

if you have a problem of teat and udder erosion in your herdchances are you are milking with unstable vacuum. And, as more and more animal health authorities have been agreeing that many teat and udder injuries - which have contributed to the spread of mastitis - have been caused by unstable milking vacuum should have your milking machine's performance checked

We'll be happy to do this for you with our DETCO Graph Machine It's a remarkable, new invention that records vacuum readings at the milker units attached to the teats, recording the milking vacuum and pulsating vacuum simultaneously. And tells you in easy-tounderstand graph form, as shown in the photo above, if you are milking with unstable vacuum at the teat end

Increasing the size of your vacuum pump and the size of your air and milk lines are good recommendations. But if you still don't have stable vacuum at the teat ends - investigate our ZERO CONCORD Twin-Vacuum Pipeline Milking System It's a combination of a revolutionary pipeline milking machine and the ZERO Completely-

Automated Vacuum Bulk Milk Cooler It was designed especially to milk with stable vacuum at the teat ends to prevent teat and udder injuries caused by milking with unstable vacuum And has many other advantages

NEW MODEL 70 **Zero Concord** MILKING SYSTEM

SPECIAL-**4 USED VAC-Q-MERS** 7½ H.P. Pump \$500 Each

Used Tanks & Milking Equipment

DUMP STATIONS

VACUUM PUMPS

BUCKET MILKERS NEW AND USED COMPRESSORS ALL SIZES

J. M. HORST

SERVICE CO.

Box 231, Quentin, PA Phone (717) 274-1242

Zero - PIONEER OF FARM BULK MILK COOLERS

Livestock market

Dewart

Dewart, Pa. February 14, 1977

CATTLE 243. Compared with last Monday's market, slaughter steers steady to 75 cents lower. Slaughter cows grading Cutter & Utility about steady, Canner 50 cents higher. One High Choice No. 1 slaughter steer at 39.50, few Low Choice 36.75-38.60, few Good 33.25-36.50, Standard 30.75-33.10, Utility 27.00-29.75. Few Choice slaughter heifers 34.10-34.85, few Good 33.10-34.60, few Standard 28.25-29.75. Utility & High Dressing Cutter slaughter cows 25.60-27.75, couple 28.00, Cutters 23.85-26.25, Canners 22.10-24.50, Shells down to 18.35. One Choice slaughter bullock at 37.00, one Good at 33.25, few Standard 28.00-31.85, few Utility 24.00-28.25. Few Yield Grade No. 1 1100-1900 lbs. slaughter bulls 28.85-32.25.

CALVES 193. Vealers grading Good & Choice \$1 to \$3 higher, Standard & Good 70-110 lbs. \$1.50 to \$4 lower. Few Prime vealers 65.00-73.00. Choice 57.00-68.00. Good 45.00-56.00, few Standard & Good 110-130 lbs. 39.00-43.00, 90-105 lbs. 33.00-37.00, Standard 70-85 lbs. 27.00-33.00. Farm calves. holstein bulls 95-115 lbs. 34.00-48.00.

HOGS 475. Barrows & Gilts \$1.50 higher. US No. 1-2 195-220 lbs. barrows & gilts 41.80-42.60, lot to 43.00, No. 1-3 190-230 lbs. 41.00-42.10, No. 2-3 200-250 lbs. 39.50-41.35, No. 1-3 145-160 lbs. 36.50-40.00. US No. 1-3 300-600 lbs. sows 31.00-36.25, No. 2-3 400-650 lbs. 28.50-30.50. Boars 18.00-22.00.

FEEDER PIGS 184. US No. 1-3 20-35 lbs. feeder pigs 20.00-25.50 per head, No. 1-3 35-50 lbs. 25.00-27.00 per head, lot No. 1-3 110 lbs. 38.00 cwt., Utility 30-60 lbs. 12.00-24.50 per head.

SHEEP 18. Choice 80-110 lbs. wooled slaughter lambs 55.00-59.00.

Belleville Auction

Belleville, Pa. February 16, 1977

CATTLE 153. Compared with last Wednesday's market, slaughter cows steady, mostly 25 cents higher, spots 50 cents higher. One Good slaughter steer at 33.75, few Standard 31.60-33.25. One Standard slaughter heifer at 30.25, Utility 25.50-29.25. Utility & High Dressing Cutter slaughter cows 26.00-28.35, couple 28.50, Cutters 24.10-26.00, Canners 21.25-24.00.

Yield Grade No. 1 1100-1875 lbs. slaughter bulls 321.00-34.75. Few Good & Choice 500-800 lbs. feeder bulls 28.00-32.00

CALVES 189. Vealers grading Standard & Good 70-110 lbs. \$1 to \$4 lower. Few Choice vealers 60.00-66.50, Good 44.00-59.50, Standard & Good 110-130 lbs. 34.00-44.00, 90-105 lbs. 30.00-36.00, Standard 70-85 lbs. 24.00-30.00, Utility 60-80 lbs. 15.00-25.00. Farm calves, few holstein bulls 95-120 lbs. 36.50-43.00.

