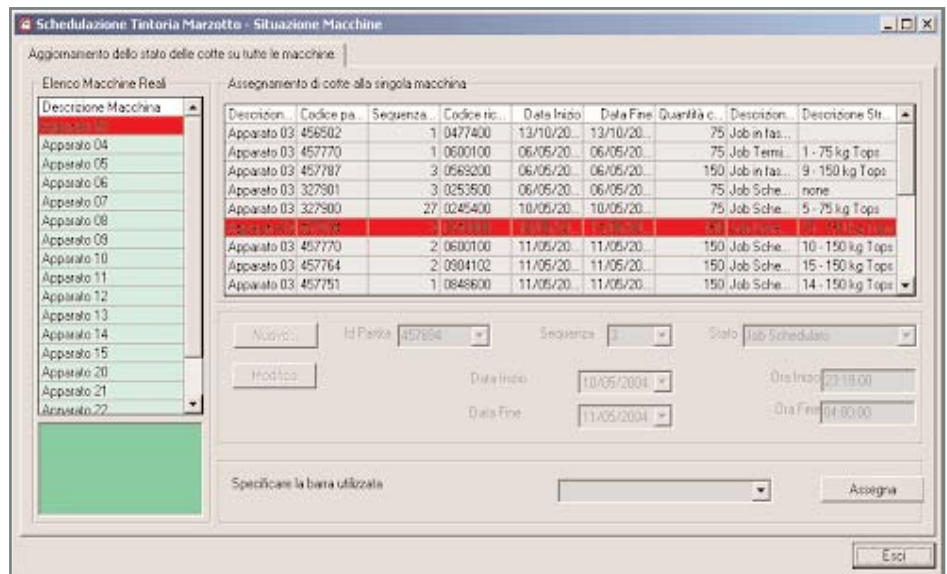


# ORS Dye Scheduler

An easy- to- use interface gives users full control over the dyeing process, indicating clearly at all times the current production status and allowing them to modify it as may be necessary to adapt to changing demands.



## Overview

The ORS Dye Scheduler is a powerful and flexible application which manages the production cycle of the dyeing process. Its primary objective is to maximise production and optimise use of all resources - from raw materials through to machinery and human resources. From an initial client order for dyed material, through the complete dyeing process, the ORS Dye Scheduler enables users to simulate, schedule, and monitor the entire process. In real applications, the ORS Dye Scheduler is so effective that in some cases, it has reduced the number of workers required in the production process by 50%.

### Data Acquisition

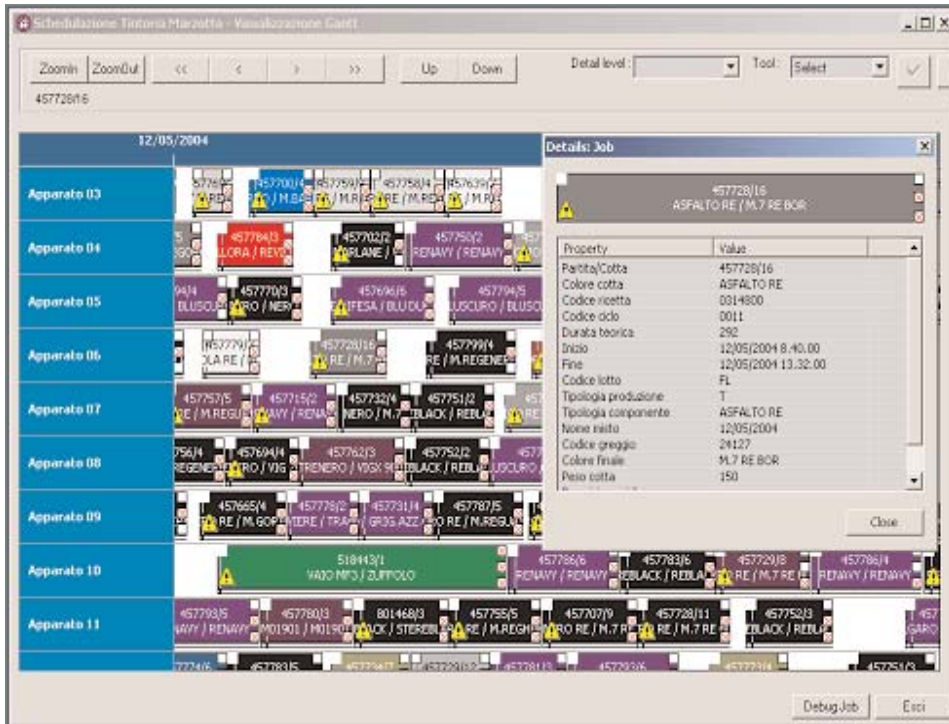
The program can load and display:

- Production orders
- Plant resources (equipment, human resources, etc)
- Warehouse supply levels of raw materials
- Warehouse supply levels of colourants
- The current status of a production line, via direct communication with the plant controllers

### Data Management

ORS Dye Scheduler enables users to:

- Manage use of all resources in an integrated and efficient manner (whether raw materials, machinery, or human resources, etc.)
- Configure machinery according to their mechanical characteristics
- Manage any given exceptions linked to different types of production
- Manage modifications to orders (redyeing, changes of raw materials or cancellations)



The scheduling results are presented in a Gantt chart, which is highly flexible and customisable.

## Scheduling

The heuristic scheduling algorithm, which respects capacity limits, enables users to:

- Break down orders into batches of material, on the basis of available resources (their amount and availability)
- Schedule the material batches for dyeing vats based on:
  - A time interval predetermined by the user
  - Delivery date of the items (and resulting priority level)
  - A production resource calendar
  - Color sequences (with introduction of a cleaning sequence when necessary)
  - Priority of the materials required based on the type of production
  - Availability of raw materials
  - Availability of dyes
  - The presence and validity of the recipe assigned to the batch
- Simulate the production process over the long term, with the option to create mock orders to test their feasibility

## Scheduling Results

The scheduling results are presented in a Gantt chart, which is highly flexible and customisable. It allows users to:

- Move or shift any given batches of material, either in terms of scheduling or of equipment. They can also be postponed or canceled.
- Verify production progress
- Select and examine the progress of an individual item
- See information on a user-specified number of batches of material
- View, via corresponding graphic symbols, the status of all batches (blocked, canceled, delayed, in progress, etc.)

## ORS Dye Scheduler Highlights

- Viewing of all the positions of the orders (with consequent minimization of external disturbances)
- A long-term view of production cycle
- Maximum flexibility in the simulation phases, which can be carried out on different production scenarios
- Scheduling constrained to the verification of the availability of raw materials and material already dyed
- Ability to forecast needs for raw material and colourants
- Ability to make forecasting production decisions, taking collateral factors into account (for example, allowing for urgent orders)
- Direct communication with the production line, so that those managing the process have immediate information on scheduling results