

## CONSTRUCTION ACTIVITIES OF MECHANICAL ZONE

The Ferry Planning circle under RHD is responsible for making programs on annual basis for new building and rehabilitation of ferries and pontoons. Ferry Construction Division under Ferry Planning Circle is presently executing 3 schemes for new building and rehabilitation of ferries and pontoons. These are as mentioned below: -

- a) Construction & Rehabilitation of Ferries & Pontoons for connecting Major Roads in Patuakhali & Borguna Districts. –DANIDA Financed.
- b) Reconstruction, Rehabilitation and Maintenance of Ferries under Roads & Highways Department. – Kfw (German Grant) Financed.
- c) Construction of Ferries and Pontoons under Roads & Highways Department.  
- Local Fund.

### Project Detail

#### A. RHD Ferry Project with Danish Assistance

In the 5<sup>th</sup> five year plan (1997-2002) of Bangladesh, the main objective in Transport Sector is to develop a balanced and integrated transport network through adoption of a strategy for improvement ferry operation on major road networks, and provision for greater participation of private sector in transport services.

The Danish assistance programme includes rehabilitation and new building of ferries and pontoons at 8 (eight) ferry ghats on Major Roads in Patuakhali and Barguna districts during the period 2000-2005. It also covers rehabilitation of landing facilities, upgrading of workshops, stores and maintenance system, privatization of ferry services and training of RHD Personnel. Total cost of this project is Tk.3406.31 lacs. Detailed Information's on Danida Aided Project Under RHD is mentioned below: -

1. **Name of Project** : Construction & Rehabilitation of Ferries & Pontoons for connecting Major Roads in Patuakhali & Borguna Districts.
2. **Proposed dates of** :

i)	Commencement	2000-2001
ii)	Completion	2004-2005

3. **Investment Cost of the Project :**

Local (Taka in Lac)	FE (Taka in Lac)	Total (Taka in Lac)
2,280.65	1,125.66	3,406.31

4. **Conversion rate of foreign currency:** 1.00 DKK = Tk. 6.84.

5. **Mode of financing: Local cost**

a)	Govt. and / or other source (s)		
	i) Grant	Tk.- 667.45 Lac	(GOB)
b)	Project Aid		
	i) DPA	Tk.- 1125.66 Lac	(DANISH Grant)
	ii) RPA	Tk.- 1603.20 Lac	

6. **Allocation during the year 2001-2002**

PA (Taka in Lac)	Local (Taka in Lac)
1000.00	50.00

7. **Approved program of works for the year 2001- 2002**

Item of works	Qty.	Expenditure			Total	Remarks
		PA	RPA	Local		
a. UT-2- (Imp) Ferry Construction	2 Nos.	---	120.00	---	120.00	
b. Pontoon Construction	2 Nos.	---	64.00	---	64.00	
c. UT-2- Ferries Rehabilitation	6 Nos.	---	132.00	---	132.00	
d. Pontoon Rehabilitation	6 Nos.	---	60.00	---	60.00	
e. Purchase of Jeeps	2 Nos.	---	50.00	---	50.00	
f. Purchase of Propulsion Units	2 Set.	---	340.00	---	340.00	
g. Spare parts Purchase	L.S	141.00	---	---	141.00	
h. Van & Equipment w/s	1 Unit.	35.00	---	---	35.00	
i. Truck Mounted Crane	1 No.	58.00	---	---	58.00	
j. CD / VAT etc	---	---	---	50.00	50.00	
<b>Total = 1,050.00</b>						

**8. As per approved Program of 2001-2002 following works are taken up**

**a. Work order issued**

- i. Construction of 2 Nos. UT- II (Imp) Ferry.
- ii. Construction of 2 Nos. (Imp) Pontoon.
- iii. Rehabilitation of existing 2 UT-2 (Imp) Ferries & 2 Pontoons.
- iv. Rehabilitation of existing 2 UT- 2- Ferries & 2 Pontoons.

**b. Tender received for**

- i. Purchase of Propulsion Units: 3 Sets.

**c. Following items will be arranged directly by DANIDA :**

i.	Van & Equipment (Mobile workshop)	1 Unit
ii.	Truck Mounted Crane	1 No.

