



Arctic Fox LLC—570 South 7th Street—Delano, Minnesota 55328 USA
 Phone: (800) 654-5382 or (763) 972-2758 — Fax: (763) 972-2873 — www.arctic-fox.com

Arctic Fox BV — Strijmaden 7 — 4703 RG — Roosendaal — The Netherlands
 Phone: +31 65 55 92 45 — Fax: +31 65 54 96 40 — www.arctic-fox.eu

Hydraulic Fluid Warmers Hydra Liner Series

APPLICATIONS: Hydraulic Fluid—Water—Other Fluids

- Warm oil flows free.
- Reduce pump cavitation and resulting damage.
- Increase productivity—no more idle equipment or workers waiting for hydraulics to warm up.
- Versatile design allows for use on equipment for Logging, Construction, Mining, Waste Hauling, Utility and Maintenance Vehicles.

HYDRA LINER SERIES

- All stainless steel construction.
- Large surface area exposed to fluid to maximize heat rise.
- Threads into standard 2" NPT female pipe thread or 2" Straight Thread O-Ring (STOR) coupling. (Listed Below)
- Excellent coolant flow capacity, utilizing 3/4" NPT coolant connections.
- 5-year—600,000 mile (965,000km) warranty.
- Install multiple units for larger tanks or faster heat rise.

PART NUMBER	"A" DIMENSION NOMINAL	"B" DIMENSION NOMINAL	SURFACE AREA NOMINAL	BTU/hr NOMINAL(1)	TYPICAL APPLICATION (AMBIENT AIR TEMP) TO -20°F / -29°C (2) **	TYPICAL APPLICATION (AMBIENT AIR TEMP) TO -40°F / -40°C (2) **
H-4000-8 H-4000-8-STOR	7 Inches 178mm	10 Inches 254mm	105 In ² 8 dm ²	Water 4,200 Oil 2,100	Up to 20 US gallons 76 Liters	Up to 8 US gallons 30 Liters
H-4000-12 H-4000-12-STOR	11 Inches 280mm	14 Inches 356mm	180 In ² 12 dm ²	Water 7,200 Oil 3,600	Up to 35 US Gallons 133 Liters	Up to 14 US gallons 53 Liters
H-4000-16 H-4000-16-STOR	15 Inches 381mm	18 Inches 457mm	250 In ² 16 dm ²	Water 10,000 Oil 5,000	Up to 50 US Gallons 190 Liters	Up to 19 US gallons 72 Liters
H-4000-20 H-4000-20-STOR	19 Inches 483mm	22 Inches 559mm	315 In ² 20 dm ²	Water 13,000 Oil 6,500	Up to 63 US Gallons 239 Liters	Up to 25 US gallons 90 Liters
H-4000-24 H-4000-24-STOR	23 Inches 584mm	26 Inches 660mm	385 In ² 24 dm ²	Water 16,000 Oil 8,000	Up to 77 US Gallons 292 Liters	Up to 30 US gallons 113 Liters

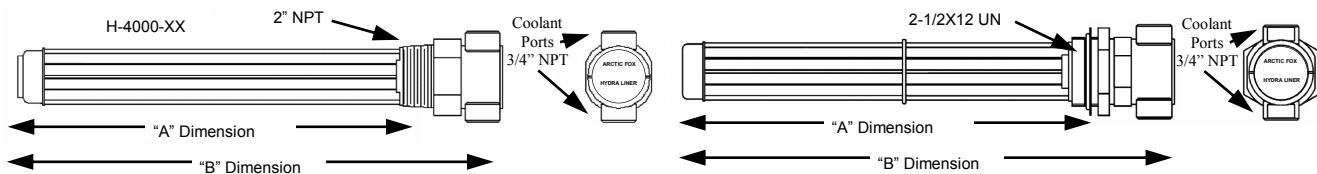
(1) Nominal BTU/hr based upon 180°F / 82°C Coolant flowing at 5 US Gallons / 19 Liters per minute.

Water—beginning temperature at +35°F / +2°C

Oil—ISO 32 Hydraulic Oil beginning temperature -20°F / -29°C.

