

# STN



STN 40 PP-GF



Comply to :  
2006/42/CE

Available upon request :

ATEX 100   
Directive 94/9/EC

Flanges :  
UNI 1092 PN16RF type B  
ANSI 150RF

Compact, Plastic and Fluoroplastic Magnetic drive Horizontal - Single Stage - Centrifugal pumps  
PP-GF (Polypropylene-Glass filled) - CFR-ETFE (Carbon filled - Ethylene tetrafluoroethylene)  
Close-coupled execution



Pompe S.P.A.

## Mag drive concept

The synchronous drive configuration is based on an outer magnet ring assembly built to magnetically couple with an inner magnet ring assembly.

These two magnet rings are locked together by the flux of attracting magnet poles flowing through the containment isolation shell.



**STN**  
STANDARD EXECUTION  
with Motor



**STN**  
ATEX EXECUTION  
without Motor

### Versatility

The STN offer a wide range of materials for the wetted parts :

- PP-GF (Polypropylene-Glass filled)
- CFR-ETFE (Carbon filled - Ethylene tetrafluoroethylene) - \*only casing

### Reliability

Suitable for handling corrosive, aggressive and hazardous liquids (low viscosity, clean or slightly contaminated) in the chemical applications.

### Design

Made with a reliable quality as the ETN but designed for smaller applications or where the working condition are less critical.

## Application Fields

Basic chemical  
Low Duty Service



Waste Water Treatment



Air Treatment



C.I.P.



Galvanic Industry



# 3D VIEW

Inner and Outer magnets are equipped with rare earth permanent magnets.

Patented cage magnet attachment guarantees stability during the operation of the pump.

High chemical resistance employing a performing material as **CFR-ETFE**.

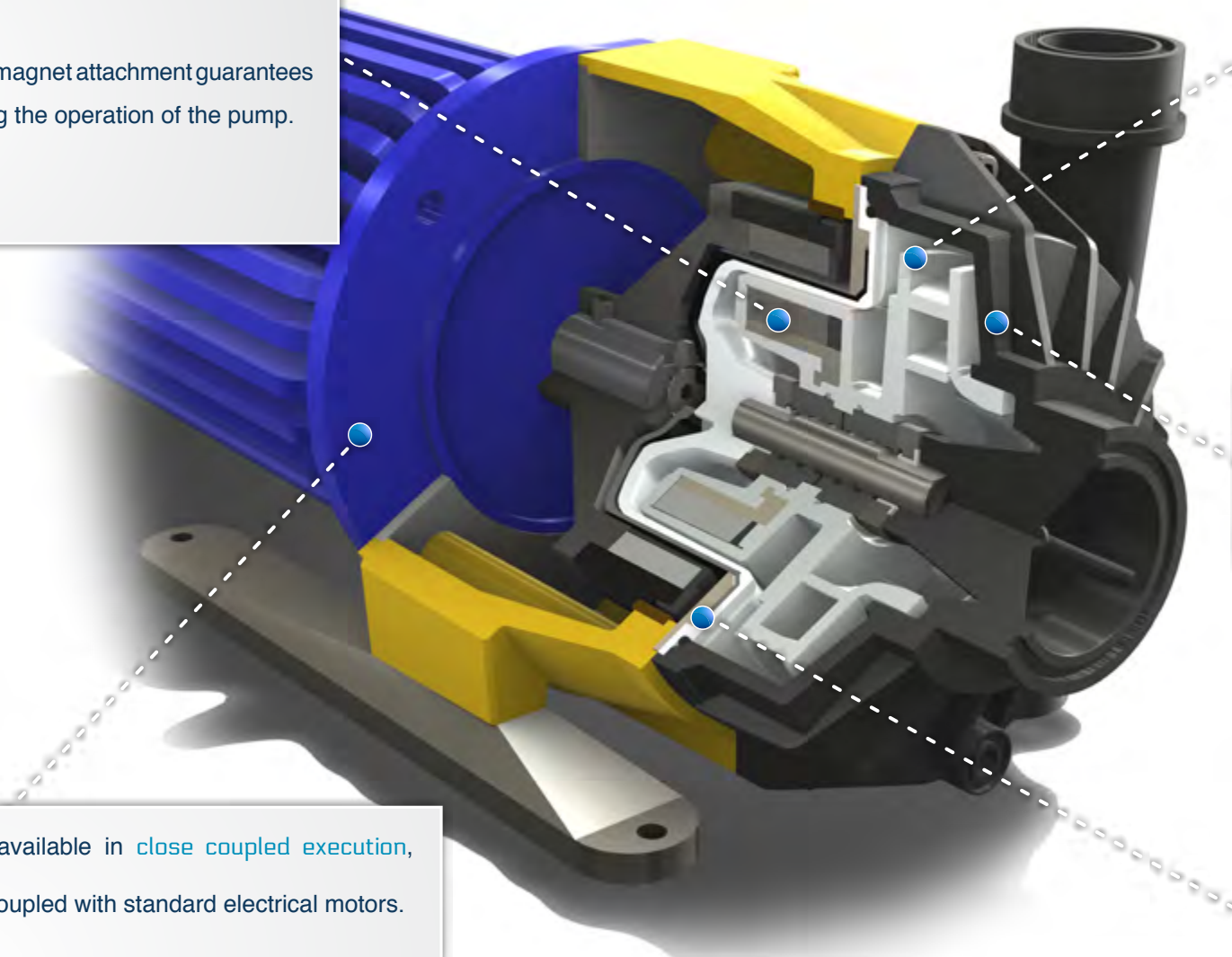
- Alternative available materials for the Wetted parts: **PP**.

