



Engine specifications & Injection pump datas

DIESEL ENGINE for INDUSTRIAL

DB58

DB58S

DB58T

DB58TI

DB58TIS

1. GENERAL INFORMATION

1.1. Engine specifications

Model Items		Engine			
		DB58/DB58S	DB58T	DB58TI	DB58TIS
Engine type		4 cycle in-line Naturally aspirated	4 cycle in-line, Water-cooled Turbo charged	4 cycle in-line, Water-cooled type Turbo charged & intercooled	
Combustion chamber type		Direct injection type			
Cylinder liner type		Dry type			
Timing gear system		Gear driven type			
No. of piston ring		2 compression ring, 1 oil ring			
No. of cylinder-bore x stroke (mm)		6 – 102 x 118			
Total piston displacement (cc)		5,785			
Compression ratio		17.5 : 1			18.5
Engine dimension (length x width x height) (mm)		1,173x666x793	1,172x724x912	1,184x657x934	1,184x690x970
Engine weight (kg)		450	480	505	480
Rotating direction (from fly wheel)		counter clockwise			
Fuel injection order		1 - 5 - 3 - 6 - 2 - 4			
Fuel injection timing (B.T.D.C static)		15 or 18°	13°		11°
Injection pump type		Bosch in-line A type			
Governor type		Mechanical governor RSV type			
Injection nozzle type		Multi-hole type (5 hole)		Multi-hole type (6 or 7 hole)	
Fuel injection pressure (kg/cm ²)		220		185	190
Compression pressure (kg/cm ²)		28 (at 200 rpm)			
Intake & exhaust valve clearance (at cold) (mm)		0.4			
Intake valve	Open at	28° (B.T.D.C)			
	Close at	62° (A.B.D.C)			
Exhaust valve	Open at	70° (B.B.D.C)			
	Close at	28° (A.T.D.C)			
Lubrication method		Pressurized circulation			
Oil pump type		Gear type			
Oil filter type		Full-flow, cartridge type			
Lubricating oil capacity (oil pan) (lit)		14.5(13) or 20.5(19)			
Oil cooler type		Water cooled			
Water pump		Belt driven impeller type			
Cooling Method		Pressurized circulation			
Cooling water capacity (engine only) (lit)		12			
Thermostat type		Wax pallet type (71 ~ 85°C or 82 ~95°C)			
Cooling fan		7-N457 blower, N595, N625 or 8-N685 sucker			
Alternator voltage – capacity (V - A)		24 – 60 or 24 - 50			
Starting Motor (voltage – output) (V - kW)		24 – 4.5			
Battery (capacity) (V - AH)		24 - 120			

