

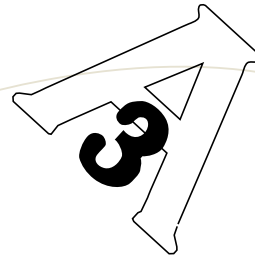
The Modern Art of Engineering



W+ pumps

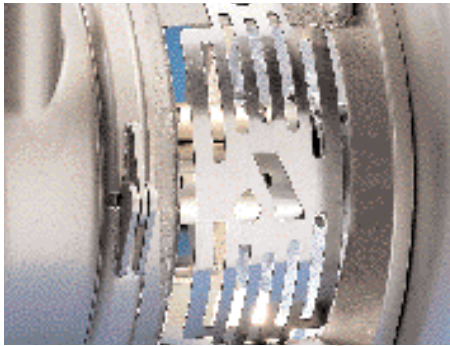
Uncompromising quality

Top performance



Designed for efficiency

The pump series W+ is based on a unique hydraulic design, which on the one hand ensures maximum efficiency and on the other allows for high hygienic standards. One important reason for this is the APV patented spiral volute positioned in the back-plate of the pump. The efficient energy utilization means that the pump has a very low noise and vibration level, which in turn ensures improved product integrity.



Innovative thinking

A striking innovation in the W+ pump is the greater operating range achieved as a result of design improvements to the impeller and outlet. In addition the W+ is very maintenance friendly and the hygienic standard at an absolute optimum.

More pump for your money

Since each W+ pump covers a wider operating range than corresponding traditional pumps. In many cases a smaller motor or pump model will do the job - enabling our customers to cut down on energy consumption, operating costs and installation expenses.

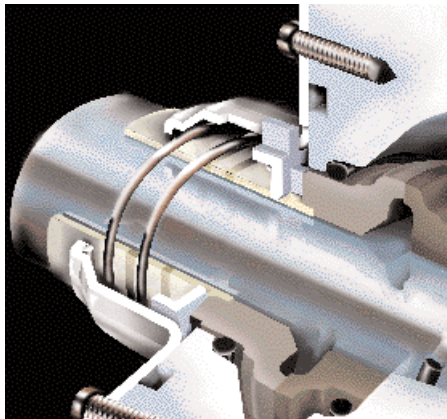
Easy maintenance

The W+ pumps are geared to total efficiency - including efficiency in maintenance and repairs. The shaft seal can be visually inspected for leaks. In most models, the pump housing has a clamp ring that can be mounted at any angle to facilitate disassembly and reassembly.



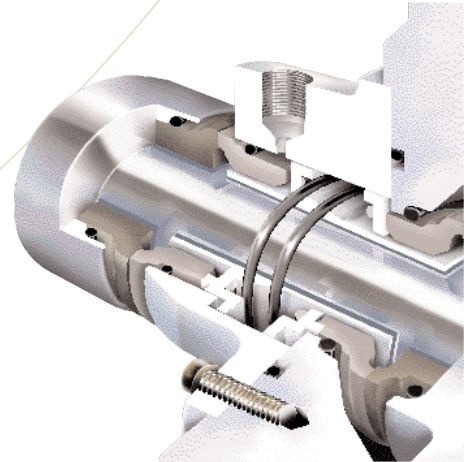
Improved shaft seal.

The shaft seal is the essential area in terms of hygiene. The pumps are equipped with a shaft seal that is ideal for hygienic applications.



Seal advantages

- Great mechanical stability, so mechanical stresses are reduced and the lifetime of the shaft seal is substantially extended.
- Flexible suspension of the stationary ring counteracts imbalances
- The shaft seal is balanced for the entire range of the pump.
- Minimum risk of dry running.
- Can easily be rebuilt into a double mechanical shaft seal using two identical shaft seals.
- Easy, quick replacement: Only the pump housing and impeller have to be disassembled. Then the shaft seal can be replaced very quickly.



High hygienic standards

The W+ pumps meet the strict hygiene requirements of the EHEDG (European Hygienic Equipment Design Group). They are therefore designed for both CIP (Cleaning in place) and SIP (Sterilizing in Place). All parts of the pump, which come into direct contact with the product, are in AISI 316L stainless steel.

The pumps can also be supplied in 3A version or aseptic version.



Variants of the W+



WHP+

The WHP+ is a high-pressure model of the W+ range. The pumps are designed to withstand system pressures up to 870 psi (60bar), as is necessary for example in certain diaphragm filtering processes. To increase stability and dampen vibrations the WHP+ pump is very sturdy in its construction.



W+ multistage pump

The W+140/50 offers three special features:

- It provides pressures up to 217 psi (15bar)
- It can be used in process with system pressure up to 870 psi (60bar)
- It ensures optimum hygienic standards.

