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# **Technical Sales Document** - Product Data -



Name 18V2000G65 **Application Group** 

3B

Ref. 25°C/-; Air charge air cooling

Speed [rpm] Nominal power [kW] Nominal power [bhp]

Frequency [Hz]

1341 50

1500

1000

**Exhaust Regulations** 

Dataset

Fuel-consumption optimized;

#### Reference conditions

No.	Description	Index	Value	Unit
3	MTU data code		13	-
6	Intake air temperature		25	°C
7	Charge-air coolant temperature		-	°C
8	Barometric pressure		1000	mbar
9	Site altitude above sea level		100	m
10	Raw-water inlet temperature		-	°C

0. Data-relevant engine design configuration

No.	Description	Index	Value	Unit
8	Engine rated speed switchable			
	(1500/1800 rpm)		-	-
12	Engine with sequential turbocharging			
	(turbochargers with cut-in/cut-out control)			-
13	Engine without sequential turbocharging		<u></u>	
13	(turbochargers without cut-in/cut-out control)		^	-
31	Engine with air-cooled charge air		Х	-
32	Engine with water-cooled charge air (external)		-	-

#### 1. Power-related data

No.	Description	Index	Value	Unit
1	Engine rated speed	Α	1500	rpm
3	Mean piston speed		7.5	m/s
4	Continuous power ISO 3046 (10% overload capability)	_	1000	kW
	(design power DIN 6280, ISO 8528)	A	1000	KVV
5	Fuel stop power ISO 3046	А	1100	kW
0	Mean effective pressure (MEP)		22.3	har
8	(Continuous power ISO 3046)		22.3	bar
19	Mean effective pressure (MEP)		24.6	har
	(Fuel stop power ISO 3046)		24.0	bar

2. General Conditions (for maximum power)

	Er Contrat Containent (101 maximum perior)				
No.	Description	Index	Value	Unit	
1	Intake air depression (new filter)	А	15	mbar	
2	Intake air depression, max.	L	50	mbar	
3	Exhaust back pressure	А	30	mbar	
4	Exhaust back pressure, max.	L	85	mbar	
5	Fuel temperature at fuel feed connection	R	25	°C	
6	Fuel temperature at fuel feed connection, max.		60	°C	

#### 3. Consumption

No.	Description	Index	Value	Unit
17	Specific fuel consumption (be) - 100 % CP (+ 5 %; EN 590; 42.8 MJ/kg)	R	201	g/kWh
18	Specific fuel consumption (be) - 75 % CP (+ 5 %; EN 590; 42.8 MJ/kg)	R	200	g/kWh

BL Reference value: fuel stop power
Maximum engine power that cannot be run continuously on
some applications (stabilization reserve)
DL Reference value: continuous power
Engine power that can be run continuously under standard
conditions

Actual value must be greater than specified value
Actual value must be less than specified value

Applicable
The module is valid for this product type

Non-applicable
The module is not valid for this product type
N Value not named
The value has not yet been named or will not be named Adequate verification not yet available (tolerance +/-10%)

Adequate verification not yet available (tolerance +/-5%)

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# **Technical Sales Document** - Product Data -



Speed [rpm] Name 18V2000G65 1500 **Application Group** Nominal power [kW] 1000 3B Dataset Ref. 25°C/-; Air charge air cooling Nominal power [bhp] 1341 Frequency [Hz] 50

**Exhaust Regulations** Fuel-consumption optimized;

1				
19	Specific fuel consumption (be) - 50 % CP	R	204	g/kWh
	(+ 5 %; EN 590; 42.8 MJ/kg)			8/
20	Specific fuel consumption (be) - 25 % CP	R	222	g/kWh
20	(+ 5 %; EN 590; 42.8 MJ/kg)	IX.	222	g/KVVII
21	Specific fuel consumption (be) - FSP	R	204	g/kWh
21	(+ 5 %; EN 590; 42.8 MJ/kg)	N	204	g/KVVII
73	No-load fuel consumption	R	18	kg/h
61	Lube oil consumption after 100 h of operation	D	0.5	% of B
01	(B = fuel consumption per hour)	R	0.5	% OI B
62	Lube oil consumption after 100 h of operation, max.		1.0	% of B
02	(B = fuel consumption per hour)	L	1.0	70 UI B

## 4. Model-related data (basic design)

No.	Description	Index	Value	Unit
3	Engine with exhaust turbocharger (ETC) and intercooler		х	-
4	Exhaust piping, non-cooled		Х	-
5	Exhaust piping, liquid-cooled		-	-
33	Working method: four-cycle, diesel, single-acting		X	-
34	Combustion method: direct injection		X	-
36	Cooling system: conditioned water		X	-
37	Direction of rotation: c.c.w. (facing driving end)		X	-
6	Number of cylinders		18	-
7	Cylinder configuration: V angle		90	degrees (°)
10	Bore		130	mm
11	Stroke		150	mm
12	Displacement, cylinder		1.99	liter
13	Displacement, total		35.82	liter
14	Compression ratio		16	-
40	Cylinder heads: single-cylinder		x	-
41	Cylinder liners: wet, replaceable		X	-
24	Number of inlet valves, per cylinder		2	-
25	Number of exhaust valves, per cylinder		2	-
15	Number of turbochargers		2	-
18	Number of intercoolers		1	-
28	Standard flywheel housing flange (engine main PTO)		0	SAE
43	Flywheel interface (DISC)		18"	-
46	Engine mass diagram, drawing No.		N	-
47	Engine mass diagram, drawing No. (cont.)		N	-

