

MOBILE COOLERS

ELH Series

Hydraulic Motor Drive



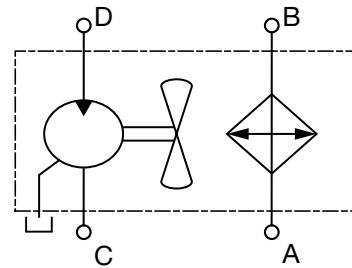
Description

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 2 - 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 180 HP cooling capacity
- Rated flows up to 90 gpm (consult factory for higher flows)
- Hydraulic motor drive offers more cooling in a smaller package
- Optional thermal speed control and pressure relief
(Contact Factory)

Hydraulic Symbol



Applications



Agricultural



Offshore



Construction



Railways



Industrial



Utility



Material Handling

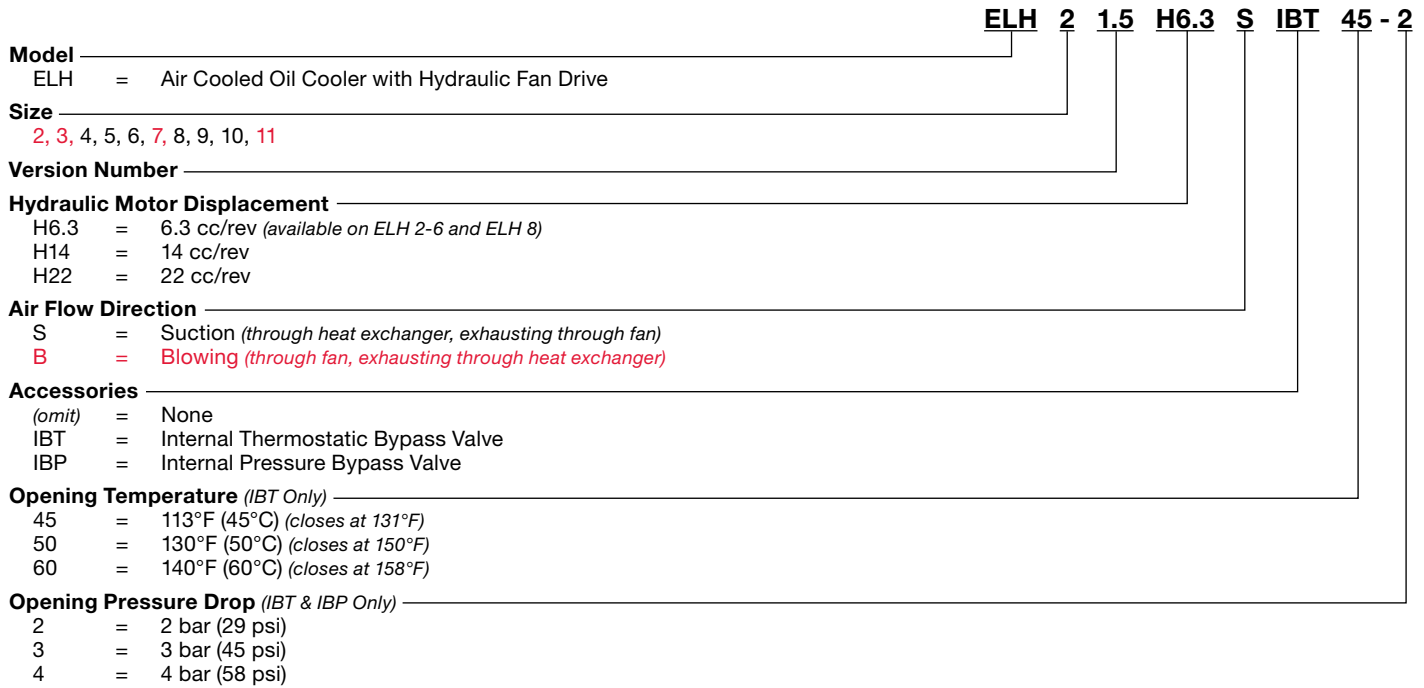


Forestry

General

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

Model Code



Model Codes Containing RED are Options – Contact HYDAC Cooling Division for information and availability

