www.poseidonbarge.com

725 E Parr Rd, Berne, IN 46711 **Contact: (260) 422-8767**

Double Drum Winch

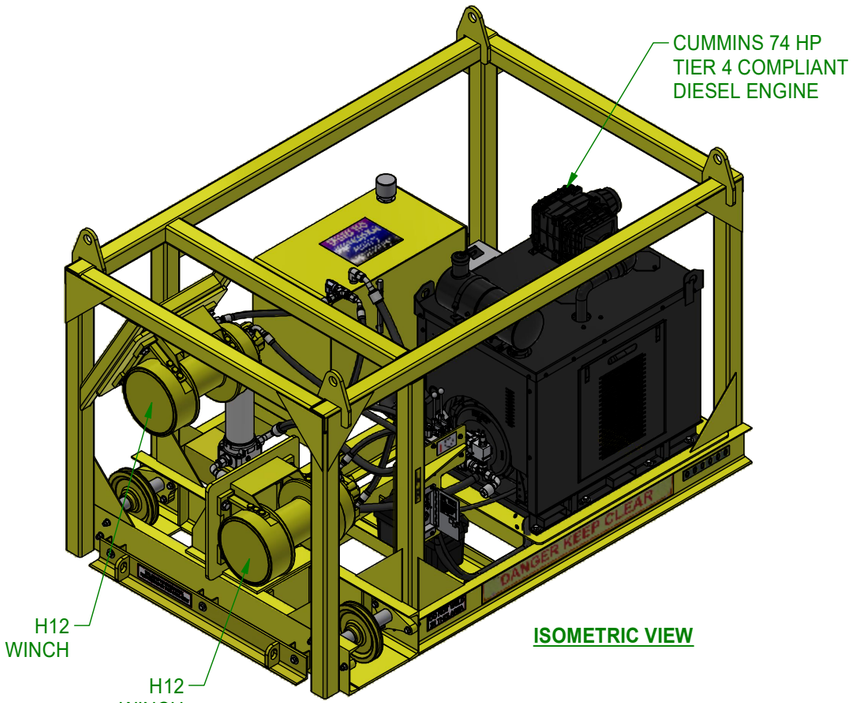
Operation Manual

725 E Parr Rd. Berne, IN, 46711
PH: 260-422-8767

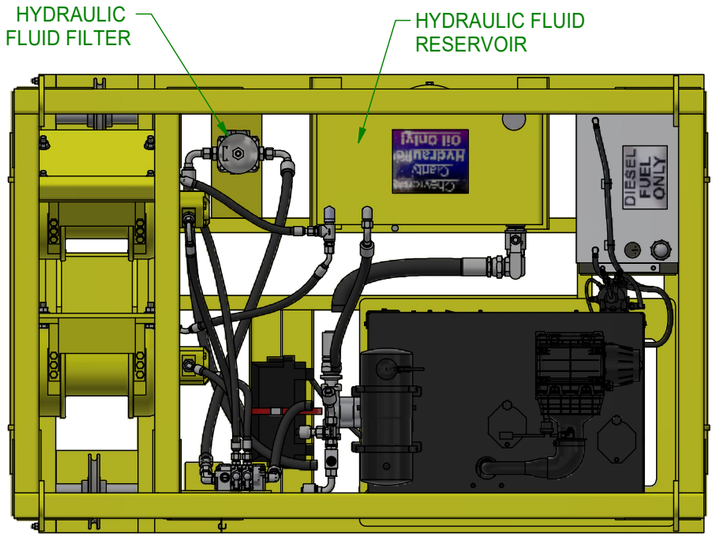
CONTENTS

P65 DOUBLE DRUM WINCH

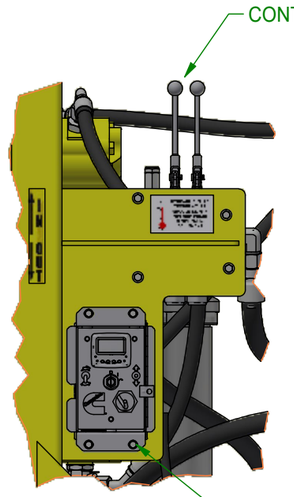
DESCRIPTION	UNIT QTY
APPROXIMATE UNIT WEIGHT	5750 LBS
WINCH PULL LINE MAXIMUM	12,000 LBS
FUEL TANK CAPACITY	17 GAL
HYD FLUID RSVR CAPACITY	70 GAL



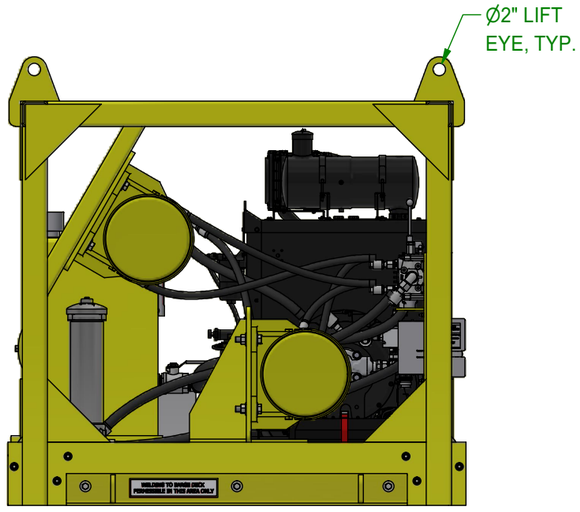
ISOMETRIC VIEW



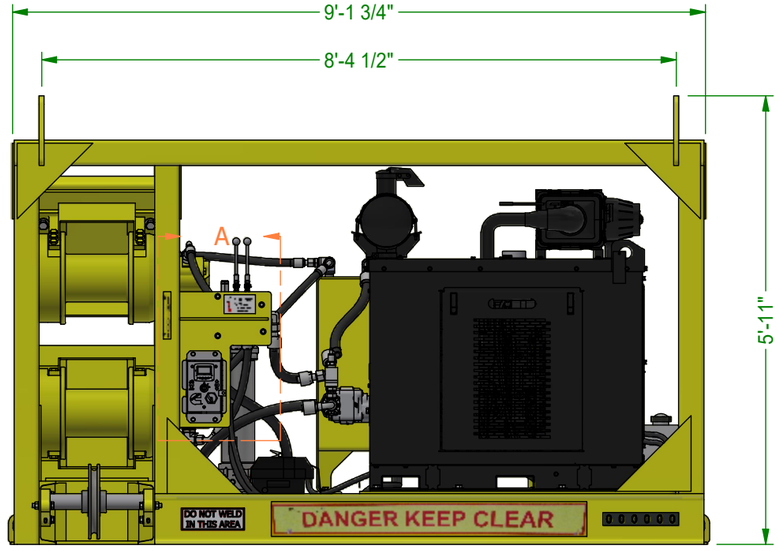
PLAN VIEW



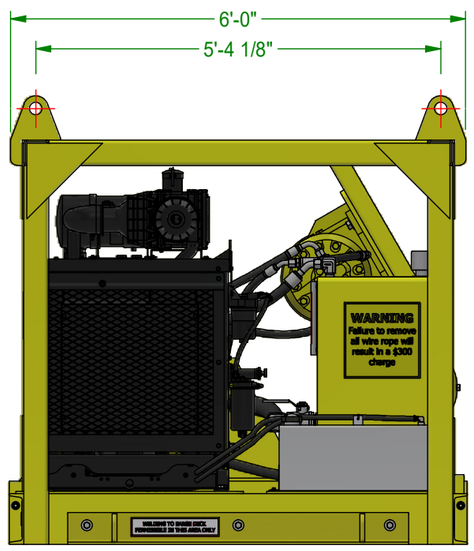
DETAIL A



END VIEW



FRONT VIEW
SCALE 1 : 24



END VIEW

POSEIDON BARGE LTD.

725 E. Parr Road
Berne, Indiana 46711
Phone: 1-260-422-8767
Fax: 1-260-207-8636

ALL DIMENSIONS ARE IN INCHES
EXCEPT WHERE STATED OTHERWISE.
x.x = ± 0.03
x.xx = ± 0.015
FRACTIONS = ± 1/16
ANGLES = ± 0.5°

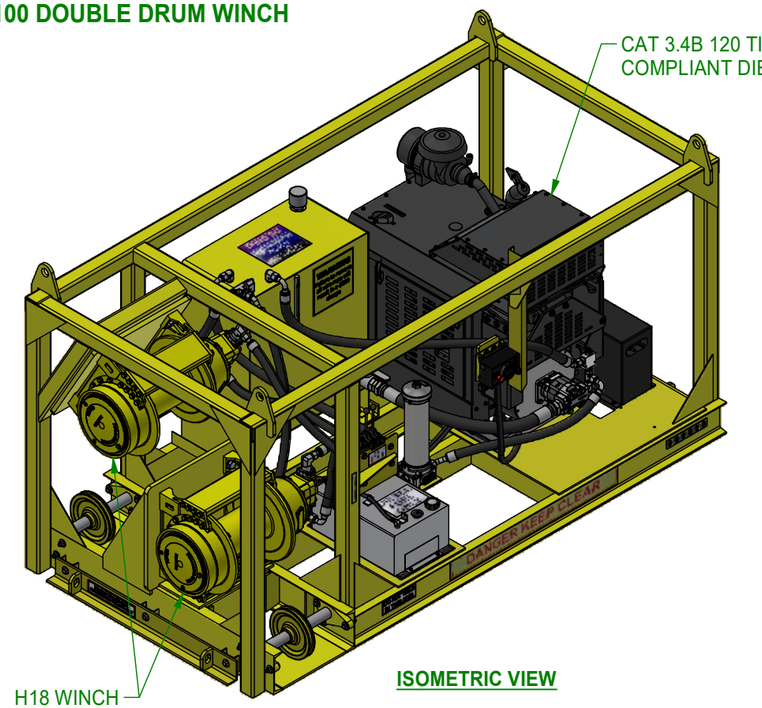
SCALE	As Noted		
DRAWN BY	BHively	DATE	9/23/2016
CHK'D BY	APurvis	DATE	9/23/2016
APP'D BY	JEmch	DATE	9/23/2016

WORKING DRAWING
WINCH, DOUBLE DRUM, P65 SPLIT

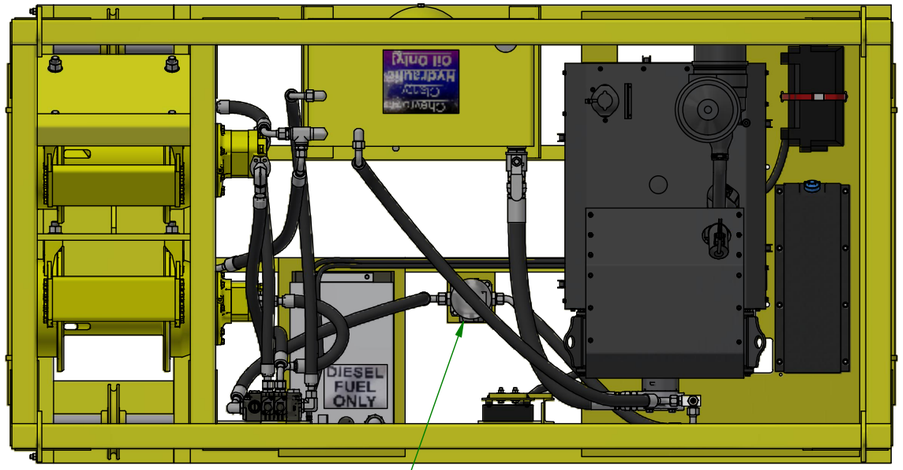
DRAWING NO.	SHEET #	REV
835-006	1 of 1	4.0

P100 DOUBLE DRUM WINCH

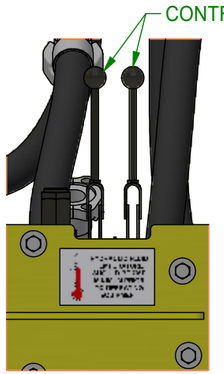
DESCRIPTION	UNIT QTY
APPROXIMATE UNIT WEIGHT	8030 LBS
WINCH PULL LINE MAXIMUM	18,000 LBS
FUEL TANK CAPACITY	17 GAL
HYD FLUID RSVR CAPACITY	110 GAL



