

REV.
A

SAE AS3231

FEDERAL SUPPLY CLASS
5320

RATIONALE

AS3231A HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

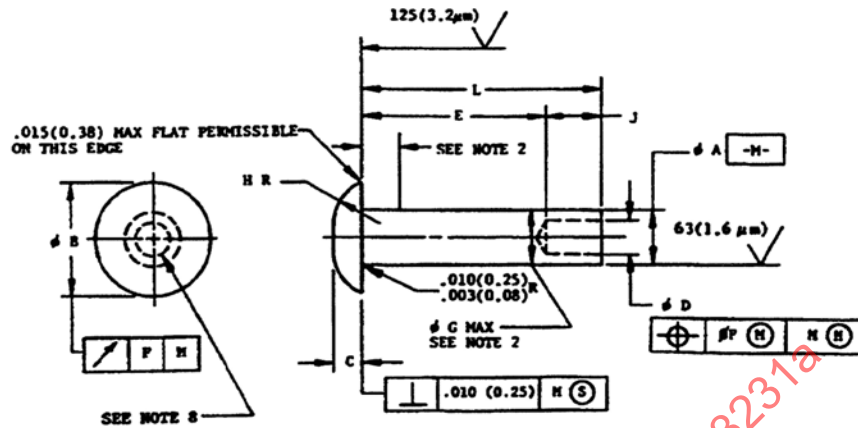
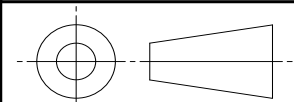


FIGURE 1

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS3231A>

THIRD ANGLE PROJECTION



CUSTODIAN: E-25

PROCUREMENT SPECIFICATION: NONE

SAE Aerospace
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AEROSPACE STANDARD

RIVET - TUBULAR, UNIVERSAL,
AS7232

SAE AS3231
SHEET 1 OF 6

REV.
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TABLE 1

NOMINAL DIAMETER Inch	NOMINAL DIAMETER (mm)	A Inch	A (mm)	B Inch	B (mm)	C Inch	C (mm)	D Inch	D (mm)	F Inch	F (mm)	G MAX Inch	G MAX (mm)	H Inch	H (mm)	J (REF) Inch	J (REF) (mm)
.062	1.57	.061-.063	1.55-1.60	.119-.131	3.03- 3.32	.027-.037	0.69-0.93	.021-.028	0.54-0.66	.010	0.25	.064	1.62	.044-.064	1.12-1.62	.080	2.03
.094	2.39	.093-.095	2.37-2.41	.179-.197	4.55- 5.00	.040-.050	1.02-1.27	.045-.050	1.15-1.27	.010	0.25	.096	2.43	.072-.092	1.83-2.34	.105	2.67
.125	3.18	.123-.126	3.13-3.20	.238-.262	6.05- 6.65	.054-.064	1.38-1.62	.060-.065	1.53-1.65	.010	0.25	.128	3.25	.096-.118	2.49-2.99	.130	3.30
.156	3.96	.154-.157	3.92-3.98	.296-.328	7.52- 8.33	.067-.077	1.71-1.95	.092-.097	2.34-2.46	.015	0.38	.158	4.01	.125-.145	3.18-3.68	.155	3.94
.188	4.78	.186-.189	4.73-4.80	.356-.394	9.05-10.00	.080-.090	2.04-2.28	.107-.112	2.72-2.84	.015	0.38	.191	4.85	.154-.174	3.92-4.41	.180	4.57
.250	6.35	.248-.252	6.30-6.40	.475-.525	12.07-13.33	.107-.117	2.72-2.97	.154-.159	3.92-4.03	.020	0.50	.254	6.45	.207-.227	5.26-5.76	.230	5.84

