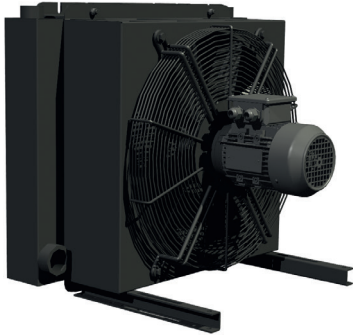




HCA-flex aircooler

HENNLICH - Cooling - Technologies GmbH

HCA-flex aircooler with AC-motor

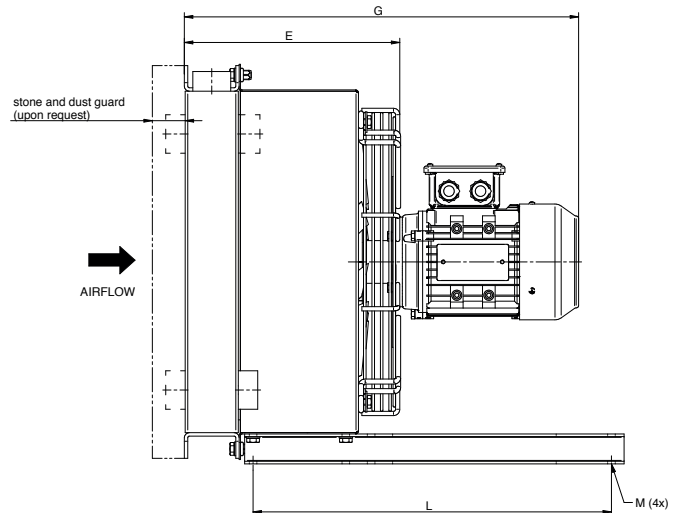
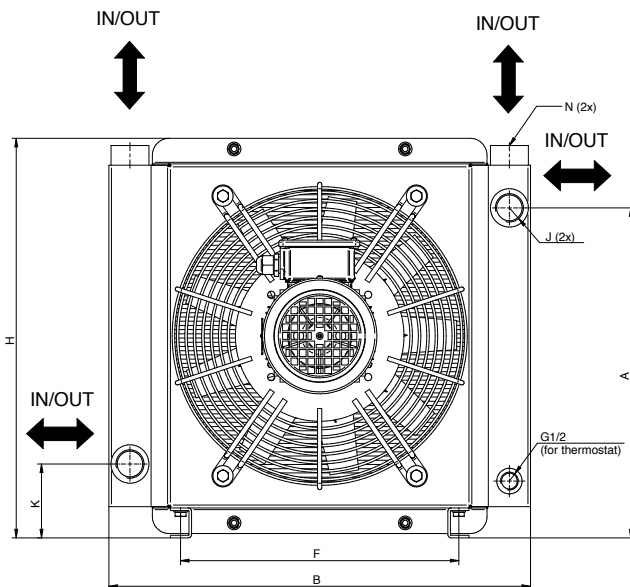


This cooler type with alternating current motor is an extension of our standard-cooler design and focuses on the flexible use.

The numerous ports enable different connections of hoses/pipes, the use of 2-pass and installation of a bypass in a later stage.

However, the flex-design is basically for stationary applications and has been developed for efficient cooling of hydraulic and lubrication oil and for water/glycol mixtures (> 15 % glycol).

Designs available incl. various accessories and as 1-pass, 2-pass or 3-pass.

