# Let's make sailing safer

At Mac N Hom Marine Equipments (P) Ltd., we are focused on range of products that meet the ever increasing demands of Marine based customers in terms of sophistication and diversification. We have brought to market innovative products, one after another to provide only the highest quality goods and services for your requirements and offer customised solutions and challenging applications quickly and cost effectively.







### Hydraulic Steering Systems for Out Board Boats



### **Balanced Hydraulic Actuators**



#### Rapid-Emperor:

Planned for Outboard engines above 115HP to 400 HP. Ideal for Twin Out Board Engine configurations.

#### **Rapid-Prince:**

Planned for Outboard Engines upto 115HP.
A Cute Model for Small and Medium HP Boats. Very
Compact and Quick Responding Type



#### Selection of Hydraulic Helm Pump

Hydraulic Helm Pump Assembly is selected based on number of Turns of Steering wheel, from Port Side Hard to Star board side Hard movement of Outboard Engine. "Lesser the Number of Turns, More the Effort to turn" is the Rule of Manual-Hydraulic Steering. Please refer the Technical Data Chart to know the details.

#### Selection of Hydraulic Hose / Stainless Steel Fittings

We recommend, Flexible Braided Hydraulic Hoses for transmission of Oil for Small Boats, and a combination of small length Hydraulic Braided hoses at the Helm Pump and Actuator ends for flexibility and Marine Protective coated Seamless Steel Tube in the middle area of vessel. We recommend and Supply Hydraulic Fittings with SS316L material.

#### MAC ◆N◆HOM MARINE EQUIPMENTS (P) LTD.



## "Let's Make the Sailing Safer"

#### Other factors to be considered during selection

Propeller Selection:- Larger The Propeller, Heavier Actuator to be selected Sea Going / Inland Vessel: Sea Going demand Heavier Actuator

Speed Of Vessel: Our Model: Rapid-Prince has a Limiting Speed of 35 Knots

Our Model: Rapid-Emperor has a limiting speed of 50 Knots

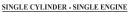
#### **Features**

- IACS member M/s Indian Register of Shipping (IRS) Approved Design Compact, Zero-leak Hydraulic System.
- **③** Smooth and Firm Steering Drive **④** Hands-Free experience. **⑤** Zero maintenance for long service years.

Technical Data Chart			
Description	Prince	Emperor	
1.Axial Thrust	207 Kgf @50 Kg/Cm <sup>2</sup>	471 Kgf @50Kg/Cm <sup>2</sup>	
2. Torque (Pivot to Tillerpin-180mm)	37 Kg.m	84 Kg.m	
3.Turns of Steering with			
42cc/rev Helm Pump (Approx.)	1 + 1	2½ + 2½	
20cc/rev Helm Pump(Approx.)	2 + 2	5 + 5	

#### DIFFERENT TYPES OF STEERING ARRANGEMENTS



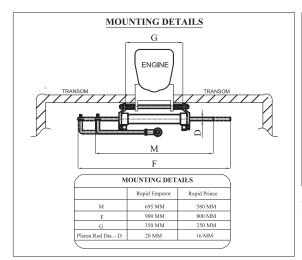




DOUBLE CYLINDER - TWIN ENGINE with HYDRAULIC CONNECTION



SINGLE CYLINDER - TWIN ENGINE with CONNECTION ROD



DATA FOR STEERING SELECTION			
VESSEL DETAILS			
Helm Pump to Transom Distance - L	Metres		
Breadth of Vessel - B	Metres	3 C	
Draft of the Vessel	Metres		
Hull form ( Mono / Catamaran )			
No of Engines	Nos.		
Power of each Engine	HP	***************************************	
Speed of Vessel	Knots		
Distance between Engine Centre Lines-C	Metres	L L	
-		-	

NOTES: 1. Please fill in this data sheet with your Vessel data, and email to info@macnhomsystems.com

- 2. All dimensions are in mm.
- 3. Dimensions are reference purpose only; kindly confirm with our Technical Dapartment.

