

[INCH-POUND]

A-A-2963

December 11, 1995

SUPERSEDING

MIL-S-4461H

August 26, 1970

COMMERCIAL ITEM DESCRIPTION

SEALING MACHINES, HEAT; HOT JAW AND CONTINUOUS

1. SCOPE

1.1 Scope. This commercial item description covers sealing machines intended for sealing thermoplastic (unsupported) and barrier (supported) materials.

2. CLASSIFICATION

2.1 Classification. The sealing machines shall be of the following type, class, and style, as specified (see 7.3).

Type I - Jaw sealing machines

Class A - Foot operated, 8-inch (203 mm) long, 1/4-inch (635 mm) wide jaws for unsupported material with both jaws heated

Class C - Motor operated, 12 (305 mm) to 14-inch (356 mm) long, 3/4-inch (19.0 mm) wide jaws for supported material with both jaws heated

Type II - Continuous sealing machines

Class A - For supported material

Style 2 - Floor mounted, 3/4-inch (19.0 mm) sealing bar

Style 3 - Portable, without motor, 1-inch (25.4 mm) sealing bar

Style 4 - Portable with motor, 3/4-inch (19.0 mm) sealing bar

Class B - For unsupported material

Style 2 - Floor mounted, 1/2-inch (12.7 mm) sealing bar

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: General Services Administration, Engineering Group (7FXEE), 819 Taylor St., Fort Worth, TX 76102

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3. SALIENT CHARACTERISTICS

3.1 Standard Commercial Product. The sealing machines shall be the manufacturer's standard commercial product except for any changes necessary for compliance with this commercial item description. A standard commercial product is a product which has been sold or is currently offered for sale in the commercial market through advertisements, manufacturer's catalogs or brochures, and represents the latest production model.

3.1.1 UL 499 Conformance. Acceptable evidence of compliance with the requirements of UL 499 shall be a UL label or listing mark; or a certified test report from an independent testing laboratory acceptable to the Government, indicating the electrical materials and components offered have been tested and conform to UL 499. Canadian Standards Association CAN/CSA-C22.2 No. 68 certification may also be accepted as evidence of compliance in lieu of the UL label or listing.

3.1.2 NFPA Conformance. Acceptable evidence of compliance with the requirements of the National Fire Protection Association (NFPA) National Electrical Code Standard No. 70 or the Canadian Electric Code CAN/CSA-C22.2 No. 0-M91, shall be the manufacturer's certified statement that the sealing machine conforms to the applicable NFPA or CSA-C22.2 requirements.

3.2 Construction. All sealing machines shall heat-seal supported or unsupported sealable material (see 2.1) by the application of heat, dwell time, and sealing pressure, with guides for accomplishing straight seals and a separate switch for energizing the heating elements. The design of the machines shall allow for easy accessibility of parts and lubrication of friction points.

3.3 Thermostat. Thermostats for the sealing machines shall be capable of maintaining a selected surface temperature, be capable of maintaining a uniform temperature on the sealing surface of a preset temperature $\pm 20^\circ\text{F}$ ($\pm -6^\circ\text{C}$), and shall have a heat recovery capability of 50°F (10°C) within 80 seconds. Temperature markings of the thermostat shall be in accordance with industry practice.

3.4 Power source. The sealing machines shall be furnished with a minimum 6 foot (1.8 m) length electric cable for connection to an electrical power source and suitable for operation on a system voltage as specified in the contract or order.

3.5 Pressure controls. The sealing machines shall have adjustable pressure controls capable of rapid adjustment of sealing pressures for producing effective heat-seals.

3.6 Pneumatic hose. Sealing machines requiring air pressure shall have a minimum 10 foot (3.05 m) length hose with an air-hose connector.

3.7 Interchangeability. All parts and assemblies of sealing machines of the same type, class, style, and manufacturer shall be interchangeable.

3.8 Performance. The sealing machines shall produce effective heat-seals on supported or unsupported material as specified in the contract or order, by the application of heat at the effective sealing temperature, pressure, and dwell time. Heat-seals shall be made in accordance with the material manufacturer's recommended sealing cycle. The heat-seals shall exhibit a continuous fusion of the sealable material at the interfaces of the material, and shall be watertight.

3.9 Type I. Type I, class A sealing machines shall provide for precise temperature with variable dwell time and pressure controls. Type I, class C sealing machines shall provide precise temperature with constant dwell time and pressure controls.

