

**MILITARY COMMITTEE AIR STANDARDIZATION BOARD
(MCASB)**

20 October 2008

NSA(AIR)0921(2008)ASSE/3802

MCASB

STANAG 3802 ASSE (EDITION 4) - SCREWDRIVER RECESSES (HIGH PERFORMANCE)

Reference: MAS(AIR)359 - ASP/3802 dated 16 September 1992

1. The enclosed NATO Standardization Agreement, which has been ratified by nations as reflected in the NATO Standardization Documentation Database (NSDD), is promulgated herewith.
2. The Reference listed above is to be destroyed in accordance with local document destruction procedures.
3. The MCASB considers this an editorial edition of the STANAG; previous ratifying references and implementation details are deemed to be valid.

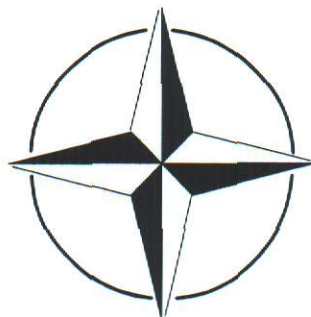


Juan A. MORENO
Vice Admiral, ESP(N)
Director, NATO Standardization Agency

Enclosure:
STANAG 3802 ASSE (Edition 4)

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**NORTH ATLANTIC TREATY ORGANIZATION
(NATO)**



**NATO STANDARDIZATION AGENCY
(NSA)**

**STANDARDIZATION AGREEMENT
(STANAG)**

SUBJECT: SCREWDRIVER RECESSES (HIGH PERFORMANCE)

Promulgated on 20 October 2008

Juan A. MORENO
Vice Admiral, ESP(N)
Director, NATO Standardization Agency

NATO/PfP UNCLASSIFIED

RECORD OF AMENDMENTS

N°	Reference/date of Amendment	Date entered	Signature

EXPLANATORY NOTES

AGREEMENT

1. This NATO Standardization Agreement (STANAG) is promulgated by the Director NATO Standardization Agency under the authority vested in him by the NATO Standardization Organisation Charter.
2. No departure may be made from the agreement without informing the tasking authority in the form of a reservation. Nations may propose changes at any time to the tasking authority where they will be processed in the same manner as the original agreement.
3. Ratifying nations have agreed that national orders, manuals and instructions implementing this STANAG will include a reference to the STANAG number for purposes of identification.

RATIFICATION, IMPLEMENTATION AND RESERVATIONS

4. Ratification, implementation and reservation details are available on request or through the NSA websites (internet <http://nsa.nato.int>; NATO Secure WAN <http://nsa.hq.nato.int>).

FEEDBACK

5. Any comments concerning this publication should be directed to NATO/NSA – Bvd Leopold III - 1110 Brussels - BEL.

Agreed English/French texts

NATO STANDARDIZATION AGREEMENT
(STANAG)

SCREWDRIVER RECESSES (HIGH PERFORMANCE)

- Annexes:
- A. Recess Dimensions
 - B. Applications in 100° Countersunk Head and Pan Head
 - C. Recess Gauge Dimensions
 - D. Recess Penetration Gauge Dimensions
 - E. Driver Dimensions

Related Documents: There are no related documents.

AIM

1. The aim of this agreement is to standardize the high performance driving recesses to be used for driving aircraft structural fasteners of shank diameter M4 to M24 inclusive.

AGREEMENT

2. Participating nations agree that where high performance driving recesses are used for driving aircraft structural fasteners of shank diameter M4 to M24 inclusive, the offset cruciform recesses and their associated driving bits as detailed in the annexes shall be used.

DEFINITIONS

3. The following terms and definitions are used for the purpose of this agreement:
 - a. High Performance Recess. A high performance recess is one which is considered capable of taking the high torque loading normally associated with structural fasteners.
 - b. Structural Fastener. A structural fastener is one whose material strength $\geq 1,000$ Mpa and normally of shank diameter M4 and above.
 - c. Anti-Camout Ribs. Projections of material along the removal walls of a driver which extend 90° to the axis in order to assist in the application of torque.

