The Nash Engineering Company

Plant and General Offices

South Norwalk, Conn., U. S. A.

Sales Offices

Atlanta	618 Atlanta Trust Co. Bldg.	Miami	113 N. E. Third St.
Birmingham	2224 Comer Bldg.	Minneapolis	808 La Salle Ave.
Boston	Nottingham Bldg., Copley Sq.	Montreal	417 New Birks Bldg.
Buffalo	317 Chamber of Commerce	New Orleans	344 Camp St.
Butte, Montana	910 Arizona St.	New York, N. Y.	Graybar Bldg.
Chattanooga	1104 James Bldg.	Omaha	Baum Bldg.
Charlotte	608 Builders Bldg.	Philadelphia	254 South 15th St.
Chicago	925 Monadnock Block	Pittsburgh	1430 Oliver Bldg.
Cleveland	1600 Union Trust Bldg.	Portland, Ore.	224 Pine St.
Dallas	1020 Mercantile Bank Bldg.	Richmond	301 American National Bank Bldg.
Denver	1226 California St.	St. Louis	4200 Forest Park Blvd.
Detroit	Kerr Bldg.	Salt Lake City, Utah	Dooly Bldg.
Indianapolis	821 Hume-Mansur Bldg.	San Francisco	Sharon Bldg.
Kansas City, Mo.	208 Mutual Bldg.	Seattle	901 L. C. Smith Bldg.
Los Angeles	1224 S. San Pedro St.	Toronto	90 Chestnut St.
Louisville	901 Realty Bldg.	Vancouver	410 Homer St.
Memphis	1714 Exchange Bldg.	Washington, D. C.	Barr Bldg.

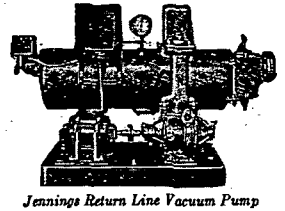
PRODUCTS

Return line and air line vacuum heating pumps. Condensation pumps. Standard and suction centrifugal pumps. House service pumps. Sewage ejectors. Sump pumps. Compressors and vacuum pumps for air and gases.

Return Line Vacuum Heating Pump

Removes air and condensation from the return line of vacuum steam heating systems, discharges the air to the atmosphere, and returns the water to the boiler.

The pump consists of two independent units combined in a single casing—an air unit and a water unit. Impellers of both units are mounted on the same shaft, supported on annular ball bearings outside the casing. The pump is bronze fitted throughout.



Jennings Return Line Vacuum Pump

The air unit exhausts air and vapors and delivers these to the atmosphere without back pressure. The water unit removes the condensation and pumps it directly into the boiler. By handling the air independently of the water, horsepower is saved, with a proportionate reduction in the cost of current.

Supplied either direct connected to standard electric motors, for belt drive, or for steam turbine drive. For continuous or automatic operation against pressures up to 40 lb.

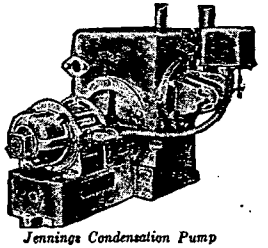
Capacities of Jennings Heating Pumps

Size	Equivalent Direct Radiation Sq. Ft.	Air Capacity Cu. Ft. per Min.	Water Capacity at 180°F. Against 10 lbs. Pressure Gal. per Min.	Actual H. P. for Delivering Water Against 10 lbs. Pressure.	R.P.M. & Motor H.P. 10 lbs. R.P.M.	10 lbs. H.P.	20 lbs. R.P.M.	20 lbs. H.P.
T	2,500	3	4	0.33	3600	⅛	3600	½
U	5,000	3	9	0.33	3600	⅛	3600	½
V	10,000	6	14	0.9			3600	1
B	16,000	9	22	1.4	1800	1½	1800	2
C	26,000	15	35	2.0	1800	2	1800	3
D	40,000	19	60	2.8	1800	3	1800	5
E	65,000	34	90	3.9	1800	5	1800	7½
F	100,000	50	140	7.0	1800	7½	1800	10
G	150,000	102	200	9.8	1200	10	1200	15

Condensation Pump and Receiver

Removes the condensation from radiators in return line steam heating systems, particularly radiators set below the boiler waterline level, and pumps the condensation back to the boiler.

By making the pump casing a part of the return tank, and bolting the motor base to the tank, floor space is conserved. The rectangular construction permits installation in a corner against the wall.



