

Panex® Selection Process

Step 1 – Select Receptacle Style

Choice of a Panex receptacle is a balance of load handling requirements and installation method. Select a preferred mounting style from those shown at right. Each style is not available in all sizes, so Step 2 is important.

Step 2 – Select Receptacle Size

Use the Panex Performance Chart to select the receptacle size that best meets your performance requirements.

Step 3 – Select Stud Style

Panex studs are shown following the receptacle pages in each size section. Performance is the same for each stud, so selection is based on head style and finish. The 6 mm size studs also offer a selection of **Partial Ejecting** versions. The length of the stud is determined by calculating Total Material Thickness (TMT) as defined on the receptacle pages.

Step 4 – Select Options

In addition to a choice of stud retainers, Panex studs also offer Head Cup and Retaining Spring options.

NOTE: All Dimensions in metric units. Calculations should be done in metric units.

Installation Guidelines can be found on the DZUS Panex Quarter Turn Installation pages.

Receptacle Styles



Clip-On – Slip-onto edge of support panel.

Right Angle Bracket – Used on support panels perpendicular to stud panel.

Front Load Clip-In – Clip-into a prepared hole anywhere in the support panel (9mm only).

Rivet Plate – Rivet mount onto support panel.

Weld Plate – Rivet mount onto support panel.

Press-In Insert – Suitable for soft metals and thermoplastics. Press or ultrasonic installation.

Self-Clinching Insert – Press-in installation from rear of support panel.

Panex Performance Chart

| Stud Size | Receptacle Style | Receptacle Strength ¹ | Max. Total Material Thickness (TMT) ² |
|-----------------|-----------------------|----------------------------------|--------------------------------------------------|
| 4mm | Clip-On | 30 lbs. | 1.5 to 32.4 mm |
| | Right Angle Bracket | 30 lbs. | 1.5 to 32.4 mm |
| | Front Load Clip-In | 12 lbs. | 1.5 to 28.4 mm |
| | Rivet Plate | 30 lbs. | 1.0 to 31.9 mm |
| | Weld Plate | 30 lbs. | 1.0 to 31.9 mm |
| | Press-In Insert | — | 0.7 to 29.6 mm |
| 6mm | Self-Clinching Insert | — | 1.7 to 30.6 mm |
| | Mini Clip-On | 45 lbs. | 2.5 to 31.4 mm |
| | Clip-On | 50 lbs. | 1.5 to 31.4 mm |
| | Right Angle Bracket | 50 lbs. | 1.5 to 31.4 mm |
| | Front Load Clip-In | 18 lbs. | 0.8 to 27.7 mm |
| | Rivet Plate | 54 lbs. | 1.5 to 31.4 mm |
| | Weld Plate | 54 lbs. | 1.5 to 31.4 mm |
| Press-In Insert | — | 0.7 to 27.6 mm | |
| 9mm | Self-Clinching Insert | — | 1.7 to 28.6 mm |
| | Clip-On | 61 lbs. | 2.0 to 28.9 mm |
| | Right Angle Bracket | 61 lbs. | 2.0 to 28.9 mm |
| | Front Load Clip-In | 23 lbs. | 2.5 to 17.4 mm |
| | Rivet Plate | 65 lbs. | 2.0 to 28.9 mm |
| Weld Plate | 65 lbs. | 2.0 to 28.9 mm | |

Notes:

1. Maximum load without distortion.
2. See specific receptacle page for TMT specification.

All dimensions on this page are in millimeters.

Additional installation information is located at the end of this section.

