



Suction Line Filter Driers

Virginia KMP Series WSL

The Virginia KMP WorldSeries™ WSL suction line filter drier is designed for use with most refrigerant/lubricant combinations. The WSL has been designed to provide a minimal pressure drop at the high flow rates of suction gas. Filtration of particles down to 10 microns in size is accomplished by both inlet and outlet filter pads. The WSL has been designed so that refrigerant will travel through the sides of the filter media to maximize filtration and to prevent "front end loading", maintaining a low pressure drop across the vessel. Acid and moisture removal is accomplished by a large volume of activated alumina in the heart of the filter drier. Internal components, including the desiccant bed, baffle, spider bracket and the inlet and outlet filter media, are compressed and held firmly in place by a special cylindrical spring applying pressure to the inlet and outlet retention screens.

Availability with solder or flare connections, in inch or millimeter sizes, expands the versatility of this filter drier to meet a broad range of industry requirements.

Manufactured in the USA in our ISO 9001 registered facility, the WorldSeries driers are UL listed (SA1906) and CSA approved (LR41494), and are rated per the ARI 730-86 standard.

Intended for worldwide application, a WorldSeries filter drier available in Europe or Asia is identical to those in North America, so wherever the equipment came from or wherever it goes - exact WSL filter driers will be available.

CHARACTERISTICS:

- Compacted bead, spring loaded design.
- Exceptional acid and particulate removal.
- Very low pressure drop.
- Filtration down to 10 microns.
- Designed for permanent installation.
- Hard copper sweat connectors.
- Large wrench flats on flare connectors.
- Standard lay-in lengths.
- Shock resistant design.
- Powder coat finish is 1000 hours salt spray test rated.
- Access port on the inlet side.
- 302 psig (21 bar) safe working pressure.



APPLICATIONS:

Designed for installation in the suction line of any refrigeration or air conditioning application to provide system protection or cleanup from moisture, contaminants, dirt and acid. Recommended for retrofit applications to trap dirt and particles released by the solvent action of the new lubricants.

COMPATIBILITY:

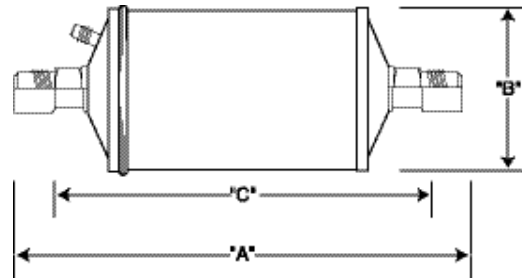
- CFC, HCFC and HFC refrigerants.
- Mineral oils, alkylbenzene (AB), polyol ester (POE), and polyalkylene glycol (PAG) lubricants.



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DIMENSIONS:



Catalog Number	Cu. In.	Fitting Type	Dimensions: Inches (Millimeters)					
			Overall Length		Diameter		Lay-in Length	
			"A"		"B"		"C"	
WSL-163	16	3/8 Flare	6-3/4	(171)	2-1/2	(63)	---	---
WSL-163S	16	3/8 Solder	6-1/16	(154)	2-1/2	(63)	5-7/16	(138)
WSL-164	16	1/2 Flare	6-15/16	(176)	2-1/2	(63)	---	---
WSL-164S	16	1/2 Solder	6-1/16	(154)	2-1/2	(63)	5-7/16	(138)
WSL-165	16	5/8 Flare	7-1/4	(184)	2-1/2	(63)	---	---
WSL-165S	16	5/8 Solder	6-5/16	(160)	2-1/2	(63)	5-5/16	(135)
WSL-166S	16	3/4 Solder	6-9/16	(167)	2-1/2	(63)	5-5/16	(135)
WSL-167S	16	7/8 Solder	7-1/16	(179)	2-1/2	(63)	5-9/16	(141)
WSL-305S	30	5/8 Solder	7-15/16	(202)	3	(76)	6-15/16	(176)
WSL-306S	30	3/4 Solder	7-15/16	(202)	3	(76)	6-11/16	(170)
WSL-307S	30	7/8 Solder	8-7/16	(214)	3	(76)	6-15/16	(176)
WSL-419S	41	1-1/8 Solder	10-5/8	(270)	3-1/2	(89)	8-13/16	(224)
WSL-7511S	75	1-3/8 Solder	14-3/16	(360)	3-1/2	(89)	12-1/4	(311)
WSL-7513S	75	1-5/8 Solder	14-7/16	(367)	3-1/2	(89)	12-1/4	(311)

