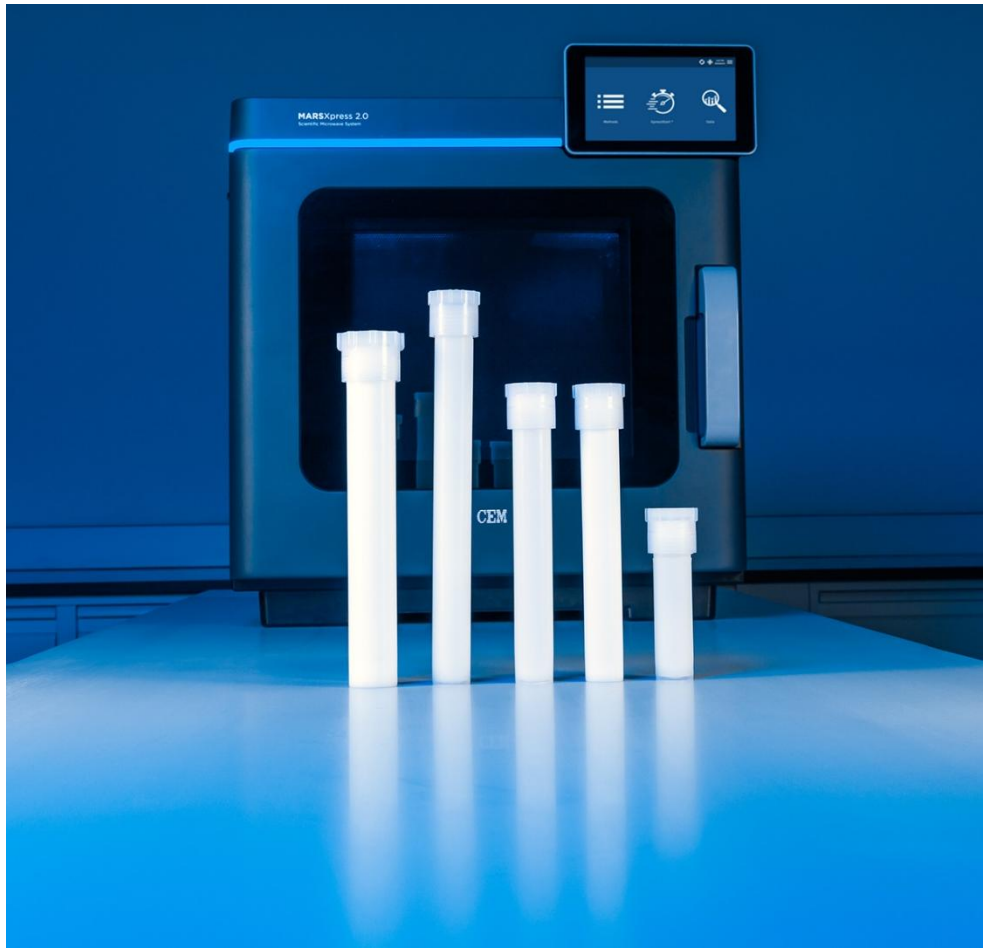
# MARSXpress 2.0™

2025年5月

# MARSXpress 2.0




简单

灵活性

可访问性

# MARSXpress 2.0

- 提供最新的尖端技术
- 全新设计，**持久耐用**
- 提高**消解市场**的灵活性
- 发布日期
  - 中国—2025年4月
  - 欧洲——2025年5月
  - 亚洲经销商——2025年5月
  - ROW–2025年秋季

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# MARSXpress 2.0

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# MARSXpress 2.0-新增了哪些功能？

## 保留

- MARSXpress™技术
- 快速准确的温度读数（iWave）
- 转盘标识
- 消解罐计数
- 操作简单直观

## 改进

- 新腔体设计
- 新的触摸屏
- 新图像用户界面（GUI），改善用户体验
- AutoCal 2.0 校准/验证
- 安全特性
  - 腔体压差传感器
  - 转盘拖动通知
  - 基于温度的冷却

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# 侧面：电源和保险丝

# 背面/侧面：排气和通信端口

排风口

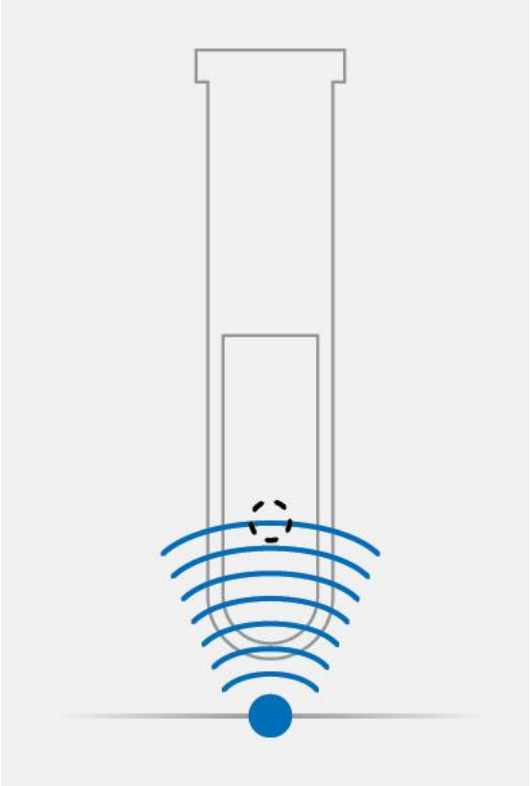
2×USB
以太网

# 让我们看看里面

- 新腔体设计
  - 46升vs 51升
  - 输送功率1800W
  - 并联运行的双磁控管
  - 优化了新腔体的功率输送
- 重新调配了传感器位置
  - iWave®
  - 消解罐计数
  - 转盘识别

# 温度控制- iWave

- 测量每个样品的温度
  - 透过消解罐壁测量样品温度
  - 确认每个样品均达到设定值
- 最准确的温度测量技术
- 可用于
  - MARS6™
  - BLADE™
  - MARSXpress 2.0™



# MARSXpress和MARSXpress Plus

- 最高温度210°C（推荐使用温度）
- 大多数样品的最大干重为0.5 g
- 主要用于有机物消化
- 可以使用HF
- 高温运行时间45分钟
- MARSXpress提供20、55和75 mL
- MARSXpress Plus提供110 mL
- 温度控制选项：iWave
- 压力控制选项...消解罐排气和自动密封以调节消解罐内的压力。

# 简单性和灵活性-MARSXpress的优势

- 易于组装的经典三部分设计
- 40位处理量
- 单次可运行1-40个样品（以前的最小值为8）
- 有20、55和75 mL规格
- 历史上最受欢迎的消解罐

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# MARSXpress应用

- 环境
  - USEPA，欧洲标准
- ASTM
- 包括AOAC方法的食品
- 饲料、肥料和谷物
- 植物、动物和鱼类组织
- 大多数药品/营养补充剂
- 食用油（植物油、橄榄油等）
- 生物学 / 临床-毛发、血液、尿液
- 消费品测试(CPSC方法）
- 采矿样品浸出
- 易加工塑料，如尼龙

# MARSXpress 2.0 is here…

- Simplicity 简单
  - MARSXpress 消解罐技术
  - XpressStart™
- Flexibility 灵活
  - 批处理 1, 2, 3… 最多40个样品
  - 消解各种各样的样品
    - 食物、环境、植物组织等
- Accessibility 可访问性
  - 视觉指示器
  - 数据处理/可定制报告
  - XpressCommand™（即将推出）

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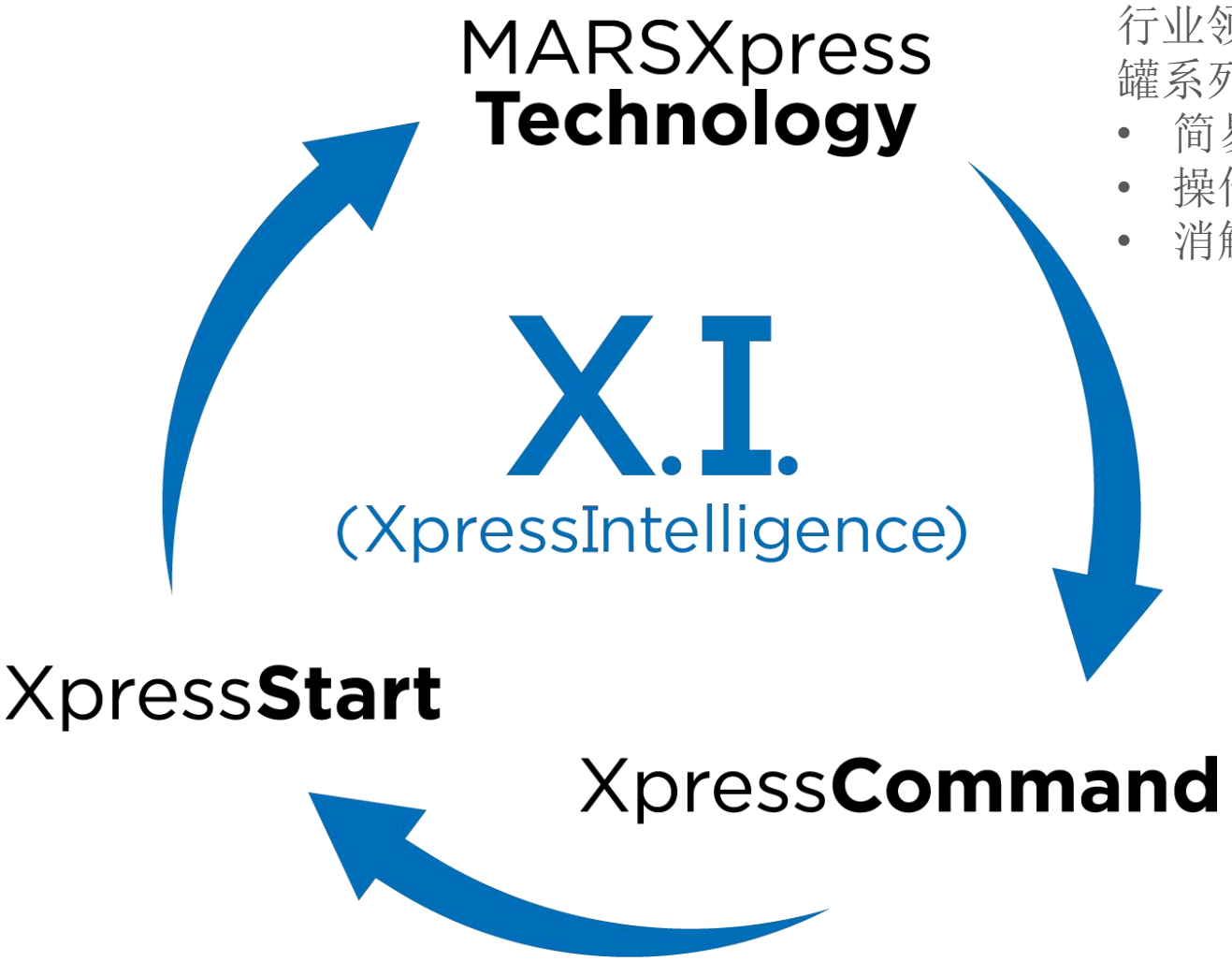
# X.I.（Xpress Intelligence™）

