



# HCH aircooler

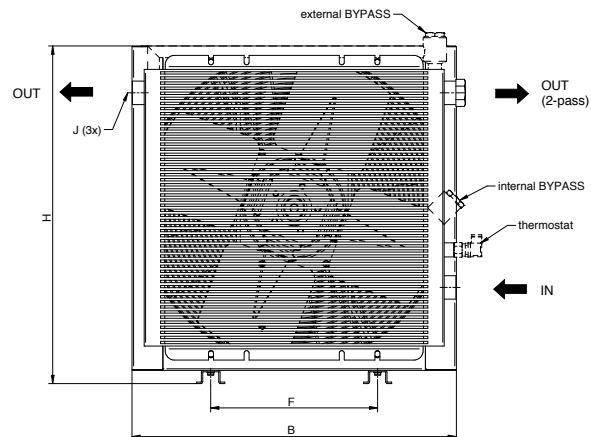
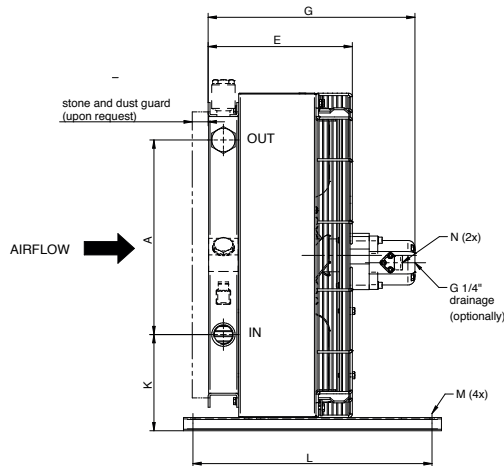
HENNLICH - Cooling - Technologies GmbH

## HCH-aircooler with hydraulic-motor



This cooler type with hydraulic motor is for stationary and mobile applications and has been developed for efficient cooling of hydraulic and lubrication oil and for water/glycol mixtures (at least 15 % glycol). Different hydraulic motors can be used, from 4 cm<sup>3</sup> up to 45 cm<sup>3</sup>. Designs available incl. various accessories and as 1-pass, 2-pass or 3-pass.

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



| HENNLICH Cooling-Technologies |        | Noise level<br>LpA dB (A)<br>1m* | Fan speed<br>[rpm] | Power<br>[kW] | Mass<br>[kg] | B    | F   | H    | J       | L   | A   | E   | G   | Mø |
|-------------------------------|--------|----------------------------------|--------------------|---------------|--------------|------|-----|------|---------|-----|-----|-----|-----|----|
| HCH standard sizes            |        |                                  |                    |               |              |      |     |      |         |     |     |     |     |    |
| HCH                           | C33.26 | 63                               | 1500               | 0,1           | 10           | 367  | 203 | 396  | G1"     | 510 | 159 | 225 | 330 | 10 |
| HCH                           | C33.26 | 80                               | 3000               | 0,8           | 10           | 367  | 203 | 396  | G1"     | 510 | 159 | 225 | 330 | 10 |
| HCH                           | C40.33 | 68                               | 1500               | 0,2           | 15           | 442  | 203 | 471  | G1"     | 510 | 234 | 245 | 350 | 10 |
| HCH                           | C40.33 | 84                               | 3000               | 1,7           | 15           | 442  | 203 | 471  | G1"     | 510 | 234 | 245 | 350 | 10 |
| HCH                           | C47.40 | 71                               | 1500               | 0,4           | 19           | 498  | 203 | 527  | G1"     | 510 | 225 | 265 | 370 | 10 |
| HCH                           | C47.40 | 87                               | 3000               | 2,6           | 19           | 498  | 203 | 527  | G1"     | 510 | 225 | 265 | 370 | 10 |
| HCH                           | C55.48 | 65                               | 1000               | 0,2           | 26           | 582  | 356 | 611  | G1"     | 510 | 308 | 280 | 385 | 10 |
| HCH                           | C55.48 | 76                               | 1500               | 0,6           | 26           | 582  | 356 | 611  | G1"     | 510 | 308 | 280 | 385 | 10 |
| HCH                           | C64.59 | 76                               | 1000               | 0,7           | 42           | 694  | 356 | 723  | G1 1/4" | 510 | 415 | 315 | 460 | 10 |
| HCH                           | C64.59 | 85                               | 1500               | 2,4           | 42           | 694  | 356 | 723  | G1 1/4" | 510 | 415 | 315 | 460 | 10 |
| HCH                           | C64.76 | 76                               | 1000               | 0,7           | 58           | 694  | 356 | 867  | G1 1/4" | 510 | 593 | 340 | 485 | 10 |
| HCH                           | C64.76 | 85                               | 1500               | 2,4           | 58           | 694  | 356 | 867  | G1 1/4" | 510 | 593 | 340 | 485 | 10 |
| HCH                           | D81.76 | 74                               | 750                | 0,7           | 78           | 870  | 508 | 900  | G2"     | 510 | 585 | 380 | 525 | 10 |
| HCH                           | D81.76 | 81                               | 1000               | 1,5           | 78           | 870  | 508 | 900  | G2"     | 510 | 585 | 380 | 525 | 10 |
| HCH                           | D94.93 | 76                               | 750                | 0,9           | 115          | 1025 | 518 | 1053 | G2"     | 800 | 830 | 410 | 555 | 14 |

