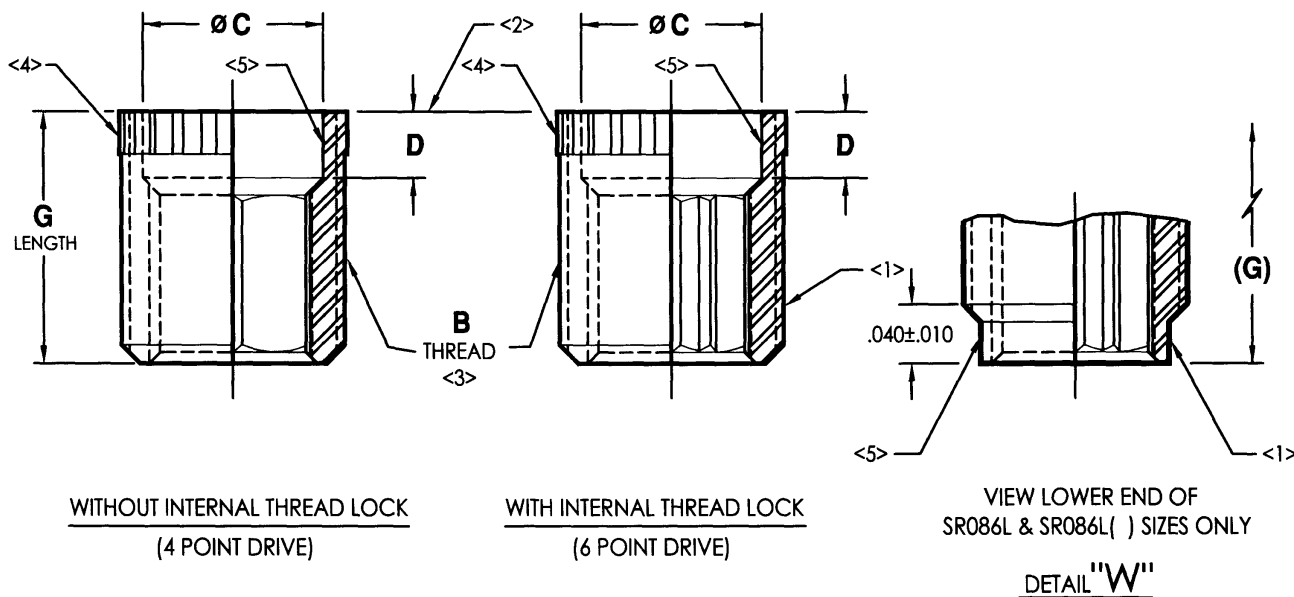
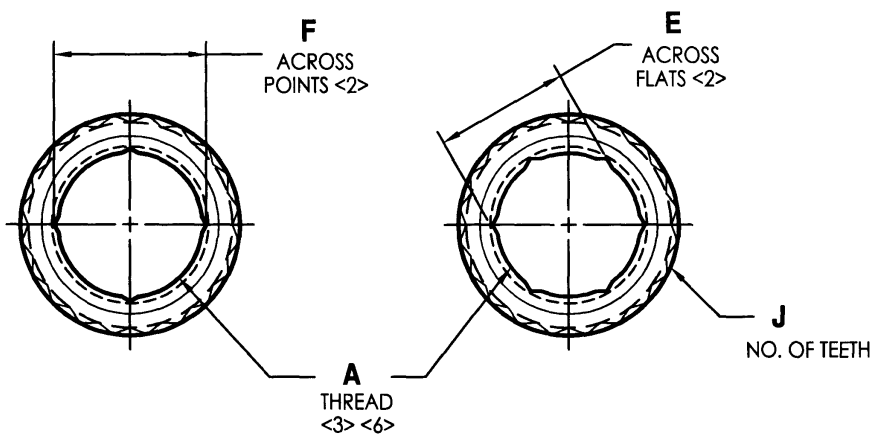


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PART NUMBER CODING:

SR 194 L 0024 - EO450

- SR: SLIMSERT INSERT SERIES
- 194: INTERNAL THREAD SIZE & PITCH COMBINATION
- L: INTERNAL THREAD LOCKING FEATURE (USE DASH FOR NON-LOCKED PARTS)
- 0024: MATERIAL CODE (SEE TABLE II, SHEET 3)
- EO450: ONLY FOR INSERTS WITH EXACT NUMBER OF SERRATIONS (SEE TABLE I, <4>)

