



SPECIALIST INFORMATION HIGH PRESSURE

CHIP CONVEYING TECHNOLOGIES

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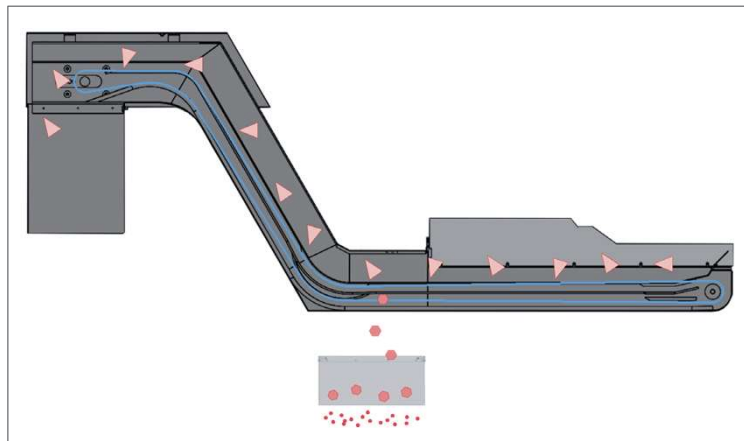
// Good chip management is very important and a suitable system must therefore be selected in advance

// Various materials and various processes are mapped on one and the same machine. The ideal solution would be to advance the right conveyor for each one of these types

// As this unfortunately is not possible in most cases, we at Müller build our solutions on three basic concepts



BASIC CONCEPT BK10



Workspace conveyor in the form of a hinge belt conveyor with a large cooling lubricant drain above an integrated chip collector is ideal for:

// Up to max. 30% fine chips

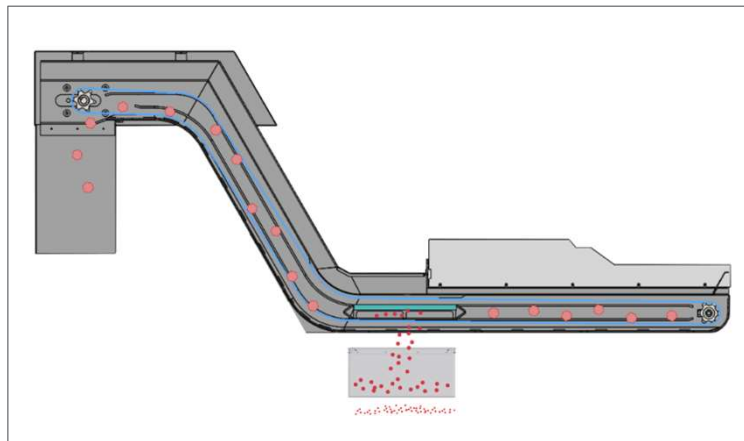
// Not suitable for brass, aluminium or copper



// **Fig. 1:** Hinge belt as workspace conveyor

// **Fig. 2:** Drain from the workspace conveyor into chip collector

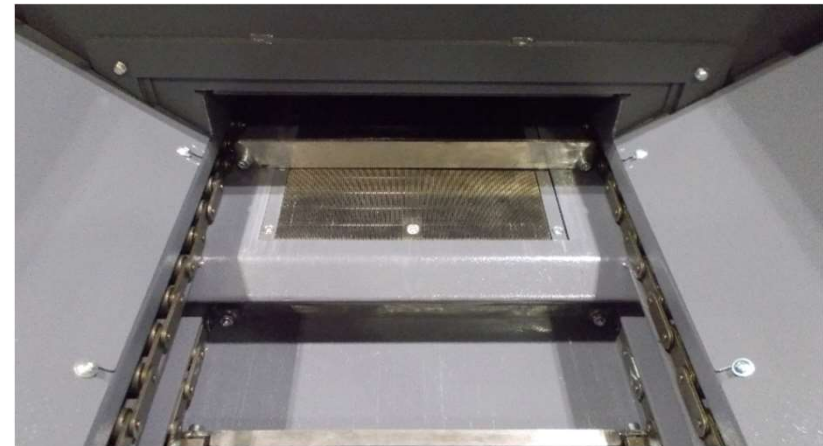
BASIC CONCEPT BK11



Scraper belt conveyor with a wire wedge slotted screen of 500 µm and a large cooling lubricant drain above an integrated chip collector is ideal for:

// Only fine chips max. 3-4 mm ø rough chipping

// Not ideal for chipping processes with over 70% removal from the raw material (in this case BK31)



// Fig.: Scraper belt conveyor

BASIC CONCEPT BK10 and BK11

Basic concept 1 recommended for	Material	Chip conveyor
Normal and medium degree of machine contamination	Steels and hard alloys, different chips from long to short	Hinge belt conveyor (BK10)
High degree of machine contamination	Brass, aluminium and other fine-chip materials	Scraper belt conveyor (BK11)



// High chip volume

// As few different materials as possible

// Normal and medium degree of machine contamination

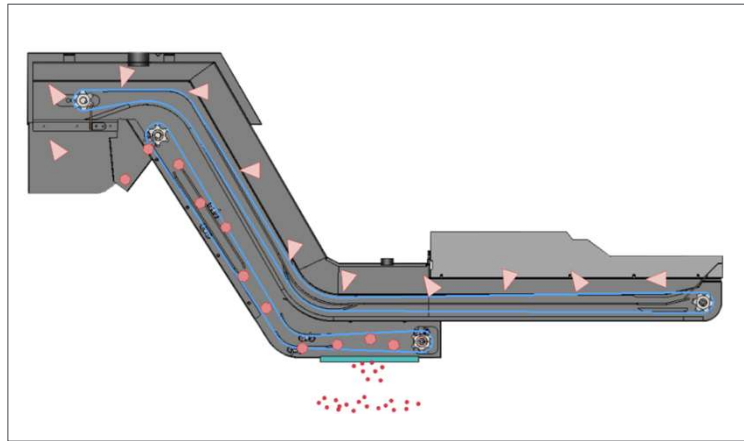
// Chips that are generally coarse and large, or willingness to clean away large fine chip volumes at shorter intervals

// Machine tank is cleaned a maximum of once a month

// **Fig. 1:** Hinge belt as workspace conveyor

// **Fig. 2:** Drain from the workspace conveyor into chip collector

BASIC CONCEPT BK20



Workspace conveyor as a scraper or hinge belt conveyor with a large cooling lubricant drain feeding directly through a slotted screen into an integrated pre-separator and with automatic chip discharge via a scraper conveyor is ideal for:

- // Over 30% fine chips
- // High volume of mixed chips
- // Only recommended in combination with a secondary tank where tank base cleaning cannot be installed

// Fig. 1: Drain from the workspace conveyor into the tank's pre-separation section

// Fig. 2: Slotted screen section (pre-separation) with chip guide plates in the secondary tank

BASIC CONCEPT BK20

Basic concept 2 recommended for	Material	Chip conveyor
Medium degree of machine contamination	Steels and hard alloys, different chips from long to short	Hinge belt conveyor (BK20)



// High chip volume

// As many different materials as possible

// Medium degree of machine contamination

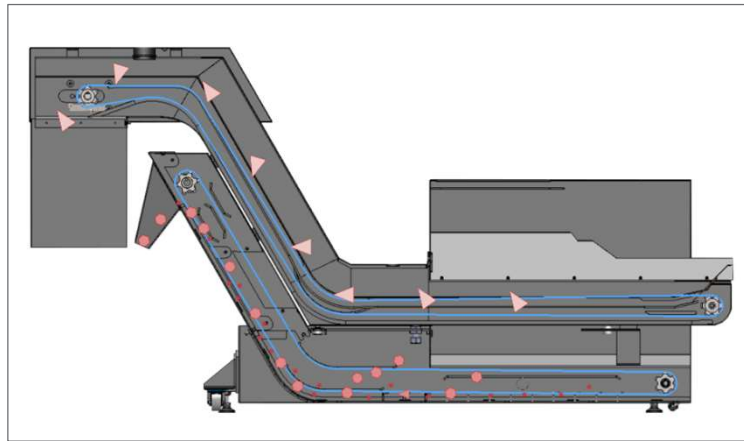
// Rather fine and floating chips. This is to prevent too frequent cleaning of the dirt tank

