



WE
PUMP
YOUR
CHEMICALS



STN SERIES

MAGNETIC DRIVE
CENTRIFUGAL PUMP
IN PLASTIC

STN

Close-coupled execution

Range of applications

- _ Basic Chemical Services
- _ Paper Industry
- _ Water Treatment (ion exchange resins)
- _ Washing Circuits (C.I.P.)
- _ Galvanic industry



in compliance with:
2006/42/CE

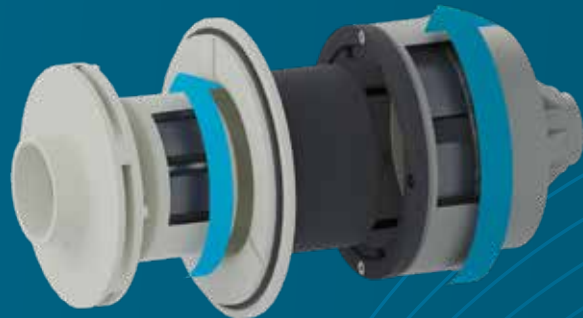


ATEX 100
Directive: 2014/34/EU



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.



Design

Simplicity, lightness and economy are the 3 strong points of this pump in cases of occasional handling of chemical products.

STN

Atex execution

Not applicable to the STN 70 model



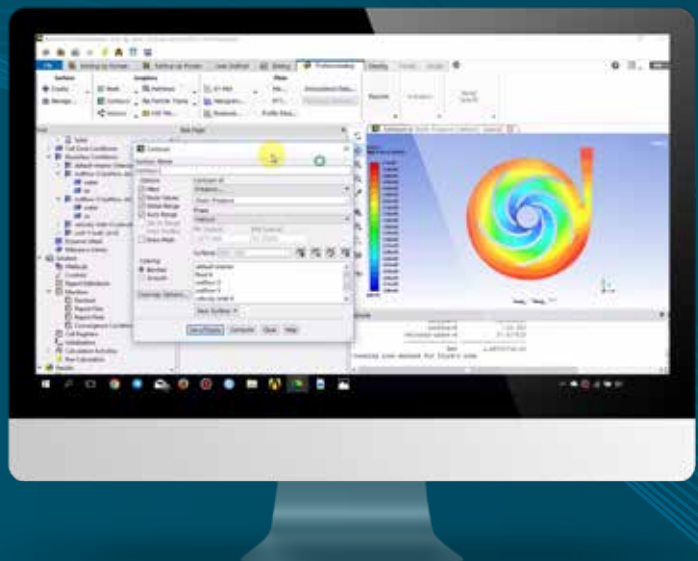
ATEX 100
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R&D with Fluidodynamic Simulation

Designed with an innovative simulation software, that permits to obtain high hydraulic performances and efficiency levels near to the physical possible values.

