

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.

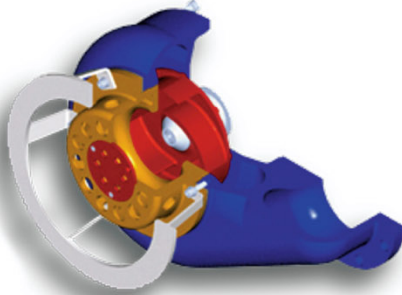
POLARIS

P U M P S

Pump'n Hard Iron

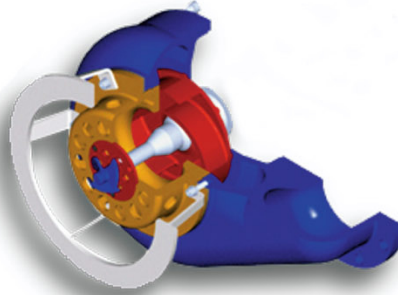
A Complete Line of Wet Ends...

Polaris Model PHO™ Standard Open Suction



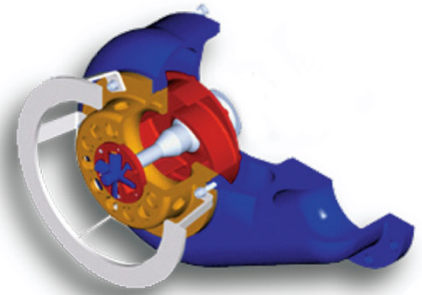
Our Standard Wet End, the Polaris Model PHO™ comprises a hard metal strainer and open impeller for any heavy duty pumping or de-watering application that does not require solids agitation.

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



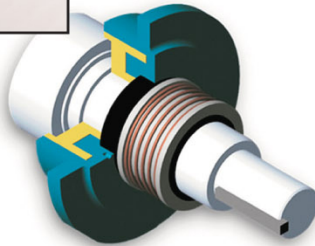
The Polaris Model PVO™ combines a hard metal shredder attachment and open impeller for applications with fibrous materials, wood yard waste, slaughter house and food processing waste or recycling.

A Complete Line of Motor Seals...

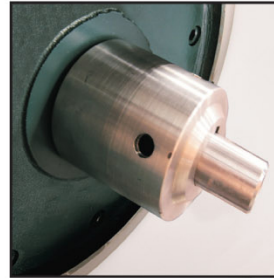
Polaris Standard Seal™



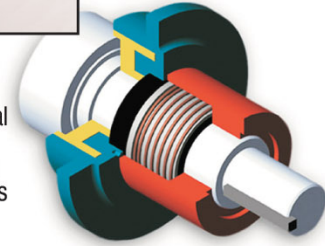
Standard motor seals, both inboard and outboard, are tandem mounted pusher types. Outboard seal has tungsten carbide faces.



Polaris Seal-Guard™



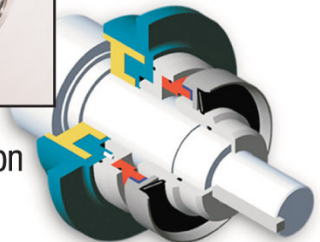
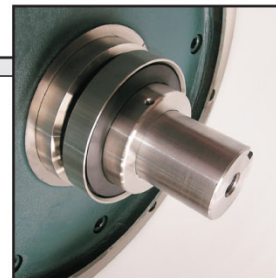
An economical solution for added seal protection for the outboard seal where long fibrous materials such as rags and paper pulp are contained in the fluid.



