

Vacuum, gas tracer and pressurization units & Leak detectors

iAmiata

Vacuum

Pressurization

Step Pressurization

Strength Test +

Leak test +

Barcode +

Vacuum, tracer gas (N₂ or He) mixtures and pressurization unit

iAmiata is a bench station for mixing Helium and Nitrogen gases and creation of test leaks with rising vacuum, pressure decay and point to point micro leaks detections.

iAmiata has been designed specifically to perform pressure tests and leak tests of refrigerating units with the use of inert gas or tracer gases such as helium or nitrogen/hydrogen, according to the ISO 10156 Standard; before the charging of the test gas it is possible to perform a vacuum cycle so to get a first cleaning of the unit and to make a preliminary sealing test.

iAmiata is ideal for the tracing of leaks from components and refrigerating units, on production lines for any kind of appliance, wherever a pressure test or/and a trace gas leak test is required.

iAmiata can be easily interfaced with the Inficon and Pfeiffer Leak detectors, with complete control of the main functionalities, configuration and report of the leak test over the relevant copper circuits.

iAmiata for pressure stress test

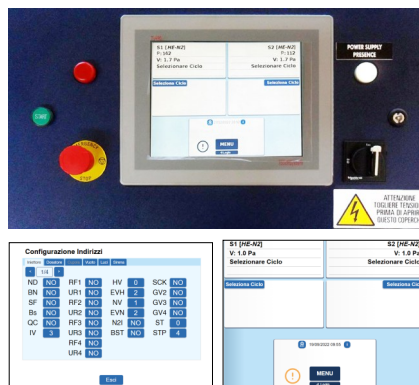
iAmiata connected to leak detector



iAmiata



Touch screen machine Controller



Connections



Functional Characteristics:

- High versatility and portability thanks to compact design
- Maximum test pressure 55 bar
- Digital gauges for pressure and vacuum measurement
- Integrated pneumatic vacuum pump (5,2 m³/h capacity)
- Setting of working cycle parameters, monitoring and printing test reports by connecting to an external PC
- Bar code reader (optional)
- Microprocessor controlled
- Up to 1000 programmable working cycles
- Reporting of the sub cycle in progress
- Built in agreement to the European Machinery Directive, Safety standards CE marked

| iAmiata General Technical Characteristics | |
|---|--|
| Tracer gas/mixtures | He or N2 / He & N2 blend |
| Injector Length | 3,5 m, Different length is available on request |
| Maximum Test pressure | 55 bar |
| Pressure Sensor resolution | 1 kPa |
| Connection to the unit to be tested | ¼" Hansen F (ISO 7241B), ¼" SAE at request |
| Vacuum pump capacity | Integrated pneumatic depressor 5,2 m ³ /h; DN16KF flange for connection to ext. vacuum pump |
| Programmable work cycles | Up to 1000 |
| Safety valve security setting | 63 bar, configurable at request |
| Control unit | TS690 |
| Working temperature | from 5 °C to 45° C |
| PC Connection | LAN |
| Compressed air supply | 6 ÷ 7 bar not lubricated |
| Power Supply | 400 V @ 50 Hz – 3ph + GND |
| Power Consumption | 0,7 kW |
| Dimensions (L x W x H) ** | 850 x 560 x 1400mm |
| Weight | ~150 kg |

* The provided unit could not exactly match the one described here

** IAmiata TT has a different dimension

| Optional features and devices |
|---|
| DCA (Data Collector Application over TCP/IP protocol) |
| Available up to 4 Mixture pressurization Systems and 2 Vacuum Pumps |
| Automatic working cycle selection performed by bar code reader |
| On-Board printer |
| Obstructed vacuum group test and/or capillary test |
| iAmiata UNO -1 Special configuration without Vacuum Pump |

* FT software department develops customized software on request

- Company Profile
- Vacuum and Charging units
- HC Refrigerants handling systems
- Special Units
- Vacuum and Charging Injectors
- Refrigerant transfer pump

Pressure test units leak detectors

Preliminary evacuation

Electrical and functional test

Ultrasonic tube sealers

IPCS & IPCS PLUS

Vacuum, gas tracer and pressurization units & Leak detectors

Vacuumping

The iAmiata machine generally is equipped with the vacuum pump that allows vacuuming to be performed on a unit under test.

