

**T**SERIES™

# solids handling industrial pumps

**GR**  
GORMAN-RUPP

HAND VALVE  
HV-21-2

WARNING  
BEFORE OPERATING THIS PUMP OR MOTOR  
SEE PAGE 10

- 1. ALWAYS WEAR SAFETY GLASSES
- 2. ALWAYS LOCK AND TAG THE PUMP OR MOTOR
- 3. NEVER OPERATE THE PUMP OR MOTOR WITH THE GUARD REMOVED
- 4. NEVER OPERATE THE PUMP OR MOTOR WITH THE GUARD REMOVED
- 5. NEVER OPERATE THE PUMP OR MOTOR WITH THE GUARD REMOVED
- 6. NEVER OPERATE THE PUMP OR MOTOR WITH THE GUARD REMOVED
- 7. NEVER OPERATE THE PUMP OR MOTOR WITH THE GUARD REMOVED
- 8. NEVER OPERATE THE PUMP OR MOTOR WITH THE GUARD REMOVED

6712/13  
17400



# Self-priming centrifuga

Gorman-Rupp T Series pumps are designed for economical, trouble-free operation in handling solids-laden liquids, mild corrosives, and slurries.

T Series pumps are available in five basic discharge sizes: 3", 4", 6", 8", 10". They are capable of pumping up to 3200 gpm, with heads to 130'. Pumps are available as basic units or can be flex coupled or V-belt driven.

**Clogging is kept to a minimum.** T Series pumps will handle spherical solids up to 3 inches in diameter depending on pump model. Gorman-Rupp recognizes when solids are present in industrial waste any pump will occasionally clog. Unclogging is quick and simple with T Series Pumps. Removable coverplate permits easy access to impeller, wearplate and seal. The clog is removed and pump returned to normal operation in minutes without disturbing suction or discharge piping.

**Priming is done automatically.** After initial priming T Series Pumps are designed to reprime automatically in a completely open system, without need of discharge or suction check valves. And they can do it with the pump casing only partially filled with liquid and with a com-

pletely dry suction line. T Series ability to handle air overcomes priming and vapor handling problems common in conventional centrifugal pumps.

**Only the suction line enters the liquid.** Because T Series pumps are self-priming they can be mounted high and dry above the sump at floor level, with only the suction pipe down in the liquid. No need to pull the pump for service or repair.

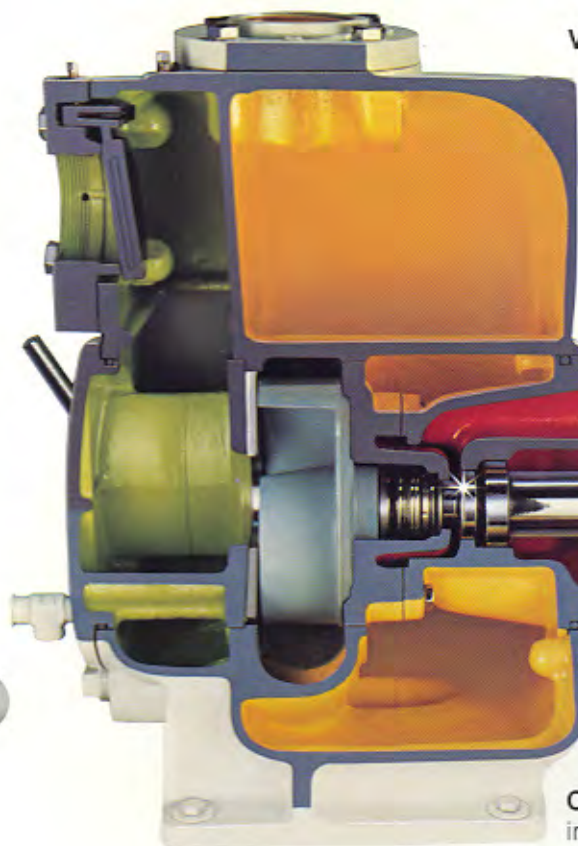
**Stainless steel fitted for corrosive applications.** For mild corrosive handling applications T Series pumps are stainless steel fitted. Impeller, wearplate and seal plate are made of 316 stainless steel. Shaft is 17-4 PH stainless steel. For corrosive/abrasive service the impeller, wearplate and seal plate are available in CD4MCu alloy. Shaft is 17-4 PH stainless steel.

**T Series pumps handle a variety of industrial applications.** The superior solids handling capabilities of the T Series pumps make them ideally suited for a variety of industrial applications including: canneries, tanneries, chemical processing, meat packing, wineries, breweries, pulp, wood chips, process water, sludge and slime, white water and others.



# pumps for solids and mild corrosive liquids.

Quality construction for dependable economical performance



**Volute Casing** Designed to provide large volume of liquid retention for dependable priming and re-priming performance. No external or internal priming devices. Hydrostatic test pressure - 150 lbs.

**Discharge** Standard is NPT. Spool type flange optional. Gray iron 30, 125 lbs. rated. (Flange is standard on T10 models.)

**Suction** Standard is NPT. Spool type flange optional. Gray iron 30, 125 lbs. rated. (Flange is standard on T8 and T10 models.)

**Check Valve** One piece molded. Specially designed. Remove or install through coverplate opening without disturbing suction piping.

**Coverplate** Easily removable. Gray iron 30.

**Shaft** Standard is 4140 steel alloy. Model T10A60-B and all stainless steel fitted pumps are 17-4 precipitation hardened stainless steel.

