

# MOBILE COOLERS

## ELH Series

Hydraulic Motor Drive



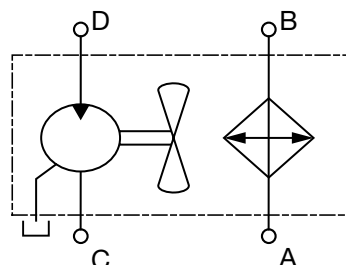
### Description

These coolers use a combination of high performance cooling elements combined with a high capacity hydraulic fan drive to give long, trouble free operation in mobile hydraulic applications. The compact design allows the coolers to fit most equipment and provides the highest cooling performance in heat dissipation while minimizing space required.

### Features

- ELH 4 and 5 coolers are designed with the inlet/outlet ports facing towards the back to help reduce fittings
- Available with internal pressure and temperature bypass
- All units feature a built in thermostat port
- Up to 125 HP cooling capacity
- Rated flows up to 80 gpm (consult factory for higher flows)
- Hydraulic motor drive offers more cooling in a smaller package

### Hydraulic Symbol



### Applications



Agricultural



Offshore



Construction



Railways



Industrial



Utility



Material  
Handling



Forestry

### General

<b>Materials</b>	Housing: welded steel Heat exchanger: aluminum, brazed bar-and-plate Fan: plastic Motor: aluminum housing, steel gears and shaft
<b>Max. Oil Temp.</b>	266°F (130°C)
<b>Max. Operating Pressure</b>	230 psi (16 bar)
<b>Mounting Orientation</b>	All positions
<b>Fluids</b>	Mineral oil to DIN 51524 Part 1 and 2 (Contact factory for other fluid usages)
<b>Filtration</b>	ISO/DIS 4406 Code 19/16- Filtration grade B25>75
<b>Motor</b>	<ul style="list-style-type: none"> <li>- Max. Drain Pressure: 29 psi (2 bar)</li> <li>- Fluid Viscosity Range: 10-600 cSt (recommended 30-45 cSt)</li> <li>- Fluid Temperature Range: up to 194° F (90°C)</li> </ul>

## Model Code

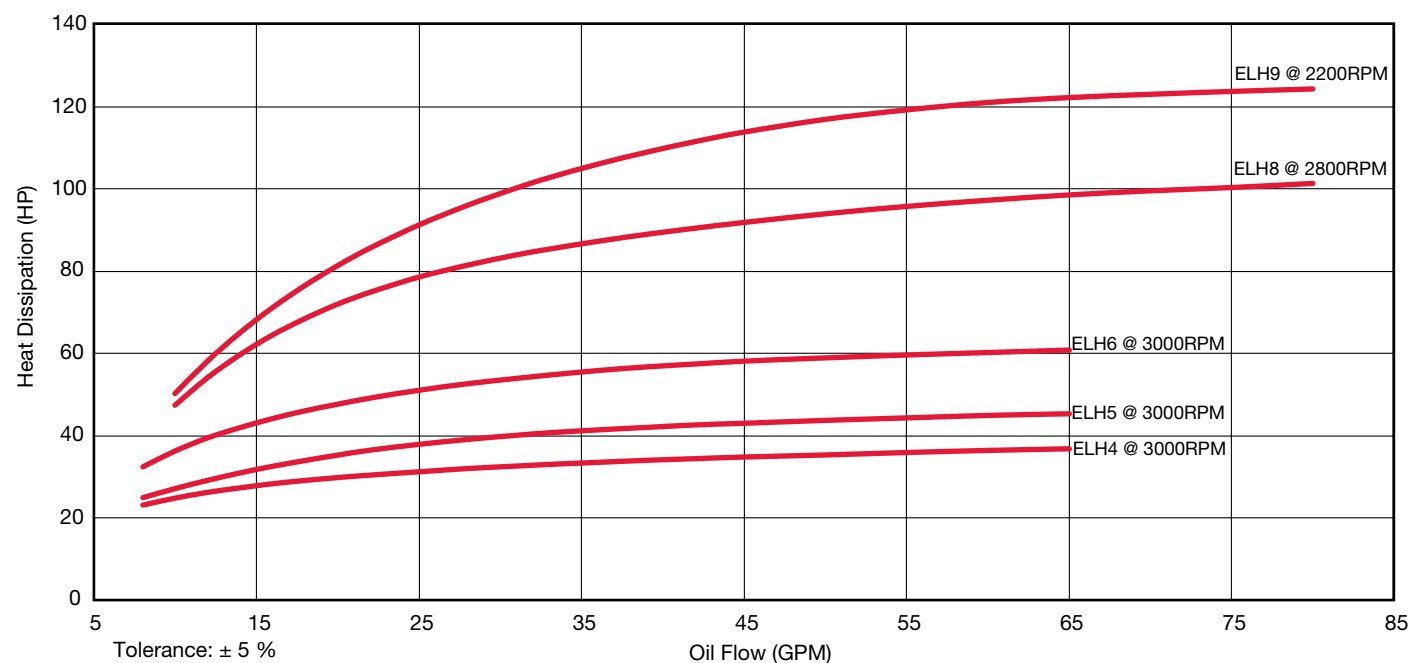
<b>Model</b>	<b>ELH</b>	<b>4</b>	<b>1.5</b>	<b>H6.3</b>	<b>S</b>	<b>IBT</b>	<b>45 - 2</b>
<b>ELH</b> = Air Cooled Oil Cooler with Hydraulic Fan Drive							
<b>Size</b>	4, 5, 6, 8, 9						
<b>Version Number</b>							
<b>Hydraulic Motor Displacement</b>	H6.3 = 6.3 cc/rev H14 = 14 cc/rev H22 = 22 cc/rev						
<b>Air Flow Direction</b>	S = Suction (through heat exchanger, exhausting through fan)						
<b>Accessories</b>	(omit) = None IBT = Internal Thermostatic Bypass Valve IBP = Internal Pressure Bypass Valve						
<b>Opening Temperature (IBT Only)</b>	45 = 113°F (45°C) (closes at 131°F) 50 = 130°F (50°C) (closes at 150°F)						
<b>Opening Pressure Drop (IBT &amp; IBP Only)</b>	2 = 2 bar (29 psi) 3 = 3 bar (45 psi)						

