Technical Engine Data

18V2000G83
Air charge air cooling;
60 Hz - 1.800/min
exhaust optimized (EPA I)

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.**	118
		Injection system	Electronically controlled high-pressure injection with singel injection pumps
Bore / Stroke	130 / 150 mm		
Displacement, total	35.82 Liter		
Number of cylinders	18	**Control / Monitoring**	Electronic engine management system "MDEC"
Cylinder configuration	V - 90°	**Number of turbo chargers**	2
Compression ratio	14 : 1	**Number of intercooler**	1
Direction of rotation	left		
(viewed from flywheel side)			

MTU-Application group				**3D** (ICFN)	**3C** (ICXN)	**3B** (ICXN)	**3A** (ICXN)
Power (ISO 3046)		kW	A	1250	#NV	1040	900
Mean piston speed		m/s	A	9.0	#NV	9.0	9.0
Mean effective pressure		bar	A	23.2	#NV	19.4	16.8
Engine weight (Engine in basic execution)	dry	kg	R	3500	#NV	3500	3500
	wet	kg	R	3750	#NV	3750	3750
Dimensions (Engine only)	length	mm	R	2450	#NV	2450	2450
	height	mm	R	1580	#NV	1580	1580
	width	mm	R	1775	#NV	1775	1775
Consumption							
Specific fuel consumption (be)	100% CP	g/kWh	G	205	#NV	205	206
(Tolerance +5% according to ISO 3046/1)	75% CP	g/kWh	R	205	#NV	205	207
	50% CP	g/kWh	R	206	#NV	206	208
Lube oil consumption (after run-in)			R	0.5	#NV	0.5	0.5
Capacity							
Engine oil capacity, initial filling (standard oil system)	total	Liter	R	130	#NV	130	130
Oil pan capacity, dipstick mark min.		Liter	L	87	#NV	87	87
Oil pan capacity, dipstick mark max.		Liter	L	110	#NV	110	110
Engine coolant capacity (without cooling equipment)		Liter	R	120	#NV	120	120
Intercooler coolant capacity		Liter	R	-	#NV	-	-
Heat dissipation							
Engine coolant dissipation	100% load	kW	R	575	#NV	490	435
Charge-air heat dissipation	100% load	kW	R	350	#NV	255	205
Radiation and convection heat, engine		kW	R	50	#NV	50	50
Starter system							
Electrical Starter (make Delco)							
Starter, rated voltage		V	R	24	#NV	24	24
Starter, rated power		kW	R	-	#NV	-	-
Starter, power requirement max.		A	R	-	#NV	-	-
Starter, power requirement at firing speed		A	R	-	#NV	-	-
Recommended battery capacity	Lead-acid	Ah/20h	R	-	#NV	-	-
	NiCd	Ah/5h	R	-	#NV	-	-
Firing speed		1/min	R	100 - 120	#NV	100 - 120	100 - 120
Coolant pre-heating							
Preheating temperature (min.)		°C	R	32	#NV	32	32
Heater performance		kW	R	6	#NV	6	6

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Coolant system, Engine coolant circuit							
Coolant temperature (at engine outlet to cooling equipment)		°C	A	95	#NV	95	95
Coolant temperature after engine, alarm		°C	R	97	#NV	97	97
Coolant temperature after engine, shutdown		°C	L	102	#NV	102	102
Coolant antifreeze content, max. permissible		%	L	50	#NV	50	50
Cooling equipment: coolant flow rate		m^3/h	A	60	#NV	60	60
Coolant pump: inlet pressure, min.		bar	L	0.4	#NV	0.4	0.4
Coolant pump: inlet pressure, max.		bar	L	1.52	#NV	1.52	1.52
Pressure loss in off-engine cooling system, max. permissible		bar	L	0.7	#NV	0.7	0.7
Cooling equipment: height above engine max. permissible		m	L	15.2	#NV	15.2	15.2
Cooling equipment: design pressure		bar	A	2.2	#NV	2.2	2.2
Coolant system, Charge-air coolant circuit							
Coolant temperature before intercooler (engine inlet)		°C	A	0	#NV	0	0
Coolant antifreeze content, max. permissible		%	L	0	#NV	0	0
Cooling equipment: coolant flow rate		m^3/h	A	0	#NV	0	0
Pressure loss in off-engine cooling system max. permissible		bar	L	-	#NV	-	-
Cooling equipment: height above engine max. permissible		m	L	0	#NV	0	0
Cooling equipment: design pressure max. permissible		bar	A	0	#NV	0	0
Combustion air							
Combustion air volume flow		m^3/s	R	1.7	#NV	1.6	1.5
Intake air depression	new filter	mbar	A	30	#NV	30	30
	limit value	mbar	L	50	#NV	50	50
Fuel system							
Fuel supply flow, max.		l/min	R	7.5	#NV	7.5	7.5
Fuel temperature, max.		°C	L	55	#NV	55	55
Fuel pressure at supply connection on engine, max. admissible		bar	L	+0.5	#NV	+0.5	+0.5
Fuel pressure at supply connection on engine, min. admissible		bar	L	-0.3	#NV	-0.3	-0.3
Exhaust system							
Exhaust volume flow		m^3/s	R	4.5	#NV	4.0	3.6
Exhaust temperature after turbocharger		°C	R	600	#NV	580	560
Exhaust backpressure limit value		mbar	L	100	#NV	100	100
General operating data							
Recommended minimum continuous load		%	R	20	#NV	20	20
Engine mass moment of inertia, with standard flywheel		kgm^2	R	6.988	#NV	6.988	6.988
Noise emission							
(Free-field sound pressure level, 1m distance)							
Engine surface noise		dB(A)	R	-	#NV	-	-
Exhaust noise, unsilenced		dB(A)	R	117	#NV	115	113

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

Reference conditions

	Standard	Power available up to
Intake air temperature	25°C	40°C
Site altitude above sea level	100 m	400 m
Charge-air coolant temperature	55°C	55°C

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Subject to modifications in the interest of technical progress.

Release: December 2003