# Rebro® 2022

# Operation Guide
## ~Sanitary Section~

**NYK** SYSTEMS

# Chapter 2 Sanitary Section

## 1. Set up a drawing screen

Reference drawing: Sanitary1.reb

## 2. Place sanitary equipment

Reference drawing: Sanitary2.reb

## 3. Draw pipes

Reference drawing: Sanitary3.reb

# 4. Edit pipes

Reference drawing: Sanitary4.reb

# 5. Finish drawings

Reference drawing: Sanitary5.reb

# 1.Set up a drawing screen

## How to add layouts

You can handle drawings of different paper sizes or scales as one file by adding layouts.

One layout becomes one sheet of drawing.

Now add an A1-size layout to create a drawing of sanitary pipes.

**①** Left-click the icon next to Layout tab.

**②** Type "Sanitary" into the name in [Making of layout] dialog box.

**③** Checkmark "Specify paper size newly" to select A1 for the paper size of a layout.

**④** Checkmark "Make floor plan view" to add a layout that has a placed plane view.

**⑤** Checkmark "Make the view name the same as the layout name". The view name always becomes the same as the layout name.

**⑥** Left-click [OK].
→A layout named "Sanitary" is added.



The view name becomes the same as the layout name.
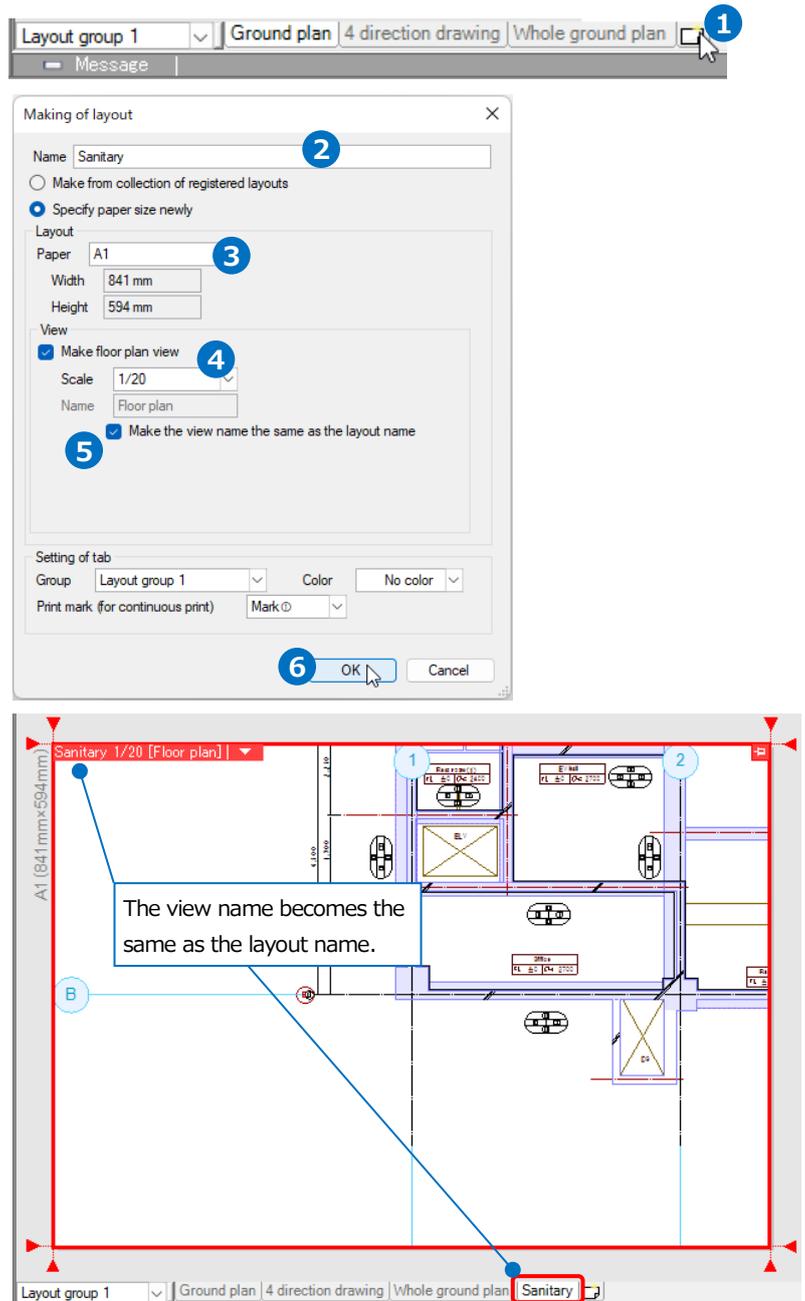
## How to adjust a display position of views

Display on an enlarged view water closet surroundings where you draw sanitary pipes.

**1** Left-click [Fitting] in [▼] next to the
view name.
→Rebro adjusts the scale and
display position to show all
elements in the view.
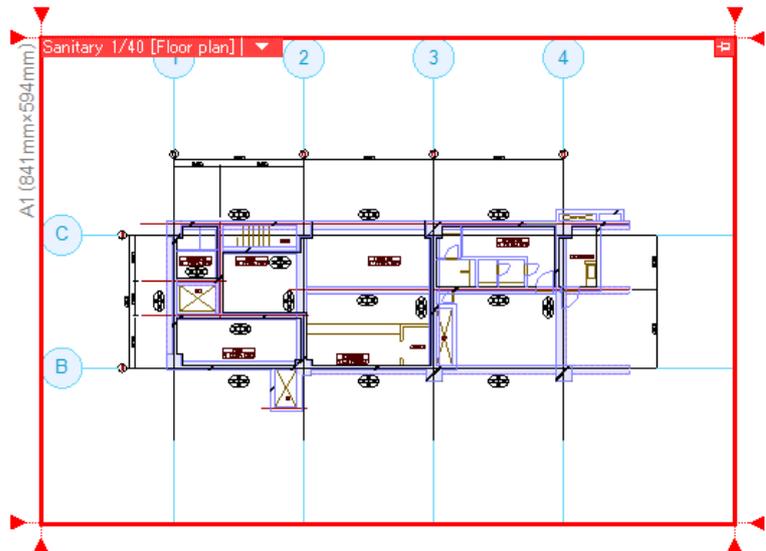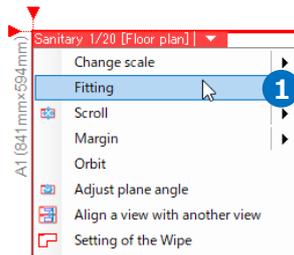




**2** Left-click [Change scale]-[Area
specification] in [▼] next to the
view name.
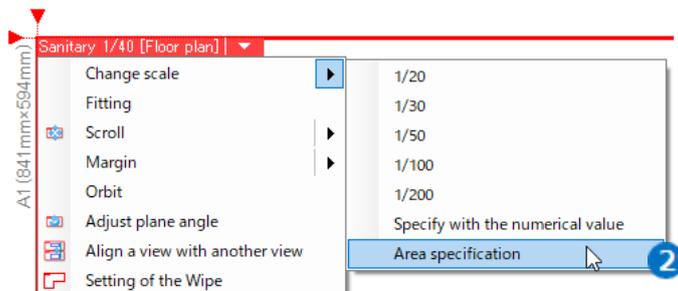
**3** A guidance message appears saying
as follows: "Specify a enlarge area".
Left-click two points on the opposite
corners to specify the area between
the third and fourth lines.
→Rebro adjusts the scale to show
the specified area into the view.



Memo
If the scale becomes anything other
than 1/20, you can specify the scale
by [Change scale].
→Rebro adjusts the scale and
display position to show the area
that is surrounded by [Change
scale]-[Area specification] into the
center of the view.

**4** Drag the wheel button while
pressing Ctrl key to fine-tune the
display position in the view.
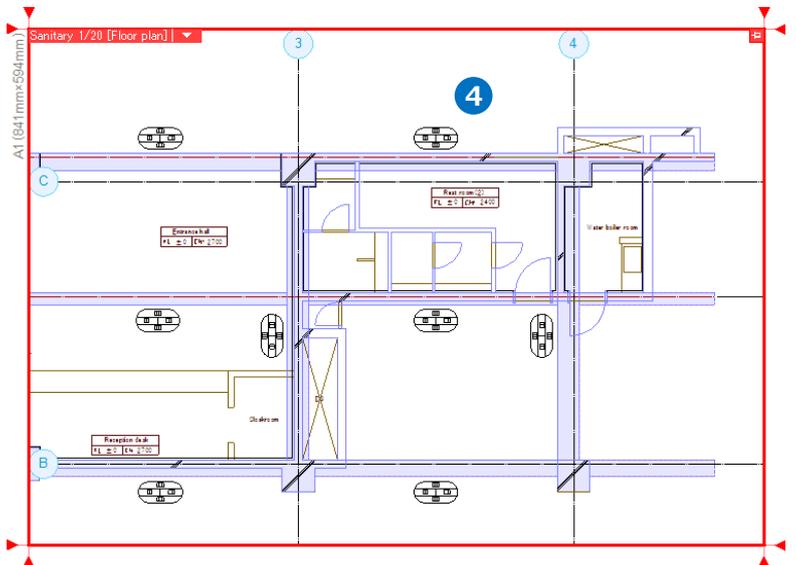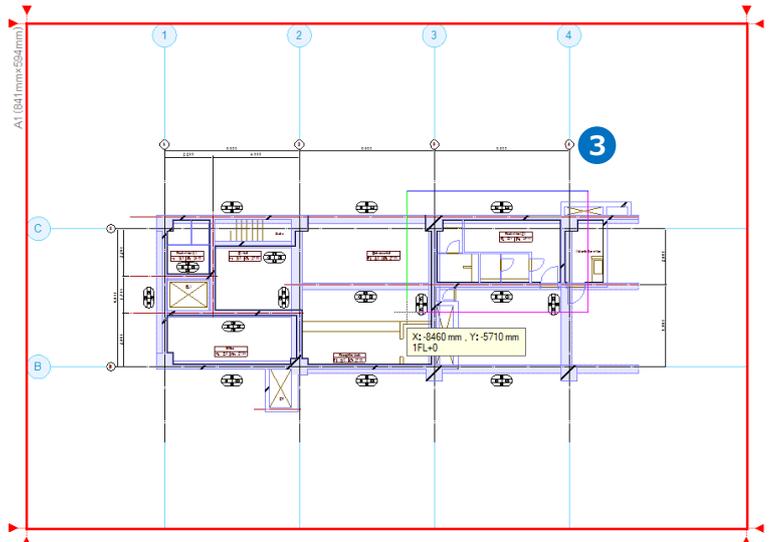
# 2.Place sanitary equipment

## How to place sanitary equipment

**1** Left-click [Equipment] tab-[Restroom].



**2** Select [Placement of chair closet] dialog-"Chair closet"-" Chair toilet for public -TOTO"-"Middle silhouette closet" - "CS860B+TC970W".

> **Memo**
> You can search for appliances by entering the name in [Search] button.
>
> 
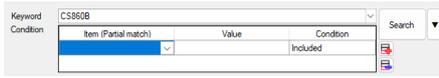
**3** Left-click [OK].

**4** Type "0" into the height and select "1FL".

**5** Select "Double line", "Make double line in all views".

**6** Left-click the arrow buttons in [Rotation] on the context menu (a right-click menu) to adjust the placing angle, and close the context menu.

> **Memo**
> Press x on the upper right of the context menu or right-click, to close the context menu in the command.
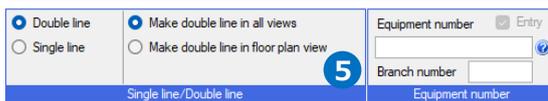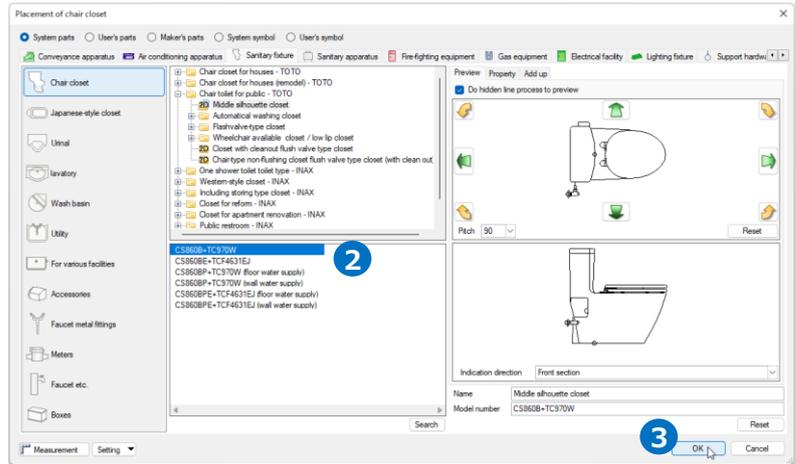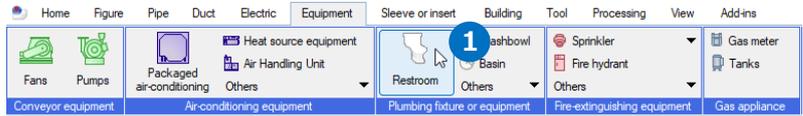
Specify the reference FL and the height from the reference FL.
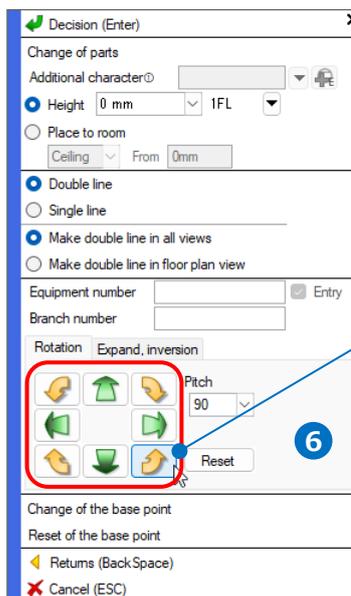
Specify the placing angle.
Yellow arrows rotate equipment on a plane and green arrows rotate it about the axis.
※You can specify the placing angle in advance on a preview screen in [Placement of chair closet] dialog box.

- Supplementary explanation:

Select [Change of the base point] on the context menu (a right-click menu) while the equipment appears temporarily on the screen, to show multiple handles on the equipment for placing reference positions.
Left-click the handle to change a reference position, if you place the equipment based on the connecting position to a drainage or water pipe.
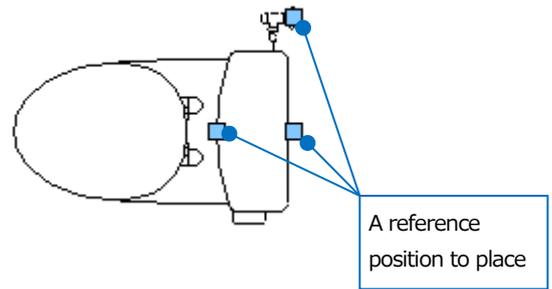
A reference position to place

**7** A guidance message appears saying as follows: "Specify position to locate". Drag the intersection point between a lining and wall to the right.

Start dragging the intersection point

Type into the blank the distance from the reference position
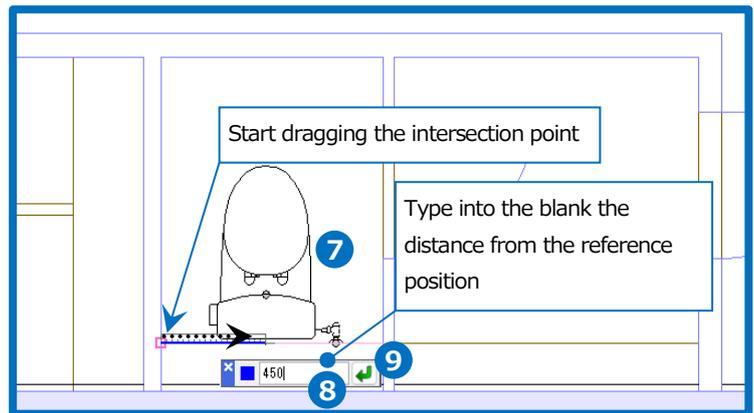
**8** Type the distance into the blank by Measure.
  ■ 450

**9** Left-click [↵] icon or press Enter to confirm.

**10** Place similarly other Sanitary fixtures.

  "Urinal-TOTO
  Automatic washing urinal giatect
  UFS820CE"

  "Lavatory-TOTO
   Wall hung lavatory-
   Rectangle shape lavatory(vessel type)
   L710C + TLC11A + TN115 (wall drainage) (wall hung type)"

Rest room(2)
FL ±0  CH 2400
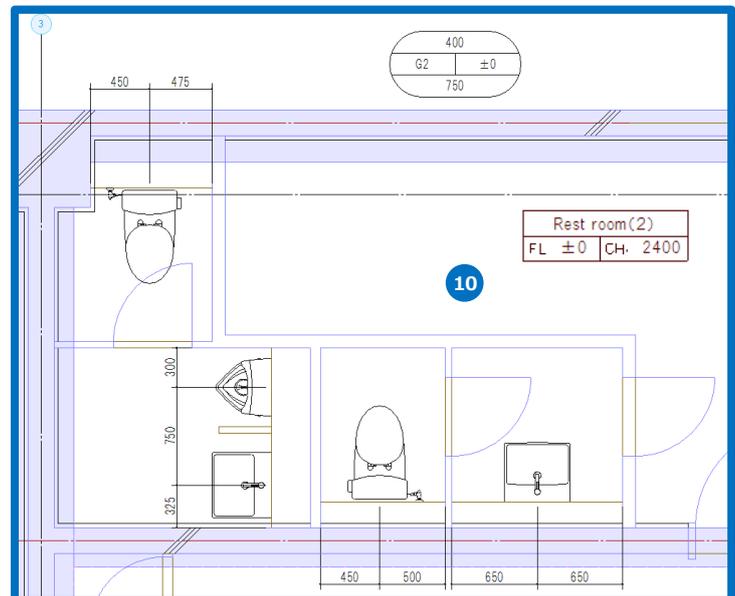
● Supplementary explanation:

Specify the area by [Tool] tab- [Room] before you place the equipment, to set a room name. Then you can specify the height to place the equipment based on room information.
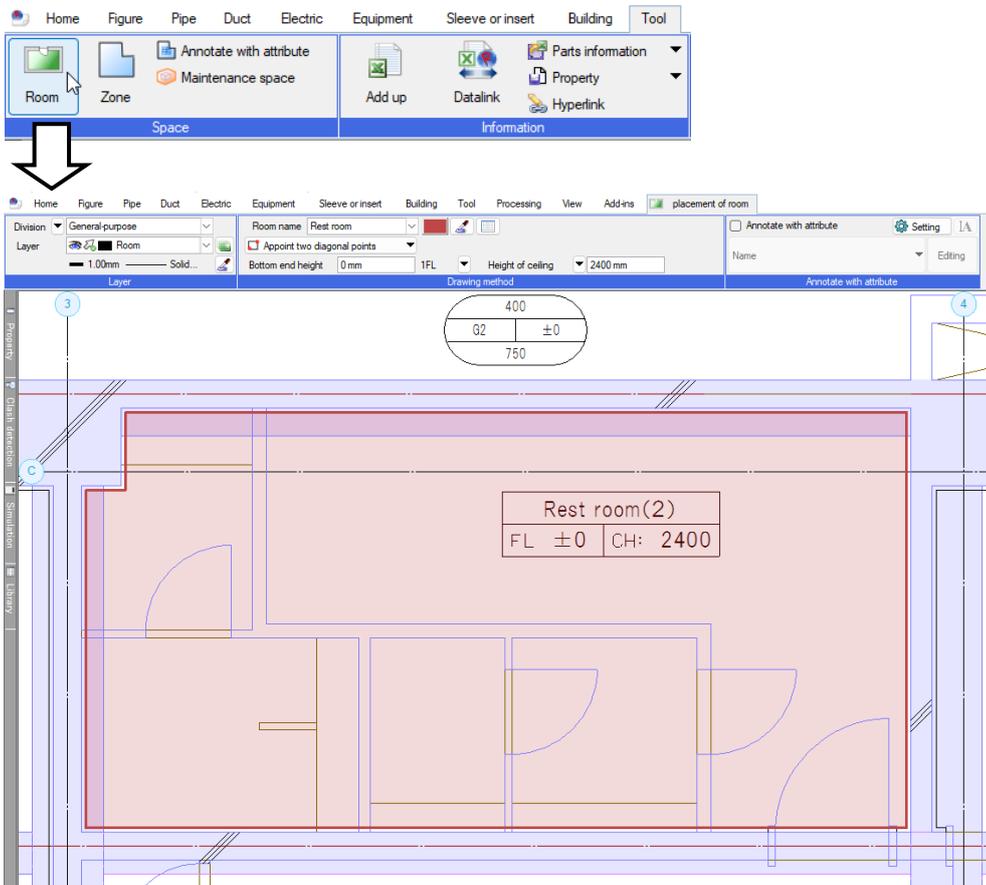


Select [Placement of equipment]-[Height] ribbon-[Place to room] to enter the height from "Floor" or "Ceiling" as the reference position for placing.
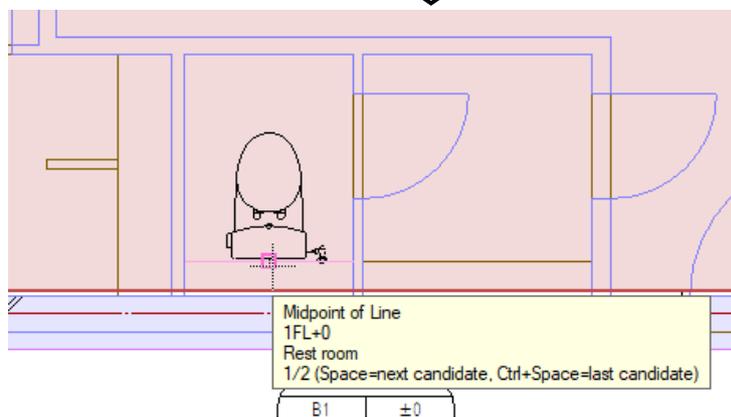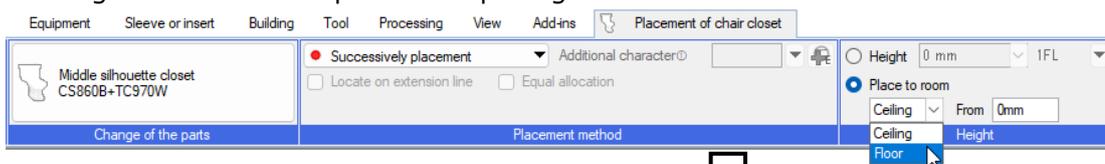
## How to place cleanouts

**1** Left-click [Pipe] tab- [Water supply or drainage fittings].



**2** Select [Insertion of water supply or drainage fittings] dialog box- "Cleanout, strainer fitting"- "Cleanout"-"COA inner screw type"- Size "100".

**3** Left-click [OK].
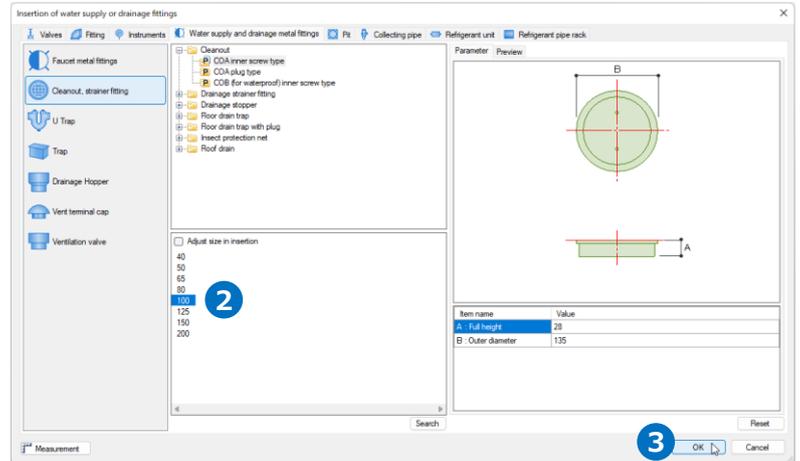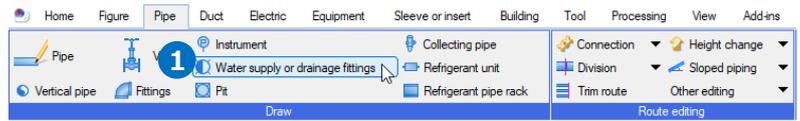




**4** Checkmark [Height] and type "0" into the blank to select "1FL".
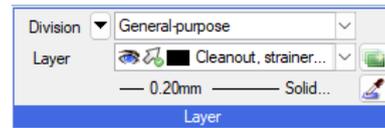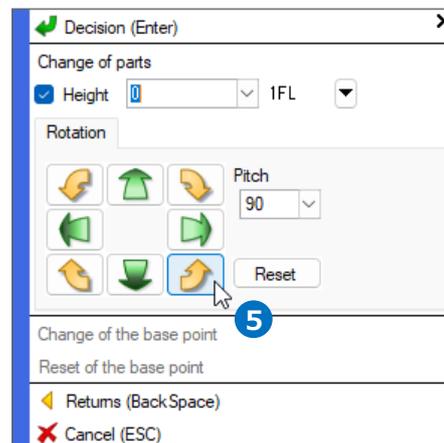


Uncheck the box to place the cleanout at the coordinates height where you specify.

**5** Left-click the arrow buttons in [Rotation] on the context menu (a right-click menu) to adjust the placing angle, and close the context menu.

**6** A guidance message appears saying as follows: "Specify position to locate". Drag the intersection point between 4 and C lines to the lower right direction.

**7** Type the distance into the blank by Measure.
- ■ 550
- ■ 1400

**8** Left-click ↵ icon or press Enter to confirm.

> ④
>
> Start dragging the intersection point
>
> C    ⑥
>
> Water
>
> Type into the blank the distance from the reference position
>
> × 550 mm
> 1400   ⑦
> ↵ ⑧
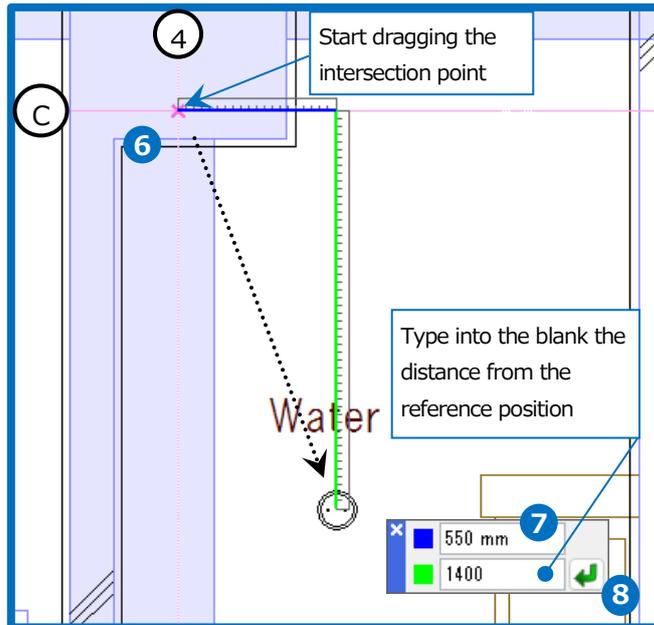
**9** Place similarly other cleanouts.

> COA inner screw type 100
>
> 800
>
> Rest room(2)
> FL ±0   CH: 2400
>
> 800
>
> COA plug type 75
>
> ⑨
>
> COA plug type 75(45° Rotation)
>
> 400
>
> Water boiler room
>
> 1,400
>
> 900
>
> 300
> B1   +0
>
> 550
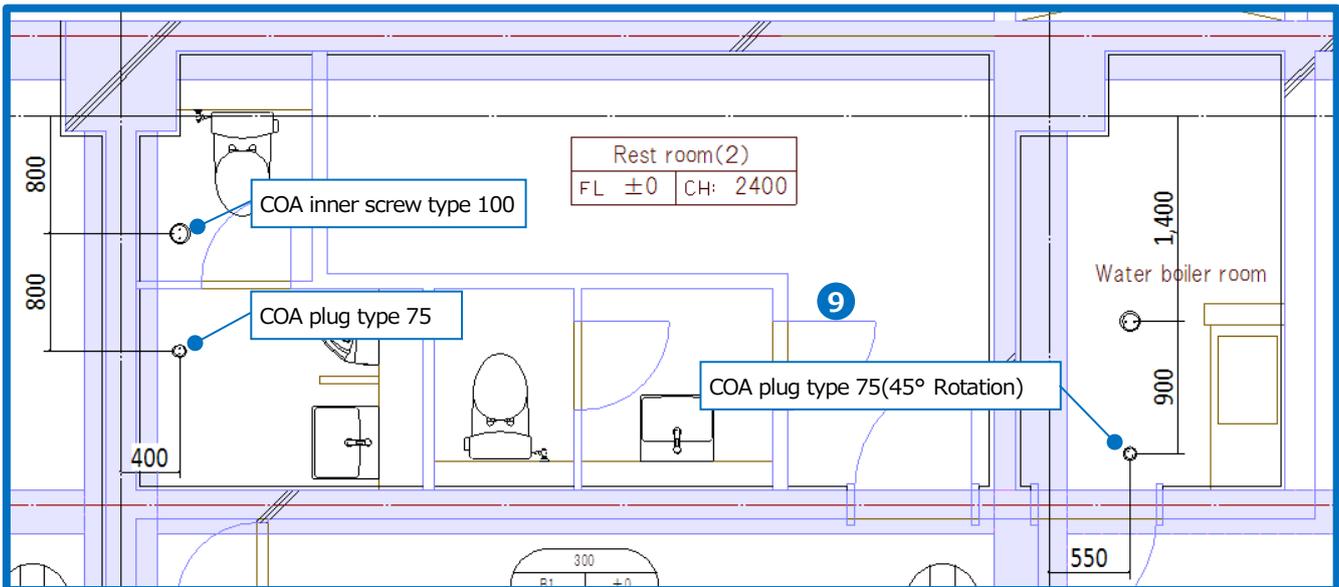
● Supplementary explanation:

By [Equipment] tab- [Mechanical equipment (Stem)], you can place equipment that are compliant with "Stem" (Standard for The Exchange of Mechanical equipment library data), which are provided with CD-ROM or data-download function.

> lectric   Equipment   Sleeve or insert   Building   Tool   Processing   View   Add-ins
>
> Gas meter    Electrical facility    Machine foundation    Mechanical equipment (Stem)
> Tanks      Supporting hanger    User's parts   Maker's parts   Devide to general-purpose figure
> Luminaire    Steel   Support steel   Standard / seismic support    User connection face
> Gas appliance   Electric   Steel,Support,Foundation   Others

# 3.Draw pipes

## How to set up pipe materials

Set up combinations (Materials subset) of pipe materials and fittings that you draw.

