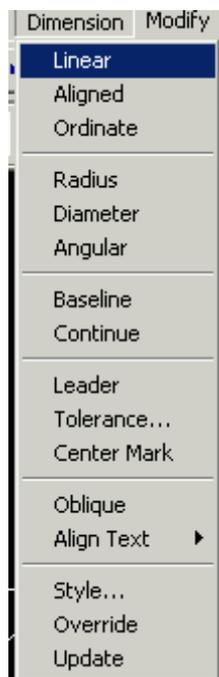


MAK112E Computer Aided Technical Drawing

AutoCAD –Dimensioning

Dimension pull-down menu as shown below is used to give dimensions on the current drawing. You may give

- ◆ linear dimension horizontal or vertical [**Linear**]
- ◆ radius to the curves (arc, circle etc.) [**Radius**]
- ◆ diameter to circle. [**Diameter**]
- ◆ angle with degrees. [**Angular**]
- ◆ dimensions with the same start point [**Baseline**]
- ◆ dimensions within a chain. [**Continue**]



As soon as selecting Dimension command, you may enter the first point of corner. To do this using osnap command Endpoint is the best choice.



Then you may give the second and the last point to measure the dimension. Again Endpoint osnap command will be used as shown below.

```

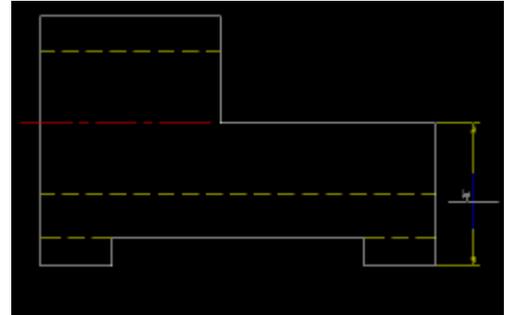
Command:
Command:
Command: _dimlinear
First extension line origin or press ENTER to select: _endp of
Second extension line origin: _endp of
310.8061,139.1640,0.0000
  
```



After giving the first and the last point of extension line, now you may enter the dimension line location using mouse.

```

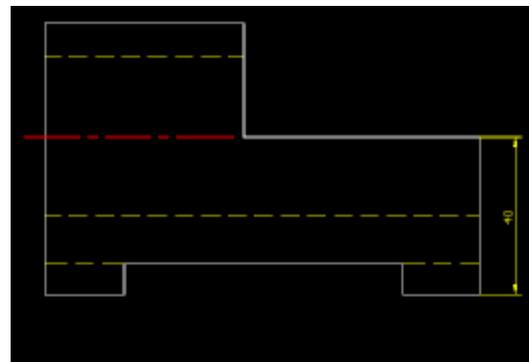
Command:
Command: _dimlinear
First extension line origin or press ENTER to select: _endp of
Second extension line origin: _endp of
Dimension line location (Mtext/Text/Angle/Horizontal/Vertical/Rotated):
327.5054,123.3145,0.0000
  
```



To give dimension text you may either accept the current dimension text or type new dimension at the prompt area. Whenever hit the enter dimension text is appeared on the drawing and you left the command.

```

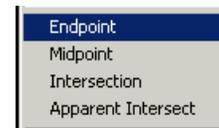
First extension line origin or press ENTER
Second extension line origin: _endp of
Dimension line location (Mtext/Text/Angle/
Dimension text = 40
Command:
310.4835,98.3857 ,0.0000
  
```

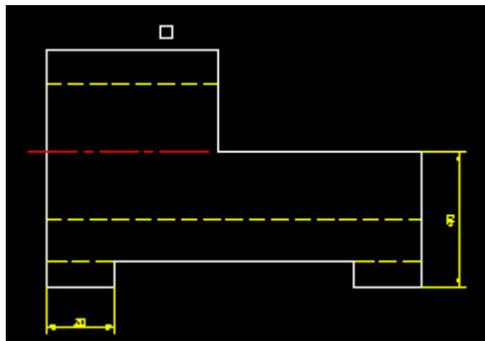


You may give horizontal dimensions using same dimension command Linear . To select the points of the extension line, again Endpoint command will be used.

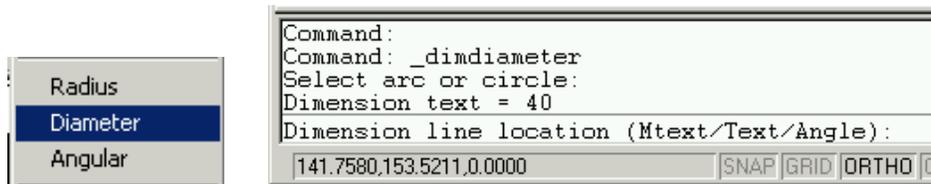
```

Command:
Command: _dimlinear
First extension line origin or press ENTER to select
Snaps to the closest endpoint of an arc or a line: endp
  
```

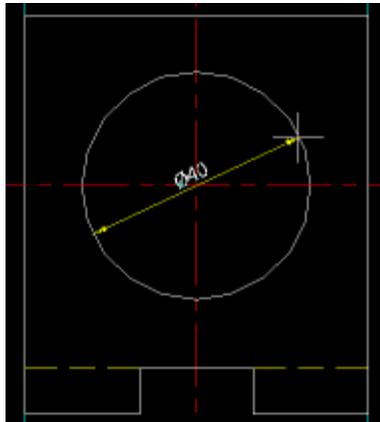




To give diameter to circle, Diameter command is selected by mouse and then instructions on command prompt will be followed.

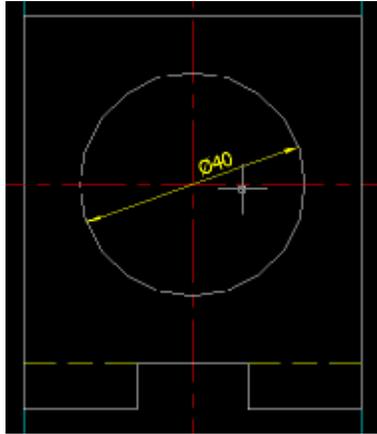


First of all the circle or arc should be selected and then either accept the current diameter or type new one and hit enter. Finally give the position of the dimension line location.



To edit the dimension position Align Text command will be used. You may change dimension location or move the dimension text over the dimension line using following commands.

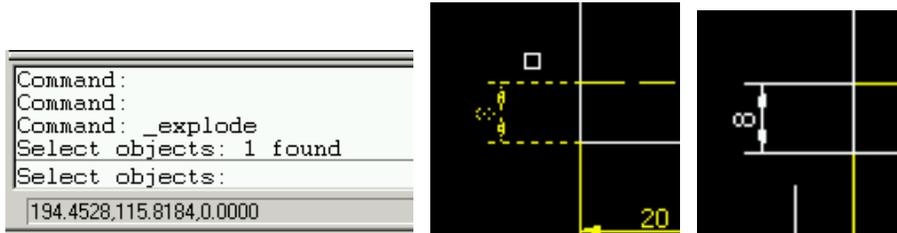




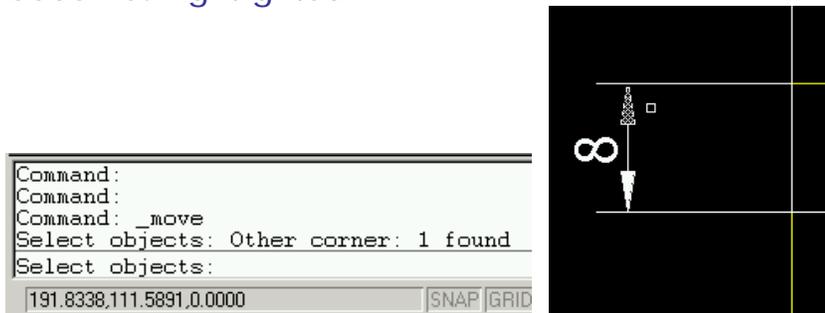
Explode 

To change properties of dimension you have to use **Explode** command, because of the dimension is a block, not a single entity.

At the beginning you have to select an object to explode and hit enter. Selected objects become highlighted with current color (i.e. yellow) and after hitting enter change color to default color (i.e. white).



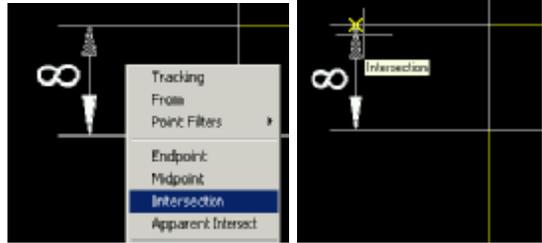
You may change the position of the both arrow. To do this use **Move** command. Either typing move or just m or selecting the icon  **Move** from the icon panel. Mouse arrow change into square. Selected arrow becomes highlighted.



