



Sifters (High Speed Security Screening)

Fast and effective powder validation sifting; performs gentle de-lumping while intercepting foreign objects to guarantee material integrity; designed for sanitary applications in the pharmaceutical, food and related industries.

A major benefit of the Kwik-Sift is that it can be positioned in-line for feeding downstream processes, providing high throughput, dust-free and continuous processing.

The machine is also designed for quick and easy dismantling for cleaning and to replace screens, which is a key factor for multi-product use.



Product Overview

The Hanningfield Kwik-Sift offers fast and effective powder screening, helping guarantee material integrity through the capture of alien objects (such as nuts, bolts, washers, zip ties). The rotating mesh drum creates a centrifugal screening action, with powder passing through the mesh while retaining those objects larger than the hole aperture. For achieving different grades of separation, various mesh sizes are available to meet different application requirements.

The Kwik-Sift can incorporate a single or dual spoiler arm arrangement for performing simple de-lumping of agglomerated material. The spoiler arm simply attaches to the Kwik-Sift chute via a Tri-Clamp.

As standard, all contact parts are manufactured from 316L stainless steel (180 grit), with FDA compliant seals, gaskets etc. Non-contact parts such as frames, motor covers and control panels are manufactured from 304 stainless steel (150 grit). All standard materials of construction and surface finishes can be upgraded or downgraded upon request.

Various mounting solutions are available for the sifters (mobile frame, swing-arm, fixed post, hoist mounted etc.) and it can be customised with a selection of inlet and outlet configurations including hand-feed chute, valve assemblies, tri-clover connections, vacuum adaptors or any other bespoke design required for process integration.

All equipment can be supplied with full validation documentation (FS/DS, FAT, SAT, IQ/OQ) and 3.1 mill certificates to EN10204.

Features:

- « Stainless steel construction (with 316L contact parts)
- « All seals FDA compliant (silicone, PTFE etc.)
- « Various mesh sizes available for multi-product usage
- « ATEX (ex-proof) versions available

Benefits:

- « Security screening at higher throughput than traditional sieving
- « Suitable for delumping and deagglomeration of friable materials (with use of spoiler arm)
- « Can be mounted in-line for feeding downstream process (gravity feed or vacuum transfer)

Advantages:

- « Avoidance of rejected and recalled batches
- « Compliance with the Food Safety Act and other sanitary guidelines
- « Easily implemented as part of a comprehensive HACCP plan
- « Dust containment possibilities
- « Low noise
- « Low invested energy
- « High capacity
- « Ultra-fast ROI
- « Low maintenance
- « Easily cleaned and deployed
- « Fast screen change out
- « Low head space and footprint

Models

Kwik-Sift KS05

The Kwik-Sift KS05 is designed for laboratory and small scale applications. The unit has an 83mm diameter screen (3.25"), providing a typical capacity range of 5 - 500 kgs/hr (10 - 1100 lbs/hr).

The KS05 features an 8" feed chute with 6" outlet (note: inlet / outlet configuration can be modified to suit any application requirement).



Kwik-Sift KS10

The Kwik-Sift KS10 is designed for pilot or low capacity applications. The unit has a 127mm diameter screen (5"), providing a typical capacity range of 350 - 7500 kgs/hr (800 - 16500 lbs/hr).

The KS10 features an 8" feed chute with 8" outlet (note: inlet / outlet configuration can be modified to suit any application requirement).

Kwik-Sift KS20

The Kwik-Sift KS20 is designed for a wide scope of production applications. The unit has a 203mm diameter screen (8"), providing a typical capacity range of 1100 - 23000 kgs/hr (2400 - 52000 lbs/hr).

The KS20 features an 8" feed chute with 12" outlet (note: inlet / outlet configuration can be modified to suit any application requirement).



Data Table

| Criteria | Unit | KS05 | KS10 | KS20 |
|------------------------|------------------------------------|-----------|-------------|--------------|
| Typical Capacities * | kgs/hr | 5 - 500 | 350 - 7500 | 1100 - 23000 |
| | lbs/hr | 10 - 1100 | 800 - 16500 | 2400 - 52000 |
| Screen Diameter | mm | 83 | 127 | 203 |
| | in | 3.25 | 5 | 8 |
| Standard Motor | kW | 0.375 | 1.5 | 4.0 |
| | HP | 0.5 | 2 | 5 |
| Approx. Weight | kgs | 40 | 140 | 160 |
| | lbs | 90 | 310 | 350 |
| Contact Parts | AISI 316L stainless steel (1.4404) | | | |
| Non-Contact Parts | AISI 304 stainless steel (1.4301) | | | |
| Country of Design | United Kingdom | | | |
| Country of Manufacture | United Kingdom | | | |

*Actual capacity is dependent on material characteristics, notably density, and screen aperture selected.

Features



Interchangeable Meshes

Various mesh sizes can be used in the sifter. Fast and easy changeover.



Spoiler Arm

Spoiler arm for de-lumping agglomerated material.



Temperature Probe (Optional)

A probe provides a constant reading of the sifter basket and/or gearbox temperatures.



Rare Earth Magnet (Optional)

A rare earth magnet can be incorporated to capture any metallic foreign objects (e.g. metal particles, nuts, bolts etc.).

