

# SFI Series Pump - NEMA 12 | Submittal Data

Submittal No: 301-S328 | Model: SFI5011D | RPM: 1760 | HP: 20HP | TEFC | Effective: April 3, 2020 | Supersedes: NEW

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

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

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

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

## PRODUCT DATA

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

DOE BASIC MODEL NO. \_\_\_\_\_ SFI5011D-A-4P-PD

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

PEI<sub>VL</sub> \_\_\_\_\_ 0.46 \_\_\_\_\_ HI ENERGY RATING \_\_\_\_\_ 54

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

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

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

RPM \_\_\_\_\_ 1760 \_\_\_\_\_ HP \_\_\_\_\_ 20 \_\_\_\_\_ PHASE \_\_\_\_\_

## 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

## DIMENSIONS

Model No. | 5011D

Flange Size (Suction x Discharge) | 6 x 5 (152 x 127)

| HORSEPOWER |                                   | 20          |
|------------|-----------------------------------|-------------|
| TEFC       | MOTOR FRAME                       | 256T        |
|            | G MAX                             | 23.16 (588) |
|            | MAXIMUM ASSEMBLY WEIGHT LBS. (KG) | 836 (379)   |
| A          | ANSI Class 125: 5.17 (131)        |             |
|            | ANSI Class 250: 5.55 (141)        |             |
| B          | ANSI Class 125: 14.95 (380)       |             |
|            | ANSI Class 250: 15.38 (391)       |             |
| C          | 19.17 (487)                       |             |
| D          | 52.0 (1321)                       |             |
| E          | ANSI Class 125: 2.35 (60)         |             |
|            | ANSI Class 250: 1.97 (50)         |             |
| F          | 14.03 (356)                       |             |
| J          | ANSI Class 125: 24.39 (619)       |             |
|            | ANSI Class 250: 24.77 (629)       |             |
| K          | 17.67 (449)                       |             |
| N          | 2.00 (51)                         |             |
| P          | 48.0 (1219)                       |             |

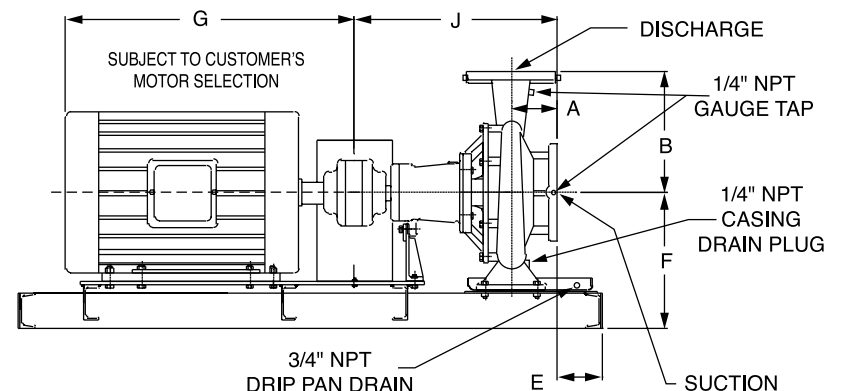
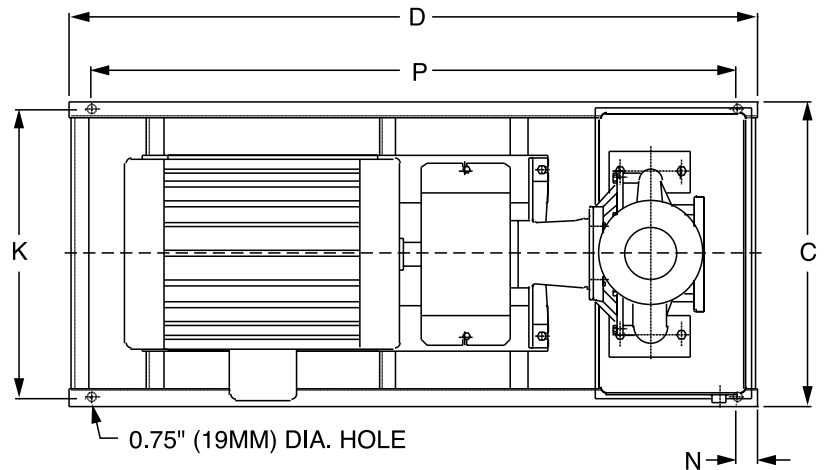
(Dimensions are for NEMA TEFC)

