

[INCH-POUND]
A-A-58075
02 August 1996
SUPERSEDING
MIL-H-4081B
21 AUG 1969

COMMERCIAL ITEM DESCRIPTION

HOLDER: COUNTERSINK, ADJUSTABLE MICROMETER STOP

The General Services Administration has authorized the use of this commercial item description (CID) as a replacement for holders type I and type II, of MIL-H-4081B for all federal agencies.

1. **SCOPE.** This commercial Item Description covers holders for countersinking cutters used on ferrous and non-ferrous materials.

2. **CLASSIFICATION.** The holders shall conform to the following types.

Type I Internal taper spindle

Type II Internal threaded spindle

3. **SALIENT CHARACTERISTICS.**

3.1 Design. Holders shall be type I or II as specified. The holder length shall be adjustable and shall have provisions to prevent unintentional adjustment, disengagement or separation of parts. The spindle travel length shall not be less than 9/32 inch. The design will ensure, that damage will not occur to the material surface, during the countersinking operation.

3.2. Spindles.

3.2.1. Spindle for type I holder. The internal self-locking cutter mounting taper shall be 0.250 ± 0.001 inch diameter at large end with $0.600 + 0.000 - 0.005$ inch per foot taper. A knockout pin hole through the spindle shall be provided.

Beneficial comments, recommendations, additions deletions, clarifications, etc, and any data which may improve this document should be sent to: WR-ALC/TILCC 255 Second Street, Suite 122 Robins AFB, GA 31098-1640.

AMSC N/A

FSC 5133

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3.2.2. Spindle for type II holder. Cutter mounting end of the spindle shall be threaded 1/4 - 28 UNF-2B by 1/2 inch deep. Cutter centering angle at the thread entrance shall be $118^{\circ} \pm 1/2^{\circ}$ included angle by 0.340 inch diameter. Wrenching flats shall be provided for installing and removing cutters.

3.3. Threads. All threads shall be in the inch system and shall conform to the class 2 tolerance limits specified in the H28 Handbook.

3.4. Knockout pin. Type I holders shall be of the knockout pin variety and shall be able to knock out seated cutter conforming to A-A-58076 without damaging pin or holder.

3.5. Length Adjustment. The holder shall allow overall length adjustment.

3.6. Depth control. The holder shall provide for cutter depth control adjustment. A permanent index line, marked with a zero indicator, shall be clearly visible over the entire adjustment range.

3.7. Adjusting. The holder shall allow all adjustments to be made without the use of tools, and adjustment surfaces will allow easy gripping by hand. Depth adjustments shall be permanently marked in increments of 0.001 inch and shall be marked with progressive numerical characters at every fifth increment; (i.e. 5-10-15 etc...).

3.8. Identification marking. The holder shall be marked with the manufacturers name or identifying symbol, and the state or country of manufacturer, unless otherwise specified. All markings shall be engraved, etched, molded, or indented directly on the items surface in such a manner that it remains clearly legible throughout the life of the item.

3.9. Workmanship. Details of workmanship shall be in accordance with the best commercial practice. Paints, coatings, platings, and finishes shall be smooth, dry adherent, continuous, and not stained or discolored. External surfaces shall be free of tool and gouge marks, nicks, or other surface imperfections.

4. REGULATORY REQUIREMENTS.

4.1. Recovered materials. The offerer/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

4.2. Metric products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch-pound units, provided they meet all provisions of this document.

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5. QUALITY ASSURANCE PROVISIONS.

5.1. Contractor Conformance. The item delivered to the government shall conform to the contractually specified requirements. For item characteristics and requirements which are not contractually specified, the delivered item shall conform to the producers own drawings, specifications, standards, and quality assurance practices for the highest quality items provided by the producer to the commercial market place. The government reserves the right to require proof of such conformance prior to first delivery and thereafter as provided for under the terms of the contract.

5.2. Market Acceptability. The following market acceptability criteria are necessary to document the quality of the product to be provided under this CID.

5.2.1. The company producing the item must have been producing a product meeting the requirements of this CID, for at least 2 years.

5.2.2. The company must have sold 1000 units meeting the requirements of this CID, in the commercial market place over the past 2 years.

5.3. Performance Tests.

5.3.1. Visual and dimensional inspection. Each sample selected shall be visually and dimensionally inspected for conformance with this CID.

5.3.2. Functional test. Each sample selected shall be tested for freedom of spindle rotation. Mount the chucking shank in a rotating spindle and bring in firm contact with a smooth metal surface. Advance the holder spindle approximately 1/4 inch, for firm spindle pre-load and positive footplate pressure, to simulate actual operating condition. Rotate the spindle at 750 and 1,000 RPM respectively for not less than 15 minutes at each spindle speed. Excessive heating, spindle seizure, or unintentional loosening or disengagement of any parts shall be cause for rejection of the representative lot. Lot size will be specified in contract.

5.3.3. Spindle concentricity and adjustment accuracy. After successful completion of tests in 5.3.2, mount each holder in a stationary fixture and inspect the spindle concentricity and cutter depth control accuracy. The internal taper or cutter centering angle, as applicable, shall be concentric with the chucking shank to 0.003 inch TIR. Adjust the cutter depth control to 0.005 inch increments as marked on the adjusting sleeve for one complete revolution. Actual deviation at each 0.005 inch adjustment shall not exceed 0.001 inch (non-cumulative) with not more than 0.005 inch total deviation for one complete revolution.