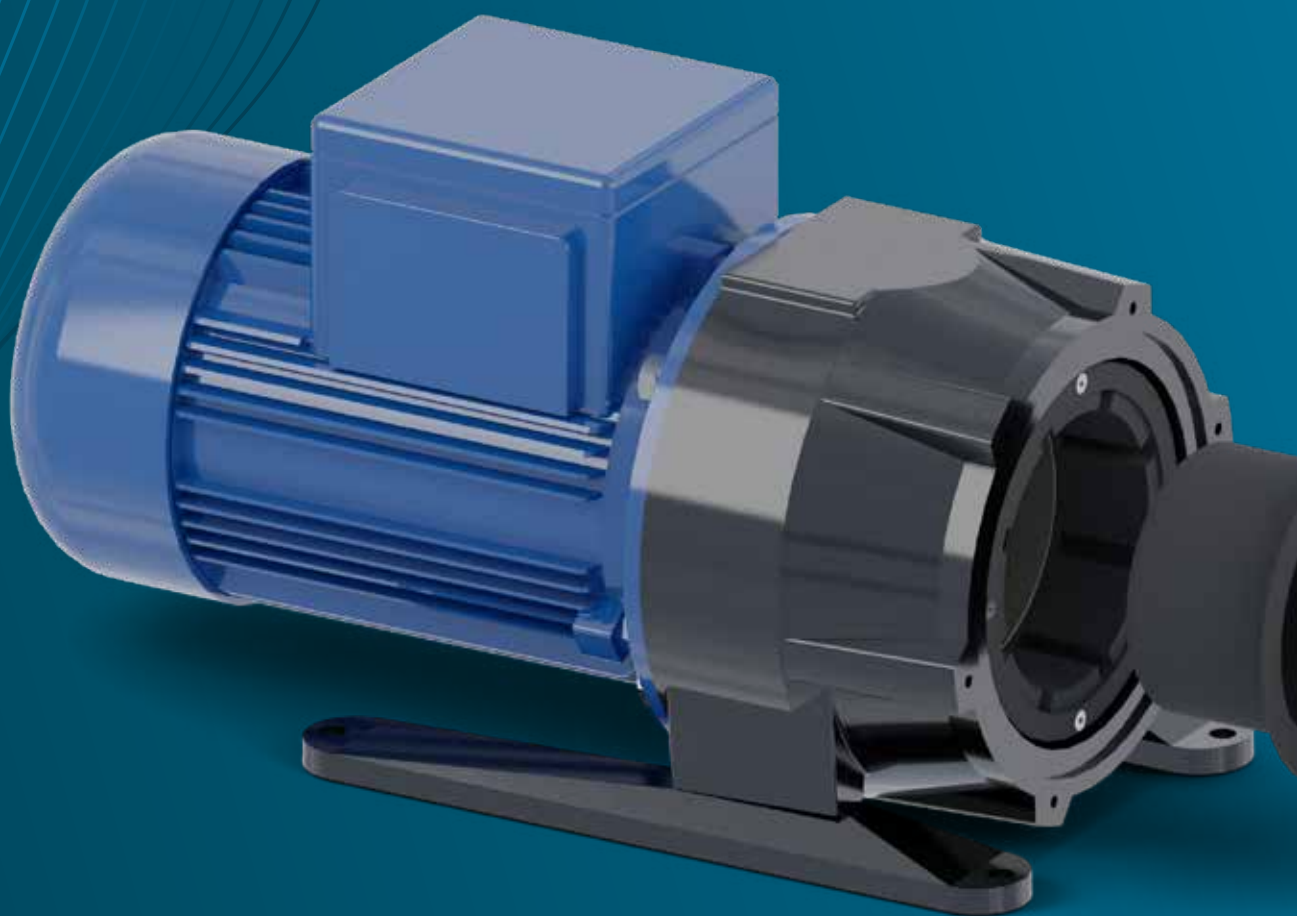
Simulated with

Ansys



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STN Series 30-40 Main features and 3d view



01. Isolation shell

Available in pure ETFE with external polycarbonate reinforcement to ensure superior mechanical resistance and in fibre glass-filled polypropylene.

Absence of Eddy Current due to non-metallic construction.

02. Impeller

The one-piece construction of the impeller and internal magnet simplifies assembly as well as minimising the risk of permeation.

The presence of counter-blades reduces axial and radial thrust ensuring greater reliability of the machine even during heavy duty jobs.

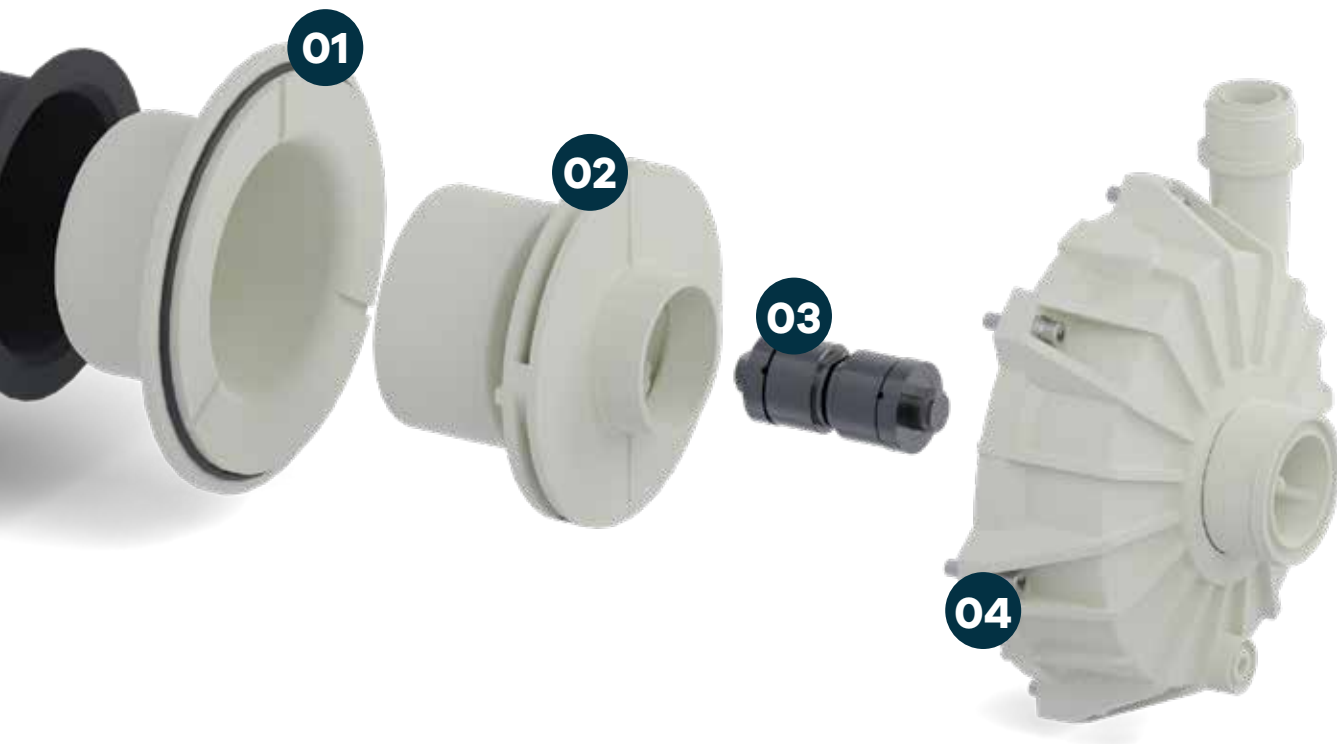
03. Pump shaft and bushes

The axial and radial loads are well distributed due to the hydraulic study of the thrusts. Pump shaft and thrust bearing available in Al₂O₃ and SiC. Bushes available in graphite, SiC, PTFE/carbon.

