DOOSAN MARINE DIESEL ENGINES

Doosan Infracore
Engine

DOOSAN

CORPORATE PROFILE

Doosan Infracore ranks among the world's leading makers of construction equipment, machine tools and engines required to build and maintain infrastructure. We were founded in 1937 and have since achieved an unrivalled position in the world. In the 1990s, we have grown to become a truly global player through technological advancements, acquisitions and new product developments.

Doosan Infracore built a global network of large production facilities and sales subsidiaries, along with extensive dealer networks in all regions of the world including North America, Europe and China. Doosan Infracore continues to secure the latest products and technologies in line with the growing demand for green engines and boosting customer value.

Introduction of Engine Business Group

The history of the Doosan Infracore Engine BG goes back to 1958 by offering diesel engines, and the unit today produces and supplies diesel and natural gas engines with high performance and fuel-efficiency for commercial vehicles, military vehicles, construction equipment, generators and ships around the world. Doosan Infracore is emerging as a global engine producer by developing a full line-up of diesel and gas models that meet increasingly strict environmental regulatory standards.

With the introduction of our new compact diesel Tier 4 final and EU Stage IIIB & IV compliant engines, Doosan Infracore is positioned to become one of the world's top 5 engine makers with advanced environmentally-friendly technologies.

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HISTORY & AWARD

1950~70's — 1980~90's — 2000's — 2010's

1950's

1958 Marine Engine (AVL)

1970's

1975 Medium duty Engines (MAN license) - D0846, D2156

1979 Light duty Engines (ISUZU license) - 4BA1, 6BB1 (2.8, 5.4L)

1980's

1983 Large Engines (MAN license) - D28 Series (15, 18, 22L)

Grand Prix of Quality Control (Honor of President/ Korea)

1985 'STORM' engine, (the first in-house designed model, 8, 12L)

1986 Iron Medal of Industry with STORM engine (Honor of President/ Korea)

1988 Small Engines - 3AB1, C223, C240, 4BC2 (1.8, 2.2, 2.4, 3.3L)

1990's

1994 Acquire ISO 9001/9002

1995 'DE & DV' series (8, 12, 15L)

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 'GE' series - CNG engine for city bus (12L)

2000's

2000 Best Award on Engine with GE12TI engine (NGV2000)

2001 Tier II engine

2004 Euro III engine with Common-rail system

2006 GM Group Supplier of the Year (SOY) award

2007 Euro IV engine

2008 CNG engine assembly plant in Atlanta - US07 certified

2009 Joint Venture with XCMG in China : XDEC

2010's

2010 Euro V engine. US10 CNG engine (supplied to LA Metro Bus)

2011 Tier IV-Interim engine

2012 XDEC, start of production

Engine plant in China

Start of production of Doosan Compact Diesel Engines (1.8,2.4,3.4L)

DOOSAN
MARINE DIESEL ENGINES
SPECIFICATION

POWER RATINGS OF DOOSAN ENGINES

Marine rating to ISO 3046

(1) Heavy Duty

- Operation hours : unlimited per year, unlimited per day
- Average load application : up to 90%
- Percentages of time at full load : up to 80%
- Typical gearbox ratio : 2.5~6

** Application : Fishing trawler, Tug boat, Pushing vessel, Cargo boat, Freighter*

(2) Medium Duty

- Operation hours : up to 3,000hr per year, up to 10hrs per day
- Average load application : up ato 70%
- Percentages of time at full load : up to 30%
- Typical gearbox ratio : 2~3.5

** Application : Pilot boat, Escort boat, Passenger boat, Freighter, Ferry, Cruising vessel*

(3) Light Duty

- Operation hours : up to 1,000hr per year, up to 5hrs per day
- Average load application : up to 50%
- Percentages of time at full load : up to 20%
- Typical gearbox ratio : 1~2.5

** Application : Yacht, Cruising vessel, Fast boat, Fire pump*

Conversion data

1 hp = 0.7457 kW
1 hp = 1.01387 PS
1 lbft = 0.138255 kgfm
760 mmHg = 1,013 mbar = 101.3 kPa
1 kgf/cm^2 = 98 kPa
1 g/PS·h = 1.359 g/kW·h

1 PS = 0.98632 hp
1PS = 0.7355 kW
1kgfm = 9.8066 Nm

1 cid = 16.38 cm^3
1 Lb/hph = 447.38 g/PS·h

$$T(Nm) = \frac{9549.3 \times P\,(kW)}{N\,(min^{-1})}$$

$$T(kgfm) = \frac{716.2 \times P\,(PS)}{N\,(min^{-1})}$$

$$T(lbft) = \frac{5252 \times P\,(hp)}{N\,(min^{-1})}$$

DOOSAN MARINE DIESEL ENGINES

DOOSAN MARINE DIESEL ENGINES

Marine Propulsion Engines

Model	Type		Displacement (Liter)	Bore x Stroke (mm)	Output (ISO 3046)			Dimension (L x W x H) (mm)	Dry Weight (kg)	Emissions
	No. of Cyl.	Aspiration			Heavy Duty kW(PS)/rpm	Medium Duty kW(PS)/rpm	Light Duty kW(PS)/rpm			
L066TI	L6	TI	5.8	102*118	132(180) / 2,200	-	-	1,352 * 800 * 917	535	TIER–II
L136	L6	NA	8.1	111*139	118(160) / 2,200	-	-	1,266 * 875 * 937	743	TIER–I
L136T	L6	TC	8.1	111*139	147(200) / 2,200	-	177(240) / 2,500	1,351 * 893 * 937	748	TIER–I
L136TI	L6	TI	8.1	111*139	169(230) / 2,200	-	-	1,364 * 911 * 937	773	TIER–II
L086TI	L6	TI	8.1	111*139	210(285) / 2,100	232(315) / 2,300	265(360) / 2,500	1,364 * 919 * 965	790	TIER–II
MD196T	L6	TC	11.1	123*155	206(280) / 2,000	-	-	1,397 * 931 * 1,077	975	TIER–I
MD196TI	L6	TI	11.1	123*155	235(320) / 2,000	-	-	1,397 * 933 * 1,077	1,009	TIER–II
L126TI	L6	TI	11.1	123*155	265(360) / 2,000	294(400) / 2,100	-	1,414 * 933 * 1,077	1,060	TIER–II
V158TI	V8	TI	14.6	128*142	353(480) / 1,800	397(540) / 2,100	500(680) / 2,300	1,657 * 1,226 * 1,397	1,350	TIER–II
V180TI	V10	TI	18.3	128*142	441(600) / 1,800	478(650) / 2,100	603(820) / 2,300	1,815 * 1,227 * 1,576	1,550	TIER–II
V222TI	V12	TI	21.9	128*142	530(720) / 1,800	588(800) / 2,100	736(1,000) / 2,300	1,973 * 1,233 * 1,606	1,750	TIER–II
4V158TI	V8	TI	14.6	128*142	390(530) / 1,800	441(600) / 2,100	588(800) / 2,300	1,558 * 1,237 * 1,334	1,540	TIER–II
4V222TI	V12	TI	21.9	128*142	588(800) / 1,800	647(880) / 2,100	883(1,200) / 2,300	1,874 * 1,243 * 1,548	1,920	TIER–II