DZUS® Panex® D3 Quarter-Turn Stud & Retainer 9 mm



Stud Head Styles

| Slotted | Wing | Bail | Phillips Recess | Hex Recess |
|----------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------------|
| <p>2.1 mm ø18 mm 4.5 mm L ø9 mm ø10 mm</p> | <p>2.0 mm 30 mm 11.5 mm L ø9 mm ø10 mm</p> | <p>22.2 mm 3 mm 28.5 mm 5 mm L ø9 mm ø10 mm</p> | <p>#3 ø18 mm 4.5 mm L ø9 mm ø10 mm</p> | <p>5 mm HEX ø18 mm 4.5 mm L ø9 mm ø10 mm</p> |
| D3-319-1 | D3-319-3 | D3-319-4 | D3-319-7 | D3-319-2 |

Note:

L = Stud Length Number in mm

Additional Stud Dimensions

L Dimension - The stud length (L) depends on the type of receptacle chosen and the thickness of your materials. Use the tables provided with each type of receptacle to determine the proper receptacle size and stud length needed for your application.

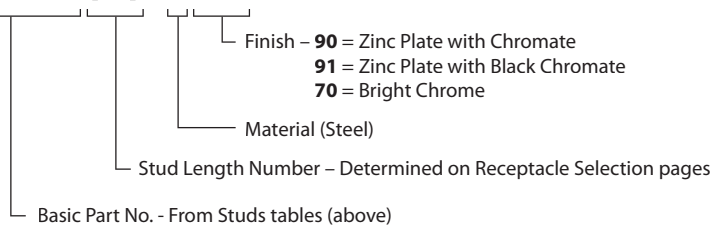
Material & Finish

Material: Case hardened steel

Finish: Zinc plate with chromate

Panex Stud Part Numbers

D3-319-1(L)-190



Retainers

| Plastic | Steel | Retaining Spring | | | |
|------------------------------------|------------------------------------|-------------------------------------------------------------------------|---------------|---------------|-----------------------|
| <p>1 mm ø9.3 mm ø17 mm</p> | <p>1 mm ø9.1 mm ø17 mm</p> | <p>H ø18 mm ø0.8 mm MUST BE SECURED WITH STEEL RETAINER</p> | | | |
| Part No. | Part No. | H Dim. | X Min. | X Max. | Part No. |
| D3-329-100-040 | D3-329-101-190 | 48 mm | 7 mm | 43 mm | D3-329-200-200 |

Material & Finish

Plastic Retainer: High density polyethylene, natural

Steel Retainer: Spring steel, zinc plate and chromate

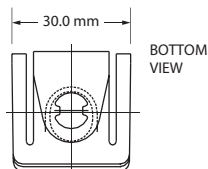
Retaining Spring: Stainless steel

All dimensions on this page are in millimeters.

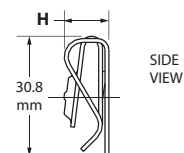
DZUS® Panex® D3 Quarter-Turn Receptacle Slip-On, Right Angle Bracket – 9 mm



Clip-On

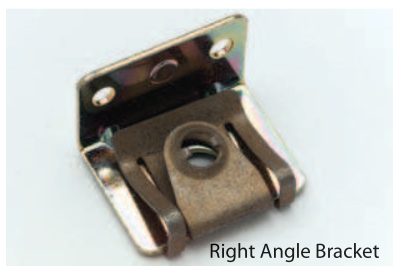


BOTTOM VIEW



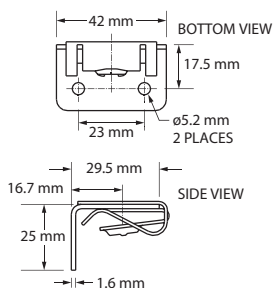
SIDE VIEW

| Support Thickness Ranges | Clip-On Part Numbers | H Dim. |
|--------------------------|----------------------|---------|
| .07 to 3.2 mm | D3-339-300-190 | 10.7 mm |
| 3.2 to 5.5 mm | D3-339-301-190 | 11.3 mm |



Right Angle Bracket

| | |
|--------------------|----------------|
| Part Number | D3-339-310-190 |
|--------------------|----------------|



Material & Finish

Clip-On Receptacle: Spring steel

Bracket Receptacle: Steel

Finish: Zinc plate and chromate

Mechanical

Maximum Load without Distortion: 61 lbs.

