KLÜG
HYDRAULICS

AIR COOLERS

CATALOGUE / 2024

www.klughydraulics.com

INDEX

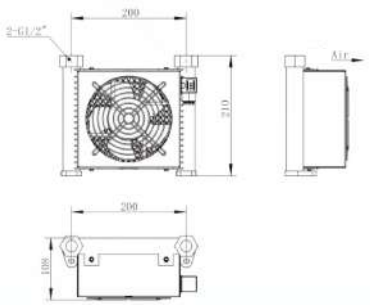
◆ PRODUCT OVERVIEW

AD series-More durable air cooler

Model	Pressure test		Heat exchange area (m2)	Optional fan type	Product size	Connecting thread	Applicable occasions
	Strength test	Airtightness test		Communication AC, direct DC	Long * wide * high		
AF0510	2.5	1.8	0.9	AC220, AC380, DC12, DC24	230X103X211	PT1/2"	Oil drain cooling
AD-40	2.8	1.8	0.8	AC220, AC380, DC12, DC24	270X115X190	G1/2"	
AD-60	2.8	1.8	1.1	AC220, AC380, DC12, DC24	320X115X205	G3/4"	
AD-60TL	2.8	1.8	2.2	AC220, AC380, DC12, DC24	410X126X210	G3/4"	
AD-100	2.8	1.8	4.0	AC220, AC380, DC12, DC24	430X140X360	G1"	
AD-100TL	2.8	1.8	8.0	AC220, AC380, DC12, DC24	605X153X335	G1"	
AD-120	3.5	2.5	5.5	AC220, AC380, DC12, DC24	480X190X386	G1"	
AD-150	3.5	2.5	6.2	AC220, AC380, DC12, DC24	540X215X400	G1"	
AD-200	3.5	2.5	8.3	AC220, AC380, DC12, DC24	577X240X460	G1-1/4"	Return oil cooling
AD-250	3.5	3.5	10.5	AC220, AC380, DC12, DC24	570X250X460	G1-1/4"	
AD-300	3.5	3.5	18	AC220, AC380, DC12, DC24	810X286X615	G1-1/2"	
AD-300T	3.5	2.5	24	AC220, AC380, DC12, DC24	615X300X790	G1-1/2"	
AD-400	3.5	2.5	31	AC220, AC380, DC12, DC24	750X300X930	G1-1/2"	
AD-450	3.5	2.5	33.2	AC220, AC380, DC12, DC24	900X275X685	G1-1/2"	
AD-600	3.5	2.5	48.2	AC220, AC380, DC12, DC24	925X250X1000	G2"	
AD-700	3.5	2.5	50	AC220, AC380, DC12, DC24	1030X250X1010	G2"	

AF0510

◆ Dimensions

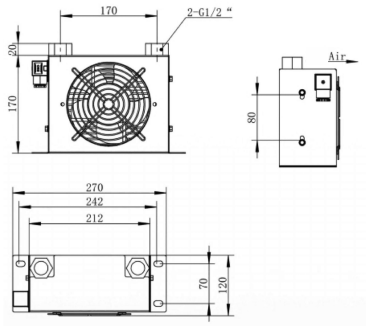


◆ Product parameters

Oil Passing Capacity	Maximum oil flow	Recommendid oil flow	Applicable occasions		
	15L/min	<10L/MIN	Oil drain cooling of variable displacement vane pump		
Cooling Capacity	30.0W/°C	35.7W/°C	36,7W/°C	Test conditions: Medium ISO VG-46;ambient humidity about 55%;error rate 5%	
Fan Specification	Voltager/frequency	AC220/50Hz	AC380/50Hz	DC12	DC24
	power	36W	38W	25W	25W
	electric current	0.23A	0.12A	2.0A	2.0A
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2°C+55°C; If you need fans of other specifications, please contact our company		
	2.5 MPa	1.8 MPa			

AD-40

◆ Dimensions

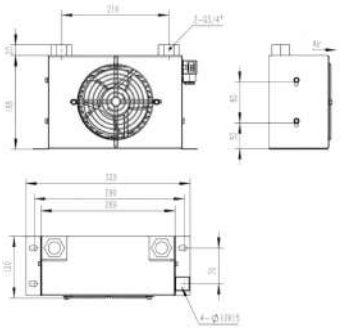


◆ Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25Mpa	Applicable occasions
	AD-40	<40L/MIN	<30L/MIN	<20L/MIN	<10L/MIN	Oil drain cooling / Return oil cooling
Cooling Capacity	10l/min		30L/min	50L/min	Calculation formula: Pw=Pm / TNM -T*a) Xn Test conditions: Medium ISO VG-46;ambient humidity about 55%;error rate 5%	
	34.4W/°C		35.7W/°C	33.8W/°C		
Fan Specification	Voltager/Frequency		AC220/50Hz	AC380/50Hz	DC12	DC24
	power		36W	38W	25W	25W
	electric current		0.23A	0.12A	2.0A	1.0A
Pressure Test	Strenght test		Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2°C+55°C; If you need fans of other specifications, please contact our company		
	2.8 MPa		1.8 MPa			

