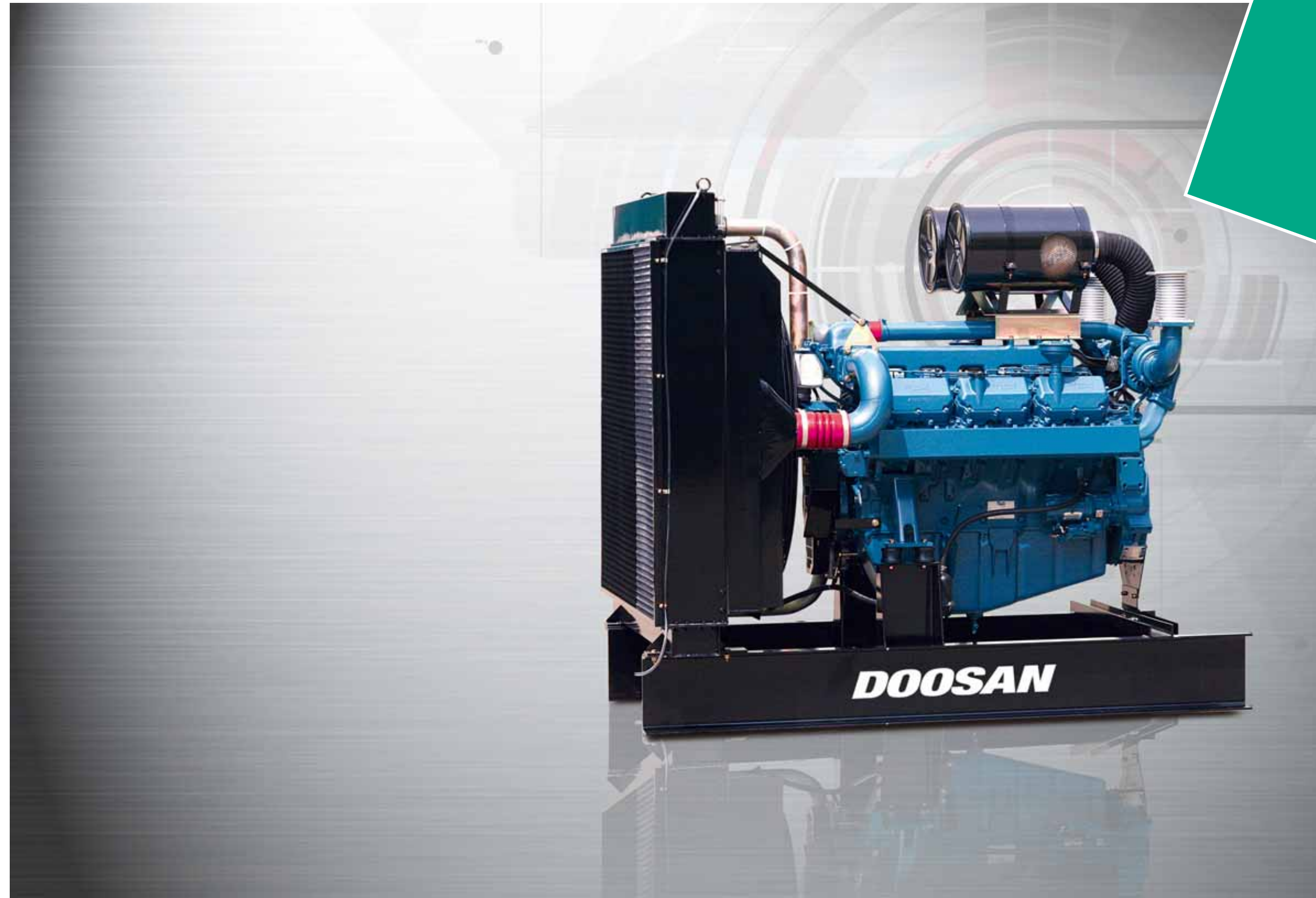




Doosan Infracore
Engines & Materials

Doosan Diesel Engine for Power unit & Fire Pump

Doosan Diesel Engine for
Power unit & Fire Pump



Doosan Infracore
Engines & Materials

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Doosan Infracore

The Introduction of Engines and Materials BG

We started producing diesel engines for the first time in 1958. Our production facility is located in Incheon, Korea and entered full production under the license of MAN technology in 1975 and ISUZU technology in 1979. Furthermore, we began to produce the CNG engine in 1998 so that our reinforced line up from Diesel engine to Natural Gas engine could supply more various choices and meet the various needs for customers.

We have two sites in Korea : an engine production facility and foundry shops producing cast components in Incheon, and an engine R&D facility in Kunsan.

We have steadily expanded our business on the foundation of accumulated technology & know-how, continued investment in R&D, and our abundant experience of developing over 1,200 different applications for the various equipments. We now



produce 66 typical models under the 1,200 horsepower.

Currently, with streamlined and integrated production facilities including iron casting, machining, and assembly line, the Incheon engine shop has the annual capacity of 20,000 units for small engine, 24,000 units for medium, 12,000 units for large, and 8,000 units for marine application engines. The Incheon foundry shop has the annual capacity of 36,000 tons.

The business organization in terms of its goods is largely divided into four groups - commercial vehicle engine, industrial engine, marine engine, and genset.



Engines & Materials BG

- History**
- 1958 Produce the Marine Engines co-developed with AVL
 - 1975 Begin to produce of medium duty engines under license of MAN(Germany)
 - 1979 Begin to produce of light duty engines under license of ISUZU(Japan)
 - 1985 Produce our own designed engine, STORM series
 - 1994 Acquire the ISO9001 certification
 - 1995 Produce our own designed engine, DE & DV series (EURO-)
 - 1997 Acquire ISO14001 certification
 - 1998 Produce EURO- engines(TIS) and CNG engines
 - 2004 Produce DL08, DV11(EURO- , TIER-)
 - 2006 Start to produce DL06(EURO- , TIER-)
 - 2007 Produce EURO 4 engines (DL06 S, DL08 S, DV11 S)
 - 2008 Reached One-million diesel engine produce on March.