You can use the initial value settings without changes.

You can similarly draw on another PC with the same material subsets that are saved in the drawing. You can also add or overwrite the setting details in another drawing.

Now add a setting for ventilation and use existing settings for soil water, wastewater, and water supply.

**1** Left-click [Pipe] tab- [Setting of materials].

**2** Left-click [Setting of materials] dialog box-[Addition].

**3** Type a subset name into [Addition of subset name] dialog box to left-click [OK].

**4** Select "Pipe materials-Hard polyvinyl chloride pipe-VP·VU Hard polyvinyl chloride pipe-VP" to left-click [OK].
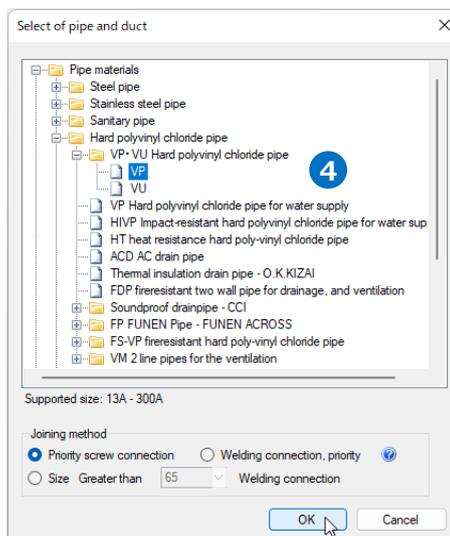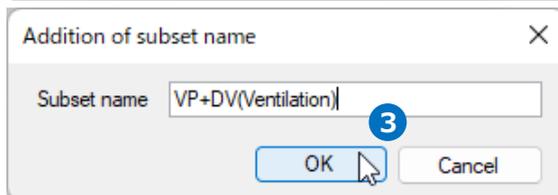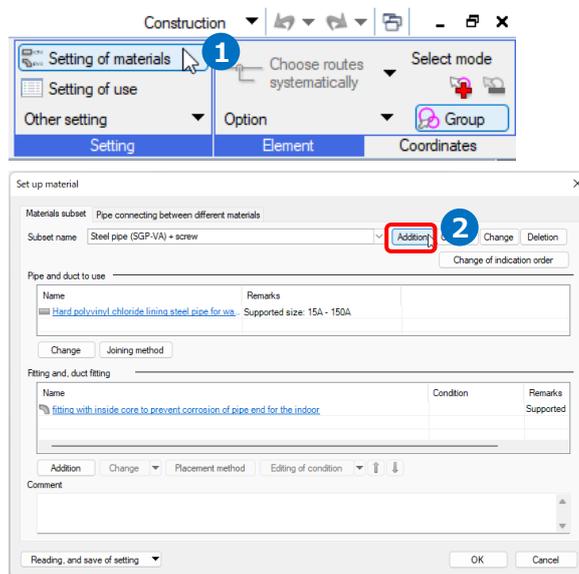
❺ Left-click [Set up material] dialog box- [Fitting and, duct fitting]-[Addition].

❻ Select [Select of fitting and duct fitting] dialog box-"Hard polyvinyl chloride pipe fitting-Hard vinyl chloride pipe fitting for drainage(DV fitting)" to left-click [OK].

❼ Set up to draw with short type fittings such as elbows or tees in preference to others.
In [Set up material] dialog box, Select the row of fittings to left-click [Placement method].
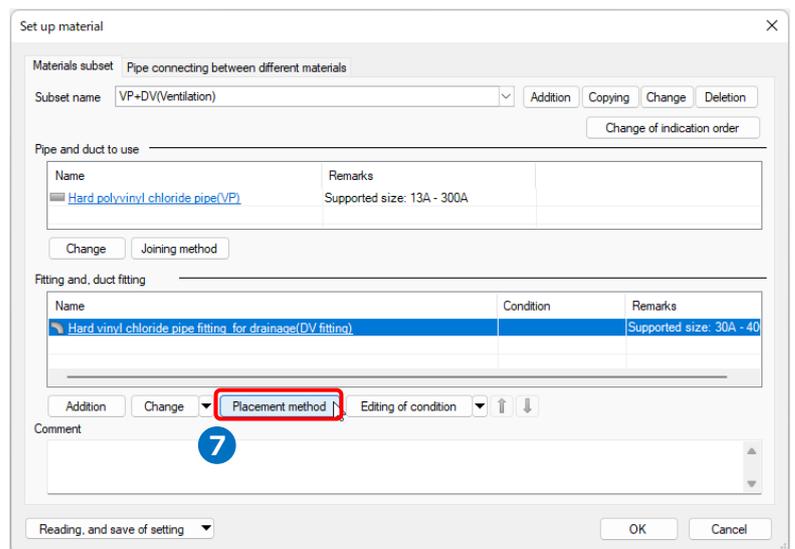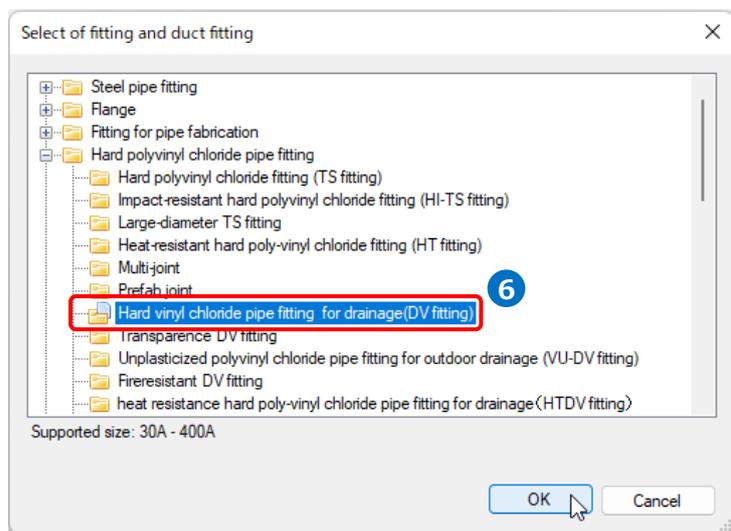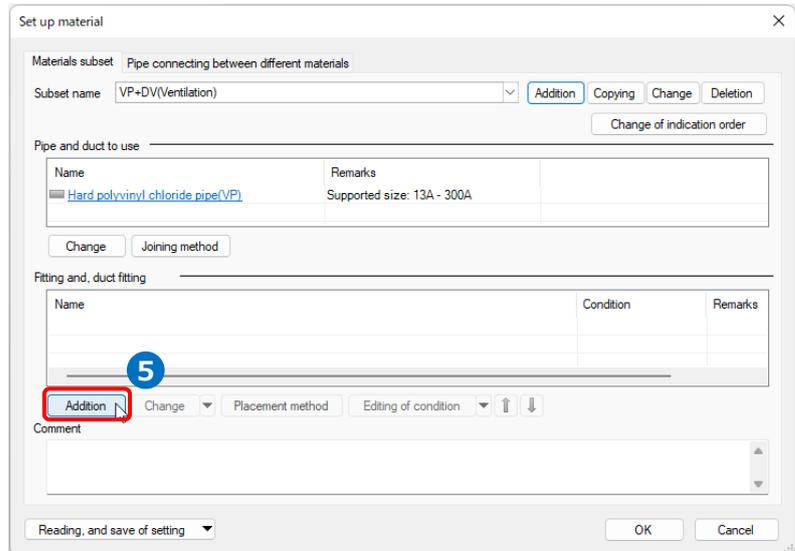
**8** In [Placement method of parts] dialog box, put preferential types at the top in each fitting type in descending order.
Select the row of "90° elbow" that is a short type of "90 degrees curve".
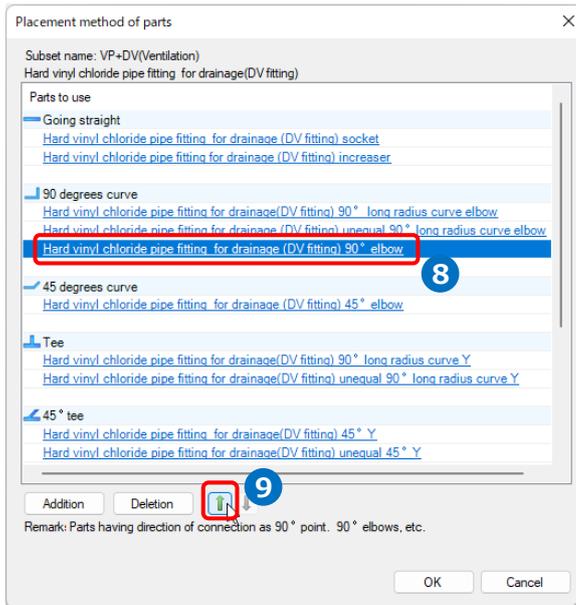
**9** Left-click ⬆ button to move the row into the top above "90° long radius curve elbow".
→The type at the top is drawn in preference to the lower one.

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Memo
You can also change the priority by dragging parts names.

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**10** Add short type "Tee". Select "Tee" to left-click [Addition].
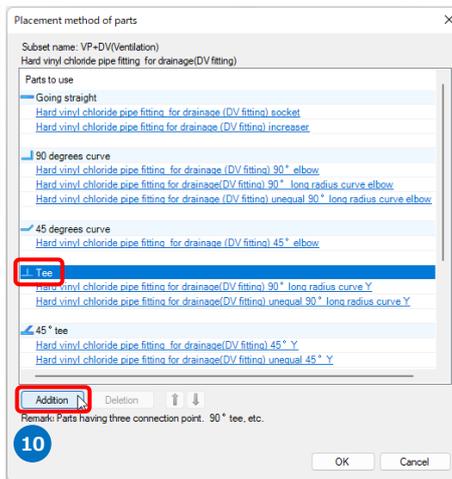
**11** Select "90°Y", "Unequal 90°Y" to left-click [OK]. The added fitting type appears at the top.
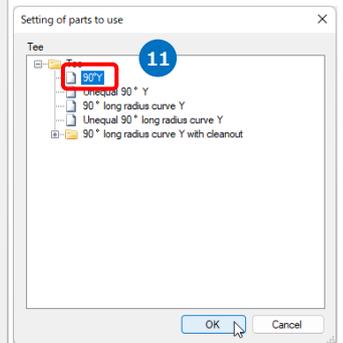
**12** Left-click [OK] to close [Placement method of parts] dialog box and [Set up material] dialog box.
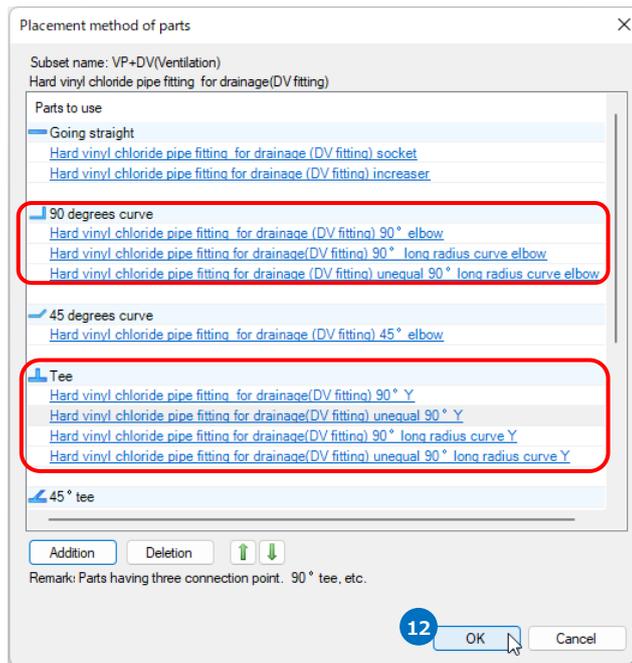
## How to set up uses

Set up attributes of uses, which are used as initial values to represent a single line or to create layers.
You can similarly draw on another PC with the same attributes of uses that are saved in the drawing. You can also add or overwrite the setting details in another drawing.
Now we explain the way to confirm or change the settings.

**1** Left-click [Pipe] tab- [Setting of use].
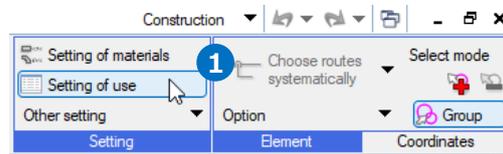
**2** Select the name of use in [Setting of use] dialog box to confirm or edit the descriptions.
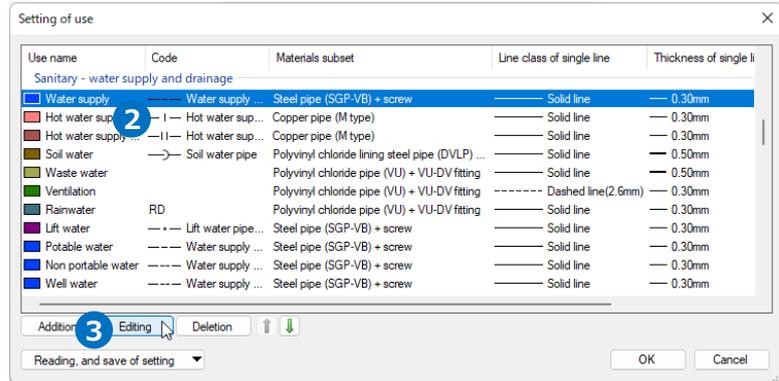
**3** Left-click [Editing] button.

**4** Confirm or edit the descriptions in [Editing of use] dialog box to left-click [OK].

> In add up, you can add them up with a name you set here. If you add up separately even in the same use, add an use to set another name.

> Single pipe symbol, size annotation code, and vertical pipe symbol are affected by these descriptions.
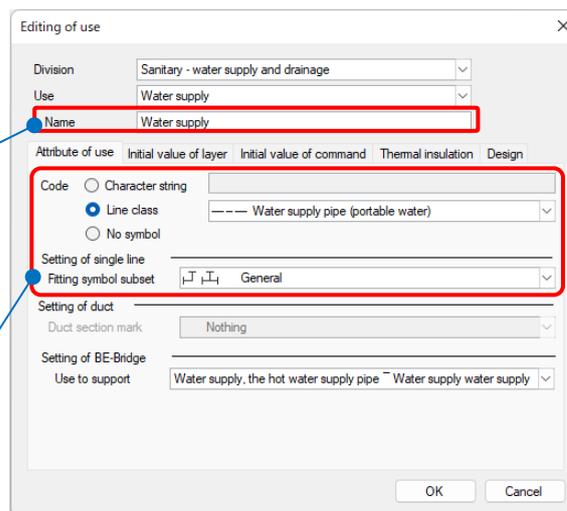
> Initial value to create a layer.
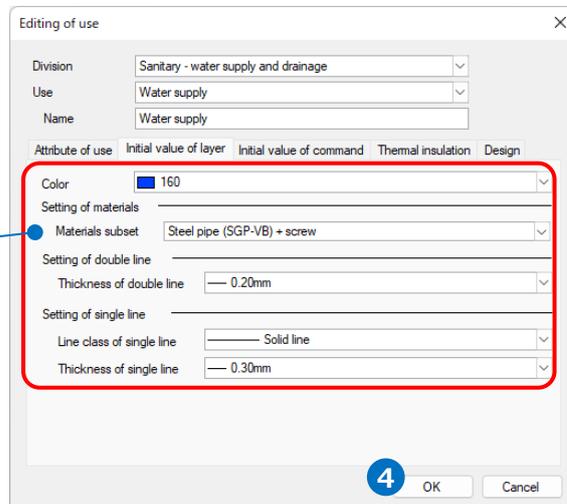
# How to set up layers

Set up layer attributes, necessary to draw pipe, such as uses and materials in addition to designs such as color and line thickness. Draw pipe, with the attributes that are set up on the selected layer when you draw the route.

You can similarly draw on another PC with the same layer that are saved in the drawing. You can also save the setting details, which can be read from another drawing.

Now set up layers for "Soil water", "Waste water", "Ventilation" and "Water supply" that we are drawing.

**①** Left-click [View] tab- [List of layers] or [Layer] on a Quick Access Toolbar.
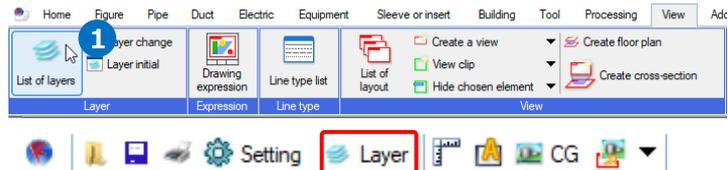


**②** Left-click [List of layers] dialog box-[Sanitary] to show a Sanitary pipe layer.
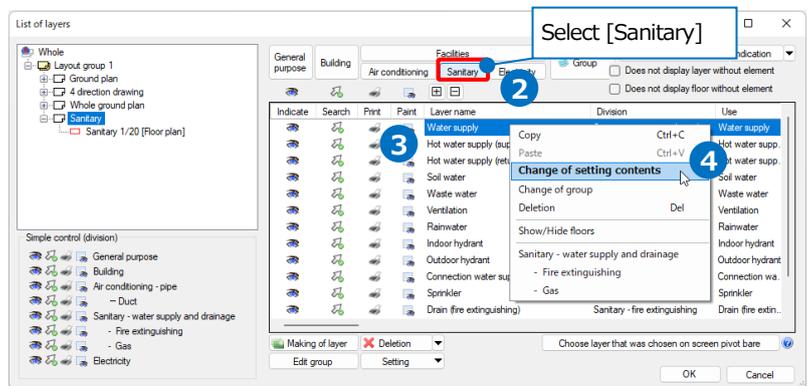
**③** Select the Layer name.



**④** Left-click [Change of setting contents] on the context menu.

**⑤** Select the material in [Editing of layer] dialog box.
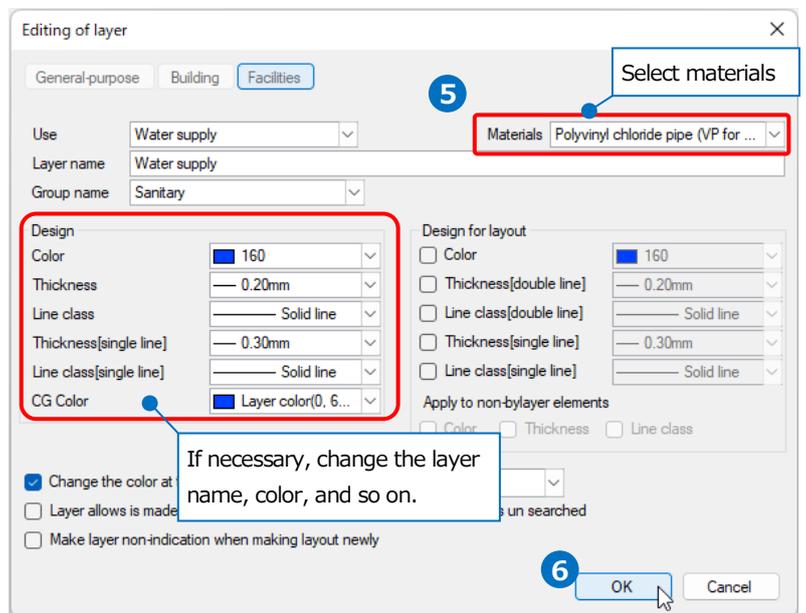
**⑥** Left-click [OK].

**⑦** In like manner, change the following materials settings:

Soil water: Polyvinyl chloride lining steel pipe (DVLP) + for the drainage MD fittings

Waste water: Polyvinyl chloride pipe (VP) + DV fitting / TS fitting

Ventilation: VP + DV (Ventilation)

Water supply: Polyvinyl chloride pipe (VP for water supply) + TS fitting

# How to draw vertical pipes

Draw a vertical pipe for sanitary pipes in pipe shaft.

**①** Left-click [Pipe] tab- [Vertical pipe].

**②** Select "Division"-"Sanitary-Water supply and drainage", "Layer"-"Soil water".

**③** Select "Size"-"100" or type "100" into the blank.

The material subset that was set on the layer is selected. You can also select another material.

Checkmark [Thermal insulation] to draw with thermal insulation being set. (See also page 16 for a supplementary explanation)

**④** Type the height for both ends of a vertical pipe. On the one hand, type "-1500" into the blank and select "1FL".
On the other hand, type "0" into the blank and select "2FL".
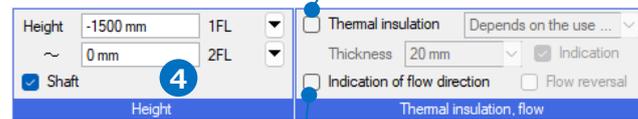
Checkmark [Indication of flow direction] to draw with the flow direction shown.

**⑤** A guidance message appears saying as follows: "Specify location for making pipe". Drag the intersection point between 4 and C lines to the upper right direction.

**⑥** Type the distance into the blank by Measure.
- 550
- 900

Type into the blank the distance from the reference position

Drag the intersection point

**⑦** Left-click 🔽 icon or press Enter to confirm.

**⑧** Draw similarly three other routes.
※Refer to the positions at the next page to draw those routes.

Soil water: Size 100

Ventilation: Size 75

Wastewater: Size 100

Water supply: Size 50

2FL+0

1FL-1500

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● Supplementary explanation:

If you add a vertical pipe on the piping conduit, select [Pipe] tab- [Pipe] to specify the height of a rise-up pipe(or a go-down pipe), and then left-click the point on the line or the endpoint.



Specify the reference FL and the height from the reference FL

Left-click the position to add the Vertical pipe

FL-500

Edge of Pipe
1FL+0
1/2 (Space=next candidate, Ctrl+Space=last candidate)

Rise up up to 1FL+0

▼1FL
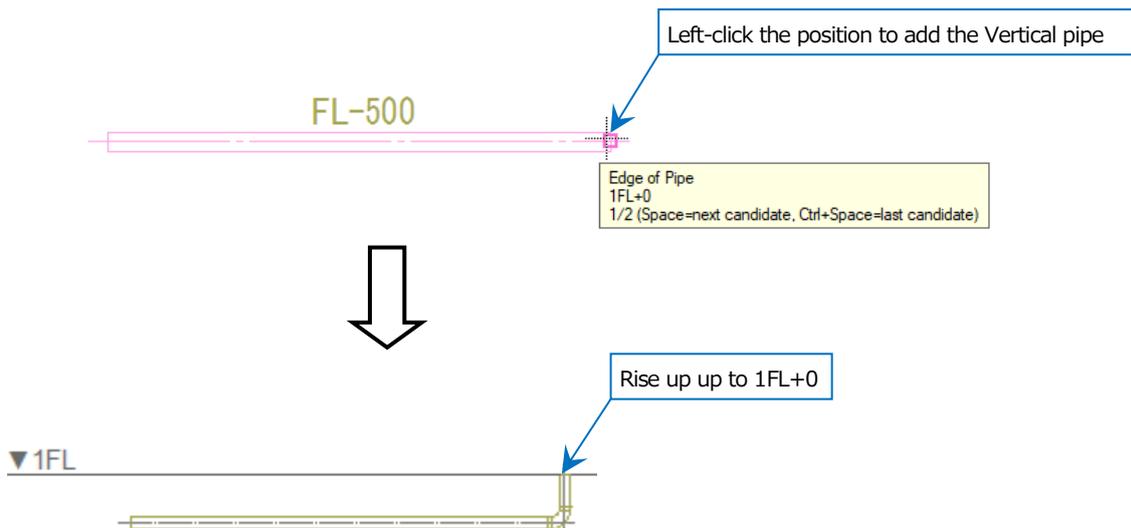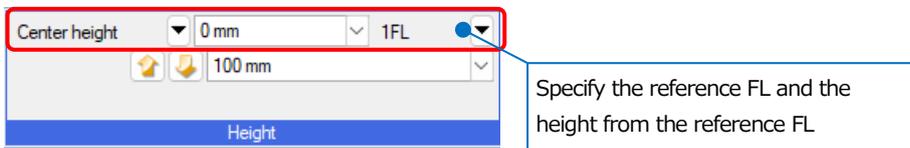
● Supplementary explanation:

Checkmark [Thermal insulation] on the ribbon when drawing pipe or vertical pipe, to draw pipes with thermal insulation being set.



Checkmark [Indication] to draw with thermal insulation shown.
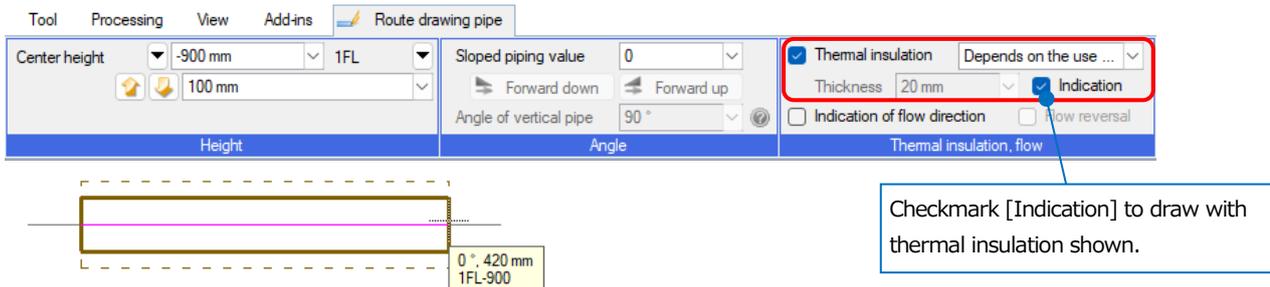
When you select "Depends on the use settings", Rebro reflects the thermal insulation thickness set for each use.

※See also page 12 for [Setting of use].



Thermal insulation thickness can be set for each size.
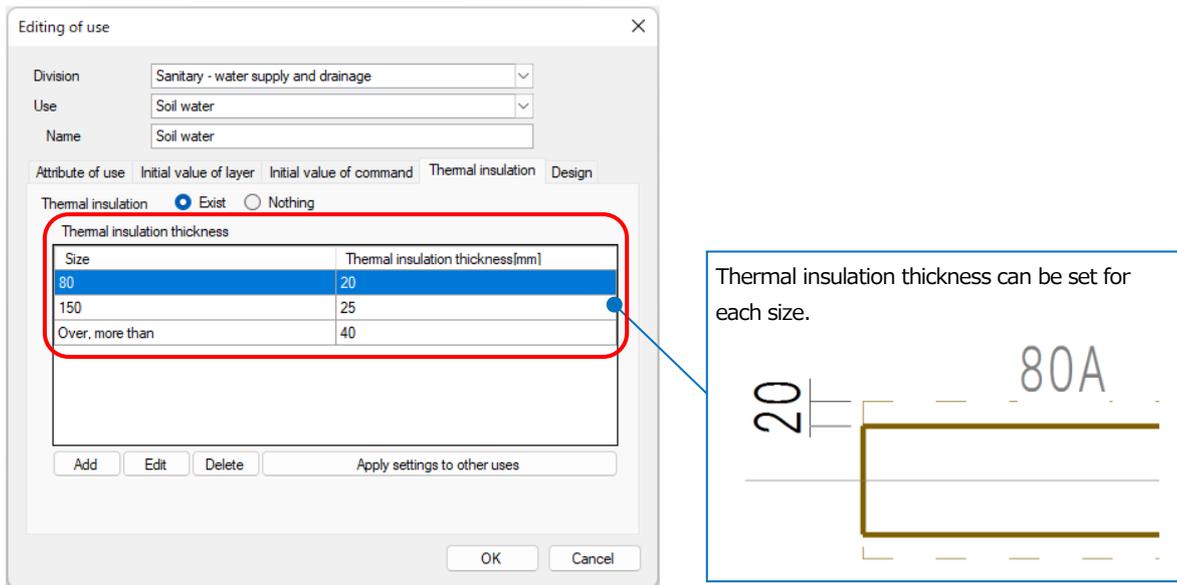
When selecting "Manual operation", you can set thermal insulation thickness on the ribbon.
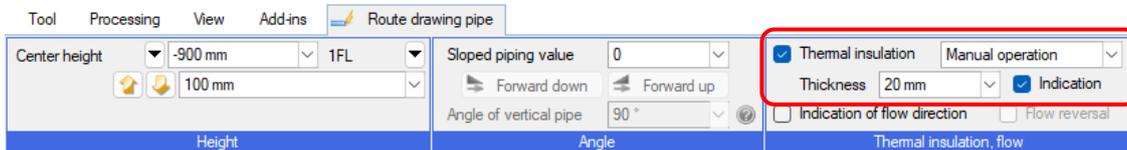


When you set up thermal insulation after drawing, go to [Pipe] tab- [Offer thermal insulation].

If you switch between Show/Hide [Thermal insulation], change [Pipe] tab- [▼] next to [Offer thermal insulation]- [Switch insulation indicate/nonindicate].
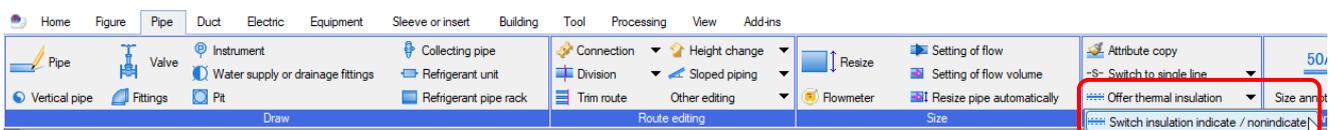
## How to draw routes for soil water pipes

### Draw a horizontal main pipe from a vertical pipe

**1** Left-click [Pipe] tab- [Pipe].

**2** Select "Layer"-"Soil water".

**3** Select "Size"-"100" or type "100" into the blank.

**4** Type "-900" into the height and select "1FL".

> **Memo**
>
> You can select the piping height reference from "Top end height", "Center height" or "Bottom end height".
>
> | Center height ▾ | -900 mm ▾ | 1FL ▾ |
> |---|---|---|
> | Top end height | | |
> | Center height | | |
> | Bottom end height | 100 mm | |
> | Height | | |

**5** A guidance message appears saying as follows: "Specify position to make pipe." Left-click the snapped point of a vertical pipe ("Edge of pipe" and so on) to connect to a Vertical pipe.

**6** Bring the pointer close to the center point of a cleanout to left-click the position where [Connection point (1) of Drainage metal fittings, insectdefence net] appears in the tooltip.
→Rebro draws a vertical pipe to connect to the cleanout.

