

Introduction

Heldon liquid line filter driers offer a high level of protection for refrigeration and air-conditioning systems. Designed to remove moisture, acids and solid particles that can lead to premature component failure and harmful chemical reactions.

Features

- Solid core constructed with optimized binding agent.
- Pre and post core filters.
- 100% Molecular Sieve core.
- Solid copper sweat and zinc plated flare connections.
- Powder coated UL approved shell.

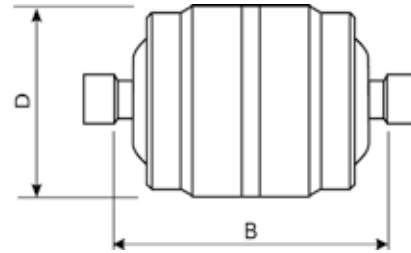
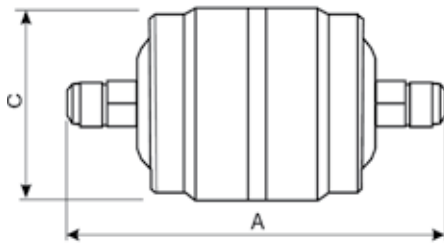


Liquid Capacity Table			Drying Capacity Tables									
Connection	Flare	Part No.	R22			R22				R134a		Drops of Water @24°C
			R407C	R134a	R404A	R407C	R410A	R134a	R404A	R507	R404A	
	Solder		R410a	R134a	R507	24°	52°	24°	52°	24°	52°	
1/4	3000-032	3001-032S	7	7	5	6.5	6	7	6.5	11	6	150
3/8	3000-033	3001-033S	19	17	13	6.5	6	7	6.5	11	6	150
1/4	3000-052	3001-052S	8	7	5	8	7	8.5	8	13	7.5	260
3/8	3000-053	3000-053S	19	18	14	8	7	8.5	8	13	7.5	260
1/4	3000-082	3001-082S	8	7	5	12.5	11	12.5	12	20	11.5	400
3/8	3000-083	3001-083S	21	19	14	12.5	11	12.5	12	20	11.5	400
1/2	3000-084	3001-084S	29	26	20	12.5	11	12.5	12	20	11.5	400
1/4	3000-162	3001-162S	8	7	5	27	23	27	25.5	43	24	870
3/8	3000-163	3001-163S	24	22	16	27	23	27	25.5	43	24	870
1/2	3000-164	3001-164S	33	30	22	27	23	27	25.5	43	24	870
5/8	3000-165	3001-165S	47	43	30	27	23	27	25.5	43	24	870
3/8	3000-303	3001-303S	23	21	15	57	48.5	58	54	92	51	1850
1/2	3000-304	3001-304S	34	31	22	57	48.5	58	54	92	51	1850
5/8	3000-305	3001-305S	49	45	33	57	48.5	58	54	92	51	1850
3/4	3000-306	3001-306S	65	59	43	57	48.5	58	54	92	51	1850
7/8		3001-307S	65	59	43	57	48.5	58	54	92	51	1850
3/8	3000-413	3001-413S	27	25	18	80	74	80	75	130	70	2600
1/2	3000-414	3001-414S	35	32	23	80	74	80	75	130	70	2600
5/8	3000-415	3001-415S	55	53	37	80	74	80	75	130	70	2600
3/4	3000-416	3001-416S	100	91	65	80	74	80	75	130	70	2600
7/8		3001-417S	100	91	65	80	74	80	75	130	70	2600

Given in accordance with ARI 710-86 for;
 Evaporator temperature; $t_e = -15^\circ\text{C}$
 Condensing temperature; $t_c = 30^\circ\text{C}$
 Pressure drop $P = 7\text{kpa}$ (1 psi)

Drying Capacity based on moisture content reduction requirements as follows;
 R22, R410A: down to 60ppm
 R407C, R404a, R507: down to 30ppm
 R134a: down to 75ppm

Dimensions



Dimensions, Weights & Carton Quantities

Part No.	A mm	C mm	Weight kg	Carton qty
3000-032	110	64	.255	48
3000-033	110	64	.310	48
3000-052	110	64	.395	40
3000-053	110	64	.435	40
3000-082	136	64	.515	24
3000-083	147	64	.550	24
3000-084	152	64	.580	24
3000-162	157	78	.750	18
3000-163	168	78	.790	18
3000-164	175	78	.825	18
3000-165	185	78	.895	18
3000-303	250	78	1.235	12
3000-304	250	78	1.290	12
3000-305	258	78	1.345	12
3000-306	258	78	1.370	12
3000-413	245	90	1.865	8
3000-414	255	90	1.885	8
3000-415	255	90	1.935	8
3000-416	269	90	1.965	8

Part No.	B mm	D mm	Weight kg	Carton qty
3001-032S	110	64	.225	48
3001-033S	110	64	.260	48
3001-052S	110	64	.360	40
3001-053S	110	64	.380	40
3001-082S	110	64	.480	24
3001-083S	136	64	.485	24
3001-084S	136	64	.495	24
3001-162S	156	78	.755	18
3001-163S	156	78	.805	18
3001-164S	156	78	.820	18
3001-165S	158	78	.895	18
3001-303S	238	78	1.210	12
3001-304S	238	78	1.250	12
3001-305S	238	78	1.270	12
3001-306S	238	78	1.290	12
3001-307S	241	78	1.310	12
3001-413S	238	90	1.805	8
3001-414S	238	90	1.815	8
3001-415S	238	90	1.825	8
3001-416S	238	90	1.835	8
3001-417S	250	90	1.870	8

- Weight kg refers to packaged weight of drier
 - Carton Qty refers to master carton box quantity
- Pallet quantities can be confirmed on request

Manufacturing Standards

Manufactured in accordance with AS 2971 or UL207
 Safe Working Pressure: 4,200 kPa

Introduction

Heldon Bi-flow filter driers offer a high level of protection for heat pump air-conditioning systems. Designed to remove moisture, acids and solid particles that can lead to premature component failure and harmful chemical reactions.

