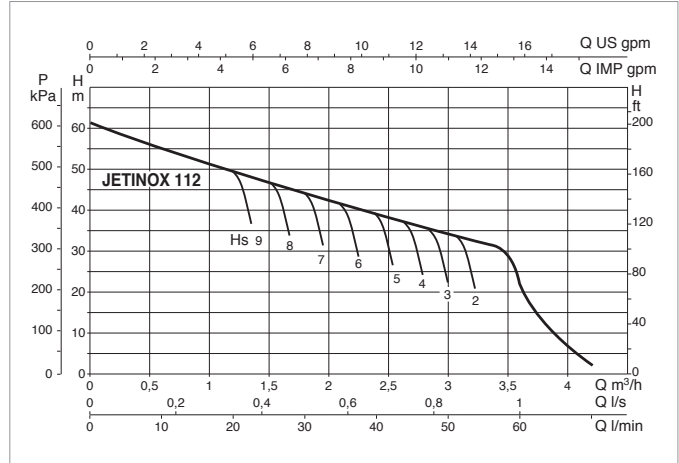
| MODEL | A | B | C | E | F | G | H | H1 | H2 | I Ø | L | DNG GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|-------------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|---|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | L/A | L/B | H | | |
| JETINOX 102 | 424 | 174 | 122 | 207 | 14 | 111 | 197 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 9.6 |

JET 112 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +50°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

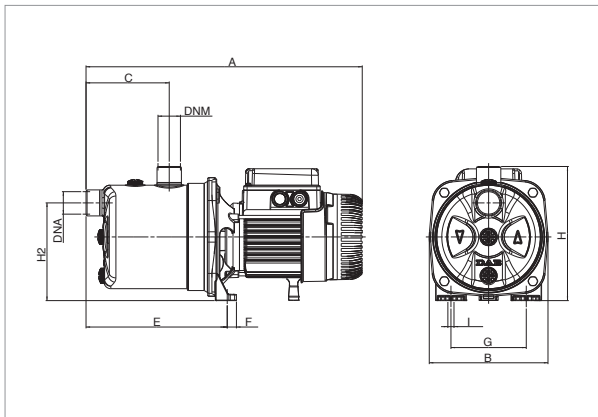


| MODEL | ELECTRICAL DATA | | | | | | |
|---------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JETINOX 112 M | 1x220-240 V ~ | 1.4 | 1 | 1.36 | 6.2 | 25 | 450 |
| JETINOX 112 T | 3x230-400 V ~ | 1.35 | 1 | 1.36 | 4.3-2.5 | - | - |

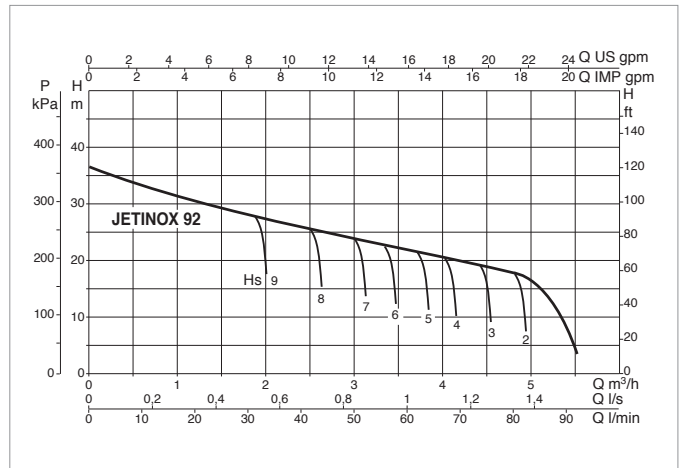
| MODEL | A | B | C | E | F | G | H | H1 | H2 | I Ø | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|---------------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|---|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | L/A | L/B | H | | |
| JETINOX 112 M | 424 | 174 | 122 | 207 | 14 | 111 | 197 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 10.6 |
| JETINOX 112 T | 440 | 174 | 122 | 207 | 14 | 111 | 197 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 11.7 |

JET 92 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +50°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

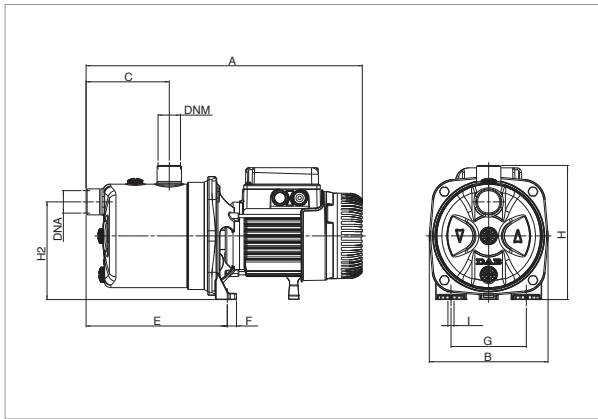


| MODEL | ELECTRICAL DATA | | | | | | |
|--------------|-----------------------|--------------|------------|----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JETINOX 92 M | 1x220-240 V ~ | 0.94 | 0.75 | 1 | 4.2 | 14 | 450 |

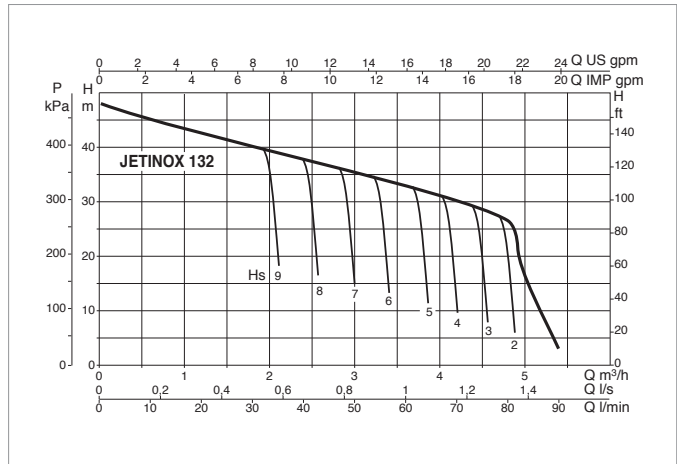
| MODEL | A | B | C | E | F | G | H | H1 | H2 | I Ø | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|------------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|---|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | L/A | L/B | H | | |
| JETINOX 92 | 406 | 174 | 122 | 207 | 14 | 111 | 197 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 8.8 |

JET 132 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +50°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.



| MODEL | ELECTRICAL DATA | | | | | | |
|---------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JETINOX 132 M | 1x220-240 V ~ | 1.49 | 1 | 1.36 | 6.6 | 25 | 450 |
| JETINOX 132 T | 3x230-400 V ~ | 1.43 | 1 | 1.36 | 4.7-2.7 | - | - |

| MODEL | A | B | C | E | F | G | H | H1 | H2 | I Ø | L | DNa GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|---------------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|---|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | L/A | L/B | H | | |
| JETINOX 132 M | 424 | 174 | 122 | 207 | 14 | 111 | 197 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 10.6 |
| JETINOX 132 T | 440 | 174 | 122 | 207 | 14 | 111 | 197 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 12.6 |

**TECHNICAL DATA****Operating range:**

from 0.6 to 5.4 m³/h with head up to 54 metres.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral.

Liquid temperature range: from 0°C to +35°C for domestic use (EN 60335-2-41).

Maximum ambient temperature: +40°C

Maximum operating pressure: 6 bar (600 kPa)

Maximum suction depth: 8 metres.

Installation: fixed in a horizontal position.

Special executions on request: alternative voltages and/or frequencies.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220/240 V / 50 Hz
three phase 230/400 V - 50 Hz

APPLICATIONS

Self priming centrifugal pump with excellent suction capacity even in the presence of air bubbles.

Suitable for pumping water with low levels of sandy impurities.

Especially used in domestic water supply installations. Suitable for small farms and gardening, small scale industrial services and where self priming is necessary.

CONSTRUCTIONAL FEATURES OF THE PUMP

Pump body in technopolymer and motor support in die cast aluminium.

Impeller, diffuser, venturi tube and sand guard in technopolymer

Stainless steel wear ring.

Carbon/ceramic mechanical seal.

CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous type, closed, with external air cooling.

Rotor mounted on oversized greased-for-life ball bearings, to guarantee low noise and long life.

Incorporated thermo-amperometric protection and permanently inserted capacitor in the single phase version.

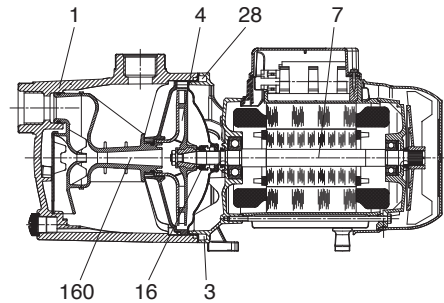
It is recommended to use overload protection for three phase motor protection, in compliance with current legislation.

Manufactured pursuant to CEI 2-3 and CEI 61-69 (EN 60335-2-41).

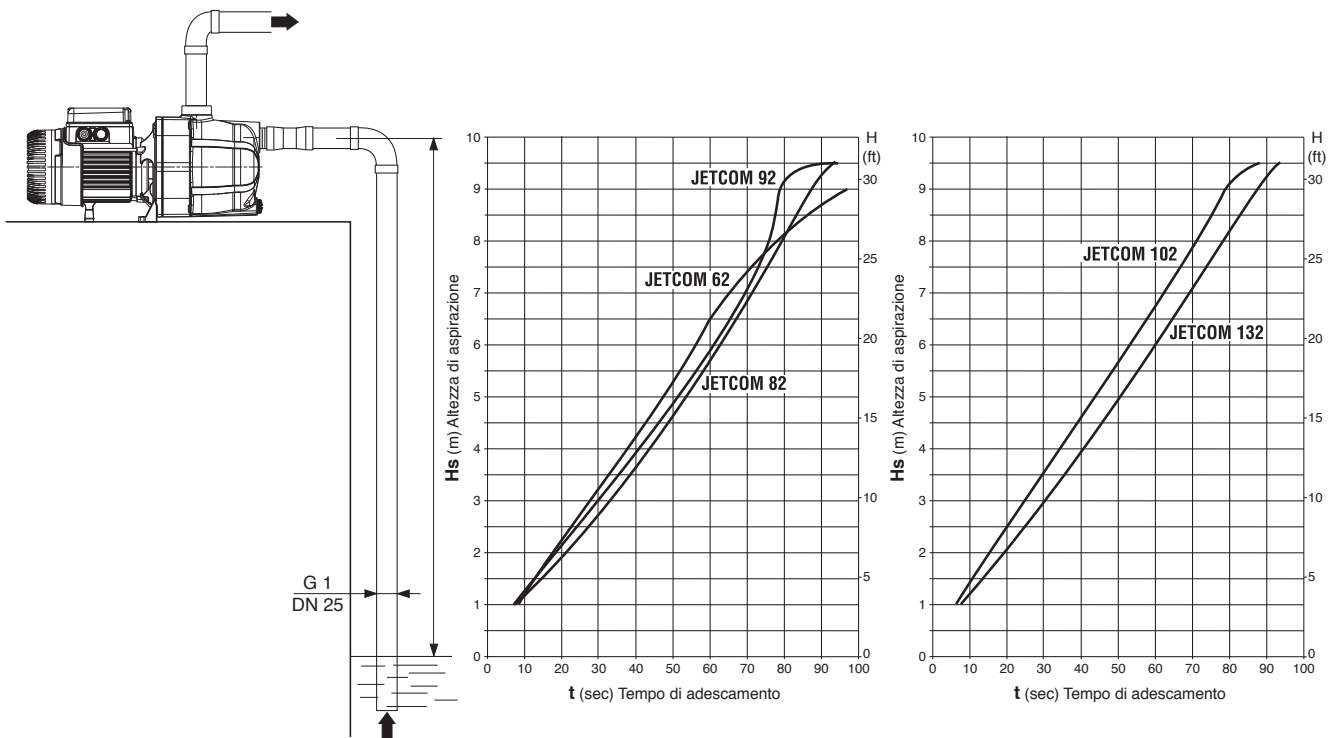
MATERIALS

| N° | PARTS * | MATERIALS |
|-----|-------------------------------|--|
| 1 | PUMP BODY | TECHNOPOLYMER A |
| 4 | IMPELLER | TECHNOPOLYMER A |
| 7 | SHAFT WITH ROTOR | AISI 416 STAINLESS STEEL X12 CrS13 - UNI 6900/71 |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |
| 36 | SEAL HOLDER COVER | AISI 304 STAINLESS STEEL X5 CRNi 1810 - UNI 6900/71 |
| 160 | VENTURI DIFFUSER NOZZEL GROUP | TECHNOPOLYMER A |

* In contact with liquid



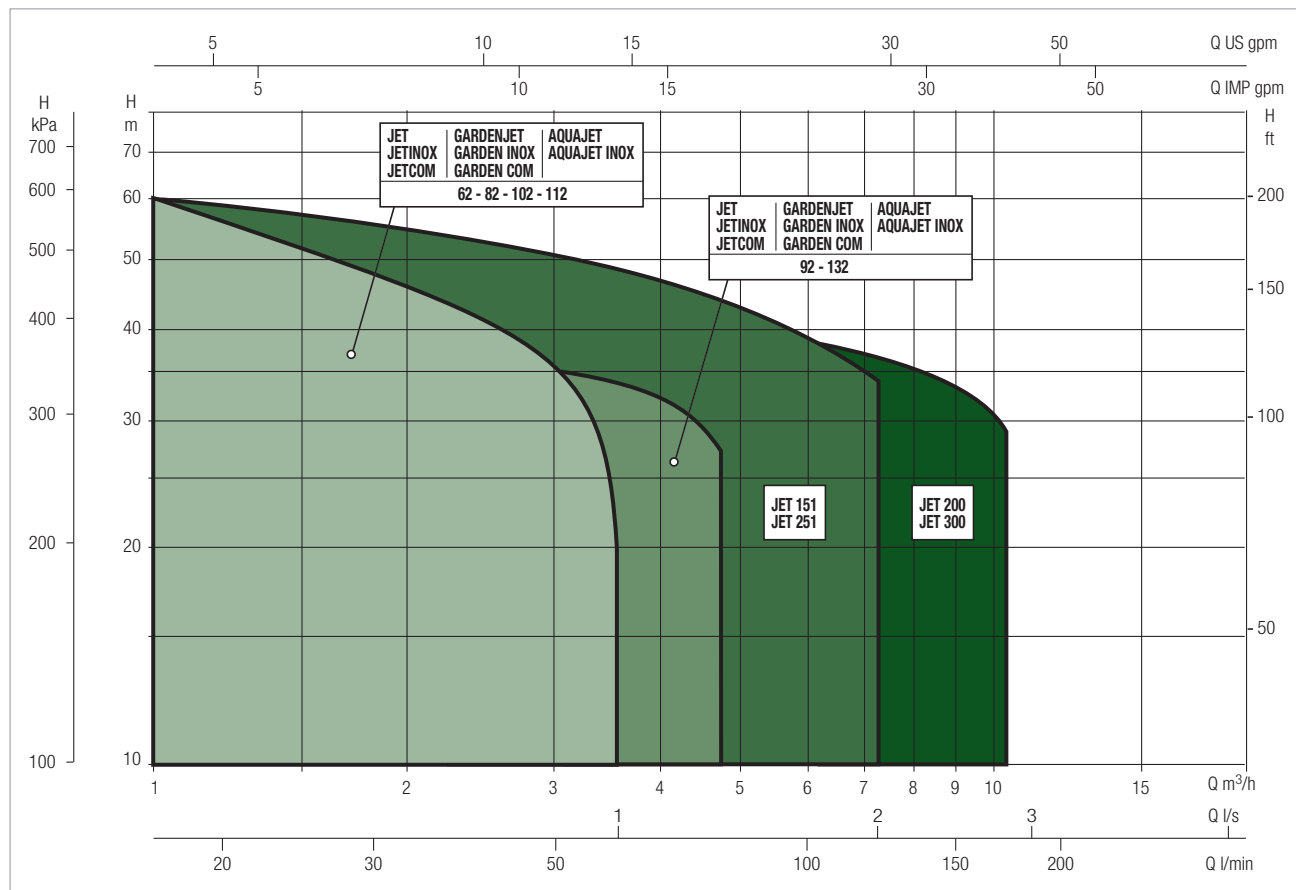
SELF PRIMING CAPACITY



PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

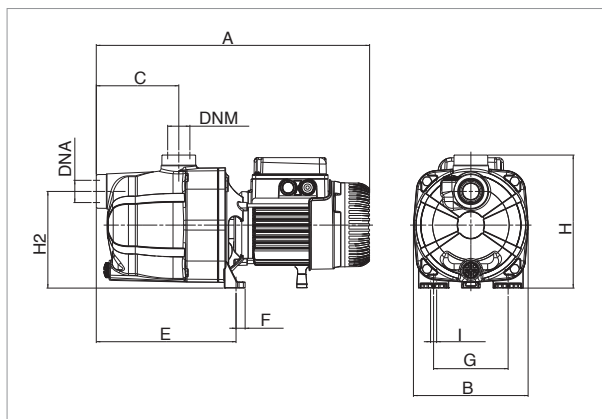


JETCOM SELECTION TABLE

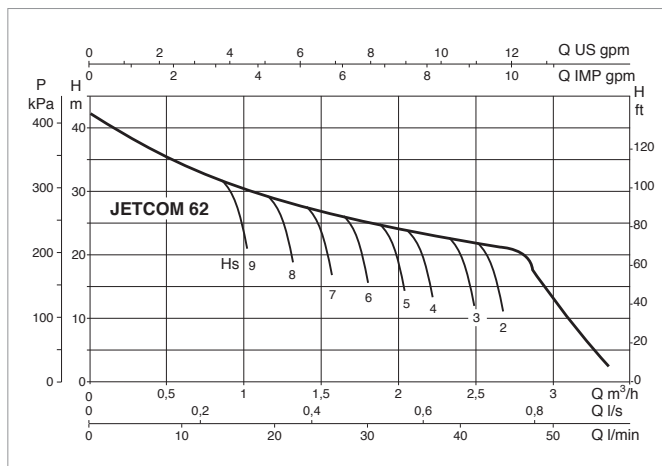
| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 |
|--------------|---------------------|------|------|------|------|------|------|------|------|------|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| JETCOM 62 M | H (m) | 42 | 35 | 29.2 | 25.6 | 22.9 | 13 | | | |
| JETCOM 82 M | | 47 | 40 | 34 | 30 | 26.2 | 23.5 | 20 | | |
| JETCOM 102 M | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | |
| JETCOM 102 T | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | |
| JETCOM 92 M | | 36.2 | 33.5 | 31 | 28.4 | 26 | 24 | 21.8 | 19.6 | 17.5 |
| JETCOM 132 M | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 |
| JETCOM 132 T | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 |

JETCOM 62-SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

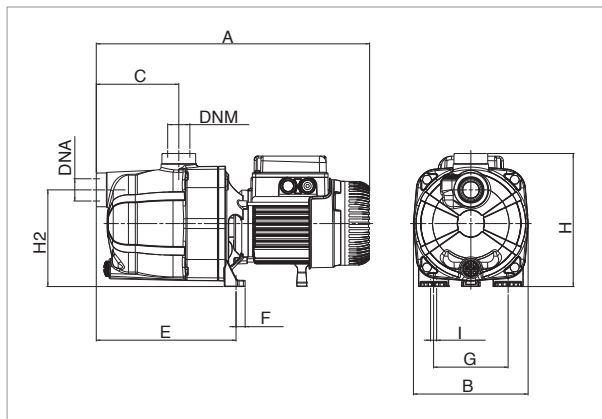


| MODEL | ELECTRICAL DATA | | | | | | |
|-------------|-----------------------|--------------|------------|-----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JETCOM 62 M | 1x220-240 V ~ | 0.72 | 0.44 | 0.6 | 3.12 | 12.5 | 450 |

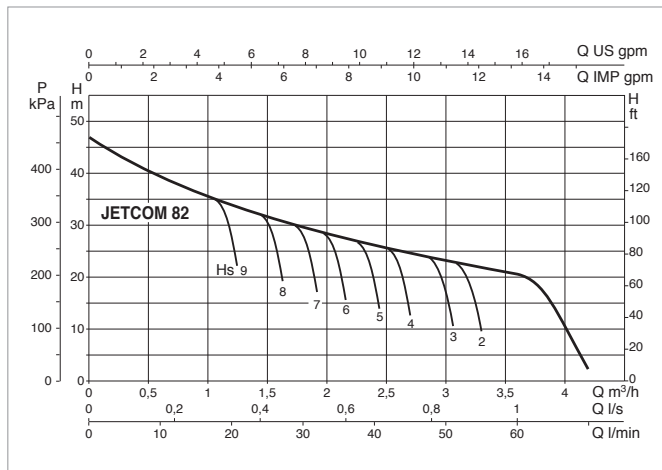
| MODEL | A | B | C | E | F | G | H | H1 | H2 | I Ø | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|-----------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|---|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | L/A | L/B | H | | |
| JETCOM 62 | 406 | 170 | 122 | 208 | 14 | 111 | 198 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 7.5 |

JETCOM 82-SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

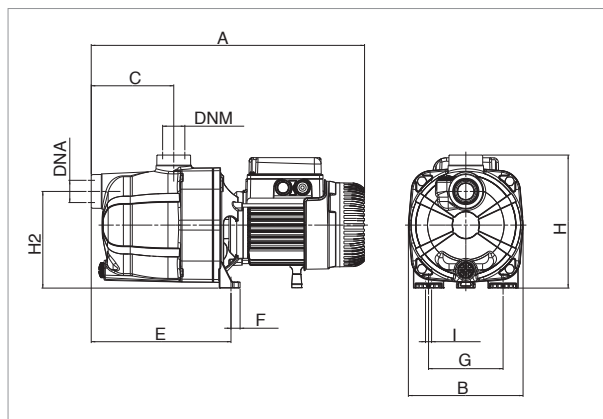


| MODEL | ELECTRICAL DATA | | | | | | |
|-------------|-----------------------|--------------|------------|-----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JETCOM 82 M | 1x220-240 V ~ | 0.85 | 0.6 | 0.8 | 3.8 | 12.5 | 450 |

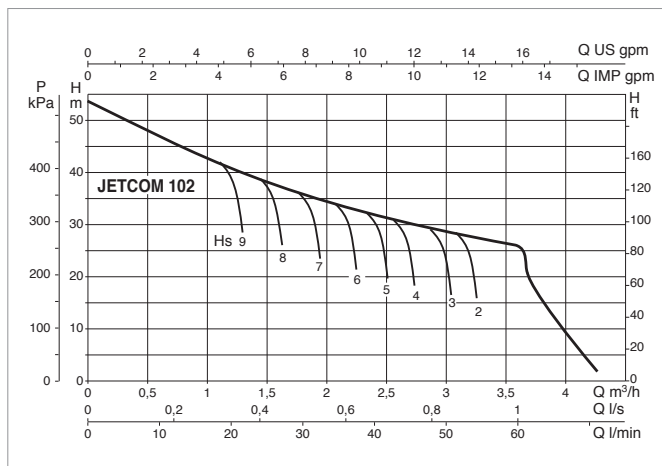
| MODEL | A | B | C | E | F | G | H | H1 | H2 | I Ø | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|-----------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|---|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | L/A | L/B | H | | |
| JETCOM 82 | 406 | 170 | 122 | 208 | 14 | 111 | 198 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 7.7 |

JET 102 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

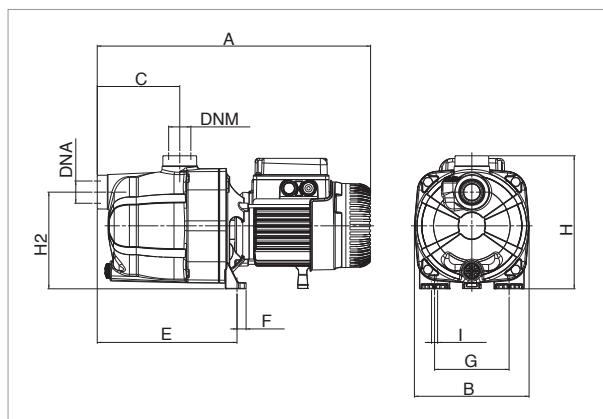


| MODEL | ELECTRICAL DATA | | | | | | |
|--------------|-----------------------|--------------|------------|----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JETCOM 102 M | 1x220-240 V ~ | 1.13 | 0.75 | 1 | 5.1 | 16 | 450 |
| JETCOM 102 T | 3x230-400 V ~ | 1.04 | 0.75 | 1 | 3.3-1.9 | - | - |

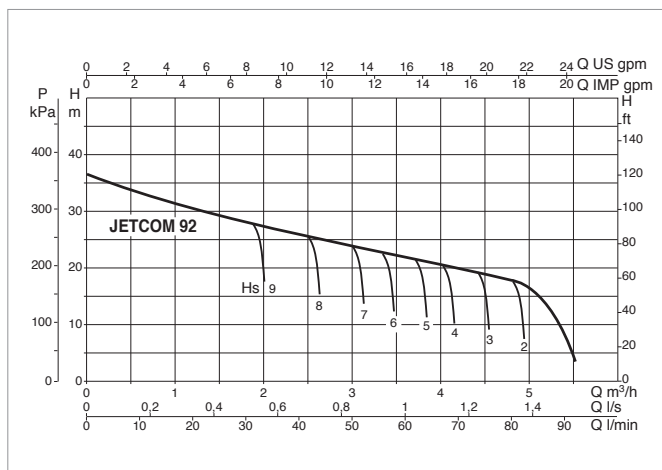
| MODEL | A | B | C | E | F | G | H | H1 | H2 | I Ø | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|------------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|---|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | L/A | L/B | H | | |
| JETCOM 102 | 425 | 170 | 122 | 208 | 14 | 111 | 203 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 9.5 |

JETCOM 92-SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

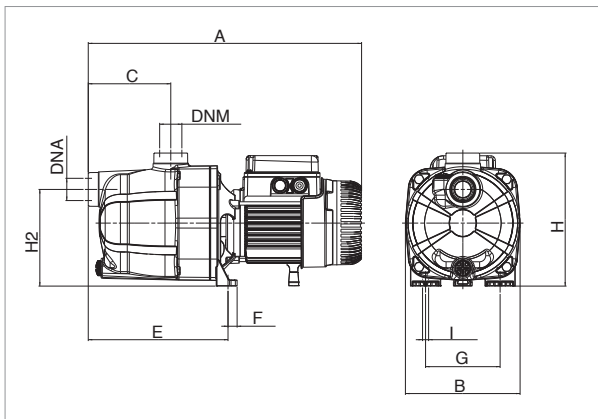


| MODEL | ELECTRICAL DATA | | | | | | |
|-------------|-----------------------|--------------|------------|----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JETCOM 92 M | 1x220-240 V ~ | 0.94 | 0.75 | 1 | 4.2 | 14 | 450 |

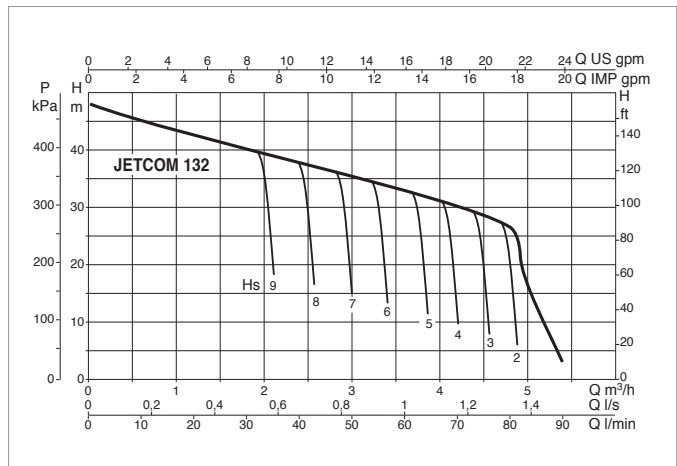
| MODEL | A | B | C | E | F | G | H | H1 | H2 | I Ø | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|-----------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|---|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | L/A | L/B | H | | |
| JETCOM 92 | 425 | 170 | 122 | 208 | 14 | 111 | 203 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 8.7 |

JET 132 - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C

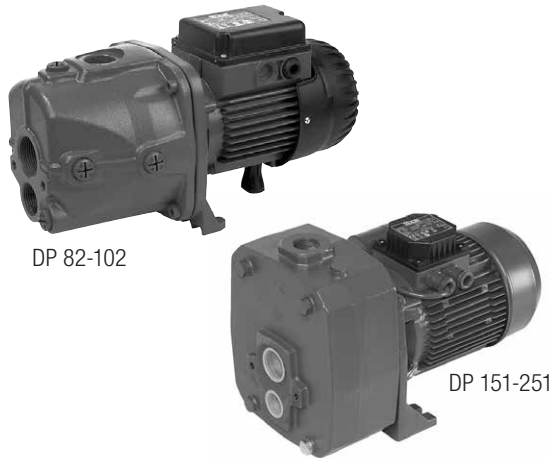


The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.



| MODEL | ELECTRICAL DATA | | | | | | |
|--------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JETCOM 132 M | 1x220-240 V ~ | 1.49 | 1 | 1.36 | 6.6 | 25 | 450 |
| JETCOM 132 T | 3x230-400 V ~ | 1.43 | 1 | 1.36 | 4.7-2.7 | - | - |

| MODEL | A | B | C | E | F | G | H | H1 | H2 | I Ø | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|--------------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|---|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | L/A | L/B | H | | |
| JETCOM 132 M | 425 | 170 | 122 | 208 | 14 | 111 | 203 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 10.5 |
| JETCOM 132 T | 441 | 170 | 122 | 208 | 14 | 111 | 203 | - | 144 | 9 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 12.6 |



TECHNICAL DATA

Operating range: up to 4.3 m³/h.
Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.
Liquid temperature range:
 from 0°C to +35°C for domestic use (EN 60335-2-41).
 for other use: from 0°C to +40°C
Maximum ambient temperature: +40°C
Maximum operating pressure:
 DP 82 - DP 102 6 bar (600 kPa).
 DP 151 - DP 251 8 bar (800 kPa).
Installation: fixed in a horizontal position.
Special executions on request: alternative voltages and/or frequencies.
Motor protection rating: IP 44
Terminal block protection rating: IP 55
Insulation class: F
Standard input voltage: single phase 220-240 V / 50 Hz
 three phase 230-400 V / 50 Hz

APPLICATIONS

Self priming centrifugal pump for suction up to 27 metres, reached by using the ejector to be inserted in wells from 4" in diameter or larger. Used for water supply in large country homes and small farms.

CONSTRUCTIONAL FEATURES OF THE PUMP

- Pump:** Cast-iron pump body and motor support. Impeller and diffuser in technopolymer. Stainless steel wear ring. Carbon/ceramic mechanical seal.
- Ejector:** Body in cast iron Venturi tube in technopolymer A and nozzle in brass. The ejector is available in three models (E 20 - E 25 - E 30) depending on the performance required.

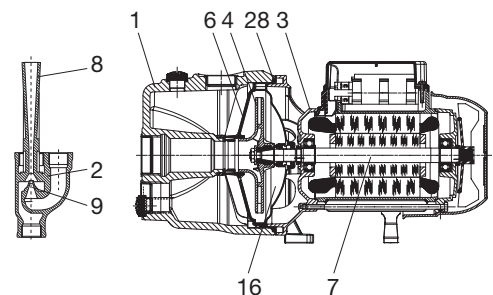
CONSTRUCTIONAL FEATURES OF THE MOTOR

Rotor mounted on oversized greased-for-life ball bearings. Incorporated thermo-amperometric protection and permanently inserted capacitor in the single phase version. It is recommended to use remote overload protection for three phase motors, in compliance with current legislation. Manufactured pursuant to CEI 61-69 (EN 60335-2-41).

MATERIALS

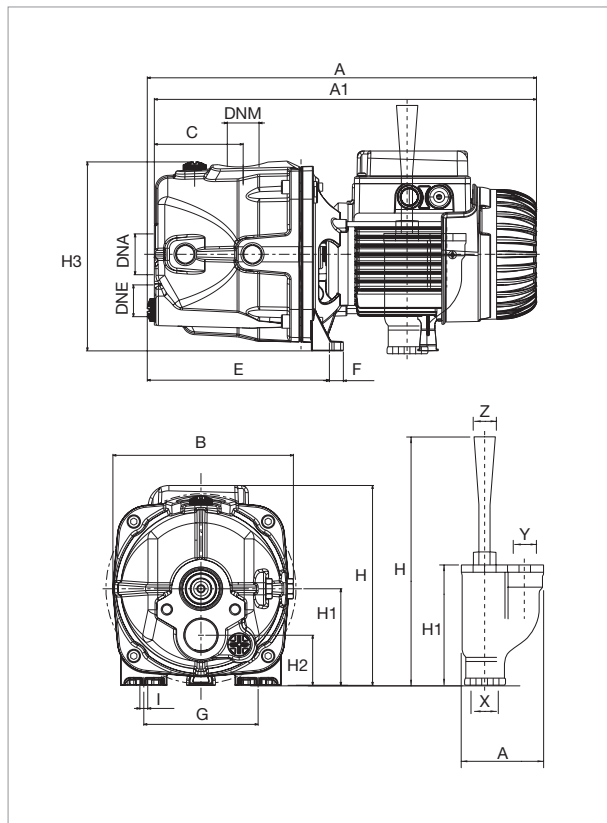
| N° | PARTS* | MATERIALS |
|----|------------------|---|
| 1 | PUMP BODY | 200 UNI ISO 185 CAST IRON |
| 2 | EJECTOR BODY | 200 UNI ISO 185 CAST IRON |
| 3 | FRAME | 200 UNI ISO 185 CAST IRON |
| 4 | IMPELLER | TECHNOPOLYMER |
| 6 | DIFFUSER | TECHNOPOLYMER |
| 7 | SHAFT WITH ROTOR | AISI 416 STAINLESS STEEL X12 CRS13 UNI 6900/71 (DP 82 - DP 102) AISI 303 STAINLESS STEEL X10CRNIS 1809 UNI 6900/71 (DP 151 - DP 251) |
| 8 | VENTURI PIPE | TECHNOPOLYMER |
| 9 | NOZZLE | BRASS |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |

* In contact with liquid



DP 82 - DP 102 - PUMPS FOR DEEP SUCTION FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

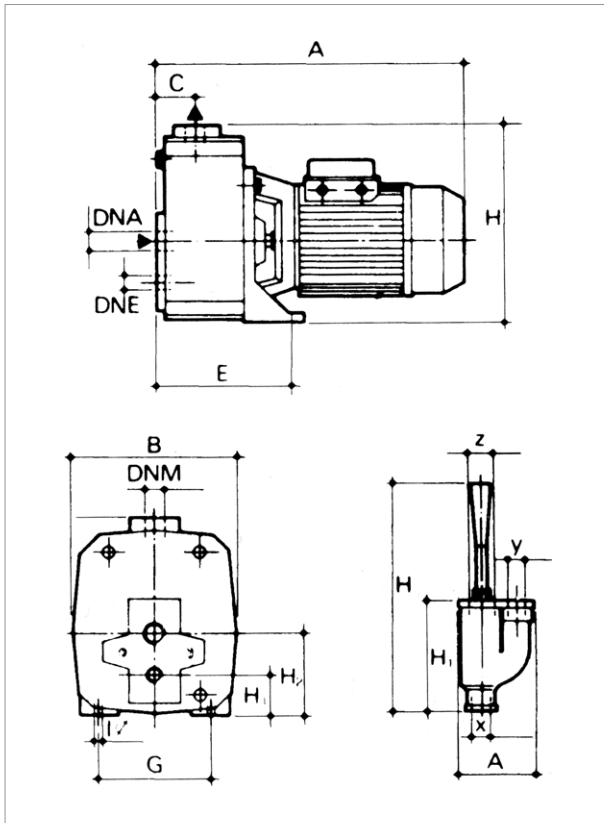
| HYDRAULIC DATA (n ≈ 2800 1/min.) | | | | | | | | |
|----------------------------------|--------------|--------------|---------------------------|------|------|-----|-----|-----|
| TYPE PUMP | TYPE EJECTOR | DEEP SUCTION | Discharge pressure in bar | | | | | |
| | | | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 |
| Capacity table in l/h | | | | | | | | |
| DP 82 M - T | E 25 | 9 | 1813 | 1080 | 446 | 33 | - | - |
| | | 12 | 1426 | 225 | - | - | - | - |
| | | 15 | 900 | 326 | - | - | - | - |
| | E 30 | 9 | 1753 | 1286 | 812 | 524 | 261 | 12 |
| | | 12 | 1345 | 965 | 608 | 329 | 162 | 0 |
| | | 15 | 1166 | 761 | 452 | 228 | 45 | - |
| DP 102 M - T | E 25 | 9 | 2386 | 1756 | 1097 | 515 | 126 | - |
| | | 12 | 1930 | 1190 | 536 | 87 | - | - |
| | | 15 | 1459 | 773 | 252 | - | - | - |
| | E 30 | 12 | - | 1240 | 872 | 566 | 329 | 156 |
| | | 15 | - | 1028 | 701 | 449 | 255 | 96 |
| | | 18 | - | 785 | 527 | 302 | 150 | 15 |
| | | 21 | - | 635 | 374 | 180 | 39 | - |

| MODEL | ELECTRICAL DATA | | | | | | |
|----------|-----------------------|--------------|------------|-----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| DP 82 M | 1x220-240 V ~ | 0.73 | 0.6 | 0.8 | 3.4 | 12.5 | 450 |
| DP 82 T | 3x230-400 V ~ | 0.73 | 0.6 | 0.8 | 2.6-1.5 | - | - |
| DP 102 M | 1x220-240 V ~ | 0.79 | 0.75 | 1 | 3.8 | 16 | 450 |
| DP 102 T | 3x230-400 V ~ | 0.64 | 0.75 | 1 | 2.6-1.5 | - | - |

| MODEL | A | A1 | B | C | E | F | G | H | H1 | H2 | H3 | I Ø | DNA GAS | DNM GAS | DNE GAS | EJECTOR | | | | | | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|------------|-----|-----|-----|----|-----|----|-----|-----|----|----|-----|-----|------------|------------|------------|---------|-----|-----|------|------|----------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | | | A | H | H1 | X | Y | Z | L/A | L/B | H | | |
| DP 82 M-T | 377 | 371 | 175 | 86 | 177 | 13 | 111 | 194 | 94 | 49 | 179 | 9 | 1 1/4" | 1" | 1" | 97 | 295 | 143 | 1" G | 1" G | 1 1/4" G | 480 | 240 | 240 | 0.03 | 10.7 |
| DP 102 M-T | 398 | 392 | 175 | 86 | 177 | 13 | 111 | 203 | 94 | 49 | 179 | 9 | 1 1/4" | 1" | 1" | 97 | 295 | 143 | 1" G | 1" G | 1 1/4" G | 480 | 240 | 240 | 0.03 | 13 |

DP 151 - DP 251 - PUMPS FOR DEEP SUCTION FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| HYDRAULIC DATA (n ≈ 2800 1/min.) | | | | | | | | | | | |
|----------------------------------|--------------|--------------|---------------------------|------|------|------|------|-----|-----|-----|-----|
| TYPE PUMP | TYPE EJECTOR | DEEP SUCTION | Discharge pressure in bar | | | | | | | | |
| | | | 3 | 3.5 | 4 | 4.5 | 5 | 5.5 | 6 | 6.5 | 7 |
| Capacity table in l/h | | | | | | | | | | | |
| DP 151 M - T | E 20 | 9 | 3470 | 2890 | 2220 | 1500 | 750 | - | - | - | - |
| | | 12 | 3110 | 2510 | 1850 | 1100 | 300 | - | - | - | - |
| | | 15 | 2710 | 2100 | 1380 | 640 | - | - | - | - | - |
| | | 18 | 2360 | 1700 | 950 | - | - | - | - | - | - |
| | E 25 | 15 | 2800 | 2330 | 1830 | 1350 | 900 | 520 | - | - | - |
| | | 18 | 2530 | 2050 | 1550 | 1090 | 680 | 300 | - | - | - |
| | | 21 | 2280 | 1800 | 1300 | 860 | 470 | - | - | - | - |
| | E 30 | 21 | 1820 | 1650 | 1410 | 1160 | 910 | 700 | 520 | - | - |
| | | 24 | 1680 | 1520 | 1260 | 1020 | 780 | 580 | 420 | - | - |
| 27 | | 1550 | 1360 | 1110 | 880 | 680 | 490 | 330 | - | - | |
| DP 251 M - T | E 20 | 9 | 4300 | 3600 | 2900 | 2180 | 1400 | 640 | - | - | - |
| | | 12 | 3750 | 3140 | 2540 | 1700 | 940 | - | - | - | - |
| | | 15 | - | 2780 | 2040 | 1300 | 500 | - | - | - | - |
| | | 18 | - | 2340 | 1610 | 820 | - | - | - | - | - |
| | E 25 | 15 | - | 2920 | 2400 | 1900 | 1400 | 950 | 570 | - | - |
| | | 18 | - | 2600 | 2110 | 1620 | 1150 | 720 | 360 | - | - |
| | | 21 | - | 2350 | 1850 | 1350 | 900 | 510 | - | - | - |
| | | 24 | - | 2050 | 1550 | 1080 | 660 | 300 | - | - | - |
| | E 30 | 21 | - | - | 1710 | 1480 | 1220 | 980 | 770 | 590 | 420 |
| | | 24 | - | - | 1580 | 1330 | 1080 | 850 | 670 | 490 | 330 |
| | | 27 | - | - | 1440 | 1200 | 950 | 750 | 560 | 400 | 250 |
| | | - | - | - | - | - | - | - | - | - | - |

| MODEL | ELECTRICAL DATA | | | | | | |
|----------|-----------------------|--------------|------------|-----|---------------------|-----------|----------------|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | I _n A | CAPACITOR | |
| | | | kW | HP | | µF | V _c |
| DP 151 M | 1x220-240 V ~ | 1.56 | 1.1 | 1.5 | 7 | 31.5 | 450 |
| DP 151 T | 3x230-400 V ~ | 1.45 | 1.1 | 1.5 | 4.7-2.7 | - | - |
| DP 251 M | 1x220-240 V ~ | - | 1.85 | 2.5 | 8.3 | 40 | 450 |
| DP 251 T | 3x230-400 V ~ | - | 1.85 | 2.5 | 5.6-3.2 | - | - |

| MODEL | A | B | C | E | G | I Ø | H | H1 | H2 | DNA GAS | DNM GAS | DNE GAS | EJECTOR | | | | | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg | |
|------------|-----|-----|----|-----|-----|-----|-----|----|-----|---------|---------|---------|---------|-----|-----|------|------|-----------------|-----|-----|-------------|-----------------|------|
| | | | | | | | | | | | | | A | H | H1 | X | Y | Z | L/A | L/B | | | H |
| DP 151 M-T | 388 | 210 | 50 | 197 | 145 | 11 | 155 | 52 | 108 | 1 1/4" | 1" | 1" | 97 | 295 | 143 | 1" G | 1" G | 1 1/4" G | 427 | 246 | 307 | 0.3 | 28.5 |
| DP 251 M | 462 | 210 | 50 | 197 | 145 | 11 | 155 | 53 | 108 | 1 1/4" | 1" | 1" | 97 | 295 | 143 | 1" G | 1" G | 1 1/4" G | 522 | 246 | 307 | 0.4 | 32.5 |
| DP 251 T | 388 | 210 | 50 | 197 | 145 | 11 | 155 | 53 | 108 | 1 1/4" | 1" | 1" | 97 | 295 | 143 | 1" G | 1" G | 1 1/4" G | 427 | 246 | 307 | 0.3 | 27.9 |



TECHNICAL DATA

Operating range:

from 0.4 to 5.4 m³/h with head up to 54 metres.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range:

from 0°C to +35°C for domestic use (EN 60335-2-41).

for other use: from 0°C to +40°C

Maximum suction depth: 8 metres.

Maximum ambient temperature: +40°C

Maximum operating pressure:

8 bar (800 kPa)

6 bar (600 kPa) only for models in technopolymer (JETCOM)

Installation: fixed in a horizontal position.

Special executions on request: alternative voltages and/or frequencies.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220/240 V / 50 Hz

APPLICATIONS

Self-priming electric centrifugal pump for gardening, horticulture, washing and leisure activities.

Equipped with a handle to aid in transport, a H07RN-F 2 metre power cord with plug and on-off switch.

Compact, easy to install, self-priming for pumping out pools, wells, and waterways even in the presence of air bubbles. Suitable for pumping water with low levels of sandy impurities.

CONSTRUCTIONAL FEATURES OF THE PUMP

Pump body in cast iron and motor support in die cast aluminium.

Impeller, diffuser, venturi tube in technopolymer.

Stainless steel wear ring and seal holder.

Carbon/ceramic mechanical seal.

CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous type, closed, with external air cooling.

Rotor mounted on oversized greased-for-life ball bearings, to guarantee low noise and long life.

Incorporated thermo-amperometric protection and permanently inserted capacitor.

Manufacture pursuant to CEI 2-3 and CEI 61-69 (EN 60335-2-41) standard.

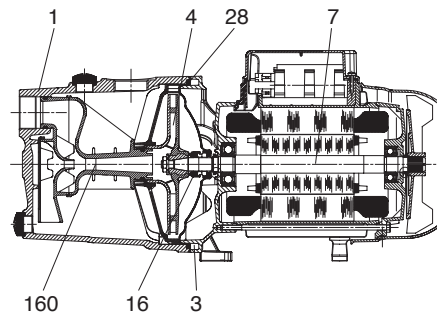
GARDENJET

SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS

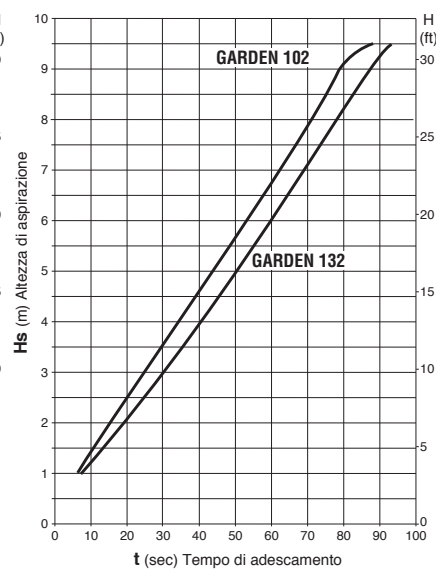
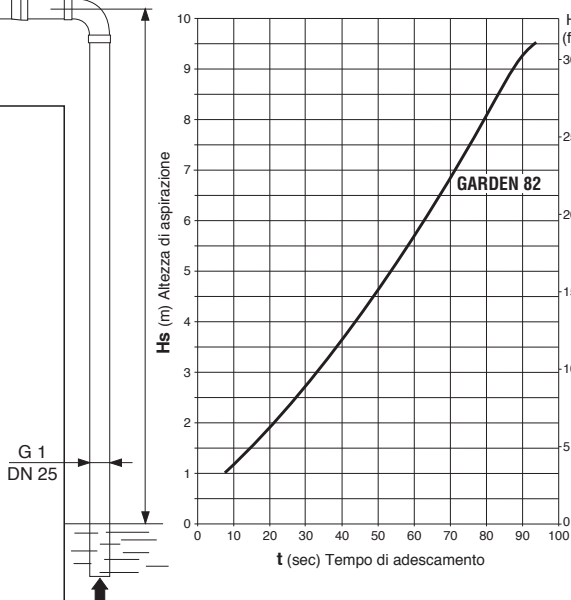
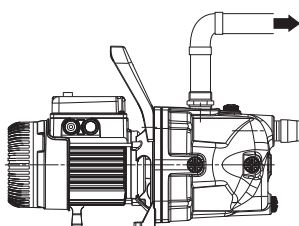
MATERIALS

| N° | PARTS* | MATERIALS |
|-----|-------------------------------|--|
| 1 | PUMP BODY | GJL 200 UNI EN 1561 CAST IRON |
| 3 | FRAME | DIE CAST ALUMINIUM |
| 4 | IMPELLER | PPO-GF 20 (Noryl™) |
| 7 | SHAFT WITH ROTOR | AISI 416 STAINLESS STEEL X12CrS13 UNI EN 10088 (UNI 6900: 71) |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |
| 160 | VENTURI DIFFUSER NOZZEL GROUP | PPO-GF 20 (Noryl™) |

* In contact with liquid



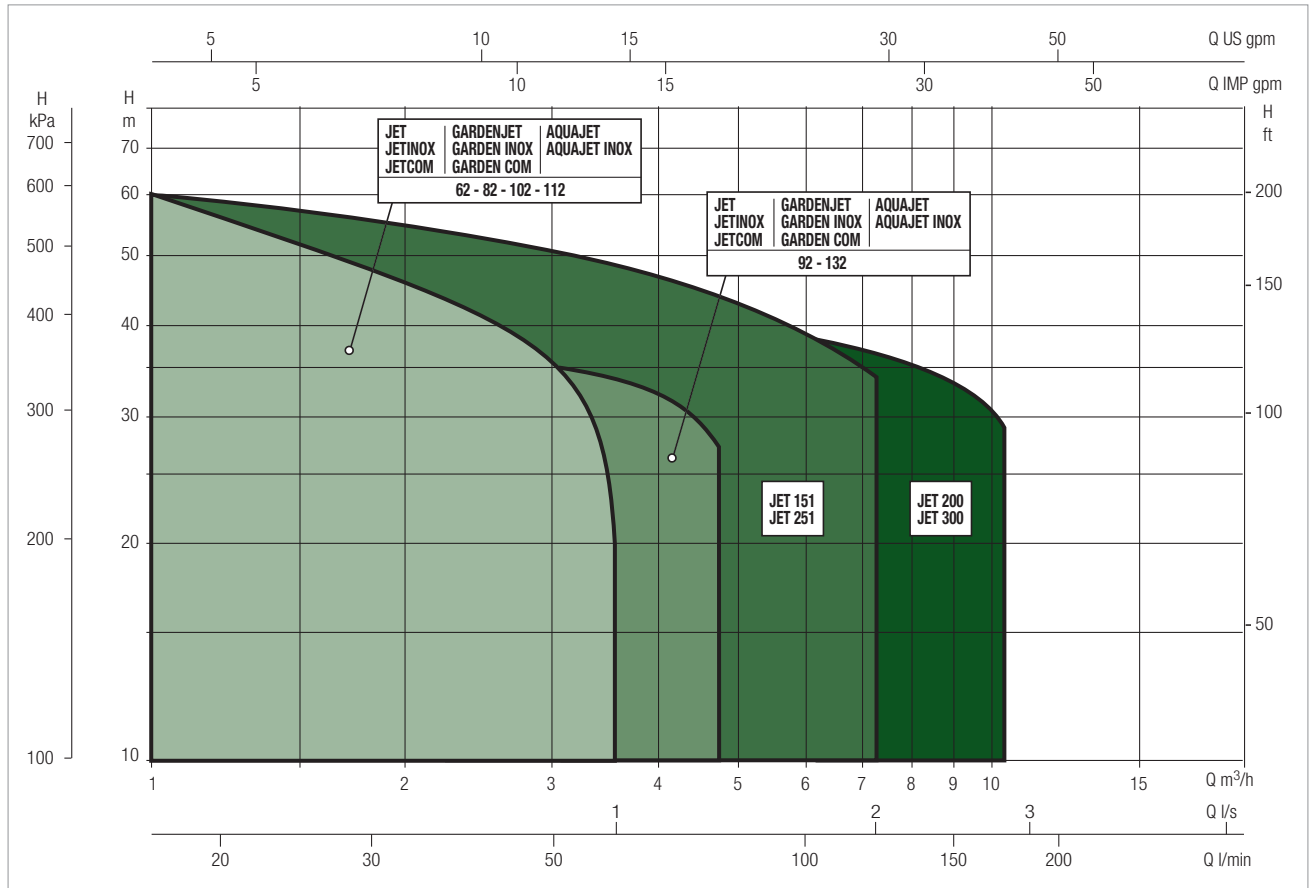
SELF PRIMING CAPACITY



PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

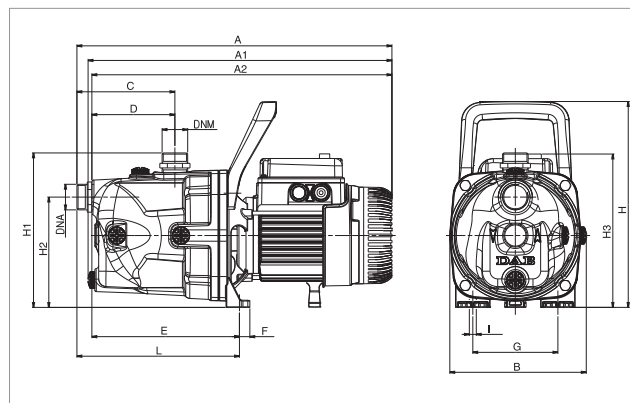
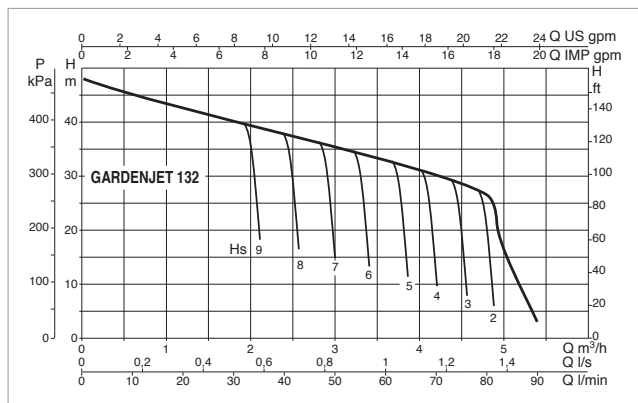
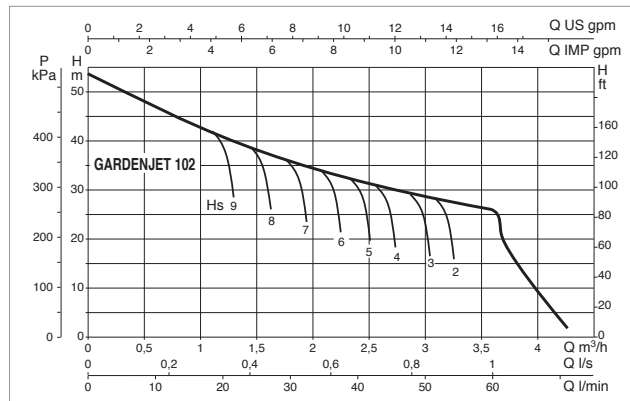
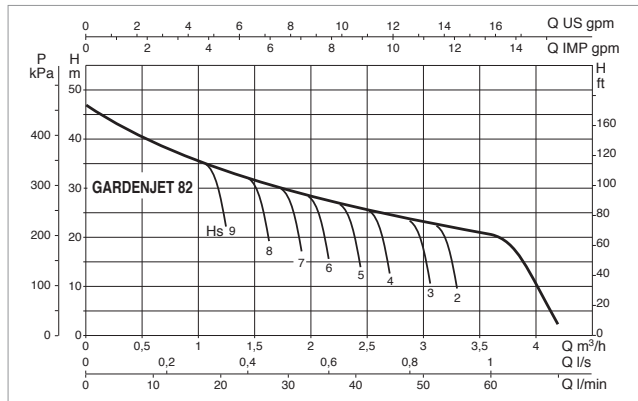


GARDENJET SELECTION TABLE

| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 |
|-----------------|---------------------|------|------|------|------|------|------|------|-----|------|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| GARDENJET 82 M | H (m) | 47 | 40 | 34 | 30 | 26.2 | 23.5 | 20.3 | | |
| GARDENJET 102 M | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | |
| GARDENJET 132 M | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 |

GARDENJET - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | |
|-----------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| GARDENJET 82 M | 1x220-240 V ~ | 0.85 | 0.6 | 0.8 | 3.8 | 12.5 | 450 |
| GARDENJET 102 M | 1x220-240 V ~ | 1.13 | 0.75 | 1 | 5.1 | 16 | 450 |
| GARDENJET 132 M | 1x220-240 V ~ | 1.49 | 1 | 1.36 | 6.6 | 25 | 450 |

| MODEL | A | A1 | A2 | B | C | D | E | F | G | H | H1 | H2 | H3 | H4 | I Ø | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|-----------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | | | | | | L/A | L/B | H | | |
| GARDENJET 82 M | 410 | 395 | 390 | 178 | 127 | 108 | 192 | 14 | 111 | 268 | 201 | 144 | 199 | - | 9 | 212 | 1" | 1" | 470 | 240 | 240 | 0.027 | 11.2 |
| GARDENJET 102 M | 429 | 414 | 409 | 178 | 127 | 108 | 192 | 14 | 111 | 268 | 200 | 144 | 209 | - | 9 | 212 | 1" | 1" | 470 | 240 | 240 | 0.027 | 13.0 |
| GARDENJET 132 M | 429 | 414 | 409 | 178 | 127 | 180 | 192 | 14 | 111 | 268 | 200 | 144 | 209 | - | 9 | 212 | 1" | 1" | 470 | 240 | 240 | 0.027 | 14.0 |

GARDEN INOX

SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS



TECHNICAL DATA

Operating range:

from 0.4 to 5.4 m³/h with head up to 54 metres.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range:

from 0°C to +35°C for domestic use (EN 60335-2-41).

for other use: from 0°C to +40°C

Maximum suction depth: 8 metres.

