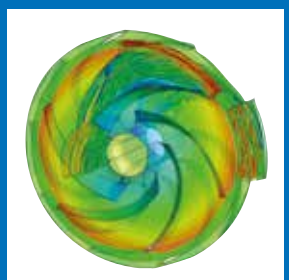
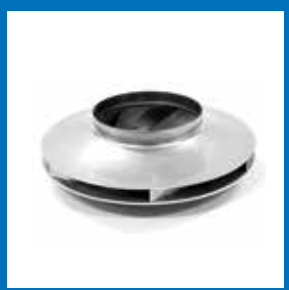
LENNTECH
WATER TREATMENT SOLUTIONS

dp pumps

the **dynamics** of water





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low-NPSHr dpv & dph(s)i

Prevent cavitation and pump failure

low-NPSHr

unique

Cavitation is caused by too low suction pressure, in relation to the internal resistance of the liquid in the pump and the vapor pressure of a liquid (the higher the temperature, the higher the vapor pressure). In case of cavitation pump problems occur because of imploding 'bubbles' generating an intense shock wave. Life expectancy decreases because of deteriorating of the metal and extra wear on moving parts due to imbalance and decreased cooling and lubricating properties of the cavitating liquid. Without cavitation you are assured of a quiet and long-lasting smooth pumping.

DP has developed a specially designed low NPSHr impeller and bottom stage casing to create a pump range with significant lower NPSHr values. Due to this low NPSHr design the pump can be used in a wider range of applications where low suction pressure and/ or high vapor pressure of the liquid normally cause problems

- Hot water (Boiler feed)
- Feed from a (low) reservoir
- Little to no space between the deaerator tank and the pump
- No vented tanks available

dphi

Also with higher flows

DP's unique design allows for lower NPSHr overall, but also extends the low NPSHr to higher flows where conventional pumps normally see a sharp increase in NPSHr with resultant cavitation.

No increased motor power

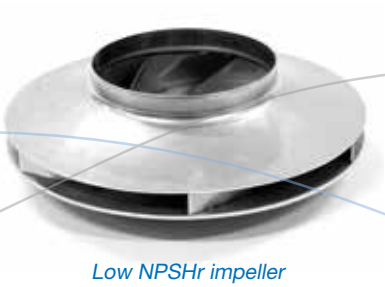
Although the low NPSHr impellers would normally require slightly more power than the standard impellers, there will be no requirements for increased motor power due to efficient rimming of the low NPSHr components.

Low NPSHr impeller versus standard Impeller

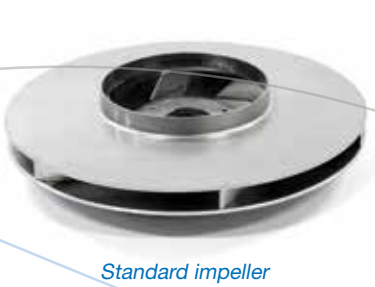
- Inlet diameter of the impeller is larger
- The impeller opening height is increased
- Impeller base plate has been reinforced
- Modified vane design
- Total height of the impeller is larger, this will be compensated by the adjusted bottom casing

