



HCA aircooler „large sizes“

HENNLICH Cooling - Technologies GmbH

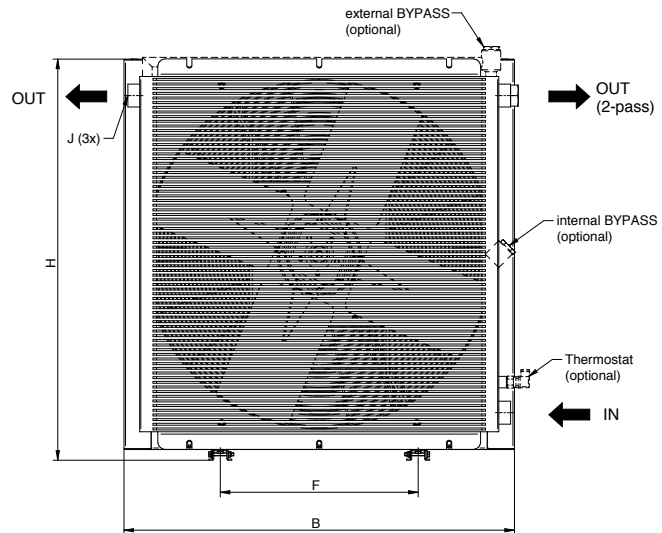
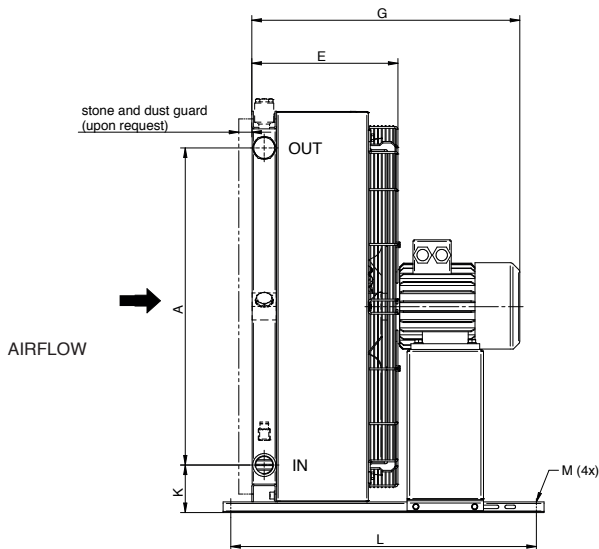
HCA-aircooler with AC-motor



This cooler type with alternating current motor is basically for stationary applications and has been developed for efficient cooling of hydraulic and lubrication oil and for water/glycol mixtures (at least 20 % glycol). Designs available incl. various accessories and as 1-pass or 2-pass.

This range of large sizes is based on the standard HCA-types, but for higher flowrates and cooling capacities.

Material	
Cooling element	Aluminium (copper or stainless steel upon request)
Air fan	Glass fibre reinforced plastic (PAG/PPG)
Sheet metal parts	C-steel powder coated
Protection grid	C-steel galvanised (Cr-VI-free)
Main parts	black color RAL 9005 (excl. air fan, grid and motor)



HENNLICH Cooling-Technologies GmbH			Noise level LpA dB (A) 1m*	Pole-Power [kW]	Mass [kg]	B	F	H	J	L	A	E	G	Mø
HCA standard sizes														
HCA	D94.93-8	3-phase	78	8-1.50	140	1025	518	1053	G2"	800	830	410	780*	14
HCA	D94.93-6	3-phase	85	6-2.20	150	1025	518	1053	G2"	800	830	410	780*	14
HCA	C113.109-8	3-phase	84	8-2.20	165	1190	600	1220	G2"	800	990	415	830*	14
HCA	C113.109-6	3-phase	90	6-5.50	175	1190	600	1220	G2"	800	990	415	830*	14
HCA	E112.112-8	3-phase	82	8-2.20	225	1190	600	1220	SAE2"	800	982	460	880*	14
HCA	E112.112-6	3-phase	89	6-5.50	245	1190	600	1220	SAE2"	800	982	460	880*	14
HCA	F112.112-4	3-phase	90	4-7.50	285	1190	600	1220	SAE2"	800	982	485	910	14
HCA	E130.119-8	3-phase	82	8-2.20	255	1300	600	1230	SAE2"	800	900	460	880*	14
HCA	E130.119-6	3-phase	89	6-5.50	275	1300	600	1230	SAE2"	800	900	460	880*	14
HCA	F130.130-4	3-phase	90	4-7.50	360	1300	600	1335	SAE3"	800	1000	465	900*	14
HCA	D150.149-8	3-phase	85	8-4.00	390	1510	1420	1630	SAE2"	900	1390	470	1000	14
HCA	D150.149-6	3-phase	92	6-11.00	430	1510	1420	1630	SAE2"	900	1390	470	960*	14
HCA	E172.160-6	3-phase	93	6-11.00	540	1720	1420	1630	SAE2"	900	1390	500	1020	14