IMPLEMENTATION OF THE AGREEMENT

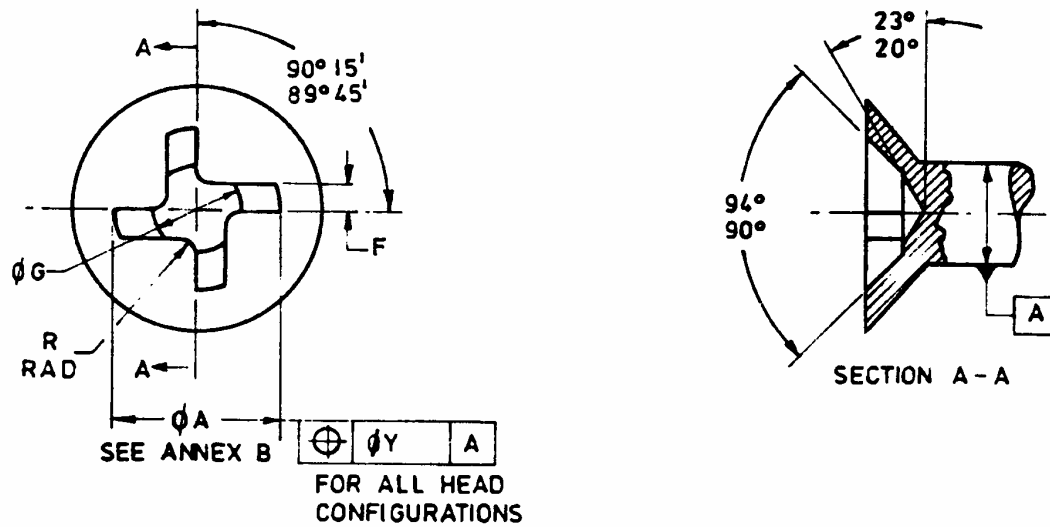
4. This STANAG is implemented when national orders or instructions are issued requiring all future manufacture and all future editions of appropriate technical manuals, or all orders for newly designed material, to be produced or ordered in accordance with this agreement.

NOTE: Nations subscribing to this agreement are not precluded from using structural fasteners which have the anti-camout rib incorporated in the recess.

DEFENCE AGAINST TERRORISM

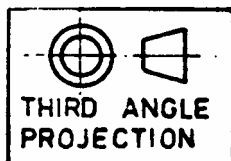
5. Aircraft equipment and materiel shall be labelled, processed and stored in such a manner as to preclude access and tampering by unauthorized personnel. Said equipment shall be inspected and certified prior to use or application to ensure operational integrity and reliability. ONLY authorized personnel shall perform servicing and maintenance of aircraft and handling or connecting of servicing equipment.

RECESS DIMENSIONS

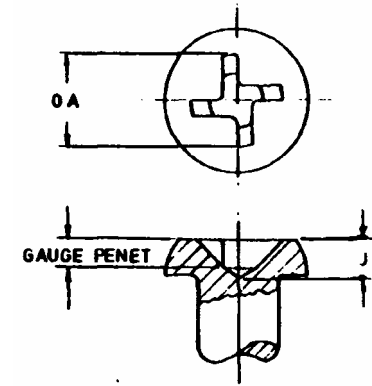
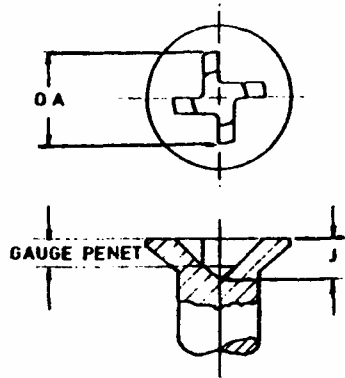


OFFSET CRUCIFORM RECESS

RECESS SIZE & No	TABLE I RECESS DIMENSIONS						INCH RECESS SIZE & No	
	F		ØG		R RAD			Y
	MAX	MIN	MAX	MIN	MAX	MIN		
R4	0,86	0,79	2,44	2,34	0,76	0,41	0,3	8
R5	0,99	0,91	2,82	2,72	1,02	0,58		10
R6	1,30	1,22	3,73	3,63			1,32	0,79
R8	1,63	1,55	4,67	4,57	5/16			
R10	1,93	1,85	5,59	5,49	3/8			
R12	2,59	2,49	7,42	7,32	2,26	1,57		
R14	2,92	2,82	8,33	8,23	2,74	1,98	0,6	9/16
R16	3,23	3,12	9,27	9,17				5/8
R18	3,86	3,76	11,10	11,00				3/4
R22	4,50	4,39	12,95	12,85				7/8
R24	5,13	5,03	14,78	14,68	3,78	2,77		1/0