5.3.4. Cutting test. Each sample holder shall be subjected to the cutting test. The cutting test shall be performed with the holder mounted in a portable, electrical or pneumatic powered hand tool. Holders shall be subjected to not less than ten repetitive countersink operations in stainless

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steel sheet, type 302, 8 gage minimum thickness. The countersink used in this test shall be at least 0.406 ± 0.005 inch major diameter for all holes. The included countersink angle and the relation of the angle to the reference plane shall be accurate to $\pm 1/2^\circ$.

6. PACKAGING.

6.1. Preservation, packaging, packing, and marking. Requirements for preservation, packaging, packing, and marking of containers shall be specified in the contract, or order.

7. NOTES.

7.1. Addresses for obtaining documents:

Federal Acquisition Regulation (FAR): Government Printing Office, Superintendent of Documents, Washington, DC 20402-9371.

DoD Standardization Documents: Standardization Document Order Desk, 700 Robbins Ave., Building 4d, Philadelphia, PA 19111-5094

7.2 Ordering data. Purchasers should select the preferred options permitted herein and should include the following information in procurement documents:

- a. Title, number and date of this Commercial Item Description.
- b. When applicable, the appropriate NSN.
- c. The number of bid samples.
- d. Applicable first article sampling requirements.
- e. Applicable lot sampling requirements.
- f. The applicable type.
- g. Required preservation, packaging and marking procedures.

Custodians:

Air Force - 99
Army - GL
DLA - GS

Preparing Activity:

Air Force - 84

Reviewers:

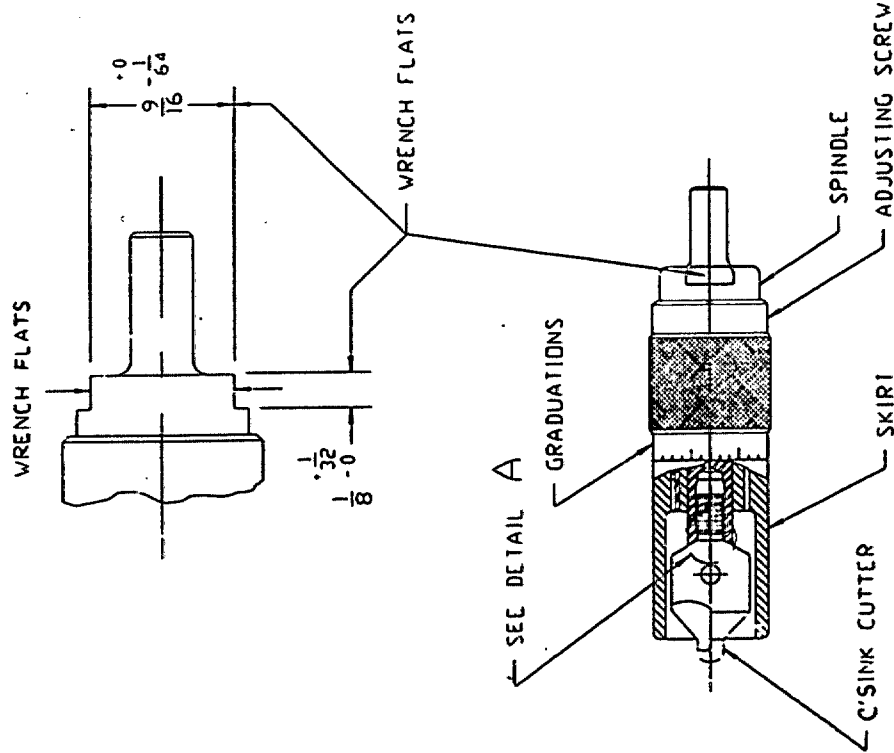
Army - AV

Agent Activity:

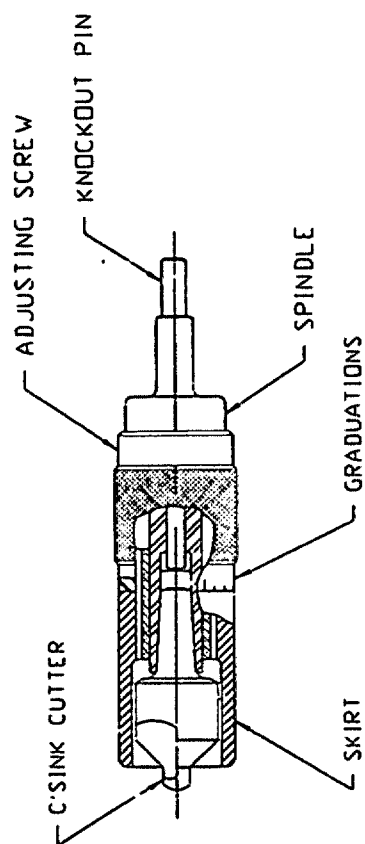
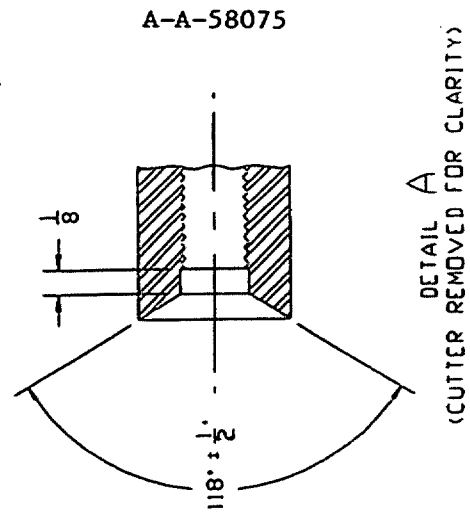
Air Force - 99

Project Number:

5133-0048



TYPE D



TYPE I