

Complete Modularity By Design...

Our Modular Design offers custom Wet End Configurations with standard components. The Open Suction, Solids Mixer and Shredder Attachment are all **INTERCHANGEABLE** on the Same Wet End Platform.

While the competition requires you to purchase a separate pump for each application, with a Polaris Pump you simply change the Wet End Kit Attachment to meet your job requirements.

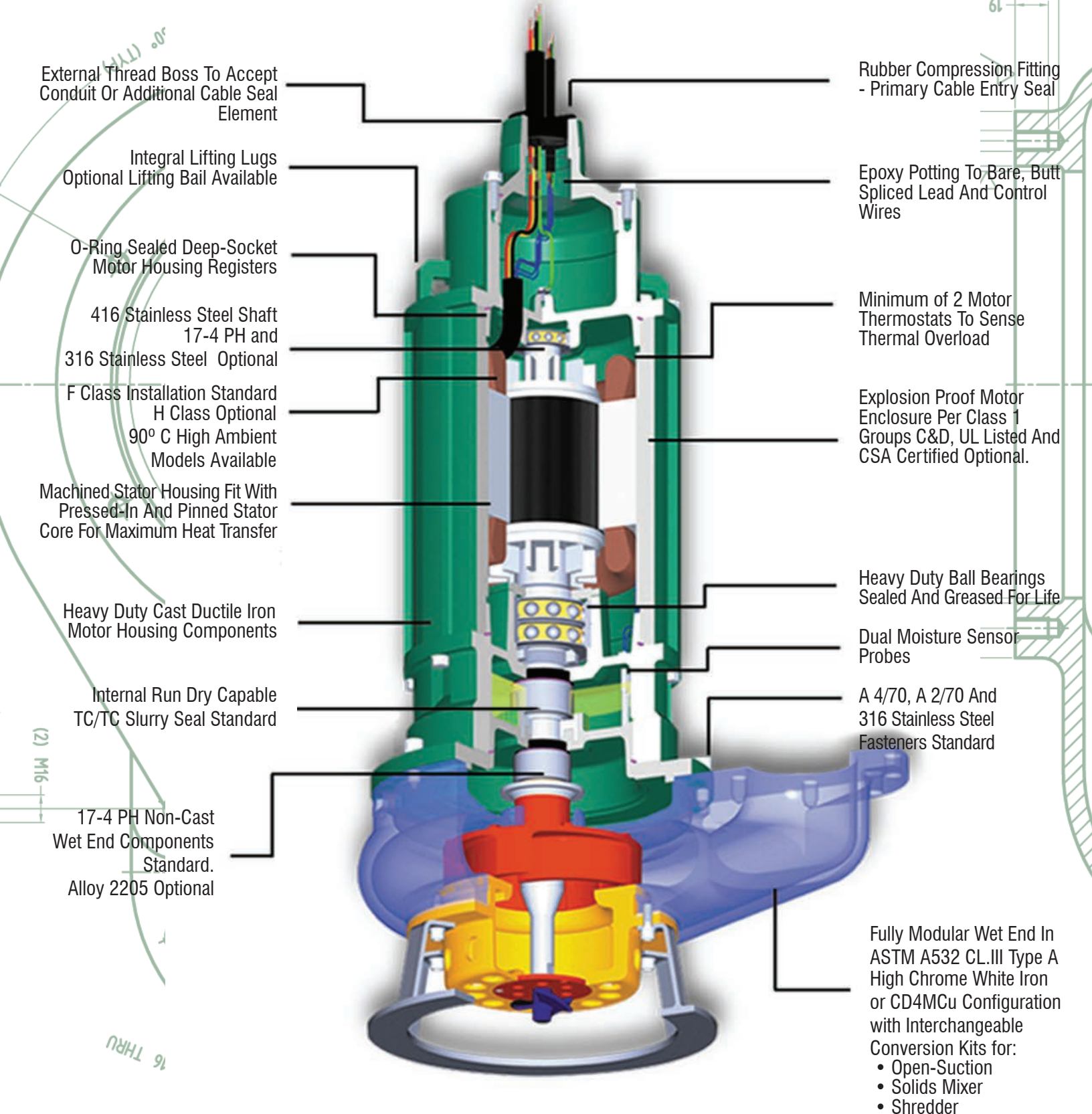


POLARIS

P U M P S

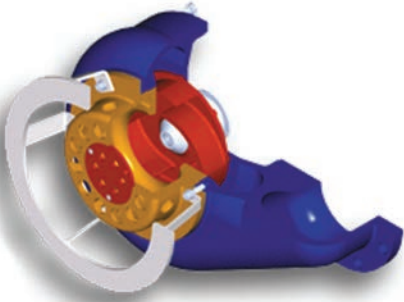
Pump'n Hard Iron

Fully Modular Wet End Design With Interchangeable Open Suction, Solids Mixer and Shredder Conversion Kits



