



**SPDETAILER DATA SHEETS**

## **SPDETAILER INTRODUCTION**

This manual is a supplement to the Struc Plus User Manual. All installation, getting started, system requirements and all other Struc Plus programmes are documented in the Struc Plus User Manual.

## **INSTALLATION AND SETUP**

### **SPDETAILER INSTALLATION PROCEDURE**

SPDetailer is installed as part of the standard installation, and/or upgrade of Struc Plus.

To view SPDetailer pull down menu the computer's graphics display must be set to a minimum of 800 x 600 resolution, as only ten pull down menus are visible when using standard 640 x 480 VGA resolution.

### **Important Drafting Note**

These **SPDetailer** programmes have been written with the assumption that the drawing has been setup using the Struc Plus Setup programme using a plot scale of 1:10. The member details generally use 1:10 for the vertical feature scaling and an optional prompt for the horizontal feature scaling, using another plot scale at setup may result in the clash of text and/or dimensions around the member detailed.

Data sheets are provided in the SPDETAIL.DOC and SPDETAIL.PDF files found in the SPMANUAL folder of the Struc Plus CD Collection. These data sheets correlate with the SPDetailer diagrams.

The User should print out these data sheets, and photocopy them as required, as part of the user preparation in detailing the required steelwork members.

## SPDetailer - Floor Beam Data Sheet

Beam Data		Notch Location		Notch X Dim		Notch Y Dim				
Member Size:		[ ] Top?								
Mark No.		[ ] Top Right?								
Beam Length		[ ] Bottom Left?								
No. Req'd		[ ] Bottom Right?								
<b>LH Connection</b>		<b>[ ] Web Holing?</b>		<b>[ ] Flex. End Plate?</b>		<b>[ ] Rigid End Plate?</b>				
No. of bolts (visible)										
End plate thickness	Not Applicable									
Dist. to top of plate	Not Applicable			Not Applicable						
Distance to top bolt										
Bolt pitch										
Bolt edge distance				Not Applicable		Not Applicable				
Left inter										
[ ] Mark Left End?										
<b>RH Connection</b>		<b>[ ] Web Holing?</b>		<b>[ ] Flex. End Plate?</b>		<b>[ ] Rigid End Plate?</b>				
No. of bolts (visible)										
End plate thickness	Not Applicable									
Dist. to top of plate	Not Applicable			Not Applicable						
Distance to top bolt										
Bolt pitch										
Bolt edge distance				Not Applicable		Not Applicable				
Right inter										
<b>Beam Web Data</b>										
<b>[ ] Web Holes?</b>	1	2	3	4	5	6	7	8	9	10
No. Bolts										
Distance to top bolt										
Bolt Pitch										
Distance to bolt										
<b>[ ] Top Flange Holes?</b>	1	2	3	4	5	6	7	8	9	10
Distance to bolt										
<b>[ ] Bottom Flange Holes?</b>	1	2	3	4	5	6	7	8	9	10
Distance to bolt										
<b>[ ] Web Cleats?</b>	1	2	3	4	5	6	7	8	9	10
No. Bolts										
Plate thickness										
Distance to top bolt										
Bolt Pitch										
Distance to plate										
<b>[ ] Web Stiffeners?</b>	1	2	3	4	5	6	7	8	9	10
Plate thickness										
Distance to plate										

**Note:** All distances are from left end of member, with both running and static horizontal dimensions being automatically placed. Vertical dimensioning of Web Holes and Web Cleats is optional. Material Leaders will automatically calculate the length, width and thickness of components, the optional mass must be calculated by the user.

## SPDetailer - Channel Beam Data Sheet

<b>Beam Data</b>		<b>Notch Location</b>	<b>Notch X Dim</b>	<b>Notch Y Dim</b>						
Member Size:		[ ] Top Left?								
Mark No.		[ ] Top Right?								
Beam Length		[ ] Bottom Left?								
No. Req'd		[ ] Bottom Right?								
<b>LH Connection</b>	<b>[ ] Web Holing?</b>	<b>[ ] Flex. End Plate?</b>	<b>[ ] Rigid End Plate?</b>							
No. of bolts (visible)										
End plate thickness	Not Applicable									
Dist. to top of plate	Not Applicable	Not Applicable								
Distance to top bolt										
Bolt pitch										
Bolt edge distance		Not Applicable	Not Applicable							
Left inter										
[ ] Mark Left End?										
<b>RH Connection</b>	<b>[ ] Web Holing?</b>	<b>[ ] Flex. End Plate?</b>	<b>[ ] Rigid End Plate?</b>							
No. of bolts (visible)										
End plate thickness	Not Applicable									
Dist. to top of plate	Not Applicable	Not Applicable								
Distance to top bolt										
Bolt pitch										
Bolt edge distance		Not Applicable	Not Applicable							
Right inter										
<b>Beam Web Data</b>										
<b>[ ] Web Holes?</b>	1	2	3	4	5	6	7	8	9	10
No. Bolts										
Distance to top bolt										
Bolt Pitch										
Distance to bolt										
<b>[ ] Top Flange Holes?</b>	1	2	3	4	5	6	7	8	9	10
Distance to bolt										
<b>[ ] Bottom Flange Holes?</b>	1	2	3	4	5	6	7	8	9	10
Distance to bolt										
<b>[ ] Web Cleats?</b>	1	2	3	4	5	6	7	8	9	10
No. Bolts										
Plate thickness										
Distance to top bolt										
Bolt Pitch										
Distance to plate										

