

LIQUID FILTER - DRIERS

“THE ORIGINAL 3 CLASSIC FUNCTIONS”

FEATURES

- The **US series** is a revolutionary design that uses a combination of a solid core, **XH-9** beaded Molecular Sieve desiccant or similar and activated aluminium. This gives a very high mechanical strength unit to provide an outstanding filtering capability, high moisture absorption and high organic and inorganic acid removal.

SPECIFICATIONS

- For **R12, R22, R502, R134a, R404A, R407C, R410A, R507**, etc... and all **CFC, HCFC & HFC** with their specific lubricants.
- System filtration down to **5 microns**.
- Nickel plated “**SAE flare**” and solid copper “**ODS**” fittings.
- Steel shell and corrosion resistant paint. Shock resistant.
- CE** approved (PED).
- Safe working pressure: **46 bar** (660 psi).
- Minimum burst pressure: **175 bar** (2500 psi).



SELECTION TABLE 1: FLOW CAPACITY

PART NUMBER	CONNECTION	Length (mm)	Body Ø	FILTER SURFACE (cm ²)	FLOW CAPACITY at 0,07 bar PRESSURE DROP (in kW)			
					R134a	R22 R407C	R410A	R404A R507
US-032	1/4" Flare SAE	112	41,0	66,0	6,7	7,4	7,0	4,9
US-032-S	1/4" O.D.S.	97			8,1	8,8	8,4	6,0
US-033-S	3/8" O.D.S.	102			10,5	11,6	11,2	7,7
US-052	1/4" Flare SAE	122	64,0	104,0	7,0	7,7	7,4	4,9
US-052-S	1/4" O.D.S.				10,2	10,9	10,9	7,4
US-053	3/8" Flare SAE	130			13,0	14,0	13,7	9,5
US-053-S	3/8" O.D.S.	113			15,8	17,2	16,8	11,6
US-082	1/4" Flare SAE	143	64,0	144,0	7,0	7,7	7,4	4,9
US-082-S	1/4" O.D.S.	120			10,9	11,9	11,6	7,7
US-083	3/8" Flare SAE	155			15,1	16,5	16,1	10,9
US-083-S	3/8" O.D.S.	134			14,7	16,1	15,8	10,5
US-084	1/2" Flare SAE	156			23,5	25,6	24,9	17,2
US-084-S	1/2" O.D.S.				24,5	26,6	25,9	17,9
US-162	1/4" Flare SAE	167	64,0	206,0	7,0	7,7	7,4	4,9
US-163	3/8" Flare SAE	175			15,4	16,8	16,5	11,2
US-163-S	3/8" O.D.S.	158			17,2	18,6	18,2	12,6
US-164	1/2" Flare SAE	181			29,1	31,5	30,8	21,0
US-164-S	1/2" O.D.S.	159			30,1	32,6	31,9	21,7
US-165	5/8" Flare SAE	192			41,3	44,8	43,8	30,1
US-165-S	5/8" O.D.S.	166			45,9	49,7	48,7	33,3
US-303	3/8" Flare SAE	243	76,0	364,0	16,5	17,9	17,5	11,9
US-304	1/2" Flare SAE	249			30,1	32,6	31,9	21,7
US-304-S	1/2" O.D.S.	227			30,8	33,3	32,9	22,4
US-305	5/8" Flare SAE	260			48,3	52,5	51,5	35,0
US-305-S	5/8" O.D.S.	234			50,8	55,0	53,9	36,8
US-307-S	7/8" O.D.S.	249			60,9	66,2	64,8	44,1
US-414	1/2" Flare SAE	253			34,3	37,1	36,4	24,9
US-415	5/8" Flare SAE	264	89,0	446,0	54,6	59,2	58,1	39,6
US-415-S	5/8" O.D.S.	238			57,8	62,7	61,3	42,0
US-417-S	7/8" O.D.S.	253			71,1	77,0	76,0	51,5
US-419-S	1 1/8" O.D.S.	253			88,2	95,6	93,8	64,1

REMARKS:

- All ratings in accordance with AHRI standard 710.
- Capacities shown in kW (1 kW = 860 Fg/h = 0,284 US TON of refrigeration).
- Liquid refrigerant temperature = 30°C (86°F).
- Saturated Vapour Temperature = -15°C (5°F).
- 1 cm² = 0,155 square Inch.



