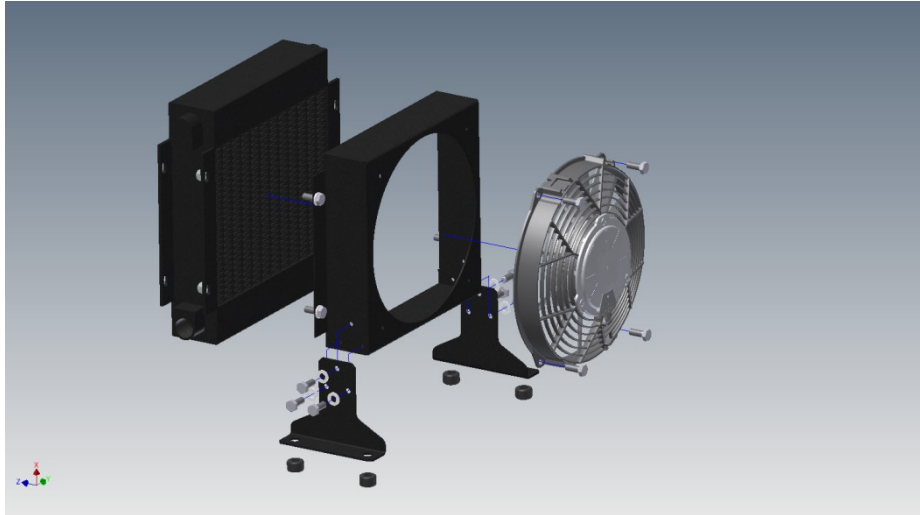
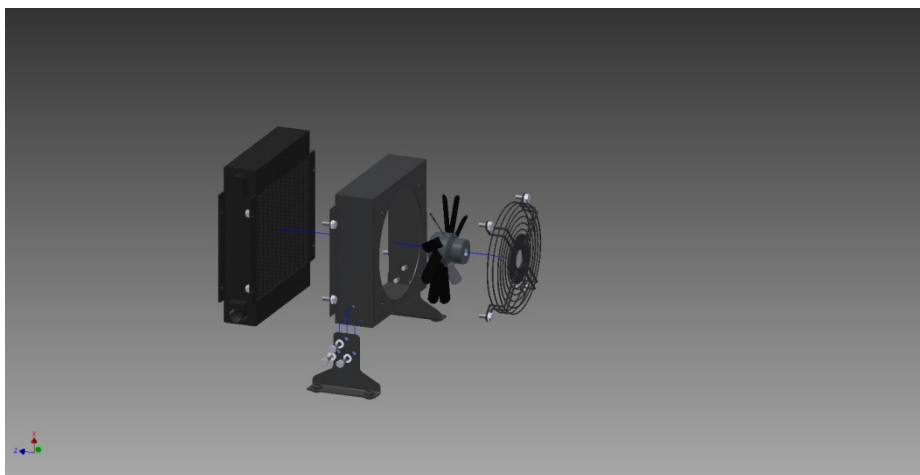


HEAT EXCHANGER SERIES CSL

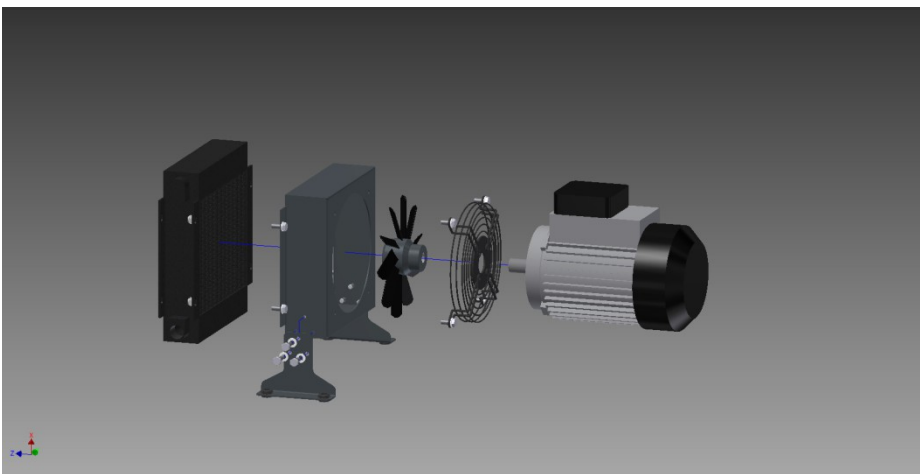
SERIES 12 and 24 V



SERIES 22 and 38 (230 and 230/400V)



