

# STN

**NEW**



STN 70



STN 30



STN 40

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



Comply to:  
2006/42/CE

Available upon request:

ATEX 100   
Directive 2014/34/CE

Flanges :  
UNI 1092 PN10RF type B  
ANSI 150RF

Plastic Magnetic Drive Centrifugal Pumps



**CDR**

Pumps UK Ltd

# STN

## 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

### 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 like the ETN range, but designed for a reduced and economical requirement profile

## Application fields

Basic chemical  
Low Duty Service



Paper industry



C.I.P.



Galvanic Industry



Water treatment  
Ion exchange  
resins regeneration



# 3D VIEW - STN 30 / 40

Inner and Outer magnets are equipped with rare earth permanent magnets. Patented cage magnet attachment guarantees stability during the operation of the pump.

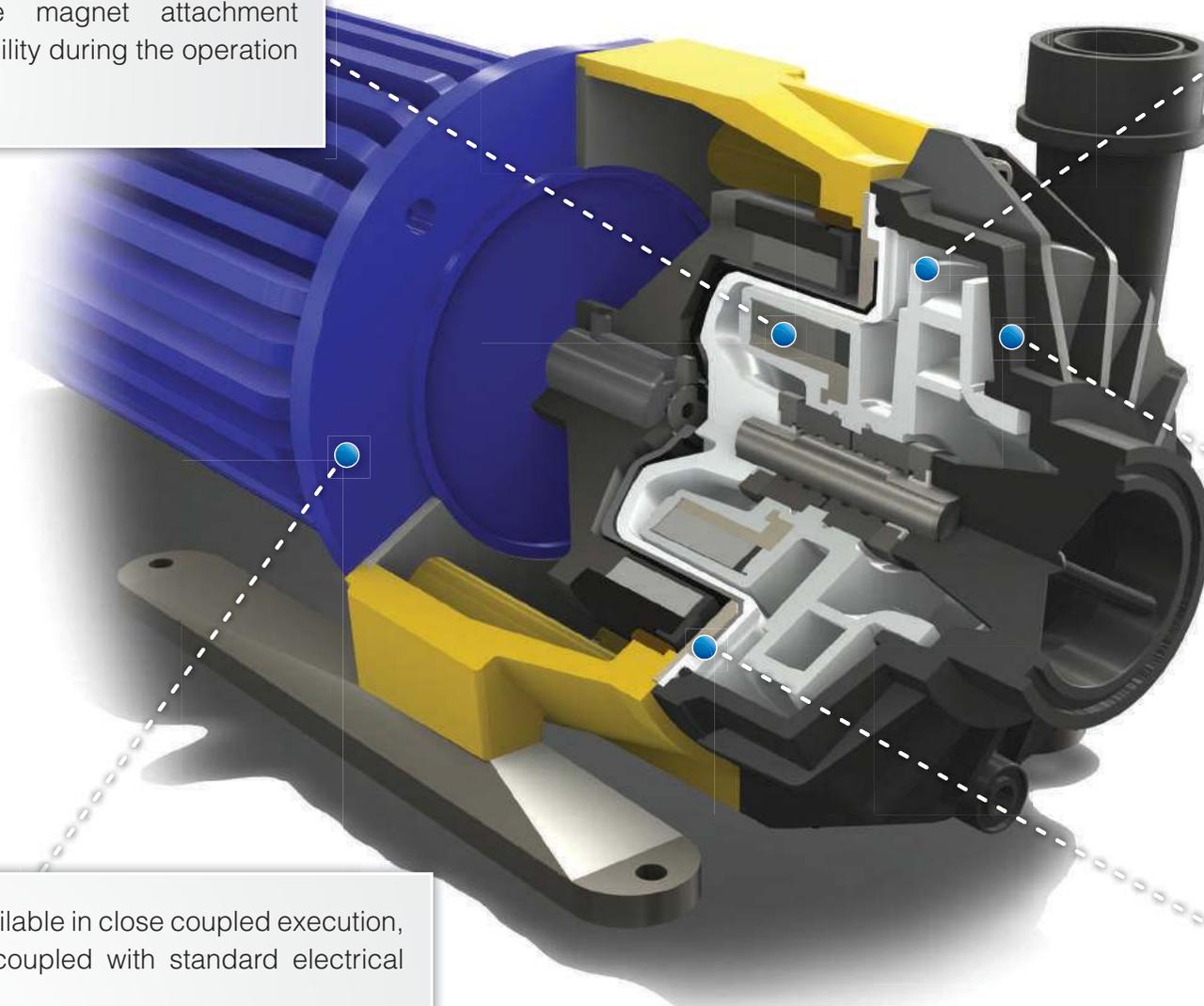
High chemical resistance employing a performing material as CFR-ETFE.