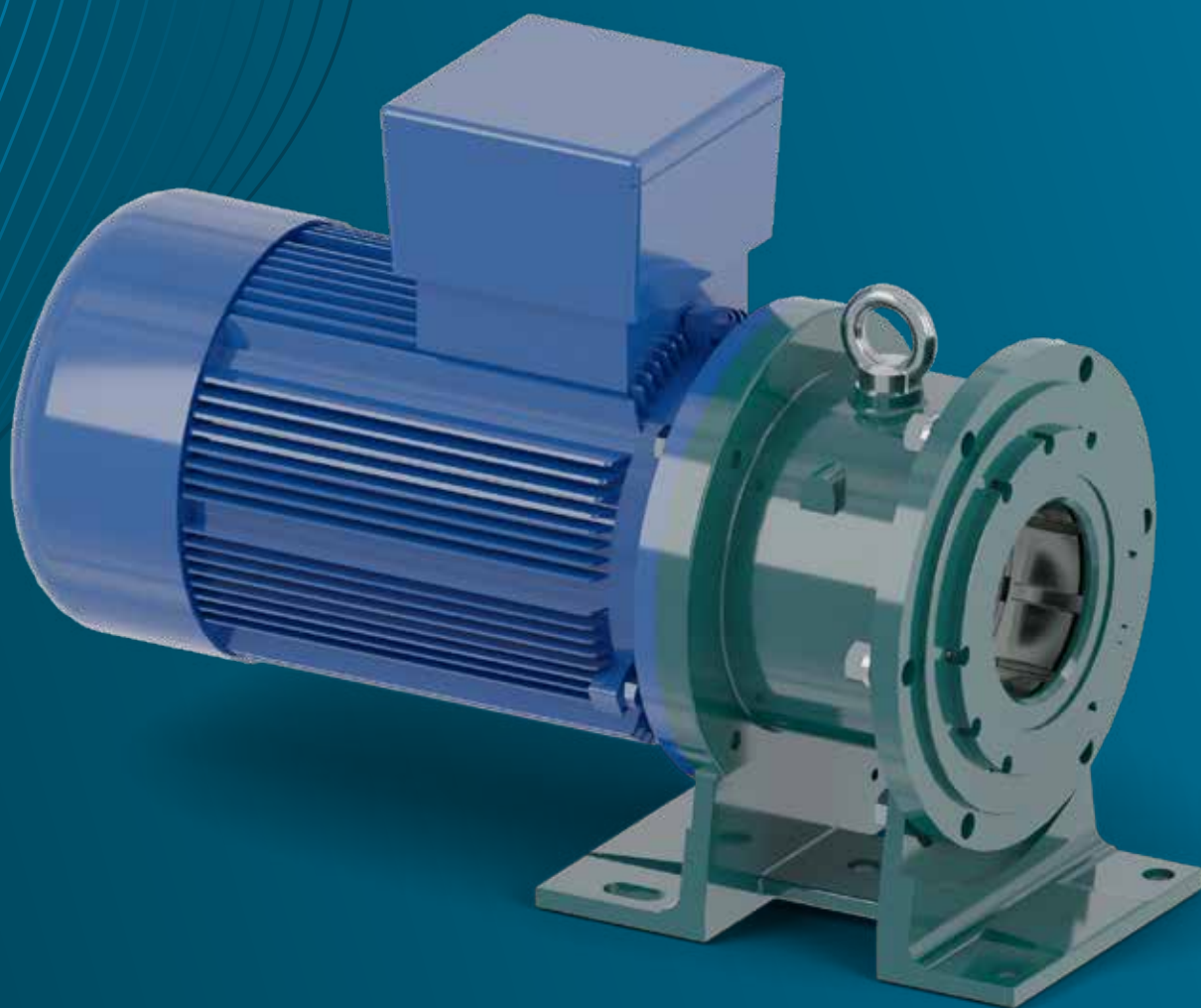
04. Casing

Available in the following materials:

- _ PP - GF: fibre glass-filled polypropylene;
- _ CFR - ETFE: carbon fiber filled ethylene tetrafluoroethylene.



STN Series 70 Main features and 3d view



01. Isolation shell

Available in fibre glass-filled polypropylene.
Absence of Eddy Current due to non-metallic construction.

02. Impeller

The one-piece construction of the impeller and internal magnet simplifies assembly as well as minimising the risk of permeation.
The presence of counter-blades reduces axial and radial thrust ensuring greater reliability of the machine even during heavy duty jobs.