SERIES G2 and 40 (for hydraulic motor and motor B14)



USE AND MAINTENANCE HEAT XCHANGER AIR – OIL

INSTALLATION

Air/oil heat exchanges are generally used for cooling oleodynamic equipments linked on the exhaust line where the exercise pressure isn't over 20 bar (max pressure admitted for air/oil heat exchangers). If the exhaust pressure is over 20 bar (flow multiplication, oil viscosity) the heat exchangers are placed into independent cooling systems with recirculation pump and by-pass.

It's advisable to mount the heat exchangers on anti-vibrants and to link inlets and outlets with flexible tubing. The heat exchangers must be installed in order that there aren't obstacles to the air flow: the anterior and posterior distance has to be as much or superior to the radius of the fan mounted (scheme 2). If the oleodynamic equipment is placed in environments where the oil temperature is subject to high temperature range it's advisable to mount a by-pass valve since with low temperatures oil viscosity rises considerably causing high pressure drops that, in most cases, are bigger than the max pressure allowed. (scheme 1)

FLUID COMPATIBLE

Mineral oil, hl, hlp, water-oil emulsion, water-glycol. For the other fluids, please consult the Technical Department of CIESSE

THECNICAL SPECIFICATION OF THE HEAT EXCHANGER PARTS

- Cooler Material: " Aluminium "
- Max Working Temperature: " + 120 °C "
- Min Working Temperature: " - 20 °C "
- Max Working Pressure: " 20 bar "
- Test Pressure: " 30 bar "
- Max Oil Viscosity: " 300 cst "
- For Other Information, Please See The Internal Data, Or Contact The Thecnical department.

ELECTRIC PART LINKING

Please be sure that Tension V, frequency Hz and rotation direction of the electric fan are as shown by the plate mounted on the heat exchangers. Follow accurately what's written in the electric scheme attached (scheme 3).

AIR SIDE MAINTENANCE

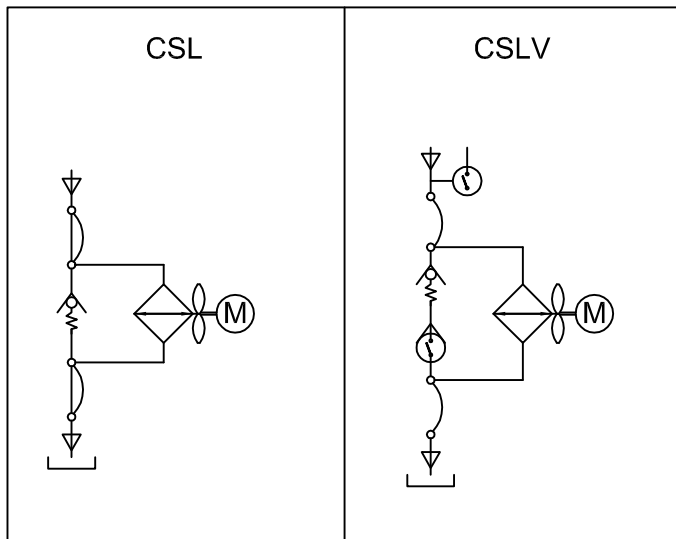
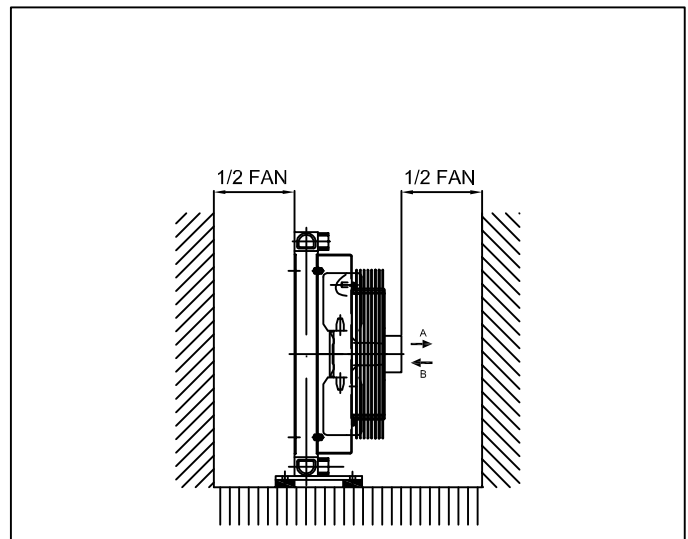
Disconnect electrically the heat exchanger. Disassemble the conveyor, electric fan and thermosta (if present). All the impurities can be removed with a warm water jet paying attention that its direction is parallel to the fins to help with the discharge of the dirt.

