RamParts® Pumps

HEAVY DUTY
Air Driven Diaphragm Pump

iPC™ SERIES
Integrated Pneumatic Controls

RAMPARTS® Integrated Pneumatic Control System Diaphragm pumps provide

- Patents pending Integrated Pneumatic Control System
- Run-dry capabilities without damage
- An infinitely variable flow control
- Self-priming and solids-handling capabilities
- The ability to handle corrosive, abrasive, viscous and shear-sensitive media
- Protection from damage due to operation against closed valves
- Durable operation and maintenance-friendly components

At Last!
A Rugged, Heavy Duty AOD Pump that does "NOT" require Electronics, Controllers or Solenoid Valves. Just add air & start pumping!!

RamParts®
*Better Service
*Better Quality
*Better Prices

Patents Pending

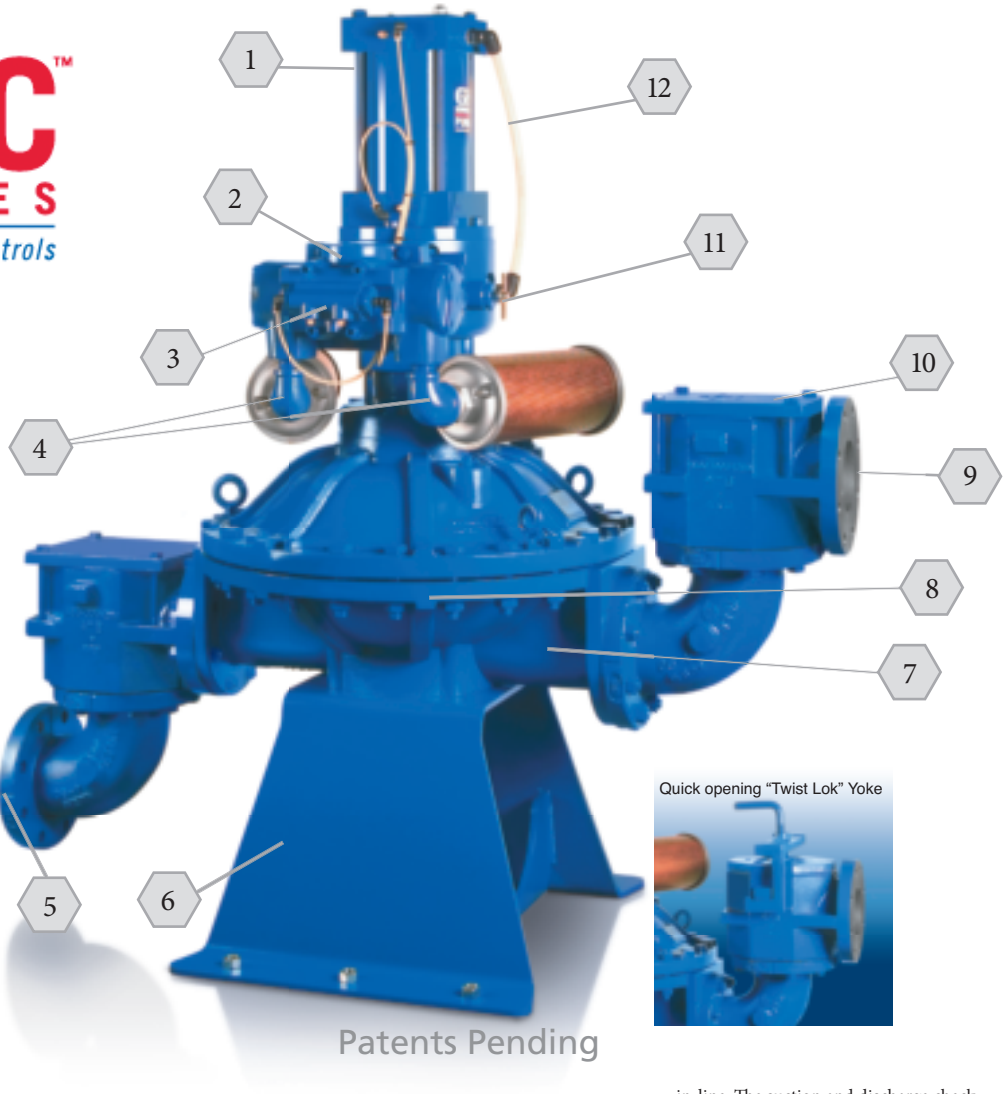
RAMPARTS® *PLUG & PLAY* "iPC™" series - *Connect an air line and start pumping no electronics required*

The air control system of an air driven diaphragm pump is an essential factor in pump performance. The patent pending Integrated Pneumatic Control System is constructed with durable, time-proven RAMPARTS® components for use in real-world applications. With its modular construction, it is both operator and maintenance friendly, allowing in-place service and/or field retrofit of either RAMPARTS® or competitors' pumps.