行业领先的MARSXpress消解罐系列

- 简易装配
- 操作简便
- 消解可靠




1.选择温度
2.开始运行
系统决定其余部分

只需语音即可操作系统

- 选择方法
- 开始
- 停止
- 查看数据
- 回主页
- 还有更多

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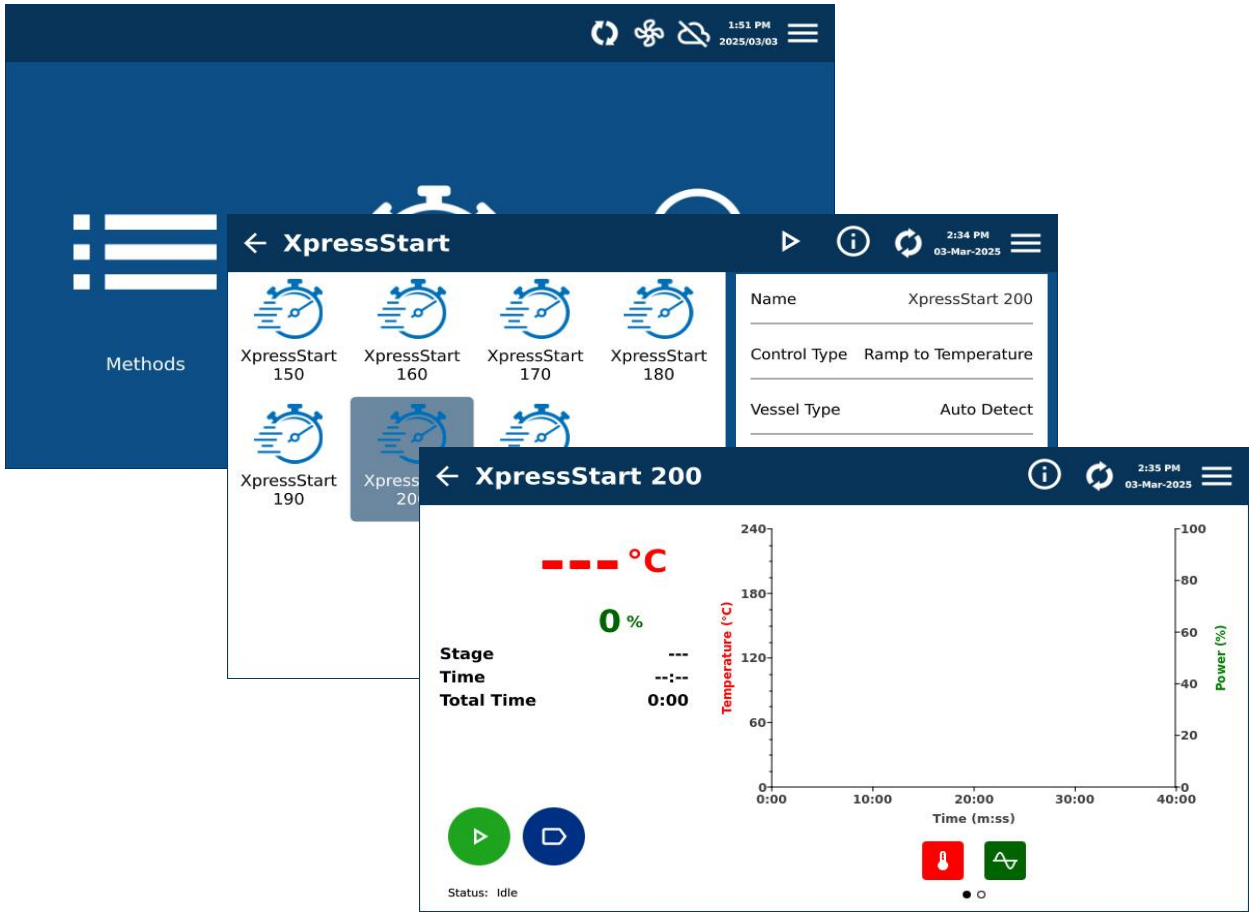
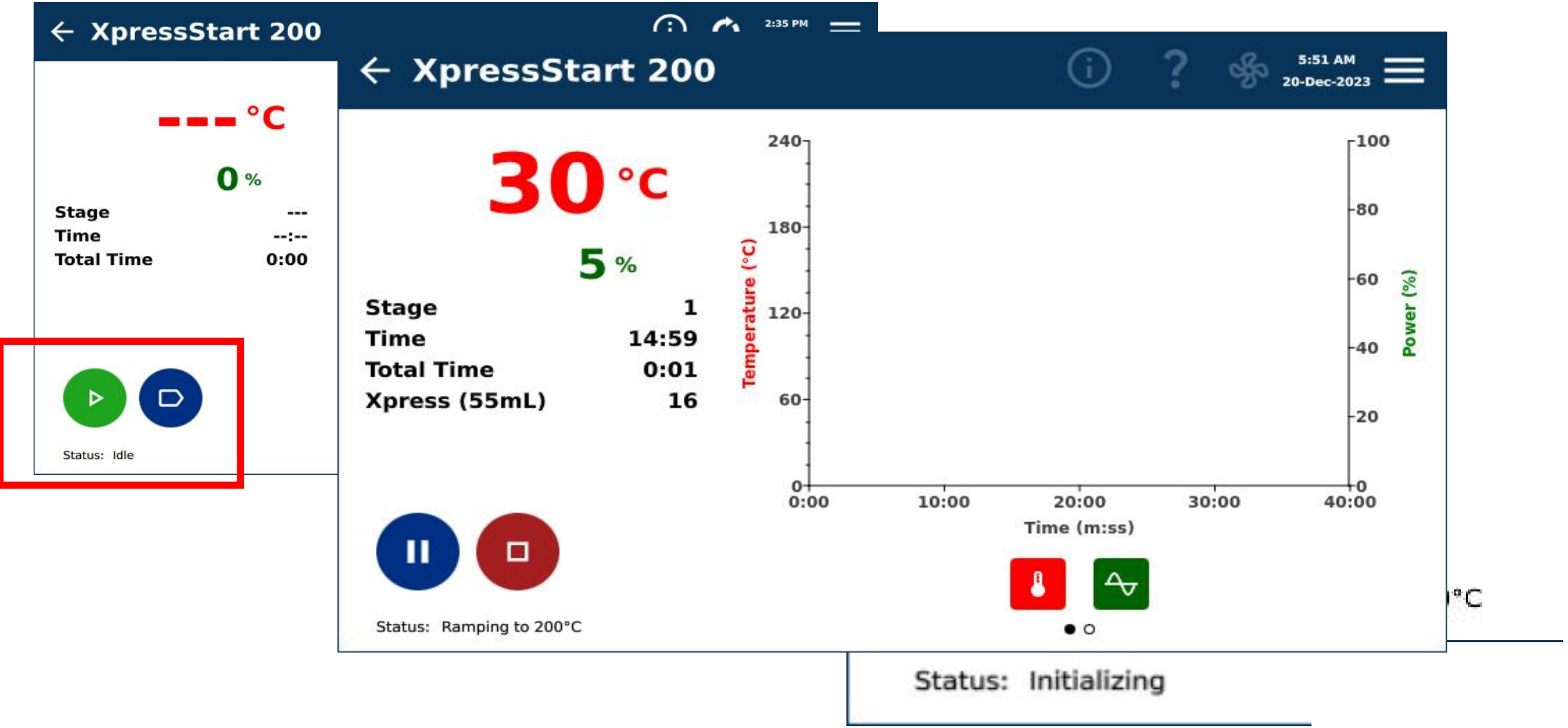
# 简单性-XpressStart

- 最简单的方式启动消解
- 选择您的运行温度，系统将完成其余工作
  - 消解罐类型
  - 消解罐数量
  - 上升和保持时间
- 按下“开始”

