OLAER®

The Professional Choice

ULOC

Cooling system

OLAER ULOC | optimized for industrial use

Olaer is a global player specializing in innovative, efficient system solutions for temperature optimization and energy storage.

All over the world, our products are working in the most diverse environments and applications.

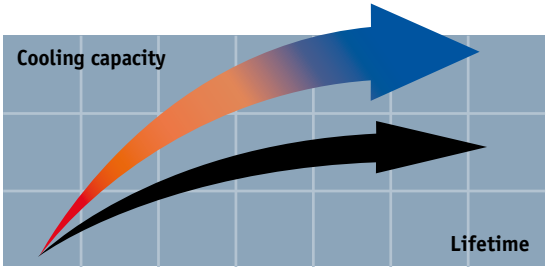
ULOC Cooling System

For industrial use – maximum cooling capacity 60 HP

The ULOC cooling system with three-phase AC motor is optimized for use in the industrial sector. The system is supplied ready for installation. An integrated circulation pump makes it possible to cool and treat the oil in a separate circuit – offline cooling. Together with a wide range of accessories, the ULOC cooling system is suitable for installation in most applications and environments. Choosing the right cooler requires precise system sizing. The most reliable way to size a cooler is with the aid of our calculation program. This program, together with precise evaluations from our experienced, skilled engineers, gives you the opportunity for more cooling per $ invested.

Overheating - an expensive problem

An under-sized cooling capacity produces a temperature balance that is too high. The consequences are poor lubricating properties, internal leakage, a higher risk of cavitation, damaged components, etc. Overheating leads to a significant drop in cost-efficiency and environmental consideration.



Temperature optimization - a basic prerequisite for cost-efficient operation

Temperature balance in a hydraulic system occurs when the cooler can cool down the energy input that the system does not consume - the system's lost energy (Ploss = Pcool = Pin – Pused).

Temperature optimization occurs at the temperature at which the oil viscosity is maintained at recommended values. The correct working temperature produces a number of economic and environmental benefits:

- Extended hydraulic system life.
- Extended oil life.
- Increased hydraulic system availability - more operating time and fewer shutdowns.
- Reduced service and repair costs.
- Maintained high efficiency in continuous operation – the system efficiency falls if the temperature exceeds the ideal working temperature.

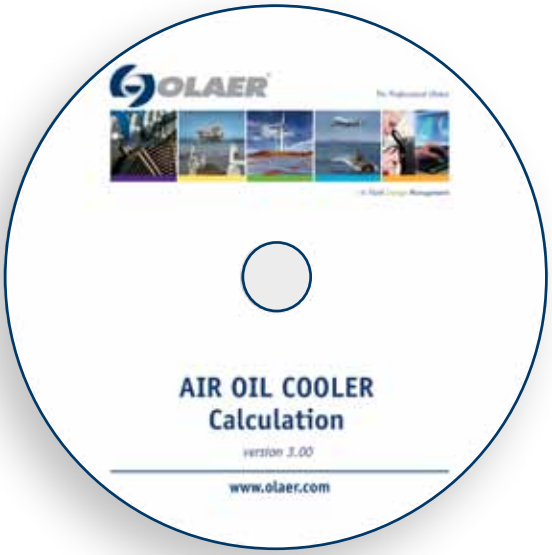
Better energy consumption means not only less environmental impact, but also reduces operating costs, i.e. more cooling per $ invested.

More cooling per $

with precise calculations and our engineers' support

Optimal sizing produces efficient cooling. Correct sizing requires knowledge and experience. Our calculation program, combined with our engineers' support, gives you access to this very knowledge and experience. The result is more cooling per $ invested.