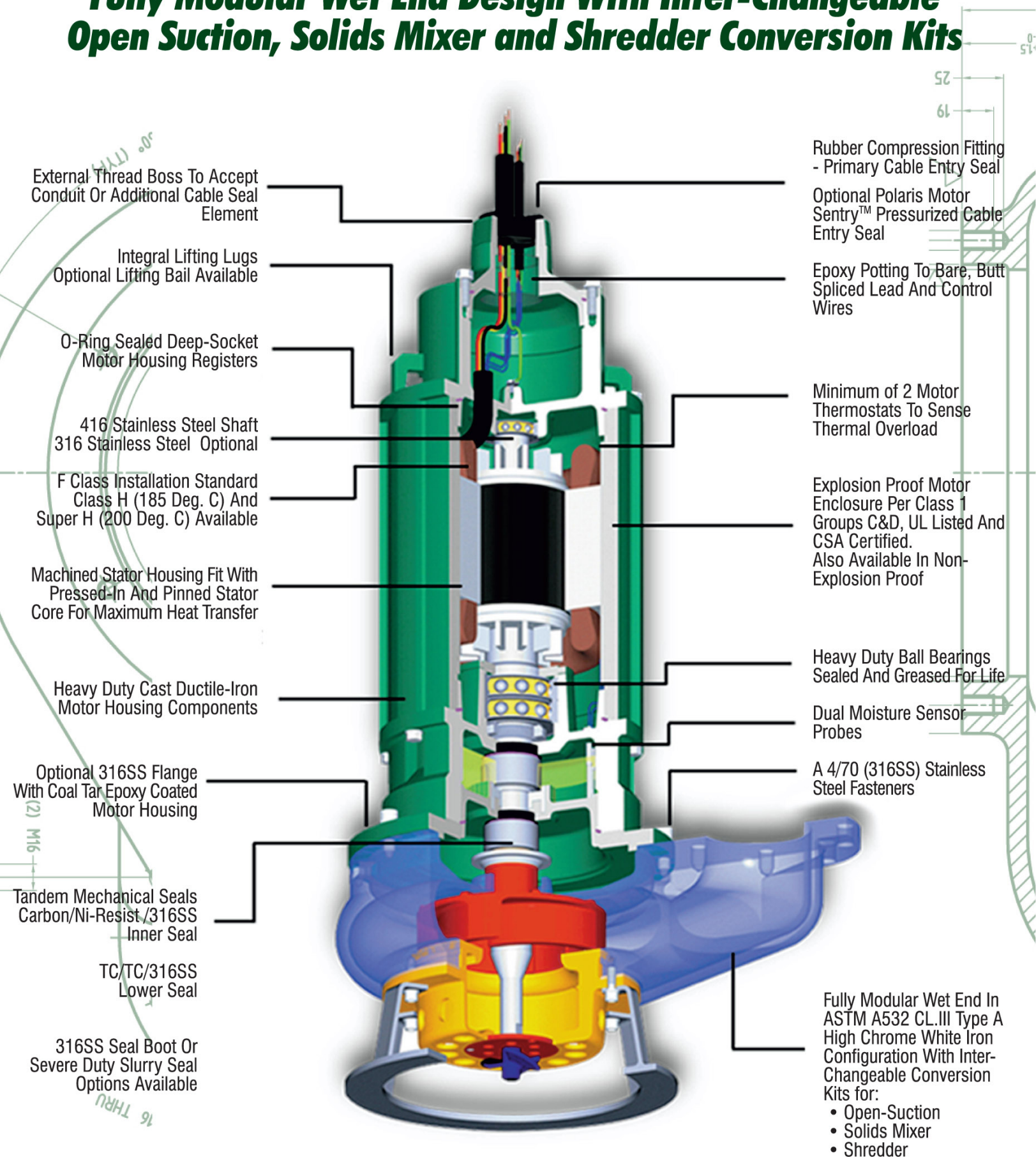
The Ultimate in Motor Protection...

Polaris Slurry-Boss™

Severe duty slurry mechanical seal for superior motor protection in abrasive slurry services.



