

[INCH POUND]  
A-A-59618  
3 September 2002  
SUPERSEDING  
XX-C-2866  
5 January 2002  
MIL-C-29222  
31 July 1989

## COMMERCIAL ITEM DESCRIPTION

### CLEANER, PRESSURE, HOT-WATER, SKID-MOUNTED

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

1. **SCOPE.** This CID covers the general requirements for skid-mounted, hot water pressure cleaners. Pressure cleaners covered by this CID are intended for commercial/industrial applications.
2. **CLASSIFICATION.** This CID uses a classification system that is included in the Part Identification Number (PIN) as shown in the following example (see 7.1).

<u>AA59618</u>	<u>-X</u>	<u>X</u>	<u>X</u>	<u>X</u>
CID number	C = Solution container T = Solution tank	0 = No spare nozzles 1 = Spare nozzles	0 = No lifting and tie down attachments 1 = Lifting and tie down attachments	0 = No fungus resistance treatment 1 = Fungus resistance treatment

Example PIN: AA59618-T100 is a cleaner with a solution tank and spare nozzles.

### 3. SALIENT CHARACTERISTICS.

3.1 Interface and physical dimensions. Pressure cleaners supplied to this CID shall be as specified herein.

3.2 Materials. All equipment, material, and articles incorporated in the work covered by this specification are to be new and fabricated using materials produced from recovered materials to the maximum extent possible without jeopardizing the intended use. (See Section 4.) Unless otherwise specified, none of the above shall be interpreted to mean that the use of used or rebuilt products is allowed under this specification.

3.3 Performance. The cleaner shall be capable of continuous delivery of not less than 200 gph (760 Lph) of hot water at 180°F (83°C) at a minimum pressure of 1000 psig (6.90 MPa). The cleaner shall operate without excessive or undesirable vibration or pulsations. Valves shall close without causing water hammer. Cleaners shall not require frequent adjustment, suffer flame failure or erratic combustion, fail to maintain the specified operational pressures, or otherwise exhibit shutdowns or repeated malfunctions.

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be sent to: Defense Supply Center, Columbus, ATTN: DSCC-VAI, Post Office Box 3990, Columbus OH 43216-5000, or telephone (614) 692-0538, or facsimile (FAX) (614) 692-6939.
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FSC 4940

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

3.4 Design. The cleaner shall be UL 1776 certified and shall meet the requirements specified herein. The cleaner shall be designed and constructed to withstand the normal shocks and stresses incident to transport by truck, air, sea, and rail. The design shall permit accessibility for maintenance and service of cleaners in the field. The cleaner shall be designed and equipped with a purge air connection to permit complete drainage of the water from the heating coil, pump(s) and piping. Water and solution container shall be so designed and located as to prevent spillage or drainage on electrical equipment.

3.5 Safety. All mechanical or electrical parts that by their design or location may become a hazard to operating or maintenance personnel shall be enclosed or properly guarded. The cleaner noise level shall not exceed the value for an 8 h exposure as defined in 29 CFR 1910.95.

3.5.1 Controls. The cleaner shall be equipped with mechanical and electrical controls and devices necessary for safe and efficient operation. As a minimum, such controls shall include the following:

- a. Temperature control device to shut down the burner in the event the temperature of the heating coil exceeds a predetermined safe limit.
- b. Pressure control device to maintain the rated pressure in the heating coil and delivery hose.
- c. Automatic fuel shutdown device to shut down fuel flow in the event of ignition interruption.
- d. A safety relief valve suitable for relieving overpressure before reaching a predetermined safe limit.

3.6 Heater section. The heater section shall consist essentially of a heating coil, a combustion chamber, and an oil burner.

3.6.1 Heating coil. The heating coil shall be continuous coiled seamless or welded carbon steel or alloy steel pipe or tubing having sufficient ductility for close coiling. The coil shall be capable of withstanding a hydrostatic test pressure of 2000 psi (13.8 MPa) for a period of at least 2 min without any leakage or rupture. The nominal diameter of the tubing shall be at least 0.50 in (12.7 mm). The cleaner shall be equipped with accessible connections, fittings, and valves, as required, to permit coil blow down for the removal of scale deposits and sludge. The coil shall be designed and installed to allow for unequal expansion and contraction and to facilitate removal for soot cleaning, repair, or replacement.

