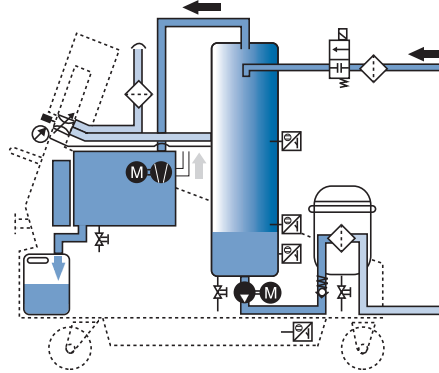


Vacuum Dehydrator



SVD

TCM
TCM-FC
TSU
TMU
TPM
TIM
TMS
CTU
TWS-C
ET-100-6
HMG 3000
EPK
HTB
GS
Trouble
Check Plus

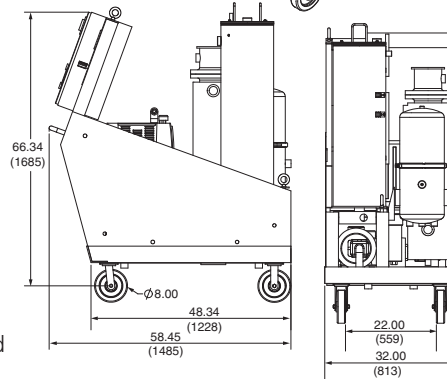
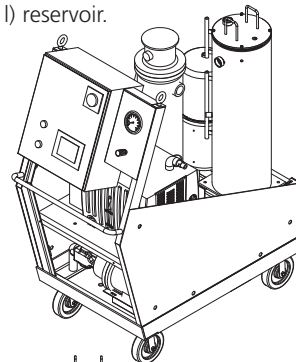
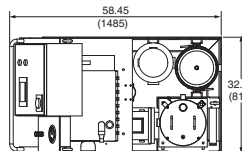
Description

Centrifuge and condensation methods typically only remove free water. The SVD, which uses mass transfer, 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 200 gallon (760 l) reservoir. Unit automatically shuts down when desired % saturation is reached.

Negative effects of water in hydraulic oil:

- Depletion of additives
- Reduction in lubricity
- Increased acidity of oil
- 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).



Metric dimensions in ().

Principle of Operation

- TWS-C standard on all units
- Removes 100% of free and over 90% of dissolved water and as well as 100% of free and over 90% of dissolved gases
- Automatic mode with automatic shutdown based on user settings
- Four models are available to accommodate various flow rates
- Use of a vacuum pump avoids any dangerous chemically reactive by-products
- Maintenance, operating, troubleshooting instructions are in HMI (touch screen)

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

Element Pressure Drop

Applications

Test Points
Adapters
Hose Joiners
Microflex Hose
Pressure Limiters
Pressure Gauges
Test Kits
Probalizer
Filtration Station
MFS, MFD
AMS, AMD
KLS, KLD
AKS, AKD
KLC
X Series
MTS
HFS
SVD
TDS-A
TDS-E
IXU
Appendix

Vacuum Dehydrator

SVD continued

Sizing

Sizing Chart
(continuous water ingestion)

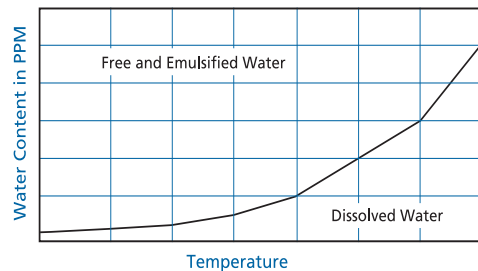
Tank Volume (gallons)	SVD Model
1000 to 2000	SVD05
2000 to 4000	SVD10
4000 to 7000	SVD16
7000 and up	SVD23

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.

