

# BARNES®

| SITHE SUBMERSIBLE CHOPPER PUMPS



# SITHE

BY BARNES®

Excellence in Innovation

Submersible chopper pumps designed to chop and macerate solids in extremely challenging waste water applications.

SITHE Chopper pumps are Barnes solution to highly demanding waste water applications in the collection systems market. The largest problem customers face in the waste water industry is clogging of non clog pumps and downstream piping. SITHE chopper pumps solve clogging with a unique, first-of-its-kind, patent pending chopping technology that slices even the most troublesome solids in waste stream.

SITHE chopper pumps provide immense value to customers including superior solid size reduction, high reliability, ease of servicing, ability to upgrade and low life cycle cost. SITHE provides this value to customers in the form of market distinguishing features like open center cutter design, field replaceable heat treated blades, plug-n-play cord, liquid cooled motor, readily available seals & bearings, and large lifting bail.

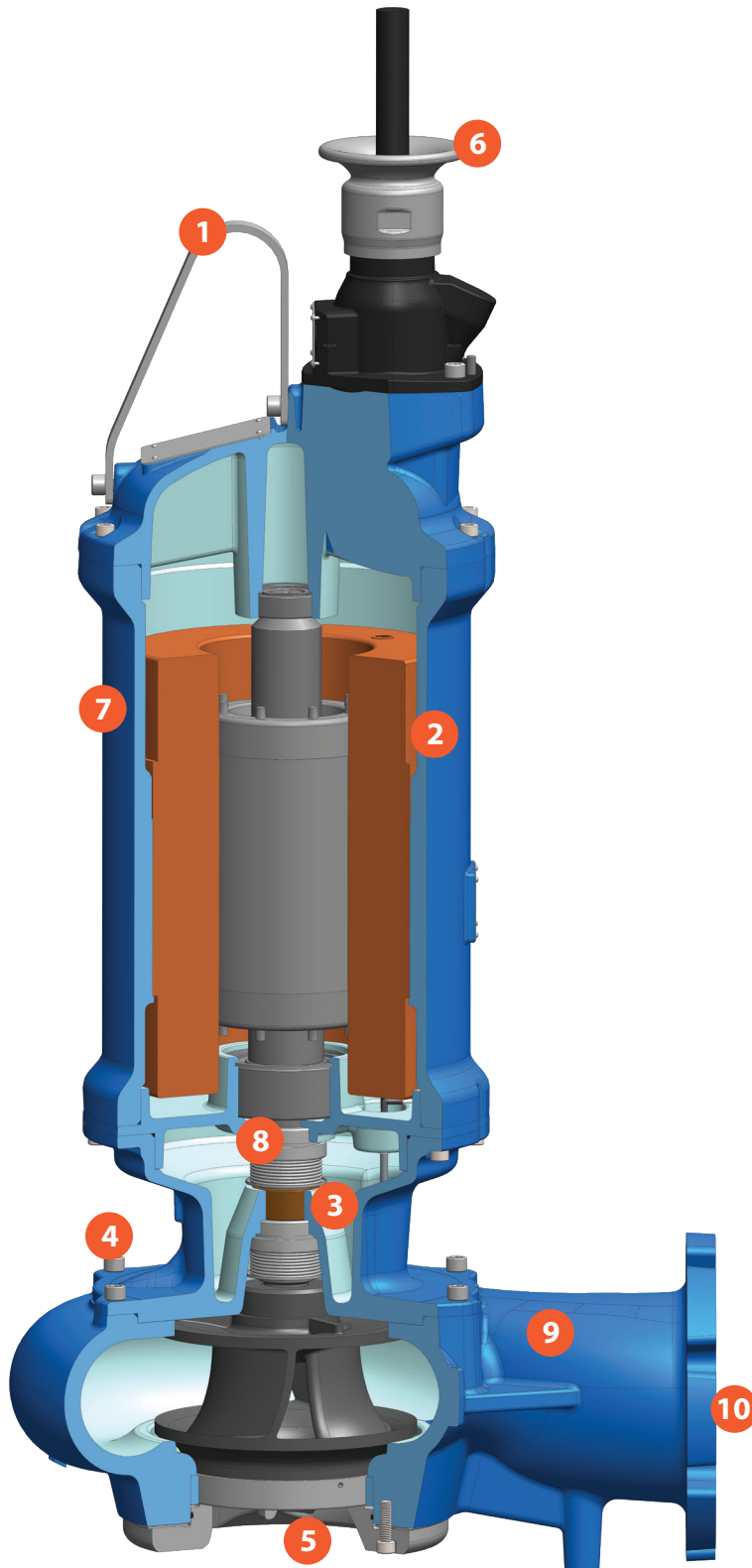


SUBMERSIBLE CHOPPER PUMP DISCHARGE & MOTOR RATINGS CHART

Speed (RPM)	1750									
	1150									
		7.5	10	15	20	25	30	40	50	60
		Horsepower								

