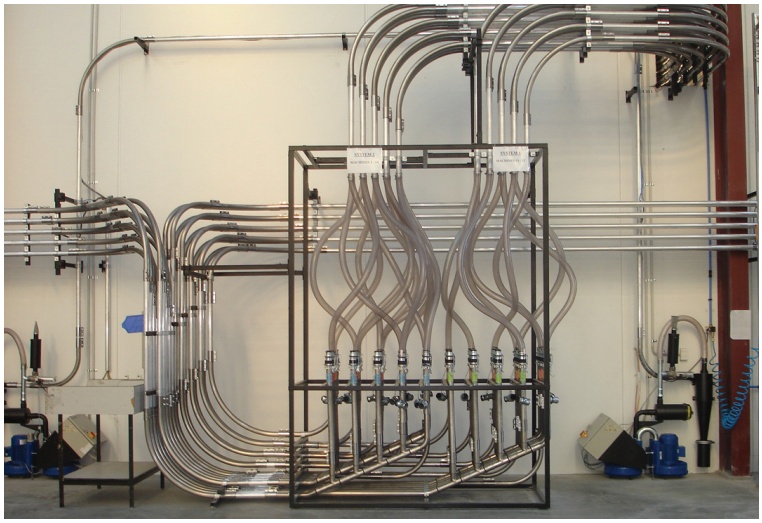
Sistema selects Fleming Plastics Dynamics to install a Labotek central materials handling system into their injection moulding facility.

SEPTEMBER 2007

Sistema Plastics is a privately owned NZ company, manufacturing and marketing a range of injection and blow molded house wares, to world wide markets. In April 2007 Sistema selected Fleming Plastics Dynamics to install a Labotek central materials handling system into their injection moulding facility. Sistema were introduced to Labotek central systems in Germany at the K2004 exhibition and were duly impressed by the high build quality and flexible system design.

Our brief for an optimum system was to achieve 5 key points and remain within our budget.

1. Keep it simple for ease of use
2. Durable and modular hardware which will accommodate expansion requirements
3. Reliable conveyance of rubber to loose flake regrinds
4. Measurable labour savings
5. Zero cross contamination of materials



Labotek Power in Plastics

Labotek were one of the few system suppliers available to meet this design brief. The system design was handled by the team at Fleming Plastics Dynamics and their experience and know how lead this specification and design stage. They supplied detailed computer generated principle and factory layout drawings allowing us to see exactly what was being proposed.

The installation was project managed by Fleming Plastics Dynamics using Sistema engineers. The project was completed ahead of time and exceeds all design requirements.

From the initial introduction to Labotek at K2004 to the hand over of the system in July 2007 there have been no negatives.

Yes, I am very pleased Sistema made the Labotek choice.

Wayne Prendergast R&D

RECENT LABOTEK INSTALLATIONS BY FLEMING:

Sistema
APERIO Group
ATLAS Plastics
HP Packaging
Moulding Services
Visy Industrial Plastics
Full View Plastics
Pippak
Huhtamaki Australia
Impact International
Willow Ware
Ultraplas
Duromer Products
AMCOR Closures
Marco Engineering
Bindweld Plastics
Toyota
Plastic Injection Company

FLEMING Plastics Dynamics
Your Plastics Ancillary Specialists
www.fleming.net.au

System Design and Components

Labo-Link Central Control
Central control is Labotek Labo-Link 15/25 Control with software prepared for two individual systems as follows:
System 1 – Machines 1 - 14
System 2 – Machine 15 - 29

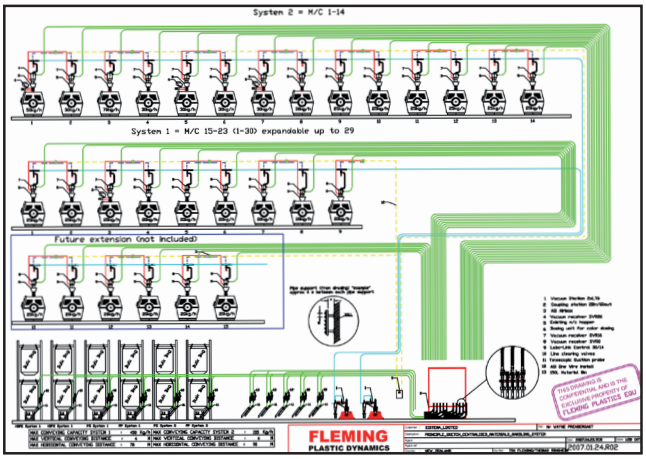
Labo-Link is based on one wire technology which allows sensors and actuators to be networked through a 2-wire flat cable also supplying power. Labo-Link eliminates the cable trees of traditional cabling replacing them with a single yellow flat cable.

Labo-Link modules connect to the flat cable by piercing the flat cable with their insulation displacement pins. This eliminates having to screw wires down, miss wiring and system debugging costs associated with miss wiring. The special profile of the flat cable prevents the possibility of reversal of poles when connecting devices.

The flat cables runs along the entire length of the vacuum line and the AS-I module is placed wherever the end user needs to connect to a vacuum hopper or pump.

