

Canning Conveyor field conveyor systems incorporating the Superdrive Jib Head Unit



Canning Conveyor



History



Canning Conveyor

Canning Conveyor Company Limited engineering division offers 40 years of experience in the design, manufacture, supply, installation and commissioning of bulk materials handling equipment and conveyors to the extraction industries world-wide. Canning Conveyor offer standard conveyor components and conveyor equipment from stock and also design and fabricate to suit customers individual requirements.

During this time, the company has built a world-wide reputation for the quality of its products and service being second to none. Our background and experience is such that we pride ourselves in offering a most thorough and reliable service to all our customers whilst maintaining our competitive prices.

A fully comprehensive range of equipment is offered incorporating conveyor rollers and drums, drive units, complete conveyors and materials handling systems and associated equipment such as gear, crushers, screens, hoppers, feeders and weighers etc.

We can offer completely new, second hand or fully reconditioned plant and equipment or any combination of the above to suit customers requirements, all at competitive prices.

Our engineering works at Worksop, incorporates design offices with AutoCAD facilities, fabrication shop for single items up to 20 tonnes for manufacture, assembly and testing and a fully equipped and comprehensive machine shop.

This is backed up by the services of skilled erection teams for installation and commissioning and an after sales service for spares and maintenance.

Canning Conveyor has now become a name which is well known by extraction and handling industries throughout the world with an established high reputation for providing total conveyor confidence.



Canning Conveyor Company Limited.

Canning Conveyor Company Limited is an ISO 9001 : 2000 registered company. We operate a quality management system that ensures our products are designed and manufactured to the highest standards. This is reflected in the performance of our equipment in operation.

The Canning SuperDrive is used around the world!

It has many application uses:

- Limestone with acidic content – Japan.
- Recycling building waste – UK.
- Compost plant - Germany.
- Crushing & screening to mixing of concrete – Sweden.
- Stone, gravel and quarry sand – Spain.
- Lafarge Mountsorrel quarry – UK.



Motorised pulleys at work in the UK

More people are finding out that Rulmeca motorised pulleys are proving by example that they are an excellent alternative to conventional drives. They provide both reliability and cost effectiveness in the most challenging of environments along with other advantages such as low noise, improved safety and compactness.

UK Coal has been reaping the rewards of these benefits after exchanging many traditional drives with motorized pulleys at **Kellingley, Maltby and Welbeck**. This has been achieved in numerous areas where excessive maintenance and high running costs were a cause of great concern. These worries have been effectively eliminated due to the motorized pulleys' superior efficiency - which gives impressive electricity savings, and the standard IP67 sealing - to enable them to work in the worst conditions that prevail at those sites.

Lafarge's Mountsorrel quarry has continued to use motorized pulleys for many years now in critical areas with high throughputs that depend on absolute availability.

Their toast-rack system has 2 reversible shuttle conveyors feeding crushed Leicestershire granite into multiple storage locations underneath from dust to 75mm.

For the last 9 years, the main shuttle conveyor has been powered by dual 800mm diameter; 37kw motorized pulleys (one at each end) carrying material at 2.5 m/sec in excess of 2500 t/hr. They have performed so well over the years that the sister conveyor running alongside, and various other plant conveyors have now also been changed to be powered by motorized pulleys.

Rulmeca have many such testimonials around the world, proving by example the versatility and reliability of motorized pulleys in the most difficult circumstances. They can be supplied in many different sizes and with power outputs of up to 132kw.



SuperDrive Jib Head Unit

The Canning Conveyor Co Ltd SuperDrive Jib Head Unit is designed specifically to power field conveyors for open pit, quarrying applications, conveying sand and gravel, clay, overburden, colliery waste and all other minerals/aggregates.



FEATURES

- Robust fabricated frame.
- Standard units available in 600, 750, 900 and 1000mm belt widths-other sizes available on request.
- Available in single drum drives from 15-55kw and double drum drives in 45-260kw.
- All single drum drives include drive drum with ceramic lagging, giving higher co-efficiency of friction.
- Double drum drives include drive drums with 10mm diamond pattern natural rubber lagging (optional extra for ceramic lagging)
- All non-drive drums are mounted in 'Cooper' split roller bearings. Nb: all drive drums mounted in brackets have a rotating shaft.
- Facilitates maintenance; has an open framework giving visibility to rotating parts.
- The cantilevered support for the non-driven delivery drum mounted forward of the drive allows the tail-end of the receiving conveyor to be positioned in-line or at right angles, directly below the delivery drum for a positive, spillage free transfer of materials.
- A totally enclosed head chute includes crash box and an inspection hatch fitted into the hood.
- Primary and secondary belt scrapers both utilising torsion self adjustment included as standard.
- All drive drums are 630mm diameter and mounted on motorised pulley mounting brackets to suit.