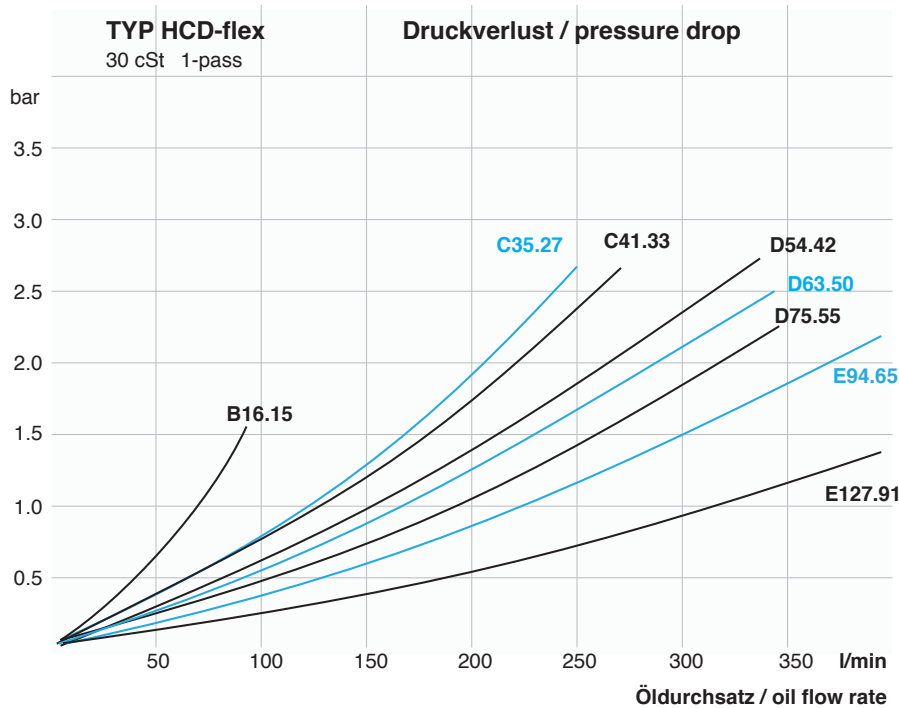


| HENNLICH Cooling-Technologies GmbH | | | Noise level LpA dB (A) 1m* | Pole / power [kW] | Mass [kg] | B | F | H | J | N | L | A | E | G | Mø |
|------------------------------------|-----------|----------|----------------------------------|-------------------------|--------------|------|-----|------|---------|---------|-----|-----|-----|-----|----|
| HCA-flex standard sizes | | | | | | | | | | | | | | | |
| HCAF | B16.15-2 | 1-phasig | 50 | 2-0.06 | 4 | 160 | - | 160 | - | G1/2" | - | 130 | - | 125 | - |
| HCAF | C35.27-2 | 1-phasig | 75 | 2-0.14 | 11 | 330 | 203 | 330 | G1 | G3/4" | 300 | 270 | 175 | 180 | 11 |
| HCAF | C35.27-2 | 3-phasig | 76 | 2-0,18 | 11 | 330 | 203 | 330 | G1 | G3/4" | 300 | 270 | 175 | 180 | 11 |
| HCAF | C41.33-2 | 1-phasig | 76 | 2-0.14 | 13 | 410 | 203 | 395 | G1 | G3/4" | 300 | 315 | 215 | 220 | 11 |
| HCAF | C41.33-2 | 3-phasig | 77 | 2-0,18 | 13 | 410 | 203 | 395 | G1 | G3/4" | 300 | 315 | 215 | 220 | 11 |
| HCAF | D54.42-4 | 3-phasig | 70 | 4-0.25 | 30 | 540 | 370 | 485 | G1 1/4" | G1 | 300 | 418 | 298 | 513 | 11 |
| HCAF | D54.42-2 | 3-phasig | 83 | 2-1.10 | 36 | 540 | 370 | 485 | G1 1/4" | G1 | 300 | 418 | 298 | 533 | 11 |
| HCAF | D63.50-4 | 3-phasig | 71 | 4-0.37 | 43 | 635 | 440 | 565 | G1 1/2" | G1 | 300 | 485 | 303 | 518 | 11 |
| HCAF | D63.50-2 | 3-phasig | 81 | 2-1.10 | 49 | 635 | 440 | 565 | G1 1/2" | G1 | 300 | 485 | 303 | 533 | 11 |
| HCAF | D75.55-4 | 3-phasig | 75 | 4-0.75 | 72 | 750 | 520 | 635 | G1 1/2" | G1 1/4" | 300 | 530 | 305 | 535 | 11 |
| HCAF | D75.55-2 | 3-phasig | 86 | 2-2,20 | 88 | 750 | 520 | 635 | G1 1/2" | G1 1/4" | 300 | 530 | 305 | 575 | 11 |
| HCAF | D75.55-4 | 3-phasig | 75 | 4-0.75 | 72 | 750 | 520 | 630 | SAE 2" | G1 1/4" | 300 | 530 | 305 | 535 | 11 |
| HCAF | D75.55-2 | 3-phasig | 86 | 2-2,20 | 88 | 750 | 520 | 630 | SAE 2" | G1 1/4" | 300 | 530 | 305 | 575 | 11 |
| HCAF | E94.65-6 | 3-phasig | 76 | 6-1.50 | 98 | 940 | 700 | 730 | G1 1/2" | G1 1/2" | 300 | 650 | 305 | 600 | 11 |
| HCAF | E94.65-4 | 3-phasig | 88 | 4-2.20 | 102 | 940 | 700 | 730 | G1 1/2" | G1 1/2" | 300 | 650 | 305 | 600 | 11 |
| HCAF | E127.91-6 | 3-phasig | 89 | 6-3,00 | 215 | 1270 | 440 | 1010 | SAE 3" | G1 1/2" | 430 | 890 | 420 | 800 | 14 |
| HCAF | E127.91-4 | 3-phasig | 96 | 4-7.50 | 235 | 1270 | 440 | 1010 | SAE 3" | G1 1/2" | 430 | 890 | 420 | 800 | 14 |