The casing's design is reinforced by a solid rib structure.

The STN are available in close coupled execution, suitable to be coupled with standard electrical motors.

Sealless design

Total containment, essential for hazardous, aggressive or valuable product.



# FEATURES

## CASING



- Available in CFR-ETFE and PP-GF execution
- Standard casing drain for a complete and fast draining of the casing

## IMPELLER ASSEMBLY



- The integral design of the impeller and inner magnet prevents any misalignment problem, also reducing the production cost
- Standard back vanes reduce axial thrust and seal chamber pressures to guarantee an extraordinary bearing and seal life.

## ISOLATION SHELL



- ETFE Non-metallic double Isolation Shell configuration on wet side, externally reinforced by a Polycarbonate can
- As alternative, it is available made by a solid 3 mm PP-GF layer
- Zero Eddy Current Losses thanks to non-metallic execution

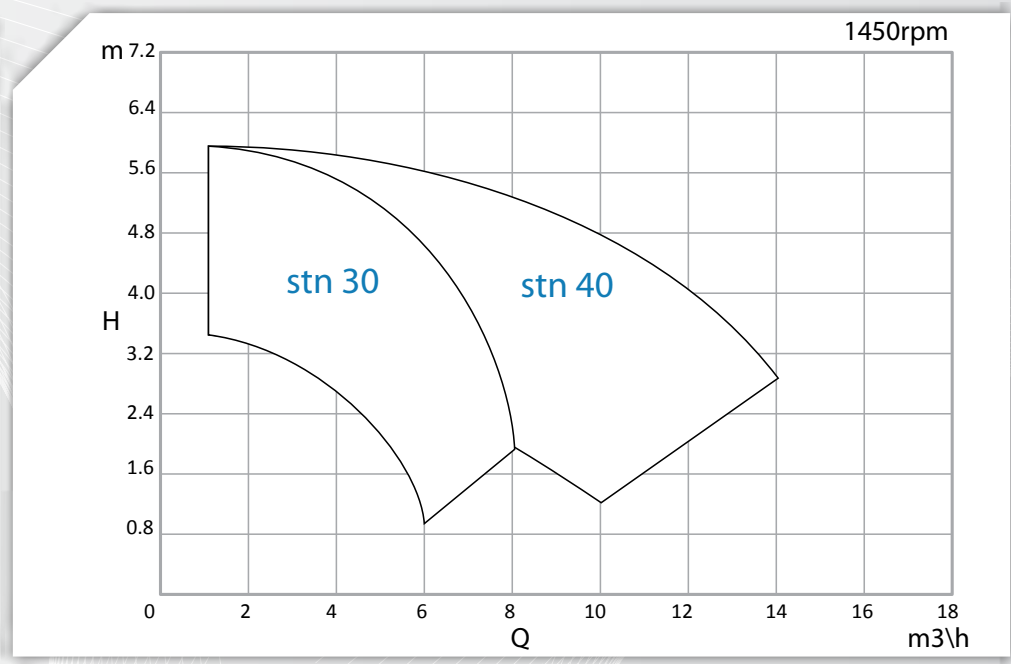
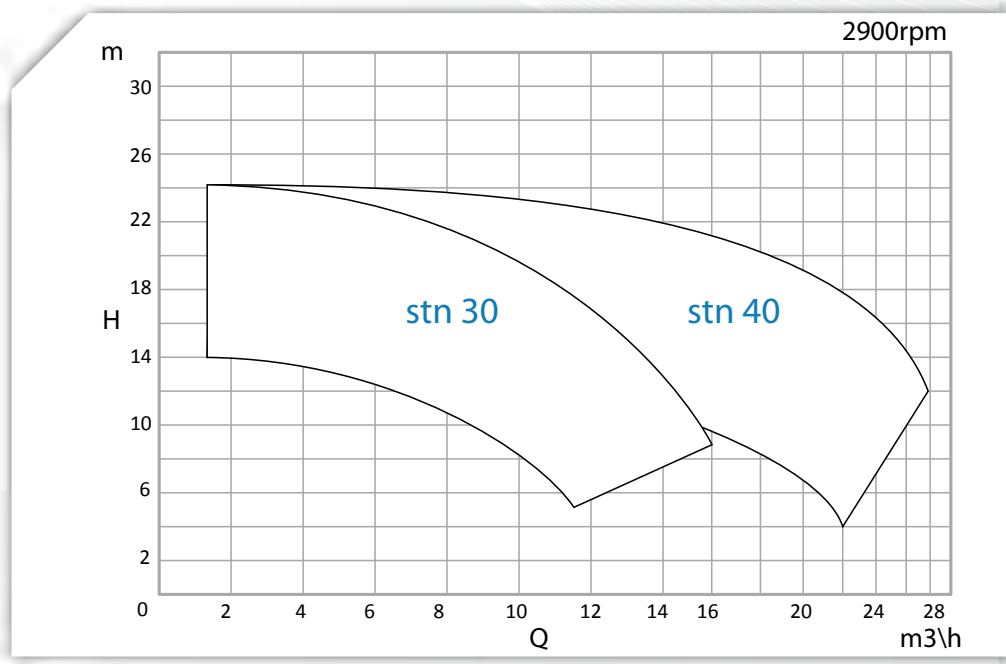
## SHAFT