Note: All distances are from left end of member, with both running and static horizontal dimensions being automatically placed. Vertical dimensioning of Web Holes and Web Cleats is optional. Material Leaders will automatically calculate the length, width and thickness of components, the optional mass must be calculated by the user.

# SPDetailer - Simple Rafter Data Sheet

## Rafter data:

Member Size	Mark No.	No Required	Horizontal Length	Roof Pitch

Mark Left End?

## Connection data:

No. Bolts	Dist. to top bolt	Bolt pitch	Bolt edge dist.	Left inter	Right inter

Draw Purlin Cleats?

## First purlin cleat data:

Cleat dist.	First bolt dist.	Bolt pitch	Plate thickness	Draw flybrace cleat?

## Purlin cleat locations:

Cleat distance								
Draw flybrace cleat								

Cleat distance								
Draw flybrace cleat								

Cleat distance								
Draw flybrace cleat								

Note: All distances are from left end of member, with both running and static horizontal dimensions being automatically placed. Material Leaders will automatically calculate the length, width and thickness of components, the optional mass must be calculated by the user.

## SPDetailer - Portal Rafter Data Sheet

### Rafter data:

### End plate data:

Member size:		Left plate thickness	
Mark No.		Left inter	
No. required		Right plate thickness	
Overall horiz'l length		Right inter	
Roof pitch			

### LH connection data:

<input type="checkbox"/> Draw haunch?		Distance between bolts
Horiz'l haunch length		
Overall haunch depth		
Distance to top of plate		
Plate depth		
No. bolts (visible)		
Distance to top bolt		

Mark Left End?

### RH connection data:

<input type="checkbox"/> Draw haunch?		Distance between bolts
Horiz'l haunch length		
Overall haunch depth		
Distance to top of plate		
Plate depth		
No. bolts (visible)		
Distance to top bolt		

Draw Purlin Cleats?

### First purlin cleat data:

Cleat dist.	First bolt dist.	Bolt pitch	Plate thickness	Draw flybrace cleat?

### Purlin cleat locations:

Cleat distance								
Draw flybrace cleat								

Cleat distance								
Draw flybrace cleat								

Cleat distance								
Draw flybrace cleat								

**Note:** All distances are from left end of member, with both running and static horizontal dimensions being automatically placed. Material Leaders will automatically calculate the length, width and thickness of components, the optional mass must be calculated by the user.

# SPDetailer - Hip Rafter Data Sheet

## Rafter data:

Member Size	Mark No.	No Required	X Grid	Y Grid	Roof Pitch

Mark Left End?

## Connection data:

No. Bolts	Dist. to top bolt	Bolt pitch	Bolt edge dist.	Left inter	Right inter

Draw Purlin Cleats?

## First purlin cleat data:

Cleat dist.	First bolt dist.	Bolt pitch	Plate thickness	Draw flybrace cleat?

## Purlin cleat locations:

Cleat distance								
Draw flybrace cleat								

Cleat distance								
Draw flybrace cleat								

Cleat distance								
Draw flybrace cleat								

Note: All distances are from left end of member, with both running and static horizontal dimensions being automatically placed. Material Leaders will automatically calculate the length, width and thickness of components, the optional mass must be calculated by the user.

# SPDetailer - UB Column Data Sheet

## Column Data:

## Base plate data:

Member size:		Plate thickness	
Mark No.		Plate width	
No. required		[ ] 2 bolt base plate?	[ ] 4 bolt base plate?
Overall height		H.D. Bolt centres	

[ ] Mark Left End?

[ ] Draw Cap Plate?

