



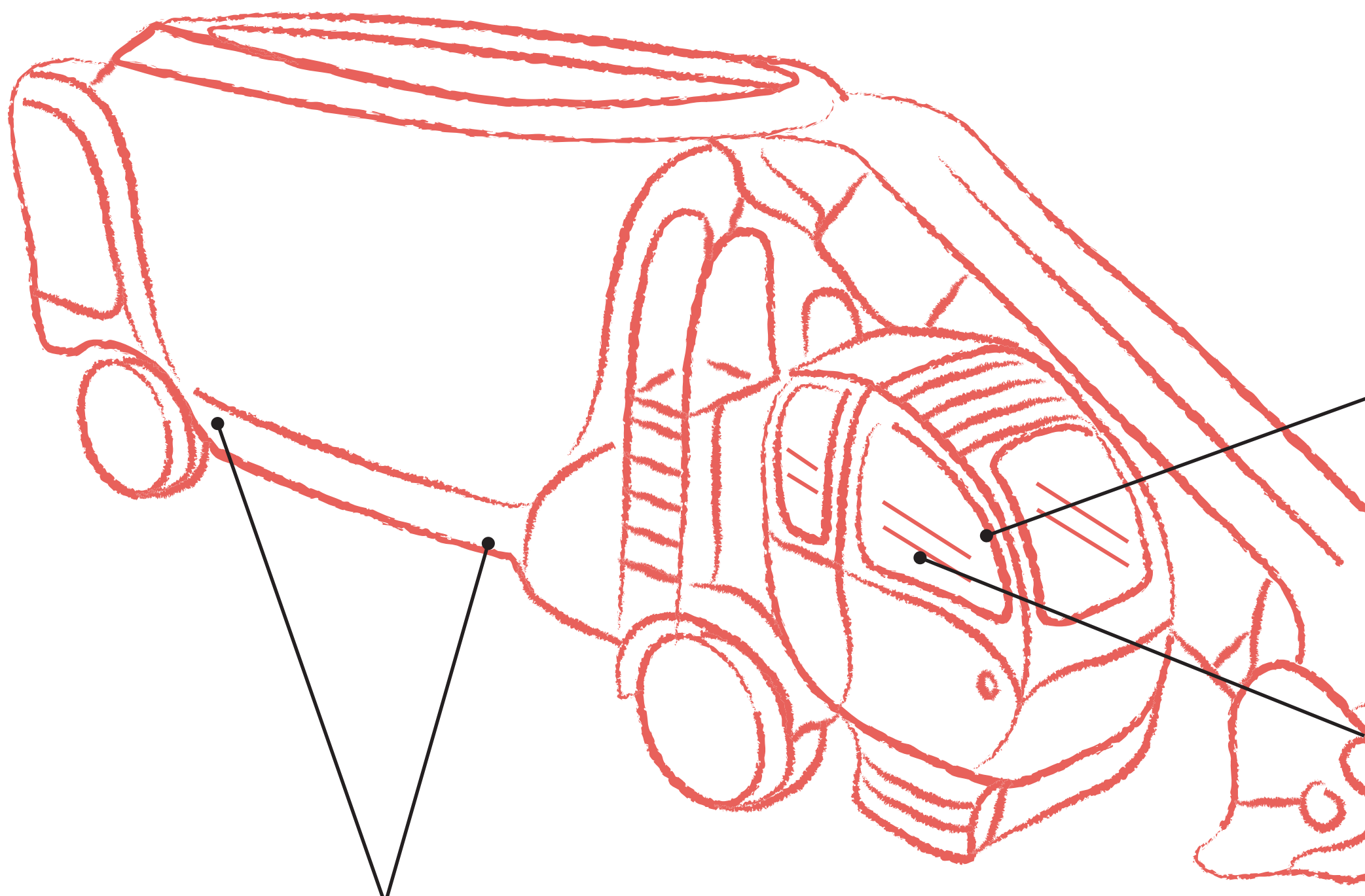
MIXER FEEDER

*Weighing and dosing management
and mixer functions driving,
with all-in-one electronic or two separate units*



SOLUTION FOR SELF-PROPELLED MIXER FEEDER

Mixers **weighing** with dosing **formulas** (recipes) management or manual setting of the weight to be loaded. Display and management of **statistics** and **counters**, with data storage and exportation through **USB** memory to the Data Log software. Interfacing functions also available on color **operating panel** with touch screen integrated with the machine. **Dynamic weighing** to guarantee maximum accuracy, even during movement. **Modular** configuration, based on machine outfit. Easy, intuitive and **ergonomic** command and display systems, also available with **customized** keyboard with customer's colors and logo.