SELECTION TABLE 2: WATER AND ACID ABSORPTION CAPACITY

PART NUMBER	CONNECTION	Length (mm)	Body Ø	FILTER SURFACE (cm ²)	Water capacity in grams of water										Acid absorption capacity in gr.
					R22		R134a		R404A		R410A		R407C		
					24°C (75°F)	52°C (125°F)	24°C (75°F)	52°C (125°F)	24°C (75°F)	52°C (125°F)	24°C (75°F)	52°C (125°F)	24°C (75°F)	52°C (125°F)	
US-032	1/4" Flare SAE	112	41,0	66,0	2,8	2,7	2,7	2,5	2,9	2,8	1,9	1,5	2,3	1,9	0,3
US-032-S	1/4" O.D.S.	97													
US-033-S	3/8" O.D.S.	102													
US-052	1/4" Flare SAE	122	64,0	104,0	7,5	7,0	7,0	6,6	7,7	7,5	4,9	3,9	6,0	4,9	0,8
US-052-S	1/4" O.D.S.														
US-053	3/8" Flare SAE	130													
US-053-S	3/8" O.D.S.	113													
US-082	1/4" Flare SAE	143	64,0	144,0	10,3	9,7	9,7	9,1	10,6	10,3	6,8	5,3	8,2	6,8	1,1
US-082-S	1/4" O.D.S.	120													
US-083	3/8" Flare SAE	155													
US-083-S	3/8" O.D.S.	134													
US-084	1/2" Flare SAE	156													
US-084-S	1/2" O.D.S.														
US-162	1/4" Flare SAE	167	64,0	206,0	14,9	14,1	14,1	13,2	15,3	14,9	9,9	7,7	12,0	9,9	1,6
US-163	3/8" Flare SAE	175													
US-163-S	3/8" O.D.S.	158													
US-164	1/2" Flare SAE	181													
US-164-S	1/2" O.D.S.	159													
US-165	5/8" Flare SAE	192													
US-165-S	5/8" O.D.S.	166													
US-303	3/8" Flare SAE	243	76,0	364,0	8,5	8,3	8,3	8,1	8,6	8,5	7,3	6,8	7,8	7,3	13,8
US-304	1/2" Flare SAE	249													
US-304-S	1/2" O.D.S.	227													
US-305	5/8" Flare SAE	260													
US-305-S	5/8" O.D.S.	234													
US-307-S	7/8" O.D.S.	249													
US-414	1/2" Flare SAE	253	89,0	446,0	13,1	12,8	12,8	12,5	13,2	13,1	11,2	10,4	12,0	11,2	21,2
US-415	5/8" Flare SAE	264													
US-415-S	5/8" O.D.S.	238													
US-417-S	7/8" O.D.S.	253													
US-419-S	1 1/8" O.D.S	253													

REMARKS:

- Water capacities are based on EPD (Equilibrium Point Dryness) of : 50 ppm R134a, R404A, R410A & R407C and 60 ppm R22.
- 1 cc = 1 gram = 20 drops of water.
- 1 cm² = 0,155 square Inch.