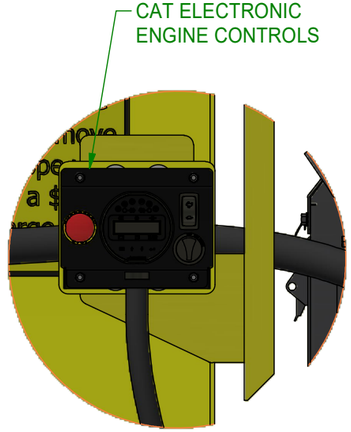
ISOMETRIC VIEW



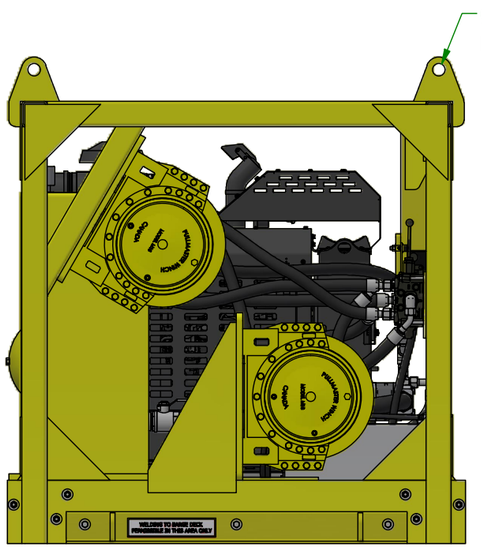
PLAN VIEW



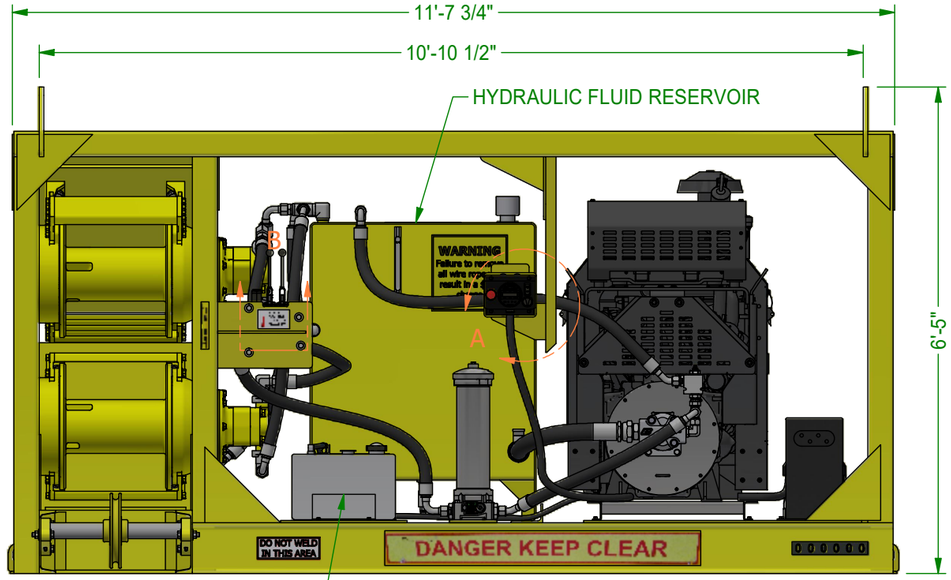
DETAIL B



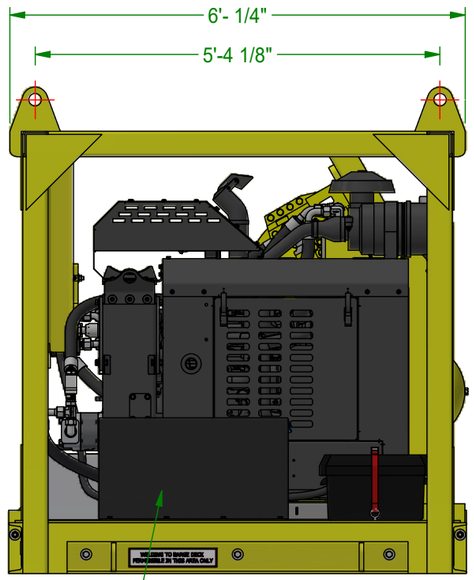
DETAIL A



END VIEW



FRONT VIEW
SCALE 1 : 24



END VIEW

POSEIDON BARGE LTD.

725 E. Parr Road
Berne, Indiana 46711
Phone: 1-260-422-8767
Fax: 1-260-207-8636

ALL DIMENSIONS ARE IN INCHES
EXCEPT WHERE STATED OTHERWISE.
x.x = ± 0.03
x.xx = ± 0.015
FRACTIONS = ± 1/16
ANGLES = ± 0.5°

SCALE	As Noted		
DRAWN BY	BHively	DATE	2/13/2023
CHK'D BY	JEmch	DATE	2/13/2023
APP'D BY	JEmch	DATE	2/13/2023

WORKING DRAWING
WINCH, DOUBLE DRUM, P100 SPLIT

DRAWING NO.	SHEET #	REV
835-011	1 of 1	0.0

INSTALLATION INSTRUCTIONS DOUBLE DRUM WINCH

1. The power unit weighs approximately 5,750 lbs for the P65 model and 8,100 lbs for the P100 model. Select the correct size of rigging for weight and use lifting points provided on the top four corners of the frame to lift the equipment. Keep the frame horizontal when lifting.
2. Place the winch on the deck platform in a location that is in direct line where the pockets will be on the platform if not using snatch blocks to redirect the cable. Weld the winch unit to the deck using the approved weld down bracket areas on the unit. Do not weld to the winch frame.
3. If using snatch blocks to redirect cable ensure that the snatch blocks are welded properly to the deck or using correct chains/rigging.
4. See weld down procedures on the next two pages for additional instructional welding information.

Welding Procedure Specification

WPS No.: **WPS-023**
Company Code: **MAFCO**
Date of Issue: **Jul. 11, 23**

Applicable Codes/Standards	Procedure Specification
AWS D1.3	SMAW

BASE MATERIAL AND CONSUMABLES

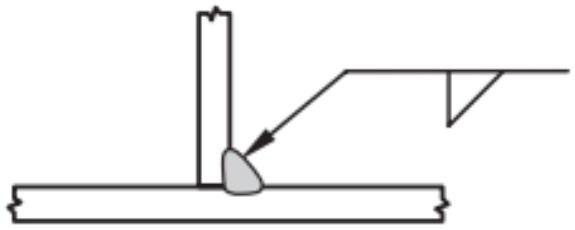
Welding Process	Process Mode	Welding Position	Joint Type
SMAW	MANUAL	Horizontal/Flat	T-Joint

Complete Joint Penetration Groove Weld		Partial Joint
☐ Back-gouged to sound metal	☐ Welded both sides without back gouging	☐ Penetration Groove Weld
☐ Welded into steel backing	☐ Welded from one side without backing	☒ Fillet Weld
☐ Welded onto other than steel backing (Copper)		

Base Materials	Thickness (in.)	Pipe Outside Diameter (in.)
ASTM A1011	11 gauge	
Shielding Gas/Flux Flow Rate	**Gas Composition**	**Flux Type**
N/A	N/A	N/A
Filler Metal	**Make/Type/Diameter**	**Electrical Stick-out**
E7018 H4R	Lincoln/Excalibur/ 1/8"	N/A

Preheat and interpass temperature (method) and control:	Ambient
Postweld heat treatment temperature (method) and control:	N/A

WELDING DETAILS

Joint Details	Bead Sequence Detail
	

PROCEDURE DETAIL

Material Thickness (in)	Weld Size (in)	No. of Layers/SIDE	Pass No.	Filler Metal Size	Current Polarity	Current (A)	Wire Feed Speed (in/min)	Voltage (V)	Travel Speed (in/min)
11 ga.	3/16"	1 / 1	1	1/8"	DCEP	108-132	N/A	21-24	4-6

REVISION	DATE CHANGED	AUTHOR	DESCRIPTION	AUTHORIZED PERSON'S APPROVAL
0	9/15/2021	John Joseph	Original Release based on PQR-007	

Disclaimer: All weld testing was performed in-house under Poseidon Barge observation and Poseidon Barge will not assume any liability for any welds or welding performed using the WPS's without Poseidon's direct supervision.

725 E Parr Rd. Berne, IN, 46711
PH: 260-422-8767

Welding Procedure Specification

WPS No.: **WPS-024**
Company Code: **MAFCO**
Date of Issue: **Jul. 11, 23**

Applicable Codes/Standards	Procedure Specification
AWS D1.3	SMAW

BASE MATERIAL AND CONSUMABLES

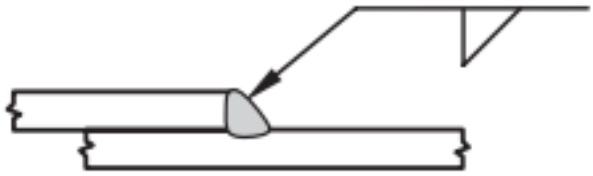
Welding Process	Process Mode	Welding Position	Joint Type
SMAW	MANUAL	Horizontal/Flat	Lap-Joint

Complete Joint Penetration Groove Weld		Partial Joint
☐ Back-gouged to sound metal	☐ Welded both sides without back gouging	☐ Penetration Groove Weld
☐ Welded into steel backing	☐ Welded from one side without backing	☒ Fillet Weld
☐ Welded onto other than steel backing (Copper)		

Base Materials	Thickness (in.)	Pipe Outside Diameter (in.)
ASTM A1011	11 gauge	
Shielding Gas/Flux Flow Rate	**Gas Composition**	**Flux Type**
N/A	N/A	N/A
Filler Metal	**Make/Type/Diameter**	**Electrical Stick-out**
E7018 H4R	Lincoln/Excalibur/ 1/8"	N/A

Preheat and interpass temperature (method) and control:	Ambient
Postweld heat treatment temperature (method) and control:	N/A

WELDING DETAILS

Joint Details	Bead Sequence Detail
	

PROCEDURE DETAIL

Material Thickness (in)	Weld Size (in)	No. of Layers/SIDE	Pass No.	Filler Metal Size	Current Polarity	Current (A)	Wire Feed Speed (in/min)	Voltage (V)	Travel Speed (in/min)
11 ga.	3/16"	1 / 1	1	1/8"	DCEP	108-132	N/A	21-24	4-6

REVISION	DATE CHANGED	AUTHOR	DESCRIPTION	AUTHORIZED PERSON'S APPROVAL
0	9/15/2021	John Joseph	Original Release based on PQR-008	

Disclaimer: All weld testing was performed in-house under Poseidon Barge, Ltd. observation and Poseidon Barge, Ltd. will not assume any liability for any welds or welding performed using the WPS's without Poseidon's direct supervision.