// Machine tank is cleaned a maximum of four times a year

// **Fig. 1:** Drain from the workspace conveyor into the tank's pre-separation section

// **Fig. 2:** Slotted screen section (pre-separation) with chip guide plates in the secondary tank

BASIC CONCEPT BK30



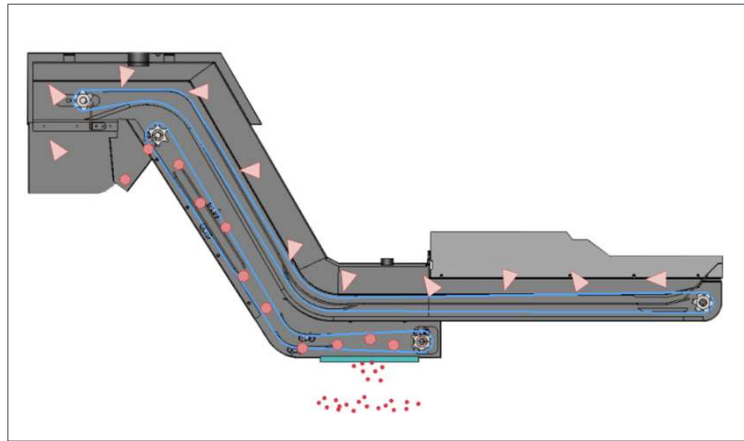
Workspace conveyor as a hinge belt conveyor with a large cooling lubricant drain feeding directly into the machine tank in combination with a scraper conveyor for cleaning the tank base (mostly in conjunction with full-flow filtration systems), ideal for:

- // Over 30% fine chips
- // Heavy-duty chipping
- // High volume of mixed chips

// Fig. 1: Drain from the workspace conveyor into the tank's pre-separation section

// Fig. 2: Slotted screen section (pre-separation) with chip guide plates in the secondary tank

BASIC CONCEPT BK31



Workspace conveyor as a hinge belt conveyor with a large cooling lubricant drain feeding directly into the machine tank in combination with a scraper conveyor for cleaning the tank base (mostly in conjunction with full-flow filtration systems), ideal for:

- // Fine chips of max. 3-4 mm diameter
- // Heavy-duty chip processing of brass, aluminium and copper
- // Over 70% removal of raw material (milling)
- // Finish passes / heavy finishing and thread whirling processes

// Fig. 1: Drain from the workspace conveyor into the machine tank section

// Fig. 2: Scraper conveyor as a workspace conveyor

BASIC CONCEPT BK10 AND BK11

Basic concept 3 recommended for	Material	Chip conveyor
All materials, all chip types, frequently changing processing	Steels and hard alloys. Very different from long to short. Frequent material changes	Machine room: Hinge belt conveyor Dirt tank: Scraper conveyor (base cleaning) (BK30)
Only fine and floating chips	Brass, aluminium and other fine-chip materials	Machine room: Scraper conveyor Dirt tank: Scraper conveyor (base cleaning) (BK31)



// Fig. 1: Hinge belt as workspace conveyor in combination with a dirt tank base cleaner

// Fig. 2: Drain from the workspace conveyor into the machine tank section

- // High chip volume
- // Frequently changing materials, various chip types (basic concept 3 offers the best possible discharge)
- // High degree of machine contamination from fine chips and sludge
- // Specifically for brass and aluminium, possibly also plastics
- // Machine tank is cleaned a maximum of twice a year

CHIP CONVEYOR CONTROL



// Perfect adaptation of the conveyor intervals to the actual circumstances.

// The interval times can be changed directly by tapping the actual values.

// The selected mode is indicated by a flashing background.

// Conveyor 1 (BK10, BK11)

Function	Button	Description
←	F1	Back to main menu
Interval	F2	Belt runs at set times
Duration	F3	Belt runs permanently
Back	F4	Belt runs backwards

// Conveyor 2 (BK20, BK30, BK31)

Function	Button	Description
←	F1	Back to main menu
Interval	F2	Belt runs at set times
Duration	F3	Belt runs permanently
Back	F4	Belt runs backwards

