

Product Introduction

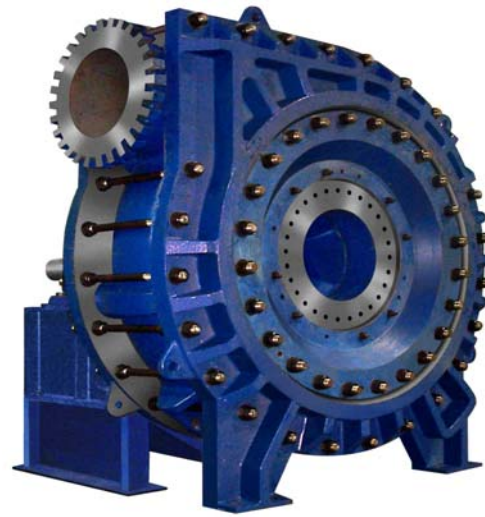
TBC

Series Overview

TBC Slurry Pumps are designed for severe duty high pressure applications with operating flows from 5000-80,000 gpm (1136 - 18,200 m³/h). Total dynamic head is up to 300 ft. (90m) per stage and power rating is up to 10,000 hp (7450kW). TBC's may be required when customer specifications exceed the LSA-S limitations.

Fields of Application

The TBC slurry pump features high heads and high flows for hydraulic transport, pipeline booster stations, dredge and other severe duties.



TBC pumps are constructed as horizontal end suction centrifugal pumps to give maximum resistance to solids while simplifying maintenance. The TBC design can achieve very high pressures because the pressure load against the liners is transferred to the non-wearing side plates, which are held together by large tie bolts. Impeller hydraulics are computer designed for high suction performance and large solids passage. The slurry pumps are constructed of abrasion-resistant white irons, ductile irons and special alloys to match most any duty requirement.

Designation

TBC-24X28-57.10LWLR FM C/4ME L

Pump Type _____

Discharge Nozzle (in.) _____

Suction Nozzle (in.) _____

Nominal Impeller Diameter (in.) _____

Shaft Size _____

Plug Code _____

Shaft Type _____

Bearing Assembly Type _____

Impeller Release Ring _____

Seal Type _____

Lantern Ring Material _____

Shell Hydraulic Type _____

Impeller Number of Vanes _____

Impeller Hydraulic Type _____

Construction Code _____

Pump Type

TBC - Tie Bolt Design for Pressure and Containment

Shaft Size

(Standard options)

- 5 5-7/16
- 6 6-7/16
- 7 7-3/16
- 9 9
- 10 10-1/4
- 11 11-1/2

Plug Code

(Standard options)

- G 2C4.5
- J 6.5
- K 7.75
- L 9.0
- M 11.5
- N 13.0

Shaft Type

- S Stiffened
- W Straight

Bearing Assembly Type

- L Limited End Float
- C Conventional

Impeller Release Ring

- R Impeller Release Ring
- N No Impeller Release Ring

Seal Type

- F Packing, Forward Flush
- K Packing, Low Flow
- M Mechanical Seal
- B Throat Bushing

Lantern Ring Material

- T Teflon
- M Metal
- N Not Applicable

Shell Hydraulic Type

- C Semi-Volute

Impeller Hydraulic Type

- ME Conventional Warped Vane

Construction Code

- H Integral Hub Liner
- L Separate Hub Liner
- OD TOD Type Suction Liner
- HP High Pressure
- VHP Very High Pressure
- GL Gathane Lined
- RL Rubber Lined



