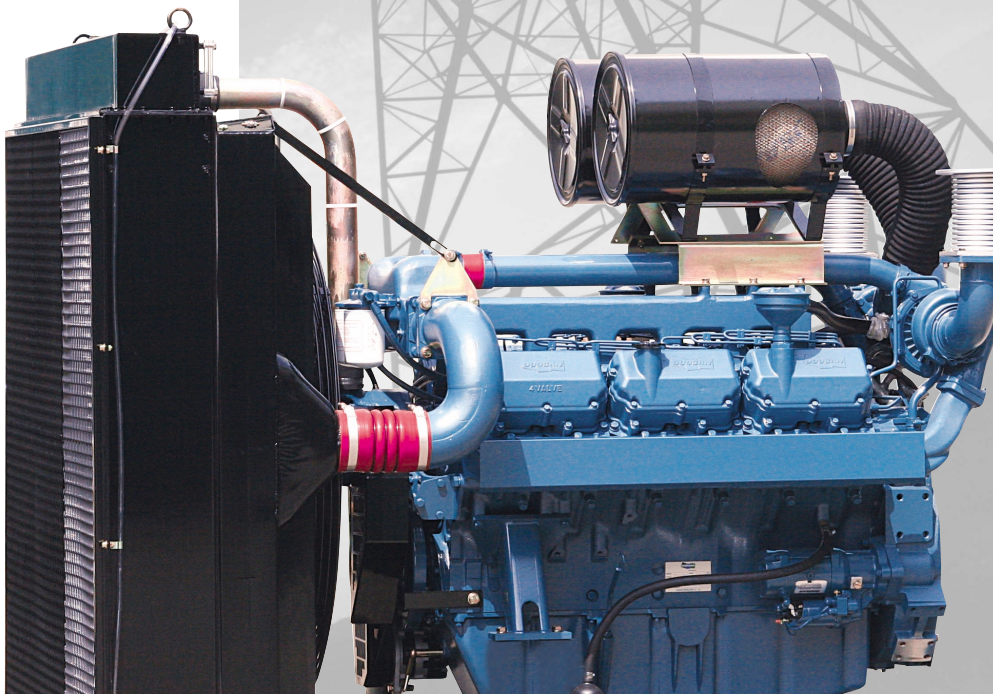
DOOSAN

Doosan Infracore
Engines & Materials

Gen Set / Power unit Engines



DOOSAN Doosan Infracore
Engines & Materials

Seoul Office : Overseas Marketing & Sales
Engines & Materials BG
Doosan Infracore Co., Ltd.
23rd Floor, Doosan Tower, 18-12,
Euljiro 6-ga, Jung-gu, Seoul, Korea.
Tel: +82-2-3398-8530~8546
Fax: +82-2-3398-8509

Web site : http://engine.doosaninfracore.co.kr

(Dec. 2006)

Doosan Infracore

Gen Set / Power unit Engines

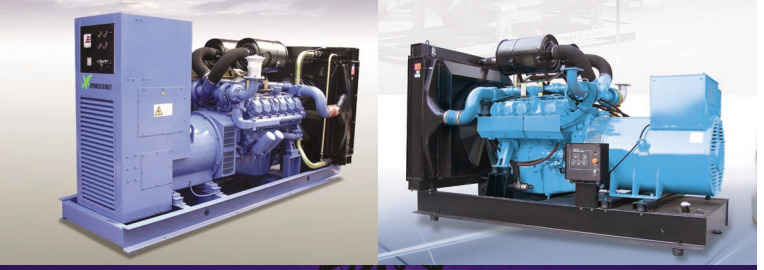
We started producing diesel engines for the first time in 1958. Our production facility is located in Incheon, Korea and entered full production under the license of MAN technology in 1975 and ISUZU techinology in 1979. Furthermore, we began to produce the CNG engine in 1998 so that our reinforced line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

We have three sites in Korea : an engine production facility, two foundry shops producing cast components in Incheon, and an engine R&D facility in Kunsan. Now 600 employees are employed in Engine Facility .

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 and the Jinheung foundry shop for 24,000 tons.

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



Clean Power Solution

Line-up

Generator Engines (G Drive/G Pac)

