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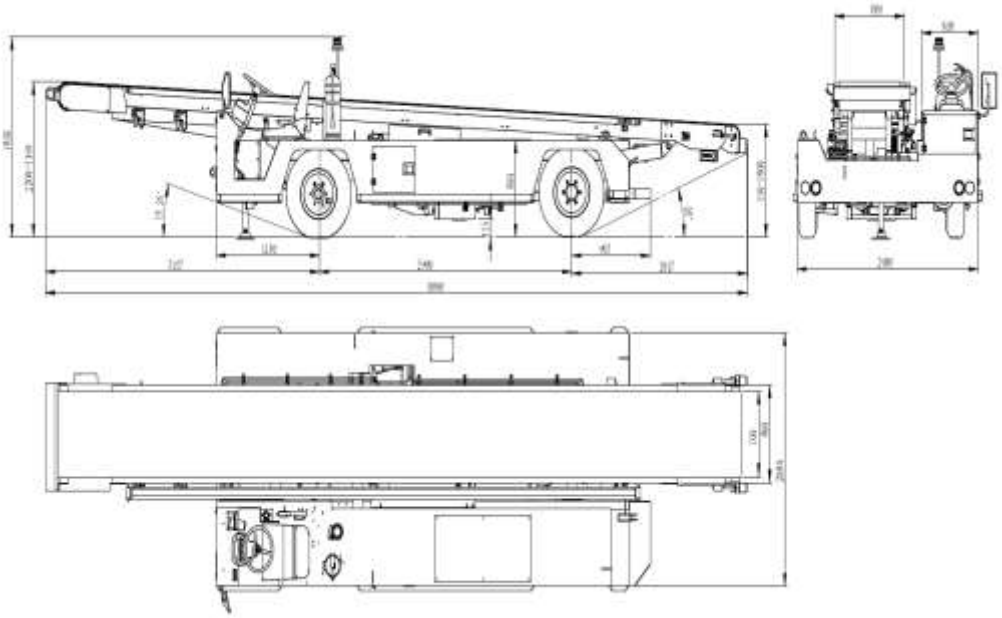
TY-XC80 Self-Propelled Conveyer-Belt Loader



1 Product Name: Self-Propelled Conveyer-Belt Loader

2 Product Model: TY-XC80

3 Product Introduction

TY-XC80 self-propelled conveyer-belt loader is a new luggage transporter designed and manufactured in China in accordance to our requirements, the chassis is self-made. The product is advanced and concise in product design, safe, reliable, reasonable in structural design, safe and convenient in operation, advanced in process, beautiful in appearance, highly reliable and easy to maintain. It can provide safe and efficient luggage conveying operation for all aircraft types.

4 Product Standard

IATA AHM 925 Functional Description of Power-Driven Conveyer Belt Loader IATA AHM 913 Basic Safety Requirements for Airport Ground Support Equipment IATA AHM 910 Basic Safety Requirements for Airport Ground Support Equipment

5 Major Performance and Technical Parameters

Height Range of Conveyer Belt s Front End (mm):	1200 4200
Height Range of Conveyer Belt s Rear End (mm):	540 1300
Width of Conveyer Belt (mm):	700
Maximum Uniform Load of Conveyer Belt (kg/m):	135
Maximum Mass of Single Cargo (kg):	400
Maximum Inclination of Conveyer Belt:	28
Conveying Speed of Conveyer Belt (m/s):	0.16 0.5m/s
Maximum Travel Speed (km/h):	25
Minimum Steady Travel Speed (km/h):	3
Wheelbase (mm):	3000
Minimum Turning Radius (mm):	6600
Ground Clearance (mm):	170
Approach Angle:	10
Departure Angle:	15
L W H (mm):	8000 2100 2080
Vehicle Curb Weight (kg):	3700

6 Major Structure and Configuration

TY-XC80 self-propelled conveyer-belt loader primarily consists of body, conveying rack, chassis power drive system, front and rear lifting mechanisms, hydraulic operating system, electrical system and other components.

6.1 Body

Its body is made by welding 5.0 thick high-quality steel plates. The product has the following features: reasonable arrangement, welding as a whole and lower body center of gravity, good stability. An enclosed cab can be installed. It also has wide field of vision.

6.2 Conveying Rack

The conveyer belt support primarily consists of main frame, load-bearing roller, stainless steel slide block, drive roller, driven roller, adjusting roller, and drive motor. The control switch and emergency stop switch are installed respectively at the front and rear ends. The drive motor drives the belt through the drive roller to load up or unload down. The driven roller and the adjusting roller can be used to adjust the belt s tension, deflection and deviation. The conveying rack is intended to increase the structural strength. The main frame uses channel beam structure. Buffer rubber blocks are mounted respectively onto the conveying rack s front and rear ends.

