

# TOWABLE BAGGAGE CONVEYOR-5MTR

## GENERAL DESCRIPTION:

The Towable Belt Loader (5MTR) is designed for good reliability and low maintenance and is suitable for loading/off-loading luggage and cargo to/from aircraft cargo holds where door sill height ranging from 1250 mm to 2660 mm. The equipment is towable type, heavy duty 5th wheel steering with solid rubber tire (380x110mm), easily maneuverable, easy to tow, quick and along with simple tow bar actuated brake.

## EQUIPMENT DESCRIPTION:

### MAIN CHASIS

The chassis is a Mig-welded rectangular steel tube structure containing the turn table assembly, H-assembly, Wheel Axles, Engine and independent hydraulic system. The charging system/ battery electrical system powers all electrical requirements.

### CONVEYOR BED LIFT MECHANISM

One lift frame assembly (H-Assy.) with two sliding rollers mounted on chassis frame and is actuated by a hydraulic cylinder, comprise the bed lift mechanism. Lift frame assembly is attached to conveyor bed with two heavy duty sliding rollers (Bearing type) and the other end with chassis by pivot pins.

### CONVEYOR BED

The Conveyor bed is composed of a steel frame upon which the drive roller, tail roller, guide roller, bed and idler rollers, rubber conveyor belt, and hydraulic drive components are assembled. The drive roller is directly driven by a hydraulic drive motor. Rotational direction of the motor controlled by a valve. The boom positioning is controlled by hydraulic cylinder acting on the rear lifting mechanism. A sufficient number of free rollers placed along the belt for a proper load distribution. The quantity of free rollers is increased on the loading and unloading part of the belt in order to avoid damages due to luggage impact. Rubber buffers are located at the forward and aft ends of the bed for soft aircraft interface.

## HYDRAULIC SYSTEM

The hydraulic system powers the conveyor bed lift cylinders and the conveyor belt drive. The system consists of the engine-driven hydraulic gear pump, drive motor, oil reservoir, control valves, oil filter and hydraulic work cylinder, check, flow control and gate valves and the associated tubing, fittings and hoses. The hydraulic pump is directly mounted on the engine with bracket and a heavy duty nylon coupling. The hydraulic circuit is protected by a pressure relief valve. Speeds are controlled by flow control valves. The belt drive motor is mounted on left side of the boom aircraft end. A counterbalance valve in the belt motor hydraulic circuit prevents runaway of heavy packages when in the "Unload" or "Reverse" mode of operation. A single acting cylinder mounted on chassis frame will raise and lower the rear end of the bed. A check valve on boom cylinder hydraulic circuit locks the cylinder in place when in raised position. One flow control valve limits the lowering speed of the bed.

## TECHNICAL SPECIFICATIONS:

- Boom Length : 5340 mm
- Bed Width : 750 mm
- Maximum Height at A/C end : 2660 mm
- Minimum Height at A/C end : 1215 mm
- Maximum Height at ramp end : 735 mm
- Load capacity: 600 kg. Distributed.
- Maximum Payload: Single load-350kg.
- Belt Transfer Speed: 0.2-0.5m/sec.
- Belt width: 600 mm
- Width between rails : 750 mm
- Max. Angle of Inclination: 24°
- Speed (Towing by Tractor): 25km/h
- Bed Up/Down Control: Manually Actuated
- Belt Up/Down Control: Manually Actuated

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#### SHIPPING DIMENSION

- Overall Dimension (mm) (LxWxH):  
6020x1410x1215. Gross Weight:

#### COMPONENT SPECIFICATION: (STANDARD)

##### ENGINE (DIESEL, AIR COOLED)

Make: Greaves  
Model: 1533  
Horse Power: 7HP@1800RPM  
Charging System: 12V

##### PUMP

Make: Dowty  
Model: 3028  
Pressure: 207 bar (3000psi)  
5.3 MOTOR  
Make: Danfos  
Model: OMR200

##### CYLINDER

Make: Standard, Single Acting.  
Stroke: 500mm

##### HAND PUMP

Make: Dowty  
Pressure: 210bar (3000psi)

##### HYD. RESERVOIR ASSY.

Material: MS (3mm)  
Capacity: 50 Ltrs.  
Breather Cap: Yes.  
Sight Glass: Yes.  
Gate valve (1inch): Yes  
Magnetic Drain Plug: Yes

##### RETUN FILTER ASSY.

Make: Hydro Line  
Type: 25Micron

##### STRAINER

Make: Hydro Line  
Type: 100 Mesh/149 Micron.

##### CONTROL VALVE (MANUAL)

##### DIESEL TANK

Make: Standard (Mahindra)  
Capacity: 45 liters.

#### OPTIONAL FEATURES:

Fuel Gauge  
Volt Meter or Ammeter  
Hour Meter  
Flashing Beacon Light/ Strobe Light.  
Electric Belt Controls  
Auxiliary Hand Pump  
Semi-Closed Canopy(Polycarbonate)  
Screw Jack  
Rear Wheel Chocks.  
Pneumatic Wheel (5.00x8x10ply.)  
Spark Arrester & Fire Extinguisher

#### PAINTING:

Two pre-coat epoxy gray primer and finished with two coat automotive paint.



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