

DIMENSION

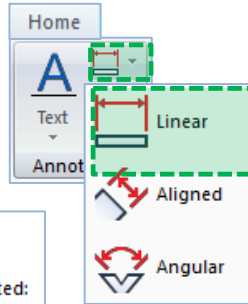
CADian 2020



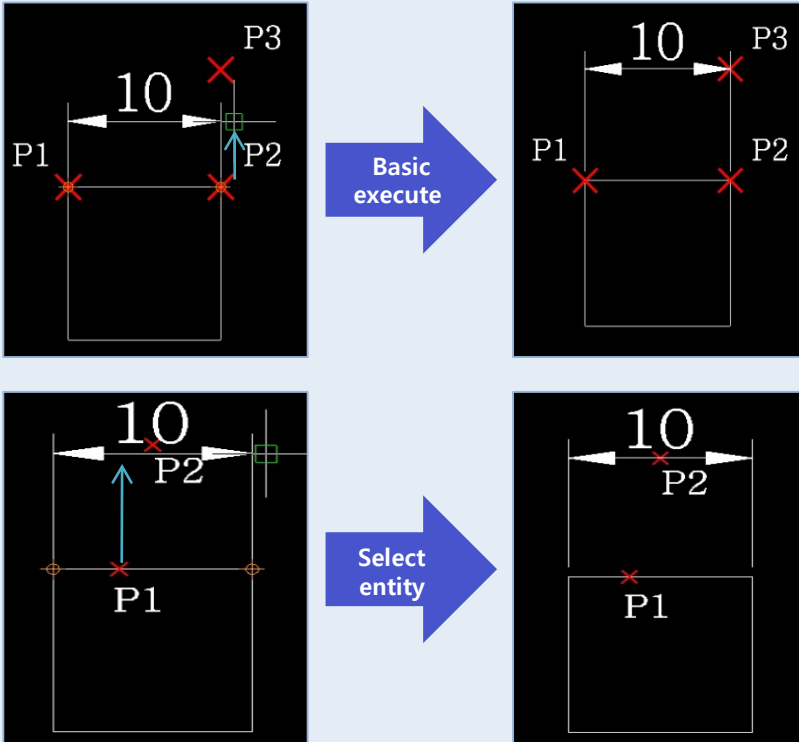
Dimlinear -1

command : dli (Dimlinear)

_DIMLINEAR
ENTER to select entity/<Origin of first extension line>:
Origin of second extension line:
Angle/Mtext/Text/Orientation of dimension line/Horizontal/Vertical/Rotated:
Dimension text = 10:



Dimlinear Basic principle



Execution Process

*. "dim-1.dwg" File OPEN

1. "command:" dli input and SPACE

2. "~<Origin first extension line>:" P1 CLICK

3. "~second extension line : " P2 CLICK

4. "~[Angle(A)/Mtext(M)/Text(T)/Horizontal(H/Vertical(V)/Rotated(R)]:" P3 CLICK

NOTE

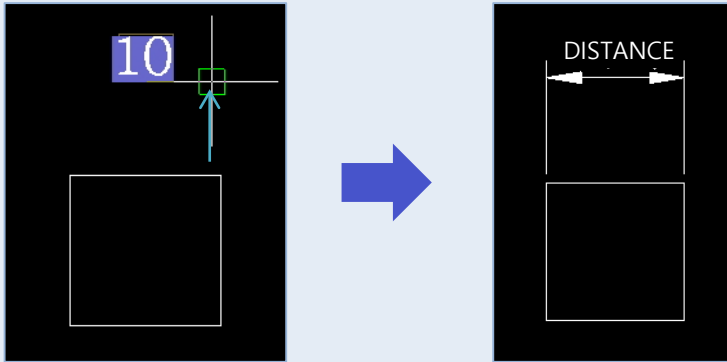
-. In step2, Press the spacebar to drawing dimensions based on sides.

ENTER to select entity/<Origin of first extension line>:

Dimlinear -1

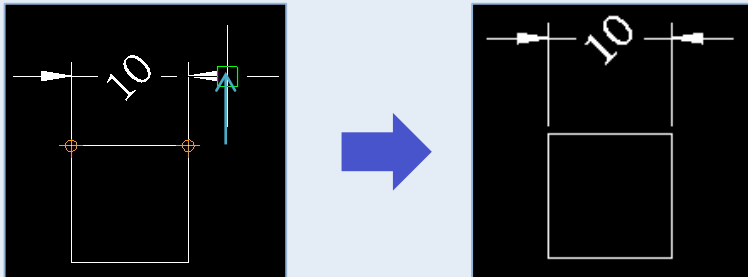
Sub options

Mtext(M) and Text(T)



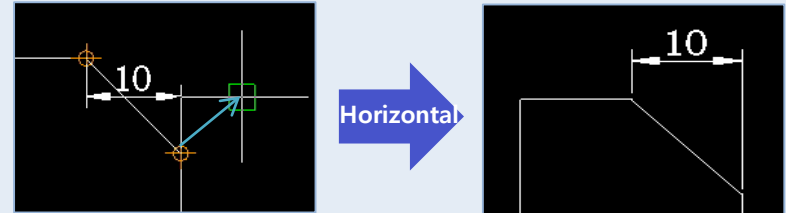
Write text and number

Angle(A)

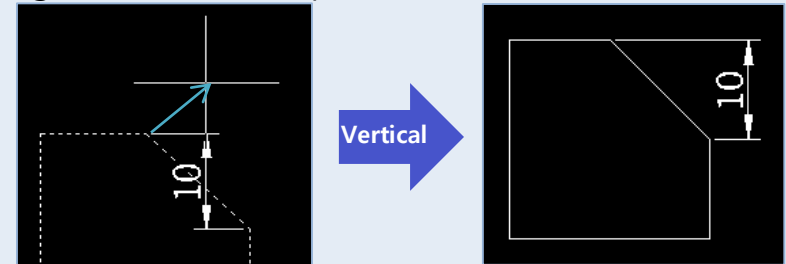


Rotate only dimension text

Horizontal(H)/ Vertical(V)

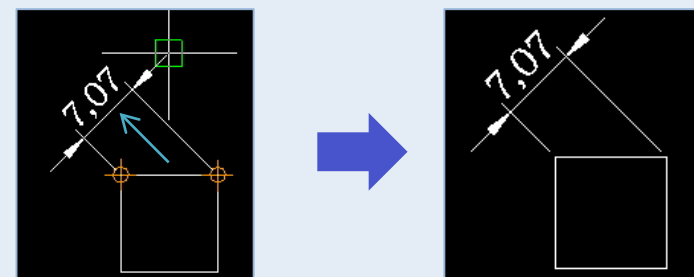


If you select Horizontal, Only draw horizontal dimension, regardless of mouse position



If you select Vertical, Only draw Vertical dimension, regardless of mouse position

Rotate(R)

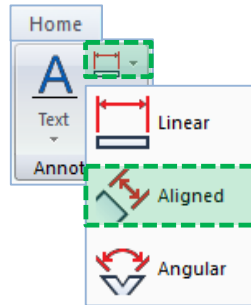


Rotate extension line

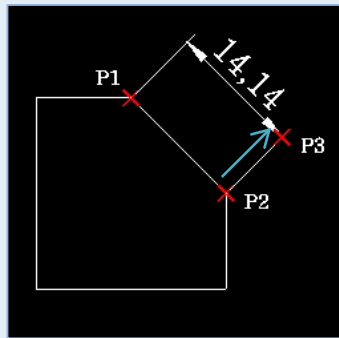
Dimaligned -1

command : dal (Dimaligned)

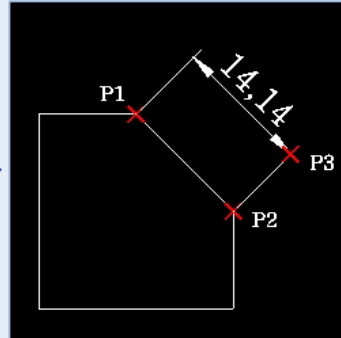
Command: DAL
_DIMALIGNED
ENTER to select entity/<Origin of first extension line>:
Origin of second extension line:
Angle/Mtext/Text/<Location of dimension line>:
Dimension text = 14,14:



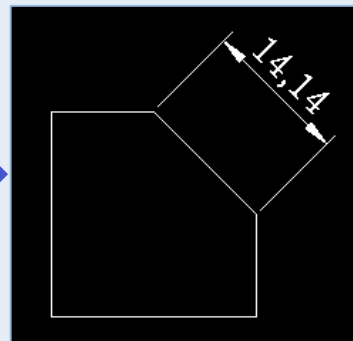
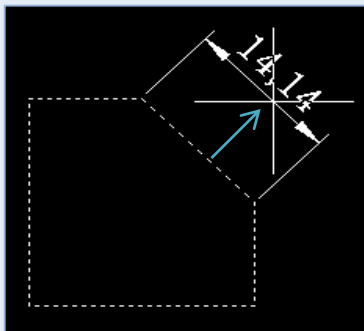
DIMALIGNED Basic principle



Basic execute



Select entity



Execution Process

*. "dim-1.dwg" File OPEN

1. "command:" dal input and SPACE

2. "~<Origin first extension line>:" P1 CLICK

3. "~second extension line : " P2 CLICK

4. "~[Angle(A)/Mtext(M)/Text(T)
<Location of dimension line>:" P3 CLICK

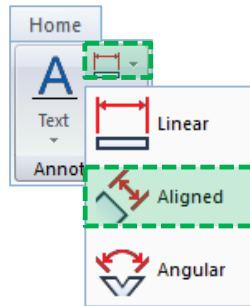
NOTE

- In step2, Press the spacebar to drawing dimensions based on sides.

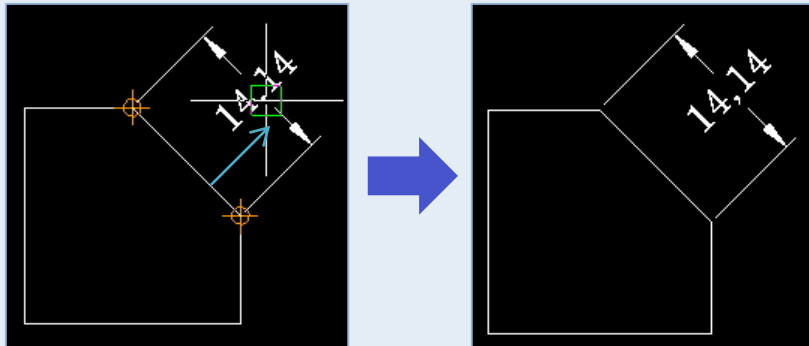
ENTER to select entity/<Origin of first extension line>:

Dimaligned -2

Sub options

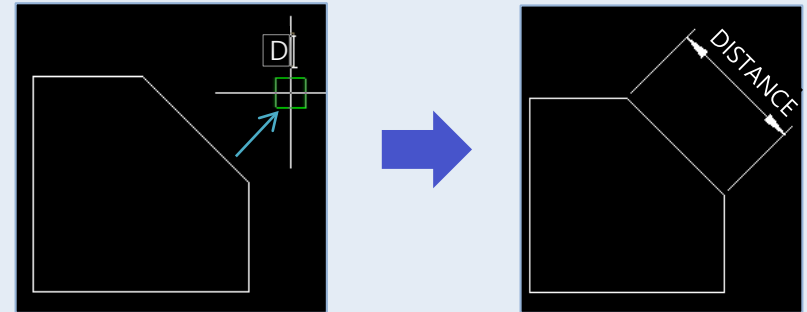


Angle(A)

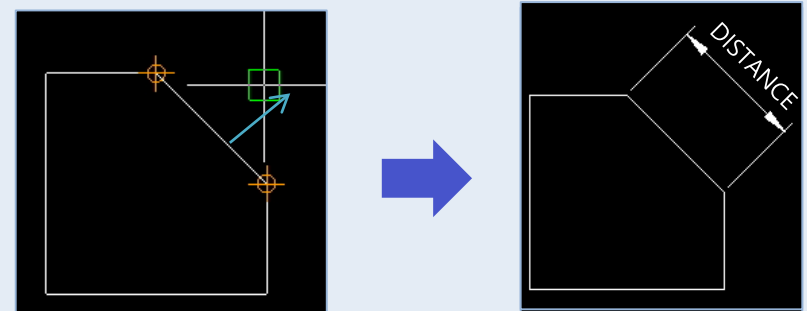


Rotate only dimension text

Multi text(M)



Text(T)

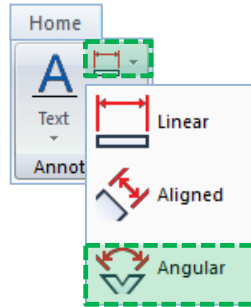


After select text, press spacebar and input at the command prompt.

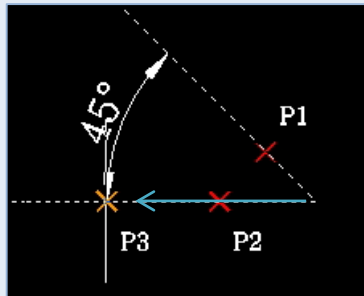
Dimangular

command : dan (Dimangular)

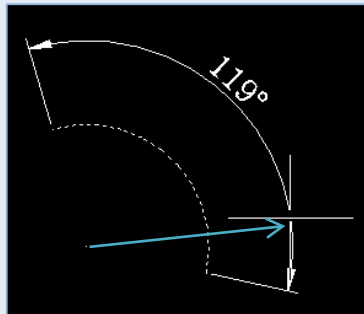
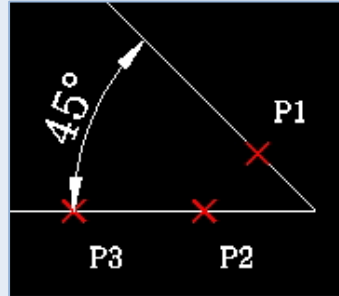
Command: DAN
_DIMANGULAR
Press ENTER to specify angle/<Select line, arc, or circle>:
Other line for angular dimension:
Angle/Text/<Location of dimension line>:
Dimension text = 45:



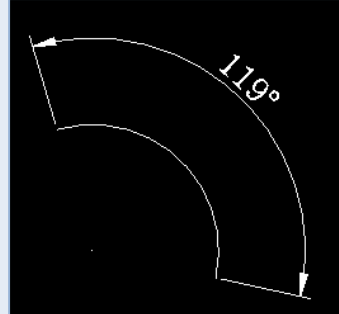
Dimangular Basic principle



LINE



ARC and
CIRCLE



Execution Process

*. "dim-1.dwg" File OPEN

1. "command:" dan input and SPACE

2. "~<Select line, arc, or circle>:" P1 CLICK

3. "~ for angular dimension:" P2 CLICK

4. "~<Location of dimension line>:" P3 CLICK

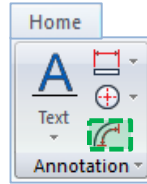
NOTE

-. In step4, Angle(A) / Text(T) is same as sub options of dimlinear

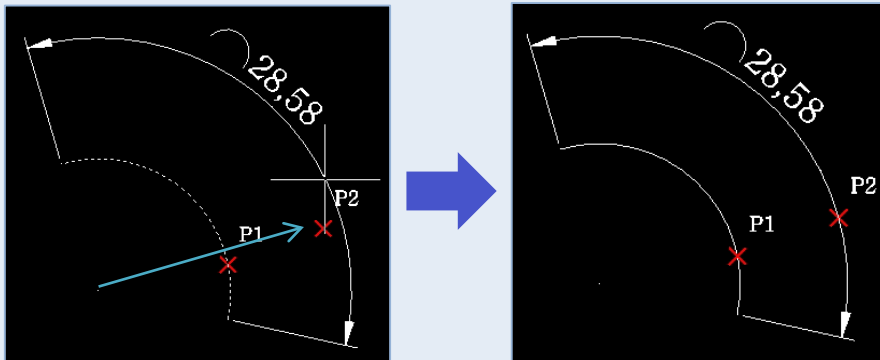
Dimarc

command : dar (Dimarc)

Command: dar
_DIMARC
Select arc or polyline arc segment:
Partial/Leader/Angle/Text/<Location of dimension arc>:
Dimension text = 28,58:



Dimarc Basic principle



Execution Process

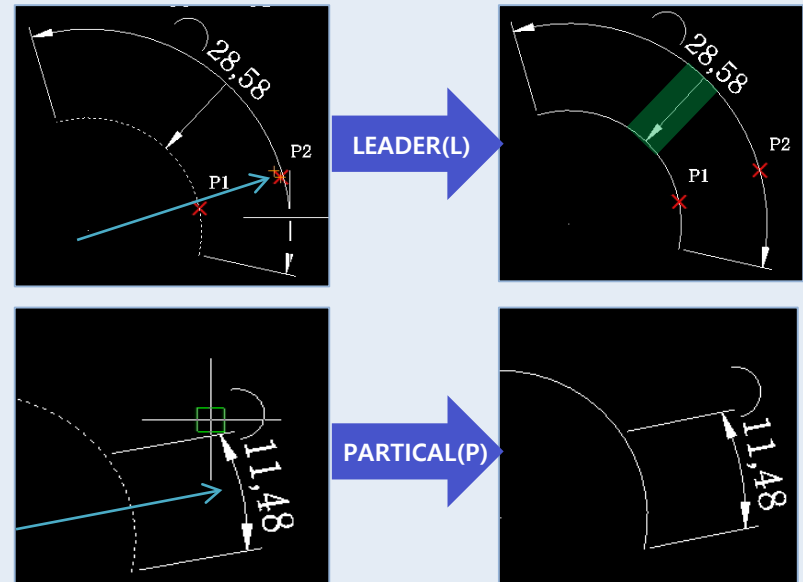
*. "dim-1.dwg" File OPEN

1. "command:" dar input and SPACE

2. "~arc or polyline arc segment:" P1 CLICK

3. "~<Location of dimension arc>" P2 CLICK

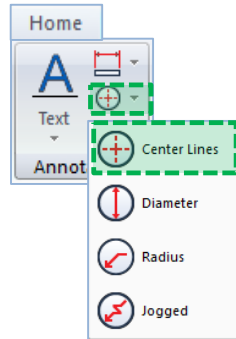
Sub options



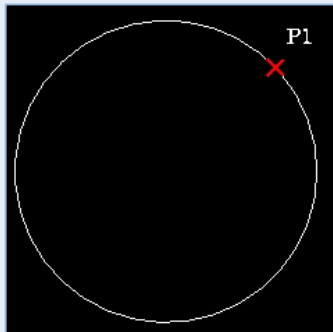
Dimcenter

command : dce (Dimcenter)

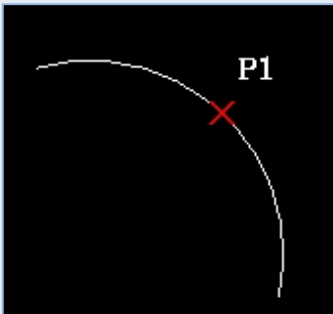
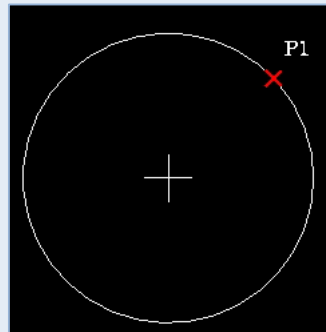
Command: DCE
DIMCENTER
Select arc or circle:



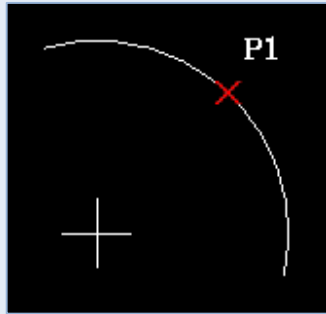
Dimcenter Basic principle



CIRCLE



ARC



Execution Process

*. "dim-1.dwg" File OPEN

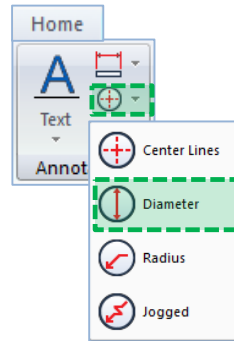
1. "command:" dce input and SPACE

2. "Select arc or circle : " P1 CLICK

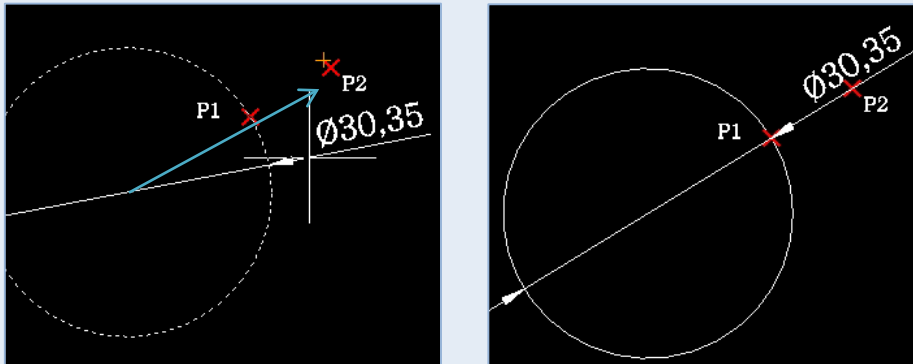
Dimdiameter

command : ddi (Dimdiameter)

Command: ddi
_DIMDIAMETER
Select arc or circle:
Dimension text = 30,35:
Angle/Mtext/Text/<Location of dimension line>:



Dimdiameter Basic principle



Execution Process

*. "dim-1.dwg" File OPEN

1. "command:" ddi input and SPACE

2. "Select arc or circle:" P1 CLICK

3. "~<Location of dimension line>" P2 CLICK

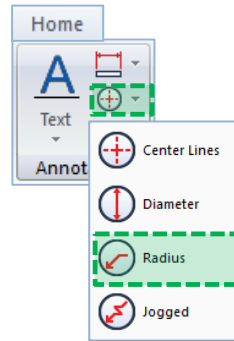
NOTE

-. In step3, Angle(A) / Text(T) / Mtext(M) is same as sub options of dimlinear

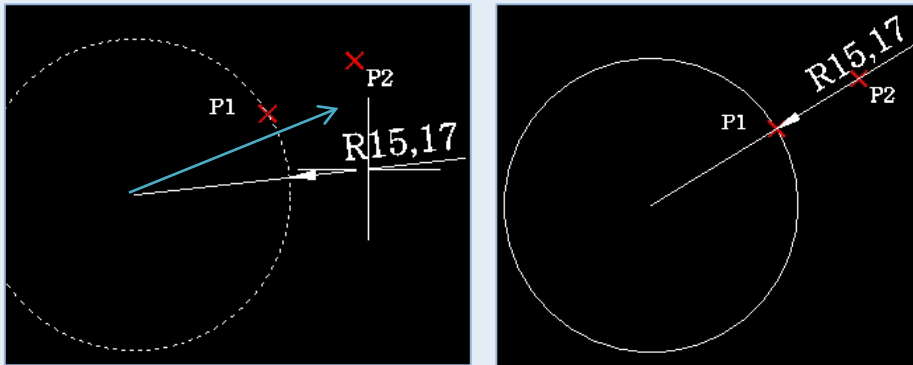
Dimradius

command : dra (Dimradius)

```
_DIMRADIUS  
Select arc or circle:  
Dimension text = 15,17:  
Angle/Mtext/Text/<Location of dimension line>:
```



Dimradius Basic principle



Execution Process

*. "dim-1.dwg" File OPEN

1. "command:" dra input and SPACE

2. "Select arc or circle:" P1 CLICK

3. "~<Location of dimension line>" P2 CLICK

NOTE

- In step3, Angle(A) / Text(T) / Mtext(M) is same as sub options of dimlinear

Dimbaseline

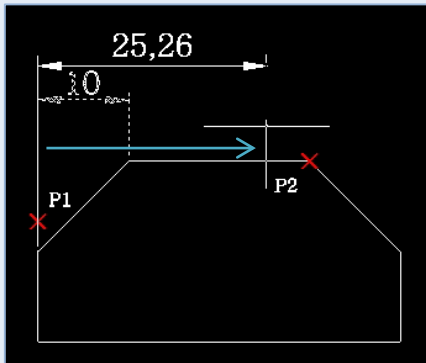
command : dba (Dimbaseline)



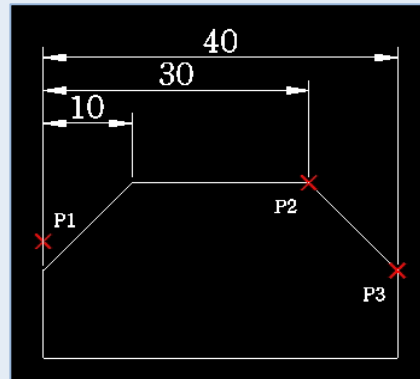
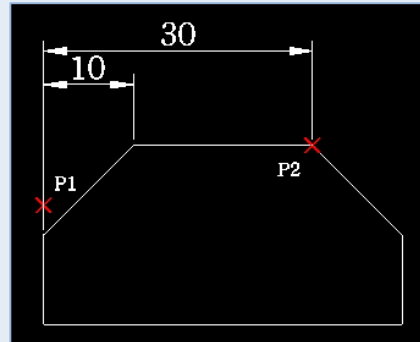
Command: dba
_DIMBASELINE
Select dimension for baseline:
Baseline: ENTER to select starting dimension/Undo/< Origin of next extension line>:
Dimension text = 30:
Baseline: ENTER to select starting dimension/Undo/< Origin of next extension line>:
Select dimension for baseline:

Dimbaseline Basic principle

In step4, press SPACEBAR



In step4, click on P3



Execution Process

*. "dim-1.dwg" File OPEN

1. "command:" dba input and SPACE

2. "Select dimension for baseline:" P1 CLICK

3. "~<Origin of next extension line>:" P2CLICK

4. "~<Origin of next extension line>:" SPACE

5. "Select dimension for baseline:"
SPACE 2 times

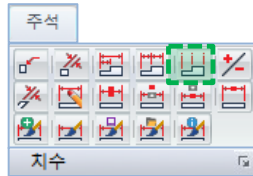
NOTE

- In step2, If you press spacebar and select the dimension, you can draw it from the selected dimension line.
- In step4, If you do not press spacebar, you can continue to draw the dimbaseline.
- If there is no drawn dimension, dimbaseline can not be executed.