WM
Load cells signal
digitizing

Weighing system: WM series weighing modules for signal acquisition from load cells and digitizing of the weight value on CAN or DigiDevice BUS. Dynamic filtering to guarantee maximum accuracy, even during vehicle movement. System designed to guarantee maximum reliability and modularity. **Load cells** for installation on axles, drawbar and hubs. Maximum resistance to external agents guaranteed by specific treatments and decades of experience in the field. Wide range of **pin** and **shear beam** load cells, also produces based on customers request.

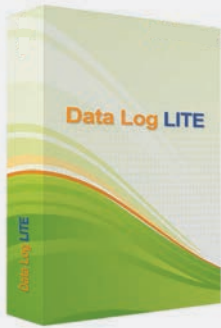
LOAD CELLS



Shear beam



Pin



PC Software: easiness on creation of formulas to be transferred to the indicator with **Data Log LITE**. Detailed reports to allow analysis of batching and consumption data. Data transfer between PC and weighing system through USB memory.



Weighing and batching control unit FIVE: optimal visibility, acoustic and visual signals, advanced functions to help the operator during components **load** and mixed product **unload**.

OPTIONS



Customized keyboard with customer's colors and logo



Command and interface systems: weighing data, commands for formulas execution and hydraulic functions, main vehicle parameters, all always available in the cabin on the all-in-one interface of the **INTEGRATED OPERATORE PANEL**. Weight and working statistics display and storage, data importation and exportation with the Data Log software, for automatic formulas update and performed work analysis.



Accessories for automatic **print** of components and weights referring the job operations of the mixer and display of weight to be loaded in different positions on the mixer.

SOLUTION FOR TRAILED MIXER FEEDER

Mixers **weighing** with dosing **formulas** (recipes) management or manual setting of the weight to be loaded. Electronic command of the **solenoid valves** driving the mixer feeder functions: belt conveyors, doors, counter-knives, milling cutter, etc. Display and management of **statistics** and **counters**, with data storage and exportation through **USB** memory to the Data Log software. **Dynamic weighing** to guarantee maximum accuracy, even during movement. **Lights**, beacons, **cameras** or other devices driving available. **Modular** configuration, based on machine outfit. Easy, intuitive and **ergonomic** command and display systems, also available with **customized** keyboard with customers colors and logo.



Accessories: Saving data on USB memory or automatic printout of components and weights, referring the job operations of the mixer: the **Data Reader USB Kit** and the **Thermal Printer** allow quick and easy check of the batching and mixing operations.



Remote Display: display the weight to be loaded in different positions on the mixer to help the user during load operations, thanks to one or more remote displays contemporarily active.



Remote Command: managing the main weighing and batching functions of the **FIVE** series indicator directly from tractor's cockpick, for maximum comfort and efficiency.



Weighing and batching control unit FIVE: optimal visibility, acoustic and visual signals, advanced functions to help the operator during components **load** and mixed product **unload**.



Cut Control:

Solenoid **valves** command to drive the **counter-knives** movement into the mixer, based on timing defined on **FIVE** series indicator.

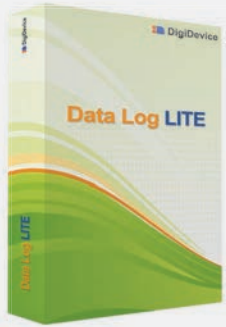
Load cells for installation on axles, drawbar and hubs. Maximum resistance to external agents guaranteed by specific treatments and decades of experience in the field. Wide range of **pin** and **shear beam** load cells, also produced based on customers request.



Shear beam



Pin



PC Software: easiness on creation of formulas to be transferred to the indicator with **Data Log LITE**. Detailed reports to allow analysis of batching and consumption data. Data transfer between PC and weighing system through USB memory.

OPTIONS



Customized keyboard with customer's colors and logo

Command and Interface Unit in the cabin: ease on management of the functions involved in mixer operations, thanks to the intuitive icon-based commands on ICON LCD display. **Weighing** data and **commands** to drive both **formulas** execution and hydraulic **functions** on the same interface unit. **ICON** unit with **wireless** connection to the HYDRA system, in order to have commands and visualizations also available in the cabin of the tractor or from the equipment used to load the components. Display and storage of working statistics.