### 5. Combustion air / exhaust gas

No.	Description	Index	Value	Unit
20	Pressure differential in external		130	b
39	air-to-air intercooler, max.	L	130	mbar
8	Charge-air pressure before cylinder - CP	R	3.1	bar abs
27	Charge-air pressure before cylinder - FSP	R	3.4	bar abs
9	Combustion air volume flow - CP	R	1.15	m³/s
10	Combustion air volume flow - FSP	R	1.25	m³/s
11	Exhaust volume flow (at exhaust temperature) - CP	R	3.3	m³/s
12	Exhaust volume flow (at exhaust temperature) - FSP	R	3.6	m³/s
15	Exhaust temperature after turbocharger - CP	R	555	°C
16	Exhaust temperature after turbocharger - FSP	R	575	°C

BL Reference value: fuel stop power Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
DL Reference value: continuous power Engine power that can be run continuously under standard conditions

Actual value must be greater than specified value
Actual value must be less than specified value

Applicable
The module is valid for this product type

Non-applicable
Walter to not valid for this product type
N Value not named
The value has not yet been named or will not be named Adequate verification not yet available (tolerance +/-10%)
AB Adequate verification not yet available (tolerance +/-5%)

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# **Technical Sales Document** - Product Data -



Name 18V2000G65

**Application Group** 3B

Dataset Ref. 25°C/-; Air charge air cooling Speed [rpm] 1500 Nominal power [kW] 1000 Nominal power [bhp] 1341 Frequency [Hz] 50

**Exhaust Regulations** Fuel-consumption optimized;

#### 6. Heat dissipation

No.	Description	Index	Value	Unit
15	Heat dissipated by engine coolant - CP	D	450	LAA
15	with oil heat, without charge-air heat	K	450	kW
16	Heat dissipated by engine coolant - FSP	J	N	kW
10	with oil heat, without charge-air heat	R	IN .	KVV
26	Charge-air heat dissipation - CP	R	190	kW
27	Charge-air heat dissipation - FSP	R	N	kW
33	Radiation and convection heat, engine - CP	R	50	kW
34	Radiation and convection heat, engine - FSP	R	N	kW

7. Coolant system (high-temperature circuit)

7.00	olani system (mgn-temperature circuit)			
No.	Description	Index	Value	Unit
17	Coolant temperature	_	95	°c
17	(at engine outlet to cooling equipment)	A	95	C
20	Coolant temperature after engine, limit 1	L	97	°C
21	Coolant temperature after engine, limit 2	L	102	°C
25	Coolant antifreeze content, max.	L	50	%
30	Cooling equipment: coolant flow rate	А	40	m³/h
35	Coolant pump: inlet pressure, min.	L	0.4	bar
36	Coolant pump: inlet pressure, max.	L	1.52	bar
41	Pressure loss in off-engine cooling system, max.	L	0.7	bar
47	Breather valve (expansion tank)	р	N	har
47	opening pressure (excess pressure)	R	N	bar
54	Cooling equipment: height above engine, max.	L	15.2	m
53	Cooling equipment: operating pressure	А	2.2	bar
72	Coolant level in expansion tank, below min.		-	
73	alarm	L		-
7.4	Coolant level in expansion tank, below min.		V	
74	shutdown	l <sup>L</sup>	X	-
40	Breather valve (expansion tank)		N.	l.
48	opening pressure (depression)	R	N	bar
49	Pressure in cooling system, max.	L	N	bar

### 8. Coolant system (low-temperature circuit)

No.	Description	Index	Value	Unit
76	Temperature differential between intake air and	^		V
	charge-air coolant before intercooler	А		K
75	Temperature differential between intake air and			K
	charge-air coolant before intercooler, max.	L	-	K

### 10. Lube oil system

No.	Description	Index	Value	Unit
1	Lube oil operating temp. before engine, from	R	88	°C
2	Lube oil operating temp. before engine, to	R	98	°C
5	Lube oil temperature before engine, limit 1	L	100	°C
6	Lube oil temperature before engine, limit 2	L	105	°C
8	Lube oil operating press. bef. engine, from	R	6.0	bar
9	Lube oil operating press. bef. engine, to	R	8.0	bar
10	Lube oil pressure before engine, alarm	L	4.4	bar

BL Reference value: fuel stop power Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
DL Reference value: continuous power Engine power that can be run continuously under standard conditions

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Adequate verification not yet available (tolerance +/-10%)

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# **Technical Sales Document** - Product Data -



Speed [rpm] Name 18V2000G65 1500 **Application Group** Nominal power [kW] 1000 3B Dataset Ref. 25°C/-; Air charge air cooling Nominal power [bhp] 1341 Frequency [Hz] 50

**Exhaust Regulations** Fuel-consumption optimized;

	• · · · · · · · · · · · · · · · · · · ·			
11	Lube oil pressure before engine, shutdown	L	3.9	bar
19	Lube oil fine filter (main circuit):		1	
19	number of units		1	_
20	Lube oil fine filter (main circuit):		2	
20	number of elements per unit		3	-
21	Lube oil fine filter (main circuit):	6	0.009	mm
21	particle retention	R		
32	Lube oil fine filter (main circuit):		0.8	hau
32	pressure differential, max.	L	_ 0.8	bar

#### 11. Fuel system

	THE GOLOGIC				
No.	Description	Index	Value	Unit	
1	Fuel pressure at fuel feed connection, min.		-0.3	har	
1	(when engine is starting)	L	-0.5	bar	
2	Fuel pressure at fuel feed connection, max.		0.5	har	
۷	(when engine is starting)	L	0.5	bar	
37	Fuel supply flow, max.	Α	10	liter/min	
8	Fuel return flow, max.	Α	4.5	liter/min	
10	Fuel pressure at return connection on engine, max.	L	0.5	bar	
12	Fuel temperature differential before/after engine	R	40	K	
15	Fuel prefilter: number of units	Α	-	-	
16	Fuel prefilter: number of elements per unit	Α	-	-	
17	Fuel prefilter: particle retention	Α	-	mm	
18	Fuel fine filter (main circuit): number of units	Α	1	-	
19	Fuel fine filter (main circuit): number of elements per unit	Α	1	-	
20	Fuel fine filter (main circuit): particle retention	Α	0.005	mm	
21	Fuel fine filter (main circuit): pressure differential, max.	L	1.0	bar	

### 12. General operating data

No.	Description	Index	Value	Unit
1	Cold start capability: air temperature	R	0 **	°C
1	(w/o starting aid, w/o preheating) - (case A)	ĸ	U	C
2	Additional condition (to case A):	R	N	°C
2	engine coolant temperature	K	IV.	C
3	Additional condition (to case A): lube oil temperature	R	10 **	°C
4	Additional condition (to case A): lube oil viscosity	R	30 **	SAE
0	Cold start capability: air temperature	R	-10 **	°c
9	(w/o starting aid, w/ preheating) - (case C)	ĸ	-10 **	C
10	Additional condition (to case C):	R	40 **	°C
10	engine coolant temperature	ĸ	40	C
11	Additional condition (to case C): lube oil temperature	R	-5 **	°C
12	Additional condition (to case C): lube oil viscosity	R	10W30	SAE
21	Coolant preheating, heater performance (standard)	R	6	kW
22	Coolant preheating, preheating temperature, min.	L	32	°C
28	Breakaway torque (without driven machinery)	R	870	Nm
20	coolant temperature +5°C	n	870	INIII
30	Breakaway torque (without driven machinery)	R	500 *	Nm
30	coolant temperature +40°C	ĸ	300	INIII
29	Cranking torque at firing speed (without driven machinery)	R	570 *	Nm
23	coolant temperature +5°C	ĸ	570	INIII

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Maximum engine power that cannot be run continuously on
some applications (stabilization reserve)
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# **Technical Sales Document** - Product Data -



Speed [rpm] Name 18V2000G65 1500 **Application Group** Nominal power [kW] 1000 3B Dataset Ref. 25°C/-; Air charge air cooling Nominal power [bhp] 1341 Frequency [Hz] 50

**Exhaust Regulations** Fuel-consumption ontimized.

Exnausi	regulations Fuel-consumption optimized;			
31	Cranking torque at firing speed (without driven machinery)	R	455 *	Nm
	coolant temperature +40°C			
96	Starting is blocked if the engine coolant temperature is		0	°C
	below			ŭ
37	High idling speed, max. (static)	L	1660	rpm
38	Limit speed for overspeed alarm / emergency shutdown	L	1800	rpm
42	Firing speed, from	R	100	rpm
43	Firing speed, to	R	120	rpm
44	Engine coolant temperature before starting full-load operation, recommended	R	40	°C
44	min.	I.	40	C
48	Minimum continuous load	R	20	%
49	Extended low or no-load operation possible		X	
43	(consultation required)		^	-
50	Engine mass moment of inertia	R	4.07	leam <sup>2</sup>
30	(without flywheel)	K	4.07	kgm²
52	Standard flywheel mass moment of inertia	R	2.92	kgm²
F1	Engine mass moment of inertia	0	6.99	12
51	(with standard flywheel)	R	0.99	kgm²
69	Speed droop (with electronic governor) adjustable, from	R	0	%
70	Speed droop (with electronic governor) adjustable, to	R	5	%
95	Number of starter ring-gear teeth on engine flywheel		118	-

## 13. Starting (electric)

No.	Description	Index	Value	Unit
2309	Manufacturer		DELCO	-
2310	Number of starter		1	-
2312	Starter electrically redundant		-	-
2313	Rated power per starter	R	9	kW
2314	Starter, rated voltage	R	24	VDC
2315	Rated short-circuit current per starter	L	1900	Α
2316	Power consumption per starter	R	930	Α
2310	(at an engine speed of 100 rpm)	IX.	550	A
3000	Power consumption per starter	R		А
3000	(at an engine speed of 100 rpm, SAEO)	n		A
3002	Power consumption per starter	R		
3002	(at an engine speed of 100 rpm, SAE1)	K	-	Α
2317	Internal resistance of power supply + line resistance per starter	А	0.008	Ω
2318	Manufacturer		DELCO	-
2319	Number of starter		2	-
2320	Starter electrically redundant		X	-
2321	Rated power per starter	R	9	kW
2322	Starter, rated voltage	R	24	VDC
2323	Rated short-circuit current per starter	L	1900	А
2324	Power consumption per starter	R	930	A
2324	(at an engine speed of 100 rpm)	n	930	A
3001	Power consumption per starter	0		
3001	(at an engine speed of 100 rpm, SAEO)	R	-	Α
3003	Power consumption per starter			
3003	(at an engine speed of 100 rpm, SAE1)	R	-	Α
2325	Internal resistance of power supply + line resistance per starter	А	0.008	Ω
2326	Manufacturer		PRESTOLITE	-
2327	Number of starter		1	-
2328	Starter electrically redundant		-	-

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Maximum engine power that cannot be run continuously on
some applications (stabilization reserve)
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Engine power that can be run continuously under standard
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# **Technical Sales Document** - Product Data -



Speed [rpm] Name 18V2000G65 1500 **Application Group** Nominal power [kW] 1000 3B Dataset Ref. 25°C/-; Air charge air cooling Nominal power [bhp] 1341 Frequency [Hz] 50

**Exhaust Regulations** Fuel-consumption optimized:

Starter   Part   Par	Exhaust Regulations Fuel-consumption optimized;						
2331   Rated short-circuit current per starter	2329	Rated power per starter	R	9	kW		
Power consumption per starter (at an engine speed of 100 rpm)   R   R   R   R   R   R   R   R   R	2330	Starter, rated voltage	R	24	VDC		
A   A   A   A   A   A   A   A   A   A	2331	Rated short-circuit current per starter	L	1900	Α		
lat an engine speed of 100 rpm	2222	Power consumption per starter	0	820			
(at an engine speed of 100 rpm, SAE0)   R   -	2332	(at an engine speed of 100 rpm)	K	830	A		
(at an engine speed of 100 rpm, SAE0)	2251	Power consumption per starter	0				
(at an engine speed of 100 rpm, SAE1)   R   -   A	3231	(at an engine speed of 100 rpm, SAE0)	К	-	A		
(at an engine speed of 100 rpm, SAE1)	2252	Power consumption per starter	0				
Number of starter	3232	(at an engine speed of 100 rpm, SAE1)	К	-	A		
2335   Number of starter   2   2   -	2333	Internal resistance of power supply + line resistance per starter	Α	0.005	Ω		
Starter electrically redundant   X   X   Caster   Caster   R   P   R   R   P   R   R   R   P   R   R	2334	Manufacturer		PRESTOLITE	-		
2337   Rated power per starter   R   9   kW	2335	Number of starter		2	-		
Starter, rated voltage Reference Re	2336	Starter electrically redundant		X	-		
Rated short-circuit current per starter	2337	Rated power per starter	R	9	kW		
Power consumption per starter (at an engine speed of 100 rpm) Power consumption per starter (at an engine speed of 100 rpm, SAE0)  3372 Reference for starter (at an engine speed of 100 rpm, SAE1) Reference for starter (at an engine speed of 100 rpm, SAE1) Reference for starter Referen	2338		R	24	VDC		
Catalogue   Cat	2339	Rated short-circuit current per starter	L	1900	Α		
(at an engine speed of 100 rpm)   Power consumption per starter (at an engine speed of 100 rpm, SAE0)   R   -	2240	Power consumption per starter	D	820	^		
Sarre   Starter   Start	2340	(at an engine speed of 100 rpm)	K	830	A		
(at an engine speed of 100 rpm, SAEO)   Power consumption per starter (at an engine speed of 100 rpm, SAE1)   R   -	2272	Power consumption per starter	0				
A   A   A   A   A   A   A   A   A   A	33/2	(at an engine speed of 100 rpm, SAE0)	К	-	A		
(at an engine speed of 100 rpm, SAE1)   3374 Internal resistance of power supply + line resistance per starter A 0.005 Ω   3375 Number of starter 2 -   3376 Starter electrically redundant   3377 Rated power per starter R 9 kW   3378 Rated short-circuit current per starter R 24 VDC   3379 Rated short-circuit current per starter L 1900 A   3380 Power consumption per starter R 830 A   (at an engine speed of 100 rpm) R 830 A   3381 Power consumption per starter R - A A   (at an engine speed of 100 rpm, SAE0) R - A A   3382 Power consumption per starter R - A A   (at an engine speed of 100 rpm, SAE1) R - A A   3383 Internal resistance of power supply + line resistance per starter A 0.005 Ω   2347 Generally valid data for starter X   2342 Rated starting-attempt Duration (at +20°C ambient temperature with battery R 3 s   2343 Interval between starts (at rated starting-attempt duration), min. L 5 s   2344 Maximum acceptable starting-attempt duration L 15 s   2346 Starting attempts within 30 minutes L 60	2272	Power consumption per starter			_		
3374   Manufacturer	33/3	(at an engine speed of 100 rpm, SAE1)	К	-	A		
3375   Number of starter   2	2341	Internal resistance of power supply + line resistance per starter	Α	0.005	Ω		
3376   Starter electrically redundant	3374	Manufacturer		PRESTOLITE	-		
Rated power per starter   R   9   kW     Starter, rated voltage   R   24   VDC     Starter, rated short-circuit current per starter   L   1900   A     Starter, rated short-circuit current per starter   L   1900   A     Starter, rated short-circuit current per starter   L   1900   A     Starter, rated short-circuit current per starter   R   830   A     Power consumption per starter   (at an engine speed of 100 rpm, SAE0)   R   -   A     Starting attempt Duration (at +20°C ambient temperature with battery   R   3     Starting attempt duration > rated starting-attempt duration   R   60   S     Starting attempts within 30 minutes   L   6   6     Starting attempts within 30 minutes   L	3375	Number of starter		2	-		
Starter, rated voltage   R   24   VDC	3376	Starter electrically redundant		-	-		
3379Rated short-circuit current per starterL1900A3380Power consumption per starter (at an engine speed of 100 rpm)R830A3381Power consumption per starter (at an engine speed of 100 rpm, SAE0)R-A3382Power consumption per starter (at an engine speed of 100 rpm, SAE1)R-A3383Internal resistance of power supply + line resistance per starterA0.005Ω2347Generally valid data for starterX-2342Rated starting-attempt Duration (at +20°C ambient temperature with batteryR3s2343Interval between starts (at rated starting-attempt duration), min.L5s2344Interval between starts (when starting-attempt duration > rated starting-attempt duration) > rated starting-attempt durationR60s3346Starting attempts within 30 minutesI66	3377	Rated power per starter	R	9	kW		
Power consumption per starter (at an engine speed of 100 rpm)  R 830  A 84  A 830  A 850  A 850  A 90wer consumption per starter (at an engine speed of 100 rpm, SAE0)  A 850  A 90wer consumption per starter (at an engine speed of 100 rpm, SAE1)  A 900  A 90wer consumption per starter A 90005  A 90wer consumption per starter A 90wer consumption per starter A 90005  A 90wer consumption per starter A 90wer consumptio	3378	Starter, rated voltage	R	24	VDC		
Raction   Rac	3379	Rated short-circuit current per starter	L	1900	Α		
Cat an engine speed of 100 rpm)   Cat an engine speed of 100 rpm)   Cat an engine speed of 100 rpm, SAEO)   R   Cat an engine speed of 100 rpm, SAEO)   R   Cat an engine speed of 100 rpm, SAEO)   R   Cat an engine speed of 100 rpm, SAEO   R   Cat an engine speed of 100 rpm, SAEO   A   Cat an engine speed of 100 rpm, SAEO   A   Cat an engine speed of 100 rpm, SAEO   A   Cat an engine speed of 100 rpm, SAEO   A   Cat an engine speed of 100 rpm, SAEO   A   Cat an engine speed of 100 rpm, SAEO   A   Cat an engine speed of 100 rpm, SAEO   A   Cat an engine speed of 100 rpm, SAEO   A   Cat an engine speed of 100 rpm, SAEO   A   Cat an engine speed of 100 rpm, SAEO   Cat an en	2200	Power consumption per starter	0	820			
Cat an engine speed of 100 rpm, SAE0    R   -   A   A	3360	(at an engine speed of 100 rpm)	К	830	A		
Cat an engine speed of 100 rpm, SAE0	2201	Power consumption per starter					
Cat an engine speed of 100 rpm, SAE1   R   -   A	3381	(at an engine speed of 100 rpm, SAE0)	K	-	A		
(at an engine speed of 100 rpm, SAE1)         3383       Internal resistance of power supply + line resistance per starter       A       0.005       Ω         2347       Generally valid data for starter       X       -         2342       Rated starting-attempt Duration (at +20°C ambient temperature with battery       R       3       s         2343       Interval between starts (at rated starting-attempt duration), min.       L       5       s         2345       Maximum acceptable starting-attempt duration       L       15       s         2344       Interval between starts (when starting-attempt duration > rated starting-attempt duration)       R       60       s         346       Starting attempts within 30 minutes       L       60       -	2202	Power consumption per starter	_				
2347 Generally valid data for starter  2342 Rated starting-attempt Duration (at +20°C ambient temperature with battery R 3 s  2343 Interval between starts (at rated starting-attempt duration), min.  2345 Maximum acceptable starting-attempt duration L 15 s  2344 Interval between starts (when starting-attempt duration > rated starting-attempt duration) R 60 s  2346 Starting attempts within 30 minutes	3382	(at an engine speed of 100 rpm, SAE1)	R	-	A		
Rated starting-attempt Duration (at +20°C ambient temperature with battery R 3 s s s s s s s s s s s s s s s s s s	3383	Internal resistance of power supply + line resistance per starter	Α	0.005	Ω		
Interval between starts (at rated starting-attempt duration), min.  2345 Maximum acceptable starting-attempt duration L 15 s  2344 Interval between starts (when starting-attempt duration > rated starting-attempt duration) R 60 s  2346 Starting attempts within 30 minutes	2347	Generally valid data for starter		Х	-		
2343   (at rated starting-attempt duration), min.   L   5     S	2342	Rated starting-attempt Duration (at +20°C ambient temperature with battery	R	3	S		
Cat rated starting-attempt duration), min.   Cat rated starting-attempt duration   Cat rated starting-atte	22.42	Interval between starts	1.	-			
Interval between starts (when starting-attempt duration > rated starting-attempt duration)  R 60  s  Starting attempts within 30 minutes	2343	(at rated starting-attempt duration), min.	L	٥	S		
Interval between starts (when starting-attempt duration > rated starting-attempt duration)  R 60  s  Starting attempts within 30 minutes	2345	Maximum acceptable starting-attempt duration	L	15	S		
(when starting-attempt duration > rated starting-attempt duration)  Starting attempts within 30 minutes	2244		_	60			
17346   5 .	2344	(when starting-attempt duration > rated starting-attempt duration)	R	60	S		
(at +20°C ambient temperature with battery full), max.	2246	Starting attempts within 30 minutes		c			
	2346	(at +20°C ambient temperature with battery full), max.	L	В	-		