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.



| MATERIALS OF CONSTRUCTION |              | CASING                                   | COVER                                | IMPELLER                                | WEAR RING                   | SHAFT        | SHAFT SLEEVE                       | MECHANICAL SEAL                              | SEAL FLUSH LINE ASSEMBLY |
|---------------------------|--------------|------------------------------------------|--------------------------------------|-----------------------------------------|-----------------------------|--------------|------------------------------------|----------------------------------------------|--------------------------|
| STANDARD CONSTRUCTION     | 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                         | Carbon Steel | 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                         | Carbon Steel | 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     |

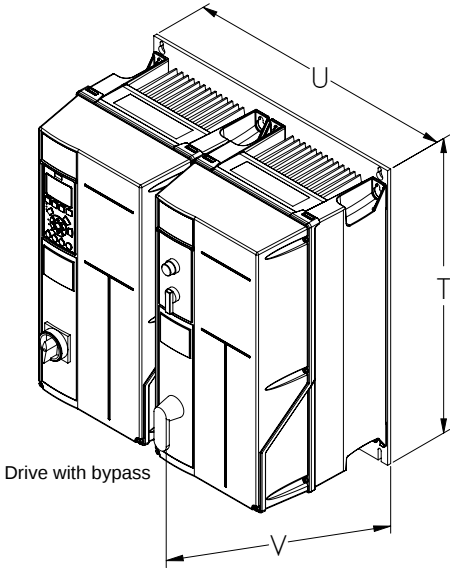
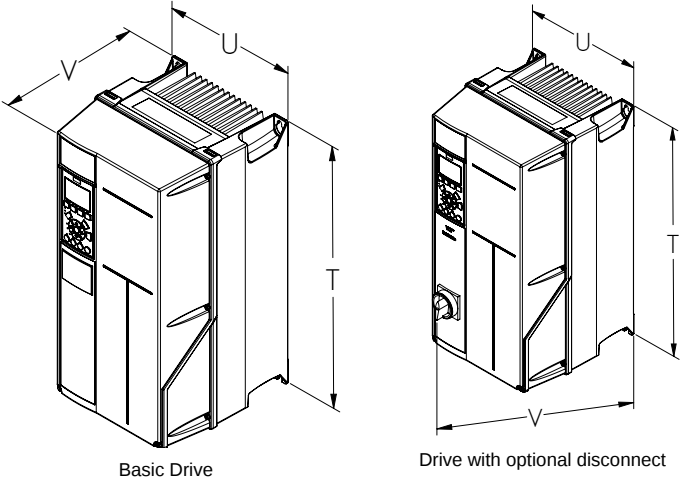
N/A - Not Available

