Libellula

Libellula.HVAC
通风管道参数模型库

Parametric shape library for the heating and ventilation industry

Industrial manufacturing control
Synergy driver for the enterprise
Optimization of business performance

SI
ENGINEERING
GROUP

关于Libellula.HVAC概要

通风管道参数模型库

Overview about Libellula.HVAC

Parametric shape library for the heating and ventilation industry

Libellula.HVAC是致力于HVAC通风管道设备制造商一套完整解决方案的软件.

根据用户所需,它配备了广泛的可定制的风管参数模型库,在CAM环境可以自动提供了钣金零件的生产工艺.

Libellula.HVAC模型库主要包含三组类型:圆形、锥形、正方形和椭圆形(如环形和法兰)

此外,该软件提供了多种在生产中经常使用的二维形状.

Libellula.HVAC is a complete software dedicated to support manufacturers of HVAC plants.

It is equipped with a wide library of parametric shapes customizable according to the projecting needs, and offers a CAM environment to automate the production process of sheet metal parts.

Libellula.HVAC library includes mainly three groups of shapes, rounded, conical, square and oval (like rings and flanges).

Moreover, the software offers a wide variety of 2D shapes normally used in production.

对于任何参数的形状,一旦被选择,它能够编辑一系列尺寸和工艺参数;这将随后可以查看该零件的二维展开和开口的位置的计算,以及标记生成线的起点和终点. 一旦所有参数被定义,在三维模式应用程序将执行可视化零件的渲染模式.所选的形状将被加载到生产订单里. 一旦生产订单被确认,Libellula.HVAC将自动创建相应的零件,生成相关的套料和最佳的切割路径,直到所创建的切割程序适合于所使用的机床并生成详细的报告.

For any parametric shape, once this has been selected, it is possible to edit a set of dimensional and technological parameters; it will be thereafter possible to view the calculation of the 2D flattening of the part and the position of opening, as well the marking of the starting and end points of the generating lines.

Once all parameters have been defined, the application will execute a render of the part to visualize this in 3D mode. Selected shapes are developed and registered in a production order.

Once the production order has been defined, Libellula.HVAC will automatically create corresponding icons, generating related nestings and optimal cutting paths, till the creation of the cutting program suited for the used machine and the issue of detailed reports.
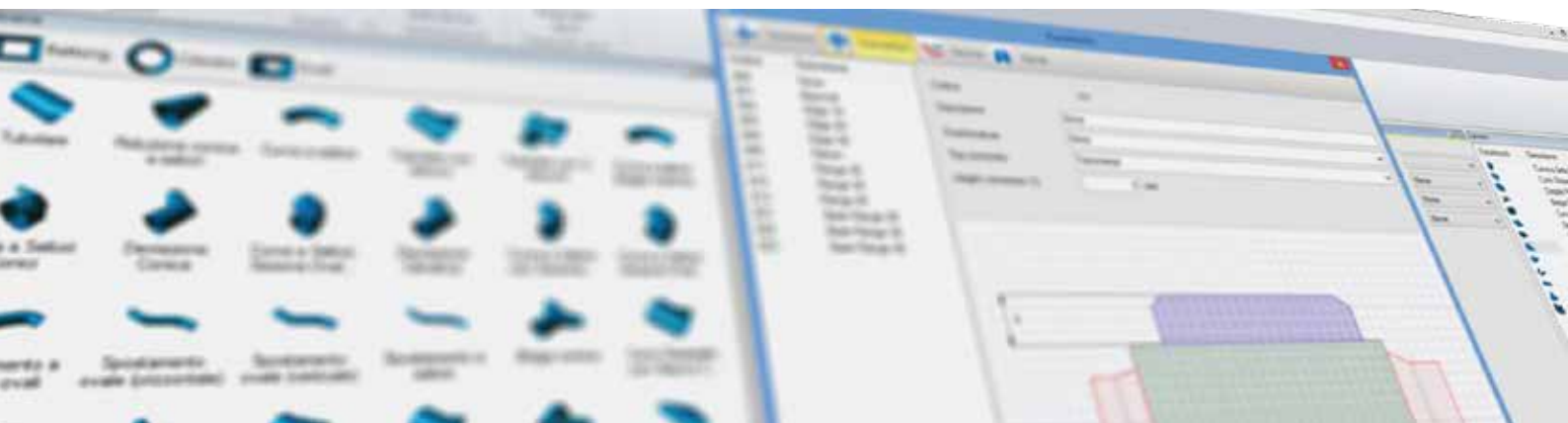
管材设计