## **RHD Ferry Project with German Assistance**

A project entitled as above has been approved by ECNEC earlier and included in the ADP for current financial year. Physical works under the project could not be undertaken yet, due to some difference of opinion between Kfw and RHD in respect of unified management for operation and maintenance of ferries. To settle the matter recently RHD has agreed and informed the Donor that Zonal Management Committees as proposed by IDC would also control operation and maintenance of ferries, besides that of equipment and machineries. With this arrangement, it is expected that physical works under the project would be started soon, if Kfw agrees.

The Project under German grant includes rehabilitation of 78 ferries and 142 pontoons, new building of 4 ferries and 4 pontoons, procurement of 20 sets of propulsion units, hand tools etc.

Execution period of this project is 3 years from 2000-2001 to 2002-2003 and the total project cost is Tk. 7689.33 lacs.

Detailed Information's on German Aided Project Under RHD is mentioned below:-

1. **Name of Project :** Reconstruction, Rehabilitation and Maintenance of Ferries under Roads & Highways Department.
2. **Proposed dates of :**

i)	Commencement	2000-2001
ii)	Completion	2002-2003

3. **Investment Cost of the Project :**  
(Taka in Lac)

<b>Local</b>	<b>FE</b>	<b>Total</b>
Tk.1689.33	Tk.6000.00	Tk.7689.33

4. **Conversion rate of foreign currency:** 1.00 DM = Tk. 25.00
5. **Mode of financing:**

Local cost:			
a)	Govt. and / or other source (s): -		
	i) Grant	Tk.1689.33 Lac	GOB Grant.
b)	Project Aid :-		
	i) DPA	Tk.3071.52 Lac	GERMAN Grant.
	ii) RPA	Tk. 2928.48 Lac	

### **C. Construction of Ferries and pontoons under GOB Fund**

Besides the Utility ferries in operation, RHD Ferry fleet comprises of uniflote and steel ferries which are more than 30 years old. Repair and maintenance of these very old ferries are too expensive considering which a project has been approved by ECNEC for replacement of these ferries under GOB Fund. The old pontoons and modified pontoons are also above 30 years old and have been included in this project for replacement.

Execution of this project will enable efficient transportation of goods and passengers at the ferry ghats on different Highways and roads all over the country by replacement of old and smaller ferries with new and bigger ones. 40 (forty) sets of propulsion units are also to be procured under this project.

Execution period of this project is 3 (three) years from 2001-2002 to 2003-2004 and the total project cost is Tk. 8750.00 lacs.

Detailed Information's on GOB Project Under RHD is mentioned below:-

1. **Name of Project :** Construction of Ferries and pontoons under Roads & Highways Department.

2. **Proposed dates of :**

i)	Commencement	2001 – 2002
ii)	Completion	2003 - 2004

3. **Investment Cost of the Project :**

(Taka in Lac)

Local	FE	Total
Tk.8750.00	Nil	Tk.8750.00

4. **Mode of financing:**

Local cost:

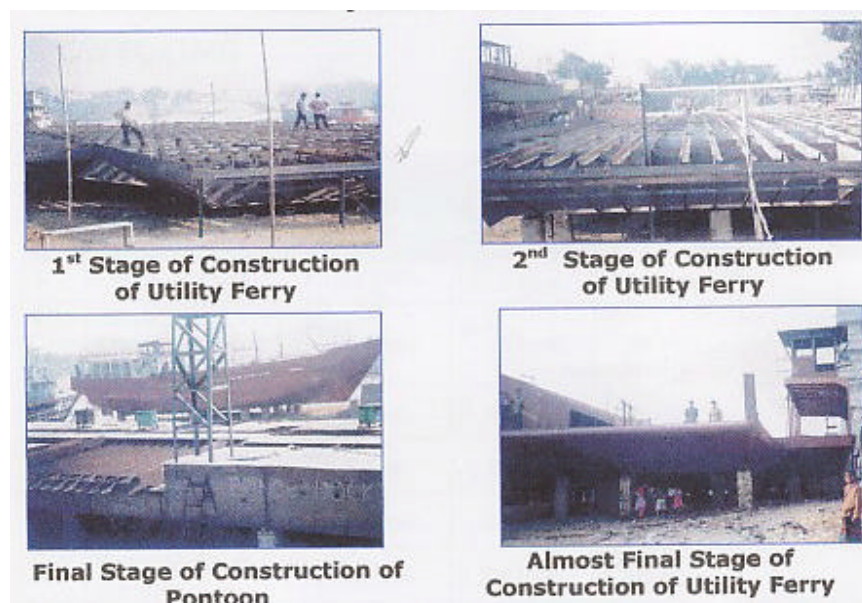
a) Govt. and / or other source (s): -

i)	Grant	Tk. 8750.00 Lac	GOB Grant
b)	Project Aid		
i)	DPA	Nil	
ii)	RPA	Nil	

## Design of ferries and pontoons

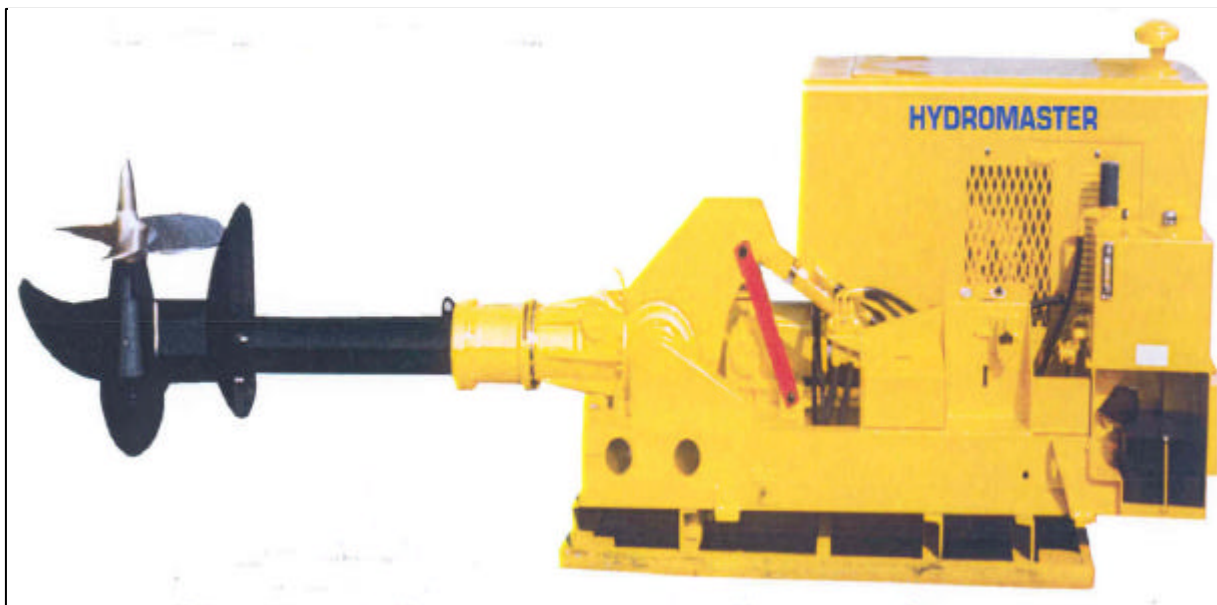
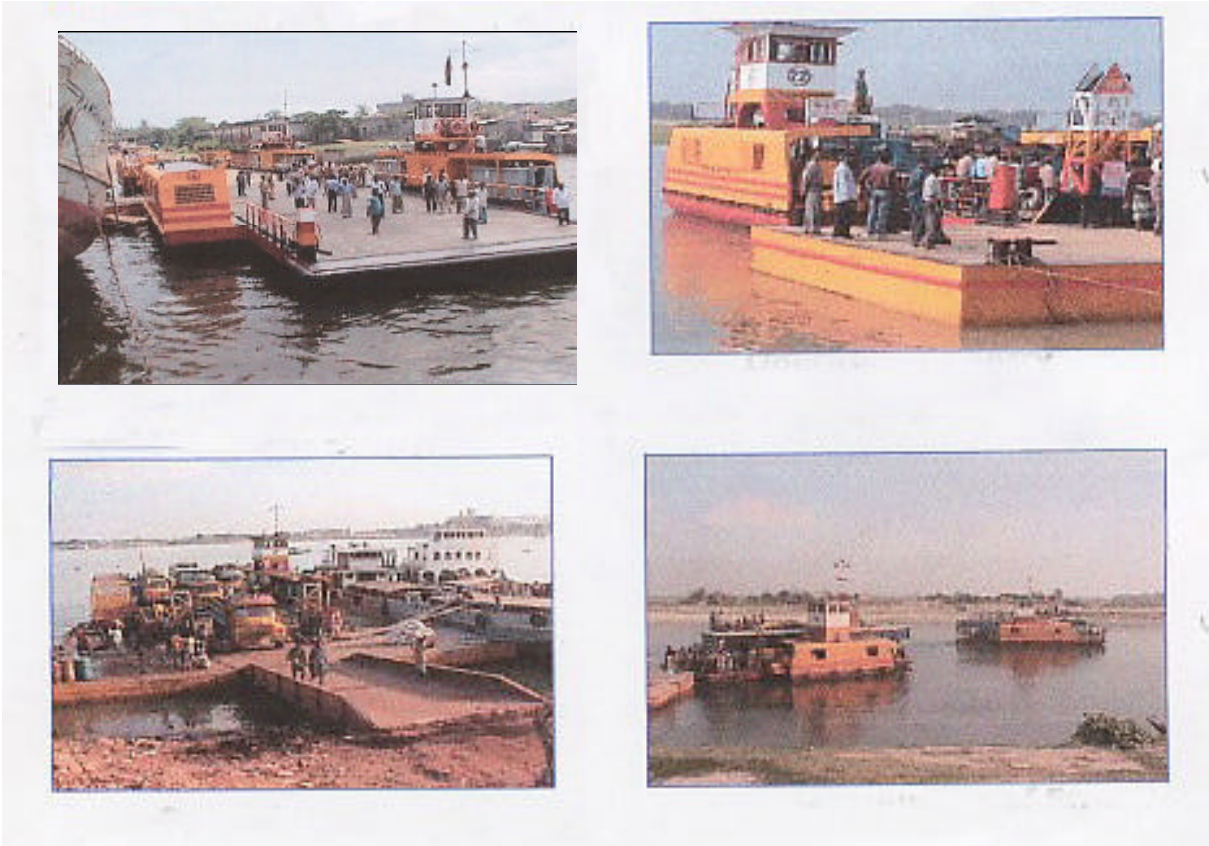
The designs of which ferries and pontoons are presently being constructed are slightly modified from the designs originally prepared by the Dutch consulting firm BVS. The modifications have been made mainly by strengthening the car deck, fender portions etc.

