

# Syno<sup>®</sup>

**PROGRESSIVE CAVITY PUMPS**

..... *Since 1975*

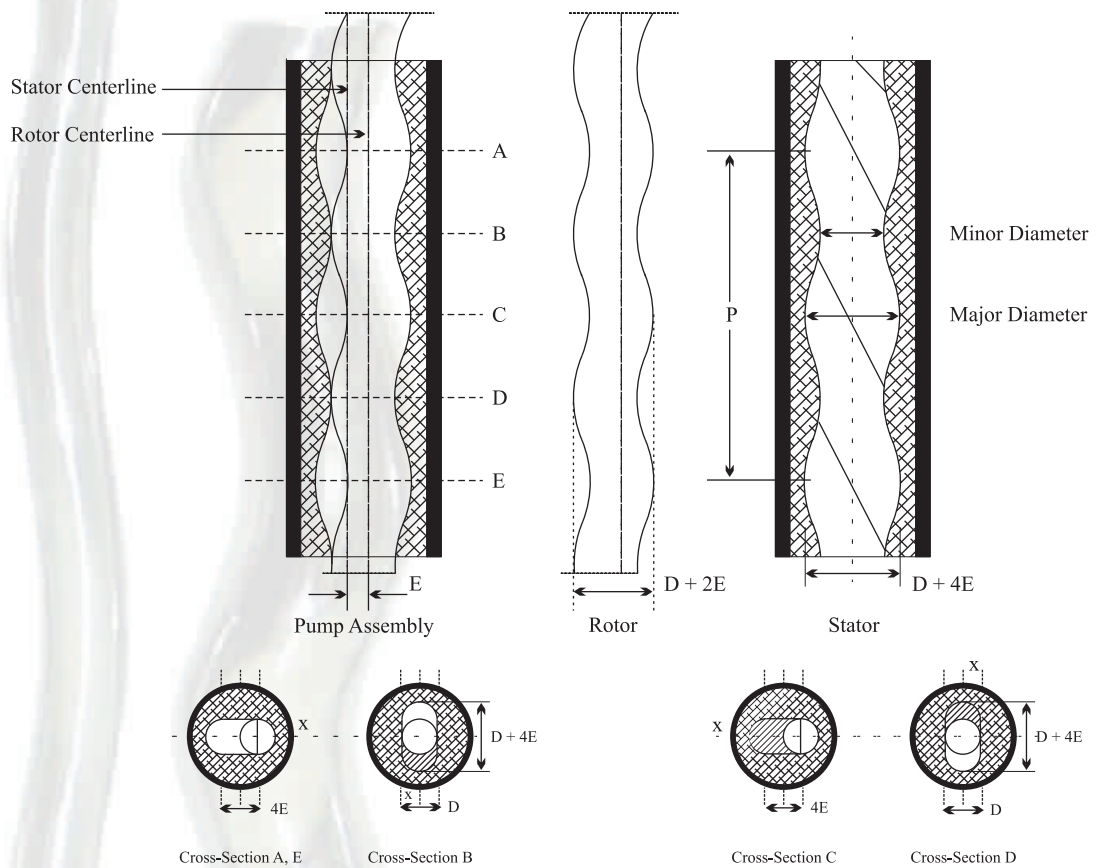
"heart of your process"

[www.synopumps.com](http://www.synopumps.com)

## SYNO PROGRESSIVE CAVITY PUMPS 'S' CATALOGUE



# PROGRESSIVE CAVITY PUMP - PUMPING PRINCIPLE



The pumping element comprises of a precision machined single external helix metallic rotor, and a double internal helix elastomer stator. Due to the special profile of the rotor and stator set, a sealing line is formed along the axis of the rotor which is maintained at both static and dynamic conditions.

As the rotor turns within the stator, these cavities progress from the suction to the discharge end of the pump carrying the fluid.

