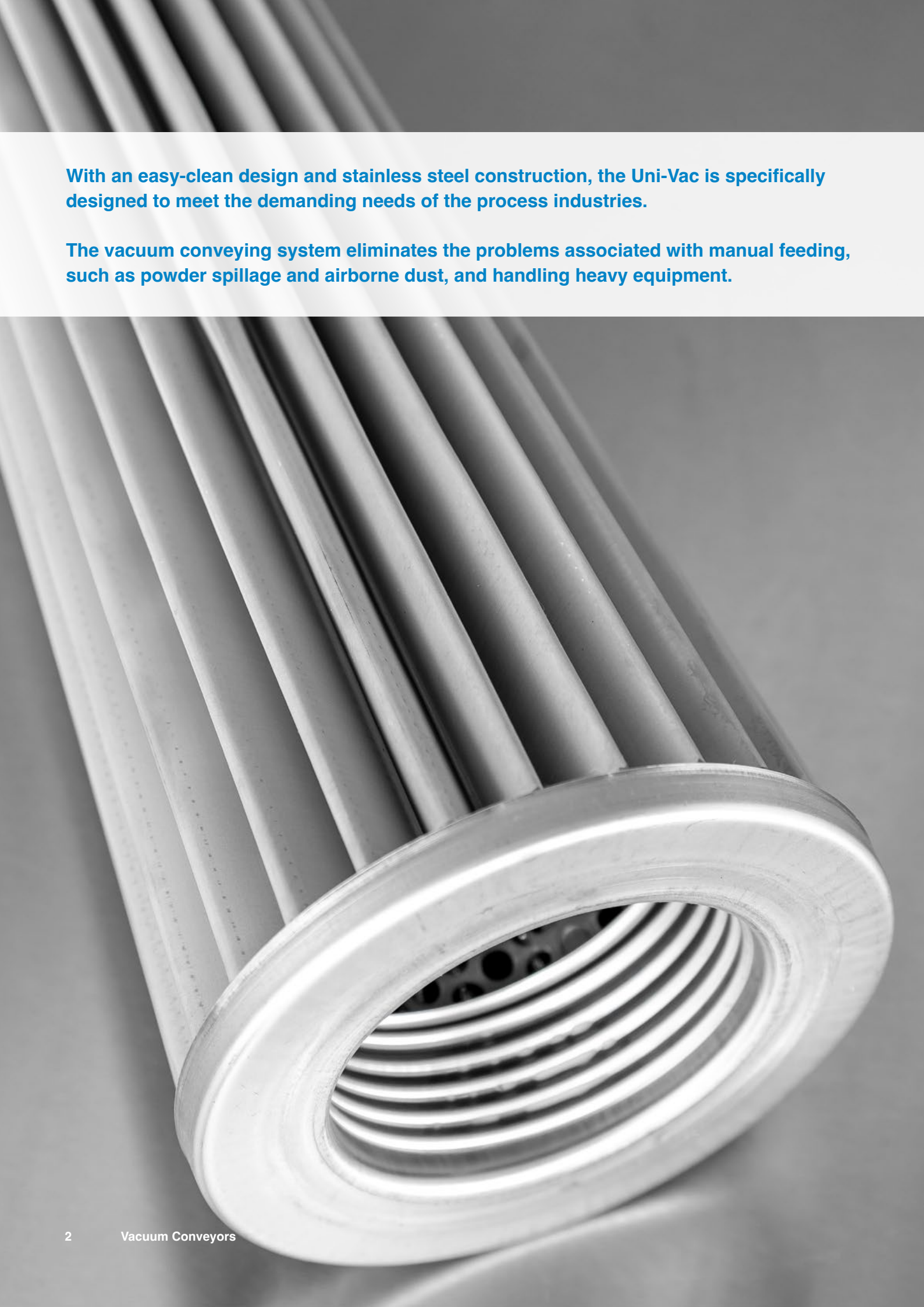
hanningfield

Vacuum Conveyors

A safe and convenient method for transferring powder; automating and accelerating loading processes; designed for sanitary applications in the pharmaceutical, food and related industries.

With an easy-clean design and stainless steel construction, the Uni-Vac is specifically designed to meet the demanding needs of the process industries.

The vacuum conveying system eliminates the problems associated with manual feeding, such as powder spillage and airborne dust, and handling heavy equipment.



Product Overview

Hanningfield Uni-Vac vacuum conveyors are designed as a safe and convenient method for transferring powders, granules, flakes, pellets, and other material.

The dust-tight sealed system prevents material contamination during the transfer process, while protecting the operator and process environment from product exposure or accidental spillage (thereby minimising waste).

The Uni-Vac hygienic range of vacuum conveyors are assembled using clamps for fast and easy dismantling for cleaning. The crevice-free, GMP design makes it ideal for demanding applications in the pharmaceutical, food, nuclear and any industry where product integrity is vital.

The Uni-Vac is suitable for numerous applications including 'suck-and-dump' and direct loading. The units can also be modified with optional upgrade features including level control, line clearance valves, CIP / WIP, HEPA filters, support frames and ATEX execution where applicable. All equipment can be supplied with full validation documentation (FS/DS, FAT, SAT, IQ/OQ) and 3.1 mill certificates to EN10204.

