

# SKS Series Pump | Submittal Data

Submittal No: 301-2321-R | Model: SKS8016 | RPM: 1760 | HP: 100HP | Effective: June 19, 2023 | Supersedes: December 22, 2022

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

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

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

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

## PRODUCT DATA

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

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

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

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

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

RPM 1760 HP 100 PHASE \_\_\_\_\_

SUPPORT STAND OPTION YES NO

(Ductile Iron ASTM A536-84 Grade 65-45-12)

## DIMENSIONS

Model No. | 8016

Flange Size (Suction x Discharge) | 8 x 8 (203 x 203)

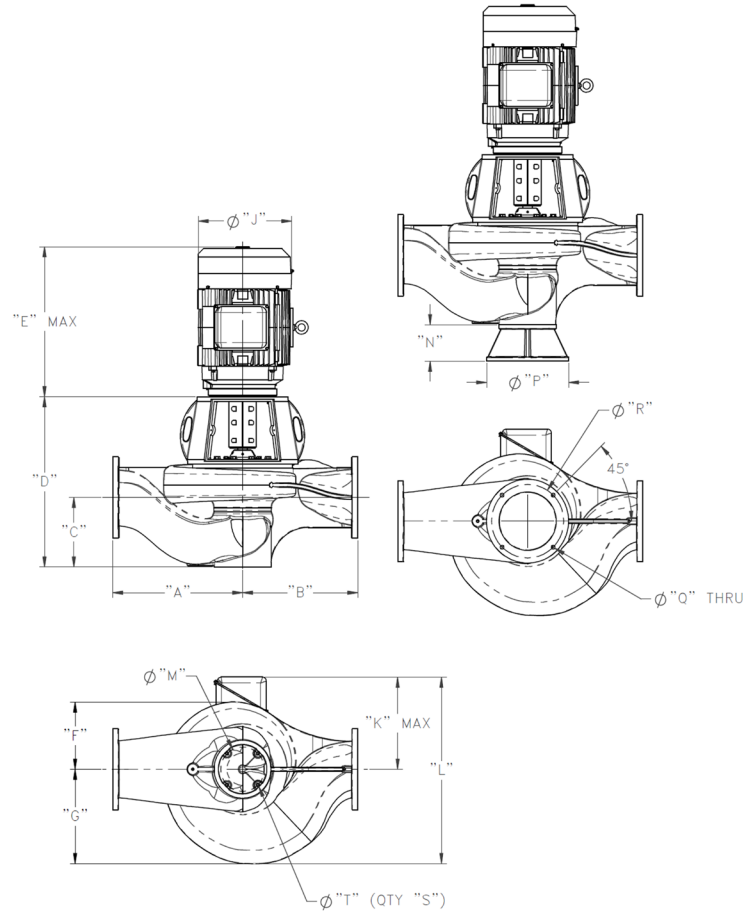
|                                           |                             |
|-------------------------------------------|-----------------------------|
| HORSEPOWER                                | 100                         |
| MOTOR FRAME TEFC                          | 405CZ                       |
| MOTOR FRAME ODP                           | 404CZ                       |
| WEIGHT WITHOUT<br>OPTIONAL STAND LBS (KG) | 2779 (1261)                 |
| WEIGHT WITH OPTIONAL<br>STAND LBS (KG)    | 2879 (1306)                 |
| FLANGE SIZE ASA                           | 8 (203)                     |
| A*                                        | ANSI CLASS 125: 26.13 (664) |
|                                           | ANSI CLASS 250: 26.69 (678) |
| B*                                        | ANSI CLASS 125: 24.00 (610) |
|                                           | ANSI CLASS 250: 24.50 (622) |
| C                                         | 16.70 (424)                 |
| D                                         | 33.95 (862)                 |
| E MAX                                     | 38.53 (979)                 |
| F                                         | 11.60 (295)                 |
| G                                         | 15.56 (395)                 |
| J DIA                                     | 21.42 (544)                 |
| K                                         | 18.65 (474)                 |
| L                                         | 34.20 (869)                 |
| M                                         | 6.63 (168)                  |
| N                                         | 7.20 (183)                  |
| P                                         | 16.50 (419)                 |
| Q                                         | 0.75 (19)                   |
| R                                         | 14.50 (368)                 |
| S                                         | 4                           |
| T                                         | 1/2-13 UNC-2B               |

## OPERATING SPECIFICATIONS

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

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

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



\*A & B Dimensions apply for all pump sizes.