## Cap plate data:

Plate thickness	Plate width	Plate angle	Bolt centres	[ ] 2 bolt cap plate?
				[ ] 4 bolt cap plate?

[ ] Draw Left Side Beam Cleats?

## Left side beam cleat data:

No. Bolts					
Bolt offset					
Dist. to top bolt					
Bolt pitch					

[ ] Draw Left Side Girt Cleats?

## First left side girt cleat data:

Cleat dist.	First bolt dist.	Bolt pitch	Plate thickness

## Girt cleat locations:

Cleat distance								
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[ ] Draw Right Side Beam Cleats?

## Right side beam cleat data:

No. Bolts					
Bolt offset					
Dist. to top bolt					
Bolt pitch					

[ ] Draw Right Side Girt Cleats?

## First right side girt cleat data:

Cleat dist.	First bolt dist.	Bolt pitch	Plate thickness

## Girt cleat locations:

Cleat distance								
----------------	--	--	--	--	--	--	--	--

[ ] Draw Web Cleats?

## Web beam cleat data:

No. Bolts					
Dist. to top bolt					
Bolt pitch					
Plate offset					

...continued

Draw Left Side Flange Holes?

<b>Left flange holes</b>	1	2	3	4	5	6	7	8	9	10
Distance to bolt										

Draw Right Side Flange Holes?

<b>Right flange holes</b>	1	2	3	4	5	6	7	8	9	10
Distance to bolt										

Draw Web Holes?

<b>Web holes</b>	1	2	3	4	5	6	7	8	9	10
Distance to bolts										
Bolt gauge										

Draw Flange Stiffener Plates?

<b>Flange stiffeners</b>	1	2	3	4	5	6	7	8	9	10
Distance to plate										

Note: All distances are from bottom end of member, with both running and static horizontal dimensions being automatically placed. Material Leaders will automatically calculate the length, width and thickness of components, the optional mass must be calculated by the user.

# SPDetailer - Hollow Section (HS) Column Data Sheet

## Column data:

## Base plate data:

Member size:		Plate thickness	
Member Width		Plate width	
Mark No.		<input type="checkbox"/> 2 bolt base plate?	<input type="checkbox"/> 4 bolt base plate?
No. Required		H.D. Bolt centres	
Overall Height			

Mark Left End?

Draw Cap Plate?

## Cap plate data:

Plate thickness	Plate width	Plate angle	Bolt centres	<input type="checkbox"/> 2 bolt cap plate?
				<input type="checkbox"/> 4 bolt cap plate?

Draw Left Side Beam Cleats?

## Left side beam cleat data:

No. Bolts					
Bolt offset					
Dist. to top bolt					
Bolt pitch					

Draw Left Side Girt Cleats?

## First left side girt cleat data:

Cleat dist.	First bolt dist.	Bolt pitch	Plate thickness

## Girt cleat locations:

Cleat distance								
----------------	--	--	--	--	--	--	--	--

Draw Right Side Beam Cleats?

## Right side beam cleat data:

No. Bolts					
Bolt offset					
Dist. to top bolt					
Bolt pitch					

Draw Right Side Girt Cleats?

## First right side girt cleat data:

Cleat dist.	First bolt dist.	Bolt pitch	Plate thickness

## Girt cleat locations:

Cleat distance								
----------------	--	--	--	--	--	--	--	--

Draw Web Cleats?

## Web beam cleat data:

No. Bolts					
Dist. to top bolt					
Bolt pitch					
Plate offset					

**Note:** All distances are from bottom end of member, with both running and static horizontal dimensions being automatically placed. Material Leaders will automatically calculate the length, width and thickness of components, the optional mass must be calculated by the user.

## SPDetailer - Single Bolt Gauge Angle Member Data Sheet

**Angle data:**

**Holing data:**

Angle size:		Left inter	
Mark No.		Right inter	
No. required		Leg Width to draw	
Beam Length		Back gauge (g3)	

Mark Left End?

Draw Additional Web Holes?

<b>Web holes</b>	1	2	3	4	5	6	7	8	9	10
Distance to bolts										

Note: All distances are from left end of member, with both running and static horizontal dimensions being automatically placed. Material Leaders will automatically calculate the length, width and thickness of components, the optional mass must be calculated by the user.

## SPDetailer - Double Bolt Gauge Angle Member Data Sheet

**Angle data:**

**Holing data:**

Angle size:		Left inter	
Mark No.		Right inter	
No. required		Leg Width to draw	
Beam Length		Back gauge (g1)	
		Back gauge (g2)	

Mark Left End?

Draw Additional Web Holes?

