



FOR INDUSTRY PROFESSIONALS

# Sealed Filter Driers



# Liquid Line Filter Driers

## APPLICATIONS

TradePro Liquid Line Filter Driers offer a high level of protection for refrigeration and air-conditioning systems. They are specifically designed to capture and retain moisture and solid particles from circulating throughout the system, which can create acid that causes damage to the compressor and other components piped within the circuit.

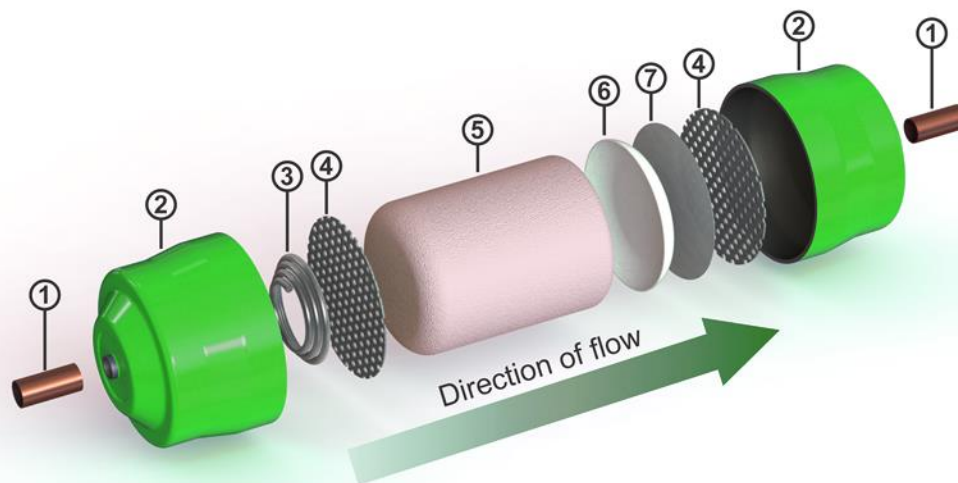
## MAIN FEATURES

- Solid core construction of 100% XH-11 Molecular Sieve
- Uniform porosity throughout entire core guarantees particulate filtration and retention
- Increased drying capacity over driers made with 80% Molecular Sieve and 20% Activated Alumina and cores
- Suitable for HCFC, HFC, and CO2 refrigerants, including R-410A
- Improved compatibility with R-410A refrigerant and its associated oil, as compared to 100% XH-9 Molecular Sieve desiccant.
- Will not degrade R-32 component in R-410A
- Stainless steel mesh and post core non-woven polyester filter provide increased filtration efficiency
- Solid particle filtration down to 150 microns
- Powder coat finish suitable for UV rays and harsh environments
- 1000 hour salt spray tested to ASTM B117

## TECHNICAL SPECIFICATIONS

- Maximum allowable operating pressure = 650 PSI (45 Bar)
- Allowable operating temperature = -40°F to +212°F (-40°C to +100°C)
- All sizes UL and C-UL Listed. File # SA1295
- CE marking
  - Sizes 08-30 in<sup>3</sup> = SEP
  - Size 45 in<sup>3</sup> = Cat I
- Solid Copper ODS connections sizes 3/8"-3/4"

# Liquid Line Filter Drier Construction



1. ODS Connection – Solid Copper
2. Shell – Powder Coated Steel
3. Spring – Steel
4. Perforated Plate – Galvanized Steel

5. Core – 100% XH-11 Molecular Sieve
6. Filter Pad – Non-woven Polyester
7. Filter Mesh – Stainless Steel

# Bi-Flow Filter Driers

## APPLICATIONS

TradePro Bi-Flow Filter Driers offer the highest levels of protection for heat pump air-conditioning systems. They are specifically designed, for the demands of heating or cooling, to capture and retain moisture and solid particulates from circulating throughout the system, which can create acid that causes damage to the compressor and other components piped within the circuit.

