

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.

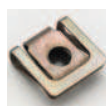
Step 4 – Select Options

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



Right Angle
Bracket



Front Load
Clip-In



Rivet Plate



Weld Plate



Press-In Insert



Self-Clinching
Insert

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
	Self-Clinching Insert	—	1.7 to 30.6 mm
6mm	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
6 mm



Stud Head Styles

Slotted	Wing	Bail	Phillips Recess
D3-316-1	D3-316-3	D3-316-4	D3-316-7

Note:
L = Stud Length Number in mm.

Hex Recess	Molded Knob ¹	Tamper Resistant ²
D3-316-2	D3-316-8	D3-316-6

Notes:
1. Knob is thermoplastic, 500 piece minimum order.
2. 1000 piece minimum order.



Part Number: D3-316-007-969

Material & Finish

Knob: Thermoplastic.
Key: Steel with zinc plate and chromate.

Additional Stud Dimensions

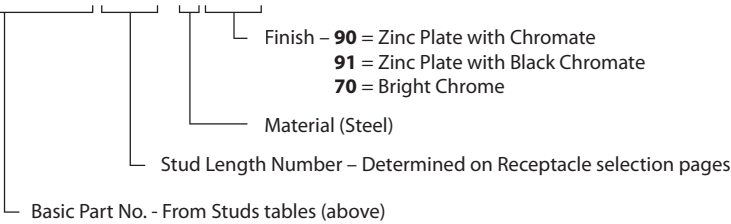
L Dimension - The stud length (L) depends on the type of receptacle chosen and the thickness of your materials. Use the tables provided with each type of receptacle to determine the proper receptacle size and stud length needed for your application.

Material & Finish

Material: Case hardened steel
Finish: Zinc plate with chromate

Panex Stud Part Numbers

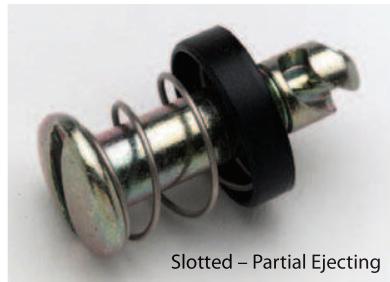
D3-316-1(L)-190



All dimensions on this page are in millimeters.

DZUS® Panex® D3 Quarter-Turn Stud Partial Ejecting – 6 mm

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Partial Ejecting Stud Selection

1. Partial Ejecting Studs are supplied as assemblies.
2. Using the TMT dimension tables on the 6 mm receptacle pages, calculate the TMT and add 2.0 mm.
3. Find the applicable range that applies to your calculated TMT and the Stud Length Number stated to the right of the applicable range.
4. Insert the Stud Length Number into the Stud Assembly Part Number. See sample part number below. Ring and Knob heads are not available as partial ejecting.
5. Check that when ejected, the space for the cup and spring does not exceed 20 mm. (See Figure A)

Partial Ejecting Stud Head Styles

Slotted	Wing	Hex Recess
D3-376-1	D3-376-3	D3-376-2

Note:
L = Stud Length Number in mm.

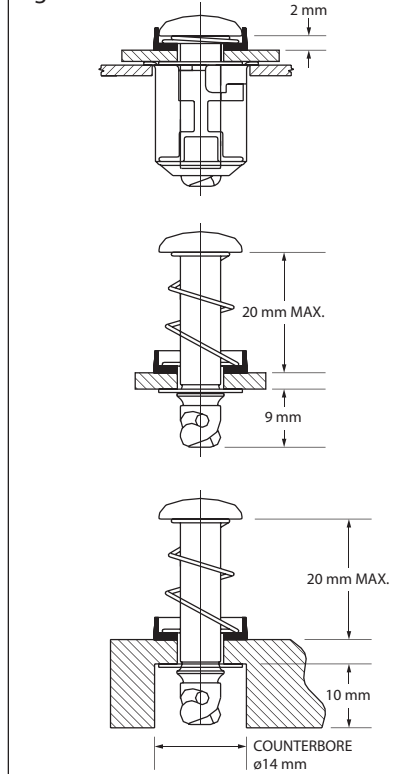
Additional Stud Dimensions

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 stud length needed for your application.

Material & Finish

Stud: Case hardened steel.
Cup: Black thermoplastic.
Finish: Zinc plate and chromate.

