



WORLDWIDE STANDARD

WB 900 APPENDIX E

DATE: 1996 OCTOBER

Lobed External Drive System for Threaded Fasteners

1. SCOPE. This Appendix covers the dimensional and gauging requirements for a 6 lobed external drive system used on threaded studs and headless screws.

2. DIMENSIONS.

The dimensions of studs and headless screws are referenced in Figure E1 and Table E1 but shall meet the gauging requirements specified in Clause 3.

3. GAUGING OF HEADLESS SCREW DRIVE FEATURES.

- 3.1 The wrenching height (K) shall be checked using the gauge specified in Figure E2 and Table E2. Parts shall be considered acceptable if the top surface of the lobed head lies flush with or extends beyond the top surface of the gauge as shown in Figure E2-A.

- 3.2 The outside diameter (A) of the drive feature shall be checked using the 'go' gauge specified in Figure E2 and Table E2. Parts are considered acceptable if all of the lobed drive system enters the gauge as shown in Figure E2-B.

- 3.3 The fallaway of lobed drive features shall be checked using the gauge specified in Figure E2 and Table E2. Parts are considered acceptable if the upper surface of the drive feature does not protrude above the top surface of the gauge as shown in Figure E2-C.

4. FORM AND POSITION. The concentricity of the outside diameter of the lobes to the inner diameter of the lobe valleys shall be checked with the gauge shown in Figure E3 and Table E3. Parts shall be considered acceptable if all of the lobed drive feature enters the gauge as shown in Figure E3-A.

The concentricity of the outside diameters of the lobes to the threaded portion of threaded studs and headless screws shall not exceed 0.25 Total Indicator Reading when measured as shown in Figure E4.



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Figure E1.

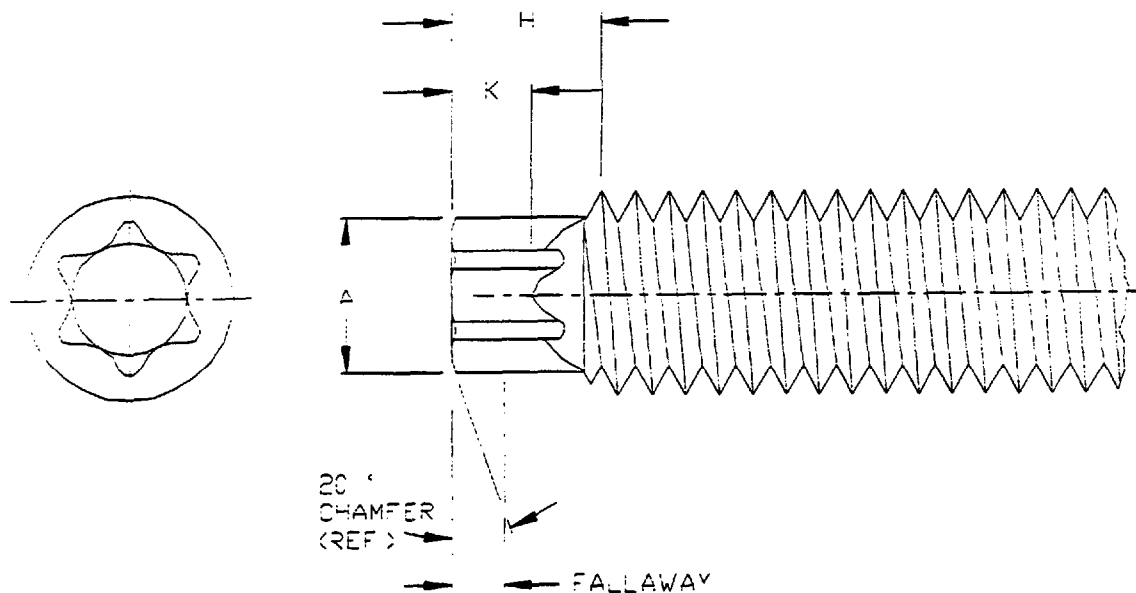


Table E1.

Drive Size	Nominal Size	A ¹⁾ Reference	K ¹⁾ Reference	H Reference	Fallaway ¹⁾ Reference
E1	M4	2.29	1.20	3.44	0.79
E4	M5	3.70	1.60	3.72	1.19
E5	M6	4.58	2.40	4.41	1.59
E7	M8	5.99	3.20	6.00	1.98
E8	M10	7.29	3.60	7.34	2.39
E10	M12	9.19	4.35	10.00	2.39
E12	M14	10.95	5.15	10.77	2.77
E14	M16	12.67	5.95	12.30	3.18
E16	M20	14.50	6.75	16.48	3.58

1) Controlled by gauging