

CARRY MANUFACTURING, INC.

SNORKEL S1 and S2 PUMPS

SNORKEL PUMPS:

Carry Manufacturing has developed a snorkel pump for use in aerial fire fighting efforts. The pumps are designed to be installed at the end of a suction hose connected to a storage tank on a helicopter. Snorkel Type 1 pumps can be used on helicopters with storage tanks of 1,000 gallons or more. Snorkel Type 2 pumps can be used on helicopters with storage tanks of 2,000 gallons or more.



**Sikorsky Helicopter
w/ Snorkel Type 2 Pump**

In general, the pump is used to pull water from a source located on the ground. The hose/pump is lowered to the water source and water is pumped from the ground to the helicopter's onboard storage tank. Fire retardant is added to the water in the tank. The helicopter flies to the fire location and the tank is dumped on the fire. The cycle is repeated. Because of the fact that the helicopter can "refill" its tanks without landing, the cycle time is shorter than fixed wing delivery systems.

Carry Manufacturing, Inc.'s Snorkel Type 1 pump is rated for 1,000 gallons per minute at 12' of lift. The Snorkel Type 2 pumps are rated for 2,400 gallons per minute at 20' of lift. The pump is designed to operate using the hydraulic power supplied by a helicopter engine. The pumps are capable of running dry due to sealed bearings and the hydraulic motor. The pump can run continuously and is limited by the capacity of the storage tank only.

Snorkel Type 1 pumps are available in 7.5 Horsepower with either 304 Stainless Steel or Aluminum pump components. Stainless Steel pumps are more durable but have more weight than Aluminum pumps.

Snorkel Type 2 pumps are hydraulically driven from a Power Unit on the aircraft with a stainless steel screen and discharge, aluminum diffuser and bowl with a bronze impeller. This pump requires about 17 Brake Horsepower to operate at full capacity.



Snorkel Type 1



Snorkel Type 2