Maximum ambient temperature: +40°C

Maximum operating pressure: 8 bar (800 kPa)

6 bar (600 kPa) only for models in technopolymer (JETCOM)

Installation: fixed in a horizontal position.

Special executions on request: alternative voltages and/or frequencies.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220/240 V / 50 Hz

APPLICATIONS

Self-priming electric centrifugal pump for gardening, horticulture, washing and leisure activities.

Equipped with a handle to aid in transport, a H07RN-F 2 metre power cord with plug and on-off switch.

Compact, easy to install, self-priming for pumping out pools, wells, and waterways even in the presence of air bubbles. Suitable for pumping water with low levels of sandy impurities.

CONSTRUCTIONAL FEATURES OF THE PUMP

Pump body in stainless steel and motor support in die cast aluminium.

Impeller, diffuser, venturi tube in technopolymer.

Stainless steel wear ring and seal holder.

Carbon/ceramic mechanical seal.

CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous type, closed, with external air cooling.

Rotor mounted on oversized greased-for-life ball bearings, to guarantee low noise and long life.

Incorporated thermo-amperometric protection and permanently inserted capacitor.

Manufacture pursuant to CEI 2-3 and CEI 61-69 (EN 60335-2-41) standard.

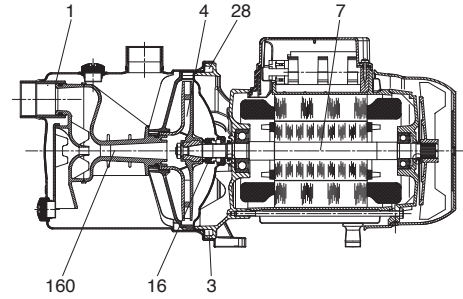
GARDEN INOX

SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS

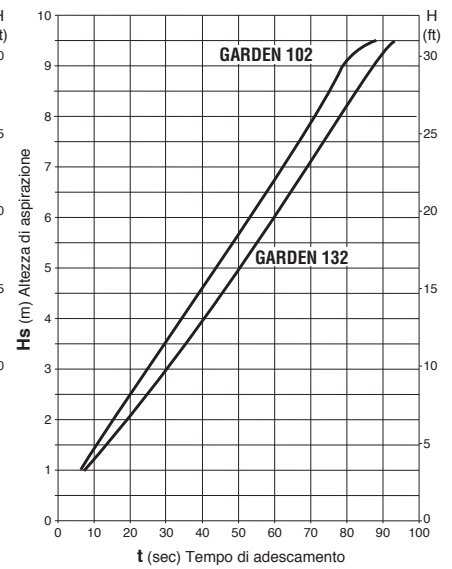
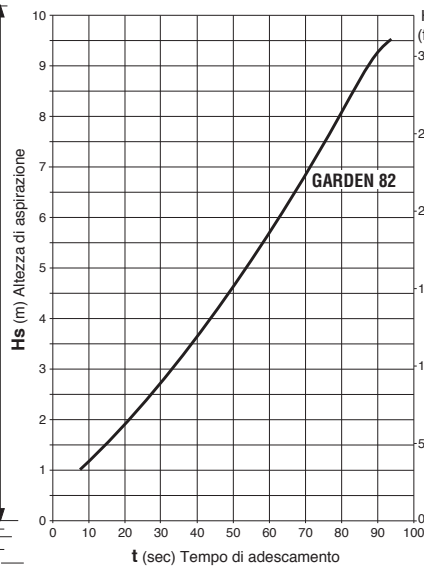
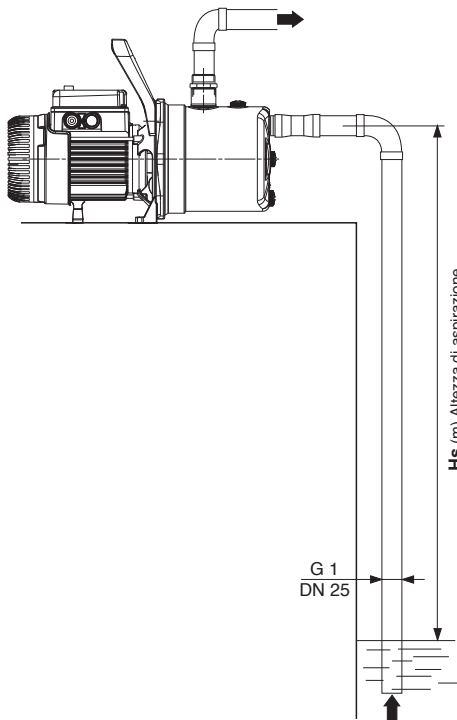
MATERIALS

| N° | PARTS* | MATERIALS |
|-----|-------------------------------|--|
| 1 | PUMP BODY | GJL 200 UNI EN 1561 CAST IRON |
| 3 | FRAME | DIE CAST ALUMINIUM |
| 4 | IMPELLER | PP0-GF 20 (Noryl™) |
| 7 | SHAFT WITH ROTOR | AISI 416 STAINLESS STEEL X12CrS13 UNI EN 10088 (UNI 6900: 71) |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |
| 160 | VENTURI DIFFUSER NOZZEL GROUP | PP0-GF 20 (Noryl™) |

* In contact with liquid



SELF PRIMING CAPACITY



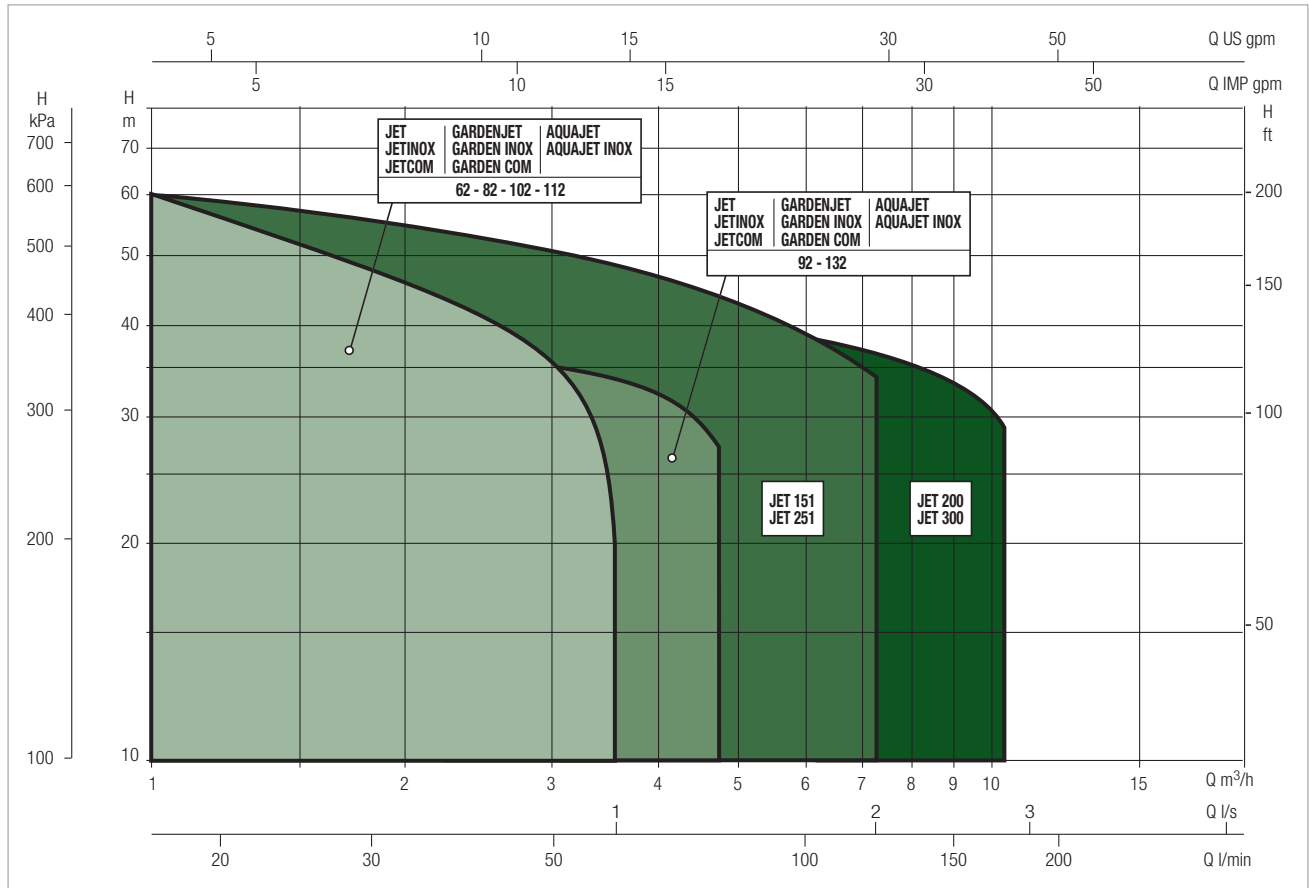
GARDEN INOX

SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS

PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

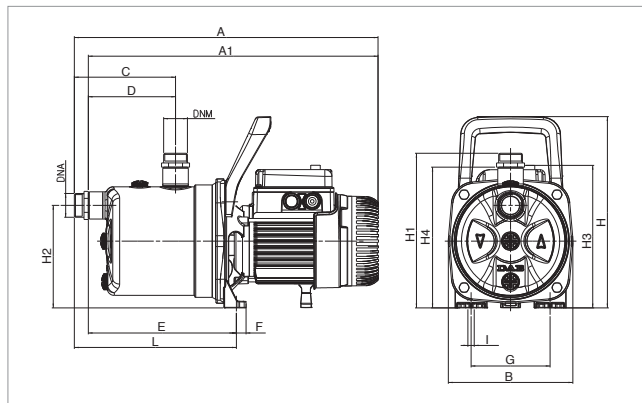
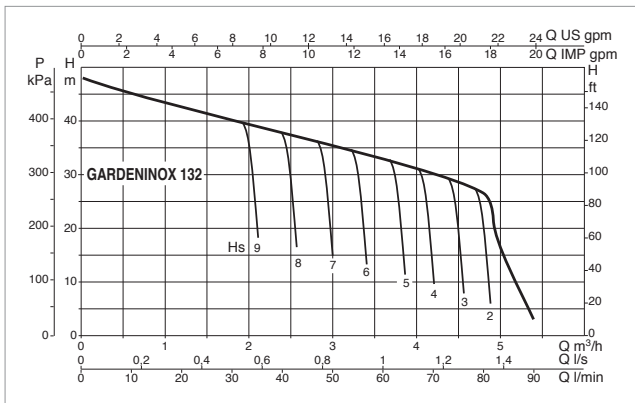
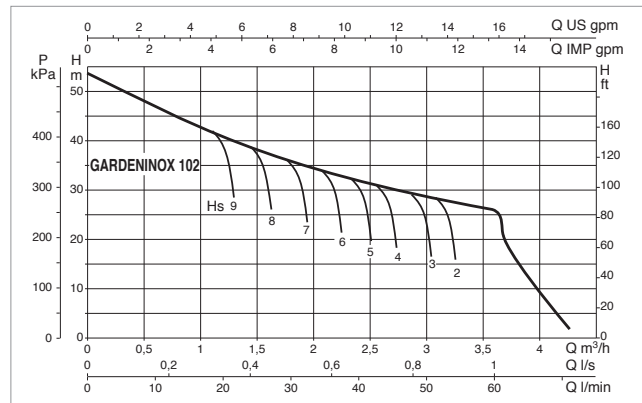
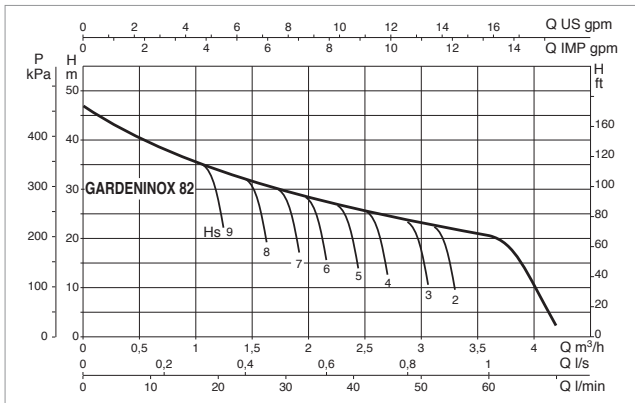


GARDEN INOX SELECTION TABLE

| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 |
|------------------|---------------------|------|------|------|------|------|------|------|-----|------|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| GARDEN INOX 82 M | H (m) | 47 | 40 | 34 | 30 | 26.2 | 23.5 | 20.3 | | |
| GARDEN INOX 102M | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | |
| GARDEN INOX 132M | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 |

GARDEN INOX - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | POWER SUPPLY 50 Hz | P1 MAX kW | ELECTRICAL DATA | | In A | CAPACITOR | |
|------------------|-----------------------|--------------|-----------------|------|---------|-----------|-----|
| | | | P2 NOMINAL | | | μF | Vc |
| | | | kW | HP | | | |
| GARDEN INOX 82 M | 1x220-240 V ~ | 0.85 | 0.6 | 0.8 | 3.8 | 12.5 | 450 |
| GARDEN INOX 102M | 1x220-240 V ~ | 1.13 | 0.75 | 1 | 5.1 | 16 | 450 |
| GARDEN INOX 132M | 1x220-240 V ~ | 1.49 | 1 | 1.36 | 6.6 | 25 | 450 |

| MODEL | A | A1 | A2 | B | C | D | E | F | G | H | H1 | H2 | H3 | H4 | I Ø | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|------------------|-----|-----|----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | | | | | | L/A | L/B | H | | |
| GARDEN INOX 82 M | 424 | 406 | - | 174 | 142 | 122 | 207 | 14 | 111 | 268 | 216 | 144 | 199 | 197 | 9 | 227 | 1" | 1" | 470 | 240 | 240 | 0.027 | 10.7 |
| GARDEN INOX 102M | 444 | 424 | - | 174 | 142 | 122 | 207 | 14 | 111 | 268 | 216 | 144 | 209 | 197 | 9 | 227 | 1" | 1" | 470 | 240 | 240 | 0.027 | 12.5 |
| GARDEN INOX 132M | 444 | 424 | - | 174 | 142 | 122 | 207 | 14 | 111 | 268 | 216 | 144 | 209 | 197 | 9 | 227 | 1" | 1" | 470 | 240 | 240 | 0.027 | 13.5 |

GARDEN COM

SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS



TECHNICAL DATA

Operating range:

from 0.4 to 5.4 m³/h with head up to 54 metres.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range:

from 0°C to +35°C for domestic use (EN 60335-2-41).

for other use: from 0°C to +40°C

Maximum suction depth: 8 metres.

Maximum ambient temperature: +40°C

Maximum operating pressure: 8 bar (800 kPa)

6 bar (600 kPa) only for models in technopolymer (JETCOM)

Installation: fixed in a horizontal position.

Special executions on request: alternative voltages and/or frequencies.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220/240 V / 50 Hz

APPLICATIONS

Self-priming electric centrifugal pump for gardening, horticulture, washing and leisure activities. Equipped with a handle to aid in transport, a H07RN-F 2 metre power cord with plug and on-off switch. Compact, easy to install, self-priming for pumping out pools, wells, and waterways even in the presence of air bubbles. Suitable for pumping water with low levels of sandy impurities.

CONSTRUCTIONAL FEATURES OF THE PUMP

Pump body in technopolymer and motor support in die cast aluminium.

Impeller, diffuser, venturi tube in technopolymer.

Stainless steel wear ring and seal holder.

Carbon/ceramic mechanical seal.

CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous type, closed, with external air cooling.

Rotor mounted on oversized greased-for-life ball bearings, to guarantee low noise and long life.

Incorporated thermo-amperometric protection and permanently inserted capacitor.

Manufacture pursuant to CEI 2-3 and CEI 61-69 (EN 60335-2-41) standard.

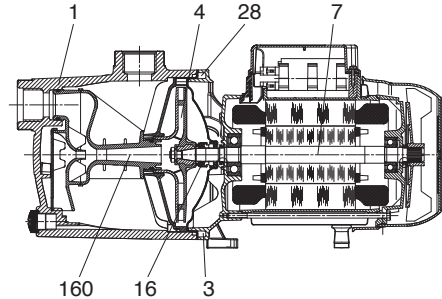
GARDEN COM

SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS

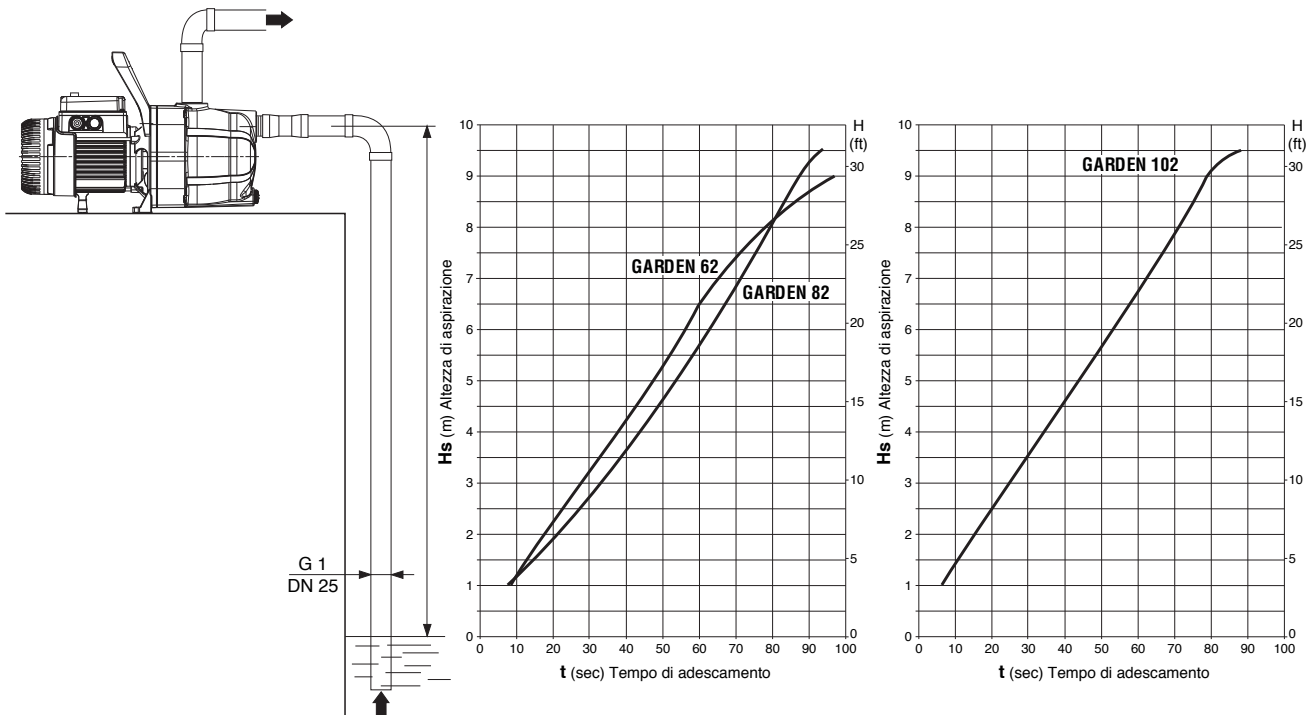
MATERIALS

| N° | PARTS* | MATERIALS |
|-----|-------------------------------|--|
| 1 | PUMP BODY | GJL 200 UNI EN 1561 CAST IRON |
| 3 | FRAME | DIE CAST ALUMINIUM |
| 4 | IMPELLER | PPO-GF 20 (Noryl™) |
| 7 | SHAFT WITH ROTOR | AISI 416 STAINLESS STEEL X12CrS13 UNI EN 10088 (UNI 6900: 71) |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |
| 160 | VENTURI DIFFUSER NOZZEL GROUP | PPO-GF 20 (Noryl™) |

* In contact with liquid



SELF PRIMING CAPACITY



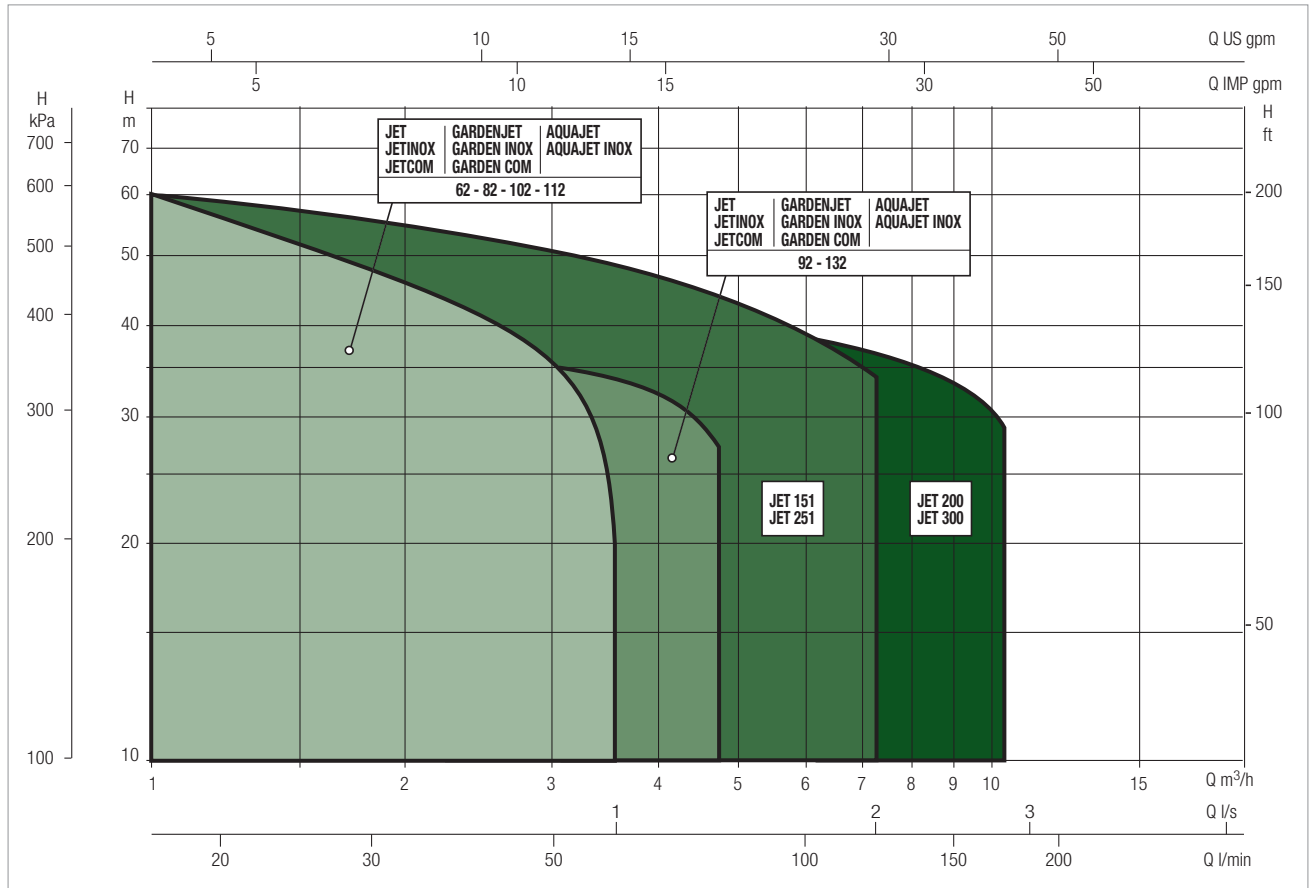
GARDEN COM

SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS

PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

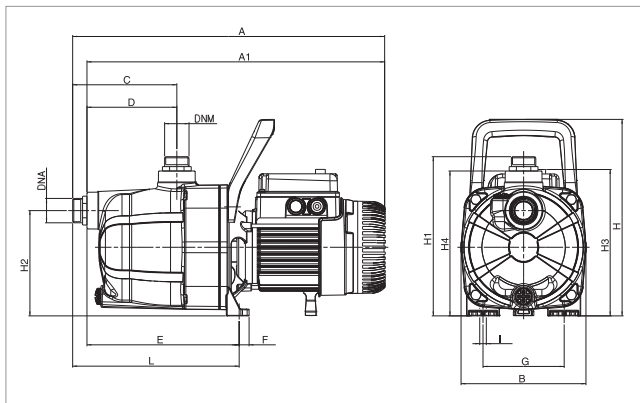
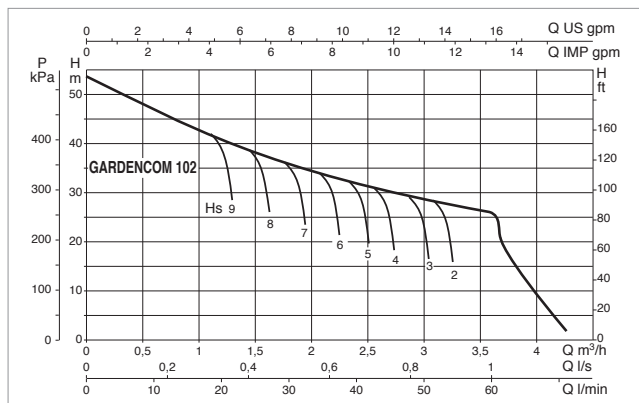
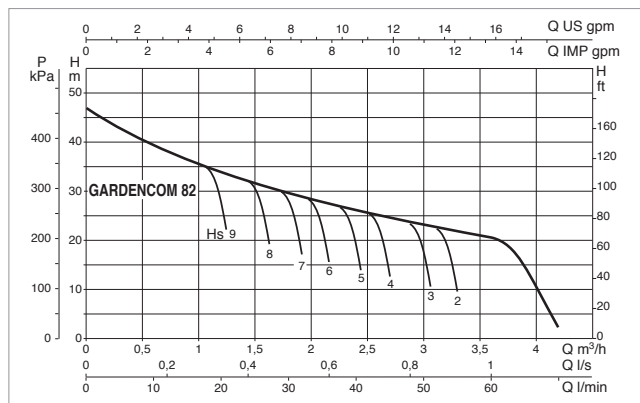
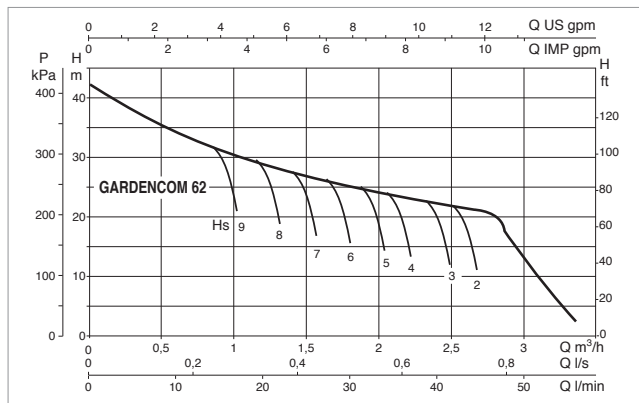


GARDEN COM SELECTION TABLE

| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 |
|------------------|---------------------|------|-----|------|------|------|------|------|-----|-----|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| GARDEN COM 62 M | H (m) | 42.7 | 35 | 29.2 | 25.6 | 22.9 | 13 | | | |
| GARDEN COM 82 M | | 47 | 40 | 34 | 30 | 26.2 | 23.5 | 20.3 | | |
| GARDEN COM 102 M | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | |

GARDEN COM - SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | POWER SUPPLY 50 Hz | P1 MAX kW | ELECTRICAL DATA | | In A | CAPACITOR | |
|------------------|-----------------------|--------------|-----------------|-----|---------|-----------|-----|
| | | | P2 NOMINAL | | | μF | Vc |
| | | | kW | HP | | | |
| GARDEN COM 62 M | 1x220-240 V ~ | 0.72 | 0.44 | 0.6 | 3.12 | 12.5 | 450 |
| GARDEN COM 82 M | 1x220-240 V ~ | 0.85 | 0.6 | 0.8 | 3.8 | 12.5 | 450 |
| GARDEN COM 102 M | 1x220-240 V ~ | 1.13 | 0.75 | 1 | 5.1 | 16 | 450 |

| MODEL | A | A1 | A2 | B | C | D | E | F | G | H | H1 | H2 | H3 | H4 | I Ø | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|------------------|-----|-----|----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | | | | | | L/A | L/B | H | | |
| GARDEN COM 62 M | 425 | 406 | - | 170 | 142 | 122 | 208 | 14 | 111 | 268 | 217 | 144 | 199 | 198 | 9 | 227 | 1" | 1" | 470 | 240 | 240 | 0.027 | 8.0 |
| GARDEN COM 82 M | 425 | 406 | - | 170 | 142 | 122 | 208 | 14 | 111 | 268 | 217 | 144 | 199 | 198 | 9 | 227 | 1" | 1" | 470 | 240 | 240 | 0.027 | 8.2 |
| GARDEN COM 102 M | 444 | 425 | - | 170 | 142 | 122 | 208 | 14 | 111 | 268 | 217 | 144 | 209 | 203 | 9 | 227 | 1" | 1" | 470 | 240 | 240 | 0.027 | 10.0 |



TECHNICAL DATA

Operating range:

from 10 to 120 litres/min. with head up to 72 m.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range:

for domestic use: from 0°C to +35°C (EN 60335-2-41)

for other use: from 0°C to +40°C

Maximum ambient temperature: +40°C

Maximum operating pressure: 8 bar (800 kPa)

Installation: fixed or portable in a horizontal position.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220-240 V / 50 Hz - 2 poles
three phase 230/400 V - 50 Hz - 2 poli

APPLICATIONS

Multi-stage centrifugal pump with horizontal shaft, featuring extremely quiet operation suitable for domestic water supply and pressurisation, irrigation of gardens and general water movement.

CONSTRUCTIONAL FEATURES OF THE PUMP

Pump body in 200 UNI ISO 185 cast iron. Motor support in die cast aluminium, with seal holder cover in AISI 304 stainless steel. Carbon/ceramic mechanical seal. Rotor shaft in AISI 304 stainless steel. Impeller and diffuser bodies and diffuser in technopolymer. Stainless steel wear ring.

CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous, continuous service motor.

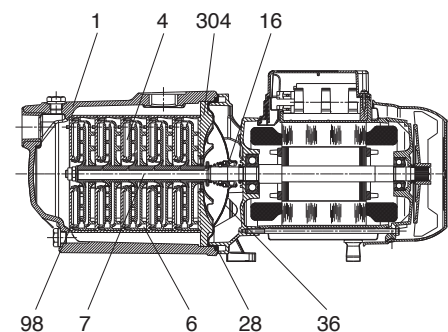
Incorporated thermo-amperometric protection and permanently inserted capacitor in the single phase version.

Overload protection to be provided by the user for the three-phase version.

MATERIALS

| N° | PARTS * | MATERIALS |
|-----|-------------------|--|
| 1 | PUMP BODY | 200 UNI ISO 185 CAST IRON |
| 4 | IMPELLER | TECHNOPOLYMER |
| 6 | DIFFUSER | TECHNOPOLYMER |
| 7 | SHAFT WITH ROTOR | AISI 304 STAINLESS STEEL X5CrNi 1810 UNI 6900/71 |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR |
| 36 | SEAL HOLDER COVER | AISI 304 STAINLESS STEEL X5CrNi 1810 UNI 6900/71 |
| 98 | DIFFUSER BODY | TECHNOPOLYMER |
| 304 | REAR DISC | TECHNOPOLYMER |

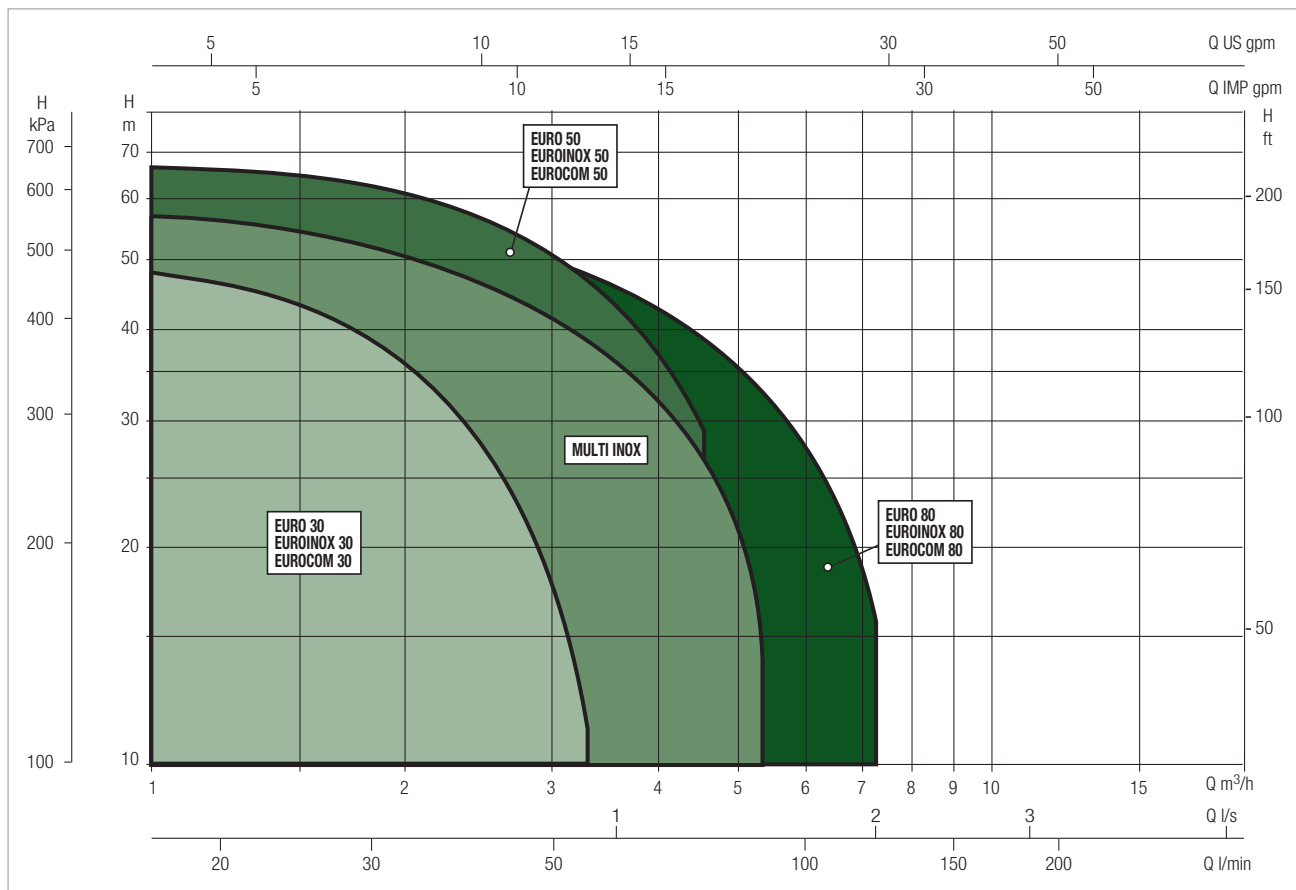
* In contact with liquid



PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

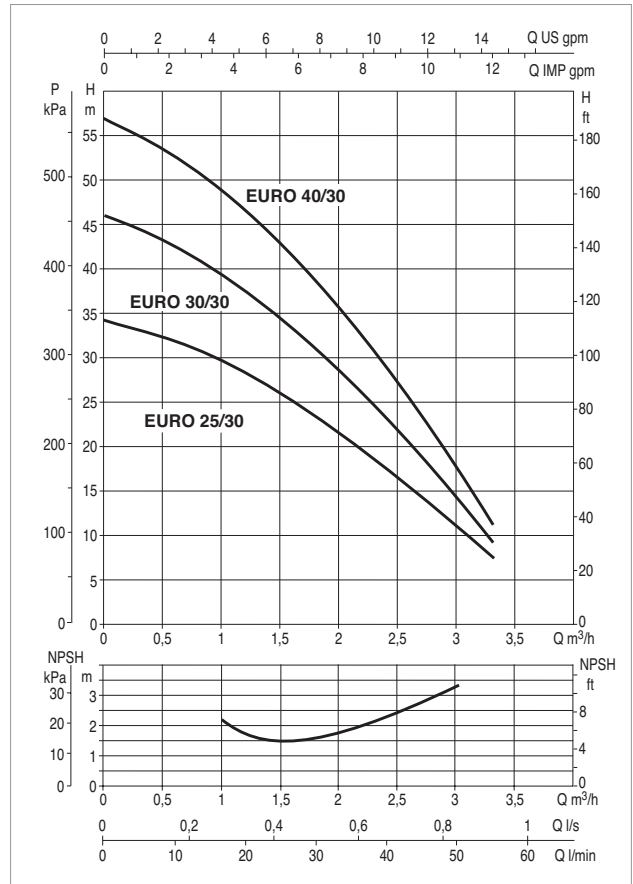
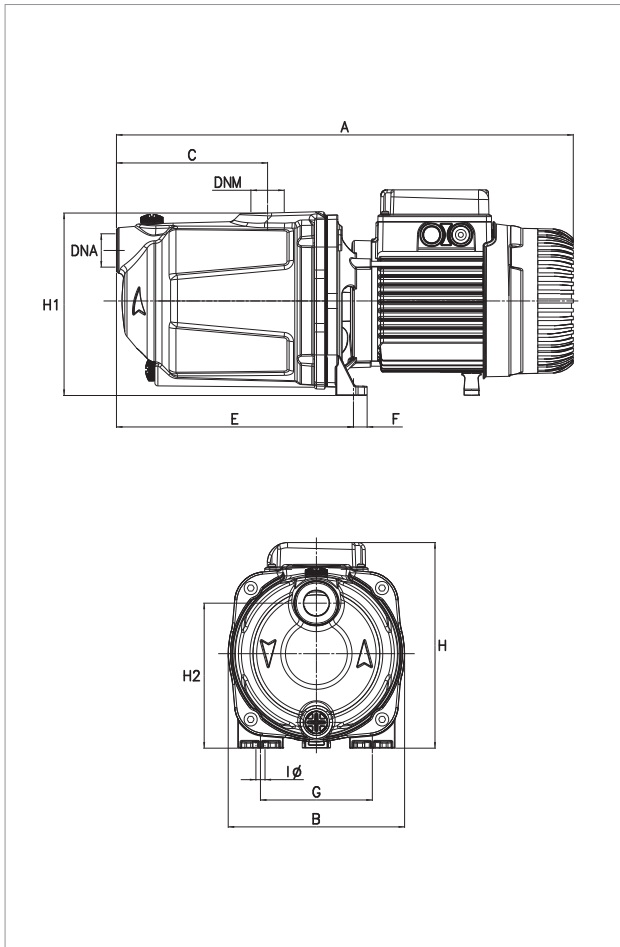


EURO SELECTION TABLE

| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 | 6 | 7.2 |
|--------------|---------------------|------|------|------|------|------|------|------|------|-----|------|------|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 |
| EURO 25/30 M | H (m) | 34.4 | 31.7 | 28.3 | 23.5 | 17.5 | 11 | | | | | |
| EURO 30/30 M | | 46 | 42.2 | 37.8 | 31.2 | 23.3 | 14.3 | | | | | |
| EURO 40/30 M | | 57 | 52.7 | 47 | 38.8 | 29 | 17.7 | | | | | |
| EURO 30/50 M | | 42.5 | 40.2 | 38.2 | 36.2 | 33.8 | 30 | 24.8 | 19.5 | 14 | | |
| EURO 40/50 M | | 57.5 | 55.3 | 52.8 | 50.1 | 47.1 | 42.7 | 35.8 | 28 | 19 | | |
| EURO 40/50 T | | 57.5 | 55.3 | 52.8 | 50.1 | 47.1 | 42.7 | 35.8 | 28 | 19 | | |
| EURO 50/50 M | | 72 | 68.5 | 65.5 | 62.1 | 58.2 | 52.2 | 43.6 | 34.5 | 26 | | |
| EURO 50/50 T | | 72 | 68.5 | 65.5 | 62.1 | 58.2 | 52.2 | 43.6 | 34.5 | 26 | | |
| EURO 30/80 M | | 47 | | 46.5 | 45 | 43.5 | 41 | 38 | 34.5 | 31 | 23 | 12 |
| EURO 30/80 T | | 47 | | 46.5 | 45 | 43.5 | 41 | 38 | 34.5 | 31 | 23 | 12 |
| EURO 40/80 M | | 59 | | 57 | 56 | 54 | 51 | 47 | 43.5 | 39 | 29.5 | 16.5 |
| EURO 40/80 T | | 59 | | 57 | 56 | 54 | 51 | 47 | 43.5 | 39 | 29.5 | 16.5 |

EURO 30-SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



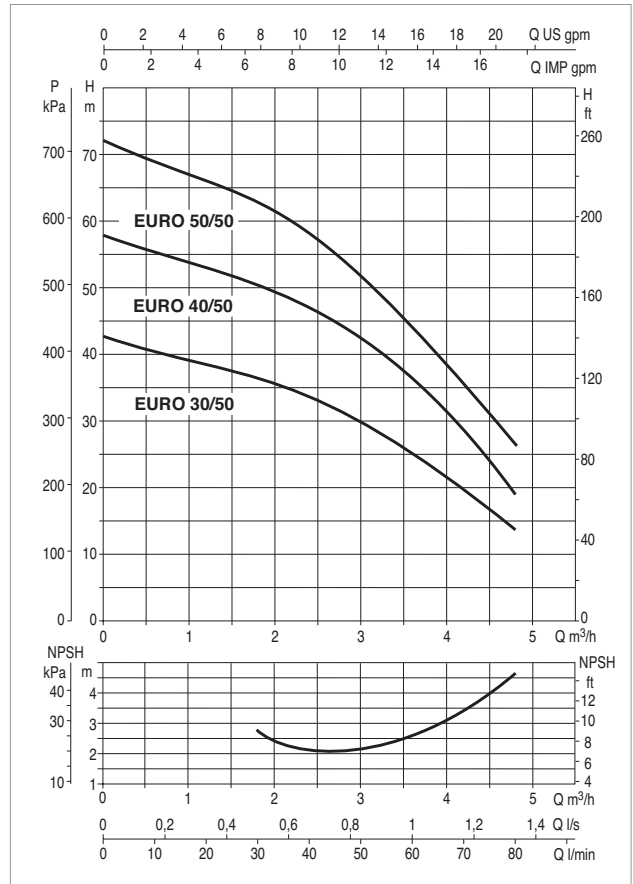
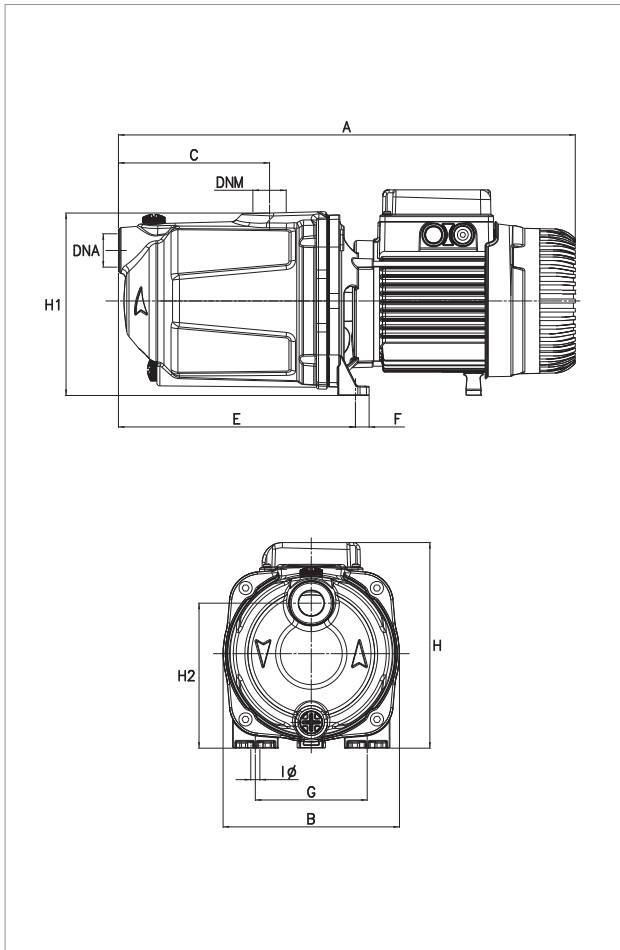
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|--------------|-----------------|--------------------|-----------|------------|------|------|-----------|-----|
| | N° IMPELLER | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | | kW | HP | | µF | Vc |
| EURO 25/30 M | 3 | 1 x 220 - 240 V ~ | 0.510 | 0.37 | 0.5 | 2.4 | 10 | 450 |
| EURO 30/30 M | 4 | 1 x 220 - 240 V ~ | 0.74 | 0.45 | 0.6 | 3.2 | 12.5 | 450 |
| EURO 40/30 M | 5 | 1 x 220 - 240 V ~ | 0.870 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |

| MODEL | A | B | C | E | F | G | I Ø | H | H1 | H2 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|--------------|-----|-----|-------|-----|------|-----|-----|-----|-----|-------|---------|---------|-----------------|-----|-----|-------------|-----------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| EURO 25/30 M | 378 | 175 | 94.5 | 180 | 13.5 | 111 | 9 | 194 | 179 | 143.5 | 1" | 1" | 440 | 206 | 245 | 0.025 | 10.7 |
| EURO 30/30 M | 433 | 175 | 149.5 | 235 | 13.5 | 111 | 9 | 194 | 179 | 143.5 | 1" | 1" | 480 | 212 | 265 | 0.031 | 12.7 |
| EURO 40/30 M | 433 | 175 | 149.5 | 235 | 13.5 | 111 | 9 | 194 | 179 | 143.5 | 1" | 1" | 480 | 212 | 265 | 0.031 | 12.8 |

EURO 50-SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



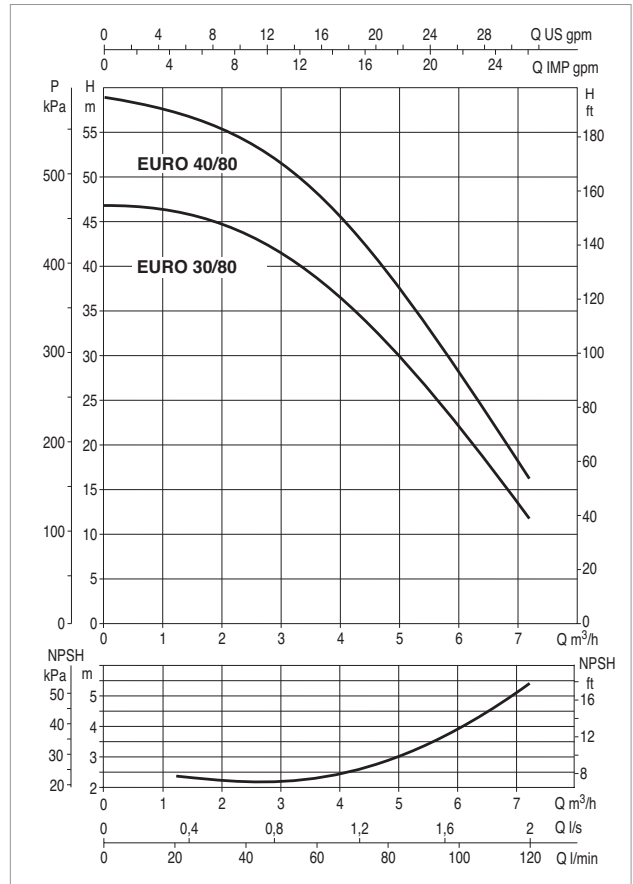
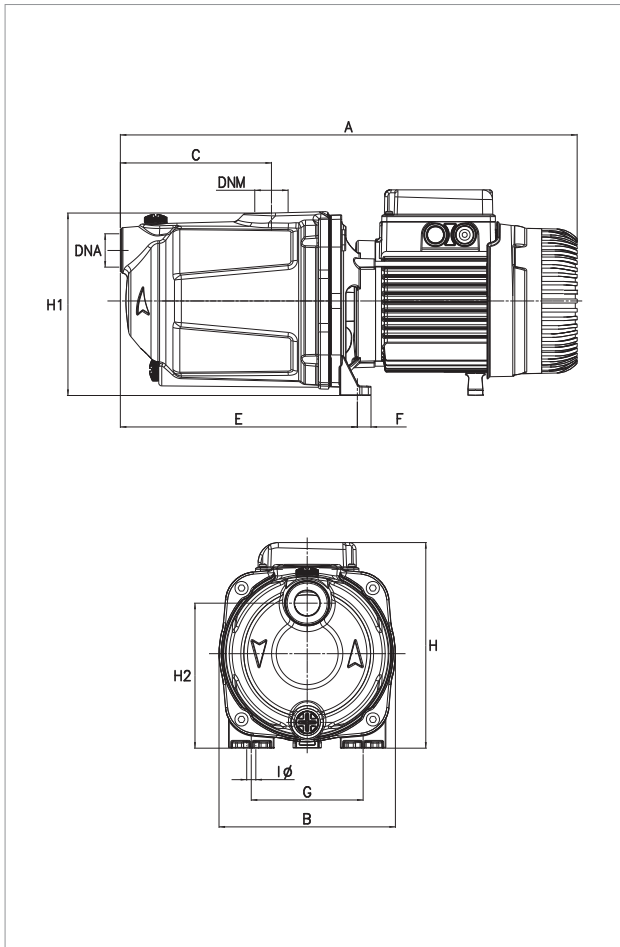
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | N° IMPELLER | POWER SUPPLY 50 Hz | P1 MAX KW | ELECTRICAL DATA | | In A | CAPACITOR | |
|--------------|-------------|--------------------|-----------|-----------------|------|---------|-----------|-----|
| | | | | P2 NOMINAL | | | µF | Vc |
| | | | | kW | HP | | | |
| EURO 30/50 M | 3 | 1 x 220 - 240 V ~ | 0.880 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |
| EURO 40/50 M | 4 | 1 x 220 - 240 V ~ | 1.200 | 0.75 | 1 | 5.3 | 25 | 450 |
| EURO 40/50 T | | 3 x 230 - 240 V ~ | 1.180 | 0.75 | 1 | 3.8-2.2 | - | - |
| EURO 50/50 M | 5 | 1 x 220 - 240 V ~ | 1.480 | 1 | 1.36 | 6.3 | 25 | 450 |
| EURO 50/50 T | | 3 x 230 - 400 V ~ | 1.440 | 1 | 1.36 | 4.4-2.5 | - | - |

| MODEL | A | B | C | E | F | G | I Ø | H | H1 | H2 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|--------------|-----|-----|-------|-----|------|-----|-----|-----|-----|-------|---------|---------|-----------------|-----|-----|-------------|-----------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| EURO 30/50 M | 378 | 175 | 94.5 | 180 | 13.5 | 111 | 9 | 194 | 179 | 143.5 | 1" | 1" | 440 | 206 | 245 | 0.025 | 11.7 |
| EURO 40/50 M | 452 | 175 | 149.5 | 235 | 13.5 | 111 | 9 | 204 | 179 | 143.5 | 1" | 1" | 480 | 212 | 265 | 0.031 | 15.6 |
| EURO 40/50 T | 468 | 175 | 149.5 | 235 | 13.5 | 111 | 9 | 204 | 179 | 143.5 | 1" | 1" | 560 | 240 | 227 | 0.031 | 18 |
| EURO 50/50 M | 452 | 175 | 149.5 | 235 | 13.5 | 111 | 9 | 204 | 179 | 143.5 | 1" | 1" | 480 | 212 | 265 | 0.031 | 16.2 |
| EURO 50/50 T | 468 | 175 | 149.5 | 235 | 13.5 | 111 | 9 | 204 | 179 | 143.5 | 1" | 1" | 560 | 240 | 227 | 0.031 | 18.5 |

EURO 80-SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | N° IMPELLER | POWER SUPPLY 50 Hz | P1 MAX KW | ELECTRICAL DATA | | | | |
|--------------|-------------|--------------------|-----------|-----------------|------|---------|-----------|-----|
| | | | | P2 NOMINAL | | In A | CAPACITOR | |
| | | | | kW | HP | | µF | Vc |
| EURO 30/80 M | 4 | 1 x 220 - 240 V ~ | 1.2 | 0.8 | 1.1 | 5.3 | 25 | 450 |
| EURO 30/80 T | | 3 x 230 - 400 V ~ | 1.18 | 0.8 | 1.1 | 3.8-2.2 | - | - |
| EURO 40/80 M | 5 | 1 x 220 - 240 V ~ | 1.48 | 1 | 1.36 | 6.3 | 25 | 450 |
| EURO 40/80 T | | 3 x 230 - 400 V ~ | 1.44 | 1 | 1.36 | 4.4-2.5 | - | - |

| MODEL | A | B | C | E | F | G | I Ø | H | H1 | H2 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|--------------|-----|-----|-------|-----|------|-----|-----|-----|-----|-------|---------|---------|-----------------|-----|-----|-------------|-----------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| EURO 30/80 M | 452 | 175 | 149.5 | 235 | 13.5 | 111 | 9 | 204 | 179 | 143.5 | 1" | 1" | 440 | 212 | 265 | 0.031 | 15.6 |
| EURO 30/80 T | 468 | 175 | 149.5 | 235 | 13.5 | 111 | 9 | 204 | 179 | 143.5 | 1" | 1" | 560 | 240 | 227 | 0.031 | 18 |
| EURO 40/80 M | 452 | 175 | 149.5 | 235 | 13.5 | 111 | 9 | 204 | 179 | 143.5 | 1" | 1" | 480 | 212 | 265 | 0.031 | 16.3 |
| EURO 40/80 T | 468 | 175 | 149.5 | 235 | 13.5 | 111 | 9 | 204 | 179 | 143.5 | 1" | 1" | 560 | 240 | 227 | 0.031 | 18 |

EUROINOX

MULTISTAGE CENTRIFUGAL PUMPS



TECHNICAL DATA

Operating range:

from 10 to 120 litres/min. with head up to 72 m.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range: from 0°C to +35°C for domestic use (EN 60335-2-41).