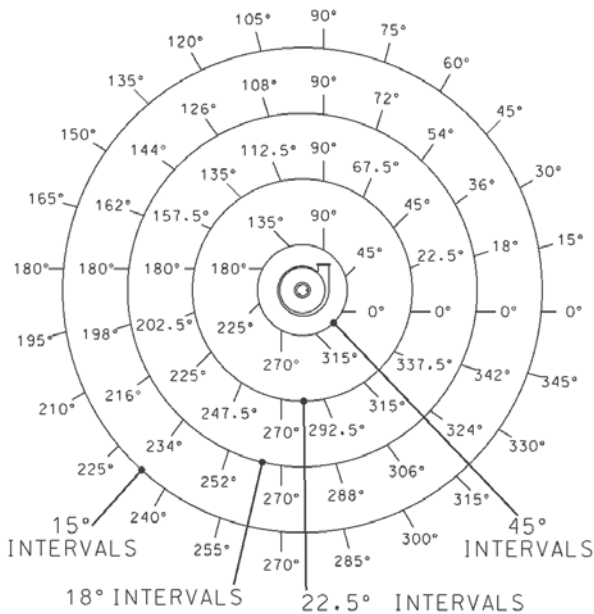
TBC RANGE PUMP INFORMATION TABLE

Assembly Number	Normal Size		Maximum Operating Pressure		Free Passage		Discharge Position	Vane Number & Type	Nominal IMP Diameter
	in	mm	psi	bar	in	mm	Degrees		
8872D	18x18-46	450x450-1170	500	34.5	4.1x4.9	104x124	18 intervals	5ME	46.00
8205D	20x20-46	500x500-1170	500	34.5	6.0x7.9	153x200	18 intervals	4ME	46.00
9132D	20x20-46	500x500-1170	510	35.2	5.3x8.9	133x225	18 intervals	4ME	44.00
9273D	20x20-46	500x500-1170	510	35.2	5.3x8.9	133x225	18 intervals	4ME	44.00
9144D	20x22-54	500x550-7370	500	34.5	8.0x10.25	203x260	15 intervals	4ME	54.00
9319D	20x22-54	500x550-7370	500	34.5	8.0x10.25	203x260	15 intervals	4ME	54.00
8892D	20x22-54	500x550-7370	500	34.5	8.0x10.25	203x260	15 intervals	5ME	54.00
8393D	20x22-54	500x550-7370	500	34.5	8.0x10.25	203x260	15 intervals	3ME	54.00
8811D	24x24-62	600x600-1575	450	31.0	11.5x11.7	292x298	0 only	3ME	62.00
8911D	24x24-62	600x600-1575	450	31.0	11.5x11.7	292x298	167.14 Only	3ME	62.00
9528D	24x28-58	600x700-1460	533	36.7	6.4x11.6	162x295	0 / 180 Only	4ME	57.80
9245D	24x30-52	600x760-1320	530	36.5	7.2x11.6	183x295	0 / 90 / 180 Only	4ME	52.00
9551D	24x28-64	600x700-1625	533	36.7	8.3x9.2	211x230	0 / 180 Only	5ME	64.00
9549D	26x28-64	660x700-1625	533	36.7	8.1x10.8	205x275	0 / 180 Only	5ME	64.00
9309D	26x28-64	660x700-1625	533	36.7	9.3x13.5	235x343	90 Only	4ME	67.00
8818D	30x34-84	760x865-2135	500	34.5	11.6x14.7	294x375	13.9 Only	4ME	84.00
3881D	30x34-84	760x865-2135	220	15.2	14.2x14.7	360x375	90 Only	3ME	84.00
9517D	30x34-84	760x865-2135	200	13.8	14.2x14.7	360x375	0 Only	3ME	84.00
9119D	30x34-84	760x865-2135	500	34.5	14.2x14.7	360x375	0 Only	3ME	84.00

Note: Discharge position is limited due to support feet.