Marine Auxiliary Engines

Model	Type		Displacement (Liter)	Bore x Stroke (mm)	Output (ISO 3046)		Dimension (L x W x H) (mm)	Dry Weight (kg)	Emissions
	No. of Cyl.	Aspiration			kW(PS)@1800rpm	kW(PS)@1500rpm			
AD066TI	L6	TI	5.8	102*118	110(150)	96(130)	1,042 * 800 * 891	535	TIER–II
AD136	L6	NA	8.1	111*139	93(126)	77(105)	1,182 * 770 * 925	735	TIER–I
AD136T	L6	TC	8.1	111*139	125(170)	107(145)	1,182 * 770 * 925	748	TIER–I
AD136TI	L6	TI	8.1	111*139	138(188)	115(157)	1,182 * 825 * 925	773	TIER–II
AD086TI	L6	TI	8.1	111*139	186(253)	151(205)	1,182 * 825 * 962	790	TIER–II
AD196T	L6	TC	11.1	123*155	181(246)	154(210)	1,193 * 854 * 1,072	975	TIER–I
AD196TI	L6	TI	11.1	123*155	199(270)	173(235)	1,193 * 854 * 1,072	1,009	TIER–II
AD126TI	L6	TI	11.1	123*155	247(336)	206(280)	1,193 * 854 * 1,072	1,060	TIER–II
AD158TI	V8	TI	14.6	128*142	353(480)	302(410)	1,037 * 1,222 * 1,074	1,295	TIER–II
AD180TI	V10	TI	18.3	128*142	441(600)	357(485)	1,195 * 1,222 * 1,169	1,545	TIER–II
AD222TI	V12	TI	21.9	128*142	530(720)	446(606)	1,353 * 1,222 * 1,199	1,735	TIER–II
4AD158TI	V8	TI	14.6	128*142	390(530)	325(442)	1,205 * 1,237 * 1,117	1,540	TIER–II
4AD222TI	V12	TI	21.9	128*142	588(800)	491(667)	1,521 * 1,243 * 1,236	1,920	TIER–II

DOOSAN MARINE DIESEL ENGINES LINE–UP

DOOSAN MARINE DIESEL ENGINES LINE-UP
IN-LINE TYPE

L066TI

L136

L136T

L136TI

L086TI

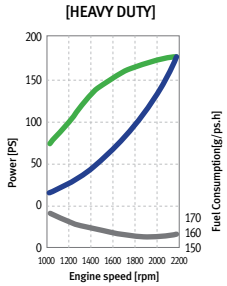
MD196T

MD196TI

L126TI

- MODEL
  - L066TI (HEAVY DUTY)
    : 180PS (132kW) / 2,200rpm

Performance Curve

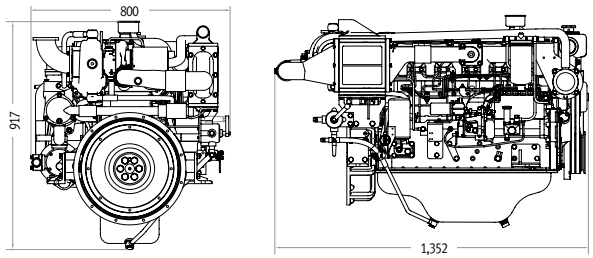


L066TI Specification

Engine Specification

Model		Units	L066TI
Engine type			4 cycle, In line, direct- injection, water cooled with turbo charger & inter-cooler
Rating output (B.H.P)		PS(kW)/rpm	180(132)/2,200
Displacement		cc	5,785
Cylinder number - bore(ø) x stroke		mm	6 -ø102 x 118
Flywheel housing & fly wheel (inch)			SAE 3 & 11 1/2
Low idling rpm		rpm	725 ± 25
No load max. rpm		rpm	below2,530
Compression ratio			19.5 : 1
Firing order			1 - 5 - 3 - 6 - 2 - 4
Governor type of injection pump			Mechanical all speed (R.S.V)
Fuel consumption (only Ref.)		g/PS.h	166.8
@ rated power		lit. / h	35.87
Starting system			Electric Starting by starter motor
Starter motor capacity		V- kW	24 - 4.5
Alternator capacity		V- A	24 - 45
Battery		V- Ah	24 - 100
Cooling system			Indirect sea water cooling with heat exchanger
Cooling water capacity	Max. / Min.	lit.	25 / 20
Fresh water pump type			Centrifugal type, driven by V- belt
Sea water pump type			Rubber impeller type driven by V- belt
Lubricating oil(Engine)	pan capacity	lit.	Max : 19 , Min : 14 (Engine total : 21)
	pressure	kg/cm^2	Full : 3.5, Idle : 1.2
Direction of revolution	crankshaft		Counter clockwise viewed from stern side
Engine size(L x W x H)	without M/G	mm	1,352 x 800 x 917
Engine dry weight	without M/G	kg	535

