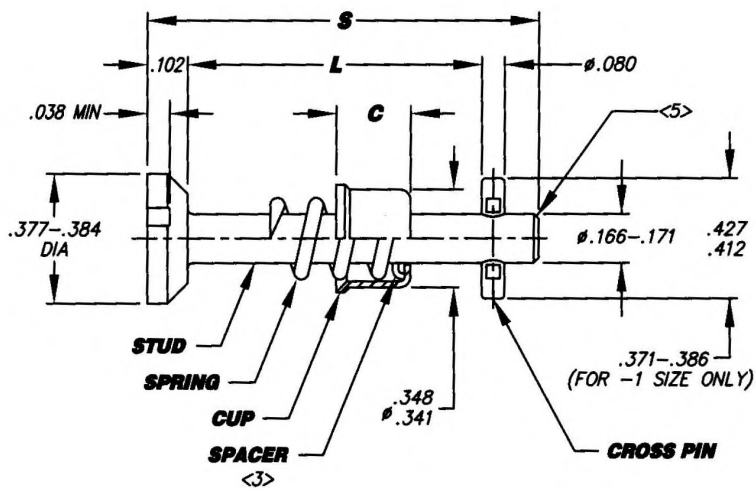
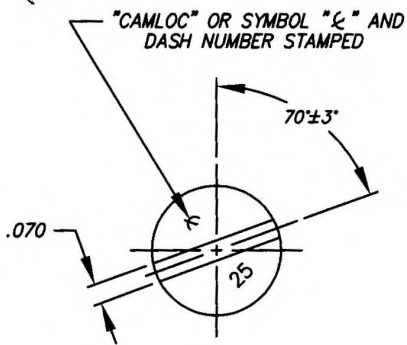
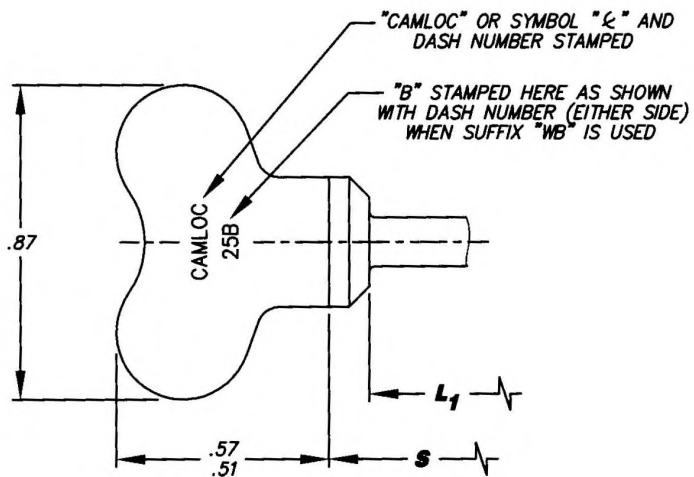
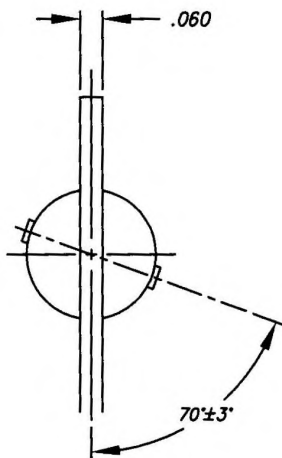


Camloc . Delron . Deutsch . Huck . K-Fast . Kaynar . Microdot . RAM . Rosan . Screwcorp . Tridair . Voi-Shan

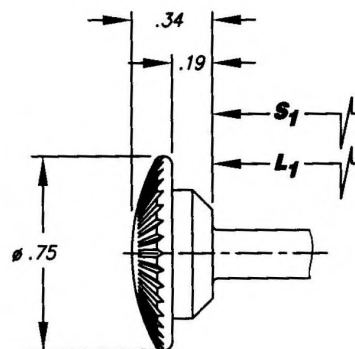
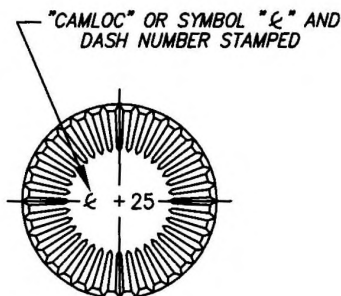
MANUFACTURE OF THE PROPRIETARY PARTS SHOWN HERE WITHOUT WRITTEN CONSENT IS ABSOLUTELY PROHIBITED