OIL SIDE MAINTENANCE

Disconnect hydraulically the heat exchanger: flux against the flow the heat exchanger with degreasing substances not aggressive for aluminium. The intensity of the dirt will determine the duration of this operation that usually lasts from 15 to 30 minutes. In case the desired clening isn't achieved repeat the operation as many times ad needed.

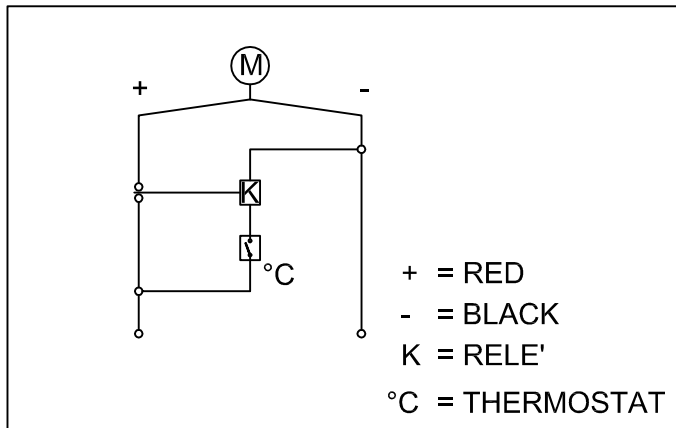
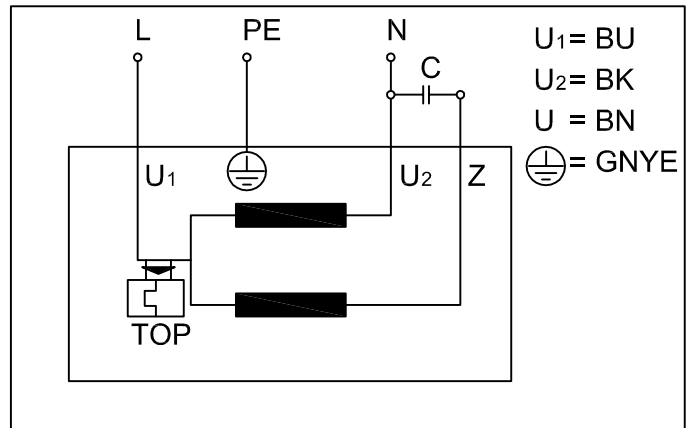
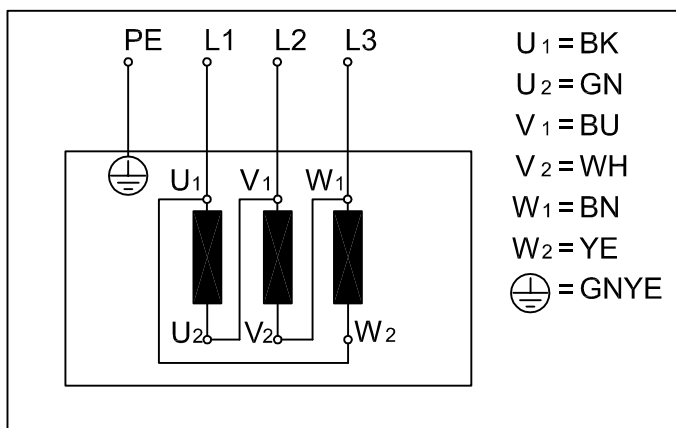
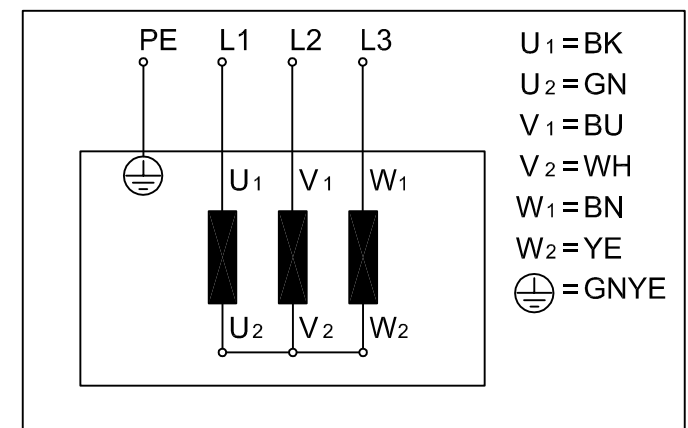
STORAGE