Engine Dimension

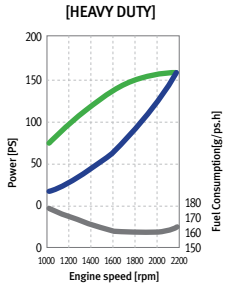


DOOSAN MARINE DIESEL ENGINES

L136

- MODEL
  - L136 (HEAVY DUTY)
    : 160PS (118kW) / 2,200rpm

Performance Curve

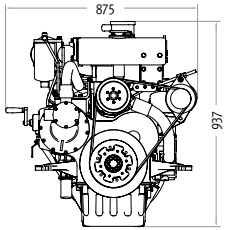


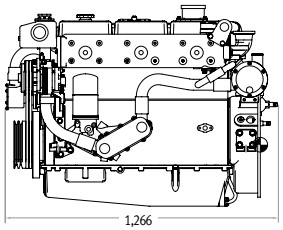
L136 Specification

Engine Specification

Model		Units	L136
Engine type			4 cycle, In line, direct- injection, water cooled aspirated naturally
Rating output (B.H.P)		PS(kW)/rpm	160(118)/2,200
Displacement		cc	8,071
Cylinder number - bore(ø) x stroke		mm	6 -ø111 x 139
Flywheel housing & fly wheel (inch)			SAE 2 & 11 1/2
Low idling rpm		rpm	725 ± 25
No load max. rpm		rpm	below 2,530
Compression ratio			17.6 : 1
Firing order			1 - 5 - 3 - 6 - 2 - 4
Governor type of injection pump			Mechanical all speed (R.S.V)
Fuel consumption(only Ref.)		g/PS.h	165
@ rated power		lit. / h	32
Starting system			Electric Starting by starter motor
Starter motor capacity		V- kW	24 - 4.5
Alternator capacity		V- A	24 - 50
Battery		V- Ah	24 - 100
Cooling system			Indirect sea water cooling with heat exchanger
Cooling water capacity	Max. / Min.	lit.	25 / 23
Fresh water pump type			Centrifugal type, driven by V- belt
Sea water pump type			Rubber impeller type driven by gear
Lubricating Oil (Engine)	pan capacity	lit.	Max : 23 , Min : 17 (Engine total : 25)
	pressure	kg/cm²	Full : 3.5 , Idle : 1.2
Direction of revolution	crankshaft		Counter clockwise viewed from stern side
Engine size(L x W x H)	without M/G	mm	1,266 x 875 x 937
Engine dry weight	without M/G	kg	743

Engine Dimension



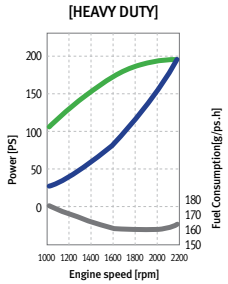


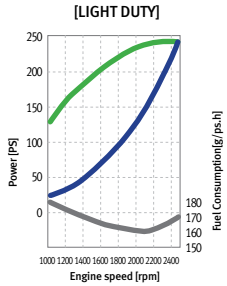
DOOSAN MARINE DIESEL ENGINES

L136T

- MODEL
  - L136T (HEAVY DUTY)
    : 200PS (147kW) / 2,200rpm
  - L136TL (LIGHT DUTY)
    : 240PS (177kW) / 2,500rpm

Performance Curve

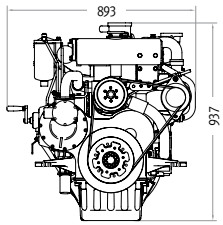


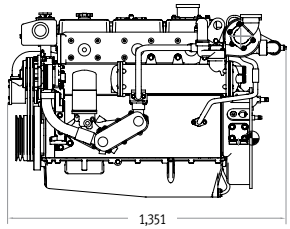


L136T Specification

Engine Specification				
Model		**Units**	**L136T**	**L136TL**
Engine type			4 cycle, In line, direct- injection, water cooled with turbo charger	
Rating output (B.H.P)		PS(kW)/rpm	200(147)/2,200	240(177)/2,500
Displacement		cc	8,071	
Cylinder number - bore(ø) x stroke		mm	6 -ø111 x 139	
Flywheel housing & fly wheel (inch)			SAE 2 & 11 1/2	
Low idling rpm		rpm	725 ± 25	
No load max. rpm		rpm	below 2,530	below 2,875
Compression ratio			16.7 : 1	16.7 : 1
Firing order			1 - 5 - 3 - 6 - 2 - 4	
Governor type of injection pump			Mechanical all speed (R.S.V)	
Fuel consumption(only Ref.)		g/PS.h	155	167
@ rated power		lit. / h	37	48
Starting system			Electric Starting by starter motor	
Starter motor capacity		V- kW	24 - 4.5	
Alternator capacity		V- A	24 - 50	
Battery		V- Ah	24 - 100	
Cooling system			Indirect sea water cooling with heat exchanger	
Cooling water capacity	Max. / Min.	lit.	27 / 25	
Fresh water pump type			Centrifugal type, driven by V- belt	
Sea water pump type			Rubber impeller type driven by gear	
Lubricating Oil (Engine)	pan capacity	lit.	Max : 23 , Min : 17 (Engine total : 25)	
	pressure	kg/cm²	Full : 3.5, Idle : 1.2	
Direction of revolution	crankshaft		Counter clockwise viewed from stern side	
Engine size(L x W x H)	without M/G	mm	1,351 x 893 x 937	
Engine dry weight	without M/G	kg	748	