REVERSIBLE "HEAT-PUMP" FILTER-DRIERS

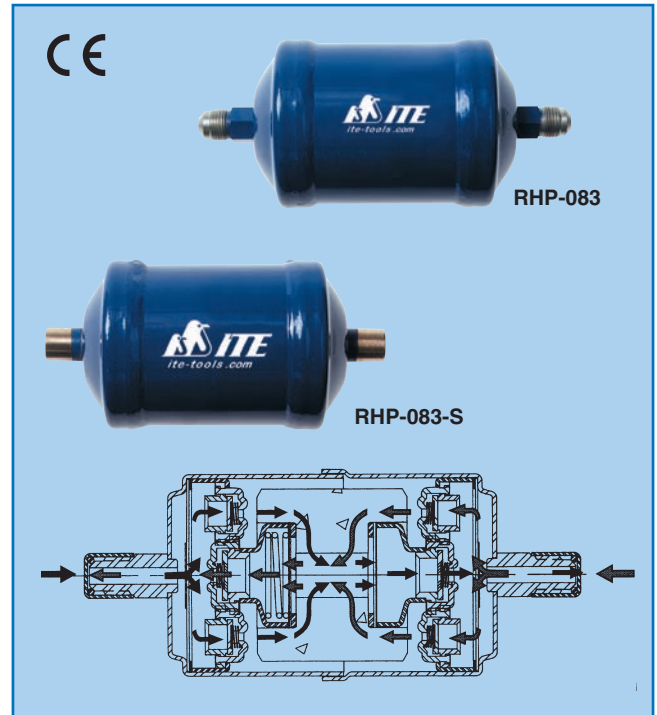
"THE BI-DIRECTIONAL FLOW SOLID CORE"

FEATURES

- For use in HEAT PUMP or REVERSIBLE cycle applications, **RPH HEAT PUMP DRIERS series** are designed to function in both directions of flow in the reversing liquid line.
- Proven nylon internal CHECK-VALVE filtering in both ways.
- Solid block desiccant core with high organic and inorganic ACID REMOVAL (activated alumina) and High MOISTURE REMOVAL (molecular sieve).
- The addition of activated charcoal to the desiccant core allows for the REMOVAL of WAX that may occur at low temperatures, giving protection to your expansion device.

SPECIFICATIONS

- For R12, R22, R502, R134a, R404A, R407C, R410A, R507, etc... and all CFC, HCFC & HFC with their specific lubricants.
- Nickel plated "SAE flare" and solid copper "ODS" fittings.
- Steel shell and corrosion resistant paint. Shock resistant.
- System filtration down to **10 microns**.
- CE approved (PED).
- Safe working pressure: **46 bar** (660 psi).
- Minimum burst pressure: **175 bar** (2500 psi).

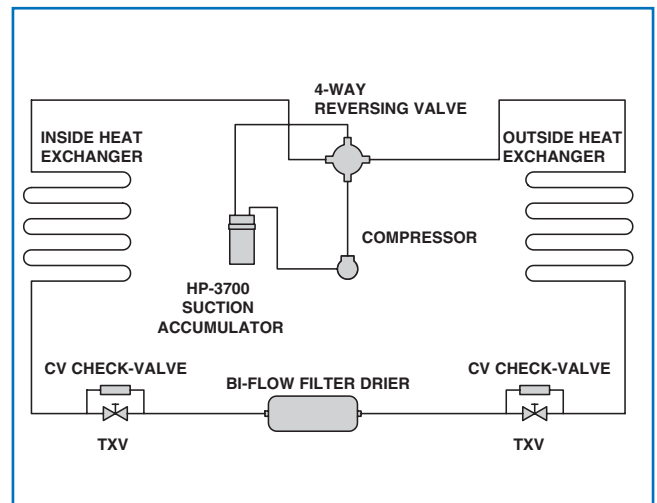


LIQUID SELECTION - CAPACITY TABLE - ORDERING.