The RamParts Integrated Pneumatic Control System is designed for trouble-free operation at intermittent or continuous duties, as well as variations in temperature, air pressure or pump speed. The Integrated Pneumatic Control System design ensures a full displacement stroke every time, with no guesswork or special operator skills required. It also offers independent control of the suction and discharge strokes, allowing the pump to be 'tuned' to the application. These features make RamParts Integrated Pneumatic Control Air Driven Diaphragm pumps easier to apply and install, and more efficient to operate and maintain than conventional diaphragm pumps.

HEAVY DUTY Air Driven Diaphragm Pumps

iPC™ SERIES
Integrated Pneumatic Controls



1 Diaphragm-Assist Air Cylinder

RAMPARTS 'iPC' (integrated Control) pumps incorporate the proprietary diaphragm-assist air cylinder design that conventional RAMPARTS Air Driven Diaphragm pumps have been known for.

As with competitive air driven diaphragm pumps, the air cylinder pulls the pump diaphragm through its suction stroke. However, unlike 'spring-assist' competitive designs, the cylinder-assist presents virtually no resistance as the pump moves through its discharge stroke. With less energy required for operation, the pump is more efficient, utilizing lower air pressure by comparison than competitive pumps. Lower air pressure also means less differential pressure across the diaphragm, resulting in less stress and longer life.

The RAMPARTS 'iPC' design takes further advantage of the cylinder-assist by providing an integrated speed control for the suction stroke. Adjusting the suction stroke speed allows the pump operation to be matched with the characteristics of the liquid being pumped, as well as the individual suction characteristics of the application.

2 Air Inlet Port

A single supply air connection is all that's required to operate the RAMPARTS 'iPC' pump. A large diameter, free-flowing port is provided for the most efficient use of the compressed air supply. No other power source is required.

3 RamParts 'No-Stall' Shifter Design

The shifting mechanism, or shifter, creates the reciprocating action that allows the pump to function.

The proprietary RamParts 'no-stall' shifting mechanism is an essential component of the RAMPARTS 'iPC' design, and allows for extended service life and consistent operation of the unit. When service is required, the design provides external access to the distribution valve assemblies, allowing for quick and easy maintenance.

4 Dual Air Exhaust

Dual exhaust means less resistance exhausting the air from the pump, producing less differential pressure, providing the most efficient pump operation possible.

5 Suction Port (Liquid Inlet)

An ANSI 125/150-pound flange is provided for connection to the suction piping. By utilizing a 90° elbow, the flange face can be positioned perpendicular to the ground plane, or rotated in 90° increments through a full 360° rotation. This allows for the most direct connection to the liquid source. For applications requiring the pump to be located above the liquid source, the perpendicular flange can also be replaced with a horizontal threaded connection. Either form provides the flexibility required for the most efficient installation.

6 Free-standing Base

The RAMPARTS 'iPC' pump utilizes a free-standing base, which provides for solid anchoring and stable operation of the unit, appropriate clearance for suction and discharge connections, and in-line service of the pump.

7 One-Piece Lower Pump Body

The RAMPARTS 'iPC' pump introduces a one-piece ductile iron 'wetted' pump body, which provides an unobstructed flow path of liquid through the pump, plus a lower center of gravity and enhanced stability for the unit. It also eliminates a number of gasketed joints and hardware commonly used in competitive pumps.

8 Bolted Design

All gasketed or sealed joints in RAMPARTS 'iPC' pumps include a bolt configuration that provides a leak-proof pump assembly. This design also provides a self-alignment feature unique to bolted configurations, making pump maintenance easier.

9 Discharge Port (Liquid Outlet)

An ANSI 125/150-pound flange is provided for connection to the discharge piping. By utilizing a 90° elbow, the flange face can be positioned perpendicular to the ground plane, or rotated as required by design conditions.

10 Check Valve Assemblies

The RAMPARTS 'iPC' design employs 90° ball check valves on both the suction and discharge ports to control the flow of liquid through the pump. These check valves allow unrestricted flow and the passage of larger diameter solids, by comparison, than competitive diaphragm pump designs.

Each check valve includes an access cover for external inspection or service of the valve using simple hand tools – or they can be fitted with optional 'Twist Lok' yokes which require no tools at all. Both designs allow the check valve balls and seats to be replaced with the pump in-line. The suction and discharge check valve assemblies are identical, reducing repair parts inventory costs.

11 Integrated Speed Control

An additional unique feature of the RAMPARTS 'iPC' design, the integrated speed control provides for manual speed control of both the suction and discharge strokes. Independent speed control of the pump strokes provides the most efficient configuration of the pump to the job at hand.

An optional pilot-operated feature is available to allow for remote adjustment of the pump speed.

12 Air Equalizer Tube

Another unique feature of the RAMPARTS 'iPC' design is the air equalizer tube.

This feature provides the most energy possible to the diaphragm while utilizing the least amount of compressed air, resulting in increased efficiency during operation and extended service life of the unit. In addition, it prevents environmental contaminants from entering the cylinder.

RamParts® Pumps
4855 Broadmoor Ave. - Kentwood, MI. 49512 - Ph. 616.656-2250 Fax 616.656-2255
www.RamPartspumps.com

Printed in the USA
AV-05646 04/09