

AUTOFLUID

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Target audience:	Experienced MEP engineers, HVAC and plumbing CAD designers and technicians.
Objectives:	Make calculations and draft 2D plans of HVAC and plumbing systems, model and export 3D networks: • Design 2D plans using AUTOCAD/BricsCAD/ZWCAD • Calculate (Sizing and Pressure loss) • Quantify networks and materials • Create 3D networks • Import a network into a BIM model • Use RVT Connect, ribbon for REVIT.
Prerequisite:	Current working knowledge of AUTOCAD or similar CAD package, of Microsoft Windows and of using the internet.
Inscription conditions:	Signature of the price offer and the training contract and/or validation of outside financing.
Lead times:	7 days to 4 weeks
Prices:	Training on site: €1,200 per day ex. taxes for one group of 1 to 5 persons.
Duration:	5 days / 35 hours
Contact:	Mélinda Charbonnel, training manager, and Tracéocad's instructors team.

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DAY 1 : Duration 7 hours

Basic settings

- > Preference file
- > Working unit
- > Drawing scale

Sizes calculations

There are 2 types of computations: on a single conduit or on a whole network

- > Calculation of air networks
- > Calculation of water networks
- > Calculation of drain networks

Drawing

- > Introduction to double line drawing
- > Structure of a conduit
- > Understanding specifications
- > Routing (Double line and single line)
- > Drawing and calculations of spacing in sets of pipes
- > Drawing inclined conduits
- > Insertion of standard components in line or on already drafted ducts
- > Network crossings
- > Customizable air conditioning terminal drawings (AHU, cassette...).

Arrows

- > Automatic drawing and positioning of arrows indicating directions of flows
- > Indicating slopes.

Quick modifications tools

- > Changing objects
- > Changing conduit shapes
- > Editing text
- > Deleting objects
- > Moving objects and branches.

Texts

- > Understanding proportions
- > Choosing a style
- > Create automatic texts, frames, leader lines
- > Formatting of the most common information using prefixes and suffixes
- > Dimensioning.

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DAY 2 : Duration 7 hours

Builder's work openings

- > Sizing and drawing builder's work openings using existing network drawings
- > Drawing openings without a network
- > Modifying builder's work openings
- > Create a table list of openings in the presentation space
- > Create a table list of openings in Excel.

Bills of equipments and materials

- > Creating zones
- > Networks bills
- > Bills of equipments
- > Finding equipment using marker tags
- > Create a table list of openings in the presentation space
- > Create a table list of openings in Excel.

Others

- > Redraw ducts automatically after they're cut
- > Working with layers (freeze, transfer, lock...)
- > Changing thicknesses.

Laying out drawings

- > Layout drawings in the sheet automatically
- > Insert and format title blocks automatically
- > Create detail views
- > Update the scale of views automatically
- > Insert the file name, its file path and the list of related XREF in the margin automatically.

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DAY 3 : Duration 7 hours

DZETACAD – Pressure loss calculations

- > Insert flow, flow direction, hidden lengths and equipment manufacturer pressure loss into the network to complete the necessary information.
- > Select the chosen network route to compute pressure drops.
- > Prepare the calculation sheet and generate a schematic view of the route.
- > Generate Excel tables showing linear and singular pressure losses.
- > Tables and calculation processes from reference studies in the industry (MEMENTO I.E IDEL'CIK, Air conditioning course PORCHER).

AUTOCOUPÉ

- > Inserting the cutting plane on a cross section automatically
- > Creating accurate base maps from the top view of a plan
- > Module for inserting technical data while on the top view of a plan
- > Module for deleting technical data
- > Automatic drawing of cross section and perfect positioning in the layout
- > Module for quick adjustments to the thickness of slabs level, suspended ceilings and raised floors

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DAY 4 : Duration 7 hours

AUTOBIM3D

- > Definition of terms:
 - The network
 - Equipment in line
 - Large equipment
 - Structure of a network
 - Graphic objects
 - Elements
 - Conduits (horizontal, vertical, oblique, slope)
 - Branches
 - Spread...

Specifying levels

- > Setting or importing building levels
- > Levels inside one floor
- > Setting the elevation of the network branches using the "Levels" command.

Generate a 3D network

- > Capture and build
- > Erase and rebuild
- > Manage 3D networks (renaming, deleting, fusing...)

Visualisation

- > The "window" command in your CAD software
- > Visual styles
- > Navigation commands (ViewCube, Zoom Orbit, ...).

3D snapshots

- > Defining your view (visualisation and rendering)
- > Taking a snapshot
- > Positioning your shot (object space or presentation).

Export

- > 3D DWG
- > 3D IFC.

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DAY 5 : Duration 7 hours

RVT-CONNECT – Bridge with REVIT

- > General presentation of Revit
- > Export 2D plans from a REVIT model to AUTOFLUID
- > Export floor properties from REVIT to import them into AUTOFLUID
- > Insert AUTOFLUID 3D networks into a REVIT model (3 possibilities)
- > Inserting text into your networks inside REVIT
- > Schedules in REVIT
- > Clash detection in REVIT.

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Methods and teaching resources

Hands on learning with demonstrations.

Use of the software on concrete cases.

All necessary AUTOFLUID applications are provided for the training.

Additional resources

Course support and files for all exercises are provided for further individual training.

Access to trainees with a handicap

Please inform us of specific needs at the time of preparing the sessions.

Feedback from the trainees on the sessions is recorded via a questionnaire at the end of each training program.