SMART TURNER PUMPS

ESTABLISHED IN 1871

ISO 9001:2008 REGISTERED COMPANY

Engineered Pumps for Industrial and Municipal Services

Catalogue A-90

- ASME B73.1 Chemical Process Pumps
- Double Suction
- Multi-stage High Pressure Boiler Feed
- End Suction
- Non-clog Solids Handling, Vertical/Horizontal Dry Pit Solids Handling
- Refuse Wet Pit/Dry Pit Solids Handling
- Vertical Cantilever Vertical Process
- Vertical Sump Wet Pit Service

www.smartturner.ca

SMART TURNER SOLUTION TO PUMPING PROBLEMS

Whatever fluids you pump, Smart Turner has the background and technology to help you meet your needs effectively and efficiently with quality designed and built pumps. Smart Turner has established an enviable reputation for reliability while pumping chemicals, oil, beverages, slurries or sewage….almost any liquid known to man.

For over 100 years, Smart Turner has been dealing with and solving pumping problems throughout the world. This in-depth experience, coupled with modern computer technology at every level from concept to shipping, is available to you through our sales and engineering personnel, coast to coast.

At Smart Turner, pumps are our only business, designed through experience to provide consistent performance and minimum maintenance. A wide range of sizes and types allows us to match the right pump to your specific application.

For further information, or an evaluation or your pumping system requirements, contact your nearest Smart Turner sales office or distributor as listed on the back cover of this catalogue.

HEAD OFFICE AND MAIN SALES OFFICE:

Smart Turner Pumps Inc.
392 Hardy Road, P.O. Box 28066,
Brantford, Ontario, N3R7X5, Canada
TEL: 1-888-561-PUMP (7867)
FAX: (519) 757-1747
EMAIL: contact@smartturner.ca
Website: **www.smartturner.ca**

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PUMP INDEX

ASME B73.1 / ANSI END SUCTION PUMPS

This catalogue provides the information you need to select a Smart Turner ASME B73.1 Pump to fit your specific needs. The ASME End Suction Pump range continues the Smart Turner tradition of providing well proven, uncomplicated designs incorporating high efficiency and smooth, low NPSH performance in a compact economical, Heavy Duty End Suction Pump.

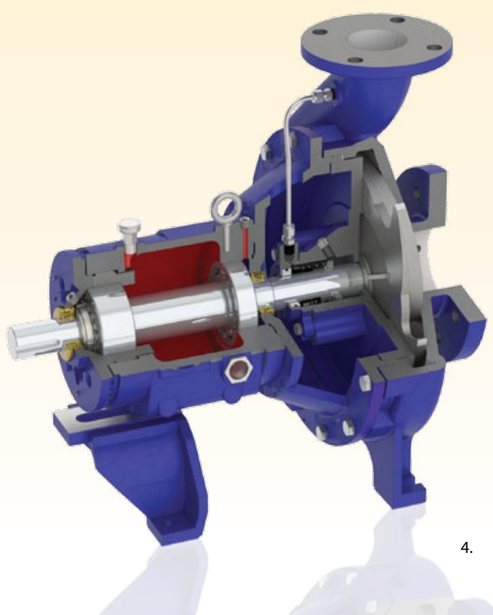
Smart Turner ASME Pumps are ideally suited to plant service and chemical process applications where continuous, reliable operation is essential, whether the fluid is clean, dirty, corrosive or abrasive.

Smart Turner ASME Pumps are quality built for rugged, trouble free operation. They are available with either grease or oil lubricated bearings as standard.

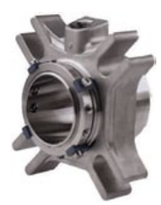
Smart Turner ASME Pumps are engineered to exceed ANSI standards in all essential features. Impeller adjustment is positive and uncomplicated. High shaft stiffness yields low shaft deflections. Oversize bearings provide more than 2 year L10 life in all cases. The large stuffing box and the rear impeller pump out vanes provide excellent heat dissipation and low stuffing box pressure for long packing and seal life. The recessed pump out vane arrangement minimizes the effects of wear by maintaining pump out efficiency throughout the full range of impeller adjustment.

Smart Turner ASME Pumps are produced and stocked in a wide range of sizes using only three bearing housings. This makes an efficient parts inventory possible through extensive interchangeability of parts between pumps.

With the inclusion of ASME Pumps, Smart Turner can now offer a range of End Suction Pumps, totaling over 60 models, with capacities to 6000 USGPM, heads to 800 feet and speeds to 3500 Rpm.



SMART TURNER PUMPS
ESTABLISHED IN 1871



CONSTRUCTION MATERIALS

- All Iron
- 316 Stainless Steel
- Steel
- Alloy 20
- CD4MCuN
- Hastelloy C
- Bronze
- Monel
- Other Materials on Application

DESIGN AND CONSTRUCTION FEATURES:

Pump: Back pullout construction to ANSI B73.1 dimensional standards. Top center line to discharge and casing feet ensure maximum rigidity and stability, while Smart Turner quality and precision ensure accurate fits and clearances.

Casing: A radially split cast volute with integral suction cover, ruggedly designed with generous allowance for abrasion and corrosion. 150# ANSI flat faced flanged connections are standard. 300# flat faced flanges or RF are an option.

Impeller: Cast in one piece, the fully open impeller is trimmed to the exact diameter required and is factory balanced. The heavy section of the impeller provides excellent wear and corrosion allowance and the partial rear shroud provides maximum support for the blades. Rear pump out vanes provide axial hydraulic balance and low, but normally positive, stuffing box pressure. The pump out vanes are recessed into the stuffing box cover to maintain pump out efficiency if axial adjustment is made.

Stuffing Box Cover: A heavy one piece casting with rabbeted fit to the casing for positive alignment. The deep bore will accept a wide range of packing or mechanical seals. Optional Tapered and Big Bore stuffing boxing are available.

Gland: Split for packed stuffing boxes and solid for mechanical seals, the gland can be provided in a variety of arrangements to suit the application.

Gaskets: All gaskets are fully contained.

Shaft: Precision machined high quality alloy, normally fitted with a renewable sleeve, and oversized to minimize deflection to ensure smooth operation and maximize packing or seal life. Hardened Shafts are available as an option.

Sleeve: A precision machined, stainless steel, hook sleeve with an O-Ring seal against the impeller. A solid shaft without sleeve can be provided. Hardened Sleeves are available as an option.

Bearings: Antifriction bearings are generously sized for longer life, with a double row thrust bearing for minimum end play. Grease or oil lubricated arrangements are available. Grease is recommended for most services as being simpler and more reliable. Bearings are protected by seals at both ends of the housing.

Bearing Housing: A rigid casting with precisely machined bores and rabbet fit to the adaptor to ensure concentricity and alignment with the stuffing box cover, casing and rotating element. The smaller housing has an integral foot and integral adaptor.

Adaptor: A rigid casting with integral gland drip reservoir, precision machined to ensure rigid and consistent alignment between bearing housing and liquid end.

Interchangeability: All pumps utilize one of only three bearing housings. Pumps with the same bearing housing have fully interchangeable shafts, sleeves bearings, packing, seals, glands, and hardware resulting in an efficient parts inventory at both the factory and the customer.

Tests: All pumps are hydrostatically tested to 50 PSI above the maximum casing design pressure. Performance Testing is available as an option

OPTIONAL EQUIPMENT:

Base: A rigid channel or fabricated base can be provided to our standard for electric motor drives. Special bases can be provided and can incorporate grout holes, drip rims and other features.

Guard: A coupling guard to our standard can be mounted on the base plate. Special guards can be accommodated.

Flexible Coupling: For normal duty our current standard is provided when a coupling is ordered. However, couplings of almost any style or manufacturer can be accommodated.

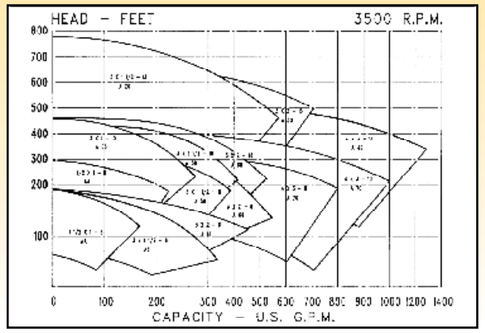
Motors: An electric motor or other driver can be provided.

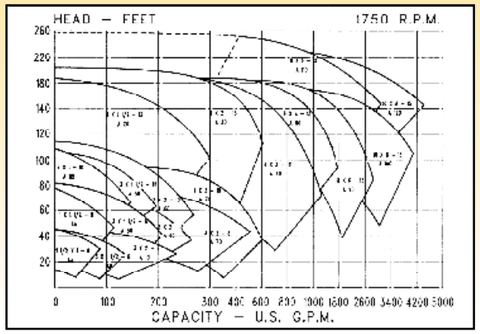
Cooler: A cooling coil can be fitted to oil lubricated bearing housings for operation at elevated temperatures. No cooling is required for liquid temperatures below 350°F (177°C). Note; standard grease lubrication is good to liquid temperatures of at least 250°F (120°C).

OTHER END SUCTION PUMPS

Other Single Stage End Suction Pumps, End Suction design Two Stage Pumps, Non Clog Pumps, and Refuse Pumps are also available.