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

Metric data is presented in ( ). Do not use for construction purposes unless certified.

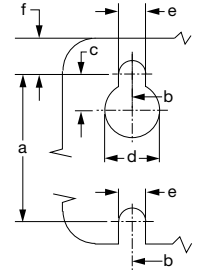
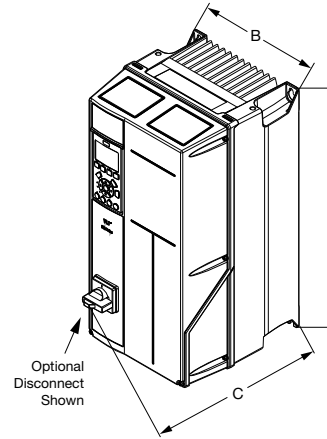
| MATERIALS OF CONSTRUCTION |               | CASING                                      | IMPELLER                        | WEAR RING                   | SHAFT                           | COUPLING               | MECHANICAL SEAL        | SEAL FLUSH LINE | SUPPORT STAND                               |
|---------------------------|---------------|---------------------------------------------|---------------------------------|-----------------------------|---------------------------------|------------------------|------------------------|-----------------|---------------------------------------------|
| STANDARD CONSTRUCTION     | BRONZE FITTED | Ductile Iron ASTM A536-84<br>Grade:65-45-12 | Bronze ASTM B583-836            | None                        | St. Steel AISI 416<br>ASTM A582 | Aluminum Alloy 6061-T6 | Ceramic / EPT          | Copper          | N/A                                         |
| OPTIONAL                  |               | N/A                                         | CF                              | Bronze ASTM B584-932 SAE660 | N/A                             | N/A                    | Tungsten Carbide / EPT | CF              | Ductile Iron ASTM A536-84<br>Grade 65-45-12 |
| STANDARD CONSTRUCTION     | ALL IRON      | Ductile Iron ASTM A536-84<br>Grade:65-45-12 | Cast Iron ASTM A48<br>Class 30A | None                        | St. Steel AISI 416<br>ASTM A582 | Aluminum Alloy 6061-T6 | Ceramic / EPT          | Stainless Steel | N/A                                         |
| OPTIONAL                  |               | N/A                                         | CF                              | N/A                         | N/A                             | N/A                    | Tungsten Carbide / EPT | CF              | Ductile Iron ASTM A536-84<br>Grade 65-45-12 |

N/A - Not Available

CF - Consult Factory

## DRIVE DATA

|                            |                                                                                                                        |
|----------------------------|------------------------------------------------------------------------------------------------------------------------|
| PROTOCOLS (Standard)       | BACnet, Modbus RTU, N2 Metasys, FLN Apogee, FC Protocol                                                                |
| PROTOCOLS (Optional)       | LonWorks® DeviceNet Profibus                                                                                           |
| ENCLOSURE                  | NEMA Type 1 / IP21 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                                                         |
| DISCONNECT SWITCH          | Mechanical Fused                                                                                                       |
| 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                      |



Frames A2 through D2 (4x mounts)

