

INDUSTRIAL COOLERS

SC Series - AC Motor Drive

Air Cooled Oil Coolers



Features

The SC Series cooler design uses a radial blower wheel to pull air through the heat exchanger and then exit from the top. This allows for excellent cooling capacity as well as low noise.

- Up to 16 HP cooling capacity
- Highly efficient and rugged bar-and-plate style heat exchangers
- Externally mounted heat exchangers for easy maintenance and cleaning
- Modular pump and filter options for a plug and play fluid conditioning system
- Available with LPF series filters
- Accessories include: Thermostats (*adjustable and fixed*), Integrated Thermostatic bypass valves and pressure bypass valves.
- Packaged systems with pump flows ranging from 3.1 gpm to 12.75 gpm

Applications



Gearboxes



Industrial



Elevators



Power
Generation



Pulp & Paper



Railways



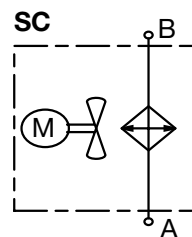
Shipbuilding



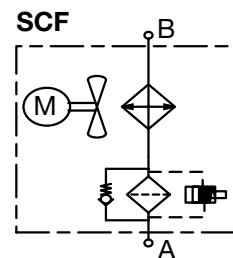
Steel / Heavy
Industry

Hydraulic Symbol

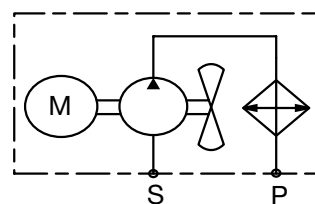
SC



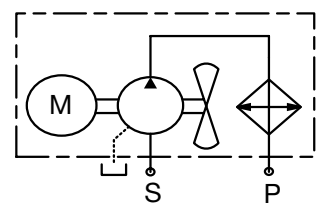
SCF



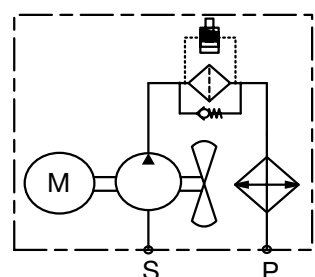
SCA 1



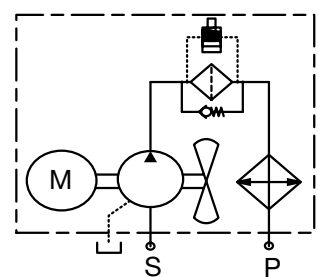
SCA 2-4



SCAF 1



SCAF 2-4



Technical Specifications

Model	Description	Max. Oil Flow Rate (gpm)	Fluid Specifications		Noise (dBa @ 1 m)	Motor Specifications		
			Pump Displacement - Flow Rate			Motor Spec Fan (hp)	Motor Spec Fan/ Pump (hp)	Motor Spec (rpm)
SC 1L, SCF 1L	Fan	32	N/A		64	0.29 (kW)	N/A	1200
SCA 1L, SCAF 1L	Fan/Pump	N/A	10 cc/rev - 3.1 gpm		68	N/A	0.29 (kW)	1200
SC 1S, SCF 1S	Fan	32	N/A		69	0.29 (kW)	N/A	1800
SCA 1S, SCAF1S	Fan/Pump	N/A	10 cc/rev - 4.75 gpm		71	N/A	0.43 (kW)	1800
SC 2L, SCF 2L	Fan	32	N/A		66	0.43 (kW)	N/A	1200
SCA 2L, SCAF 2L	Fan/Pump	N/A	28 cc/rev - 8.45 gpm	40 cc/rev - 12 gpm	68	N/A	2.0	1200
SC 2S, SCF2S	Fan	32	N/A		76	0.63 (kW)	N/A	1800
SCA 2S, SCAF2S	Fan/Pump	N/A	28 cc/rev - 12.75 gpm	40cc N/A	77	N/A	3.0	1800
SCA 3L, SCAF3L	Fan/Pump	N/A	28 cc/rev - 8.45 gpm	40 cc/rev - 12 gpm	73	N/A	2.0	1200
SCA 3S, SCAF3S	Fan/Pump	N/A	28 cc/rev - 12.75 gpm	40cc N/A	84	N/A	3.0	1800
SCA 4L, SCAF 4L	Fan/Pump	N/A	28 cc/rev - 8.45 gpm	40 cc/rev - 12 gpm	73	N/A	2.0	1200
SCA 4S, SCAF 4S	Fan/Pump	N/A	28 cc/rev - 12.75 gpm	40cc N/A	84	N/A	3.0	1800

