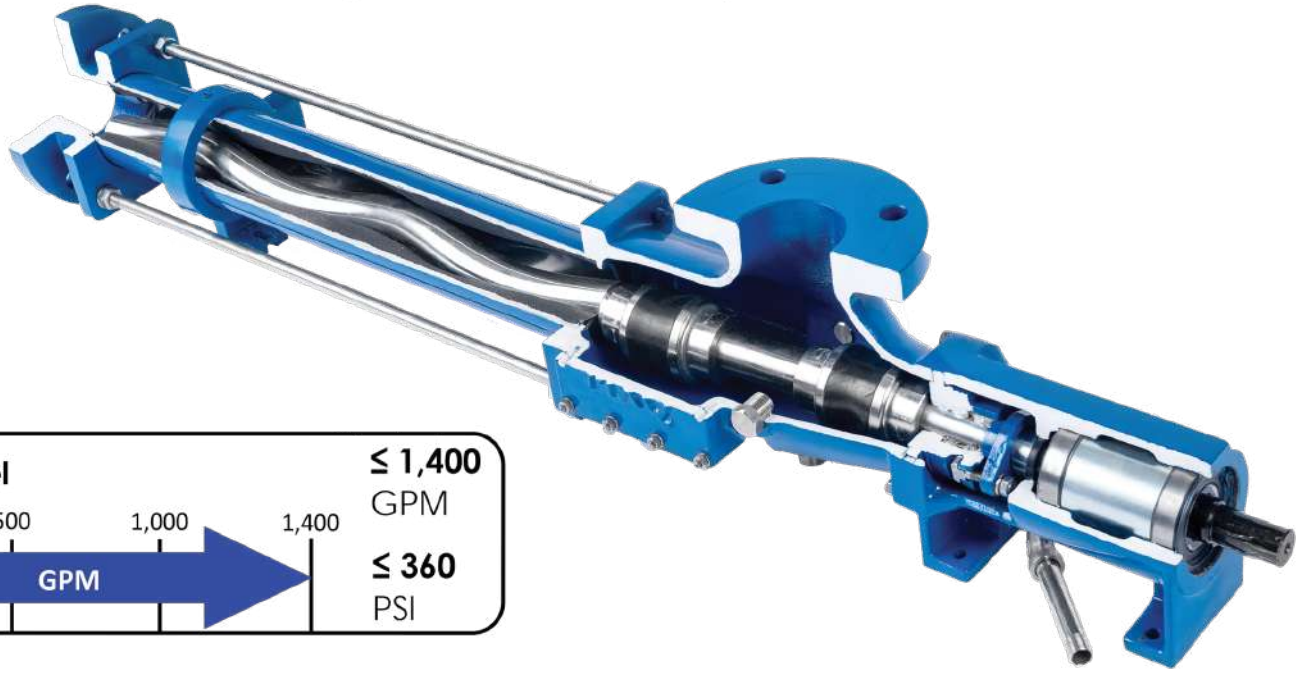
MXQ®

Fluids in Motion™

MXQ PROGRESSIVE CAVITY PUMP

MXQ PCP AT A GLANCE



CHARACTERISTCS

- 100% Bornemann Equivalent
- Wide range of applications
- Smooth & continuous flow
- Low pulsation
- Capacities up to *1,400 GPM*
- Differential pressures up to *360 PSI*
- Can pass solids up to *3"*

MATERIALS OF CONSTRUCTION

Casing	GG-25, 1.4408, 1.4571, 1.4462
Rotor	C45 Hard Chrome, 1.4571, 1.4462
Shaft	1.4021, 1.4571, 1.4462
Stator	SBR, NBR, HNBR, FKM, IIR, CSM, EPDM

PUMP DESCRIPTION

The EH model is one of the best progressive cavity pumps on the market. There are many standard features that set it apart from the competition, such as:

⇒ Cardan Style Universal Joints
⇒ Elongated Profile
⇒ SS Internal Shafting & Hardware
⇒ Bronze Lantern Packing Ring
⇒ Access Ports on Suction Casing
⇒ Drain Pipe on Stuffing Box
⇒ Stuffing Box Flush Connections
⇒ Pressure Gauge Fittings

MXQ PCP PERFORMANCE

Model	RPM*	1 stage=90psi (GPM)	2 stage=180 psi (GPM)	4 stage=360 psi (GPM)
EH 164	100	1.5	.75	.30
EH 236	100	3	1.5	.75
EH 375	100	6	3	1.5
EH 600	100	12	6	3.0
EH 1024	100	24	12	6.0
EH 1500	100	50	24	12.5
EH 1900	100	100	50	25
EH 2650	100	150	75	37.5
EH 4500	100	250	125	-
EH 6300	100	350	175	-

*Maximum operating speed is 400 RPM

MXQ PCP FEATURES

MXQ Progressive Cavity Pumps

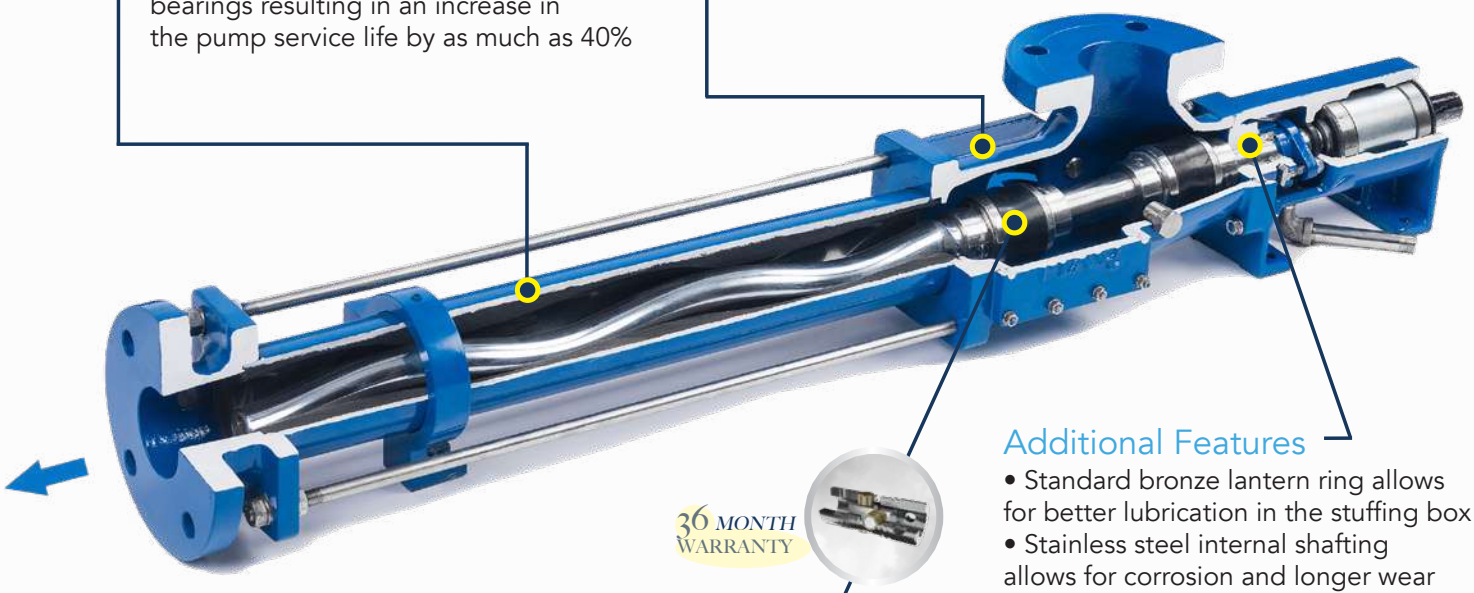
MXQ progressive cavity pumps are reliable, robust and have a wide range of applications. They have the impressive capability of pumping highly viscous media at a constant, smooth, and metered flow.