## CONTROL CONNECTIONS

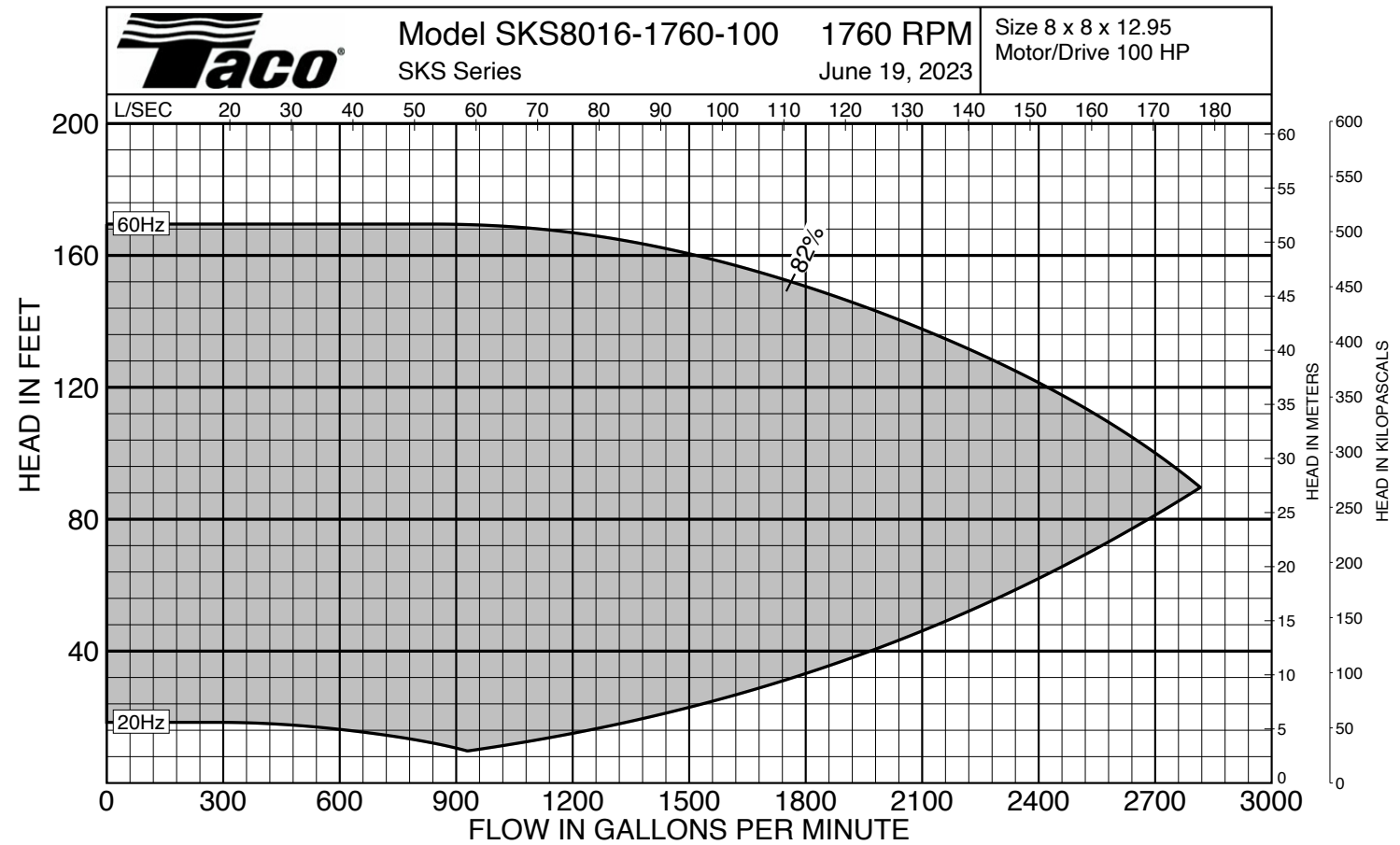
|                                |                                                             |
|--------------------------------|-------------------------------------------------------------|
| Analog input (follower signal) | 2; selectable voltage or current, direct and inverse acting |
| Digital inputs (programmable)  | 6 (2 can be used as digital outputs)                        |
| Analog outputs (programmable)  | 1; 0/4 to 20 mA                                             |
| Relay outputs (programmable)   | 2 standard Form C 240 V AC, 2 A; 1 or 3 additional optional |
| Auxiliary voltage              | +24 V DC, maximum 200 mA                                    |
| Communication port             | 1 RS485, 1 USB                                              |

