Heat exchangers Air/Oil LAC

- LDC with DC Motor for Mobile Use
- Maximum cooling capacity 300 kW

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

Compact design and low pressure drop and high cooling capacity.

Easy to maintain and easy to retrofit in many applications.

DC motor 12V/24V

Quiet fan and fan motor.

Compact design and low weight.

Smart DC Drive speed regulation

Smart DC Drive

Smart DC Drive for soft start of fan, as well as lower power consumption and sound level by means of temperature-controlled speed regulation. Smart DC Drive also eliminates voltage peaks, thus contributing towards a longer useful life for the fan motor.

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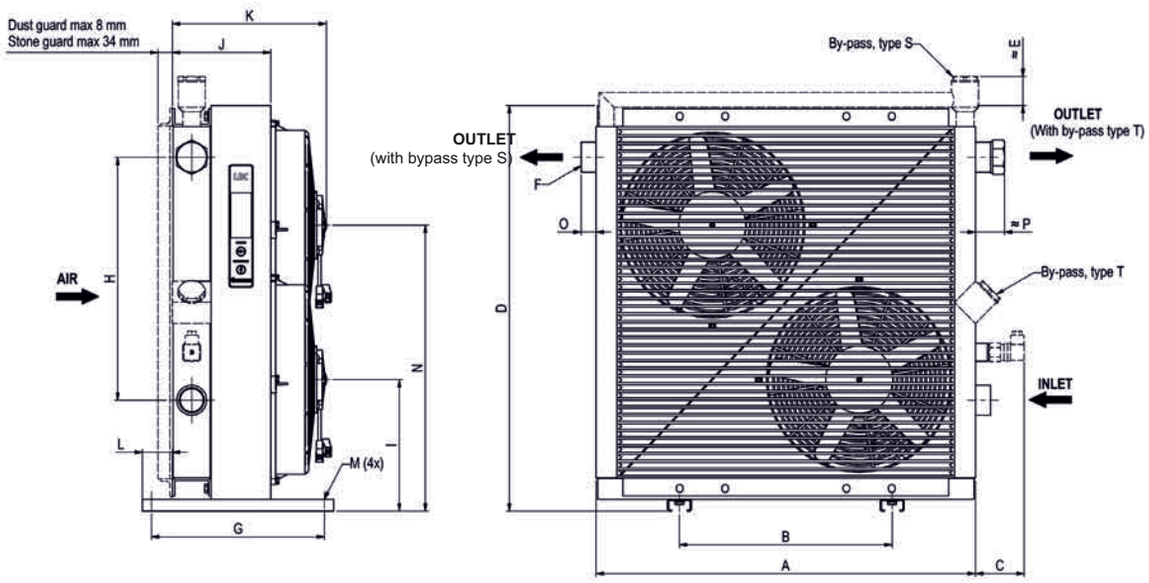
HEAT EXCHANGERS AIR/OIL TYPE LAC



TYPE	A	B	C	D	E	F	G	H	I	J	K	L	Mø	N	O	P	Weight kg (approx)	Acoustic Pressure LpA dB(A)1m*
LDC 002	184	74	72	189	73	G½	190	72	97	105	157	39	9	-	11	25	4	66
LDC 003	244	134	82	227	69	G1	148	90	116	115	157	31	9x14	-	23	35	5	68
LDC 004	267	134	82	256	69	G1	148	90	131	115	162	31	9x14	-	23	35	6	68
LDC 007	330	203	82	345	54	G1	267	160	175	115	178	59	9	-	23	44	9	71
LDC 011	400	360	82	396	65	G1	101	230	200	125	218	-	9x29	-	23	44	12	74
LDC 016	464	416	82	466	63	G1	101	300	235	125	218	-	9x29	-	23	44	15	74
LDC 020	510	470	82	510	61	G1	101	280	257	125	211	-	9x29	-	23	44	18	77
LDC 023	615	356	46	635	26	G1	290	305	200	125	218	50	13	455	-	8	25	77
LDC 033	635	356	82	678	59	G1¼	290	406	220	165	258	50	13	478	25	49	30	77

* = Noise level tolerance ± 3 dB(A)