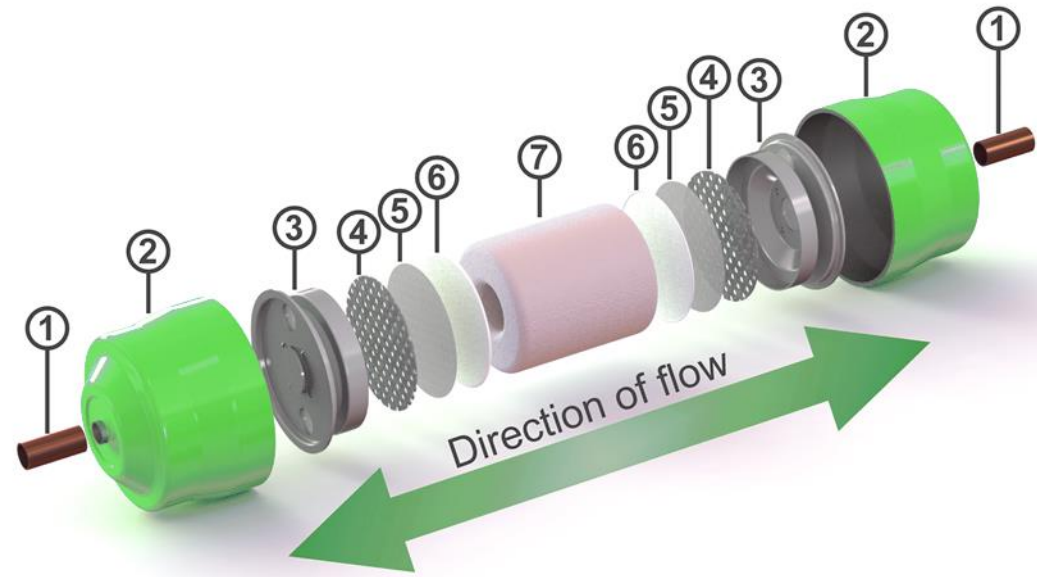
## MAIN FEATURES

- Solid core construction of 100% XH-11 Molecular Sieve
- Uniform porosity throughout entire core guarantees particulate filtration and retention
- Increased drying capacity over driers made with 80% Molecular Sieve and 20% Activated Alumina and cores
- Suitable for HCFC, HFC, and CO2 refrigerants
- Improved compatibility and reduced R32 absorption with refrigerants R-410A and R407C as compared to XH-9 Molecular Sieve
- Stainless steel mesh and pre and post core non-woven polyester filter provide increased filtration efficiency
- Solid particle filtration down to 150 microns
- Powder coat finish suitable for UV rays and harsh environments
- 1000 hour salt spray tested to ASTM B117

## TECHNICAL SPECIFICATIONS

- Maximum allowable operating pressure = 650 PSI (45 Bar)
- Allowable operating temperature = -40°F to +212°F (-40°C to +100°C)
- All sizes UL and C-UL Listed. File # SA1295
- CE marking
  - Sizes 08-30 in<sup>3</sup> = SEP
  - Size 45 in<sup>3</sup> = Cat I
- Solid Copper ODS connections sizes 3/8"-3/4"

