aerospatiale TECHNICAL MANAGEMENT STANDARDS DEPt.	STANDARD BLIND RIVETS ; . FLATTENED ROUND HEAD (STANDARD SERIES DIAMETERS)	GENERAL DESIGN MANUAL ASN- A0062

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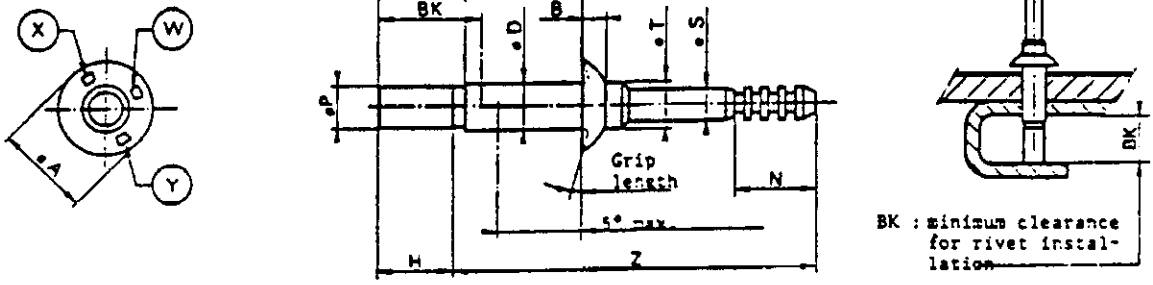
1 - DESCRIPTION

According to the manufacturers, this blind rivet is made of 3 parts (Bush, rod and ring) or 2 parts (Bush with built-in ring and rod).

Engagement and fitting proceed on the same face of the components to be assembled.

2 - CHARACTERISTICS



BK : minimum clearance for rivet installation

* This tolerance is ± 1°30 for monel and s.s. rivets

2.1 - Markings - The markings on the rivet head are as follows :

. at W, a letter specifying the nature of the material :
  letter C : for stainless steel ;
  letter M : for monel ;
  no marking : for aluminium alloy
. at X, manufacturer's identification mark : see I.G.C. 04.81.104.
. at Y, grip length.

2.2 - Dimensions

Diameter code	Nominal diameter (in)	Nominal diameter (mm)	D +.003 −.001 (in)	D +0,076 −0,025 (mm)	A (in)	A (mm)	B REF. +.010 0 (in)	B REF. +0,25 0 (mm)	N min. (in)	N min. (mm)
3	3/32	2,4	.094	2,388	.187 ± .009	4,75 ± 0,29	.040	1,02		
4	1/8	3,2	.125	3,175	.250 ± .012	6,35 ± 0,30	.054	1,37		
5	5/32	4,0	.156	3,962	.312 ± .016	,92 ± 0,41	.067	1,70	.375	9,52
6	3/16	4,8	.187	4,750	.375 ± .019	9,52 ± 0,48	.080	2,03		
8	1/4	6,3	.250	6,350	.500 ± .025	12,70 ± 0,63	.107	2,72		

Diameter code	P* ± .007 (in)	P* ± 0,18 (mm)	S ± .003 (in)	S ± 0,08 (mm)	T REF. max.	T REF. min.	Drilling Hole dia. (in) max.	Drilling Hole dia. (in) min.	Drilling Hole dia. (mm) max.	Drilling Hole dia. (mm) min.	Bit n° (gauge)
3	.090	2,29	.069	1,75	.089	2,26	.100	.097	2,54	2,46	# 40
4	.111	2,82	.090	2,29	.119	3,02	.132	.129	3,35	3,28	# 30
5	.139	3,53	.112	2,84	.148	3,76	.164	.160	4,16	4,06	# 20
6	.164	4,17	.132	3,35	.174	4,42	.196	.192	4,98	4,88	# 10
8	.219	5,56	.178	4,52	.232	5,89	.261	.256	6,63	6,50	F

1) For diameter code 3, the tolerance is ± .004 (± 0.10)

2.3- GRIP LENGTHS AND DIMENSIONS

- Only rivets whose dimensions are in the framed area are covered by document NAS 1398 ;
- Only stainless steel and monel rivets for items 509 and 510 are covered by document NAS 1398.

Grip length ref.	Grip length min.	Grip length max.	3 BK min.	3 H REF.	3 K max.	3 L ±.010 ±0.25	3 Z REF.	4 BK min.	4 H REF	4 K max.	4 L ±.010 ±0.25	4 Z REF	5 BK min.	5 H REF.	5 K max.	5 L ±.010 ±0.25	5 Z REF
01	*	.062 1.57	.22 5.59	.131 3.33	.33 8.38	.156 3.96		.30 7.62	.147 3.73	.39 9.91	.188 4.78		.28 7.11	.127 3.22	.38 9.65	.188 4.78	
02	.63 1.60	.125 3.17	.26 6.60	.172 4.37	.43 10.92	.219 5.56	1.78 45.21	.35 8.89	.203 5.16	.51 12.95	.250 6.35		.34 8.64	.183 4.65	.49 12.45	.250 6.35	
03	.126 3.20	.187 4.75	.30 7.62	.211 5.36	.53 13.46	.281 7.14		.41 10.41	.259 6.58	.63 16.00	.313 7.95		.38 9.91	.239 6.07	.61 15.49	.313 7.95	
04	.188 4.78	.250 6.35	.34 8.64	.254 6.45	.63 16.00	.344 8.74		.46 11.68	.315 8.00	.75 19.05	.375 9.52	1.79 45.47	.45 11.43	.295 7.49	.73 18.54	.375 9.52	1.81 45.97
05	.251 6.38	.312 7.92						.52 13.21	.371 9.42	.87 22.10	.438 11.12		.50 12.70	.351 8.92	.85 21.59	.438 11.12	
06	.313 7.95	.375 9.52						.57 14.48	.427 10.84	.98 24.89	.500 12.70		.56 14.22	.407 10.34	.917 24.64	.500 12.70	
07	.376 9.55	.437 11.10						.63 16.00	.493 12.52	1.11 28.19	.563 14.30	1.79 45.47	.62 15.75	.463 11.76	1.09 27.69	.563 14.30	
08	.438 11.13	.500 12.70						.69 17.53	.549 13.94	1.23 31.24	.626 15.90		.67 17.02	.519 13.18	1.20 30.48	.625 15.88	
09	.501 12.73	.562 14.27											.78 19.81	.616 15.95	1.37 34.80	.688 17.48	2.06 52.32
10	.563 14.30	.625 15.88											.84 21.34	.686 17.42	1.54 39.12	.750 19.05	
11	.626 15.90	.687 17.45															
12	.688 17.48	.750 19.05															
13	.751 19.08	.812 20.62															
14	.813 20.65	.875 22.22															

* See page 4

2.3 - GRIP LENGTHS AND DIMENSIONS (Cont'd)

Grip length ref.	Grip length min.	Grip length max.	6 BK min.	6 H REF.	6 K max.	6 L ±.010 ±0,25	6 Z REF.	8 BK min.	8 H REF.	8 K max.	8 L ±.010 ±0,25	8 Z REF.
01	* **	.062 1,57	.27 6,86	.107 2,72	.37 9,40	.188 4,78						
02	.063 1,60	.125 3,17	.32 8,13	.163 4,14	.48 12,19	.250 6,35		.37 9,40	.179 4,55	.57 14,48	.313 7,95	
03	.126 3,20	.187 4,75	.37 9,40	.219 5,56	.60 15,24	.313 7,95		.43 10,92	.235 5,97	.69 17,53	.375 9,52	
04	.188 4,78	.250 6,35	.43 10,92	.275 6,99	.72 18,29	.375 9,52	1.85 46,99	.48 12,19	.291 7,39	.81 20,57	.438 11,12	1.97 50,04
05	.251 6,38	.312 7,92	.48 12,19	.331 8,41	.84 21,34	.438 11,12		.54 13,72	.347 8,81	.93 23,62	.500 12,70	
06	.313 7,95	.375 9,52	.54 13,72	.387 9,83	.96 24,38	.500 12,70		.60 15,24	.403 10,24	1.04 26,42	.563 14,30	
07	.376 9,55	.437 11,10	.60 15,24	.443 11,25	1.08 27,43	.563 14,30		.65 16,51	.459 11,67	1.16 29,46	.625 15,88	
08	.438 11,13	.500 12,70	.65 16,51	.499 12,67	1.20 30,48	.625 15,88		.71 18,03	.515 13,08	1.28 32,51	.688 17,48	
09	.501 12,73	.562 14,27	.76 19,30	.610 15,49	1.37 34,80	.688 17,48		.82 20,83	.630 16,00	1.46 37,08	.750 19,05	
10	.563 14,30	.625 15,88	.82 20,83	.670 17,02	1.49 37,85	.750 19,05	2.10 53,34	.88 22,35	.690 17,53	1.58 40,13	.813 20,65	2.22 56,39
11	.626 15,90	.687 17,45	.88 22,35	.730 18,54	1.61 40,89	.813 20,65		.94 23,88	.750 19,05	1.70 43,18	.875 22,22	
12	.688 17,48	.750 19,05	.94 23,88	.790 20,07	1.74 44,20	.875 22,22		1.00 25,40	.810 20,57	1.83 46,48	.938 23,82	
13	.751 19,08	.812 20,62						1.06 26,92	.870 22,10	1.95 49,53	1.000 25,40	2.47 62,74
14	.813 20,65	.875 22,22						1.12 28,45	.930 23,62	2.07 52,58	1.063 27,0	

**

Diameter ref.	3 in.	3 mm	4 in.	4 mm	5 in.	5 mm	6 in.	6 mm
min. grip length	.020	0,51	.025	0,64	.031	0,79	.037	0,94

2.4 - TENSILE AND SHEAR STRENGTHS

Diameter ref.	Grip length ref.	Thickness of sheets (mm)	Shear (N)			Tensile (N)		
			Surface treatment code					
			11	20-21-22	30-31	11	20-21-22	30-31
3 1)	02	2 x 1,58			2415			1470
	03	2 x 2,36						
4	01	2 x 0,79	1 345	1 935	2 625	1 020	1 510	2 850
	02	2 x 1,58	2 200	3 160	4 315			
	03	2 x 2,36						
	04	2 x 3,17						
5	01	2 x 0,79	1 825	2 650	3 600	1 670	2 450	4 450
	02	2 x 1,58	2 870	4 140	5 650			
	03	2 x 2,36	3 360	4 850	6 625			
	04	2 x 3,17						
	05	2 x 3,96						
6	02	2 x 1,58	3 600	5 250	7 120	2 400	3 470	6 670
	03	2 x 2,36	4 850	7 070	9 550			
	04	2 x 3,17						
	05	2 x 3,96						
	06	2 x 4,75						
8	02	2 x 1,58	5 250	7 560	10 360	4 450	6 480	12 010
	03	2 x 2,36	7 030	10 140	13 870			
	04	2 x 3,17	8 765	12 630	17 300			
	05	2 x 3,96						
	06	2 x 4,75						
	07	2 x 5,56						
	08	2 x 6,35						

1) Diameter Ref. 3 (Ø 2.4) is stainless steel only, code 30 and 31.

NOTE : For rivets with a grip length greater than that given, take the value as being that of the last table reference for the diameter used.

3 - MATERIALS AND SURFACE TREATMENT

CODE	Material			Protective treatment			Lubrication	Maximum working temperature
	Sleeve	Pin	Ring	Sleeve	Pin	Ring	Sleeve	
11	Aluminium alloy QQ-A-430 2017-T4 or 5056-H38	7075	2017-T4 or 5056-H38	Alumilite anodizing MIL-A-8625 or MIL-C-5541 colour : yellow	Alodine MIL-C-5541	None 1)	None	120°C
20	Monel QQ N-281			None			None	235°C
21				Cadmium plating QQ-P-416 Type II	None		None	
22				Silver plating, min. thickness 5 µm QQ-S-365	None		None	480°C
30	Stainless steel A 286 AMS 5735	Stainless steel A 286 mild treated AMS 5736	Monel QQ-N-281	None	None		Dry film NAS 1400	650°C
31				Cadmium plating QQ.P.416 Type II				235°C

1) Sleeve & ring can be monolithic (manufacturer's decision)
2) May be beige coloured at manufacturer's initiative to identify alloy 5056.

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4 - DESIGNATION

Each blind rivet is designated by its reference number and identification block only as shown in the following example :

a) NEW REFERENCE

Designation	Identification block	
	Manufacturer's code	Reference
BLIND RIVET	F 5442 [1]	ASNA0062 - 4 03-21

Basic code
Diameter code (see chap. 2.2)
Grip length code (see chap. 2.3)
Protective material code (see chap. 3)

b) FORMER REFERENCE

Designation	Identification block	
	Manufacturer's code	Reference
BLIND RIVETS	F 5442 [1]	54222 - 4 03-21

Basic code
Diameter code (see chap. 2.2)
Grip length code (see chap. 2.3)
Protective material code (see chap. 3)

5 - SPECIFICATIONS

Supply specification : NAS 1400

6 - MANUFACTURERS

See PQ 001.05

1) F5442 : Manufacturers code assigned to "Normalisation Générale de l'Aérospatiale" for standardized parts entirely defined by their reference in the General Design Manual.

CMS Radix : 5527 . . .

AMENDMENT LIST

Issue	Paragraph amended	Synthesis of amendment	Reason
A 03.76		New standard	Replaces ASN 542.4 Issue B.
B 02.83		Update	New manufacturer added.
C 12.83	4	2.4 mm dia. rivet added.	
D 05.86	6	- New designation added - Equivalences between ASN coded references and manufacturer references deleted - Photocomposition	Basic reference matched with standard No.