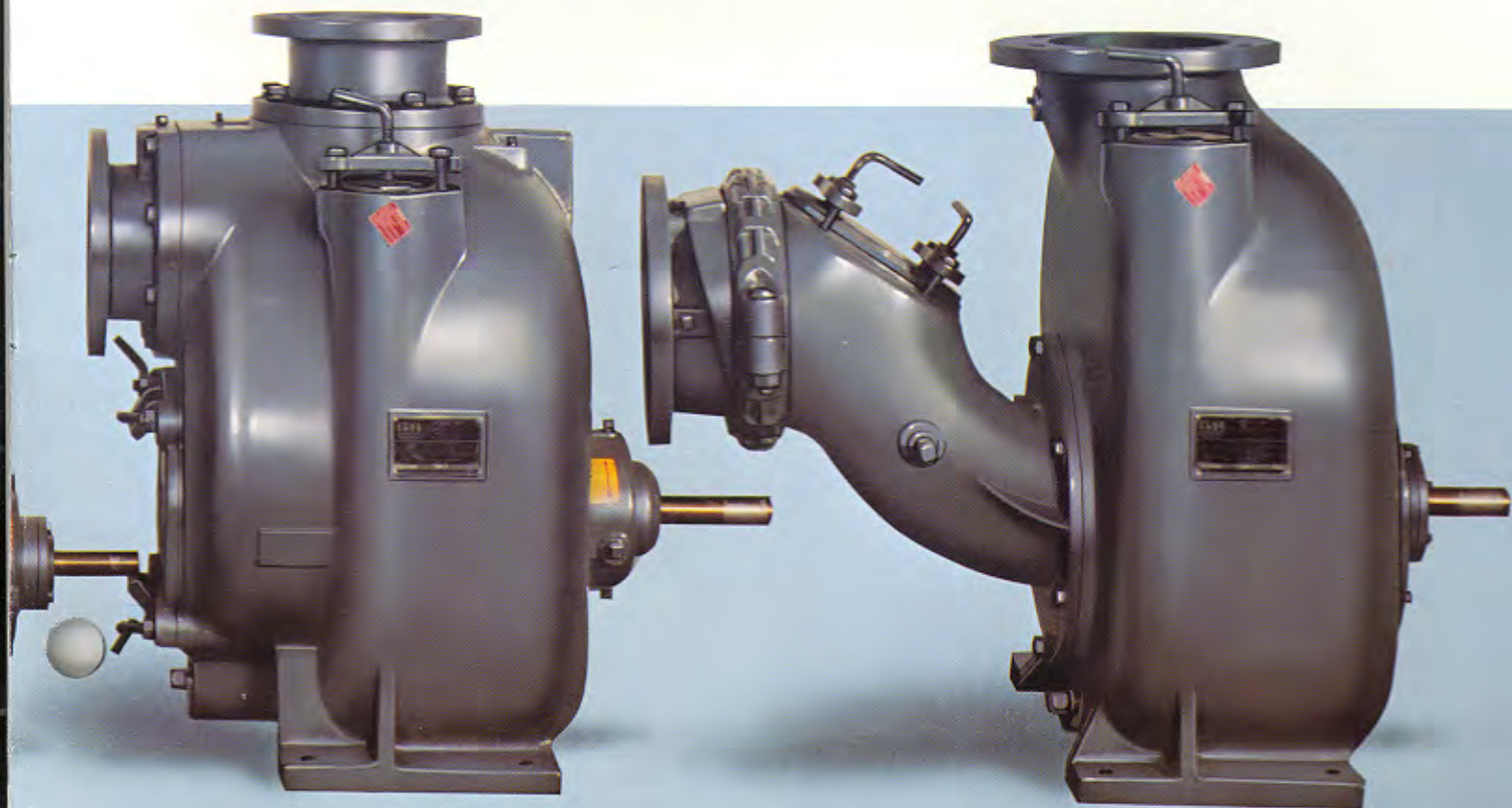
**Bearing Housing** Supported by volute housing. Eliminates alignment problems. No pedestal.

**Bearings** Heavy-duty ball bearings, cooled by pumped liquid, in sizes to withstand thrust and radial stresses. Oil bath lubrication system.

**Impeller** Two vane, semi-open, non clog type, or multi-vane depending on head requirements. (See p. 5)

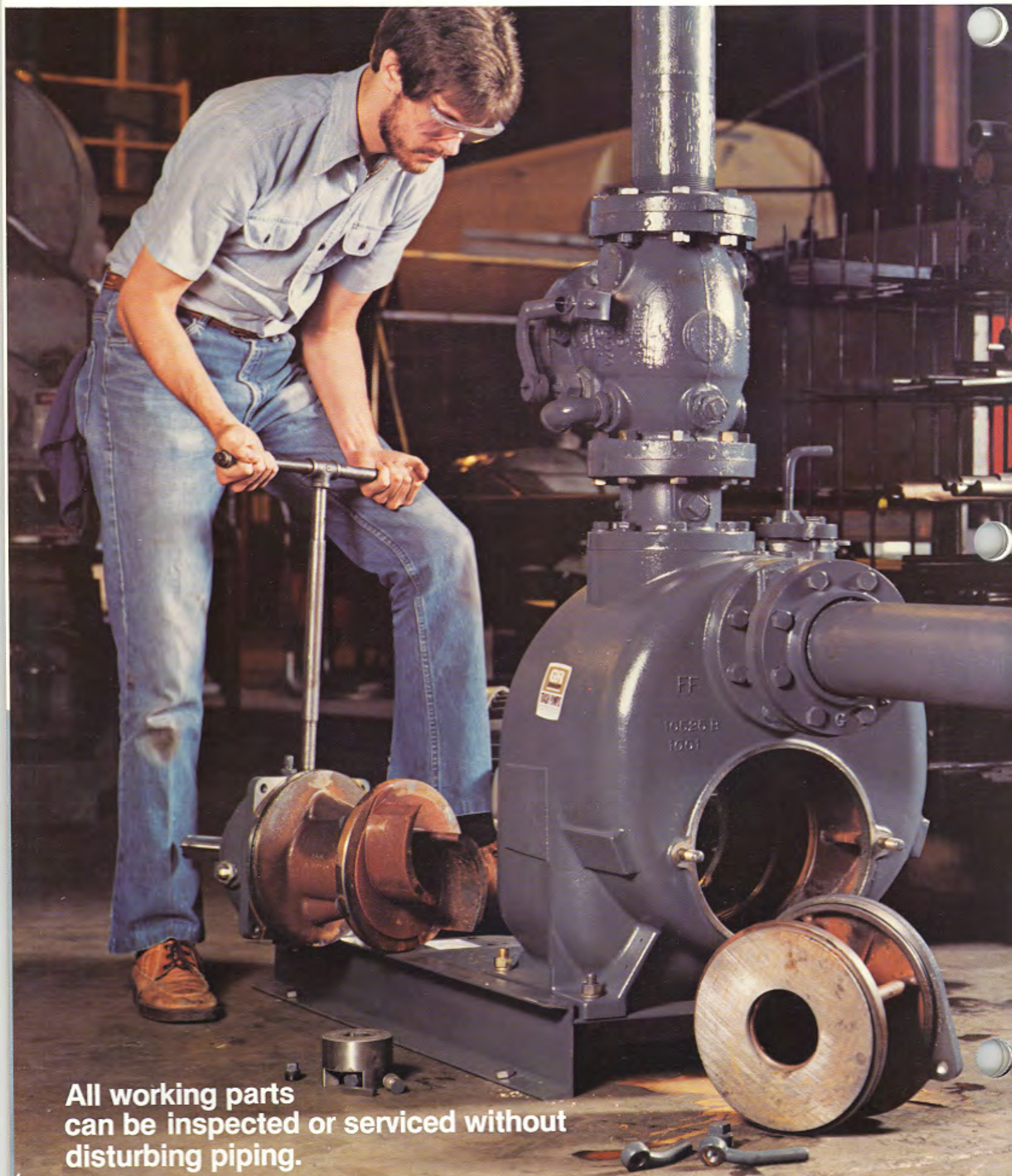
**Wearplate** Replaceable. Standard is steel. Model T8A60-B is Gray iron 30. All stainless steel fitted are 316 stainless steel.