APPLICATIONS IN 100° COUNTERSUNK HEAD AND PAN HEAD



OFFSET CRUCIFORM RECESS (continued)

NORMAL HEAD		TABLE II APPLICATION IN 100° COUNTERSUNK HEAD						REDUCED NORMAL HEAD	
NOM SHANK DIA	* RECESS AND DRIVER NUMBER	ØA WING DIA		J RECESS DEPTH		GAUGE PENETRATION		* RECESS AND DRIVER NUMBER	NOM SHANK DIA
		MAX	MIN	MAX	MIN	MAX	MIN		
M4	R4	5,46	5,21	1,98	1,73	1,511	1,219	M4	M5
M5	R5	6,30	6,05	2,29	2,03	1,740	1,422	M5	M6
M6	R6	8,26	8,00	3,00	2,74	2,261	1,905	-	-
M7	R6	8,26	8,00	3,00	2,74	2,261	1,905	-	-
M8	R8	9,07	8,81	3,10	2,84	2,184	1,778	-	-
M10	R10	10,85	10,59	3,68	3,43	2,616	2,159	-	-

TABLE III APPLICATION IN NORMAL FLAT TOP PAN HEAD							
NOM SHANK DIA	* RECESS AND DRIVER NUMBER	ØA WING DIA		J RECESS DEPTH		GAUGE PENETRATION	
		MAX	MIN	MAX	MIN	MAX	MIN
M4	R4	5,79	5,54	2,16	1,91	1,676	1,384
M5	R5	6,68	6,43	2,49	2,24	1,980	1,613
M6	R6	8,76	8,51	3,25	3,00	2,515	2,159
M7	R6	8,76	8,51	3,25	3,00	2,515	2,159
M8	R8	9,70	9,45	3,40	3,15	2,502	2,096
M10	R10	11,61	11,35	4,09	3,84	2,997	2,540

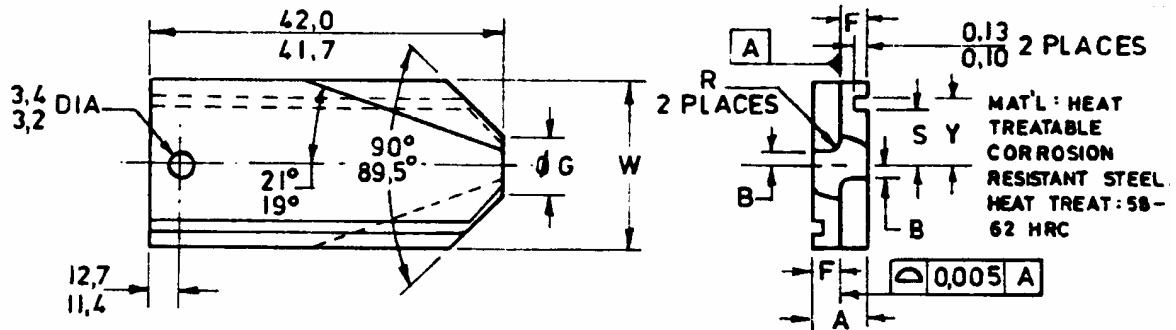
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NORMAL HEAD		TABLE II APPLICATION IN 100° COUNTERSUNK HEAD						REDUCED NORMAL HEAD	
NOM SHANK DIA	* RECESS AND DRIVER NUMBER	ØA WING DIA		J RECESS DEPTH		GAUGE PENETRATION		* RECESS AND DRIVER NUMBER	NOM SHANK DIA
		MAX	MIN	MAX	MIN	MAX	MIN		
M12	R16	17,98	17,73	6,12	5,87	4,343	3,683	-	-
M14	R14	16,21	15,95	5,51	5,26	3,924	3,315	-	-
M16	R16	17,98	17,73	6,12	5,87	4,343	3,683	-	-
M18	R18	21,56	21,31	7,32	7,06	5,232	4,470	-	-
M20	R18	21,56	21,31	7,32	7,06	5,232	4,470	-	-
M22	R22	25,12	24,87	8,53	8,29	6,083	5,220	-	-
M24	R24	28,70	28,40	9,73	9,47	6,960	5,994	-	-