AD-60TL

◆ Dimensions

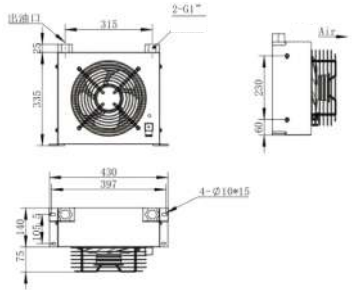


◆ Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25Mpa	Applicable occasions
	AD-60	<60L/MIN	<35L/MIN	<25L/MIN	<15L/min	Oil drain cooling / Return oil cooling
Cooling Capacity	10L/min	30L/min	50L/min	Calculation formula: Pw=Pm / TNM -T*a) Xn Test conditions: Medium ISO VG-46;ambient humidity about 55%;error rate 5%		
	43.0W/°C	42.8W/°C	42.8W/°C			
Fan Specification	Voltager/Frequency	AC220/50Hz	AC380/50Hz	DC12	DC24	
	power	36W	36W	25W	25W	
	electric current	0.23A	0.12A	2.0A	1.0A	
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2°C+55°C; If you need fans of other specifications, please contact our company			
	2.8 MPa	1.8 MPa				

AD-100

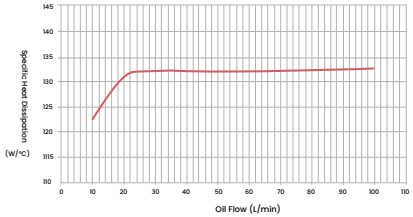
◆ Dimensions

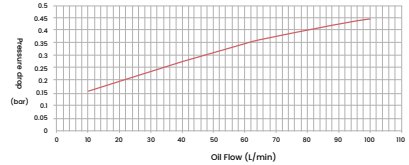


◆ Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25Mpa	25MPa
	Recommended oil flow	<100L/min	<70L/min	<50L/min	<10L/min	<35L/min
Cooling Capacity	Calculation formula	Equamont cooling power= heat doissipator power/(excepted oil temperature - the highest ambient temperature) X Safety factor				
	Test conditions for performance curves	Fan AC380/50Hz medium ISO VG-46; ambient humidity about 55%;error rate 5%				
Fan Specification	Voltager/Frequency	AC220/50Hz	AC380/50Hz	DC12	DC24	
	Power/electiric current	68W/0.5A	68W/0.24A	<10.0A	<6.0A	
	Degree of protection	IP44	IP44	IP56	IP56	
	(A) (1m) Noise	55	55	55	55	
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2°C+55°C; If you need fans of other specifications, please contact our company			
	2.8 MPa	1.8 MPa				

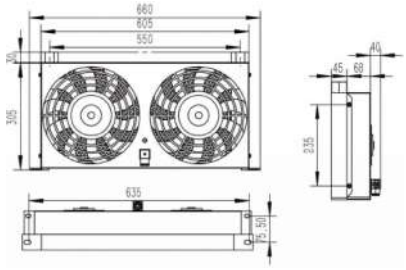
◆ Performance curve





AD-100TL

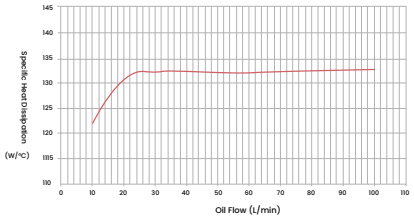
Dimensions

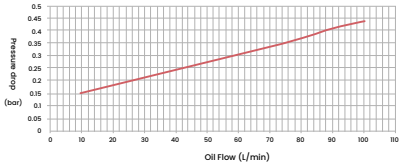


Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25MPa
	Recommended oil flow	<100L/min	<70L/min	<50L/min	<35L/min
Cooling Capacity	Calculation formula	Equamont cooling power= heat doissipator power/(excepted oil temperature - the highest ambient temperature) X Safety factor			
	Test conditions for performance curves	Fan AC380/50Hz medium ISO VG-46; ambient humidity about 55%;error rate 5%			
Fan Specification	Voltager/Frequency	AC220/50Hz	AC380/50Hz	DC12	DC24
	Power/electiric current	136W/1A	136W/0.48A	<10.0A	<6.0A
	Degree of protection	IP44	IP44	IP56	IP56
	dB(A) (1m) Noise	55	55	55	55
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2ºC+55ºC; If you need fans of other specifications, please contact our company		
	2.8 MPa	1.8 MPa			

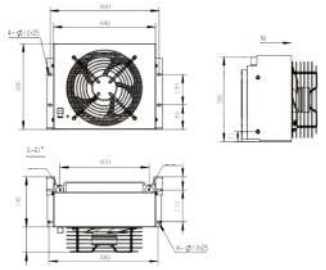
Performance curve





AD-120

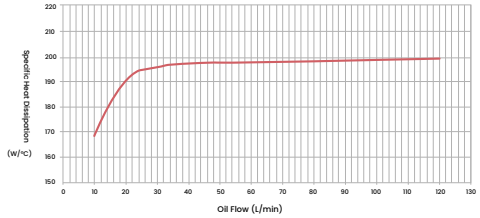
Dimensions

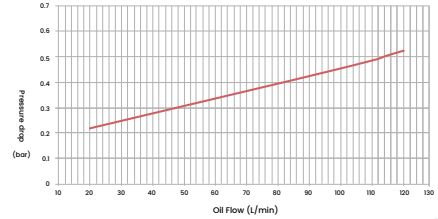


Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25MPa
	Recommended oil flow	<90L/min	<70L/min	<50L/min	<40L/min
Cooling Capacity	Calculation formula	Equamont cooling power= heat doissipator power/(excepted oil temperature - the highest ambient temperature) X Safety factor			
	Test conditions for performance curves	Fan AC380/50Hz medium ISO VG-46; ambient humidity about 55%;error rate 5%			
Fan Specification	Voltager/Frequency	AC220/50Hz	AC380/50Hz	DC12	DC24
	Power/electiric current	168W/0.73A	169W/0.32A	<16.0A	<8.0A
	Degree of protection	IP44	IP44	IP56	IP56
	dB(A) (1m) Noise	70	70	72	72
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2ºC+55ºC; If you need fans of other specifications, please contact our company		
	3.5 MPa	2.5 MPa			

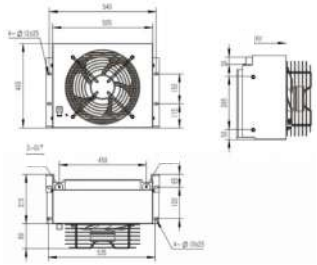
Performance curve





AD-150

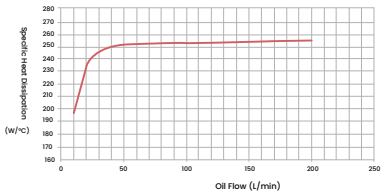
Dimensions

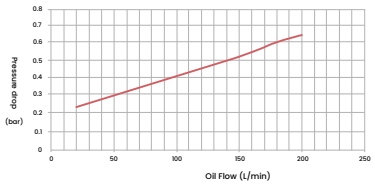


Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25MPa
	Recommended oil flow	<150L/min	<110L/min	<80L/min	<50L/min
Cooling Capacity	Calculation formula	Equamont cooling power= heat doissipator power/(excepted oil temperature - the highest ambient temperature) X Safety factor			
	Test conditions for performance curves	Fan AC380/50Hz medium ISO VG-46; ambient humidity about 55%;error rate 5%			
Fan Specification	Voltager/Frequency	AC220/50Hz	AC380/50Hz	DC12	DC24
	Power/electiric current	95W/0.67A	95W/0.38A	<16.0A	<8.5A
	Degree of protection	IP44	IP44	IP56	IP56
	dB(A) (1m) Noise	56	56	60	60
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2ºC+55ºC; If you need fans of other specifications, please contact our company		
	3.5 MPa	2.5 MPa			

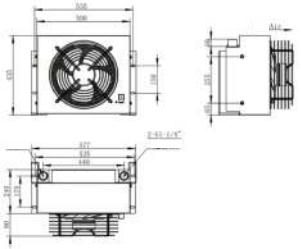
Performance curve





AD-200

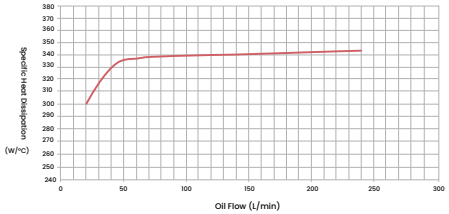
Dimensions

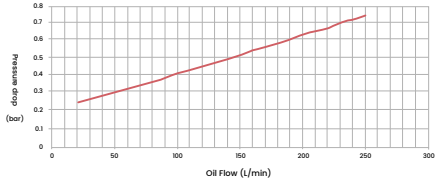


Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25MPa
	Recommended oil flow	<200L/min	<140L/min	<120L/min	<70L/min
Cooling Capacity	Calculation formula	Equamont cooling power= heat doissipator power/(excepted oil temperature - the highest ambient temperature) X Safety factor			
	Test conditions for performance curves	Fan AC380/50Hz medium ISO VG-46; ambient humidity about 55%;error rate 5%			
Fan Specification	Voltager/Frequency	AC220/50Hz	AC380/50Hz	DC12	DC24
	Power/electiric current	120W/1.0A	135W/0.46A	<16.0A	<8.5A
	Degree of protection	IP54	IP54	IP56	IP56
	dB(A) (1m) Noise	64	64	68	68
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2ºC+55ºC; If you need fans of other specifications, please contact our company		
	3.5 MPa	2.5 MPa			

