

# DA-4600 Line

With a quarter turn stud rotation; the **DA-4600 Line** studs engage sloped cams in the receptacle and lock into a dead-end detent. Cam action pulls the bottom of the receptacle up against spring tension. Arrival at the locked position is obvious due to an over-rotation stop and a detent snap action that can be felt.



Manufactured from lightweight, high strength thermoplastics, the **DA-4600 Line quarter turn fasteners** provide a modern, stylish finish coupled with the advantages of quick access and low installed cost.

The fasteners lock with a vibration-resistant clamping tension, cannot be overturned, and may be operated thousands of times.

## Technical Information

**Material, all components:** Acetyl Copolymer Resin  
**Material Burning Rating Code:** UL 94 HB ASTM E-162  
**Flame Spread Index:** 130  
**Ultimate tensile strength:** 180 lb.  
**Locking service tension (min.):** 13 lb.  
**Locking stop strength:** 15 lb.-in.  
**Wear resistance:** 5,000+ cycles  
**Temperature resistance:**  
**High** 194° F (90° C) (248° F (120° C) intermittent)  
**Low** -40° F (-40° C)

## Selection Procedure

### 1. Select a head style.

### 2. Select a retainer.

Retainers captivate a stud to a panel and, unless they are absorbed into the panel or support, add thickness to the Total Material Thickness. A special self-retaining hole is possible if your material is a ductile plastic.

### 3. Determine the receptacle size and stud grip length.

The stud grip length or **G** depends on the type of receptacle chosen and the thickness of your materials. Use the tables provided with each receptacle to determine the proper receptacle size and stud length needed for your application. Standard stud lengths range from 0.45" to 1.00" (11.43 to 25.40 mm).

#### Panel Thickness:

The thickness of the material that contains the stud.

#### Support Thickness:

The thickness of the material where the receptacle will be mounted.

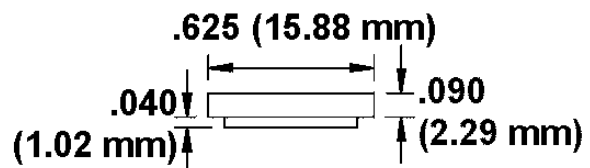
#### Gap Thickness:

The thickness of anything that will prevent the panel from coming in direct contact with the support. This will possibly include rivet head thickness and / or stud retainer thickness.

**Note:** Custom colors and head styles are possible on special orders.

## Self Ejecting Feature

**Note:** The Self Ejecting Cup adds .090" (2.29 mm) to the Total Material Thickness or Panel Gap Thickness. A minimum panel thickness of .040" (1.02 mm) is required for the Self Ejecting Feature.



#### Material:

**Cup:** Black Acetal resin

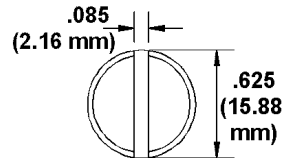
**Spring:** Stainless Steel

**Note:** For the Self-Ejecting feature, specify "SE" between the stud's "G" dimension and the color. E.g., **4624-45-SE-BK**.

