ARO®

EVO SERIES™

THE EVOLUTION IN PROCESS PUMPS

EVO Series™ Pump Selection Guide

Ingersoll Rand®

EVO Series™ Superior by Design

EVO Series™ Pump is the next evolution from ARO®, the trusted brand with almost 100 years of experience in fluid handling solutions.

The EVO Series™ combines the benefits of its industry-leading ARO® portfolio with unique features. This combination never available in one pump creating a ground breaking solution.

It's time to evolve your expectations of what a pump can do.

Built in Control and Monitoring Capability

- Speed and torque control
- Flow / Head adjustment

Built in safety features

- Leak detection (auto shutoff)
- Secondary seal/leak containment with no dynamic seal
- Safety and hazardous options
- Low noise level that follow db international standards
- Class 1, Div 2 / IP66 rating / ATEX option

Deadhead and Blocked Inlet Capability

(Protects pump and process)

- Able to deadhead and restart when downstream valve is closed/open
- Extended maintenance cycle

Drive can be controlled via PLC: analog signal or ModBus*

Custom control through basic pressure and flow (optional)

Unique 3 chamber design

- Gives unmatched reliability
- Smooth operation
- Higher flows
- Consistent performance
- Solid handling

No maintenance gearbox

Features a long life high abrasive resistance diaphragm

Industry leading continuous use pressure and flow capabilities

Available in 5 different materials of construction

** More communication protocol options available upon request.*

EVO Series™ Pumps

Exclusive / Leak Free Design - eliminates leakage through primary containment to the environment integrated with a **secondary containment** for fluid and oil, and an automatic **leak detection** as a standard offering that initiates the auto shutoff alarm

True Deadhead a closed loop control system allows the pump to come to a complete and immediate stop, while holding and maintaining the line pressure

High efficiency with **exceptional energy savings** compared to other positive displacements pumps

Very Low pulsation due to the unique three chamber design, no need for pulsation dampener

Controllability more controllable than any other positive displacement pump in its range

IOT ready full integration through PLC or HMI devices

Easy installation, Easy serviceability maintenance in place, even in a small space

Durable Design

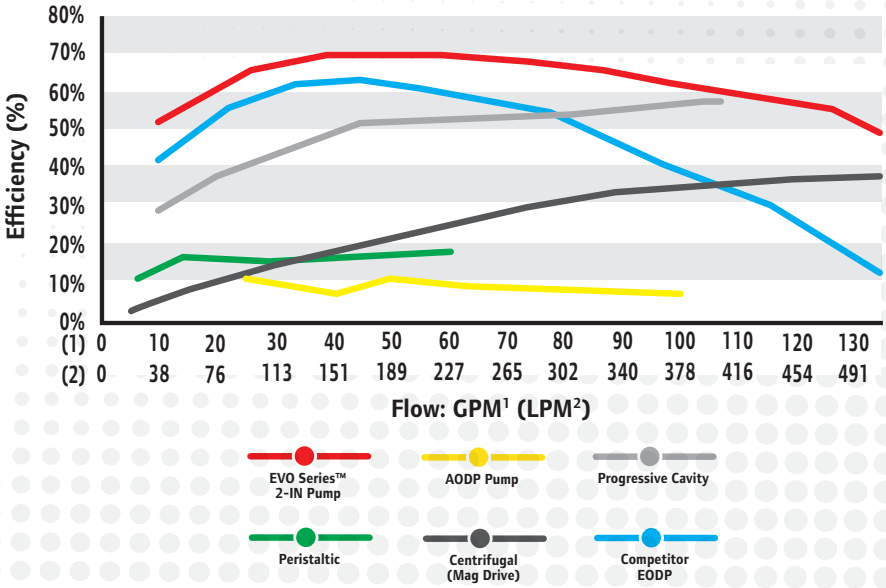
- Run dry capabilities
- Self priming
- Ability to handle solids and abrasives
- Extended lifecycle even when ran in high load conditions
- High performance diaphragms
- Low maintenance cost
- Valve shutoff tolarant

