

# SFI Series Pump - NEMA 1 | Submittal Data

Submittal No: 301-S731 | Model: SFI1509D | RPM: 3500 | HP: 40HP | ODP | Effective: August 23, 2021 | Supersedes: NEW

JOB: \_\_\_\_\_

REPRESENTATIVE: \_\_\_\_\_

ENGINEER: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

## PRODUCT DATA

ITEM NO. \_\_\_\_\_

DOE BASIC MODEL NO. SFI1509D-A-2P-PD

MODEL NO. \_\_\_\_\_ VOLTAGE \_\_\_\_\_

PEI<sub>VL</sub> 0.45 HI ENERGY RATING 55

IMPELLER DIA. \_\_\_\_\_ WEIGHT \_\_\_\_\_

GPM \_\_\_\_\_ PUMP/MOTOR \_\_\_\_\_

HEAD/FT \_\_\_\_\_ FREQUENCY \_\_\_\_\_

RPM 3500 HP 40 PHASE \_\_\_\_\_

NSF 61 CERTIFIED YES NO

## DIMENSIONS

Model No. | 1509D

Flange Size (Suction x Discharge) | 2 1/2 x 1 1/2 (64 x 38)

| HORSEPOWER |                                   | 40          |
|------------|-----------------------------------|-------------|
| ODP        | MOTOR FRAME                       | 286TS       |
|            | G MAX                             | 23.69 (601) |
|            | MAXIMUM ASSEMBLY WEIGHT LBS. (KG) | 735 (333)   |
| A          | ANSI Class 125: 4.07 (103)        |             |
|            | ANSI Class 250: 4.37 (111)        |             |
| B          | ANSI Class 125: 9 (229)           |             |
|            | ANSI Class 250: 9.25 (235)        |             |
| C          | 19.18 (487)                       |             |
| D          | 50.0 (1270)                       |             |
| E          | ANSI Class 125: 1.11 (28)         |             |
|            | ANSI Class 250: 0.81 (21)         |             |
| F          | 11.28 (287)                       |             |
| J          | ANSI Class 125: 23.05 (585)       |             |
|            | ANSI Class 250: 23.35 (593)       |             |
| K          | 17.68 (449)                       |             |
| N          | 2.00 (51)                         |             |
| P          | 46.0 (1168)                       |             |

(Dimensions are for NEMA ODP)

50 Cycle Performance Curves attached when applicable

English dimensions are in inches. Metric dimensions are in millimeters.

Metric data is presented in ( ).

Do not use for construction purposes unless certified.

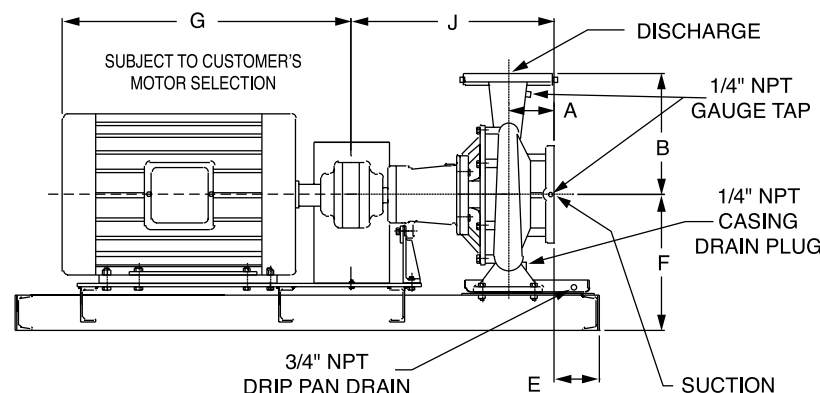
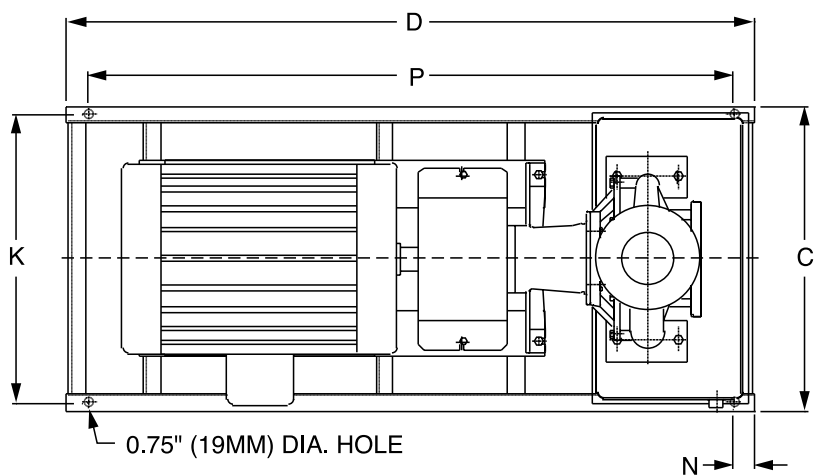
## OPERATING SPECIFICATIONS

|          | FLANGE         | PRESSURE              | TEMPERATURE   |
|----------|----------------|-----------------------|---------------|
| STANDARD | ANSI Class 125 | 175 PSIG* (1210 KPA)  | 250°F (120°C) |
| OPTIONAL | ANSI Class 250 | 300 PSIG** (2070 KPA) | 250°F (120°C) |