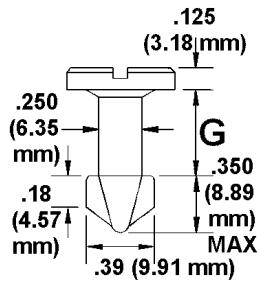
## Studs

### Straight Slot

**4604-G-BK**

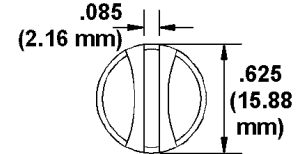


**4604-G-SE-BK**

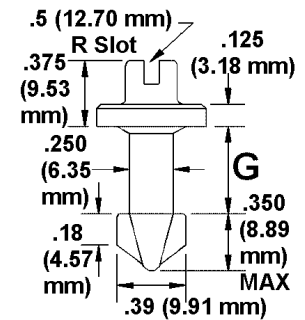


### Slotted Knob

**4644-G-BK**

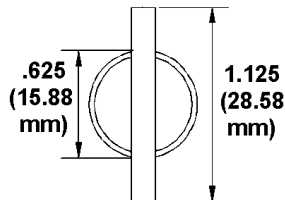


**4644-G-SE-BK**

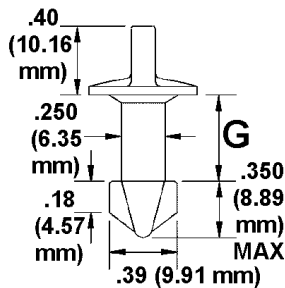


### Wing

**4624-G-BK**

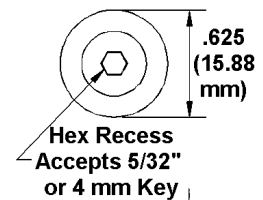


**4624-G-SE-BK**

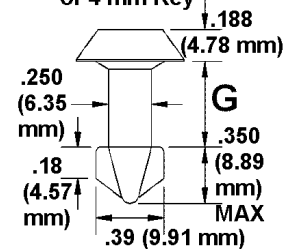


### Tool Only

**4666-G-BK**



**4666-G-SE-BK**


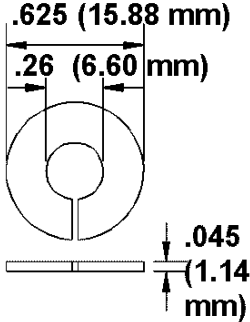

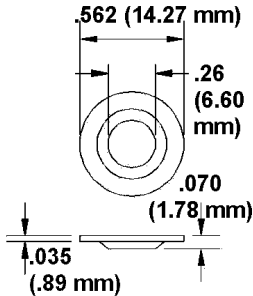
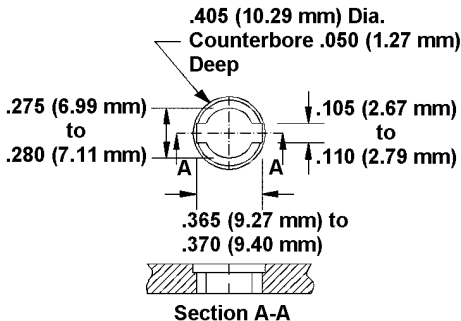


# DA-4600 Line

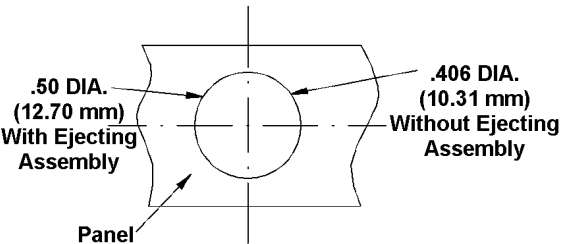
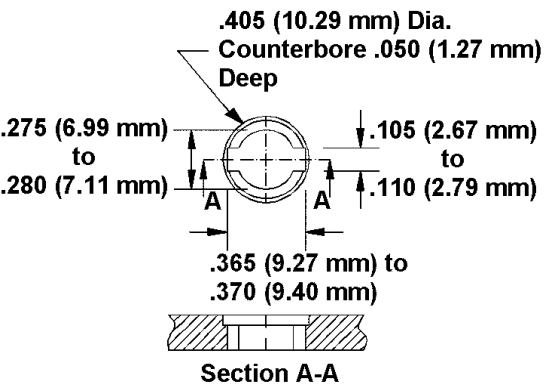


## Retainers

Retainers captivate a stud to a panel and, unless they are absorbed into the panel or support, add thickness to the Total material Thickness and / or Panel Gap Thickness. A special self-retaining hole is possible if your material is a ductile plastic.

Split Retainer						
	<table border="1"> <thead> <tr> <th>Part Number</th> <th>Material</th> </tr> </thead> <tbody> <tr> <td>4604-000-BK</td> <td>black acetal resin</td> </tr> </tbody> </table>	Part Number	Material	4604-000-BK	black acetal resin	
Part Number	Material					
4604-000-BK	black acetal resin					
		<p><b>Installation:</b> Pushes onto the stud shaft from the side.</p> <p>Use 0.045" (1.14 mm) for Calculations</p>				
Solid Retainer						
	<table border="1"> <thead> <tr> <th>Part Number</th> <th>Material</th> </tr> </thead> <tbody> <tr> <td>127P-5B</td> <td>black nylon</td> </tr> </tbody> </table>	Part Number	Material	127P-5B	black nylon	
Part Number	Material					
127P-5B	black nylon					
		<p><b>Installation:</b> Pushes straight over the stud end lugs.</p> <p>Use 0.035" (.89 mm) for Calculations</p>				
Self-Retaining Hole						
	<p>Recommended panel stud hole for interference fit in ductile plastic panels greater than 0.075" (1.91 mm) thick.</p>					

