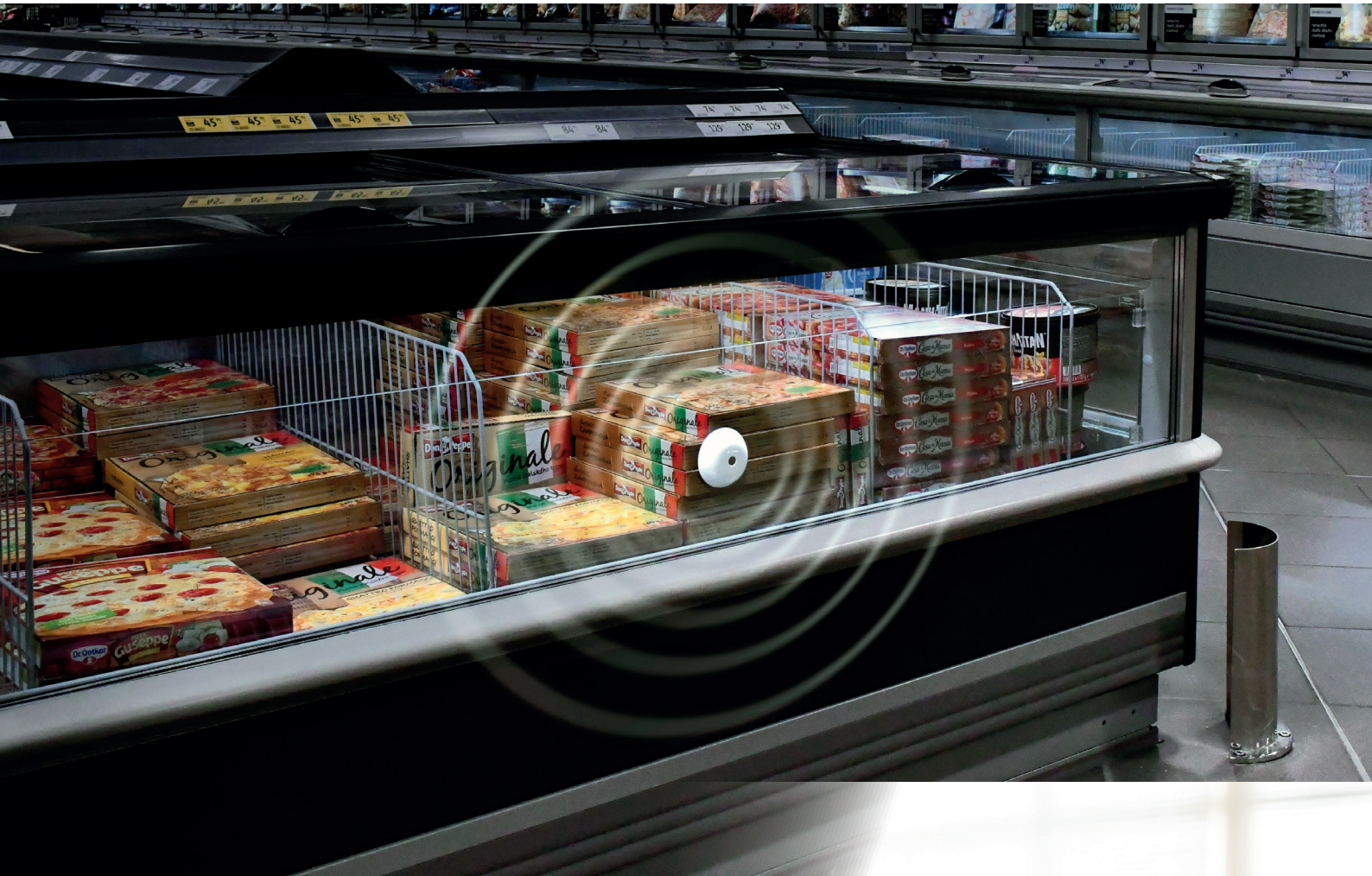


Temperature.
Energy. HACCP. Service Operations.



Store performance
online

Autonomous.
For 30 years.



Get full control over
the performance of your store



A fully autonomous monitoring system of wireless sensors that **monitors key store operation data 24/7**

100% compliant with EN12830:2018

certified



USER FRIENDLY ONLINE APPLICATION
Effective Time & Cost Savings Tool

- Temperatures and HACCP under control
- Energy savings
- Service cost savings
- Food loss savings
- Material savings /Labor savings
- Minimal maintenance cost
- Minimal energy consumption
- Easy to install - no wires



TEMPERATURE



ENERGY



EQUIPMENT



SERVICE

Wireless sensors with
more than 30-years
battery lifetime



GATEWAY GB41



HACCP TEMPERATURE SENSOR TS1



DOOR SENSOR DS1



**TEMPERATURE AND HUMIDITY
STORE SENSOR LS1**



EXTERNAL UNIT EB2
+ **PRODUCT TEMPERATURE SIMULATION SENSOR PS7**
+ **NEEDLE SENSOR NS4**



EXTERNAL UNIT EB2
+ **EXTERNAL CABLE SENSOR WITH 50 MM PROBE ES5**

NO WIRES, NO BATTERY CHARGING

All sensors have power supply by special battery integrated in the sensor body. With minimum power consumption technology.