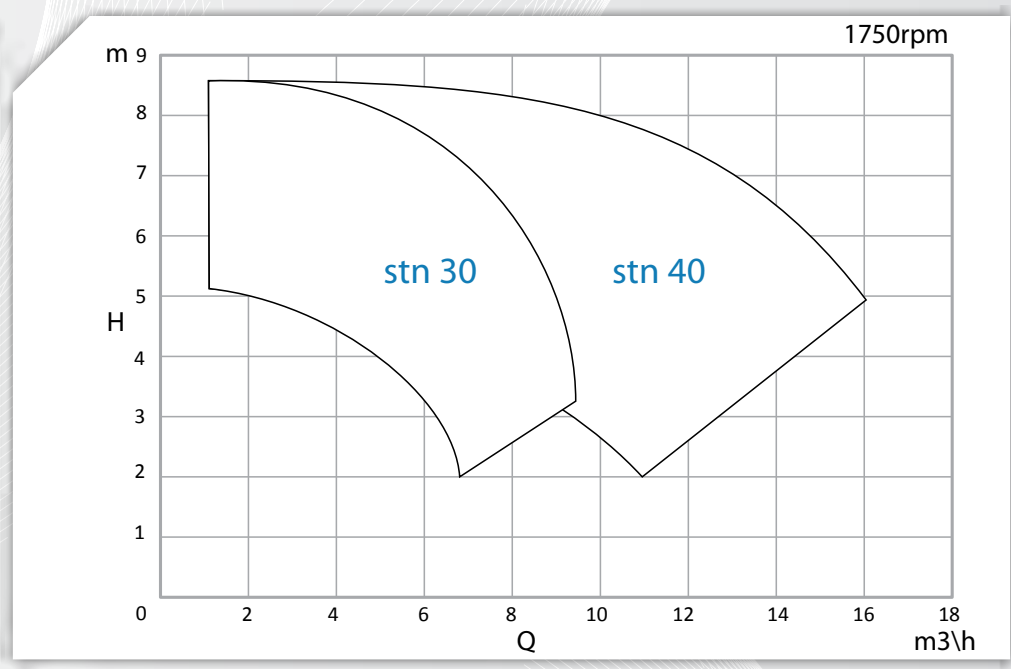
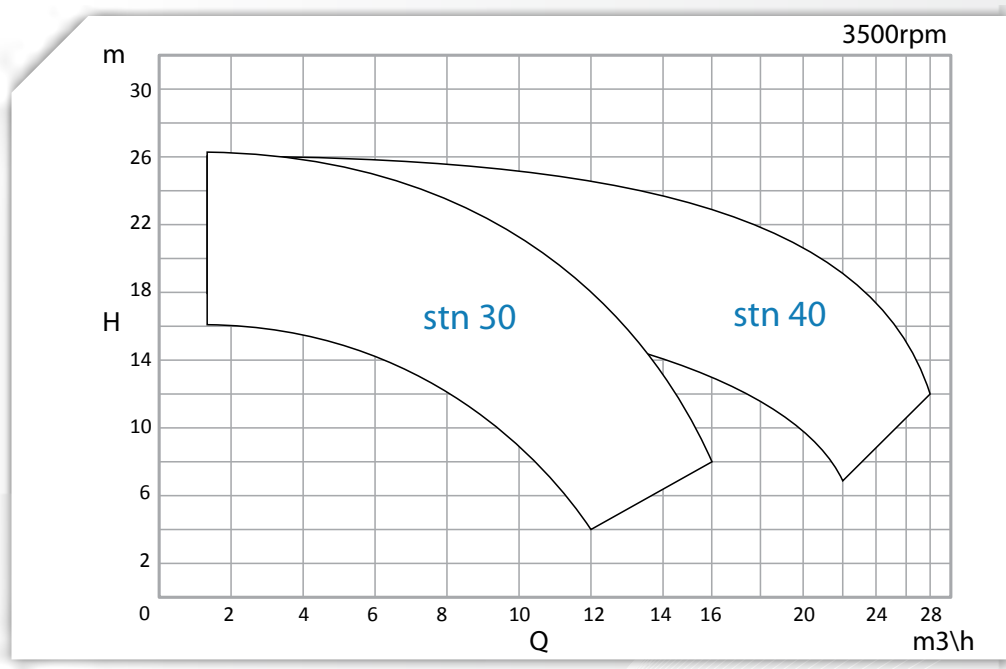
- Axial and radial loads are well distributed thanks to the highly reliable rotating parts design. The static shaft (SiC or Ceramic) is supported in the can and by the lining suction cover.