## FEATURES AND BENEFITS

- ▶ **POSITIVE DISPLACEMENT**
- ▶ **INHERENTLY SELF-PRIMING**
- ▶ **INHERENTLY NON CLOGGING**
- ▶ **LOW FLUID VELOCITY**
- ▶ **REVERSIBLE**
- ▶ **Uniform non-pulsating metered flow proportional to speed.**
- ▶ **Head developed independent of speed. Avoids use of foot valve.**
- ▶ **Ability to handle entrained air/gas in fluid. Handles high percentage of suspended solids.**
- ▶ **Ability to handle shear sensitive products.**
- ▶ **Provides Flexibility of operation.**

# OUR DESIGN – YOUR ADVANTAGE: EASY SERVICEABILITY, DEPENDABILITY, OPERATING SAFETY

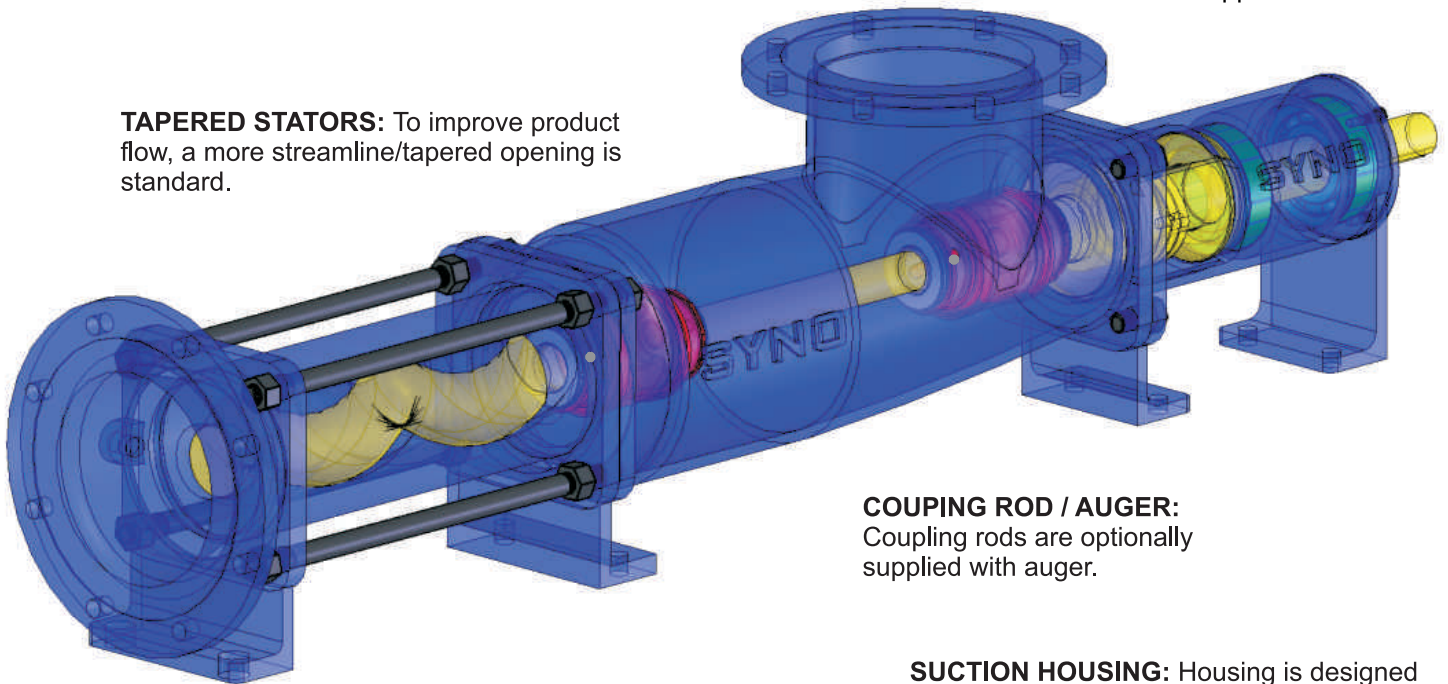
## SUCTION / DELIVERY CONNECTIONS:

Standard connections are Tri-Clamp type. Other connections are available including hopper design with auger.