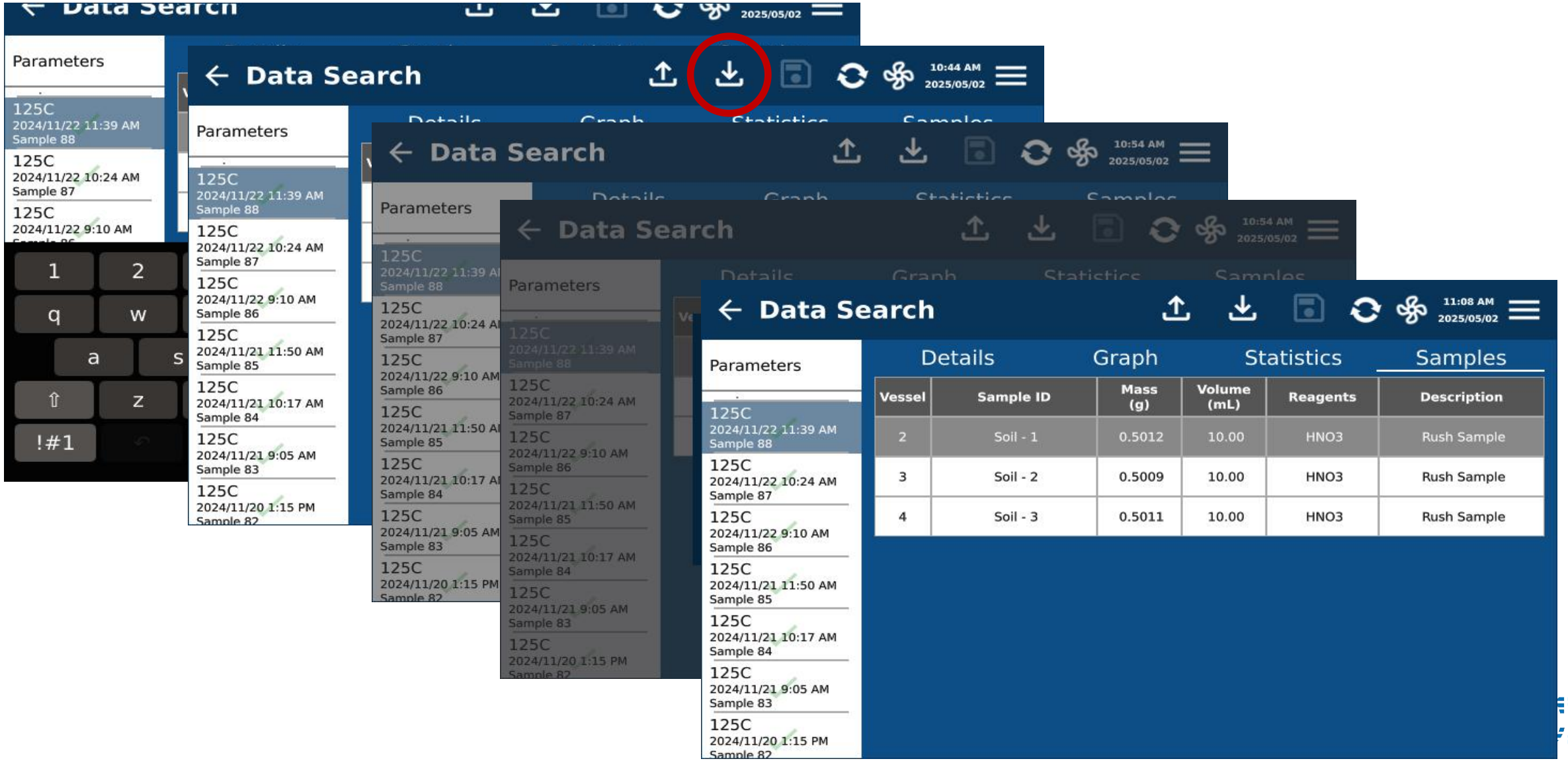
- 7个预设温度
- 无需编辑



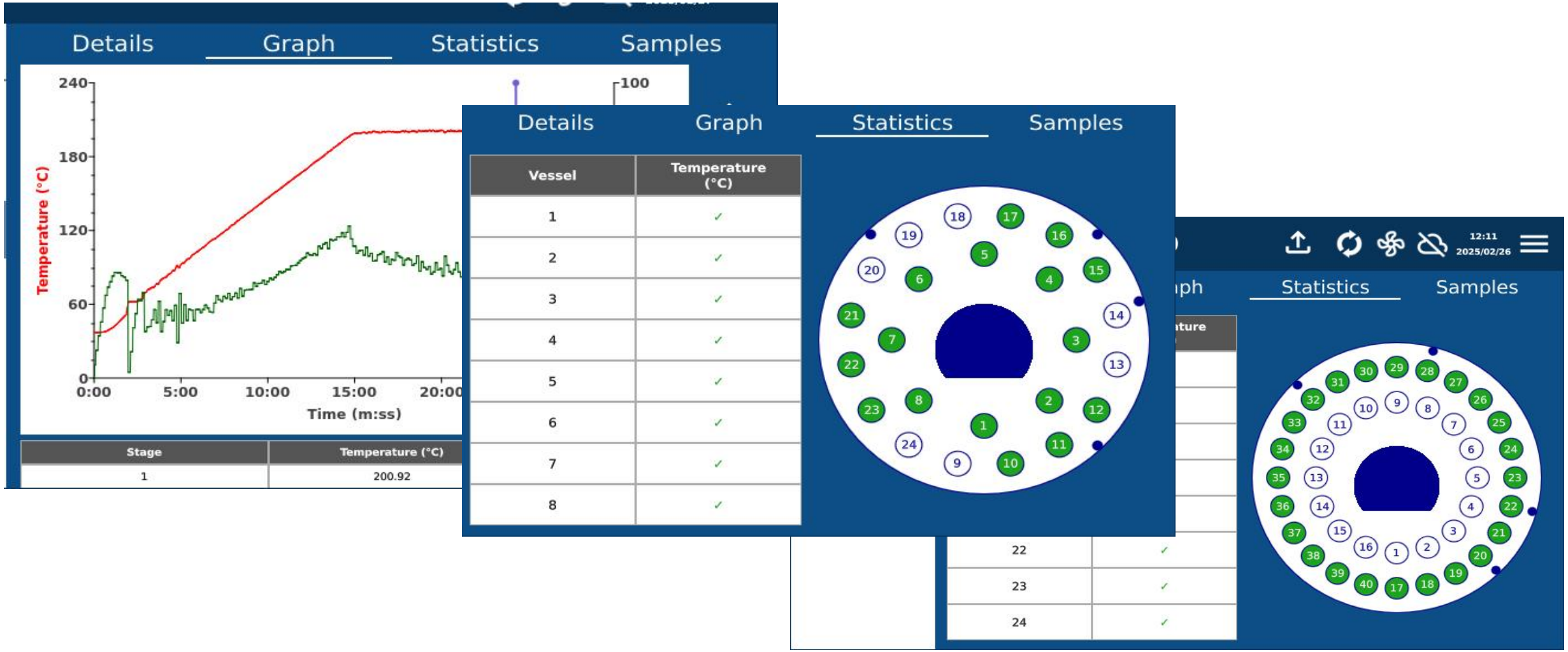
# XpressStart-查看正在发生的事情



# 导入样品列表


Data Search
10:44 AM
2025/05/02
Parameters
125C
2024/11/22 11:39 AM
Sample 88
125C
2024/11/22 10:24 AM
Sample 87
125C
2024/11/22 9:10 AM
Sample 86
125C
2024/11/21 11:50 AM
Sample 85
125C
2024/11/21 10:17 AM
Sample 84
125C
2024/11/21 9:05 AM
Sample 83
125C
2024/11/20 1:15 PM
Sample 82
Details
Graph
Statistics
Samples
11:08 AM
2025/05/02
Vessel
Sample ID
Mass (g)
Volume (mL)
Reagents
Description
2
Soil - 1
0.5012
10.00
HNO3
Rush Sample
3
Soil - 2
0.5009
10.00
HNO3
Rush Sample
4
Soil - 3
0.5011
10.00
HNO3
Rush Sample

# 可访问性-全新数据报告功能



# 可访问性-导出为pdf或csv

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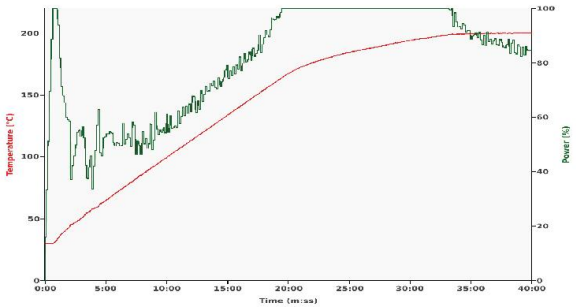
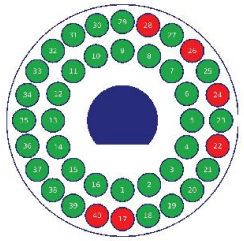
**Experiment Report**
XpressStart 200

**MARS**Xpress 2.0
N0007 v0.04

| Stage | Temperature (°C) | Ramp Time (mm::ss) | Hold Time (mm:ss) |
|---|---|---|---|
| 1 | 200 | 25:00 | 15:00 |



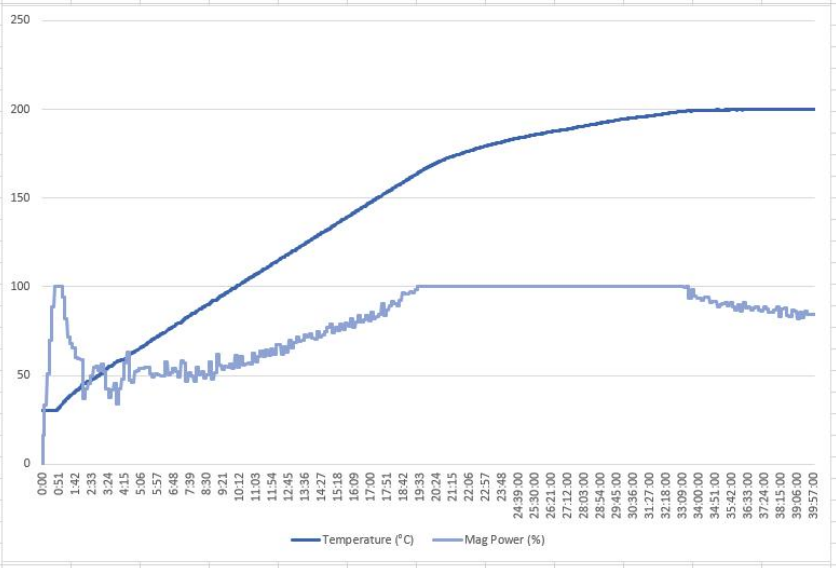
| Vessel | Temperature (°C) |
|---|---|
| 17 | 177 |
| 22 | 188 |
| 24 | 182 |
| 26 | 181 |
| 28 | 186 |
| 40 | 175 |

| | | | |
|---|---|---|---|
| **Experiment ID:** | Experiment 34 | **Outcome:** | Set point reached during hold |
| **Run By:** | Administrator | **Vessel Type:** | Xpress (55mL) |
| **Start:** | 01-Apr-2025 6:18:32 AM | **Vessel Count:** | 40 |
| **End:** | 01-Apr-2025 6:58:32 AM | **Run Version:** | 0.03 |

Run By _____ Date _____

Approved By _____ Date _____

| | A | B | C | D |
|---|---|---|---|---|
| 1 | Unit: N0007 | | | |
| 2 | Method: XpressStart 200 | | | |
| 3 | Experiment: Experiment 34 | | | |
| 4 | Vessel Type: Xpress (55mL) | | | |
| 5 | Vessel Count: 40 | | | |
| 6 | Version: 0.03 | | | |
| 7 | Started: 01-Apr-2025 6:18 AM | | | |
| 8 | User: Administrator | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | Stage | Time | Temperat | Mag Power (%) |
| 12 | 1 | 0:00 | 30.2 | 0 |
| 13 | 1 | 0:01 | 30.2 | 0 |
| 14 | 1 | 0:02 | 30.2 | 16.1 |
| 15 | 1 | 0:03 | 30.2 | 16.1 |
| 16 | 1 | 0:04 | 30.2 | 16.1 |
| 17 | 1 | 0:05 | 30.2 | 16.1 |
| 18 | 1 | 0:06 | 30.2 | 33.4 |
| 19 | 1 | 0:07 | 30.2 | 33.4 |
| 20 | 1 | 0:08 | 30.2 | 33.4 |
| 21 | 1 | 0:09 | 30.2 | 33.4 |
| 22 | 1 | 0:10 | 30.2 | 33.4 |
| 23 | 1 | 0:11 | 30.2 | 33.4 |
| 24 | 1 | 0:12 | 30.2 | 33.4 |
| 25 | 1 | 0:13 | 30.2 | 33.4 |
| 26 | 1 | 0:14 | 30.2 | 51.2 |
| 27 | 1 | 0:15 | 30.2 | 51.2 |
| 28 | 1 | 0:16 | 30.2 | 51.2 |
| 29 | 1 | 0:17 | 30.2 | 51.2 |
| 30 | 1 | 0:18 | 30.2 | 51.2 |
| 31 | 1 | 0:19 | 30.2 | 51.2 |
| 32 | 1 | 0:20 | 30.2 | 51.2 |
| 33 | 1 | 0:21 | 30.2 | 51.2 |
| 34 | 1 | 0:22 | 30.2 | 69.6 |
| 35 | 1 | 0:23 | 30.2 | 69.6 |