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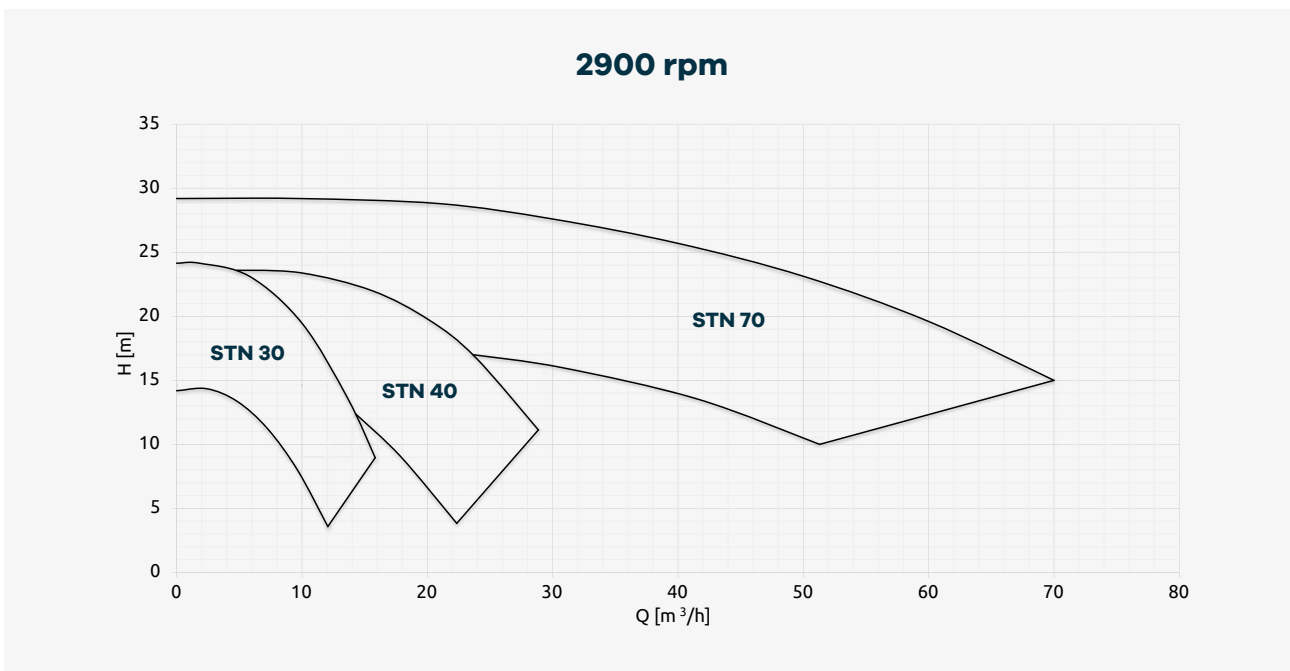
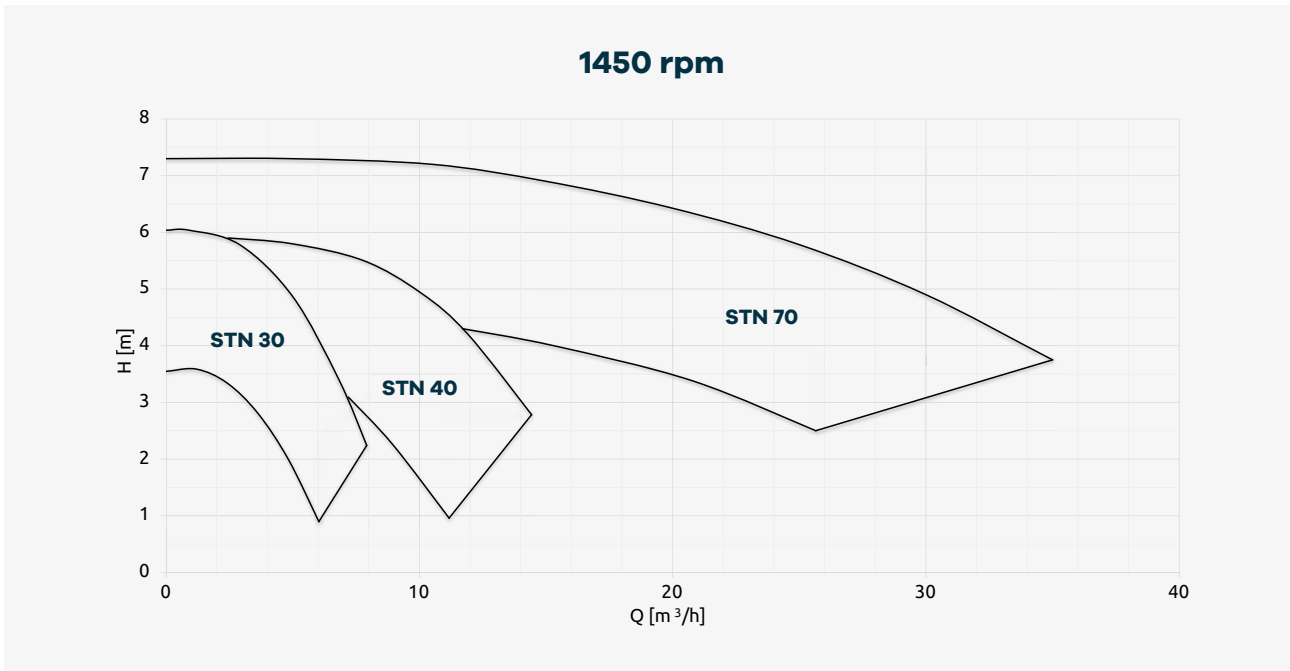
04. Casing

Available in the following materials:
_ PP - GF: fibre glass-filled polypropylene.