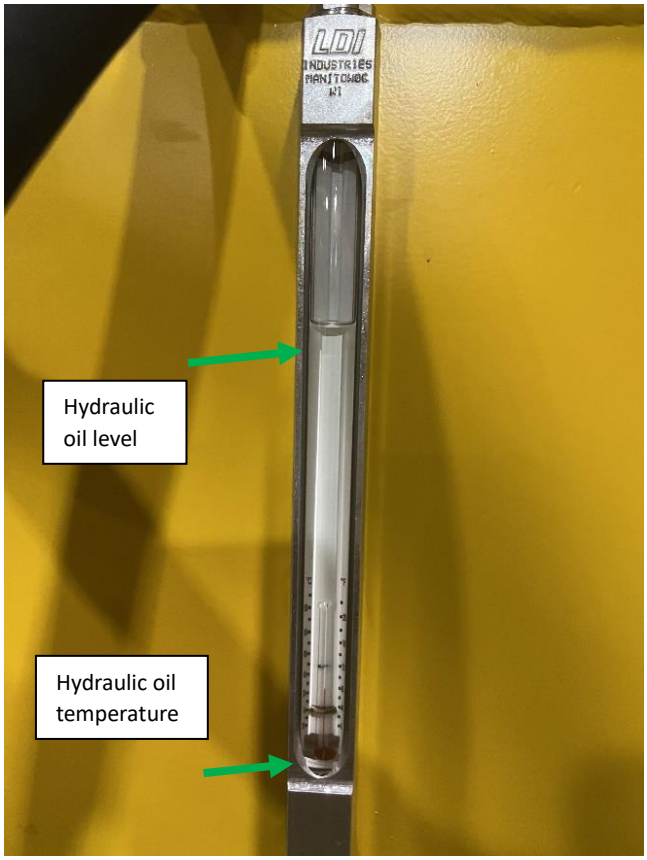
725 E Parr Rd. Berne, IN, 46711
PH: 260-422-8767

BEFORE OPERATION

1. Perform thorough inspection of connection hoses, power unit, winches, and frame that would hinder performance or operation.
2. Check for correct fluid level in fuel tank.
    a. Ensure the fuel in the tank is fresh
    b. Fuel tank will designate the correct fuel type
3. Check for correct fluid level in hydraulic reservoir
    a. Sight gauge will determine hydraulic level and temperature
    b. WARNING! If fluid needs to be added: DO NOT OPERATE until a mechanic has checked the unit and added the required amount of appropriate hydraulic fluid
4. Inspect engine – refer to engine manual provided for proper fluids. Always allow engine to cool before conducting any inspections.
    a. Check engine oil levels
    b. Check coolant levels

OPERATION

1. Engine Start Up and Shut Down
    A. Refer to engine owner's manual for startup and shut down procedure. Turn the key switch to the on position and then to the run position to start the engine. To prevent damage to the starting motor do not crank for more than 30 seconds. Wait two minutes between each attempt to start. If the engine does not start after three attempts check the fuel supply system. Absence of blue or white exhaust smoke during cranking indicates no fuel is being delivered.
    B. Allow the equipment to idle and warm up. Do not throttle up until the engine temperature is at least 135 degrees and the hydraulic oil is at least 70 degrees. Once to temp turn to run.
    C. Refer to engines owner's manual for normal and cold weather operation and precautions. Return the unit to idle for 3 minutes after operating under heavy load before turning off the unit.



OPERATING INSTRUCTIONS

DANGER

FAILURE TO FOLLOW OPERATING INSTRUCTIONS WILL RESULT IN PROPERTY DAMAGE, SEVERE INJURY OR DEATH.

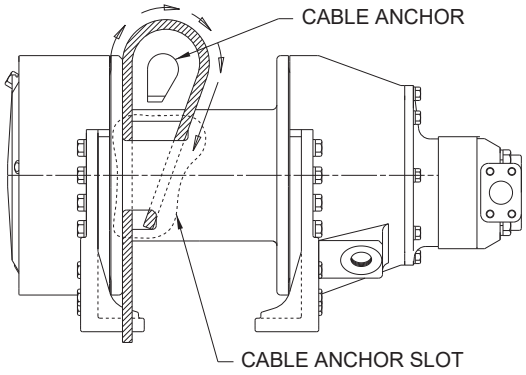
After the PULLMASTER planetary winch has been installed in accordance with the INSTALLATION INSTRUCTIONS, the wire rope can be fastened to the cable drum.

IMPORTANT: The ropes, chains, slings, etc. are not part of the winch and are not covered by this manual. Refer to manufacturer's handling, inspection and maintenance recommendations to avoid potential accidents. For selection of ropes, etc. please check following product standards: DIN 15020, prEN818-1/9, prEN 1492-1/2, prEN 1677-1/3 and other relevant product standards.

1) The cable drum of the PULLMASTER planetary winch has two cable anchor slots, one for clockwise and one for counterclockwise hoisting. Standard rotation for hoisting is clockwise when looking at the hydraulic motor of the unit. It is critical to select the cable anchor slot which will permit winding of the wire rope on the drum in the correct direction of rotation. If the wire rope is wound on the cable drum in the wrong direction of rotation, the winch will have no braking capacity. Each winch is shipped from the factory with a label on the drum indicating the correct cable anchor slot.

WIRE ROPE INSTALLATION
Clockwise hoisting winch shown.
(Use cable anchor slot on opposite side of drum for counterclockwise hoisting winch.)

Feed the wire rope through the cable anchor slot. Loop rope back into slot as shown. Insert cable anchor into slot, small end first and long side nearest the drum flange. Pull rope tight to wedge rope in slot.



SI1013-18

2) On wire rope installation, care must be taken that the wire rope is wrapped completely around the cable anchor and properly pulled into the cable anchor slot in the cable drum. The cable drum requires 5 wraps of wire rope for safety.

3) The winch operation is controlled by a single control valve lever which has a **forward**, a **reverse** and a **neutral** position. Speed control in either direction is obtained by modulation of the control valve lever. Maximum line speed in either direction is obtained when the control valve lever is moved as far as it can go. The disc brake of the winch will come on automatically when the winch control lever is returned to **neutral**.

4) Always warm up equipment prior to operating winch, particularly in low ambient temperature. Circulate hydraulic oil through the winch control valve for several minutes to warm the hydraulic system. To prime the winch with warm oil, operate the winch at slow speed, forward and reverse, several times.

5) Prevent corrosion damage to winch interior. If not used regularly, run winch up and down at least once every two weeks.

6) To ensure proper winch installation and function, raise and lower a full test load to a safe height before using winch for regular operation at the start of each shift.

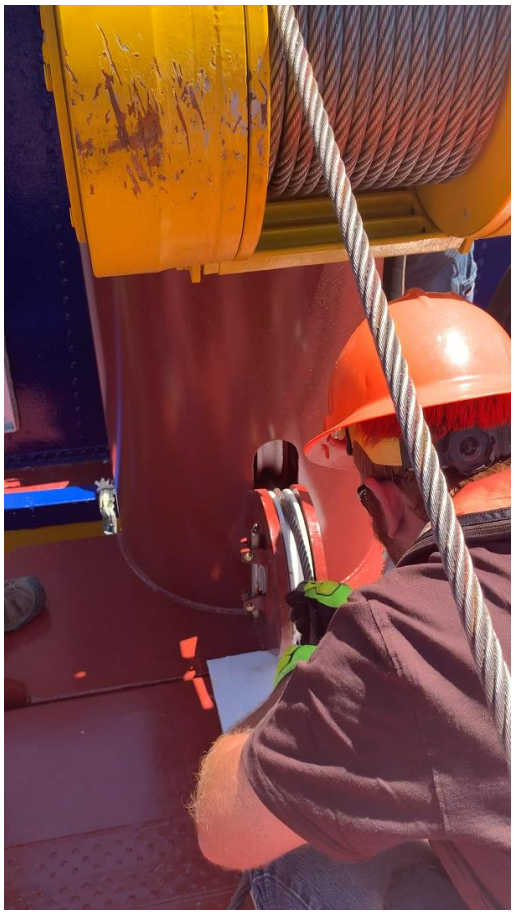
If, after a new installation, the winch does not function properly, refer to the TROUBLESHOOTING section of this manual.

WIRE ROPE INSTALLATION

1. The contractor must provide:
    a. P65 Model: a 5/8” cable becket with 5/8” cable up to 222’ per drum
    b. P100 Model: a 3/4” cable becket with 3/4" cable up to 170’ per drum
2. Follow the wire rope installations found in the winch manual. Ensure to leave 10-15’ of cable not installed on the winch drum for the next step.

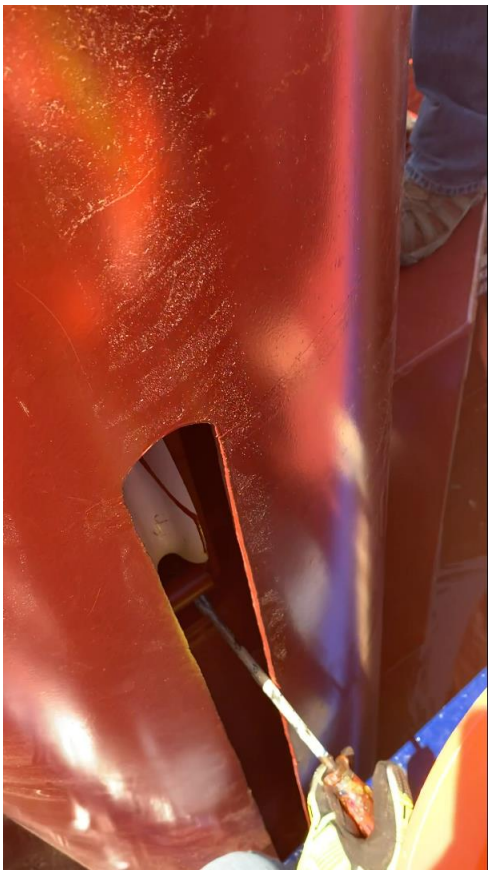
INSTALLING THE SPUDS

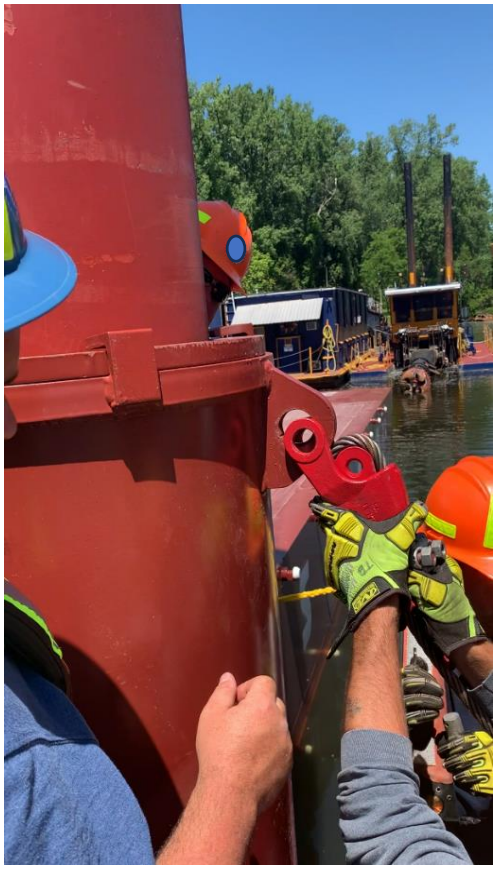
1. Select correct rigging for the top of the spud to the crane.
2. Using a crane raise the spud and lower it into the pocket until the spud sheave is just above the sheave of the pocket.
3. Insert the 10-15 feet of extra cable not installed on the winch drum over the top of the pocket sheave and under both sheaves of the spud until the cable can be pulled out the back side of the pocket. Ensure to guide the cable between the sheave and guide bars on the spud sheaves.



INSTALLING THE SPUD CONT.

4. Attach the cable becket or cable wedge socket provided by the contractor. Follow the cable becket manufacturer's guidelines for tightening and installation.
5. Attach the cable becket to the lifting eye on the back side of the pocket.
6. Push the hydraulic control level forward to rotate the winch drum clockwise to install the remaining cable. Continue until the weight of the spud is supported by the cable and not the crane.
7. Remove the crane rigging from the spud.
8. The control valve can now be used to raise and lower the spud.
9. Repeat this wire rope and spud install for the other pockets.
10. NOTE: only operate one spud at a time when raising or lowering.





<u>Maintenance and Service Intervals for Double Drum Winch Power Units</u>: Serial #_____

- Every 250 Hours:
  - Change Engine Oil and Filter
  - Inspect Air Filter/Check Restriction Indicator
  - Check Coolant Level
  - Check Hydraulic Oil Level – Chevron Clarity AW32
  - Blow out Radiator
  - Inspect engine belt
  - Drain Water Separator
  - Inspect Hydraulic Hoses for Wear
  - Inspect for Loose Fasteners
  - Load Test Battery_____
  - Clean Fuel Strainer in Banjo Bolt – Fuel Filter Housing (Cummins ONLY)
  - Clean Strainer screen on Injection Pump inlet port (Cummins ONLY)

- Every 500 Hours:
  - In addition to 250 Hour Service:
    - Change all Fuel Filters
    - Change all Screw On Hydraulic Filters/Check Indicator on Canister Style Pressure Filters and change if required
    - Change Air Filter
    - Change Gear Oil in Planetary on Winches – H12 & H18 ONLY
    - Inspect Lifting eyes
    - Inspect frame for weld cracks

- Every 2000 Hours: Should be performed In-House
  - In addition to 250 & 500 Hour Service:
    - Change Antifreeze in Engine Cooling System
    - Change Hydraulic Oil
    - Engine Valve Lash Clearance Adjustment

Serviced By:_____Date:_____

Winch Mount P65 / P100 Pre Ship Inspection

Serial Number:_____

Date Inspected:_____

Anticipated Ship Date:_____

Inspector:_____ **Engine SN#** _____ **P65** **P100**

		Comments
Hose / Fittings condition		
Cooling fan		
Drum Leaks		
Fluids Check		
Mounting Feet Installed		
Cable Anchors Attached		
Exhaust taped close		
Battery Charged		
Start Condition		
Coolant level		
Gauges functioning		
15 gal Fuel		
1 set of keys		
Reservoir oil level		
Metal frame cracks or fatigue		
Missing safety decals (replace)		
Valve Handles		

Drum Serial Number		P65	P100
Drum Serial Number		P65	P100

725 E Parr Rd. Berne, IN, 46711
PH: 260-422-8767

Hydraulic Power Unit HPU/ HPUD / HPUW Winter Maintenance List

Serial Number: _____ **Location:** _____

Date Maintained: _____ _____

Person Performing Maintenance: _____

Inspect & complete the following items prior to discontinuing extended usage during the cold season	Check when Completed	Comments
Add Anti-Gel to Fuel Tank	☐	_____
Remove Battery & Charge	☐	_____
Secure Rain Guard on Exhaust pipe	☐	_____
Check Coolant level	☐	_____
Check coolant freezing point	☐	_____
Check Hose / Fittings condition	☐	_____
Check Reservoir oil level	☐	_____
Check engine oil level	☐	_____
Cover unit with tarp	☐	_____

WARRANTY

- Poseidon Barge warrants to the original purchaser that the Poseidon products will be free from defects in workmanship and materials for the period of one year from date of shipment. Warranty covers only new equipment and not used equipment sold by Poseidon Barge. This warranty is void if any equipment is altered, modified, or repaired by any party other than Poseidon Barge, without written approval by an authorized Poseidon Officer.

BARIL
401 Growth Parkway
Angola, IN 46703
barilcoatings.us
260-665-8431

Dual Cure 306

Organic Zinc-Rich Primer

U.S. Patents:
6,833,424 & 7,169,876

Description:

Dual Cure 306 is a proprietary organic zinc rich urethane primer. It is formulated for ease of application as a two component system that enables low temperature cure, fast recoat times and resistance to mud-cracking. A self-priming and corrosion resistant primer, 306 is proven to protect steel in the harshest environments. This product was designed for production environments that require fast recoat times. Unlike typical zinc coatings on the market, 306 provides a very smooth, near automotive quality finish at a low VOC. Applications using DualCure 306 Primer may achieve ISO 12944 C-5 corrosion class.

Advantages:

- Extreme Corrosion Resistance
- Versatile Single or Dual-Component System
- Superior Adhesion
- 86% Zinc in the dried film
- Fast Recoat
- No Heat Cure
- Easy to Mix and Apply
- Superior Impact Resistance

Uses:

- Heavy-Duty Machinery
- Piping
- Structural Steel
- Manufacturing Equipment
- Vehicles

Material Properties	
Gloss Level	Matte
Density	20.10 lbs/gal 2.40 kg/ltr (mixed)
Volume Solids	63% (mixed)
VOC	3.2 lbs/gal 383 grams/ltr (mixed)
Dry Film Thickness	3.0-5.0 mils
Pot Life	2-hours mixed @ 68°F/20°C uncovered. May be extended by sealing against moisture
Theoretical Coverage	336 ft2/gal @ 3.0 mils DFT **Excess millage may cause blistering. 7 Mils max DFT*

Surface Preparation:

New or Unfinished Surfaces:

Ferrous Metal: For best performance, application to abrasive blasted surface is recommended. “Commercial Blast Cleaning” (SSPC-SP6) is recommended as the minimum for blast cleaning. Proper blast media and blasting equipment shall be used to produce a minimal profile depth of 1.5 mils, 2 mils is ideal. Do not reuse abrasive media. Remove blasting dust and grit from surfaces before painting. Blasted surfaces should be coated within 8 hours after blasting or before rusting or other contamination of the surface occurs. If blasting is not possible, use another Baril high performance primer.

Galvanized Metal: For best performance, application to abrasive blasted surface is recommended. “Brush Blast Cleaning”. (SSPC-SP7) is recommended as the minimum for blast cleaning. Comply with the instructions form the applicator of the galvanizing for the proper time frame from when the galvanizing is applied until the blasting process should be performed . Proper blast media and blasting equipment shall be used to produce a minimal profile depth of 1.5 mils. Do not reuse abrasive media. Remove blasting dust and grit from surfaces before painting. Blasted surfaces should be coated within 8 hours after blasting or before rusting or other contamination of the surface occurs.

Aluminum: Not recommended

Previously painted surfaces: Not recommended

Mixing Instructions:

Thoroughly mix product preferably using a mechanical mixing device. The temperature of the mixed product should at least be 45°F during application. Maintain agitation during application. Mix 4 parts of Dual Cure 306 Series Part A with 1 part of ACC-910 Part B.

Dual Cure 306

Organic Zinc Rich Primer

Application Instructions

Spray Method	Airless	Air Assisted Airless	Air Spray / HVLP
Thinner	MAK	MAK	MAK
Quantity	0-25%	0-25%	0-25%
Nozzle or Tip Size	0.013-.017	0.013-.015	1.1-1.8
Fluid Pressure	2000 - 3000 PSI	1000 - 1500 PSI	15-25 PSI
Air Pressure	50 lbs.	50 lbs.	50 lbs.
Dry Film Thickness	3.0 - 5.0 Mils	3.0 - 5.0 Mils	3.0 - 5.0 Mils

Performance Characteristics

Accelerated Weathering: ISO 11507 / ASTM G154	N/A
Impact (Direct & Indirect) ASTM D-2794	180 in lbs / 160 in lbs
Chemical Resistance	100 Double MEK Rubs
Flexibility: ISO 1519 / ASTM D522	Cylindrical Mandrel 10mm ISO 1520 Cupping 5-7 mm
Abrasion Resistance: ASTM D4060	Taber CS-17 / 1kg 400 cycles: 150 mg loss
Salt Spray: ASTM B-117 (5 mils) 306, (3mils) DualCure 174 Topcoat	9600 Hours
Acid Resistant:	Spills: Good, Fumes: Excellent
Chlorine Resistant:	Spills: Good, Fumes: Excellent

Dry Times: 70°F @ 3-5 mils DFT

To Touch:	30 mins.
To Handle:	1-hr
To Re-Coat:	15 mins. to 30 mins
To Topcoat:	45 mins. min. to 6 hrs. max. Sanding required > 8 hrs.

**Applying topcoat prior to ZRU drying may result in solvent pop. Relative humidity will assist in curing process. High humidity may cause a reduction in maximum available re-coat window.*

Health & Environmental:

In accordance with OSHA regulations on hazardous materials, harmful and irritating if in contact with skin, eyes and by inhalation. Observe safety information from MSDS sheets. Always wear proper protective suits, gloves and eye protection. In case of eye contact, immediately wash with large amounts of water and contact a medical expert. If spraying, always wear proper NIOSH approved respirators. Fresh air fed respirators are preferred. Do not eat, drink or smoke during application. Discharge, treatment or disposal is subject to federal, state, commonwealth, provincial and local laws. Since empty containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind or weld on or near this container.

Cleaning Instructions:

Cleaning tools: Clean immediately after application using MEK.

Warranty / Disclaimer:

The technical data and other printed information furnished are true and accurate to the best of our knowledge. The products are warranted pursuant to acceptance of limited warranty. A copy of which can be obtained from Baril Coatings, which is the exclusive warranty with respect to the sale of this product. The modification of any component or uses not outlined in this bulletin nullifies the warranty unless advance written confirmation is obtained from Baril Coatings. No other warranties expressed or implied shall apply. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, shall be to supply replacement materials as set forth in the limited warranty.

DualCure
lifetime protection

401 Growth Parkway
Angola, IN 46703
www.barilcoatings.us
260-665-8431

Sustainable Coating Solutions
BARIL

BARIL
401 Growth Parkway
Angola, IN 46703
barilcoatings.us
260-665-8431

Dual Cure 178

Semi-Gloss Polyaspartic
Finish Coat or Primer

U.S. Patents:
6,833,424 & 7,169,876

Description:

Dual Cure 178 is a patented high performance Polyaspartic, engineered to provide excellent exterior durability, adhesion and flexibility. This semi gloss protective coating may be applied to blasted steel as a DTM system that meets ISO 12944 (C2-C3). Dual Cure 178 may be used as a fast curing primer that can be topcoated with itself or other DualCure Topcoats. DualCure 178 is very chemical and abrasion resistant coating, as well as having good exterior durability and flexibility.

Advantages:

- Good Color and Gloss Retention
- Superior Scratch Resistance
- Superior Adhesion
- Flexibility
- 1-Hr Dry Time
- No Heat Cure
- Good Corrosion Resistance
- High Abrasion Resistance

Uses:

- Heavy-Duty Machinery
- Oil and Gas
- Containers
- Implements
- Exterior Steel
- Vehicles
- Marine

Material Properties	
Gloss Level	40° Satin Gloss
Density	11.58 lbs/gal (1.37kg/ltr) mixed
Volume Solids	56.7% (mixed)
VOC	3.3 lbs./gal (395 grams/ltr) mixed
Dry Film Thickness	2.0 - 4.0 mils
Colors Available	Full Color Spectrum Available
Pot Life (68°F/20°C)	25 minutes mixed
Theoretical Coverage	454 ft2 / gal @ 2.0 mils dry film thickness
Practical Coverage	As a guideline for airless spraying on large dimensions: 70% of theoretical coverage. For small dimensions: 50%

Surface Preparation:

New or Unfinished Surfaces:

Ferrous Metal: For use as a ***"Direct to Metal"*** application ***to abrasive blasted surface is recommended.***
"Commercial Blast Cleaning" (SSPC-SP6) is recommended as the minimum for blast cleaning. Proper blast media and blasting equipment shall be used to produce a minimum profile depth of 1.5 mils minimum. Do not reuse abrasive media. Remove blasting dust and grit from surfaces before painting. Blasted surfaces should be coated within 8 hours after blasting or before rusting or other contamination of the surface occurs.

If blasting is not possible, a primer is required along with chemical cleaning or pretreatment.

Suitable Primers: SteelKote 825, SteelKote 850, SteelKote 900

Galvanized Metal: Clean all contamination by scrubbing with a cleaning soap solution. Abrasive Blast and apply DualCure 306 Primer.

Aluminum or Stainless Steel: For best performance, application to abrasive blasted surface is recommended or etch with a phosphoric acid pretreatment solution is recommended for maximum adhesion. Clean all contamination by scrubbing with a cleaning soap solution. Prime with Steelkote 950 Multi Surface Epoxy Primer.

Mixing Instructions:

Thoroughly mix product, preferably using a mechanical mixing device. The temperature of the mixed product should be at least 45°F during application. Mix 2 parts of DualCure 178 Part A with 1 Part of ACT-902 Activator.

Dual Cure 178

Semi-Gloss Polyaspartic
Finish Coat or Primer

Application Instructions

Spray Method	Airless	Air Assisted Airless	Air Spray/MVLP/HVLP
Thinner	N/A	N/A	MAK
Quantity	N/A	N/A	0-10%
Nozzle or Tip Size	0.011-0.013	0.012-0.015	1.0-1.5
Fluid Pressure	2000 - 3000 PSI	1200 - 1800 PSI	8-16 PSI
Air Pressure	N/A	15-25 PSI	20-30 PSI
Dry Film Thickness	2.0 - 4.0 Mils	2.0 - 4.0 Mils	2.0 - 4.0 Mils

Performance Characteristics

Accelerated Weathering: ISO 11507 / ASTM G154 ISO 2813 / ASTM D523	2000 hours gloss retention @ 60° > 50%
Florida Black Box Exposure	N/A
Impact (Direct-Reverse) ASTM D-2794	160 in lbs
Chemical Resistance	100 Double MEK Rubs
Flexibility: ISO 1519 / ASTM D522	Cylindrical Mandrel 10mm ISO 1520 Cupping 5-7 mm
Abrasion Resistance: ASTM D4060	CS-17 / 1kg 1000 cycles: 50 mg loss
Salt Spray ASTM B-117	Direct to Metal Blasted 1500 hours

Dry Times: 70°F @ 3-5 mils DFT

To Touch:	30 Minutes
To Handle:	1-hour
To Re-Coat:	1-hour minimum / 12 hours maximum @ 2.5 mils dry
Force Cure:	Do not force cure, heat will not help product cure faster

Health & Environmental:

In accordance with OSHA regulations on hazardous materials, harmful and irritating if in contact with skin, eyes and by inhalation. Observe safety information from SDS sheets. Always wear proper protective suits, gloves and eye protection. In case of eye contact, immediately wash with large amounts of water and contact a medical expert. If spraying, always wear proper NIOSH approved respirators. Fresh air fed respirators are preferred. Do not eat, drink or smoke during application. Discharge, treatment or disposal is subject to federal, state, commonwealth, provincial and local laws. Since empty containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind or weld on or near this container.