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 - STN 30 / 40



## 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.



## IMPELLER ASSEMBLY

- 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

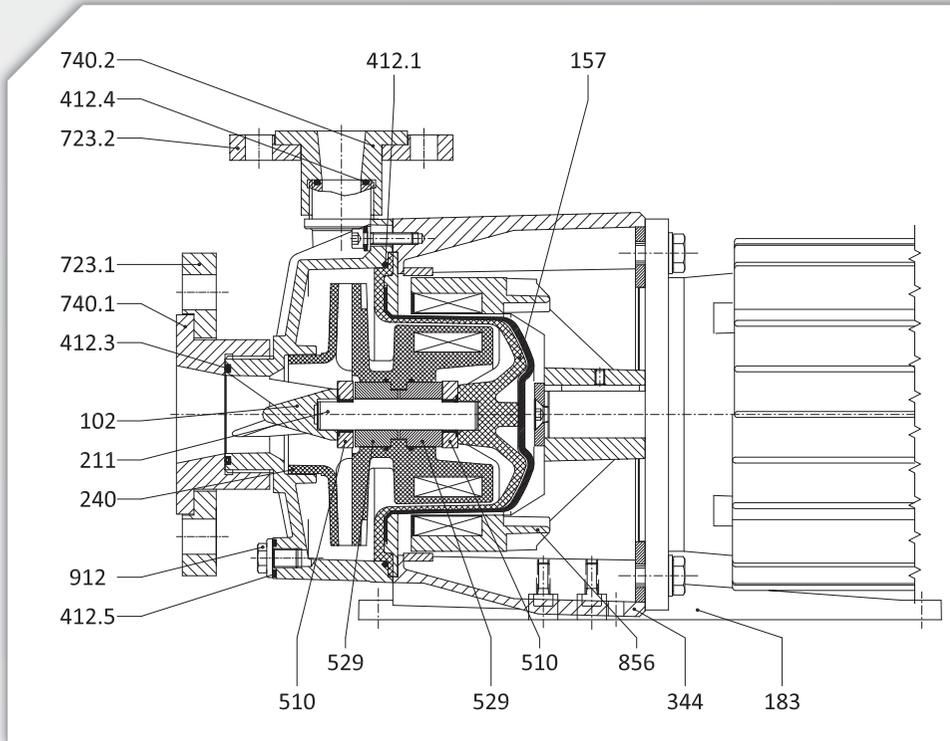


## SHAFT AND BUSHES

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.

# SECTIONAL DRAWING - STN 30 / 40

STN



Pump Part List

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-CARBON / GRAPHITE
856	Outer Magnet	GS400+Ryton
912	Threaded Cap	PTFE

