

SPECIFICATION

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02 Apron feeder, type RKF 1800 x 16000 – D8-A with outboard chains and rollers

Conveying capacity	1200 t/h limestone
Width between skirt boards	1800 mm
Centre distance (length)	16000 mm
Conveying inclination	25 degree.
Conveying speed nom.	8,7 m/min with 800 mm material bed and 1200 t/h
Conveying speed max.	13,0 m/min
Type of chain	D8, lifetime lubricated
Chain arrangement	Inboard chain and rollers
Chain pitch	228,6 mm
Diameter of sprockets	775,6 mm
Sprocket shaft bearings	Dual spherical roller bearings
Material of sprockets	Segments of hardened cast steel
Thickness of pans	20 mm, heavy reinforced
Height of skirt boards	1800 mm
Thickness of skirt boards	15 mm
Number of slide rails	3 pieces – hopper area 1 piece - transport area
Type of drive	Head-end single drive, planetary gear in hollow shaft design with backstop and heating SEW
Motor	AC - motor 1 x 132 kW , 1500 rpm with frequency converter

The heavy duty apron feeders mainly consist of:

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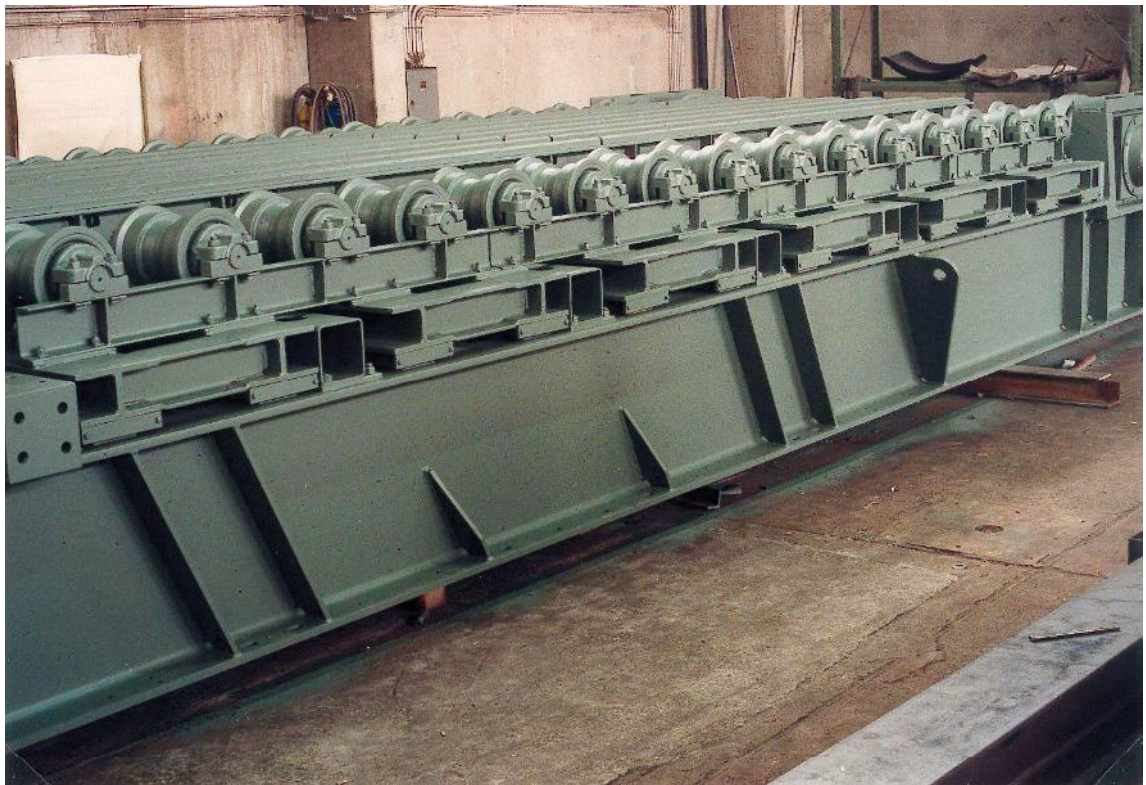
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- the apron feeder frame with skirt boards
- the apron feeder deck with pans and tractor chains (outside running)
- the head end drive and the tail end tension station
- the apron feeder drive

Impact table, please refer to the picture below

In order to have an additional impact load protection by coarse boulders, a heavy duty impact table is installed underneath the apron feeder pans.

The impact table is equipped with an **increased number of rollers and supported by two rows of metallic type shock absorbers.**



typical picture

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Apron feeder frame

The apron feeder frame is designed as a heavy duty self-supporting cross beam reinforced column structure. The skirt boards are fixed to this main frame.

In order to support the apron feeder conveying pans on the entire length of the apron feeder, the frame is equipped with a non lubricant slide rail system.



Outboard chain system

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Apron feeder deck with the outboard running tractor chain

The apron feeder deck consists of the linked conveying pans and the lifetime lubricated tractor chains. The fabricated conveying pans with formed sealing lips are made of heavy steel plates. At their lower side they are reinforced by means of wide-flange beams. In order to secure a high conveying capacity, every third conveying pan is equipped with an additional square bar flight. The two tractor chains with the linked conveying pans are led over the entire length by a row of lifetime lubricated rollers.



typical picture

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Head end drive- and tail end tension station

The head end drive shaft is supported in heavy duty dual row spherical roller bearings. The cast steel and flame hardened drive sprocket wheels are hub bolted and segment-divided for easy maintenance work. The hubs are fixed to the drive shaft by tapered locking ring assemblies. The dual row spherical roller bearings of the tail-end shaft are arranged in heavy duty guided take-up bearing housings.



typical picture

Speed adjustment

The apron feeder speed i.e. the conveying capacity to the crusher is automatically controlled by the effective energy input of the crusher motors and increased or decreased according to the crusher load. If the load of the crusher motors exceeds a set maximum figure, the apron feeder will be stopped until the load has decreased to a normal figure.

This type of control with all incorporated safety features ensures optimum loading of the crusher and is to be considered in the electrical equipment.

03 Apron feeder drive system with planetary gear box, AC-motor and VFD

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According to the required drive-torque the apron feeder drive is designed as single drive and mainly consisting of:

- the planetary gear with back stop in hollow shaft design for mounting the gear directly on the drive shaft of the apron feeder
- the torque support for E-motor and gear

- 1 AC-motor 132 kW, 1500 rpm
400V, 50 cps
Protection IP55
Design B5, isolation F used B
Class of efficiency I

- Frequency converter