Fully Modular Wet End Design With Inter-Changeable Open Suction, Solids Mixer and Shredder Conversion Kits



External Thread Boss To Accept Conduit Or Additional Cable Seal Element

Integral Lifting Lugs
Optional Lifting Bail Available

O-Ring Sealed Deep-Socket Motor Housing Registers

416 Stainless Steel Shaft
316 Stainless Steel Optional

F Class Installation Standard
Class H (185 Deg. C) And
Super H (200 Deg. C) Available

Machined Stator Housing Fit With
Pressed-In And Pinned Stator
Core For Maximum Heat Transfer

Heavy Duty Cast Ductile-Iron
Motor Housing Components

Optional 316SS Flange
With Coal Tar Epoxy Coated
Motor Housing

Tandem Mechanical Seals
Carbon/Ni-Resist /316SS
Inner Seal

TC/TC/316SS
Lower Seal

316SS Seal Boot Or
Severe Duty Slurry Seal
Options Available

Rubber Compression Fitting
- Primary Cable Entry Seal

Optional Polaris Motor
Sentry™ Pressurized Cable
Entry Seal

Epoxy Potting To Bare, Butt
Spliced Lead And Control
Wires

Minimum of 2 Motor
Thermostats To Sense
Thermal Overload

Explosion Proof Motor
Enclosure Per Class 1
Groups C&D, UL Listed And
CSA Certified.
Also Available In Non-
Explosion Proof

Heavy Duty Ball Bearings
Sealed And Greased For Life

Dual Moisture Sensor
Probes

A 4/70 (316SS) Stainless
Steel Fasteners

Fully Modular Wet End In
ASTM A532 CL.III Type A
High Chrome White Iron
Configuration With Inter-
Changeable Conversion
Kits for:

- Open-Suction
- Solids Mixer
- Shredder

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)	5 (3.7)	7.5 (5.5)	10 (7.35)	
	FREQ. (Hz) / F.L. RPM	60 / 1740	60 / 1740	60 / 1755	
	VOLTAGE	230V / 460V (1) or 575V			
	INSULATION	F (150 DEG. C)			
	RUN DRY CAPABILITY	WITH 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		

- NOTES:**
- (1) MOTOR CAN BE RECONNECTED IN THE FIELD FOR 230 OR 460 VOLT
 - (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)	10 (7.35)	15 (11)		
	FREQ. (Hz) / F.L. RPM	60 / 1755	60 / 1755		
	VOLTAGE	230V / 460V (1) or 575V			
	INSULATION	F (150 DEG. C)			
	RUN DRY CAPABILITY	WITH WATER JACKET			
	PUMP WET COOLED S.F. (2)	1.2	1.8		
PUMP WATER JACKET S.F. (2)	1.15	1.6			

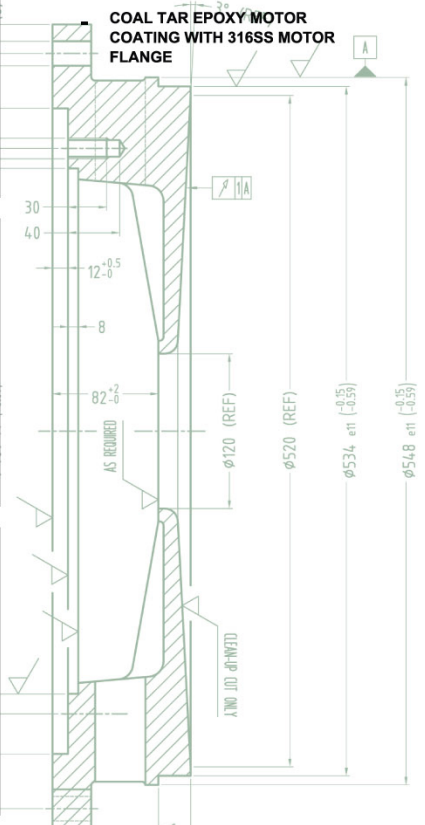
- STANDARD OPTIONS FOR POLARIS MOTOR MODULES**
- EXPLOSION PROOF MOTORS, UL AND CSA LISTED FOR USE IN CLASS 1 GROUPS C&D HAZARDOUS LOCATIONS
 - NON-EXPLOSION PROOF
 - STANDARD AND PREMIUM EFFICIENCY MOTOR ARMATURES
 - CLASS H (185 DEG. C) AND SUPER H (200 DEG. C) AVAILABLE
 - POLARIS "SEAL GUARD" 316SS MECHANICAL SEAL BOOT
 - POLARIS "SLURRY BOSS" HEAVY DUTY MECHANICAL SLURRY SEAL
 - POLARIS "MOTOR SENTRY" AUXILIARY CABLE ENTRY SEAL