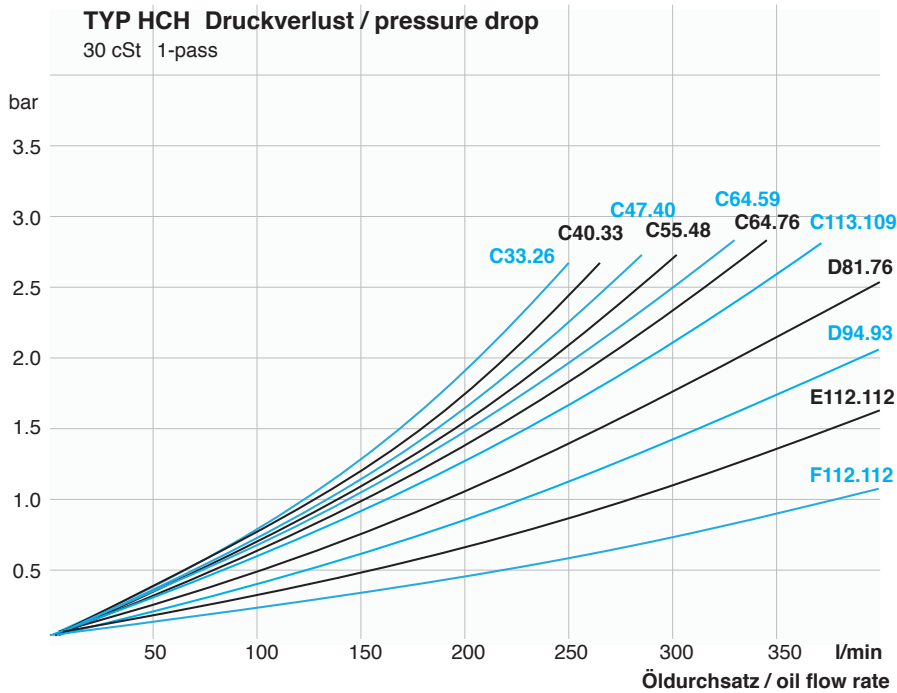


## HCH-aircooler with hydraulic-motor

| HENNLICH Cooling-Technologies |          | Noise level<br>LpA dB (A)<br>1m* | Fan<br>speed<br>[rpm] | Power<br>[kW] | Mass<br>[kg] | B    | F   | H    | J     | L   | A   | E   | G   | Mø |
|-------------------------------|----------|----------------------------------|-----------------------|---------------|--------------|------|-----|------|-------|-----|-----|-----|-----|----|
| HCH standard sizes            |          |                                  |                       |               |              |      |     |      |       |     |     |     |     |    |
| HCH                           | D94.93   | 85                               | 1000                  | 1,9           | 115          | 1025 | 518 | 1053 | G2"   | 800 | 830 | 410 | 555 | 14 |
| HCH                           | C113.109 | 84                               | 750                   | 2,4           | 125          | 1190 | 600 | 1220 | G2"   | 800 | 990 | 415 | 570 | 14 |
| HCH                           | C113.109 | 89                               | 1000                  | 5,3           | 125          | 1190 | 600 | 1220 | G2"   | 800 | 990 | 415 | 570 | 14 |
| HCH                           | E112.112 | 96                               | 750                   | 2,4           | 195          | 1190 | 600 | 1220 | SAE2" | 800 | 982 | 460 | 615 | 14 |
| HCH                           | E112.112 | 91                               | 1000                  | 5,3           | 195          | 1190 | 600 | 1220 | SAE2" | 800 | 982 | 460 | 615 | 14 |
| HCH                           | F112.112 | 98                               | 1250                  | 11,0          | 220          | 1190 | 600 | 1220 | SAE   | 800 | 982 | 490 | 690 | 14 |