## SHAFT SEALING:

Numerous shaft seal designs are available, including sanitary single mechanical seals and sanitary double mechanical seals for sterile applications.

**TAPERED STATORS:** To improve product flow, a more streamline/tapered opening is standard.



## COUPLING ROD / AUGER:

Coupling rods are optionally supplied with auger.

**PUMPING ELEMENTS:** Rotor & Stators designs are available for optimal pump performance and pulsation free transfer of products.

**SUCTION HOUSING:** Housing is designed free of dead space. Available with heating or cooling jackets.

**UNIVERSAL CARDAN JOINT**

2 Years Warranty  
\* 30% Low Maintenance Cost.

Zero leakage

Low Torque

2 Years Warranty

30% low maintenance cost

**GENTLE, LOW SHEAR FLOW**

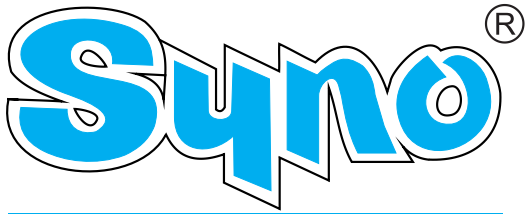
**HIGHEST SOLID PASSAGE IN THE MARKET**

**20% LESS POWER CONSUMPTION**

**ATEX CERTIFICATION**

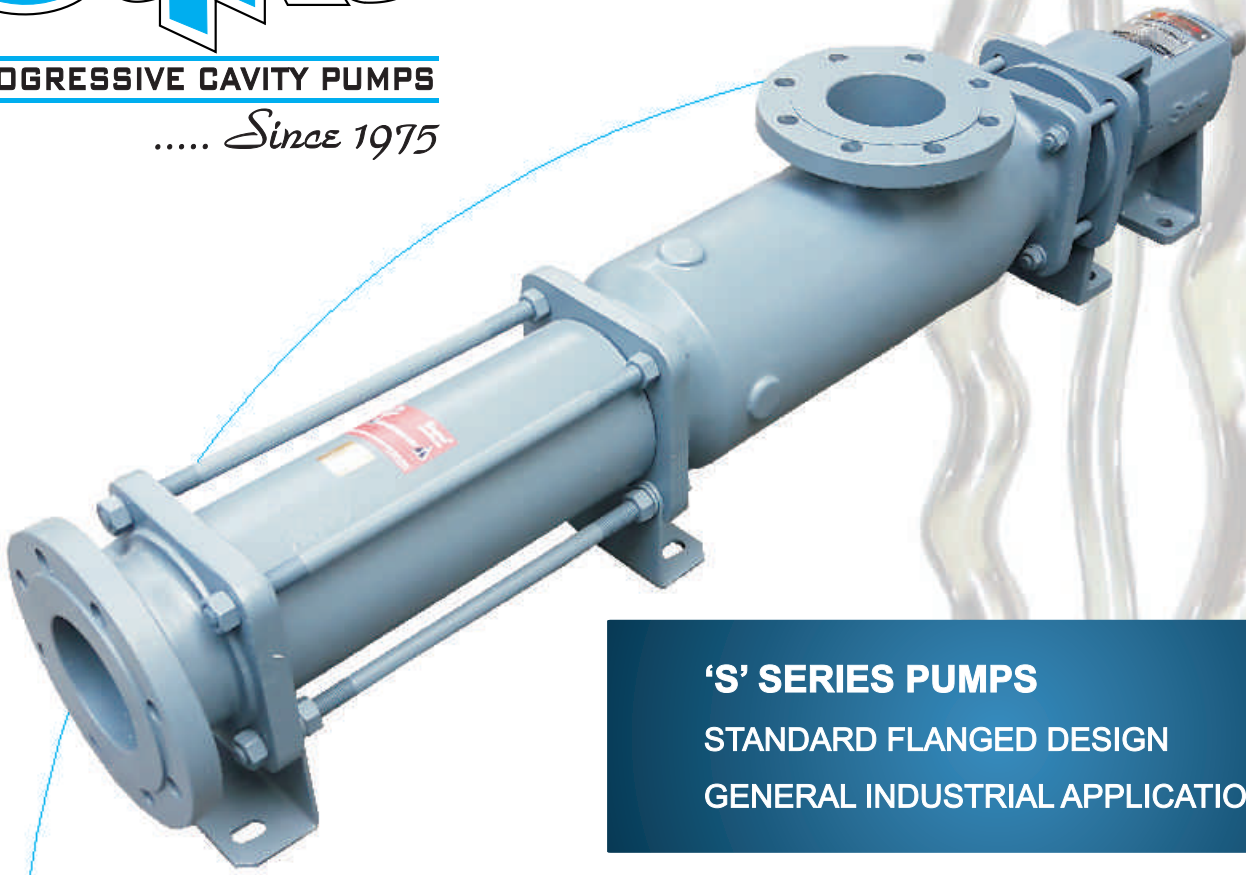
**MANUFACTURED TO FIT EXISTING PIPEWORK**