RANGE CHARTS
ASME B73.1 / ANSI END SUCTION PUMPS
All Models





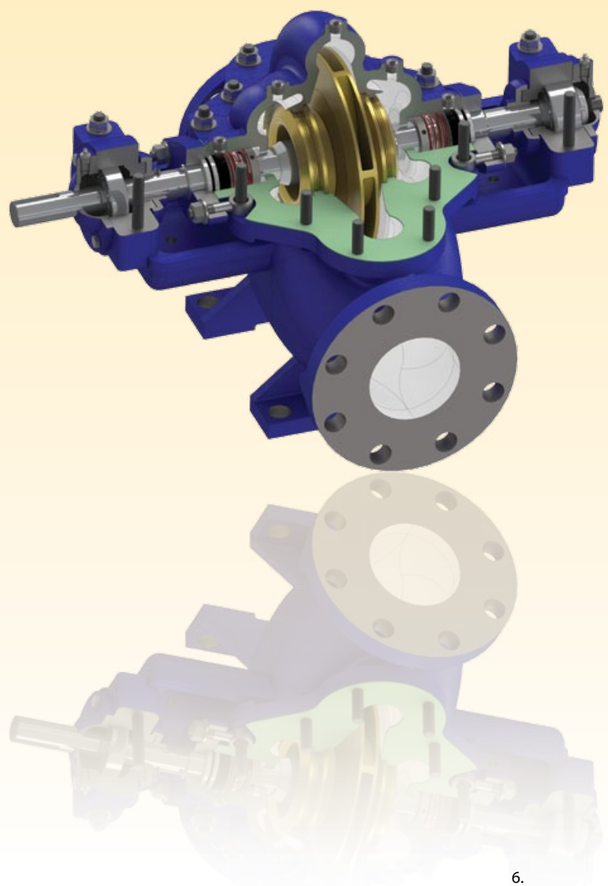
DOUBLE SUCTION PUMPS

This catalogue provides the information you need to select a Double Suction Pump for your service.

Smart Turner Double Suction Pumps are quality built and of rugged design to provide long, continuous, quiet trouble-free operation in a wide variety of municipal, industrial or other heavy duty applications. Designed with efficiency and NPSH in mind, all pumps have labyrinth casing wear rings as standard to guarantee low recirculation losses without compromising the premise of longevity.

Smart Turner Double Suction Pumps are produced in a wide range of sizes, comprising 14 single stage models and 2 two stage models. As many as five models share each of the shaft standards to ensure a high level of interchangeability and effective parts inventory.

Depending on the application and rating, sizes are available to 14 x 12 x 16, capacities to 8000 USGPM, heads to 750 ft., and speeds to 3600 Rpm.



SMART TURNER PUMPS
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CONSTRUCTION MATERIALS

- All Iron
- Cast Iron, Bronze Fitted
- Other castable, machineable alloys can be considered.

DESIGN AND CONSTRUCTION FEATURES:

Casing: Axially split, rugged castings with 125 psi ANSI flat faced flanged connections on the lower casing. Precision machining ensures alignment of the shaft assembly through the bearing housings and stuffing boxes. Tongue and groove machining locates the wear rings. Easy removal of the upper casing permits inspection and/or removal of the rotating element without disturbing the connecting piping.

Impeller: An enclosed, fully shrouded, one piece casting, the impeller is trimmed to meet the exact diameter requirements and is factory balanced. Impeller clearance is factory set and needs no further adjustment. The impeller is keyed to the shaft and secured axially by threaded sleeve nuts.

Casing Wear Rings: A full labyrinth design is standard to ensure minimal recirculation from the discharge to the suction side of the impeller. Tongues and grooves locate the wear rings in the casing.

Shaft: Machined and ground from high grade alloy, the shaft is designed for maximum strength and rigidity, and minimum deflection. The shaft is threaded for right and left sleeve nuts.

Sleeve Nuts: Right and left hand threaded combination shaft sleeve/impeller nuts protect the shaft from wear and corrosion for packed stuffing boxes. Sleeve nuts are self tightening and eliminate the need for external nuts, keys and sealing devices. Where mechanical seals are furnished, right and left hand impeller nuts only are used and the seal mounts direct on a stainless steel shaft.

Bearings: Grease lubricated ball or roller bearings are selected for long life and continuous service under full load conditions.

Two stage pumps have an intermediate bearing consisting of a bearing shell and distance sleeve which separates the impellers. This bearing also serves as a restriction bushing for leakage between the stages, and is lubricated by the liquid being pumped.

Bearing Housings: Bearing brackets with integral drip reservoirs for stuffing box leakage, house and protect the bearings. Replaceable cartridge housings are standard on 6 and 8 inch pumps and are located in the bearing brackets with tongues and grooves.

Stuffing Boxes: Designed for easy access and to accommodate a wide range of packing, the stuffing boxes are packed as standard and have neck rings and lantern rings with flush lines from the casing. Lantern rings are not required nor fitted for services where good suction pressure is present. Lantern rings for connection of external flush lines are available for fluids containing abrasives.

Single mechanical seals are available.

Glands: Solid, one piece glands are standard for packed stuffing boxes and mechanical seals. The glands can be provided in a variety of arrangements to suit the application.

Interchangeability: Pumps on the same frame have fully interchangeable shafts, sleeves, bearings, packing, seals, glands and hardware resulting in an efficient parts inventory at both the factory and customer.

Tests: All pumps are hydrostatically tested to 50 psi above the maximum casing design pressure.

OPTIONAL EQUIPMENT:

Base: A rigid channel or fabricated base can be provided to our standard for electric motor drives. Special bases can be provided and can incorporate grout holes, drip rims and other features.

Guard: A coupling guard to our standard can be mounted on the baseplate.

Flexible Couplings: For normal duty, our own pin and rubber type coupling is standard to 150 HP at 3600 Rpm, 75 HP at 1800 Rpm or motor frame 405T. However, couplings of almost any style or manufacture can be accommodated.

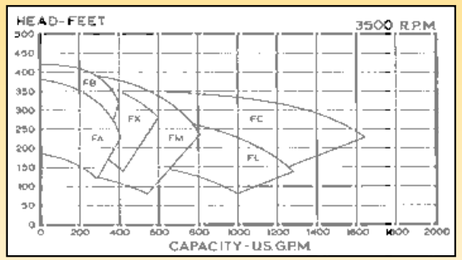
Motors: An electric motor or other driver can be provided.

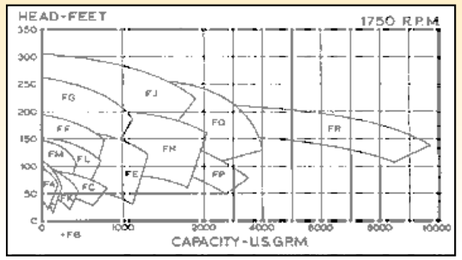
SPECIAL FEATURES:

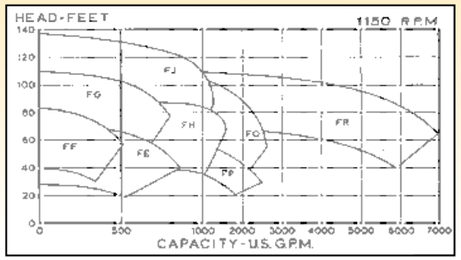
Vertical Units: All single stage Double Suction Pumps can be provided in a vertical mounting frame designed to fully support and protect the pump and to support and align a "C" flange mounted electric motor. Vertical mounting is useful where floor space is restricted.

RANGE CHARTS
DOUBLE SUCTION PUMPS

All Models Except 2 Stage







MULTI-STAGE PUMPS

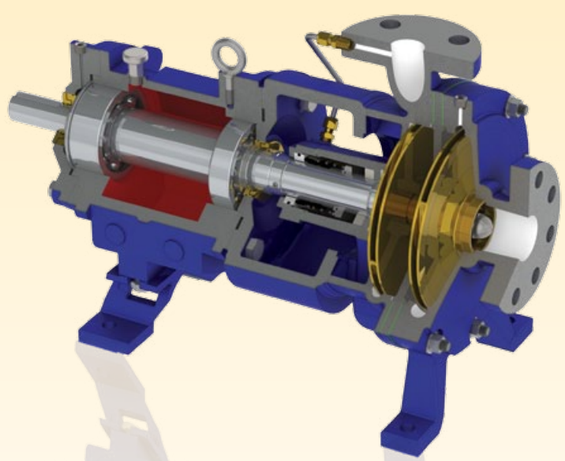
This catalogue provides the information you need to select a Smart Turner Multi-Stage Pump to fit your specific needs. Smart Turner Multi-Stage pumps are of a well proven, uncomplicated, Heavy-Duty design which provides high head, low NPSH performance in a compact, economical end suction style pump.

Smart Turner Multi-Stage pumps are designed to provide reliable low maintenance operation on a continuous high head, low NPSH service where trouble free performance is essential.

Smart Turner Multi-Stage pumps are ideally suited to a boiler feed or other arduous high performance service.

Smart Turner Multi-Stage pumps are produced in a range of 3 models, utilizing only one bearing housing assembly and thereby allowing maximum efficiency in terms of parts inventory and interchangeability.

Depending on the application and rating and rating, sizes are available to 4x2x10 for capacities to 400 USGPM, heads to 800 feet, speeds to 3600 Rpm.



SMART TURNER PUMPS
ESTABLISHED IN 1871

CONSTRUCTION MATERIALS

- Cast Iron*
- Cast Iron, Bronze Fitted
- Cast Iron, 316 Stainless Fitted*
- Any other Alloy can be considered.

*stock castings

DESIGN AND CONSTRUCTION FEATURES:

Casting: A radially split first stage volute with integral suction cover and 250 psi ANSI flat faced flanged suction connection. Foot mounting of the casting allows removal of the rotating assembly without disturbing the suction piping.

Impellers: The fully enclosed end suction impellers are both one piece castings, fully machined, trimmed to the exact diameter required for the application and factory balanced. The impellers are mounted back-to-back, keyed to the shaft, and are secured by a locknut and washer.

Stuffing Box Cover: A heavy one piece casting with an integral second stage volute and 250/800 psi ANSI flat faced flanged discharge connection. The deep stuffing box will accept a range of Packing or mechanical seals. The discharge connection is in the top centerline configuration.

InterStage Diaphragm: A solid casting precisely machined and fitted between the first and second stages. The diaphragm to casing and diaphragm to stuffing box seals are fully contained "O" Rings, except on the Model 1-1/2TC, which has Gasketed interfaces.

Gland: A split gland for packing, or solid for a mechanical seal, can be provided in a quench design if required.