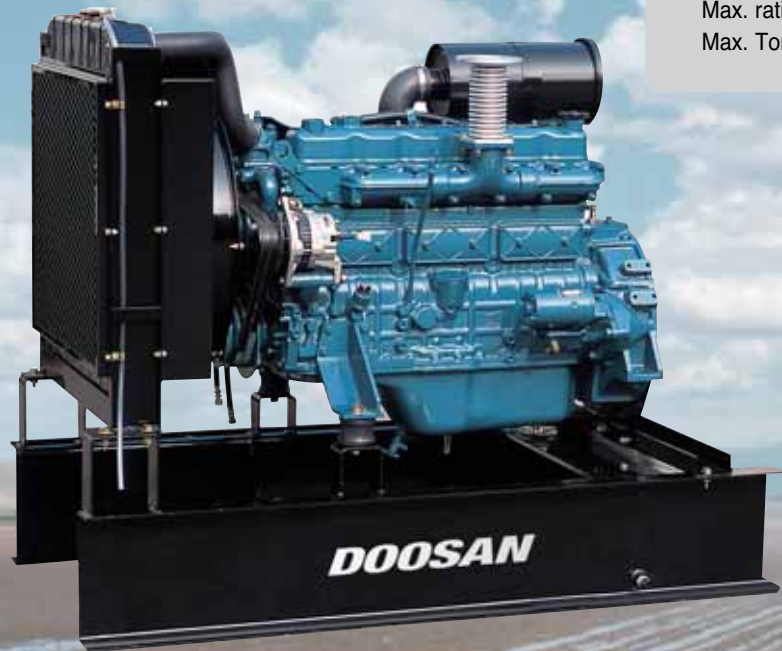
- Quality Award**
- 1983 Grand Prix of Quality Control (Honor of President/ Korea)
 - 1986 Iron Medal of Industry with STORM engine (Honor of President/ Korea)
 - 1994 Acquire ISO 9001/9002
 - 1995 Gold Medal of Q.C.C. Contest(Honor of President/ Korea)
 - 1996 Grand Prix Tech. of Environmental Reservation with DE12TI engine (Honor of President/ Korea)
 - 1997 Grand Prix of Quality Management (Honor of President/ Korea)
 - Acquire ISO 14001
 - 1999 Korean 100 Technology of 20th century with GE12TI CNG Engine (Seoul Economy Daily, Ministry of Science and Technology/Korea)
 - 2000 Best Award on Engine with GE12TI engine (NGV2000)
 - 2006 Award on GM Group Supplier of the Year (SOY)

- Products**
- | | |
|--|--|
| Vehicle and Industrial Engine Group | Diesel & CNG Engine for Truck, Bus and Agricultural/ Construction Machinery, etc |
| Marine Engine Group | Diesel Engine for marine propulsion and Generator |
| Generator Engine Group | Diesel & NG Engine for Generator |
| Materials Group | Cast Iron Products
Aluminum Cast Products
Sintered Metal Products |

DOOSAN

DIESEL ENGINE

PU066

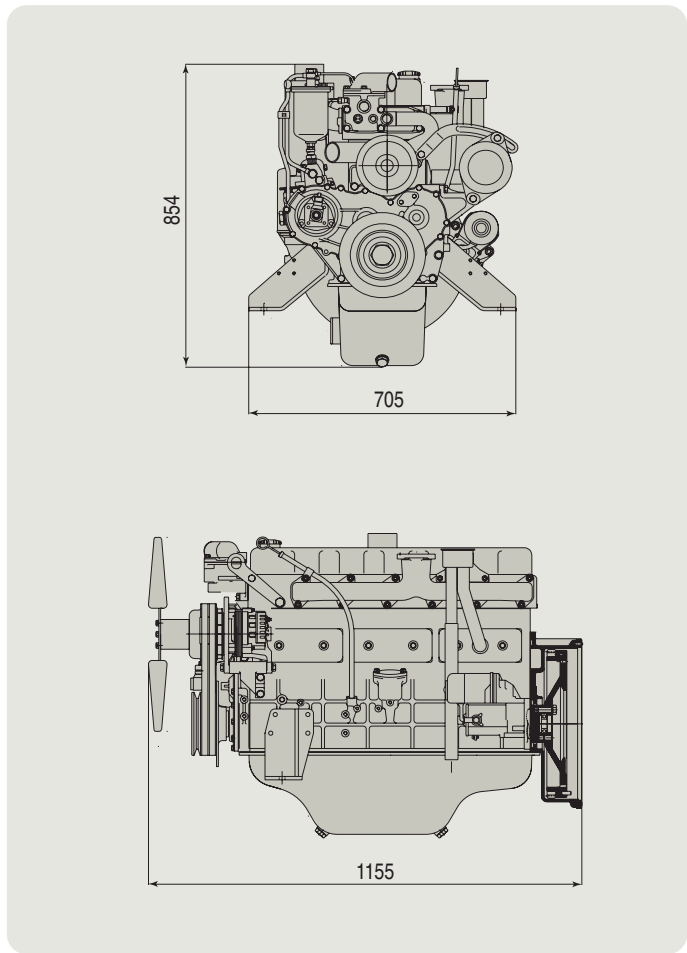


● **PU066** Power Unit Engine rating according to DIN 6270B
Max. rating 85kW(116PS)@2,800rpm
Max. Torque 353N.m(36kg.m)@1,600rpm

● Main Specification

Engine Model	PU066
Type	4 cycle, water cooled, overhead valve, in-line, 6 cylinder direct injection type
Flywheel Spec	SAE No. 3, 11 1/2 Counter clockwise
Direction of crankshaft rotation	viewed from flywheel
Firing order	1-5-3-6-2-4
Lub. oil capacity (liter)	13
Cooling water capacity (liter)	12
Fuel	Diesel fuel
Fuel injection pump	Bosch AD type
Governor	RSV all speed control type
Cooling fan	Blower type
Bore × Stroke (mm)	102 × 118
Displacement(liter)	5.8
Engine Size(L × H × W)	1,155 × 705 × 775
Weight	450