Model Code

SCAF 3L 1.6 B 28 MF190 3 B IBP 2 TS120

Model _____

SC = Basic Cooler (sizes 1 & 2 only)
 SCF = Cooler with Filter
 SCA = Cooler with Pump
 SCAF = Cooler with Pump & Filter

Size _____

1L, 1S, 2L, 2S, 3L, 3S, 4L, 4S (Note: S = 1800 RPM, L = 1200 RPM)

Modification Number (latest version supplied) _____

Motor Voltage _____

B = 230/460 Volts, 3ph
 X = No Motor

Pump _____

(omit) = No Pump
 10 = 10 ccm/rev, L=3.1gpm, S=4.75gpm (sizes 1L 1S only)
 28 = 28 ccm/rev, L=8.4, S=12.75 (sizes 2L, 2S 3L, 3S, 4L 4S only)
 40 = 40 ccm/rev, L=12 gpm (sizes 2L, 3L, 4L only)

Filter Type _____

(omit) = No Filter
 LPF160 = Cartridge Filter, 43 rated gpm

Micron Rating _____

(omit) = No Filter
 10 = 10 micron, Absolute

Filter Indicator _____

(omit) = No Filter
 B = Visual
 D24 = 24 VDC Lamp/Switch (LPF + FLND filters only)

Accessories _____

(omit) = None
 IBT = Internal Thermostatic Bypass Valve
 IBP = Internal Pressure Bypass Valve

Opening Temperature (IBT Only) _____

45 = Opens 113°F (45°C) Closes at 131°F (55°C)
 50 = Opens 130°F (50°C) Closes at 150°F (65°C)

Opening Pressure (IBT & IBP) _____

2 = 2 bar (29psi)
 3 = 3 bar (45psi)
 4 = 4 bar (58 psi)

Temperature Switch _____

TS-120 = Inline Temperature Switch, Fixed 120°F
 TS-140 = Inline Temperature Switch, Fixed 140°F