(2) Actual temperature rise will be affected by factors such as coolant temperature and flow rate, specific heat capacity of fluids and air movement around reservoir.

**** Contact Arctic Fox Application Engineering for estimated temperature rise for your specific application.**



WELD ON TANK ADAPTERS

PART NUMBER	DESCRIPTION	APPLICATION
A-3228HD	Steel—Schedule 80 2" NPT Female Coupling	Preferred for most installations on steel tanks
A-3228AHD	Aluminum T-6061—Schedule 80 2" NPT Female Coupling	Preferred for most installations on aluminum tanks
A-3228HD-STOR	Steel—Combination 32 STOR & 1/2" NPT	May be used to install either design Hydra Liner
V6216	Steel—Half Coupling—32 STOR	Used when external tank clearance is limited
A-5878SSHD	Stainless Steel—Half Coupling—32 STOR	Used when external tank clearance is limited
IS43THCK	Stainless Steel—2" NPT Half Coupling 300#	Preferred for most installations on Stainless Steel Tanks
TWF-32	Steel—Flange 32 STOR	Used when external clearance is limited
TWF-32N	Steel—Flange 2" NPT	Used when external clearance is limited

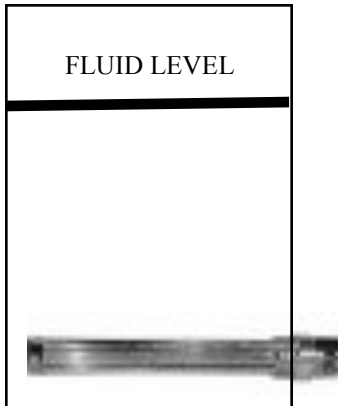


Arctic Fox LLC—570 South 7th Street—Delano, Minnesota 55328 USA
Phone: (800) 654-5382 or (763) 972-2758 — Fax: (763) 972-2873 — www.arctic-fox.com

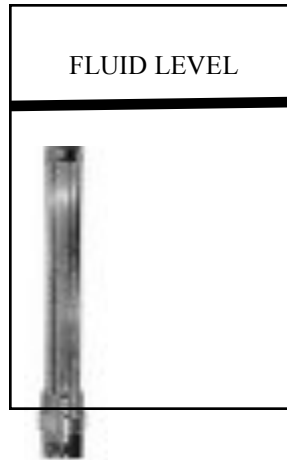
Arctic Fox BV — Strijmaden 7 — 4703 RG — Roosendaal — The Netherlands
Phone: +31 65 55 92 45 — Fax: +31 65 54 96 40 — www.arctic-fox.eu

H-4000 SERIES HYDRA LINER RESERVOIR MOUNTING CRITERIA

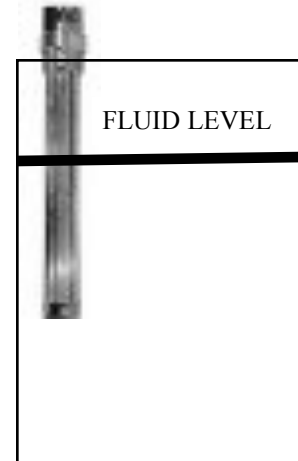
BEST



ACCEPTABLE



NOT ACCEPTABLE



- **SEE ARCTIC FOX PUBLICATION B-575 FOR RESERVOIR REINFORCEMENT WHEN PLANNING THE HYDRA LINER INSTALLATION.**

H-4000 SERIES HYDRA LINER COOLANT CONNECTIONS

Coolant Supply:

Obtain hot coolant from a pipe plug or other available opening on the engine coolant pressure side.

Route coolant via minimum 3/4" (19mm) I.D. hose to "IN" port on Hydra Liner.

Coolant Return:

Route coolant from Hydra Liner "OUT" port back to suction side of engine water pump via minimum 3/4" (19mm) I.D. hose.

Suggestion:

If uncertain as to which pipe plug ports on engine are coolant supply and return, locate hose connections for cab heater and plumb into ports located in same cavities.

Contact Arctic Fox Applications Engineering in USA (800) 654-5382 or (763) 972-2758 for further information on specific installations