Maximum Torque: 36 lbs.-in.

To Determine Stud Length Needed

1. Calculate the Total Material Thickness (TMT) using Figure 1 below.
2. Then, using the Stud Selection Table, find the TMT Range that applies to your calculated TMT. Use the Stud Length Number to complete the Stud Part Number.

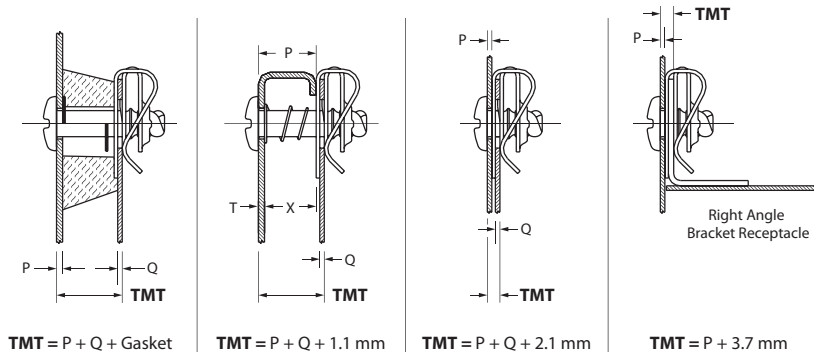


Figure 1: Total Material Thickness (TMT)

| TMT | Stud Length No. (L Dim) ¹ |
|-----------------|--------------------------------------|
| 2.0 to 2.9 mm | 10 |
| 3.0 to 3.9 mm | 11 |
| 4.0 to 4.9 mm | 12 |
| 5.0 to 5.9 mm | 13 |
| 6.0 to 6.9 mm | 14 |
| 7.0 to 7.9 mm | 15 |
| 8.0 to 8.9 mm | 16 |
| 9.0 to 9.9 mm | 17 |
| 10.0 to 10.9 mm | 18 |
| 11.0 to 11.9 mm | 19 |
| 12.0 to 12.9 mm | 20 |
| 13.0 to 13.9 mm | 21 |
| 14.0 to 14.9 mm | 22 |
| 15.0 to 15.9 mm | 23 |
| 16.0 to 16.9 mm | 24 |
| 17.0 to 17.9 mm | 25 |
| 18.0 to 18.9 mm | 26 |
| 19.0 to 19.9 mm | 27 |
| 20.0 to 20.9 mm | 28 |
| 21.0 to 21.9 mm | 29 |
| 22.0 to 22.9 mm | 30 |
| 23.0 to 23.9 mm | 31 |
| 24.0 to 24.9 mm | 32 |
| 25.0 to 25.9 mm | 33 |
| 26.0 to 26.9 mm | 34 |
| 27.0 to 27.9 mm | 35 |
| 28.0 to 28.9 mm | 36 |

Example:

TMT = 24 mm.

Stud Part Number is **D3-319-132-190** for a 9 mm slotted stud.

Note:

1. Equals (L) Dim on Stud Selection pages.

All dimensions on this page are in millimeters.

Additional installation information is located at the end of this section.

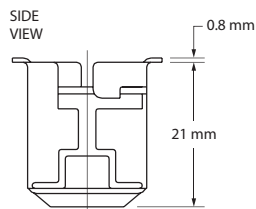
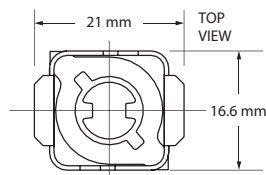
Quick Access Fasteners

DZUS® Panex® D3 Quarter-Turn Receptacle Front Load, Clip-In – 9 mm



Front Load,
Clip-In

Part Number D3-339-200-190



Material & Finish

Material: Spring steel
Finish: Zinc plate and chromate

Mechanical

Maximum Load without Distortion: 23 lbs.
Maximum Torque: 36 lbs.-in.

All dimensions on this page are in millimeters.