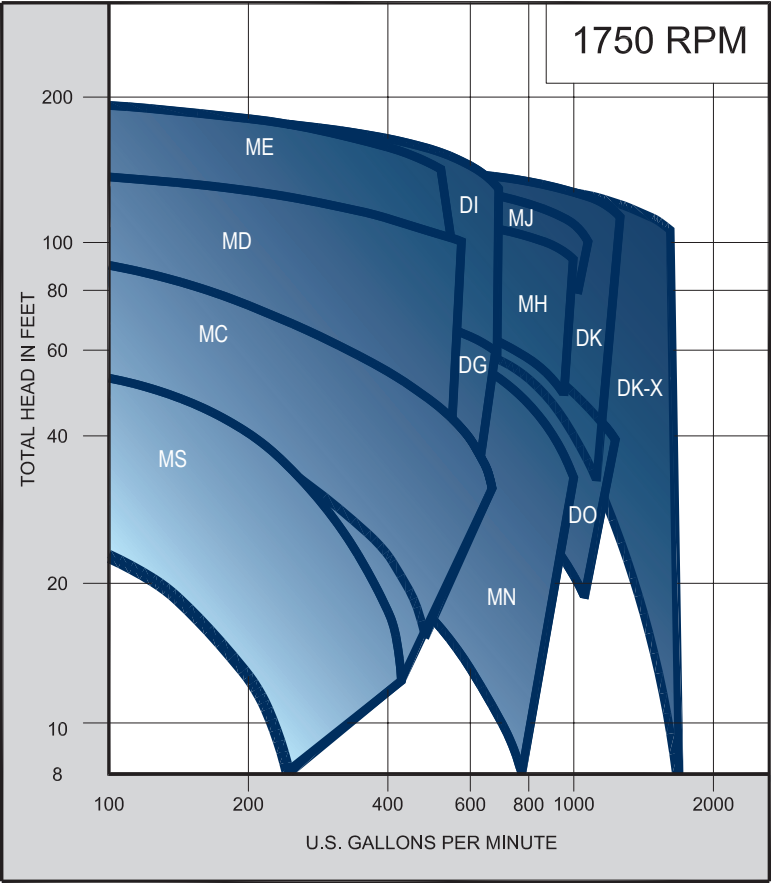
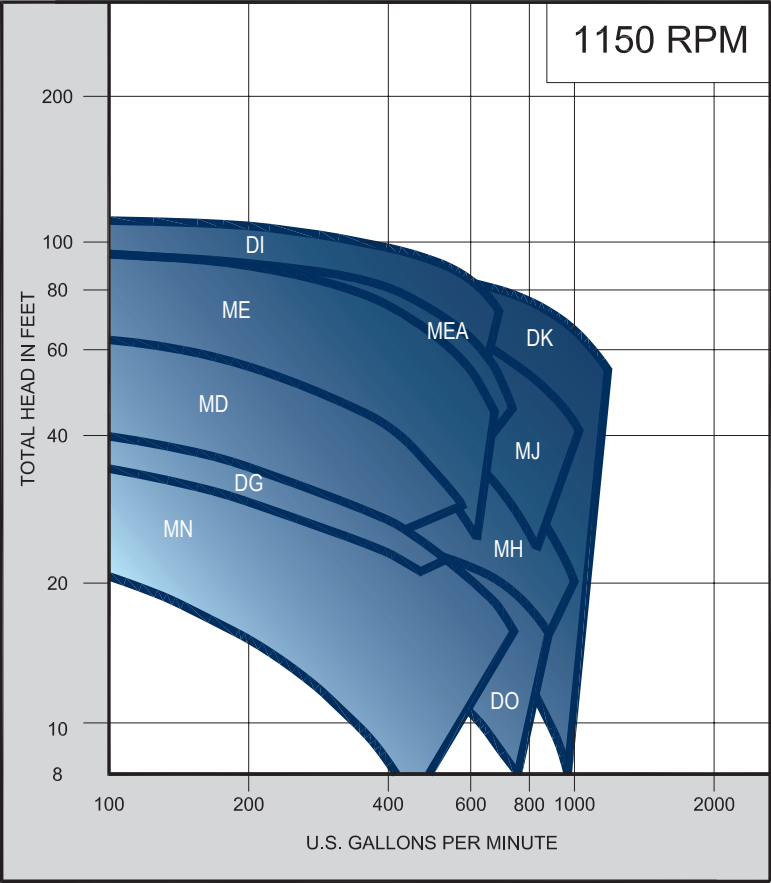
6" Discharge      4" Discharge      4" & 6" Discharge

