OILPURE SYSTEMS
The Machine Reliability Company
www.oilpure.com

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Wireless Remote Control dial in from mobile phones to PLC by Mobile Cellular

LAN Line Local Area Network to Office PC

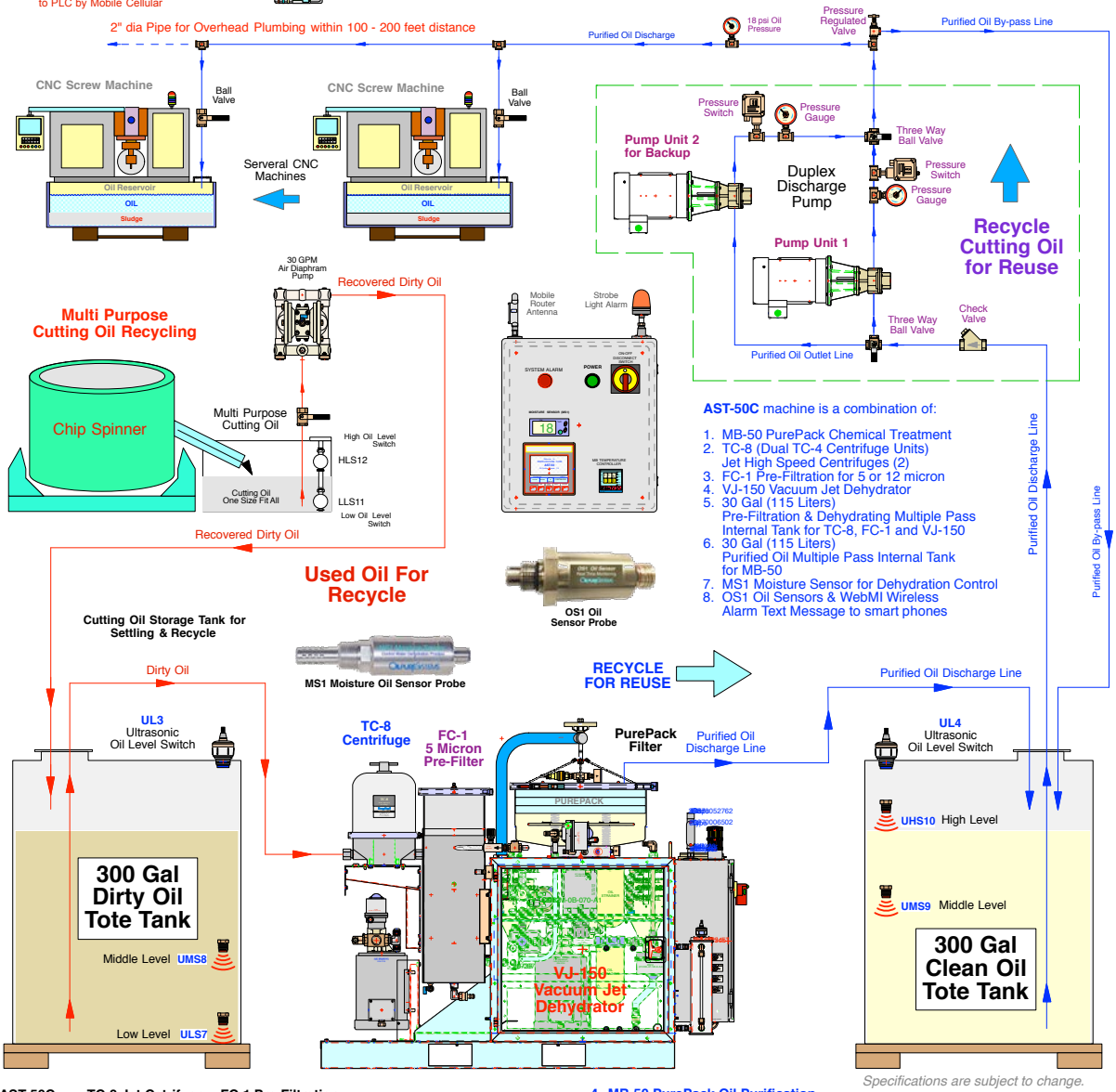
Mobile Router Cellular DIGI Transport

OilPure Remote Control Remote Monitor Alarm Message on iPhone

Oil Monitoring System
Web MI Wireless Remote Control

250 to 350 gallons per day
(950 to 1,325 Liters)
Oil Recycling Capacity

Batch-to-Batch Flow Diagram
AST-50C Oil Recycling Machine for Cutting Oil Recycling Operation