ICON D

Backlighting Graphic Display and 16 operating keys
Wireless option

OPTIONS



Integrated Emergency Button



USB port for data exchange



Mounting supports for different surface features



Colors and graphic customizing available

Weight acquisition and device driving systems on the wagon: **HYDRA LT20** and **HYDRA WT20** modules, dedicated to the management of both On/Off and proportional type solenoid valves (belts, doors, counter-knives, millint cutter, etc.) and sensors acquisition. Maximum configuration flexibility, to drive not only solenoid valves, but also control of different devices, like **lights**, beacons, cameras, etc. Cascade connection of more modules available, to increase the outputs number and **wireless** connection to the ICON interface unit. **HYDRA WT20** module with **weighing** electronics integrated in the **hydraulic** functions management unit, for systems with ICON command.



HYDRA LT20

20 Outputs
2 PWM



HYDRA WT20

20 Outputs
2 PWM
Load cells input

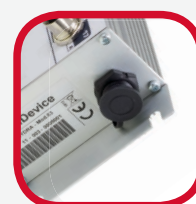
OPTIONS



Integrated or distributed power supply



Direct reading of external sensors

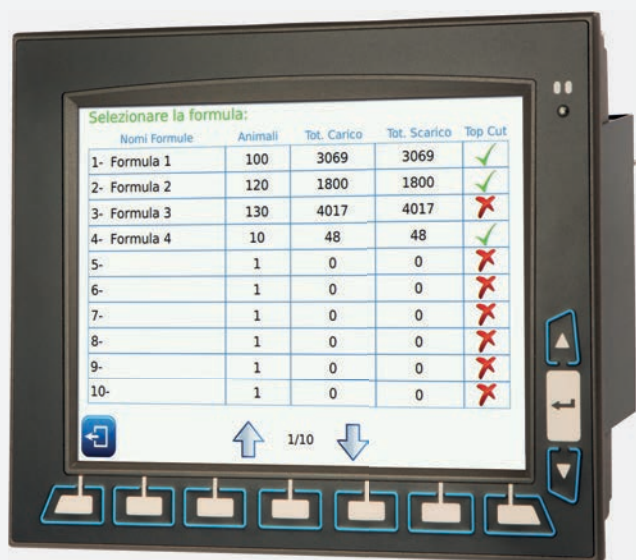


BUS connection port



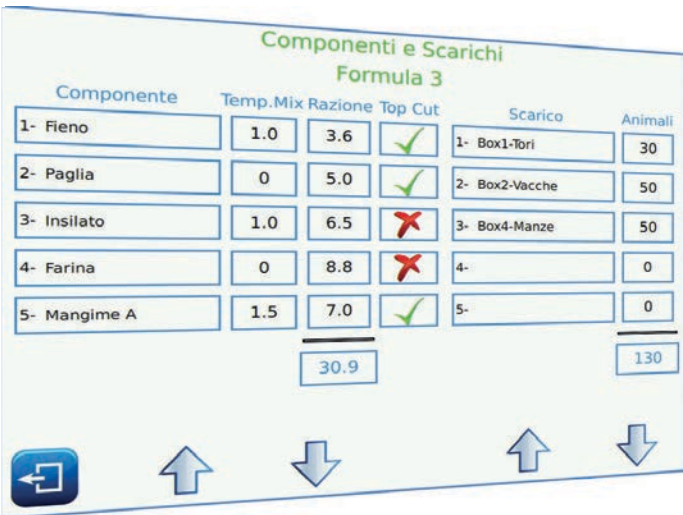
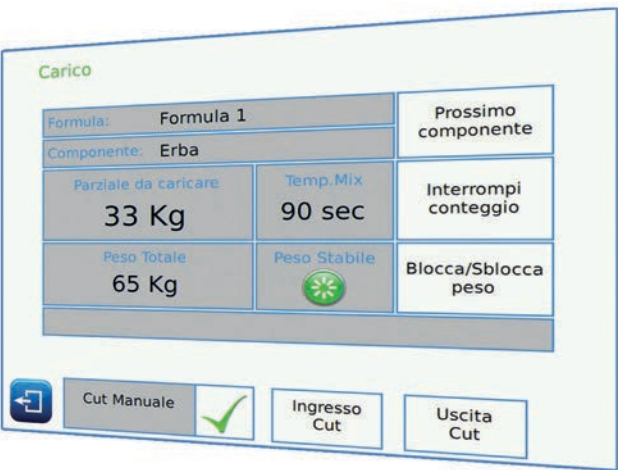
Emergency button onboard the machine

