

# DOOSAN INFRACORE INDUSTRIAL ENGINE

## D34



Intermittent rating kW(HP) / rpm	Max. torque N.m(kg.m) / rpm	Aftertreatment System
54 (74) / 2400	330 (33.7) / 1400	DOC
63 (85) / 2400	325 (33.1) / 1600	DOC + SCR
69 (92) / 2400	350 (35.7) / 1600	
75 (100) / 2400	375 (38.2) / 1600	
82 (110) / 2400	430 (43.8) / 1400	
97 (130) / 2400	500 (51.0) / 1400	

### ◎ MECHANICAL SYSTEM

- o Engine Model D34
- o Engine Type In-line 4 cycle Diesel,  
water cooled, Turbo-intercooler
- o Combustion type Direct injection
- o Cylinder Type Linerless
- o Number of cylinders 4
- o Bore x stroke 98 x 113 mm
- o Displacement 3.409 lit.
- o Compression ratio 17.0 : 1
- o Firing order 1-3-4-2
- o Dry weight 335 kg  
(w/o starter, alternator, aftertreatment)
- o Dimension (LxWxH)  
889.6x655.2x804.5mm(with DOC)  
875x655.2x804.5mm(with DOC/Fan Height 475mm)  
896.9x655.2x992mm(with DOC+SCR/ up to 110HP)  
896.9x695.9x1005.4mm(with DOC+SCR/over 110HP)
- o Rotation Counter clockwise viewed from Flywheel
- o Fly wheel housing SAE NO.3M(SAE J617)
- o Fly wheel Clutch 11 1/2"(SAE J620)
- o Number of teeth 125  
(Flywheel)

### ◎ ENGINEERING DATA

- o Water flow 114 liters/min @2,400 rpm (100HP)
- o Heat rejection
  - to coolant 12.0 kcal/sec @2,400 rpm (74HP)
  - to coolant 14.2 kcal/sec @2,400 rpm (100HP)
  - to coolant 14.9 kcal/sec @2,400 rpm (110HP)
  - to coolant 16.2 kcal/sec @2,400 rpm (130HP)
  - to CAC 2.2 kcal/sec @2,400 rpm (74HP)
  - to CAC 2.6 kcal/sec @2,400 rpm (100HP)
  - to CAC 2.8 kcal/sec @2,400 rpm (110HP)
  - to CAC 3.6 kcal/sec @2,400 rpm (130HP)
- o Air flow 5,280 liter/min @2,400 rpm (100HP)
- o Exhaust gas temp. 750 °C ↓ @2,400 rpm
- o Max. permissible restrictions
  - Intake system 2.16 kPa clean filter  
6.23 kPa dirty filter

### ◎ FUEL SYSTEM

- o Injection pump DELPHI DFP 4.2
- o Governor Controlled by ECU
- o Feed pump N/A
- o Injection nozzle Multi hole type
- o Fuel filter Full flow, cartridge type
- o Used fuel EN590

### ◎ LUBRICATION SYSTEM

- o Lub. Method Fully forced pressure feed type
- o Oil pump Gear type driven by crankshaft
- o Oil filter Full flow, cartridge type
- o Oil pan capacity High level 12.6 liters(except 130HI)  
Low level 6.0 liters(except 130HP)  
High level 14.3 liters(130HP)  
Low level 6.4 liters(130HP)
- o Angularity limit 35 deg all around
- o Lub. Oil 10W30 CJ-4  
(Refer to Operation Manual)
- o Maximum oil temp 135°C at main oil gallery
- o Lub oil pressure Idle Speed : Min 100 kPa

### ◎ COOLING SYSTEM

- o Cooling method Fresh water forced circulation
- o Water capacity Approx. 5.1 lit  
(engine only)
- o Water pump Centrifugal type driven by belt
- o Thermostat Wax – pellet type  
Opening temp. 82°C  
Full open temp. 97°C
- o Cooling fan Not Available
- o Water Temperature 110°C (max.)

