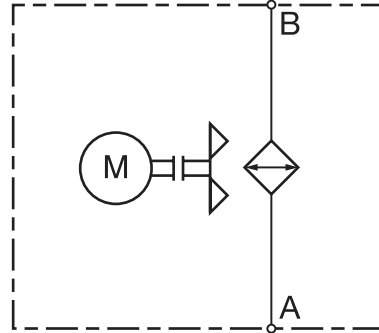


## ELD Series Air Cooled Oil Coolers for Mobile Applications

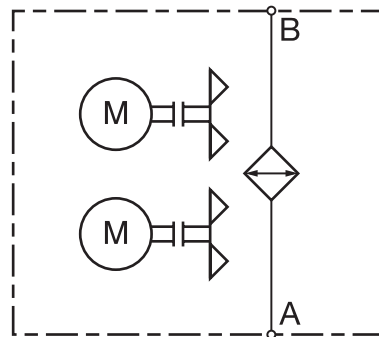


### Hydraulic Symbol

Sizes 1 - 4.5



Sizes 5 - 6



### Description

These coolers use a combination of high performance cooling elements combined long life DC electrical powered fans to give long trouble free operation in mobile hydraulic applications. The compact design allows the coolers to fit most equipment and provide the highest cooling performance in heat dissipation while minimizing space required.

### Features

- Most coolers are designed with the inlet/outlet ports facing toward the back to help reduce fittings
- Available with internal pressure bypass
- All units feature a built in thermostat port
- 12 and 24 volt DC fans
- Up to 50 HP cooling capacity
- Rated flows up to 45 gpm
- Motor lifetimes up to 8,000 hours



