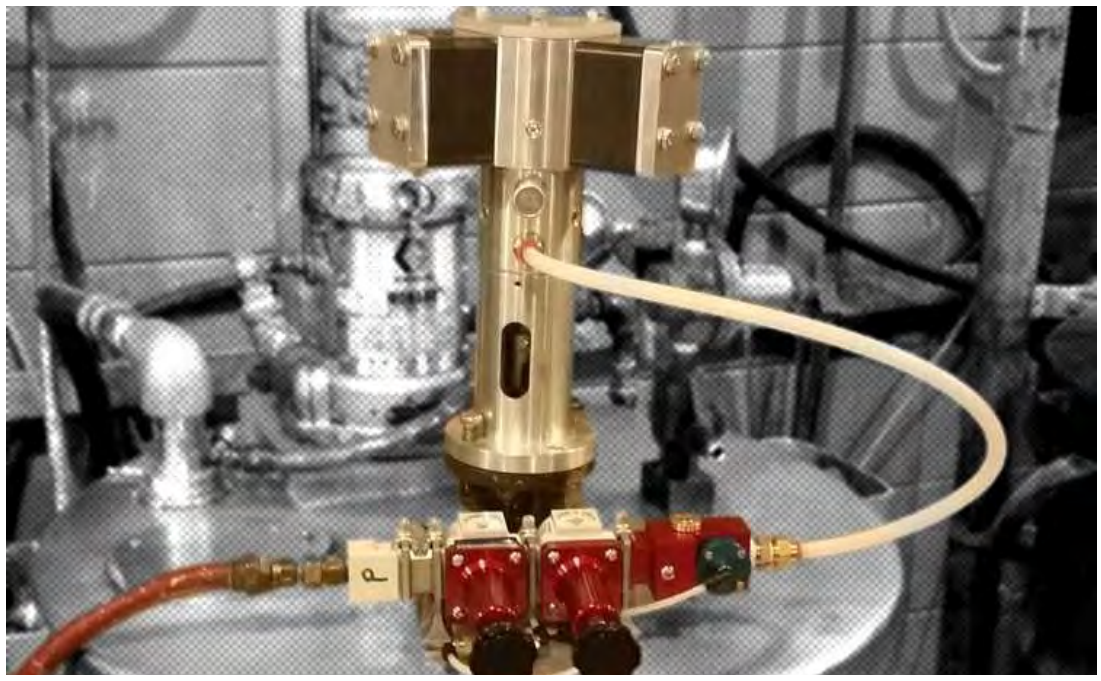
COAST INDUSTRIAL SYSTEMS, INC.
2223 Verus Street • San Diego, California 92154

October 2019



In This Issue

Blowing In The Wind

The Advantages Of Air Motors Over Electric

Air motors harness the power of compressed air to generate torque and rotational motion in applications ranging from powering production machinery and rotating turntables to operating mixers and actuating valves. They're often an engineer's "go-to" solution for jobs an electric motor can't handle. That's because in many instances, air motors outperform their electric counterparts.

Advantages of air

One big advantage is safety. Because they do not require electricity and have no sparking hazards, air motors can be used in volatile atmospheres. Explosion-proof electric motors, on the other hand, require costly special housings. Air motors can also be overloaded and stalled without harm. Overloading an electric motor, however, can trip circuit breakers and damage the motor.

By their nature, air motors tolerate adverse environments well. Dust and dirt that can shorten the life of electric motors has little effect on air motors, provided the air supply sees proper filtration. Likewise, air motors withstand wet, humid, and aggressive wash-down conditions. High temperatures also tend to limit the performance of electric motors. Air motors, however, are self cooling and generally perform well to 300°F and, in some cases, even higher. Cool-running air motors can also be a better choice in applications with frequent starts and stops, because electric motors must be greatly oversized to dissipate heat generated by high starting torque.

Air motors generally have a higher power density than electric motors, so they can transmit more power from the same envelope or the same power from a smaller envelope. This is especially true when loads must be driven at less than the nominal speed of the electric motor — which necessitates using an electric gearmotor or separate gear box.

Finally, electric motors typically cannot be repaired by the average maintenance technician. They must be sent to a facility that specializes in electric motor repair to be re-wound and insulated. In contrast, technicians experienced in repairing rotating equipment — such as pumps, compressors, and gear boxes — can usually work on air motors. This reduces downtime and overall maintenance costs.