AEROSPACE STANDARD

RIVET - TUBULAR, UNIVERSAL,
AS7232

L		A=.062 (1.57)			A=.094 (2.39)		
		PART NO.	E		PART NO.	E	
Inch	(mm)		Inch	(mm)		Inch	(mm)
			APPROX MASS			APPROX MASS	
			LB/100	kg/100		LB/100	kg/100
.146-.166	3.71-4.21	AS3231-001	.061-.091	1.39-2.31	AS3231-051	.036-.066	0.92-1.67
.178-.198	4.53-5.02	AS3231-002	.093-.123	2.37-3.12	AS3231-052	.068-.098	1.73-2.48
.209-.229	5.31-5.81	AS3231-003	.109-.169	2.77-4.29	AS3231-053	.099-.139	2.52-3.27
.240-.260	6.10-6.60	AS3231-004	.133-.183	3.94-4.69	AS3231-054	.130-.180	3.31-4.06
.271-.291	6.89-7.39	AS3231-005	.166-.216	4.73-5.48	AS3231-055	.161-.211	4.09-4.85
.302-.322	7.68-8.17	AS3231-006	.217-.247	5.52-6.27	AS3231-056	.192-.222	4.88-5.63
.334-.354	8.49-8.99	AS3231-007	.249-.279	6.33-7.08	AS3231-057	.224-.254	5.69-6.43
.365-.385	9.28-9.77	AS3231-008	.280-.310	7.12-7.87	AS3231-058	.255-.285	6.48-7.23
.396-.416	10.08-10.56	AS3231-009	.311-.341	7.90-8.66	AS3231-059	.286-.316	7.27-8.02
.428-.448	10.86-11.37	AS3231-010	.343-.373	8.72-9.47	AS3231-060	.318-.348	8.08-8.84
.459-.479	11.66-12.16	AS3231-011	.376-.406	9.30-10.26	AS3231-061	.349-.379	8.87-9.62
.490-.510	12.45-12.95	AS3231-012	.403-.433	10.29-11.04	AS3231-062	.380-.410	9.66-10.41
.521-.541	13.26-13.74	AS3231-013	.436-.466	11.08-11.83	AS3231-063	.411-.441	10.44-11.20
.552-.572	14.05-14.52	AS3231-014	.467-.497	11.87-12.62	AS3231-064	.442-.472	11.23-11.98
.584-.604	14.84-15.34	AS3231-015	.499-.529	12.68-13.43	AS3231-065	.474-.504	12.04-12.80
.615-.635	15.63-16.12				AS3231-066	.505-.535	12.83-13.58
.645-.665	16.35-16.89				AS3231-067	.536-.566	13.62-14.37
.678-.698	17.23-17.72				AS3231-068	.568-.598	14.43-15.18
.709-.729	18.01-18.51				AS3231-069	.599-.629	15.22-15.97
.740-.760	18.80-19.30				AS3231-070	.630-.660	16.01-16.76
.771-.791	19.59-20.09				AS3231-071	.661-.691	16.79-17.55
.802-.822	20.38-20.87				AS3231-072	.692-.722	17.58-18.33
.834-.854	21.19-21.69				AS3231-073	.724-.754	18.39-19.15
.865-.885	21.98-22.47				AS3231-074	.755-.785	19.18-19.93
.896-.916	22.76-23.26				AS3231-075	.786-.816	19.97-20.72
.928-.948	23.58-24.07				AS3231-076	.818-.848	20.78-21.53
.959-.979	24.38-24.86				AS3231-077	.849-.879	21.57-22.32
.990-1.010	25.15-25.65				AS3231-078	.880-.910	22.36-23.11
1.052-1.072	26.73-27.22				AS3231-079	.942-.972	23.93-24.68
1.115-1.135	28.33-28.82				AS3231-080	1.003-1.033	25.53-26.28
1.178-1.198	29.93-30.42				AS3231-081	1.068-1.098	27.13-27.88
1.240-1.260	31.50-32.00				AS3231-082	1.130-1.160	28.71-29.46
1.302-1.322	33.08-33.57				AS3231-083	1.192-1.222	30.28-31.03
1.365-1.385	34.68-35.17				AS3231-084	1.255-1.285	31.89-32.63
1.428-1.448	36.28-36.77				AS3231-085	1.381-1.348	33.48-34.23
1.490-1.510	37.85-38.35				AS3231-086	1.380-1.410	35.06-35.81

TABLE 2

AEROSPACE STANDARD

RIVET - TUBULAR, UNIVERSAL,
AS7232

L			A-125 (3.18)			A-156 (3.96)					
Inch	(mm)	PART NO.	E		APPROX MASS		PART NO.	E		APPROX MASS	
			Inch	(mm)	LB/100	kg/100		Inch	(mm)	LB/100	kg/100
.178-.198	4.53-5.02	AS3231-102	.043-.073	1.10-1.85	.092	.042	AS3231-154	.080-.110	2.04-2.79	.181	.082
.209-.229	5.31-5.81	AS3231-103	.074-.104	1.88-2.64	.103	.046	AS3231-155	.111-.141	2.82-3.58	.199	.090
.240-.260	6.10-6.60	AS3231-104	.105-.135	2.67-3.42	.115	.052	AS3231-156	.142-.172	3.61-4.36	.218	.099
.271-.291	6.89-7.39	AS3231-105	.136-.166	3.46-4.21	.127	.058					
.302-.322	7.68-8.17	AS3231-106	.167-.197	4.23-5.00	.138	.067					
.334-.354	8.49-8.99	AS3231-107	.199-.229	5.06-5.81	.149	.068	AS3231-157	.174-.204	4.42-5.18	.246	.112
.365-.385	9.28-9.77	AS3231-108	.230-.260	5.83-6.60	.161	.073	AS3231-158	.205-.235	5.21-5.96	.253	.116
.396-.416	10.06-10.56	AS3231-109	.261-.291	6.63-7.39	.172	.078	AS3231-159	.236-.266	6.00-6.75	.273	.124
.428-.448	10.88-11.37	AS3231-110	.293-.323	7.43-8.20	.184	.084	AS3231-160	.268-.298	6.81-7.56	.291	.132
.459-.479	11.66-12.16	AS3231-111	.324-.354	8.23-8.99	.196	.089	AS3231-161	.299-.329	7.60-8.35	.309	.140
.490-.510	12.45-12.95	AS3231-112	.355-.385	9.02-9.77	.208	.095	AS3231-162	.330-.360	8.39-9.14	.327	.148
.521-.541	13.24-13.74	AS3231-113	.386-.416	9.81-10.56	.220	.100	AS3231-163	.361-.391	9.17-9.93	.346	.152
.552-.572	14.03-14.52	AS3231-114	.417-.447	10.61-11.27	.231	.105	AS3231-164	.392-.422	9.96-10.71	.364	.165
.584-.604	14.82-15.34	AS3231-115	.449-.479	11.41-12.16	.243	.110	AS3231-165	.424-.454	10.77-11.53	.382	.173
.615-.635	15.63-16.12	AS3231-116	.480-.510	12.20-12.95	.255	.116	AS3231-166	.455-.485	11.56-12.31	.400	.181
.646-.666	16.39-16.89	AS3231-117	.511-.541	12.98-13.74	.266	.120	AS3231-167	.486-.516	12.35-13.10	.417	.189
.678-.698	17.23-17.72	AS3231-118	.543-.573	13.78-14.54	.278	.126	AS3231-168	.518-.548	13.16-13.91	.437	.198
.709-.729	18.01-18.51	AS3231-119	.574-.604	14.58-15.34	.290	.132	AS3231-169	.549-.579	13.95-14.70	.454	.206
.740-.760	18.80-19.30	AS3231-120	.605-.635	15.37-16.12	.300	.136	AS3231-170	.580-.610	14.76-15.49	.472	.214
.771-.791	19.59-20.09	AS3231-121	.636-.666	16.16-16.91	.312	.141	AS3231-171	.611-.641	15.52-16.28	.491	.222
.802-.822	20.38-20.87	AS3231-122	.667-.697	16.95-17.70	.324	.147	AS3231-172	.642-.672	16.31-17.06	.509	.231