Figure A



Panex Stud Part Numbers

D3-376-1(L)-190

- Basic Part No. - From Studs table (above)
- Stud Length Number - Determined on Receptacle selection pages. Add 2mm to TMT for partial ejecting stud assembly
- Material (Steel)
- Finish - 90 = Zinc Plate with Chromate
91 = Zinc Plate with Black Chromate
70 = Bright Chrome

All dimensions on this page are in millimeters.

DZUS® Panex® D3 Head Embellisher & Retainer

6mm



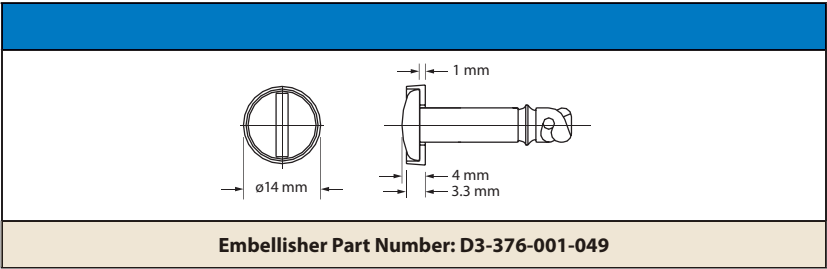
Stud Head Embellisher



Material: Black thermoplastic.

Embellisher Stud Selection

1. Cups should be ordered as separate components.
2. Using the TMT dimension tables on the 6mm receptacle pages, calculate the TMT and add 1.0 mm.
3. Find the applicable range that applies to your calculated TMT and the Stud Length Number stated to the right of the applicable range.
4. Insert the Stud Length Number into the Stud Assembly Part Number. See sample part number below. Stud embellisher is not for use with ring, wing or knob head styles.



Note: Embellisher only available for tool recess head styles (slotted, Phillips, Hex, Tamper resistant).

Retainers

Plastic ¹	Steel	Retaining Spring			
Part No.	Part No.	H Dim.	X Min.	X Max.	Part No.
D3-326-100-040	D3-326-101-190	48 mm	19 mm	44 mm	D3-326-200-200
		25 mm	5 mm	21 mm	D3-326-201-200

Note:

1. Not to be used on Molded Knob studs, part number D3-316-8XX-XXX.

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

Mini Clip-On – 6 mm

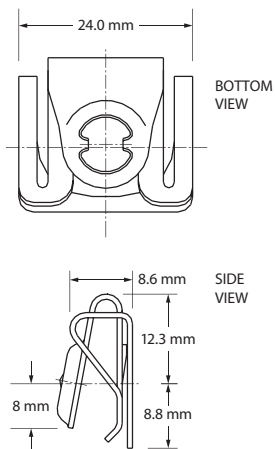
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Mini Clip-On

Part Number D3-336-330-130*

* For minimum orders of 10,000 pieces



Material & Finish

Material: Spring steel

Finish: Organic silver

Mechanical

Maximum Load without Distortion: 45 lbs.

Maximum Torque: 31 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.

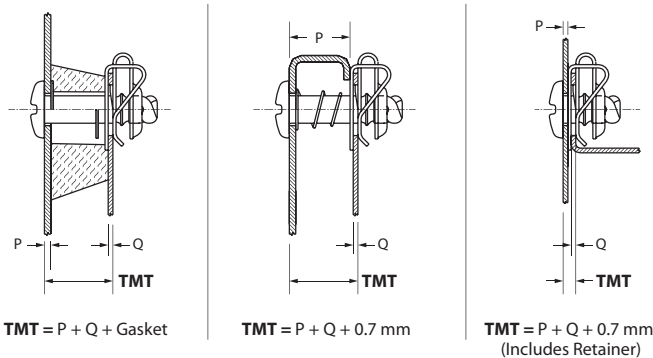


Figure 1: Total Material Thickness (TMT)