Agricultural



Automotive



Construction

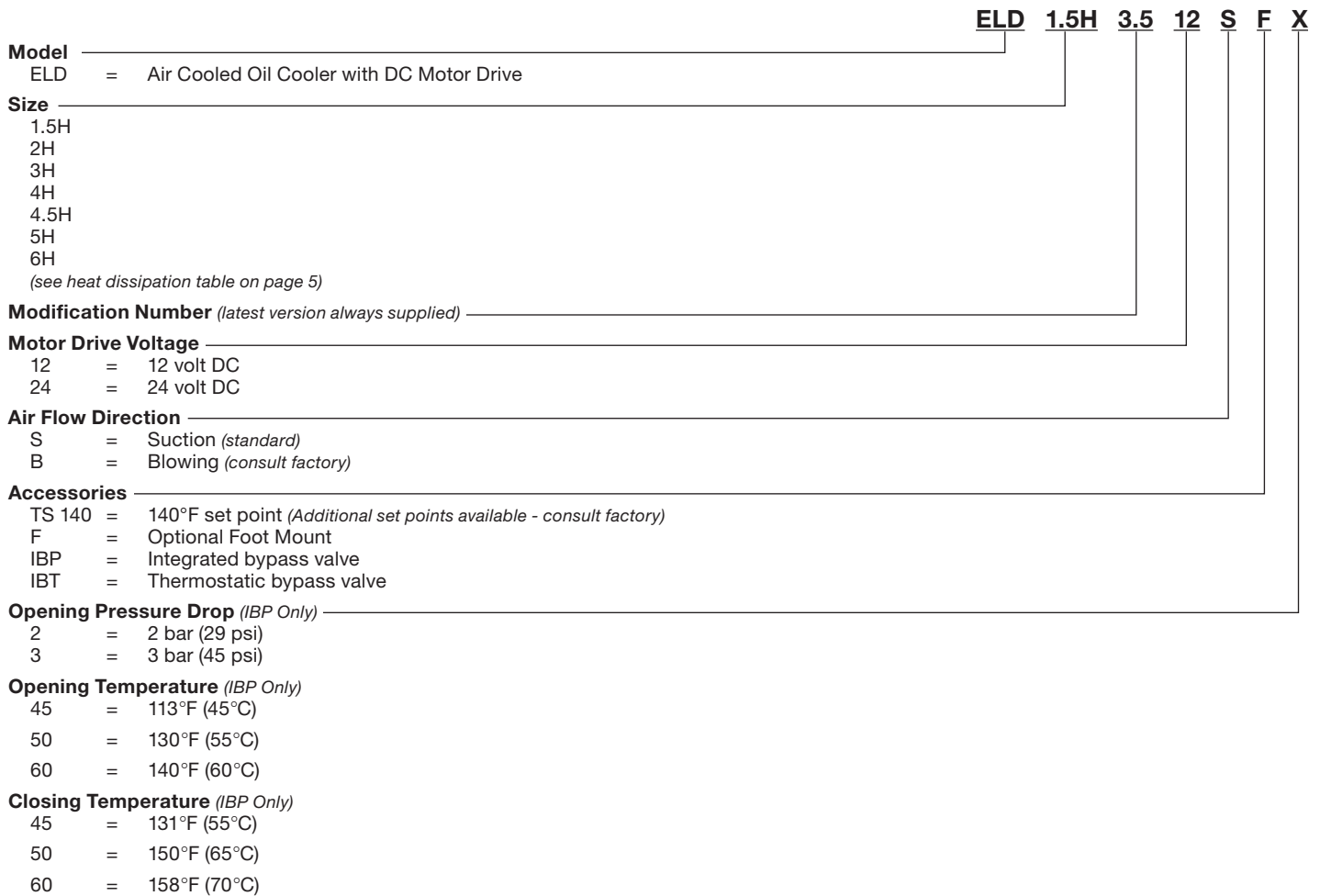


Commercial  
Municipal



Railways

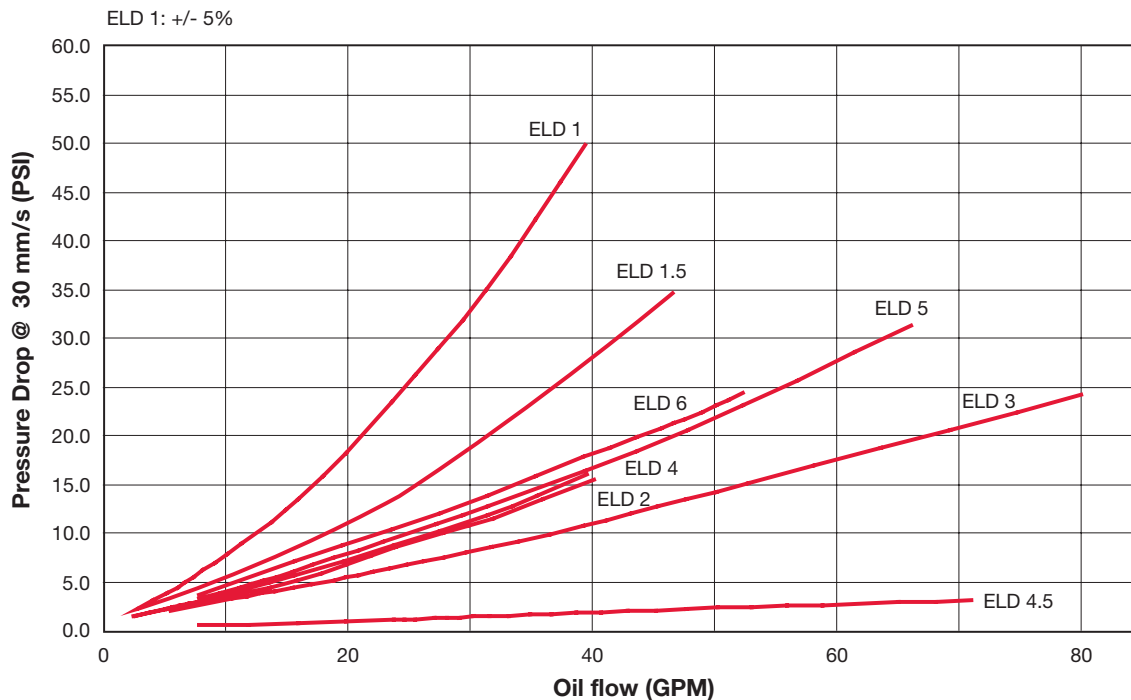
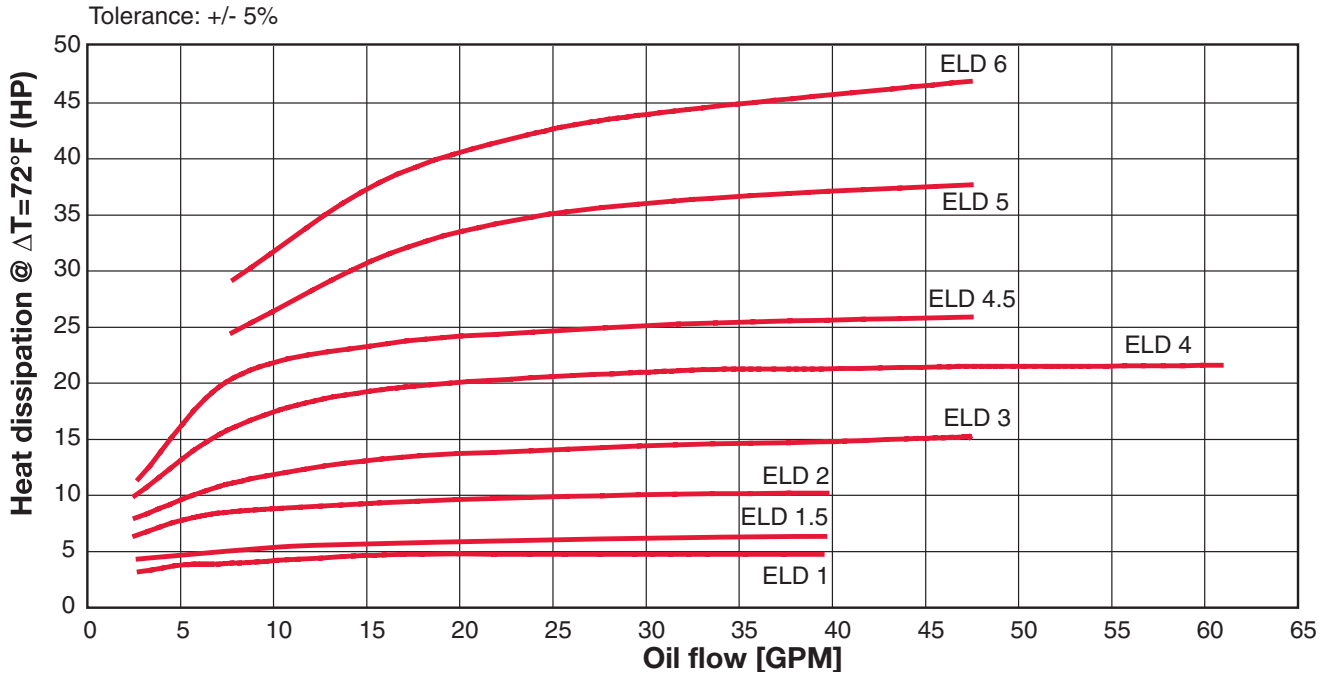
**Model Code**



## ELD Series

### Heat Dissipation

Cooling capacity depending on oil flow and the temperature differential  $\Delta T$  between the oil inlet. For calculations with low  $\Delta T$  valves (i.e. below 20°F), please contact our technical support.