Clean Up Instructions:

Cleaning tools: Clean immediately after application using MEK.

Warranty / Disclaimer:

The technical data and other printed information furnished are true and accurate to the best of our knowledge. The products are warranted pursuant to acceptance of limited warranty. A copy of which can be obtained from Baril Coatings, which is the exclusive warranty with respect to the sale of this product. The modification of any component or uses not outlined in this bulletin nullifies the warranty unless advance written confirmation is obtained from Baril Coatings. No other warranties expressed or implied shall apply. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, shall be to supply replacement materials as set forth in the limited warranty.

DualCure
lifetime protection

401 Growth Parkway
Angola, IN 46703
www.barilcoatings.us
260-665-8431

Sustainable Coating Solutions
BARIL

50P Series

High Pressure Filters

Parker

ENGINEERING YOUR SUCCESS.

50P Series

Applications

Applications for 50P series filters

- **Automotive specified equipment**
- **Hydrostatic transmission circuits**
- **Servo and proportional controls**
- **Offshore drilling rigs**
- **Mining equipment**
- **Power units**

The design objective for all Parker filters is to achieve a sensible balance between cost and performance. We use state of the art technology to arrive at innovative yet practical designs, which are cost effective for OEM's and users alike.

The 50P series allows you to customize each filter to closely match your needs. Choose the options which best fit your application. No need to waste money on features you don't need.

The 50P series filters are bowl-up, which provides several possible advantages. The bowl-up mounting makes servicing the elements quick and easy. Simply remove the top cover to access the element. A drain port is provided to allow oil be removed from filter prior to element servicing. This design reduces the possibility of oil spillage and injury to maintenance personnel.

The 50P series has optional manifold porting for space saving design that reduces the number of fittings and potential leak points. The porting is also designed to match the installation of many other manufacturers. Most important, the 50P series meets the SAE HF4 automotive standard.

Vent Plug
Purge all air from filter assembly
Improves system performance

Cover
Durable ductile iron
Top service elements
No oil spills during service

Bowl
Single or double length

Head
Ductile iron construction-SAE or manifold ports
Meets SAE HF4 automotive specification

Bypass (not visible)
Cartridge style
Precision matched assemblies

Indicators
Visual or electrical/visual
Several connector options

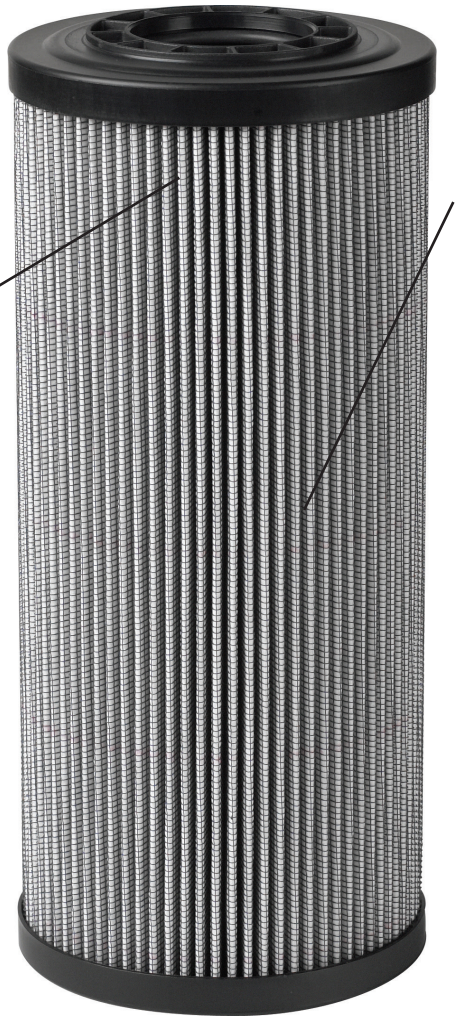
Drain Plug (not visible)
Drain oil for easy service

50P Series

Features

O-Ring Seal
Positive sealing for optimum element efficiency

Plastic End Caps
Excellent corrosion protection
Laser marked for clear long lasting identification



Microglass Media
Multi-layer for high capacity and high efficiency
Four different micron sizes available
Wire reinforced to prevent pleat bunching

Spiral Support Cylinders (Not Visible)
High strength consistent support
Continuous length eliminates leak points and increases surface area

Meets SAE HF4 specificaton for automotive uses

Feature	Advantage	Benefit
Base mounted filter	No brackets required for installation	Reduces installation costs
Top access cover	Remove element from top Lighter then remiving entire bowl	No oil mess
Visual and electrical indicators	Know exactly when to service elements	
Drain port	Drain all oil from assembly prior to servicing	Eliminates cross contamination
Vent port	Purges all trapped air in filter	Get the maximum performance from elements Prevents a “spongy” system
Multipass tested elements	Element performance backed by recognized test standards	Elements selected will have consistent performance levels
Microglass elements	Multi-layer media Wire reinforced pleats	High capacity with high efficiency No performance loss from pleat bunching

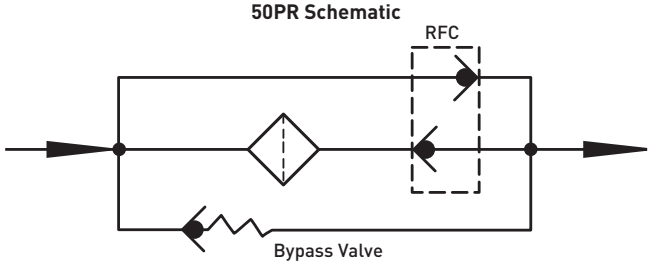
50P Series

50PR Reverse Flow Filter

The 50PR was designed specifically for hydrostatic transmission loops because of it's capability to handle reverse flow.

Closed circuit HSTs frequently reverse direction causing flow to reverse in the fluid lines. Pressure filters installed between pump and motor must be able to handle reverse flow without having contaminant washed off of the elements and back into the system. To prevent such an occurrence, the filters require the use of internal check valves to direct the flow through the element in one direction and around the element in the other. Parker's internal check valve design minimizes additional pressure loss and eliminates the cost associated with external valves and fittings. Also the internal design keeps the envelope dimensions of the filter to a minimum as can be seen on the installation drawing.

50PR Schematic



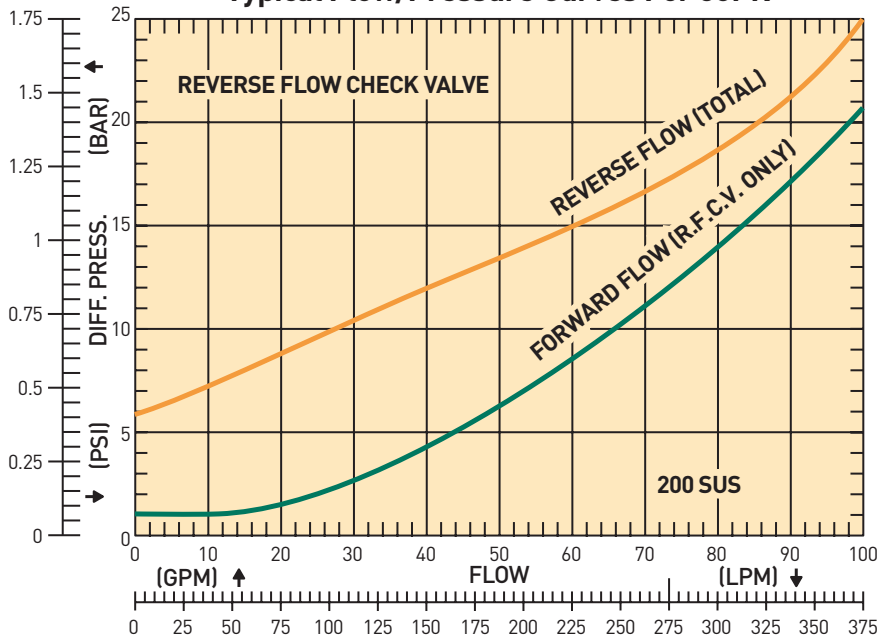
Sizing 50PR Filter Assemblies

To accurately determine the total pressure loss that will be seen when used in your system, the following steps should be taken.

1. Examine the "Flow vs. Pressure" curve below. Find the pressure drop for the maximum system flow on the forward flow curve. Record this value as "housing with check valve pressure loss."
2. Examine the appropriate pressure loss curve for the media and bowl length combination. These curves are found in the Element Performance Data section.
3. Find the pressure drop for the maximum flow rate through the filter and record this value as "element pressure loss."
4. Find the empty housing pressure drop for the maximum flow rate through the filter and record
   this value as "empty housing pressure loss."
5. Add the values obtained in steps 1 and 3, then subtract out the value from step 4. The resultant pressure loss should not exceed 1/3 of the bypass valve or indicator you intend to select. If this ratio exceeds 1/3, then a double length housing or other media grade may need to be considered.

Contact the division if there is any doubt as to the total pressure loss you have calculated.