#### 15. Starting (pneumatic/oil pressure starter)

	<b>0</b> 1			
No.	Description	Index	Value	Unit
5	Starting air pressure before starter motor, min.	R	18	bar
6	Starting air pressure before starter motor, max.	R	N	bar
7	Starting air pressure before starter motor, min.	L	N	bar
8	Starting air pressure before starter motor, max.	L	N	bar
18	Start attempt duration (engine preheated)	R	N	S

BL Reference value: fuel stop power
Maximum engine power that cannot be run continuously on
some applications (stabilization reserve)
DL Reference value: continuous power
Engine power that can be run continuously under standard
conditions

Actual value must be greater than specified value
Actual value must be less than specified value

Adequate verification not yet available (tolerance +/-10%)
AB Adequate verification not yet available (tolerance +/-5%)

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# **Technical Sales Document** - Product Data -



Speed [rpm] Name 18V2000G65 1500 **Application Group** Nominal power [kW] 1000 3B Dataset Ref. 25°C/-; Air charge air cooling Nominal power [bhp] 1341 Frequency [Hz] 50

**Exhaust Regulations** Fuel-consumption optimized:

LATIGUE	Exhibitions Fuel-consumption optimized,					
19	Start attempt duration (engine not preheated)	R	N	S		
20	Start attempt duration, max.	L	N	S		
21	Air consumption/start attempt (engine preheated)	R	0.84	m³n		
23	Starting air tank for 3 start attempts (max. 40 bar) (engine preheated)	R	N	liter		
24	Starting air tank for 3 start attempts (max. 30 bar) (engine preheated)	R	N	liter		
25	Starting air tank for 6 start attempts (max. 40 bar) (engine preheated)	R	N	liter		
26	Starting air tank for 6 start attempts (max. 30 bar) (engine preheated)	R	N	liter		
27	Starting air tank for 10 start attempts (max. 40 bar) (engine preheated)	R	N	liter		
28	Starting air tank for 10 start attempts (max. 30 bar) (engine preheated)	R	N	liter		

16. Inclinations - standard oil system (ref.: waterline)

	To moment one of the control of the					
No.	Description	Index	Value	Unit		
	Longitudinal inclination, continuous max.					
15	driving end down	L	5	degrees (°)		
	(Option: max. operating inclinations)					
	Longitudinal inclination, continuous max.					
17	driving end up	L	5	degrees (°)		
	(Option: max. operating inclinations)					
19	Transverse inclination, continuous max.		10	dograce (°)		
19	(Option: max. operating inclinations)	L		degrees (°)		

18. Capacities

No.	Description	Index	Value	Unit
1	Engine coolant capacity (without cooling equipment)	R	120	liter
11	On-engine fuel capacity	R	5	liter
	Engine oil capacity, initial filling			
14	(standard oil system)	R	130	liter
	(Option: max. operating inclinations)			
	Oil change quantity, max.			
20	(standard oil system)	R	114	liter
	(Option: max. operating inclinations)			
	Oil pan capacity, dipstick mark min.			
28	(standard oil system)	L	87	liter
	(Option: max. operating inclinations)			
	Oil pan capacity, dipstick mark max.			
29	(standard oil system)	L	110	liter
	(Option: max. operating inclinations)			

### 19. Masses / dimensions

No.	Description	Index	Value	Unit
	Engine mass, dry			
9	(basic engine configuration acc. to	R	3500	kg
	scope of supply specification)			

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some applications (stabilization reserve)
DL Reference value: continuous power
Engine power that can be run continuously under standard
conditions

Actual value must be greater than specified value
Actual value must be less than specified value

Applicable
The module is valid for this product type

Non-applicable
Walter to not valid for this product type
N Value not named
The value has not yet been named or will not be named

Adequate verification not yet available (tolerance +/-10%)

Adequate verification not yet available (tolerance +/-5%)

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# **Technical Sales Document** - Product Data -



Speed [rpm] Name 18V2000G65 1500 **Application Group** Nominal power [kW] 1000 3B Dataset Ref. 25°C/-; Air charge air cooling Nominal power [bhp] 1341 Frequency [Hz] 50

**Exhaust Regulations** Fuel-consumption optimized;

		Engine mass, wet			
1	10	(basic engine configuration acc. to	R	3750	kg
		scope of supply specification)			

