

## STANDARD EQUIPMENT

# MAS 1650 - S16 R MPTK



### Fuel System

Fuel feed pump  
Change over type fuel filters  
Fuel injection pump  
Shielded fuel injection lines

### Lubricating Oil System

Oil pressure alarm switch  
Full-flow lubricating oil filters (change over type)  
By-pass filter (change over type)  
Oil cooler with thermostat

### Cooling System

Fresh water pump  
Thermostats with by-pass

### Electric System

Starter motor  
Alternator 30 Amps

### Inlet and Exhaust System

Turbo chargers MITSUBISHI  
Inlet air main fold with air cleaner  
Dry type exhaust main fold with vertical outlet, counter flange

### Other Standard Equipment

Hydraulic governor  
Mounting brackets

### Alternator

Stamford type HMC  
Engine and alternator are mounted on a welded steel base frame, installed on vibration dampers

## TECHNICAL DATA

| Power   | Cylinders         | Diameter x Bore | Total Cylinder Capacity | Injection System | Starting System   | Fly head       | Dry Weight |
|---|-------------------|-----------------|-------------------------|------------------|-------------------|----------------|------------|
| 50 Hz - 1710 Kva - 1500 Rpm<br>60 Hz - 1344 Kva - 1200 Rpm<br>60 Hz - 2028 Kva - 1800 Rpm | 16 cylinders in V | 170x180 mm      | 65.4 liters             | Direct           | 24 Volts bi-polar | SAE 21 / SAE 1 | 12100 Kg   |

## Options

### Classification

BV, LRS, DNV classification (and other). IMO classification

### Engine cooling system

Heat exchanger fresh water / raw water (turbo lair or combined)  
Plate cooler  
Box cooler  
Keel cooling  
Mounted seawater pump  
Electric seawater pump

### Exhaust

Flexible expansion joint  
Silencer 22 db or 35 db or others  
Spark-arrestor

### Lubricating oil system

Manual oil drain pump  
Electric oil drain pump  
Pre-lubricating pump  
Emergency oil pump

### starting system

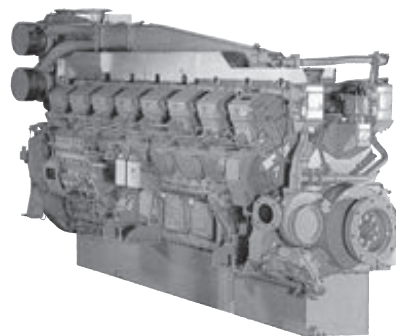
Air starting  
Electric compressor set  
Air / electrical combined starting

### Instrumental panel

Single- or multi-stations  
Mechanical or electronic remote control

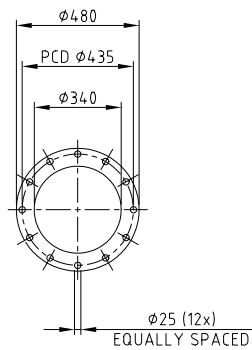
### Alternator

Other brands like LEROY SOMER, etc...

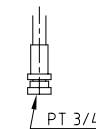


**S16R-MPTK** 16-cylinder, 4-cycle, Water cooled, Diesel Enginee Direct-injection, Turbocharged with Air-cooler  
Bore x Stroke (mm) : 170 x 180  
Displacement (L) : 65.37

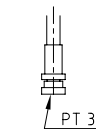
DETAIL A  
EXHAUST GAS OUTLET



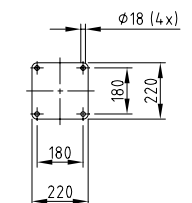
DETAIL B (NON SCALE)  
FUEL PIPE JOINT  
ON BOTH SIDES



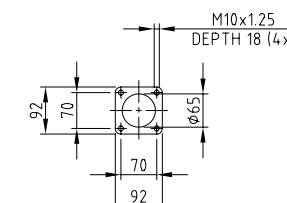
DETAIL C (NON SCALE)  
FUELLEAK OFF PIPE JOINT  
ON BOTH SIDES



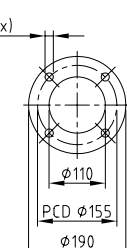
DETAIL D  
MOUNTING DETAIL VIBRATION DAMPER