Technical Specifications

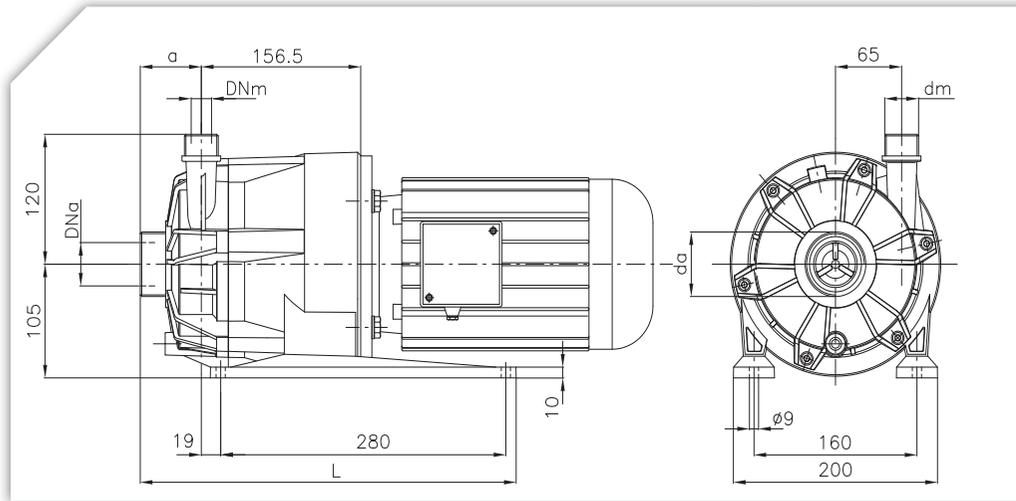
Performances 2900 rpm	Q max = 28 m3/h -> H max = 25 mcl
Electric Motors	0.75 kW (motor size 80) -> 4 kW (motor size 112)
Temperature range	<ul style="list-style-type: none"> <li>PP-GF : 0°C -&gt; +60°C</li> <li>CFR-ETFE : -15°C -&gt; +80°C</li> </ul>
Allowable Pressure Range	<ul style="list-style-type: 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") STN 40 (G2"¾ X G1"½) * as option: Flanges ISO 1092 PN10RF or ANSI 150RF
Viscosity	0,5 cSt min - 60 cSt max
Allowable Solids	Max concentration 2 % by weight / Max particle size 0,10 mm

Flange Connections

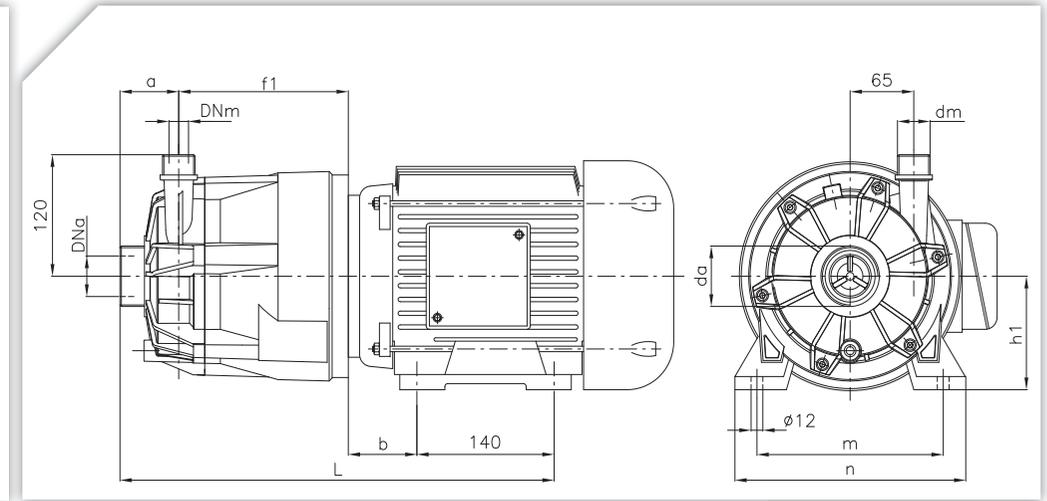
DIN	Component	Material
412.3	O-Ring	EPDM / FPM / FKM
412.4	O-Ring	EPDM / FPM / FKM
723.1	Suction Flange	PP-STEEL / AISI 304
723.2	Discharge flange	PP-STEEL / AISI 304
740.1	Flare connection	PP / ETFE-AISI 304
740.2	Flare connection	PP / ETFE-AISI 304

