

## Allegro Notes

### Power and Performance

Sufficient power should be installed to maintain a minimum cruising speed of at least 16 knots. Cruising at lower speeds is inefficient and a waste of power. This does not mean that lower speeds cannot be maintained, but only that the hull is most efficient at the higher speeds. If these higher speeds are not desired, then a hull form such as a semi-displacement or full displacement type is more practical. The SPEED/POWER CHART will give an idea of the power required for a given speed. Either single or twin motors may be used, but a twin engine installation is recommended for best handling, reliability, and performance, especially if gasoline motors are used. The powerplant should be of the conventional type using a straight shaft, propeller, and proper reduction gear. Other power systems such as stern mounted engines with outdrive, v-drives, or jet drives are not recommended. Because of the centrally located engine, weight of the powerplant is not critical, even though lightweight, compact engines are desirable. Sufficient fuel capacity is provided for many hours of high-speed operation. In most cases, extra fuel may be added, but this will add to the weight and hence the power required to maintain a given speed. There is ample water capacity to provide the needs of a demand water system and use of showers.

#### SPEED/POWER CHART

**Displacement = 14,000 lbs.**

16 KNOTS	140 SHP*
19 KNOTS	190 SHP
21.5 KNOTS	250 SHP
24 KNOTS	320 SHP
27 KNOTS	380 SHP
32.5 KNOTS	550 SHP

\*Minimum planing speed

The calculated speeds listed are approximate and considered accurate on the listed displacement. Changes in displacement (or weight) will modify the figures and will not give the speeds listed. All speeds listed are in knots per hour. To convert to miles per hour, divide by .87. Note that the horsepower is given as SHAFT HORSEPOWER (SHP). Since most motors are listed at BRAKE HORSEPOWER (BHP), it will be necessary to reduce the BHP to SHP. A reliable factor to multiply the BHP by is .70 to determine the SHP. All speeds assume that the proper gear ratio and propeller size is used. For twin engines, divide the SHP figure by two in order to determine horsepower required for each engine.