### ◎ ELECTRICAL SYSTEM

- o Battery Charging 12V x 90A  
Alternator
- o Voltage regulator Built-in type IC regulator
- o Starting motor 12V x 2.7kW
- o Battery Voltage 12V

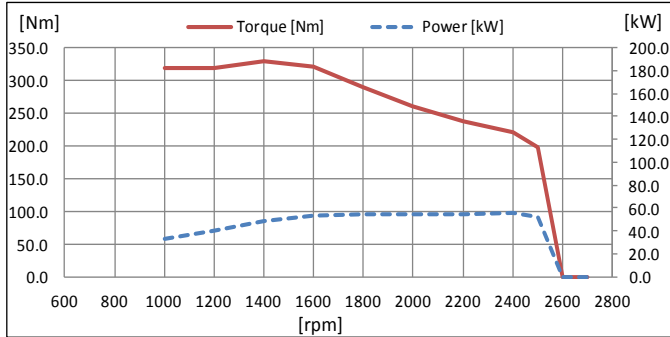
- Exhaust system 20 kPa max.(DOC only version)  
30 kPa max.(DOC+SCR version)

- o Battery Capacity 100 Ah, 950CCA ↑ (recommended)
- o Starting Aid Air heater

© VALVE SYSTEM

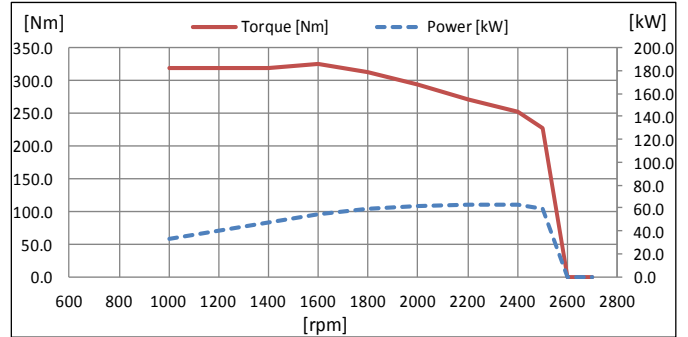
- o Type Over head valve
- o Number of valve Intake 2, exhaust 2 per cylinder
- o Valve lashes Intake 0.4mm  
(@ cold) Exhaust 0.45mm

**54KW(74HP)**



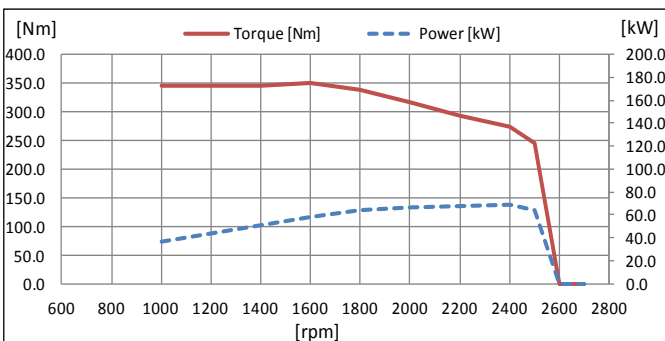
speed	Power			Torque	
	kW	PS	HP	Nm	kgm
1000	33.5	45.6	44.9	320.0	32.6
1200	40.2	54.7	53.9	320.0	32.6
1400	48.4	65.8	64.9	330.0	33.7
1600	54.0	73.4	72.4	322.0	32.8
1800	54.5	74.1	73.1	289.3	29.5
2000	54.6	74.2	73.2	260.7	26.6
2200	54.7	74.4	73.4	237.5	24.2
2400	55.3	75.2	74.1	220.0	22.4
2500	51.8	70.5	69.5	198.0	20.2
2600	0.0	0.0	0.0	0.0	0.0

**63KW(85HP)**



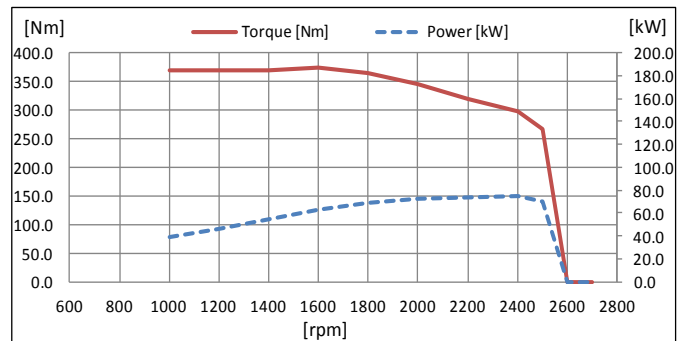
speed	Power			Torque	
	kW	PS	HP	Nm	kgm
1000	33.5	45.6	44.9	320.0	32.6
1200	40.2	54.7	53.9	320.0	32.6
1400	46.9	63.8	62.9	320.0	32.6
1600	54.5	74.0	73.0	325.0	33.1
1800	58.8	80.0	78.9	312.0	31.8
2000	61.8	84.0	82.9	295.0	30.1
2200	62.7	85.2	84.0	272.0	27.7
2400	63.4	86.2	85.0	252.3	25.7
2500	59.5	80.8	79.7	227.1	23.2
2600	0.0	0.0	0.0	0.0	0.0