Maximum ambient temperature: +40°C

Maximum operating pressure: 8 bar (800 kPa)

Installation: fixed or portable in a horizontal position.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220/240 V / 50 Hz
three phase 230/400 V - 50 Hz

APPLICATIONS

Multi-stage centrifugal pump with horizontal shaft, with excellent suction capacity even in the presence of air bubbles, featuring extremely quiet operation suitable for domestic water supply and pressurisation, irrigation of gardens and general water movement.

CONSTRUCTIONAL FEATURES OF THE PUMP

Pump body in stainless steel. Motor support in die cast aluminium, with seal holder cover in AISI 304 stainless steel. Carbon/ceramic mechanical seal. Rotor shaft in AISI 304 stainless steel. Impeller and diffuser bodies and diffuser in technopolymer. Stainless steel wear ring.

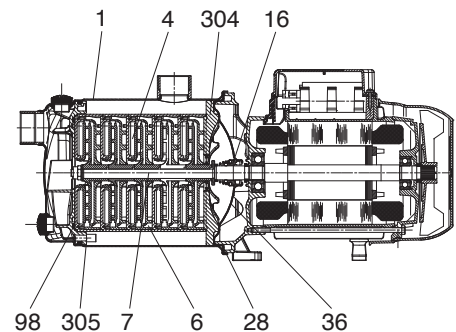
CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous, continuous service motor. Incorporated thermo-ampereometric protection and permanently inserted capacitor in the single phase version. Overload protection to be provided by the user for the three-phase version.

MATERIALS

| N° | PARTS* | MATERIALS |
|-----|-------------------|--|
| 1 | PUMP BODY | AISI 304 STAINLESS STEEL X5CRNI 1810 UNI 6900/71 |
| 4 | IMPELLER | TECHNOPOLYMER |
| 6 | DIFFUSER | TECHNOPOLYMER |
| 7 | SHAFT WITH ROTOR | AISI 304 STAINLESS STEEL X5CrNi 1810 UNI 6900/71 |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR |
| 36 | SEAL HOLDER COVER | AISI 304 STAINLESS STEEL X5CRNI 1810 UNI 6900/71 |
| 98 | DIFFUSER BODY | TECHNOPOLYMER |
| 304 | REAR DISC | TECHNOPOLYMER |
| 305 | FRONT DISC | TECHNOPOLYMER |

* In contact with liquid



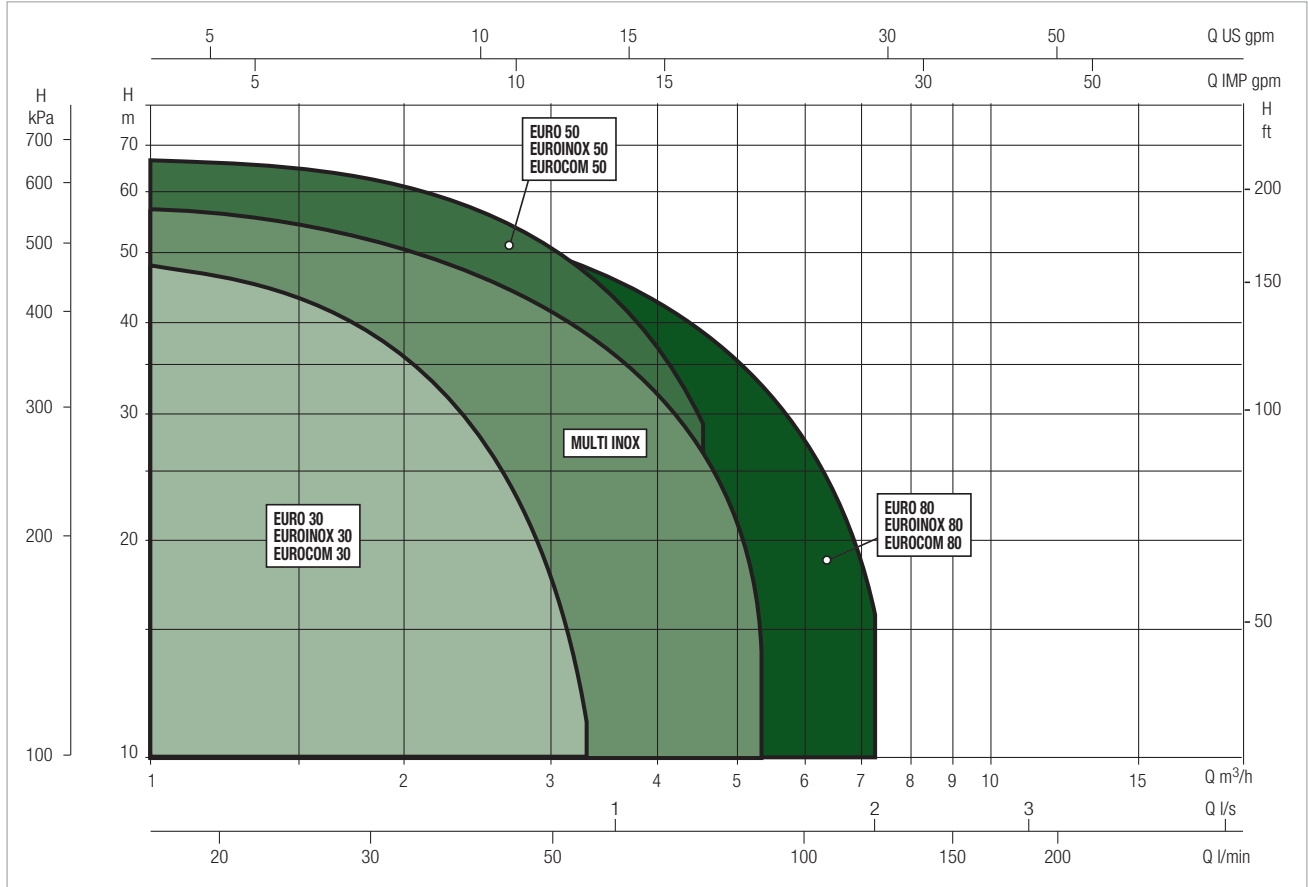
EUROINOX

MULTISTAGE CENTRIFUGAL PUMPS

PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

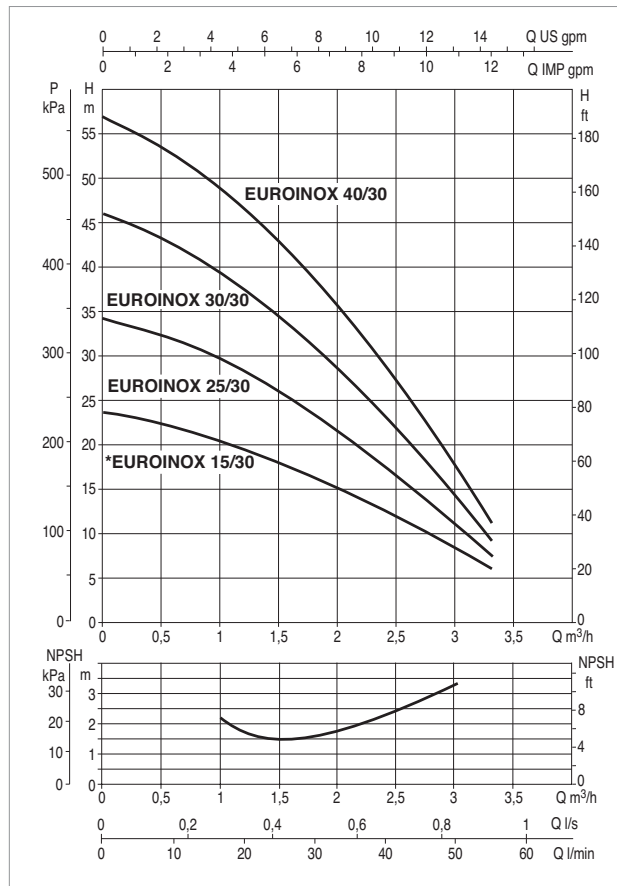
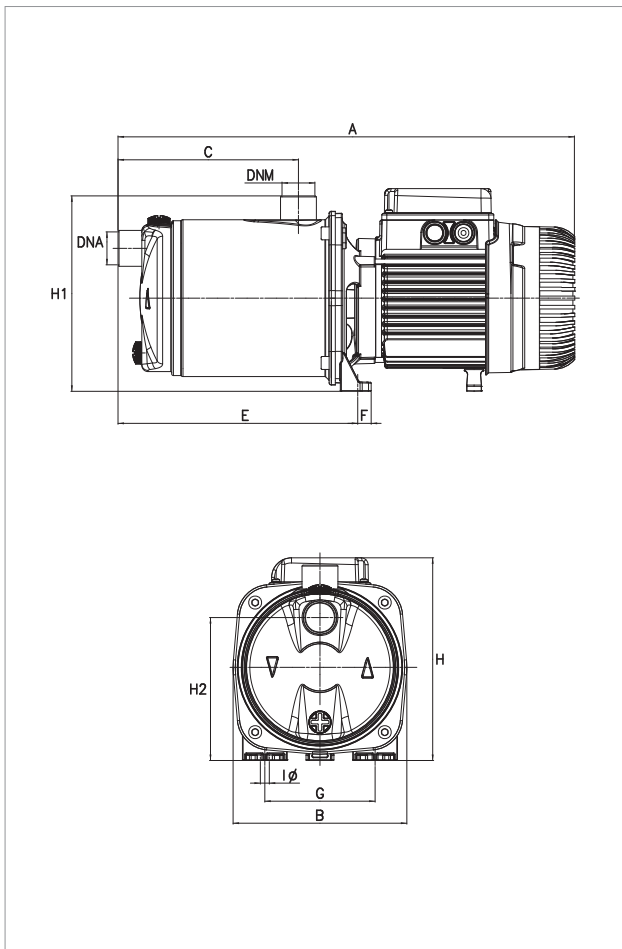


EUROINOX SELECTION TABLE

| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 | 6 | 7.2 |
|------------------|---------------------|----|------|------|------|------|------|------|------|-----|------|------|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 |
| EUROINOX 25/30 M | H (m) | 34 | 31.7 | 28.3 | 23.5 | 17.5 | 11 | | | | | |
| EUROINOX 30/30 M | | 46 | 42.2 | 37.8 | 31.2 | 23.3 | 14.3 | | | | | |
| EUROINOX 40/30 M | | 57 | 52.7 | 47 | 38.8 | 29 | 17.7 | | | | | |
| EUROINOX 30/50 M | | 42 | 40.2 | 38.2 | 36.2 | 33.8 | 30 | 24.8 | 19.5 | 14 | | |
| EUROINOX 30/50 T | | 42 | 40.2 | 38.2 | 36.2 | 33.8 | 30 | 24.8 | 19.5 | 14 | | |
| EUROINOX 40/50 M | | 58 | 55.3 | 52.8 | 50.1 | 47.1 | 42.7 | 35.8 | 28 | 19 | | |
| EUROINOX 40/50 T | | 58 | 55.3 | 52.8 | 50.1 | 47.1 | 42.7 | 35.8 | 28 | 19 | | |
| EUROINOX 50/50 M | | 72 | 68.5 | 65.5 | 62.1 | 58.2 | 52.2 | 43.6 | 34.5 | 26 | | |
| EUROINOX 50/50 T | | 72 | 68.5 | 65.5 | 62.1 | 58.2 | 52.2 | 43.6 | 34.5 | 26 | | |
| EUROINOX 30/80 M | | 47 | | 46.5 | 45 | 43.5 | 41 | 38 | 34.5 | 31 | 23 | 12 |
| EUROINOX 30/80 T | | 47 | | 46.5 | 45 | 43.5 | 41 | 38 | 34.5 | 31 | 23 | 12 |
| EUROINOX 40/80 M | | 59 | | 57 | 56 | 54 | 51 | 47 | 43.5 | 39 | 29.5 | 16.5 |
| EUROINOX 40/80 T | | 59 | | 57 | 56 | 54 | 51 | 47 | 43.5 | 39 | 29.5 | 16.5 |

EUROINOX 30-SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

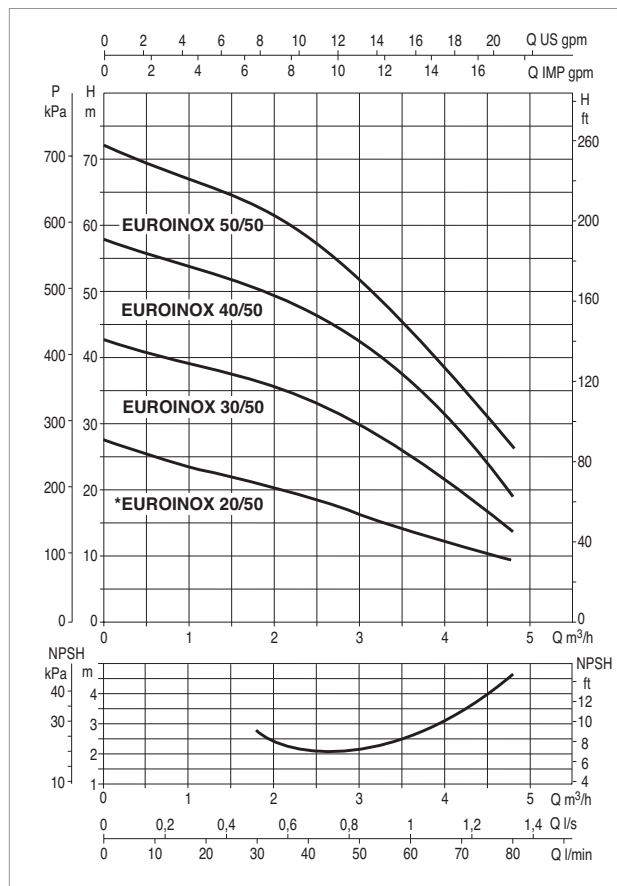
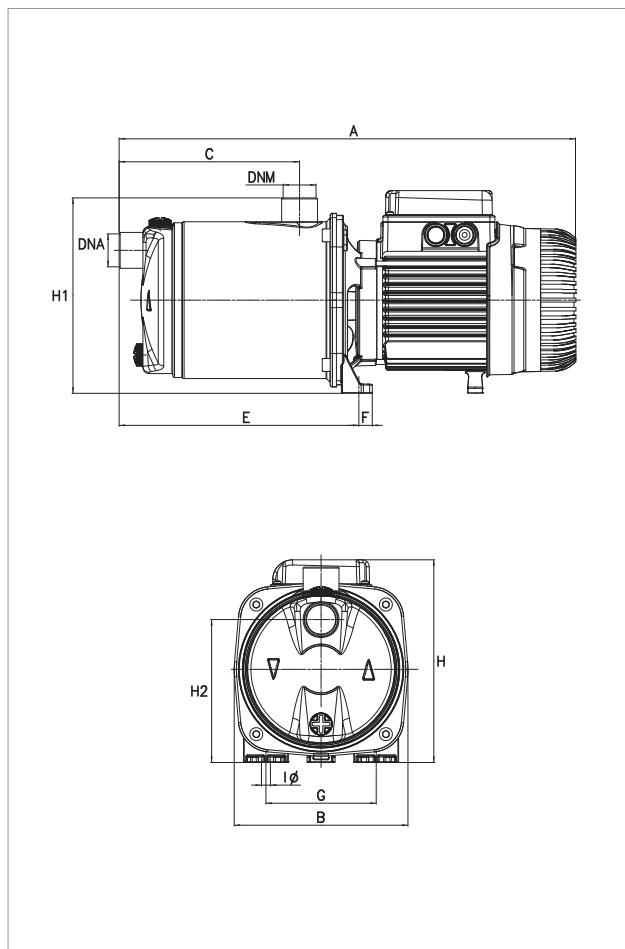
| MODEL | ELECTRICAL DATA | | | | | | | |
|------------------|-----------------|--------------------|-----------|------------|------|------|-----------|-----|
| | N° IMPELLER | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | | kW | HP | | µF | Vc |
| EUROINOX 25/30 M | 3 | 1 x 220 - 240 V ~ | 0.520 | 0.37 | 0.5 | 2.4 | 10 | 450 |
| EUROINOX 30/30 M | 4 | 1 x 220 - 240 V ~ | 0.760 | 0.45 | 0.6 | 3.2 | 12.5 | 450 |
| EUROINOX 40/30 M | 5 | 1 x 220 - 240 V ~ | 0.880 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |

| MODEL | A | B | C | E | F | G | I Ø | H | H1 | H2 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|---------|---------|-----------------|-----|-----|-------------|-----------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| EUROINOX 25/30 M | 384 | 174 | 108 | 186 | 13.5 | 111 | 9 | 193 | 196 | 143 | 1" | 1" | 440 | 206 | 245 | 0.025 | 9.7 |
| EUROINOX 30/30 M | 439 | 174 | 166 | 241 | 13.5 | 111 | 9 | 193 | 196 | 143 | 1" | 1" | 480 | 212 | 265 | 0.031 | 11.7 |
| EUROINOX 40/30 M | 439 | 174 | 166 | 241 | 13.5 | 111 | 9 | 193 | 196 | 143 | 1" | 1" | 480 | 212 | 265 | 0.031 | 11.9 |

* Available upon request.

EUROINOX 50-SELF-PRIMING CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



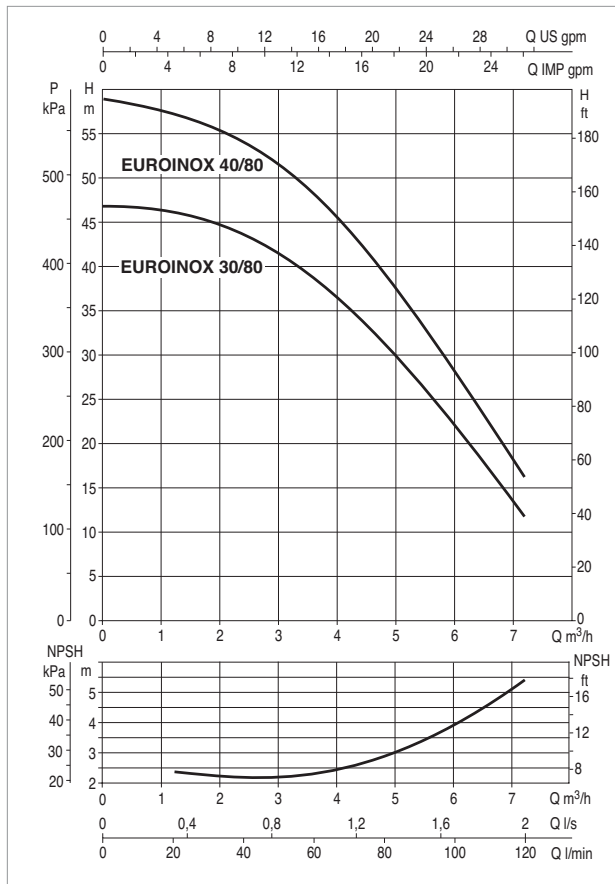
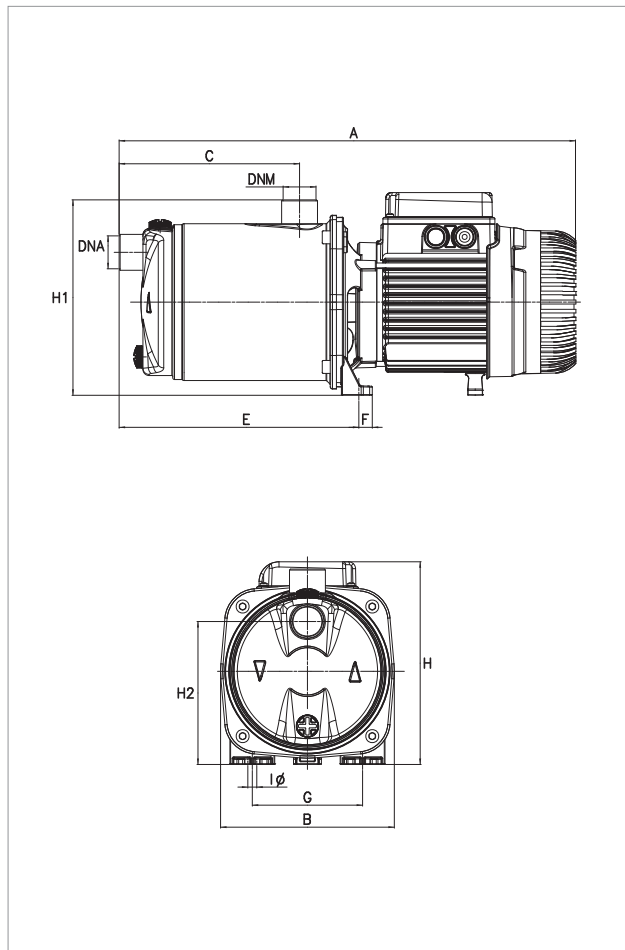
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | N° IMPELLER | POWER SUPPLY 50 Hz | P1 MAX KW | ELECTRICAL DATA | | | | |
|------------------|-------------|--------------------|-----------|-----------------|------|---------|-----------|-----|
| | | | | P2 NOMINAL | | In A | CAPACITOR | |
| | | | | kW | HP | | µF | Vc |
| EUROINOX 30/50 M | 3 | 1x220-240 V ~ | 0.880 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |
| EUROINOX 30/50 T | | 3x230-400V ~ | 0.870 | 0.55 | 0.75 | 2.8-1.6 | - | - |
| EUROINOX 40/50 M | 4 | 1x220-240 V ~ | 1.200 | 0.75 | 1 | 5.3 | 25 | 450 |
| EUROINOX 40/50 T | | 3x230-400V ~ | 1.180 | 0.75 | 1 | 3.8-2.2 | - | - |
| EUROINOX 50/50 M | 5 | 1x220-240 V ~ | 1.480 | 1 | 1.36 | 6.3 | 25 | 450 |
| EUROINOX 50/50 T | | 3x230-400V ~ | 1.440 | 1 | 1.36 | 4.4-2.5 | - | - |

| MODEL | A | B | C | E | F | G | I Ø | H | H1 | H2 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|-------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|---------|---------|-----------------|-----|-----|-------------|-----------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| EUROINOX 30/50 MT | 384 | 174 | 108 | 186 | 13.5 | 111 | 9 | 193 | 196 | 143 | 1" | 1" | 440 | 206 | 245 | 0.025 | 10.7 |
| EUROINOX 40/50 M | 458 | 174 | 166 | 241 | 13.5 | 111 | 9 | 203 | 196 | 143 | 1" | 1" | 480 | 212 | 265 | 0.031 | 14.8 |
| EUROINOX 40/50 T | 474 | 174 | 166 | 241 | 13.5 | 111 | 9 | 203 | 196 | 143 | 1" | 1" | 560 | 240 | 227 | 0.031 | 14.8 |
| EUROINOX 50/50 M | 458 | 174 | 166 | 241 | 13.5 | 111 | 9 | 203 | 196 | 143 | 1" | 1" | 480 | 212 | 265 | 0.031 | 15.5 |
| EUROINOX 50/50 T | 474 | 174 | 166 | 241 | 13.5 | 111 | 9 | 203 | 196 | 143 | 1" | 1" | 560 | 240 | 227 | 0.031 | 15.5 |

EUROINOX 80-SELF-PRIMING MULTISTAGE CENTRIFUGAL PUMPS CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|------------------|-----------------|--------------------|-----------|------------|------|---------|-----------|-----|
| | N° IMPELLER | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | | kW | HP | | µF | Vc |
| EUROINOX 30/80 M | 4 | 1x220-240 V ~ | 1.200 | 0.8 | 1.1 | 5.3 | 25 | 450 |
| EUROINOX 30/80 T | | 3x230-400 V ~ | 1.180 | 0.8 | 1.1 | 3.8-2.2 | - | - |
| EUROINOX 40/80 M | 5 | 1x220-240 V ~ | 1.480 | 1 | 1.36 | 6.5 | 25 | 450 |
| EUROINOX 40/80 T | | 3x230-400 V ~ | 1.440 | 1 | 1.36 | 4.4-2.5 | - | - |

| MODEL | A | B | C | E | F | G | I Ø | H | H1 | H2 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|---------|---------|-----------------|-----|-----|-------------|-----------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| EUROINOX 30/80 M | 458 | 174 | 166 | 241 | 13.5 | 111 | 9 | 203 | 196 | 143 | 1" | 1" | 480 | 212 | 265 | 0.031 | 14.8 |
| EUROINOX 30/80 T | 474 | 174 | 166 | 241 | 13.5 | 111 | 9 | 203 | 196 | 143 | 1" | 1" | 560 | 240 | 227 | 0.031 | 14.8 |
| EUROINOX 40/80 M | 458 | 174 | 166 | 241 | 13.5 | 111 | 9 | 203 | 196 | 143 | 1" | 1" | 480 | 212 | 265 | 0.031 | 15.5 |
| EUROINOX 40/80 T | 474 | 174 | 166 | 241 | 13.5 | 111 | 9 | 203 | 196 | 143 | 1" | 1" | 560 | 240 | 227 | 0.031 | 15.5 |



TECHNICAL DATA

Operating range:

from 10 to 120 litres/min. with head up to 72 m.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range:

for domestic use: from 0°C to +35°C (EN 60335-2-41)

for other use: from 0°C to +40°C

Maximum ambient temperature: +40°C

Maximum operating pressure: 6 bar (600 kPa)

Installation: fixed or portable in a horizontal position.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220/240 V - 50 Hz

three phase 230/400 V - 50 Hz

APPLICATIONS

Multi-stage centrifugal pump with horizontal shaft, featuring extremely quiet operation suitable for domestic water supply and pressurisation, irrigation of gardens and general water movement.

CONSTRUCTIONAL FEATURES OF THE PUMP

Pump body in technopolymer. Motor support in die cast aluminium, with seal holder cover in AISI 304 stainless steel. Carbon/ceramic mechanical seal. Rotor shaft in AISI 304 stainless steel. Impeller and diffuser bodies and diffuser in technopolymer. Stainless steel wear ring.

CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous, continuous service motor.

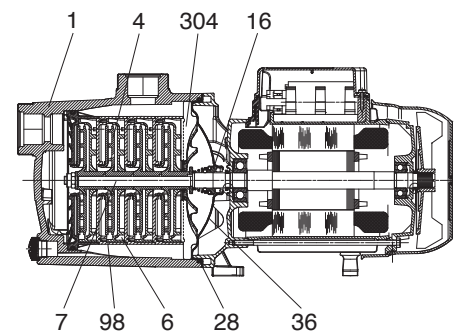
Incorporated thermo-amperometric protection and permanently inserted capacitor in the single phase version.

Overload protection to be provided by the user for the three-phase version.

MATERIALS

| N° | PARTS* | MATERIALS |
|-----|-------------------|--|
| 1 | PUMP BODY | TECHNOPOLYMER |
| 4 | IMPELLER | TECHNOPOLYMER |
| 6 | DIFFUSER | TECHNOPOLYMER |
| 7 | SHAFT WITH ROTOR | AISI 304 STAINLESS STEEL X5CrNi 1810 UNI 6900/71 |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR |
| 36 | SEAL HOLDER COVER | AISI 304 STAINLESS STEEL X5CRNI 1810 UNI 6900/71 |
| 98 | DIFFUSER BODY | TECHNOPOLYMER |
| 304 | REAR DISC | TECHNOPOLYMER |

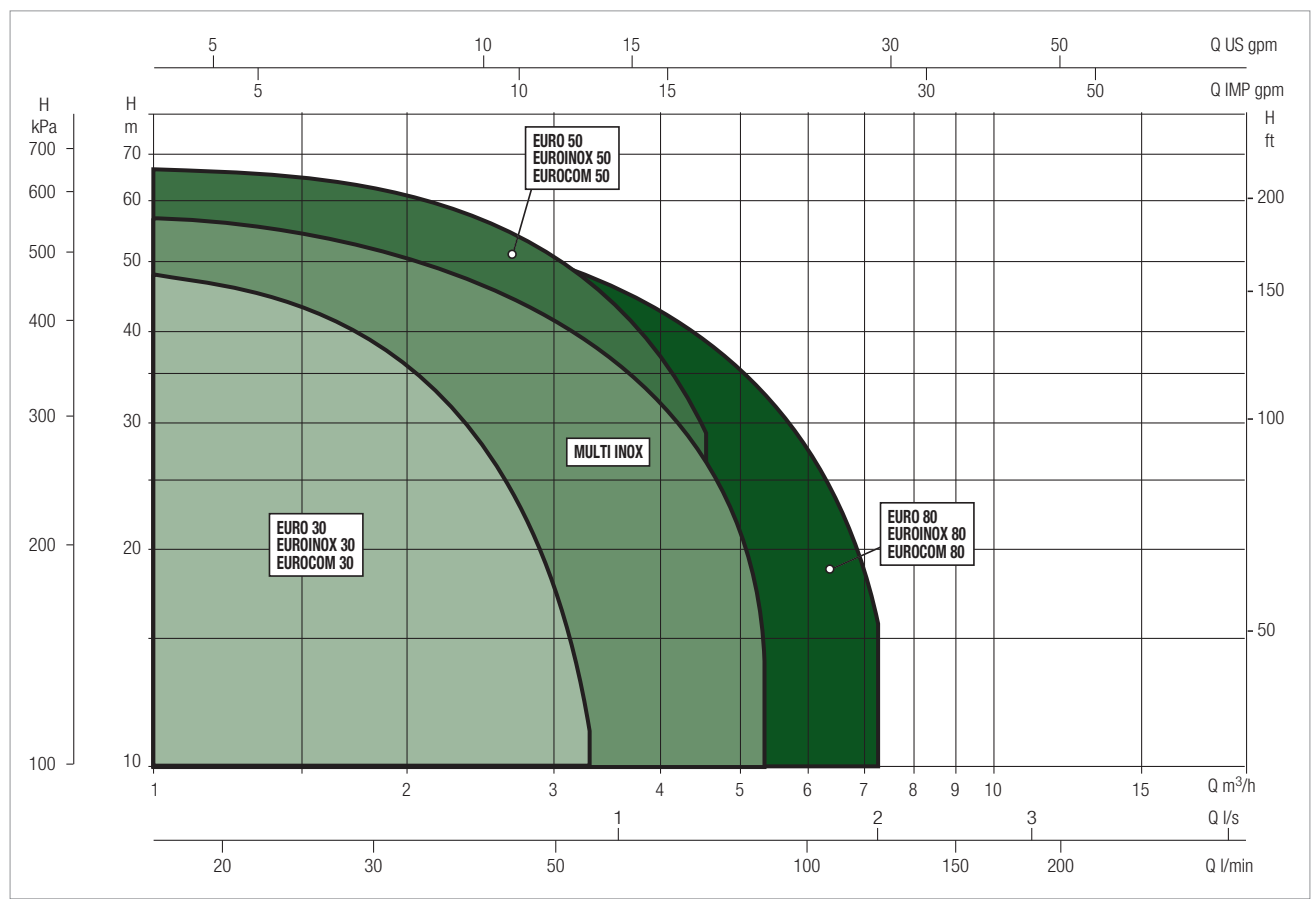
* In contact with liquid



PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

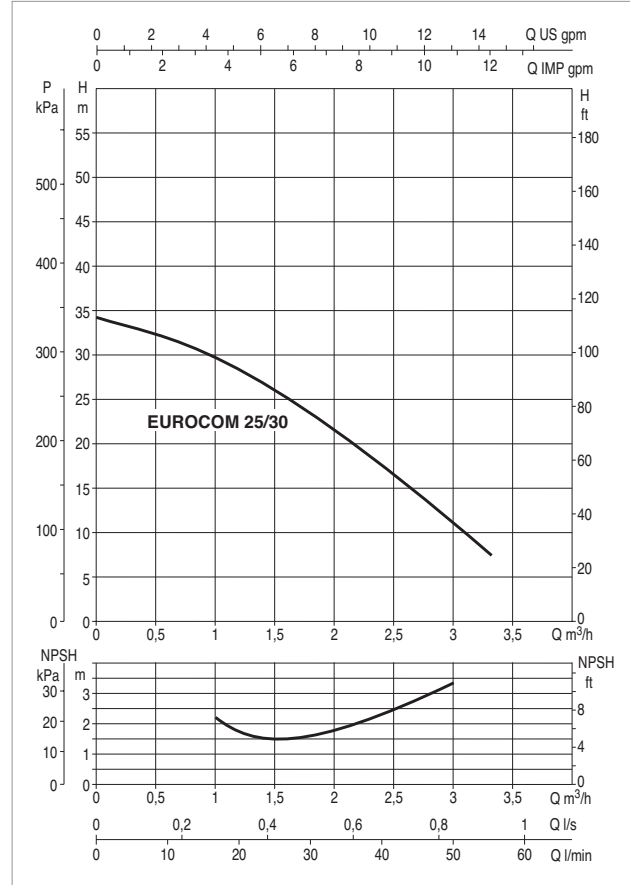
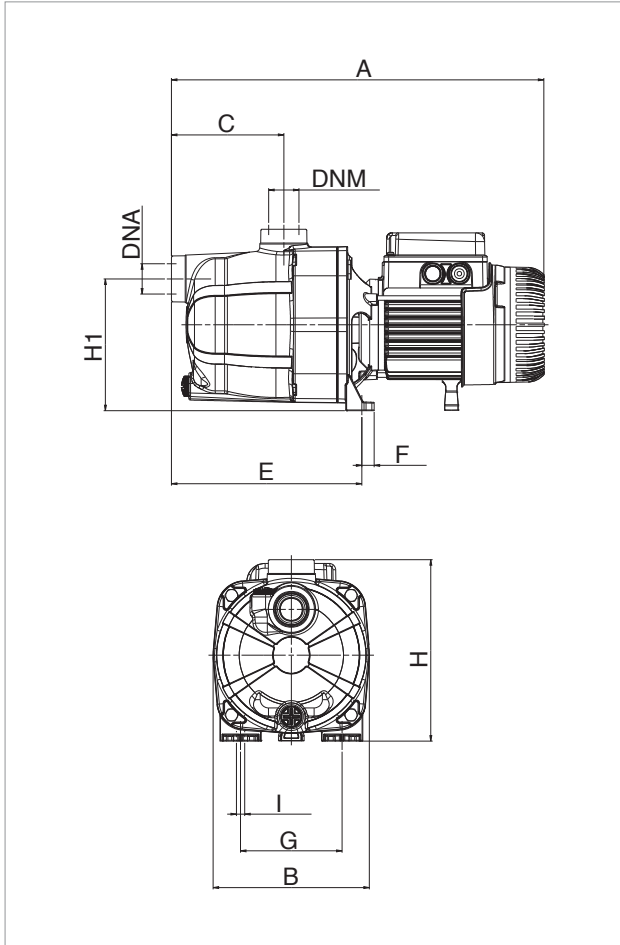


EUROCOM SELECTION TABLE

| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 | 6 | 7.2 |
|-----------------|---------------------|------|------|------|------|------|------|------|------|------|-----|-----|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 |
| EUROCOM 25/30 M | H (m) | 34.4 | 31.7 | 28.3 | 23.5 | 17.5 | 11 | | | | | |
| EUROCOM 30/50 M | | 42.2 | 40.2 | 38.2 | 36.2 | 33.8 | 30 | 24.8 | 19.5 | 14 | | |
| EUROCOM 40/50 M | | 57.7 | 55.3 | 52.8 | 50.1 | 47.1 | 42.7 | 35.8 | 28 | 19.2 | | |
| EUROCOM 40/50 T | | 57.7 | 55.3 | 52.8 | 50.1 | 47.1 | 42.7 | 35.8 | 28 | 19.2 | | |
| EUROCOM 30/80 T | | 47 | | 46.5 | 45 | 43.5 | 41 | 38 | 34.5 | 31 | 23 | 12 |

EUROCOM 30-SELF-PRIMING MULTISTAGE CENTRIFUGAL PUMPS CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



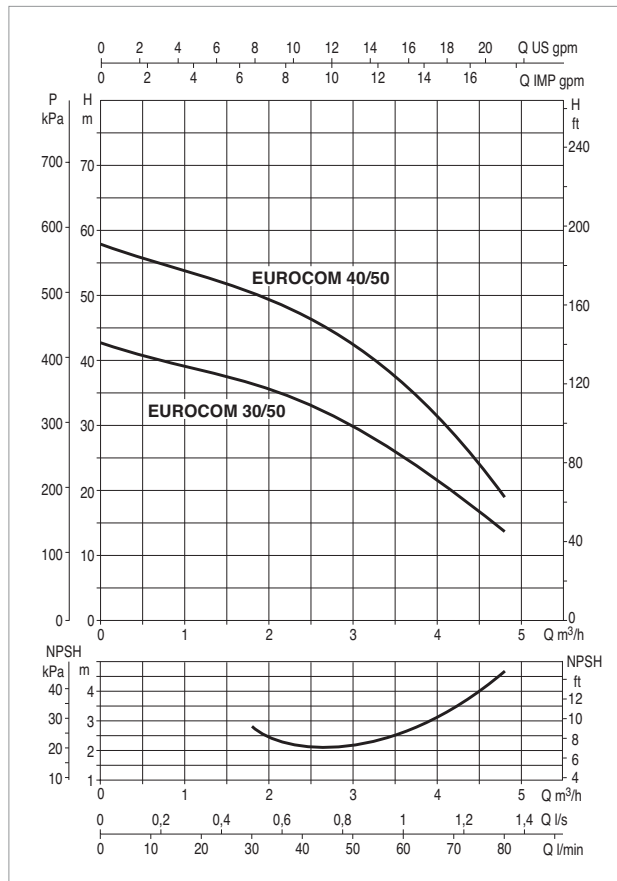
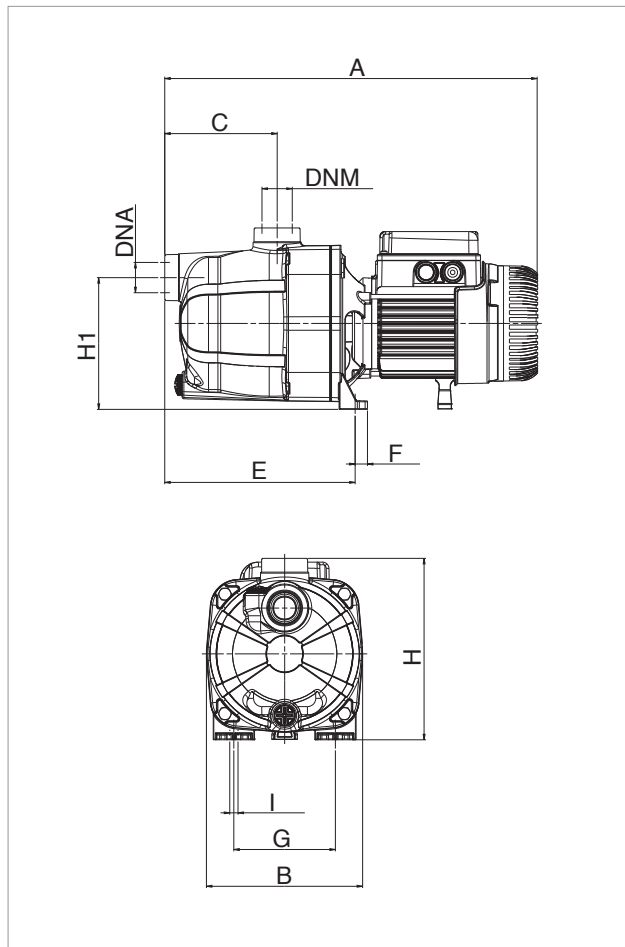
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | N° IMPELLER | POWER SUPPLY 50 Hz | P1 MAX KW | ELECTRICAL DATA | | | | |
|-----------------|-------------|--------------------|-----------|-----------------|-----|------|-----------|-----|
| | | | | P2 NOMINAL | | In A | CAPACITOR | |
| | | | | kW | HP | | µF | Vc |
| EUROCOM 25/30 M | 3 | 1x220-240V ~ | 0.52 | 0.37 | 0.5 | 2.4 | 10 | 450 |

| MODEL | A | B | C | E | F | G | I Ø | H | H1 | H2 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg | |
|-----------------|-----|-----|-----|-----|----|-----|-----|-----|-----|----|---------|---------|-----------------|-----|-----|-------------|-----------------|---|
| | | | | | | | | | | | | | L/A | L/B | H | | M | T |
| | | | | | | | | | | | | | | | | | | |
| EUROCOM 25/30 M | 406 | 170 | 122 | 208 | 14 | 111 | 9 | 198 | 144 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 8 | 8 |

EUROCOM 50-SELF-PRIMING MULTISTAGE CENTRIFUGAL PUMPS CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



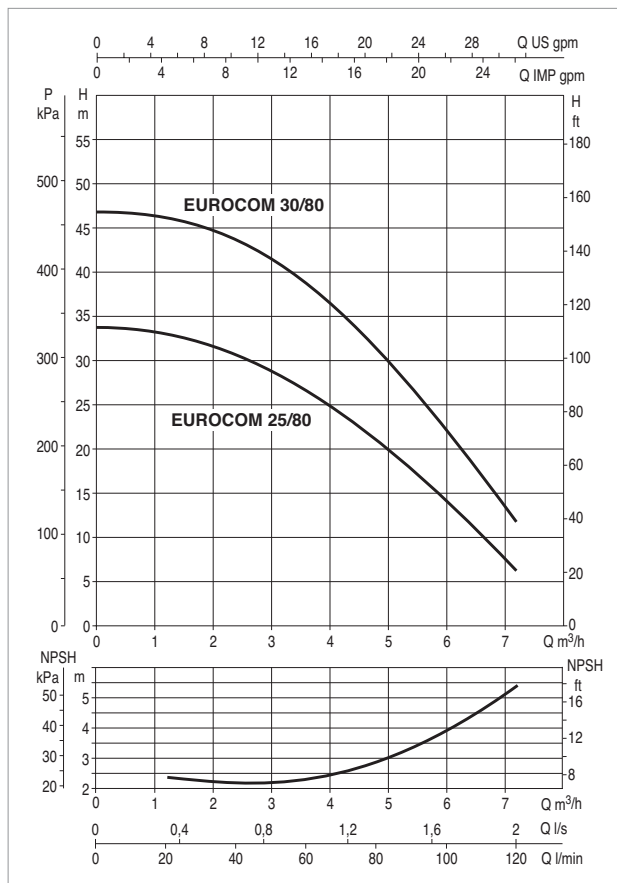
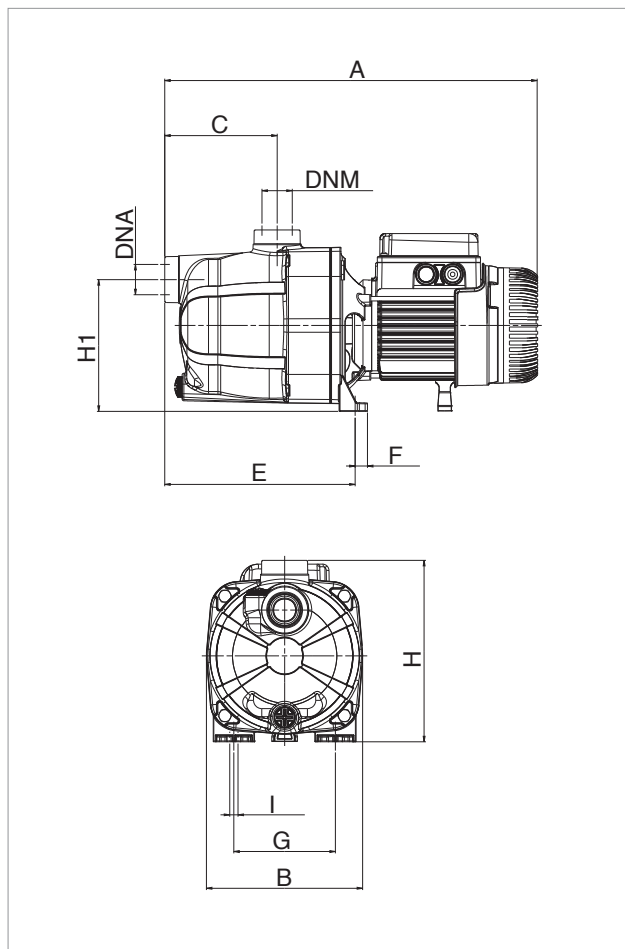
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|-----------------|-----------------|--------------------|-----------|------------|------|---------|-----------|-----|
| | N° IMPELLER | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | | kW | HP | | µF | Vc |
| EUROCOM 30/50 M | 3 | 1x220-240 V ~ | 0.88 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |
| EUROCOM 40/50 M | 4 | 1x220-240 V ~ | 1.2 | 0.75 | 1 | 5.3 | 25 | 450 |
| EUROCOM 40/50 T | | 3x230-400 V ~ | 1.18 | 0.75 | 1 | 3.8-2.2 | - | - |

| MODEL | A | B | C | E | F | G | I Ø | H | H1 | H2 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|-----------------|-----|-----|-----|-----|----|-----|-----|-----|-----|----|---------|---------|-----------------|-----|-----|-------------|-----------------|
| | | | | | | | | | | | | | L/A | L/B | H | | |
| EUROCOM 30/50 M | 406 | 170 | 122 | 208 | 14 | 111 | 9 | 198 | 144 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 8.8 |
| EUROCOM 40/50 M | 406 | 170 | 122 | 208 | 14 | 111 | 9 | 203 | 144 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 11 |
| EUROCOM 40/50 T | 422 | 170 | 122 | 208 | 14 | 111 | 9 | 203 | 144 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 12.5 |

EUROCOM 80-SELF-PRIMING MULTISTAGE CENTRIFUGAL PUMPS CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|-----------------|-----------------|--------------------|-----------|------------|-----|---------|-----------|----|
| | N° IMPELLER | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | | kW | HP | | µF | Vc |
| EUROCOM 30/80 T | 4 | 3x230-400V ~ | 1.04 | 0.8 | 1.1 | 3.3-1.9 | - | - |

| MODEL | A | B | C | E | F | G | I Ø | H | H1 | H2 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg | |
|-----------------|-----|-----|-----|-----|----|-----|-----|-----|-----|----|---------|---------|-----------------|-----|-----|-------------|-----------------|------|
| | | | | | | | | | | | | | L/A | L/B | H | | M | T |
| EUROCOM 30/80 T | 425 | 170 | 122 | 208 | 14 | 111 | 9 | 203 | 144 | - | 1" | 1" | 470 | 240 | 240 | 0.027 | 11 | 11.3 |

MULTI INOX

SELF-PRIMING, MULTISTAGE HORIZONTAL ELECTRIC PUMPS



TECHNICAL DATA

Operating range:

capacity up to 90 l/min; head up to 59 m.