The user-friendly calculation program can be downloaded from www.olaerusa.com



Valuable system review into the bargain

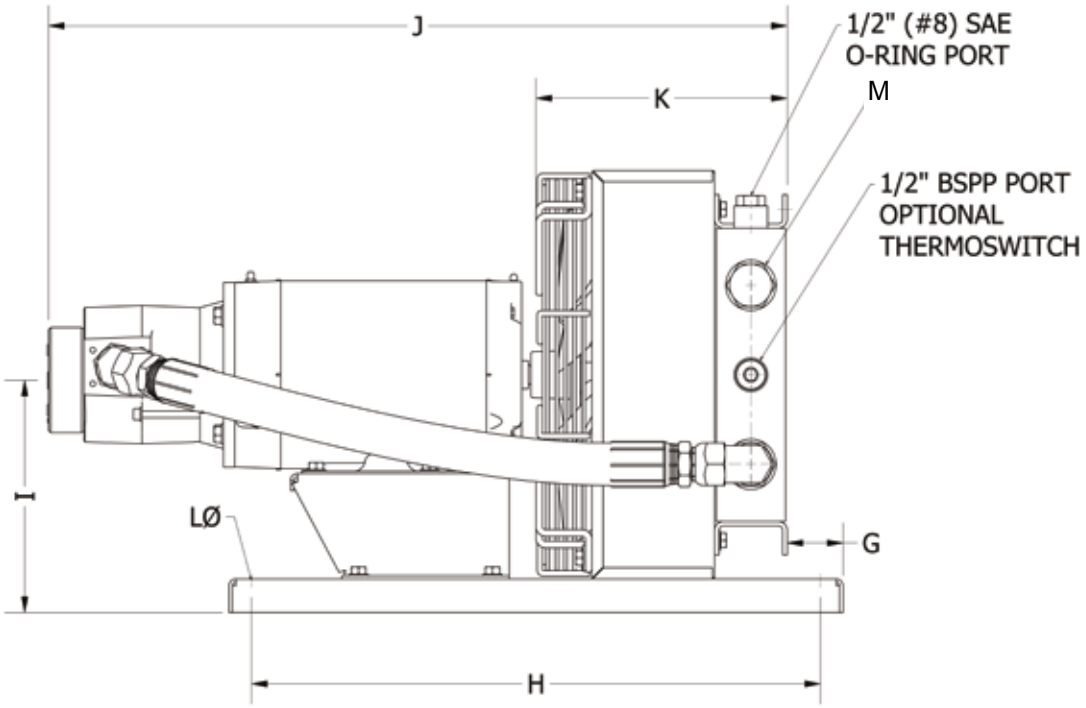
A more wide-ranging review of the hydraulic system is often a natural element of cooling calculations. Other potential system improvements can then be discussed – e.g. filtering, offline or online cooling, etc. Contact us for further guidance and information.

OLAER's quality and performance guarantee insurance for your operations and systems

A continual desire for more cost efficient and environmentally friendly hydraulic systems requires continuous development. Areas where we are continuously seeking to improve performance include cooling capacity, noise level, pressure drop and fatigue.

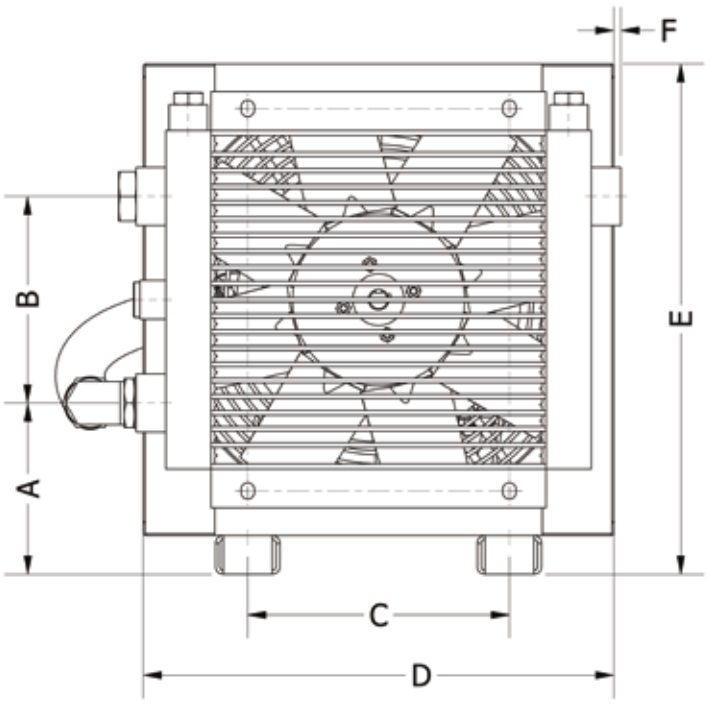
Meticulous quality and performance tests are conducted in our laboratory. All tests and measurements take place in accordance with standardized methods - cooling capacity in accordance with EN1048, noise level ISO 3743, pressure drop EN 1048 and fatigue ISO 10771-1.