All in one pump no need to buy extra accessories

Hazardous duty certifications meeting the most pressing worldwide safety standards covering environments with presence of hazardous liquids and gases

The Best of Energy Efficiency

EVO Series™ provides 70% total efficiency, the best energy efficiency of all positive displacement pumps*



** Total efficiency means not only the mechanical and hydraulic efficiency of the motor and gear box, but consider the efficiency of the full system (pump, gear box, motor, drive and any other electric equipment installed) measured on real applications.*

Clean Energy

Ingersoll Rand has a commitment to develop sustainable products as part of a genuine contribution to develop clean energy products to reduce the global carbon footprint.

Target Industries

EVO Series™ Process Pump - All in One solution to solve the most difficult application challenges

Cardboard Industry

Starch glue circulation:

- Can run continuously at 4 bar of pressure
- The best solution for high efficiency, reliability, low pulsation and long intervals between maintenance
- Productivity increase with a rapid return of investment

Paint and Ink Industry

Ink filling application:

- Heavy duty cycle at intermittent rate
- Full automation and controllability (including deadhead function) that provides cost and process productivity
- Fully automated and integrated system without the need for additional accessories

Industrial Waste Water

Aggressive waste water transfer:

- Ability to maintain constant operation at multiple speeds
- Quickly increase flow to discharge a large volume of wastewater based on system requirements
- High efficiency solution for companies that use activated carbon process
- The best solution for overall dosing tasks

Construction Waste Water

Filter press filling:

- Hold sufficient deadhead pressure to properly dry out filtered material – also control the density desired for the filtered material
- Increased flow rate compared to a conventional pump from the same size due to torque limit control that promotes maximum suction
- Control the pump from PLC interface to avoid manual operation

Options for Versatility & High Efficient Process

	1" Metallic	2" Metallic and Non-Metallic
Max Flow rate:	54 gpm (204 lpm)	140 gpm (530 lpm)
Inlet pressure:	60 psig (4 bar)	60 psig (4 bar)
Max outlet pressure:	120 psi (8.3 bar)	120 psi (8.3 bar)
Wet suction lift:	29 ft (8.8 m)	30 ft (9.1 m)
Dry suction lift:	14 ft (4.3 m)	18 ft (5.5 m)

Selection Chart

Size		Wet		Connection		Seat		Balls		Diaphragm	
10	1"*	A	AL	F	ANSI/DIN	A	SP	A	SP	A	SP
20	2"	C	CI			F	AL	S	SS	T	PTFE
		S	SST			H	SS	T	PTFE		
		P	PP**			S	SS				
						P	PP				

*Note: * Metallic version; ** Ordinary duty version*

Your EVO Series™ Process Pump easily configured through the Smart ARO® Set up (SAS)

Quickly set up your pump in 3 easy steps:

1. Language
2. Motor Power
3. Motor Type

The easy and quick setup of the VFD is designed to save you time with pre-integrated features like leak detects, thermal protection, closed loop control, deadhead timeout, and embedded safety parameters that ensure pump is set with proper boundaries for safe operation.

1", 2"
Stainless Steel
Shown with VFD Controller

1", 2"
Aluminum
Cast Iron

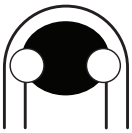
2"
Polypropylene

1", 2"
Hazardous Duty
(Metallic versions)

Crankcase		Shaft		Bellows		Motor		Drive	
C	CI	S	SPLINE	V	FKM	0	NO MOTOR	0	NO DRIVE
						A	STD MOTOR	A	200-2240V STD DRIVE A5 or B1
						B	HAZ MOTOR	B	200-2240V HAZ DRIVE A5 or B1
						C	HAZ MOTOR	C	380-500V STD DRIVE A5
								D	380-500V HAZ DRIVE A5

Easily get your pump to operational in less than one minute

The best performance compared to other Positive Displacement Pumps

ARO® EVO Series™ vs Others (features by applications requirements)	Positive Displacement			
				