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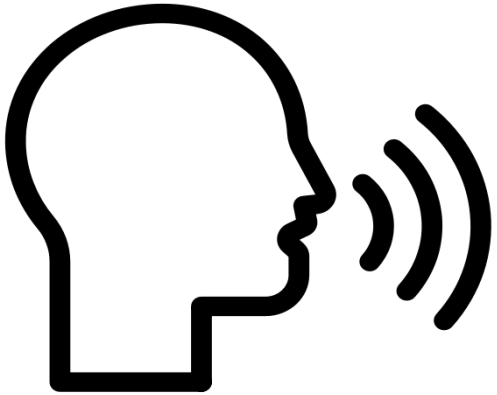
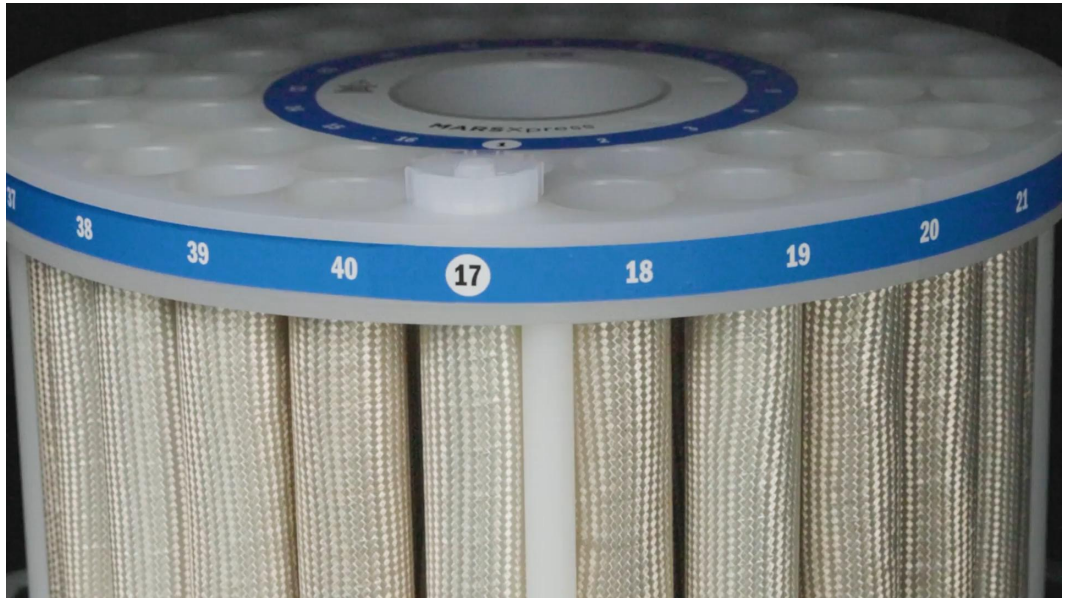
# 可访问性-XpressCommand

- 加载
- 运行/启动
- 停止
- 回主页
- 查看数据
- 执行实用程序



# 灵活性-历史首次...

- 批次1、2或3…最多40个MARSXpress消解罐
  - 适用于紧急样品
  - **特异化样品**
  - 对异常数据进行重新**消解**
- 仅使用外排，相邻位置
- 减少摇摆转盘运动



# 高级安全特性

- 包括标准MARS 6安全报警
- 全新的
  - 排气监测（压差传感器）
    - 如果触发，则排气流量不足
  - 转盘拖动通知
    - 如果触发，则表示消解罐过热或变形
  - 基于温度的冷却
    - 确保消解罐已达到安全操作温度

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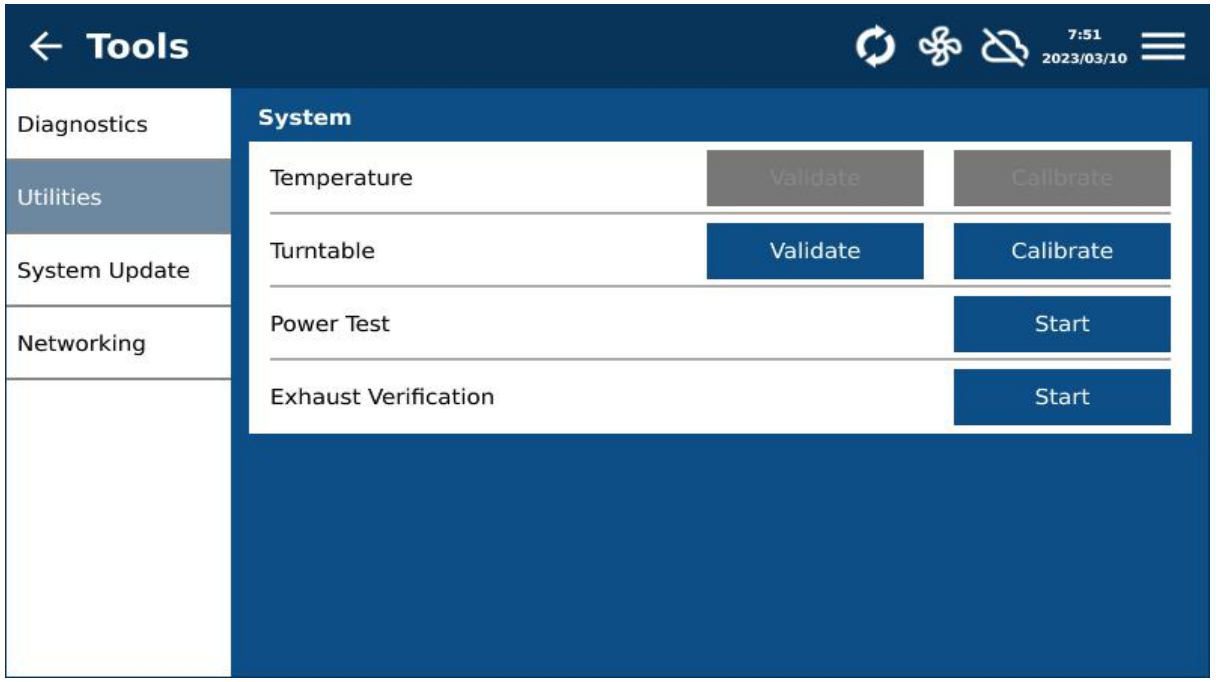
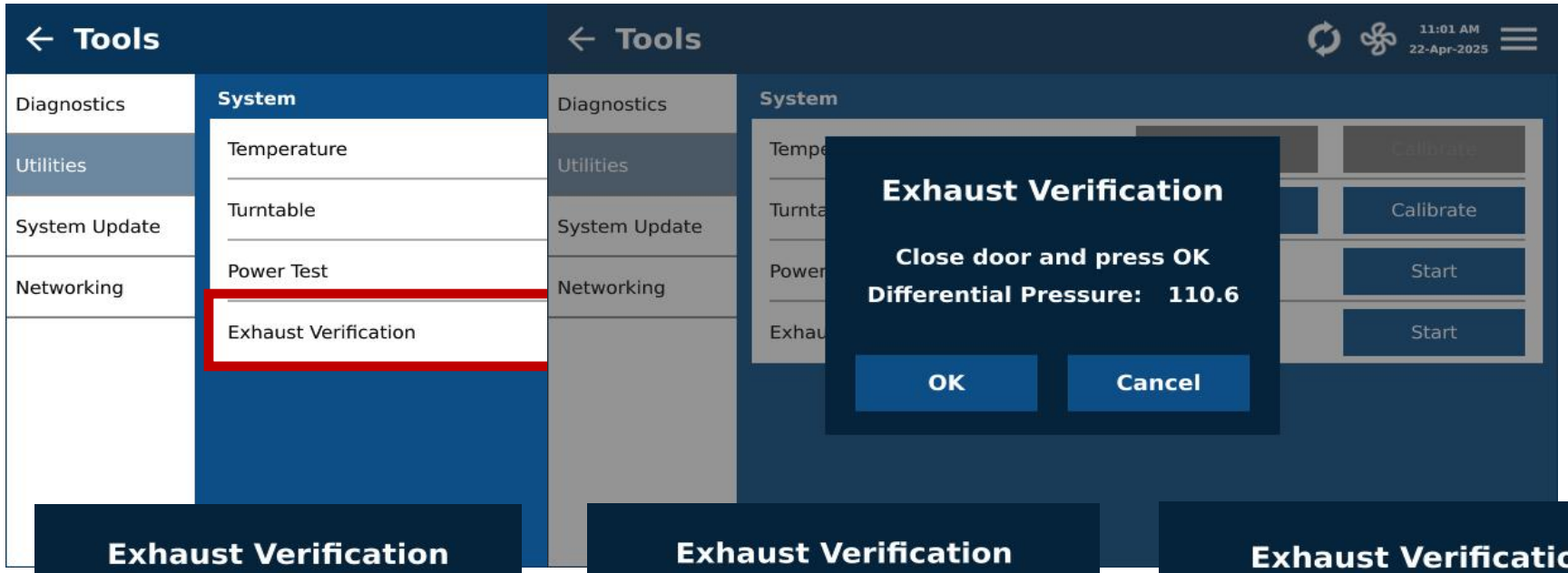
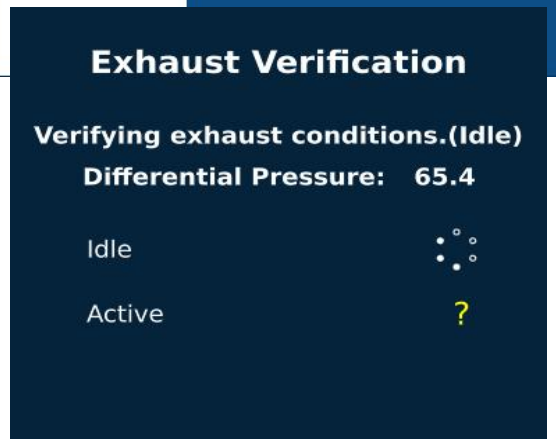
# 简单性-易于使用的实用程序

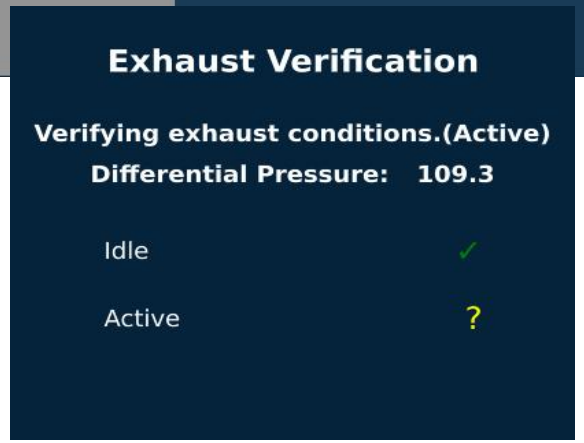
- 排气系统验证
  - 执行测试并提供勾选标记
- 功率测试
  - 记录温度和功率值
- 转盘
  - 验证和校准
- 温度
  - 验证和校准

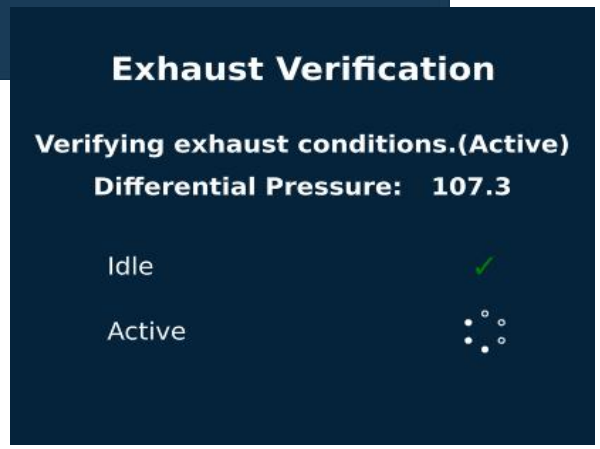


# 排气验证


Tools
Diagnostics
Utilities
System Update
Networking
System
Temperature
Turntable
Power Test
Exhaust Verification
Tools
11:01 AM
22-Apr-2025
Diagnostics
Utilities
System Update
Networking
System
Calibrate
Start
Start
Exhaust Verification
Close door and press OK
Differential Pressure: 110.6
OK
Cancel

