

TECHNICAL FEATURES

Ambient Characteristics

Temperature Limits:

Ambient: 5°C...45°C

Storage: -20°C...+70°C

Humidity Limits:

Ambient: 5%...95% (R.H. non-condensing)

Storage: 5%...95% (R.H. non-condensing)

Weights sampled and duration of cycles

Probe sample: approximately 100 Kg

Accuracy: $> \pm 0.02\%$

Reading resolution: 10 g.

Quantity of gradable tomato: ~ 20 Kg recommended

Quantity of grindable tomato: ~ 4 Kg/cycle

Sample washing time: on average 60 s with 20 Kg

Grinding duration: 60 s

Grinding and Analysis duration: 125 s

Overall cycle duration: on average 4 mins with 20 Kg

Concentration measurement

Measurement limits: 0...10 Brix

Accuracy: max accuracy ± 0.15 Brix

Measurement scale: BRX - ICUMSA (1974)

pH measurement

Measurement limits: 2...14 pH

Accuracy: ± 0.05 pH

Reading resolution: 0.01/0.1 pH

Color/Lycopene measurement

Indices: a/b - L

Lycopene measurement limits: 0...80 mg/100 g

Accuracy: higher than $\pm 5\%$ of the given reading

Max accuracy: 0.5 mg/100 g

Lycopene repeatability: higher than ± 0.25 mg/100 g

Power Supplies

Electrical: AC 3/N/PE 400V $\pm 10\%$ 50...60 Hz 10kW. Connections by means of junction box.

Pneumatic: dehydrated air 6...10 bar (87...145 psi). Expected consumption ~ 2 l/min. Connection via "quick-release coupling" for plastic tube with diameter 6x4 mm

Water: 1.5...4 bar (22...58 psi). Expected consumption ~ 75 l/evaluation cycle. Connection to relative manifold provided by means of "2" Female Threaded Union.

Please refer to the technical datasheet for further data.



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More products for the Tomato Industry

UR24

Process Refractometer



In Line – Brix, nD, User Scale

LR02

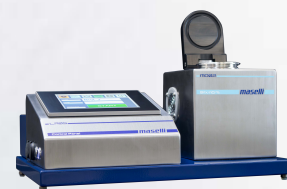
portable Laboratory Refractometer



Lab – Brix, nD, HFCS, User Scale

LR05

Laboratory Refractometer



Lab – Brix, nD, HFCS, User Scale

ZZ2001415B



SV01

TOMATO QUALITY CONTROL STATION

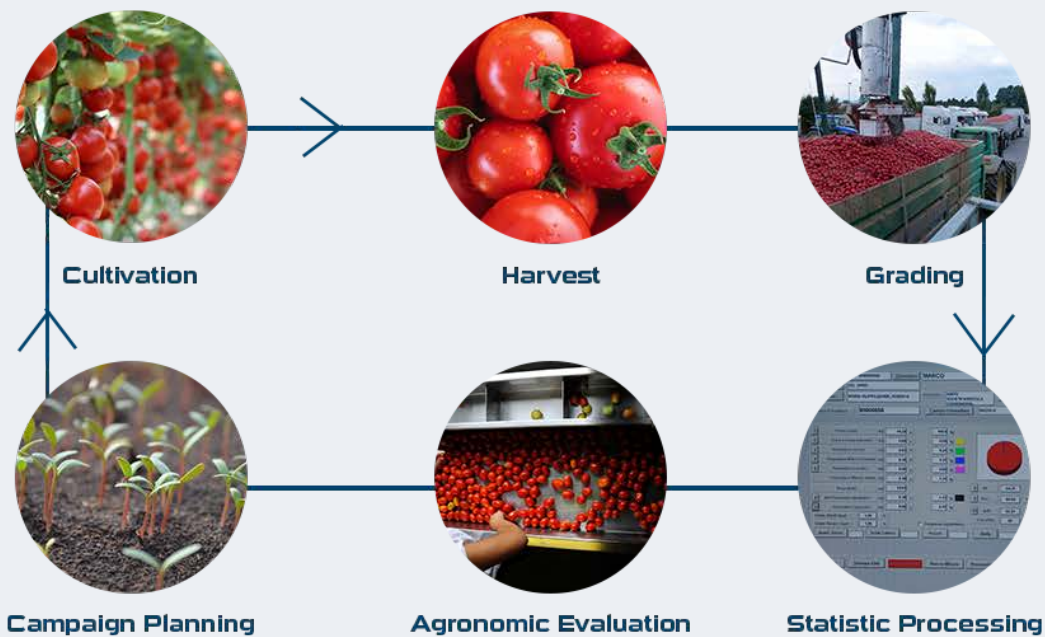
BRX, PH, COLOR, LYCOPENE, % OF WASTE OF THE LOAD