**7** Left-click [Decision] on the context menu (right-click) to complete commands.

Specify the reference FL and the height from the reference FL

Left-click the vertical pipe

Edge of Pipe
1FL-900
1/4 (Space=next candidate, Ctrl+Space=last candidate)

Left-click the center point of a cleanout

Water boiler room

-90 °, 2300 mm [Connection point(1) of Drainage metal fittings, insectdefence net]
1FL-900
1/10 (Space=next candidate, Ctrl+Space=last candidate)
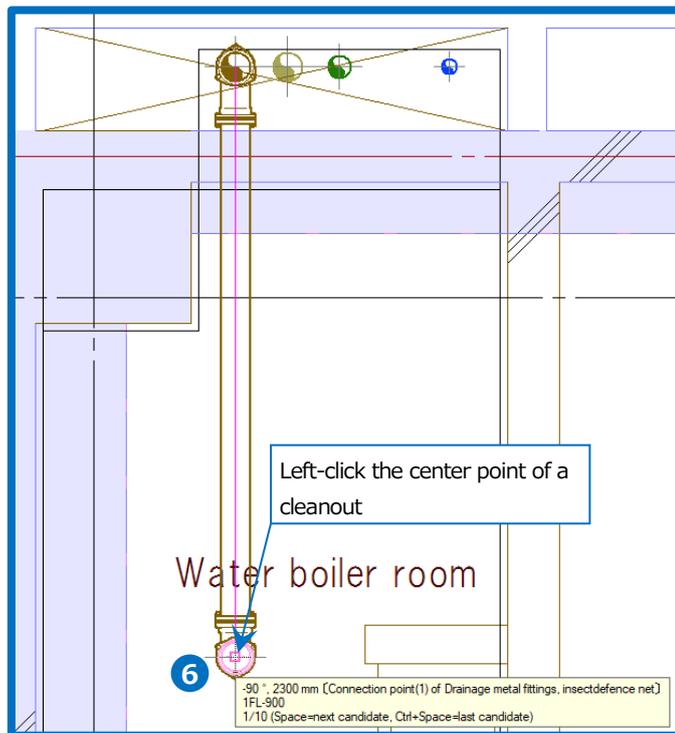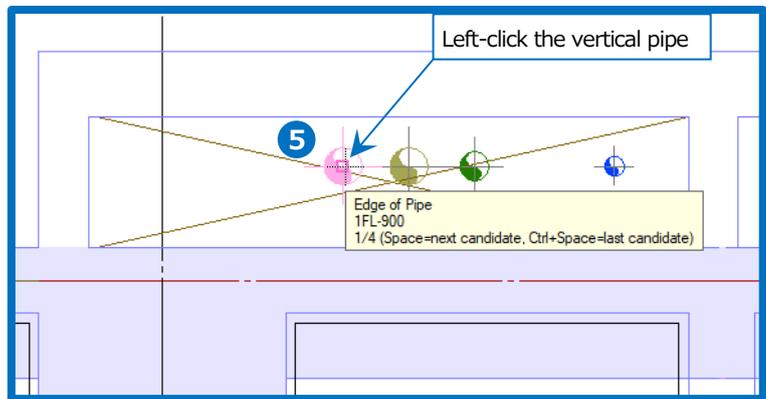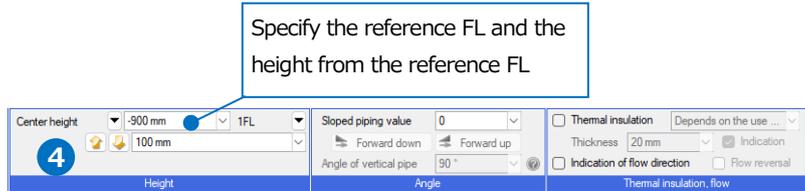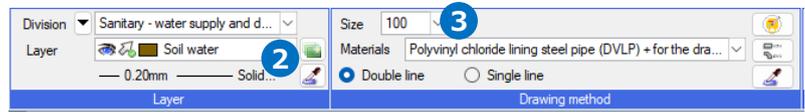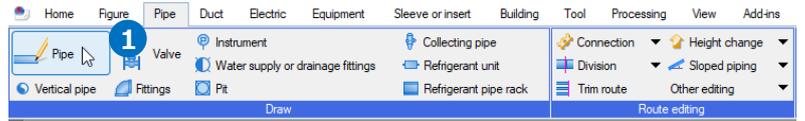
## Draw a horizontal main pipe for soil water, from a cleanout

**1** Left-click the cleanout, press Shift to show a handle for drawing routes (yellow).
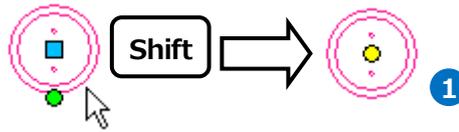
> **Memo**
> Equipment registered in Rebro can be drawn with the stored information about connecting point.

**2** Left-click the handle.
The descriptions on the ribbon change to [Route drawing figure].
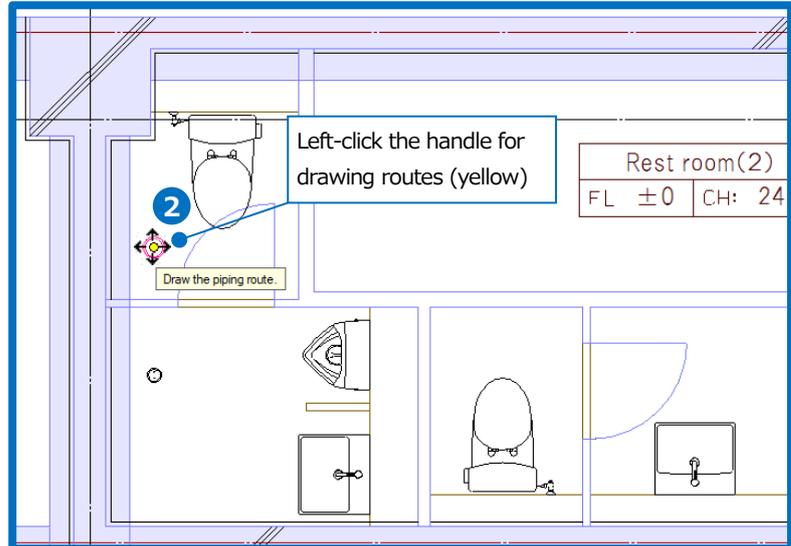
**3** Select "Layer"-"Soil water".
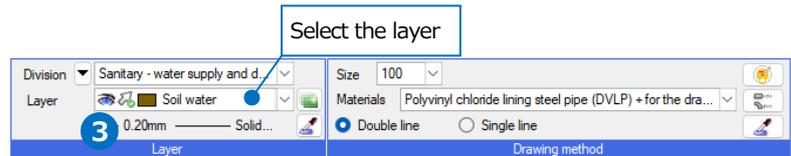
**4** Type "-900" into the height of a horizontal pipe and select "1FL".
→Rebro draws a vertical pipe automatically from the connecting height of a cleanout up to the piping height you typed.

> **Memo**
> Typed history of the numeric value for [Height] are saved up to ten pcs., from which you can also select.
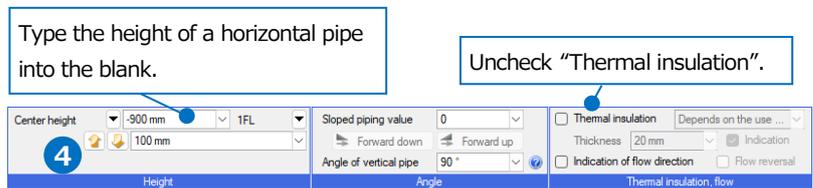
**5** A guidance message appears saying as follows: "Specify position to make pipe." Bring the pointer onto the main pipe that you connect and left-click the position where fittings appear, to connect.

Left-click the handle for drawing routes (yellow)

Rest room(2)
FL ±0   CH: 24

Draw the piping route.

Select the layer

Type the height of a horizontal pipe into the blank.

Uncheck "Thermal insulation".

Left-click a point on the line of the main pipe.

0°, 6490 mm [Point of intersection of Pipe]
1FL-900
1/3 (Space=next candidate, Ctrl+Space=last candidate)
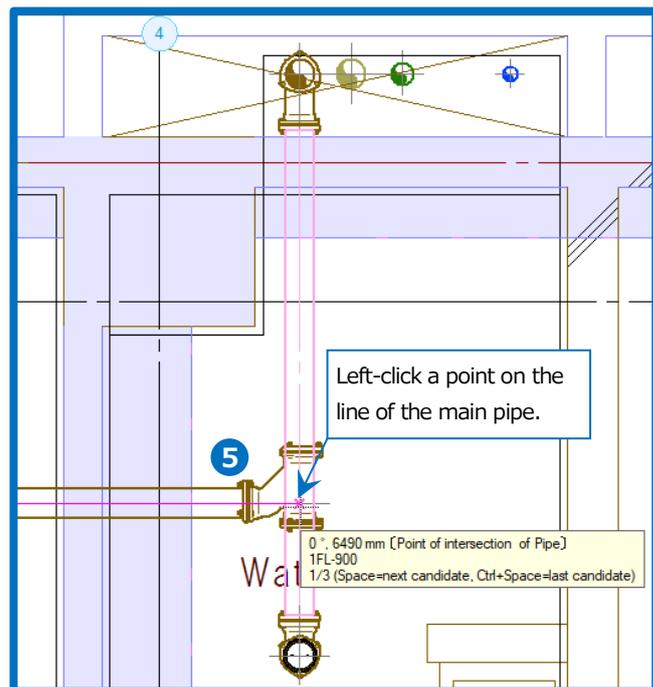
● Supplementary explanation:

The direction of fittings can be determined automatically. If you want to change the direction, checkmark [Reverse direction] on the context menu, and specify a point on the line of route to connect.
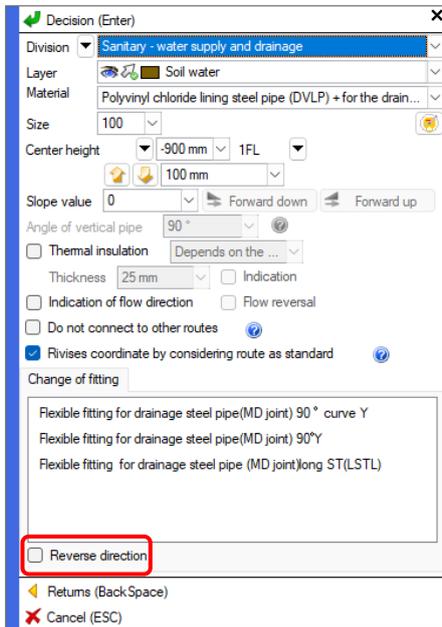


If you want to change after drawing, use [Pipe] tab- [Other editing]-[Reverse of direction], or [Reverse of direction] on the context menu.

### Draw branch pipes connecting to equipment

**1** Left-click a Western-style toilet bowl to show a handle for drawing routes (yellow), then left-click the handle. →The descriptions on the ribbon change to [Route drawing figure] and the following appears: uses, size, and connecting height (the previous value in the case of floor drainage/water supply), which were set up in the equipment.



Left-click the handle for drawing routes (yellow)

Bring the pointer onto a handle to show the uses and sizes set for the fixture's connection point.
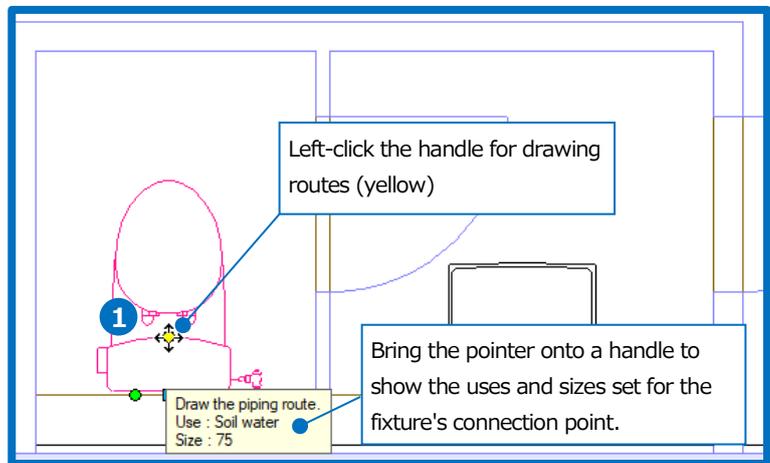
**2** Type "-900" into the height of a horizontal pipe and select "1FL". →Rebro draws a vertical pipe automatically from the connecting height of a Western-style toilet bowl up to the piping height you typed.
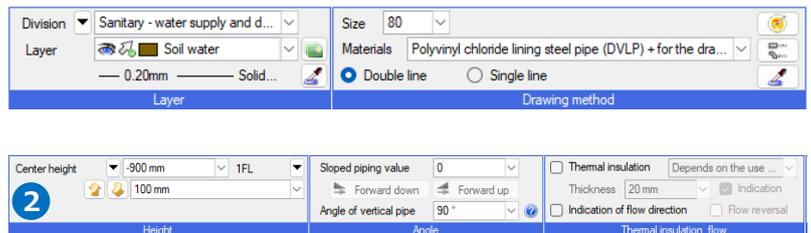
**3** A guidance message appears saying as follows: "Specify position to make pipe." Left-click a point on the line of the main pipe to connect.
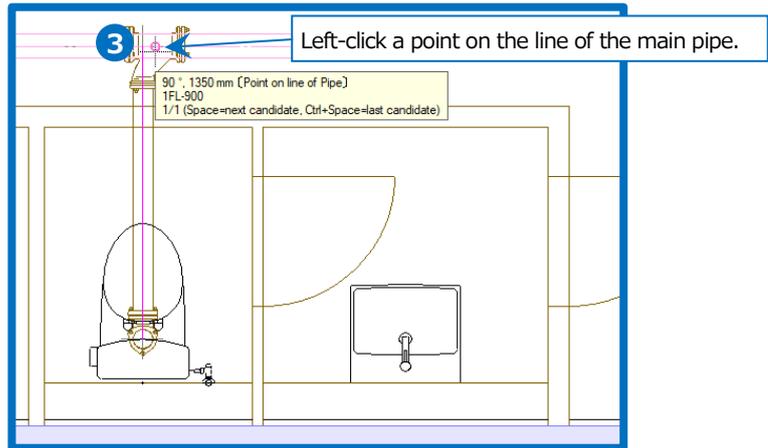
**4** Draw similarly other branch pipes.

Memo
Left-click the pipe to show a handle for drawing routes (yellow) at one end of the pipe, from which you can expand or contract the route.

**3** Left-click a point on the line of the main pipe.

90 °, 1350 mm (Point on line of Pipe)
1FL-900
1/1 (Space=next candidate, Ctrl+Space=last candidate)

Rest room(2)
FL ±0  CH: 2400

**4**
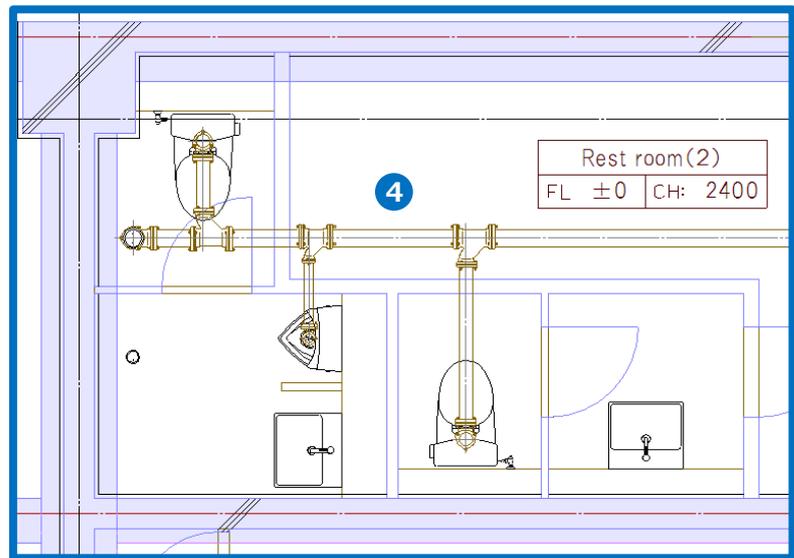
● Supplementary explanation:

In addition to the above, [Equipment connection] or [Pattern drawing] commands can be used to draw branch pipes that connect to equipment. [Equipment connection] command targets equipment that has stored information about connection points.

| Home | Figure | Pipe | Duct | Electric | Equipment | Sleeve or insert | Building | Tool | Processing | View | Add-ins |

| Pipe | Valve | Instrument | Collecting pipe | Connection | Height change |
| | | Water supply or drainage fittings | Refrigerant unit | Equipment connection | ped piping |
| Vertical pipe | Fittings | Pit | Refrigerant pipe rack | Pattern drawing | diting |

Draw | Route editing
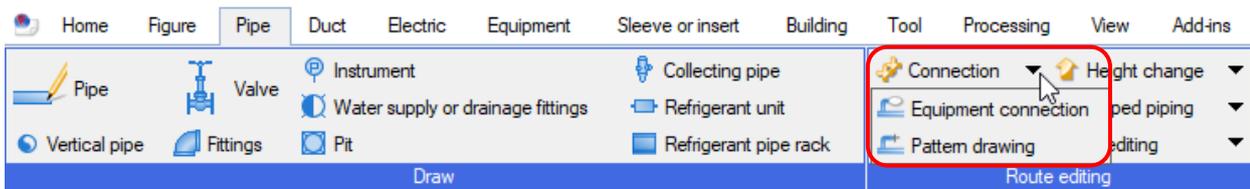
## How to draw routes for waste pipes

### Draw a horizontal main pipe from a vertical pipe

**1** Left-click [Pipe] tab-[Pipe].

**2** Select "Layer"-"Waste water".

**3** Select "Size"-"75" or type "75" into the blank.

**4** Type "-900" into the height and select "1FL".

**5** A guidance message appears saying as follows: "Specify position to make pipe." Left-click the snapped point of a Vertical pipe ("Edge of pipe" and so on) to connect to a Vertical pipe.

**6** Bring the pointer close to the center point of a cleanout to left-click the position where [Connection point (1) of Drainage metal fittings, insectdefence net] appears in the tooltip.
→Rebro draws a straight pipe up to the cleanout position.
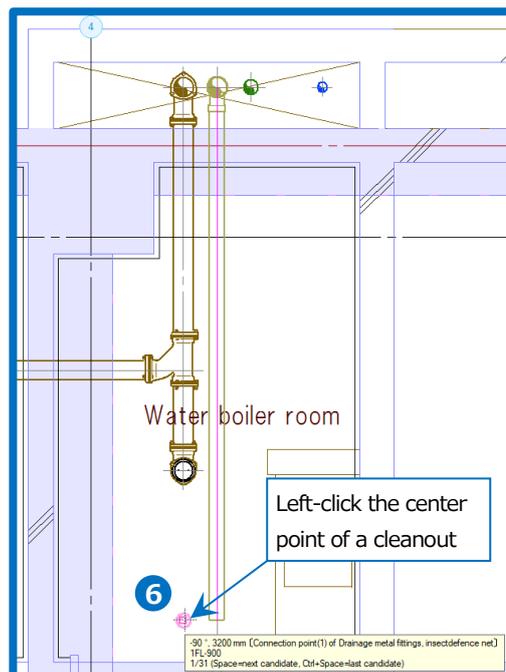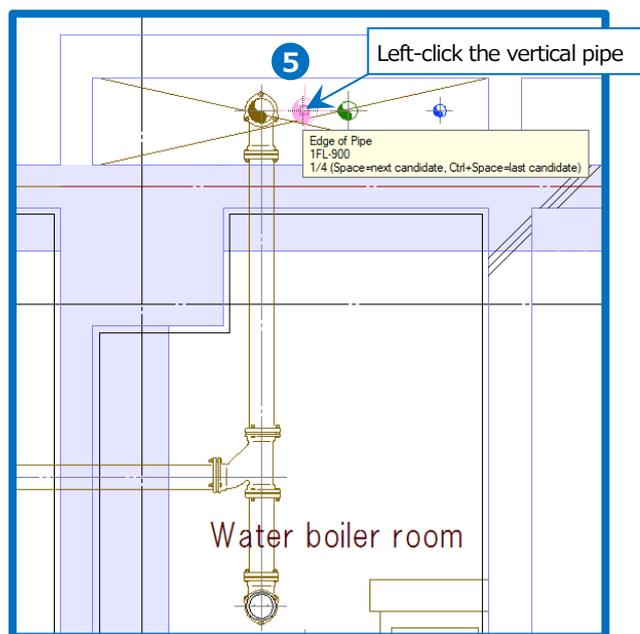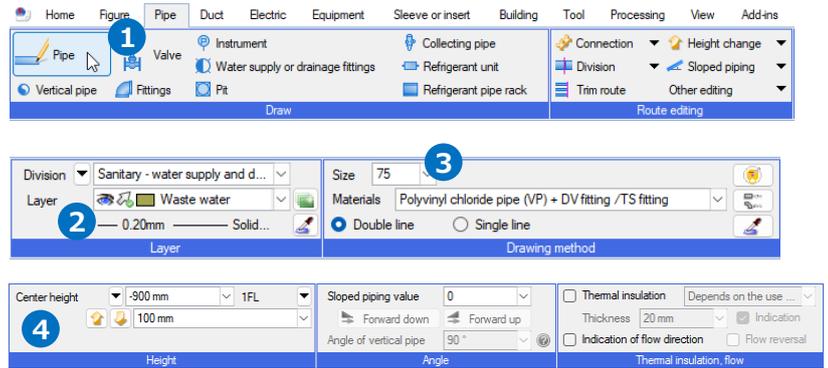


Left-click the vertical pipe

Water boiler room



Left-click the center point of a cleanout

Water boiler room

**7** Bring the pointer close to the center point of a cleanout to left-click the position where [Connection point (1) of Drainage metal fittings, insectdefence net] appears in the tooltip.

→Rebro draws a straight pipe to connect to the cleanout.



Left-click the center point of a cleanout

90 °, 200 mm [Connection point(1) of Drainage metal fittings, insectdefence net]
1FL-900
1/35 (Space=next candidate, Ctrl+Space=last candidate)

---
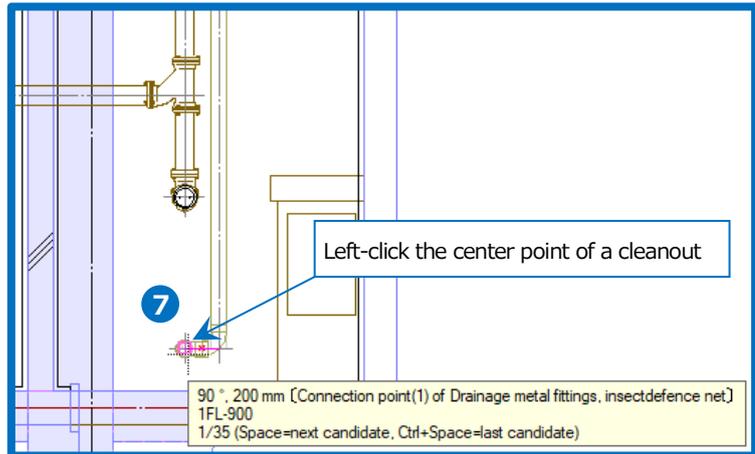
Memo

Checkmark [View]tab- [Drawing expression]tab-[Pipe, duct, and electricwire common]-[Proper placement check]-[Proper placement check], to show "x" if the fitting does not fit into the space.



---

**8** Left-click [Decision] on the context menu to end the command.

**9** Switch a 90-degrees elbow to 45-degrees elbow in order to fit the fitting into the space.
Left-click the elbow to show a handle for moving (blue), then left-click the handle.
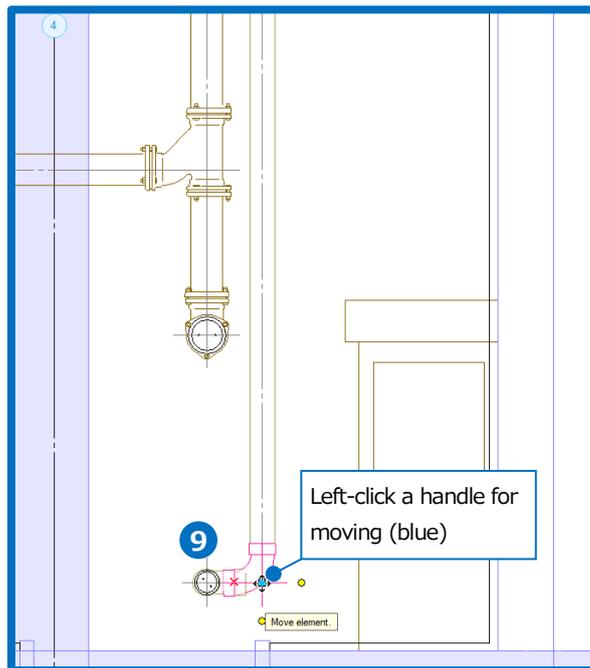


Left-click a handle for moving (blue)

Move element.

---

Memo

Left-click the handle for moving fittings, a numerical value is entered in [Coordinates]-[Pitch] automatically so that the elbow becomes 45-degrees.



Pitch 200 mm
Angle 180 °
Option  Reference  0 °
Element   Coordinates

---

**10** A guidance message appears saying as follows: "Specify move point".
Bring the pointer into the moving direction and left-click the position where a 45-degrees elbow appears.



0 °, 200 mm
1FL-900

The pitch on [Coordinates]
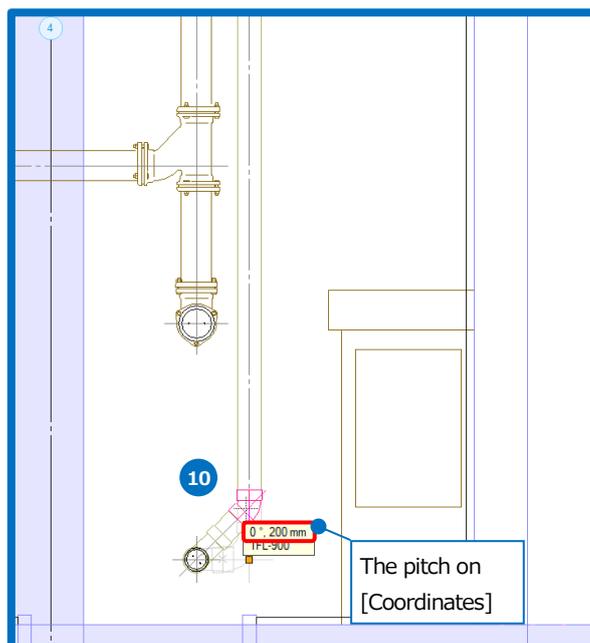
## Draw a horizontal main pipe for wastewater, from a cleanout

**1** Left-click the cleanout, press Shift to show a handle for drawing routes (yellow).



**Shift**

**1**
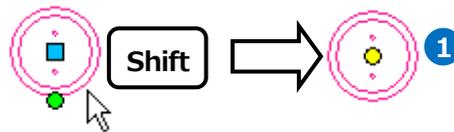
**2** Left-click the handle.
→The descriptions on the ribbon change to [Route drawing figure].

**3** Select "Layer"-"Wastewater".

**4** Type "-900" into the height of a horizontal pipe.
→Rebro draws a vertical pipe automatically from the connecting height of a cleanout up to the piping height you typed.

Left-click the handle for drawing routes (yellow)

**2**

Draw the piping route.
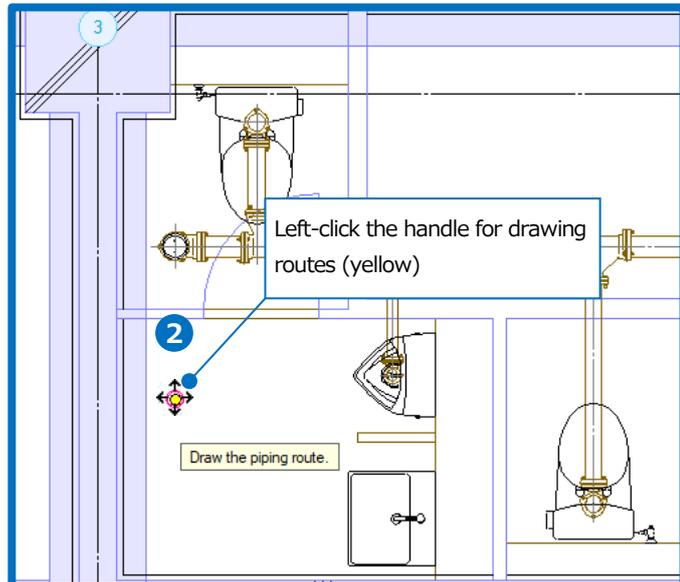
**5** A guidance message appears saying as follows: "Specify position to make pipe." Bring the pointer into the direction of a main pipe that you connect and left-click a point on the line to connect to the horizontal main pipe.

Select the layer



**3**

Type the height of a horizontal pipe into the blank

Uncheck "Thermal insulation".



**4**

Water boiler room

Left-click a point on the line of the main pipe

0 °, 6690 mm (Point of intersection of Pipe)
1FL-900
1/2 (Space=next candidate, Ctrl+Space=last candidate)

**5**
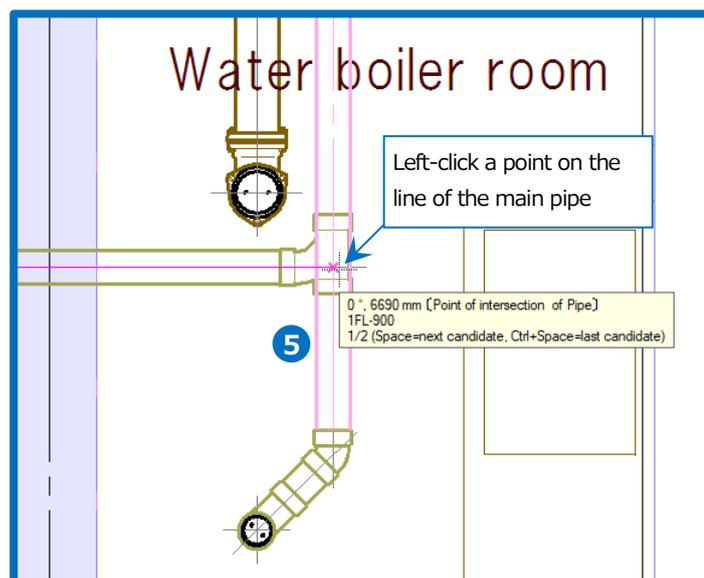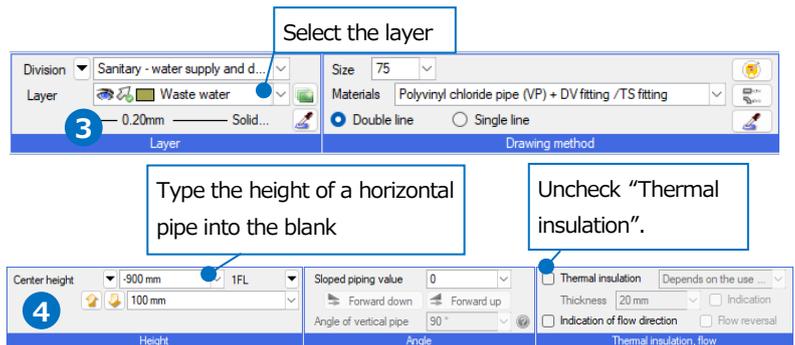
## Draw branch pipes connecting to equipment

**1** Left-click a washstand bowl, and press Shift to show a handle for drawing routes (yellow).

**2** Left-click the handle.
→The descriptions on the ribbon change to [Route drawing figure] and the following appears: uses, size, and connecting height, which are stored in the equipment.

