

The **GEN²**™ System.

Total conveyor control without a central computer

The GEN²™ system is a totally new approach to accumulation conveyor control. Instead of a central computer, each GEN² valve module contains its own on-board programmable logic. This enables each module to communicate directly with other modules, both upstream and downstream, and make independent decisions based on its own individual program instructions.

Eliminate costly and complex computer programs

Up to 100 GEN² valve modules can be connected together to an Interpreter unit that provides a serial connection for programming. Using a notebook PC and the menu-driven software supplied on a CD-ROM, you simply select the operating parameters you want for accumulation, release, jam condition and "sleep" mode.

The Interpreter unit provides an interface between Humphrey's H-flex protocol and most field bus protocols such as DeviceNet. This allows you to connect the system to a main computer for centralized status monitoring and diagnostics in large installations.

Plug & Run™ technology reduces assembly and maintenance costs

The GEN² modules are simple and easy to assemble into a complete system. Each comes with quick-connect cables to save time and eliminate mistakes.

Each module has status lights to provide a positive indication of its function. Should a module ever fail, it's easy to spot. And it can be "hot swapped" in a matter of minutes. This contributes to a lower total cost of ownership.

Simple menu-driven programming

Humphrey designed the software to make programming as simple and easy as possible. Using a menu and drop down windows, you can make global selections that apply to all zones, and then configure individual zones differently, if needed.



Increase product density and throughput

Each zone, or node, can be programmed for accumulation and release in 0.1 second intervals up to a 25-second delay. This enables you to fine-tune a conveyor to achieve maximum product density and throughput.

The programmable jam feature allows you to adjust the response time to a jam condition in the same way. Should a jam condition be detected, the module sensing the event will take control and shut down the upstream zones containing products until the condition is corrected. If the system is connected to a central computer, the GEN² system will provide an on-screen status alert. This can significantly improve system up time.

Reduce energy costs

The programmable "Sleep" function automatically shuts down any conveyors zones without activity for a pre-determined time -- up to 25 seconds. You can make this a global command, or program individual zones as required. This allows you to reduce energy costs without sacrificing operability.

On-board status indication and diagnostics

Twin LED's provide a visual indication of each module's status. One is bi-color, with green indicating the module is powered and red indicating a fault. The other LED turns amber when the solenoid is engaged. In addition, the Interpreter unit has LED's providing system-wide status indication.

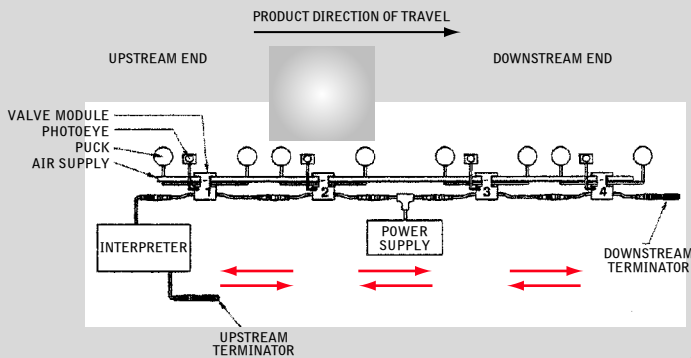


Reconfigure without reprogramming

GEN² system uses dynamic addressing, which means that you can remove or add modules (up to 100) without having to re-address each module in a central computer program. This significantly reduces system reconfiguration time and costs.

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**The next generation in
accumulation conveyor control**

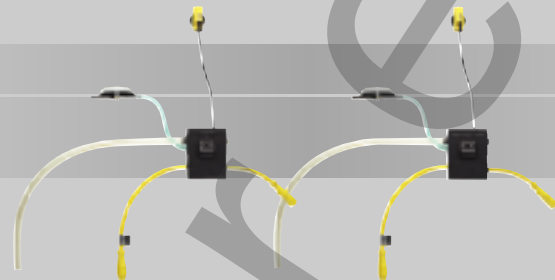


Independent Intelligent Control

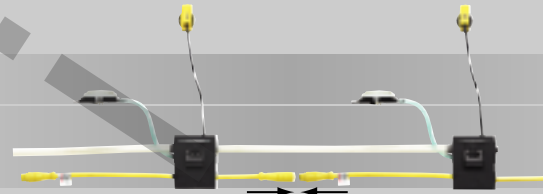
The GEN² system takes the concept of distributed computing to the next logical step: Independent Intelligent Control of multiple sequential control operations.

Each GEN² module contains sufficient computing power onboard to respond to a number of pre-programmed situations, based on direct input from a local sensor. Each module is programmed to communicate with the two adjacent upstream and downstream modules, polling their status. Depending on the upstream/downstream status, each module then makes an independent decision, based on its programming. As a result, very little if any communication with a central computer is required for normal operation; and only self-diagnostic communications are sent back to a central computer to alert a human operator to a problem.

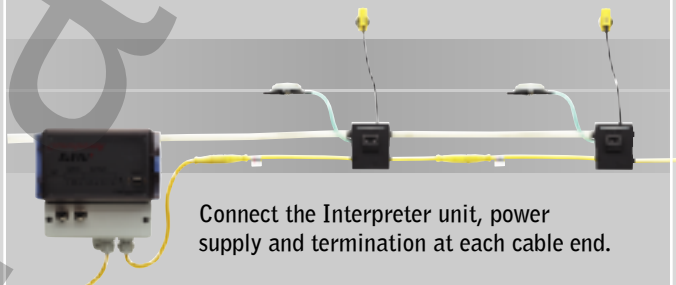
Installation is as simple as it gets



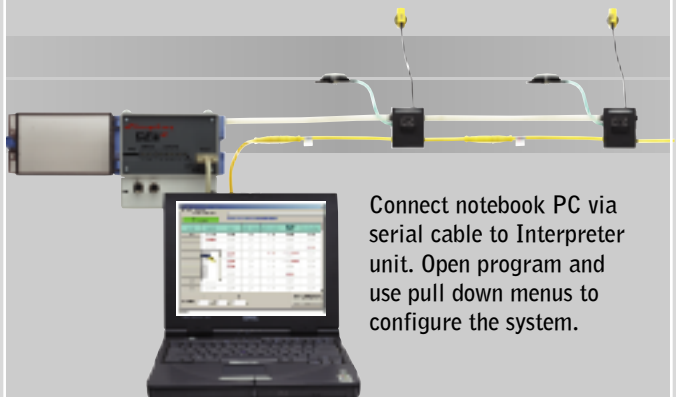
Mount the GEN² modules, photo eyes and pucks.



Connect the pneumatic tubing and data cables.



Connect the Interpreter unit, power supply and termination at each cable end.



Connect notebook PC via serial cable to Interpreter unit. Open program and use pull down menus to configure the system.