Generator sizing guidelines for submersible motors

6"	8"		10"		12"		Nominal Rated Power		Generator Power DOL starting		Generator Power Star-Delta starting	
2 pole	2 pole	4 pole	2 pole	4 pole	2 pole	4 pole	kW	HP	kW	KVA	kW	KVA
							4	5.5	10	12.5	7.5	9.4
							5.5	7.5	12.5	15.6	11	12.5
							7.5	10	18	22.5	13.5	17
							9.3	12.5	20	25	16.5	20.6
							11	15	25	31.3	20.25	25.5
							15	20	35	43.8	27	33.8
							18.5	25	40	50	35	43.8
							22	30	50	62.5	40	50
							26	35	60	75	47	58.8
							30	40	70	87.5	50	62.5
							37	50	75	93.8	60	75
							45	60	90	112.5	75	93.8
							55	75	110	137.5	90	112.5
							66	90	135	168.8	110	137.5
							75	100	150	187.5	125	156.3
							93	125	185	231.3	150	187.5
							110	150	210	260	175	218.8
							132	180	250	312.5	220	275
							150	200	300	375	250	312.5
							165	225	340	425	275	343.8
							185	250	380	475	300	375
							220	300	450	562.5	360	450
							260	350	520	650	415	518.8
							300	400	600	750	500	625

Chart provides guidelines only.

Use motor amps for correct sizing

Values are for self excited alternators

Confirm with generator supplier for sizing and selection

Starting voltage at least 55% of nominal voltage

Start generator before starting submersible motor

Stop the submersible motor before stopping the generator

Caution with frequency and motor speed relating to pump affinity laws

Increase in speed increases flow however proportional increases in power (kW) may overload motor

DO NOT operate the submersible motor above full load nameplate amps

Changing the speed (RPM) of the generator above or below 50hz directly affects the pump flow, head and input kilowatts of the pump in different proportions.
Changing the speed (increase or decrease) affects the flow through the pump, (faster or slower flow) by a proportion equal to the increase or decrease in speed.
The pump head is changed by the sqaure of the proprotion of the speed change while the kilowatt is changed by the cube of the proportion of speed change.

DO NOT allow generator to run out of fuel as the 'hunting' affects the pump speed, and

and the related proportional flow and power.

Generator hunting can also cause motor thrust bearing wear

Jul-19