\*Values measured at T = 72°F, may vary at lower dT values

**General**

<b>Construction</b>	<b>Housing</b>	Welded steel
	<b>Heat Exchanger</b>	Aluminum
	<b>Fan</b>	Plastic
<b>Mounting Orientation</b>	All positions	
<b>Maximum Pressure</b>	230 psi (16 bar)	
<b>Fluids</b>	Mineral oil to DIN 51524 Part 1 and 2	
<b>Ambient Temperature</b>	50° - 104° F (10° - 40°C)	
<b>Maximum Oil Temperature</b>	266° F (130°C)	
<b>Air Flow Direction</b>	Pulled across heat exchanger	

**Specifications**

Size	Motor Capacity (kW)	Amp Draw	Protection Class IP	Fan Diameter (mm)	Noise Level dBa* (1 meter)	Weight (lbs.)
<b>ELD 1</b> 12 volt / 24 volt	0.11 / 0.11	8 / 3.9	68	190	73	8.8
<b>ELD 1.5</b> 12 volt / 24 volt	0.11 / 0.11	8 / 3.9	68	190	73	8.8
<b>ELD 2</b> 12 volt / 24 volt	0.16 / 0.16	9.4 / 5.2	68	255	74	20.688
<b>ELD 3</b> 12 volt / 24 volt	0.26 / 0.26	17.6 / 9.6	68	305	79	24.2
<b>ELD 4</b> 12 volt / 24 volt	0.35 / 0.35	24.2 / 10	68	385	76	34.98
<b>ELD 4.5</b> 12 volt / 24 volt	0.35 / 0.35	24.2 / 10	68	385	76	48.4
<b>ELD 5</b> 12 volt / 24 volt	0.53 / 0.53	35.2 / 19.2	68	305	80	66.66
<b>ELD 6</b> 12 volt / 24 volt	0.69 / 0.69	48.4 / 20	68	385	77	80.52

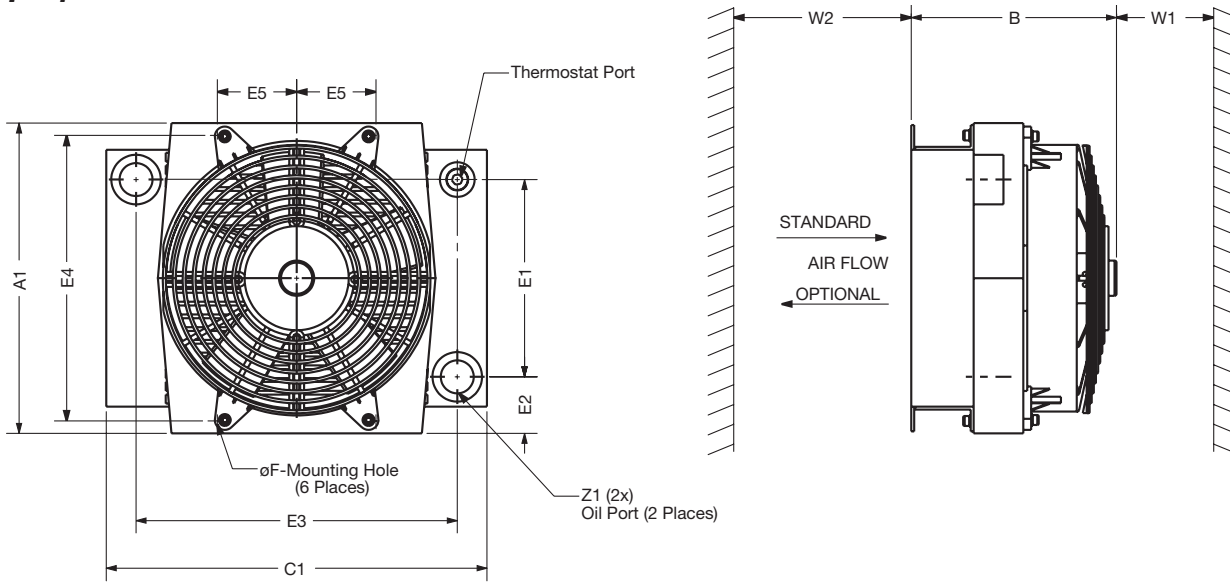
\*The noise levels are only a guide as acoustic properties vary and depend on the characteristics of the room, connections, viscosity, and resonance.

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

## ELD Series

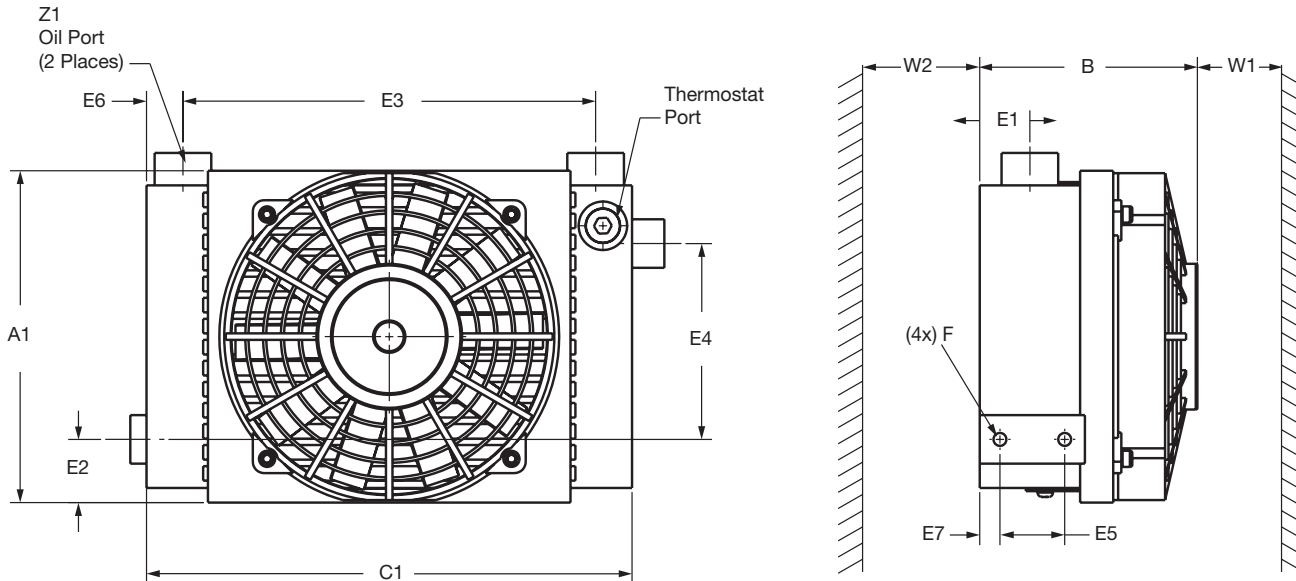
### Dimensions

#### Sizes 1 - 4



Size	A1	B	C1	E1	E2	E3	E4	E5	F	W1	W2	Z1	Thermostat Port
ELD 1	9.65	4.72	11.81	4.92	2.36	9.84	8.86	3.54	0.35	7.87	3.94	1 1/16"-12 UN	1/2" NPT
ELD 2	12.32	8.27	15.12	7.83	2.24	12.76	11.34	3.15	0.55 x 0.4	9.84	5.91	1 5/16"-12 UN	1/2" NPT
ELD 3	14.02	8.27	16.54	9.06	2.48	14.57	12.95	3.94	0.55 x 0.4	11.81	7.09	1 5/16"-12 UN	1/2" NPT
ELD 4	17.72	7.83	19.69	11.38	3.17	17.72	16.57	5.91	0.63 x 0.4	15.75	7.87	1 5/16"-12 UN	1/2" NPT