# Bi-Flow Filter Drier Construction

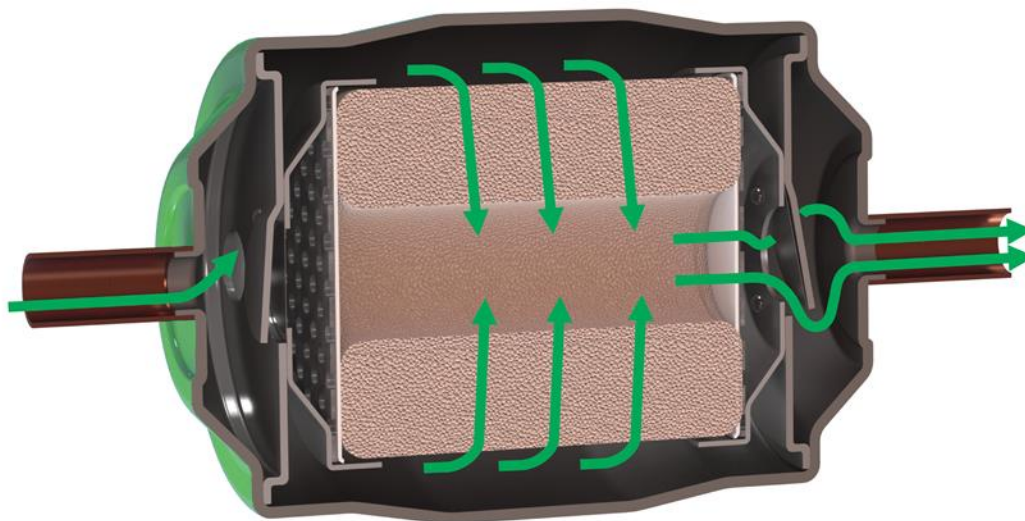


- 1. ODS Connection – Solid Copper
- 2. Shell – Powder Coated Steel
- 3. Valve Plate Assembly – Galvanized Steel
- 4. Perforated Plate – Galvanized Steel

- 5. Filter Mesh – Stainless Steel
- 6. Filter Pad – Non-woven Polyester
- 7. Core – 100% XH-11 Molecular Sieve

# Valve Plate Operation

The TradePro Bi-Flow Filter Driers employ a new and improved valve plate assembly that ensures all particles remain trapped once they are caught by the filter, regardless of the refrigerant flow direction. The new valve plate design directs the refrigerant flow through the desiccant core from the outside, inwards at all times. This provides maximum drying and micron filtration for the refrigerant while maintaining acceptable refrigerant flow rates through the filter drier.



# Suction Line Filter Driers

## APPLICATIONS

TradePro Suction Line Filter Driers offer a high level of moisture and contaminant removal from refrigeration and air-conditioning systems. Designed to remove moisture, acids and solid particles that can lead compressor failure.

Employing a solid core design, TradePro Suction Line Filter Driers deliver minimal pressure drop via total core utilization. This results in quicker uptake of inorganic acids and other contaminants. The solid core itself is formed through a binding process that maximizes surface area and protects the core from acid decomposition.

Additionally, TradePro Suction Line Filter Driers feature inlet and outlet access Schrader ports for the monitoring of pressure drop.

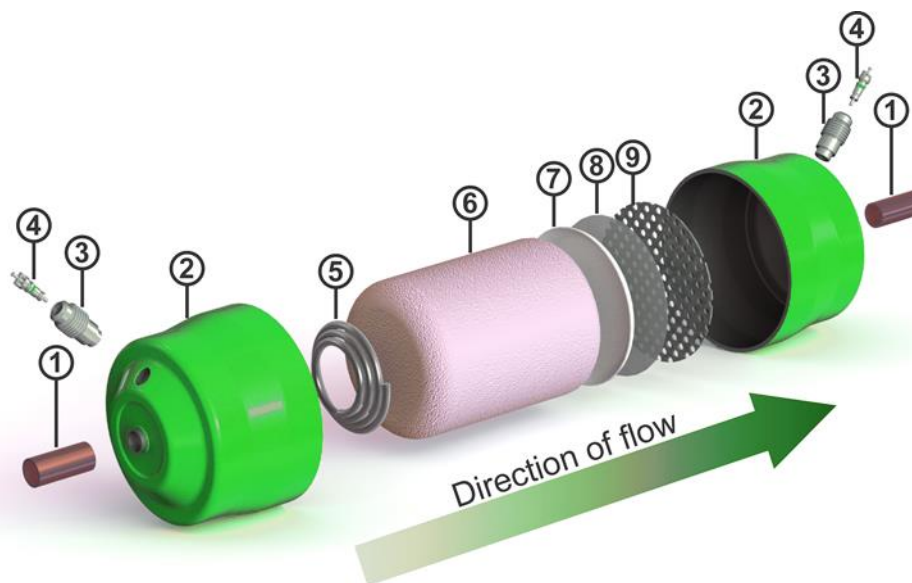
## MAIN FEATURES

- Solid core construction of 80% Molecular Sieve and 20% Activated Alumina
- Uniform porosity throughout entire core guarantees particulate filtration and retention
- High moisture absorption with added acid absorption over 100% Molecular Sieve cores
- Suitable for HCFC, HFC and CO2 refrigerants
- Not suitable for oils containing additives
- Stainless steel mesh and post core non-woven polyester filter provide increased filtration efficiency
- Solid particle filtration down to 150 microns
- Powder coat finish suitable for UV rays and harsh environments
- 1000 hour salt spray tested to ASTM B117

