

[INCH-POUND]
A-A-59611
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SUPERSEDING
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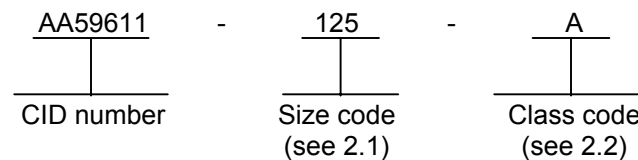
COMMERCIAL ITEM DESCRIPTION

COMPRESSOR, AIR, DIESEL-ENGINE-DRIVEN, PORTABLE, WHEEL-MOUNTED

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

1. **SCOPE.** This CID covers the general requirements for commercial, portable, wheel-mounted, diesel-engine-driven air compressors of rotary screw design. Compressors covered by this CID are intended for commercial/industrial applications.

2. **CLASSIFICATION/PART OR IDENTIFICATION NUMBER (PIN).** This CID uses a classification system which is included in the Part Identification Number (PIN) as shown in the following example (see 7.1).



2.1 **Size.** The compressors are of the following sizes, as specified below (see 7.1 and 7.4):

Size 125	-	125 cfm at 100 psig
Size 250	-	250 cfm at 100 psig
Size 365	-	365 cfm at 100 psig
Size 600	-	600 cfm at 100 psig
Size 750	-	750 cfm at 100 psig

2.2 **Class.** The compressors are of the following classes, as specified below (see 7.1 and 7.4):

Class A	-	Wheeled undercarriage with fixed tongue
Class B	-	Wheeled undercarriage with automotive steering and hinged towbar

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AMSC N/A
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3. SALIENT CHARACTERISTICS.

3.1 Dimensions. The compressor dimensions shall be as specified in 3.13.

3.2 Performance. The compressor shall be capable of compressing and delivering not less than the normal volume of free air ($\pm 4\%$) applicable to the compressor size specified at a receiver pressure of 100 psig under the following atmospheric conditions:

- a. 14.696 psia (sea level)
- b. 60°F
- c. 5% humidity

Under the conditions specified, the air discharge temperature shall not exceed 250°F. The compressor shall be capable of operating satisfactorily when tilted 15° longitudinally or transversely from a level position.

3.2.1 Regulation. Regulation of compressor output shall be accomplished by a stepless, pneumatic control or electronic system. The system shall be adjustable within limits established by the manufacturer and shall be set to automatically maintain a nominal discharge pressure of 100 psig when the compressor is operating at full rated capacity. The system shall also provide for automatic regulation of compressor output from zero to 100 % of rated capacity. Primary regulation shall be effected by the proportional and automatic reduction of engine speed within the range of full-rated-capacity speed to a speed not less than the engine manufacturer's recommended idle speed. Supplemental control may be accomplished by the proportional and automatic actuation of a compressor inlet unloader valve.

3.2.2 Environmental conditions. The compressor shall be capable of starting and operating under the following atmospheric conditions:

- a. -20°F to +120°F at sea level (29.92 inches of mercury).
- b. -20°F to +102°F at an elevation of 5,000 feet (24.98 inches of mercury).

3.2.3 Safety shutdown. The compressor shall be equipped with a safety shutdown system designed to automatically stop the engine under any of the following conditions:

- a. Compressor discharge air temperature in excess of safe limit established by the manufacturer but in no case exceeding 250°F.
- b. Engine coolant temperature in excess of manufacturer's established safe limit.
- c. Engine lubricating oil pressure below engine manufacturer's required safe limit.

3.3.4 Sound level. The exterior sound level produced by the compressor shall not exceed 76dB in accordance with the EPA standard, 40 CFR PT204.

3.4 Engine. The compressor shall be driven by a diesel engine that shall properly and adequately operate the air end and all connected auxiliaries at the speed required to develop rated compressor capacity under the atmospheric conditions specified in 3.2. The engine shall be equipped with an electrical starting system rated either at 12V or 24V in accordance with the standard voltage for the engine being furnished. The diesel engine shall be ready for full-load operation within 15 minutes under

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any of the environmental conditions specified in 3.2.2. The fuel tank shall be sized for continuous operation at rated compressor output of at least 8 hours. The diesel engine shall start in any temperature above -20°F. Cold weather starting aids may be used.