	ARO® EVO Series™	Progressive Cavity	Peristaltic	AODP
Efficiency	🟢	🟢	🟡	🔴
Deadhead Safety (at zero energy consumption)	🟢	🟡	🟡	🟢
Dry Self Priming (lift installation)	🟢	🟢	🟢	🟢
Dry Running	🟢	🟢	🟢	🟢
Sealless (no packing or mechanical seals)	🟢	🟡	🟢	🟢
Pulsation	🟡	🟢	🔴	🟡
Chemical Compatibility (materials vs costs)	🟢	🟡	🟢	🟢

Positive Displacement				
				
EODP	Lobes	Vanes	Gear	Centrifugal
🟡	🟡	🟢	🟡	🟡
🟡	🟢	🟡	🟢	🟡
🟢	🔴	🟢	🟡	🔴
🟡	🟡	🟡	🔴	🔴
🟡	🟡	🟡	🟡	🟡
🔴	🟢	🟢	🟢	🟡
🟢	🔴	🟡	🟡	🟡

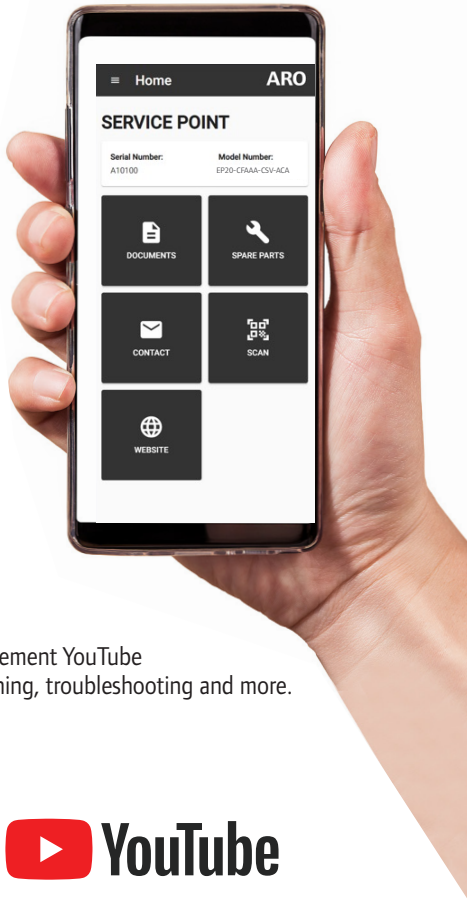
ARO® Service Point

The easiest way to get service in real-time.

Capabilities Include:

- Individual access using the QR code on the pump
- Download the product - specific operating instructions and all other information available at EVO Series™ pump library
- Direct contact with ARO® customer service
- Spare part inquiry and request for quote at the touch of a button

Demo Scan



Benefits

EFFICIENT - Optimize your maintenance processes with our help.

PRACTICAL - Optimize your maintenance work and access all pump information digitally in the field.

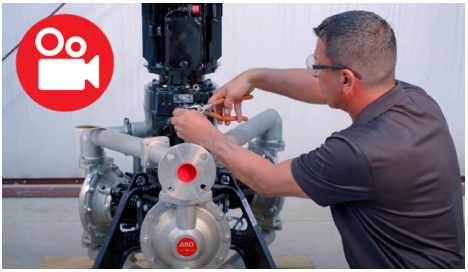
DIRECT - Contact our service team directly from the app.

RELIABLE - Reduce errors in spare part purchases.

FAST - Speed up the order process.

EVO Series™ on Demand

Take a look at the videos available in our ARO® Fluid Management YouTube channel that include instructions for installation, commissioning, troubleshooting and more.