PART NUMBER	CONNECTION	Flow capacity at 0,07 bar pressure drop (in kW)					Water capacity in grams of water												
							R22		R134a		R404A		R407C		R410A				
		R22	R134a	R410A	R404A	R407C	24°C (75°F)	52°C (125°F)	24°C (75°F)	52°C (125°F)	24°C (75°F)	52°C (125°F)	24°C (75°F)	52°C (125°F)	24°C (75°F)	52°C (125°F)			
RHP-082S	1/4" O.D.S.	4,90	4,55	4,90	2,80	4,55													
RHP-083	3/8" Flare SAE	11,20	10,15	11,55	6,65	10,15													
RHP-083-S	3/8" O.D.S.	13,65	12,25	14,00	8,05	12,25	3,5	3,2	3,8	3,5	4,0	3,7	2,8	2,1	2,2	1,5			
RHP-084	1/2" Flare SAE	16,80	15,05	17,15	10,15	15,05													
RHP-084-S	1/2" O.D.S.	17,50	15,75	17,85	10,50	15,75													
RHP-163	3/8" Flare SAE	12,95	11,55	13,30	7,70	11,55													
RHP-163-S	3/8" O.D.S.	14,70	13,30	15,05	8,75	13,30													
RHP-164	1/2" Flare SAE	20,30	18,20	20,65	12,25	18,20													
RHP-164-S	1/2" O.D.S.	24,50	22,05	24,85	14,70	22,05	5,2	4,7	5,6	5,1	5,8	5,5	4,1	3,1	3,2	2,2			
RHP-165	5/8" Flare SAE	31,50	28,35	32,20	18,90	28,35													
RHP-165-S	5/8" O.D.S.	35,00	31,50	35,70	21,00	31,50													

REMARKS

- Capacities shown in kW (1 kW = 860 Fg/h = 0,284 US TON of refrigeration).
- 1 cc = 1 gram = 20 drops of water.
- 1 cm² = 0,155 square Inch.
- All ratings in accordance with AHRI standard 710.
- Water capacities are based on EPD (Equilibrium Point Dryness) of: 50 ppm R134a, R404A, R410A & R407C and 60 ppm R22.
- Liquid refrigerant temperature = 30°C (86 °F).
- Saturated Vapour Temperature = -15°C (5 °F).
- **RPH REVERSIBLE HEAT PUMP DRIERS** may be installed in any position.
- In case of "BURN OUT" compressor (heat pump unit), do the following:
 - Remove all existing filters and driers.
 - Test a sample of oil from the compressor (see "acid test kits" procedure), page 229.
 - Clean the system if necessary and change the oil charge.
 - Install a new **RPH reversible heat pump drier**.
 - Install an **SSL suction filter-drier** in addition to the liquid line drier.
 - Check again compressor oil and the moisture indicator during the week after.



SUCTION LINE FILTER-DRIERS

“LOW PRESSURE DROP SOLID CORE”

SUCTION LINE FILTERS FOR USE AFTER A “COMPRESSOR BURNOUT”

FEATURES

- **SSL series suction line filter-driers** are designed to clean up refrigerant systems to prevent, or be used after, a **compressor burnout**.
- It removes solid **contaminants**, harmful **organic** and **inorganic acids** as well as providing **dirt filtering** after motor burn out replacements. Also, it will collect and hold any dirt and sludge that is in the suction line and the Evaporator at start up. Ideal in remote system installation with long refrigerant lines. Any “professional field built-up” system needs this kind of protection.
- The **SSL series** are equipped with an access valve on **each end** for true and accurate pressure drop readings across the drier.
- An inlet deflector spreads the gas flow even across the molded core to provide full filtration capacity and to prevent core’s erosion.

INSTALLATION

- **SSL series suction line filter-driers** may be installed in any position in the suction line, as close to the compressor as possible and ahead of the suction accumulator if any.
- In low temperature applications, **SSL driers** should be installed in a vertical position (flow in a downward direction) to prevent oil accumulation.