Model	No. of Cyl (Aspiration)	Disp (l)	BorexStroke (mm)	Output (ISO 3046 / 8528) kW(ps)@1800rpm Stanby / Prime	Output (ISO 3046 / 8528) kW(ps)@1500rpm Stanby / Prime	Dimension (LxWxH, mm)	Dry weight (kg)	Emission
DB33	L 4(NA)	3.3	102 x 100	35(47)/32(43)	29(39)/26(35)	870 x 705 x 749	310	TIER-I
P034TI	L 4(TI)	3.3	102 x 100	60(82)/55(75)	48(65)/42(57)	870 x 728 x 841	335	TIER-I
DB58	L 6(NA)	5.8	102 x 118	70(95)/64(87)	59(80)/54(73)	1,155 x 705 x 854	450	TIER-I
D1146	L 6(NA)	8.1	111 x 139	105(143)/96(130)	85(116)/77(105)	1,224 x 727 x 973	720	TIER-I
D1146T	L 6(TC)	8.1	111 x 139	138(187)/125(170)	118(160)/107(145)	1,277 x 824 x 1,074	780	TIER-I
P086TI-1	L 6(TI)	8.1	111 x 139	191(260) / 174(237)	164(223) / 149(203)	1,242 x 918 x 1,099.5	790	TIER-I
P086TI	L 6(TI)	8.1	111 x 139	223(303)/205(279)	199(270)/177(240)	1,242 x 918 x 1,100	790	TIER-II
P126TI	L 6(TI)	11.1	123 x 155	298(405)/278(378)	272(370)/241(328)	1,383 x 870 x 1,207	910	TIER-II
P126TI-II	L 6(TI)	11.1	126 x 155	342(465) / 307(418)	294(400) / 265(360)	1,383 x 913 x 1,207	910	TIER-I
P158LEI-1	V8(TI)	14.6	128 x 142	443(602) / 402(547)	414(563) / 363(494)	1,484 x 1,389 x 1,162	950	TIER-I
P158LE	V 8(TI)	14.6	128 x 142	443(602)/402(547)	414(563)/363(494)	1,484 x 1,389 x 1,162	950	TIER-I
P158LE-S	V 8(TI)	14.6	128 x 142	481(654)/441(600)	441(600)/402(546)	1,484 x 1,389 x 1,162	961	TIER-I
P158FE	V8(TI)	14.6	128 x 142	492(669)/441(600)	441(600)/402(546)	1,492 x 1,389 x 1,240	997	TIER-II
P180LE-1	V 10(TI)	18.3	128 x 142	498(677) / 454(617)	442(600) / 403(548)	1,557 x 1,389 x 1,248	1,175	TIER-I
P180LE	V 10(TI)	18.3	128 x 142	540(734)/497(676)	496(674)/443(602)	1,557 x 1,389 x 1,248	1,175	TIER-I
P180LE-S	V 10(TI)	18.3	128 x 142	567(771)/519(705)	496(674)/452(615)	1,557 x 1,389 x 1,248	1,188	TIER-I
P222LE	V 12(TI)	21.9	128 x 142	649(883)/591(803)	574(781)/532(723)	1,717 x 1,389 x 1,288	1,575	TIER-I
P222LE-S	V 12(TI)	21.9	128 x 142	682(927)/625(850)	603(820)/552(750)	1,717 x 1,389 x 1,288	1,591	TIER-I
P222FEV	V 12(TI)	21.9	128 x 142	711(967)/659(896)	612(832)/569(774)	1,719 x 1,389 x 1,305	1,650	TIER-II

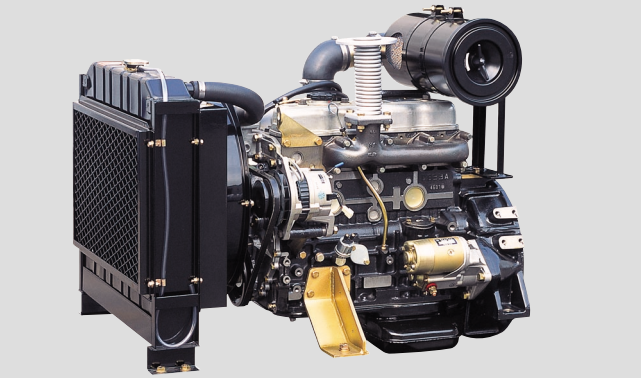
Power Unit Engines (P Drive/P Pac)

Model	No. of Cyl (Aspiration)	Disp (l)	BorexStroke (mm)	Output DIN6270B Max.Power kW(ps)/rpm	Output DIN6270B Max. Torque N.m (kg.m)/rpm	Dimension (LxWxH, mm)	Dry weight (kg)	Emission
PU034	NA(L 4)	3.3	102 x 100	50(68)/3,000	186(19)/2,000	875 x 705 x 723	310	TIER-I
PU066	NA(L 4)	5.8	102 x 118	85(116)/2,800	353(36)/1,600	1,155 x 705 x 775	450	TIER-I
PU086	NA(L 6)	8.1	111 x 139	118(160)/2,200	588(60)/1,600	1,244 x 716 x 900	780	TIER-I
PU086T	TC(L 6)	8.1	111 x 139	149(205)/2,200	826(84)/1,400	1,277 x 824 x 1,000	780	TIER-I
PU086TI	TI(L 6)	8.1	111 x 139	213(290)/2,200	1,095(112)/1,600	1,242 x 918 x 1,100	792	TIER-II
PU126TI	TI(L 6)	11.1	123 x 155	294(400)/2,100	1,521(155)/1,400	1,383 x 870 x 1,207	910	TIER-II
PU158TI	TI(V 8)	14.6	128 x 142	397(540)/2,100	2,117(216)/1,500	1,484 x 1,389 x 1,162	950	TIER-I
PU180TI	TI(V 10)	18.3	128 x 142	478(650)/2,100	2,303(235)/1,500	1,557 x 1,389 x 1,248	1,175	TIER-I
PU222TI	TI(V 12)	21.9	128 x 142	589(800)/2,100	3,205(327)/1,500	1,717 x 1,389 x 1,288	1,575	TIER-I