This is achieved irrespective of refrigerant flow direction as Heldon Bi-flow filter driers have a built in check valve system ensuring all particles remain trapped once they are caught by the filter.

Standard Series (Beige) have a solid core consisting of 100% molecular sieve. The valve plate has been designed to handle all conditions, they offer quick water absorption and are ideally suited to HFC refrigerants, POE and PAG oils.

Burnout Series (Yellow) have a solid core consisting of 48% Molecular Sieve, 47% Activated Alumina and 5% Activated Carbon. They offer quick moisture and acid absorption and are ideally suited when a small motor burnout occurs and space does not permit a full size burnout drier.



Features

Features

Solid core constructed with optimized binding agent.
Pre and post core filters, double the filtration and less chance of a total core blockage.
Standard Series– 100% Molecular sieve.

Burnout Series– 48% Molecular Sieve,
47% Activated Alumina, and 5% Activated Carbon.
Solid copper sweat and zinc plated flare connections.
Powder coated UL approved shell rated to 4200Kpa /600psi (R410a).

Benefits

Larger and faster moisture uptake per cubic inch.
Double the filtration and less chance of a total core blockage.
Ideal for POE oil systems, quickest moisture removal and reduced risk of hydrolysis. Will not strip Manufacturers oil additives.
Clean up after small burnout with space restrictions.
Easier to use and longer life.
Suitable for harsh environments and high pressure applications.

Manufacturing Standards

Manufactured in accordance with AS 2971 or UL207
Safe Working Pressure: 4,200 kPa

Dimensions and Capacities



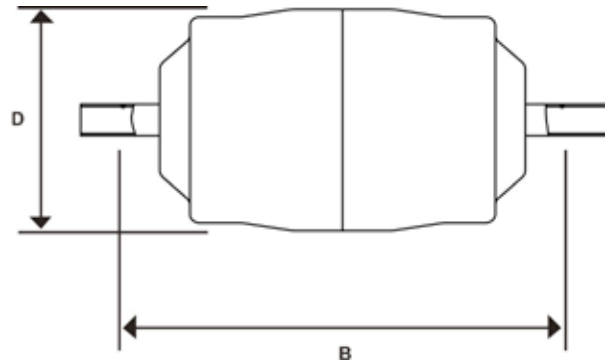
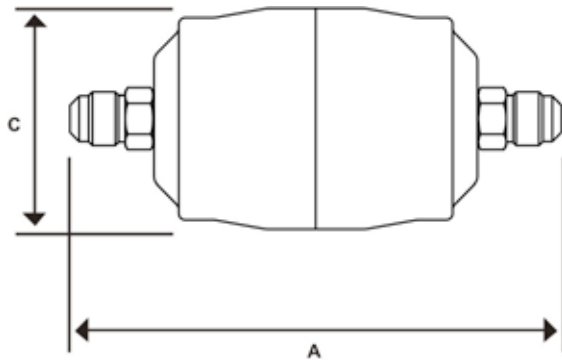
Standard	Part No.		Capacity kW			Drying Capacity		
	Flare	Solder	R22	R407C	R134a	R22	R407C	R134a
1/4	3040-082	3040-082S	4.1	3.7	3.7	11.5	11.5	12.5
3/8	3040-083	3040-083S	8	7.4	7.4	11.5	11.5	12.5
1/2	3040-084	3040-084S	8.9	8	8	11.5	11.5	12.5
3/8	3040-163	3040-163S	18.9	17	17	15.5	15.5	16.3
1/2	3040-164	3040-164S	30	27	27	15.5	15.5	16.3
5/8	3040-165	3040-165S	38.5	34.6	34.6	15.5	15.5	16.3



Burnout Series		Capacity kW			Drying Capacity			Acid Capacity g
Connection	Part No.	R22	R407C	R134a	kg refrigerant*			
		Flare	R410A	R134a	R22	R410A	R134a	
1/4	3027-082	4.2	3.8	3.8	7	6.3	7.4	3.9
3/8	3027-083	8.3	7.5	7.5	7	6.3	7.4	3.9
1/2	3027-084	9.1	8.2	8.2	7	6.3	7.4	3.9
3/8	3027-163	19	17.5	17.5	13	11.8	14	8.8
1/2	3027-164	30	27	27	13	11.8	14	8.8
5/8	3027-165	39	35.8	35.8	13	11.8	14	8.8

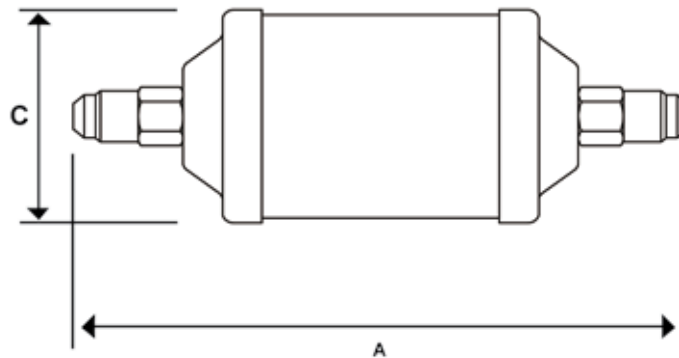
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 Evaporator temperature; $t_e = -15^\circ\text{C}$
 Condensing temperature; $t_c = 30^\circ\text{C}$
 Pressure drop $P = 7\text{kpa (1 psi)}$

*Drying capacity based on the following criteria;
 R22 - down to 50ppm
 R407C - down to 50ppm
 R410A - down to 60ppm
 R134a - down to 75ppm



Dimensions, Weights & Carton Quantities

Part No.	A mm	C mm	Weight kg	Carton qty	Part No.	B mm	D mm	Weight kg	Carton qty
3040-082	145	65	.515	24	3040-082S	116	65	.480	24
3040-083	155	65	.550	24	3040-083S	120	65	.485	24
3040-084	163	65	.580	24	3040-084S	122	65	.495	24
3040-163	169	78	.790	18	3040-163S	134	78	.805	18
3040-164	177	78	.825	18	3040-164S	136	78	.820	18
3040-165	185	78	.895	18	3040-165S	134	78	.895	18



Dimensions, Weights & Carton Quantities

Part No. Flare	A mm	C mm	Weight kg	Carton qty
3027-082	140	64	.515	18
3027-083	152	64	.550	18
3027-084	160	64	.580	18
3027-163	170	78	.790	18
3027-164	175	78	.825	18
3027-165	185	78	.895	18

Introduction

Heldon Burnout filter driers offer a high level of contaminant removal from refrigeration and air-conditioning systems following a compressor motor burnout. Designed to remove the moisture, acids and solid particles that can lead to the premature failure of the replacement compressor.