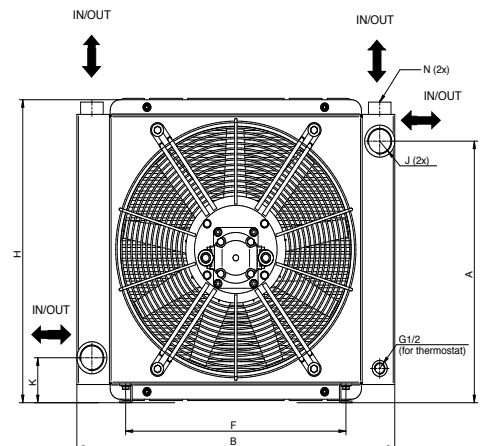
\*\*Data „G“ = approximately, as depending on motor

Other cooler dimensions upon request  
Noise level tolerance  $\pm 3$  dB(A)



## General motor data

|  |
|--|
| <b>Hydraulic motor [cm<sup>3</sup>]</b>                        |
| 6, 8, 11, 14, 16, 20, 25                                       |
| 34, 45   |
| <b>Motor pmax</b>  |
| 250 bar (170 bar)  |
| <b>Motor bearing</b>   |
| > size C64.59  |
| <b>Max. oil temperature [Tmax]</b>                             |
| 120 °C   |
| <b>Max. oil pressure</b>                                       |
| 26 bar (for sizes CXX.XX)<br>(statically, standard conditions) |



New:  
The Flex-Design => with in and outlets in all directions => for flexible connection

## Selection of cooler:

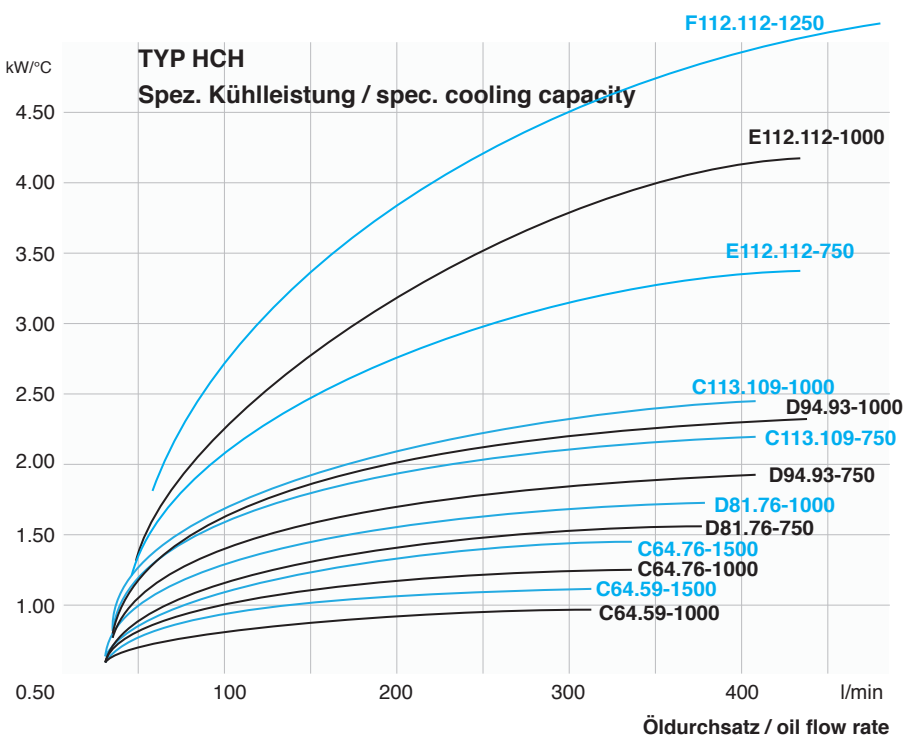
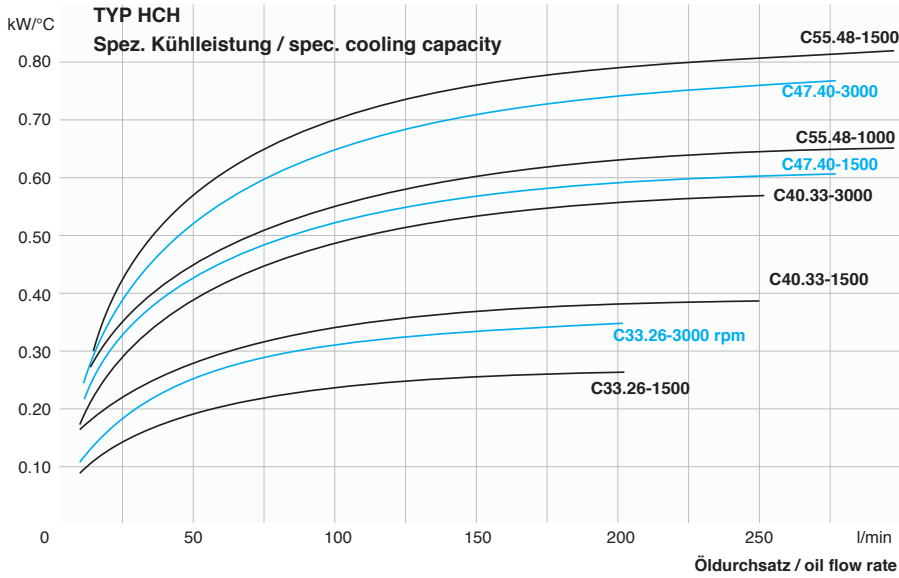
The pressure drop can be determined for each type by using the oil flow rate based on a viscosity of 30cst. For other viscosities please ask our application engineers.