Designed for DUCT machinery

Libellula.HVAC会自动地分割超出机床加工范围的形状,为了正确执行生产周期.

Libellula.HVAC automatically splits those shapes which are bigger than the working area of the machine, in order to properly execute the production cycle.
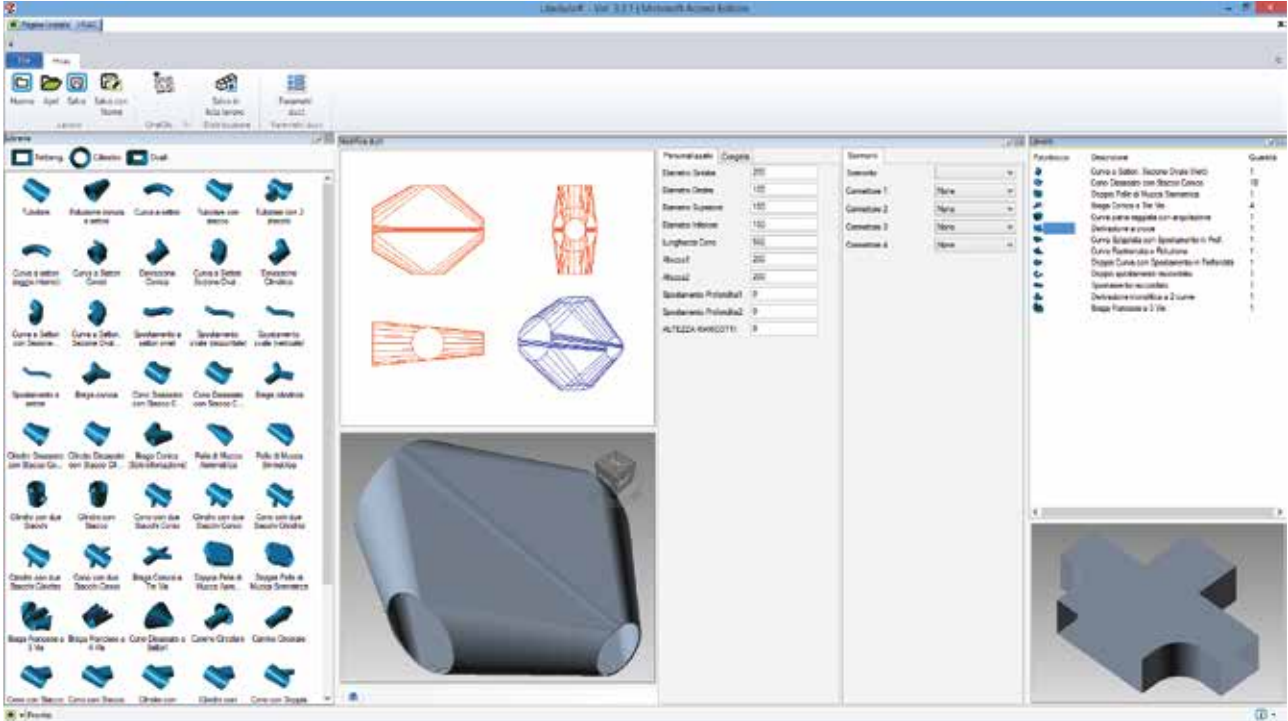
Libellula.HVAC：利益

易学易用完全自动化系统

Libellula.HVAC: the benefits
Easiness of use and complete automation

易用性
Libellula.HVAC不需要使用外部CAD去创建参数模型.

灵活多样的参数模型库适合您的任何需求.
超过100多种任何形状的图形，Libellula.HVAC最适合通风管道的设计.