## Stud Installation

Panel Stud Hole	Self Retaining Panel Stud Hole
 <p>.50 DIA. (12.70 mm) With Ejecting Assembly</p> <p>.406 DIA. (10.31 mm) Without Ejecting Assembly</p> <p>Panel</p>	 <p>.405 (10.29 mm) Dia. Counterbore .050 (1.27 mm) Deep</p> <p>.275 (6.99 mm) to .280 (7.11 mm)</p> <p>.105 (2.67 mm) to .110 (2.79 mm)</p> <p>.365 (9.27 mm) to .370 (9.40 mm)</p> <p>Section A-A</p> <p>Recommended panel stud hole for interference fit in ductile plastic panels greater than .075" (1.91 mm) thick.</p>

### Installation for Part Number 4604-000-BK: (Split Retainer)

The retainer pushes onto the stud shaft from the side.

### Installation for Part Number 127P-5B: (Solid Retainer)

The retainer pushes straight over the stud end lugs.

### Installation for Self-Retaining Panel Stud Hole:

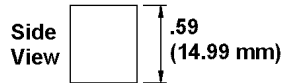
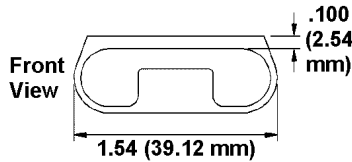
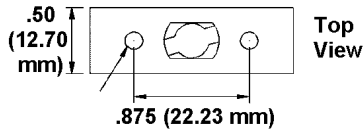
The stud pushes straight through the hole.

# DA-4600 Line



## Rivet-In Receptacle

Part Number: 4604-1-BK

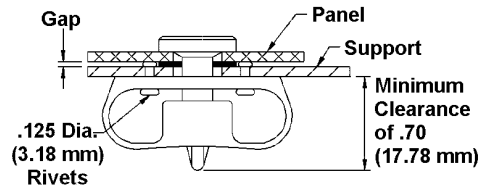


### To determine Stud G Dimension Needed

Calculate the Total Material Thickness. Using the table below, find the Total Material Thickness range that applies to your calculated Total Material Thickness. The stud length needed is to the right of your applicable Total Material Thickness range.

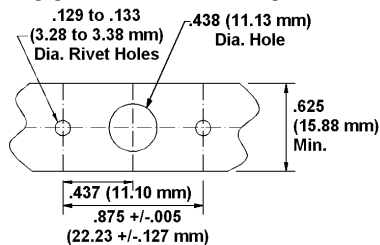
Total Material Thickness		Stud G Dimension
(inch)	(mm)	
.100 - .149	2.54 - 3.78	45
.150 - .199	3.81 - 5.05	50
.200 - .249	5.08 - 6.32	55
.250 - .299	6.35 - 7.59	60
.300 - .349	7.62 - 8.86	65
.350 - .399	8.89 - 10.13	70
.400 - .449	10.16 - 11.40	75
.450 - .499	11.43 - 12.67	80
.500 - .549	12.70 - 13.94	85
.550 - .599	13.97 - 15.21	90
.600 - .649	15.24 - 16.48	95
.650 - .699	16.51 - 17.75	100

**Total Material Thickness =  
Panel Thickness +  
Support Thickness +  
Gap Thickness**



**Note:** Stud retainer thickness is on page DA-4. Rivets and stud retainers may be nested into recessed holes.

### Support Panel Preparation



### Installation Procedures

The receptacle is riveted to the support.