SLOTTED HEAD



WING HEAD



KNURLED HEAD

INTERIM DOCUMENT REVISION		
Rev.	Date	DAF#
AN1	10/8/2018	117431

APPROVED DATE 22 JUL 97	CURRENT DESIGN ACTIVITY: ARCONIC Arconic Fastening Systems CAMLOC PRODUCTS 3012 WEST. LOMITA BLVD. TORRANCE, CA 90505	TITLE: STUD ASSEMBLY	CURRENT DESIGN ACTIVITY: CAGE CODE: 71286
REV. LETTER AND DATE AN 04 DEC 12			SALES DRAWING NO.
DAF NUMBER 102814		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	4002 SHEET 1 OF 2

THIS DRAWING EMBODIES A CONFIDENTIAL, PROPRIETARY DESIGN & ALL DESIGN, MANUFACTURING PRODUCTION, USE & SALE RIGHTS REGARDING SAME ARE EXPRESSLY RESERVED.

ANGLES = ± 1°
FRACTIONS = ± 1/32
DECIMALS .XX = ± .02
.XXX = ± .010

Camloc . Delron . Deutsch . Huck . K-Fast . Kaynar . Microdot . RAM . Rosan . Screwcorp . Tridair . Voi-Shan

PART NO. CALLOUT
4002() ()

MANUFACTURE OF THE PROPRIETARY PARTS SHOWN HERE WITHOUT WRITTEN CONSENT IS ABSOLUTELY PROHIBITED

SUFFIX	HEAD TYPE	MATERIAL				FINISH
		WING OR KNURLED HEAD	STUD	CUP & SPACER <3>	SPRING AND CROSS PIN	
NONE <4>	SLOTTED	NONE	4037 STEEL PER AMS6300, ASTM A331, ASTM A322, ASTM A752 OR 1008-1010 STEEL PER ASTM A108	STEEL PER ASTM A109 OR ASTM A108, ASTM A682, ASTM A684	MUSIC WIRE PER ASTM A228	CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2 WITH YELLOW CHROMATE
A		NONE	300 SERIES CRES PER QQ-S-763, ASTM A276, OR ASTM 493 ASTM A580.	300 SERIES CRES PER ASTM A167 OR ASTM A240, ASTM A582 AMS-QQ-S-763	300 SERIES CRES PER QQ-S-763 OR ASTM A313	PASSIVATE PER ASTM A967. STUD & CUP BLACK OXIDE PER MIL-DTL-13924
C		NONE	4037 STEEL PER AMS6300, ASTM A331, ASTM A322, ASTM A752 OR 1008-1010 STEEL PER ASTM A108	STEEL PER ASTM A109 OR ASTM A108, ASTM A682, ASTM A684	MUSIC WIRE PER ASTM A228	ZINC PLATE PER ASTM B633, CLASS 5, TYPE III WITH CLEAR CHROMATE
D						ZINC PLATE PER ASTM B633, CLASS 5, TYPE II
K	KNURLED	4037 STEEL PER AMS6300, ASTM A331, ASTM A322, ASTM A752 OR 1008-1010 STEEL PER ASTM A108.				CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2 WITH YELLOW CHROMATE
S	SLOTTED	NONE	300 SERIES CRES PER AMS-QQ-S-763, ASTM A276 OR ASTM A493, ASTM A580.	300 SERIES CRES PER ASTM A167 OR ASTM A240, ASTM A582, AMS-QQ-S-763	300 SERIES CRES PER AMS-QQ-S-763 OR ASTM A313	PASSIVATE PER AMS 2700
S-CM <6>						
SW	FIXED WING	300 SERIES CRES PER ASTM A240				
W <4>		STEEL PER ASTM A109	4037 STEEL PER AMS6300, ASTM A331, ASTM A322, ASTM A752 OR 1008-1010 STEEL PER ASTM A108	STEEL PER ASTM A109 OR ASTM A108, ASTM A682, ASTM A684	MUSIC WIRE PER ASTM A228	CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2 WITH YELLOW CHROMATE
WB						ZINC PLATE PER ASTM B633, CLASS 8, TYPE II