## TECHNICAL SPECIFICATIONS

- Maximum allowable operating pressure = 650 PSI (45 Bar)
- Allowable operating temperature = -40°F to +212°F (-40°C to +100°C)
- All sizes UL and C-UL Listed. File # SA1295
- CE marking
  - Sizes 08-30 in<sup>3</sup> = SEP
  - Size 45 in<sup>3</sup> = Cat I
- Solid Copper ODS connections sizes 5/8"-1-1/8"

# Suction Line Filter Drier Construction



1. ODS Connection – Solid Copper
2. Shell – Powder Coated Steel
3. Schrader Fitting – ¼" SAE Fl. Steel
4. Valve Core – R-410A approved
5. Spring – Steel
6. Core – 100% XH-11 Molecular Sieve

7. Filter Pad – Non-woven Polyester
8. Filter Mesh – Stainless Steel
9. Perforated plate – Galvanized Steel



# Filter Drier End Plugs



We feature rubber end plug protectors not plastic caps for a secure seal. The recommended method of end plug removal is with the use of pliers, preferably needle-nose to remove the protector from the fitting on the drier, not peeling or twisting off by hand. If you attempt to remove the protector by simply trying to pull it out with your fingers, you run the risk of tearing the rubber protector. This is not an indication of dry rot. The protector plug is a secure fit, and is intended to be so by design.

# Filter Drier End Plugs



Our driers are shipped under a significant positive charge of nitrogen pressure to displace any oxygen that may be present. This feature is two fold. One, it prevents any rust from developing internally due to the presence of moisture, and two, it prevents any humidity in the atmosphere from being absorbed by the desiccant, which could compromise the integrity of the total drying capacity of the drier. This is crucial, due to the fact that Polyolester oils (POE) are hygroscopic by nature and also, given that these filters could be subjected to extreme weather conditions riding around in a technicians truck. Therefore, we believe the more secure fit that requires the use of pliers to remove it correctly, is better to protect the drier prior to it being put into service.

# Technical Specifications

# Drying Capacity

## Liquid Line Filter Drier

Model Details	Drying Capacity* (kg of refrigerant)							
	R22		R134a/R507		R404A		R407C/R410A	
	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)
TP-LLD083S	15.2	14.1	16.3	15.5	24.0	14.8	16.4	14.1
TP-LLD163S	23.7	22.0	25.5	24.3	37.5	23.2	25.6	22.0
TP-LLD164S	23.7	22.0	25.5	24.3	37.5	23.2	25.6	22.0
TP-LLD305S	49.4	45.7	53.0	50.5	78.1	48.2	53.3	45.7
TP-LLD456S	80.7	74.8	86.6	82.5	127.6	78.9	87.2	74.7

Model Details	Drying Capacity** (drops of water)											
	R22		R134a		R507		R404A		R407C		R410A	
	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)
TP-LLD083S	273.4	253.3	289.1	275.2	293.5	279.5	432.4	267.2	295.3	253.1	295.3	253.1
TP-LLD163S	427.2	395.8	451.7	430.1	458.6	436.7	675.6	417.5	461.4	395.5	461.4	395.5
TP-LLD164S	427.2	395.8	451.7	430.1	458.6	436.7	675.6	417.5	461.4	395.5	461.4	395.5
TP-LLD305S	888.6	823.3	939.5	894.5	954.0	908.3	1405.3	868.3	959.7	822.6	959.7	822.6
TP-LLD456S	1452.6	1345.8	1535.8	1462.2	1559.4	1484.7	2297.1	1419.3	1568.7	1344.6	1568.7	1344.6

