

# 81 DZUS® Lion Quarter-Turn Fasteners

## Overview · Accessories

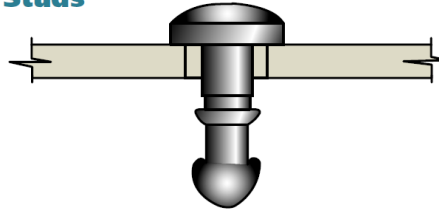
### Features

- For limited space applications
- Quick access

### To select correct fastener:

1. **Select receptacle**
  - Choose a receptacle from 81 DZUS® Lion Quarter-Turn Fasteners range
  - Note any frame thickness limitations
2. **Select retainer and accessories**
  - Choose from 81 DZUS® Lion Quarter-Turn Fasteners range and note any adjustment value
3. **Select stud**
  - Measure your *Outer Panel Thickness* or *Total Material Thickness* (note under receptacle part number will tell you which to use)
  - If adjustment formula is shown under receptacle part number, apply this formula to your measurement
  - Use measurement to find stud part number in stud 81 DZUS® Lion Quarter-Turn Fasteners selection table
4. **Order each component and tool (if required) separately by part number**

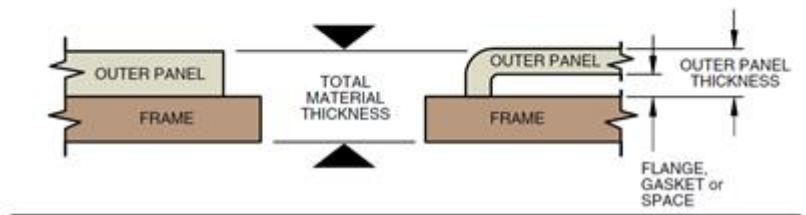
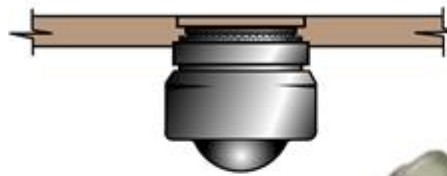
### Studs



### Retainer



### Receptacles



### Accessories

#### Material

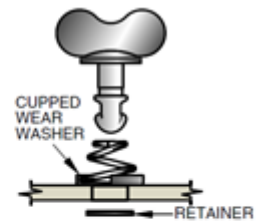
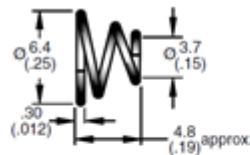
- Ejector spring: 302 Stainless steel, passivated
- Wear washer: Nylon, black or white (see below table)

PART NUMBER		
EJECTOR SPRING	WEAR WASHER	
	Black	White
81-41-102-24	81-46-101-41	81-46-101-39

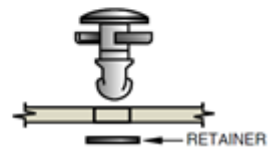
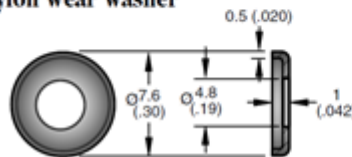
#### Adjustment Formula Notes

- When using a **stud ejector** (ejector spring and wear washer), add 0.8 to your Outer Panel Thickness or Total Material Thickness
- When using a **wear washer**, add 0.5 to your Outer Panel Thickness or Total Material Thickness