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	210TYS		
	MOTOR RATING HP (KW)	15 (11)	20 (14.7)		
	FREQ. (Hz) / F.L. RPM	60 / 1755	60 / 1750		
	VOLTAGE	230V / 460V (1) or 575V			
	INSULATION	F (150 DEG. C)			
	RUN DRY CAPABILITY	WITH WATER JACKET			
	PUMP WET COOLED S.F. (2)	1.2	1.6		
PUMP WATER JACKET S.F. (2)	1.05	1.4			

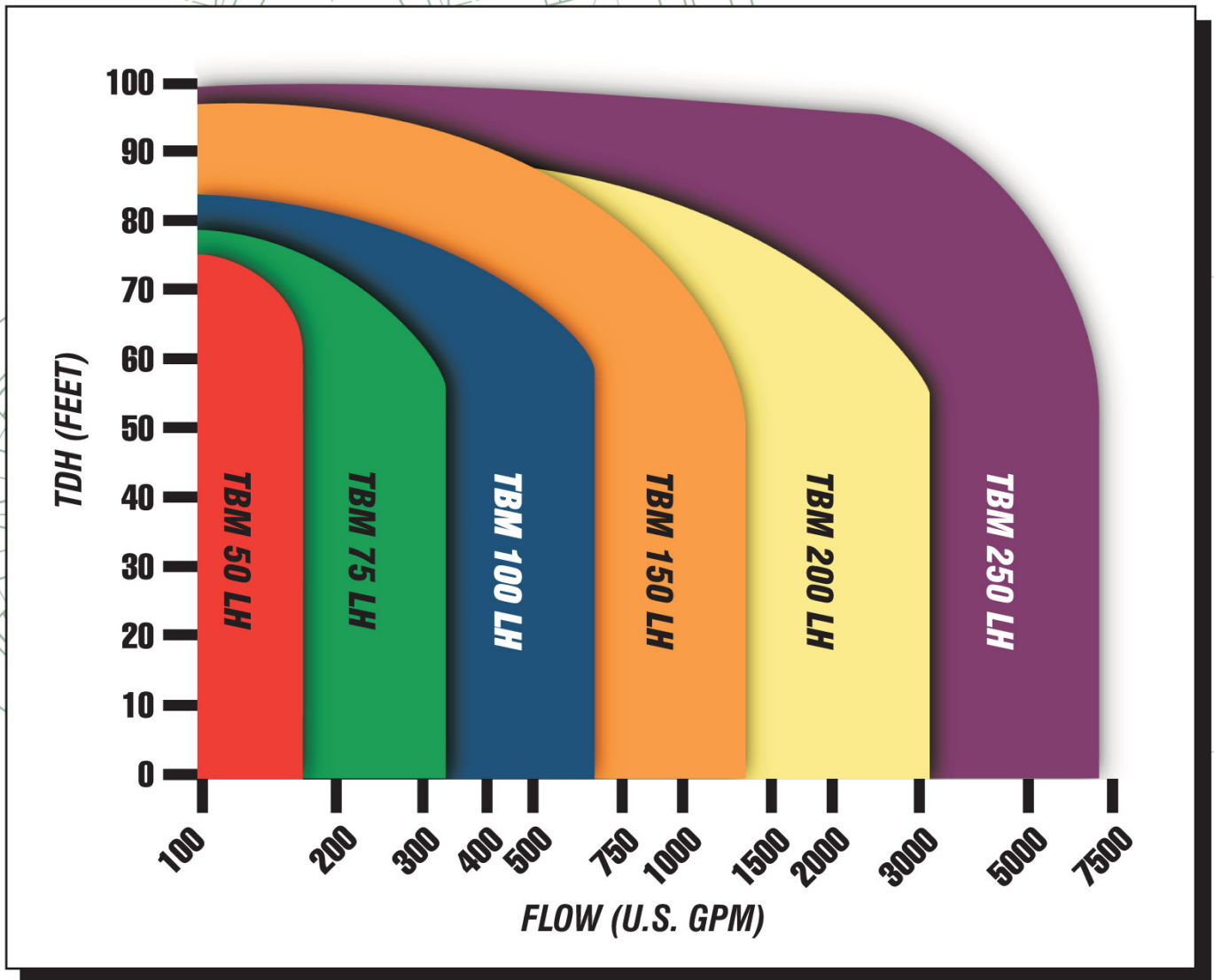
TBM 150 LH (6")	DISCHARGE SIZE mm (IN)	150 (6")			NOTE: FOR CONTINUOUS HEAVY SHREDDER APPLICATIONS FOR PUMP TYPE PVO USE LARGEST MOTOR MODULE POSSIBLE.
	IMPELLER DIAMETER mm (IN)	250 (9.84")			
	MAX. PARTICLE SIZE mm (IN)	32 (1.26")			
	MOTOR FRAME SIZE	250TY	250TY	320TYS	
	MOTOR RATING HP (KW)	30 (22)	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)			
	RUN DRY CAPABILITY	WITH 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		