Due to their solid core design, Heldon burnout filter driers maintain a minimal pressure drop with total core utilization resulting in quicker uptake of inorganic acids and other contaminants. The solid core is formed through a binding process that maximizes surface area and protects the core from acid decomposition.

Available in standard and short lay in length they feature inlet and outlet access Schrader ports for the monitoring of pressure drop. On small suction pressure drop critical systems one model is supplied with a replacement jumper tube.

It is good practice to remove all suction burnout driers after an acid test to prevent loss of system performance and the risk of catalytic hydrolysis in POE oil systems.



Features

Features

Solid core construction with optimized binding agent.

Pre and post core filters, double the filtration and less chance of a total core blockage.

Inlet and Outlet access ports.

Short lay in length and multi-orientation design.

Solid copper sweat and zinc plated flare connections.

Powder coated shell rated to 3200Kpa /500psi (R410a Suction line compatible).

Benefits

Larger and faster moisture and contaminant uptake per cubic inch.

Double the filtration and less chance of a total core blockage.

The ability to monitor pressure drop across the drier.

Easy of installation in tight positions.

Easier to use and longer life.

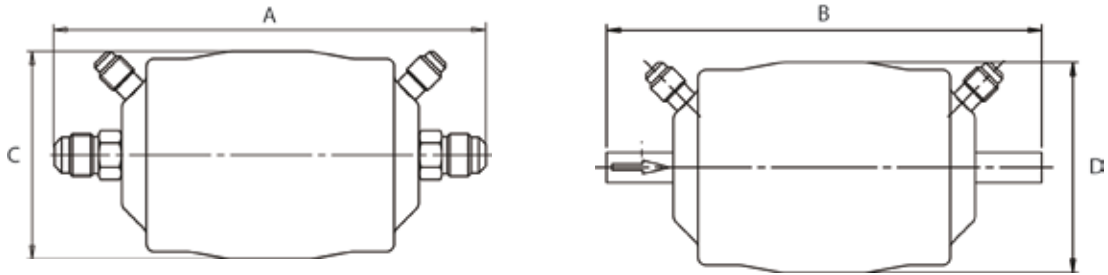
Suitable for harsh environments and most suction line applications.

Manufacturing Standards

Manufactured in accordance with AS 2971

Safe Working Pressure: 3,200 kPa

Dimensions and Capacities



Suction/Burnout

Burnout Filter Drier

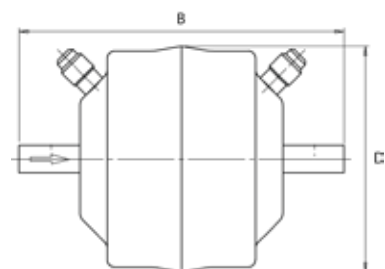
Con	Flare Part No.	Length (A)	Dia (C)	Weight kg	Carton qty	Solder Part No.	Length (B)	Dia (D)	Capacity kW			Weight kg	Carton qty
									R22/407C	R134A	R404A		
1/4						3022-033S	110	46	4	3	3	.335	48
1/4	3021-082	146	64	.570	24	3022-082S	146	64	6	3.5	4	.570	24
3/8	3021-083	146	64	.600	24	3022-083S	146	64	6	3.5	4.5	.600	24
1/2	3021-084	153	64	.640	24	3022-084S	148	64	10	5.5	8	.640	24
1/4	3021-162	160	78	.800	18	3022-162S	160	78	10.5	5	7.5	.800	18
3/8	3021-163	170	78	.860	18	3022-163S	160	78	13	5.5	8	.860	18
1/2	3021-164	177	78	.880	18	3022-164S	162	78	15	6	8.5	.880	18
5/8	3021-165	186	78	.960	18	3022-165S	160	78	20	9.5	13	.960	18
1/2	3021-304	250	78	1.400	12	3022-304S	235	78	17	10	15	1.400	12
5/8	3021-305	259	78	1.460	12	3022-305S	246	78	18	12.5	15	1.460	12
3/4	3021-306	238	78	1.440	12	3022-306S	239	78	22	14	19	1.440	12
7/8						3022-307S	245	78	26	16	22	1.500	12
1 1/8						3022-309S	245	78	31	20	27	1.550	12
1 3/8						3022-311S	255	78	31	20	27	1.550	12
1/2	3021-414	257	90	1.940	8	3022-414S	242	90	25	14.5	23	1.940	8
1/2	3021-415	266	90	1.960	8	3022-415S	240	90	26.5	16	24.5	1.960	8
3/4	3021-416	272	90	2.000	8	3022-416S	246	90	29.5	17.5	25	2.000	8
7/8						3022-417S	250	90	30	18	25	2.200	8

Burnout Filter Drier with Jumper Tube

3/8	3026-06	171	46						7	4.5	5	.565	
1/2	3026-08	178	46						7	4.5	5	.645	
5/8	3026-10	191	46						7	4.5	5	.750	

Pancake Burnout Filter Drier

1/2						3025-404s	110	87	17	14	15	1.000	12
5/8						3025-405s	110	87	23	17.5	19.5	1.000	12
3/4						3025-406s	110	87	23	17.5	19.5	1.000	12
7/8						3025-407s	110	87	25	19	21	1.000	12
1 1/8						3025-409s	120	87	27	21	23	1.000	12

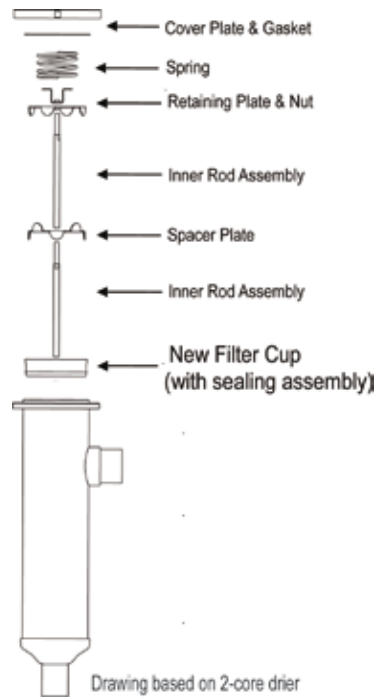


Introduction

Heldon's range of demountable filter drier shells are designed to be used in both the liquid and suction lines of refrigeration and air-conditioning systems using fluorinated refrigerants.