\*Drying Capacity is based on the following moisture content before and after drying:

R22: From 1050 ppm W to 60 ppm W in accordance with ARI 710-86

R134a: From 1050 ppm W to 75 ppm W. If refrigerant is to be dried to 50 ppm W, reduce the stated capacities by 15%

R404A, R407C, R507: From 1020 ppm W to 30 ppm W

R410A: From 1050 ppm W to 60 ppm W

\*\* 20 drops = 1 gram in accordance with ARI 710-86

# Drying Capacity

## Bi-Flow Filter Drier

Model Details	Drying Capacity* (kg of refrigerant)							
	R22		R134a/R507		R404A		R407C/R410A	
	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)
TP-LLDBF083S	8.5	7.9	9.2	8.7	13.5	8.3	9.2	7.9
TP-LLDBF163S	14.2	13.2	15.3	14.6	22.5	13.9	15.4	13.2
TP-LLDBF164S	14.2	13.2	15.3	14.6	22.5	13.9	15.4	13.2
TP-LLDBF305S	29.4	27.3	31.6	30.1	46.5	28.8	31.8	27.2
TP-LLDBF456S	56.0	51.9	60.1	57.3	88.6	54.7	60.5	51.9

Model Details	Drying Capacity** (drops of water)											
	R22		R134a		R507		R404A		R407C		R410A	
	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)
TP-LLDBF083S	153.8	142.5	162.6	154.8	165.1	157.2	243.2	150.3	166.1	142.4	166.1	142.4
TP-LLDBF163S	256.3	237.5	271.0	258.0	275.2	262.0	405.4	250.5	276.8	237.3	276.8	237.3
TP-LLDBF164S	256.3	237.5	271.0	258.0	275.2	262.0	405.4	250.5	276.8	237.3	276.8	237.3
TP-LLDBF305S	529.8	490.8	560.1	533.3	568.7	541.5	837.8	517.6	572.1	490.4	572.1	490.4
TP-LLDBF456S	1008.3	934.2	1066.0	1014.9	1082.4	1030.6	1594.4	985.2	1088.9	933.3	1088.9	933.3

\*Drying Capacity is based on the following moisture content before and after drying:

R22: From 1050 ppm W to 60 ppm W in accordance with ARI 710-86

R134a: From 1050 ppm W to 75 ppm W. If refrigerant is to be dried to 50 ppm W, reduce the stated capacities by 15%

R404A, R407C, R507: From 1020 ppm W to 30 ppm W

R410A: From 1050 ppm W to 60 ppm W

\*\* 20 drops = 1 gram in accordance with ARI 710-86

## Suction Line Filter Drier

Model Details	Drying Capacity* (kg of refrigerant)							
	R22		R134a/R507		R404A		R407C/R410A	
	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)
TP-SLD165S	21.5	19.9	23.1	22.0	37.0	19.9	22.6	19.3
TP-SLD166S	21.5	19.9	23.1	22.0	37.0	19.9	22.6	19.3
TP-SLD167S	21.5	19.9	23.1	22.0	37.0	19.9	22.6	19.3
TP-SLD305S	44.8	41.5	48.1	45.7	77.0	41.5	47.1	40.2
TP-SLD306S	44.8	41.5	48.1	45.7	77.0	41.5	47.1	40.2
TP-SLD307S	44.8	41.5	48.1	45.7	77.0	41.5	47.1	40.2
TP-SLD309S	44.8	41.5	48.1	45.7	77.0	41.5	47.1	40.2