#### Stud Ejector



#### Nylon Wear Washer

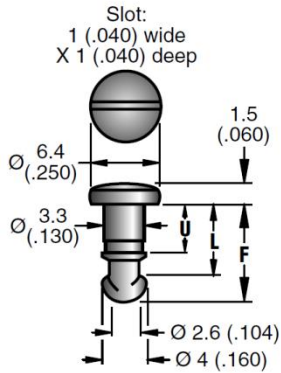


## 81 DZUS® Lion Quarter-Turn Fasteners

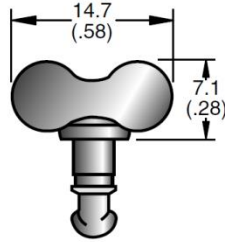
Studs - Stud Selection

QUARTER-TURN FASTENERS

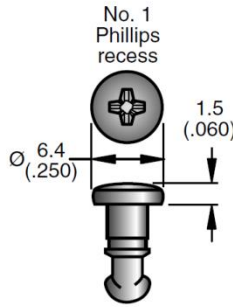
**Oval Slotted**



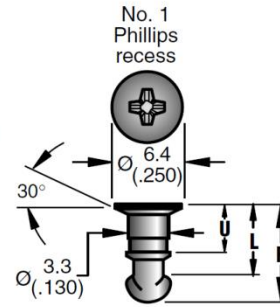
**Wing Head**



**Oval  
Phillips Recess**



**Flush  
Phillips Recess**



FOR:		FOR:		STUD PART NUMBER				DIMENSIONS		
Press-in Part No. 81-35-308-55 and Ultrasonic Part No. 81-35-310-55		ALL OTHER RECEPTACLES*		Zinc plate, chromate plus sealer		Case hardened and zinc plate chromate plus sealer.		U	L	F
				OVAL SLOTTED	WING HEAD	OVAL PHILLIPS RECESS	FLUSH PHILLIPS RECESS			
Outer Panel Thickness ‡	Total Material Thickness ‡	MIN.	MAX.							
1 (.040)	1.5 (.059)	2.3 (.090)	2.8 (.109)	81-11-100-16	81-12-100-16	81-18-100-16	81-19-100-16	4.9 (.193)	7.2 (.285)	9.8 (.385)
1.5 (.060)	2 (.079)	2.8 (.110)	3.3 (.129)	81-11-120-16	81-12-120-16	81-18-120-16	81-19-120-16	5.4 (.213)	7.8 (.305)	10.3 (.405)
2 (.080)	2.5 (.099)	3.3 (.130)	3.8 (.149)	81-11-140-16	81-12-140-16	81-18-140-16	81-19-140-16	5.9 (.233)	8.3 (.325)	10.8 (.425)
2.5 (.100)	3 (.119)	3.8 (.150)	4.3 (.169)	81-11-160-16	81-12-160-16	81-18-160-16	81-19-160-16	6.4 (.253)	8.8 (.345)	11.3 (.445)
3 (.120)	3.5 (.139)	4.3 (.170)	4.8 (.189)	81-11-180-16	81-12-180-16	81-18-180-16	81-19-180-16	6.9 (.273)	9.3 (.365)	11.8 (.465)
3.6 (.140)	4.1 (.159)	4.8 (.190)	5.3 (.209)	81-11-200-16	81-12-200-16	81-18-200-16	81-19-200-16	7.4 (.293)	9.8 (.385)	12.3 (.485)
4.1 (.160)	4.6 (.179)	5.3 (.210)	5.8 (.229)	81-11-220-16	81-12-220-16	81-18-220-16	81-19-220-16	8 (.313)	10.3 (.405)	12.8 (.505)
4.6 (.180)	5.1 (.199)	5.8 (.230)	6.3 (.249)	81-11-240-16	81-12-240-16	81-18-240-16	81-19-240-16	8.5 (.333)	10.8 (.425)	13.3 (.525)
5.1 (.200)	5.6 (.219)	6.4 (.250)	6.9 (.269)	81-11-260-16	81-12-260-16	81-18-260-16	81-19-260-16	9 (.353)	11.0 (.445)	13.8 (.545)
5.6 (.220)	6.1 (.239)	6.9 (.270)	7.4 (.289)	81-11-280-16	81-12-280-16	81-18-280-16	81-19-280-16	9.5 (.373)	11.8 (.465)	14.4 (.565)
6.1 (.240)	6.6 (.259)	7.4 (.290)	7.9 (.309)	81-11-300-16	81-12-300-16	81-18-300-16	81-19-300-16	10 (.393)	12.3 (.485)	14.9 (.585)
6.6 (.260)	7.1 (.279)	7.9 (.310)	8.4 (.329)	81-11-320-16	81-12-320-16	81-18-320-16	81-19-320-16	10.5 (.413)	12.8 (.505)	15.4 (.605)

**Material**

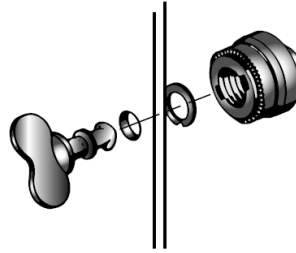
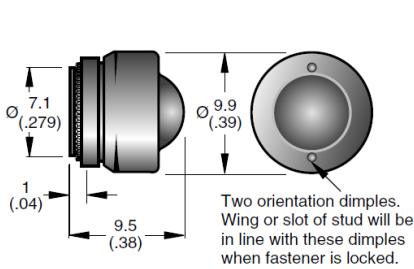
- Wing head stud: 1008 steel
- Wing: 1010 Steel
- Others: 1008 steel  
(see table for finishes)

# 81 DZUS® Lion Quarter-Turn Fasteners

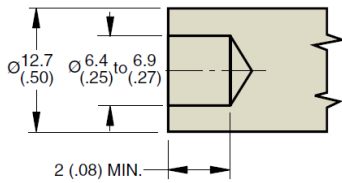
## Receptacles

### Shielded press-in for sheet metal

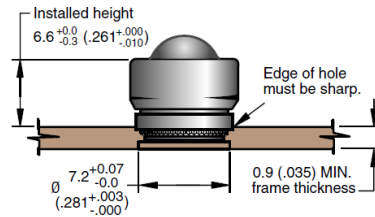
- Provides RFI-EMI shielding



### Installation Tool



TOOL PART NUMBER
54-0-5466-11



NOTE: For use in low carbon steels, aluminum and stainless steels in the annealed condition that are R<sub>B</sub>85 or less.

