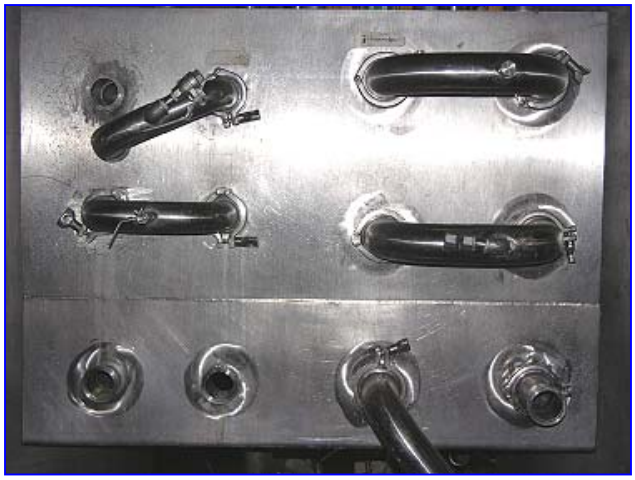
Wiegand/Niro 6-Effect Evaporator with Flash Cooler/Polisher	
Mfg: Wiegand/Niro	**Model:**
Stock No. HD-SC188.600	**Serial No.**

Wiegand/Niro 6-Effect Evaporator with Flash Cooler/Polisher.

- Input: 5.5% Total Solids at 60,000 lb../hr.
- Output: 50% Total Solids at 6,600 lb../hr.
- 1999 GEA/Niro Update Includes: New Thermal Vapor Recompression System
- 2003 Update Includes: Allen Bradley SLC 500 PLC Programmable Controller with Panelview 1000 Touch Screen Display, (2) Anderson AV 9000 & AJ-300 Recorders



Please click this links to view additional information.

http://www.food-processing-equipment.biz/images/HD-SC188niroevaporatorfrontview.pdf

http://www.food-processing-equipment.biz/images/HD-SC188niroevaporatortopview.pdf

http://www.food-processing-equipment.biz/images/HD-SC188niroevaporatordrawings.pdf

http://www.food-processing-equipment.biz/images/HD-SC188niroevaporatorcatwalkdetails.pdf

http://www.food-processing-equipment.biz/images/HD-SC188niroevaporatorfoundationplan.pdf

Commissioning will take place as soon as is reasonably possible after Erection is completed. WIEGAND understands that SORRENTO will require a period of time after Erection is complete and the evaporator is ready for Commissioning in order to make the Goshen facility operational and to place it in a state ready to supply sweet-whey to the Evaporating Plant. Consequently, and in order to comply with the Scheduled Completion and Scheduled Operational Dates set forth in Section VI, WIEGAND shall give SORRENTO written notice that the Evaporating Plant is ready for commissioning at least fourteen (14) days prior to the Scheduled Completion Date. SORRENTO shall then have until the Scheduled Completion Date to bring the Goshen facility operational. WIEGAND will commission the Evaporating Plant commencing on September 30, 1982.

B. CAPACITY AND OPERATIONAL DATA

WIEGAND represents and warrants that the Evaporating Plant shall meet the following capacity and operating specifications:

Product			Sweet Whey	Skim Milk
Evaporator				
Feed	quantity	PPH	60,000	60,000
	concentration	% TS	5.5-6.5	9
	temperature	° F	90 - 110	90
Outlet	quantity	PPH	6,600	11,250
	concentration	% TS	50	45-48
	temperature	° F	122	122
Flash Cooler				
Outlet	quantity	PPH	6,345	11,020
	concentration	% TS	52	49
	temperature	° F	variable between	45-100
Evaporation Capacity including flash cooler		PPH	53,655	48,980

Steam Consumption (120 psig at steam header, dry, saturated and of constant pressure)			
Preheating from 95° F to 158° F, pasteurizing at 165° F and evaporation	PPH	5,110	5,000
Steam Efficiency	e	10.45 (Average for 20 hours) (continuous operation)	9.75
Thermocompressor - Flash Cooler			
at 86° F	PPH	170	--
at 45° F	PPH	--	1,000
Air Ejector Flash Cooler	PPH	20	20
Concentrate heating (direct steam injection to 190° F)	PPH	400	--
Total Steam Consumption	PPH	5,700	6,020
Vacuum Maintenance		Water Ring Pumps	
Condensate Discharge			
From Stage 1 (boiler feed)	PPH	Apx. 6,600	Apx. 4,500
	° F	Apx. 165	Apx. 165
From Stage 6, and surface condensers	PPH	54,000 Apx. Apx.	40,000 Apx. Apx.
	° F	115	115
Cooling Water Consumption			
Tower water heated from Temp. 84° to 98° F	GPM	900 at 95° F Product Feed	
	GPM	1,100 at DSI operation	

(In cooler seasons, cooling water consumption decreases considerably.)

Electric Power Consumption

Electric Capacity installed	kW	Approx. 160
Effective Consumption	kW	Approx. 105

Temperatures

Preheating	° F	From feed temperature 90° F to 158° F in 6 consecutive stages.
Pasteurizing	° F	From 158° F to 165° F in one stage.
Product Holding		At 165° F for min. 15 sec.

Evaporation

Effect		I	II	III	IV	V	VI
Heating temperature (approx)	° F	165	160	156	145	138	122
Boiling temperature (approx)	° F	160	156	145	138	122	108

Concentrate Heating	° F	From 122° F to 190° F max. variable between 170° and 190° F
Concentrate Holding		variable between 2 and 5 minutes
Flash Cooler	° F	Adjustable between 45 and 100
Product Flow		See attached Process Flow Diagram No. 28-02-0
Make Up Water	GPM	Approx. 30.

80 GALLONAGE

C. UTILITIES

1.0 Steam

Steam pressure at the steam header is 120 psig minimum, dry, saturated, and of constant pressure.

The exact connection point to the steam header will be shown in the Arrangement Drawings to be supplied by WIEGAND.