

Technical Engine Data

16V4000G61

Water charge air cooling (external);

50 Hz - 1.500/min

exhaust optimized (TA-Luft)



Operating method	Four stroke Diesel	Flywheel housing flange	SAE 00
Combustion system	Direct Injection	Flywheel interface	21"
Charging method	Exhaust turbo charger and Water charge air cooling (external);	Starter ring-gear teeth no.	182
Bore / Stroke	165 / 190 mm	Injection system	Common Rail System with electronically controlled high-pressure injection through singel injector pumps
Displacement, total	65.0 Liter	Control / Monitoring	Electronic engine management system "MDEC"
Number of cylinders	16	Number of turbo chargers	4
Cylinder configuration	V - 90°	Number of intercooler	1
Compression ratio	15.5 : 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	#NV	1760	1760	#NV
Mean piston speed		m/s	A	#NV	9.5	9.5	#NV
Mean effective pressure		bar	A	#NV	21.7	21.7	#NV
Engine weight (Engine in basic execution)	dry	kg	R	#NV	6950	6950	#NV
	wet	kg	R	#NV	7435	7435	#NV
Dimensions (Engine only)	length	mm	R	#NV	2900	2900	#NV
	height	mm	R	#NV	1350	1350	#NV
	width	mm	R	#NV	1710	1710	#NV
Consumption							
Specific fuel consumption (be) (Tolerance +5% according to ISO 3046/1)	100% CP	g/kWh	G	#NV	210	210	#NV
	75% CP	g/kWh	R	#NV	213	213	#NV
	50% CP	g/kWh	R	#NV	215	215	#NV
Lube oil consumption (after run-in)			R	#NV	0.5	0.5	#NV
Capacity							
Engine oil capacity, initial filling (standard oil system)	total	Liter	R	#NV	290	290	#NV
	Oil pan capacity, dipstick mark min.	Liter	L	#NV	160	160	#NV
	Oil pan capacity, dipstick mark max.	Liter	L	#NV	230	230	#NV
Engine coolant capacity (without cooling equipment)		Liter	R	#NV	175	175	#NV
Intercooler coolant capacity		Liter	R	#NV	40	40	#NV
Heat dissipation							
Engine coolant dissipation	100% load	kW	R	#NV	740	740	#NV
Charge-air heat dissipation	100% load	kW	R	#NV	440	440	#NV
Radiation and convection heat, engine		kW	R	#NV	90	90	#NV
Starter system							
Electrical Starter (make Delco)							
Starter, rated voltage		V	R	#NV	24	24	#NV
Starter, rated power		kW	R	#NV	2X9.0	2X9.0	#NV
Starter, power requirement max.		A	R	#NV	2600	2600	#NV
Starter, power requirement at firing speed		A	R	#NV	1000	1000	#NV
Recommended battery capacity	Lead-acid	Ah/20h	R	#NV	450	450	#NV
	NiCd	Ah/5h	R	#NV	240	240	#NV
Firing speed		1/min	R	#NV	80 - 120	80 - 120	#NV
Coolant pre-heating							
Preheating temperature (min.)		°C	R	#NV	32	32	#NV
Heater performance		kW	R	#NV	9.0	9.0	#NV

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Coolant system, Engine coolant circuit						
Coolant temperature (at engine outlet to cooling equipment)	°C	A	#NV	95	95	#NV
Coolant temperature after engine, alarm	°C	R	#NV	97	97	#NV
Coolant temperature after engine, shutdown	°C	L	#NV	99	99	#NV
Coolant antifreeze content, max. permissible	%	L	#NV	50	50	#NV
Cooling equipment: coolant flow rate	m ³ /h	A	#NV	62	62	#NV
Coolant pump: inlet pressure, min.	bar	L	#NV	0.4	0.4	#NV
Coolant pump: inlet pressure, max.	bar	L	#NV	1.5	1.5	#NV
Pressure loss in off-engine cooling system, max. permissible	bar	L	#NV	0.7	0.7	#NV
Cooling equipment: height above engine max. permissible	m	L	#NV	15.2	15.2	#NV
Cooling equipment: design pressure	bar	A	#NV	2.5	2.5	#NV
Coolant system, Charge-air coolant circuit						
Coolant temperature before intercooler (engine inlet)	°C	A	#NV	55	55	#NV
Coolant antifreeze content, max. permissible	%	L	#NV	50	50	#NV
Cooling equipment: coolant flow rate	m ³ /h	A	#NV	19	19	#NV
Pressure loss in off-engine cooling system max. permissible	bar	L	#NV	0.7	0.7	#NV
Cooling equipment: height above engine max. permissible	m	L	#NV	10	10	#NV
Cooling equipment: design pressure max. permissible	bar	A	#NV	2.5	2.5	#NV
Combustion air						
Combustion air volume flow	m ³ /s	R	#NV	2.3	2.3	#NV
Intake air depression	new filter	A	#NV	30	30	#NV
	limit value	L	#NV	50	50	#NV
Fuel system						
Fuel supply flow, max.	l/min	R	#NV	20.0	20.0	#NV
Fuel temperature, max.	°C	L	#NV	-	-	#NV
Fuel pressure at supply connection on engine, max. admissible	bar	L	#NV	1.5	1.5	#NV
Fuel pressure at supply connection on engine, min. admissible	bar	L	#NV	-0.1	-0.1	#NV
Exhaust system						
Exhaust volume flow	m ³ /s	R	#NV	5.8	5.8	#NV
Exhaust temperature after turbocharger	°C	R	#NV	490	490	#NV
Exhaust backpressure limit value	mbar	L	#NV	51	51	#NV
General operating data						
Recommended minimum continuous load	%	R	#NV	20	20	#NV
Engine mass moment of inertia, with standard flywheel	kgm ²	R	#NV	15.88	15.88	#NV
Noise emission						
(Free-field sound pressure level, 1m distance)						
Engine surface noise	dB(A)	R	#NV	107	107	#NV
Exhaust noise, unsilenced	dB(A)	R	#NV	116	116	#NV

A = Design value; G = Guaranteed 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.