**3** Type "100" for pipe length with the keyboard. The entered numerical value appears in the field [Distance=] on the status bar.

**4** Bring the pointer into the drawing direction and left-click there or press Enter.
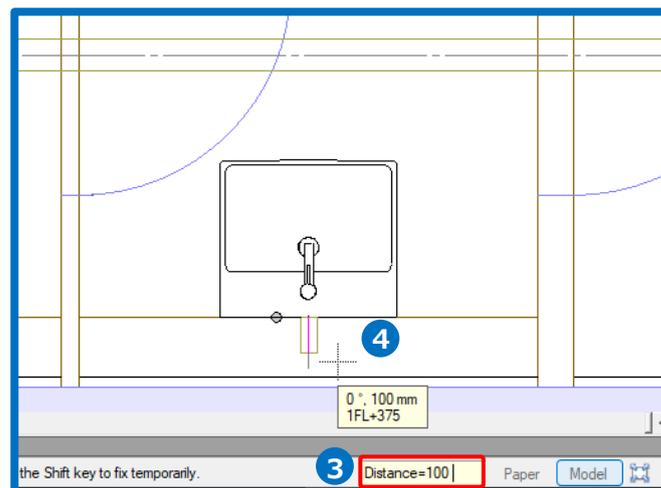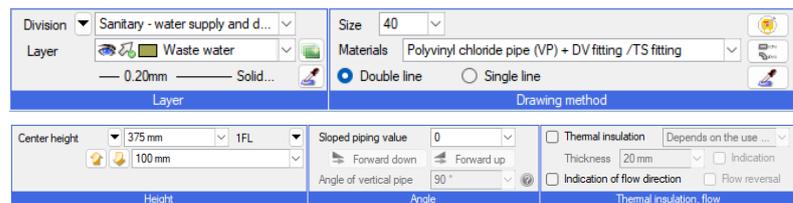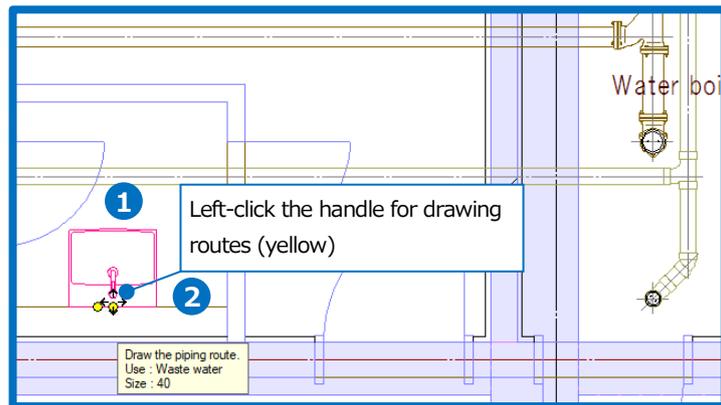
**5** Change the height. Type "-900" into the changing height on the context menu to close the menu.

> **Memo**
> Press x on the upper right on the context menu or right-click, to close the context menu in the command.
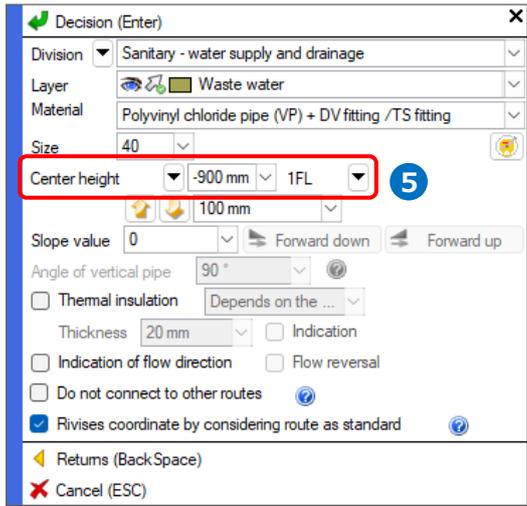
**6** Left-click the position to create piping.

**7** Left-click the main pipe to connect.

**8** Draw similarly other branch pipes.



Decision (Enter)

| | | |
|---|---|---|
| Division ▼ | Sanitary - water supply and drainage | |
| Layer | 👁 🔒 ⬛ Waste water | |
| Material | Polyvinyl chloride pipe (VP) + DV fitting /TS fitting | |
| Size | 40 | |
| Center height ▼ | -900 mm ▼ 1FL ▼ | **5** |
| | 🔺 🔻 100 mm | |
| Slope value | 0 ⬆ Forward down ⬇ Forward up | |
| Angle of vertical pipe | 90 ° | |
| ☐ Thermal insulation | Depends on the ... | |
| Thickness | 20 mm ☐ Indication | |
| ☐ Indication of flow direction | ☐ Flow reversal | |
| ☐ Do not connect to other routes | | |
| ☑ Rivises coordinate by considering route as standard | | |

◀ Returns (Back Space)
✖ Cancel (ESC)



**7**

90 °, 850 mm〔Point of intersection of Pipe〕
1FL-900
1/4 (Space=next candidate, Ctrl+Space=last candidate)

Left-click a point on the line of the main pipe

**6** Left-click the position to create piping



**8** 100

Change the height "-900".

# How to draw routes for vent pipes

## Draw a horizontal main pipe from a vertical pipe

**1** Left-click [Pipe] tab- [Pipe].

**2** Select "Layer"-"Ventilation".

**3** Select "Size"-"75" or type "75" into the blank.

**4** Type "1500" into the height and select "1FL".

**5** A guidance message appears saying as follows: "Specify position to make pipe." Left-click the snapped point of a vertical pipe ("Edge of pipe" and so on) to connect to a Vertical pipe.

**6** Type "290" for pipe length with the keyboard. The entered numerical value appears in the field [Distance=] on the status bar.

**7** Bring the pointer into the drawing direction and left-click there or press Enter.



Left-click the vertical pipe

Edge of Pipe
1FL+1500
1/4 (Space=next candidate, Ctrl+Space=last candidate)

0 °, 290 mm
1FL+1500

Distance=290
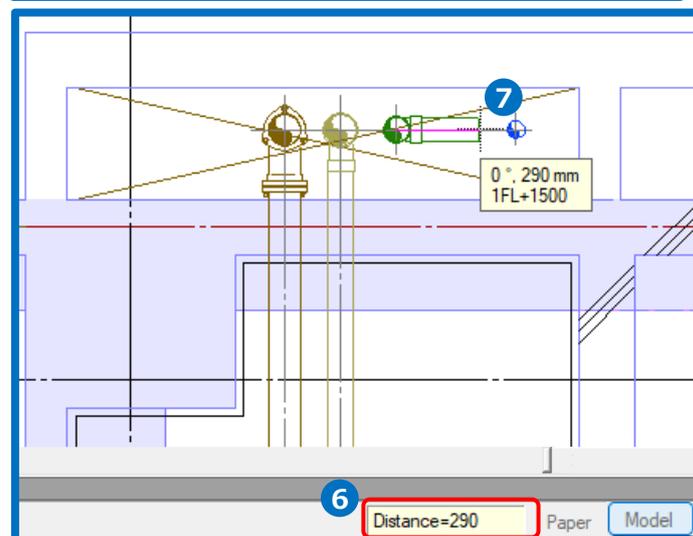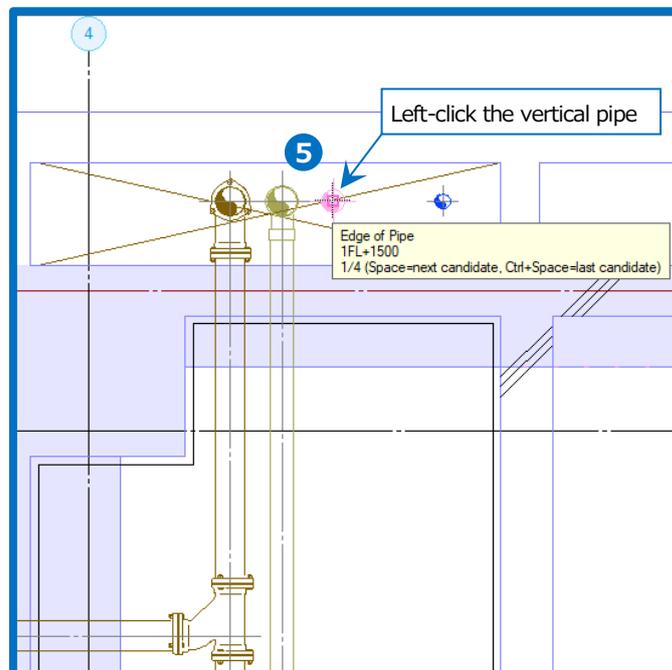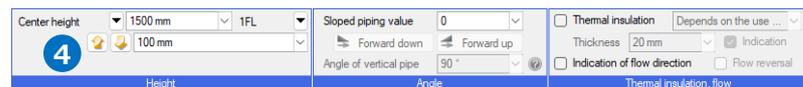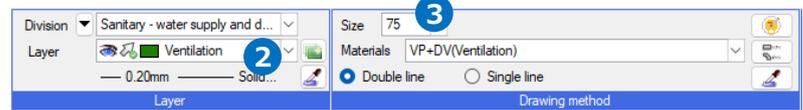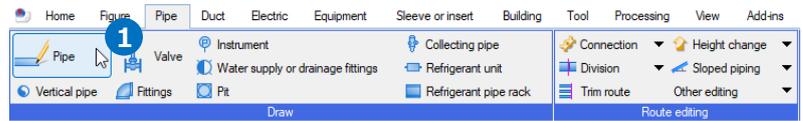
**8** Change the height.
Type "-400" into the changing height on the context menu, and close the menu.
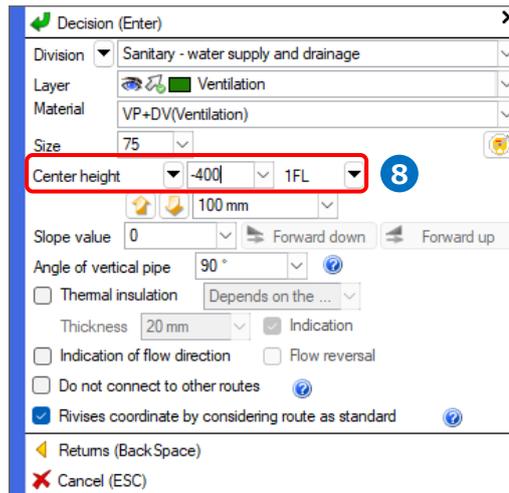
**9** Draw a route and left-click a horizontal main pipe for soil water to connect to the vent pipe.



Left-click a point on the line of the soil water pipe
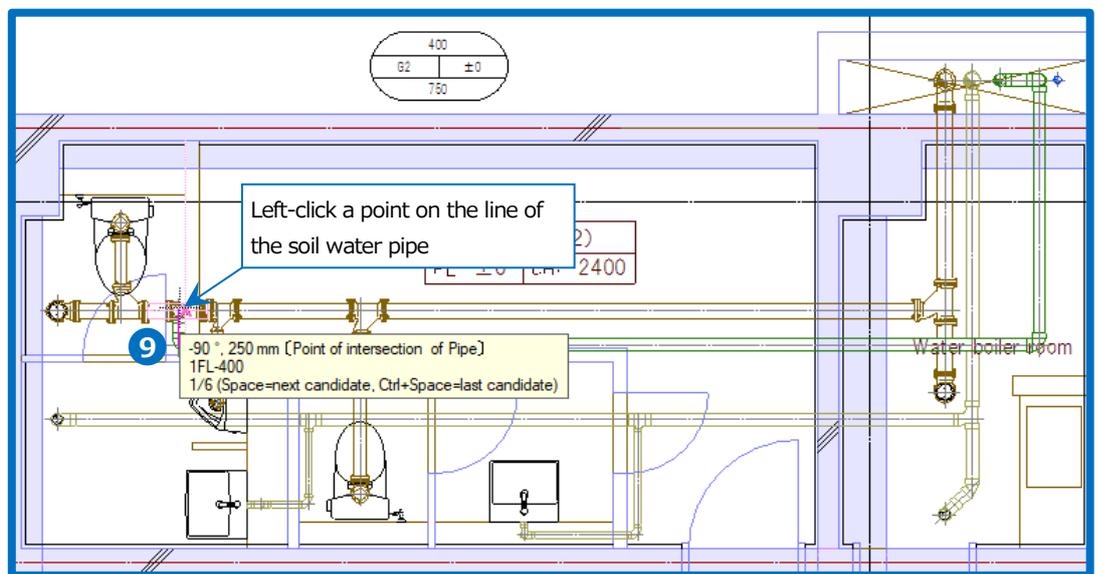
**Pick out a branch pipe on the route**

**1** Left-click a vent pipe and select [Addition of branch pipe] on the context menu.
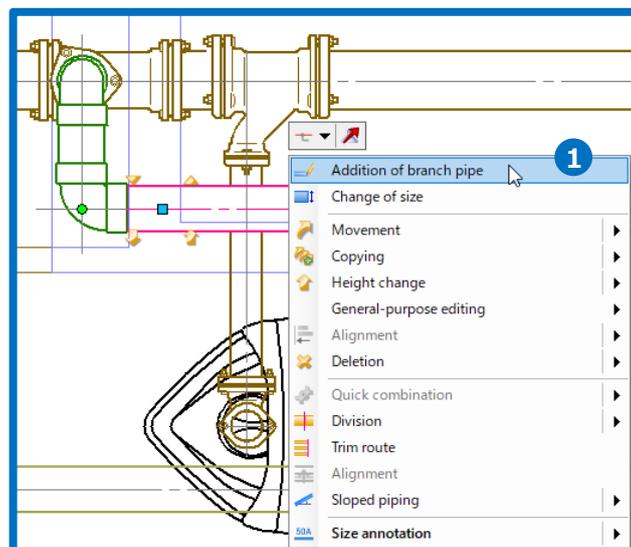
**2** Type "50" into the size on the context menu to close the menu. The initial value of the height is "The same as main pipe" in [Addition of branch pipe] command.

**3** A guidance message appears saying as follows: "Specify position picking up branch pipe". Left-click the position to pick out a branch pipe.

**4** Left-click a waste pipe to connect to a vent pipe.



Decision (Enter)
Division — Sanitary - water supply and drainage
Layer — Ventilation
Material — VP+DV(Ventilation)
Size — 50 **2**
Center height — The s... 1FL
100 mm
Slope value 0 — Forward down — Forward up
Angle of vertical pipe 90°
☐ Thermal insulation — Manual operation
Thickness 0 mm ☑ Indication
☐ Indication of flow direction ☐ Flow reversal
☐ Do not connect to other routes
☑ Rivises coordinate by considering route as standard
◀ Returns (BackSpace)
✕ Cancel (ESC)



Left-click the point on the line of the vent pipe

Point on line of Pipe
1FL+0
1/1 (Space=next candidate, Ctrl+Space=last candidate)



Left-click the point on the line of the waste pipe

0°, 550 mm [Point of intersection of Pipe]
1FL-400
1/3 (Space=next candidate, Ctrl+Space=last candidate)

## How to draw routes for water pipes

### Draw a horizontal main pipe from a vertical pipe

**1** Left-click [Pipe] tab- [Pipe].

**2** Select "Layer"-"Water supply".

**3** Select "Size"-"30" or type "30" into the blank.

**4** Type "1500" into the height and select "1FL".

**5** A guidance message appears saying as follows: " Specify position to make pipe." Left-click the snapped point of a Vertical pipe ("Edge of pipe" and so on) to connect to a Vertical pipe.

**6** Type "180" for pipe length with the keyboard. The entered numerical value appears in the field [Distance=] on the status bar.

**7** Bring the pointer into the drawing direction and left-click there or press Enter.
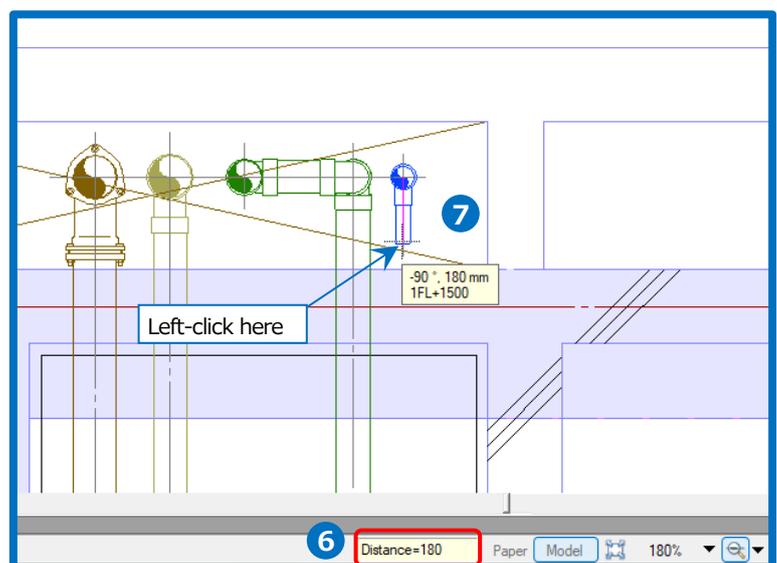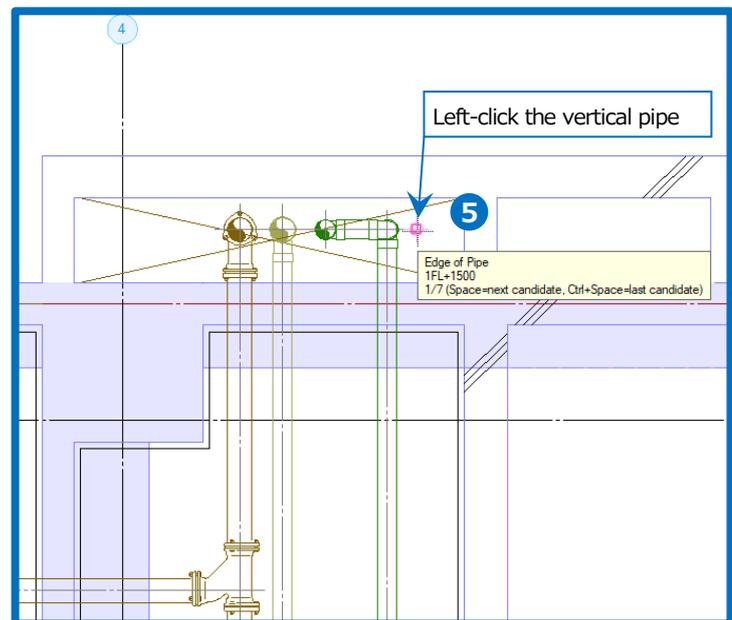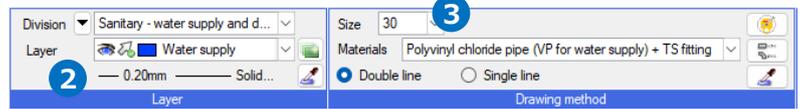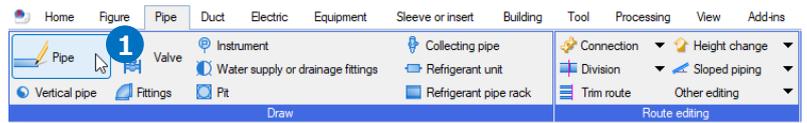
**8** Change the height.

Type "-900" into the changing height on the context menu to close the menu.
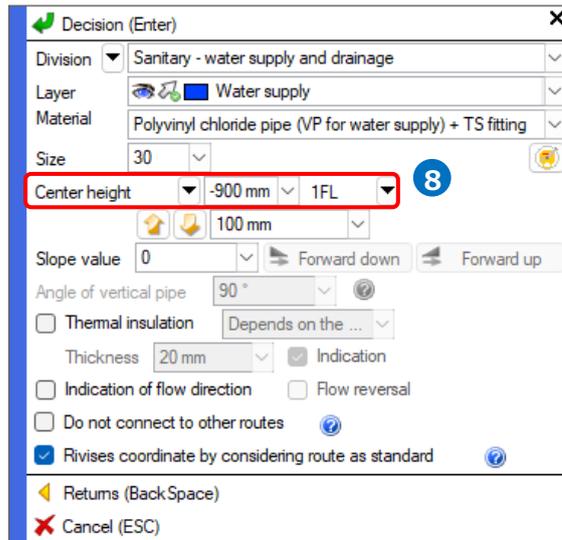
**9** Draw a main route.

※Extend the end portion a little longer so that a branch pipe can be easily connected.

After the connection, delete the surplus route. (See also page 39)



**10** Left-click [Decision] on the context menu to end the command.
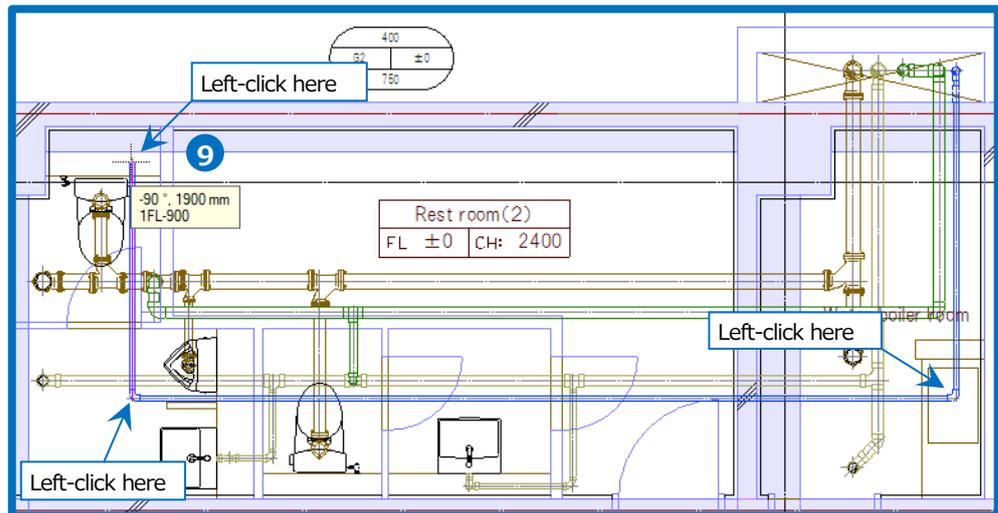


### Draw branch pipes connecting to equipment

**1** Left-click a washstand bowl to show a handle for drawing routes (yellow), then left-click the handle.

→The descriptions on the ribbon change to [Route drawing figure] and the following appears: uses, size, and connecting height, which are stored in the equipment.
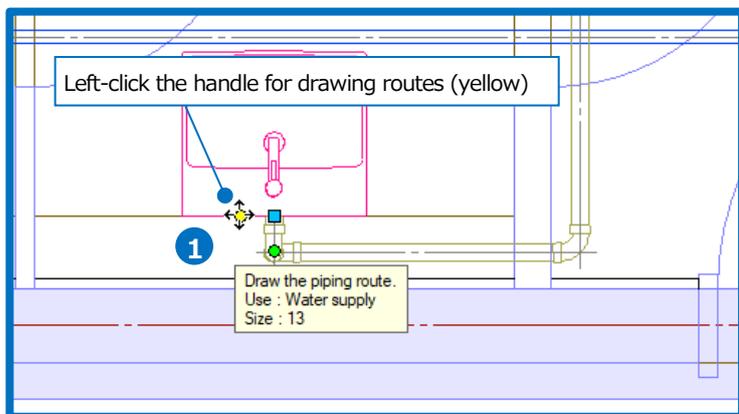
**2** Type "100" for pipe length with the keyboard. The entered numerical value appears in the field [Distance=] on the status bar.

**3** Bring the pointer into the drawing direction and left-click there or press Enter.

**4** Change the size. Type "20" into the changing size on the context menu to close the menu.

**5** Left-click the position to create piping.
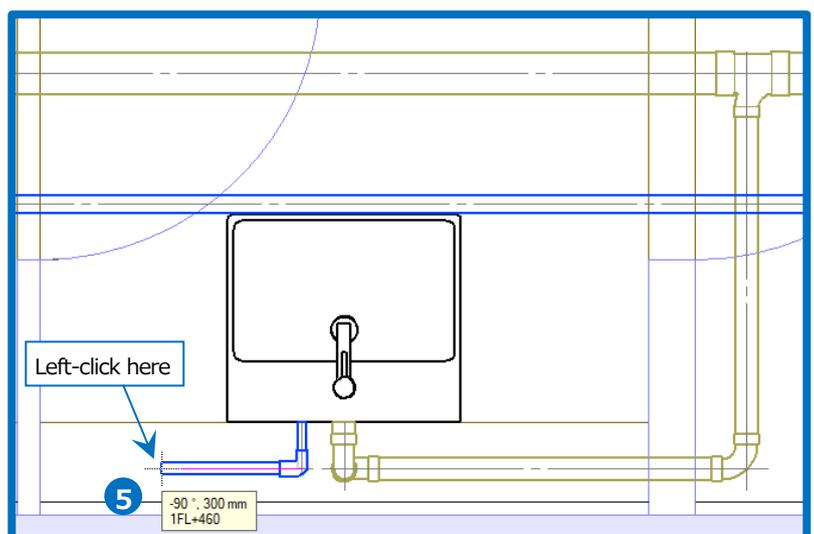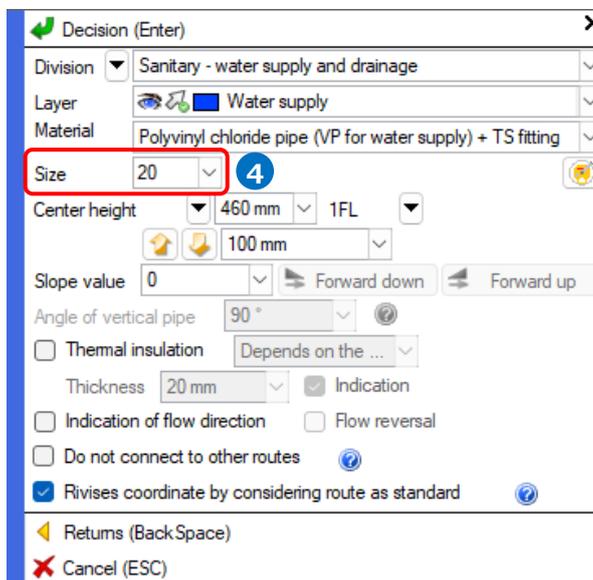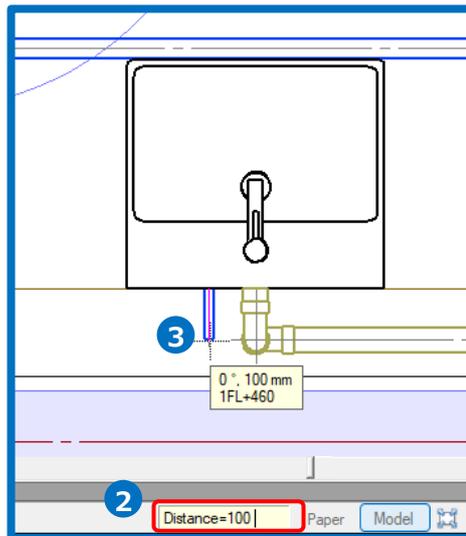
**6** Change the height. Type "-900" into the changing height on the context menu to close the menu.

**7** Left-click the main pipe to connect to the branch pipe.

**8** Draw similarly other branch pipes.



Left-click a point on the line of the main pipe
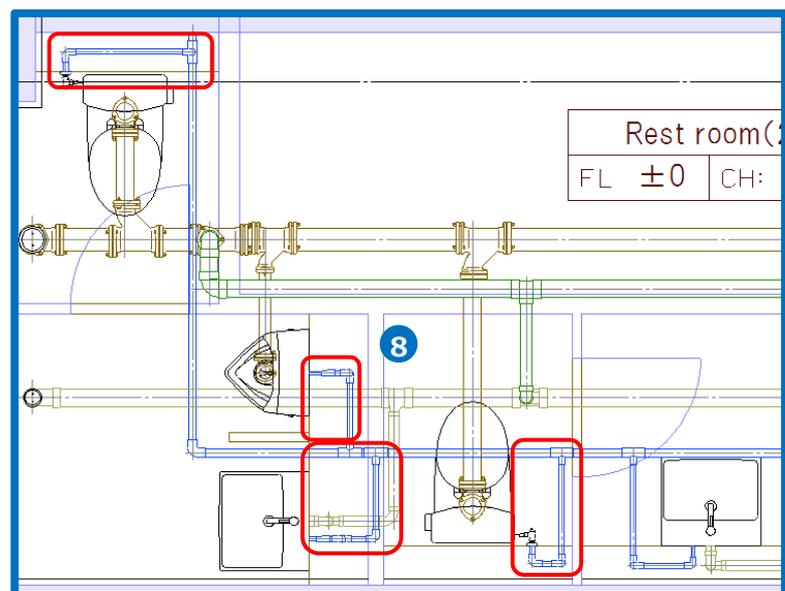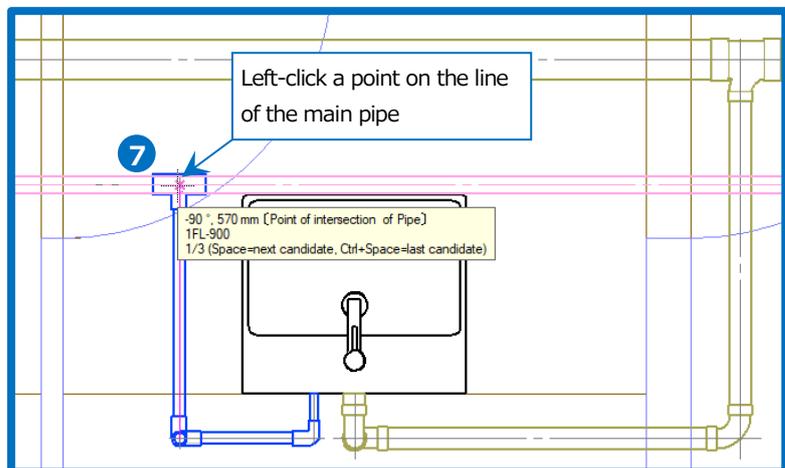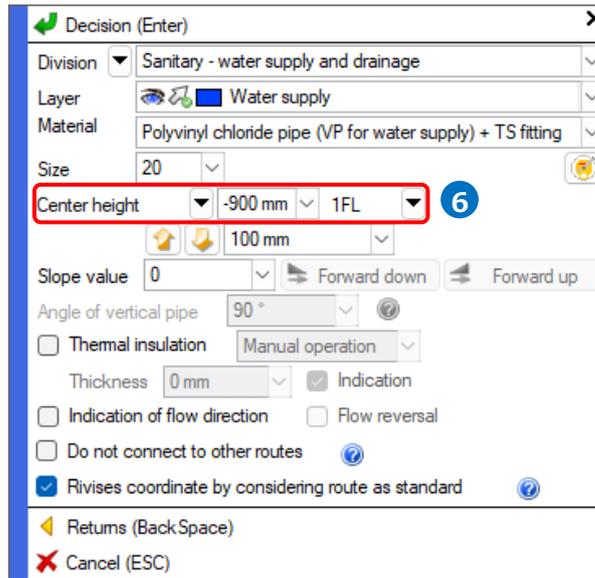
## How to add valves

Add valves to water pipes in a shaft.