SV01

BENEFITS AND PAYBACK

- Turn-key solution
- Modular solution available upon request
- Robust sampler
- Real-time evaluation of the Waste, Brix, pH, TA, Color of the Load
- Objective results obtained with an automated system
- Dedicated software for data analysis
- Set of statistical data to better drive cultivations
- Easy operations

The road to Quality Improvement:



SYSTEM DESCRIPTION

The SV01 station is installed at the receiving area of the tomatoes processing plant to evaluate the quality of the incoming raw fruit.

The station is a turn-key **modular** construction which consists of **CC02 truck sampler**, a prefabricated module with all the elements for the check of the tomatoes inside and a PC embedded with Maselli-made Software for handling automatically the whole system.

The Software is customizable according to the parameters to be checked: the system can determine the percentage of waste (inerts, fruit defects, fruit illness) plus the physical parameters such as **Bx**, **pH**, **color** and **lycopene**. The collected data can:

- provide a more accurate economical evaluation of the delivered load
- enable sending the various loads to the most appropriate processing lines
- help making agronomic decisions for future cultivations

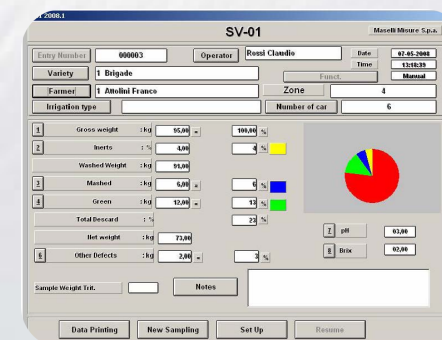
SV01 What is inside



Washer & Selection Table



TR01 Bx/ Ph / Color analysis



Dedicated Software

MODULAR ELEMENTS

CC02 TRUCK SAMPLING PROBE

CC02 is a truck sampling probe able to take a representative sample of the whole tomato load thanks to its moving structure. The probe is handled through a control panel located inside the prefabricated box.

WASHER & SELECTION TABLE

After the sampling phase, the tomato sample is washed to eliminate inerts. After washing, the sample is selected and weighed in the grading bench, equipped with load cells that automatically send the weigh values to the software, where these are used to calculate the entire load's quality.

TR01 - TOMATO ANALYZER

The TR01 grinding unit is a fully automatic analysis system able to perform Brix, pH, Color and Lycopene analysis of tomato juice in few seconds. The system is modular and can be customized according to the parameters to be checked.

The refractometric unit inside TR01 is Maselli best-seller *UR24 - Process Refractometer*.

The TR01, when in combination with SV01 System is directly controlled by the PLC and connected to Maselli Tomato Software.



MASELLI TOMATO SOFTWARE

The computer provided with SV01 Station, connected via RS232 to the PLC located in the system control and management cabinet:

- acquires, processes and store the data relative to all the weighing operations and measurements
- regulates the interface with the operator and the calculation of % waste

The computer can also be connected to the plants central IT system and to an external printer in order to get a **printed record** of the load's quality.