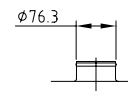
DETAIL E (1:10)  
F/W OUTLET



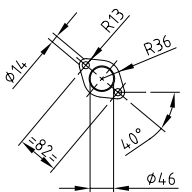
DETAIL F (1:10)  
F/W INLET



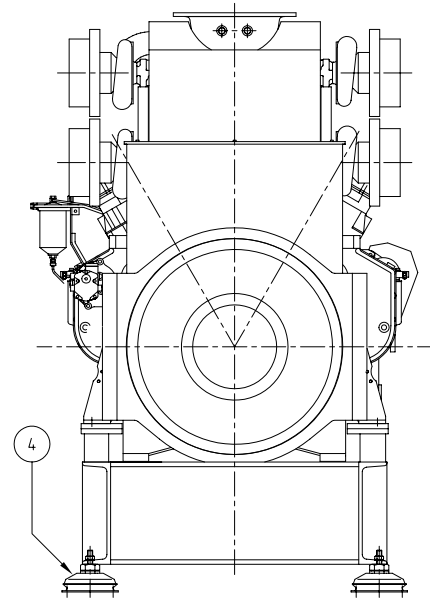
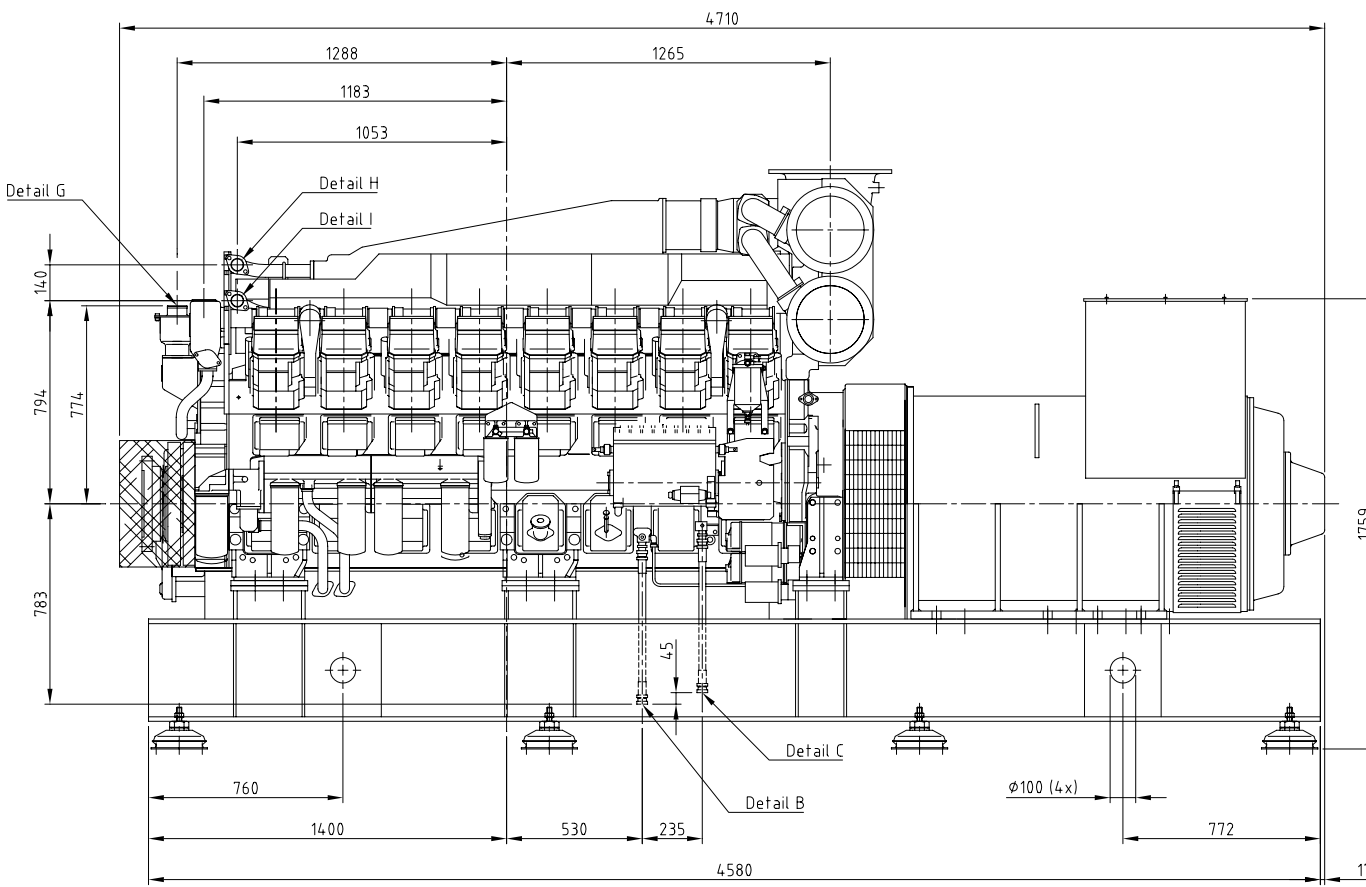
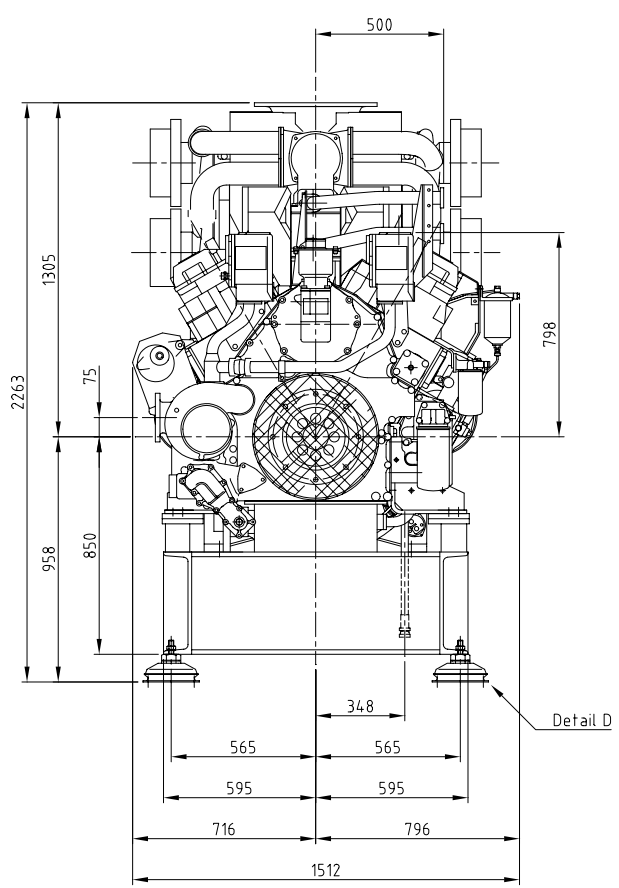
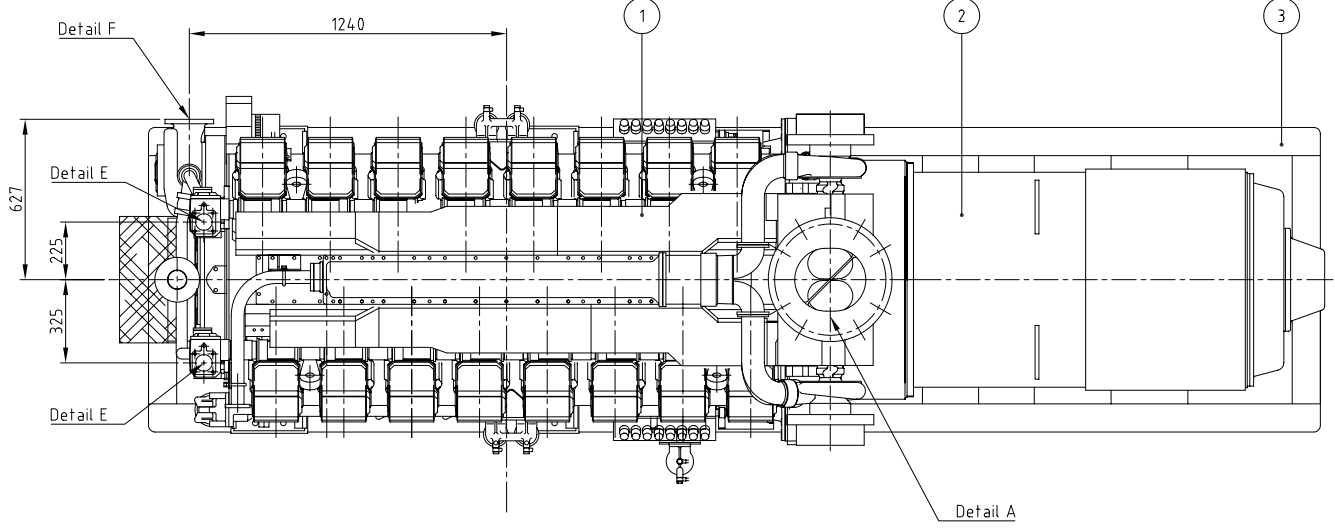
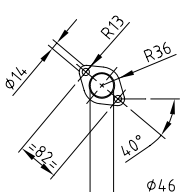
DETAIL G (1:10)  
BREATHER OUTLET