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APPROVED DATE 05/01/00	<p><b>ARCONIC</b> Arconic Fastening Systems</p>	TITLE: <b>SLIMSERT INSERT</b>	CURRENT DESIGN ACTIVITY: CAGE CODE: 83324
REV. LETTER AND DATE AP 09/23/15			SALES DRAWING NO.
DAF NUMBER 442518	<p><b>Rosan Products</b> 3018 W. Lamita Blvd. Torrance, California 90505-5103</p>	<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES &amp; ASME Y14.5M TOLERANCES:</p>	<p><b>SR ( ) SERIES</b></p> <p>SHEET 1 OF 5</p>

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ANGLES = ±3°  
DECIMALS .XX = ±.02  
.XXX = ±.010


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**TABLE I**

	BASIC PART NUMBER <7>	A INT. THD. CLASS-3B <3> <6>	B <3>		ØC +.008 -.002	D +.015 -.000	(E)	(F)	G ±.010	J <4> ±1
			EXT. THD. CLASS-3A	Ø MAX. MINOR SPECIAL						
MINIATURE	SR086L	.0860-56 UNC	.1380-40 UNF	.1073	.086	.042	.073	---	.170	21
	SR086						---	.080	.130	
	SR110L	.1120-40 UNC	.1640-32 UNC	.1380	.116	.060	.092	---	.190	15
	SR110						---	.100		
	SR142L	.1380-32 UNC	.1900-32 UNF	.1620	.142	.080	.113	---	.210	17
	SR142						---	.120		
	SR162L	.1640-32 UNC	.2160-28 UNF	.1890	.169	.080	.138	---	.250	20
SR162	---						.150			
STRUCTURAL	SR192L	.1900-32 UNF	.2500-28 UNF	.2170	.192	.080	.157	---	.290	20
	SR192						---	.180		
	SR194L	.1900-24 UNC	.2500-28 UNF	.2170	.192	.080	.157	---	.290	20
	SR194						---	.180		
	SR258L	.2500-28 UNF	.3125-24 UNF	.2785	.252	.095	.210	---	.380	24
	SR258						---	.240		
	SR250L	.2500-20 UNC	.3125-24 UNF	.2785	.252	.095	.210	---	.380	24
	SR250						---	.240		
	SR314L	.3125-24 UNF	.3750-24 UNF	.3405	.314	.110	.266	---	.470	29
	SR314						---	.310		
	SR318L	.3125-18 UNC	.3750-24 UNF	.3405	.314	.110	.266	---	.470	29
	SR318						---	.310		
	SR374L	.3750-24 UNF	.4375-20 UNF	.4010	.377	.110	.322	---	.560	34
	SR374						---	.370		
	SR376L	.3750-16 UNC	.4375-20 UNF	.4010	.377	.110	.322	---	.560	34
	SR376						---	.370		
	SR430L	.4375-20 UNF	.5000-20 UNF	.4630	.439	.135	.377	---	.660	39
	SR430						---	.430		
	SR434L	.4375-14 UNC	.5000-20 UNF	.4630	.439	.135	.377	---	.660	39
	SR434						---	.430		
	SR500L	.5000-20 UNF	.5625-24 UNEF	.5290	.505	.135	.439	---	.750	44
SR500	---						.490			
SR503L	.5000-13 UNC	.5625-24 UNEF	.5290	.505	.135	.439	---	.750	44	
SR503						---	.490			
SR568L	.5625-18 UNF	.6875-12UN	.6130	.571	.145	.481	---	.840	42	
SR568						---	.550			
SR562L	.5625-12 UNC	.6875-12UN	.6130	.571	.145	.481	---	.840	42	
SR562						---	.550			
SR628L	.6250-18 UNF	.7500-16 UNF	.6870	.634	.145	.534	---	.940	46	
SR628						---	.620			
SR621L	.6250-11 UNC	.7500-16 UNF	.6870	.634	.145	.534	---	.940	46	
SR621						---	.620			
SR756L	.7500-16 UNF	.8750-20 UNEF	.8240	.756	.170	.648	---	1.120	44	
SR756						---	.750			
SR750L	.7500-10 UNC	.8750-20 UNEF	.8240	.756	.170	.648	---	1.120	44	
SR750						---	.750			

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APPROVED DATE 05/01/00	 <b>ARCONIC</b> Arconic Fastening Systems <b>Rosan Products</b> 3018 W. Lomita Blvd. Torrance, California 90505-5103	TITLE: <b>SLIMSERT INSERT</b>	CURRENT DESIGN ACTIVITY: CAGE CODE: <b>83324</b>
REV. LETTER AND DATE AP 09/23/13		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	SALES DRAWING NO.
DAF NUMBER 412518		ANGLES = ±3° DECIMALS .XX = ±.02 .XXX = ±.010	<b>SR ( ) SERIES</b> SHEET 2 OF 5