SPECIFICATIONS

- For **R12, R22, R502, R134a, R404A, R407C, R410A, R507**, etc... and all **CFC, HCFC & HFC** with their specific lubricants.
- **Important:** Capacities rated in accordance with **ARI std 730-86**.
- Nickel plated “**SAE flare**” and solid copper “**ODS**” fittings.
- Dual Access Valves for true and accurate pressure drop readings.
- Steel shell and corrosion resistant paint. Shock resistant.
- **CE** approved (PED).
- System filtration down to **10 microns**.
- Maximum temperature rating: **107°C (225°F)**.
- Safe working pressure: **43 bar (620 psi)**.
- Minimum burst pressure: **175 bar (2500 psi)**.



PART NUMBER		CONN. DIAM.	DESICCANT VOLUME (cm ³)	DIMENSIONS (in mm)		
FLARE	O.D.S.			Ø	LENGTHS	
					FLARE	O.D.S.
SSL-083		3/8"	131	64	155	
SSL-084	SSL-084-S	1/2"	131		161	139
SSL-165	SSL-165-S	5/8"	262		191	166
	SSL-166-S	3/4"	262			177
	SSL-307-S	7/8"	492	76		249
	SSL-419-S	1 1/8"	672	89		252
	SSL-4811-S	1 3/8"	787			266
	SSL-4813-S	1 5/8"	787	114		265

NOTE: To obtain cubic Inch, divide cm³ by **16,38** coefficient divisor
EXAMPLE: 131 cm³ / **16,38** = 8 cubic inch.

SUCTION LINE CAPACITY SELECTION AFTER A “COMPRESSOR BURNOUT”. CAPACITIES SHOWN IN kW (1 kW = 860 Fg/h = 0,284 US TON of refrigeration).

REFRIGERANTS			R12				R22				R404A / R507				R134a			
EVAPORATING TEMPERATURE (°C)			-30°	-18°	-7°	+5°	-30°	-18°	-7°	+5°	-30°	-18°	-7°	+5°	-30°	-18°	-7°	+5°
PRESSURE DROP in bar (psi)			0,04	0,07	0,10	0,14	0,07	0,10	0,14	0,21	0,07	0,10	0,14	0,21	0,04	0,07	0,10	0,14
PART NUMBER		CONN. DIAM.	(0,5)	(1,0)	(1,5)	(2,0)	(1,0)	(1,5)	(2,0)	(3,0)	(1,0)	(1,5)	(2,0)	(3,0)	(0,5)	(1,0)	(1,5)	(2,0)
FLARE	O.D.S.																	
SSL-083		3/8"	0,7	1,1	2,1	2,4	1,1	1,4	2,1	3,2	0,9	1,6	2,4	4,1	0,3	0,7	1,4	2,1
SSL-084	SSL-084-S	1/2"	1,5	2,4	3,9	4,9	2,2	3,6	5,1	8,8	2,2	3,7	3,9	8,2	1,0	2,2	3,5	5,3
SSL-165	SSL-165-S	5/8"	1,7	2,8	4,6	6,5	3,5	5,2	7,7	11	3,6	5,0	7,0	12	1,5	3,1	5,0	7,5
	SSL-166-S	3/4"	2,6	5,2	7,0	10	5,2	8,7	12	17	3,7	5,3	9,1	14	2,1	3,8	6,3	9,1
	SSL-307-S	7/8"	2,8	4,9	7,7	12	6,0	9,1	14	21	5,5	8,6	12	20	2,8	5,6	8,8	13
	SSL-419-S	1 1/8"	2,8	4,2	13	16	8,4	13	19	30	7,6	12	18	28	4,2	7,7	12	19
	SSL-4811-S	1 3/8"	4,9	9,8	15	23	12	18	27	42	10,7	17	26	40	5,6	10	18	26
	SSL-4813-S	1 5/8"	6,0	10	16	26	13	20	30	46	11,6	19	28	44	6,3	12	19	30

- REMARKS:**
- The above recommended capacities fairly reflect field replacement or installation.
 - Lab conditions would give approximate double values.
 - Rating in accordance with **ARI standard 730-86**.
 - Above corresponding evaporating temperatures: (-30°C = -20°F) (-18°C = 0°F) (-7°C = +20°F) (+5°C = +40°F).
 - Above corresponding press. drop: (0,04 bar = 0,5 psi) (0,07 bar = 1 psi) (0,10 bar = 1,5 psi) (0,14 bar = 2 psi) (0,21 bar = 3 psi).

