



Address

10850 Hartley Rd  
Santee, CA 92071  
United States

Phone:  
Email:  
Website:

Phone | Email | Online

619.596.3181  
sales@discflo.com  
www.discflo.com

# WHITE PAPER

DISCPAC TECHNOLOGY AND EFFICIENCY

# THE FUTURE OF PUMP TECHNOLOGY

In severe applications where abrasion, viscosity, entrained air, excessive wear and corrosion problems wreak havoc on pump systems and degrade products, Discflo™ has developed a superior alternative that dramatically reduces pump wear, is virtually clog free and prevents product damage.

## No Close Tolerances

The Disc pump is not a centrifugal pump, positive displacement, gear or lobe pump. Unique in design, the disc pump bridges the performance gaps of conventional pumps and is capable of out-performing all of them in many applications.

## No Radial Loads

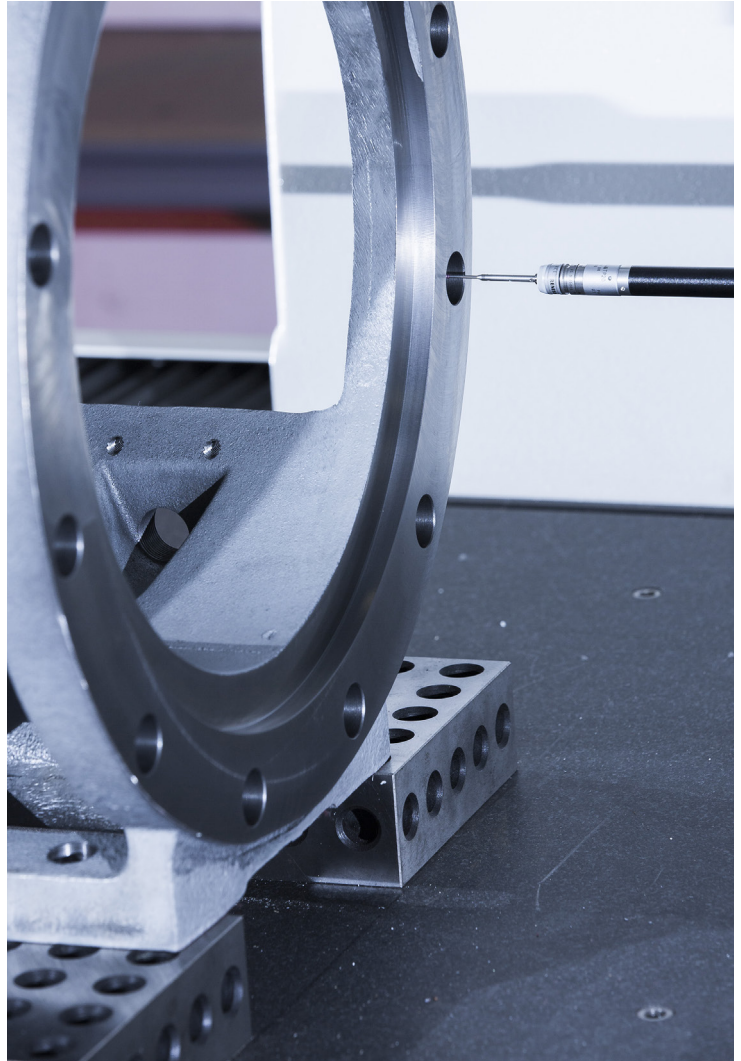
The Disc pump uses a new and patented technology that isn't available in any other pump. The technology of the Disc pump harnesses the natural power of boundary layer and viscous drag.

## No Impingement

**Boundary Layer** - a boundary layer of fluid molecules collects and rotates with the discs. This creates a natural, protective buffer that separates the pump from the fluid.

## Non Pulsating Laminar Flow

**Viscous Drag** - Through viscous drag, the fluid is pulled through the pump without impingement. The boundary layer attracts and drags successive layers of fluid molecules into layered flows of parallel streams. This is the simple principle of viscous drag and in the Disc pump it is a powerful dynamic force that "pulls" the fluid through the pump in a smooth laminar, non-turbulent flow.



## EFFICIENCY AND RELIABILITY

The non-impingement and laminar flow pumping of the Disc pump is similar to the flow through an ordinary pipe. The layers of fluid at the walls are stationary (relative to the rotating discs), creating a protective boundary layer. Viscous drag pulls layers into flows of smooth laminar streams.

With no impingement device to damage your product and a boundary layer of protection for the pump, the Disc pump effectively eliminates the root cause of clogging, cavitation, excessive wear and product damage that plague the performance of conventional pumps. Discflo is more reliable and efficient in handling tough applications and a lot more cost effective. It simply lasts longer, requires fewer (if any) repairs and doesn't damage your product.

# THE DISCPAC

THE MOST DYNAMIC, DURABLE PUMP EVER DEVELOPED FOR HARD-TO-PUMP APPLICATIONS.



## CUTTING EDGE TECHNOLOGY AND DESIGN EXCELLENCE

**No Reduced Performance Efficiencies** - No close tolerances and no impingement mean no metal-to-metal component wear

**Less Wear - No Pump Vibration** - Smooth flow through the pumps saves wear and tear on the entire pump system (and your product). It also eliminates pump vibration and excessive noise.

**Low NSPH Requirements** - Laminar flow means low NSPH! It prevents reduction in head and capacity and further reduces noise and vibration. The NSPHr is about half to one-third of a centrifugal pump in the same service conditions.

**Open Design - Virtually Clog-free** - The straight forward design of the Disc pump conserves space and makes assembly and disassembly quick and easy. The open design prevents clogging. Optional pull out back.

### For Non-turbulent Pumping

It is the Discpac that makes the Disc pump so revolutionary. All other pumps use some type of impingement device - relying on the force of impact to push the fluid through the pump. This impact is hard on shear-sensitive products and it creates pulsation that wears the pump and damages piping. The non-impingement operation of the Disc pump makes it different than any other pump on the market today.

The Disc pump uses a series of parallel discs called the Discpac. As the discs rotate, they create a boundary layer and viscous drag force that pulls the product smoothly into the pump. There is no destructive impact with an impingement device.

### To Handle Any Job

The Discpac can be designed for the gentlest possible pumping of shear-sensitive solids and gaseous froths. At the same time it can handle aggressive slurries with heavy viscosities and highly abrasive solids content.

The Disc pump can be designed with over-size suction and discharge.

A wide variety of metal and non-metallic materials are available for the pump and its components and over a dozen configurations including API-610 and ANSI 2000 using Disc technology.