TABLE III APPLICATION IN NORMAL FLAT TOP PAN HEAD							
NOM SHANK DIA	* RECESS AND DRIVER NUMBER	ØA WING DIA		J RECESS DEPTH		GAUGE PENETRATION	
		MAX	MIN	MAX	MIN	MAX	MIN
M12	R12	14,43	14,17	4,90	4,65	3,493	2,934
M14	R14	16,21	15,95	5,51	5,26	3,924	3,315
M16	R16	17,98	17,73	6,12	5,87	4,343	3,683
M18	R18	21,56	21,31	7,32	7,06	5,232	4,470
M20	R18	21,56	21,31	7,32	7,06	5,232	4,470
M22	R22	25,12	24,87	8,53	8,29	6,080	5,220
M24	R24	28,70	28,48	9,73	9,47	6,960	5,994

*NOTE: FOR CORRESPONDING INCH RECESS SIZE AND NUMBER SEE ANNEX A

RECESS GAUGE DIMENSIONS



OFFSET CRUCIFORM RECESS GAUGE

TABLE IV RECESS GAUGE DIMENSION

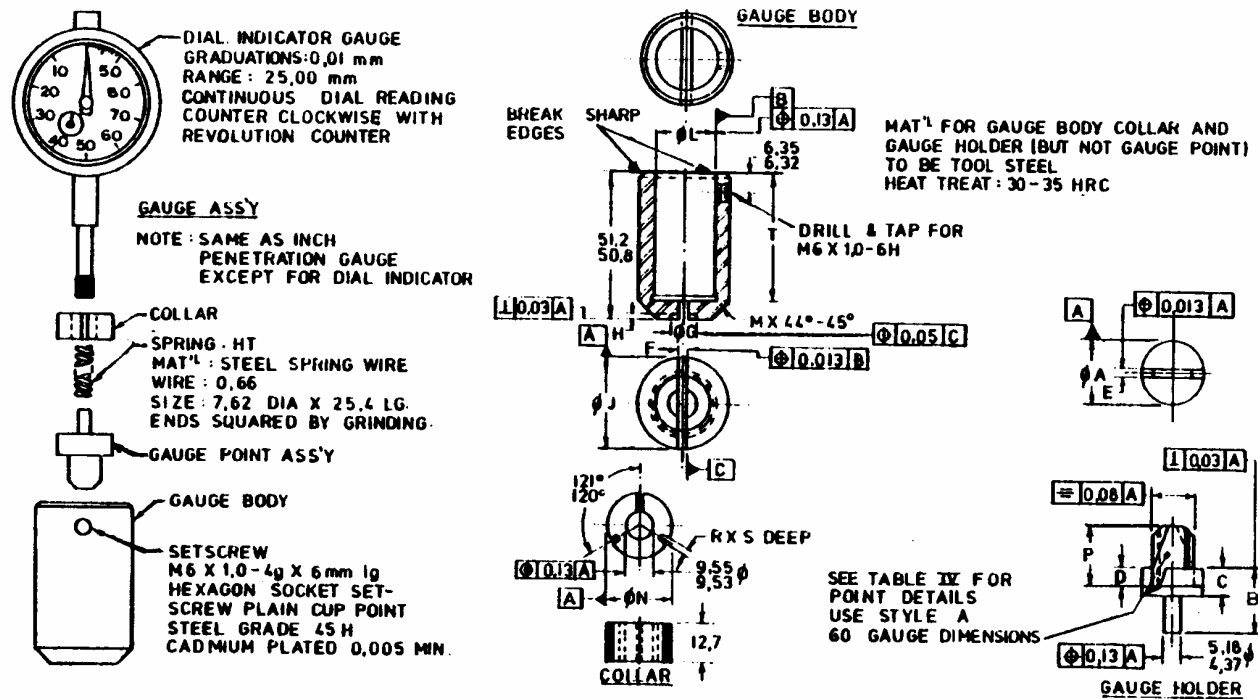
TABLE IV RECESS GAUGE DIMENSION											
RECESS GAUGE NUMBER	TYPE OF GAUGE	A REF	B MAX	F +0,003 -0	ØG ±0,03	R MAX	W ±0,25	² S +0 -0,05	² Y +0,05 -0	INCH RECESS GAUGE NUMBER	
² R4A	GO	1,572	0,35	0,785	2,46	0,38	6,35	1,02	1,52	8A	
² R4B	GO	1,499		0,749	2,46			-	-	8B	
² R4C	NO GO	1,730		0,864	3,99		11,13	1,02	1,52	8C	
² R5A	GO	1,826		0,50	0,912	2,84	0,56	6,35	1,27	1,78	10A
² R5B	GO	1,753			0,976	2,84			-	-	10B
² R5C	NO GO	1,984			0,991	4,55		11,13	1,27	1,78	10C
² R6A	GO	2,436	1,217		3,76	1,78			2,29	1/4A	
² R6B	GO	2,362	1,181		3,76	-			-	1/4B	
² R6C	NO GO	2,593	1,295		5,74	22,22		1,78	2,29	1/4C	
² R8A	GO	3,096	0,76		1,547	4,72	0,76	11,13	2,41	2,92	5/16A
² R8B	GO	3,023			1,511	4,72			-	-	5/16B
² R8C	NO GO	3,254		1,626	7,16	22,22		2,41	2,92	5/16C	
R10A	GO	3,706		1,852	5,64	1,02	11,13	-	-	3/8A	
R10C	NO GO	3,863		1,930				-	-	3/8C	
R12A	GO	4,976		2,487	7,47		19,05	-	-	1/2A	
R12C	NO GO	5,184		2,591				-	-	1/2C	
R14A	GO	5,636		2,817	8,38			-	-	9/16A	
R14C	NO GO	5,845		2,921				-	-	9/16C	
R16A	GO	6,246		3,122	9,32			-	-	5/8A	

