PROGRESSING CAVITY PUMPS

Progressing cavity pumps are self-priming, rotary displacement pumps for handling and dosing low to high-viscous, neutral or aggressive, pure or abrasive, gaseous liquids or liquids which tend to froth, even with fiber and solids content. The pumping elements of the self-priming progressing cavity pumps are the rotating rotor and the stationary stator. CIRCOR's Allweiler® brand produces stators and rotors at its own factory in Germany.

ALLDUR® stators – available exclusively from Allweiler® brand – ensure the highest possible durability and economic efficiency. With ALLDUR® stators, you can now pump even extremely abrasive liquids economically and with minimal outlay for maintenance and spare parts!

Allweiler® brand progressing cavity pumps are characterized by high pumping and metering accuracy and continuous, extremely gentle, low pulsation pumping. The liquid structure remains intact during pumping. Allweiler® brand progressing cavity pumps display excellent self-priming features, also with dry substance content up to 45 %. Allweiler® progressing cavity pumps are available in all common materials, making them ideal not only for industrial use, but also (in stainless and CIP versions) for food and beverage production and the pumping of pharmaceuticals and cosmetics.

Strengths of the technology

- Continuous, extremely gentle, low pulsation pumping
- Excellent self-priming features
- Dry substance content up to 45 %
- Also available in stainless and CIP versions

Maximizing TSO* due to

Low maintenance and spare part costs

Patented, zero-play stub shaft connection, internal bearing, removable bearing bracket, high-quality joint design, joint are protected against overpressure and solids, and are lifetime-lubricated with oil.

Maximum efficiency

Greater power density with innovative 1/2-screw pumping elements, stators with uniform clamping and special scaled, facet-like surface.

Low energy requirements

Rotors with lower friction, shaft seal with very small diameter and up to 50% lower friction loss.

*Total Savings of Ownership

Main Applications

Utilized in all segments of chemical and petrochemical industries, but also for wastewater and environmental engineering, food and pharmaceutical industry, pulp and paper industry.

General advantages of the progressing cavity pumps at a glance:

- No deposits inside the casing
- No bridge forming
- Vibration-free, higher operating speeds, longer service lives
- Easy disassembly
- Easy to maintain
- Shaft sealing variable

PROGRESSING CAVITY PUMPS: Maximum Performance Data and Construction Characteristics

Pumped liquid	
Water	Water
Wastewater	Waste
Oil, lubricating fluids	Oil
Coolant lubricants	Cool
Heat carrier liquids	Heat
Chemicals	Chem
Food, beverage, cosmetics, pharmaceuticals	Food

Series			AE.V-ID		AE-ZD		AE.H-ID		AEB.4H-IE		AE.N-RG	
			Waste Chem Food		Water Chem Food		Waste Chem Food		Waste Chem Food		Waste Chem Food	
Max. flow rate	GPM	l/min	502	1,900	449	1,700	766	2,900	53	200	132	500
Max. discharge pressure	PSIG	bar	928	64	552	36	363	25	363	25	363	25
Viscosity		mm^2/s	270,000		1,000,000		270,000		270,000		1,000,000	
Max. fluid temperature	°F	°C	302	150	302	150	302	150	212	100	302	150
Horizontal/vertical installation			●/-		●/-		●/-		●/-		●/-	
Wall/pedestal mounting			-/●		-/●		-/●		-/●		-/●	
Dry installation			●		●		●		●		●	
In-tank installation			-		-		-		-		-	
Magnetic coupling			-		-		-		-		-	

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Series			AEB-ZE		AE.N-ID		AEB.N-IE		ANP		ANBP	
			Waste Chem Food		Waste Chem Food		Waste Chem Food		Waste Chem Food		Waste Chem Food	
Max. flow rate	GPM	l/min	198	750	1,281	4,850	489	1,850	11	42	11	42
Max. discharge pressure	PSIG	bar	348	24	232(363)	16 (25)	174	16	232	16	232	16
Viscosity		mm^2/s	1,000,000		270,000		270,000		20,000		20,000	
Max. fluid temperature	°F	°C	212	100	302	150	212	100	302	150	212	100
Horizontal/vertical installation			●/-		●/-		●/-		●/-		●/-	
Wall/pedestal mounting			-/●		-/●		-/●		-/●		-/●	
Dry installation			●		●		●		●		●	
In-tank installation			-		-		-		-		-	
Magnetic coupling			-		-		-		-		-	

