281.870.1014

14355 schiller road • houston texas 77082

after 20+ years in business
we still don't have a formal mission statement
but we still are working hard on
making things
easy
for you

metalab ■

practicam

practicad

practirev

making things. easy.™

Our services are at the heart of everything we do. In providing a solution for you — be it a software, a hardware, an equipment item, or anything else — we focus on providing all that you expect from this solution: design, implementation, training, and maintenance.

281.870.1014

14355 schiller road · houston texas 77082

metalab ■

practicam

practicad

practirev

For every one of our customers, we create an effective, efficient, economical, productive, custom manufacturing system which does exactly what their company needs. This focus is present and visible in everything we do.

For as long as you own and maintain any of our fully featured products, we will continue to provide our services — including lifetime free training at our site, technical support, updates and upgrades, and help with any other aspect of your operations.

Whenever you need an improvement or an addition to our product (a new fitting or a part, a new type of label, or simply a new product feature), your request is addressed free of charge (for a typical request within a fully featured package) and the speed of

these modifications is determined by their priority and importance to you and other customers.

Our goal is to treat you and your company fairly, and to grow with you.

We will do the same when you are faced with a new shop equipment or new production requirements — and practically, any time you need help in solving a problem.

Yes — we will be by your side.

Most important here is not the outstanding quality of our products, but our commitment to building a long-term relationship with you and your company.

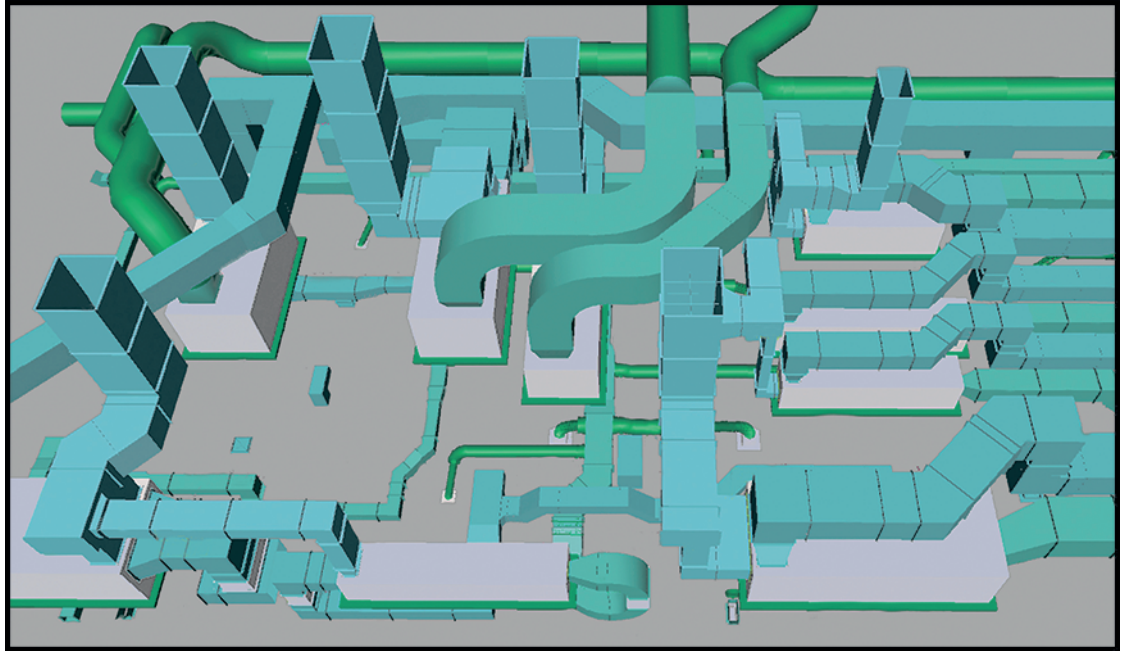This is why your needs define the limits of our services.

making things. easy.™

PractiCAD™, our CAD software, is the ultimate tool for a fully automated custom workflow for every aspect of your design and drafting work, completely and seamlessly integrated with your estimating and manufacturing processes.

281.870.1014

14355 schiller road • houston texas 77082

metalab

practicam

practicad ■

practirev

Your success is determined by your productivity which comes from two sources: efficiency (doing things right) and effectiveness (doing right things).

Full automation is the main focus of all our products, and it is the key to making both of these sources work for you. PractiCAD is capable of automating virtually every technical task you are facing, while preserving every choice and every decision you make along the way.

We took your existing workflow (no surprises here) and customized every step to make sure that you will never have to repeat or redo anything — your computer will, automatically, using our proprietary technology based on a new concept of automatics™. We eliminated many (if not all) repetitive or manual tasks, simple and complex,

common for both computer software and drafting practices, so you can invest your time in doing what you do best: creating the conceptual base of your projects.

PractiCAD tools and approaches cover all aspects of your drafting and design work, addressing every course of action you take and making sure it is free of obstacles and inefficiencies, so any design decisions will enhance, not hinder, your ability to perform similar operations in every environment — design and drafting within sheet metal, piping or any other expected (or unexpected) terrain.