Shaft: The precision machined high quality alloy shaft is normally fitted with a renewable sleeve, and is sized to minimize deflection to ensure smooth operation and maximum packing or seal life.

Shaft Sleeve: An easily removable stainless steel sleeve is standard. The sleeve is sealed against the shaft by "O" Rings and is secured by double locking screws. Hardened Sleeves available on request.

Bearing: Standard grease lubricated ball bearings are rated for 2 years minimum service at full load and speed. Oil lubrication, with or without cooling, is available.

Bearing Housing: A rigid casting precision machined to ensure accurate bore and rotating element alignment.

Adaptor: A rigid casting with an integral gland drip reservoir, precision machined to connect the bearing housing to the liquid end of the pump.

Hydraulic Balance: Back-to-back impellers ensure full axial balance while 180 degree opposed cutwaters provide effective radial balance.

Temperature: Standard packing or mechanical seal, and grease lubricated bearings are satisfactory to 250 degrees Fahrenheit on water, depending on additives and operating conditions. Optional seals or packing, quench glands and oil lubrication with or without cooling, are available for higher temperatures.

Interchangeability: All pumps utilize a common bearing housing and have interchangeable bearings, Packing, seals, glands, and hardware, resulting in efficient parts inventory at the factory for the customer.

Tests: All pumps are hydrostatically tested to 100 psi above the maximum design pressure.

OPTIONAL EQUIPMENT:

Base: A rigid channel or fabricated base can be provided to our standard for electric motor drives. Special bases can be provided and can incorporate grout holes, drip rims, and other features.

Guard: A coupling guard to our standard can be mounted on the baseplate. Special guards can be accommodated.

Flexible Coupling: For normal duty, our current standard is provided when a coupling is ordered. However, couplings of almost any style or manufacture can be accommodated.

Motors: An electric motor or other driver can be provided.

SPECIAL FEATURES:

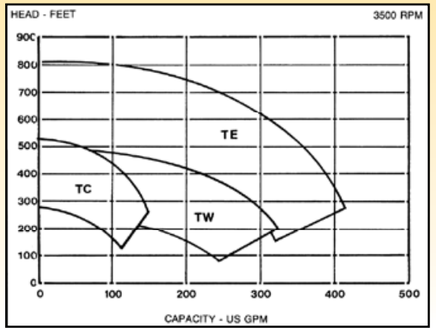
Wear Rings: Casings and impellers can be provided with wear rings. However, there are not recommended except for special applications or circumstances.

OTHER MULTI STAGE PUMPS:

Smart Turner horizontally split case Multi-Stage pumps are available in the standard Double Suction Catalogue C-90.

RANGE CHARTS
MULTI-STAGE PUMPS

All Models



END SUCTION PUMPS

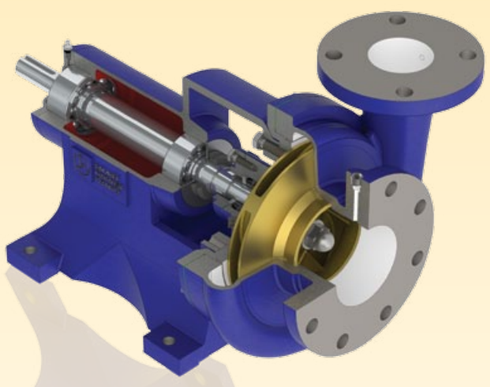
This catalogue provides the information you need to select an End Suction Pump to fit your specific needs. Smart Turner End Suction Pumps are available as enclosed or open impeller models in a proven, uncomplicated, heavy duty design which lends itself to the inclusion of special features, including back pull-out with a spacer coupling.

Enclosed Impeller: Smart Turner Enclosed Impeller Pumps are ideally suited to plant service requirements where continuous, high efficiency, trouble free operation is required.

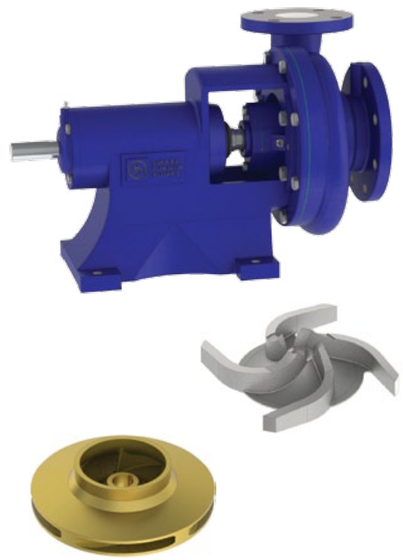
Open Impeller: Smart Turner Open Impeller Pumps are quality built for rugged duty, particularly where the fluid is corrosive, abrasive, or dirty, or where continuous, low down-time operation is essential.

Smart Turner End Suction Pumps are produced in a range of 37 models with only four power frame sizes. A highly efficient parts inventory is made possible through extensive interchangeability of parts for pumps sharing the same frame size.

Depending on the application and rating, sizes are available to 10 x 8 x 16, capacities to 4000 USGPM, heads to 400 ft., and speeds to 3600 Rpm.



SMART TURNER PUMPS
ESTABLISHED IN 1871



DESIGN AND CONSTRUCTION FEATURES:

Casting: A radially split first stage volute with integral suction cover and 125/250 psi ANSI flat faced flanged connections, ruggedly designed with generous allowance for abrasion and corrosion. The casing is precisely machined to ensure minimum and consistent clearance between it and the impeller.

Impeller: Cast in one piece, the impeller is trimmed to the exact diameter required and is factory balanced. The heavy section of the impeller provides excellent wear and corrosion allowance. The clearance between the impeller and casing is factory set to ensure optimum performance and no field adjustment is required. The impeller is keyed to the shaft and secured by a locknut. Both impeller designs result in axial hydraulic balance and low stuffing box pressure – the enclosed impeller by means of balancing holes through the eye – the open impeller inherently, or with pump out vanes when necessary.

Stuffing Box Cover: A heavy one piece casting with rabbeted flange for positive alignment. The deep bore will accept a wide range of packings or mechanical seals.

Gland: Split for packed stuffing boxes and solid for mechanical seals, the gland can be provided in a variety of arrangements to suit the application.

Shaft: Precision machined high quality alloy shaft is normally fitted with a renewable sleeve, and is sized to minimize deflection to ensure smooth operation and maximum packing for seal life.

CONSTRUCTION MATERIALS

Open Impeller

- All Iron*
- All Stainless
- Steel*
- Titanium**
- Alloy 20**
- Monel
- Ni Resist
- CD4MCuN

Enclosed Impeller

- All Iron*
- Cast Iron, Bronze Fitted*
- Any other castable machinable alloy can be considered.

*Stock castings in most common sizes

**Stock castings in some sizes

Bearing: Standard grease lubricated ball bearings are rated for 2 years minimum service at full load and speed. Oil lubrication, with or without cooling, is available.

Power Frame: A one piece casting which is precision machined to assure accurate bore and rotating element alignment. It has integral feet for maximum rigidity and an integral gland drip reservoir.

Interchangeability: All pumps utilize a common bearing housing and have interchangeable bearings, packings, seals, glands and hardware, resulting in efficient parts inventory at the factory for the customer.

Tests: All pumps are hydrostatically tested to 100 psi above the maximum design pressure.

OPTIONAL EQUIPMENT:

Base: A rigid channel or fabricated base can be provided to our standard for electric motor drives. Special bases can be provided and can incorporate grout holes, drip rims and other features.

Guard: A coupling guard to our standard can be mounted on the base-plate. Special guards can be accommodated.

Flexible Coupling: For normal duty, our current standard is provided when a coupling is ordered. However, couplings of almost any style or manufacture can be accommodated.

Motors: An electric motor or other driver can be provided.

SPECIAL FEATURES:

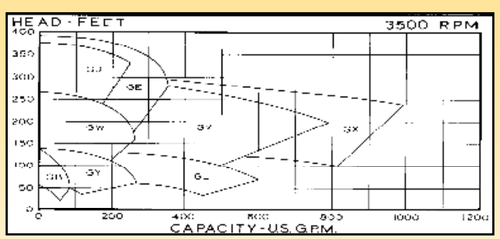
Wear Rings: Casings and impellers can be provided with wear rings. However, these are not recommended except for special applications or circumstances.

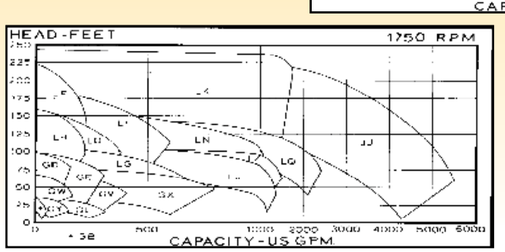
Close Coupled: All models except the largest sizes can be provided as close coupled, motor mounted units.

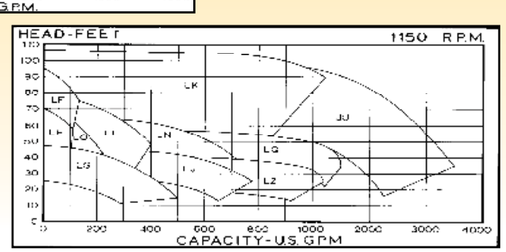
OTHER END SUCTION PUMPS

End Suction design Two Stage Pumps, Non Clog Pumps, and Refuse Pumps are also available.