自动化套料加工
通过一键命令按钮，Libellula.HVAC完全自动生成工件. 一旦工件被确认，Libellula.HVAC自动创建:
> 零件
> 工艺
> 机床编号
> 报告
> 实时展开

Easiness of use
Libellula.HVAC does not need to use an external CAD
to create parametric shapes

Flexible and versatile library to suit any of your needs
With more than a hundred of figures of any shape,
Libellula.HVAC is optimally suitable for HVAC designers

Complete automation of nesting process
With the oneClicConcept philosophy, Libellula.HVAC allows a totally automatic creation of the elements forming a determined work. Once the working is confirmed, Libellula.HVAC automatically creates:
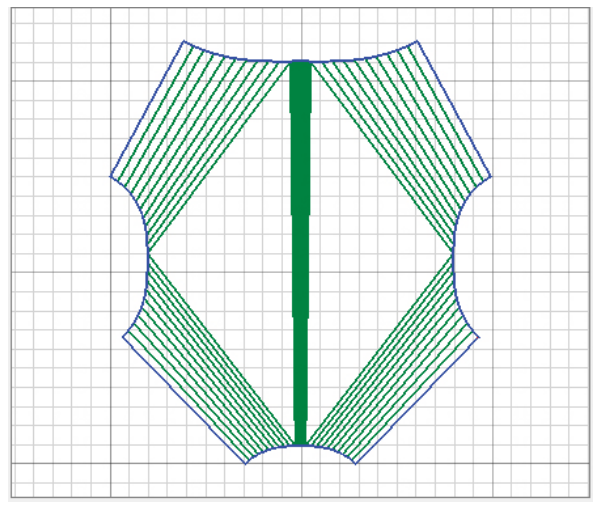> Icons
> Nesting
> Technology
> Machine code
> Reports

实时展开
Libellula.HVAC可以实时查看零件展开的部分

Real time unfolding
Libellula.HVAC allows to view the flat unfolding of the part in real time

参数模型

提供任意用户所需的参数模型

Parametric shapes

A wide library for any needs

选择一些特殊的参数模型取决于以下因素：
外观要求
切割机的配件及设备
设计限制条件

The choice of a particular set of parametric figures depends on the following factors:

aesthetical needs
fitting and equipment of the cutting machine
designing constraints

例如方形底座参数化模型选择适用于天花板吊顶和建筑物内部洞穴．另一方面，椭圆形的形状被选中是因为圆形的边缘完全满足高安全标准.

For instance, the parametric shapes with square base are chosen to adapt to false ceilings and internal cavaedia of buildings.

On the other hand, oval shapes are selected because of their capability to perfectly meet high safety standards thanks to their rounded edges.
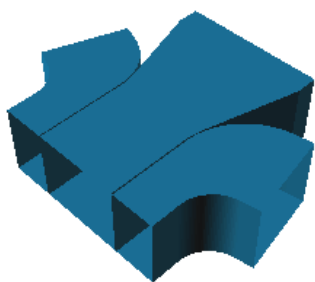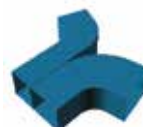

参数图形：方形
Parametric figures: SQUARE
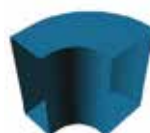
光曲线的倾斜度	动态的两条曲线分支	偏移（直线背面）
Rayed curve with angulations	Dynamic two curves branch	Offset (straight backs)

参数化图形：圆形和锥形
Parametric figures: ROUNDED and CONICAL

圆管	具有四分支的形状
Round duct	French trouser with 4 branches

参数化图形：椭圆形
Parametric figures: OVAL

圆锥截面减少	椭圆形减少	椭圆外部形状
Conic sections reduction	Oval reduction	French trousers with oval outlets
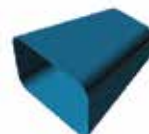
生产和工作流程

提供任意用户所需的参数模型

Workflow production

Workflow step by step

Libellula.HVAC可以为所有通风管道行业提供线性工作流程，从专家设计到新操作人员. 今后您会发现一个典型的工作流程应用:

参数模型库的数字选择
Libellula.HVAC可以提供上百种可用的风管参数模型
参数编辑和校正
连接点的设置和校正设计
零件的三维视图根据长度、直径、高度可以自定义设置
内部连接元件的内部设置（重叠）和外部（连接）

自动创建工作
一旦所需要的零件被创建和校正，我们可以对指定的零件进行批量操作.