Shells are made from steel tube with solid copper connectors, R-717 rated shells with steel connectors are available on request. Shells have a corrosion resistant powder coat finish. Test certificates are available on request.

The new Heldon Demountable Drier comes with a unique filter cup - this cleans the internal wall as you remove the assembly during service.



Features

Features

- Full range from 10kW to 509kW.
- Aluminium end plate option.
- Stainless steel mesh.
- Standardized to replace other manufactures units and cores.
- Solid copper full flow connections.
- Powder coated shell rated to 3600Kpa.

Benefits

- Larger range to suit most applications.
- Increased operating life in low temp applications.
- Secondary particle filtration and retention.
- Drop in replacement for other common makes and will accept most cores.
- Easier installation and minimum Δ pd.
- Suitable for harsh environments and high pressure applications.

Manufacturing Standards

Manufactured to AS2971
Safe Working Pressure: 4,200 kPa



Dimensions and Capacities

3017 Series Drier Shells				Capacities kW	
Connection	Part No.	Cores	R22	Liquid Line	
				R134A	R404A
7/8"	3017-1401	1	157	139	99
7/8"	3017-1402	2	155	140	100
7/8"	3017-1403	3	155	140	100
7/8"	3017-1404	4	155	140	100
1 1/8"	3017-1801	1	206	186	133
1 1/8"	3017-1802	2	240	217	155
1 1/8"	3017-1803	3	394	226	162
1 1/8"	3017-1804	4	394	226	162
1 3/8"	3017-2201	1	259	226	162
1 3/8"	3017-2202	2	326	295	211
1 3/8"	3017-2203	3	400	365	261
1 3/8"	3017-2204	4	415	377	271
1 5/8"	3017-2601	1	259	227	162
1 5/8"	3017-2602	2	326	295	211
1 5/8"	3017-2603	3	400	365	261
1 5/8"	3017-2604	4	415	377	271
2 1/8"	3017-3401	1	259	227	162
2 1/8"	3017-3402	2	396	358	256
2 1/8"	3017-3403	3	424	389	277
2 1/8"	3017-3404	4	509	460	329

3010 Series Drier Shells				Capacities kW	
Connection	Part No.	Cores	R22	Liquid Line	
				R134A	R404
2 5/8"	3010-4202	2	396	358	256
2 5/8"	3010-4203	3	424	389	277
2 5/8"	3010-4204	4	509	460	329
3"	3010-4802	2	396	358	256
3"	3010-4803	3	424	389	277
3"	3010-4804	4	509	460	329
3 1/8"	3010-5002	2	396	359	256
3 1/8"	3010-5003	3	424	389	277
3 1/8"	3010-5004	4	509	460	329
3 1/4"	3010-5204	4	509	460	329
3 1/2"	3010-5604	4	509	460	329
3 5/8"	3010-5804	4	509	460	329
4"	3010-6404	4	509	460	329

Liquid capacities based on;
 Evaporating temp: -15°C
 Condensing temp: 30°C
 pd = .07 bar

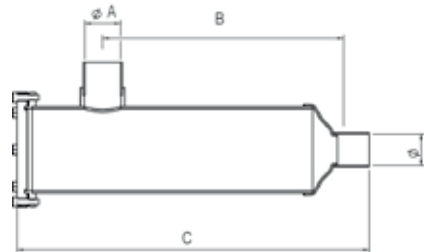
Suction Capacities based on;
 Evaporating temp: 4.4°C
 Condensing temp: 32.2°C

Dimensions 3017 Series

Part No.	A inches	B mm	C
3017-1401	7/8	140	269
3017-1402	7/8	280	409
3017-1403	7/8	424	553
3017-1404	7/8	567	696
3017-1801	1 1/8	140	269
3017-1802	1 1/8	280	409
3017-1803	1 1/8	424	553
3017-1804	1 1/8	567	696
3017-2201	1 3/8	140	269
3017-2202	1 3/8	280	409
3017-2203	1 3/8	424	553
3017-2204	1 3/8	567	696
3017-2601	1 5/8	140	269
3017-2602	1 5/8	280	409
3017-2603	1 5/8	424	553
3017-2604	1 5/8	567	696
3017-3401	2 1/8	140	296
3017-3402	2 1/8	280	409
3017-3403	2 1/8	424	553
3017-3404	2 1/8	567	696

Dimensions 3010 Series

Part No.	A inches	B mm	C
3010-4202	2 5/8"	140	269
3010-4203	2 5/8"	280	409
3010-4204	2 5/8"	424	553
3010-4802	3"	567	696
3010-4803	3"	140	269
3010-4804	3"	280	409
3010-5002	3 1/8"	424	553
3010-5003	3 1/8"	567	696
3010-5004	3 1/8"	140	269
3010-5204	3 1/4"	280	409
3010-5604	3 1/2"	424	553
3010-5804	3 5/8"	567	696
3010-6404	4"	600	710