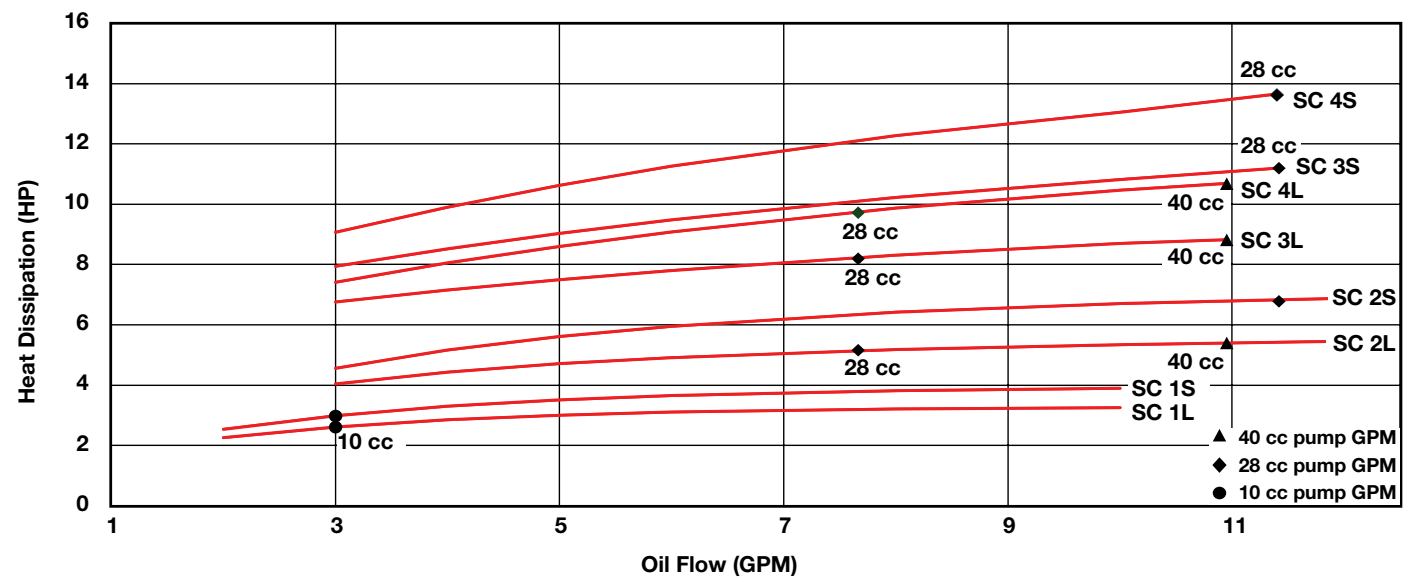
Model Codes Containing RED are Options – Contact HYDAC Cooling Division for information and availability

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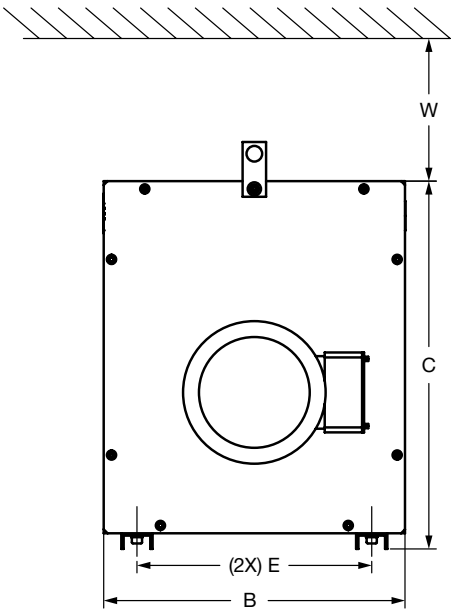
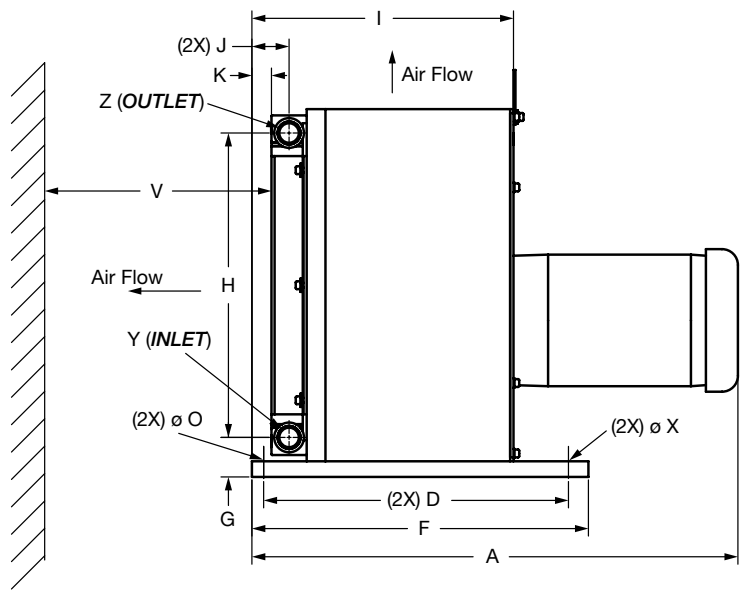
General

