



PRODUCT LISTING

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FACTS TO CONSIDER ON HYDRAULIC RESERVOIRS

SIZING

Folklore rules of thumb proclaim that the reservoir should be from 2 to 5 times the size of the pump GPM. For example: a 20 GPM pump should have a reservoir of 40 to 100 gallon capacity. However, this rule of thumb may not necessarily be true, especially if heat exchangers are used. With a heat exchanger the reservoir could be as small as one times the size of the pump GPM. Some closed loop systems require virtually no reservoir at all.

The accurate method for sizing a reservoir is to determine the heat balance for your hydraulic system. Try to accurately determine the amount of heat that will be generated through lost work, then determine the reservoir space available and how much heat can be dissipated in that space. From these calculations the necessity and size of the heat exchanger and the proper size of the reservoir can be determined.

INDOOR or OUTDOOR

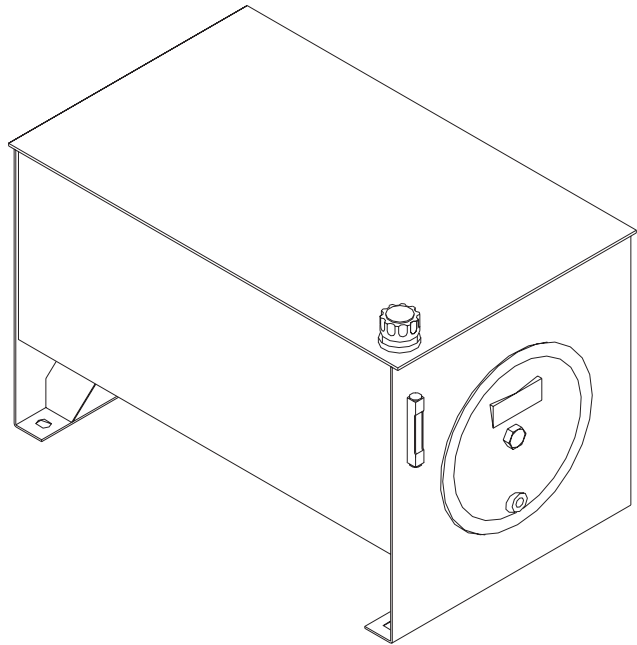
Reservoirs for indoor service usually have rubber grommets in the top plates for sealing suction and return lines. These grommets are not water tight. For outdoor reservoirs, welded couplings are used to seal the suction and return lines from weather and foreign fluids. For reservoirs requiring wash downs, welded couplings should also be used to prevent wash fluids from entering the tank.

Tank heaters are essential in cold climates. The most common heaters used are electrical immersion heaters. Most of them require a welded coupling in the tank side for installation. Sizing of the immersion heaters falls into two categories.

1. Sizing the immersion heater for maintaining the oil temperature when the pump is not running.

For sizing the immersion heater to maintain the oil temperature, calculate the total surface area of the tank (include all four sides plus top and bottom) in square feet. Then use the following approximate formula for heat transfer between a steel surface and surrounding air:

$$WATTS = 0.01 \times \text{AREA OF TANK (SQUARE FEET)} \times \text{TEMPERATURE DIFFERENCE (°F)}$$



2. Sizing the immersion heater to heat the hydraulic oil to pump suction temperature requirements in a given time.

For sizing the immersion heater to heat the hydraulic oil. Use the following rule of thumb:

ONE WATT WILL HEAT ONE GALLON ONE °F IN ONE HOUR

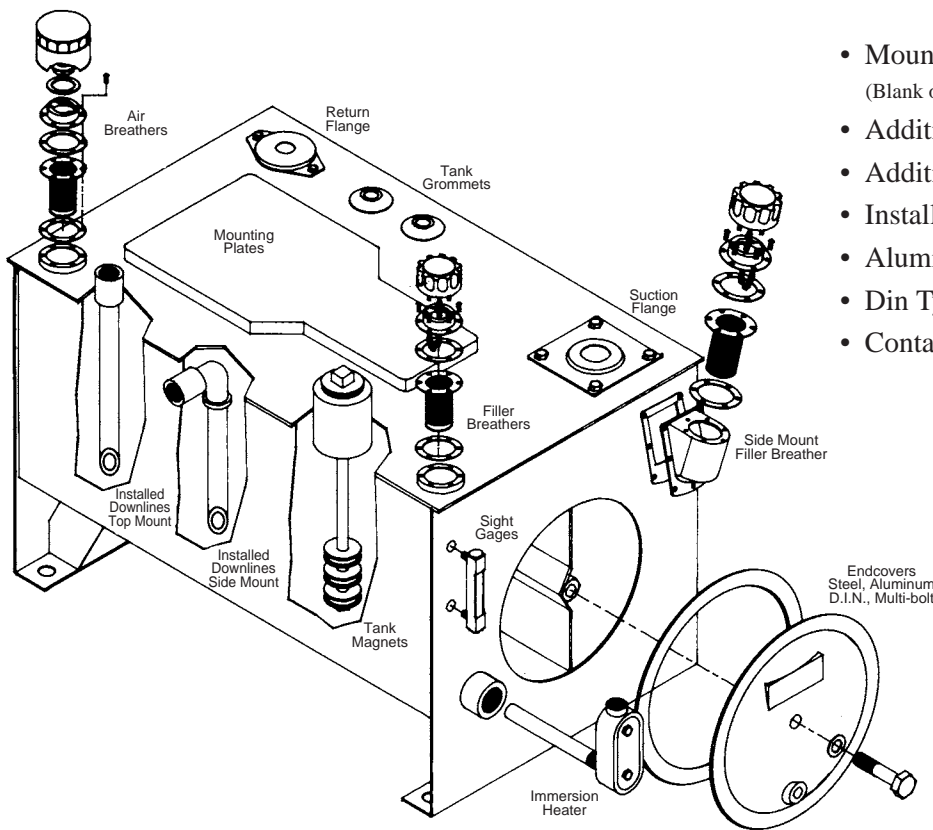
Location of the reservoir is important. Adequate air circulation should be provided. For outdoor location, shield the tank from direct sun radiation and protect it from weather, if possible. For indoor location shield the tank from furnace and steam lines and other radiation. The reservoir can be painted white to help reflect radiant heat or painted black to help radiate heat from tank to atmosphere.

You will note that no discussion of the sizing of cooling heat exchangers is given here. Most full line hydraulic manufacturers and distributors have complete data for sizing. If you require information for your specific needs and cannot obtain assistance, contact us and we will help you.



VESCOR RESERVOIRS

AVAILABLE OPTIONS FROM VESCOR®



- Mounting Plates
(Blank or Drilled and Tapped to your specifications)
- Additional Sight Gauges
- Additional Filler Breathers
- Installed Couplings
- Aluminum Endcovers
- Din Type Endcovers
- Containment Trays/Stand

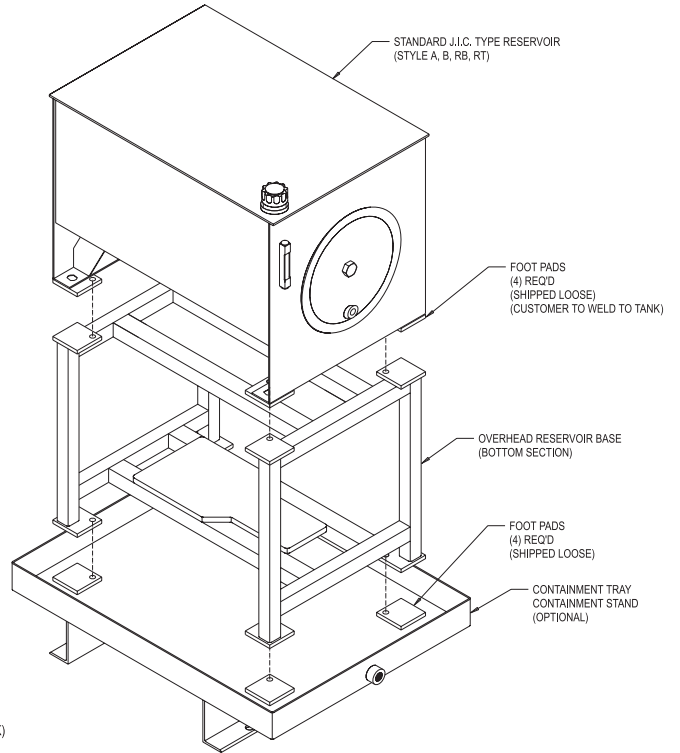
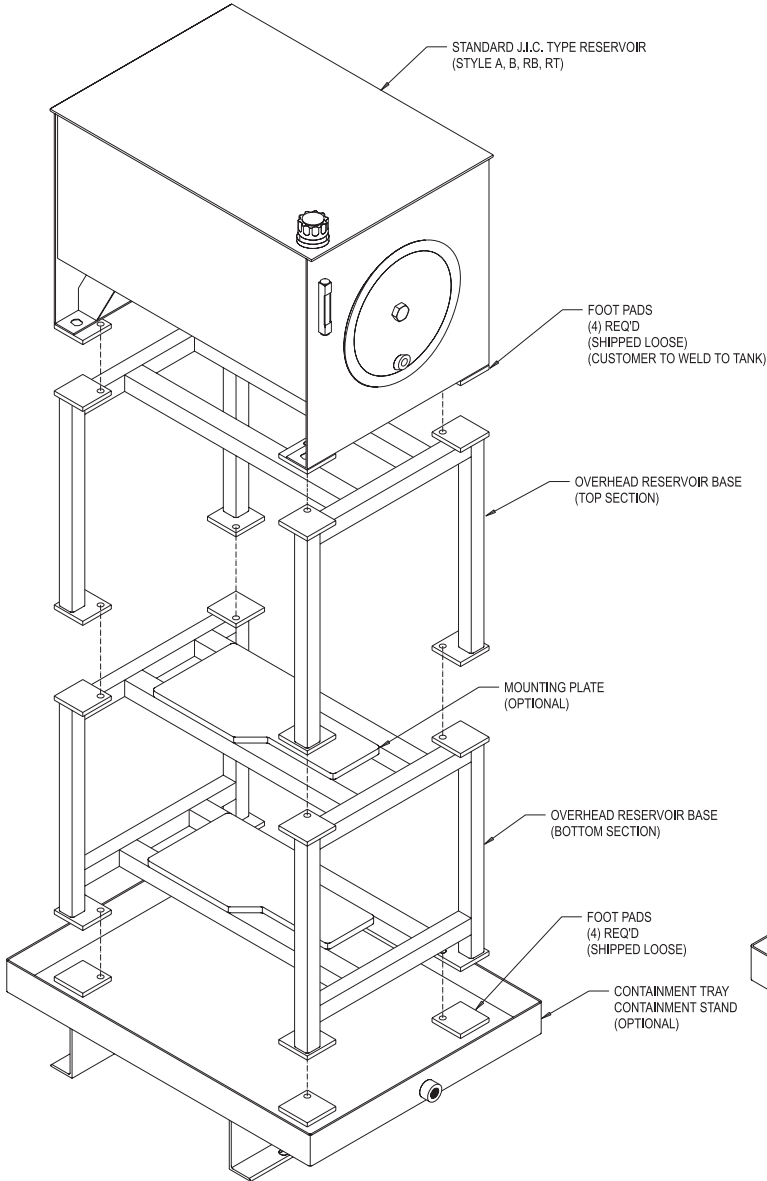
IMPORTANT FEATURES / STANDARD EQUIPMENT