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**TABLE II**


CODE	MATERIAL	MAGNETIC	HEAT TREAT	FINISH	TEMPERATURE RANGE
N/A	17-4 PH (PER AMS 5643)	YES	Rc 35-42	PASSIVATE PER AMS 2700 PLUS SOLID FILM LUBE PER AS5272, TYPE I	-110°/+650°F
0001 <8>				PASSIVATE PER AMS 2700	-110°/+900°F
0004				PASSIVATE PER AMS 2700 PLUS SILVER PLATE PER AMS2410, .0002 MIN. THK.	
0008				IVD ALUMINUM COATING PER MIL-DTL-83488 TYPE II, CLASS 3 PLUS SOLID FILM LUBRICANT PER AS5272, TYPE I	UP TO 600°F
0009				IVD ALUMINUM COATING PER MIL-DTL-83488 TYPE I, CLASS 2	UP TO 600°F
0021 <8>	A286 (AMS 5731, AMS 5734, OR AMS 5737) <9>	NO	Rc 32-40	PASSIVATE PER AMS 2700	-400°/+1200°F
0024				PASSIVATE PER AMS 2700 PLUS SILVER PLATE PER AMS2411, .0002 MIN. THK.	-400°/+1200°F
0025				PASSIVATE PER AMS 2700 PLUS SOLID FILM LUBE PER AS5272, TYPE I	-400°/+650°F
0029				IVD ALUMINUM COATING PER MIL-DTL-83488 TYPE II, CLASS 3 PLUS SOLID FILM LUBRICANT PER AS5272, TYPE I	UP TO 600°F
0036	4130 (AMS6370) OR, 8740 (AMS6322)	YES	Rc 25-34	CAD PLATE PER AMS-QQ-P-416, TYPE III, CL.3 PLUS SOLID FILM LUBE PER AS5272, TYPE I	UP TO +450°F

**NOTES:**

- <1> INTERNAL THREAD LOCKING FEATURE MEETS REQUIREMENT OF MIL-I-45932, LOCATED IN THE CENTER OF INTERNAL THREAD LENGTH APPROXIMATELY, EXCEPT FOR SIZES SR086L & SR086L( ), SEE DETAIL ("W") SHEET 1.
- <2> "E" & "F" DIMENSIONS APPLY TO THIS END ONLY.
- <3> THREADS PER FED-STD-H28/2 AND AS NOTED PRIOR TO THE ADDITION OF SOLID FILM LUBRICANT AND AFTER PLATING WHERE APPLICABLE. EXTERNAL THREAD IS SPECIAL FORM-BASIC UNIFIED WITH INCREASED Ø MINOR PER TABLE I. Ø MAJOR AND Ø PITCH PER -3A TOLERANCES. INTERNAL THREAD Ø MINOR WILL ACCEPT SCREWS AND BOLTS WITH AS8879 THREADS.
- <4> SERRATION AREA:
  - a. BURRS PERMISSIBLE IN SERRATION AREA.
  - b. EXACT NUMBER OF SERRATIONS REQUIRED FOR INSTALLATION IN HARD MATERIALS (ex: STEEL, NICKEL, TITANIUM, etc.). APPLICABLE FOR INSERTS WITH -EO450.
  - c. CONTACT ENGINEERING FOR INSTALLATION INTO HARD MATERIALS.
- <5> THREAD MARKS PERMISSIBLE IN COUNTERBORE.
- <6> UNIFIED NATIONAL COARSE (UNC) THREADS HAVE A MODIFIED Ø MINOR.
- <7> FOR PART NUMBER CODING, SEE SHEET 1.
- <8> FINISH CODES, "0001 & 0021" ONLY AVAILABLE WITHOUT INTERNAL LOCKING FEATURE.
- <9> MAGNETIC PERMEABILITY FOR PARTS FABRICATED FROM A-286 MATERIAL SHALL BE LESS THAN 2.000 (AIR 1.000) H = 200 OERSTEDS.
- <10> STANDARD TAPS, IN SIZES INDICATED, ARE USED TO TAP ALL HOLES.
- <11> THREAD IS MODIFIED BY OVERSIZE TAP DRILL.
- <12> SWAGE OPERATION REQUIRED TO ACHIEVE POSITIVE EXTERNAL LOCK.
- 13. FOR PROPER INSTALLATION, USAGE OF ROSAN DRIVE TOOL & SWAGE TOOL IS MANDATORY.
- <14> STEP DRILLS ARE DESIGNED FOR THRU HOLE DRILLING. WHEN USED TO DRILL A BLIND HOLE, IT MAY BE NECESSARY TO GRIND THE DRILL TO SUIT DEPTH REQUIRED.
- <15> A SERRATED COUNTERBORE IS REQUIRED IN THE INSTALLATION HOLE OF HARD MATERIALS. REFER TO WOBBLE BROACH IN TABLE III.
- 16. DIMENSIONS APPLY AFTER PLATING AND BEFORE THE ADDITION OF SOLID FILM LUBRICANT.

