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## Water and Sewage Applications



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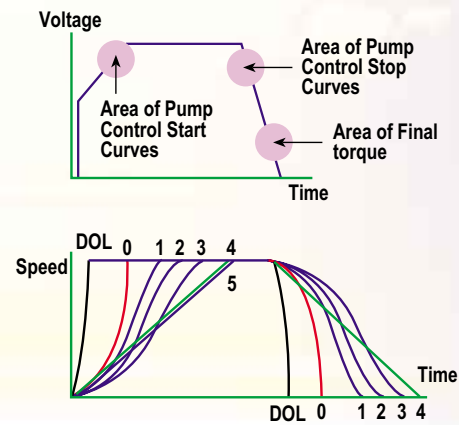
Solcon provides solutions for the most demanding applications in the Water and Sewage industry. Our products are known for long term reliability and robust design, thus, ensuring excellent performance in harsh environments. The intelligent Pump Control Program allows for starting and stopping curve selection, thus, eliminating the water surge and "Hammer Effect" which may cause pipe damage.



### Pump Control (common for RVS-DN, RVS-DX & HRVS-DN)

#### Start Curves

The Soft-Starter incorporates an Intelligent Pump Control Program that allows selection between three special dynamic voltage ramp-up curves, and Torque or Current curves. Each curve further reduces peak torque, thus, extends acceleration time.



#### Advantages at a glance

- Reduced inrush current & mechanical shock
- Smooth, stepless acceleration & deceleration
- Unique starting and stopping characteristics
- Heavy duty, fully rated design
- Sophisticated motor protection
- Maintenance free - all solid state
- Compact and light weight
- Easy installation and operation
- Frequency auto-tracking (generators in remote installations)



#### Stop Curves

When pumping to a higher elevation and motor is soft stopped, motor torque may quickly fall below load torque causing abrupt stalling instead of smoothly decreasing speed to zero. This will create a Water Hammer phenomenon resulting in a loud noise and damage to the pipe system. The Pump Control enables selection between Four dynamic voltage ramp-down or Torque curves to prevent a stall condition and eliminate Water Hammer.

#### HRVS-DN

Medium Voltage Soft-Starter, for Asynchronous and Synchronous Motors  
50-2700A, 1500-15000V



#### Static Exciter

Range: 60-240Vdc, 40-1000A



#### Typical Applications

- Water pumps
- Sewage pumps
- Vertical Hollow Shaft pumps
- Submersible pumps - special curves
- Preventing Over Pressure & Water Hammer
- Starting from Diesel Generators (weak mains supply)

#### RVS-DN

Digital Soft-Starter 8-3000A, 200-1000V  
Line and Inside Delta connection



#### RVS-DX

Digital Soft-Starter 8-1100A, 200-600V  
with a built-in bypass and LCD display, intended for Line and Inside Delta connection



#### RVS-AX

Electronic Soft-Starter 8-170A, 220-600V  
with a built-in bypass



#### SOLSTART PLUS

Soft-Starter 31-170A, 220-600V  
with a built-in bypass.  
**Uniquely designed for OEM's**



#### Solstart

Miniature Soft Starter 8-58A, 208-600V  
with a built-in bypass, for single and three phase motors



#### MPS-6

Motor Protection and Control Relay



#### MIP-6

Motor Insulation Protection Relay



#### TPR-6

Temperature Protection Relay



#### MPS-3000

Motor Protection and Control Relay



#### Final Torque

Prior to concluding the deceleration process, motor torque reaches a level where the load torque is higher than motor's torque and the valve closes. The motor continues to run against a closed valve (no load) until it stops. The Final Torque feature enables setting a point where the motor stops when the valve closes.

#### Solcon protection relays

Ultimate range of motor protection relays, covering; Medium and Low Voltage motors ranging, up to 22000V, 2000A and 14 temperature sensors.