

RATIONALE

FIGURE REDRAWN, TABLES REVISED, USAGE NOTE ADDED, TABLE 1C LOADS ROUNDED UP OR DOWN. SPECS UPDATED.

REV.
B

AS3650™

SAE Executive Standards Committee Rules provide that: " This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user." SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

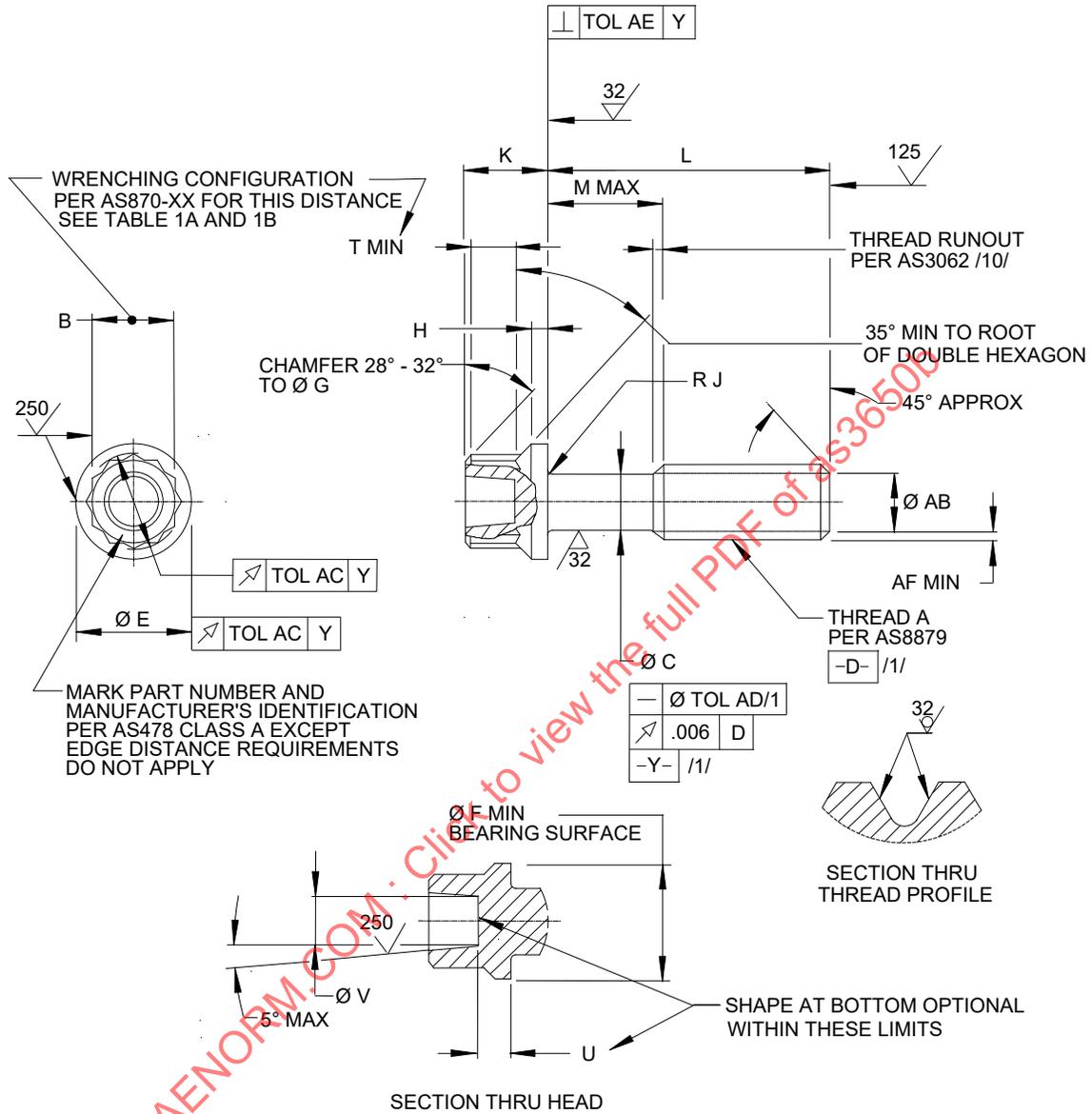
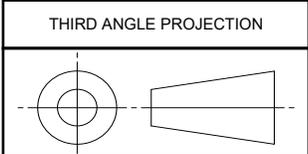


