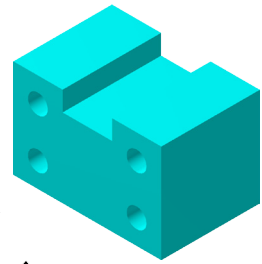


Channel Block Solid



A. Create Target Block.

Step 1. If necessary start a new Mastercam file, click File Menu > New .

Step 2. Change to Isometric View  (Alt-7).



Step 3. Click the down arrow of Set Planes  in the toolbar and click **Top (WCS)**, Fig. 1.

Fig. 1

Step 4. Click Create Menu > Primitives > Block.

Step 5. In Block dialog box set

Select Solids  Fig. 2

Length  3

Width  2

Height  2

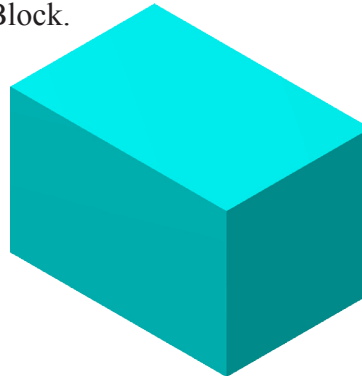


Fig. 4

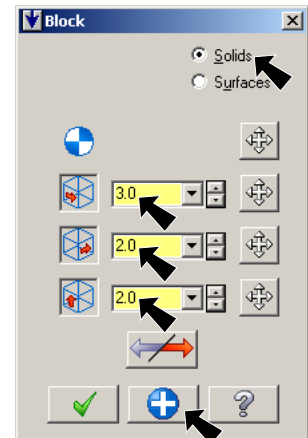


Fig. 2

Step 6. Click the down arrow in the Auto Cursor ribbon bar and click Origin  to place solid, Fig. 3.

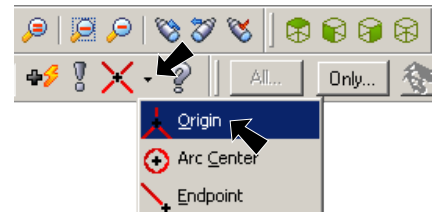


Fig. 3

Step 7. Turn on Shading, use Alt-S.

Step 8. Click Apply  in Block dialog box to fix solid, Fig. 2 and Fig. 4.

B. Create Tool Block.

Step 1. In Block dialog box set:

Select Solids  Fig. 5

Length  1

Width  2

Height  .6

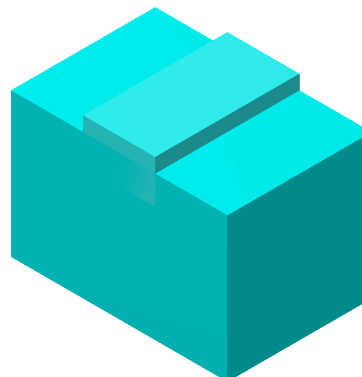


Fig. 7

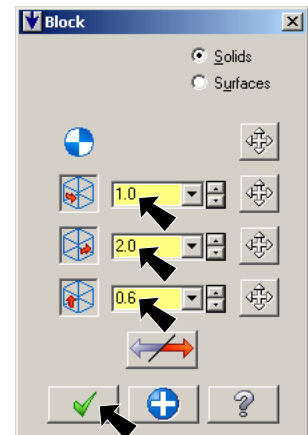


Fig. 5

Step 2. In Auto Cursor ribbon bar set:

 1 Fig. 6

 0

 1.6



Fig. 6

Step 3. Click OK  in Block dialog box to fix solid and close dialog box.

C. Save As “CHANNEL BLOCK”

Step 1. Click File Menu > Save As.

Step 2. Key-in **CHANNEL BLOCK** for the filename and press ENTER.

D. Boolean Remove.

Step 1. Click Solids Menu > Boolean Remove.

Step 2. Click **big block** for Target.

Step 3. Click **small block** for Tool and press ENTER, **Fig. 8**.

Step 4. Save  (Alt-F S).