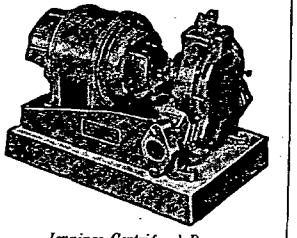
Jennings Condensation Pump

Capacities of Jennings Condensation Pumps

Size	Equivalent Direct Radiation Sq. Ft.	Water Capacity G.P.M.	Tank Capacity G.P.M.	R.P.M. 10 lb. Discharge Pressure	Motor H.P. 10 lb. Discharge Pressure
32	2000	4	6	3600	⅛
34	4000	6	6	3600	⅛
36	6000	8	6	3600	⅛
38	8000	11	12	3600	⅛
310	10,000	13	12	3600	⅛
312	12,000	16	12	3600	½
316	16,000	22	12	3600	½

Centrifugal Pump

For circulating hot and cold water; boosting city water pressure; handling water in air washing and conditioning; removing condensate from heating systems, blow-down from soot blowers and superheaters, exhaust drips from steam ejector air pumps and *other auxiliaries*; pumping refrigerator can and core water, evaporator feed, cooling tower and condenser water, screen wash water, oil engine jacket water, ash sluicing water.



Jennings Centrifugal Pump

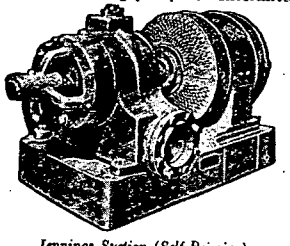
Compact—motor armature and pump impeller are mounted on the same shaft. Simplicity—no bearings in pump casing, only one stuffing box. Accessible—pump impeller can be removed without breaking pipe connections, touching packing, or disturbing shaft alignment.

Supplied in 1¼, 1½, 2, 3, 4 and 6 in. sizes for handling up to 1000 g.p.m. Heads up to 250 ft. Bronze fitted *pump is standard construction.* Also furnished in all-bronze or all-iron for special service.

Centrifugal Pump Operating With Suction Lift

When the Jennings Suction Centrifugal is started, the built-in Nash Hytor Vacuum Pump exhausts the air from the casing and suction piping. Water is quickly drawn into the pump. Full rated capacity is delivered without delay.

Successful performance is assured under conditions where water level is likely to fall, or where air or gas is handled together with the water being pumped. Intermittent operation is possible without the need for a foot valve.



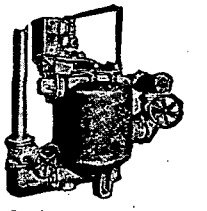
Jennings Suction (Self-Priming) Centrifugal Pump

Furnished in 2, 3, 4 and 6 in. sizes for capacities up to 1000 g. p. m. Heads up to 100 ft. Supplied either bronze fitted or all bronze construction.

Sewage Ejector

For pumping unscreened sewage or drainage from basements below the street sewer level, handling crude sewage from low level districts, pumping effluent, sludge and *other heavy liquids.*

The Jennings Sewage Ejector is of the pneumatic type. Air, compressed to the necessary working pressure by a Nash Hytor Compressor, is used as the motive power to pump the accumulated sewage from a *pot to the* sewer.



Jennings Sewage Ejector

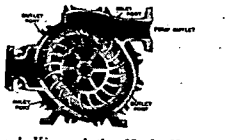
Air is compressed, delivered, and used *only when* required. There are no air storage tanks, reciprocating air compressors, or screens. Air valves are avoided.

Furnished in several standard sizes for handling up to 1500 gal. per min. Heads up to 50 ft.

Compressors and Vacuum Pumps for Air and Gases

The rotor, consisting of a cylindrical hub around the periphery of which are chambers or spaces formed by heavy shrouds cast integrally, revolves freely in an elliptical casing or housing filled with water.

As the rotor turns, it carries the water around with it. The water under the influence of centrifugal force, is compelled to follow the contour of the casing, and alternately to enter and to leave the rotor chambers, twice in each revolution.



Sectional View of the Nash Hytor Compressor or Vacuum Pump, Showing the Unique Principle of Hydro-Turbine Operation

As the water recedes from the rotor, air is drawn into the chambers through the inlet port. As the water is subsequently forced back into the rotor by the converging casing, the air is compressed and then discharged from the rotor through the outlet port.

A separator, supplied with each compressor, frees the delivered compressed air of entrained moisture.

Supplied in several standard sizes for handling up to 5000 cu. ft. of free air per min. For discharge pressures up to 20 lbs.; vacuums up to 20 in. of mercury column. Cast iron standard construction. Bronze fitted pumps, and pumps of solid bronze and *other alloys* furnished special.

Bulletins

No. 10. Nash Hytor Compressors.
No. 11. Nash Hytor Vacuum Pumps.
No. 15. Jennings Return Line Vacuum Heating Pumps, piped-up type.
No. 17. Jennings Air Line Vacuum Heating Pumps.
No. 52. Jennings Standard Centrifugal Pumps.
No. 63. Jennings Condensation Pumps.
No. 67. Jennings Sewage Ejectors.
No. 71. Jennings Return Line Vacuum Heating Pumps, manifold type.