Natural Gas Engines for Generator

Model	No. of Cyl (Aspiration)	Displ (l)	BorexStroke (mm)	Output (ISO 3046) kW(ps)@1800rpm kW(ps)/rpm	Output (ISO 3046) kW(ps)@1500rpm Nm(kg.m)/rpm	Dimension (LxWxH, mm)	Dry weight (kg)	Emission
GE08TI	TI(L 6)	8.1	111 x 139	165(224)/150(204)	141(192)/128(174)	1,224 x 760 x 973	750	-
GE12TI	TI(L 6)	11.1	123 x 155	225(306)/200(272)	187(254)/175(238)	1,405 x 854 x 1,072	910	-
GV158TI	TI(V 8)	14.6	128 x 142	300(408)/270(367)	253(344)/230(313)	1,389 x 1,222 x 1,070	1,300	-
GV180TI	TI(V 10)	18.3	128 x 142	375(510)/340(462)	319(434)/290(394)	1,495 x 1,222 x 1,169	1,520	-
GV222TI	TI(V 12)	21.9	128 x 142	451(613)/410(557)	385(523)/350(476)	1,717 x 1,222 x 1,195	1,750	-

DB33/PU034



DB33 Gen Set Engine rating according to ISO 8528

Standby 35kW(47PS)@1,800rpm 29kW(39PS)@1,500rpm

Prime 32kW(43PS)@1,800rpm 26kW(35PS)@1,500rpm

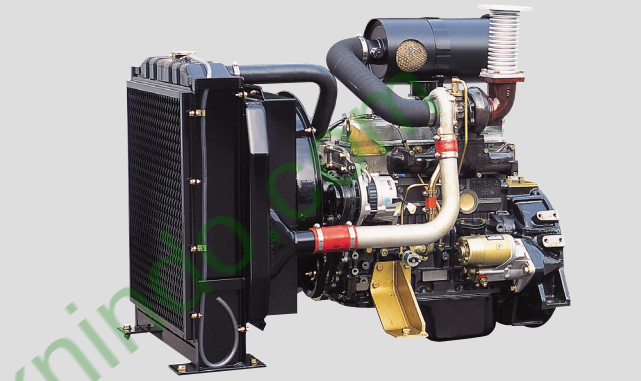
PU034 Power Unit Engine rating according to DIN 6270B

Max. rating 50kW(68PS)@3,000rpm

Max. Torque 186N.m(19kg.m)@2,000rpm

Engine Model	DB33	PU034
Type	4 cycle, water cooled, overhead valve, in-line, direct injection type	4 cycle, water cooled, overhead valve, in-line, direct injection type
Compression ratio	17.5 to 1	17.5 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel
Firing order	1-3-4-2	1-3-4-2
Lub. oil capacity (liter)	7.5	7.5
Cooling water capacity (liter)	8.5	8.5
Used fuel	Diesel fuel	Diesel fuel
Fuel injection pump	In-line type	In-line type
Governor	RSV all speed control type	RSV all speed control type
Cooling fan	Blower type	Blower type
Bore × Stroke (mm)	102×100	102×100
Displacement(liter)	3.3	3.3
Engine Size(L×H×W)	870×705×749	875×705×723
Weight	310	310

P034TI



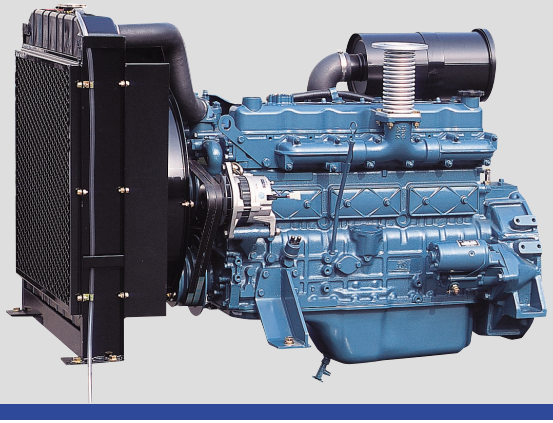
P034TI Gen Set Engine rating according to ISO 8528

Standby 60kW(82PS)@1,800rpm 48kW(65PS)@1,500rpm

Prime 55kW(75PS)@1,800rpm 42kW(57PS)@1,500rpm

Engine Model	P034TI
Type	4 cycle, water cooled, overhead valve, in-line, direct injection type, turbocharger, intercooler
Compression ratio	17.2 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel
Firing order	1-3-4-2
Lub. oil capacity (liter)	6.5
Cooling water capacity (liter)	8.5
Used fuel	Diesel fuel
Fuel injection pump	In-line type
Governor	RSV all speed control type
Cooling fan	Blower type
Bore × Stroke (mm)	102×100
Displacement(liter)	3.3
Engine Size(L×H×W)	870×728×841
Weight	355

DB58/PU066



DB58 Gen Set Engine rating according to ISO 8528

Standby 70kW(95PS)@1,800rpm 59kW(80PS)@1,500rpm

Prime 64kW(87PS)@1,800rpm 54kW(73PS)@1,500rpm

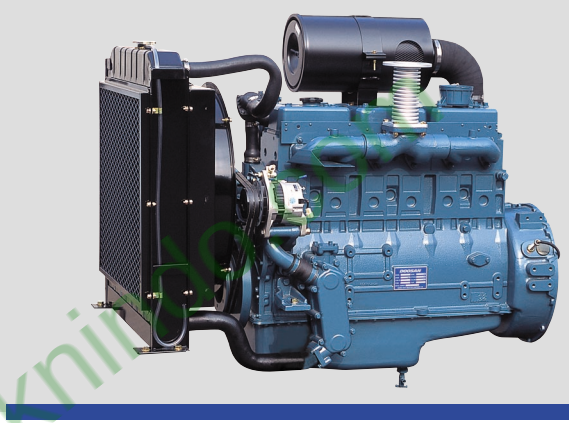
PU066 Power Unit Engine rating according to DIN 6270B