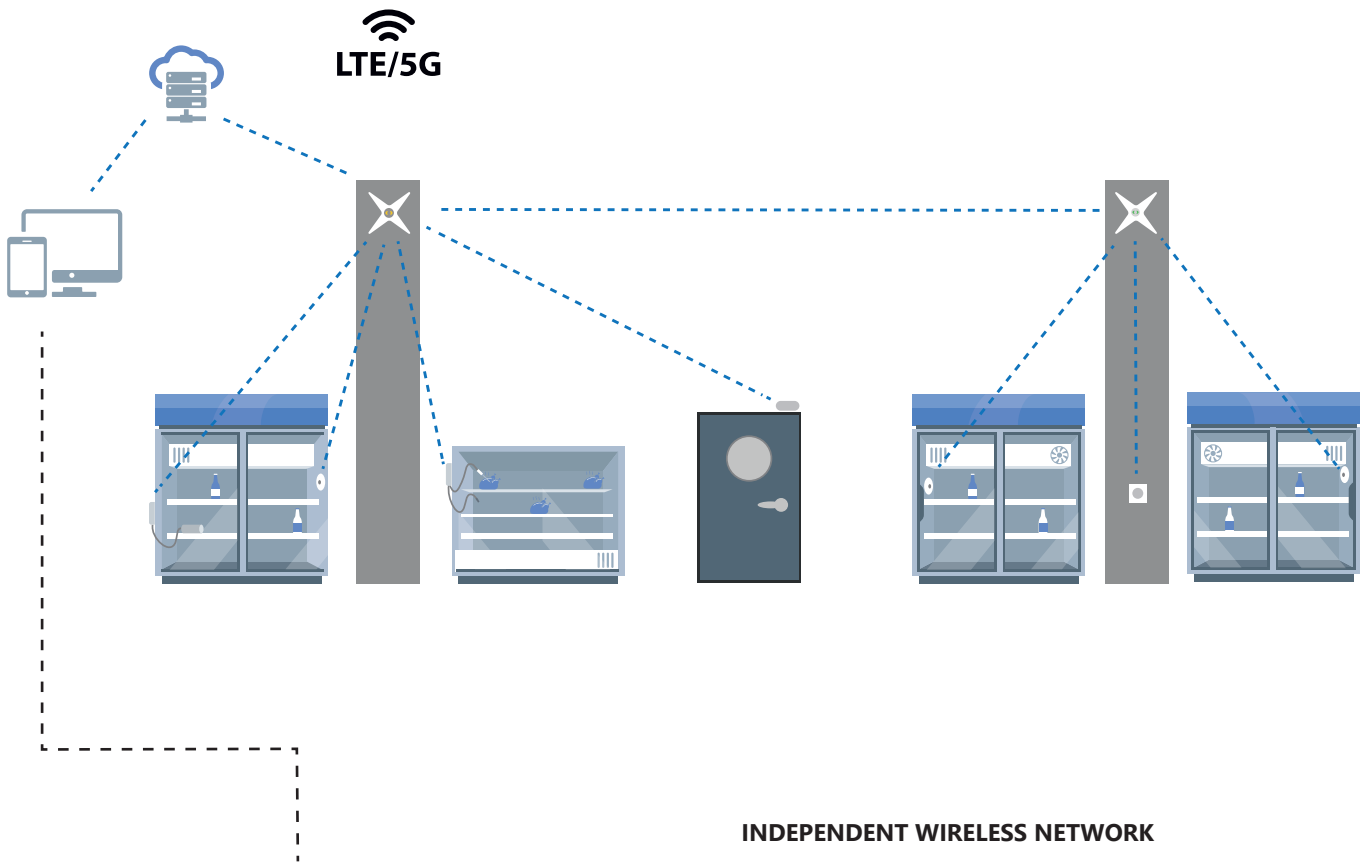


**SYNSTORES 30 years battery lifetime,
guaranteed minimum 10 years.***

Complete list of HW components – visit www.synstores.com

*) except LS1 sensor - comes with replaceable battery

From wireless sensors to your mobile or desktop device



INDEPENDENT WIRELESS NETWORK

Records from the sensors are automatically measured at **two minute** intervals and sent by the gateway to the cloud server. From there to any device connected to the internet via the SYNSTORES application.

Our Application shows the user (for example, the outlet manager) current temperatures, temperature history and opening and closing of doors in refrigeration and freezer boxes, energy consumption and much more.



Safe, running on MICROSOFT Azure.
Safety certified by TÜV SÜD.
No operational limits.
No restriction for number of users or pcs of equipment.



Unique properties of sensors

- No additional calibration needed.
- The plastic material used has a certificate for coming into contact with food.
- Sensors are waterproof and dust-proof.
- Their surface is easy to clean.
- Rounded lens shaped sensors that don't get in the way when you are handling goods.
- Certified by TÜV SÜD according to EN 12830:2018.
- Tested by the Czech Metrology Institute.
- The system complies with EN 12830:2018.
- Independent supervision of service organisations.

