

Durco[®] Mark 3[™] Unitized Self-Priming Pump

The Mark 3 Unitized Self-Priming pump eliminates the costs and hassles of vertical down-hole pumps.



High and Dry

The Flowserve Mark 3 Unitized Self-Priming pump is engineered to draw from liquid sources below ground level or from sources which have no positive pressure to naturally prime the pump. Conveniently located at ground level where installation is simple and maintenance is easily performed, the Mark 3 Self-Priming pump costs less to buy, install and maintain than submersible pumps.

The Flowserve Mark 3 family of ANSI process pumps came to prominence in the chemical processing industries under the Durco heritage name. The Mark 3 Unitized Self-Priming pump represents one of many pioneering innovations from Flowserve and Durco and is an attractive, easy-to-maintain alternative for many important plant services.

Applications

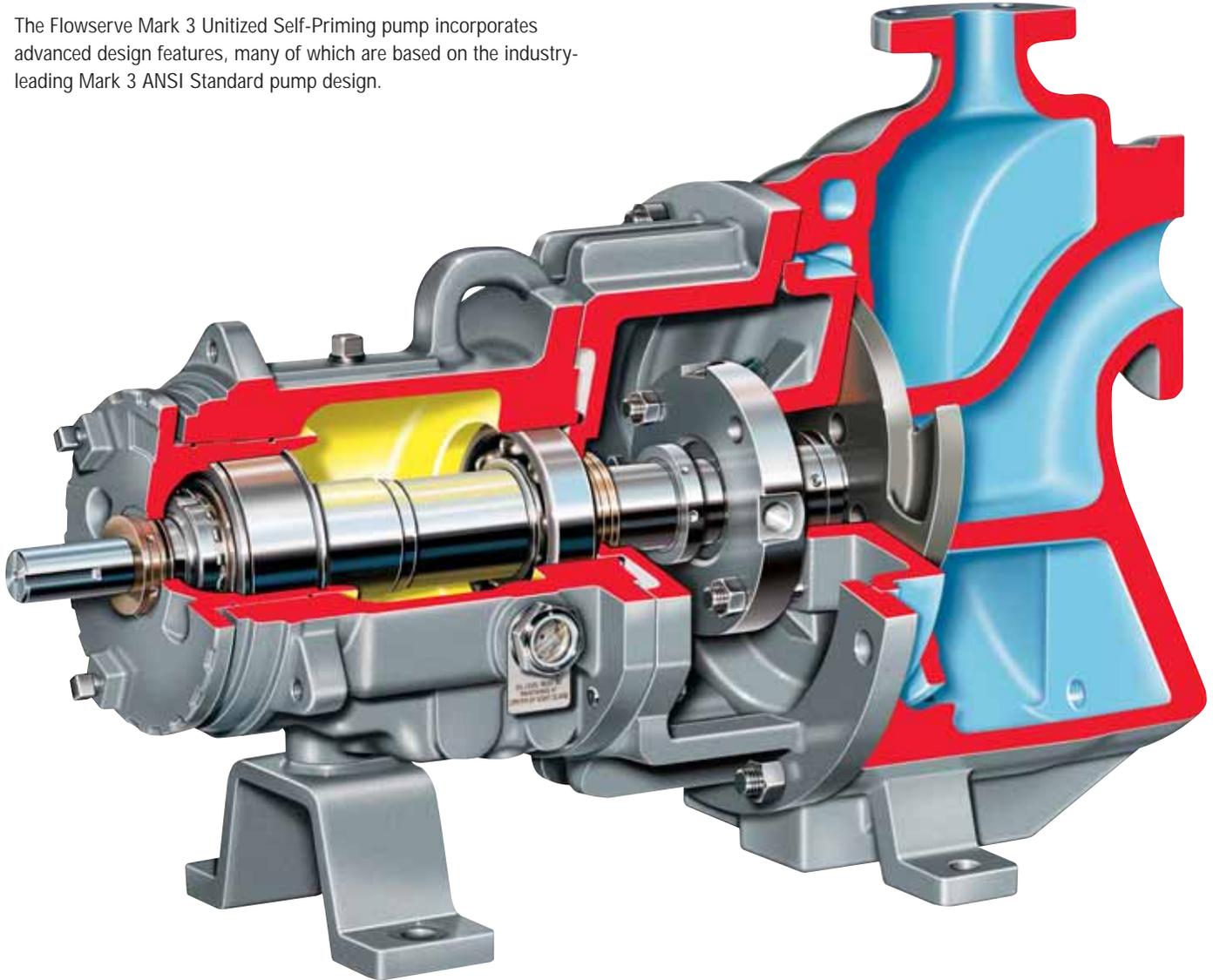
- Sump service
- Tank car unloading
- Duplex pumping lift station
- Fly ash pond transfer
- Waste acid transfer
- Waste treatment lagoon service

Operating Parameters

- Flows to 320 m³/h (1400 gpm)
- Heads to 120 m (400 ft)
- Pressures to 20 bar (285 psi)
- Temperatures to 370°C (700°F)
- Static suction lift to 6 m (20 ft)

World Renowned for Reliability and Performance

The Flowserve Mark 3 Unitized Self-Priming pump incorporates advanced design features, many of which are based on the industry-leading Mark 3 ANSI Standard pump design.



