A Discussion of

Submersible Non-Clog Pump Design

• Impeller Types
• Performance Characteristics
• Mechanical Design Characteristics
Pumps with differing impeller types

4SHV Multi Vane Vortex Impeller

4SHM Mono Vane Enclosed Impeller

4SHD Dual Vane Enclosed Impeller
VORTEX IMPELLER DESIGN
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

• 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

It’s All About Trade-Offs