**8000 HOURS BEFORE MAINTENANCE**



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**'S' SERIES PUMPS**  
**STANDARD FLANGED DESIGN**  
**GENERAL INDUSTRIAL APPLICATIONS**

S' Series is ideal for handling slurries, viscous, shear sensitive or two or tri phase mixtures or when applications require, significant suction lift capabilities. These pumps are used for a wide variety of pumping and transfer duties. The design of Pump is ideally suited for both low to high flow applications and also allows for the development of multi-stage pumps that increase the pressure handling capabilities. These Pumps are found tough rugged industrial applications handling anything from abrasive slurries, aggressive or reactive chemicals, to viscous liquids, oils, or suspensions and aqueous solutions at elevated temperatures. They are known for their flawless performance, efficiency & trouble-free operation along with long service life features.

| Technical Features |                |
|--------------------|----------------|
| Capacity           | 1 to 400 m3/hr |
| Pressure           | upto 24 Bar    |
| Temp.              | upto 180° C    |
| Viscosity          | upto 80,000 cP |

| On Request:                                   |
|---|
| Double Mechanical Seal Cartage Type           |
| Jacketed for Hot Water Circulation            |
| Trolley Mounted or Custom made Skid           |
| Tungsten Carbide Coating with HP/HVOF Process |
| Special Execution for Low or High Temperature |

| Materials      |   |
|----------------|---|
| Housings       | All Grades of: Cast Iron / Stainless Steel / Duplex Steel / Hastelloy etc.              |
| Rotating Parts | All Grades of: Stainless Steel / Tool Steel / Duplex Steel / Hastelloy etc.             |
| Sealing        | Mechanical Seal / Gland   |
| Stator         | High Nitrile Black / Nitrile(White) / EPDM / Viton / Natural / Neoprene / Silicon etc.. |



# APPLICATIONS



## Environmental

- Waste Water and Sludge Treatment.
- Sludge Dewatering.
- Metering of chemical additives (polymers).
- Contaminated groundwater [leachate]
- Industrial waste water treatment
- Environmental waste
- Ethanol production

## Paper and Pulp

- Coatings
- Colourants
- Starch
- Adhesives
- Latex
- Chemical additives



## Sugar Mill and Distillery

- Molasses
- Magma
- Messecuite
- Melt
- Sulphited syrup
- Flocculent Dosing
- Phosphoric Acid
- Milk of Lime
- ETP Sludge



*We Pump Everything !*

# APPLICATIONS



## Chemical

- Speciality chemicals
- Cosmetics
- Pharmaceuticals
- Paints including Titanium Dioxides
- Metering of chemical additives
- Titanium dioxides
- Solvents
- Clay slips

## Mining

- Mine de-watering
- Wastewater
- Water treatment
- Slurries
- Dirty Water
- Recovery Agents



## Oil and Petrochemical

- Offshore oil & gas drilling platforms, fixed and floating
- Flare knock-out drums
- Low NPSH applications [high suction lift applications]
- Crude Oil Processing
- Drilling mud
- Waste oil
- Oil-water separation.

