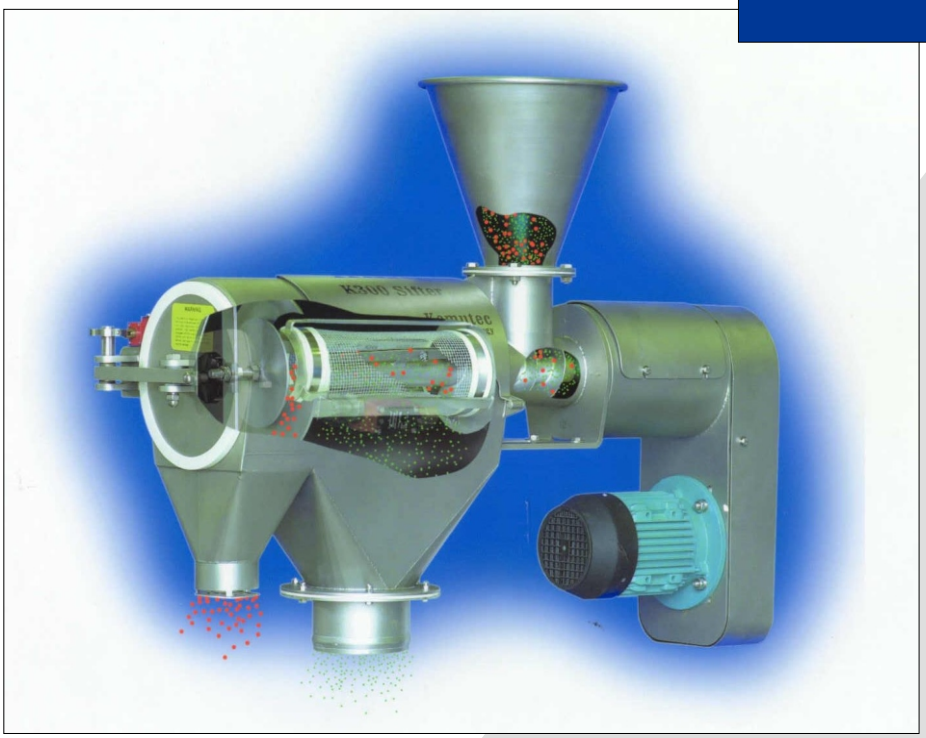
Kemutec

Specialists in Powder Processing Technology

Cantilever Design Centrifugal Sifter

DS490TS 5/11



Cantilever design Kek Centrifugal Sifter comes from a long line of proven sifting equipment. The easy clean and tool free design allows for maximum output and uptime. It's oversize hinged door provides quick access to the hygienically design sifting screens. The Kek Cantilever design Centrifugal Sifter is ideal for Food, Pharmaceutical, Powder Processing and Chemical Industries.

Cantilever Design Kek Centrifugal Sifter Features

- Hinged Oversize Door for Easy Cleaning and Operation
- Quiet Vibration Free Operation
- Fully Rotatable Screen for Inspection and Cleaning
- Bolted Flanges for Dust Tight Operation
- Tool Free Removal of Sifting Screen, Screen Retainer and Paddle/Blade Assembly
- Flexible Design Reduces Floor Space and Meets every Processing Requirements
- No Oversize End Bearing or Seals for Fewer Moving Parts to wear or replace
- Hygienic Design
- Screen Changes in Less Than 30 Seconds

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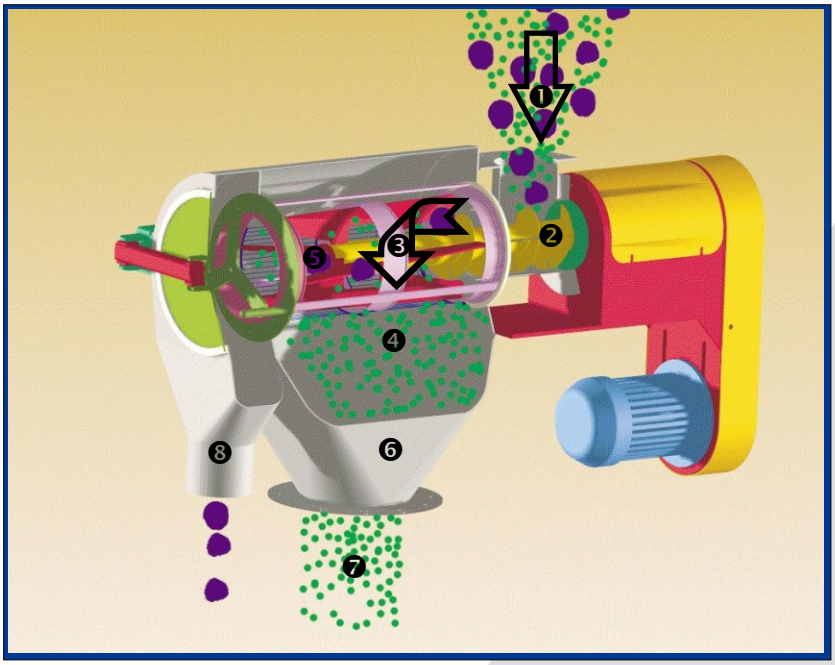
Cantilever Design Centrifugal Sifter Principle of Operation