OPTIONAL EXTRAS

- Mechanical backstops.
- Re-greasable labyrinth seals for extreme conditions.
- Brake units.
- Soft starts.
- Complete stainless steel motorised drums to suit.

3 YEARS PARTS AND LABOUR WARRANTY

Benefits of the Canning SuperDrive Jib Head Unit

Purpose-built design

The Canning SuperDrive has been specifically designed for belt conveyors.

Totally enclosed

The motor, gearbox and bearings are totally enclosed and sealed inside a steel shell; therefore they are unlikely to fail due to harmful environmental conditions such as water, dust, grit chemicals, grease, oil, etc.

Space saving design

Because the drive unit and the bearings are mounted inside the SuperDrive, it takes up much less room than a conventional drive. No need for costly extras like chains, v-belts, couplings, bearings, support structure and special guarding.

Safety

The Canning SuperDrive is probably one of the safest drives available because the motor is completely enclosed and the external shafts are always stationary. The only moving external parts are the Motorized Pulley shell and bearing housings.

Low purchasing and installation cost

The Canning SuperDrive is quite often less expensive than exposed drives because it has fewer parts. Therefore less conveyor design and parts purchasing costs. It is also much quicker and easier to install – certainly less than a quarter of the time taken to fit an exposed system.

Low maintenance cost

The end user also benefits from the Canning SuperDrive, because it requires no maintenance other than the recommended oil change every 10,000 hours and oil seal change every 30,000 hours. In other words almost 5 years between oil changes based on an 8-hour/day working week. Synthetic oil can be specified to extend the service range up to 30,000 hours.

Efficiency

The Canning SuperDrive usually has a much higher efficiency from electrical motor to shell (pulley face) than conventional drives, because it has fewer frictional losses, and therefore efficiencies of up to 97% can be achieved.

Cleanliness

Because the Canning SuperDrive is hermetically sealed it cannot contaminate any conveying materials such as food, electrical components, plastic and other materials that must be kept perfectly clean during handling.

Aesthetic appearance

If installed correctly the Canning SuperDrive always looks good. Due to its compact size and smooth lines, quite often the SuperDrive is out of sight, because it is hidden within the conveyor frame.

Thermal protection

All three phase Canning SuperDrives are protected by our thermal protection switch. This heat sensitive switch is built into the motor windings to protect the motor from overheating. The thermal protector must be connected to a normally closed circuit.

Weight saving and distribution

Often the Canning SuperDrive is lighter than conventional drives and often it is possible to reduce the cost of the conveyor structure, because the weight is evenly distributed within the conveyor frame.

Variable frequency converter

All Canning SuperDrive with 3 phase motors are easily controlled by variable frequency converters working in the 15 Hz to 65 Hz frequency range. See Technical Precautions in the catalogue.

Fewer parts

A Canning SuperDrive consists of the SuperDrive and two fixing brackets! Exposed drives can require up to eight or more separate components, most of which have to be purchased from different suppliers or custom manufactured.

Low noise

Thanks to the totally sealed enclosure and high quality gears the Canning SuperDrive runs almost at a whisper – a very important fact in today's modern factory environments.

The Canning SuperDrive – the ideal drive unit for conveyors 'Fit it and forget it'.

Loop Take-Up Units

The loop take-up unit comprises a connecting section, an intermediate section and a winch section.

A hand operated winch, complete with a tension rope achieves belt tension in the loop take-up unit.

The winch has a totally enclosed brake and is rated at 3000kg on the first layer.

The tension carriage is fitted with a 400mm diameter low tension drum mounted in 'Cooper' split bearings. The tension carriage is fitted with a twin pulley arrangement.



Tension end drum c/w 'Cooper' split bearings.



Winch



Carriage



Loop tension unit

Grading Section

The grading situated at the rear of the loop take up is manufactured from run of conveyor structure with extended legs to provide a smooth transition from loop height to the intermediate structure height. Hand railing is provided to restrict access to the belt at high level.

Tail End Unit

The return box end is fitted with a tail drum mounted on 'Cooper' split bearings. The loading section is fitted with four heavy duty impact idler sets, two standard idler sets, two return rollers; a set of skirt plates and skirt rubbers complete with damping flats the full length.

A return belt plough complete with scraper blade is provided.