To Determine Stud Length Needed

1. Calculate the Total Material Thickness (TMT) using figure 1 below.
2. Then, using the Stud Selection Table, find the TMT Range that applies to your calculated TMT. Use the Stud Length Number to complete the Stud Part Number.

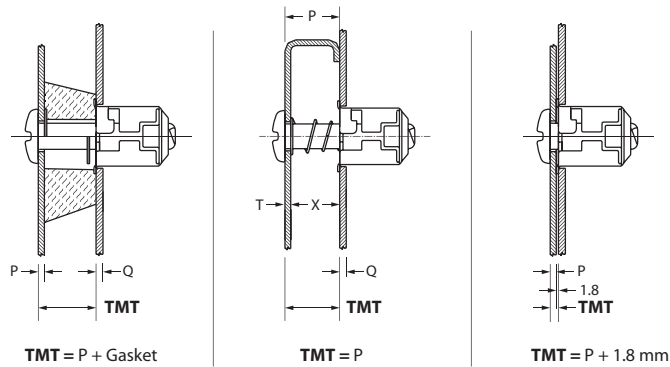


Figure 1: Total Material Thickness (TMT)

| TMT | Stud Length No. (L Dim) ¹ |
|-----------------|--------------------------------------|
| 2.5 to 3.4 mm | 22 |
| 3.5 to 4.4 mm | 23 |
| 4.5 to 5.4 mm | 24 |
| 5.5 to 6.4 mm | 25 |
| 6.5 to 7.4 mm | 26 |
| 7.5 to 8.4 mm | 27 |
| 8.5 to 9.4 mm | 28 |
| 9.5 to 10.4 mm | 29 |
| 10.5 to 11.4 mm | 30 |
| 11.5 to 12.4 mm | 31 |
| 12.5 to 13.4 mm | 32 |
| 13.5 to 14.4 mm | 33 |
| 14.5 to 15.4 mm | 34 |
| 15.5 to 16.4 mm | 35 |
| 16.5 to 17.4 mm | 36 |

Note:
1. Equals (L) Dim on Stud Selection pages.

Example:

TMT = 16 mm.
Stud Part Number is **D3-316-135-190** for a 9 mm slotted stud.

Quick Access Fasteners

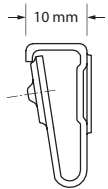
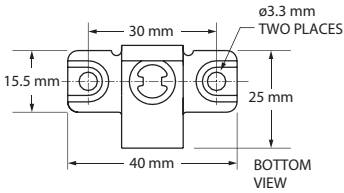
Additional installation information is located at the end of this section.

DZUS® Panex® D3 Quarter-Turn Receptacle Rivet Plate, Weld Plate – 9 mm



Rivet Plate

Part Number D3-339-400-190

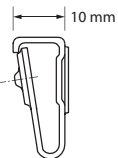
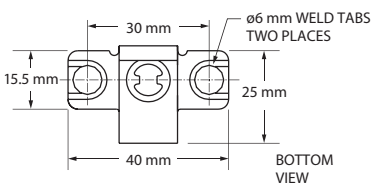


SIDE VIEW



Weld Plate

Part Number D3-339-500-190



SIDE VIEW

Material & Finish

Material: Spring steel
Finish: Zinc plate and chromate

Mechanical

Maximum Load without Distortion: 65 lbs.
Maximum Torque: 36 lbs.-in.

To Determine Stud Length Needed

1. Calculate the Total Material Thickness (TMT) using figure 1 below.
2. Then, using the Stud Selection Table, find the TMT Range that applies to your calculated TMT. Use the Stud Length Number to complete the Stud Part Number.