Cores to Suit

Part No.	Description	Replaces / interchangeable with
3050-1	ULTRA-DRY CORE Super high moisture	Z-48, 48DU, VS-48XH, RCW-48 & UK-48 100% MS Ideal for POE Oil.
3049-1	STANDARD CORE General clean-up	PCK-48, 48 DN, VS48H, RC-4864 & D48 80%/ 20% MS/AL Not recommended for POE Oil
3051-1	BURN-OUT CORE Complete clean-up	PCK-48HH, 48DA, RC-4864-HH, W-48 & VS-48SC 60% /35% /5% MS /AL /AC
3050-100	HI CAPACITY CORE Suit 150mm Shells	H-100, VS-100H, PCK-100 100% MS Ideal for POE Oil
3050-32	SUCTION CORE Low pressure drop, high flow rate	RPE48BD 100% MS Ideal for POE Oil
3052-2	FILTER ELEMENT Low pressure drop	RPE48BD, F48R, VS48F, PFE-48BF, 48-F

Internal Kits

Part No.	Description	
3010-01	ONE CORE - INTERNAL incl gasket and spring	OLD STYLE
3010-02	TWO CORE - INTERNAL incl gasket and spring	OLD STYLE
3010-03	THREE CORE- INTERNAL incl gasket and spring	OLD STYLE
3010-04	FOUR CORE - INTERNAL incl gasket and spring	OLD STYLE
3017-01	ONE CORE - INTERNAL incl gasket and spring	NEW STYLE
3017-02	TWO CORE - INTERNAL incl gasket and spring	NEW STYLE
3017-03	THREE CORE- INTERNAL incl gasket and spring	NEW STYLE
3017-04	FOUR CORE - INTERNAL incl gasket and spring	NEW STYLE



Introduction

Heldon manufacture both "Y" and inline cleanable strainers suitable for refrigerants and liquids offering complete protection to compressors, pumps, meters, valves and similar mechanical equipment.

Installation of a strainer before any mechanical equipment will ensure trouble free service and avoid the costly shutdowns, repairs or replacement so often caused by the introduction of foreign matter in pipe lines.

The "Y" Type;

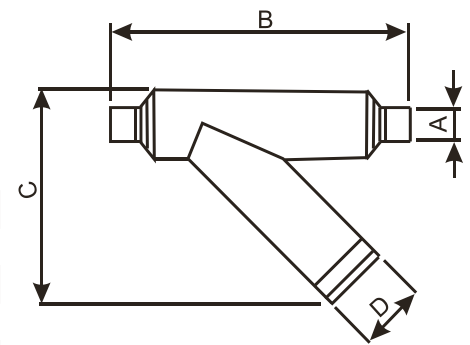
The Screen/Mesh filter can be removed and cleaned with solvent and compressed air. Y strainers can be installed in the horizontal or vertical position as long as the filter mesh is accessible.

In-line;

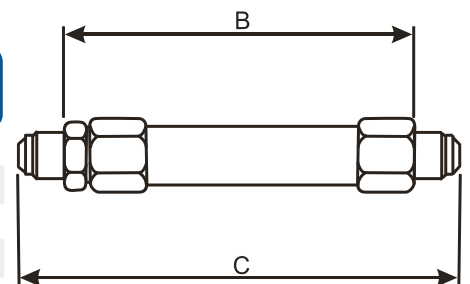
Heldon manufacture brass inline strainers for capillary systems and feature an accessible, cleanable 100 mesh strainer.



Part No.	Connection	A ID	B mm	C mm	D mm	Mesh Size
91-14	7/8 ID	22.2	294	186	63.5	80
91-18	1 1/8 ID	28.6	297	186	63.5	80
91-22	1 3/8 ID	35	298	186	63.5	80
91-26	1 5/8 ID	41.3	288	186	63.5	80
91-KIT	Y-Strainer gasket and o-ring kit					
91-STRAINER	Filter elements to suit Y-Strainer					



Hex Size	Connection	B mm	C mm	Mesh Size
90-0496	1/4 MSAE	19	156	100
90-0680	3/8 MSAE	22	156	100
90-0896	1/2 MSAE	25	156	100
90-1096	5/8 MSAE	25	156	100



Manufacturing Standards

Manufactured in accordance with AS 2971 and 1677
 Safe Working Pressure: 3,200 kPa steel and 4,200 kPa brass



Introduction

Designed as a superior direct replacement for OEM filter driers in the transport industry where they will need to withstand the rigours of their application. Heldon driers have an optimized core to filter ratio housed inside a strengthened steel shell with standard, o-ring and flange mounts versions.



Part No.	Description	Inlet	Outlet
3030-00209-00	TRANSPORT REFG/DRIER - Replaces 14-00209-00104302 Transicold	5/8 MSAE*	5/8 MSAE*
3030-106316	TRANSPORT REFG/DRIER - Replaces 106316 Sutrack	5/8 MSAE	5/8 MSAE
3030-4900	TRANSPORT REFG/DRIER - Replaces 66-4900 Thermoking	5/8 MSAE	1/2 MSAE
3030-5750	TRANSPORT REFG/DRIER - Replaces 66-5750 Thermoking	5/8 O-R FS	1/2 O-R FS
3030-5788	TRANSPORT REFG/DRIER - Replaces 66-5788 Thermoking	5/8 O-R FS	3/8 O-R FS
3035-26-303	FLANGE DRIER - 1 5/8 BHC - 303 Series Drier	Lay-in length	264.5mm

* = Male Flare connection with groove for o-ring

O-R FS = O-Ring Face Seal

Introduction

Heldon discharge mufflers are designed to dramatically reduce compressor noise and smooth out damaging harmonic pulses, they create breakout noise as well as increasing the risk of pipe work fatigue fractures. This is achieved by a combination of changes in direction and specially designed baffles that cut down the harmonic wave that travels on the outer edge of the flow stream.

Heldon discharge mufflers are steel bodied with pressed steel internal baffles for greater strength and durability. They feature solid copper connectors for ease of installation. To eliminate oil logging issues associated with other mufflers, Heldon have incorporated oil drain passages into the baffles and offset the connectors.



Features

Features

- Designed for maximum flow and minimal pressure drop.
- Solid copper connectors.
- Special baffle design.
- Manufactured and tested to relevant pressure vessel codes.
- Stamped inlet position.
- Powder coated finish.
- Oil drain passage.