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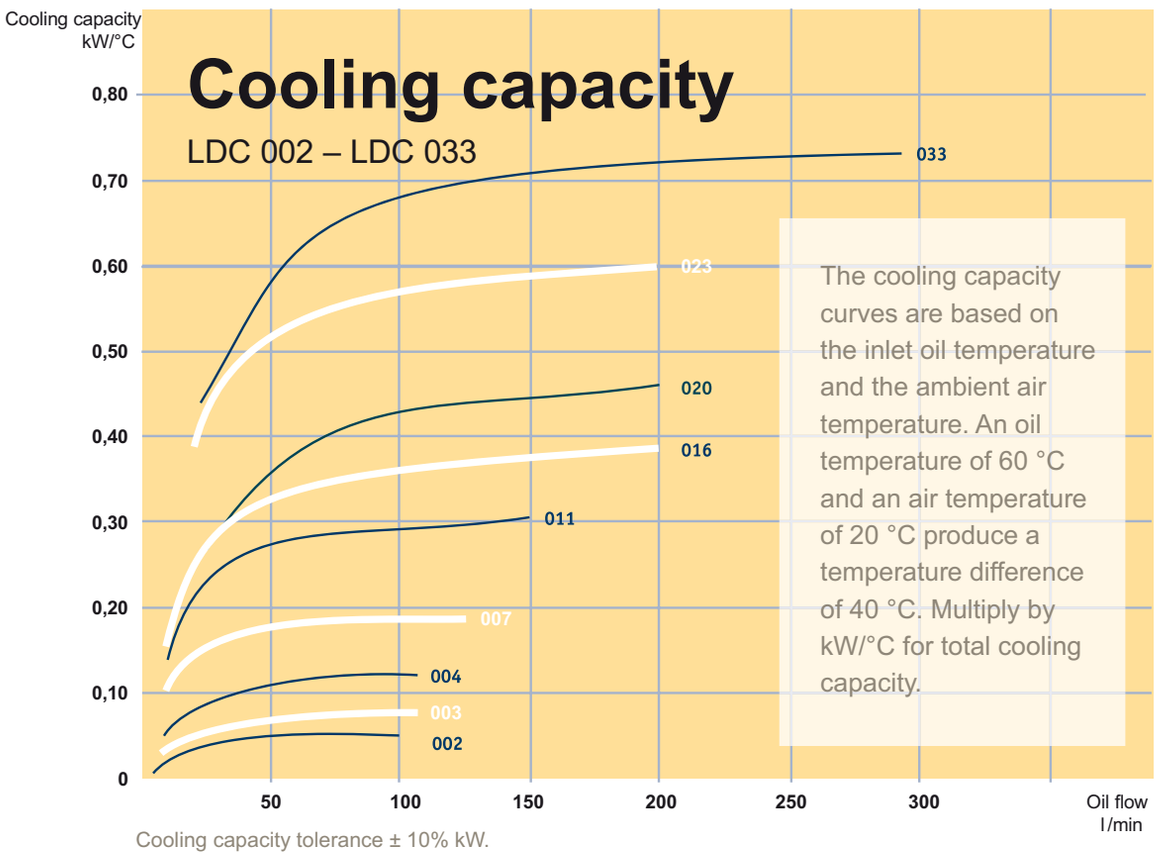
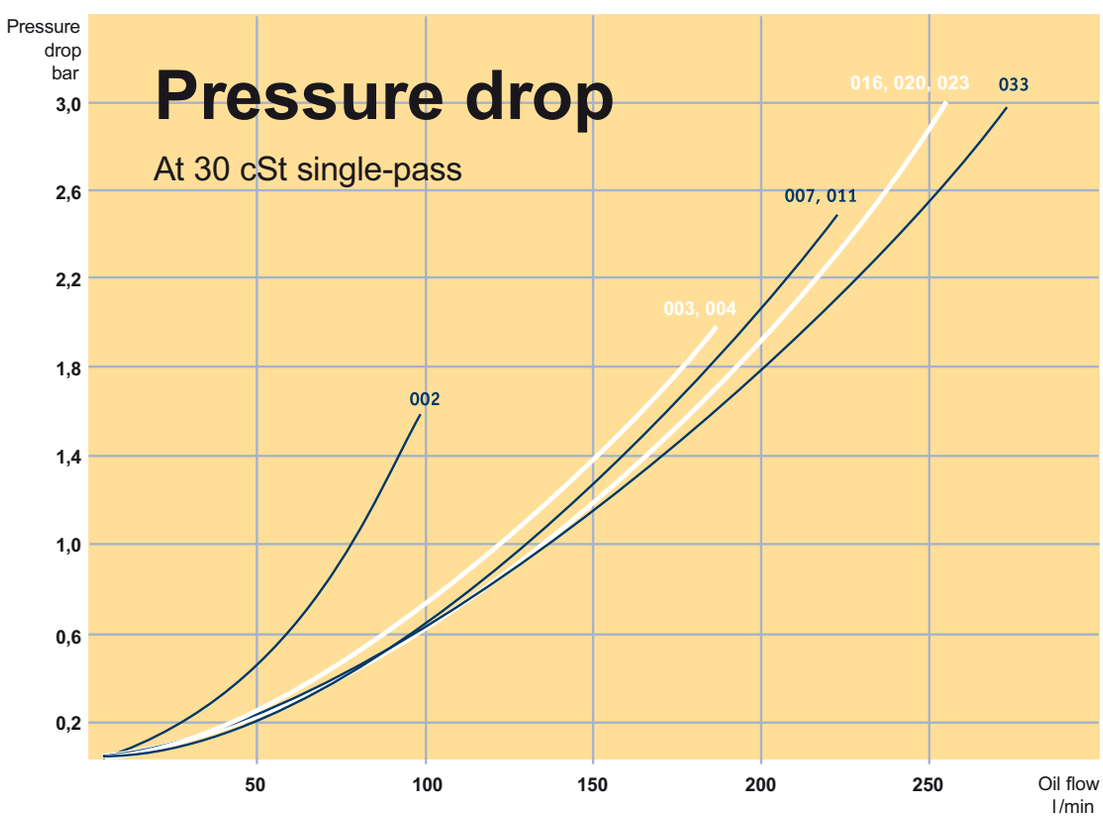
HEAT EXCHANGERS AIR/OIL TYPE LAC