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)	60 (2.36")			
	MOTOR FRAME SIZE	360TYS	360TYS	360TYS	
	MOTOR RATING HP (KW)	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)			
	RUN DRY CAPABILITY	WITH 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 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)	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)			
	RUN DRY CAPABILITY	WITH 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				



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 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)	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 DEG. C) - SUPER H (200 DEG. C) OPTIONAL			
	RUN DRY CAPABILITY	WITH 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)	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 DEG. C) - SUPER H (200 DEG. C) OPTIONAL			
	RUN DRY CAPABILITY	WITH 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)	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 DEG. C) - SUPER H (200 DEG. C) OPTIONAL			
	RUN DRY CAPABILITY	WITH 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)	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 DEG. C) - SUPER H (200 DEG. C) OPTIONAL			
	RUN DRY CAPABILITY	WITH 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) MOTOR CAN BE RECONNECTED IN THE FIELD FOR 230 OR 460 VOLT
- (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

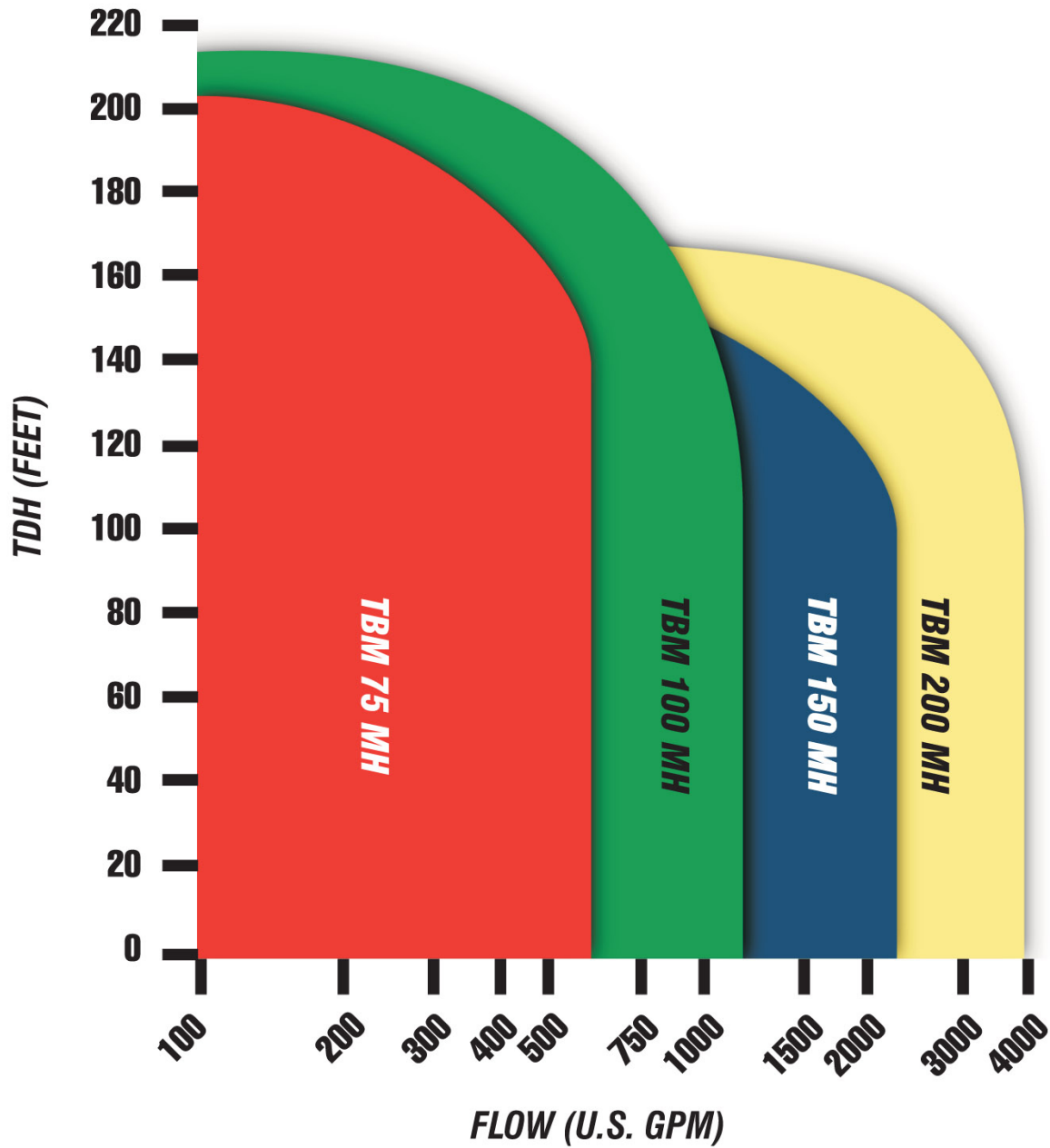
STANDARD AND PREMIUM EFFICIENCY MOTOR ARMATURES

- CLASS H (185 DEG. C) AND SUPER H (200 DEG. C) AVAILABLE
- POLARIS "SEAL GUARD" 316SS MECHANICAL SEAL BOOT

POLARIS "SLURRY BOSS" HEAVY DUTY MECHANICAL SLURRY SEAL

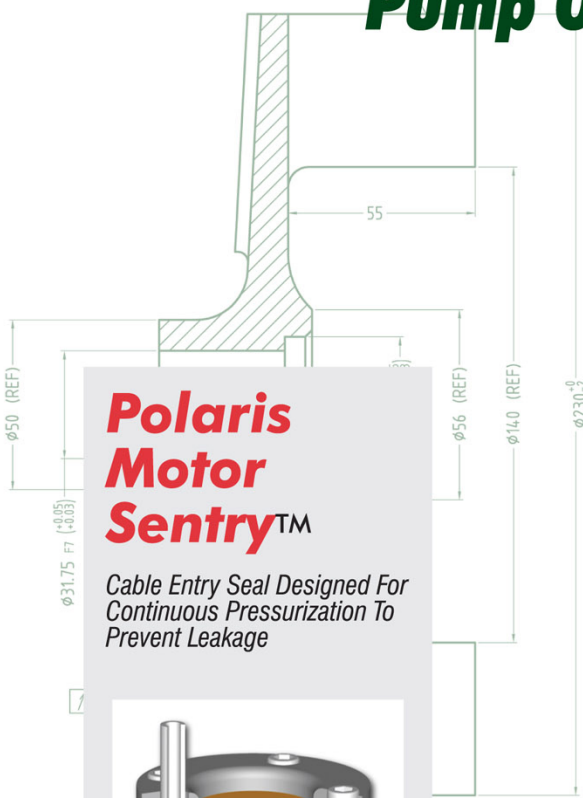
- POLARIS "MOTOR SENTRY" AUXILIARY CABLE ENTRY SEAL
- COAL TAR EPOXY MOTOR COATING WITH 316SS MOTOR FLANGE