FIGURE 1 - BOLT

For more information on this standard, visit <https://www.sae.org/standards/content/AS3650B>



CUSTODIAN: E-25

PROCUREMENT SPECIFICATION: AS4877 /3/



AEROSPACE STANDARD

(R) BOLT, MACHINE - DOUBLE HEX HEAD,
REDUCED SHANK,
UNS N07718 - 185 KSI

AS3650™
SHEET 1 OF 9

REV.
B

TABLE 1A - DIMENSIONS

DASH NO.	AS8879 THREAD A UNJF-3A	B WRENCH DASH NO.	B NOMINAL SIZE	C	E ±.010	F MIN	G ±.010	H MIN	K ±.010
-3	.1900-32	08	.2500	.140-.145	.375	.335	.250	.040	.258
-4	.2500-28	10	.3125	.195-.200	.438	.398	.312	.060	.303
-5	.3125-24	12	.3750	.247-.255	.500	.460	.375	.070	.338
-6	.3750-24	14	.4375	.309-.317	.562	.522	.438	.090	.383
-7	.4375-20	16	.5000	.362-.370	.688	.648	.500	.110	.454
-8	.5000-20	18	.5625	.424-.432	.750	.710	.562	.125	.495

TABLE 1B - DIMENSIONS

DASH NO.	J ±.005	T MIN	U	V ±.010	AB ±.010	AC	AD	AE	AF
-3	.020	.122	.120-.160	.100	.140	.006	.003/1	.003	.015
-4	.020	.144	.158-.207	.150	.194	.007	.003/1	.003	.018
-5	.020	.166	.166-.225	.206	.249	.008	.003/1	.003	.022
-6	.020	.188	.714-.243	.260	.311	.010	.0025/1	.003	.022
-7	.025	.210	.202-.280	.310	.364	.010	.0025/1	.003	.027
-8	.025	.232	.240-.329	.370	.426	.012	.002/1	.003	.027

TABLE 1C - TEST LOADS

DASH NO.	ULTIMATE TENSILE STRENGTH TEST LOAD, LBF MIN ROOM TEMP
-3	2850
-4	5520
-5	8860
-6	13870
-7	19040
-8	26120

SAENORM.COM : Click to view the full PDF of as3650

TABLE 2 - DIMENSIONS

PART NUMBER	L ±.010	M MAX	APPROX MASS LB/100
AS3650-3-08	.500	.150	.56
AS3650-3-09	.562	.212	.59
AS3650-3-10	.625	.275	.62
AS3650-3-11	.688	.338	.65
AS3650-3-12	.750	.400	.68
AS3650-3-13	.812	.462	.71
AS3650-3-14	.875	.525	.74
AS3650-3-15	.938	.588	.77
AS3650-3-16	1.000	.650	.80
AS3650-3-17	1.062	.712	.83
AS3650-3-18	1.125	.775	.87
AS3650-3-19	1.188	.838	.90
AS3650-3-20	1.250	.900	.93
AS3650-3-21	1.312	.962	.96
AS3650-3-22	1.375	1.025	.99
AS3650-3-23	1.438	1.088	1.02
AS3650-3-24	1.500	1.150	1.04
AS3650-3-25	1.562	1.212	1.07
AS3650-3-26	1.625	1.275	1.10
AS3650-3-27	1.688	1.338	1.13
AS3650-3-28	1.750	1.400	1.16
AS3650-3-29	1.812	1.462	1.19
AS3650-3-30	1.875	1.525	1.22
AS3650-3-31	1.938	1.588	1.25
AS3650-3-32	2.000	1.650	1.28
AS3650-3-34	2.125	1.775	1.35
AS3650-3-36	2.250	1.900	1.40
AS3650-3-38	2.375	2.025	1.46
AS3650-3-40	2.500	2.150	1.52
AS3650-3-42	2.625	2.275	1.58
AS3650-3-44	2.750	2.400	1.63
AS3650-3-46	2.875	2.525	1.70
AS3650-3-48	3.000	2.650	1.76
AS3650-3-50	3.125	2.775	1.82
AS3650-3-52	3.250	2.900	1.87
AS3650-3-54	3.375	3.025	1.94
AS3650-3-56	3.500	3.150	1.99
AS3650-3-58	3.625	3.275	2.05
AS3650-3-60	3.750	3.400	2.12
AS3650-3-62	3.875	3.525	2.17