### 20. Fan / fan cooler

No.	Description	Index	Value	Unit
3	Fan, pusher-type		x	-
18	Fan arrangement: vertical above crankshaft		х	-
9	Fan drive: mechanical via V-belt		х	-
13	Fan: speed	R	N	rpm
19	Standard fan cooler, supplied by MTU,		N	
19	design and specific data acc. to case A / B / C		IN .	-
21	(Case A) - fan cooler, designed for:	Α	N	°C
21	- ambient temperature	A	IV	C
54	(Case A) - fan cooler, designed for:	Α	N	m
34	- site altitude, max.	^		111
22	(Case A) - fan cooler, designed for:	Α	N	%
	- coolant antifreeze content, max.		`	70
	(Case A) - fan: power consumption			
55	at 1 mbar / 100 Pa duct allowance	R	N	kW
	(pressure and suction sides, total)			
	(Case A) - fan: power consumption			
56	at 2 mbar / 200 Pa duct allowance	R	N	kW
	(pressure and suction sides, total)			
	(Case A) - fan: power consumption			
57	at 3 mbar / 300 Pa duct allowance	R	N	kW
	(pressure and suction sides, total)			
	(Case A) - cooling-air flow rate			
27	at 1 mbar / 100 Pa duct allowance	R	N	m³/s
	(pressure and suction sides, total)			
	(Case A) - cooling-air flow rate			
28	at 2 mbar / 200 Pa duct allowance	R	N	m³/s
	(pressure and suction sides, total)			
	(Case A) - cooling-air flow rate			
29	at 3 mbar / 300 Pa duct allowance	R	N	m³/s
	(pressure and suction sides, total)			
58	(Case A) - fan: weight	R	N	kg
59	(Case A) - fan cooler: weight, dry (incl. pipework)	R	N	kg
31	(Case A) - fan cooler: coolant capacity	R	N	liter
32	(Case B) - fan cooler, designed for:	Α	N	°C
-	- ambient temperature			•
60	(Case B) - fan cooler, designed for:	Α	N	m
	- site altitude, max.	,		
33	(Case B) - fan cooler, designed for:	Α	N	%
	- coolant antifreeze content, max.			,-
	(Case B) - fan: power consumption			
61	at 1 mbar / 100 Pa duct allowance	R	N	kW
	(pressure and suction sides, total)			
	(Case B) - fan: power consumption			
62	at 2 mbar / 200 Pa duct allowance	R	N	kW
	(pressure and suction sides, total)			

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Maximum engine power that cannot be run continuously on
some applications (stabilization reserve)
DL Reference value: continuous power
Engine power that can be run continuously under standard
conditions

Actual value must be greater than specified value
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AB Adequate verification not yet available (tolerance +/-5%)

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# **Technical Sales Document** - Product Data -



Speed [rpm] Name 18V2000G65 1500 **Application Group** Nominal power [kW] 1000 3B Dataset Ref. 25°C/-; Air charge air cooling Nominal power [bhp] 1341 Frequency [Hz] 50

Exhau	st Regulations Fuel-consumption optimized;		-171 1	
	(Case B) - fan: power consumption			
63	at 3 mbar / 300 Pa duct allowance	R	N	kW
	(pressure and suction sides, total)			
	(Case B) - cooling-air flow rate			
38	at 1 mbar / 100 Pa duct allowance	R	N	m³/s
	(pressure and suction sides, total)			
	(Case B) - cooling-air flow rate			
39	at 2 mbar / 200 Pa duct allowance	R	N	m³/s
	(pressure and suction sides, total)			,
	(Case B) - cooling-air flow rate			
40	at 3 mbar / 300 Pa duct allowance	R	N	m³/s
	(pressure and suction sides, total)	"		, 5
64	(Case B) - fan: weight	R	N	kg
65	(Case B) - fan cooler: weight, dry (incl. pipework)	R	N	kg
42	(Case B) - fan cooler: coolant capacity	R	N	liter
	(Case C) - fan cooler, designed for:			
43	- ambient temperature	Α	N	°C
	(Case C) - fan cooler, designed for:			
66	- site altitude, max.	A	N	m
	(Case C) - fan cooler, designed for:			
44	- coolant antifreeze content, max.	A	N	%
	(Case C) - fan: power consumption			
67	at 1 mbar / 100 Pa duct allowance	R	N	kW
	(pressure and suction sides, total)			
	(Case C) - fan: power consumption		N	
68	at 2 mbar / 200 Pa duct allowance	R		kW
	(pressure and suction sides, total)			
	(Case C) - fan: power consumption			
69	at 3 mbar / 300 Pa duct allowance	R	N	kW
	(pressure and suction sides, total)			
	(Case C) - cooling-air flow rate			
49	at 1 mbar / 100 Pa duct allowance	R	N	m³/s
	(pressure and suction sides, total)			
	(Case C) - cooling-air flow rate			
50	at 2 mbar / 200 Pa duct allowance	R	N	m³/s
	(pressure and suction sides, total)			
	(Case C) - cooling-air flow rate			
51	at 3 mbar / 300 Pa duct allowance	R	N	m³/s
	(pressure and suction sides, total)			
70	(Case C) - fan: weight	R	N	kg
71	(Case C) - fan cooler: weight, dry (incl. pipework)	R	N	kg
53	(Case C) - fan cooler: coolant capacity	R	N	liter

## 21. Exhaust emissions

No.	Description	Index	Value	Unit
1972	Emissions data sheet:		EDS20000081 -	-
	Fuel-consumption optimized			
1307	Regulation: "TA-Luft" (Edition 1986) - CP	2		
	Nitric oxide (NOx) (5% O2)	R		mg/m³n
308	Regulation: "TA-Luft" (Edition 1986) - CP	2		
	Carbon monoxide (CO) (5% O2)	R	<del>-</del> 	mg/m³n

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DL Reference value: continuous power Engine power that can be run continuously under standard conditions

Actual value must be greater than specified value
Actual value must be less than specified value

Applicable
The module is valid for this product type

Non-applicable
Walter to not valid for this product type
N Value not named
The value has not yet been named or will not be named Adequate verification not yet available (tolerance +/-10%)
AB Adequate verification not yet available (tolerance +/-5%)

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# **Technical Sales Document** - Product Data -



Speed [rpm] Name 18V2000G65 1500 **Application Group** Nominal power [kW] 1000 3B Dataset Ref. 25°C/-; Air charge air cooling Nominal power [bhp] 1341 Frequency [Hz] 50