Liquid temperature range:

for domestic use: from +35°C to +35°C

for other use: from 0°C to +40°C

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral.

Maximum suction depth: 8 metres

Maximum ambient temperature: +40°C

Protection rating: IPX4

Insulation class: F

Installation: fixed or portable in a horizontal position.

Special executions on request: alternative voltages and/or frequencies.

APPLICATIONS

Multi-stage, self priming centrifugal pump with horizontal shaft, with excellent suction capacity even in the presence of air bubbles, featuring extremely quiet operation suitable for domestic water supply and pressurisation, irrigation of gardens and general water movement.

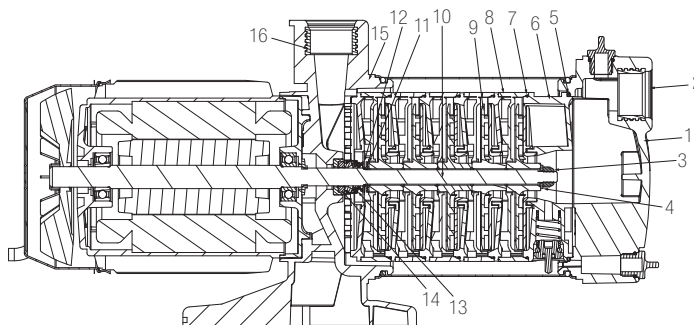
FEATURES

Pump sleeve in stainless steel. Pressure and suction body and motor support in technopolymer. Impeller in AISI 304 stainless steel, diffuser bodies and diffuser in technopolymer. Carbon/ceramic mechanical seal. Rotor shaft in AISI 304 stainless steel. Single phase, asynchronous, continuous service motor. Incorporated thermo-amperometric protection and permanently inserted capacitor.

MATERIALS

| N° | PARTS* | MATERIALS |
|----|-----------------|---|
| 1 | SUCTION FLANGE | TECHNOPOLYMER |
| 2 | INSERT | NICKLED BRASS |
| 3 | NUT | A2 – UNI7474 STAINLESS STEEL |
| 4 | WASHER | A2 STAINLESS STEEL |
| 5 | OR GASKET | NBR |
| 6 | COUNTERFLANGE | TECHNOPOLYMER |
| 7 | OR GASKET | NBR |
| 8 | DIFFUSER | TECHNOPOLYMER |
| 9 | IMPELLER | TECHNOPOLYMER |
| 10 | ROTOR SHAFT | AISI 416 STAINLESS STEEL UNI EN 10088-1 X12CrS13 |
| 11 | WASHER | A2 STAINLESS STEEL |
| 12 | SEEGER RING | AISI 316 STAINLESS STEEL |
| 13 | MECHANICAL SEAL | SILICON - VITON |
| 14 | COUNTERFACE | STEA/NBR |
| 15 | BODY | TECHNOPOLYMER |
| 16 | INSERT | NICKLED BRASS |

* In contact with liquid



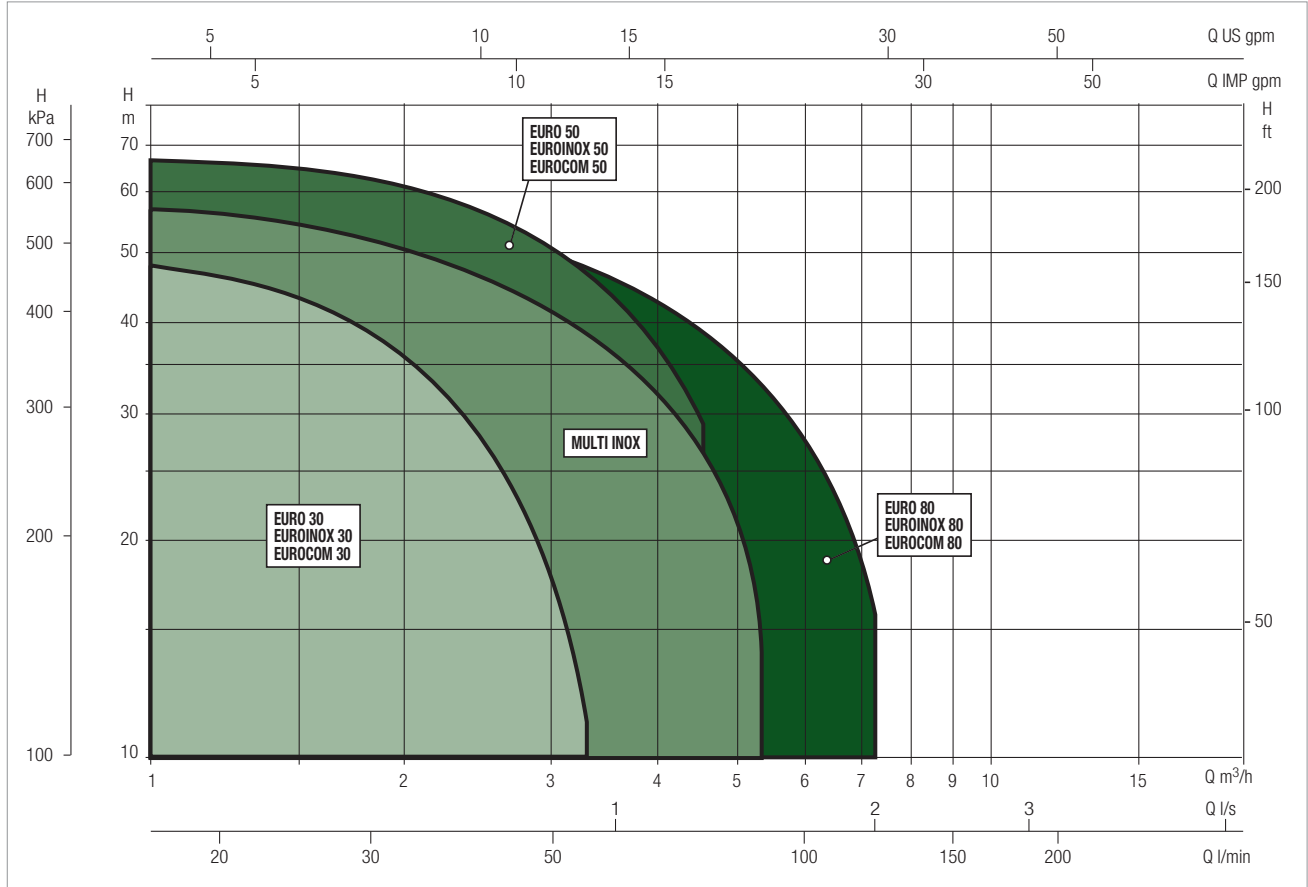
MULTI INOX

SELF-PRIMING, MULTISTAGE HORIZONTAL ELECTRIC PUMPS

PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

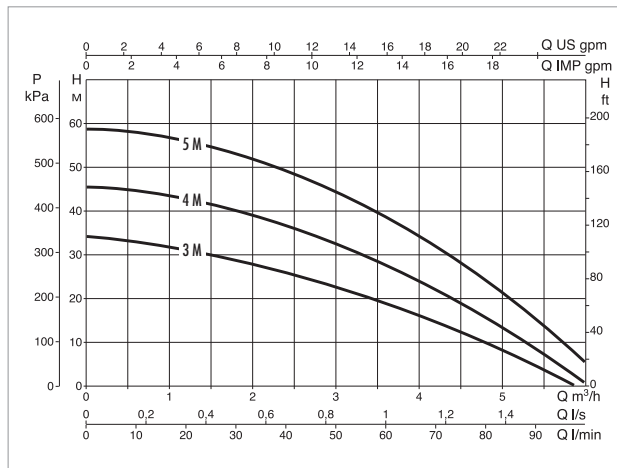
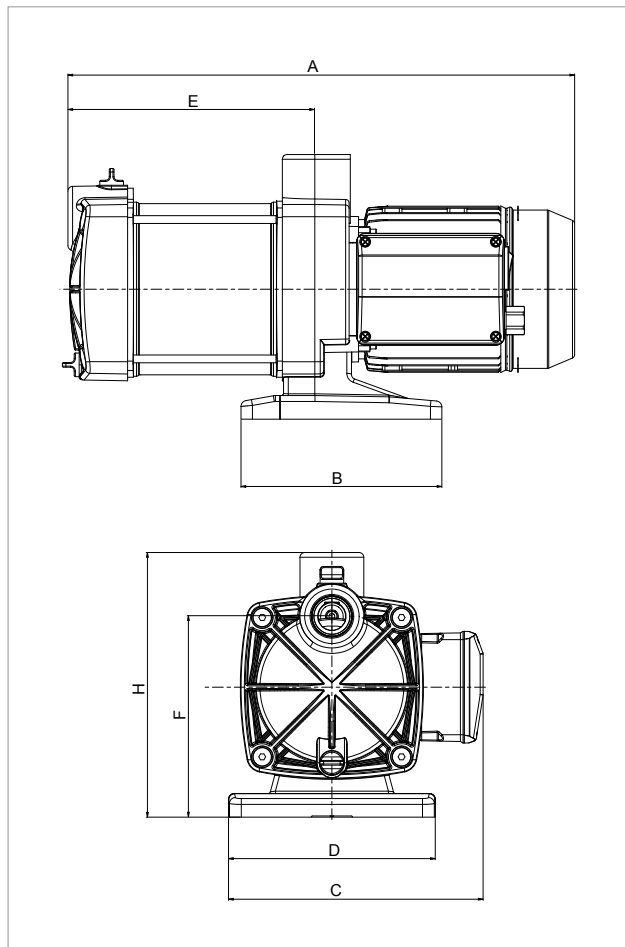


MULTI INOX SELECTION TABLE

| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 | 5.4 |
|----------------|---------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| MULTI INOX 3 M | H (m) | 33 | 32 | 30 | 29 | 27 | 22 | 19 | 14 | 10 | 5 |
| MULTI INOX 4 M | | 46 | 45 | 43 | 40 | 38 | 33 | 28 | 22 | 16 | 9 |
| MULTI INOX 5 M | | 59 | 58 | 56 | 53 | 49 | 45 | 38 | 32 | 25 | 13 |

MULTI INOX - SELF-PRIMING MULTI-STAGE, HORIZONTAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



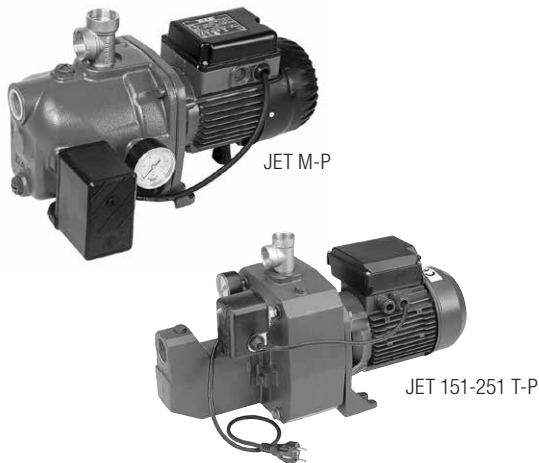
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|----------------|-----------------|--------------------|-----------|------------|------|------|-----------|-----|
| | N° IMPELLER | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | | kW | HP | | µF | Vc |
| MULTI INOX 3 M | 3 | 1x220-240 V ~ | 0.80 | 0.55 | 0.75 | 3.7 | 12.5 | 450 |
| MULTI INOX 4 M | 4 | 1x220-240 V ~ | 1.00 | 0.75 | 1 | 4.5 | 16 | 450 |
| MULTI INOX 5 M | 5 | 1x220-240 V ~ | 1.25 | 1 | 1.36 | 5.5 | 20 | 450 |

| MODEL | A | B | C | D | E | F | H | DNA GAS | DNM GAS | PACK DIMENSIONS | | | GROSS Kg |
|----------------|-----|-----|-----|-----|-----|-----|-----|---------|---------|-----------------|-----|-----|----------|
| | | | | | | | | | | L/A | L/B | H | |
| MULTI INOX 3 M | 380 | 170 | 215 | 175 | 184 | 170 | 220 | 1" | 1" | 460 | 230 | 270 | 8.8 |
| MULTI INOX 4 M | 430 | 170 | 215 | 175 | 209 | 170 | 220 | 1" | 1" | 460 | 230 | 270 | 11.3 |
| MULTI INOX 5 M | 455 | 170 | 215 | 175 | 234 | 170 | 220 | 1" | 1" | 460 | 230 | 270 | 12.5 |

JET - JET INOX - EUROINOX M-P

PREPARED CENTRIFUGAL ELECTRIC PUMPS



TECHNICAL DATA

Operating range:

from 0.4 to 10.5 m³/h with head up to 62 metres.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range: from 0°C to +35°C for domestic use (EN 60335-2-41). For other use: from 0°C to +40°C

Maximum ambient temperature: +40°C

Maximum operating pressure: 8 bar (800 kPa)

Installation: fixed in a horizontal position.

Special executions on request: different frequencies and/or voltage.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220/240 V / 50 Hz
three phase 230/400 V - 50 Hz

APPLICATIONS

Self priming centrifugal pump with excellent suction capacity even in the presence of air bubbles.

Suitable for pumping water with low levels of sandy impurities. Especially used in domestic water supply installations. Suitable for small farms and gardening, small scale industrial services and where self priming is necessary.

CONSTRUCTIONAL FEATURES OF THE PUMP

Pump body in cast iron for jet pumps and in stainless steel for the jetinox and euroinox pumps

Motor support in die cast aluminium.

Impeller, diffuser, venturi tube and sand guard in technopolymer

Stainless steel wear ring.

Carbon/ceramic mechanical seal.

SINGLE PHASE VERSION: electric pump set up with pressure gauge, pressure switch, power cord with plug and three-way brass fitting for use when connecting to a tank

THREE-PHASE VERSION: electric pump set up with pressure gauge, pressure switch, remote overload protection and three-way brass fitting for use when connecting to a tank

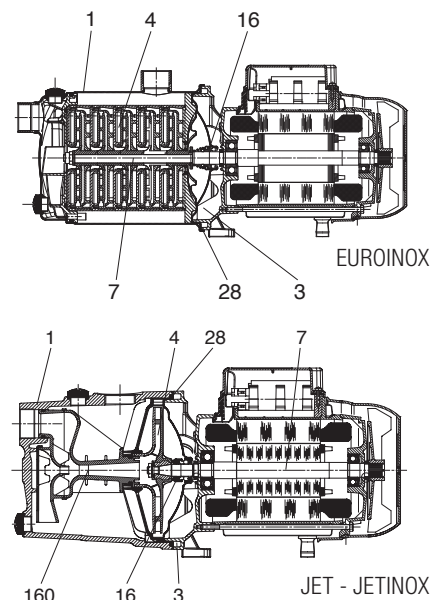
CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous type, closed, with external air cooling. Rotor mounted on oversized greased-for-life ball bearings, to guarantee low noise and long life. Incorporated thermo-ampereometric protection and permanently inserted capacitor in the single phase version. It is recommended to use overload protection for three phase motor protection, in compliance with current legislation. Manufactured pursuant to CEI 2-3 and CEI 61-69 (EN 60335-2-41).

MATERIALS

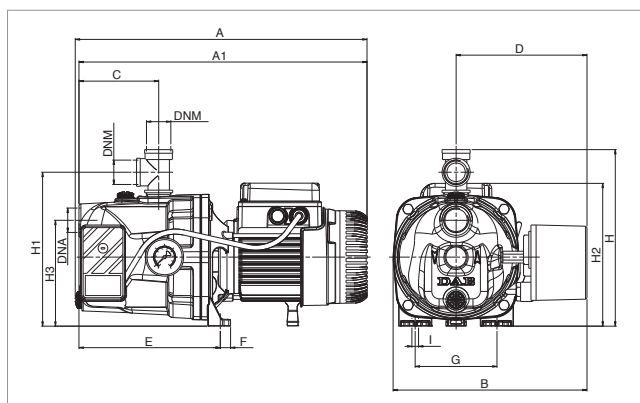
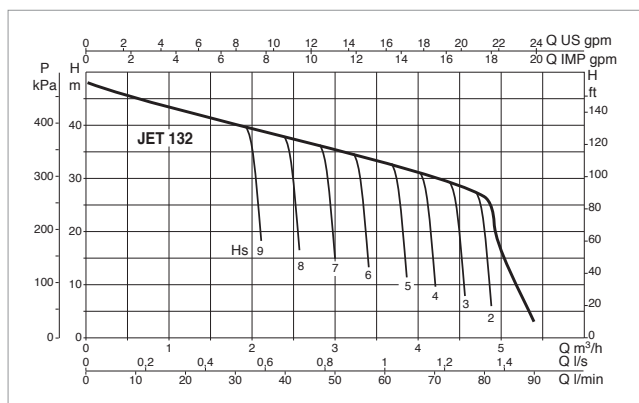
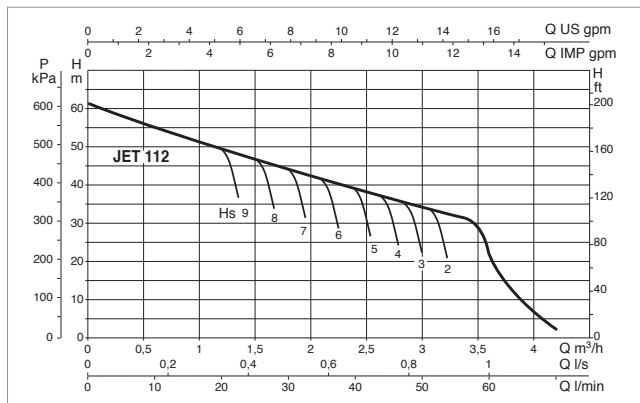
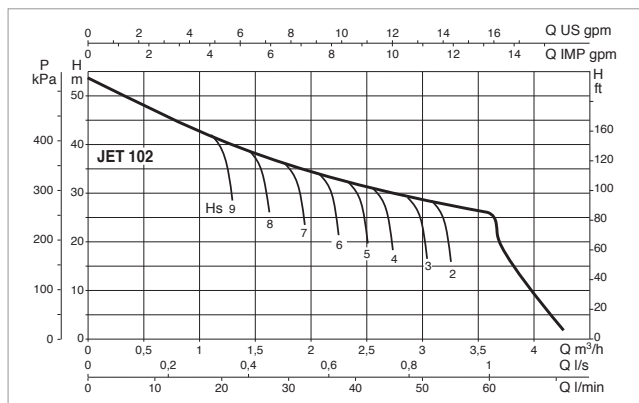
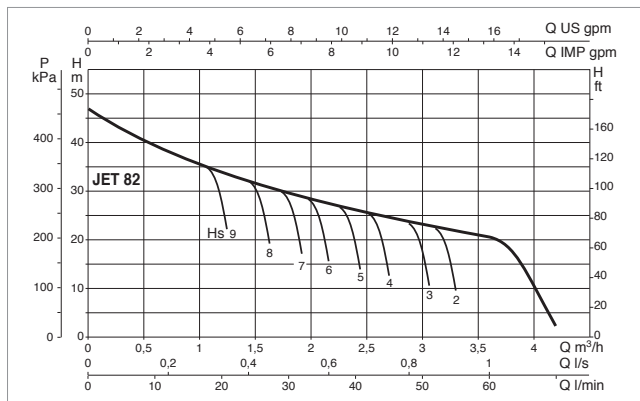
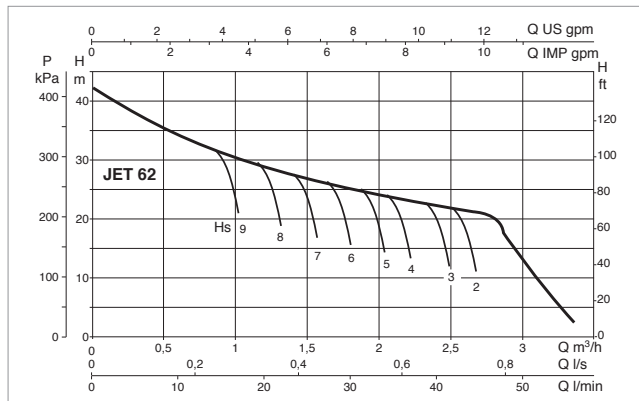
| N° | PARTS * | MATERIALS |
|-----|-------------------------------|---|
| 1 | PUMP BODY | 200 UNI ISO 185 CAST IRON (FOR JET) AISI 304 STAINLESS STEEL (FOR JETINOX AND EUROINOX) |
| 3 | FRAME | DIE CAST ALUMINIUM |
| 4 | IMPELLER | TECHNOPOLYMER A |
| 7 | SHAFT WITH ROTOR | AISI 416 STAINLESS STEEL X12 CrS13 - UNI 6900/71 |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |
| 160 | VENTURI DIFFUSER NOZZEL GROUP | TECHNOPOLYMER A |

* In contact with liquid



JET 62-82-102-112-132-MP - CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

LIQUID TEMPERATURE RANGE PUMPED: FROM 0 °C TO +35 °C - MAXIMUM AMBIENT TEMPERATURE: +40°C



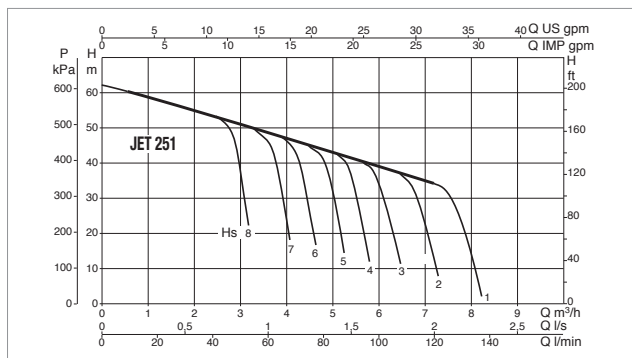
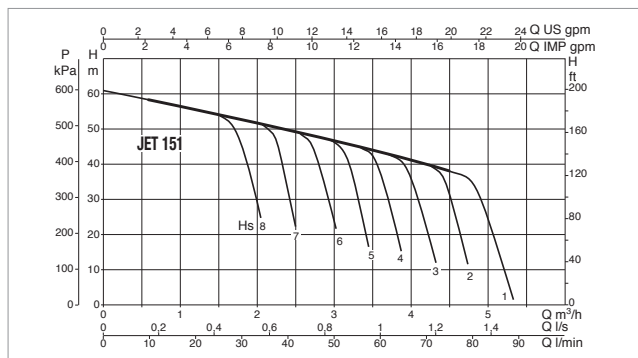
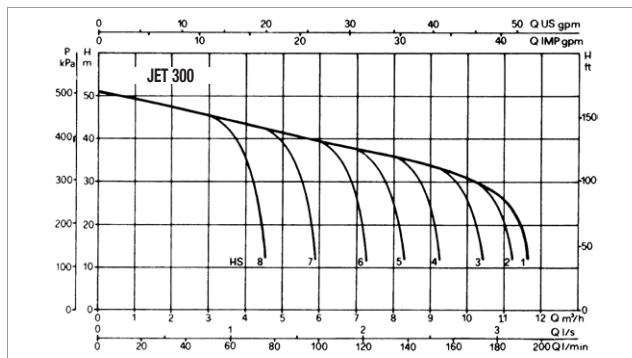
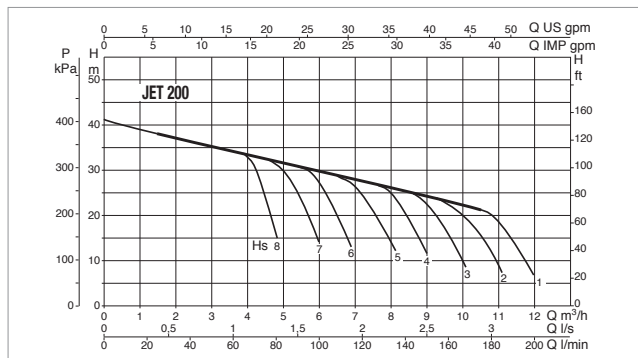
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | |
|------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JET 62 MP | 1x220-400V ~ | 0.72 | 0.44 | 0.6 | 3.12 | 12.5 | 450 |
| JET 82 MP | 1x220-400V ~ | 0.85 | 0.6 | 0.8 | 3.8 | 12.5 | 450 |
| JET 102 MP | 1x220-400V ~ | 1.13 | 0.75 | 1 | 5.1 | 16 | 450 |
| JET 112 MP | 1x220-400V ~ | 1.4 | 1 | 1.36 | 6.2 | 25 | 450 |
| JET 132 MP | 1x220-400V ~ | 1.49 | 1 | 1.36 | 6.6 | 25 | 450 |

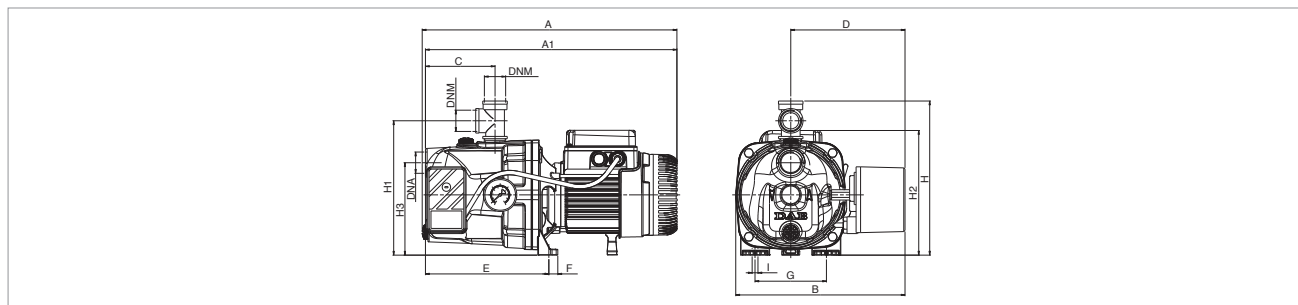
| MODEL | A | A1 | B | C | D | E | F | G | I Ø | H | H1 | H2 | H3 | I Ø | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|------------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|---------|---------|-----------------|-----|-----|----------------|--------------------|
| | L/A | L/B | H | | | | | | | | | | | | | | | | | | |
| JET 62 MP | 395 | 390 | 263 | 108 | 177 | 192 | 14 | 111 | - | 239 | 209 | 193 | 144 | 9 | 1" | 1" | 440 | 295 | 235 | 0.031 | 11.9 |
| JET 82 MP | 395 | 390 | 263 | 108 | 177 | 192 | 14 | 111 | - | 239 | 209 | 193 | 144 | 9 | 1" | 1" | 440 | 295 | 235 | 0.031 | 12.1 |
| JET 102 MP | 414 | 390 | 263 | 108 | 177 | 192 | 14 | 111 | - | 239 | 209 | 203 | 144 | 9 | 1" | 1" | 440 | 295 | 235 | 0.031 | 13.9 |
| JET 112 MP | 414 | 390 | 263 | 108 | 177 | 192 | 14 | 111 | - | 239 | 209 | 203 | 144 | 9 | 1" | 1" | 440 | 295 | 235 | 0.031 | 14.9 |
| JET 132 MP | 414 | 390 | 263 | 108 | 177 | 192 | 14 | 111 | - | 239 | 209 | 203 | 144 | 9 | 1" | 1" | 440 | 295 | 235 | 0.031 | 14.9 |

JET 200-300-151-251-MP - CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

LIQUID TEMPERATURE RANGE PUMPED: FROM 0 °C TO +35 °C - MAXIMUM AMBIENT TEMPERATURE: +40°C



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

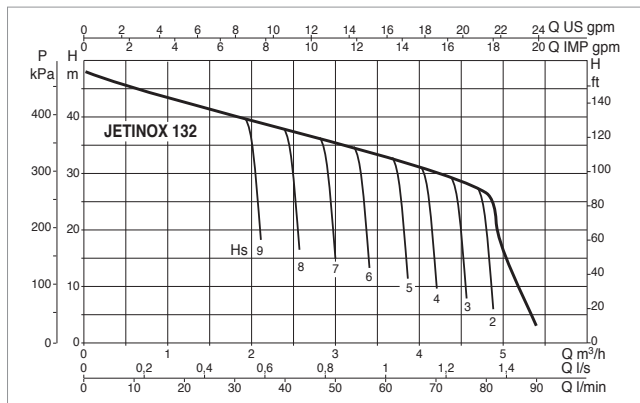
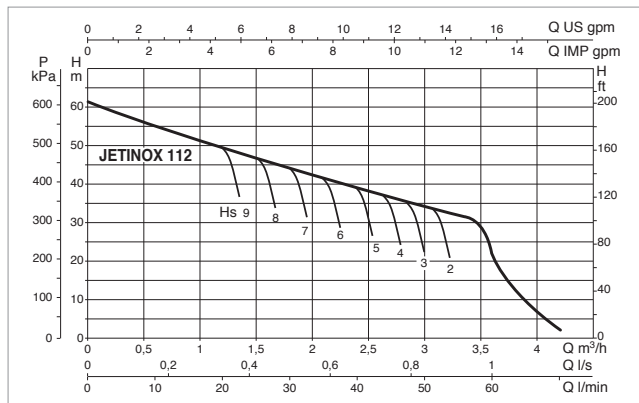
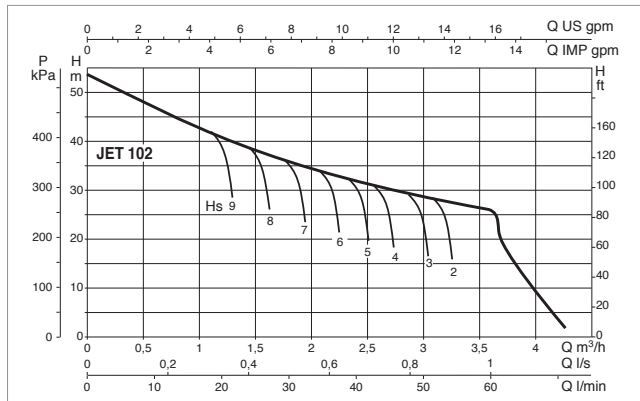
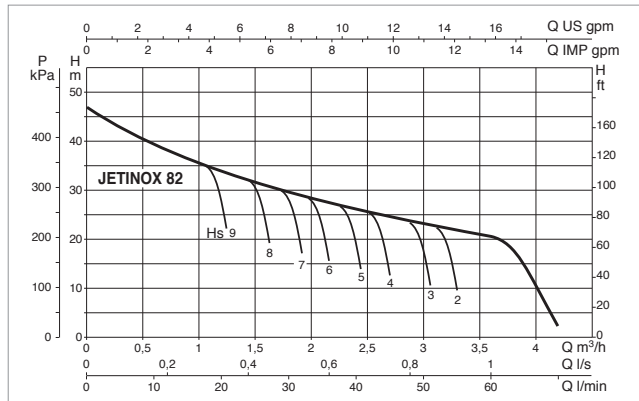


| MODEL | ELECTRICAL DATA | | | | | | |
|------------|-----------------------|--------------|------------|-----|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JET 200 MP | 1x220-240 V ~ | 2 | 1.5 | 2 | 9 | 31.5 | 450 |
| JET 200 TP | 3x400 V ~ | 2 | 1.5 | 2 | 3.9 | - | - |
| JET 300 MP | 1x220-240 V ~ | 2.7 | 2.2 | 3 | 12 | 40 | 450 |
| JET 300 TP | 3x400 V ~ | 2.7 | 2.2 | 3 | 8.5-4.9 | - | - |
| JET 151 MP | 1x220-240 V ~ | 1.6 | 1.1 | 1.5 | 7.2 | 31.5 | 450 |
| JET 151 TP | 3x400 V ~ | 1.6 | 1.1 | 1.5 | 5.2-3 | - | - |
| JET 251 MP | 1x220-240 V ~ | 2.2 | 1.85 | 2.5 | 10 | 40 | 450 |
| JET 251 TP | 3x400 V ~ | 2.2 | 1.85 | 2.5 | 6.9-4 | - | - |

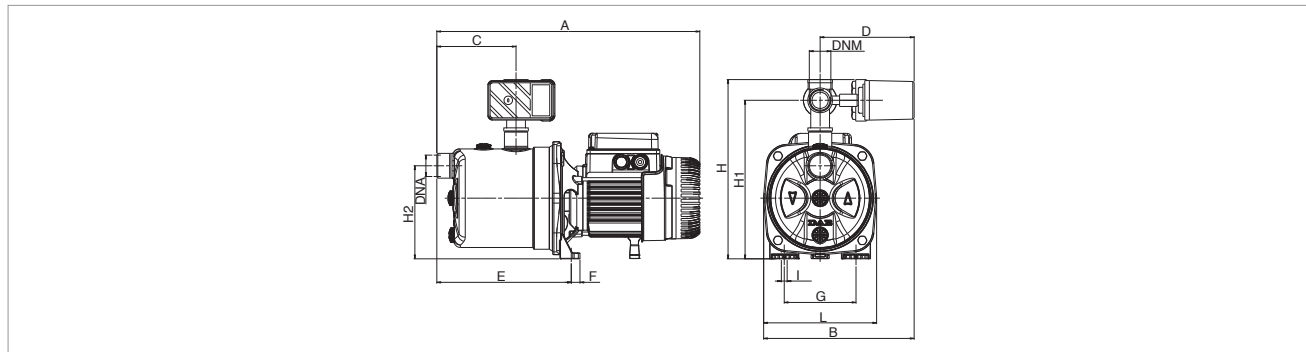
| MODEL | A | A1 | B | C | D | E | F | G | I Ø | H | H1 | H2 | H3 | I | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|------------|-----|----|-----|-----|---|-----|----|-----|-----|-----|-----|----|----|----|---------|---------|-----------------|-----|-----|----------------|--------------------|
| | | | | | | | | | | | | | | | | | L/A | L/B | H | | |
| | | | | | | | | | | | | | | | | | JET 200 MP | 521 | - | | |
| JET 200 TP | 521 | - | 294 | 151 | - | 282 | 20 | 160 | 11 | 275 | 175 | - | - | 11 | 1 1/2" | 1 1/4" | 600 | 236 | 267 | 0.038 | 28 |
| JET 300 MP | 595 | - | 294 | 151 | - | 282 | 20 | 160 | 11 | 275 | 175 | - | - | 11 | 1 1/2" | 1 1/4" | 660 | 236 | 267 | 0.042 | 31.5 |
| JET 300 TP | 521 | - | 294 | 151 | - | 282 | 20 | 160 | 11 | 275 | 175 | - | - | 11 | 1 1/2" | 1 1/4" | 600 | 236 | 267 | 0.038 | 30 |
| JET 151 MP | 558 | - | 290 | 220 | - | 367 | 15 | 145 | 11 | 305 | 165 | - | - | 11 | 1 1/4" | 1" | 600 | 236 | 267 | 0.038 | 31.5 |
| JET 151 TP | 558 | - | 290 | 220 | - | 367 | 15 | 145 | 11 | 305 | 165 | - | - | 11 | 1 1/4" | 1" | 600 | 236 | 267 | 0.038 | 33 |
| JET 251 MP | 632 | - | 290 | 220 | - | 367 | 15 | 145 | 11 | 305 | 165 | - | - | 11 | 1 1/4" | 1" | 645 | 236 | 267 | 0.040 | 36 |
| JET 251 TP | 558 | - | 290 | 220 | - | 367 | 15 | 145 | 11 | 305 | 165 | - | - | 11 | 1 1/4" | 1" | 600 | 236 | 267 | 0.038 | 34 |

JETINOX 82-102 -112 -132-MP - CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

LIQUID TEMPERATURE RANGE PUMPED: FROM 0 °C TO +35 °C - MAXIMUM AMBIENT TEMPERATURE: +50°C



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

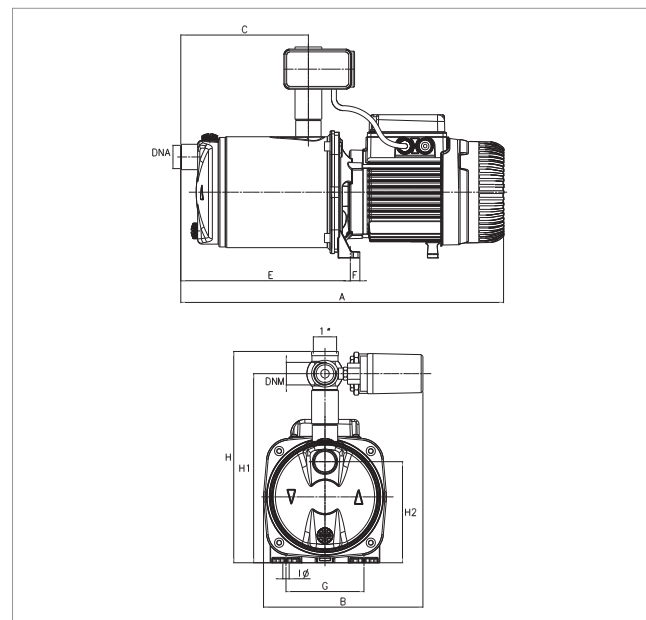
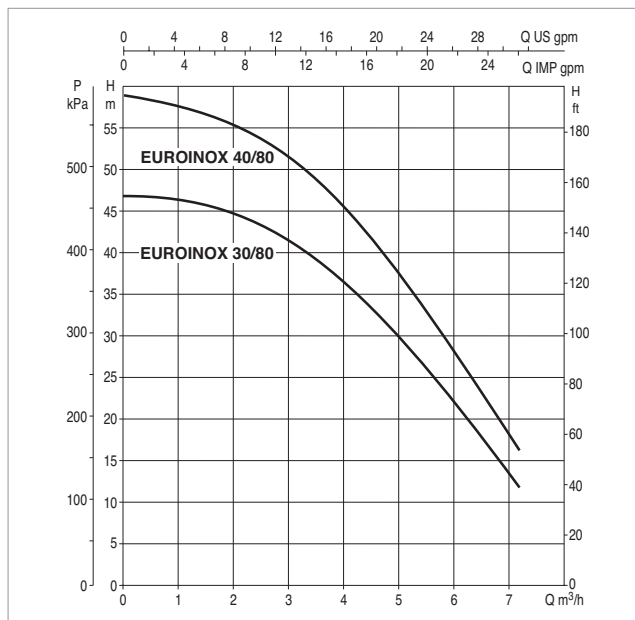
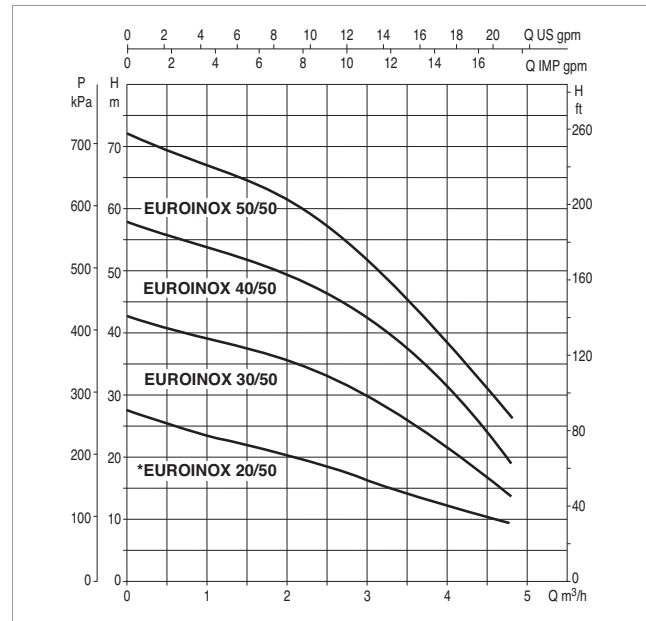
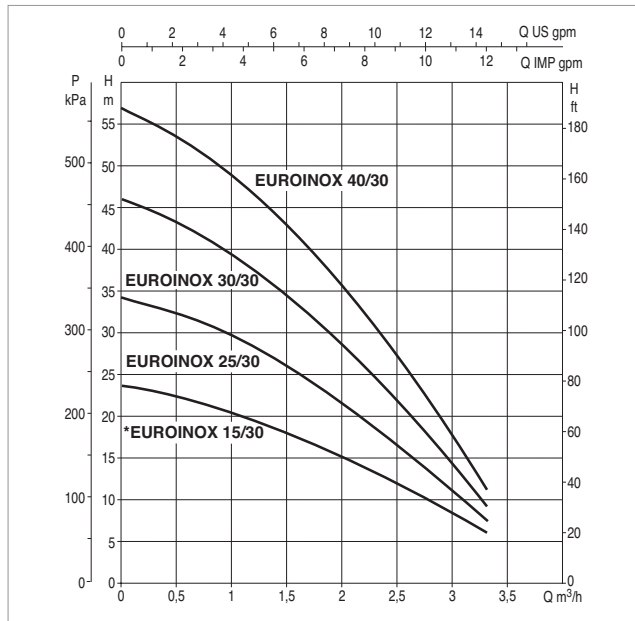


| MODEL | ELECTRICAL DATA | | | | | | |
|----------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| JETINOX 82 MP | 1x220-240 V ~ | 0.85 | 0.6 | 0.8 | 3.8 | 12.5 | 450 |
| JETINOX 102 MP | 1x220-240 V ~ | 1.13 | 0.75 | 1 | 5.1 | 16 | 450 |
| JETINOX 112 MP | 1x220-240 V ~ | 1.4 | 1 | 1.36 | 6.2 | 25 | 450 |
| JETINOX 132 MP | 1x220-240 V ~ | 1.49 | 1 | 1.36 | 6.6 | 25 | 450 |

| MODEL | A | B | C | D | E | F | G | H | H1 | H2 | I | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|----------------|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|---|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | | | | | | L/A | L/B | H | | |
| JETINOX 82 MP | 406 | 232 | 122 | 145 | 207 | 14 | 111 | 276 | 244 | 144 | 9 | 174 | 1" | 1" | 450 | 276 | 320 | 0.031 | 13.6 |
| JETINOX 102 MP | 424 | 232 | 122 | 145 | 207 | 14 | 111 | 276 | 244 | 144 | 9 | 174 | 1" | 1" | 450 | 276 | 320 | 0.031 | 14.8 |
| JETINOX 112 MP | 424 | 232 | 122 | 145 | 207 | 14 | 111 | 276 | 244 | 144 | 9 | 174 | 1" | 1" | 450 | 276 | 320 | 0.031 | 15.8 |
| JETINOX 132 MP | 424 | 232 | 122 | 145 | 207 | 14 | 111 | 276 | 244 | 144 | 9 | 174 | 1" | 1" | 450 | 276 | 320 | 0.031 | 15.8 |

EUROINOX 30-50-80-MP -CENTRIFUGAL ELECTRIC PUMPS FOR DOMESTIC WATER SUPPLY

LIQUID TEMPERATURE RANGE PUMPED: FROM 0 °C TO +35 °C - MAXIMUM AMBIENT TEMPERATURE: +40°C



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | |
|-------------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| EUROINOX 40/30 MP | 1x220-240V | 0.88 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |
| EUROINOX 30/50 MP | 1x220-240V | 0.88 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |
| EUROINOX 40/50 MP | 1x220-240V | 1.2 | 0.8 | 1.1 | 5.3 | 25 | 450 |
| EUROINOX 30/80 MP | 1x220-240V | 1.2 | 0.75 | 1 | 5.3 | 25 | 450 |
| EUROINOX 40/80 MP | 1x220-240V | 1.48 | 1 | 1.36 | 6.3 | 25 | 450 |

| MODEL | A | B | C | E | F | G | I Ø | H | H1 | H2 | DNA GAS | DNM GAS | GROSS WEIGHT Kg |
|-------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|------------|------------|-----------------------|
| EUROINOX 40/30 MP | 439 | 226 | 108 | 241 | 13.5 | 111 | 9 | 300 | 268 | 143 | 1" | 1" | 15.5 |
| EUROINOX 30/50 MP | 384 | 226 | 108 | 186 | 13.5 | 111 | 9 | 300 | 268 | 143 | 1" | 1" | 11.4 |
| EUROINOX 40/50 MP | 458 | 226 | 108 | 241 | 13.5 | 111 | 9 | 300 | 268 | 143 | 1" | 1" | 14.5 |
| EUROINOX 30/80 MP | 458 | 226 | 108 | 241 | 13.5 | 111 | 9 | 300 | 268 | 143 | 1" | 1" | 14.5 |
| EUROINOX 40/80 MP | 458 | 226 | 108 | 241 | 13.5 | 111 | 9 | 300 | 268 | 143 | 1" | 1" | 17.5 |

**TECHNICAL DATA****Operating range:**

up to 5.4 m³/h with head up to 61 metres.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range: from 0°C to +35°C for domestic use (EN 60335-2-41). For other use: from 0°C to +40°C

Maximum ambient temperature: +40°C

Maximum operating pressure: 8 bar (800 kPa)

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220-240 V / 50 Hz

APPLICATIONS

Automatic booster sets, especially suitable for domestic use, small civil, farming or industrial installations, washing plants and leisure activities.

These feature JET self-priming electric pumps, which work even in the presence of air bubbles and small sandy impurities in the water.

The assembly comprises a 20 litre capacity mebrane tank, pressure switch for automatic operation, pressure gauge, JET electric pump with power cord with plug, fittings kit between the pump and the tank, all fully assembled and ready for installation.

CONSTRUCTIONAL FEATURES OF THE PUMP

Pump body and motor support in die cast aluminium.

Impeller, diffuser, venturi tube and sand guard in technopolymer

Stainless steel wear ring.

Carbon/ceramic mechanical seal.

CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous type, closed, with external air cooling.

Rotor mounted on oversized greased-for-life ball bearings, to guarantee low noise and long life.

Incorporated thermo-amperometric protection and permanently inserted capacitor.

Manufactured pursuant to CEI 2-3 / CEI 61-69 (EN 60335-2-41).

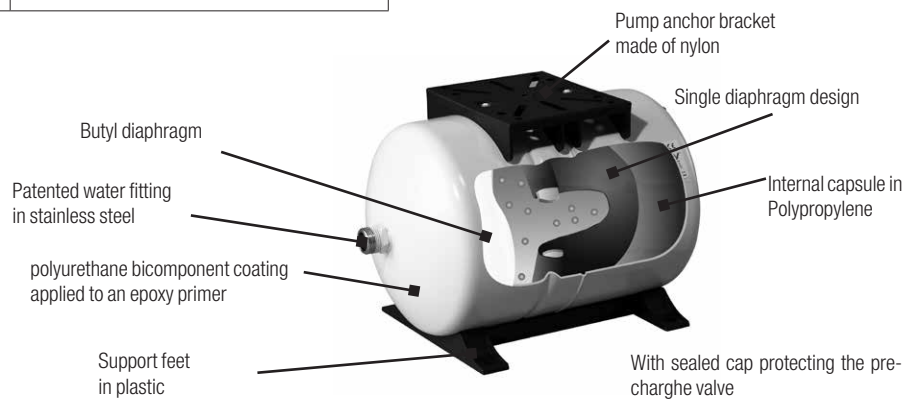
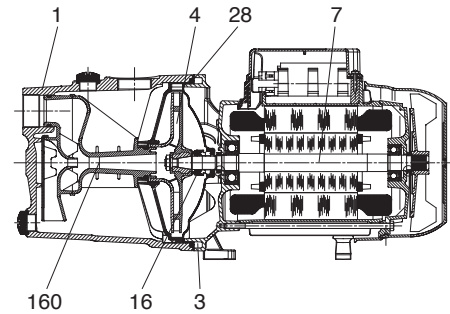
CONSTRUCTIONAL FEATURES OF THE TANK

Horizontal, 20 litre capacity tank, with butyl membrane, including rear support brackets and front housing brackets for installation of the top side of the pump.