## Technical Specifications

Size	Motor Displacement (cm <sup>3</sup> /rev)	Fan Operating Speed Range (rpm)	Min. Pressure Required for 1500 RPM	Motor Oil Flow @1500 RPM (gpm)	Max. Continuous Motor Operating Pressure (psi)	Noise Level @1000 RPM (dBa @1 Meter)*	Weight (lbs.)
ELH 4	6.3 / 14 / 22	1000 / 3000	725 / 435 / 290	2.8 / 5.7 / 9.7	3625 / 3625 / 2175	70	40
ELH 5	6.3 / 14 / 22	1000 / 3000	1015 / 435 / 290	2.8 / 5.7 / 9.7	3625 / 3625 / 2175	70	53
ELH 6	6.3 / 14 / 22	1000 / 3000	2175 / 1015 / 725	2.8 / 5.7 / 9.7	3625 / 3625 / 2175	70	95
ELH 8	6.3 / 14 / 22	1000 / 2800	2900 / 1160 / 870	2.8 / 5.7 / 9.7	3625 / 3625 / 2175	76	148
ELH 9	14 / 22	1000 / 2200	1885 / 1305	5.7 / 9.7	3625 / 2175	78	188

\*The noise levels are only a guide as acoustic properties vary and depend on the characteristics of the room, connections, viscosity, and resonance.