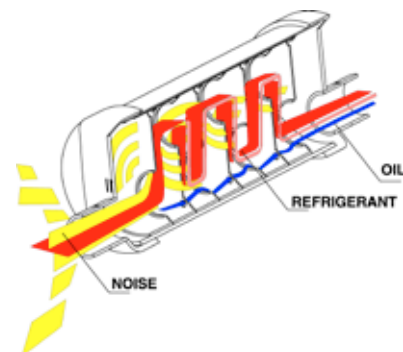
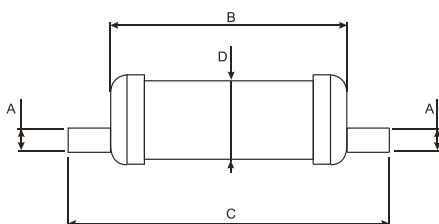
Benefits

- Negligible loss in system efficiency.
- Easier installation with out the need for flux.
- Cuts out the harmonic pulse.
- Quality and verified vessel integrity.
- Ensures correct installation orientation.
- Exceeds 500 hour salt spray tests.
- No chance of oil logging.

Part No.	Connection	SWP	B	C	D
3400-3206	3/8 ID	4,200	139	188	2"
3400-3208	1/2 ID	4,200	145	193	2"
3400-3210	5/8 ID	4,200	139	191	2"
3400-3212	3/4 ID	4,200	145	195	2"
3400-4814	7/8 ID	4,200	210	292	3"
3400-4818	1 1/8 ID	3,500	260	330	3"
3400-6422	1 3/8 ID	3,500	279	368	4"
3400-6426	1 5/8 ID	3,500	282	380	4"
3400-9634	2 1/8 ID	3,200	425	570	6"
3400-9642	2 5/8 ID	3,200	425	575	6"
3400-9650	3 1/8 ID	3,200	425	580	6"

Approvals

Manufactured in accordance with UL 207



Introduction

Oil separators are used in refrigeration systems that require the compressor lubricating oil to be returned directly to the compressor crankcase under all operating conditions. Using an oil separator will prevent lubricating oil from circulating throughout the system with the refrigerant making the condenser and evaporator more efficient.

Heldon Oil separators are designed for maximum flow with minimal pressure drop while efficiently removing oil from suspension in the refrigerant. Oil removal is achieved using stainless steel membranes that have been optimised for both flow and oil removal. A baffle plate allows separated oil to de-aerate while remaining warm and viscous. A stainless steel float and precision needle and seat are used to achieve automatic oil return to the compressor crankcase.

Heldon Oil separators are constructed from steel with solid copper connections.



Features

Features

- Designed for maximum flow and minimal pressure drop.
- Solid copper connectors.
- Optimised separation membrane per mass flow.
- Precision needle and seat, allows only the correct amount of oil to return to the crankcase.
- Internal baffle plate.
- Hermetically sealed stainless steel float.
- Powder coated finish.

Benefits

- Negligible loss in system efficiency.
- Easier installation with out the need for flux.
- Efficient removal of oil from the refrigerant flow.
- Allows only the correct amount of oil to return to the crankcase.
- Improves quality of returning oil.
- Extended service life.
- Exceeds 500 hour salt spray tests.

Manufacturing Standards

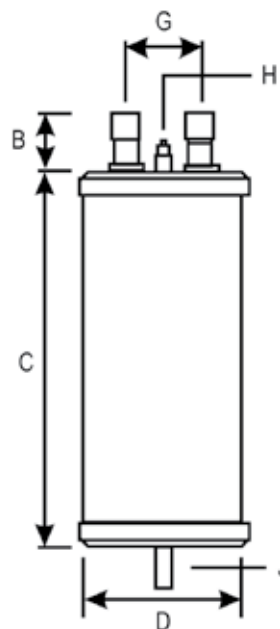
Manufactured in accordance with AS 2971
Safe Working Pressure: 3,200 kPa

Dimensions and Capacities

Nominal Capacity (kw) at Evaporating Temperature °C

Part No.-30	R22					R404A					R134a				
	-20	-10	0	5	-30	-20	-10	0	5	-30	-20	-10	0	5	
3210-6406S	3.0	3.2	3.6	3.8	4.2	3.0	3.2	3.6	3.8	4.2	2.7	2.9	3.2	3.4	3.8
3210-6406	4.1	4.3	5.0	5.1	5.4	4.1	4.3	5.0	5.1	5.4	3.7	3.9	4.5	4.6	4.9
3210-6408	5.8	6.2	6.5	6.8	7.0	5.8	6.2	6.5	6.8	7.0	5.2	5.6	5.9	6.1	6.3
3210-6410	16.9	17.5	18.2	18.8	19.3	15.4	16.4	17.5	18.5	19.3	15.2	15.8	16.4	16.9	17.4
3210-6414	25.4	26.2	26.9	27.6	28.1	24.0	25.2	26.6	28.0	28.8	22.9	23.8	24.2	24.8	25.3
3210-6418	33.1	34.3	35.3	36.4	37.0	31.7	33.4	35.0	36.6	37.4	29.8	30.9	31.8	32.8	33.3
3210-6422	42.1	43.6	44.8	46.3	47.5	40.1	43.3	47.5	47.7	49.0	37.9	39.2	40.3	41.7	42.8
3210-9622	46.7	47.4	48.0	48.6	49.3	43.1	45.2	48.3	49.5	50.8	42.0	42.7	43.2	43.8	44.4
3210-9626	57.7	58.9	60.5	62.0	63.2	54.2	57.3	60.5	63.6	65.1	51.9	53.0	54.4	55.8	56.9
3210-9634	100.1	102.3	103.5	104.6	105.5	93.4	98.4	102.2	106.0	108.6	90.0	92.0	93.1	94.1	95.0

Capacity figures based on;
 Evaporator temperature $t_e = 5^\circ\text{C}$
 Condensing temperature $t_c = 30^\circ\text{C}$
 Pressure drop $P = 7\text{kpa (1 psi)}$



Note: Oil separators must be installed vertically.

