

## Technical specification for WTJ5160JSP type air catering trucks



### 1 Product Profile

Retrofitted from ISUZU second class chassis, WTJ5160JSP catering truck is advanced in technology, safe and reliable for use with all performances better than similar products retrofitted from domestically produced chassis.

It is applicable to A300、A310、A318、A319、A320、A330、A340、B707、B727、B737、B747、B757、B767、B777、DC8、1L—18、1L—62、MD11、MD80 type aircraft except A380.

### 2 Product Standard

MH/T6016-2017 《Aircraft Catering truck》

JG5099-1988 《Safety Regulations for Aerial Work Machinery》

GB7258-2004 《Safety Technical Conditions of Motor Vehicle》

AHM910 《Basic Requirements of Ground Support Equipment》

AHM927 《Basic Safety Requirements of Ground Support Equipment》

### 3 Technical Parameter

No.	Name of project	Performance index				Note
		Configuration 1	Configuration 2	Configuration 3	Configuration 4	
1	Type of chassis	ISUZU QL1160AQFRY		ISUZU QL1180XQFRY		
2	Type of engine	ISUZU 6HK1-TCNG40		ISUZU 6HK1-TCL		
3	Engine emission	GB 17691-2005 China IV		GB 17691-2005 China V		
4	Type of transmission	ISUZU MLD-6Q		USA ALLISON2500		
5	Height of platform (mm)	2730~6150		2740~6020		---
6	Loading of van body (kg)	4000				---
7	Adjustment range of mobile platform (mm)	0~800				---
8	Adjustment range of extensible platform (mm)	0~600		0~500		---
9	Size of fixed platform (mm)	1400×2480		1400×2400		---
10	Size of mobile platform (mm)	1120×1200				---
11	Size of van body (mm)	7200×2480×2400		7500×2480×2400		
12	Loading of fixed platform (kg)	1000		1200		---
13	Loading of movable platform (kg)	400		600		---
14	Overall dimension (mm)	9900×2550×3800		10320×2500×3830		---
15	Curb weight (kg)	14000				---

### 4 Main Structure

#### 4.1 Second class chassis

4.1.1 The chassis can load 8000kg, which is used of special design .

4.1.2 Three cabin, flat head, high strength, it can be reversed

4.1.3 Brake mode

- ① Serve brake
- ② Parking brake
- ③ Emergency brake
- ④ Auxiliary braking

⑤ ABS brake-force control, 4 channel、4 sensor、4 regular (option)。

4.1.4 Power-assisted steering。

4.1.5 Equipped with air condition in cabin.

4.1.6 Equipment with cold starting device。

4.1.7 一 .Adopt ISUSU QL1160AQFRY chassis。Choose 6HK1-TCNG40 engine, power 177kW/2400rpm, Max. torque 706/1450±40N.m, China 4 emission。This engine is type of water cooled, four-stroke turbocharged, 6V cylinder, intercooled.

4.1.8 二 Adopt ISUSU QL1160AQFRY chassis。Choose 6HK1-TCL40 engine, power 177kW/2400rpm, Max. torque 706/1450±40N.m, China 4 emission。This engine is type of water cooled, four-stroke turbocharged, 6V cylinder, intercooled.

#### 4.2 Outriggers

4.2.1 The whole vehicles is equipped with four supporting legs with bi-direction lockup valve.

4.2.2 Safety interlock prevents movement of the vehicle, until that the outriggers aren't fully retracted

4.2.3 Four outriggers can security the truck working anti the wind grade 8, and keeping stability anti wind grade 12.

#### 4.3 Lifting assembly

4.3.1 It is scissor lift with 16# Mn-steel. Auto beam and sister beam is use the design of widening (patent: ZL2007 20040715.5 ), and is great of chassis beam; lifting device is with beam channels, scissor lift is with steel pipe, it can ensure the stable in process of lifting.

4.3.2 The main cylinder installed on two hydraulic pipes can ensure lifting speed

4.3.3 the start angle of cylinder is great of 30°.

#### 4.4 Van body

4.4.1 have two types of dimension:

1) Dimension 一: 7200×2480×2400。

2) Dimension 二: 7500×2480×2400。

4.4.2 Cars side board is equipped of 75mm thickness of composite thermal insulation material with high quality GRP and RPUF material, it is function for rain proof.

4.4.3 Top plate of van body adopt 100mm thickness of composite thermal insulation material, floor thickness 90mm.

4.4.4The floor plate is equipped with non-seam anti-slip aluminum alloy plate., the thickness is 6mm.