# DA-4600 Line

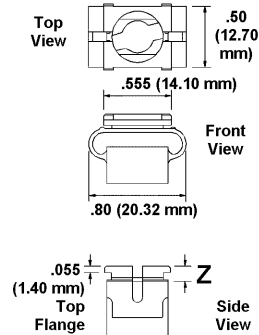
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# DA-4600 Line



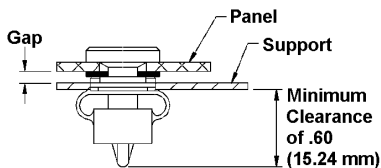
## Mini Snap-In Back Load Receptacle



Receptacle Selection				
Support Thickness Range		Receptacle Part Numbers	Z	
(in.)	(mm)		(in.)	(mm)
.032 - .050	0.81 - 1.27	<b>4604-12-BK</b>	.108"	2.74
.051 - .100	1.30 - 2.54	<b>4604-13-BK</b>	.158"	4.01

### To determine Receptacle Size and Stud G Dimension

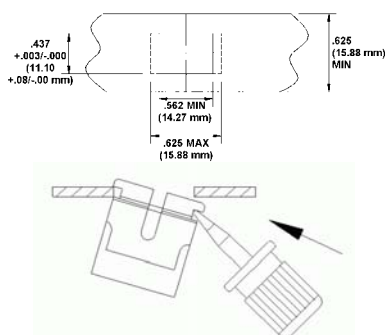
$$\text{Panel Gap Thickness} = \text{Panel Thickness} + \text{Gap Thickness}$$



**Step 1: Find the Support Thickness Range that applies to your Support Thickness in the table above.** The Part Number of the receptacle needed is stated to the right of your applicable Support Thickness Range.

**Step 2: Calculate the Panel Gap Thickness.** Then in the table on the next page, find the column that applies to the receptacle you selected above and find the range that applies to your calculated Panel Gap Thickness. The stud **G** dimension needed is to the far right of your applicable Panel Gap Thickness range.

### Support Panel Preparation



### Installation Procedures

1. Angle the long notched side of the top flange into the hole from the underside.
2. Push the other long side completely through the hole with a flat blade screwdriver.





# DA-4600 Line

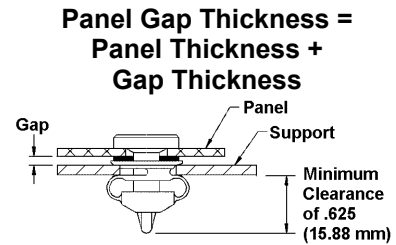
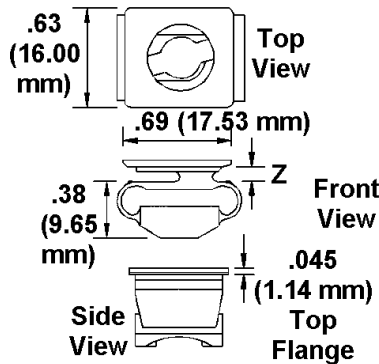
## Receptacles and Panel Gap Thickness Ranges

4604-12-BK		4604-13-BK		Stud G Dimension
(inch)	(mm)	(inch)	(mm)	
0.125 - 0.174	3.18 - 4.42	0.074 - 0.124	1.88 - 3.15	45
0.175 - 0.224	4.45 - 5.69	0.125 - 0.174	3.18 - 4.42	50
0.225 - 0.274	5.72 - 6.96	0.175 - 0.225	4.45 - 5.72	55
0.275 - 0.324	6.99 - 8.23	0.225 - 0.274	5.72 - 6.96	60
0.325 - 0.374	8.26 - 9.50	0.275 - 0.324	6.99 - 8.23	65
0.375 - 0.424	9.53 - 10.77	0.325 - 0.374	8.26 - 9.50	70
0.425 - 0.474	10.80 - 12.04	0.375 - 0.424	9.53 - 10.77	75
0.475 - 0.524	12.07 - 13.31	0.425 - 0.474	10.80 - 12.04	80
0.525 - 0.574	13.34 - 14.58	0.475 - 0.524	12.07 - 13.31	85
0.575 - 0.624	14.61 - 15.85	0.525 - 0.574	13.34 - 14.58	90
0.625 - 0.674	15.88 - 17.12	0.575 - 0.624	14.61 - 15.85	95
0.675 - 0.724	17.15 - 18.39	0.625 - 0.674	15.88 - 17.12	100

# DA-4600 Line



## Mini Clip-In Front Load Receptacle



### To determine Mini Clip In Receptacle Size and Stud Length Needed

**Step 1: Find the Support Thickness Range that applies to your Support Thickness in the table.** The Part Number of the receptacle needed is stated to the right of your applicable Support Thickness Range.