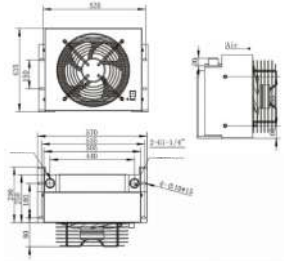
Performance curve





AD-250

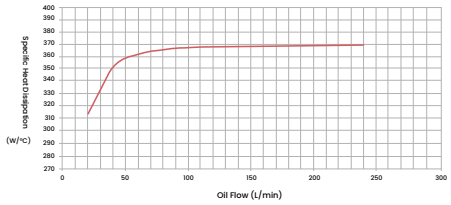
Dimensions

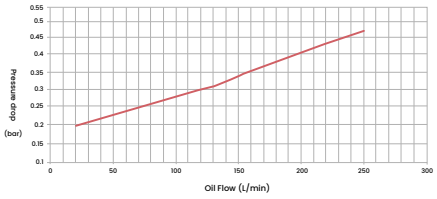


Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25MPa
	Recommended oil flow	<250L/min	<200L/min	<140L/min	<90L/min
Cooling Capacity	Calculation formula	Equamont cooling power= heat doissipator power/(excepted oil temperature - the highest ambient temperature) X Safety factor			
	Test conditions for performance curves	Fan AC380/50Hz medium ISO VG-46; ambient humidity about 55%;error rate 5%			
Fan Specification	Voltager/Frequency	AC220/50Hz	AC380/50Hz	DC12	DC24
	Power/electiric current	125W/1.0A	135W/0.46A	<16.0A	<8.5A
	Degree of protection	IP54	IP54	IP56	IP56
	dB(A) (1m) Noise	64	64	68	68
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2ºC+55ºC; If you need fans of other specifications, please contact our company		
	3.5 MPa	3.5 MPa			

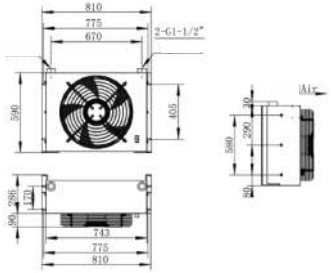
Performance curve





AD-300

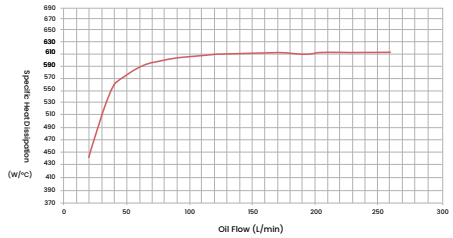
Dimensions

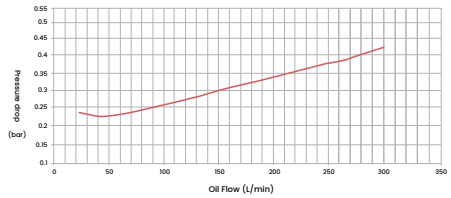


Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25MPa
	Recommended oil flow	<300L/min	<260L/min	<180L/min	<120L/min
Cooling Capacity	Calculation formula	Equamont cooling power= heat doissipator power/(excepted oil temperature - the highest ambient temperature) X Safety factor			
	Test conditions for performance curves	Fan AC380/50Hz medium ISO VG-46; ambient humidity about 55%;error rate 5%			
Fan Specification	Voltager/Frequency	AC220/50Hz	AC380/50Hz	DC12	DC24
	Power/electiric current	450W/1.0A	500W/1.1A	<16.0A X 2	<8.0A X 2
	Degree of protection	IP54	IP54	IP56	IP56
	dB(A) (1m) Noise	72	72	72	72
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2ºC+55ºC; If you need fans of other specifications, please contact our company		
	3.5 MPa	3.5 MPa			

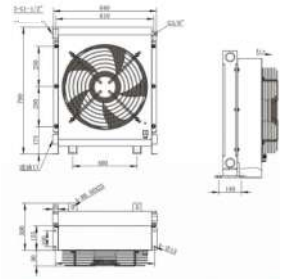
Performance curve





AD-300T

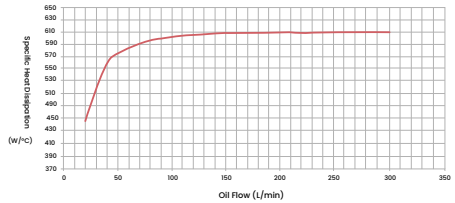
Dimensions

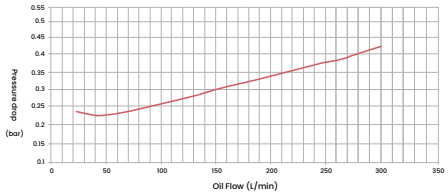


Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25MPa
	Recommended oil flow	<300L/min	<260L/min	<180L/min	<120L/min
Cooling Capacity	Calculation formula	Equamont cooling power= heat doissipator power/(excepted oil temperature - the highest ambient temperature) X Safety factor			
	Test conditions for performance curves	Fan AC380/50Hz medium ISO VG-46; ambient humidity about 55%;error rate 5%			
Fan Specification	Voltager/Frequency	AC220/50Hz	AC380/50Hz	DC12	DC24
	Power/electiric current	450W/1.0A	400W/0.46A	<16.0A X 2	<8.0A X 2
	Degree of protection	IP54	IP54	IP56	IP56
	dB(A) (1m) Noise	72	72	68	68
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2ºC+55ºC; If you need fans of other specifications, please contact our company		
	3.5 MPa	2.5 MPa			