HOGS 310. Barrows & Gilts steady to 50 cents lower. US No. 1-2 200-230 lbs. barrows & gilts 41.60-42.60, No. 1-3 190-240 lbs. 40.50-41.80, few lots

No. 2-3 255-265 lbs. 37.50-38.90, few lots No. 1-3 180-185 lbs. 40.30-40.60. US No. 1-3 300-550 lbs. sows 30.50-37.00. Boars 17.00-21.50.

FEEDER PIGS 371. US No. 1-3 20-35 lbs. feeder pigs 19.00-26.00 per head, No. 1-3 35-50 lbs. 25.00-28.50, No. 1-3 75-100 lbs. 29.50-32.50, Utility 40-80 lbs. 16.50-20.00 per

SHEEP 27. Few Choice 70-115 lbs. wooled slaughter lambs 49.00-52.50, few Good 60-80 lbs. 42.00-48.00. Few Slaughter ewes 12.50-15.50.

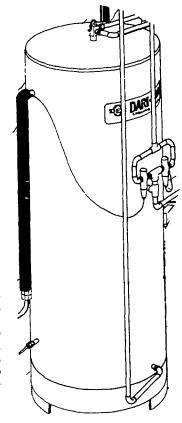


INTRODUCING

THERMA-STOR

Dairy Equipment Company Madison, Wisconsin has added a new energy saving Therma-Stor condensing unit to its Dari-Kool Bulk Milk Cooler Line.

The Therma-Stor is a major improvement in water cooled condensing units. This unit has an all stainless steel heat exchanger combined with a 150 gallon stainless steel storage tank. This unit provides enough 110 degrees water for preping cows and general use while milking. It also stores 110 degrees water for use between milking. In addition the Therma-Stor produces 50 gallons of 165 degrees for pipeline wash-up after milking. This unit is available with a single or dual condenser.



A NEW WATER COOLED CONDENSER - THERMA-STOR

For years water cooled condensing units have been used not only for bulk milk coolers, but refrigeration units of all types. The main reason water was used, was to lower the condensing temperature of the refrigerant. This increased the efficiency of the condensing unit.

Large quantities of 70 degrees - 80 degrees water was the useless by-product of these units. Because of the high original investment and maintenance cost, this style unit is not commonly sold on milk coolers today.

Then things changed. Energy costs have doubled on most farms in the last few years, 165 degrees F water now costs a dairyman ½ cent, to 2 cents per gallon. The average dairy uses two gallons of hot water per cow, per day for udder washing, sanitizing, washing equipment, feeding calves and general clean up. This means an average cost of \$2-day or \$700-year for a 100 cow dairy. This revived the water cooled condenser concept for dairy farmers. A modern dairy used 110 degrees water for equipment sanitizing, udder washing, rinse cycles on the pipeline and the bulk cooler, calf feeding and hand washing. Only the wash cycle of pipeline and the milk cooler require an elevated water temperature of 165 degrees F. The profile of usage on an average 100 cow dairy is 400 gallons of 110 degrees water and 70 gallons of 165 degrees

A water cooled condenser can deliver 165 degrees water, but the condensing temperature would be very high. The results would be poor efficiency and short compressor life. The lower the condensing temperatures, the higher the efficiency and the

longer the compressor life. One of the innovations on the market today generates a gallon of 100 degrees water for every gallon of milk cooled. It also generated 50 gallons of 165 degrees at each milking. This unit combines an insulated 150 gallon stainless steel storage tank and a stainless steel heat exchanger into one. The condensing temperature in this unit is determined by the 110 degrees water. The 165 degrees water is generated by desuperheating the refrigerant. Storage of the 110 degrees and 165 degrees water is

necessary for usage at times other than milking.

A small backup 165 degrees water heater is recommended. There is no need for a backup on the 110 degrees water because excess is usually generated. The refrigeration system is very conventional regarding controls, valves and compressors. The condenser storage tank is the only special piece of equipment required. This condenser storage tank can be added to most refrigeration systems.

The investment of this equipment is returned by the savings in electrical energy in a

year or two on the average dairy.

With the addition of Therma-Stor to an existing air cooled condenser refrigeration system your milk house can be partially heated and there is no water wasted. Average investment for a stanchion barn or small milking parlor will be in the \$1300.

Lloyd Kreider

Cochranville, PA (215) 932-2934 Shenks Farm Service

Lititz, PA (717) 626-1151

Carl Shirk Lebanon, PA (717) 274-1436

Jones Dairy Service

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