# PERFORMANCE FIELDS

50Hz



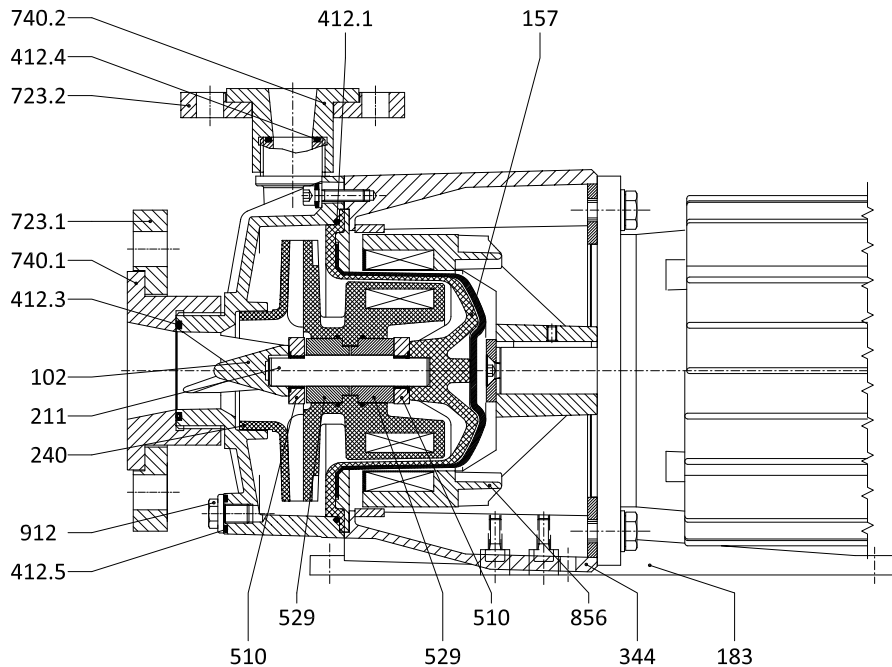
60Hz



Not binding data refers to water at room temperature. For specific performance curve contact CDR Pompe SpA.