Through vacuuming unwanted air and gases are extracted from the circuit being processed, it also allows any moisture present to evaporate and be extracted as gas by the vacuum pump.

Vacuumping generally is preparatory to beginning processing on a unit under test, but it can also be omitted depending on the state of the circuit under test.

| iAmiata Uno TT (Table top unit) Technical Characteristics | |
|--|---|
| Tracer gas/mixtures | 2 |
| Injectors | Min 2 |
| Vacuum/Pressurization System | 1 Injection System |
| Flowmeter | 1 |
| Injector Length | 3,5 m, Different length is available on request |
| Maximum Test pressure | 55 bar |
| Safety valve security setting | 63 bar, configurable at request |
| Dimension | 560 x 420 x 300 mm |

| iAmiata Uno Technical Characteristics | |
|--|---|
| Tracer gas/mixtures | 2 |
| Injectors | Min 2 |
| Vacuum/Pressurization System | 1 Injection System |
| Flowmeter | 1 |
| Injector Length | 3,5 m, Different length is available on request |
| Maximum Test pressure | 55 bar |
| Safety valve security setting | 63 bar, configurable at request |

Pressurization

Pressurization is the function that allows a circuit to be loaded with a drawn mixture at a certain user-configurable pressure. Then the machine automatically assesses the presence of leaks through the pressure drop test, and following this, if properly configured, leak detection can be carried out through an Inficon P3000 and P3000XL leak-

detector.

the pressure input from the capillary, then it is possible to say that the capillary is not obstructed and place the test OK.

This function can only be enabled by the user if the Hardware is equipped with the corresponding pressure and control valve. Please contact FT technical department for more information.

Company Profile

Vacuum and Charging units

HC Refrigerants handling systems

Special Units

Vacuum and Charging injectors

Refrigerant transfer pump

Pressure test units leak detectors

Preliminary evacuation

Electrical and functional test

Ultrasonic tube sealers

IPCS & IPCS PLUS

| iAmiata Due Technical Characteristics | |
|--|---|
| Tracer gas/mixtures | 2 |
| Injectors | Min 2 |
| Vacuum/Pressurization System | 2 Injection System |
| Flowmeter | 2 |
| Injector Length | 3,5 m, Different length is available on request |
| Maximum Test pressure | 55 bar |
| Safety valve security setting | 63 bar, configurable at request |

| iAmiata Quattro Technical Characteristics | |
|--|---|
| Tracer gas/mixtures | 2 |
| Injectors | Min 4 |
| Vacuum/Pressurization System | 4 Injection System |
| Flowmeter | 4 |
| Injector Length | 3,5 m, Different length is available on request |
| Maximum Test pressure | 55 bar |
| Safety valve security setting | 63 bar, configurable at request |

* FT software department develops customized software on request

Vacuum, gas tracer and pressurization units & Leak detectors

Stress Test in iAmiata ST1

The Stress Test function belongs only to the iAmiata ST machine.

The purpose is to test the tightness of the high circuit, low circuit and the separation valve by loading nitrogen simultaneously on both sides of the circuit.

The high and low circuits are pressurized at

different pressures, and this difference must always be monitored and controlled so that a safety differential cannot be exceeded.