Technical Specifications

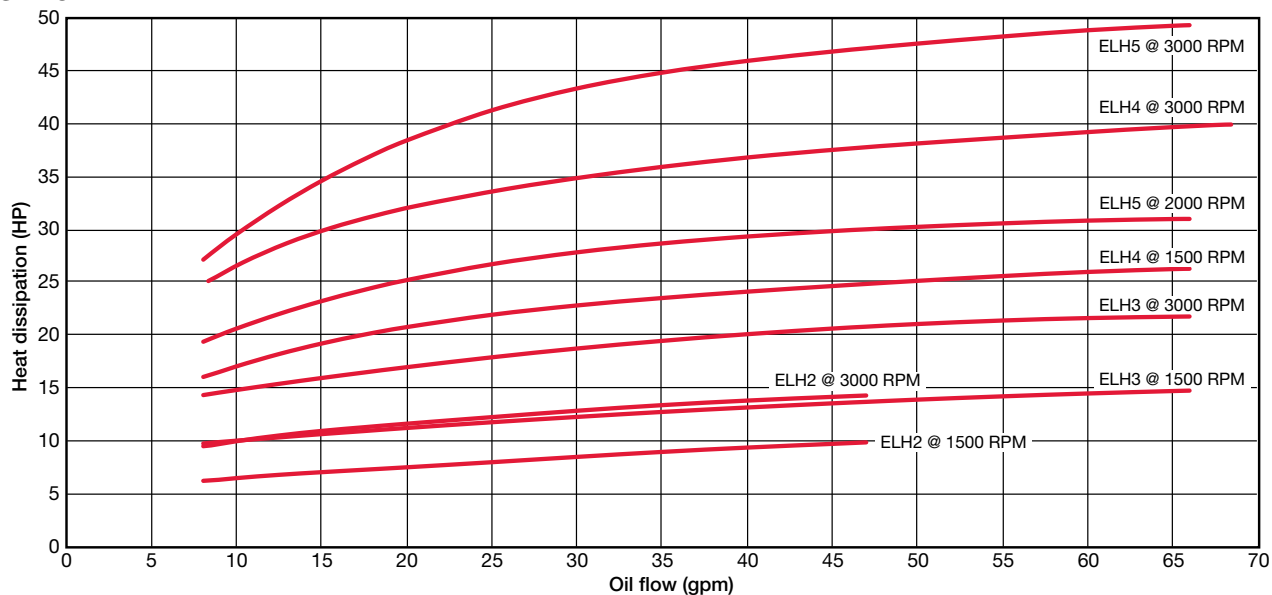
Size	Motor Displacement (cm3/rev)	Operating Speed Range (rpm)	Δp of Motor @ max RPM @ 34 cst (psi)	Motor Oil Flow @1500 RPM (gpm)	Continuous Motor Operating Pressure (psi)	Noise Level @1000 RPM (dBa @1 Meter)*	Weight (lbs.)
ELH 2	6.3 / 14 / 22	1000 / 3000	290	2.8 / 5.7 / 9.7	3625 / 3625 / 2175	69	25
ELH 3	6.3 / 14 / 22	1000 / 3000	290	2.8 / 5.7 / 9.7	3625 / 3625 / 2175	69	29
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 7	14 / 22	1000 / 2800	3190 / 2030	5.7 / 9.7	3625 / 2175	77	166
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
ELH 10	14 / 22	1000 / 1800	3335 / 1885	5.7 / 9.7	3625 / 2175	82	243
ELH 11	14 / 22	1000 / 1600	3625 / 2175	5.7 / 9.7	3625 / 2175	83	342