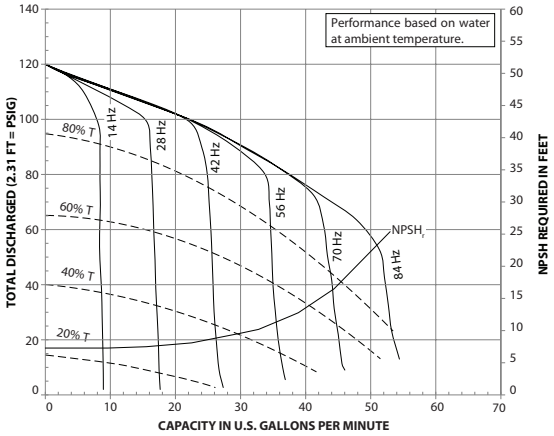


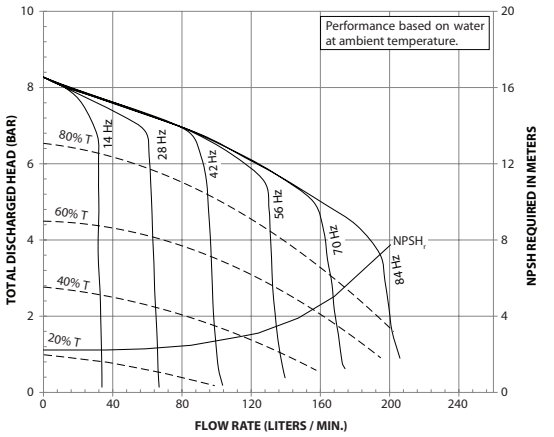
YouTube

www.youtube.com/@aropumps

Performance Curves

1" Metallic



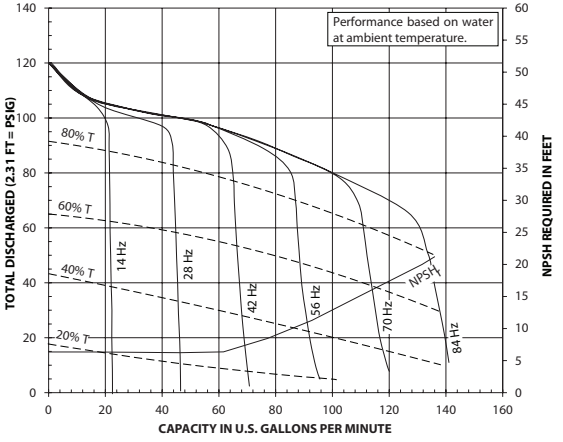


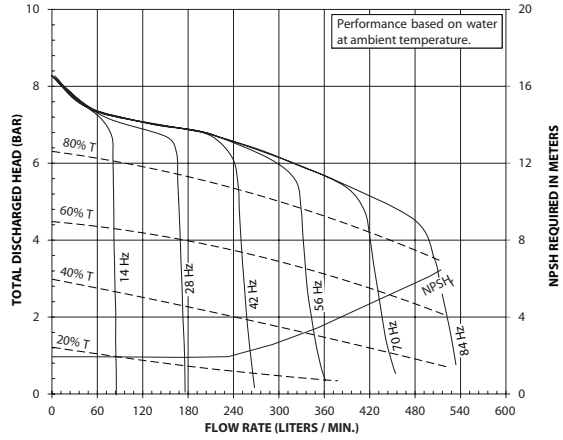
Drive Controls: Motor Frequency ≈ Flow — — — — Torque limit ≈ Discharge Head

There are two primary VFD settings needed to navigate the pump operating map. The commanded frequency will control the pump speed (flw), and the motor torque limit (parameter 416) will limit the maximum torque that the motor will output which will in turn limit the pump pressure. The pump will run at the commanded speed until the back pressure in the system exceeds the motor torque limit shown by the horizontal dotted lines. When this happens, the pump will begin to de-rate its speed to maintain a constant torque output. This will continue until there is zero flw in the system, but full pressure. When the pressure downstream is reduced, the pump will speed up until the speed reaches its commanded frequency. To limit the pressure in the system, the torque limit can be set less than 100%. When backpressure builds, the pump will begin to de-rate its speed at a lower pressure where it intersects its respective curve for that given torque limit.