PractiCAD. The fastest. The easiest to learn. The most powerful. And when combined with our PractiCAM™, the most powerful CAM and estimating system in the world — unbeatable.
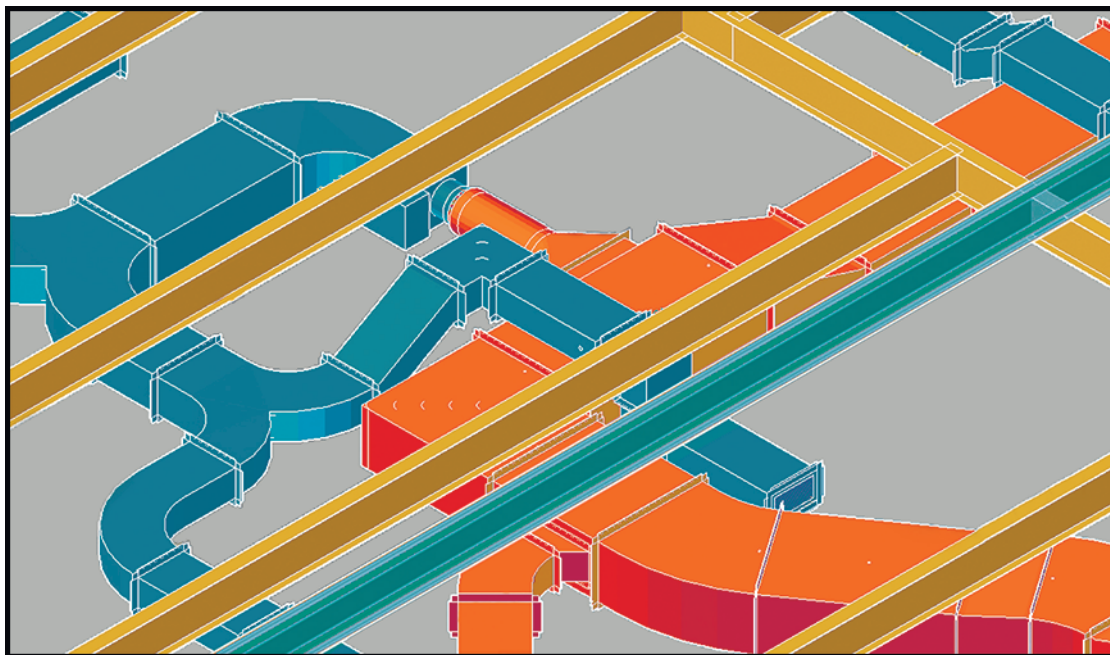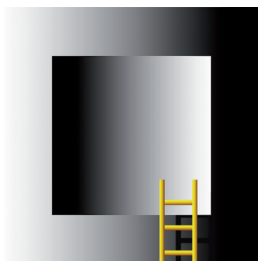
making things. easy.™

To achieve the performance level you require, ==PractiCAD™ combines three of the most important components== of a modern industrial system: ==state-of-the-art software technology, full automation and complete customization.==

metalab

practicam

practicad ■

practirev

In today's highly competitive industrial environment, you are what you use — your tools define your progress and your success, and ==PractiCAD is the most advanced set of sophisticated and intelligent tools on the market.==

PractiCAD was designed and executed in ==strict accordance with industry practices and workflows,== incorporating ==all necessary ergonomic requirements within its structure and its interface.==

While our development practices always included support for data generated by the older versions of our software, ==we do not have "legacy issues"== (always a euphemism for the outdated parts of the system). We have not patched our software over or repackaged it for a quick sale.
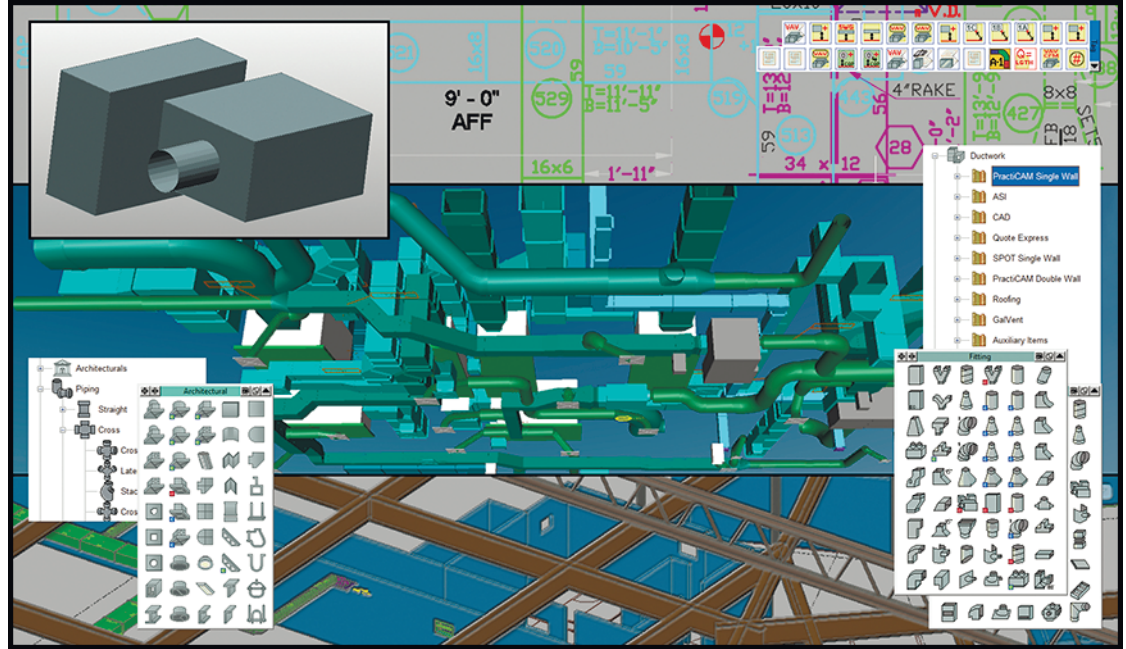
==We have designed, from scratch,==

==a new system not bound by its own history, but capable of serving you in the 21st century==— and beyond it, featuring not only approaches and tools of today, but also prepared for expected and possible changes in future technology.