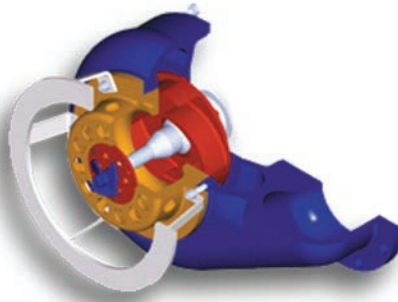
A Complete Line of Wet Ends...

Polaris Model PHO™ Standard Open Suction



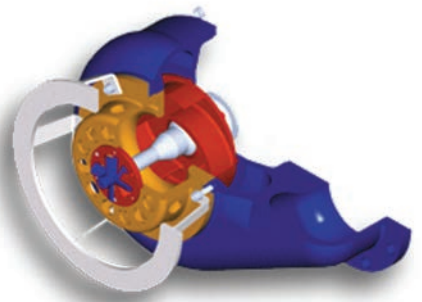
Our Standard Wet End, the Polaris Model PHO™ comprises a hard metal strainer and open impeller for any heavy duty pumping or de-watering application that does not require solids agitation.

Polaris Model PBO™ Solids Mixer Option



The Polaris Model PBO™ utilizes a hard metal strainer, hard metal solids mixer and open impeller for any heavy duty solids pumping in application with high materials content.

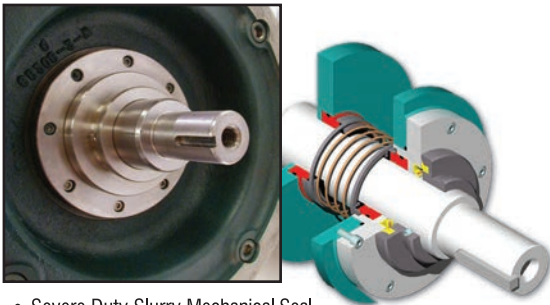
Polaris Model PVO™ Shredder Option



The Polaris Model PVO™ combines a hard metal shredder attachment and open impeller for applications with fibrous materials, wood yard waste, slaughter house and food processing waste or recycling.

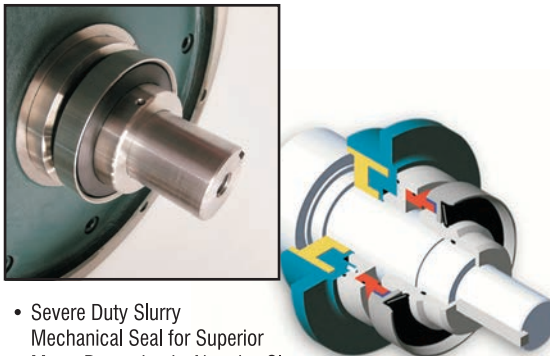
A Complete Line of Motor Seals...

Polaris Internal Slurry Seal™ *Continuous Run Dry Capable*



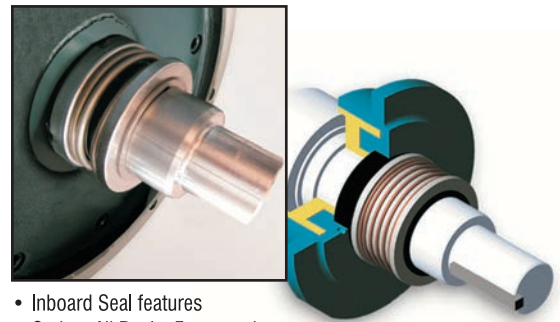
- Severe Duty Slurry Mechanical Seal for Superior Motor Protection in Abrasive Slurry Services
- Back-to-Back Mechanical Seals operate in an Oil Bath and require no external cooling
- No Exposed Coil Springs, Keys or Shrouds for Clog-Free operation
- Tungsten Carbide Seal Faces and 316 Stainless Steel Hardware