DASH NUMBER	L	L ₁	S	S ₁	C	APPROX. WEIGHT LBS/100
-1	.383-.393	.383-.398	.66	.56	.220	SEE FORMULA BELOW
-2	.413-.423	.413-.428	.69	.59	.220	
-3	.443-.453	.443-.458	.72	.62	.257	
-4	.473-.483	.473-.488	.75	.65	.257	
-5	.503-.513	.503-.518	.78	.68	.292	
-6	.533-.543	.533-.548	.81	.71	.322	
-7	.563-.573	.563-.578	.84	.74	.352	
-8	.593-.603	.593-.608	.87	.77	.382	
-9	.623-.633	.623-.638	.90	.70	.412	
-10	.653-.663	.653-.668	.93	.83	.442	
-11	.683-.693	.683-.698	.96	.86	.472	
-12	.713-.723	.713-.728	.99	.89	.502	
-13	.743-.753	.743-.758	1.02	.92	.532	
-14	.773-.783	.773-.788	1.05	.95	.562	
-15	.803-.813	.803-.818	1.08	.98	.592	
-16	.833-.843	.833-.848	1.11	1.01	SEE NOTE <1>	
-17	.863-.873	.863-.878	1.14	1.04		
-18	.893-.903	.893-.908	1.17	1.07		
-19	.923-.933	.923-.938	1.20	1.10		
-20	.953-.963	.953-.968	1.23	1.13		
-228		7.193-7.208	7.47		.257	6.028
-234		7.373-7.388	7.650			6.145

NOTES, UNLESS OTHERWISE SPECIFIED:

<1> FOR -16 AND LONGER:
1.1 SLOTTED AND CRES FIXED WING HEAD TYPE C = .257
1.2 KNURLED AND STEEL FIXED WING HEAD TYPE C = .220

2. CROSS PIN WILL WITHSTAND A PUSHOUT FORCE OF 50 LBS. FOR CRES OR 100 LBS. FOR MUSIC WIRE, AND RETAIN SYMMETRICAL ABOUT CENTERLINE OF STUD WITHIN ±.020

<3> SPACER(S) MAY BE REQUIRED FOR FUNCTIONALITY PURPOSE.

<4> PARTS WILL MEET ALL REQUIREMENTS OF NASM5591.

<5> FOR -1 THRU -15 CHAMFERED OPTIONAL FOR ALL OTHER SIZES. <6>


<6> SUFFIX "S-CM" MUST BE CHAMFERED.

FOR DASH NO. NOT IN TABLE USE;
L MIN = (DASH NO. x .030) + .353; L MAX = L MIN + .010
S = (DASH NO. x .03) + .63

APPROX. WEIGHT LBS/100:
STEEL = SLOTTED = .9172 + } (DASH NO. x .0193)
 WING = 1.562 + }
 KNURLED = 2.651 + }
CRES = SLOTTED = .930 + } (DASH NO. x .0195)
 WING = 1.582 + }

INTERIM DOCUMENT REVISION		
Rev.	Date	DAF#
AN1	10/8/2018	117431

THIS DRAWING EMBODIES A CONFIDENTIAL, PROPRIETARY DESIGN & ALL DESIGN, MANUFACTURING PRODUCTION, USE & SALE RIGHTS REGARDING SAME ARE EXPRESSLY RESERVED.

APPROVED DATE 22 JUL 97	CURRENT DESIGN ACTIVITY:  ARCONIC Arconic Fastening Systems	TITLE: STUD ASSEMBLY	CURRENT DESIGN ACTIVITY: CAGE CODE: 71286
REV. LETTER AND DATE AN 04 DEC 12	DAF NUMBER 102814	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	SALES DRAWING NO. 4002 SHEET 2 OF 2

ANGLES = ± 1°
FRACTIONS = ± 1/32
DECIMALS = ± .02
.XX = ± .02
.XXX = ± .010