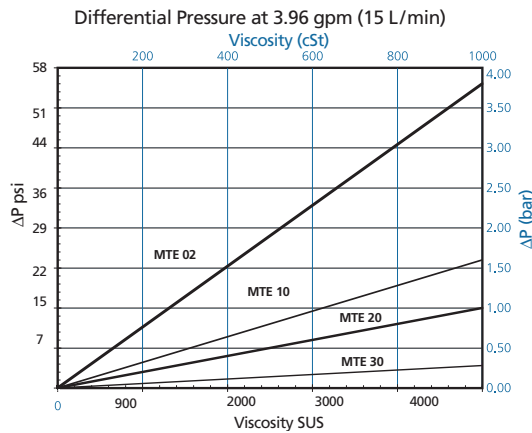
Factors That Affect Water Removal Rate

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

	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 (18.93 L/min)	10 gpm (37.85 L/min)	16 gpm (60.57 L/min)	23 gpm (87.06 L/min)
Maximum Operating Pressure:	87 psi (4.5 bar)	87 psi (4.5 bar)	87 psi (4.5 bar)	87 psi (4.5 bar)
Visc. Range without Heater SUS: (cSt):	75-2500 (15-500)	75-2500 (15-500)	75-2500 (15-500)	75-2500 (15-500)
Visc. Range with Heater SUS:	5000	5000	5000	5000
Electrical Cable Length:	25 ft (7.6 m)	25 ft (7.6 m)	25 ft (7.6 m)	25 ft (7.6 m)
Seal Material:	NBR	NBR	NBR	NBR
Weight with Heater:	1300 lbs (585 kg)	1350 lbs (608 kg)	Contact factory	Contact factory
Weight without Heater:	1105 lbs (497 kg)*	1170 lbs (527 kg)*	Contact factory	Contact factory
Fluid Temperature:	50°F to 175°F (10°C to 79°C)	50°F to 175°F (10°C to 79°C)	50°F to 175°F (10°C to 79°C)	50°F to 175°F (10°C to 79°C)
Ambient Temperature:	5°F to 105°F (-15°C to 41°C)	5°F to 105°F (-15°C to 41°C)	5°F to 105°F (-15°C to 41°C)	5°F to 105°F (-15°C to 41°C)
Max Free Water Removal Rate* (gallons/hour):	0.75	1	1.5	2
Attainable Water Content:	<100 ppm	<100 ppm	<100 ppm	<100 ppm

*Estimated weight

How to Build a Valid Model Number for a Schroeder Vacuum Dehydrator:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9
SVD								

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9
SVD	10	H	M	46	19H	2	02	

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6
Vacuum Dehydrator	Flow Rate	Fluid	Mobility	Voltage	Power
SVD	05 = 5 gpm 10 = 10 gpm 16 = 16 gpm 23 = 23 gpm	H = Hydraulic and Synthetic Oil T = Transformer Oil (requires heater) B = Biodegradable Oil F = Fire Resistant Oils (must identify fluid type with order)	S = Stationary M = Mobile	23 = 230V/60 Hz/ 3 Phase 46 = 460V/60 Hz/ 3 Phase 57 = 575V/ 60 Hz/ 3 Phase XX = Other	19X = 1900 watts 27X = 2700 watts 32X = 3200 watts 51X = 5100 watts 09H = 8650 watts with heater 19H = 19200 watts with heater 21H = 21200 watts with heater 26H = 26100 watts with heater
BOX 7	BOX 8	BOX 9	<p>Preferred order codes designate shorter lead times and faster delivery.</p>		
Number of Elements	Media	Option			
1 2 3 4	02 10 20 30	C = Automatic Cooling water fill (available for H and B fluids only)			

Notes:

Box 5: 575 will be built to CSA standards.

Box 7: See Element Selection Chart below for correlation between number of elements and flow.

Model	No. of Elements	Flow gpm (L/min)	Model	No. of Elements	Flow gpm (L/min)
SVD05	1	5 (18.93)	SVD16	3	16 (56.78)
SVD10	2	10 (37.85)	SVD23	4	23 (75.71)

Specifications

- TCM
- TCM-FC
- TSU
- TMU
- TPM
- TIM
- TMS
- CTU
- TWS-C
- ET-100-6
- HMG 3000
- EPK
- HTB
- GS
- Trouble Check Plus
- Test Points
- Adapters
- Hose Joiners
- Microflex Hose
- Pressure Limiters
- Pressure Gauges
- Test Kits
- Probalizer
- Filtration Station
- MFS, MFD
- AMS, AMD
- KLS, KLD
- AKS, AKD
- KLC
- X Series
- MTS
- HFS
- SVD**
- TDS-A
- TDS-E
- IXU
- Appendix

Model Number Selection

Element Selection