Polaris Slurry-Boss™



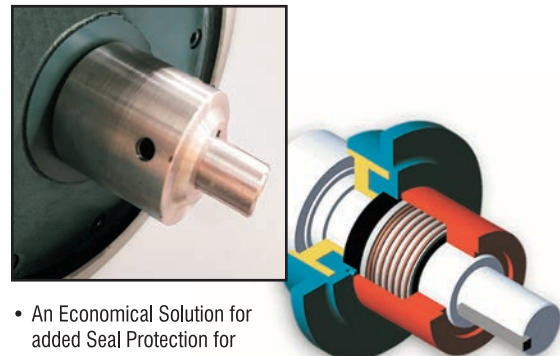
- Severe Duty Slurry Mechanical Seal for Superior Motor Protection in Abrasive Slurry Services for Applications Requiring Explosion-Proof Motors
- Seal is cooled by the Process Fluid and does not require additional lubrication or cooling
- No Exposed Coil Springs, Keys or Shrouds for Clog-Free operation
- Tungsten Carbide Seal Faces, CD4MCu Sleeve, 316SS Hardware and Viton Elastomers are Standard

Polaris Light Duty Slurry Seal™



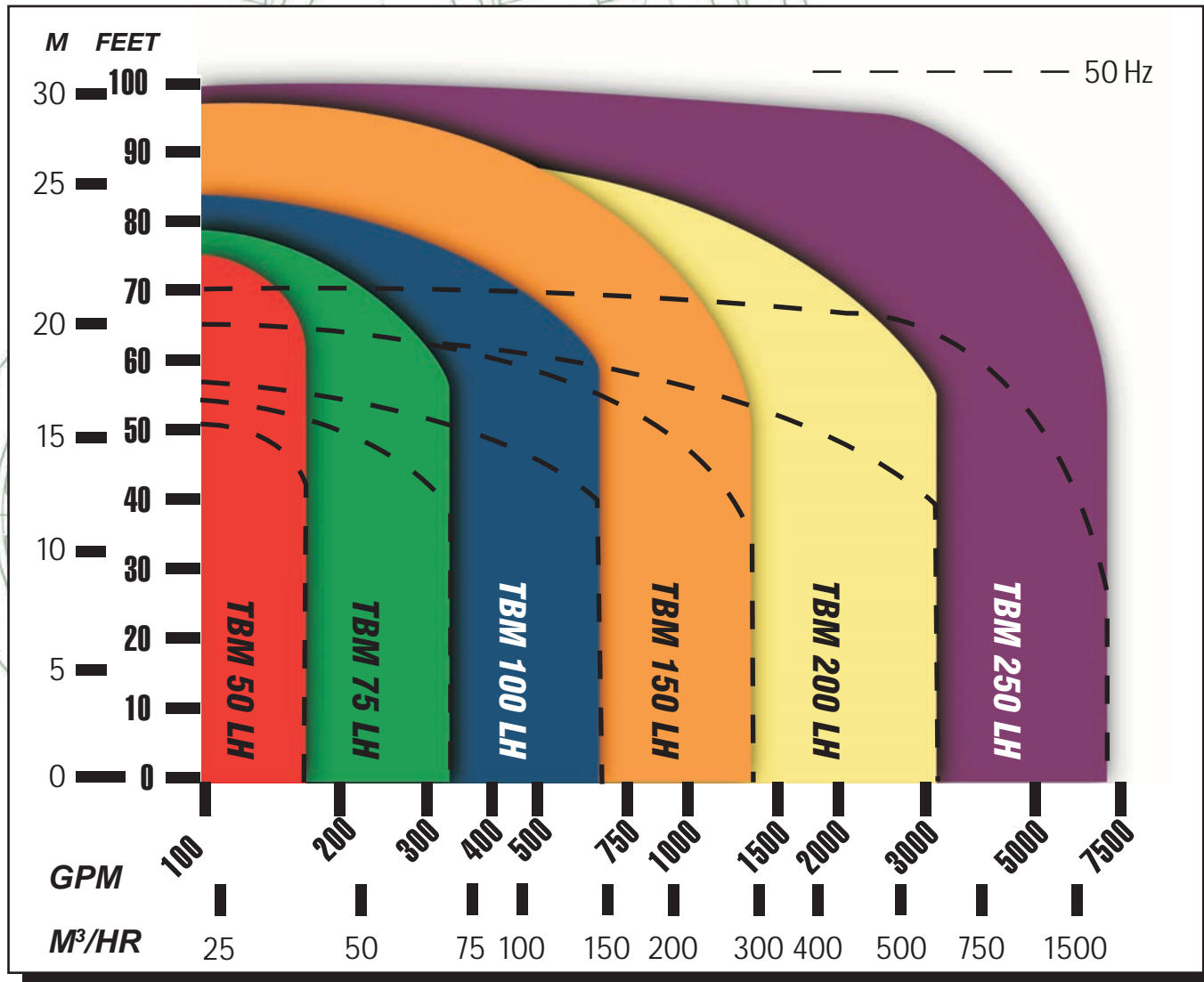
- Inboard Seal features Carbon-Ni Resist Faces and 316 Stainless Steel Hardware
- Outboard Seal features Tungsten Carbide Faces and 316 Stainless Steel Hardware