FLOW CAPACITY: Tons (kW)

Catalog Number	Refrigerant 12				Refrigerant 22			
	+40°F	+20°F	0°F	-20°F	+40°F	+20°F	0°F	-20°F
	2ΔP	1.5ΔP	1ΔP	0.5ΔP	3ΔP	2ΔP	1.5ΔP	1ΔP
WSL-163	0.4 (1.5)	0.3 (1.0)	0.2 (0.6)	0.1 (0.3)	0.8 (2.7)	0.5 (1.8)	0.3 (1.2)	0.2 (0.8)
WSL-163S	0.5 (1.8)	0.3 (1.2)	0.2 (0.8)	0.1 (0.4)	0.9 (3.2)	0.6 (2.1)	0.4 (1.4)	0.3 (0.9)
WSL-164	0.9 (3.2)	0.6 (2.2)	0.4 (1.4)	0.2 (0.7)	1.7 (5.8)	1.1 (3.8)	0.7 (2.6)	0.5 (1.6)
WSL-164S	1.0 (3.6)	0.7 (2.4)	0.4 (1.5)	0.2 (0.8)	1.8 (6.4)	1.2 (4.2)	0.8 (2.8)	0.5 (1.8)
WSL-165	1.4 (5.1)	1.0 (3.5)	0.6 (2.2)	0.3 (1.2)	2.6 (9.1)	1.7 (6.0)	1.2 (4.1)	0.7 (2.6)
WSL-165S	1.5 (5.2)	1.0 (3.5)	0.6 (2.2)	0.3 (1.2)	2.7 (9.3)	1.7 (6.1)	1.2 (4.1)	0.7 (2.6)
WSL-166S	1.8 (6.4)	1.3 (4.4)	0.8 (2.8)	0.4 (1.5)	3.3 (11.6)	2.2 (7.6)	1.5 (5.1)	0.9 (3.2)
WSL-167S	1.9 (6.8)	1.3 (4.7)	0.8 (3.0)	0.5 (1.6)	3.5 (12.3)	2.3 (8.0)	1.6 (5.5)	1.0 (3.4)
WSL-305S	2.5 (8.8)	1.7 (6.0)	1.1 (3.8)	0.6 (2.0)	4.5 (15.8)	2.9 (10.3)	2.0 (7.0)	1.3 (4.4)
WSL-306S	3.1 (10.7)	2.1 (7.3)	1.3 (4.6)	0.7 (2.5)	5.5 (19.3)	3.6 (12.6)	2.4 (8.6)	1.5 (5.4)
WSL-307S	4.7 (16.6)	3.2 (11.3)	2.0 (7.2)	1.1 (3.8)	8.5 (29.9)	5.5 (19.5)	3.8 (13.3)	2.4 (8.3)
WSL-419S	6.1 (21.5)	4.2 (14.7)	2.6 (9.3)	1.4 (5.0)	11.0 (38.7)	7.2 (25.2)	4.9 (17.2)	3.1 (10.8)
WSL-4511S	8.9 (31.3)	6.1 (21.3)	3.8 (13.5)	2.1 (7.2)	16.0 (56.3)	10.4 (36.7)	7.1 (25.0)	4.5 (15.7)
WSL-7513S	11.1 (39.1)	7.6 (26.7)	4.8 (16.9)	2.6 (9.1)	20.0 (70.3)	13.0 (45.8)	8.9 (31.2)	5.6 (19.6)



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FLOW CAPACITY:
Tons (kW)