**1** Left-click [Pipe] tab- [Valve].

**2** Select [Insertion of valves] dialog box-"Gate valve"-"Gate valve made of bronze - Kitz"-"Screw type JIS5K".

**3** Left-click [OK].

**4** Checkmark [Height] and type "1300" into the valve height, then select "1FL".

**5** A guidance message appears saying as follows: "Specify position to locate". Point the vertical pipe with a pointer to show a temporary valve so that the color becomes the same as the pipes.

Checkmark [Adjust size in insertion], to adjust the valve size according to the pipe size that you insert.
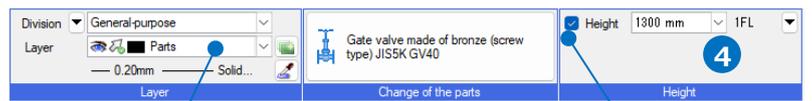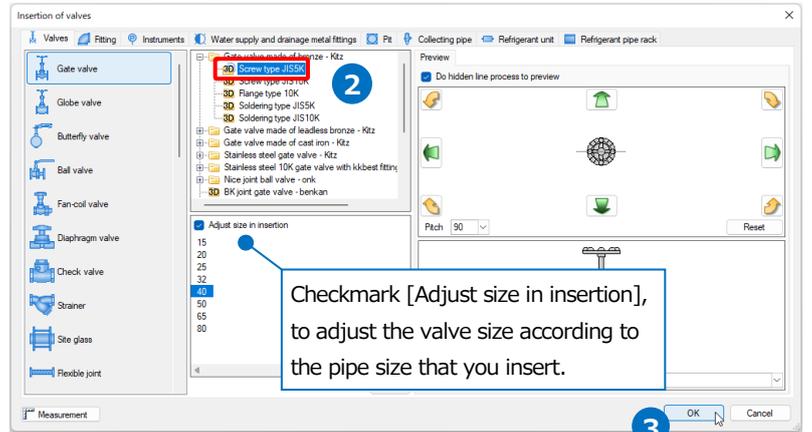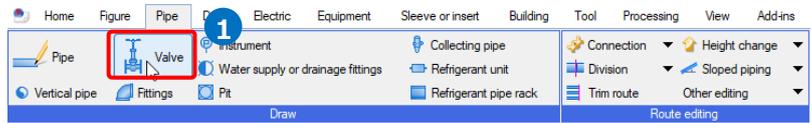
Type on the piping conduit to change to the piping layer.

Uncheck the check box to align the valve with the height of the pipe that you insert.

Point the riser with a pointer to show a temporary valve
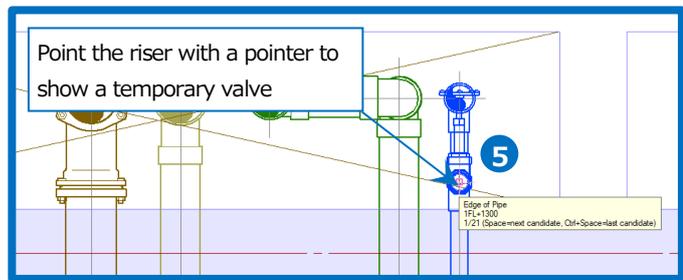
⑥ Left-click arrow buttons in [Rotation] on the context menu to adjust the valve direction.

⑦ Left-click [Decision] to add a valve on the route.

⑧ Left-click [Decision] on the context menu to end the command.
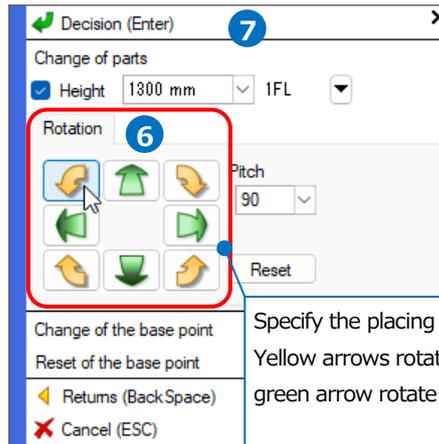


Specify the placing angle.
Yellow arrows rotate equipment on a plane and green arrow rotate it about the axis.

※You can specify the placing angle in advance on a preview screen in [Insertion of valves] dialog box.
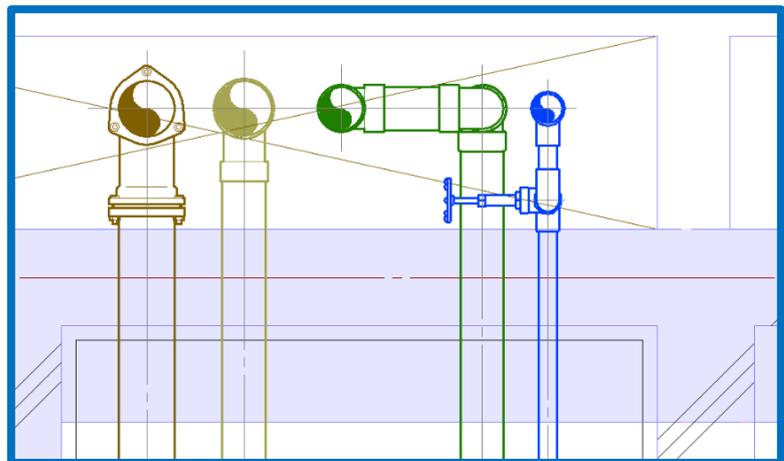
# 4. Edit pipes

## How to choose the route for pipes

Use [Element] panel- [Choose routes systematically], [Extend the route choice], and [Choose section on the route] to choose successive piping routes. You can edit smoothly by choosing routes systematically or selecting routes that match the condition. You can also select a route on the context menu.
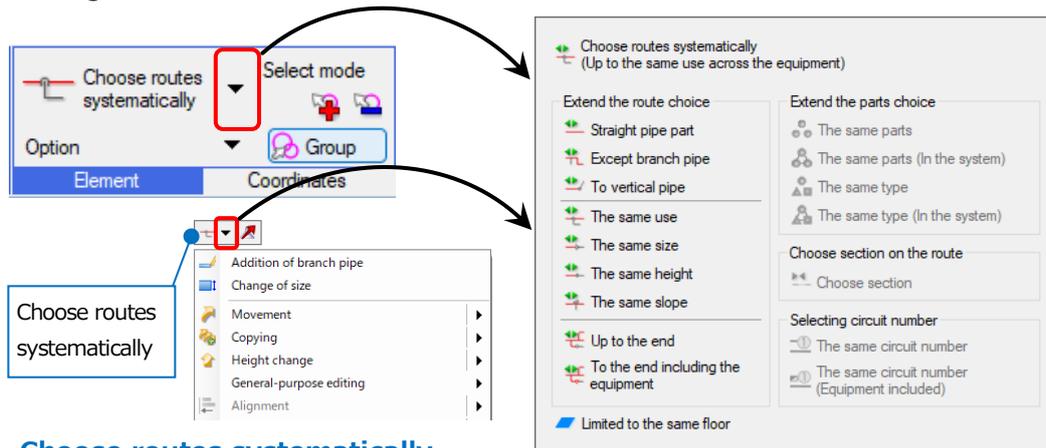


### Choose routes systematically

Choose an element on the route and left-click [Choose routes systematically] to choose all routes for the same use in the system.

### Extend the route choice

Choose an element on the route and select the expansion type. Left-click an arrow that appears on the chosen route to select the direction. Left-click between two arrows to choose all routes that elongate to both direction.
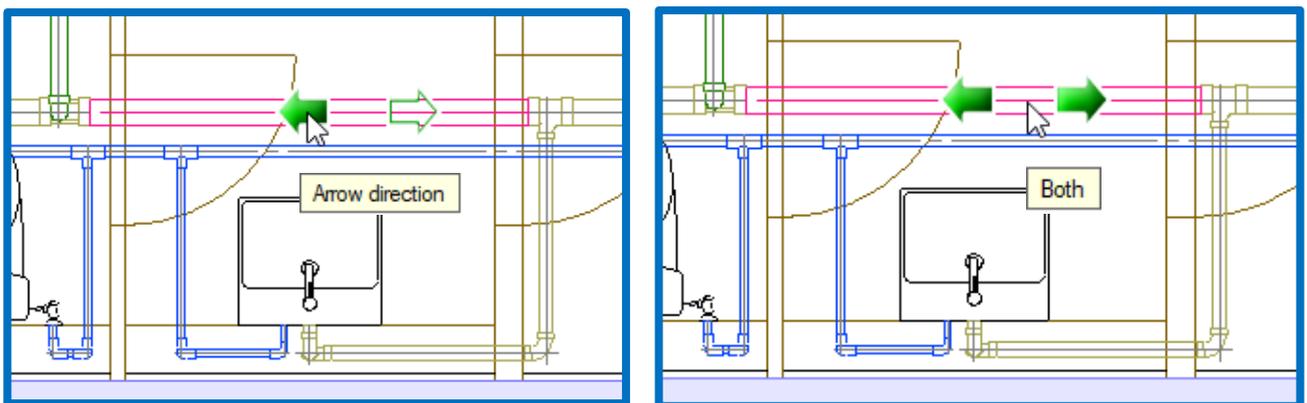


### Choose section on the route

Choose the section between the two elements on a route. Left-click the first element, the second element, and [Choose section] in turn.

## How to resize pipes

Resize a water pipe on the route of a straight pipe.

① Left-click the pipe.

② Left-click "▼" next to [Choose routes systematically] to select [Extend the route choice]-[Up to the end].

③ Arrows appear on the chosen pipe. Left-click the arrow for the direction where you want to change the size.
→The target pipe is chosen.
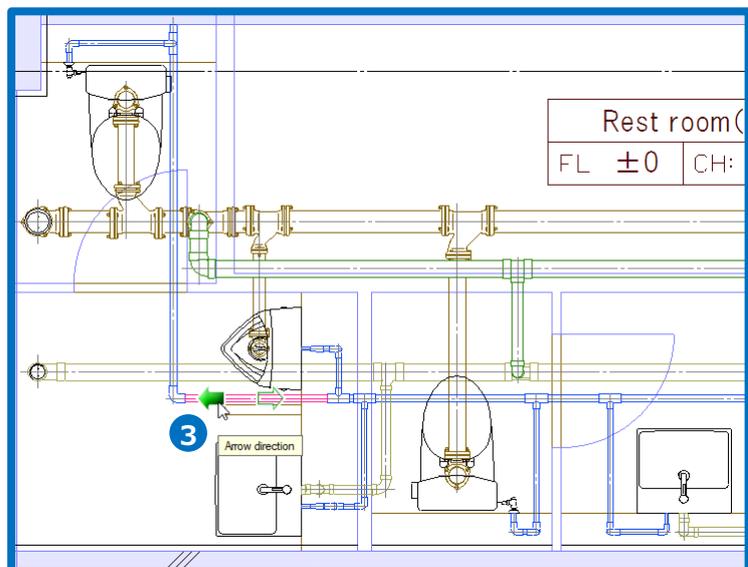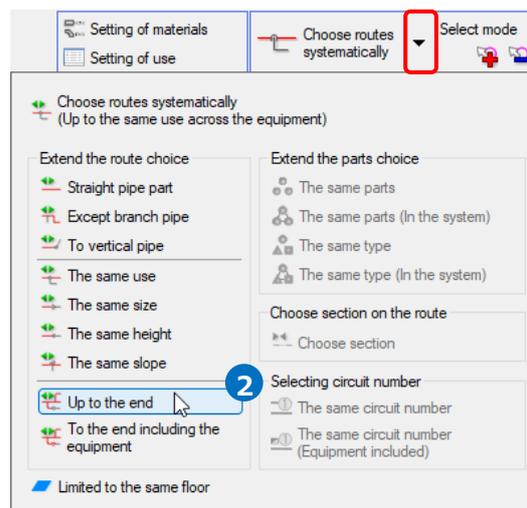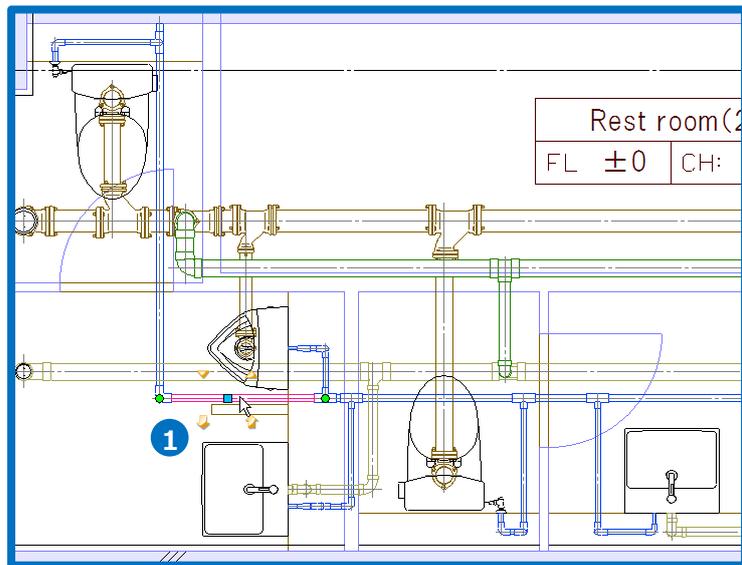
**4** Left-click [Change of size] on the context menu.

**5** Type "20" into the changing size on the context menu.

**6** Left-click [Decision] to end the command.



---
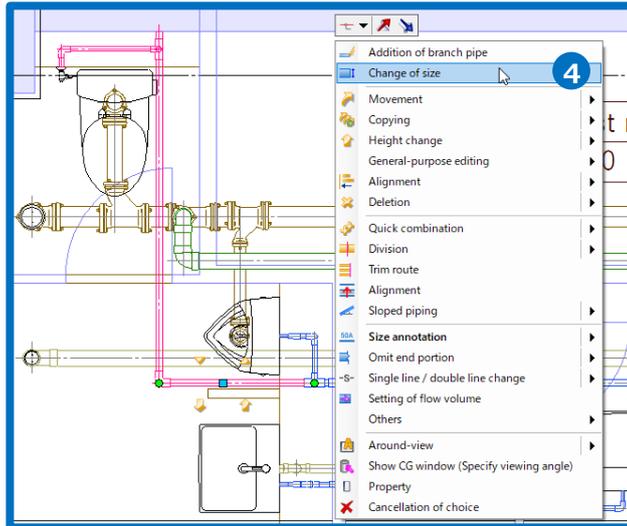
**Memo**

Left-click the handle [ ▼ ] or [ △ ] that appears on the chosen pipe to change by each size.

[ ▼ ] for downsizing

[ △ ] for upsizing

Resizing can be set by [Setting]-[General] tab-[Pipe, duct, and electricwire common]-[Resize].

---
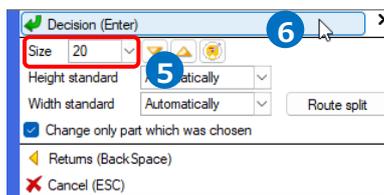
**Memo**

Resize on the route of a straight pipe to create a reducer. You can set the distance between a tee and a reducer by specifying [Setting]-[General]tab-[Pipe, duct and electricwire common]-[Drawing rule]-[Interval between reducer].



**Pipe, duct, and electricwire common – Drawing rule**

| | | |
|---|---|---|
| Maximum angle of fitting (below) | 2 ° | |
| Maximum of sloped piping | 2 ° | Generate automatically tee and reducer in case not to use unequal tee."Interval between reducer" specify distance of them |
| Interval between reducer | 50 mm | |

---
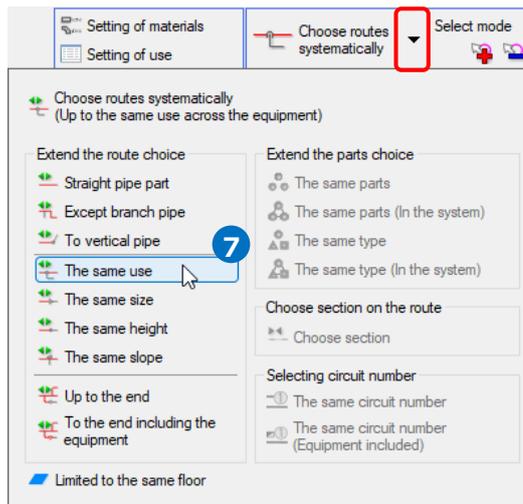
**7** Resize similarly a vent pipe. Left-click the pipe and [▼] next to [Choose routes systematically], to select [Extend the route choice]-[The same use].

**8** Left-click the arrow to choose a route to resize.
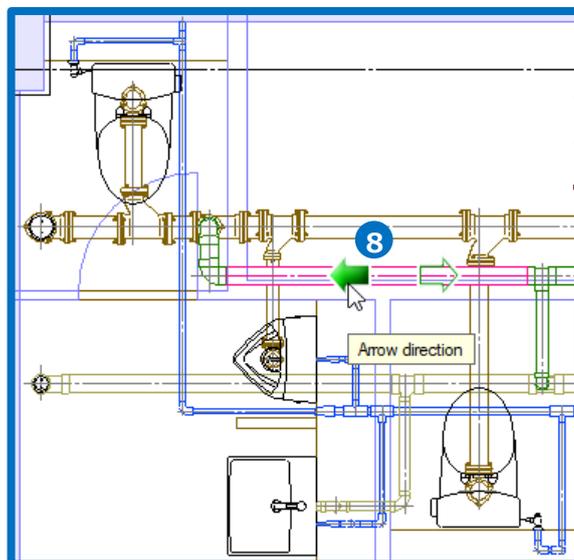
⑨ Left-click [Change of size] on the context menu to select "50" for the changing size.

⑩ Left-click [Decision] to end the command.
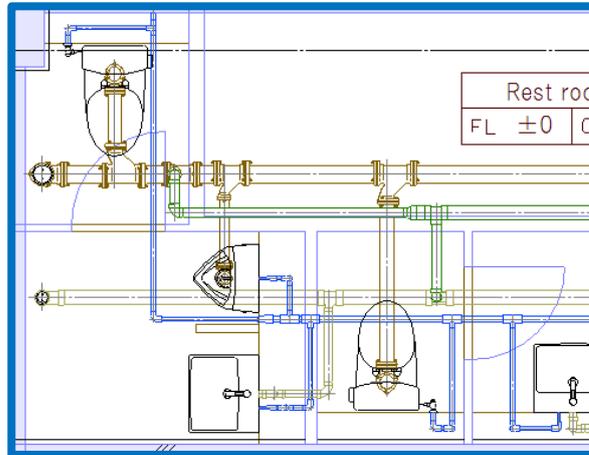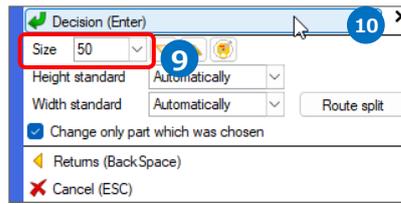
● Supplementary explanation:

Uncheck [Change only part which was chosen] in edit command of piping to extend route choice automatically based on the chosen route.
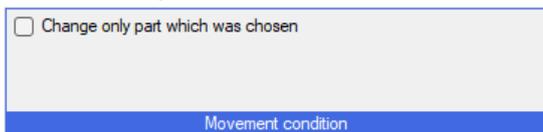
| Command | Extended area |
| --- | --- |
| Height change | Change the routes height including other routes that are the same height as the chosen route |
| Sloped piping | Give a slope to routes including other routes that has the same use as the chosen route |
| 45 degrees sloped piping | Give a 45-degrees slope to the routes including other routes that are the same height as the chosen route |
| Cancellation of sloped piping | Reset the slope and level routes including other routes that has the same use as the chosen route |
| Offer thermal insulation | Add thermal insulation to whole routes that are connected to the chosen route |
| Change of size | Resize the routes including other routes that are the same size as the chosen route, however excludes the branch routes |
| Movement | Move straight routes (incl. a Vertical pipe) on the specifying view |
| Rotation Rotating and copy | Rotate straight routes (incl. a Vertical pipe) beyond a base point on the specifying view. Rotate and copy straight routes (incl. a Vertical pipe) beyond a base point in the specifying view |

## How to delete pipes

**1** Left-click the pipe and [Deletion] on the context menu.

→The specified pipe is deleted.

Rebro changes the fittings shape according to the connecting state of the pipe.

---
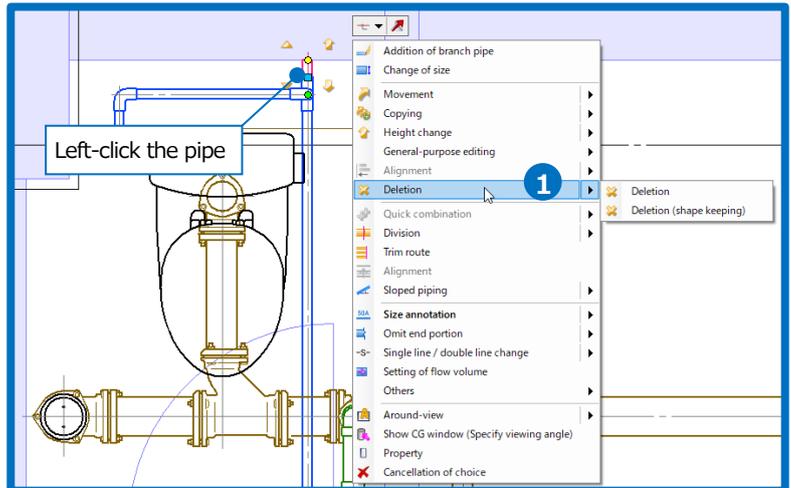
**Memo**

A piping conduit that is shorter than the overlap length of fittings can be deleted by pointing the fitting end and choosing the point left on the end.

Water supply Pipe 20VP
Hard polyvinyl chloride pipe for water supply
1FL-900  35mm
Layer: Water supply
2/2 (Space=next candidate, Ctrl+Space=last candidate)

---

Left-click the pipe

The tee changes to an elbow.

---
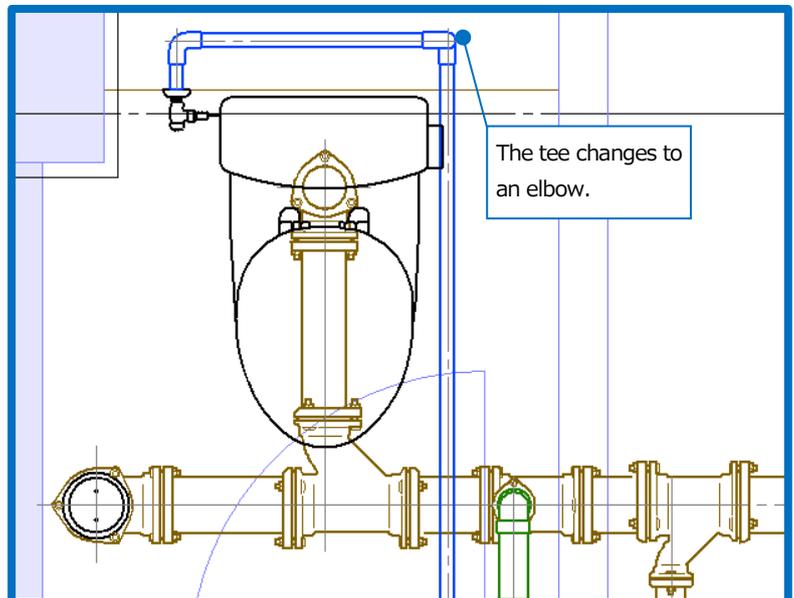
• Supplementary explanation:

[Deletion (shape keeping)] leaves without changes the fitting that are connecting to the route.
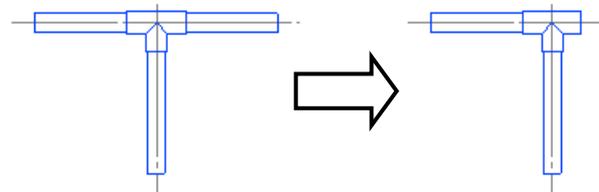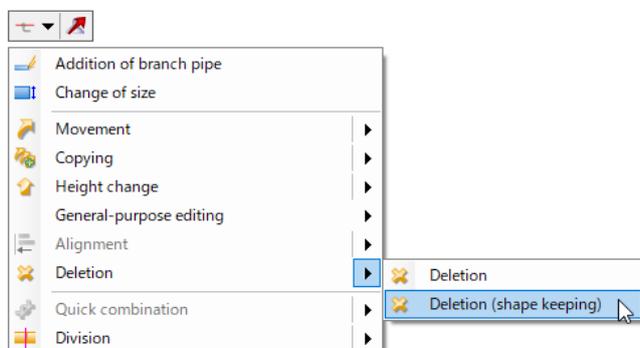
## How to move pipes

Move the pipes and adjust the gap measurement between the base line and the actual center line.

**1** Left-click the pipe (a vent pipe) to move.

**2** Left-click a handle for moving (blue).

**3** A guidance message appears saying as follows: "Specify move point". Drag the point on a line of the center line for a soil water pipe, the reference position, into a downward direction.
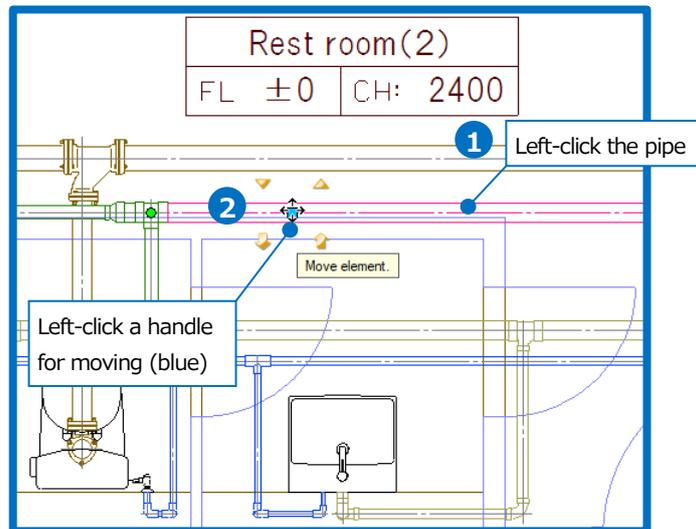
**4** Type the distance into the blank by Measure.

- ■ 200

**5** Left-click ⏎ icon or press Enter to confirm.

**6** Move similarly other routes.

Rest room(2)
FL ±0 | CH: 2400

**1** Left-click the pipe

**2**

Move element.

Left-click a handle for moving (blue)

Drag the point on a line

Rest room(2)
±0 | CH: 2400

**3**

**4** 200

**5**

Type into the blank the distance from the reference position

500

Rest room(2)
FL ±0 | CH: 2400

**6**

175  175  125    120    360    1,000
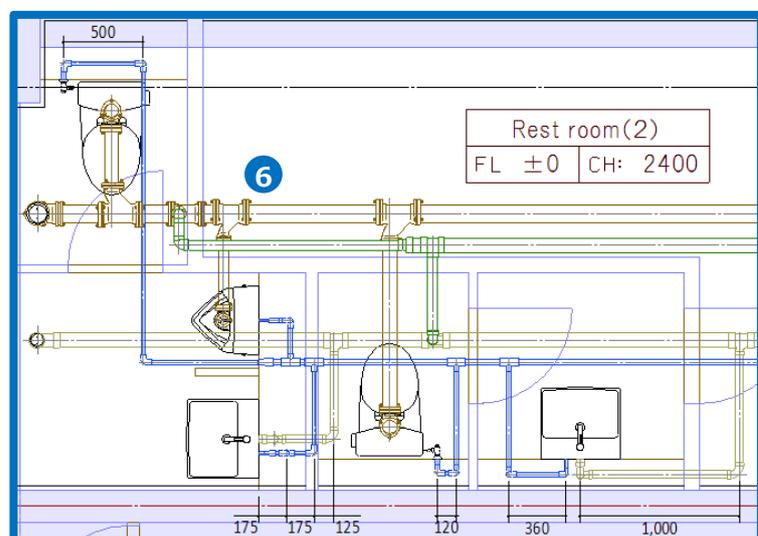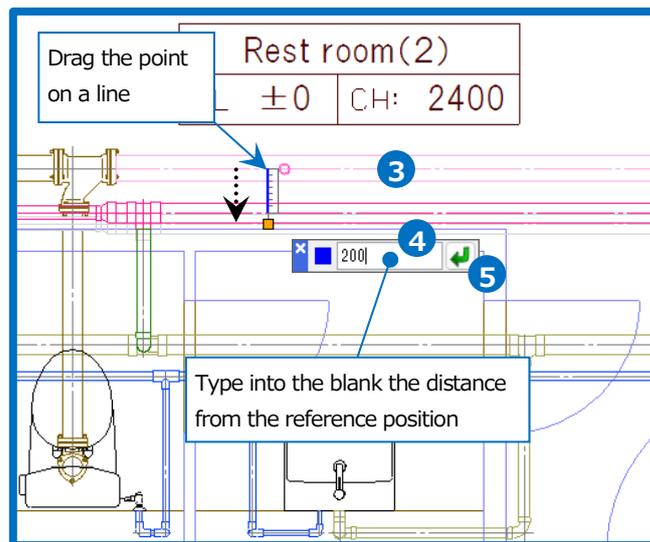
## How to bend a branch pipe into a 45-degrees angle

Move fittings to change the route shape.

**1** Left-click the piping conduit that you want to bend into a 45-degrees angle, then left-click [Division] on the context menu.
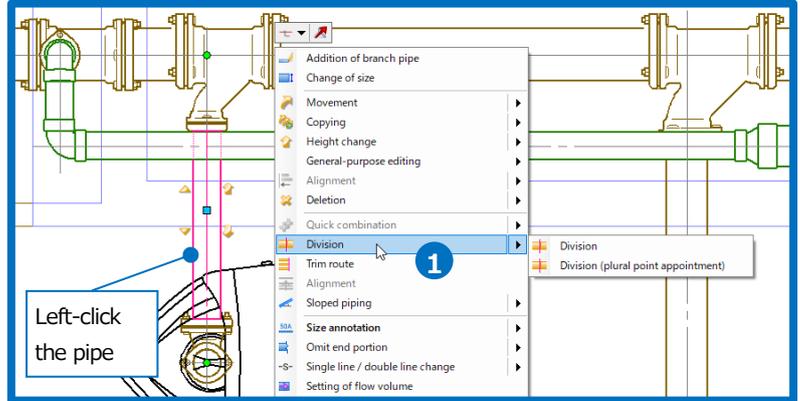
**2** A guidance message appears saying as follows: "Specify division position". Drag the point on a line of the main pipe in a downward direction.