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

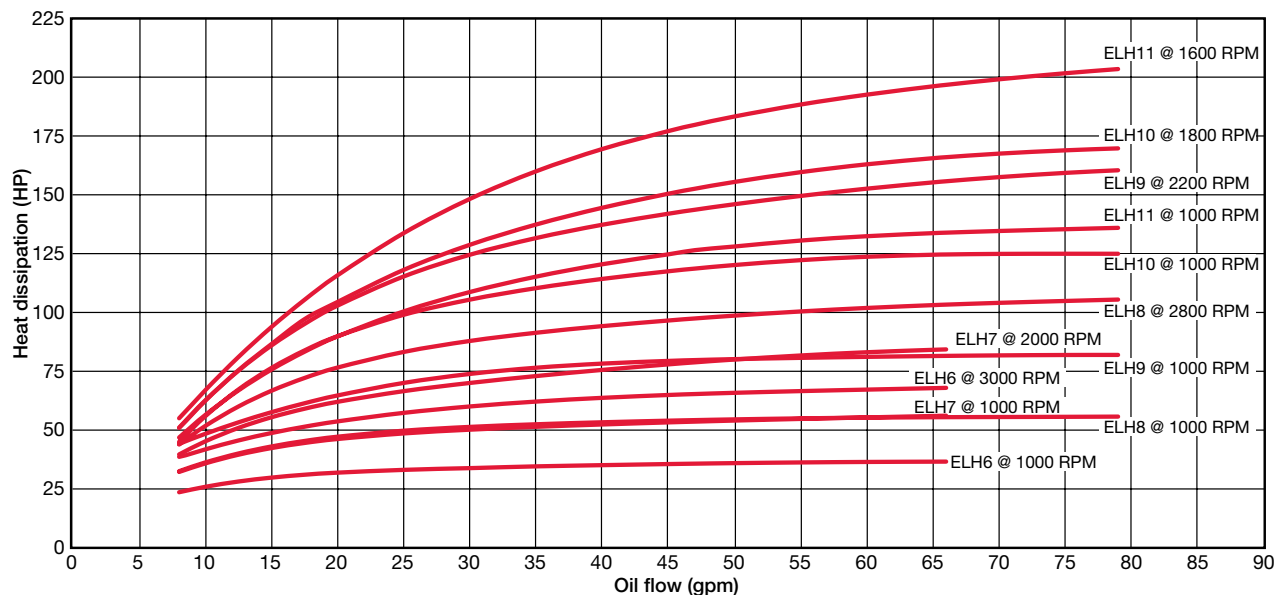
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Heat Dissipation @ $\Delta T = 72^\circ\text{F}$

Sizes 2-5

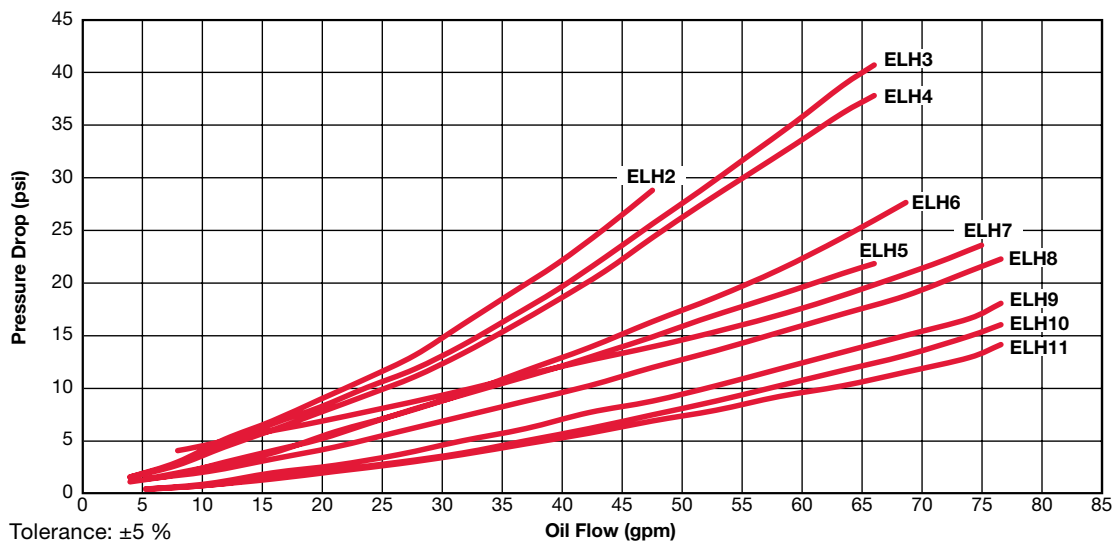


Sizes 6-11



Cooling capacity is dependent on the oil flow rate and the temperature difference ΔT between oil inlet and air inlet.

