Technical Engine Data

12V2000G65
Air charge air cooling;
50 Hz - 1.500/min
fuel consumption optimized

Operating method	Four stroke Diesel	**Flywheel housing flange**	SAE 0
Combustion system	Direct Injection	**Flywheel interface**	18"
Charging method	Exhaust turbo charger and Air charge air cooling;	**Starter ring-gear teeth no.**	160
		Injection system	Electronically controlled high-pressure injection with single injection pumps
Bore / Stroke	130 / 150 mm		
Displacement, total	23.88 Liter		
Number of cylinders	12	**Control / Monitoring**	Electronic engine management system "ADEC"
Cylinder configuration	V - 90°	**Number of turbo chargers**	2
Compression ratio	16 : 1	**Number of intercooler**	1
Direction of rotation (viewed from flywheel side)	left		

MTU-Application group				**3D** (ICFN)	**3B** (ICXN)
Power (ISO 3046)		kW	A	765	695
Mean piston speed		m/s	A	7.5	7.5
Mean effective pressure		bar	A	25.6	23.3
Engine weight (Engine in basic execution)	dry	kg	R	2490	2490
	wet	kg	R	2660	2660
Dimensions (Engine only)	length	mm	R	1882	1882
	height	mm	R	1570	1570
	width	mm	R	1580	1580
Consumption					
Specific fuel consumption (be)	100% CP	g/kWh	G	203	202
(Tolerance +5% according to ISO 3046/1)	75% CP	g/kWh	R	202	203
	50% CP	g/kWh	R	208	210
Lube oil consumption (after run-in)			R	0.5	0.5
Capacity					
Engine oil capacity, initial filling (standard oil system)	total	Liter	R	77	77
	Oil pan capacity, dipstick mark min.	Liter	L	50	50
	Oil pan capacity, dipstick mark max.	Liter	L	67	67
Engine coolant capacity (without cooling equipment)		Liter	R	90	90
Intercooler coolant capacity		Liter	R	-	-
Heat dissipation					
Engine coolant dissipation	100% load	kW	R	330	310
Charge-air heat dissipation	100% load	kW	R	160	135
Radiation and convection heat, engine		kW	R	40	40
Starter system					
Electrical Starter (make Delco)					
Starter, rated voltage		V	R	24	24
Starter, rated power		kW	R	9.0	9.0
Starter, power requirement max.		A	R	1750	1750
Starter, power requirement at firing speed		A	R	800	800
Recommended battery capacity	Lead-acid	Ah/20h	R	-	-
	NiCd	Ah/5h	R	-	-
Firing speed		1/min	R	100 - 120	100 - 120
Coolant pre-heating					
Preheating temperature (min.)		°C	R	32	32
Heater performance		kW	R	3	3

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Coolant system, Engine coolant circuit					
Coolant temperature (at engine outlet to cooling equipment)		°C	A	95	95
Coolant temperature after engine, alarm		°C	R	97	97
Coolant temperature after engine, shutdown		°C	L	102	102
Coolant antifreeze content, max. permissible		%	L	50	50
Cooling equipment: coolant flow rate		m^3/h	A	40	40
Coolant pump: inlet pressure, min.		bar	L	0.4	0.4
Coolant pump: inlet pressure, max.		bar	L	1.52	1.52
Pressure loss in off-engine cooling system, max. permissible		bar	L	0.7	0.7
Cooling equipment: height above engine max. permissible		m	L	15.2	15.2
Cooling equipment: design pressure		bar	A	2.2	2.2
Coolant system, Charge-air coolant circuit					
Coolant temperature before intercooler (engine inlet)		°C	A	-	-
Coolant antifreeze content, max. permissible		%	L	-	-
Cooling equipment: coolant flow rate		m^3/h	A	-	-
Pressure loss in off-engine cooling system max. permissible		bar	L	-	-
Cooling equipment: height above engine max. permissible		m	L	-	-
Cooling equipment: design pressure max. permissible		bar	A	-	-
Combustion air					
Combustion air volume flow		m^3/s	R	0.9	0.85
Intake air depression	new filter	mbar	A	15	15
	limit value	mbar	L	50	50
Fuel system					
Fuel supply flow, max.		l/min	R	8.0	8.0
Fuel temperature, max.		°C	L	-	-
Fuel pressure at supply connection on engine, max. admissible		bar	L	+0.5	+0.5
Fuel pressure at supply connection on engine, min. admissible		bar	L	-0.3	-0.3
Exhaust system					
Exhaust volume flow		m^3/s	R	2.05	2.3
Exhaust temperature after turbocharger		°C	R	565	555
Exhaust backpressure limit value		mbar	L	85	85
General operating data					
Recommended minimum continuous load		%	R	20	20
Engine mass moment of inertia, with standard flywheel		kgm^2	R	3.92	3.92
Noise emission					
(Free-field sound pressure level, 1m distance)					
Engine surface noise		dB(A)	R	100	100
Exhaust noise, unsilenced		dB(A)	R	110	109

A = Design value; G = Guarenteed value; R = Guideline value
L = Limit value, up to which the engine can be operated w/o change
- = Data not available; * = Estimated or projected values

Reference conditions

	Standard	Power available up to
Intake air temperature	25°C	40°C
Site altitude above sea level	100 m	400 m

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