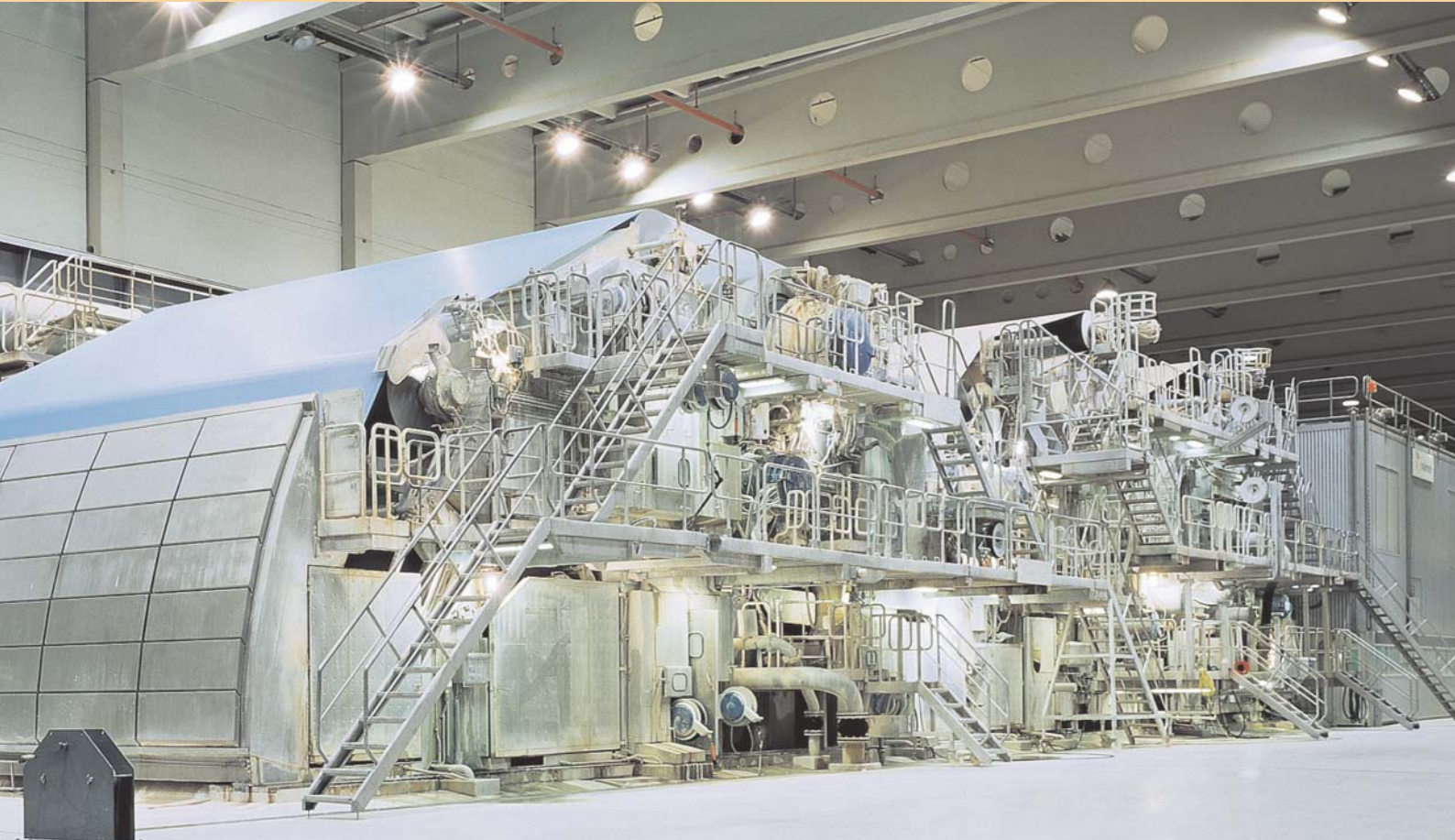


Vacuum Systems for the Paper Industry





Energy savings

With the increasing cost of power, energy cost is a key concern of today's papermaker. Our large liquid ring vacuum pumps have a patented variable porting design that allows the pump to operate continuously at its peak efficiency, reducing power consumption.