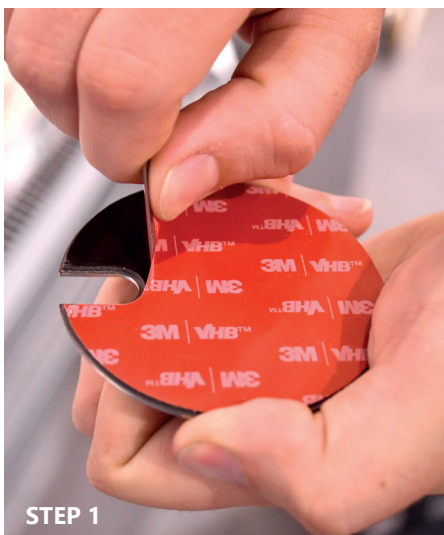


Easy and superfast installation

Sensores can be fitted in all appliances - in refrigeration counters, freezer boxes, cabinets and other plug-in furniture, drinks refrigerators, freezers, and cold boxes, the measurement of core food temperatures, and also the „simulation measurement“ of product core temperatures.

AVERAGE INSTALLATION TIME IN THE 800 M² STORE IS 3 HOURS

NO DISRUPTION OF STORE OPERATIONS NEEDED



Key monitoring values, operation and equipment performance in **one application**.



Proactive application

MONITORING, DIGITAL HACCP REPORTING AND MUCH MORE

- overview
- reports
- events
- alarms
- summary
- consumption (graphs, sheets)
- store performance comparison and evaluation
- equipment performance comparison
- open / closed doors statistics and evaluation
- service TAG (technician on store)
- service call button
- critical issue button



Automatic HACCP reporting

JUST SELECT STORE, DAY, WEEK, MONTH AND DOWNLOAD HACCP REPORT FOR EACH EQUIPMENT

THE SYSTEM COMPLIES WITH EN 12830:2018

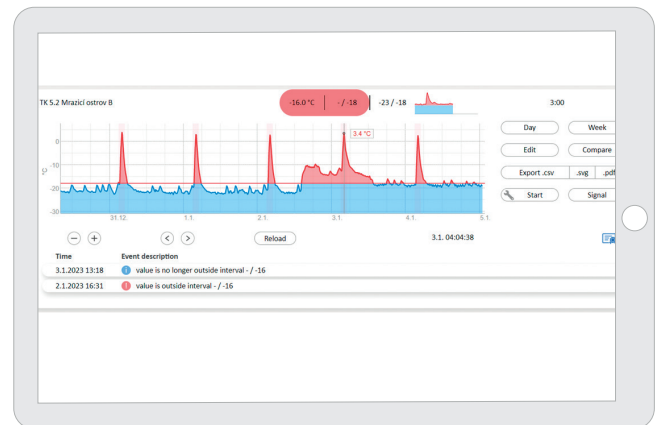
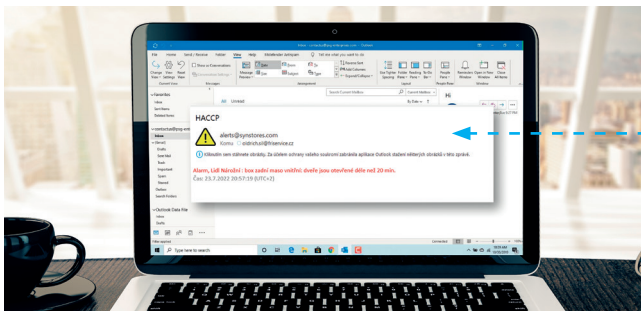


Records from the sensors are stored on the server as daily HACCP reports. Reports are immediately available to the user as PDF files, which can be downloaded with a single click. **Reports are saved on the server for at least one year, in accordance with applicable HACCP legislation.**