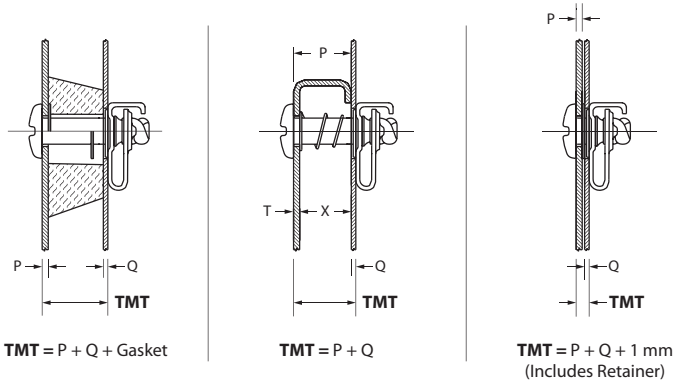


Figure 1: Total Material Thickness (TMT)

| TMT | Stud Length No. (L Dim) ¹ |
|-----------------|--------------------------------------|
| 2.0 to 2.9 mm | 10 |
| 3.0 to 3.9 mm | 11 |
| 4.0 to 4.9 mm | 12 |
| 5.0 to 5.9 mm | 13 |
| 6.0 to 6.9 mm | 14 |
| 7.0 to 7.9 mm | 15 |
| 8.0 to 8.9 mm | 16 |
| 9.0 to 9.9 mm | 17 |
| 10.0 to 10.9 mm | 18 |
| 11.0 to 11.9 mm | 19 |
| 12.0 to 12.9 mm | 20 |
| 13.0 to 13.9 mm | 21 |
| 14.0 to 14.9 mm | 22 |
| 15.0 to 15.9 mm | 23 |
| 16.0 to 16.9 mm | 24 |
| 17.0 to 17.9 mm | 25 |
| 18.0 to 18.9 mm | 26 |
| 19.0 to 19.9 mm | 27 |
| 20.0 to 20.9 mm | 28 |
| 21.0 to 21.9 mm | 29 |
| 22.0 to 22.9 mm | 30 |
| 23.0 to 23.9 mm | 31 |
| 24.0 to 24.9 mm | 32 |
| 25.0 to 25.9 mm | 33 |
| 26.0 to 26.9 mm | 34 |
| 27.0 to 27.9 mm | 35 |
| 28.0 to 28.9 mm | 36 |

Note:

1. Equals (L) Dim on Stud Selection pages.

Example:

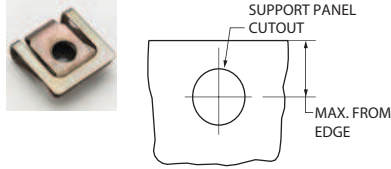
TMT = 24 mm.
Stud Part Number is **D3-319-132-190** for a 9 mm slotted stud.

All dimensions on this page are in millimeters.

Additional installation information is located at the end of this section.

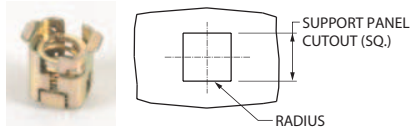
Support Panel Preparation

Clip-On and Right Angle Bracket



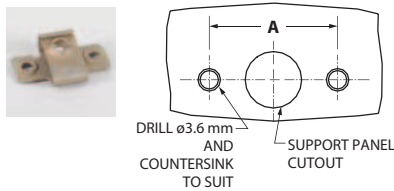
| Receptacle Size | Support Panel Thickness | Support Panel Cutout (+0.2) | Maximum From Edge (-0.5) |
|-----------------|-------------------------|-----------------------------|--------------------------|
| 4 | 0.7 to 2.5 mm | 8.0 mm | 10.0 mm |
| 6 | 0.7 to 3.2 mm | 11.0 mm | 11.0 mm |
| 6 mini | 0.9 to 2.5 mm | 11.0 mm | 8.0 mm |
| 9 | 0.7 to 3.2 mm | 14.0 mm | 13.0 mm |
| 9 | 3.2 to 5.5 mm | 14.0 mm | 13.0 mm |