INTEGRATED OPERATOR PANEL



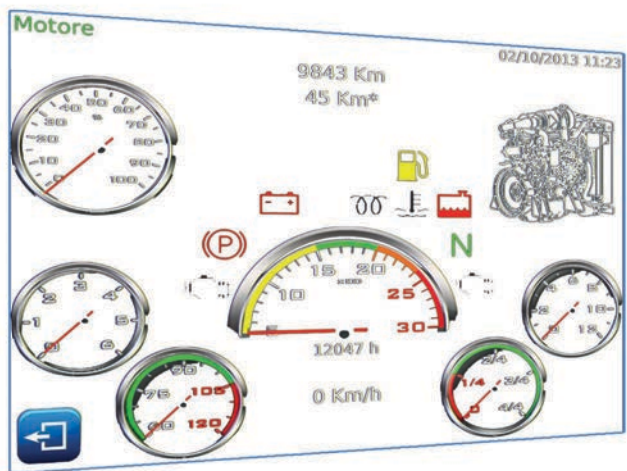
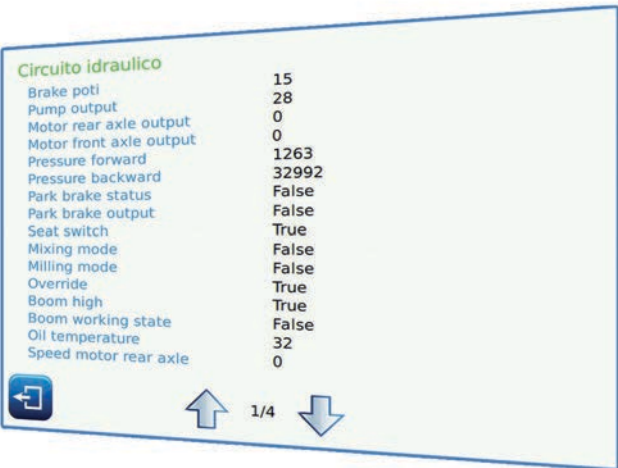
- Panel PC for “mobile” applications, rough, with 10.4” color touch screen.
- Standard bus connections (CAN bus, CANopen, J1939, ...) for interfafce with the Electronic Control Unit of the vehicle and with all the devices connected on the bus.
- Bus connection to the Tufner systems for weight reading and formulas execution.

Display of the operation being performed (load or unload), with details like formula, component or unload box, weight to be loaded. Buttons on touch screen to command next component, weight lock/unlock, as well as mixing stop. Command of the hydraulic circuits for counter-knives in and out in the mixer, also with timing sequence.



Dosing formulas input, with components and rations based on animals number, mixing time between components, counter-knives selectable for each component. Animals number definition for each unload point.

Display on the same operating panel of the status of the typical parameters for hydraulic, eletric and pneumatic circuits of the vehicle connected to the panel through standard bus.

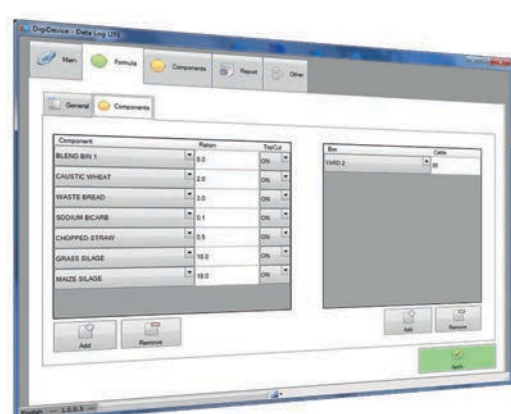
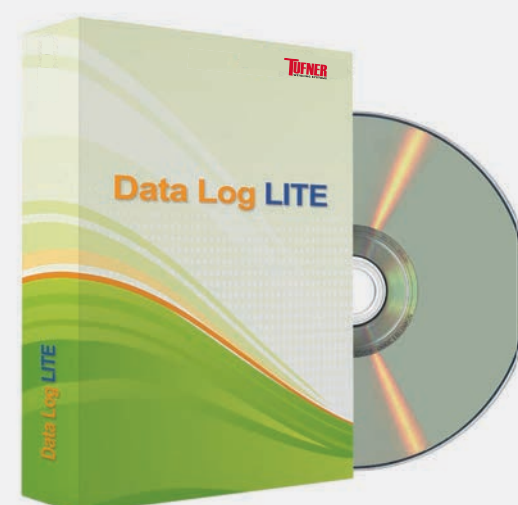