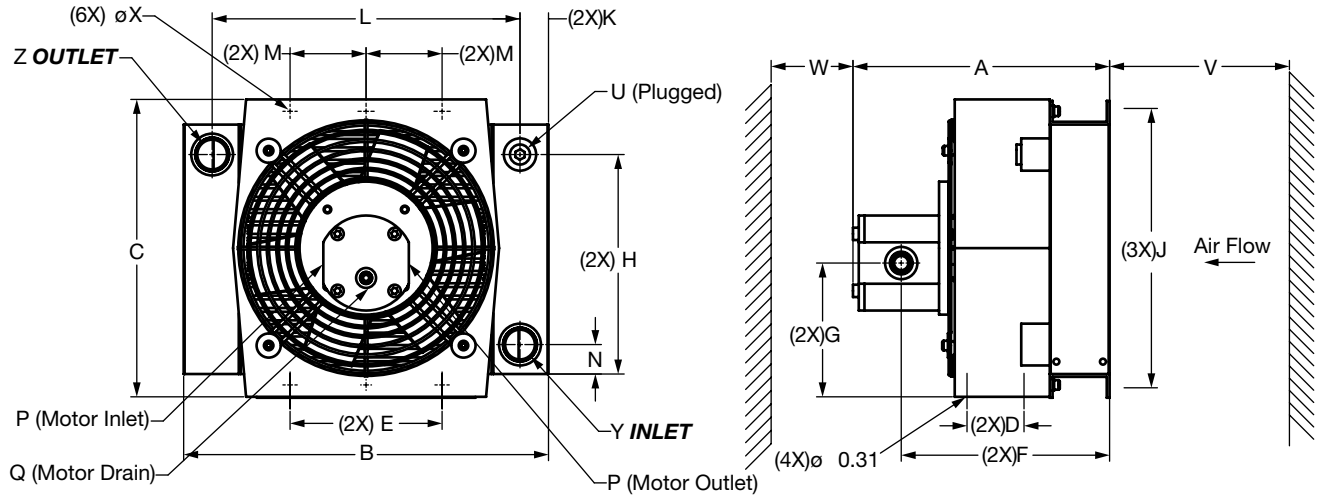
Pressure Drop @ 30cSt



Tolerance: $\pm 5\%$

Pressure differential Δp depending on flow rate Q and the viscosity of the oil.