Everything in our software, from the robust and sophisticated data structures to the intuitive and highly dynamic user interface, was created anew, ==using our customers' requests, suggestions, and ideas gathered and analyzed over 20+ years of our experience in this field.==

==Your freedom to create and build is our ultimate objective.== This is why PractiCAD gives you "the impossible" — ==automation along every work path, with an unlimited ability to select, set and re-use any action you may take.==

making things. easy.™

No limits. From the very beginning of our software, the removal of any and all limitations facing the customer was and still is our top design objective — we do not believe in creating obstacles, neither for our clients nor for ourselves.

metalab

practicam

practicad ■

practirev

The variety and range of features, operations, tools and objects which are offered by PractiCAD™ are truly limitless. From smart geometric editing to our advanced automatics™. From every possible intelligent routing scenario to the largest (and still expandable) set of fittings and accessories worldwide. From custom items you can build yourself to custom items we can build for you (free of charge). From fully automated major project-wide tasks (such as consistent and instant tagging and numbering in strict accordance with your company style and format) to eliminating every extraneous mouse click and every unnecessary keystroke (so common to most AutoCAD-based applications).

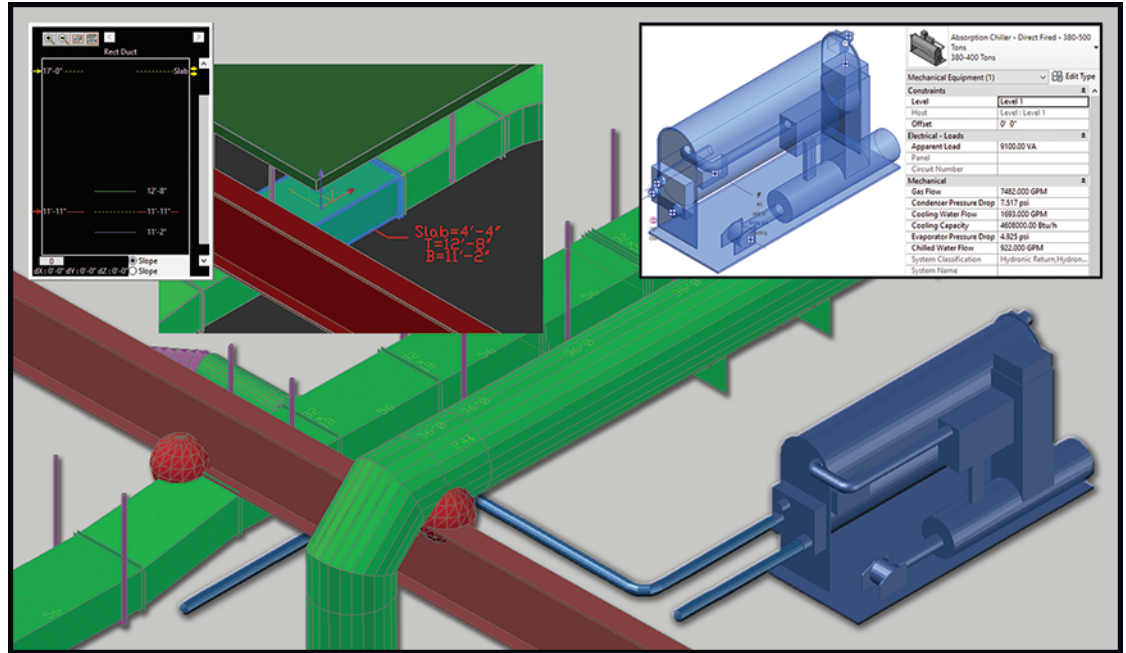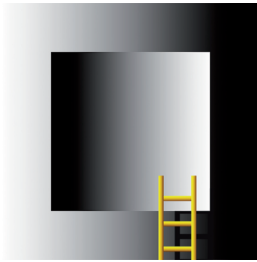PractiCAD HVAC libraries can accommodate all of PractiCAM fittings and products — 4000+ parametric and fully customizable 3D templates, including round, rectangular, oval, single wall and double wall duct, as well as VAVs, AHUs etc.

PractiCAD piping libraries cover the entire range of piping and plumbing products — over 60,000 fittings, valves and other items — with a complete set of all necessary joints, all dimensioned in precise conformance with ANSI, ASTM and/or manufacturer's standards.

PractiCAD libraries also include a complete set of architectural elements: steel, bar joists, slabs, walls, lights, ceiling grids, grills, registers, diffusers and other items.