Engine Dimension



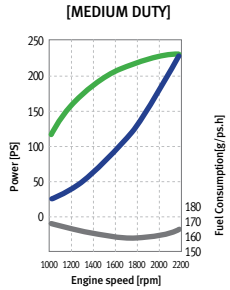


DOOSAN MARINE DIESEL ENGINES

L136TI

- MODEL
  - L136TI (HEAVY DUTY)
    : 230PS (169kW) / 2,200rpm

Performance Curve



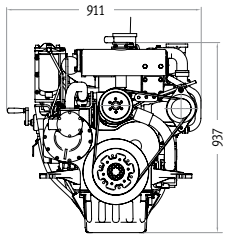
L136TI Specification

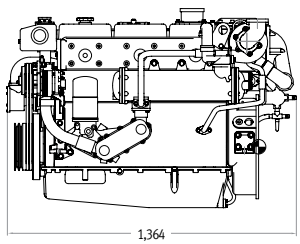
IN-LINE TYPE

Engine Specification

Model		Units	L136TI
Engine type			4 cycle, In line, direct- injection, water cooled with turbo charger & inter-cooler
Rating output (B.H.P)		PS(kW)/rpm	230(169)/2,200
Displacement		cc	8,071
Cylinder number - bore(ø) x stroke		mm	6 - ø111 x 139
Flywheel housing & fly wheel (inch)			SAE 2 & 11 1/2
Low idling rpm		rpm	725 ± 25
No load max. rpm		rpm	below 2,530
Compression ratio			16.7 : 1
Firing order			1 - 5 - 3 - 6 - 2 - 4
Governor type of injection pump			Mechanical all speed (R.S.V)
Fuel consumption(only Ref.)		g/PS.h	161.7
@ rated power		lit. / h	44.43
Starting system			Electric Starting by starter motor
Starter motor capacity		V- kW	24 - 4.5
Alternator capacity		V- A	24 - 50
Battery		V- Ah	24 - 100
Cooling system			Indirect sea water cooling with heat exchanger
Cooling water capacity	Max. / Min.	lit.	27 / 25
Fresh water pump type			Centrifugal type, driven by V- belt
Sea water pump type			Rubber impeller type driven by gear
Lubricating Oil (Engine)	pan capacity	lit.	Max : 23 , Min : 17 (Engine total : 25)
	pressure	kg/cm²	Full : 3.5 , Idle : 1.2
Direction of revolution	crankshaft		Counter clockwise viewed from stern side
Engine size(L x W x H)	without M/G	mm	1,364 x 911 x 937
Engine dry weight	without M/G	kg	773

Engine Dimension



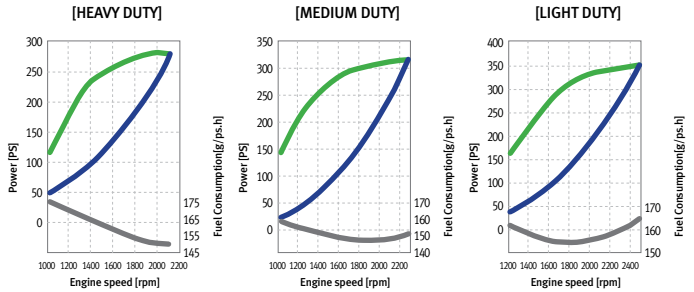


DOOSAN MARINE DIESEL ENGINES

L086TI

- MODEL
  - L086TIH (HEAVY DUTY)
    : 285PS (210kW) / 2,100rpm
  - L086TIM (MEDIUM DUTY)
    : 315PS (232kW) / 2,300rpm
  - L086TIL (LIGHT DUTY)
    : 360PS (265kW) / 2,500rpm

Performance Curve

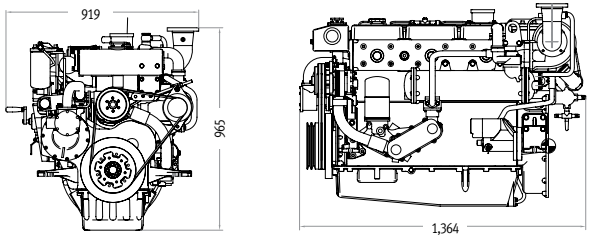


L086TI Specification

Engine Specification

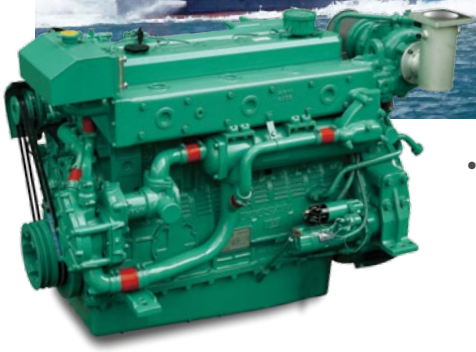
Model		Units	L086TIH	L086TIM	L086TIL
Engine type			4 cycle, In line, direct- injection, water cooled with wet turbo charger & inter-cooler		
Rating output (B.H.P)		PS(kW)/rpm	285(210)/2,100	315(232)/2,300	360(265)/2,500
Displacement		cc	8,071		
Cylinder number - bore(ø) x stroke		mm	6 -ø111 x 139		
Flywheel housing & fly wheel (inch)			SAE 2 & 11 1/2		
Low idling rpm		rpm	750 ± 25		
No load max. rpm		rpm	below 2,415	below 2,645	below 2,875
Compression ratio			16.7 : 1	16.7 : 1	15.3:1
Firing order			1 - 5 - 3 - 6 - 2 - 4		
Governor type of injection pump			Mechanical all speed (R.S.V)		
Fuel consumption(only Ref.)		g/PS.h	166	172.6	166.5
@ rated power		lit. / h	56.52	64.96	71.61
Starting system			Electric Starting by starter motor		
Starter motor capacity		V- kW	24 - 4.5		
Alternator capacity		V- A	24 - 50		
Battery		V- Ah	24 - 100		
Cooling system			Indirect sea water cooling with heat exchanger		
Cooling water capacity	Max. / Min.	lit.	27 / 25		
Fresh water pump type			Centrifugal type, driven by V- belt		
Sea water pump type			Rubber impeller type driven by gear		
Lubricating oil (Engine)	pan capacity	lit.	Max : 23, Min : 17 (Engine total : 25)		
	pressure	kg/cm²	Full : 3.5, Idle : 1.2		
Direction of revolution	crankshaft		Counter clockwise viewed from stern side		
Engine size(L x W x H)	without M/G	mm	1,364 x 919 x 965		
Engine dry weight	without M/G	kg	790		

