

DIESEL ENGINES SPECIFICATIONS



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Chapter II Diesel Engine Specification

MF3D14, MF4D18 Type Diesel Engine

MF3D14, MF4D18.....Base type;

MF3DPW, MF4D18PW.....General power

MF3D14PV, MF4D18PV.....Genset use;

MF3D14PM, MF4D18PM.....Marine use

| | | | |
|----------|-----------------------------------|---------------------------------|----------------------------|
| MF3D14PW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 20.5(28)/3000 | 18(25.5)/3000 | ≥72/1800rpm |
| MF4D18PW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 28(38)/3000 | 26(35)/3000 | ≥98/1800rpm |
| MF3D14PV | Prime rating Kw(ps)/rpm | 10(13.5)/1500rpm | 12(16)/1800rpm |
| MF4D18PV | Standby rating Kw(ps)/rpm | 15(20)/1500rpm | 18(25)/1800rpm |

Diesel Engine Main Specifications

| | |
|--|---|
| Engine type | Vertical, in-line, water cooling, 4-strook |
| No. of cylinders bore*stroke | 3-3.15*3.54 and 4-3.15*3.54(inch) |
| Type of combustion chamber | Direct injection, square form |
| Poston display cement | 1.385MF and 1.812MF |
| Firing order | 1-3-2 and 1-3-4-2 |
| Direction of rotation (view from flywheel end) | Counter clockwise |
| Starting method | Electric starting |
| Lube oil pressure (M Pa) | 0.20-0.40 |
| Charging generator | Voltage...12V; Power...500W |
| Starting motor | Voltage...12V; Power...205kw |
| Engine stop method | Cut-off fuel supply |
| Lubrication method | Forced and splash |
| Cooling method | Forced close and cycle |
| Speed droop | 5(TPV); 10 (TPV) |
| Idle speed | 650rpm |
| Thermostat: Opening temperature | 82 Fully opened temperature:95 |
| Top tank temperature:Normal:80-85 | Max.allowable:95 |
| Min.allowable radiator cap pressure | (pis):7 |
| Flywheel housing | SAE No.4 with flat pad |
| Flywheel | SAE 6-1/2" or SAE 7-1/2" |

MF4D24, MF4D28, MF4D30 Type Diesel Engine

MF4D20, MF4D24, MF4D30...Base type; MF4D20PW, MF4D24PW, MF4D30PW.....General power
MF4D20PV, MF4D24PV, MF4D30PV.....Genset use; MF4D20PM, MF4D24PM, MF4D30PMMarine use

| | | | |
|----------|-----------------------------------|---------------------------------|----------------------------|
| MF4D24PW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 46(62)/3200 | 42(57)/3200 | ≥155/1800rpm |
| MF4D28PW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 50(68)/3000 | 46(62)/3000 | ≥173/1800rpm |
| MF4D30PW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 55(75)/3600 | 50(68)/3600 | ≥203/2200rpm |
| MF4D24PV | Prime rating Kw(ps)/rpm | 24(33)/1500rpm | 26(35)/1800rpm |
| MF4D28PV | Standby rating Kw(ps)/rpm | 28(38)/1500rpm | 30(40)/1800rpm |
| MF4D30PV | Standby rating Kw(ps)/rpm | 30(40)/1500rpm | 33(44)/1800rpm |
| MF4D24PM | Continuous | Intermittent | Net weight |
| | 15 ⁰ | 18 ⁰ | ≤345kg |
| MF4D28PM | Continuous | Intermittent | Net weight |
| | 15 ⁰ | 18 ⁰ | ≤355kg |
| MF4D30PM | Continuous | Intermittent | Net weight |
| | 15 ⁰ | 18 ⁰ | ≤365kg |