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			SHEET 3 OF 5

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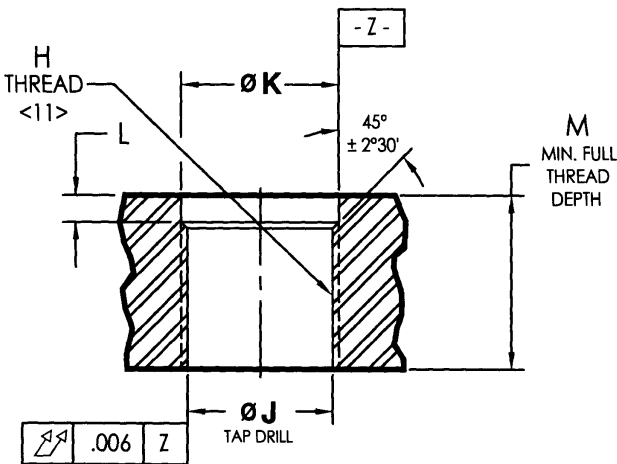


FIGURE 1:  
HOLE PREPARATION

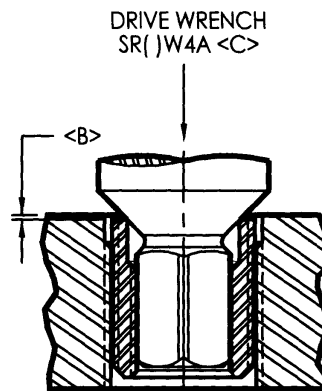


FIGURE 2:  
WRENCHING OPERATION  
NO INTERNAL THREAD LOCK  
(4 POINT DRIVE)

FOR BASIC PART NUMBERS:  
SR086, SR110, SR142, & SR162, INSTALL .010-.020  
BELOW SURFACE OF PARENT MATERIAL. ALL  
LARGER SIZES TO BE INSTALLED .015-.025  
BELOW SURFACE OF PARENT MATERIAL.

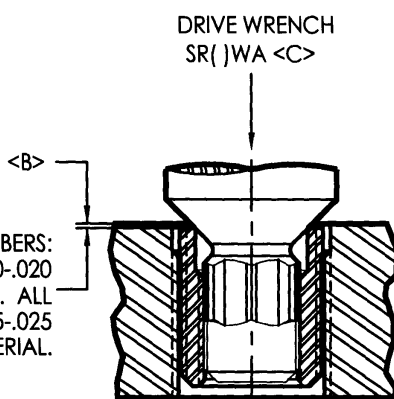


FIGURE 3:  
WRENCHING OPERATION  
WITH INTERNAL LOCK  
(6 POINT DRIVE)

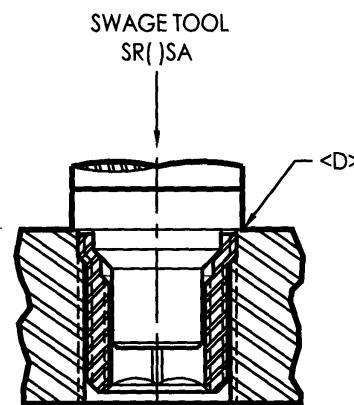


FIGURE 4:  
SWAGING OPERATION <12>  
(SAME TOOL FOR BOTH LOCKED  
& NON-LOCKED PARTS)

**INSTALLATION PROCEDURE:**

- A. INSERTS DESIGNED PRIMARILY FOR INSTALLATION INTO ALUMINUM & MAGNESIUM, NOT EXCEEDING A HARDNESS OF BRINELL 187 (3000 Kg. LOAD & 10mm. BALL).
- <B> THE SLIMSERT IS WRENCHED INTO THE PARENT MATERIAL TO DEPTH SHOWN IN FIGURE 3 WITH WRENCH PER TABLE III.
- <C> USE DRIVE WRENCH AS INDICATED IN TABLE III. OTHERWISE, ALL HOLE PREPARATIONS, OPERATIONS & TOOLS ARE THE SAME FOR BOTH LOCKED AND NON-LOCKED PARTS.
- <D> THE SILMSERT IS INSTALLED WHEN THE SHOULDER OF THE SWAGE TOOL BOTTOMS ON THE SURFACE OF THE PARENT MATERIAL.
- <E> METHOD OF REMOVAL:  
USING REMOVAL TOOL SR()JR, AS NOTED IN TABLE III, C'BORE TO DEPTH "L" DIMENSION. BACK OUT INSERT WITH DRIVE WRENCH, CLEAN OUT HOLE AND INSTALL NEW INSERT.