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

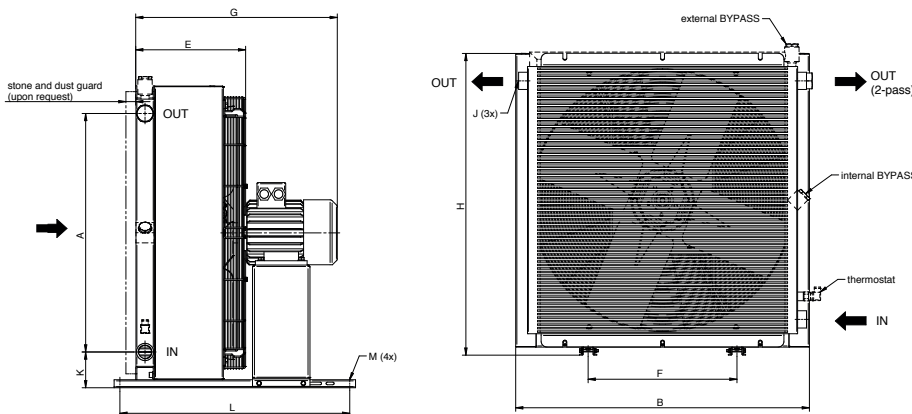


HCA-flex aircooler with AC-motor



General motor data

| |
|--|
| 3-phase motor |
| IP55, Insulation class F temperature class B |
| * 1- and 3-phase motor as external rotor |
| IP44, Insulation class B temperature class B |
| Max. oil temperature [Tmax] |
| 120 °C |
| Max. oil pressure |
| 26 bar (for sizes CXX.XX) (statically, standard conditions) |



Please note our standard cooler design HCA with short delivery time.

Selection of cooler:

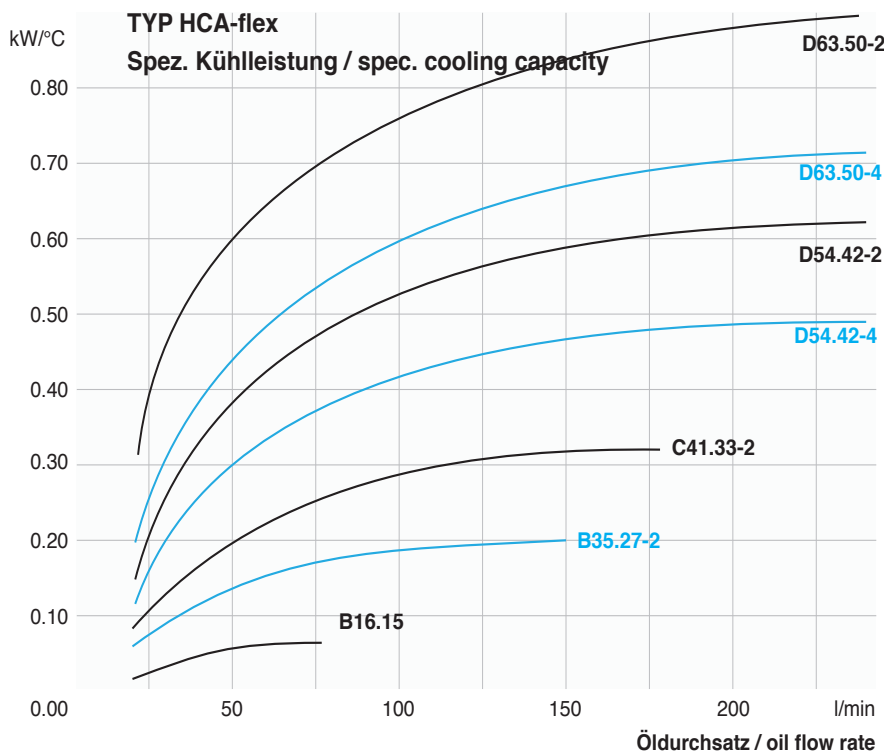
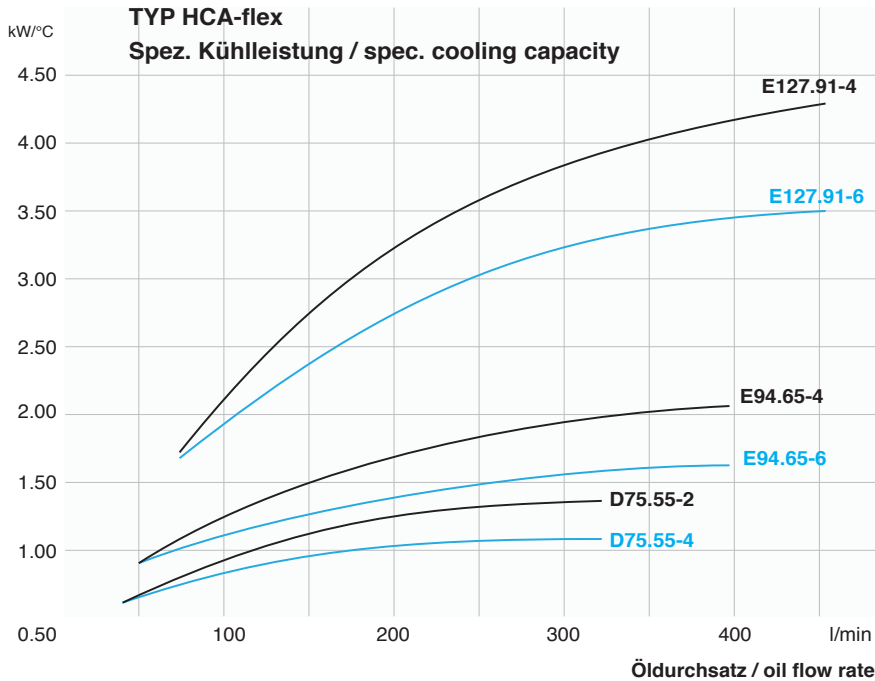
The pressure drop can be determined for each type by using the oil flow rate based on a viscosity of 30cst. For other viscosities please ask our application engineers.