## MAXIMUM DIMENSIONS & WEIGHTS

| Frame Size | Power Range – HP (kW) |                           |                           | NEMA Type 1 / IP21<br>Inches (mm) |            |            | NEMA Type 12 / IP55<br>(IP54 D & E) – Inches (mm) |            |            | Max Weight<br>Lbs (Kg) |
|------------|-----------------------|---------------------------|---------------------------|-----------------------------------|------------|------------|---------------------------------------------------|------------|------------|------------------------|
|            | 200V - 240V           | 380V - 480V               | 525V - 600V               | A                                 | B          | C          | A                                                 | B          | C          |                        |
| A2         | 1.5 (1.1) - 3 (2.2)   | 1.5 (1.1) - 5 (4.0)       | —                         | 19.1 (485)                        | 5.1 (130)  | 9.6 (245)  | N/A                                               | N/A        | N/A        | 30 (14)                |
| A3         | 4 (3.0) - 5 (4.0)     | 7.5 (5.5) - 10 (7.5)      | 1.5 (1.1) - 10 (7.5)      | 19.1 (485)                        | 5.1 (130)  | 9.6 (245)  | N/A                                               | N/A        | N/A        | 30 (14)                |
| A5         | 1.5 (1.1) - 5 (4.0)   | 1.5 (1.1) - 10 (7.5)      | 1.5 (1.1) - 10 (7.5)      | N/A                               | N/A        | N/A        | 16.5 (420)                                        | 9.5 (242)  | 9.6 (243)  | 35 (16)                |
| B1         | 7.5 (5.5) - 15 (11.0) | 15 (11.0) - 25 (18.0)     | 15 (11.0) - 25 (18.0)     | 18.9 (480)                        | 9.5 (242)  | 12.1 (308) | 18.9 (480)                                        | 9.5 (242)  | 12.1 (308) | 65 (30)                |
| B2         | 20 (15.0) - 20 (15.0) | 30 (22.0) - 40 (30.0)     | 30 (22.0) - 40 (30.0)     | 25.6 (650)                        | 9.5 (242)  | 12.1 (308) | 25.6 (650)                                        | 9.5 (242)  | 12.1 (308) | 70 (32)                |
| C1         | 25 (18.0) - 40 (30.0) | 50 (37.0) - 75 (55.0)     | 50 (37.0) - 75 (55.0)     | 26.9 (680)                        | 12.1 (308) | 14.1 (359) | 26.9 (680)                                        | 12.1 (308) | 14.1 (359) | 100 (45)               |
| C2         | 50 (37.0) - 60 (45.0) | 100 (75.0) - 125 (90.0)   | 100 (75.0) - 125 (90.0)   | 30.3 (770)                        | 14.6 (370) | 14.9 (379) | 30.3 (770)                                        | 14.6 (370) | 14.9 (379) | 143 (65)               |
| D1         | N/A                   | 150 (110.0) - 200 (132.0) | 150 (132.0) - 200 (160.0) | 47.5 (1208)                       | 16.5 (420) | 16.3 (414) | 47.5 (1208)                                       | 16.5 (420) | 16.3 (414) | 229 (104)              |
| D2         | N/A                   | 250 (160.0) - 350 (250.0) | 250 (200.0) - 400 (400.0) | 62.5 (1588)                       | 16.5 (420) | 16.4 (417) | 62.5 (1588)                                       | 16.5 (420) | 16.4 (417) | 364 (165)              |

## BACKPLATE MOUNTING HOLE DIMENSIONS – Inches (mm)

| Frame Size | a             | b          | c         | d         | e          | f          | Frame Size | a             | b           | c           | d         | e         | f         |
|------------|---------------|------------|-----------|-----------|------------|------------|------------|---------------|-------------|-------------|-----------|-----------|-----------|
| A2         | 17.62 (447.5) | 4.33 (110) | 0.32 (8)  | 0.43 (11) | 0.22 (5.5) | 0.35 (9)   | C1         | 25.51 (648.0) | 10.71 (272) | 0.49 (12.5) | 0.75 (19) | 0.35 (9)  | 0.39 (10) |
| A3         | 17.62 (447.5) | 4.33 (110) | 0.32 (8)  | 0.43 (11) | 0.22 (5.5) | 0.35 (9)   | C2         | 29.09 (739.0) | 13.15 (334) | 0.49 (12.5) | 0.75 (19) | 0.35 (9)  | 0.39 (10) |
| A5         | 15.82 (401.7) | 8.46 (215) | 0.32 (8)  | 0.47 (12) | 0.26 (6.5) | 0.25 (6.5) | D1         | 45.4 (1154)   | 12.00 (304) | N/A         | N/A       | 0.40 (11) | 1.00 (25) |
| B1         | 17.87 (453.9) | 8.27 (210) | 0.47 (12) | 0.75 (19) | 0.35 (9)   | 0.35 (9)   | D2         | 60.4 (1535)   | 12.00 (304) | N/A         | N/A       | 0.40 (11) | 1.00 (25) |
| B2         | 24.57 (624.0) | 8.27 (210) | 0.47 (12) | 0.75 (19) | 0.35 (9)   | 0.35 (9)   |            |               |             |             |           |           |           |



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

COMMENTS