Typical Applications

Enabling High-Purity Material at High-Speed

It is common to perform security screening prior to processes such as blending or pack-off. This helps guarantee material integrity (free of alien objects) and prevents undesirable large agglomerates from being carried downstream.

Ensuring the purity of your material should not mean compromising capacity. The Kwik-Sift excels at rapidly performing tasks which are historically slow or labour intensive. The Kwik-Sift can perform in-line screening and de-agglomeration, at rates which far exceed traditional vibratory sieving methods.

The Kwik-Sift is perfectly suited to the following:

Material Types

- « Sports nutritional powdered drink mix ingredients such as whey, milk powder, soya powder, soya isolates, amino acids, aspartame, caffeine, and colourants
- « Mineral and vitamin supplements such as chelated and elemental minerals, ascorbate calcium and ascorbic acid
- « Botanicals and many other nutraceuticals
- « Baby formula powders
- « Adult nutritional and protein formula powders
- « Seasoning blends
- « Bakery pre-mix ingredients such as flour, starch, sugar, baking soda, baking powder, cocoa powder, salt, and others
- « Flavoured bread crumb ingredients such as breadcrumbs, herbs, and powdered cheeses
- « Dry soup mix ingredients such as dehydrated vegetable powder, herbs, spray dried flavours, onion powder, garlic powder, curry powder and other spices that tend to agglomerate
- « Brewers yeast and other brewing powders
- « Spray dried coffee and tea powder



Examples of Tramp Removal (Intercepted by Kwik-Sift)



Twist Ties



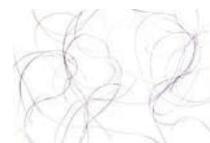
Zip Ties



Paper / Plastic Bag Tear-Offs



Nuts and Bolts



Hair



Rubber Bands



Wood Splinters



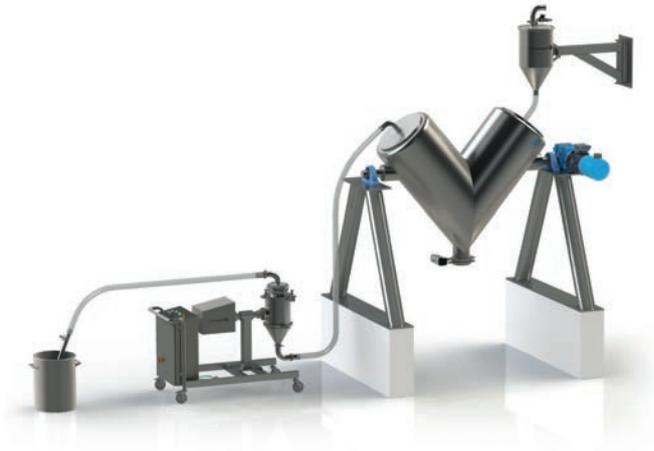
Fine Metallic Particles (with the inclusion of a rare magnet)

Example Applications

In-Line Screening before Blending

The Kwik-Sift serves the dual function of de-lumping bulk solid ingredients while capturing tramp and other foreign substances.

Sifted material prior to blending / mixing significantly improves mix integrity, while reducing blend times. Integrated systems available for both direct vacuum filling as well as indirect filling for non-vacuum rated processing vessels.



Finishing Process after Mixing / Blending / Drying

The Kwik-Sift easily integrates with a mixer, blender, and dryer discharge. In many cases, the Kwik-Sift can process the mixed materials as quickly as the mixer discharges. Agglomerations occur in the mixing process as liquid ingredients such as fats, oils, water-based colourants and other liquid ingredients are introduced into the mixer process.

The Kwik-Sift solution to finishing dried and mixed materials fits in most process streams by virtue of its small footprint and small head space without additional ancillary equipment. All the process material is “finished” perfectly homogenised and nothing is wasted.



Fill and Weigh Dispensary / Pack-Off Station

Bulk powders stored in either rigid IBCs or flexible IBCs can pick up moisture and create agglomerations. Integration of the Kwik-Sift in a gain in weight pack-off station can render the process material agglomeration free while capturing foreign extraneous matter.

Conditioned powders are accurately dispensed in a variety of container types while maintaining dust containment and ensuring high weighing accuracy.





**UK and Worldwide
(Headquarters)**

Hanningfield Process Systems Ltd
17 Millhead Way
Purdeys Industrial Estate
Rochford, Essex, SS4 1LB
United Kingdom

Tel: +44 (0) 1702 549 777

E-Mail:

sales@hanningfield.com

**USA, Canada, Mexico
and North America**

Hanningfield (North America) LLC
PO Box 1107
Fuquay-Varina
North Carolina
27526
United States of America

Tel: +1 (919) 338 2884

E-Mail:

northamerica@hanningfield.com

**Australasia and
the Asia-Pacific**

Hanningfield (Asia-Pacific) Pty Ltd
PO Box 362
Kenmore
Queensland
4069
Australia

Tel: +61 (0) 488 242158

E-Mail:

pacific@hanningfield.com

**India and the
SAARC region**

Hanningfield India Pvt Ltd
157/158A Akbar Camp Road
Sandoz Baug, Kolshet
Thane (West) 400 607
Maharashtra
India

Tel: +91 22 2586 8059

E-Mail:

india@hanningfield.com