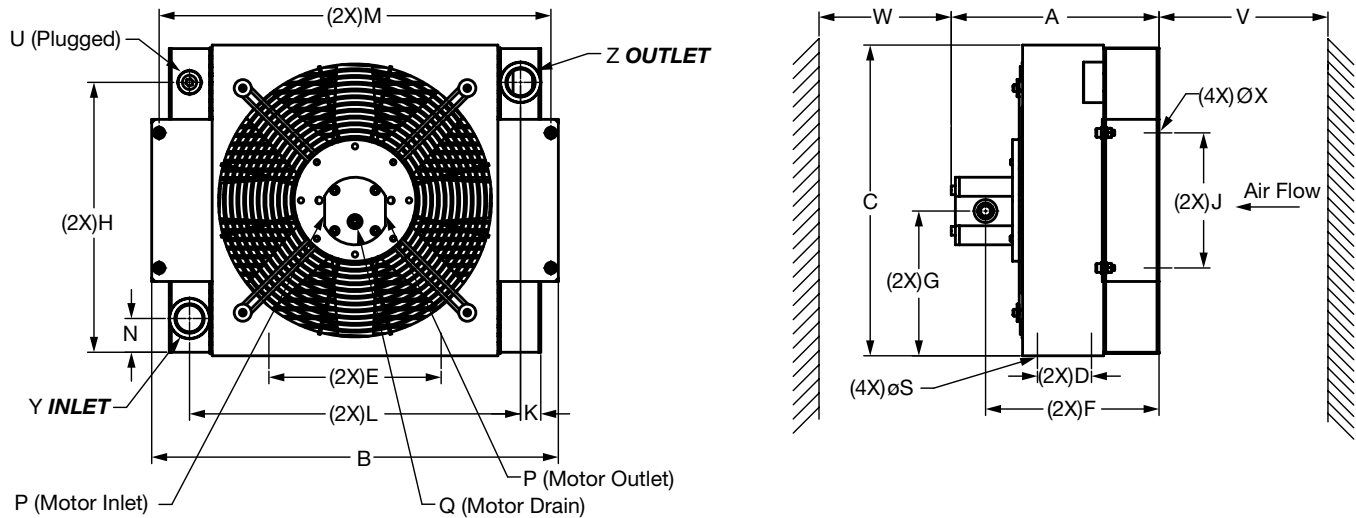
Dimensions ELH Size 2 - 4



Size	A (6.3cc)	A (14cc)	A (22cc)	B	C	D	E	F (6.3cc)	F (14cc)	F (22cc)	G	H	J
2	10.63 [270]	11.13 [283]	11.70 [297]	15.12 [384]	12.32 [313]	2.36 [60]	6.30 [160]	8.63 [219]	8.88 [226]	9.17 [233]	5.58 [142]	9.09 [231]	11.48 [292]
3	10.97 [279]	11.47 [291]	12.03 [306]	16.54 [420]	14.02 [356]	3.15 [80]	9.45 [240]	8.97 [228]	9.22 [234]	9.50 [241]	6.39 [162]	10.47 [266]	12.95 [329]
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
2	1.18 [30]	12.76 [324]	3.15 [80]	1.32 [34]	SAE-10	SAE-4	1/2" NPT	5.91 [150]	7.87 [200]	ø0.39x0.59 [ø10x15]	SAE-16	SAE-16
3	0.98 [25]	14.57 [370]	3.94 [100]	1.42 [36]	SAE-10	SAE-4	1/2" NPT	7.09 [180]	9.84 [250]	ø0.39x0.59 [ø10x15]	SAE-16	SAE-16
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



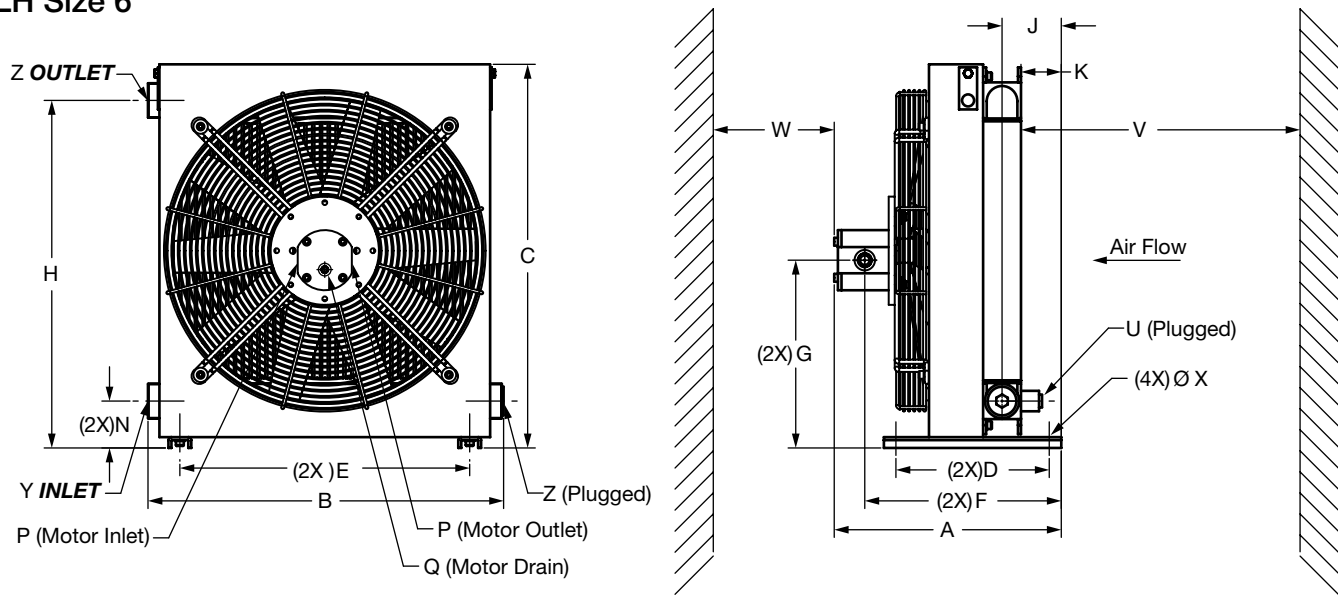
Size	A (6.3cc)	A (14cc)	A (22cc)	B	C	D	E	F (6.3cc)	F (14cc)	F (22cc)	G	H	J
5	12.11 [308]	12.61 [320]	13.17 [335]	23.70 [602]	18.11 [460]	3.15 [80]	10.04 [255]	10.11 [257]	10.36 [263]	10.64 [270]	8.44 [214]	15.73 [400]	7.87 [200]

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].