**Seal** Exclusive double floating self-aligning oil lubricated mechanical type with silicon carbide rotating face, tungsten titanium carbide stationary face. (See p. 5)



**T**SERIES™

# Pumps are engineered



All working parts  
can be inspected or serviced without  
disturbing piping.

# to minimize downtime.

**ANY PUMP CAN CLOG.** Gorman-Rupp realizes that a clogged pump can seriously delay profitable production. That's why the T Series pumps are designed to be the easiest ever to unclog and get back into production.

The T Series self-priming design allows the pumps to operate high and dry at floor level with only the suction line in the liquid being pumped. No overhead cranes or hoists are required to "pull the pump."

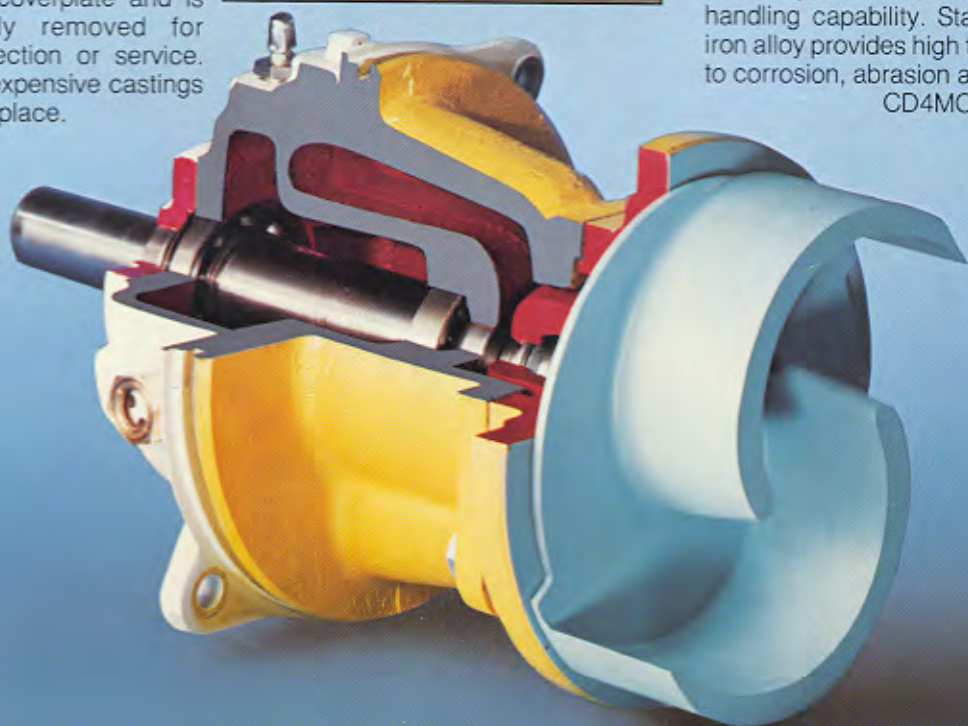
If a clog does occur, the removable coverplate provides quick and easy access to the pump interior without disturbing piping. The clog is removed and pump returned to service in minutes.

The impeller, replaceable wearplate and seal can also be easily accessed through the coverplate for inspection or service. And no special tools are required.

If pump shaft or bearings need service or repair, the entire rotating assembly can be removed without disturbing pump casing or plumbing. Rotating assembly is sealed with an O-ring, allowing for external adjustments of clearance.

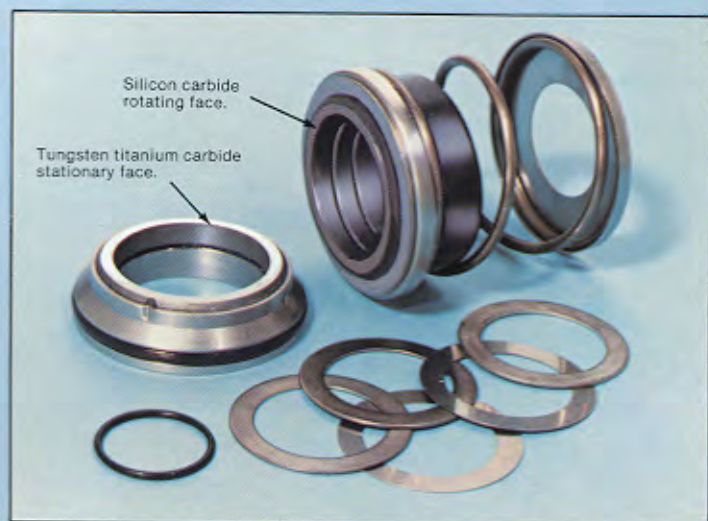
## WEARPLATES ARE REPLACEABLE

on T Series pumps. The wearplate fastens to the coverplate and is easily removed for inspection or service. No expensive castings to replace.



## GORMAN-RUPP'S EXCLUSIVE SEAL

is a double floating, self-aligning mechanical type with rotating face of silicon carbide, stationary face of tungsten titanium carbide, oil lubricated with mating surfaces lapped to a flatness tolerance of 0 to 5.8 millionths of an inch. Tungsten titanium carbide/silicon carbide properties provide a sealing surface impervious to abrasives, yet they will not shatter or fracture, as do carbons and ceramics under extreme thermal shock.



**NON-CLOG IMPELLER.** Two vane, semi-open, non-clog type impeller handles spherical solids up to 3" in diameter in 4", 6", 8" and 10" models. 3" model handles 2½" spherical solids. Pump-out vanes on shroud reduce foreign material build-up behind impeller and reduce pressure on seal and bearings. Multi vane impeller is available for higher heads with limited solids handling capability. Standard impeller construction of ductile iron alloy provides high tensile strength with resulting resistance to corrosion, abrasion and shock loads. 316 stainless steel and CD4MCu alloy impellers are available for more corrosive applications.

## ENTIRE ROTATING ASSEMBLY CAN BE REMOVED.

Inspection of pump shaft or bearings is easily accomplished without disturbing pump casing or piping by removing the rotating assembly. Simply remove bolts from the back of the pump and the rotating assembly slides out. If quick service is required, a spare assembly can be inserted and pump returned to normal operation in minutes.