Engine Dimension



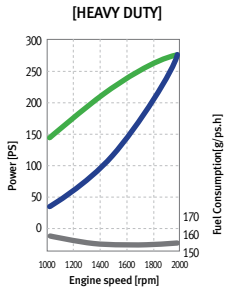
DOOSAN MARINE DIESEL ENGINES

MD196T



- MODEL
  - MD196T (HEAVY DUTY)
    : 280PS (206kW) / 2,000rpm

Performance Curve

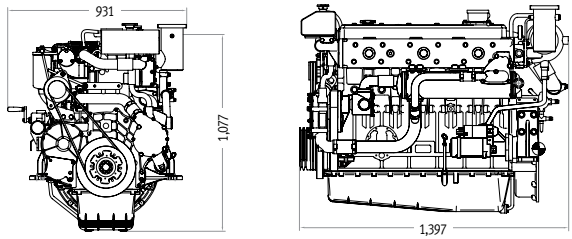


MD196T Specification

Engine Specification

Model		Units	MD196T
Engine type			4 cycle, In line, direct- injection, water cooled with wet turbo charger
Rating output (B.H.P)		PS(kW)/rpm	280(206)/2,000
Displacement		cc	11,051
Cylinder number - bore(ø) x stroke		mm	6 - ø123 x 155
Flywheel housing & fly wheel (inch)			SAE 1 & 14
Low idling rpm		rpm	725 ± 25
No load max. rpm		rpm	below 2,300
Compression ratio			17.1 : 1
Firing order			1 - 5 - 3 - 6 - 2 - 4
Governor type of injection pump			Mechanical variable speed (R.S.V)
Fuel consumption(only Ref.)		g/PS.h	156
@ rated power		lit. / h	49
Starting system			Electric Starting by starter motor
Starter motor capacity		V- kW	24 - 6.0
Alternator capacity		V- A	24 - 50
Battery		V- Ah	24 - 150
Cooling system			Indirect sea water cooling with heat exchanger
Cooling water capacity	Max. / Min.	lit.	24 / 19
Fresh water pump type			Centrifugal type, driven by gear
Sea water pump type			Rubber impeller type driven by gear
Lubricating oil (Engine)	Pan capacity	lit.	Max : 25, Min : 19 (Engine total : 27)
	Pressure	kg/cm^2	Full : 3.5, Idle : 1.2
Direction of revolution	Crankshaft		Counter clockwise viewed from stern side
Engine size(L x W x H)	Without M/G	mm	1,397 x 931 x 1,077
Engine dry weight	Without M/G	kg	975

Engine Dimension

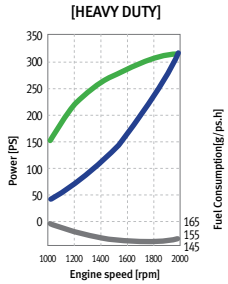


DOOSAN MARINE DIESEL ENGINES

MD196TI

- MODEL
  - MD196TI (HEAVY DUTY)
    : 320PS (235kW) / 2,000rpm

Performance Curve

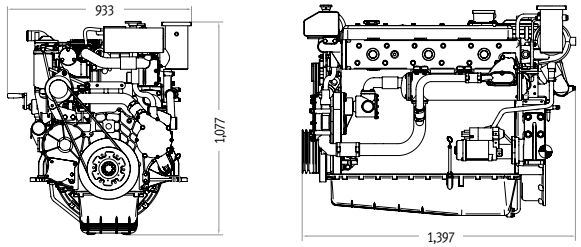


MD196TI Specification

Engine Specification

Model		Units	MD196TI
Engine type			4 cycle, In line, direct- injection, water cooled with wet turbo charger & inter-cooler
Rating output (B.H.P)		PS(kW)/rpm	320(235)/2,000
Displacement		cc	11,051
Cylinder number - bore(ø) x stroke		mm	6 -ø123 x 155
Flywheel housing & fly wheel (inch)			SAE 1 & 14
Low idling rpm		rpm	725 ± 50
No load max. rpm		rpm	below 2,300
Compression ratio			16.5 : 1
Firing order			1 - 5 - 3 - 6 - 2 - 4
Governor type of injection pump			Mechanical variable speed (R.S.V)
Fuel consumption(only Ref.)		g/PS.h	153.3
@ rated power		lit. / h	58.61
Starting system			Electric Starting by starter motor
Starter motor capacity		V- kW	24 - 6.0
Alternator capacity		V- A	24 - 50
Battery		V- Ah	24 - 150
Cooling system			Indirect sea water cooling with heat exchanger
Cooling water capacity	Max. / Min.	lit.	24 / 19
Fresh water pump type			Centrifugal type, driven by gear
Sea water pump type			Rubber impeller type driven by gear
Lubricating oil(Engine)	Pan capacity	lit.	Max : 25, Min : 19 (Engine total : 27)
	Pressure	kg/cm²	Full : 3.5, Idle : 1.2
Direction of revolution	Crankshaft		Counter clockwise viewed from stern side
Engine size(L x W x H)	Without M/G	mm	1,397 x 933 x 1,077
Engine dry weight	Without M/G	kg	1,009

Engine Dimension

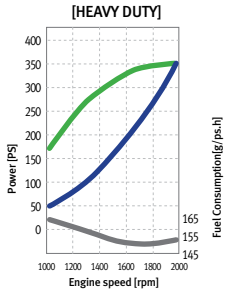


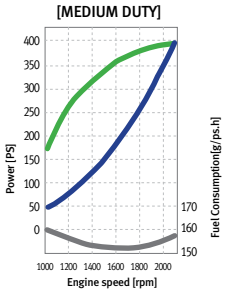
DOOSAN MARINE DIESEL ENGINES

L126TI

- MODEL
  - L126TIH (HEAVY DUTY)
    : 360PS (265kW) / 2,000rpm
  - L126TIM (MEDIUM DUTY)
    : 400PS (294kW) / 2,100rpm

Performance Curve



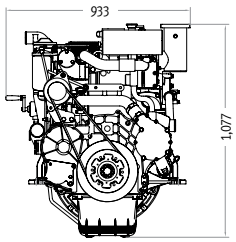


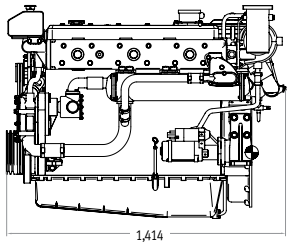
L126TI Specification

Engine Specification

Model		Units	L126TIH	L126TIM
Engine type			4 cycle, In line, direct- injection, water cooled with wet turbo charger & inter-cooler	
Rating output (B.H.P)		PS(kW)/rpm	360(265)/2,000	400(294)/2,100
Displacement		cc	11,051	
Cylinder number - bore(ø) x stroke		mm	6 - ø123 x 155	
Flywheel housing & fly wheel (inch)			SAE 1 & 14	
Low idling rpm		rpm	725 ± 25	
No load max. rpm		rpm	below 2,300	below 2,415
Compression ratio			17 : 1	17 : 1
Firing order			1 - 5 - 3 - 6 - 2 - 4	
Governor type of injection pump			Mechanical variable speed (R.S.V)	
Fuel consumption(only Ref.)		g/PS.h	153.3	161
@ rated power		lit. / h	65.94	76.94
Starting system			Electric Starting by starter motor	
Starter motor capacity		V- kW	24 - 6.0	
Alternator capacity		V- A	24 - 50	
Battery		V- Ah	24 - 150	
Cooling system			Indirect sea water cooling with heat exchanger	
Cooling water capacity	Max. / Min.	lit.	24 / 19	
Fresh water pump type			Centrifugal type, driven by gear	
Sea water pump type			Rubber impeller type driven by gear	
Lubricating oil (Engine)	Pan capacity	lit.	Max : 25, Min : 19 (Engine total : 27)	
	Pressure	kg/cm^2	Full : 3.5, Idle : 1.2	
Direction of revolution	Crankshaft		Counter clockwise viewed from stern side	
Engine size(L x W x H)	Without M/G	mm	1,414 x 933 x 1,077	
Engine dry weight	Without M/G	kg	1,060	

