



Technical Bulletin (TB-0025-10)

Oil Separators

Version 10, December 2025

Oil Separator Components and Accessories

Introduction

BITZER US manufactures a series of ASME oil separators intended for use as a primary oil separator with screw compressors. The separators in this document do not contain coalescing filters.

The dimensions and ports are similar to the BITZER European version (PED) found in the main software and website. However, there are differences such as the PED version uses flanged connections.

To download 2D and 3D drawings of BITZER US separators, please visit: www.bitzerpv.com.

Ordering




The separators are sold as kits with the same model number used by BITZER worldwide with a "US" suffix (e.g. OA1954US). The voltage specific parts (heaters, oil level control and sensors) must be ordered separately (see page 2).

Oil Separators (Standard Refrigerants)								
Model Number (Kit)	Vessel Part Number	*Initial Oil Charge Liters (Gallons)	MWP (psi)	Weight (lbs)	Crankcase Heaters Required	Oil Outlet	Ref Inlet	Ref Outlet
OA1954US	771-0003-01	18 (5)	406	118	1 x 140W	1-1/4"-12	2 1/8	1 5/8
OA4188US	771-0004-01	40 (11)	450	252	2 x 140W	1-3/4"-12	3 1/8	3 1/8
OA9111US	771-0005-01	90 (24)	450	537	3 x 140W	1-3/4"-12	4 1/8	4 1/8
OA14111US	771-0006-01	140 (37)	450	746	3 x 140W	2-1/4"-12	4 1/8	4 1/8
OA25112US	771-0007-01	250 (66)	450	1357	3 x 200W	3-1/8" IDS	5 1/8	5 1/8

Oil Separators (Ammonia)								
Model Number	Vessel Part Number	*Initial Oil Charge Liters (Gallons)	MWP (psi)	Weight (lbs)	Crankcase Heaters Required	Oil Outlet	Ref Inlet	Ref Outlet
OA1954US-NH3	771-0003-03	18 (5)	406	124	1 x 140W	3/4" NPS	2"	2"
OA4188US-NH3	771-0004-03	40 (11)	450	262	2 x 140W	1-1/4"NPS	3"	3"
OA9111US-NH3	771-0005-03	90 (24)	450	553	3 x 140W	1-1/2"NPS	4"	4"
OA14111US-NH3	771-0006-03	140 (37)	450	765	3 x 140W	2" NPS	4"	4"
OA25112US-NH3	771-0007-03	250 (66)	450	1235	3 x 200W	3" NPS	5"	5"

* An additional 1 gallon of oil is recommended for each compressor's circuit oil piping

Optional Parts and Accessories (Order Separately)

DESCRIPTION		PART #	PICTURE
For Standard Oil Separators (OA)			
Optoelectronic Liquid Level Monitoring Kit (Device, 1-3/4-12 Prism, and O-Ring)	115V	347950-02	
	230V	347950-01	
	24 V (AC/DC)	347950-04	
Heater: 140W, 9-1/4" Long	120V	892-1140-01	
	230V	892-1140-02	
Heater: 200W, 7.5" Long (for OA25112US vessel only)	120V	343213-08	
	230V	343213-07	

For Ammonia Oil Separators (OA)			
Optional NH3 Drain Valve	1/2-14 NPTF x 5/8-18 UNF	263012000	
Oil Level Sensor: Relay style switch; 1" NPT (NH3 Vessels)	24 volt	791-9906-24	
	120 volt	791-9907-15	
	230 volt	791-9907-23	
Heater: 140W, 9-1/4" Long	120 volt	892-1140-01	
	230 volt	892-1140-02	

Oil Separator Kit Parts List (All Versions)

BITZER U.S.: 770-503-9226
 BITZER Canada: 514-697-3363
 BITZER Mexico: +52 (81)1522 4500

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 24 Hour Quickship Hotline: (888) 462-4893

DESCRIPTION		PART NUMBER	PICTURE
Drain Valve (HFC Vessels Only)	½-14 NPTF x 5/8-18 UNF	540106050	
Drain Valve Coupling (HFC Vessels Only)	1/2" NPT Full	P000001977	
Oil Thermostat:	70°>140° Temp	860-5021-01	
Heater Well	For 140W heater; 10" Long	308001-84	
	Well for thermostat; 5.5" Long	345906-05	
Heater Well (for OA25112US vessel only)	For 200W heater; 8" Long (1-1/8"-18 UNEF)	345905-05	
Oil Fill Cap	1-1/4" Rota lock	366203-01	
Service Valve for HFC	¼" NPT Flare and Schrader Connections for HFC	803-0001-01	