After selection, give the base point of the object to move. To do this osnap command will be helpful. (i.e. Intersection)

```

Command:
Command: _move
Select objects: Other corner: 1 found
Select objects:
Base point or displacement: _int of
Snaps to the intersection of a line, an arc, or a circle: int
  
```



Then you may give the target point (or second point) for moving object. Intersection osnap command is used again to do this task.

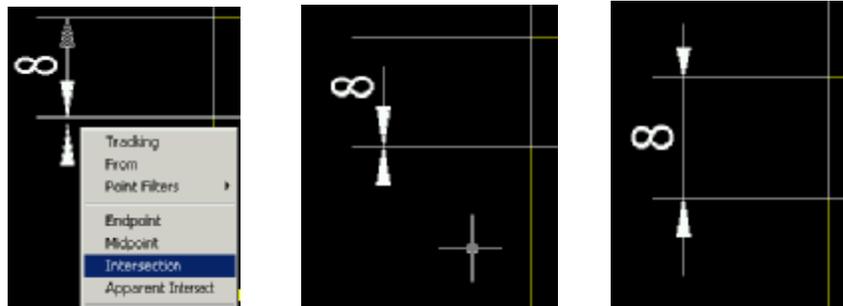
```

Command:
Command: _move
Select objects: Other corner: 1 found
Select objects:
Base point or displacement: _int of Second point of displacement: _int of
Snaps to the intersection of a line, an arc, or a circle: int
  
```

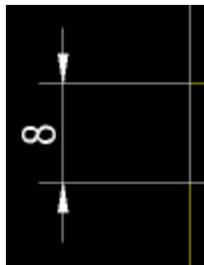
```

Command: _move
Select objects: Other corner: 1 found
Select objects:
Base point or displacement: _int of Second point of displacement: _int of
Command:
  
```

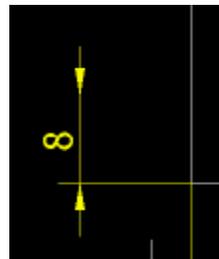
Repeat this procedure for another arrow to move and extend the dimension line. Finally you get the new dimension as shown below.



Now you have to change dimension color from white to yellow. Change the color of the objects using Properties icon 

