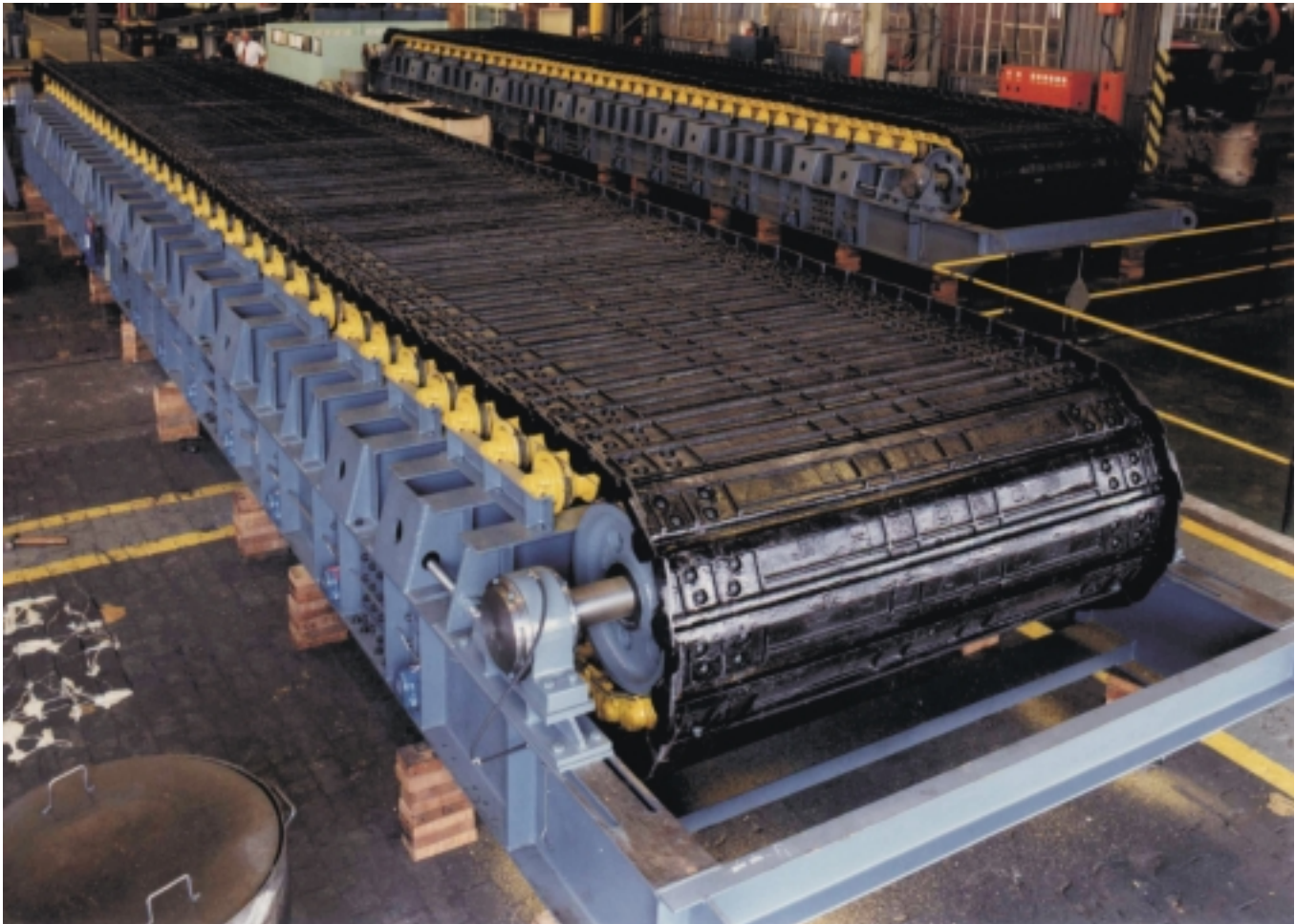


OSBORN

Engineered Products SA (Pty) Limited
Shaping Materials Handling

An Astec Company

Osborn Apron Feeder



Osborn offer a complete range of standard and extra heavy duty apron feeders suited for the most arduous conditions encountered in the Mining and Quarrying Industries.

Our Apron Feeders are designed and built in a wide range of sizes from 900mm to 3500mm wide to handle heavy, lumpy and abrasive materials, and provide a reliable means of controlling the feed rate to prevent surge loads to primary crushers, belt conveyors and other plant and equipment.

Apron Feeders are usually installed under a hopper or bin and can accept direct dumping by trucks or dozers, shovels or dragline.

Feeders can be supplied in lengths to suit Customers requirements.

With one of the largest and most modern facilities in South Africa, **Osborn** also offers installation, commissioning, spares, reconditioning and after sales service, plus the capability to supply the right unit for any type of enquiry.

In addition, these units compliment **Osborn's** wide range of mills, screens, jaw crushers, gyrasphere cone crushers, feeders, scrubbers and idlers. A turnkey plant capability is also available.

Loading Hoppers

Whilst Apron Feeders are capable of operating under severe conditions, the following points on feeder and loading are made with a view to achieving the most efficient and lasting results :

Control the dumping of material into the Hopper so that the impact of the new load is absorbed by the last of the material from the previous load, i.e. keep the dumping of material into a completely empty Hopper, to a minimum.

If it becomes impossible to tip on a bed of material, as advised above, then it is important to dump the load further towards the tail end of the Hopper so that the greater portion of the impact is borne by the sloping rear wall or drop box. Ideally, what one should aim to achieve is the load as suggested above on the sloping section, coming to rest on the feeder belt in such a position that it forms a bed for the succeeding portion of the load, which is discharged from a greater height.

Calculation of Deck Speed for any given Capacity

$$\text{Deck Speed (m/minute)} = \frac{16,7 \times \text{t.p.h.}}{W \times D \times WT \times VF}$$

Where t.p.h. = Metric tons / hour
 W = Width inside skirts (metres)

D = Depth material inside skirts (metres) (approx. 1/2 the width)

WT = Density of material (Kg/m³) as handled

VF = Void Factor
 0,75 run of mine
 0,85 All 0,3m lumps
 0,90 All 0,16m lumps

Feeders can be supplied in lengths to suit customers' requirements.

Power requirements will vary in accordance with the following :

- Burden Depth
- Bulk Density
- Angle of Inclination
- Shearing or Open Ended Hopper
- Hopper Design
- Hopper Capacity
- Apron Feeder selection
- (Type of undercarriage components)
- Head Shaft rpm (Head Sprocket pitch dia.)
- Feed material Analysis

Questionnaire

To enable us to quote for equipment relative to your particular requirements, it will greatly assist us if all essential information is supplied with the initial enquiry. For your guidance we tabulate the information required :

Material

Is material wet or dry ?

Percentage moisture

Approximate mass of material in kg/m³

Maximum lump size of material

Is feed graded

Capacity required in tonnes / hour

Type of drive required ? i.e. fixed speed, variable speed

Variable speed Electro-Hydraulic

Have we to supply the drive ? Yes / No

Hopper Design
 Open / closed Front

Feeder inclination

Osborn. Designers and manufacturers of bulk materials handling and minerals processing plant and equipment.

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