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TABLE IV RECESS GAUGE DIMENSION										
RECESS GAUGE NUMBER	TYPE OF GAUGE	A REF	B MAX	F +0,003 -0	ØG ±0,03	R MAX	W ±0,25	² S +0 -0,05	² Y +0,05 -0	INCH RECESS GAUGE NUMBER
R16C	NO GO	6,454		3,226	11,13			-	-	5/8C
R18A	GO	7,516		3,757			25,40	-	-	3/4A
R18C	NO GO	7,724		3,861				-	-	3/4C
R22A	GO	8,786		4,392	12,98			-	-	7/8A
R22C	NO GO	8,994		4,396				-	-	7/8C
R24A	GO	10,056		5,027	14,81		38,10	-	-	10A
R24C	NO GO	10,264		5,131				-	-	10C

- NOTES: 1) MARK GAUGE WITH RECESS GAUGE NUMBER AND TYPE OF GAUGE
- 2) THE REMOVAL WALL OF EACH OF THE TWO WINGS ON "A" AND "C" RECESS GAUGE NUMBERS M4 THROUGH M8 TO HAVE GROOVE AS SHOWN TO CLEAR ANTI-CAMOUT RIB
- 3) FOR INFORMATIVE AND COMPARATIVE USE ONLY

RECESS PENETRATION GAUGE DIMENSIONS

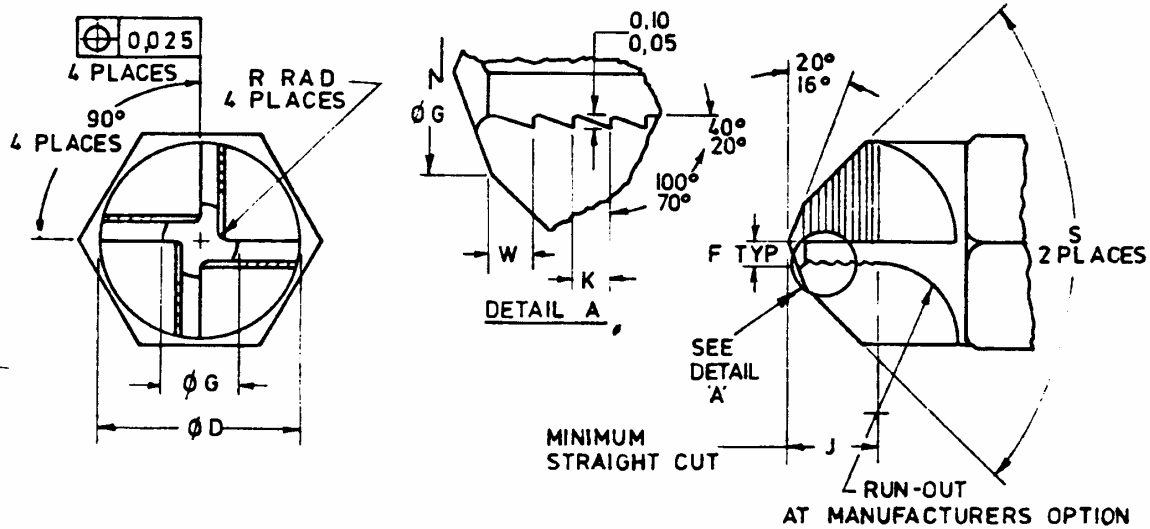


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TABLE V RECESS PENETRATION GAUGE DIMENSIONS																	
RECESS PENET GAUGE NUMBER	ØA	B	C	D	E	F	ØG	H	ØJ	ØL	M	P	ØN	R	S	T	* INCH PENET GAUGE NUMBER
	+0,013 -0	±0,41	±0,41	±0,41	±0,03	+0,05 -0	+0,05 -0	±0,41	±0,41	±0,03 -0	±0,41	±0,13	+0,013 -0	±0,41	±0,41	±0,13 -0	
R4	9,500	21,44	12,70	7,92	1,63	1,60	4,83	0,79	22,23	9,53	3,18	12,95	-	-	-	47,63	8
R5					1,88	1,85	5,56										10
R6	19,025	18,26	9,53		2,49	2,46	7,26	1,57	31,75	19,05	6,35	20,32	19,025	1,57	3,18	44,45	1/4
R8					3,15	3,12	9,07										5/16
R10					3,76	3,73	10,85										3/8
