

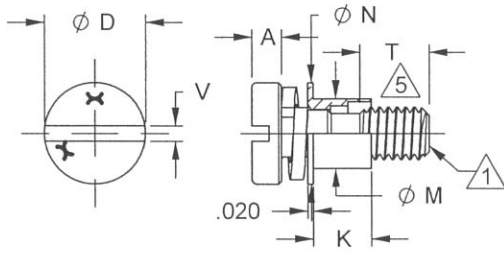
**Alcoa
Fastening
Systems**



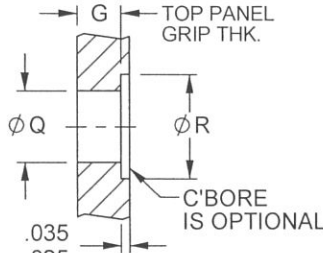
CURRENT DESIGN ACTIVITY
CAGE CODE OHDW7
AFS TUCSON OPERATIONS
3724 EAST COLUMBIA STREET
TUCSON, ARIZONA 85714
PHONE (520) 519-7400
FAX (520) 519-7454

CAPTIVE SCREW

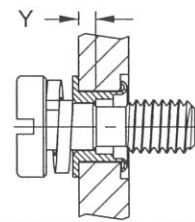
**ENGINEERING
STANDARD**



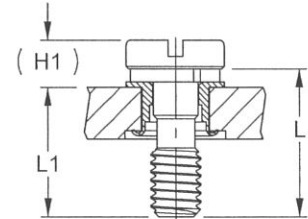
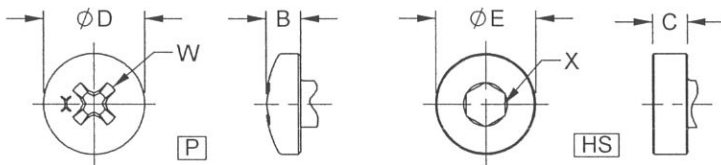
SCREW ASSEMBLY BEFORE MOUNTING



PANEL PREPARATION



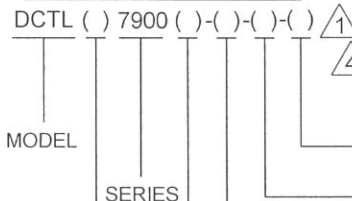
SCREW ASSEMBLY AFTER MOUNTING



SCREW ASSEMBLY AFTER MOUNTING

THREAD SIZE CODE	A	B	C	ØD	ØE	(H1)			ØM ±.005	ØN ±.010	ØQ +.004 - .001	ØR +.020 - .000	T	V	W	X
						SLOT	P	HS								
4, 4F	.063	.075	.110	.212	.180	.108	.120	.155	.178	.219	.187	.281	5	.040	4	3/32
6, 6F	.077	.092	.135	.263	.222	.128	.143	.186	.202	.265	.209	.312		.044	6	7/64
8, 8F	.090	.110	.161	.314	.266	.150	.170	.221	.215	.314	.221	.343		.049	8	9/64
10, 10C, 10F	.104	.127	.187	.365	.307	.171	.194	.254	.250	.365	.257	.375		.055	10	5/32
12, 12C, 12F	.137	.168	.247	.482	.370	.219	.250	.329	.313	.492	.323	.437	.062	1/4	3/16	

PART NUMBER CALLOUT



LENGTH CODE	L ±.020	L1				
		4	6	8	10	12
1	.347	.302	.296	NA		
2	.472	.427	.421	.412	.405	.390
3	.597	.552	.546	.537	.530	.515
4	.722	.677	.671	.662	.655	.640
5	.847	.802	.796	.787	.780	.765
6	.972	.927	.921	.912	.905	.890

GRIP CODE	G (TOP PANEL GRIP THK.)			K ±.005	Y ±.005
	A	B	C		
A	.031-.062	.085	.020	.062	
B	.063-.125	.147			
C	.126-.187	.210			
D	.188-.250	.272			
E	.251-.312	.335			
F	.313-.375	.397			

THREAD SIZE CODE	THREAD SIZE	LEAD	THREAD SIZE CODE	THREAD SIZE	LEAD
4	.112-40 UNC-2A	SINGLE	4F	.112-40 UNC-2A	DOUBLE
6	.138-32 UNC-2A		6F	.138-32 UNC-2A	
8	.164-32 UNC-2A		8F	.164-32 UNC-2A	QUAD
10	.190-32 UNF-2A		10F	.190-32 UNF-2A	
12	.250-28 UNF-2A	SINGLE (COARSE)	12F	.250-28 UNF-2A	
10C	.190-24 UNC-2A				
12C	.250-20 UNC-2A				