3.4.1 Instruments and controls. All instruments shall be mounted on a panel or panels located near the operating controls and shall be visible to the operator. The instrument panel(s) shall be furnished with illumination for night operation. The following engine instruments and controls, as a minimum, shall be furnished:

- a. Control, starter
- b. Control, shutoff
- c. Control, manual engine warm-up
- d. Gage, lubricating oil pressure
- e. Gage, engine coolant temperature
- f. Ammeter or battery charging indicator
- g. Safety controls (see 3.2.3)
- h. Priming aid controls
- i. Time totalizing meter (Registers a minimum of 9,999.9 hours of engine operating time)
- j. Tachometer
- k. Fuel gage
- l. Air receiver pressure
- m. Air discharge temperature

3.4.2 Emissions. The diesel engines shall be certified to meet EPA non-road emission standards.

3.5 Storage battery(s). Unless otherwise specified (see 7.4), the storage battery shall be a fully charged, maintenance free battery. When specified (see 7.4), dry charged battery(s) shall be furnished without electrolyte, with sealed caps to prevent the intrusion of atmospheric moisture. A charging mechanism shall be included to keep storage batteries charged.

3.6 Air cleaners. Air cleaners shall be of the two-stage dry-type design wherein the first stage provides centrifugal separation and the second stage provides impingement filtration with use of a suitable filter medium. When handling dust concentration of 0.025 gm/ft³, the air cleaners shall be capable of operating not less than 8 hours without exceeding an air restriction which could adversely affect the rated output of the compressor. When located outside the compressor housing, the air intake shall be fitted with a rain cap end screen. Connections of components associated with the air cleaner installation shall be water and gas tight. The cleaner shall have an indicator that shows when the cartridge is ready for replacement and shall be visible to the operator when the instrument panel door is open.

3.7 Radiators/heat exchangers. Radiators/heat exchangers shall be configured so that they may be cleaned from both sides with compressed air or water spray without disconnecting the associated hoses and piping. Time required for cleaning of radiators/head exchangers shall be less than 1 hour.

3.8 Air end. The air end shall be of the rotary screw design.

3.9 Receiver. The air receiver shall be designed, constructed, and marked for a pressure of not less than 150 psig. The receiver shall be equipped with a drain valve or plug and shall be protected against excessive pressure by the manufacturer's standard relief valve. The receiver discharge system shall include a pressure gage, a manual blowdown valve and an automatic blowdown valve or sonic orifice. The system shall be designed to blow the complete air system down to atmospheric pressure when the engine stops. When a pressure in excess of 10 psig must be maintained in the receiver to ensure

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adequate circulation of compressor oil or elimination of carry-over, the air discharge piping shall include a minimum pressure valve or device set to maintain a predetermined minimum back pressure on the compressor oil system.

3.10 Manifold and service outlets. The air receiver discharge line shall be equipped with an air service manifold having individually controlled service outlets with standard universal type, quick disconnect, pneumatic hose couplings. The air service manifolds of each size of compressor shall be fitted with not less than the number and sizes of outlets specified in table I. All 0.75 inch outlets shall be equipped with the manufacturer's standard lever-type air cocks. Quick disconnect couplings with male or female fitting ends, shall be provided. The compressor shall be equipped with a check valve installed in the air line between the receiver and the manifold outlets to prevent reverse flow of air into the receiver during blowdown. When specified (see 7.4), a manual shutoff valve shall be installed in the air line between the receiver and the manifold.

TABLE I. Service outlets.

Compressor size (cfm)	Number of 0.75 inch outlets	Number of 1.50 inch outlets with gate, globe or plug valve
125	2	—
250	4	1
365	4	1
600	4	2
750	4	2

3.11 Housing. A suitable housing shall be provided to enclose the engine, receiver, and instrument panel(s). Housing and panels shall be no less than 0.0568 inch thick. Supporting members and braces shall be furnished as required. The housing shall be sufficiently rigid to support a 300 lb load applied to any single one square foot area on the top of the housing. The housing shall include hinged access openings to the fuel cap, engine, air end, and instrument panel(s). Access panel(s) shall be equipped with devices to hold the panel(s) in an open position and clamps or latches to retain the panel(s) in the closed position. Access panel(s) to the fuel cap and instrument panels shall be pad-lockable. Fenders shall be able to withstand a load of at least 175 lbs without permanent deformation.