Motors: All NEMA Standard (T Frame)

\* In accordance with ANSI Standard B16.1 Class 125

\*\* In accordance with ANSI Standard B16.1 Class 250



| MATERIALS OF CONSTRUCTION |               |              | CASING                                    | COVER                                | IMPELLER                                | WEAR RING                   | SHAFT                                | SHAFT SLEEVE                       | MECHANICAL SEAL                              | SEAL FLUSH LINE ASSEMBLY |
|---------------------------|---------------|--------------|-------------------------------------------|--------------------------------------|-----------------------------------------|-----------------------------|--------------------------------------|------------------------------------|----------------------------------------------|--------------------------|
| STANDARD CONSTRUCTION     | BRONZE FITTED | 125# FLANGE  | Cast Iron ASTM A48/A48M-03 Class 30A      | Cast Iron ASTM A48/A48M-03 Class 30A | Bronze ASTM B584 ALLOY C83600 or C84400 | N/A                         | Stainless Steel TYPE 416"™ ASTM A582 | Bronze ASTM B584-98A C92200        | Ceramic/EPT                                  | N/A                      |
|                           |               | 250# FLANGE  | Ductile Iron ASTM A536-84 Grade 65-45-12  | Cast Iron ASTM A48/A48M-03 Class 30A | Bronze ASTM B584 ALLOY C83600 or C84400 | N/A                         | Stainless Steel TYPE 416"™ ASTM A582 | Bronze ASTM B584-98A C92200        | Ceramic/EPT                                  | N/A                      |
| OPTIONAL                  |               | 125# OR 250# | N/A                                       | N/A                                  | Stainless Steel ASTM A351/A 351M-08     | Bronze ASTM B584-98A C92200 | N/A                                  | Stainless Steel TYPE 303 ASTM A276 | Tyngsten Carbide /EPT or Silicon-Carbide/EPT | Copper & Brass C3600     |
| STANDARD CONSTRUCTION     | NSF 61        | 125# FLANGE  | Cast Iron ASTM A48/A48M-03 Class 30A      | Cast Iron ASTM A48/A48M-03 Class 30A | Stainless Steel ASTM A351/A 351M-08     | N/A                         | Stainless Steel TYPE 416"™ ASTM A582 | Bronze ASTM B584-98A C92200        | Ceramic/EPT                                  | Copper & Brass C3600     |
|                           |               | 250# FLANGE  | Ductile Iron ASTM A536-84 Grade: 65-45-12 | Cast Iron ASTM A48/A48M-03 Class 30A | Stainless Steel ASTM A351/A 351M-08     | N/A                         | Stainless Steel TYPE 416"™ ASTM A582 | Bronze ASTM B584-98A C92200        | Ceramic/EPT                                  | Copper & Brass C3600     |
| OPTIONAL                  |               | 125# OR 250# | N/A                                       | N/A                                  | N/A                                     | Bronze ASTM B584-98A C92200 | N/A                                  | N/A                                | N/A                                          | N/A                      |