For more information about our standardized tests, ask for "OLAER's blue book – a manual for more reliable cooler purchasing".



TYPE	Nom. oil flow Rate *(gpm)*	Cooling capacity *at 50 °F ETD (Btu/hr)*	Cooling capacity *Btu/hr/°F*	Acoustic pressure level *LpA dB(A) 3 ft.**	Motor Capacity / No. of poles *HP*	Weight *lb. (Approx.)*	Motor
ULOC 007D - A	6.3	15,500	310	71	1/4	66	1-4-143TC
ULOC 007D - B	12.7	19,000	380	71	1/4	68	1-4-143TC
ULOC 007E - C	19.0	21,000	420	72	2/4	82	2-4-145TC
ULOC 007E - D	25.4	22,500	450	72	2/4	84	2-4-145TC
ULOC 011D - A	6.3	24,000	480	74	1/4	77	1-4-143TC
ULOC 011D - B	12.7	28,500	570	74	1/4	79	1-4-143TC
ULOC 011E - C	19.0	32,000	640	74	2/4	93	2-4-145TC
ULOC 011E - D	25.4	34,500	690	74	2/4	95	2-4-145TC
ULOC 016E - A	6.3	33,500	670	78	2/4	86	2-4-145TC
ULOC 016E - B	12.7	41,000	820	78	2/4	86	2-4-145TC
ULOC 016E - C	19.0	47,000	940	78	2/4	88	2-4-145TC
ULOC 016E - D	25.4	50,000	1,000	78	2/4	88	2-4-145TC
ULOC 023F - B	12.7	60,000	1,200	82	3/4	148	3-4-182TC
ULOC 023F - C	19.0	65,000	1,300	82	3/4	150	3-4-182TC
ULOC 023F - D	25.4	70,000	1,400	82	3/4	150	3-4-182TC
ULOC 033G - C	19.0	80,000	1,600	87	5/4	139	5-4-182TC
ULOC 033G - D	25.4	90,000	1,800	87	5/4	139	5-4-182TC
ULOC 044G - C	19.0	95,000	1,900	88	5/4	168	5-4-182TC
ULOC 044G - D	25.4	105,000	2,100	88	5/4	168	5-4-182TC

Electric motors specified are calculated for max. working pressure 90 psi at 125 cSt and 50 Hz, 60 psi at 125 cSt and 60 Hz.
If you require higher pressure, please contact us for a choice of motors with a higher output.
** = Noise level tolerance ± 3 dB(A).*