Make sure that during the movement and repositioning. The turbinates air hoses and couplings are protected. For storage aver 18 months flush the inside part of the Oil heat exchanger with oil the inside of glycol with glycolate. this

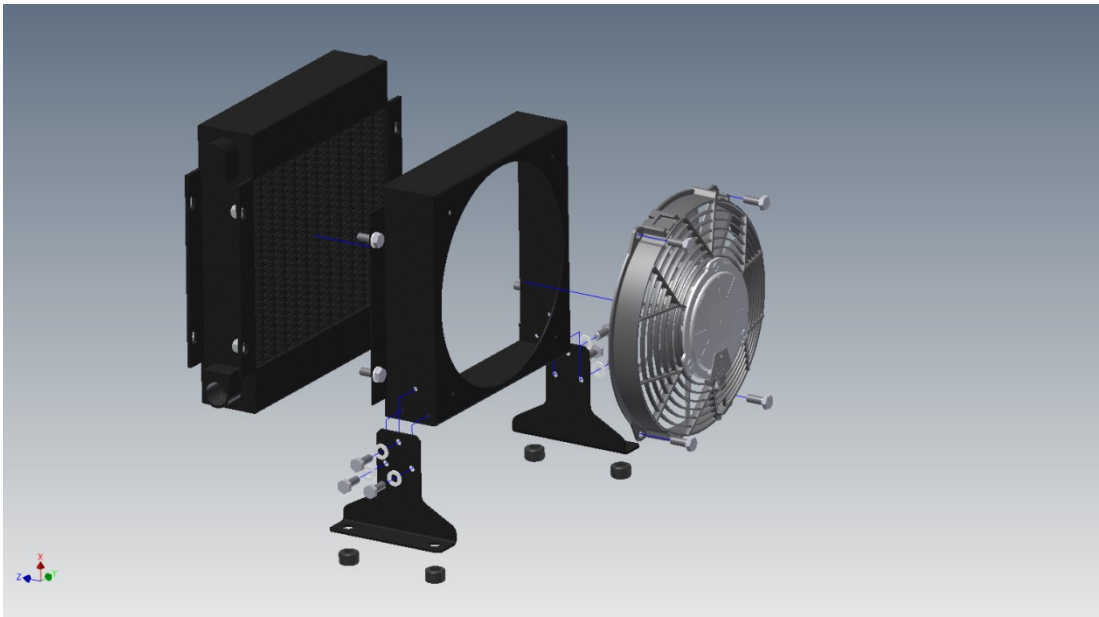
SCHEMA n°1

SCHEMA n°2


ATTENTION: THE CSLV VERSION, CAN BE PROVIDED AS FOLLOWS:

- Complete, with the thermostatic valve and by-pass,
- With only by-pass element,
- With only valve thermostatic element.

