



## TECHNICAL SPECIFICATIONS

### LOW WATER LEGS

#### Pit Liner Protection

Special care must be taken so that floating aerators or other devices in a pit or lagoon do not tear the plastic pit liner during low water conditions. To this end, VaraCorp uses legs on its floating pontoons to keep the rotating turbine from ever hitting the bottom of the pit.

A secondary issue is the downward pressure exerted by the foot of each leg if/when resting on the pit liner. This pressure is expressed as pounds per square inch, and such pressure should not place undue stress on the plastic liner.

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Following are calculations showing the approximate pressure on the pit liner by each of the four legs on the VaraCorp aerator during low water conditions.

Diameter of the foot on each leg = 8 inches (each foot has a flat surface with slightly rounded edges.)  
Surface area of each foot =  $\pi r^2 = 3.14 \times 4 \text{ inches} \times 4 \text{ inches} = 50 \text{ in}^2$

The weight of a typical VaraCorp aerator is 300 pounds or less. This weight is equally distributed onto the four legs or  $300 \div 4 = 75$  pounds per leg.

If we divide the weight per leg by the surface area of the foot, we get  $75 \text{ lbs} \div 50 \text{ in}^2 = 1.5$  pounds per square inch. This pressure is well within the capabilities of plastic pit liners.