Material is fed into the sifter inlet ❶ and is accelerated by the auger ❷. The auger moves the materialInto the cylindrical sifting chamber where it is picked up by the rotating paddle/blade assembly ❸ and thrown centrifugally against the sieve screen ❹. The blades ❺ on the paddle assembly are set in a helical configuration to move the material along the entire length of the sieve screen at the optimum sieving rate for any particular application. The fine product ❻ passes through the screen and is collected at the main sifter outlet ❼. The oversized and/or tramp material is moved to the end of the sifting chamber and, after passing around the end baffle, is discharged through a separate smaller outlet ❽.

Typical Applications

Kek Centrifugal Sifters are ideal for the following powders:

- Food /Dairy - powders, mixes, additives, granules, crumbs, spices and dehydrated products
- Pharmaceutical - powders and granules
- Plastics - powders, resins, and paints
- Chemical - powders, granules, additives, resins, dyes, pigments and metals
- Any application requiring highly efficient sifting, frequent cleaning and no cross-contamination between batches

Kek Centrifugal Sifters are ideal for the following applications:

- Scalping to remove oversize particles
- Policing to remove foreign particles and objects
- Size classification of powders
- De-lumping and de-agglomeration of powders
- Liquid Straining

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Kemutec Technical Specification

Kek Laboratory Centrifugal Sifter with "Cantilever Shaft"

Drawing No. DS490

Body Type: One piece c/w fines outlet and integral oversize end.

Inlet/Outlet Connections: Pipe Stub connections on the inlet and outlet - see drawing for details

Oversize End Connection: Pipe Stub and safety grid - See drawing for details.

Oversize End Door: Fitted with a hinged & interlocked door

Motor Specification: 0.5 hp metric frame, 3 phase, (60 hz) motor non hazardous area

Sifter Shaft Speed: Via Direct Drive 1750 rpm. Shaft rotation - counter clockwise viewed from Oversize End

Shaft / Bearing Type: Cantilever Shaft supported at inlet end only by a pair of heavy duty sealed for life flanged ball bearing units fixed to drive support housing/bracket

Shaft Seal: At inlet end only. Twin nitrile rubber lip seals mounted in a bolted seal housing c/w air purge connection between seals. Air-purge is pre-piped from seal to a bulkhead fitting on the housing to accept ¼" o/dia nylon tube.

Air/Gas Purge Requirement: The Air Purge facility requires compressed air/gas from a clean dry supply, regulated to 0 to 1 bar g (0 to 15 psi). Usage rate is approx 7 cuft/min at 0.5 bar g / 7.5 psi.

Gaskets: All gaskets are FDA approved white food quality rubber

Shaft Paddle: 3 blade all welded with -2 degree reverse pitch.

Construction Material: 316 Stainlless Steel

Sieve Mesh Area: 0.045 m^2 = 0.48 ft^2

Sieve Basket: To suit CE/1 Nylon or Woven Wire Mesh types as standard.

Sieve Meshes: Woven nylon or wire mesh as standard. Options of Wedge Wire and Perforated Plate are offered.

Safety Interlocks:
Pepperl + Fuchs
Round M30 Code No. NJ5-30GK-S1N
N/O - Used in conjunction with P&F safety relay for safety Interlock.

Maximum Temperatures:

Nylon meshes	176° F	80° C
Silicone gasket	392° F	200° C
Nitrile shaft seals	176° F	80° C
PTFE shaft seals	392° F	200° C
Flanged bearing units	212° F	100° C

Operating Pressure: +/- 0.5 psi

Altitude: Maximum 1000 m above sea level (due to motor cooling).