Left-click the pipe
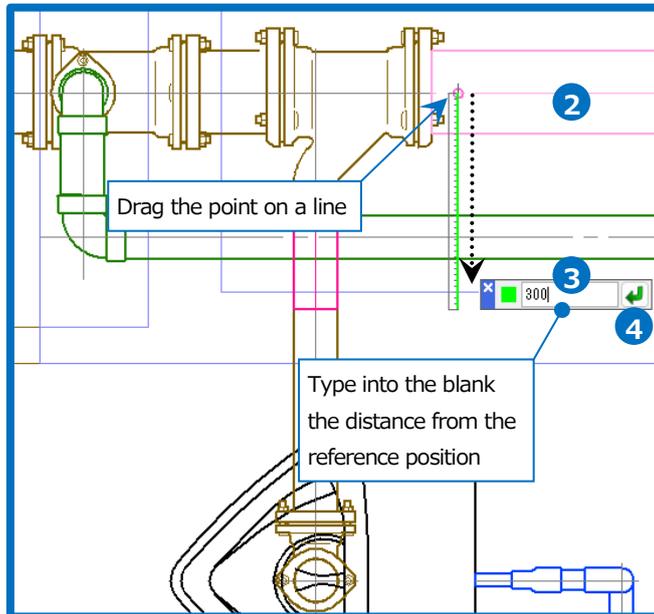
**3** Type the distance into the blank by Measure.
   - 300

**4** Left-click 🔲 icon or press Enter to confirm.

> **Memo**
>
> The route located downstream from the position where [Division] is executed goes out of scope of automatic extension for the route choice in [Height change], [Movement], and [Rotation]. (See also page 38 for a supplementary explanation)



Drag the point on a line

Type into the blank the distance from the reference position

**5** Left-click the fitting to show a handle for moving (blue).



Left-click the fitting
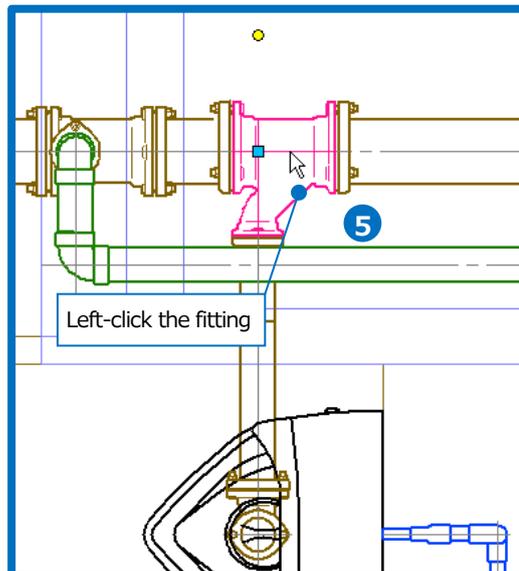
**6** Left-click the handle.

Memo

Left-click the handle for moving fittings, a numerical value is entered in [Coordinates]-[Pitch] automatically so that the elbow becomes 45-degrees.
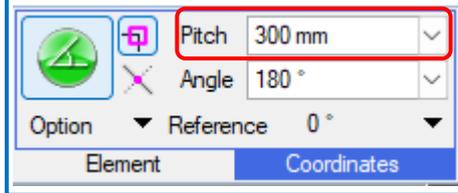
| | | Pitch | 300 mm | ⌄ |
|---|---|---|---|---|
| | | Angle | 180 ° | ⌄ |
| Option | ▼ | Reference | 0 ° | ▼ |
| Element | | Coordinates | | |
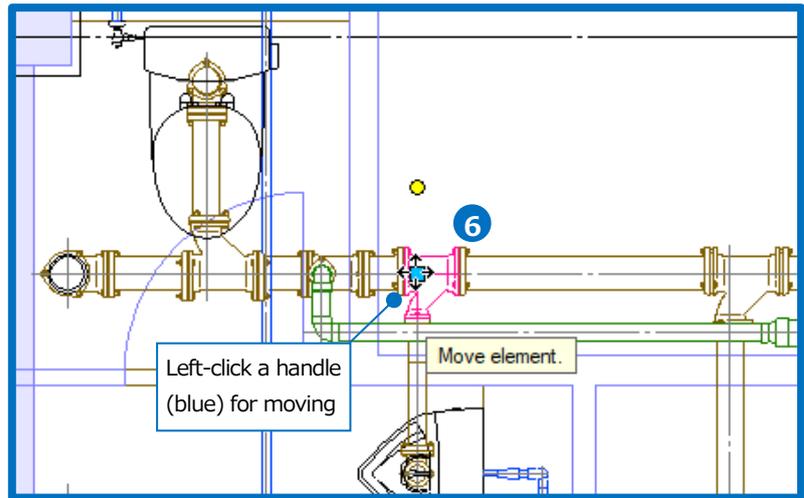


Left-click a handle (blue) for moving

Move element.

**7** A guidance message appears saying as follows: "Specify move point." Bring the pointer into the moving direction and left-click the position where a 45-degrees elbow appears.



Left-click the position where a 45-degrees elbow appears

0 ° 300 mm
1FL-900

The pitch on [Coordinates]
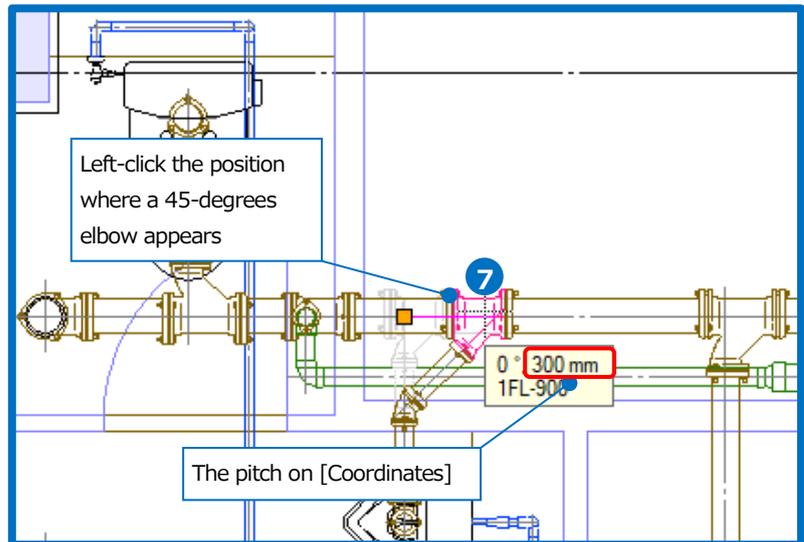
## How to change the height

Change the height of a main pipe for a water pipe.

**1** Left-click the pipe.

**2** Left-click "▼" next to [Choose routes systematically], to select [Extend the route choice]-[The same height].

**3** Arrows appear on the chosen pipe. Left-click the arrow for the direction where you want to change the height.
→The target pipe is chosen.
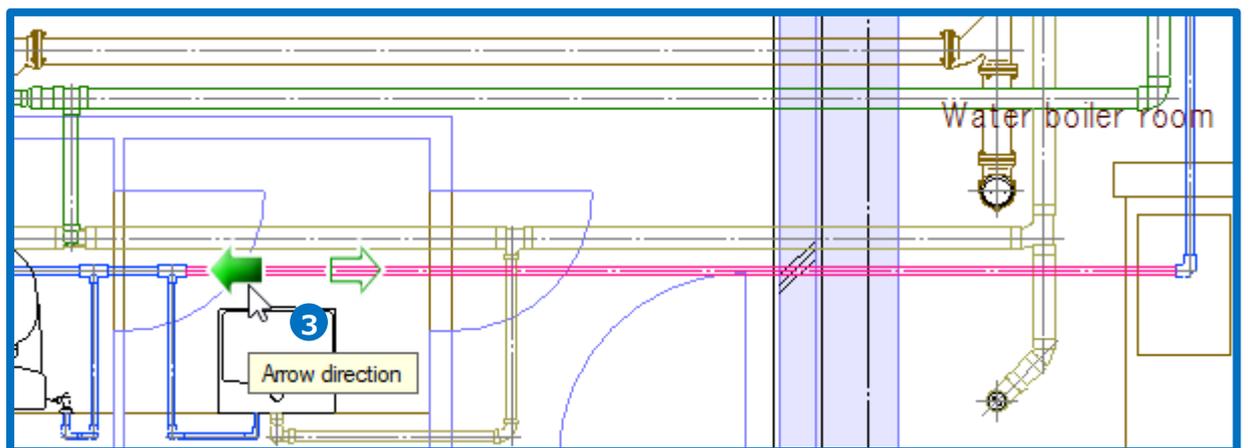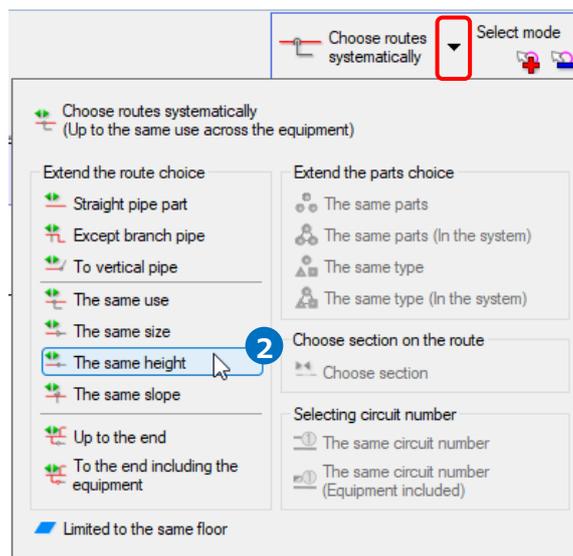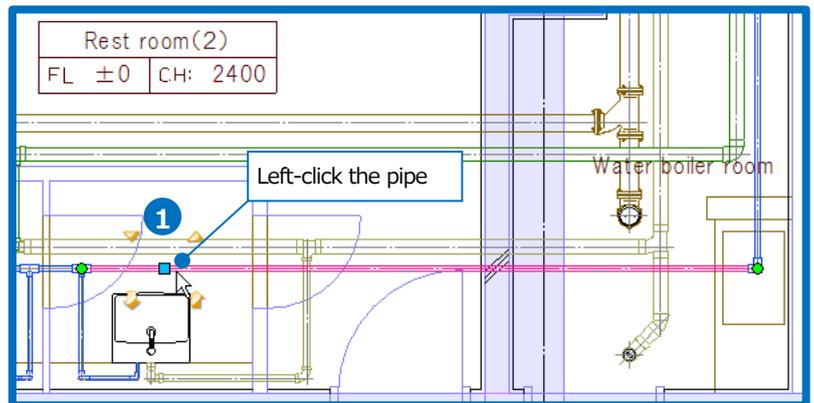
**4** Left-click [Height change] on the context menu.



**5** Select the way to change "Absolute".

---

Memo

If you select "Absolute", you can select the piping height reference from the following: "Automatically", "Top end", "Center", "Bottom end", "Top end (include thermal insulation)" or "Bottom end (include thermal insulation)". In the case of "Automatically", "Center" serves as the reference for pipes, and "Bottom end" for rectangular ducts, cable racks, and so on.



---

**6** Checkmark [Change only part which was chosen].

**7** Type "-400" into the changing height and select "1FL".
→The changed height appear temporarily.

**8** Left-click [Decision] on the context menu to execute the change.



---
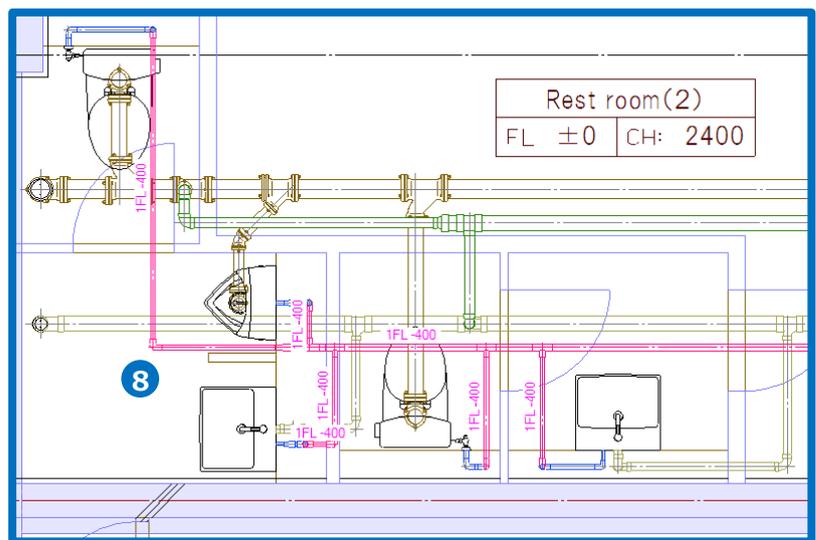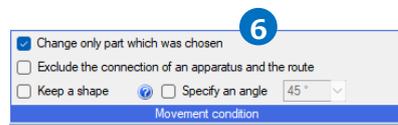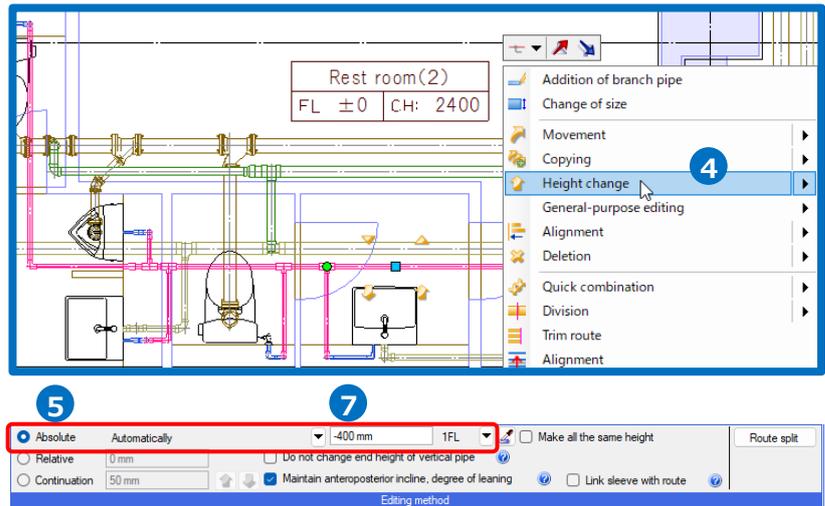
Memo

Left-click the handle [ ⬇ ] or [ ⬆ ] that appears on the chosen pipe to start [Height change], and you can change the height with the value entered in "Continuation". With each click, the height is changed by the entered value.
Click [ ⬇ ] to go down, and [ ⬆ ] to go up.

You can change the height with the value entered in "Continuation".



---

## How to raise up a branch pipe of a soil water pipe into a 45-degrees angle

**1** Left-click a branch pipe for soil water.

**2** Left-click [Sloped piping]-[45 degrees sloped piping] on the context menu.

**3** Select the way to change "Absolute".

**4** Type "-600" into the changing height and select "1FL".

**5** Checkmark [Change only part which was chosen].

**6** Left-click [Decision] on the context menu to execute the change.
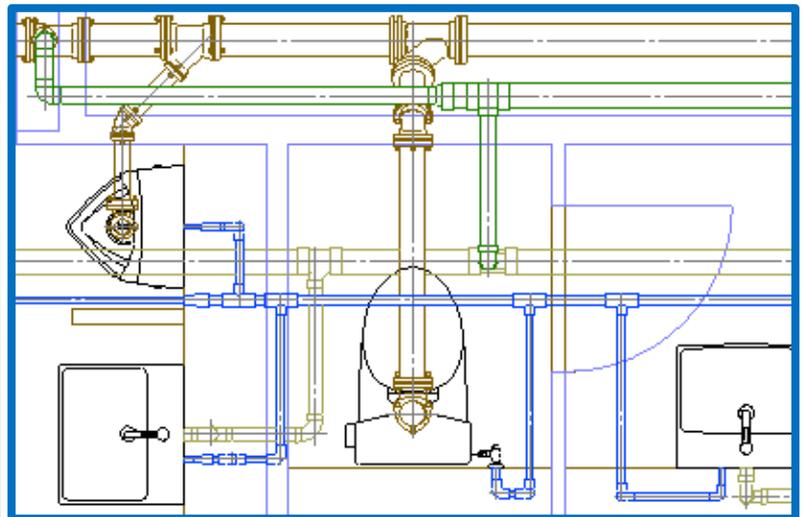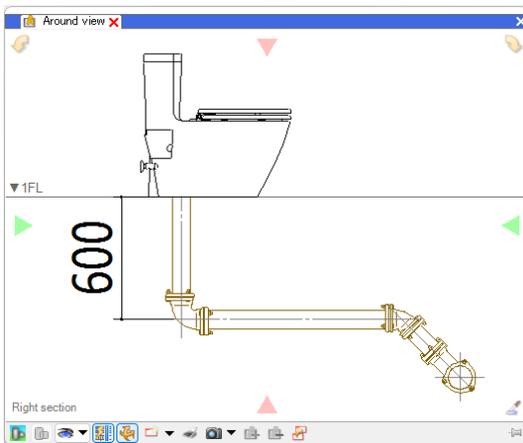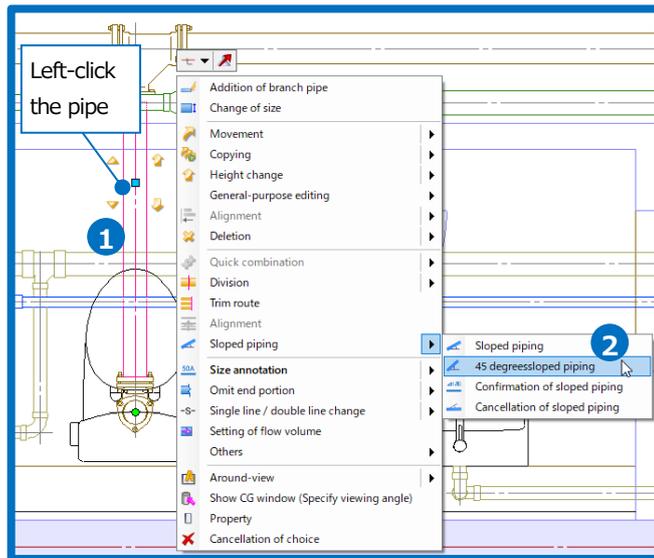
# How to change a fitting type

Change the fitting of the connecting point between a vent pipe and a drainage pipe from a 90-degrees big bend Y to a 90-degrees Y.

**1** Left-click a tees connecting a soil water pipe and a vent pipe.

**2** Left-click [Editing of parts] on the context menu.

**3** Select "Flexible fitting (MD joint) for drainage steel pipe"-"Tee"-"90°Y" in the dialog.



Left-click the "Tee"
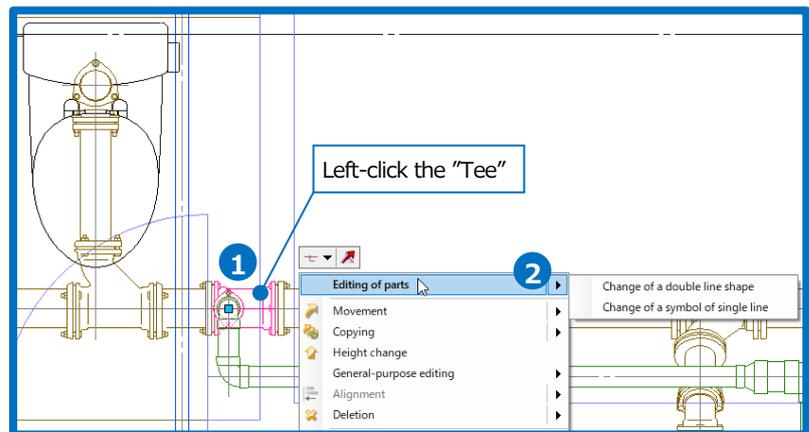
**4** Select "Only selected parts"

> **Memo**
>
> "Only selected parts " option allows you to edit the chosen parts. "All the same parts on the drawing" edits all the same parts on the drawing that match the selected part in terms of size, use, and layer.
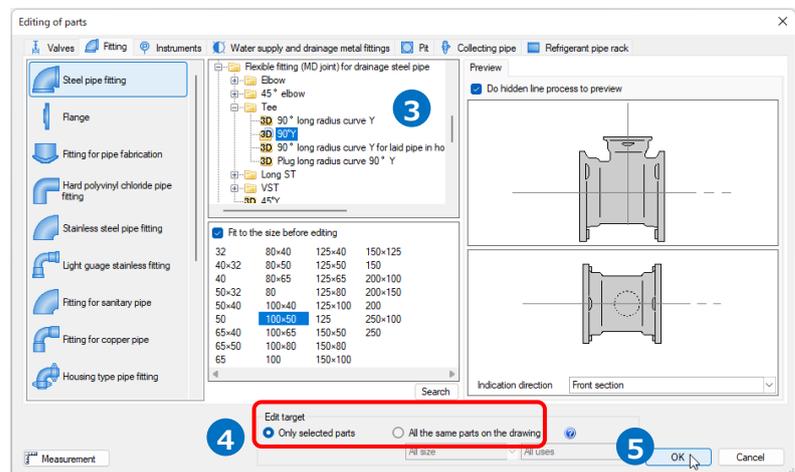


**5** Left-click [OK].

**6** Change similarly the tee connecting a waste pipe and a vent pipe to "Hard vinyl chloride pipe fitting for drainage (DV fitting)-"Tee"-"Unequal 90° Y".



Rest room(2)
FL ±0    CH: 2400
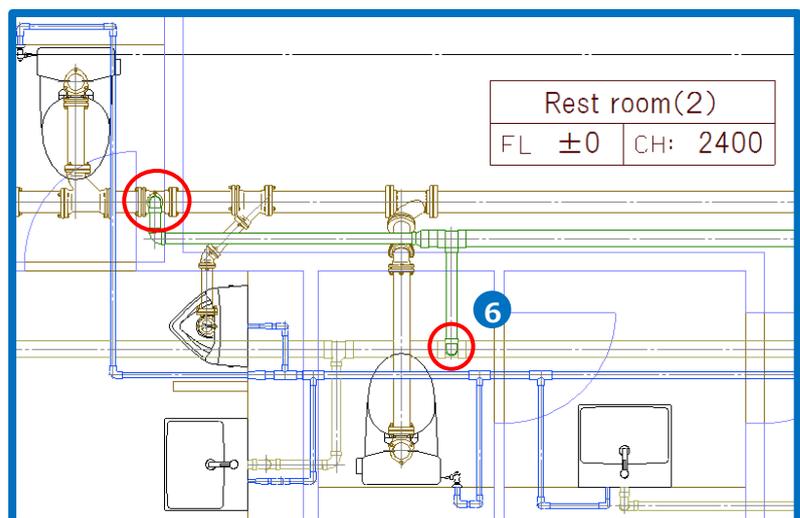
## How to switch from a double line into a single line

You can switch between a single line ⇔ a double line after drawing routes. Now, for example, switch a water pipe into a single line.

In each view, you can select the expression with a single line or a double.

**1** Left-click a water pipe.

**2** Left-click [Element] panel-[Choose routes systematically].

→Rebro picks all pipes in the water pipe system.

**3** Left-click [Single line / double line change]-[Switch to single line] on the context menu.

→The water supply system in a current view switches to single-line.

---
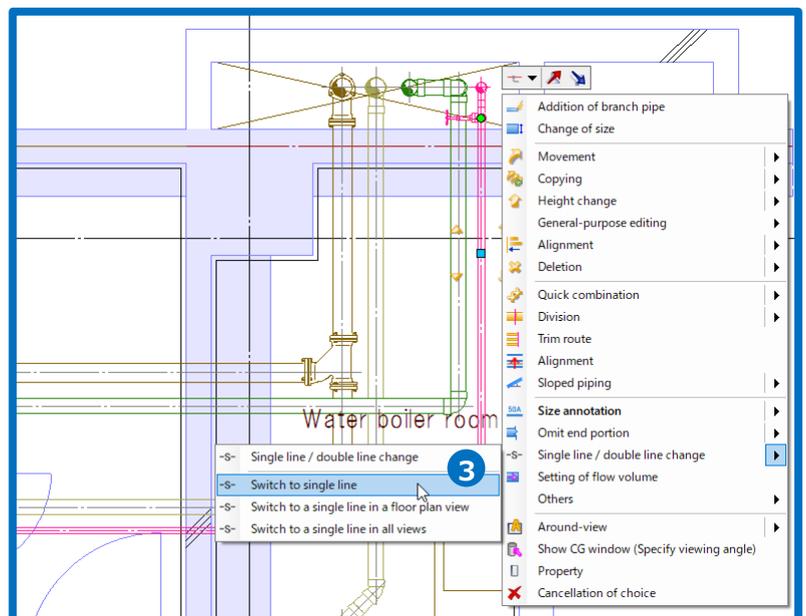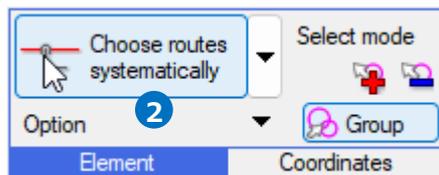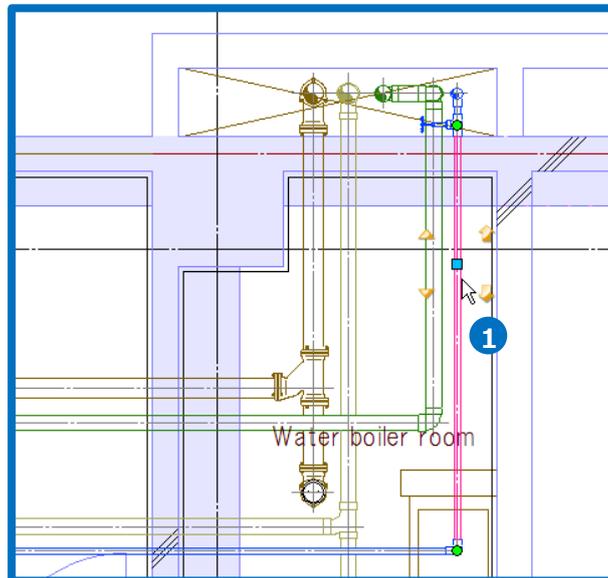
Memo

You can select the view to change the expression by [Single line / double line change] on the context menu, or [Pipe] tab-[Switch to single line].

- ○ Make single line in all views
- ○ Make single line in floor plan view
- ● Make single line only in current view

Adaptation area

If you switch by [Property], all views are affected.
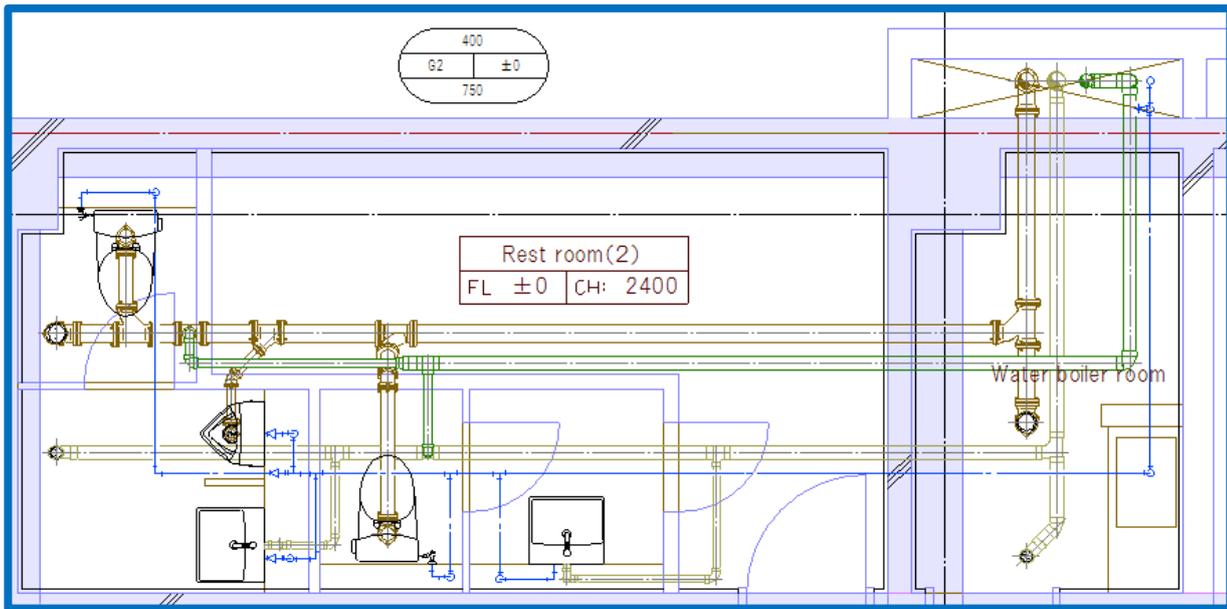
- Supplementary explanation:

You can set a symbol size of a single line by [Pipe] tab- [Other setting]-[Set up single-line symbol] for each scale.



A symbol of uses: Select [Automatic placement distance] or [Automatic placement minimum distance] to show it in the pitch. Select [Pipe] tab- [Edit uses symbol] to add, move, or delete it.

## How to give slopes

Give slopes to a soil water pipe and a waste pipe.