Oil Separator Kit Parts List (Kit Specific)

Oil Outlet Valves			OA1954US	OA4188US	OA9111US	OA14111US
1-1/4"Rotalock; 7/8"(22mm) sweat connection for HFC	361321-06		X			
1-3/4"Rotalock; 1- 3/8"(35mm) sweat connection for HFC	361321-08			X	X	
2-1/4"Rotalock threads; 1-5/8"(42mm) sweat connection for HFC	361321-12					X
White Rotalock O-Ring for Roto- lock Valves and Sight Glass	1"-14, Dia 19mm, 1x1.5mm	1-1/4"-12, Dia. 25mm, 4x1.5mm	1-3/4"-12, Dia. 38mm, 1x1.5mm	2-1/4"-12, Dia. 50.8mm, 1.5mm (also for sight glass)		
	372200-02	372200-03	372200-04	372200-06		
						
Oil Separators (Standard Refrigerants)						
Sight Glass	2-1/4"-12	361832-01				
Sight Glass Nut	2-1/4"-12 RL	366304-04				

Oil Separator Kit Parts List (Ammonia versions only)

Reflex Lense 1101R	2"	P000008160	
Gasket 1103B	2" OD x 1.5" ID	P000008159	
Gasket Vulcanized Fiber 1104	2" OD x 1.6" ID	P000008158	
Sight Glass Kit (includes the 3 items shown above)	999-0041-01		



The items shown below are for historical information as these parts are no longer used on vessels manufactured after 10/2014

Oil Sight Glass Kit	2-1/8"-16 UN-2B Reflex Lens and PTFE Gasket	LI-50A-3AR	
Oil Sight Glass (used on OA1954US...OA2511 2US vessels)	2" NPT	SG-1016	Used on vessels <09/2014 
Packing Gasket for Oil Sight Glass (used with LI-50A-3AR)	PTFE	2-023-053	
Oil Drain Valve	1"-14 Rotalock connection; 3/8" Flare for HFC	766-3062-02	Used on vessels <09/2014 The oil drain connection on vessels >09/2014 is not included as the connection size has changed to a standard 1/2" NPT pipe connection 
OA1954US Outlet Stub for HFC	2-1/4" Rota lock 1-5/8" (42mm) Sweat for HFC	366000-22	Used on vessels <02/2015 The OA1954US Outlet stub was removed on this vessel and replaced by 1-5/8" IDS Stub 
Oil Level Sensor: Outputs a 5VDC signal for use with ESC201 OR PLC Systems; 36" leads; 3/4"-16 Threads. (2 piece sensor and well)		791-9906-00	

Historical Information:

Changes made prior to 2015 are not listed.

Level Sensor




August 05, 2025

BITZER US has changed the oil level sensor connect for vertical oil separators. The connection prior to the change was a 1/2" NPT connection

This port has been updated to use a 1-3/4"-12 RTL connection. The new connection accommodates the AWA OLC-D1 oil level sensor. The table below documents the last serial number that uses the old level sensor connection, 1/2" NPT coupling.

Oil Separator Kit Item Number	Vessel Item Number	Last Serial Number Henry Oil Sensor Connection (Date)
OA1954US	771-0003-01	8408232647 (06/03/2025)
OA14111US	771-0006-01	8408232358 (05/12/2025)
OA1954US-NH3	771-0003-03	8408232178 (03/10/2025)
OA4188US-450	771-0004-02	8404626126 (06/08/2023)
OA25112US	771-0007-01	8408232530 (05/14/2025)
OA9111US	771-0005-01	8408232746 (08/19/2025)
OA4188US	771-0004-01	8409002087 (10/24/2025)

The table below provides part numbers that can still be ordered for replacement.

Voltage	Item Number	Image	Connection	Usage
5VDC	791-9906-02		1/2" NPT	Vertical Oil Separators - Synthetic Refrigerants
115V	791-9906-15			
230V	791-9906-23			

Notes: