



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWel]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

**Reference conditions**

| No. | Description                    | Index | Value | Unit |
|-----|--------------------------------|-------|-------|------|
| 6   | Intake air temperature         |       | 25    | °C   |
| 7   | Charge-air coolant temperature |       | 55    | °C   |
| 8   | Barometric pressure            |       | 1000  | mbar |
| 9   | Site altitude above sea level  |       | 100   | m    |
| 10  | Raw-water inlet temperature    |       | -     | °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

**X** 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%)  
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|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

## 0. Data-relevant engine design configuration

| No. | Description   | Index | Value | Unit |
|-----|---|-------|-------|------|
| 12  | Engine with sequential turbocharging<br>(turbochargers with cut-in/cut-out control)       |       | -     | -    |
| 13  | Engine without sequential turbocharging<br>(turbochargers without cut-in/cut-out control) |       | X     | -    |

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|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

### 1. Power-related data

| No. | Description  | Index | Value | Unit |
|-----|--|-------|-------|------|
| 1   | Engine rated speed   | A     | 1500  | rpm  |
| 2   | Reduction gear - Output speed  | A     | -     | rpm  |
| 3   | Mean piston speed  |       | 10.5  | m/s  |
| 4   | Continuous power ISO 3046 (10% overload capability)<br>(design power DIN 6280, ISO 8528) | A     | 2420  | kW   |
| 5   | Fuel stop power ISO 3046   | A     | 2662  | kW   |
| 8   | Mean effective pressure (MEP)<br>(Continuous power ISO 3046)                             |       | 20.3  | bar  |
| 9   | Mean effective pressure (MEP)<br>(Fuel stop power ISO 3046)                              |       | 22.3  | bar  |
| 18  | Performance map No.  |       | -     | -    |
| 38  | Performance map No. (cont.)  |       | -     | -    |
| 20  | Performance map, amendment index   |       | -     | -    |

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|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

## 2. General Conditions (for maximum power)

| No. | Description  | Index | Value | Unit |
|-----|--|-------|-------|------|
| 46  | Individual power calculation (ESCM) required for maximum power       |       | X     | -    |
| 1   | Intake air depression (new filter)                                   | A     | 15    | mbar |
| 2   | Intake air depression, max.  | L     | 50    | mbar |
| 51  | Exhaust overpressure (total pressure against atmosphere)             | A     | 30    | mbar |
| 52  | Exhaust overpressure, max. (total pressure against atmosphere)       | L     | 85    | mbar |
| 5   | Fuel temperature at fuel feed connection                             | R     | 25    | °C   |
| 9   | Fuel temperature at fuel feed connection, max. (w/o power reduction) | L     | 55    | °C   |
| 10  | Fuel temperature at fuel feed connection, max.                       | L     | 55    | °C   |
| 18  | Fuel temperature at fuel feed connection, min.                       | L     | -     | °C   |

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|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

### 3. Consumption

| No. | Description   | Index | Value | Unit   |
|-----|---|-------|-------|--------|
| 17  | Specific fuel consumption (be) - 100 % CP<br>(+ 5 %; EN 590; 42.8 MJ/kg)  | R     | 190   | g/kWh  |
| 18  | Specific fuel consumption (be) - 75 % CP<br>(+ 5 %; EN 590; 42.8 MJ/kg)   | R     | 193   | g/kWh  |
| 19  | Specific fuel consumption (be) - 50 % CP<br>(+ 5 %; EN 590; 42.8 MJ/kg)   | R     | 202   | g/kWh  |
| 20  | Specific fuel consumption (be) - 25 % CP<br>(+ 5 %; EN 590; 42.8 MJ/kg)   | R     | 227   | g/kWh  |
| 21  | Specific fuel consumption (be) - FSP<br>(+ 5 %; EN 590; 42.8 MJ/kg)   | R     | 194   | g/kWh  |
| 56  | Specific fuel consumption (be) - 100 % FSP<br>(+ 5 %; EN 590; 42.8 MJ/kg)   | R     | -     | g/kWh  |
| 57  | Specific fuel consumption (be) - 75 % FSP<br>(+ 5 %; EN 590; 42.8 MJ/kg)  | R     | -     | g/kWh  |
| 58  | Specific fuel consumption (be) - 50 % FSP<br>(+ 5 %; EN 590; 42.8 MJ/kg)  | R     | -     | g/kWh  |
| 59  | Specific fuel consumption (be) - 25 % FSP<br>(+ 5 %; EN 590; 42.8 MJ/kg)  | R     | -     | g/kWh  |
| 73  | No-load fuel consumption  | R     | 35    | kg/h   |
| 92  | Lube oil consumption after 100 h of operation<br>(B = fuel consumption per hour)<br>Guideline value does not apply for the design<br>of EGAT systems. Please consult the Applications<br>Center with regard to the layout of EGA systems. | R     | 0.3   | % of B |
| 62  | Lube oil consumption after 100 h of operation, max.<br>(B = fuel consumption per hour)  | L     | 1.0   | % of B |

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|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

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

| No. | Description  | Index | Value | Unit        |
|-----|--|-------|-------|-------------|
| 1   | Naturally aspirated engine                             |       | -     | -           |
| 2   | Engine with exhaust turbocharger (ETC)                 |       | -     | -           |
| 3   | Engine with exhaust turbocharger (ETC) and intercooler |       | X     | -           |
| 4   | Exhaust piping, non-cooled                             |       | X     | -           |
| 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                                    |       | 20    | -           |
| 7   | Cylinder configuration: V angle                        |       | 90    | degrees (°) |
| 8   | Cylinder configuration: in-line vertical               |       | -     | -           |
| 10  | Bore   |       | 170   | mm          |
| 11  | Stroke   |       | 210   | mm          |
| 12  | Displacement, cylinder                                 |       | 4.77  | liter       |
| 13  | Displacement, total                                    |       | 95.4  | liter       |
| 14  | Compression ratio                                      |       | 16.4  | -           |
| 40  | Cylinder heads: single-cylinder                        |       | X     | -           |
| 41  | Cylinder liners: wet, replaceable                      |       | X     | -           |
| 42  | Piston design: composite piston                        |       | -     | -           |
| 49  | Piston design: solid-skirt piston                      |       | X     | -           |
| 21  | Number of piston compression rings                     |       | 2     | -           |
| 22  | Number of piston oil control rings                     |       | 1     | -           |