In addition, we will create, free of charge, new templates for any products and fittings you may want to draw and fabricate.

making things. easy.™

With the quick, simple and precise placement of 3D entities, the entire PractiCAD™ drafting process is easy and straightforward. It is also enhanced by additional tools and features which greatly expand your workflow options.

Handling of any drawing entities, both PractiCAD's own and/or 3rd party AutoCAD-based models, preset or user-constructed, is very flexible: you can add grip points to any existing entity, and then save and reuse it as your own. And all 3D entities can be catalogued, too. This simple feature opens up the ability to use any manufacturer's or contractor's equipment or special items very efficiently.

The entity placement itself is further enhanced by our Elevation Tool — you can continuously view and track your elevations, while using multiple sets of elevations relative to any and all of your reference planes (including the nearest slab, if you prefer). The tool stays visible and active at once, eliminating the necessity to switch to it or to recalculate anything.
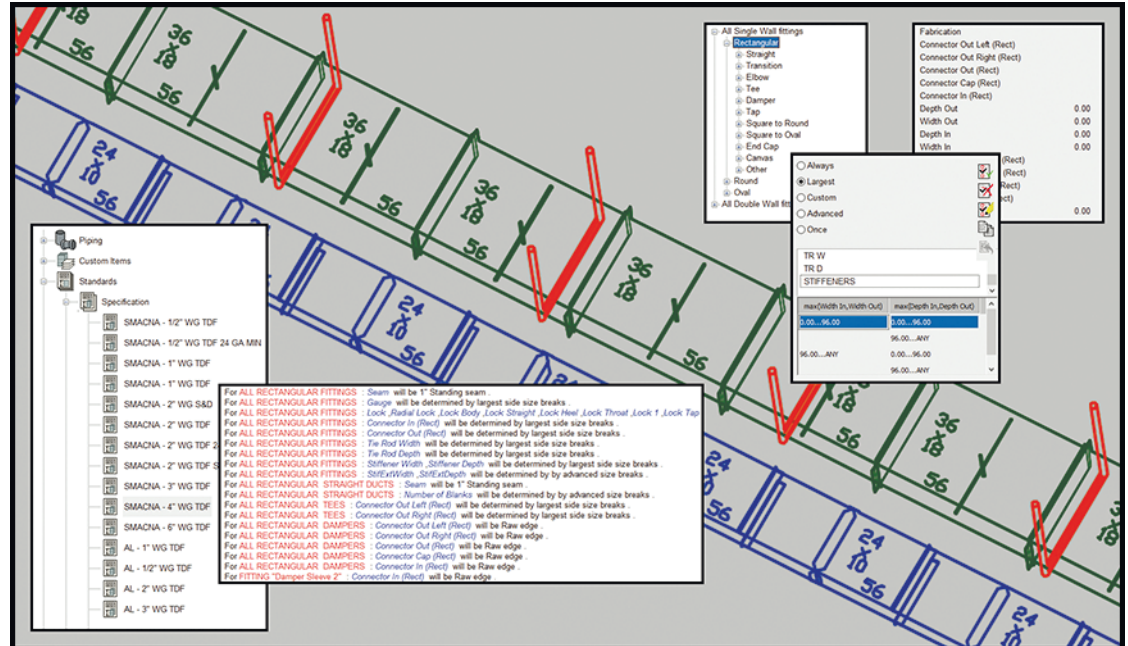
Any PractiCAD entity can be edited at any time, individually or globally, using either the AutoCAD property box or the editing window — and all related information (text, tags, annotations) is automatically and instantly updated.

While placing multiple connected entities, you can take advantage of PractiCAD autorouting capabilities, including duct to duct auto routing with automatic calculation of elevation changes and roll angles, with a variety of routing choices (for example, an automatic flex routing to GRD's using custom fitting assemblies).

Our automatic collision checking works not only for PractiCAD entities, but also for Lines, PolyLines, PolyFaceMesh Lines (Revit lines), and AutoCAD solids, giving you the instant detection and instant hints for resolving the conflict.

making things. easy.™

With automation, comes consistency — and while PractiCAD™ automates everything you do, it provides all tools you need to utilize this consistency effectively and efficiently in every one of your projects.

PractiCAD specification mechanism (common to PractiCAD and PractiCAM) makes sure that your meticulous attention to the smallest details of your work and a precise execution of your designs do not take any of your time.

