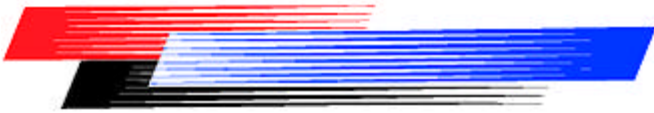


Fairchild Fasteners



Santa Ana Operations

Slimsert® - One-piece thin-walled locked-in threaded insert



SLIMSERT INSERT REPAIR KIT CONTENTS

ONE PIECE
LOCKING INSERT



SLIMSERT INSERT-NON LOCKING (FOUR POINT)

SLIMSERT INSERT-SELF LOCKING (SIX POINT)

STEP DRILL (NEW HOLE PREPARATION)

TAP

WRENCH (FOUR POINT)



WRENCH (SIX POINT)

SWAGE TOOL

SLIMSERT REMOVAL TOOL

VERY
IMPORTANT
REFERENCE NOTE

There are Slimsert inserts with and without the internal thread locking feature. Learn to identify them by their internal wrenching configuration.

INTERNAL THREAD SIZE	KIT PART NUMBER	QUANTITY								BOX SIZE	FEDERAL STOCK NUMBER**
#4-40	K4110-110L	40	40	1	1	1	1	1	1	NO. 4	5180-178-0056
#6-32	K4-142-142L	40	40	1	1	1	1	1	1	NO. 4	5180-177-8960
#-32	K4-162-162L	40	40	1	1	1	1	1	1	NO. 4	5180-177-8966
#10-24	K4-194-194L	40	40	1	1	1	1	1	1	NO. 4	5180-177-8963
1/4-20	K4-250-250L	40	40	1	1	1	1	1	1	NO. 4	5180-177-8967
5/16-18	K4-318-318L	20	20	1	1	1	1	1	1	NO. 4	5180-157-1102
3/8-16	K4-376-376L	12	12	1	1	1	1	1	1	NO. 4	5180-157-1103
7/16-14	K4-434-434L	12	12	1	1	1	1	1	1	NO. 4	
1/2-13	K4-503-503L	10	10	1	1	1	1	1	1	NO. 4	5180-157-1104
5/8-11	K4-621-621L	5	5	1	1	1	1	1	1	NO. 2	5180-157-1105
3/4-10	K4-750-750L	4	4	1	1	1	1	1	1	NO. 2	5180-157-1106
#10-32	K4-192-192L	40	40	1	1	1	1	1	1	NO. 4	5180-1778968
1/4-28	K4-258-258L	40	40	1	1	1	1	1	1	NO. 4	5180-178-0046
5/16-24	K4-314-314L	20	20	1	1	1	1	1	1	NO. 4	5180-177-8962
3/8-24	K4-374-374L	12	12	1	1	1	1	1	1	NO. 4	5180-157-1108
7/16-20	K4-430-430L	12	12	1	1	1	1	1	1	NO. 4	5180-157-1110
1/2-20	K4-500-500L	10	10	1	1	1	1	1	1	NO. 4	5180-157-1228
5/8-18	K4-628-628L	5	5	1	1	1	1	1	1	NO. 2	5180-157-1124
3/4-16	K4-756-756L	4	4	1	1	1	1	1	1	NO. 2	5180-157-1130

NOTE: BOX NO 2...8-5/8"x7-3/8"x1-15/16"
BOX NO. 4...8-5/8"x15/16"

HOLE PREPARATION AND TOOLING

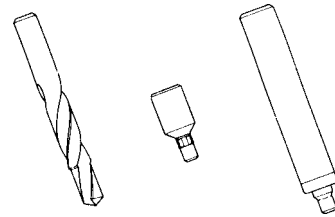


TABLE I

PART NUMBER	TAP DRILL +.004 -.001	TAP -3B MOD.	C'BORE DIA. +.004 -.001	C'BORE DEPTH	TAP MIN. FULL THD.	STEP DRILL**	DRIVE WRENCH*	SWAGE TOOL
SR110	.140(#28)	#8-32 UNC	.164	.052	.220	SR11D	SR11W4-A	SR11S-A
SR142	.1661(#19)	#10-32 UNF	.187	.065	.240	SR14D	SR14W4-A	SR14S-A
SR162	.191(#11)	#12-28-UNF	.216	.05	.280	SR16D	SR16W4-A	SR16S-A
SR192	.221(#2)	1/4-28 UNF	.250	.082	.325	SR19D	SR19W4-A	SR19S-A
SR194								
SR258	.281(9/32)	5/16-24 UNF	.312	.082	.415	SR25D	SR25W4-A	SR25S-A
SR250								
SR314	.343(11/32)	.7/8-24 UNF	.375	.082	.505	SR31D	SR1W4-A	SR31S-A
SR318								
SR374	.404(Y)	7/16-20 UNF	.437	.113	.565	SR37D	SR37W4-A	SR37S-A
SR376								
SR430	.468(15/32)	1/2-20 UNF	.500	.113	.695	SR43D	SR43W4-A	SR43S-A
SR434								
SR500	.531(17/32)	9/16-24 UNEF	.562	.113	.785	SR50D	SR50W4-A	SR50S-A
SR503								
SR628	.703(45/4)	3/4-16 UNF	.75	.156	.967	SR62D	SR62W4-A	SR62S-A
SR621								
SR756	.844(27/32)	7/8-20 UNEF	.875	.156	1.155	SR75D	SR75W4-A	SR75S-A
SR750								

* Wrench changes for parts having internal thread lock. For proper wrench part number drop the "4". Example: SR37W-A.

** Designed for through drilling. Point may be ground down for shallow blind holes as required.

INSERT DIMENSIONAL DATA

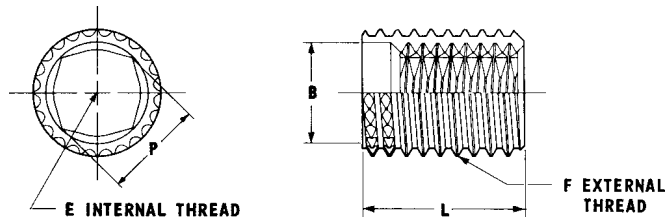


TABLE II

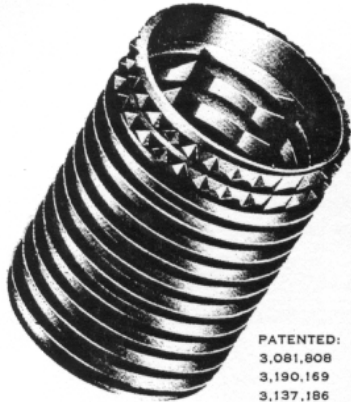
	PART NUMBER*	E	F	MAX.	L	B	C'BORE	P
		INT. THD-3B f MOD. MINOR DIA.	EXT. THD. WITH MOD MINOR DIA.	MINOR DIA. EXT. THD.	LENGTH ±.010	C'BORE DIA. +.008 -.002	DEPTH +.010 -.000	ACROSS POINTS
MINIATURE	SR110	Ø 4-40 UNC	8-32 UNC	.1380	.19	.116	.060	.10
	SR142	Ø 6-32 UNC	10-32UNF	.1620	.21	.142	.065	.12
	SR162	Ø -32 UNC	12-28UNF	.1890	.25	.169	.065	.15
STRUCTURAL	SR192	10-32UNF	1/4-28 UNF	.2170	.29	.192	.05	.18
	SR194	Ø 10-24 UNC						
	SR258	1/4-28 UNF	5/16-24 UNF	.2785	.38	.252	.085	.24
	SR250	Ø 1/4-20 UNC						
	SR314	5/16-24 UNF	3/8-24 UNF	.3405	.47	.314	.085	.31
	SR318	Ø 5/16-18 UNC						
	SR374	3/18-24 UNF	7/16-20 UNF	.4010	.56	.377	.115	.37
	SR376	Ø 3/18-16 UNC						
LARGE	SR430	7/16-20 UNF	1/20-20 UNF	.4630	.66	.439	.115	.43
	SR434	Ø 7/16-14 UNC						
	SR500	1/2-20 UNF	9/16-24 UNEF	.5290	.75	.505	.115	.49
	SR503	Ø 1/2-13 UNC						
	SR628	5/8-18 UNF	3/4-16 UNF	.6870	.94	.634	.145	.62
	SR621	Ø 5/8-11 UNC						
	SR756	3/4-16 UNF	7/8-20 UNEF	.8240	1.12	.756	.170	.75
	SR750	Ø 3/4-10 UNC						

* Parts are available with internal thread locking feature by adding suffix letter "L" to part number. Example: SR374L. All dimensional data is the same for locked parts except column "P" wrench configuration. See note (*) Table II.

Be an expert on thread repair with...

ROSÁN SLIMSERT[®] INSERTS

HOLE PREPARATION AND INSTALLATION



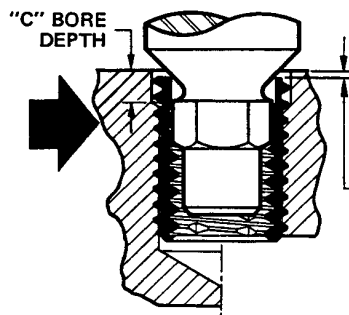
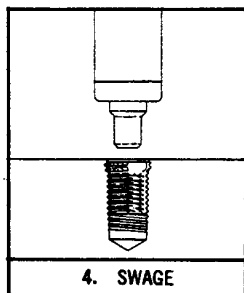
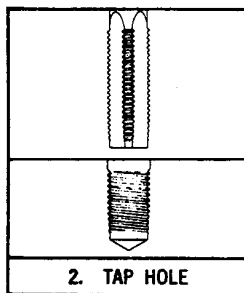
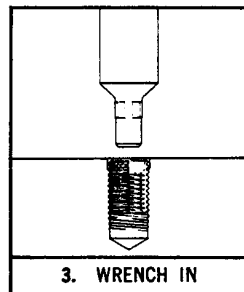
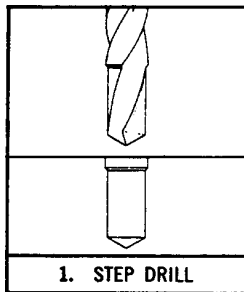
PATENTED:
3,081,808
3,190,169
3,137,186



PART NUMBER (1)	TAP DRILL +.004 -.001	TAP -3B MOD.	C'BORE DIA. +.004 -.001	C'BORE DEPTH ±.005	TAP MIN. FULL THD.	STEP DRILL	DRIVE WRENCH (2)	SWAGE TOOL
SR086	.113(#33)	6-40 UNF Not Mod	.138	.045-.050	.160	SR08D	SR08W4-A	SR08S-A
SR110	.140(#28)	#8-32 UNC	.164	.052	.220	SR11D	SR11W4-A	SR1S-A
SR142	.166(#19)	#10-32 UNF	.187	.065	.240	SR14D	SR14W4-A	SR14S-A
SR162	.191(#11)	#12-28 UNF	.216	.065	.280	SR16D	SR16W4-A	SR16S-A
SR192	.221(#2)	1/4-28 UNF	.250	.082	.325	SR19D	SR19W4-A	SR19S-A
SR194								
SR258	.281(9/32)	5/16-24 UNF	.312	.082	.415	SR25D	SR25W4-A	SR25S-A
SR250								
SR314	.343(11/32)	3/8-24 UNF	.375	.082	.505	SR31D	SR31W4-A	SR31S-A
SR318								
SR374	.404(Y)	7/16-20 UNF	.437	.113	.595	SR37D	SR37W4-A	SR37S-A
SR376								
SR430	.468(15/32)	1/2-20 UNF	.50	.113	.695	SR43D	SR43W4-A	SR43S-A
SR434								
SR500	.531(17/32)	9/16-24 UNEF	.562	.113	.785	SR50D	SR50W4-A	SR50S-A
SR503								
SR568	.625(5/8)	11/16-12N	.687	.150	.873	SR56D	SR56W4-AS	R56S-A
SR562								
SR628	703(45/64)	3/4-16 UNF	.750	.156	.967	SR62D	SR62W4-A	SR62S-A
SR621								
SR756	.844(27/32)	7/8-20 UNEF	.75	.156	1.155	SR75D	SR75W4-A	SR75S-A
SR750								

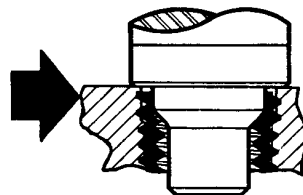
The INTERNAL THREAD LOCKING SLIMSERT INSERT HAS A 6 POINT WRENCHING RECESS. Those without the internal thread locking feature have

- (1) The hole preparation and installation tooling for both the non-internal thread locking Insert (part numbers shown) and the internal thread locking Slimsert Inserts, [SR()L] are the same except for the drive wrench.
- (2) The DRIVE WRENCH NUMBERS SHOWN are used to instal the 4 POINT SLIMSERT INSERTS. The 6 Point Slimsert Inserts are installed with another drive tool specified by



- WRENCH THE SR()L INSERTS IN USING SR()WA DRIVE WRENCH.
- WRENCH THE SR() INSERTS IN USING SR()W4A DRIVE WRENCH.

WRENCHING DEPTH: For SR086, 110, 142 and .162 parts, install .010" to .020" below surface of parent material before swaging. All other parts are to be installed .015" to .025" below surface of parent material before swaging.



PLACE THE SR()SA SWAGE TOOL IN SLIMSERT AND APPLY A DOWNWARD FORCE SUFFICIENT TO BOTTOM THE NYLON PROTECTIVE SHOULDER ON THE SURFACE OF THE PARENT MATERIAL.



ROSÁN/Fairchild Fasteners
3130 West Harvard Street
Santa Ana, California 92704 USA

AFTER SWAGE GAGE

CHECKS SWAGE AND DEPTH OF THE ROSAN SLIMSERT INSERTS

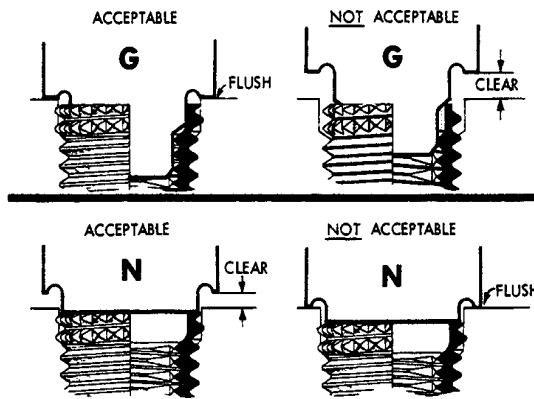


SR() GSD-A SERIES

INSPECTION OF INSTALLED ROSÁN SLIMSERTS ® IS NOW EASIER THAN EVER!

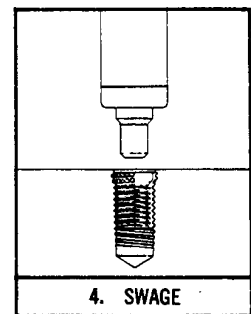
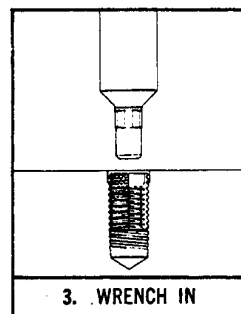
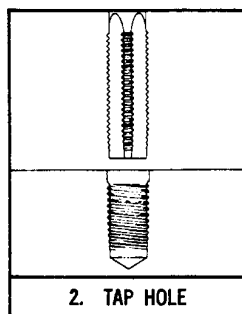
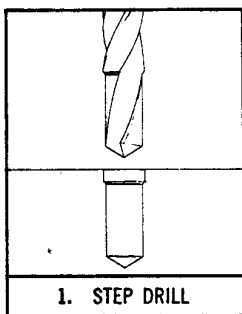
Insert the "G" (for "go") end of the gage into the neck of the insert - it ust bottom on the aterial surface to show that full swage has been accomplished.

Now insert the "N" (for "not go") end. The shoulder must be clear of the work surface to indicate insert has not been driven too deep.



PART NUMBER	INSERT INTERNAL THD. CLASS 3B Ø MOD. MINOR DIA.	INSERT EXTERNAL THD. WITH MOD. MINOR DIA.	GAGE PART NUMBER
SR 086	2-56 UNCØ	6-40 UNF-3A NOT MOD.	SR08GSD-A
SR 110 L	4-40 UNC Ø	8-32 UNC	SR11GSD-A
SR 110	4-40 UNCØ		
SR 142 L	6-32 UNCØ	10-32 UNF	SR14GSD-A
SR 142	6-32 UNC Ø		
SR 162 L	8-32 UNC Ø	12-28 UNF	SR16GSD-A
SR 162	8-32 UNC Ø		
SR 192 L	10-32 UNF	1/4-28 UNF	SR19GSD-A
SR 192			
SR 194 L	10-24 UNC Ø		
SR 194			
SR 258 L	1/4-28 UNF	5/16-24 UNF	SR25GSD-A
SR 258			
SR 250 L	1/4-20 UNC Ø		
SR 250			
SR 314 L	5/16-24 UNF	3/8-24 UNF	SR31GSD-A
SR 314			
SR 318 L	5/16-18 UNC Ø		
SR 318			
SR 374 L	3/8-24 UNF	7/16-20 UNF	SR37GSD-A
SR 374			
SR 376 L	3/8-16 UNC Ø		
SR 376			
SR 430 L	7/16-20 UNF	1/2-20 UNF	SR43GSD-A
SR 430			
SR 434 L	7/16-14 UNC Ø		
SR 434			
SR 500 L	1/2-20 UNF	9/16-24 UNEF	SR50GSD-A
SR 500			
SR 503 L	1/2-13 UNC Ø		
SR 503			

Remember those... 4 SURE STEPS TO SUCCESS



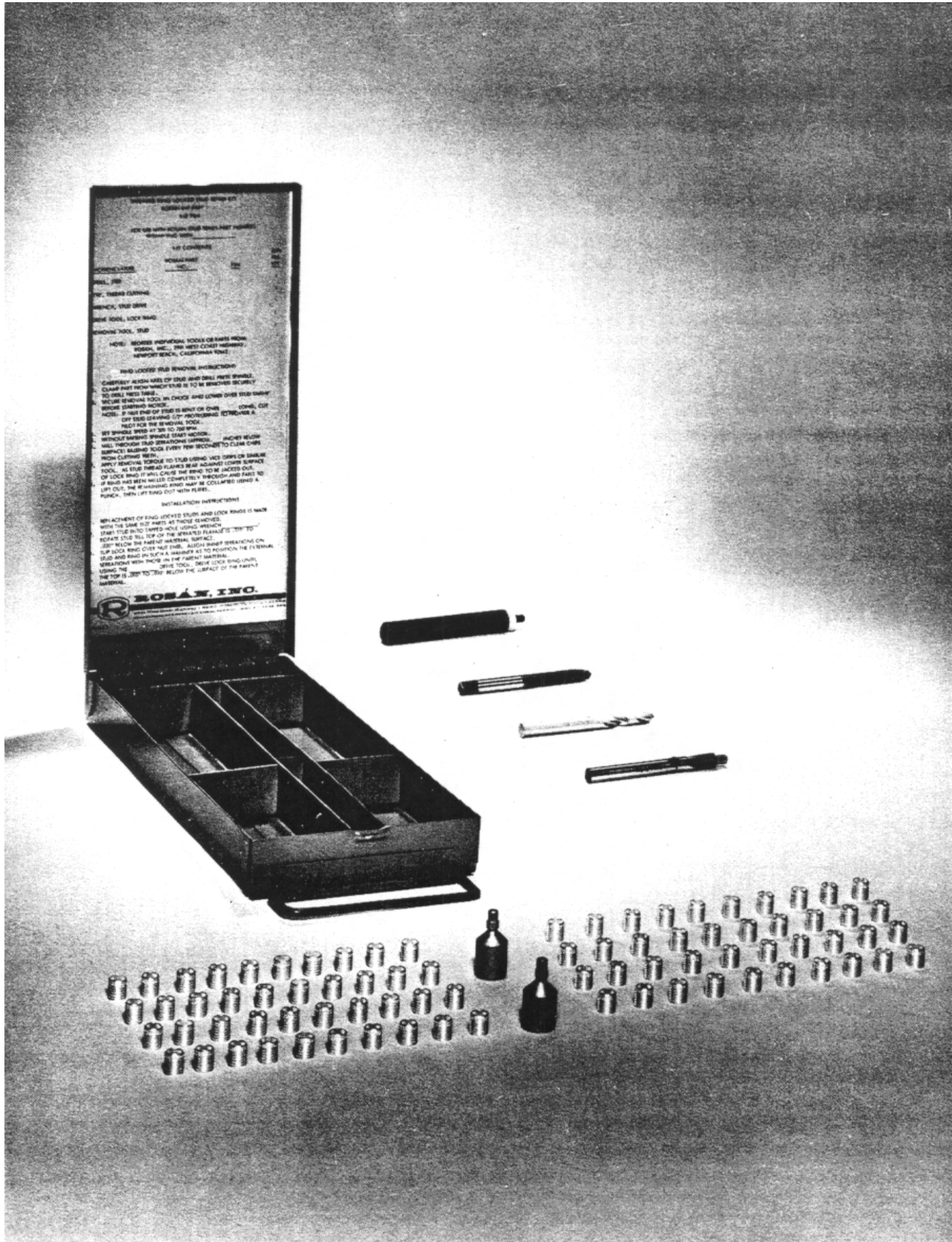


SLIMSERT INSERT 'SRW' KIT
CONTENT

TSB10969
REV. "E"
PAGE 3

ONE EACH PER KIT

INSERT INT. THD.	KIT PART NUMBER	NUMBER INSERTS PER/KIT	INSERT PART NUMBER	STEP DRILL	TAP	DRIVE WRENCH	SWAGE TOOL	REMOVAL TOOL
4-40 UNC	K4SRW110-110L	40 ea	SRW110L SRW110	SR14D	SR14T	SR11WA SR11W4A	SRW11SA	SRW11R
6-32 UNC	K4SRW142-142L	40 ea	SRW 142L SRW142	SRW 14D	SRW14T	SR14W-A SR14W4-A	SR 14SA	SRW 14R
8-32 UNC	K4SRW162-162L	40 ea	SRW 162L SRW162	SRW 16D	SRW 16T	SR16W-A SR16W4-A	SR 16SA	SRW 16R
10-32 UNF	K4SRW192-192L	40 ea	SRW 192L SRW 192	SRW 19D	SRW19T	SR19W-A SR19W4-A	SRW19SA	SRW 19R
10-24 UNC	KRSRW194-194L	40 ea	SRW194L SRW 194			SR19W-A SR19W4-A		
1/4-28 UNF	K4SRW258-258L	40 ea	SRW 258L SRW 258	SRW 25D	SRW25T	SR25W-A SR25W4-A	SRW25SA	SRW 25R
1/4-20	K4SRW250-250L	40 ea	SRW 250L SRW 250			SR25W-A SR25W4-A		
5/16-24 UNF	K4SRW314-314L	20 ea	SRW 314L SRW 314	SRW 31D	SRW31T	SR31W-A SR31W4-A	SRW31SA	SRW 31R
5/16-18 UNC	K4SRW318-318L	20 ea	SRW 318L SRW 318			SR31W-A SR31W4-A		
3/8-24 UNF	K4SRW374-374L	12 ea	SRW 374L SRW 374	SRW 37D	SRW37T	SR37W-A SR37W4-A	SRW37SA	SRW 37R
3/8-16 UNC	K4SRW376-376L	12 ea	SRW 376L SRW 376			SR37W-A SR37W4-A		
7/16-20 UNF	K4SRW430-430L	12 ea	SRW 430L SRW 430	SRW 43D	SRW43T	SR43W-A SR43W4-A	SRW43SA	SRW 43R
7/16-14 UNC	K4SRW434-434L	12 ea	SRW 434L SRW 434			SR43W-A SR43W4-A		
1/2-20 UNF	K4SRW500-500L	10 ea	SRW 500 SRW 500L	SRW 50D	SRW50T	SR50W-A SR50W4-A	SRW50SA	SRW 50R
1/2-13 UNC	K4SRW503-503L	10 ea	SRW 503L SRW 503			SR50W-A SR50W4-A		
5/8-18 UNF	K4SRW628-628L	5 ea	SRW 628L SRW628	SRW62D	SRW62T	SR62WA SR62W4A	SRW62SA	SRW628R
5/8-11UNC	K4SRW621-621L	5 ea	SRW 621L SRW 621			SR62WA SR62W4A		SRW 621R
3/4-16UNF	K4SRW756-756L	4 ea	SRW 756L SRW756	SRW75D	SRW75T	SR75WA SR75W4-A	SRW75SA	SRW756R
3/4-10UNC	K4SRW750-750L	4 ea	SRW750L SRW450			SR75WA SR75W4-A		SRW750





ROSÁN SLIMSERT INSERT
 EQUIVALENT AND REPLACEMENT
 FOR WIRE TYPE "MS" INSERTS

TSB10969
 REV. "E"
 PAGE 5

— NON THREAD LOCKING —

G.E.C.
 9-11-69
DRA 355-IC
 REV "A" 4-1-75
 REV "B" 4-26-76
 REV "C" 6-17-76
 REV "D" 84-05-21

	INSERT INT. THD. SIZE	WIRE TYPE INSERTS				ROSÁN SLIMSERT INSERT EQUIVALENT				ROSÁN REPLACEMENT FOR INSTALLED OR FAILED WIRE INSERTS			
		INSERT LENGTH	INSERT NUMBER	MILITARYSTD. NUMBER	MS (ASG) NUMBER	INSERT NUMBER	INSERT NSN	INSERT & TOOL KIT	INSERT & TOOL KIT NSN	INSERT NUMBER	INSERT NSN	INSER & TOOL KIT	INSERT & TOOL KIT NSN
COARSE THREAD SERIES	4-40	.168	1185-04CN 0168	MS 21208-C0415	MS 122116	SR110	5340-00-056-7811	K 4-110-110L	5180-00-178-0056	SRW 110		K4SRW110-110L	
	6-32	.207	1185-06CN 0207	MS 21208-C0615	MS 122118	SR142	5340-00-682-4845	K 4-142-142L	5180-00-177-8960	SRW 142		K 4SRW142-142L	
	8-32	.246	1185-2CN 0246	MS 21208-C0815	MS 122119	SR 162		K 4-162-162L	5180-00-177-8966	SRW 162		K 4SRW162-162L	
	10-24	.285	1185-3CN 0285	MS 21208-C1-15	MS 122120	SR 194	5340-00-990-9733	K 4-194-194L	5180-00-177-8963	SRW 194	5340-00-510-5265	K 4SRW194-194L	5180-00-126-1772
	1/4-20	.375	1185-4CN 0375	MS 21208-C4-15	MS 122121	SR 250	5340-00-930-2438	K 4-250-250L	5180-00-177-8967	SRW 250	5340-00-412-0018	K 4SRW250-250L	5180-00-126-1766
	5/16-18	.469	1185-5CN0469	MS 21208-C5-15	MS 122122	SR 318	5340-00-189-8716	K 4-318-318L	5180-00-157-1102	SRW 318	5340-00-508-2080	K 4SRW318-318L	5180-00-126-1761
	3/8-16	.562	1185-6CN 0562	MS 21208-C6-15	MS 122123	SR 376	5340-00-325-0580	K 4-376-376L	5180-00-157-1103	SRW 376	5340-00-508-2085	K 4SRW376-376L	5180-00-126-1750
	7/16-14	.656	1185-7CN-0656	MS 21208-C7-15	MS 122124	SR 434		K 4-434-434L		SRW 434		K 4SRW434-434L	
	1/2-13	.750	1185-8CN 0750	MS 21208-C8-15	MS 122125	SR 503	5340-00-943-5395	K 4-503-503L	5180-00-157-104	SRW 503	5340-00-514-4186	K 4SRW503-503L	5180-00-126-1773
	9/16-12	.844	1185-9CN-0844	MS 21208-C9-15	MS 122126	SR 562		K4-562-562L		SRW 562		K 4SRW562-562L	
	5/8-11	.938	1185-10CN 0938	MS 21208-C1015	MS 122127	SR 621		K 4-621-621L	5180-00-157-1105	SRW 621		KRSRW621-621L	
3/4-10	1.125	1185-12CN 1125	MS 21208-C1215	MS 122128	SR 750		K 4-750-750L	5180-00-157-1106	SRW 750		K4SRW750-750L		
FINE THREAD SERIES	10-32	.285	1191-3CN 0285	MS 21208-F1-15	MS 1249695	SR 192	5340-00-966-6163	K 4-192-192L	5180-00-177-8968	SRW 192	5340-00-031-0503	K 4SRW192-192L	5180-00-126-2797
	1/4-28	.375	=1191-4CN 0375	MS 21208-F4-15	MS 124696	SR 258	5340-00-957-8199	K 4-258-258L	5180-00-178-0046	SRW 258	5340-00-407-9261	K 4SRW258-258L	5180-00-126-1769
	5/16-24	.469	1191-5CN 0469	MS 21208-F5-15	MS 124697	SR 314	5340-00-078-0118	K 4—314-314L	5180-00-177-8962	SRW 314	5340-00-031-0502	K 4SRW314-314L	5180-00-126-1765
	3/8-24	.562	1191-6CN 0562	MS 21208-F6-15	MS 124698	SR 374	5340-00-971-7617	K 4-374-374L	5180-00-157-1108	SRW 374	5340-00-508-2082	K 4SRW374-374L	5180-00-126-1759
	7/16-20	.656	1191-7CN 0656	MS 21208-F7-15	MS 124699	SR 430	5340-00-364-8098	K 4-430-430L	5180-00-157-1110	SRW 430	5340-00-510-4604	K 4SRW430-430L	5180-00-126-1701
	1/2-20	.750	1191-8CN 0750	MS 21208-F8-15	MS 124700	SR 500	5340-00-917-7813	K 4-500-500L	5180-00-157-1228	SRW 500	5340-00-512-5007	K 4SRW500-500L	5180-00-126-1774
	9/16-18	.844	1191-9CN 0844	MS 21208-F9-15	MS 124701	SR 568		K4-568-568L		SRW 568		K4SRW568-568L	
	5/8-18	.938	1191-10CN 0938	MS 21208-F1015	MS 124702	SR 628		K 4-628-628L	5180-00-157-1124	SRW 628		K4SRW628-628L	
3/4-16	1.125	1191-12CN 1125	MS 21208-F1215	MS 124703	SR 756		K 4-756-756L	5180-00-157-1130	SRW 756		K4SRW756-756L		



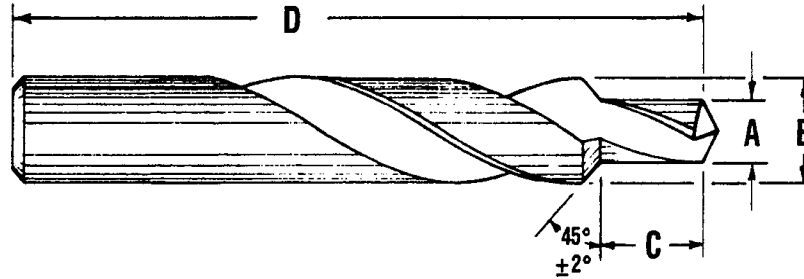
ROSÁN SLIMSERT INSERT
EQUIVALENT AND REPLACEMENT
FOR WIRE TYPE "MS" INSERTS

—INTERNAL THREAD LOCKING—

TSB10969
REV. "E"
PAGE 6

G.E.C.
9-11-69
DRA 355 - 2C
REV."D"84-05-21

INSERT INT. THD. SIZE	WIRE TYPE INSERTS				ROSÁN SLIMSERT INSERT EQUIVALENT				ROSÁN REPLACEMENT FOR INSTALLED OR FAILED WIRE INSERTS			
	INSERT LENGTH	INSERT NUMBER	MILITARY STD. NUMBER	MS (ASG) NUMBER	INSERT NUMBER	INSERT NSN	INSERT & TOOL KIT	INSERT & TOOL KIT NSN	INSERT NUMBER	INSERT NSN	INSERT & TOOL KIT	INSERT & TOOL KIT NSN
4-40	.168	3585-04CN 0168	MS 21209-C0415	—	SR 110L	5340-00-857-4921	K 4-110-110L	5180-00-178-0056	SRW 110L		K4SRW110-110L	
6-32	.207	3585-06CN 0207	MS 21209-C0615	—	SR 142L	5340-00-864-4958	K 4-142-142L	5180-00-177-8960	SRW 142L	5340-00-410-5851	K 4SRW142-142L	
8-32	.246	3585-2CN 0246	MS 21209-C0815	—	SR 162L	5340-00-809-6648 5340-00-990-9916	K 4-162-162L	5180-00-177-8966	SRW 162L	5340-00-937-0534	K 4SRW162-162L	
10-24	.285	3585-3CN 0285	MS 21209-C1-15	—	SR 194L	5340-00-971-7615	K 4-194-194L	5180-00-177-8963	SRW 194L	5340-00-512-5049	K 4SRW194-194L	5180-00-126-1772
1/4-20	.375	3585-4CN 0375	MS 21209-C4-15	—	SR 250L	5340-00-043-3947	K 4-250-250L	5180-00-177-8967	SRW 250L	5340-00-508-2071	K 4SRW250-250L	5180-00-126-1766
5/16-18	.469	3585-5CN 0469	MS 21209-C5-15	—	SR 318L	5340-00-376-8204	K 4-318-318L	5180-00-157-1102	SRW 318L	5340-00-508-2081	K 4SRW318-318L	5180-00-126-1761
3/8-16	.562	3585-6CN 0562	MS 21209-C6-15	—	SR 376L	5340-00-943-8157	K 4-376-376L	5180-00-157-1103	SRW 376L	5340-00-510-4603	K 4SRW376-376L	5180-00-126-1750
7/16-14	.656	3585-7CN 0656	MS 21209-C7-15	—	SR 434L		K 4-434-434L		SRW 434L		K 4SRW434-434L	
1/2-13	.750	3585-8CN 0750	MS 21209-C8-15	—	SR 503L	5340-00-943-8159	K 4-503-503L	5180-00-157-1104	SRW 503L	5340-00-512-5008	K 4SRW503-503L	5180-00-126-1773
9/16-12	.844	3585-9CN 0844	MS 21209-C9-15	—	SR 562L		K4-562-562L		SRW 562L		K4SRW562-562L	
5/8-11	.938	3585-10CN 0938	MS 21209-C1015	—	SR 621L		K 4-621-621L	5180-00-157-1105	SRW 621L		K4SRW621-621L	
3/4-10	1.125	3585-12CN 1125	MS 21209-C1215	—	SR 750L		K 4-750-750L	5180-00-157-1106	SRW 750L		K4SRW750-750L	
10-32	.285	3591-3CNC285	MS 21209-F1-15	—	SR 192L	5340-00-834-9323 5340-00-864-4959	K 4-192-192L	5180-00-177-8968	SRW 192L	5340-00-434-7575 5340-00-968-9432	K 4SRW192-192L	5180-00-126-2797
1/4-28	.375	3591-4CN 0375	MS 21209-F4-15	—	SR 258L	5340-00-814-0267	K 4-258-258L	5180-00-178-0046	SRW 258L	5340-00-510-4576 5340-00-968-9433	K 4SRW258-258L	5180-00-126-1769
5/16-24	.469	3591-5CN 0469	MS 21209-F5-15	—	SR 314L	5340-00-866-1327	K 4-314-314L	5180-00-177-8962	SRW 314L	5340-00-508-2079	K 4SRW314-314L	5180-00-126-1765
3/8-24	.562	3591-6CN 0562	MS 21209-F6-15	—	SR 374L	5340-00-019-9237 5340-00-072-5460	K 4-374-374L	5180-00-157-1108	SRW 374L	5340-00-541-8928	K 4SRW374-374L	5180-00-126-1759
7/16-20	.656	3591-7CN 0656	MS 21209-F7-15	—	SR 430L	5340-00-994-7101	K 4-430-430L	5180-00-157-1110	SRW 430L	5340-00-441-9051	K 4SRW430-430L	5180-00-126-1701
1/2-20	.750	3591-8CN 0750	MS 21209-F8-15	—	SR 500L	5340-00-943-8158	K 4-500-500L	5180-00-157-1228	SRW 500L	5340-00-514-4184	K 4SRW500-500L	5180-00-126-1774
9/16-18	.844	3591-9CN 0844	MS 21209-F9-15	—	SR 568L		K 4-568-568L		SRW 568L		K4SRW568-568L	
5/8-18	.938	3591-10CN 0938	MS 21209-F1015	—	SR 628L		K4-628-628L		SRW 628L		K4SRW628L	
3/4-16	1.125	3591-12CN 1125	MS 21209-F1215	—	SR 756L		K4-756-756L		SRW 756L		K4SRW756-756L	



STEP DRILL PART NUMBER	A DIA	B DIA	C ñ.015	D +.28 -.13
SR08D	.1123-.1128	.1373-.1380	.248	1.94
SR11D	.1392-.1399	.1633-.1640	.350	2.12
SR14D	.1652-.1659	.1863-.1870	.370	2.25
SR16D	.1902-.1909	.2153-.2160	.425	2.38
SR19D	.2192-.2199	.2493-.2500	.488	2.62
SR25D	.2800-.2810	.3110-.3120	.611	2.94
SR31D	.3420-.3430	.3740-.3750	.701	3.25
SR37D	.4030-.4040	.4360-.4370	.835	3.56
SR43D	.4670-.4680	.4990-.5000	.935	3.87
SR50D	.5298-.5310	.5608-.5620	.981	4.12
SR56D	.6238-.6250	.6858-.6870	1.044	4.75
SR62D	.7018-.7030	.7488-.7500	1.036	5.12
SR75D	.8429-.8441	.8738-.8750	1.320	5.62
SR87D	.9668-.9680	.9988-1.0000	1.450	6.25

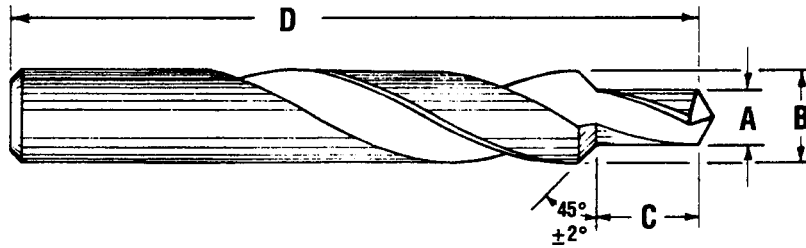
NOTES: UNLESS OTHERWISE SPECIFIED

1. MATERIAL: High speed steel.
2. HEAT TREAT: 58-64 HRC.
3. FINISH: Strippable plastic coat to protect cutting edges.
Tube packaging optional.
4. Made from standard straight shank twist drill (screw machine length, 2 flute).
5. Dimensions and tolerances not shown are per ANSI B94.11.
6. CAUTION: 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 the depth required.

**STEP DRILL
SLIMSERT INSERT**

**SR()D
SERIES**

FORM R585



STEP DRILL PART NUMBER	A DIA	B DIA	C +.020 -.010	D +.28 -.13
SRW14D	.1810-.1817	.2153-.2160	.390	2.38
SRW16D	.2170-.2177	.2493-.2500	.425	2.62
SRW19D	.2410-.2417	.2800-.2810	.488	2.75
SRW25D	.3010-.3020	.3420-.3430	.611	3.06
SRW31D	.3670-.3680	.4210-.4220	.701	3.56
SRW37D	.4360-.4370	.4830-.4840	.835	3.75
SRW43D	.5140-.5152	.5608-.5620	.935	4.12
SRW50D	.5770-.5782	.6240-.6252	.981	4.25
SRW56D	.7020-.7032	.7488-.7500	1.097	5.12
SRW62D	.7650-.7662	.8108-.8120	1.112	5.38
SRW75D	.8900-.8912	.9368-.9380	1.298	5.8

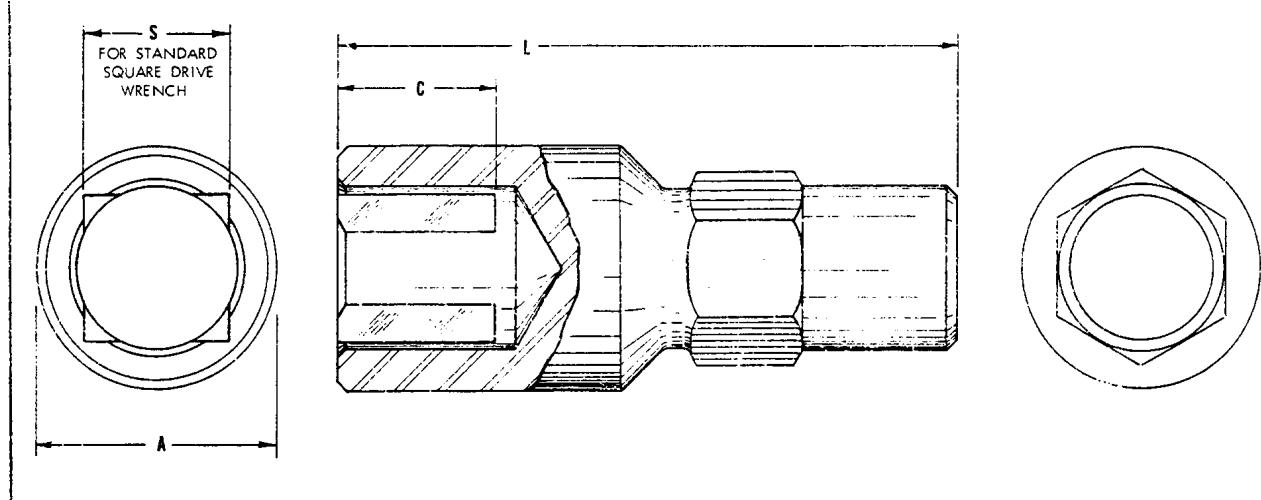
NOTES: UNLESS OTHERWISE SPECIFIED

1. **MATERIAL:** High speed steel.
2. **HEAT TREAT:** 58-64 HRC.
3. **FINISH:** Strippable plastic coat to protect cutting edges.
Tube packaging optional.
4. Made from standard straight twist drill (screw machine length, 2 flute).
5. Dimensions and tolerances not shown are per ANSI B94.11.
6. **CAUTION:** 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 the depth required.

**STEP DRILL
SLIMSERT INSERT**

**SRW()D
SERIES**

FORM R585



WRENCH ‡PART NUMBER	A DIA.	C	L (REF)	S
SR 11 W4-A	.44	.28	.84	1/4
SR 14 W4-A	.44	.28	.87	1/4
SR 16 W4-A	.44	.28	.90	1/4
SR 19 W4-A	.44	.28	.94	1/4
SR 25 W4-A	.44	.28	1.03	1/4
SR 31 W4-A	.44	.28	1.12	1/4
SR 37 W4-A	.62	.40	1.39	3/8
SR 43 W4-A	.62	.40	1.48	3/8
SR 50 W4-A	.62	.40	1.58	3/8
SR 56 W4-A	.75	.40	1.66	3/8
SR 62 W4-A	.88	.40	1.75	3/8
SR 75 W4-A	1.0	.40	1.94	3/8

‡ SR()W-A SUPERSEDES AND OBSOLETES SR ()W

MATERIAL: ALLOY STEEL, HEATTREATED
FINISH: BLACK OXIDE PER SPECIFICATION MIL-C-13924
 PLUS OIL PER SPECIFICATION IL-C-16173 GRADE 3

DIMENSIONS IN INCHES. TOLERANCES UNLESS NOTED: DECIMAL .XX =±.015, .XXX =±.005

ISSUED: 1 APR 62 (1) 15 DEC 62 (2) 19 MAR 63 (3) 1 JULY 64

form RS87

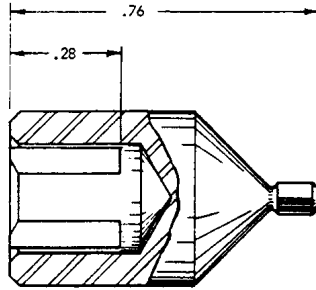
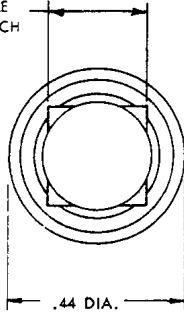
WRENCH - 6 POINT
SLIMERT® INSERT



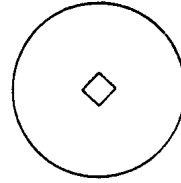
ROSAN INC.
 2901 WEST COAST HIGHWAY
 NEWPORT BEACH, CALIFORNIA

SR()W-A SERIES

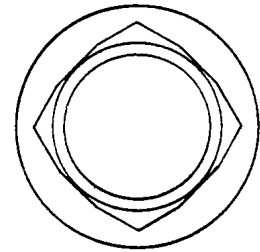
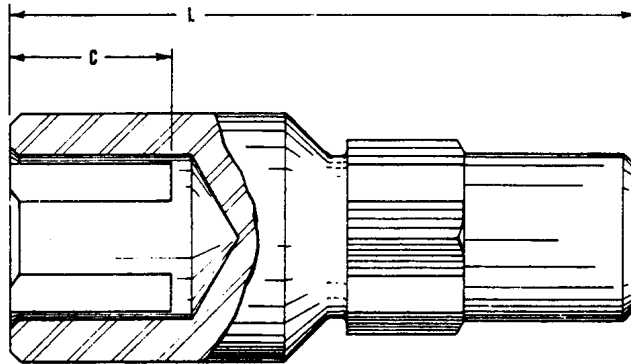
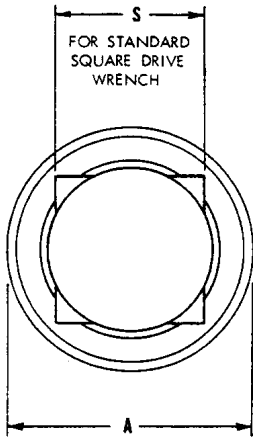
FOR STANDARD
1/4" SQUARE
DRIVE WRENCH



‡ SR 08 W4-A



FOR STANDARD
SQUARE DRIVE
WRENCH



WRENCH ‡PART NUMBER	A DIA.	C	L (REF)	S
SR 11 W4-A	.44	.28	.84	1/4
SR 14 W4-A	.44	.28	.87	1/4
SR 16 W4-A	.44	.28	.90	1/4
SR 19 W4-A	.44	.28	.94	1/4
SR 25 W4-A	.44	.28	1.03	1/4
SR 31 W4-A	.44	.28	1.12	1/4
SR 37 W4-A	.62	.40	1.39	3/8
SR 43 W4-A	.62	.40	1.48	3/8
SR 50 W4-A	.62	.40	1.58	3/8
SR 56 W4-A	.75	.40	1.66	3/8
SR 62 W4-A	.88	.40	1.75	3/8
SR 75 W4-A	1.0	.40	1.94	3/8

MATERIAL: ALLOY STEEL, HEAT TREATED

FINISH: BLACK OXIDE PER SPECIFICATION MIL-C-13924
PLUS OIL PER SPECIFICATION MIL-C-16173 GRADE 3

‡ SR () W4-A SUPERSEDES AND OBSOLETES SR () W4

DIMENSIONS IN INCHES, TOLERANCES UNLESS NOTED: .XX = ±.015, .XXX = ±.005

ISSUED: 1 APR 62 (1) 15 DEC 62 (2) 19 MAR 63 (3) 1 JULY 64

form RS68

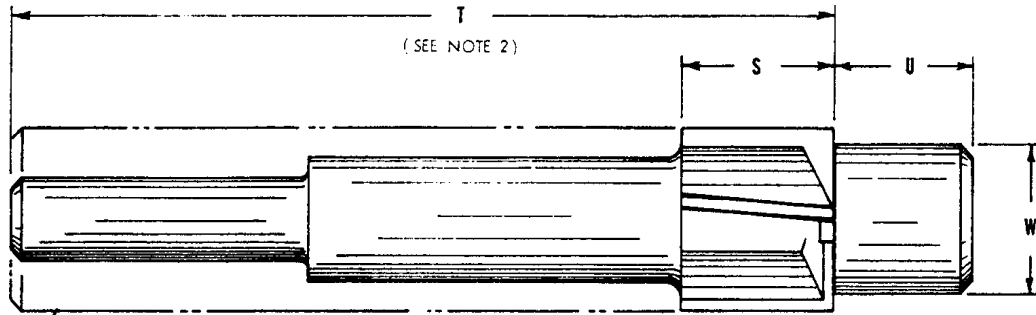
WRENCH - 4 POINT
SLIMERT® INSERT

KOSIN

ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

SR()W4-A SERIES

PAGE 7.08



STRAIGHT SHANK FOR
SR 11 R, SR 14 R & SR 16 R

REMOVAL TOOL ASSY

REMOVAL TOOL ASSY NUMBER	S ±.015	U ±.015	T (REF)	W DIA (REF)
SR 11 R	.50	.15	SEE NOTE 2	.089
SR 14 R	.50	.16		.110
SR 16 R	.50	.18		.134
SR 19 R	.50	.19		.158
SR 25 R	.50	.22		.213
SR 31 R	.50	.28		.269
SR 37 R	.50	.34		.332
SR 43 R	.50	.41		.386
SR 50 R	.50	.47		.449
SR 56 R	1.24	.26		5.12
SR 621 R	1.32	.29	5.38	.564
SR 628 R				.568
SR 750 R	1.50	.35	5.38	.681
SR 756 R				.686

MATERIAL: HIGH SPEED STEEL, HEAT TREATED

FINISH: WAX DIPPED

- NOTES:**
1. DIMENSIONS NOT SHOWN ARE PER TOOL MANUFACTURER'S STANDARDS.
 2. OVERALL LENGTH "T" IS PER TOOL MANUFACTURER'S STANDARDS, SIZES NOT TABULATED ARE NOT TO EXCEED 3.50.
 3. NUMBER OF FLUTES, CONFIGURATION AND SHANK DIAMETERS ARE PER TOOL MANUFACTURER'S STANDARDS.

ISSUED: 1 APR 62 (1) 15 DEC 62 (2) 19 MAR 63 (3) 1 APR 64 (4) 1 JULY 65

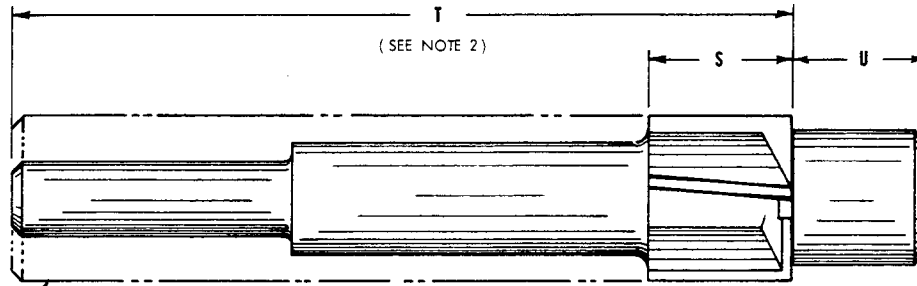
form RS94

**REMOVAL TOOL
SLIMERT® INSERT**



ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

SR()R SERIES



STRAIGHT SHANK FOR SRW 11 R,
SRW 14 R & SRW 16 R

REMOVAL TOOL ASSY

REMOVAL TOOL ASSY NUMBER	S ±.015	U ±.015
SRW 11 R	.50	.16
SRW 14 R	.50	.18
SRW 16 R	.50	.18
SRW 19 R	.50	.19
SRW 25 R	.50	.22
SRW 31 R	.50	.28
SRW 37 R	.50	.34
SRW 43 R	.50	.41
SRW 50 R	.50	.47

MATERIAL: HIGH SPEED STEEL, HEAT TREATED

FINISH: WAX DIPPED

- NOTES:
1. DIMENSIONS NOT SHOWN ARE PER TOOL MANUFACTURER'S STANDARDS.
 2. OVERALL LENGTH "T" IS PER TOOL MANUFACTURER'S STANDARDS, NOT TO EXCEED 3.50.
 3. NUMBER OF FLUTES, CONFIGURATION AND SHANK DIAMETERS ARE PER TOOL MANUFACTURER'S STANDARDS.

ISSUED: 1 APR 62 (1) 1 APR 64

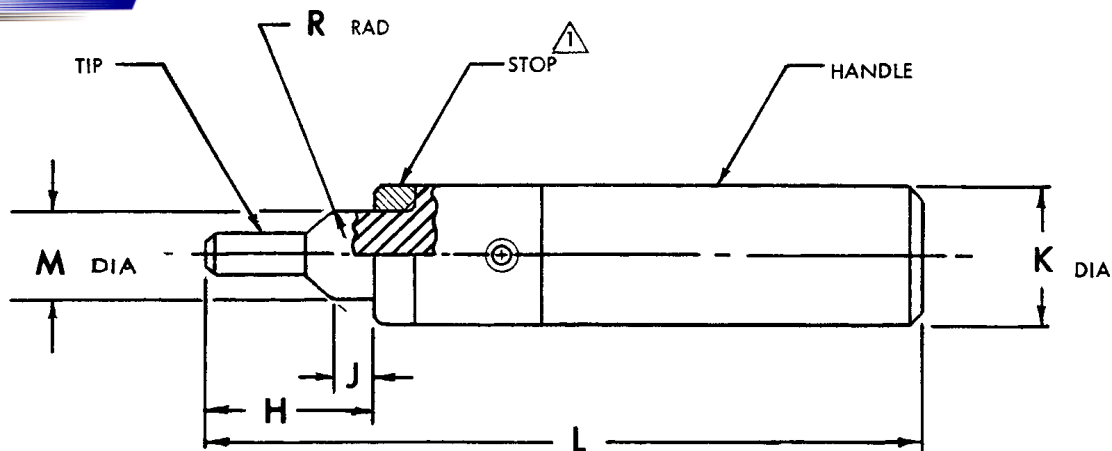
form R595

**REMOVAL TOOL
SLIMERT® INSERT**



ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

SRW()R SERIES



TOOL NUMBER	STOP NUMBER	H ±.015	J +.000 -.010	K DIA	L ±.060	M DIA MIN	R RAD
SR 08 S-A	SR 08 S-2	.126	.038	.31	3.808	.103	.015
SR 11 S-A	SR 11 S-2	.185	.051	.43	3.808	.103	.015
SR 14 S-A	SR 14 S-2	.205	.055	.43	3.985	.161	.015
SR 16 S-A	SR 16 S-2	.205	.061	.43	3.985	.192	.015
SR 19 S-A	SR 19 S-A-2	.273	.077	.43	4.055	.211	.015
SR 25 S-A	SR 25 S-2	.348	.075	.50	4.085	.280	.030
SR 31 S-A	SR 31 S-A-2	.423	.072	.56	4.270	.345	.040
SR 37 S-A	SR 37 S-A-2	.513	.096	.62	4.488	.408	.045
SR 43 S-A	SR 43 S-2	.548	.100	.62	4.548	.470	.045
SR 50 S-A	SR 50 S-A-2	.548	.100	.75	4.665	.536	.045
SR 56 S-A	SR 56 S-2	.501	.119	1.00	4.905	.605	.040
SR 62 S-A	SR 62 S-2	.501	.119	1.00	4.905	.669	.040
SR 75 S-A	SR 75 S-2	.501	.130	1.00	4.905	.798	.075
SR 87 S-A	SR 87 S-2	.501	.130	1.25	5.148	.929	.075
SR 93 S-A	SR 93 S-2	.501	.147	1.38	5.295	.985	.075

NOTES:

<1> REPLACEMENT NYLON STOPS ARE AVAILABLE; SEE TABLE FOR PART NUMBERS. WHEN REPLACING STOP, PRESS ON TO SEAT WITH COUNTERSINK AGAINST SHOULDER.

MATERIAL: HANDLE - ALLOY STEEL, HEAT TREATED
TIP - M42 STEEL

FINISH: BLACK OXIDE AND OIL

Tool configuration change will be effective on SR08SA through SR50SA. Original configuration may be shipped by Rosan, Inc. until supply is depleted. Interchangeability is not affected.

DIMENSIONS IN INCHES, TOLERANCES UNLESS NOTED: .XX = ±.015, .XXX = ±.005

ISSUED: 1 JUL 64 (1) 15 OCT 64 (2) 1 JUNE 75

PATENT 3,137,186

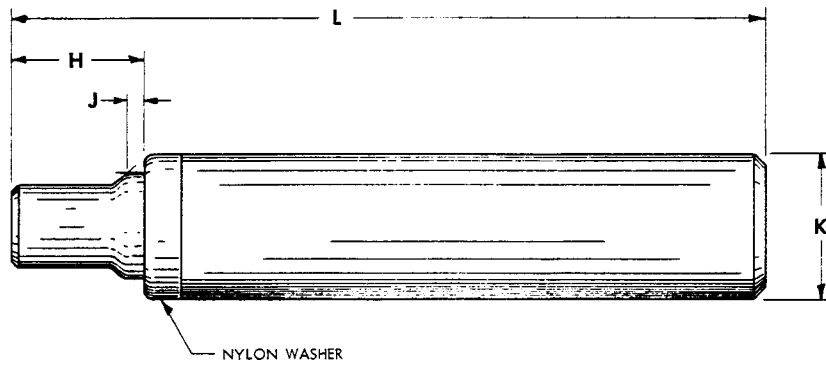
SWAGETOOL
SLIMERT® INSERT

Rosan

ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

SR()S-A SERIES

7.42



SWAGE TOOL PART NUMBER	H ±.015	J +.000 -.010	K DIA	L ±.03
SRW 19 S-A	.275	.077	.43	3.00
SRW 25 S-A	.350	.075	.50	3.00
SRW 31 S-A	.425	.072	.56	3.50
SRW 37 S-A	.515	.096	.62	3.50
SRW 43 S-A	.575	.100	.62	3.96
SRW 50 S-A	.625	.100	.75	3.96

MATERIAL: ALLOY STEEL, HEAT TREATED

DIMENSIONS IN INCHES, TOLERANCES UNLESS NOTED: .XX = ±.015, .XXX = ±.0005

ISSUED: 23 SEP 64

PATENT 3,137,186

SWAGETOOL
SLIMSER[®]T INSERT



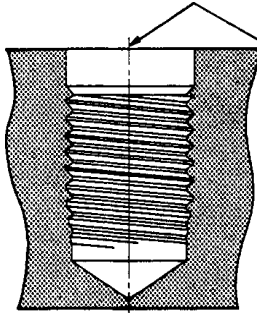
ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

SRW()^{S-A} SERIES

7.43

CORRECT METHOD FOR CALLING OUT INSTALLATION DIMENSIONS FOR SLIMSERT® INSERTS ON DRAWINGS

MACHINING INFORMATION



FOR _____ (REF)
(PART NO. FOR SPECIFIC APPLICATION)

DRILL _____ DIA. X _____ DEEP

C'BORE _____ DIA. X _____ DEEP

CHAMFER 45° X C'BORE DIA. $\begin{matrix} +.000 \\ -.010 \end{matrix}$ (.030 R. OPTIONAL)

TAP _____ MIN. FULL THD. _____

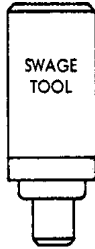
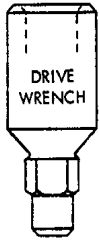
STANDARD TAPS ARE USED TO TAP ALL HOLES. THREAD IS MODIFIED BY OVERSIZE TAP DRILL.

NOTES:

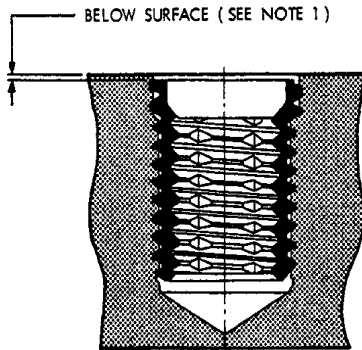
1. CONCENTRICITY BETWEEN DRILLED HOLE AND C'BORE MUST BE HELD TO WITHIN .006 T.I.R. MAX.
2. DRILL, C'BORE AND CHAMFER MAY BE COMBINED INTO ONE OPERATION BY THE USE OF THE SLIMSERT INSERT STEP DRILL.



INSTALLATION INFORMATION



- A. WRENCH INSERT IN WITH APPLICABLE 4 OR 6 POINT DRIVE WRENCH TO REQUIRED DEPTH. (SEE NOTE 1 BELOW)
- B. PLACE SWAGE IN PART AND APPLY DOWNWARD FORCE SUFFICIENT TO BOTTOM NYLON PROTECTIVE SHOULDER ON SURFACE ON PARENT MATERIAL, WHICH WILL EFFECT FULL SWAGEOUT AND EXTERNAL LOCK SETTING.
- C. ROSAN POWER INSTALLATION AND SWAGE TOOLS ARE AVAILABLE FOR HIGH SPEED PRODUCTION.



NOTES:

1. SEE ROSAN DATA SHEETS PS10022 (SR SERIES) AND PS10023 (SRW SERIES) FOR COMPLETE INSTALLATION INSTRUCTIONS.
2. ALL DRAWINGS CALLING OUT ROSAN PARTS SHOULD CARRY A NOTE SPECIFYING SOURCE: ROSAN INC., NEWPORT BEACH, CALIFORNIA

PATENTED:
3,081,808
3,137,186
3,190,169

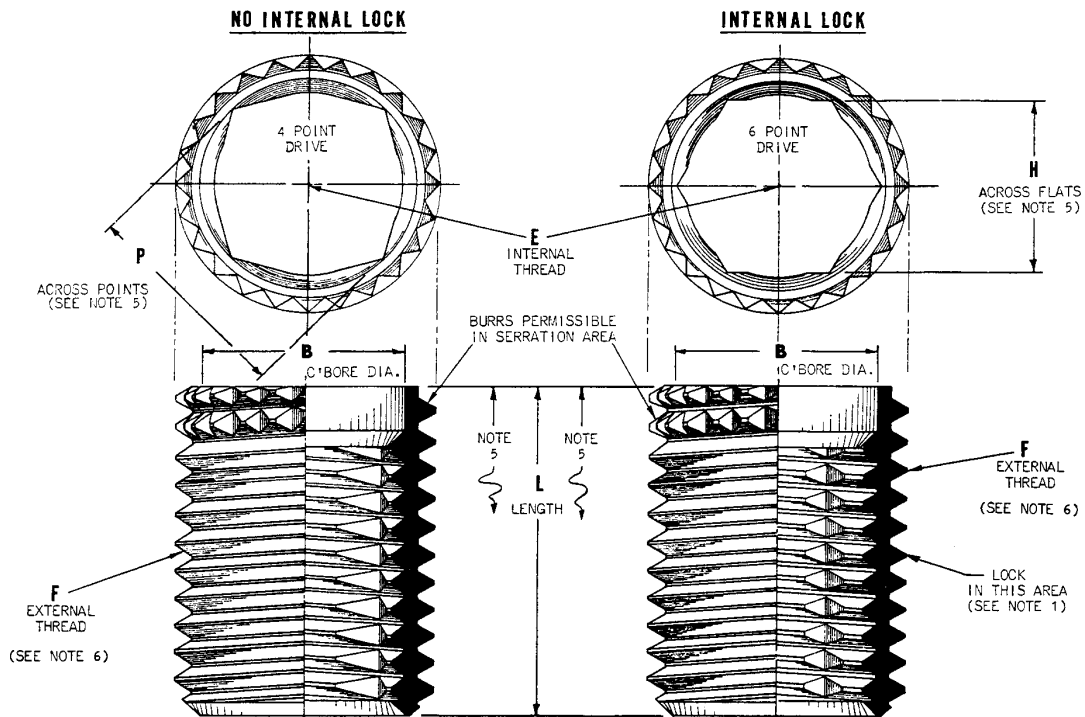
SLIMSERT® INSERT
ENGINEERING AID



ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

PS10025

PAGE 10.01



EXAMPLE OF PART NUMBER AND CODING EXPLANATION:

SR 194 24 THDS. PER INCH **SR 192 L** INTERNAL THREAD LOCKING FEATURE
 SERIES NOMINAL DIA. INT. THD. SERIES NOMINAL DIA. INT. THD.

**INTERCHANGEABLE WITH M45932/1 INSERTS
 PER SPECIFICATION MIL-I-45932/1**

NOTES:

1. INT. THD. LOCKING FEATURE MEETS REQUIREMENTS OF MIL-I-45932.
2. FOR INSTALLATION DATA & INSTALLATION TOOLS REFER TO PS10022, PAGE 10.03 AND 10.03.1.
3. MATERIAL: 17-4 PH (AMS5643) STAINLESS STEEL WITH SUPPLEMENTAL SOLID FILM LUBRICANT COATING MEETING THE REQUIREMENTS OF MIL-L-8937.
4. HEAT TREAT: CONDITION H1025.
5. "H" & "P" DIMENSIONS APPLY THIS END ONLY.
6. THDS IN ACCORDANCE WITH MIL-S-7742 & AS NOTED, PRIOR TO THE ADDITION OF SOLID FILM LUBRICANT, EXTERNAL THREAD IS SPECIAL FORM - BASIC UNIFIED WITH INCREASED MINOR DIA. PER TABLE. MAJOR DIA. & P.D. PER - 3A TOLERANCES. INTERNAL THREAD MINOR DIAMETER WILL ACCEPT SCREWS AND BOLTS WITH MIL-S-8879 THREADS.

ISSUED: 10 MAY 60 (8) 19 MAR 63 (9) 1 SEP 65 (10) 15 NOV 65 (11) 1 OCT 77

PATENTED:
 3,081,808
 3,190,169

SLIMERT® INSERT
 HI-STRENGTH



ROSAN INC.
 2901 WEST COAST HIGHWAY
 NEWPORT BEACH, CALIFORNIA

SR SERIES

	PART NUMBER	E INT. THD. CLASS 3B O MOD. MINOR DIA.	F EXT. THD. WITH MOD. MINOR DIA.	MAX. MINOR DIA. EXT. THD.	L LENGTH ±.010	B C'BORE DIA. +.008 -.002	C'BORE DEPTH +.015 -.000	H ACROSS FLATS	P ACROSS POINTS	AVAIL- ABILITY CODE
MINIATURE	SR 086	2-56 UNC	6-40 UNF-3A NOT MOD.	.1073	.13	.086	.042	—	.08	▲
	SR 110 L	4-40 UNC	8-32 UNC	.1380	.19	.116	.060	.092	—	▲
	SR 110	4-40 UNC						—	.10	▲
	SR 142 L	6-32 UNC 0	10-32 UNF	.1620	.21	.142	.080	.113	—	▲
	SR 142	6-32 UNC 0						—	.12	▲
	SR 162 L	8-32 UNC 0	12-28 UNF	.1890	.25	.169	.080	.138	—	▲
	SR 162	8-32 UNC 0						—	.15	▲
STRUCTURAL	SR 192 L	10-32 UNF	1/4-28 UNF	.2170	.29	.192	.080	.157	—	▲
	SR 192							—	.18	▲
	SR 194 L	10-24 UNC 0	5/16-24 UNF	.2785	.38	.252	.095	.157	—	▲
	SR 194							—	.18	▲
	SR 258 L	1/4-28 UNF	5/16-24 UNF	.2785	.38	.252	.095	.210	—	▲
	SR 258							—	.24	▲
	SR 250 L	1/4-20 UNC 0	5/16-24 UNF	.2785	.38	.252	.095	.210	—	▲
	SR 250							—	.24	▲
	SR 314 L	5/16-24 UNF	3/8-24 UNF	.3405	.47	.314	.110	.266	—	▲
	SR 314							—	.31	▲
	SR 318 L	5/16-18 UNC 0	3/8-24 UNF	.3405	.47	.314	.110	.266	—	▲
	SR 318							—	.31	▲
	SR 374 L	3/8-24 UNF	7/16-20 UNF	.4010	.56	.377	.110	.322	—	▲
	SR 374							—	.37	▲
	SR 376 L	3/8-16 UNC 0	7/16-20 UNF	.4010	.56	.377	.110	.322	—	▲
	SR 376							—	.37	▲
	SR 430 L	7/16-20 UNF	1/2-20 UNF	.4630	.66	.439	.135	.377	—	▲
	SR 430							—	.43	▲
	SR 434 L	7/16-14 UNC 0	1/2-20 UNF	.4630	.66	.439	.135	.377	—	▲
	SR 434							—	.43	▲
	SR 500 L	1/20-20 UNF	9/16-24 UNEF	.5290	.75	.505	.135	.439	—	▲
	SR 500							—	.49	▲
	SR 503 L	1/2-13 UNC 0	9/16-24 UNEF	.5290	.75	.505	.135	.439	—	▲
SR 503	—							.49	▲	
LARGE	SR 568 L	9/16-18 UNF	11/16-12 N	.6130	.84	.571	.145	.481	—	Δ
	SR 568							—	.55	Δ
	SR 562 L	9/16-12 UNC 0	11/16-12 N	.6130	.84	.571	.145	.481	—	Δ
	SR 562							—	.55	Δ
	SR 628 L	5/18-18 UNF	3/4-16 UNF	.6870	.94	.634	.145	.534	—	Δ
	SR 628							—	.62	Δ
	SR 621 L	5/8-11 UNC 0	3/4-16 UNF	.6870	.94	.634	.145	.534	—	Δ
	SR 621							—	.62	Δ
	SR 756 L	3/4-16 UNF	7/8-20 UNEF	.8240	1.12	.756	.170	.648	—	Δ
	SR 756							—	.75	Δ
	SR 750 L	3/4-10 UNC 0	7/8-20 UNEF	.8240	1.12	.756	.170	.648	—	Δ
	SR 750							—	.75	Δ

AVAILABILITY:

▲ STANDARD PARTS NORMALLY STOCKED.

Δ STANDARD PARTS AVAILABLE FROM STOCK OR WITHIN NORMAL DELIVERY.

DIMENSIONS IN INCHES. TOLERANCES UNLESS NOTED. DECIMAL .XX = ± .015. .XXX = ± .005

WRENCHING OPERATION

SWAGING OPERATION

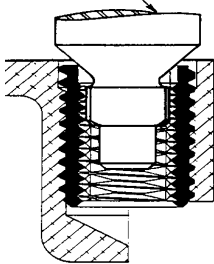
NO INTERNAL LOCK

4 POINT DRIVE

NOTE:

USE DRIVE WRENCH AS INDICATED. OTHERWISE ALL HOLE PREPARATIONS, OPERATIONS AND TOOLS SAME AS 6 POINT DRIVE.

DRIVE WRENCH
SR()W4-A

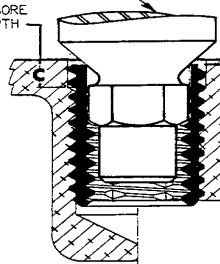


INTERNAL LOCK

6 POINT DRIVE

DRIVE WRENCH
SR()W-A

C BORE
DEPTH



FOR SR086, 110,110L, 142,142L,162 & 162L PARTS, INSTALL .010-.020 BELOW SURFACE OF PARENT MATERIAL. ALL OTHER PARTS TO BE INSTALLED .015-.025 BELOW SURFACE OF PARENT MATERIAL.(SEE NOTE 4)

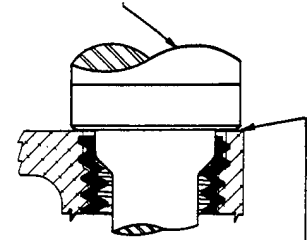
BLIND HOLE
INSTALLATION

THRU HOLE
INSTALLATION

NOTE: SAME FOR BOTH 4 AND 6 POINT DRIVE.

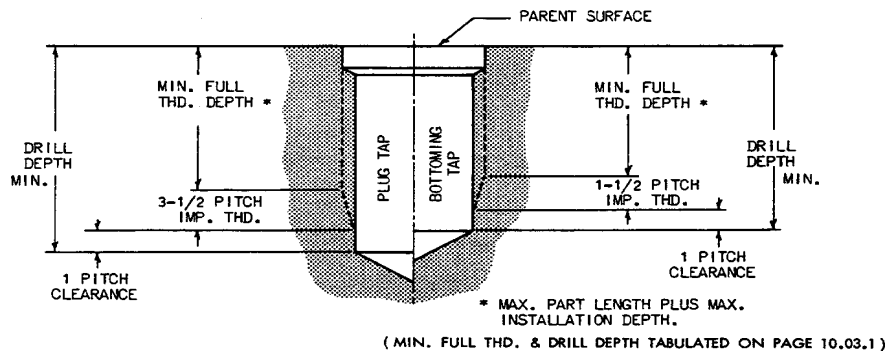
SWAGE TOOL

SR()S-A



WHEN SHOULDER OF SWAGE TOOL BOTTOMS ON SURFACE OF PARENT MATERIAL FULL SWAGE AND LOCK SETTING IS ACCOMPLISHED.

HOLE PREPARATION



NOTES:

1. STANDARD TAPS, IN FRACTIONAL SIZES INDICATED, ARE USED TO TAP ALL HOLES. (THREAD IS MODIFIED BY OVERSIZE TAP DRILL)
2. SWAGE TOOL OPERATION REQUIRED TO ACHIEVE POSITIVE EXTERNAL LOCK.
3. TO INSURE THE ACHIEVEMENT OF THE DESIGN CAPABILITIES OF THE SLIMSERT INSERT, THE USAGE OF ROSAN STANDARD TOOLS IS MANDATORY, I.E. DRIVE WRENCH SR()W-A OR SR()W4-A AND SWAGE TOOL SR()S-A. SEE SECTION 7 FOR TOOL ILLUSTRATIONS.
4. THESE INSERTS ARE PRIMARILY FOR INSTALLATION INTO ALUMINUM AND MAGNESIUM. FOR USE IN OTHER MATERIALS, CONSULT ROSAN ENGINEERING DEPARTMENT.
5. METHOD OF REMOVAL: USING REMOVAL TOOL SR()R, C BORE TO DEPTH "C" DIMENSION. BACK OUT INSERT WITH DRIVE WRENCH, CLEAN OUT HOLE AND INSTALL NEW INSERT.
ALTERNATE METHOD: USE DRILL SIZE INDICATED IN REMOVAL DRILL COLUMN. DRILL TO "C" DIMENSION PLUS .025. REMOVE REMAINING PORTION OF SERRATION AND FOLLOW PROCEDURE AS STATED ABOVE.
6. POWER TOOLING: POWER WRENCH AND SWAGE TOOLS ARE AVAILABLE TO FACILITATE HIGH PRODUCTION RATE REQUIREMENTS, SEE SECTION 7 FOR TOOL ILLUSTRATIONS.

PATENTED:
3,081,808
3,137,186
3,190,169

INSTALLATION AND REMOVAL DATA
SR SERIES
SLIMSERT® INSERT



ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

PS10022 SHEET 1
OF 2

HOLE PREPARATION DATA AND TOOLS REQ'D

PART NUMBER	TAP DRILL +.004 -.001	TAP -3B MOD. (NOTE 1 SH. 1)	C'BORE DIA. +.004 -.001	C C'BORE DEPTH	PLUG TAP		BOTTOMING TAP		STEP DRILL	‡ DRIVE WRENCH	* SWAGE TOOL	REMOVAL TOOL	REMOVAL DRILL
					DRILL DEPTH MIN	MIN. FULL THD.	DRILL DEPTH MIN	MIN. FULL THD.					
SR 086	.133 (#33)	6-40 UNF NOT MOD.	.138	.050 .045	.273	.160	.223	.160	SR 08D	SR08W4-A	SR 08S-A	N- (#30)	.1285
SR 110L	.140 (#28)	#8-32 UNC	.164	.052	.361	.220	.298	.220	SR 11D	SR11W-A	SR 11S-A	SR 11R	.156 (5/32)
SR 110										SR11W4-A			
SR 142L	.166 (#19)	#10-32 UNF	.187	.065	.381	.240	.318	.240	SR 14D	SR14W-A	SR 14S-A	SR 14R	.173 (#17)
SR 142										SR14W4-A			
SR 162L	.191 (#11)	#12-28 UNF	.216	.065	.441	.280	.369	.280	SR 16D	SR16W-A	SR 16S-A	SR 16R	.205 (#5)
SR 162										SR16W4-A			
SR 192L	.221 (#2)	1/4-28 UNF	.250	.082	.486	.325	.414	.325	SR 19D	SR19W-A	SR 19S-A	SR 19R	.234 (15/65)
SR 192										SR19W4-A			
SR 194L										SR19W-A			
SR 194										SR19W4-A			
SR 258L	.281 (9/32)	5/16-24 UNF	.312	.082	.602	.415	.519	.415	SR 25D	SR25W-A	SR 25S-A	SR 25R	.296 (19/64)
SR 258										SR25W4-A			
SR 250L										SR25W-A			
SR 250										SR25W4-A			
SR 314L	.343 (11/32)	3/8-24 UNF	.375	.082	.693	.505	.609	.505	SR 31D	SR31W-A	SR 31S-A	SR 31R	.359 (23/64)
SR 314										SR31W4-A			
SR 318L										SR31W-A			
SR 318										SR31W4-A			
SR 374L	.404 (Y)	7/16-20 UNF	.437	.113	.820	.595	.720	.595	SR 37D	SR37W-A	SR 37S-A	SR 37R	.421 (27/64)
SR 374										SR37W4-A			
SR 376L										SR37W-A			
SR 376										SR37W4-A			
SR 430L	.468 (15/32)	1/2-20 UNF	.500	.113	.920	.695	.820	.695	SR 43D	SR43W-A	SR 43S-A	SR 43R	.484 (31/64)
SR 430										SR43W4-A			
SR 434L										SR43W-A			
SR 434										SR43W4-A			
SR 500L	.531 (17/32)	9/16-24 UNEF	.562	.113	.973	.785	.889	.785	SR 50D	SR50W-A	SR 50S-A	SR 50R	.546 (35/64)
SR 500										SR50W4-A			
SR 503L										SR50W-A			
SR 503										SR50W4-A			
SR 568L	.625 (5/8)	11/16-12 N	.687	.150	1.248	.873	.081	.873	SR 56D	SR56W-A	SR 56S-A	SR 56R	.641 (41/64)
SR 568										SR56W4-A			
SR 562L										SR56W-A			
SR 562										SR56W4-A			
SR 628L	.703 (45/64)	3/4-16 UNF	.750	.156	1.248	.967	.123	.967	SR 62D	SR62W-A	SR 62S-A	SR 628R SR621R	.734 (47/64)
SR 628										SR62W4-A			
SR 621L										SR62W-A			
SR 621										SR62W4-A			
SR 756L	.844 (27/32)	7/8-20 UNEF	.875	.156	1.380	1.155	.280	1.155	SR 75D	SR75W-A	SR 75S-A	SR 756R SR 750R	.859 (55/64)
SR 756										SR75W4-A			
SR 750L										SR75W-A			
SR 750										SR75W4-A			

‡ SR()W-A AND SR()W4-A SUPERSEDES AND OBSOLETES SR()W AND SR()W4

* SR()S-A SUPERSEDES SR()S

DIMENSIONS IN INCHES. TOLERANCES UNLESS NOTED: DECIMAL .XX ± .015. .XXX ± .005

INSTALLATION AND REMOVAL DATA
SR SERIES
SLIMBERT® INSERT

KOSIN
 ROSAN INC.
 2901 WEST COAST HIGHWAY
 NEWPORT BEACH, CALIFORNIA

PS1002 SHEET 2
 OF 2

PAGE 10.03.1

FORM R424-1

ISSUED: 15 MAR 61 (6) 1 JULY 65 (7) 15 DEC 66 (8) 1 OCT 77

EVALUATION TEST DATA										
LISTED HERE IS A SERIES OF TYPICAL PHYSICAL PROPERTIES OBTAINED FROM 30 CONSECUTIVE TESTS CONDUCTED UPON SLIMSERT INSERTS; BY INDEPENDENT TESTING LABORATORIES AND BY THE TEST LABORATORY AT THE ROSAN FACILITY.										
1	2	3	4	5	6	7	8	9	10	11
PART NO.	AXIAL TENSION (PULL OUT) (NOTE 4)		TORQUE OUT		TORQUE TENSION (NOTE 1)		INTERNAL THREAD LOCK (NOTE 5)		MINIMUM EDGE DISTANCE	WEIGHT POUNDS
(NOTE 10)	NAS-1291 NUT-SELF LOCKING 180,000P.S.I.	TYPICAL TEST RESULT	SPEC. MIL-N 25027	TEST RESULT	ROSAN SPEC. REQMTS.	TEST RESULT	MIL-N 25027 REQMTS.	TEST RESULT	SEE NOTE 9	PER 1000 PIECES
SR 086	665 #	720 # SCREW FAILURE	10 INC POUNDS	16 MAX. 13 MIN.	ALLEN SCREW FAILURE	ALLEN SCREW FAILURE	MAX. 2.5 BREAK *	MAX. 2.5 BREAK 0.3	.096	.209
SR 110 L	1,110 #	1,218 # SCREW FAILURE	20 INC POUNDS	35 MAX. 23 MIN.	ALLEN SCREW FAILURE	ALLEN SCREW FAILURE	MAX. .5 BREAK *	MAX. -2.5 BREAK-0.5	.121	.396
SR 142 L	1,670#	1,767 # SCREW FAILURE	30 INCH POUNDS	45 MAX. 35 MIN.	ALLEN SCREW FAILURE	ALLEN SCREW FAILURE	MAX. -10 BREAK-1.0	MAX. -5.0 BREAK-4.0	.133	.550
SR 162 L	2,490#	2,570# SCREW FAILURE	45 INCH POUNDS	55 MAX. 45 MIN.	ALLEN SCREW FAILURE	ALLEN SCREW FAILURE	MAX. -15 BREAK-1.5	MAX. -8.0 BREAK-4.0	1.45	.779
SEE NOTE 10	MIL-N-25027 REQU'MT	TYP. TEST RESULT	SPEC MIL-N-25027	TEST RESULT	ROSAN SPEC. REQU'MT	TEST RESULT	MIL-N-25027 REQU'MT	TEST RESULT	SEE NOTE 9	PER 1000 PCS.
SR192L	2,460 #	3,900 # ≠	60 INCH #	160 MAX. 60 MIN.	AN-3 BOLT FAILURE	AN-3 BOLT FAILURE	MAX.-18 BRK.-2.0	MAX.-12 BRK.-5.5	.179	1.20
SR258L	4,580 #	5,250 # ≠	100 INCH #	200 MAX. 100 MIN.	AN-4 BOLT FAILURE	AN-4 BOLT FAILURE	MAX.-30 BRK.-3.5	MAX.-12 BRK.5-.5	.195	2.17
SR314L	7,390 #	8,400 # ≠	160 INC #	360 MAX. 190 MIN.	AN-5 BOLT FAILURE	AN-5 BOLT FAILURE	MAX.-60 BRK.-6.5	MAX.-50 BRK.-10	.240	3.39
SR374L	11,450 #	13,000 # ≠	240 INCH #	405 MAX. 360 MIN.	AN-6 BOLT FAILURE	AN-6 BOLT FAILURE	MAX.-80 BRK.-9.5	MAX.-41 BRK.-14.8	.312	4.77
SR430L	15,450 #	17,000# ≠	350 INCH #	460 MAX. 350 MIN.	AN-7 BOLT FAILURE	AN-7 BOLT FAILURE	MAX.-100 BRK.-14.0	MAX.-65 BRK.-35	.38	6.98
SR500L	21,110#	22,400 # ≠ ≠	450 INCH #	720 MAX. 480 MIN.	AN-8 BOLT FAILURE	AN-8 BOLT FAILURE	MAX.-150 BRK-18.0	MAX.-80 BRK.-35.5	.44	9.32

*SOME INDICATION OF TORQUE

NOTES:

1. IN THE ABSENCE OF APPLICABLE MILITARY SPECS., ROSAN SPECS. WERE ESTABLISHED AND APPLIED.
2. TEST BOLTS USED: 160,000-180,000 PSI EXCEPT COLUMNS 6 & 7.
3. TEST BLOCK MATERIAL: 356-T6 ALUMINUM ALLOW SAND CASTING:
4. COL. 3 TEST RESULTS SHOW AXIAL LOADS WHICH CAUSED FAILURE IN 356-T6 MATERIAL. (ONE BOLT DIA. THD. ENGAGEMENT)
5. INTERNAL THD. LOCK:
MAX.= MAX. TORQUE ENCOUNTERED IN 15 CYCLES. BRK. = MIN. BREAKAWAY TORQUE ENCOUNTERED IN 15 CYCLES. VALUES IN INCH POUNDS.
6. ALL AXIAL PULLOUT TESTS WERE CONDUCTED ON 60H BALDWIN UNIVERSAL TESTING MACHINE OR EQUIVALENT.
7. ALL TORQUE TESTS WERE CONDUCTED USING SNAP-ON INDICATOR TORQUE-O-METERS.
8. INSERT MATERIAL 17-4PH.
9. COLUMN 10 IS MIN. RECOMMENDED EDGE DISTANCE FROM CENTER LINE OF PART REQUIRED TO DEVELOP AXIAL LOAD VALUES PER COL. 3. IN APPLICATIONS USING RECOMMENDED, OR LESS THAN RECOMMENDED MIN. EDGE DISTANCE SWAGING MAY RESULT IN MINIMAL DEFLECTION OF PARENT MATERIAL AT THE UNSUPPORTED EDGE IN THE LOW STRENGTH ALLOYS. CLAMPING OR PERIPHERAL SUPPORT OF THE PARENT MATERIAL WILL ELIMINATE THIS CONDITION WHEN IT IS SO REQUIRED.
10. NON-LOCKED PARTS MEET SAME STRUCTURAL REQUIREMENT AS THOSE LISTED ABOVE.
11. TYPE OF FAILURE:
≠ BOLT BREAK
≠≠ PART PULLED OUT OF PARENT MATERIAL.

ISSUED: 1 OCT 77

FORM RA13-1

**SLIMSERT® INSERT
DESIGN EVALUATION DATA
SR SERIES**

Rosin
ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

SR SERIES

PAGE 10.03.2

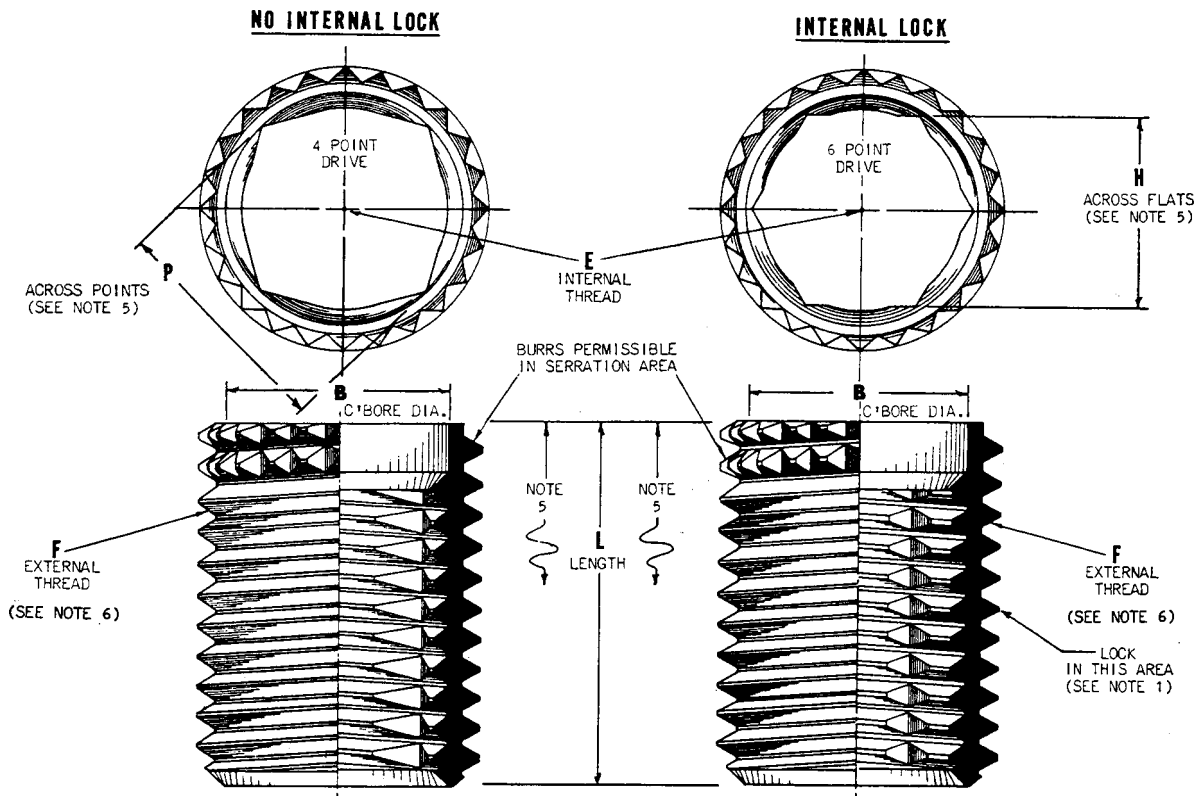
DASH NUMBER	MATERIAL	MAGNETIC	FINISH	TEMP RANGE	USAGE
STANDARD	17-4PH	YES	SOLID FILM LUBE	-110°/+600°F	STANDARD FOR GENERAL APPLICATIONS
-0001[2][4]	17-4PH	YES	NONE (PASSIVATE)	-110°/+900°F	USE WHERE LUBRICANT AND GALVANIC PROTECTION IS NOT NEEDED
-0003[2]	17-4PH	YES	BARRIER COAT AND SOLID FILM LUBE	-110°/+800°F	SAME AS STANDARD PLUS GALVANIC PROTECTION AND FOR HIGHER TEMPERATURE APPLICATIONS
-0021[2][4]	A-286	NO	NONE (PASSIVATE)	-400°/+1200°F	USE WHERE LUBRICANT AND GALVANIC PROTECTION IS NOT NEEDED
-0023[2]	A-286	NO	BARRIER COAT AND SOLID FILM LUBE (PER ELECTRO FILM 2006)	-300°/+800°F	SAME AS -0025, BUT FOR HIGHER TEMPERATURE APPLICATIONS
-0024	A-286	NO	SILVER PLATE	-400°/+1200°F	FOR HIGH OR LOW TEMPERATURE APPLICATIONS
-0025[2]	A-286	NO	TIO-LUBE 460	-400°/+650°F	A NON-GRAPHITE SOLID FILM LUBE WITH NON-OUTGASSING CHARACTERISTICS MEETS MIL-L-46010 AND MIL-6-8937
-0034[2]	4130	YES	ZINC PLATE PER QQ-Z-325 TY II, CL1	+150°F	APPLICATIONS IS NOT OVER 150°F
-0036	4130	YES	CAD PLATE PER QQ-P-416 TYII, CL3 PLUS TIO-LUBE 460	+450°F	STANDARD FINISH
-0042[2]	BERYLLIUM COPPER	NO	TIO-LUBE 460	-320°/+400°F	REFERENCE MIL-I-45932/1

NOTES: UNLESS OTHERWISE SPECIFIED

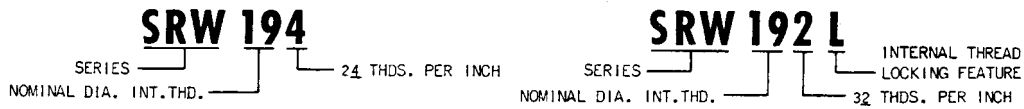
1. Thread dimensions are prior to the addition of solid film lubricant.
- [2] These parts are considered a non-stock item.
3. Magnetic permeability for parts fabricated from A286 shall be less than 2.000(AIR 1.000) H=200 oersteds.
- [4] -0001 and -0021 are only available without internal thread locking feature.

**MATERIALS AND FINISHES
FOR "SR" AND "SRW" SERIES
SLIMSERT INSERTS**

PS10021



EXAMPLE OF PART NUMBER AND CODING EXPLANATION:



NOTES:

1. INT. THD. LOCKING FEATURE MEETS REQUIREMENTS OF MIL-I-45932.
2. FOR INSTALLATION DATA & INSTALLATION TOOLS REFERS TO PS10022, PAGE 1.03 AND 10.03.1.
3. MATERIAL: 17-4PH (AMS5643) STAINLESS STEEL WITH SUPPLEMENTAL SOLID FILM LUBRICANT COATING MEETING THE REQUIREMENTS OF MIL-L-8937.
4. HEAT TREAT: CONDITION H1025.
5. "H" & "P" DIMENSIONS APPLY THIS END ONLY.
6. THDS IN ACCORDANCE WITH MIL-S-7742 & AS NOTED, PRIOR TO THE ADDITION OF SOLID FILM LUBRICANT, EXTERNAL THREAD IS SPECIAL FORM -BASIC UNIFIED WITH INCREASED MINOR DIA, PER TABLE, MAJOR DIA. & P.D. PER - 3A TOLERANCES. INTERNAL THREAD MINOR DIAMETER WILL ACCEPT SCREWS AND BOLTS WITH MIL-S-8879 THREADS.

ISSUED: 10 MAY 60 (8) 1 AUG 62 (9) 1 SEP 65 (10) 15 NOV 65 (11) 1 OCT 77

FORM R413-1

PATENTED:
3,081,808
3,190,169

**SLIMSERT® INSERT HI-STRENGTH
OVERSIZE REPLACEMENT
FOR WIRE TYPE INSERT**



ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

SRW SERIES

	PART NUMBER	E INT. THD. CLASS 3B f MOD. MINOR DIA.	F EXT. THD. MOD MINOR DIA.	PITCH DIA. EXT. THD.	MAX. MINOR DIA. EXT. THD.	L LENGTH ±.010	B C'BORE DIA. -.008 -.002	C'BORE DEPTH +.015 -.000	H ACROSS FLATS	P ACROSS POINTS	AVAILABILITY CODE
MINIATURE		4-40 UNC	USE SR110	OR SR 110	L						
		4-40 UNC									
	SRW 142L	f 6-32 UNC	12-28 UNF	.1928 .1904	.1758	.21	.142	.080	.113	—	▲
	SRW 142	f 6-32 UNC								—	.12
SRW 162L	f 8-32 UNC	1/4-28 UNF	.2268 .2243	.2098	.25	.169	.080	.138	—	▲	
SRW 162	f 8-32 UNC								—	.15	△
STRUCTURAL	SRW 192L	10-32 UNF	9/32-28 NS	.2580 .2554	.2410	.29	.214	.080	.157	—	▲
	SRW 192									—	.18
	SRW 194L	f 10-24 UNC							.157	—	△
	SRW 194									—	.18
	SRW258L	1/4-28 UNF	11/32-24 NS	.3166 .3138	.2976	.38	.264	.095	.210	—	▲
	SRW258									—	.24
	SRW 250L	f 1/4-20 UNC							.210	—	▲
	SRW 250									—	.24
	SRW 314L	5/16-24 UNF	27/64-20 NS	.3894 .3863	.3651	.47	.336	.110	.266	—	▲
	SRW 314									—	.31
	SRW 318L	f 5/16-18 UNC							.266	—	△
	SRW 318									—	.31
	SRW 374L	3/8-24 UNF	31/64-20 NS	.4519 .4487	.4276	.56	.393	.110	.322	—	▲
	SRW 374									—	.37
	SRW 376L	f 3/8-16 UNC							.322	—	△
	SRW 376									—	.37
	SRW 430L	7/16-20 UNF	9/16-18 UNF	.5264 .5230	.4993	.66	.466	.135	.377	—	▲
	SRW 430									—	.43
	SRW 434L	f 7/16-14 UNC							.377	—	△
	SRW 434									—	.43
	SRW 500L	1/2-20 UNF	5/8-18 UNF	.5889 .5854	.5618	.75	.528	.135	.439	—	▲
	SRW500									—	.49
	SRW 503L	f 1/2-13 UNC							.439	—	△
SRW 503	—									.49	△

AVAILABILITY:

- ▲ STANDARD PARTS NORMALLY STOCKED.
- △ STANDARD PARTS AVAILABLE FROM STOCK OR WITHIN NORMAL DELIVERY.