# SECTIONAL DRAWING



| DIN   | Component         | Material                    |
|-------|-------------------|-----------------------------|
| 102   | Casing            | PP-GF / CFR-ETFE            |
| 157   | Isolation Shell   | PP-GF / ETFE+PC             |
| 183   | Support foot      | Ryton/Inox                  |
| 211   | Pump Shaft        | SiC / Al2O3                 |
| 240   | Impeller Assembly | PP/ETFE                     |
| 344   | Lantern           | PP-GF / GS400               |
| 412.1 | O-Ring Casing     | EPDM / FPM / FKM            |
| 412.5 | O-Ring            | EPDM / FPM / FKM            |
| 510   | Thrust Bearing    | SiC / Al2O3                 |
| 529   | Bearing Sleeve    | SiC / PTFE-Al2O3 / Graphite |
| 856   | Outer Magnet      | GS400+Ryton                 |
| 912   | Threaded Cap      | PTFE                        |

Pump Part list

| DIN   | Component        | Material            |
|-------|------------------|---------------------|
| 412.3 | O-Ring           | EPDM / FPM / FKM    |
| 412.4 | O-Ring           | EPDM / FPM / FKM    |
| 723.1 | Suction Flange   | PP-STEEL / AISI 304 |
| 723.2 | Suction Flange   | PP-STEEL / AISI 304 |
| 740.1 | Flare connection | PP / ETFE-AISI 304  |
| 740.2 | Flare connection | PP / ETFE-AISI 304  |

Flange connections

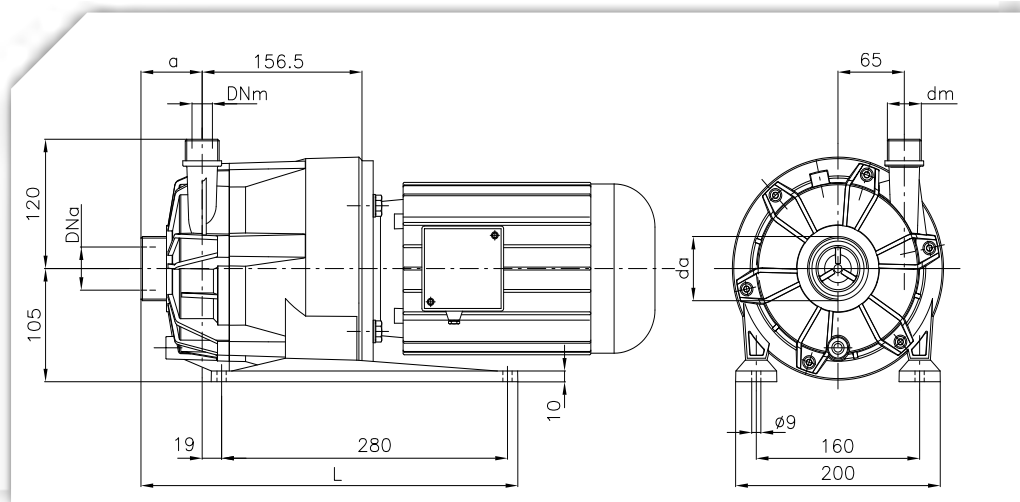
STN

Technical Specifications

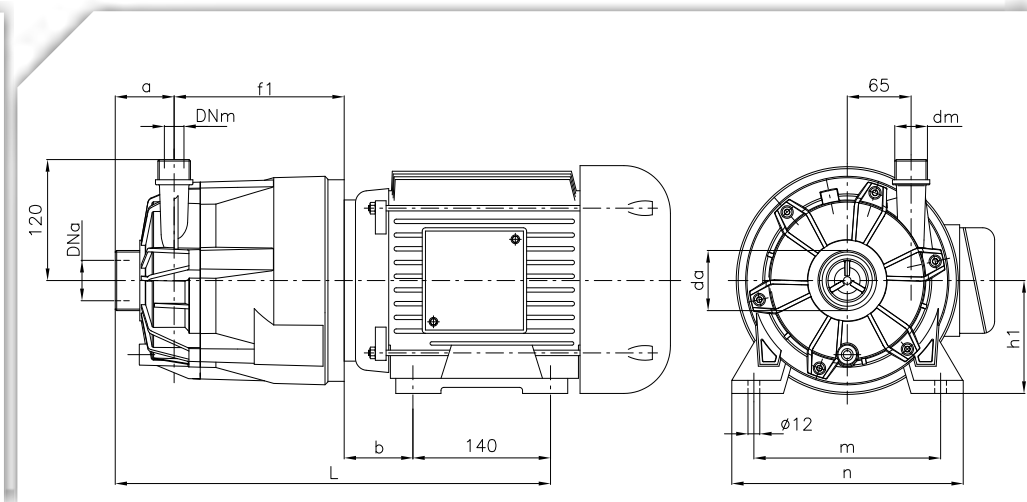
|                          |  |
|--------------------------|--|
| Performances<br>2900 rpm | Q max = 28 m3/h -> H max = 25 mcl  |
| Electric Motors          | 0.75 kW (motor size 80) -> 4 kW (motor size 112)   |
| Temperature range        | <ul style="list-style-type: none"> <li>PP-GF : 0°C -&gt; +60°C</li> <li>CFR-ETFE : -15°C -&gt; +80°C</li> </ul>                                |
| Allowable Pressure Range | <ul style="list-style-type: none"> <li>PP : from 6 bar (20°C) to 4 bar (60°C)</li> <li>CFR-ETFE : from 6 bar (20°C) to 4 bar (80°C)</li> </ul> |
| Threaded Connections     | STN 30 (G2" X G1")<br>STN 40 (G2"¾ X G1"½)<br>* as option : Flanges ISO 1092 PN16RF or ANSI 150 RF   |
| Viscosity                | 1cSt min - 100 cSt max   |
| Allowable Solids         | Max concentration 2 % by weight / Max particle size 0,10 mm  |