Catalog Number	Refrigerant 502				Refrigerant 134a			
	+20°F	0°F	-20°F	-40°F	+40°F	+20°F	0°F	-20°F
	3ΔP	2ΔP	1.5ΔP	1ΔP	2ΔP	1.5ΔP	1ΔP	0.5ΔP
WSL-163	0.5 (1.7)	0.3 (1.1)	0.2 (0.7)	0.1 (2.6)	0.5 (1.8)	0.3 (1.1)	0.2 (0.7)	0.1 (0.4)
WSL-163S	0.6 (2.0)	0.4 (1.3)	0.2 (0.8)	0.1 (3.0)	0.6 (2.1)	0.4 (1.4)	0.2 (0.7)	0.1 (0.4)
WSL-164	1.1 (3.7)	0.7 (2.4)	0.4 (1.6)	0.3 (5.5)	1.0 (3.5)	0.7 (2.5)	0.4 (1.4)	0.2 (0.7)
WSL-164S	1.2 (4.1)	0.7 (2.6)	0.5 (1.7)	0.3 (6.0)	1.2 (4.2)	0.8 (2.8)	0.5 (1.8)	0.2 (0.7)
WSL-165	1.7 (5.9)	1.1 (3.7)	0.7 (2.5)	0.4 (8.6)	1.7 (6.0)	1.1 (3.9)	0.7 (2.5)	0.4 (1.4)
WSL-165S	1.7 (6.0)	1.1 (3.8)	0.7 (2.5)	0.4 (8.8)	1.7 (6.0)	1.1 (3.9)	0.7 (2.5)	0.4 (1.4)
WSL-166S	2.1 (7.5)	1.3 (4.7)	0.9 (3.1)	0.5 (11.0)	2.1 (7.4)	1.4 (4.9)	0.9 (3.2)	0.5 (1.8)
WSL-167S	2.3 (7.9)	1.4 (5.0)	0.9 (3.3)	0.6 (11.6)	2.2 (7.7)	1.5 (5.3)	0.9 (3.2)	0.5 (1.8)
WSL-305S	2.9 (10.2)	1.8 (6.5)	1.2 (4.2)	0.7 (14.9)	2.9 (10.2)	1.9 (6.7)	1.2 (4.2)	0.6 (2.1)
WSL-306S	3.5 (12.5)	2.2 (7.9)	1.5 (5.2)	0.9 (18.3)	3.5 (12.3)	2.3 (8.1)	1.4 (4.9)	0.8 (2.8)
WSL-307S	5.5 (19.3)	3.5 (12.2)	2.3 (8.0)	1.4 (28.2)	5.4 (19.0)	3.6 (12.7)	2.2 (7.7)	1.2 (4.2)
WSL-419S	7.1 (24.9)	4.5 (15.8)	3.0 (10.4)	1.8 (36.5)	7.0 (24.6)	4.7 (16.5)	2.9 (10.2)	1.5 (5.3)
WSL-4511S	10.3 (36.2)	6.5 (22.9)	4.3 (15.1)	2.6 (53.1)	10.2 (35.9)	6.8 (23.9)	4.2 (14.8)	2.2 (7.7)
WSL-7513S	12.9 (45.3)	8.2 (28.7)	5.4 (18.9)	3.3 (66.4)	12.7 (44.7)	8.5 (29.9)	5.2 (18.3)	2.7 (9.5)

Catalog Number	Refrigerant 407C				Refrigerant 404A / 507			
	+20°F	0°F	-20°F	-40°F	+20°F	0°F	-20°F	-40°F
	3ΔP	2ΔP	1.5ΔP	1ΔP	3ΔP	2ΔP	1.5ΔP	1ΔP
WSL-163	0.7 (2.6)	0.5 (1.6)	0.3 (1.1)	0.2 (0.7)	0.5 (1.8)	0.3 (1.1)	0.2 (0.7)	0.1 (0.4)
WSL-163S	0.9 (3.0)	0.5 (1.9)	0.4 (1.3)	0.2 (0.8)	0.6 (2.2)	0.4 (1.3)	0.2 (0.9)	0.1 (0.5)
WSL-164	1.6 (5.5)	1.0 (3.5)	0.7 (2.3)	0.4 (1.4)	1.1 (4.0)	0.7 (2.4)	0.5 (1.6)	0.3 (1.0)
WSL-164S	1.7 (6.1)	1.1 (3.9)	0.7 (2.6)	0.4 (1.6)	1.2 (4.4)	0.8 (2.7)	0.5 (1.8)	0.3 (1.1)
WSL-165	2.5 (8.7)	1.6 (5.5)	1.0 (3.7)	0.6 (2.2)	1.8 (6.2)	1.1 (3.8)	0.7 (2.5)	0.4 (1.5)
WSL-165S	2.5 (8.8)	1.6 (5.6)	1.1 (3.7)	0.6 (2.3)	1.8 (6.4)	1.1 (3.9)	0.7 (2.6)	0.4 (1.5)
WSL-166S	3.1 (11.0)	2.0 (7.0)	1.3 (4.6)	0.8 (2.8)	2.3 (7.9)	1.4 (4.8)	0.9 (3.2)	0.5 (1.9)
WSL-167S	3.3 (11.7)	2.1 (7.4)	1.4 (4.9)	0.9 (3.0)	2.4 (8.4)	1.5 (5.1)	1.0 (3.4)	0.6 (2.0)
WSL-305S	4.3 (15.0)	2.7 (9.5)	1.8 (6.3)	1.1 (3.9)	3.1 (10.8)	1.9 (6.6)	1.2 (4.4)	0.7 (2.6)
WSL-306S	5.2 (18.4)	3.3 (11.7)	2.2 (7.7)	1.3 (4.7)	3.8 (13.2)	2.3 (8.1)	1.5 (5.3)	0.9 (3.2)
WSL-307S	8.1 (28.4)	5.1 (18.0)	3.4 (11.9)	2.1 (7.3)	5.8 (20.4)	3.5 (12.5)	2.3 (8.3)	1.4 (4.9)
WSL-419S	10.4 (36.7)	6.6 (23.3)	4.4 (15.5)	2.7 (9.4)	7.5 (26.4)	4.6 (16.2)	3.0 (10.7)	1.8 (6.4)
WSL-4511S	15.2 (53.4)	9.6 (33.9)	6.4 (22.5)	3.9 (13.7)	10.9 (38.4)	6.7 (23.5)	4.4 (15.5)	2.6 (9.3)
WSL-7513S	19.0 (66.8)	12.1 (42.4)	8.0 (28.1)	4.9 (17.2)	13.7 (48.0)	8.3 (29.4)	5.5 (19.4)	3.3 (11.6)



