From pre-fabricated buildings to space applications, no fastener offers the ease of use, strength and unprecedented performance of Zahodiakin fasteners. *These positive-locking fasteners are the most rapidly-threading fastener on the market. this makes them ideal for applications requiring quick and convenient access to panel areas without sacrificing the strength of the connection.
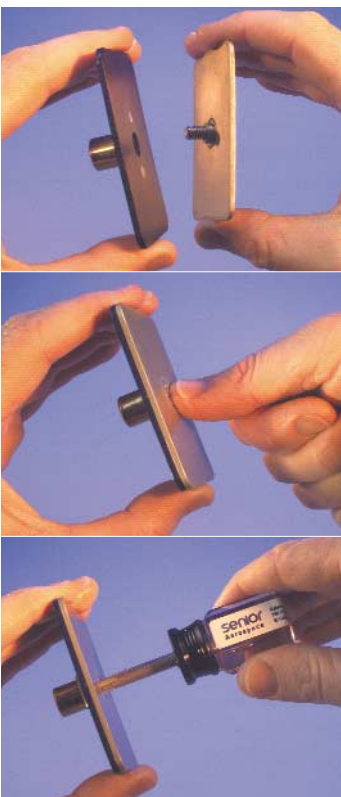
The Zahodiakin fasteners unique foolproof design is characterized by its ability to synchronize the fastener stud with its receptacle. Misalignments are automatically corrected and there's never a cross-threading. Just place the two parts together, push, and give a half-turn with a screwdriver to complete a positive-locking, high-strength connection. In seconds.

Initially designed to secure access doors, panels and structural components under the most critical aerospace conditions, Zahodiakin fasteners have never experienced a field failure in more than 50 years of manufacture. Today, both commercial and military fastener products are available, with the military line designed to meet or exceed Mil-F-22978A (ASG).

Receptacle Part No. V4-109

Shim part No. V4-116-62 (if required)

Retaning Ring Part No. V4-201

No protrusion

Grommet

Flush-Type Stud Assembly Part No SV4F

Material:	**Steel-Carbon and Alloy Federal Standard No. 66, table 3, table 8, table 18.**
Finish:	**Cadmium Plate to current QQ-P-416 requirements**
Temperature:	**450°F maximum**

1. Align stud threads with receptacle. Unique synchronizing-ring design automatically corrects misalignments.

2. Push threaded stud firmly into receptacle.

3. A half-turn with a screwdriver completes positive-locking connection. Total time: a few seconds.

High-Performance Comparative Test & Performance Data

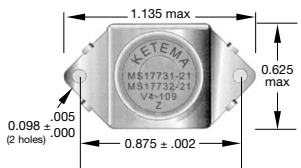| Mechanical Properties	MIL-F-22978A	Measured Performance
Locking Torque (lbs)	30 Max	30 Max
Unlocking Torque (lbs)	35 Max	35 Max
Torque Out (lbs)	100 Min	100 Max
Ultimate Shear Load (lbs)	4650	8300
Rated Shear Load (lbs)	3560	4500
Ultimate Tensile Load (lbs)	2210	4500
Rated Tensile Load (lbs)	1700	1700
Sheet Separation @	.015	.013 1700 lbs(ins)
Sheet Pull-up (in)	1/16	1/16
Stud Push-out (lbs)	150 min	200 min
Receptacle Pus-Out (lbs)	125min	130min
Vibration Requirements	Para 4.6.8	Exceed Spec.
Misalignment Float (in)	=.020	±.020
Elevated Temperature Limit (°F)	450	450
Corrosion resistance (hours)	96	200

senior Aerospace

TO ORDER

Order by part number and description, Stud Assembly SV4F - (Stud number), Receptacle Assembly V4-109, Retaining Ring V4-201 and Shim V4-116-62.

Part Number			Weight (lbs)	Part Number		Weight (lbs)	Part Number	Grip Range	Total Weight (lbs)	Part Number	Weight (lbs)	Grommet Length
Ketema Stud ❶ Assy.	Ketema Retainer Ring	MS Stud Assy.	Stud Assy.	Ketema Receptacle	MS Receptacle Assy.	Receptacle Assy.	MS ❷ Fastener Assy	$T_1 + T_2$	Fastener Assy.	Shim (if required)	Shim	Total Length ± .010
SV4F-1	V4-201	MS 17731-1A	.011	V4-109	MS17731-21	.028	MS 17731-1	.150 - .220	.039	V4-116-62	.0026	.200
SVAF-2	V4-201	MS 17731-2A	.012	V4-109	MS17731-21	.028	MS 17731-2	.221 - .290	.040			.200
SVAF-3	V4-201	MS 17731-3A	.013	V4-109	MS17731-21	.028	MS 17731-3	.291 - .360	.041	NOT REQUIRED		275
SVAF-4	V4-201	MS 17731-4A	.016	V4-109	MS17731-21	.028	MS 17731-4	.361 - .430	.044	(if part number V4-116-62 9		.350
SVAF-5	V4-201	MS 17731-5A	.017	V4-109	MS17731-21	.028	MS 17731-5	.431 - .500	.045	(shim) is used, deduct		.425
SVAF-6	V4-201	MS 17731-6A	.020	V4-109	MS17731-21	.028	MS 17731-6	.501 - .570	.048	.062 from min and max.		.500
SVAF-7	V4-201	MS 17731-7A	.022	V4-109	MS17731-21	.028	MS17731-7	.571 - .640	.050	grip range dimension)		.575
SVAF-8	V4-201	MS 17731-8A	.024	V4-109	MS17731-21	.028	MS 17731-8	.641 - .710	.052			.650
SVAF-9	V4-201	MS 17731-9A	.025	V4-109	MS17731-21	.028	MS 17731-9	.771 - .780	.053			.725

MS ❶ Stud, grommet and retainer ring

MS ❷ Stud, grommet, retainer ring and receptacle

1.135 max
0.625 max
0.098 ±.005 .000 (2 holes)
0.875 ± .002

Receptacle Assembly
0.075 max
0.625 max

0.325 I.D.
0.400 ± .027 .000 (free diameter)
.024±.002
.012 Ref

Retainer Ring Slot
.375± .000 .002
0.060 Ref.
0.500 Max

Recess MS 9006 Nomianl size 2 (PHILLIPS) Depth.123 min
Number & Mfg. Name or trademark
.190 Min

Code

T_1 = Outer Panel
T_2 = Inner Panel
H = Total Length of Grommet (see table)
C = H - T_1 = Shear VAlue in Sheet ₂
A = Head of Grommet - Constant at .060

Formula

When (T_1 - A/2) greater than C, c' bore T_1
When (T_1 - A/2) greater than C, c' bore T_2

Example No.1

Assume Stud Assembly SV4F-2 is being used, with T_1 being 0.102 in. and T_2 being used 0.158 in., "A" is .060 in.

1. Compute Value of (T_1 - A/2):
(T_1 - A/2) = .102 - .060/2 = .072

2. Compute Value of "C":
C = H - T_1 = .237 - .102 = .135
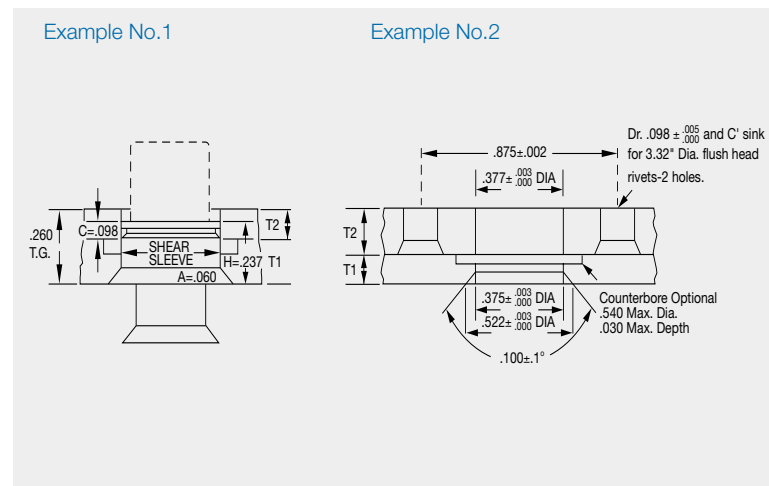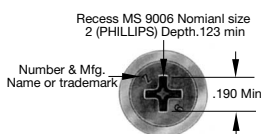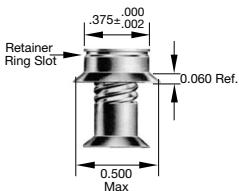Referring to the formula above: (T_1 - A/2) is less than C; therefore, Sheet T_2 is to be counterbored.
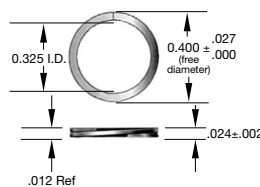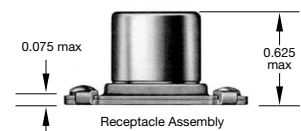
Example No.2

Assume Stud Assembly SV4F-2 is being used, with T_1 being 0.125 in. and T_2 being used 0.135 in., "A" is .060 in.

1. Compute Value of (T_1 - A/2):
(T_1 - A/2) = .125 - .030 = .095

2. Compute Value of "C":
C = H - T_1 = .237 - .125 = .112
Referring to the formula above: (T_1 - A/2) is greater than "C"; therefore, Sheet T_1 is to be counterbored.

Example No.1

.260 T.G.
C=.098
SHEAR SLEEVE
H=.237 T1
A=.060
T2

Example No.2

.875±.002
.377± .003 .000 DIA
Dr. .098 ± .005 .000 and C' sink for 3.32" Dia. flush head rivets-2 holes.
T2
T1
.375± .003 .000 DIA
.522± .003 .000 DIA
Counterbore Optional .540 Max. Dia. .030 Max. Depth
.100±.1°

Notes:

1. Float of receptacle shall not be less than .020 in any direction from the center position.

2. Dimensioning and gaging of the above recess shall be in accordnce with Military Standard Drawing MS 9006, Cross Recess and Gage Dimensions.

3. For complete assembly of Stud Assembly, Receptacle Assembly and Retaining Ring No. V4-201.

senior
Aerospace