TMT	Stud Length No. (L Dim) ¹
2.5 to 3.4 mm	10
3.5 to 4.4 mm	11
4.5 to 5.4 mm	12
5.5 to 6.4 mm	13
6.5 to 7.4 mm	14
7.5 to 8.4 mm	15
8.5 to 9.4 mm	16
9.5 to 10.4 mm	17
10.5 to 11.4 mm	18
11.5 to 12.4 mm	19
12.5 to 13.4 mm	20
13.5 to 14.4 mm	21
14.5 to 15.4 mm	22
15.5 to 16.4 mm	23
16.5 to 17.4 mm	24
17.5 to 18.4 mm	25
18.5 to 19.4 mm	26
19.5 to 20.4 mm	27
20.5 to 21.4 mm	28
21.5 to 22.4 mm	29
22.5 to 23.4 mm	30
23.5 to 24.4 mm	31
24.5 to 25.4 mm	32
25.5 to 26.4 mm	33
26.5 to 27.4 mm	34
27.5 to 28.4 mm	35
28.5 to 29.4 mm	36
29.5 to 30.4 mm	37
30.5 to 31.4 mm	38

Note:

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

Example:

TMT = 24 mm.

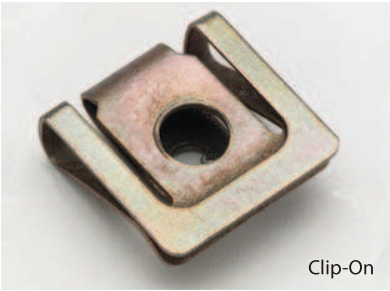
Stud Part Number is **D3-316-131-190** for a 6 mm slotted stud.

All dimensions on this page are in millimeters.

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

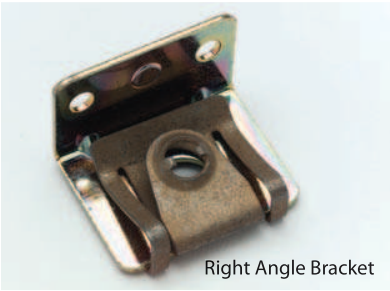
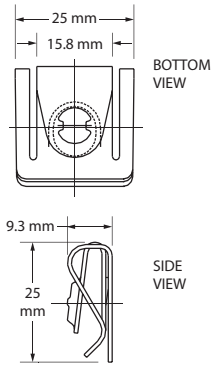
DZUS® Panex® D3 Quarter-Turn Receptacle

Clip-On, Right Angle Bracket – 6 mm



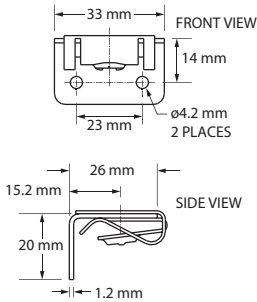
Clip-On

Part Number D3-336-300-190



Right Angle Bracket

Part Number D3-336-310-190



Material & Finish

Clip-On Receptacle: Spring steel
Bracket Receptacle: Steel
Finish: Zinc plate and chromate

Mechanical

Maximum Load without Distortion: 50 lbs.
Maximum Torque: 31 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.

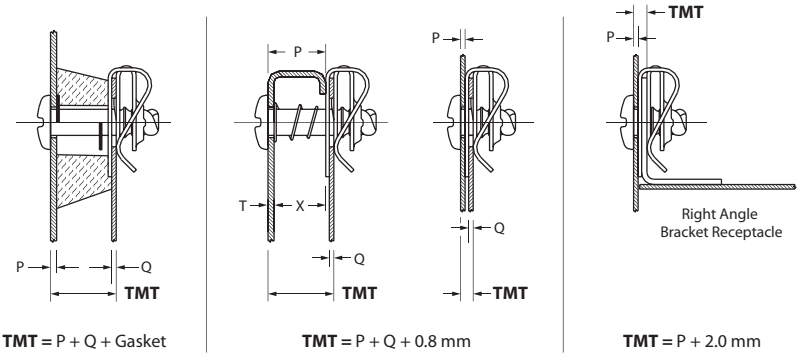


Figure 1: Total Material Thickness (TMT)