TYPE	A	B	C	D	E	F	G	H	I	J	K	Lø	M *SAE O-ring Boss**
ULOC 007D - A	5.2	6.3	8.0	14.4	15.6	0.2	2.0	20.1	8.5	26.1	8.9	0.35	1″ (#16)
ULOC 007D - B	5.2	6.3	8.0	14.4	15.6	0.2	2.0	20.1	8.5	26.6	8.9	0.35	1″ (#16)
ULOC 007E - C	5.2	6.3	8.0	14.4	15.6	0.2	2.0	20.1	8.5	27.1	8.9	0.35	1″ (#16)
ULOC 007E - D	5.2	6.3	8.0	14.4	15.6	0.2	2.0	20.1	8.5	27.6	8.9	0.35	1″ (#16)
ULOC 011D - A	5.3	9.0	8.0	17.3	18.5	0.1	2.0	20.1	9.9	27.0	9.9	0.35	1″ (#16)
ULOC 011D - B	5.3	9.0	8.0	17.3	18.5	0.1	2.0	20.1	9.6	27.4	9.8	0.35	1″ (#16)
ULOC 011E - C	5.4	9.0	8.0	17.3	18.5	0.1	2.0	20.1	9.9	28.0	9.8	0.35	1″ (#16)
ULOC 011E - D	5.4	9.0	8.0	17.3	18.5	0.1	2.0	20.1	9.6	28.5	9.8	0.35	1″ (#16)
ULOC 016E - A	5.1	11.7	8.0	19.5	20.7	0.3	2.0	20.1	11.0	27.7	10.7	0.35	1″ (#16)
ULOC 016E - B	5.1	11.7	8.0	19.5	20.7	0.3	2.0	20.1	11.0	28.2	10.7	0.35	1″ (#16)
ULOC 016E - C	5.1	11.7	8.0	19.5	20.7	0.3	2.0	20.1	11.0	28.8	10.7	0.35	1″ (#16)
ULOC 016E - D	5.1	11.7	8.0	19.5	20.7	0.3	2.0	20.1	10.7	29.3	10.7	0.35	1″ (#16)
ULOC 023F - B	5.2	14.9	14.0	22.8	24.0	0.2	2.0	24.0	12.4	30.7	11.3	0.55	1″ (#16)
ULOC 023F - C	5.1	14.9	14.0	22.8	24.0	0.2	2.0	24.0	12.4	31.2	11.3	0.55	1″ (#16)
ULOC 023F - D	5.1	14.9	14.0	22.8	24.0	0.2	2.0	24.0	12.4	31.7	11.3	0.55	1″ (#16)
ULOC 033G - C	5.2	19.1	14.0	27.2	28.4	-	2.4	24.0	14.6	32.7	12.5	0.55	1¼″ (#20)
ULOC 033G - D	5.2	19.1	14.0	27.2	28.4	-	2.4	24.0	14.9	33.2	12.5	0.55	1¼″ (#20)
ULOC 044G - C	4.5	26.1	14.0	27.2	34.1	-	2.0	24.0	17.4	33.6	13.5	0.55	1¼″ (#20)
ULOC 044G - D	4.5	26.1	14.0	27.2	34.1	-	2.0	24.0	17.4	33.9	13.5	0.55	1¼″ (#20)

** = Port on the inlet side of the pump is 1½″ (#24) SAE O-ring Boss for all models.*

All dimensions listed above are in inches.

Clever design and the right choice of materials and components produce a long useful life, high availability and low service and maintenance costs.

Integrated circulation pump produces and even flow with low pressure pulsations.

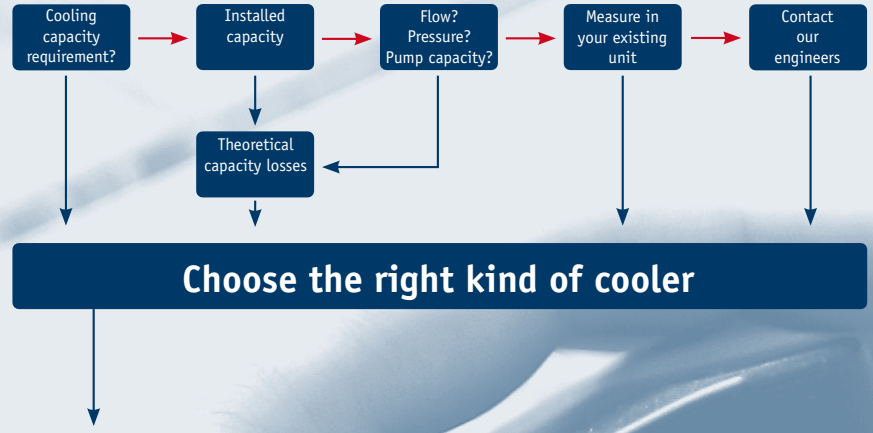
Easy to maintain and easy to retrofit in many applications.

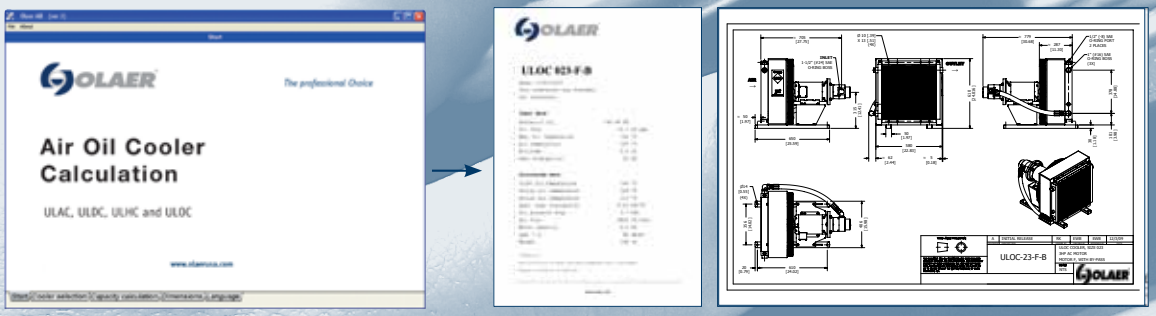
Cooler matrix with low pressure drop and high cooling capacity.