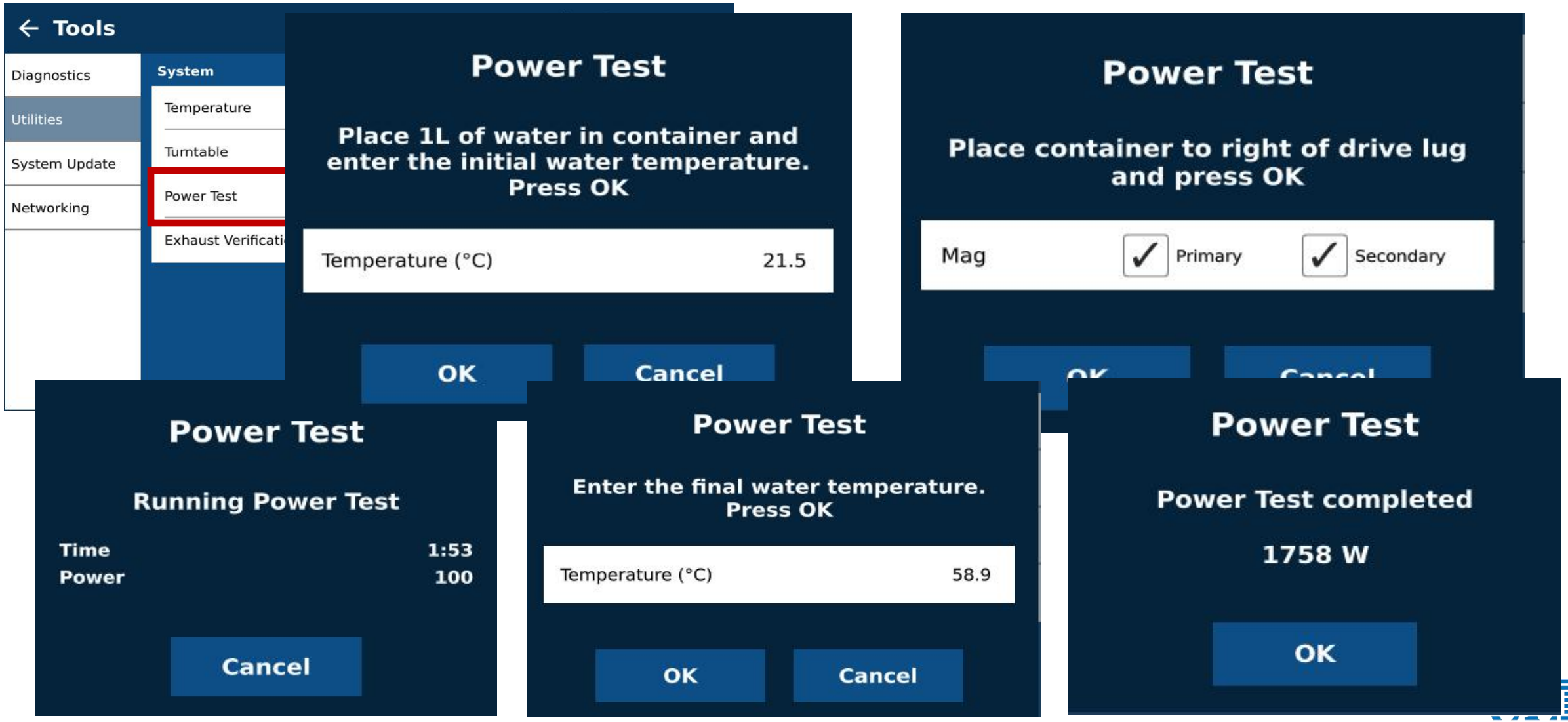

Exhaust Verification
Verifying exhaust conditions.(Idle)
Differential Pressure: 65.4
Idle
Active
?


Exhaust Verification
Verifying exhaust conditions.(Active)
Differential Pressure: 109.3
Idle
Active
?

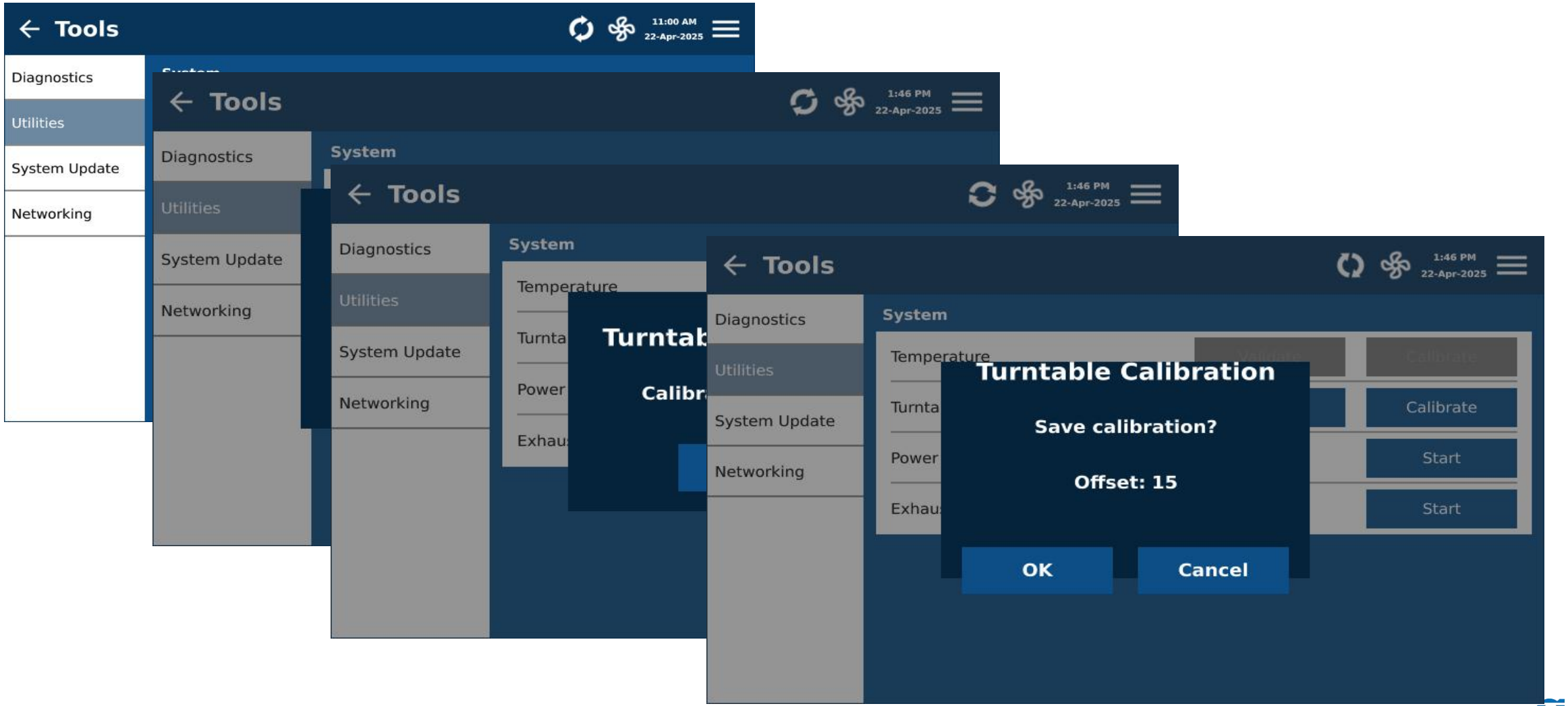

Exhaust Verification
Verifying exhaust conditions.(Active)
Differential Pressure: 107.3
Idle
Active

Exhaust Verification
Verification complete.
Differential Pressure: 67.8
Idle
Active
OK