TMT	Stud Length No. (L Dim) ¹
1.5 to 2.4 mm	09
2.5 to 3.4 mm	10
3.5 to 4.4 mm	11
4.5 to 5.4 mm	12
5.5 to 6.4 mm	13
6.5 to 7.4 mm	14
7.5 to 8.4 mm	15
8.5 to 9.4 mm	16
9.5 to 10.4 mm	17
10.5 to 11.4 mm	18
11.5 to 12.4 mm	19
12.5 to 13.4 mm	20
13.5 to 14.4 mm	21
14.5 to 15.4 mm	22
15.5 to 16.4 mm	23
16.5 to 17.4 mm	24
17.5 to 18.4 mm	25
18.5 to 19.4 mm	26
19.5 to 20.4 mm	27
20.5 to 21.4 mm	28
21.5 to 22.4 mm	29
22.5 to 23.4 mm	30
23.5 to 24.4 mm	31
24.5 to 25.4 mm	32
25.5 to 26.4 mm	33
26.5 to 27.4 mm	34
27.5 to 28.4 mm	35
28.5 to 29.4 mm	36
29.5 to 30.4 mm	37
30.5 to 31.4 mm	38

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

Example:

TMT = 24 mm.
 Stud Part Number is **D3-316-131-190** for a 6 mm slotted stud.

All dimensions on this page are in millimeters.

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

DZUS® Panex® D3 Quarter-Turn Receptacle

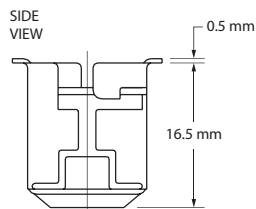
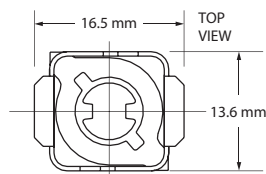
Front Load, Clip-In – 6 mm

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Front Load,
Clip-In

Part Number D3-336-200-190



Material & Finish

Material: Spring steel

Finish: Zinc plate and chromate

Mechanical

Maximum Load without Distortion: 18 lbs.

Maximum Torque: 31 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.

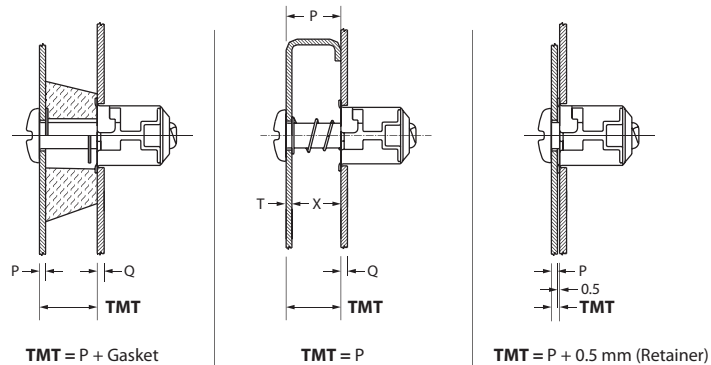


Figure 1: Total Material Thickness (TMT)

TMT	Stud Length No. (L Dim) ¹
0.8 to 1.7 mm	16
1.8 to 2.7 mm	17
2.8 to 3.7 mm	18
3.8 to 4.7 mm	19
4.8 to 5.7 mm	20
5.8 to 6.7 mm	21
6.8 to 7.7 mm	22
7.8 to 8.7 mm	23
8.8 to 9.7 mm	24
9.8 to 10.7 mm	25
10.8 to 11.7 mm	26
11.8 to 12.7 mm	27
12.8 to 13.7 mm	28
13.8 to 14.7 mm	29
14.8 to 15.7 mm	30
15.8 to 16.7 mm	31
16.8 to 17.7 mm	32
17.8 to 18.7 mm	33
18.8 to 19.7 mm	34
19.8 to 20.7 mm	35
20.8 to 21.7 mm	36
21.8 to 22.7 mm	37
22.8 to 23.7 mm	38

Note:

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

Example: TMT = 20 mm.

Stud Part Number is **D3-316-135-190** for a 6 mm slotted stud.

All dimensions on this page are in millimeters.

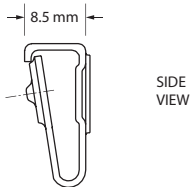
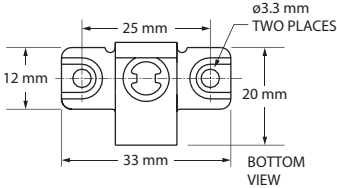
Additional installation information is located at the end of this section.