Optional Features (please request):

- PTFE shaft lip seals
- Hazardous area drive motor and door interlocks.
- Oversize Collection Canisters
- Polyester / PFK / Anti-static polymer meshes.
- Mobile support stand
- Vibratory tray feed system (see DS510)

Alternative Machine Types:

- Complete unit with vibratory tray feed system (see DS510).

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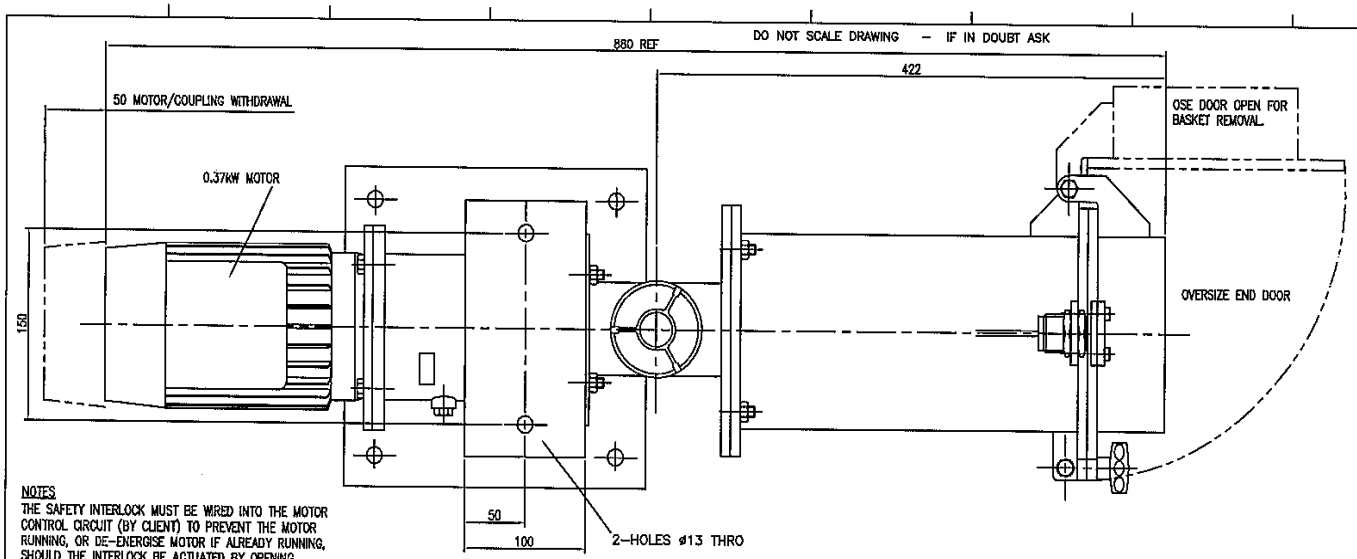
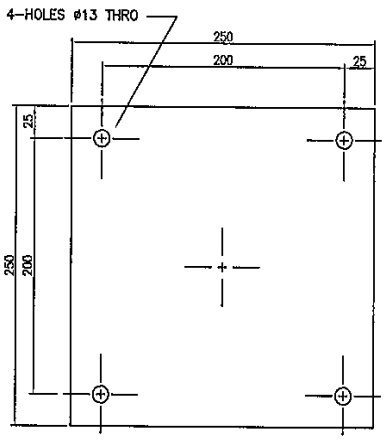
DO NOT SCALE DRAWING – IF IN DOUBT ASK