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.



# HCH 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 E112.112-1000 with spec. cooling capacity of 3,8 kW/°C (acc. chart) multiplied by  $\Delta t = 40$  °C results a cooling capacity of 152 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. Therefore consider some safety or contact a Hennlich Cooling technician!

Motor type plate has to be noted as well.

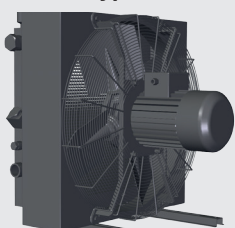
For higher temperatures up to 250°C compact solutions are going to be provided.

Higher pressure rates upon request.

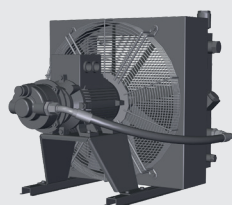
If water/glycol is used, the cooling characteristics are better.

Please send us the mixture and the technical data or fill in and send us the technical questionnaire on our website: [www.hennlich.at](http://www.hennlich.at)

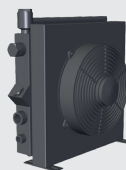
**Other Types:**



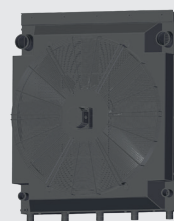
HCA with AC-Motor



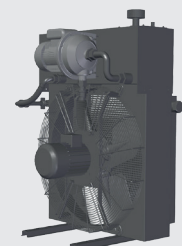
HCP with AC-Motor + pump



HCD with 12/24VDC



HCC for diesel engines



HCS cooling systems



## Key code

## HCH - C33.26 – 11 - 100 - TSS - Z

| Cooler type        |  |
|--------------------|--|
| HCH                | air cooler with hydraulic-motor                                      |
| HCHF               | flex-design with hydraulic-motor                                     |
| HCHX               | aircooler with ATEX-design   |
| HCHM               | aircooler with marine-design   |
| Cooler size        |  |
| C33.26 bis XXXX    | acc. table   |
| Hydraulic motor    |  |
| 6                  | ~ 6 cm <sup>3</sup>  |
| 8                  | ~ 8 cm <sup>3</sup>  |
| 11                 | ~ 11 cm <sup>3</sup>   |
| 14                 | ~ 14 cm <sup>3</sup>   |
| 16                 | ~ 16 cm <sup>3</sup>   |
| 20                 | ~ 20 cm <sup>3</sup>   |
| 25                 | ~ 25 cm <sup>3</sup>   |
| 34                 | ~ 34 cm <sup>3</sup>   |
| 45                 | ~ 45 cm <sup>3</sup>   |
| Bypass accessories |  |
| 1XX                | 1-pass excl. bypass valve)   |
| 2XX                | standard 2-pass  |
| 3XX                | standard 3-pass  |
| 5XX                | 2-pass with accesories   |
| X2X                | bypass valve (2 bar)   |
| X5X                | bypass valve (5 bar)   |
| 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, ... |