## Others Industrial Areas

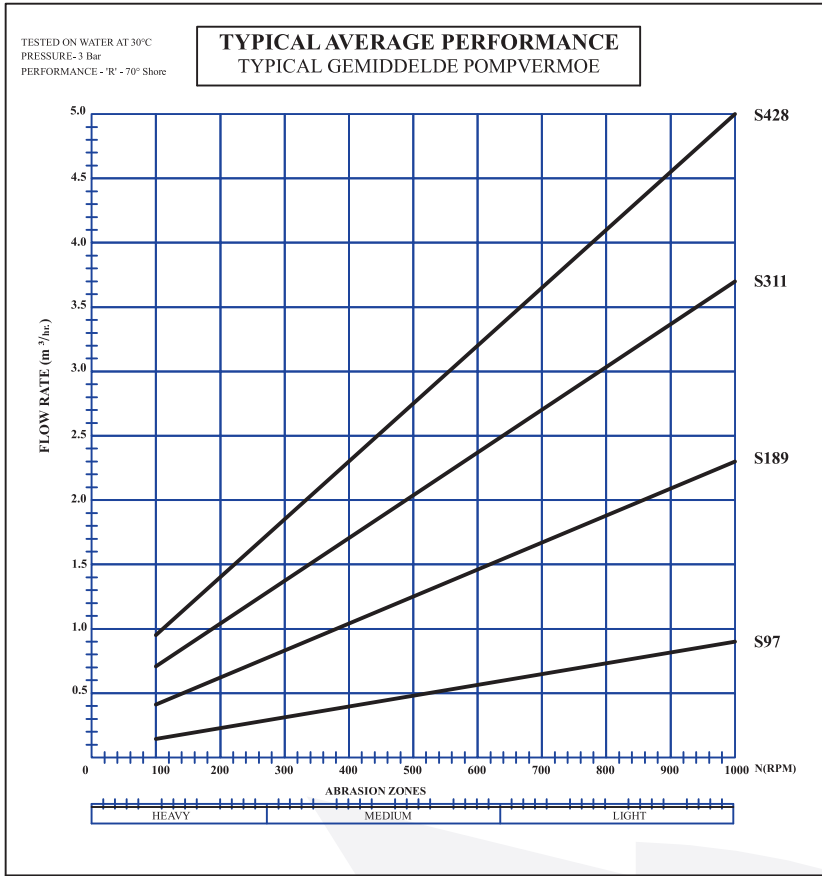
- Agriculture.
- Construction.
- Building products
- Marine
- Shipbuilding.
- Automotive Industry.