Diesel Engine Main Specifications

| Engine type | Vertical, in-line, water cooling, 4-strook |
|--|---|
| No.of cylinders bore*stroke | 4-3.54*3.94 and 4-3.73*3.94;4-3.78*3.94(inch) |
| Type of combustion chamber | Direct injection, square form |
| Poston display cement | 2.42MF and 2.81MF;2.97MF |
| Firing order | 1-3-4-2 |
| Direction of rotation (view from flywheel end) | Counter clockwise |
| Starting method | Electric starting |
| Lube oil pressure (M Pa) | 0.20-0.40 |
| Charging generator | Voltage...12V; Power...500W |
| Starting motor | Voltage...12V; Power...2.5kw |
| Engine stop method | Cut-off fuel supply |
| Lubrication method | Forced and splash |
| Cooling method | Forced close and cycle |
| Speed droop | 5(TPV); 10 (TPV) |
| Idle speed | 650rpm |
| Thermostat: Opening temperature | 82; Fully opened temperature:95 |
| Top tank temperature:Normal:80-85 | Max.allowable:95 |
| Min.allowable radiator cap pressure | (pis):7 |
| Flywheel housing | SAE No.4 with flat pad |

| | |
|----------|--------------------------|
| Flywheel | SAE 6-1/2" or SAE 7-1/2" |
|----------|--------------------------|

MF4D32, MF4D32Ti Type Diesel Engine

MF4D32, MF4D32Ti.....Base type; MF4D32PW, MF4D32TiPW.....General power
MF4D32PM, MF4D32TiPM.....Marine use

| | | | |
|------------|-----------------------------------|---------------------------------|----------------------------|
| MF4D32PW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 62.5kw(85)/3600 | 58(79)/3600 | ≥200/2200rpm |
| MF4D32TiPW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 88(120)/3200 | 80(109)/3200 | ≥300/1800rpm |
| MF4D32PV | Prime rating Kw(ps)/rpm | 30(40)/1500rpm | 34(46)/1800rpm |
| MF4D32PM | Continuous | Intermittent | Net weight |
| | 15° | 18° | ≤295kg |
| MF4D32TiPM | Continuous | Intermittent | Net weight |
| | 15° | 18° | ≤355kg |

Diesel Engine Main Specifications

| | |
|--|---|
| Engine type | Vertical, in-line, water cooling, 4-strook |
| No.of cylinders bore*stroke | 4-3.85*4.13(inch) |
| Type of combustion chamber | Direct injection, square form |
| Poston display cement | 3.185MF |
| Firing order | 1-3-4-2 |
| Direction of rotation (view from flywheel end) | Counter clockwise |
| Starting method | Electric starting |
| Lube oil pressure (M Pa) | 0.20-0.40 |
| Charging generator | Voltage...12V; Power....500W |
| Starting motor | Voltage...12V; Power...2.5kw |
| Engine stop method | Cut-off fuel supply |
| Lubrication method | Forced and splash |
| Cooling method | Forced close and cycle |
| Speed droop | 5(TPV); 10 (TPV) |
| Idle speed | 650rpm |
| Thermostat: Opening temperature | 82; Fully opened temperature:95 |
| Top tank temperature:Normal:80-85 | Max.allowable:95 |
| Min.allowable radiator cap pressure | (pis):7 |
| Flywheel housing | SAE No.4 with flat pad |
| Flywheel | SAE 6-1/2" or SAE 7-1/2" |

MF4D38, MF4D38Ti Type Diesel Engine

MF4D38, MF4D38Ti.....Base type; MF4D38PW, MF4D38TiPW.....General power
MF4D38PM, MF4D38TiPM.....Marine use

| | | | |
|------------|-----------------------------------|---------------------------------|----------------------------|
| MF4D38PW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 66kw(89)/3200 | 60(81)/3200 | ≥280/1800rpm |
| MF4D38TiPW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 103(140)/2600 | 90(120)/2600 | ≥360/1500rpm |
| MF4D38PV | Prime rating Kw(ps)/rpm | 30(40)/1500rpm | 34(46)/1800rpm |
| MF4D38PM | Continuous | Intermittent | Net weight |
| | 15 ⁰ | 18 ⁰ | ≤400kg |
| MF4D38TiPM | Continuous | Intermittent | Net weight |
| | 15 ⁰ | 18 ⁰ | ≤455kg |