● Engine Dimension



DOOSAN

DIESEL ENGINE

PU086

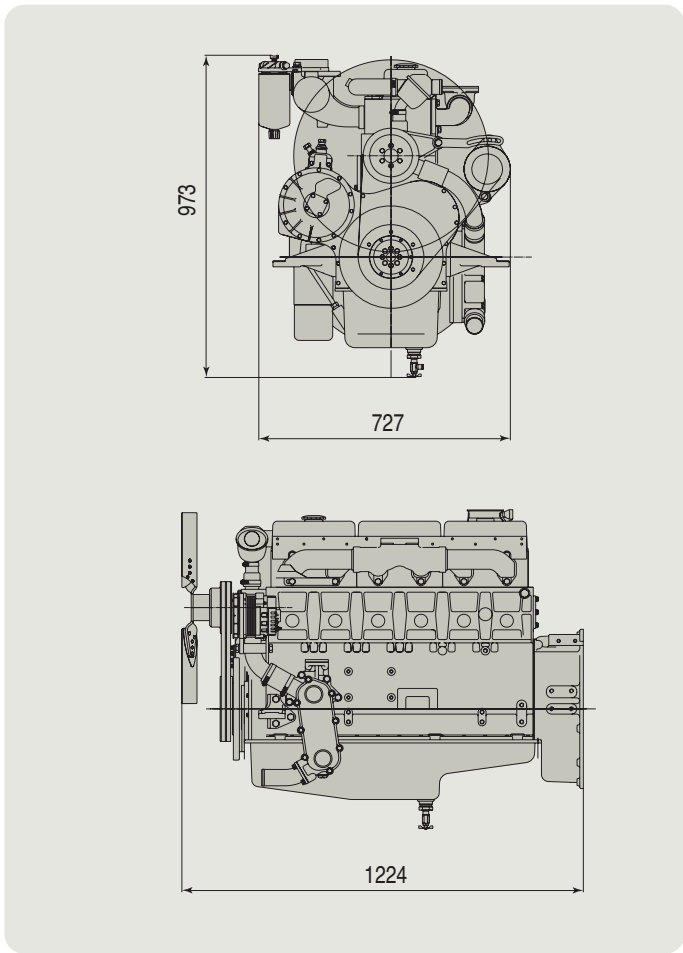


● **PU086** Power Unit Engine rating according to DIN 6270B
Max. rating 118kW(160PS)@2,200rpm
Max. Torque 588N.m(60kg.m)@1,600rpm

● Main Specification

Engine Model	PU086
Type	4 cycle, water cooled, overhead valve, in-line, 6 cylinder direct injection type
Flywheel Spec	SAE No. 1, 14 Counter clockwise
Direction of crankshaft rotation	viewed from flywheel
Firing order	1-5-3-6-2-4
Lub. oil capacity (liter)	15
Cooling water capacity (liter)	14
Fuel	Diesel fuel
Fuel injection pump	In-line type
Governor	RSV all speed control type
Cooling fan	Blower type
Bore × Stroke (mm)	111 × 139
Displacement(liter)	8.1
Engine Size(L × H × W)	1,244 × 716 × 900
Weight	780

● Engine Dimension



DOOSAN

DIESEL ENGINE

PU086T

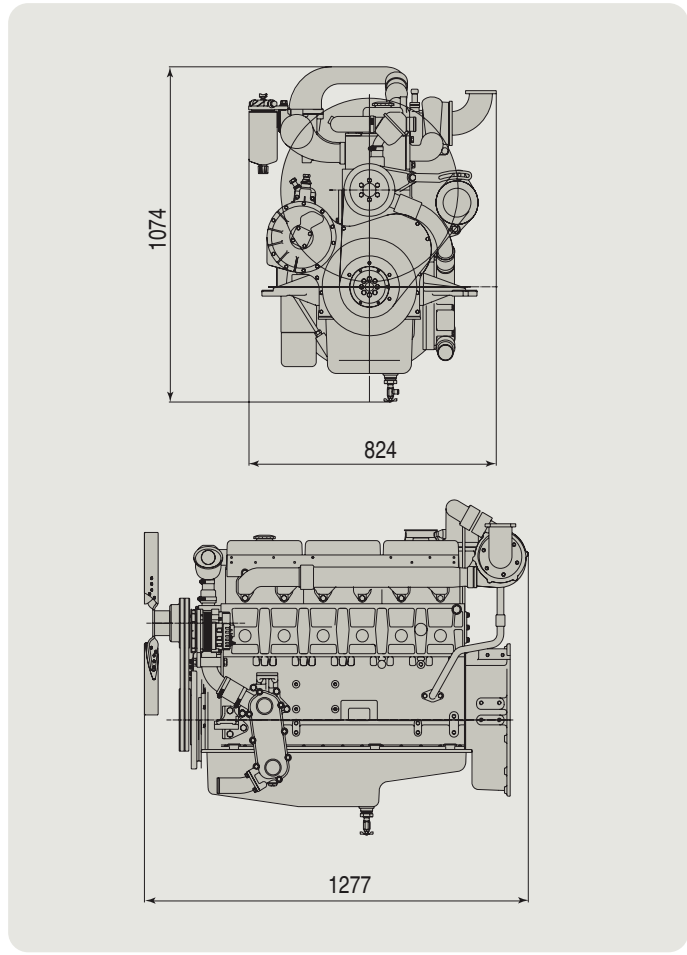


● **PU086T** Power Unit Engine rating according to DIN 6270B
Max. rating 149kW(205PS)@2,200rpm
Max. Torque 826N.m(84.3kg.m)@1,400rpm

● Main Specification

Engine Model	PU086T
Type	4 cycle, water cooled, overhead valve, in-line, 6 cylinder direct injection type, turbocharger
Flywheel Spec	SAE No. 1, 14 Counter clockwise
Direction of crankshaft rotation	viewed from flywheel
Firing order	1-5-3-6-2-4
Lub. oil capacity (liter)	15
Cooling water capacity (liter)	14
Fuel	Diesel fuel
Fuel injection pump	Bosch P type
Governor	RSV all speed control type
Cooling fan	Blower type
Bore × Stroke (mm)	111 × 139
Displacement(liter)	8.1
Engine Size(L × H × W)	1,277 × 824 × 1,001
Weight	780

● Engine Dimension



DOOSAN

DIESEL ENGINE

PU086TI

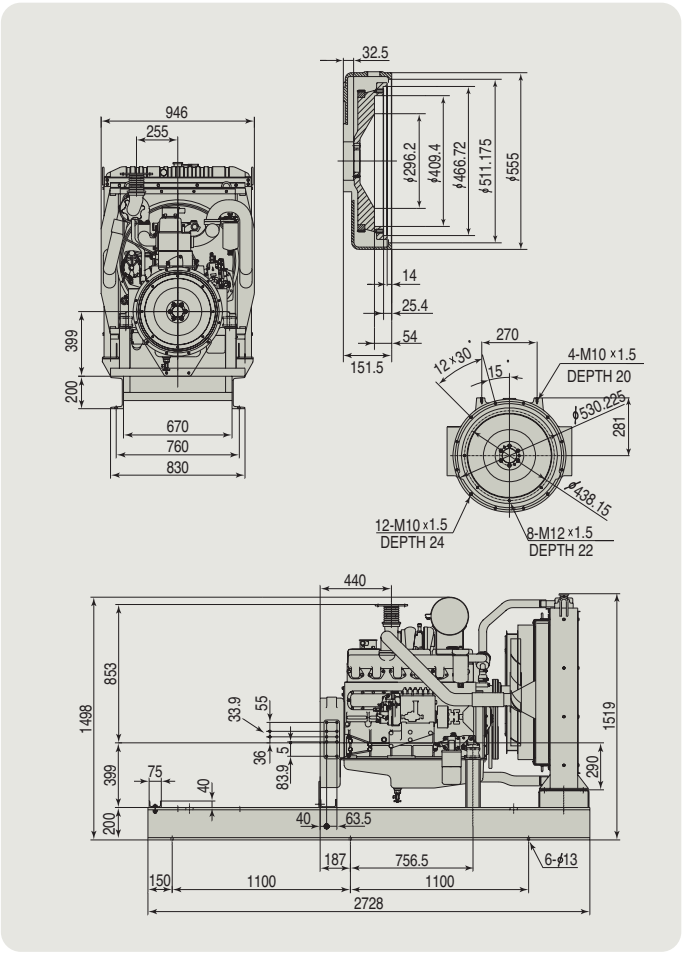


● **PU086TI** Power Unit Engine rating according to DIN 6270B
Max. rating 213kW(290PS)@2,200rpm
Max. Torque 1095N.m(111.7kg.m)@1,600rpm

