



PUMPS & SYSTEMS

A Discussion of

Submersible Non-Clog Pump Design

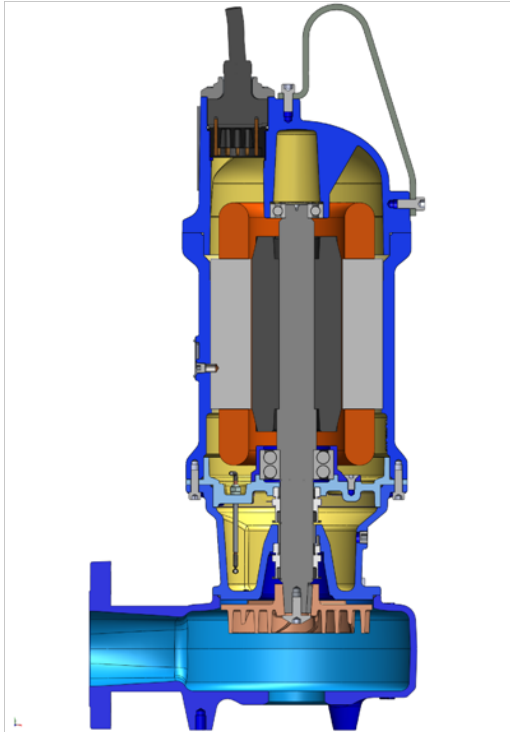
- Impeller Types
- Performance Characteristics
- Mechanical Design Characteristics

CRANE

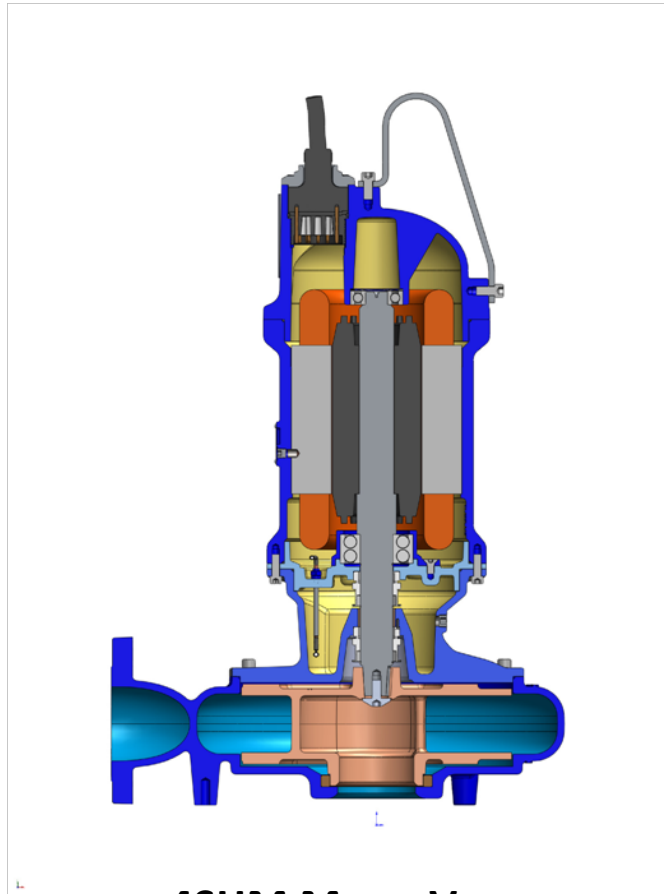
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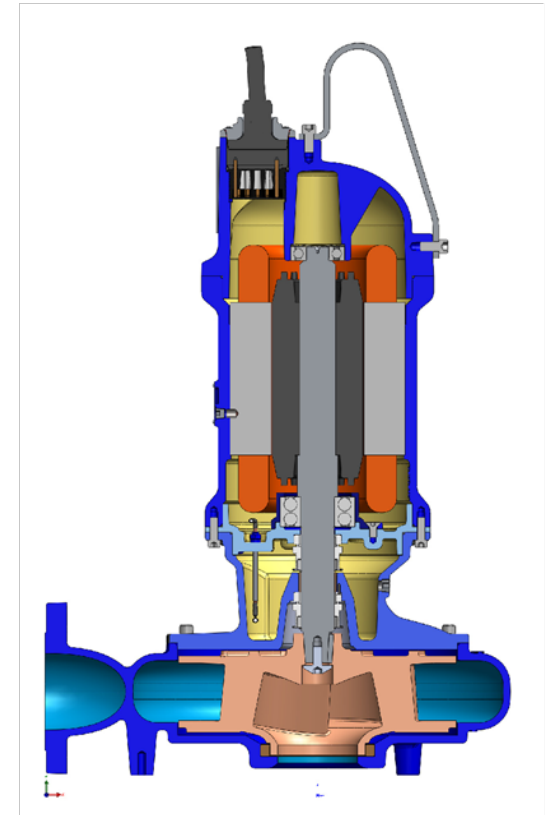
Pumps with differing impeller types