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|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

|    |  |   |    |     |
|----|--|---|----|-----|
| 24 | Number of inlet valves, per cylinder                             |   | 2  | -   |
| 25 | Number of exhaust valves, per cylinder                           |   | 2  | -   |
| 15 | Number of turbochargers  |   | 6  | -   |
| 16 | Number of L.P. turbochargers                                     |   | 6  | -   |
| 17 | Number of H.P. turbochargers                                     |   | -  | -   |
| 18 | Number of intercoolers   |   | 1  | -   |
| 19 | Number of L.P. intercoolers                                      |   | 1  | -   |
| 20 | Number of H.P. intercoolers                                      |   | -  | -   |
| 28 | Standard flywheel housing flange (engine main PTO)               |   | 00 | SAE |
| 50 | Static bending moment at standard flywheel housing flange, max.  | L | 15 | kNm |
| 51 | Dynamic bending moment at standard flywheel housing flange, max. | L | 75 | kNm |
| 29 | Standard flywheel housing flange (reduction gearbox main PTO)    |   | -  | SAE |
| 43 | Flywheel interface (DISC)  |   | 21 | -   |

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|                          |                | <b>Nominal power [kWel]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

## 5. Combustion air / exhaust gas

| No. | Description  | Index | Value | Unit              |
|-----|--|-------|-------|-------------------|
| 8   | Charge-air pressure before cylinder - CP           | R     | 2.6   | bar abs           |
| 27  | Charge-air pressure before cylinder - FSP          | R     | 2.9   | bar abs           |
| 9   | Combustion air volume flow - CP                    | R     | 2.7   | m <sup>3</sup> /s |
| 10  | Combustion air volume flow - FSP                   | R     | 3.0   | m <sup>3</sup> /s |
| 11  | Exhaust volume flow (at exhaust temperature) - CP  | R     | 7.1   | m <sup>3</sup> /s |
| 12  | Exhaust volume flow (at exhaust temperature) - FSP | R     | 8.1   | m <sup>3</sup> /s |
| 13  | Exhaust temperature before turbocharger - CP       | R     | 690   | °C                |
| 14  | Exhaust temperature before turbocharger - FSP      | R     | 730   | °C                |
| 15  | Exhaust temperature after turbocharger - CP        | R     | 560   | °C                |
| 16  | Exhaust temperature after turbocharger - FSP       | R     | 585   | °C                |
| 17  | Exhaust temperature after engine - CP              | R     | 510   | °C                |
| 18  | Exhaust temperature after engine - FSP             | R     | 530   | °C                |

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|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

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## 6. Heat dissipation

| No. | Description   | Index | Value | Unit |
|-----|---|-------|-------|------|
| 10  | Heat dissipated by engine coolant - FSP with oil heat   | R     | -     | kW   |
| 12  | Heat dissipation by engine coolant - FSP with oil heat, with charge-air heat                      | R     | -     | kW   |
| 62  | Heat dissipated by engine coolant - FSP (high-temperature circuit)                                | R     | -     | kW   |
| 63  | Heat dissipated by engine coolant - FSP (low-temperature circuit)                                 | R     | -     | kW   |
| 14  | Heat dissipated by engine coolant - FSP without oil heat, with charge-air heat                    | R     | -     | kW   |
| 15  | Heat dissipated by engine coolant - CP with oil heat, without charge-air heat                     | R     | 890   | kW   |
| 16  | Heat dissipated by engine coolant - FSP with oil heat, without charge-air heat                    | R     | 980   | kW   |
| 18  | Heat dissipated by engine coolant - FSP without oil heat, without charge-air heat                 | R     | -     | kW   |
| 23  | Heat dissipated by oil - FSP  | R     | -     | kW   |
| 25  | Charge-air and oil heat dissipation - FSP   | R     | -     | kW   |
| 26  | Charge-air heat dissipation - CP  | R     | 350   | kW   |
| 27  | Charge-air heat dissipation - FSP   | R     | 430   | kW   |
| 39  | Heat dissipated by exhaust gas - FSP  | R     | -     | kW   |
| 31  | Heat dissipated by return fuel flow - CP  | R     | 7.5   | kW   |
| 32  | Heat dissipated by return fuel flow - FSP   | R     | -     | kW   |
| 33  | Radiation and convection heat, engine - CP  | R     | 105   | kW   |
| 34  | Radiation and convection heat, engine - FSP   | R     | -     | kW   |
| 36  | Radiation and convection heat, genset - FSP (engine + generator + 10m insulated exhaust pipework) | R     | -     | kW   |

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|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

