

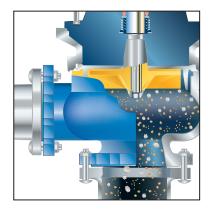


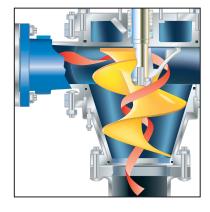
Three different designs allow optimum pump selection for each solids handling requirement.

# SOLIDS HANDLING SUBMERSIBLE

## INTRODUCTION

For over 45 years, Hayward Gordon has worked closely with our customers to develop exceptional products and tailored process pumping solutions. From our Screw Centrifugal series, through our hard metal Recessed Impeller line, to our Chopper Pumps, Hayward Gordon's wide range of Solids Handling Pumps tackle the most severe to the most delicate of applications. Put Hayward Gordon's products and experience to work for you. We'll solve your most challenging solids handling pumping problems.







## **TORUS**

The TORUS series of solids handling pumps feature an impeller completely recessed into the rear section of the volute, out of the flow path of the material being pumped. This allows passage of any solid which is equal to the discharge size of the pump.

In addition to handling large solids, the TORUS pump is ideally suited for highly abrasive applications, when low particle degradation is required, for slurries with gas entrainment, or for stringy or fiberous materials.

#### Features of this design include:

- · Discharge sizes from 2"-8"
- Sacrificial wear element for highly abrasive service.
- Hard metal construction in Ni-Hard, Super Ni-Hard or High Chrome. Also available in 316ss and other corrosion resistant alloys.
- · 15 models to choose from
- · Impeller is keyed to shaft

#### XCS

The XCS screw centrifugal line of pumps offers a unique set of advantages for handling thick sludges, large or stringy solids, shear sensitive fluids and delicate materials.

The open channel of the screw impeller combines gentle, clog-free pumping action with high efficiency and non-overloading characteristics.

Hard metal wear resistant construction is available when abrasives are present.

# Features of this design include:

- · High Efficiency (up to 80%)
- · Clog-free operation
- High Chrome abrasion resistant construction
- Non-overloading power curve
- · Low NPSH requirements
- · Gentle, low shear pumping action
- · 17 models to choose from

## CHOPX

The CHOPX series chopper pumps perform the dual function of cutting and pumping making them ideally suited for applications requiring reduction of solids size and/or protection of downstream equipment.

The proven clamp type construction, common to all our solids handling pumps, permits the entire wet-end to be manufactured in wear-resistant hard metals to ensure maximum component life in abrasive services.

#### Features of this design include:

- Dual function pumping and chopping
- Patented high efficiency impeller
- Anti-fouling design
- Abrasion resistant materials available
- Corrosion resistant materials available
- · 10 models to choose from

# **PUMP & MOTOR FEATURES**

High temperature monitoring via thermostats in all three motor phases

Submersible motors capable of running 15 min. in air

High-efficiency air-filled construction eliminates viscous drag found in oil-filled designs

Minimum 50,000 hour L<sub>10</sub> bearing life

Standard John Crane upper and lower seals, independently mounted - seal face materials include carbon/ceramic or tungsten carbide

Labyrinth grooves protect lower seal from solids

Efficient, open-channel non-clog impeller for smooth passage of large or delicate solids

Hard metal wear ring offers a low cost sacrificial element for extremely abrasive conditions.

> The fully recessed impeller allows clear passage of all solids that will pass the casing discharge port.

Cable Entry Sealing System

- · Rubber grommet seal
- · Epoxy encapsulated cable entry
- · Butt spliced connectors to prevent moisture from wicking through the cable - even when the cable jacket is punctured

Stainless steel shaft

Dual probe sensing system detects moisture in seal chamber

Pump end materials of construction include: Cast Iron, High-Chrome Iron, 316SS and CD<sub>4</sub>MCU

Optional externally adjusted suction liner for convenient adjustment of impeller clearance

> Highly engineered patented impeller profiles produces efficiencies much higher than the competition.

Sharpened impeller edges sweep over spiral grooves in the casing backplate to cut and expel stray material from behind the impeller.



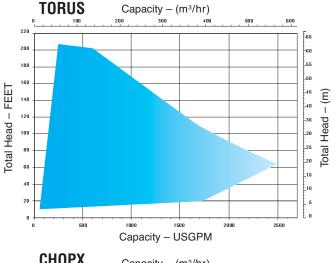
Powerful cutting action achieved by hardened and sharpened scissor action between stationary cutter bars and rotating impeller.

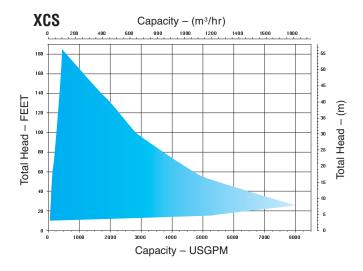
One piece, heavy walled casing allows passage of solids up

to 8" diameter.

**CHOPX TORUS** 

# PERFORMANCE RANGE

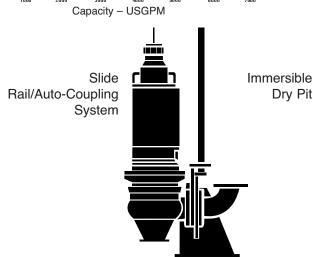




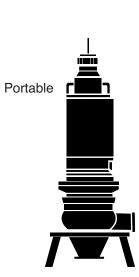
# CHOPX Capacity - (m³/hr) Capacity - (m³/hr) Capacity - (m³/hr) (E) - pagh | pagh |

# SUBMERSIBLE/IMMERSIBLE CONFIGURATIONS

Hayward Gordon XCS submersible and immersible pumps can be provided in the following arrangements:







# **Hayward Gordon**

US Patents: No 6,190,121; No 6,224,331

# U.S.A.

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