4.4.5 Inside of van body is equipped with FVR, the heat preservation coefficient is great of 0.45(W/m<sup>2</sup>,K)

4.4.6 The front and rear doors is equipped with handle and hook lock, adopt 1.5m design of wide door. Its Changchun is with side by side combination; Haikou is with electric doors, the width is 900-1000mm,Wuhan is with sliding doors.

4.4.7 The van body install 6 pieces of led 30W white lights.

4.4.8 There are two pieces of 55W lights in the working platform, and install on both sides of the front van body; The parking is equipped of two pieces of 55W lights installed on both sides of the rear van body.

4.4.9 The front and rear van body install bumper strip with D type rubber pipe

4.4.10 Both sides of van body far away from 800mm floor install a piece of gusset plate for safety belt, the detailed specification will be made by the buyers.

4.4.11 The electric-control hydraulic platform and lighting switch install on the far away from 1500mm right inside of front van body.

4.4.12 The hanging ladder install on right inside of front van body.

4.4.13 Top centerline of van body install two pieces of yellow caution lights.

4.4.14 Top switch and emergency stop adopt Al plate, install refrigeration evaporator.

4.4.15 The lifting tail gate install in the rear of trucks for Guangzhou, lifting range is from 0-1500mm. The trucks for Changchun install two pieces of pedals, there are fixed measure on the front and rear of connecting pedals.

4.4.16 The van body keep smooth, the floor thickness is 6mm, higher than 200mm Al plate, it has waterproof and can withstand the design load. Inside of van body is equipped with 25mm-30mm drain holes.

#### 4.5 Front and rear doors of van body

##### 4.5.1 wide-body rolling doors (option)

① Dimension of door: 2180 mm×1960 mm。

② Dimension of rolling door: 2180 mm×1960 mm。

③ The outside is made of aluminum alloy, the inside is filled with insulation material, and the thickness of doors is 35mm。

##### 4.5.2 Narrow-body rolling doors (option)

① Dimension of door: 1400mm×1960mm。

② Dimension of rolling door: 1400mm×1960mm。

③ The outside is made of aluminum alloy, the inside is filled with insulation material, and the thickness of doors is 35mm。

##### 4.5.3 Electric narrow-body rolling doors (option)

① Dimension of door: 1400mm×1960mm。

② Dimension of rolling door: 1400mm×1960mm。

③ The outside is made of aluminum alloy, the inside is filled with insulation material, and the thickness of doors is 35mm。

##### 4.5.4 Sliding doors

① Dimension of door: : 1100mm×1900mm。

② Dimension of sliding door: : 900mm×1900mm。

③ The simple volume of the door device is easy to operate, avoid the possibility that the shutter door suddenly falls and cause the accident, which is more secure than the shutter door。

④ The thickness of door plate is 100mm, the inner layer is filled with flame retardant environmental materials, and the insulation performance is very good。

#### 4.6 Working platform

4.6.1 There are three parts of rear platform with hydraulic drive: fixed one, horizontal one and telescopic one.

4.6.2 As per the requirement of clients, the dimension of platform have the following types:

- ① Fixed dimension (mm) 1400×2480, it can load 1000kg.
- ② Mobile platform (mm) 1120×1200, it can load 400kg, stroke 0~800mm.
- ③ Extensive platform (mm) 1230×1075, stroke 0~600mm.

4.6.3 the platform is equipped with 2 pieces of 55W spot lighting, installed on the both sides of front van body

#### 4.7 Refrigeration system

4.7.1 Equipped with US carrier or thermo king cooling system, it can automatically open/stop and self-inspection.

4.7.2 Refrigeration system form: independence, diesel drive, coupling drive, semi-closed compressor unit, pipe coil evaporator

#### 4.8 Monitoring system

4.8.1 The monitoring system is made of mainframe and camera.

4.8.2 Equipped with 500G hard disc.

4.8.3 It also equip with GPS positioning system.

#### 4.9 Electric system

4.9.1 Install ground operation cabinet on the left truck and set up control box in van body , in the driving cab have safety indicated lights.

4.9.2 Adopt relay logic control circuit.

4.9.3 Set up safety protection for circuit.

4.9.4 Install the indicated light in the driving cab, it can show the change of outriggers.

4.9.5 Set up the emergency quenching circuit and control circuit with emergency electric pump.

4.9.6 Both the relay and switches are imported from Europe and the United States, and the switch is waterproof.

4.9.7 The emergency stop switch (and the indicator light) is installed in the upper right corner of van body ,the emergency stop switch has two levels

4.9.8 The solenoid valve and overflow valve is equipped with emergency button, which can be used to realize the movement of hydraulic cylinder when the solenoid valve is broken.