Vehicle dashboard, with the indicators of the main parameters of engine and systems onboard, all in one panel.

SOFTWARE: DATA LOG

Tufner's DataLog software for PC, to create formulas, components, unloads and data exchange with the systems FIVE or ICON onboard the vehicle. Data base automatically updated with the working data saved on USB memory by the control unit on the mixer.

Working data analysis available with reports and exportation in standard formats.

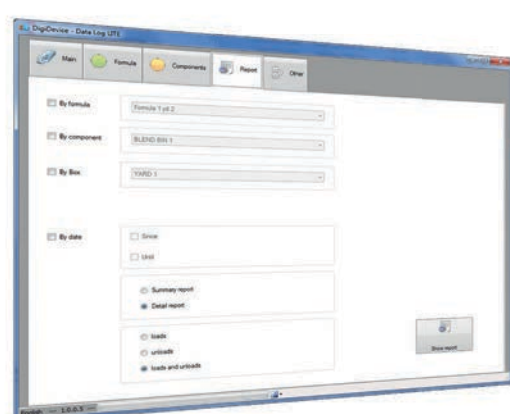
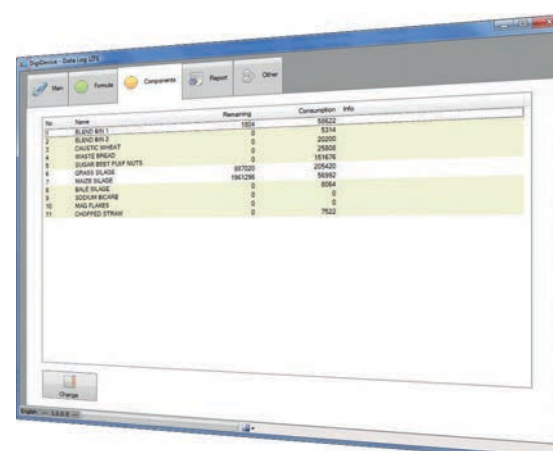


Formulas Management

- Load and unload **formulas** creation, with name, to be transferred to the indicator
- Possibility to transfer to the indicator formulas **selected** among those in the database
- **Animals** number setting
- Pro-animal ration for each **component**
- Quantity to be unloaded for each **unload**

Components Management

- Up to 50 **components** can be inserted with name and transferred to the indicator
- **Stocked** amount displayed for each component
- **Consumed** amount displayed for each component

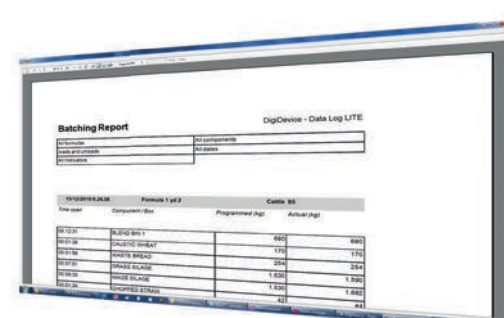


Data Reports

- Report by **formula**, **component** or unload box
- Report by **date**
- Report of **load**, unload data or both
- **Summary** or **detailed** report