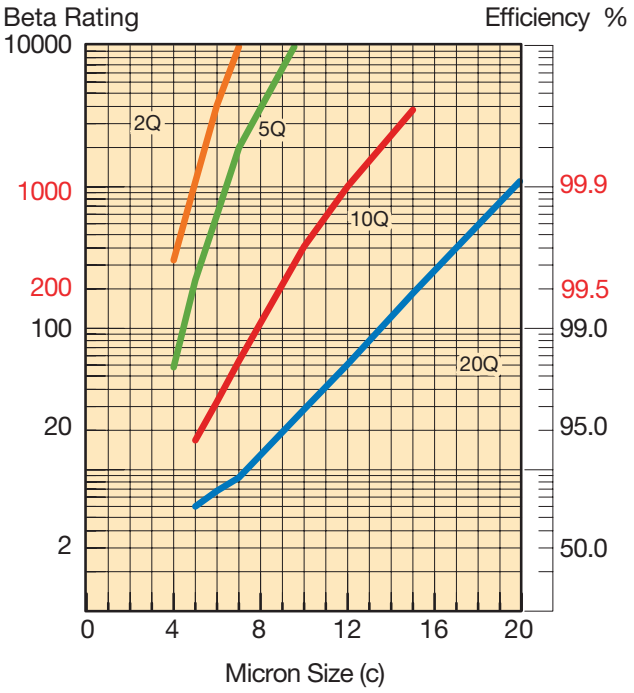
Typical Flow/Pressure Curves For 50PR



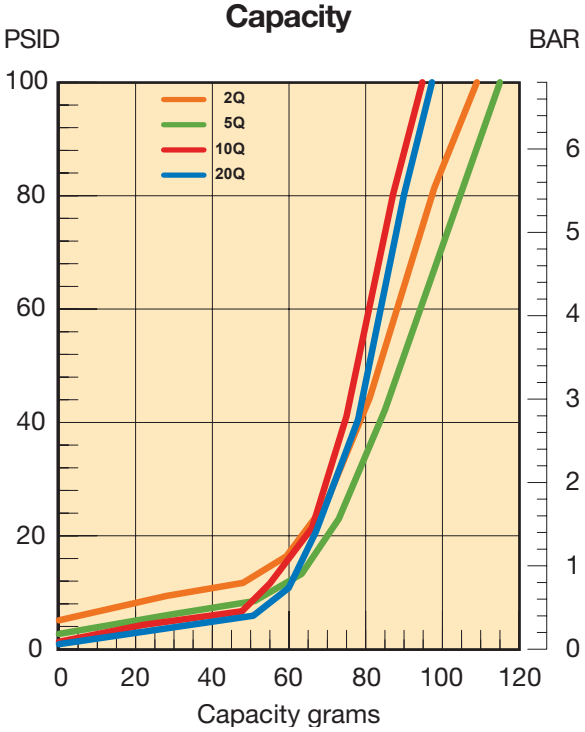
50P Series

50P-1 Element Performance

Efficiency



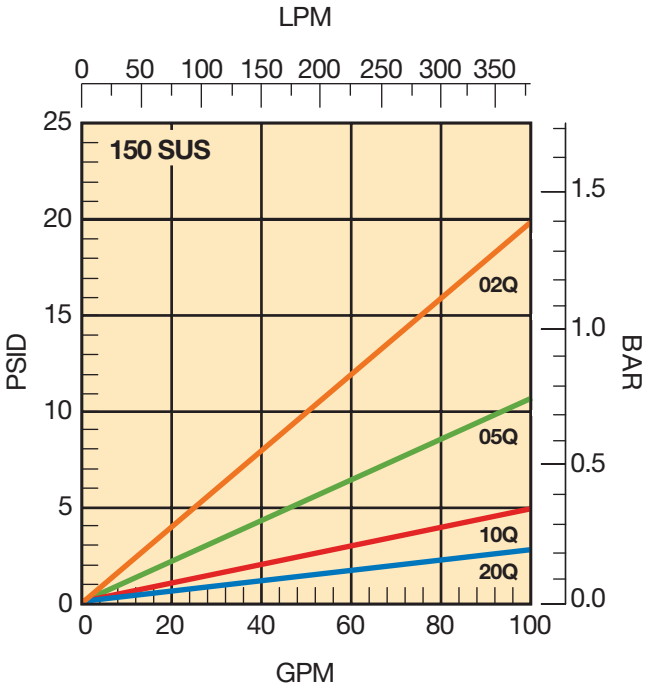
Capacity

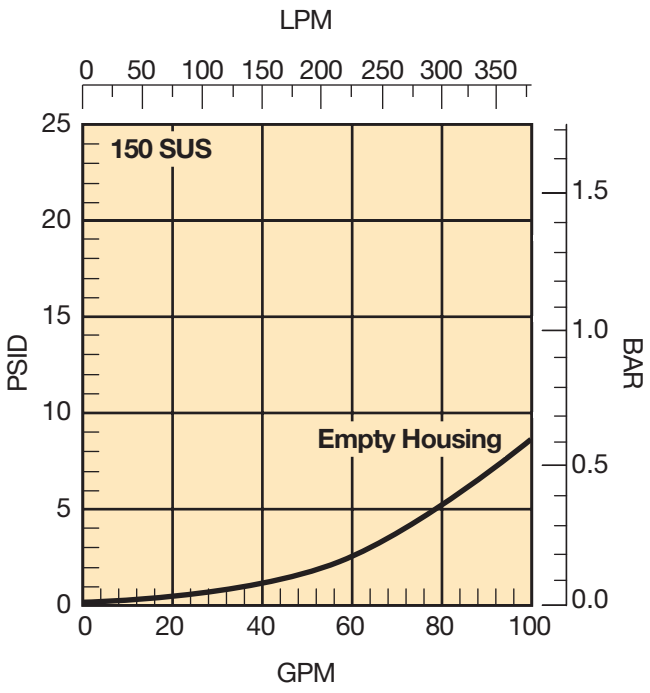


Results typical from Multi-pass tests run per test standard ISO 16889 @ 50 gpm to 100 psid terminal - 10 mg/L BUGL
Refer to Appendix on pages 264-265 for relationship to test standard ISO 4572.

*High Collapse Correction Factor:
"QH" Elements (2000 psid) = 1.4 times reported loss

Flow vs. Pressure Loss

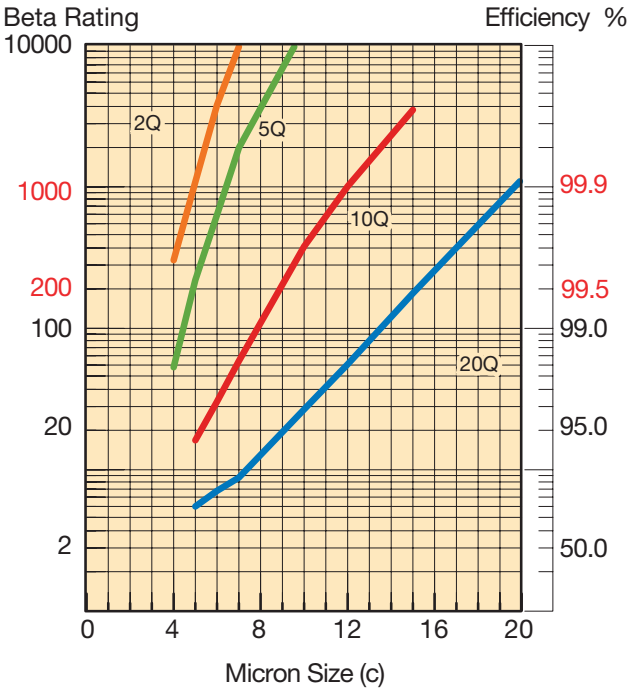




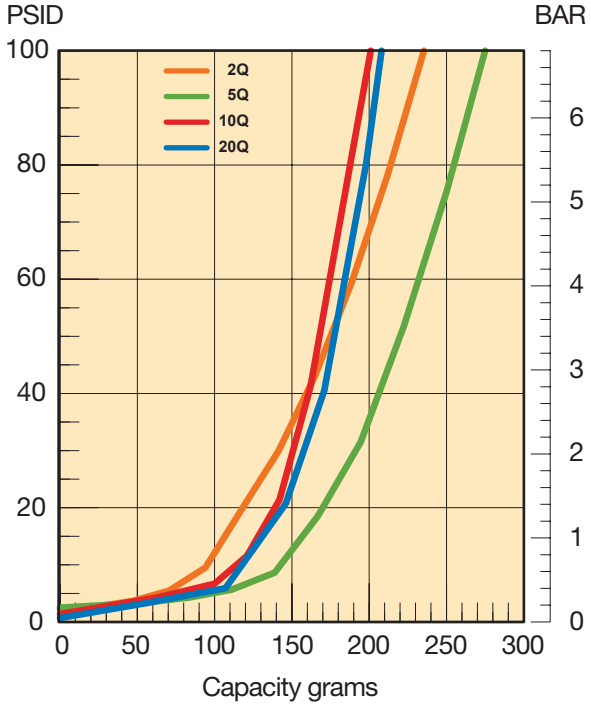
50P Series

50P-2 Element Performance

Efficiency

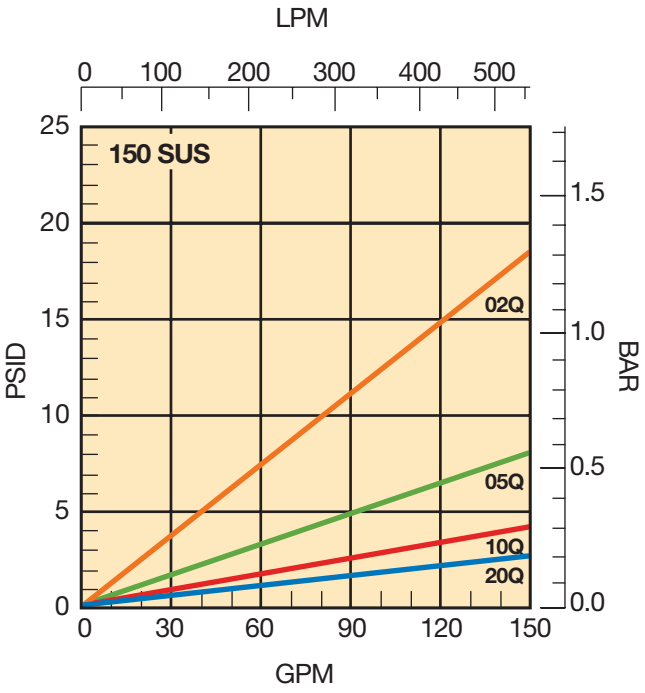


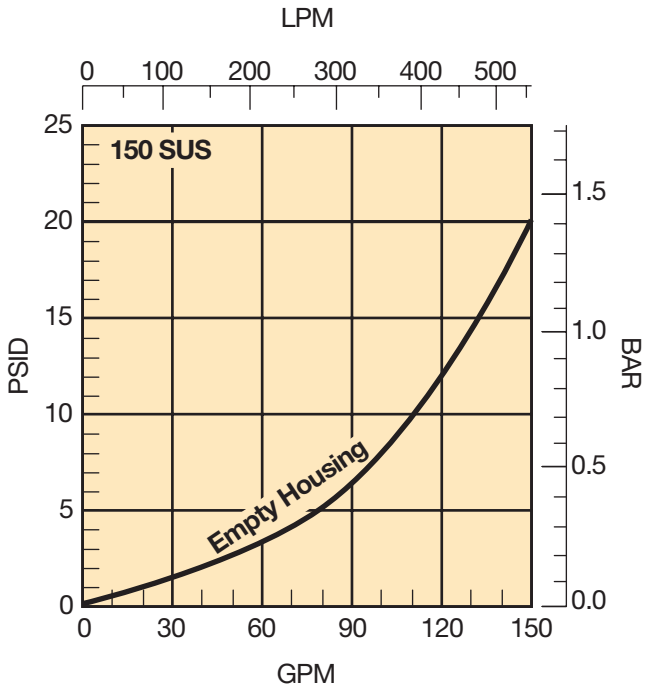
Capacity



Results typical from Multi-pass tests run per test standard ISO 16889 @ 80 gpm to 100 psid terminal - 10 mg/L BUGL
Refer to Appendix on pages 264-265 for relationship to test standard ISO 4572.