## DIFFERENT STAGES OF CONSTRUCTION OF UTILITY FERRY AND PONTOON



## OPERATION OF UTILIY FERRY

Propulsion units are provided for the ferries as per size and capacity of the ferries and considering river current at the ferry ghat. Catalogues and specification of some of the engines and propulsion units at present being used in utility ferries are mentioned below.





## Standard Equipment

### TECHNICAL SPECIFICATION

HP	Kw	RPM	TRANSMISSION	PROPELLER
200	150	2200	TYPE 800 Ratio 3.538:1	Standard size 1016mm dia or as designed to meet vessel criteria

#### ENGINE

Our standard engines are Cummins, Scania, Duetz, Perkins,  
Other makes of diesel engines can be installed as required.

#### ENGINE SPEED

Controlled by throttle cable from free standing remote control console.

#### COOLING

Totally enclosed fresh water system with tropical radiator, raw water or air cooled  
depending on engine choice.

#### FUEL TANK

Capacity sized to meet vessels operational requirements.

#### BATTERY

12 Volt DC negative earth return, alternator charging.

#### GEAR BOX

Combined clutch/forward and reverse gearbox ratio 1:1.

#### STEM

Between 1372mm and 2800mm measured from deck to propeller centre line.

#### STEERING

Electro-hydraulic remote control from a free standing console (all cabling provided).