Jednotka	Limit	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	
1. Chladivna skrinicka a mrazicovny vyrobek (102)	4	1.0	1.6	1.0	1.1	0.9	0.9	1.6	1.6	0.8	2.1	1.0	1.1	1.9	1.7	1.3	0.8	1.0	1.0	1.2	1.6	1.2	1.4	0.8		
2. Chladivna skrinicka a mrazicovny vyrobek (102)	12	6.0	5.4	4.8	6.4	4.8	4.6	5.5	5.8	4.9	7.0	4.9	5.4	6.1	4.8	4.7	5.0	4.8	5.2	4.9	5.2	5.0	5.5	4.7	4.8	
3. Mrazicovny vyrobek, uzavreny (115)	-12	-14.5	-16.4	-18.0	-13.7	-17.7	-18.7	-18.1	-17.8	-13.6	-17.1	-18.2	-18.2	-18.8	-10.3	-16.3	-17.2	-18.4	-18.1	-12.2	-18.2	-19.2	-19.3	-19.3	-12.8	
4. Chladivna skrinicka, otvry (113)	10	2.8	2.8	2.8	5.0	2.9	2.7	2.8	2.8	2.7	5.0	3.6	2.7	2.9	2.6	3.5	4.1	2.9	2.8	2.9	3.5	2.9	3.8	3.2	2.9	
5. Chladivny regal 210 skrinicka (44)	14	5.3	6.2	5.8	5.4	5.7	5.5	5.7	6.5	6.1	5.1	4.9	4.7	4.9	10.2	5.7	5.5	5.1	5.1	4.4	6.9	4.6	4.8	4.7	4.7	
6. Chladivny regal 210 skrinicka (46)	14	5.9	8.4	6.2	5.8	5.9	5.8	5.9	9.4	5.4	4.8	4.8	4.8	5.3	9.9	5.4	5.1	4.7	4.8	4.9	9.8	5.5	5.9	4.9	4.8	
7. Chladivny regal 210 mrazicovny (54)	8	0.9	1.0	1.0	3.7	1.2	1.2	1.1	1.2	4.3	1.6	1.0	1.0	1.4	1.2	5.2	1.9	1.1	1.1	1.1	1.3	3.8	1.5	1.1	1.1	
8. Chladivny regal 210 skrinicka (55)	8	1.1	1.3	1.0	6.1	1.5	1.3	1.5	1.7	3.4	6.4	1.9	2.5	3.0	1.8	1.5	7.3	2.9	1.9	1.8	1.7	7.0	2.0	1.5	1.5	
9. Chladivny regal 210 skrinicka (57)	8	1.2	1.3	0.7	5.7	1.9	1.2	1.2	1.4	1.1	5.9	2.1	1.2	1.1	1.1	1.1	6.1	1.9	1.3	1.8	1.3	5.5	5.5	5.5		
10. Chladivny regal 210 skrinicka (57)	10	8.6	8.3	8.4	8.3	10.5	8.9	8.2	8.2	8.9	8.8	8.6	9.7	7.8	7.5	6.9	6.7	9.6	7.5	7.0	6.7	6.7	6.8	8.5	8.7	
11. Chladivny regal skrinicka (76)	10	3.1	3.3	3.3	2.8	4.1	3.3	3.4	4.0	6.1	4.3	4.9	4.4	4.6	5.2	4.7	4.9	5.8	4.9	4.4	5.0	5.1	5.3	5.2	5.0	
12. Chladivny regal skrinicka (80)	10	4.1	4.2	3.8	3.9	4.6	4.7	4.2	4.7	5.1	4.8	4.2	4.0	6.1	5.5	5.0	6.1	5.6	4.4	4.7	5.9	5.5	4.7	4.4	4.4	
13. Chladivny regal skrinicka (80)	10	10.3	10.1	10.0	10.0	11.0	10.7	9.9	8.4	7.4	6.9	7.9	8.1	9.1	8.8	8.1	7.5	8.9	9.1	8.2	8.2	9.1	10.2	10.3	10.3	
14. Chladivny regal 120 skrinicka (81)	12	3.6	4.1	10.1	5.0	4.2	4.1	4.3	4.0	9.6	4.7	4.0	5.3	4.7	4.1	10.4	4.8	4.2	3.7	4.2	10.1	5.2	3.8	4.4		
15. Chladivny regal 210 mrazicovny (56)	12	3.9	4.4	5.9	4.6	4.0	3.8	4.4	4.2	6.3	3.9	3.8	3.8	3.8	4.0	6.7	3.9	4.0	4.3	3.7	4.2	4.1	5.5	4.1	4.0	
16. Chladivny regal 210 mrazicovny (56)	12	4.6	4.7	6.1	4.8	4.9	4.7	4.8	4.8	7.1	4.8	4.7	4.8	4.8	4.8	6.7	4.8	4.8	4.9	5.0	5.1	5.0	6.3	4.9	4.7	
17. Chladivny regal 210 mrazicovny (57)	12	5.0	4.8	6.0	5.0	5.0	4.7	5.0	4.4	6.3	5.1	4.7	4.7	4.5	4.3	6.7	5.1	4.7	4.9	4.8	4.6	4.8	5.3	4.6	4.6	
18. Chladivny regal 210 mrazicovny (58)	12	4.0	3.9	5.4	3.9	3.9	3.9	4.1	4.0	6.3	3.6	3.3	4.1	6.9	3.3	3.1	4.1	3.9	3.6	4.0	3.3	3.1	3.3	3.3	3.3	
19. Chladivny regal 210 mrazicovny (58)	12	4.2	4.1	5.4	4.1	4.2	4.0	4.3	4.3	6.0	4.4	4.3	4.1	4.0	4.4	6.9	4.5	4.4	4.6	4.4	3.7	6.5	4.2	3.8	4.1	

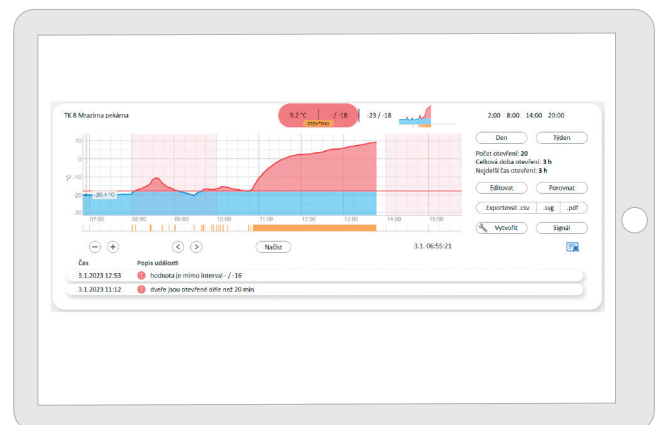
Alarms

IN CASE OF ANY PROBLEM SYNSTORES AUTOMATICALLY SENDS YOU A MESSAGE



Automatic control of the temperature has a major impact on safe preservation and storage of food or prepared meals

Door alarms



Door openings have a huge impact on temperature and hygienic limits required by the legal environment as well as on energy consumption of cooling and freezing chambers and for number of service calls caused by icing of evaporators there. Right side picture - printscreen example.