● Main Specification

Engine Model	PU086TI
Type	4 cycle, water cooled, overhead valve, in-line, 6 cylinder direct injection type, turbocharger, intercooler
Flywheel Spec	SAE No. 1, 14 Counter clockwise
Direction of crankshaft rotation	viewed from flywheel
Firing order	1-5-3-6-2-4
Lub. oil capacity (liter)	15
Cooling water capacity (liter)	14
Fuel	Diesel fuel
Fuel injection pump	Bosch P type
Governor	RSV all speed control type
Cooling fan	Blower type
Bore × Stroke (mm)	111 × 139
Displacement(liter)	8.1
Engine Size(L × H × W)	1,242 × 918 × 1,100
Weight	792

● Engine Dimension



DOOSAN

DIESEL ENGINE

PU126TI

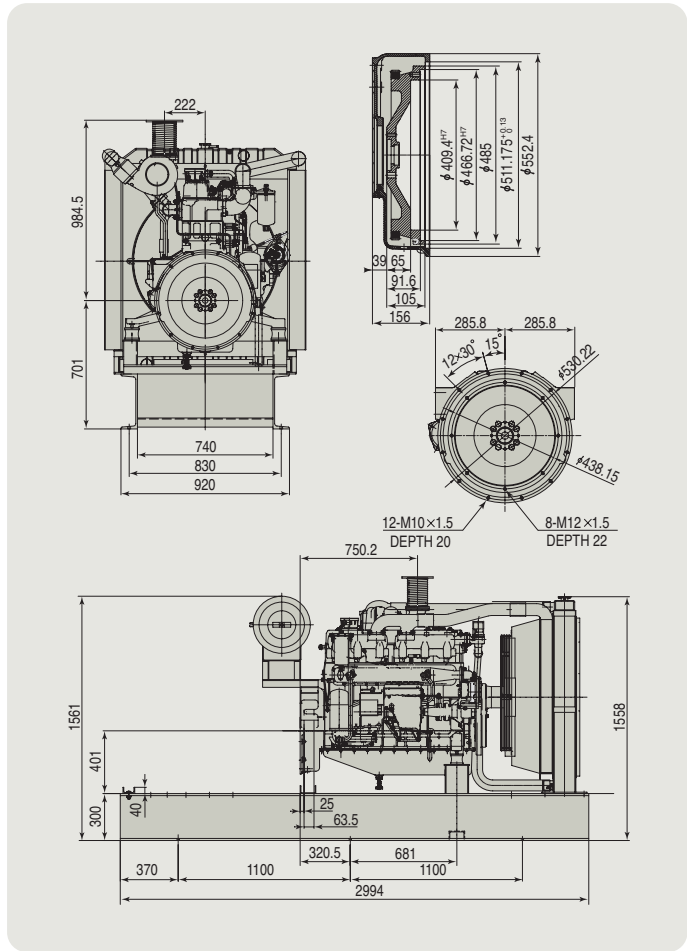


● **PU126TI** Power Unit Engine rating according to DIN 6270B
Max. rating 294kW(400PS)@2,100rpm
Max. Torque 1521N.m(155kg.m)@1,400rpm

● Main Specification

Engine Model	PU126TI
Type	4 cycle, water cooled, overhead valve, in-line, 6 cylinder direct injection type, turbocharger, intercooler
Flywheel Spec	SAE No. 1, 14
Direction of crankshaft rotation	Counter clockwise viewed from flywheel
Firing order	1-5-3-6-2-4
Lub. oil capacity (liter)	23
Cooling water capacity (liter)	19
Fuel	Diesel fuel
Fuel injection pump	Bosch P type
Governor	RSV all speed control control type
Cooling fan	Blower type
Bore × Stroke (mm)	123 × 155
Displacement(liter)	11.1
Engine Size(L × H × W)	1,383 × 870 × 1,207
Weight	910

● Engine Dimension



DOOSAN

DIESEL ENGINE

PU158TI

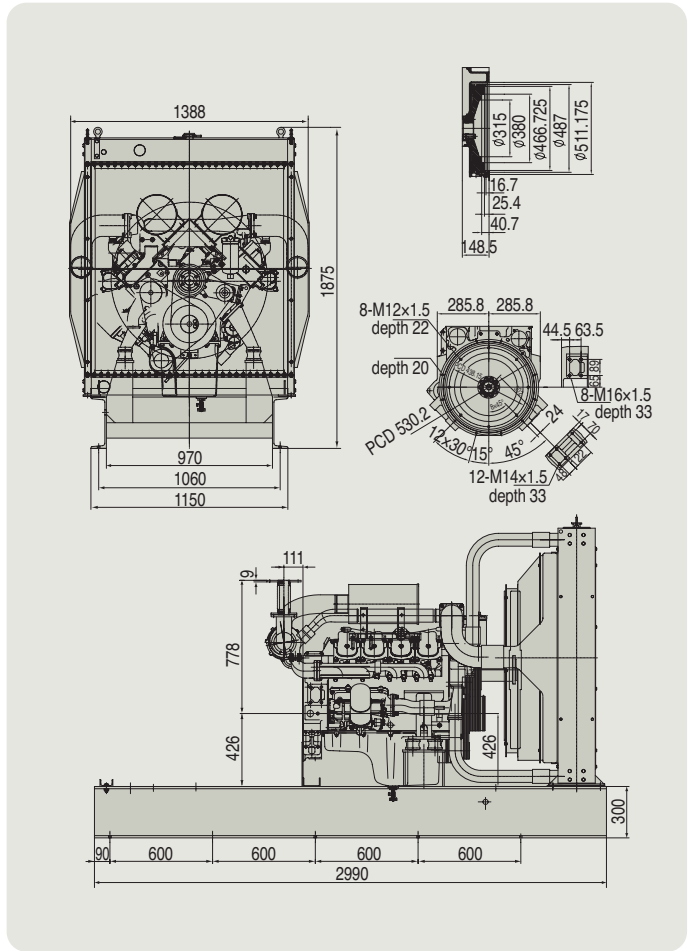


● **PU158TI** Power Unit Engine rating according to DIN 6270B
Max. rating 397kW(540PS)@2,100rpm
Max. Torque 2117N.m(216kg.m)@1,500rpm

