

Chip separator CS

KNOLL
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Issue 08-2019



Properties

Chip separation via cyclone separator

Continuous operation

Space-saving configuration on existing conveyor

Independent control unit

Benefits

- No consumables
- Maintenance-free
- Low operating costs
- High separation rates up to > 98%
- Degassing effect on cooling lubricants

Can be retrofitted at any time

No interference with existing control systems required

Application

KNOLL chip separators CS are devices for separating short chips, which the conveyor of a hinged or slat conveyor cannot hold back.

- Use as pre-separator for reducing the chip carryover to a downstream cooling lubricant (CL) filter
- Use as independent cleaning unit for low purity specifications of the CL
- Suitable for chips from a density of 2.7 g/cm³ in water-based CL

Description

Main functions

Separation

1. The lift pump conveys the chip/CL mixture tangential to the chip separator
2. The centrifugal force conveys the chips outwards (primary vortex) before they go down into the chip bunker
3. A secondary vortex rises upwards and the CL leaves the CS for CL treatment

Draining

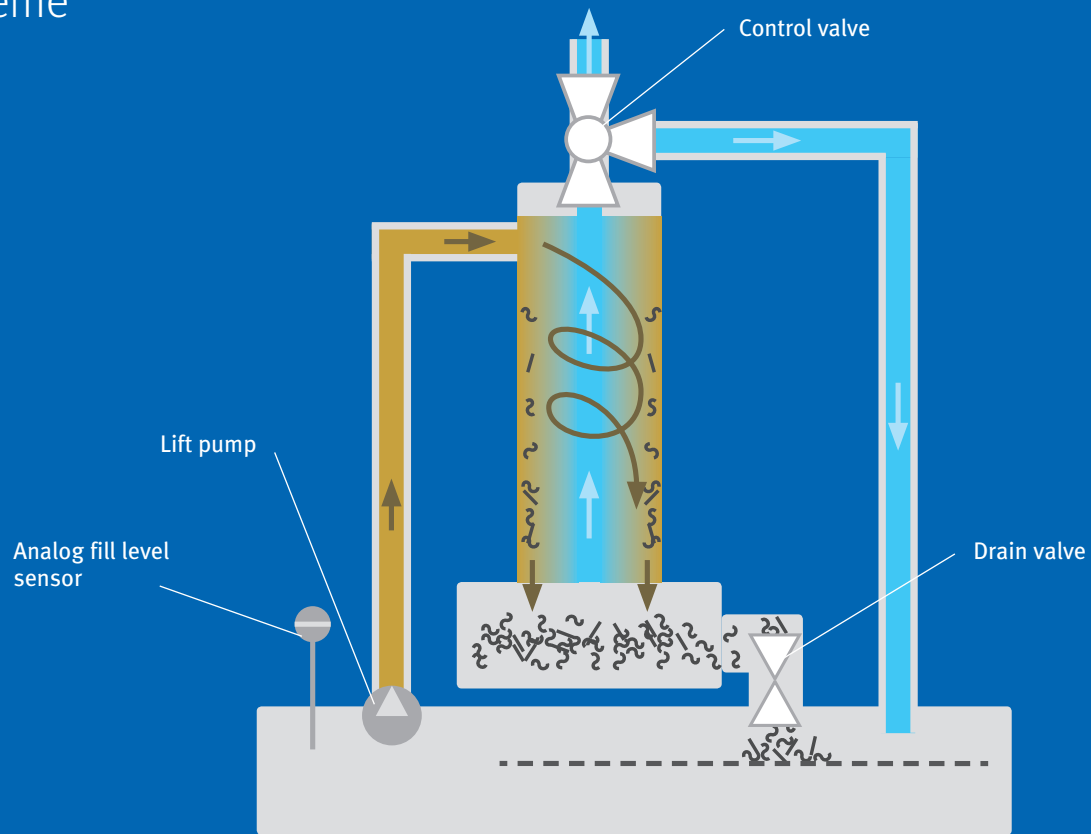
1. Cyclical opening of drain valve
2. Accumulated chips are flushed from the chip bunker onto the conveyor belt

Combination options

For further requirements, on request we combine the chip separator with

- Conveying systems for transporting the chips
- Filter systems for cleaning the cooling lubricants and supplying the machine tool

Scheme



Equipment

| | |
|--|---|
| Chip separator | ● |
| Console with fill and blow down piping | ● |
| Analog fill level sensor | ● |
| Control valve | ● |
| Lift pump | ○ |
| Separator control cabinet | ○ |

- Basic equipment
- Option

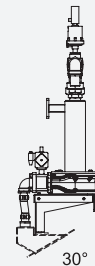
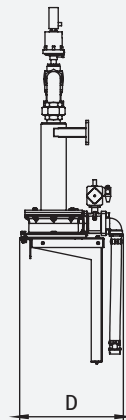
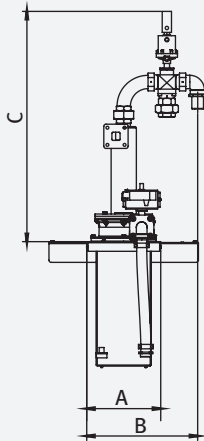
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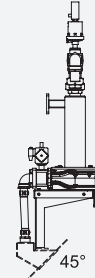
Dimensions and technical data

Pitch angle of
standard conveyor systems

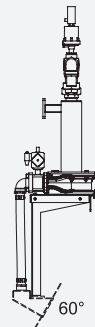
CS 270



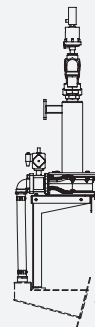
30°



45°

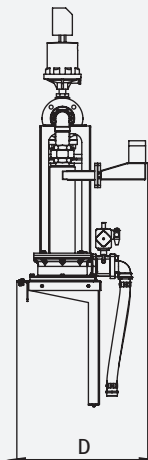
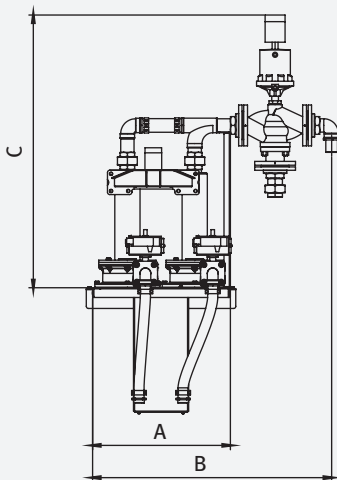


60°



75°

CS 270-2



| Type | Number of chip separators | Cycle emulsion (max. l/min) | Operating pressure inlet | A | B | C | D |
|----------|---------------------------|-----------------------------|--------------------------|-----|------|------|-----|
| CS 270 | 1 | 270 | 1.4 bar | 335 | 503 | 1043 | 470 |
| CS 270-2 | 2 | 540 | 1.4 bar | 625 | 1083 | 1235 | 595 |

Dimensions without units given in mm.