Max. rating 85kW(116PS)@2,800rpm

Max. Torque 353N.m(36kg.m)@1,600rpm

Engine Model	DB58	PU066
Type	4 cycle, water cooled, overhead valve, in-line, direct injection type	4 cycle, water cooled, overhead valve, in-line, direct injection type
Compression ratio	17.5 to 1	17.5 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel
Firing order	1-5-3-6-2-4	1-5-3-6-2-4
Lub. oil capacity (liter)	19	13
Cooling water capacity (liter)	12	12
Used fuel	Diesel fuel	Diesel fuel
Fuel injection pump	In-line type	In-line type
Governor	RSV all speed control type	RSV all speed control type
Cooling fan	Blower type	Blower type
Bore × Stroke (mm)	102×118	102×118
Displacement(liter)	5.8	5.8
Engine Size(L×H×W)	1,155×705×854	1,155×705×775
Weight	450	450

D1146/PU086



D1146 Gen Set Engine rating according to ISO 8528

Standby 105kW(143PS)@1,800rpm 85kW(116PS)@1,500rpm

Prime 96kW(130PS)@1,800rpm 77kW(105PS)@1,500rpm

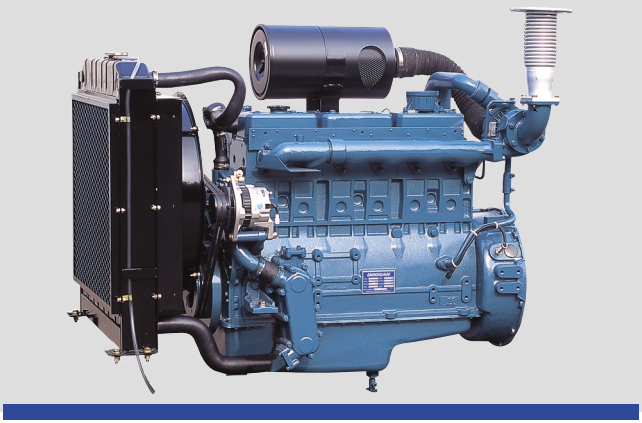
PU086 Power Unit Engine rating according to DIN 6270B

Max. rating 118kW(160PS)@2,200rpm

Max. Torque 588N.m(60kg.m)@1,600rpm

Engine Model	D1146	PU086
Type	4 cycle, water cooled, overhead valve, in-line, direct injection type	4 cycle, water cooled, overhead valve, in-line, direct injection type
Compression ratio	17.5 to 1	16.8 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel
Firing order	1-5-3-6-2-4	1-5-3-6-2-4
Lub. oil capacity (liter)	15.5	15
Cooling water capacity (liter)	14	14
Used fuel	Diesel fuel	Diesel fuel
Fuel injection pump	In-line type	In-line type
Governor	RSV all speed control type	RSV all speed control type
Cooling fan	Blower type	Blower type
Bore × Stroke (mm)	111×139	111×139
Displacement(liter)	8.1	8.1
Engine Size(L×H×W)	1,224×727×973	1,244×716×900
Weight	720	780

D1146T/PU086T



D1146T Gen Set Engine according to ISO 8528

Standby 138kW(187PS)@1,800rpm 118kW(160PS)@1,500rpm

Prime 125kW(170PS)@1,800rpm 107kW(145PS)@1,500rpm

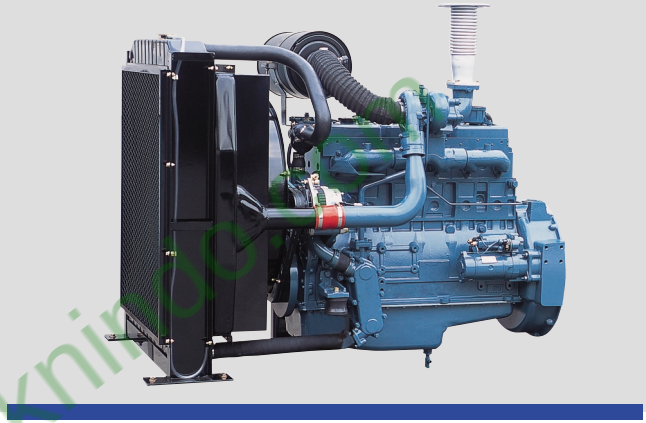
PU086T Power Unit Engine rating according to DIN 6270B

