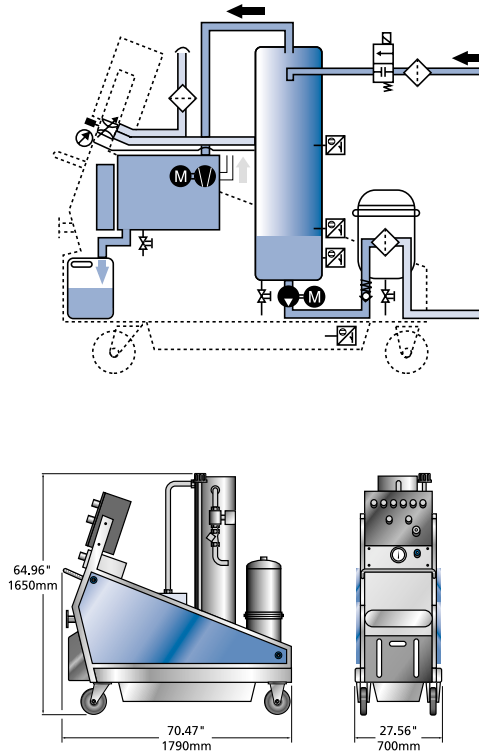


Vacuum Dehydrator

**FLUID
CONDITIONING
PRODUCTS**



Note: Envelope dimensions will change in future models. Contact factory for details.

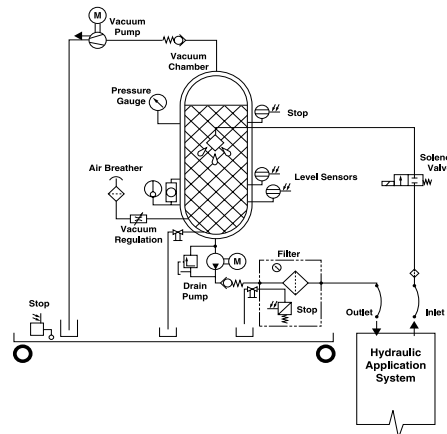


Centrifuge and condensation methods typically only remove free water. The SVD, which uses vacuum dehydration, can remove both free and dissolved water from the oil, as well as dissolved gases. In addition, solid contaminants are also removed by highly efficient membrane elements. The SVD is intended to be used on large hydraulic and lubricating circuits that have a minimal 1000 gallon reservoir.

Negative effects of water in hydraulic oil:

- Depletion of additives
- Increased acidity of oil
- Reduction in lubricity
- Accelerated aging of components

When connected to the hydraulic reservoir of a system with wet oil, the SVD unit draws the oil in its chamber. Oil slowly cascades down in the reactor chamber. Water is separated in the form of vapor and is removed by the vacuum pump. This vapor can be released to atmosphere or condensed into a separate reservoir. The purified oil is drained from the reactor chamber through a pump back to system reservoir at a continuous flow rate. This oil is now dry and free of water (within the specifications provided).



- Removes 100% of free and over 90% of dissolved water and as well as 100% of free and over 90% of dissolved gases
- Four models are available to accommodate various flow rates
- Use of a vacuum pump avoids any dangerous chemically reactive by-products

- Mobile equipment/equipment used outdoors
- Pulp and paper plants
- Power generation plants
- Plastic injection and die cast machines
- Reclaimed fluids

SVD

- TPM
- TIM
- TIM-P
- TWS
- ET-100-6
- ETD-100-6
- TDA
- EWC
- EPK
- HTB
- GS

Trouble
Check Plus

Test Points

Adapters

Hose
Joiners

Microflex
Hose

Pressure
Gauges

Pressure
Limiters

Test Kits

Probalizer

Filtration
Station

AFM

MFS, MFD

AMS, AMD

KLS, KLD

AKS, AKD

X Series

HFS

Features

Applications

MTS

SVD

Appendix

SVD

continued

Sizing

Sizing Chart
(continuous water ingestion)

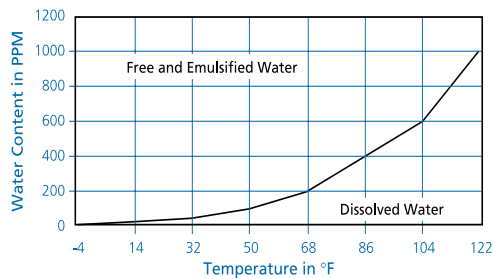
Tank Volume (gallons)	SVD Model
1000 to 2000	SVD 05
2000 to 4000	SVD 10
4000 to 7000	SVD 16
7000 and up	SVD 23

Sizing of the SVD is normally done through periodic measuring of the water content which will determine the hourly ingestion of water. The typical dewatering speed of the SVD is listed in the technical data table above. If there is a continuous ingestion of water (i.e. condensation) the recommended flow rate of the SVD can be determined by the the system size (total gallons.) It should circulate 3 or 4 times through the SVD every day.