.834-.854	21.19-21.69	AS3231-123	.699-.729	17.78-18.51	.336	.152	AS3231-173	.674-.704	17.12-17.88	.528	.239
.865-.885	21.98-22.47	AS3231-124	.730-.760	18.58-19.30	.348	.158	AS3231-174	.705-.735	17.91-18.66	.546	.248
.896-.916	22.76-23.26	AS3231-125	.761-.791	19.33-20.09	.359	.163	AS3231-175	.736-.766	18.70-19.45	.564	.256
.928-.948	23.58-24.07	AS3231-126	.793-.823	20.15-20.90	.371	.168	AS3231-176	.768-.798	19.51-20.26	.582	.264
.959-.979	24.36-24.86	AS3231-127	.824-.854	20.93-21.69	.383	.174	AS3231-177	.799-.829	20.30-21.05	.600	.272
.990-1.010	25.15-25.65	AS3231-128	.855-.885	21.72-22.47	.395	.179	AS3231-178	.830-.860	21.09-21.84	.615	.281
1.052-1.072	26.73-27.22	AS3231-129	.917-.947	23.30-24.05	.417	.189	AS3231-179	.892-.922	22.66-23.41	.654	.296
1.115-1.135	28.33-28.82	AS3231-130	.980-1.010	24.90-25.65	.442	.200	AS3231-180	.955-.985	24.26-25.01	.691	.313
1.178-1.198	29.93-30.42	AS3231-131	1.043-1.073	26.50-27.25	.464	.210	AS3231-181	1.018-1.048	25.86-26.61	.727	.330
1.240-1.260	31.50-32.00	AS3231-132	1.105-1.135	28.07-28.82	.487	.221	AS3231-182	1.080-1.110	27.44-28.19	.764	.346
1.302-1.322	33.08-33.57	AS3231-133	1.167-1.197	29.65-30.40	.510	.231	AS3231-183	1.142-1.172	29.03-29.78	.800	.363
1.365-1.385	34.68-35.17	AS3231-134	1.230-1.260	31.23-32.00	.533	.242	AS3231-184	1.205-1.235	30.61-31.36	.837	.380
1.428-1.448	36.28-36.77	AS3231-135	1.293-1.323	32.83-33.60	.557	.252	AS3231-185	1.268-1.298	32.21-32.96	.873	.396
1.490-1.510	37.85-38.35	AS3231-136	1.355-1.385	34.42-35.17	.580	.263	AS3231-186	1.330-1.360	33.79-34.54	.910	.413
1.552-1.572	39.43-39.92	AS3231-137	1.417-1.447	36.00-36.75	.604	.274	AS3231-187	1.392-1.422	35.26-36.01	.946	.429
1.615-1.635	41.03-41.52	AS3231-138	1.480-1.510	37.60-38.35	.627	.284	AS3231-188	1.455-1.485	36.98-37.71	.982	.445
1.678-1.698	42.63-43.12	AS3231-139	1.543-1.573	39.20-39.95	.651	.299	AS3231-189	1.518-1.548	38.57-39.31	1.020	.462
1.740-1.760	44.23-44.70	AS3231-140	1.605-1.635	40.77-41.52	.673	.305	AS3231-190	1.580-1.610	40.14-40.89	1.055	.478
1.802-1.822	45.78-46.27						AS3231-191	1.642-1.672	41.71-42.46	1.093	.496
1.865-1.885	47.38-47.87						AS3231-192	1.705-1.735	43.31-44.06	1.128	.512
1.928-1.948	48.98-49.47						AS3231-193	1.768-1.798	44.91-45.66	1.165	.528
1.990-2.010	50.55-51.05						AS3231-194	1.830-1.860	46.49-47.24	1.201	.545