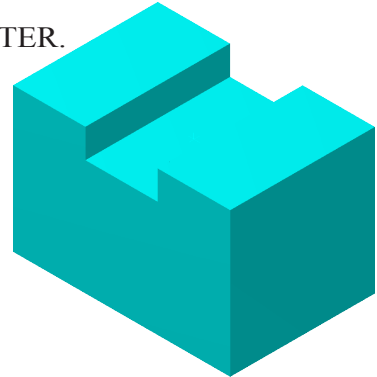


Fig. 8

E. Set Grid and Snap .5.

Step 1. Use **Alt-G** to display Grid dialog box, **Fig. 9**

Check **Active grid**

Check **Visible grid**

Set **X and Y Spacing .5**

Click OK .

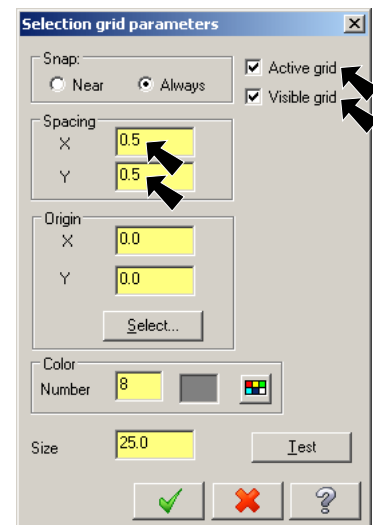


Fig. 9

F. Create 4 Cylinders.

Step 1. Click the down arrow of Set Planes  in the toolbar and click **Front (WCS)**, Fig 10.

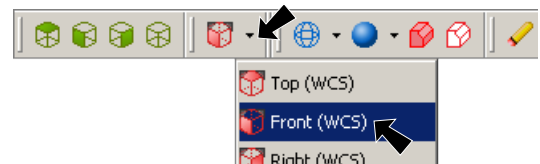


Fig. 10

Step 2. Turn off shading, use **Alt-S**.

Step 3. Click Create Menu > Primitives > Cylinder.

Step 4. In Cylinder dialog box set:

Expand , Fig. 11

Select **Solids** 

Radius  .2

Height  2.5

Click **Radius**  and **Height**  to lock fields. The fields turn red when locked.

Select **Axis Z** 

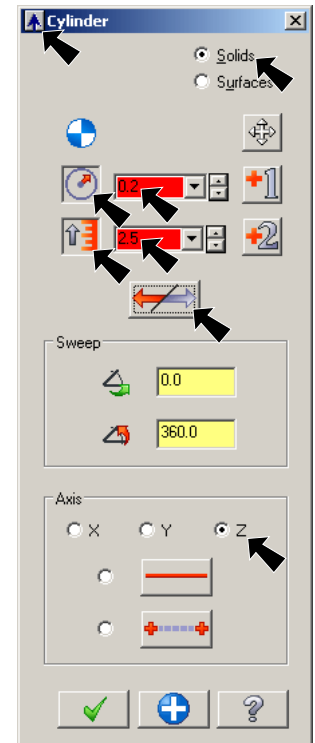


Fig. 11

Step 5. In Auto Cursor ribbon bar set:

 .5 click Z  to lock field, Fig. 12.

Step 6. Click all 4 grid points, Fig. 13 and Fig. 14. If the cylinder is projected away from block click **Flip**

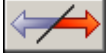
Direction  in the Cylinder dialog box, Fig. 11.



Fig. 12

Step 7. Click OK  in dialog box to fix solids and close dialog box.