Polaris Seal-Guard™



- An Economical Solution for added Seal Protection for the Light Duty Slurry Seal where long fibrous Materials such as Rags and Paper Pulp are contained in the Fluid
- Also for Slurry Applications to protect the Light Duty Slurry Seal Mechanism from Particle Contamination and Impact
- Made from 316 Stainless Steel

Series TBM Low-Head Hydraulic Coverage



Typical Applications for Series TBM Pumps

Power Generation

Coal Pile Run Off
Coal Crusher Sumps
Coal Tunnel Sumps
Coal Fines Recovery
FGD Blowdown Sumps
Bottom Ash Transport
Fly Ash Sumps and Ponds
Waste Water and Basement Sumps

Mining / Steel Producing

Kaolin Clay
Red Mud Decanting
Magnetite Recovery
Clarifier Sludge
Waste Water and Basement Sumps
Coal Pile Run Off
Slag Pit
Scale Pit
Swarf Box
Flume Flush
Interceptor Pump

Sand & Gravel

Weir Overflow
Dust Suppression
Recycle Water
Wheel Wash Pump
Cyclone Feed
Dredging
Barge Unloading

Pulp - Paper / Food Processing

Wood Yard Run Off
Waste Water and Basement Sumps
Food Processing
Waste Juicer Sumps

Series TBM Low-Head Motor Sizes

TBM 50 LH (2")	DISCHARGE SIZE mm (IN)		50 (2")		NOTE: FOR CONTINUOUS HEAVY SHREDDER APPLICATIONS FOR PUMP TYPE PVO USE LARGEST MOTOR MODULE POSSIBLE.	
	IMPELLER DIAMETER mm (IN)		215 (8.46")			
	MAX. PARTICLE SIZE mm (IN)		16 (0.63")			
	MOTOR FRAME SIZE		180TY	180TY		210TYS
	MOTOR RATING HP (KW) (1)		5 (3.7)	7.5 (5.5)		10 (7.35)
	FREQ. (Hz) / F.L. RPM		60 / 1740	60 / 1740		60 / 1755
	VOLTAGE		230V OR 460V OR 575V			
	INSULATION		F (150 DEG. C) H (185° C) - 90° C HIGH AMBIENT OPTIONAL			
	RUN DRY CAPABILITY		WITH INTERNAL SLURRY SEAL AND/OR WATER JACKET			
	PUMP WET COOLED S.F. (2)		1.2	1.8		2.5
PUMP WATER JACKET S.F. (2)		1.05	1.55	2.15		

NOTE:
FOR CONTINUOUS
HEAVY SHREDDER
APPLICATIONS FOR
PUMP TYPE PVO USE
LARGEST MOTOR
MODULE POSSIBLE.

NOTES:
(1) OTHER HP AND RPM RATINGS
AVAILABLE

(2) AT MAXIMUM FLOW RATE

TBM 75 LH (3")	DISCHARGE SIZE mm (IN)	75 (3")			NOTE: FOR CONTINUOUS HEAVY SHREDDER APPLICATIONS FOR PUMP TYPE PVO USE LARGEST MOTOR MODULE POSSIBLE.
	IMPELLER DIAMETER mm (IN)	215 (8.46")			
	MAX. PARTICLE SIZE mm (IN)	22 (0.86")			
	MOTOR FRAME SIZE	210TYS	210TYS		
	MOTOR RATING HP (KW) (1)	10 (7.35)	15 (11)		
	FREQ. (Hz) / F.L. RPM	60 / 1755	60 / 1755		
	VOLTAGE	230V OR 460V OR 575V			
	INSULATION	F (150 DEG. C) H (185° C) - 90° C HIGH AMBIENT OPTIONAL			
	RUN DRY CAPABILITY	WITH INTERNAL SLURRY SEAL AND/OR WATER JACKET			
	PUMP WET COOLED S.F. (2)	1.2	1.8		
PUMP WATER JACKET S.F. (2)	1.15	1.6			

NOTE:
FOR CONTINUOUS
HEAVY SHREDDER
APPLICATIONS FOR
PUMP TYPE PVO USE
LARGEST MOTOR
MODULE POSSIBLE.