STANDARD CANNING SUPERDRIVE HEAD UNITS

| CANNING MODEL REFERENCE | | | | |
|-------------------------|-----------|-----------------|-----------|------------|
| MOTOR POWER | | BELT WIDTH (mm) | | |
| SINGLE DRUM DRIVE | 600mm | 750mm | 900mm | 1000mm |
| 15kw | SD60-15SC | SD75-15SC | SD90-15SC | SD100-15SC |
| 18.5kw | SD60-18SC | SD75-18SC | SD90-18SC | SD100-18SC |
| 22kw | SD60-22SC | SD75-22SC | SD90-22SC | SD100-22SC |
| 30kw | SD60-30SC | SD75-30SC | SD90-30SC | SD100-30SC |
| 45kw | SD60-45SC | SD75-45SC | SD90-45SC | SD100-45SC |
| 55kw | SD60-55SC | SD75-55SC | SD90-55SC | SD100-55SC |
| DOUBLE DRUM DRIVE | | | | |
| 45kw | SD60-45DR | SD75-45DR | SD90-45DR | SD100-45DR |
| 50kw | SD60-60DR | SD75-60DR | SD90-60DR | SD100-60DR |
| 75kw | SD60-75DR | SD75-75DR | SD90-75DR | SD100-75DR |

Other widths and sizes available to order from 600mm to 2000mm belt widths, up to 232kw.

High Density Polymer Rollers

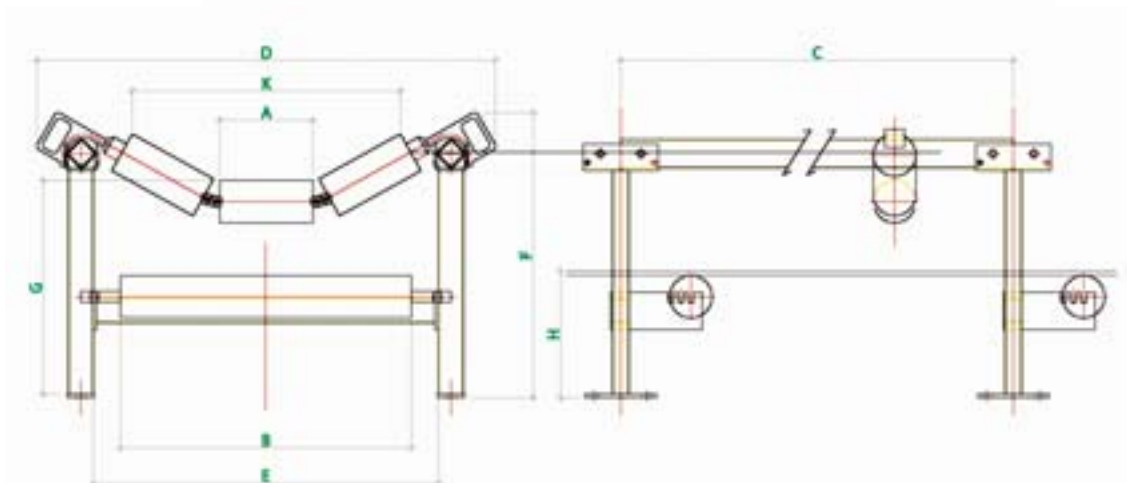


Characteristics of High Density Polymer

1. **High quality:** The roller shell is manufactured from HDP (High Density Polymer) with impact resistant, acid resistant, anti-corrosion, anti-alkali in chemical characteristics. The roller is assembled with double cap bearings, in compliance with ISO standards.
2. **Heavy rigid and high impact performance:** Different from the steel roller, Cannings synthetic roller has good impact and instauration. Strengthened frame offers the synthetic roller the same rigidity as a steel roller.
3. **Excellent waterproof and anti-dust:** Cannings synthetic roller provides triple bearing protection. Seal rings prevent water and dust from entering into the inside of the roller. Special catchment groove utilising centrifugal force keeps the inside of the roller dry in all weather conditions. The patented triple labyrinth seals offer a 45% higher efficiency of preventing water and dust than traditional labyrinths.
4. **Higher efficiency:** Ejection body, homogeneous mass, good roundness, minimum rolling factor, durable for high speed operation, power saving, noise free.
5. **Light weight:** Cannings synthetic roller is 55% lighter than traditional steel roller, suitable for small drive, head pulley and tail pulley, it can save 25% of power and equipment cost.
6. **Low maintenance cost:** Long service life, no lubrication oil needed, easy replacement, reduce maintenance labour and time to the minimum.
7. **Specification:-**

| | |
|---------|-------------------------------------|
| Tube - | 102mm diameter x 8mm wall thickness |
| | 127mm diameter x 8mm wall thickness |
| Shaft - | Bright drawn mild steel |