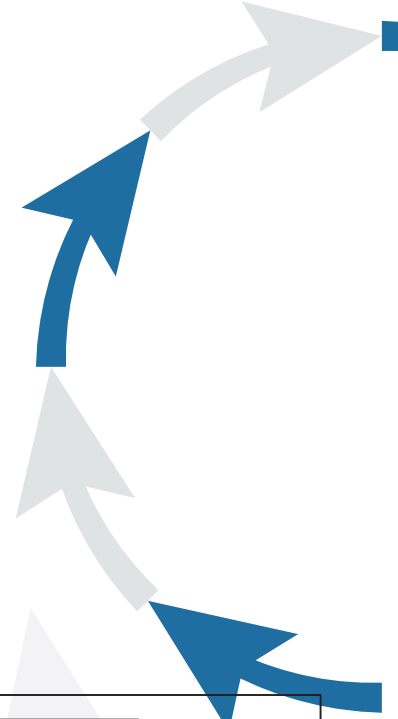
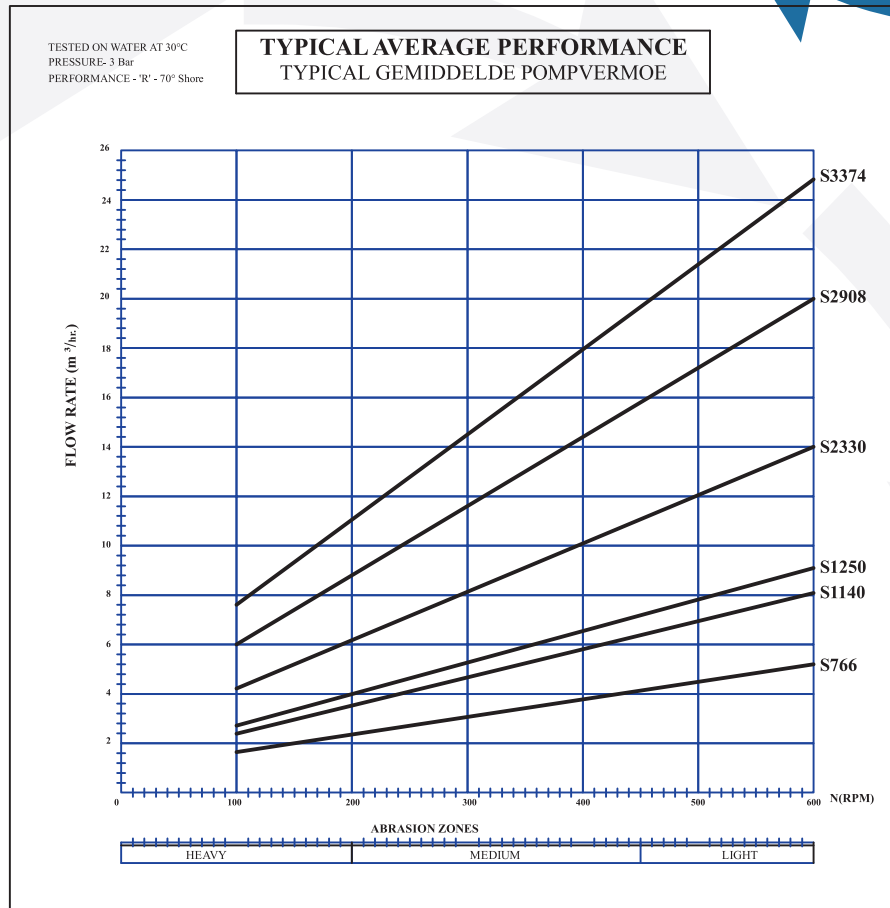
*We Pump Everything !*