SYNSTORES – online **temperature** reporting system

Protecting the health of customers - the highest priority

Regular automatic control of critical points in the temperature chain has a major impact on safe preservation and storage of food, prepared meals, and pharmaceuticals. SYNSTORES provides a highly effective and technologically simple solution for monitoring this temperature chain in production and distribution of those commodities.

SYNSTORES also helps you to save the energy and service cost thus the operational cost of cooling and freezing equipment. With ES5 in combination with EB2 External unit you can also easily monitor your hot counters or cabinets.

-  10-years replacement guarantee free of charge
-  -30 ° to +50°C measurement every 2 minutes
-  100% wireless, online solution
-  100% automated HACCP reporting system



Temperatures in refrigeration appliance (TS1).



Temperatures in freezing appliance (TS1).



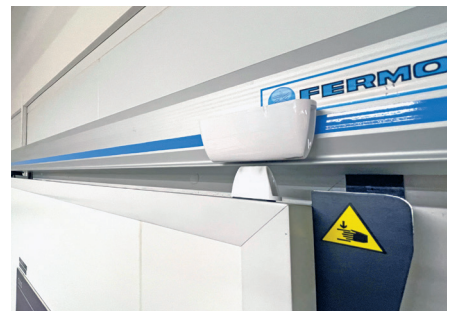
Temperatures inside the hot food (NS4).



Temperatures and humidity monitoring (lobby) (LS1).



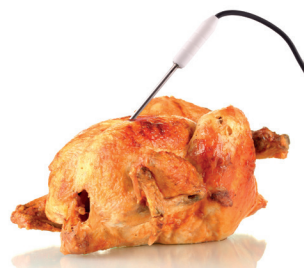
Product simulation sensor (PS7).



Cooling box door sensor (DS1).



Base unit and external sensor (EB2).



Penetration sensor for core temperature (NS4).

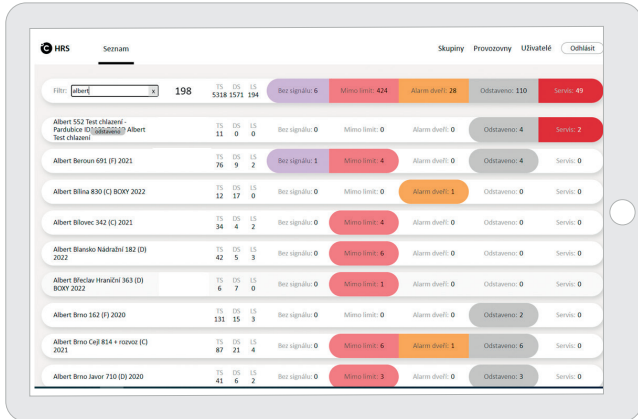


All these sensors visible online in SYNSTORES application.

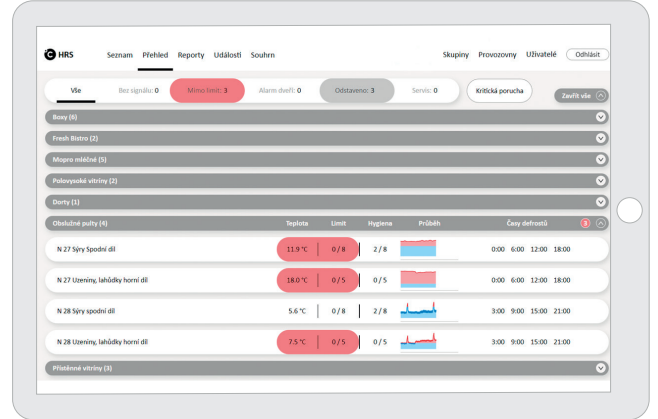


SYNSTORES application

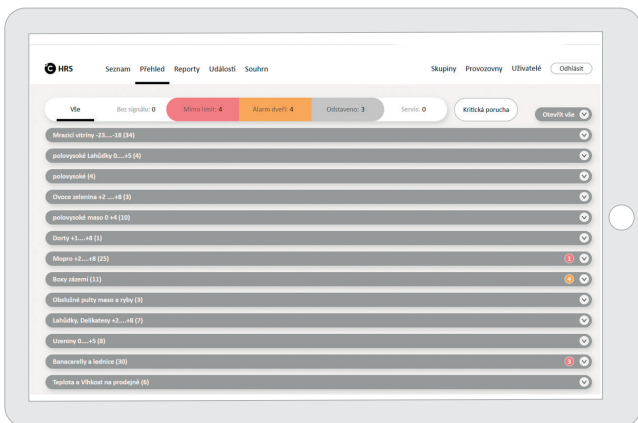
From general overview of groups of stores to the details of equipment.



The retail chain stores full overview - number of sensors, number of equipment out of temperature limits, number of stores with doors opened (cooling / freezing chambers), number of service calls, indication of service technician on the stores.



