

# Technical Engine Data

## 16V2000G65

**Air charge air cooling;**

**50 Hz - 1.500/min**

**fuel consumption optimized**



<b>Operating method</b>	Four stroke Diesel	<b>Flywheel housing flange</b>	SAE 0
<b>Combustion system</b>	Direct Injection	<b>Flywheel interface</b>	18"
<b>Charging method</b>	Exhaust turbo charger and Air charge air cooling;	<b>Starter ring-gear teeth no.</b>	118
		<b>Injection system</b>	Electronically controlled high-pressure injection with single injection pumps
<b>Bore / Stroke</b>	130 / 150 mm		
<b>Displacement, total</b>	31.84 Liter		
<b>Number of cylinders</b>	16	<b>Control / Monitoring</b>	Electronic engine management system "ADEC"
<b>Cylinder configuration</b>	V - 90°	<b>Number of turbo chargers</b>	2
<b>Compression ratio</b>	16 : 1	<b>Number of intercooler</b>	1
<b>Direction of rotation</b>	left		
<small>(viewed from flywheel side)</small>			

MTU-Application group				3D (ICFN)	3B (ICXN)
Power (ISO 3046)		kW	A	975	890
Mean piston speed		m/s	A	7.5	7.5
Mean effective pressure		bar	A	24.5	22.4
Engine weight (Engine in basic execution)	dry	kg	R	3100	3100
	wet	kg	R	3310	3310
Dimensions (Engine only)	length	mm	R	2226	2226
	height	mm	R	1572	1572
	width	mm	R	1580	1580
<b>Consumption</b>					
Specific fuel consumption (be) (Tolerance +5% according to ISO 3046/1)	100% CP	g/kWh	G	199	198
	75% CP	g/kWh	R	195	196
	50% CP	g/kWh	R	198	201
Lube oil consumption (after run-in)			R	0.5	0.5
<b>Capacity</b>					
Engine oil capacity, initial filling (standard oil system)	total	Liter	R	102	102
	Oil pan capacity, dipstick mark min.	Liter	L	69	69
	Oil pan capacity, dipstick mark max.	Liter	L	92	92
Engine coolant capacity (without cooling equipment)		Liter	R	110	130
Intercooler coolant capacity		Liter	R	-	-
<b>Heat dissipation</b>					
Engine coolant dissipation	100% load	kW	R	420	400
Charge-air heat dissipation	100% load	kW	R	200	170
Radiation and convection heat, engine		kW	R	45	45
<b>Starter system</b>					
Electrical Starter (make Delco)					
Starter, rated voltage		V	R	24	24
Starter, rated power		kW	R	9.5	9.5
Starter, power requirement max.		A	R	1600	1600
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
<b>Coolant pre-heating</b>					
Preheating temperature (min.)		°C	R	32	32
Heater performance		kW	R	4	4

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<b>Coolant system, Engine coolant circuit</b>				
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 <sup>3</sup> /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
<b>Coolant system, Charge-air coolant circuit</b>				
Coolant temperature before intercooler (engine inlet)	°C	A	-	-
Coolant antifreeze content, max. permissible	%	L	-	-
Cooling equipment: coolant flow rate	m <sup>3</sup> /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	-	-
<b>Combustion air</b>				
Combustion air volume flow	m <sup>3</sup> /s	R	1.2	1.1
Intake air depression	mbar	A	15	15
Intake air depression new filter limit value	mbar	L	50	50
<b>Fuel system</b>				
Fuel supply flow, max.	l/min	R	10	10
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
<b>Exhaust system</b>				
Exhaust volume flow	m <sup>3</sup> /s	R	3.3	2.95
Exhaust temperature after turbocharger	°C	R	535	530
Exhaust backpressure limit value	mbar	L	85	85
<b>General operating data</b>				
Recommended minimum continuous load	%	R	20	20
Engine mass moment of inertia, with standard flywheel	kgm <sup>2</sup>	R	6.55	6.55
<b>Noise emission</b>				
(Free-field sound pressure level, 1m distance)				
Engine surface noise	dB(A)	R	103	103
Exhaust noise, unsilenced	dB(A)	R	108	107

A = Design value; G = Guaranteed 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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