SAEAMS.COM: Click to view the full PDF of as3650b

TABLE 2 - DIMENSIONS (CONTINUED)

PART NUMBER	L ±.010	M MAX	APPROX MASS LB/100
AS3650-4-09	.562	.212	1.13
AS3650-4-10	.625	.275	1.16
AS3650-4-11	.688	.338	1.19
AS3650-4-12	.750	.400	1.21
AS3650-4-13	.812	.462	1.24
AS3650-4-14	.875	.525	1.27
AS3650-4-15	.938	.588	1.31
AS3650-4-16	1.000	.650	1.38
AS3650-4-17	1.062	.712	1.43
AS3650-4-18	1.125	.775	1.49
AS3650-4-19	1.188	.838	1.54
AS3650-4-20	1.250	.900	1.60
AS3650-4-21	1.312	.962	1.66
AS3650-4-22	1.375	1.025	1.71
AS3650-4-23	1.438	1.088	1.77
AS3650-4-24	1.500	1.150	1.83
AS3650-4-25	1.562	1.212	1.89
AS3650-4-26	1.625	1.275	1.94
AS3650-4-27	1.688	1.338	2.00
AS3650-4-28	1.750	1.400	2.06
AS3650-4-29	1.812	1.462	2.11
AS3650-4-30	1.875	1.525	2.17
AS3650-4-31	1.938	1.588	2.23
AS3650-4-32	2.000	1.650	2.29
AS3650-4-34	2.125	1.775	2.40
AS3650-4-36	2.250	1.900	2.51
AS3650-4-38	2.375	2.025	2.63
AS3650-4-40	2.500	2.150	2.74
AS3650-4-42	2.625	2.275	2.85
AS3650-4-44	2.750	2.400	2.97
AS3650-4-46	2.875	2.525	3.08
AS3650-4-48	3.000	2.650	3.20
AS3650-4-50	3.125	2.775	3.31
AS3650-4-52	3.250	2.900	3.43
AS3650-4-54	3.375	3.025	3.54
AS3650-4-56	3.500	3.150	3.66
AS3650-4-58	3.625	3.275	3.76
AS3650-4-60	3.750	3.400	3.88
AS3650-4-62	3.875	3.525	3.99
AS3650-4-64	4.000	3.650	4.11
AS3650-4-66	4.125	3.775	4.22
AS3650-4-68	4.250	3.900	4.34
AS3650-4-70	4.375	4.025	4.46
AS3650-4-72	4.500	4.150	4.56
AS3650-4-74	4.625	4.275	4.68
AS3650-4-76	4.750	4.400	4.79
AS3650-4-78	4.875	4.525	4.91
AS3650-4-80	5.000	4.650	5.02
AS3650-4-82	5.125	4.775	5.14
AS3650-4-84	5.250	4.900	5.25
AS3650-4-86	5.375	5.025	5.36
AS3650-4-88	5.500	5.150	5.47
AS3650-4-90	5.625	5.275	5.59
AS3650-4-92	5.750	5.400	5.71
AS3650-4-94	5.875	5.525	5.82
AS3650-4-96	6.000	5.650	5.93

SAENORIS.COM. Click to view the full PDF of as3650b

TABLE 2 - DIMENSIONS (CONTINUED)