SCHEMA n°3
CONNECTION 12-24V DC

CONNECTION 230V MONOPHASE

CONNECTION Delta (3~ 230 VAC)

CONNECTION Star (3~ 400 VAC)


Key for CSL air-oil coolers



All positions must be filled in when ordering. **FOR EXAMPLE:** CSL 1 . 12 . A . 00 2

AIR – OIL COOLER TYPE: _____

CSL (standard series)

COOLERS SEIZE: _____

04 – 05 – 1 – 2 – 3 – 4 – 5

MOTOR VOLTAGE: _____

12 (12V) – 24 (24V) - 22 (230V) - 38 (230/400V)

G2 (for Hydraulic motor Gr.2) – 40 (Motor B14)

AIR FLOW: _____

A = Air flow suction - B = Air flow blowing

THERMO CONTACT: _____

00 = No thermo contact

38 = 38°C - 27°C

47 = 47°C - 36°C

60 = 60°C - 49°C

70 = 70°C - 59°C

80 = 80°C - 69°C

TR = 0°C -100°C

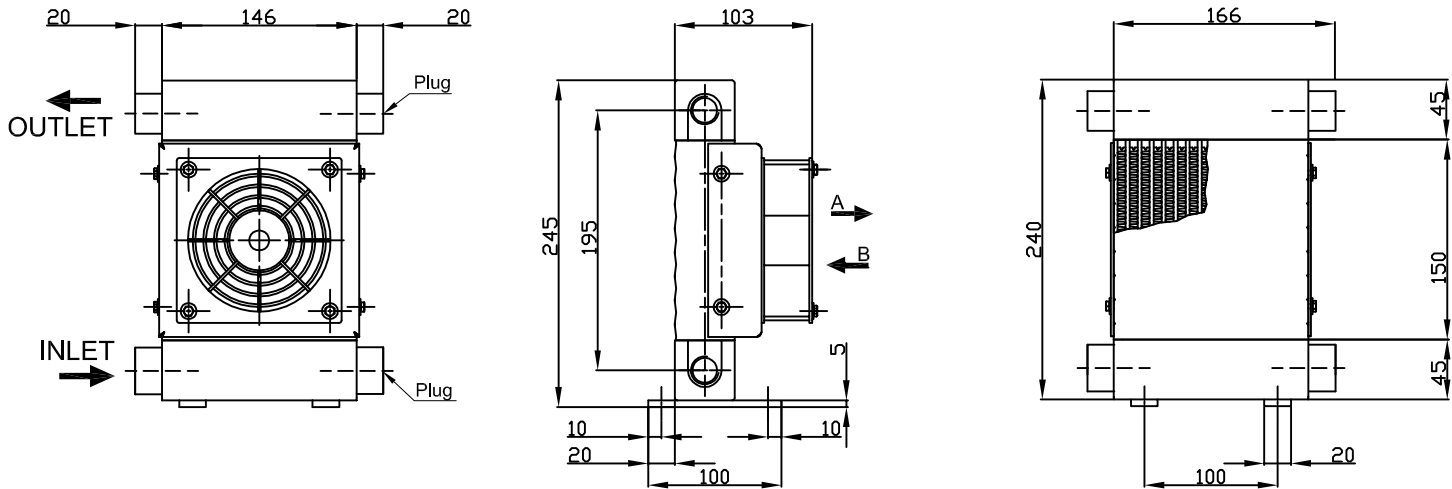
PASSAGES: _____

/ = Single pass.