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Waste Chem Food

Waste Chem Food

Waste Chem Food

Waste Chem Food

Waste Chem Food

Series			AE.E-ID		ALL-OPTIFLOW AE1F		ALL-OPTIFLOW AEB1F		AEB.E-IE		TECFLOW AE1L	
Max. flow rate	GPM	l/min	1,981	7,500	1,004	3,800	1,004	3,800	766	2,900	713	2,700
Max. discharge pressure	PSIG	bar	232	16	232	16	232	16	232	16	232	16
Viscosity		mm^2/s	300,000		300,000		300,000		300,000		200,000	
Max. fluid temperature	°F	°C	302	150	275	135	212	100	212	100	302	150
Horizontal/vertical installation			●/-		●/-		●/-		●/-		●/-	
Wall/pedestal mounting			-/●		-/●		-/●		-/●		-/●	
Dry installation			●		●		●		●		●	
In-tank installation			-		-		-		-		-	
Magnetic coupling			-		-		-		-		-	

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Waste Chem Food

Waste Chem Food

Waste Chem Food

Food

Food

Series			TECFLOW AEB1L		ADP		ADBP		ALLCLEAN ACNP		ALLCLEAN ACNBP	
Max. flow rate	GPM	l/min	713	2,700	3	10	3	10	127	480	127	480
Max. discharge pressure	PSIG	bar	232	16	174	12	174	12	174	12	174	12
Viscosity		mm^2/s	200,000		20,000		20,000		150,000		150,000	
Max. fluid temperature	°F	°C	212	100	302	150	212	100	266	130	212	100
Horizontal/vertical installation			●/-		●/-		●/-		●/-		●/-	
Wall/pedestal mounting			-/●		-/●		-/●		-/●		-/●	
Dry installation			●		●		●		●		●	
In-tank installation			-		-		-		-		-	
Magnetic coupling			-		-		-		-		-	

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ALLWEILER®

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Food

Waste Chem Food

Waste Chem Food

Waste Chem Food

Food

Series	AEB-SE		SETP		SETBP		SEFBP		AEB1E-ME	
Max. flow rate GPM	238	900	621	2,350	177	670	177	670	185	700
Max. flow rate l/min										
Max. discharge pressure PSIG	174	12	145	10	145	10	145	10	116	8
Max. discharge pressure bar										
Viscosity mm^2/s	150,000		300,000		150,000		150,000		150,000	
Max. fluid temperature °F	176	80	302	150	212	100	212	100	113	45
Max. fluid temperature °C										
Horizontal/vertical installation	●/-		-/●		-/●		-/●		●/-	
Wall/pedestal mounting	-/●		●/-		●/-		●/-		-/-	
Dry installation	●		-		-		-		●	
In-tank installation	-		●		●		●		-	
Magnetic coupling	-		-		-		-		-	

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Waste Chem Food

Food

Series	AFP		SMP2	
Max. flow rate GPM	12	47	24	92
Max. flow rate l/min				
Max. discharge pressure PSIG	87	6	87	6
Max. discharge pressure bar				
Viscosity mm^2/s	50,000		11,500	
Max. fluid temperature °F	113	45	140	60
Max. fluid temperature °C				
Horizontal/vertical installation	-/●		●/-	
Wall/pedestal mounting	-/-		-/●	
Dry installation	-		●	
In-tank installation	●		-	
Magnetic coupling	-		-	

ALLDUR®:

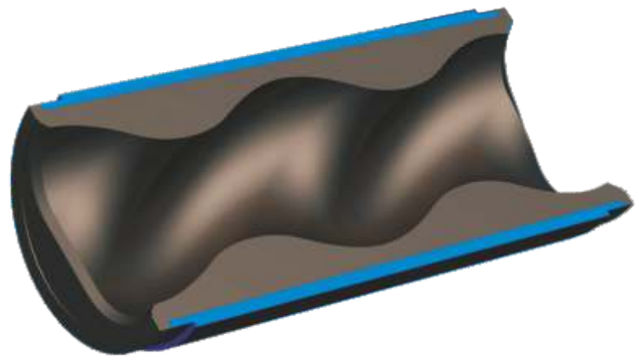
ORIGINAL ALLWEILER® ALLDUR® STATORS: UP TO FIVE-TIMES LONGER SERVICE LIFE, EVEN WITH ABRASIVE LIQUIDS

SIGNIFICANTLY LOWER COSTS FOR SPARE PARTS

CIRCOR's Allweiler® brand progressing cavity pumps with ALLDUR® stators

Up to five-times longer service life

- Ready to handle heavy and dynamic loads
- High impact resilience
- Low compression set
- High tear-growth resistance
- High aging resistance
- Extreme durability

HERE'S WHAT YOU CAN EXPECT:

- Extremely high wear resistance
- Up to 500% longer service life (MTBF)
- Longer maintenance intervals
- Less downtime (MTTR)
- Lower maintenance costs
- Extended pump service life