Engine Dimension





DOOSAN MARINE DIESEL ENGINES LINE-UP

DOOSAN MARINE DIESEL ENGINES LINE-UP
V TYPE

V158TI

V180TI

V222TI

4V158TI

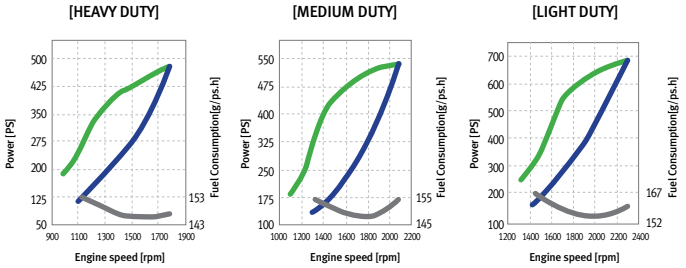
4V222TI

DOOSAN MARINE DIESEL ENGINES

V158TI

- MODEL
  - V158TIH (HEAVY DUTY)
    : 480PS (353kW) / 1,800rpm
  - V158TIM (MEDIUM DUTY)
    : 540PS (397kW) / 2,100rpm
  - V158TIL (LIGHT DUTY)
    : 680PS (500kW) / 2,300rpm

Performance Curve

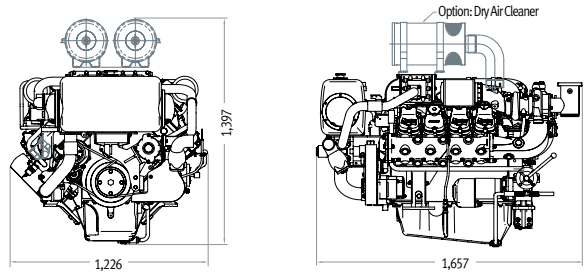


V158TI Specification

Engine Specification

Model		Units	V158TIH	V158TIM	V158TIL
Engine type			4 cycle, V type, direct- injection, water cooled with wet turbo charger & inter-cooler		
Rating output (B.H.P)		PS(kW)/rpm	480(353)/1,800	540(397)/2,100	680(500)/2,300
Displacement		cc	14,618		
Cylinder number - bore(ø) x stroke		mm	8 - ø128 x 142		
Flywheel housing & fly wheel (inch)			SAE 1 & 14		
Low idling rpm		rpm	725 ± 25		
No load max. rpm		rpm	below 2,070	below 2,415	below 2,645
Compression ratio			15 : 1	15:1	14.6:1
Firing order			1 - 5 - 7 - 2 - 6 - 3 - 4 - 8		
Governor type of injection pump			Mechanical variable speed (R.Q.V)		
Fuel consumption(only Ref.)		g / PS.h	163.5	169.7	185.4
@ rated power		lit. / h	93.76	109.48	177.20
Starting system			Electric Starting by starter motor		
Starter motor capacity		V – kW	24 - 6.6		
Alternator capacity		V – A	24 - 50		
Battery		V – Ah	24 - 200		
Cooling system			Indirect sea water cooling with heat exchanger		
Cooling water capacity	Max. / Min.	lit.	89 / 78		
Fresh water pump type			Centrifugal type, driven by belt		
Sea water pump type			Bronze impeller type driven by belt		
Lubricating oil (Engine)	pan capacity	lit.	Max : 31, Min : 25 (Engine total : 35)		
	pressure	kg/cm²	Full : 3.5, Idle : 1.2		
Direction of revolution	crankshaft		Counter clockwise viewed from stern side		
Engine Size (L x W x H)	without M/G	mm	1,657 x 1,226 x 1,397		
Engine dry weight	without M/G	kg	1,350	1,350	1,435

Engine Dimension

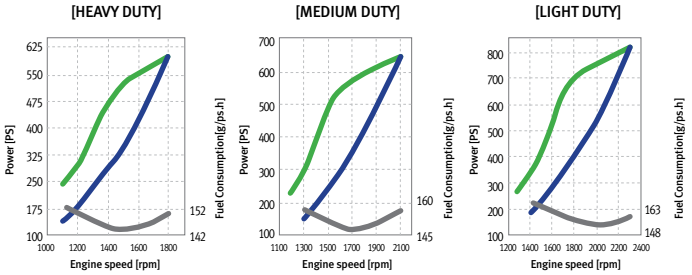


DOOSAN MARINE DIESEL ENGINES

V180TI

- MODEL
  - V180TIH (HEAVY DUTY)
    : 600PS (441kW) / 1,800rpm
  - V180TIM (MEDIUM DUTY)
    : 650PS (478kW) / 2,100rpm
  - V180TIL (LIGHT DUTY)
    : 820PS (603kW) / 2,300rpm