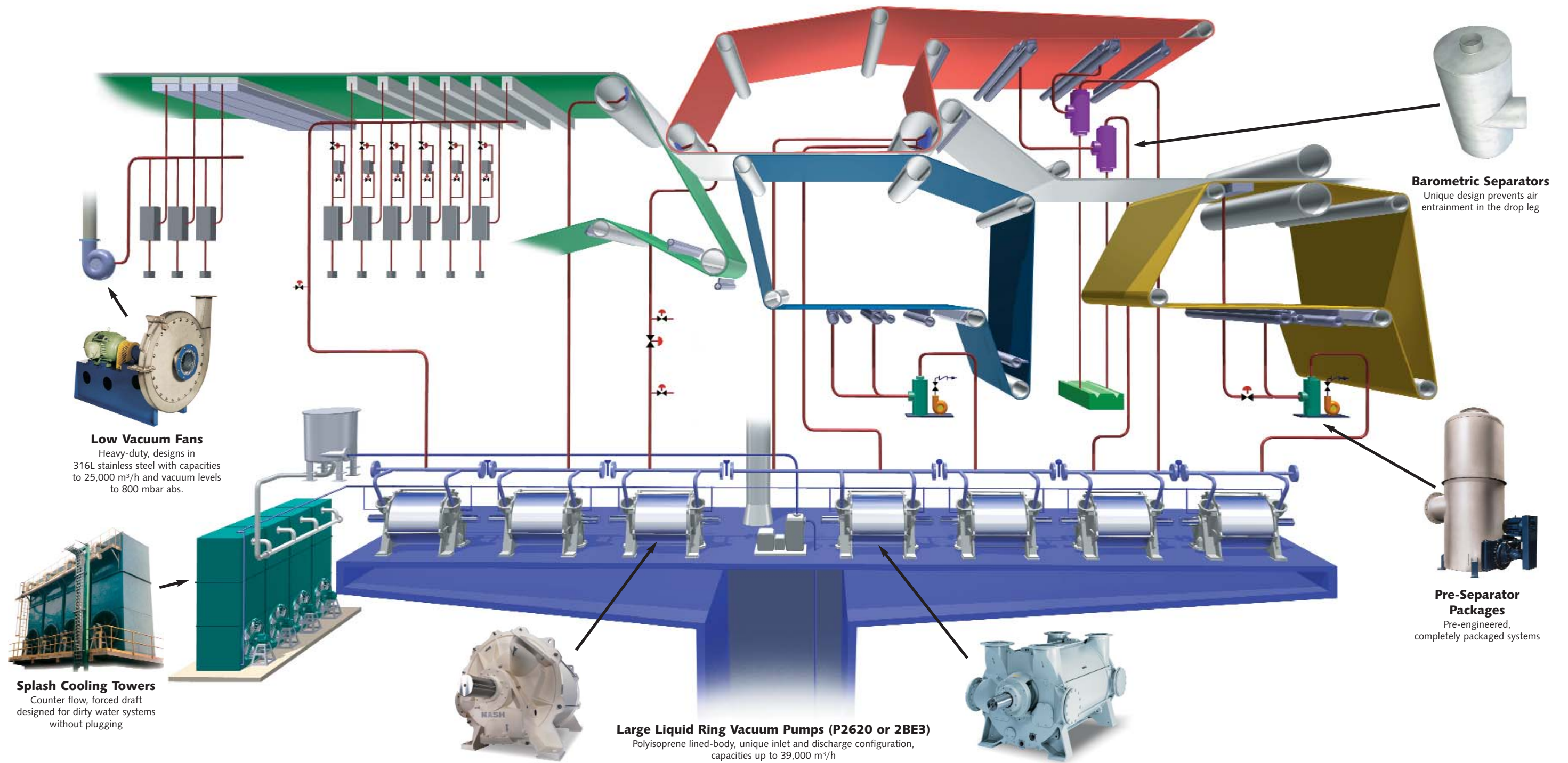
Optimum performance

Bigger and/or faster is not necessarily better. A vacuum pump operating at off-design conditions may consume

enough excess energy to pay for a properly sized, more efficient pump in a short period of time.

Our experienced engineers can properly size and select the vacuum pumps and water removal equipment required to operate your paper machine at its peak performance.

With more than 80 years of combined paper industry experience as both The NASH Engineering Company and Siemens-elmo, you can be sure that the most efficient, most reliable equipment is specified for your application.