# OVERALL DIMENSIONS - STN 30 / 40

## STN 30/40 MOTOR SIZE 80/90



## STN 30/40 MOTOR SIZE 100/112



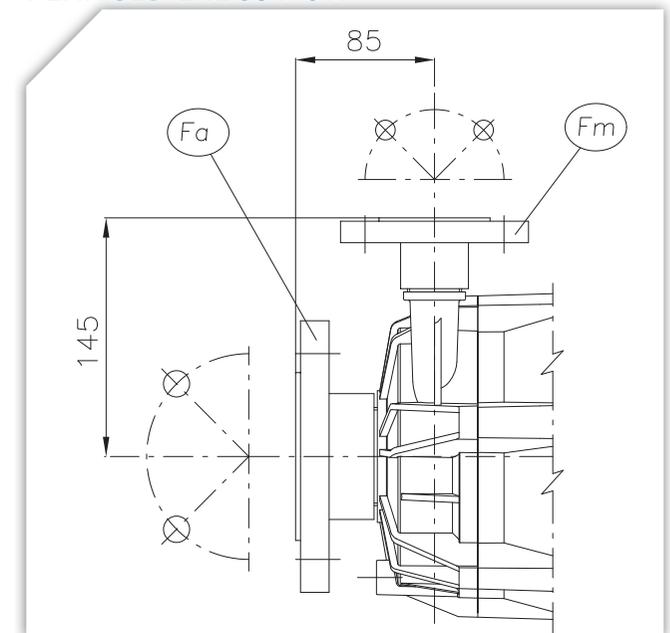
## STN 30/40 MOTOR SIZE 80/90

Model	DNa	DNm	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	DNa	DNm	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



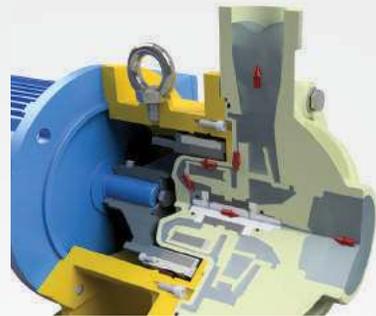
## 3D VIEW - STN 70

Inner and Outer magnets are equipped with rare earth permanent magnets. Patented cage magnet attachment guarantees stability during the operation of the pump.

**NEW**

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

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



New internal circulation path to improve flushing and lubrication of bushes, to keep bushes and shaft cooled and lubricated, even under stress conditions, i.e. end of curve and/or cavitation conditions.

# FEATURES - STN 70



## CASING

- Available in 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

- Available made by a solid 3 mm PP-GF layer
- Zero Eddy Current Losses thanks to non-metallic execution



## SHAFT AND BUSHES

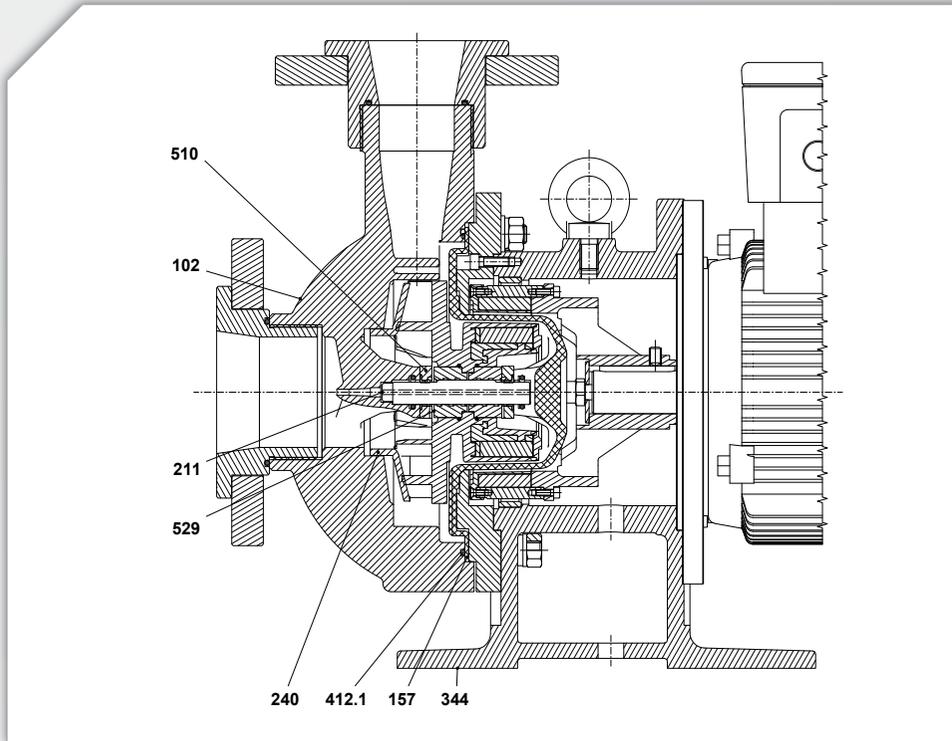
Axial and radial loads are well distributed thanks to the highly reliable rotating parts design. The static shaft (SiC or Ceramic) is supported in the can and by the lining suction cover.