## 7. Coolant system (high-temperature circuit)

| No. | Description   | Index | Value | Unit |
|-----|---|-------|-------|------|
| 9   | Coolant temperature<br>(at engine outlet to cooling equipment;<br>with max. 40% antifreeze) | A     | -     | °C   |
| 17  | Coolant temperature<br>(at engine outlet to cooling equipment)                              | A     | 100   | °C   |
| 57  | Coolant temperature differential after/before engine,<br>from                               | R     | 10    | K    |
| 58  | Coolant temperature differential after/before engine,<br>to                                 | R     | 12    | K    |
| 23  | Coolant temperature differential after/before engine  | L     | 14    | K    |
| 20  | Coolant temperature after engine, limit 1   | L     | 102   | °C   |
| 21  | Coolant temperature after engine, limit 2   | L     | 104   | °C   |
| 25  | Coolant antifreeze content, max.  | L     | 50    | %    |
| 30  | Cooling equipment: coolant flow rate  | A     | 80    | m³/h |
| 31  | Coolant pump: pressure differential   | R     | 2.3   | bar  |
| 35  | Coolant pump: inlet pressure, min.  | L     | 0.5   | bar  |
| 36  | Coolant pump: inlet pressure, max.  | L     | 2.5   | bar  |
| 39  | Engine: coolant pressure differential<br>with thermostat                                    | R     | 1.7   | bar  |
| 41  | Pressure loss in off-engine cooling system, max.  | L     | 0.7   | bar  |
| 72  | Pressure loss in off-engine cooling system, min.  | L     | 0.55  | bar  |
| 43  | Pressure loss in off-engine cooling system, max.<br>without thermostat                      | L     | 0.7   | bar  |
| 70  | Pressure loss in off-engine cooling system, min.<br>without thermostat                      | L     | 0.55  | bar  |
| 47  | Breather valve (expansion tank)<br>opening pressure (excess pressure)                       | R     | 1.0   | bar  |
| 54  | Cooling equipment: height above engine, max.  | L     | 15    | m    |

**[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

**[X]** 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%)

**[A]** Design value  
Value required for the design of an external system (plant)

**[R]** Guideline value  
Typical average value as information – only suitable for design purposes to a limited extent

**[L]** Limit value  
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

|    |   |   |      |     |
|----|---|---|------|-----|
| 53 | Cooling equipment: operating pressure                         | A | 2.5  | bar |
| 73 | Coolant level in expansion tank, below min. alarm             | L | -    | -   |
| 74 | Coolant level in expansion tank, below min. shutdown          | L | X    | -   |
| 50 | Thermostat, starts to open                                    | R | 79   | °C  |
| 51 | Thermostat, bypass closed                                     | R | 92   | °C  |
| 52 | Thermostat, fully open  | R | 92   | °C  |
| 48 | Breather valve (expansion tank) opening pressure (depression) | R | -0.1 | bar |
| 49 | Pressure in cooling system, max.                              | L | 5.0  | 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

**>** Actual value must be greater than specified value

**<** Actual value must be less than specified value

**X** 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%)

**A** Design value

Value required for the design of an external system (plant)

**R** Guideline value

Typical average value as information – only suitable for design purposes to a limited extent

**L** Limit value

A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

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

| No. | Description  | Index | Value | Unit |
|-----|--|-------|-------|------|
| 53  | Coolant temperature<br>(at engine outlet to cooling equipment)                                 | R     | 64    | °C   |
| 9   | Coolant temperature before intercooler<br>(at engine inlet from cooling equipment)             | A     | 55    | °C   |
| 14  | Coolant temperature before intercooler, limit 1  | L     | 75    | °C   |
| 61  | Coolant temperature before intercooler, shutdown   | L     | -     | °C   |
| 15  | Coolant temperature before intercooler, limit 2  | L     | -     | °C   |
| 54  | Coolant temperature differential after/before<br>intercooler, min.                             | L     | 9     | K    |
| 55  | Coolant temperature differential after/before<br>intercooler, max.                             | L     | 13    | K    |
| 13  | Coolant antifreeze content, max.   | L     | 50    | %    |
| 17  | Charge-air temperature after intercooler, max.   | L     | 80    | °C   |
| 76  | Temperature differential between intake air and<br>charge-air coolant before intercooler       | A     | 30    | K    |
| 75  | Temperature differential between intake air and<br>charge-air coolant before intercooler, max. | L     | 32    | K    |
| 45  | Charge-air temperature after intercooler, max.<br>for compliance with "TA-Luft" at CP          | L     | -     | °C   |
| 56  | Coolant pump: flow rate  | A     | 32.5  | m³/h |
| 20  | Cooling equipment: coolant flow rate   | A     | 32.5  | m³/h |
| 21  | Intercooler: coolant flow rate   | R     | 32.5  | m³/h |
| 22  | Coolant pump: pressure differential  | R     | 1.6   | bar  |
| 24  | Coolant pump: inlet pressure, min.   | L     | 0.5   | bar  |
| 25  | Coolant pump: inlet pressure, max.   | L     | 2.5   | bar  |
| 29  | Pressure loss in off-engine cooling system, max.   | L     | 0.7   | bar  |
| 62  | Pressure loss in off-engine cooling system, min.   | L     | 0.55  | 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

**[>]** Actual value must be greater than specified value  
**[<]** Actual value must be less than specified value

**[X]** 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%)

**[A]** Design value  
Value required for the design of an external system (plant)

**[R]** Guideline value  
Typical average value as information – only suitable for design purposes to a limited extent

**[L]** Limit value  
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

|    |   |   |      |     |
|----|---|---|------|-----|
| 31 | Pressure loss in off-engine cooling system, max. without thermostat | L | 0.7  | bar |
| 63 | Pressure loss in off-engine cooling system, min. without thermostat | L | 0.55 | bar |
| 43 | Cooling equipment: height above engine, max.                        | L | 15   | m   |
| 36 | Breather valve (expansion tank) opening pressure (excess pressure)  | R | 1.0  | bar |
| 37 | Breather valve (expansion tank) opening pressure (depression)       | R | -0.1 | bar |
| 42 | Cooling equipment: operating pressure                               | A | 2.5  | bar |
| 67 | Coolant level in expansion tank, below min. alarm                   | L | -    | -   |
| 68 | Coolant level in expansion tank, below min. shutdown                | L | X    | -   |
| 39 | Thermostat, starts to open  | R | 38   | °C  |
| 40 | Thermostat, bypass closed   | R | 51   | °C  |
| 41 | Thermostat, fully open  | R | 51   | °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