Uni-Vac VC-Series (VC05, VC10, VC20, VC30)
Our standard range of compact, modular, parallel body vacuum conveyors which are held together using Tri-Clamps. The compact body limits filter size, making this unit best suited to low airflows and/or short convey runs.

Uni-Vac V-Series (V01, V03, V05, V10, V20, V30, V50, V100, Custom Sizes)
Our customisable range of conical body hoppers. The conical body helps give a greater volume at a lower overall height. The increased body/lid diameter also allows for larger filters, making the unit more versatile and better suited to high airflows and/or long convey runs.

Features:

- Stainless steel construction with FDA compliant seals
- Suitable for powders, granules, flakes, pellets etc.
- ATEX (ex-proof) versions available
- Optional features including spray-balls and level control
- Optional 'stepless' design for damage-free transfer of tablets or other fragile materials

Benefits:

- Automate and accelerate loading process
- Easy integration with other process machinery
- Dust-tight transfer of material from A to B
- Eliminate manual handling and increase productivity
- Reduce material loss
- Limit airborne dust
- Minimal risk of contamination
- Easy to clean design for minimal operational downtime

Standard Models

Uni-Vac VC-Series

The VC-Series comprises of **VC05, VC10, VC20, and VC30**.

A vacuum generator is used to create the air flow, which in turn requires compressed air to be available in the process room. An electro-pneumatic or fully pneumatic control panel is available with the VC-Series. As there is the option for a completely pneumatic control panel, then this means that the vacuum conveyor is easier to install in ATEX environments.

Uni-Vac V-Series

The V-Series comprises of **V01, V03, V05, V10, V20, V30, V50, V100 and custom sizes**.

For process rooms where height is limited, the V-Series is the better choice. The sloped sides of the hopper allows for a greater volume without having to increase the height of the hopper. It is possible to taper out the sides of the hopper to create a solution that is customised to your application.

Specialist Models

Reactor Loading

Tablet Conveying

Direct Loading

Data Table

	Model *	Max. Throughput **		Hopper Diameter		Hopper Height		Hopper Capacity	Standard Hose Diameter	Contact Parts	Non-Contact Parts
		kgs/hr	lbs/hr	mm	in	mm	in	litres	in		
VC-Series	VC05	300	660	254	10	490	19.25	5	1.5	316L stainless steel (1.4404)	304 stainless steel (1.4301)
	VC10	900	2000	254	10	590	23.25	10	1.5		
	VC20	1200	2650	254	10	840	33	20	1.5		
	VC30	2000	4500	254	10	1090	43	30	1.5		
V-Series	V01	50	110	245	9.65	464	18.27	1	1.0 / 1.5	316L stainless steel (1.4404)	304 stainless steel (1.4301)
	V03	100	220	245	9.65	493	19.41	3	1.0 / 1.5		
	V05	300	660	245	9.65	533	20.98	5	1.0 / 1.5		
	V10	900	2000	400	15.75	803	31.61	10	1.5		
	V20	1200	2650	400	15.75	803	31.61	20	1.5 / 2.0		
	V30	2000	4500	400	15.75	1153	45.39	30	1.5 / 2.0		
	V50	3000	6750	400	15.75	1433	56.42	50	2.0		
	V100	4000	9000	400	15.75	1703	67.05	100	2.5 / 3.0		

* Custom size hoppers available on request

** Values based on standard bulk density product over short convey distance

Features

WIP Stainless Filters

Easy to clean, hygienic stainless filters for wet-in-place cleaning.

Level Control

Level control for optimum hopper filling. Can also be used in discharge hopper to prevent overfilling of downstream equipment.

ATEX Compliant

Available in ATEX versions (up to Zone 0/20).

Mounting Options

Various mounting solutions including mobile frame, fixed and adjustable height hoist (manual and electric), and wall mounted.

Typical Applications

Vacuum Transfer from Drum to Process Machine

Finished powder can be sucked from ground floor into the receiving hopper on the process machine. Once full, the outlet valve opens and discharges the material into the machine.

Level control can be integrated into the vacuum transfer unit to prevent overfilling of the feed hopper.

The dust-tight transfer prevents the operator from needing to climb a ladder and scoop material by hand.

In-Line Vacuum Milling or Sieving

In-line vacuum conveying through a mill or sieve is a fast and efficient method of powder transfer.

In-line vacuum also improves containment and speeds up the conveying process.

Vacuum Transfer into a High Shear Mixer

Vacuum transfer into a high shear mixer is a very common application. Powder can be conveyed from a drum or IBC located at floor level up to the mixer inlet. This system avoids manual handling and reduces process time.

Vacuum Transfer into a Vessel

Another common application is conveying material from a drum or IBC at floor level up and into a mixing vessel. Containment, reduced waste, and improved process times are all major benefits.

Direct Loading (into Blender)

Direct loading offers greatly improved efficiency over traditional ‘suck and dump’ systems, using the blender itself to pull a vacuum and draw material from ground level.

Direct loading reduces the number of moving parts and improves efficiency by reducing convey times, as the system operates via continuous transfer (with no discharge or backwash sequence). Material charges directly and continuously into the inlet port on the blender.

Special Applications

Hanningfield provides an extensive range of options to fulfil various special requirements.

Available options include: ultra sanitary construction, stainless steel filters, ATEX, and nitrogen purging.

All Hanningfield vacuum conveying equipment can be customised to suit any specific requirements.

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Version 2