3.9.1 Class A. Class A sealing machines shall heat-seal unsupported material of 0.003 inch (0.0762 mm) minimum thickness. The sealing machine shall have heating elements in both jaws. The machine shall have a foot pedal assembly with an adjustable compression spring for the operation of the jaws and application of heat sealing pressure and dwell time. A temperature gage shall be provided to indicate the jaw temperature. The sealing machines shall be wired for 120 Volt, 60 Hz, single phase, or 220 Volt, 50 Hz, single phase to accommodate type F "Schuko" plugs with round pins, as specified in the contract or order. The class A sealing machine is furnished without indicator light or cooling unit.

3.9.2 Class C. Class C sealing machines shall be motor driven, with heating elements in both jaws, and an indicator light to indicate the heating elements are energized. Sealing pressure shall be applied for making a 3/4 inch (19.0 mm) wide seal on supported material by a spring action in the machine, and the heat sealing dwell time shall be dependent upon motor speed. The sealing temperature thermostatic control shall be conveniently located on the machine. The machine shall have a foot operated switch for either single or continuous operation of heat sealing cycles. The machine shall be capable of being bench mounted.

3.10 Type II. Type II sealing machines shall produce a continuous heat-seal as the sealable material is conveyed through the machine. The machine shall have adjustable means for adjustment of the gap between heating bars to obtain effective heat seals with material of various thicknesses, and to take up slack of conveying bands, belts, or chains, as applicable. The conveyors carrying the sealable material through the machine shall be either motor driven continuous bands, belts, or chains, except for class A, style 3, which shall have no motor or continuous material conveyors.

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3.10.1 Class A, Style 2. Class A, style 2 sealing machines shall be motor driven and capable of being floor mounted. The machine shall be provided with a mechanism to allow rotation of the machine about its longitudinal axis and for locking the machine in any required position. The machine shall be furnished with a pair of flat rollers operated by adjustable pneumatic pressure with an operating range of 40 psi (276 kPa) minimum to 80 psi (552 kPa) maximum, and capable of making a 3/4 inch (19.0 mm) wide seal on supported material. The machine shall have conveniently located controls for temperature, pressure, and speed (dwell time) of the material conveyors. The speed of travel of the material conveyor shall be not less than 13 feet (3.96 m) per minute to produce a dwell time of 4 seconds. The machine shall have an adjustment for the conveyor tension and spacing between sealing bars for obtaining effective heat-seals with sealable material of various thicknesses, a separate switch for conveyor operation, and protective guards for the safety of the operator. The machine shall be furnished with a cooling unit.

3.10.1.1 Speed controller. The speed controller shall be capable of rapid adjustment of operating speeds to obtain 2 to 15 seconds variation in dwell time during the heat sealing travel of the material conveyors. The dwell time shall be indicated on a dial. Means shall be provided for locking the dwell time setting.

3.10.2 Class A, Style 3. Class A, style 3 sealing machines shall be provided with a carrying handle for portability and hand operation. The carrying handle temperature shall not exceed 110 °F (43 °C) during operation of the machine at its maximum temperature setting. The sealing machine shall provide for mounting of heat sealing bars and grooved sealing pressure rollers. The rollers shall be loaded under spring pressure capable of being adjusted for the application of effective sealing pressure for a 1 inch wide (25.4 mm) seal on supported material. The in-feed end of the machine shall be flared to facilitate the insertion of the sealable material. The machine shall have provisions for the attachment of a side handle for horizontal hand operation and brackets for bench operation. The machine shall be capable of providing a variable dwell time.

3.10.3 Class A, Style 4: Class A, style 4 sealing machines shall be provided with a carrying handle for portability and hand operation, and a mounting base or brackets for bench mounting. The carrying handle temperature shall not exceed 110 °F (43 °C) during operation of the machine at its maximum temperature setting. The sealing machine shall have a motor with a pair of bands, belts, or chains as conveyors for the sealable material. Sealing pressure shall be provided for a 3/4 inch (19.0 mm) wide seal on supported material by a pair of spring-loaded rollers with adjustable pressure capability located at the outlet end of the machine. The conveyors shall move between a fixed guide on one side and a spring loaded guide on the opposite side to provide contact between the conveyors. The conveyors shall have a controlled rate of speed to provide a travel of 200 inches (5.08 m) per minute for the sealable material.