Made of seamless steel pipe, the load bearing roller is durable. A variable cross-section structure is adopted for drive and driven rollers, thereby eliminating the conveyer belt s deviation factors and making it easy to adjust.

100mm high deflector gates are installed respectively at both sides of conveyer belt to prevent luggage from slipping out of the conveying rack; both the left and right gates are movable and below the conveying surface when put down.

6.3 Front and Rear Lifting Mechanisms

Both the front and rear lifting mechanisms are propped up by a single cylinder, and can adjust the height of the conveyor belt support s front and rear ends respectively. You can install an adjustable throttle valve and control the lifting speed to ensure smooth lifting. Its lifting can only be controlled by the cab. The lifting mechanism hydraulic system is fitted with an electromagnetic ball valve to prevent the conveying rack from sliding when the hydraulic system fails. The conveying mechanism is fitted with a mechanical protection latch to prevent cylinders from leaking and the conveying rack from lowering down.

6.4 Chassis Power Drive System

A self-made chassis with hydraulic transmission drive system; the engine is directly connected with the hydraulic transmission and transmits the power to the wheels via drive shafts and rear axles to realize step less speed change.

TX-XC80A Driving system:
Engine: Perkins 404D-22, Euro III emission
Transmission: Graziano , PST2 auto hydraulic transmission.

T**X-XC80B Driving system:**
Engine: ISUZU ak-c240pkj-30 diesel engine, Euro III emission

TX-XC80C Driving system:
Engine: Cummins QSF2.8(37KW@2500rpm)diesel engine, China IV emission

Transmission: Japan Y43280E, auto hydraulic transmission

Steering System: Hydraulic steering gear

Brake System: Front-disc, rear-drum dual-line brake system, hand brakes

Front Axle: A steering axle with disc service brake, its wheelbase is 1720mm

Rear Axle: A drive axle with drum service and parking brakes, its wheelbase is 1680mm.




6.5 Hydraulic Operating System

The hydraulic operating system consists of hydraulic pump, cyclonic motor, front and rear lifting cylinders, hydraulic valve, oil piping and other components. When installing a front outrigger, the emergency hand operated pump installed in the product can retract the outrigger in an emergency manner when the engine fails to run normally or the power fails, so that the self-propelled conveyer-belt loader can be evacuated from the airplane timely.

Solenoid valve blocks are sourced from international brands. Imported balance valves are installed in the conveying system to prevent bulky cargoes from being unloaded too fast and causing danger.

Hydraulic pipe fittings are joints and seamless galvanized steel pipes sourced from domestically renowned brands.

The volume of hydraulic oil tank is 70L.

6.6 Electrical System and Safety Device

The electrical control system includes travel signal and control, engine electrical, conveyor belt lifting and travel control. The product s electrical control circuit is controlled via relays; it is neat in circuit layout and reliable;

An engine tachometer and hour meter, fuel level gauge, high engine coolant temperature indicator, turn indicator, parking indicator, low oil pressure indicator, outrigger retracted-in-place indicator, emergency stop button, lifting switches for conveying rack s front and rear ends, engine start switch and lighting switches are mounted in the instrument panel.

The system voltage is DC 12V.

6.7 Main configuration

No.	Item	Type	Brand
1	Chassis	Self-made	china
2	Cabin	left drive	china
3	Engine	C240-NBKEG-01-C3	Isuzu
4	Transmission	Y43280E	Japan
5	Front and rear axles	HY430	China
6	Gear pump	CBHZ-F25	China
7	Tire	225/70R15	China
8	Feed belt	700mm	USA
9	Hydraulic cylinder	D50/28-250	China
10	Hydraulic block	RPE3-063	ARGO
		DSG-01-3C4	China
11	Conveyor motor	JS-250	EATON(USA)
12	Check valve	VUR380	Oleoweb(Italy)
		CIT-06-04-50	China
13	Balance valve	PRE3-063	EATON(USA)
14	Magnetic ball valve	EDT6	Oleoweb(Italy)
15	Hydraulic steering gear	XCEL45	EATON(USA)
		101S-1	China
16	Hose fitting		Parker
17	Relay	RH4B-UL	Japan
18	Relay socket	PTF14A-E	Japan
19	Button	YWIB-A1E10	Japan
20	Travel switch	WLNJ-30	Omron
21	Emergency switch	YW1B-V4E10R	Japan
22	Alarm lamp	FL-4871	Japan
23	Indicator lamp		Japan