Air motors are available in different designs, but vane and piston versions are most common in industrial settings.

Piston air motors deliver high power, high starting torque, and precise speed control at low speed, making them well-suited for tasks where the motor must start under load. They usually have from two to six cylinders arranged either axially or radially within a housing.

Radial-piston motors are robust units, typically oil-lubricated, and well-suited to continuous operation. They have the highest starting torque of any air motor. Radial-piston motors deliver torque and horsepower at relatively low speeds — under 3000 rpm – and are commonly used for driving conveyors, rotating large drums and tumblers, and for rotating positive-displacement pumps.

Axial-piston motors are more compact than their radial-piston counterparts, making them suited for mounting in close quarters. Their design is more complex and costly than vane motors, but they deliver maximum power at much lower speeds than vane motors can. Axial-piston motors also

Rotary vane motors normally deliver low to medium power. Simple and compact vane motors are an excellent option in applications that require a high-speed, low torque power source. They most often drive portable power tools but are used in a host of other applications as well. Vane motors operate at speeds from 100 to more than 25,000 rpm and deliver more power per pound than piston air motors. Though many require lubricated air, more and more are designed to operate non-lubricated to serve critical applications and address environmental concerns.

COAST INDUSTRIAL SYSTEMS, INC.
2223 Verus Street • San Diego, California 92154

Hot Off The Presses

From: BUSINESS WIRE, June 2019

Graco Inc., a leading manufacturer of fluid handling equipment, has expanded its line of paint agitators to include radial piston air motor driven agitators. Tested extensively in different conditions in the lab and the field, the new radial piston air motor typically uses 30 to 50 percent less compressed air than comparable rotary vane motors at low to medium speeds.

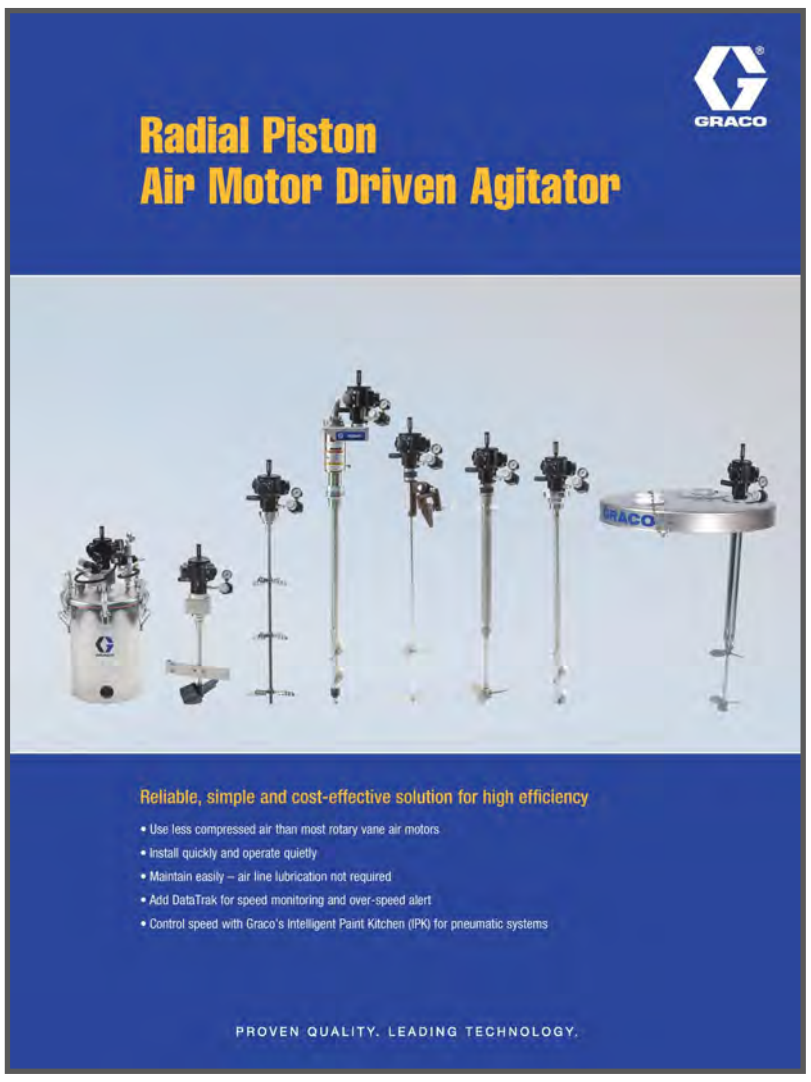
"Compressed air represents the highest energy cost for many factories, so lowering compressed air use can mean significant savings," said Henry Zeng, Graco Product Marketing Manager for the Industrial Products Division. "Agitator motors usually use the most air of any industrial paint kitchen equipment. This makes agitator efficiency a top way to conserve air and save money."