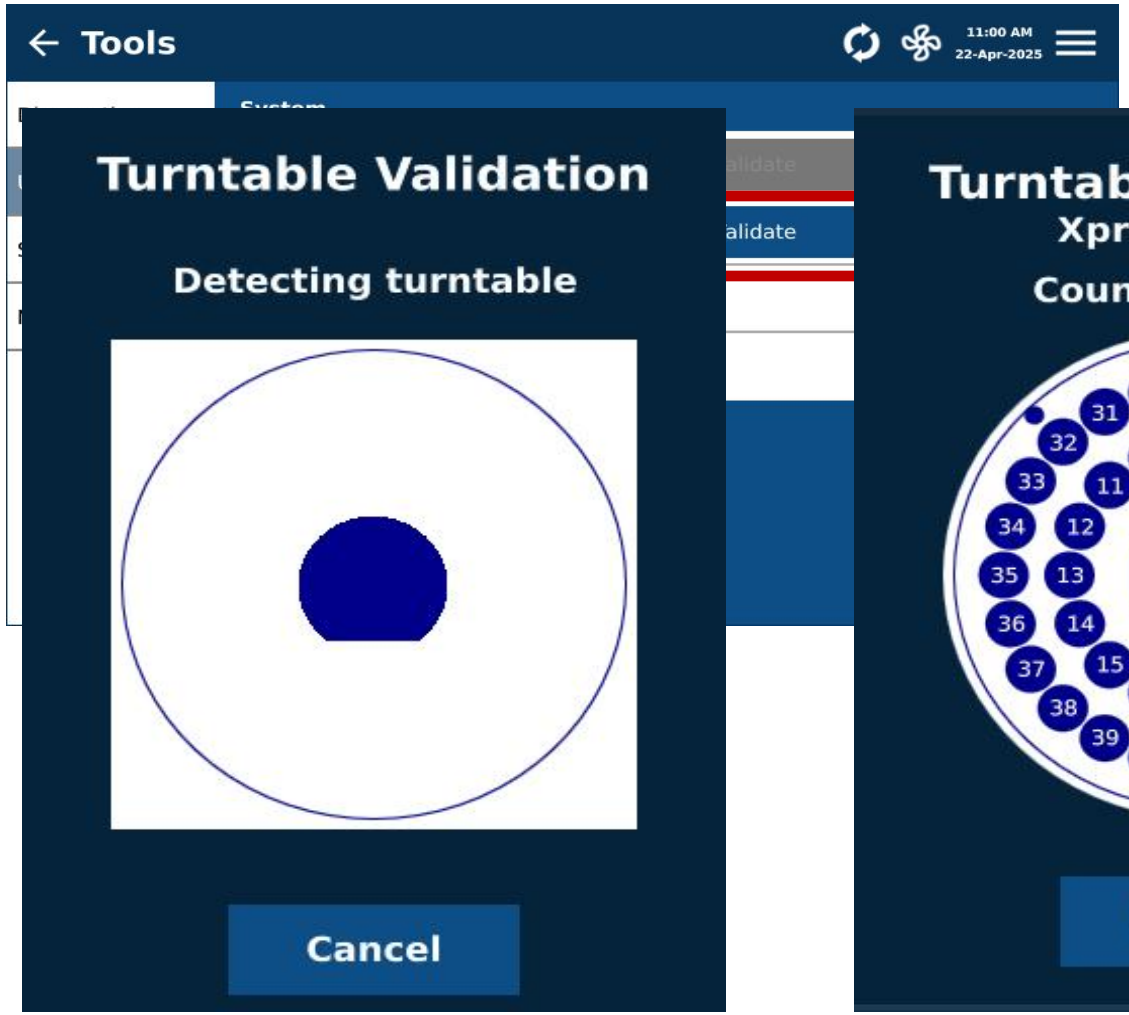
# 功率测试

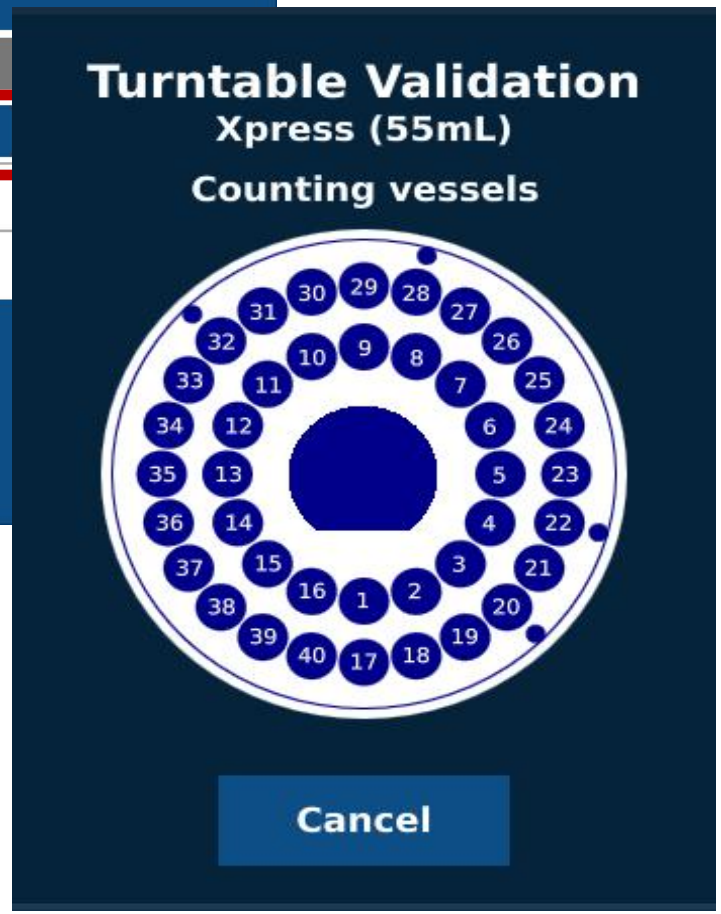

Tools
Diagnostics
Utilities
System Update
Networking
System
Temperature
Turntable
Power Test
Exhaust Verificati
Power Test
Place 1L of water in container and enter the initial water temperature. Press OK
Temperature (°C) 21.5
OK
Cancel
Power Test
Place container to right of drive lug and press OK
Mag
Primary
Secondary
Power Test
Running Power Test
Time 1:53
Power 100
Cancel
Power Test
Enter the final water temperature. Press OK
Temperature (°C) 58.9
OK
Cancel
Power Test
Power Test completed
1758 W
OK

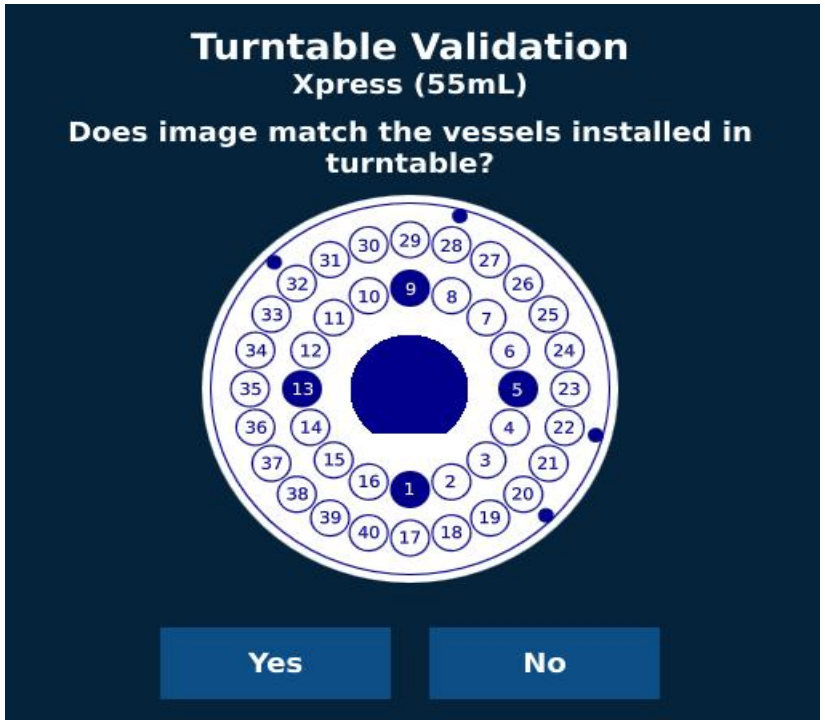
# 转盘校准


Tools
11:00 AM
22-Apr-2025
Diagnostics
Utilities
System Update
Networking
Tools
1:46 PM
22-Apr-2025
System
Tools
1:46 PM
22-Apr-2025
System
Temperature
Tools
1:46 PM
22-Apr-2025
System
Temperature
Calibrate
Start
Start
Turntable Calibration
Save calibration?
Offset: 15
OK
Cancel