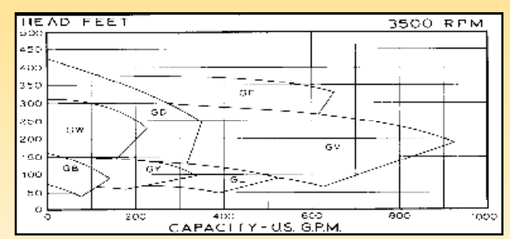
RANGE CHARTS
END SUCTION PUMPS
Enclosed Impeller

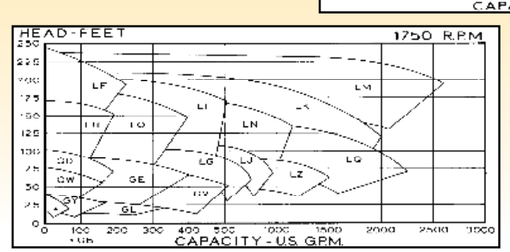


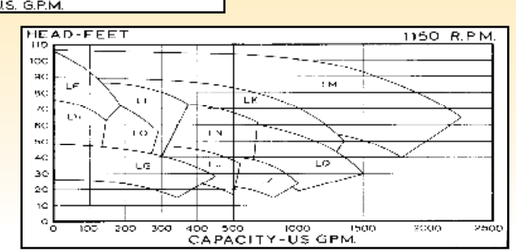




RANGE CHARTS
END SUCTION PUMPS
Open Impeller







NON CLOG PUMPS

This catalogue provides the information you need to select a dry pit Non Clog Pump for your service.

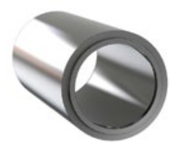
The Smart Turner Non Clog Pump is designed to handle liquids such as sewage, sludge, pulp, stock, or food stuffs containing up to 3 inch or larger diameter solids. High efficiency and hydraulic stability allow application of each model with the appropriate bearing housing to ensure smooth, trouble free operation with the minimum of maintenance.

The centerline discharge feature makes old side discharge designs, with their need for left and right rotation arrangements, redundant. In the horizontal arrangement, the centerline discharge and full casing mount allow true back pullout with use of a spacer coupling.

Smart Turner Non Clog Pumps are produced in a range of 7 models, all of which are available in vertical frame mount drive, vertical flexible shaft drive or horizontal arrangements.

Depending on application, sizes are available to 12 x 10 x 19 for capacities to 6000 USGPM, heads to 250 ft, and speeds to 1800 Rpm.

SMART TURNER PUMPS
ESTABLISHED IN 1871



CONSTRUCTION MATERIALS

- Cast Iron

*Any other Alloy can be considered

DESIGN AND CONSTRUCTION FEATURES:

Casing: A radially split, cast volute with separate suction cover, and 125/150 psi ANSI flat faced flanged connections, ruggedly designed with generous allowance for abrasion and corrosion.

Impeller: A one piece casting, the fully shrouded, enclosed impeller will handle solids of 3 inch diameter, or larger for some models. The impeller is machined, balanced and trimmed to meet the exact performance requirements, and the clearance between it and the suction cover is factory set. The impeller is keyed to the shaft and secured by a flow contoured washer and cap screw.

Wear Rings: Either or both, impeller and suction cover can be fitted with renewable, axial clearance wear rings.

Stuffing Box Cover: A heavy one piece casting with rabbeted flange for positive alignment. The deep bore will accept packing with a lantern ring, and single or double mechanical seals.

Gland: Split for packed stuffing boxes and solid for mechanical seals, the gland is provided in a variety of arrangements to suit the application.

Shaft: Precision machined high quality alloy, normally fitted with a renewable sleeve, the shaft is sized to minimize deflection to ensure smooth operation and maximum packing for seal life.

Bearings: The grease lubricated, antifriction bearings are generously sized for long life, and are protected from moisture and dirt by seals in both bearing covers.

Bearing Housing: The rigid cast iron bearing housing is located above the spigot fitted to the stuffing box cover. The bearing housing accepts a "C" flange motor for direct drive through a flexible coupling.

Suction Elbow: The pump suction is fitted with 125/150 psi ANSI flat faced flanged cast elbow.

Hand Holes: Suction elbow and casing are both provided with inspection or cleanout hand holes with fully flow contoured, bolted and gasketed covers.

Pump Stool: The entire pump is mounted on a substantial cast, four-legged stool capable of supporting the full weight and torque of the pump and motor.

Discharge: Centerline discharge nozzle means only one rotation is required. The discharge can be located at any one of eight positions.

Tests: All pumps are hydrostatically tested to 50 psi above the maximum casing design pressure.

OPTIONAL EQUIPMENT:

Motor: A "C" flange electric motor can be provided.

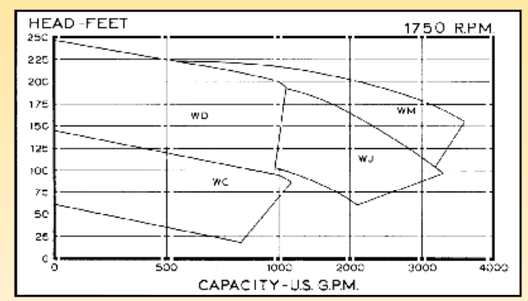
Flexible Coupling: For normal duty our current standard is provided when a coupling is ordered. However, couplings of almost any style or manufacture can be accommodated.

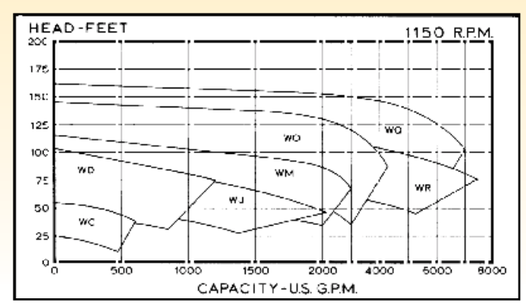
Hose Valve: A bronze hose valve can be provided, fitted to the suction elbow.

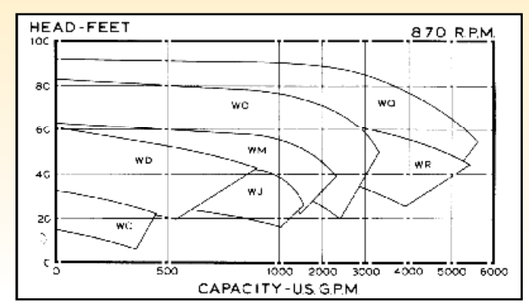
OTHER NON CLOG PUMPS

A full range of open impeller, wet or dry pit Refuse Pumps is available for smaller stations and lower flow requirements. The Refuse Pump handles flows to 600 USGPM and heads to 100 ft.

RANGE CHARTS
NON CLOG PUMPS
All Models







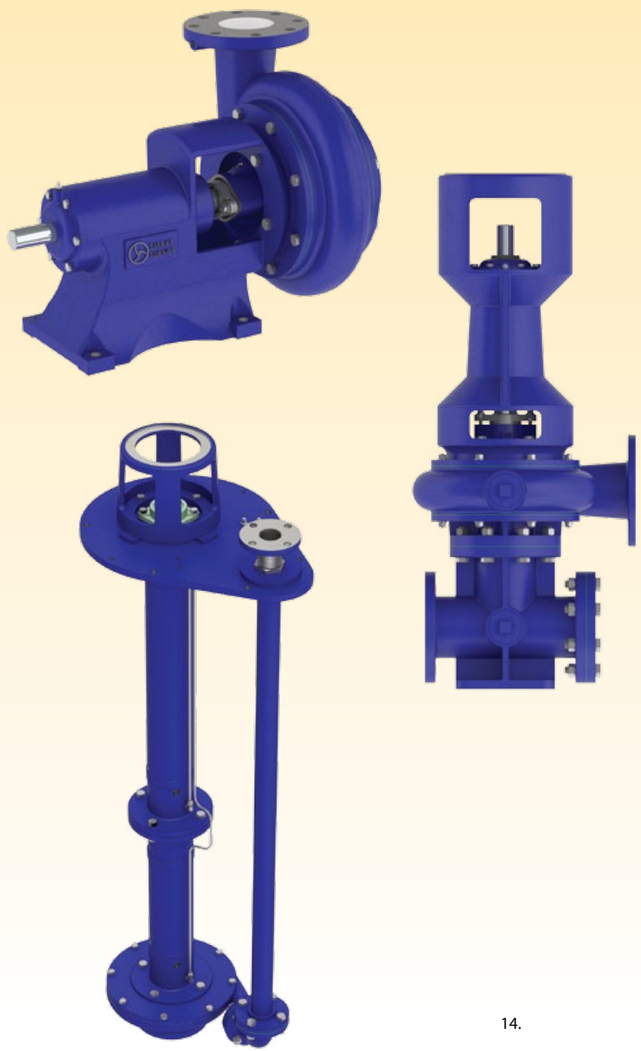
REFUSE PUMPS

This catalogue provides the information you need to select either a wet or dry pit Refuse Pump for your service.

The Smart Turner Refuse Pump is designed to handle solids up to 2-1/2" diameter, with a minimum of maintenance, in a wide variety of applications. Vertical wet pit pumps have bolted columns with a guide bushing in each section to ensure that shaft support is provided at intervals of no more than 3 feet. Dry pit, full ball bearing power frame pumps are available in vertical frame mounted drive, vertical flexible shaft drive, or horizontal arrangements.

Smart Turner Refuse Pumps are produced in a range of 3 models.

Depending on application, sizes are available for capacities to 600 USGPM, heads to 100 feet, and speeds to 1800 Rpm.



SMART TURNER PUMPS
ESTABLISHED IN 1871

CONSTRUCTION MATERIALS

- All Iron*
- All Stainless Steel
- Any other castable, machineable alloy can be considered.

(*Castings stocked for all sizes)

HORIZONTAL SHAFT REFUSE PUMPS
DESIGN AND CONSTRUCTION FEATURES:

Casing: A radially split cast volute with separate suction cover, and 125/150 psi ANSI flat faced flanged connections, ruggedly designed with generous allowance for abrasion and corrosion.

Impeller: Cast in one piece, the open impeller is trimmed to the exact diameter required and is factory balanced. The two-bladed impeller effectively resists clogging and handles up to 2-1/2" solids. The clearance between the impeller and suction cover is factory set to ensure optimum performance and no field adjustment is required. The impeller is keyed to the shaft and secured by a locknut.

Stuffing Box Cover: A heavy one piece casting with rabbeted flange for positive alignment. The deep bore will accept packing, with or without a lantern ring, and single or double mechanical seals.