- All VESCOR J.I.C. Reservoirs meet all J.I.C., N.F.P.A., and A.S.L.E. standards
- All VESCOR Reservoirs are skillfully fabricated from hot rolled steel plate and sheet. All steel is pickled and oiled which eliminates the need for sandblasting.
- Stationery baffles are properly slotted providing correct oil circulation.
- Single bolt endcovers provide the maximum opening for cleanout of reservoir.
- All VESCOR Reservoirs include sight gauge and filler breather as standard equipment.
- Endcovers include bayonet gasket for positive seal.
- Reservoir exterior prime painted.

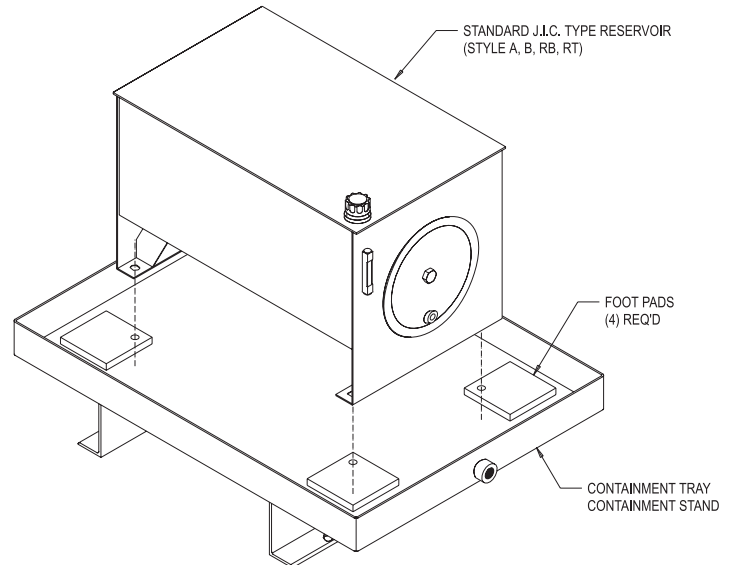


OVERHEAD RESERVOIR ASSEMBLY

DOUBLE OVERHEAD RESERVOIR ASSEMBLY



SINGLE OVERHEAD RESERVOIR ASSEMBLY



CONTAINMENT TRAY/STAND ASSEMBLY

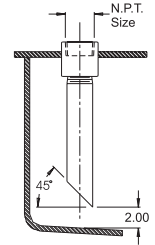
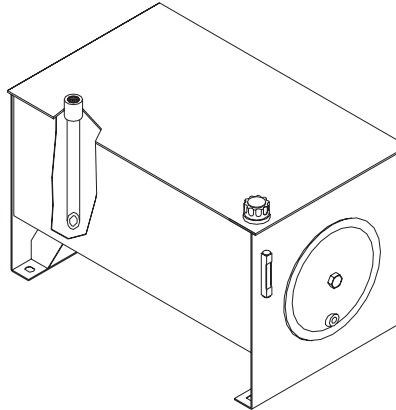