Cooling capacity tolerance ± 10% kW.



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Key for LDC Air Oil Coolers

All positions must be filled in when ordering

EXAMPLE: LDC - 016 - A - S - 00 - S20 - S - 0
1 2 3 4 5 6 7 8

1. AIR OIL COOLER WITH DC MOTOR = LDC

2. COOLER SIZE

002, 003, 004, 007, 011, 016, 020, 023, 033

3. MOTOR VOLTAGE

12 V = A
24 V = B

4. Accessories for DC Motor

No motor accessories = 0
Smart DC Drive, soft start. Requires a thermo contact pos.5 = S

5. THERMO CONTACT

No thermo contact = 00

Thermo contact	Smart DC Drive
40 °C = 40	45 °C = 40
50 °C = 50	50 °C = 50
60 °C = 60	55 °C = 55
70 °C = 70	60 °C = 60
80 °C = 80	75 °C = 75
90 °C = 90	95 °C = 95

6. COOLER MATRIX

Standard = 000
Two-pass = T00
Built-in, pressure-controlled bypass, single-pass
2 bar = S20
5 bar = S50
8 bar = S80
Built-in, pressure-controlled bypass, two-pass*
2 bar = T20
5 bar = T50
8 bar = T80
Built-in temperature and pressure-controlled bypass, single-pass
50 °C, 2.2 bar = S25
60 °C, 2.2 bar = S26
70 °C, 2.2 bar = S27
90 °C, 2.2 bar = S29
Built-in temperature and pressure-controlled bypass, two-pass*
50 °C, 2.2 bar = T25
60 °C, 2.2 bar = T26
70 °C, 2.2 bar = T27
90 °C, 2.2 bar = T29