### Heat Dissipation @ $\Delta T = 72^\circ F$ Sizes 4-9

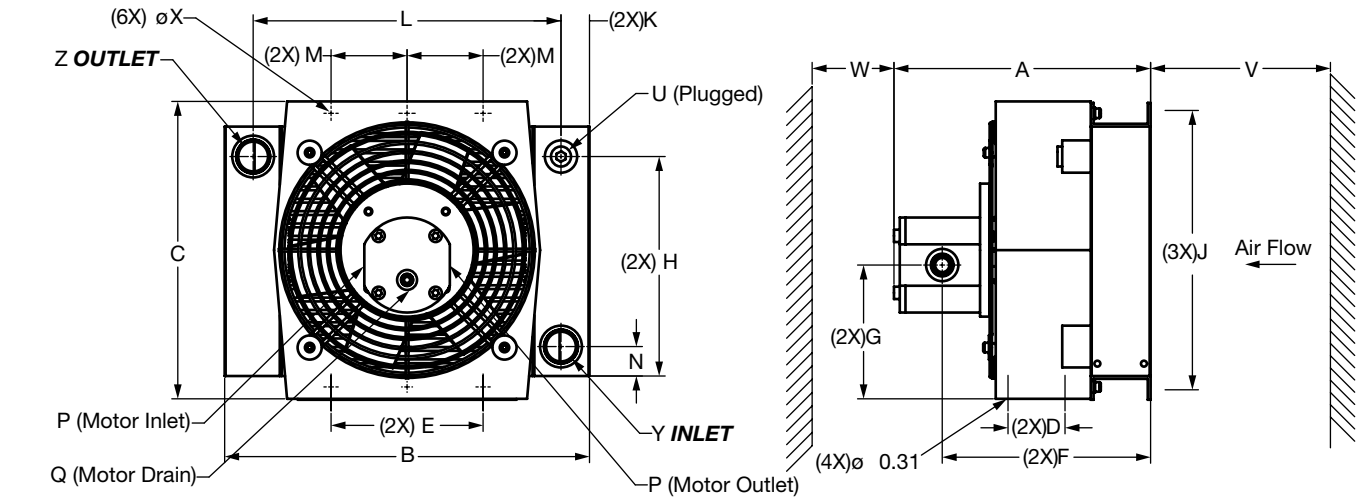


Dependent on the oil flow rate and the temperature difference  $\Delta T$  between oil inlet and air inlet.

Note: The values are measured at  $\Delta T = 72^\circ F$  ( $40^\circ C$ ). For smaller  $\Delta T$  values, the heat dissipation can change. Please reference page E1 or contact your local HYDAC distributor for further consultation.

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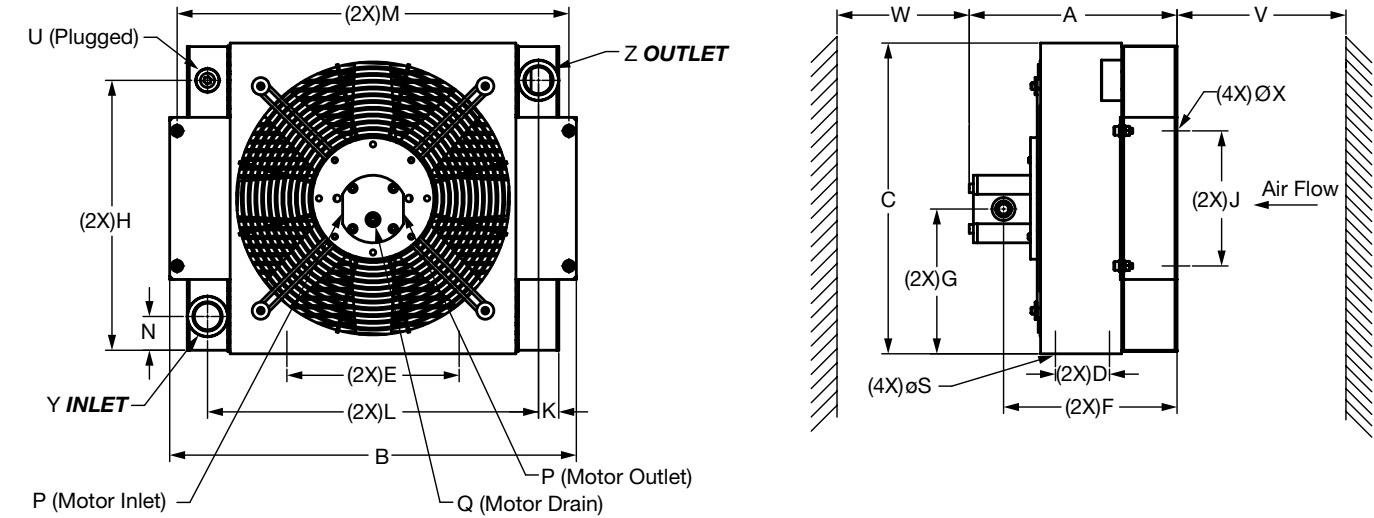
## Dimensions ELH Size 4



Size	A (6.3cc)	A (14cc)	A (22cc)	B	C	D	E	F (6.3cc)	F (14cc)	F (22cc)	G	H	J
4	11.56 [294]	12.06 [306]	12.62 [321]	19.69 [500]	17.72 [450]	3.15 [80]	10.52 [267]	9.56 [243]	9.81 [249]	10.09 [256]	8.24 [209]	13.35 [339]	16.57 [421]

Size	K	L	M	N	P	Q	U	V	W	X	Y	Z
4	0.98 [25]	17.72 [450]	5.91 [150]	1.97 [50]	SAE-10	SAE-4	1/2" NPT	7.87 [200]	13.78 [350]	Ø0.39x0.59 [Ø10x15]	SAE-16	SAE-16