# Fourteen high performance pump n



# Models in 3", 4", 6", 8" and 10" sizes.

PUMP MODEL	SIZE	SOLIDS	IMPELLER	WEAR PLATE	SEAL PLATE	SHAFT
T3A60-B	3"	2½"	Ductile Iron	1020 Steel	Gray Iron 30	4140 Alloy Steel
T3A61-B	3"	2½"	316 S.S.	316 S.S.	316 S.S.	17-4 PH S.S.
T4A60-B	4"	3"	Ductile Iron	1020 Steel	Gray Iron 30	4140 Alloy Steel
T4A61-B	4"	3"	316 S.S.	316 S.S.	316 S.S.	17-4 PH S.S.
T4B60-B	4"	1½"	Gray Iron	Gray Iron	Gray Iron 30	4140 Alloy Steel
T4B61-B	4"	1½"	316 S.S.	316 S.S.	316 S.S.	17-4 PH S.S.
T6A60-B	6"	3"	Ductile Iron	1020 Steel	Gray Iron 30	4140 Alloy Steel
T6A61-B	6"	3"	316 S.S.	316 S.S.	316 S.S.	17-4 PH S.S.
T6B60-B	6"	1½"	Gray Iron	Gray Iron	Gray Iron 30	4140 Alloy Steel
T6B61-B	6"	1½"	316 S.S.	316 S.S.	316 S.S.	17-4 PH S.S.
T8A60-B	8"	3"	Ductile Iron	Gray Iron	Gray Iron 30	4140 Alloy Steel
T8A61-B	8"	3"	316 S.S.	316 S.S.	316 S.S.	17-4 PH S.S.
T10A60-B	10"	3"	Ductile Iron	120-90-02 Ductile Iron	Gray Iron 30	17-4 PH S.S.
T10A61-B	10"	3"	316 S.S.	316 S.S.	316 S.S.	17-4 PH S.S.

#### STANDARD EQUIPMENT:

- Oil level sight gauge
- Pressure relief valve

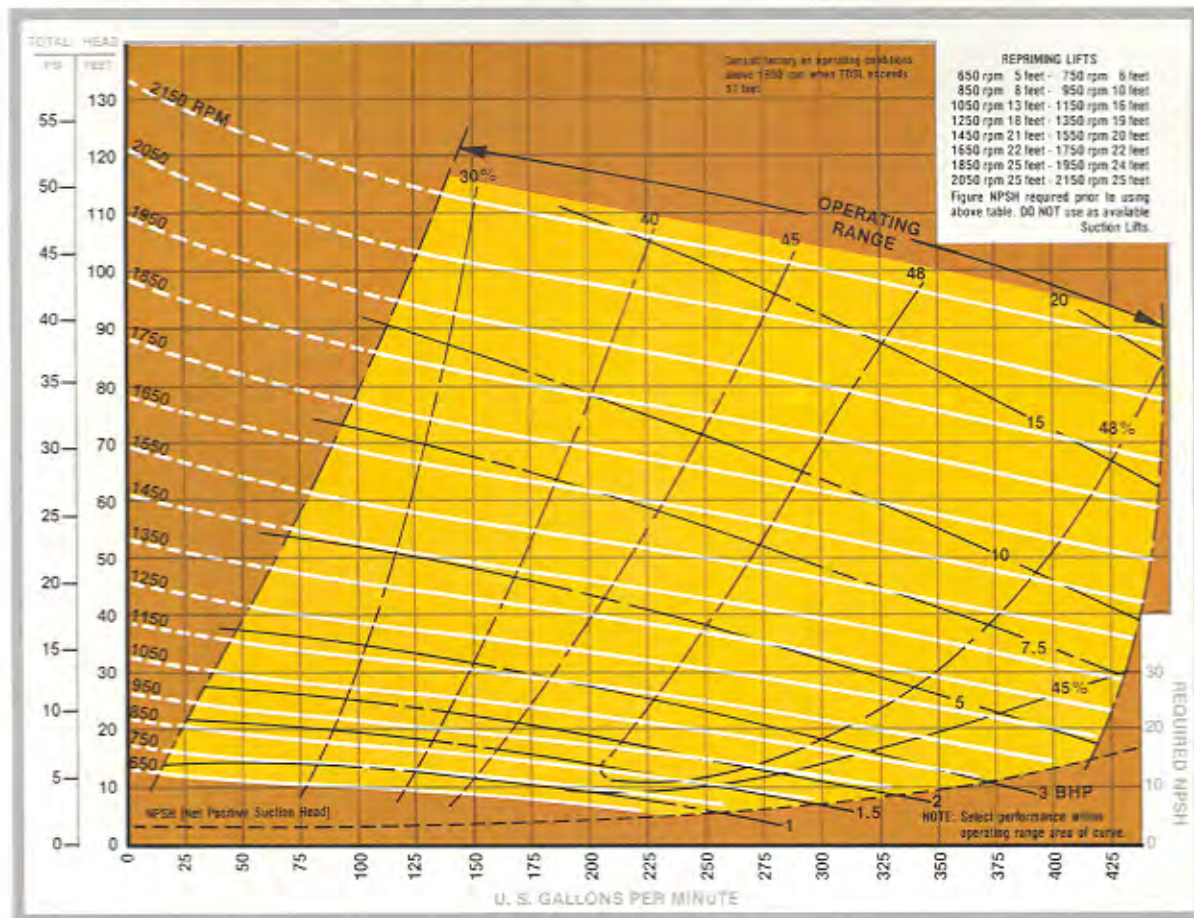
#### OPTIONAL EQUIPMENT:

- Air release valve
- Suction & discharge flanged spools
- Casing heaters
- High temperature shut down

#### NOTE:

In addition to the twelve basic units mentioned on these pages, pumps may on special order be engine powered and mounted on wheels for portability and stand-by use during power failure.

Performance as shown has been obtained by pumping 70° clear water. Altitude was corrected to sea level. The pipe and fittings were common in size to pump suction and discharge. Suction pipe incorporated 5' horizontal run from pump to vertical drop into wet well. Individual curves pertaining to the performance of each pump at constant speed, with variable impeller diameter with variable speed for each impeller diameter, are available on request to factory.