DZUS® Panex® D3 Quarter-Turn Receptacle
Rivet Plate, Weld Plate – 6 mm



Rivet Plate

Part Number D3-336-400-190

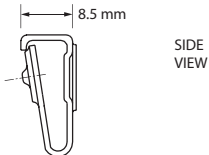
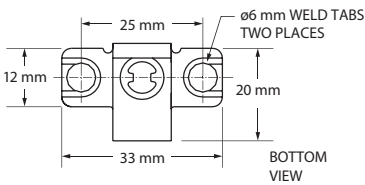


SIDE VIEW



Weld Plate

Part Number D3-336-500-190



SIDE VIEW

Material & Finish

Material: Spring steel
Finish: Zinc plate and chromate

Mechanical

Maximum Load without Distortion: 54 lbs.
Maximum Torque: 31 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.

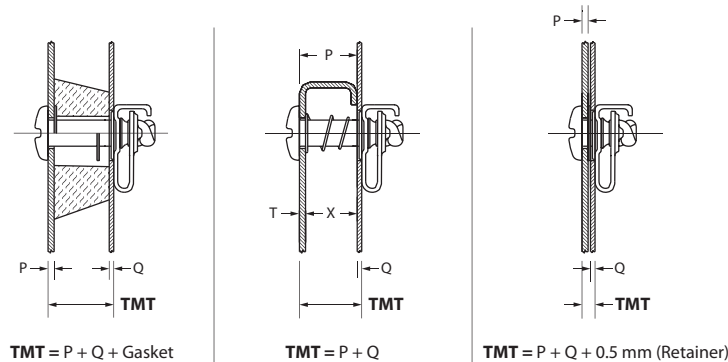


Figure 1: Total Material Thickness (TMT)

TMT	Stud Length No. (L Dim) ¹
2.5 to 3.4 mm	10
3.5 to 4.4 mm	11
4.5 to 5.4 mm	12
5.5 to 6.4 mm	13
6.5 to 7.4 mm	14
7.5 to 8.4 mm	15
8.5 to 9.4 mm	16
9.5 to 10.4 mm	17
10.5 to 11.4 mm	18
11.5 to 12.4 mm	19
12.5 to 13.4 mm	20
13.5 to 14.4 mm	21
14.5 to 15.4 mm	22
15.5 to 16.4 mm	23
16.5 to 17.4 mm	24
17.5 to 18.4 mm	25
18.5 to 19.4 mm	26
19.5 to 20.4 mm	27
20.5 to 21.4 mm	28
21.5 to 22.4 mm	29
22.5 to 23.4 mm	30
23.5 to 24.4 mm	31
24.5 to 25.4 mm	32
25.5 to 26.4 mm	33
26.5 to 27.4 mm	34
27.5 to 28.4 mm	35
28.5 to 29.4 mm	36
29.5 to 30.4 mm	37
30.5 to 31.4 mm	38

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

Example:

TMT = 24 mm.
Stud Part Number is **D3-316-131-190** for a 6 mm slotted stud.

All dimensions on this page are in millimeters.

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

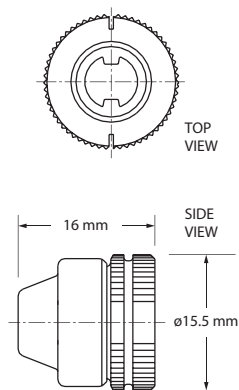
DZUS® Panex® D3 Quarter-Turn Receptacle Press-In Insert – 6 mm

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Press-In Insert

Part Number D3-336-100-300



Material

Brass and plated steel

Mechanical

Installation Load: 2250 lbs.

Maximum Torque: 31 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.

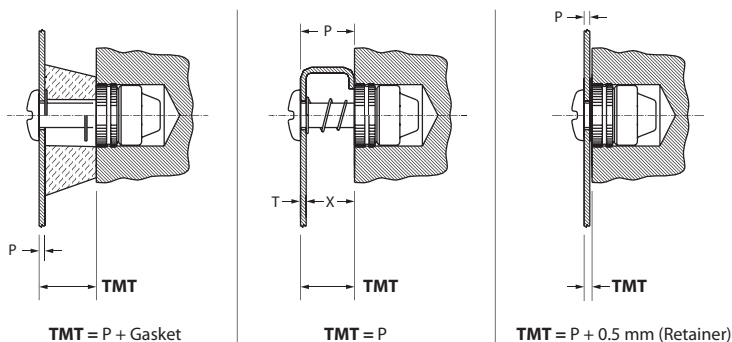


Figure 1: Total Material Thickness (TMT)