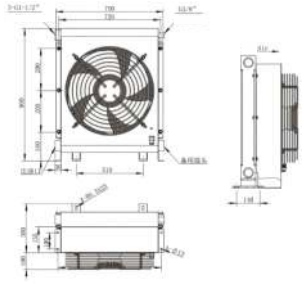
Performance curve





AD-400

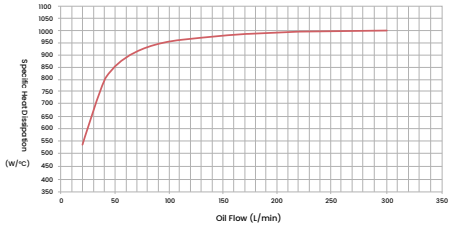
Dimensions

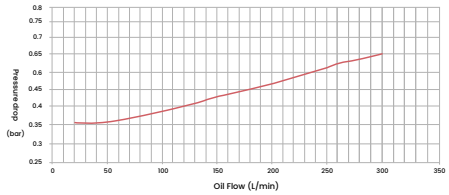


Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25MPa
	Recommended oil flow	<380L/min	<290L/min	<200L/min	<130L/min
Cooling Capacity	Calculation formula	Equamont cooling power= heat doissipator power/(excepted oil temperature - the highest ambient temperature) X Safety factor			
	Test conditions for performance curves	Fan AC380/50Hz medium ISO VG-46; ambient humidity about 55%;error rate 5%			
Fan Specification	Voltager/Frequency	AC220/50Hz	AC380/50Hz	DC12	DC24
	Power/electiric current	700W/3.55A	800W/1.56A	<16.0A X 2	<8.0A X 2
	Degree of protection	IP54	IP54	IP56	IP56
	dB(A) (1m) Noise	72	72	72	72
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2ºC+55ºC; If you need fans of other specifications, please contact our company		
	3.5 MPa	3.5 MPa			

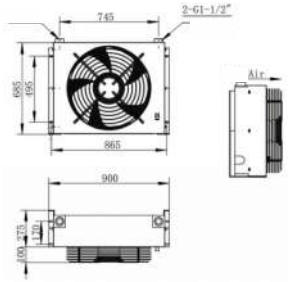
Performance curve





AD-450

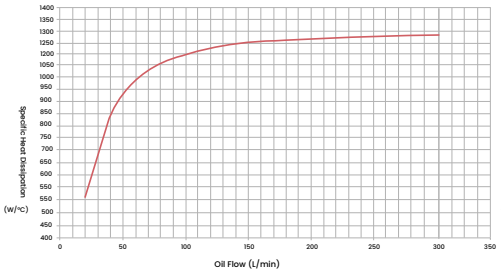
Dimensions

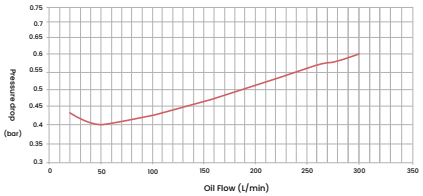


Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25MPa
	Recommended oil flow	<420L/min	<320L/min	<220L/min	<150L/min
Cooling Capacity	Calculation formula	Equamont cooling power= heat doissipator power/(excepted oil temperature - the highest ambient temperature) X Safety factor			
	Test conditions for performance curves	Fan AC380/50Hz medium ISO VG-46; ambient humidity about 55%;error rate 5%			
Fan Specification	Fan type	External rotor fan		DC Fan	DC Fan	Hydraulic motor
	Voltager/Frequency	AC220/50Hz	AC380/50Hz	DC12	DC24	8, 10, 12, 16, 20, 25, 32 ml/r
	Power/electiric current	700W/3.86A	800W/1.65A	<8.0A X4	<8.0A X4	
	Degree of protection	IP54	IP54	IP56	IP56	
	dB(A) (1m) Noise	75	75	74	74	
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2°C+55°C; If you need fans of other specifications, please contact our company			
	3.5 MPa	2.5 MPa				

