

# SeaStar Hydraulic Steering

## About Our Hydraulic Steering Systems:

The following is a quick overview of our steering systems and steering component terminology. For details on a particular steering system (features, applications, ordering information and dimensions) noted below, refer to the catalog pages describing that steering system. Distinctions made below are generalizations and should be used in conjunction with: 1) the specific steering system sections of this catalog when selecting a system and 2) water testing the boat.

SeaStar hydraulic steering is the most comfortable and efficient approach to steering a boat. It is available in several outboard, stern drive and inboard configurations to fit most boats.

SeaStar systems use oil to transmit force from the steering wheel to the outboard motor or rudder. Instead of the push-pull cable of a mechanical system, the SeaStar system uses a "liquid cable" which is considerably more efficient.

The SeaStar hydraulic steering system is relatively impervious to frictional loads from engine torque, etc. since most of the moving parts are running on ball bearings and in oil.

Several helm displacements are available, allowing a choice in the number of steering wheel turns to suit boat handling characteristics and individual driving preferences.

SeaStar PRO is recommended for single outboard powered boats that exceed 50 MPH. SeaStar PRO offers maximum comfort and control, with the precise response of dual cable *and* the smooth feel of hydraulics.

All hydraulic systems exceed A.B.Y.C. safety standards and ISO/I.M.C.I./N.M.M.A. certification requirements and are constructed with high quality corrosion-resistant materials.

### Typical Hydraulic Steering System Components:

**HELM:** A dashboard-mounted hydraulic pump and/or reservoir to which the steering wheel and hydraulic hose are connected. Turning the wheel pumps fluid from the helm through the hoses and into the cylinder, moving the cylinder ram which in turn moves the engine through its steering arc. There is no remote reservoir and/or pressure vessel in SeaStar systems (except in SeaStar power steering and Hynautic.)

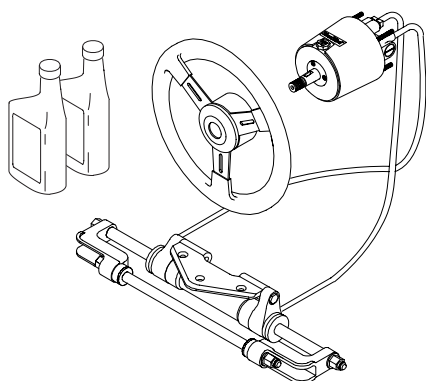
**BEZEL/BACK PLATE KITS:** Kits that allow for reduced helm protrusion from the dash, and allow retrofitting of SeaStar front mount helms to boats in which mechanical steering or older SeaStar systems were previously installed.

**STEERING HOSE:** Special hydraulic hose that carries the fluid from the helm to the cylinder and back. Outboard steering hoses are pre-manufactured to specific lengths. Modification after manufacture is not recommended and could result in steering failure. (Tubing is used in some I/O and inboard hydraulic systems.)

**CYLINDER:** Consisting of a ram, bored cylinder and attaching hardware, the cylinder is moved by fluid pumped from the helm when the wheel is turned.

**TIE BAR KITS:** Hardware to allow steering connection of 2 or 3 engines in unison.

### HYDRAULIC STEERING



### SLIDE PLATE OR ADAPTER PLATE KIT (older cylinders)

