



Submittal Data Information

301-2320-R

SKS Series SelfSensing Vertical Split Coupled Pumps with Wall-Mounted VFD

EFFECTIVE: January 27, 2020

SUPERSUPERSEDES: April 1, 2013

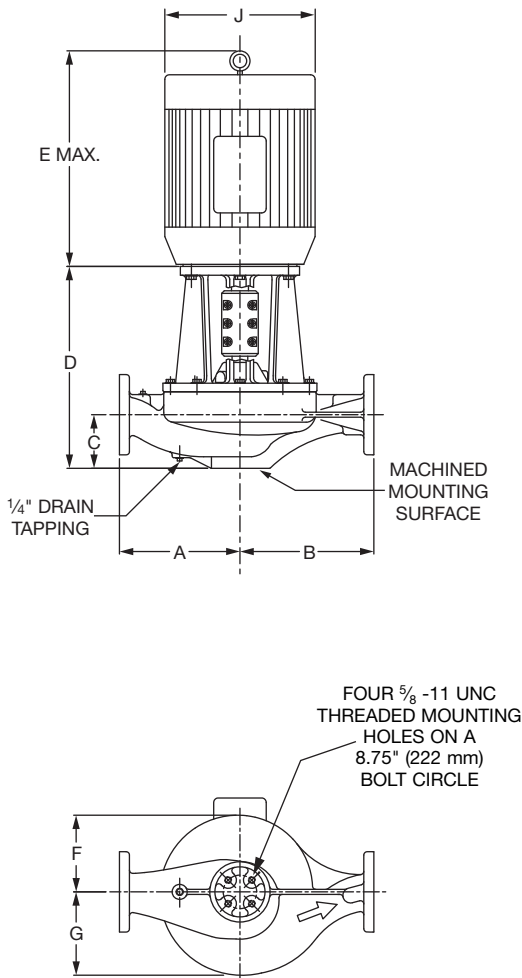
MODEL SKS1013-1760-100

JOB _____ ENGINEER _____

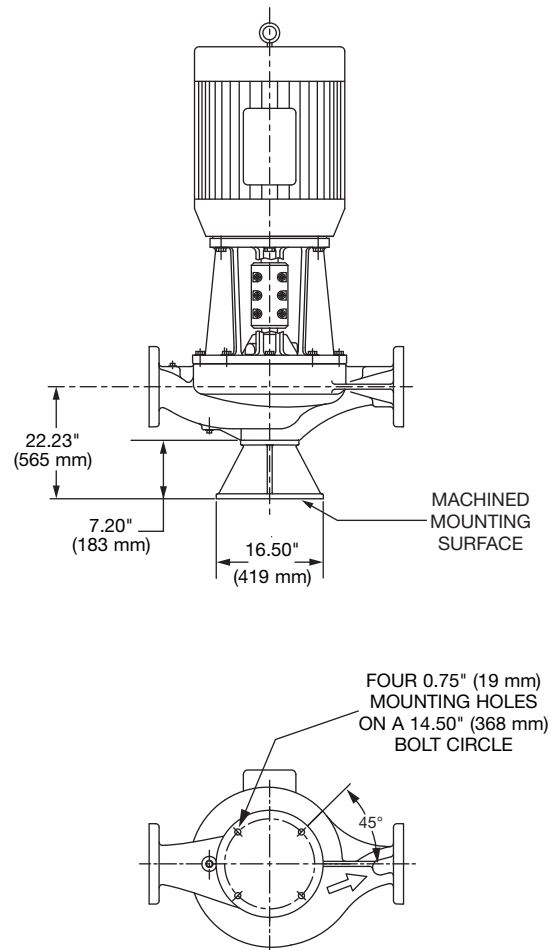
CONTRACTOR _____ REP. _____

ITEM NO.	MODEL NO.	IMPELLER DIA.		G.P.M.	HEAD/FT.	H.P.	ELEC. CHAR.
Configuration	DOE Basic Model Number	PEI Value		Energy Rating	WEIGHT _____ PUMP/MOTOR _____		
Pump + Motor + Drive	SKS1013A-A-4P-PD	PEI _{vi}	0.48	52			

Pumps at or above 75 HP will need to have the VFD mounted to the wall.



PUMP WITH OPTIONAL SUPPORT STAND



DIMENSIONS

*A & B Dimensions apply for all pump sizes.