Other Suction Line Products

WSD Suction Line Filter Drier - For suction line applications in which it is difficult or impossible to use a standard length filter drier, the WSD series is the answer. All WSD filter driers have a 4" diameter and none exceeds a lay-in length over 5-1/2 inches.

WSF Suction Line Filter - For those suction line applications in which filtration of particulates is the only concern, the WSF series is the solution. This filter is designed to offer a lower pressure drop than a comparable filter drier, while still filtering out the dangerous particles that can damage a system.

Liquid Line Filter Driers

WLD Premium Liquid Line Filter Drier - For liquid line applications requiring exceptional moisture removal capability, as well as the ability to remove acids from the refrigerant. This premium filter drier contains a special blend of desiccants as well as an extended filtering surface for removing larger-than-normal amounts of particulate matter from the refrigerant/lubricant combination. Compatible with all CFC, HCFC and HFC refrigerant/lubricant combinations.

WAH Standard Liquid Line Filter Drier - For liquid line applications that require good filtration and moisture adsorption from a filter drier that is compatible with all CFC, HCFC and HFC refrigerant/lubricant combinations. Ideal for use in new and replacement equipment which has not had a compressor burnout.

WSC Solid Core Liquid Line Filter Drier - For those technicians who like the quality of Virginia KMP filter driers, but who prefer a solid core. Adsorbs moisture and acids from the refrigerant as well as removing small suspended particles. Compatible with all CFC, HCFC, and HFC refrigerant/lubricant combinations.

V2A Two Way Liquid Line Filter Drier - For use in the bidirectional liquid line of heat pump applications. Contains a special blend of desiccants to remove both moisture and acid from a system, as well as filtering very small particles from the refrigerant/lubricant mixture. Offers exceptional flow and drying capabilities.

WSG Liquid Line Filter Drier with Built-In Sight Glass - For liquid line applications which require the use of a standard liquid line filter drier and a sight glass. The built in sight glass saves time and money in installation and reduces the possibility for leaks while the liquid line filter drier removes moisture and contaminants from the refrigerant/lubricant combination. Compatible with all CFC, HCFC and HFC refrigerant/lubricant combinations.

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Virginia KMP Corp.
4100 Platinum Way
Dallas, Texas 75237 USA
Tel: 800 285 8567
Fax: 800 877 8567
E-Mail: info@virginiakmp.com
Website: www.virginiakmp.com

Hong Kong
Tel: +852 8108 2998
Fax: +852 8106 3196

France
Tel: +33 437 420008
Fax: +33 478 495653

Germany
Tel: +49 2241 975 907
Fax: +49 2241 975 910

Italy
Tel: +39 02 45 708 663
Fax: +39 02 45 708 600

England
Tel: +44 1226 273 400
Fax: +44 1226 273 401

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