Materials	Housing: Welded steel housing, steel filter bracket, steel legs, steel blower wheel Heat Exchanger: Aluminum Heavy duty bar and plate Motors: TEFC, IEC Frame B5 Flange or NEMA frame style TEFC
Mounting Position	Horizontal, motor shaft
Maximum Pressure	w/o Pump: 230 psi (16 bar) Static with Pump: 90 psi (6 BAR)*
Fluids	Mineral oil to DIN 51524 Part 1 and 2 (Contact factory for other fluid usages)
Max Viscosity	w/o Pump: 2000 cst with Pump: 180 cst
Ambient Temperature	50°F (10°C) to 104°F (40°C)
Maximum Oil Temperature	w/o Pump: 266°F (130°C) with Pump: 175°F (80°C)
Air Flow Direction	Pulled across Heat Exchanger

Heat Dissipation @ ΔT = 40°F



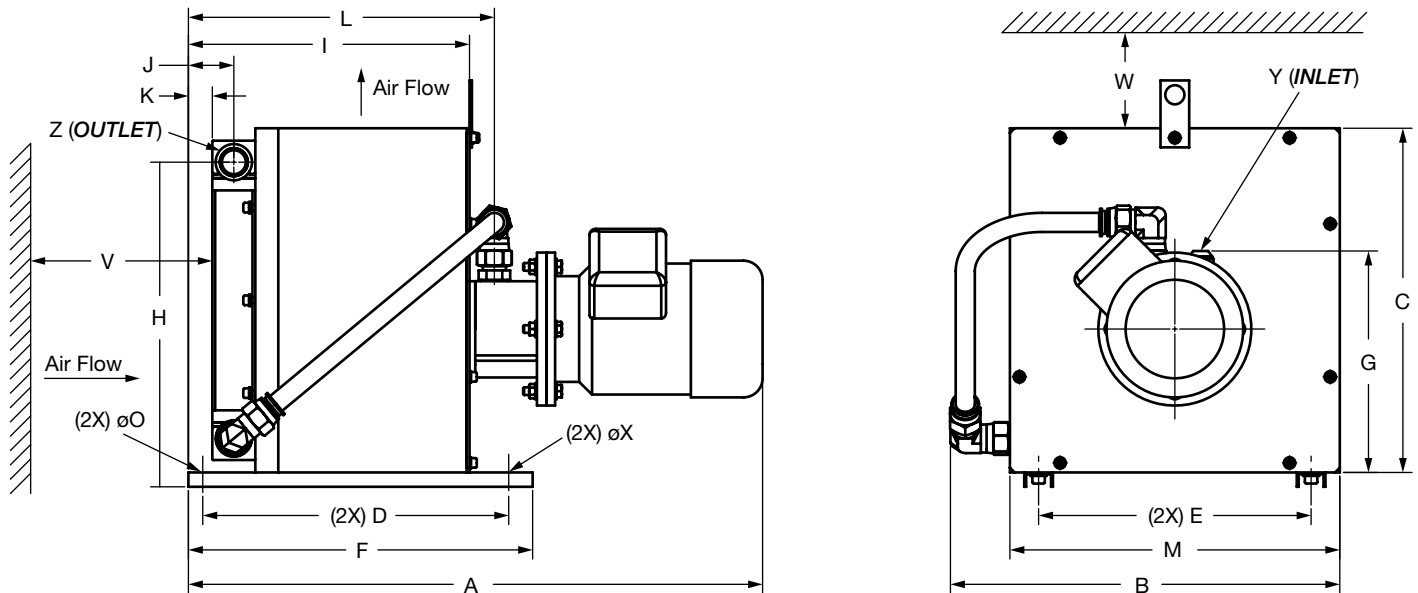
Dimensions SC Size 1 - 4 L, S



Size	A	B	C	D	E	F	G	H	I	J	K	O	V	W	X	Y	Z