● Main Specification

Engine Model	PU158TI
Type	4 cycle, water cooled, overhead valve, V-type, 8 cylinder direct injection type, turbocharger, intercooler
Flywheel Spec	SAE No. 1, 14
Direction of crankshaft rotation	Counter clockwise viewed from flywheel
Firing order	1-5-7-2-6-3-4-8
Lub. oil capacity (liter)	28
Cooling water capacity (liter)	20
Fuel	Diesel fuel
Fuel injection pump	Bosch P type
Governor	RQV all speed control type
Cooling fan	Blower type
Bore × Stroke (mm)	128 × 142
Displacement(liter)	14.6
Engine Size(L × H × W)	1,484 × 1,389 × 1,162
Weight	950

● Engine Dimension



DOOSAN
DIESEL ENGINE

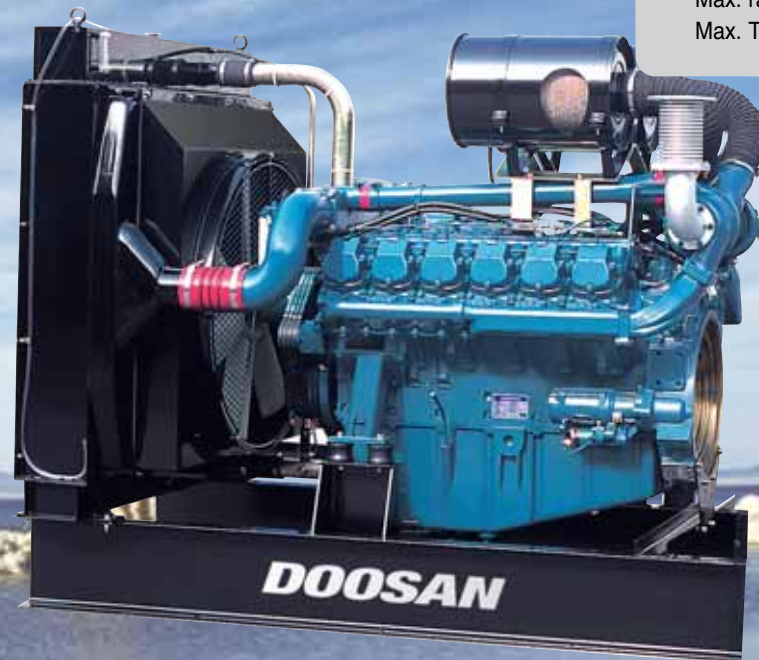
PU180TI



- **PU180TI** Power Unit Engine rating according to DIN 6270B
Max. rating 478kW(650PS)@2,100rpm
Max. Torque 2303N.m(235kg.m)@1,500rpm

DOOSAN
DIESEL ENGINE

PU222TI

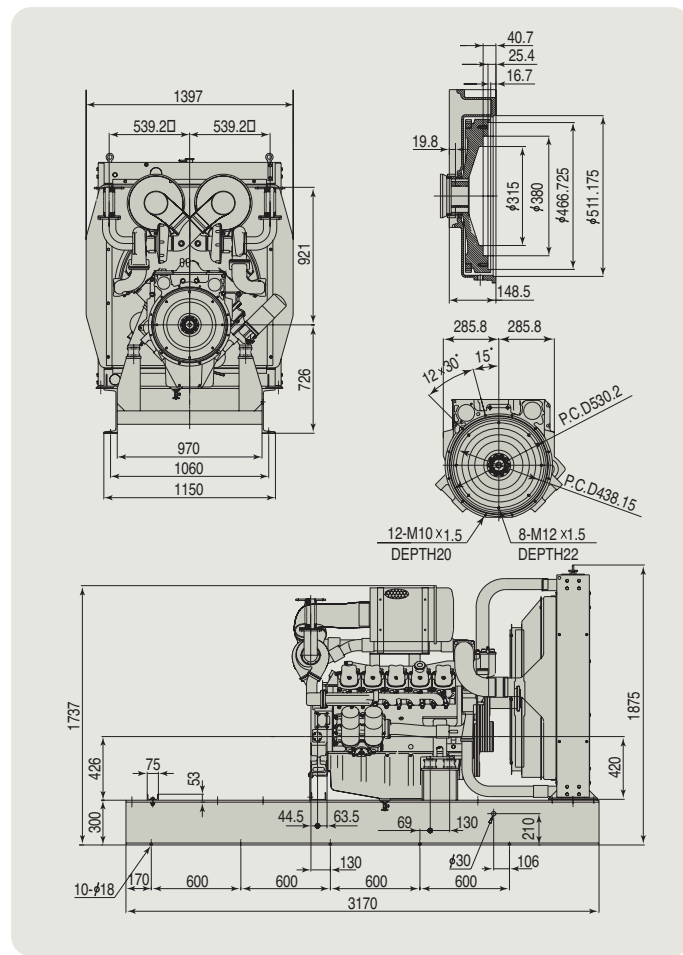


- **PU222TI** Power Unit Engine rating according to DIN 6270B
Max. rating 589kW(800PS)@2,100rpm
Max. Torque 3205N.m(327kg.m)@1,500rpm

● Main Specification

Engine Model	PU180TI
Type	4 cycle, water cooled, overhead valve, V-type, 10 cylinder direct injection type, turbocharger, intercooler
Flywheel Spec	SAE No. 1, 14
Direction of crankshaft rotation	Counter clockwise viewed from flywheel
Firing order	1-6-5-10-2-7-3-8-4-9
Lub. oil capacity (liter)	35
Cooling water capacity (liter)	21
Fuel	Diesel fuel
Fuel injection pump	Bosch P type
Governor	RQV all speed control type
Cooling fan	Blower type
Bore × Stroke (mm)	128 × 142
Displacement(liter)	18.3
Engine Size(L × H × W)	1,557 × 1,389 × 1,248
Weight	1,175

