

Technical Pump Specification

NEMO® Model
NM090BY02S14V.1

Job:	
Date:	3/29/2021
Project:	Frac Pumps
	TPS Template 12/12/19

APPROVED
By JM at 5:15 pm, Mar 30, 2021

Product:		Content	nominal	minimum	maximum
Name / Composition			Frac Chemical Friction Reducer		
Product temperature	approx.	°F	70		
Specific gravity	approx.		1		
Particle size	approx.	in	0		
pH value			Not Given		
Solids content (w/w)	approx.	%TS	0		
Dynamic viscosity	approx.	CPS	8000		
Abrasiveness	Assumed		None		

"Materials of construction are only recommended based on the information provided. Customer needs to verify materials will be compatible with the process fluid or application."

Application details:		Content	nominal		
Flow rate (Q)	approx.	GPM	250		
Differential pressure		PSI	120		
Suction pressure	assumed	PSI	Flooded		
Discharge pressure	approx.	PSI	120		
Pump operating speed	approx.	RPM	385		
Sliding velocity	approx.	ft./s	9.2		
Frequency	approx.	Hz	59		
Power required at drive shaft	approx.	HP	26		
Running torque	approx.	ft./lbs.	364.2		
Starting torque	approx.	ft./lbs.	451.4		

Assembly specification	Installation:	Horizontal
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General operating conditions		
Installation area	Inside	
Ambient Temperature	Approx. 20°C / 70 F	
Humidity	up to 75%	
Application type	Continuous operation	
Operating hours per day	8	
Service voltage	3ph, 60hz, 230/460V	

Painting	Coating system	NIL System I RAL 7031 NETZSCH gray NCS 355B60G teal (stator only)
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Operating and Maintenance Instructions	
Standard documentation in accordance with the 98/37/EG Machinery Directive.	
The Operational Manual is provided in English and additional Safety instructions in Spanish	
Request the Operating and Maintenance at https://www.netzschusa.com/distributors/OM.html	

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Characteristics and benefits of the FSIP® Ready pump:

Reliable and sophisticated construction

Features large FSIP servicing cover (window)

Two large inspection ports 180° apart

Modular construction system

4 different stator - rotor geometries available for most sizes

Low Maintenance expenses

General characteristics

name plate on the pump	in English (Stainless steel)
direction of rotation	To the left, counter clockwise(as viewed from drive end)

Pump Pedestal

Cast Iron 0.6025 / EN-GJL-250

Pump housing / End connection

Housing material	Cast Iron 0.6025 / EN-GJL-250
Housing Connection position	Vertically Upwards (as viewed from drive end)
Function of housing connection	Suction Connection
Function of end connection	Discharge Connection
Suction Connection design	Standard
Nom. dia. & pressure for pump housing	6" 125# ANSI Flange
Discharge Connection design	standard
Nom. dia. & pressure of discharge flange	6" 125# ANSI Flange
Housing seals	FKM

Shaft seal

Design	Single Mechanical Seal
Shaft seal type	Netzsch uNS-100
Shaft seal materials	SiC v SiC faces, Viton Elastomers, 316SS hardware - Q1Q1VGG

Rotating parts

Extension shaft Material	Stainless Steel SAE 420
Coupling Rod Material	Stainless Steel SAE 420
Coupling Rod Design	Standard

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Joints

Joint type	Pin Joint with Wear Bushing and SM Joint Seal
Joint sealing material	Buna/SAE 316 Stainless Steel
Joint lubrication	Mineral Oil

Rotor

Part # 944635

Rotor material	Stainless Steel SAE 316, hard chrome plated
Rotor Size	Standard
Rotor Design	Hollow Tube Rotor
Temperature range	32-84°F

Stator

Stator material	NEMOLAST® S61L / S62L (Buna)
Dry run protection	STP3 stator probe

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Drive

Premium Efficient Gearmotor	
Manufacturer	Nord
Type	SK972.1F-225RP/4
Flange diameter (mm)	300
Shaft diameter (mm)	60
Cross drill diameter (mm)	18
Cross drill position—measured from IEC face according to WN0146	33
Output speed n2 @60Hz (RPM)	392
Output speed min/max (RPM)	79/392
Gear Ratio	4.56
Mounting position	M1

Terminal Box Position

TB2 - Conduit Box on Top

Power (HP)	40
Voltage range (V)	230/460
Frequency (Hz)	60
Min/max frequency (Hz)	12/60
Number of poles / phases	4/3
Motor speed n1 @60Hz (RPM)	1785
Protection type / insulation class	IP55/F

Baseplate:

Not in scope of supply

Arrangement

Options

- | | | |
|--|---------------------------------------|--|
| ☐ 4" Grout Holes | ☐ Anchor bolts | ☐ Casters and handle bar |
| ☐ Motor mount shims | ☐ Lifting lugs | ☐ 0.75" Drip Rim w/0.75" NPT drain plug |

Approximate Weights – (lbs.)

Bareshaft Pump	578
Complete Assembly	1323

Additional Documentation

None

Testing

Standard Factory Test	☒
Hydrostatic Test	☐
Run Test	☐
Performance Test	☐
Other: _____	☐