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The module is valid for this product type  
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A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

## 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        |
| 3   | Lube oil operating temp. after engine, from                                 | R     | 98    | °C        |
| 4   | Lube oil operating temp. after engine, to                                   | R     | 108   | °C        |
| 5   | Lube oil temperature before engine, limit 1                                 | L     | 99    | °C        |
| 6   | Lube oil temperature before engine, limit 2                                 | L     | 101   | °C        |
| 7   | Lube oil operating pressure before engine (measuring block)                 | R     | 5.3   | bar       |
| 8   | Lube oil operating press. bef. engine, from                                 | R     | 4.5   | bar       |
| 9   | Lube oil operating press. bef. engine, to                                   | R     | 7.3   | bar       |
| 10  | Lube oil pressure before engine, alarm                                      | L     | -     | bar       |
| 33  | Lube oil pressure before engine, limit 1 (speed-related value, consult MTU) | L     | 3.5   | bar       |
| 11  | Lube oil pressure before engine, shutdown                                   | L     | -     | bar       |
| 34  | Lube oil pressure before engine, limit 2 (speed-related value, consult MTU) | L     | 3.2   | bar       |
| 17  | Lube oil pump(s): oil flow, total   | R     | 835   | liter/min |
| 19  | Lube oil fine filter (main circuit): number of units                        |       | 1     | -         |
| 20  | Lube oil fine filter (main circuit): number of elements per unit            |       | 5     | -         |
| 21  | Lube oil fine filter (main circuit): particle retention                     | R     | 0.014 | mm        |
| 32  | Lube oil fine filter (main circuit): pressure differential, max.            | L     | 1.5   | bar       |
| 35  | Lube oil fine filter (main circuit): make (standard): MANN & HUMMEL         |       | X     | -         |

**[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

**[X]** Applicable  
The module is valid for this product type

**[ ]** Non-applicable  
The module is not valid for this product type

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|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

## 11. Fuel system

| No. | Description  | Index | Value | Unit      |
|-----|--|-------|-------|-----------|
| 1   | Fuel pressure at engine fuel feed connection, min. (when engine is starting)           | L     | -0.1  | bar       |
| 2   | Fuel pressure at engine fuel feed connection, max. (when engine is starting)           | L     | 1.5   | bar       |
| 57  | Fuel pressure at engine fuel feed connection, min. (when engine is running)            | L     | -0.3  | bar       |
| 65  | Fuel pressure at engine fuel feed connection, max. (when engine is running)            | L     | 0.5   | bar       |
| 37  | Fuel supply flow, max.   | A     | 27    | liter/min |
| 4   | Fuel pressure before injection pump, from (high-pressure pump)                         | R     | 6.0   | bar       |
| 5   | Fuel pressure before injection pump, to (high-pressure pump)                           | R     | 9.0   | bar       |
| 6   | Fuel pressure before injection pump, min. (high-pressure pump)                         | L     | 5.0   | bar       |
| 7   | Fuel pressure before injection pump with engine not running, max. (high-pressure pump) | L     | 1.5   | bar       |
| 8   | Fuel return flow, max.   | A     | 7     | liter/min |
| 10  | Fuel pressure at return connection on engine, max.                                     | L     | 0.5   | bar       |
| 12  | Fuel temperature differential before/after engine                                      | R     | 30    | K         |
| 38  | Fuel temperature after high-pressure pump, alarm                                       | L     | 100   | °C        |
| 15  | Fuel prefilter: number of units  | A     | -     | -         |
| 16  | Fuel prefilter: number of elements per unit  | A     | -     | -         |
| 17  | Fuel prefilter: particle retention   | A     | -     | mm        |
| 29  | Fuel prefilter: make (standard): MANN & HUMMEL   |       | -     | -         |
| 18  | Fuel fine filter (main circuit): number of units                                       | A     | 1     | -         |
| 19  | Fuel fine filter (main circuit): number of elements per unit                           | A     | 1     | -         |

**[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

**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%)**

**[A]** Design value  
Value required for the design of an external system (plant)

**[R]** Guideline value  
Typical average value as information – only suitable for design purposes to a limited extent

**[L]** Limit value  
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

|    |  |   |       |     |
|----|--|---|-------|-----|
| 20 | Fuel fine filter (main circuit): particle retention                | A | 0.005 | mm  |
| 21 | Fuel fine filter (main circuit): pressure differential, max.       | L | 1.0   | bar |
| 32 | Fuel fine filter (main circuit):<br>make (standard): MANN & HUMMEL |   | X     | -   |

**[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**

**[X] Applicable**  
The module is valid for this product type  
**[ ] Non-applicable**  
The module is not valid for this product type  
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|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

## 12. General operating data

| No.  | Description  | Index | Value | Unit      |
|------|--|-------|-------|-----------|
| 1    | Cold start capability: air temperature (w/o starting aid, w/o preheating) - (case A)   | R     | 10    | °C        |
| 2    | Additional condition (to case A): engine coolant temperature                           | R     | 10    | °C        |
| 3    | Additional condition (to case A): lube oil temperature                                 | R     | 10    | °C        |
| 4    | Additional condition (to case A): lube oil viscosity                                   | R     | 15W40 | SAE       |
| 9    | Cold start capability: air temperature (w/o starting aid, w/ preheating) - (case C)    | R     | 0     | °C        |
| 10   | Additional condition (to case C): engine coolant temperature                           | R     | 40    | °C        |
| 11   | Additional condition (to case C): lube oil temperature                                 | R     | -10   | °C        |
| 12   | Additional condition (to case C): lube oil viscosity                                   | R     | 15W40 | SAE       |
| 21   | Coolant preheating, heater performance (standard)                                      | R     | 9.0   | kW        |
| 22   | Coolant preheating, preheating temperature, min.                                       | L     | 32    | °C        |
| 3506 | Coolant preheating, preheating temperature, max.                                       | L     | 55    | °C        |
| 23   | Lube oil priming pump: flow rate   | R     | N     | liter/min |
| 24   | Lube oil priming pump: pressure  | R     | N     | bar       |
| 25   | Lube oil priming pump: rated power   | R     | N     | kW        |
| 26   | Lube oil priming pump: cut-in interval<br>pump cut-in every ... minutes                | R     | N     | min       |
| 27   | Lube oil priming pump: cut-in duration   | R     | N     | min       |
| 28   | Breakaway torque (without driven machinery)<br>coolant temperature +5°C                | R     | 2600  | Nm        |
| 30   | Breakaway torque (without driven machinery)<br>coolant temperature +40°C               | R     | 2200  | Nm        |
| 29   | Cranking torque at firing speed (without driven machinery)<br>coolant temperature +5°C | R     | 1400  | Nm        |