# 3 INCH

**MODEL T3A60-B  
MODEL T3A61-B**

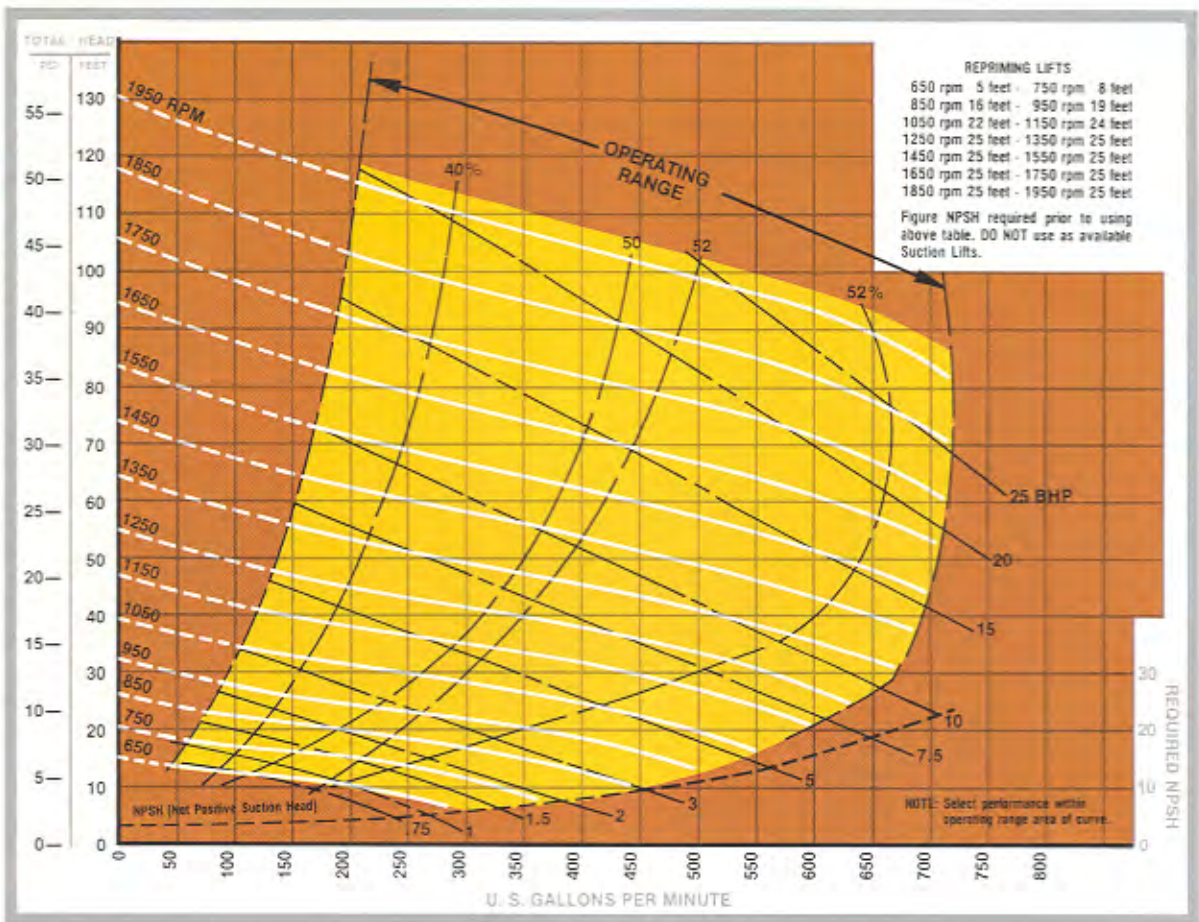
Performance with 8¾" diameter impeller at various rpm's. 2½" solids.

# 4

## INCH

**MODEL T4A60-B**  
**MODEL T4A61-B**

Performance with  
9<sup>3</sup>/<sub>4</sub>" diameter  
impeller at  
various rpm's.  
3" solids.