New field conveyor HDP suspended idlers, rollers and steel structures



| | A | B | C | D | E | F | G | H | K |
|------|-----|------|------|------|------|-----|-----|-----|------|
| 600 | 224 | 700 | 3048 | 1130 | 830 | 784 | 592 | 304 | 640 |
| 650 | 240 | 750 | 3048 | 1180 | 876 | 784 | 592 | 304 | 700 |
| 750 | 280 | 900 | 3048 | 1284 | 980 | 784 | 592 | 304 | 800 |
| 800 | 295 | 950 | 3048 | 1333 | 1029 | 784 | 592 | 304 | 850 |
| 900 | 330 | 1050 | 3048 | 1434 | 1130 | 784 | 592 | 304 | 950 |
| 1000 | 360 | 1175 | 3048 | 1520 | 1216 | 784 | 592 | 304 | 1050 |

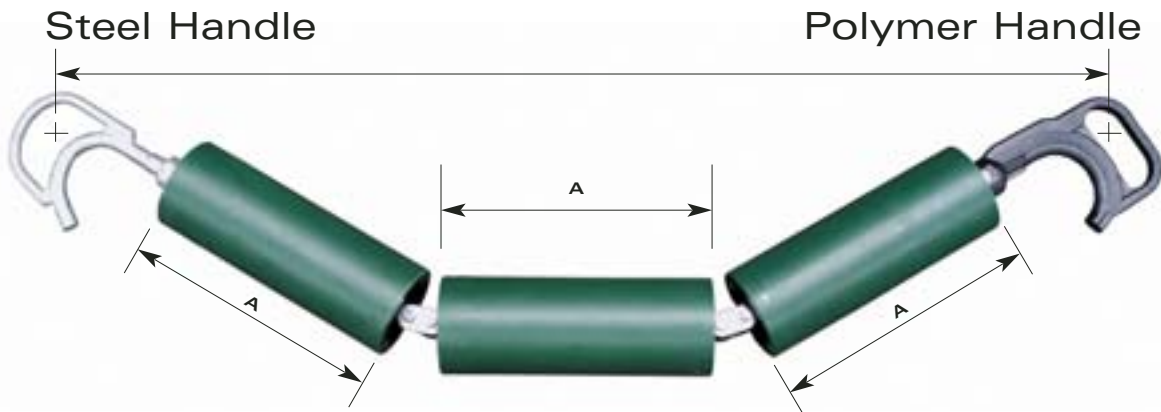
Suspended idlers

- New 'safety handles' (In HDP polymer or galvanised steel). Reduced manual handling and trapped finger hazards.
- Easy to install and fit – one man job!
- Lightweight flow friction
- Noise reduction – environmentally friendly! Up to 8 decibels quieter than steel! Excellent for locations where noise levels are an issue.
- Non-stick, high density polymer Polymer rollers don't stick.
- Wear rate - excellent compared with steel! Very durable.
- Power efficiency - reduces power requirements (amps).
- Triple labyrinth seals for longer life.
- 102mm and 127mm diameter rollers.
- 25mm diameter precision bearing and scales.
- 8 Gauge (4.06mm) shell on steel rollers.
- 8mm shell thickness on polymer rollers.

Intermediate structure - new innovative design!

- Robust construction – 60 x 40 RHS.
- Good lateral ground clearance.
- Reduce transport costs-easily stacked/palletised, 60% less space needed!
- Reduced costs of maintenance/installation. Detachable legs. Reduced time. One side of the leg can be replaced without dismantling the conveyor.
- Reduced costs of replacement parts. Leg in 3 pieces-replacement only when needed.
- Surface finish. Long lasting. Powder coated deep brunswick green or galvanised.

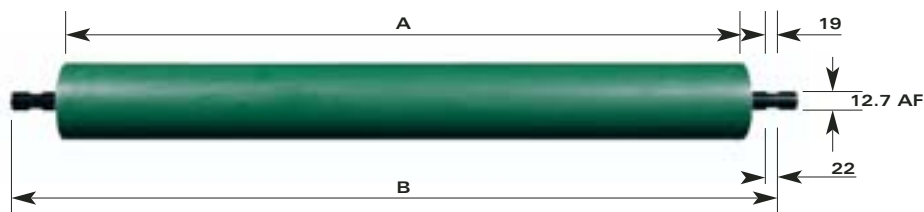
New field conveyor suspended idlers & return rollers



| Belt Width | A | B | Polymer 102mm Dia Ref | 102mm Dia Ref | 127mm Dia Ref |
|------------|-----|------|-----------------------|---------------|---------------|
| mm | mm | mm | | | |
| 500 | 190 | 813 | HDP26SI | CDS20 | CES20 |
| 600 | 224 | 889 | HDP24SI | CDS24 | CES24 |
| 650 | 240 | 940 | HDP26SI | CDS26 | CES26 |
| 750 | 280 | 1041 | HDP30SI | CDS30 | CES30 |
| 800 | 295 | 1092 | HDP32SI | CDS32 | CES32 |
| 900 | 330 | 1194 | HDP36SI | CDS36 | CES36 |
| 1000 | 360 | 1280 | HDP40SI | CDS40 | CES40 |
| 1050 | 380 | 1346 | HDP42SI | CDS42 | CES42 |
| 1200 | 432 | 1499 | HDP48SI | CDS48 | CES48 |