Max. rating 149kW(205PS)@2,200rpm

Max. Torque 826N.m(84.3kg.m)@1,400rpm

Engine Model	D1146T	PU086T
Type	4 cycle, water cooled, overhead valve, in-line, direct injection type, turbocharger	4 cycle, water cooled, overhead valve, in-line, direct injection type, turbocharger
Compression ratio	16.8 to 1	16.8 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel
Firing order	1-5-3-6-2-4	1-5-3-6-2-4
Lub. oil capacity (liter)	15.5	15
Cooling water capacity (liter)	14	14
Used fuel	Diesel fuel	Diesel fuel
Fuel injection pump	In-line type	In-line type
Governor	RSV all speed control type	RSV all speed control type
Cooling fan	Blower type	Blower type
Bore × Stroke (mm)	111×139	111×139
Displacement(liter)	8.1	8.1
Engine Size(L×H×W)	1,277×824×1,074	1,277×824×1,001
Weight	780	780

P086TI-1/P086TI/PU086TI



P086TI-1 Gen Set Engine rating according to ISO 8528

Standby 223kW(303PS)@1,800rpm 199kW(270PS)@1,500rpm

Prime 205kW(279PS)@1,800rpm 177kW(240PS)@1,500rpm

P086TI Gen Set Engine rating according to ISO 8528

Standby 191kW(260PS)@1,800rpm 164kW(223PS)@1,500rpm

Prime 174kW(237PS)@1,800rpm 149kW(203PS)@1,500rpm

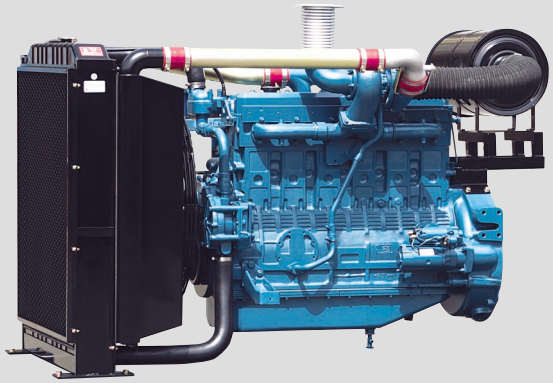
PU086TI Power Unit Engine rating according to DIN 6270B

Max. rating 213kW(290PS)@2,200rpm

Max. Torque 1095N.m(111.7kg.m)@1,600rpm

Engine Model	P086TI -1/P086TI	PU086TI
Type	4 cycle, water cooled, overhead valve, in-line, direct injection type, turbocharger, intercooler	4 cycle, water cooled, overhead valve, in-line, direct injection type, turbocharger, intercooler
Compression ratio	16.4 to 1	16.7 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel
Firing order	1-5-3-6-2-4	1-5-3-6-2-4
Lub. oil capacity (liter)	15.5	15
Cooling water capacity (liter)	14	14
Used fuel	Diesel fuel	Diesel fuel
Fuel injection pump	In-line type	In-line type
Governor	electric control type	RSV all speed control type
Cooling fan	Blower type	Blower type
Bore × Stroke (mm)	111×139	111×139
Displacement(liter)	8.1	8.1
Engine Size(L×H×W)	1,242×918×1,100	1,242×918×1,100
Weight	790	792

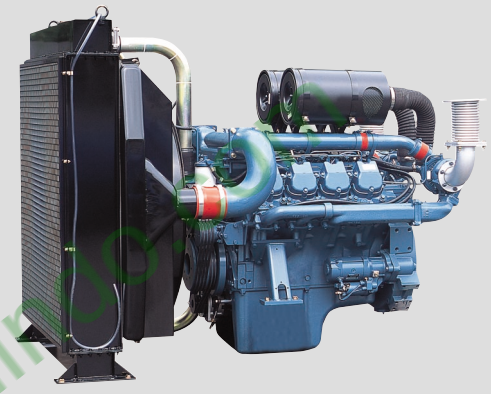
P126TI/P126TI-Ⅱ/PU126TI



- **P126TI** Gen Set Engine rating according to ISO 8528
  - Standby 298kW(405PS)@1,800rpm 272kW(370PS)@1,500rpm
  - Prime 278kW(378PS)@1,800rpm 241kW(328PS)@1,500rpm
- **P126TI-Ⅱ** Gen Set Engine rating according to ISO 8528
  - Standby 342kW(465PS)@1,800rpm 294kW(400PS)@1,500rpm
  - Prime 307kW(418PS)@1,800rpm 265kW(360PS)@1,500rpm
- **PU126TI** Power Unit Engine rating according to DIN 6270B
  - Max. rating 294kW(400PS)@2,100rpm
  - Max. Torque 1521N.m(155kg.m)@1,400rpm

Engine Model	P126TI/P126TI-Ⅱ	PU126TI
Type	4 cycle, water cooled, overhead valve, in-line, direct injection type, turbocharger, intercooler	4 cycle, water cooled, overhead valve, in-line, direct injection type, turbocharger, intercooler
Compression ratio	17 to 1	17 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel
Firing order	1-5-3-6-2-4	1-5-3-6-2-4
Lub. oil capacity (liter)	23	23
Cooling water capacity (liter)	19	19
Used fuel	Diesel fuel	Diesel fuel
Fuel injection pump	In-line type	In-line type
Governor	electric control type	RSV all speed control type
Cooling fan	Blower type	Blower type
Bore × Stroke (mm)	123×155	123×155
Displacement(liter)	11.1	11.1
Engine Size(L×H×W)	1,383×870×1,207	1,383×870×1,207
Weight	910	910