### Material

- Receptacle: 1010 steel, zinc plate, chromate plus sealer
- Shell: Low carbon steel, zinc plate, chromate plus sealer
- Spring: 302 stainless steel, zinc immersion coating
- Cap: 305 stainless steel, zinc immersion coating

### PART NUMBER

81-35-311-55

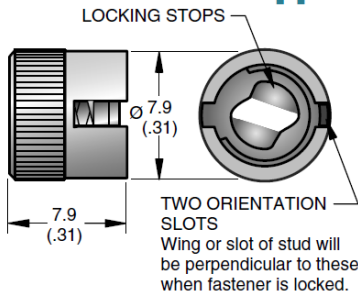
### Adjustment Formula

- To enter Stud Selection Table determine your Total Material Thickness
- Substitute 1.3 (constant) for frame thickness if frame thickness is less than 1.27

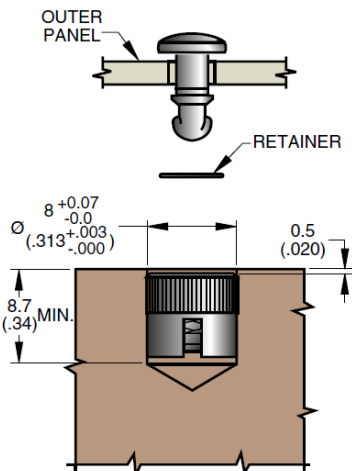
### Product Strength Guidelines

- Maximum static load: 440 N

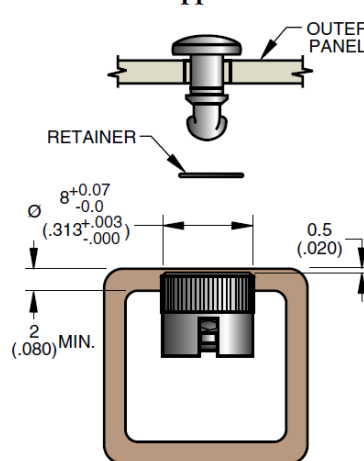
## Press-in for blind applications and solid materials



### Solid Materials



### Blind Applications



### Material

- Receptacle: 1010 steel hardened and zinc plate, chromate plus sealer
- Shell: Low carbon steel hardened and zinc plate, chromate plus sealer
- Retainer and spring: 302 stainless steel, zinc immersion coating

### PART NUMBER

81-35-308-55

### Adjustment Formula

- To enter Stud Selection Table determine your Outer Panel Thickness

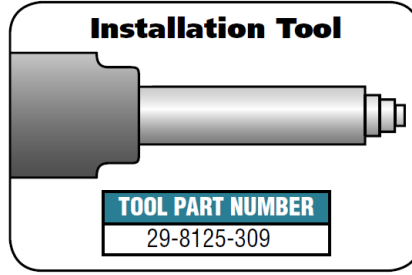
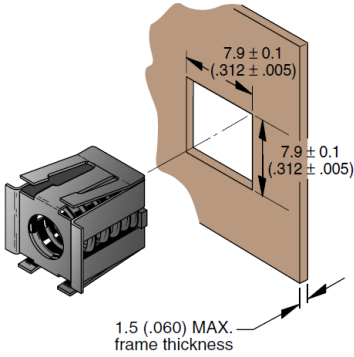
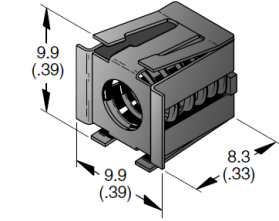
### Product Strength Guidelines

- Maximum static load: 440 N

# 81 DZUS<sup>®</sup> Lion Quarter-Turn Fasteners

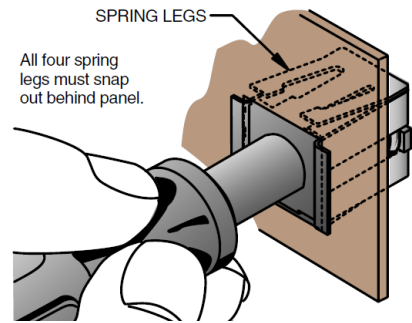
## Receptacles

### Snap-in



**TOOL PART NUMBER**  
29-8125-309

Push only on the center area of the receptacle as shown until all four spring legs snap out behind your panel.