STANDARD OPTIONS FOR POLARIS
MOTOR MODULES

- EXPLOSION PROOF MOTORS,
UL AND CSA LISTED FOR USE IN
CLASS 1 GROUPS C&D
HAZARDOUS LOCATIONS
- NON-EXPLOSION PROOF
- STANDARD AND PREMIUM
EFFICIENCY MOTOR
ARMATURES
- CLASS H (185 DEG. C) AND
90° HIGH AMBIENT MODELS
AVAILABLE
- COAL TAR EPOXY OR HEAVY
DUTY DUOMAR™ MOTOR COATINGS

TBM 100 LH (4")	DISCHARGE SIZE mm (IN)		100 (4")		NOTE: FOR CONTINUOUS HEAVY SHREDDER APPLICATIONS FOR PUMP TYPE PVO USE LARGEST MOTOR MODULE POSSIBLE.
	IMPELLER DIAMETER mm (IN)		230 (9.05")		
	MAX. PARTICLE SIZE mm (IN)		32 (1.26")		
	MOTOR FRAME SIZE		210TYS		
	MOTOR RATING HP (KW) (1)		15 (11)	20 (14.7)	
	FREQ. (Hz) / F.L. RPM		60 / 1755	60 / 1750	
	VOLTAGE		230V OR 460V OR 575V		
	INSULATION		F (150 DEG. C) H (185° C) - 90° C HIGH AMBIENT OPTIONAL		
	RUN DRY CAPABILITY		WITH INTERNAL SLURRY SEAL AND/OR WATER JACKET		
	PUMP WET COOLED S.F. (2)		1.2	1.6	
PUMP WATER JACKET S.F. (2)		1.05	1.4		

NOTE:
FOR CONTINUOUS
HEAVY SHREDDER
APPLICATIONS FOR
PUMP TYPE PVO USE
LARGEST MOTOR
MODULE POSSIBLE.

TBM 150 LH (6")	DISCHARGE SIZE mm (IN)		150 (6")			NOTE: FOR CONTINUOUS HEAVY SHREDDER APPLICATIONS FOR PUMP TYPE PVO USE LARGEST MOTOR MODULE POSSIBLE.
	IMPELLER DIAMETER mm (IN)		250 (9.84")			
	MAX. PARTICLE SIZE mm (IN)		32 (1.26")			
	MOTOR FRAME SIZE		250TY	250TY	320TYS	
	MOTOR RATING HP (KW) (1)		30 (22)	40 (29.4)	50 (36.7)	
	FREQ. (Hz) / F.L. RPM		60 / 1750	60 / 1745	60 / 1770	
	VOLTAGE		230V or 460V or 575V 460V or 575V			
	INSULATION		F (150 DEG. C) H (185° C) - 90° C HIGH AMBIENT OPTIONAL			
	RUN DRY CAPABILITY		WITH INTERNAL SLURRY SEAL AND/OR WATER JACKET			
	PUMP WET COOLED S.F. (2)		1.3	1.73	2.1	
PUMP WATER JACKET S.F. (2)		1.15	1.5	1.85		

NOTE:
FOR CONTINUOUS
HEAVY SHREDDER
APPLICATIONS FOR
PUMP TYPE PVO USE
LARGEST MOTOR
MODULE POSSIBLE.

TBM 200 LH (8")	DISCHARGE SIZE mm (IN)		200 (8")		NOTE: FOR CONTINUOUS HEAVY SHREDDER APPLICATIONS FOR PUMP TYPE PVO USE LARGEST MOTOR MODULE POSSIBLE.
	IMPELLER DIAMETER mm (IN)		375 (14.76")		
	MAX. PARTICLE SIZE mm (IN)		40 (1.58")		
	MOTOR FRAME SIZE		360TYS	360TYS	
	MOTOR RATING HP (KW) (1)		75 (55.15)	100 (73.53) 125 (91.9)	
	FREQ. (Hz) / F.L. RPM		60 / 1170	60 / 1170 60 / 1170	
	VOLTAGE		460V or 575V		
	INSULATION		F (150 DEG. C) H (185° C) - 90° C HIGH AMBIENT OPTIONAL		
	RUN DRY CAPABILITY		WITH INTERNAL SLURRY SEAL AND/OR WATER JACKET		
	PUMP WET COOLED S.F. (2)		1.3 MIN. DEPENDING ON IMPELLER DIAMETER		
PUMP WATER JACKET S.F. (2)		1.15 MIN. DEPENDING ON IMPELLER DIAMETER			