Connection	Part No.	Dimensions					H MSAE	J THREAD	Weight kg	Carton qty	Oil required ml
		B	C	D	G						
3/8	3210-6406S	32	148	103	48	1/4	M10 x 1.5	1.8	9	480	
3/8	3210-6406	32	247	103	48	1/4	M10 x 1.5	2.2	4	480	
1/2	3210-6408	33.5	245	103	48	1/4	M10 x 1.5	2.5	4	480	
5/8	3210-6410	38.5	300	103	48	1/4	M10 x 1.5	2.9	4	480	
7/8	3210-6414	40	344	103	48	1/4	M10 x 1.5	3.2	4	480	
1 1/8	3210-6418	45	370	103	48	1/4	M10 x 1.5	3.6	4	480	
1 3/8	3210-6422	49	475	103	48	1/4	M10 x 1.5	4.5	4	480	
1 3/8	3210-9622	43	352	153	75	3/8	M10 x 1.5	3.2	4	1230	
1 5/8	3210-9626	50	429	153	75	3/8	M10 x 1.5	3.5	4	1230	
2 1/8	3210-9634	55	432	153	75	3/8	M10 x 1.5	3.6	4	1230	

* Oil quantity must be added to separator prior to use

Introduction

Heldon Oil controls are designed to meter the desired amount of oil back to the compressor crankcase as well as improve the quality of the oil by removing potentially harmful particles. To achieve these outcomes Heldon manufacture and supply proven strainers and filters as well as both mechanical and electronic oil level controllers that are suitable for all fluorinated refrigerants as well as both mineral and poe oil.

Oil Strainer

Heldon oil strainers are designed to remove and isolate system debris from the refrigerant oil. The primary role is to protect the compressor and oil level control devices from wear, damage or blockage. They remove and contain contaminant particles via a 200 mesh membrane.



Features - Strainer

- 3/8 MSAE connections
- 200 mesh membrane (74 microns)
- SWP 3200kPa
- Easy installation and replacement.
- Efficient removal potentially harmful particles
- Suitable for all fluorinated refrigerants

Oil Filter

Heldon oil filters are designed to remove and isolate system debris from the refrigerant oil down to 10 microns. The primary role is to protect the compressor and oil level control devices from wear, damage or blockage. They remove and contain contaminant particles via a connected synthetic membrane.



Features - Filter

- Concertina membrane
- SWP 3200kPa
- Easy installation and replacement.
- Maximum surface area and filter particles down to 10 microns
- Suitable for all fluorinated refrigerants

Part No.	Description	Conn	Lay	Dia	Swp
		MSAE	length		
			mm	mm	
3500-083	Oil Strainer	3/8"	147	64	3200
3500-233	Oil Filter	3/8"	200	78	3200
3500-413	Demountable Oil Filter Shell			89	3200
3501-1	Oil Filter Element	(to suit demountable shell)			

External Oil Level Regulators (Fixed) - Compressor Mounted

The function of a mechanical oil level regulator is to control the level of the oil in the compressor crankcase with a float operated valve.

Oil level regulators are designed to attach directly to the sight glass housing of the compressor crankcase. The Oil Regulator has a three bolt multi-application B.C. flange and will fit many common compressors. Adaptors are available to suit other applications.

The oil return line from the oil separator is connected to the 3/8 MSAE connection on the top of the regulator. The float and needle mechanism will allow oil into the regulator and maintain a 1/2 sight glass level at all times.

Note: Not suitable for Scroll compressors.



High Side Float

A sealed oil float chamber is used to meter and return separated oil back to the compressor crankcase from the high pressure side of the system. For use when the oil separator doesn't have a metering function.

Part No.	Description	Oil Con in	Oil Con out	level Fixed	Pd	Swp
3600-9510	Compressor oil regulator	3/8"MSAE		1/2 Glass	.35 - 2.1bar	3100kpa
3600-HSF1	High side oil float	3/8"MSAE	3/8"MSAE	1/2 Glass	.35 - 2.1bar	3100kpa

Electronic Oil Level Control

The Optronic Oil Level Regulator is designed to control the oil level in the compressor crankcase using proven optical sensor technology.

More reliable than mechanical floats this stand alone regulator is suitable for both high and low pressure oil management. The oil is regulated at 1/2 sight glass using a pulse timer. When a low oil condition is detected, there is a 15 second time delay prior to oil feed to ensure stability and prevent overfill. Oil is then pulsed into the compressor at 3 second intervals. If demand is not satisfied after 2 minutes of continuous oil feed, a low level alarm is initiated by means of a fail- safe electrical contact. During the alarm condition the regulator will continue to pulse feed oil. The alarm will reset automatically when the oil level returns to 1/2 glass. The alarm contact may be used to shut down the compressor and or switch an external dialler.

The Optronic Regulator is fitted to the sight glass housing of the compressor and allows for a visual inspection of the crankcase oil level.



Part No.	Oil Con	Supply Voltage	Alarm Contacts	Class	Oils	Swp
3600-OP-02	1/4"msae	24V ac	24v dc 2A	IP 54	Min/POE	3600kpa

Introduction

Liquid receivers are used in refrigeration systems for the purpose of allowing the system to adjust to varying loads, additionally they should be able to store the systems refrigerant charge during a pump down and to ensure only liquid refrigerant enters the liquid line.

Heldon manufacture a wide range of Liquid Receivers, in both **Horizontal** and **Vertical** configuration. Our standard range is Vertical from 1.4 litre to 14.5 litre, other sizes and Horizontal orientation can be made to suit individual customer needs based on volume. Standard tube body sizes are 100mm, 120mm, 180mm and 220mm and up to 2000mm in length. Made to order receivers can be fitted with sweat or rotalock connectors, sight glasses with or without indicator balls, electronic level sensors and relief valve access.



Features

Features

- Designed for maximum flow and minimal pressure drop.
- Solid copper connectors on the inlet.
- Rotalock connectors on the outlet, allows the ability to fit a service valve directly to the vessel.
- Manufactured and tested to relevant pressure vessel codes.
- Stamped inlet position, ensures correct installation orientation.
- Powder coated finish
- Custom manufacture available.