**69KW(92HP)**



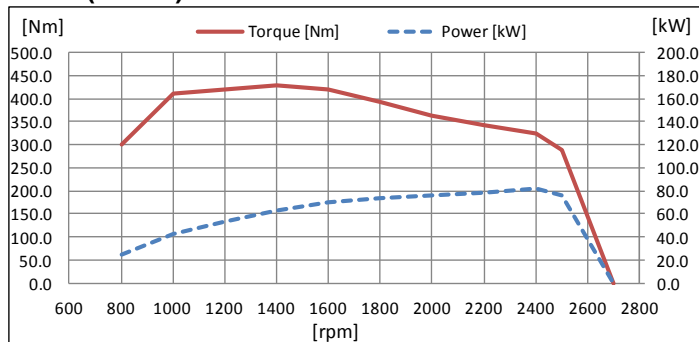
speed	Power			Torque	
	kW	PS	HP	Nm	kgm
1000	36.1	49.1	48.4	345.0	35.2
1200	43.4	58.9	58.1	345.0	35.2
1400	50.6	68.8	67.8	345.0	35.2
1600	58.6	79.7	78.6	350.0	35.7
1800	63.7	86.6	85.4	338.0	34.5
2000	66.6	90.6	89.3	318.0	32.4
2200	67.7	92.1	90.8	294.0	30.0
2400	68.6	93.3	92.0	273.1	27.8
2500	64.4	87.5	86.3	245.8	25.1
2600	0.0	0.0	0.0	0.0	0.0

**75KW(100HP)**

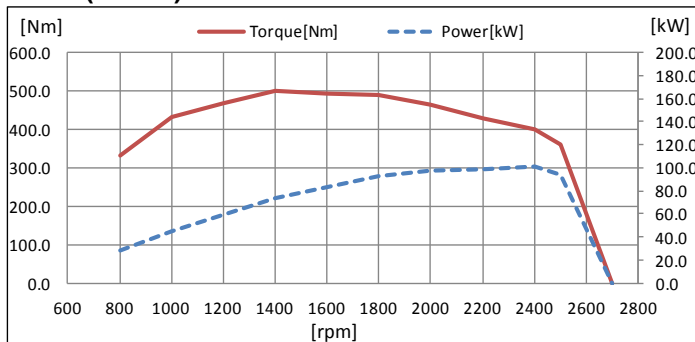


speed	Power			Torque	
	kW	PS	HP	Nm	kgm
1000	38.7	52.7	52.0	370.0	37.7
1200	46.5	63.2	62.4	370.0	37.7
1400	54.2	73.8	72.7	370.0	37.7
1600	62.8	85.4	84.3	375.0	38.2
1800	68.8	93.5	92.3	365.0	37.2
2000	72.3	98.2	96.9	345.0	35.2
2200	73.7	100.2	98.9	320.0	32.6
2400	74.6	101.5	100.1	297.0	30.3
2500	70.0	95.1	93.8	267.3	27.3
2600	0.0	0.0	0.0	0.0	0.0