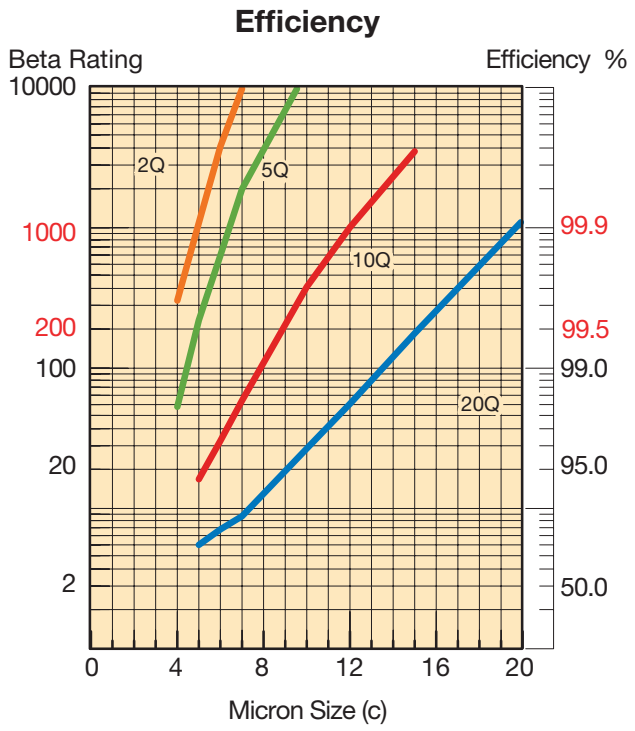
Flow vs. Pressure Loss

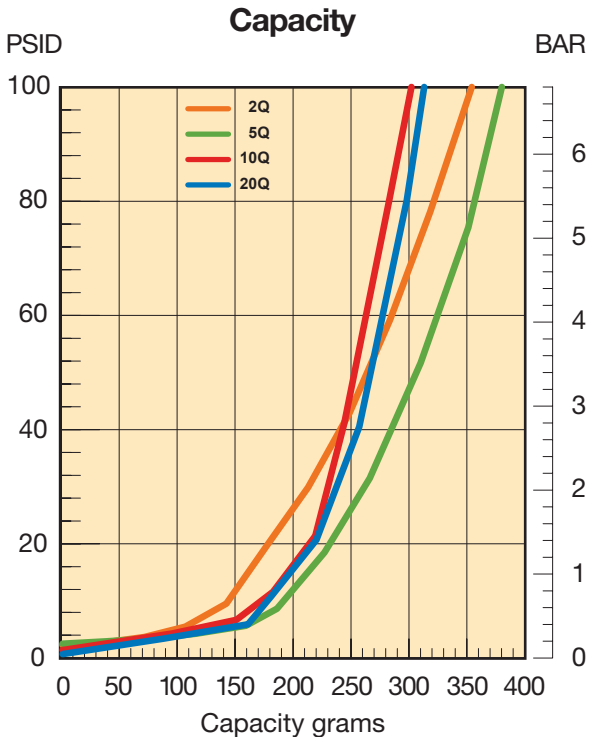




50P Series

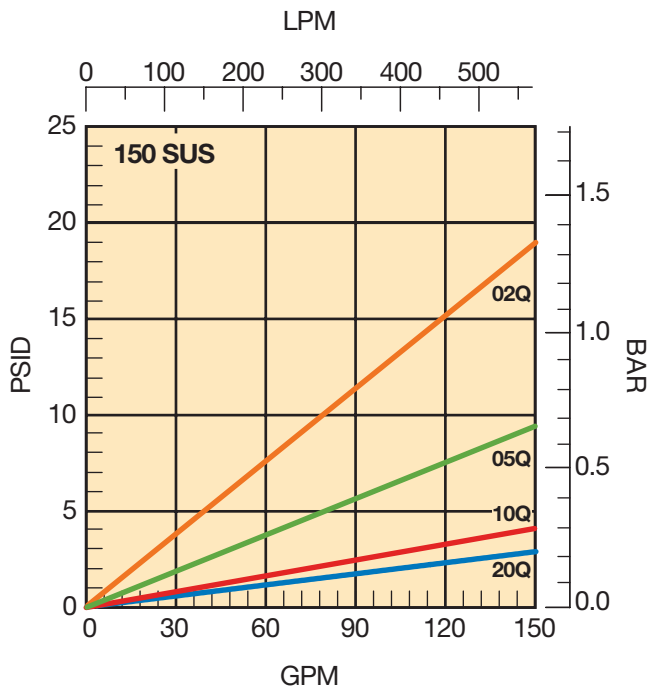
50P-3 Element Performance

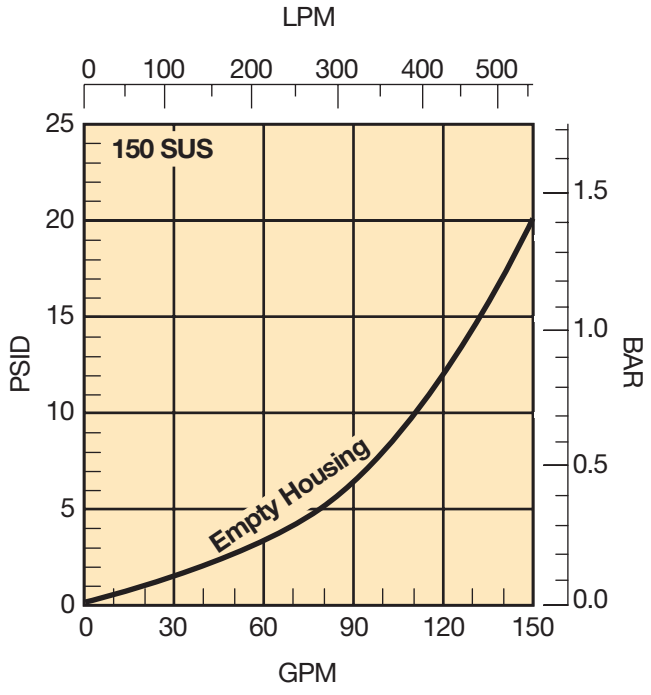




Results typical from Multi-pass tests run per test standard ISO 16889 @ 80 gpm to 100 psid terminal - 10 mg/L BUGL
Refer to Appendix on pages 264-265 for relationship to test standard ISO 4572.

Flow vs. Pressure Loss





50P Series

Specifications

Pressure Ratings:
Maximum Allowable Operating Pressure (MAOP): 5000 psi (344.8 bar)
Rated Fatigue Pressure: 3500 psi (241.4 bar)
Design Safety Factor: 3:1

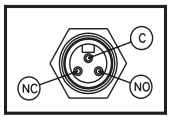
Element Collapse Rating:
150 psid (10.2 bar) standard
2000 psid (138 bar) high collapse "H" option

Operating Temperatures:
Buna: -40°F (-40°C) to 225°F (107°C)
Fluorocarbon: -15°F (-26°C) to 275°F (135°C)

Filter Materials:
Head (base) and Cover: ductile iron
Bowl: seamless steel tube

Dimensions: mm/inches	50P-1	50PR-1	50P-2	50PR-2	50P-3
X	387.1 15.24	404.6 15.93	622.8 24.52	640.3 25.21	850.4 33.48
Z	254.0 10.00	254.0 10.00	508.0 20.00	508.0 20.00	760.2 30.00

Indicators:
Visual 3 band (clean, change element, bypass)
Electrical: visual as above plus electrical switch with wire leads or connection as selected.
5A @ 240VAC
3A @ 28VDC
SPDT



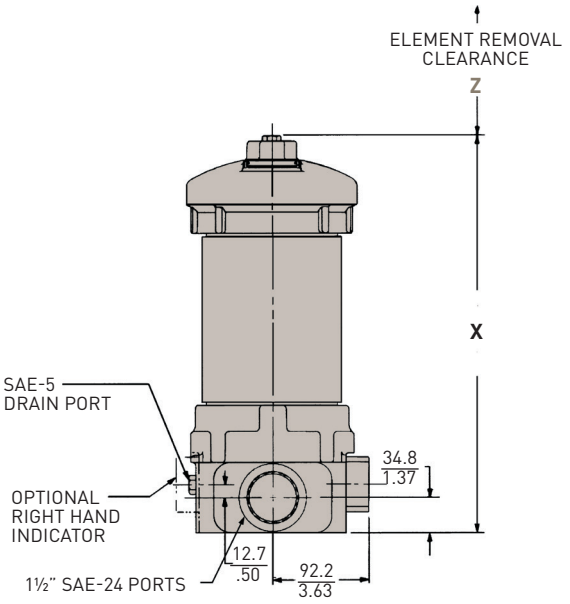
D

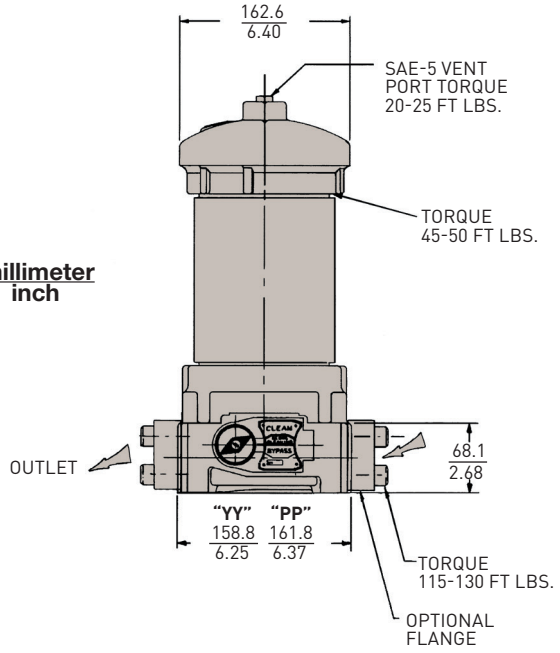
Color Coding:
White (normally closed)
Red (normally open)
Black (common)

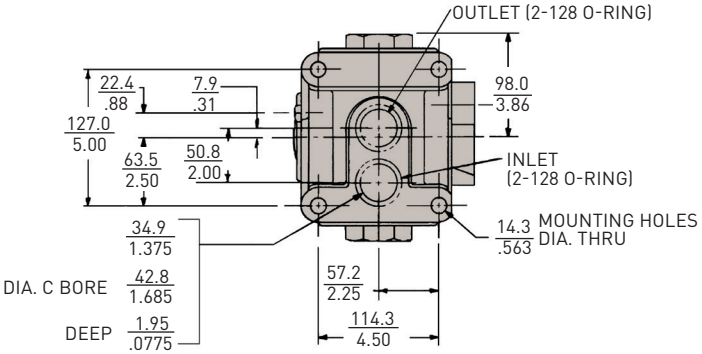
Shipping Weights (approximate):
50P-1: 56 lb. (25.4 kg)
50P-2: 77 lb. (34.9 kg)
50P-3: 95 lbs. (43.0 kg)
50PR-1: 59 lb. (26.8 kg)
50PR-2: 80 lb. (36.3 kg)

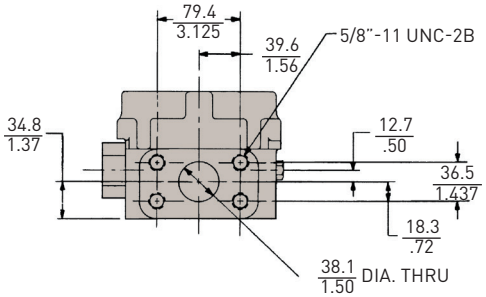
Drawings are for reference only.
Contact factory for current version.

Linear Measure: millimeter / inch









50P Series

Parts List and Service Instructions

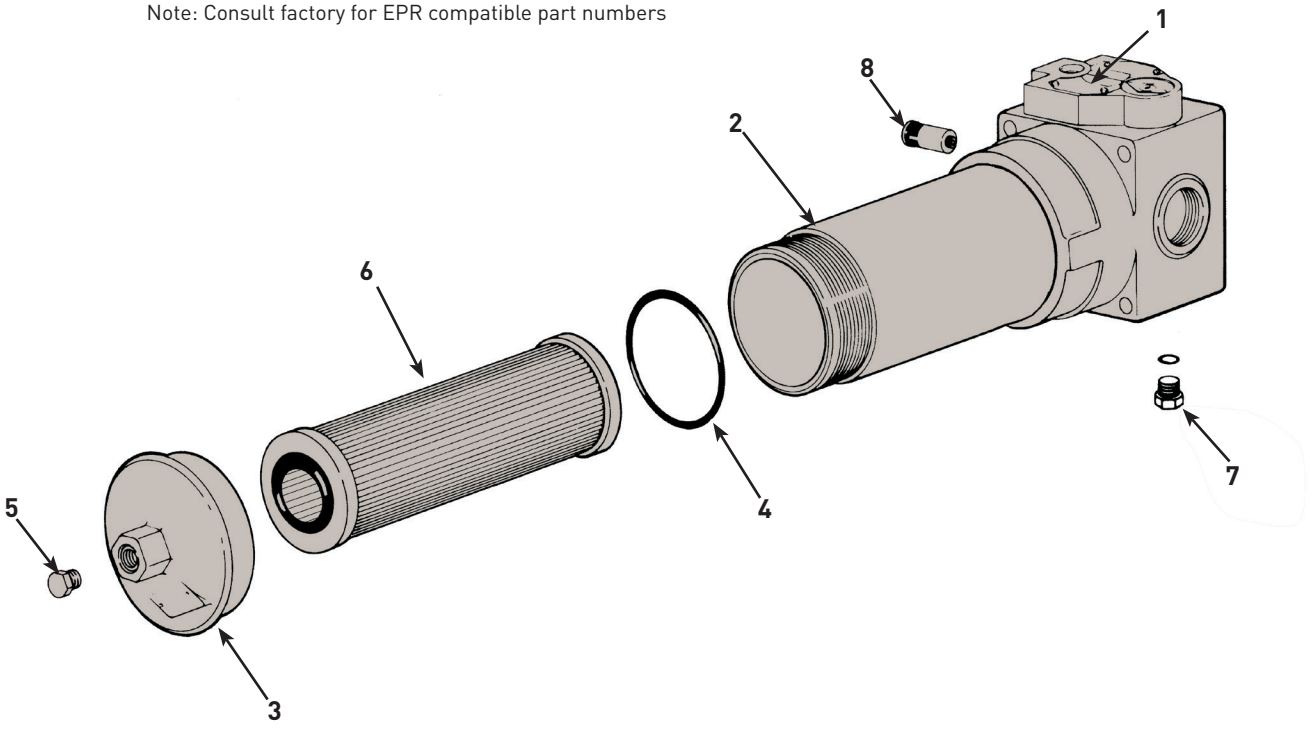
Index	Description	Part Number 50P/50PR
1	**Head Assembly**	C/F
2	**Bowl**	C/F
3	**Cover**	926655
4	**Cover O-ring** Buna Fluorocarbon	 N92246 V92246
5	**Vent Plug** Buna Fluorocarbon	927363 N93905 V93905
6	**Element**	Elements selected will have consistent performance levels
7	**Drain Plug** Buna Fluorocarbon	927363 N93905 V93905
8	**Bypass Valve** (50PR valve is not serviceable) 50psi No bypass, 50 psi indicator 90 psi No bypass, 90 psi indicator **Indicator Kits** Mechanical (left side) Mechanical (right side) Electrical (wire leads) Electrical (3-pin Brad Harrison sytle) Electrical (DIN 43650 connection) **O-ring, Manifold port** Buna Fluorocarbon	 924189 924192 927399 930683 931916 931924 925337 926482 929362 N92128 V92128

Note: Consult factory for EPR compatible part numbers

Element Service Instructions

When servicing the 50P filter, use the following procedure.