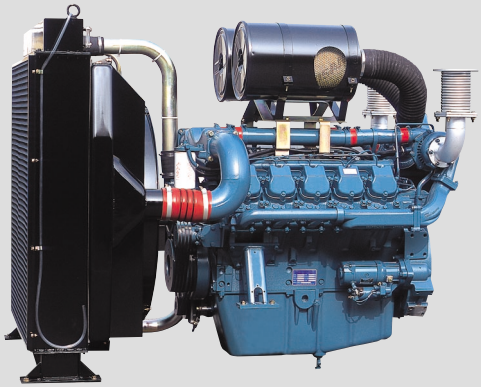
P158LE-1/P158LE/P158LE-S/PU158TI



- **P158LE-1** Gen Set Engine rating according to ISO 8528
  - Standby 402kW(546PS)@1,800rpm 362kW(492PS)@1,500rpm
  - Prime 366kW(498PS)@1,800rpm 327kW(444PS)@1,500rpm
- **P158LE** Gen Set Engine rating according to ISO 8528
  - Standby 458kW(623PS)@1,800rpm 414kW(563PS)@1,500rpm
  - Prime 402kW(547PS)@1,800rpm 363kW(494PS)@1,500rpm
- **P158LE-S** Gen Set Engine rating according to ISO 8528
  - Standby 481kW(654PS)@1,800rpm 441kW(600PS)@1,500rpm
  - Prime 441kW(600PS)@1,800rpm 402kW(546PS)@1,500rpm
- **PU158TI** Power Unit Engine rating according to DIN 6270B
  - Max. rating 397kW(540PS)@2,100rpm
  - Max. Torque 2117N.m(216kg.m)@1,500rpm

Engine Model	P158LE-1/P158LE P158LE-S	PU158TI
Type	4 cycle, water cooled, overhead valve, V-type, direct injection type, turbocharger, intercooler	4 cycle, water cooled, overhead valve, V-type, direct injection type, turbocharger, intercooler
Compression ratio	15 to 1	15 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel
Firing order	1-5-7-2-6-3-4-8	1-5-7-2-6-3-4-8
Lub. oil capacity (liter)	28	28
Cooling water capacity (liter)	20	20
Used fuel	Diesel fuel	Diesel fuel
Fuel injection pump	In-line type	In-line type
Governor	electric control type	RQV all speed control type
Cooling fan	Blower type	Blower type
Bore × Stroke (mm)	128×142	128×142
Displacement(liter)	14.6	14.6
Engine Size(L×H×W)	1,484×1,389×1,162	1,484×1,389×1,162
Weight	950	950

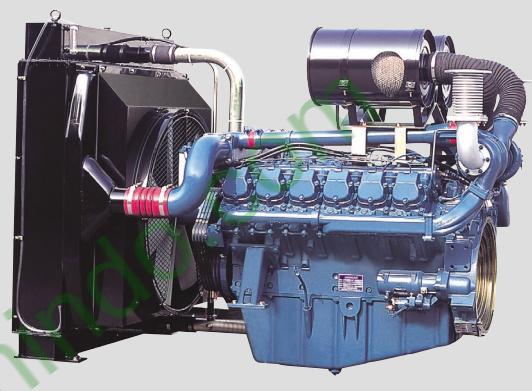
P180LE-1/P180LE/P180LE-S/PU180TI



- **P180LE-1** Gen Set Engine rating according to ISO 8528
  Standby 498kW(677PS)@1,800rpm 442kW(600PS)@1,500rpm
  Prime 454kW(617PS)@1,800rpm 403kW(548PS)@1,500rpm
- **P180LE** Gen Set Engine rating according to ISO 8528
  Standby 540kW(734PS)@1,800rpm 496kW(674PS)@1,500rpm
  Prime 497kW(676PS)@1,800rpm 443kW(602PS)@1,500rpm
- **P180LE-S** Gen Set Engine rating according to ISO 8528
  Standby 567kW(771PS)@1,800rpm 496kW(674PS)@1,500rpm
  Prime 519kW(705PS)@1,800rpm 452kW(615PS)@1,500rpm
- **PU180TI** Power Unit Engine rating according to DIN 6270B
  Max. rating 478kW(650PS)@2,100rpm
  Max. Torque 2303N.m(235kg.m)@1,500rpm

Engine Model	P180LE-1/P180LE P180LE-S	PU180TI
Type	4 cycle, water cooled, overhead valve, V-type, direct injection type, turbocharger, intercooler	4 cycle, water cooled, overhead valve, V-type, direct injection type, turbocharger, intercooler
Compression ratio	15 to 1	15 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel
Firing order	1-6-5-10-2-7-3-8-4-9	1-6-5-10-2-7-3-8-4-9
Lub. oil capacity (liter)	35	35
Cooling water capacity (liter)	21	21
Used fuel	Diesel fuel	Diesel fuel
Fuel injection pump	In-line type	In-line type
Governor	electric control type	RQV all speed control type
Cooling fan	Blower type	Blower type
Bore × Stroke (mm)	128×142	128×142
Displacement(liter)	18.3	18.3
Engine Size(L×H×W)	1,557×1,389×1,182	1,557×1,389×1,248
Weight	1,175	1,175