3.6.2 Combustion chamber. The combustion chamber shall be of a preformed castable refractory; of a preformed ceramic fiber refractory; of a double, concentrically coiled, tangent tube water wall; or of a tangent tube water wall with metal liner. Both the castable and ceramic fiber refractories shall be rated to withstand exposure of the hot face to temperatures up to 2500 °F (1370 °C).

3.6.3 Oil burner. The oil burner shall be of the high-pressure mechanical atomizing type or the low-pressure air atomizing type. The fuel system for mechanical atomizing burners shall include a positive displacement, electric motor driven fuel pump. Low-pressure burners shall include a fuel-metering device. Both type burners shall be equipped with high voltage electrode type spark ignition and a forced draft blower. The burner firing cycle shall be thermostatically controlled to prevent excessive heating coil temperatures at reduced flow rates. The cleaner shall be equipped with a fuel tank having a minimum capacity for 2 h continuous operation. The burner shall be capable of continuous operation at full rated capacity with a smoke density reading not to exceed ASTM D2156 Smoke Spot Number 2.

The burner shall be suitable for firing any of the following fuel:

- a. Fuel oil, grade No. 2.
- b. Diesel fuel, grades DF-1 and DF-2.
- c. Jet fuel, grade JP-8.

3.7 Water pump. The pump shall be a positive displacement, electric motor driven packed plunger type. Pump check valves, including disk or balls, springs, seats, and any other associated metallic parts, shall be resistant to the corrosive effects of the cleaning compound and coil descaling acid solutions. Pump bearings shall be of the sealed, permanently lubricated type or shall run in an oil bath.

3.7.1 Damping device. The pump or piping connected thereto shall be equipped with a damping device to absorb pressure pulsations caused by the reciprocating action of the pump.

3.7.2 Water tank. A water tank with a constant-level float valve shall be provided to act as a reservoir for the incoming water supply. The tank shall be fabricated of corrosion resistant metal or metal treated to resist corrosion or polyethylene. It shall be equipped with inlet piping consisting of a manual shutoff valve, and a standard threaded connection for a 0.75 in (19 mm) garden hose coupling. The inlet float valve shall be designed to operate against supply pressures up to 80 psi (0.55 MPa). The tank shall be equipped with an overflow pipe and an air gap or other means to prevent siphoning of the tank water back into the water supply line.

3.7.3 Hose. A 50 ft (15 mm) length of hose for feeding water to the water float tank shall be furnished. The hose shall be yarn reinforced, rubber construction. The hose shall be equipped with commercial brass fittings with male and female hose connections.

3.8 Cleaning solution system. The cleaning solution system shall be designed to introduce concentrated or mixed cleaning compound at the pump suction or at the coil outlet through a metering valve. The metering valve shall be manually adjustable from zero to 10 % by volume and located at the control panel. The cleaning compound supply to the system shall come from a solution container or from a solution tank as specified.

3.8.1 Solution container rack. When a solution container is required, the cleaner shall be provided with a rack to secure a 5-gal (19 L) liquid solution container.

3.8.2 Solution tank. The tank shall be fabricated from stainless steel or high-density polyethylene when a solution tank is required. The tank shall have a capacity of at least 10-gal (38 L). Means for determining the liquid level inside the tank shall be provided.

3.9 Spray delivery components. Each cleaner shall be furnished with a cleaning gun, a set of nozzles, and high-pressure hose. The cleaner shall be equipped with a hanger, rack, or other appurtenance for stowing the guns and hose in transit, and when not in use.

3.9.1 Cleaning gun. The cleaning gun shall be furnished as a single unit with interchangeable nozzles. The gun shall be equipped with an insulated or air-cooled, trigger shutoff, pistol grip handle. The wand shall be a tube at least 2 ft (0.61 m) in length. The handle shall be capable of withstanding a 2000 psi (13.8 MPa) hydrostatic test. The handle and wand with the delivery hose assembly attached shall be capable of withstanding being dropped twice from a height not less than 6 ft (1.8 m) to a concrete floor.

One drop shall have the handle impact the ground and one drop shall have the wand impact on the ground. Upon completion of the two drops, the handles and wand shall show no evidence of breaks and fractures. Permanent deformation of the handle and wand shall not be cause for rejection. The cleaner shall then be operated, and the handle and wand inspected for leaks. Leaks that cannot be corrected by tightening of threaded connections and failure to operate satisfactorily are unacceptable.