**1** Left-click a soil water pipe.

**2** Left-click [Element] panel- [Choose routes systematically].
→Rebro picks the whole soil water pipe system.

**3** Left-click [Sloped piping] on the context menu.

**4** Select "1/100" for the slope value.
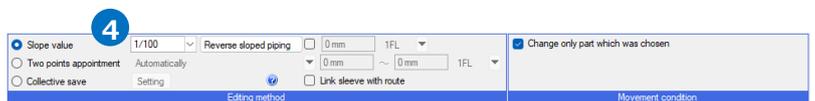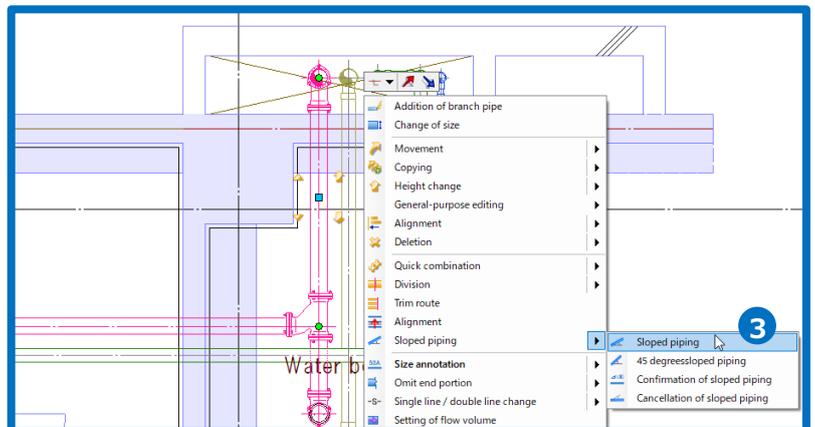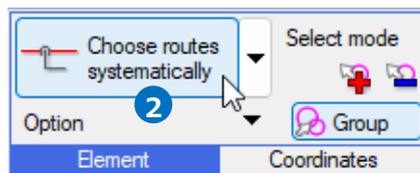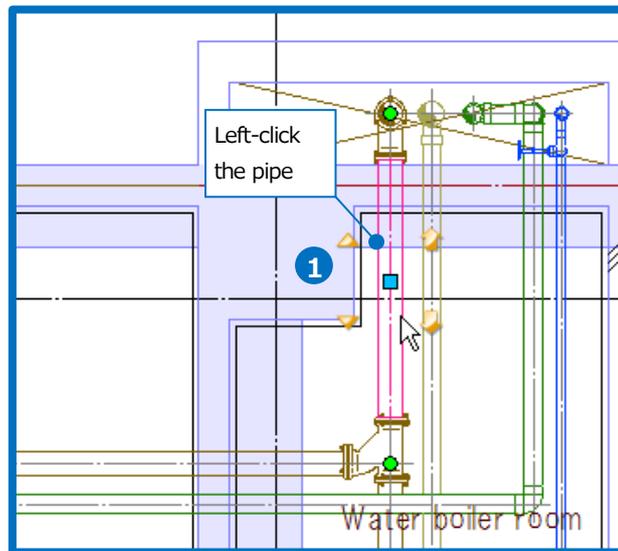
**⑤** Check the directions of slopes. An icon ◢ appears on the route to show the directions of slopes. Left-click the point that has an improper direction, to change.



**⑥** Specify a base point, an changeless position in height, for the slope. Left-click the handle (orange color) that appears on a base point of the slope to specify it as the base point. Now left-click the center position of a vertical pipe.

**⑦** Left-click [Decision] on the context menu to execute the setup.

**⑧** Give a slope similarly to a waste pipe.
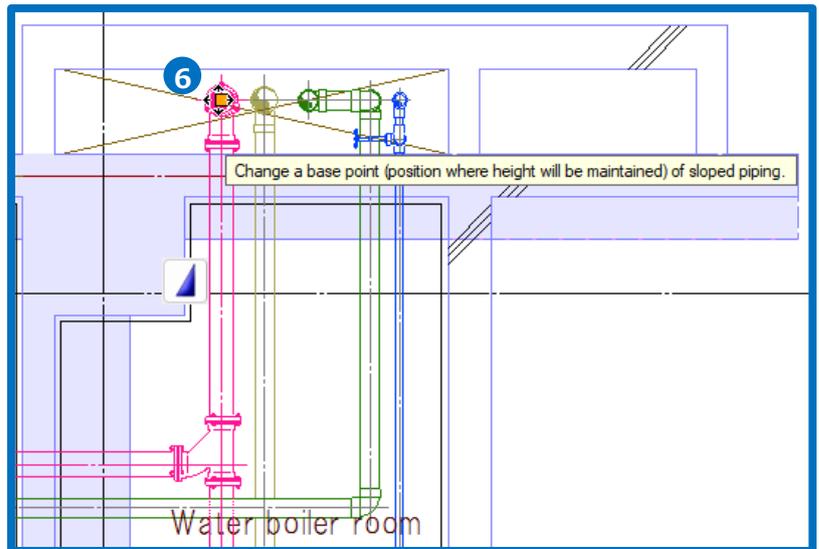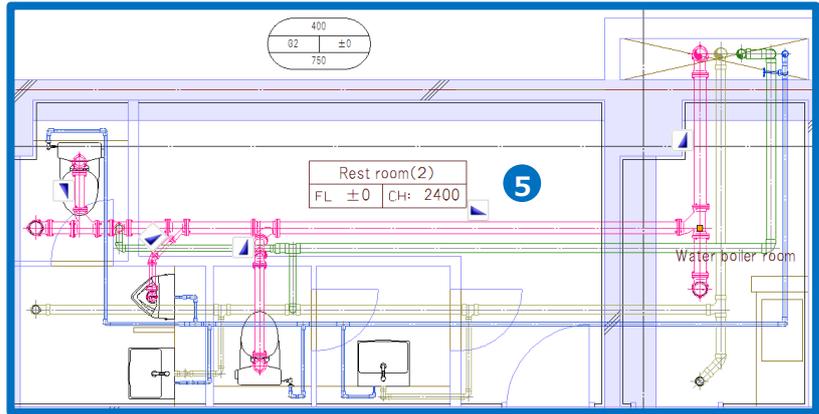


- Supplementary explanation:

Also, you can give a specified slope collectively for each pipe size.





**Collective addition of sloped piping** ✕

| Size | Sloped piping value |
|---|---|
| Less than 65 | 1/50 |
| Less than 100 | 1/100 |
| Less than 125 | 1/150 |
| More than it | 1/200 |
| | |
| | |

Deletion

OK      Cancel
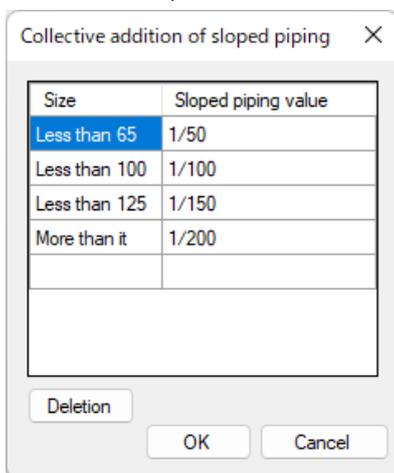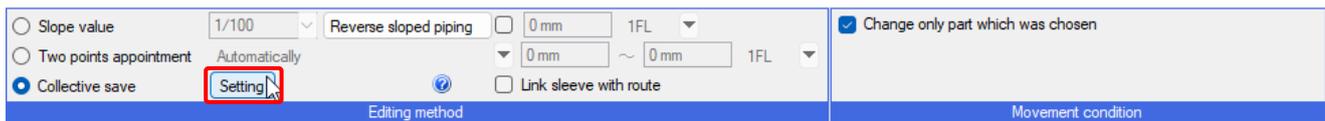
## How to detect clashes

Check points where a pipe clashes with other pipes or skeletons.

**1** Left-click [Tool] tab- [Clash detection].
→[Clash detection] panel opens.



**2** Select [Inspect whole drawing] and left-click [Start] to execute clash detection.
→ Clash positions between a pipe and pipes or building skeletons are listed on the clash detection panel. On the drawing, balloons appear with the numbers on the list.





The list of clash points
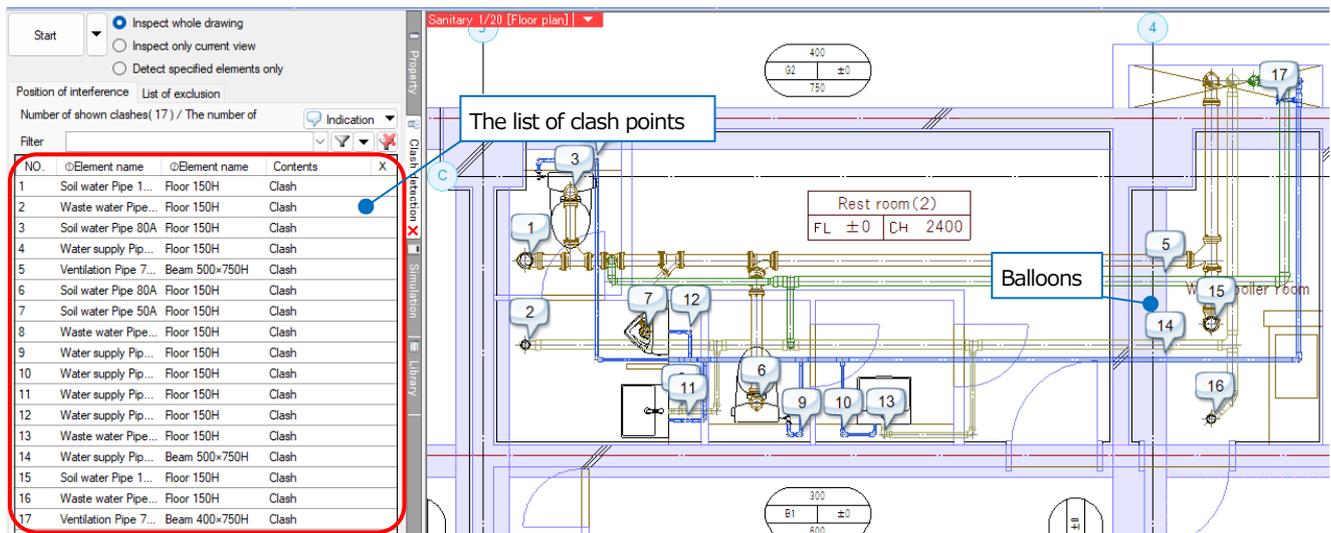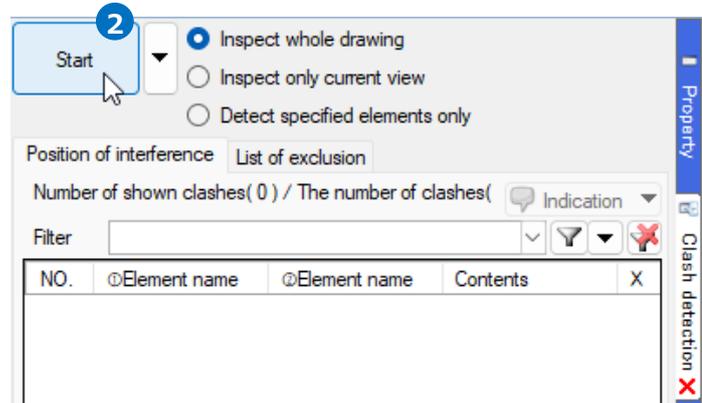
Balloons

Memo

Switch to [Kind of balloon]-[For Print] to print balloons on the clash points.



-51-

# How to draw sleeves

Insert sleeves into the penetrating points through a skeleton. Rebro excludes from the clash detection list the points where sleeves are inserted. Sleeves can be inserted by two ways: automatically or manually. Now insert a beam sleeve manually and a floor sleeve automatically.

## Insert beam sleeves

**1** Left-click [Sleeve or insert] tab-[Sleeve].

**2** Select the sleeve type.

**3** Select the way to specify the sleeve size. Now select "Pipe-No thermal insulation(2 size up)" and type "75" into the pipe size.

**4** Select [Designation of height]-[Coordinate] to draw sleeves according to the pipe height.
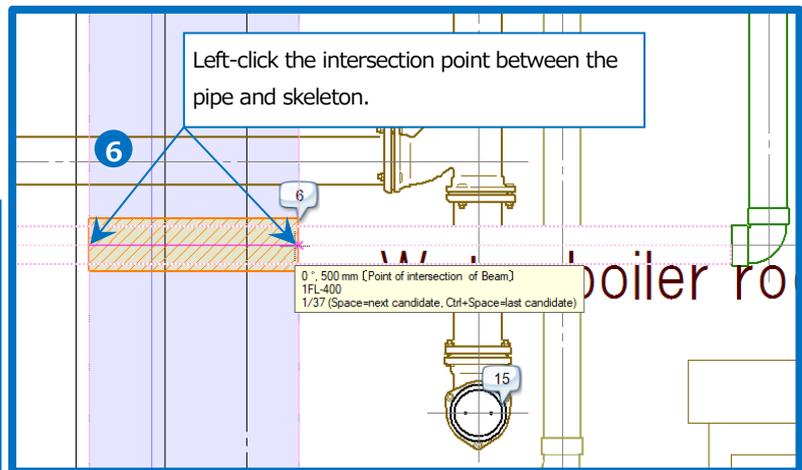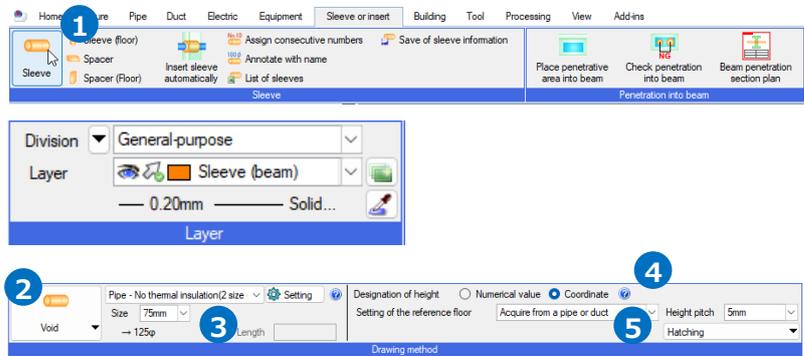
> **Memo**
> If you select [Designation of height]-[Coordinate], the sleeve height rounds off figures that are typed into [Height pitch]. If you type "0 mm", the specified coordinates height becomes the sleeve height as it is without correction.

**5** Select [Setting of the reference floor]-[Acquire from a pipe or duct].

**6** A guidance message appears saying as follows: "Specify two positions of both ends of sleeve. Specifies first point for starting position of drawing sleeve". Left-click two intersection points between the pipe and skeleton.

> **Memo**
> Specify [Point of intersection of pipe] at a snapped point to determine the sleeve height according to the pipe height.



Left-click the intersection point between the pipe and skeleton.

> **Memo**
> You can set up the outer diameter or thickness for each sleeve size by [Setting]-[General] tab-[Sleeve]-[Outer diameter].

**7** Type similarly into the clash points with other beams also.
→When a sleeve is inserted, the balloon on a clash point disappears.

**8** Left-click [Decision] on the context menu to end the command.
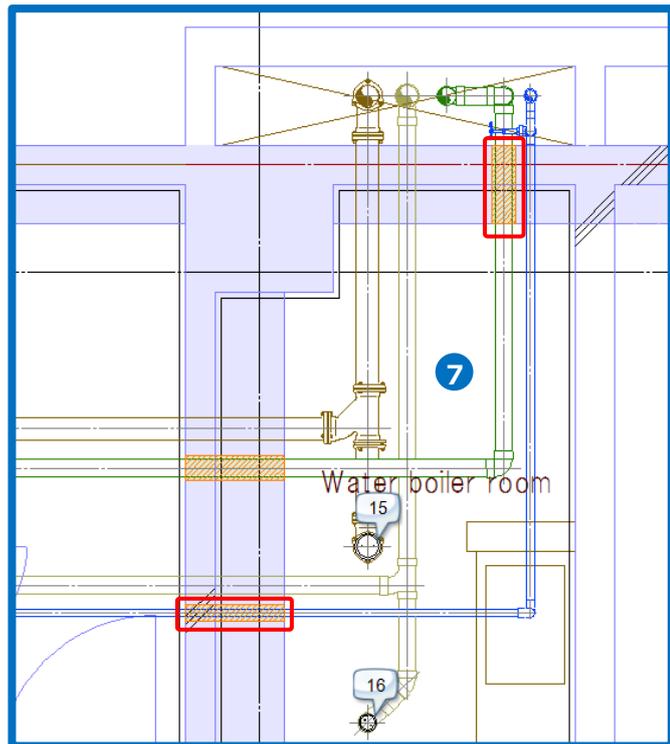
### Insert floor sleeves

**1** Left-click [Sleeve or insert] tab-[Insert sleeve automatically].

**2** Select [Make whole drawing for target].

**3** Select [Setting of the reference floor]-[Acquire from a pipe or duct].
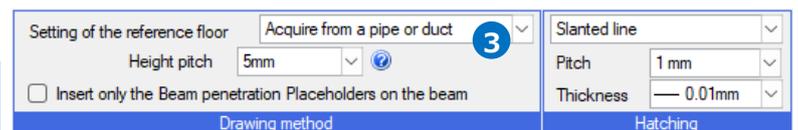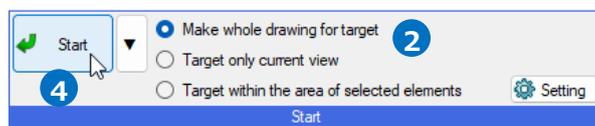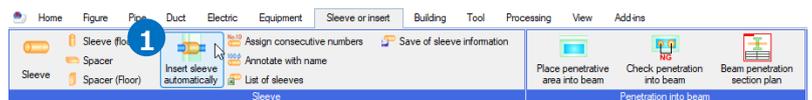
> **Memo**
> The sleeve height rounds off figures that are typed into [Height pitch]. If you type "0 mm", the route height becomes the sleeve height as it is without correction.

**4** A guidance message appears saying as follows: "Click [Start] and automatically insert sleeves in whole drawing". Left-click [Start] to execute.
→A dialog box shows the results.

**5** Left-click [OK].

→The sleeves appear on the screen and the balloons on the clash points disappear.

---
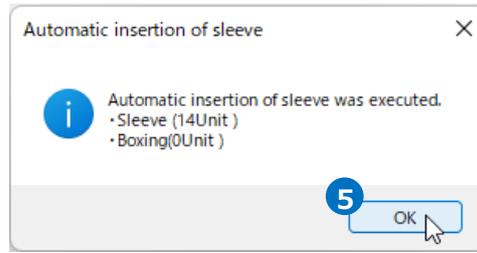
Memo

Left-click [▼] next to [Start] button to specify the sleeve type.



---



Automatic insertion of sleeve

Automatic insertion of sleeve was executed.
・Sleeve (14Unit )
・Boxing(0Unit )

**5** OK



---
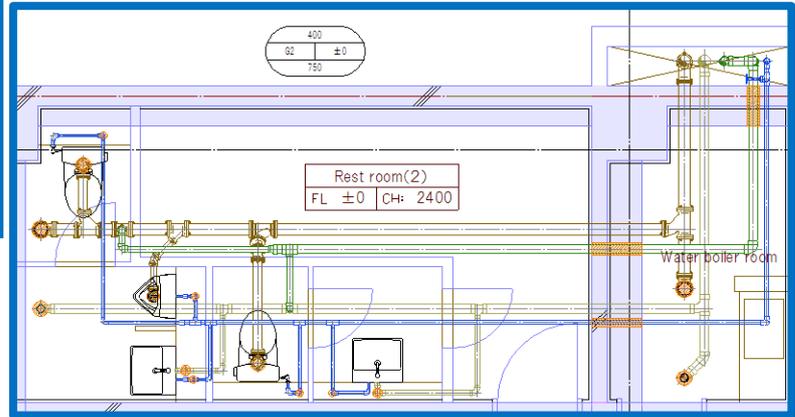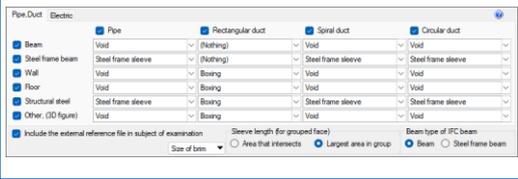
● Supplementary explanation:

In the case of [Insert sleeve automatically], the sleeve size of pipe (excluding refrigerant pipes or fire-resisting double-layer pipes) from the setting that is assigned to the uses by [Setting]-[General]tab-[Sleeve]-[List of size].
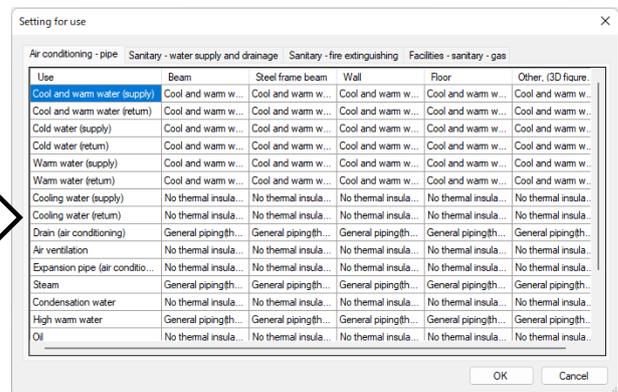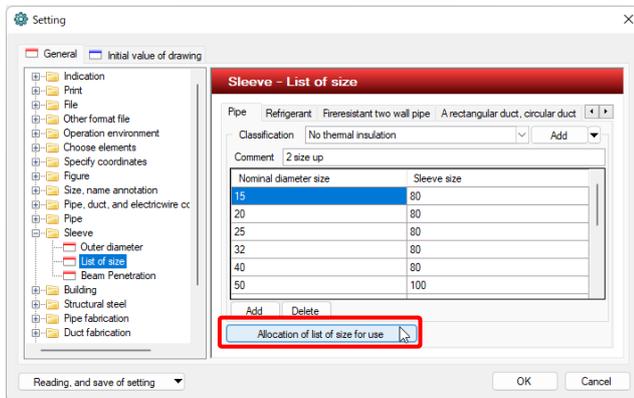


You can set up a drawing layer for sleeves in [View] tab- [Layer initial]. Checkmark "Divide layers by automatic sleeve use segment." to add after the layer name a use category for the route penetrating the sleeve.
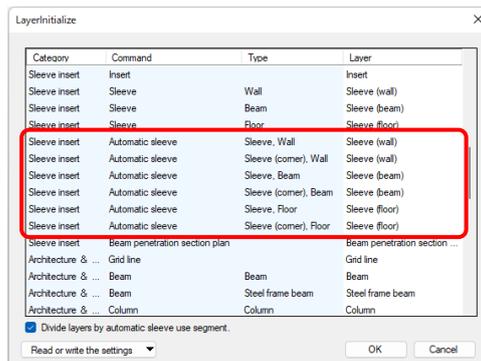
# 5.Finish drawings

## How to create a layout for printing

### Resize a view

**1** Left-click the view name.

**2** A guidance message appears saying as follows: "Select multiple views by [Select additional view] / [deselect views]. Drag the left button of the mouse or click the handle or press the edit button". Left-click the handle for resizing (white) that appears on the view frame.
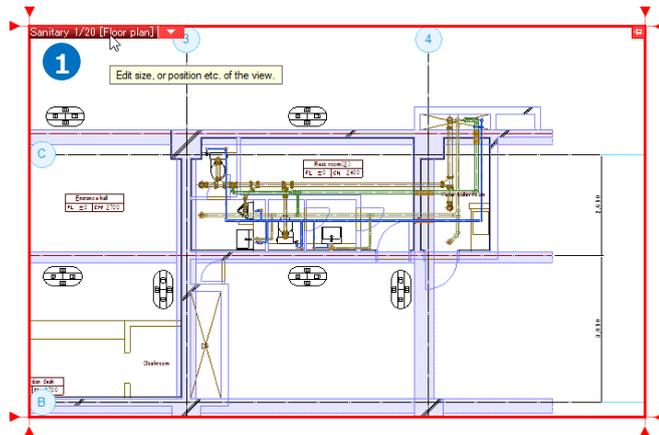
**3** A guidance message appears saying as follows: "Please specify change position". Left-click the position to change.

> **Memo**
> Checkmark [Align center] on the ribbon or the context menu to show the centers at the same position after resizing.
>
> Handle
> ● Change of size
>   ☑ Align center
>   ☑ Both blank links
>   ☐ Changing the scale to fit the size of the view
> ○ Change of blank
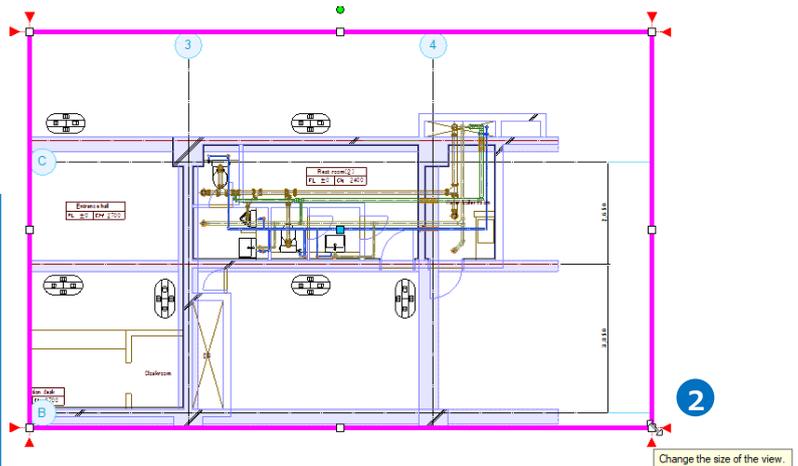
**4** Left-click [Decision] on the context menu to end the command.

**5** Drag a scroll wheel while pressing Ctrl to adjust in fine increments the display position in the view.
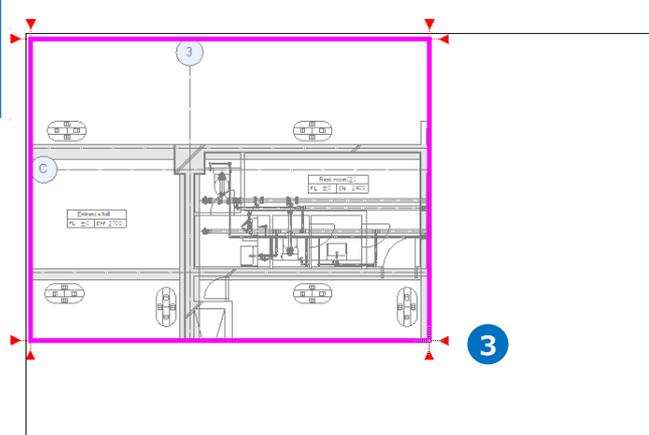
## Create views for cross sections

**1** Left-click [View] tab- [Create a view].



**2** Select "Scale"-"1/20", "Direction"-"Front section".



**3** A guidance message appears saying as follows: "Specify area making view". Left-click two points on the opposite corners on the screen.

**4** Open similarly a view at "Direction"-"Right section" and "Right front secion" at "Scale"-"1/20".



The second point of the corners

The first point of the corners

**5** Left-click [Decision] on the context menu to end the command.

**6** Left-click [Fitting] in [▼] next to the view name of the front view and the right side view.
→Rebro adjusts the scale and display position to show all elements in the view.





Change scale
Fitting **6**
Scroll
Margin
Orbit
Adjust plane angle
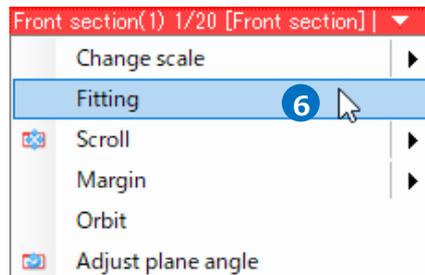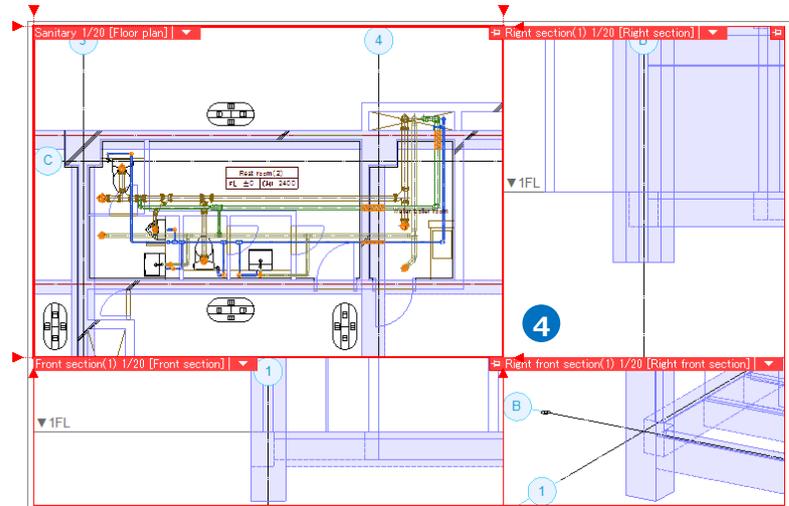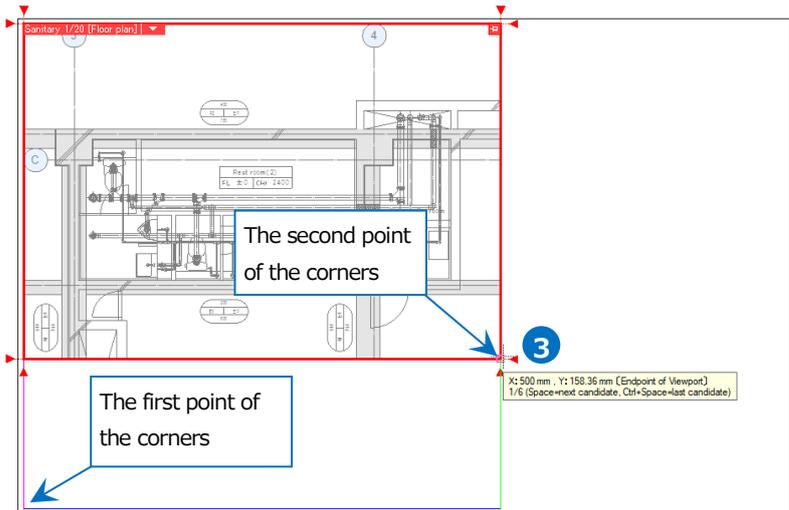
## Set up clips

Specify the display area for elements to show only the necessary elements as a cross section from all elements shown in a view.

**1** Left-click [View] tab- [View clip].

**2** Select [Add].
Select "Height"-"0" and "Reference floor"-"1FL".

<div style="border:1px solid">

Memo

If you select the same height, Rebro does not set up a clip for Z-axis direction.
If you select different heights, Rebro can create a floor plan that picks out the specified area for z-axis direction.