PART NUMBER	L ±.010	M MAX	APPROX MASS LB/100
AS3650-5-10	.625	.221	1.99
AS3650-5-11	.688	.284	2.03
AS3650-5-12	.750	.346	2.07
AS3650-5-13	.812	.408	2.10
AS3650-5-14	.875	.471	2.15
AS3650-5-15	.938	.534	2.19
AS3650-5-16	1.000	.596	2.25
AS3650-5-17	1.062	.658	2.31
AS3650-5-18	1.125	.721	2.40
AS3650-5-19	1.188	.784	2.50
AS3650-5-20	1.250	.846	2.59
AS3650-5-21	1.312	.908	2.69
AS3650-5-22	1.375	.971	2.77
AS3650-5-23	1.438	1.034	2.87
AS3650-5-24	1.500	1.096	2.96
AS3650-5-25	1.562	1.158	3.05
AS3650-5-26	1.625	1.221	3.14
AS3650-5-27	1.688	1.284	3.23
AS3650-5-28	1.750	1.346	3.33
AS3650-5-29	1.812	1.408	3.42
AS3650-5-30	1.875	1.471	3.51
AS3650-5-31	1.938	1.534	3.60
AS3650-5-32	2.000	1.596	3.69
AS3650-5-34	2.125	1.721	3.88
AS3650-5-36	2.250	1.846	4.06
AS3650-5-38	2.375	1.971	4.25
AS3650-5-40	2.500	2.096	4.43
AS3650-5-42	2.625	2.221	4.62
AS3650-5-44	2.750	2.346	4.80
AS3650-5-46	2.875	2.471	4.99
AS3650-5-48	3.000	2.596	5.17
AS3650-5-50	3.125	2.721	5.35
AS3650-5-52	3.250	2.846	5.54
AS3650-5-54	3.375	2.971	5.72
AS3650-5-56	3.500	3.096	5.90
AS3650-5-58	3.625	3.221	6.09
AS3650-5-60	3.750	3.346	6.27
AS3650-5-62	3.875	3.471	6.46
AS3650-5-64	4.000	3.596	6.64
AS3650-5-66	4.125	3.721	6.82
AS3650-5-68	4.250	3.846	7.01
AS3650-5-70	4.375	3.971	7.20
AS3650-5-72	4.500	4.096	7.38
AS3650-5-74	4.625	4.221	7.56
AS3650-5-76	4.750	4.346	7.75
AS3650-5-78	4.875	4.471	7.93
AS3650-5-80	5.000	4.596	8.11
AS3650-5-82	5.125	4.721	8.30
AS3650-5-84	5.250	4.846	8.48
AS3650-5-86	5.375	4.971	8.67
AS3650-5-88	5.500	5.096	8.85
AS3650-5-90	5.625	5.221	9.04
AS3650-5-92	5.750	5.346	9.22
AS3650-5-94	5.875	5.471	9.40
AS3650-5-96	6.000	5.596	9.59

SAENOR.COM : Click to view the full PDF of as3650b

TABLE 2 - DIMENSIONS (CONTINUED)

PART NUMBER	L ±.010	M MAX	APPROX MASS LB/100
AS3650-6-11	.688	.226	3.09
AS3650-6-12	.750	.288	3.12
AS3650-6-13	.812	.350	3.18
AS3650-6-14	.875	.413	3.24
AS3650-6-15	.938	.476	3.32
AS3650-6-16	1.000	.538	3.41
AS3650-6-17	1.062	.600	3.50
AS3650-6-18	1.125	.663	3.60
AS3650-6-19	1.188	.726	3.72
AS3650-6-20	1.250	.788	3.86
AS3650-6-21	1.312	.850	4.01
AS3650-6-22	1.375	.913	4.15
AS3650-6-23	1.438	.976	4.29
AS3650-6-24	1.500	1.038	4.43
AS3650-6-25	1.562	1.100	4.58
AS3650-6-26	1.625	1.163	4.72
AS3650-6-27	1.688	1.226	4.86
AS3650-6-28	1.750	1.288	5.01
AS3650-6-29	1.812	1.350	5.15
AS3650-6-30	1.875	1.413	5.29
AS3650-6-31	1.938	1.476	5.44
AS3650-6-32	2.000	1.538	5.58
AS3650-6-34	2.125	1.663	5.86
AS3650-6-36	2.250	1.788	6.15
AS3650-6-38	2.375	1.913	6.44
AS3650-6-40	2.500	2.038	6.72
AS3650-6-42	2.625	2.163	7.01
AS3650-6-44	2.750	2.288	7.30
AS3650-6-46	2.875	2.413	7.58
AS3650-6-48	3.000	2.538	7.87
AS3650-6-50	3.125	2.663	8.15
AS3650-6-52	3.250	2.788	8.44
AS3650-6-54	3.375	2.913	8.73
AS3650-6-56	3.500	3.038	9.01
AS3650-6-58	3.625	3.163	9.30
AS3650-6-60	3.750	3.288	9.58
AS3650-6-62	3.875	3.413	9.87
AS3650-6-64	4.000	3.538	10.16
AS3650-6-66	4.125	3.663	10.44
AS3650-6-68	4.250	3.788	10.72
AS3650-6-70	4.375	3.913	11.02
AS3650-6-72	4.500	4.038	11.30
AS3650-6-74	4.625	4.163	11.59
AS3650-6-76	4.750	4.288	11.88
AS3650-6-78	4.875	4.413	12.16
AS3650-6-80	5.000	4.538	12.44
AS3650-6-82	5.125	4.663	12.73
AS3650-6-84	5.250	4.788	13.02
AS3650-6-86	5.375	4.913	13.31
AS3650-6-88	5.500	5.038	13.59
AS3650-6-90	5.625	5.163	13.87
AS3650-6-92	5.750	5.288	14.15
AS3650-6-94	5.875	5.413	14.43
AS3650-6-96	6.000	5.538	14.71