COMPACT SUCTION LINE FILTER-DRIERS

“LOW PRESSURE DROP SOLID CORE”

FEATURES

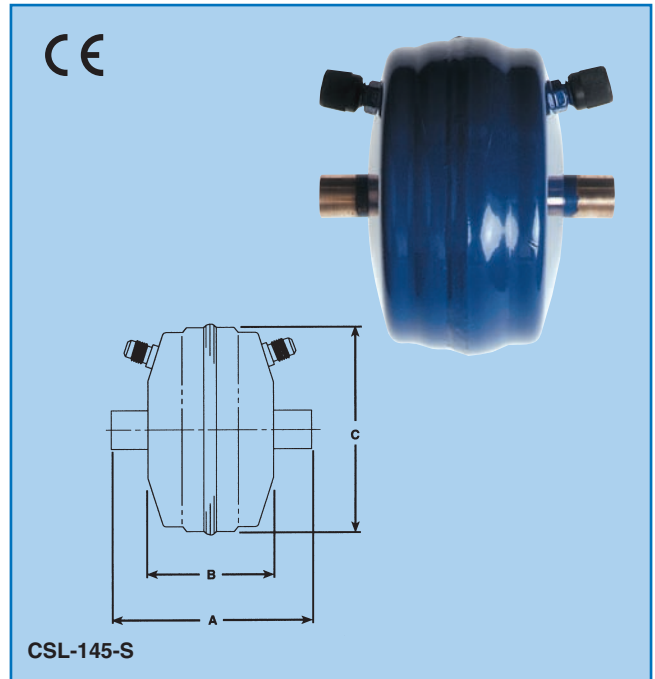
- **CSL series suction line filter-driers** are designed to clean up your refrigerant system to prevent, or be used after, a compressor burnout.
- It removes solid contaminants and harmful organic and inorganic acids as well as providing a full dirt filtering and motor burnout applications. Ideal in remote system installation with long refrigerant lines. Any field built-up system needs this kind of protection.
- The **CSL series** are equipped with an access valve on each end for accurate pressure drop readings across the drier.
- An inlet deflector spreads the refrigerant flow evenly across the molded core to provide full filtration capacity and to prevent erosion of the core. It is compact and ideal for limited room installation. Placed between the reversing valve (heat pump unit) and the compressor, it is also ideal to protect the reversible system.

INSTALLATION

- The **CSL series suction line filter-driers** may be installed in any position in the suction line, as close to the compressor as possible and ahead of the suction line accumulator if any.
- In low temperature applications, the **CSL** drier should be installed in a vertical position with the flow in a downward direction to prevent oil accumulation.

SPECIFICATIONS

- For **R12, R22, R502, R134a, R404A, R407C, R410A, R507**, etc... and all **CFC, HCFC & HFC** with their specific lubricants.
- Solid copper “ODS” fittings.
- Shock resistant steel shell and corrosion resistant paint.
- Dual access valve for pressure drop reading.
- **CE** approved (PED).
- System filtration down to **10 microns**.
- Maximum temperature rating: **107°C (225°F)**.
- Safe working pressure: **35 bar (500 psi)**.
- Minimum burst pressure: **175 bar (2500 psi)**.



CSL-145-S

PART NUMBER (O.D.S. CONNECTIONS)	CONN. DIAM.	DIMENSIONS (in mm)		
		(A)	(B)	(C)
CSL-144-S	1/2"	116	69	107
CSL-145-S	5/8"	116	69	114
CSL-146-S	3/4"	116	69	111
CSL-147-S	7/8"	116	69	116
CSL-149-S	1 1/8"	116	69	123

SUCTION LINE SELECTION - CAPACITY TABLE - ORDERING.

