

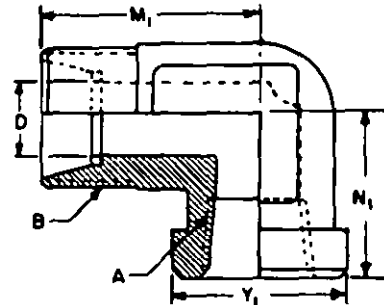
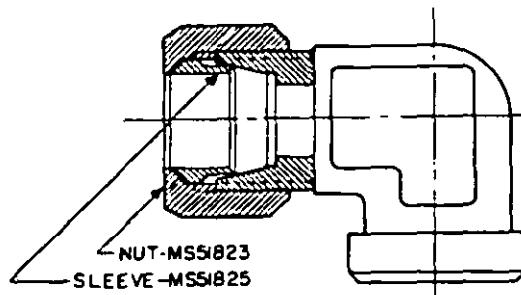
FED. SUP. CLASS
4730User Activities:
Army - AV
Navy - OS, NCReview Activities:
Army - AT, CL, NE
Air Force - B2
DLA - CS

TABLE I

DASH NUMBER		TUBE O.D.	A PIPE THREAD	B STRAIGHT THREAD	D DIA DRILL	M ₁	N ₁	Y ₁
ASSY	*BODY	NOM	NPTF	CLASS 2		±.03	±.03	±.020
1	21	1/8	1/8	5/16-24UNF	0.093	0.83	0.66	0.562
2	22	3/16	1/8	3/8-24UNF	0.125	0.83	0.66	0.562
3	23	1/4	1/8	7/16-20UNF	0.203	0.89	0.66	0.562
4	24	5/16	1/8	1/2-20UNF	0.234	0.95	0.66	0.562
5	25	3/8	1/4	9/16-18UNF	0.281	1.03	0.88	0.750
6	26	1/2	3/8	3/4-16UNF	0.422	1.23	1.02	0.875
7	27	5/8	1/2	7/8-14UNF	0.500	1.42	1.23	1.062
8	28	3/4	3/4	1-1/16-12UN	0.656	1.38	1.36	1.312
9	29	7/8	3/4	1-3/16-12UN	0.719	1.62	1.42	1.312
10	30	1	1	1-5/16-12UN	0.875	1.73	1.62	1.625
11	31	1-1/4	1-1/4	1-5/8-12UN	1.093	2.08	1.70	1.875
12	32	1-1/2	1-1/2	1-7/8-12UN	1.344	2.58	2.08	2.362
13	33	2	2	2-1/2-12UN	1.813	2.64	2.39	2.812

FOR NOTES SEE SHEET 2.

Ⓔ Denotes change

DISTRIBUTION: STATEMENT A. Approved for public release; distribution is unlimited.
This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document, when applicable.

P.A. - AR Other Cust 99	TITLE ELBOW, PIPE TO TUBE, 90°, FEMALE PIPE END, FLARELESS TYPE, HYDRAULIC	MILITARY STANDARD MS51813
PROCUREMENT SPECIFICATION MIL-F-15560	SUPERSEDES CIRCLE in part	SHEET 1 OF 2

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

4730-0879

APPROVED 29 DEC 1967 REVISED 30 DEC 1970 22 NOV 1974 13 MAY 77 17 JUNE 1982 30 JULY 1987

FED. SUP. CLASS
4730

NOTES:

1. **MATERIAL:** Steel, carbon in accordance with the procurement specification.
Steel, corrosion-resisting in accordance with the procurement specification.
 2. **PROTECTIVE COATING:** Cadmium plated in accordance with procurement specification.
Zinc plated in accordance with procurement specification.
Phosphate coating in accordance with procurement specification.
Passivation treatment in accordance with procurement specification.
 3. **DIMENSIONS AND TOLERANCES:** Dimensions and tolerances not shown shall be in accordance with the SAE Standard for Flareless Tube Fittings (SAE J514).
 4. **THREADS:** Threads shall be in accordance with Screw-Thread Standards for Federal Services, FED-STD-H2B.
 5. **PART NUMBER:** The MS part number consists of the MS number, plus the dash number and (for complete assembly) the applicable MS51825 sleeve style designator.
 - A. For complete assembly (with nut and sleeve), cadmium plated, use the MS number, plus the assembly dash number and the sleeve style designator. Example: MS51813-1A or MS51813-1B.
 - B. For the body only, cadmium plated, use the MS number and the body dash number. Example: MS51813-21.
 - C. For zinc coating add "Z" and (for complete assembly) the sleeve style designator to the dash number. Example: MS51813-1ZA or MS51813-1ZB or MS51813-21Z.
 - D. For phosphate coating add "P" and (for complete assembly) the sleeve style designator to the dash number. Example: MS51813-1PA or MS51813-1PB or MS51813-21P.
 - E. For corrosion-resisting steel add "SS" and (for complete assembly) the sleeve style designator to the dash number. Example: MS51813-1SSA or MS51813-1SSB or MS51813-21SS.
 6. For design feature purposes, this standard takes precedence over procurement documents referenced herein.
 7. Reference documents shall be of the issue in effect on date of invitations for bid.
 8. The illustration is for identification and is not intended to restrict designs or shapes not dimensioned.
 9. After 22 NOV 1974, bodies will be used for production only and SHALL NOT be stocked for maintenance. Existing stock of bodies should be used until depleted.
 10. CAUTION: The following data is furnished for the purpose of new design only and is not intended to imply interchangeability.
- MS51813 will replace MS39200 for new design after approval date on this document. Table II below gives reference data for coordination of equivalent tube sizes, in both compression and hydraulic type elbows. Assembly replacement is authorized.

TABLE II (FOR INFORMATION ONLY)
ASSEMBLY EQUIVALENCY

PART NUMBER		PART NUMBER		PART NUMBER	
COMPRESSION	HYDRAULIC	COMPRESSION	HYDRAULIC	COMPRESSION	HYDRAULIC
MS39200-1	MS51813-1	MS39200-5	MS51813-5	MS39200-9	MS51813-9
-2	-2	-6	-6	-10	-10
-3	-3	-7	-7	-11	-11
-4	-4	-8	-8	-12	-12

P.A. AR Other Cust 99	TITLE ELBOW, PIPE TO TUBE, 90°, FEMALE PIPE END, FLARELESS TYPE, HYDRAULIC	MILITARY STANDARD MS51813
PROCUREMENT SPECIFICATION MIL-F-18866	SUPERSEDES CMXK6 in part	SHEET 2 OF 2

User Activities:
Army - AF
Navy - OS, MCReview Activities:
Army - AT, CL, ME
Air Force - B2
DLA - CS

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document, when applicable.

APPROVED 29 DEC 1967 REVISED 30 DEC 1970 FOR CHANGES SEE SHEET 1 FOR CHANGES SEE SHEET 2. 30 July 1987