**[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

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**[ ]** Non-applicable  
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|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

|      |   |   |      |                  |
|------|---|---|------|------------------|
| 31   | Cranking torque at firing speed (without driven machinery)<br>coolant temperature +40°C   | R | 1100 | Nm               |
| 96   | Starting is blocked if the engine coolant temperature is below  |   | 0    | °C               |
| 92   | Run-up period to rated speed (without driven machinery)   | R | N    | s                |
| 93   | Run-up period to rated speed (with driven machinery)<br>(* at general conditions)   | R | N    | s                |
| 37   | High idling speed, max. (static)  | L | 1700 | rpm              |
| 38   | Limit speed for overspeed alarm / emergency shutdown  | L | 1950 | rpm              |
| 39   | Limit speed for overspeed alarm   | L | 1950 | rpm              |
| 42   | Firing speed, from  | R | 80   | rpm              |
| 43   | Firing speed, to  | R | 120  | rpm              |
| 44   | Engine coolant temperature before starting full-load operation, recommended min.<br>(for emergency/standby sets with coolant preheating the minimum preheating temperature referred to extended property No.22 is sufficient) | R | 60   | °C               |
| 3515 | Minimum continuous load (operation > 10h)   | R | 30   | kW/cyl           |
| 49   | Extended low or no-load operation possible (consultation required)  |   | X    | -                |
| 50   | Engine mass moment of inertia (without flywheel)  | R | 24.6 | kgm <sup>2</sup> |
| 52   | Standard flywheel mass moment of inertia  | R | 10.2 | kgm <sup>2</sup> |
| 51   | Engine mass moment of inertia (with standard flywheel)  | R | 34.8 | kgm <sup>2</sup> |
| 69   | Speed droop (with electronic governor) adjustable, from   | R | 0    | %                |
| 70   | Speed droop (with electronic governor) adjustable, to   | R | 7    | %                |
| 95   | Number of starter ring-gear teeth on engine flywheel  |   | 182  | -                |

**[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

**[X]** 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%)

**[A]** Design value  
Value required for the design of an external system (plant)

**[R]** Guideline value  
Typical average value as information – only suitable for design purposes to a limited extent

**[L]** Limit value  
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

### 13. Starting (electric)

| No.  | Description  | Index | Value      | Unit |
|------|--|-------|------------|------|
| 2309 | Manufacturer   |       | Delco      | -    |
| 2310 | Number of starter  |       | 2          | -    |
| 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       | A    |
| 2316 | Power consumption per starter<br>(at an engine speed of 100 rpm)     | R     | 580        | A    |
| 2317 | Internal resistance of power supply + line resistance<br>per starter | A     | 0.008      | Ω    |
| 2318 | Manufacturer   |       | Bosch      | -    |
| 2319 | Number of starter  |       | 2          | -    |
| 2320 | Starter electrically redundant                                       |       | -          | -    |
| 2321 | Rated power per starter  | R     | 11.3       | kW   |
| 2322 | Starter, rated voltage   | R     | 24         | VDC  |
| 2323 | Rated short-circuit current per starter                              | L     | 2190       | A    |
| 2324 | Power consumption per starter<br>(at an engine speed of 100 rpm)     | R     | 750        | A    |
| 2325 | Internal resistance of power supply + line resistance<br>per starter | A     | 0.0047     | Ω    |
| 2326 | Manufacturer   |       | Prestolite | -    |
| 2327 | Number of starter  |       | 1          | -    |
| 2328 | Starter electrically redundant                                       |       | -          | -    |
| 2329 | Rated power per starter  | R     | 15         | kW   |
| 2330 | Starter, rated voltage   | R     | 24         | VDC  |
| 2331 | Rated short-circuit current per starter                              | L     | 3000       | A    |