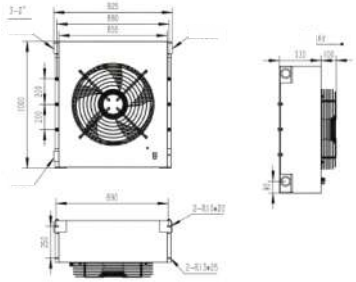
Performance curve





AD-600

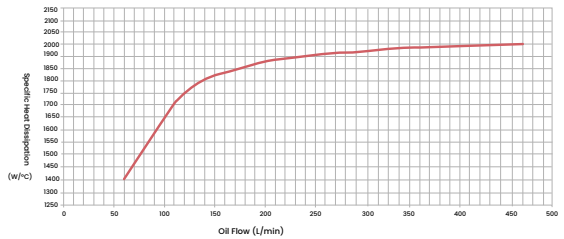
Dimensions

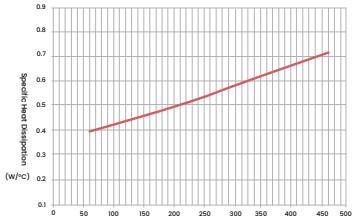


Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25MPa
	Recommended oil flow	<550L/min	<330L/min	<220L/min	<180L/min
Cooling Capacity	Calculation formula	Equamont cooling power= heat doissipator power/(excepted oil temperature - the highest ambient temperature) X Safety factor			
	Test conditions for performance curves	Fan AC380/50Hz medium ISO VG-46; ambient humidity about 55%;error rate 5%			
Fan Specification	Fan type	External rotor fan		DC Fan	DC Fan	Hydraulic motor
	Voltager/Frequency	AC380/50Hz	AC380/50Hz	DC12	DC24	8, 10, 12, 16, 20, 25, 32 ml/r
	Power/electiric current	750W/3.86A	800W/7.0A	<8.0A X4	<8.5A X4	
	Degree of protection	IP54	IP54	IP56	IP56	
	dB(A) (1m) Noise	75	75	75	75	
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -2°C+55°C; If you need fans of other specifications, please contact our company			
	3.5 MPa	2.5 MPa				

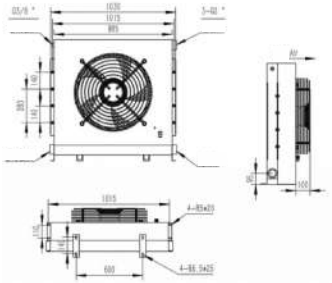
Performance curve





AD-700

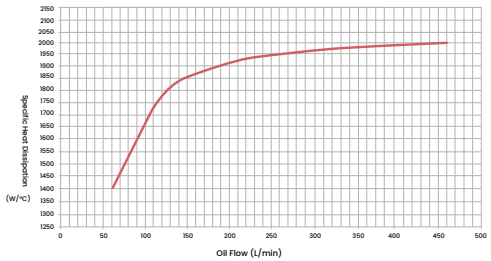
Dimensions

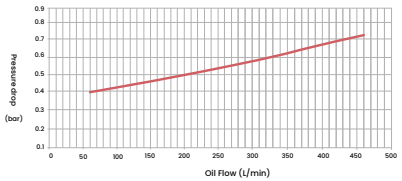


Product parameters

Oil Passing Capacity	System pressure	10Mpa	15Mpa	20Mpa	25MPa	
	Recommended oil flow	<650L/min	<450L/min	<300L/min	<240L/min	
Cooling Capacity	Calculation formula	Equamont cooling power= heat doissipator power/(excepted oil temperature - the highest ambient temperature) X Safety factor				
	Test conditions for performance curves	Fan AC380/50Hz medium ISO VG-46; ambient humidity about 55%;error rate 5%				
Fan Specification	Fan type	External rotor fan		DC Fan	DC Fan	Hydraulic motor
	Voltager/Frequency	AC380/50Hz	AC380/50Hz	DC12	DC24	8, 10, 12, 16, 20, 25, 32 ml/r
	Power/electiric current	750W/3.6A	800W/7.0A	<8.0A X4	<8.0A X4	
	Degree of protection	IP54	IP54	IP56	IP56	
	dB(A) (1m) Noise	75	75	75	75	
Pressure Test	Strenght test	Air tightness test	Remarks: the fan is suction by default, and the applicable enviroments is -20°C+75°C; If you need fans of other specifications, please contact our company			
	3.5 MPa	2.5 MPa				

Performance curve





Product application and features

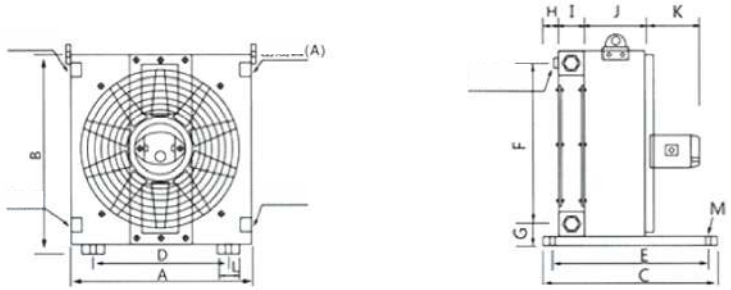
Application Fields

The cooler is specially used in construction machinery, which requires high performance, high efficiency and minimum overall size far easy installation. Typical applications include oil cooling for cranes, concrete mixers, pump trucks, pavers a nd d rives.