4.9.9 Attach power switch of emergency electric pump.

#### 4.10 Hydraulic system

4.10.1 The structure is simple and reasonable layout, it adopt Park seamless steel pipe and hose fitting. It has two set of hydraulic system, one is control van body and outriggers; another is control platform scale, it has main power system, electric pump, hand pump, artificial overpower system, it can offer emergency operation.

4.10.2 Main hydraulics is used of American and European brands, the hydraulic reversing valve is

one-piece with hand and electrics. There area filter between hydraulic pump and control valve, every outlet has two-way lockup valve.

4.10.3 The whole lifting weight reach 4000kg, in rated load, lifting speed is 80mm/s-150mm/s, the electric pump for German can lift 4000kg.

4.10.4 Adopt Park hydraulic pipeline and famous hydraulic cylinders

4.10.5 Adopt hydraulic gear pump, its drive by power takeoff.

4.10.6 Adopt I or II class lifting cylinder with chrome layer.

4.10.7 The outriggers adopt "H" type.

4.10.8 Control valve adopt hand and electric magnetic valve.

4.10.9 Equipped with two pieces of operation platform.

4.10.10 The volume is hydraulic oil tank is 100L, oil-box install on hand valve.

4.10.11 Hydraulic system is equipped with pressure gauge.

4.10.12 Hydraulic system is equipped with emergency pump, hand pump.

## 5 Emergency and traction

### 5.1 Electric emergency system

5.1.1 It can operate the lifting and lowing of platform and van body and outriggers.

### 5.2 Manual emergency system

It can make the van body up and down and take back outriggers, completion time is more than 5 minutes.

### 5.3 Traction equipment

The front and rear end vehicle are installed coupling device.

## 6 Safety interlock and other safety devices

### 6.1 Driving cab

6.1.1 Equip with PTO switch and indicator light .

6.1.2 It is equipped with indicator light, which can take back the outriggers

6.1.2 Equip with temperature display of refrigerating unit and temperature control panel

6.1.3 Install the display screen of monitor system

6.1.4 As per requirement of clients, it can equip with the necessary switches

### 6.2 Ground operation box

6.2.1 The operation box is located in the left outrigger.

6.2.2 Should equip with button of outriggers and van body, power switch, lighting switch, emergency electric pump switch, stop button, indicator light.

### 6.3 Control box for van body

6.3.1 The operation box is located at the right side of van body.

6.3.2 The van body should be settled up the button of extensive and movable platform, van body, emergency pump, stop button, engine switch, lighting switch and power indicator lights

### 6.4 Safety interlock

6.4.1 When PTO is workable, if the transmission put into gear, the vehicle can't be moved.

6.4.2 If the supporting legs can't back to the original location, the vehicle can't be moved.

- 6.4.3 When the van body lifting, will sent sound and light alarm
- 6.4.4 If the van body can't back to the original location, the outriggers can't be taken back.
- 6.4.5 If extensive platform can't back to the original location, the van body can't be lowed down.
- 6.4.6 When reversing, should equip with audible warning signal。
- 6.4.7 Should equip with joint control button
- 6.4.8 If the supporting legs can't back to the original location, the van body can't be lifted.
- 6.4.9 The rubber-sleeve of front platform install proximity switch, sensing distance is 100mm
- 6.4.10 The internal and external van body control interlock device of its lifting.

6.5 Other safety devices

- 6.5.1 Equip with two pieces of 55W spot lightings, and install on the both sides of van body (option)
- 6.5.2 The rear of the vehicle is fitted with a collision tube, the thickness is 10mm、the length is 850mm。
- 6.5.3 There is a mechanical safety brace at the rear end of the van body。
- 6.5.4 As per the customer' s request, it can equip with crash barrier on air condition (option)
- 6.5.5 As per the customer' s request, it can equip with crash barrier on hydraulic system (option)
- 6.5.6 As per the customer' s request, it can equip with protective cover on hydraulic outriggers

(option)