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3.11 Class B, Style 2. Class B, style 2 sealing machines shall be motor driven and capable of being floor mounted. The machine shall be provided with a mechanism to allow rotation of the machine about its longitudinal axis and for locking the machine in any required position. The machine shall be furnished with sealing bars and a cooling unit for cooling the heat-seal. The machine is not required to have a pressure controller or sealing pressure rollers. The speed controller shall control speed to produce a dwell time in seconds within 10 percent accuracy of the indicated dwell time setting. The machine shall be operated by adjustable pneumatic pressure with an operating range of 40 psi (276 kPa) minimum to 80 psi (552 kPa) maximum. The machine shall have conveniently located controls for temperature, pressure, and speed (dwell time) of the material conveyors. The speed of travel of the material conveyor shall be not less than 13 feet (3.96 m) per minute to produce a dwell time of 2 seconds. The machine shall have an adjustment for the band tension and material gap for producing effective heat-seals 1/2 inch (12.7 mm) wide on unsupported material of various thicknesses, a separate switch for conveyor operation, and protective guards for the safety of the operator.

3.12 Workmanship. Sealing machines shall have no defects that affect function, appearance or serviceability.

3.13 Measurement system. The values stated in inch-pound units are to be regarded as the standard. The metric values stated in parentheses are for information purposes only.

3.14 Metric products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch-pound units, providing they fall within the tolerances specified and all other requirements of this document are met. If a product is manufactured to metric dimensions and those dimensions exceed the tolerances specified in the inch-pound units, a request should be made to the contracting officer to determine if the product is acceptable.

3.15 Commercial item. The use of the term "commercial item" in this document does not imply that any item or items offered are not required to conform with all requirements specified herein.

4. REGULATORY REQUIREMENTS.

4.1 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).

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5. QUALITY ASSURANCE PROVISIONS

5.1 Contractor Certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this Commercial Item Description, and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices, and is the same product offered for sale in the commercial marketplace. The government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

6. PACKAGING

6.1 Packaging. Preservation, packing, and marking shall be as specified in the contract or order.

7. NOTES

7.1 Part Identification Number (PIN). Sealing machines conforming to this commercial item description shall be identified by a part number configuration consisting of identification of a portion of the CID number, type, class, and style. An example of the part number configuration is shown below. This part numbering system is intended for identification and cross-indexing of the item within the Federal cataloging system. The following part identification numbering procedure is for government purposes and does not constitute a requirement for the contractor.

AA29632A3 Example: (AA29632A3) = Type II, Class A, Style 3

Style (2, 3, or 4)
Class (A, B, or C)
Type (I = 1, II = 2)
Commercial item description number

7.2 Referenced Documents. The documents referenced in this commercial item description shall be the issues in effect on the date of issuance of the invitation for bids or request for proposals unless otherwise specified. These documents form a part of this commercial item description to the extent specified. In the event of a conflict between this commercial item description and a document referenced herein, this commercial item description shall take precedence.

UL Standards: Application for copies of UL standards should be addressed to Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062.

NFPA Standards: Application for copies of NFPA standards should be addressed to National Fire Protection Association, One Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101.

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CSA Standards: Application for copies of CSA standards should be addressed to Canadian Standards Association, 178 Rexdale Blvd., Etobicoke, Ontario, Canada M9W 1R3.

7.3 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents (if applicable).

- a. Title, number and date of this commercial item description.
- b. Type, class, and style.
- c. The preservation, packing, and marking desired.

7.4 National Stock Numbers (NSNs): The following is a list of NSNs assigned which correspond to this CID. The list may not be indicative of all possible NSNs associated with the CID.

NSN	Type	Class	Style	Part number
3540-00-063-2917	I	A		AA29631A-2917
3540-01-140-6347	I	A		AA29631A-6347
3540-00-203-2090	I	C		AA29631C
3540-00-505-4785	II	A	2	AA29632A2
3540-00-975-4255	II	A	3	AA29632A3
3540-00-819-8837	II	A	4	AA29632A4
3540-01-018-9882	II	B	2	AA29632B2

7.5 Supersession data. The following types, classes, and styles of MIL-S-4461H were deleted for this commercial item description.

Type I - Class B
 Type II - Class A - Style 1
 Class B - Style 1
 Class B - Style 3

MILITARY INTERESTS:

NONE: DoD has no registered interest in revisions to this Commercial Item Description until further notice.

PREPARING ACTIVITY:
GSA-FSS