### Material

- Housing and retainer: 301 stainless steel, natural
- Receptacle: 1010 steel, zinc plate, chromate plus sealer
- Spring: 302 stainless steel, passivated
- Tool: 12L14 steel, zinc plated, plus bright chromate dip

**PART NUMBER**  
81-35-309-56

### Adjustment Formula

- To use Stud Selection Table to determine your Total Material Thickness by calculating: Outer Panel Thickness + 1.5

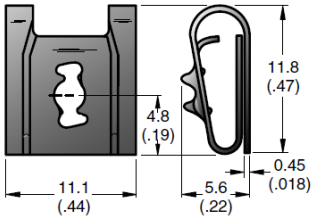
### Notes

- This tool will bear against the top surface of the receptacle, it will not enter the top opening.

### Product Strength Guidelines

- Maximum static load: 440 N

### Clip-on

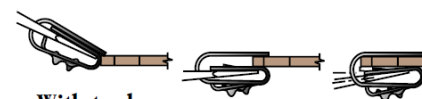


### To Install

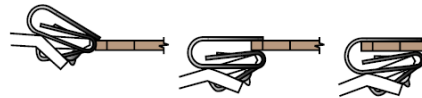
#### By hand



#### With screwdriver



#### With tool



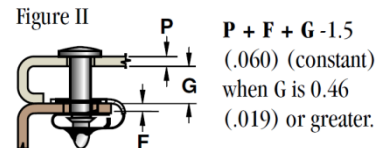
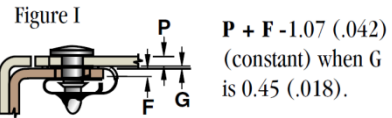
### Material

- Receptacle: 1064 steel, zinc immersion coating or 17-7PH stainless steel, passivated

Part Description	PART NUMBER
Steel	81-47-101-15
Stainless steel	81-47-101-20

### Adjustment Formula

- To use Stud Selection Table to determine your Total Material Thickness by calculating:



### Product Strength Guidelines

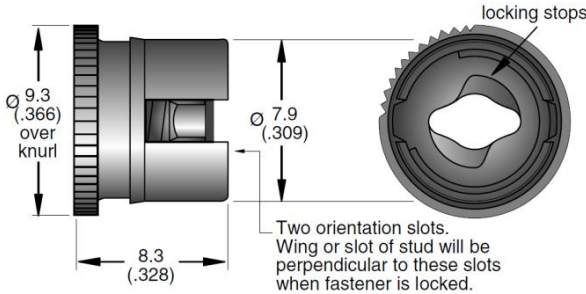
- Maximum static load: 440 N

# 81 DZUS® Lion Quarter-Turn Fasteners

Receptacles

For ultrasonic installation in thermoplastics

- Minimize residual stress
- Increased pull-out resistance
- Increased torque-out resistance



**Material**

- Receptacle: 1010 steel, case hardened and zinc plate, chromate plus sealer
- Shell: Low carbon steel, zinc plate, chromate plus sealer
- Spring: 302 stainless steel, zinc immersion coating

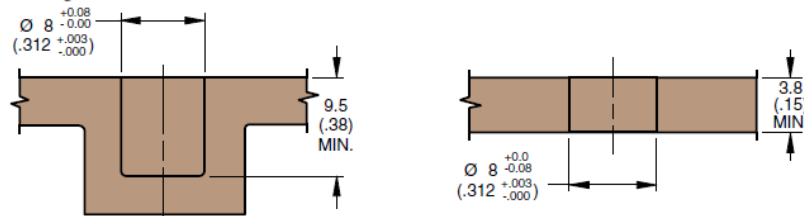
**PART NUMBER**  
81-35-310-55

**Product Strength Guidelines**

- Maximum static load: 440 N

**Installation**

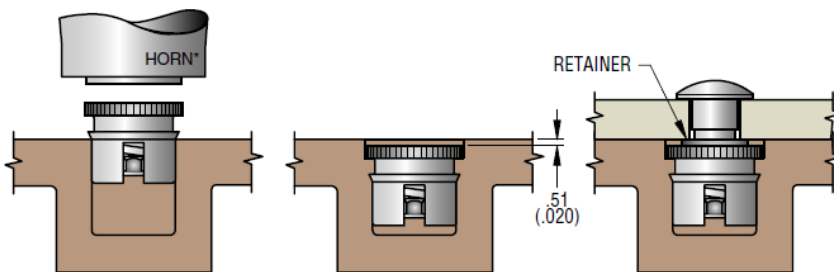
1. Prepare hole.