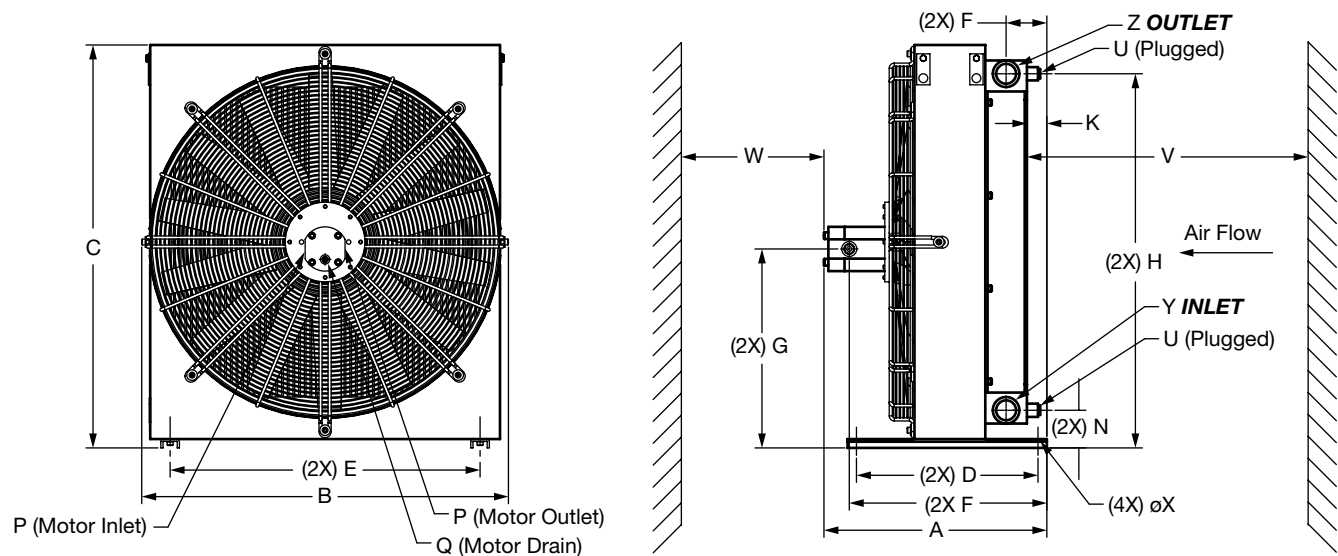
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Dimensions ELH Size 6