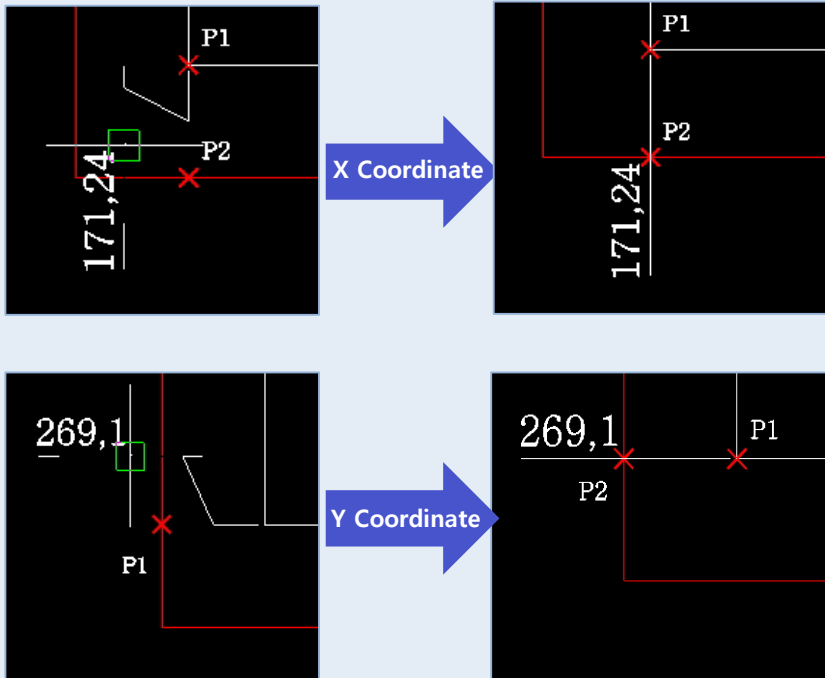
Dimordinate

command : dor (Dimordinate)

Command: DOR
_DIMORDINATE
Select point for ordinate dimension:
Text/Angle/X datum/Y datum/<Leader endpoint>:
Dimension text = 171,24:



Dimordinate Basic principle



Execution Process

*. "dim-1.dwg" File OPEN

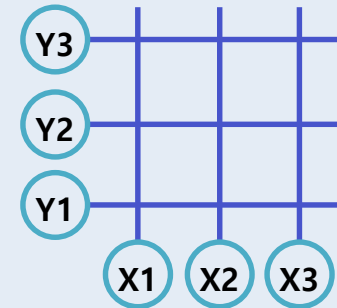
1. "command:" **dor** input and SPACE

2. "~ point for ordinate dimension:" **P1** CLICK

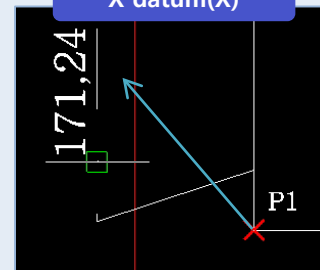
3. "~<Leader endpoint>:" **P2** CLICK

NOTE

Definition of dimordinate

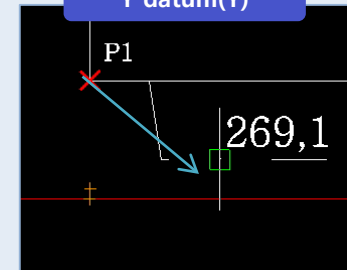


X datum(X)



If x is selected,
only x coordinates are drawn.

Y datum(Y)

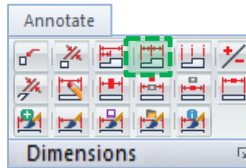


If y is selected,
only y coordinates are drawn.

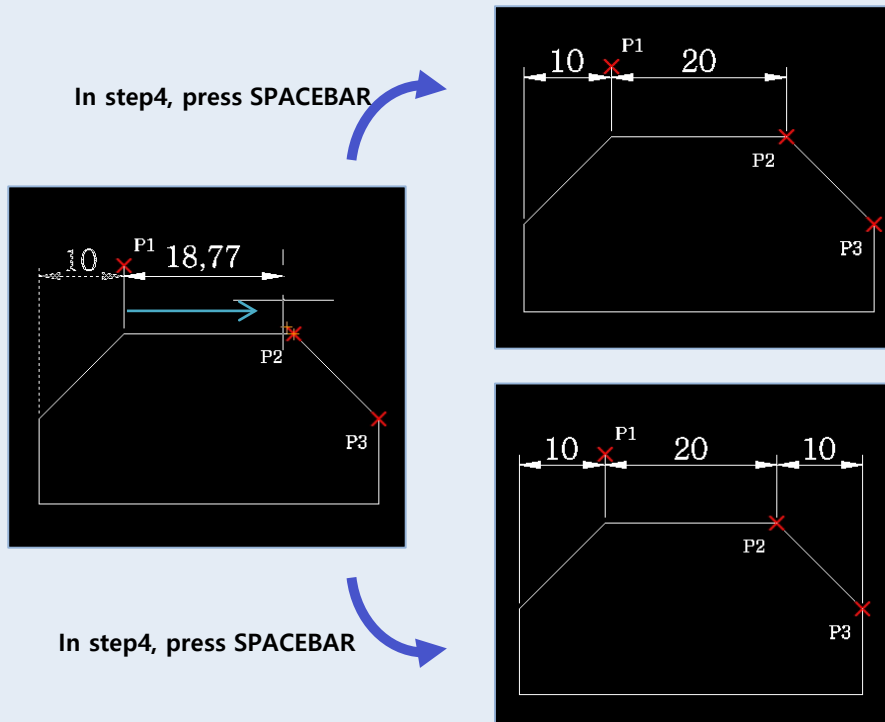
Dimcontinue

command : dco (Dimcontinue)

Command: DCO
DIMCONTINUE
Select dimension to continue:
Continue: ENTER to select starting dimension/Undo/<Origin of next extension line>:
Dimension text = 20:
Continue: ENTER to select starting dimension/Undo/<Origin of next extension line>:
Select dimension to continue:



Basic principle



Execution Process

*. "dim-1.dwg" File OPEN

1. "command:" **dco** input and SPACE

2. "Select dimension for continue:" **P1** CLICK

3. "~<Origin of next extension line>:" **P2** CLICK

4. "~<Origin of next extension line>:" SPACE

5. "Select dimension for continue:"
SPACE 2 times

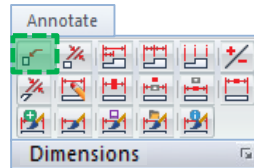
NOTE

- In step2, If you press spacebar and select the dimcontinue, you can draw it from the selected dimension line.
- In step4, If you do not press spacebar, you can continue to draw the dimcontinue.
- If there is no drawn dimension, dimcontinue can not be executed.

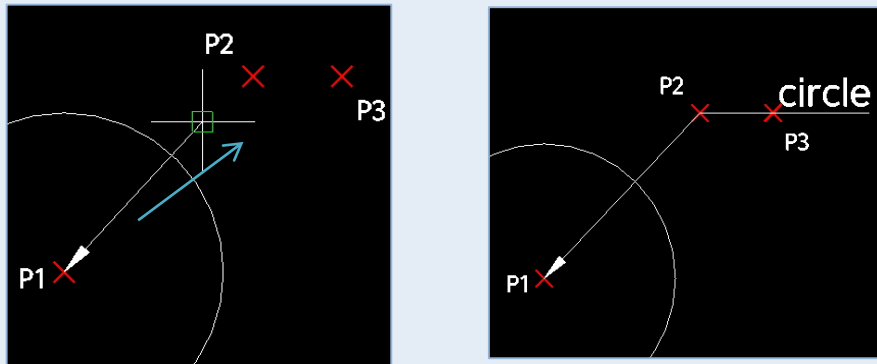
Leader - 1

command : lead (Leader)

Command: LEAD
_LEADER
Specify leader start point:
Specify next point:
Specify next point or [Annotation/Format/Undo] <Annotation>:
Specify next point or [Annotation/Format/Undo] <Annotation>:
Enter first line of annotation text or <options>: circle
Enter next line of annotation text:



Leader Basic principle



Execution Process

*. "dim-1.dwg" File OPEN

1. "command:" lead input and SPACE

2. "~ leader start point:" P1 CLICK

3. "Specify next point:" P2 CLICK

4. "~[Annotation(A)/Format(F)/Undo(U)]
<Annotation>:" P3 CLICK

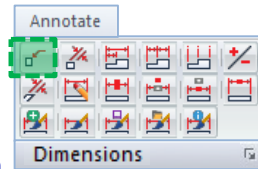
5. "~[Annotation(A)/Format(F)/Undo(U)]
<Annotation>:" SPACE

6. "~ text or<options>:" circle input and ENTER

7. "~ annotation text:" ENTER

NOTE

- In step5, If you do not press SPACE, you can draw a leader continuously.
- In step6~7, To proceed to the next step, Input all of the text and press ENTER.

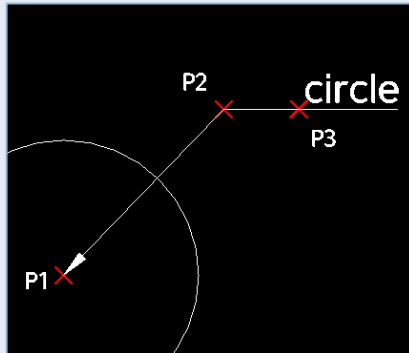


Leader -2

Step4, Format of sub options

Spline(S)/STraight(ST)/Arrow(A)/None(N)

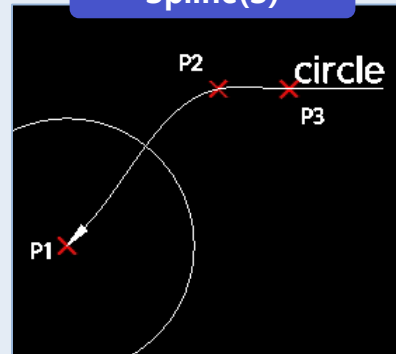
Normal execution



Straight line+Arrow

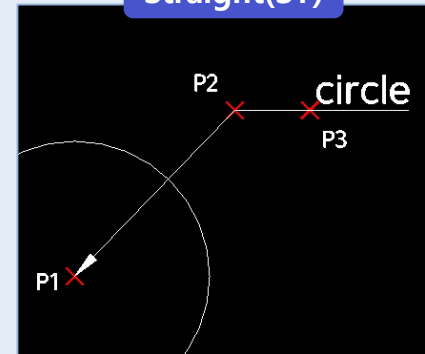
Applied Results

Spline(S)



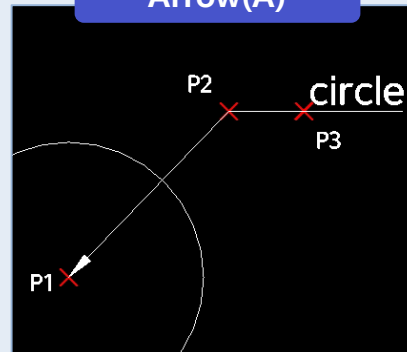
Draw the leader on the spline.

Straight(ST)



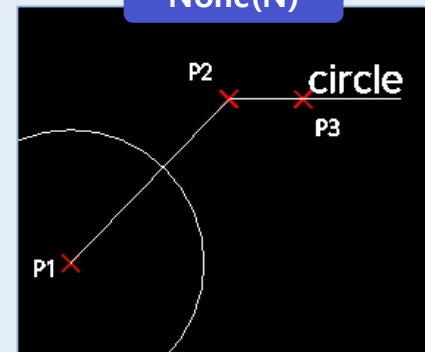
Draw a leader in a straight line.

Arrow(A)



Apply an arrow to the leader.

None(N)



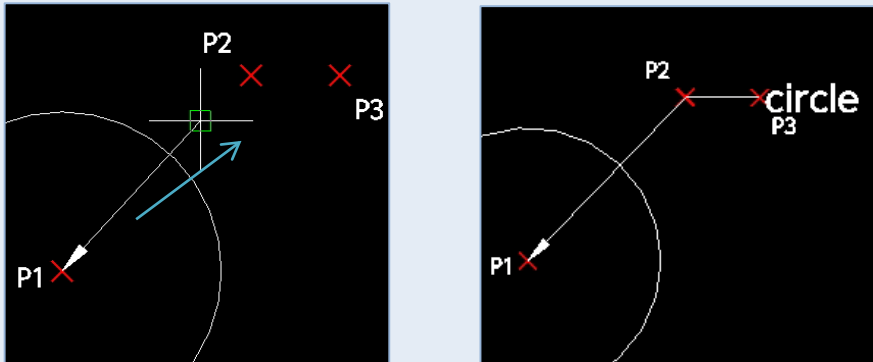
Do not apply an arrow to the leader.

Quick Leader -1

command : le (Qleader)

```
Command: le
_QLEADER
Specify first leader point or [Settings] <Settings>:
Specify Next point:
Specify Next point:
Specify text width <0.000000>:
First line of annotation text/<Mtext>: circle
Enter next line of annotation text:
```

Qleader Basic principle



Execution Process

*. "dim-1.dwg" File OPEN

1. "command:" le input and SPACE

2. "~[Settings(S)]:" P1 CLICK

3. "Specify Next point:" P2 CLICK

4. "Specify Next point : " P3 CLICK

5. "Specify text width <0.000000>:" SPACE

6. "~<Mtext(M)>:" circle input and ENTER

7. "~ of annotation text:" ENTER

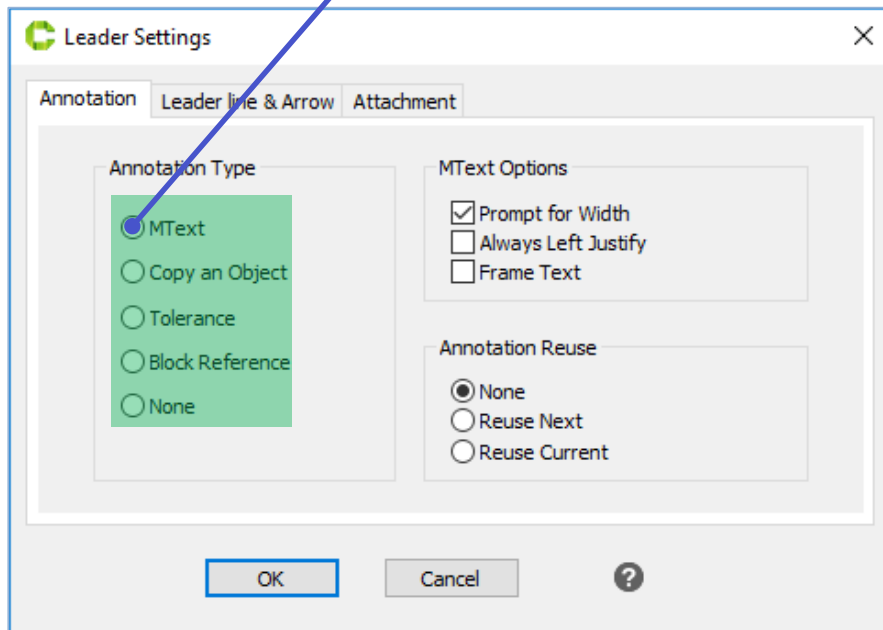
NOTE

- In step6~7, To proceed to the next step,
Input all of the text and press ENTER.

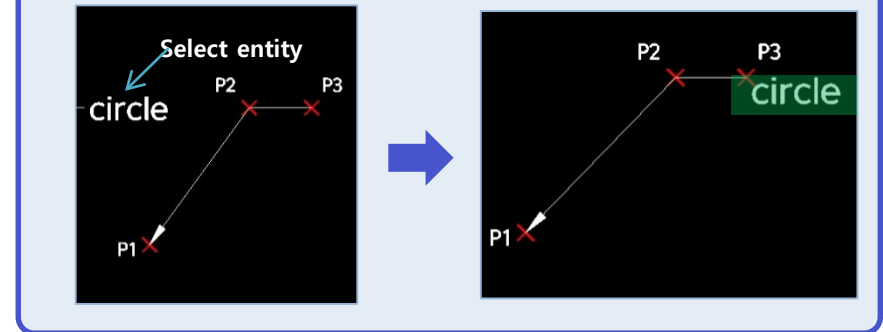
Quick Leader -2

Sub options

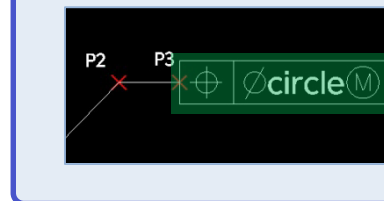
Default : Mtext



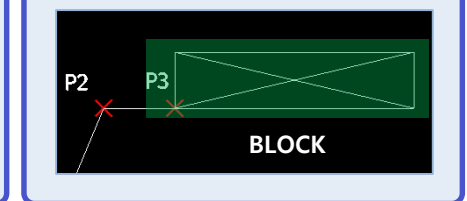
Copy an Object



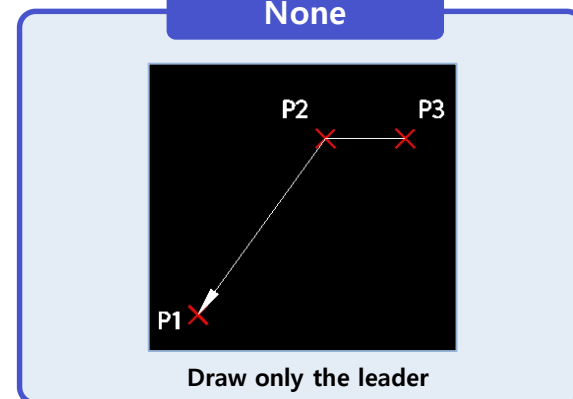
Tolerance



Block Reference

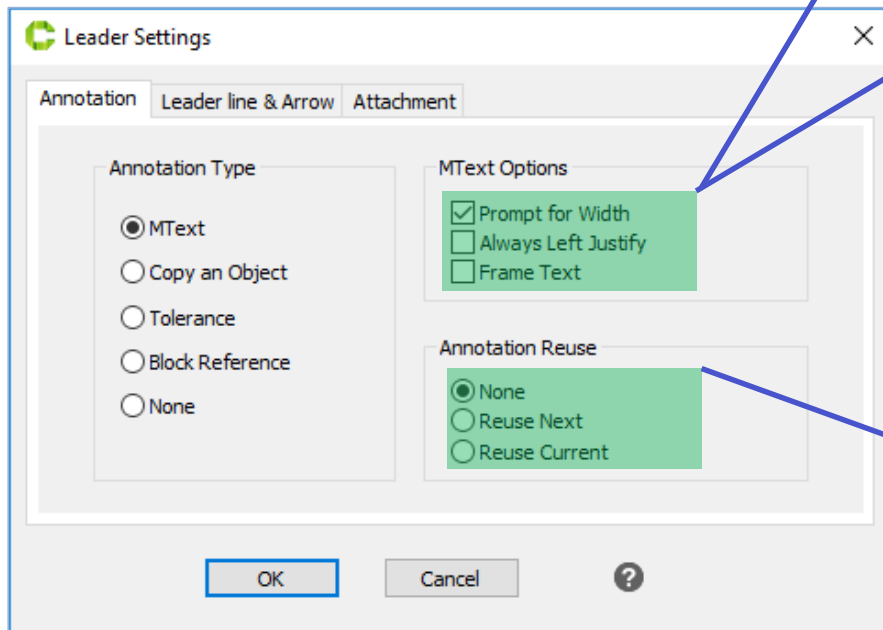


None



Quick Leader -3

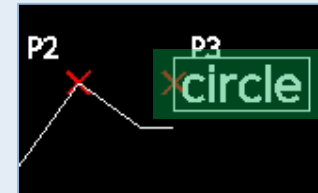
Sub options



Prompt for Width

-. If checked, text width is set while executing.

Frame Text



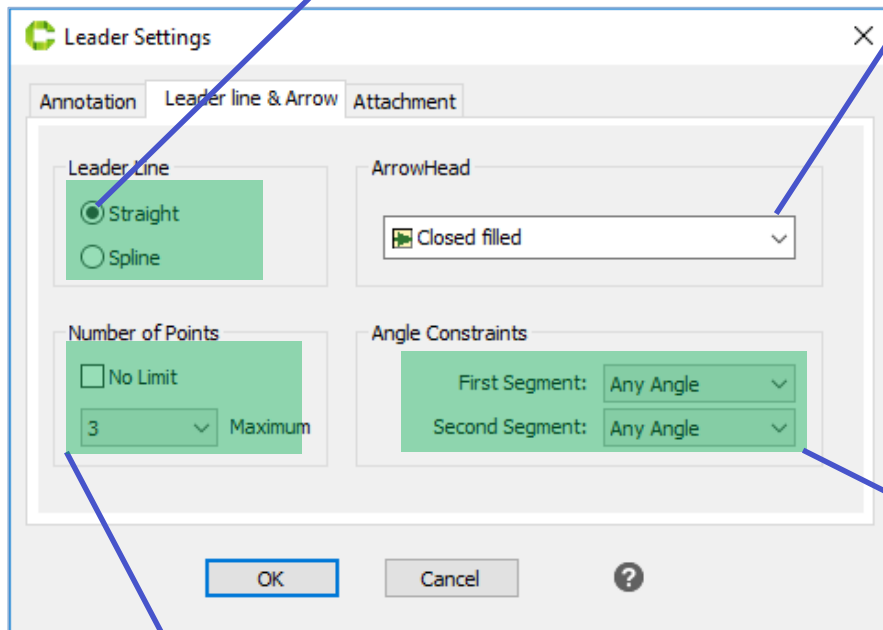
Annotation Reuse

- . None : Do not use annotation
- . Reuse Next : The current setting is used next.
- . Reuse Current : Use the previous settings again.