R12					5,03	5,00	14,43				3,18						1/2
R14					5,69	5,66	16,21										9/16
R16					6,30	6,27	17,98										5/8
R18					28,550	15,88	7,57				7,54						21,56
R22	8,84	8,81					25,12	7/8									
R24	10,11	10,08					28,70	1.0									

NOTE: * FOR INFORMATIVE AND COMPARATIVE USE ONLY

DRIVER DIMENSIONS



OFFSET CRUCIFORM DRIVER

DRIVER SIZE	TABLE VI DRIVER DIMENSIONS									INCH DRIVER SIZE & No
	ØD	F OVER RIB	ØG	J MIN	R RADIUS	S	W MAX ¹	K RIB TO RIB ¹	MIN No OF RIBS ¹	
M4	6,15-6,28	0,762-0,775	2,44-2,49	2,39	0,33-0,41	94,5° 92,5°	0,38	0,56 0,38	4	8
M5	7,72-7,785	0,889-0,902	2,82-2,87	2,77	0,51-0,58		91,5° 90,5°		0,76	5
M6	10,90-11,03	1,156-1,207	3,73-3,78	3,18		0,89		5/16		
M8		1,486-1,537	4,70-4,75	3,58	0,58-0,71					
M10	15,67-15,80	1,778-1,829	5,61-5,66	4,37		-		3/8		
M12		2,388-2,438	7,44-7,49	5,16	1,27-1,40	-			1/2	
M14	18,95-19,15	2,680-2,743	8,36-8,41	5,54	1,60-1,73	-		9/16		
M16		2,985-3,048	9,30-9,35	6,35		-			5/8	
M18		21,84-22,35	3,620-3,683	11,13-11,18		7,94			-	3/4
M22		25,15-25,65	4,254-4,318	12,98-13,03		9,52			-	7/8
M24		31,50-32,00	4,890-4,953	14,81-14,86		10,31			2,39-2,51	-

NOTE: 1) DRIVERS FOR RECESS AND DRIVER SIZES M4 THROUGH M8 ARE TO HAVE THE ANTI-CAMOUT RIBS ON THE REMOVAL WALL OF EACH OF THE FOUR WINGS. THE RIB IS PREFERRED TO BE GENERALLY TRIANGULAR IN SHAPE HAVING BASE, HEIGHT AND LOCATION DIMENSIONS WHICH FALL WITHIN THE ENVELOPE OF THE MIN MAX DIMENSION AS SHOWN. WING THICKNESS TO BE MEASURED OVER RIBS.