Performance Curve

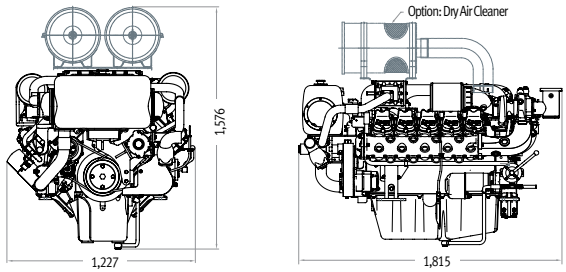


V180TI Specification

Engine Specification

Model		Units	V180TIH	V180TIM	V180TIL
Engine type			4 cycle, V type, direct- injection, water cooled with wet turbo charger & inter-cooler		
Rating output (B.H.P)		PS(kW)/rpm	600(441)/1,800	650(478)/2,100	820(603)/2,300
Displacement		cc	18,273		
Cylinder number - bore(ø) x stroke		mm	10 - ø128 x 142		
Flywheel housing & fly wheel (inch)			SAE 1 & 14		
Low idling rpm		rpm	725 ± 25		
No load max. rpm		rpm	below 2,070	below 2,415	below 2,645
Compression ratio			15 : 1	15:1	14.6:1
Firing order			1 - 6 - 5 - 10 - 2 - 7 - 3 - 8 - 4 - 9		
Governor type of injection pump			Mechanical variable speed (R.Q.V)		
Fuel consumption(only Ref.)		g / PS.h	156.2	167.5	176.6
@ rated power		lit. / h	111.97	130.08	173.01
Starting system			Electric Starting by starter motor		
Starter motor capacity		V – kW	24 - 6.6		
Alternator capacity		V – A	24 - 50		
Battery		V – Ah	24 - 200		
Cooling system			Indirect sea water cooling with heat exchanger		
Cooling water capacity	Max. / Min.	lit.	92 / 81		
Fresh water pump type			Centrifugal type, driven by belt		
Sea water pump type			Bronze impeller type driven by belt		
Lubricating oil (Engine)	pan capacity	lit.	Max: 35, Min : 28 (Engine total : 38)		
	pressure	kg/cm^2	Full : 3.5, Idle : 1.2		
Direction of revolution	crankshaft		Counter clockwise viewed from stern side		
Engine Size (L x W x H)	without M/G	mm	1,815 x 1,227 x 1,576		
Engine dry weight	without M/G	kg	1,550	1,550	1,630

Engine Dimension

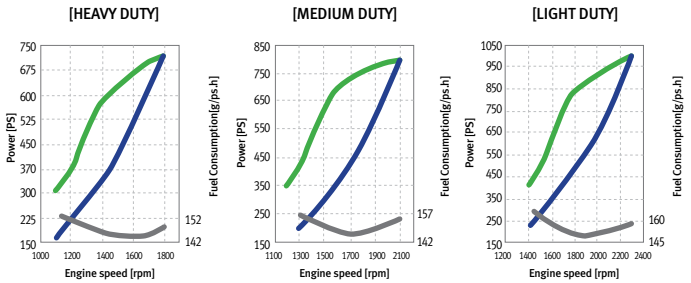


DOOSAN MARINE DIESEL ENGINES

V222TI

- MODEL
  - V222TIH (HEAVY DUTY)
    : 720PS (530kW) / 1,800rpm
  - V222TIM (MEDIUM DUTY)
    : 800PS (588kW) / 2,100rpm
  - V222TIL (LIGHT DUTY)
    : 1,000PS (736kW) / 2,300rpm

Performance Curve

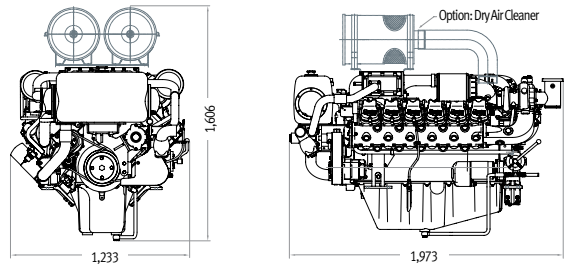


V222TI Specification

Engine Specification

Model		Units	V222TIH	V222TIM	V222TIL
Engine type			4 cycle, V type, direct- injection, water cooled with wet turbo charger & inter-cooler		
Rating output (B.H.P)		PS(kW)/rpm	720(530)/1,800	800(588)/2,100	1,000(736)/2,300
Displacement		cc	21,927		
Cylinder number - bore(ø) x stroke		mm	12 - ø128 x 142		
Flywheel housing & fly wheel (inch)			SAE 1 & 14		
Low idling rpm		rpm	725 ± 25		
No load max. rpm		rpm	below 2,070	below 2,415	below 2,645
Compression ratio			15 : 1	15:1	14.6:1
Firing order			1 - 12 - 5 - 8 - 3 - 10 - 6 - 7 - 2 - 11 - 4 - 9		
Governor type of injection pump			Mechanical variable speed (R.Q.V)		
Fuel consumption(only Ref.)		g / PS.h	159.2	167.3	176.9
@ rated power		lit. / h	136.95	159.90	211.35
Starting system			Electric Starting by starter motor		
Starter motor capacity		V – kW	24 - 6.6		
Alternator capacity		V – A	24 - 50		
Battery		V – Ah	24 - 200		
Cooling system			Indirect sea water cooling with heat exchanger		
Cooling water capacity	Max. / Min.	lit.	98 / 87		
Fresh water pump type			Centrifugal type, driven by belt		
Sea water pump type			Bronze impeller type driven by belt		
Lubricating oil (Engine)	pan capacity	lit.	Max : 40, Min : 33 (Engine total : 43)		
	pressure	kg/cm^2	Full : 3.5, Idle : 1.2		
Direction of revolution	crankshaft		Counter clockwise viewed from stern side		
Engine Size (L x W x H)	without M/G	mm	1,973 x 1,233 x 1,606		
Engine dry weight	without M/G	kg	1,750	1,750	1,830

Engine Dimension

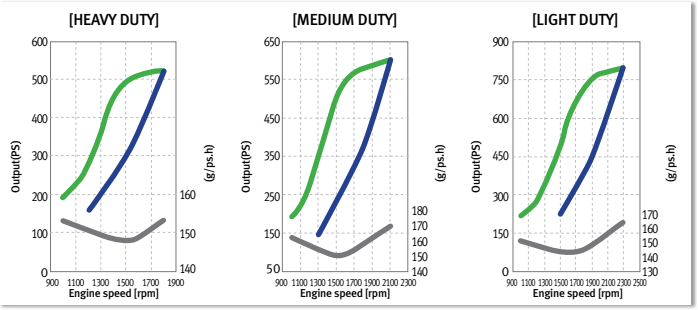


DOOSAN MARINE DIESEL ENGINES

4V158TI

- MODEL
  - 4V158TIH (HEAVY DUTY)
    : 530PS (390kW) / 1,800rpm
  - 4V158TIM (MEDIUM DUTY)
    : 600PS (441kW) / 2,100rpm
  - 4V158TIL (LIGHT DUTY)
    : 800PS (588kW) / 2,300rpm