Model No.	Conn.	Motor Frame	HP 1760 RPM	Flange Size ASA	A*	B*	C	D	E MAX	F	G	H	J DIA
1013	10 x 10 (254 x 254)			10 (254)	22.00 (559) if ANSI Class 125	22.00 (559) if ANSI Class 125	15.03 (382)			10.11 (257)	12.33 (313)	0.25 (6)	20.13 (511)
		405CZ	100		22.69 (576) if ANSI Class 250	22.69 (576) if ANSI Class 250		28.22 (717)	40.90 (1039)				

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

Item	BRONZE FITTED		ALL IRON	
	Standard Pump Construction	Optional	Standard	Optional
Casing	Cast Iron ASTM A48 Class 30A	N/A	Cast Iron ASTM A48 Class 30A	N/A
Impeller	Bronze ASTM B584-836	CF	Cast Iron ASTM A48 Class 30A	CF
Wear Ring	None	Bronze ASTM B584-932 SAE660	None	N/A
Shaft	St. Steel AISI 416 ASTM A582	N/A	St. Steel AISI 416 ASTM A582	N/A
Coupling	Aluminum Alloy 6061-T6	N/A	Aluminum Alloy 6061-T6	N/A
Mechanical Seal	Ceramic / EPT	Tungsten Carbide / EPT	Ceramic / EPT	Tungsten Carbide / EPT
Seal Flush Line	Copper	CF	Stainless Steel	CF
Support Stand	N/A	Ductile Iron ASTM A536-84 Grade: 65-45-12	N/A	Ductile Iron ASTM A536-84 Grade: 65-45-12

CF - Consult Factory

N/A - Not Available

OPERATING SPECIFICATIONS

	Standard		Optional
Flange	ANSI Class 125	ANSI Class 250	
Pressure	175 PSIG* (1210 KPA)	300 PSIG** (2070 KPA)	CF
Temperature	250°F (120°C)	250°F (120°C)	CF

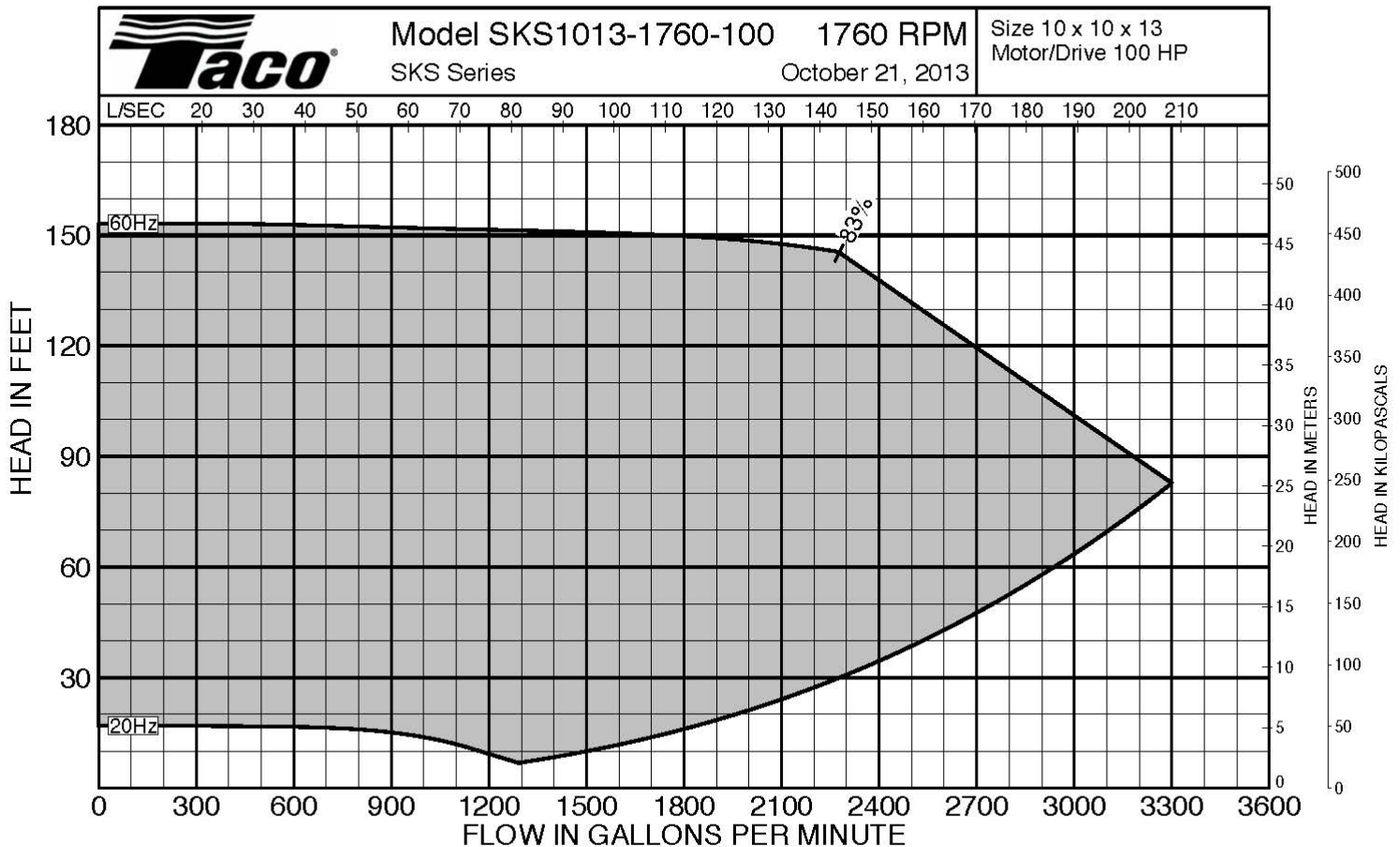
Motors: All NEMA Standard ODP Frame (CZ Shaft)