Dewatering at its best

In the FORMING SECTION, correct controlled water removal rates are important in forming a strong, consistent sheet, while also reducing web breaks and further water removal costs. Low vacuum fans efficiently aid water removal at the vacuum foils.

Moving down the wire, flatboxes have a slightly higher vacuum level to remove water. **NASH liquid ring vacuum pumps** provide the ability to adjust vacuum levels to optimize water removal. Once the sheet reaches the Couch, the opportunity exists to impart extra hardness and strength by increasing the vacuum level. The **NASH liquid ring vacuum pump** is the ideal vacuum source as it

responds positively to changes on the paper machine so providing maximum efficiency at varying vacuum levels, flexibility, and durability while offering exclusive performance features.

In the PRESS SECTION, additional moisture is removed from the sheet. Felt conditioning, which is critical to sheet dryness and paper machine run-ability, requires a variable vacuum source to track felt performance. As the felt ages, it becomes more compact, less permeable and more resistant to water removal. A higher vacuum level is then required to remove water. Because press felts fill at different rates during their lifetime, TAPPI recommends that each felt be serviced by an independent vacuum source. The inherent operating characteristics of NASH liquid ring

vacuum pumps provide this tracking by automatically adjusting vacuum levels as the felt ages.

The water removed from the press felts during the felt conditioning process contains debris and chemical contaminants that cannot be tolerated in the vacuum pump seal water under today's regulatory climate. **NASH Air-Water Separators** (with barometric drop legs (BM) or with low-NPSH water removal pumps (NK package) prevent the contaminated white water from entering the seal water systems.

Water effluent from the separators and separator packages can be easily monitored and quantified through the use of **NASH V-Notch Seal Tanks** that are available in

both single and multiple compartment configurations and provide a visual indication of the water removed from the process system. Water removed from the felts at the uhle box contains process debris and chemical contaminants.

In closed-loop applications where the vacuum pump seal water is reused and the heat of compression must be removed, or in once-through applications where the temperature of the water must be reduced for environmental concerns, the **NASH Splash Series Cooling Tower** can be used. Its compact/modular design allows it to be used both indoors and outdoors and its unique fill design reduces clogging in most dirty water applications.



Upgrading and re-engineering existing installations

As the demand of the market and the economy changes, so must the paper industry. A state-of-the-art paper machine 10 years ago may be considered marginal by today's standards. Whether it involves adding capacity through additional vacuum pumps/water removal equipment or changing the configuration of your existing equipment, we will analyze your vacuum system needs and determine a solution that best fits your needs and requirements.

Reliability that's built to last

Many of the NASH and Siemens-elmo pumps installed in paper mills decades ago are still operating today. They are solid, reliable and trouble-free. All of the 2BE3 and P2620 vacuum pumps come with a polyisoprene-lined body that

reduces corrosion and wear and the associated power consumption. All of this is backed by an exclusive two-year warranty against defects in material and workmanship.

Parts and Service - just a phone call away

If you require parts or service on your NASH or Siemens-elmo vacuum pump, our extensive parts and service network is only a phone call away. NASH Service Engineers are available on 24 hour emergency call out.

Our European, company owned, service centers have stocks of service exchange pumps for most popular models and are also ready to respond to your service needs and restore your vacuum pump back to its original factory performance.

Other NASH Products

2BE3/P2620

Large liquid ring vacuum pumps with superior corrosion resistance
Top discharge capability which eliminates need for trench
Self-recirculating seal water, reducing need for
external seal water source
Capacity of 2,500 to 39,000 m³/h with vacuum to 33 mbar abs



Barometric Separators

Unique design prevents air entrainment in the
drop leg simplifies seal water reuse
Capacities to 42,500 m³/h of air and 15,200 l/min of water



Pre-Separator Packages

Stainless steel separator with all S/S or S/S-fitted
low NPSH removal pump
Swing away tank mounted design with removable cover
Water flows: 120 m³/h



Splash Cooling Towers

Counterflow, forced draft designs
Modular, FRP Construction
PVC (ABS available) & S/S internal wetted components
Suitable for flows greater than 400 m³/h



Low Vacuum Fans

Single stage, 316 stainless steel impeller & housing
Capacity of 25,000 m³/h with vacuum to 800 mbar abs



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