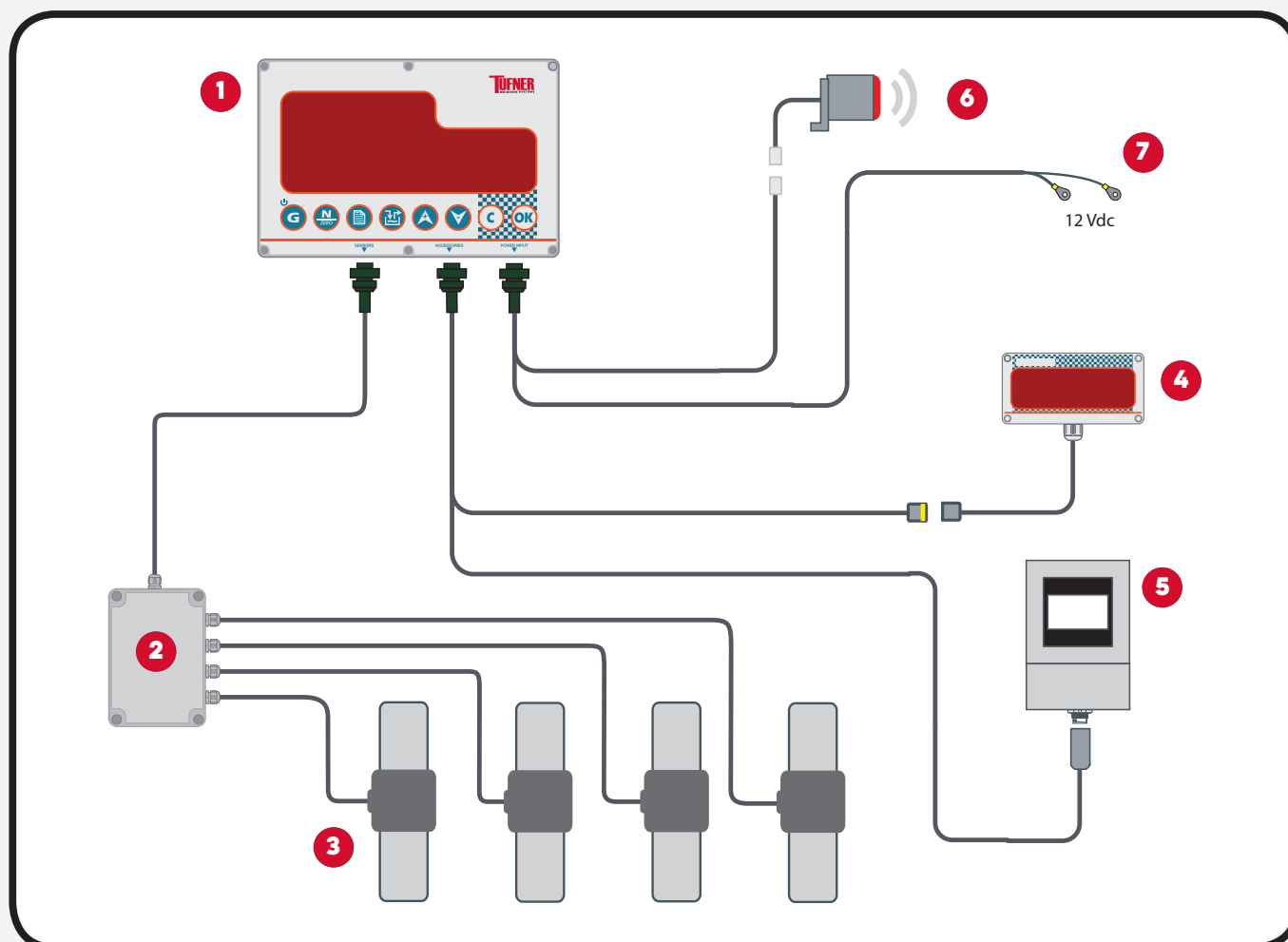
Data Printing

- **Reports** display
- Reports **exportation** as spreadsheet (MS Excel™) or pdf



EXAMPLE: WEIGHING AND DOSING

- 1 Weighing & dosing unit FIVE
- 2 Junction box for load cells connection
- 3 Load cells
- 4 Remote display
- 5 Thermal printer
- 6 Siren horn
- 7 Power supply connection



EXAMPLE: WEIGHING, DOSING & VALVES CONTROL

- 1 ICON D Command Unit with radio frequency connection
- 2 HYDRA WT20 Module with integrated weighing electronic and radio frequency connection
- 3 Junction box for load cells connection
- 4 Load Cells
- 5 Remote Display
- 6 Integrated power supply cable with Fuse
- 7 Two-outputs cable for solenoid valves connection
- 8 "Double Current" cable for high absorption solenoid valves
- 9 Single cable for general outputs (lights, beacons, other functions enable, ...)
- 10 Two-outputs cables for general outputs
- 11 BUS enabling in "Automotive Grade" execution
- 12 Digitized Inductive sensor (to detect gates open/close)