Series TBM Medium-Head Hydraulic Coverage



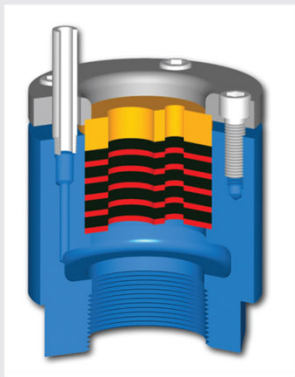
Pump Options and Accessories

CLEAN-UP CUT ONLY



Polaris Motor Sentry™

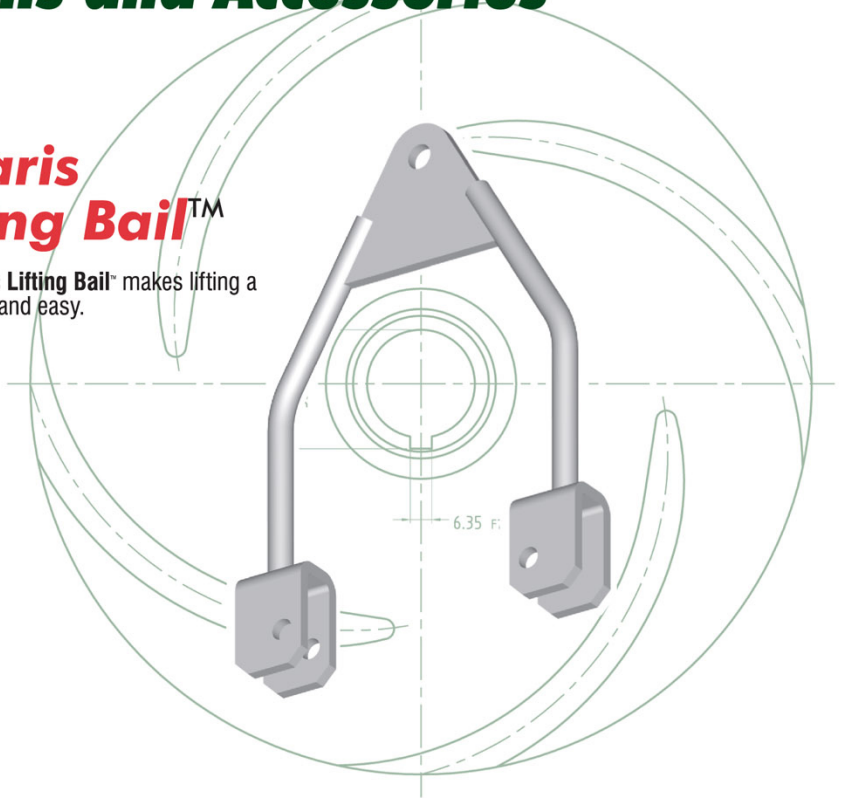
Cable Entry Seal Designed For Continuous Pressurization To Prevent Leakage



Polaris Motor Sentry™
Patent Pending

Polaris Lifting Bail™

The Polaris Lifting Bail™ makes lifting a pump safe and easy.

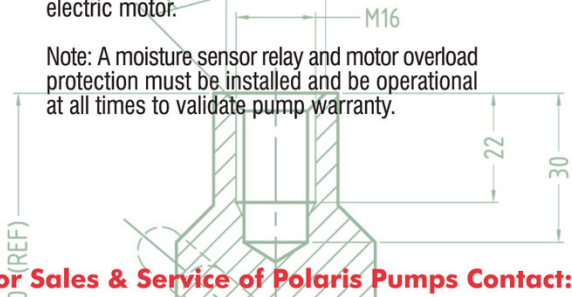


Moisture Sensor Relay

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) Wet End Construction
- All Hardware 316 or 17-4 PH Stainless Steel
- Tandem Mechanical Seals with Tungsten Carbide Faces Standard
- Add The Polaris Motor Sentry Cable Seal Which Creates A Leak-Proof Seal When Combined With A Pressurized Air Supply
- 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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