TBC Specifications

Capacities (Qmax.) 5000-80,000 gpm
1136-18,200 m³/h
Heads (H max.) 300 ft
92 m



Discharge Positions

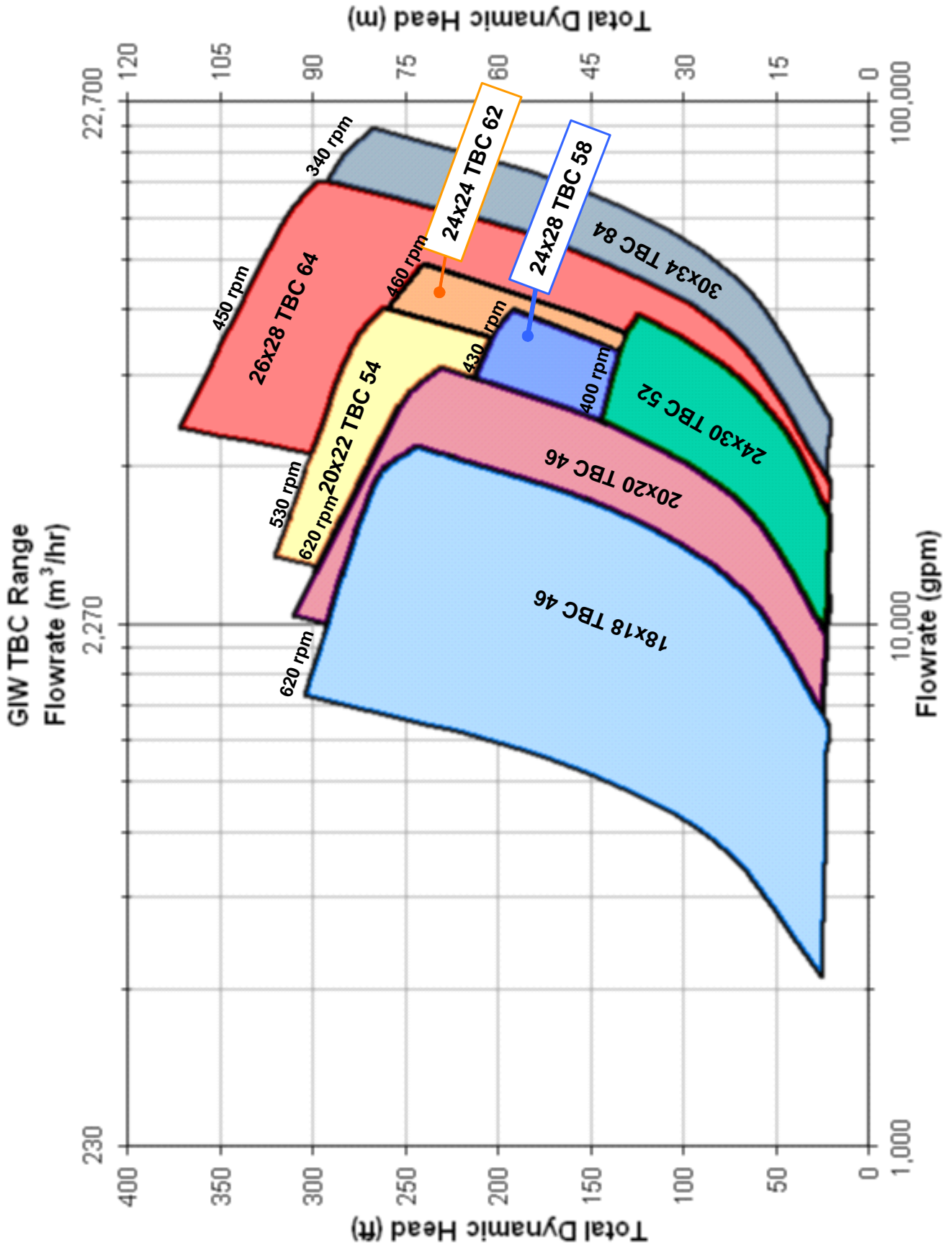
Rotation direction is clockwise from the drive end. A bottom horizontal discharge is standard.

Normal temperature limit is 150° F (65°C).

Consult the factory for materials and configurations for temperatures above 150° F or for material options to suit your particular application.

Materials

Part No.	Item	Standard	Alternate
101	Shell	Gasite WD28G	Gasite WD28G
230	Impeller	Gasite WD28G	Gasite WD28G
16-1	Suction Plate	Ductile Iron	Ductile Iron
13-19	Suction Liner	Gasite 18G	Gasite 28 G
332	Pedestal	Fab Steel	Fab Steel
210	Shaft	4150 Steel	4340HT Steel
451	Stuffing Box	Grey Iron	Grey Iron
524	Shaft Sleeve	Carbide Coated Steel	Carbide Coated Steel
350	Bearing Housing	Grey Iron	Grey Iron