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	

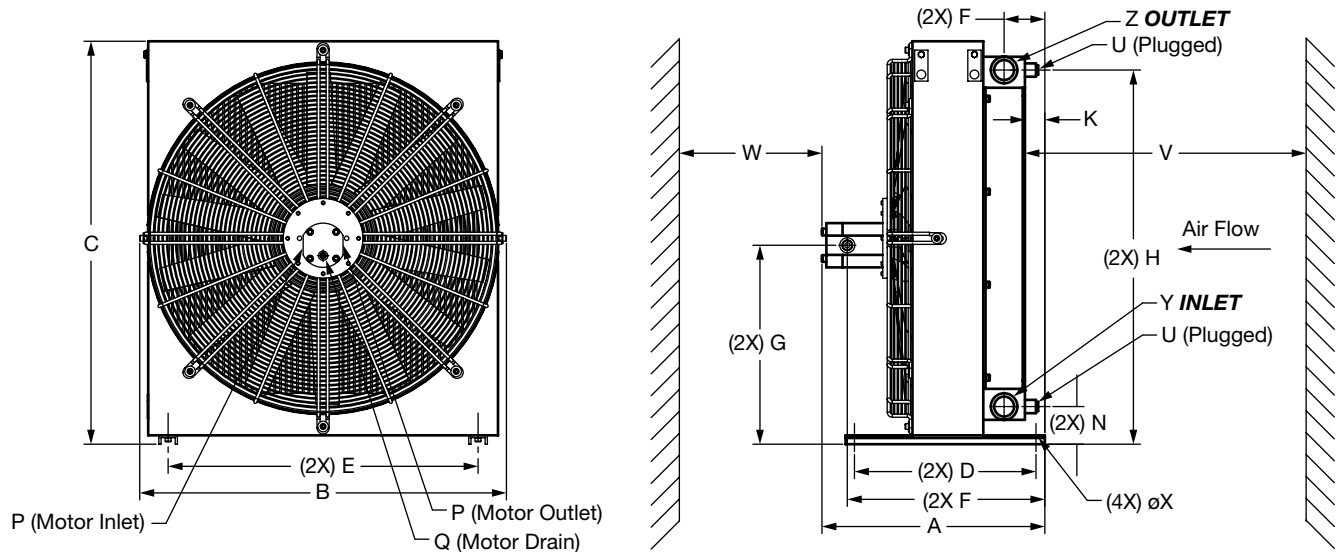
Dimensions ELH Size 7 - 8



Size	A (6.3cc)	A (14cc)	A (22cc)	B	C	D	E	F (6.3cc)	F (14cc)	F (22cc)	G	H	J
7	N/A	17.72 [450]	18.06 [459]	27.80 [706]	28.58 [726]	16.14 [410]	22.05 [560]	N/A	15.24 [387]	15.52 [394]	14.07 [357]	26.50 [673]	2.89 [73]
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	
7	1.65 [42]	N/A	N/A	2.87 [73]	SAE-10	SAE-4	1/2" NPT	25.00 [635]	42.00 [1067]	ø0.39x0.78 [ø10x20]	SAE-20	SAE-20	
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	

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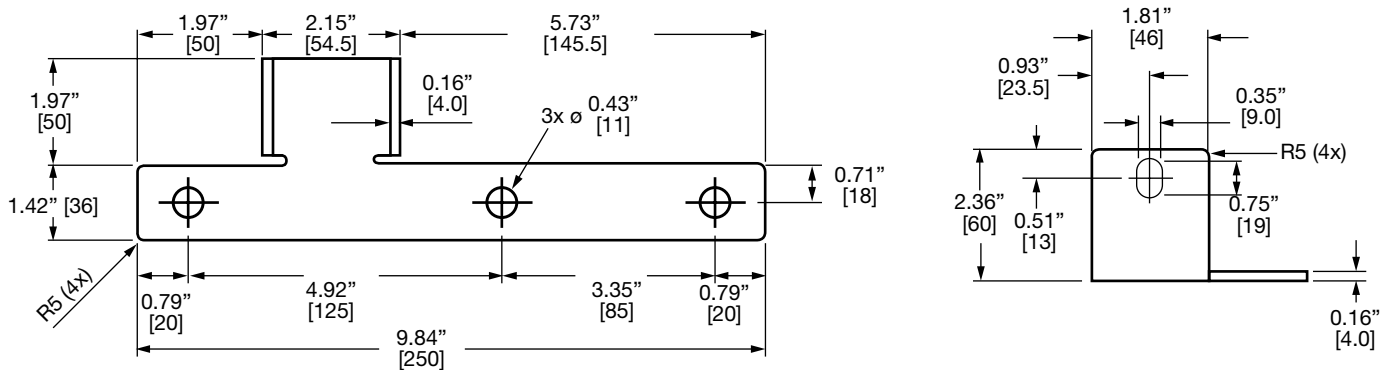
Dimensions ELH Size 9 - 11



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]
10	N/A	20.65 [525]	21.21 [539]	38.23 [971]	41.73 [1060]	18.11 [460]	27.56 [700]	N/A	18.39 [467]	18.67 [474]	20.84 [529]	39.37 [1000]	3.66 [93]
11	N/A	21.43 [544]	21.99 [559]	42.91 [1090]	46.46 [1180]	18.11 [460]	27.56 [700]	N/A	19.18 [487]	19.46 [494]	23.20 [589]	44.69 [1135]	3.66 [93]

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
10	1.81 [46]	N/A	N/A	3.54 [90]	SAE-10	SAE-4	1/2" NPT	35.43 [900]	55.12 [1400]	ø0.35 [ø9]	SAE-24	SAE-24
11	1.81 [46]	N/A	N/A	2.95 [75]	SAE-10	SAE-4	1/2" NPT	39.37 [1000]	62.99 [1600]	ø0.35 [ø9]	SAE-24	SAE-24

Dimensions ELH Mounting Foot Bracket Size 2 - 4



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