A. Stop the system's power unit.
B. Relieve any pressure in the filter or line.
C. If desired, oil can be drained from filter housing by removing the drain port plug located in the head.
D. Rotate the cover counter-clockwise and remove.
E. Remove element from housing.
F Place new, clean element into housing centering element over locator.
G. Inspect cover o-ring and replace if necessary
H. Apply cover to filter and tighten to 45-50 ft. lbs.
I. Replace drain plug and tighten 20-25 ft. lbs.



50P Series

High Pressure Duplex Filters

How To Order

Select the desired symbol (in the correct position) to construct a model code.

Example:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
F3	50P	1	10Q	DL	90	PP	1

BOX 1: Seals

Symbol	Description
None	**Buna**
F3	Fluorocarbon
E8	EPR

BOX 2: Basic Assenbly

Symbol	Description
50P	**5000 PSI (MAOP)**
50PR*	Reverse flow hydrostatic version

* Not available on triple length, must choose 1 or 2 in box 3.

BOX 3: Length

Symbol	Description
1	Single
2	Double
3	Triple

BOX 4: Element Media

Symbol	Description
02Q	Microglass, 2 micron
05Q	Microglass, 5 micron
10Q	Microglass, 10 micron
20Q	Microglass, 20 micron

BOX 5: Indicators

Symbol	Description
P	**Port plugged**
PL	Port plugged, left side
M	Visual indicator
ML	Visual indicator, left side
E	Electrical indicator w/ wire leads and conduit connection
EL	Electrical indicator w/ wire leads and conduit connection, left side
D	Electrical indicator w/ ANSI, B.93.55M 3-pin Brad Harrison style connection
D	Electrical indicator w/ ANSI/ B.93.55M 3-pin Brad Harrison style connection, left side

Note: Left side is on viewer's left when looking into inlet port.

BOX 6: Bypass & Indicator Setting

Symbol	Description
35	35 psid
50	50 psid
90	**90 psid**

BOX 7: Ports

Symbol	Description
PP	**SAE-24 straight thread**
YY	**SAE 1 1/2" flange face (J518)**
XX	**1 3/8" manifold ports on bottom of head**

BOX 8: Options

Symbol	Description
1	**None**
11	Blocked bypass

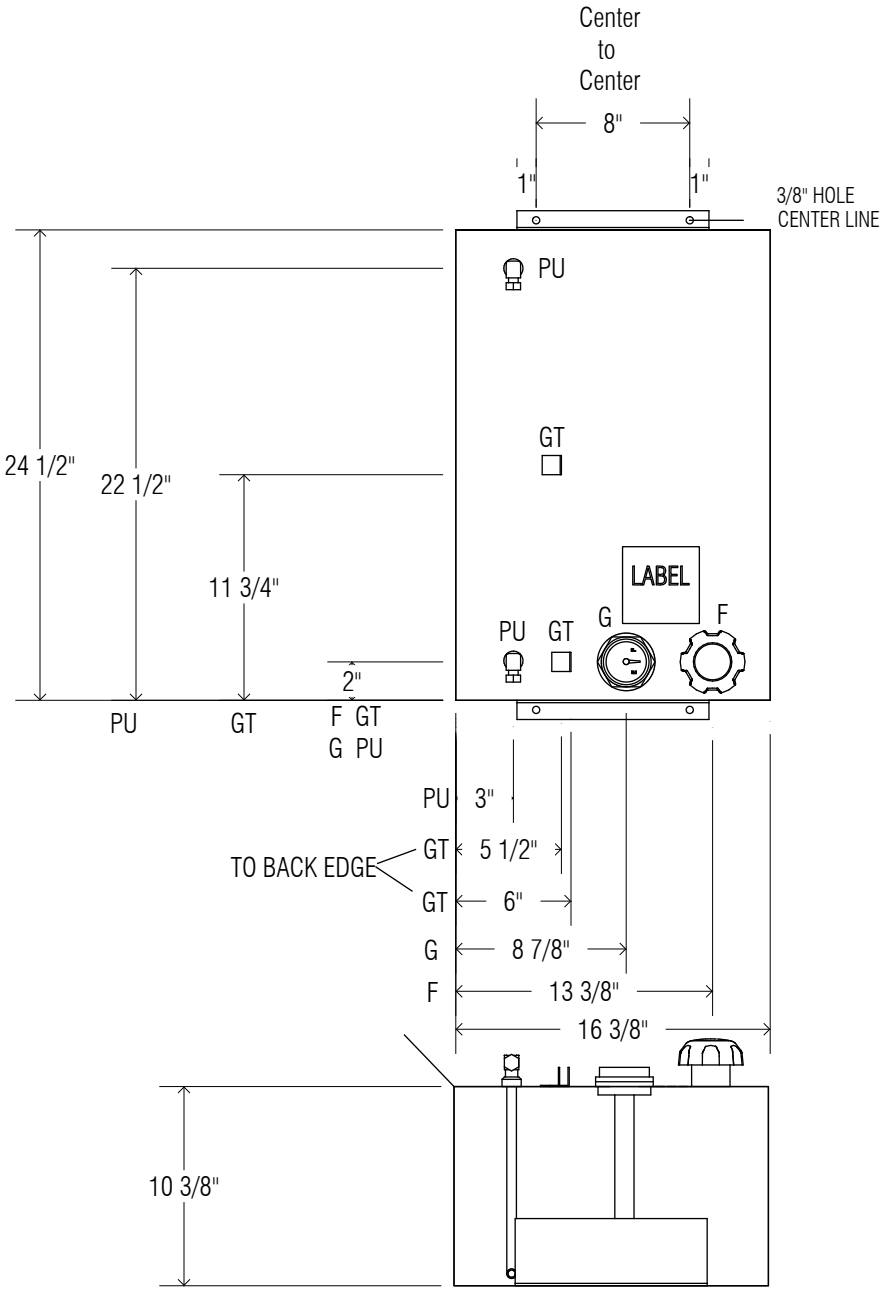
Please note the bolded options reflect standard options with a reduced lead time.

Replacement Elements (Fluorocarbon)

Standard Collapse				High Collapse			
Media	Single	Double	Triple	Media	Single	Double	Triple
02Q	932668Q	932677Q	933486Q	02QH	932674Q	932683Q	936446Q
05Q	932669Q	932678Q	933487Q	05QH	932675Q	932684Q	936447Q
10Q	932670Q	932679Q	933488Q	10QH	932676Q	932685Q	936448Q
20Q	931018Q	931020Q	933489Q	20QH	930438Q	931490Q	936449Q

CUSTOMER	CUSTOMER MODEL # / BOAT LENGTH	COMPLIANCE STANDARD	GALLONS	QUOTE #	RDS PART #
MID AMERICA FOUNDATION	POSEIDON	---	17	730313	69997

09/22/2021



WELD TABS SOLID

10/26/2022 REV FILL TO VENTED RATCHET CAP / ADD VISUAL GAUGE KB PER JR
03/16/2022 ADD ADDITIONAL NOTES FOR KELCH CAP KB PER DT

SHEET .125	52 1/2 X 24 1/4					(60")	FILL: RATCHET ADAPT & CAP - VENTED - 012316
						(48")	VENT: ———
1: 10 1/8	2: 26 1/4	3: 36 3/8	4: 16 1/8	5:	6: LEFT		GAUGE: VISUAL GAUGE 10" - 1 1/2" NPTF
							PICKUP: (2) 3/8" X 3/8" AL ST ELL NYLON PU 10"
ENDPLATE	16 1/8 X 10 1/8						RETURN: ———
							DRAIN: ———
BAFFLE QTY	GAUGE .125						TABS: (2) 4X1 1/2 X 10" W/(2) 3/8" HOLES, BEND ON WYSONG
							COATING: ———
							ACC'S

MID AMERICAN FOUNDATION -- POSEIDON

SALESMAN	CUST. APPROVAL DATE	DRAWN	DATE DRAWN	SIZE	SHEETS	RDS PART #
LW	--/--/----	MH	--/--/----	A	1 OF 1	69997

PARTS LIST FOR P65 (H12) DOUBLE DRUM WINCH UNITS

ITEM	DESCRIPTION	POSEIDON PART NUMBER
Filter Element- High Pressure Hydraulic Fluid	Varies- Contact Poseidon with Equipment Serial Number	Varies
VA20 Operator control valve, for two- winch systems	VALVE, HYD CONTROL, PARKER, VA20, 2-HANDLE	624-200-HV008
Hydraulic Reservoir cap	CAP, HYDRO CRAFT, HC-120	630-200-HG004
Hydraulic Reservoir fluid level/temp gauge	GAUGE, SIGHT LEVEL, LDI INDUSTRIES, G1620-10-A-1	630-200-HG008
Hydraulic Reservoir cleanout cover and gasket	CLEAN OUT, VESCOR, 5060-12-S	664-200-HR003
System Pressure relief valve (at hydraulic pump)	VALVE, RELIEF, HYDRAFORCE, RV16-26A-16T-N-35	624-200-HV007
Grease for Sheaves	GREASE, MARINE GRADE, BULK (REF M-C # 10175K15)	678-200-MCB031
Hydraulic Oil	OIL, HYDRAULIC, CHEVRON CLARITY AW-32	692-200-HOB001
Gear Oil for Winch Drum	OIL, GEAR, SAE 90W	692-200-HOB003
Hydraulic Pump	PUMP, HYD, PARKER, P330A197EJAB17-25	623-200-HPM012

PARTS LIST FOR P100 (H18) DOUBLE DRUM WINCH UNITS

ITEM	DESCRIPTION	POSEIDON PART NUMBER
Filter Element- High Pressure Hydraulic Fluid	Varies- Contact Poseidon with Equipment Serial Number	Varies
VA35 Operator control valve, for two- winch systems	VALVE, HYDRAULIC CONTROL, PARKER, VA35, 2 HANDLE	624-200-HV009
Hydraulic Reservoir cap	CAP, HYDRO CRAFT, HC-120	630-200-HG004
Hydraulic Reservoir fluid level/temp gauge	GAUGE, SIGHT LEVEL, LDI INDUSTRIES, G1620-10-A-1	630-200-HG008
Hydraulic Reservoir cleanout cover and gasket	CLEAN OUT, VESCOR, 5060-12-S	664-200-HR003
System Pressure relief valve (at hydraulic pump)	VALVE, RELIEF, PARKER, RAH161S30	624-200-HV030
Grease for Sheaves	GREASE, MARINE GRADE, BULK (REF M-C # 10175K15)	678-200-MCB031
Hydraulic Oil	OIL, HYDRAULIC, CHEVRON CLARITY AW-32	692-200-HOB001
Gear Oil for Winch Drum	OIL, GEAR, SAE 90W	692-200-HOB003
Hydraulic Pump	PUMP, HYDRAULIC PARKER, IN82351, PGP350A478FCAB22-7	623-200-HPM011