dpvcf *dpvsf* *dpv*

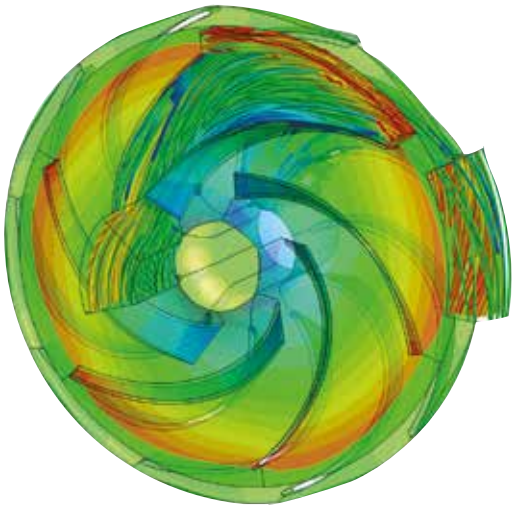
design



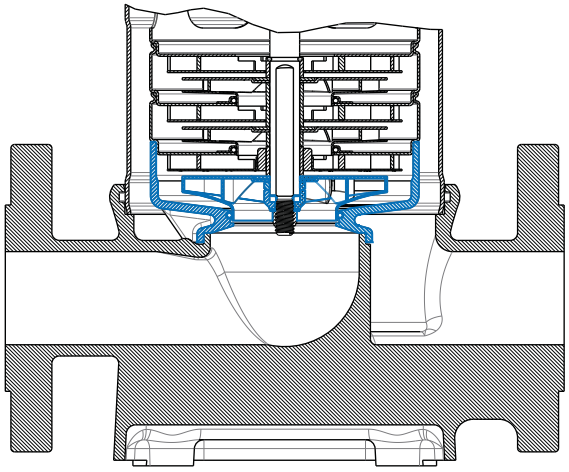
Low NPSHr impeller



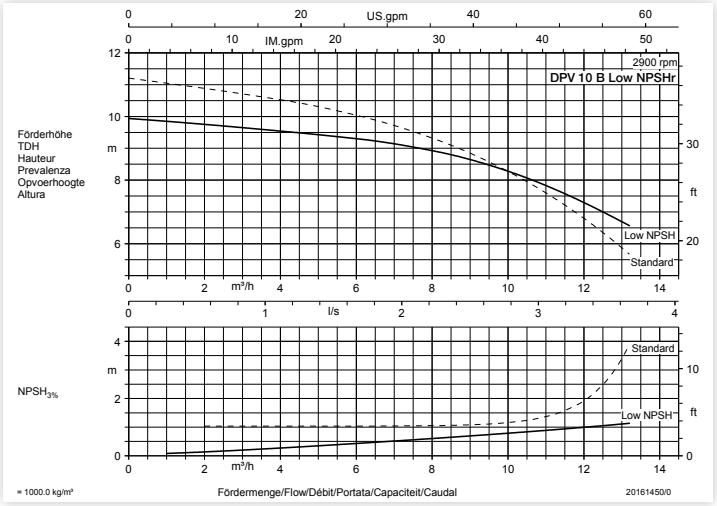
Standard impeller

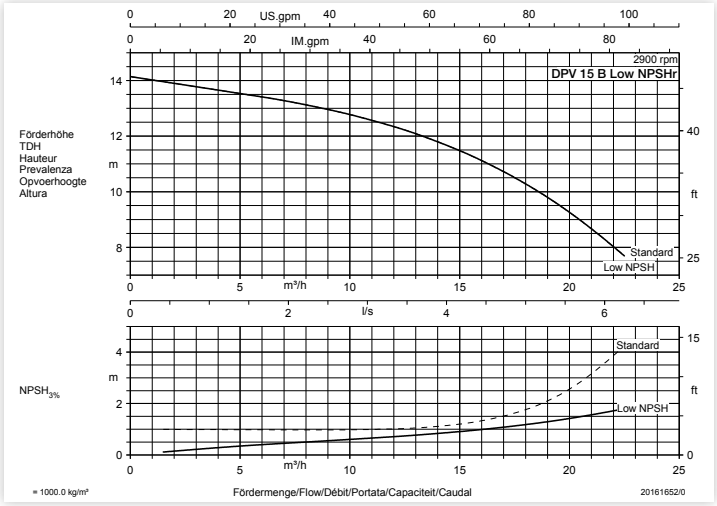


Extended CFD calculation models have resulted in a design with lower fluid velocities at the core of the impeller (shown in blue).



A pump with Low NPSHr impeller has the same height as the standard version and can easily be exchanged.





Low NPSHr option is available for DPV (C/S) and DPH(S)I 2, 4,6, 10 and 15 in both 50 and 60 Hz

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