## Dimensions ELH Size 5

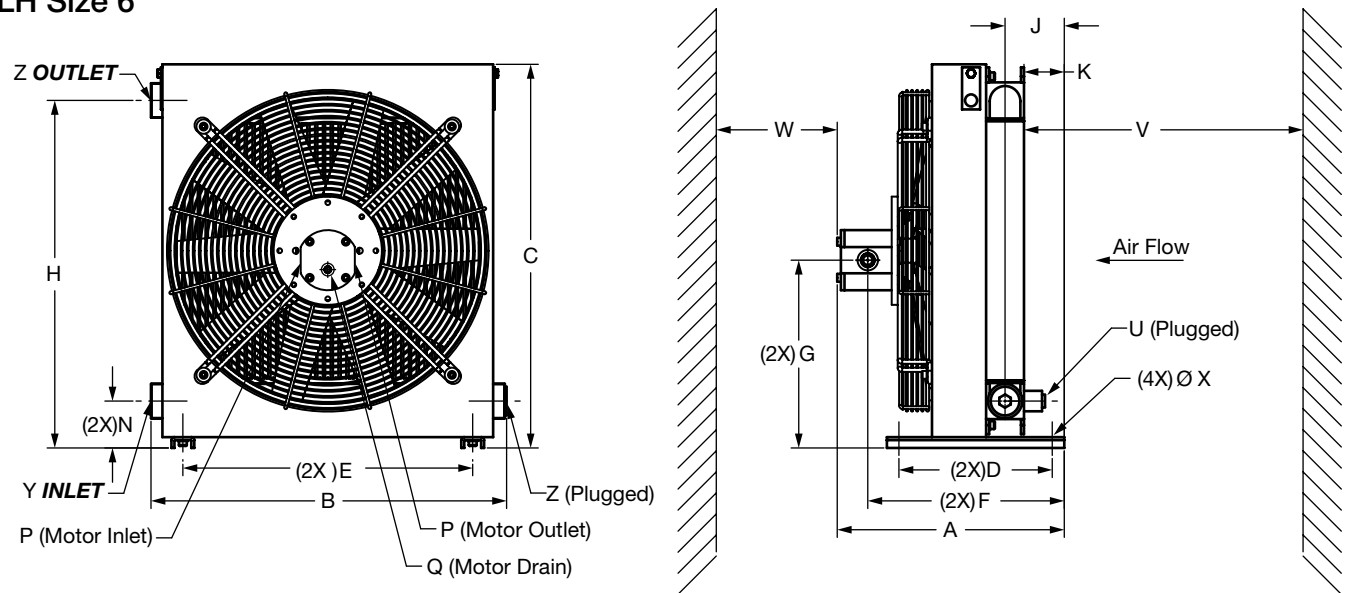


Size	A (6.3cc)	A (14cc)	A (22cc)	B	C	D	E	F (6.3cc)	F (14cc)	F (22cc)	G	H	J
5	12.11 [308]	12.61 [320]	13.17 [335]	23.70 [602]	18.11 [460]	3.15 [80]	10.04 [255]	10.11 [257]	10.36 [263]	10.64 [270]	8.44 [214]	15.73 [400]	7.87 [200]

Size	K	L	M	N	P	Q	U	V	W	X	Y	Z
5	1.19 [30]	19.29 [490]	22.83 [580]	1.97 [50]	SAE-10	SAE-4	1/2" NPT	9.84 [250]	15.75 [400]	Ø0.47 [Ø12]	SAE-20	SAE-20

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print. Dimensions are in inches [mm].

