



Vacuum/ Condensate Return Packages for Steam Heating Systems

PERFORMANCE & VERSATILITY. NES offers versatility and performance for the majority of your steam heating system needs with features preferred by architects, engineers, contractors and owners alike. By using entirely separate air and water pumping elements the system can be closely fitted to specific job requirements for optimum pumping efficiency. This simple design also provides for easy maintenance. Available in a variety of configurations (Single, Duplex and Modified Duplex), NES systems are easily and economically expandable.

Features:

- Efficiency: NES pump capacities are approximately 10 CFM per horsepower, twice as that of the common water jet type vacuum heating pump.
- Standard operating vacuum 10" Hg which is twice as high as water jet systems.
- 3 Year warranty against defects.
- Standard construction is Cast Iron with 304 & 316 SS available.
- Standard seal is mechanical seals.
- Parts and repair kits available to fit old NASH vacuum systems.
- Available in for systems up to 100,000 SQ FT EDR.



CLS Condensate Units

Vacuum Condensate Pumps for Steam Systems

SIZING AND SELECTION OF EQUIPMENT

CONDENSATE PUMPS

Condensate pumping capacity is directly related to the steaming capacity of the broiler. One broiler horsepower will evaporate .069 gallons per minute. Each 1000 sq. ft. EDR will condensate pumps specified in our suggested standard offering table are sized to handle 3 times this theoretical condensing rate. This can frequently be reduced to 2 times this rate and still provide ample pumping capacity.

RECEIVER

Nash type CLS receivers are sized for an approximate one minute storage capacity. Undersized receivers can cause short cycling and premature wear to motor starting components. Oversized receivers can cause a starve- then-flood condition to the broiler or broiler feed unit.

Nash type CLS receivers are close grained cast iron. Cast iron is widely recognized as the most durable material. It is not unusual to see cast iron receivers that are still perfectly sound after more than 60 years of service.

VACUUM PUMPS

Unlike condensate pumps or receivers, there is no formula that can be used to calculate air pumping requirements. This can be based only on sound judgment and experience. In years past, for new construction, experience showed that pumping capacity of 1/3 to 1/2 CFM per thousand square feet EDR was adequate. This standard can still be used for buildings with tight return piping and no trap leakage. Recognizing that today's vacuum- condensate pumps are for installation on existing systems, Nash type CLS suggested standard offerings provide approximately 1 CFM per thousand square feet EDR. One thing is certain; it is difficult to err in providing too much air capacity.

SUMMARY OF STANDARD RECOMMENDATIONS FOR WATER AND AIR CAPACITIES

All values shown below are per 1000 Sq. Ft. E.D.R. for each water or air pump.

<i>CONDENSATE</i>	
Simplex Unit	1.0 to 1.25 GPM
Duplex and Modified duplex Units	1.0 GPM
<i>AIR- FOR LOW VACUUM SYSTEMS</i>	
Simplex and Modified Duplex Units	1.0 CFM
Duplex Units	.75CFM
<i>AIR- HIGH VACUUM SYSTEMS</i>	
Simplex and Modified Duplex Units	2.0 CFM
Duplex Units	1.0 to 2.0 CFM