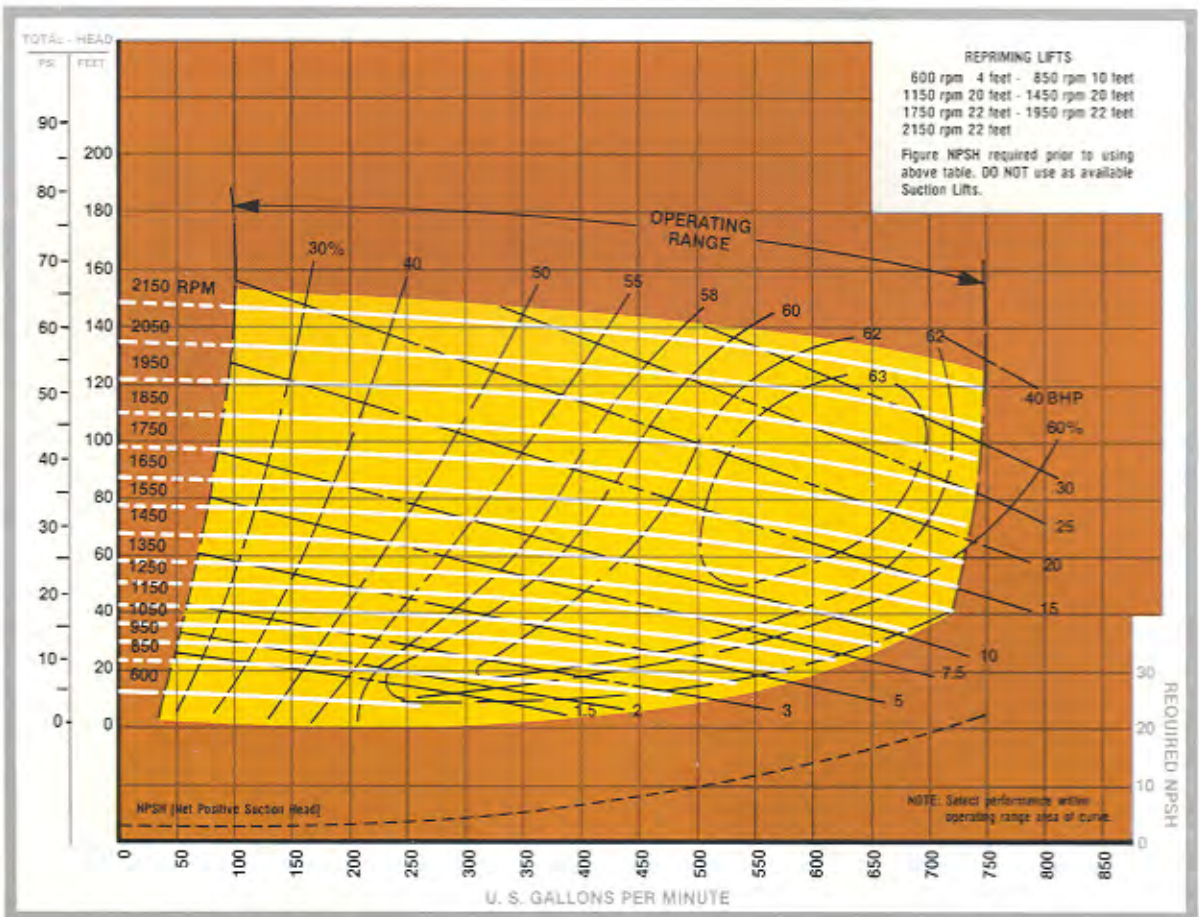


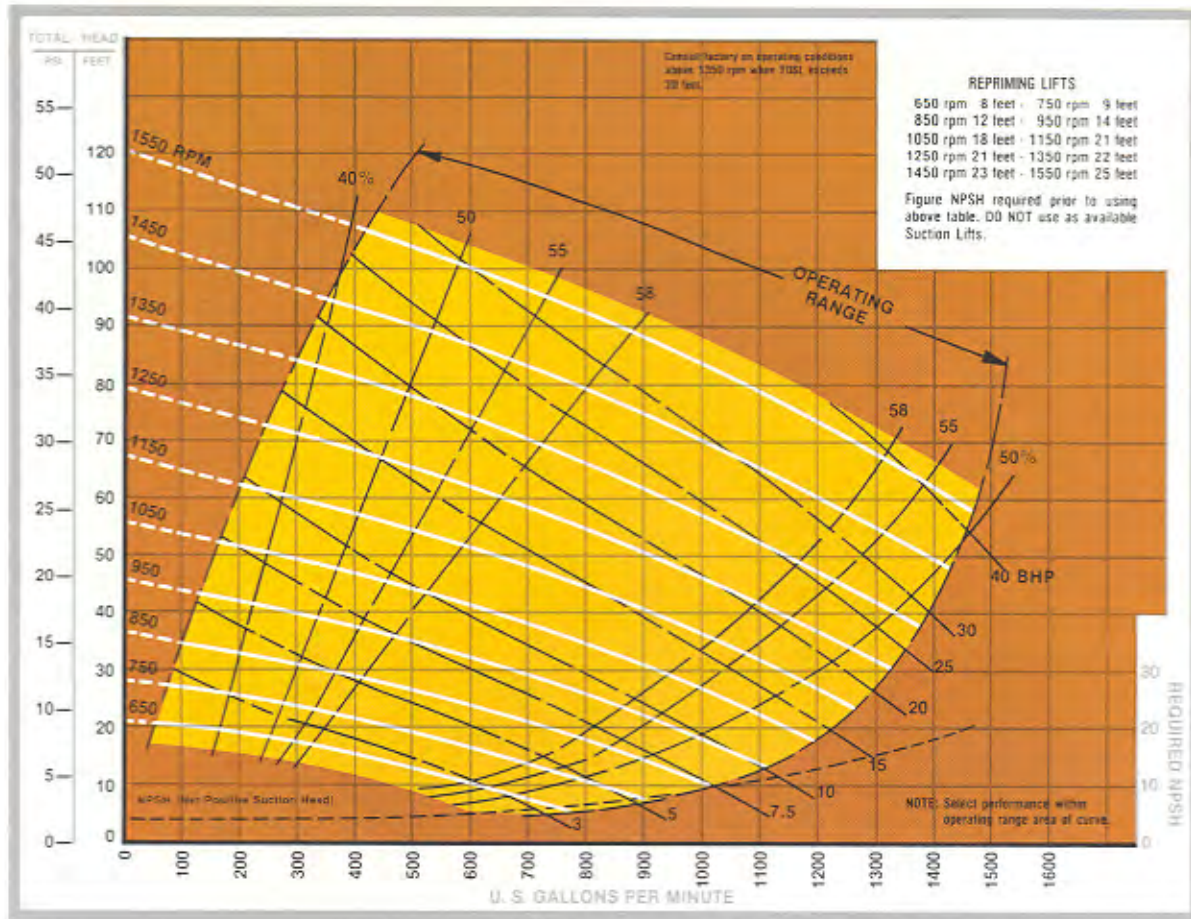
# 4

## INCH

**MODEL T4B60-B**  
**MODEL T4B61-B**

Performance with  
9<sup>3</sup>/<sub>4</sub>" diameter  
impeller at  
various rpm's.  
1<sup>1</sup>/<sub>2</sub>" solids.



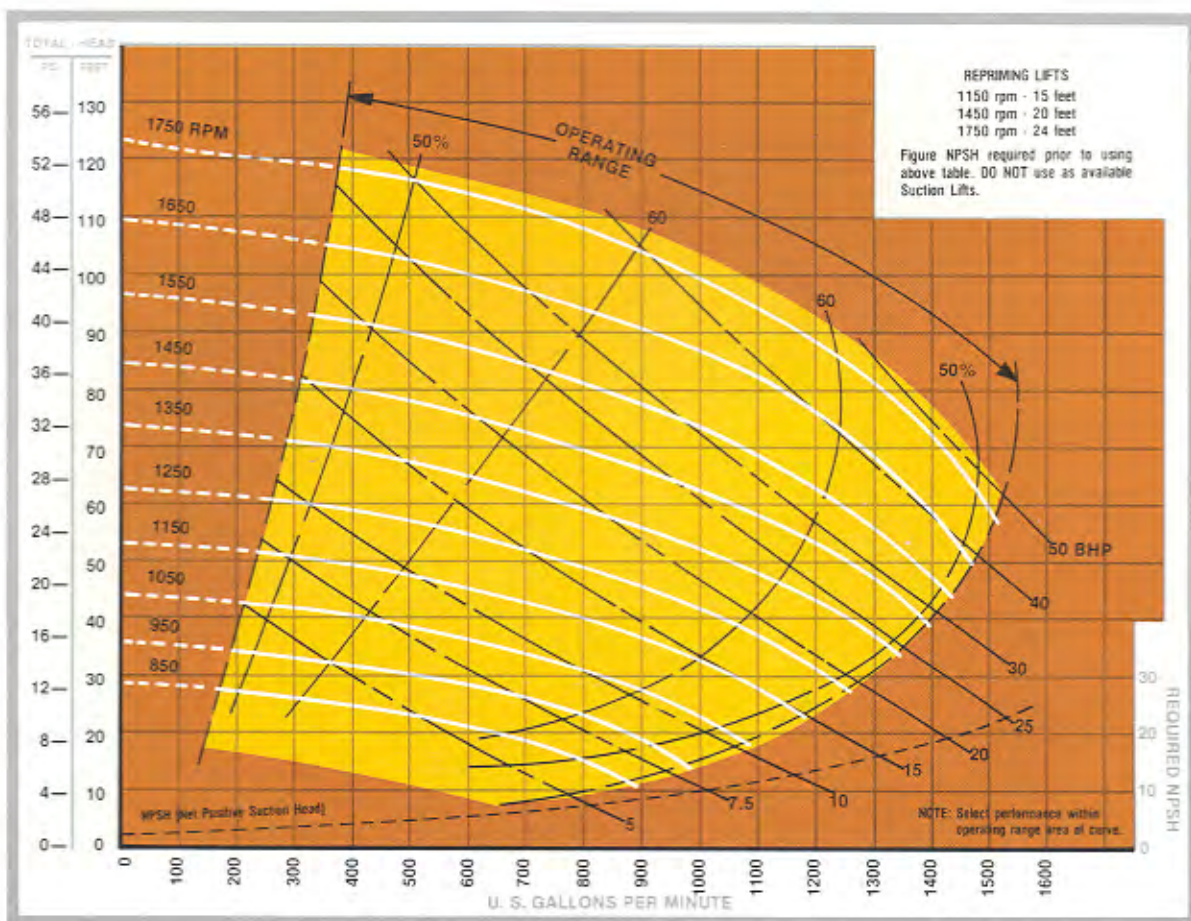


6

INCH

MODEL T6A60-B  
MODEL T6A61-B

Performance with 12<sup>3</sup>/<sub>8</sub>" diameter impeller at various rpm's. 3" solids.