SC1L,S	20.47	13.58	14.76	12.60	11.22	14.17	1.99	11.38	11.57	1.87	0.98	0.35	39.37	11.81	ø0.35x1.2 Slot	1-1/16"-12 (F)	SAE 12
SC2L,S	24.45	15.16	18.50	15.33	11.81	16.93	1.99	15.31	13.16	1.87	0.98	0.35	59.06	15.75	ø0.35x1.2 Slot	1-1/16"-12 (F)	SAE 12
SC3L,S	28.39	17.72	20.87	18.50	14.17	19.69	2.23	17.28	17.10	2.46	1.57	0.35	78.74	19.69	ø0.35x1.2 Slot	1-1/16"-12 (F)	SAE 12
SC4L,S	28.39	17.72	20.87	18.50	14.17	19.69	2.32	17.28	17.10	2.11	1.02	0.35	78.74	19.69	ø0.35x1.2 Slot	1-5/16"-12 (F)	SAE 16

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

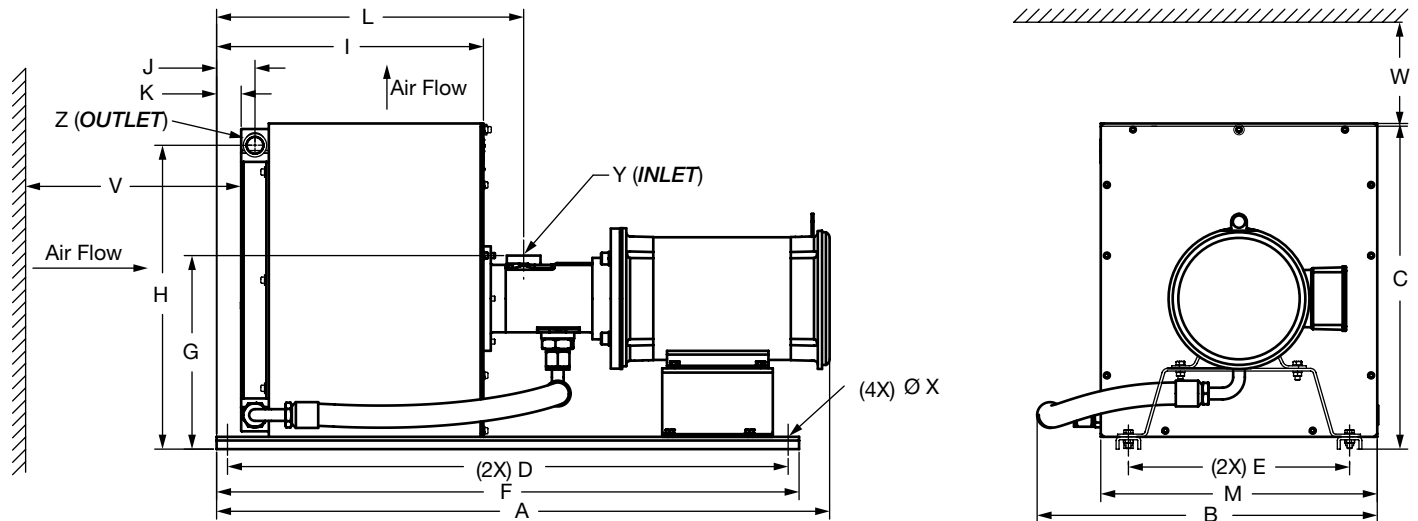
Dimensions SCA Size 1 L



A	B	C	D	E	F	G	H	I	J
23.64	16.03	14.76	12.6	11.22	14.17	9.71	13.37	11.57	1.87

K	L	M	O	V	W	X	Y	Z
0.98	12.6	13.58	ø0.35	11.81	39.37	ø0.35x1.18 slot	1 1/16"-12 JIC-12 (M)	SAE 12