# 转盘验证


Tools
11:00 AM
22-Apr-2025
Turntable Validation
Detecting turntable
Cancel

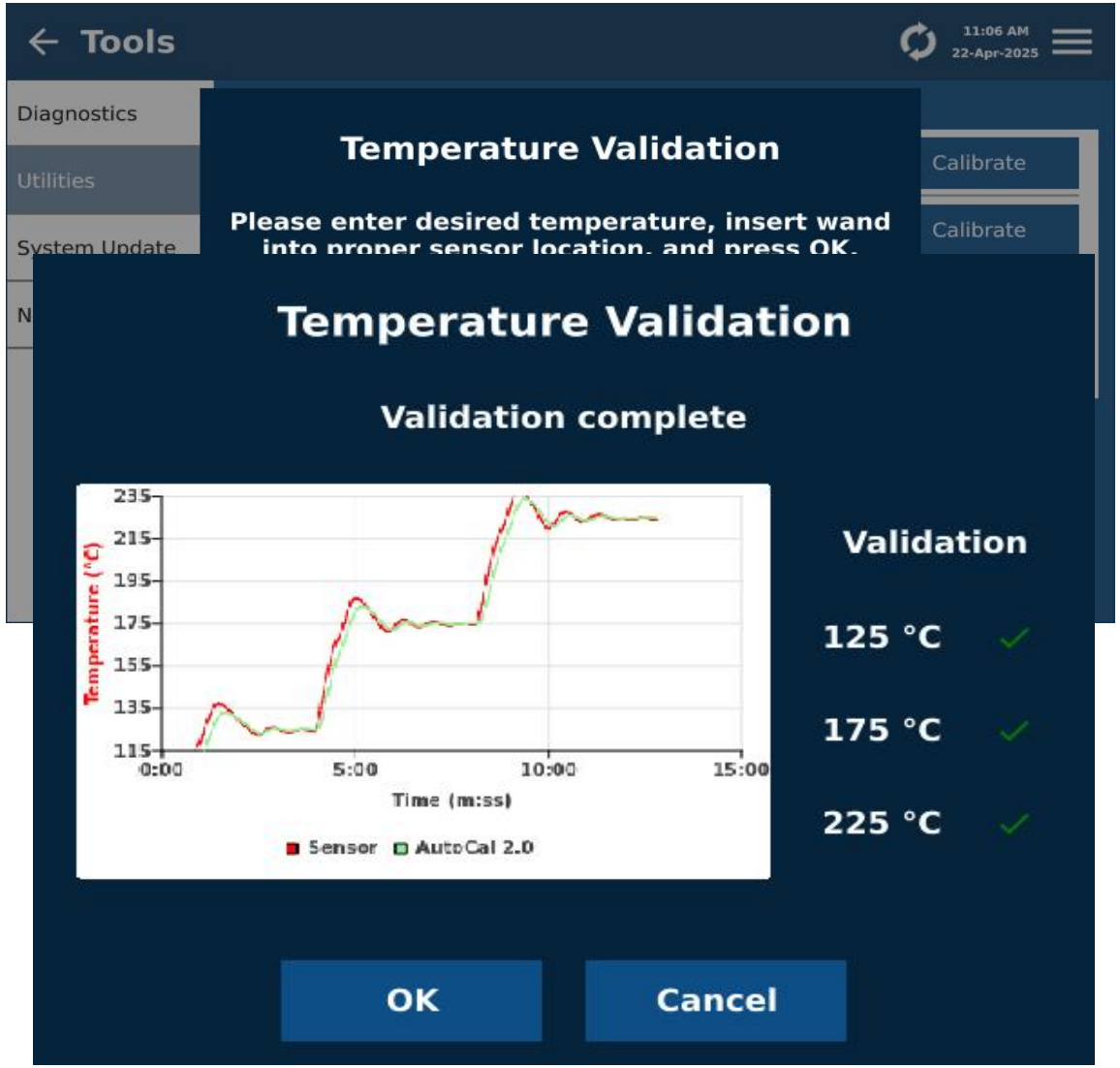

Turntable Validation
Xpress (55mL)
Counting vessels
Cancel

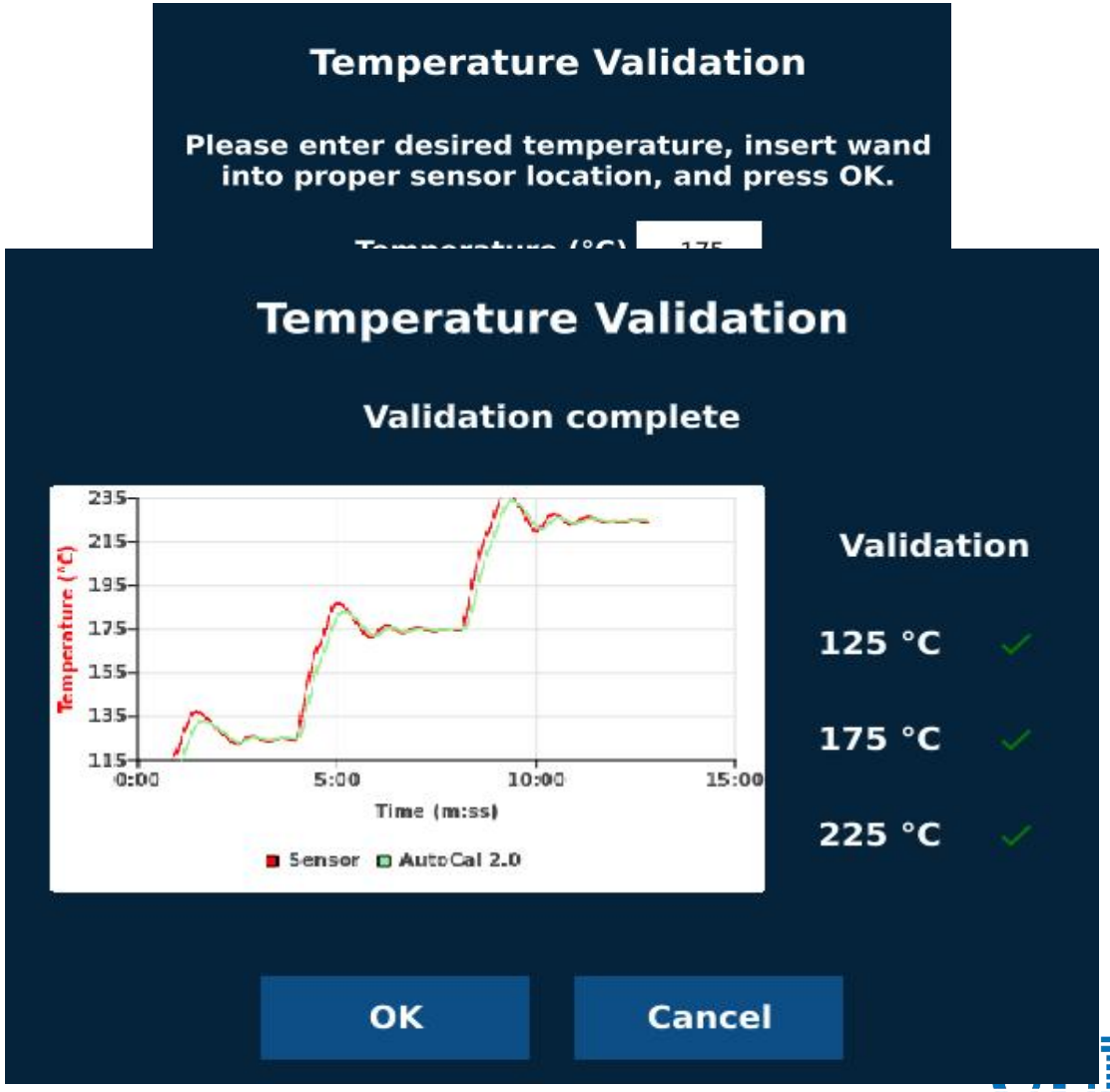

Turntable Validation
Xpress (55mL)
Does image match the vessels installed in turntable?
Yes
No

# AutoCal 2.0 (PN 920104-1 )

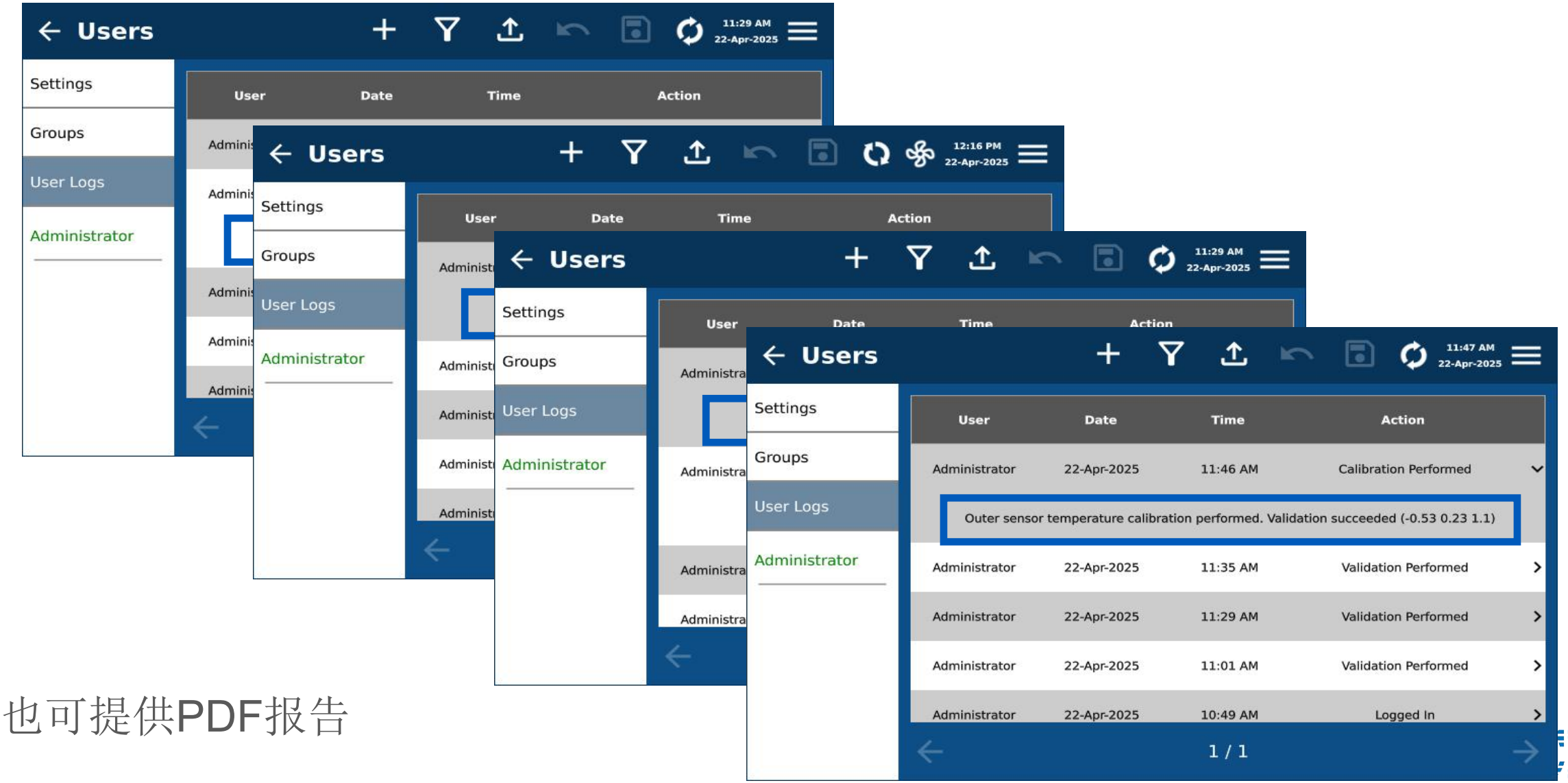
- 轻松安全地进行温度校准和验证
  - 通过USB直接接口
- 包括用于正确定位的固定装置
  - 与MARS 6和MARSXpress 2.0兼容

# 温度验证和校准


Tools
11:06 AM
22-Apr-2025
Diagnostics
Utilities
System Update
Calibrate
Calibrate
Temperature Validation
Please enter desired temperature, insert wand into proper sensor location, and press OK.
Temperature Validation
Validation complete
Temperature (°C)
235
215
195
175
155
135
115
0:00
5:00
10:00
15:00
Time (m:ss)
Sensor
AutoCal 2.0
Validation
125 °C
175 °C
225 °C
OK
Cancel

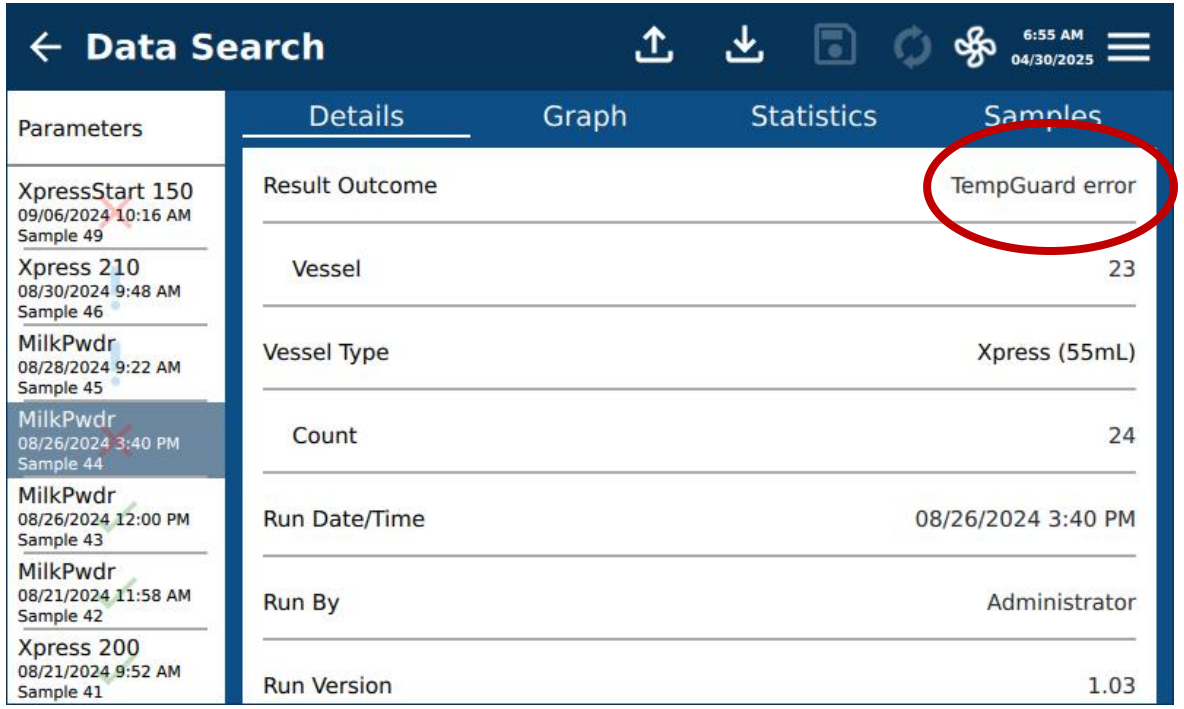

Temperature Validation
Please enter desired temperature, insert wand into proper sensor location, and press OK.
Temperature Validation
Validation complete
Temperature (°C)
235
215
195
175
155
135
115
0:00
5:00
10:00
15:00
Time (m:ss)
Sensor
AutoCal 2.0
Validation
125 °C
175 °C
225 °C
OK
Cancel