### 82KW(110HP)



### 97KW(130HP)



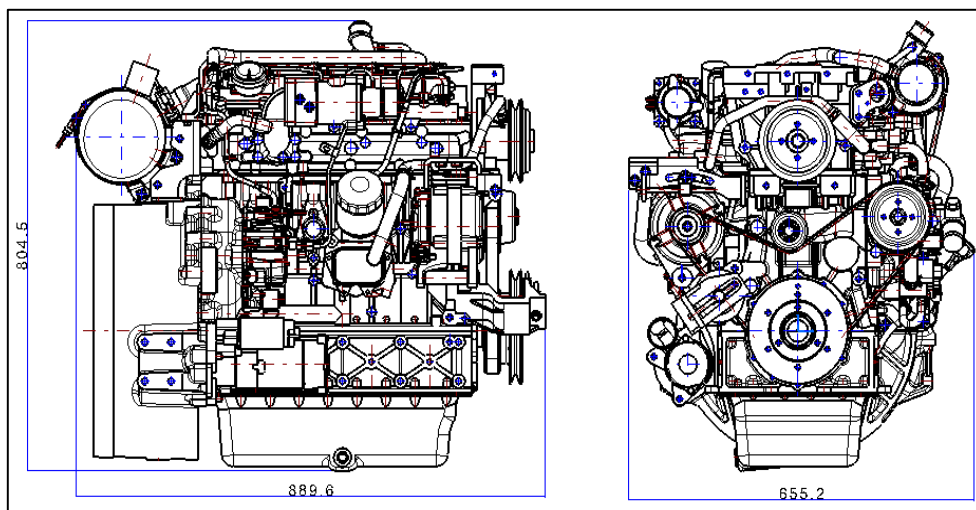
speed	Power			Torque	
	kW	PS	HP	Nm	kgm
800	25.1	34.2	33.7	300.0	30.6
1000	42.9	58.4	57.6	410.0	41.8
1200	52.8	71.8	70.8	420.0	42.8
1400	63.0	85.7	84.5	430.0	43.8
1600	70.4	95.8	94.5	420.4	42.9
1800	73.9	100.5	99.2	392.3	40.0
2000	76.3	103.7	102.3	364.1	37.1
2200	78.6	106.8	105.4	341.1	34.8
2400	81.9	111.4	109.9	326.0	33.2
2500	75.9	103.2	101.7	289.8	29.6
2700	0.0	0.0	0.0	0.0	0.0

speed	Power			Torque	
	kW	PS	HP	Nm	kgm
800	25.1	34.2	33.7	300.0	30.6
1000	42.9	58.4	57.6	410.0	41.8
1200	58.8	80.0	78.9	468.0	47.7
1400	73.3	99.7	98.3	500.0	51.0
1600	79.9	108.7	107.2	477.0	48.6
1800	85.6	116.4	114.8	454.0	46.3
2000	90.3	122.7	121.1	431.0	43.9
2200	94.2	128.1	126.4	409.0	41.7
2400	97.0	131.9	130.1	386.0	39.4
2500	69.9	-	93.7	267.0	27.2
2700	0.0	0.0	0.0	0.0	0.0

### o Dimension (LxWxH)

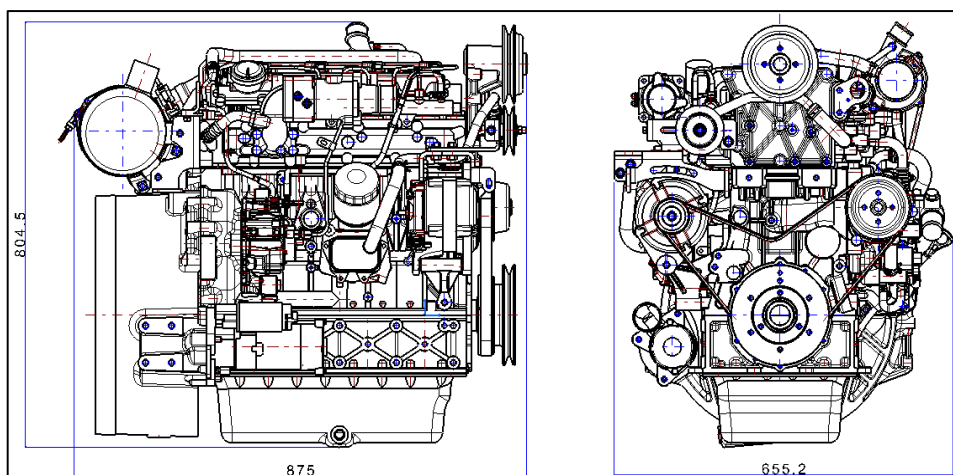
-D34\_74HP\_DOC only

889.6x655.2x804.5mm(with DOC)