#### Size 1.5

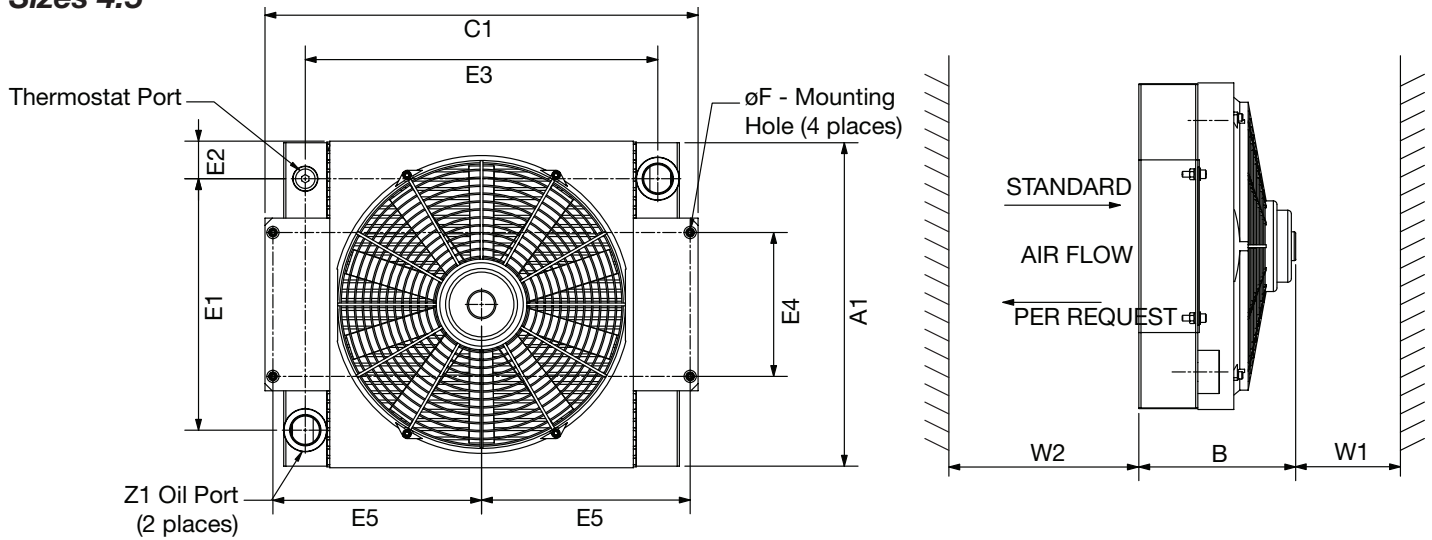


Size	A1	B	C1	E1	E2	E3	E4	E5	E6	E7	F	W1	W2	Z1	Thermostat Port
ELD 1.5	8.07	5.30	11.81	1.22	1.54	10.04	4.76	1.57	0.89	0.49	5/16"-18 UNC	0.31	0.16	1 1/16"-12 UN	1/2" NPT

# ELD Series

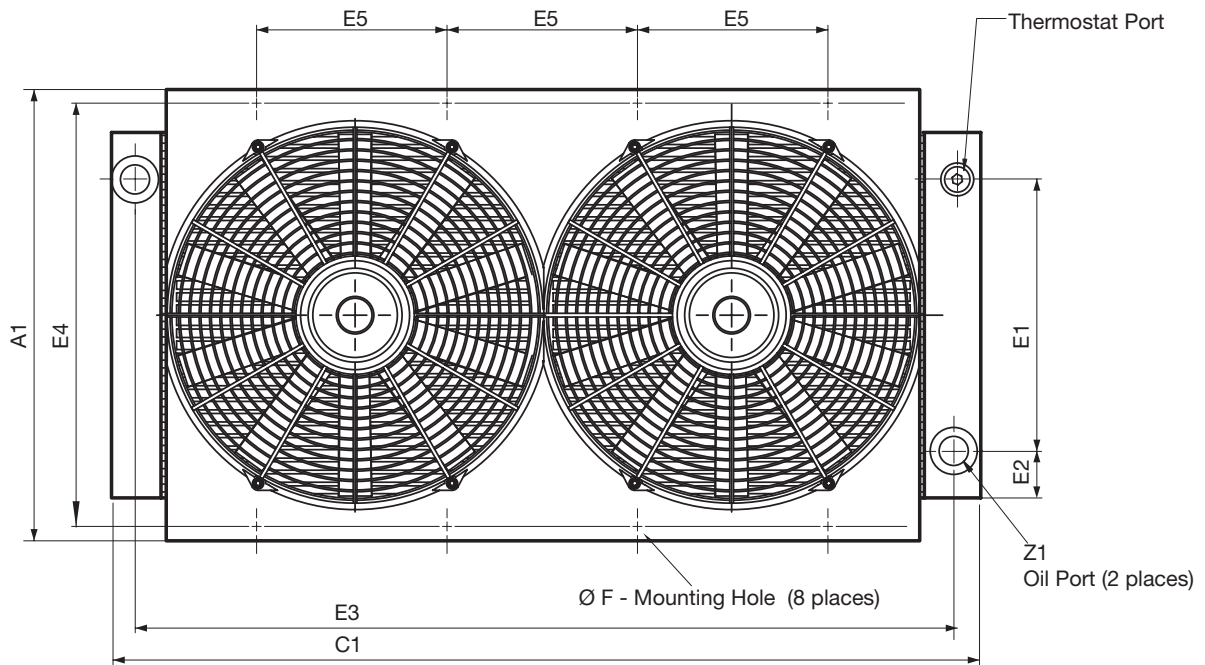
## Dimensions

### Sizes 4.5



Size	A1	B	C1	E1	E2	E3	E4	E5	F	W1	W2	Z1	Thermostat Port
ELD 4.5	17.87	8.58	23.70	13.78	2.05	19.29	7.87	11.42	0.472	15.75	7.87	1 5/8"-12 UN	1/2" NPT