TMT	Stud Length No. (L Dim) ¹
0.7 to 1.6 mm	12
1.7 to 2.6 mm	13
2.7 to 3.6 mm	14
3.7 to 4.6 mm	15
4.7 to 5.6 mm	16
5.7 to 6.6 mm	17
6.7 to 7.6 mm	18
7.7 to 8.6 mm	19
8.7 to 9.6 mm	20
9.7 to 10.6 mm	21
10.7 to 11.6 mm	22
11.7 to 12.6 mm	23
12.7 to 13.6 mm	24
13.7 to 14.6 mm	25
14.7 to 15.6 mm	26
15.7 to 16.6 mm	27
16.7 to 17.6 mm	28
17.7 to 18.6 mm	29
18.7 to 19.6 mm	30
19.7 to 20.6 mm	31
20.7 to 21.6 mm	32
21.7 to 22.6 mm	33
22.7 to 23.6 mm	34
23.7 to 24.6 mm	35
24.7 to 25.6 mm	36
25.7 to 26.6 mm	37
26.7 to 27.6 mm	38

Note:

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

Example:

TMT = 24 mm.

Stud Part Number is **D3-316-135-190** for a 6 mm slotted stud.

All dimensions on this page are in millimeters.

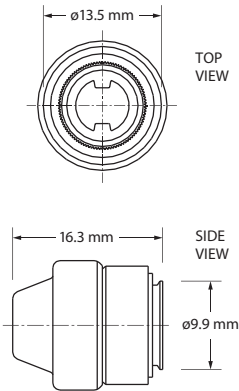
Additional installation information is located at the end of this section.

DZUS® Panex® D3 Quarter-Turn Receptacle Self-Clinching Insert – 6 mm



Self-Clinching
Insert

Part Number D3-336-110-190



Material & Finish

Material: Steel
Finish: Zinc plate and chromate

Mechanical

Installation Load: 2700 lbs.
Maximum Torque: 31 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.

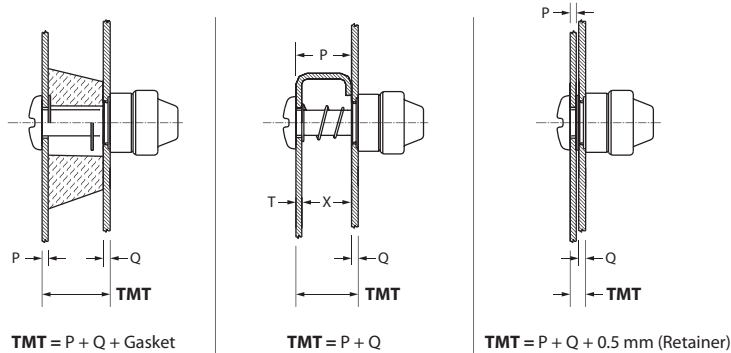


Figure 1: Total Material Thickness (TMT)

TMT	Stud Length No. (L Dim) ¹
1.7 to 2.6 mm	12
2.7 to 3.6 mm	13
3.7 to 4.6 mm	14
4.7 to 5.6 mm	15
5.7 to 6.6 mm	16
6.7 to 7.6 mm	17
7.7 to 8.6 mm	18
8.7 to 9.6 mm	19
9.7 to 10.6 mm	20
10.7 to 11.6 mm	21
11.7 to 12.6 mm	22
12.7 to 13.6 mm	23
13.7 to 14.6 mm	24
14.7 to 15.6 mm	25
15.7 to 16.6 mm	26
16.7 to 17.6 mm	27
17.7 to 18.6 mm	28
18.7 to 19.6 mm	29
19.7 to 20.6 mm	30
20.7 to 21.6 mm	31
21.7 to 22.6 mm	32
22.7 to 23.6 mm	33
23.7 to 24.6 mm	34
24.7 to 25.6 mm	35
25.7 to 26.6 mm	36
26.7 to 27.6 mm	37
27.7 to 28.6 mm	38

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

Example:

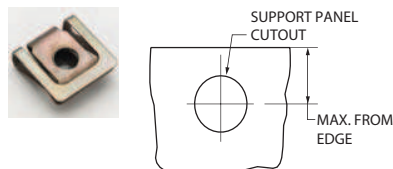
TMT = 24 mm.
Stud Part Number is **D3-316-134-190** for a 6 mm slotted stud.