Quick Leader -4

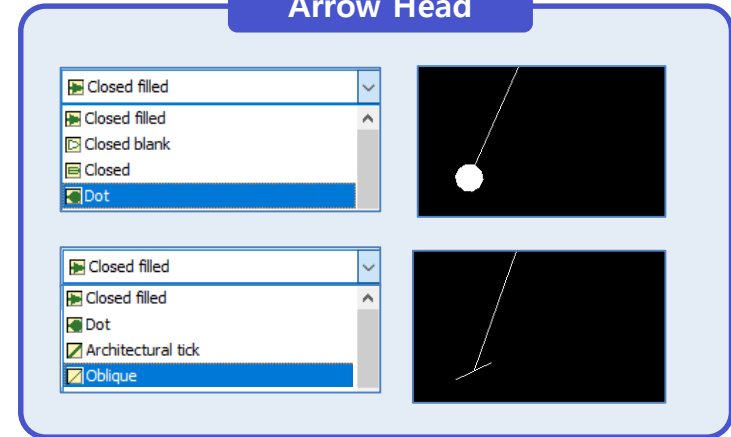
Sub options

Default : Straight line



Number of points click when drawing leader

Arrow Head



Set angle

- When you set the angle, you draw the leader at the setted angle. (Polar)

Quick Leader -5

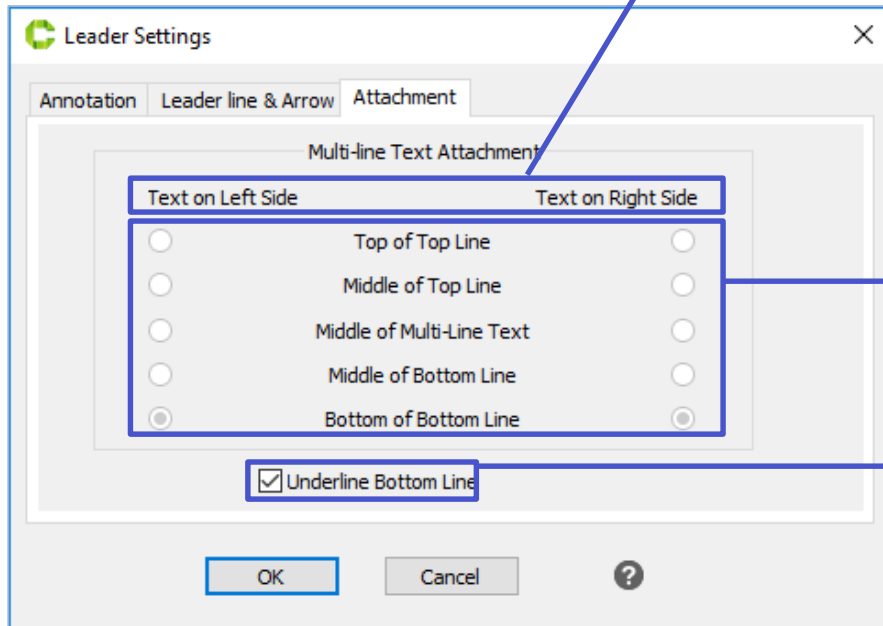
Sub options

Text on Left Side

cadian1
cadian2
cadian3

Text on Right Side

cadian1
cadian2
cadian3



Multi-Line Attachment

Middel of Top Line

cadian1
cadian2
cadian3

Top of Top Line

cadian1
cadian2
cadian3

Middle of MText

cadian1
cadian2
cadian3

Middle of Bottom Line

cadian1
cadian2
cadian3

Bottom of Bottom Line

cadian1
cadian2
cadian3

Underline Bottom Line

cadian1
cadian2
cadian3

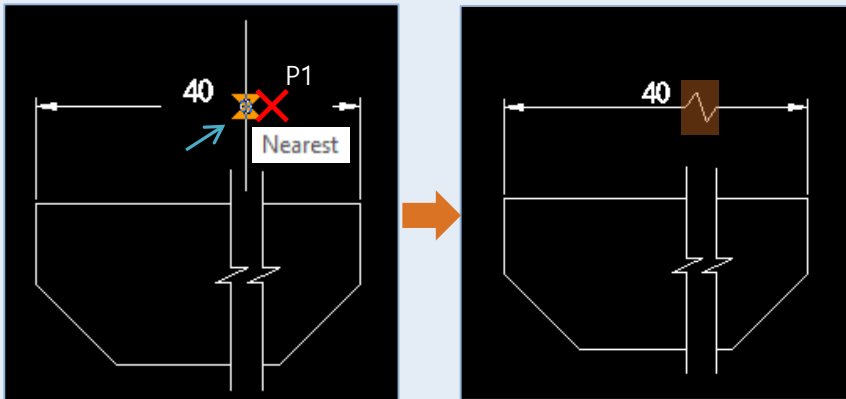
-. Check to disable the **Multi-line Text Attachment** function.

Dimjogline

command : djl (Dimjogline)

Command: DJL
DIMJOGLINE
Select dimension to add jog or [Remove]:
Specify jog location (or press ENTER):

Dimjogline Basic principle



Select nearest osnap

Execution Process

*. "dim-1.dwg" File OPEN

1. "command:" djl input and SPACE

2. "~[Remove(R)]:" Dimension Select and SPACE

3. "~(or press ENTER):" P1 CLICK

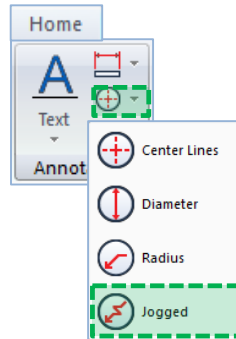
NOTE

- It is used when the drawing length is different from the actual length.
- In Step2, Select "r" to remove Dimjogline.
- In Step2, Select the nearest osnap when selecting the position of the dimjogline.

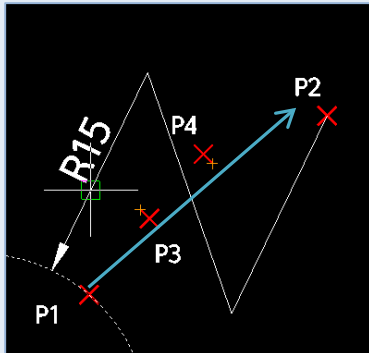
Dimjogged (Circle, Arc)

command : djo (Dimjogged)

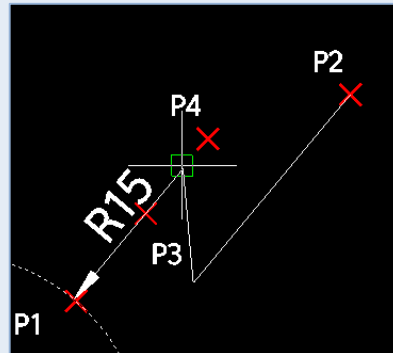
Command: djo
_DIMJOGGED
Select arc or circle:
Specify center location override:
Dimension text = 15:
Angle/Mtext/Text/<Location of dimension line>:
Specify jog location:



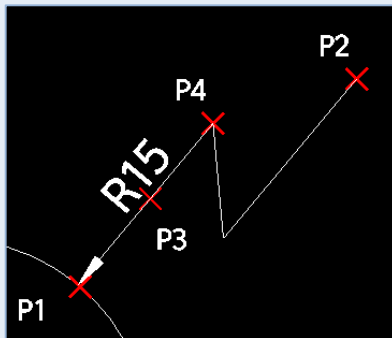
Dimjogged(Circle, Arc) Basic principle



1. Create Dimjogged



2. Select location of dimension



3. Select location of Jog

Execution Process

*. "dim-1.dwg" File OPEN

1. "command:" djo input and SPACE

2. "Select arc or circle:" P1 Select and SPACE

3. "Specify center location override:"
P2 CLICK

4. "~<Location of dimension line>:" P3 CLICK

5. "Specify jog location:" P4 CLICK

NOTE

- Used when the size of a circle or arc is large and the center is not visible in the drawing.
- In step4, Angle(A) / MText(M) / Text(T) is same as sub options of dimlinear

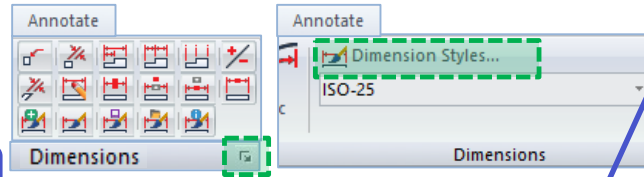
DIMENSION Style

CADian 2020



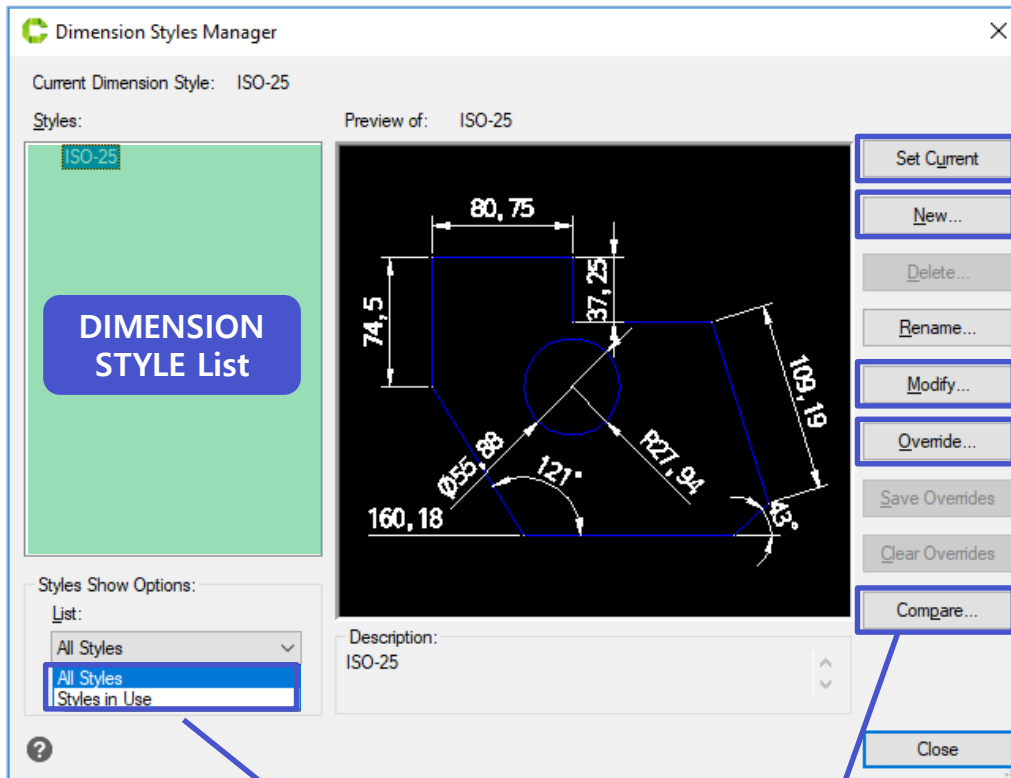
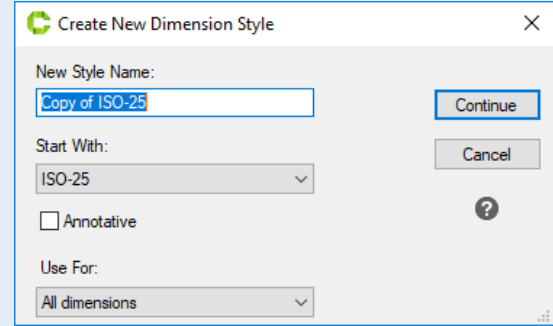
DIMENSION STYLE -1

command : d (Dimstyle)



Selected dimension style use immediately

Create a new dimension style



DIMENSION STYLE List

View style list

Styles in Use = Used in drawing

Compare Dimension styles

Check the other parts of the dimension style items when comparing.

Edit Dimension

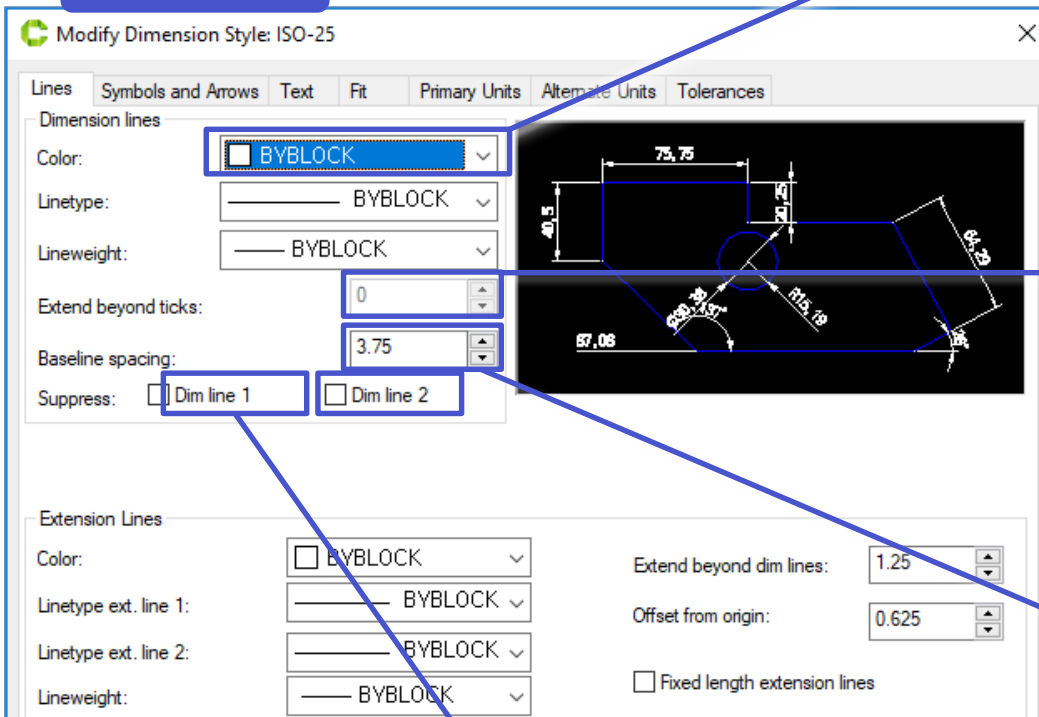
Modify line, arrow, text, tolerance, etc

Override

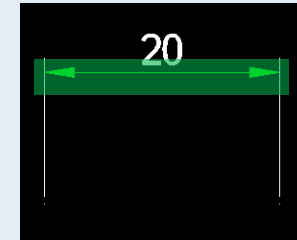
- Add or change in the current dimension style and continue to use
- If you modify the dimension system variable, a override is created.
- If you save the override, the original dimension style will be overwritten with the modifications. (Delete override)

DIMENSION STYLE -2

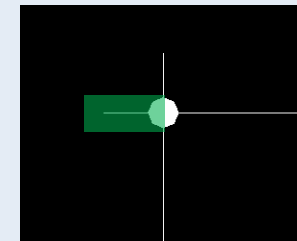
LINE -1



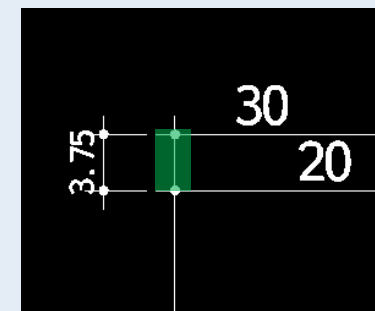
Dimension line color (DIMCLRD)



Extend beyond ticks (DIMDLE)



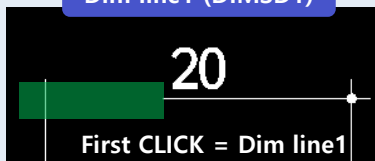
Baseline spacing (DIMDLI)



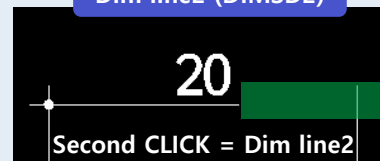
Apply to dimbaseline

Dimension Suppression

Dim line1 (DIMSD1)



Dim line2 (DIMSD2)



DIMENSION STYLE -3

LINE -2

Extension Lines

Color: ☐ BYBLOCK

Linetype ext. line 1: BYBLOCK

Linetype ext. line 2: BYBLOCK

Lineweight: BYBLOCK

Suppress: ☐ Ext line 1 ☐ Ext line 2

Extend beyond dim lines: 1.25

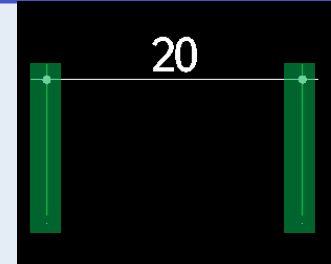
Offset from origin: 0.625

☐ Fixed length extension lines

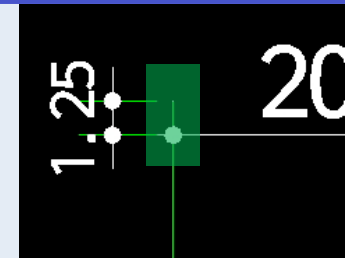
Length: 1

OK Cancel

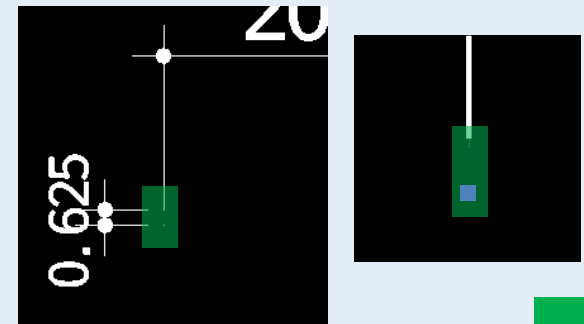
Extension line color (DIMCLRE)



Extend beyond dim line (DIMEXE)

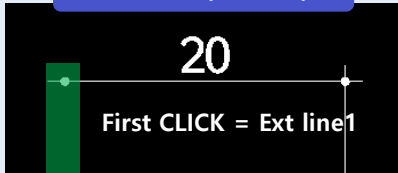


Offset from origin (DIMEXO)



Extension suppress

Ext line1 (DIMSE1)

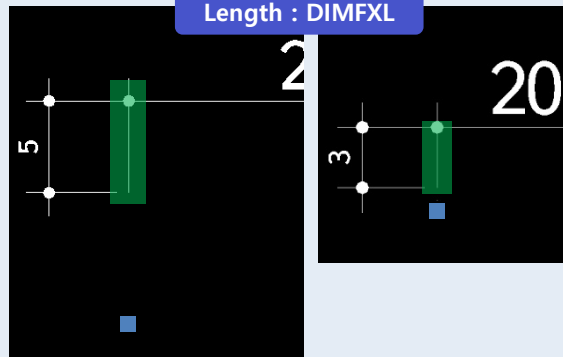


Ext line2 (DIMSE2)



Fixed length extension line (DIMFXLON)

Length : DIMFXL



If the value is larger than the set value,
the extension line is fixed to the set value.
Length = 5
If the extension length is 3, it is not applied.

DIMENSION STYLE -4

Symbols and Arrows -1

Modify Dimension Style: ISO-25

Lines Symbols and Arrows Text Fit Primary

Arrowheads

First: Closed filled

Second: Closed filled

Leader: Closed filled

Arrow size: 2.5

Center marks

☐ None

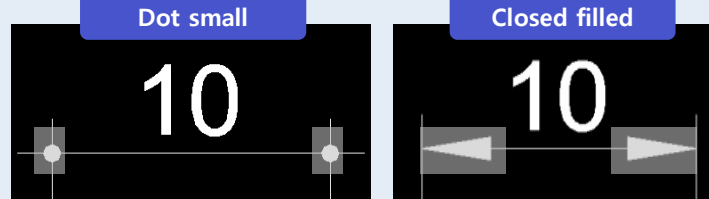
☒ Mark 2.5

☐ Line

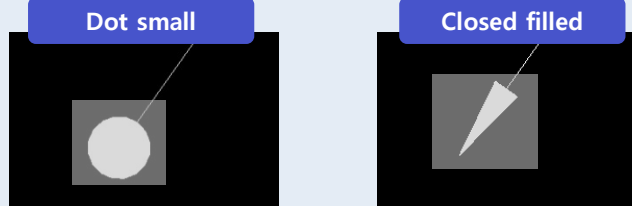
Dimension Break

Break size: 0.1250

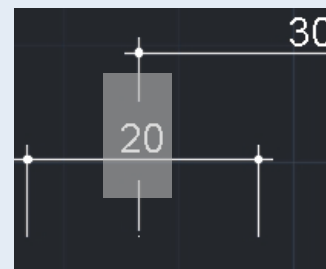
Apply dimension arrow (DIMBLK1/2)



Apply leader arrow (DIMLDRBLK)

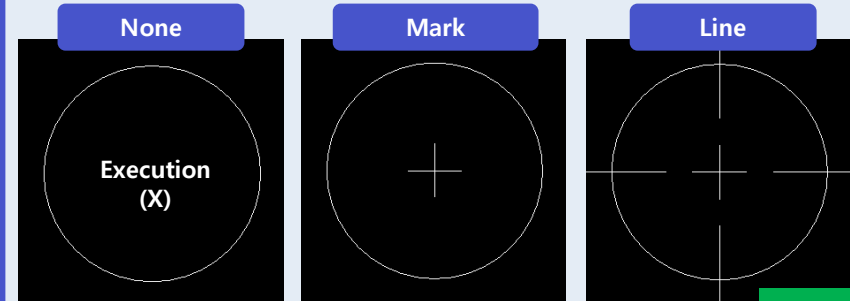


Dimension break



Breaking distance

Center marks (DIMCEN)

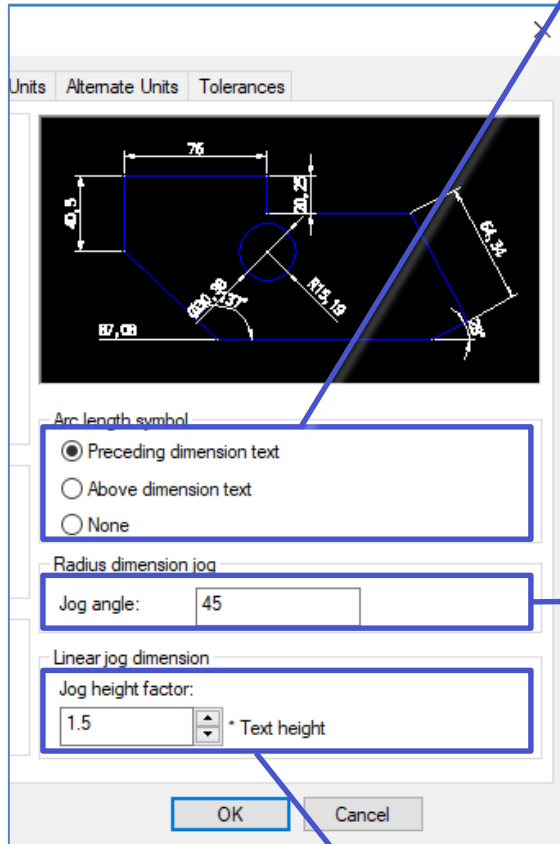


Arrowhead

- Closed filled
- Closed filled
- Closed blank
- Closed
- Dot
- Architectural tick
- Oblique
- Open
- Origin indicator
- Origin indicator 2
- Right angle
- Open 30
- Dot small
- Dot blank
- Dot small blank
- Box
- Box filled
- Datum triangle
- Datum triangle filled
- Integral
- None
- User Arrow...

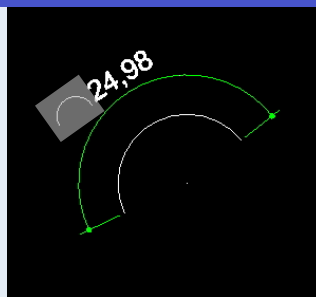
DIMENSION STYLE -5

Symbols and Arrows -2



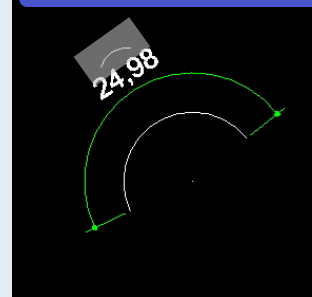
Arc length symbol position (DIMARCSYM)

Preceding dimension text



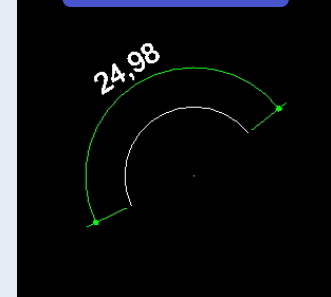
Position in front of dimension text

Above dimension text



Position over dimension text

None



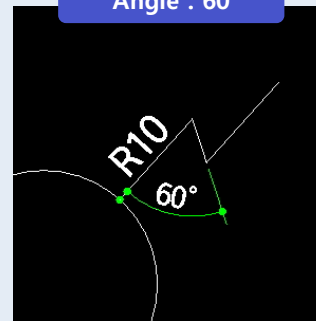
No symbol

Dimjogged Angle (DIMJOGANG)

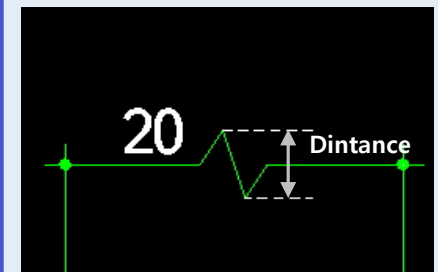
Angle : 45



Angle : 60



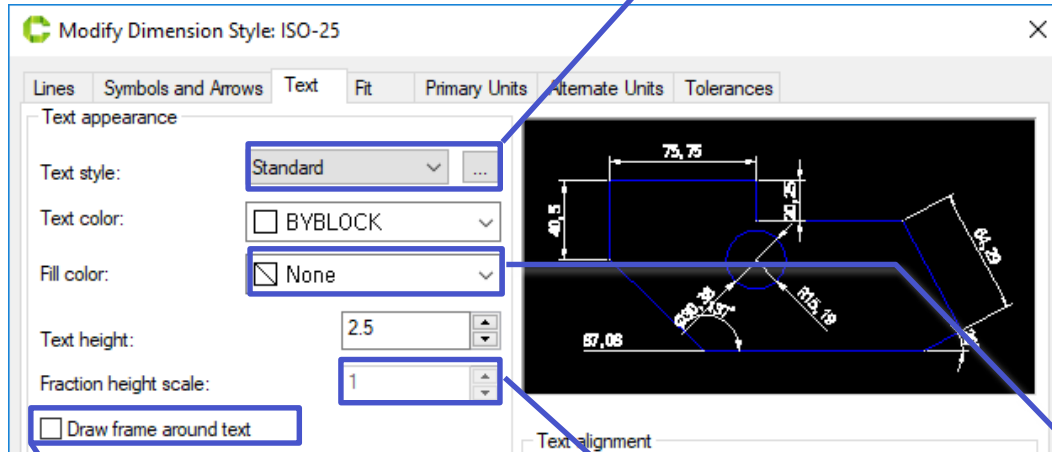
Linear jog dimension



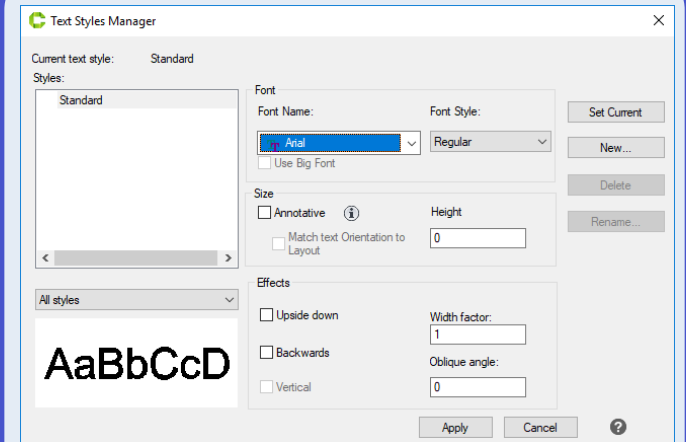
The larger the set value, the larger the distance.