**4SHV Multi Vane
Vortex Impeller**



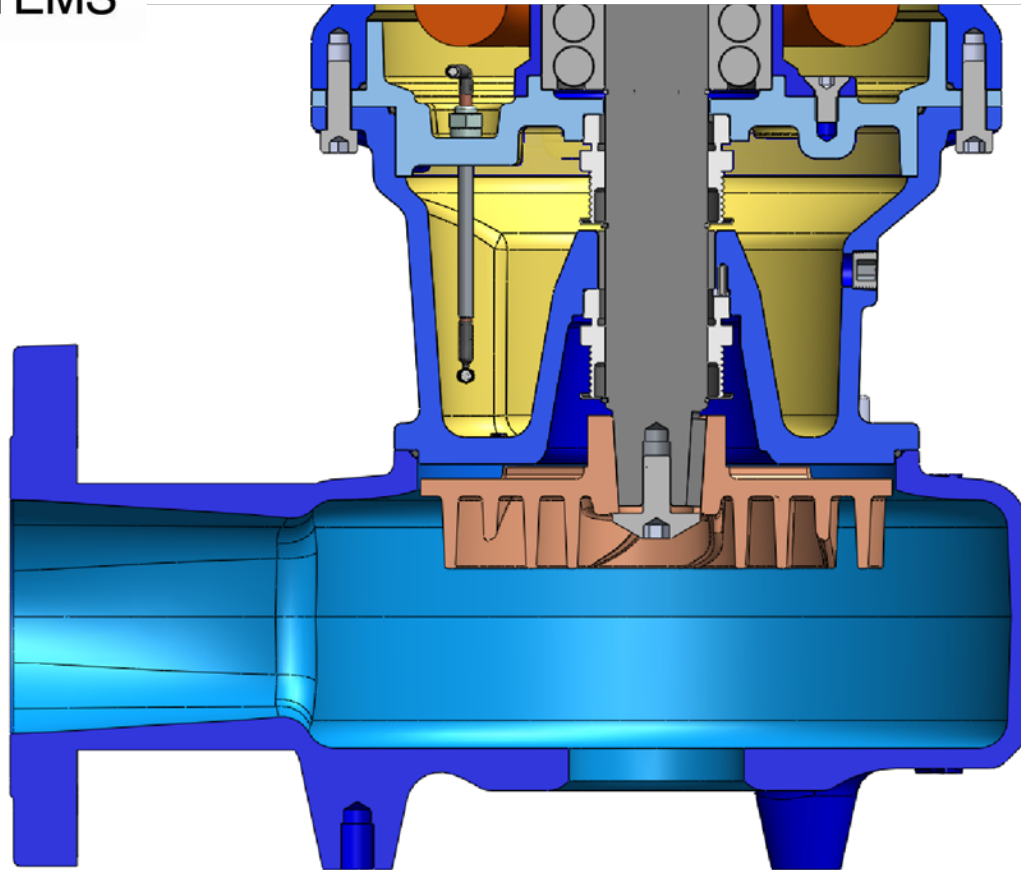
**4SHM Mono Vane
Enclosed Impeller**



**4SHD Dual Vane
Enclosed Impeller**



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VORTEX IMPELLER DESIGN



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VORTEX IMPELLER ADVANTAGES

- Highest clog resistance
 - Flow passes under impeller
 - Passes large or stringy solids
- Resistant to grit, sand damage
 - No tight wear ring clearances



Clog Resistance Trade-Off

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- Vortex Pumps Provide Outstanding Clog Resistance, Especially at Low Flows
- Single Vane Enclosed Impellers Provide Excellent Clog Resistance at Lower Heads
- Two Vane Enclosed Impellers Provide Clog Resistance at Higher Flows and Head