INSTALLED COUPLINGS and RETURN LINES

Basic Top Mount

Benefits:

- Customer specified locations
- Customer specified sizes
- No cutting of holes to install couplings
- Low cost
- Rapid assembly of power unit

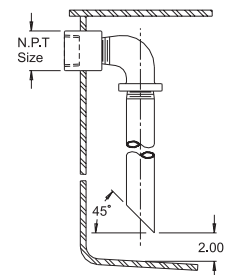
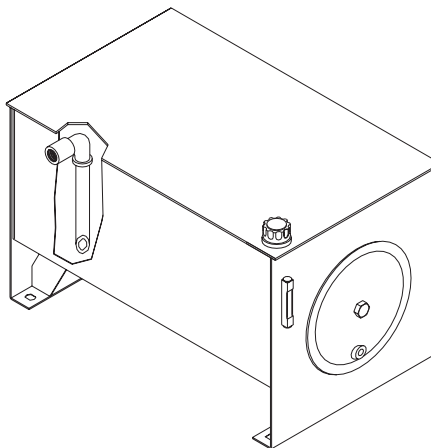


Reservoir Size (gals)	Return Lines Available with Schedule 40 Pipe							
	1/2" NPT #8 SAE	3/4" NPT #10 SAE	1" NPT #12 SAE	1-1/4" NPT #14 SAE	1-1/2" NPT #16 SAE	2" NPT #20 SAE	2-1/2" NPT #24 SAE	3" NPT #32 SAE
10 to 20	•	•	•					
30 to 40	•	•	•	•				
50 to 60	•	•	•	•	•			
80 to 100		•	•	•	•	•		
120 to 150			•	•	•	•	•	
200 and up			•	•	•	•	•	•

Basic Side Mount

Benefits:

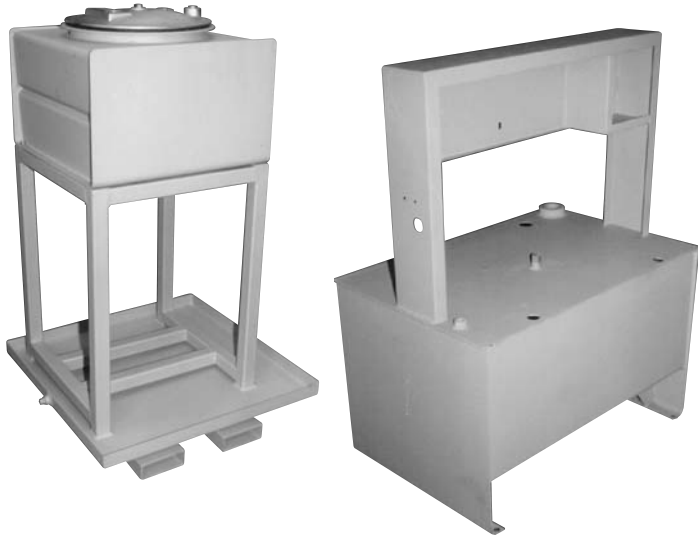
- Customer specified locations
- Customer specified sizes
- No cutting of holes to install couplings
- Low cost
- Rapid assembly of power unit



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10 to 20	•	•	•					
30 to 40	•	•	•	•				
50 to 60	•	•	•	•	•			
80 to 100		•	•	•	•	•		
120 to 150			•	•	•	•	•	
200 and up			•	•	•	•	•	•



CUSTOM RESERVOIRS



Custom Reservoirs Are Standard

For nearly 30 years, VESCOR has signified excellence in hydraulic reservoirs and accessories. VESCOR has always offered exceptional quality and service in the manufacturing of hydraulic reservoirs for a wide variety of applications.

While offering a complete line of standard reservoirs, VESCOR is one of the largest manufacturer of customized tanks and reservoirs. VESCOR can manufacture your customized reservoir in quantities of one to one hundred. A complete, totally updated engineering department assists customers in developing the most cost effective and practical design for every application.

VESCOR is proud of its earned reputation for quality and on-time performance, this is due in part to refined engineering specifications and quality control efforts. VESCOR offers a depth of experience few competitors can match. VESCORS' personnel are continually trained in the use of new technology. New advanced equipment maintains the highest possible manufacturing standards.

VESCORS' *off the shelf* reservoirs are always available. Customers are often able to utilize *modified standards* in their design, thus saving in manufacturing costs.

When you need a quality tank or reservoir, call or e-mail VESCOR for assistance and a quote.

At VESCOR *Custom Reservoirs Are Standard.*