The store view - indication of the equipment having temperature issues.



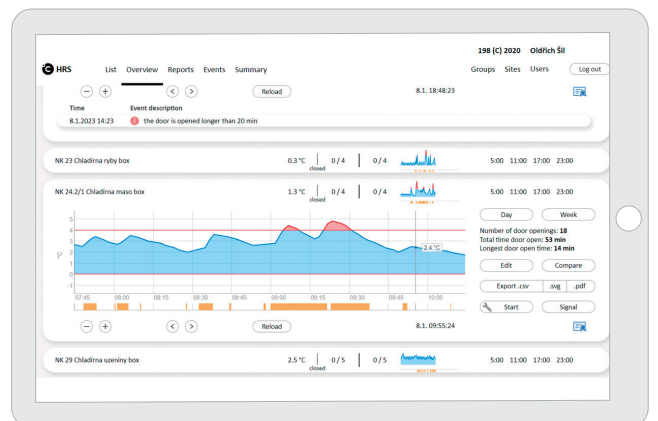
Store overview - where the Store Manager can see the total overview of the equipment groups with indication of temperature and door alarms.



Detail of the equipment with the problematic temperature.



Detail view at the single equipment, you can see the temperature, door opening, defrost time field, door opening statistics...



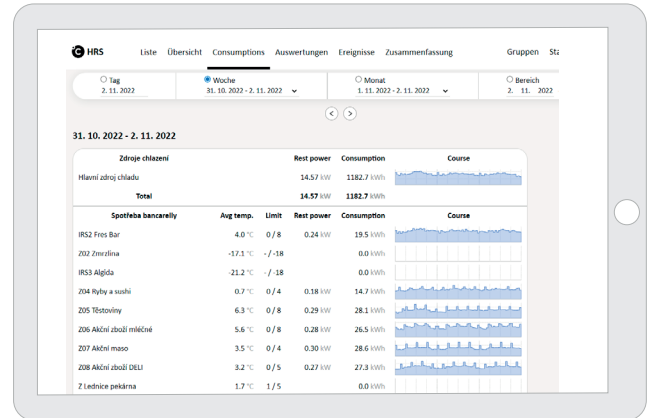
Detail of the cooling chambers with opened doors above the time limit.

SYNSTORES – online **energy consumption** reporting system

Supervise the energy consumption of all your appliances

With our special SYNSTORES HW components for monitoring of energy consumption you can monitor online every single unit in your store - cooling and freezing cabinets, hot counters, combi ovens, any of piece of equipment as dishwashers or slicing machine. With our IQ31 unit you can monitor and see online also the central cooling and freezing unit. You have the total store energy consumption monitored online but also in real detail.

In combination with temperature monitoring you have absolute perfect overview of your store performance based on real-time data.