Receptacle Selection				
Support Thickness Range		Receptacle Part Numbers	Z	
(in.)	(mm)		(in.)	(mm)
.035 - .049	0.89-1.24	<b>4604-R11-BK</b>	.052	1.32
.050 - .069	1.27-1.75	<b>4604-R12-BK</b>	.072	1.83
.070 - .089	1.78-2.26	<b>4604-R13-BK</b>	.092	2.34
.090 - .109	2.29-2.77	<b>4604-R14-BK</b>	.112	2.84
.110 - .129	2.79-3.28	<b>4604-R15-BK</b>	.132	3.35

**Step 2: Calculate the Panel Gap Thickness.** Then in the table on the next page, find the column that applies to the receptacle you selected above and find the range that applies to your calculated Panel Gap Thickness. The stud **G** dimension needed is to the far right of your applicable range.

Support Panel Preparation	Installation Procedures
<p>                 .551                  +.008/-.000                  (14.00)                  +.20/-.00 mm)                  SQUARE             </p>	<ol style="list-style-type: none"> <li>Place the open end of the top flange around the hole edge from above and angle the receptacle through the hole.</li> <li>Slide the receptacle back until the flange lip snaps into the hole.</li> </ol>



# DA-4600 Line

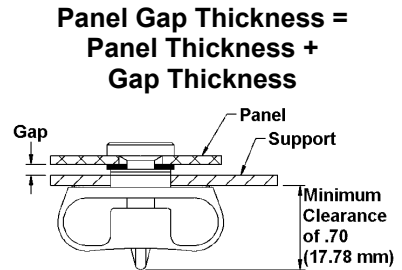
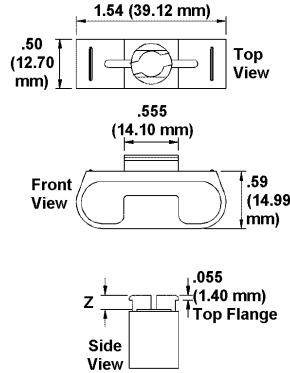
## Receptacles and Panel Gap Thickness Ranges (inch)

4604-R11-BK	4604-R12-BK	4604-R13-BK	4604-R14-BK	4604-R15-BK	Stud G Dimension
.105-.154	.085-.134	.065-.114	.045-.094	.025-.074	45
.155-.204	.135-.184	.115-.164	.095-.144	.075-.124	50
.205-.254	.185-.234	.165-.214	.145-.194	.125-.174	55
.255-.304	.235-.284	.215-.264	.195-.244	.175-.224	60
.305-.354	.285-.334	.265-.314	.245-.294	.225-.274	65
.355-.404	.335-.384	.315-.364	.295-.344	.275-.324	70
.405-.454	.385-.434	.365-.414	.345-.394	.325-.374	75
.455-.504	.435-.484	.415-.464	.395-.444	.375-.424	80
.505-.554	.485-.534	.465-.514	.445-.494	.425-.474	85
.555-.604	.535-.584	.515-.564	.495-.544	.475-.524	90
.605-.654	.585-.634	.565-.614	.545-.594	.525-.574	95
.655-.704	.635-.684	.615-.664	.595-.644	.575-.624	100

(mm)

4604-R11-BK	4604-R12-BK	4604-R13-BK	4604-R14-BK	4604-R15-BK	Stud G Dimension
2.67-3.91	2.16-3.40	1.65-2.90	1.14-2.39	.64-1.88	45
3.64-5.18	3.43-4.67	2.92-4.17	2.41-3.66	1.91-3.15	50
5.21-6.45	4.70-5.94	4.19-5.44	3.68-4.93	3.18-4.42	55
6.48-7.72	5.97-7.21	5.46-6.71	4.95-6.20	4.45-5.69	60
7.75-8.99	7.24-8.48	6.73-7.98	6.22-7.47	5.72-6.96	65
9.02-10.26	8.51-9.75	8.00-9.25	7.49-8.74	6.99-8.23	70
10.29-11.53	9.78-11.02	9.27-10.52	8.76-10.01	8.26-9.50	75
11.56-12.80	11.05-12.29	10.54-11.79	10.01-11.29	9.53-10.77	80
12.83-14.07	12.32-13.56	11.81-13.06	11.30-12.55	10.80-12.04	85
14.10-15.34	13.59-14.83	13.08-14.33	12.57-13.82	12.07-13.31	90
15.37-16.61	14.86-16.10	14.35-15.60	13.84-15.09	13.34-14.58	95
16.64-17.88	16.13-17.37	15.62-16.87	15.11-16.36	14.61-15.85	100