3.9.2 Nozzles. Three corrosion-resistant steel nozzles shall be furnished with each cleaner to provide 15°, 25°, and 40° spray patterns. When specified, spare spray nozzles shall be provided with the unit. The nozzles shall be equipped with quick disconnect couplings and shall not leak during cleaner operation. The nozzles shall be prominently marked to assist the cleaner operator in selecting a particular spray pattern.

3.9.3 Hose. The hose shall be suitable for hot water service with a pressure rating of not less than 2250 psi (15.51 MPa). Hose shall be nominally 0.375 in (9.5 mm) inside diameter with a length of at least 40 ft (12 m). The hose shall consist of a wire braid reinforced, natural or synthetic rubber, multi-ply inner carcass and a neoprene, or equivalent, outer cover that is heat-, oil-, and weather-resistant.

3.10 Electrical system. The electrical system shall operate from a 208-volt, 3-phase, 60-Hertz power source.

3.10.1 Motor. The motor shall be designed and rated in accordance with NEMA MG 1. Motors shall be furnished in drip-proof enclosures and with sealed windings. The design and installation of the motor overload protection, load capacity, feeder circuit protection, controller selection, and associated wiring practices shall comply with NFPA 70. Motor controller shall meet the design and operational requirements of NEMA ICS 1.

3.10.2 Wiring. Wiring on the cleaner shall be complete up to the point of the plug connection for the power supply cord. The design and installation of all wiring and circuit devices shall comply with NFPA 70.

3.10.3 Power cord. A 75 ft (23 m) hard service, four conductor, oil-resistant, flexible power cord shall be furnished with each cleaner. The cord shall be NEMA type S, SO, or ST and shall be equipped with 3-phase, 3-pole, 4-wire grounding type connectors conforming to NEMA WD 1. One end shall be male, the other female. The cleaner shall be equipped with a matching, weatherproof male connector suitable for exterior applications.

3.11 Protective Enclosure. Components of the cleaner requiring protection from the weather shall be enclosed in a weather-resistant sheet metal housing with access doors or panels and a stock cover. Controls for the manually adjusted metering valve and all switches and control valves shall be centrally located in the control panel. The control panel shall be recessed or otherwise guarded to prevent damage to protruding elements. Access doors or panels shall be equipped with suitable latching devices.

3.12 Skid mounting. The cleaner shall be mounted on a welded, structural steel skid base. The skid base shall include two longitudinal structural steel skid runners with a base plate or welded cross members to support the cleaner. A splash pan shall cover open areas between the skids when the cleaner is supported on cross members. The clearance from the ground to the lowest projection of the cleaner shall be at least 4 in (100 mm). Both ends of each skid shall be shaped to facilitate skidding. Both ends of each skid shall be provided with attachments for towing and lifting slings.

The skid runners shall be provided with pockets to permit lifting of the cleaner by a forklift truck. The pockets shall be a minimum of 24 in (610 mm) on centers and shall be shaped to accommodate forks in sizes up to 2 in (50 mm) in thickness by 8 in (203 mm) in width.

3.13 Lifting and tie down attachments. When specified, the cleaner shall be equipped with lifting and tie down attachments conforming to type II or type III of MIL-STD-209. A nonferrous transportation plate shall be provided and mechanically attached to the cleaner. It shall be inscribed with a diagram showing the lifting attachments and lifting slings, the capacity of each attachment, and the required length and size of each sling cable. A silhouette of the item furnished showing the center of gravity shall be provided on the transportation plate. Stenciling or other suitable marking may identify tie down attachments. Tie down marking shall clearly indicate that the attachments are intended for the tie down of the cleaner on the carrier when shipped.

3.14 Cleaning, treatment and painting. Surfaces normally painted shall be cleaned, treated, and painted in good commercial practice. The color of the finish coat, conforming to FED-STD-595, shall be as specified (see 7.4). Painting shall be with manufacturer's current materials according to manufacturer's current processes and the total dry-film thickness shall be no less than 0.0025 in (0.0635 mm) over the entire surface. The paint shall be free from runs, sags, orange peel, or other defects. The end item, allied equipment, and attachments shall be the same color.

3.15 Instruction plates. The cleaner shall be equipped with instruction plates suitably located, describing any special or important procedures to be followed in operating and servicing the equipment. Plates shall be of a material that shall last and remain legible for the life of the equipment. Plates shall be securely affixed to the equipment with nonferrous screws or bolts. All switches and control valves shall be identified by permanent plates marked in the same manner specified herein for the metallic instruction plates. The instructions shall include, but not be limited to the following:

- a. Safety precautions.
- b. Preparation of the cleaning solution.
- c. Descaling procedures and schedule for the heating coil.
- d. Blow down procedures.
- e. Wiring diagram.