**Exhaust Regulations** Fuel-consumption optimized:

Exhaust Regulations Fuel-consumption optimized;				
309	Regulation: "TA-Luft" (Edition 1986) - CP	R		mg/m³n
	Unburned hydrocarbons (HC)	K	-	mg/m-n
310	Regulation: "TA-Luft" (Edition 1986) - CP	R		mg/m³n
	Dust (5% O2)	I.		ilig/ili il
366 311	Regulation: "TA-Luft" (Edition 1986) - CP	R	_	mg/m³n
	Formaldehyde (5% O2)	IX.		ilig/ili il
	Regulation: stationary power plants in France - CP	R	-	mg/m³n
311	Nitric oxide (NOx) (5% O2)	11		111g/111 11
312	Regulation: stationary power plants in France - CP	R	_	mg/m³n
011	Carbon monoxide (CO) (5% O2)			6/
313	Regulation: stationary power plants in France - CP	R	-	mg/m³n
	Unburned hydrocarbons (NMHC)			8/
314	Regulation: stationary power plants in France - CP	R	-	mg/m³n
	Dust / particulates (5% O2)			- O
	Regulation: US EPA "Nonroad"			
316	(40 CFR 89 - Tier 1 -)	R	-	g/kWh
	Nitric oxide (NOx)			
	Regulation: US EPA "Nonroad"			
317	(40 CFR 89 - Tier 1 -)	R	-	g/kWh
	Carbon monoxide (CO)			
240	Regulation: US EPA "Nonroad"			44
318	(40 CFR 89 - Tier 1 -)	R	-	g/kWh
	Unburned hydrocarbons (HC)			
240	Regulation: US EPA "Nonroad"	_		(1.54)
319	(40 CFR 89 - Tier 1 -)	R	-	g/kWh
	Particulates			
220	Regulation: US EPA "Nonroad"	_		(1) 4 (1)
320	(40 CFR 89 - Tier 2 -)	R	-	g/kWh
	Nitric oxide (NOx) + unburned hydrocarbons (HC)			
221	Regulation: US EPA "Nonroad"	<b>D</b>		- /I->A/I-
321	(40 CFR 89 - Tier 2 -) Carbon monoxide (CO)	R	-	g/kWh
	Regulation: US EPA "Nonroad"			
323	(40 CFR 89 - Tier 2 -)	R		- /I->A/I-
323	Particulates	K	-	g/kWh
	Regulation: ARAI - CP			
436	Smoke opacity	R	-	1/m
	Exhaust volume flow, dry - CP			
141	(standard conditions)	R	N	m³/h
	Exhaust mass flow - CP			
143	(reference conditions)	R	N	kg/h
	Residual oxygen content (O2) in dry exhaust - CP			
144	(standard conditions)	R	N	% (vol.)
145	Total combustion calorific value - CP	R	N	kW
37	Smoke index, BOSCH - FSP	R	0.5	-
	1 /	1		1

### 22. Acoustics

No.	Description	Index	Value	Unit
	Exhaust noise, unsilenced - CP			
101	(free-field sound-pressure level Lp, 1m distance,	R	115	dB(A)
	ISO 6798, +3dB(A) tolerance)			

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# **Technical Sales Document** - Product Data -



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**Exhaust Regulations** Fuel-consumption optimized:

LAHUUSE	ruel-consumption optimized;			
201	Exhaust noise, unsilenced - CP	R	128	dB(A)
	(sound power level LW, ISO 6798, +3dB(A) tolerance)			. ,
	Exhaust noise, unsilenced - CP			
103	(free-field sound-pressure level Lp, 1m distance,	R	735 356e	_
100	ISO 6798)		7.55 5500	
	Spectrum No.			
	Exhaust noise,unsilenced - CP			
203	(sound power level LW, ISO 6798)	R	N	-
	Spectrum No.			
	Engine surface noise with attenuated			
109	intake noise (filter) - CP	D	105	dB(A)
109	(free-field sound-pressure level Lp, 1m distance,	R 10		
	ISO 6798, +2dB(A) tolerance)			
	Engine surface noise with attenuated			
209	intake noise (filter) - CP	R	123	dB(A)
	(sound power level LW, ISO 6798, +2dB(A) tolerance)			
	Engine surface noise with attenuated			
111	intake noise (filter) - CP	D .	734 281e	-
111	(free-field sound-pressure level Lp, 1m distance,	R	754 2016	
	ISO 6798) Spectrum No.			
	Engine surface noise with attenuated			
211	intake noise (filter) - CP	R	N	-
211	(sound power level LW, ISO 6798)			
	Spectrum No.			
	Structure borne noise at engine mounting brackets			
125	in vertical direction above resilient engine mounts - CP	R	734 287e	-
	Spectrum No.			
129	Test stand impedance spectrum, Diagram No.		N	-
130	Test stand impedance spectrum, Diagram No. (cont.)		N	-

## 23. TBO and load profile (case A)

	20. 120 4 1044 p. 0 (0400 7.)				
No.	Description	Index	Value	Unit	
15	Maintenance schedule No.		N	-	
16	Maintenance schedule No. (cont.)		N	-	

BL Reference value: fuel stop power Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
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Actual value must be less than specified value

Applicable
The module is valid for this product type

Non-applicable
Walter to not valid for this product type
N Value not named
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