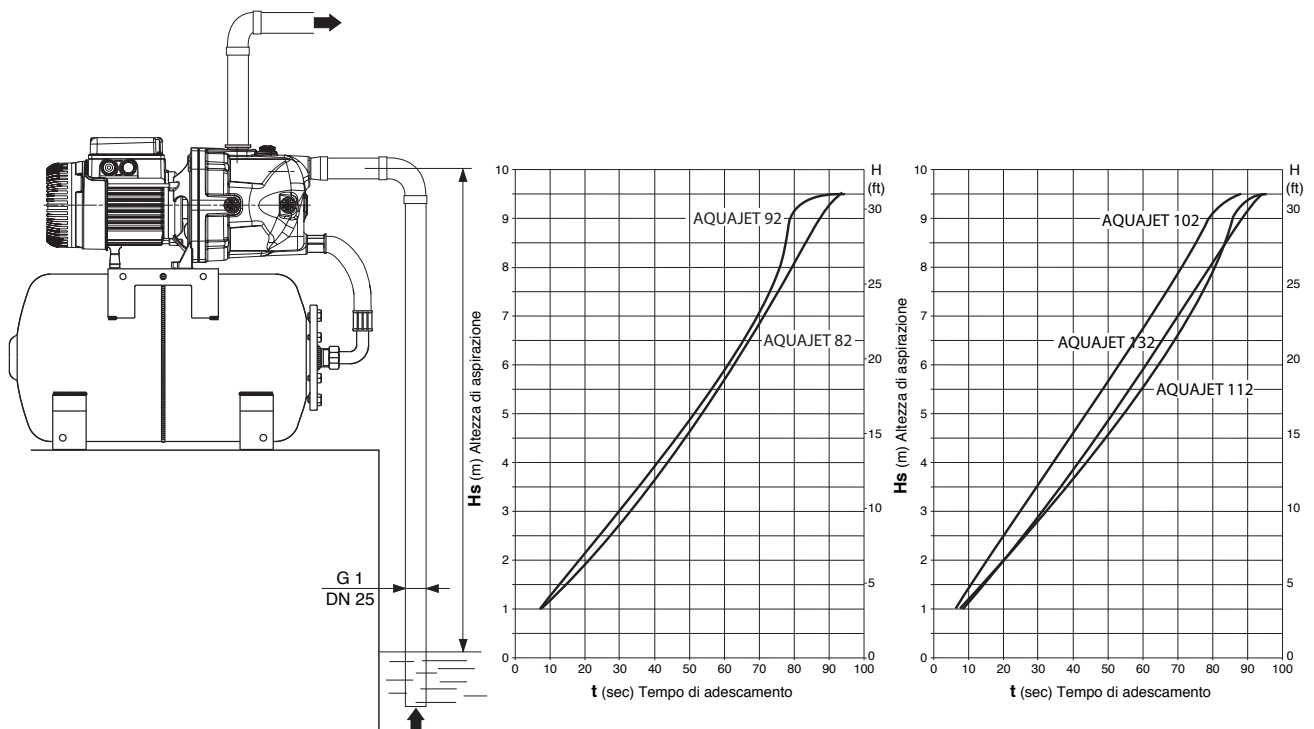
MATERIALS

| N° | PARTS * | MATERIALS |
|-----|-------------------------------|--|
| 1 | PUMP BODY | 200 UNI ISO 185 CAST IRON |
| 3 | FRAME | DIE CAST ALUMINIUM |
| 4 | IMPELLER | TECHNOPOLYMER A |
| 7 | SHAFT WITH ROTOR | AISI 416 STAINLESS STEEL X12 CrS13 - UNI 6900/71 |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |
| 160 | VENTURI DIFFUSER NOZZEL GROUP | TECHNOPOLYMER A |

* In contact with liquid



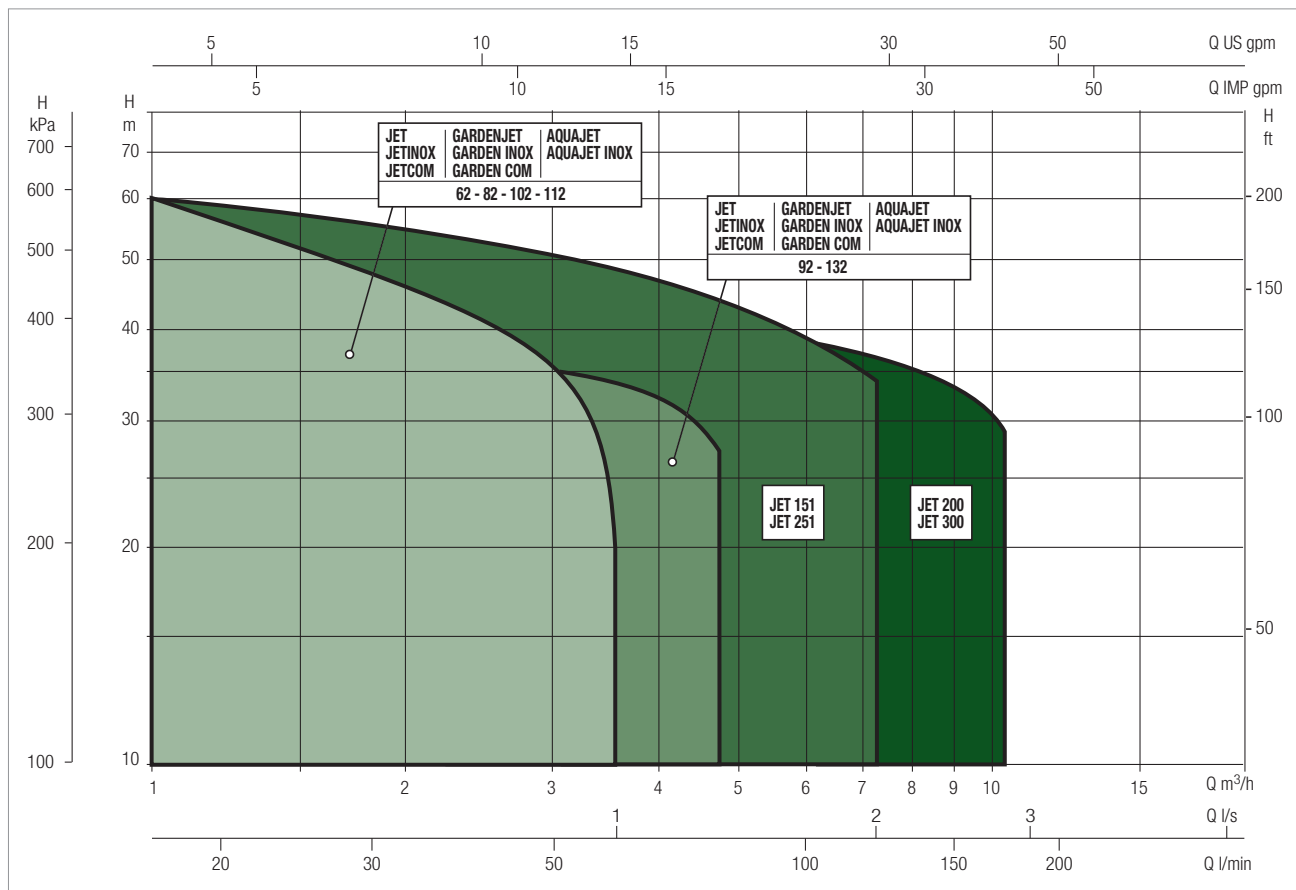
SELF PRIMING CAPACITY



PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

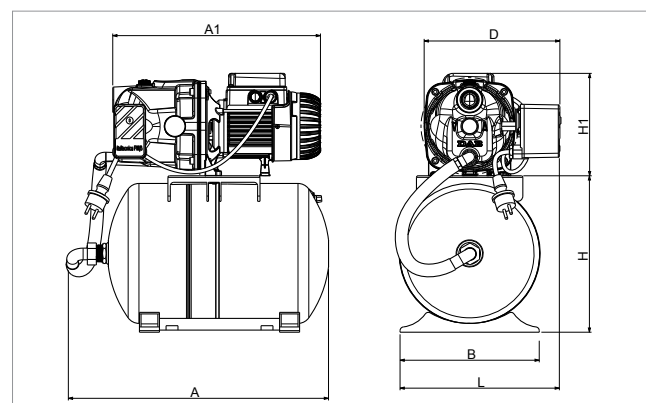
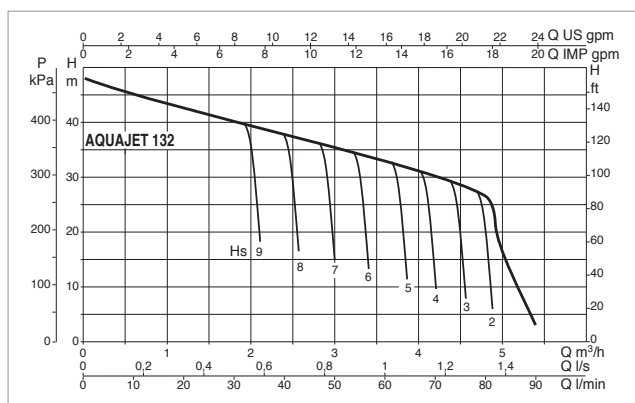
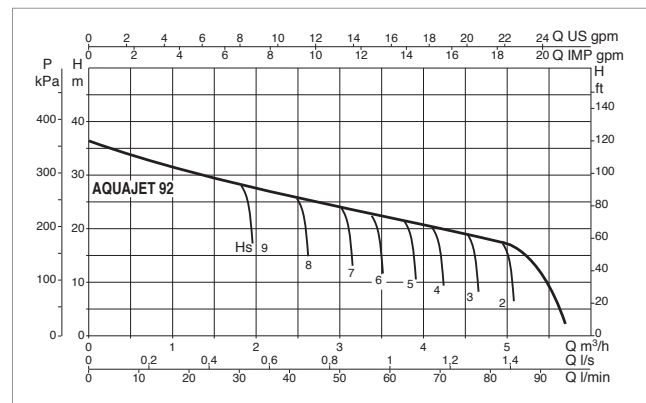
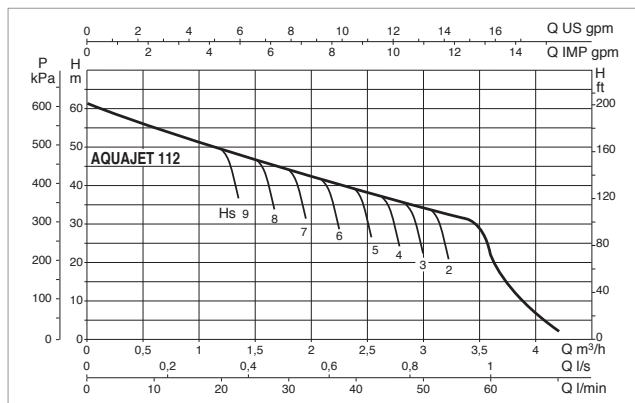
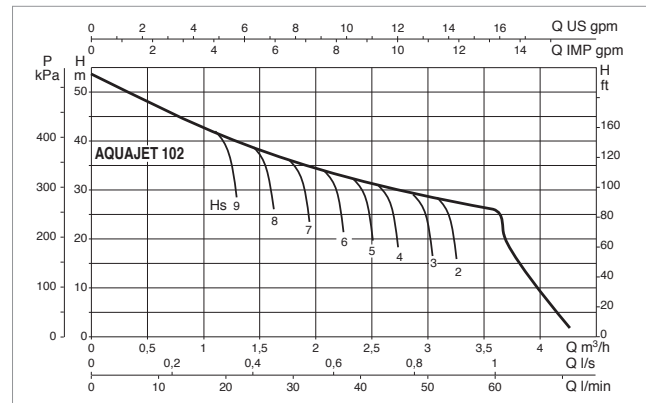
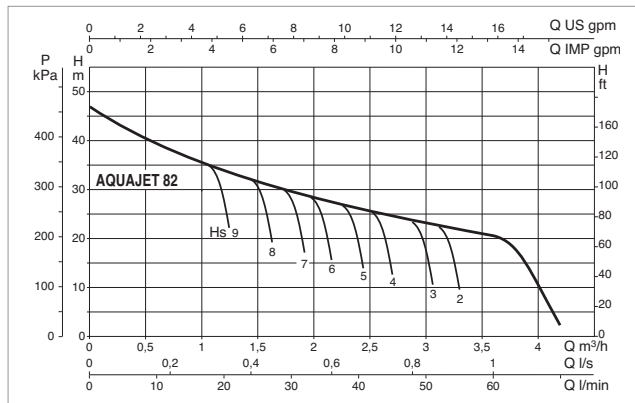


AQUAJET SELECTION TABLE

| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 |
|---------------|---------------------|------|------|------|------|------|------|------|------|------|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| AQUAJET 82 M | H (m) | 47 | 40 | 34 | 30 | 26.2 | 23.5 | 20.3 | | |
| AQUAJET 102 M | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | |
| AQUAJET 112 M | | 61 | 54 | 47.8 | 42.8 | 38.8 | 34.8 | 22 | | |
| AQUAJET 92 M | | 36.2 | 33.5 | 31 | 28.4 | 26 | 24 | 21.8 | 19.6 | 17.5 |
| AQUAJET 132 M | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 |

AQUAJET - AUTOMATIC SELF-PRIMING PRESSURISATION GROUPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | |
|---------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| AQUAJET 82 M | 1x220-240 V ~ | 0.85 | 0.6 | 0.8 | 3.8 | 12.5 | 450 |
| AQUAJET 102 M | 1x220-240 V ~ | 1.13 | 0.75 | 1 | 5.1 | 16 | 450 |
| AQUAJET 112 M | 1x220-240 V ~ | 1.4 | 1 | 1.36 | 6.2 | 25 | 450 |
| AQUAJET 92 M | 1x220-240 V ~ | 0.94 | 0.75 | 1 | 4.2 | 14 | 450 |
| AQUAJET 132 M | 1x220-240 V ~ | 1.43 | 1 | 1.36 | 6.6 | 25 | 450 |

| MODEL | A | A1 | B | D | H | H1 | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|---------------|-----|-----|-----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | L/A | L/B | H | | |
| AQUAJET 82 M | 492 | 393 | 263 | 256 | 296 | 194 | 301 | 1" | 1" | 566 | 360 | 554 | 0.104 | 17.8 |
| AQUAJET 102 M | 492 | 413 | 263 | 256 | 296 | 204 | 301 | 1" | 1" | 566 | 360 | 554 | 0.104 | 19.8 |
| AQUAJET 112 M | 492 | 413 | 263 | 256 | 296 | 204 | 301 | 1" | 1" | 566 | 360 | 554 | 0.104 | 19 |
| AQUAJET 92 M | 492 | 303 | 263 | 256 | 296 | 194 | 301 | 1" | 1" | 566 | 360 | 554 | 0.104 | 20.1 |
| AQUAJET 132 M | 492 | 413 | 263 | 256 | 296 | 204 | 301 | 1" | 1" | 566 | 360 | 554 | 0.104 | 21.5 |

AQUAJETINOX

AUTOMATIC SELF-PRIMING PRESSURISATION GROUPS



TECHNICAL DATA

Operating range:

from 0.6 to 5.4 m³/h with head up to 61 metres.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range:

from 0°C to +35°C for domestic use (EN 60335-2-41).

for other use: from 0°C to +40°C

Maximum suction depth: 8 metres.

Maximum ambient temperature: +40°C

Maximum operating pressure: 8 bar (800 kPa)

Installation: fixed or portable in a horizontal position.

Special executions on request: alternative voltages and/or frequencies.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220/240 V / 50 Hz

APPLICATIONS

Automatic booster sets, especially suitable for domestic use, small civil, farming or industrial installations, washing plants and leisure activities.

These feature JETINOX self-priming electric pumps, which work even in the presence of air bubbles and small sandy impurities in the water.

The assembly comprises a 20 litre capacity membrane tank, pressure switch for automatic operation, pressure gauge, JETINOX electric pump with power cord with plug, fittings kit between the pump and the tank, all fully assembled and ready for installation.

CONSTRUCTIONAL FEATURES OF THE PUMP

Pump body, seal holder cover and wear ring in stainless steel.

Motor support in die cast aluminium.

Impeller, diffuser, venturi tube in technopolymer.

Carbon/ceramic mechanical seal.

CONSTRUCTIONAL FEATURES OF THE MOTOR

Asynchronous type, closed, with external air cooling.

Rotor mounted on oversized greased-for-life ball bearings, to guarantee low noise and long life.

Incorporated thermo-amperometric protection and permanently inserted capacitor in the single phase version.

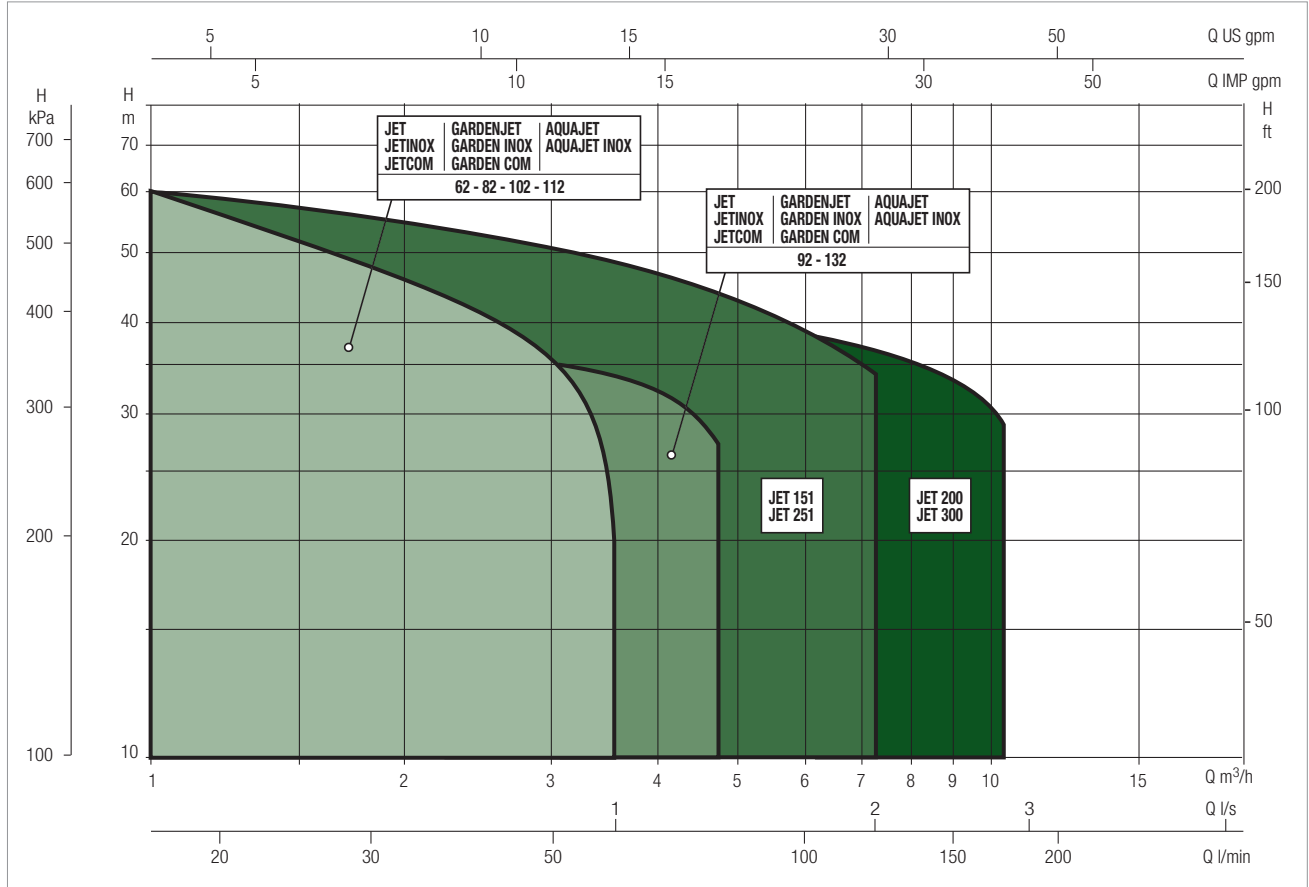
It is recommended to use overload protection for three phase motor protection, in compliance with current legislation.

Manufacture pursuant to CEI 2-3 and CEI 61-69 (EN 60335-2-41) standard.

PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE



AQUAJETINOX SELECTION TABLE

| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 |
|--------------------|---------------------|------|------|------|------|------|------|------|------|------|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| AQUAJET-INOX 82 M | H (m) | 47 | 40 | 34 | 30 | 26.2 | 23.5 | 20.3 | | |
| AQUAJET-INOX 102 M | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | |
| AQUAJET-INOX 112 M | | 61 | 54 | 47.8 | 42.8 | 38.8 | 34.8 | 20 | | |
| AQUAJET-INOX 92 M | | 36.2 | 33.5 | 31 | 28.4 | 26 | 24 | 21.8 | 19.6 | 17.5 |
| AQUAJET-INOX 132 M | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 |

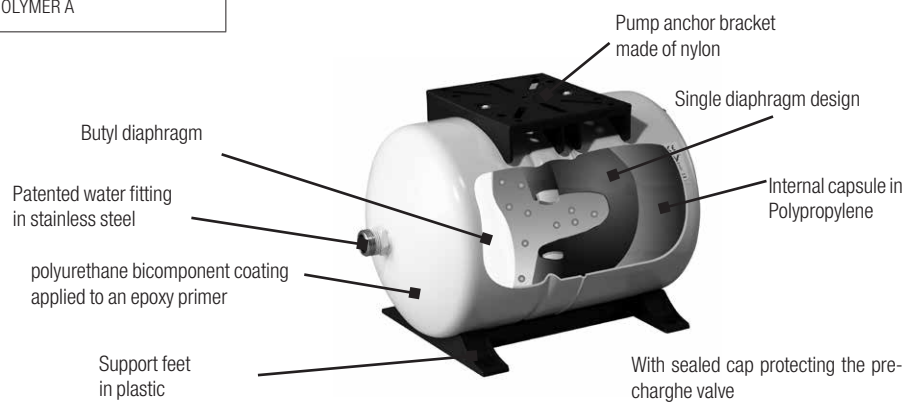
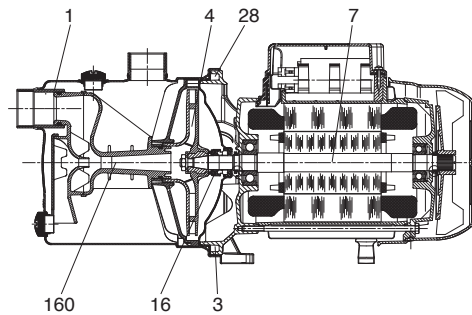
AQUAJETINOX

AUTOMATIC SELF-PRIMING PRESSURISATION GROUPS

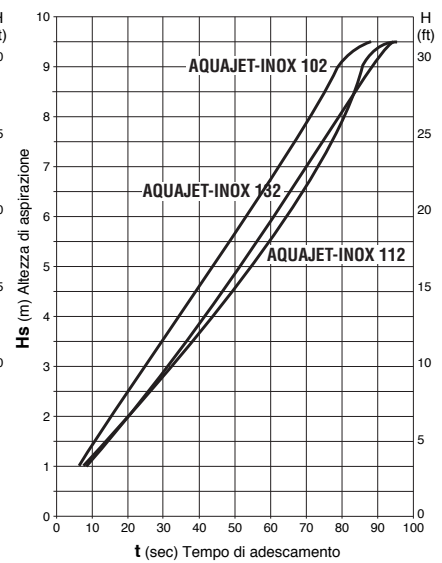
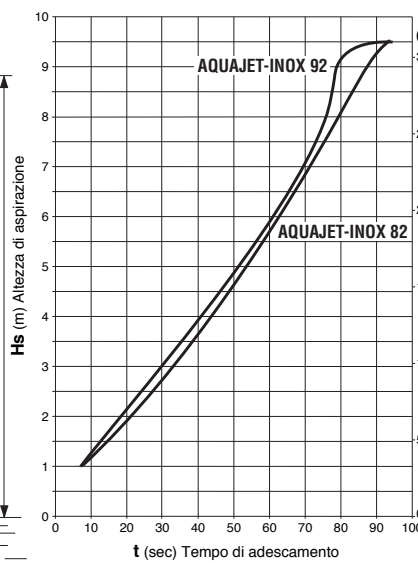
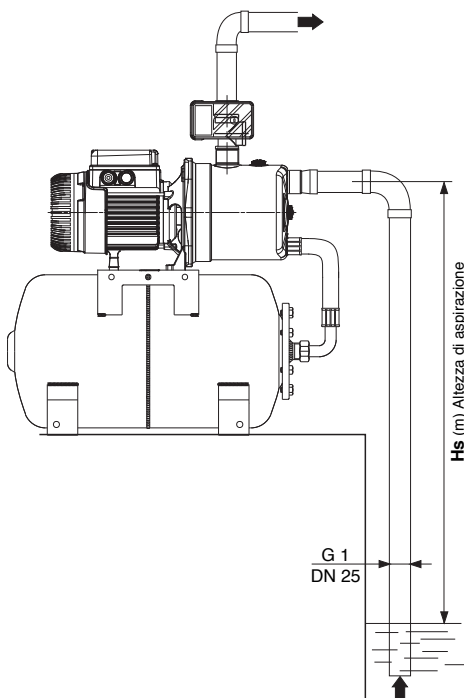
MATERIALS

| N° | PARTS* | MATERIALS |
|-----|----------------------------------|--|
| 1 | PUMP BODY | AISI 304 STAINLESS STEEL X5 CRNI 1810 - UNI 6900/71 |
| 4 | IMPELLER | TECHNOPOLYMER A |
| 7 | SHAFT WITH ROTOR | AISI 303 STAINLESS STEEL X10 CrNiS 1809 - UNI 6900/71 |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |
| 36 | SEAL HOLDER COVER | AISI 304 STAINLESS STEEL X5 CRNI 1810 - UNI 6900/71 |
| 160 | VENTURI DIFFUSER NOZZLE GROUP | TECHNOPOLYMER A |

* In contact with liquid

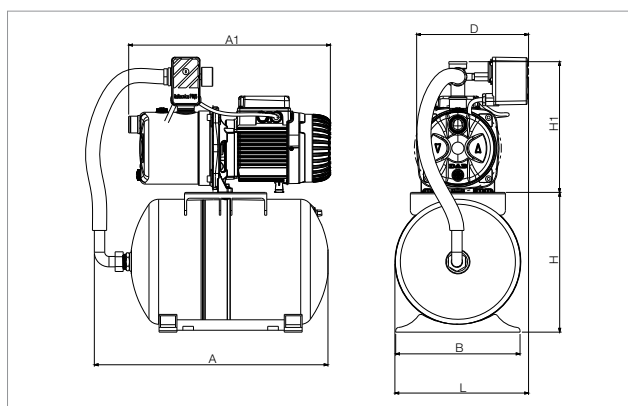
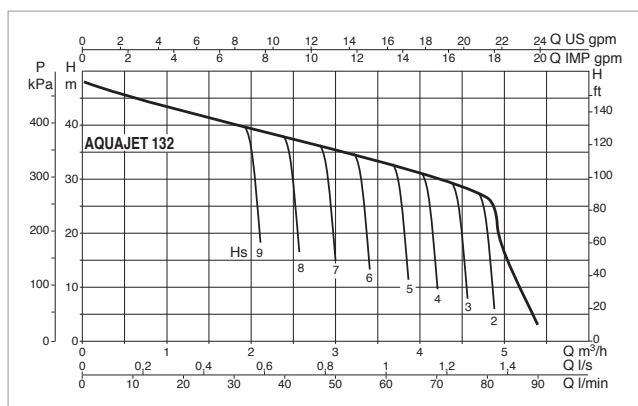
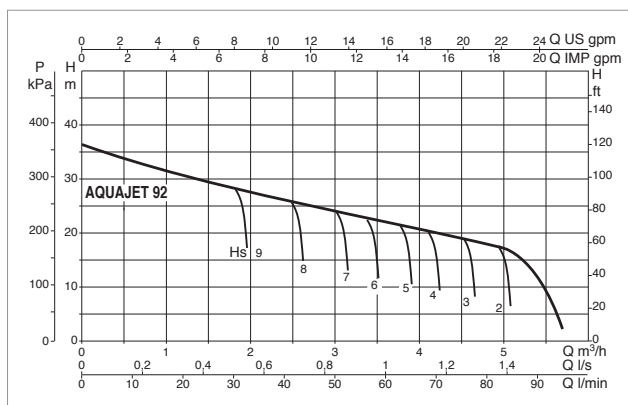
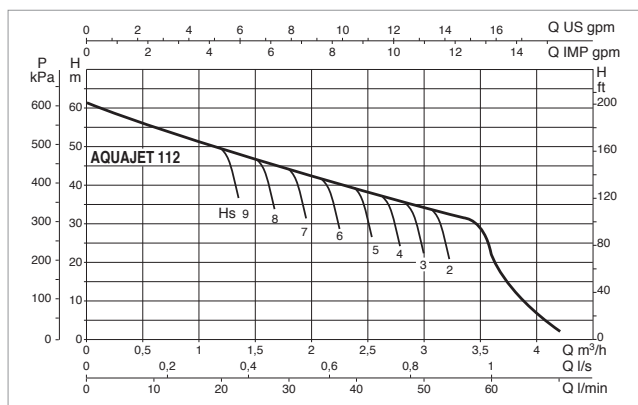
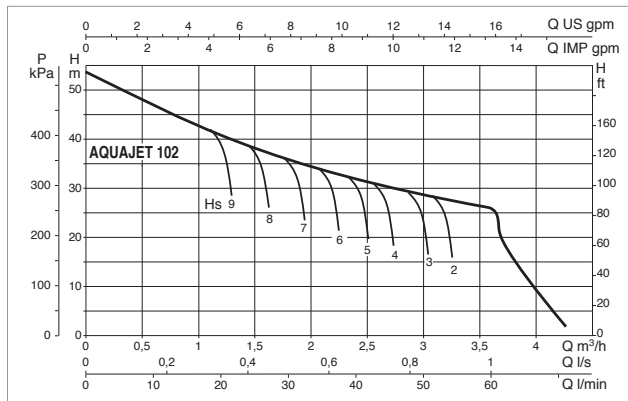
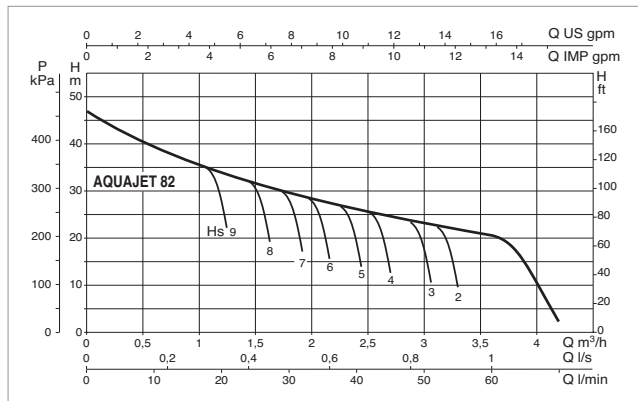


SELF PRIMING CAPACITY



AQUAJETINOX - AUTOMATIC SELF-PRIMING PRESSURISATION GROUPS FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



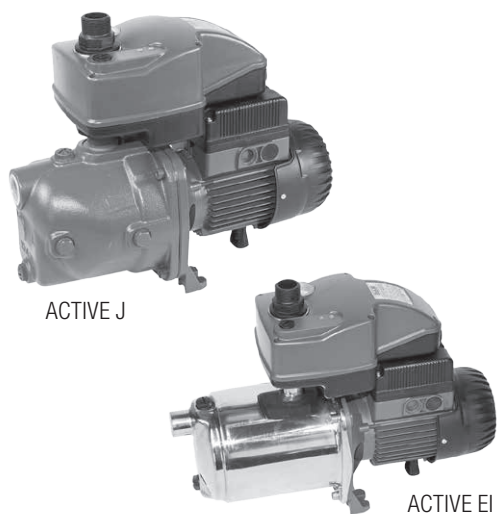
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | |
|--------------------|-----------------------|--------------|------------|------|---------------------|-----------|----------------|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | I _n A | CAPACITOR | |
| | | | kW | HP | | μF | V _c |
| AQUAJET-INOX 82 M | 1x220-240 V ~ | 0.85 | 0.6 | 0.8 | 3.8 | 12.5 | 450 |
| AQUAJET-INOX 102 M | 1x220-240 V ~ | 1.13 | 0.75 | 1 | 5.1 | 16 | 450 |
| AQUAJET-INOX 112 M | 1x220-240 V ~ | 1.4 | 1 | 1.36 | 6.2 | 25 | 450 |
| AQUAJET-INOX 92 M | 1x220-240 V ~ | 0.94 | 0.75 | 1 | 4.2 | 14 | 450 |
| AQUAJET-INOX 132 M | 1x220-240 V ~ | 1.43 | 1 | 1.36 | 4.7-2.7 | 25 | 450 |

| MODEL | A | A1 | B | D | H | H1 | L | DNA GAS | DNM GAS | PACK DIMENSIONS | | | VOLUME (mc) | GROSS WEIGHT Kg |
|--------------------|-----|-----|-----|-----|-----|-----|-----|------------|------------|-----------------|-----|-----|----------------|-----------------------|
| | | | | | | | | | | L/A | L/B | H | | |
| AQUAJET-INOX 82 M | 494 | 406 | 263 | 237 | 296 | 277 | 283 | 1" | 1" | 566 | 360 | 629 | 0.102 | 16 |
| AQUAJET-INOX 102 M | 494 | 426 | 263 | 237 | 296 | 277 | 283 | 1" | 1" | 566 | 360 | 629 | 0.102 | 19.5 |
| AQUAJET-INOX 112 M | 494 | 426 | 263 | 237 | 296 | 277 | 283 | 1" | 1" | 566 | 360 | 629 | 0.102 | 20 |
| AQUAJET-INOX 92 M | 494 | 406 | 263 | 237 | 296 | 277 | 283 | 1" | 1" | 566 | 360 | 629 | 0.102 | 16.5 |
| AQUAJET-INOX 132 M | 494 | 426 | 263 | 237 | 296 | 277 | 283 | 1" | 1" | 566 | 360 | 629 | 0.102 | 19.5 |

ACTIVE SYSTEM

AUTOMATIC ON/OFF PRESSURISATION SYSTEM



TECHNICAL DATA

Operating range:

from 0.4 to 10.5 m³/h with head up to 62 metres.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range: from 0°C to +35°C for domestic use (EN 60335-2-41). For other use: from 0°C to +40°C

Maximum ambient temperature: +40°C

Maximum operating pressure: 8 bar (800 kPa)

Installation: fixed in a horizontal position.

Special executions on request: different frequencies and/or voltage.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220/240 V / 50 Hz
three phase 230/400 V - 50 Hz

APPLICATIONS

ACTIVE is an automatic pumping system comprising a pump, a motor and an integrated control unit. It is especially suitable for domestic use, small civil, farming or industrial installations, washing plants and leisure activities.

The pump may be used to pump rainwater or potable or not-potable water.

The pumps that may be added to this system are:

- JET, JETINOX and JETCOM self-priming pumps or the EUROINOX multi-stage pumps suitable for operation in the presence of air or gas bubbles. These are indispensable when drawing water from artesian wells and when there are problems with priming and suction.
- EURO, EUROCOM multi-stage pumps suitable for very quiet operation in positive suction head installation..

CONSTRUCTIONAL FEATURES OF THE PUMP

The ACTIVE system is easy to install and ready to use, integrated with the electric pump, which:

- controls it
- runs it automatically
- regulates its operation
- limits its start ups
- ensures pressure stability inside the hydraulic circuit
- enables electronic control of the start up pressure.

OPERATION

The ACTIVE system is an electronic device with a pressure switch and a flow switch, which enable the electric pump to always operate under the best conditions. Under minimal water pumping conditions, upon start up, the electric pump begins after the system pressure has dropped to its calibration pressure, which is adjustable by the user (from 1.5 to 4.5 bar under the pressure-flow switch or from 1.5 to 8 bar under the pressure switch). If there is a leak in the system, slight dripping or runs or if there is just a small draw, the ACTIVE system limits the number of electric pump start ups.

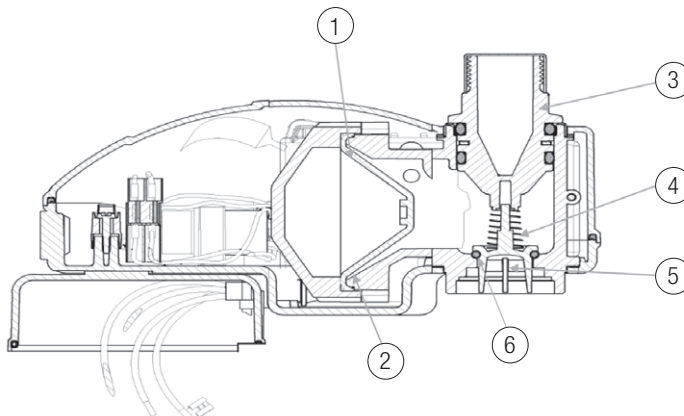
The system eliminates water hammers, because when the draw of water is stopped, the delayed stop of the electric pump comes with zero flow rate. If there is no water to be drawn, the ACTIVE system is triggered to avoid the dry running working pump. The system has LED signals and alarms. It has an automatic restart once the error conditions have been reset.

The ACTIVE system requires no maintenance or adjustment.

MATERIALS

| N° | PARTS * | MATERIALS |
|----|----------------|--------------------------|
| 1 | DIAPHRAGM BODY | PA 66 30% FV |
| 2 | DIAPHRAGM | EPDM FOOD GRADE RUBBER |
| 3 | COUPLING + OR | POM-GF25 + NBR |
| 4 | SPRING | AISI 302 STAINLESS STEEL |
| 5 | VNR | POM COPOLYMER |
| 6 | OR GASKET | GOMMA EPDM |

* In contact with liquid



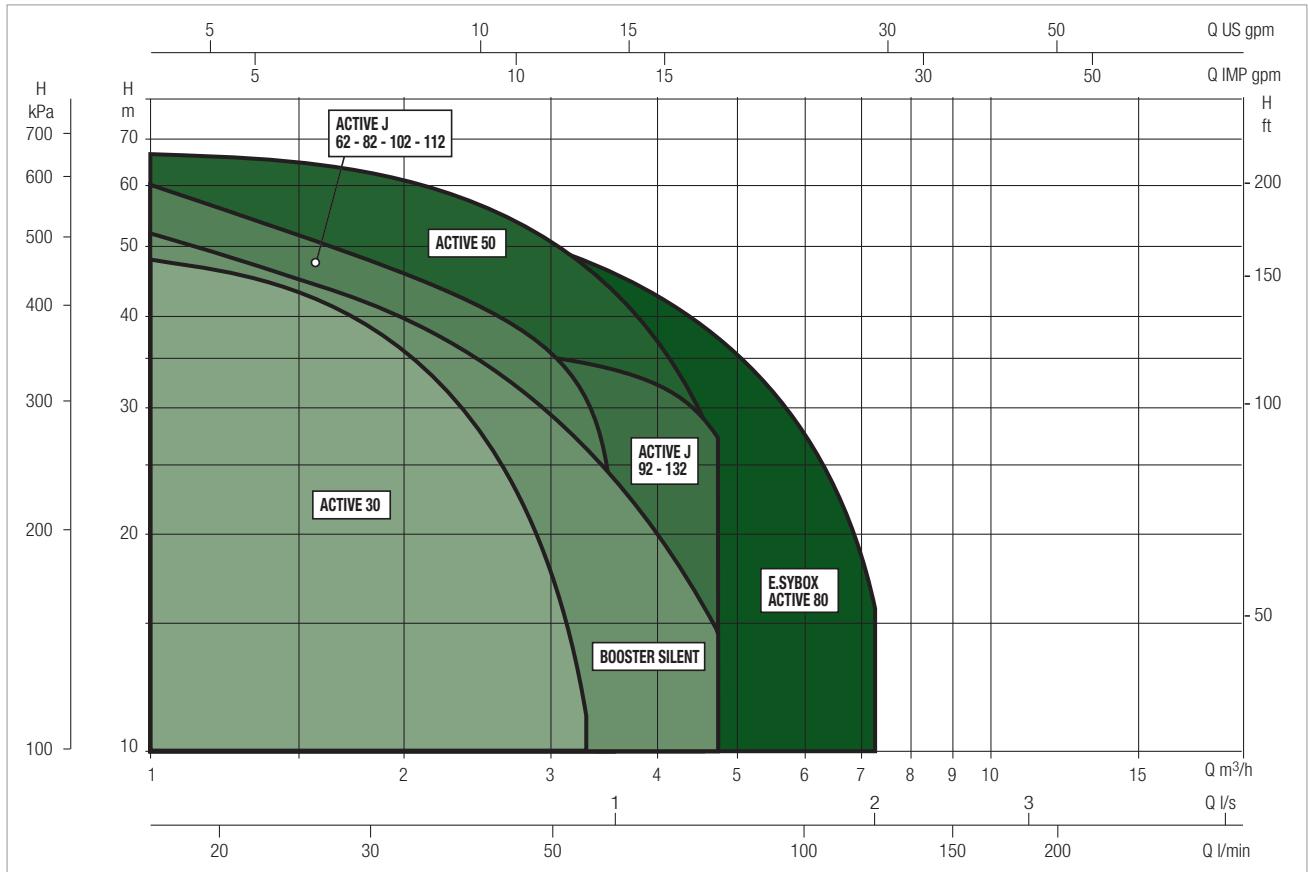
ACTIVE SYSTEM

AUTOMATIC ON/OFF PRESSURISATION SYSTEM

PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

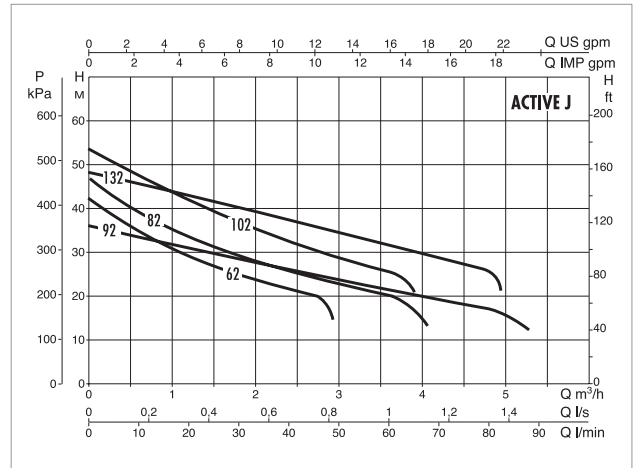
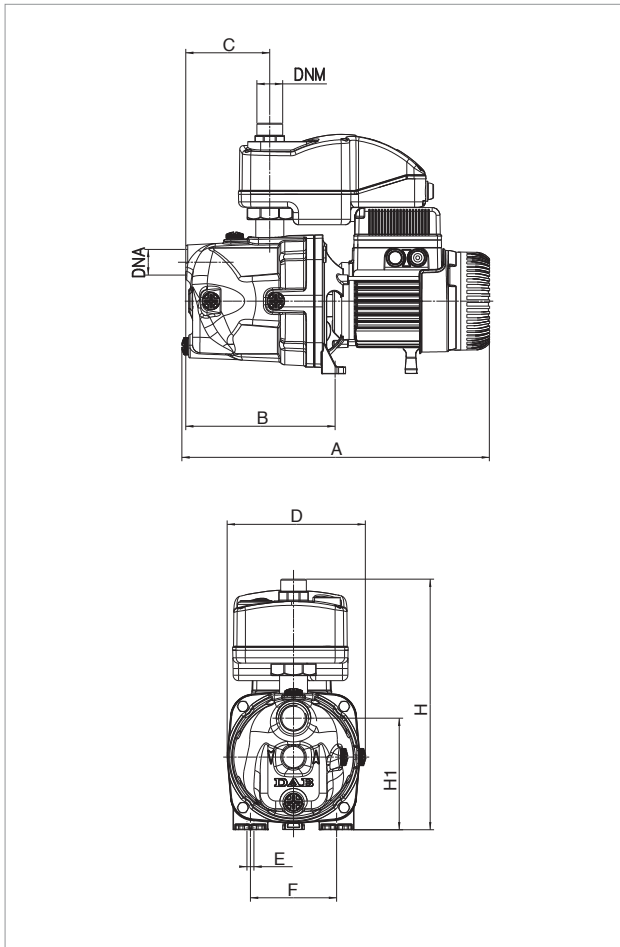


ACTIVE SYSTEM SELECTION TABLE

| MODEL | Q | | H (m) | | | | | | | | | | | |
|-------------------|------|-------|-------|------|------|------|------|------|------|------|------|------|-----|--|
| | m³/h | l/min | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 | 6 | 7.2 | |
| | | | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 | |
| ACTIVE J 62 M | | | 42.7 | 35 | 29.2 | 25.6 | 22.9 | 13 | | | | | | |
| ACTIVE J 82 M | | | 47 | 40 | 34 | 30 | 26.2 | 23.5 | 20.3 | | | | | |
| ACTIVE J 102 M | | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | | | | |
| ACTIVE J 112 M | | | 61 | 54 | 47.8 | 42.8 | 38.8 | 34.8 | 20 | | | | | |
| ACTIVE J 92 M | | | 36.2 | 33.5 | 31 | 28.4 | 26 | 24 | 21.8 | 19.6 | 17.5 | | | |
| ACTIVE J 132 M | | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 | | | |
| ACTIVE JI 82 M | | | 47 | 40 | 34 | 30 | 26.2 | 23.5 | 20.3 | | | | | |
| ACTIVE JI 102 M | | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | | | | |
| ACTIVE JI 112 M | | | 61 | 54 | 47.8 | 42.8 | 38.8 | 34.8 | 20 | | | | | |
| ACTIVE JI 92 M | | | 36.2 | 33.5 | 31 | 28.4 | 26 | 24 | 21.8 | 19.6 | 17.5 | | | |
| ACTIVE JI 132 M | | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 | | | |
| ACTIVE JC 102 M | | | 53.8 | 47 | 41 | 36.3 | 32.4 | 28.8 | 25.8 | | | | | |
| ACTIVE JC 132 M | | | 48.3 | 45.6 | 42.8 | 40 | 37.6 | 35 | 32.5 | 30 | 27.2 | | | |
| ACTIVE E 30/50 M | | | 42.2 | 40.2 | 38.2 | 36.2 | 33.8 | 30 | 24.8 | 19.5 | 14 | | | |
| ACTIVE EI 25/30 M | | | 34.4 | 31.7 | 28.3 | 23.5 | 17.5 | 11 | | | | | | |
| ACTIVE EI 30/30 M | | | 46 | 42.2 | 37.8 | 31.2 | 23.3 | 14.3 | | | | | | |
| ACTIVE EI 40/30 M | | | 57 | 52.7 | 47 | 38.8 | 29 | 17.7 | | | | | | |
| ACTIVE EI 30/50 M | | | 42.2 | 40.2 | 38.2 | 36.2 | 33.8 | 30 | 24.8 | 19.5 | 14 | | | |
| ACTIVE EI 40/50 M | | | 57.7 | 55.3 | 52.8 | 50.1 | 47.1 | 42.7 | 35.8 | 28 | 19.2 | | | |
| ACTIVE EI 50/50 M | | | 72 | 68.5 | 65.5 | 62.1 | 58.2 | 52.2 | 48 | 43.6 | 34.5 | 26 | | |
| ACTIVE EI 25/80 M | | | 34 | | 33 | 32 | 30.5 | 28.5 | 26 | 23.5 | 21 | 14.5 | 6.5 | |
| ACTIVE EI 30/80 M | | | 47 | | 46.5 | 45 | 43.5 | 41 | 38 | 34.5 | 31 | 23 | 12 | |
| ACTIVE EI 40/80 M | | | 59 | 58 | 57 | 56 | 54 | 51 | 47.5 | 43.8 | 39.5 | 29.5 | 16 | |

ACTIVE J AUTOMATIC ON/OFF PRESSURISATION SYSTEM FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +40 °C - Maximum ambient temperature: +40°C



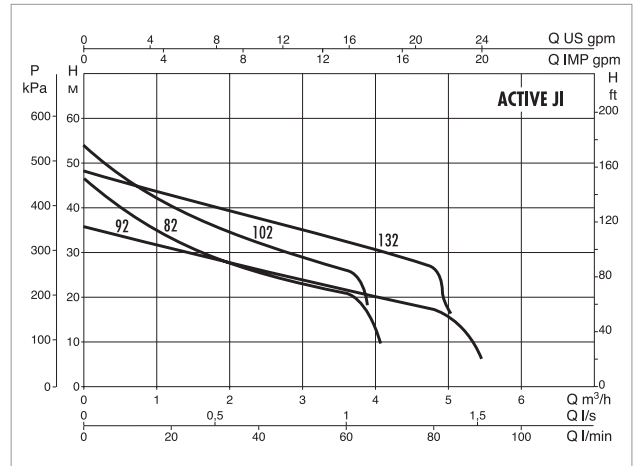
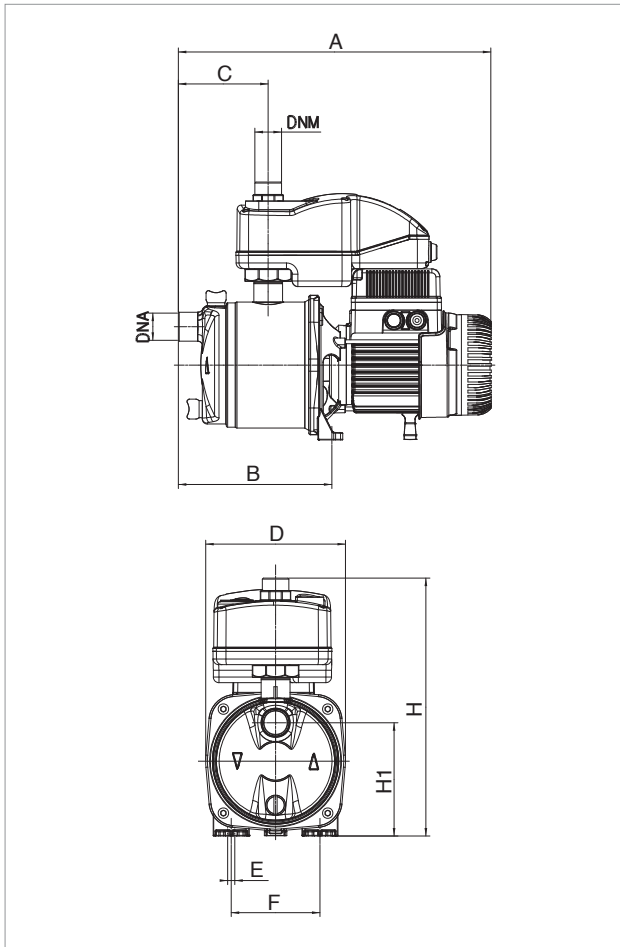
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | |
|----------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| ACTIVE J 62 M | 1x220-240 V ~ | 0.720 | 0.44 | 0.6 | 3.12 | 12.5 | 450 |
| ACTIVE J 82 M | 1x220-240 V ~ | 0.850 | 0.6 | 0.8 | 3.8 | 12.5 | 450 |
| ACTIVE J 102 M | 1x220-240 V ~ | 1.130 | 0.75 | 1 | 5.1 | 16 | 450 |
| ACTIVE J 92 M | 1x220-240 V ~ | 0.940 | 0.75 | 1 | 4.2 | 14 | 450 |
| ACTIVE J 132 M | 1x220-240 V ~ | 1.490 | 1 | 1.36 | 6.6 | 25 | 450 |

| MODEL | A | B | C | D | E | F | H | H1 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | GROSS WEIGHT Kg |
|----------------|-----|-----|-----|-----|---|-----|-----|-----|------------|------------|-----------------|-----|-----|-----------------------|
| | | | | | | | | | | | L/A | L/B | C | |
| ACTIVE J 62 M | 395 | 192 | 108 | 178 | 9 | 111 | 322 | 144 | 1" | 1" | 476 | 234 | 348 | 10.50 |
| ACTIVE J 82 M | 395 | 192 | 108 | 178 | 9 | 111 | 322 | 144 | 1" | 1" | 476 | 234 | 348 | 13.2 |
| ACTIVE J 102 M | 395 | 192 | 108 | 178 | 9 | 111 | 322 | 144 | 1" | 1" | 476 | 234 | 348 | 12.50 |
| ACTIVE J 92 M | 395 | 192 | 108 | 178 | 9 | 111 | 322 | 144 | 1" | 1" | 476 | 234 | 348 | 11.70 |
| ACTIVE J 132 M | 395 | 192 | 108 | 178 | 9 | 111 | 322 | 144 | 1" | 1" | 476 | 234 | 348 | 13.50 |

ACTIVE JI - AUTOMATIC ON/OFF PRESSURISATION SYSTEM FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +40 °C - Maximum ambient temperature: +40°C



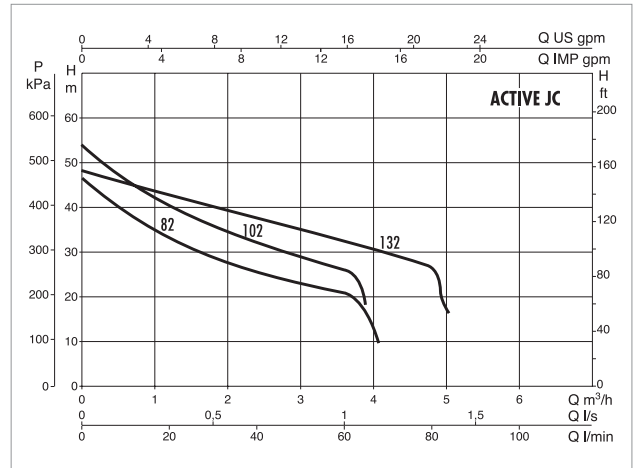
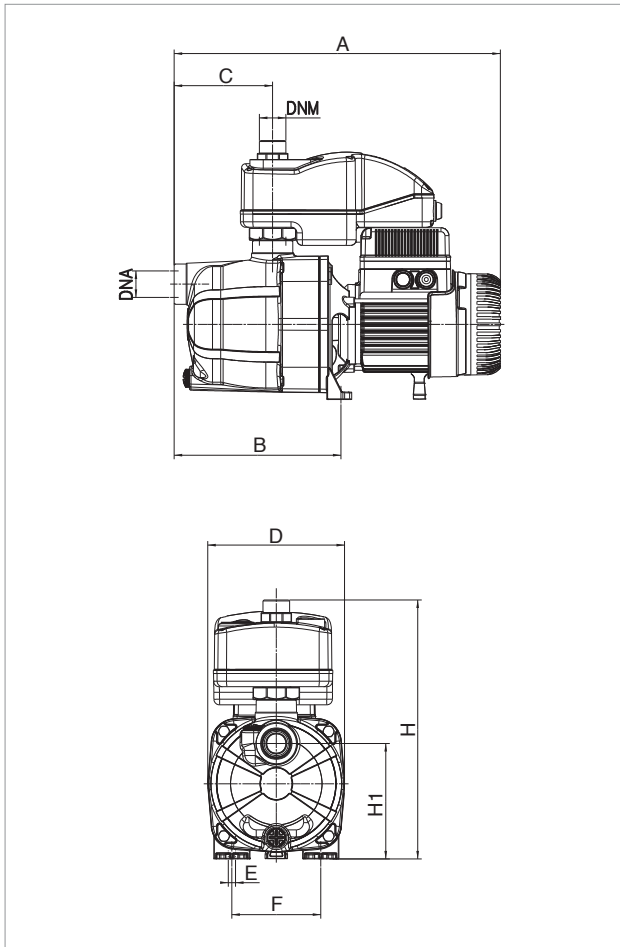
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | |
|-----------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| ACTIVE JI 82 M | 1x220-240 V ~ | 0.85 | 0.6 | 0.8 | 3.8 | 12.5 | 450 |
| ACTIVE JI 102 M | 1x220-240 V ~ | 1.13 | 0.75 | 1 | 5.1 | 16 | 450 |
| ACTIVE JI 92 M | 1x220-240 V ~ | 0.94 | 0.75 | 1 | 4.2 | 14 | 450 |
| ACTIVE JI 112 M | 1x220-240 V ~ | 1.4 | 1 | 1.36 | 6 | 25 | 450 |
| ACTIVE JI 132 M | 1x220-240 V ~ | 1.49 | 1 | 1.36 | 6.6 | 25 | 450 |

| MODEL | A | B | C | D | E | F | H | H1 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | GROSS WEIGHT Kg |
|-----------------|-----|-----|-----|-----|---|-----|-----|-----|------------|------------|-----------------|-----|-----|-----------------------|
| | | | | | | | | | | | L/A | L/B | C | |
| ACTIVE JI 82 M | 390 | 192 | 112 | 174 | 9 | 111 | 322 | 141 | 1" | 1" | 476 | 234 | 348 | 10.70 |
| ACTIVE JI 102 M | 390 | 192 | 112 | 174 | 9 | 111 | 322 | 141 | 1" | 1" | 476 | 234 | 348 | 12.50 |
| ACTIVE JI 92 M | 390 | 192 | 112 | 174 | 9 | 111 | 322 | 141 | 1" | 1" | 476 | 234 | 348 | 11.70 |
| ACTIVE JI 112 M | 390 | 192 | 112 | 174 | 9 | 111 | 322 | 141 | 1" | 1" | 476 | 234 | 348 | 13.70 |
| ACTIVE JI 132 M | 390 | 192 | 112 | 174 | 9 | 111 | 322 | 141 | 1" | 1" | 476 | 234 | 348 | 13.50 |