### Sizes 5 - 6

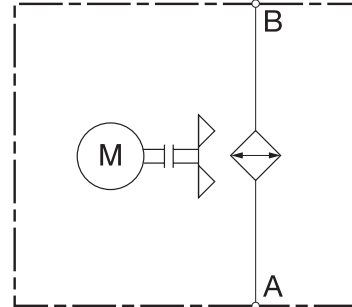


Size	A1	B	C1	E1	E2	E3	E4	E5	F	W1	W2	Z1	Thermostat Port
ELD 5	18.70	9.25	31.89	12.64	3.03	29.53	17.72	6.69	0.63 x 0.35	15.75	7.87	1 5/8"-12 UN	1/2" NPT
ELD 6	20.94	8.86	37.40	14.69	3.11	35.04	19.80	7.87	0.71 x 0.35	19.69	9.84	1 5/8"-12 UN	1/2" NPT

## ELH Series Air Cooled Oil Coolers for Mobile Applications



Hydraulic Symbol



### Description

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

### Features

- ELD 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
- Hydraulic motor drive offers more cooling in a smaller package
- Optional thermal speed control and pressure relief  
(Consult Factory)



Agricultural



Automotive



Construction



Railways

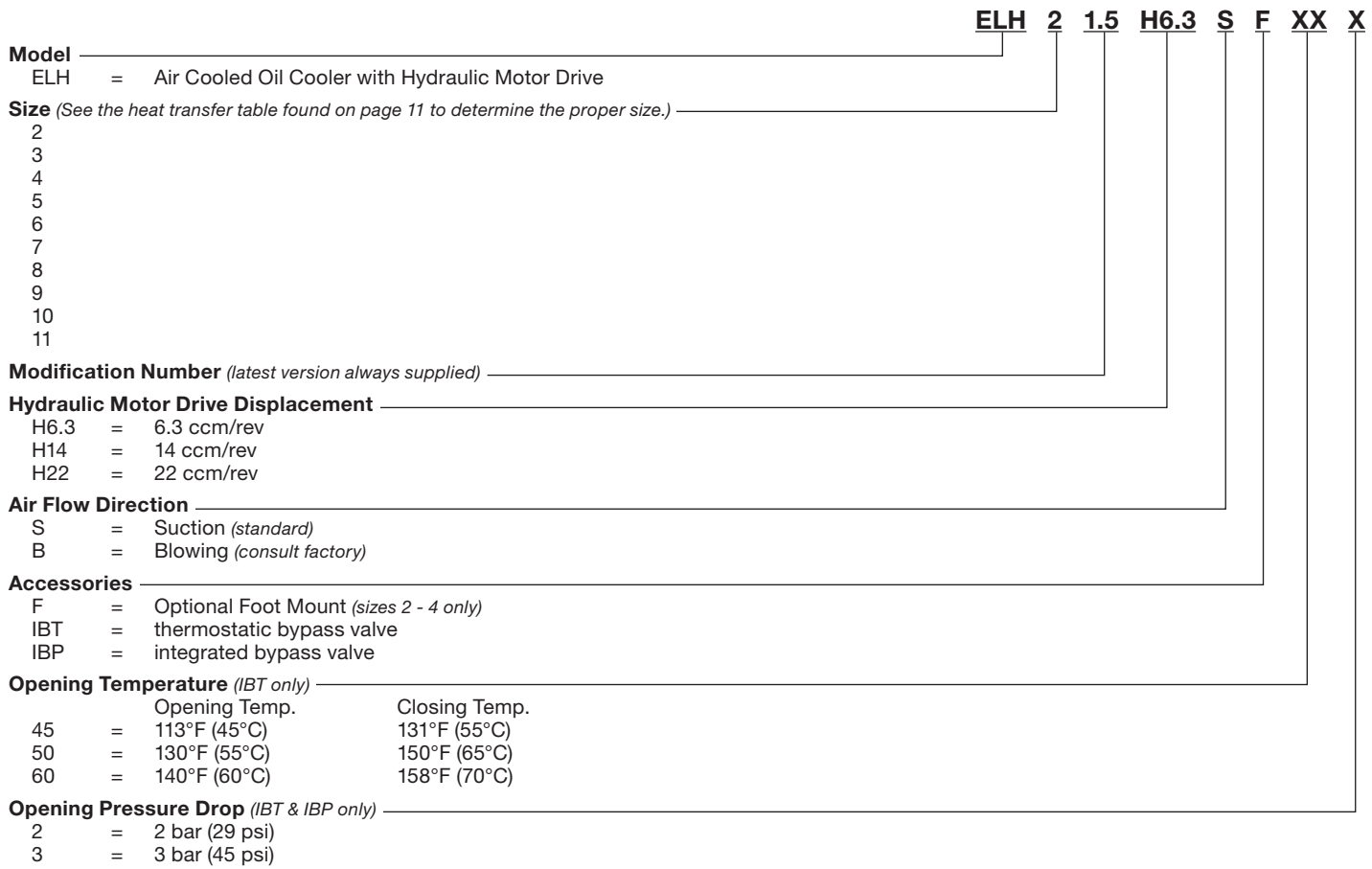


Industrial



Commercial  
Municipal

**Model Code**

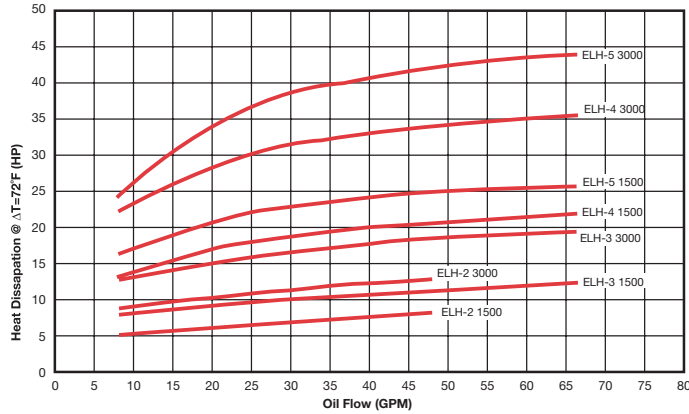




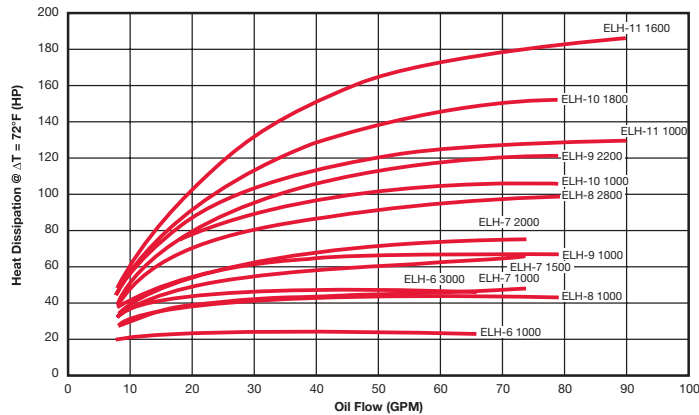
## ELH Series Heat Dissipation

Cooling capacity depending on oil flow and the temperature differential  $\Delta T$  between the oil inlet and air inlet. For calculations with low  $\Delta T$  valves (i.e. below 20°F), please contact our technical support.

### Sizes 2 - 5

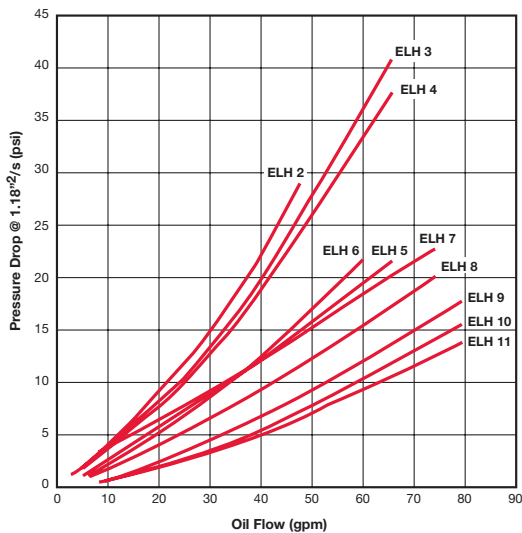


### Sizes 6 - 11



### Pressure Drops

Pressure differential  $\Delta p$  depending on flow rate  $Q$  and the viscosity of the oil.



**General**

<b>Construction</b>	<b>Housing</b>	Welded Steel
	<b>Heat Exchanger</b>	Aluminum
	<b>Fan</b>	Plastic
	<b>Motor</b>	Aluminum housing, Steel gears and shaft
<b>Maximum Oil Temperature</b>		266 F
<b>Maximum Operating Pressure</b>		230 psi
<b>Mounting Orientation</b>		All positions
<b>Fan Rotation</b>		See arrow on housing
<b>Filtration</b>		ISO/DIS 4406 Code 19/16- Filtration grade B25>75
<b>Maximum Outlet Side Pressure</b>		1740 psi
<b>Maximum Drain Pressure</b>		29 psi
<b>Fluid Viscosity Range (Motor)</b>		10 - 600 cst. (recommended 30 - 45 cst.)
<b>Fluid Temperature Range (Motor)</b>		Up to 194° F