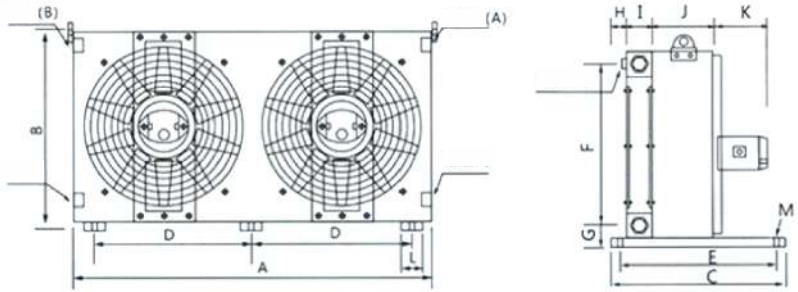
Product Feature

The cooler is specially used in construction machinery, which requires high performance, high efficiency and minimum overall size far easy installation. Typical applications include oil cooling for cranes, concrete mixers, pump trucks, pavers and drives.

Outline Drawing



DXH-3~DXH-11



DXH-12~DXH-15

◆ Product application and features

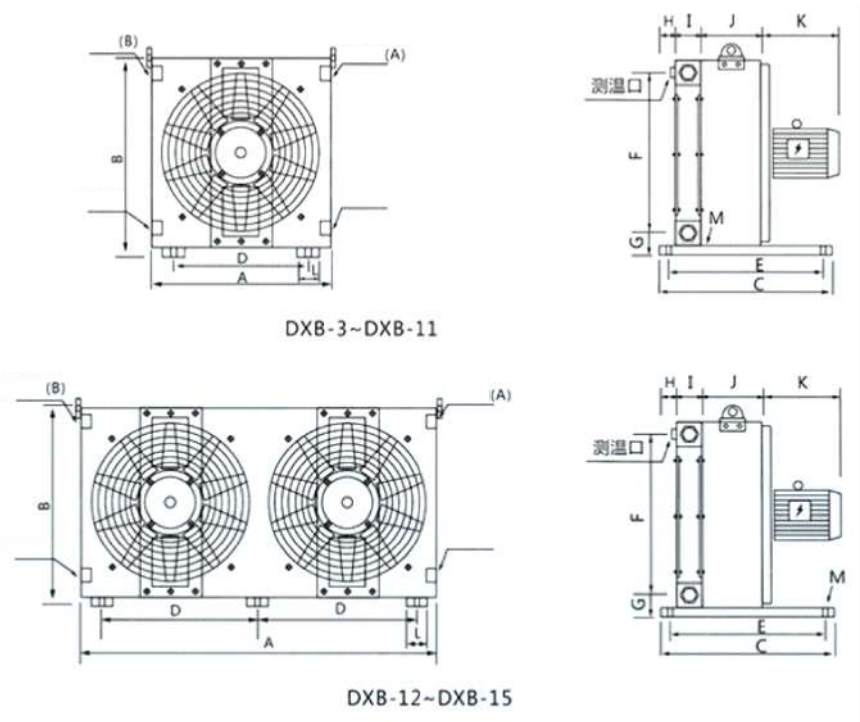
Application Fields

High performance cooler with axial fan is su ita ble for hydraulic cooling and can be used in oil return and bypass. Typical applications: industrial power station, lubrication system (such as gearbox) and machine tool.

Product Feature

El cooler adopts high-performance axial fan and powerful heat sink to obtain the best performance. It can provide medium speed or high-speed fan type, and its modulardesign enables it to add oil supply pump and filterwhen needed.

◆ Outline Drawing



◆ Product application and features

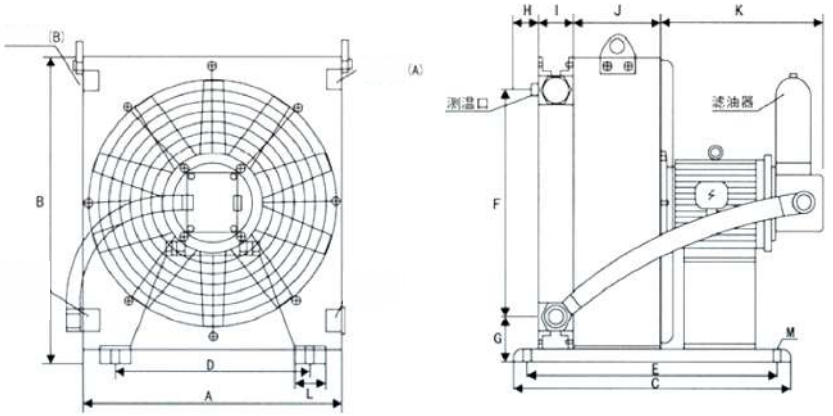
Application Fields

Low noise seriesoil/air cooler has a unique vertical exhaust flow mode, which is su ita ble for ali kinds of small and medium-sized oil / air coolers Hydraulic system. It can be used for oil return and bypass cooling. Typical applications: hoisting machinery, lubrication system (such as gear) Box) and machine tool.