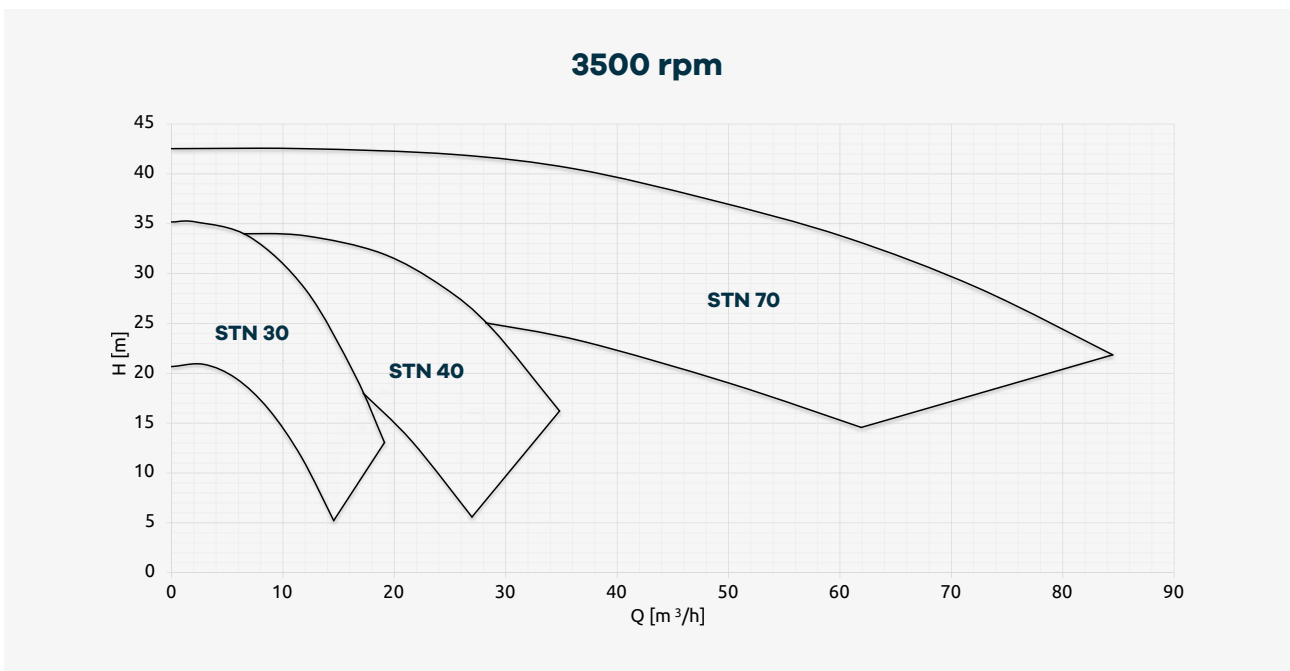
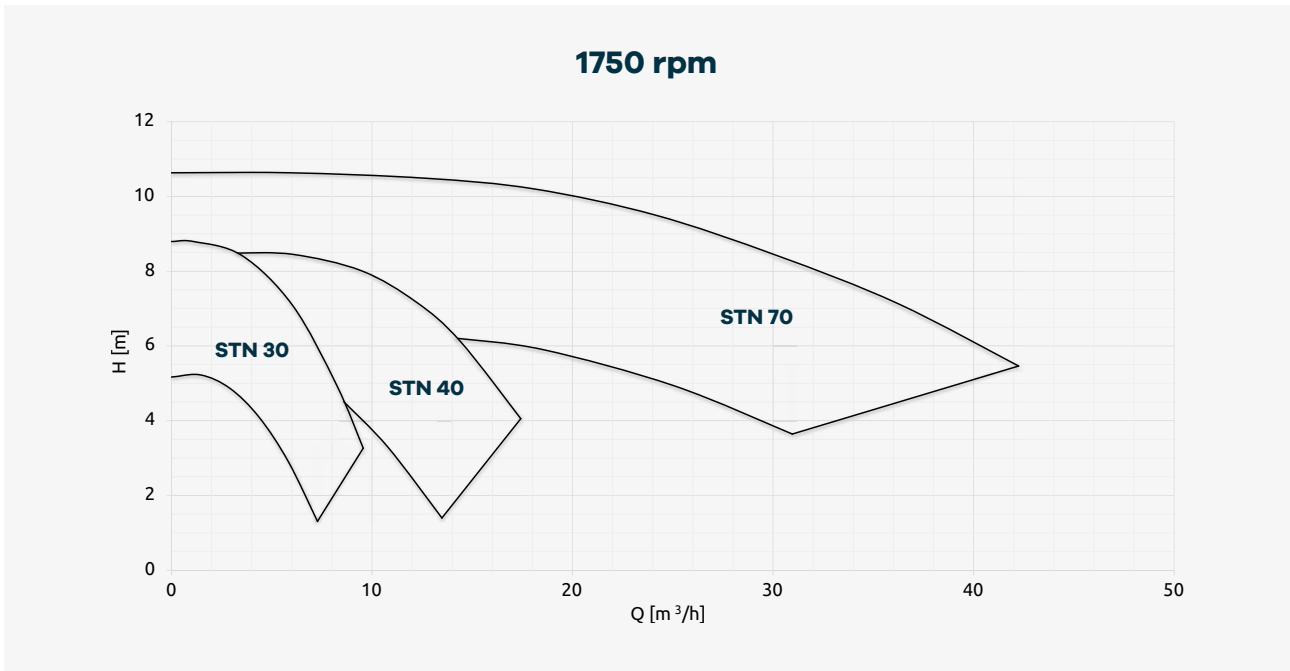
Performance Curves