Elongated 6L Geometry

- Requires lower RPM resulting in less wear and maintenance
- Lower shearing force on the liquid pumped
- Reduces the rubbing velocity
- Lowers the required starting torque
- Increases the life of the joint and bearings resulting in an increase in the pump service life by as much as 40%

Simple Design

- Two clean-outs for easy maintanence, repairs, and disassembly
- Drain pipe on stuffing box
- 1, 2, 4 Stages all the same length



36 MONTH WARRANTY

Additional Features

- Standard bronze lantern ring allows for better lubrication in the stuffing box
- Stainless steel internal shafting allows for corrosion and longer wear
- Pressure gauge fittings
- Available in close-coupled design
- Pump packages available in over & under, in-line, and right angle designs

Cardan Style Universal Joints

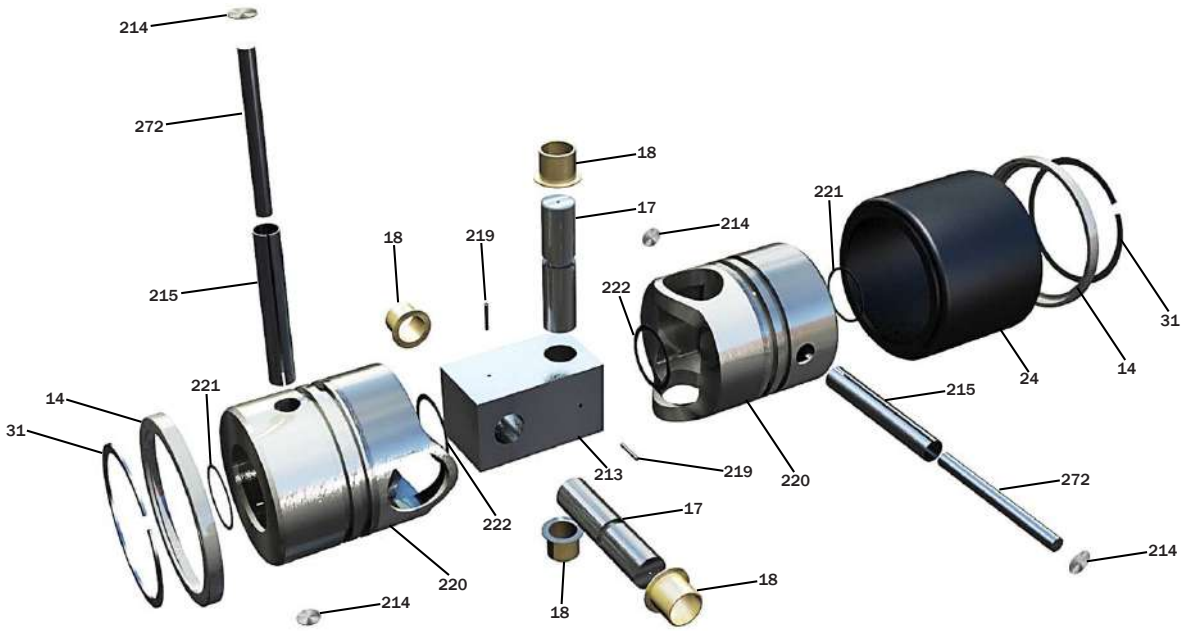
- Efficiently distributes the eccentric radial and axial forces intoseveral components allowing for greater angularity
- All components are lubricated with a synthetic, temperature stable lubricant and enclosed in an elastomeric boot that is made of the same material as the stator
- Easy to access and repair

Over & Under Design

In-Line Design

Right Angle Design

MXQ PCP CARDAN JOINT



Item	Qty.	Description	Item	Qty.	Description
14	2	Boot Collar	215	2	Sleeve
17	2	Joint Pin	219	2	Locking Pin
18	4	Joint Bushing	220	2	Joint Head
24	1	Boot Cover	221	2	Shaft O-ring
31	2	Boot Collar Snap Ring	222	2	Joint O-ring
213	1	Block Pulley (Yoke)	272	2	Taper Pin
214	4	Sealing Disc	501	1	Complete Assembly