ACTIVE JC - AUTOMATIC ON/OFF PRESSURISATION SYSTEM FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +40 °C - Maximum ambient temperature: +40°C



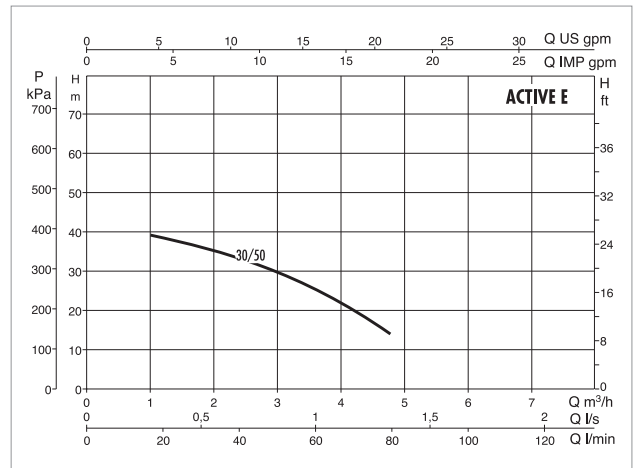
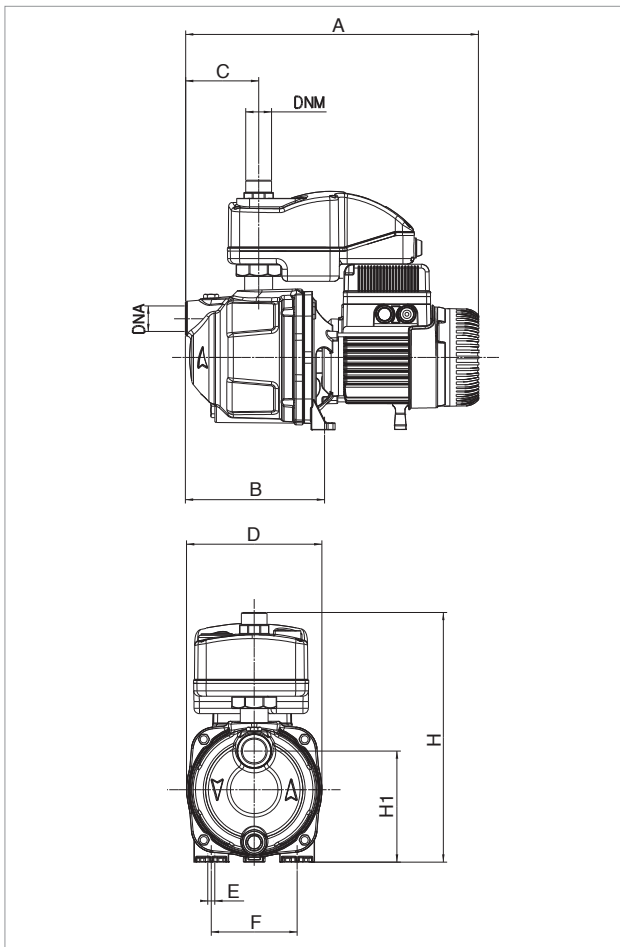
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | |
|-----------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| ACTIVE JC 102 M | 1x220-240 V ~ | 1.130 | 0.75 | 1 | 5.1 | 16 | 450 |
| ACTIVE JC 132 M | 1x220-240 V ~ | 1.49 | 1 | 1.36 | 6.6 | 25 | 450 |

| MODEL | A | B | C | D | E | F | H | H1 | DNA | DNM | PACK DIMENSIONS | | | GROSS WEIGHT Kg |
|-----------------|-----|-----|-----|-----|---|-----|-----|-----|------|------|-----------------|-----|-----|--------------------|
| | | | | | | | | | | | L/A | L/B | C | |
| ACTIVE JC 102 M | 406 | 208 | 122 | 170 | 9 | 111 | 322 | 144 | 1" G | 1" G | 476 | 234 | 348 | 12.50 |
| ACTIVE JC 132 M | 406 | 208 | 122 | 170 | 9 | 111 | 322 | 144 | 1" G | 1" G | 476 | 234 | 348 | 13.50 |

ACTIVE E - AUTOMATIC ON/OFF PRESSURISATION SYSTEM FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +40 °C - Maximum ambient temperature: +40°C



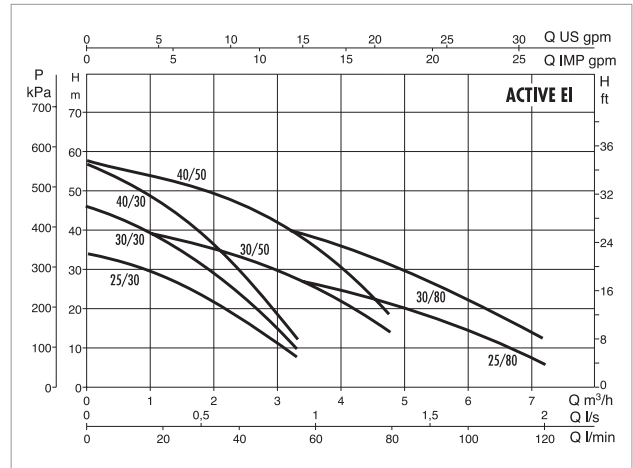
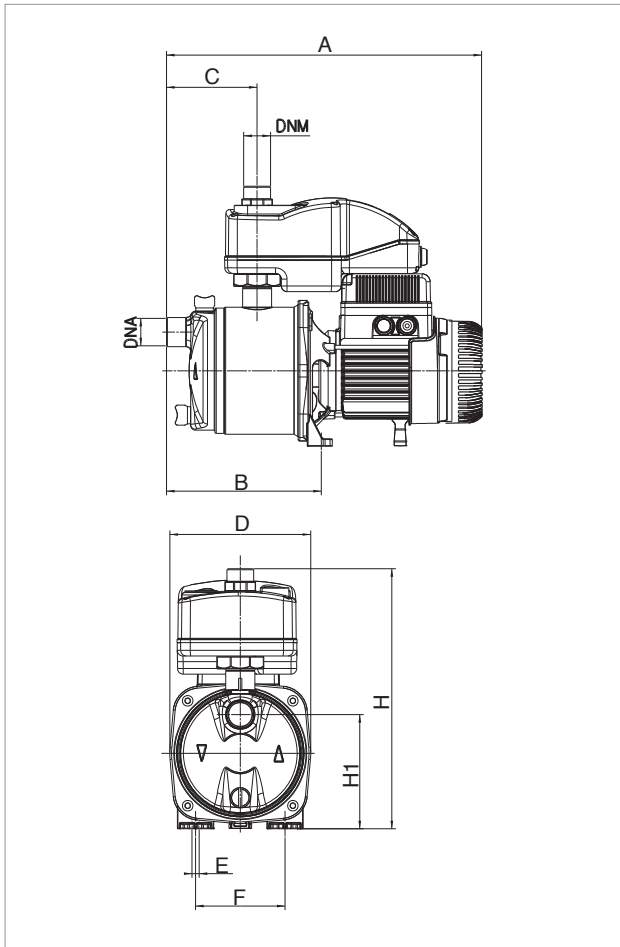
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | |
|------------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| ACTIVE E 30/50 M | 1x220-240 V ~ | 0.88 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |

| MODEL | A | B | C | D | E | F | H | H1 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | GROSS WEIGHT Kg |
|------------------|-----|-----|----|-----|---|-----|-----|-----|------------|------------|-----------------|-----|-----|-----------------------|
| | | | | | | | | | | | L/A | L/B | C | |
| ACTIVE E 30/50 M | 377 | 180 | 94 | 175 | 9 | 111 | 322 | 144 | 1" | 1" | 476 | 234 | 348 | 11.70 |

ACTIVE EI - AUTOMATIC ON/OFF PRESSURISATION SYSTEM FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +40 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | |
|-------------------|-----------------------|--------------|------------|------|---------------------|-----------|----------------|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | I _n A | CAPACITOR | |
| | | | kW | HP | | µF | V _c |
| ACTIVE EI 25/30 M | 1x220-240 V ~ | 0.520 | 0.37 | 0.5 | 2.4 | 10 | 450 |
| ACTIVE EI 30/30 M | 1x220-240 V ~ | 0.720 | 0.45 | 0.6 | 3.2 | 12.5 | 450 |
| ACTIVE EI 40/30 M | 1x220-240 V ~ | 0.880 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |
| ACTIVE EI 30/50 M | 1x220-240 V ~ | 0.880 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |
| ACTIVE EI 40/50 M | 1x220-240 V ~ | 1.200 | 0.8 | 1.1 | 5.3 | 20 | 450 |
| ACTIVE EI 50/50 M | 1x220-240 V ~ | 1.48 | 1 | 1.36 | 6 | 25 | 450 |
| ACTIVE EI 25/80 M | 1x220-240 V ~ | 0.880 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |
| ACTIVE EI 30/80 M | 1x220-240 V ~ | 1.200 | 0.8 | 1.1 | 5.3 | 20 | 450 |
| ACTIVE EI 40/80 M | 1x220-240 V ~ | 1.48 | 1 | 1.36 | 6 | 25 | 450 |

| MODEL | A | B | C | D | E | F | H | H1 | DNA | DNM | PACK DIMENSIONS | | | GROSS WEIGHT Kg |
|-------------------|-----|-----|-----|-----|---|-----|-----|-----|------|------|-----------------|-----|-----|--------------------|
| | | | | | | | | | | | L/A | L/B | C | |
| ACTIVE EI 25/30 M | 390 | 192 | 112 | 174 | 9 | 111 | 322 | 141 | 1" G | 1" G | 476 | 234 | 348 | 10.90 |
| ACTIVE EI 30/30 M | 445 | 247 | 167 | 174 | 9 | 111 | 322 | 141 | 1" G | 1" G | 476 | 234 | 348 | 13.50 |
| ACTIVE EI 40/30 M | 445 | 247 | 167 | 174 | 9 | 111 | 322 | 141 | 1" G | 1" G | 476 | 234 | 348 | 14.00 |
| ACTIVE EI 30/50 M | 390 | 192 | 112 | 174 | 9 | 111 | 322 | 141 | 1" G | 1" G | 476 | 234 | 348 | 10.00 |
| ACTIVE EI 40/50 M | 445 | 247 | 167 | 174 | 9 | 111 | 322 | 141 | 1" G | 1" G | 476 | 234 | 348 | 15.50 |
| ACTIVE EI 50/50 M | 445 | 247 | 167 | 174 | 9 | 111 | 322 | 141 | 1" | 1" | 476 | 234 | 348 | 15.20 |
| ACTIVE EI 25/80 M | 390 | 192 | 112 | 174 | 9 | 111 | 322 | 141 | 1" G | 1" G | 476 | 234 | 348 | 9.50 |
| ACTIVE EI 30/80 M | 445 | 247 | 167 | 174 | 9 | 111 | 322 | 141 | 1" G | 1" G | 476 | 234 | 348 | 15.50 |
| ACTIVE EI 40/80 M | 445 | 247 | 167 | 174 | 9 | 111 | 322 | 141 | 1" | 1" | 476 | 234 | 348 | 15.00 |

BOOSTER SILENT

AUTOMATIC ON/OFF PRESSURISATION SYSTEMS



TECHNICAL DATA

Operating range:

capacity up to 90 l/min; head up to 46 m.

Liquid temperature range:

for domestic use: from +35°C to +35°C

for other use: from 0°C to +40°C

Liquid quality requirements:

Clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral.

Maximum suction depth: 8 metres

Maximum ambient temperature: +40°C

Protection rating: IPX4

Insulation class: F

Installation: fixed or portable in a horizontal position.

Special executions on request: alternative voltages and/or frequencies.

APPLICATIONS

Automatic, self-priming up to 8 metres, pressurisation system with multi-impellers (3-4-5) and integrated electronics, for domestic water supply in gardens and small irrigation systems.

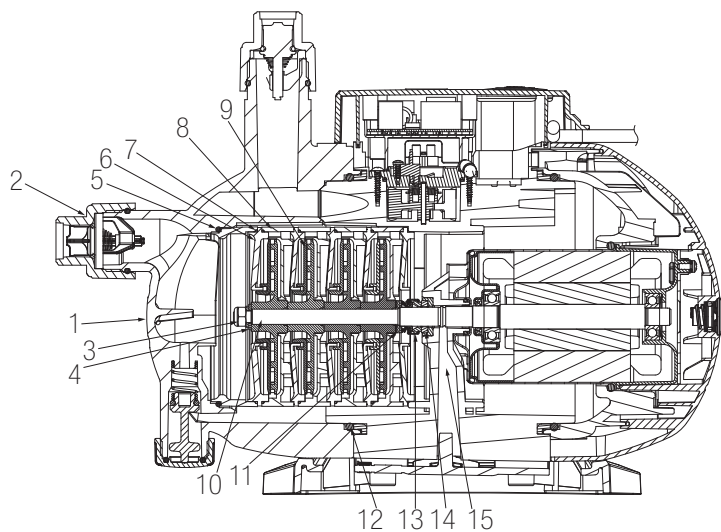
FEATURES

Hull in sound absorbant composite material, with technopolymer hydraulics. Carbon/ceramic mechanical seal. Single phase, asynchronous, continuous service motor cooled by the liquid being pumped. Incorporated thermo-amperometric protection and permanently inserted capacitor.

The system is equipped with an integrated electronics board, pressure and flow switches for automatic start and stop as soon as the taps are opened or closed. The electronics prevent the pump from dry-running. The system has LED signals and alarms. It has an automatic restart once the error conditions have been reset. The system is equipped with non-return valves in aspiration, 2 metre power cord and plug and a 2 litre tank.

MATERIALS

| N° | PARTS | MATERIALS |
|----|------------------|---|
| 1 | PUMP BODY | TECHNOPOLYMER |
| 2 | NON-RETURN VALVE | TECHNOPOLYMER |
| 3 | NUT | UNI7474 A2 STAINLESS STEEL NUT |
| 4 | WASHER | A2 STAINLESS STEEL |
| 5 | OR GASKET | NBR |
| 6 | DIFFUSER PLUG | TECHNOPOLYMER |
| 7 | OR GASKET | NBR |
| 8 | DIFFUSER | TECHNOPOLYMER |
| 9 | IMPELLER | TECHNOPOLYMER |
| 10 | ROTOR SHAFT | AISI 416 STAINLESS STEEL UNI EN 10088-1 X12CrS13 |
| 11 | WASHER | A2 STAINLESS STEEL |
| 12 | OR GASKET | NBR |
| 13 | MECHANICAL SEAL | SILICON - VITON |
| 14 | COUNTERFACE | STEA/NBR |
| 15 | BODY | TECHNOPOLYMER |



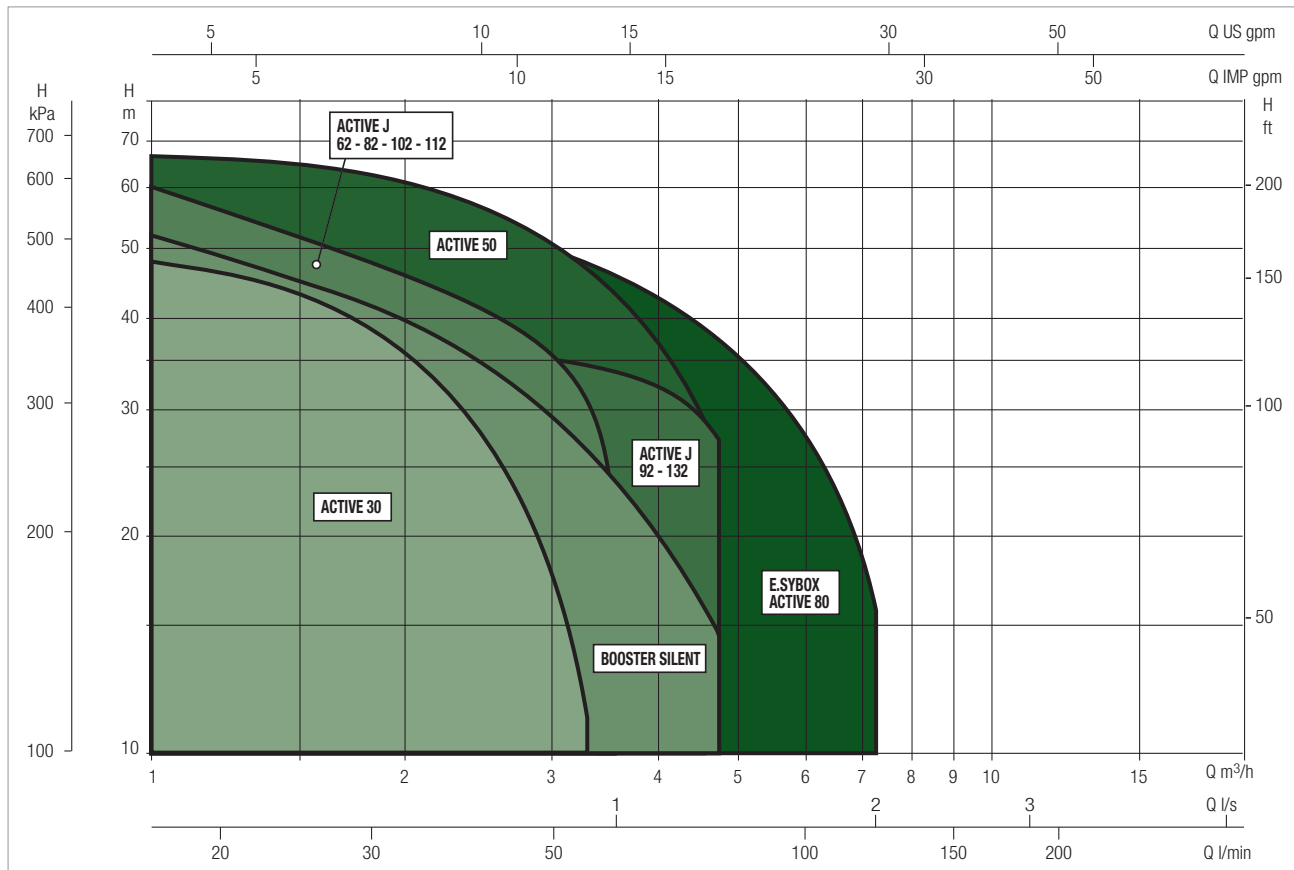
BOOSTER SILENT

AUTOMATIC ON/OFF PRESSURISATION SYSTEMS

PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

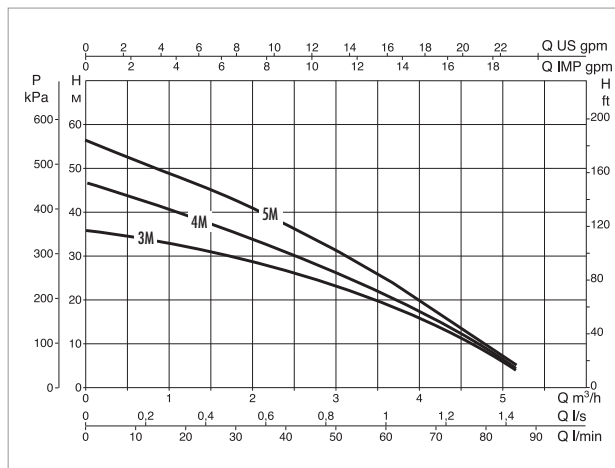
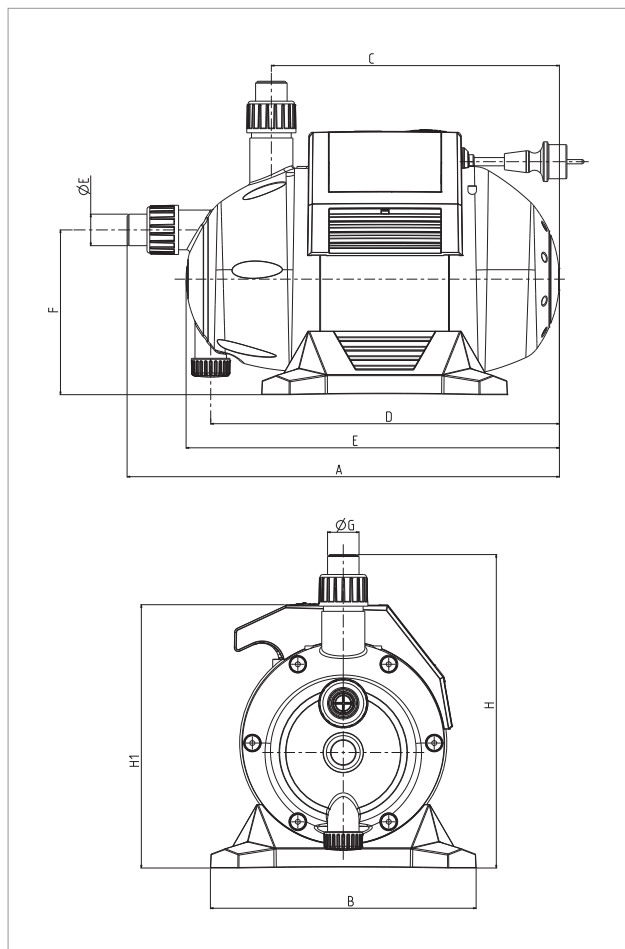


BOOSTER SILENT SELECTION TABLE

| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 |
|---------------------------|---------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| BOOSTER SILENT 3 M | H (m) | 37 | 34 | 32 | 31 | 27 | 23 | 19 | 15 | 8 |
| BOOSTERSILENT 3 M 1.5 BAR | | 37 | 34 | 32 | 31 | 27 | 23 | 19 | 15 | 8 |
| BOOSTER SILENT 4 M | | 47 | 43 | 40 | 35 | 31 | 27 | 22 | 17 | 9 |
| BOOSTER SILENT 5 M | | 57 | 52 | 48 | 43 | 38 | 31 | 25 | 18 | 10 |

BOOSTER SILENT - AUTOMATIC ON/OFF PRESSURISATION SYSTEMS FOR DOMESTIC WATER SUPPLY

LIQUID TEMPERATURE RANGE PUMPED: FROM 0 °C TO +35 °C - MAXIMUM AMBIENT TEMPERATURE: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | |
|----------------------------------|-----------------|--------------------|-----------|------------|------|------|
| | N° IMPELLER | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A |
| | | | | kW | HP | |
| BOOSTER SILENT 3 M | 3 | 1 x 230 V ~ | 0.8 | 0.55 | 0.75 | 3.7 |
| BOOSTERSILENT 3 M 1.5 BAR | 3 | 1 x 230 V ~ | 0.8 | 0.55 | 0.5 | 3.7 |
| BOOSTER SILENT 4 M | 4 | 1 x 230 V ~ | 1 | 0.75 | 1 | 4.7 |
| BOOSTER SILENT 5 M | 5 | 1 x 230 V ~ | 1.25 | 1 | 1.36 | 5.7 |

| MODEL | A | B | C | D | E | F | Ø G | H | H1 | DNA GAS | DNM GAS | PACK DIMENSIONS | | | GROSS Kg | Q.TY x PALLET |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|---------|-----------------|-----|-----|----------|---------------|
| | | | | | | | | | | | | L/A | L/B | H | | |
| BOOSTER SILENT 3 M | 455 | 280 | 305 | 370 | 395 | 175 | 33 | 330 | 280 | 1" | 1" | 480 | 300 | 470 | 11.5 | 18 |
| BOOSTERSILENT 3 M 1.5 BAR | 455 | 280 | 305 | 370 | 395 | 175 | 33 | 330 | 280 | 1" | 1" | 480 | 300 | 470 | 11.5 | 18 |
| BOOSTER SILENT 4 M | 455 | 280 | 305 | 370 | 395 | 175 | 33 | 330 | 280 | 1" | 1" | 480 | 300 | 470 | 11.5 | 18 |
| BOOSTER SILENT 5 M | 455 | 280 | 305 | 370 | 395 | 175 | 33 | 330 | 280 | 1" | 1" | 480 | 300 | 470 | 11.5 | 18 |

JET - JETINOX - EUROINOX WITH ACTIVE DRIVER

AUTOMATIC INVERTER DRIVEN PRESSURISATION SYSTEM



TECHNICAL DATA

Operating range:

from 10 to 120 litres/min. with head up to 59 m.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral, close to the properties of water.

Liquid temperature range:

(for domestic use) from 0°C to 35°C

(for other uses) from 0°C to 40°C

Maximum ambient temperature: +40°C

Maximum operating pressure:

6 bar (600 kPa) for Jetcom AD1 and Eurocom AD1.

8 bar (800 kPa) for other models.

Installation: fixed in a horizontal position.

Motor protection rating: IP 44

Terminal block protection rating: IP 55

Insulation class: F

Standard input voltage: single phase 220/240 V / 50 Hz

Electric pump voltage: Three phase 220/240 V - 50 Hz

APPLICATIONS

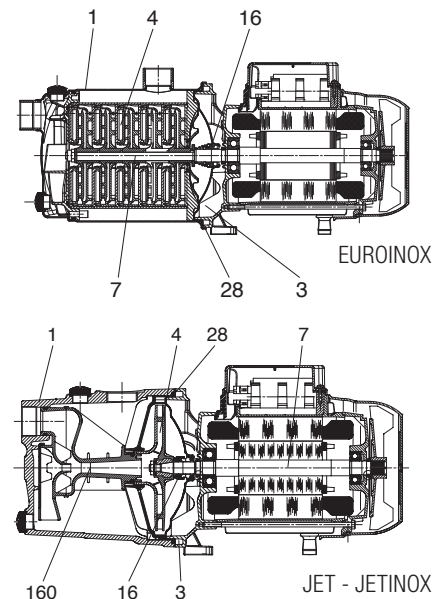
Automatic booster sets, especially suitable for domestic use, small civil, farming or industrial installations, washing plants and leisure activities. These feature the use of JET, JETINOX, JETCOM and EUROINOX self-priming pumps, coupled directly to the Active Driver device.

The Active Driver is an innovative, variable speed integrated electric pump control system, able to maintain constant pressure with changing flow rates. Thanks to its simple and clear user interface, it is easy to calibrate operational pressure, view settings and any error messages. Active Driver comprises an inverter, a pressure sensor and a flow sensor.

MATERIALS

| N° | PARTS * | MATERIALS |
|-----|-------------------------------|---|
| 1 | PUMP BODY | 200 UNI ISO 185 CAST IRON (FOR JET) |
| | | AISI 304 STAINLESS STEEL (FOR JETINOX AND EUROINOX) |
| 3 | FRAME | DIE CAST ALUMINIUM |
| 4 | IMPELLER | TECHNOPOLYMER A |
| 7 | SHAFT WITH ROTOR | AISI 416 STAINLESS STEEL X12 CrS13 - UNI 6900/71 |
| 16 | MECHANICAL SEAL | CARBON/CERAMIC |
| 28 | OR GASKET | NBR RUBBER |
| 160 | VENTURI DIFFUSER NOZZEL GROUP | TECHNOPOLYMER A |

* In contact with liquid



ACTIVE DRIVER

INVERTER



TECHNICAL DATA

Model: M/M model; M/T model; T/T model.

Max. motor phase current:

M/M model 14A; M/T model 10,5A; T/T model 13,5A.

Standard input voltage: M/M and M/T model 1x230V; M/M dual voltage 1x115V and 1x230V; T/T model 3x400V.

Electric pump voltage: M/M model 1x230V; M/M dual voltage model 1x115V and 1x230V; M/T model 3x230V; T/T model 3x400V.

Frequency: 50 Hz - 60 Hz.

Installation: vertical or horizontal. For T/T model only Vertical

Max. liquid temperature: 50°C.

Max. operational temperature: 60°C.

Max. pressure: 16 bar.

Aspiration diameter (DNA): 1 1/4" male.

Discharge diameter (DNM): 1 1/2" female.

Protection rating: IP55

Active Driver can also be used in parallel, Taht is a device for each electric pump (except model M/M 1.1)

APPLICATIONS

The units with Active Driver were designed and manufactured to meet the needs for **constant pressure** required by modern plumbing systems. Constant pressure regulation is applicable to many sectors: Water supply for irrigation, industry, hotels, housing construction, thermal baths. The basic concept that guided our Engineers in the development of these units was to manufacture a system that is **simple, flexible and reliable**.

ADVANTAGES

Constant pressure - Quiet operation - Economical - Reduced water consumption - Smaller footprint
(Expansion tanks not required) Less maintenance - dry-running protection

ACTIVE DRIVER NOTES

The Active Driver module is a complete system, which includes all fittings for connection to the plumbing plant, a pressure sensor, a flow sensor and an inverter. Active Driver, installed on the discharge side of **each electric pump** adjusts the rotation speed of its associated pump, to keep the water **pressure constant** even though the flow rate changes. The water flowing through the Active Driver fittings also aids in **cooling the heat** generated by the electronics.

OPERATION

Upon the first drop in pressure in the plant, caused by water being drawn, the pump is kept running to meet the required flow rate.

The pump pressure may be adjusted by the user using the + and - buttons on Active Driver (usually all of the pumps are set at the same pressure level).

The pumps stop automatically when there is:

Pump overload - dry-running - low voltage - Maximum pressure exceeded (adjustable) - Active Driver electronics overheating.

ACTIVE DRIVER FUNCTIONS DISPLAYED

Pump operational frequency (Hz) - Real-time pressure (bar) - Amperes absorbed by the pump - Alarms.

ACTIVE DRIVER EXTERNAL CONNECTIONS (models M/T 2.2 - T/T 3.0 - T/T 5.5 only)

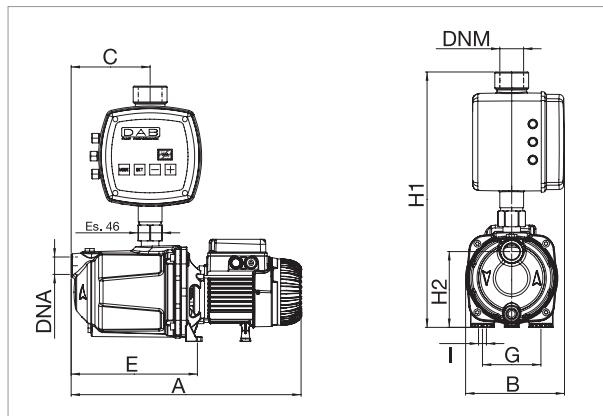
Inputs: pump disabling, pressure switch, float against dry operation, second pressure setpoint.

Outputs: two terminals with no potential for signaling alarms, pump stop, pump running.

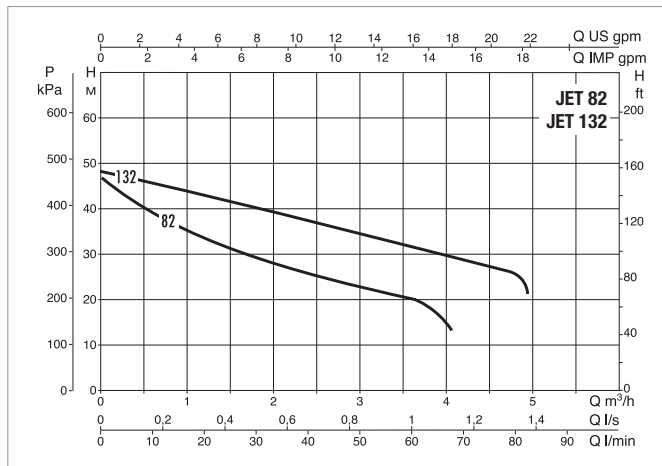
| MODEL | MAX CURRENT MOTOR A | MAX POWER MOTOR KW | POWER SUPPLY 50 Hz | POWER SUPPLY ELECTRIC PUMP | DNA GAS | DNM GAS | INTERFACE FOR USE IN PARALLEL | USE WITH PUMP TYPE | ADJUSTMENT PRESSURE BAR |
|-----------------------|---------------------|--------------------|--------------------|----------------------------|----------|----------|-------------------------------|--|-------------------------|
| ACTIVE DRIVER M/M 1.1 | 8.5 | 1.1 | SINGLE PHASE 1x230 | SINGLE PHASE 1x230 | 1 1/4" M | 1 1/2" F | NO | Surface pumps, submerged 4" and 5" with single phase motor with current draw up to 8.5 A | 1-6 |
| ACTIVE DRIVER M/M 1.5 | 11 | 0.55 | SINGLE PHASE 1x115 | SINGLE PHASE 1x115 | 1 1/4" M | 1 1/2" F | SI | Surface pumps, submerged 4" and 5" with single phase motor with current draw up to 11 A | 1-9 |
| | | 1.5 | 1x230 | 1x230 | | | | | |
| ACTIVE DRIVER M/M 1.8 | 14 | 1.0 | SINGLE PHASE 1x115 | SINGLE PHASE 1x115 | 1 1/4" M | 1 1/2" F | SI | Surface pumps, submerged 4" and 5" with single phase motor with current draw up to 14 A | 1-9 |
| | | 1.8 | 1x230 | 1x230 | | | | | |
| ACTIVE DRIVER M/T 1.0 | 4.7 | 1.0 | SINGLE PHASE 1x230 | Three-phase 3x230 | 1 1/4" M | 1 1/2" F | SI | Surface pumps, submerged 4" and 5" with 230 V three-phase motor with current draw up to 4.7 A | 1-5 |
| ACTIVE DRIVER M/T 2.2 | 10.5 | 2.2 | SINGLE PHASE 1x230 | Three-phase 3x230 | 1 1/4" M | 1 1/2" F | SI | Surface pumps, submerged 4" and 5" with 230 V three-phase motor with current draw up to 10.5 A | 1-16 |
| ACTIVE DRIVER T/T 3.0 | 7.5 | 3.0 | Three-phase 3x400 | Three-phase 3x400 | 1 1/4" M | 1 1/2" F | SI | Surface pumps, submerged 4" and 5" with 400 V three-phase motor with current draw up to 7.5 A | 1-16 |
| ACTIVE DRIVER T/T 5.5 | 13.3 | 5.5 | Three-phase 3x400 | Three-phase 3x400 | 1 1/4" M | 1 1/2" F | SI | Surface pumps, submerged 4" and 5" with 400 V three-phase motor with current draw up to 13.3 A | 1-16 |

AD JET - AUTOMATIC INVERTER DRIVEN PRESSURISATION SYSTEM FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

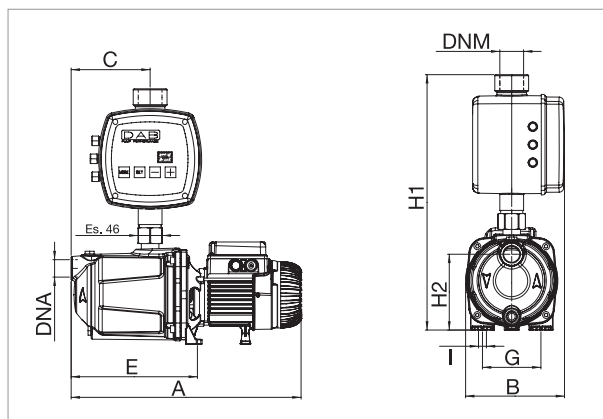


| MODEL | POWER SUPPLY 50 Hz | P1 MAX kW | ELECTRICAL DATA | | | | |
|--------------------|-----------------------|--------------|-----------------|------|---------|-----------|-----|
| | | | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| AD1.0 M/M JET 132M | 1x220-240 V ~ | 1.49 | 1.0 | 1.36 | 6.6 | 25 | 450 |

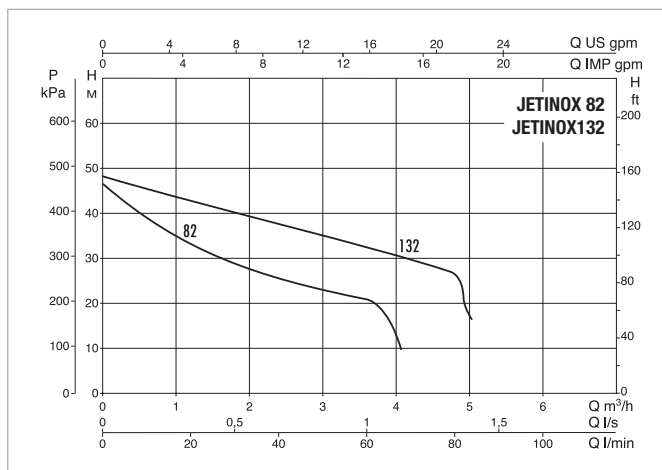
| MODEL | A | B | C | E | G | I | H1 | H2 | DNA GAS | DNM GAS | PACK VOLUME (mc) | GROSS WEIGHT Kg |
|--------------------|-----|-----|-----|-----|-----|---|-----|-----|------------|------------|---------------------|--------------------|
| AD1.0 M/M JET 132M | 414 | 185 | 108 | 192 | 111 | 9 | 485 | 144 | 1" | 1 1/2" | 0.54 | 18.8 |

AD JETINOX - AUTOMATIC INVERTER DRIVEN PRESSURISATION SYSTEM FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

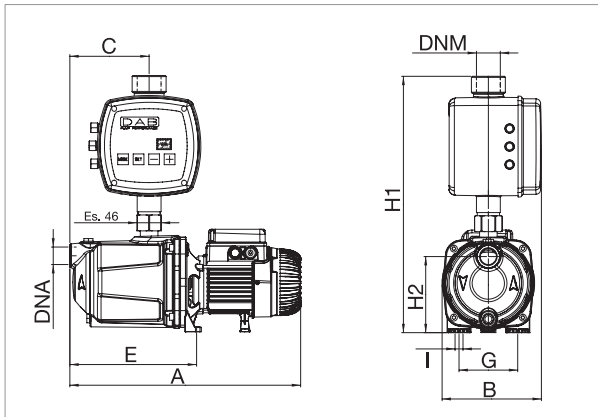


| MODEL | POWER SUPPLY 50 Hz | P1 MAX kW | ELECTRICAL DATA | | | | |
|------------------------|-----------------------|--------------|-----------------|------|---------|-----------|-----|
| | | | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| AD1.0 M/M JETINOX 132M | 1x220-240 V ~ | 1.49 | 1 | 1.36 | 6.6 | 25 | 450 |

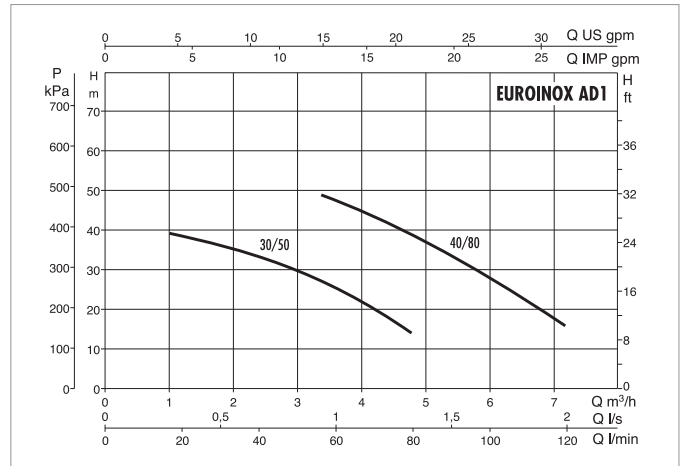
| MODEL | A | B | C | E | G | I | H1 | H2 | DNA GAS | DNM GAS | PACK VOLUME (mc) | GROSS WEIGHT Kg |
|------------------------|-----|-----|-----|-----|-----|---|-----|-----|------------|------------|---------------------|--------------------|
| AD1.0 M/M JETINOX 132M | 424 | 187 | 122 | 207 | 111 | 9 | 502 | 144 | 1" | 1 1/2" | 0.54 | 16.2 |

AD EUROINOX - AUTOMATIC INVERTER DRIVEN PRESSURISATION SYSTEM FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from 0 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.



| MODEL | ELECTRICAL DATA | | | | | | |
|---------------------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| AD1.0 M/M EUROINOX 30/50M | 1x220-240 V ~ | 0.88 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |
| AD1.0 M/M EUROINOX 40/80M | 1x220-240 V ~ | 1.20 | 0.8 | 1.1 | 5.3 | 25 | 450 |

| MODEL | A | B | C | E | G | I | H1 | H2 | DNA GAS | DNM GAS | PACK VOLUME (mc) | GROSS WEIGHT Kg |
|---------------------------|-----|-----|-----|-----|-----|---|-----|-----|------------|--------------------------------|---------------------|-----------------------|
| AD1.0 M/M EUROINOX 30/50M | 378 | 187 | 95 | 235 | 111 | 9 | 485 | 144 | 1" | 1" ¹ / ₂ | 0.54 | 16.8 |
| AD1.0 M/M EUROINOX 40/80M | 452 | 187 | 150 | 235 | 111 | 9 | 485 | 144 | 1" | 1" ¹ / ₂ | 0.54 | 21.6 |

E.SYBOX

ELECTRONIC PRESSURISATION SYSTEM



TECHNICAL DATA

Operating range:

capacity up to 120 l/min; head up to 65 m.

Liquid quality requirements: clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral.

Liquid temperature range: from 0°C to +35°C for domestic use for other use: from 0°C to +40°C

Maximum suction depth: 8 metres - 7 metres 30/50 version

Maximum ambient temperature: +40°C

Maximum operating pressure: 8 bar (800 kPa)

Motor protection rating: IPX4

Insulation class: F

Insulation class: Horizontal or vertical fixed position

Special executions on request: alternative voltages and/or frequencies.

APPLICATIONS

E.SYBOX is DAB's integrated electronic water pressurisation system for domestic and residential use. The E.SYBOX inverter system provides the comfort of constant water pressure, while saving energy too. Suitable for use for potable water, in domestic plants for gardening and irrigation. Suitable for creating groups of up to 4 pumps. E.SYBOX requires no additional components for installation.

FEATURES

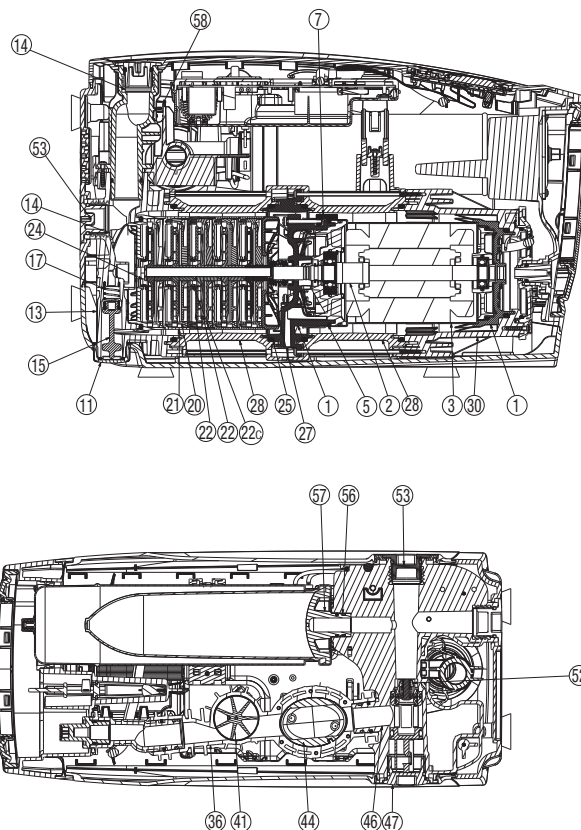
E.SYBOX comprises a self-priming, multi-stage pump with electronic inverter management, pressure and flow sensors, adjustable, high resolution LCD display and an integrated 2 litre expansion tank. May be installed either vertically or horizontally, in closed spaces without high level of air exchange. The accessories (e.sywall, e.sydock, e.sytwin, e.sytank) permit several installation possibilities.

The water-cooled motor, the protective and sound damping ABS hull, the anti-vibration feet and its electronics make this compact product very quiet (45dB under normal use). The wireless system enables the creation of other pressurisation groups able to connect with other DAB devices (eg. e.sylink).

MATERIALS

| N° | PARTS * | MATERIALS |
|------|-------------------------|---|
| 1 | MOTOR FLANGE | TECHNOPOLYMER |
| 2 | ROTOR SHAFT | AISI 303 STAINLESS STEEL |
| 3 | MOTOR JACKET | AISI 304 STAINLESS STEEL |
| 5 | OR GASKET | NBR |
| 7 | SINTERED PLATE | AISI 304 STAINLESS STEEL |
| 11 | 1" PLUG | TECHNOPOLYMER |
| 13 | SUCTION BODY | TECHNOPOLYMER |
| 14 | 1" INSERT | NICKLED BRASS |
| 15 | SHUTTER | TECHNOPOLYMER |
| 17 | SPRING | AISI 303 STAINLESS STEEL |
| 20 | DIFFUSER | TECHNOPOLYMER |
| 21 | DIFFUSER BODY | TECHNOPOLYMER |
| 22 | IMPELLER | TECHNOPOLYMER |
| 22c | SHIM RING | AISI 316 STAINLESS STEEL |
| 24 | NUT | AISI 316 STAINLESS STEEL |
| 25 | DIFFUSER END PLUG | TECHNOPOLYMER |
| 27 | MECHANICAL SEAL | CARBON IMPREGNATED RESIN/ SILICON CARBIDE / EPDM |
| 28 | PUMP BODY | TECHNOPOLYMER |
| 30 | DISCHARGE BODY | TECHNOPOLYMER |
| 36 | FLOW SWITCH BODY | TECHNOPOLYMER |
| 41 | PRESS. STABLE. IMPELLER | TECHNOPOLYMER |
| 46 | DISCHARGE MANIFOLD | TECHNOPOLYMER |
| 47 | 1"1/4 PLUG | TECHNOPOLYMER |
| 52 | NON-RETURN VALVE | TECHNOPOLYMER/RUBBER/STEEL |
| 57 | TANK | TECHNOPOLYMER/RUBBER |
| 58/1 | PRESSURE SENSOR BODY | TECHNOPOLYMER |

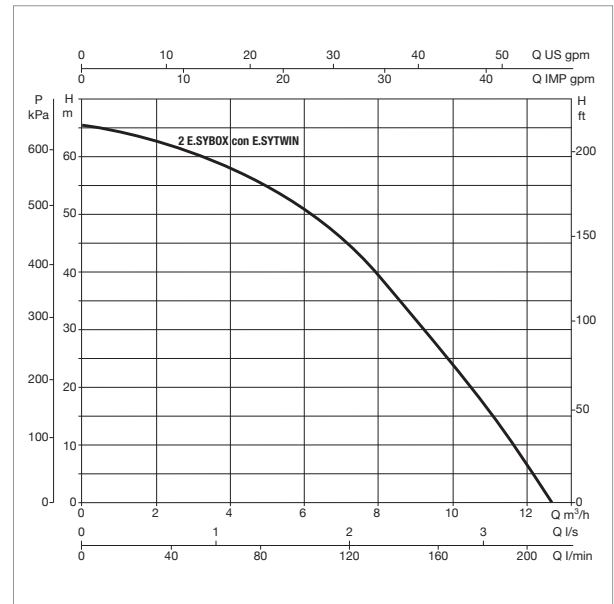
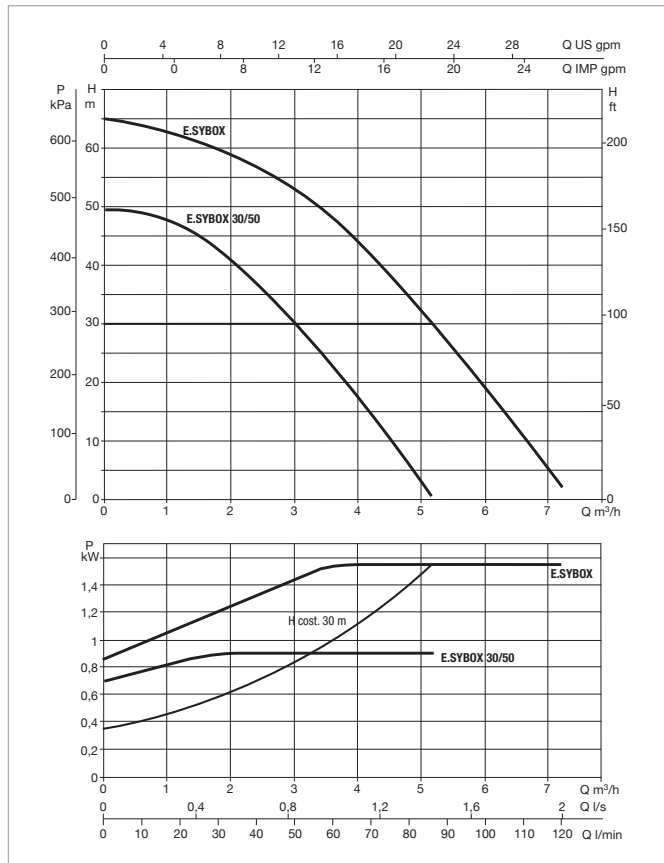
* In contact with liquid



E.SYBOX - ELECTROIC PRESSURISATION SYSTEM FOR DOMESTIC WATER SUPPLY

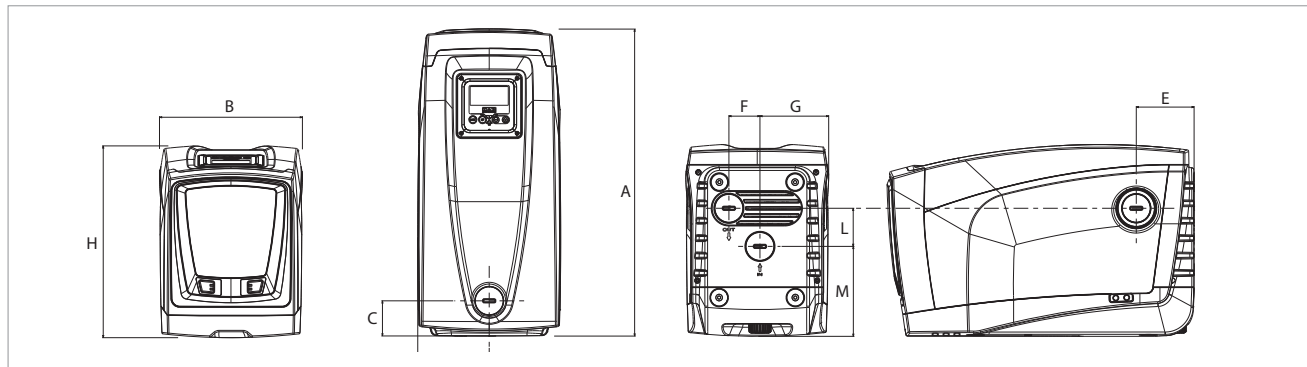
Liquid temperature range: from 0°C to +35°C for domestic use - from 0°C to +40°C for other uses.