50 Hz



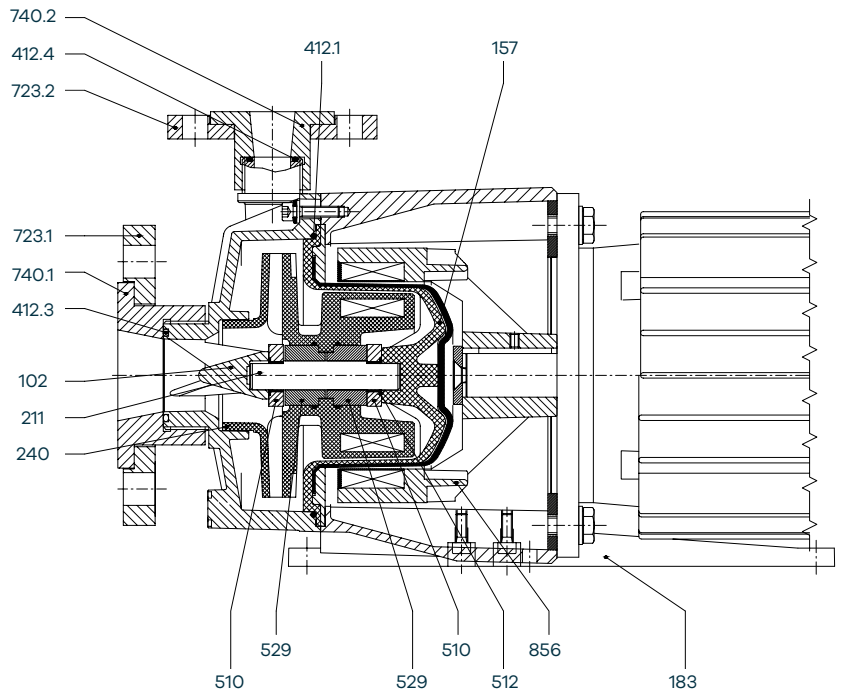
Not binding data refers to water at room temperature.
For specific performance curve contact CDR Pompe S.R.L.

60 Hz



STN 30-40

Section drawings



Technical specifications

Performance at 2900 rpm

Q max = 28 m³/h
H max = 25 mcl

Motors

0.75 kW (motor size 80)
4 kW (motor size 112)

Allowable temperatures

PP-GF: 0°C > +60°C
CFR-ETFE: -15°C > +80°C

Allowable pressures

PP-GF: from 6 bar (20°C) to 4 bar (60°C)
CFR-ETFE: from 6 bar (20°C) to 4 bar (80°C)

Connections

STN 30 (G2" X G1")
STN 40 (G2"¾ X G1"½)

Viscosity

min: 0,5 cSt
max: 150 cSt

Allowable solids

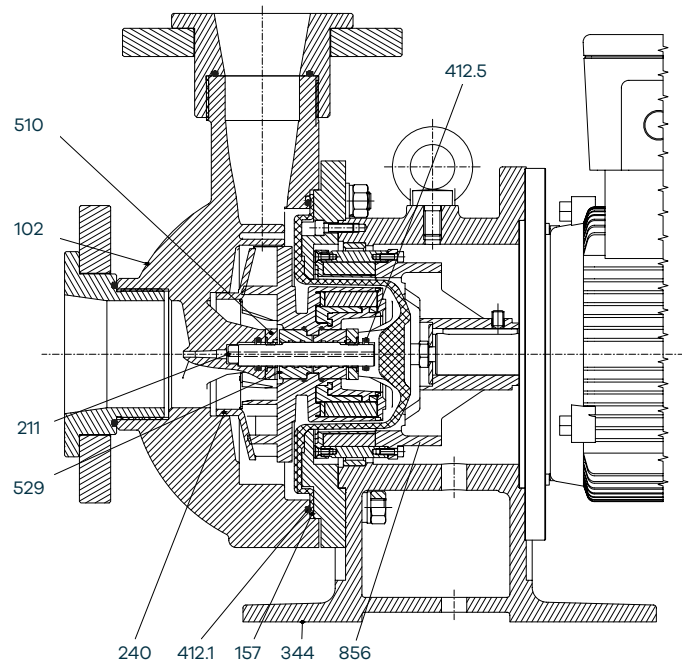
Maximum concentration: 2% by weight
Maximum size: 0,10 mm