ALTERNATE METHOD:

USE REMOVAL DRILL SIZE INDICATED IN TABLE III. DRILL TO "L" DIMENSION PLUS .025. REMOVE REMAINING PORTION OF KNURL & FOLLOW PROCEDURE AS STATED ABOVE.

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**TABLE III**

BASIC PART NUMBER <7>	H THREAD CLASS-3B <10> <11>	ØJ<11> TAP DRILL +.004 - .001	K +.004 - .001	L <E>	M MIN.	TOOLING					
						STEP DRILL <14>	DRIVE WRENCH	SWAGE TOOL	REMOVAL TOOL <E>	REMOVAL DRILL <E>	WOBBLE BROACH <15>
SR086L	.1380-40 UNF	.113 (#33)	.138	.050	.160	SR08D	SR08WA	SR08SA	---	.1285 (#30)	---
SR086							SR08W4A				
SR110L	.1640-32 UNC	.140 (#28)	.164	.052	.220	SR11D	SR11WA	SR11SA	SR11R	.156 (5/32)	SRPBT11WB OR WBA
SR110							SR11W4A				
SR142L	.1900-32 UNF	.166 (#19)	.187	.065	.240	SR14D	SR14WA	SR14SA	SR14R	.173 (#17)	SRPBT14WB OR WBA
SR142							SR14W4A				
SR162L	.2160-28 UNF	.191 (#11)	.216	.065	.280	SR16D	SR16WA	SR16SA	SR16R	.205 (#5)	SRPBT16WB OR WBA
SR162							SR16W4A				
SR192L	.2500-28 UNF	.221 (#2)	.250	.082	.325	SR19D	SR19WA	SR19SA	SR19R	.234 (15/64)	SRPBT19WB OR WBA
SR192							SR19W4A				
SR194L							SR19WA				
SR194							SR19W4A				
SR258L	.3125-24 UNF	.281 (9/32)	.312	.082	.415	SR25D	SR25WA	SR25SA	SR25R	.297 (19/64)	SRPBT25WB OR WBA
SR258							SR25W4A				
SR250L							SR25WA				
SR250							SR25W4A				
SR314L	.3750-24 UNF	.343 (11/32)	.375	.082	.505	SR31D	SR31WA	SR31SA	SR31R	.359 (23/64)	SRPBT31WB OR WBA
SR314							SR31W4A				
SR318L							SR31WA				
SR318							SR31W4A				
SR374L	.4375-20 UNF	.404 (Y)	.437	.113	.595	SR37D	SR37WA	SR37SA	SR37R	.422 (27/64)	SRPBT37WB OR WBA
SR374							SR37W4A				
SR376L							SR37WA				
SR376							SR37W4A				
SR430L	.5000-20 UNF	.468 (15/32)	.500	.113	.695	SR43D	SR43WA	SR43SA	SR43R	.484 (31/64)	SRPBT43WB OR WBA
SR430							SR43W4A				
SR434L							SR43WA				
SR434							SR43W4A				
SR500L	.5625-24 UNEF	.531 (17/32)	.562	.113	.785	SR50D	SR50WA	SR50SA	SR50R	.546 (35/64)	SRPBT50WB OR WBA
SR500							SR50W4A				
SR503L							SR50WA				
SR503							SR50W4A				
SR568L	.6875-12 UN	.625 (5/8)	.687	.150	.873	SR56D	SR56WA	SR56SA	SR56R	.672 (43/64)	SRPBT56WB OR WBA
SR568							SR56W4A				
SR562L							SR56WA				
SR562							SR56W4A				
SR628L	.7500-16 UNF	.703 (45/64)	.750	.156	.967	SR62D	SR62WA	SR62SA	SR628R	.734 (47/64)	SRPBT62WB OR WBA
SR628							SR62W4A		SR621R		
SR621L							SR62WA				
SR621							SR62W4A				
SR756L	.8750-20 UNEF	.836 (53.5 / 64)	.875	.156	1.155	SR75D	SR75WA	SR75SA	SR756R	.859 (55/64)	---
SR756							SR75W4A		SR750R		
SR750L							SR75WA				
SR750							SR75W4A				

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