Our specifications — most extensive and most flexible in the industry, and supported by the robust and unlimited system of custom shop standards and allowances — provide a way to consistently automate everything, from sizing decisions to allowance and material selection, from defining the configuration of a smallest notch to specifying exact ways to use (and make!) various accessories.
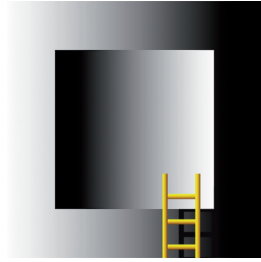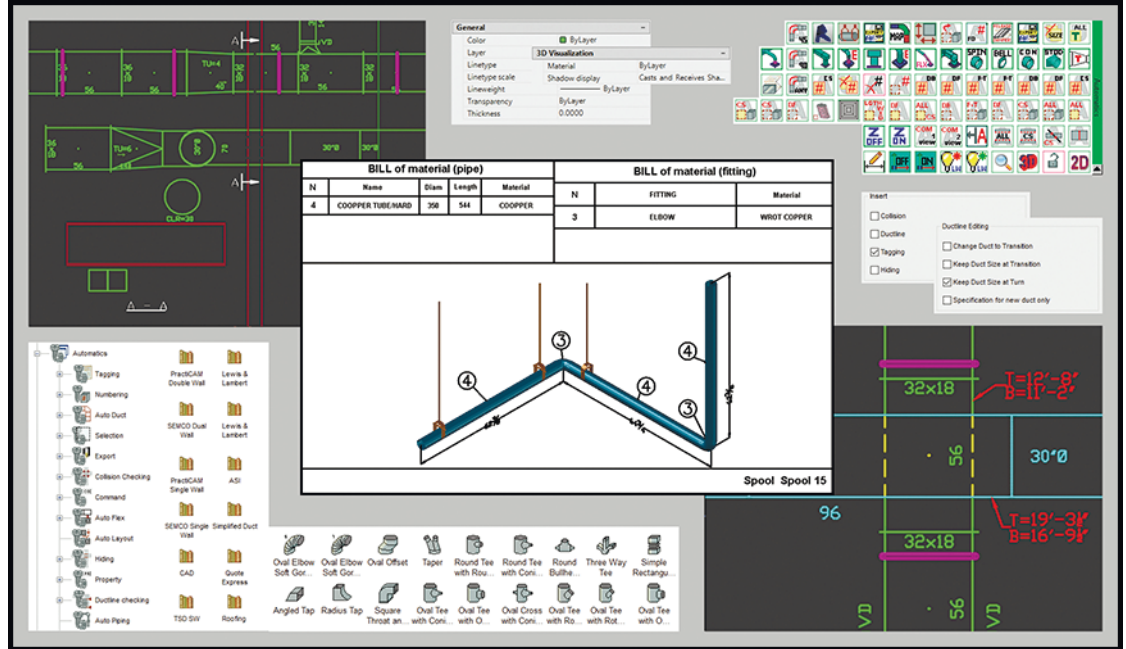
As a part of our service, we build initial custom specification sets for each and every customer; these sets are completely user-modifiable at any time and you can have as many various sets as you wish.

Specifications can be used while drawing, or can be applied afterwards. In either case, specifications ensure a consistently correct and effortless way to have "everything in its place".

Using specifications, PractiCAD can also automatically provide (and track) all auxillary parts and accessories — tie rods and other stiffeners, dampers, vanes, connectors and connector accessories, hangers, etc. And when your drawing is edited, all these items are automatically updated in accordance with your specifications and your changes — for example, if you modify the duct size or position, connectors change, dampers and vanes adjust blades, hangers move, all without any action on your part.

making things. easy.™

Fully automated and automation-driven components within PractiCAD™ and PractiCAM™ are not always obvious, but they are present and active in your work process at every stage of your workflow and in every task you face.

Any time we can automate even a single operation, however small it may appear, we do it, because these time and effort savings add up very quickly.

Our automatic hidden line generation works for any overlap of any visible entities. Our automatic, customizable and logic-driven layer creation streamlines the layer mechanism for the entire drafting team. Our fast automatic custom spooling works for pipe and fittings, with multiple isometric views and different bills of material on one report, and includes automatic tagging, numbering and dimensioning. Our automatic cross sectioning, done from any view, with view-based auto tagging and numbering, gets an automatic update whenever your drawing is modified, and eliminates any duplicates in data download. Our automatic and completely customizable reporting uses
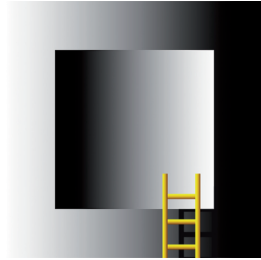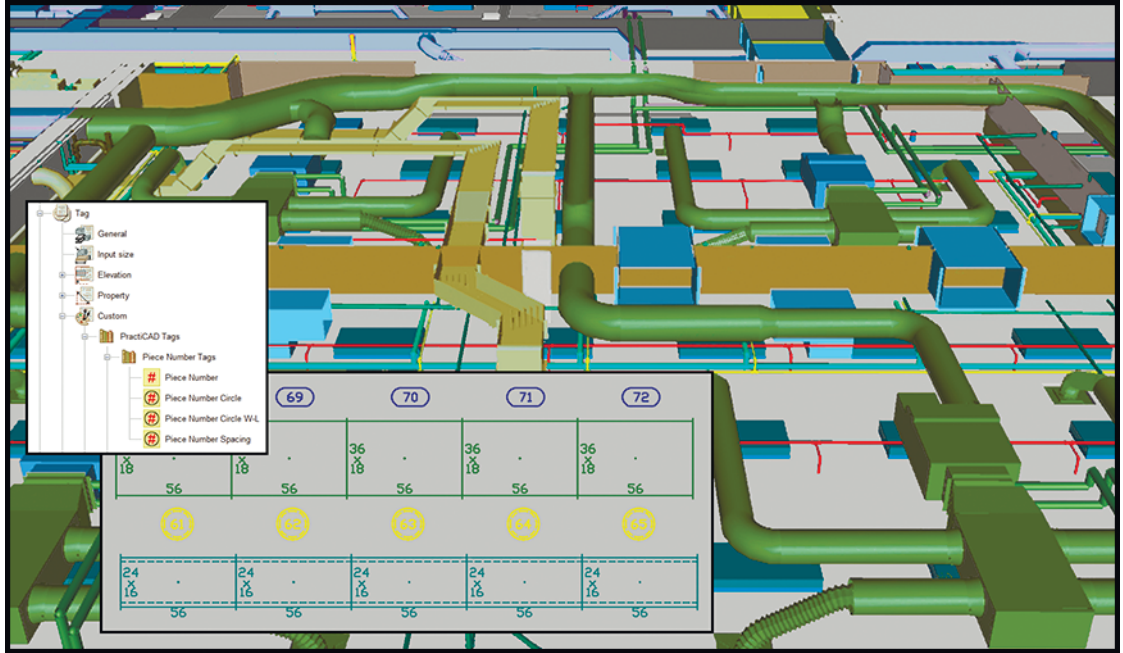
our intelligent entities to efficiently sort, organize and present any information.