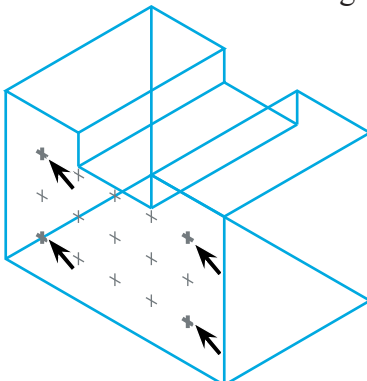


Fig. 13

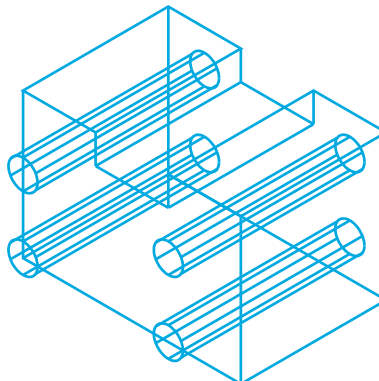


Fig. 14

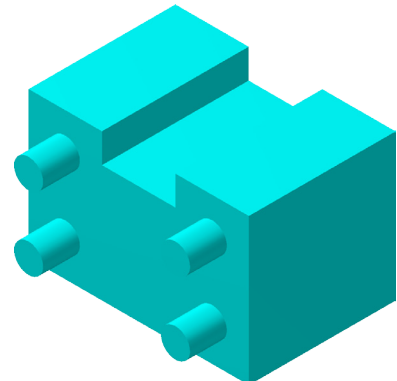


Fig. 15

Step 8. Turn on shading, use **Alt-S**.

Step 9. Save  (**Alt-F S**).

G. Boolean Remove Cylinders.

Step 1. Click Solids Menu > Boolean Remove.

Step 2. Click the **block for target**.

Step 3. Click the **four cylinders for tool** and press ENTER, Fig. 16.

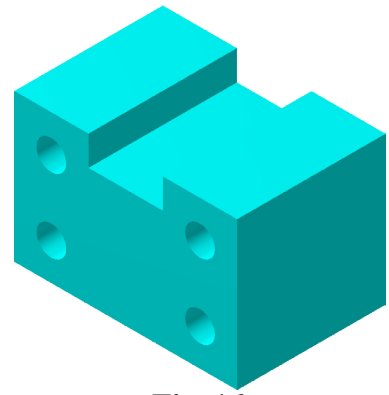


Fig. 16

H. Set Construction Plane To Isometric View.

Step 1. Click the down arrow of Set Planes  in the tool bar and click **Named Views**, Fig 17.

Step 2. Click **Iso** from the View Selection dialog box and click OK , Fig 18.

Step 3. Change to Isometric View  (Alt-7).

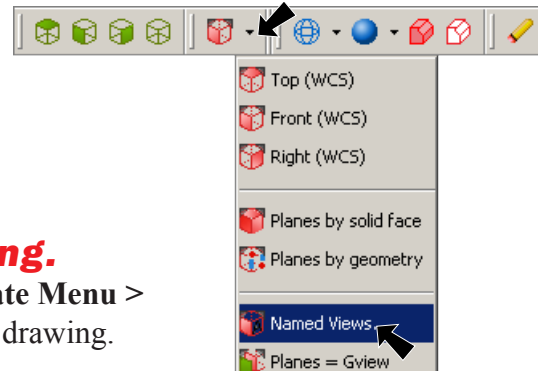


Fig. 17

I. Add Your Name and Period To Drawing.

Step 1. Use **Page Down** to reduce the drawing. Use **Create Menu > Drafting > Note** to add your names and period to drawing.

Step 2. Save  (Alt-F S).

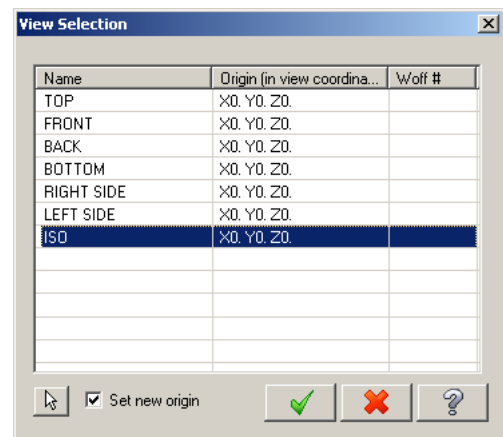


Fig. 18