## SITHE chopper pumps have valuable features including:



- 1 Large Stainless Steel Lifting Bail**  
Facilitates easy hooking for pump removal
- 2 VFD Ready Motor**  
With 1.2 service factor, class H insulation and class H magnet wire
- 3 Tapered Keyed Shaft**  
Reduces vibration & increases seal life
- 4 Stainless Hardware**  
Increases corrosion resistance
- 5 Heat Treated Blades**  
**Open Center Design**  
For superior slicing and sustained sharpness
- 6 Plug-n-Play Quick Connect Cord**  
Simplifies pump installation & removal
- 7 Liquid Cooled Motor**  
Enhances motor cooling & Increases bearing life
- 8 High Capacity Bearings**  
Provides 50,000 hour bearing life at 2 ft/sec flow
- 9 Axalta Epoxy Coating**  
Improves durability & aesthetics
- 10 Slotted Discharge**  
Adapts to ANSI and ISO flanges

**BARNES®** SITHE SUBMERSIBLE CHOPPER PUMPS





## Superior Solid Size Reduction and Non Clogging

SITHE's innovative chopping mechanism reduces solid size and passes even the toughest of solids in waste stream like greasy hairballs, stringy ropes, pillows, glass, bottles, nylon hose, wood dowels and other solids greater than 3" size. SITHE's open center cutter design and Barnes hydraulics prevent solids build up around the pump and in the volute and impeller passageways, and pass the chopped solids without any clogging. The slicing blade and striker plate, made from heat treated 440C Stainless Steel, maintain their sharpness over time, thus retaining excellent solid size reduction capability. The slicing mechanism is designed to reduce solid size small enough to prevent clogging of the pump and downstream check valve, but large enough to be trapped at headwork screens at waste water treatment plant.



## High Reliability

SITHE's unique, efficient and effective slicing action reduces impact on wear items like bearings and seals. The heat treated 440C Stainless Steel chopping blades cut hard items with minimal impact on sharpness and last for a minimum of 7 to 8 years. All SITHE pumps are certified by CSA. Explosion proof models are approved Class 1 Groups C&D Division 1. SITHE's high capacity bearings are rated for a 50,000 hour life at 2ft/sec. The cord-integral temperature and moisture sensors improve reliability and protect the pump from temperature and water infiltration.



SITHE's unique patent pending open center cutter design

## Ease of Servicing

SITHE's reliable design reduces the need for servicing. The striker plate and slicing blade retain sharpness for 7 to 8 years thereby minimizing the need for replacement. SITHE has Silicon Carbide/ Silicon Carbide lower seals that reduce seal failure and liquid entry into the motor. All wear items, including striker plate, slicing blade, bearings and mechanical seals can be replaced in less than 30 minutes. Replacement can be performed near the installation utilizing simple tools and removing the need to ship the pump to a service center. In addition, SITHE's plug-n-play cord and large lifting bail make it easy to remove and service the pump from the pit.



Field replaceable blades

## Ability to Upgrade

SITHE chopper pumps are designed for upgradability. SITHE can easily upgrade existing sewage ejectors and submersible non clog pumps. SITHE's accessories include adaptors that can fit into rail systems of other pump brands and can be used to upgrade pumps in existing lift stations at costs lower than the cost of rehabilitation or other solutions like dual-shafted grinders. No changes to the well design is required and no investment is needed for new panels and wirings.



Plug-n-play quick connect cord

## Low Life Cycle Cost

SITHE's rugged design reduces the need for servicing and reduces servicing costs. The striker plate and slicing blade are the only wear components that will need replacement in the chopping mechanism. This ease of maintenance reduces the time to maintain and service.

SITHE's mono and dual vane enclosed impellers mean significantly higher efficiencies and provide higher energy savings over the life of the pump. Heavily solids laden wastewater is still 90% water, so extra energy to chop is only at 10% volume. SITHE is also equipped with standard, readily available and low cost mechanical seals and bearings unlike other solutions that use proprietary components.



## Industry Best Lead Time

SITHE chopper pumps are available in a industry defying lead time of 3 weeks. These pumps are proudly manufactured in the United States of America. Each pump is assembled, thoroughly tested, painted and packaged in a world-class lean environment.