Model Details	Drying Capacity** (drops of water)											
	R22		R134a		R507		R404A		R407C		R410A	
	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)	75°F (24°C)	125°F (52°C)
TP-SLD165S	387.0	358.2	409.5	390.0	415.8	396.0	666.0	358.2	406.8	347.4	406.8	347.4
TP-SLD166S	387.0	358.2	409.5	390.0	415.8	396.0	666.0	358.2	406.8	347.4	406.8	347.4
TP-SLD167S	387.0	358.2	409.5	390.0	415.8	396.0	666.0	358.2	406.8	347.4	406.8	347.4
TP-SLD305S	806.4	747.0	852.7	810.1	865.8	822.6	1386.0	747.0	847.8	723.6	847.8	723.6
TP-SLD306S	806.4	747.0	852.7	710.1	865.8	822.6	1386.0	747.0	847.8	723.6	847.8	723.6
TP-SLD307S	806.4	747.0	852.7	710.1	865.8	822.6	1386.0	747.0	847.8	723.6	847.8	723.6
TP-SLD309S	806.4	747.0	852.7	810.1	865.8	822.6	1386.0	747.0	847.8	723.6	847.8	723.6

\*Drying Capacity is based on the following moisture content before and after drying:

R22: From 1050 ppm W to 60 ppm W in accordance with ARI 710-86

R134a: From 1050 ppm W to 75 ppm W. If refrigerant is to be dried to 50 ppm W, reduce the stated capacities by 15%

R404A, R407C, R507: From 1020 ppm W to 30 ppm W

R410A: From 1050 ppm W to 60 ppm W

\*\* 20 drops = 1 gram in accordance with ARI 710-86

# Liquid Capacity

## Liquid Line Filter Drier

Model Details	Liquid Capacity*											
	R22		R134a		R404A		R407C		R410A		CO <sub>2</sub>	
	Tons	kW	Tons	kW	Tons	kW	Tons	kW	Tons	kW	Tons	kW
TP-LLD083S	6.2	21.7	5.3	18.7	3.0	10.5	6.2	21.7	6.6	23.1	8.2	28.7
TP-LLD163S	6.5	23.0	5.7	20.1	3.2	11.1	6.5	23.0	7.0	24.5	8.7	30.8
TP-LLD164S	9.9	34.9	8.6	30.3	4.8	16.9	9.9	34.9	10.6	37.3	13.2	46.4
TP-LLD305S	12.4	43.5	10.9	38.2	6.1	21.3	12.4	43.5	13.2	46.4	16.6	58.4
TP-LLD456S	19.4	68.2	16.9	59.5	9.4	32.9	19.4	68.2	20.7	72.7	25.9	91.0

\*Liquid capacity is based on the following conditions:

Evaporating temperature of  $t_e = +5^\circ\text{F} (-15^\circ\text{C})$  ( $-22^\circ\text{F} (-30^\circ\text{C})$  for CO<sub>2</sub>)

Condensing temperature of  $t_c = +86^\circ\text{F} (+30^\circ\text{C})$  ( $+23^\circ\text{F} (-5^\circ\text{C})$  for CO<sub>2</sub>)

Pressure drop across filter drier of  $\Delta p = 1 \text{ PSI} (0.07 \text{ bar})$

## Bi-Flow Filter Drier

Model Details	Liquid Capacity*											
	R22		R134a		R404A		R407C		R410A		CO <sub>2</sub>	
	Tons	kW	Tons	kW	Tons	kW	Tons	kW	Tons	kW	Tons	kW
TP-LLDBF083S	2.3	8.0	2.1	7.4	1.2	4.1	2.3	8.0	2.3	8.0	2.8	10.0
TP-LLDBF163S	5.4	18.9	4.8	17.0	2.7	9.4	5.4	18.9	5.4	18.9	6.7	23.7
TP-LLDBF164S	8.5	30.0	7.7	27.0	4.3	15.0	8.5	30.0	8.5	30.0	10.7	37.6
TP-LLDBF305S	10.2	35.8	9.2	32.3	5.1	18.0	10.2	35.8	10.2	35.8	12.8	44.9
TP-LLDBF456S	15.9	56.1	13.9	48.9	7.7	27.1	15.9	56.1	17.0	59.8	21.3	74.9