Interchangeability of bushes, axial thrusts and shaft between ETN EVO and STN 70

Bushes available in PTFE/Carbon.

# SECTIONAL DRAWING - STN 70

STN



Pump Part List

DIN	Component	Material
102	Casing	PP-GF
157	Isolation shell	PP
183	Feet	Ryton/Inox
211	Shaft	SiC / Al2O3
240	Impeller assembly	PP
344	Lantern	GS400
412.1	O-ring casing	EPDM / FPM
412.5	O-Ring	EPDM / FPM
510	Thrust Bearing	SiC / Al2O3
529	Bearing Sleeve	PTFE/carbon/SiC/graphite
856	Outer Magnet	GS400+Ryton

Technical Specifications

Performances 2900 rpm	Q max = 62 m3/h -> H max = 30 mcl
Electric Motors	0.75 kW (motor size 80) -> 4 kW (motor size 112)
Temperature range	• PP-GF : 0°C -> +60°C
Allowable Pressure Range	• PP : from 6 bar (20°C) to 4 bar (60°C)
Threaded Connections	STN 70 Threaded execution = DN 80 / DN 50 Flanged execution = DN 80 / DN 65 * as option: flanges ISO 1092 PN16RF or ANSI 150RF
Viscosity	1cSt min - 100 cSt max
Allowable Solids	Max concentration 2 % by weight / Max particle size 0,10 mm

Painting Coating Quality

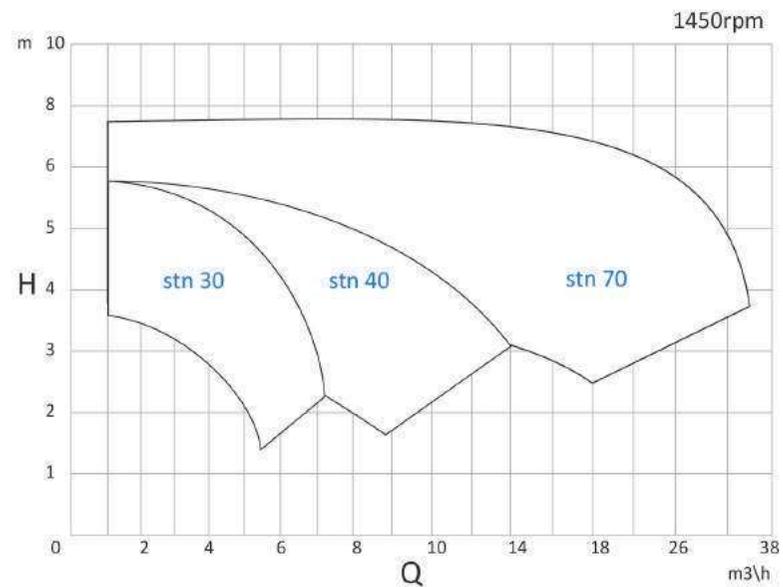
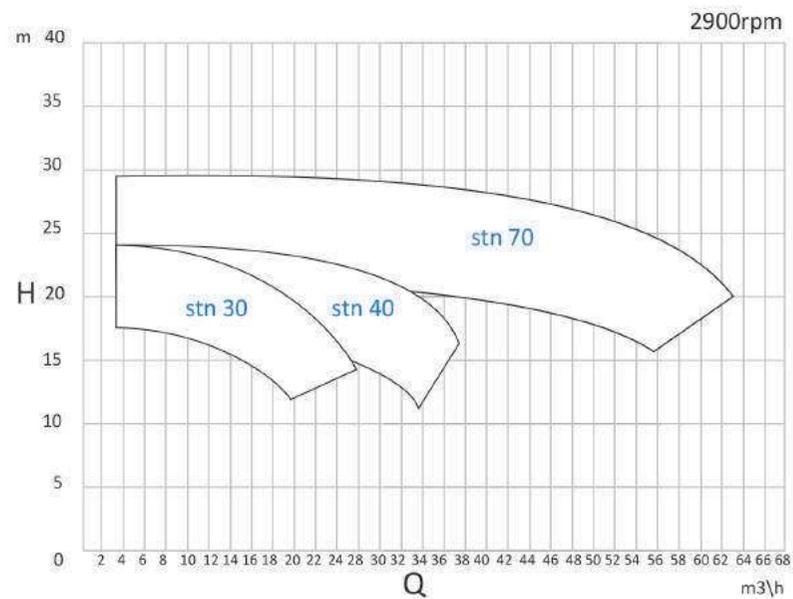
The metal surfaces are protected by a high performance three layers coating (240 micron total)

