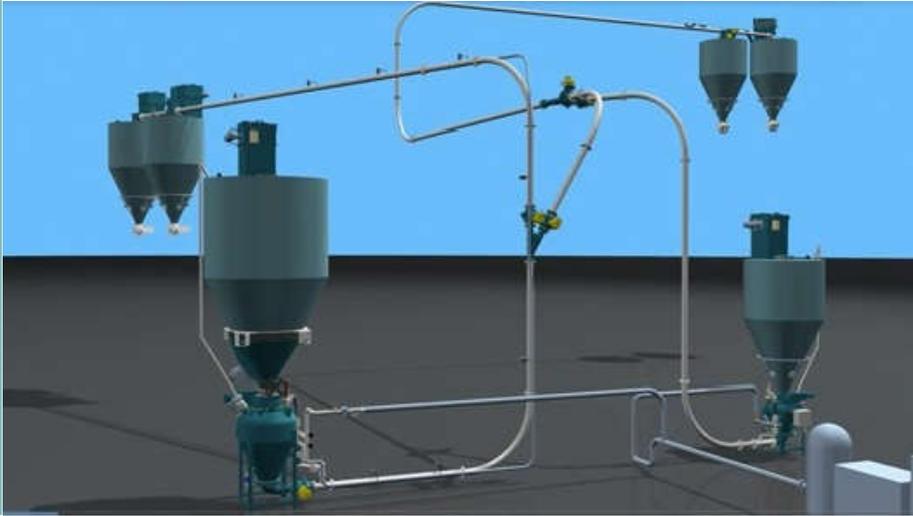


## Technical Article



Published by Schenck Process UK Ltd, Lisa Thomas, Marketing Manager

# Are you interested in Maximising plant production with Minimum operating costs?

**At Schenck Process we understand that efficient, high volume of material handling, using processes that consume minimal cost and energy, is an important on-going consideration for our customers. Therefore after 40 years of leading innovation in Dense Phase Pneumatic Conveying, we have proudly evolved our solutions further, to provide just that.**

Designed and engineered by our specialist team based in the UK, our revolutionary system for the **next generation of Dense Phase Conveying is called ProPhase™.**

ProPhase™ continues to offer the traditional concept of Dense Phase Conveying. Whereby it will move materials in an enclosed, dust free environment, using compressed pressurised air but at low levels of velocity, to ensure less wear and tear on the system and the materials being conveyed. However, with ProPhase™ it also now has the added benefit of providing better performance than typical Dense Phase Conveying systems, without absorbing high amounts of costly energy.

Providing processing rates of up to 250 tonne per hour, across distances up to 750m, the output is increased, whilst through careful design and engineering, energy consumptions are minimised. Conveying pipelines from DN50 to DN300 and vessel volumes of 0.23m<sup>3</sup> to 6.2m<sup>3</sup>, ensures performance is maximised.

Keeping flexibility for our customers in mind, the ProPhase™ incorporates a modular design, allowing it to be supplied as a full system or become part of an existing Dense Phase Conveying process – even with those supplied from other manufacturers. Using one of our Clyde Process Pro-DV Dome Valve, the ProPhase™ can effectively perform up to 250,000 cycles between minor services, and up to 1m between major services.

The ProPhase™ also incorporates many additional features that contribute towards its performance, including an Air Distribution Manifold that prevents powder back-flow to maximise valve life, Regulator Valves that minimise power consumption, as well as wear and bulk solids degradation. To convey even difficult bulk solids gently and reliably, Density Stabiliser Pipeline Air Injection units can be added at regulator intervals, whilst Vessel and Valve flow surfaces can be treated with non-stick or corrosion resistant coatings, for added life performance.

### **& there is more.....**

As an R&D team who thrive on innovation, at Schenck Process we've also developed a Smart Control for Dense Phase Conveying – that takes its operation to an even higher level. To support ProPhase™ or other Conveying systems, we've **introduced the Intelligent PHASiQ™ Control Panel.**

Using advanced software, the PHASiQ™, provides pre-engineered sequence control, visualisation and data capture for Dense Phase Conveying – all in one compact unit.

Allowing commissioning that takes just minutes and quicker, simpler installation of the system, the PHASiQ™ can drastically save costs in these areas. Another important benefit of the control is it ensures client engineering is minimised and hassle-free. It can be operated as a stand-alone machine or networked to existing control systems, providing added flexibility.

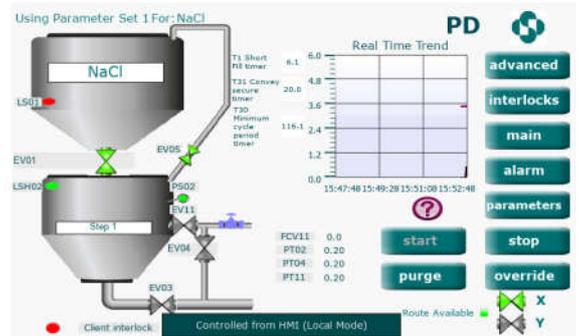
The actual data the control collects, can be remotely accessed for speedy diagnostics and provides a powerful analysis tool to show historical trending and service values – for future process improvements. The interface is very simple to operate with clear graphics and icons, whilst its powerful parameter management tool allows the controller be highly adaptable through simple touch screen functionality.

Allowing for 5 dense phase conveying modes and on and off control of the ProPhase™ Pump, the control includes pre-loaded software for optimum, straightforward operation.

**With the client and their process in mind, the combination of our ProPhase™ Dense Phase Conveyor systems installed with the intelligent PHASiQ™ Control Panel, will open up a number of cost, time, data learning and efficiency benefits to the many markets that adopt pneumatic conveying, as an intrinsic part of their bulk material handling process.**

For more information on Schenck Process, Dense Phase Conveying, which forms part of our Clyde Process range, please get in contact:

[info@schenckprocess.com](mailto:info@schenckprocess.com) | <https://www.schenckprocess.com/contact>



### Parameter Management

Parameter set select From push buttons  
Selected by HMI  
Selected by CCS

Material Name	Current Parameters	Parameter Set 1	Parameter Set 2	Parameter Set 3	Parameter Set 4
NaCl	NaCl	NaCl	Sulphate	mat 3	mat 4
Parameter Set	1	1	2	3	4
Pump Type	D	Pro	CD	No pump	No pump
Wilo Selection	None	None	None	None	None
DPS Regulator Setting	3.50	3.50	3.50	3.50	3.50
T1 Blurt Fill Timer	10000	10000	10000	10000	10000
Contract Number	K00849	K00849	K00849	K00849	K00849

load set 1 | load set 2 | load set 3 | load set 4  
store as set 1 | store as set 2 | store as set 3 | store as set 4

System running signal:  On

Circle: Step 6

WRITE TO USB/SD

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