3.12 Mounting. The complete compressor unit shall be securely mounted on a wheel mounted undercarriage equipped with parking brakes. Compressors shall be equipped with a retractable third wheel or foot pad and drawbar lunette-coupler. All compressors shall be equipped with suspension components with a rated capacity at least equal to the loads imposed on each member, measured at the ground, with compressor loaded to capacity. When rating suspension capacity, unsprung weight shall be deducted. Two safety chains shall be furnished on each compressor. Each compressor shall be designed for towing over rough terrain at speeds up to 8 mph, graded gravel roads at speeds up to 20 mph, and paved surfaces at speeds up to 50 mph. The rough terrain shall consist of rock-strewn clay or sod with bumps and depressions averaging at least two inches above and below normal surface.

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3.12.1 Class A. The complete compressor unit shall be securely mounted on a wheel mounted undercarriage with a fixed towing tongue. When specified (see 7.4), the undercarriage shall be equipped with a towing tongue having minimum adjustable hitch height of ± 3 inches from centerline of the tongue for size 125, and -3, +11 inches from centerline for sizes 250 and greater. Size 125 shall be of the two-wheel single axle type. Sizes 250 and 365 shall be two-wheel type with single axle or four-wheel type with tandem axles. Sizes 600 shall be of the four-wheel type with tandem axles. Size 750 shall be of the four-wheel or six-wheel type with tandem axles. The size 250 tandem and larger undercarriage shall be equipped with surge-type brakes and shall incorporate a positive mechanical lockout to prevent brakes from locking when the compressor is pushed rearward by the towing vehicle.

3.12.2 Class B. The complete compressor unit shall be securely mounted on a wheel mounted undercarriage with automotive type steering and hinged towbar. Sizes 250, 365, 600 and 750 shall be of the four-wheel type.

3.12.3 Tires and wheels. Tires shall be of a rated capacity at least equal to the load imposed on each tire, measured at each wheel at the ground with compressor loaded to rated gross vehicle weight. Tires shall not drag on fenders when making turns.

3.12.4 Parking brake. A lever type handbrake, using disc or drum brakes, shall be provided. The parking brake shall be capable of holding the compressor in a stationary position on a 15% grade.

3.13 Air transportability. The compressor dimensions shall not exceed 105 inches in width and 102 inches in height in a reduced configuration, to conform to air transportability requirements. In addition, the weight of the compressor shall not exceed 20,000 lbs per tandem axle with the fuel tank 3/4 full in a reduced configuration. Achieving a reduced configuration shall be limited to the removal or relocation of mechanically attached (non-welded) components and shall not affect the transportability of the item, including the ability to negotiate, without interference, a 15 foot ramp at an angle of 17° from the horizontal. Removal and reinstallation or reinstallation time of components required to achieve the reduced configuration shall not exceed 4 man hours. When delivered to the Government the compressor shall not be in the reduced configuration.

3.14 Lubrication. Lubricating points shall be easily visible and accessible. Parts requiring lubrication shall be properly lubricated before delivery. The equipment shall be permanently marked to indicate the temperature range and grades of lubricants used.

3.15 Cleaning, treatment, and painting. Surfaces normally painted shall be cleaned, treated, and painted in good commercial practice. The total dry film thickness of the paint shall be no less than 0.0025 inch over the entire surface. The paint shall be free from runs, sags, orange peel, or other defects. The color of the exterior finish coat shall be as specified (see 7.4). The end item, allied equipment, and attachments shall be of the same color.

3.16 Lifting and tiedown attachments. The compressor shall be equipped with a lifting eye for handling by a crane or a hoist. The eye shall be located at the top of the machine at the normal center of balance. The lifting eye shall be capable of supporting 2-1/2 times the weight of the machine and shall be mounted in such a manner that the machine and its accessories retain alignment during lifting operations. The compressor shall be equipped with tiedown attachments. Tiedown attachments shall be identified by suitable marking. Tiedown marking shall clearly indicate that the attachments are intended for the tiedown of the compressor on the carrier when shipped.

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3.17 Instruction plates. The compressor shall be provided with permanently attached instructions describing special or important procedures for operating and servicing equipment or warning of hazardous procedures.