- Epoxy zinc paint
- Epoxy amidic modified vinyl
- Epoxy enamel paint or aliphatic acrylic polyurethane.
- Available upon request : EN ISO 12944-5 C5M and C5I protecting paint system grades
- RAL 1017

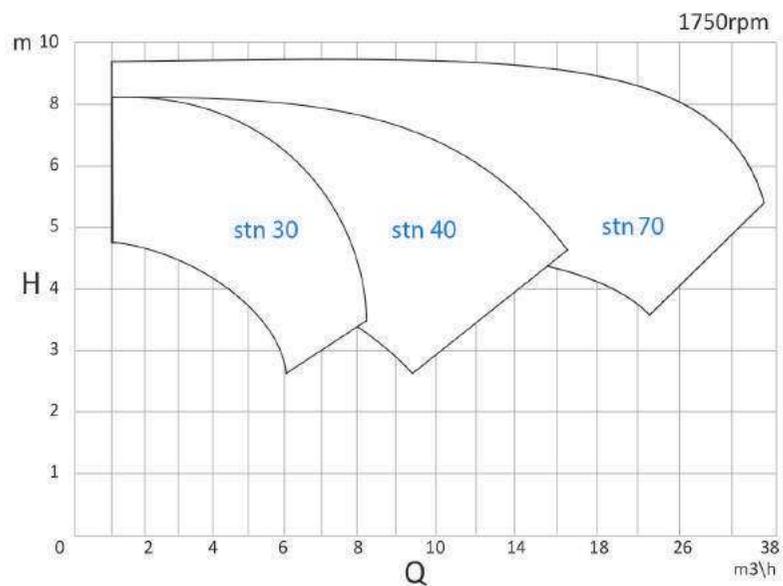
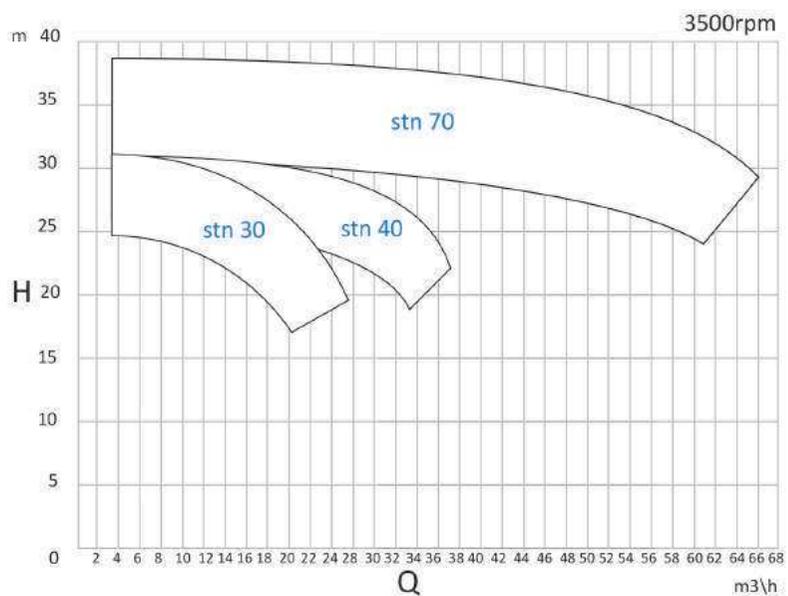


# PERFORMANCE FIELDS

50Hz



60Hz





Pumps UK Ltd | Making the right choice...

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