AST-50C machine is a combination of:

1. MB-50 PurePack Chemical Treatment
2. TC-8 (Dual TC-4 Centrifuge Units) Jet High Speed Centrifuges (2)
3. FC-1 Pre-Filtration for 5 or 12 micron
4. VJ-150 Vacuum Jet Dehydrator
5. 30 Gal (115 Liters) Pre-Filtration & Dehydrating Multiple Pass Internal Tank for TC-8, FC-1 and VJ-150
6. 30 Gal (115 Liters) Purified Oil Multiple Pass Internal Tank for MB-50
7. MS1 Moisture Sensor for Dehydration Control
8. OS1 Oil Sensors & WebMI Wireless Alarm Text Message to smart phones

Specifications are subject to change.

AST-50C = TC-8 Jet Cetrifuge + FC-1 Pre-Filtration + VJ-150 Vacuum Jet Dehydrator + MB-50 PurePack

1. TC-8 Dual Jet Centrifuge
- 4,000 to 6,000 rpm high speed G-Force centrifigue.
- Remove 5 to 10 pounds of sludge per day.
- Dual Jet Centrifuge units (2) at @15 GPM for 30 GPM pump capacity with multiple pass separation for effective sludge build up.
- Excellent application to remove sludge from Waylube in Cold Header Machines or Wire Drawing Machine or Cutting Oil or Quenching Oil.
- Low maintenance as it takes about 5 minutes to clean sludge from centrifuge bell unit.

2. VJ-150 Vacuum Jet Dehydration
- Capable of removing dissolved water from *10,000 ppm or 1% down to less than 50 ppm.*
- Remove approximately 1 quarts (900 cc) of dissolved water per hour.
- Water dehydration can be continuous or batch mode for more effective water removal.
- Moisture Sensor (MS1) automatically controls dehydrating time and it will make sure that dehydrating operation continues until water is less than 100 ppm. With MS1, the discharged clean oil always contains less than 100 ppm of water.
- Water dehydrating tank batch size is 20 gallons in AST-50 unit.
- Water starts to dehydrate at low oil temperature from 145 °F to 155 °F (62 °C to 68°C).
- 12 GPM Dehydrating flow rate with 52 GPM pump capacity.
- *10.5 KW electric heater* with 14 watts/sq. inch density.

3. FC-1 Pre-Filtration
- 5 Micron pre-filter aftere DT-100 free water separation.
- Four pieces of C-5 filter elements installed in FC-4 filter unit.
- C-5 Filter element size: 7" dia. x 32" long
- 2 GPM Pump capacity for FC-1.

4. MB-50 PurePack Oil Purification
- Particulate removal down to 1 to 3 micron or get *ISO 16/14/11 to ISO 15/13/10 oil cleanliness.*
- PurePack chemical filter can absorb emulsified water down to less than 100 ppm from 1,500 ppm.
- Remove *oxidation by-products* causing high acidity reading in *Total Acid Number (TAN).*
- 50 GPH flow capacity with over 90% filtration efficiency.

5. OS1 Oil Sensor Monitoring
- OS1 Oil Sensor is an on-line real time oil condition monitoring device. When oil condition in the oil reservoir degrades to the alarming level, OS1 will send analog signal to PLC to display the new oil changing status.
- Oil degradation will be monitored and displayed in a curve which indicates the lubrication quality. The degration curve will dispaly on PLC for comparison.

6. AST-50 System Operation (AST-50 = TC-8 + FC-1 + VJ-150 + MB-50)
- Dual oil purification in both PurePack chemical treatment with oil dialysis and Vacuum Jet Dehydration for excessive water dehydration.
- PurePack oil dialysis and vacuum Jet dehydration time can be set according to excessive water content and particulate oil contamination.
- Both continuous and batch-to-batch *oil purification can be programmed to fit various degree of oil contamination* for full automatic operation.
- Full automatic operation to draw dirty oil from pit and deliver dehydrated oil to oil tank or equipment oil reservoir.
- Automatic shut down by pressure switch and timer switch with dual high temperature alarms in both PurePack operation and Vacuum Jet dehydration.
- 3.5" LCD graphic digital touch screen display operation. NEMA 4 enclosure
- Automatic operation by *Programmable Logic Controll (PLC) with built-in memory.*
- IoT MINI SCADA monitoring system with Remote Control from smart phones.

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