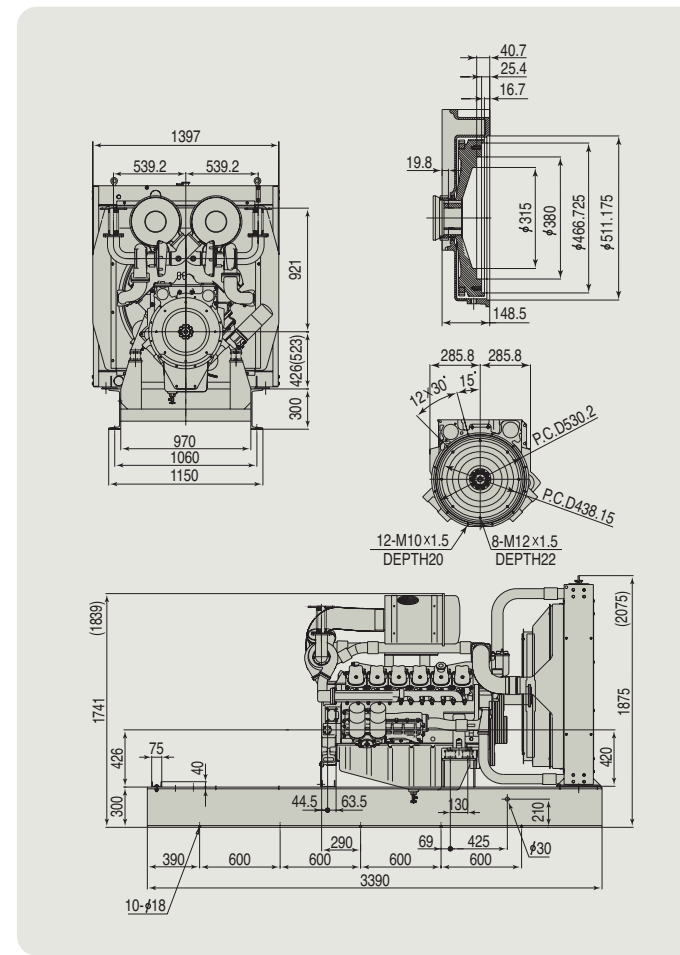
● Engine Dimension



● Main Specification

Engine Model	PU222TI
Type	4 cycle, water cooled, overhead valve, V-type, 12 cylinder direct injection type, turbocharger, intercooler
Flywheel Spec	SAE No. 1, 14
Direction of crankshaft rotation	Counter clockwise viewed from flywheel
Firing order	1-12-5-8-3-10-6-7-2-11-4-9
Lub. oil capacity (liter)	40
Cooling water capacity (liter)	23
Fuel	Diesel fuel
Fuel injection pump	In-line type
Governor	RQV all speed control type
Cooling fan	Blower type
Bore × Stroke (mm)	128 × 142
Displacement(liter)	21.9
Engine Size(L × H × W)	1,717 × 1,389 × 1,288
Weight	1,575

● Engine Dimension



Fire Pump

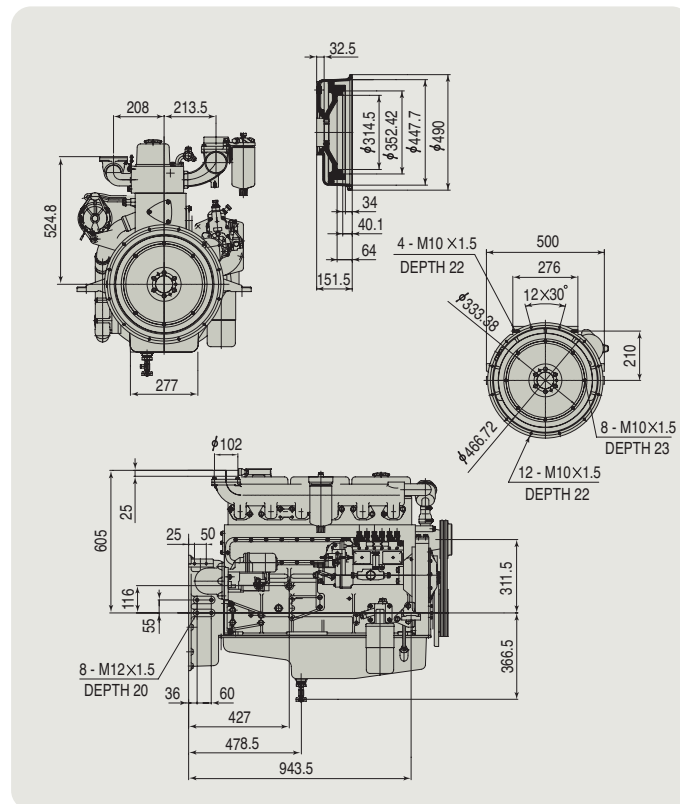
PU086

Max. Rating kW(PS)@rpm 121 (165) / 2,450
Min. Rating kW(PS)@rpm 55 (75) / 1,000

Main Specification

Engine Model	PU086
Type	4 cycle, water cooled, overhead valve, in-line, 6 cylinder direct injection type
Flywheel Spec	SAE No. 1, 14
Direction of crankshaft rotation	Counter clockwise viewed from flywheel
Firing order	1-5-3-6-2-4
Lub. oil capacity (liter)	15
Cooling water capacity (liter)	14
Fuel	Diesel fuel
Fuel injection pump	Bosch P type
Governor	RSV all speed control type
Cooling fan	N/A
Bore × Stroke (mm)	111 × 139
Displacement(liter)	8.1
Engine Size(L × H × W)	1,117 × 759 × 977
Weight	780