Gland: Split for packed stuffing boxes and solid for mechanical seals, the gland is provided in a variety of arrangements to suit the application.

Shaft: Precision machined high quality alloy, normally fitted with a renewable sleeve, the shaft is sized to minimize the deflection to ensure smooth operation and maximum packing or seal life.

Bearings: Grease lubricated ball, antifriction bearings, sealed for life where size permits, are rated for 2 years minimum service at full load and speed.

Power Frame: A one piece casting which is precision machined to assure accurate bore and rotating element alignment. It has integral feet for maximum rigidity, and an integral gland drip reservoir.

Tests: All pumps are hydrostatically tested to 50 psi above the maximum casing design pressure.

OPTIONAL EQUIPMENT:

Base: A rigid channel or fabricated base can be provided to our standard for electric motor drives. Special bases can be provided and can incorporate grout holes, drip rims and other features.

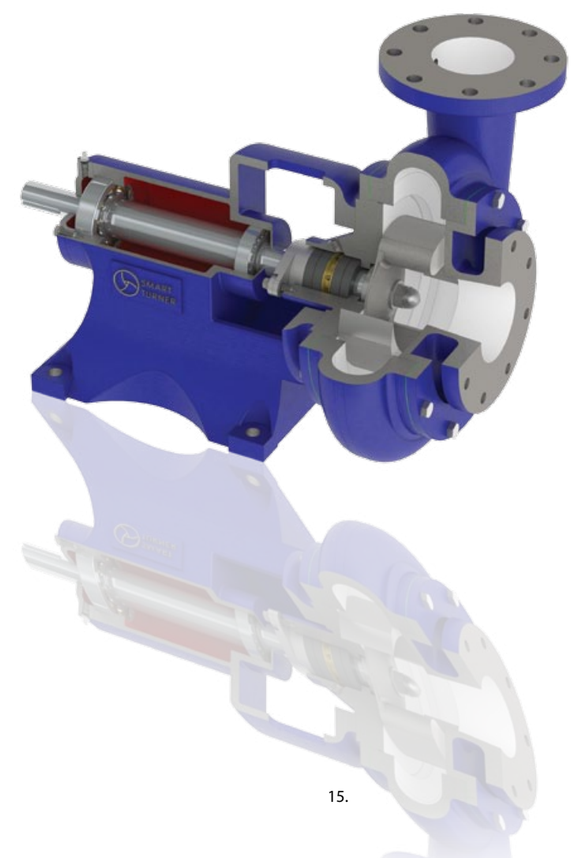
Guard: A coupling guard to our standard can be mounted on the base plate.

Flexible Coupling: For normal duty, our own pin and rubber buffer type coupling is standard to 150 HP at 3600 Rpm, 75 HP at 1800 Rpm or motor frame 405T. However, couplings of almost any style or manufacture can be accommodated.

Motor: An electric motor or other driver can be provided.

OTHER NON CLOG PUMPS

A full range of enclosed impeller dry pit Non Clog Pumps is available to size 12 x 10 x 19. This range handles 3 inch solids and meets flow requirements to 6000 USGPM and heads to 250 feet.



WET PIT REFUSE PUMPS

DESIGN AND CONSTRUCTION FEATURES:

Casing: A radially split, cast volute with separate suction cover (except Model 3HZ) ruggedly designed with generous allowance for abrasion and corrosion.

Impeller: Cast in one piece, the open impeller is trimmed to the exact diameter required and is factory balanced. The two-bladed impeller effectively resists clogging and handles up to 2-1/2" solids. The clearance between the impeller and the suction cover is factory set to ensure optimum performance and no field adjustment is required. The impeller is keyed to the shaft and secured by a locknut.

Column: Standard columns to 12 ft., and longer when required, are assembled from 3, 2 and 1 ft. long, cast column pipes with integral flanges and spigot fits to ensure rigidity and alignment. Each column pipe is of heavy section to minimize deflection and incorporates large relief holes to ensure no pressure build-up is possible in the column.

Shaft: Ground alloy, generously sized to provide torsional strength for continuous start/stop operation, and supported, at intervals of 3 ft. maximum, by a guide bushing in each column pipe section. The shaft is sealed at the support plate by a lip seal immediately below the thrust bearing.

Thrust Bearing: A heavy duty grease lubricated, self aligning ball bearing in its own cast iron bearing housing, which is spigotted and bolted to the pearplate, supports the shaft axially and allows simple axial shaft and impeller adjustment. Excess grease pressure relief is built in.

Guide Bushings: Standard bushings are cast bronze, fully machined to close tolerances, and have a double helix lubricant path to ensure optimum lubricant penetration. Bushings are long to provide good radial support to the shaft. Chemloy, Cutless, and other bushing types and materials are available. Heavy duty bushings fitted with lip seals are available for abrasive service where external lubrication is not feasible.

Lubrication: Grease lubrication is standard for all solid bushings, and when necessary oil lubrication can be provided. For severe services and special applications, bushings can be provided with external liquid lubrication arrangements. Cutless bushings must be liquid lubricated.

Pearplate: The pump is supported by a heavy section, pear shaped casting, with spigotted fits for column and motor stool, providing rigidity and alignment, and allowing removal of the entire pump, including discharge pipe, without dismantling.

Motor Stool: A rigid cast iron stool, spigotted for a "C" flange motor, is standard.

Interchangeability: The three pumps in this range share columns and pearplates with the 17 models of the standard Vertical Sump Pump range.

Settings: Standard columns provide settings (pearplate to suction) to 12 feet depending on model. Longer settings can be provided either by use of a suction nipple or, depending on model and rating, by a longer column. A split column and shaft is provided for settings over 12 ft.

Materials of Construction: Cast Iron, 304/316 Stainless Steel, or other machineable alloys as required for the service.

OPTIONAL EQUIPMENT:

Coverplate: Coverplates designed to support the complete unit and fabricated to our standard dimensions, or to suit installation requirements, can be provided and can have openings for controls, vents, or manhole as space permits.

Flexible Coupling: For normal duty, our own pin and rubber buffer type coupling is standard to 75 HP at 1800 Rpm and motor frame 365TC. However, couplings of almost any style or manufacture can be accommodated.

Suction Nipple: Enables the pump to be applied to greater depths.

Float Switch: Float Switch(es), Mechanical or Electrical Alternator, Control Panel or High Water Alarm are available on application.

OTHER VERTICAL WET PIT PUMPS

Standard Vertical Sump Pumps, to size 8 x 6 x 13 are also available.

Cantilever design Refuse Pumps are available on application.

DRY PIT REFUSE PUMPS

DESIGN AND CONSTRUCTION FEATURES:

Casing: A radially split, cast volute with separate suction cover, and 125/150 psi ANSI flat faced flanged connections, ruggedly designed with generous allowance for abrasion and corrosion.

Impeller: Cast in one piece, the open impeller is trimmed to the exact diameter required and is factory balanced. The two-bladed impeller effectively resists clogging and handles up to 2-1/2" solids. The clearance between the impeller and suction cover is factory set to ensure optimum performance and no field adjustment is required. The impeller is keyed to the shaft and secured by a locknut.

Stuffing Box Cover: A heavy one piece casting with rabbeted flange for positive alignment. The deep bore will accept packing, with or without a lantern ring, and single or double mechanical seals.

Gland: Split for packed stuffing boxes and solid for mechanical seals, the gland is provided in a variety of arrangements to suit the application.

Shaft: Precision machined high quality alloy, normally fitted with a renewable sleeve, the shaft is sized to minimize the deflection to ensure smooth operation and maximum packing or seal life.

Bearings: Grease lubricated ball, antifriction bearings generously sized for long life.

Bearing Housing: The rigid cast iron bearing housing is located above and spigot fitted to the stuffing box cover.

Suction Tee: The pump is supported by a rigid cast suction tee with integral mounting flange. One branch of the tee forms the suction connection and the other, which is fitted with cover, forms a clean out.

Tests: All pumps are hydrostatically tested to 50 psi above the maximum casing design pressure.

ALTERNATE DRIVE ARRANGEMENTS:

Vertical Frame Mounted Drive: The bearing housing accepts a "C" flange motor for direct drive through a flexible coupling.

Vertical Flexible Shaft Drive: The bearing housing is provided with a bare shaft for connection to flexible shafting driven by a motor above and remote from the pump.

OPTIONAL EQUIPMENT:

Motor: A "C" flange electric motor can be provided.

Flexible Coupling: For normal duty, our pin and rubber buffer type coupling is standard to 75 HP at 180 0Rpm and motor frame 365TC. However, couplings of almost any style or manufacture can be accommodated.

Flexible Drive Shaft: Drive shafting can be provided in combinations and lengths to suit the application.

Motor Stool: A rigid cast iron motor stool ready to accept a "C" flange electric motor can be provided.

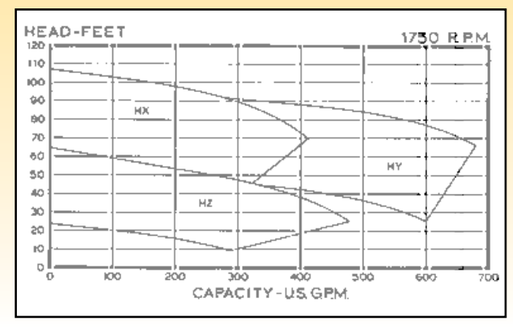
OTHER NON CLOG PUMPS

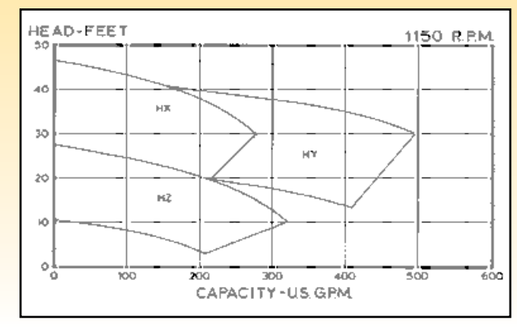
A full range of enclosed impeller dry pit Non Clog Pumps is available to size 12 x 10 x 19. This range handles 3 inch solids and meets flow requirements to 6000 USGPM and heads to 250 feet.

