EHC System Solution | Water Removal Solution | AW Oil Solution | Gas Turbine Solution | Steam Turbine Solution

EPT CLEAN OIL

SVR™ PE PRODUCT BULLETIN

Industry-leading solution for electro-hydraulic control system reliability

SVR IS THE FIRST OF ITS KIND, ENGINEERED PHOSPHATE ESTER CONDITIONING SYSTEM, DESIGNED TO PROTECT AND MANAGE PHOSPHATE ESTER FLUID AND SYSTEM RELIABILITY.

SVR™ for phosphate ester fluid provides 200% – 400% more filtration capacity than most OEM systems, and provides the proper rate of filtration to keep your phosphate ester fluid reservoir in optimal condition.

SVR can be combined with the TMR™ N_2, an engineered nitrogen generation system designed to remove water and oxygen within atmospheric breathing lubricant reservoirs.

Together, the SVR and TMR N_2 systems will provide ideal phosphate ester fluid quality, significantly increasing servo valve and EHC system reliability.

cleanoil.com | 1-403-246-3044 | #17 3900 -106th Ave. SE Calgary, AB T2C 5B6 Canada

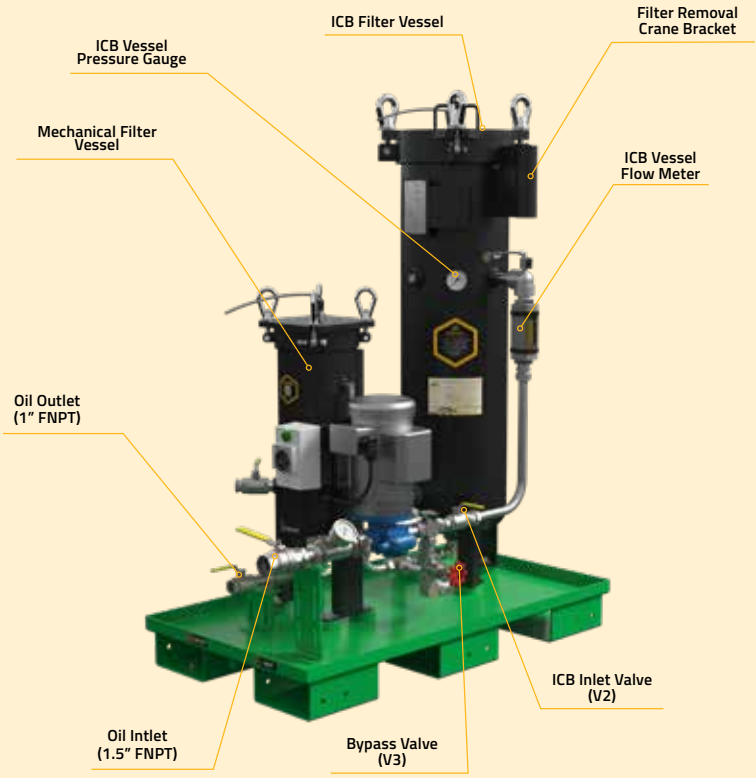
Rethink. Remove. Restore.

MAINTAIN PHOSPHATE ESTER FLUIDS

Phosphate ester fluids have excellent fire resistant properties, but must be maintained within a relatively narrow range of fluid operating parameters. For most phosphate ester fluid users, the existing electro-hydraulic control (EHC) fluid conditioning system is not capable of maintaining the key fluid parameters. Operating outside of these critical fluid parameters increases the rate of servo valve failure and the rate of fluid breakdown by up to 10x compared to what is achievable with a proper fluid maintenance system.

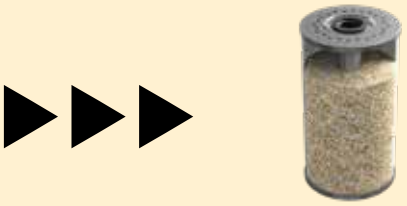
SVR PE FEATURES AND BENEFITS

- Quickly reduces and prevents servo valve sticking
- High acid removal capacity
- Proven protection against solid and dissolved varnish
- Significantly improves fluid resistivity
- Significantly reduces solid contamination
- Eliminates the varnish formation cycle that typically occurs when the oil cools during turbine shut down
- Engineer approved system designed to facilitate rapid approval and deployment
- Very low maintenance and time requirement – turn it on and let it run
- **No downtime - SVR can be installed without an outtage**



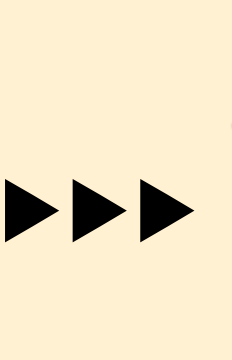
SVR PE INCLUDES

- EPT Clean Oil's industry leading patented ion-exchange resin technology to remove soluble contaminants including acids and dissolved metals
  - One complete set of ICB™ filters are included with SVR PE purchase
- Fluid Technical Center support until results are documented
- 3-year warranty on all parts



WATER REMOVAL WITH TMR N_2

- With the recommended TMR N_2 option, water can be reduced by 150 ppm per day and maintain water levels <300 ppm. TMR N_2 also reduces oxygen levels and harmful dissolved gases, including CO, H_2 and C_2H_4.
- TMR N_2 system can be mounted on the SVR system or externally mounted



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SVR PE SYSTEM SPECIFICATIONS

	SVR 150PE	SVR 300PE	SVR 600PE	SVR1200PE	SVR 2400PE
Dimension LxWxH	120 x 79 x 102 cm 47" x 31" x 40"	120 x 79 x 148 cm 47" x 31" x 58"	122 x 66 x 102 cm 48" x 26" x 40"	122 x 66 x 148 cm 48" x 26" x 58"	178 x 76 x 148 cm 70" x 30" x 58"
Weight	159 kg / 350 lb	181 kg / 400 lb	201 kg / 550 lb	273 kg / 600 lb	454 kg / 1000 lb
Connections Inlet/Outlet FNPT:	1.0" / 1.0"	1.0" / 1.0"	1.5" x 1.0"	1.5" / 1.0"	2.0" x 1.5"
Reservoir Volume	912 L / 240 gal	1,824 L / 480 gal	4,560 L / 1,200 gal	9,120 L / 2,400 gal	18,240 L / 4,800 gal
Operating Temperature	86°F to 176°F (30°C to 80°C)				
Flow Rate *	2.0 lpm / 0.5 gpm	4.0 lpm / 1.0 gpm	8.5 lpm / 2.5 gpm	19.0 lpm / 5.0 gpm	38.0 lpm / 10.0 gpm
Reservoir Exchange Rate/24 hr	5.7x	5.7x	5.7x	5.7x	5.7x
Electrical Options	115VAC / 1Ph / 60Hz (General Purpose) is standard. Other electrical options are available. Explosion Proof (Class I, Div I and Div II) options are available				
Current	13.2 Amps (at 115VAC / 1Ph / 60Hz)				

* For phosphate ester, EHC or gas turbine applications, the desirable filtration flow rate is to exchange the fluid reservoir volume >4-5x / day. For recovery projects, higher exchange rates are desired.

Note: Using the above sizing, 80% of sites are typically restored with 2 sets of filters with a replacement interval of 6 weeks. The clean-up or restoration period is typically 3 – 4 months. Heavily contaminated sites normally require 3 sets of filters with a replacement interval of 1 month. After lubricant restoration is complete, the normal fluid maintenance mode requires that filters are replaced annually. All installations include detailed monthly analysis until clean-up period is complete.

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