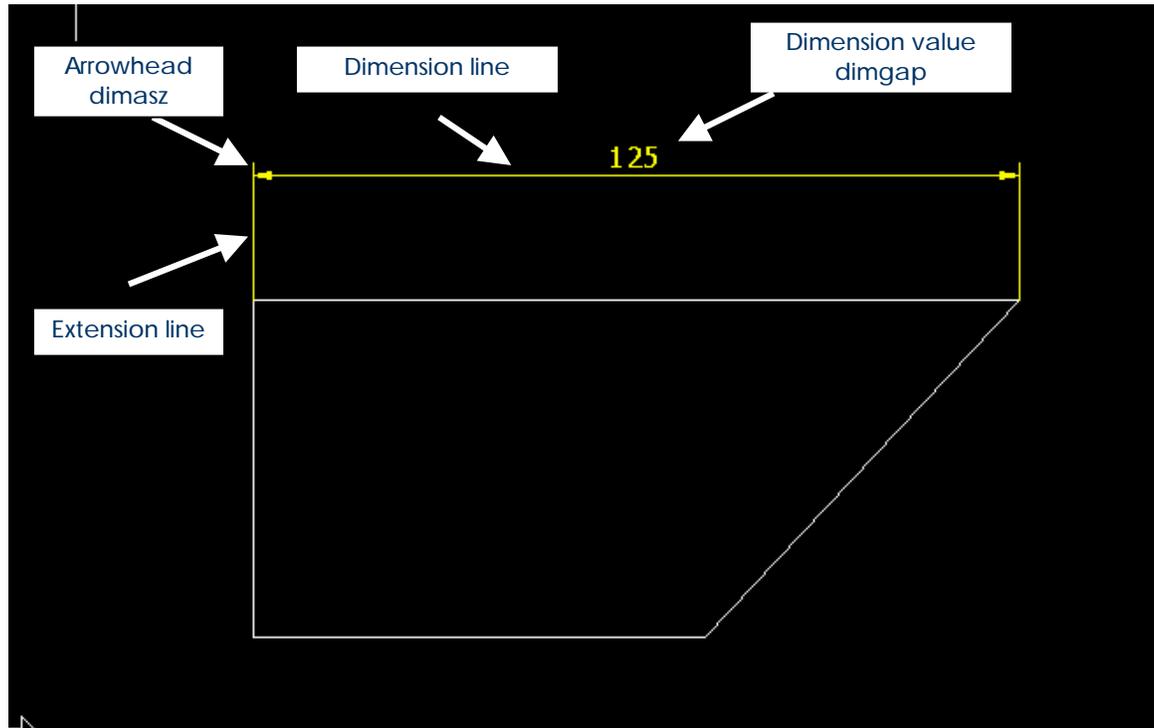


Before



After

Advanced Dimensioning Commands



dimasz	<2.5>	Controls the size of the dimension arrowhead
dimgap	<1.5>	Sets the distance around the dimension text above its line
dimexe	<2>	Determines how far to extend the extension line
dimexo	<0>	Determines how far extension lines are offset from origin point
Dimdli	<10>	Sets the distance between adjacent dimension lines

Special characters

Diameter	%%C	∅	%%C 50	∅ 50
Degree	%%D	°	50%%D	50 °
Plus/minus	%%P	±	50 %%P 2	50 ± 2

Aligned Dimensioning



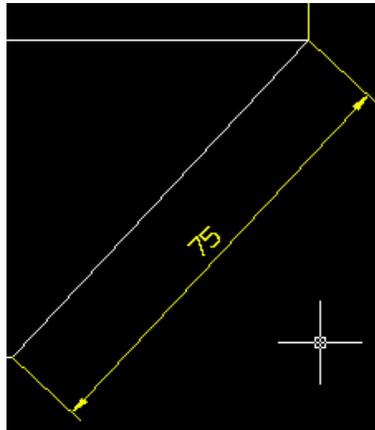
```

Command: _dimaligned
First extension line origin or press ENTER to select:
  
```

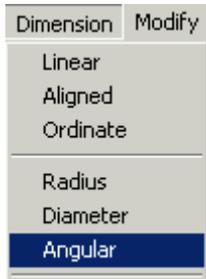
```
Command: _dimaligned  
First extension line origin or press ENTER to select: _endp of  
Second extension line origin:
```

```
Command: _dimangular  
First extension line origin or press ENTER to select: _endp of  
Second extension line origin: _endp of  
Dimension line location (Mtext/Text/Angle):
```

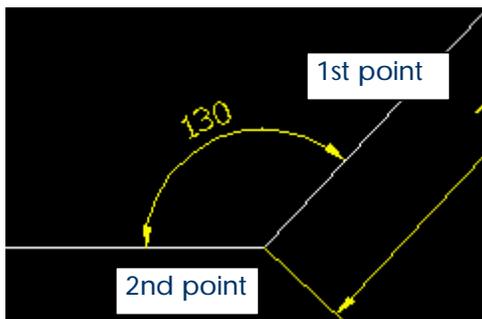
```
Second extension line origin: _endp of  
Dimension line location (Mtext/Text/Angle): t  
Dimension text <75.0353>: 75  
Dimension line location (Mtext/Text/Angle):
```



Angular Dimensioning



```
Command:  
Command: _dimangular  
Select arc, circle, line, or press ENTER:  
Second line:
```

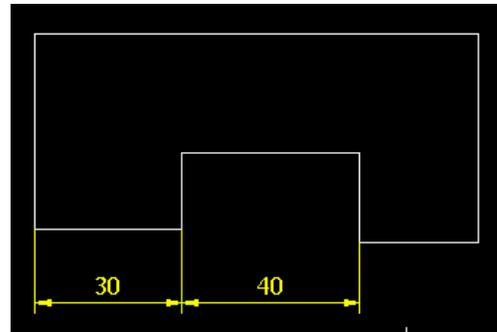
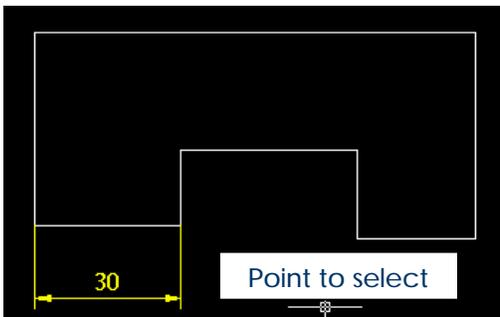


```
Command: _dimangular  
Select arc, circle, line, or press ENTER:  
Second line:  
Dimension arc line location (Mtext/Text/Angle):
```

```
Second line:  
Dimension arc line location (Mtext/Text/Angle): t  
Dimension text <132.9469>: 130
```

```
Dimension arc line location (Mtext/Text/Angle): t  
Dimension text <132.9469>: 130  
Dimension arc line location (Mtext/Text/Angle):  
Command:
```

Continue Command



Baseline Command