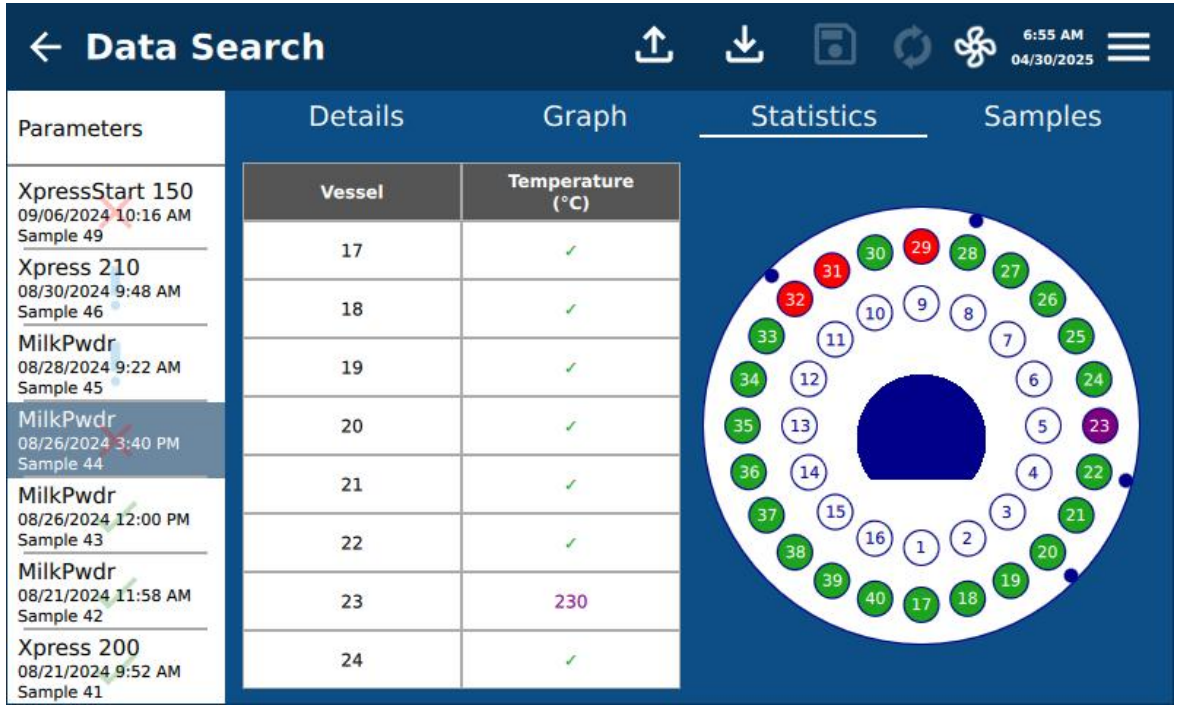
# 审计跟踪




也可提供PDF报告

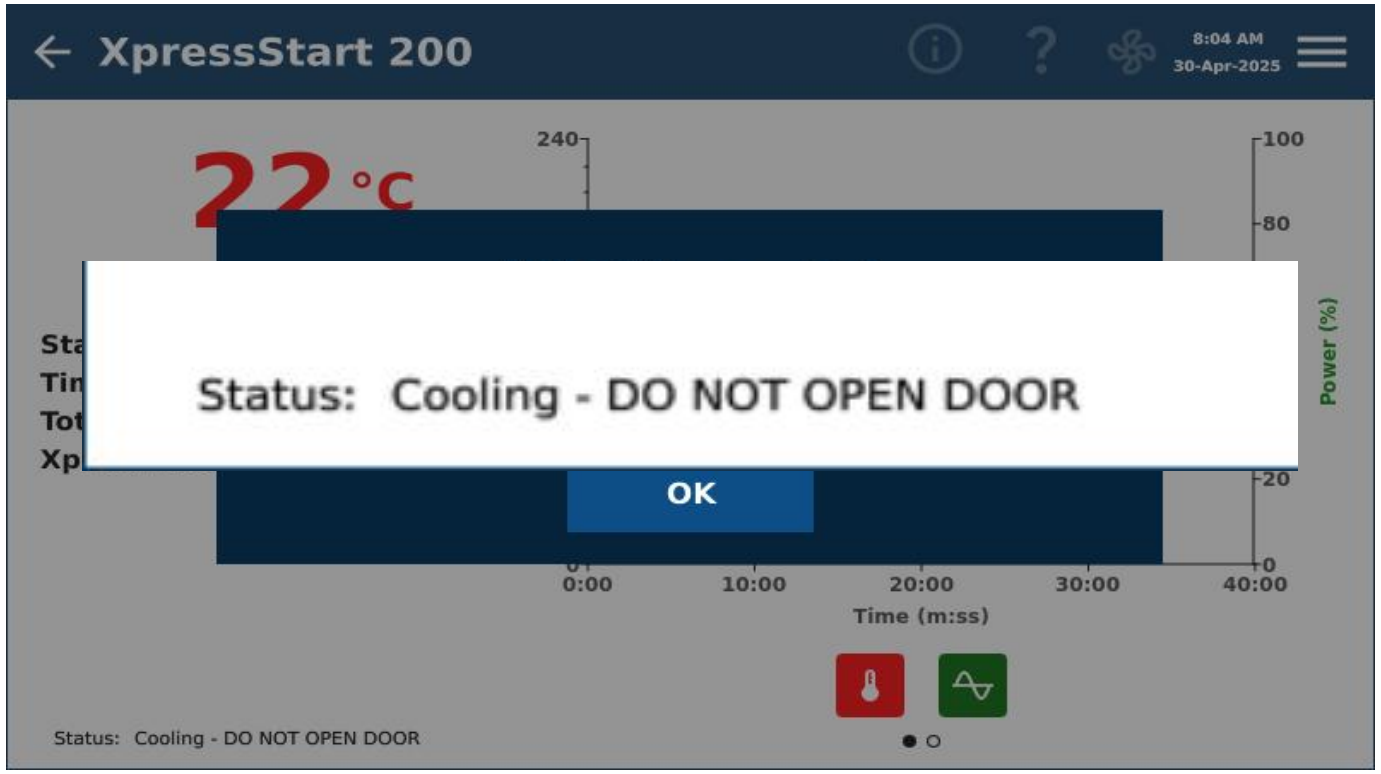
# Tempguard


Data Search
6:55 AM
04/30/2025
Parameters
Details
Graph
Statistics
Samples
XpressStart 150
09/06/2024 10:16 AM
Sample 49
Xpress 210
08/30/2024 9:48 AM
Sample 46
MilkPwdr
08/28/2024 9:22 AM
Sample 45
MilkPwdr
08/26/2024 3:40 PM
Sample 44
MilkPwdr
08/26/2024 12:00 PM
Sample 43
MilkPwdr
08/21/2024 11:58 AM
Sample 42
Xpress 200
08/21/2024 9:52 AM
Sample 41
Result Outcome
TempGuard error
Vessel
23
Vessel Type
Xpress (55mL)
Count
24
Run Date/Time
08/26/2024 3:40 PM
Run By
Administrator
Run Version
1.03


Data Search
6:55 AM
04/30/2025
Parameters
Details
Graph
Statistics
Samples
XpressStart 150
09/06/2024 10:16 AM
Sample 49
Xpress 210
08/30/2024 9:48 AM
Sample 46
MilkPwdr
08/28/2024 9:22 AM
Sample 45
MilkPwdr
08/26/2024 3:40 PM
Sample 44
MilkPwdr
08/26/2024 12:00 PM
Sample 43
MilkPwdr
08/21/2024 11:58 AM
Sample 42
Xpress 200
08/21/2024 9:52 AM
Sample 41
Vessel
Temperature (°C)
17 ✓
18 ✓
19 ✓
20 ✓
21 ✓
22 ✓
23 230
24 ✓

# 安全冷却

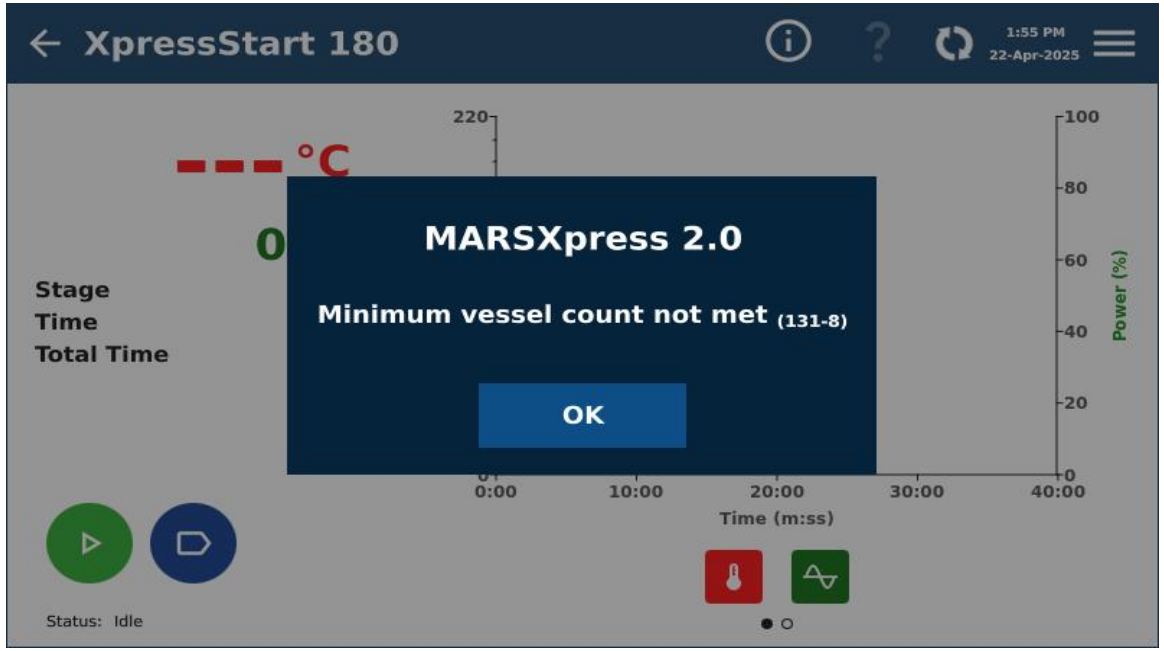
- 自动激活原因：
  - **转盘拖动错误**
  - ReactiGuard
  - 火焰探测
  - 编码器故障




- 冷却30分钟
- 用户无法停止
- 转盘运动停止

# 消解罐要求

- 使用1,2,3...模式时



# 警报

| 错误信息 | 条件 |
| --- | --- |
| 检测到转盘拖动 | 转盘电流超过1200计数 |
| 检测到气流不足。请联系服务部门 | 压差连续3秒低于主动阈值（40.0 Pa） |
| 未检测到温度升高 | 控制温度比理想曲线温度低超过75°C。 |
| 检测到温度升高 | 在2分钟的时间窗口内，控制温度比理想曲线温度高出40%以上 |
| 检测到温度下降 | 在2分钟的时间窗口内，控制温度比理想曲线温度低40%以上 |
| TempGuard触发 | 单个消解罐的温度超过了TempGuard设定的温度（记录为发生问题的消解罐），具体如下：<br>默认值：230°C<br>最高温度≥200°C：最高温度+ 30°C |
| 编码器故障 | 当转盘处于活动状态时，编码器值在2.5秒内不会改变 |
| 未达到最低消解罐数量 | 如果消解罐数量少于4个，则必须是外排相邻 |

# 即将发布

- 自安装系统
- 内置视频
  - 安装
    - 包括系统验证
  - 如何开始消解
  - 如何编程方法
  - 如何使用系统
    - 导出数据
    - 更新软件

- 其它：
  - CFR合规性修复脚本

CEM

謝謝
Gracias
Merci
Thank you
Danke
Merci
謝謝
Danke
謝謝
Dziękuję
Gracias
Obrigado

# 谢谢！ 开始行动吧！