But the main concept, which is changing the way people draw, is our automatic. Automatics™ are parametric operational sequences driven by the user-defined logic, and they can be assembled into larger modules — ultimatics™.

Both automatics and ultimatics make drafting extremely quick and, because of their universal structure and a very wide range of components and operations, they give you the opportunity to automate most drafting tasks.

It is the best time saving feature in PractiCAD — and it also helps you to standardize your operations across the company by simply sharing automatics with every member of your team.

making things. easy.™ ∎ ∎ ∎ ∎ ∎ ∎

All PractiCAD™ drawing entities are intelligent and dynamic. PractiCAD automatically tracks and adjusts all necessary data (including graphics and appearance) in accordance with changes made to related elements.

281.870.1014

14355 schiller road • houston texas 77082

metalab

practicam

practicad ■

practirev

The more precise the draftsman's drawing and annotation styles are, the more time and effort he spends to make sure that all tags, piece numbers, and other data-driven text are properly placed and positioned, and that they fully match the rest of the information within the drawing **without losing the clarity of representation and expression** — a tedious and time-consuming task.

Our fully automated tagging — both **the fastest and most accurate in the industry** — works precisely the other way around: **the more exact and consistent your drawing style is, the better, faster, easier you can keep up with it.**

Our tags can include any type of **information in any graphic form with any geometrical and content presets.** You can build your own custom

intelligent tag for every item on the drawing, and these tags will follow their **user-defined, specification-supported, logic-driven scenarios,** and update their content, appearance, placement and geometry without any action required on your part.
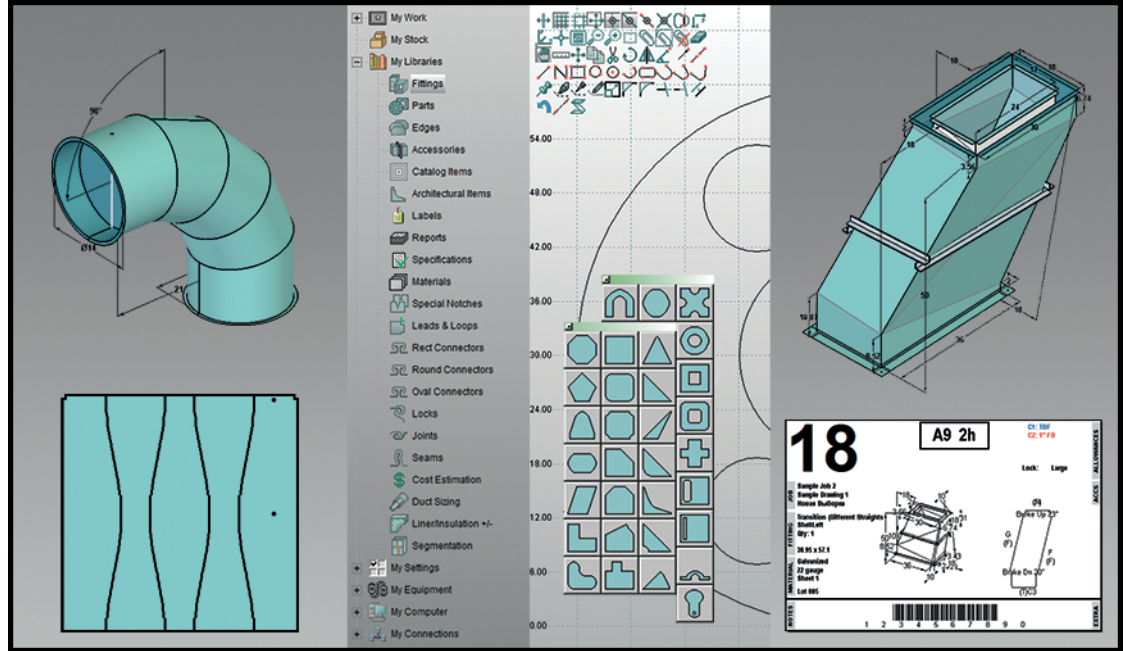
Nothing has to be erased or manually adjusted — **our tags adjust themselves whenever the entity is moved or modified.**

To make the long story shorter, our piece numbers follow the same path — **no limits: any shape, any font, any position, any placement, any logic.**

And then... there are **tagging and numbering automatics™ and ultimatics™,** providing completely automatic tagging and numbering with precise custom layout, content and positioning.

making things. easy.™

PractiCAD™ is fully integrated with PractiCAM™, our CAM and estimating system for sheet metal work — the most advanced sheet metal CAM in the world. Using these tools together, you can design and build anything you can create.