Quiet fan and fan motor.

Compact design and low weight.

Calculate the cooling capacity requirement





Order Key for ULOC Cooling Systems

All positions must be filled in when ordering.

EXAMPLE:

ULOC - 007D - M - A - SA

Series	*Model*	*Motor type*	*Pump flow rate*	*Core Bypass*
1	*2*	*3*	*4*	*5*

1. OIL COOLER SERIES
OFFLINE, WITH PUMP; ULOC

2. COOLER SIZE/MODEL

007D, 007E, 011D, 011E, 016E, 023F, 033G, 044G	

3. MOTOR TYPE

No motor	= W
Three phase, 190/380V 50 Hz, 208-230/460V 60Hz	= M
Three phase, 575V 60Hz	= Q
Not listed, consult Olaer USA	= Z

* = Performance at 50 Hz will be reduced by approximately 10%

4. PUMP FLOW RATE (GPM)

6	= A
12	= B
19	= C
25	= D

5. CORE BYPASS*

No Bypass	= SW
20 psi External Hose Bypass *(standard option)*	= SA
65 psi External Hose Bypass *(standard option)*	= SB
30 psi External Tube Bypass	= SG
75 psi External Tube Bypass	= SH
120 psi External Tube Bypass	= SJ
120 °F External Thermo-Bypass	= SM
140 °F External Thermo-Bypass	= SN
160 °F External Thermo-Bypass	= SP
195 °F External Thermo-Bypass	= SQ

** The standard cores are single pass. Two pass cores and other options available upon request, please consult Olaer USA*

Technical specification

FLUID COMBINATIONS

Mineral oil
Oil/water emulsion
Water glycol
Phosphate ester

COOLER MATRIX

Maximum static working pressure	300 psi
Dynamic working pressure	200 psi*
Heat transfer tolerance	± 6 %
Maximum oil inlet temperature	250 °F

* Tested in accordance with ISO/DIS 10771-1

- ULOC is designed primarily for synthetic oils, vegetable oils and mineral oil type HL/HLP in accordance with DIN 51524. Maximum oil temperature 250 °F.
- Maximum negative pressure in the inlet line is 6 psi with an oil-filled pump. Maximum pressure on the pump's suction side is 8 psi.
- Maximum working pressure for the pump is 150 psi.

Heat transfer tolerance	± 6 %

MATERIAL

Cooler Core	Aluminum
Fan blades/hub	Glass fiber reinforced polypropylene/ Aluminum
Fan housing	Steel
Fan guard	Steel
Pump Housing	Aluminum
Other parts	Steel
Surface treatment	Electrostatically powder-coated

CONTACT OLAER FOR ADVICE ON

- Oil temperatures > 250 °F
- Oil viscosity > 100 cSt / 500 SSU
- Aggressive environments
- Environments with heavy airborne particulates
- High-altitude locations

Bypass Valve

Stone Guard

The information in this brochure is subject to change without prior notice.

The Professional Choice

- in Fluid Energy Management

Global perspective

and local entrepreneurial flair

Olaer is a global player specializing in innovative, efficient system solutions for temperature optimization and energy storage. Olaer develops, manufactures and markets products and systems for a number of different sectors, e.g. the aircraft, engineering, steel and mining industries, as well as for sectors such as oil and gas, contracting and transport, farming and forestry, renewable energy, etc.

All over the world, our products operate in the most diverse environments and applications. One constantly repeated demand in the market is for optimal energy storage and temperature optimization. We work at a local level with the whole world as our workplace – local entrepreneurial flair and a global perspective go hand in hand.

Our local presence, long experience and a wealth of knowledge combined with our cutting-edge expertise to give you the best possible conditions for making a professional choice.