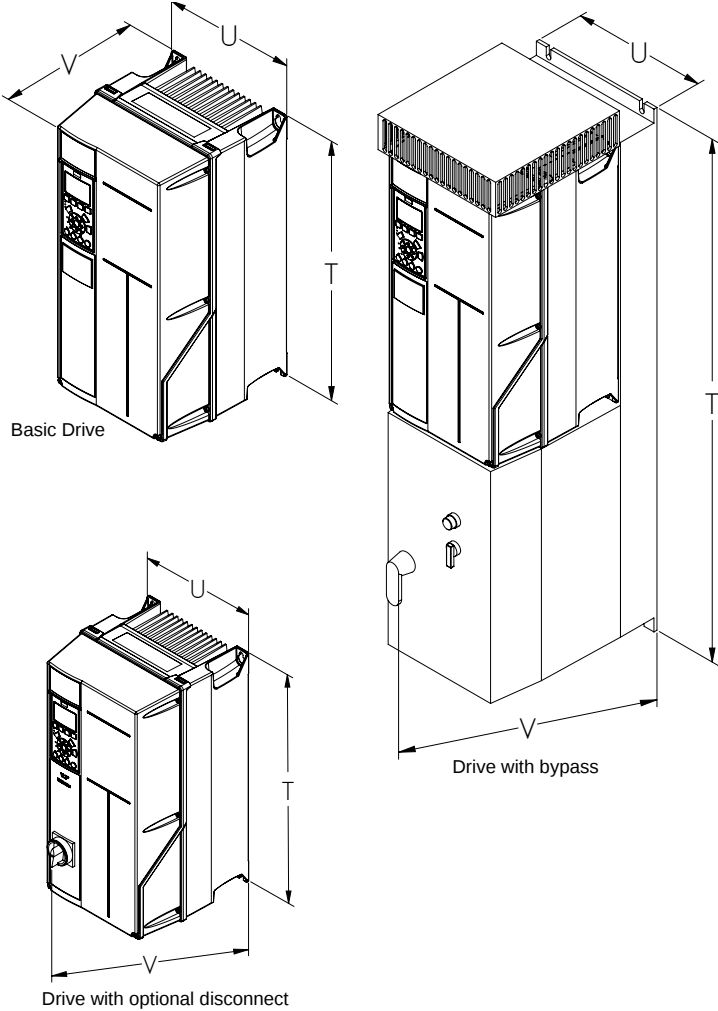
N/A - Not Available

DRIVE DATA

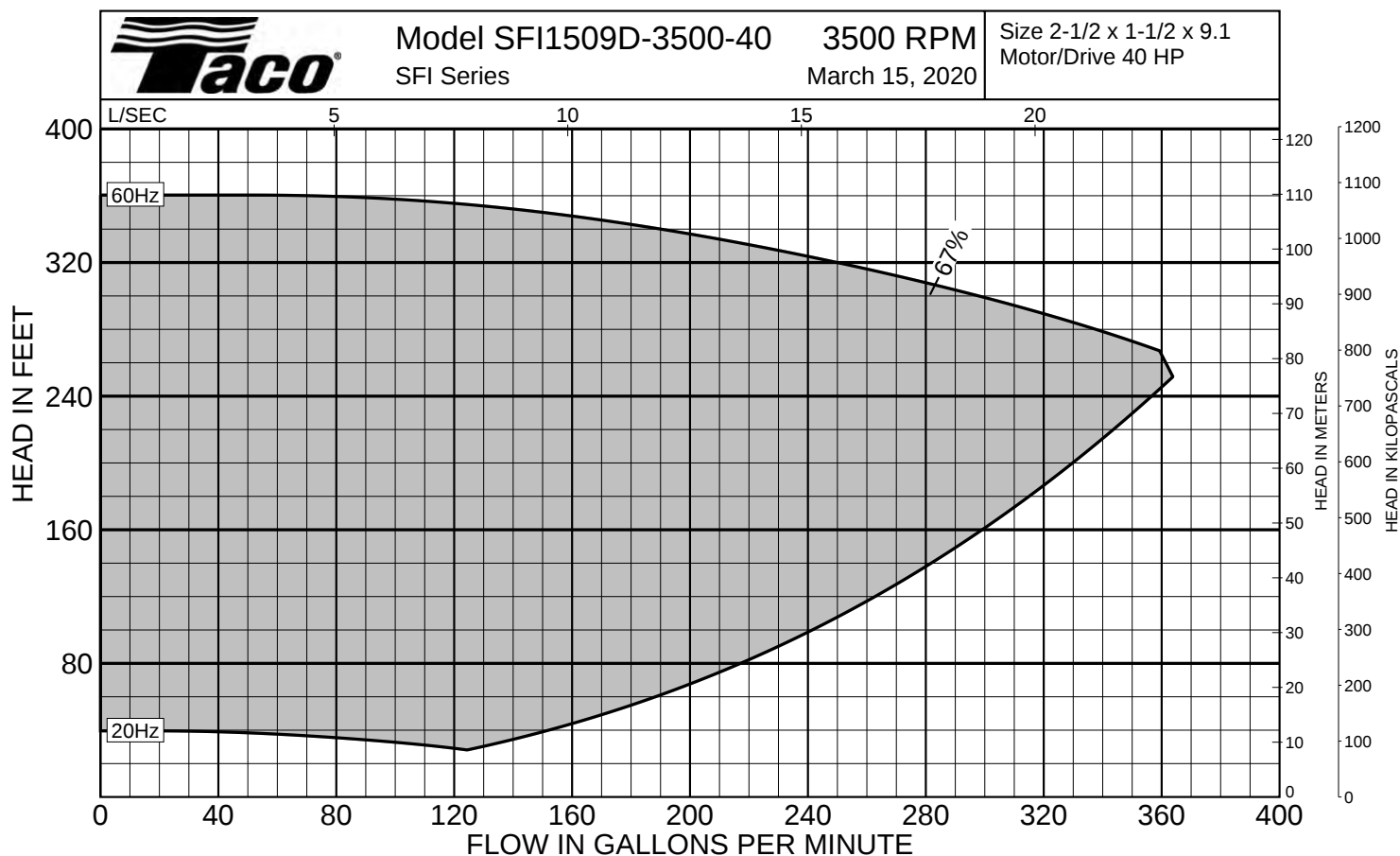
|                            |                                                                                                                                                                                                                                                                                                                                    |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PROTOCOLS (Standard)       | BACnet, Modbus RTU, N2 Metasys, FLN Apogee, FC Protocol                                                                                                                                                                                                                                                                            |
| PROTOCOLS (Optional)       | LonWorks®    DeviceNet    Profibus                                                                                                                                                                                                                                                                                                 |
| ENCLOSURE                  | NEMA Type 1 / IP21                                                                                                                                                                                                                                                                                                                 |
| I/O (Standard)             | 6 Digital Inputs / 2 Digital Outputs<br>1 Analog Current Output / 2 Analog Inputs<br>2 Pulse Inputs<br>2 Form C Relays                                                                                                                                                                                                             |
| ADDITIONAL CONTROL OPTIONS | None    General Purpose I/O    Relay Card<br>24VDC Supply    Analog I/O                                                                                                                                                                                                                                                            |
| ELECTRICAL CONFIGURATION   | Basic (no disconnect)    Mechanical disconnect    Fused disconnect<br>2 Contactor Bypass - Drive Fusing & Main Disconnect (5kA SCCR)<br>2 Contactor Bypass - Main Fusing & Disconnect (100kA SCCR)<br>3 Contactor Bypass - Drive Fusing & Main Disconnect (5kA SCCR)<br>3 Contactor Bypass - Main Fusing & Disconnect (100kA SCCR) |
| EMC/RFI CONTROL            | Integrated filter designed to meet EN61800-3                                                                                                                                                                                                                                                                                       |
| HARMONIC SUPPRESSION       | Dual DC-link chokes (Equivalent: 5% AC line reactor)<br>Supporting IEEE 519-1992 requirements                                                                                                                                                                                                                                      |
| COOLING                    | Fan-cooled through back channel                                                                                                                                                                                                                                                                                                    |
| AMBIENT TEMPERATURE        | -10°C to 45°C up to 1000 meters above sea level<br>-14°F to 113°F up to 3300 feet above sea level                                                                                                                                                                                                                                  |