**[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

**[X]** 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%)

**[A]** Design value  
Value required for the design of an external system (plant)

**[R]** Guideline value  
Typical average value as information – only suitable for design purposes to a limited extent

**[L]** Limit value  
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

|      |  |   |            |     |
|------|--|---|------------|-----|
| 2332 | Power consumption per starter<br>(at an engine speed of 100 rpm)   | R | 1400       | A   |
| 2333 | Internal resistance of power supply + line resistance<br>per starter   | A | 0.0045     | Ω   |
| 2334 | Manufacturer   |   | Prestolite | -   |
| 2335 | Number of starter  |   | 2          | -   |
| 2336 | Starter electrically redundant   |   | X          | -   |
| 2337 | Rated power per starter  | R | 15         | kW  |
| 2338 | Starter, rated voltage   | R | 24         | VDC |
| 2339 | Rated short-circuit current per starter  | L | 3000       | A   |
| 2340 | Power consumption per starter<br>(at an engine speed of 100 rpm)   | R | 1400       | A   |
| 2341 | Internal resistance of power supply + line resistance<br>per starter   | A | 0.0045     | Ω   |
| 2347 | Generally valid data for starter   |   | X          | -   |
| 2342 | Rated starting-attempt Duration (at +20°C ambient<br>temperature with battery full)  | R | 5          | s   |
| 2343 | Interval between starts<br>(at rated starting-attempt duration), min.  | L | 20         | s   |
| 2345 | Maximum acceptable starting-attempt duration   | L | 15         | s   |
| 2344 | Interval between starts<br>(when starting-attempt duration > rated starting-<br>attempt duration)  | R | 60         | s   |
| 2346 | Starting attempts within 30 minutes<br>(at +20°C ambient temperature with battery full),<br>max.   | L | 6          | -   |
| 3565 | Disengagement of starter pinion at engine Speed<br>Note: Exceeding the guideline value of the<br>disengagement speed will reduce the life cycle of the<br>starter depending on how often and how much the<br>speed has been exceeded | R | 400        | rpm |
| 3566 | Disengagement of starter pinion at engine speed,<br>max.   | L | 500        | rpm |

**[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

**[X]** 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%)

**[A]** Design value  
Value required for the design of an external system  
(plant)

**[R]** Guideline value  
Typical average value as information – only suitable  
for design purposes to a limited extent

**[L]** Limit value  
A value representing the lower limit/minimum value or  
upper limit/maximum value that may not be  
exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

#### 14. Starting (air in cylinder)

| No. | Description   | Index | Value | Unit             |
|-----|---|-------|-------|------------------|
| 1   | Starting air pressure before engine, min.                                   | R     | -     | bar              |
| 2   | Starting air pressure before engine, max.                                   | R     | -     | bar              |
| 3   | Starting air pressure before engine, min.                                   | L     | -     | bar              |
| 4   | Starting air pressure before engine, max.                                   | L     | -     | bar              |
| 20  | Start attempt duration (engine preheated)                                   | R     | -     | s                |
| 21  | Start attempt duration (engine not preheated)                               | R     | -     | s                |
| 22  | Start attempt duration  | L     | -     | s                |
| 23  | Air consumption / start attempt (engine preheated)                          | R     | -     | m <sup>3</sup> n |
| 24  | Air consumption / start attempt (engine not preheated)                      | R     | -     | m <sup>3</sup> n |
| 25  | Starting air tank for 3 start attempts (max. 40 bar) (engine preheated)     | R     | -     | liter            |
| 26  | Starting air tank for 3 start attempts (max. 30 bar) (engine preheated)     | R     | -     | liter            |
| 27  | Starting air tank for 6 start attempts (max. 40 bar) (engine preheated)     | R     | -     | liter            |
| 28  | Starting air tank for 6 start attempts (max. 30 bar) (engine preheated)     | R     | -     | liter            |
| 29  | Starting air tank for 10 start attempts (max. 40 bar) (engine preheated)    | R     | -     | liter            |
| 30  | Starting air tank for 10 start attempts (max. 30 bar) (engine preheated)    | R     | -     | liter            |
| 31  | Starting air tank for 3 start attempts (max. 40 bar) (engine not preheated) | R     | -     | liter            |
| 32  | Starting air tank for 3 start attempts (max. 30 bar) (engine not preheated) | R     | -     | liter            |
| 33  | Starting air tank for 6 start attempts (max. 40 bar) (engine not preheated) | R     | -     | liter            |

**[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

**[X]** 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%)

**[A]** Design value  
Value required for the design of an external system (plant)

**[R]** Guideline value  
Typical average value as information – only suitable for design purposes to a limited extent

**[L]** Limit value  
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

|    |   |   |   |       |
|----|---|---|---|-------|
| 34 | Starting air tank for 6 start attempts<br>(max. 30 bar) (engine not preheated)  | R | - | liter |
| 35 | Starting air tank for 10 start attempts<br>(max. 40 bar) (engine not preheated) | R | - | liter |
| 36 | Starting air tank for 10 start attempts<br>(max. 30 bar) (engine not preheated) | R | - | liter |

**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

**X** 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%)

**A** Design value  
Value required for the design of an external system (plant)

**R** Guideline value  
Typical average value as information – only suitable for design purposes to a limited extent

**L** Limit value  
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

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

| No. | Description   | Index | Value | Unit             |
|-----|---|-------|-------|------------------|
| 35  | Pneumatic starter: make Gali  |       | -     | -                |
| 36  | Pneumatic starter: make TDI   |       | X     | -                |
| 5   | Starting air pressure before starter motor, min.  | R     | 8     | bar              |
| 6   | Starting air pressure before starter motor, max.  | R     | 9     | bar              |
| 7   | Starting air pressure before starter motor, min.  | L     | 8     | bar              |
| 8   | Starting air pressure before starter motor, max.  | L     | 9     | bar              |
| 18  | Start attempt duration (engine preheated)   | R     | 3     | s                |
| 19  | Start attempt duration (engine not preheated)   | R     | 5     | s                |
| 20  | Start attempt duration, max.  | L     | -     | s                |
| 114 | Air consumption/start attempt<br>(engine preheated)<br>Engine without generator<br>Control with engine controller     | R     | 1.4   | m <sup>3</sup> n |
| 115 | Air consumption/start attempt<br>(engine not preheated)<br>Engine without generator<br>Control with engine controller | R     | 1.6   | m <sup>3</sup> n |
| 116 | Air consumption with external control<br>for air-starter (per second)   | R     | 0.7   | m <sup>3</sup> n |
| 23  | Starting air tank for 3 start attempts<br>(max. 40 bar) (engine preheated)  | R     | -     | liter            |
| 24  | Starting air tank for 3 start attempts<br>(max. 30 bar) (engine preheated)  | R     | -     | liter            |
| 25  | Starting air tank for 6 start attempts<br>(max. 40 bar) (engine preheated)  | R     | -     | liter            |
| 26  | Starting air tank for 6 start attempts<br>(max. 30 bar) (engine preheated)  | R     | -     | liter            |
| 27  | Starting air tank for 10 start attempts<br>(max. 40 bar) (engine preheated)   | R     | -     | liter            |