All dimensions on this page are in millimeters.

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

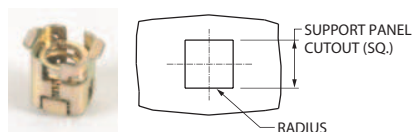
Support Panel Preparation

Clip-On and Right Angle Bracket



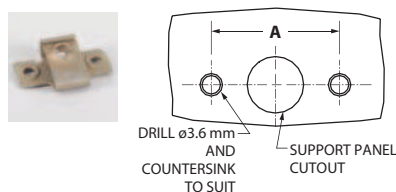
Receptacle Size	Support Panel Thickness	Support Panel Cutout (+0.2)	Maximum From Edge (-0.5)
4	0.7 to 2.5 mm	8.0 mm	10.0 mm
6	0.7 to 3.2 mm	11.0 mm	11.0 mm
6 mini	0.9 to 2.5 mm	11.0 mm	8.0 mm
9	0.7 to 3.2 mm	14.0 mm	13.0 mm
9	3.2 to 5.5 mm	14.0 mm	13.0 mm

Front Load, Clip-In Receptacles



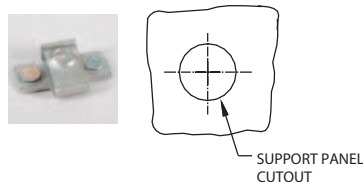
Receptacle Size	Support Panel Thickness	Support Panel Cutout Sq.	Corner Radius Max.
4	0.7 to 2.5 mm	9.5 to 9.6 mm	0.2 mm
6	0.7 to 3.2 mm	14 to 14.2 mm	0.2 mm
9	0.7 to 3.2 mm	17 to 17.2 mm	0.2 mm

Rivet Plates



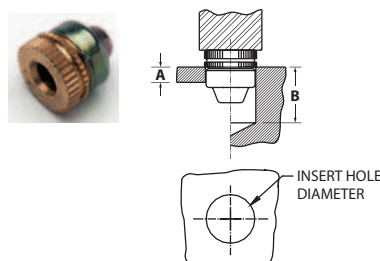
Receptacle Size	Support Panel Cutout	A Dimension
4	8.0 mm +0.2	20 mm
6	11.0 mm +0.2	25 mm
9	14.0 mm +0.2	30 mm

Weld Plates



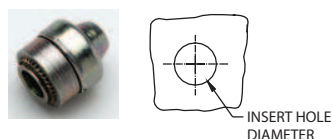
Receptacle Size	Support Panel Cutout
4	8.0 mm +0.2
6	11.0 mm +0.2
9	14.0 mm +0.2

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

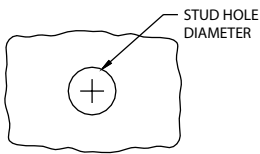


Support Thickness: 1.3 mm min.
Support Material Hardness: RB85 max.

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.

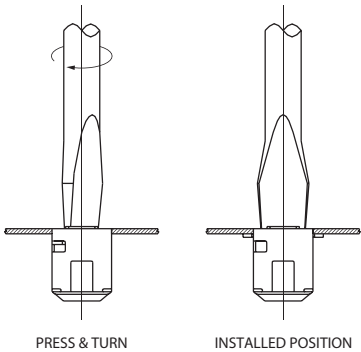
Stud Panel Preparation



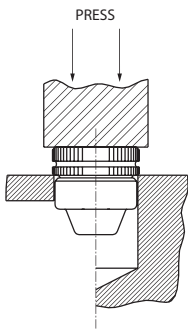
Standard Panel Hole	
Stud Size	Stud Hole Diameter (+.2 -.000)
4 mm	5.0 mm
6 mm	7.0 mm
9 mm	10.0 mm

Insert Receptacles Installation

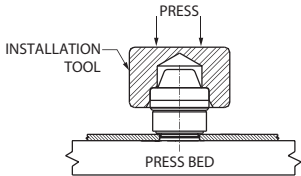
Front Load, Clip-In Receptacles



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.