RANGE CHARTS

REFUSE PUMPS

All Models





VERTICAL CANTILEVER PUMPS

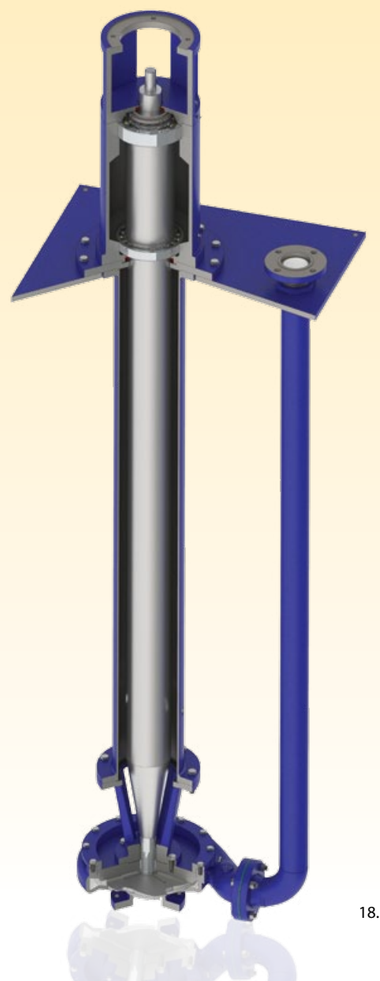
This catalogue provides the information you need to select a Vertical Cantilever Pump for your service.

The Smart Turner Vertical Cantilever Pump is designed to be simple and extremely rugged. It has a minimum of parts, no submerged bearings, no liquid seals or packing to consider, a massive shaft and bearing arrangement, and is ideally suited to vertical applications where continuous service under difficult conditions would normally present maintenance and down time problems.

Smart Turner's Vertical Cantilever design is produced in a range of 35 models on three power frames and geared to today's industrial demands for reliable performance and uninterrupted service.

Depending on the application, rating, and pump setting, sizes are available to 10 x 8 x 16, capacities to 4000 USGPM, heads to 300 ft. and speeds to 3600 Rpm.

Other Smart Turner Pump catalogues and products to meet your remaining pumping needs are outlined on the inside back cover.



SMART TURNER PUMPS
ESTABLISHED IN 1871

CONSTRUCTION MATERIALS

- All Iron*
- All Stainless Steel
- Alloy 20
- CD4MCu
- Any other castable, machinable alloy can be considered.

(*Stock castings in most common sizes)

DESIGN AND CONSTRUCTION FEATURES:

Casing: A radially split, cast volute with integral suction cover and 125/150 psi ANSI flat faced flanged connections, ruggedly designed with generous allowance for abrasion and corrosion. The casing is precisely machined to ensure minimum and consistent clearance between it and the impeller.

Impeller: Cast in one piece, the open impeller is trimmed to the exact diameter required and is factory balanced. The heavy section of the impeller provides excellent wear and corrosion allowance. The clearance between the impeller and the casing is factory set to ensure optimum performance and no field adjustment is required. The impeller is keyed to the shaft and secured by a locknut.

Column: Standard columns to 12 ft., and longer when required, are assembled from 3, 2 and 1 ft long, column pipes with integral flanges and spigot fits to ensure rigidity and alignment. Three column pipe sizes are common to all models. Each column pipe is of heavy section to minimize deflection and incorporates large relief holes to ensure no pressure build up is possible in the column.

Shaft: Ground alloy, generously sized to provide torsional strength for continuous start/stop operation, and supported, at intervals of 3 ft. maximum, by a guide bushing in each column pipe section. The shaft is sealed at the support plate by a lip seal immediately below the thrust bearing.

Thrust Bearing: A heavy duty grease lubricated, self-aligning ball bearing in its own cast iron bearing housing, which is spigotted and bolted to the pearplate, supports the shaft axially and allows simple axial shaft and impeller adjustment. Excess grease pressure relief is built in.

Guide Bushings: Standard bushings are cast bronze, fully machined to close tolerances, and have a double helix lubricant path to ensure optimum lubricant penetration. Bushings are long to provide good radial support to the shaft. Chemloy, Cutless, Carbon, and other bushing materials are available. Heavy duty bushings fitted with lip seals are available for abrasive service where external lubrication s not feasible.

Lubrication: Grease lubrication is standard for all solid bushings, and when necessary, oil lubrication can be provided. For severe services and special applications, bushings can be provided with external liquid or discharge liquid lubrication arrangements. Cutless bushings must be liquid lubricated.

Pearplate: The pump is supported by a heavy section, pear-shaped plate, with spigotted fits for column and motor stool, providing rigidity and alignment, and allowing removal of the entire pump including discharge pipe without dismantling.

Motor Stool: A rigid cast iron stool, spigotted for a 'C' flange motor, is standard.

Interchangeability: 35 pumps on three column and pearplate sizes ensure maximum efficiency and economy.

Settings: Standard columns provide settings (pearplate to suction) to 12 feet depending on model. Longer settings can be provided either by use of a suction nipple or, depending on model and rating, by a longer column. A split column and shaft is provided for settings over 12 ft.

Materials of Construction: Cast Iron, 304/316 Stainless Steel, Alloy 20, or other machineable alloys as required for the service.

OPTIONAL EQUIPMENT

Coverplate: Coverplates designed to support the complete unit and fabricated to our standard dimensions, or to suit installation requirements, can be provided, and can have openings for controls, vents, or manhole as space permits.

Flexible Coupling: For normal duty our current standard is provided when coupling is ordered. However, couplings of almost any style or manufacturer can be accommodated.

Motors: an electric motor with 'C' flange can be provided.

Suction Nipple: Enables the pump to be applied to greater depths.

Suction Strainer: The cast strainer has an integral 125/150 psi ANSI flange to match the suction.

Float Switch: Float Switch(es), Mechanical or Electrical Alternator, Control Panel, or High Water Alarm are available on application.

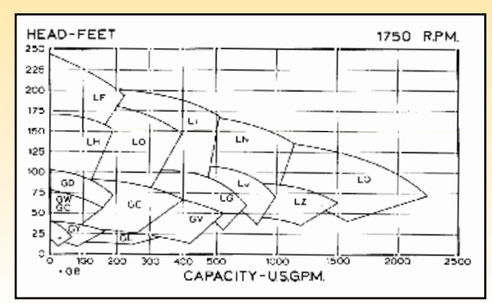
OTHER VERTICAL SUMP PUMPS

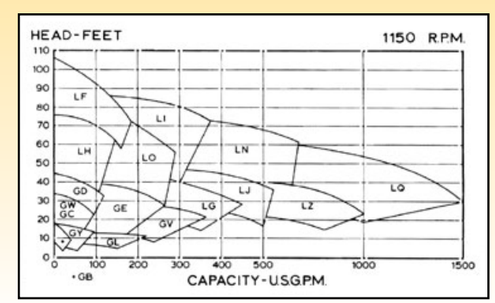
Any of our ANSI pump liquid ends can be provided in Sump Pump configuration (see curves in K-90)

Vertical Sump design Refuse Pumps, capable of handling solids up to 2-1/2" are available. Pumps larger than 8x6x13 can be provided for some applications.

RANGE CHARTS
VERTICAL CANTILEVER PUMPS

All Models





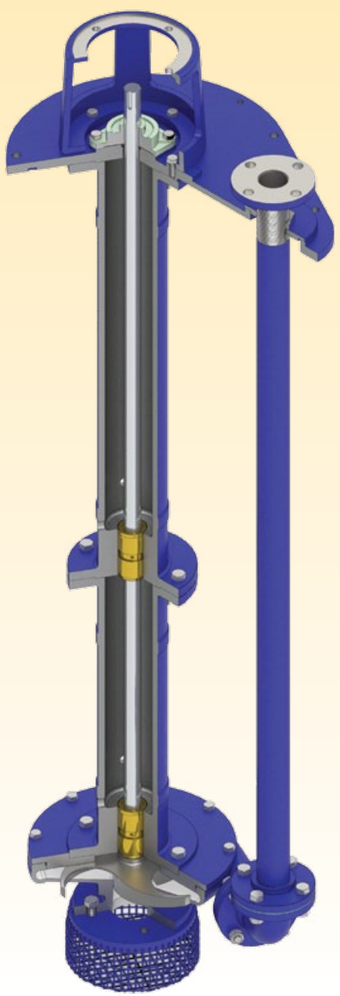
VERTICAL SUMP PUMPS

This catalogue provides the information you need to select a vertical Sump Pump for your service.

The Smart Turner Vertical Sump Pump is designed to provide quiet, efficient, dependable performance with a minimum of maintenance in wide variety of wet pit applications. Designed with ease of maintenance and maximum flexibility in mind, all pumps have bolted columns with guide bushings in each section to ensure that shaft support is provided at intervals of no more than 3 feet.

Smart Turner Vertical Sump Pumps are produced in a range of 35 models, using only three basic shafts, column and support plates.

Depending on the application, rating, and pump setting, standard sizes are available to 10x8x16, capacities to 4000 USGPM, heads to 300 feet, and speeds to 3600 Rpm.



SMART TURNER PUMPS
ESTABLISHED IN 1871

CONSTRUCTION MATERIALS

- Cast Iron
- Steel
- Stainless Steel
- Alloy 20
- Duplex / Super Duplex
- Hastily
- Monel
- Any other Alloy can be considered.

DESIGN AND CONSTRUCTION FEATURES:

Casing: A radially split, cast volute with integral suction cover and 125/150 psi ANSI flat faced flanged connections, ruggedly designed with generous allowance for abrasion and corrosion. The casing is precisely machined to ensure minimum and consistent clearance between it and the impeller.