DIMENSION STYLE -6

TEXT -1

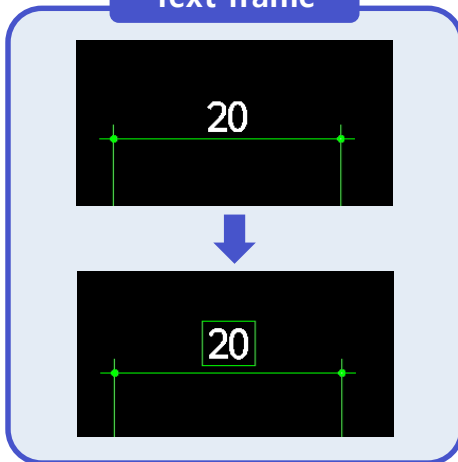


Dim text style

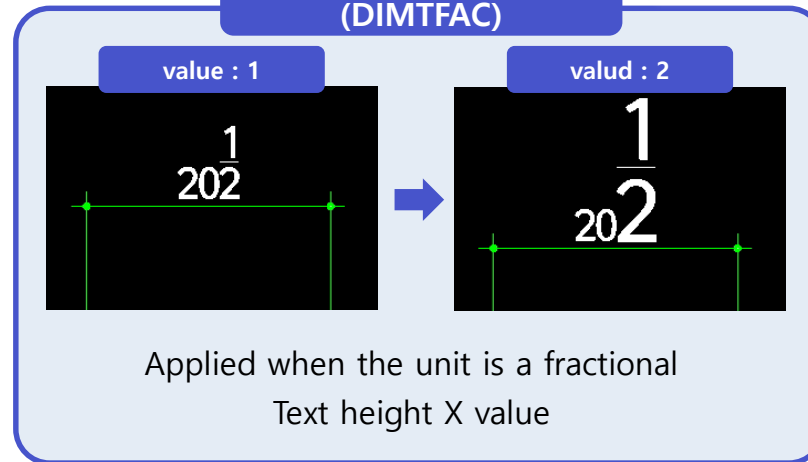


Use dimension text as a text style

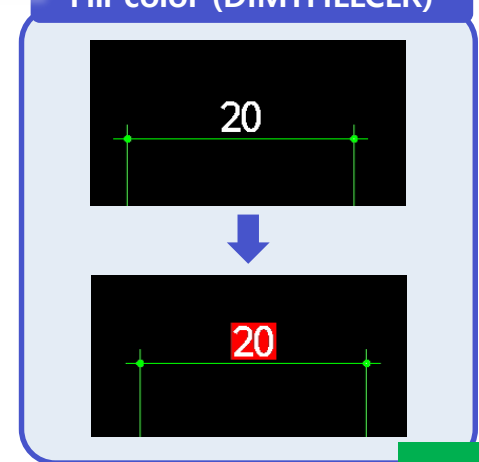
Text frame



Fraction height scale (DIMTFAC)



Fill color (DIMTFILLCLR)



DIMENSION STYLE -7

TEXT -2

☐ Draw frame around text

Text placement

Vertical: **Above**

Horizontal: **Centered**

View Direction: **Left-to-Right**

Offset from dim line: **0.625**

Text alignment

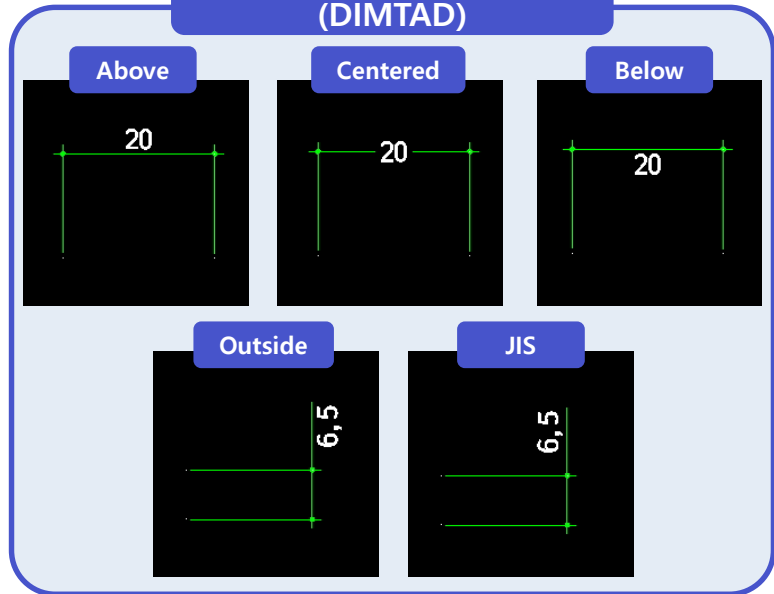
☐ Horizontal

☒ Aligned with dimension line

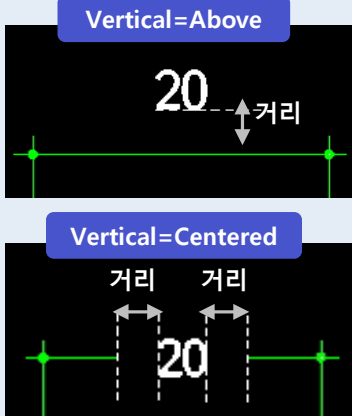
☐ ISO standard

OK Cancel

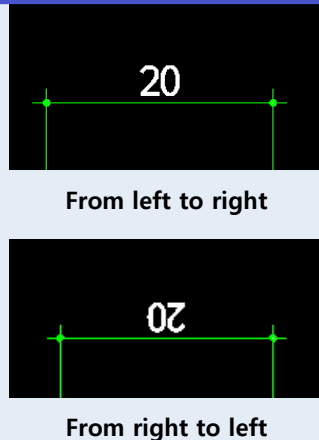
Text vertical placement (DIMITAD)



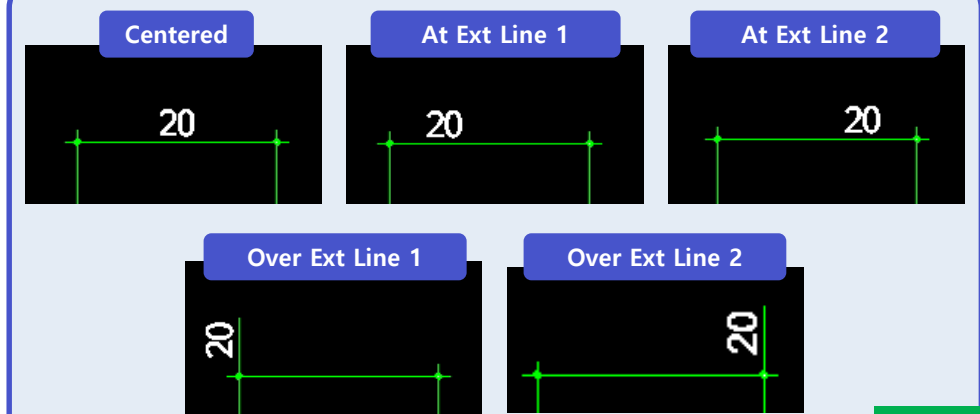
Distance between text and dimension (DIMGAP)



View Direction (DIMITXDIRECTION)

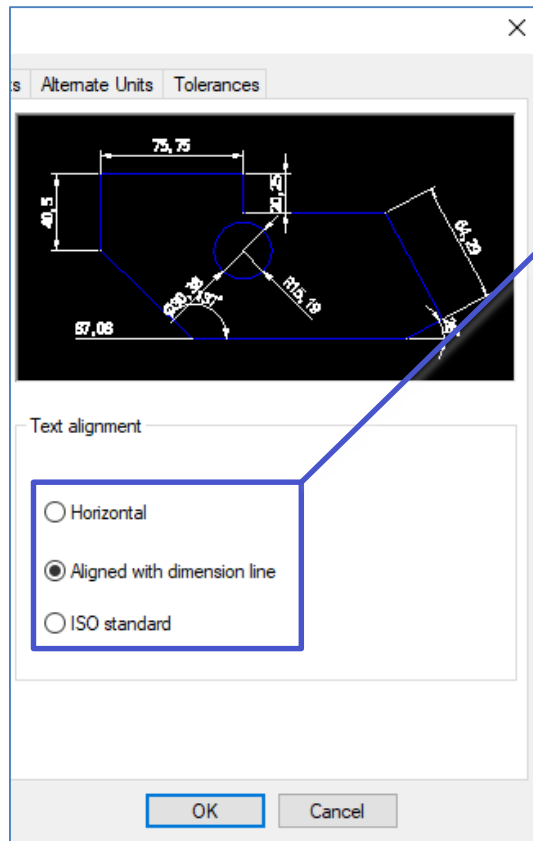


Text horizontal placement (DIMJUST)



DIMENSION STYLE -8

TEXT -3



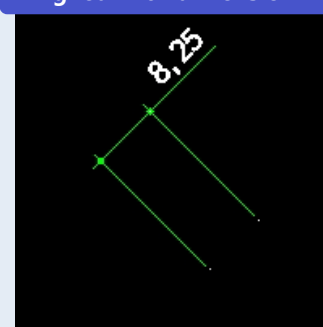
Text alignment

Horizontal



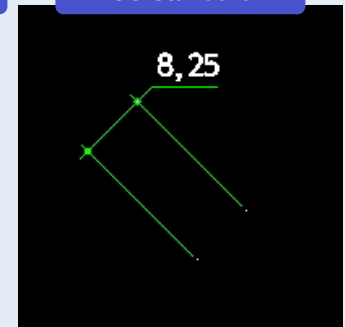
DIMTIH = ON
DIMTOH = ON

Aligned with dimension line



DIMTIH = OFF
DIMTOH = OFF

ISO standard

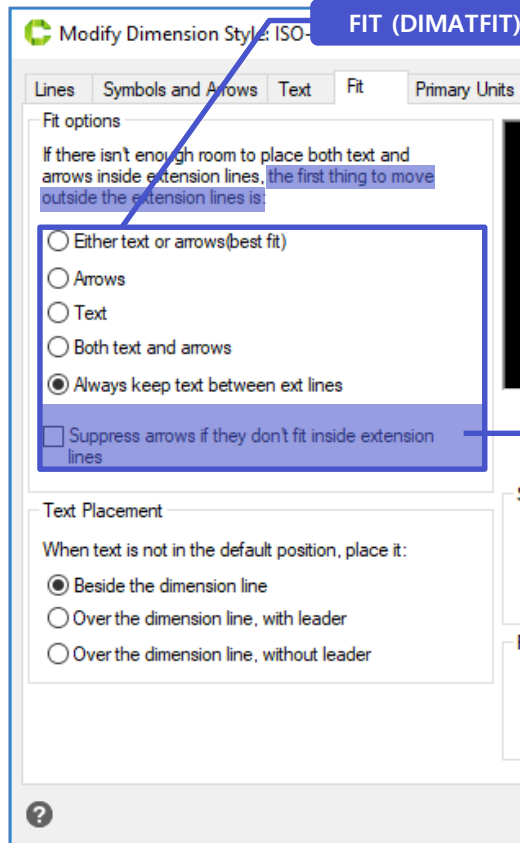


DIMTIH = OFF
DIMTOH = ON

DIMTIH = Text aligns inside
DIMTOH = Text aligns outside

DIMENSION STYLE -9

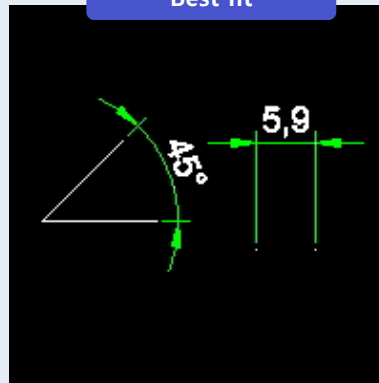
FIT -1



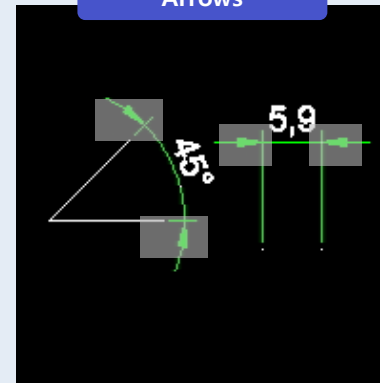
Uncheck (DIMSOXD)

Draw arrows by default

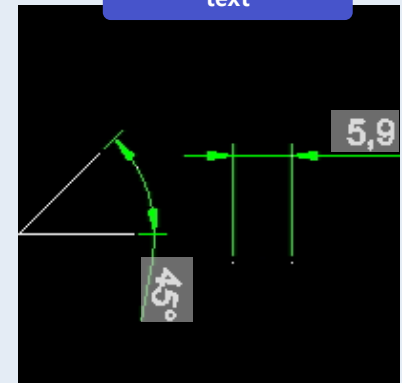
Best fit



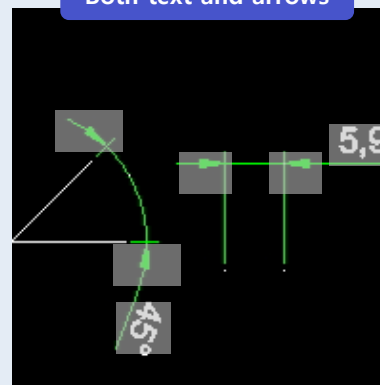
Arrows



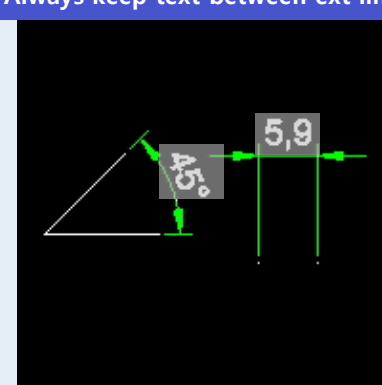
text



Both text and arrows

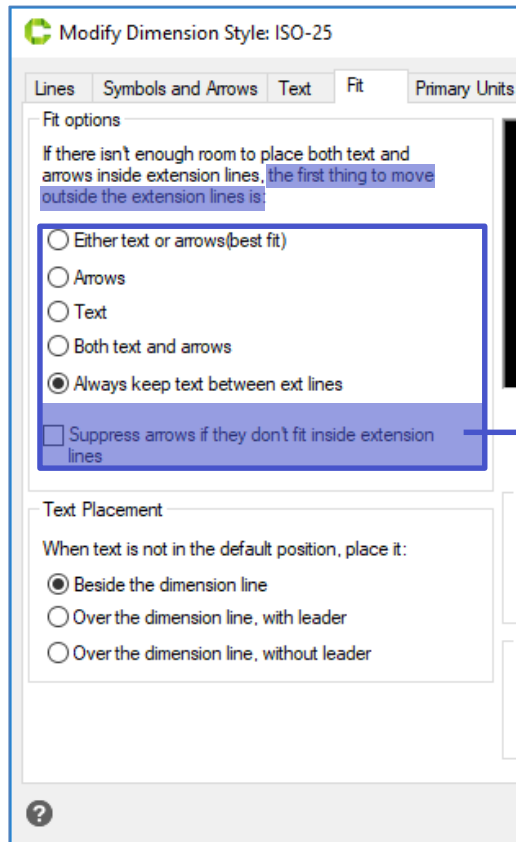


Always keep text between ext lines



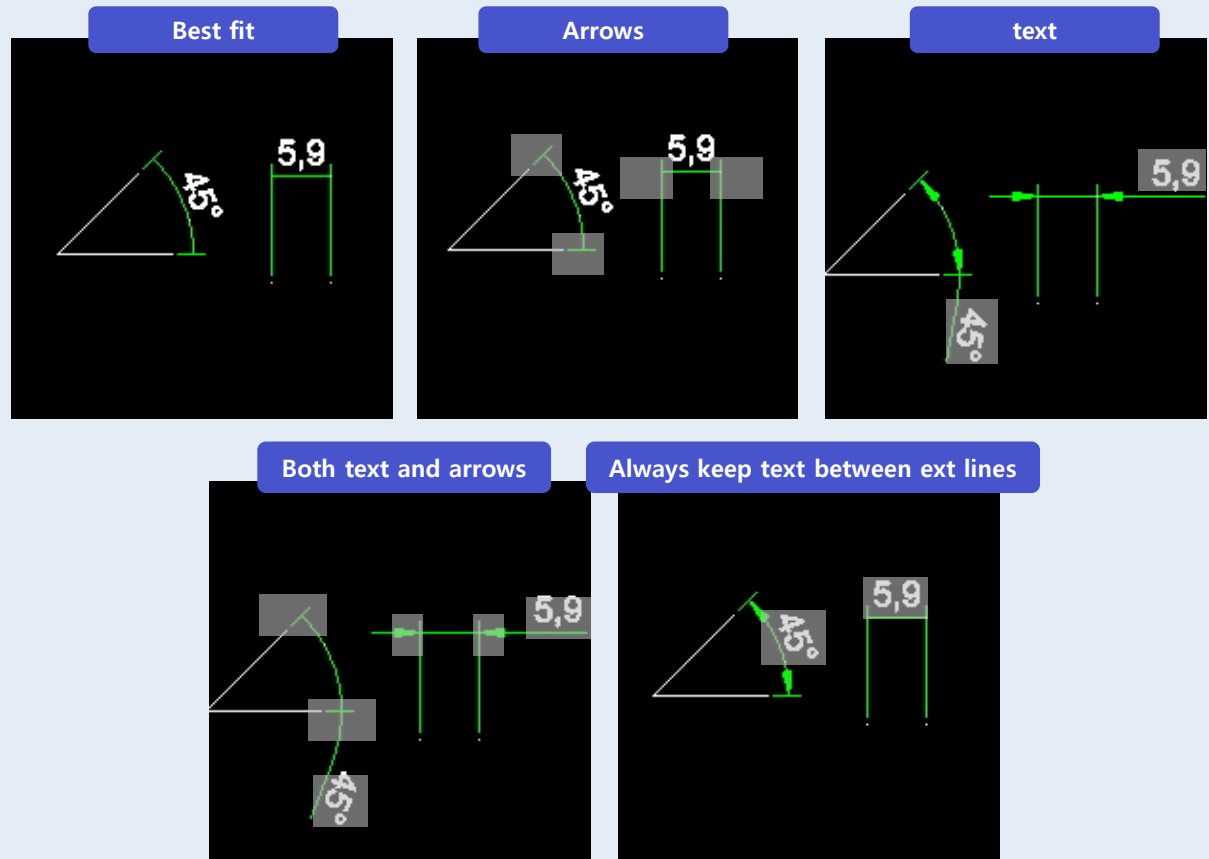
DIMENSION STYLE -10

FIT -2



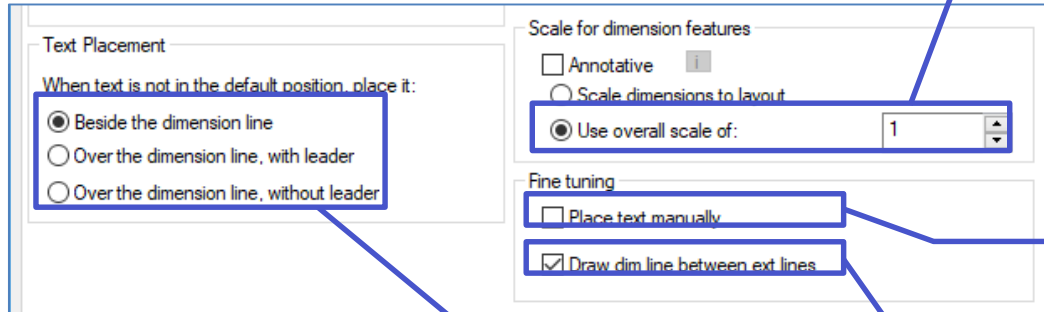
Check (DIMSOXD)

Exclude dimensions where text have been moved out of the extension line,

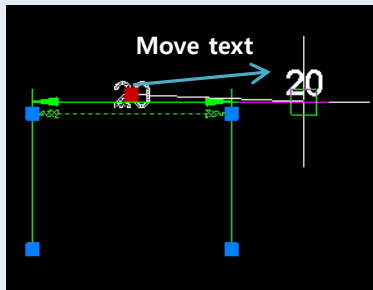


DIMENSION STYLE -11

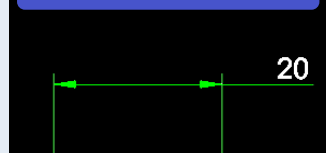
FIT -3



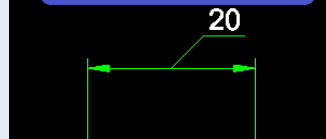
Text Placement (DIMTMOVE)



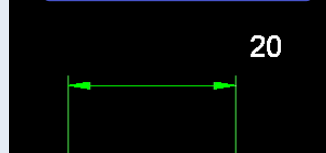
Beside the dimension



Over the dimension with leader



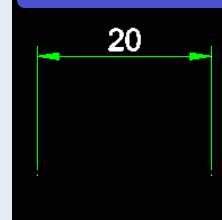
Over the dimension without leader



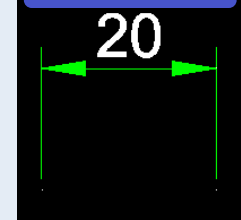
Scale for dimension (DIMSCALE)

Change arrow scale and text scale

Dimscale = 1

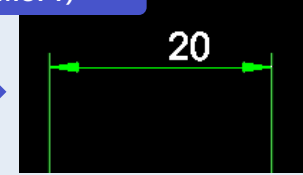
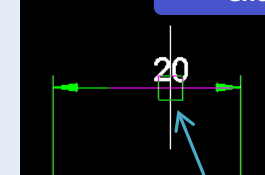


Dimscale = 2



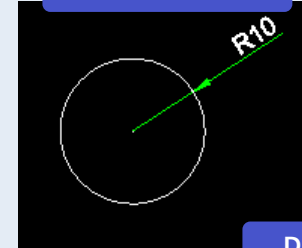
Text position can be selected when drawing dimension

Check (DIMUPT)

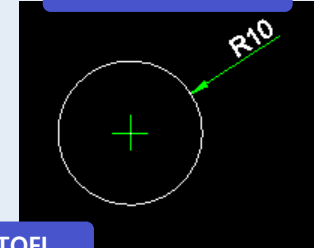


Draw a line between the extension lines

Check



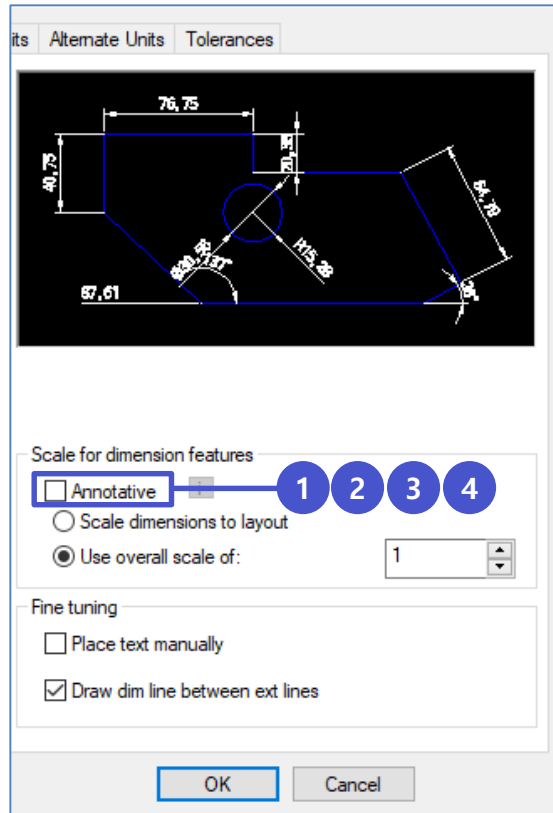
Uncheck



DIMTOFL

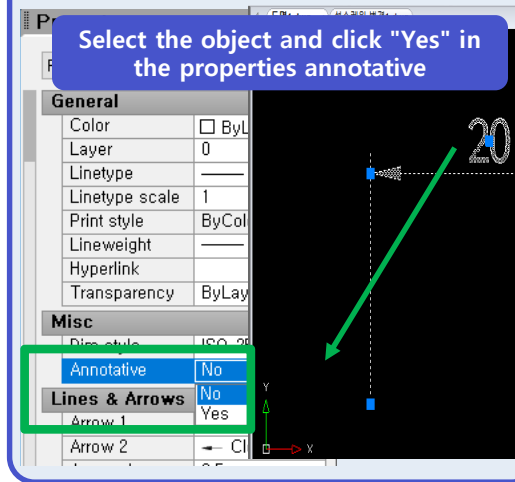
DIMENSION STYLE -12

FIT -4

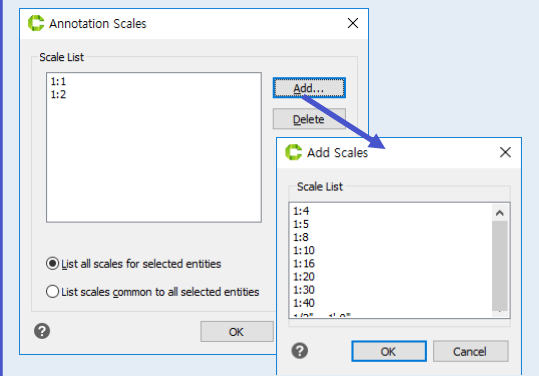


1 Click Annotative "Yes"

Select the object and click "Yes" in the properties annotative



2 Annotation scale



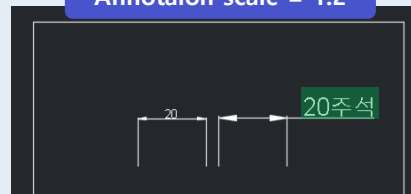
OBJECTSCALE (command)