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.



HCA-flex aircooler

HENNLICH - Cooling - Technologies GmbH



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 E127.91-6 with spec. cooling capacity of 3,2 kW / °C (acc. chart) multiplied by $\Delta t = 40$ °C results a cooling capacity of 128 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 capacity. Consider some safety or contact a HENNLICH Cooling technician!

Motor type plate has to be noted as well. For higher temperatures up to 250 °C compact solutions are going to be provided.

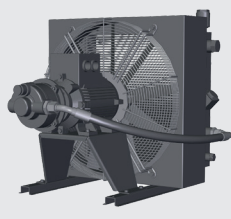
Higher pressure rates upon request.

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 technical questionnaire on our website: www.hennlich.at

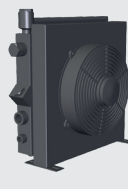
Other Types:



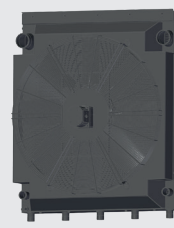
HCH with hydraulic motor



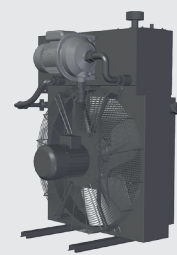
HCP with AC-Motor + pump



HCD with 12/24VDC



HCC for diesel engines



HCS cooling systems



Key code

HCAF - C33.26 – 4D - 100 - TSS - Z

| Cooler type | |
|--------------------|--|
| HCA | air cooler with AC-motor |
| HCAF | Flex-design with AC-motor |
| HCAX | aircooler with ATEX-design |
| HCAM | aircooler with marine-design |
| Cooler size | |
| B16.15 bis XXXX | acc. table |
| Pole quantity | |
| 2 | 2-pole (3000 1/min) |
| 4 | 4-pole (1500 1/min) |
| 6 | 6-pole (1000 1/min) |
| 8 | 8-pole (750 1/min) |
| 12 | 12-pole (500 1/min) |
| Z | special |
| Motor voltage | |
| A | 230/400V, 50 Hz / 3-phase |
| B | 275/480V, 60 Hz / 3-phase |
| C | 230V, 50/60 Hz / 1-phase |
| D | 230/400V, 50 Hz; 275/480V, 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 |
| 3XX | standard 3-pass |
| 5XX | 2-pass with accesories |
| X2X | bypass valve (2bar) |
| X5X | bypass valve (5bar) |
| XX4 | thermostat 40 °C |
| XX5 | thermostat 50 °C |
| XX6 | thermostat 60 °C |
| XX7 | thermostat 70 °C |
| XX8 | thermostat 80 °C |
| XX9 | thermostat 90 °C |
| X25 | with internal thermal-bypass (2 bar, 50 °C) |
| X26 | with internal thermal-bypass (2 bar, 60 °C) |
| Internal codes | |
| TSS | internal codes |
| Internal codes | |
| Z | Options for stone and dust guard, painting, filter, accessories, ... |