3.18 Identification plate. An identification plate shall be provided and shall contain all necessary data. The applicable nomenclature contained in the contract item description shall be placed at the top. Nonferrous fasteners shall be used to affix the plates to the compressors.

3.19 Workmanship. Compressors shall be free from sharp edges, burns, or any defect that might affect the quality or the intended use.

3.20 Marking. Compressors supplied to this CID shall be marked with the manufacturer's (MFR's) standard commercial PIN.

4. **REGULATORY REQUIREMENTS**. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

5. **PRODUCT CONFORMANCE PROVISIONS.**

5.1 Product conformance. The products provided shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

6. **PACKAGING**. Preservation, packing, and marking shall be as specified in the contract or order.

7. **NOTES.**

7.1 PIN. The PIN should be used for Government purposes to buy commercial products to this CID. See section 2 for PIN format example.

7.2 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these compressors to DSCC under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

7.3 Source of documents.

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR, para. 23.403 - Federal Acquisition Regulation

(Application for copies should be addressed to the U.S. Government Printing Office, North Capitol and H streets NW, Washington, DC 20402.)

ENVIRONMENTAL PROTECTION AGENCY (EPA)

40 CFR PT204 - Noise Emission Standards for Construction Equipment

(Application for copies should be addressed to the U.S. Government Printing Office, North Capitol and H Streets NW, Washington, DC 20402.)

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(Industry association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

7.4 Ordering data. The contract or order should specify the following:

- a. CID document number, revision, and CID PIN.
- b. Size and class of the unit required (see 2.1 and 2.2).
- c. When a dry charged battery shall be furnished (see 3.5).
- d. When a manual shut-off valve is required (see 3.10).
- e. When the undercarriage shall be equipped with a rigid towing tongue having adjustable hitch heights, and the minimum adjustable hitch heights required (see 3.12.1).
- f. Type and size of tire, if different (see 3.12.3).
- g. Color of exterior finish coat required (see 3.15).
- h. Packaging requirements.

7.5 Commercial products. As part of the market analysis and research effort, this CID was coordinated with the following manufacturers of commercial products. At the time of CID preparation and coordination, these manufacturers were known to have commercial products that would meet the requirements of this CID. (NOTE: This information should not be considered as a list of approved manufacturers or be used to restrict procurement to only the manufacturers shown.)

<u>MFR's CAGE</u>	<u>MFR's name and address</u>
33968	Ingersoll-Rand 501 Sanford Avenue Mocksville, NC 27028-2919 Phone Number: 1-800-526-1090 Fax Number: 1-973-887-4658
31654	Sullair Corporation 3700 East Michigan Boulevard Michigan City, IN 46360-6500 Phone Number: 1-219-879-5451 Fax Number: 1-219-874-1252

7.6 Part number (P/N) supersession data. These CID part numbers supersede the following Federal Specification part numbers as shown. This information is being provided to assist in reducing proliferation in the Government inventory system (see table II).

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TABLE II. P/N data.

Part number (see section 2)	Superseded part number	MFR's CAGE	MFR's P/N <u>1/</u>
AA59611-125-A	XXC2812-01	33968	
		31654	
AA59611-125-B	XXC2812-06	33968	
		31654	125Q
AA59611-250-A	XXC2812-02	33968	
		31654	
AA59611-250-B	XXC2812-07	33968	
		31654	250Q
AA59611-365-A	XXC2812-03	33968	
		31654	
AA59611-365-B	XXC2812-08	33968	
		31654	
AA59611-600-A	XXC2812-04	33968	
		31654	
AA59611-600-B	XXC2812-09	33968	
		31654	
AA59611-750-A	XXC2812-05	33968	
		31654	
AA59611-750-B	XXC2812-10	33968	
		31654	

1/ The manufacturer's P/N shall not be used for procurement to the requirements of this CID. At the time of preparation of this CID, the aforementioned commercial products were reviewed and could be replaced by the CID PIN shown. For actual part marking requirements see 3.20.

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MILITARY INTERESTS:

Custodians:

Air Force - 99

Army - AT

Navy - SH

DLA - CC

Review activities:

Air Force – 71, 84

Navy - SA

CIVIL AGENCY COORDINATING ACTIVITY:

GSA/FSS

Preparing activity:

DLA-CC

(Project 4310-0035)