4 Apply annotation scale

Annotation scale = 1:1



Annotation scale = 1:2



- Features that apply only to viewports
- Dimensions are not visible unless they are set scale values

3 How to setting

1. Draw entity to annotation

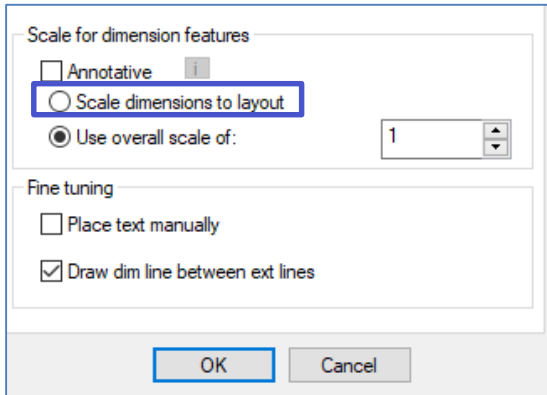
2. "OBJECTSCALE" execute

3. Add annotation scale

4. "OK" CLICK

DIMENSION STYLE -13

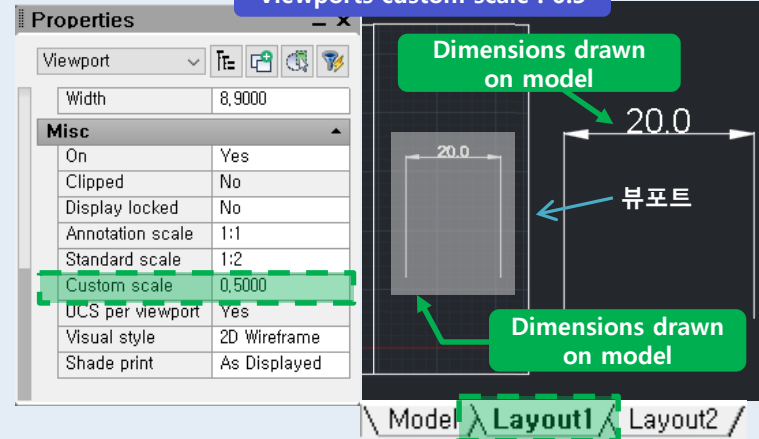
FIT -5



1

Layout tab

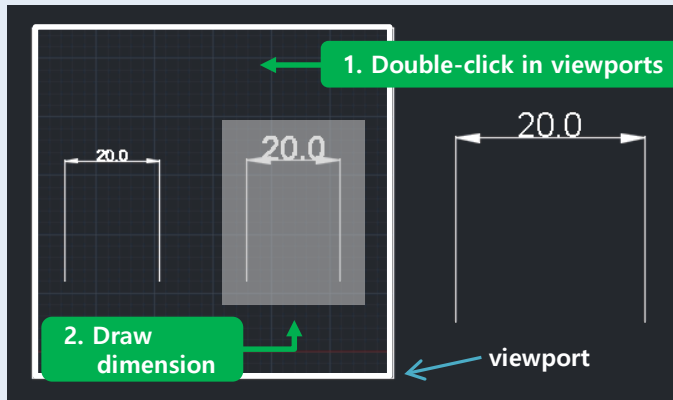
Viewports custom scale : 0.5



- Click on the viewport and change the Custom scale to 0.5

2

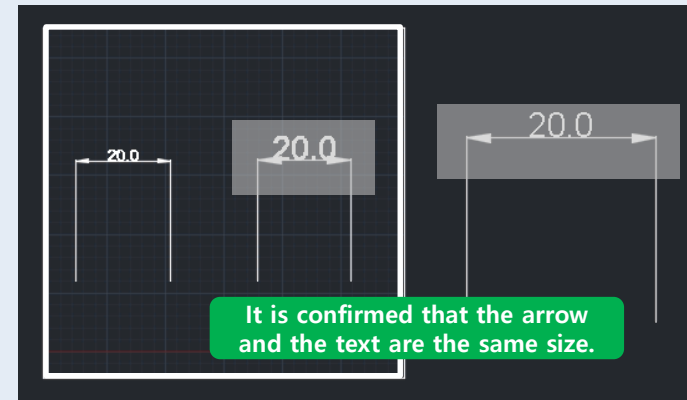
Draw a dimension in viewports



- DIMSCALE = 0
- This feature only applies to layout tab.

3

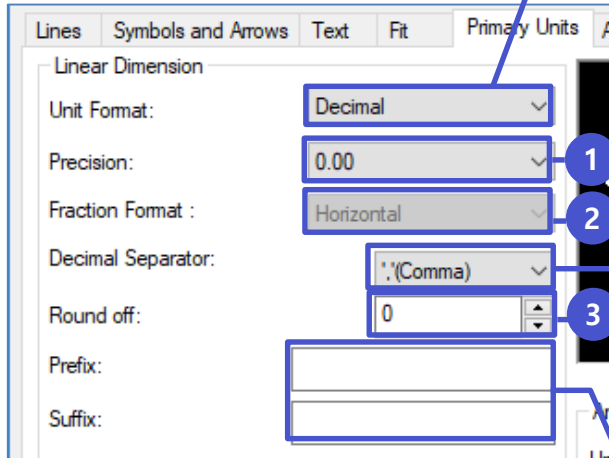
Dimscale Comparison



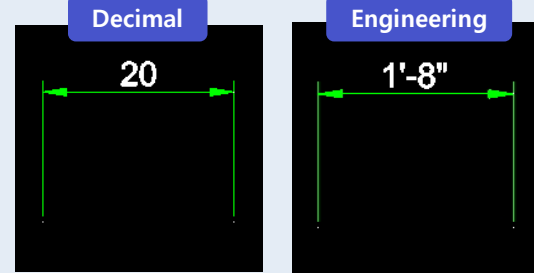
- Even if the viewport scale is different, the dimension is drawn by the scale of the layout.

DIMENSION STYLE -14

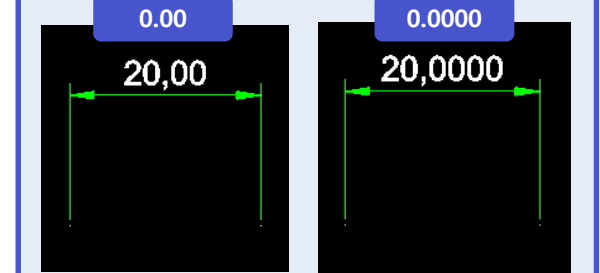
Primary Units -1



Unit Format (DIMLUNIT)



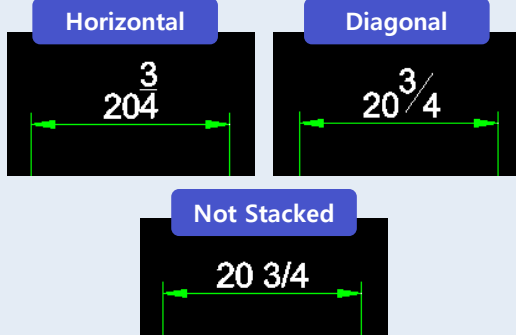
1 Precision (DIMDEC)



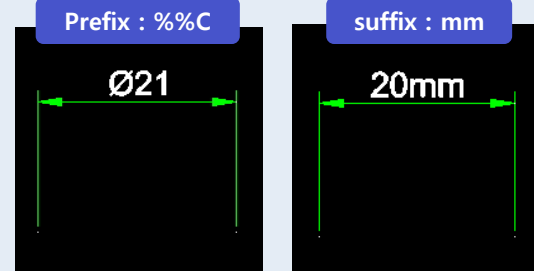
Decimal Separator (DIMDSEP)



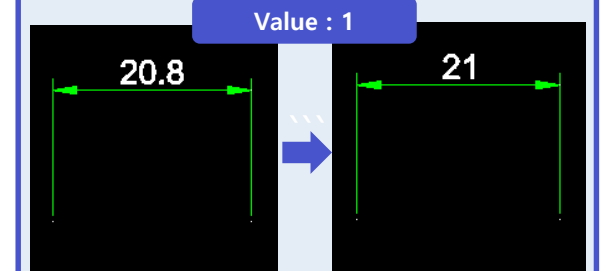
2 Fraction Format (DIMFRAC)



Prefix / suffix (DIMPOST)

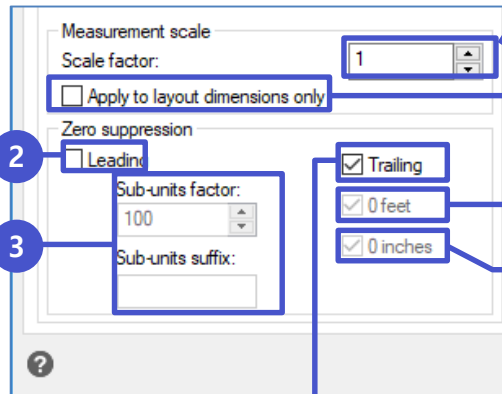


3 Round off (DIMRND)



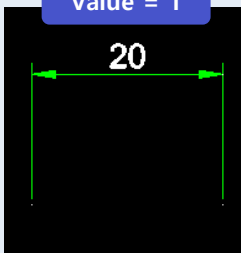
DIMENSION STYLE -15

Primary Units -2

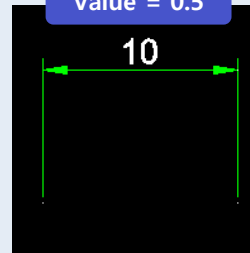


Scale factor (DIMLFAC)

Value = 1

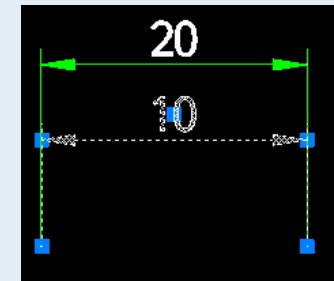


Value = 0.5



1

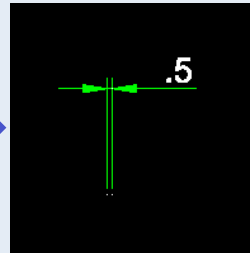
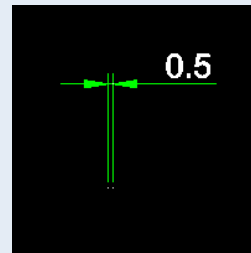
Scale factor in layout



Apply only layout

Zero suppression (Leading) DIMLIN

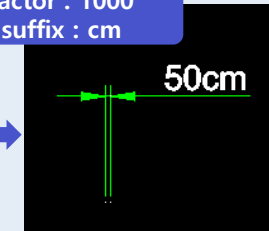
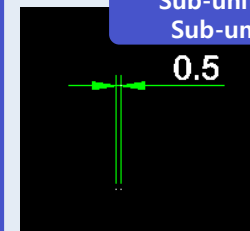
2



3

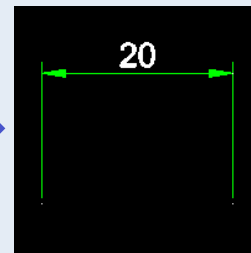
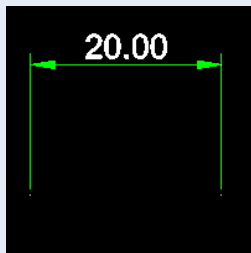
Sub-units

Sub-units factor : 1000
Sub-units suffix : cm



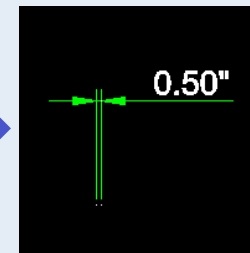
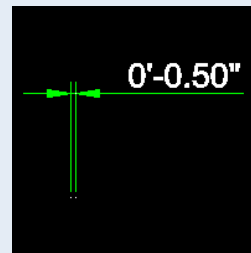
1 = 1m (1000)
If less than 1, convert to cm.

Zero suppression (Trailing) DIMLIN



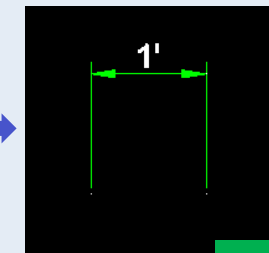
0 feet suppression (DIMLIN)

4



5

0 inch suppression (DIMLIN)



DIMENSION STYLE -16

Primary Units -3

Angular Dimension

Unit Format: Decimal Degrees

Precision: 0

Zero suppression

☐ Leading

☐ Trailing

OK Cancel

Units Format (DIMAUNIT)

Decimal Degrees

Degrees Minutes Seconds

Gradians

Radians

Precision (DIMADEC)

Value = 0

Value = 0.0

Zero suppression (Leading) DIMAZIN

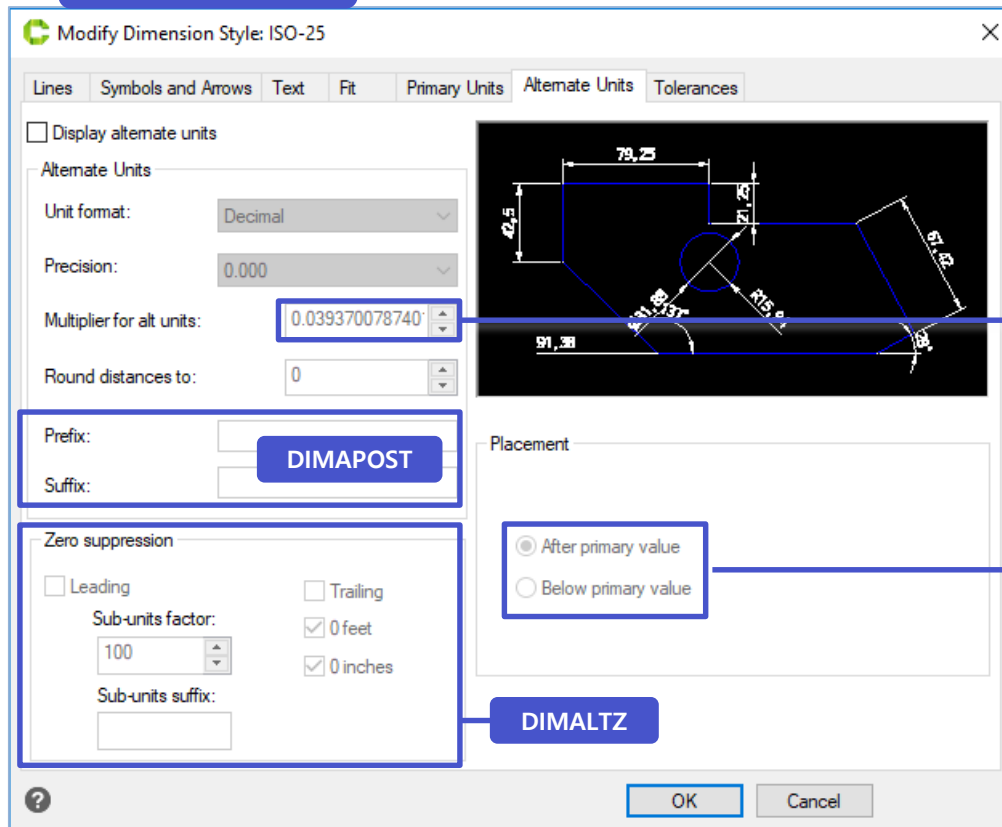
0.5° → .5°

Zero suppression (Trailing) DIMAZIN

22.50° → 22.5°

DIMENSION STYLE -17

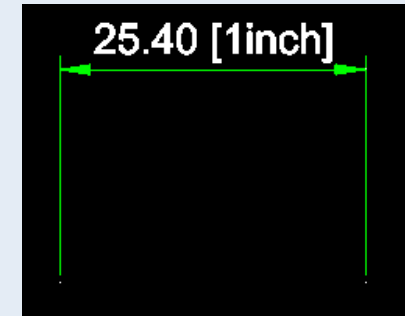
Alternate units



NOTE

The remaining options are equal to the **primary units**

Basic principle (DIMALT)



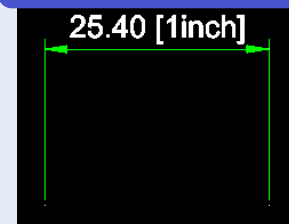
It is used when the unit used in the country is different. (ex. mm / inch)

Multiplier for alt units (DIMALTF)

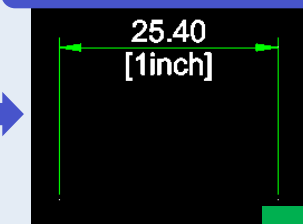
$25.4 \times 0.0394 = 1.0076(1)$
mm -> inch exchange

Placement (DIMPOST)

After primary value (""")
-> SPACE and ENTER



Below primary value (W\X)
-> X = Uppercase



DIMENSION STYLE -18

Tolerances -1

Tolerance format

Method: None

Precision: 0.00

Upper value: 1 0

Lower value: 0

Scaling for height: 1

Vertical position: 2 Bottom

Tolerance alignment

☐ Align decimal separators

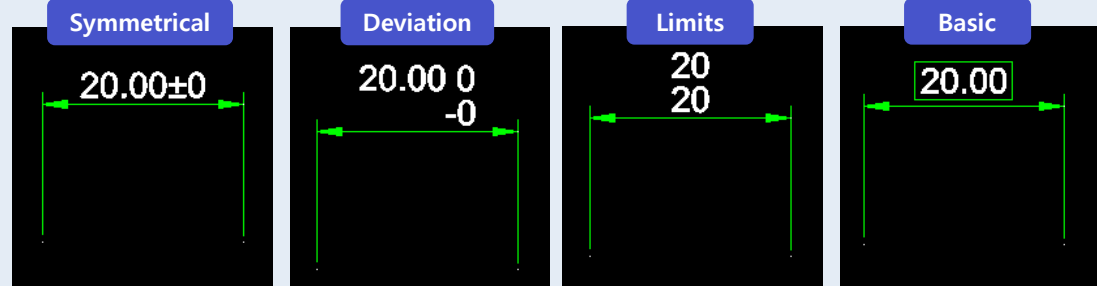
☒ Align operational separators

Tol alignemnt

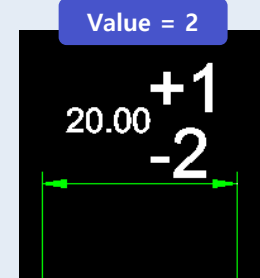
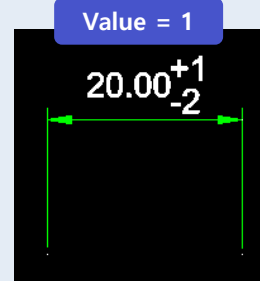


If the operation code is different, it is not aligned.

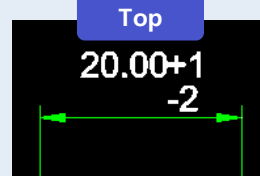
Method (DIMITOL)



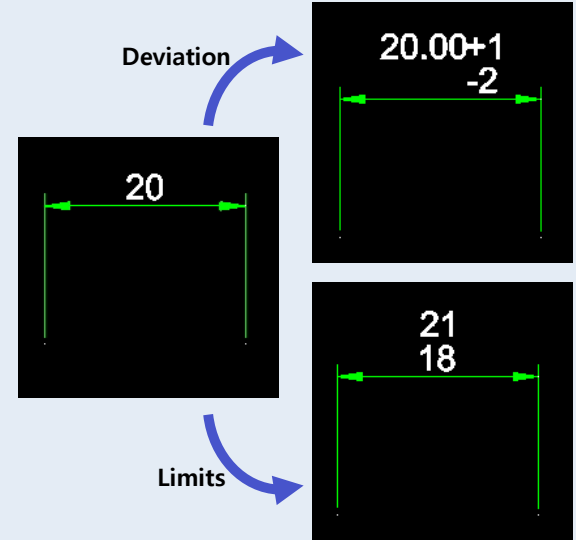
Scale for height (DIMTFAC)



TOL Position (DIMITOLJ)



Apply Upper/Lower (DIMTP / DIMTM)



Upper/Lower : only deviation, limits
Upper : only Symmetrical

DIMENSION STYLE -19

Tolerances -2

Modify Dimension Style: ISO-25

Lines Symbols and Arrows Text Fit Primary Units Alternate Units Tolerances

Tolerance format

Method: None

Precision: 0.00

Upper value: 0

Lower value: 0

Scaling for height: 1

Vertical position: Bottom

Tolerance alignment

☐ Align decimal separators

☒ Align operational separators

Zero suppression

☐ Leading ☒ 0 feet

☒ Trailing ☒ 0 inches

Alternate Unit Tolerances

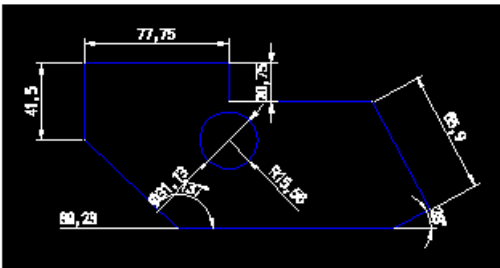
Precision: 0.000 **DIMALTTD**

Zero suppression

☐ Leading ☒ 0 feet

☐ Trailing ☒ 0 inches **DIMALTTZ**

OK Cancel



Alternate units Tolerances



$$1 \times 0.0394 = 0.0394(0.04)$$

$$2 \times 0.0394 = 0.0788(0.08)$$

NOTE

- . Zero suppression function is equal to zero suppression of alternate units
- . The precision function is also equal to the precision of the alternate units.