1.2. Engine power

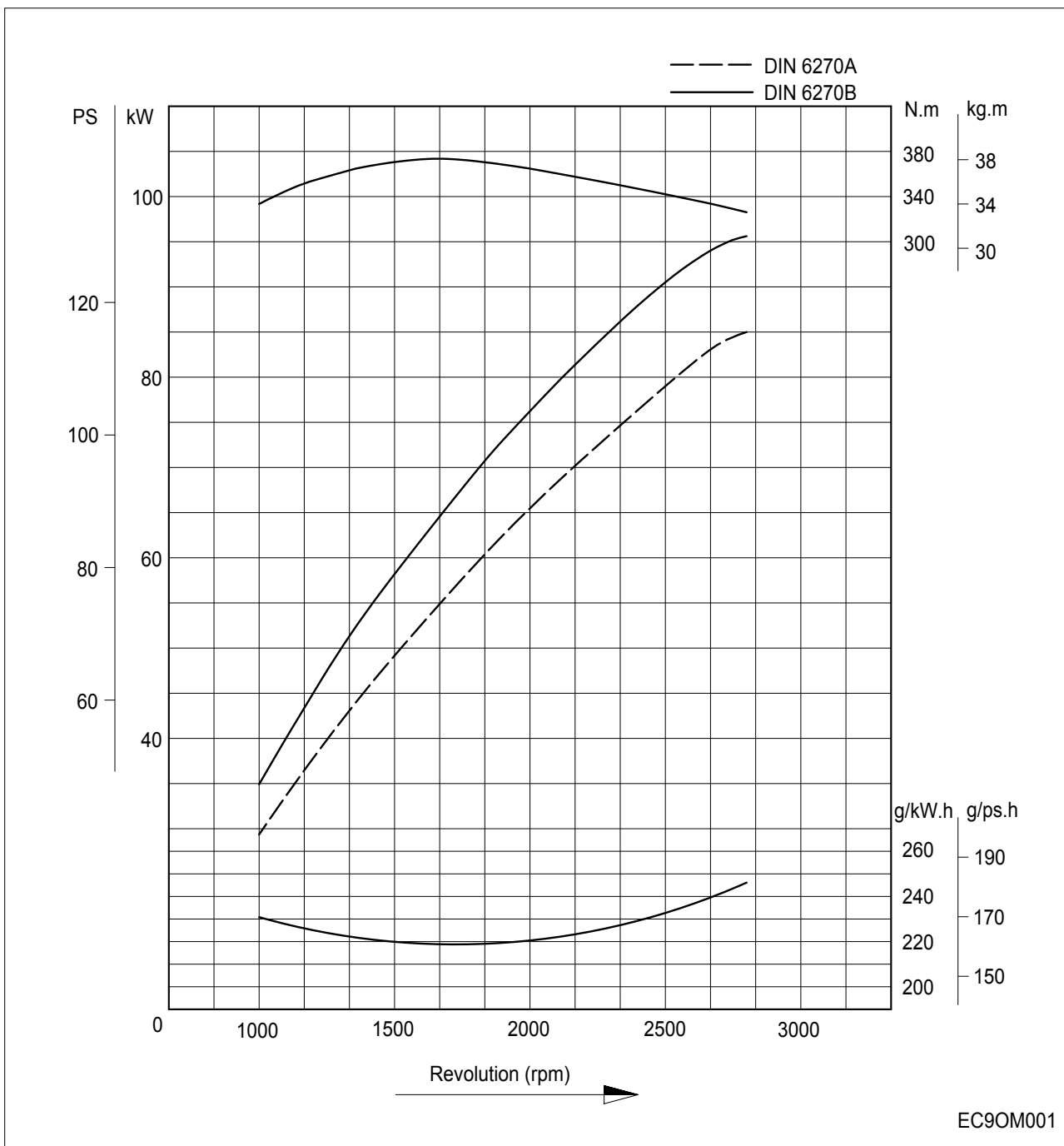
Production tolerance : ±5%

Engine model		Performance					
Model	Suffix	Injection timing (BTDC°)	Power (PS/rpm)	Torque (kg.m/rpm)	Low idle (rpm)	High idle (rpm)	Remark
DB58	EARDA	20	88.5/1,800	35.5/1,600	950-1,000	2,000~2,030	-
	EAREA		113/2,200	38/1,600	850-900	2,370~2,470	
	EAREB		92/2,200	32/1,600	775-825	2,370~2,470	
	EARFE				860±25	2,420±25	
	EARFI/J	16	102/2,200	35.5/1,600	800±25	2,420±50	-
	EARFH	18			850±25	2,420±25	
	EARFF	20	102/2,200	35.5/1,600	800±25	2,420±50	
	EARFG	18			975±25	2,420±50	
	EARFK	16			975±25	2,420±50	
	EARLA/B	18	108/2,200	37.5/1,600	975±25	2,420±50	-
	EARLC	16	98~102/2,200	38.0/1,600	975±25	2,420±50	
DB58S	ECRFA	15	102/2,200	37/1,600	800±25	2,420±50	TIER-II
	ECRFB	15	90/2,200	33/1,600	800±25	2,420±50	
	ECRFC	15	94/2,400	33/1,600	800±25	2,640±50	
DB58T	EATEA	18	132/2,200	44/1,600	925~975	2,370~2,470	TIER-I
	EATEE	13		45/1,600	1,100±25	2,240±50	
	EATEH		950-980	2,370~2,470			
	EATEB	18	111/1,850	45/1,700	825~875	2,035±50	
	EATEF	13			1,050±10	2,035±50	
	EATED	18	114/1,950	45/1,600	1,150±25	2,140±50	
	EATEG	13	120/2,050	45/1,600	1,150±25	2,255±50	
	EATEI		100+2/1,850	39.0/1,700	1,050±10	2,035±50	
	EATLA	18	139/2,300	45.5/1,600	875~925	2,480±50	
	EATLB	13	132/2,200	45.0/1,600	975±25	2,420±50	
DB58TI	EAOEA	13	150/2,000	57/1,600	1,150±25	2,200±50	-
	EAOED						
	EAOEB	13	160/2,200	58/1,600	1,200±25	2,420±50	
	EAOEC	13	155/2,100			2,310±50	
	EAOLA/B	13	145/2,000	975~1,025	2,370~2,470		
	EAOEE	13	160/2,000	59/1,600	1,150±25	2,200±50	
DB58TIS	ECOEA	11	173/2,000	68/1,400	1,250~1,275	2,200~2,250	TIER-II
	ECOEB	11	157/1,950	62/1,400	1,200~1,225	2,150~2,200	
	ECOEC	11	162/2,200	60/1,500	1,200~1,225	2,370~2,470	
	ECOEG	11	158/2,100			2,260~2,360	
	ECOED	11	135/2,200	50/1,400	1,100~1,125	2,420~2,470	
	ECOEE	11	154/2,000	60,1,500	1,200±25	2,200±50	
	ECOEF	11	124/1,950	48/1,400	1,150~1,175	2,095~2,195	
	ECOLA	13	165/2,200	73/1,400	1,075~1,125	2,370~2,470	
	ECOLB	11	145/2,200	63/1,500	1,100±25	2,420±50	

* Note : All data are based on operation without cooling fan at DIN 6270B

1.3. Performance curve

1.3.1. Performance curve (DB58)



Performance	DIN 6270B	DIN 6270A
Output (rated)	96 kW(130PS)/2,800 rpm	85 kW(115PS)/2,800 rpm
Torque (min)	370 N.m(38.0 kg.m)/1,600 rpm	
Fuel consumption (min)	218 g/kW.h(160 g/PS.h)	