展开和创建二维零件
Libellula.HVAC可以实时展开零件和创建二维零件

套料工艺
Libellula.HVAC 自动创建套料工艺

ISO代码
校正已安装的切割机ISO代码

报告
创建用于控制生产的报告文件.

The structure of Libellula.HVAC allows to create a linear working flow for all professionals in the HVAC industry, from expert designers to new operators. Hereafter you will find a typical working flow on the use of application:

Choice of the figure from library
Libellula.HVAC offers a hundred of immediately available shapes

Editing of parameters and validation
Verification of development and setting of joint points
3D view of the part and possibility to set customized values according to lengths, diameters, heights.
Setting of internal joining elements both internally (overlap) and externally (connectors)

Automatic creation of work
Once the wished part is created and validated, we can start the work with the desired quantity of parts

Unfolding and creation of 2D icons
Libellula.HVAC executes the flattening of the part in real time and creates the icon in 2D

Nesting and technology
Libellula.HVAC automatically creates nesting and technology

ISO Code
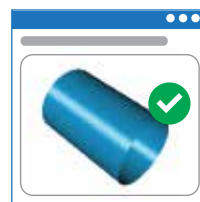Validates ISO code for the installed cutting machine

Report
Creates report files used to control of production

Libellula.HVAC

参数编辑和校正
Editing of parameters and validation

创建工作
Creation of work

展开和创建二维零件
Unfolding and creation of 2D icons

套料工艺
Nesting and technology

PPR

ISO代码
Nesting and technology

报告
Report

技术特征
Technical features

风管参数模型库
LIBRARY

超过100多种参数模型
Libellula.HVAC风管参数模型库主要包含三组类型：圆形、锥形、方形和椭圆形（环和法兰）.

自动化全部加工工序
由于Libellula.HVAC的线性流程，从零件的展开至生成机床加工的程序代码完全是自动化的.

易用性
定义形状参数的设置已被工程师用于简单和直观的设计加工，以及来自行业内的丰富经验.

More than 100 prametric figures
Libellula.HVAC library includes mainly three groups of shapes , rounded, conical, square and oval (like rings and flanges).

Complete process automation
Thanks to the linear workflow of Libellula.HVAC, the process of unfolding, nesting and code generation for machine tools is entirely automatic.

Easiness of use
The set of parameters for the definition of the shape has been engineered to offer simple and intuitive designing process, and comes from a solid experience in the industry.

使用独特和简单的流程
Libellula.HVAC可以解决生产加工工艺流程.

实时展开
由于可以实时展开，用户对生成的零件可以随意修改

在工作区域修改零件
Libellula.HVAC根据所选机床自动匹配和分割大零件

Unique and simple flow of use
Libellula.HVAC has been developed to solve the manufacturing process in a logical flow.

Real time unfold
The control of the user on the generated part is complete thanks to the real time unfolding.

Adjustment of parts on the working area
Libellula.HVAC automatically adapts and splits big parts according to the selected machine.

自动套料
NESTING

自动套料
自动套料过程在增加系统更多更精确的尝试的基础上计算出最佳的解决方案. 根据尝试的数量，您能要求系统在短时间内快速选择最佳的套料解决方案.
- 自动套料 – 快速方式
- 自动套料 – 平均模式 – 最优化
- 自动套料 – 精确模式 – 最优化

自动套料放置零件考虑许多不同选项，例如：角步距旋转，矩阵/重心填充，X-Y/探索/条状/重叠配对，零件镜像，纹理方向，等⋯

Auto Nesting
The process of automatic nesting calculates the best possible solution on the basis of an increasing system of more and more accurat attempts. You can require the system to make a fast nesting selecting the best solution in the shortest time or you let the system calculate the most efficient solution according to a variable number of attempts.
- Auto Nesting - Fast mode
- Auto Nesting - Average mode - Optimizer
- Auto Nesting - Accurate mode - Optimizer

Auto nesting considers many different options to place a part, like for instance: Angular step rotation, Matrix/Gravity center Filling, X-Y/ Heuristic / Strip / Overlapped Pairing, Mirror parts, Grain direction, etc...