3.15.1 Fuel markings. The following shall also be permanently and legibly stenciled on the equipment in letters at least 0.75 in (19 mm) high in conspicuous locations:

USE ONLY NO. 2 FUEL OIL, DIESEL FUEL, OR JP-8.

3.16 Identification plate. An identification plate shall be furnished for each cleaner. All necessary data shall be stamped in the blank spaces of the plate provided for that purpose. The plate shall be securely affixed to the cleaner in a conspicuous place with nonferrous screws, rivets, or bolts. The top blank shall contain the item nomenclature.

3.17 Fungus resistance. When specified, electrical components and circuit elements, including terminals and circuit connections, shall be encapsulated, except that:

- a. Components and elements inherently inert to fungi or in hermetically sealed enclosures need not be encapsulated.
- b. Current-carrying contact surfaces, such as relay contact points, shall not be encapsulated.

3.18 Marking. Pressure cleaners 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 pressure cleaners to DSCC under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

7.3 Source of documents.

FEDERAL STANDARD

FED-STD-595 - Color Used in Government Procurement

MILITARY STANDARD

MIL-STD-209 - Lifting and Tie down Provisions

(Copies of military standards are available from the Document Automation and Production Service, Building 4/D (DPM-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR PARA. 23.403 - Federal Acquisition Regulations

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR 1910.95 - Occupational Noise Exposure

(Application for copies should be addressed to the Superintendent of Documents, U.S. Government Printing Office, 732 N. Capital Street, NW #808, Washington, DC 20402-0001.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 2156 - Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels

(Application for copies should be addressed to the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959)

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA MG1 - Motors and Generators  
NEMA ICS1 - General Standards for Industrial Controls and Systems  
NEMA WD1 - General Purpose Wiring Devices

(Application for copies should be addressed to the National Electrical Manufacturers Association, 2101 L Street NW, Washington, DC 20037.)

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 - National Electrical Code

(Application for copies should be addressed to the National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.)

UNDERWRITERS LABORATORIES INC. (UL)

UL 1776 - High Pressure Cleaning Machines

(Application for copies should be addressed to Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062.)

(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. Product conformance provisions.
- c. Color of finish coat required (see 3.14).
- d. 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>
59455	Alkota Cleaning Systems 110 Iowa Street Alcester, SD 57001 (605) 934-2222
ORRC3	Campbell Supply Company DBA Cam Spray 520 Brooks Road Iowa Falls, Iowa 50126 (800) 648-5011  Delco Cleaning Systems 2513 Warfield St. Fort Worth, TX 76106 (817) 625-4213
64030	Hydro Engineering Inc. 865 W. 2600 S Salt Lake City, UT 84119 (801) 972-1181
29215	Jenny Products, Inc. 850 N. Pleasant Avenue Somerset, PA 15501 (814) 445-3400
9W709	Landa Water Cleaning Systems 8953 Sable Creek Drive Jacksonville, FL 32244 (800) 984-2612
60619	Walter Manufacturing Company 297 Anna Street Watsonville, CA 95076 (408) 724-1377

7.6 Part number (P/N) supersession data. The CID part number supersede the following MFR's P/N as shown. This information is being provided to assist in reducing proliferation in the Government inventory system.

TABLE I. P/N data.

Dash number AA59618-	MFR's CAGE	MFR's P/N <sup>1/</sup>
T000	59455	29222
	60619	218
	64030	HE 3.3/1000EHO
	64030	MDL P35

<sup>1/</sup> 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 3.18.

7.7 Government users. To acquire information on obtaining these wiper blades from the Government inventory system, please contact the DSCC call center: Defense Supply Center Columbus Office Code: DSCC-NAB, Post Office Box 3990, Columbus, OH 43216-5000, or telephone (614) 692-3191.

7.8 Similar document. This document is the functional equivalent of XX-C-2866, dated January 5, 1995.

7.9 Keywords.  
 Cleaning gun  
 Electric  
 Oil  
 Motor

MILITARY INTERESTS:

Custodians:  
 Navy - SH  
 DLA - CC

Review activity:  
 Navy - SA

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

Preparing activity:  
 DLA - CC

(Project 4940-0760)