DIMENSIONS IN INCHES, TOLERANCES UNLESS NOTE: DECIMAL .XX = .0151 .XXX

ISSUED: 15 MAR 61 (3) 1 JULY 64 (4) 1 OCT 77

FORM R4-14-3

**SLIMBERT® INSERT HI-STRENGTH
OVERSIZE REPLACEMENT
FOR WIRE TYPE INSERT**



ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

SRW SERIES

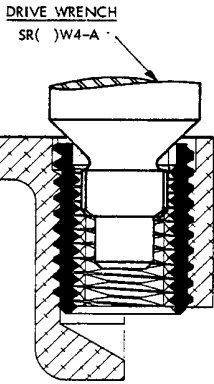
WRENCHING OPERATION

SWAGING OPERATION

NO INTERNAL LOCK

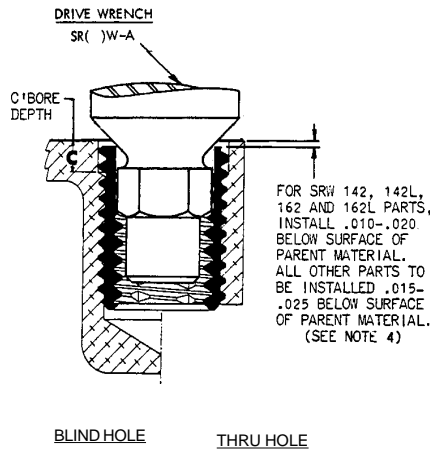
4 POINT DRIVE

NOTE:
USE DRIVE WRENCH AS INDICATED. OTHERWISE ALL HOLE PREPARATIONS, OPERATIONS AND TOOLS

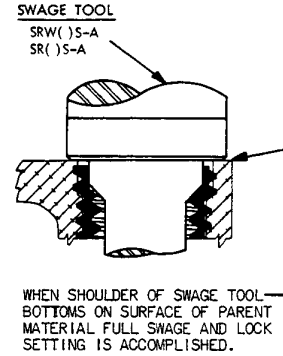


INTERNAL LOCK

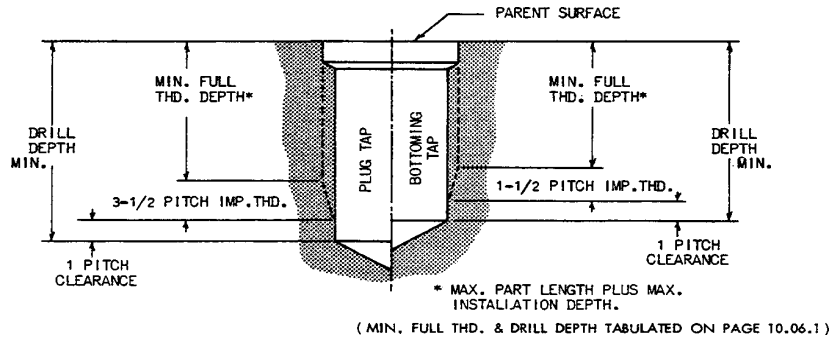
6 POINT DRIVE



NOTE: SAME FOR BOTH 4 AND 6 POINT DRIVE



HOLE PREPARATION



NOTES:

- STANDARD TAPS, IN FRACTIONAL SIZES INDICATED, ARE USED TO TAP ALL HOLES. (THREAD IS MODIFIED BY OVERSIZE TAP DRILL)
- SWAGE TOOL OPERATION REQUIRED TO ACHIEVE POSITIVE EXTERNAL LOCK.
- TO INSURE THE ACHIEVEMENT OF THE DESIGN CAPABILITIES OF THE SLIMSERT INSERT, THE USAGE OF ROSAN STANDARD TOOLS IS MANDATORY, I.E. DRIVE WRENCH SR()W-A OR SR()W4-A AND SR()S-A OR SRW()S-A. SEE SECTION 7 OR ILLUSTRATIONS.
- THESE INSERTS ARE PRIMARILY FOR INSTALLATION INTO ALUMINUM AND MAGNESIUM. FOR USE IN OTHER MATERIALS CONSULT ROSAN ENGINEERING DEPARTMENT.
- METHOD OF REMOVAL:** USING REMOVAL TOOL SRW () R, C"BORE TO DEPTH "C" DIMENSION. BACK OUT INSERT WITH DRIVE WRENCH, CLEAN OUT HOLE AND INSTALL NEW SLIMSERT INSERT.
ALTERNATE METHOD: USE DRILL SIZE INDICATED IN REMOVAL DRILL COLUMN. DRILL TO "C" DIMENSION PLUS .025. REMOVE REMAINING PORTION OF SERRATION AND ALLOW PROCEDURE AS STATED ABOVE.
- POWER TOOLING:** POWER WRENCH AND SWAGE TOOLS ARE AVAILABLE TO FACILITATE HIGH PRODUCTION RATE REQUIREMENTS, SEE SECTION 7 FOR ILLUSTRATIONS.

ISSUED: 1 AUG 60 (4) 1 JULY 64 (5) 28 SEP 64 (6) 1 SEP 65 (7) 1 OCT 77

PATENTED:
3,081,808
3,137,186

INSTALLATION AND REMOVAL DATA
SRW SERIES
SLIMSERT® INSERTS

RosAN
ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

PS10023 SHEET 1
OF 2

HOLE PREPARATION DATA AND TOOLS REQ'D

PART NUMBER	TAP DRILL +004 -001	C'BORE DIA. +004 -001	C C'BORE DEPTH	STEP DRILL	THD. -3B MOD. (NOTE 1 SHEET 1)	PITCH DIA.	PLUG TAP		BOTTOMING TAP		TAP TOOL NO.	‡ DRIVE WRENCH	* SWAGE TOOL	REMOVAL TOOL	REMOVAL DRILL
							DRILL DEPTH MIN.	MIN. FULL THD.	DRILL DEPTH MIN.	MIN. FULL THD.					
SRW142L	.182 (#14)	.216	.065	SRW 14D	#12-28 UNF	.1959 .1928	.401	.240	.329	.240	SRW 14T	SR14W-A	SR14S-A	SRW 14R	.205 (#5)
SRW142												SR14W4-A			
SRW162L	.218 (7/32)	.250	.065	SRW 16D	1/4-28 UNF	.2300 .2268	.441	.280	.369	.280	SRW 16T	SR16W-A	SR16S-A	SRW 16R	.234 (15/64)
SRW162												SR16W4-A			
SRW192L	.242 (C)	.281	.082	SRW 19D	9/32-28 NS	.2613 .2580	.486	.325	.414	.325	SRW 19T	SR19W-A	SRW19S-A	SRW 19R	.265 (17/64)
SRW192												SR194-A			
SRW194L												SR19W-A			
SRW258L	.302 (N)	.343	.082	SRW 25D	11/32-24 NS	.3203 .3166	.602	.415	.519	.415	SRW 25T	SR25W-A	SR25S-A	SRW 25R	.328 (21/64)
SRW258												SR25W4-A			
SRW250L												SR25W-A			
SRW250												SR25W4-A			
SRW314L	.368 (U)	.422	.082	SRW 31D	27/64-20 NS	.3934 .3894	.730	.505	.630	.505	SRW 31T	SR31W-A	SRW31S-A	SRW 31R	.406 (13/32)
SRW314												SR31W4-A			
SRW318L												SR31W-A			
SRW318												SR31W4-A			
SRW374L	.437 (7/16)	.484	.113	SRW 37D	31/64-20 NS	.4560 .4519	.820	.595	.720	.595	SRW 37T	SR37W-A	SRW37S-A	SRW 37R	.453 (29/64)
SRW374												SR37W4-A			
SRW376L												SR37W-A			
SRW376												SR37W4-A			
SRW430L	.515 (33/64)	.562	.113	SRW 43D	9/16-18 UNF	.5308 .5264	.945	.695	.834	.695	SRW 43T	SR43W-A	SRW43S-A	SRW 43R	.546 (35/64)
SRW430												SR43W4-A			
SRW434L												SR43W-A			
SRW434												SR43W4-A			
SRW500L	.578 (37/64)	.625	.113	SRW 50D	5/8-18 UNF	.5934 .5889	1.035	.785	.924	.785	SRW 50T	SR50W-A	SRW50S-A	SRW 50R	.609 (39/64)
SRW500												SR50W4-A			
SRW503L												SR50W-A			
SRW503												SR50W4-A			

‡ SR()W-A AND SR()W4-A SUPERSEDES AND OBSOLETES SR()W AND SR()W4

* SR(S-A & SRW(S-A SUPERSEDES SR(S)S & SRW(S)S

DIMENSIONS IN INCHES. TOLERANCES UNLESS NOTED: DECIMAL .XX ± .015 .XXX ± .005

ISSUED: 15 MAR 61 (1) 15 DEC 61 (2) 15 MAY 62 (3) 1 JULY 64 (4) 1 OCT 77

FORM R425-1

INSTALLATION AND REMOVAL DATA
SRW SERIES
SLIMERT® INSERTS



ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

PS10023 SHEET 2
OF 2

PAGE 10.06.1

EVALUATION TEST DATA

LISTED HERE IS A SERIES OF TYPICAL PHYSICAL PROPERTIES OBTAINED FROM 30 CONSECUTIVE TESTS CONDUCTED UPON SLIMSERT INSERTS BY INDEPENDENT TESTING LABORATORIES AND BY THE TEST LABORATORY AT THE ROS&N FACILITY

1	2	3	4	5	6	7	8	9	10	11
PART NO.	AXIAL TENSION (PULL OUT) NOTE 4		TORQUE OUT		TORQUE TENSION (NOTE 1)		INTERNAL THD. LOCK (NOTE 5)		MIN. EDGE DIST.	WT. IN LBS.
SEE NOTE 10	MIL-N-25027 REQU'MT	TYP. TEST RESULT	SPEC. MIL-N-25027	TEST RESULT	ROS&N SPEC. REQU'MT	TEST RESULT	MIL-N-25027 REQU'MT	TEST RESULT	SEE NOTE 9	PER 1000 PCS.
SRW192L	2460#	3900# ≠	60 INCH#	160 MAX. 75 MIN.	AN-3 BOLT FAILURE	AN-3 BOLT FAILURE	MAX-18 BRK-2.0	MAX-12 BRK-5.0	.224	1.86
SRW258L	4580#	5933# ≠	100 INCH#	210 MAX. 100 MIN.	AN-4 BOLT FAILURE	AN-4 BOLT FAILURE	MAX-30 BRK-3.5	MAX-18 BRK-7.0	.242	3.36
SRW314L	7390#	9533# ≠	160 INCH#	400 MAX. 190 MIN.	AN-5 BOLT FAILURE	AN-5 BOLT FAILURE	MAX-60 BRK-6.5	MAX-41 BRK-14.8	.291	5.81
SRW374L	11,450#	13,866# ≠	240 INCH#	505 MAX. 430 MIN.	AN-6 BOLT FAILURE	AN-6 BOLT FAILURE	MAX-80 BRK-9.5	MAX-50 BRK-25.0	.367	7.22
SRW430L	15,450#	17,200# ≠	350 INCH#	600 MAX. 525 MIN.	AN-7 BOLT FAILURE	AN-7 BOLT FAILURE	MAX-100 BRK-14.0	MAX-50 BRK-35.0	.406	13.39
SRW500L	21,110#	23,400# ≠	450 INCH#	800 MAX. 600 MIN.	AN-8 BOLT FAILURE	AN-8 BOLT FAILURE	MAX-150 BRK-18.0	MAX-80 BRK-35.5	.468	17.87

NOTES:

1. IN THE ABSENCE OF APPLICABLE MILITARY SPECS., ROSAN SPECS. WERE ESTABLISHED AND APPLIED.
2. TEST BOLTS USED: 160,000-180,000 PSI EXCEPT COLUMNS 6 & 7.
3. TEST BLOCK MATERIAL: 356-T6 ALUMINUM ALLOY SAND CASTING.
4. COL. 3 TEST RESULTS SHOW AXIAL LOADS WHICH CAUSED FAILURE IN 356-T6 MATERIAL. (ONE BOLT DIA. THD. ENGAGEMENT)
5. INTERNAL THD. LOCK:
MAX. = MAX. TORQUE ENCOUNTERED IN 15 CYCLES. BRK. = MIN. BREAKAWAY TORQUE ENCOUNTERED IN 15 CYCLES.
VALUES IN INCH POUNDS.
6. ALL AXIAL PULLOUT TESTS WERE CONDUCTED ON 60H BALDWIN UNIVERSAL TESTING MACHINE OR EQUIVALENT.
7. ALL TORQUE TESTS WERE CONDUCTED USING SNAP-ON INDICATOR TORQUE-O-METERS.
8. INSERT MATERIAL 17-48PH.
9. COLUMN 10 IS MIN. RECOMMENDED EDGE DISTANCE FROM CENTER LINE OF PART REQUIRED TO DEVELOP AXIAL LOAD VALUES PER COL. 3. IN APPLICATIONS USING RECOMMENDED, OR LESS THAN RECOMMENDED MIN. EDGE DISTANCE, SWAGING MAY RESULT IN MINIMAL DEFLECTION OF PARENT MATERIAL AT THE UNSUPPORTED EDGE IN THE LOW STRENGTH ALLOYS. CLAMPING OR PERIPHERAL SUPPORT OF THE PARENT MATERIAL WILL ELIMINATE THIS CONDITION WHEN IT IS SO REQUIRED.
10. NON-LOCKED PARTS MEET SAME STRUCTURAL REQUIREMENTS AS THOSE LISTED ABOVE.
11. **TYPE OF FAILURE:**
≠ BOLT BREAK
≠≠ PART PULLED OUT OF PARENT MATERIAL.

ISSUED: 1 OCT 77

FORM R414-1

SLIMSERT® INSERT
DESIGN EVALUATION DATA
OVERSIZE REPLACEMENT TYPE
SRW SERIES

Ros&N
ROSAN INC.
2901 WEST COAST HIGHWAY
NEWPORT BEACH, CALIFORNIA

SRW SERIES

PAGE 10.06.2

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Fax: 310.784.6606

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Guarda

Eurosim / Simmonds
Parque Industrial da Guarda
Lotes 53/54 6300 Guarda Portugal
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Fax: 714.680.0175

Fullerton: Plant 2

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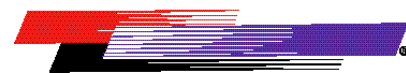
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