<b>Web holes</b>	1	2	3	4	5	6	7	8	9	10
Distance to bolts										

Note: All distances are from left end of member, with both running and static horizontal dimensions being automatically placed. Material Leaders will automatically calculate the length, width and thickness of components, the optional mass must be calculated by the user.

## **SPDetailer - Tube Members Data Sheet**

### **Tube data:**

Tube Size	Tube Width	Mark No.	No. Required	Tube Length

Mark Left End?

### **With Crimped Ends**

#### **LH connection data:**

#### **RH connection data:**

Crimp Length		Crimp Length	
Bolt Edge Distance		Bolt Edge Distance	
Bolt Pitch		Bolt Pitch	
<input type="checkbox"/> One row of Bolts		<input type="checkbox"/> One row of Bolts	
<input type="checkbox"/> One Bolt per Row		<input type="checkbox"/> One Bolt per Row	
<input type="checkbox"/> Two Row of Bolts		<input type="checkbox"/> Two Row of Bolts	
<input type="checkbox"/> Two Bolts per Row		<input type="checkbox"/> Two Bolts per Row	
Left Inter		Right Inter	

### **With End Plate & Cleat**

#### **LH connection data:**

#### **RH connection data:**

Cleat Plate Length		Cleat Plate Length	
Cleat Plate Width		Cleat Plate Width	
End Plate Thickness		End Plate Thickness	
End Plate Width		End Plate Width	
Bolt Edge Distance		Bolt Edge Distance	
Bolt Pitch		Bolt Pitch	
<input type="checkbox"/> One row of Bolts		<input type="checkbox"/> One row of Bolts	
<input type="checkbox"/> One Bolt per Row		<input type="checkbox"/> One Bolt per Row	
<input type="checkbox"/> Two Row of Bolts		<input type="checkbox"/> Two Row of Bolts	
<input type="checkbox"/> Two Bolts per Row		<input type="checkbox"/> Two Bolts per Row	
Left Inter		Right Inter	

### **With Cut in Cleat Data Sheet**

#### **LH connection data:**

#### **RH connection data:**

Plate Length		Plate Length	
Plate Width		Plate Width	
Cut in Length		Cut in Length	
Bolt Edge Distance		Bolt Edge Distance	
Bolt Pitch		Bolt Pitch	
<input type="checkbox"/> One row of Bolts		<input type="checkbox"/> One row of Bolts	
<input type="checkbox"/> One Bolt per Row		<input type="checkbox"/> One Bolt per Row	
<input type="checkbox"/> Two Row of Bolts		<input type="checkbox"/> Two Row of Bolts	
<input type="checkbox"/> Two Bolts per Row		<input type="checkbox"/> Two Bolts per Row	
Left Inter		Right Inter	

**Note:** All distances are from left end of member, with both running and static horizontal dimensions being automatically placed. Material Leaders will automatically calculate the length, width and thickness of components, the optional mass must be calculated by the user.

## **SPDetailer - Stair First Flight with Landing Data Sheet**

### **Mark Details:**

Stair Mark	No. Off	Section	RL Top Landing	RL Bottom Landing

PFC Stringer?                       Plate Stringer?

Mark Left End?

### **Geometry:**

Vertical WP-WP		Horizontal WP-WP	
No. Risers		Nosing Offset	
Landing thickness		Top landing length	
Grout thickness		Vertical Cut	
Right inter		Stringer depth	

### **Connection data:**

<input type="checkbox"/> Notch Stringer		Distance to top bolt	
Notch X Dim.		Bolt pitch	
Notch Y Dim		Bolt edge distance	

### **Tread data:**

<input type="checkbox"/> Bolted tread		<input type="checkbox"/> Welded tread	
Dist. down to bolt		Tread width	
Bolt edge distance		Tread Depth	
Bolt pitch			

## **SPDetailer - Stair First Flight without Landing Data Sheet**

### **Mark Details:**

Stair Mark	No. Off	Section	RL Top Landing	RL Bottom Landing

PFC Stringer?                       Plate Stringer?

Mark Left End?

### **Geometry:**

Vertical WP-WP		Horizontal WP-WP	
No. Risers		Nosing Offset	
Landing thickness			
Grout thickness		Vertical Cut	
Right inter		Stringer depth	

### **Tread data:**

<input type="checkbox"/> Bolted tread		<input type="checkbox"/> Welded tread	
Dist. down to bolt		Tread width	
Bolt edge distance		Tread Depth	
Bolt pitch			

Note: Handrail holing can be added to the stringer by using the Handrail...Base Plate holing routine.

