

NCERC Tank, Agitator, and Pump Info

Propagation TKs

Tank No.	Name	Volume	Agitation?	Variable Speed?	Agitator Type	Size	Number of Impellers	Max RPMs	Vessel Pressure Rating	Jacketed?	pH Control?	Recirculation Pump Type	Motor Size	Variable Speed?	Head Size	Flowrate	Forwarding Pump Type	Motor Size	Variable Speed?	Flowrate
VS-xxxx	Propagator #1	30 L	Y	Y	R100		3	1700 rpm	3.1 bar	Y	Y	N/A	N/A	N/A	N/A	N/A	(Pressure)	N/A	N/A	Varies
VS-51000	Propagator #2	150L	Y	Y	R100	8.40"	2	332 rpm	40 psi	Y	Y	N/A	N/A	N/A	N/A	N/A	(Pressure)	N/A	N/A	Varies
VS-54000	Propagator #3	1500L	Y	Y	R100/A100/R100	17.00"	3	280 rpm	40 psi	Y	Y	N/A	N/A	N/A	N/A	N/A	(Pressure)	N/A	N/A	Varies

Process TKs

Tank No.	Name	Volume	Agitation?	Variable Speed?	Agitator Type	Size	Number of Impellers	Max RPMs	Vessel Pressure Rating	Jacketed?	pH Control?	Recirculation Pump Type	Motor Size	Variable Speed?	Head Size	Flowrate	Forwarding Pump Type	Motor Size	Variable Speed?	Flowrate
TA-0990	Slurry TK	100 gals	Y	N	A310	12.80"	2	350	atm	N	Y	Prog. Cavity	5 hp	Y	N/A	0-60 gpm	Prog. Cavity	1 hp	Y	0-5 gpm
TA-0950	Liquifaction TK	500 gals	Y	N	A310	10.60"	2	350	atm	Y	Y*	Centrifugal	10 hp	N	1x1.5-8	20 gpm @ 144'	Prog. Cavity	2 hp	Y	0-5 gpm
TA-1030	Mix TK	50 gals	Y	N	A100	3.60"	1	1800	atm	Y	Y*	Centrifugal	5 hp	N	1x1.5-6	15 gpm @ 68'	Prog. Cavity	1 hp	Y	0-5 gpm
TA-1210	Pre-Seed Ferm #1	75 gals	Y	N	A100	3.60"	1	1800	atm	N	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TA-1220	Pre-Seed Ferm #2	75 gals	Y	N	A100	3.60"	1	1800	atm	N	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RX-1310	Fermenter #1	6,000 gals	Y	Y	A200	40.00"	3	34	atm	Y	Y	Rotary Lobe	10 hp	Y	N/A	0-70 gpm	(Split stream)**	N/A	N/A	Varies
RX-1320	Fermenter #2	6,000 gals	Y	Y	A200	40.00"	3	34	atm	Y	Y	Rotary Lobe	10 hp	Y	N/A	0-70 gpm	(Split stream)**	N/A	N/A	Varies
RX-1330	Fermenter #3	6,000 gals	Y	Y	A200	40.00"	3	34	atm	Y	Y	Rotary Lobe	10 hp	Y	N/A	0-70 gpm	(Split stream)**	N/A	N/A	Varies
RX-1340	Fermenter #4	6,000 gals	Y	Y	A200	40.00"	3	34	atm	Y	Y	Rotary Lobe	10 hp	Y	N/A	0-70 gpm	(Split stream)**	N/A	N/A	Varies
TA-1410	Beerwell	6,000 gals	Y	N	A200	40.00"	3	34	atm	N	N	Rotary Lobe	10 hp	Y	N/A	0-70 gpm	Prog. Cavity	2 hp	Y	0-5 gpm
VS-1410	DeGas Column	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40 psi	N	N	N/A	N/A	N/A	N/A	N/A	Centrifugal		Y	0-5 gpm
VS-1420	Beer Column	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40 psi	N	N	N/A	N/A	N/A	N/A	N/A	Centrifugal	3 hp	Y	0-10 gpm
VS-1430	Rectifying Column	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40 psi	N	N	N/A	N/A	N/A	N/A	N/A	Gear	0.5 hp	Y	0-2 gpm
TA-1505	Product Drum	10 gal	N	N	N/A	N/A	N/A	N/A	40 psi	N	N	N/A	N/A	N/A	N/A	N/A	Gear		Y	
TA-1530	Purge Drum	10 gal	N	N	N/A	N/A	N/A	N/A	40 psi	N	N	Gear	0.5 hp	N/A	N/A				Y	
TA-1610/11	Shift TK	120 gals	N	N	N/A	N/A	N/A	N/A	atm	N	N	Centrifugal	3 hp	N	1x1.5-8	20 gpm @ 40'	(Split stream)**	N/A	N/A	Varies
TA-1630	Ethanol Storage TK	8,000 gals	N	N	N/A	N/A	N/A	N/A	atm	N	N	Centrifugal	7.5 hp	N	1.5x3-6	150 gpm @ 106'	(Split stream)**	N/A	N/A	Varies
TA-2010	Whole Stillage TK	100 gals	Y	N	A100	3.60"	1	1800	atm	N	N	Centrifugal	10 hp	N	1x1.5-8	20 gpm @ 159'	Prog. Cavity	2 hp	Y	0-5 gpm
TA-2020	Thin Stillage TK	50 gals	Y	N	A100	3.30"	1	1800	atm	N	N	Centrifugal	3 hp	N	1x1.5-6	15 gpm @ 65'	(PID control valve)	N/A	N/A	Varies
TA-0710	Evaporator Feed TK	750 gals	Y	N	A310	12.80"	1	350	atm	N	N	Centrifugal	7.5 hp	N	1x1.5-6	15 gpm @ 53'	(PID control valve)	N/A	N/A	Varies
E-2120	Shell and Tube Evaporator	800 gals	N/A	N/A	N/A	N/A	N/A	N/A	(vacuum)	N	N	Centrifugal	40 hp	N	6x8-15		(Densitometer)	N/A	N/A	Varies
E-2180	Plate and Frame Evaporator	300 gals	N/A	N/A	N/A	N/A	N/A	N/A	(vacuum)	N	N	Centrifugal	40 hp	N	2x3-13	314 gpm @ 94'	(Densitometer)	N/A	N/A	Varies
TA-2140	Syrup TK	200 gals	Y	N	A310	11.20"	1	1800	atm	Y	N	Centrifugal	10 hp	N	1x1.5-6	15 gpm @ 102'	Rotary Lobe	0.75 hp	Y	1-5 lbs/min
TA-3010	Hold Tank #1	1,500 gals	Y	Y	A510E	31.00"	2	125	atm	N	N	Centrifugal	20 hp	Y	1x1.5-8	40 gpm @ 273'	Prog. Cavity***	1 hp	Y	0-5 gpm
TA-3020	Hold Tank #2	1,500 gals	Y	N	A310	17.00"	1	350	atm	N	N	Centrifugal	15 hp	Y	1x1.5-8	20 gpm @ 237'	Gear***	0.5 hp	Y	1-20 lbs/min