SAENORIP.COM. Click to view the full PDF of as3650b

TABLE 2 - DIMENSIONS (CONTINUED)

PART NUMBER	L ±.010	M MAX	APPROX MASS LB/100
AS3650-7-14	.875	.240	4.96
AS3650-7-15	.938	.303	5.15
AS3650-7-16	1.000	.365	5.35
AS3650-7-17	1.062	.427	5.54
AS3650-7-18	1.125	.490	5.74
AS3650-7-19	1.188	.553	5.93
AS3650-7-20	1.250	.615	6.13
AS3650-7-21	1.312	.677	6.32
AS3650-7-22	1.375	.740	6.52
AS3650-7-23	1.438	.803	6.72
AS3650-7-24	1.500	.865	6.91
AS3650-7-25	1.562	.927	7.10
AS3650-7-26	1.625	.990	7.30
AS3650-7-27	1.688	1.053	7.50
AS3650-7-28	1.750	1.115	7.69
AS3650-7-29	1.812	1.177	7.88
AS3650-7-30	1.875	1.240	8.08
AS3650-7-31	1.938	1.303	8.28
AS3650-7-32	2.000	1.365	8.47
AS3650-7-34	2.125	1.490	8.86
AS3650-7-36	2.250	1.615	9.25
AS3650-7-38	2.375	1.740	9.64
AS3650-7-40	2.500	1.865	10.03
AS3650-7-42	2.625	1.990	10.42
AS3650-7-44	2.750	2.115	10.82
AS3650-7-46	2.875	2.240	11.21
AS3650-7-48	3.000	2.365	11.60
AS3650-7-50	3.125	2.490	11.60
AS3650-7-52	3.250	2.615	11.60
AS3650-7-54	3.375	2.740	11.60
AS3650-7-56	3.500	2.865	11.60
AS3650-7-58	3.625	2.990	13.55
AS3650-7-60	3.750	3.115	13.94
AS3650-7-62	3.875	3.240	14.33
AS3650-7-64	4.000	3.365	14.72
AS3650-7-66	4.125	3.490	15.11
AS3650-7-68	4.250	3.615	15.50
AS3650-7-70	4.375	3.740	15.89
AS3650-7-72	4.500	3.865	16.28
AS3650-7-74	4.625	3.990	16.67
AS3650-7-76	4.750	4.115	17.06
AS3650-7-78	4.875	4.240	17.46
AS3650-7-80	5.000	4.365	17.85
AS3650-7-82	5.125	4.490	18.24
AS3650-7-84	5.250	4.615	18.62
AS3650-7-86	5.375	4.740	19.01
AS3650-7-88	5.500	4.865	19.40
AS3650-7-90	5.625	4.990	19.80
AS3650-7-92	5.750	5.115	20.19
AS3650-7-94	5.875	5.240	20.58
AS3650-7-96	6.000	5.365	20.97

SAENOR.COM: Click to view the full PDF of as3650b