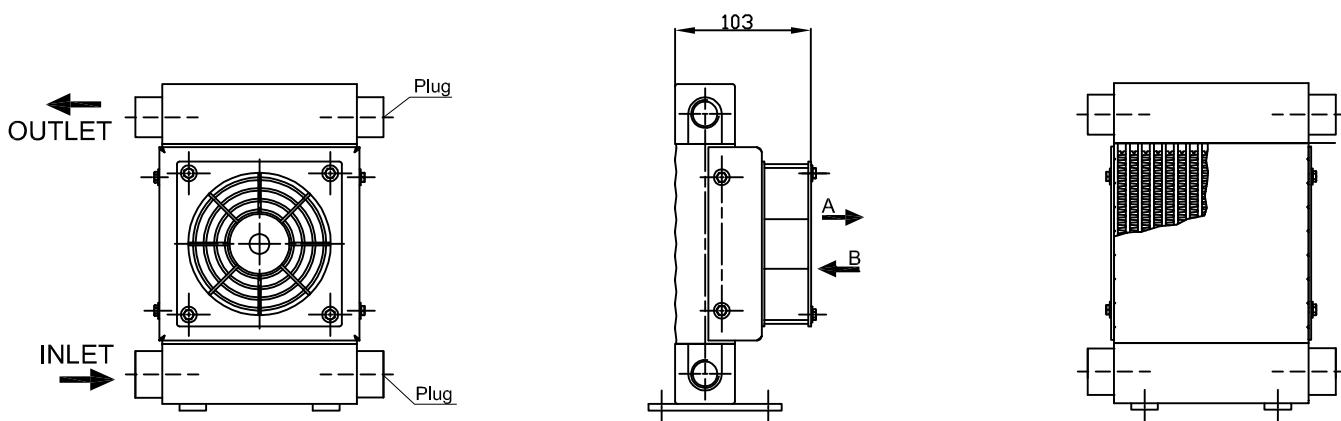
2 = Two pass

Air - Oil coolers series CSL04

Code	Tension (V)	Frequency (Hz)	Rpm (N°)	Air flow (m ³ /h)	Power (Kw)	Current (A)	ØFan (mm)	IP Fan	Lwa dB (A)	Capacity (lt)	Weight (Kg)	Color Painting
CSL04.12.0.00	12	DC	2800	140	0.0035	0.6	108	20	45	1.15	3	Black
CSL04.24.0.00	24	DC	2800	140	0.0033	0.2	107	20	45	1.15	3.2	Black



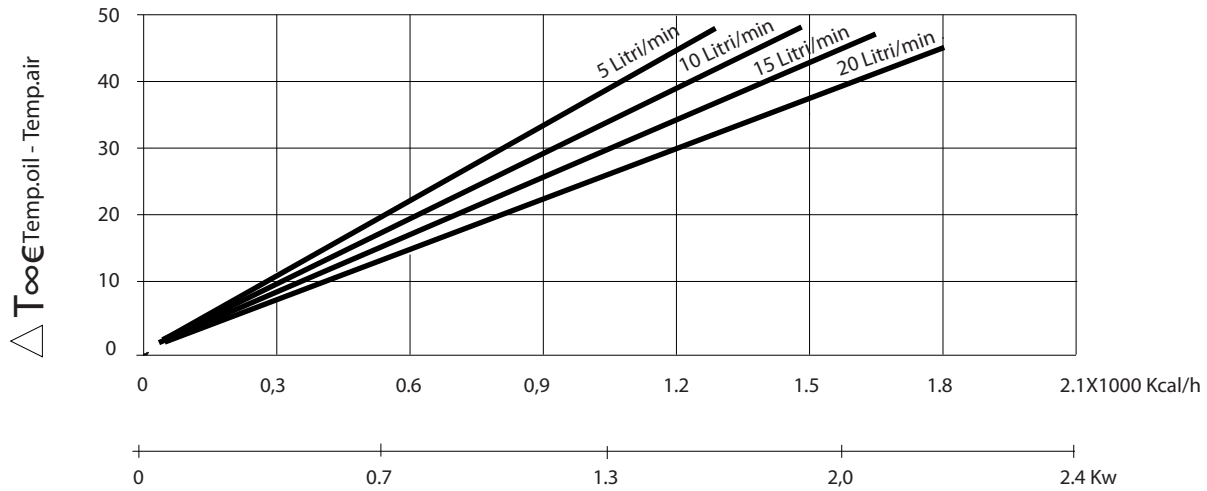
Code	Tension (V)	Frequency (Hz)	Rpm (N°)	Air flow (m ³ /h)	Power (Kw)	Current (A)	ØFan (mm)	IP Fan	Lwa dB (A)	Capacity (lt)	Weight (Kg)	Color Painting
CSL04.22.0.00	230	50/60	2650/3100	125	0,019/0,017	0.14	105	20	42	1.15	3.2	Black