Ref: P/H = Polyhook with handle S/hook = Steel hook S/handle = Steel hook with handle

Field Conveyor Return Idler



| Belt Width | A | B | Polymer 102mm Dia Ref | 102mm Dia Ref | 127mm Dia Ref |
|------------|------|------|-----------------------|---------------|---------------|
| mm | mm | mm | | | |
| 500 | 600 | 784 | HDP20RR | DFMR20 | EFMR20 |
| 600 | 700 | 886 | HDP24RR | DFMR24 | EFMR24 |
| 650 | 750 | 936 | HDP26RR | DFMR26 | EFMR26 |
| 750 | 900 | 1038 | HDP30RR | DFMR30 | EFMR30 |
| 800 | 950 | 1090 | HDP32RR | DFMR32 | EFMR32 |
| 900 | 1050 | 1190 | HDP36RR | DFMR36 | EFMR36 |
| 1000 | 1175 | 1296 | HDP40RR | DFMR40 | EFMR40 |
| 1050 | 1210 | 1342 | HDP42RR | DFMR42 | EFMR42 |
| 1200 | 1360 | 1496 | HDP48RR | DFMR48 | EFMR48 |

Conveyor Belt - Cannoflex Qualities

Cannoflex Standard Conveyor Belting is made with E.P fabric plies. The top and bottom are provided with abrasion resistant rubber covers to DIN 22102 and B.S 490.

Application

For conveying heavy and sharp edged goods in bulk such as gravel, crushed stone, limestone, iron pellets, glass and coal, also sand, fertilisers etc.

Cannoflex conveyor belts are quality products with an extremely high degree of reliability. The manufacturers have over 60 years of experience in belt production. Extensive testing devices ensure that Cannoflex belts are released only if they are first class from the viewpoint of chemical, technological, structural and manufacturing techniques.

Carcass

The function of the carcass is to transmit and absorb the forces acting on the belt. It is primarily a question of tensile forces from the driving pulley. Secondly the carcass absorbs the impact that partly appears when the material is loaded onto the conveyor and partly when the belt with material passes over the carrying idlers.

The carcass consists of one or more plies of textile fabric with rubber on each side to give adhesion and flexibility. The longitudinal direction is called warp and cross direction is called weft.

The conveyor belt fabrics can have the same or different material in warp and weft. One letter is designating each, for instance EP, in which E is Polyester in warp and P is Polyamide in weft.

In the following the most common carcass materials are described.

Cotton (B)

A natural fibre used in both warp and weft. Cotton is still used in conveyor belt fabrics, but it is being displaced by synthetic material.

Polyester (E)

Synthetic fibres such as Terylene, Trevira, Diolen, and Tetoron. Polyester fabrics are not influenced by moisture or micro organisms. They are very flexible, have stability in length and are acid resistant.

Polyamide (P)

Synthetic fibres known as Nylon and Perlon. This fabric has more or less the same characteristics as Polyester, but not the length stability.

Polyester-Polyamide (EP)

The EP fabrics have Polyester as the warp and Polyamide as the weft. This combination gives the best possible fabric characteristics with the following advantages:

- High strength in proportion to weight
- High resistance to impact
- Negligible elongation
- Great flexibility, excellent trough ability
- Not susceptible to humidity and micro-organisms

These technical advantages as well as many years' experience in the conveyor belt field are the reason why Canning Conveyors prefer EP as carcass material in conveyor belts.

Covers

The covers protect the carcass and give the necessary friction between belt and driving pulley and between belt and driving pulley and between belt and material.

As the covers must resist influences from the transported material and the weather, cover types that are wear resistant, oil and/or heat resistance, antistatic or the combine two or more of these properties are required.

Installation

- UK immediate response
- Experienced well equipped field service engineers
- EPIC safety passport accredited
- Full of range of spares availability
- Commissioning and aftersales service



**The Canning
SuperDrive –
the ideal drive unit
for conveyors**

**‘Fit it &
forget it’**



Canning Conveyor

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