6

INCH

MODEL T6B60-B  
MODEL T6B61-B

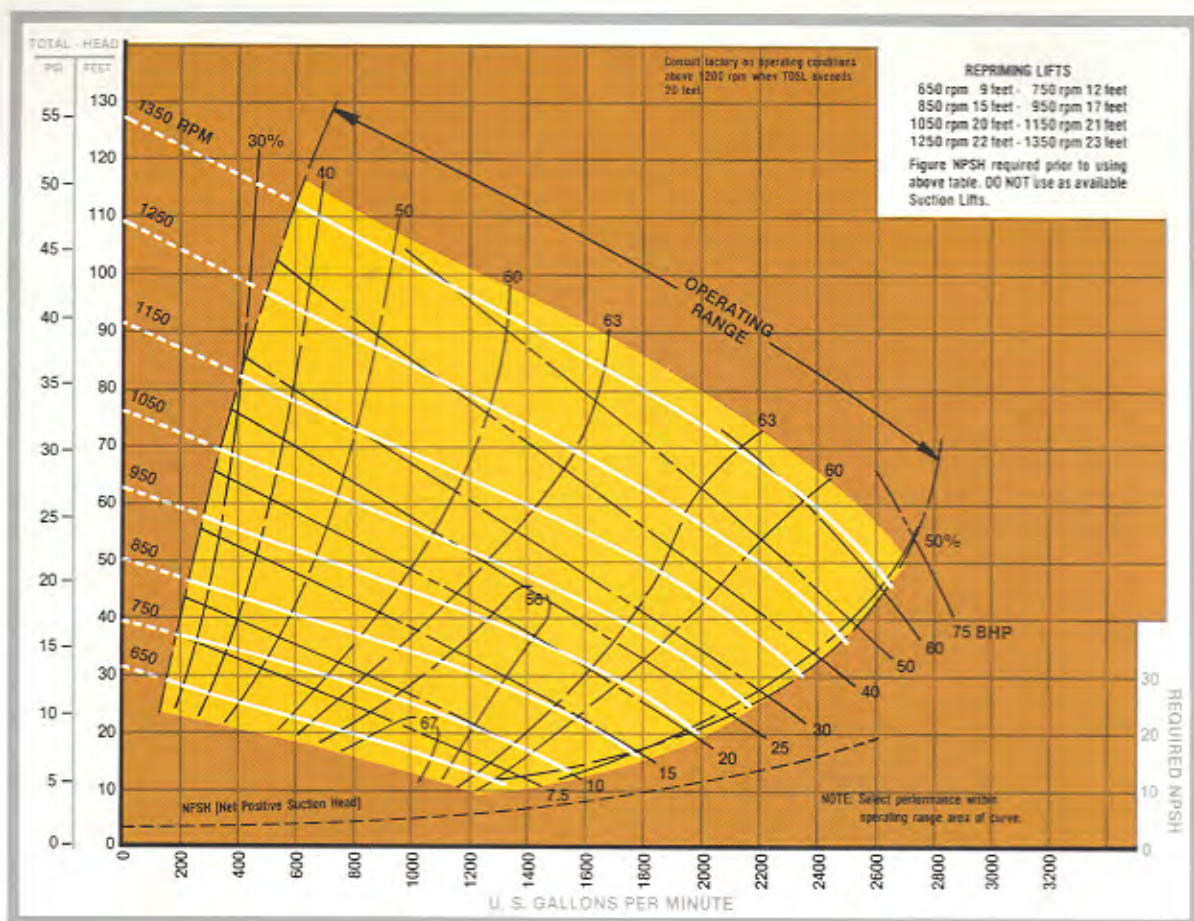
Performance with 11<sup>3</sup>/<sub>8</sub>" diameter impeller at various rpm's. 1<sup>1</sup>/<sub>2</sub>" solids.

# 8

## INCH

**MODEL T8A60-B**  
**MODEL T8A61-B**

Performance with  
14<sup>3</sup>/<sub>4</sub>" diameter  
impeller at  
various rpm's.  
3" solids.