**Specifications**

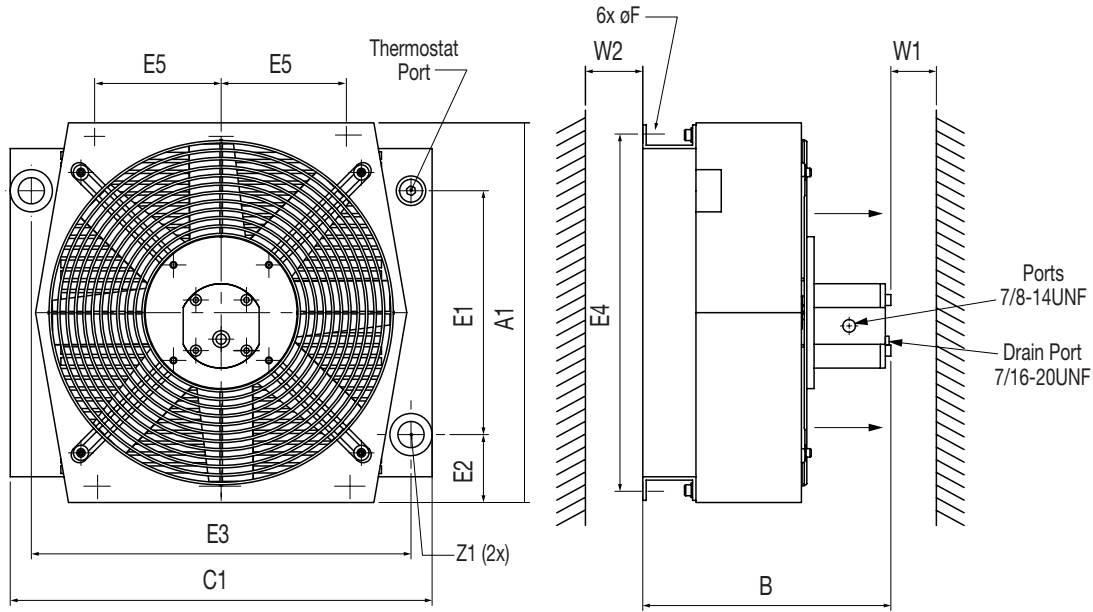
Model	Motor Displacement (cm <sup>3</sup> /rev)	Operating Speed Range (rpm)	Δp of motor @ max RPM @ 34 cts (psi)	Motor oil flow @ 1500 rpm (gpm)	Motor Max. Pressure (psi)	Continuous Motor Operating Pressure (psi)	Noise level @ 1000 RPM (dBa) (1 Meter)*	Weight (lbs.)
ELH 2	6.3 / 14 / 22	1000 / 3000	290	2.8 / 6 / 9.7	4350 / 4350 / 2900	3625 / 3625 / 2175	69	24.3
ELH 3	6.3 / 14 / 22	1000 / 3000	290	2.8 / 6 / 9.7	4350 / 4350 / 2900	3625 / 3625 / 2175	69	28.7
ELH 4	6.3 / 14 / 22	1000 / 3000	725 / 435 / 290	2.8 / 6 / 9.7	4350 / 4350 / 2900	3625 / 3625 / 2175	70	40.0
ELH 5	6.3 / 14 / 22	1000 / 3000	1015 / 435 / 290	2.8 / 6 / 9.7	4350 / 4350 / 2900	3625 / 3625 / 2175	70	53.0
ELH 6	6.3 / 14 / 22	1000 / 3000	2175 / 1015 / 725	2.8 / 6 / 9.7	4350 / 4350 / 2900	3625 / 3625 / 2175	70	94.6
ELH 7	14 / 22	1000 / 3000		6 / 9.7	4350 / 2900	3625 / 2175	77	TBA
ELH 8	6.3 / 14 / 22	1000 / 2800	2900 / 1160 / 870	2.8 / 6 / 9.7	4350 / 4350 / 2900	3625 / 3625 / 2175	76	147.7
ELH 9	14 / 22	1000 / 2200	1885 / 1305	6 / 9.7	4350 / 2900	3625 / 2175	78	187.4
ELH 10	14 / 22	1000 / 1800	3335 / 1885	6 / 9.7	4350 / 2900	3625 / 2175	82	242.5
ELH 11	14 / 22	1000 / 1600	3625 / 2175	6 / 9.7	4350 / 2900	3625 / 2175	83	341.7

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

## ELH Series

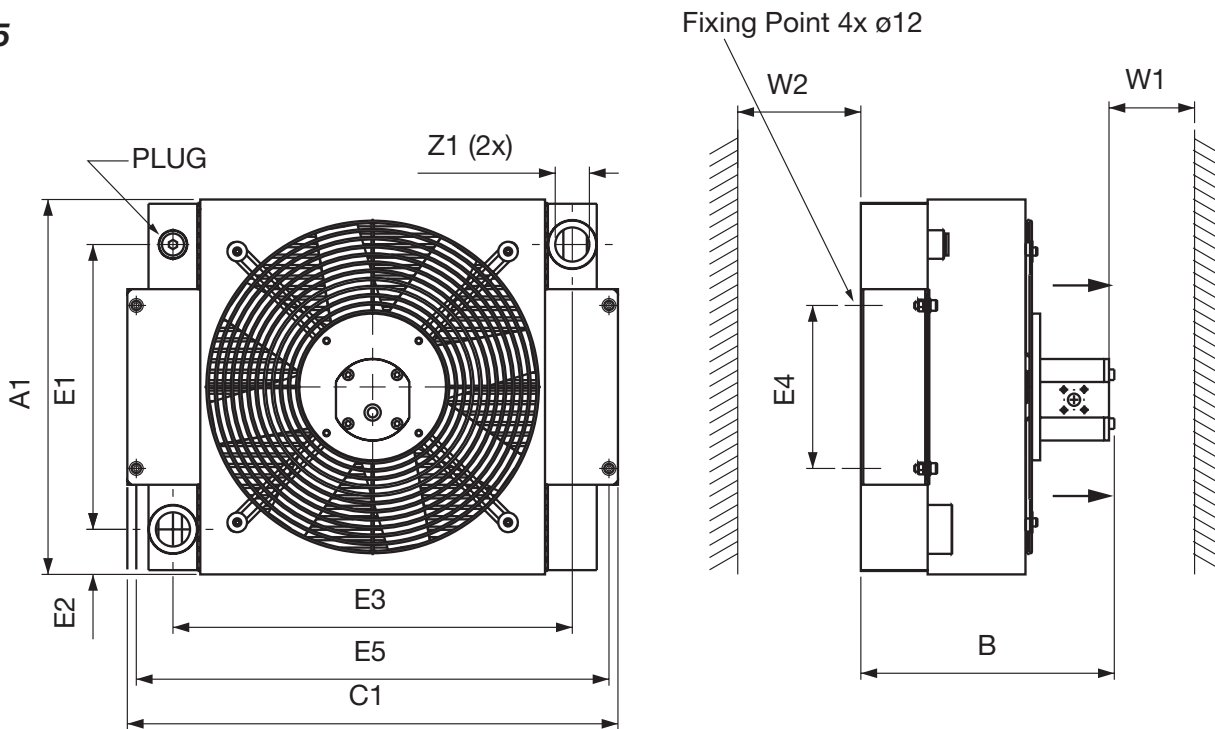
### Dimensions

#### Sizes 2 - 4



Size	A1	B 6.3 cc	B 14 cc	B 22 cc	C1	E1	E2	E3	E4	E5	F	W1	W2	Z1	Thermostat Port
ELH 2	12.32	10.63	11.14	11.70	15.12	7.83	2.20	12.76	11.34	3.15	0.55 x 0.4	7.87	5.91	1-5/16"-12 UN	1/2" NPT
ELH 3	14.02	10.99	11.49	12.05	16.54	9.06	2.48	14.57	12.95	3.94	0.55 x 0.4	9.84	7.09	1-5/16"-12 UN	1/2" NPT
ELH 4	17.72	11.56	12.06	12.62	19.69	11.38	3.17	17.72	16.57	5.91	0.49 x 0.39	13.78	7.87	1-5/16"-12 UN	1/2" NPT