CAPACITIES SHOWN IN kW (1 kW = 860 Fg/h = 0,284 US TON of refrigeration).

REFRIGERANTS	R12				R22				R502				
EVAPORATING TEMPERATURE (°C)	-30°	-18°	-7°	+5°	-30°	-18°	-7°	+5°	-40°	-30°	-18°	-7°	
PRESSURE DROP in bar (psi)	0,04	0,07	0,10	0,14	0,07	0,10	0,14	0,21	0,04	0,07	0,10	0,14	
PART NUMBER O.D.S. CONNECTIONS	CONN. DIAM.	(0,5)	(1,0)	(1,5)	(2,0)	(1,0)	(1,5)	(2,0)	(3,0)	(0,5)	(1,0)	(1,5)	(2,0)
CSL-144-S	1/2"	0,70	1,41	2,46	3,86	2,11	3,16	4,57	7,03	0,70	1,41	2,46	3,52
CSL-145-S	5/8"	1,76	2,46	4,57	7,03	3,62	5,63	8,44	12,7	1,41	2,81	4,57	6,58
CSL-146-S	3/4"	2,11	3,52	6,83	9,49	4,92	7,74	11,3	17,8	2,11	3,87	5,98	9,14
CSL-147-S	7/8"	2,46	4,21	7,03	10,8	5,87	8,08	12,0	18,3	2,11	3,87	6,68	9,85
CSL-149-S	1 1/8"	2,81	5,63	9,14	13,7	7,03	10,9	16,2	24,6	2,81	5,87	8,79	13,0

REFRIGERANTS	R134a				R407C				R404A & R507				
EVAPORATING TEMPERATURE (°C)	-30°	-18°	-7°	+5°	-30°	-18°	-7°	+5°	-40°	-30°	-18°	-7°	
PRESSURE DROP in bar (psi)	0,04	0,07	0,10	0,14	0,07	0,10	0,14	0,21	0,04	0,07	0,10	0,14	
PART NUMBER O.D.S. CONNECTIONS	CONN. DIAM.	(0,5)	(1,0)	(1,5)	(2,0)	(1,0)	(1,5)	(2,0)	(3,0)	(0,5)	(1,0)	(1,5)	(2,0)
CSL-144-S	1/2"	1,05	1,76	3,16	4,57	1,76	2,81	4,23	6,68	0,70	1,05	1,76	2,81
CSL-145-S	5/8"	1,76	3,16	5,87	8,09	3,16	4,92	7,74	12,0	1,05	2,46	3,87	5,98
CSL-146-S	3/4"	2,46	4,57	7,38	10,9	4,21	7,03	10,6	16,5	1,76	3,16	5,87	8,09
CSL-147-S	7/8"	2,46	4,92	7,74	11,6	4,57	7,38	10,9	17,8	1,76	3,16	5,87	8,09
CSL-149-S	1 1/8"	3,52	6,33	10,6	15,8	5,98	9,85	14,8	23,2	2,46	4,57	7,03	10,9

REMARKS:

- The above recommended capacities reflect field replacement or installation. Lab conditions would give approximately double values.
- Rating in accordance with **ARI standard 730-86**.
- Above corresponding evaporating temperatures: **(-40°C = -40°F)** **(-30°C = -20°F)** **(-18°C = 0°F)** **(-7°C = +20°F)** **(+5°C = +40°F)**.
- Above corresponding press. drop: **(0,04 bar = 0,5 psi)** **(0,07 bar = 1 psi)** **(0,10 bar = 1,5 psi)** **(0,14 bar = 2 psi)** **(0,21 bar = 3 psi)**.
- Also: **1 cm² = 0,155 square inch**.