根据不同选项，套料工序将一次计算出许多不同的板材放置：
- 多种材料/厚度类型
- 多种尺寸格式类型
- 主要板材管理

在可能的情况下为了增加重复计算出最小数量的套料解决方案.

准确和完整的报告
Libellula.HVAC对于报告生成和编辑配备了现代化和强大的引擎，适用于跟踪生产加工所有必要的信息，另外也配备了条形码系统. 报告可以很容易地保存为PDF或Excel文件便于操作人员通过网络来访问和共享.

The nesting process will calculate in one execution many different plate placement according to different options:
- Multi type of Material/Thickness
- Multi type of format dimension
- Master plate management

To calculate the best possible nesting solution with minimum amount of programs in order to increase repetition when possible.

Accurate and complete reports
Libellula.HVAC is equipped with a modern and powerful engine for report building and editing, suitable to produce and track all necessary information for production, also in case of bar code systems. Reports can be easily saved as PDF or Excel files to access and share through the network.

硬件和软件要求
Hardware & Software Requirements

硬件最低配置

- 处理器Intel® Core TM i5 或类似的
- 硬盘：2GB可用空间
- 4GB内存
- 256 MB 的内存视频卡
- DVD ROM16X
- 显示器17寸（1024X768）
- 3个按钮滚轮鼠标
- USB接口
- 在COM端口RS232（9针）*的情况下，PC需要电缆传输到机床.

建议硬件配置

- 处理器Intel® Core TM i7或类似的（32位或64位）
  硬盘（2GB可用空间）
- 8 GB内存或更大
- 1GB内存视频卡
- 22寸显示器（1920X1080)或更大

Minimal Hardware Configuration

- CPU Intel® Core TM i5 or similar
- Hard disk: 2GB free space
- 4 Gb RAM
- Video Card with 256 Mb Ram memory • DVD ROM 16x
- Monitor 17"(1024X768)
- 3-button mouse with wheel
- USB port for USB License Key
- COM Port RS232 (9 pin) *in case the PC needs cable transmission to the machine.

Suggested Hardware Configuration

- CPU Intel® Core TM i7 or similar (32bit or 64bit)
- Hard disk SATA III (2GB Free space)
- RAM 8 Gb or Higher
- Video Card with 1GB Ram memory
- Monitor 22"(1920X1080) or Higher

软件要求（服务器端）

- Microsoft .NET Framework 4.0

服务器操作系统：

Microsoft® Windows Server 2003 SP1(32位或64位)
Microsoft® Windows Vista SP2商业版 - 旗舰（32位或 64 位）
Microsoft® Windows Server 2008 SP1（32位 或 64 位）
Microsoft® Windows Server 2008 R2 SP1（32位或64位）
Microsoft® Windows 7 SP 1 专业版和旗舰版（32位或64位)
Microsoft® Windows 8 专业版 - 企业（32位或64位)

软件要求（客户端）

客户端（网络访问）支持的浏览器：火狐3.0，谷歌 Chrome，Internet Explorer 9，Opera 11，Safari 5

客户端操作系统：

Microsoft® Windows Vista® 商业版和旗舰版（32位或64位)
Microsoft® Windows 7® SP1 专业版- 旗舰（32位或64位)
Microsoft® Windows 8 P专业版- 企业（32位或64位)

Software Requirements (Server side)

- Microsoft .NET Framework 4.0

Server Operating System:

- Microsoft® Windows Server 2003 SP1 (32bit or 64 bit)
- Microsoft® Windows Vista SP2 Business - Ultimate (32bit or 64 bit)
- Microsoft® Windows Server 2008 SP1 (32bit or 64 bit)
- Microsoft® Windows Server 2008 R2 SP1(32bit o 64 bit)
- Microsoft® Windows 7 SP 1 Professional and Ultimate (32bit or 64 bit)
- Microsoft® Windows 8 Pro - Enterprise (32bit or 64 bit)

Software Requirements (Client side)

Clientt (web access)
Supported browsers: Firefox 3.0, Google Chrome, Internet Explorer 9, Opera 11, Safari 5

Client Operating System:

- Microsoft® Windows Vista® Business and Ultimate (32bit or 64 bit)
- Microsoft® Windows 7® SP1 Professional - Ultimate (32bit or 64 bit)
- Microsoft® Windows 8 Pro - Enterprise (32bit or 64 bit)

Libellula技术支持

只要您需要随时为您提供服务.

Libellula technical support

At your service, whenever you need.

有效、准确的答复、快速查找问题并提出正确的解决方案：这是我们技术支持的指导方针. 按照客户的要求，Libellula技术支持建议以下三种类型的合同.

Availability, precision on answering, ability to recognize the problems quickly and to propose the right solutions: these are the guidelines of our technicalsupport. The Libellula technical support proposes 3 types of contracts, following the customer requirements

每个客户可以根据他的组织结构选择技术支持服务：Libellula技术支持始终如一. 快速无拖延，是您唯一的解决方案.

Every customer selects the technical support service in function of his structure and his organization: Libellula always
No postponing, no delay, only solutions.

标准服务 **SIMPLE**	高级服务 **TOP**	额外服务 **PREMIUM**
电话协助 传真服务 电子邮件协助 聊天	电话协助 传真服务 电子邮件协助 聊天 一键命令远程技术支持	电话协助 传真服务 电子邮件协助 聊天 一键命令远程技术支持 客户入口 升级和折扣
Phone assistance Fax service Email assistance Chat	Phone assistance Fax service Email assistance Servizio Chat OneClic.SUPPORT	Phone assistance Fax service Email assistance Chat OneClic.SUPPORT Customer PORTAL Upgrades and discount

Libellula技术支持

只要您需要随时为您提供服务.

Libellula technical support

At your service, whenever you need.

电话协助I
通过电话立即答复：经过专业培训的技术人员实时为您提供服务并解决您的疑问和问题.

电子邮件协助
我们的技术人员很乐意通过电子邮件快速地回复您的问题. 悉心照顾的服务，快速提高您的工作效率.

与我们技术支持聊天
专业聊天技术支持实时解答您的问题. 优良的服务，即时答复客户的问题.

Service Fax   传真服务
传真服务，任何非紧急查询的情况下是可用的. 您的任何问题将被快速审查和跟进.

一键命令远程技术支持
技术支持通过安全的互联网连接，可以直接连接您的电脑：我们的技术人员将在您的计算机上直接远程操作，为您提供即时的解决方案.

客户入口
您可以通过我们的网站很容易地联系Libellula技术支持：www.libellula.eu. 您可以直接访问我们的网站选择您喜欢的服务选项. 为客户提供最便捷的服务.

Phone assistance
Immediate answer of phone calls: a trained technician is at your service in real time, to solve your doubts and problems

Email assistance
Our technicians are always available and willing to reply to e-mails rapidly and extensively. Utmost care for service, delivering highest efficiency.

Chat with our technicians
Professional chat support for real time answers.
Excellent service, never leaving the customer without a reply.

Servizio Fax
A fax service, for any non-urgent inquiries, is available. Any of your issues will be examined and followed up.

OneClic.SUPPORT
Technical support through safe internet connection, directly from your application: our technician will directly operate on your computer, delivering immediate solutions.

Customer Portal
The Libellula technical support can be easily contacted through our website: www.libellula.eu. Our portal allows direct access to the service using one of the options you prefer. A great innovation for our most discerning customers.

Libellula ®

Sheet Metal Software

SI GROUP ENGINEERING

Industrial Automation solutions

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