Then the machine automatically assesses the presence of leaks through the pressure drop test, and to follow, if properly configured, a pressurization phase and leak detection can be carried out through a leak detector from the Inficon P3000 and P3000XL family.

| iAmiata ST1 Technical Characteristics | |
|--|---|
| Tracer gas/mixtures | 2 |
| Injectors | Min 2 |
| Vacuum/Pressurization System 1 Injection System Strength-Test | 1 Injection System |
| Flowmeter | 2 (1 for High P and 1 for Low P) |
| Injector Length | 3,5 m, Different length is available on request |
| Maximum Test pressure | 55 bar |
| Safety valve security setting | 63 bar, configurable at request |

| iAmiata ST2 Technical Characteristics | |
|--|---|
| Tracer gas/mixtures | 2 |
| Injectors | Min 4 |
| Vacuum/Pressurization System 2 Injection System Strength-Test | 2 Injection System |
| Flowmeter | 4 (2 for High P and 2 for Low P) |
| Injector Length | 3,5 m, Different length is available on request |
| Maximum Test pressure | 55 bar |
| Safety valve security setting | 63 bar, configurable at request |

Capillary monitoring in iAmiata CBT

The capillary check function allows, prior to the pressurization stage, to tell whether the capillary is clogged. Two pressure sensors must be present in the machine to perform this test.

The circuit is pressurized only on the capillary side; then the sensor on the low-pressure circuit is monitored. If the pressure readout has the same

value as the pressure input from the capillary, then it is possible to say that the capillary is not obstructed and place the test OK.

This function can only be enabled by the user if the Hardware is equipped with the corresponding pressure and control valve. Please contact FT technical department for more information.

Company Profile

Vacuum and Charging units

HC Refrigerants handling systems

Special Units

Vacuum and Charging Injectors

Refrigerant transfer pump

Pressure test units leak detectors

Preliminary evacuation

Electrical and functional test

Ultrasonic tube sealers

IPCS & IPCS PLUS

iAmiata Uno CBT1 Technical Characteristics

| | |
|--|---|
| Tracer gas/mixtures | 2 |
| Injectors | Min 2 |
| Vacuum/Pressurization System 1 Injection system with capillary obstruction test | 1 Injection System |
| Flowmeter | 1 |
| Injector Length | 3,5 m, Different length is available on request |
| Maximum Test pressure | 55 bar |
| Safety valve security setting | 63 bar, configurable at request |

iAmiata CBT2 Technical Characteristics

| | |
|--|---|
| Tracer gas/mixtures | 2 |
| Injectors | Min 4 |
| Vacuum/Pressurization System 1 Injection system with capillary obstruction test | 2 Injection System |
| Flowmeter | 2 |
| Injector Length | 3,5 m, Different length is available on request |
| Maximum Test pressure | 55 bar |
| Safety valve security setting | 63 bar, configurable at request |

* FT software department develops customized software on request

真空、气体示踪剂和加压装置以及检漏仪

iAmiata

真空

增压

步骤增压

强度测试+

泄漏测 +

条形码 +

真空、示踪气体 (N₂或He) 混合物和加压装置

iAmiata是一个台式工作站，用于混合氦气和氮气，并通过真空上升、压力衰减和点对点微泄漏检测来创建测试泄漏。

iAmiata经过专门设计，用于根据ISO 10156标准，使用惰性气体或示踪气体（例如氦气或氮气/氢气）对制冷装置进行压力测试和泄漏测试；在充入测试气体之前，可以执行真空循环，以便对装置进行第一次清洁并进行初步密封测试。

iAmiata非常适合需要压力测试或/和痕量气体泄漏测试的各类设备生产线上，以追踪组件和制冷装置的泄漏。

iAmiata可轻松与Inficon和Pfeiffer检漏仪连接，完全控制相关铜电路泄漏测试的主要功能、配置和报告。

用于压力测试的iAmiata

iAmiata连接至检漏仪



iAmiata



触摸屏机控制器



连接



功能特性：

- 依托小巧设计，具备高度的多功能性和便携性
- 最大测试压力 55 bar
- 用于压力和真空测量的数字仪表
- 集成气动真空泵（5.2 m³/h容量）
- 通过连接外部PC设置工作循环参数、监控和打印测试