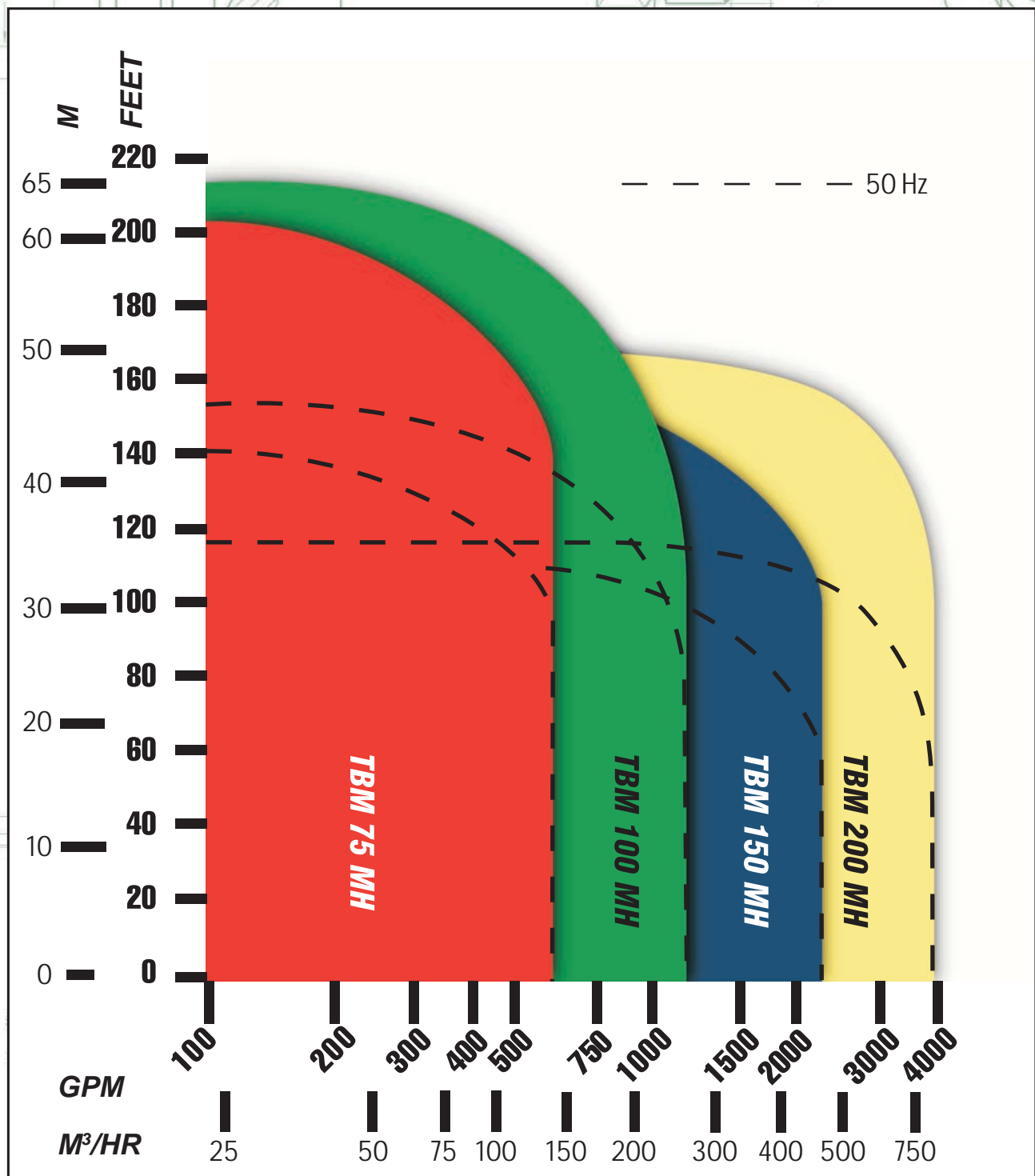
NOTE:
FOR CONTINUOUS
HEAVY SHREDDER
APPLICATIONS FOR
PUMP TYPE PVO USE
LARGEST MOTOR
MODULE POSSIBLE.

TBM 250 LH (10")	DISCHARGE SIZE mm (IN)		250 (10")			NOTE: FOR CONTINUOUS HEAVY SHREDDER APPLICATIONS FOR PUMP TYPE PVO USE LARGEST MOTOR MODULE POSSIBLE.
	IMPELLER DIAMETER mm (IN)		520 (20.47")			
	MAX. PARTICLE SIZE mm (IN)		56 (2.2")			
	MOTOR FRAME SIZE		360TYS	360TYS	360TYS	
	MOTOR RATING HP (KW)(1)		100 (73.53)	125 (91.9)	150 (110.3)	
	FREQ. (Hz) / F.L. RPM		60 / 880	60 / 880	60 / 880	
	VOLTAGE		460V or 575V			
	INSULATION		F (150 DEG. C) H (185° C) - 90° C HIGH AMBIENT OPTIONAL			
	RUN DRY CAPABILITY		WITH INTERNAL SLURRY SEAL AND/OR WATER JACKET			
	PUMP WET COOLED S.F. (2)		1.3 MIN. DEPENDING ON IMPELLER DIAMETER			
PUMP WATER JACKET S.F. (2)		1.15 MIN. DEPENDING ON IMPELLER DIAMETER				

NOTE:
FOR CONTINUOUS
HEAVY SHREDDER
APPLICATIONS FOR
PUMP TYPE PVO USE
LARGEST MOTOR
MODULE POSSIBLE.