External Micrometer Impeller Adjustment accurately sets impeller clearance in 20 seconds, in the shop or the field

Standard Reverse Vane Impeller offers repeatable pump performance throughout the life of the pump

SealSentry™ Seal Chambers extend seal life and provide advanced self-flushing ability

Unitized Casing has large priming chamber, air separator and volute in one integral component. Eliminates the need for a separate priming tank

Metal-to-Metal Construction assures a true running and concentric shaft, extending bearing and mechanical seal life

Large Shaft and Bearing Components extend bearing life and reduce shaft deflection and vibration

Durco Mark 3 Unitized Self-Priming Pump



The Priming Cycle

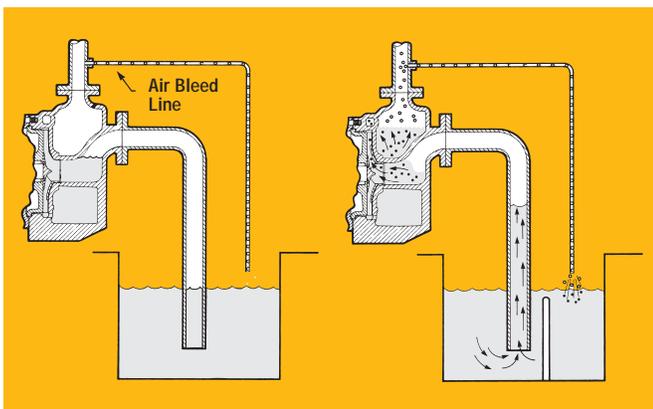
The Mark 3 Unitized Self-Priming pump uses liquid recirculation to prime the pump. The pressure differential between the aerated liquid at the impeller and the non-aerated liquid in the priming chamber creates a vacuum that pulls liquid up the pipe. As a result, the Mark 3 Unitized Self-Priming pump is ideal for suction lift applications or pumping liquids with entrained air or gases.

Benefits of the Mark 3 Unitized Self-Priming Pump

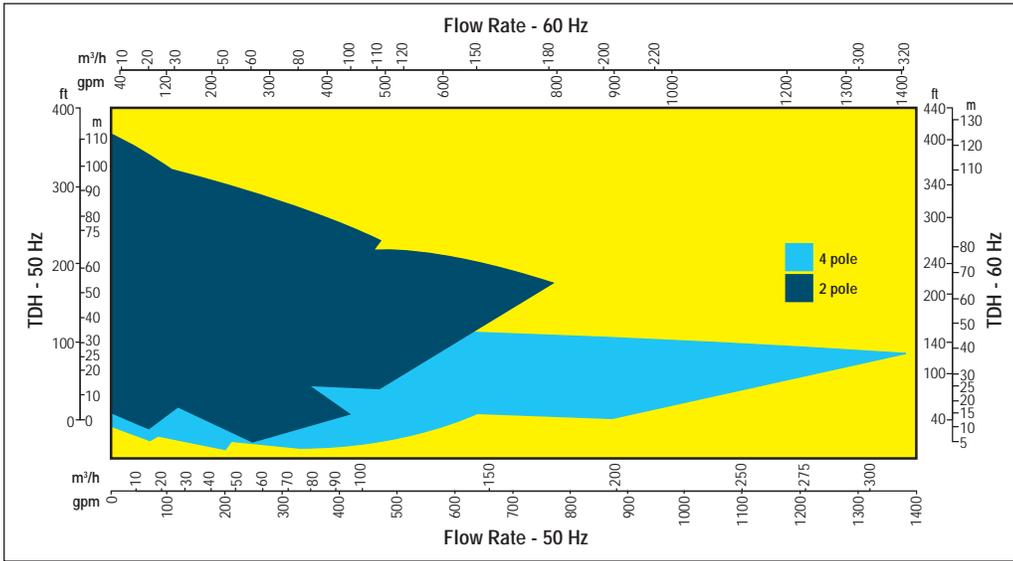
- Eliminates internal valves
- Eliminates external priming devices or foot-valves
- Portable
- Compact
- Ease of installation
- Ease of maintenance

Choice of Power Ends

- Standard Mark 3A power end with double lip oil seals and top vent/breather
- ANSI 3A™ power end featuring Inpro VBXX bearing isolators and a lifetime warranty



Mark 3 Unitized Self-Priming Performance Curve



Eleven Sizes Available

- Three Group 1
 - 1J1.5x1US-6
 - 1K3x2US-6
 - 1K1.5x1.5US-82
- Eight Group 2
 - 2K3x2US-8
 - 2K4x3US-8
 - 2K2x1.5US-10A
 - 2K3x2US-10
 - 2K4x3US-10H
 - 2K3x2US-13
 - 2K4x3US-13
 - 2K6x4US-13A

Offered in a wide range of metallurgy to meet application needs.

The KW941 Pump Power Monitor

The KW941 Pump Power Monitor monitors and displays actual power to the pump, offering simultaneous protection from underload and overload operating conditions. Able to prevent damage from dry run operation at the end of unloading applications, the KW941 is ideal for use with self-priming pumps. The KW941 also helps to eliminate costly downtime and expensive pump repairs caused by:

- Dry running
- Pump overloads
- Cavitation
- Blocked lines
- Closed suction or discharge valves
- Excessive wear or rubbing



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