**[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

**[X]** 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%)

**[A]** Design value  
Value required for the design of an external system (plant)

**[R]** Guideline value  
Typical average value as information – only suitable for design purposes to a limited extent

**[L]** Limit value  
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



## - Product Data -

|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWel]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

|    |  |   |   |       |
|----|--|---|---|-------|
| 28 | Starting air tank for 10 start attempts (max. 30 bar) (engine preheated)     | R | - | liter |
| 29 | Starting air tank for 3 start attempts (max. 40 bar) (engine not preheated)  | R | N | liter |
| 30 | Starting air tank for 3 start attempts (max. 30 bar) (engine not preheated)  | R | N | liter |
| 31 | Starting air tank for 6 start attempts (max. 40 bar) (engine not preheated)  | R | N | liter |
| 32 | Starting air tank for 6 start attempts (max. 30 bar) (engine not preheated)  | R | N | liter |
| 33 | Starting air tank for 10 start attempts (max. 40 bar) (engine not preheated) | R | N | liter |
| 34 | Starting air tank for 10 start attempts (max. 30 bar) (engine not preheated) | R | N | liter |

**[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**

**[X] 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%)**

**[A] Design value**  
Value required for the design of an external system (plant)

**[R] Guideline value**  
Typical average value as information – only suitable for design purposes to a limited extent

**[L] Limit value**  
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes





|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

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

| No. | Description  | Index | Value | Unit        |
|-----|--|-------|-------|-------------|
| 15  | Longitudinal inclination, continuous max.<br>driving end down<br>(Option: max. operating inclinations) | L     | 5     | degrees (°) |
| 16  | Longitudinal inclination, temporary max.<br>driving end down<br>(Option: max. operating inclinations)  | L     | -     | degrees (°) |
| 17  | Longitudinal inclination, continuous max.<br>driving end up<br>(Option: max. operating inclinations)   | L     | 5     | degrees (°) |
| 18  | Longitudinal inclination, temporary max.<br>driving end up<br>(Option: max. operating inclinations)    | L     | -     | degrees (°) |
| 19  | Transverse inclination, continuous max.<br>(Option: max. operating inclinations)                       | L     | 10    | degrees (°) |
| 20  | Transverse inclination, temporary max.<br>(Option: max. operating inclinations)                        | L     | -     | degrees (°) |

**[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**

**[X] 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%)**

**[A] Design value**  
Value required for the design of an external system (plant)

**[R] Guideline value**  
Typical average value as information – only suitable for design purposes to a limited extent

**[L] Limit value**  
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

### 17. Inclinations - special oil system (ref.: waterline)

| No. | Description                               | Index | Value | Unit        |
|-----|---|-------|-------|-------------|
| 1   | Longitudinal inclination, continuous max. | L     | -     | degrees (°) |
| 7   | Transverse inclination, continuous max.   | L     | -     | degrees (°) |

**[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**

**[X] 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%)**

**[A] Design value**  
Value required for the design of an external system (plant)

**[R] Guideline value**  
Typical average value as information – only suitable for design purposes to a limited extent

**[L] Limit value**  
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

## 18. Capacities

| No. | Description  | Index | Value | Unit  |
|-----|--|-------|-------|-------|
| 1   | Engine coolant capacity (without cooling equipment)  | R     | 205 * | liter |
| 11  | On-engine fuel capacity  | R     | 9     | liter |
| 14  | Engine oil capacity, initial filling<br>(standard oil system)<br>(Option: max. operating inclinations) | R     | 390 * | liter |
| 20  | Oil change quantity, max.<br>(standard oil system)<br>(Option: max. operating inclinations)            | R     | 340 * | liter |
| 28  | Oil pan capacity, dipstick mark min.<br>(standard oil system)<br>(Option: max. operating inclinations) | L     | 268   | liter |
| 29  | Oil pan capacity, dipstick mark max.<br>(standard oil system)<br>(Option: max. operating inclinations) | L     | 315   | liter |

**[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

**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%)**

**Design value**

Value required for the design of an external system (plant)

**Guideline value**

Typical average value as information – only suitable for design purposes to a limited extent

**Limit value**

A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

## 19. Masses / dimensions

| No. | Description   | Index | Value | Unit |
|-----|---|-------|-------|------|
| 9   | Engine mass, dry<br>(basic engine configuration acc. to<br>scope of supply specification) | R     | 9290  | kg   |

**[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**

**[X] 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%)**

**[A] Design value**  
Value required for the design of an external system  
(plant)

**[R] Guideline value**  
Typical average value as information – only suitable  
for design purposes to a limited extent

**[L] Limit value**  
A value representing the lower limit/minimum value or  
upper limit/maximum value that may not be  
exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

## 21. Exhaust emissions

| No.  | Description   | Index | Value         | Unit |
|------|---|-------|---------------|------|
| 1972 | Emissions data sheet:<br>Fuel-consumption optimized |       | EDS 4000 1240 | -    |