281.870.1014

14355 schiller road • houston texas 77082

metalab

practicam

practicad ■

practirev

PractiCAM includes product libraries for HVAC, construction, machine and ship building, architectural and roofing elements, kitchen products, signmaking, decorative metalwork and other areas. If something can be made out of sheet metal (or any sheet material), PractiCAM can design and make it for you.
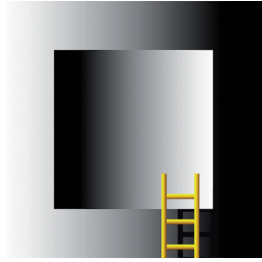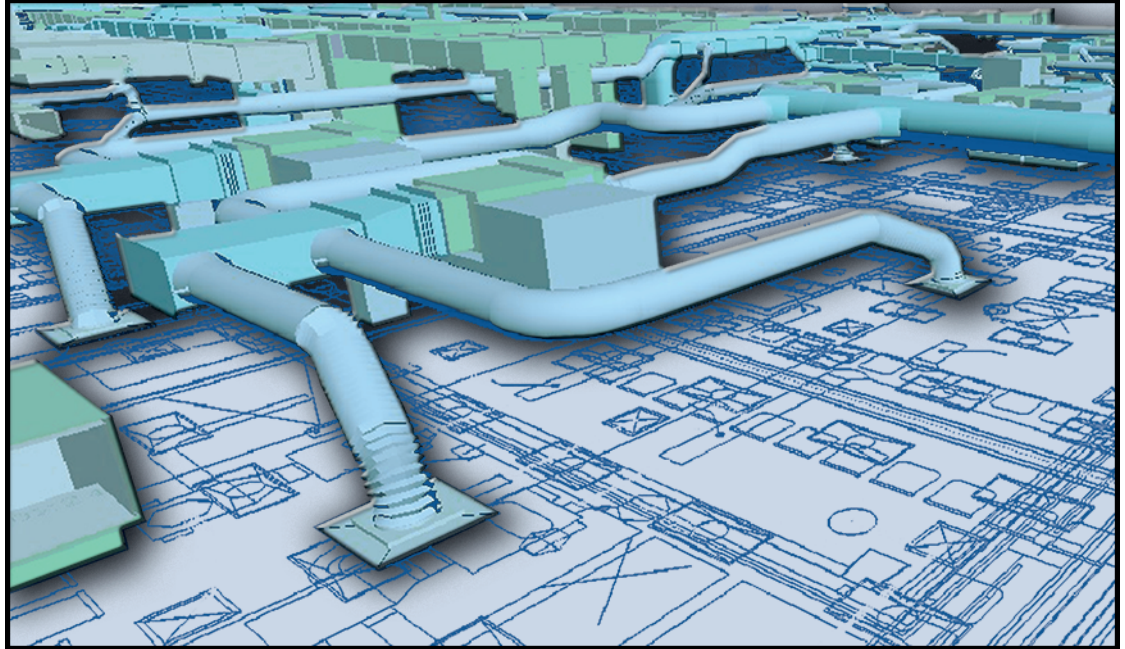
PractiCAD can download all necessary product data directly to PractiCAM, including not only fittings, flex, grills, diffusers, registers, hangers, but also a complete set of information about accessories, auxillary items, allowances and any additional modifications. Once the download is complete, tie rods and other stiffeners, dampers, vanes, access doors, tap holes, tie rod holes, nested fittings are all automatically processed and ready for the fabrication stage.

The download process from PractiCAD

to PractiCAM is as simple as a Copy/Paste operation — and takes just as long. You can make any selection from any job by any scenario, all user-defined, and all data sets can be split, combined or modified during or after the takeoff — the ease of takeoff manipulations here is unmatched by any other software. PractiCAM automatically prepares, checks and transmits all necessary manufacturing data to specified coil lines, spiral machines, pipe cutters, plasma/laser/oxy-fuel/waterjet cutters and other equipment.

The direct and seamless data flow from PractiCAD to PractiCAM to fabrication eliminates all errors and provides a fully automated approach for implementing your design ideas and engineering specifications in complete accordance with your production standards and requirements.

making things. easy.™

Your data, seamlessly moving between PractiCAD™ and PractiCAM™, creates an ideal foundation for the most precise and detailed cost estimating system. It is an integral part of PractiCAM based on design data provided by PractiCAD.

281.870.1014

14355 schiller road • houston texas 77082

metalab

practicam

practicad ■

practirev

PractiCAM includes several integrated components: a cost estimating system, a product pricing system, and a customer management database.

In addition to the industry standard SMACNA-based cost estimates, our estimating system provides tools to track your production and to make your estimates directly from your shop's true productivity (instead of industry-wide averages used by everyone else).