Maximum ambient temperature: +40°C



Performance refers to 2 assembled e.sybox in e.sytwin.
Pressure losses included

The performance curves are based on the kinematic viscosity values =
1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.



| MODEL | Q=m³/h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3 | 3.6 | 4.2 | 4.8 | 5.4 | 6 | 6.6 | 7.2 |
|---------------|---------|----|------|-----|------|-----|------|-----|------|-----|------|-----|-----|-----|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 |
| E.SYBOX | H (m) | 65 | 63.5 | 62 | 59.5 | 57 | 53 | 48 | 41.5 | 35 | 27.5 | 19 | 10 | 2 |
| E.SYBOX 30/50 | H (m) | 50 | 49.5 | 47 | 43 | 37 | 30.5 | 23 | 14.5 | 6 | | | | |

| MODEL | ELECTRICAL DATA | | | | |
|---------------|-----------------|-----------------------|--------|------|------|
| | N° IMPELLER | POWER SUPPLY 50/60 Hz | P1 MAX | | In A |
| | | | kW | HP | |
| E.SYBOX | 5 | 1 x 220 - 240V ~ | 1.55 | 2.11 | 10 |
| E.SYBOX 30/50 | 3 | 1 x 220 - 240V ~ | 0.9 | 1.22 | 6.8 |

| MODEL | A | B | C | D | E | F | G | I Ø | H | L | M | DNA | DNM | PACK DIMENSIONS | | | GROSS Kg |
|---------------|-----|-----|----|-------|-----|----|-------|-----|-----|----|-------|-----|-----|-----------------|-----|-----|----------|
| | | | | | | | | | | | | | | L/A | L/B | H | |
| E.SYBOX | 564 | 263 | 65 | 131.5 | 106 | 57 | 126.2 | 9 | 362 | 70 | 165.2 | 1" | 1" | 685 | 360 | 490 | 27 |
| E.SYBOX 30/50 | 564 | 263 | 65 | 131.5 | 106 | 57 | 126.2 | 9 | 362 | 70 | 165.2 | 1" | 1" | 685 | 360 | 490 | 24 |

ACCESSORIES

E.SYBOX

| | | MODEL |
|--|--|-------|
|  <p>293L x 318P x 180H</p> | <h2>E.SYDOCK</h2> <p>Because of the 4 hydraulic configurations available, installation is faster easier and more flexible. All required interfaces for connection to the plant are included. e.sybox quiet operation ids ensured by the anti-vibration feet included.</p> | |
|  <p>752L x 358P x 230H</p> | <h2>E.SYTWIN</h2> <p>This is the natural evolution of e.sydock, keeping all of its benefits, for the creation of twin pump groups. It gives exceptional performance due to the combined operation with 50% smaller footprint than any equivalent system.</p> | |
|  <p>870L x 595P x 1663H</p> | <h2>E.SYTANK</h2> <p>Tank, designed to best join with e.sybox, is equipped with:</p> <ul style="list-style-type: none"> • e.sydock (specific version) for quick connection. • suction tube with bottom valve • mains filler valve with float • overflow • discharge fittings • set up for ground anchor • inspection plug <p>Capacity 480 litres net with expansion available on 3 sides.</p> | |
|  | <h2>E.SYWALL</h2> <p>Kit includes brackets, screws, plugs and two accessories for vibration absorption.</p> | |
|  <p>E.SYLINK KIT E.SYLINK LOW PRESSURE SWITCH</p> | <h2>E.SYLINK</h2> <p>Accessory equipped with wireless 802.15.4 interface, created to enable E.SYBOX to use 4 digital inputs (pressure switch, float, etc.), control 2 relay outputs (alarms, etc.) with the possibility of connecting an auxiliary pressure sensor.</p> | |



1" 1/4 DISCHARGE AND SUCTION FITTINGS



293L x 345P x 679H



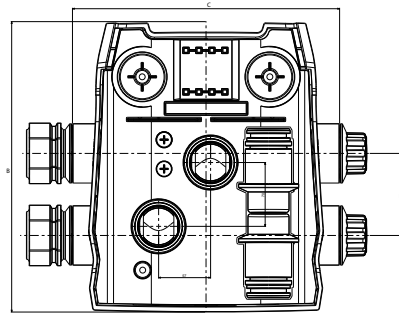
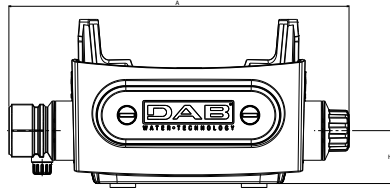
752L x 358P x 730H



ACCESSORIES

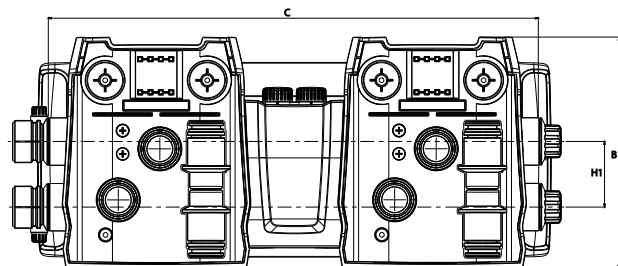
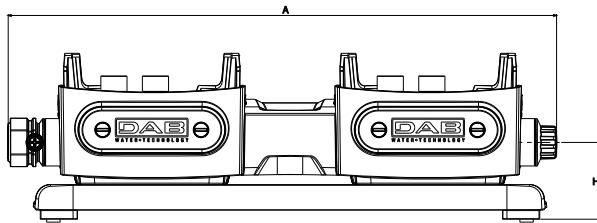
E.SYBOX

E.SYDOCK



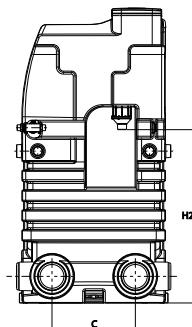
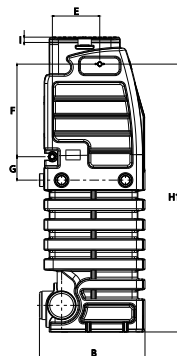
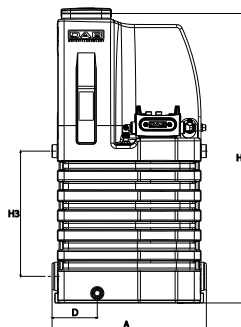
| MODEL | A | B | C | H | H1 | PACK DIMENSIONS | | | GROSS KG |
|----------|-----|-------|-----|----|----|-----------------|-----|-----|----------|
| | | | | | | L/A | L/B | H | |
| E.SYDOCK | 373 | 318.5 | 293 | 58 | 90 | 346 | 295 | 230 | 4 |

E.SYTWIN

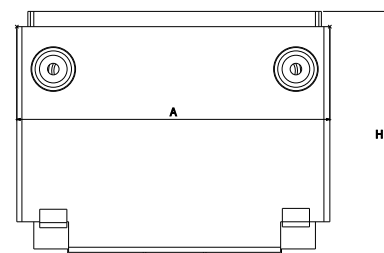


| MODEL | A | B | C | H | H1 | PACK DIMENSIONS | | | GROSS KG |
|----------------|-----|-----|-----|-------|----|-----------------|-----|-----|----------|
| | | | | | | L/A | L/B | H | |
| E.SYTWIN - GAS | 752 | 317 | 672 | 105.3 | 90 | 734 | 330 | 260 | 11.8 |

E.SYTANK



E.SYWALL



| MODEL | A | B | C | D | E | F | G | H | H1 | H2 | H3 | I |
|----------|-----|-----|-----|-----|-----|-----|-----|------|------|-----|-----|----|
| E.SYTANK | 870 | 595 | 470 | 255 | 267 | 522 | 132 | 1632 | 1510 | 977 | 706 | 30 |

| MODEL | a | H | PACK DIMENSIONS | | | GROSS KG |
|----------|-------|-------|-----------------|-----|----|----------|
| | | | L/A | L/B | H | |
| E.SYWALL | 184.5 | 143.5 | 350 | 250 | 46 | 1 |

| DESCRIPTION | PACK DIMENSIONS | | | GROSS KG |
|--|-----------------|-----|-----|----------|
| | L/A | L/B | H | |
| E.SYLINK - e.sylink + USB cable | 150 | 148 | 98 | 0.22 |
| E.SYLINK KIT - e.sylink + USB cable + 8DIN power box + power supply + 3 cable glands | 275 | 360 | 200 | 1.9 |
| E.SYLINK + PRESSURE SWITCH KIT - e.sylink KIT (see above) + low pressure switch kit | 432 | 355 | 265 | 2.9 |

ACCUMULATION AND PRESSURISATION ASSEMBLY KIT



TECHNICAL DATA

Operating range:

From 10 to 120 litres/min. with head up to 72 m.

Liquid temperature range:

for domestic use: from 0°C to +35°C

Liquid quality requirements:

Suitable for potable water pursuant to EN1717 and EN13077 European standards.

Maximum ambient temperature: +40°C

Max. operational pressure: 8 bar (800 kPa) for surface pump configurations.

Max. inlet pressure: 6 bar

Protection rating:

IP44 for surface pumps.

IP68 for submerged pumps.

Insulation class: F

APPLICATIONS

The NBB pressurization system comprises a water accumulation tank and a pump (w or w/o inverter).

NBB is the solution for the creation of a pressurization system

for domestic use, where the mains pressure is not sufficient and a system with a water accumulation tank is required.

This is based on a modular concept. The kit comprises an NBB tank, a submerged or surface pump, an inverter - in the event the pump does not have integrated electronics - and an installation kit, including an expansion tank, where one is not integrated with the pump.

In all of its many configurations, NBB stands out because of its small size, its easy use and in the inverter version, its energy saving convenience.

FEATURES

NBB comprises:

- 280 litre tank for potable water, compliant with the EN1717 and EN13077 European standards
- fill and overflow valves pre-assembled
- protective screen included in the kit.

Using the kit for the addition of the auxiliary 280 litre tank, the connection tube with gaskets and clamps, the system capacity may be doubled.

In addition to the NBB, the user may choose an assembly kit that meets the needs of the specific type of pump or a pump + inverter being installed.

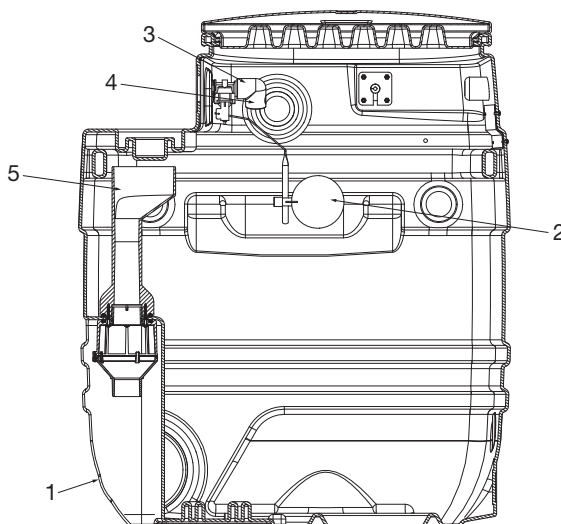
The pump and inverter are not included in the kit. they must be ordered separately.

The installation kit includes all required accessories for installing the pump and inverter on the NBB tank.

The Pulsar and Euroinox installation kits a 4 litre expansion tank is provided for.

NBB MATERIALS

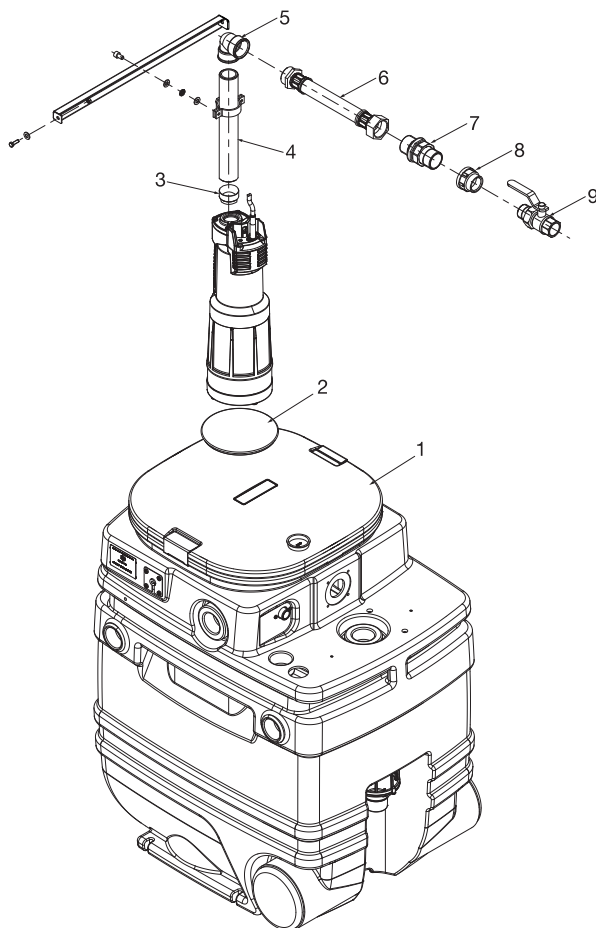
| N° | PARTS | MATERIALS |
|----|---------------|---------------|
| 1 | TANK | TECHNOPOLYMER |
| 2 | FLOAT | TECHNOPOLYMER |
| 3 | 90° ELBOW | TECHNOPOLYMER |
| 4 | AERATOR | TECHNOPOLYMER |
| 5 | OVERFLOW TUBE | TECHNOPOLYMER |



MATERIALS

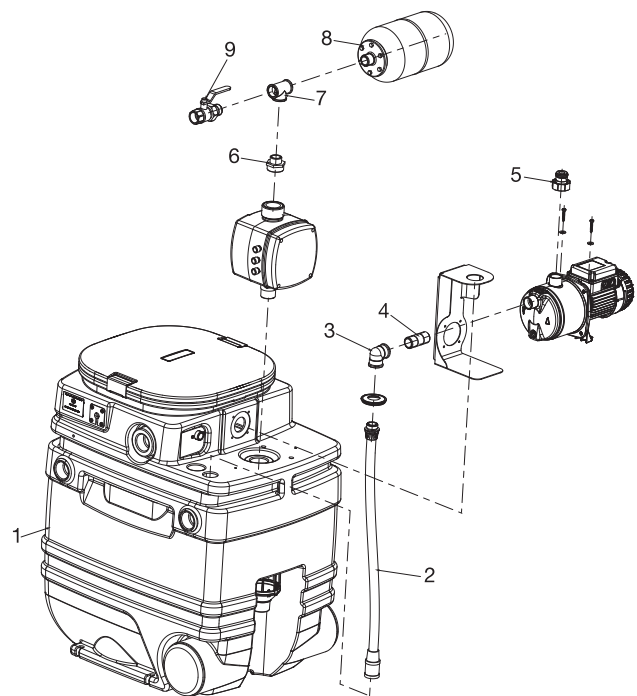
NBB+Divertron

| N° | PARTS | MATERIALS |
|----|------------------|--------------------------|
| 1 | NBB TANK | TECHNOPOLYMER |
| 2 | ANTIVIBRATION | NBR |
| 3 | REDUCER | BRASS |
| 4 | M/M EXTENSION | BRASS |
| 5 | 90° FITTING | BRASS |
| 6 | FLEX HOSE | AISI 304 STAINLESS STEEL |
| 7 | STRAIGHT FITTING | BRASS |
| 8 | REDUCER SLEEVE | BRASS |
| 9 | BALL VALVE | BRASS |



NBB+Euroinox

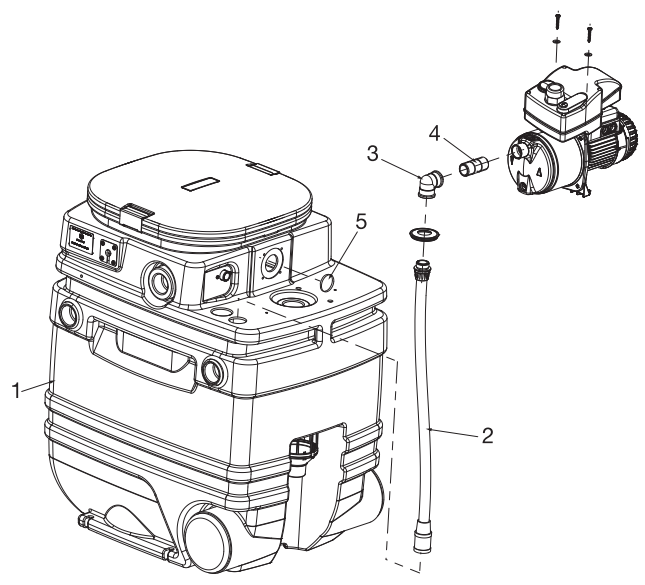
| N° | PARTS | MATERIALS |
|----|------------------------|--|
| 1 | NBB TANK | TECHNOPOLYMER |
| 2 | SUCTION TUBE | TECHNOPOLYMER/BRASS |
| 3 | CURVE FITTING | BRASS |
| 4 | M/M EXTENSION | BRASS |
| 5 | 2 PIECE FITTING | BRASS |
| 6 | NIPPLE | BRASS |
| 7 | T FITTING | BRASS |
| 8 | 5 LITRE EXPANSION TANK | 5 LITRE STEEL EXPANSION TANK STAINLESS/RUBBER |
| 9 | BALL VALVE | BRASS |



MATERIALS

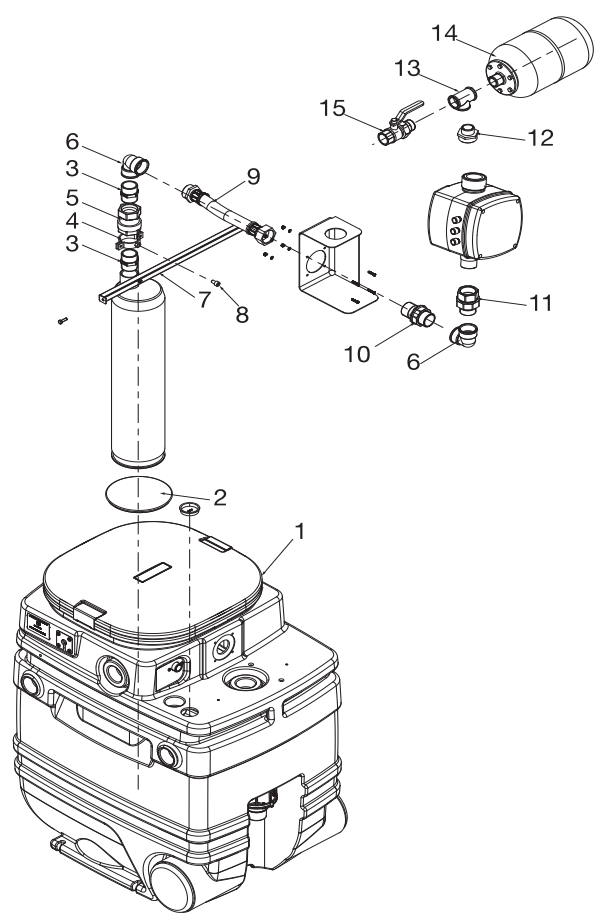
NBB+Active

| N° | PARTS | MATERIALS |
|----|-------------------|---------------------|
| 1 | TANK | TECHNOPOLYMER |
| 2 | SUCTION TUBE | TECHNOPOLYMER/BRASS |
| 3 | CURVE FITTING | BRASS |
| 4 | M/M EXTENSION | BRASS |
| 5 | THREAD-SAVER PLUG | TECHNOPOLYMER |



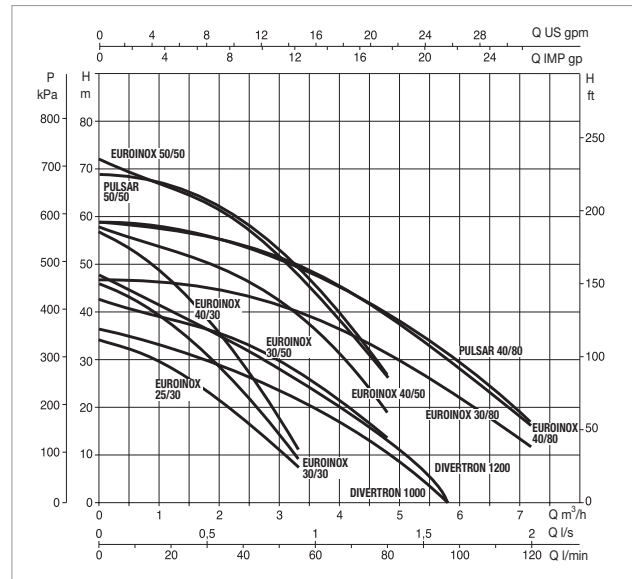
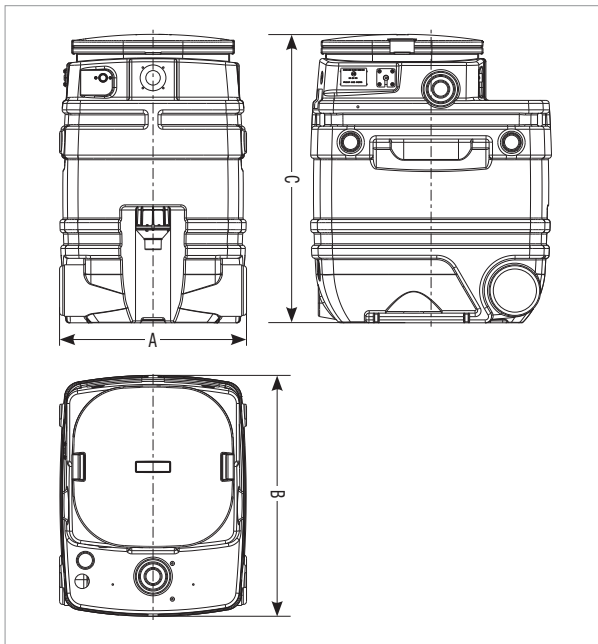
NBB+Pulsar

| N° | PARTS | MATERIALS |
|----|------------------------|--------------------------|
| 1 | NBB TANK | TECHNOPOLYMER |
| 2 | ANTIVIBRATION | NBR |
| 3 | NIPPLE | BRASS |
| 4 | COLLAR | STAINLESS/RUBBER |
| 5 | CHECK VALVE | BRASS |
| 6 | 90° FITTING | BRASS |
| 7 | BRACKET | AISI 304 STAINLESS STEEL |
| 8 | SCREWS | A2 STAINLESS STEEL |
| 9 | FLEX HOSE | AISI 304 STAINLESS STEEL |
| 10 | STRAIGHT FITTING | BRASS |
| 11 | 3 PIECE FITTING | BRASS |
| 12 | NIPPLE | BRASS |
| 13 | T FITTING | BRASS |
| 14 | 5 LITRE EXPANSION TANK | STAINLESS/RUBBER |
| 15 | BALL VALVE | BRASS |



NBB ACCUMULATION AND PRESSURISATION ASSEMBLY KIT FOR DOMESTIC WATER SUPPLY

LIQUID TEMPERATURE RANGE PUMPED: FROM 0 °C TO +35 °C - MAXIMUM AMBIENT TEMPERATURE: +40°C



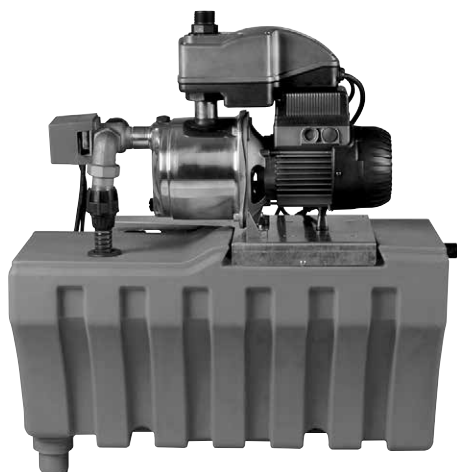
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | |
|---------------------------------|-----------------------|--------------|------------|-------------|-----------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| EUROINOX M (all models) | 1x220-240 V ~ 50Hz | 0.5 / 1.5 | 0.37 / 1 | 0.5 / 1.36 | 2.4 / 6.5 | - | - |
| EUROINOX T (all models) | 3x230 V ~ 50Hz | 0.9 / 1.5 | 0.55 / 1 | 0.75 / 1.36 | 2.8 / 4.4 | - | - |
| EUROINOX EI (all models) | 1x220-240 V ~ 50Hz | 0.5 / 1.5 | 0.37 / 1 | 0.5 / 1.36 | 2.4 / 6.5 | - | - |
| PULSAR 50/50 M | 1x220-240 V ~ 50Hz | 1.45 | 1 | 1.36 | 6.5 | 25 | 450 |
| PULSAR 50/50 T | 3x230 V ~ 50Hz | 1.35 | 1 | 1.36 | 4.15 | - | - |
| PULSAR 40/80 M | 1x220-240 V ~ 50Hz | 1.45 | 1 | 1.36 | 6.5 | 25 | 450 |
| PULSAR 40/80 T | 3x230 V ~ 50Hz | 1.35 | 1 | 1.36 | 4.15 | - | - |
| DIVERTRON 1200 M | 1x220-240 V ~ 50Hz | 1.1 | 0.75 | 1 | 4.7 | 12.5 | 450 |

| MODEL | A | B | C | DNA GAS | DNM GAS | PACK DIMENSIONS | | | GROSS Kg |
|------------|-----|-----|-----|------------|------------|-----------------|-----|-----|-------------|
| | | | | | | L/A | L/B | H | |
| NBB | 580 | 747 | 895 | ¾" | 1" | 590 | 790 | 910 | 16.9 |

ACTIVE SWITCH

PLANTS FOR USE OF RAINWATER



TECHNICAL DATA

- Max capacity (lt/min-m3/h):** 80-4.8
- Max head:** 42.2 m
- Max. Liquid temperature:** FROM +5°C TO +35°C
- Max. system pressure:** Max 6 bar
- Max. mains pressure:** Max 4 bar
- Minimum mains flow rate:** Min 10 lt/min
- Maximum height of the highest point of use:** 15 m
- Power supply:** Volt 220-240 Hz50
- Maximum power absorbed:** 880 W
- Protection rating:** IP 20
- Ambient temperature:** Min +5 °C Max +40 °C
- Tank materials:** PE
- Mains inlet pipe dimensions:** 3/4"
- Discharge pipe dimensions:** 1"
- Suction pipe dimensions:** 1"
- Overflow pipe dimensions:** DN 50
- Max Altitude:** 1000 metres
- Water type:** ph 4-9
- ON/OFF float version:** ON/OFF float with 20 metre cable
- Dry weight in Kg:** 15
- Operational weight in Kg:** 30

APPLICATIONS

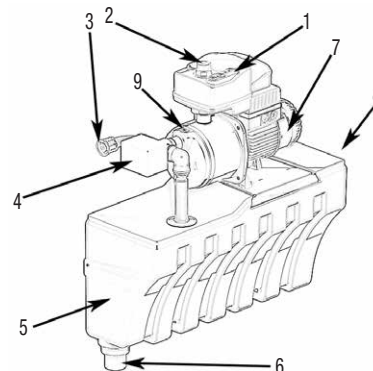
The ACTIVE SWITCH unit is used for rainwater management. The unit detects a lack of water in the collection system, whether from rainwater or the mains and makes corrections to ensure proper operation of the plant (that is, it does not ever leave the connected utilities dry). Generally, this system is reserved for irrigation, clothes washing, WC flushing and floor cleaning applications. The primary purpose of the ACTIVE SWITCH system is to give use of the rainwater priority over the use of the mains water. When there is not enough rainwater in the collection tank, the control unit switches over to the mains, ensuring that the connected use points are supplied (PLEASE, NOTE the water supplied by this system is not potable). The connection between the rainwater collection tank and the mains water collection tank in this system is selected by way of a three-way valve installed on the suction side of the pump. Pump operation is precisely that of a "start-stop" system with pressure and flow control. When the pressure drops below a certain threshold level, the pump starts up. Upon closing the tap, the pump stops. If the water runs out, the pump stops and signals a fault on the pump control panel. After a set time, the pump starts back up again automatically. If all the functions' parameters have returned to normal, then the system runs normally. The system is also equipped with a special anti-odour anti-emptying siphon.

TECHNICAL SPECIFICATIONS

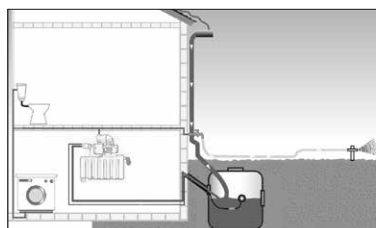
The system comprises a polyethylene (PE) console and an ACTIVE EI 30/50M electric centrifugal pump. The kit also includes a wall mount bracket and a water level sensor with 20 metres of cable.

MATERIALS

| N° | PARTS | MATERIALS |
|----|---------------------------|--|
| 1 | PUMP CONTROL PANEL | SEE ACTIVE SYSTEM |
| 2 | PRESSURISED WATER OUTLET | PA 6.6 + 30% F.V. |
| 3 | RAINWATER SUCTION | STEEL HOSE |
| 4 | 3-WAY VALVE | VALVE BODY: BRASS RETURN SPRINGS: STEEL MOTOR COVER SELF-EXTINGUISHING ABS |
| 5 | RAINWATER COLLECTION TANK | PE |
| 6 | OVERFLOW DRAIN SIPHON | PP HOMOPOLYMER |
| 7 | PUMP | SEE EUROINOX |
| 8 | MAINS WATER INLET | STEEL HOSE |
| 9 | PUMP LOAD PLUG | PPE / O-R IN NBR |



INSTALLATION DIAGRAM



CONTROL PANEL



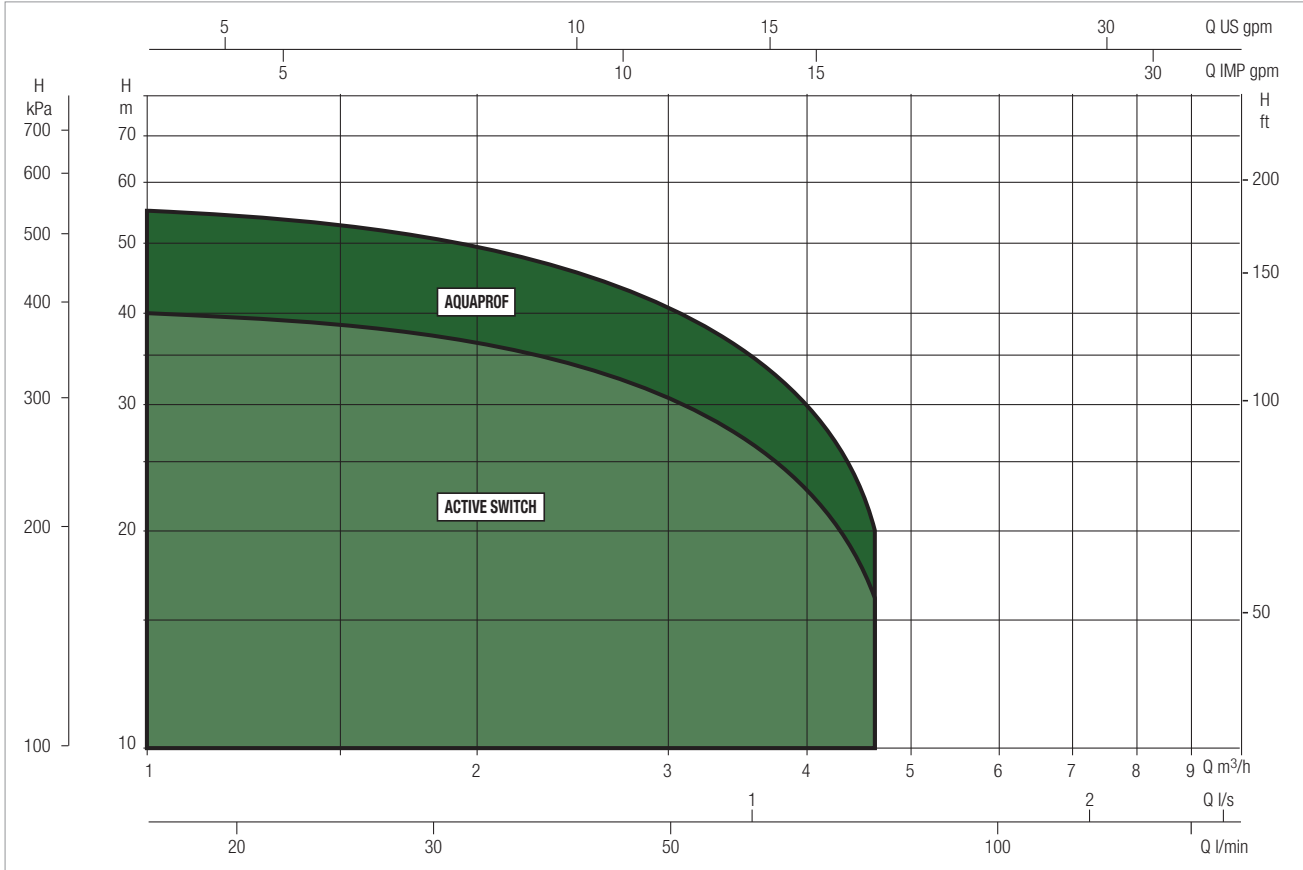
ACTIVE SWITCH

PLANTS FOR USE OF RAINWATER

PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

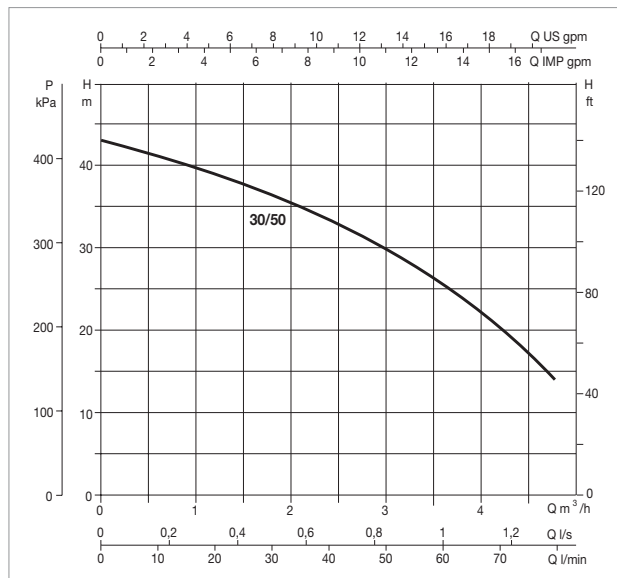
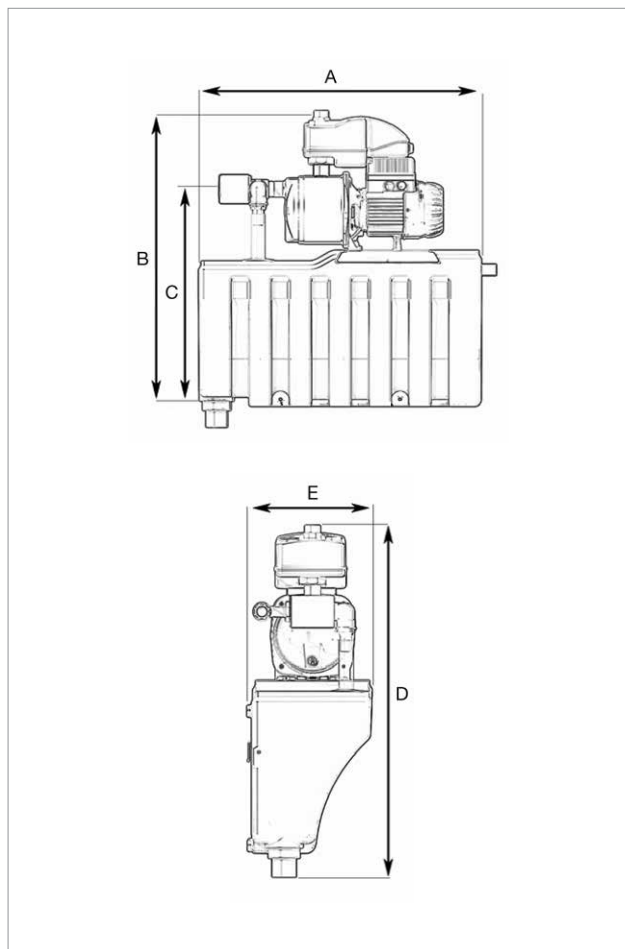


ACTIVE SWITCH SELECTION TABLE

| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 |
|------------------------------|---------------------|------|------|------|------|------|-----|------|------|-----|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| ACTIVE SWITCH 30/50 M | H (m) | 42.2 | 40.2 | 38.2 | 36.2 | 33.8 | 30 | 24.8 | 19.5 | 14 |

ACTIVE SWITCH - PLANTS FOR USE OF RAINWATER FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from +5 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | |
|-----------------------|-----------------------|--------------|------------|------|---------|-----------|-----|
| | POWER SUPPLY 50 Hz | P1 MAX kW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | kW | HP | | µF | Vc |
| ACTIVE SWITCH 30/50 M | 1x220-240 V ~ | 0.880 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |

| MODEL | A | B | C | D | E | DNA GAS | DNM GAS | GROSS Kg | No. PIECES PALLET |
|-----------------------|-----|-------|-------|-------|-----|------------|------------|-------------|----------------------|
| ACTIVE SWITCH 30/50 M | 650 | 666.5 | 501.5 | 731.5 | 260 | 1" | 1" | 18 | 4 |

AQUAPROF

PLANTS FOR USE OF RAINWATER



TECHNICAL DATA

Max flow rate (lt/min-m3/h): 85-5.1

Max head: 48 m

Max. Liquid temperature: From +5°C to +35°C

Max. system pressure: Max 6 bar

Max. mains pressure: Max 4 bar

Minimum mains flow rate: Min 10 lt/min

Maximum height of the highest point of use: 12 m

Power supply: Volt 230 Hz50

Maximum power absorbed: W 1000

Protection rating: IP 42

Ambient temperature: Min +5°C Max +40°C

Cabinet materials: PPE

Tank materials: PE

Mains inlet pipe dimensions: 3/4"

Discharge pipe dimensions: 1"

Suction pipe dimensions: 1"

Overflow pipe dimensions: DN 50

Max Altitude: 1000 metres

Max power Pump No. 2 relay: 3'A_250Volt

Water type: ph 4-9

ON/OFF float version: ON/OFF float with 20 metre cable

version with electronic transducer water level indicator: electronic transducer (4-20 mA 8-28 V DC) w/20 metres of cable

Dry weight in Kg: 20

Operational weight in Kg: 35

APPLICATIONS

The AQUAPROF unit is used for rainwater management and distribution. The unit detects any faults in the water collection system, whether from rainwater or the mains and makes corrections to ensure proper operation of the plant (that is, it does not ever leave the connected utilities dry). It signals any faults and displays the problem detected. Generally, this system is reserved for irrigation, clothes washing, WC flushing and floor cleaning applications. The primary purpose of the AQUAPROF system is to give use of the rainwater priority over the use of the mains water. When there is not enough rainwater in the collection tank, the control unit switches over to the mains, ensuring that the connected use points are supplied (PLEASE, NOTE the water supplied by this system is not potable). The connection between the rainwater collection tank and the mains water collection tank in this system is selected by way of a three-way valve installed on the suction side of the pump. Pump operation is precisely that of a "start-stop" system with pressure and flow control. When the pressure drops below a certain threshold level, the pump starts up. Upon closing the tap, the pump stops. If the water runs out, the pump stops and signals a fault on the pump control panel. After a set time, the pump starts back up again automatically. If all the functions' parameters have returned to normal, then the system runs normally. The system is also equipped with a special anti-odour anti-emptying siphon. Every 24 hours, the system checks the operation of the 3-way valves. Every week, the system completely changes the water contained in the mains water collection tank (the change is restricted by the user's water use requirements).

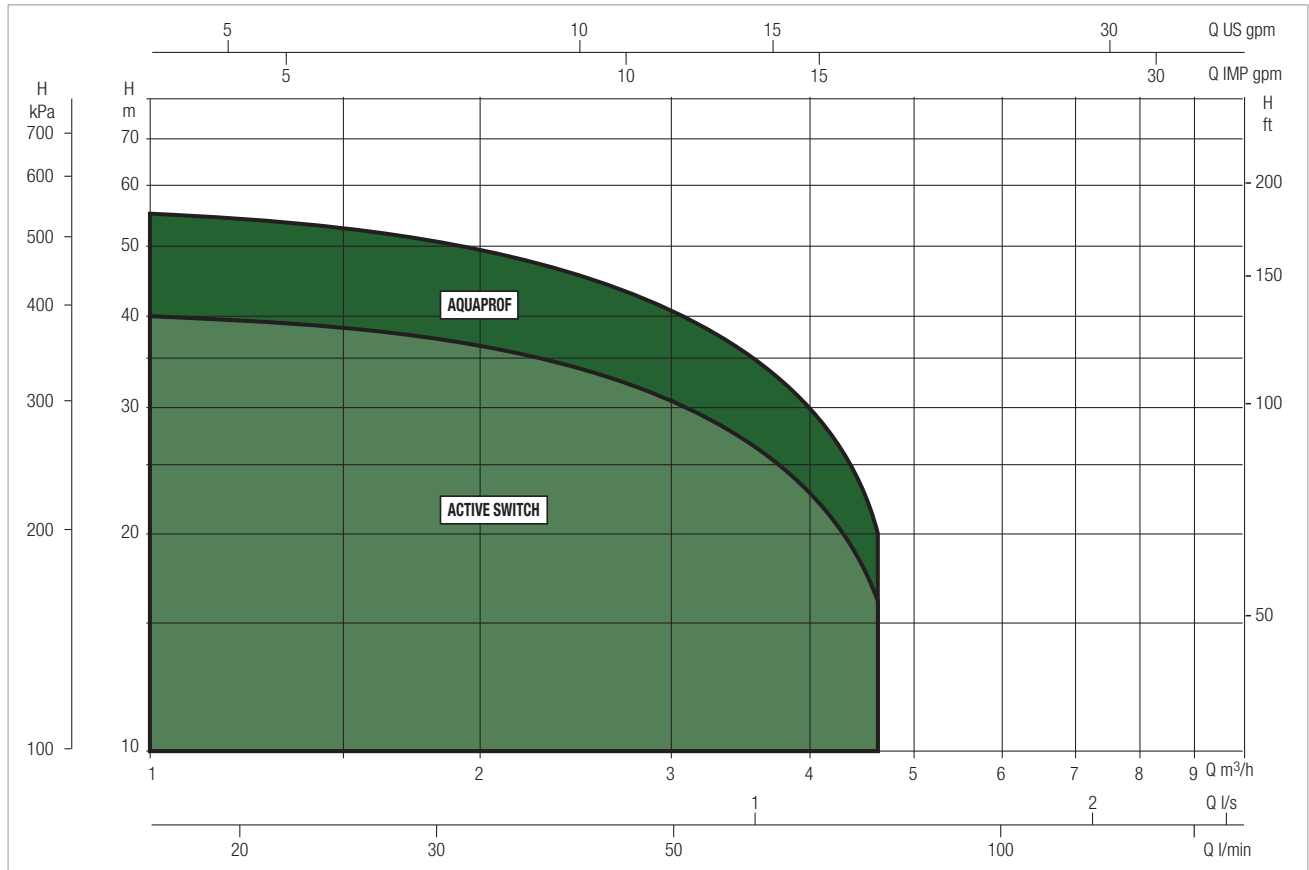
TECHNICAL SPECIFICATIONS

The system comprises a polypropylene (PPE) foam console and either a EUROINOX 30/50M or a EUROINOX 40/50M electric centrifugal pump. The kit also includes a wall mount bracket and a water level sensor with 20 metres of cable for the AQUAPROF BASIC model ON/OFF version. While for the AQUAPROF TOP version there is an electronic transducer (with a 5 m full scale 4-20 mA 8-28 VDC). With tanks that are less than 2 metres deep, it is suggested that a dedicated sensor with a 2 - 2.5 metre resolution be purchased separately.

PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE



AQUAPROF SELECTION TABLE

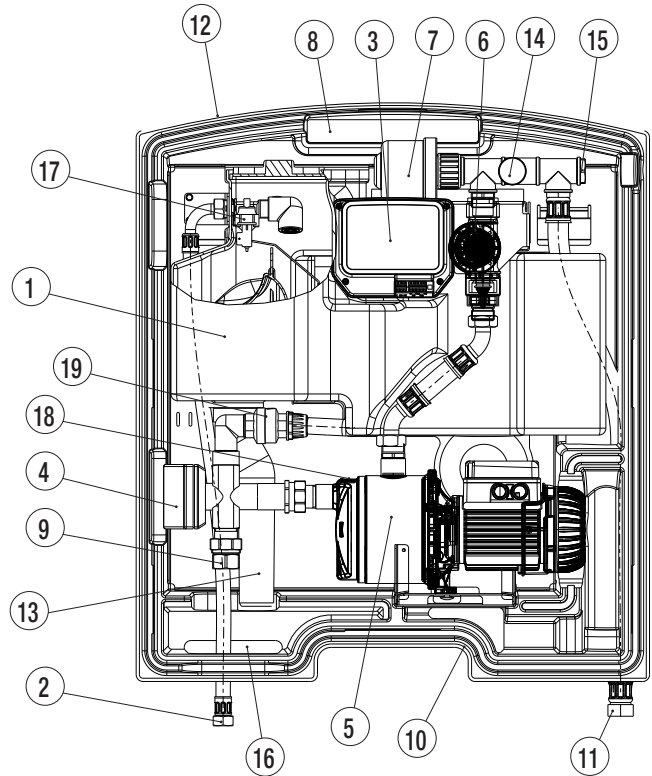
| MODEL | Q=m ³ /h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.3 | 3.6 | 4.2 | 4.8 |
|----------------------|---------------------|------|------|------|------|------|------|------|------|------|------|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 55 | 60 | 70 | 80 |
| AQUAPROF BASIC 30/50 | H (m) | 42.2 | 40.2 | 38.2 | 36.2 | 33.8 | 30 | 27.5 | 24.8 | 19.5 | 14 |
| AQUAPROF BASIC 40/50 | | 57.7 | 55.3 | 52.8 | 50.1 | 47.1 | 42.7 | 39.5 | 35.8 | 28 | 19.2 |
| AQUAPROF TOP 30/50 | | 42.2 | 40.2 | 38.2 | 36.2 | 33.8 | 30 | 27.5 | 24.8 | 19.5 | 14 |
| AQUAPROF TOP 40/50 | | 57.7 | 55.3 | 52.8 | 50.1 | 47.1 | 42.7 | 39.5 | 35.8 | 28 | 19.2 |

AQUAPROF

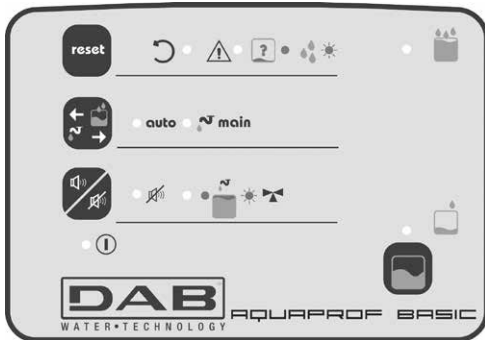
PLANTS FOR USE OF RAINWATER

MATERIALS

| N° | PARTS | MATERIALS |
|----|--|--|
| 1 | MAINS WATER TANK | LLDPE |
| 2 | MAINS WATER INLET | METAL HOSE |
| 3 | CONTROL PANEL | - |
| 4 | 3-WAY VALVE | VALVE BODY: BRASS RETURN SPRINGS: STEEL MOTOR COVER SELF-EXTINGUISHING ABS |
| 5 | PUMP | EUROINOX |
| 6 | CONTROL SYSTEM HYDRAULIC PUMP | POM / NBR / STEEL |
| 7 | ANTI-DRIP EXPANSION TANK | DIPHHRAGM WITH HIGH CHLOROBUTYL CONTENT |
| 8 | WARM AIR VENT | - |
| 9 | RAINWATER SUCTION | BRASS |
| 10 | AIR INTAKE PUMP COOLING | - |
| 11 | PRESSURISED WATER OUTLET | METAL HOSE |
| 12 | REAR CLADDING | PP FOAM |
| 13 | EMERGENCY OVERFLOW | - |
| 14 | PRESSURE GAUGE | - |
| 15 | HORIZONTAL OUTLET | BRASS |
| 16 | CHANNEL FOR HOSES AND ELECTRIC CABLES | - |
| 17 | FLOAT VALVE | PA 66 / STEEL / POLYSTYRENE |
| 18 | PUMP LOAD PLUG | PPE / O-R IN NBR |
| 19 | CHECK VALVE | BRASS |



CONTROL PANEL

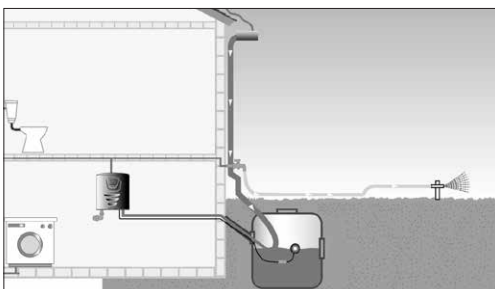


AQUAPROF BASIC



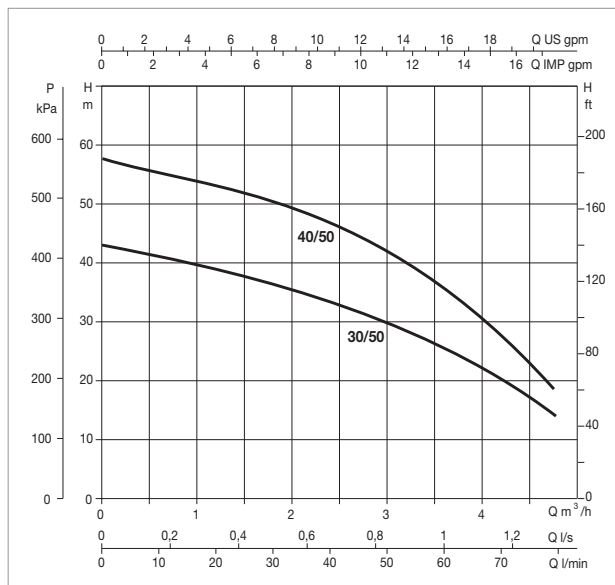
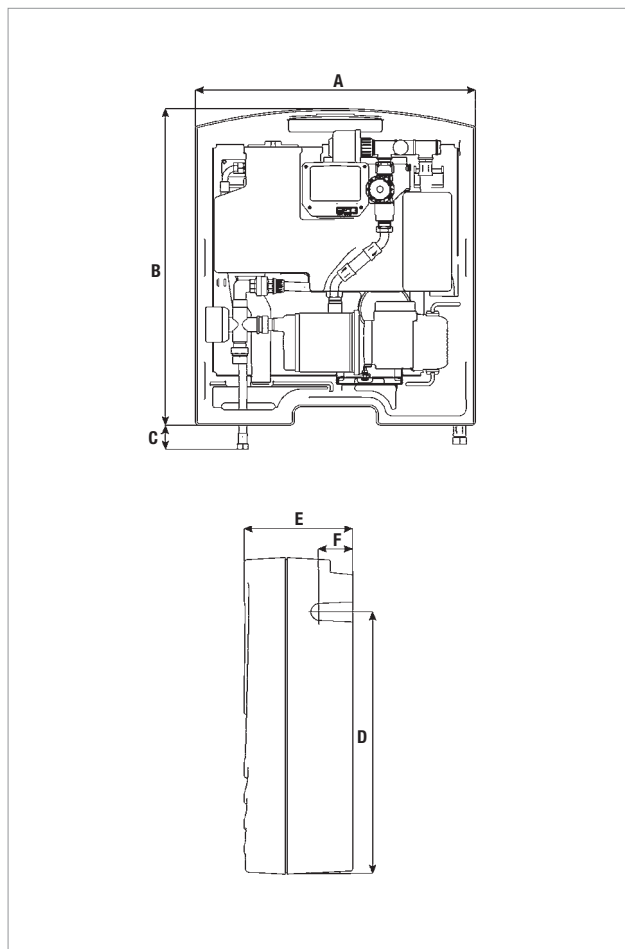
AQUAPROF TOP

INSTALLATION DIAGRAM AQUAPROF BASIC AND TOP



AQUAPROF - PLANTS FOR USE OF RAINWATER FOR DOMESTIC WATER SUPPLY

Liquid temperature range pumped: from +5 °C to +35 °C - Maximum ambient temperature: +40°C



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | ELECTRICAL DATA | | | | | | | |
|----------------------|-----------------|--------------------|-----------|------------|------|------|-----------|-----|
| | N° IMPELLER | POWER SUPPLY 50 Hz | P1 MAX KW | P2 NOMINAL | | In A | CAPACITOR | |
| | | | | kW | HP | | µF | Vc |
| AQUAPROF BASIC 30/50 | 3 | 1x220-240 V ~ | 0.88 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |
| AQUAPROF BASIC 40/50 | 4 | 1x220-240 V ~ | 1.2 | 0.75 | 1 | 5.3 | 20 | 450 |
| AQUAPROF TOP 30/50 | 3 | 1x220-240 V ~ | 0.88 | 0.55 | 0.75 | 3.9 | 12.5 | 450 |
| AQUAPROF TOP 40/50 | 4 | 1x220-240 V ~ | 1.2 | 0.75 | 1 | 5.3 | 20 | 450 |

ACCESSORIES

ACCESSORIES

SELF-PRIMING CENTRIFUGAL PUMPS

| EXPANSION TANKS | | DESCRIPTION |
|---|--|-----------------------------|
| <p>100/310/450 LITRI V 20/60 LITRES H 2/8/18 LITRES V</p> | | 2 LITRE 10 BAR V TANK- G |
| | | 8 LITRE 10 BAR V TANK- G |
| | | 18 LITRE 10 BAR V TANK- G |
| | | 18 LITRE 16 BAR V TANK- G |
| | | 20 LITRE 10 BAR H TANK- G |
| | | 60 LITRE 10 BAR H TANK- G |
| | | 100 LITRE 10 BAR V TANK - G |
| | | 310 LITRE 10 BAR V TANK - G |
| | | 450 LITRE 10 BAR V TANK - G |

| AQUABOX ASSEMBLY KIT | DESCRIPTION | QUANTITY FOR PACKAGING |
|----------------------|-------------------------------|------------------------|
| | AQUABOX OR ASSEMBLY KIT 25/20 | 1 |
| | AQUABOX "H" 60 ASSEMBLY KIT | 1 |



| AQUABOX ASSEMBLY KIT | DESCRIPTION | QUANTITY FOR PACKAGING |
|----------------------|---|------------------------|
| | MEMBRANE FOR AQUABOX V. 8 LITRES BUTYL | 1 |
| | MEMBRANE FOR AQUABOX V. 20 LITRES /16 BAR | 1 |
| | MEMBRANE FOR AQUABOX 19-20 LITRES BUTYL | 1 |


| PRESSURE GAUGES | DESCRIPTION | QUANTITY FOR PACKAGING |
|-----------------|--|------------------------|
| | PRESSURE GAUGE ASS. 6 BAR D.50 ATT.¼" | 100 |
| | PRESSURE GAUGE ASS.12 BAR D.63 ATT.¼" | 100 |
| | PRESSURE GAUGE RAD. 12 BAR D.63 ATT.¼" | 100 |


| PRESSURE SWITCH | DESCRIPTION | QUANTITY FOR PACKAGING |
|-----------------|------------------------------------|------------------------|
| | PRESSURE SWITCH 6 BAR | 10 |
| | PRESSURE SWITCH 6 BAR - XMP | 10 |
| | PRESSURE SWITCH 12 BAR - XMP | 10 |
| | RUN DRY PROTECTION PRESSURE SWITCH | - |


ACCESSORIES

SELF-PRIMING CENTRIFUGAL PUMPS

| FITTINGS | DESCRIPTION | QUANTITY FOR PACKAGING |
|---|------------------------|------------------------|
|  | 3 WAY BRASS FITTING 1" | 125 |
|  | 5 WAY BRASS FITTING 1" | 100 |

| FOOT VALVE | DESCRIPTION | QUANTITY FOR PACKAGING |
|---|-------------------|------------------------|
|  FOOT VALVE 3/4" | FOOT VALVE 3/4" | 10 |
| | FOOT VALVE 1" | 10 |
| | FOOT VALVE 1 1/4" | 5 |

| CHECK VALVES | DESCRIPTION | QUANTITY FOR PACKAGING |
|---|--------------------|------------------------|
|  CHECK VALVE 3/4" | CHECK VALVE 3/4" | 14 |
| | CHECK VALVE 1" | 10 |
| | CHECK VALVE 1 1/4" | 8 |
| | CHECK VALVE 1 1/2" | - |
| | CHECK VALVE 2" | - |

| CONTROLLER | DESCRIPTION | QUANTITY FOR PACKAGING |
|---|---------------------------|------------------------|
|  CONTROLLER 1.5 | CONTROLLER 1.5 NO CABLE | 1.2 |
| | CONTROLLER 1.5 NO CABLE | 1.5 |
| | CONTROLLER 1.5 NO CABLE | 2.2 |
| | CONTROLLER 1.5 WITH CABLE | 1.2 |
| | CONTROLLER 1.5 WITH CABLE | 1.5 |
| | CONTROLLER 1.5 WITH CABLE | 2.2 |

TECHNICAL ANNEX

GENERAL INFORMATION

BASIC TERMS USED WITH PUMPS

Below, in current language, there are listed the meanings of the basic terms used when talking about hydraulic pumps. The figures will be expressed in technical units of measure, referring to the conversion table in International and English measurement units.