TABLE 2 (CONTINUED)

AEROSPACE STANDARD

RIVET - TUBULAR, UNIVERSAL,
AS7232

L		A=188 (4.76)				A=230 (6.35)			
Inch	(mm)	PART NO.	E		APPROX MASS LB/100	PART NO.	E		APPROX MASS LB/100
			Inch	(mm)			Inch	(mm)	
.302-.322	7.68-8.17	AS3231-206	.117-.147	2.98-3.73	.333	.152	.161-.191	4.09-4.85	.774
.324-.354	8.23-8.99	AS3231-207	.149-.179	3.79-4.54	.363	.164	.193-.223	4.91-5.66	.871
.365-.385	9.28-9.77	AS3231-208	.180-.210	4.58-5.33	.388	.176	.224-.254	5.69-6.45	.968
.396-.416	10.06-10.56	AS3231-209	.211-.241	5.36-6.12	.415	.188	.255-.285	6.48-7.23	.914
.428-.448	10.88-11.37	AS3231-210	.243-.273	6.18-6.93	.442	.200	.286-.316	7.27-8.02	.961
.459-.479	11.66-12.16	AS3231-211	.274-.304	6.96-7.72	.469	.212	.317-.347	8.06-8.81	1.007
.490-.510	12.45-12.95	AS3231-212	.305-.335	7.75-8.50	.494	.224	.349-.379	8.87-9.62	1.053
.521-.541	13.26-13.76	AS3231-213	.336-.366	8.54-9.29	.520	.236	.380-.410	9.65-10.40	1.102
.552-.572	14.03-14.52	AS3231-214	.367-.397	9.33-10.08	.546	.248	.411-.441	10.43-11.18	1.146
.584-.604	14.84-15.34	AS3231-215	.399-.429	10.14-10.89	.573	.260	.443-.473	11.26-12.01	1.193
.615-.635	15.63-16.12	AS3231-216	.430-.460	10.93-11.68	.599	.272	.474-.504	12.04-12.80	1.241
.645-.665	16.39-16.89	AS3231-217	.461-.491	11.71-12.47	.626	.284	.505-.535	12.83-13.58	1.286
.678-.698	17.23-17.72	AS3231-218	.493-.523	12.51-13.28	.653	.296	.536-.566	13.62-14.37	1.334
.709-.729	18.01-18.51	AS3231-219	.524-.554	13.31-14.07	.679	.308	.567-.597	14.41-15.16	1.381
.740-.760	18.80-19.30	AS3231-220	.555-.585	14.10-14.85	.705	.320	.598-.628	15.22-15.97	1.428
.771-.791	19.59-20.09	AS3231-221	.586-.616	14.89-15.64	.732	.332	.630-.660	16.01-16.76	1.475
.802-.822	20.38-20.87	AS3231-222	.617-.647	15.68-16.43	.757	.344	.661-.691	16.79-17.55	1.521
.834-.854	21.19-21.69	AS3231-223	.649-.679	16.48-17.24	.785	.356	.692-.722	17.61-18.36	1.569
.865-.885	21.98-22.47	AS3231-224	.680-.710	17.28-18.03	.810	.368	.723-.753	18.39-19.15	1.615
.896-.916	22.76-23.26	AS3231-225	.711-.741	18.08-18.82	.837	.380	.754-.784	19.18-19.93	1.661
.928-.948	23.58-24.07	AS3231-226	.743-.773	18.88-19.63	.864	.392	.785-.815	20.06-20.81	1.707
.959-.979	24.38-24.86	AS3231-227	.774-.804	19.68-20.42	.890	.404	.816-.846	20.84-21.59	1.754
.990-1.010	25.15-25.65	AS3231-228	.805-.835	20.48-21.20	.916	.415	.847-.877	21.62-22.37	1.800
1.032-1.052	26.03-26.52	AS3231-229	.837-.867	21.28-22.02	.942	.427	.878-.908	22.40-23.15	1.846
1.115-1.135	28.33-28.82	AS3231-230	.930-.960	22.63-23.38	1.022	.439	.909-.939	23.38-24.13	1.892
1.178-1.198	29.93-30.42	AS3231-231	.993-1.023	25.23-25.98	1.044	.451	.940-.970	24.16-24.91	1.938
1.240-1.260	31.50-32.00	AS3231-232	1.035-1.065	26.78-27.53	1.127	.463	.971-1.001	25.19-25.94	1.984
1.302-1.322	33.08-33.57	AS3231-233	1.117-1.147	28.38-29.13	1.187	.475	1.002-1.032	26.22-26.97	2.030
1.365-1.385	34.68-35.17	AS3231-234	1.180-1.210	29.98-30.73	1.233	.487	1.033-1.063	27.25-28.00	2.076
1.428-1.448	36.28-36.77	AS3231-235	1.243-1.273	31.58-32.33	1.286	.499	1.064-1.094	28.28-29.03	2.122
1.490-1.510	37.85-38.35	AS3231-236	1.305-1.335	33.15-33.90	1.339	.511	1.095-1.125	29.31-30.06	2.168
1.532-1.552	39.43-39.92	AS3231-237	1.367-1.397	34.73-35.48	1.391	.523	1.126-1.156	30.34-31.09	2.214
1.615-1.635	41.03-41.52	AS3231-238	1.430-1.460	36.33-37.08	1.444	.535	1.157-1.187	31.37-32.12	2.260
1.678-1.698	42.63-43.12	AS3231-239	1.493-1.523	37.93-38.68	1.497	.547	1.188-1.218	32.40-33.15	2.306
1.740-1.760	44.20-44.70	AS3231-240	1.555-1.585	39.50-40.25	1.550	.559	1.219-1.249	33.43-34.18	2.352
1.802-1.822	45.78-46.27	AS3231-241	1.617-1.647	41.08-41.83	1.602	.571	1.250-1.280	34.46-35.21	2.398
1.865-1.885	47.38-47.87	AS3231-242	1.680-1.710	42.68-43.43	1.655	.583	1.281-1.311	35.49-36.24	2.444
1.928-1.948	48.98-49.47	AS3231-243	1.743-1.773	44.28-45.03	1.708	.595	1.312-1.342	36.52-37.27	2.490
1.990-2.010	50.55-51.05	AS3231-244	1.805-1.835	45.88-46.60	1.763	.607	1.343-1.373	37.55-38.30	2.536

TABLE 2 (CONTINUED)