报告

- 条形码读取器（可选）
- 受控微处理器
- 高达1000个可设置工作循环
- 报告当前子循环
- 构造符合欧洲机械指令，安全标准CE标志

| iAmiata一般技术特性 | |
|-----------------|--|
| 示踪气体/混合物 | He或N2 / He & N2混合物 |
| 注射器长度 | 3.5 m, 可根据要求提供不同长度 |
| 最大测试压力 | 55 bar |
| 压力传感器分辨率 | 1 kPa |
| 与待测设备的连接 | 应要求提供的 $\frac{1}{4}$ " Hansen F (ISO 7241B), $\frac{1}{4}$ " SAE |
| 真空泵容量 | 集成气动减压器 5.2 m ³ /h; DN16KF用于连接至外部真空泵的法兰 |
| 可设置工作循环数 | 高达1000个 |
| 安全阀安全设置 | 63 bar, 可根据要求配置 |
| 控制装置 | TS690 |
| 工作温度 | 从5°C至45°C |
| 计算机连接 | 局域网 |
| 压缩空气供应 | 6 - 7 bar未润滑 |
| 电源 | 50 Hz时400 V - 3ph + GND |
| 功率消耗 | 0.7 kW |
| 尺寸(长 x 宽 x 高)** | 850 x 560 x 1400 mm |
| 重量 | ~150 kg |

* 提供的装置与此处描述的装置不完全匹配

** IAmiata TT具有不同的尺寸

| 可选功能和设备 |
|----------------------------|
| DCA (基于TCP/IP协议的数据收集器应用程序) |
| 最多可提供4个混合物加压系统和2个真空泵 |
| 由条形码读取器执行的自动工作循环选择 |
| 机载打印机 |
| 受阻真空组测试和/或细密测试 |
| iAmiata UNO -1 不带真空泵的特殊配置 |

* FT软件部门根据要求开发定制软件

| |
|----------------|
| 公司简介 |
| 真空和冷媒亦连接 |
| IC制冷剂处理系统 |
| 特殊装置 |
| 真空和充注注射器 |
| 制冷剂输送泵 |
| 压力测试单元检测 |
| 初步排空 |
| 电气和功能测试 |
| 超声波密封口机 |
| IPCS和IPCS PLUS |

真空、气体示踪剂和加压装置以及检漏仪

抽真空

iAmiata机器通常配备真空泵，从而对被测设备进行抽真空。

通过抽真空，可从氮气罐处理的电路中提取不需要的空气和气体，还可以使存在的水分蒸发并被真空泵作为气体提取。

抽真空通常是被测装置上处理开始前的工作，但也可以根据被测电路的状态而省略。

| iAmiata Uno TT (桌面装置) 技术特性 | |
|----------------------------|--------------------|
| 示踪气体/混合物 | 2 |
| 注射器 | Min 2 |
| 真空/加压系统 | 1 注射系统 |
| 流量计 | 1 |
| 注射器长度 | 3.5 m, 可根据要求提供不同长度 |
| 最大测试压力 | 55 bar |
| 安全阀安全设置 | 63 bar, 可根据要求配置 |
| 尺寸 | 560 x 420 x 300 mm |

| iAmiata Uno 技术特性 | |
|------------------|--------------------|
| 示踪气体/混合物 | 2 |
| 注射器 | Min 2 |
| 真空/加压系统 | 1 注射系统 |
| 流量计 | 1 |
| 注射器长度 | 3.5 m, 可根据要求提供不同长度 |
| 最大测试压力 | 55 bar |
| 安全阀安全设置 | 63 bar, 可根据要求配置 |

增压

加压是一种允许回路在一定的用户可配置压力下加载被抽取混合物的功能。然后，机器通过压降测试自动评估是否存在泄漏，如果配置正确，则可以通过Inficon P3000和P3000XL检漏仪进行泄漏检测。