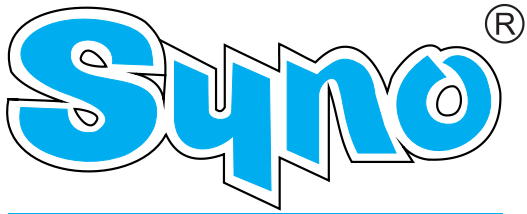


### LOW CAPACITY SELECTION



### MEDIUM-LOW CAPACITY SELECTION





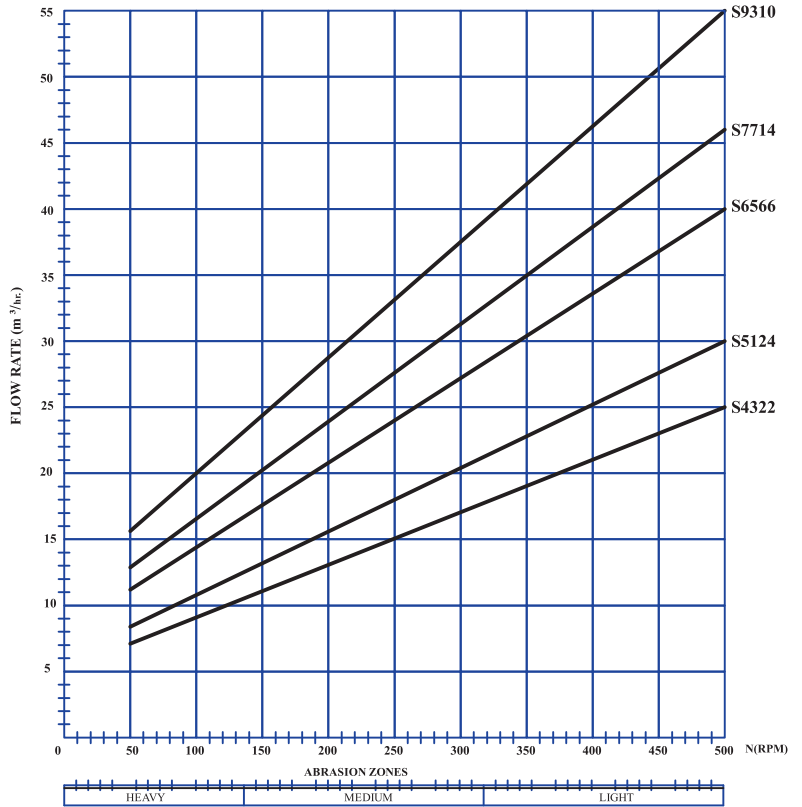
**PROGRESSIVE CAVITY PUMPS**

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**MID-HIGH CAPACITY SELECTION**