Engine Dimension



Fire Pump

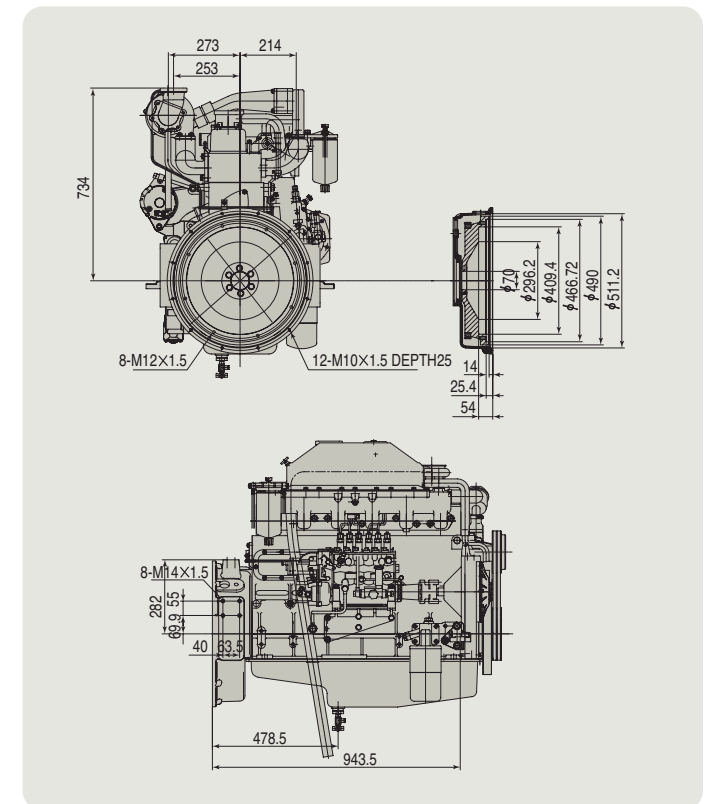
PU086TI

Max. Rating kW(PS)@rpm 228 (310) / 2,450
Min. Rating kW(PS)@rpm 77 (105) / 1,000

Main Specification

Engine Model	PU086TI
Type	4 cycle, water cooled, overhead valve, in-line, 6 cylinder direct injection type turbocharger intercooler
Flywheel Spec	SAE No. 1, 14
Direction of crankshaft rotation	Counter clockwise viewed from flywheel
Firing order	1-5-3-6-2-4
Lub. oil capacity (liter)	15
Cooling water capacity (liter)	14
Fuel	Diesel fuel
Fuel injection pump	Bosch P type
Governor	RSV all speed control type
Cooling fan	N/A
Bore × Stroke (mm)	111 × 139
Displacement(liter)	8.1
Engine Size(L × H × W)	1,116 × 728 × 1,106
Weight	800

Engine Dimension



Fire Pump

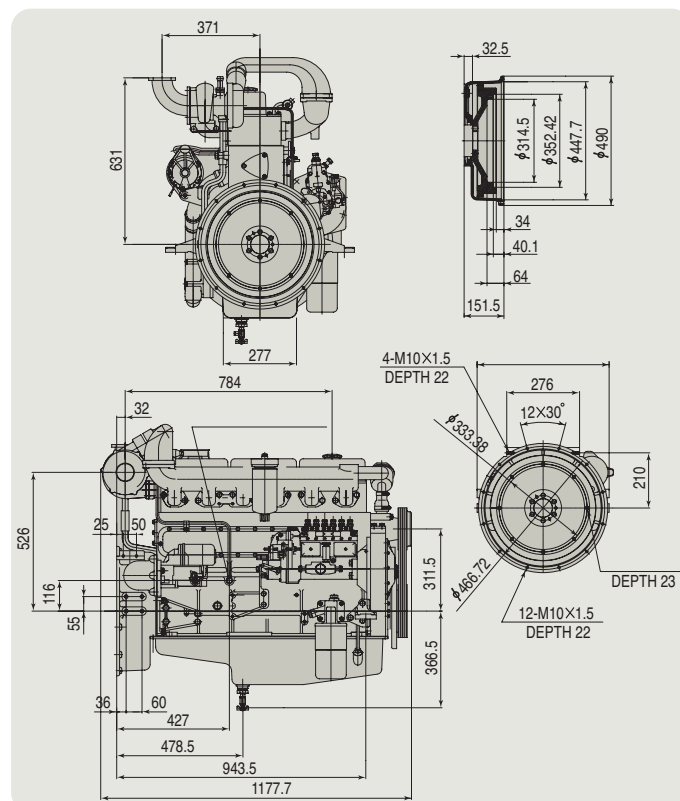
PU086T

Max. Rating kW(PS)@rpm 173 (235) / 2,450
Min. Rating kW(PS)@rpm 85 (115) / 1,000

Main Specification

Engine Model	PU086T
Type	4 cycle, water cooled, overhead valve, in-line, 6 cylinder direct injection type turbocharger
Flywheel Spec	SAE No. 1, 14
Direction of crankshaft rotation	Counter clockwise viewed from flywheel
Firing order	1-5-3-6-2-4
Lub. oil capacity (liter)	15
Cooling water capacity (liter)	14
Fuel	Diesel fuel
Fuel injection pump	Bosch P type
Governor	RSV all speed control type
Cooling fan	N/A
Bore × Stroke (mm)	111 × 139
Displacement(liter)	8.1
Engine Size(L × H × W)	1,183 × 824 × 1,074
Weight	790

Engine Dimension



Fire Pump

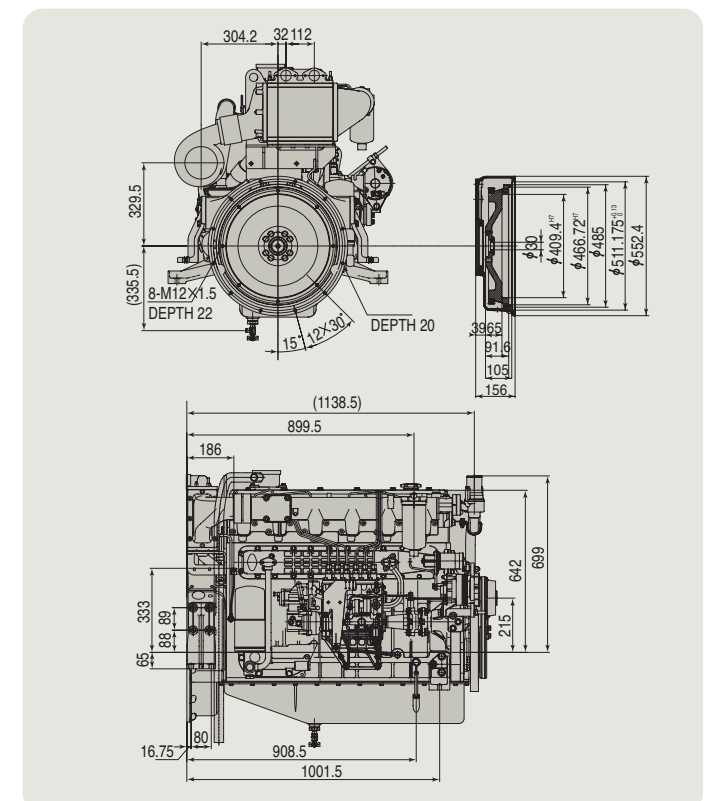
PU126TI

Max. Rating kW(PS)@rpm 294 (400) / 2,100
Min. Rating kW(PS)@rpm 143 (195) / 1,000

Main Specification

Engine Model	PU126TI
Type	4 cycle, water cooled, overhead valve, in-line, 6 cylinder direct injection type turbocharger intercooler
Flywheel Spec	SAE No. 1, 14
Direction of crankshaft rotation	Counter clockwise viewed from flywheel
Firing order	1-5-3-6-2-4
Lub. oil capacity (liter)	23
Cooling water capacity (liter)	19
Fuel	Diesel fuel
Fuel injection pump	Bosch P type
Governor	RSV all speed control type
Cooling fan	N/A
Bore × Stroke (mm)	123 × 155
Displacement(liter)	11.1
Engine Size(L × H × W)	1,223 × 890 × 1,095
Weight	925