Impeller: Cast in one piece, the open impeller is trimmed to the exact diameter required and is factory balanced. The heavy section of the impeller provides excellent wear and corrosion allowance. The clearance between the impeller and the casing is factory set to ensure optimum performance and no field adjustment is required. The impeller is keyed to the shaft and secured by a locknut.

Column: Standard columns to 12 ft., and longer when required, are assembled from 3, 2 and 1 ft long, column pipes with integral flanges and spigot fits to ensure rigidity and alignment. Three column pipe sizes are common to all models. Each column pipe is of heavy section to minimize deflection and incorporates large relief holes to ensure no pressure build up is possible in the column.

Shaft: Ground alloy, generously sized to provide torsional strength for continuous start/stop operation, and supported, at intervals of 3 ft. maximum, by a guide bushing in each column pipe section. The shaft is sealed at the support plate by a lip seal immediately below the thrust bearing.

Thrust Bearing: A heavy duty grease lubricated, self-aligning ball bearing in its own cast iron bearing housing, which is spigotted and bolted to the pearplate, supports the shaft axially and allows simple axial shaft and impeller adjustment. Excess grease pressure relief is built in.

Guide Bushings: Standard bushings are cast bronze, fully machined to close tolerances, and have a double helix lubricant path to ensure optimum lubricant penetration. Bushings are long to provide good radial support to the shaft. Chemloy, Cutless, Carbon, and other bushing materials are available. Heavy duty bushings fitted with lip seals are available for abrasive service where external lubrication s not feasible.

Lubrication: Grease lubrication is standard for all solid bushings, and when necessary, oil lubrication can be provided. For severe services and special applications, bushings can be provided with external liquid or discharge liquid lubrication arrangements. Cutless bushings must be liquid lubricated.

Pearplate: The pump is supported by a heavy section, pear-shaped plate, with spigotted fits for column and motor stool, providing rigidity and alignment, and allowing removal of the entire pump including discharge pipe without dismantling.

Motor Stool: A rigid cast iron stool, spigotted for a 'C' flange motor, is standard.

Interchangeability: 35 pumps on three column and pearplate sizes ensure maximum efficiency and economy.

Settings: Standard columns provide settings (pearplate to suction) to 12 feet depending on model. Longer settings can be provided either by use of a suction nipple or, depending on model and rating, by a longer column. A split column and shaft is provided for settings over 12 ft.

Materials of Construction: Cast Iron, 304/316 Stainless Steel, Alloy 20, or other machineable alloys as required for the service.

OPTIONAL EQUIPMENT

Coverplate: Coverplates designed to support the complete unit and fabricated to our standard dimensions, or to suit installation requirements, can be provided, and can have openings for controls, vents, or manhole as space permits.

Flexible Coupling: For normal duty our current standard is provided when coupling is ordered. However, couplings of almost any style or manufacturer can be accommodated.

Motors: an electric motor with 'C' flange can be provided.

Suction Nipple: Enables the pump to be applied to greater depths.

Suction Strainer: The cast strainer has an integral 125/150 psi ANSI flange to match the suction.

Float Switch: Float Switch(es), Mechanical or Electrical Alternator, Control Panel, or High Water Alarm are available on application.

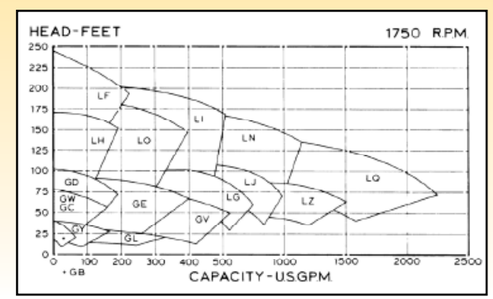
OTHER VERTICAL SUMP PUMPS

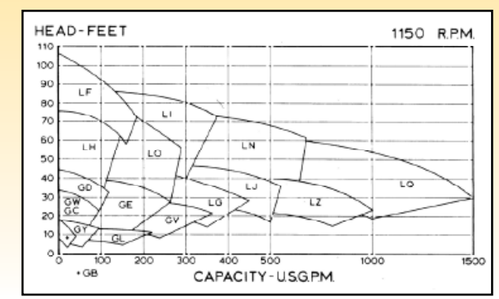
Any of our ANSI pump liquid ends can be provided in Sump Pump configuration (see curves in K-90)

Vertical Sump design Refuse Pumps, capable of handling solids up to 2-1/2" are available. Pumps larger than 8x6x13 can be provided for some applications.

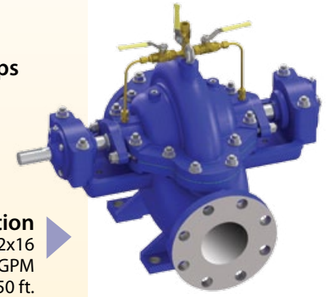
RANGE CHARTS
VERTICAL SUMP PUMPS

All Models





PUMPS



ASME B73.1-2012 Chemical Process Pumps
Size to 10x8x17
Capacity to 6000 USGPM
Head to 800 ft.
Speed to 3600 rpm
Metallurgy Cast Iron,
Alloys, Steel, Exotics

Double Suction
Size to 14x12x16
Capacity to 8000 USGPM
Head to 750 ft.
Speed to 3600 rpm
Metallurgy Cast Iron, Bronze

Multi-stage High Pressure Boiler Feed
Size to 4x2x10
Capacity to 400 USGPM
Head to 800 ft.
Speed to 3600 rpm
Metallurgy Cast Iron, Bronze

End Suction
Size to 10x8x16
Capacity to 4000 USGPM
Head to 400 ft.
Speed to 3600 rpm
Metallurgy Cast Iron,
Alloys, Exotics

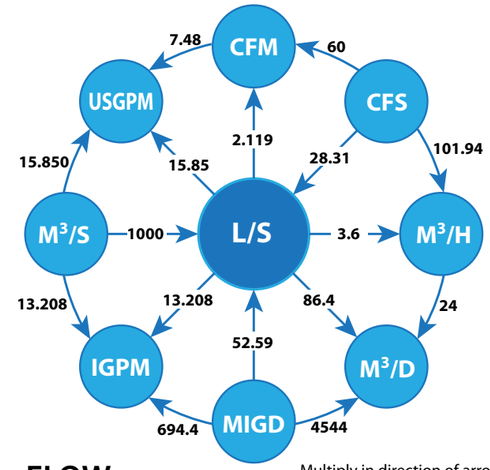
Non-clog Solids Handling, Vertical/Horizontal Dry Pit Solids Handling
Size to 12x10x19
Capacity to 6000 USGPM
Head to 250 ft.
Speed to 1800 rpm
Metallurgy Cast Iron,
Bronze, Alloys

Refuse Wet Pit/Dry Pit Solids Handling
Size to 4x4x10
Capacity to 600 USGPM
Head to 100 ft.
Speed to 1800 rpm
Metallurgy Cast Iron, Alloys

Vertical Cantilever Vertical Process
Size to 10x8x16
Capacity to 4000 USGPM
Head to 300 ft.
Speed to 3600 rpm
Metallurgy Cast Iron,
Alloys, Exotics

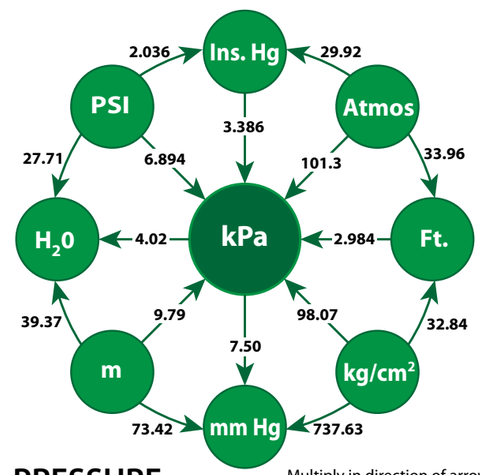
Vertical Sump Wet Pit Service
Size to 10x8x16
Capacity to 4000 USGPM
Head to 300 ft.
Speed to 3600 rpm
Metallurgy Cast Iron,
Alloys, Exotics

CONVERSION CHARTS



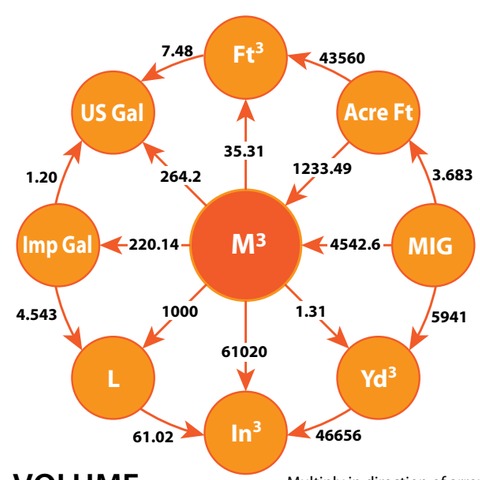
FLOW

Multiply in direction of arrow.
Divide in opposite direction.



PRESSURE

Multiply in direction of arrow.
Divide in opposite direction.



VOLUME

Multiply in direction of arrow.
Divide in opposite direction.