#### OPTIONAL EXTRAS

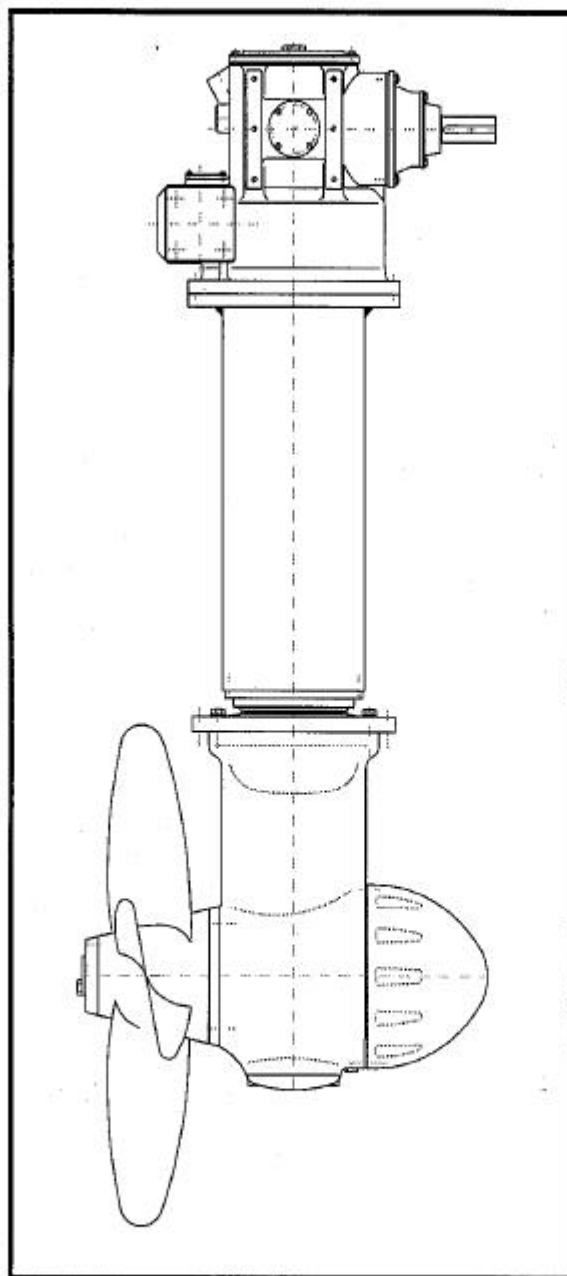
Engine can be supplied with totally enclosed sound proofed or fully acoustic canopy.

DESIGN CHANGES MAY RESULT IN ALTERATIONS TO THESE SPECIFICATIONS

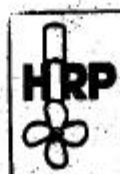
**NOTE: SEE GENERAL ARRANGEMENT DRAWING NO: 20561**