## Options, Kits & Accessories

Numerous options are available for maximum flexibility. These include three cord sizes, seal materials and mounting options. Recommended accessories like Break Away Fittings (BAF), leg kit and relay are common with Barnes SH non clog pumps. BAF facilitate easy installation or removal of pumps via a slide rail system. Leg kits support the pump in floor mounted installations. Control panels are available for simplex and multiple pump installations, and customized to meet specifications. Other accessories include pit covers with access doors, lifting chains, pump hoists, level controls and check valves.

## Service & Repair

Crane Pumps & Systems has an extensive network of distributors and service centers throughout the US and Canada.





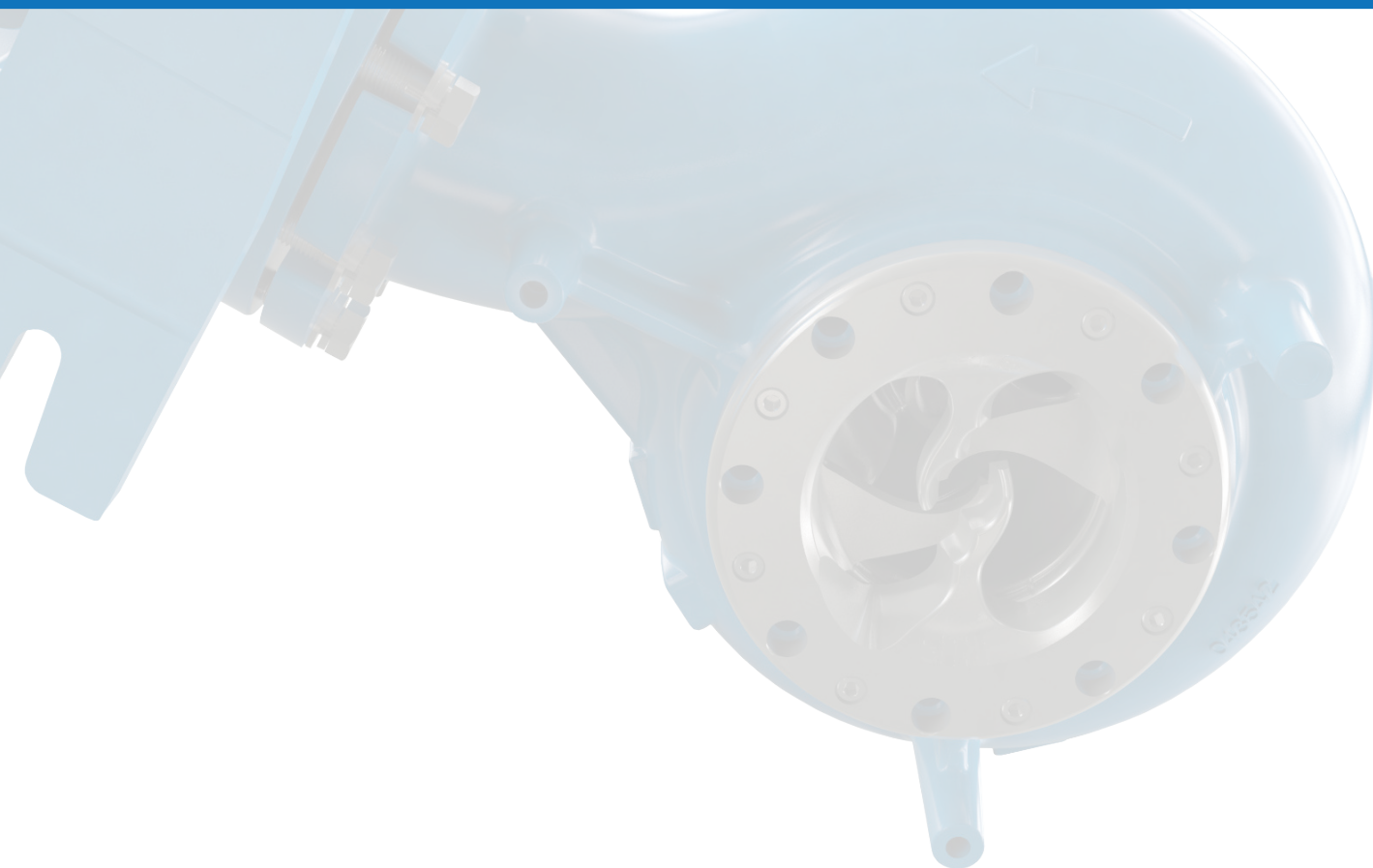
Since 1946 Crane Pumps & Systems has been designing and manufacturing pumps, accessories and systems to provide solutions for municipal water and wastewater, residential, commercial, industrial and military pump market segments.





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**CRANE**

PUMPS & SYSTEMS

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