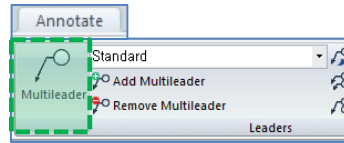
Multi-Leader

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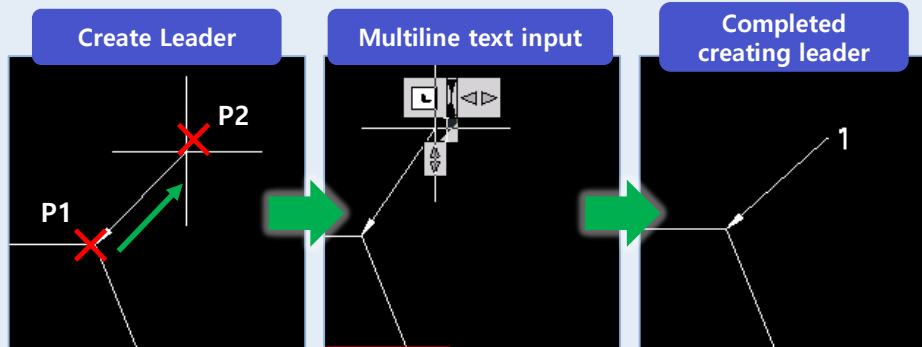
Multi-Leader-1

command : mld
(MLeaDer)



Command: mld
_MLEADER
Specify leader landing location or [leader arrowHead first/Content first/Options] <Options>: l
Specify leader landing location or [leader arrowHead first/Content first/Options] <Options>: h
Specify leader arrowhead location or [leader Landing first/Content first/Options] <Options>:
Cancel

Multi-Leader Basic principle (Leader Landing first)



Execution Process (Leader Landing first)

*. "mleader.dwg" File OPEN

1. "command:" **mld** input and SPACE

2. "~ [Leader Landing first(L) ~]:"
L input and SPACE

3. "~ [Leader arrowhead first(H~)]:"
h input and SPACE

4. "Leader Positioning arrowhead~:"
P1 Click

5. "Specify Leader arrowhead position~
<END>:" P2 Click

6. "1" input and CTRL + ENTER
(Multiline text input)

NOTE

- Changeable item when entering option(o)
in step 2

Leader Type(L)

Max points(M)

Leader Landing(A)

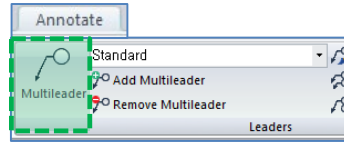
First Angle(F)

Content Type(C)

Second Angle(S)

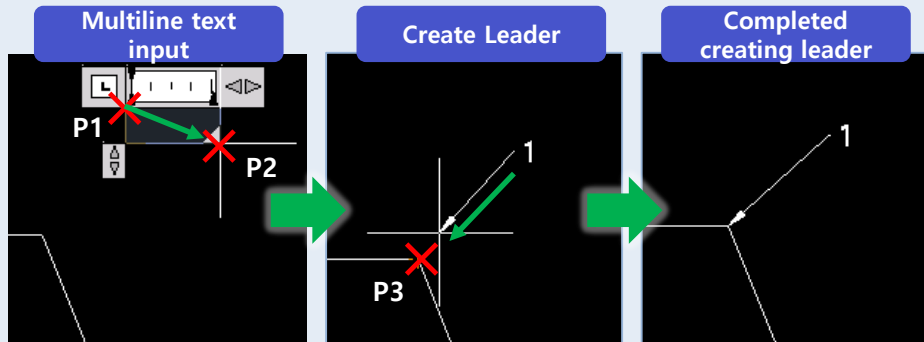
Multi-Leader-2

command : mld
(MLeaDer)



Command: MLD
MLEADER
Specify leader arrowhead location or [leader Landing first/Content first/Options] <Options>: C
Specify content location or [leader Landing first/leader arrowHead first/Options] <Options>:
Second point:
Specify leader arrowhead location or [End] <End>:

Multi-Leader Basic principle (Content first)



Execution Process (Content first)

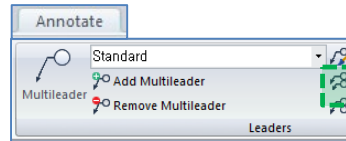
- *. "mleader.dwg" File OPEN
1. "command:" **mld** input and SPACE
2. "~ [Leader Landing first(L)/Content first(C)~]:"
C input and SPACE
3. "Specify content ~<Options>:" **P1** Click
4. "Specify second point:" **P2** Click
5. "1" input and **CTRL + ENTER**
(Multiline text input)
6. "Specify leader ~<End>:" **P3** Click

NOTE

- If you create a multi-leader as content and execute a multi-leader command again, the following changes
Specify ~ Leader arrowhead first(H)/Contentfirst(C)/Option(O)]
- In this case, the leader arrowhead (H) option can be used to create a multi-leader wire first in the previous chapter

Align Multi-Leader -1

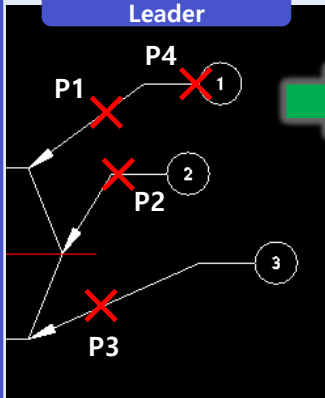
command : mla
(MLeaderAlign)



Command: MLA
_MLEADERALIGN
Select multileaders:
Opposite corner:
1 found, 1 total
Select multileaders:
Opposite corner:
1 found, 2 total
Select multileaders:
Opposite corner:
1 found, 3 total
Current mode: Distribute
Specify first point or [Options]: o
Enter an option [Distribute/make leader segments Parallel/specify Spacing/Use current spacing] <Distribute>: d
Specify first point or [Options]:
Specify second point:

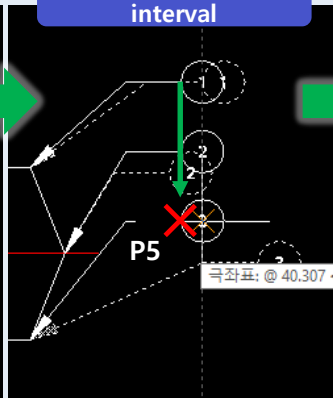
Multi-Leader Alignment Basic principle (Dispersion)

Select Multi-Leader

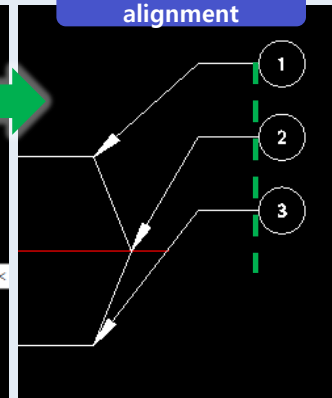


P1 ~ P3 Select in order

Specify alignment interval



Multi-Leader alignment



Execution Process

*. "mleader_addition.dwg" File OPEN

1. "command:" mla input and SPACE

2. "Select multi leader :"
P1, P2, P3 Click and SPACE

3. "Specify first ~[options(O)]:"
O input and SPACE

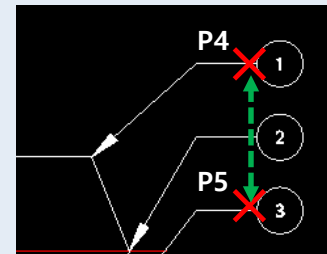
4. "Enter an option ~ <Dispersion>:"
d input and SPACE

5. "Specify first ~[options(O)]:" P4 Click

6. "Specify second point :"
P5 Click

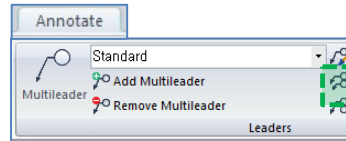
NOTE

- Sort by the distance between the first and second points



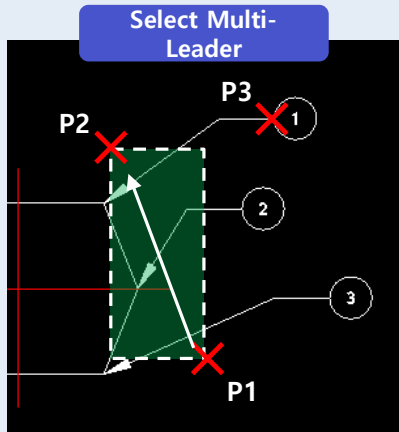
Align Multi-Leader -2

command : mla
(MLeaderAlign)

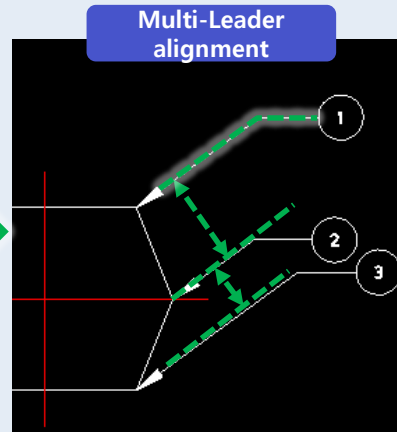


Command: MLA
_MLEADERALIGN
Select multileaders:
Opposite corner:
3 found, 3 total
Select multileaders:
Current mode: Make leader lines parallel
Select multileader to align to or [Options]: o
Enter an option [Distribute/make leader segments Parallel/specify Spacing/Use current spacing] <Make leader lines parallel>: p
Select multileader to align to or [Options]:

Multi-Leader Alignment Basic principle (parallel)



P1 ~ P3 Select in order



Sort in parallel

Execution Process

*. "mleader_addition.dwg" File OPEN

1. "command : " mla input and SPACE

2. "Select multi leader : " P1 Click

3. "Specify opposite corner : "
P2 Click and SPACE

4. "Select multileader to align ~[option(O)]: "
O input and SPACE

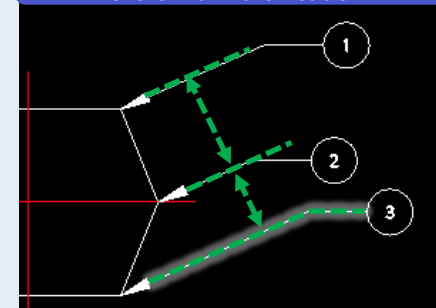
5. "Enter an option ~ <Distribute> "
p input and SPACE

6. "Select multileader ~[option(O)]: " P3 Click

NOTE

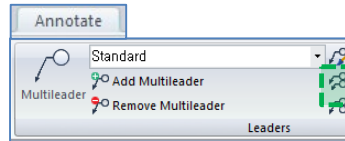
- . Parallel sort by leaderline you clicked in step 5

Parallel alignment centered on the third multi-leader



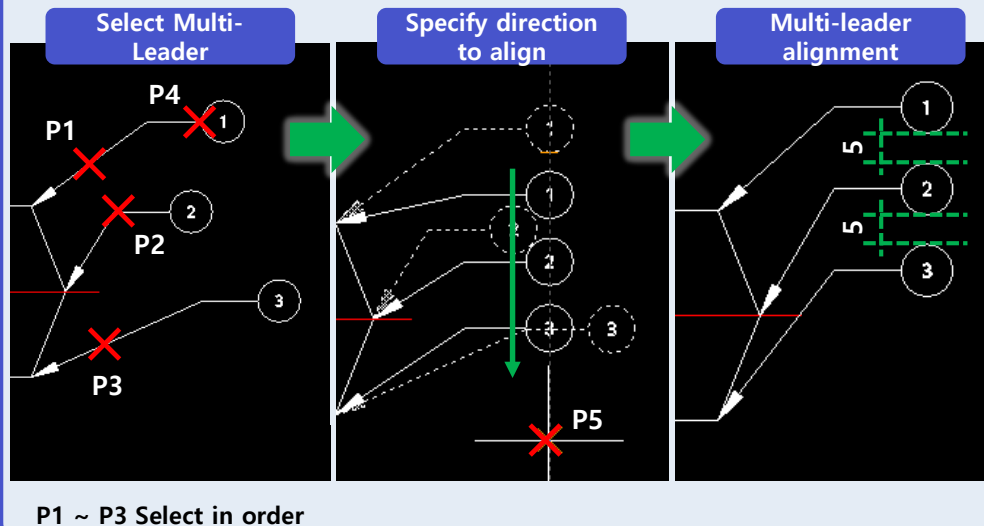
Align Multi-Leader -3

command : mla
(MLeaderAlign)



Command: MLA
MLEADERALIGN
Select multileaders:
Opposite corner:
1 found, 1 total
Select multileaders:
Opposite corner:
1 found, 2 total
Select multileaders:
Opposite corner:
1 found, 3 total
Select multileaders:
Current mode: Make leader lines parallel
Select multileader to align to or [Options]: O
Enter an option [Distribute/make leader segments Parallel/specify Spacing/Use current spacing] <Make leader lines parallel>: S
Specify spacing <0.0000>: 5
Select multileader to align to or [Options]:
Specify direction:

Multi-Leader Alignment Basic principle (parallel)



Execution Process

*. "mleader_addition.dwg" File OPEN

1. "command : " mla input and SPACE

2. "Select multi leader :"
P1, P2, P3 Click and SPACE

3. "Select multileader to align ~ [options(O)]:"
O input and SPACE

4. "Enter an Option ~ <Distribute>"
s input and SPACE

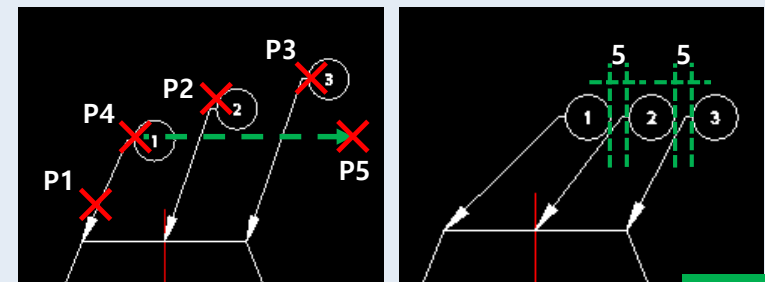
5. "Specify spacing : " 5 input and SPACE

6. "Select multileader to align ~ [options(O)]:"
P4 Click

7. "Specify direction:" P5 Click

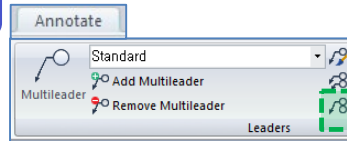
NOTE

- Can be aligned horizontally for this situation



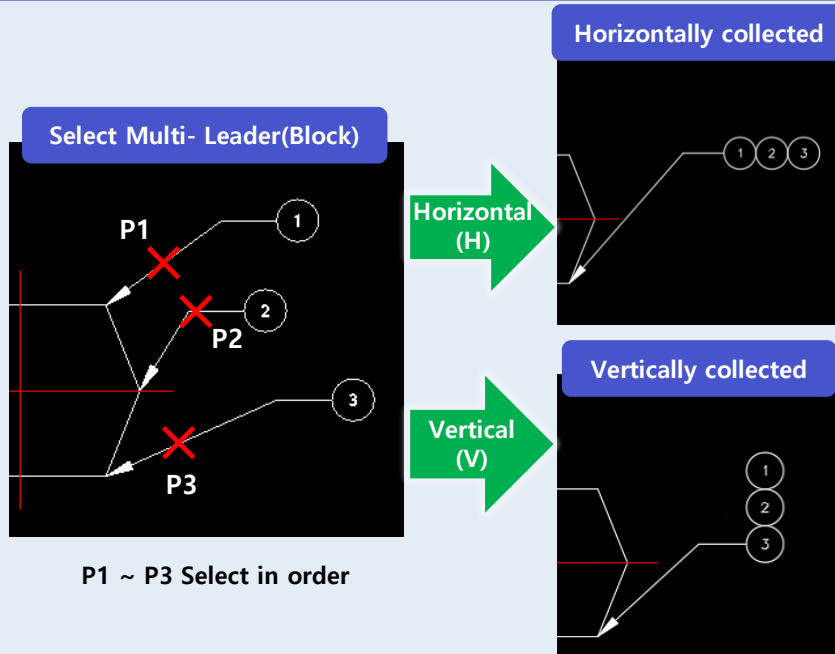
Collect Multi-Leader -1

command : mlc
(MLeaderCollect)



```
Command: MLC
_MLEADERCOLLECT
Select multileaders:
Opposite corner:
1 found, 1 total
Select multileaders:
Opposite corner:
1 found, 2 total
Select multileaders:
Opposite corner:
1 found, 3 total
Select multileaders:
Current mode: Horizontal
Specify collected multileader location or [Vertical/Horizontal/Wrap] <Horizontal>: h
```

Multi-Leader Collect Basic principle (Vertical / Horizontal)



Execution Process

*. "mleader_addition.dwg" File OPEN

1. "command : " mlc input and SPACE

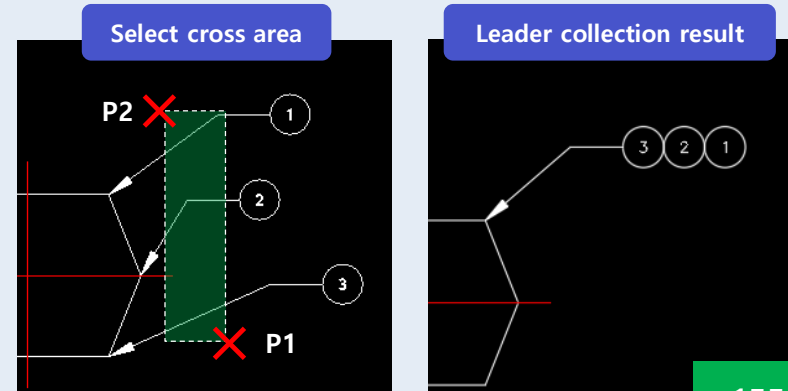
2. "Select multi leader :"
P1, P2, P3 Click and SPACE

3. "~[Vertical/Horizontal/Wrap]:"
h input and SPACE

4. Click anywhere

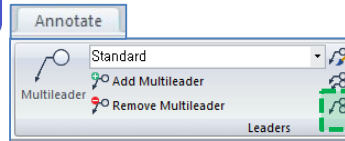
NOTE

- Only when leader type is block
- Horizontal and vertical selectable in the third step
- Change order of leader when selecting crossing area



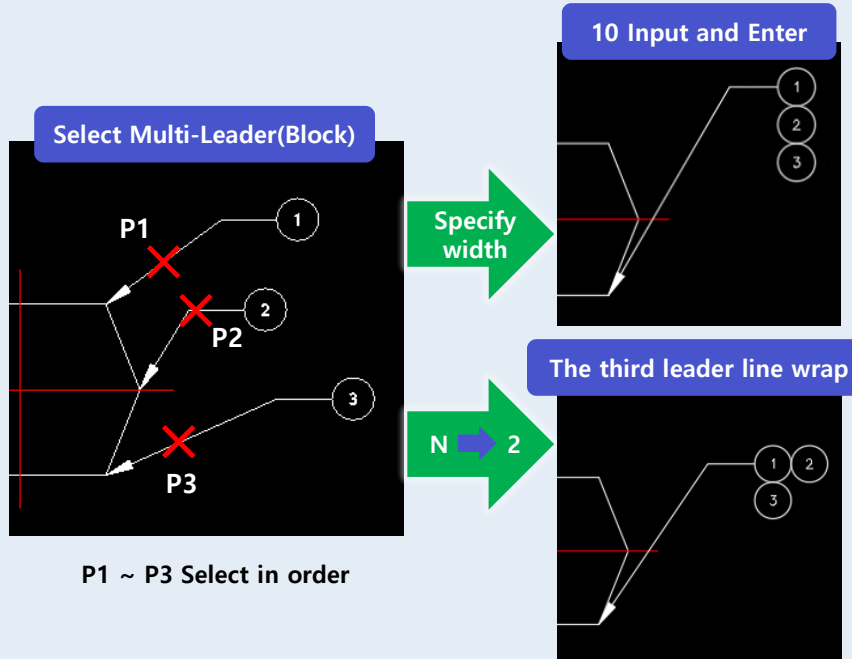
Collect Multi-Leader -1

command : mlc
(MLEADERCOLLECT)



- 1 Command: MLC
MLEADERCOLLECT
Select multileaders:
Opposite corner:
1 found, 1 total
Select multileaders:
Opposite corner:
1 found, 2 total
Select multileaders:
Opposite corner:
1 found, 3 total
- 2 Select multileaders:
Current mode: Horizontal
Specify collected multileader location or [Vertical/Horizontal/Wrap] <Horizontal>: w
Specify wrap width or [Number]: n
Specify number per row <1>: 2
Specify collected multileader location or [Vertical/Horizontal/Wrap] <Wrap>:

Multi-Leader Collect Basic principle (Wrap text)



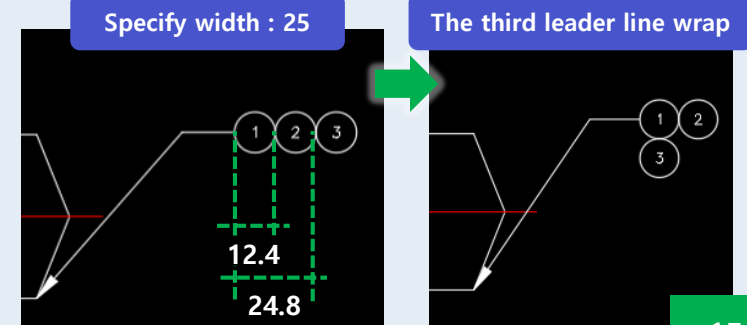
Execution Process

*. "mleader_addition.dwg" File OPEN

1. "command : " mlc input and SPACE
2. "Select multi leader :"
P1, P2, P3 Click and SPACE
3. "~[Vertical/Horizontal/Wrap]:"
w input and SPACE
4. "~wrap ~ or [Number]:"
10 input and SPACE

NOTE

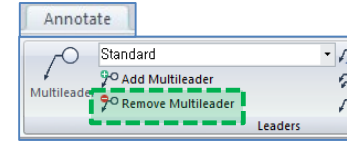
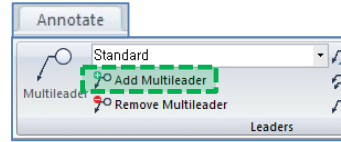
- Only when leader type is block
- In the 3 step, the result of specifying the width of the Wrap



Add and remove of Multi-leader

Command : mle
(MLeaderEdit)

Command: MLE
MLEADEREDIT
Select multileader:
Opposite corner:
Specify leader arrowhead location or [Remove leader lines]:



Execution Process (Add)

*. "mleader_addition.dwg" File OPEN

1. "command : " mle input and SPACE

2. "Select multi leader :"
P1 Click and SPACE

3. "Specify leader ~ [Remove leader lines(R)]:"
P2 Click

Execution Process (Remove)

*. "mleader_addition.dwg" File OPEN

1. "command:" mle input and SPACE

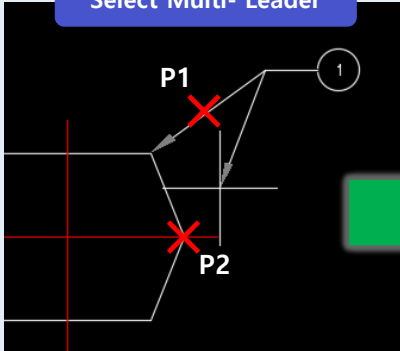
2. "Select multi leader : " P1 Click and SPACE

3. "Specify leader ~ [Remove leader lines(R)]:"
r input and SPACE

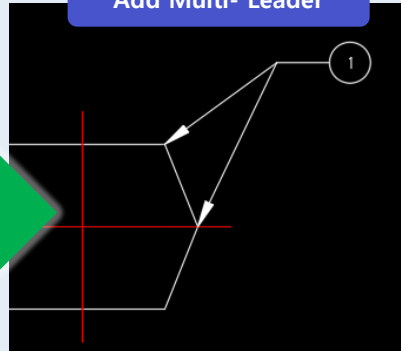
4. "Select leader ~ [Add leader lines(A)]:"
P2 Click and SPACE

Multi-Leader Edit Basic principle (Add / Remove)

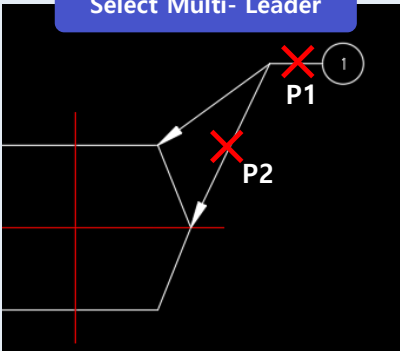
Select Multi- Leader



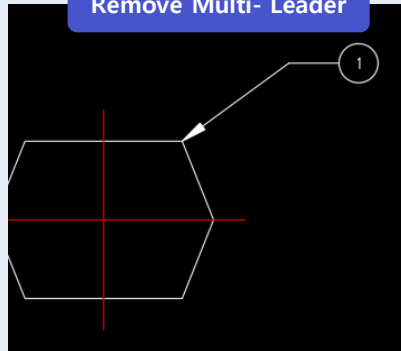
Add Multi- Leader



Select Multi- Leader



Remove Multi- Leader



Multi-Leader style

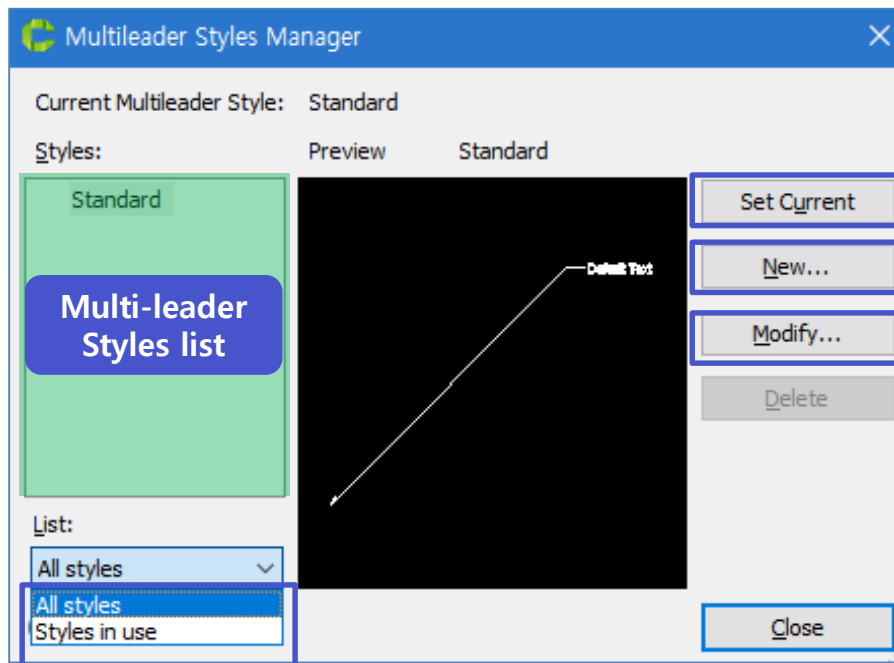
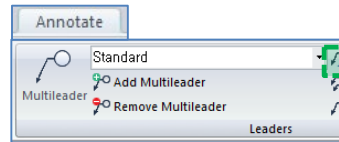
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◆ Multi-Leader

