

Delivery of colour pigment

The explosion in the housing market over the last 15 years has led to increased consumer investments in housing and home improvement. One such investment has been in focusing on the garden as a key selling factor when placing a house on the market as well as a place the owner can enjoy a glass of Pimms and relax with their favourite book. As a result of such capital investment and enjoyment, the market for decorative paving stones has dramatically increased.

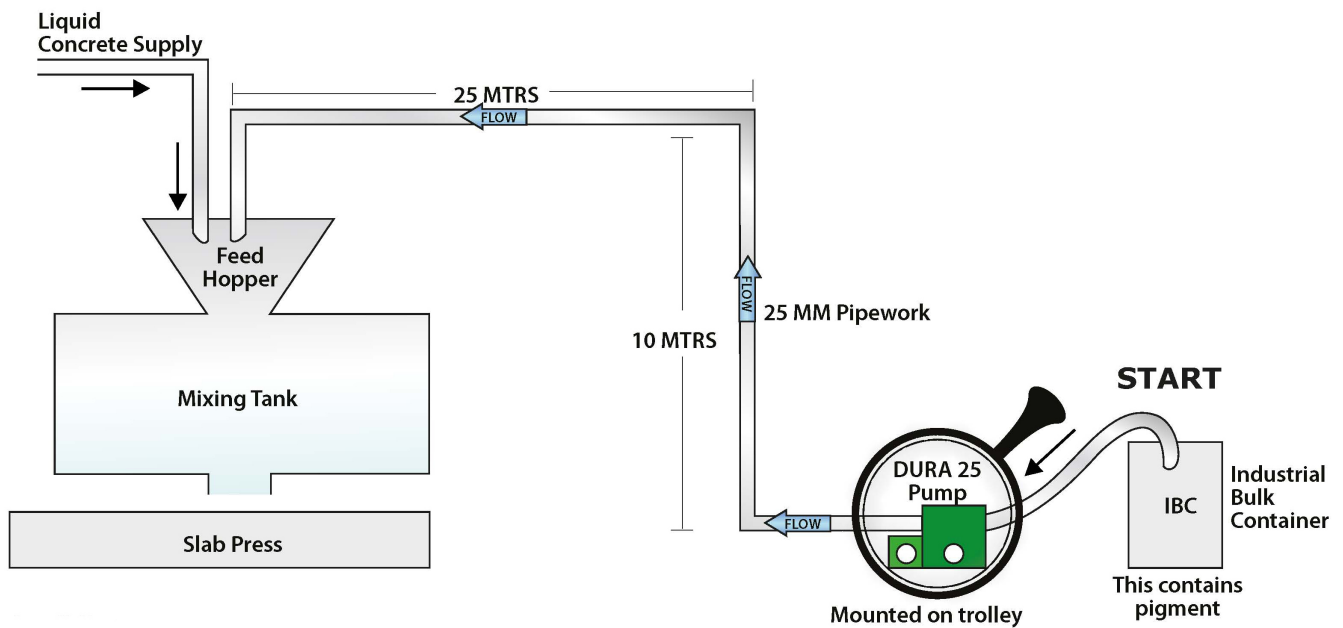


Process points

Coloured pigment is abrasive with small solid particles. It is difficult to dose accurately and consistently. These two factors impact greatly on quality and cost control. Where mixing the pigment onsite, a solution which suffers a loss in concentration may fade much quicker in the end product. An increase in concentration can affect the cost of production. The same principles apply for those manufacturers using a pre-mixed pigment.

A manufacturing facility of this product requires an exceptionally high quality of finish with the most robust pumping system to deliver coloured pigment.

Feedback from manufacturers to Verder indicated requirements for a trouble free operation, less downtime due to maintenance and controllable delivery of the product.



An example of a pumping solution designed for a Verder customer

Process Points continued...

Downtime is costly to the production process, especially with the nature of the other materials and setting agents. To minimize disruption, the pump used in the delivery of the pigment had to be able to handle an abrasive substance, easy to maintain and service and would not allow build-up, which could cause clogging or develop leaks that are hazardous and costly to clean-up.

Health & Safety practices surrounding the use of chemical and solvent based materials in paving stone production meant that the pump had to be leak free.

Problem identification

Upon consultation with the operations managers at manufacturing facilities it was common to see older air-operated diaphragm pumps being used with a 1" outlet and an IBC and hopper with the pigment concentration being an inconsistent variable. With between 30 and 40 feet of pipe work running from the IBC, the control of delivery was not providing a consistent concentration of coloured pigment in the final batch. Other problems included a build-up of product and pigment solidifying, which disrupted the flow and made servicing and maintenance of the pipe-run and pump more frequent and complicated, resulting in higher costs.

The solution

The Verderflex Dura series is a new generation of smaller hose pumps designed to maximize the pump operation and minimize factory footprint, servicing costs and potential downtime.

The Verderflex Dura range is an excellent choice for transferring pigment.

What makes the Dura range the correct choice for pigment?

- High corrosion and abrasion resistant – The Verderflex Dura range can be specified with a variety of Verderflex hoses to accommodate the abrasive pigment used in the process.
- The peristaltic pump action provides a gentle, constant, pulsed delivery, which makes it ideal for any process looking for consistency and accuracy.
- The Dura range of pumps is seal-less and leak free.
- The only part that comes into contact with the pigment is the hose, so it is very easy to clean and maintain.

- It is quieter, cheaper and more efficient to run than loud and expensive air diaphragm pumps.
- The pump can run dry without any damage.
- Reduced downtime because the only part to change is the hose.
- The unit is compact and can be installed in manufacturing facilities where space is at a premium.

Customer response

Feedback from our customers included comments that the pump was easy to install and maintain, with particular praise for the quality of the hose within the pump being durable and long lasting. The company accounts also showed a more consistent cost of production with the precise delivery of

the pigment and less downtime when cleaning the pipeline and pump unit. There are also no ball valves to wear or block.

Installing a Dura pump in a manufacturing facility provides a solution to many problems that occur. The Dura range of pumps provides for manual or automated control direct from the throughput of the production machine. This will assist the operations manager with a reliable and robust pumping process with the flexibility required for varying paving stone designs and the consistency for a high benchmark in quality control and managing the cost of production.