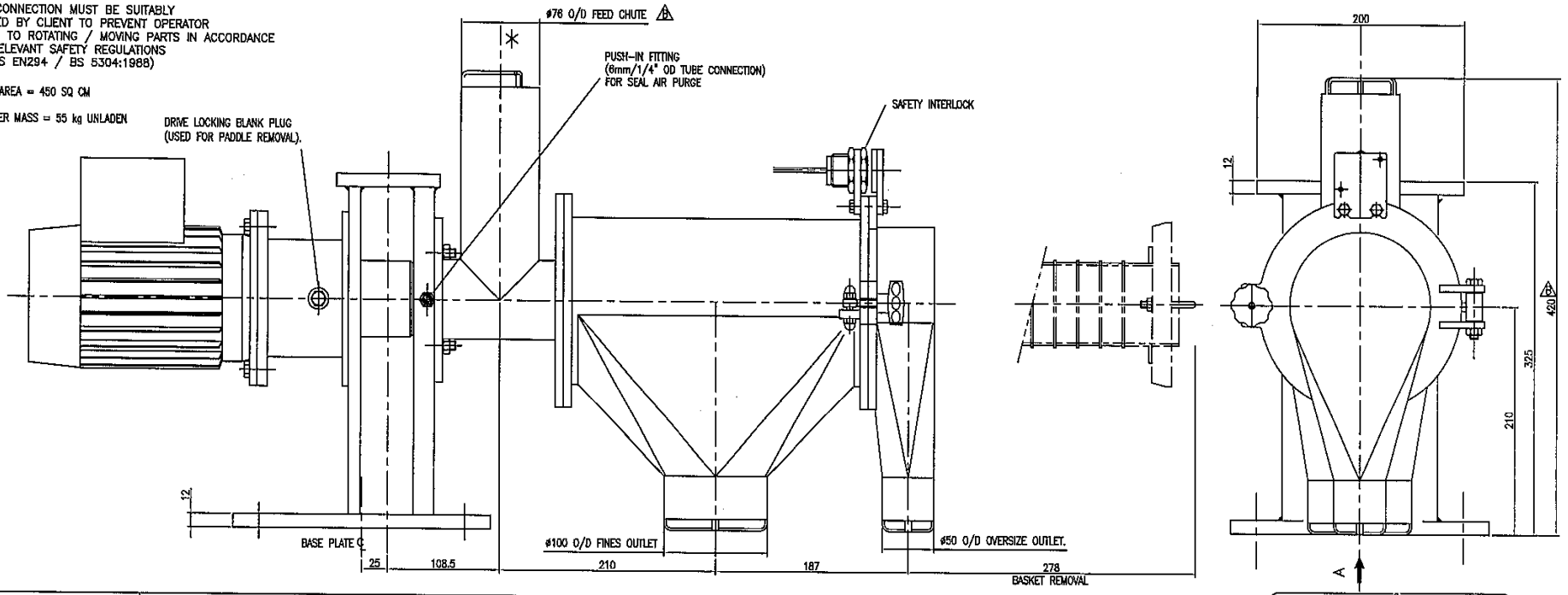
VIEW ON ARROW 'A'.
SHOWING MOUNTING DETAILS

NOTES
THE SAFETY INTERLOCK MUST BE WIRED INTO THE MOTOR CONTROL CIRCUIT (BY CLIENT) TO PREVENT THE MOTOR RUNNING, OR DE-ENERGISE MOTOR IF ALREADY RUNNING, SHOULD THE INTERLOCK BE ACTUATED BY OPENING THE OVERSIZE END DOOR.

✳ INLET CONNECTION MUST BE SUITABLY GUARDED BY CLIENT TO PREVENT OPERATOR ACCESS TO ROTATING / MOVING PARTS IN ACCORDANCE WITH RELEVANT SAFETY REGULATIONS (SEE BS EN294 / BS 5304:1988)

SCREEN AREA = 450 SQ CM

EST SIFTER MASS = 55 kg UNLADEN



DRAWING SPECIFICATIONS
UNLESS OTHERWISE STATED

Screw threads to BS3643
ISO Metric Coarse Pitch Series (Medium Fit)
Surface Finish to BS1134 in micrometres
Welding Symbols to BS499 Part 2
Dimension & Geometrical Tolerances to BS308
Limits & Fits to BS4500
Remove all sharp edges and burrs

TOLERANCE SPECIFICATIONS
UNLESS OTHERWISE STATED

SHEET METAL DIMENSIONS	MACHINED DIMENSIONS
0 to 300 ± 1.00	0 to 150 ± 0.30
300 to 1000 ± 2.00	Over 150 ± 0.80
Over 1000 ± 3.00	
ANGULAR DIMENSIONS	**UNMACHINED DIMENSIONS**
± 0°-30'	0 to 150 ± 0.50
	Over 150 ± 1.50

ALL DIMENSIONS IN MILLIMETRES

THIRD ANGLE PROJECTION ◎

For all material, weld and finish specifications refer to purchase/works order unless stated otherwise

ISSUE	DESCRIPTION	
B	INLET UPDATED WITH SAFETY GRILLE. DIA 76 WAS 76, DIM 420 WAS 440.	CH 13/03/02
A	FIRST APPROVED ISSUE	SHB 01/12/99

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TITLE: CANTILEVER LAB SIFTER.

DRG No: A1 DS490 | ISSUE: B | DATE: 13/03/02

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CHECKED BY:
APPROVED BY:
SCALE: 1:2