* Dimension „G“ variable acc. motordesign

Other cooler types / dimensions upon request. Noise level tolerance +/- 3 dB(A)

General motor data

3-phase motor IP55, Insulation class F temperature class B

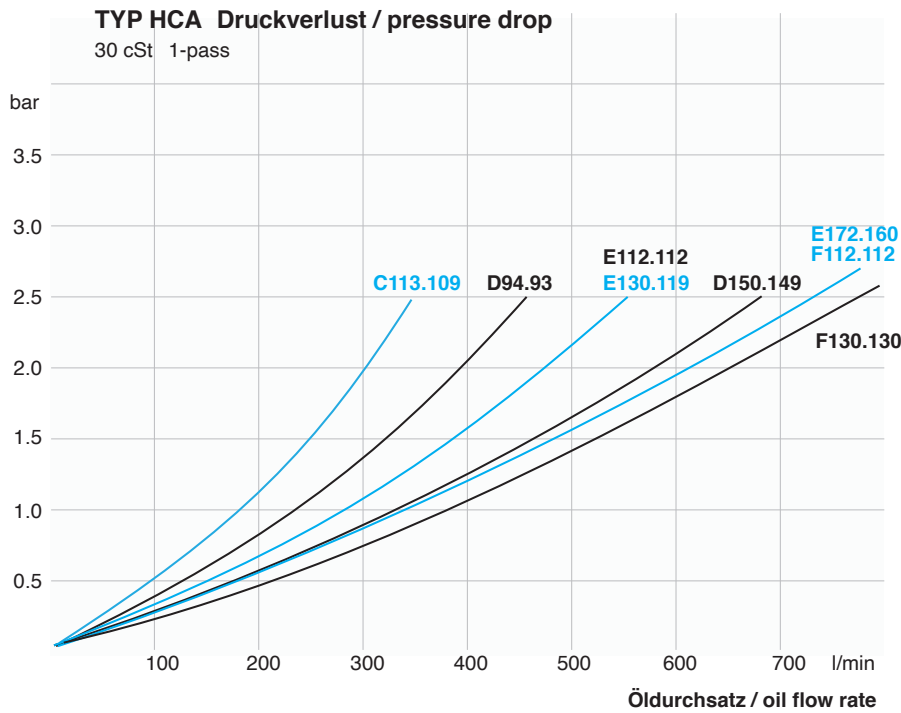
Max. oil temperature [Tmax] 120 °C at 14 bar other temperatures upon request

Max. oil pressure 24 bar (statically, standard conditions)



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Selection of cooler (acc. following graphs):

The pressure drop can be determined for each type by using the oil flow rate based on a viscosity of 30cst. For other viscosities please ask our application engineers.

The specific cooling capacity (y-axis) can be determined with the oil flow rate (x-axis) and the intersection of the cooler type. In order to get the actual cooling capacity it has to be multiplied with the temperature-difference of the max. oil temperature (= cooler inlet) and the max. air temperature suctioned to the cooler.

Example:

Max. oil temperature: 70 °C
Max. air temperature: 30 °C
($\Delta t = 40$ °C temperature difference)

Oil flow rate: 300 l/min

For cooler type E112.112-8 with spec. cooling capacity of 3,0 kW / °C (acc. chart) multiplied by $\Delta t = 40$ °C results a cooling capacity of 120 kW.