Series TBM Medium-Head Hydraulic Coverage



Series TBM Medium-Head Motor Sizes

TBM 75 MH (3")	DISCHARGE SIZE mm (IN)	75 (3")			NOTE: FOR CONTINUOUS HEAVY SHREDDER APPLICATIONS FOR PUMP TYPE PVO USE LARGEST MOTOR MODULE POSSIBLE.
	IMPELLER DIAMETER mm (IN)	340 (13.38")			
	MAX. PARTICLE SIZE mm (IN)	35 (1.38")			
	MOTOR FRAME SIZE	250TY	250TY	250TY	
	MOTOR RATING HP (KW) (1)	25 (18.4)	30 (22)	40 (29.4)	
	FREQ. (Hz) / F.L. RPM	60 / 1750	60 / 1750	60 / 1745	
	VOLTAGE	230V or 460V or 575V	460V or 575V		
	INSULATION	F (150 DEG. C) H (185° C) - 90° C HIGH AMBIENT OPTIONAL			
	RUN DRY CAPABILITY	WITH INTERNAL SLURRY SEAL AND/OR WATER JACKET			
	PUMP WET COOLED S.F. (2)	1.3 MIN. DEPENDING ON IMPELLER DIAMETER			
	PUMP WATER JACKET S.F. (2)	1.15 MIN. DEPENDING ON IMPELLER DIAMETER			

TBM 100 MH (4")	DISCHARGE SIZE mm (IN)	100 (4")			NOTE: FOR CONTINUOUS HEAVY SHREDDER APPLICATIONS FOR PUMP TYPE PVO USE LARGEST MOTOR MODULE POSSIBLE.
	IMPELLER DIAMETER mm (IN)	340 (13.38")			
	MAX. PARTICLE SIZE mm (IN)	40 (1.56")			
	MOTOR FRAME SIZE	320TYS	320TYS	320TYS	
	MOTOR RATING HP (KW) (1)	30 (22)	40 (29.4)	75 (55.15)	
	FREQ. (Hz) / F.L. RPM	60 / 1165	60 / 1170	60 / 1770	
	VOLTAGE	230V or 460V or 575V	460V or 575V		
	INSULATION	F (150 DEG. C) H (185° C) - 90° C HIGH AMBIENT OPTIONAL			
	RUN DRY CAPABILITY	WITH INTERNAL SLURRY SEAL AND/OR WATER JACKET			
	PUMP WET COOLED S.F. (2)	1.3 MIN. DEPENDING ON IMPELLER DIAMETER			
	PUMP WATER JACKET S.F. (2)	1.15 MIN. DEPENDING ON IMPELLER DIAMETER			

TBM 150 MH (6")	DISCHARGE SIZE mm (IN)	150 (6")			NOTE: FOR CONTINUOUS HEAVY SHREDDER APPLICATIONS FOR PUMP TYPE PVO USE LARGEST MOTOR MODULE POSSIBLE.
	IMPELLER DIAMETER mm (IN)	430 (16.93")			
	MAX. PARTICLE SIZE mm (IN)	55 (2.16")			
	MOTOR FRAME SIZE	360TYS	360TYS	360TYS	
	MOTOR RATING HP (KW) (1)	75 (55.15)	100 (73.53)	125 (91.9)	
	FREQ. (Hz) / F.L. RPM	60 / 880	60 / 1170	60 / 1170	
	VOLTAGE	460V or 575V			
	INSULATION	F (150 DEG. C) H (185° C) - 90° C HIGH AMBIENT OPTIONAL			
	RUN DRY CAPABILITY	WITH INTERNAL SLURRY SEAL AND/OR WATER JACKET			
	PUMP WET COOLED S.F. (2)	1.3 MIN. DEPENDING ON IMPELLER DIAMETER			
	PUMP WATER JACKET S.F. (2)	1.15 MIN. DEPENDING ON IMPELLER DIAMETER			