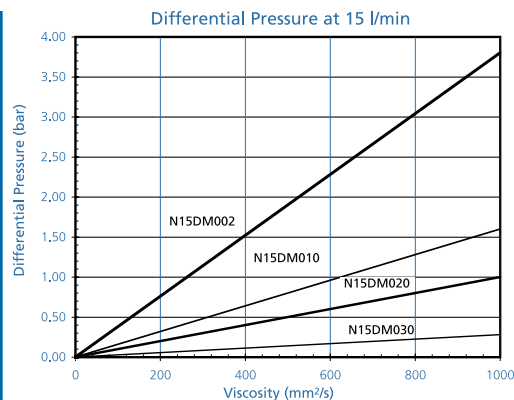
Factors That Affect Water Removal Rate

Factor (increasing/decreasing)	Dewatering Speed
Water Content ↑	↑
Fluid Temperature ↑	↑
Detergent Additives ↓	↓
Absolute Pressure in Vacuum Chamber ↓	↑
Humidity ↓	↑
Flow Rate ↑	↑
Ester Oils ↓	↓

Hydraulic Oil Saturation Curve



Element Pressure Drop



Vacuum Dehydrator

**FLUID
CONDITIONING
PRODUCTS**

	SVD05	SVD10	SVD16	SVD23
Capacity of Pressure Vessel:	5.25 gal (20 l)	10.5 gal (40 l)	20.5 gal (78 l)	26.25 gal (100 l)
Solid Contamination to ISO 4572:	1.1 lbs. (500 g)	2.2 lbs. (1000 g)	3.3 lbs. (1500 g)	5.5 lbs. (2500 g)
Bypass Cracking Pressure:	29 psi (2 bar)	29 psi (2 bar)	29 psi (2 bar)	29 psi (2 bar)
Pump Type:	Gear pump	Gear pump	Gear pump	Gear pump
Flow Rate:	5 gpm	10 gpm	16 gpm	23 gpm
Maximum Operating Pressure:	87 psi (4.5 bar)	87 psi (4.5 bar)	87 psi (4.5 bar)	87 psi (4.5 bar)
Viscosity Range (without) SUS (cst):	75-2500 (15-500)	75-2500 (15-500)	75-2500 (15-500)	75-2500 (15-500)
Electrical Cable Length:	32 ft. (10 m)	32 ft. (10 m)	32 ft. (10 m)	32 ft. (10 m)
Hose Length:	16 ft. (5 m)	16 ft. (5 m)	16 ft. (5 m)	16 ft. (5 m)
Hose Material:	NBR	NBR	NBR	NBR
Inlet - Outlet:	M52x2-M36x2	M52x2-M36x2	M52x2-M36x2	M52x2-M36x2
Seal Material:	NBR	NBR	NBR	NBR
Dry Weight:	940 lbs.	970 lbs.	1100 lbs.	1145 lbs.
Fluid Temperature:	50°F to 175°F	50°F to 175°F	50°F to 175°F	50°F to 175°F
Ambient Temperature:	5°F to 105°F	5°F to 105°F	5°F to 105°F	5°F to 105°F
Max Free Water Removal Rate* (gallons/hour):	0.75	1	1.5	2
Attainable Water Content:	<100 ppm	<100 ppm	<100 ppm	<100 ppm

Specifications

TPM

TIM

TIM-P

TWS

ET-100-6

ETD-100-6

TDA

EWC

EPK

HTB

GS

Trouble
Check Plus

Test Points

Adapters

Hose
Joiners

Microflex
Hose

Pressure
Gauges

Pressure
Limiters

Test Kits

Probalizer

Filtration
Station

AFM

MFS, MFD

AMS, AMD

KLS, KLD

AKS, AKD

X Series

HFS

MTS

SVD

Appendix

Vacuum Dehydrator	Flow Rate	Fluid	Mobility	Voltage	Power	Number of Elements*	Media	Options (may specify more than one)
SVD	05 = 5 gpm	H = Hydraulic and Synthetic Oil	S = Stationary M = Mobile	23 = 230V/60 Hz/ 3 Phase 46 = 460V/60 Hz/ 3 Phase XX = Other	19X = 1900 watts	1	02	C = Automatic Cooling water fill (Available for H and B fluids only) W = TestMate Water Sensor
	10 = 10 gpm	T = Transformer Oil (Requires Heater)			27X = 2700 watts			
	16 = 16 gpm	B = Biodegradable Oil			32X = 3200 watts			
	23 = 23 gpm	F = Fire Resistant Oils (Must identify fluid type with order)			51X = 5100 watts			
					09H = 8650 watts with heater	2		
					19H = 19200 watts with heater	3		
					21H = 21200 watts with heater	4		
					26H = 26100 watts with heater			

Model Number Selection

*See Element Selection Chart below for correlation between number of elements and flow.

Model	Without Heater	With Heater	Heater Size
SVD 05	19X	09H	6 kw
SVD 10	27X	19H	9 kw
SVD 16	32X	21H	13 kw
SVD 23	51X	26H	21 kw

Power Selection

Model	No. of Elements	Flow (gpm)
SVD 05	1	5
SVD 10	2	10
SVD 16	3	16
SVD 23	4	23

Element Selection