</div>

**3** A guidance message appears saying as follows: "Please specify clip area". In the plane view, left-click two points on the opposite corners of the display area in the front view.
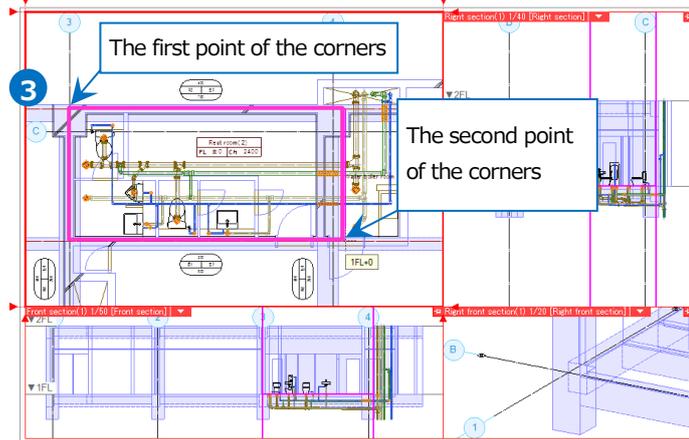
**4** A guidance message appears saying as follows: "Choose view to clip". Left-click inside a frame of the front view.
→The front view shows only the elements in the specified area.
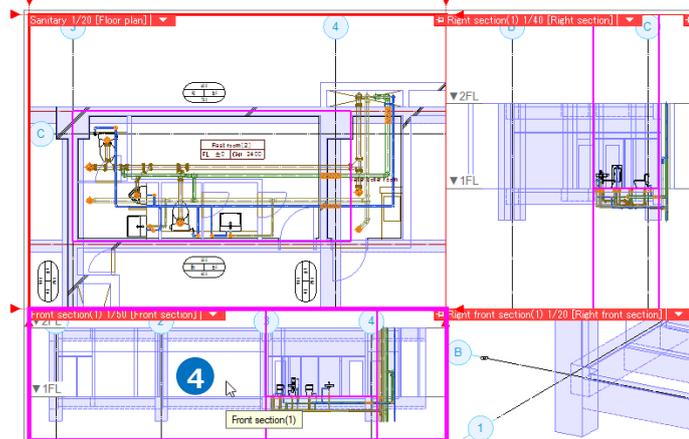
**5** Set up similarly a clip in the right side view.
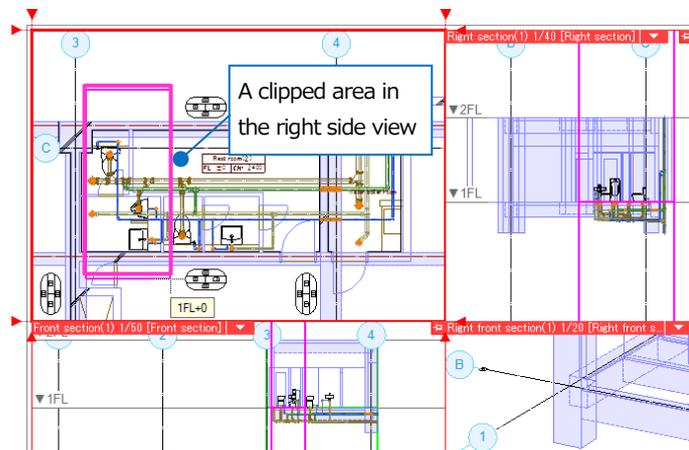
## Set up scales

❶ Left-click [Change scale]-[1/20] in [▼] next to the view name of the front view or the right side view.
→Rebro changes the view scale.
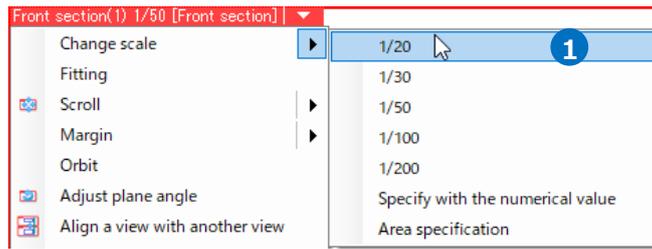
> **Memo**
>
> If you want to change a scale into the one that is not on the list, left-click [Change scale] to select [Change scale of the view] dialog box-"Scale" or type a denominator value into the blank.
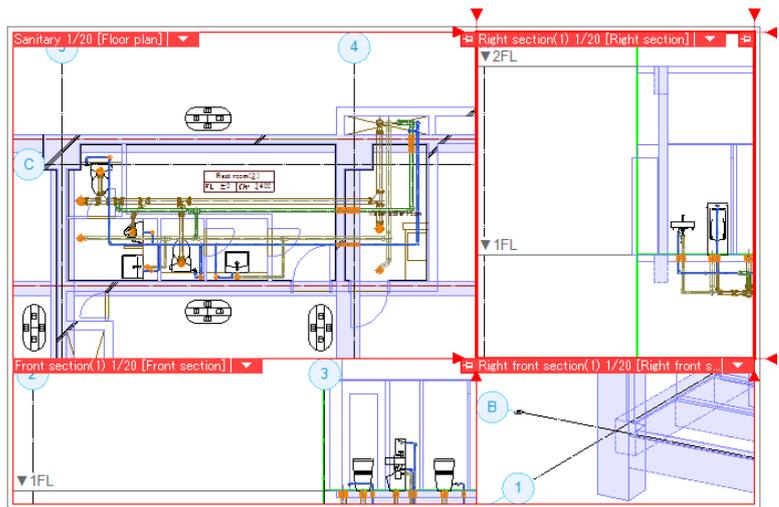


● Supplementary explanation:

Select [View] tab- [Create cross-section] to create a cross section view on which a clip and a scale is set up.
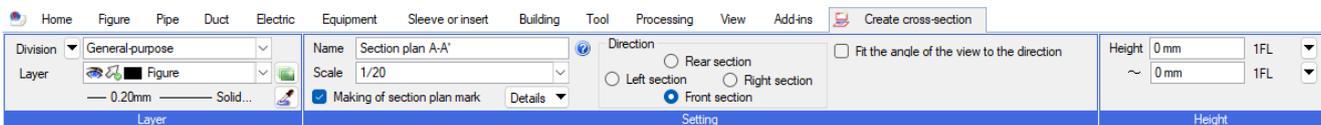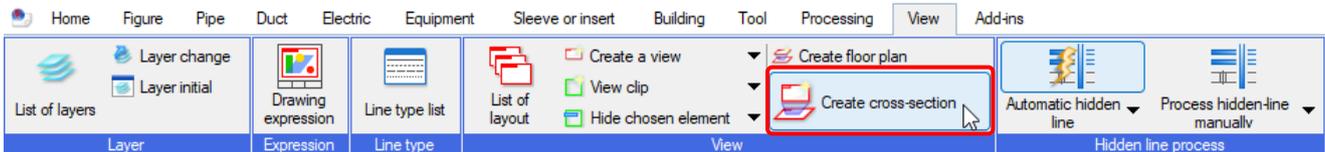
### Align the display positions of views

**1** Left-click [Align a view with another view] in [▼] next to the view name of the front view.



**2** A guidance message appears saying "Choose other views to align position". Left-click inside a frame in a plane view.
→The positions of the plane view and the front view are arranged in order.



Left-click the plane view

**3** Adjust the position for z-axis direction to show all pipes in the view. Left-click [Scroll]-[Scroll in a view(By specifying two points)] in [▼] next to the view name of the front view.

---

**Memo**

Uncheck "Work together with margins".

☐ Work together with margins

Setting

---
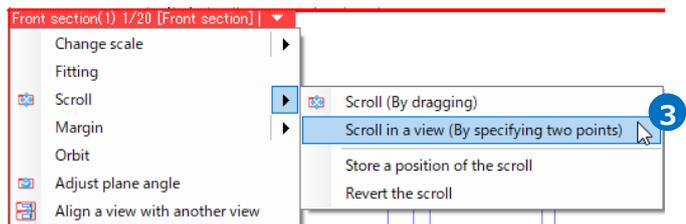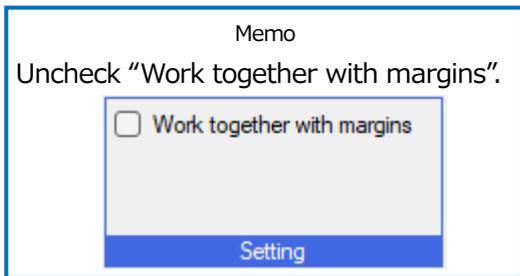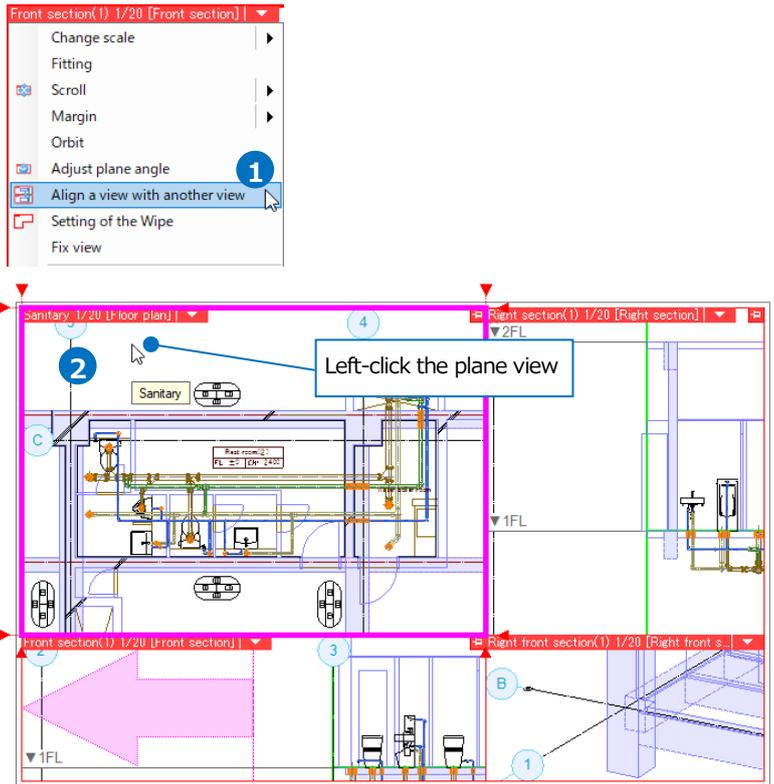


**4** A guidance message appears saying as follows: "Specify two points to scroll". Inside a frame of the front view, left-click two points so that the line becomes vertical.
→The display position of the view changes.



The second point of the corners

90°, 40 mm

The first point of the corners
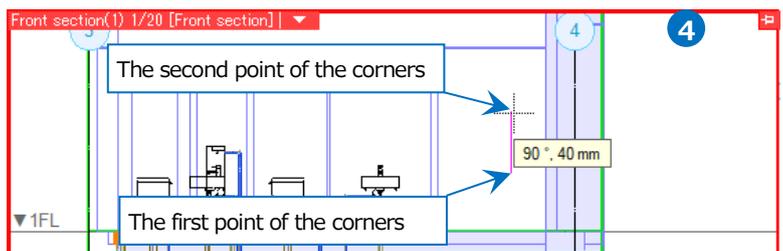
**5** Drag a scroll wheel while pressing Ctrl to adjust the display position in the right side view.
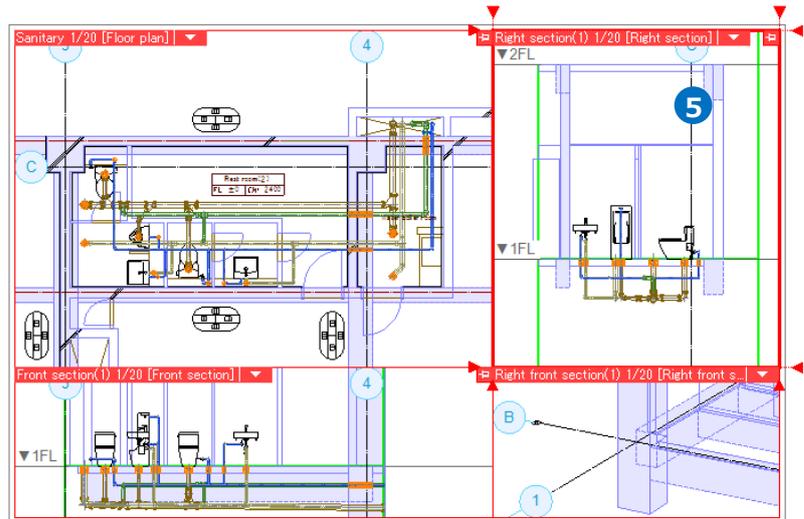


### Set up a layer display

Now hide a skeleton layer in a right front view.

**1** Left-click "Layer" panel.

**2** Set [Current view] as a target for layer control.

**3** Select [Category]-[Architecture & Structure].

**4** Change the right front view to a current view and left-click [Indicate] icon.
→ 3D building data in a right front view will be hidden.
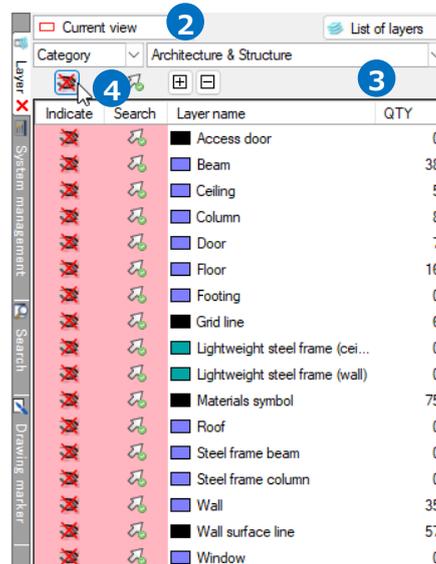


**5** Left-click [Fitting] in [▼] next to the view name of the right front view to show the whole pipe in the view.
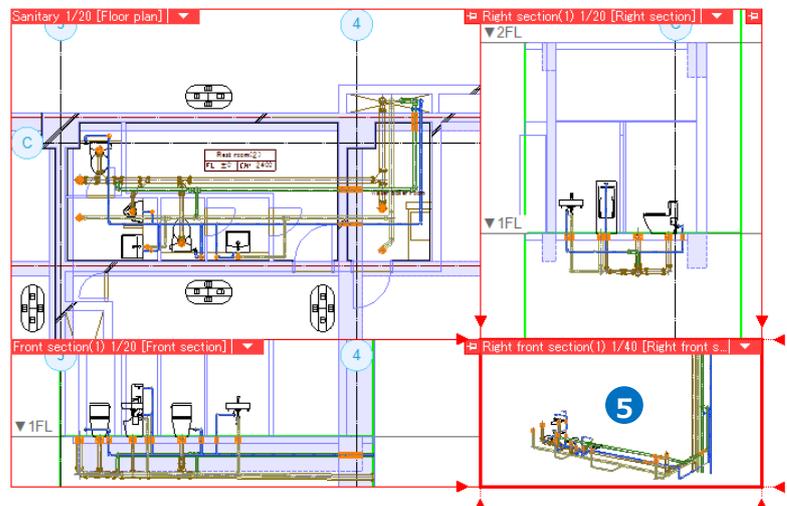
## Leave a margin in a view

Leave a margin in a view so that you can draw grid lines or dimension lines that are led outside the drawing.

**1** Left-click [Margin] in [▼] next to the view name in a plane view.

**2** A guidance message appears saying as follows: "Please click handle in side to change blank". Left-click the handle for changing position (white) for the blank that appears on the view frame.

**3** A guidance message appears saying as follows: "Please specify to change position of blank". Left-click the position to move the blank.

**4** Left-click [Decision] on the context menu to end the command.
→3D elements are hidden in the margins around a plane-view.

---
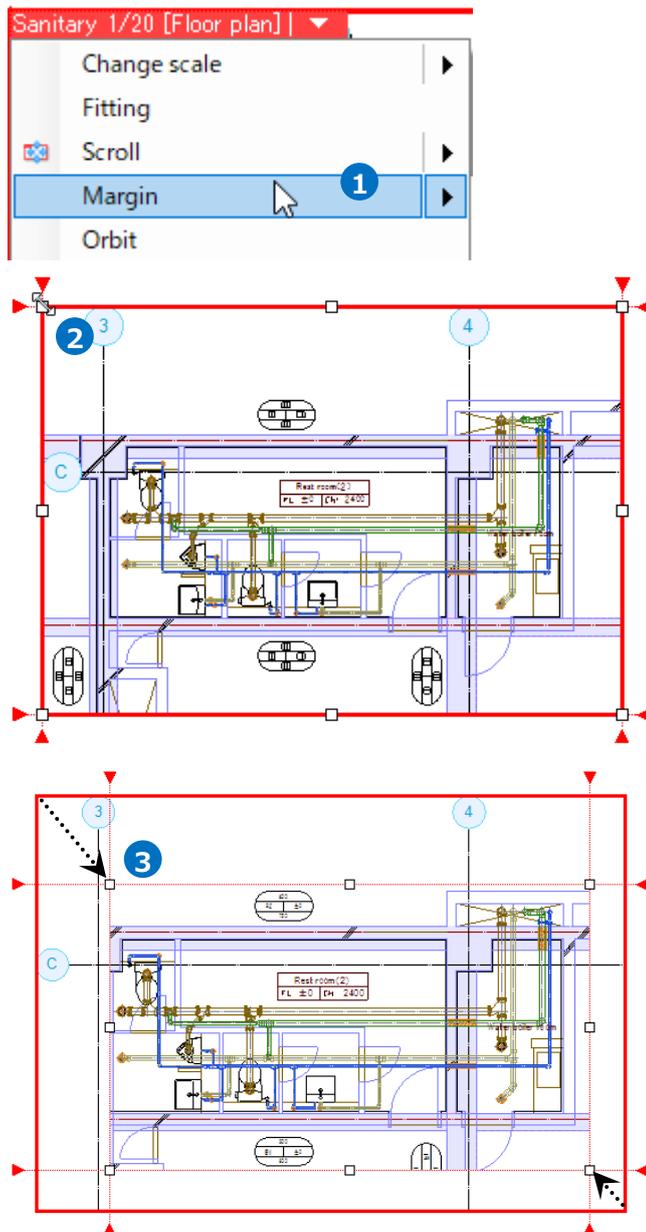
Memo

You can edit margins by left-clicking triangle marks that indicate the margins in the four corners of the view.

Left-click the triangle

Edit the margins. Only in a view elements are displayed in the margin.

# How to draw dimension lines

**1** Left-click [Figure] tab- [Dimension line].

**2** Select the size of dimension value.

**3** Select the shape for an end portion of the dimension line.

**4** A guidance message appears saying as follows: "Specify drawout position more than two points, and choose "decision (Enter)" of clicking right button." Left-click the position to lead out a dimension line.
(In this case, the center position between the grid line and the vertical pipe)

**5** Left-click [Decision] on the context menu.

**6** A guidance message appears saying as follows: "Specify position of dimension or choose "decision(Enter)" of clicking right button".
In the margin area, left-click the position to draw a dimension line.

**7** Left-click [Decision] on the context menu to end the command.

---

Memo

Checkmark "Height" on the ribbon to draw by specifying the height. Uncheck "Height" to draw at the specified coordinate height.

---

Select the shape of an end portion for the dimension line

Select the size for a dimension value

Left-click the position to lead out

Left-click the position to draw a dimension line

## How to annotate the drawing with sizes

Annotate pipe sizes or height.

**1** Left-click [Pipe] tab- [Size annotation].

**2** Select the descriptions that you want to annotate.

**3** Select the way to draw.

**4** Select the character size and so on.

**5** A guidance message appears saying "Choose Pipe, Valves, Fitting you want to annotate with Text such as size". Left-click the pipe to annotate with the size.

**6** In the case of [Text with leader line (Specify angle)], [On a line], and [Any position], left-click the position where you place the size annotation text.

※[Center] places the text in the middle of the pipe that you left-clicked.

**6′** In the case of [Text with leader line], left-click the position of the leader line and the position where you place the size annotation text.

**7** Left-click [Decision] on the context menu to end the command.
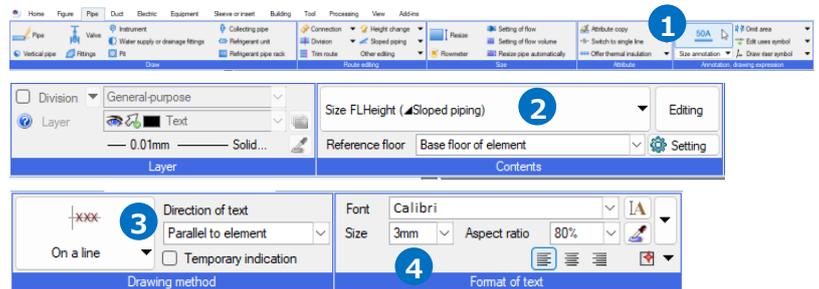


Memo

Checkmark the panel for layer settings to select the layer for the size annotation text. Uncheck the panel for layer settings to draw on the same layer as a target that you annotate.



Left-click the pipe that you annotate



Ventilation Pipe 75VP
Hard polyvinyl chloride pipe(VP)
1FL-400 4,563mm
Layer: Ventilation
(Space=next candidate, Ctrl+Space=last candidate)

75VP FL-400

Point on line of Pipe
1FL-400
1/2 (Space=next candidate, Ctrl+Space=last candidate)

75VP FL-400

-45 °, 210 mm
1FL-400

Memo

Select "Text with leader line" for the drawing method, to annotate a sloped pipe at the height where you specify the position.

# How to draw vertical pipe symbols

**1** left-click [Pipe] tab- [Draw riser symbol].

**2** Specify the way to draw riser symbols. Checkmark "Distinguish top and bottom of the selective choice construct automatically" and select "Only as for the numerical value".

**3** Select the sequence how to place riser symbols. Select "Upper left".

**4** Left-click [Arrow] to checkmark "Fit the color of vertical pipe mark (spear) to the route".

**5** A guidance message appears saying as follows:" Choose vertical pipe, vertical duct". Choose the vertical pipe in a pipe shaft.

**6** Left-click [Decision] on the context menu.

**7** A guidance message appears saying as follows:" Specify vertex of a leader line and select "Decision (Enter)" with right click." Left-click the vertex of the leader line.

**8** Left-click [Decision] on the context menu to end the command.
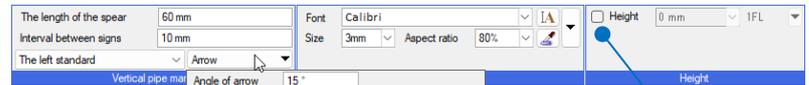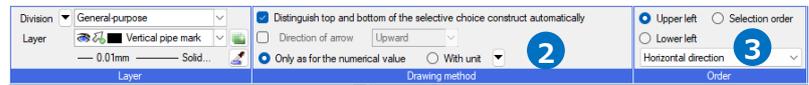


Checkmark in the box to specify the reference floor and the height for a riser symbol to draw.



Water supply Pipe 50VP
Hard polyvinyl chloride pipe for water supply
1FL+1500～+4100 2,579mm
Layer: Water supply
(Space=next candidate, Ctrl+Space=last candidate)



Left-click the vertex

60 °, 940 mm
1FL-900

You can change the pipe to pick out a leader line, with the handle (light blue).

Memo

Left-click multiple vertexes to bend the leader line.

Left-click the vertex
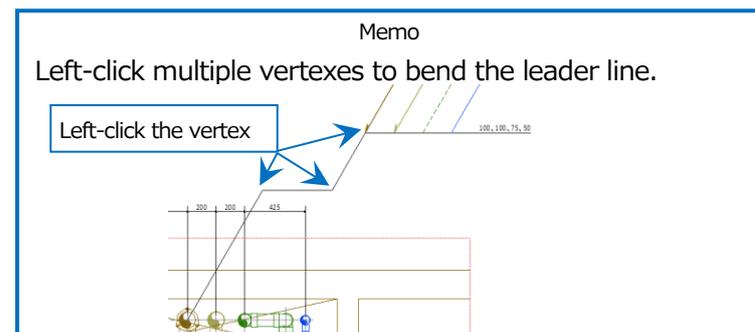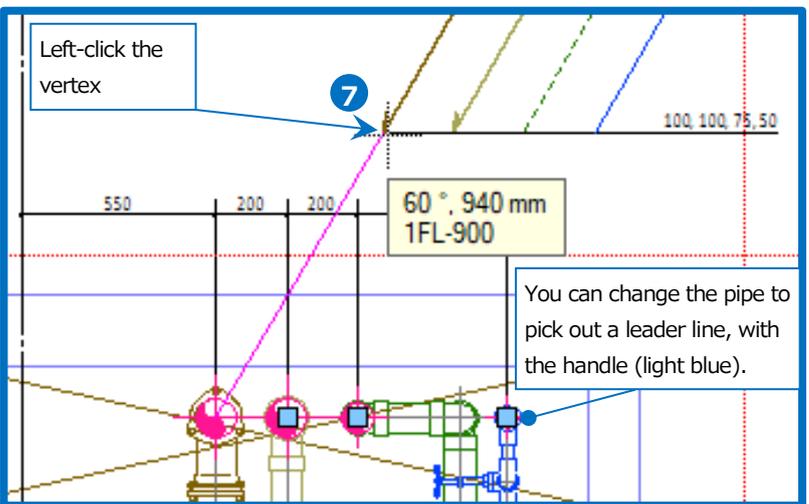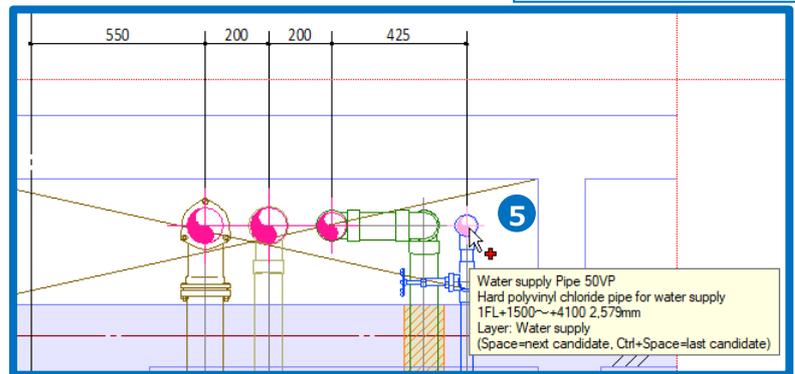
## How to adjust the position of a grid line

**1** Choose the grid line to change the length and left-click the handle for changing position (yellow).
A guidance message appears saying: "Specify position of movement of ruled line."

**2** Adjust the length of the grid line. Left-click the position where you want to display the symbol.
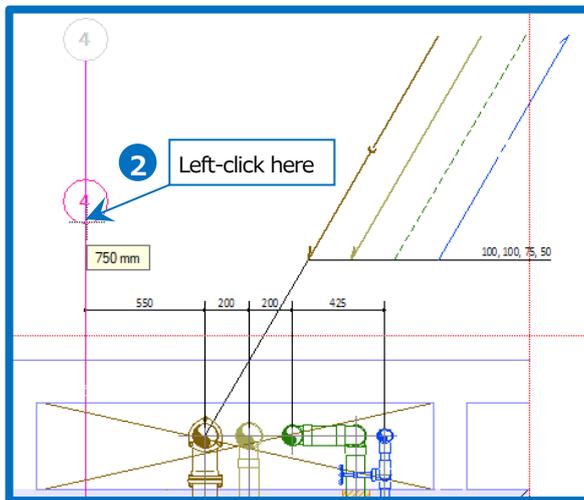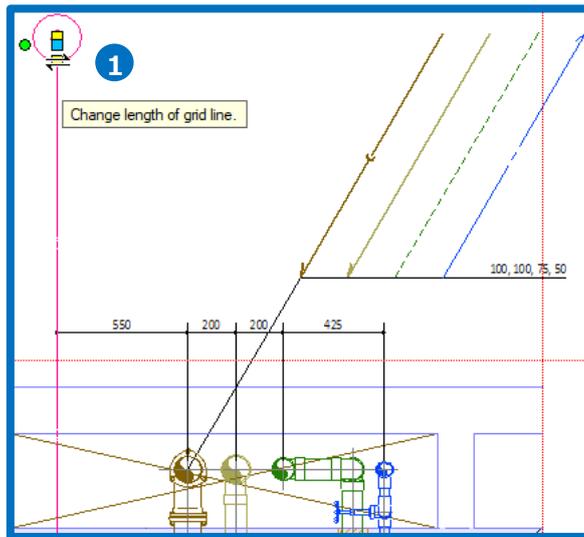
> **Memo**
>
> Checkmark [Include grid line having to the same direction] to change the lined up grid lines collectively.
>
> ☐ Align position
> ☑ Include grid line having to the same direction
>
> Editing method

## How to draw a floor line

**1** Select [Building] tab- [Setting of floor].

**2** Left-click [Drawing of floor line].
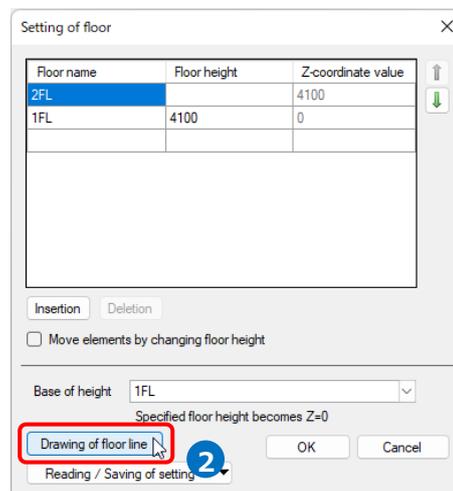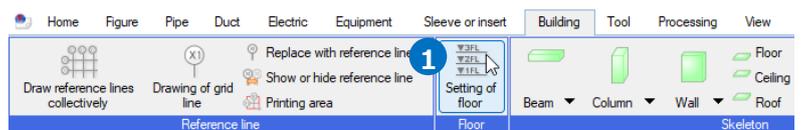
③ A guidance message appears saying as follows: "Specify area making floor line". Left-click two points on the opposite corners so that the specified area overlaps with the floor line.
→Rebro draws a floor line for printing on the position where the specified area overlaps the floor line.
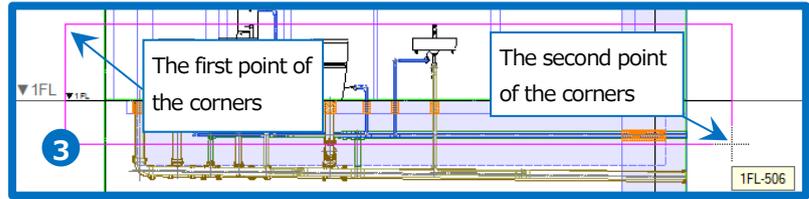


The first point of the corners

The second point of the corners

③

1FL-506

## How to process a hidden line

If you turn on [View] tab- [Automatic hidden line], Rebro processes a hidden line when you draw.

If you turn on [View] tab- [Automatic hidden line] after drawing, Rebro processes a hidden line at that moment. If you turn off [View] tab- [Automatic hidden line], hidden line process is reset.
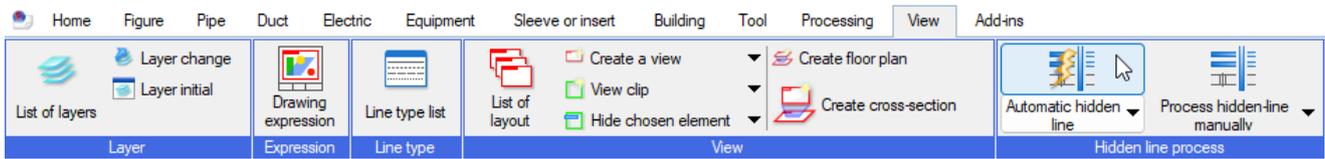


[Setting of automatic hidden line] can complete settings for the target elements of a hidden line process or line types of a hidden line part.