# SPECIFICATION SHEET

propulsion unit model HRP 400



260 kW – 460 kW



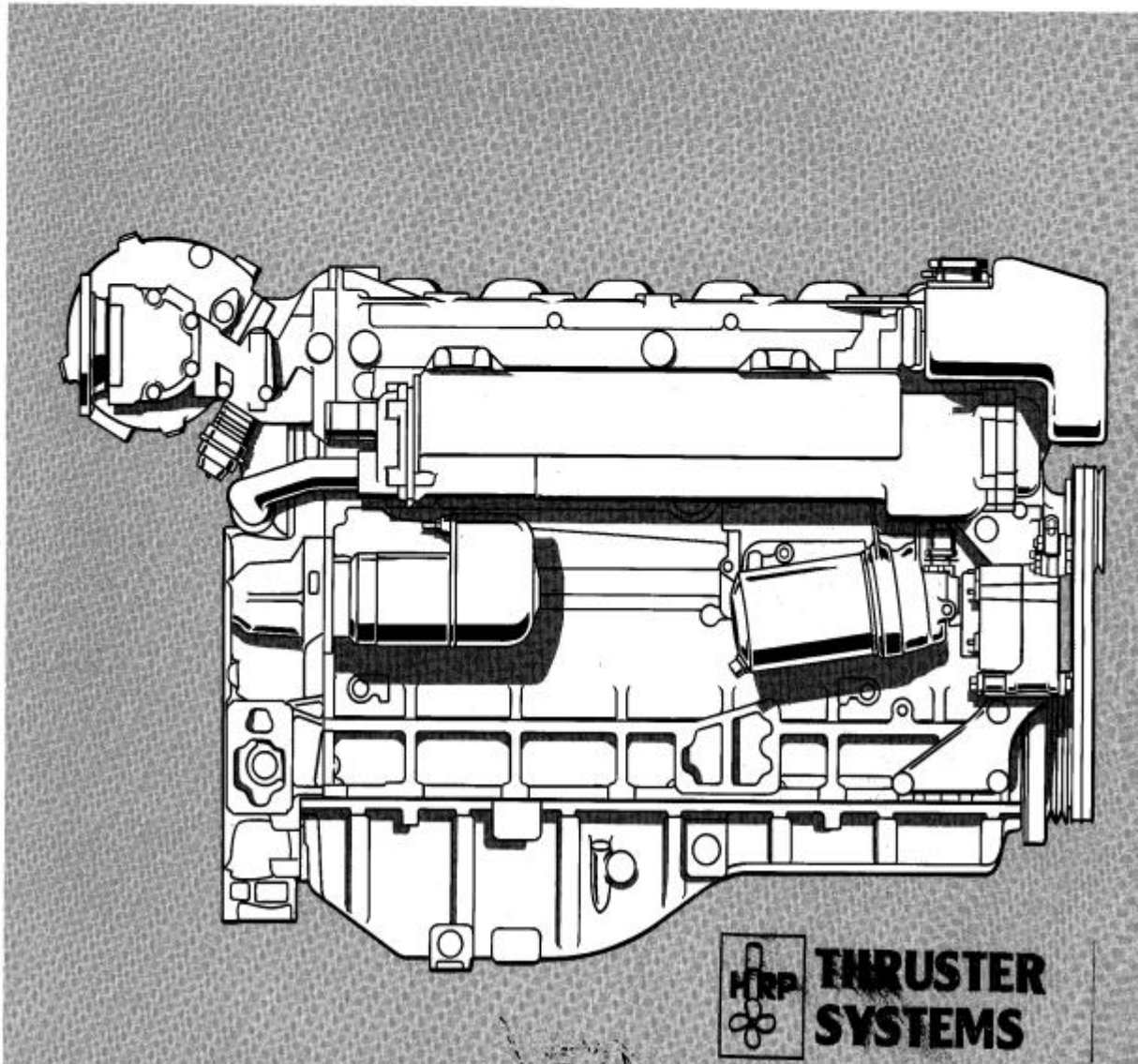
**THRUSTER  
SYSTEMS**

Data Sheet

**MAN Marine Diesel Engines**  
**176 - 735 kW (240 - 1000 hp)**



*Medium-duty operation*

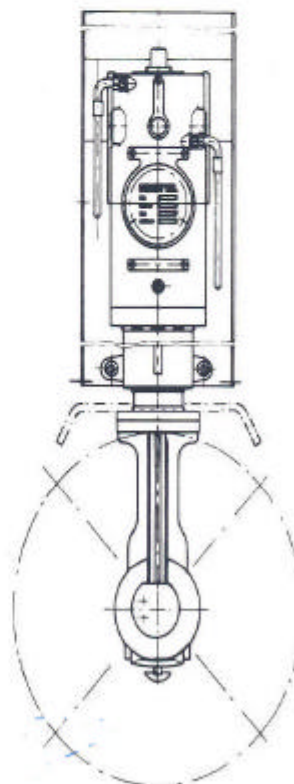




# SCHOTTEL

## SRP 110

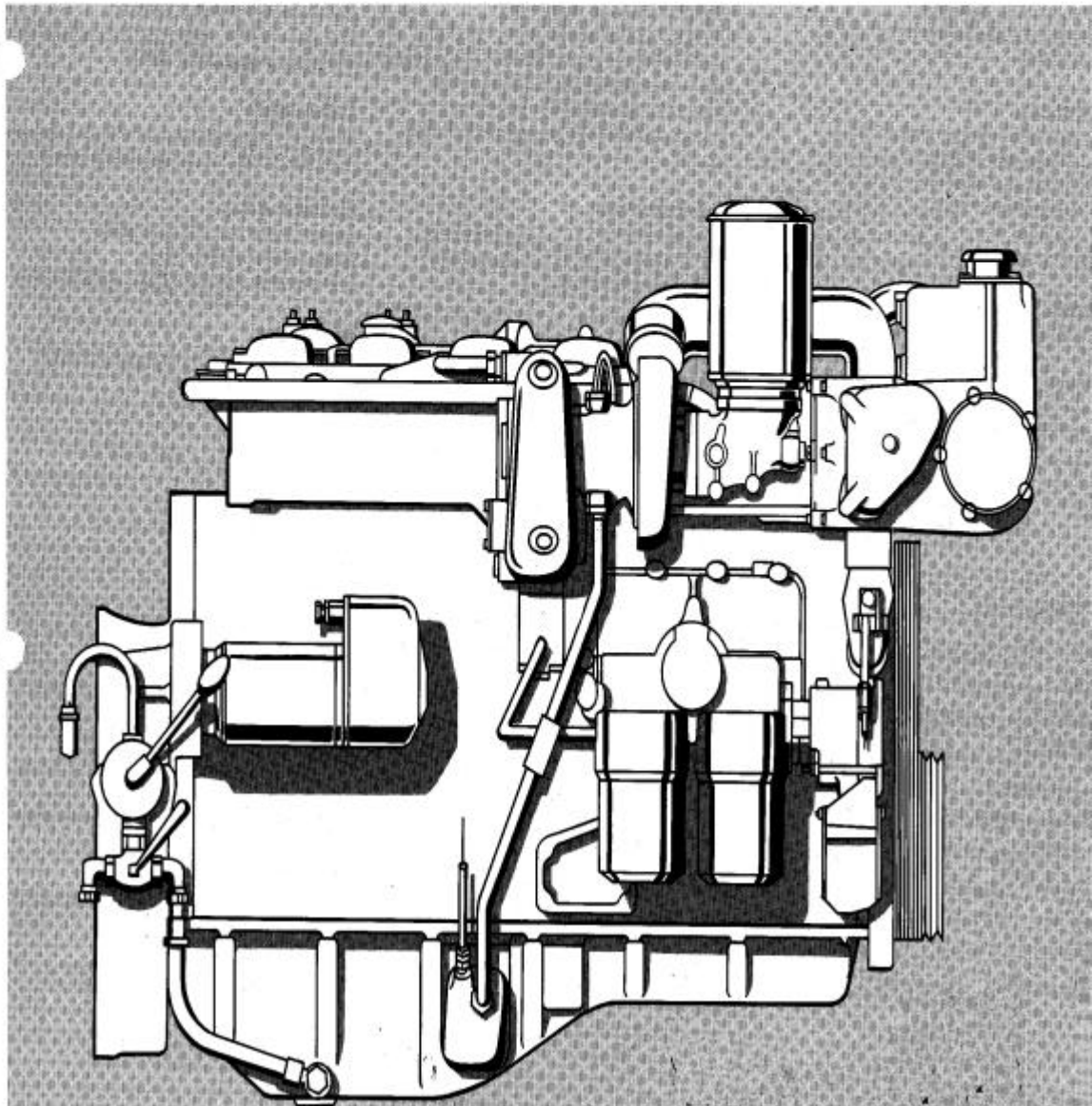
Rudderpropeller  
for  
Main Propulsion



Power Range  
130 - 260 kW

# D 2866 TE Marine Diesel Engine

6-cylinder, vertical in-line engine  
with exhaust-driven turbocharger  
rated at 235 kW (320 HP)



<b>Strength of Ferry fleet</b>		
Total number of ferry	ghats	100
Total number of ferries	-	186
Total number of pontoons	-	208

## Type of the Ferries

Utility ferries : 125

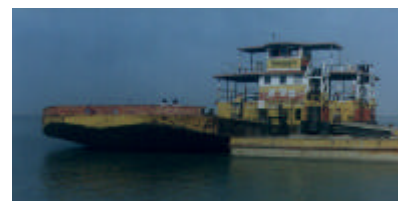
Unifloat ferries : 29

Steel ferries ( catamaran type) :32

Pontoons : 208



**Utility Ferry**



**Steel & Unifloat ferries are very old and not being constructed since 1977**

<b>Utility ferries</b>		
<b>Type-1(Imp):-</b>	<b>Total number</b>	<b>06; Capacity: 12 Buses/Trucks</b>
<b>Type-1:-</b>	<b>Total number</b>	<b>27; Capacity: 9 Buses/Trucks</b>
<b>Type-2(Imp):-</b>	<b>Total number:</b>	<b>56; Capacity: 4 Buses/Trucks and 4 Cars/Jeeps</b>
<b>Type-2:-</b>	<b>Total number:</b>	<b>28; Capacity: 4Buses/Trucks</b>
<b>Type-3:-</b>	<b>Total number</b>	<b>08; Capacity: 2 Buses/Trucks and 2 Cars/Jeeps</b>