The Labo-Link Features

- "Plug & Play" design allows system expansion or layout change easily without the need of a qualified electrician



- Significantly reduces the amount of cable required for large installations
- Significantly reduces the labour required for large installations
- Requires no conduit or mechanical support structure
- Reduces long-term maintenance costs by using advanced diagnostic capabilities such as showing the precise location of the machine at fault
- Reduces the time required to expand the system in the future, adding a machine takes minutes versus hours.

Optional Labo-Link Control Touch Screen 6" colour TP270-6 offers total control of the centralised materials conveying system via desk top computer. Based on WinCC and MS operating system with network interface and Ethernet compatibility via Siemens Sm@rt Service.

Vacuum Receivers

This system is using a combination of the Labotek SVR8, SVR16 & SVR26 vacuum receivers. Each SVR vacuum receiver is made of stainless steel AISI 304, equipped with a remote vacuum valve with spring return, 50.8 mm T-pipe, level switch, coarse wire screen in lid, non return flap, and vacuum and material connections in 50.8 mm. Bottom cone is 60° with Ø80mm outlet.

The modular design allows main body sections to be inserted to increase or decrease capacity as required to meet changing demands. The remote pneumatic vacuum valves are positioned on the overhead vacuum line. They open pneumatically and close via a spring return ensuring a tight vacuum seal in the rare event of an air cylinder failure.

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Willow Ware
Ultraplas
Duromer Products
AMCOR Closures
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Toyota
Plastic Injection Company

Vacuum Station
The vacuum station selected is the Labotek 2 x LT6 side channel blower with by-pass valve, safety valve, and wall fixed control. The 2 x LT6 has an extremely low noise level of (<69 dBa), very small foot print and are rated for 24 hour operation in ambient conditions up to 60°C. The 2 x LT6 design uses two individual 3.4kw vacuum blowers running in series. This achieves an extremely deep vacuum with low air speed ensuring a safe material conveying speed over long distances. This design also allows a single spare 3.4kw vacuum blower on site as spare at very low cost.

Optional frequency inverters eliminates start up amps by running permanently (5Hz standby) giving significant energy savings. Also allows % adjustment of air flow per SVR vacuum receiver.

Central Filter
The central cyclone dust collector provides highly efficient separation of carry over dust and fines from the conveying air drawn toward the central pump.

Coupling Station
Coupling station is supplied complete mounted in a steel frame. Each outlet is equipped with lock fitting, rubber gasket, and blind cover with chain. All piping is made of 50.8 mm stainless steel AISI 304. Frame is extended in height to carry all machine pipes with flex hose for easy operator use.

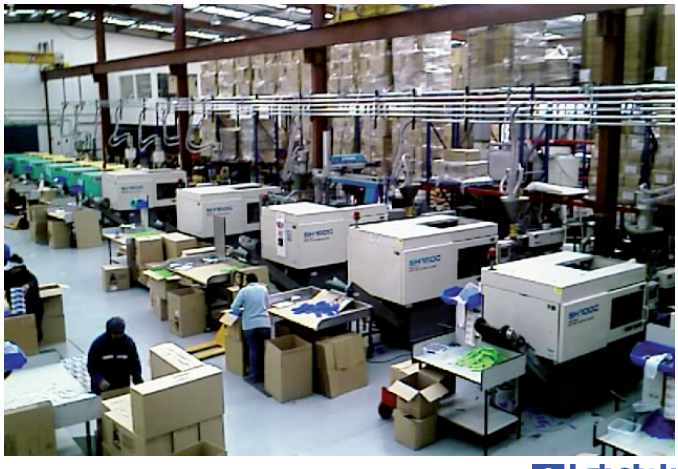
Piping System
The entire machine dedicated piping system is made of standard 50.8 mm Aluminium pipe. Each machine has a dedicated piping system to a coupling station allowing complete flexibility of material change. All long radius bends in the material piping system are made of Stainless steel. Pipe couplings are the standard 2 bolt compression type with rubber seal and earth strap.

1T Bulk Bag Stand Material Containers
Labotek supplied the base material container only allowing Sistema to arranging the frame work required for hanging the bulk bags. Material bins were fabricated in powder coated mild steel RAL 5010 with 150ltr capacity, and 3 vacuum outlets for telescopic suction probes. Excluding grid for bag breaking.

Pipe Cleaning Valve
A pipe clearing valve is installed at each of the material bins allowing ambient air into the piping system at the end of each conveying cycle effectively clearing the line. The intention is to clear the vertical rise only at the end of each conveying cycle, leaving a shallow depth of material in the horizontal run. This prevents line blockages and increases the system capacity.

Color Exact Dosing Units
21 machines are fitted with a Color Exact neckpiece type NP-2, allowing any machine to accept one of the 6 Color Exact dosing units type CE1100SM/D. Color Exact proved the only colour dosing unit capable of consistent accuracy shot to shot.

Local On/Off
A local on/off box, located close to each vacuum receiver at each machine allows easy start/stop of individual SVR's, in case of material change or general maintenance.



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