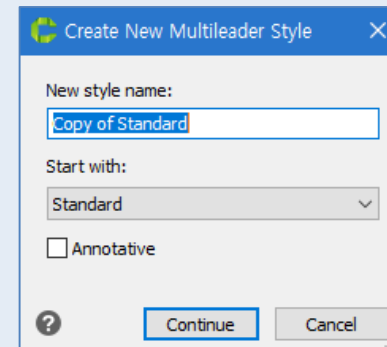
Multi-leader Style-1

command : mls (MLeaderStyle)



Use selected dimension style right away

Create a new dimension style



Change dimension type

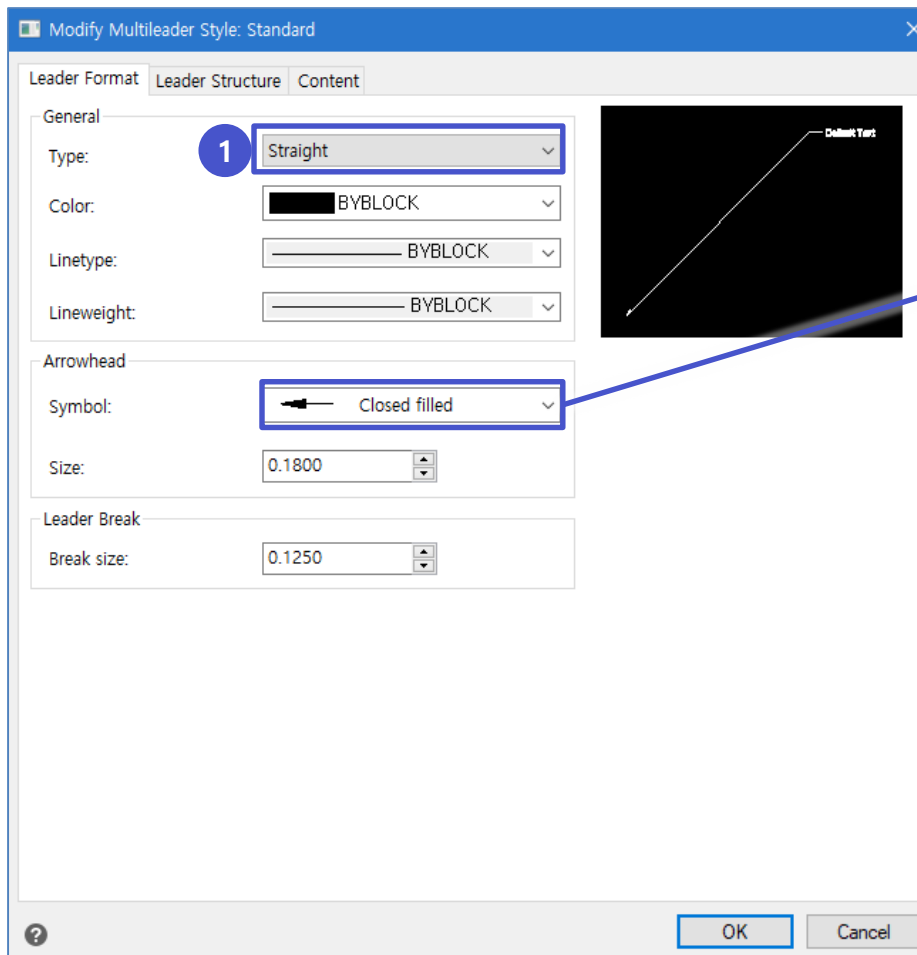
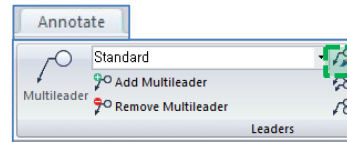
Modify format, structure, and content

View style list

Style in use = in use in drawing

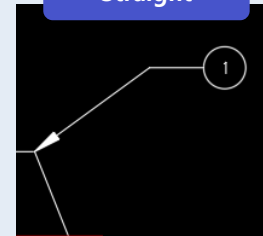
Multi-leader Style-2

Leader type -1

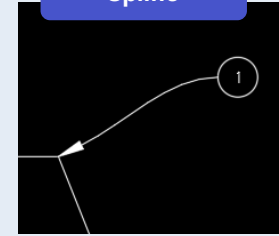


1 Leader Type

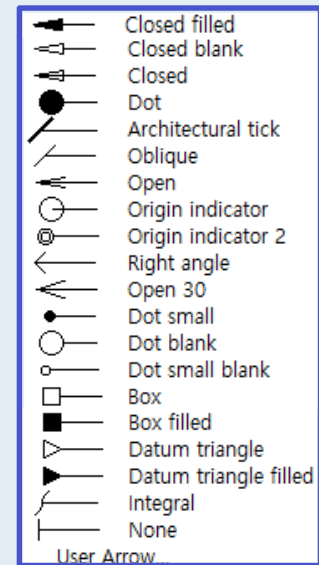
Straight



Spline

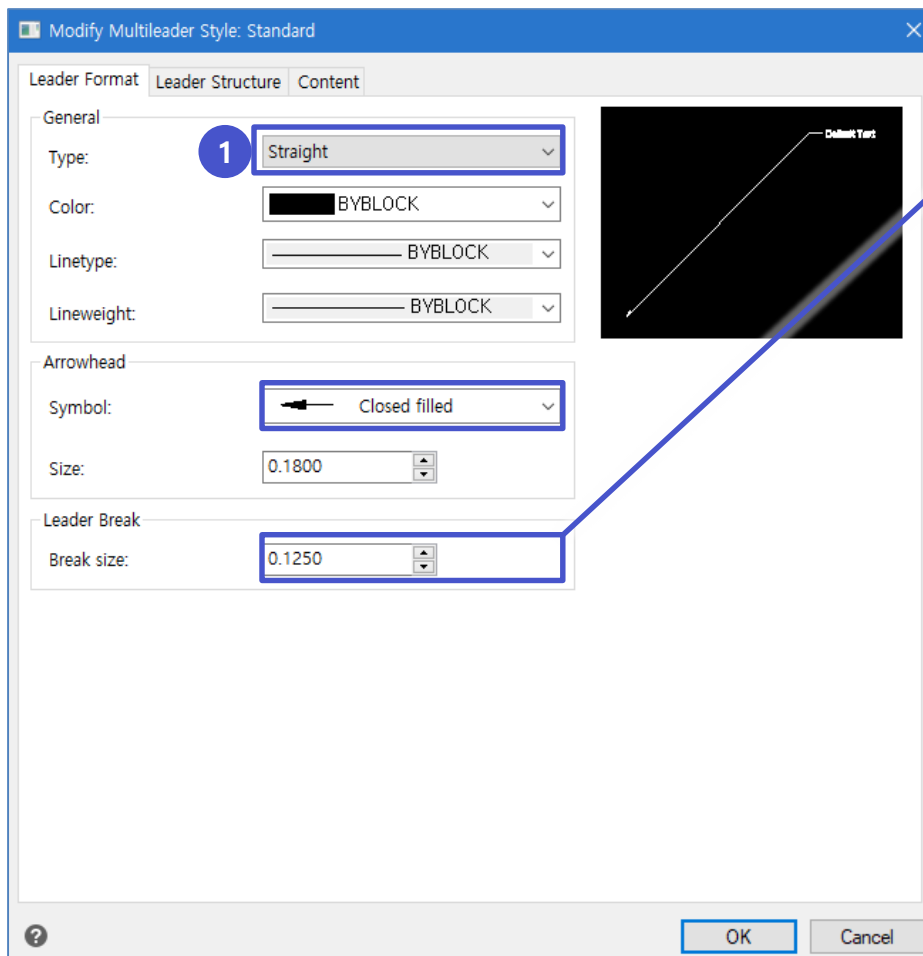
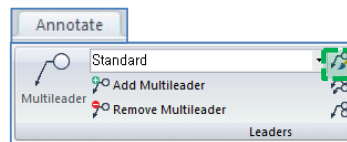


Arrowhead Symbol



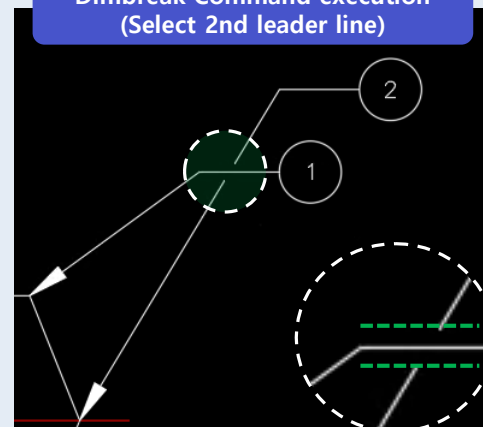
Multi-leader Style-3

Leader type -2



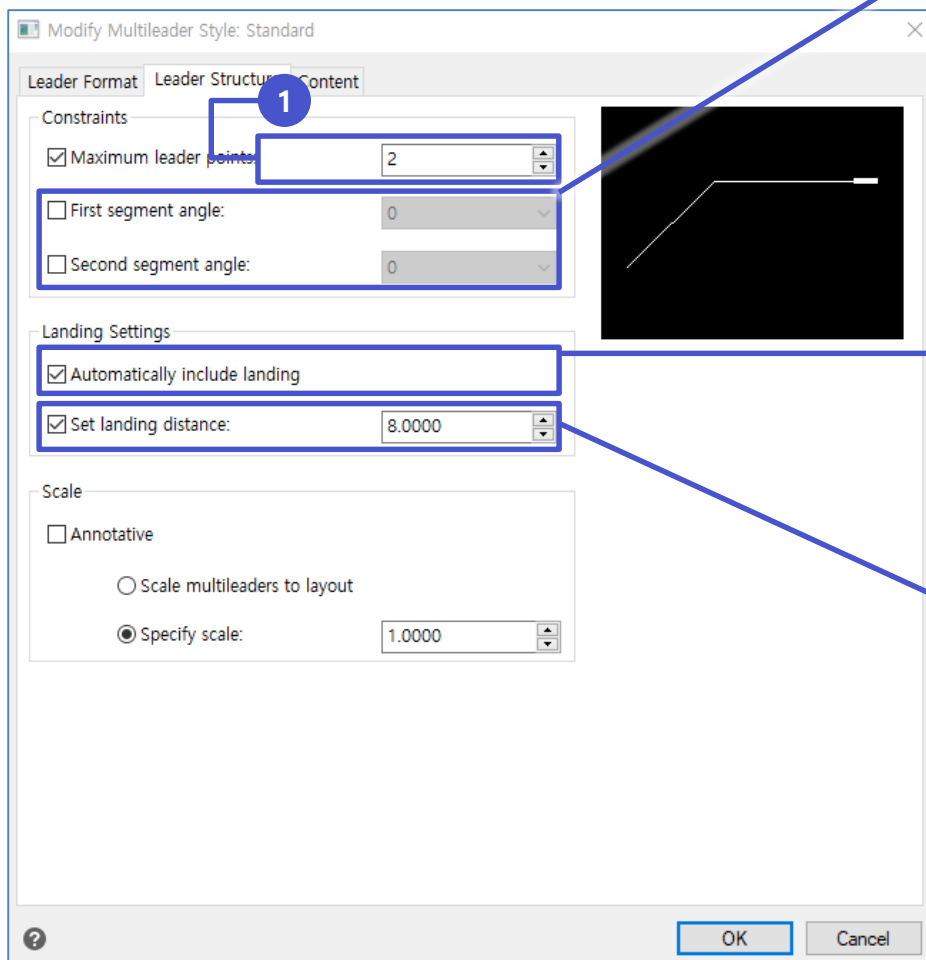
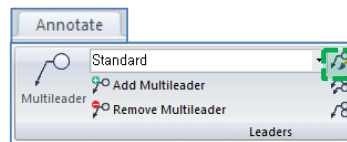
Leader Break

Dimbreak Command execution
(Select 2nd leader line)



Multi-leader Style-4

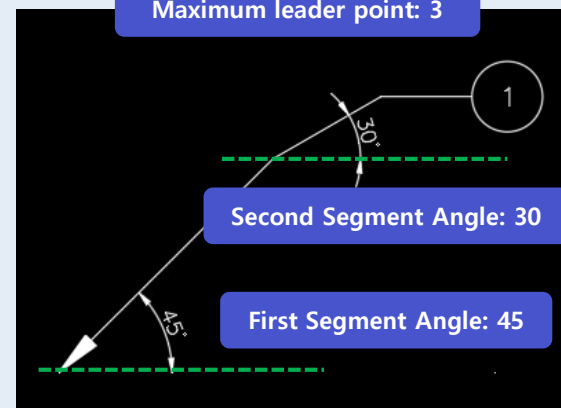
Leader Structure -1



1 Point clicks when creating leader

Specify angle

Maximum leader point: 3



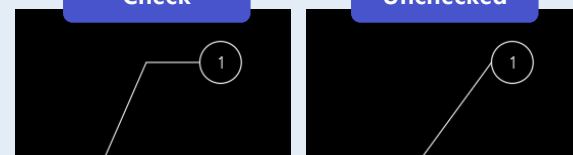
Second Segment Angle: 30

First Segment Angle: 45

Automatically include landing

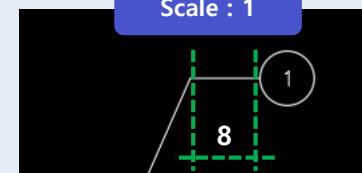
Check

Unchecked



Automatic line distance

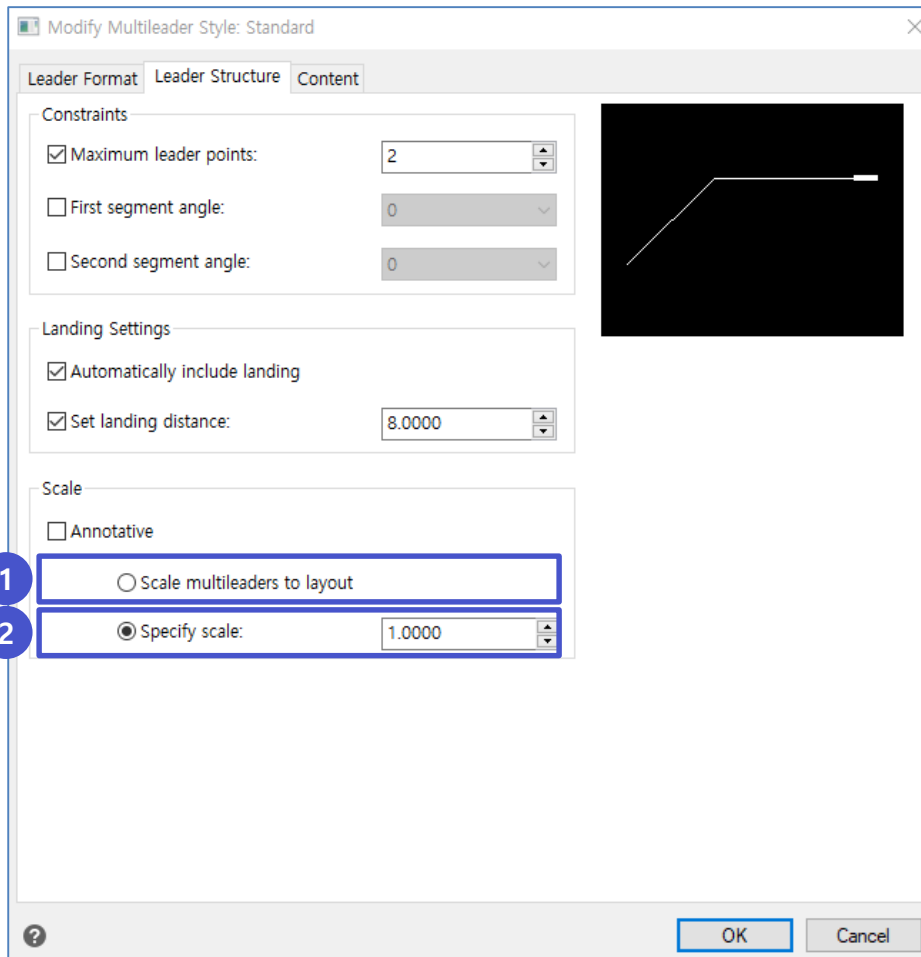
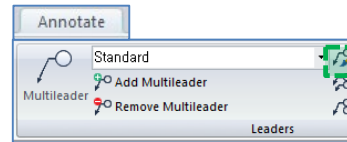
Scale : 1



When unchecked, request distance value during command execution

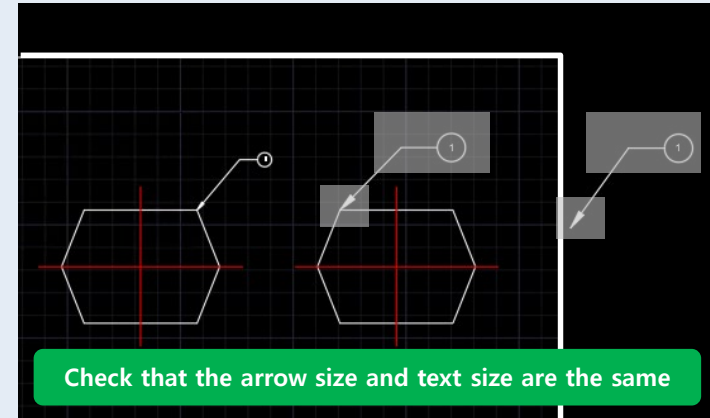
Multi-leader Style-5

Leader Structure -2



1

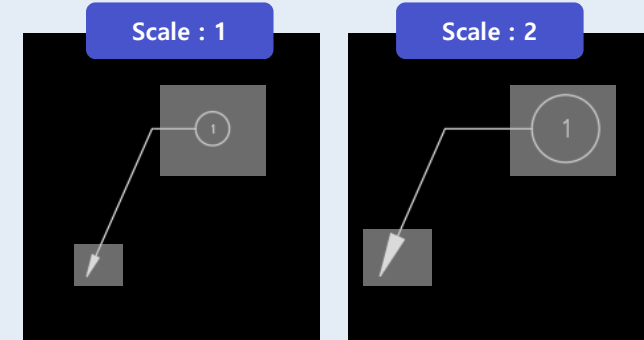
Batch scale



Layout → ViewPort → Model When creating dimensions in order, you can create a leader by the scale of the layout.

2

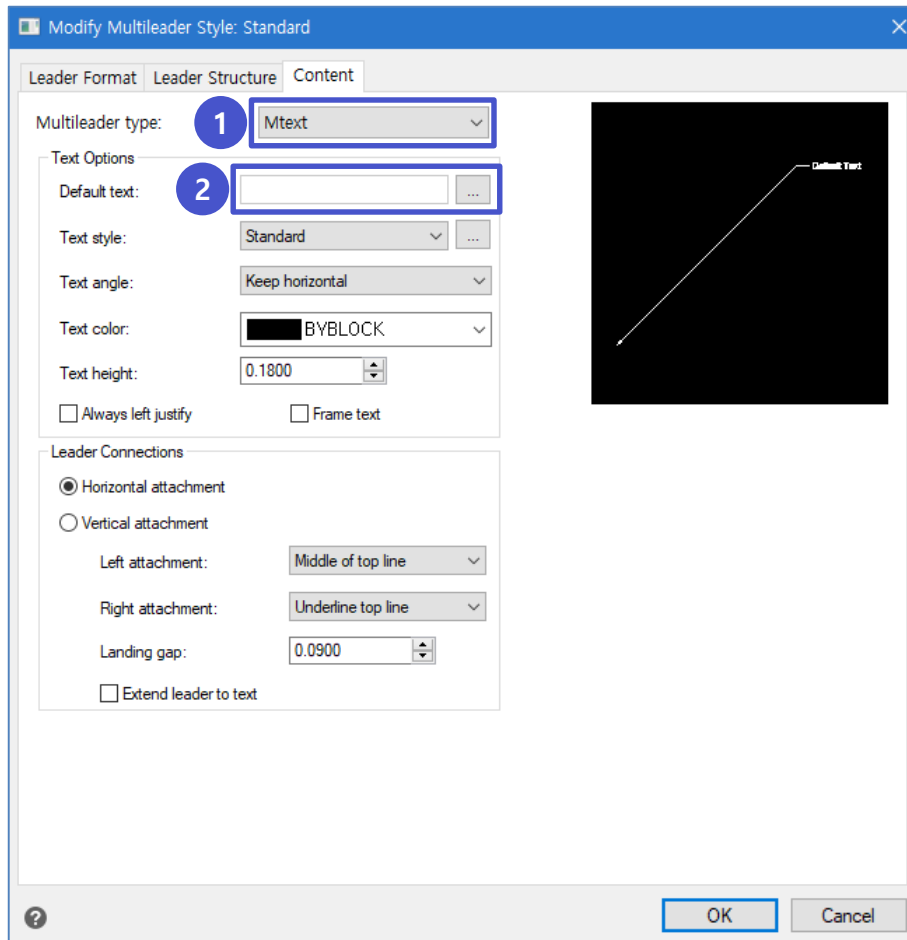
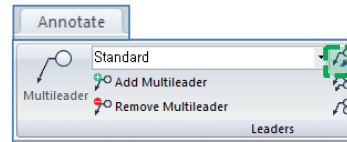
Specify scale



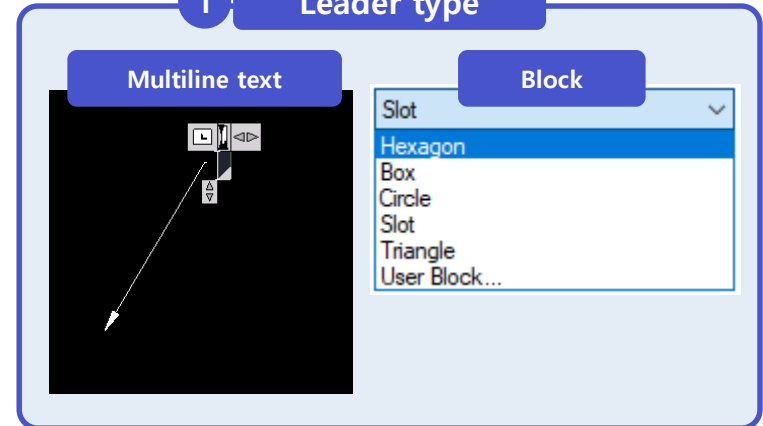
Applies both arrows and content at twice the scale

Multi-leader Style-6

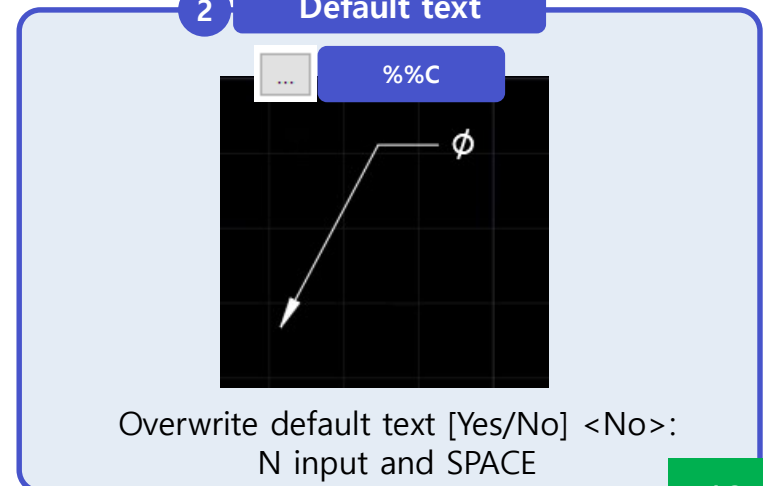
Leader Content -1



1 Leader type

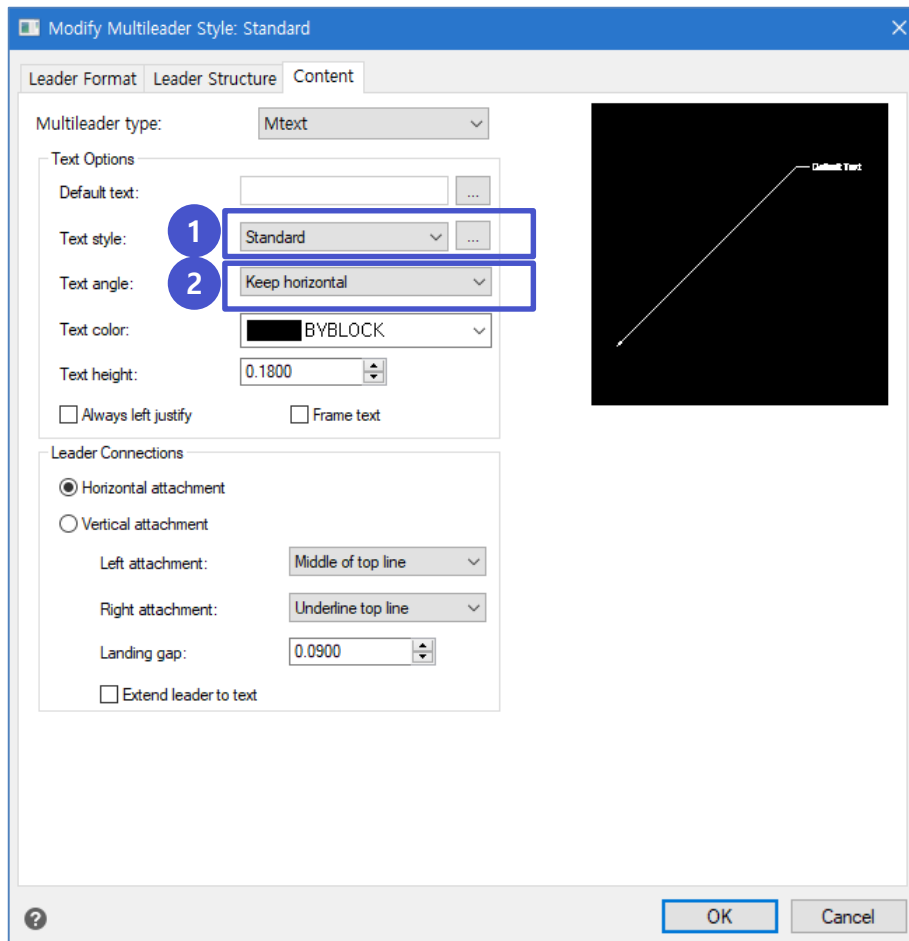
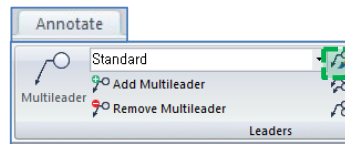