# OVERALL DIMENSIONS

## STN 30/40 MOTOR SIZE 80/90



## STN 30/40 MOTOR SIZE 100/112



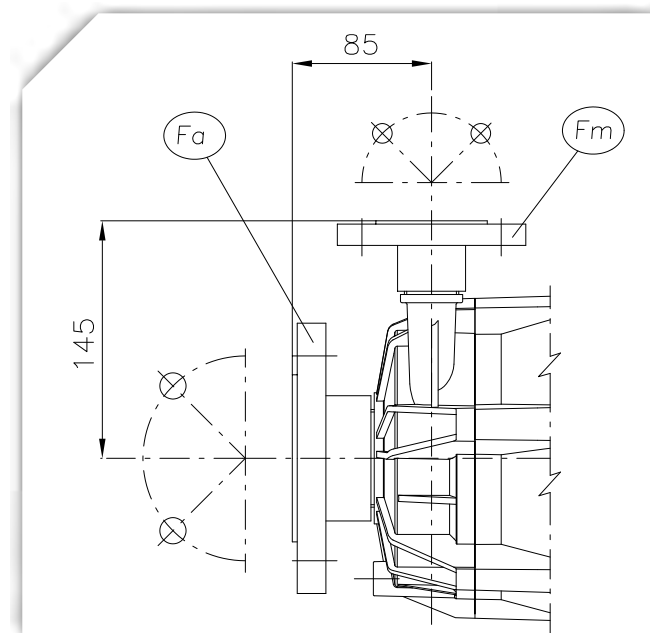
## STN 30/40 MOTOR SIZE 80/90

| Model  | DN <sub>a</sub> | DN <sub>m</sub> | da       | dm       | a (mm) | L (mm) | Motor Frame |
|--------|-----------------|-----------------|----------|----------|--------|--------|-------------|
| STN 30 | 40              | 20              | G 2"     | G 1"     | 60     | 370    | 80 / 90 B5  |
| STN 40 | 50              | 32              | G 2 3/4" | G 1 1/2" | 67     | 377    | 80 / 90 B5  |

## STN 30/40 MOTOR SIZE 100/112

| Model  | DN <sub>a</sub> | DN <sub>m</sub> | da       | dm       | a (mm) | b (mm) | h1 (mm) | L (mm) | f1 (mm) | m (mm) | n (mm) | Motor Frame  |
|--------|-----------------|-----------------|----------|----------|--------|--------|---------|--------|---------|--------|--------|--------------|
| STN 30 | 40              | 20              | G 2"     | G 1"     | 60     | 63     | 100     | 438    | 173     | 180    | 200    | 100 B3 / B14 |
|        | 40              | 20              | G 2"     | G 1"     | 60     | 70     | 112     | 443    | 173     | 190    | 240    | 112 B3 / B14 |
| STN 40 | 50              | 32              | G 2-3/4" | G 1-1/2" | 67     | 63     | 100     | 443    | 173     | 180    | 200    | 100 B3 / B14 |
|        | 50              | 32              | G 2-3/4" | G 1-1/2" | 67     | 70     | 112     | 450    | 173     | 190    | 240    | 112 B3 / B14 |

## FLANGED EXECUTION





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For further info, please visit  
[www.cdrpompe.com](http://www.cdrpompe.com)

**Technical Characteristics**

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