



Varnish Removal System

The most complete varnish removal and prevention system on the market. It removes oxidation by-products and prevents varnish formation during the cooldown.

MATERIALS & COMPONENTS:

- **Filter Cartridge:** Long Fiber Cellulose / Polypropylene
- **Housing:** Aluminium
- **All Other Materials:** Steel, Buna-N, FPM, Polyester.

CHEMICAL COMPATIBILITY:

Compatible with all mineral oils, most synthetic oils, phosphate esters (contact Des-Case technical support for chemical compatibility inquiries)

Overview

Varnish is a common problem for a wide range of hydraulic fluids and lubricants, especially in turbine and plastic injection molding applications. It results in valve stiction, shorter fluid life, clogged system filters and unscheduled maintenance.

The formation of varnish begins with oxidation of the fluid. Wear particles and moisture generate oxidation. Those factors will react with hydraulic fluid resulting in degradation and rising Total Acid Number (TAN).

The Varnish Removal System combines highly efficient varnish removal and oil quality monitoring in one modular system.

The filter unit acts as a kidney loop, continuously circulating fluid through the filter media. In addition, an Oil Quality Sensor can be used to monitor oil degradation.

The Varnish Removal System can be configured for applications with fluid volumes up to 36,000 liters (9,500 gallons).

Specifications

Nominal Flow	1 l/min (0,26 gpm) per cartridge
Apparent Dirt Holding Capacity	1,955 g (4,3 lb)
Water Absorption	2,6 liters (0,69 gal)
By-pass Opening Pressure	5 bar (72,5 psi)
Pump Safety Valve	15 bar (217 psi)
Fluid Temperature	20° - 80° C (68° - 176° F)
Power Supply	See ordering code
Inlet Connection	Depending on the pump, contact a Des-Case representative

Outlet Connection	1/2" BSPP female
System Seal	FPM (Viton)
Fluid Compatibility	Mineral oil, synthetic ester, phosphate esters (for other fluids, please contact us)
Dimensions	Unit dependent, contact a Des-Case representative
Weight	Unit dependent, contact a Des-Case representative

Advantages:

- Removes soluble and insoluble varnish contaminants
- Prolongs oil health by reducing additive consumption
- Reduces and prevents servo valve sticking
- Efficiently cleans the system without adding water or other by-products.

Typical Industries:

- Manufacturing
- Pulp & Paper
- Power Generation
- Steel
- Mining

Ordering Codes

VX							
	Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7

Housing type (max reservoir volume) [Box 1]	
Code	Description
1A	Single housing, 1 cartridge (< 3.000 liters / 790 gal)
1B	Single housing, 2 cartridges (3.000 - 6.000 liters / 790 - 1.585 gal)
1C	Single housing, 3 cartridges (6.000 - 9.000 liters / 1.585 - 2.375 gal)
2B	Double housing, 4 cartridges (9.000 - 12.000 liters (2.375 - 3.170 gal)
2C	Double housing, 6 cartridges (12.000 - 18.000 liters / 3.170 - 4.755 gal)
3C	Triple housing, 9 cartridges (18.000 - 27.000 liters (4.755 - 7.130 gal)
4C	Quadruple housing, 12 cartridges (27.000 - 36.000 liters / 7.130 - 9.500 gal)

System Seals [Box 2]	
Code	Description
V	FPM seals

Electrical configuration [Box 3]	
Code	Description
1	230(Δ)/400(Y) VAC 50Hz / 3 Phase (configured as Star - Y)
A	230(Δ)/400(Y) VAC 50Hz / 3 Phase (configured as Delta - Δ)
2	280(Δ)/480(Y) VAC 60Hz / 3 Phase (configured as Star - Y)
B	280(Δ)/480(Y) VAC 60Hz / 3 Phase (configured as Delta - Δ)
3	230 VAC 50Hz / 1 Phase
C	230 VAC 60Hz / 1 Phase
4	110 VAC 60Hz / 1 Phase
D	110 VAC 50Hz / 1 Phase
5	200(Δ)/346(Y) VAC 50Hz / 3 Phase (configured as Delta - Δ)
6	200(Δ)/346(Y) VAC 60Hz / 3 Phase (configured as Delta - Δ)
X	333(Δ)/575(Y) VAC 60Hz / 3 Phase (configured as Star - Y)

Pump Option* [Box 4]	
Code	Description
50 Hertz	
501	0,6 cc/rev (standard for 1A housing)
502	1,6 cc/rev (standard for 1B housing)
503	2,5 cc/rev (standard for 1C housing)
504	3,15 cc/rev (standard for 2B housing)
506	5,0 cc/rev (standard for 2C housing)
509	6,1 cc/rev (standard for 3C housing)
512	8,2 cc/rev (standard for 4C housing)
60 Hertz	
601	0,6 cc/rev (standard for 1A housing)
602	1,25 cc/rev (standard for 1B housing)
603	1,6 cc/rev (standard for 1C housing)
604	2,5 cc/rev (standard for 2B housing)
606	3,15 cc/rev (standard for 2C housing)
609	5,0 cc/rev (standard for 3C housing)
612	6,1 cc/rev (standard for 4C housing)

*Amount of cartridges refer to filter housing type

Control box [Box 5]	
Code	Description
0	None
1	On/Off Control box (standard)

Indicator option [Box 6]	
Code	Description
0	Pressure gauge (standard)
1	Additional pressure differential switch

Oil Quality Sensor [Box 7]	
Code	Description
0	None
1	OQS installed
2	OQS/OQD installed

Element Part code	
Code	Description
VXV	FPM seal

EXAMPLE:

VX	2C	C	1	503	1	0	0
	Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7