Internal components

DIN	Components	Materials
102	Casing	PP-GF / CFR-ETFE
157	Isolation shell	PP-GF / ETFE+PC
183	Feet	Ryton / Inox
211	Pump shaft	SiC / Al2O3
240	Assembled impeller	PP / ETFE
344	Lantern	PP-GF / GS400
412.1	O-Ring Casing	EPFM / FPM / FKM
412.3	O-Ring Casing	EPFM / FPM / FKM
412.4	O-Ring	EPFM / FPM / FKM
412.5	O-Ring	EPFM / FPM / FKM
510	Thrust bearing	SiC / Al2O3
529	Rotating bushes	SiC / PTFE-Carbon / Graphite
856	External magnet	GS400+Ryton
912	Drainage cap	PTFE
723.1	Suction flange	PP-Steel / AISI 304
723.2	Discharge flange	PP-Steel / AISI 304
740.1	Suction joint	PP / ETFE-AISI 304
740.2	Discharge joint	PP / ETFE-AISI 304

STN 70

Section drawings



Technical specifications

Performance at 2900 rpm

Q max = 50 m³/h
H max = 30 mcl

Motors

0,75 kW (motor size 80)
7,5 kW (motor size 112)

Allowable temperatures

PP-GF: 0°C > +60°C

Allowable pressures

PP-GF: from 6 bar (20°C) to 4 bar (60°C)

Pump nozzles

Thredead gas = DN 80 / DN 50
Flanged = DN 80 / DN 65
Flanges ISO 1092, PN10RF e ANSI 150 RF

Viscosity

min: 0,5 cSt
max: 150 cSt

Allowable solids

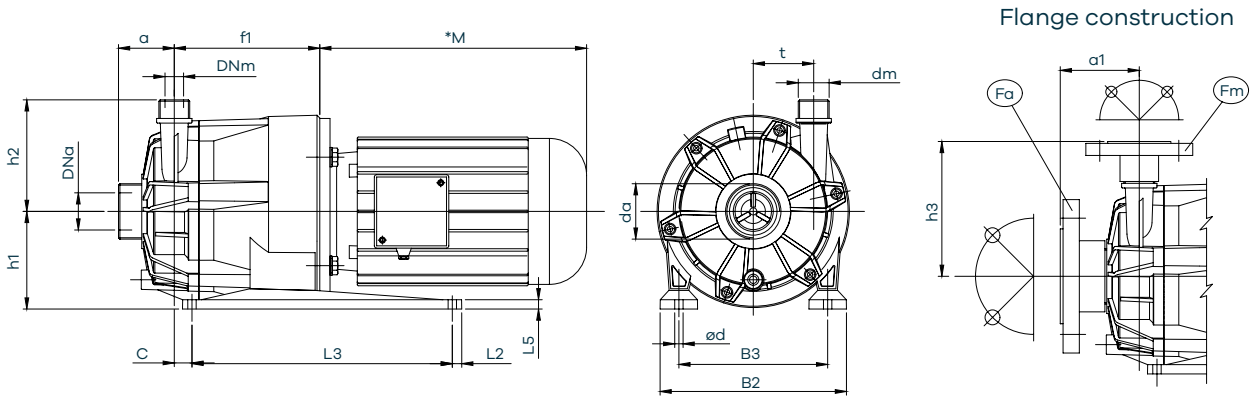
Maximum concentration: 2% by weight
Maximum size: 0,10 mm

Internal components

DIN	Components	Materials
102	Casing	PP-GF
157	Isolation shell	PP
211	Pump shaft	SiC / Al ₂ O ₃
240	Assembled impeller	PP
344	Lantern	GS400
412.1	O-Ring Casing	EPFM / FPM
412.5	O-Ring	EPFM / FPM
510	Thrust bearing	SiC / Al ₂ O ₃
529	Rotating bushes	SiC / PTFE-Carbon / Graphite
856	External magnet	GS400+Ryton

STN 30-40 | motor 80/90

Overall dimensions



Pump dimensions

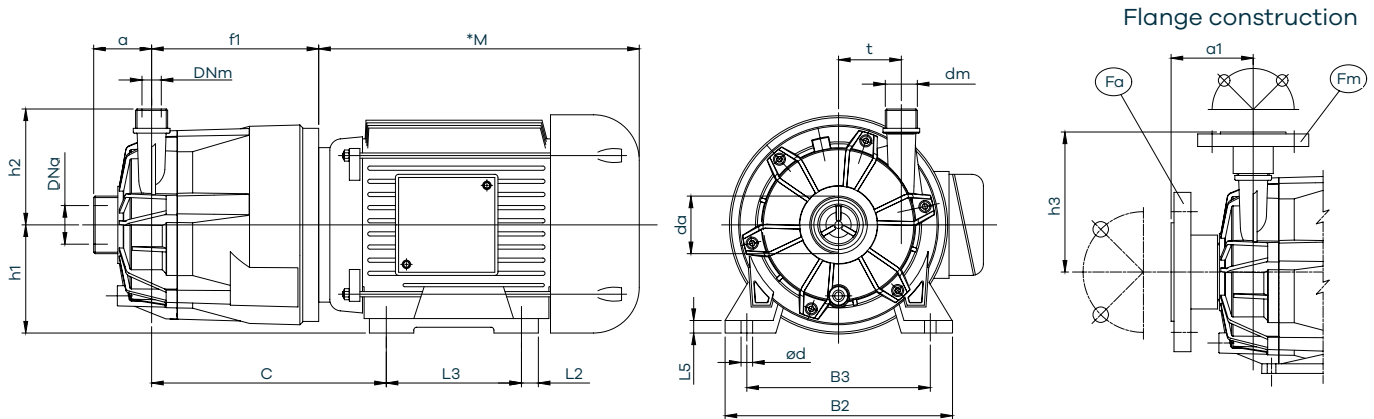
Model	STN 30	STN 40
DN _a	40	50
DN _m	20	32
F _a	DN50 UNI EN 1092-1 PN 10RF or ANSI 150	DN65 UNI EN 1092-1 PN 10RF or ANSI 150
F _m	DN25 UNI EN 1092-1 PN 10RF or ANSI 150	DN40 UNI EN 1092-1 PN 10RF or ANSI 150
da	G 2"	G 2" 3/4
dm	G 1"	G 1"1/2
a (mm)	60	67
a ₁ (mm)	85	85
B ₂ (mm)	200	200
B ₃ (mm)	160	160
C (mm)	19	19
Ød	9	9
h ₁ (mm)	105	105
h ₂ (mm)	120	120
h ₃ (mm)	145	145
L ₂ (mm)	10	10
L ₃ (mm)	280	280
L ₅ (mm)	10	10
t (mm)	65	65