"Our field test units continue to perform well – without failure – through millions of rotations," said Zeng. "Field and lab tests also show that the radial piston air motor does not need air line lubrication, which eliminates many potential issues air line lubrication may cause."

Graco's complete line of agitators is backed by its commitment to deliver A+ Service to every customer, every time.

For more information, visit Graco's website.

Follow this link for Graco's product overview video.



Part Number	Description	Recommended Agitator Rotation	Max. Recommended Materail Viscosity (cP)	Manual
25C528	Stainless Steel Direct Drive, 30/55 Gallon, One Stainless Steel 5.5" Propeller	Clockwise	1,000	
25C533	Carbon Steel Direct Drive, 30/55 Gallon, Two Aluminum 5.5" Propellers	Clockwise	1,000	
25M481	Stainless Steel Direct Drive, 30/55 Gallon, One Stainless Steel 8" Impeller	Clockwise	500	
25C529	Carbon Steel Direct Drive, 55 Gallon, Side Mount, Two Aluminum 5.5" Propellers	Clockwise	1,000	
25C530	Stainless Steel Direct Drive, 55 Gallon, Bung Mount, Expanding Blade	Counter Clockwise	1,000	3A4792
25C534	Stainless Steel Direct Drive, Helix, Bung Mount	Clockwise	1,000	
25C535	Carbon Steel Direct Drive, Helix, Bung Mount	Clockwise	1,000	
25N881	In-Drum, 1.5" Bung Mount	Clockwise	500	
25N882	In-Drum, 2" Bung Mount	Clockwise	500	
25C539	Heavy Duty Agitator for 5 Gallon Pressure Tank (Pressure Tank not included)	Clockwise	1,000	
25C540	Heavy Duty Agitator for 10 Gallon Pressure Tank (Pressure Tank not included)	Clockwise	1,000	
25C541	Heavy Duty Agitator for 15 Gallon Pressure Tank (Pressure Tank not included)	Clockwise	1,000	3A4797
25C536	Heavy Duty Agitator with Pressure Tank, 5 Gallon	Clockwise	1,000	
25C537	Heavy Duty Agitator with Pressure Tank, 10 Gallon	Clockwise	1,000	
25C538	Heavy Duty Agitator with Pressure Tank, 15 Gallon	Clockwise	1,000	
25C532	Stainless Steel, Belt Drive Twistork Helix, Bung Mount	Clockwise/ Counter Clockwise	1,000	3A4800

Part Number	Description
25C765	Radial Piston Air Motor Kit
25M535	Radial Piston Air Motor Repair Kit
19A844	Radial Piston Air Motor Conversion Kit

COAST INDUSTRIAL SYSTEMS, INC.

2223 Verus Street • San Diego, California 92154

COMPANY OVERVIEW

Coast Industrial Systems, Inc. is the #1 supplier of painting and coating application equipment to the marine and manufacturing industries, and is proud to serve both San Diego and Mexico since 1986.

Coast Industrial Systems, Inc. has always placed the customer first, and strives for business excellence in all ways. Our friendly sales and customer service staff are knowledgeable, experienced and qualified to help meet your painting and coating application requirements, and to exceed your expectations.

Graco Top 20 High-Protective Coatings & Foam Distributor
Award Winner 2010-2018

GRACO HPCF 2018 NORTH AMERICAN TOP 20 DISTRIBUTOR

GRACO TITAN BINKS Nordson ANEST IWATA
SATA CARLISLE FLUID TECHNOLOGIES Ransburg WAGNER BGK DEVILBISS AUTOMOTIVE REFINISHING