HEAD

Head refers to height, difference in level or height. When talking about a pump with a capacity of Q litres per second and a head of 30 metres, this means that the pump has the capacity to lift Q litres 30 metres (that is surpass a difference of height of 30 metres) per second. For a given pump, the head is linked to its manufacturing characteristics such as external diameter of the impeller and rotation speed, while it is independent of the liquid pumped. This means that the pump is capable of raising Q litres per second equally, of water, petrol or mercury; only the power of the motor will be different for the three substances.

SPECIFIC WEIGHT OF A LIQUID OR FLUID

Specific weight of a liquid is the unit volume of that liquid/fluid. Specific weight is usually expressed in Kg/dm³ or Kg/l given that one dm³ is equal to 1 litre.

PRESSURE

By pressure means the weight per unit of surface (eg, Kg/cm²); this is a term that should not be confused with head. Indeed, in the case of fluids, the pressure that a fluid exerts on a surface is given by the product of the head (or height) of the fluid itself multiplied by its specific weight. Therefore, the thickness of several Km of air on the earth's surface produces a pressure of about 1 Kg/cm² (equal to about 1 atmosphere) at the earth's surface. If the same thickness were to be of water instead of air, the pressure at the earth's surface would be between 700-800 greater. This is because the specific weight of water is between 700-800 times greater than that of air.

Keeping in mind that a 10 metre high column of water equals about 1 Kg/cm², based on what was said, by installing a pressure gauge on the discharge outlet of a pump, the following pressure increases would be measured:

- | | | |
|-----------------|--|---|
| a) with petrol | (specific weight 00.7 Kg/dm ³) | = 00.7 x 0.001 x 30 x 100 = 02.1 Kg/cm ² |
| a) with water | (specific weight 01.0 Kg/dm ³) | = 00.1 x 0.001 x 30 x 100 = 03.0 Kg/cm ² |
| a) with mercury | (specific weight 13.6 Kg/dm ³) | = 13.6 x 0.001 x 30 x 100 = 40.8 Kg/cm ² |

FLOW RATE

What is meant by flow rate is the quantity of liquid or fluid that passes over a surface, such as the discharge outlet of a pump, or the cross section of a pipe, etc., over a unit of time.

Depending on the quantities used, there may be litres per minute, (l/min), litres per second (l/s) cubic metres per hour (m³/h) etc.

It is necessary to understand that there is a perfect analogy between electricity and hydraulics. One merely needs to recall that hydraulic head is equal to the quantities referring to the difference in potential or voltage in electronics and the hydraulic flow rate is similar to the intensity of the current or amperage. Even the behaviour of these quantities is identical. Actually, a wire or cable that is too thin does not aid current flow in the same manner that a pipe that has too small a diameter does not favour the flow of a liquid. Just like the flow of electrical current through a wire to a cable requires a difference in voltage, in the same manner the flow rate of a liquid or fluid through a pipe requires a certain amount of head.

There will never be movement of a liquid between two points in a perfectly horizontal pipe with both having the liquid at the same head. This is linked to the fact that, since the cable gives a certain resistance to the flow of the electrical current (electrical resistance), so does the pipe offer a certain amount of resistance to the flow of the fluid. This resistance depends on the quality of the pipe (material, shape, presence of scale, etc.), its cross section or rather the speed that the fluid flows through the pipe. This resistance is called Head Loss.

HEAD LOSS

What is meant by head loss is that part of the head, possessed by the liquid, lost in the flow through a tube or a valve or filter, etc. This head loss cannot be recovered because it is a loss due to friction. Returning to the analogy between electrical and hydraulic phenomena, since the losses in a cable become greater with more electric current flowing through it, head loss is greater as the speed of the fluid increases, and therefore as the diameter of the pipe decreases or how much the valve creates a bottleneck or how fouled the filter.

PUMP

This is a machine that gives a liquid going through it a certain head. This head may be used to take the liquid to a higher level or to travel a certain distance either in a pipe or in the air. The characteristics of a pipe are

- a) **flow rate** (the quantity of liquid moved over a period of time)
- b) **head** (the height that the machine can raise the flow rate)

Depending on the ratio between flow rate and head there may be:

- a) pumps with large head and small flow rates (piston pumps, rotating pumps, small centrifugal pumps)
- b) pumps with medium head and flow rates (centrifugal pumps in general)
- c) pumps with large flow rates and small head (axial flow centrifugal pumps and propeller pumps)

Centrifugal pumps, axial flow centrifugal pumps and propeller pumps are rotary driven and their speed is universally measured in revolutions per minute RPM. For these machines working at a given speed, for each flow rate value there is only one head value. This means that if this type of pump performance is to be increased or decreased its operational speed must be increased or decreased. Essentially, the liquid that flows through a pump is given energy linked to the head and the speed of the same liquid. This energy provided in a unit of time is called the power output.

POWER OUTPUT

What is meant by power output is the power supplied by the same pump. The level of this power depends on three quantities: flow rate, the head and the specific weight of the liquid pumped. The larger these three factors are, the greater the power output of the pump will be. For example, a pump dispensing petrol does less work than one dispensing sulphuric acid, precisely because the specific weights or densities of the two liquids are different. The pump the liquid, the pump must be turned by a motor, which is either electric or internal combustion. Electric motors use electric power. Internal combustion engines use petroleum distillates or gas. The power needed by the pump to work is called the absorbed power.

CALCULATION OF THE POWER OUTPUT

Usually the output power by a pump is expressed in kW or HP, indicating:

Q = flow rate

H = the head in a column of liquid (m.l.c. [meter liquid column])

γ = specific weight (density)

Power output (P3) is given by:

$$P_3 = \frac{\gamma \text{ (kg/dm}^3\text{)} \times Q \text{ (l/s)} \times H \text{ (m.c.l.)}}{75} \text{ in HP}$$

$$P_3 = \frac{\gamma \text{ (kg/dm}^3\text{)} \times Q \text{ (m}^3\text{/h)} \times H \text{ (m.c.l.)}}{270} \text{ in HP}$$

$$P_3 = \frac{\gamma \text{ (kg/dm}^3\text{)} \times Q \text{ (l/s)} \times H \text{ (m.c.l.)}}{102} \text{ in kW}$$

$$P_3 = \frac{\gamma \text{ (kg/dm}^3\text{)} \times Q \text{ (l/min)} \times H \text{ (m.c.l.)}}{4500} \text{ in HP}$$

$$P_3 = \frac{\gamma \text{ (kg/dm}^3\text{)} \times Q \text{ (m}^3\text{/h)} \times H \text{ (m.c.l.)}}{367} \text{ in kW}$$

$$P_3 = \frac{\gamma \text{ (kg/dm}^3\text{)} \times Q \text{ (l/min)} \times H \text{ (m.c.l.)}}{6120} \text{ in kW}$$

POWER ABSORBED

Absorbed power means the power used by the motor to give the liquid what was called 'power output' above.

Not all absorbed power becomes power output because a part of it is dissipated in friction and another part, even more significant, is lost inside of the pump itself due to hydraulic leaks. Therefore, clearly the power output will always be less than that absorbed and their ratio shall always be less than 1. This number is called efficiency.

EFFICIENCY

Pump efficiency is obtained by dividing the power output by the absorbed power and commonly expressed as a percentage. For example, pump efficiency of 75% means that only 75% of the power absorbed becomes power output, with the remaining 25% being lost as it is dissipated in friction. Clearly, the higher the efficiency of the pump then the less power absorbed is lost. Then if one considers that the cost of the power is that concerning the power absorbed, then it is immediately clear how important efficiency is. Looking at two pumps with the same power output of 1 HP with an efficiency of 50% for one and 60% for the other, it may be deduced that the first needs 2 Hp to supply 1 HP while for the second only 1.67 HP is needed. This means that pump efficiency expresses the quality of the pump and its savings in terms of operational costs better than almost any other parameter.

EFFICIENCY CALCULATION

P1: is the power absorbed by the motor in kW (generally indicated by a watt meter)

P2: is the output power by the motor in kW. This is measured at the brake (practically, this is the power absorbed by the pump)

P3: is the power absorbed by the pump in kW

$$\text{Motor efficiency } \eta = \frac{P_2}{P_1}$$

$$\text{Motor efficiency } \eta = \frac{P_3}{P_2}$$

$$\text{Motor efficiency } \eta = \frac{P_3}{P_1}$$

PUMP HEAD AND ITS MEASUREMENT

What is meant by a pump's head is always and only the differential given by the same pump, which is generally expressed in metres. To measure the head of a surface pump, it is necessary to measure, during operation, the value of the head at the outlet, making sure to refer the values of the readings to a single level, called the plane of reference. Now, depending on the installation there may one of two cases:

- 1) the value read at the suction inlet is negative (i.e., less than zero on the pressure gauge). this is the case when the level of the liquid drawn is lower than the suction inlet.
- 2) the value read at the suction inlet is positive (ie, greater than zero on the pressure gauge). this is the case when the level of the liquid drawn is higher than the suction inlet (submerged operation).

In the first case, the pump head is given by the sum of the two readings. In the second case it is given by the head value at the discharge outlet less the value at the suction inlet.

Then, it is necessary to check that the values read at the pump inlet and outlet refer to the same diameter, so that the different speed values are not distorted in the measurement section. Any correction shall be made through the calculation of the dynamic head, which is that part of the head linked to the speed of the liquid, ie, that part of the head that the liquid possesses in the measurement section because it is moving. The dynamic Hd head, expressed in metres, is given by the following formula:

$$H_d = \frac{v^2}{2g}$$

where: v = speed of the fluid at the point of measurement, expressed in m/s
 g = acceleration of gravity (9.81) expressed in m/s²
 $2g = 2 \times 9.81 = 19.62$ m/s²

The head correction term is given by the difference between the dynamic head at the discharge outlet and the the dynamic head at the suction inlet. Clearly if the measurements upstream and downstream of the pump are taken on pipes of equal diameter, ie, with the liquid moving at the same speed, the correction term will be zero.

To measure the head of a pump with the impeller submerged it is sufficient to measure, during the pump operation, the head at the discharge outlet. In this case, the pump head is given by the sum of the value read with the dynamic head. (still at the discharge outlet) and with the difference of the level of the free surface of the liquid drawn and the pressure gauge.

PUMP PERFORMANCE AT DIFFERENT RPM

The pump's revolutions n notably influences its performance. Not considering any cavitation phenomena, the law of similars applied, expressed:

$$Q_x = Q \times \frac{n_x}{n}$$

$$H_x = H \times \left(\frac{n_x}{n} \right)^2$$

$$P_{2-x} = P_2 \times \left(\frac{n_x}{n} \right)^3$$

For example, doubling the number of revolutions (n_x) one gets:

Q_x = the value of the flow rate doubles

H_x = the value of the head quadruples

P_{2-x} = the Power absorbed by Pump increases 8 times

$Q - H - P_2$ are values referring to speed n

$Q_x - H_x - P_{2-x}$ are values referring to speed n_x .

NOTIONS ON ELECTRIC PUMP MOTORS

| SYMBOL KEY | |
|---------------|--|
| P_1 | = POWER ABSORBED BY THE MOTOR IN KW |
| P_2 | = POWER OUTPUT BY THE MOTOR IN KW OR HP |
| $V \sim$ | = AC VOLTAGE POWER SUPPLY |
| Hz | = FREQUENCY IN PERIODS/DEPENDIMNG ON THE POWER SUPPLY VOLTAGE |
| I | = CURRENT ABSORBED BY THE MOTOR IN AMPERES |
| $\cos\varphi$ | = POWER FACTOR |
| $n^{1/min}$ | = ROTATION SPEED IN RPM |
| η | = EFFICIENCY (RATIO OF POWER OUTPUT AND POWER ABSORBED P_2/P_1) |
| p | = NUMBER OF POLES ON THE MOTOR |
| Cn | = MOTOR RATED TORQUE |

ROTATION SPEED W/NO LOAD

The rotation speed of single phase or three phase induction electric motors w/no load is calculated as follows:

$$n^{1/min} = \frac{120 \times \text{Hz}}{p}$$

Rotation speed w/no load $n^{1/min}$

| FREQUENZCY HZ | 2 POLES | 4 POLES |
|---------------|---------|---------|
| 50 | 3000 | 1500 |
| 60 | 3600 | 1800 |

The speed at full load is 2% to 7% less than w/no load (2% ÷ 7% slippage).

CURRENT ABSORBED

$$\text{Single phase: } I = \frac{1000 \times P_2 \text{ (kW)}}{V \times \cos\varphi \times \eta} \quad \text{or: } I = \frac{736 \times P_2 \text{ (HP)}}{V \times \cos\varphi \times \eta}$$

$$\text{Three phase: } I = \frac{1000 \times P_2 \text{ (kW)}}{1.73 \times V \times \cos\varphi \times \eta} \quad \text{or: } I = \frac{736 \times P_2 \text{ (HP)}}{1.73 \times V \times \cos\varphi \times \eta}$$

POWER ABSORBED

$$\text{Single phase: } P_1 \text{ (kW)} = \frac{V \times I \times \cos\varphi}{1000}$$

$$\text{Three-phase: } P_1 \text{ (kW)} = \frac{1.73 \times V \times I \times \cos\varphi}{1000}$$

POWER OUTPUT AT MOTOR SHAFT

$$\text{Single phase: } P_2 \text{ (kW)} = \frac{V \times I \times \cos\varphi \times \eta}{1000} \quad \text{or: } P_2 \text{ (HP)} = \frac{V \times I \times \cos\varphi \times \eta}{736}$$

$$\text{Three-phase: } P_2 \text{ (kW)} = \frac{1.73 \times V \times I \times \cos\varphi \times \eta}{1000} \quad \text{or: } P_2 \text{ (HP)} = \frac{1.73 \times V \times I \times \cos\varphi \times \eta}{736}$$

EFFICIENCY

$$\eta = \frac{P_2 \text{ (kW)}}{P_1 \text{ (kW)}}$$

POWER FACTOR

$$\text{Single phase: } \cos\varphi = \frac{P_2 (\text{kW}) \times 1000}{V \times I \times \eta} \quad \text{or: } \cos\varphi = \frac{P_1 (\text{kW}) \times 1000}{V \times I}$$

$$\text{Three-phase: } \cos\varphi = \frac{P_2 (\text{kW}) \times 1000}{1.73 \times V \times I \times \eta} \quad \text{or: } \cos\varphi = \frac{P_1 (\text{kW}) \times 1000}{1.73 \times V \times I}$$

RATED TORQUE

$$C_n = \frac{P_2 (\text{kW}) \times 1000}{1.027 \times n^{1/\text{min}}} \text{ in Kg}$$

$$C_n = \frac{P_2 (\text{HP}) \times 736}{1.027 \times n^{1/\text{min}}} \text{ in Kg}$$

$$C_n = \frac{702 \times \text{HP}}{n^{1/\text{min}}} \text{ in Deca Newton Meter}$$

RELATION BETWEEN KW AND HP

$$1 \text{ HP} = 0.736 \text{ kW} \quad 1 \text{ kW} = 1.36 \text{ HP} \quad \frac{\text{HP}}{1.36} = \text{kW} \quad \text{kW} \times 1.36 = \text{HP}$$

PEAK CURRENT (IP)

Peak current at start up is greater than rated current by 4 to 8 volts depending on the power of the motor
 $I_{sp} = I_n \times 4 \div 8$

NOTES ON ELECTRICAL CAPACITORS

The approximate current absorbed by a capacitor is:

$$I = \frac{6.28 \times F \times C \times V}{1,000,000}$$

Where:

- I = current in amperes absorbed by a capacitor
- F = frequency in Hz from the rated voltage
- C = capacitor capacity in μF
- V = rated voltage

Example:

The approximate current absorbed by a 14 μF capacitor connected to 220 Volt - 50 Hz power, will be:

$$I = \frac{6.28 \times 50 \times 14 \times 220}{1,000,000} = 0.96 \text{ Ampere}$$

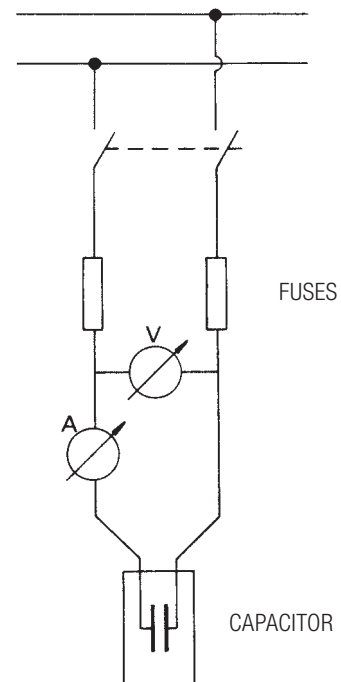
The approximate capacity of a capacitor is determined:

$$C = \frac{I}{6.28 \times F \times V} \times 1,000,000$$

Example:

The capacity of a capacitor that absorbs 1.4 Amperes connected to 220 Volt - 50 Hz power, will be:

$$C = \frac{1.4}{6.28 \times 50 \times 220} \times 1,000,000 = 20.2 \mu\text{F}$$



STAR-DELTA STARTER

The motor normally connected to delta Δ is connected to the network by a star connection. The current and the starting torque are reduced by 1/3 of the level it would have been with just the delta Δ connection.

PROTECTION

It is suggested that the motors in the network are connected to thermal magnetic circuit breakers in a fuse circuit pursuant to the standards of that country.

LOSS OF HEAD AND SPEED TABLE

To calculate the **head losses** accurately **and the speed** use this table:

| FLOW RATE | | | NEW GALVANIZED PIPES | | | | | | | | | |
|-----------|-------|-------------------|----------------------------------|-------|--------|-------|-------|------|-------|---|-------|------|
| | | | NOMINAL DIAMETERS: INCHES AND mm | | | | | | | | | |
| l/s | l/min | m ³ /h | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" | 2"1/2 | 3" | 3"1/2 | 4" |
| | | | 15.75 | 21.25 | 27 | 35.75 | 41.25 | 52.5 | 68 | 80.25 | 92.5 | 105 |
| 0.17 | 10 | 0.6 | 0.856 | 0.47 | 0.291 | | | | | | | |
| | | | 9.01 | 20.9 | 0.65 | | | | | | | |
| 0.25 | 15 | 0.9 | 1.284 | 0.705 | 0.4387 | 0.249 | | | | HAZEN WILLIAMS FORMULA (UNI 9489 13.3.3.6) | | |
| | | | 19.07 | 4.43 | 1.38 | 0.35 | | | | | | |
| 0.33 | 20 | 1.2 | 1.712 | 0.94 | 0.582 | 0.332 | 0.25 | | | | | |
| | | | 32.47 | 7.55 | 2.35 | 0.6 | 0.3 | | | | | |
| 0.42 | 25 | 1.5 | 2.14 | 1.175 | 0.728 | 0.415 | 0.31 | | | | | |
| | | | 49.06 | 11.41 | 3.55 | 0.91 | 0.45 | | | | | |
| 0.5 | 30 | 1.8 | 2.568 | 1.411 | 0.874 | 0.498 | 0.37 | 0.23 | | | | |
| | | | 68.74 | 15.98 | 4.98 | 1.27 | 0.63 | 0.2 | | | | |
| 0.58 | 35 | 2.1 | 2.996 | 1.646 | 1.019 | 0.581 | 0.44 | 0.27 | | | | |
| | | | 91.42 | 21.26 | 6.62 | 1.69 | 0.84 | 0.26 | | | | |
| 0.67 | 40 | 2.4 | | 1.881 | 1.165 | 0.664 | 0.5 | 0.31 | | | | |
| | | | | 27.22 | 8.48 | 2.16 | 1.08 | 0.33 | | | | |
| 0.83 | 50 | 3 | | 2.351 | 1.456 | 0.831 | 0.62 | 0.39 | 0.23 | | | |
| | | | | 41.13 | 12.81 | 3.27 | 1.63 | 0.5 | 0.14 | | | |
| 1 | 60 | 3.6 | | 2.821 | 1.747 | 0.997 | 0.75 | 0.46 | 0.28 | | | |
| | | | | 57.63 | 17.95 | 4.58 | 2.28 | 0.7 | 0.2 | | | |
| 1.17 | 70 | 4.2 | | 3.291 | 2.039 | 1.163 | 0.87 | 0.54 | 0.32 | 0.23 | | |
| | | | | 76.64 | 23.88 | 6.08 | 3.03 | 0.94 | 0.27 | 0.12 | | |
| 1.33 | 80 | 4.8 | | | 2.33 | 1.329 | 1 | 0.62 | 0.37 | 0.26 | | |
| | | | | | 30.57 | 7.79 | 3.88 | 1.2 | 34 | 0.15 | | |
| 1.5 | 90 | 5.4 | | | 2.621 | 1.495 | 1.12 | 0.69 | 0.41 | 0.3 | | |
| | | | | | 38.01 | 9.69 | 4.83 | 1.49 | 0.42 | 0.19 | | |
| 1.67 | 100 | 6 | | | 2.912 | 1.661 | 1.25 | 0.77 | 0.46 | 0.33 | 0.25 | |
| | | | | | 46.19 | 11.77 | 5.86 | 1.81 | 0.51 | 0.23 | 0.11 | |
| 2.08 | 125 | 7.5 | | | 3.641 | 2.077 | 1.56 | 0.96 | 0.57 | 0.41 | 0.31 | 0.24 |
| | | | | | 69.79 | 17.79 | 8.86 | 2.74 | 0.78 | 0.35 | 0.17 | 0.09 |
| 2.5 | 150 | 9 | | | | 2.492 | 1.87 | 1.16 | 0.69 | 0.49 | 0.37 | 0.29 |
| | | | | | | 24.92 | 12.41 | 3.84 | 1.09 | 0.49 | 0.24 | 0.13 |
| 2.92 | 175 | 10.5 | | | | 2.907 | 2.18 | 1.35 | 0.8 | 0.58 | 0.43 | 0.34 |
| | | | | | | 33.15 | 16.51 | 5.1 | 1.45 | 0.65 | 0.32 | 0.17 |

Numbers in white: Head loss in m. for each 100 m. of piping

Numbers in green: Water speed in m/sec

The table refers to galvanized pipe.

For different materials multiply by:

- 0.6 for PVC pipe
- 0.7 for aluminium pipe
- 0.8 for laminated steel and stainless pipe

LOSS OF HEAD AND SPEED TABLE

To calculate the **head losses** accurately **and the speed** use this table:

| FLOW RATE | | | NEW GALVANIZED PIPES | | | | | | | | | | |
|-----------|-------|------|---|-------|------|-------|-------|-------|------|------|-----|-----|--|
| | | | NOMINAL DIAMETERS: INCHES AND MM | | | | | | | | | | |
| l/s | l/min | m³/h | 1"1/4 | 1"1/2 | 2" | 2"1/2 | 3" | 3"1/2 | 4" | 5" | 6" | 8" | |
| | | | 35.75 | 41.25 | 52.5 | 68 | 80.25 | 92.5 | 105 | 130 | 155 | 206 | |
| 3.33 | 200 | 12 | 3.322 | 2.5 | 1.54 | 0.92 | 0.66 | 0.5 | 0.39 | 0.25 | | | |
| | | | 42.43 | 21.14 | 6.53 | 1.85 | 0.83 | 0.41 | 0.22 | 0.08 | | | |
| 4.17 | 250 | 15 | 4.156 | 3.12 | 1.93 | 1.15 | 0.82 | 0.62 | 0.48 | 0.31 | | | |
| | | | 64.12 | 31.94 | 9.87 | 2.8 | 1.25 | 1.63 | 0.34 | 0.12 | | | |
| 5 | 300 | 18 | 3.74 | 2.31 | 1.38 | 0.99 | 0.74 | 0.58 | 0.38 | 0.27 | | | |
| | | | 44.75 | 13.83 | 3.92 | 1.75 | 0.88 | 0.47 | 0.17 | 0.07 | | | |
| 6.67 | 400 | 24 | 4.99 | 3.08 | 1.84 | 1.32 | 0.99 | 0.77 | 0.5 | 0.35 | | | |
| | | | 76.2 | 23.55 | 6.68 | 2.98 | 1.49 | 0.8 | 0.28 | 0.12 | | | |
| 8.33 | 500 | 30 | 3.85 | 2.3 | 1.65 | 1.24 | 0.96 | 0.63 | 0.44 | | | | |
| | | | 35.58 | 10.09 | 4.51 | 2.26 | 1.22 | 0.43 | 0.18 | | | | |
| 10 | 600 | 36 | 4.62 | 2.75 | 1.98 | 1.49 | 1.16 | 0.75 | 0.53 | 0.3 | | | |
| | | | 49.85 | 14.14 | 6.31 | 3.16 | 1.7 | 0.6 | 0.26 | 0.06 | | | |
| 11.67 | 700 | 42 | 3.21 | 2.31 | 1.74 | 1.35 | 0.88 | 0.62 | 0.35 | | | | |
| | | | 18.81 | 8.4 | 4.2 | 2.27 | 0.8 | 0.34 | 0.09 | | | | |
| 13.33 | 800 | 48 | 3.67 | 2.64 | 1.99 | 1.54 | 1.01 | 0.71 | 0.4 | | | | |
| | | | 24.08 | 10.75 | 5.38 | 2.9 | 1.03 | 0.44 | 0.11 | | | | |
| 15 | 900 | 54 | 4.13 | 2.97 | 2.23 | 1.73 | 1.13 | 0.8 | 0.45 | | | | |
| | | | 29.94 | 13.37 | 6.69 | 3.61 | 1.28 | 0.54 | 0.14 | | | | |
| 16.67 | 1000 | 60 | 4.59 | 3.3 | 2.48 | 1.93 | 1.26 | 0.88 | 0.5 | | | | |
| | | | 36.39 | 16.24 | 8.13 | 4.39 | 1.55 | 0.66 | 0.16 | | | | |
| 20.83 | 1250 | 75 | 4.12 | 3.1 | 2.41 | 1.57 | 1.1 | 0.63 | | | | | |
| | | | 24.54 | 12.29 | 6.63 | 2.34 | 0.99 | 0.25 | | | | | |
| 25 | 1500 | 90 | 4.95 | 3.72 | 2.89 | 1.88 | 1.33 | 0.75 | | | | | |
| | | | 34.39 | 17.22 | 9.29 | 3.28 | 1.39 | 0.35 | | | | | |
| 29.17 | 1750 | 105 | 4.34 | 3.37 | 2.2 | 1.55 | 0.88 | | | | | | |
| | | | 22.9 | 12.35 | 4.37 | 1.85 | 0.46 | | | | | | |
| 33.33 | 2000 | 120 | 4.96 | 3.85 | 2.5 | 1.77 | 1 | | | | | | |
| | | | 29.31 | 15.81 | 5.59 | 2.37 | 0.59 | | | | | | |
| 41.67 | 2500 | 150 | 4.81 | 3.14 | 2.21 | 1.25 | | | | | | | |
| | | | 23.89 | 8.44 | 3.59 | 0.9 | | | | | | | |
| 50 | 3000 | 180 | HAZEN WILLIAMS FORMULA (UNI 9489 13.3.3.6) | | | | 3.77 | 2.65 | 1.5 | | | | |
| | | | | | | | 11.83 | 5.02 | 1.26 | | | | |
| 66.67 | 4000 | 240 | HAZEN WILLIAMS FORMULA (UNI 9489 13.3.3.6) | | | | 5.03 | 3.53 | 2 | | | | |
| | | | | | | | 20.15 | 8.55 | 2.14 | | | | |
| 83.33 | 5000 | 300 | HAZEN WILLIAMS FORMULA (UNI 9489 13.3.3.6) | | | | 4.42 | 2.5 | | | | | |
| | | | | | | | 12.93 | 3.23 | | | | | |

Numbers in white: Head loss in m. for each 100 m. of piping

Numbers in green: Water speed in m/sec


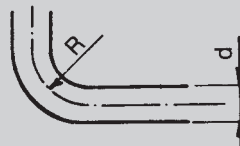
The table refers to galvanized pipe.

For different materials multiply by:

- 0.6 for PVC pipe
- 0.7 for aluminium pipe
- 0.8 for laminated steel and stainless pipe

HEAD LOSSES

in centimetres water column in bends, shutters and valves

| WATER SPEED IN m/sec | SHARP BENDS | | | | | CURVE NORMAL BENDS | | | | | NORMAL SHUTTERS | FOOT VALVES | CHECK VALVES | LOSS OF ENERGY AT THE OUTLET OF DRAIN PIPES $V^2/2g$ |
|----------------------|---|---------------------|---------------------|---------------------|---------------------|--|---------------------|---------------------|-------------------|---------------------|-----------------|-------------|--------------|--|
| |  | | | | |  | | | | | | | | |
| | $\alpha = 30^\circ$ | $\alpha = 40^\circ$ | $\alpha = 60^\circ$ | $\alpha = 80^\circ$ | $\alpha = 90^\circ$ | $\frac{d}{R} = 0.4$ | $\frac{d}{R} = 0.6$ | $\frac{d}{R} = 0.8$ | $\frac{d}{R} = 1$ | $\frac{d}{R} = 1.5$ | | | | |
| 0.10 | 0.03 | 0.04 | 0.05 | 0.07 | 0.08 | 0.07 | 0.08 | 0.01 | 0.0155 | 0.027 | 0.03 | 30 | 30 | 0.05 |
| 0.15 | 0.06 | 0.073 | 0.1 | 0.14 | 0.17 | 0.016 | 0.019 | 0.024 | 0.033 | 0.06 | 0.033 | 31 | 31 | 0.12 |
| 0.2 | 0.11 | 0.13 | 0.18 | 0.26 | 0.31 | 0.028 | 0.033 | 0.04 | 0.059 | 0.11 | 0.058 | 31 | 31 | 0.21 |
| 0.25 | 0.17 | 0.21 | 0.28 | 0.4 | 0.48 | 0.044 | 0.052 | 0.063 | 0.091 | 0.17 | 0.09 | 31 | 31 | 0.32 |
| 0.3 | 0.25 | 0.3 | 0.41 | 0.6 | 0.7 | 0.063 | 0.074 | 0.09 | 0.13 | 0.25 | 0.13 | 31 | 31 | 0.46 |
| 0.35 | 0.33 | 0.4 | 0.54 | 0.8 | 0.93 | 0.085 | 0.10 | 0.12 | 0.18 | 0.33 | 0.18 | 31 | 31 | 0.62 |
| 0.4 | 0.43 | 0.52 | 0.71 | 1.0 | 1.2 | 0.11 | 0.13 | 0.16 | 0.23 | 0.43 | 0.23 | 32 | 31 | 0.82 |
| 0.5 | 0.67 | 0.81 | 1.1 | 1.6 | 1.9 | 0.18 | 0.21 | 0.26 | 0.37 | 0.67 | 0.37 | 33 | 32 | 1.27 |
| 0.6 | 0.97 | 1.2 | 1.6 | 2.3 | 2.8 | 0.25 | 0.29 | 0.36 | 0.52 | 0.97 | 0.52 | 34 | 32 | 1.84 |
| 0.7 | 1.35 | 1.65 | 2.2 | 3.2 | 3.9 | 0.34 | 0.40 | 0.48 | 0.70 | 1.35 | 0.7 | 35 | 32 | 2.5 |
| 0.8 | 1.7 | 2.1 | 2.8 | 4.0 | 4.8 | 0.45 | 0.53 | 0.64 | 0.93 | 1.7 | 0.95 | 36 | 33 | 3.3 |
| 0.9 | 2.2 | 2.7 | 6 | 5.2 | 6.2 | 0.57 | 0.67 | 0.82 | 1.18 | 2.2 | 1.2 | 37 | 34 | 4.2 |
| 1.0 | 2.7 | 3.3 | 4.5 | 6.4 | 7.6 | 0.7 | 0.82 | 1.0 | 1.45 | 2.7 | 1.45 | 38 | 35 | 5.1 |
| 1.5 | 6.0 | 7.3 | 10.0 | 14.0 | 17.0 | 1.6 | 1.9 | 2.3 | 3.3 | 6.0 | 3.3 | 47 | 40 | 11.5 |
| 2.0 | 11.0 | 14.0 | 18.0 | 26.0 | 31.0 | 2.8 | 3.3 | 4.0 | 5.8 | 11.0 | 5.8 | 61 | 48 | 20.4 |
| 2.5 | 17.0 | 21.0 | 28.0 | 40.0 | 48.0 | 4.4 | 5.2 | 6.3 | 9.1 | 17.0 | 9.1 | 78 | 58 | 32.0 |
| 3.0 | 25.0 | 30.0 | 41.0 | 60.0 | 70.0 | 6.3 | 7.4 | 9.0 | 13.0 | 25.0 | 13.0 | 100 | 71 | 46.0 |
| 3.5 | 33.0 | 40.0 | 55.0 | 78.0 | 93.0 | 8.5 | 10.0 | 12.0 | 18.0 | 33.0 | 18.0 | 123 | 85 | 62.0 |
| 4.0 | 43.0 | 52.0 | 70.0 | 100.0 | 120.0 | 11.0 | 13.0 | 16.0 | 23.0 | 42.0 | 23.0 | 150 | 100 | 82.0 |
| 4.5 | 55.0 | 67.0 | 90.0 | 130.0 | 160.0 | 14.0 | 21.0 | 26.0 | 37.0 | 55.0 | 37.0 | 190 | 120 | 103.0 |
| 5.0 | 67.0 | 82.0 | 110.0 | 160.0 | 190.0 | 18.0 | 29.0 | 36.0 | 52.0 | 67.0 | 52.0 | 220 | 140 | 127.0 |

v = water speed in metres per second

d = tube diameter in metres

h = head loss in centimetres of water column for each metre of pipe calculated using the Lang formula:

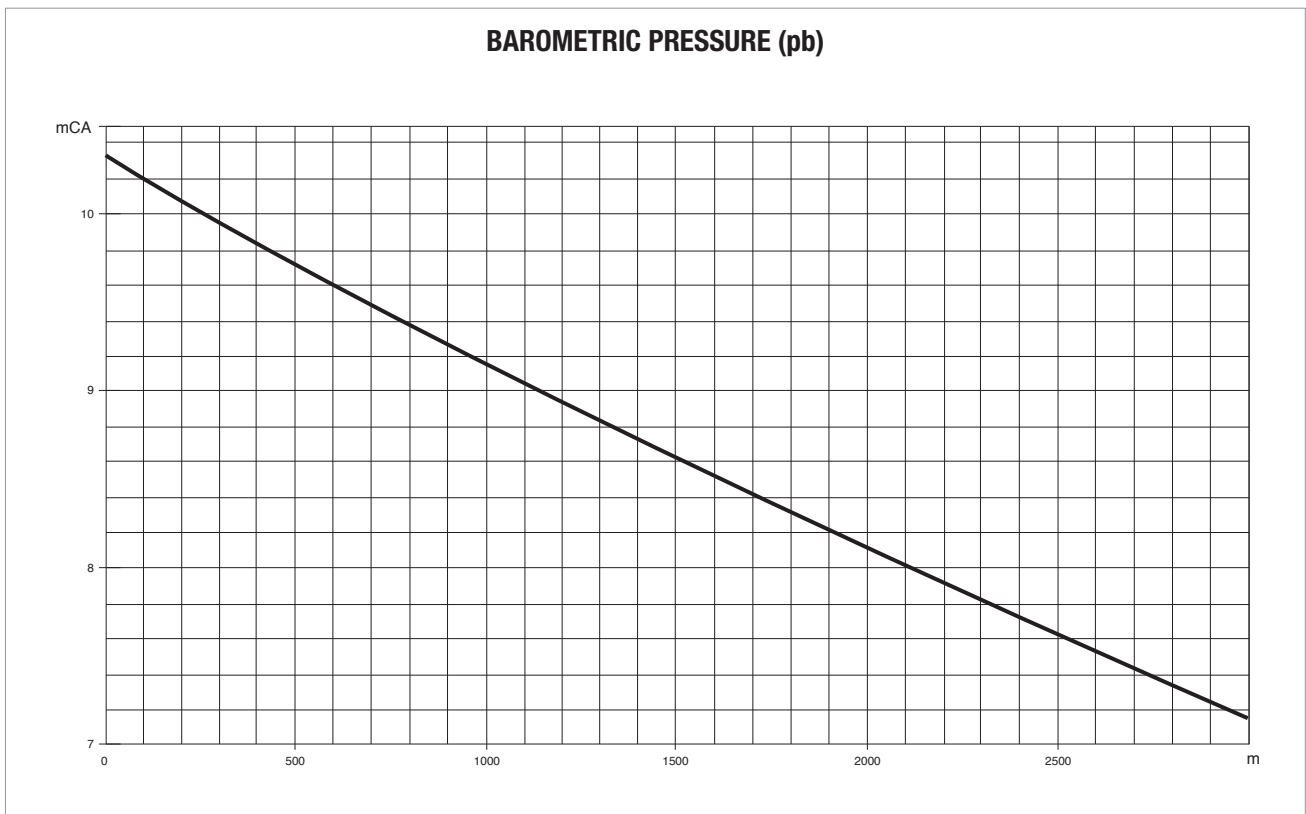
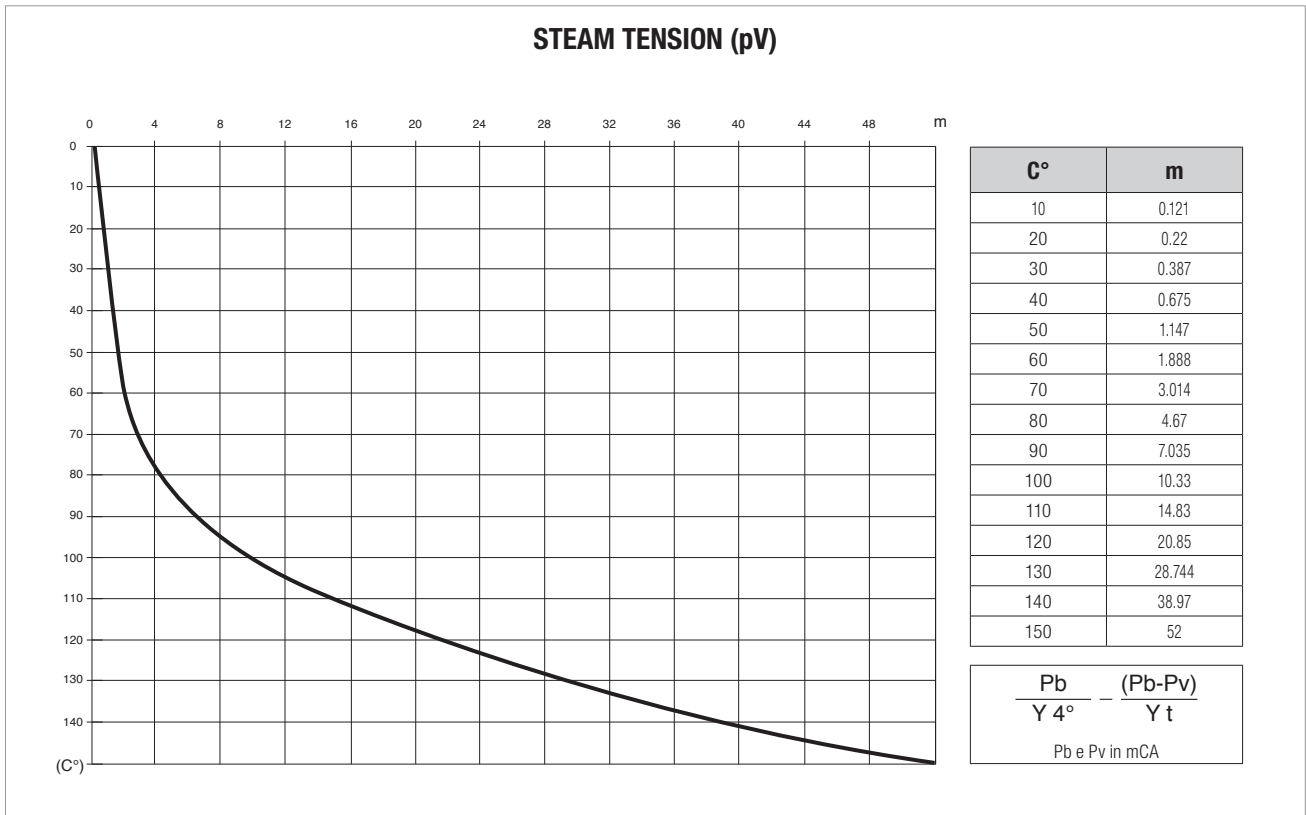
$$h = \lambda \times \frac{100}{d} \times \frac{v^2}{2g} \qquad \lambda = 0.02 + \frac{0.0018}{\sqrt{v \times d}}$$

Head loss in bends is only due to the contraction of the liquid flow from the direction change (the development of the bends should be included in the length of the pipe) while the loss of head in the valves and shutters was determined by technical tests.

Head loss from shutters and normal bends is equal to that of 5 metres of straight pipe while for check and clapet valves it is equal to 15 metres.

The values indicated are for completely smooth internal wall pipe. In the event of encrustation, the following increases should be considered.

STEAM TENSION AND SPECIFIC WEIGHT OF WATER AS A FUNCTION OF THE TEMPERATURE



UNITS OF MEASURE CONVERSION TABLE

| SIZE | SYSTEM UNITS OF MEASURE | UNITS OF MEASURE | SYMBOL | CONVERSIONS | | |
|---------------------|-----------------------------|---|---|--|--|---|
| | | | | TECHNICAL SYSTEM | INTERNATIONAL SYSTEM (SI) | ENGLISH SYSTEM |
| LENGTH | Technical and International | metre decimetre centimetre millimetre | m dm cm mm | 1 dm = 0.1 m 1 cm = 0.01 m 1 mm = 0.001 m | | 1 m = 3.28 ft 1 dm = 3.937 in 1 cm = 0.3937 in |
| | English | inch foot yard | 1", in 1', ft yd | 1" = 25.4 mm 1" ft = 0.3048 m 1 yd = 0.9144 m | | 1 ft = 12" 1 yd = 3 ft = 26" |
| SURFACE AREA | Technical and International | square metre square centimetre square millimetre | m ² cm ² mm ² | 1 cm ² = 0,0001 m ² 1 mm ² = 0.01 cm ² | | 1 m ² = 1.196 sq.yd 1 m ² = 10.764 sq.ft 1 cm ² = 0.155 sq.in |
| | English | square inch square foot square yard | sq. in sq. ft sq. yd | 1 sq.in = 6,45 cm ² 1 sq.ft = 0,0929 m ² 1 sq.yd = 0,836 m ² | | 1 sq.ft = 144 sq.in 1 sq.yd = 1.296 sq.in 1 sq.yd = 9 sq.ft |
| VOLUME | Technical and International | cubic metre cubic decimetre cubic centimetre litre | m ³ cm ³ mm ³ l | 1 m ³ = 1.000 dm ³ 1 cm ³ = 0.001 m ³ = 1.000 cm ³ 1 mm ³ = 0.001 dm ³ 1 l = dm ³ | | 1 dm ³ = 0.22 Imp. gal 1 dm ³ = 0.264 US. gal 1 dm ³ = 61.0 cu.in |
| | English | cubic inch cubic foot Imp. gallon US gallon | cu. in cu. ft Imp. gal US gal | 1 sq.in = 16.39 cm ³ 1 cu.ft = 28,34 m ³ 1 Imp.gal = 4,546 m ³ 1 US.gal = 3,785 dm ³ | | 1 Imp.gal = 1.201 US.gal 1 US.gal = 0.833 Imp.gal |
| TEMPERATURE | Technical and International | degrees centigrade degrees Kelvin | °C °K | °C = °K - 273 °K = °C + 273 | | °C = 5/9 x (°F - 32) °K = 5/9 x (°F - 32) + 273 |
| | English | degrees Fahrenheit | °F | °F = 9/5 x °C + 32 | | - |
| | | Freezing point of water at atmospheric pressure: Boiling point of water at atmospheric pressure: | | 000°C = 273 °K = 032 °F 100°C = 373 °K = 212 °F | | |
| WEIGHT e FORCE | Technical | kilogram | kg | - | 1 kg = 9.81 N | 1 kg = 2.203 lb |
| | International | Newtons | N | 1 N = 0.102 kg | - | 1 N = 0.22546 lb |
| | English | pound | lb | 1 lb = 0.454 kg | 1 lb = 4.452 N | - |
| WEIGHT SPECIFIC | Technical | kilogram per cubic decimetre | kg/dm ³ | - | 1 kg/dm ³ = 9.807 N/dm ³ | 1 kg/dm ³ = 62,46 lb/cu.ft |
| | International | Newton over cubic decimetre | N/dm ³ | 1 N/dm ³ = 0.102 kg/dm ³ | - | 1 N/dm ³ = 6.36 lb/cu.ft |
| | English | pound per cubic foot | lb/dm ³ | 1 lb/cu.ft = 0.01600 kg/dm ³ | 1 lb/cu.ft = 0160 N/dm ³ | - |
| PRESSURE | Technical | technical atmosphere | kg/cm ² | - | 1 kg/cm ² = 98,067 kPa 1 kg/cm ² = 0,9807 bar | 1 kg/cm ² = 14.22 psi |
| | International | Pascal kiloPascal bar | Pa kPa bar | 1 kPa = 0,0102 kg/cm ² 1 bar = 1.02 kg/cm ² | 1 kPa = 1.000 Pa 1 bar = 100.000 Pa | 1 kPa = 0,145 psi 1 bar = 14,50 psi |
| | English | pound per square inch | psi | 1 psi = 0,0703 kg/cm ² | 1 psi = 0,06895 bar 1 psi = 6,894 kPa | - |
| FLOW RATE | Technical | litres per minute litres per second cubic metres per hour | l/min l/s m ³ /h | 1 l/min = 0.0167 l/s 1 l/s = 3.6 m ³ /h 1 m ³ /h = 16,667 l/min | 1 l/s = 0,001 m ³ /s | 1 l/min = 0.22 imp.g.p.m. 1 l/min = 0.264 US.g.p.m. 1 m ³ /h = 3,666 imp.g.p.m. 1 m ³ /h = 4.403 US.g.p.m. |
| | International | cubic metres per second | m ³ /s | 1 m ³ /s = 1.000 l/s 1 m ³ /s = 3.600 m ³ /h | - | 1 m ³ /s = 13.198 imp.g.p.m. 1 m ³ /s = 15.852 US.g.p.m. |
| | English | Imperial gallon per minute US gallon per minute | Imp.g.p.m. US.g.p.m. | 1 Imp.g.p.m. = 4,546 l/min 1 Imp.g.p.m. = 0,273 m ³ /h 1 US.g.p.m. = 3,785 l/min 1 US.g.p.m. = 0,227 m ³ /h | - | 1 Imp.g.p.m. = 1.201 US.g.p.m. 1 US.g.p.m. = 0.833 Imp.g.p.m. |
| TORQUE MOMENT | Technical | kilogram per metre | kgm | - | 1 kg = 9.807 Nm | 1 kgm = 7,233 ft.lb |
| | International | Newton per metre | Nm | 1 Nm = 0.102 kg | - | 1 Nm = 0,7376 ft.lb |
| | English | foot pound | ft.lb | 1 ft.lb = 0.138 kg | 1 ft.lb = 1,358 Nm | - |
| WORK ed ENERGY | Technical | kilogram per metre horsepower per hour | kgm CVh | | 1 kg = 9.807 J 1 CVh = 0,736 kWh | 1 kgm = 7,233 ft.lb 1 Nm = 0,986 HP.hr. |
| | International | Joule kilowatt hour | J kWhq | 1 J = 0.102 kg kWh = 1,36 CVh | - | 1 Nm = 0,7376 ft.lb 1 Nm = 0,7376 ft.lb |
| | English | foot pound Horsepower hour | ft.lb HP.hr. | 1 ft.lb = 0.138 kg 1 HP.hr. = 1,014 CVh | 1 ft.lb = 0.358 Nm 1 HP.hr. = 0.746 kWh | - |
| POWER | Technical | Horsepower | HP | 1 HP = 0.736 kW | 1 HP = 736 W | - |
| | International | Watts kiloWatts | W kW | 1 W = 0.00136 Hp 1 kW = 1.36 Hp | 1 kW = 1.000 W | - |
| KINEMATIC VISCOSITY | Technical | stokes centistokes | 1 St 1 cSt | 1 St = 1 cm ² /s 1 cSt = 0,01 St | 1 St = 0,0001 m ² /s | 1 St = 0.00107 ft ² /s |
| | International | m ² /s | m ² /s | 1 m ² /s = 10.000 St | 1 m ² /s = 10.000 cm ² /s | 1 m ² /s = 10,764 ft ² /s |
| | English | square feet per second | ft ² /s | 1 ft ² /s = 929 St | 1 ft ² /s = 0,0929 m ² /s | - |

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