Cardan Joint

- Allows for greater angularity
- Reduces length of connecting rods
- Eliminates need for hollow drive shaft
- Effectively sealed from fluid pumped
- Easy to access and repair
- Standard 3 year warranty

Pin Joint

- Low angularity toleration
- Long connecting rods required
- Hollow drive shaft prone to clogging
- Regular maintenance required
- Difficult to access & maintain
- Short service life

MXQ APPLICATIONS

PC pumps have applications across industries with varying requirements, especially processing hard-to-pump materials. They are commonly used in wastewater treatment by city-based municipal corporations.

Here are a few important application areas:

- **Wastewater management:** Filter aids, scum mixing, sludge handling processes and recirculation

- **Municipal corporations:** Water treatment plants, recycling and purification

- **Food & beverage:** Food processing industries to process canned sauces, soups, baby foods, fruit juices, breweries, beverages, hydrogenation, milk & milk products, crystallizing

- **Paints:** Pumping of inks, chemicals, dyes, adhesives, paints, emulsions, foundries, varnishes, and gelatins

- **Oil & gas:** Drilling processes for mud and crude oil, subsea cutting recovery, oil refining processes

Other general applications: Heat transfer, latex, cutting fluids, fertilizers, solid suspension, pulp & paper, fluid transfer

CASE STUDY

APPLICATION

Industial wastewater & sludge

PROCESS

Activated sludge with atmospheric and pure oxygen diffusion

THE CHALLENGE

The customer is a governmental entity created in Texas with the broad charge to protect the waters of the state. They currently process wastewater from municipalities and the petrochemical industry.

Their facility had been having trouble with a piston-pump system (shown below) that had constant seal problems and ball-valve leakage. The solids in the wastewater were constantly being trapped in these areas causing failures. Regular maintenance was required three to four times per year.

Unhappy with this old system, the customer wanted a more reliable replacement. A visit to the plant was needed to verify the operating conditions and make an analysis of the space available.

Above: Piston-pumping system to be replaced

It was determined that the replacement pump had to be flexible enough to pump sludge from 30 to 300 GPM at a constant 85 PSI. Additionally, the length of the space available was less than the long geometry of the ideal pump.

Above: MXQ EH Model Progressive Cavity Pump (Over & Under Package) installation

THE SOLUTION

The answer to the problem was the MXQ model EH-2650 progressive cavity pump (shown above). The EH model met all of the customer's requirements through its low maintenance, cost-effectiveness, performance, and design.

The EH model's elongated profile requires a lower rpm resulting in low shear to the product and less pump wear. The EH model comes standard with two universal cardan joints. Unlike pin joints, theses cardan joints efficiently distribute radial and axial forces. This allows for better angularity and a longer service life.

Due to the ample overhead space, a belt-driven over and under design was suggested. This minimized the structural and pipe changes made. Moreover, a variable frequency drive was used to speed up and slow down the pump. This allows the user to dial in the desired flow.

With the addition of being valve-free, this model was the ideal solution to the customer's problems.

THE RESULT

The pump was mounted on a structural steel base-plate and driven by an overhead mounted 25 horsepower SEW motor with the variable-frequency drive. The design was compact and the operation was seamless with no vibration or resonance. After an approximate period of six months, a standby pump was also installed.

KEY BENEFITS

The MXQ EH model (shown below) is a reliable, robust progressive cavity pump. It has the impressive capability of pumping wastewater sludge and highly acidic media. Its standard features, such as its elongated profile and heavy duty cardan joints, give it the advantage over all other competitors in the industry.

Total customer satisfaction and excellent equipment performance is at the heart of our mission statement. When reliability, low maintenance, and optimum productivity are the desired result, then the MXQ EH model progressive cavity pump is your solution.

CONNECT WITH US

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