And unlike other multistage pumps, it is CIP friendly. It has open impeller and semi-open impeller vanes eliminating any hiding places for bacteria. The W+ multistage pump is equipped with a heavy-duty bearing basket that absorbs all radial and axial forces present in pumps of this kind. The W+ 140/50 can therefore use standard motors of any make.



WI+ Inducer pump

Gaseous products, products with low boiling points and processes that involve vacuums all share the same "problem"; the inlet pressure available (NPSHa) is lower than the pressure required for the pump to work optimally (NPSHr), and this creates a risk for cavitation. For these applications. The W+ pump is the perfect choice.

The WI+ is equipped with an inducer in the pump inlet. The inducer boosts the inlet pressure, and the risk of cavitation is correspondingly reduced

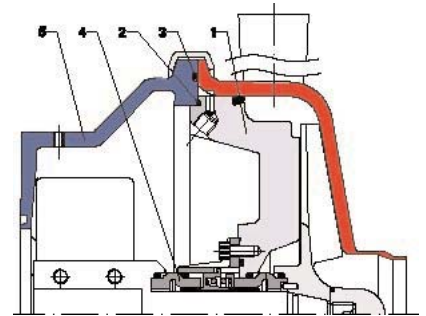


(the NPSHr-value typically drops by 50-70%). When the risk of cavitation disappears, so does the risk of a large number of operational disturbances that would otherwise be the result, such as excessive noise, energy loss, product damage and unnecessary wear on the pump.

The inducer further enables the WI+ pump to handle viscous products where other centrifugal pumps have to give up - which means it may often replace the far more expensive positive displacement pumps. The WI+ is unique among inducer pumps, since it provides the same high efficiency and low NPSHr value throughout its entire operating range.

WA+ aseptic pump

Environmental requirements are getting stricter and stricter! But today aseptic production is already essential to certain processes - including the manufacture of long life food and pharmaceutical products. The WA+ pump is the perfect solution. All seals including the shaft seal, are designed as double seals. So APV products ensures absolutely aseptic production processes with barrier media up to 320°F (150°C). With a WA+ pump, the risk of contaminating the product and environment is thus reduced to an absolute minimum.

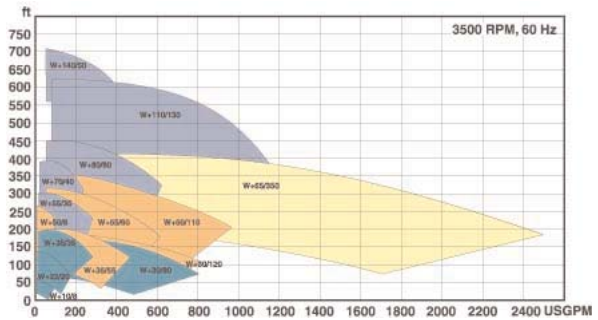
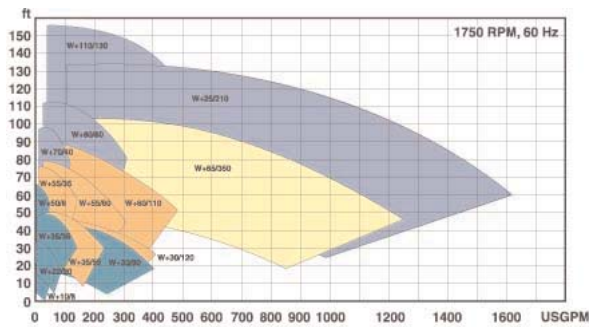


WK+

Like the W+140/50 the pump models W+30/120, 55/60, 60/110, 65/350, 70/40, 80/80 and 110/130 can be supplied base mounted as a WK+ pump.



Prepared for the future



Reliability

Problem-free operation and long life-time characterize the W+ pump. The pump design is particularly strong. The new design of the shaft seal resists wear and the extension frame is made of stainless steel. Operating reliability has been thoroughly tested. All W+ pumps are designed for system pressures up to 203, 261 and 362 psi (14, 18 and 25 bar) as standard.

Complete product range

The W+ range consist of 16 standard models with pressure and flow capacities to 217 psi (15 bar) and to 1760 gpm (400 m³/hr) and a number of special versions, which may be adapted specifically to customer requirements. The W+ pumps are modular so that any pumping job can be done with a perfectly customized W+ pump

Motors

To meet the global demand the W+ pumps are supplied with either NEMA or IEC standard motors.



APV Products

100 South CP Avenue
Lake Mills WI 53551
USA
Tel: 920-648-8311
Fax: 920-648-1441

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