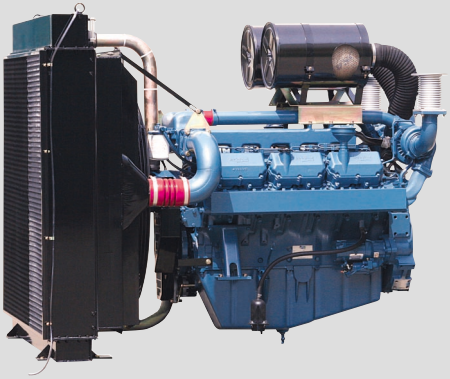
P222LE/P222LE-S/PU222TI



- **P222LE** Gen Set Engine rating according to ISO 8528
  Standby 649kW(883PS)@1,800rpm 574kW(781PS)@1,500rpm
  Prime 591kW(803PS)@1,800rpm 532kW(723PS)@1,500rpm
- **P222LE-S** Gen Set Engine rating according to ISO 8528
  Standby 682kW(927PS)@1,800rpm 603kW(820PS)@1,500rpm
  Prime 625kW(850PS)@1,800rpm 552kW(750PS)@1,500rpm
- **PU222TI** Power Unit Engine rating according to DIN 6270B
  Max. rating 589kW(800PS)@2,100rpm
  Max. Torque 3205N.m(327kg.m)@1,500rpm

Engine Model	P222LE/P222LE-S	PU222TI
Type	4 cycle, water cooled, overhead valve, V-type, direct injection type, turbocharger, intercooler	4 cycle, water cooled, overhead valve, V-type, direct injection type, turbocharger, intercooler
Compression ratio	15 to 1	15 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel
Firing order	1-12-5-8-3-10-6-7-2-11-4-9	1-12-5-8-3-10-6-7-2-11-4-9
Lub. oil capacity (liter)	40	40
Cooling water capacity (liter)	23	23
Used fuel	Diesel fuel	Diesel fuel
Fuel injection pump	In-line type	In-line type
Governor	electric control type	RQV all speed control type
Cooling fan	Blower type	Blower type
Bore × Stroke (mm)	128×142	128×142
Displacement(liter)	21.9	21.9
Engine Size(L×H×W)	1,717×1,389×1,288	1,717×1,389×1,288
Weight	1,575	1,575

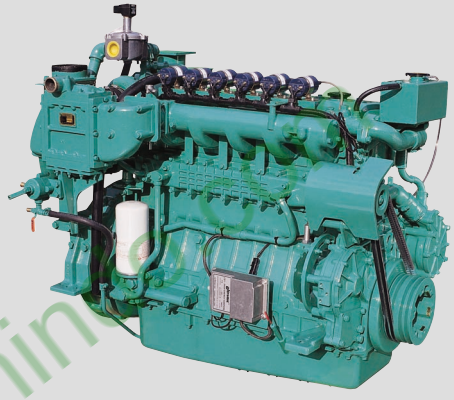
P158FE/P222FE



- **P158FE** Gen Set Engine rating according to ISO 8528
  Standby 492kW(669PS)@1,800rpm 441kW(600PS)@1,500rpm
  Prime 441kW(600PS)@1,800rpm 402kW(546PS)@1,500rpm
- **P222FE** Gen Set Engine rating according to ISO 8528
  Standby 711kW(967PS)@1,800rpm 612kW(832PS)@1,500rpm
  Prime 659kW(896PS)@1,800rpm 569kW(774PS)@1,500rpm

Engine Model	P158FE	P222FE
Type	4 cycle, water cooled, overhead 4-valve, V-type, direct injection type turbocharger, intercooler	4 cycle, water cooled, overhead 4-valve, V-type, direct injection type turbocharger, intercooler
Compression ratio	14.2 to 1	14.2 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel
Firing order	1-5-7-2-6-3-4-8	1-12-5-8-3-10-6-7-2-11-4-9
Lub. oil capacity (liter)	28	40
Cooling water capacity (liter)	20	23
Used fuel	Diesel fuel	Diesel fuel
Fuel Injection pump	In-Line type	In-Line type
Covernor	Electric control type	Electric control type
Cooling fan	Blower type or Heat Exchanger type	Blower type or Heat Exchanger type
Bore×Stroke (mm)	128×142	128×142
Displacement(liter)	14.6	21.9
Engine Size(L×H×W)	1,484×1,389×1,162	1,717×1,610×1,296
Weight	997	1,650

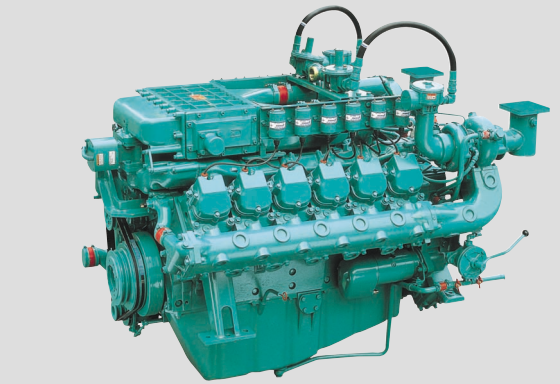
GE08TI/GE12TI



- **GE08TI** Gen Set Engine rating according to ISO 8528
  Standby 165kW(224PS)@1,800rpm 141kW(192PS)@1,500rpm
  Prime 150kW(204PS)@1,800rpm 128kW(174PS)@1,500rpm
- **GE12TI** Gen Set Engine rating according to ISO 8528
  Standby 225kW(306PS)@1,800rpm 187kW(254PS)@1,500rpm
  Prime 200kW(272PS)@1,800rpm 175kW(238PS)@1,500rpm