f ₁	STN 30	STN 40
Motor dimensions		
80 (mm)	156,5	156,5
90 (mm)	156,5	156,5
Motor shape	B5	B5
Pump weight (without motor)	13	13

* The M dimension is according to the installed motor

STN 30-40 | motor 100/112

Overall dimensions



Pump dimensions

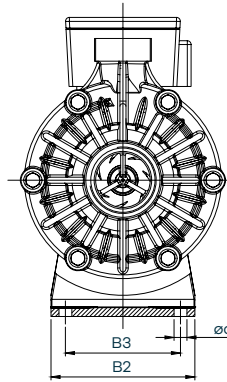
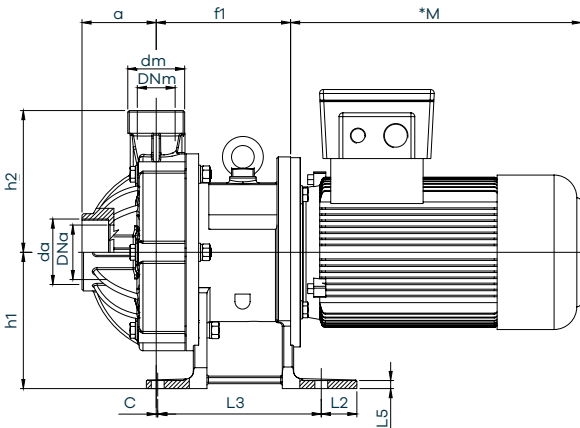
Model	STN 30	STN 40
DNa	40	50
DNm	20	32
Fa	DN50	DN65
	UNI EN 1092-1 PN 10RF or ANSI 150	
Fm	DN25	DN40
	UNI EN 1092-1 PN 10RF or ANSI 150	
da	G 2"	G 2" 3/4
dm	G 1"	G 1"1/2
a (mm)	60	67
a1 (mm)	85	85
Ød	12	12
h2 (mm)	120	120
h3 (mm)	145	145
L2 (mm)	15	17
L3 (mm)	140	140
L5 (mm)	10	12
t (mm)	65	65

f1		
Motor dimensions	STN 30	STN 40
B2	100 (mm)	200
	112 (mm)	240
B3	100 (mm)	160
	112 (mm)	190
C	100 (mm)	236
	112 (mm)	243
h1	100 (mm)	100
	112 (mm)	112
f1	100 (mm)	173
	112 (mm)	173
Motor shape	B3/B14	B3/B14
Pump weight (without motor)	16	16

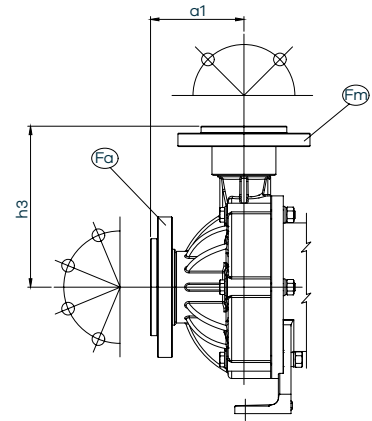
* The M dimension is according to the installed motor

STN 70

Overall dimensions



Flange construction



Pump dimensions

Model	STN 70
DNa	80
DNm	50
Fa	DN80 UNI EN 1092-1 PN 10RF or ANSI 150
Fm	DN65 UNI EN 1092-1 PN 10RF or ANSI 150
da	G 3"
dm	G 2 1/2"
a (mm)	98
a1 (mm)	133
B2 (mm)	190
B3 (mm)	152
C (mm)	2
ød	17
h1 (mm)	180
h2 (mm)	187
h3 (mm)	229
L2 (mm)	47
L3 (mm)	216
L5 (mm)	10
t (mm)	0

f1	
Motor dimensions	STN 70
80 (mm)	178
90 (mm)	178
100 (mm)	178
112 (mm)	178
132 (mm)	196
Motor shape	B5
Pump weight (without motor)	32

* The M dimension is according to the installed motor



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Technical characteristics:

The data and technical characteristics shown in the General Catalogue are not binding. CDR Pompe SRL reserves the right to implement changes without notice. Therefore the data, the size, performance and any other information reported are indicative and not binding. For any technical details you can request the product update form.