DECIMAL EQUIVALENTS

English	Metric	Decimal	English	Metric	Decimal	English	Metric	Decimal	English	Metric	Decimal
..	.1	.0039	45	..	.0820	5	..	.2055	7/16	..	.4375
	.2	.0079	44	..	.0860	4	..	.2090	29/64	..	.4531
..	.3	.0118	43	..	.0890	3	..	.2130	15/32	..	.4687
80	..	.0135	42	..	.0935	7/32	.	.2187	..	12.	.4724
79	.	.0145	3/32	..	.0937	2	..	.2210	31/64	..	.4844
1/64	..	.0156	41	..	.0960	1	..	2280	1/2	..	.5000
..	.4	.0157	40	..	.0980	A	..	.2340	..	13.	.5118
78	.	.0160	39	..	.0995	15/64	..	.2344	33/64	..	5156
77	.	.0180	38	..	.1015	..	6.	.2362	17/32	..	.5312
.	.5	.0197	37	..	.1040	B	..	.2380	35/64	..	.5469
76	.	.0200	36	..	.1065	C	..	.2420	..	14.	.5512
75	.	.0210	7/64	..	.1094	D	..	.2460	9/16	..	.5625
74	.	.0225	35	..	.1100	1/4	..	.2500	37/64	..	.5781
.	.6	.0236	34	..	.1110	F	..	.2570	..	15.	.5906
73	..	.0240	33	..	.1130	G	..	.2610	19/32	..	.5937
72	..	.0250	32	..	.1160	17/64	..	.2656	39/64	..	.6094
71	..	.0260	..	3.	.1181	H	..	.2660	5/8	..	.6250
..	.7	.0276	31	.	.1200	I	..	.2720	..	16.	.6299
70	..	.0280	1/8	..	.1250	..	7.	.2756	41/64	..	.6406
69	..	.0292	30	..	.1285	J	..	.2770	21/32	..	.6562
68	..	.0310	29	..	.1360	K	..	.2810	..	17.	.6693
1/32	..	.0312	28	..	.1405	9/32	..	.2812	43/64	..	.6719
..	.8	.0315	9/64	..	.1406	L	..	.2900	11/16	..	.6875
67	..	.0320	27	..	.1440	M	..	.2950	45/64	..	.7031
66	..	.0330	26	.	.1470	19/64	..	.2969	..	18.	.7087
65	..	.0350	25	..	.1495	N	..	.3020	23/32	..	.7187
.	.9	.0354	24	..	.1520	5/16	..	.3125	47/64	..	.7344
64	..	.0360	23	..	.1540	..	8.	.3150	..	19.	.7480
63	..	.0370	5/32	.	.1562	O	..	.3160	3/4	..	.7500
62	..	.0380	22	..	.1570	P	..	.3230	49/64	..	.7656
61	..	.0390	..	4.	.1575	21/64	..	.3281	25/32	..	.7812
..	1.	.0394	21	..	.1590	Q	..	.3320	..	20.	.7874
60	..	.0400	20	..	.1610	R	..	.3390	51/64	..	.7969
59	..	.0410	19	..	.1660	11/32	..	.3437	13/16	..	.8125
58	..	.0420	18	.	.1695	S	..	.3480	..	21.	.8268
57	.	.0430	11/64	..	.1719	..	9.	.3543	53/64	..	.8281
56	..	.0465	17	.	.1730	T	..	.3580	27/32	..	.8437
3/64	..	.0469	16	..	.1770	23/64	..	.3594	55/64	..	.8594
55	..	.0520	15	..	.1800	U	..	.3680	..	22.	.8661
54	..	.0550	14	..	.1820	3/8	..	.3750	7/8	..	.8750
53	..	.0595	13	..	.1850	V	...	.3770	57/64	..	.8906
1/16	.	.0625	3/16	..	.1875	W	..	.3860	..	23.	.9055
52	..	.0635	12	..	.1890	25/64	..	.3906	29/32	..	.9062
51	..	.0670	11	..	.1910	..	10.	.3937	59/64	..	.9219
50	..	.0700	10	..	.1935	X	..	.3970	15/16	..	.9375
49	.	.0730	9	..	.1960	Y	.	.4040	..	24.	.9449
48	..	.0760	..	5.	.1968	13/32	..	.4062	61/64	..	.9531
5/64	..	.0781	8	..	.1990	Z	..	.4130	31/32	..	.9687
47	..	.0785	7	..	.2010	27/64	..	.4219	..	25.	.9842
..	2.	.0787	13/64	..	.2031	..	11.	.4331	63/64	..	.9844
46	..	.0810	6	..	.2040				1	25.4	1.000

TAP DRILL CHART

RECOMMEND TAP DRILL TO USE FOR 75% DEPTH OF THREAD

Nom. Size Tap	Use Drill Bit	(Closest)	Decimal	Nom. Size Tap	Use Drill Bit	(Closest)	Decimal	Nom. Size Tap	Use Drill Bit	(Closest)	Decimal
0-80 NF	3/64"	3/64"	.0469	14-20 NS	#10	-	.1935	9/16-12 NC	31/64"	31/64"	.4844
1-64 NC	#53	-	.0595	1/4-20 NC	#7	13/64"	.2010	14mm-1.50mm	12.7mm	-	.4999
1-72 NF	#53	1/16"	.0595	14-24 NS	#7	-	.2010	14mm-1.25mm*	12.8mm	-	.5039
2-56 NC	#50	-	.0700	6mm-1.00mm	5.2mm	-	.2047	9/16-18 NF	33/64"	33/64"	.5156
2-64 NF	#50	-	.0700	1/4-24 NS	#4	-	.2090	5/8-11 NC	17/32"	17/32"	.5312
3-48 NC	#47	5/64"	.0785	1/4-28 NF	#3	7/32"	.2130	16mm-2.00mm	14.2mm	35/64"	.5590
3-56 NF	#45	-	.0820	1/4-32 NEF	7/32"	7/32"	.2188	5/8-18 NF	37/64"	37/64"	.5781
4-36 NS	#44	-	.0860	1/4-40 NS	#1	-	.2280	16mm-1.50mm	14.7mm	-	.5787
4-40 NC	#43	3/32"	.0890	7mm-1.00mm	6.1mm	15/64"	.2401	11/16-11 NS	19/32"	19/32"	.5938
4-48 NF	#42	3/32"	.0935	5/16-18 NC	Ltr.F	17/64"	.2570	18mm-2.50mm	15.8mm	39/64"	.6220
3mm-0.60mm	2.5mm	-	.0984	8mm-1.25mm	6.9mm	17/64"	.2716	11/16-16 NS	5/8"	5/8"	.6250
1/8-40 NS	#38	-	.1015	5/16-24 NF	Ltr.I	-	.2720	3/4-10 NC	21/32"	21/32"	.6562
5-40 NC	#38	-	.1015	8mm-1.00mm	7.1mm	-	.2795	18mm-1.50mm*	16.8mm	-	.6614
5-44 NF	#37	-	.1040	5/16-32 NEF	9/32"	9/32"	.2812	3/4-16 NF	11/16"	11/16"	.6875
6-32 NC	#35	7/64"	.1100	9mm-1.25mm	7.9mm	-	.3110	20mm-2.50mm	17.8mm	11/16"	.7008
6-36 NS	#34	-	.1110	3/8-16 NC	5/16"	5/16"	.3125	7/8-9 NC	49/64"	49/64"	.7656
6-40 NF	#33	-	.1130	9mm-1.00mm	8.1mm	-	.3189	7/8-14 NF	13/16"	13/16"	.8125
6-48 NS	#31	-	.1200	9mm-0.75mm	8.3mm	-	.3268	22mm-1.50mm	20.9mm	-	.8228
4mm-0.70mm	3.4mm	-	.1338	3/8-24 NF	Ltr.Q	21/64"	.3320	7/8-18 NS*	53/64"	53/64"	.8281
4mm-0.75mm	3.4mm	-	.1338	10mm-1.50mm	8.7mm	-	.3425	24mm-3.00mm	21.4mm	53/64"	.8425
8-32 NC	#29	-	.1360	10mm-1.25mm	8.9mm	11/32"	.3503	1.8 NC	7/8"	7/8"	.8750
8-36 NF	#29	9/64"	.1360	10mm-1.00mm	9.1mm	-	.3583	24mm-2.00mm	22.3mm	-	.8779
8-40 NS	#28	-	.1405	7/16-14 NC	Ltr.U	23/64"	.3680	1.12 NF	59/64"	59/64"	.9219
3/16-24 NS	#26	-	.1470	11mm-1.50mm	9.7mm	-	.3818	1-14 NS	15/16"	15/16"	.9375
10-24 NC	#25	5/32"	.1495	7/16-20 NF	25/64"	25/64"	.3906	1 1/8-7 NC	63/64"	63/64"	.9844
3/16-32 NS	#22	-	.1570	12mm-1.75mm	10.5mm	-	.4133	1 1/8-12 NF	1 3/64"	1 3/64"	1.0469
10-32 NF	#21	5/32"	.1590	12mm-1.50mm	10.7mm	27/64"	.4212	1 1/4-7 NC	1 7/64"	1 7/64"	1.1094
5mm-0.90mm	4.2mm	-	.1653	1/2-13 NC	27/64"	27/64"	.4219	1 1/4-12 NF	1 11/64"	1 11/64"	1.1719
5mm-0.80mm	4.3mm	-	.1693	12mm-1.25mm*	10.9mm	27/64"	.4291	1 3/8-6 NC	1 7/32"	1 7/32"	1.2188
12-24 NC	#16	11/64"	.1770	1/2-20 NF	29/64"	29/64"	.4531	1 3/8-12 NF	1 19/64"	1 19/64"	1.2969
12-28 NF	#14	3/16"	.1820	1/2-24 NS	29/64"	29/64"	.4531	1 1/2-6 NC	1 11/32"	1 11/32"	1.3438
12-32 NEF	#13	-	.1850	14mm-2.00mm	12.2mm	-	.4803	1 1/2"-12 NF	1 27/64"	1 27/64"	1.4219

SMART TURNER PUMPS
ESTABLISHED IN 1871

Smart Turner Pumps Inc.
392 Hardy Road, P.O. Box 28066,
Brantford, Ontario, N3R7X5, Canada

TEL: 1-888-561-PUMP (7867)
FAX: (519) 757-1747
EMAIL: contact@smartturner.ca
Website: **www.smartturner.ca**

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HEAD OFFICE AND MAIN SALES OFFICE:
Smart Turner Pumps Inc.
392 Hardy Road, P.O. Box 28066,
Brantford, Ontario, N3R7X5, Canada
TEL: (519) 757-1746 FAX: (519) 757-1747
Website: **www.smartturner.ca**

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