

2. Specifications

Model			4JHE	4JH-TE	4JH-HTE	4JH-DTE
Type			Vertical 4-cycle water cooled diesel engine			
Combustion system			Direct Injection			
Aspiration			Normal aspiration	Exhaust gas turbine turbocharger	Exhaust gas turbine turbocharger with intercooler	
Number of cylinders			4			
Bore x stroke		mm (in.)	78 x 86 (3.07 x 3.39)			
Displacement		ℓ (cu.in.)	1.644 (100.33)			
One hour rating output (DIN6270B)	Output/crankshaft speed	HP/rpm (kW/rpm)	44/3600 (32.4/3600)	55/3600 (40.5/3600)	66/3600 (48.6/3600)	77/3600 (56.7/3600)
	Brake mean effective pressure	Kg/cm ² (lb./in. ²)	6.69 (95.15)	8.36 (118.91)	10.0 (142.20)	11.7 (166.37)
	Piston speed	m/sec. (ft./sec.)	10.3 (33.79)	10.3 (33.79)	10.3 (33.79)	10.3 (33.79)
Continuous rating output (DIN6270A)	Output/crankshaft speed	HP/rpm (kW/rpm)	40/3500 (29.5/3500)	50/3500 (36.8/3500)	60/3500 (44.2/3500)	70/3500 (51.5/3500)
	Brake mean effective pressure	kg/cm ² (lb./in. ²)	6.26 (89.04)	7.82 (111.23)	9.39 (133.53)	11.0 (156.42)
	Piston speed	m/sec. (ft./sec.)	10.0 (32.81)	10.0 (32.81)	10.0 (32.81)	10.0 (32.81)
Compression ratio			17.8	16.2	15.9	15.9
Fire order			1 180° 3 180° 4 180° 2 180° 1			
Fuel injection pump			Bosch in-line type YPES-CL			
Fuel injection timing (FID)		degree	12° ± 1° (*9° ± 1°) bTDC	12° ± 1° bTDC	12° ± 1° bTDC	12° ± 1° bTDC
Fuel Injection pressure		kg/cm ² (lb./in. ²)	200 ± 5 (2844 ± 71)			
Fuel injection nozzles			Hole type			
Direction of rotation	Crankshaft		Counter-clockwise viewed from stern			
	Propeller shaft (Forward)		Clockwise viewed from stern			
Power take off			At flywheel side			
Cooling system			Constant high temperature fresh water cooling Fresh water: Centrifugal pump Sea water: Rubber impeller pump			
Lubrication system			Forced lubrication with trochoid pump			
Starting system	Starting motor		DC 12V, 1.8kW			
	AC generator		12V, 55A			
Turbocharger	Type			RHB52 (IHI)	RHB52HW (IHI)	
	Model			MY29	MY31	MY34
	Cooling system			Air cooling	Water cooling	
Air cooler system	Type				Sea-water cooled, Plate fin type	Sea-water cooled, Corrugated fin type
	Radiation area	m ² (in. ²)			0.76 (1178)	0.67 (1038)
Clutch	Model		KBW20		KBW21	KBW21
	Type		Constant mesh gear with multiple friction disc clutch			
	Reduction ratio (Forward/Reverse)		2.17/3.06, 2.62/3.06, 3.28/3.06			2.17/3.06, 2.62/3.06
	Propeller speed DIN6270A rating (Forward/Reverse)		1615/1145, 1336/1145, 1068/1145			1615/1145, 1336/1145
	Lubricating oil capacity Effect/max	ℓ (cu.in.)	0.15/1.2 (9.15/73.22)			
	Clutch weight	kg (lb.)	26 (57.33)		30 (66.15)	30 (66.15)
Dimensions	Overall length	mm (in.)	906.3 (35.68)		906.3 (35.68)	906.3 (35.68)
	Overall width	mm (in.)	561 (22.09)		561 (22.09)	561 (22.09)
	Overall height	mm (in.)	659 (25.94)		668 (26.30)	668 (26.30)
Engine weight with clutch (dry)		kg (lb.)	226 (498)	232 (511)	246 (542)	246 (542)
Lubricating oil capacity Effect/max.		ℓ (cu.in.)	3.0/6.5 (183.06/396.63)			
Cooling water capacity (Fresh water)	Fresh water tank	ℓ (cu.in.)	6.0 (366.12)			
	Sub tank	ℓ (cu.in.)	0.8 (48.82)			

Note: * Applicable engine number #/E 00101 ~ 00574