Diesel Engine Main Specifications

| Engine type | Vertical, in-line, water cooling, 4-strook |
|--|---|
| No.of cylinders bore*stroke | 4-4.03*4.64(inch) |
| Type of combustion chamber | Direct injection, square form |
| Poston display cement | 3.815MF |
| Firing order | 1-3-4-2 |
| Direction of rotation (view from flywheel end) | Counter clockwise |
| Starting method | Electric starting |
| Lube oil pressure (M Pa) | 0.20-0.40 |
| Charging generator | Voltage...24V; Power...500W |
| Starting motor | Voltage...24V; Power...2.5kw |
| Engine stop method | Cut-off fuel supply |
| Lubrication method | Forced and splash |
| Cooling method | Forced close and cycle |
| Speed droop | 5(TPV); 10 (TPV) |
| Idle speed | 650rpm |
| Thermostat: Opening temperature | 82; Fully opened temperature:95 |
| Top tank temperature:Normal:80-85 | Max.allowable:95 |
| Min.allowable radiator cap pressure | (psi):7 |
| Flywheel housing | SAE No.4 with flat pad |
| Flywheel | SAE 11-1/2" |

MF4D50, MF4D50Ti Type Diesel Engine

MF4D50, MF4D50Ti.....Base type; MF4D50PW, MF4D50TiPW.....General power
MF4D50PM, MF4D50TiPM.....Marine use

| | | | |
|------------|-----------------------------------|---------------------------------|----------------------------|
| MF4D50PW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 88kw(120)/2800 | 80(109)/3200 | ≥400/1800rpm |
| MF4D50TiPW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 127(172)/2300 | 115(157)/2300 | ≥465/1500rpm |
| MF4D50PV | Prime rating Kw(ps)/rpm | 51(70)/1500rpm | 58(79)/1800rpm |
| MF4D50PM | Continuous | Intermittent | Net weight |
| | 15 ⁰ | 18 ⁰ | ≤455kg |
| MF4D50TiPM | Continuous | Intermittent | Net weight |
| | 15 ⁰ | 18 ⁰ | ≤490kg |

Diesel Engine Main Specifications

| Engine type | Vertical, in-line, water cooling, 4-strook |
|--|---|
| No.of cylinders bore*stroke | 4-4.45*4.92(inch) |
| Type of combustion chamber | Direct injection, square form |
| Poston display cement | 5.02MF |
| Firing order | 1-3-4-2 |
| Direction of rotation (view from flywheel end) | Counter clockwise |
| Starting method | Electric starting |
| Lube oil pressure (M Pa) | 0.20-0.40 |
| Charging generator | Voltage...24V; Power....500W |
| Starting motor | Voltage...24V; Power...3.0kw |
| Engine stop method | Cut-off fuel supply |
| Lubrication method | Forced and splash |
| Cooling method | Forced close and cycle |
| Speed droop | 5(TPV); 10 (TPV) |
| Idle speed | 650rpm |
| Thermostat: Opening temperature | 82; Fully opened temperature:95 |
| Top tank temperature:Normal:80-85 | Max.allowable:95 |
| Min.allowable radiator cap pressure | (psi):7 |
| Flywheel housing | SAE No.4 with flat pad |
| Flywheel | SAE 11-1/2" |

MF6D58, MF6D58Ti Type Diesel Engine

MF6D58, MF6D58Ti.....Base type; MF6D58PW, MF6D58TiPW.....General power
MF6D58PM, MF6D58TiPM.....Marine use

| | | | |
|------------|-----------------------------------|---------------------------------|----------------------------|
| MF6D58PW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 103kw(140)/3000 | 80(109)/3000 | ≥420/1800rpm |
| MF6D58TiPW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 126(170)/2600 | 115(157)/2600 | ≥465/1500rpm |
| MF4D50PV | Prime rating Kw(ps)/rpm | 51(70)/1500rpm | 58(79)/1800rpm |
| MF6D58PM | Continuous | Intermittent | Net weight |
| | 15 ⁰ | 18 ⁰ | ≤620kg |
| MF6D58TiPM | Continuous | Intermittent | Net weight |
| | 15 ⁰ | 18 ⁰ | ≤690kg |