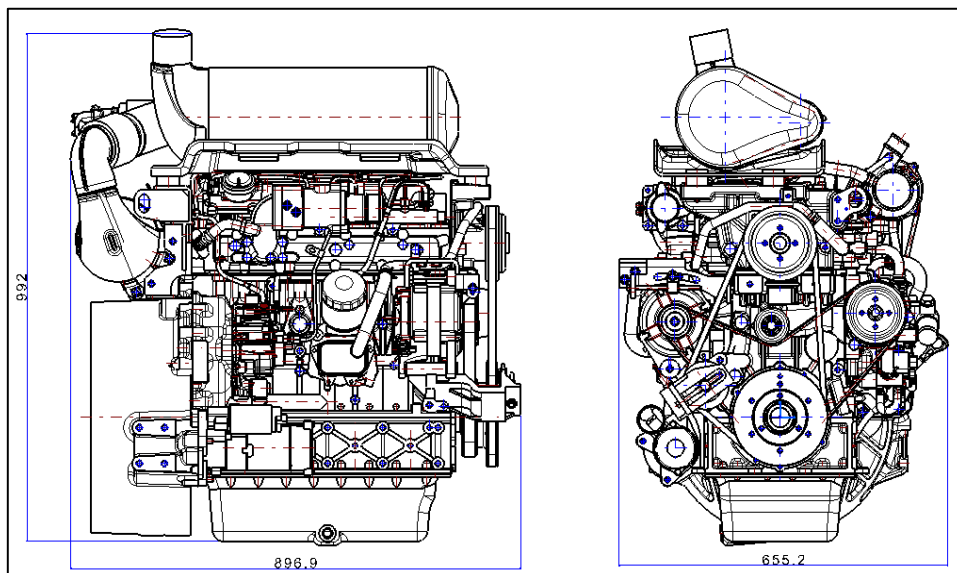
-D34\_74HP\_DOC only (Fan Height option\_475mm)

875x655.2x804.5mm(with DOC/Fan Height 475mm)



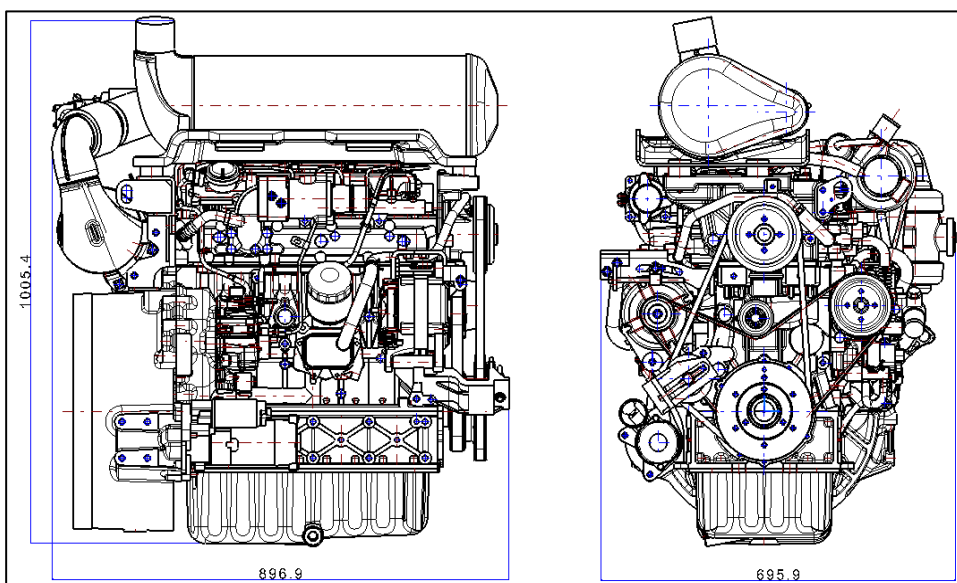
-D34\_Up to 110HP\_DOC+SCR

896.9x655.2x992mm(with DOC+SCR/ up to 110HP)



-D34\_Over 110HP\_DOC+SCR

896.9x695.9x1005.4mm(with DOC+SCR/over 110HP)



◆ CONVERSION TABLE

in. = mm x 0.0394    lb/ft = N.m x 0.737  
PS = kW x 1.3596    U.S. gal = lit. x 0.264  
psi = kg/cm<sup>2</sup> x 14.7    kW = 0.2388 kcal/s  
in<sup>3</sup> = lit. x 61.02    lb/PS.h = g/kW.h x 0.00162  
hp = PS x 0.98635    cfm = m<sup>3</sup>/min x 35.336  
lb = kg x 2.20462

Revised : 30th, June, 2016

※ Specifications are subject to change without prior notice