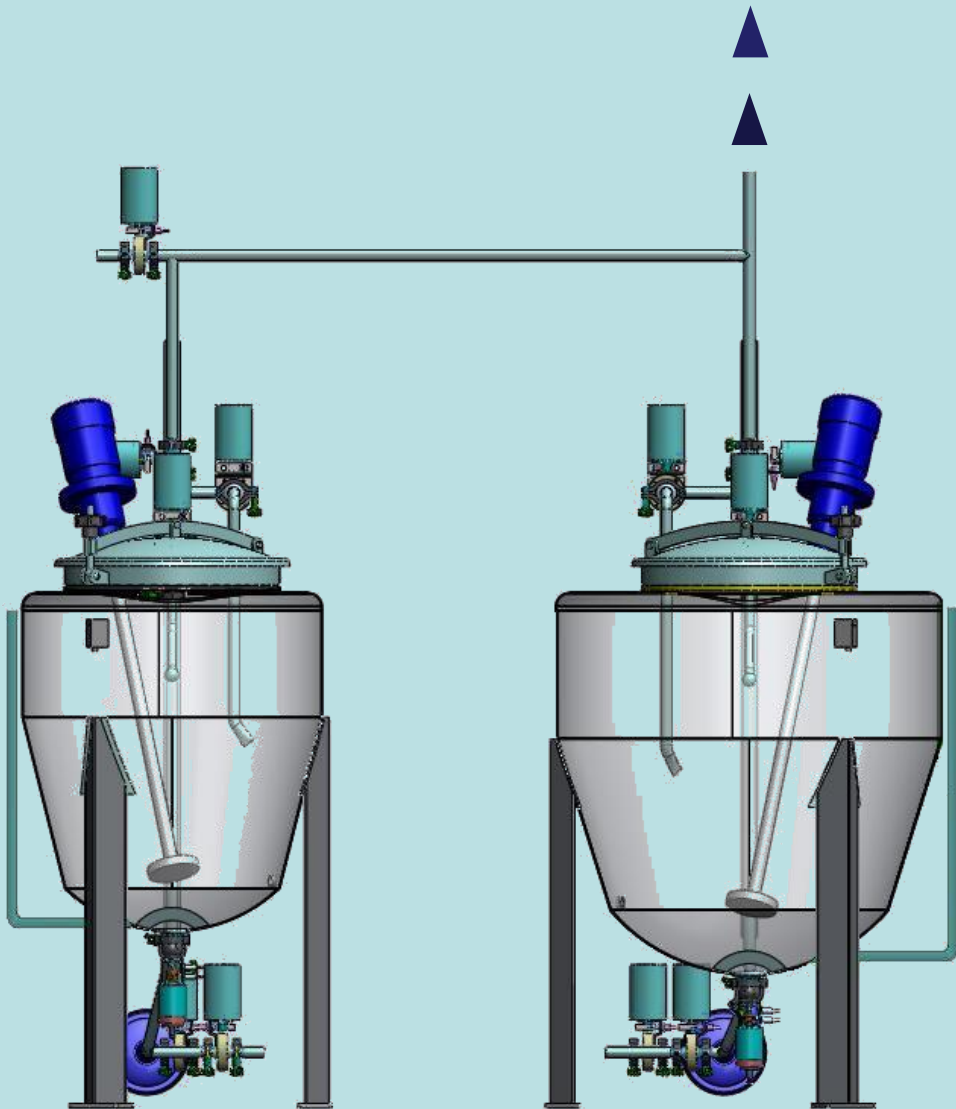


NEW

Dyestuff Dissolving

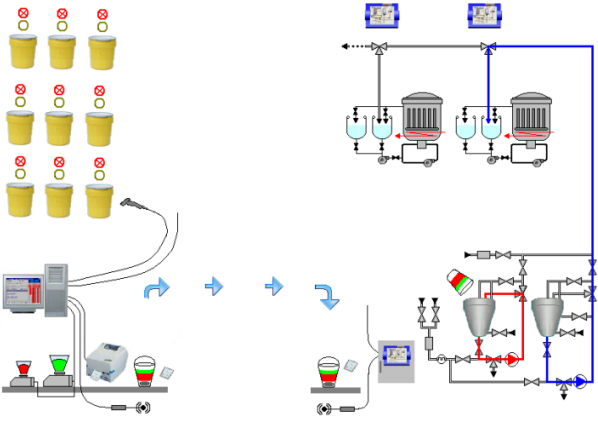
**arel**



Correct dyestuff at the right quantity-

Perfectly dissolved **on time** and transferred with **optimal** rinsing

# Complete System



Arel dissolving system cares for the managing of the dissolving parameters, for perfect on time dissolving of the dye stuffs and for the delivery of the solutions to the dyeing machines with optimal rinsing.

The system is integrated with the dye-house control center and with the dye machine controllers

## Dissolver Recipe

The recipe tables contain for each dyestuff the dissolving ratio (liter water/ kg dye), the dissolving time (Sec/Kg) and the dissolving temperature. Based on these tables and on simple rules, the dissolving parameters including the amount of water, the dissolving temperature, the mixing times and the rinsing procedures are **automatically set** for the most suitable and economical values

| Machine | Lot      | Weight | Unit |
|---------|----------|--------|------|
| 10      | 14080736 | 350    | Kg   |

| Prod. No. | Prod. Name   | Quality | Unit | Tank |
|-----------|--------------|---------|------|------|
| TAZ046    | LUBIT CO     | 3300.00 | Grm  | T1   |
| SWZ2091   | AVCOTEX DAN  | 2700.00 | Grm  | T1   |
| TAZ190    | PLEXENE CA.N | 5200.00 | Grm  | T1   |
| TAZ2074   | TANATERGE    | 1920.00 | Grm  | T1   |