Front Load, Clip-In Receptacles



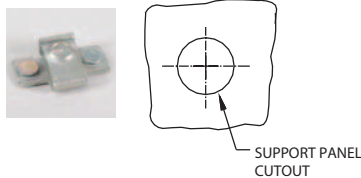
| Receptacle Size | Support Panel Thickness | Support Panel Cutout Sq. | Corner Radius Max. |
|-----------------|-------------------------|--------------------------|--------------------|
| 4 | 0.7 to 2.5 mm | 9.5 to 9.6 mm | 0.2 mm |
| 6 | 0.7 to 3.2 mm | 14 to 14.2 mm | 0.2 mm |
| 9 | 0.7 to 3.2 mm | 17 to 17.2 mm | 0.2 mm |

Rivet Plates



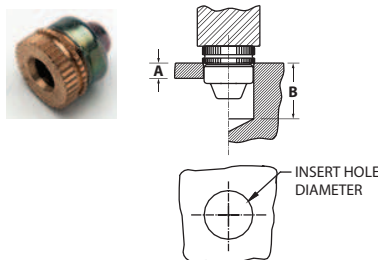
| Receptacle Size | Support Panel Cutout | A Dimension |
|-----------------|----------------------|-------------|
| 4 | 8.0 mm +0.2 | 20 mm |
| 6 | 11.0 mm +0.2 | 25 mm |
| 9 | 14.0 mm +0.2 | 30 mm |

Weld Plates



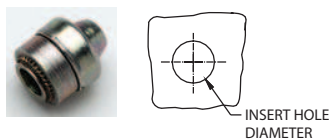
| Receptacle Size | Support Panel Cutout |
|-----------------|----------------------|
| 4 | 8.0 mm +0.2 |
| 6 | 11.0 mm +0.2 |
| 9 | 14.0 mm +0.2 |

Press-In Insert



| Receptacle Size | A Dimension Min. | B Dimension Min. | Insert Hole Diameter |
|-----------------|------------------|------------------|----------------------|
| 4 | 4.5 mm | 14 mm | 12.0 mm +0.1 |
| 6 | 5.0 mm | 17 mm | 15.0 mm +0.1 |

Self Clinching Insert

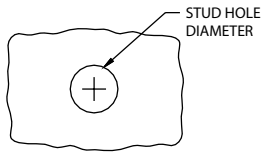


Support Thickness: 1.3 mm min.
Support Material Hardness: RB85 max.

| Receptacle Size | Insert Hole Diameter |
|-----------------|----------------------|
| 4 | 7.0 mm +0.08 |
| 6 | 10.0 mm +0.08 |

All dimensions on this page are in millimeters.

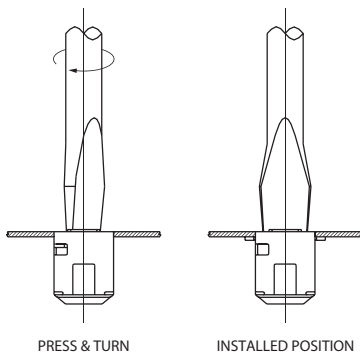
Stud Panel Preparation



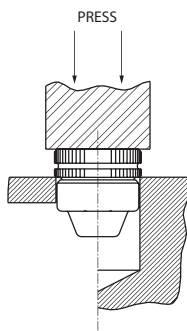
| Standard Panel Hole | |
|---------------------|--------------------------------|
| Stud Size | Stud Hole Diameter (+.2 -.000) |
| 4 mm | 5.0 mm |
| 6 mm | 7.0 mm |
| 9 mm | 10.0 mm |

Insert Receptacles Installation

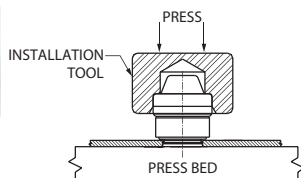
Front Load, Clip-In Receptacles



Press-In Insert



Self-Clinching Insert



| Receptacle Size | Installation Tool Part Number |
|-----------------|-------------------------------|
| 4 | D3-334-119-190 |
| 6 | D3-336-119-190 |

All dimensions on this page are in millimeters.