**[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**

**[X] 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%)**

**[A] Design value**  
Value required for the design of an external system (plant)

**[R] Guideline value**  
Typical average value as information – only suitable for design purposes to a limited extent

**[L] Limit value**  
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

## 22. Acoustics

| No. | Description   | Index | Value   | Unit  |
|-----|---|-------|---------|-------|
| 101 | Exhaust noise, unsilenced - CP<br>(free-field sound-pressure level Lp, 1m distance,<br>ISO 6798, +3dB(A) tolerance)                                     | R     | 113     | dB(A) |
| 201 | Exhaust noise, unsilenced - CP<br>(sound power level LW, ISO 6798, +3dB(A)<br>tolerance)  | R     | 126     | dB(A) |
| 102 | Exhaust noise, unsilenced - FSP<br>(free-field sound-pressure level Lp, 1m distance,<br>ISO 6798, +3dB(A) tolerance)                                    | R     | -       | dB(A) |
| 202 | Exhaust noise, unsilenced - FSP<br>(sound power level LW, ISO 6798, +3dB(A)<br>tolerance)   | R     | -       | dB(A) |
| 103 | Exhaust noise, unsilenced - CP<br>(free-field sound-pressure level Lp, 1m distance,<br>ISO 6798)<br>Spectrum No.  | R     | 735748e | -     |
| 203 | Exhaust noise,unsilenced - CP<br>(sound power level LW, ISO 6798)<br>Spectrum No.   | R     | N       | -     |
| 104 | Exhaust noise, unsilenced - FSP<br>(free-field sound-pressure level Lp, 1m distance,<br>ISO 6798) Spectrum No.  | R     | -       | -     |
| 204 | Exhaust noise,unsilenced - FSP<br>(sound power level LW, ISO 6798)<br>Spectrum No.  | R     | -       | -     |
| 109 | Engine surface noise with attenuated<br>intake noise (filter) - CP<br>(free-field sound-pressure level Lp, 1m distance,<br>ISO 6798, +2dB(A) tolerance) | R     | 104     | dB(A) |
| 209 | Engine surface noise with attenuated<br>intake noise (filter) - CP<br>(sound power level LW, ISO 6798, +2dB(A)<br>tolerance)                            | R     | 123     | dB(A) |

**[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

**[X]** Applicable  
The module is valid for this product type

**[ ]** Non-applicable  
The module is not valid for this product type

**[N]** Value not named  
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**[A]** Design value  
Value required for the design of an external system  
(plant)

**[R]** Guideline value  
Typical average value as information – only suitable  
for design purposes to a limited extent

**[L]** Limit value  
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upper limit/maximum value that may not be  
exceeded. Not suitable for design purposes



|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

|     |   |   |         |       |
|-----|---|---|---------|-------|
| 110 | Engine surface noise with attenuated intake noise (filter) - FSP (free-field sound-pressure level Lp, 1m distance, ISO 6798, +2dB(A) tolerance) | R | -       | dB(A) |
| 210 | Engine surface noise with attenuated intake noise (filter) - FSP (sound power level LW, ISO 6798, +2dB(A) tolerance)                            | R | -       | dB(A) |
| 111 | Engine surface noise with attenuated intake noise (filter) - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798) Spectrum No.        | R | 735747e | -     |
| 211 | Engine surface noise with attenuated intake noise (filter) - CP (sound power level LW, ISO 6798) Spectrum No.                                   | R | N       | -     |
| 112 | Engine surface noise with attenuated intake noise (filter) - FSP (free-field sound-pressure level Lp, 1m distance, ISO 6798) Spectrum No.       | R | -       | -     |
| 212 | Engine surface noise with attenuated intake noise (filter) - FSP (sound power level LW, ISO 6798) Spectrum No.                                  | R | -       | -     |
| 132 | Engine surface noise, without intake noise - FSP (free-field sound-pressure level Lp, 1m distance, ISO 6798, +2dB(A) tolerance)                 | R | -       | dB(A) |
| 232 | Engine surface noise, without intake noise - FSP (sound power level LW, ISO 6798, +2dB(A) tolerance)  | R | -       | dB(A) |
| 134 | Engine surface noise, without intake noise - FSP (free-field sound-pressure level Lp, 1m distance, ISO 6798) Spectrum No.                       | R | -       | -     |
| 234 | Engine surface noise, without intake noise - FSP (sound power level LW, ISO 6798) Spectrum No.  | R | -       | -     |
| 118 | Intake noise, unsilenced - FSP (free-field sound-pressure level Lp, 1m distance, ISO 6798)  | R | -       | dB(A) |

**[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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**[ ]** Non-applicable  
The module is not valid for this product type  
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|                          |                |                             |      |
|--------------------------|----------------|-----------------------------|------|
| <b>Name</b>              | 20V4000G63F    | <b>Speed [rpm]</b>          | 1500 |
| <b>Application Group</b> | 3B             | <b>Nominal power [kW]</b>   | 2420 |
| <b>Dataset</b>           | Ref. 25°C/55°C | <b>Nominal power [bhp]</b>  | 3245 |
|                          |                | <b>Nominal power [kVA]</b>  | -    |
|                          |                | <b>Nominal power [kWeI]</b> | -    |
|                          |                | <b>Frequency [Hz]</b>       | 50   |

**Exhaust Regulations** Fuel-consumption optimized;

|     |   |   |         |       |
|-----|---|---|---------|-------|
| 218 | Intake noise, unsilenced - FSP<br>(sound power level LW, ISO 6798)  | R | -       | dB(A) |
| 120 | Intake noise, unsilenced - FSP<br>(free-field sound-pressure level Lp, 1m distance,<br>ISO 6798)<br>Spectrum No.                  | R | -       | -     |
| 220 | Intake noise, unsilenced - FSP<br>(sound power level LW, ISO 6798)<br>Spectrum No.  | R | -       | -     |
| 125 | Structure borne noise at engine mounting brackets<br>in vertical direction above resilient engine mounts -<br>CP<br>Spectrum No.  | R | 735749e | -     |
| 126 | Structure borne noise at engine mounting brackets<br>in vertical direction above resilient engine mounts -<br>FSP<br>Spectrum No. | R | -       | -     |
| 128 | Structure born noise, vertically below the resilient<br>engine<br>mounts - FSP<br>Spectrum No.                                    | R | -       | -     |

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