2 Default text



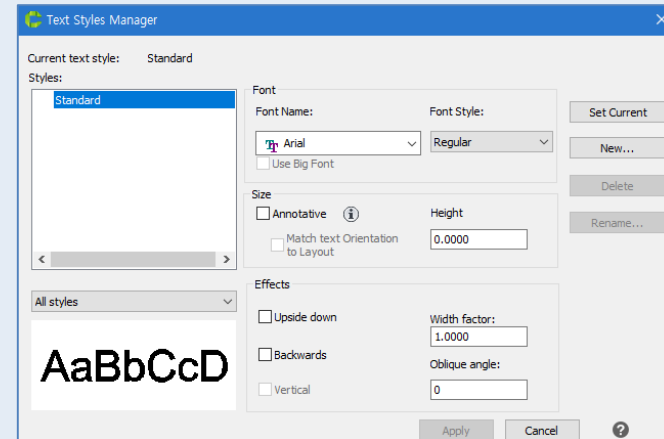
Multi-leader Style-7

Leader Content -2



1

Text Type



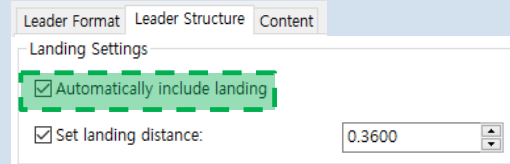
Using multi-leader text in text styles

2

Text Angle

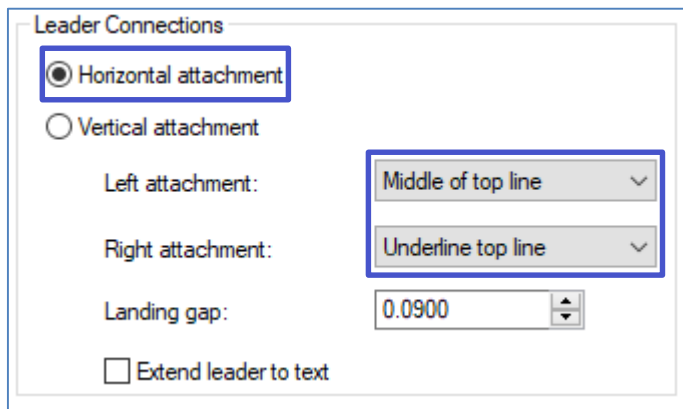
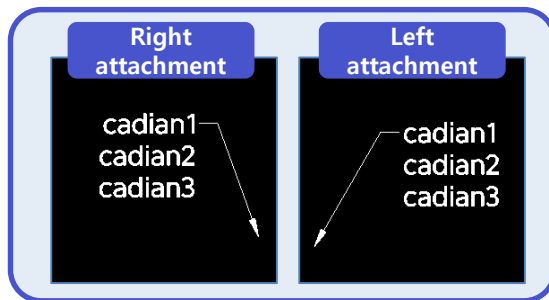
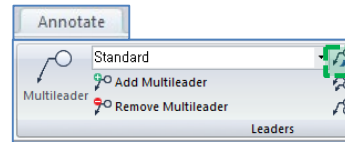


Reflect angle only when unchecked

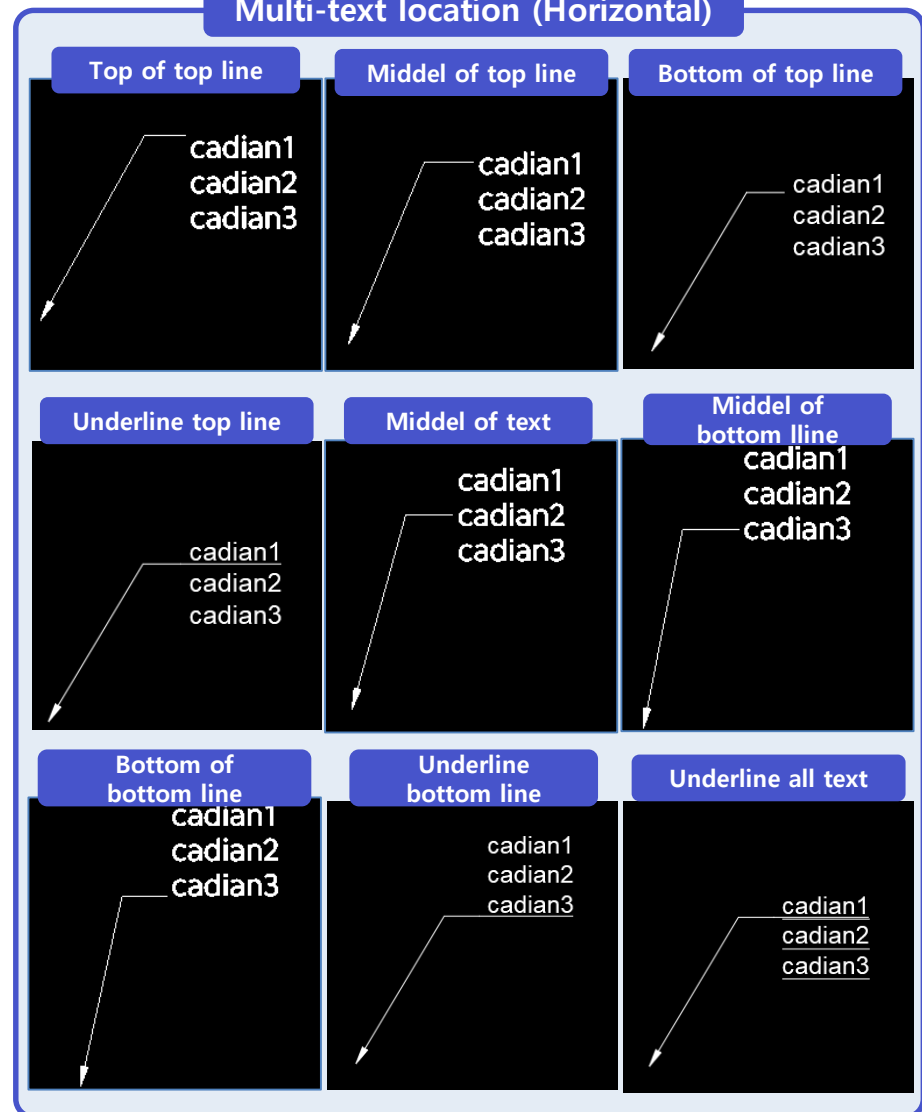


Multi-leader Style-8

Leader Content -3



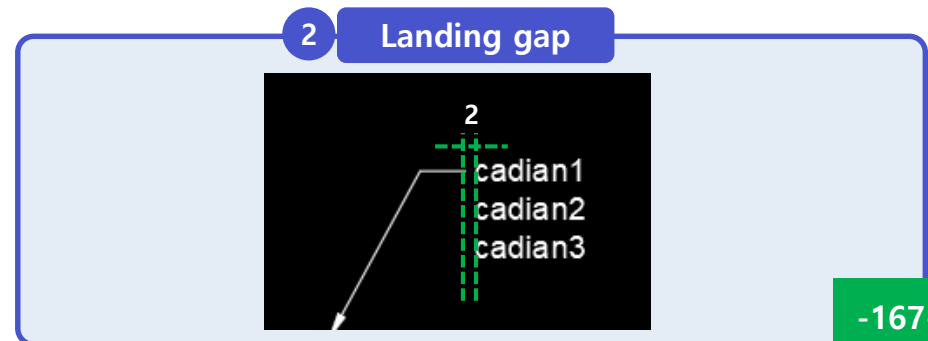
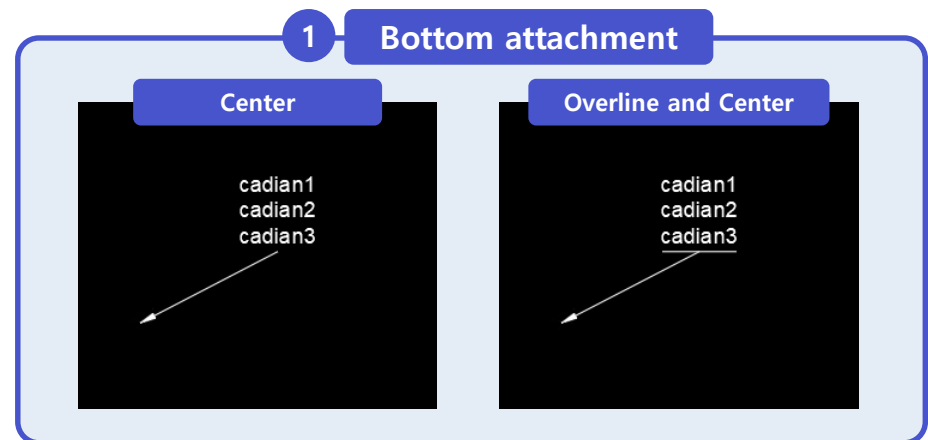
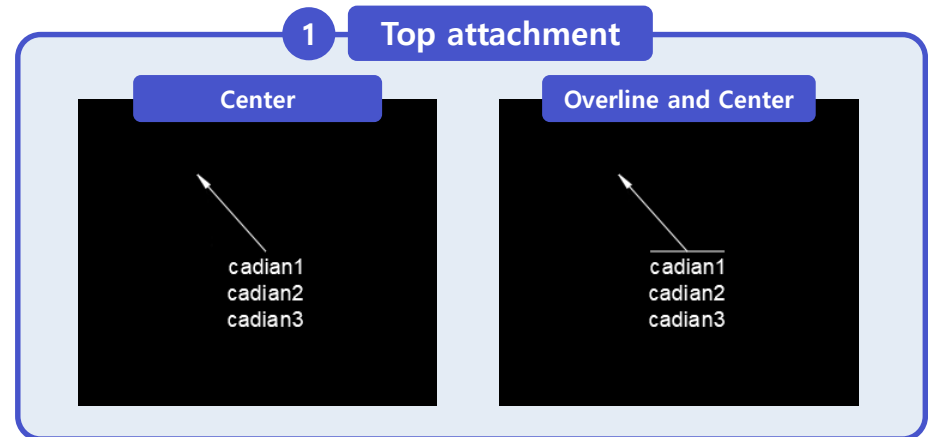
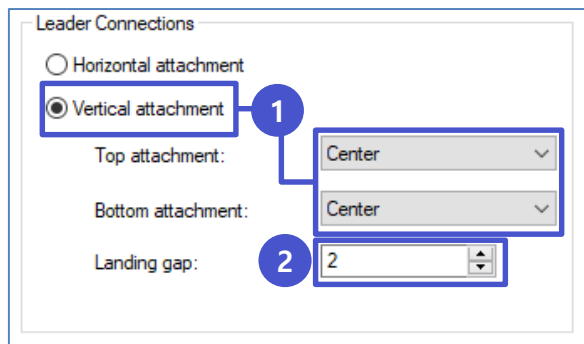
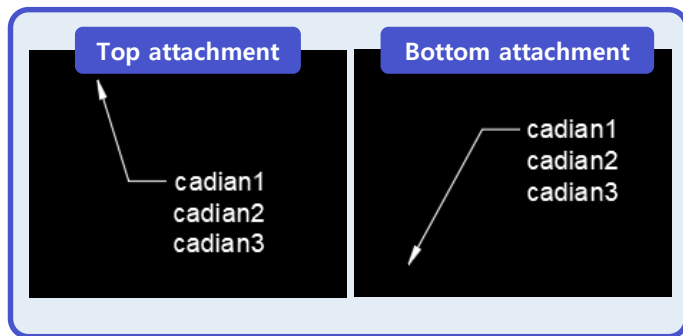
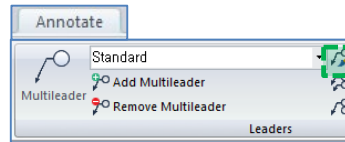
Multi-text location (Horizontal)



◆ Multi-Leader

Multi-leader Style-9

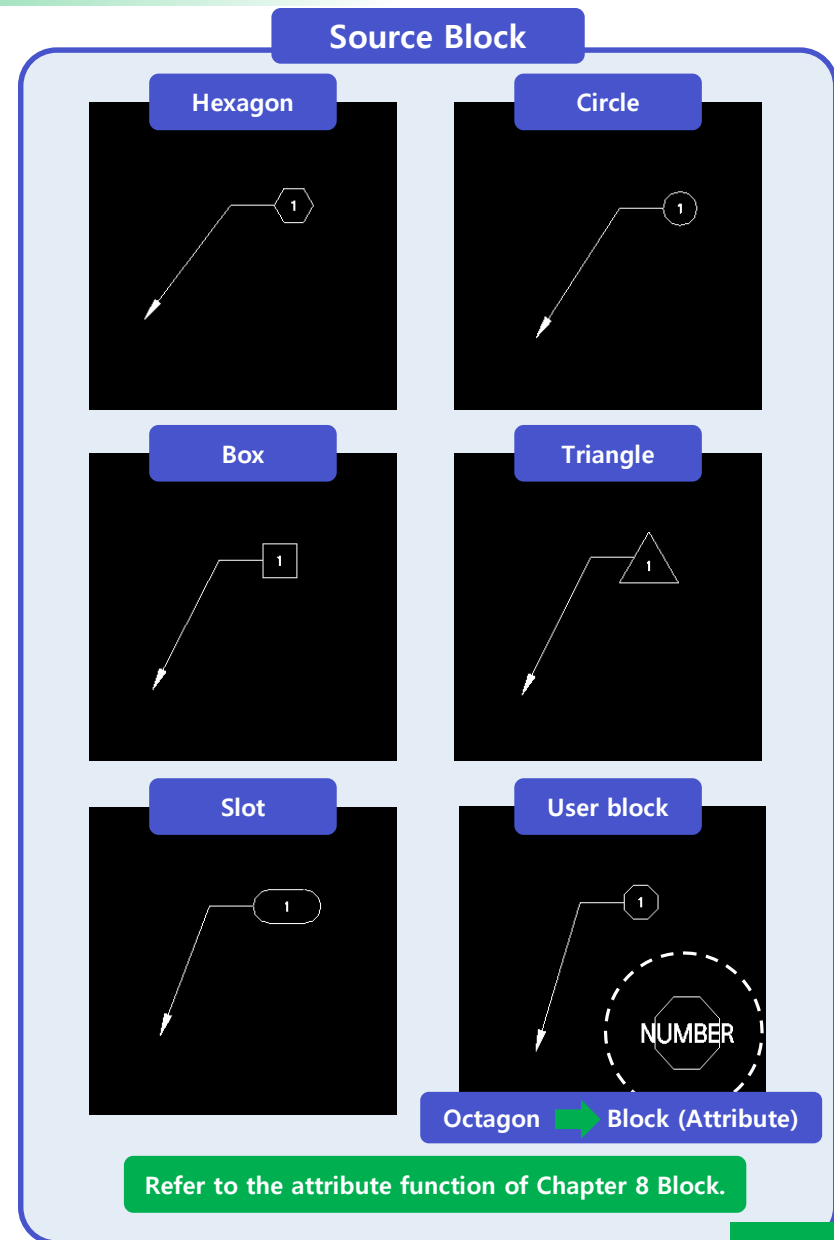
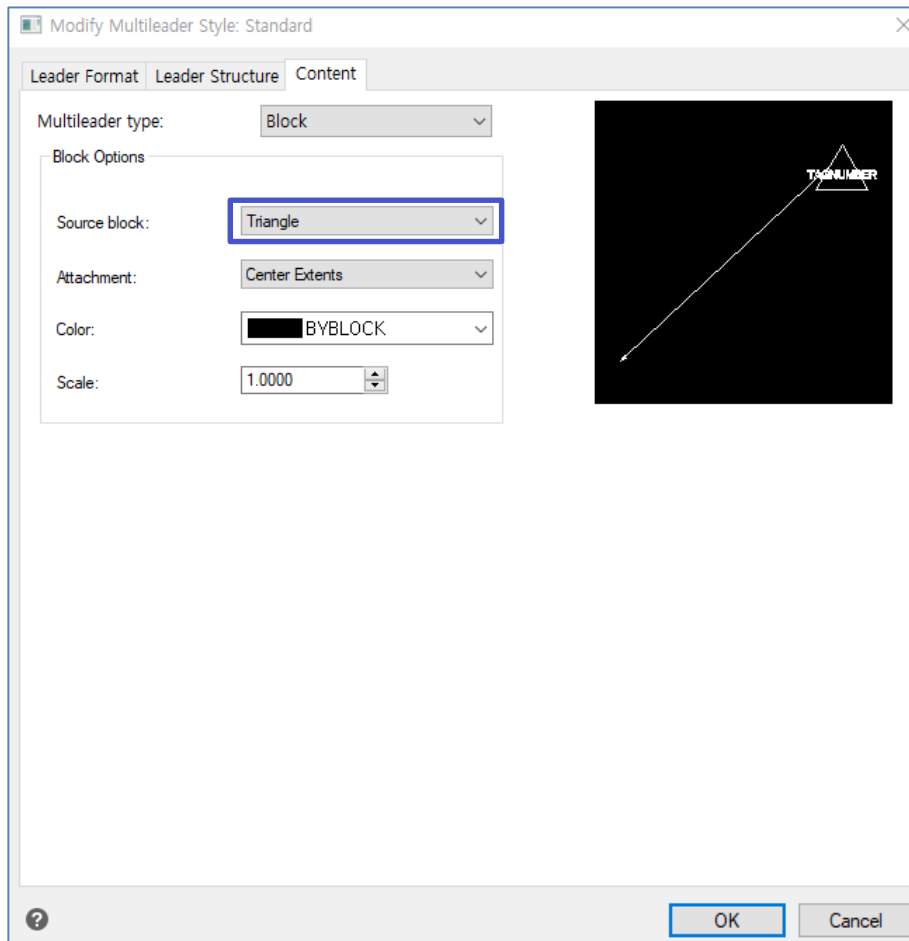
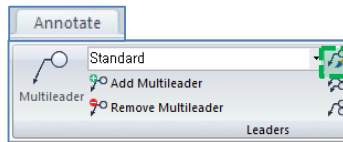
Leader Content -4



◆ Multi-Leader

Multi-leader Style-10

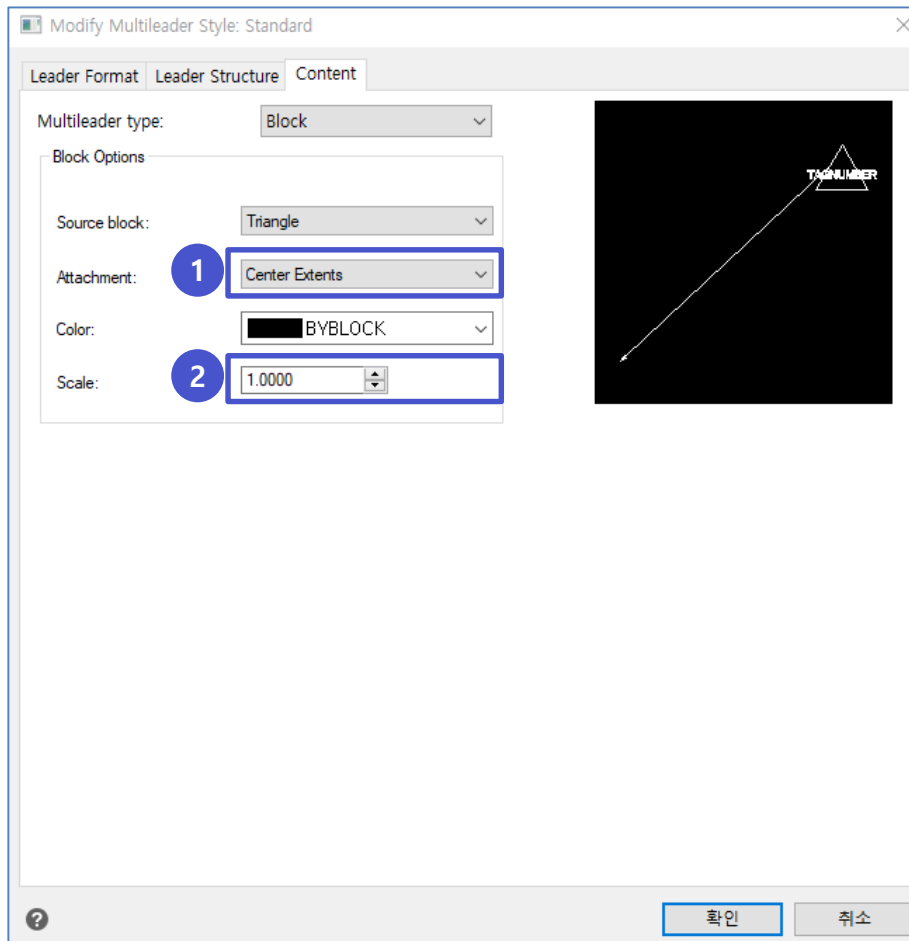
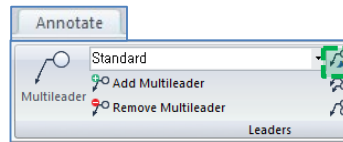
Leader Content -5



◆ Multi-Leader

Multi-leader Style-11

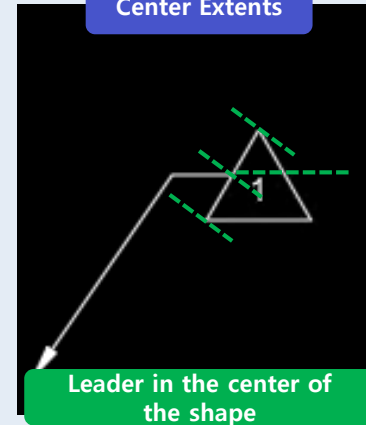
Leader Content -6



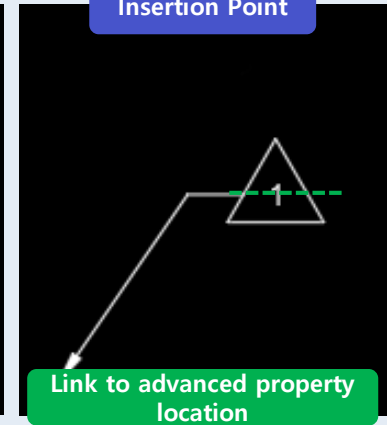
1

Attachment

Center Extents



Insertion Point

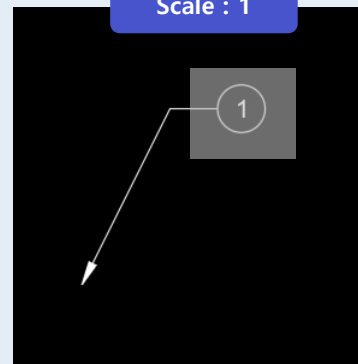


Using multi-leader characters in text styles

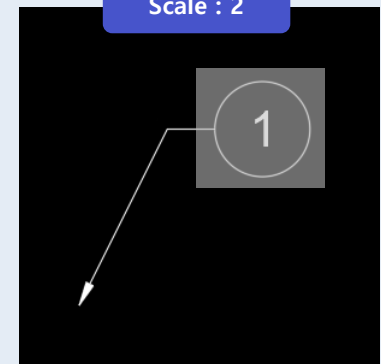
2

Content Scale

Scale : 1



Scale : 2



Apply content-only scale values (excluding arrows)