

ITW GSE

140CU20 & 180CU20 DIESEL GPU

EPA Tier 3 / CARB Tier 3
EU stage III A
Low emissions compliant



CLEAN, RELIABLE POWER & EFFICIENT DESIGN

The CU20-series offers an innovative cooling system, designed to operate within the engine installation requirements to meet all engine emission standards, and a digital “SENTRY” control system providing a comprehensive approach to GPU control, trouble shooting and service tracking. The low profile design, and 5th wheel steering, provides superior visibility and maneuverability in today’s congested ramp areas.

The ITW GSE GPU features the Cummins electronic diesel engine and the ITW GSE designed and manufactured dual bearing generator. Integrating customer influenced design, innovative technology, and ITW GSE’s years of engineering expertise maximizes the GPU performance and maintains the traditional ITW GSE standard of durability and reliability.

PERFORMANCE FEATURES

- Large stainless steel fuel tank with 10 hour run time
- Low fuel warning and shutdown
- Delayed stop for turbo protection
- Emergency stop shutdown
- ITW GSE dual bearing generator offers long life and reliability
- Numbered, color-coded wiring
- Towbar activated braking system
- Superior frequency & voltage regulation
- Lift-off doors and removable panels provide complete access to engine, generator and control compartments
- Lost neutral detection
- Dual 400Hz outputs for wide body aircraft support

It’s all about connections



SPECIFICATIONS

ITW GSE 140CU20 & 180CU20 Diesel GPU

Engine

- Cummins QSB6.7 (140 kVA) QSL9 (180 kVA) diesel engine operating at 2000 RPM
- Turbocharged 4-stroke, inline 6 cylinder with common rail fuel system
- Full application approval by Cummins Engine
- 12 VDC battery system
- Electronic governor system (via the engine's ECM)
- Intake manifold pre-heater for cold weather starting
- HP: 240 (140 kVA), 325 (180 kVA)

Engine Protection

- Low oil pressure shutdown
- High coolant temperature shutdown
- Low coolant level shutdown
- Intake air restriction indication

Environmental

- Operating Temperature: -31° C to + 52° C (-25° F to +125° F)
- Relative humidity 10-95% non-condensing
- No altitude derating required up to 10,000 feet, when running in normal operating range

Performance

- Continuous rating: 140 & 180 kVA 3 phase, 4 wire, 115/200V
- Meets or exceeds both SAE ARP5015A and MIL-STD-704F electrical power quality requirements
- Up to 5% line drop compensation assures proper voltage at aircraft plug

Instrumentation

Engine Operation

- Meters: coolant temperature, battery voltmeter, hour meter, oil pressure, fuel level
- Buttons: engine start, engine stop, panel lights, pre-heater

Generator Output

- Meters: frequency, ammeter, voltmeter
 - Buttons: phase select, output contactor control, fault reset
- #### Fault Code Display
- Engine Faults: air cleaner restriction, high coolant temp., low oil pressure, low fuel warning, low coolant
 - Generator Faults: over & under frequency, overload, over & under voltage

Electrical Characteristics

- Voltage Regulation: $\pm 1\%$ no load to full load
- Voltage adjustment is ± 15 volts
- Maximum line drop compensation: 5%
- Individual Harmonic Distortion: $<2\%$ of the fundamental (RMS) voltage
- Total Harmonic Distortion: $<3\%$ of the fundamental (RMS) voltage
- Voltage & Frequency Transients meet MIL-STD-704F and SAE ARP5015A
- Phase voltage balance not to exceed 1% on a 3-phase balanced load and does not exceed 4% with 33% unbalanced load
- Frequency Regulation: ± 2 Hz steady rate

Generator Protection

- Per MIL-STD-704F and SAE ARP5015A
- Over voltage: disconnects output between 124 to 126 volts in 1 second and disconnects output at 180 volts L-N in 50 ms
- Under-voltage: disconnects output < 100 volts L-N in 7 secs
- Over-frequency: disconnects output > 420 Hz in 5 secs
- Under-frequency: disconnects output < 380 Hz in 7 secs

Generator Overload

- $>125\%$ rated load for 5 minutes
- $>150\%$ for 30 seconds
- $>200\%$ for 10 seconds
- $>210\%$ for 2 seconds
- Individual outputs: 325 amps, 5 minutes

Options

- Unit operating light
- Low fuel beacon
- Clearance lights
- Block heater
- Battery blanket
- CE Marking / Certification
- Cable tray rollers
- AC output cables - 2 each (specify length)
- 28.5 VDC Transformer-Rectifier (600 A continuous, 2000 A peak)
- DC output cable (with 28.5 VDC option - specify length)
- Tie down rings
- Forklift pockets
- Fixed mounting
- Wheel chocks

	140 kVA - 140CU20	180 kVA - 180CU20
Length	159.5" (4051 mm)	159.5" (4051 mm)
Height	77" (1956 mm)	77" (1955.8 mm)
Width	79" (2007 mm)	79" (2007 mm)
Weight	6,106 lbs. (2,770 kg)*	7,056 lbs. (3,201 kg)*

* 28VDC TR adds 300 lbs (136 kg)

** Length based on tow bar up; L x W x H tolerance +/- 3"

*** Weight based on fuel empty, no 28.5VDC and tolerance with and w/o fuel is 150 lbs and depends on configuration.