TBM 200 MH (8")	DISCHARGE SIZE mm (IN)	200 (8")			NOTE: FOR CONTINUOUS HEAVY SHREDDER APPLICATIONS FOR PUMP TYPE PVO USE LARGEST MOTOR MODULE POSSIBLE.
	IMPELLER DIAMETER mm (IN)	470 (18.5")			
	MAX. PARTICLE SIZE mm (IN)	60 (2.36")			
	MOTOR FRAME SIZE	360TYS	360TYS	360TYS	
	MOTOR RATING HP (KW) (1)	100 (73.53)	125 (91.9)	150 (110.3)	
	FREQ. (Hz) / F.L. RPM	60 / 1170	60 / 1170	60 / 1170	
	VOLTAGE	460V or 575V			
	INSULATION	F (150 DEG. C) H (185° C) - 90° C HIGH AMBIENT OPTIONAL			
	RUN DRY CAPABILITY	WITH INTERNAL SLURRY SEAL AND/OR WATER JACKET			
	PUMP WET COOLED S.F. (2)	1.3 MIN. DEPENDING ON IMPELLER DIAMETER			
	PUMP WATER JACKET S.F. (2)	1.15 MIN. DEPENDING ON IMPELLER DIAMETER			

NOTES:

- (1) OTHER HP AND RPM RATINGS AVAILABLE
- (2) AT MAXIMUM FLOW RATE

STANDARD OPTIONS FOR POLARIS MOTOR MODULES

- EXPLOSION PROOF MOTORS, UL AND CSA LISTED FOR USE IN CLASS 1 GROUPS C&D HAZARDOUS LOCATIONS
- NON-EXPLOSION PROOF

STANDARD AND PREMIUM EFFICIENCY MOTOR ARMATURES

- CLASS H (185° C) AND 90° C HIGH AMBIENT MODELS AVAILABLE
- POLARIS "SEAL GUARD" 316SS MECHANICAL SEAL BOOT

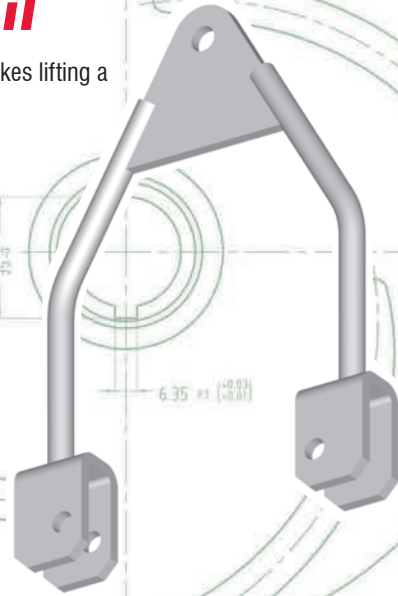
- COAL TAR EPOXY OR HEAVY DUTY DUROMAR™ MOTOR COATINGS



Pump Options and Accessories

Lifting Bail

The **Polaris Lifting Bail** makes lifting a pump safe and easy



Water Cooling Jacket

For hot sump or low level sump applications with air exposure longer than 15 minutes



Water Jet Ring

For applications with heavy solids content, or sump clean up with settled and caked sump floors.

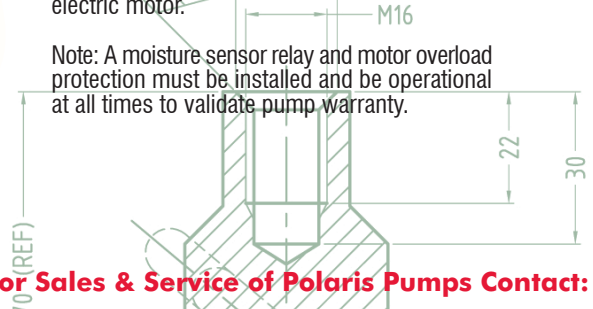


Moisture Sensor Relay

Detect Moisture before it gets to your motor

The **Moisture Sensor Relay** helps you detect moisture before it has a chance to infiltrate your electric motor.

Note: A moisture sensor relay and motor overload protection must be installed and be operational at all times to validate pump warranty.



The Polaris Pumps Line of Electro-Submersible Pumps Feature...

- Our Modular Design Allows Field Upgradeable Wet Ends: Convert An Open Suction Wet End Installation To Either A Solids Mixer Or Shredder Unit
- Complete High Chrome (650 BHN+) or CD4MCu Wet End Construction
- All Hardware 316 or 17-4 PH Stainless Steel
- Internal Slurry Seals with Tungsten Carbide Faces Standard
- Upgrade Kits For Severe Duty Slurry Seal Available For All Motor Sizes Frame 210 and larger.
- Motor Options For Explosion Proof Rating Per Class 1 Division C & D
- Assembled in the U.S.A. from U.S. and Canadian Components.

For Sales & Service of Polaris Pumps Contact:

www.polarispumps.com

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