The reports and estimates are completely custom, and include all material and labor costs, organized and presented in a user-defined form (exportable to Excel), including shop/field breakdown, accessories, related hardware, catalog items, etc.
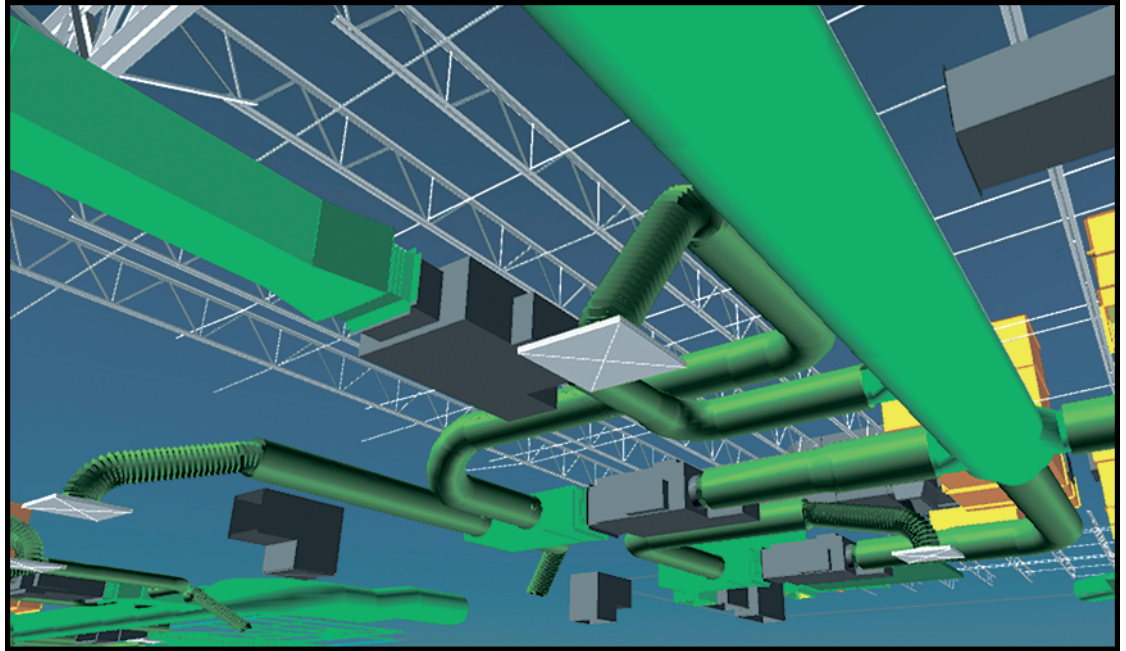
You can build your own estimating methods and approaches, and your own pricing models, down to the last bolt, using tables or formulas, per customer or across the board, with completely custom logic, and use "what if" scenarios to analyze your models — because you can simultaneously use multiple estimating approaches.

And the process is very simple: if cost estimation is included in your workstation setup, all cost estimates and reports are automatically generated upon data download.

All traditional cost estimating has been based on inexact approximations — but this approach is no longer necessary. PractiCAM is the most precise estimating system on the market — after all, we know exactly how to make each piece (other estimating systems don't), and we do not have to guess at how much did it cost (they do).

making things. easy.™

Continuity, compatibility and connectivity are crucial attributes of today's systems, and PractiCAD™ supports and maintains effective and efficient toolset to provide uninterrupted and seamless pathways for your data flow.

281.870.1014

14355 schiller road • houston texas 77082

metalab

practicam

practicad ■

practirev

PractiCAD is a BIM-compliant software. Its data exchange and networking capabilities streamline and facilitate all data handling procedures, eliminate duplication of effort, and cover every import, export and data transfer scenario.

For example, you can convert AutoCAD MEP duct to PractiCAD duct while applying your specifications, and use results to get cost estimates from AutoCAD MEP or PractiCAD MEP. Or export PractiCAD drawings to Revit to create a Revit model with PractiCAD properties. Or export the data to Navis and other software packages (for example, hanger data can be sent to Robotic Total Stations (GTP) or Trimble). Or use any .DWG files to create custom connection-ready items and to add custom properties to these entities for reporting and re-use.

The list of possibilities and features is endless, and everything is custom — PractiCAD defines every procedure, every variable, and every result in accordance with your workflow, because we believe that you know how to run your business better than we do.

This is why every detail, from your allowances and product templates to your drafting styles and download procedures, is set according to your exact vision of your operations.

And the last but not the least: PractiCAD has the shortest learning curve. A typical AutoCAD-proficient draftsman who has never seen our software before, can begin to use PractiCAD in production after less than 2 hours of training.

Call us. You will be glad you did.

making things. easy.™

MetaLab International Inc. • cad, cam, estimating systems and equipment
for sheet metal fabrication, hvac applications
general manufacturing and construction
ship building, machine building and repair
signmaking, ornamental and fine art metalwork

completely custom goods and services

Our company is a leading developer of CAD, CAM, estimating systems
for HVAC/Sheet Metal/Mechanical Contractors worldwide. We specialize
in fully integrated and automated industrial solutions, from design to fabrication.

866.870.1014 (toll-free)

Our product suite currently includes:

PractiCAM   CAM software for HVAC and Sheet Metal
                 Estimating software
PractiCAD   3D BIM software for Sheet Metal/Piping (AutoCAD-based)
                 3D BIM software for Sheet Metal/Piping (Revit-based)
                 NavisWorks integration software
PractiCAD MEP   Full design suite (includes all of the above components)