



CLS Series Condensate Units

Overview:

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.



Vacuum/Condensate Return
Packages for Steam
Heating Systems

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.
- Parts and repair kits available to fit old NASH vacuum systems.
- Available in for systems up to 100,000 SQ FT EDR.
- 3-year factory warranty.

Materials of Construction:

| Part | Standard Material of Construction | Optional Material of Construction |
|----------------|-----------------------------------|-----------------------------------|
| Housing & Head | Cast iron | 304/316 Stainless Steel |
| Seal | Mechanical seal | - |

Condensate Pumps: Condensate pumping capacity is directly related to the steaming capacity of the boiler. One boiler 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.



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Oversized receivers can cause a starve-then-flood condition to the boiler or boiler 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.

Standard Recommendations:

All values shown below are per 1000 SQ FT EDR for each water or air pump.

Condensate:

Simplex Unit 1.0 to 1.25 GPM

Duplex and Modified Duplex Units 1.0 GPM.

Air - For low Vacuum Systems:

Simplex and Modified Duplex Units 1.0 CFM Duplex Units 0.75 CFM.

Air - High Vacuum Systems:

Simplex and Modified Duplex Units 2.0 CFM Duplex Units 1.0 to 2.0 CFM.