

Specification

Air Start Unit MSU 200 T (Trailer)



Construction

Gas turbine driven stand alone unit with integrated air inlet, exhaust-, fuel- and electrical system, including hose storage, mounted on a 2-axle-trailer.

Technical Data

- **Nominal rating at 15°C (59°F), sea level (no installation losses)**

Bleed air output:	1.54 kg/s	(204 ppm)
Delivery pressure:	3.86 bar abs	(56 psia)
Bleed air temperature:	215 °C	(420°F)
- **Environmental conditions**

Temperature:	-32°C *	+52 °C
Altitude:	0 m	2500 m
Humidity:	0 %	100 %

* Operation at -40°C is possible with additional equipment
- **Weight including 400 l fuel**

	1,800 kg	(3,970 lb).
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- **Overall dimensions**

Length:	3,845 mm	(151.4 inch)
Width:	1,750 mm	(69.0 inch)
Height:	2,190 mm	(86.22 inch)
- **Fuels**

Jet fuel:	Mil-T-5624 Grade JP-4 or JP-5
Diesel:	D 1655, Type A, A1 or B and DF 1, DF 2
- **Oils**

in accordance to MIL-PRF-23699F or commercial equivalents.

Specification

Air Start Unit MSU 200 T (Trailer)

Standard Features	
Hose storage	right side
Hose length	40 ft (50ft optional)
Aircraft coupling	Kaiser M7950 – 93 S3
Air inlet	Particle separator with scavenge system
Noise level (at full load)	85±2 dB (A) in 7 m (23 ft) at full load
Fuel system	400 l (105 gal) for 2 hours full load
Battery and generator system	24 V / 64 Ah / 55 A
Control system	- Full Authority Digital Engine Control (FADEC) - Built In Test Equipment (BITE)
Operator`s panel	- Integrated in noise attenuated enclosure - Simple utilisation of the panel through plain text display and low number of switches
Operating modes	- Main Engine Start (MES) Mode - Environmental Control System (ECS) Mode - Automatic mode selection (MES/ECS)
Safety	- Overspeed shut down - Exhaust gas overtemperature control - High oil temperature shut down (override during MES) - Low oil pressure shut down (override during MES) - Low fuel warning - Fuel filter warning - Fuel pressure warning
Panel indication	- Fuel level - Battery voltage - Start counter - Hour meter - Bleed pressure - Bleed temperature - Exhaust Gas Temperature (EGT) - Oil temperature - Oil pressure - Speed - Ambient temperature - Starter temperature - BITE message
Containerized enclosure	- Noise attenuated - Basic frame with crane lift device
Trailer	- Two axles with torsion bar suspension - Turntable steering
Colour	- Arctic white - Two layers gloss paint
Documents	- System manuals - Illustrated parts catalogues

Specification

Air Start Unit MSU 200 V (Van)



Construction

Gas turbine driven stand alone unit with integrated air inlet, exhaust-, fuel- and electrical system, including hose storage, mounted on a Mercedes Benz 308 CDI.

Technical Data

- **Nominal rating at 15°C (59°F), sea level (no installation losses)**

Bleed air output:	1.54 kg/s	(204 ppm)
Delivery pressure:	3.86 bar abs	(56 psia)
Bleed air temperature:	215 °C	(420°F)
- **Environmental conditions**

Temperature:	-32°C *	+52 °C
Altitude:	0 m	2500 m
Humidity:	0 %	100 %

* Operation at -40°C is possible with additional equipment
- **Weight including 400 l fuel**

	3,250 kg	(7,150 lb).
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- **Overall dimensions with MB 308**

Length:	5,119 mm	(201,5 inch)
Width:	1,990 mm	(78.3 inch)
Height:	2,221 mm	(87.4 inch)
- **Fuels**

Jet fuel:	Mil-T-5624 Grade JP-4 or JP-5
Diesel:	D 1655, Type A, A1 or B and DF 1, DF 2
- **Oils**

in accordance to MIL-PRF-23699F or commercial equivalents

Specification

Air Start Unit MSU 200 V (Van)