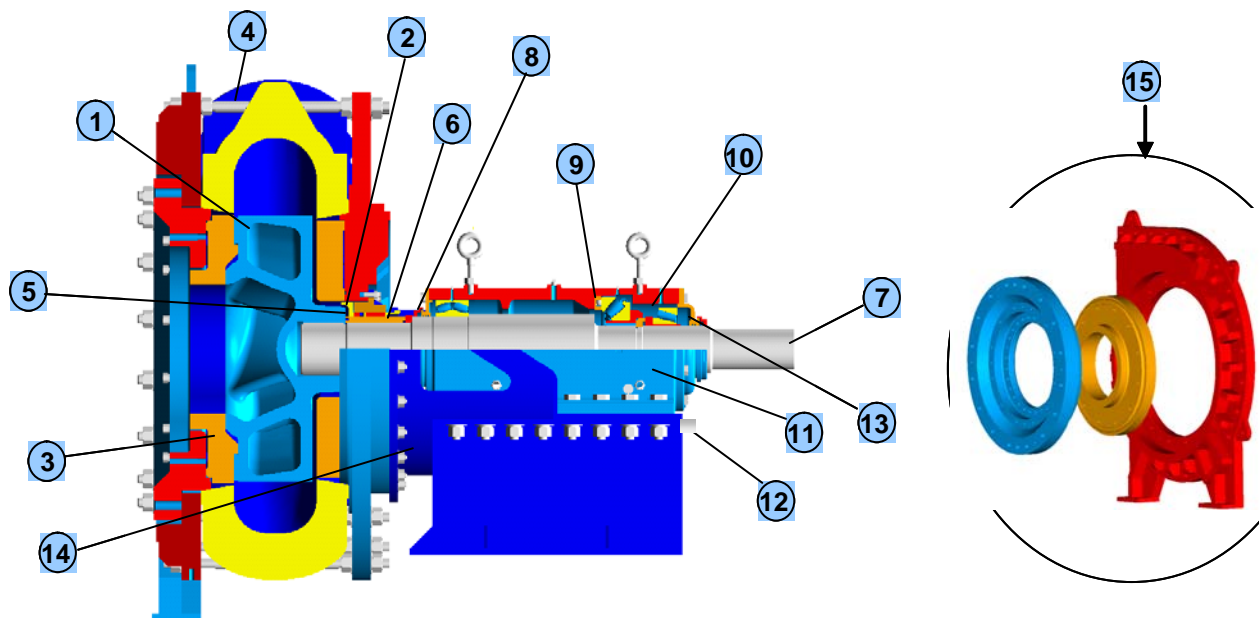


RPM SHOWN IS MAXIMUM AT CLASS TWO DUTY



GIW Model TBC Pumps

Low Maintenance, Severe Duty, Abrasion Resistant



Wear Parts

- ① Impeller is designed for wear-resistant operation in highly abrasive slurries. Heavy section impeller clearing vanes actively keep solids out of nose gap.
- ② Two aramid gaskets aid in the removal of the impeller.
- ③ Replaceable suction liner facilitates pump internal inspection and minimizes wear part usage cost. Liner can be rotated at intervals to increase wear life.
- ④ Special tie bolt construction of the shell for safety and reliability in high pressure applications.

Pump Seal

- ⑤ Replaceable wear plate maximizes stuffing box life.
- ⑥ Shaft sleeve with fused carbide hard coating to maximize packing life.

Mechanical End

- ⑦ Robust stiffened shaft to improve the wear life of the mechanical end and stuffing box.
- ⑧ Impeller release ring for easy impeller removal. Standard on all larger pumps.

- ⑨ Spring retainer ring locates the thrust bearing pre-load springs for correct axial thrust load.
- ⑩ Limited end float design uses taper roller bearings.
- ⑪ Split-cartridge bearing assembly offers ease of inspection and maintenance.
- ⑫ Accurate impeller clearance adjustments are easily made with the adjusting screw.
- ⑬ Labyrinth seals protect bearings.

Quick Alignment

- ⑭ Rabbet fits machined in the pedestal support the hub plate and shell to provide component alignment.
- ⑮ TBC 57 and 64 have a special 2-piece suction plate design to reduce maintenance for more uptime and increased production.

Interchangeability

To optimize wear life and efficiency, various hydraulic design and material options can be used on the same mechanical end.