DRIVE DATA

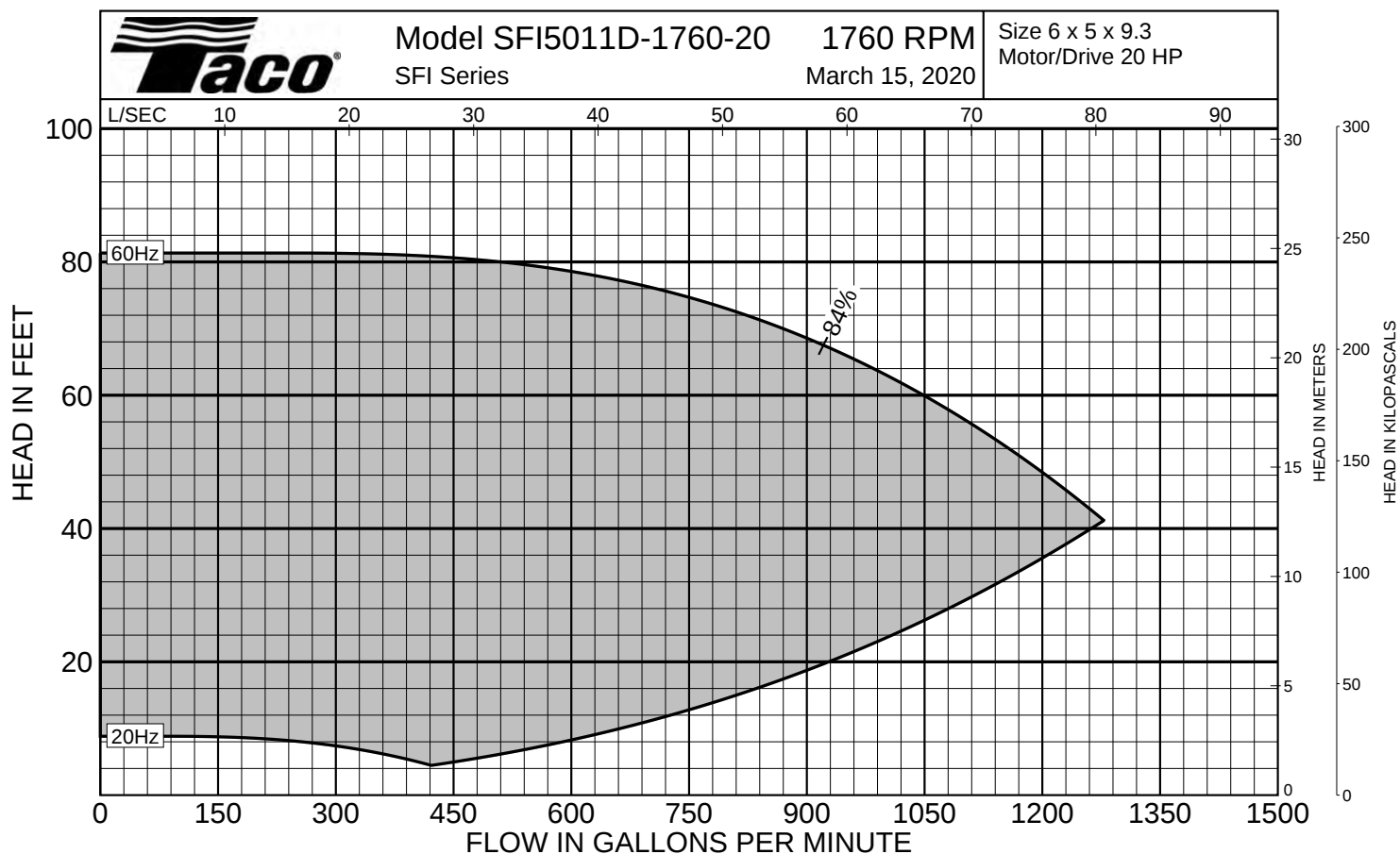
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|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PROTOCOLS (Standard)       | BACnet, Modbus RTU, N2 Metasys, FLN Apogee, FC Protocol                                                                                                                                                                                                                                                                            |
| PROTOCOLS (Optional)       | LonWorks®    DeviceNet    Profibus                                                                                                                                                                                                                                                                                                 |
| ENCLOSURE                  | NEMA Type 12 / IP55                                                                                                                                                                                                                                                                                                                |
| 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            | Intergated 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) - 5 (4)   | 1.5 (1.1) - 10 (7.5) |      | WITHOUT BYPASS (A5) | 16.5 (420)           | 9.5 (242)  | 9.6 (243)  |
|                     |                      |      | WITH BYPASS (A5)    | 18.9 (478)           | 19.3 (487) | 10.3 (262) |
| 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)    | 21.5 (546)           | 19.1 (485) | 12.9 (327) |
| 20 (15) - 20 (15)   | 30 (22) - 40 (30)    |      | WITHOUT BYPASS (B2) | 25.6 (650)           | 9.5 (242)  | 12.1 (308) |
|                     |                      |      | WITH BYPASS (B2)    | 28.2 (716)           | 19.1 (485) | 12.9 (327) |



COMMENTS



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