Dimensions SCA Size 2 - 4 L-S

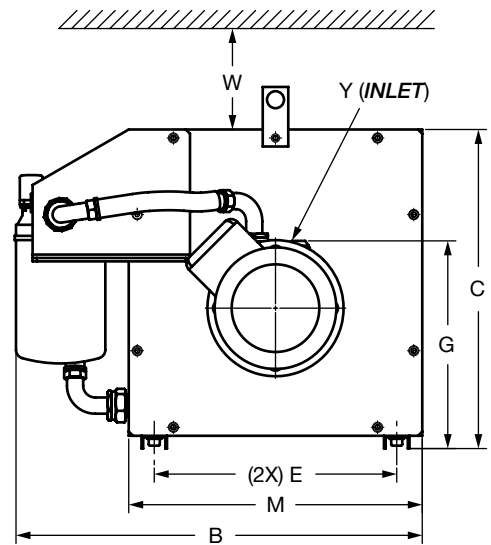
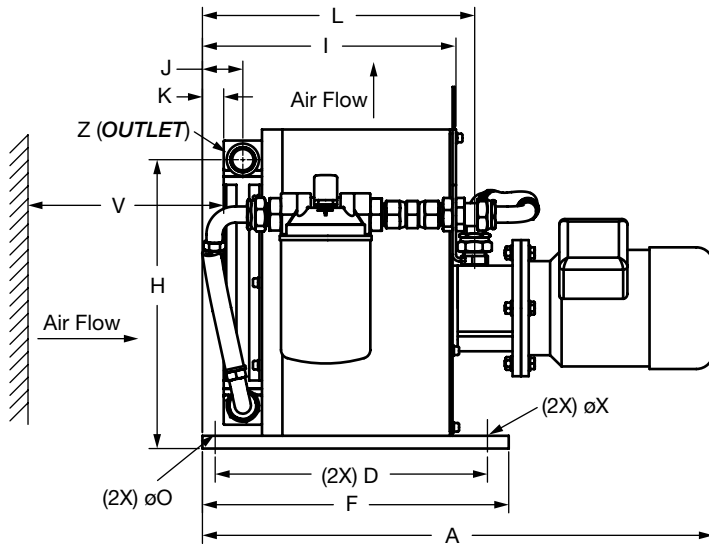


Size	A	B	C	D	E	F	G	H	I	J	K	L	M	V	W	X	Y	Z
SCA2L,SB28	36.76	19.04	18.50	32.31	11.81	33.92	9.84	17.30	14.31	2.99	2.10	16.36	15.16	15.75	59.06	ø0.35x1.18 Slot	SAE 16	SAE 12
SCA2LB40	38.27	19.04	18.50	32.31	11.81	33.92	10.63	17.30	14.31	2.99	2.10	16.89	15.16	15.75	59.06	ø0.35x1.18 Slot	SAE 24	SAE 12
SCA3L,SB28	40.12	21.73	20.87	35.94	14.17	37.92	11.61	19.45	17.69	3.05	2.17	19.74	17.72	19.69	78.74	ø0.35x1.56 Slot	SAE 16	SAE 12
SCA3LB40	41.63	21.73	20.87	35.94	14.17	37.92	12.40	19.45	17.69	3.05	2.17	20.27	17.72	19.69	78.74	ø0.35x1.56 Slot	SAE 24	SAE 12
SCA4L,SB28	40.12	21.73	20.87	35.94	14.17	37.92	11.61	19.61	17.69	2.70	1.46	19.74	17.72	19.69	78.74	ø0.35x1.56 Slot	SAE 16	SAE 16
SCA4LB40	41.63	21.73	20.87	35.94	14.17	37.92	12.40	19.61	17.69	2.70	1.46	20.27	17.72	19.69	78.74	ø0.35x1.56 Slot	SAE 24	SAE 16