## Safe On Time Synchronization

Upon real dye house status, dissolving tanks availability and the required dissolving time -the scheduling **priority system** advise the operator the guided weighing time and the **optimal time** for each dissolving procedure. The transferring of the solution to the dyeing machine is fully synchronized with the dye cycle

Optional PICK TO LIGHT and RFID identification systems contribute to even more error proof system

| Lot      | Recipe Name  | Tnk | Mach | Kg Dye |
|----------|--------------|-----|------|--------|
| 78650985 | Jaffa Orange | 1   | 05   | 0.215  |
| 54321987 | Blue Sky     | 2   | 07   | 4.820  |
| 46576879 | Black        | 2   | 04   | 4.700  |
| 86964098 | Pink 700     | 1   | 09   | 0.982  |
| 13289807 | Lemon Yellow | 2   | 15   | 5.580  |
| 69547998 | Fire Red     | 1   | 12   | 1.022  |
| 67453901 | Marine Blue  | 2   | 03   | 1.730  |
| 76895462 | Light-Green  | 1   | 07   | 0.915  |
| 98769845 | Orange       | 2   | 11   | 2.292  |
| 65889065 | Red 7        | 1   | 07   | 0.720  |
| 48765986 | Black        | 2   | 13   | 5.900  |
| 56487087 | Brown 57     | 2   | 14   | 4.854  |

## Optimal Rinsing

Arel unique optimization by rules software adapt the rinsing parameters of the **current batch** to fit the piping and tank contamination of the **previous batch**

In case the current batch is small batch with pale shade and the previous batch was large batch with dark shade -extra rinsing is carried out; less rinsing is requested, in case, dark shade is dissolved after pale shade

The result is substantial saving in rinsing time and rinsing water together with the guarantee of clean system

Rule Name: Pre-Rinsing Repeattion Updated: 18.12.08

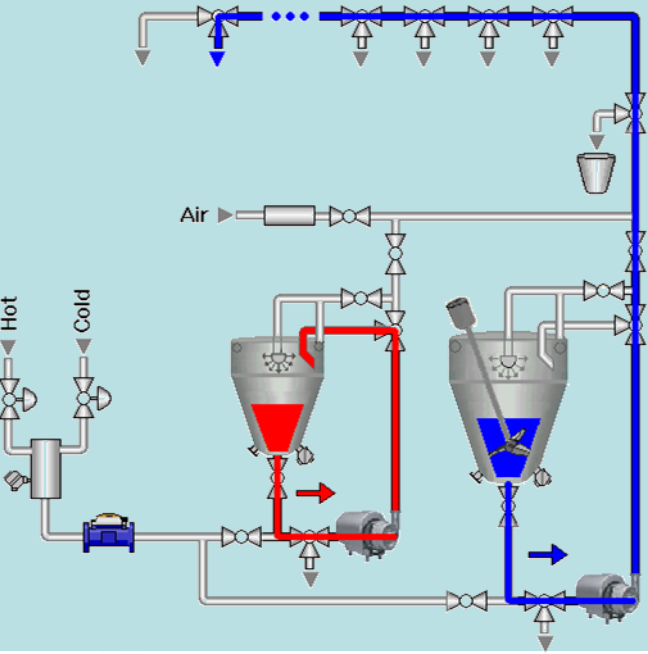
IF

| Parameter  | Check | Value |
|--|-------|-------|
| Difference of Dyestuff Weight Between Current Batch and Previous Batch | >     | 10kg  |

THEN

DD Repeat

# Dissolving Procedure



Upon recipe parameters, and the machines status ,the computer decide the most suitable tank and time for each dissolving.

The tank bottom is filled with some water and the operator is advised to add the dyestuffs. After adding the dyestuffs, the tank is filled with more water **from the bottom** ,at a controlled temperature ,together with flow recirculation. After the tank is filled with the requisite amount of water and the mixing time elapsed The computer checks if pre-rinsing is required, if yes ,an **OPTIMIZED pre-rinsing** procedure is initiated, and the line to the machine is cleaned by water and **air**.

After the pre-rinsing the delivery of the dyestuff solution to the machine is taking place by the same pump which performed the re-circulation. At the end of the delivery **after rinsing** is carried out to ensure that all the dyestuff residues are transferred to the machine. Extra rinse-by water and steam- cleans tank and the line for the next delivery



## Arel Dissolving Stations Comprises

- Up to three dissolving covered tanks
- Mixing and delivery pump(s) for each tank
- Temperature regulation device
- Powerful mixer(s)
- Clean by air and rinsing devices
- Filling from bottom piping with flow meter and optional blending system control
- Sanitary transmitters and safety devices
- PC based controller with control panel and mimic display with manual by pass

# Dissolving Tank

Careful design of the shape of the dissolving tank, together with mixing concept, which combine mixing by the delivery pump and /or by powerful mixer, enable the tank to dissolve efficiently very small amount of dyestuffs with small amount of water, as well as dissolving with the full volume of the tank

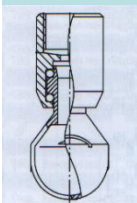
Utmost care for details, ensure perfect **dissolving**, perfect **rinsing** with **minimum water** quantities at **minimal time**



Perfect Design

Powerful mixer and mixing by recirculation

Valves conform to 3A SANITARY standard to fit the requirement of the pharmaceutical industry



The cleaning power of **rotary surge cleaners** for most efficient rinsing and for water/time saving



For perfect dissolving, **flush bottom tank valve** eliminate dead space between the tank bottom and the exit valve



The delivery and recirculation pump offer superb sanitary qualities, high efficiency, reliability, and good clean-in-place and service-in-place