Performance Curves

2" Metallic





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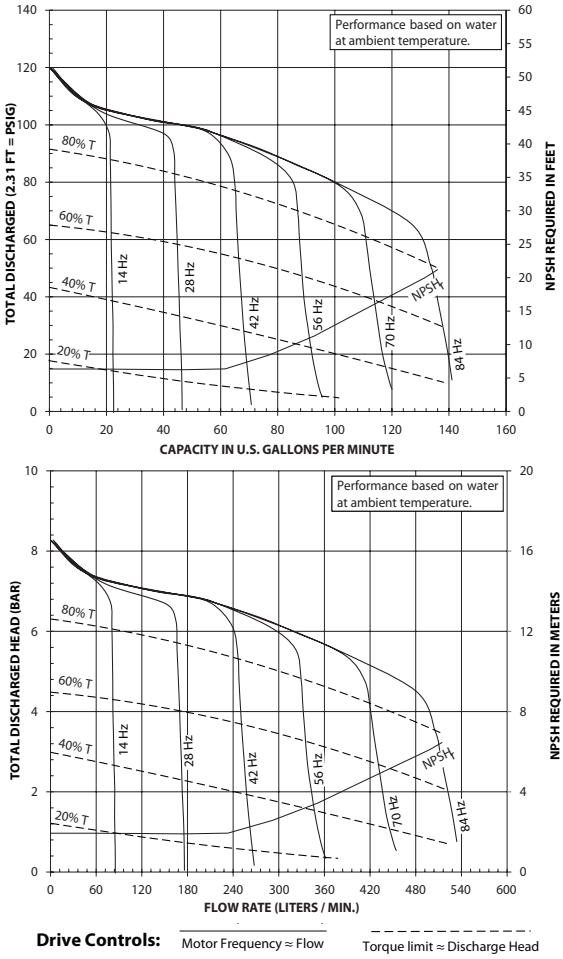
Performance Curves

2" Non-Metallic



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ARO® Parts and Accessories

Service Kits

	1" Metallic	2" Metallic	2" Non-Metallic
Fluid Section Service Kit: Balls, Diaphragms, Bellows and O-rings	637559-XX*	637555-XX*	637558-XX*
PRV (Pressure Relief Valve) Service Kit	67557-X *	67557-X *	67557-X *
Crankcase Service Kit	EP10-CSVX-01-A *	EP20-CSVX-01-A *	EP20-CSVS-01-A
Crankcase Seals Service Kit	637561	637556	637556
Oil and Filter Replacement Kit	637562	637557	637557
Oil Piston Pump Assembly	67558	67558	67558

See details on next page

Service Kit Details

	1" Metallic	2" Metallic	2" Non-Metallic
Balls - *Santoprene*	637559-AA	637555-AA	637558-AA
Diaphragms - *Santoprene*			
Balls - *PTFE*	637559-TA	637555-TA	637558-TA
Diaphragms - *Santoprene*			
Balls - *PTFE*	637559-TT	637555-TT	637558-TT
Diaphragms - *PTFE*			
Balls - *316 SS*	637559-ST	637555-ST	637558-ST
Diaphragms - *PTFE*			
Crankcase - *Aluminum Air Cap*	EP10-CSVA-01-A	EP20-CSVA-01-A	-
Crankcase - *Stainless Steel Air Cap*	EP10-CSVS-01-A	EP20-CSVS-01-A	EP20-CSVS-01-A
PRV - *Aluminum*	67557-1		
PRV - *Cast Iron*	67557-2		
PRV - Stainless Steel	67557-3		
PRV - *Polypropylene*	67557-4		

ARO® AUTHENTIC ARO PARTS

Exactly built and designed by ARO®, Authentic ARO® Parts are the only replacement parts you an count on to restore your ARO® equipment to the equipment's original performance and quality, while backing up your warranty and ATEX hazardous duty certification.

Why Authentic ARO®Parts?

Without the authentic ARO®name, it does not carry the ARO® promise and runs the risk of subpar chemical, metallurgical, and mechanical properties

And, only Authentic ARO® Parts ensure that our pumps continue to meet the strict requirements for ATEX and CE certifications.

Contact us for further information

To learn more scan or visit AROzone.com

Facebook Twitter LinkedIn YouTube

or contact

arosupport@irco.com

ARO®

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