Performance Curve

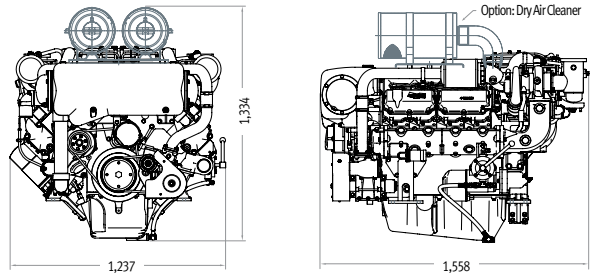


4V158TI Specification

Engine Specification

Model		Units	4V158TIH	4V158TIM	4V158TIL
Engine type			4 valve, 4 cycle, V type, direct- injection, water cooled with wet turbo charger & inter-cooler		
Rating output (B.H.P)		PS(kW)/rpm	530(390)/1,800	600(441)/2,100	800(588)/2,300
Displacement		cc	14,618		
Cylinder number - bore(ø) x stroke		mm	8 - ø128 x 142		
Flywheel housing & fly wheel (inch)			SAE 1 & 14		
Low idling rpm		rpm	725 ± 25		
No load max. rpm		rpm	below 2,070	below 2,415	below 2,645
Compression ratio			14.3 : 1	14.3:1	14.3:1
Firing order			1 - 5 - 7 - 2 - 6 - 3 - 4 - 8		
Governor type of injection pump			Mechanical variable speed (R.Q.V)		
Fuel consumption(only Ref.)		g / PS.h	160.4	168	180.6
@ rated power		lit. / h	101.57	120.43	172.62
Starting system			Electric Starting by starter motor		
Starter motor capacity		V – kW	24 - 6.6		
Alternator capacity		V – A	24 - 55		
Battery		V – Ah	24 - 200		
Cooling system			Indirect sea water cooling with heat exchanger		
Cooling water capacity	Max. / Min.	lit.	94 / 83		
Fresh water pump type			Centrifugal type, driven by belt		
Sea water pump type			Bronze impeller type driven by belt		
Lubricating oil (Engine)	pan capacity	lit.	Max : 31, Min : 25 (Engine total : 35)		
	pressure	kg/cm^2	Full : 3.5, Idle : 1.2		
Direction of revolution	crankshaft		Counter clockwise viewed from stern side		
Engine Size (L x W x H)	without M/G	mm	1,558 x 1,237 x 1,334		
Engine dry weight	without M/G	kg	1,540	1,540	1,580

Engine Dimension

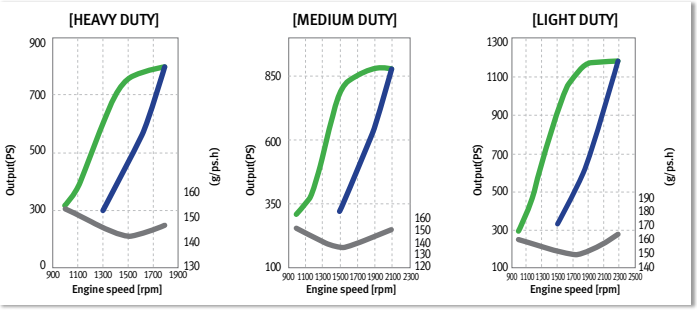


DOOSAN MARINE DIESEL ENGINES

4V222TI

- MODEL
  - 4V222TIH (HEAVY DUTY)
    : 800PS (588kW) / 1,800rpm
  - 4V222TIM (MEDIUM DUTY)
    : 880PS (647kW) / 2,100rpm
  - 4V222TIL (LIGHT DUTY)
    : 1,200PS (883kW) / 2,300rpm

Performance Curve

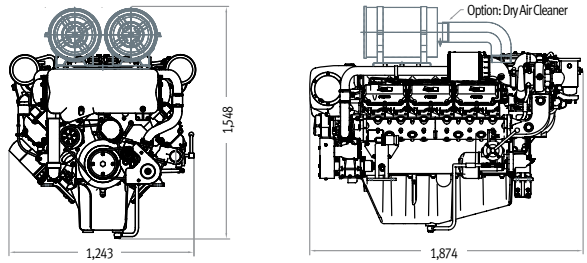


4V222TI Specification

Engine Specification

Model		Units	4V222TIH	4V222TIM	4V222TIL
Engine type			4 valve, 4 cycle, V type, direct- injection, water cooled with wet turbo charger & inter-cooler		
Rating output (B.H.P)		PS(kW)/rpm	800(588)/1,800	880(647)/2,100	1,200(883)/2,300
Displacement		cc	21,927		
Cylinder number - bore(ø) x stroke		mm	12 - ø128 x 142		
Flywheel housing & fly wheel (inch)			SAE 1 & 14		
Low idling rpm		rpm	725 ± 25		
No load max. rpm		rpm	below 2,070	below 2,415	below 2,645
Compression ratio			14.3 : 1	14.3 : 1	14.3 : 1
Firing order			1 - 12 - 5 - 8 - 3 - 10 - 6 - 7 - 2 - 11 - 4 - 9		
Governor type of injection pump			Mechanical variable speed (R.Q.V)		
Fuel consumption(only Ref.)		g / PS.h	153	160	168
@ rated power		lit. / h	146.24	168.22	200.72
Starting system			Electric Starting by starter motor		
Starter motor capacity		V – kW	24 - 6.6		
Alternator capacity		V – A	24 - 55		
Battery		V – Ah	24 - 200		
Cooling system			Indirect sea water cooling with heat exchanger		
Cooling water capacity	Max. / Min.	lit.	103 / 92		
Fresh water pump type			Centrifugal type, driven by belt		
Sea water pump type			Bronze impeller type driven by belt		
Lubricating oil (Engine)	pan capacity	lit.	Max : 40, Min : 33 (Engine total : 43)		
	pressure	kg/cm^2	Full : 3.5, Idle : 1.2		
Direction of revolution	crankshaft		Counter clockwise viewed from stern side		
Engine Size (L x W x H)	without M/G	mm	1,874 x 1,243 x 1,548		
Engine dry weight	without M/G	kg	1,920	1,920	1,960

Engine Dimension



NOTES

NOTES

Doosan Infracore Co., Ltd

7-11, Hwasu-Dong, Dong-Gu, Incheon, Korea
www.doosaninfracore.com/engines

Engine Sales
21st Floor, Doosan Tower, 18-12, Euljiro 6-ga, Jung-gu, Seoul, Korea
Tel : +82-2-3398-8400 / Fax : +82-2-3398-8509
Email : doosanmarine@doosan.com

AUTHORIZED DEALER

* Specifications are subject to change without prior notice.