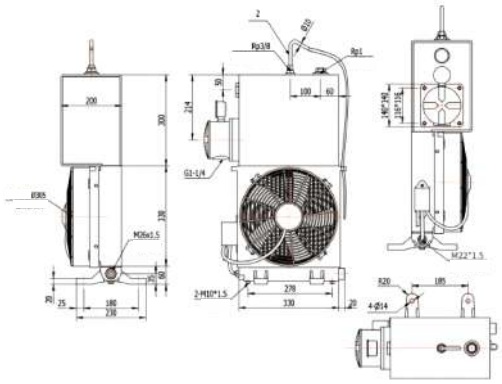
Product Feature

The advantage of bypass cooling system is that it includes stable cooling (and filtration), and its performance is not affected by flow change and main hydraulic circuit The impact of. In this way, the specification of the cooler only needs tobe su ita ble lor the thermal load without meeting the maximum return oil flow of the main circuit. Another advantage is that the by pass cooler is completely unaffected by pressure shock, which may damage the cooler.

◆ Outline Drawing

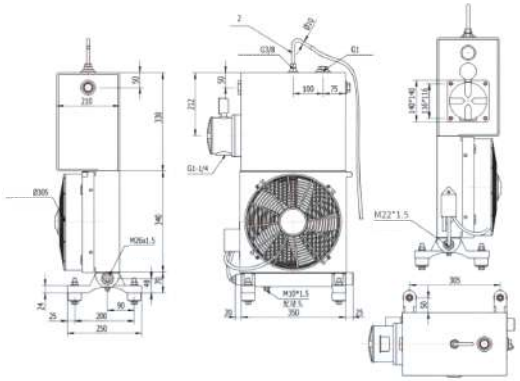


KY018



Model	Thank volume	Blade diameter	Fan voltage	Cooler	Fan	Filter	Thermal switch	Stich temperature value		Maximum allowable temperature		SW (mm)	G
								Upper limit	Lower limit	Continued	Moment		
KY018	18L	305mm	**24V/12V**	1	1	1	1	55	50	65	85	22	M22 X1.5

KY026



Model	Thank volume	Blade diameter	Fan voltage	Cooler	Fan	Filter	Thermal switch	Stich temperature value		Maximum allowable temperature		SW (mm)	G
								Upper limit	Lower limit	Continued	Moment		
KY026	26L	305mm	**24V/12V**	1	1	1	1	55	50	65	85	22	M22 X1.5

KLÜG HYDRAULICS
DURABLE, QUALITY AND SAFETY

1. Introduction
The oil cooler assembly series for concrete mixers manufactured by our company offers outstanding performance and has been highly praised by customers after years of practical use. The assembly includes the cooler, oil tank, fan, air guide cover, fan cover, protective net, temperature switch, and filler. The oil tank is integrated with the radiator, and the filler is connected to the oil tank through a flange. Please refer to the table on page 1 for optional models.

2. Installation Position and Connection Mode
It is recommended to install the cooler in a location where hot air does not flow into it, to prevent interference with smooth airflow. The cooler is connected to the frame with two lower mounts. During installation, shockproof blocks should be used to reduce vibration and impact during vehicle operation, thereby extending the cooler's service life.

3. Oil Tank
The top of the oil tank is equipped with an oil filler and a pressure balance port, and the side is fitted with an oil level gauge. During initial use, oil should be added up to the center line of the gauge. When filling, air in the system should be purged as much as possible, and the oil filling plug should be tightly covered after each fill.

4. Electrical Connection
The cooler motor is a DC motor with a service life of 3000 working hours. Since DC motors are not suitable for long-term continuous operation, they must be used with a temperature switch and contactor during use.

5. Temperature Switch
The temperature switch enables intermittent fan operation through its "on/off" action. Two different temperature switch models are available. The operating process is as follows: as oil temperature rises, when it reaches the upper limit of the switch's set value, the switch activates, the fan starts operating, and the cooling air quickly reduces the oil temperature. As the temperature falls, when it reaches the lower limit, the switch disconnects and the fan stops running.

The temperature switch is not installed on the cooler upon leaving the factory. For use, install the switch in the M14 threaded hole on the end face of the lower head. This threaded hole is blocked by a plug at the factory; remove the plug, then screw in and tighten the temperature switch along with the sealing ring. Note: When screwing in the temperature switch, the maximum torque should not exceed 20 Nm. Excessive torque will damage the switch and cause base cracking. Such damage is not covered under warranty. To prevent the temperature switch from "overheating," a relay must be used. Refer to the electrical schematic diagram for the proper use of the switch.

6. Filter
The filter is connected to the cooler through a flange and is an oil-absorption filter. After installation, the filter is submerged in oil, with only the end cover exposed outside the tank. The filter element can be replaced through the end cover, and the oil circuit is automatically cut off during replacement. Therefore, it is not necessary to drain the oil from the system when replacing the filter element. The filter is equipped with a vacuum gauge to indicate the degree of hydraulic oil contamination.