## Snap-In Back Load Receptacle



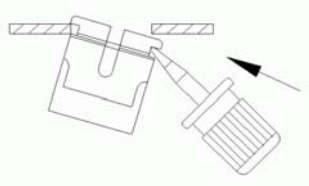
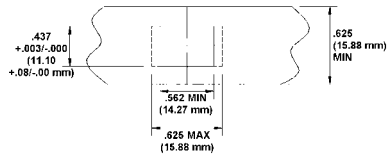
### To determine Receptacle Size and Stud Length Needed

**Step 1: Find the Support Thickness Range that applies to your Support Thickness in the table.** The Part Number of the receptacle needed is stated to the right of your applicable Support Thickness Range.

Receptacle Selection				
Support Thickness Range		Receptacle Part Numbers	Z	
(inch)	(mm)		(inch)	(mm)
.032-.050	0.81-1.27	<b>4604-2-BK</b>	.110	2.79
.064-.080	1.63-2.03	<b>4604-3-BK</b>	.143	3.63
.090-.104	2.29-2.64	<b>4604-4-BK</b>	.167	4.24
.119-.135	3.02-3.43	<b>4604-5-BK</b>	.198	5.03
.149-.165	3.78-4.19	<b>4604-6-BK</b>	.228	5.79

**Step 2: Calculate the Panel Gap Thickness.** Then in the table on the next page, find the column that applies to the receptacle you selected above and find the range that applies to your calculated Panel Gap Thickness. The stud **G** dimension needed is to the far right of your applicable Panel Gap Thickness range.

### Support Panel Preparation



### Installation Procedures

1. Angle the long notched side of the top flange into the hole from the underside.
2. Push the other long side completely through the hole with a flat blade screwdriver.



# DA-4600 Line

## Receptacles and Panel Gap Thickness Ranges (inch)

4604-2-BK	4604-3-BK	4604-4-BK	4604-5-BK	4604-6-BK	Stud G Dimension
.035-.084	---	---	---	---	45
.085-.134	.035-.084	.035-.084	---	---	50
.135-.184	.085-.134	.085-.134	.035-.084	.035-.084	55
.185-.234	.135-.184	.135-.184	.085-.134	.085-.134	60
.235-.284	.185-.234	.185-.234	.135-.184	.135-.184	65
.285-.334	.235-.284	.235-.284	.185-.234	.185-.234	70
.335-.384	.285-.334	.285-.334	.235-.284	.235-.284	75
.385-.434	.335-.384	.335-.384	.285-.334	.285-.334	80
.435-.484	.385-.434	.385-.434	.335-.384	.335-.384	85
.485-.534	.435-.484	.435-.484	.385-.434	.385-.434	90
.535-.584	.485-.534	.485-.534	.435-.484	.435-.484	95
.585-.634	.535-.584	.535-.584	.485-.534	.485-.534	100

(mm)

4604-2-BK	4604-3-BK	4604-4-BK	4604-5-BK	4604-6-BK	Stud G Dimension
0.89-2.13	---	---	---	---	45
2.16-3.40	0.89-2.13	0.89-2.13	---	---	50
3.43-4.70	2.16-3.40	2.16-3.40	0.89-2.13	0.89-2.13	55
4.70-5.94	3.43-4.67	3.43-4.67	2.16-3.40	2.16-3.40	60
5.97-7.21	4.70-5.94	4.70-5.94	3.43-4.67	3.43-4.67	65
7.24-8.48	5.97-7.21	5.97-7.21	4.70-5.94	4.70-5.94	70
8.51-9.75	7.24-8.48	7.24-8.48	5.97-7.21	5.97-7.21	75
9.78-11.02	8.51-9.75	8.51-9.75	7.24-8.48	7.24-8.48	80
11.05-12.29	9.78-11.02	9.78-11.02	8.51-9.75	8.51-9.75	85
12.32-13.56	11.05-12.29	11.05-12.29	9.78-11.02	9.78-11.02	90
13.59-14.83	12.32-13.56	12.32-13.56	11.05-12.29	11.05-12.29	95
14.86-16.10	13.59-14.83	13.59-14.83	12.32-13.56	12.32-13.56	100

# DA-4600 Line



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