* = not for LDC 002 - LDC 004

7. MATRIX GUARD

No guard = 0
Stone guard = S
Dust guard = D
Dust and stone guard = P

8. STANDARD/SPECIAL

Standard = O
Special = Z

TECHNICAL SPECIFICATION

FLUID COMBINATIONS

Mineral oil	HL/HLP in accordance with DIN 51524
Oil/water emulsion	HFA, HFB in accordance with CETOP RP 77H
Water glycol	HFC in accordance with CETOP RP 77H
Phosphate ester	HFD-R in accordance with CETOP RP 77H

MATERIAL

Cooler matrix	Aluminum
Fan blades/guard	Glass fibre reinforced polypropylene
Fan housing	Steel
Other parts	Steel
Surface treatment	Electrostatically powder-coated

COOLER MATRIX

Maximum static working pressure 21 bar
Dynamic working pressure 14 bar*
Maximum oil inlet temperature 120 °C

* Tested in accordance with ISO/DIS 10771-1

ELECTRIC MOTOR

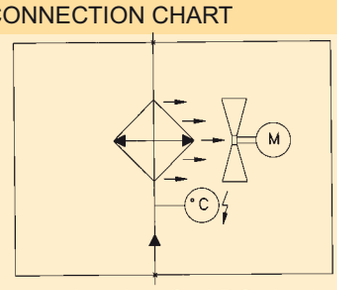
COOLING CAPACITY CURVES

The cooling capacity curves in this technical data sheet are based on tests in accor-dance with EN 1048 and have been produced using oil type ISO VG 46 at 60 °C.

CONTACT PARKER HANNIFIN FOR ADVICE ON

Oil temperatures > 120 °C
Oil viscosity > 100 cSt
Aggressive environments
Ambient air rich in particles
High-altitude locations

CONNECTION CHART



Connection chart for LDC air oil cooler.

LDC	002	003	004	007-020	023-033
Speed (rpm)	3 700	3 670	3 350	3 060	3 060
Protection std.	IP 68	IP 68	IP 68	IP 68	IP 68
Insulation class	H	H	H	H	H
Ambient temp.	-30°C - +80°C				
Power consump. (A) 12 V	6.5	8	8	20	2x20*
Power consump. (A) 24 V	3.5	4	4	10	2x10*

* = LDC 023 and LDC 033 uses two motors

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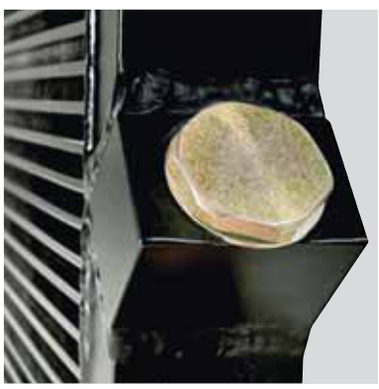
Take the Next Step

- choose the right accessories

Supplementing a hydraulic system with a cooler, cooler accessories and an accumulator gives you increased availability and a longer useful life, as well as lower service and repair costs. All applications and operating environments are unique. A well-planned choice of the following accessories can thus further improve your hydraulic system. Please contact Parker Hannifin for guidance and information.



Pressure-controlled bypass valveIntegrated
Allows the oil to bypass the cooler matrix if the pressure drop is too high. Reduces the risk of the cooler bursting, e.g. in connection with cold starts and temporary peaks in pressure or flow. Available for single-pass or two-pass matrix design.

Thermo contact
Sensor with fixed set point, for temperature warnings. Can be used for more cost-efficient operation and better environmental consideration through the automatic control of the fan motor, either on or off.

Temperature-controlled bypass valve integrated
Allows the oil to bypass the cooler matrix if the pressure drop is higher than 2,2 bar or less than the chosen temperature. The bypass closes when the oil temperature increases. Different closing temperatures available. Available for singlepass or two-pass matrix design

Smart DC Drive speed regulation
For cost-efficient operation and better environmental consideration through speed regulated fan control. Activated by chosen temperature.

Temperature-controlled 3-way valveExternal
Same function as the temperature-controlled bypass valve, but positioned externally.
Note: must be ordered separately.

Stone guard/Dust guard
Protects components and systems from tough conditions.

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