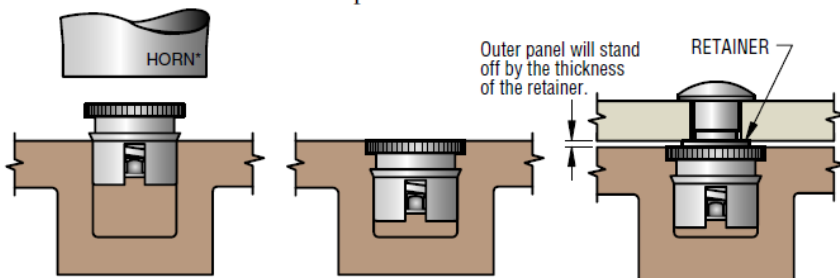
2. Use one of the methods shown.

Enter the No. 81 Stud Selection Table with your Outer Panel Thickness using column for Part Number 81-35-310-55.

**METHOD A**—Horn recesses receptacle to a 0.5 (.020) depth.



**METHOD B**—Horn installs receptacle flush with surface.



\*Horn design may vary with material and applications.

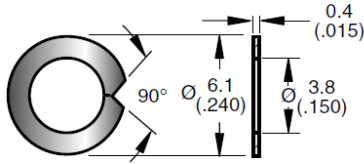
# 81 DZUS<sup>®</sup> Lion Quarter-Turn Fasteners

## Retainers

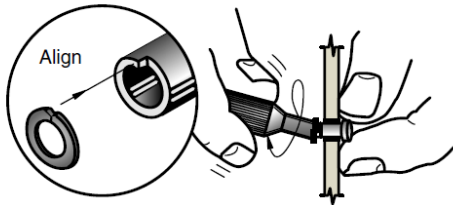
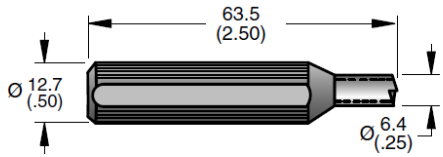
QUARTER-TURN FASTENERS

### Split-Ring Retainer

Hand or tool installation

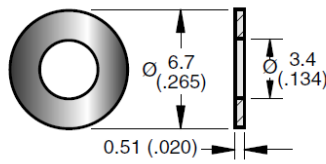


### Installation Tool

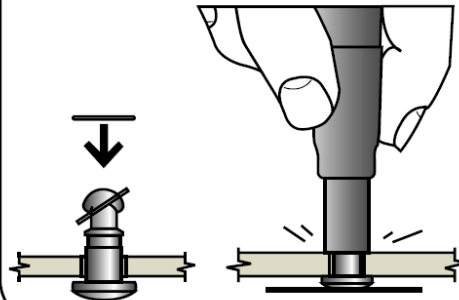
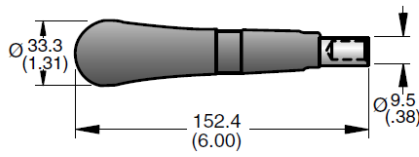


### Push-On Retainer

Tool installation



### Installation Tool



### Material

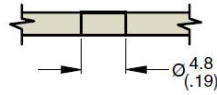
- Split-ring retainer: 302 Stainless steel, passivated
- Push-on retainer: Nylon, black
- Split-ring tool: Steel, zinc plated
- Push-on tool: Hardened low carbon steel, zinc plated.

## Installation

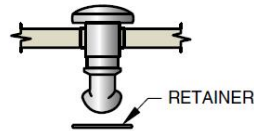
For Above-surface styles



1. Drill.



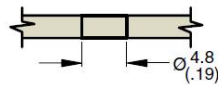
2. Insert stud and add retainer.



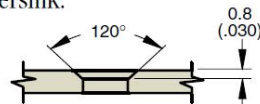
For Flush-head style



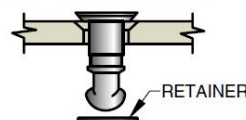
1. Drill.



2. Countersink.



3. Insert stud and add retainer.



RETAINER/TOOL	PART NUMBERS
Split-Ring Retainer	81-32-101-20
Split-Ring Tool	81-0-15129-11
Push-On Retainer	81-32-301-12
Push-On Tool	81-0-18173-11

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