* pH can be adjusted on either of the two tanks, but not concurrently.

** Recycle stream is pinched back and diverted to allow material transfer out of vessel.

*** TKs and forwarding pumps are interchangeable.

Utility TKs

Tank No.	Name	Volume	Agitation?	Variable Speed?	Agitator Type	Size	Number of Impellers	Max RPMs	Vessel Pressure Rating	Jacketed?	pH Control?	Pump Type	Motor Size	Variable Speed?	Head Size	Flowrate
TA-0910	Waste TK #1	6,000 gals	Y	N	A200	40.00"	3	34	atm	Y	Y*	Centrifugal	20 hp	N	1x1.5-8	20 gpm @ 214'
TA-0920	Waste TK #2	6,000 gals	Y	N	A200	40.00"	3	34	atm	Y	Y*	Centrifugal	20 hp	N	1x1.5-8	30 gpm @ 276'
TA-1110	Scrubber Effluent TK	6,000 gals	Y	N	A200	40.00"	3	34	atm	Y	N	Centrifugal	5 hp	N	1x1.5-6	15 gpm @ 94'
AS-2050	SO2 Scrubber	N/A	N/A	N/A	N/A	N/A	N/A	N/A	atm	N	N	Centrifugal	10 hp	N	1x1.5-8	85 gpm @ 153'
AS-2240	CO2 Scrubber	N/A	N/A	N/A	N/A	N/A	N/A	N/A	atm	N	N	Centrifugal	3 hp	N	1x1.5-6	20 gpm @ 71'
TA-2260	East Seal H2O TK	300 gals	N	N/A	N/A	N/A	N/A	N/A	atm	N	N	Centrifugal	7.5 hp	N	1x1.5-8	50 gpm @ 146'
TA-2280	West Seal H2O TK	300 gals	N	N/A	N/A	N/A	N/A	N/A	atm	N	N	Centrifugal	7.5 hp	N	1x1.5-8	50 gpm @ 146'
TA-2310	CIP Rinse H2O TK	750 gals	N	N/A	N/A	N/A	N/A	N/A	atm	Y	N	Centrifugal	20 hp**	Y		0-80 gpm
TA-2320	CIP Mix TK	150 gals	N	N/A	N/A	N/A	N/A	N/A	atm	N	N	Centrifugal	20 hp**	Y		0-80 gpm
TA-2330	CIP Feed TK	500 gals	N	N/A	N/A	N/A	N/A	N/A	atm	N	N	Centrifugal	20 hp**	Y		0-80 gpm
AS-3110	Scrubber #3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	atm	N	N	Gear	0.5 hp	Y	N/A	
TA-9100	Process H2O TK	150 gals	N	N/A	N/A	N/A	N/A	N/A	atm	N	N	Centrifugal	5 hp	Y	1x1.5-6	15 gpm @ 111'

* pH control is manual via sulfuric acid or soda ash additions.

** All TKs share the same dispersal pump.

Portable Skids

Tank No.	Name	Volume	Agitation?	Variable?	Type	Size	Number of Impellers	Max RPMs	Vessel Pressure Rating	Jacketed?	pH Control?	Pump Type	Motor Size	Variable Speed?	Head Size	Flowrate
TA-1710	Wash Tank #1	50 gals	Y	N	A100	3.30"	1	1800	atm	N	N	Centrifugal	3 hp	N	1x1.5-6	30 gpm @ 33'
TA-1720	Wash Tank #2	50 gals	Y	N	A100	3.30"	1	1800	atm	N	N	Centrifugal	3 hp	N	1x1.5-6	30 gpm @ 33'