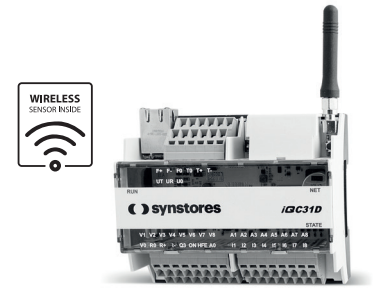
HW components for energy monitoring



ENERGY MONITORING UNIT 400V EMU3



Energy Monitoring Unit 230V EMU1 / EMU1S



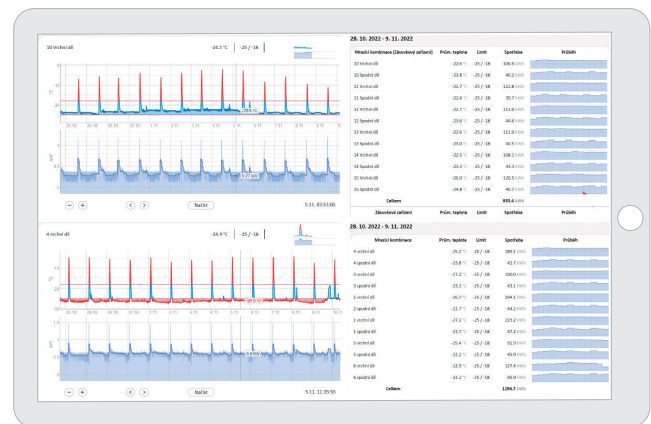
IQ31 measuring and control system

Compare energy consumption of similar units in different stores



IDENTICAL FREEZING COMBINATION OF 2 PRODUCERS

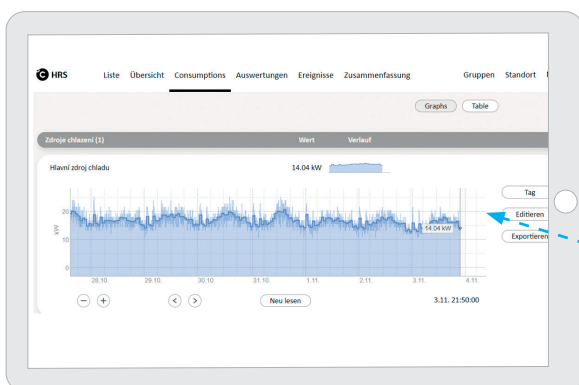
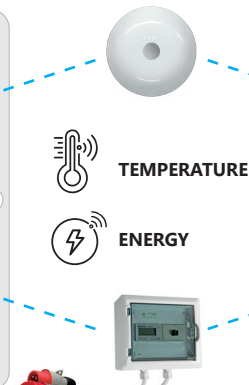
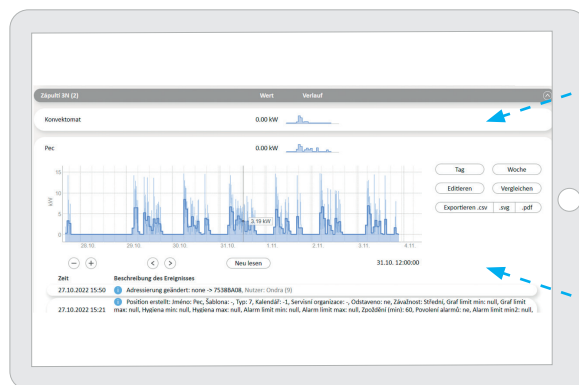
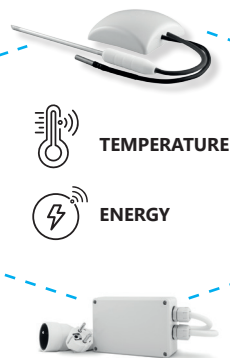
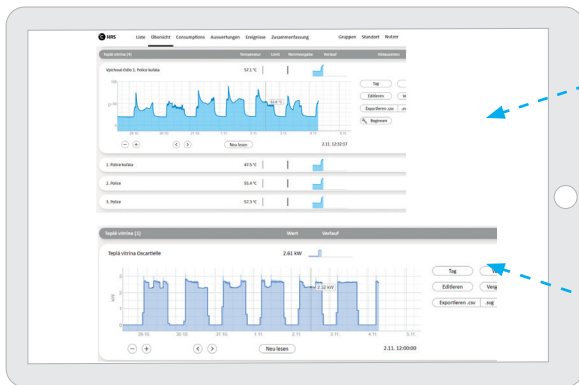
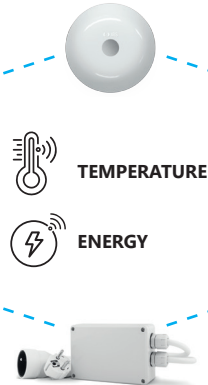
This is the comparison of 2 equipment types from 2 producers. The same store size and application - combi freezers. Temperature monitored by TS1 temperature and HACCP sensor, energy consumption is monitored by energy monitoring unit EMU1. All values visible online. Temperature measured every 2 minutes. Energy consumption measured every 5 minutes. Statistic available online.



10 days statistic of energy consumption

STORE 1	STORE 2	DIFFERENCE
1 294,7 KWH	935,4 KWH	359,3 KWH 38,4%

Set up optimal efficiency of the cooling or hot appliance



Example from the retail temperature & energy – effect of doors installation



4 plug in cooling cabinets before and after sliding lids installation.

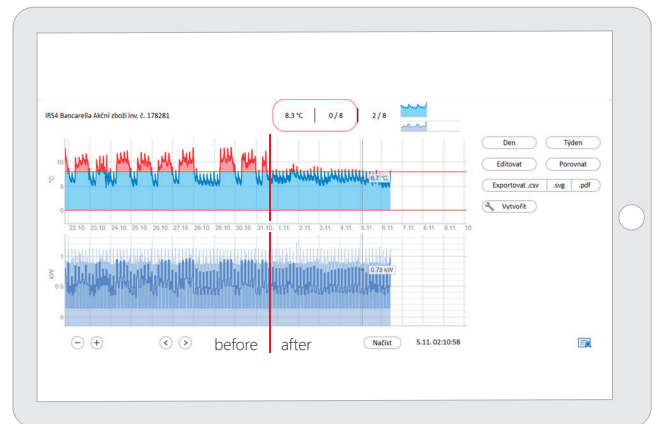
There is huge impact online visible and measurable based on real data. Temperature measured by SYN-STORES every 2 minutes, energy consumption every 5 minutes.

EXAMPLE FROM THE RETAIL

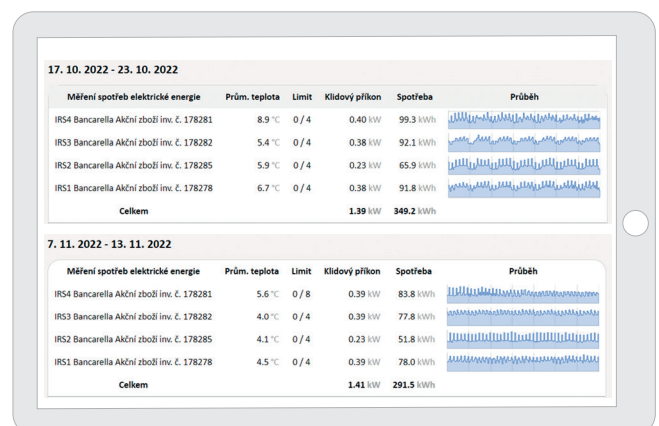
- temperature & energy
- effect of doors installation



Performance overview before / after.