Benefits

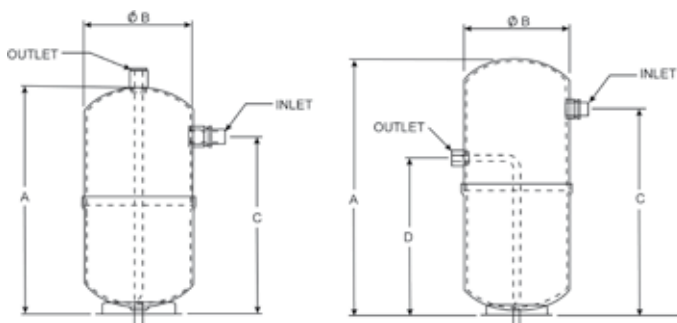
- Negligible loss in system efficiency.
- Easier installation with out the need for flux.
- Ability to fit a service valve directly to the vessel.
- Quality and verified vessel integrity.
- Ensures correct installation orientation.
- Exceeds 500 hour salt spray tests.
- Vessels made to exactly suit the application.

Manufacturing Standards

Manufactured in accordance with AS 2971.
Safe Working Pressure: 3,000 kPa or higher on request (Qty depending)

Dimensions and Capacities

Part No.	Con Outlet Inches	Con Inlet Inches	Height mm A	DIA mm B	Height mm C	Height mm D	Volume Litre	Weight kg	Bulk Qty	Outlet Position
3310-064014	3/4 R/L	1/4 ID	200	100	170	N/A	1.4	1.2	9	TOP
3310-064724	3/4 R/L	3/8 ID	250	120	195	N/A	2.4	2.6	4	TOP
3310-084724	3/4 R/L Top	3/8 ID	240	120	195	N/A	4.4	2.1	4	TOP
3310-105544	3/4 R/L	1/2 ID	340	140	270	210	4.4	3.4	4	SIDE
3310-167082	1 R/L	1 R/L	390	180	320	320	8.2	6.3	4	SIDE
3310-1670109	1 R/L	1 R/L	500	180	430	430	10.9	6.9	4	SIDE
3310-1686145	1 R/L	1 R/L	430	220	344	95	14.5	12	1	SIDE



Introduction

The main function of the suction accumulator in a refrigeration or heat pump system is to protect the compressor from liquid refrigerant. Liquid refrigerant can dilute the oil, wash out the bearings, and damage valve reeds. The un-evaporated portion of refrigerant returning in the suction line is trapped in the accumulator, allowing only vapour refrigerant and oil to leave and return to the compressor.

Heldon suction accumulators comprise of a sufficiently sized vessel with an optimised "U" shaped internal tube to minimise pressure drop and maximise flow through the vessel. Positive oil return is accomplished through a strainer protected injection orifice. The inlet to the U tube is located above and behind the vessel inlet to eliminate any possibility of high velocity liquid carryover.

Heldon suction accumulators are constructed from Steel with solid copper connections and supplied with a plugged pressure relief valve connection on larger models.



Features

Features

- Designed for maximum flow and minimal pressure drop.
- Solid copper connectors.
- Optimised orifice per mass flow.
- Large strainer fitted to the orifice.
- U tube inlet positioned behind and above vessel inlet.
- Stamped inlet position.
- Powder coated finish.

Benefits

- Negligible loss in system efficiency.
- Easier installation with out the need for flux.
- Positive oil return with controlled liquid injection.
- Reduced chance of orifice blocking.
- Reduced risk of high velocity liquid carryover.
- Ensures correct installation orientation.
- Exceeds 500 hour salt spray tests.

Approvals

Manufactured in accordance with AS 2971.
Safe Working Pressure: 2,500 kPa

Dimensions and Capacities

Connector	Part No.	Volume (L)	Capacity kW			Dimensions		Weight kg	Carton Qty
			R404A	R134a	R410A	DIA mm A	Height mm B		
1/2"	3100-083007	0.7	8.00	4.50	7.50	76	200	1.4	12
1/2"	3100-084015	1.5	10.20	5.80	9.80	102	210	1.2	12
5/8"	3100-104016P	1.6	10.40	6.00	10.00	102	218	1.9	9
5/8"	3100-104019	1.9	11.00	6.00	10.50	102	270	2.6	4
3/4"	3100-123011	1.1	9.00	5.20	8.80	76	300	1.8	4
3/4"	3100-124016P	1.6	10.50	6.50	10.15	102	244	2.2	9
3/4"	3100-124017	1.7	10.60	6.60	10.25	102	250	2.3	9
3/4"	3100-125024P	2.4	13.00	7.00	12.00	128	215	2.8	4
3/4"	3100-125029P	2.6	13.50	7.50	13.00	128	255	3.2	4
7/8"	3100-145034P	3.4	19.00	10.00	18.00	128	285	3.5	4
7/8"	3100-145040	4.0	22.00	12.00	21.00	128	368	3.8	4
1 1/8"	3100-185040	4.0	22.00	12.00	21.00	128	360	3.8	4
1 1/8"	3100-185559	5.9	30.80	13.80	29.50	140	430	6.2	4
1 1/8"	3100-186055P	5.5	30.00	13.50	28.50	159	340	5.9	4
1 1/8"	3100-186063P	6.3	31.50	14.00	30.00	159	420	6.8	4
1 1/8"	3100-186572	7.2	36.20	17.50	34.50	160	400	6.7	4
1 3/8"	3100-226563	6.3	31.00	13.80	29.50	160	350	6.2	4
1 3/8"	3100-226596	9.6	52.00	28.00	49.50	160	524	4.6	1
1 5/8"	3100-266510	10.5	57.00	32.00	55.00	160	575	9.3	1
2 1/8"	3100-346013P	13.0	74.50	37.00	72.50	159	874	14.0	1
2 1/8"	3100-348615	15.0	92.00	42.00	90.00	219	533	13.3	1
2 5/8"	3100-421125	25.0	148.00	78.00	144.00	273	522		1
3 1/8"	3100-501135	35.0	204.00	114.00	198.00	273	683		1