DRIVE DIMENSIONS

| HP RANGE            |                      |                      | FRAME               | DIMENSIONS - IN (MM) |            |            |
|---------------------|----------------------|----------------------|---------------------|----------------------|------------|------------|
| 208V                | 460V                 | 575V                 |                     | T                    | U          | V          |
| 1.5 (1.1) - 3 (2.2) | 1.5 (1.1) - 5 (4.0)  | N/A                  | WITHOUT BYPASS (A2) | 19.1 (485)           | 5.1 (130)  | 9.6 (245)  |
|                     |                      |                      | WITH BYPASS (A2)    | 31.7 (806)           | 7.6 (194)  | 9.7 (247)  |
| 4 (3.0) - 5 (4.0)   | 7.5 (5.5) - 10 (7.5) | 1.5 (1.1) - 10 (7.5) | WITHOUT BYPASS (A3) | 19.1 (485)           | 5.1 (130)  | 9.6 (245)  |
|                     |                      |                      | WITH BYPASS (A3)    | 31.7 (806)           | 7.6 (194)  | 9.7 (247)  |
| 7.5 (5.5) - 15 (11) | 15 (11) - 25 (18)    |                      | WITHOUT BYPASS (B1) | 18.9 (480)           | 9.5 (242)  | 12.1 (308) |
|                     |                      |                      | WITH BYPASS (B1)    | 41.8 (1061)          | 9.1 (231)  | 15.9 (405) |
| 20 (15) - 20 (15)   | 30 (22) - 40 (30)    |                      | WITHOUT BYPASS (B2) | 25.6 (650)           | 9.5 (242)  | 12.1 (308) |
|                     |                      |                      | WITH BYPASS (B2)    | 43.2 (1098)          | 9.6 (243)  | 17.7 (450) |
| 25 (18) - 40 (30)   | 50 (37) - 75 (55)    |                      | WITHOUT BYPASS (C1) | 26.9 (680)           | 12.1 (308) | 14.1 (359) |
|                     |                      |                      | WITH BYPASS (C1)    | 54.4 (1381)          | 12.7 (322) | 18 (457)   |



COMMENTS



Curves based on Clear Water @ 60F with a Specific Gravity of 1.0