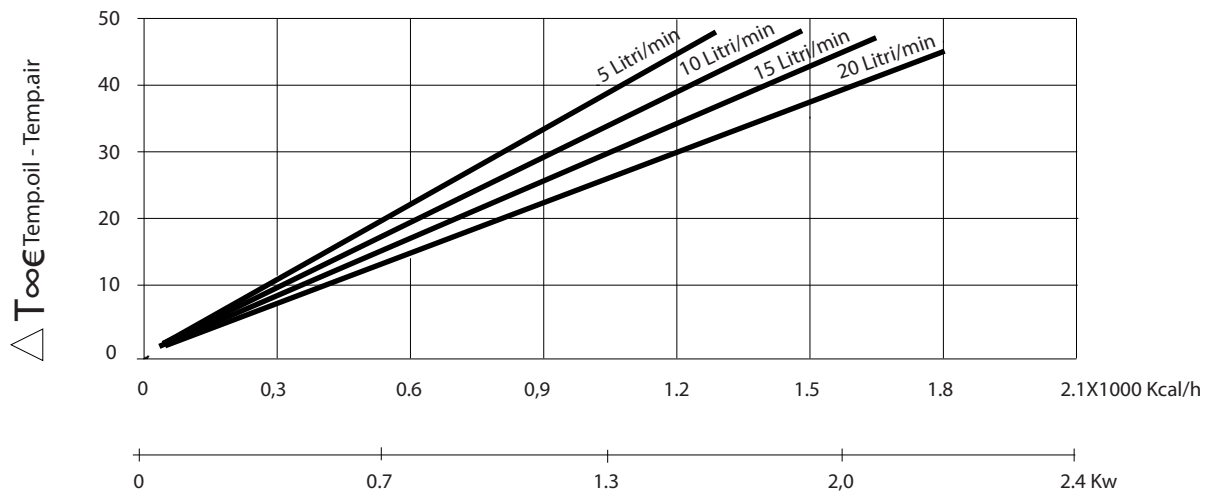
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CSL04

THERMIC EFFICIENCY FOR 12-24 DC



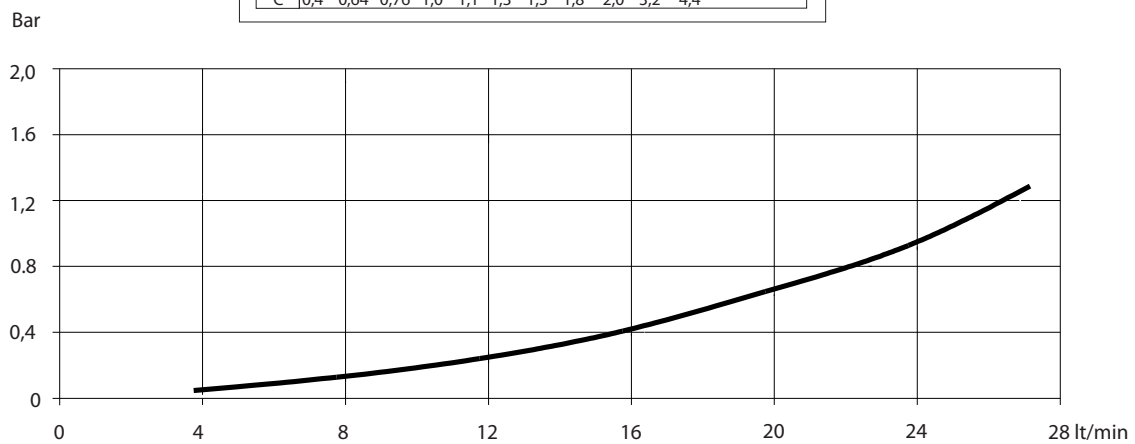
THERMIC EFFICIENCY FOR 22 AC



PRESSURE DROP

In order to know different viscosity, please multiply cst x C correction factor

cst	10	15	20	30	40	50	60	80	100	200	300
C	0,4	0,64	0,76	1,0	1,1	1,3	1,5	1,8	2,0	3,2	4,4



Technical characteristic herein mentioned are not binding and it can be modified from CIESSE without any notice