Standard Features	
Hose storage	left side
Hose length	40 ft (50ft optional)
Aircraft coupling	Kaiser M7950 – 93 S3
Air inlet	Particle separator with scavenge system
Noise level (at full load)	85±2 dB (A) in 7 m (23 ft) at full load
Fuel system	400 l (105 gal) for 2 hour full load
Battery and generator system	24 V / 64 Ah / 55 A
Control system	- Full Authority Digital Engine Control (FADEC) - Built In Test Equipment (BITE)
Operator`s panel	- integrated in driver`s cabin - Simple utilisation of the panel through plain text display and low number of switches
Operating modes	- Main Engine Start (MES) Mode - Environmental Control System (ECS) Mode - Automatic mode selection (MES/ECS)
Safety	- Overspeed shut down - Exhaust gas overtemperature control - High oil temperature shut down (override during MES) - Low oil pressure shut down (override during MES) - Low fuel warning - Fuel filter warning - Fuel pressure warning
Panel indication	- Fuel level - Battery voltage - Start counter - Hour meter - Bleed pressure - Bleed temperature - Exhaust Gas Temperature (EGT) - Oil temperature - Oil pressure - Speed - Ambient temperature - Starter temperature - BITE message
Containerized enclosure	- Noise attenuated - Basic frame with crane lift device
Van (Truck)	- Mercedes Benz 308 CDI (3.2 t)
Colour	- Arctic white - Two layers gloss paint
Documents	- System manuals - Illustrated parts catalogues

Specification

Air Start Unit MSU 400 V (Van)



Construction

Twin pack consisting of two MSU 200 modules that be operated individually or simultaneously. Gas turbine driven stand alone unit with integrated air inlet, exhaust-, fuel- and electrical system incl. hose storage mounted on a Mercedes Benz 408 CDI.

Technical Data

- **Nominal rating at 15°C (59°F), sea level (no installation losses)**

Bleed air output:	3.08 kg/s	(408 ppm)
Delivery pressure:	3.86 bar abs	(56 psia)
Bleed air temperature:	215 °C	(420°F)
- **Environmental conditions**

Temperature:	-32°C*	+52 °C
Altitude:	0 m	2500 m
Humidity:	0 %	100 %

* Operation at -40°C is possible with additional equipment
- **Weight including 800 l fuel**

	5,100 kg	(10,910 lb)
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- **Overall dimensions with MB 408**

Length:	5,720 mm	(225.2 inch)
Width:	2,500 mm	(98.4 inch)
Height:	2,400 mm	(96.5 inch)
- **Fuels**

Jet fuel:	Mil-T-5624 Grade JP-4 or JP-5
Diesel:	D 1655, Type A, A1 or B and DF 1, DF 2
- **Oils**

	in accordance to MIL-PRF-23699F or commercial equivalents.
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Specification

Air Start Unit MSU 400 V (Van)

Standard Features	
Hose storage	both sides
Hose length	50 ft
Aircraft coupling	Kaiser M7950 – 93 S3
Air inlet	Particle separator with scavenge system
Noise level (at full load)	85±2 dB (A) in 7 m (23 ft) for single unit at full load 90±2 dB (A) in 7 m (23 ft) for twin unit at full load
Fuel system	800 l (210 gal) for 2 hours full load
Battery and generator system	24 V / 64 Ah / 55 A
Control system	- Full Authority Digital Engine Control (FADEC) - Built In Test Equipment (BITE)
Operator`s panel	- Twin panel, integrated in driver`s cabin - Simple utilisation of the panel through plain text display and low number of switches
Operating modes	- Main Engine Start (MES) Mode - Environmental Control System (ECS) Mode - Automatic mode selection (MES/ECS)
Safety	- Overspeed shut down - Exhaust gas overtemperature control - High oil temperature shut down (override during MES) - Low oil pressure shut down (override during MES) - Low fuel warning - Fuel filter warning - Fuel pressure warning
Panel indication	- Fuel level - Battery voltage - Start counter - Hour meter - Bleed pressure - Bleed temperature - Exhaust Gas Temperature (EGT) - Oil temperature - Oil pressure - Speed - Ambient temperature - Starter temperature - BITE message
Containerized enclosure	- Noise attenuated - Basic frame with crane lift device
Van (Truck)	- Mercedes Benz 408 CDI (4.6 t)
Colour	- Arctic white - Two layers gloss paint
Documents	- System manuals - Illustrated parts catalogues