\*Liquid capacity is based on the following conditions:  
 Evaporating temperature of  $t_e = +5^\circ\text{F} (-15^\circ\text{C})$  ( $-22^\circ\text{F} (-30^\circ\text{C})$  for CO<sub>2</sub>)  
 Condensing temperature of  $t_c = +86^\circ\text{F} (+30^\circ\text{C})$  ( $+23^\circ\text{F} (-5^\circ\text{C})$  for CO<sub>2</sub>)  
 Pressure drop across filter drier of  $\Delta p = 1 \text{ PSI} (0.07 \text{ bar})$



# Liquid Capacity

## Suction Line Filter Drier

Model Details	Liquid Capacity*												Acid Capacity** (g)
	R22		R134a		R404A		R407C		R410A		CO <sub>2</sub>		
	Tons	kW	Tons	kW	Tons	kW	Tons	kW	Tons	kW	Tons	kW	
TP-SLD165S	12.0	42.2	10.5	36.8	5.8	20.4	12.0	42.2	12.8	45.0	16.0	56.3	4.0
TP-SLD166S	15.0	52.6	13.0	45.9	7.2	25.4	15.0	52.6	15.9	56.1	20.0	70.2	4.0
TP-SLD167S	17.7	62.2	15.4	54.3	8.5	30.0	17.7	62.2	18.9	66.3	23.6	83.0	4.0
TP-SLD305S	12.4	43.5	10.9	38.2	6.1	21.3	12.4	43.5	13.2	46.4	16.6	58.4	8.3
TP-SLD306S	18.3	64.3	15.9	56.0	8.8	30.9	18.3	64.3	19.5	68.5	24.3	85.6	8.3
TP-SLD307S	18.3	64.3	15.9	56.0	8.8	30.9	18.3	64.3	19.5	68.5	24.3	85.6	8.3
TP-SLD309S	25.1	88.3	21.9	77.1	12.1	42.6	25.1	88.3	26.8	94.2	33.5	117.9	8.3

\*Liquid capacity is based on the following conditions:

Evaporating temperature of  $t_e = +5^\circ\text{F} (-15^\circ\text{C})$  ( $-22^\circ\text{F} (-30^\circ\text{C})$  for CO<sub>2</sub>)

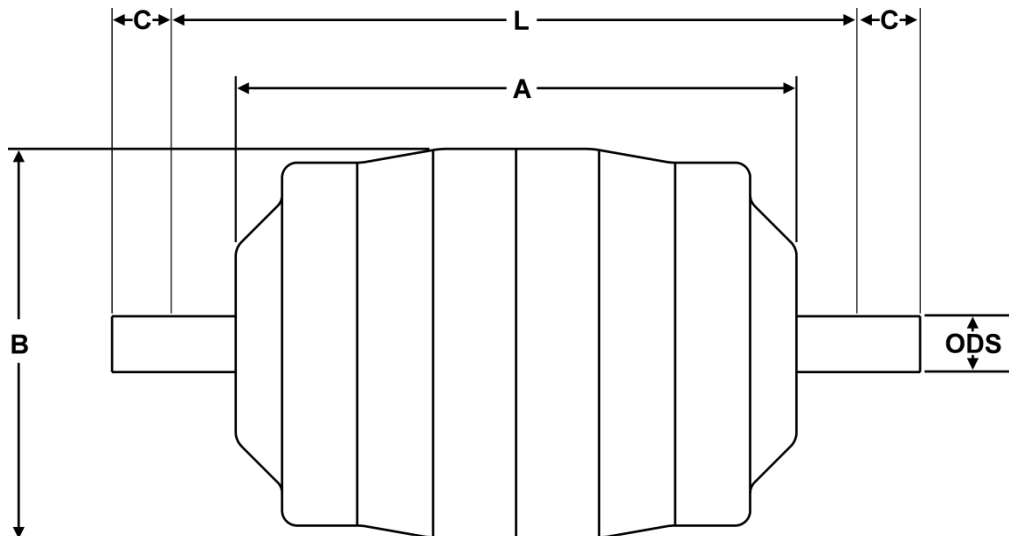
Condensing temperature of  $t_c = +86^\circ\text{F} (+30^\circ\text{C})$  ( $+23^\circ\text{F} (-5^\circ\text{C})$  for CO<sub>2</sub>)