如果毛细管有压力输入，则说明毛细管没有阻塞，测试正常。

只有当硬件配备了相应的压力和控制阀时，用户才能启用此功能。请联系FT技术部门，以了解更多信息。

公司简介

真空和冷媒充注装置

R13制冷剂处理系统

特殊装置

真空和充注注射器

制冷剂输送泵

压力测试单元检漏仪

初步排空

电气和功能测试

超声波管封口机

IPCS和IPCS PLUS

iAmiata Due 技术特性

| | |
|----------|--------------------|
| 示踪气体/混合物 | 2 |
| 注射器 | Min 2 |
| 真空/加压系统 | 2 注射系统 |
| 流量计 | 2 |
| 注射器长度 | 3.5 m, 可根据要求提供不同长度 |
| 最大测试压力 | 55 bar |
| 安全阀安全设置 | 63 bar, 可根据要求配置 |

iAmiata Quattro 技术特性

| | |
|----------|--------------------|
| 示踪气体/混合物 | 2 |
| 注射器 | Min 4 |
| 真空/加压系统 | 4 注射系统 |
| 流量计 | 4 |
| 注射器长度 | 3.5 m, 可根据要求提供不同长度 |
| 最大测试压力 | 55 bar |
| 安全阀安全设置 | 63 bar, 可根据要求配置 |

* FT软件部门根据要求开发定制软件

真空、气体示踪剂和加压装置以及检漏仪

iAmiata ST1中的压力测试

压力测试功能仅属于

iAmiata ST机器。

其目的是通过在回路两侧同时充入氮气来测试高压回路、低压回路和分离阀的密封性。

高、低压回路的加压压力

不同，并且必须始终监视和控制该压差，避免超过安全差。

然后，机器通过压降测试自动评估是否存在泄漏，如果配置正确，则可以通过Inficon P3000和P3000XL系列的检漏仪进行加压阶段和泄漏检测。

| iAmiata ST1 技术特性 | |
|-------------------|---------------------|
| 示踪气体/混合物 | 2 |
| 注射器 | Min 2 |
| 真空/加压系统1 注射系统强度测试 | 1 注射系统 |
| 流量计 | 2 (1个用于高压, 1 个用于低压) |
| 注射器长度 | 3.5 m, 可根据要求提供不同长度 |
| 最大测试压力 | 55 bar |
| 安全阀安全设置 | 63 bar, 可根据要求配置 |

| iAmiata ST2 技术特性 | |
|-------------------|---------------------|
| 示踪气体/混合物 | 2 |
| 注射器 | Min 4 |
| 真空/加压系统2 注射系统强度测试 | 2 注射系统 |
| 流量计 | 4 (2个用于高压, 2 个用于低压) |
| 注射器长度 | 3.5 m, 可根据要求提供不同长度 |
| 最大测试压力 | 55 bar |
| 安全阀安全设置 | 63 bar, 可根据要求配置 |

iAmiata CBT中的毛细管监测

毛细管检查功能允许在加压阶段之前判断毛细管是否堵塞。机器中必须有两个压力传感器才能执行此测试。

回路仅在毛细管侧加压；然后低压电路上的传感器受到监控。如果压力读数

和毛细管的压力输入相同，则说明毛细管没有阻塞，测试正常。

只有当硬件配备了相应的压力和控制阀时，用户才能启用此功能。请联系FT技术部门，以了解更多信息。

公司简介

真空和制冷剂注射

制冷剂处理系统

特殊装置

真空和充注注射器

制冷剂输送泵

压力测试单元检测

初步排空

电气功能测试

超声波密封口机

IPCS和IPCS PLUS

iAmiata Uno CBT1 技术特性

| | |
|----------------------|--------------------|
| 示踪气体/混合物 | 2 |
| 注射器 | Min 2 |
| 真空/加压系统1 注射系统毛细管阻塞测试 | 1 注射系统 |
| 流量计 | 1 |
| 注射器长度 | 3.5 m, 可根据要求提供不同长度 |
| 最大测试压力 | 55 bar |
| 安全阀安全设置 | 63 bar, 可根据要求配置 |

iAmiata CBT2 技术特性

| | |
|----------------------|--------------------|
| 示踪气体/混合物 | 2 |
| 注射器 | Min 4 |
| 真空/加压系统1 注射系统毛细管阻塞测试 | 2 注射系统 |
| 流量计 | 2 |
| 注射器长度 | 3.5 m, 可根据要求提供不同长度 |
| 最大测试压力 | 55 bar |
| 安全阀安全设置 | 63 bar, 可根据要求配置 |

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