DETAIL H (1:10)  
S/W OUTLET



DETAIL I (1:10)  
S/W INLET



NOTE:  
UNDER EVERY FILTER A DRIPTRAY WILL BE INSTALLED  
ALL ROTATING PARTS WILL BE COVERED

FOR INFORMATION ONLY

| Pos No. | QUANTITY | DESCRIPTION      | TYPE       | MATERIAL |
|---------|----------|------------------|------------|----------|
| 4       | 8        | VIBRATION DAMPER | TV 063 I/A |          |
| 3       | 1        | FRAME            |            | STEEL    |
| 2       | 1        | GENERATOR        | HCM734HI   |          |
| 1       | 1        | ENGINE           | SI6R-MPTK  |          |

|   |                    |                       |                 |
|---|--------------------|-----------------------|-----------------|
| No.:  | Date:              | Description of change |                 |
| Subject:  |                    | MAS 1650              | 1500 rpm        |
| Type:   | S16R-MPTK HCM734H1 | Project No.:          |                 |
| Drawn:  | S.K.               | Checked:              | Scale: 1:20     |
| Date:   | February 1999      | Date:                 | Size: A2        |
| MHI EQUIPMENT EUROPE B. V.  |                    | American projection   | Drawing number: |
| EUROPEAN SALES AND SERVICE SUBSIDIARY OF MITSUBISHI HEAVY INDUSTRIES LTD. - JAPAN |                    |                       | B00654-0        |
|   |                    |                       | Rev. 0          |
|   |                    |                       | Sheet No. 1/1   |
| all rights reserved   |                    |                       |                 |