#### Size 5

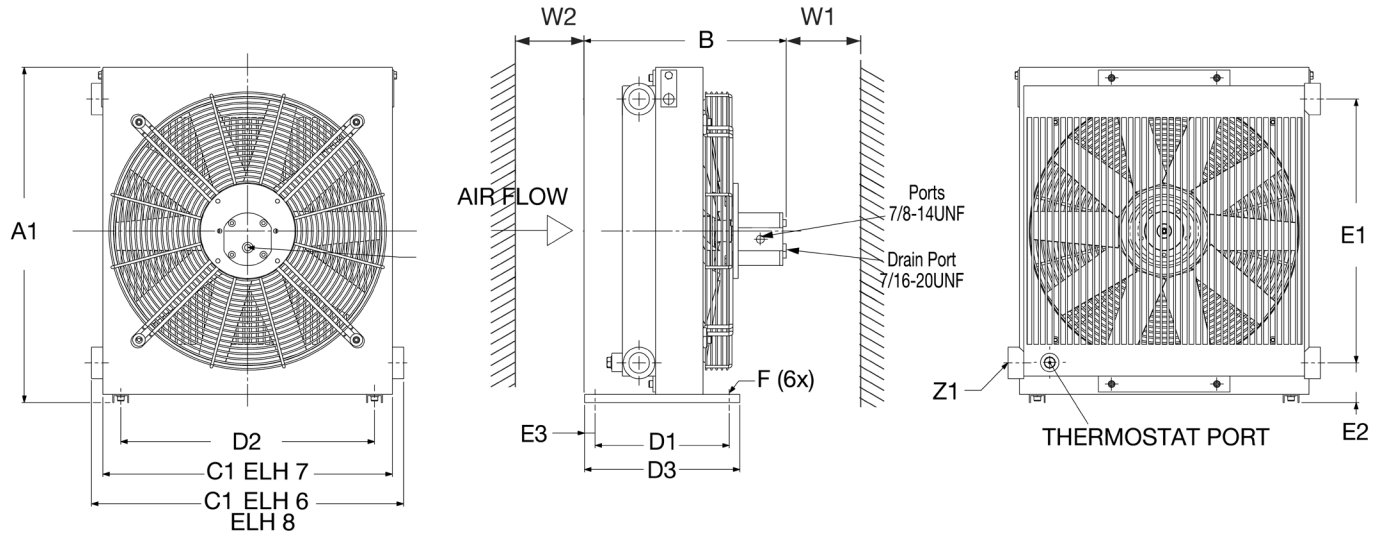


Size	A1	B 6.3 cc	B 14 cc	B 22 cc	C1	E1	E2	E3	E4	E5	F	W1	W2	Z1	Thermostat Port
ELH 5	18.11	12.25	12.73	13.29	23.70	13.78	2.17	19.29	7.87	22.83	0.47	15.75	9.84	1-5/8"-12 UN	1/2" NPT

# ELH Series

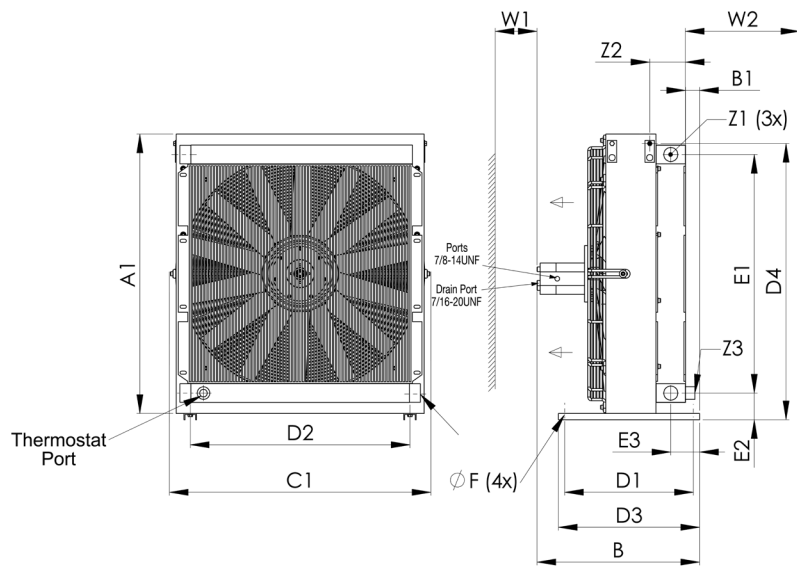
## Dimensions

### Sizes 6 - 8



Size	A1	B 6.3 cc	B 14 cc	B 22 cc	C1	D1	D2	D3	E1	E2	E3	F	W1	W2	Z1	Thermostat Port
ELH 6	25.12	14.87	15.37	15.93	23.54	10.04	18.98	11.61	19.69	3.07	0.79	0.35	39.37	23.62	1-5/8"-12 UN	1/2" NPT
ELH 7	28.58	-	17.50	18.06	27.80	16.14	22.05	17.72	23.62	2.87	0.79	0.35	42.00	25.00	1-5/8"-12 (F)	1/2" NPT
ELH 8	30.08	15.06	15.57	16.13	27.64	10.04	18.98	11.61	24.74	3.06	0.79	0.35	43.31	27.56	1-5/8"-12 UN	1/2" NPT

### Sizes 9 - 11



Size	A1	B 6.3 cc	B 14 cc	B 22 cc	C1	D1	D2	D3	E1	E2	E3	F	W1	W2	Z1	Thermostat Port
ELH 9	35.83	-	19.88	20.44	32.56	16.14	27.56	17.72	29.92	3.35	3.62	0.35	47.24	35.43	1-7/8"-12 UN	1/2" NPT
ELH 10	41.73	-	20.72	21.28	38.28	18.11	27.56	19.69	35.83	3.54	3.66	0.35	55.12	35.43	1-7/8"-12 UN	1/2" NPT
ELH 11	46.40	-	21.49	22.05	42.91	18.11	27.56	19.69	41.73	2.95	3.66	0.35	62.99	39.37	1-7/8"-12 UN	1/2" NPT