CODE	STUD MATERIAL/FINISH
NONE	A-286 (SIZE 4 & 6)/PASSIVATE
	302 (SIZE 8, 10 & 12)/PASSIVATE
A	A-286 (SIZE 8, 10 & 12)/PASSIVATE
B	A-286 (SIZE 8, 10 & 12)/BLACK OXIDE
E	A-286 (SIZE 4 & 6)/BLACK OXIDE
	302 (SIZE 8, 10 & 12)/BLACK OXIDE

RECESS CODE	DRIVING RECESS AND SPECIFICATION
NONE	SLOT RECESS PER ANSIB18.6.3
HS	SOCKET HEAD HEX RECESS PER ANSIB18.3
P	CROSS RECESS PER NASM 9006

DIMENSIONS IN INCHES

TOLERANCE UNLESS OTHERWISE NOTED:
.X = ±.05
.XX = ±.02
.XXX = ±.015
ANGLES ±0.5°

DRAWN BY J. SCHLOBOHM
CHECKED BY J. HEIN

CAGE CODE
OHDW7

R PER DCN 9351, CHANGED CODE TABLE SHEET 1, REVISED MATERIAL DESIGNATIONS, SHEET 2

ISSUED	1/31/2005
REVISED	11/12/2010
PAGE	1 OF 2

CAPTIVE SCREW, OPTIONAL RECESS, LOCKING, THREAD LENGTH CONTROLLED, A-286/302 STUD MATERIAL OPTIONS

DCTL()7900

S-2141

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R



THREAD LENGTH AVAILABILITY TABLE																		
GRIP CODE	4, 4F, 6, 6F						8, 8F, 10, 10C, 10F						12, 12C, 12F					
	1	2	3	4	5	6	2	3	4	5	6	2	3	4	5	6		
A	.140						.230					.198						
B							.168			.250		.136	.261			.280		
C		.140			.203			.230					.198					
D								.168					.136	.261				
E			.140						.230					.198				
F									.168					.136	.261			

ASSEMBLIES NOT AVAILABLE

MATERIAL:

STUD:
A286 CRES PER AMS 5732, AMS 5737, HEAT TREAT TO 160 KSI MIN UTS
OR
302 CRES PER ASTM-A-493, AMS 5636
SLEEVE: ALL SIZES: 304 CRES PER AMS 5639 AND AMS-QQ-S-763
LOCK WASHER: 300 SERIES CRES PER ASME B18.21.1

FINISH:
PASSIVATE PER AMS2700 AND AMS-QQ-P-35.
BLACK OXIDE PER MIL-C-13924, CLASS 3 (A286)
BLACK OXIDE PER MIL-C-13924, CLASS 4 (300 SERIES)

NOTES:

- 1 ▶ LETTERS AT THE END OF PART NUMBER DESIGNATE SPECIAL ASSEMBLIES:
DL - ASSEMBLIES WITH DRI LUBE THREADS PER MIL-PRF-46010
PL - ASSEMBLIES WITH PATCH LOCK PER MIL-DTL-18240
- 2 ▶ -2A THREADS PER ASME B1.1.
- 3 ▶ NO CODE REQUIRED FOR SLOTTED RECESS HEADS.
- 4 ▶ FOR LONGER LENGTHS "L", ADD .125 INCREMENTS PER LENGTH CODE.
- 5 ▶ SEE APPROPRIATE THREAD LENGTH AVAILABILITY TABLE FOR "T" DIMENSION.

INSTALLATION TOOLS: () INDICATES THREAD SIZE CODE

ARBOR PRESS TOOL HW7600-()

HAND TOOL: H8603-(), INCLUDES
NOSE PIECE HN7513-(), PULLER HP7523-(), AND
HANDLE ASSEMBLY TA7533

DIMENSIONS IN INCHES

R	PER DCN 9351, CHANGED CODE TABLE SHEET 1, REVISED MATERIAL DESIGNATIONS, SHEET 2		TOLERANCE UNLESS OTHERWISE NOTED: X = ±.05 XX = ±.02 XXX = ±.015 ANGLES ±0.5°	DRAWN BY	J. SCHLOBOHM	SIGNER INITIALS	
	ISSUED	1/31/2005		CHECKED BY	J. HEIN		
	REVISION	11/12/10		DCTL()7900			
PAGE	2 OF 2	CAPTIVE SCREW, OPTIONAL RECESS, LOCKING, THREAD LENGTH CONTROLLED, A-286/302 STUD MATERIAL OPTIONS		S-2141			

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