Temperature performance before / after.



Energy performance before / after.

SYNSTORES – online equipment performance reporting system

Take control over each store equipment performance

EVALUATION & COMPARISON OF:

- stores performance
- store equipment performance
- service performance



Use the data coming from equipment every **2 minutes** to see online the performance and its history to evaluate the store or each single piece of equipment functionality and performance of:

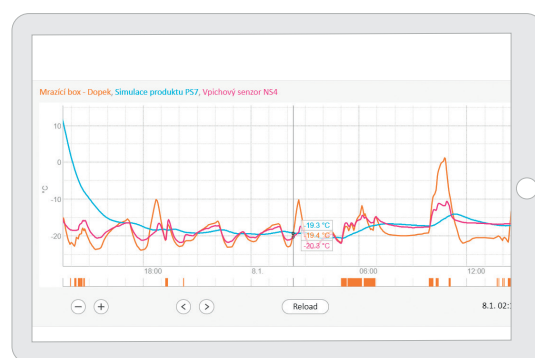
- Temperature
- Energy consumption
- Efficiency, performance
- Service calls and KPI's

Based on real data.

And compare it. By producer, brand, type, service partner.



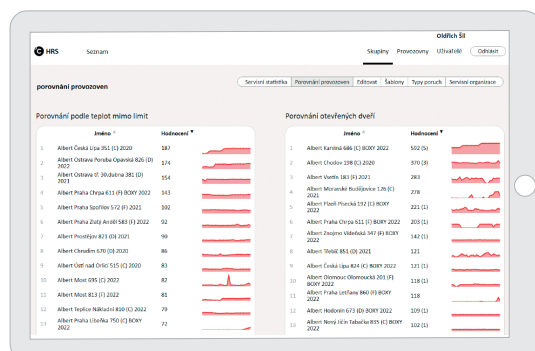
data coming from equipment every 2 minutes



Visualized comparison of temperature curves helps you to compare and evaluate the performance of the equipment.



Visualized Performance of Equipment on store Monthly Statistic - View.



Store Performance Comparison Sheet Helps you to make very fast and addressed corrective actions.



SYNSTORES – online service process reporting system



Service TAG - Technician on the store.

On line overview of service operations on the store

EASY SERVICE TASK

Easy to initiate the service call - just by one click you call the service directly to specific piece of equipment in particular store - saves the time of your store personal and speed up the identification for service partner.

ON-LINE IDENTIFICATION OF SERVICE STAFF IN THE STORE

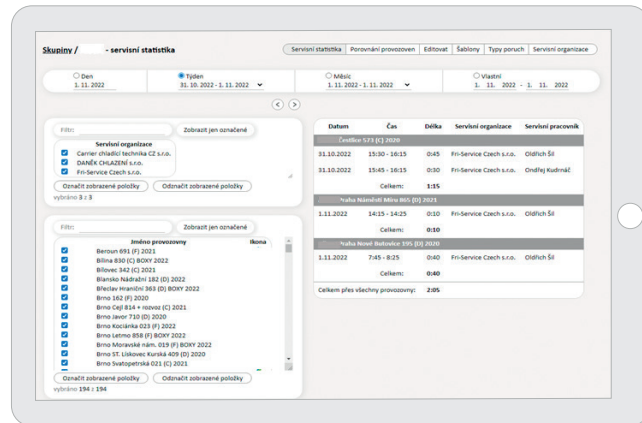
Using the Service TAG the system automatically identifies that the service technician XY arrives and after service call leaves the store, the time of service technician spent in store is recorded and reported automatically.

BEFORE/AFTER SERVICE CALL EQUIPMENT STATUS MONITORING

The status of the equipment even after the service call is monitored and easily visualized in the application. It is very clear for system and for store personal to identify that the service call was successfully solved and the temperature is OK or not. Even automatic escalation is possible.

AUTOMATIC TIMESHEET REPORT

All the records about the service calls from history and performance of the technicians and service organization on the store are reported in the application easily by one or two clicks.

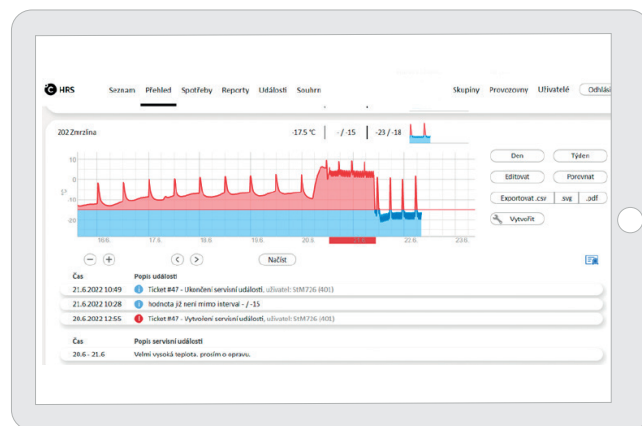


SERVICE STATISTICS

Identificator tag identifies automatically the Service Technician when working in the store on a service call and reports this to store manager and records it in the SYNSTORES application.



Service Call - visible as red line under the temperature curve.



Improvement visible after the Service Call finished.

Reference





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