Engine Dimension



Fire Pump

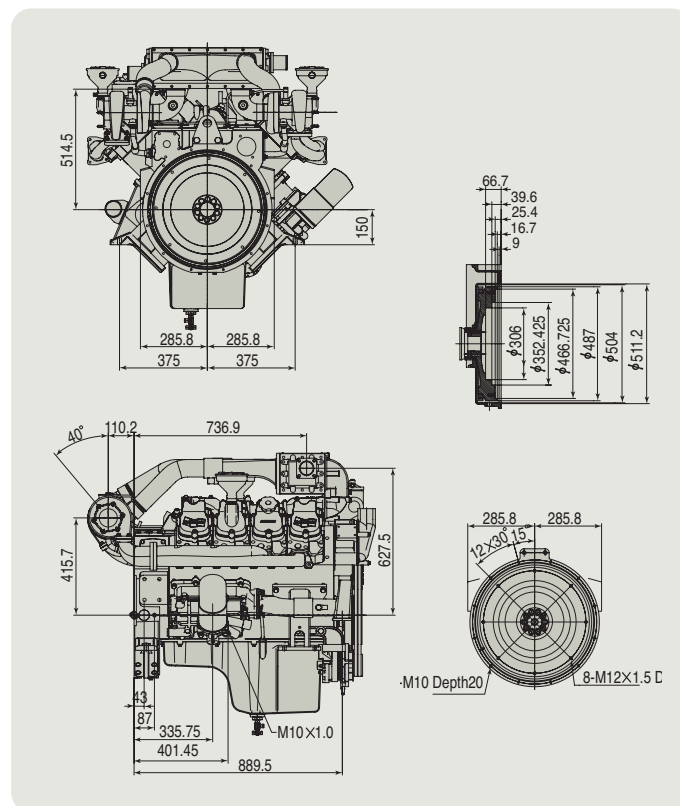
PU158TI

Max. Rating kW(PS)@rpm 408 (555) / 2,350
Min. Rating kW(PS)@rpm 338 (459) / 1,300

Main Specification

Engine Model	PU158TI
Type	4 cycle, water cooled, overhead valve, V-type, 8 cylinder direct injection type turbocharger intercooler
Flywheel Spec	SAE No. 1, 14
Direction of crankshaft rotation	Counter clockwise viewed from flywheel
Firing order	1-5-7-2-6-3-4-8
Lub. oil capacity (liter)	28
Cooling water capacity (liter)	20
Fuel	Diesel fuel
Fuel injection pump	Bosch P type
Governor	RQV all speed
Cooling fan	N/A
Bore × Stroke (mm)	128 × 142
Displacement(liter)	14.6
Engine Size(L × H × W)	1,229 × 1,140 × 1,205
Weight	1,000

Engine Dimension



Fire Pump

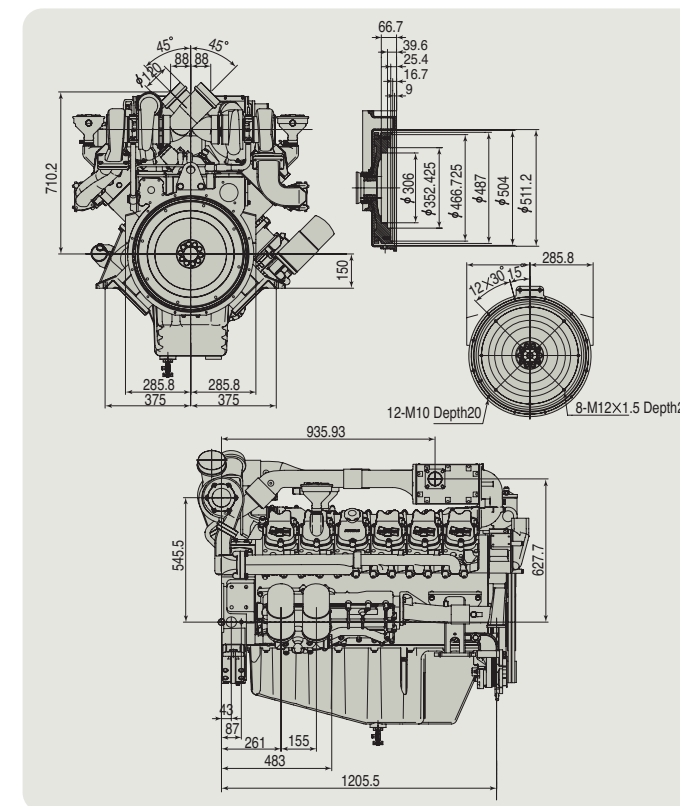
PU222TI

Max. Rating kW(PS)@rpm 625 (850) / 2,350
Min. Rating kW(PS)@rpm 515 (700) / 1,300

Main Specification

Engine Model	PU222TI
Type	4 cycle, water cooled, overhead valve, V-type, 12 cylinder direct injection type turbocharger intercooler
Flywheel Spec	SAE No. 1, 14
Direction of crankshaft rotation	Counter clockwise viewed from flywheel
Firing order	1-12-5-8-3-10-6-7-2-11-4-9
Lub. oil capacity (liter)	40
Cooling water capacity (liter)	23
Fuel	Diesel fuel
Fuel injection pump	Bosch P type
Governor	RQV all speed
Cooling fan	N/A
Bore × Stroke (mm)	128 × 142
Displacement(liter)	21.9
Engine Size(L × H × W)	1,453 × 1,140 × 1,292
Weight	1,650

Engine Dimension



Fire Pump

PU180TI

Max. Rating kW(PS)@rpm 511 (695) / 2,350
Min. Rating kW(PS)@rpm 398 (541) / 1,300

Main Specification

Engine Model	PU180TI
Type	4 cycle, water cooled, overhead valve, V-type, 10 cylinder direct injection type turbocharger intercooler
Flywheel Spec	SAE No. 1, 14
Direction of crankshaft rotation	Counter clockwise viewed from flywheel
Firing order	1-6-5-10-2-7-8-3-4--9
Lub. oil capacity (liter)	35
Cooling water capacity (liter)	21
Fuel	Diesel fuel
Fuel injection pump	Bosch P type
Governor	RQV all speed
Cooling fan	N/A
Bore × Stroke (mm)	128 × 142
Displacement(liter)	18.3
Engine Size(L × H × W)	1,295 × 1,140 × 1,262
Weight	1,225

Engine Dimension