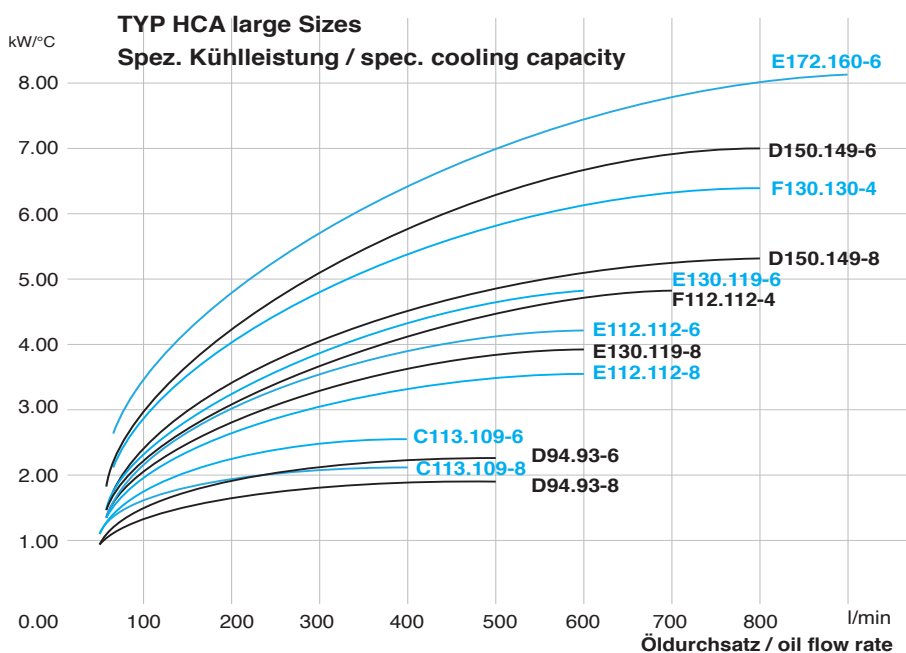
To calculate thermal dissipation loss or cooling power we provide support in any case!

The characteristic curves are based on data of typical hydraulic oil at 60 °C and can differ due to other physical figures. Please note that dust, dirt or circulating air can cause a loss of cooling-capacity. Therefor consider some safety or contact: **HENNLICH Cooling - Technologies**

The Motor type plate has to be noted as well.

For higher temperatures up to 250 °C compact solutions are going to be provided. Higher pressure rates upon request.

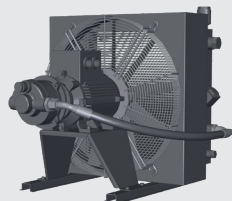
If water/glycol is used, the cooling characteristics are better. Please send us the mixture and the technical data or fill in and send us the questionnaire on our website: www.hennlich.at



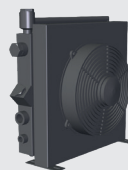
Weitere Typen:



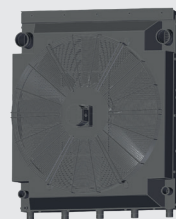
HCH with hydraulic motor



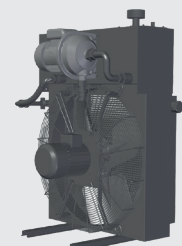
HCP with AC-Motor + pump



HCD with 12/24VDC



HCC for diesel engines



HCS cooling systems



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Key code

HCA - D94.93 – 6A - 100 - TSS - Z

Cooler type	
HCA	Air cooler with AC-motor
HCAE	Air cooler as „High Efficiency“
HCAF	Flex-design with AC-motor
HCAX	Aircooler with ATEX-design
HCAM	Aircooler with marine-design
Cooler size	
D94.93 to XXXX	acc. table
Pole quantity	
4	4-pole (1500 1/min)
6	6-pole (1000 1/min)
8	8-pole (750 1/min)
Z	special
Motor voltage	
A	230/400V, 50 Hz / 3-phase
B	265/460V, 60 Hz / 3-phase
C	230V, 50/60 Hz / 1-phase
D	230/400V, 50 Hz; 265/460V, 60 Hz
E	500V, 50 Hz / 3-phase
F	400/690 V, 50 Hz / 3-phase
G	special voltage
Z	special motor
X	without motor
Bypass-accessories	
1XX	1-pass excl. bypass valve)
2XX	standard 2-pass
5XX	2-pass with accesories
X2X	bypass valve (2bar)
X5X	bypass valve (5bar)
X8X	bypass valve (8bar)
XX4	thermostat 40°
XX5	thermostat 50°
XX6	thermostat 60°
XX7	thermostat 70°
XX8	thermostat 80°
XX9	thermostat 90°
X25	with thermal-bypass (2 bar, 50 °C)
Internal codes	
TSS	internal codes
Internal codes	
Z	Options for stone and dust guard, painting, filter, accessories, ...