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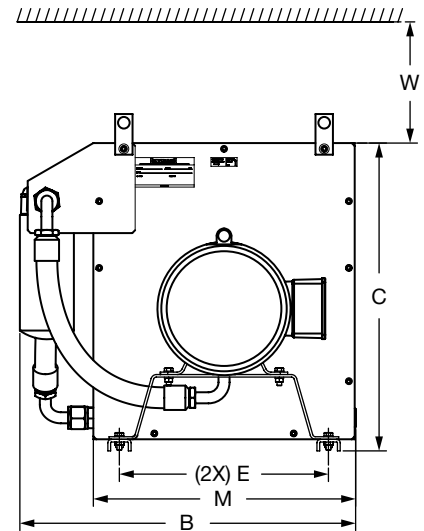
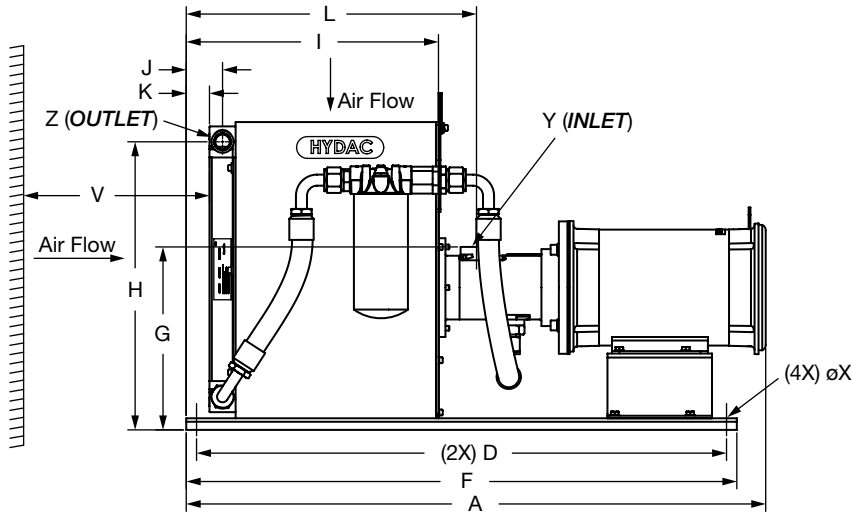
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Dimensions SCAF Size 1 L



A	B	C	D	E	F	G	H	I	J	K	L	M	O	V	W	X	Y	Z
23.64	18.80	14.76	12.60	11.22	14.17	9.71	13.37	11.57	1.87	0.98	12.60	13.58	ø0.35	11.81	39.37	ø0.35x1.18 slot	1 1/16"-12 JIC-12 (M)	SAE 12

Dimensions SCAF Size 2 - 4 S



Size	A	B	C	D	E	F	G	H	I	J	K	L	M	V	W	X	Y	Z
SCAF2L, SB28	36.76	20.14	18.50	32.31	11.81	33.92	9.84	17.30	14.31	2.99	2.10	16.36	15.16	15.75	59.06	ø0.35x1.18 Slot	SAE 16	SAE 12
SCAF2LB40	38.27	20.14	18.50	32.31	11.81	33.92	10.63	17.30	14.31	2.99	2.10	16.89	15.16	15.75	59.06	ø0.35x1.18 Slot	SAE 24	SAE 12
SCAF3L, SB28	40.12	23.37	20.87	35.94	14.17	37.92	11.61	19.45	17.69	3.05	2.17	19.74	17.72	19.69	78.70	ø0.35x1.56 Slot	SAE 16	SAE 12
SCAF3LB40	41.63	23.37	20.87	35.94	14.17	37.92	12.40	19.45	17.69	3.05	2.17	20.27	17.72	19.69	78.70	ø0.35x1.56 Slot	SAE 24	SAE 12
SCAF4L, SB28	40.12	23.37	20.87	35.94	14.17	37.92	11.61	19.61	17.69	2.70	1.46	19.74	17.72	19.69	78.70	ø0.35x1.56 Slot	SAE 16	SAE 16
SCAF4LB40	41.63	23.37	20.87	35.94	14.17	37.92	12.40	19.61	17.69	2.70	1.46	20.27	17.72	19.69	78.70	ø0.35x1.56 Slot	SAE 24	SAE 16

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