## **SPDetailer - Stair Typical Flight with Landings Data Sheet**

### **Mark Details:**

Stair Mark	No. Off	Section	RL Top Landing	RL Bottom Landing

PFC Stringer?                       Plate Stringer?

Mark Left End?

### **Geometry:**

Vertical WP-WP		Horizontal WP-WP	
No. Risers		Nosing Offset	
Landing thickness		Top landing length	
Left inter		Btm landing length	
Right inter		Stringer depth	

### **LH Connection data:**

<input type="checkbox"/> Notch Stringer		Distance to top bolt	
Notch X Dim.		Bolt pitch	
Notch Y Dim		Bolt edge distance	

### **RH Connection data:**

<input type="checkbox"/> Notch Stringer		Distance to top bolt	
Notch X Dim.		Bolt pitch	
Notch Y Dim		Bolt edge distance	

### **Tread data:**

<input type="checkbox"/> Bolted tread		<input type="checkbox"/> Welded tread	
Dist. down to bolt		Tread width	
Bolt edge distance		Tread Depth	
Bolt pitch			

## **SPDetailer - Stair Typical Flight with Top Landing Data Sheet**

### **Mark Details:**

Stair Mark	No. Off	Section	RL Top Landing	RL Bottom Landing

PFC Stringer?                       Plate Stringer?

Mark Left End?

### **Geometry:**

Vertical WP-WP		Horizontal WP-WP	
No. Risers		Nosing Offset	
Landing thickness		Top landing length	
Left inter			
Right inter		Stringer depth	

### **RH Connection data:**

<input type="checkbox"/> Notch Stringer		Distance to top bolt	
Notch X Dim.		Bolt pitch	
Notch Y Dim		Bolt edge distance	

### **Tread data:**

<input type="checkbox"/> Bolted tread		<input type="checkbox"/> Welded tread	
Dist. down to bolt		Tread width	
Bolt edge distance		Tread Depth	
Bolt pitch			

Note: Handrail holing can be added to the stringer by using the Handrail...Base Plate holing routine.

## **SPDetailer - Stair Typical Flight with Bottom Landing Data Sheet**

### **Mark Details:**

Stair Mark	No. Off	Section	RL Top Landing	RL Bottom Landing

PFC Stringer?                       Plate Stringer?

Mark Left End?

### **Geometry:**

Vertical WP-WP		Horizontal WP-WP	
No. Risers		Nosing Offset	
Landing thickness			
Left inter		Btm landing length	
Right inter		Stringer depth	

### **LH Connection data:**

<input type="checkbox"/> Notch Stringer		Distance to top bolt	
Notch X Dim.		Bolt pitch	
Notch Y Dim		Bolt edge distance	

### **Tread data:**

<input type="checkbox"/> Bolted tread		<input type="checkbox"/> Welded tread	
Dist. down to bolt		Tread width	
Bolt edge distance		Tread Depth	
Bolt pitch			

## **SPDetailer - Stair Typical Flight without Landings Data Sheet**

### **Mark Details:**

Stair Mark	No. Off	Section	RL Top Landing	RL Bottom Landing

PFC Stringer?                       Plate Stringer?

Mark Left End?

### **Geometry:**

Vertical WP-WP		Horizontal WP-WP	
No. Risers		Nosing Offset	
Landing thickness			
Left inter			
Right inter		Stringer depth	

### **Tread data:**

<input type="checkbox"/> Bolted tread		<input type="checkbox"/> Welded tread	
Dist. down to bolt		Tread width	
Bolt edge distance		Tread Depth	
Bolt pitch			

Note: Handrail holing can be added to the stringer by using the Handrail...Base Plate holing routine.

## **SPDetailer - Single Gusset Data Sheet**

### **Gusset Data:**

X Inter:	
Y Inter:	
Bolt Distance from IP	
Bolt Pitch	
Bolt edge	
<input type="checkbox"/> Draw Corner Chamfer?	
Hypotenuse	

## **SPDetailer - Double Gusset Data Sheet**

### **Left Side Gusset Data:**

Left X Inter:	
Left Y Inter:	
Left Bolt Distance from IP	
Left Bolt Pitch	
Left Bolt edge	
<input type="checkbox"/> Draw Left Chamfer?	
Left Hypotenuse	

### **Right Side Gusset Data:**

Right X Inter:	
Right Y Inter:	
Right Bolt Distance from IP	
Right Bolt Pitch	
Right Bolt edge	
<input type="checkbox"/> Draw Right Chamfer?	
Right Hypotenuse	

Right Bolt edge	
<input type="checkbox"/> Draw Right Chamfer?	
Right Hypotenuse	