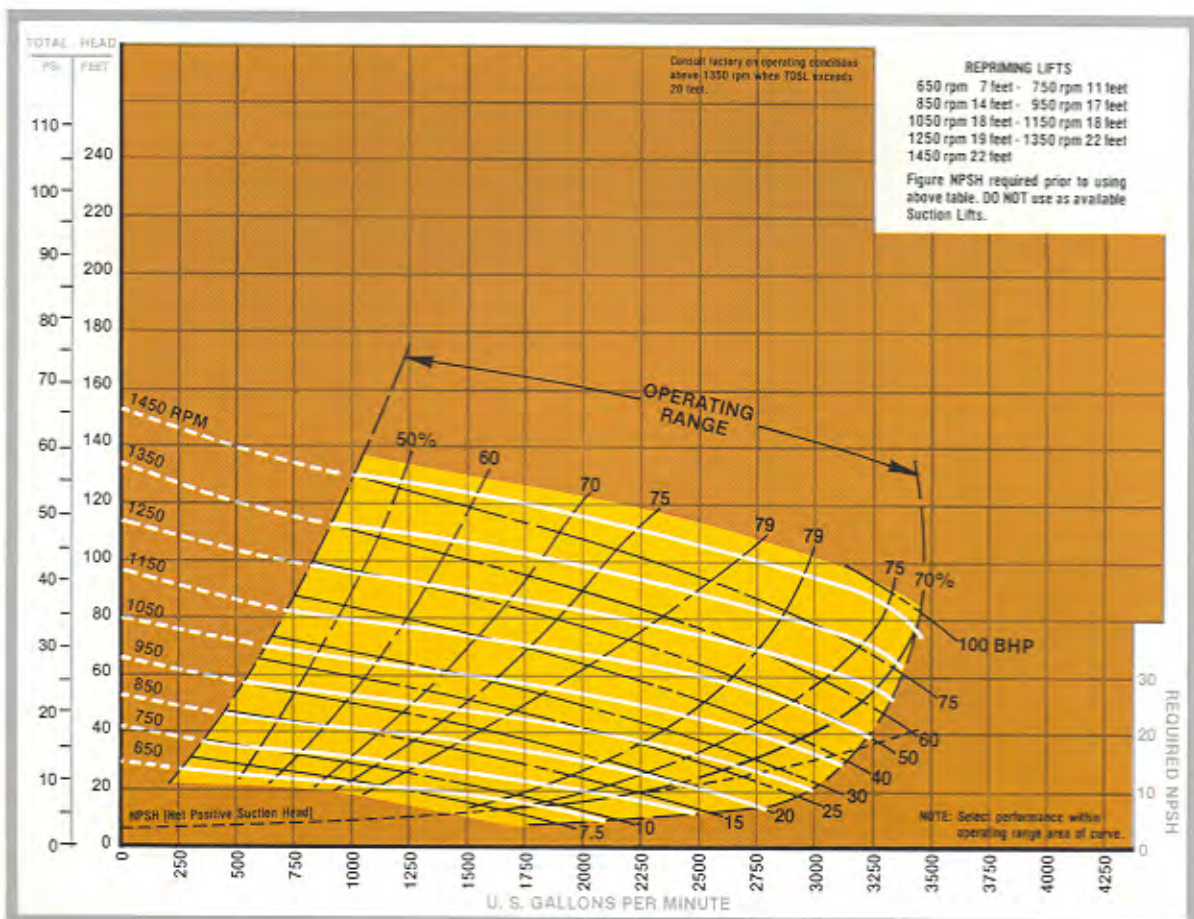


# 10

## INCH

**MODEL T10A60-B**  
**MODEL T10A61-B**

Performance with  
14<sup>3</sup>/<sub>4</sub>" diameter  
impeller at  
various rpm's.  
3" solids.



## Drive Variations

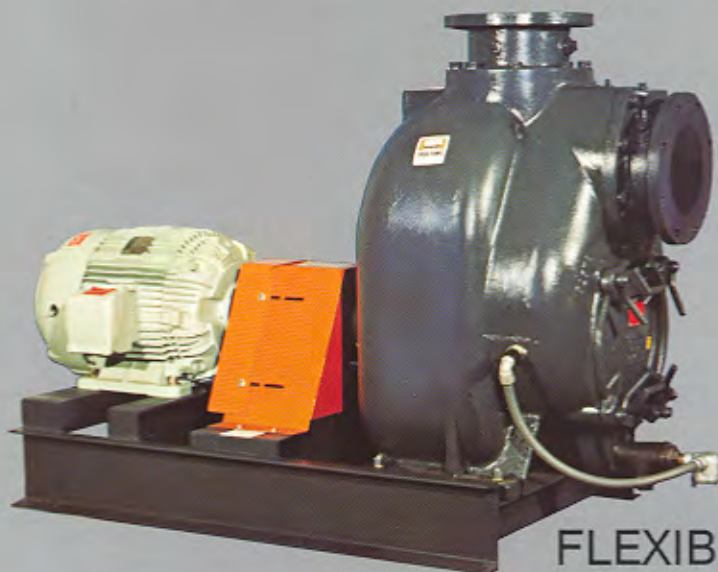
Gorman-Rupp T Series pumps are available as basic units for connection to customers' power or may be flex-coupled or V-belt driven by an electric motor.

When space is critical, flex-coupling often solves the "tight-fit" problem. V-belt drive offers the advantage of flexibility in speed selection and usually provides maximum operating speed for required head and capacity without trimming impeller. Belt and sheave configurations are constructed to industry standards and are universally available.

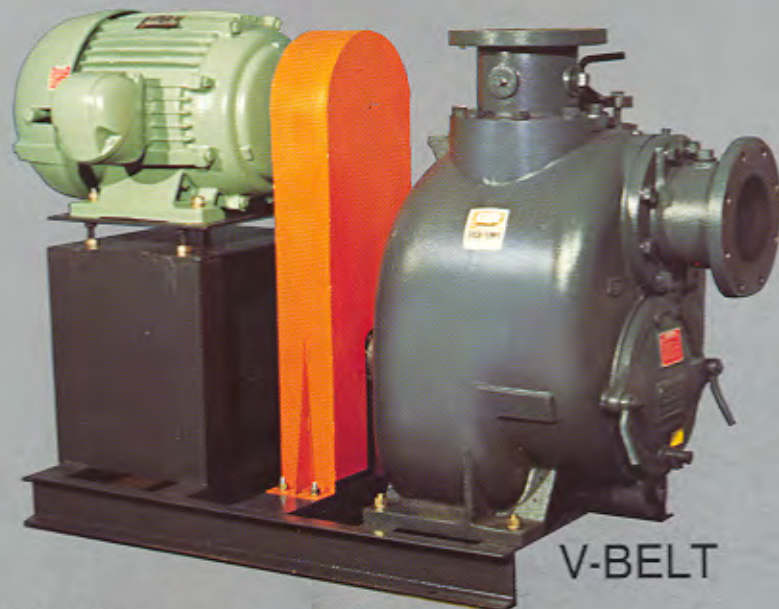
T Series pumps may also be powered by gasoline or diesel engines. Electric motor driven pumps with "standby" engine power are also available.



BASIC



FLEXIBLE



V-BELT

Note: Pumps shown with optional spool flanges.

# A complete line of pumps for every industrial application.

## CORROSIVE LIQUIDS AND SOLIDS

10 Series pumps are available in gray iron, 316 stainless steel, bronze, alloy 20 or CD4MCu construction depending on liquid or slurry being pumped. Only two moving parts — impeller and shaft, so maintenance problems are minimal. Pumps are available in 1½" to 6" sizes. Capacities to 1300 gpm, heads to 100'. Pumps handle up to 2½" spherical solids depending on pump model. Multiple seal options available.

## CORROSIVE LIQUIDS AND LIMITED SOLIDS

90 Series pumps were specifically designed for mining applications where limited access is critical. Compact size is ideal for applications where several pumps must operate in close quarters. Pump construction is gray iron, all bronze, alloy 20, CD4MCu or 316 stainless steel. All wearing parts can be quickly replaced using common hand tools. Pumps are available in 2" and 3" sizes. Capacities to 320 gpm, heads to 180'. Multiple seal options available.

## MILD CORROSIVES AND LIMITED SOLIDS

80 Series pumps are designed for high-efficiency, non-stop workloads. Straight-in suction design allows them to operate on higher suction levels than standard self-priming centrifugals. Pumps are available in 1¼" to 8" sizes. Capacities to 2100 gpm, heads to 180'. Multiple seal options available.

## PETROLEUM PRODUCTS

O Series pumps feature straight-in suction which eliminates entrance restrictions and provides better suction performance when handling solvents, petroleum products and similar liquids. Available in 2" to 6" sizes. Capacities to 1350 gpm, heads to 390'.

## ROTARY GEAR PUMPS

Gorman-Rupp's positive displacement internal rotary gear pumps are designed to handle a wide range of liquid viscosities and temperatures. Only two moving parts (rotor and idler) provide efficient, even flow of liquids with positive mixing action. Pulsing and line surges are eliminated. Available in 3/8" to 5" discharge sizes. Capacities to 450 gpm, pressures to 200 psi.



10 Series



90 Series



80 Series



O Series



Rotary Gear



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