

NASH Vacuum Pumps for Bricks & Ceramics

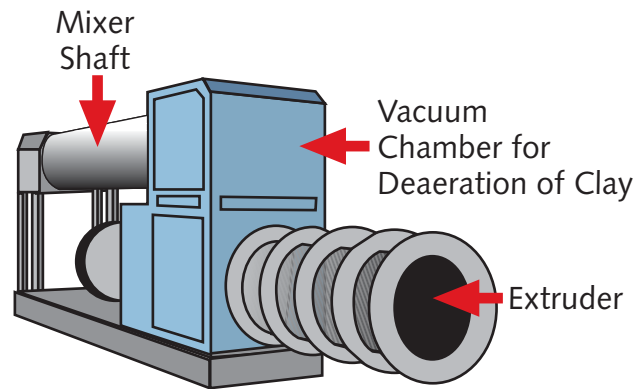


Nash liquid ring vacuum pumps are ideal for this application, because of their ability to handle both intermittent and continuous streams of water without damage or loss of vacuum level.

Extruded bricks are made from shale and clay materials, mixed with water. The mixture passes through a vacuum chamber which reduces the amount of air in the mix, resulting in a denser, more homogenous product. It is then forced through a die in the brick shape by an auger (screw) extruder, cut to size and dried.

There are several variations on this procedure, but the two that interest us are:

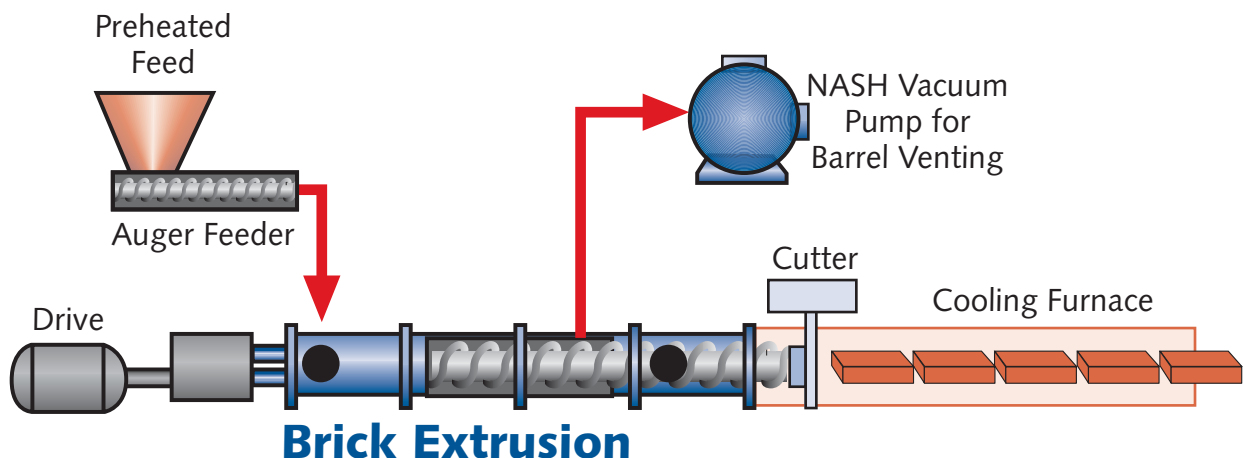
- deaerating extruders with vacuum incorporated in the extruder barrel
- combined deaerating extrusion units consisting of extruder, vacuum chamber and mixer



In both cases, the deaerating system should remove as much air as possible from the clay, giving the clay increased workability and plasticity - and greater strength. Nash liquid ring vacuum pumps are ideal for this application, because of their ability to handle both intermittent and continuous streams of water without damage or loss of vacuum level. Nash pumps are also tolerant of clay carryover. Add these to over a century of high reliability and engineered excellence, and Nash liquid ring vacuum pumps are the perfect choice for your extrusion process.

A relatively new process is vacuum hot extrusion. Here, raw material is heated in a vacuum extruder until it develops the plasticity needed for extrusion. The material is forced through the die at high temperature (1100-1200° F). A great advantage of this type of processing, is the ability to recycle waste raw materials. As long as the material is reasonably consistent, ceramics can be produced this way using fly ash from coal, lignite and bio-mass; mine tailings; waste clay materials; and schist-containing materials.

Due to the high temperature levels involved in hot extrusion, the liquid ring pumps are often sealed with oil instead of water. This is no problem for Nash pumps - they work with a wide variety of seal liquids.



NASH Features	User Benefits
Ability to handle process carryover or recycled gases	Increased operating efficiency and reduced operating costs
Long design life	Highest reliability
No internal lubrication required	Less maintenance required; less downtime
No metal-to-metal contact	Simple operation; wear-free performance
Cool Running	Incoming vapor is condensed. Smaller, less costly equipment can be selected
Only one moving part	Simple and trouble-free operation
Proven energy efficient design	Lower operating costs, year after year
Over a century of engineering and application experience	Optimal system design for all filtration requirements
New and updated models	Water and energy savings

Contact us for further information

NASH
Div. of Gardner Denver
 9 Trefoil Drive
 Trumbull, CT 06611 U.S.A.
 tel: 800 553 NASH
 + 203 459 3900
 fax: + 203 459 3988
 nash@gardnerdenver.com
 GDNash.com