Diesel Engine Main Specifications

| | |
|--|---|
| Engine type | Vertical, in-line, water cooling, 4-strook |
| No.of cylinders bore*stroke | 6-4.02*4.65(inch) |
| Type of combustion chamber | Direct injection, square form |
| Poston display cement | 5.823MF |
| Firing order | 1-5-3-6-2-4 |
| Direction of rotation (view from flywheel end) | Counter clockwise |
| Starting method | Electric starting |
| Lube oil pressure (M Pa) | 0.20-0.40 |
| Charging generator | Voltage...24V; Power...500W |
| Starting motor | Voltage...24V; Power...3.0kw |
| Engine stop method | Cut-off fuel supply |
| Lubrication method | Forced and splash |
| Cooling method | Forced close and cycle |
| Speed droop | 5(TPV); 10 (TPV) |
| Idle speed | 650rpm |
| Thermostat: Opening temperature | 82; Fully opened temperature:95 |
| Top tank temperature:Normal:80-85 | Max.allowable:95 |
| Min.allowable radiator cap pressure | (psi):7 |
| Flywheel housing | SAE No.3 with flat pad |
| Flywheel | SAE 11-1/2" |

MF6D71, MF6D71Ti Type Diesel Engine

MF6D71, MF6D71Ti.....Base type; MF6D71PW, MF6D71TiPW.....General power
MF6D71PM, MF6D71TiPM.....Marine use

| | | | |
|------------|-----------------------------------|---------------------------------|----------------------------|
| MF6D71PW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 117kw(160)/3000 | 110(150)/3000 | ≥580/1800rpm |
| MF6D71TiPW | Intermittent rating Kw(ps)/rpm | Continuous rating Kw(ps)/rpm | Max.torque Nm(kgfm)/rpm |
| | 226(300)/2600 | 200(270)/2600 | ≥730/1500rpm |
| MF4D71PV | Prime rating Kw(ps)/rpm | 70(95)/1500rpm | 80(180)/1800rpm |
| MF4D71TiPV | Standby rating Kw(ps)/rpm | 148(201)1500rpm | 159(216)1800rpm |
| | <5 | <10 | ≤5 |
| MF6D71PM | Continuous | Intermittent | Net weight |
| | 15 ⁰ | 18 ⁰ | ≤750kg |
| MF6D71TiPM | Continuous | Intermittent | Net weight |
| | 15 ⁰ | 18 ⁰ | ≤790kg |

Diesel Engine Main Specifications

| Engine type | Vertical, in-line, water cooling, 4-strook |
|--|--|
| No.of cylinders bore*stroke | 6-4.33*4.92(inch) |
| Type of combustion chamber | Direct injection, square form |
| Poston display cement | 7.132MF |
| Firing order | 1-5-3-6-2-4 |
| Direction of rotation (view from flywheel end) | Counter clockwise |
| Starting method | Electric starting |
| Lube oil pressure (M Pa) | 0.20-0.40 |
| Charging generator | Voltage...24V; Power....500W |
| Starting motor | Voltage...24V; Power...3.0kw |
| Engine stop method | Cut-off fuel supply |
| Lubrication method | Forced and splash |
| Cooling method | Forced close and cycle |
| Speed droop | 5(TPV); 10 (TPV) |
| Idle speed | 650rpm |
| Thermostat: Opening temperature | 82; Fully opened temperature:95 |
| Top tank temperature:Normal:80-85 | Max.allowable:95 |
| Min.allowable radiator cap pressure | (psi):7 |
| Flywheel housing | SAE No.2 with flat pad |
| Flywheel | SAE 11-1/2" |