TESTED ON WATER AT 30°C  
 PRESSURE- 3 Bar  
 PERFORMANCE - 'R' - 70° Shore

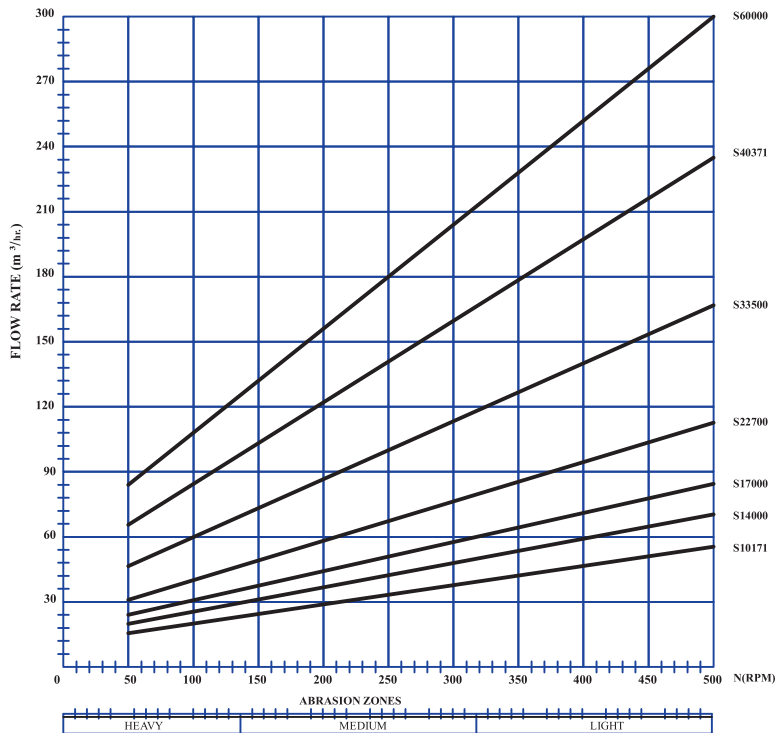
**TYPICAL AVERAGE PERFORMANCE**  
 TYPICAL GEMIDDELDE POMPVERMOE



**HIGH CAPACITY SELECTION**

TESTED ON WATER AT 30°C  
 PRESSURE- 3 Bar  
 PERFORMANCE - 'R' - 70° Shore

**TYPICAL AVERAGE PERFORMANCE**  
 TYPICAL GEMIDDELDE POMPVERMOE

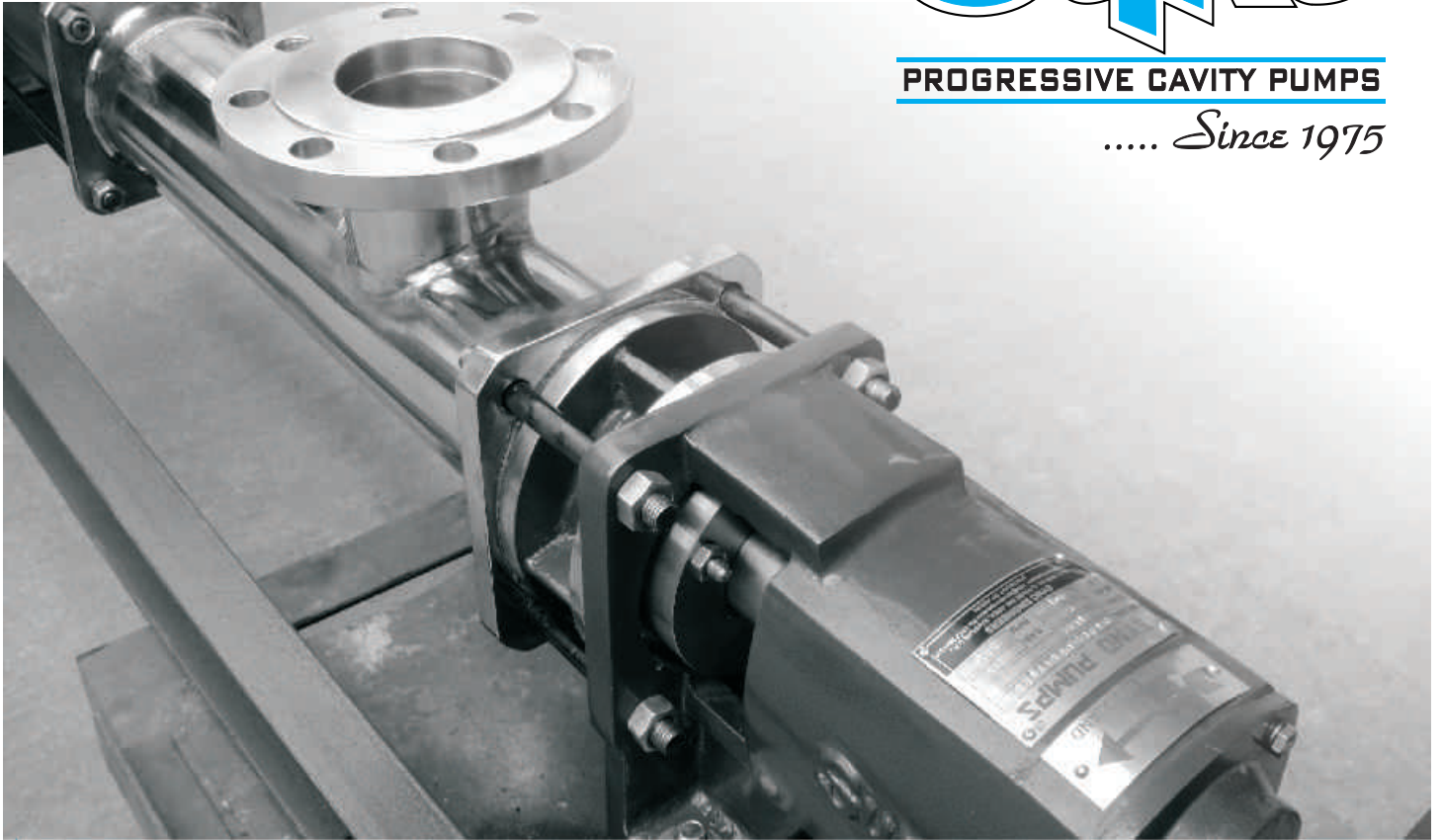




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**OVER 40 YEARS OF FLUIDS ENGINEERING EXPERTISE**



**MAKE IN INDIA**

## **SYNO ENGINEERS**

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**WORLDWIDE PRESENCE**