* In accordance with ANSI Standard B16.1 Class 125

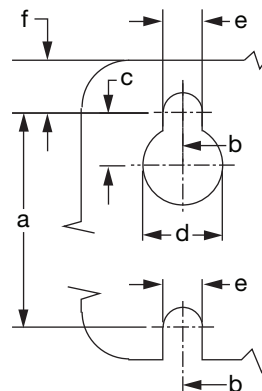
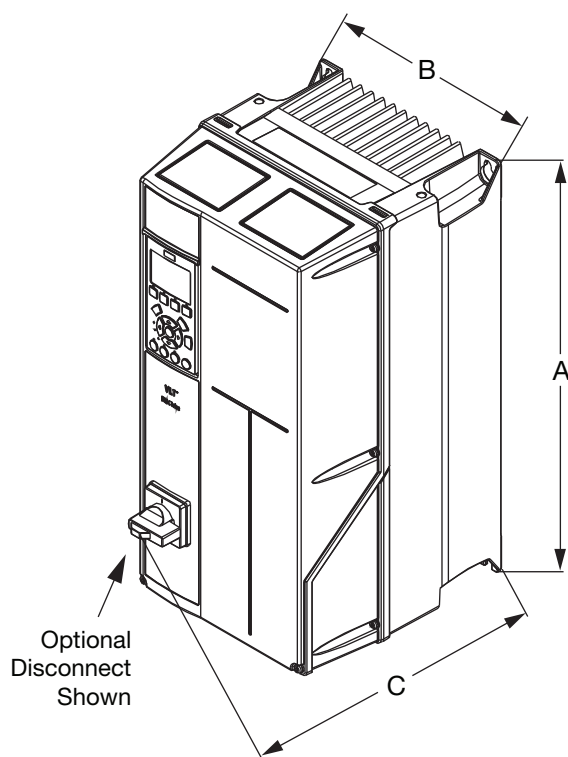
** In accordance with ANSI Standard B16.1 Class 250 Dim.

MAXIMUM PUMP ASSEMBLY WEIGHT

Motor Frame	Weight without Optional Stand Lbs (Kg)	Weight with Optional Stand Lbs (Kg)
404CZ - 405CZ	2603 (1181)	2703 (1226)



MECHANICAL DRAWINGS



Frames A2 through D2 (4x mounts)

MAXIMUM DIMENSIONS and WEIGHTS

Frame Size	Power Range – HP (kW)			NEMA Type 1 / IP21 Inches (mm)			NEMA Type 12 / IP55 (IP54 D & E) – Inches (mm)			Max Weight 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
A2	17.62 (447.5)	4.33 (110)	0.32 (8)	0.43 (11)	0.22 (5.5)	0.35 (9)
A3	17.62 (447.5)	4.33 (110)	0.32 (8)	0.43 (11)	0.22 (5.5)	0.35 (9)
A5	15.82 (401.7)	8.46 (215)	0.32 (8)	0.47 (12)	0.26 (6.5)	0.25 (6.5)
B1	17.87 (453.9)	8.27 (210)	0.47 (12)	0.75 (19)	0.35 (9)	0.35 (9)
B2	24.57 (624.0)	8.27 (210)	0.47 (12)	0.75 (19)	0.35 (9)	0.35 (9)
C1	25.51 (648.0)	10.71 (272)	0.49 (12.5)	0.75 (19)	0.35 (9)	0.39 (10)
C2	29.09 (739.0)	13.15 (334)	0.49 (12.5)	0.75 (19)	0.35 (9)	0.39 (10)
D1	45.4 (1154)	12.00 (304)	N/A	N/A	0.40 (11)	1.00 (25)
D2	60.4 (1535)	12.00 (304)	N/A	N/A	0.40 (11)	1.00 (25)

SPECIFICATIONS:

MOTOR DESIGN DATA:	
HP	
Volts	
Frequency	Hz
Phase	

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 1 Analog Current Output / 2 Analog Inputs 2 Pulse Inputs 2 Form C Relays
Additional Control Options	☐ None ☐ General Purpose I/O ☐ Relay Card ☐ 24VDC Supply ☐ Analog I/O
Disconnect Switch	☐ Mechanical ☐ Fused
ENI/RFI Control	Integrated filter designed to meet EN61800-3
Harmonic Suppression	Dual DC-link chokes (Equivalent: 5% AC line reactor) 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 -14°F to 113°F up to 3300 feet above sea level

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



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