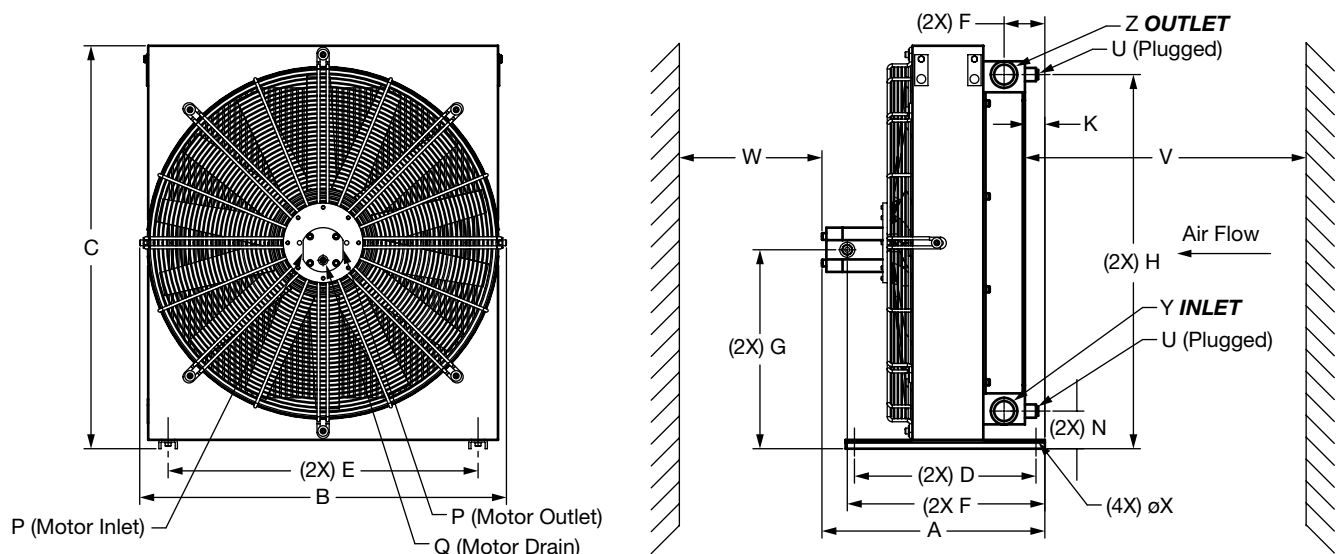
## Dimensions ELH Size 6



Size	A (6.3cc)	A (14cc)	A (22cc)	B	C	D	E	F (6.3cc)	F (14cc)	F (22cc)	G	H	J
6	14.87 [378]	15.37 [390]	15.93 [405]	23.17 [589]	25.12 [638]	10.04 [255]	18.98 [482]	12.87 [327]	13.12 [333]	13.40 [340]	12.30 [312]	22.76 [578]	3.88 [99]

Size	K	L	M	N	P	Q	U	V	W	X	Y	Z
6	2.64 [67]	N/A	N/A	3.08 [78]	SAE-10	SAE-4	1/2" NPT	22.62 [575]	39.37 [1000]	ø0.35 [ø9]	SAE-20	SAE-20

## Dimensions ELH Size 8



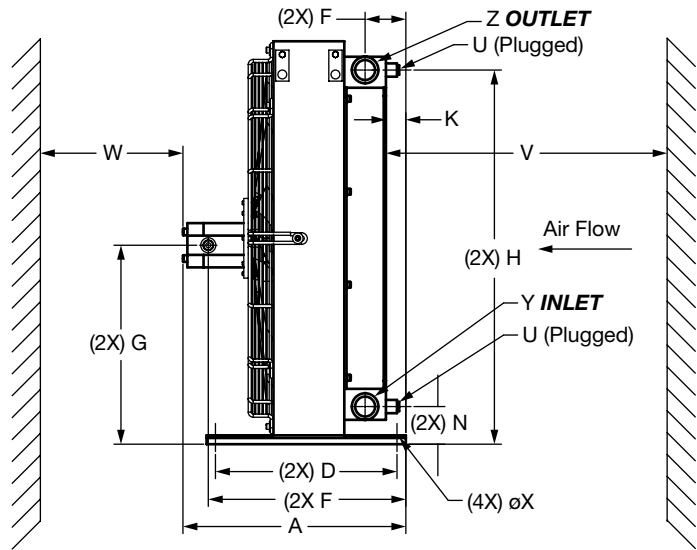
Size	A (6.3cc)	A (14cc)	A (22cc)	B	C	D	E	F (6.3cc)	F (14cc)	F (22cc)	G	H	J
8	15.07 [383]	15.57 [395]	16.13 [410]	27.24 [692]	30.08 [764]	10.04 [255]	18.98 [482]	13.06 [332]	13.31 [338]	13.59 [345]	14.78 [375]	27.76 [705]	3.70 [94]

Size	K	L	M	N	P	Q	U	V	W	X	Y	Z
8	2.09 [53]	N/A	N/A	3.03 [77]	SAE-10	SAE-4	1/2" NPT	27.56 [700]	43.31 [1100]	ø0.35 [ø9]	SAE-20	SAE-20

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print. Dimensions are in inches [mm].

## Dimensions

### ELH Size 9



Size	A (6.3cc)	A (14cc)	A (22cc)	B	C	D	E	F (6.3cc)	F (14cc)	F (22cc)	G	H	J
9	N/A	19.82 [503]	20.38 [518]	32.61 [828]	35.83 [910]	16.14 [410]	27.56 [700]	N/A	17.57 [446]	17.85 [453]	17.69 [449]	33.27 [845]	3.62 [92]

Size	K	L	M	N	P	Q	U	V	W	X	Y	Z
9	1.77 [45]	N/A	N/A	3.35 [85]	SAE-10	SAE-4	1/2" NPT	35.43 [900]	47.24 [1200]	ø0.39x0.78 [ø10x20]	SAE-24	SAE-24

## Notes