Pressure drop across filter drier of  $\Delta p = 1 \text{ PSI} (0.07 \text{ bar})$

\*\* Acid capacity is based on absorption capacity of oleic acid at 0.05TAN (Total Acid Number)

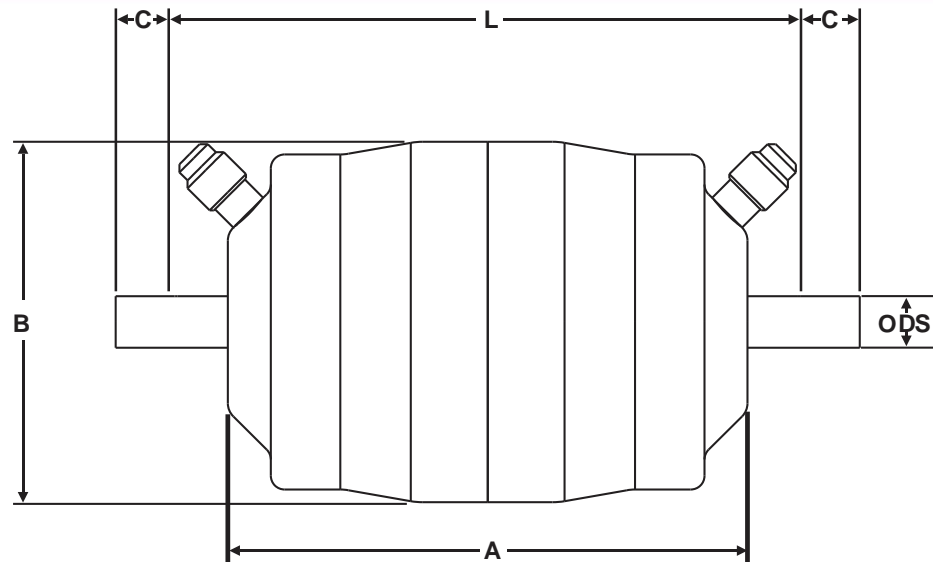
# Liquid Line Filter Driers Dimensional Specifications

TradePro No	ODS (inch)	Dimensions (inch)				Weight (lbs)
		L	A	ØB	C	
TP-LLD083S	3/8	4.72	3.86	2.60	0.51	0.95
TP-LLD163S	3/8	5.28	4.41	3.07	0.51	1.40
TP-LLD164S	1/2	5.35	4.41	3.07	0.51	1.40
TP-LLD305S	5/8	8.50	7.28	3.07	0.59	2.70
TP-LLD456S	3/4	9.06	8.03	3.62	0.55	3.70



# Bi-Flow Filter Driers Dimensional Specifications

TradePro No	ODS (inch)	Dimensions (inch)				Weight (lbs)
		L	A	B	C	
TP-LLDBF083S	3/8	4.72	3.86	2.60	0.51	0.95
TP-LLDBF163S	3/8	5.28	4.41	3.07	0.51	1.40
TP-LLDBF164S	1/2	5.35	4.41	3.07	0.51	1.40
TP-LLDBF305S	5/8	8.66	7.28	3.07	0.51	2.85
TP-LLDBF456S	3/4	9.06	8.03	3.62	0.59	3.85



# Suction Line Filter Driers Dimensional Specifications

TradePro No	ODS (inch)	Dimensions (inch)				Weight (lbs)
		L	A	B	C	
TP-SLD165S	5/8	5.28	4.41	3.07	0.51	1.50
TP-SLD166S	3/4	5.35	4.41	3.07	0.59	1.55
TP-SLD167S	7/8	5.59	4.41	3.07	0.59	1.60
TP-SLD305S	5/8	8.66	7.28	3.07	0.51	2.75
TP-SLD306S	3/4	8.23	7.28	3.07	0.59	2.80
TP-SLD307S	7/8	8.46	7.28	3.07	0.59	2.85
TP-SLD309S	1-1/8	8.46	7.28	3.07	0.59	2.90