Engine Model	GE08TI	GE12TI
Type	4 cycle, water cooled, overhead valve, in-line, spark ignition turbocharger intercooler	4 cycle, water cooled, overhead valve, in-line, spark ignition turbocharger intercooler
Compression ratio	10.5 to 1	10.5 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel
Firing order	1-5-3-6-2-4	1-5-3-6-2-4
Lub. oil capacity (liter)	23	25
Cooling water capacity (liter)	18	21
Used fuel	Nature gas	Nature gas
Engine Control	Electronic control type	Electronic control type
Cooling fan	Blower type or Heat Exchanger type	Blower type or Heat Exchanger type
Bore×Stroke (mm)	111×139	123×155
Displacement(liter)	8.1	11.1
Engine Size(L×H×W)	1,224×760×973	1,405×854×1,072
Weight	760	920

GV158TI/GV180TI/GV222TI



- **GV158TI** Gen Set Engine rating according to ISO 8528
  Standby 300kW(408PS)@1,800rpm 253kW(344PS)@1,500rpm
  Prime 270kW(367PS)@1,800rpm 230kW(313PS)@1,500rpm
- **GV180TI** Gen Set Engine rating according to ISO 8528
  Standby 375kW(510PS)@1,800rpm 319kW(434PS)@1,500rpm
  Prime 340kW(462PS)@1,800rpm 290kW(394PS)@1,500rpm
- **GV222TI** Gen Set Engine rating according to ISO 8528
  Standby 451kW(613PS)@1,800rpm 385kW(523PS)@1,500rpm
  Prime 410kW(557PS)@1,800rpm 350kW(476PS)@1,500rpm

Engine Model	GV158TI	GV180TI	GV222TI
Type	4 cycle, water cooled, overhead valve, in-line, spark ignition turbocharger, intercooler	4 cycle, water cooled, overhead valve, in-line, spark ignition turbocharger, intercooler	4 cycle, water cooled, overhead valve, in-line, spark ignition turbocharger, intercooler
Compression ratio	10.5 to 1	10.5 to 1	10.5 to 1
Direction of crankshaft rotation	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel	Counter clockwise viewed from flywheel
Firing order	1-5-7-2-6-3-4-8	1-6-5-10-2-7-3-8-4-9	1-12-5-8-3-10-6-7-2-11-4-9
Lub. oil capacity (liter)	31	35	40
Cooling water capacity (liter)	36	42	44
Used fuel	Nature gas	Nature gas	Nature gas
Engine Control	Electronic control type	Electronic control type	Electronic control type
Cooling fan	Blower type or Heat Exchanger type	Blower type or Heat Exchanger type	Blower type or Heat Exchanger type
Bore×Stroke (mm)	128×142	128×142	128×142
Displacement(liter)	14.6	18.3	21.9
Engine Size(L×H×W)	1,388×1,223×1,239	1,546×1,223×1,334	1,704×1,223×1,363
Weight	1,176	1,366	1,556

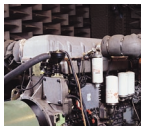
R&D Center

Engine Research & Development center

Engine R&D center is constantly pursuing total customer satisfaction. We have a fully equipped ultra modern engine testing facilities which include exhaust gas analysis, run-in cells, cold test cells, and anechoic cells. In order to assure the engine's endurance and reliability, we have conducted a variety of tests which include; cold starting test, noise test and emissions gas test, high-speed test exceeding 130% of capacity, overload, thermal shock test and endurance test.
In vehicle condition, off-road, rough terrain and fleet tests are being done and it will be accumulated up to 2.5 million kilometer long drive test.


Cold Chamber


Emission Test Cell


Anechoic Chamber


Durability Test Cell

DOOSAN Diesel & Gas Engine Sales & A/S Network

- ALGERIA
- ARGENTINA
- AUSTRALIA
- AUSTRIA
- BANGLADESH
- BRAZIL
- CANADA
- CHILE
- CHINA
- COSTARICA
- CROATIA
- DENMARK
- EGYPT
- FRANCE
- GHANA
- GERMANY
- GREECE
- HOLLAND
- HONGKONG
- HUNGARY
- INDIA
- INDONESIA
- IRAN
- ISRAEL
- ITALY
- KOREA
- KUWAIT
- LEBANON
- LIBYA
- MALAYSIA
- MALDIVES
- MEXICO
- MOROCCO
- NEW ZEALAND
- NORWAY
- PAKISTAN
- PERU
- PHILIPPINES
- PORTUGAL
- QATAR
- ROMANIA
- RUSSIA
- S.AFRICA
- SAUDI ARABIA
- SINGAPORE
- SPAIN
- SRI LANKA
- SYRIA
- TAIWAN
- TANZANIA
- THAILAND
- TUNISIA
- TURKEY
- UAE
- U.K
- U.S.A
- VANUATU
- VENEZUELA
- VIETNAM
- YEMEN