7 Configuration table

No.	Name	Configuration	Option	Note
1	Chassis	<input type="checkbox"/> ISUZU QL1160AQFRY	<input type="checkbox"/> ISUZU QL1180XQFRY	
		6HK1-TCNG40, China 4 emission	6HK1-TCL, China 5 emission	
2	Transmission	<input type="checkbox"/> ISUZU MLD-6Q Manual	<input type="checkbox"/> Allison2500 Automatic	
3	Tire	<input type="checkbox"/> 9.00-20-16PR	<input type="checkbox"/> 10R22.5	
4	PTO	<input type="checkbox"/> KRT350R-002	<input type="checkbox"/> 271GBHVP-D5XY	
5	Oil pump	<input type="checkbox"/> CBN-F63-BFHL	<input type="checkbox"/> P51A442BE3015-99	
6	Electric emergency pump	800601632		
7	Manual emergency pump	PMO 50 e-s		
8	Refrigeration unit	<input type="checkbox"/> Carrier 750S	<input type="checkbox"/> carrier850S	
			<input type="checkbox"/> carrier850U	
			<input type="checkbox"/> Thermo king UT1200	
			<input type="checkbox"/> Thermo king UT1200X	

No.	Name	Configuration	Option	Note
9	Location of refrigeration unit	<input type="checkbox"/> beside of manual driver	<input type="checkbox"/> beside of manual driver	
			<input type="checkbox"/> beside of auto driver	
			<input type="checkbox"/> beside of auto second driver	
10	Guardrail of refrigeration unit	<input type="checkbox"/> No	<input type="checkbox"/> Yes	option
11	Guardrail of hydraulic system	<input type="checkbox"/> No	<input type="checkbox"/> Yes	option
12	Length of Van body	<input type="checkbox"/> 7.2meters	<input type="checkbox"/> 7.5meters	
13	Van body door	<input type="checkbox"/> sliding doors	<input type="checkbox"/> Rolling doors	
			<input type="checkbox"/> Rolling doors	
14	thickness of figured aluminum sheet	<input type="checkbox"/> figured aluminum sheet , thickness 5mm	<input type="checkbox"/> figured aluminum sheet, thickness is 6mm	
			<input type="checkbox"/> figured aluminum sheet, thickness is 8mm	
15	Height of edge folded for aluminum sheet	<input type="checkbox"/> 125mm	<input type="checkbox"/> 200mm	
16	Lighting for van body	<input type="checkbox"/> 4 pieces	<input type="checkbox"/> 5 pieces	
			<input type="checkbox"/> 6 pieces	
			<input type="checkbox"/> 7 pieces	
			<input type="checkbox"/> 8 pieces	
17	Fixed platform	<input type="checkbox"/> the length of fixed platform is 1.4meters	<input type="checkbox"/> the length of fixed platform is 1.4meters 1.2meters	
			<input type="checkbox"/> the length of fixed platform is 1.4meters 1.6 meters	
			<input type="checkbox"/> the length of fixed platform is 1.4meters 1.7 meters	
			<input type="checkbox"/> the length of fixed platform is 1.4meters 1.9 meters	



No.	Name	Configuration	Option	Note
18	Stoke of extensive platform	<input type="checkbox"/> 0~500mm	<input type="checkbox"/> 0~600mm	
19	Mobile mode	<input type="checkbox"/> Hydraulic cylinder	<input type="checkbox"/> Electric pushing-rod	
20	Anti-collision tube for extensive platform	<input type="checkbox"/> Black	<input type="checkbox"/> black D type	
21	Protective screening	<input type="checkbox"/> no	<input type="checkbox"/> yes	
22	thickness of figured Al sheet	<input type="checkbox"/> 5mm	<input type="checkbox"/> 6mm	
			<input type="checkbox"/> 8mm	
23	Ladder stand	<input type="checkbox"/>	<input type="checkbox"/>	
24	canopy	<input type="checkbox"/> No	<input type="checkbox"/> YES	
25 s	Hydraulic system	<input type="checkbox"/> Yuken	<input type="checkbox"/> ARGO	
			<input type="checkbox"/> ATOS	
26	Monitor system	<input type="checkbox"/> no	<input type="checkbox"/> Yes	
27	Radar	<input type="checkbox"/> NO	<input type="checkbox"/> yes, Qty2	
			<input type="checkbox"/> yes, Qty4	
			<input type="checkbox"/> yes, Qty6	
28	Wheel chock	<input type="checkbox"/> Qty1	<input type="checkbox"/> with stem	
			<input type="checkbox"/> no stem	
			<input type="checkbox"/> with stem	
			<input type="checkbox"/> wheel shock	
29	power switch for air condition	<input type="checkbox"/> no	<input type="checkbox"/> yes	option
30	power switch for Electric emergency pump	<input type="checkbox"/> no	<input type="checkbox"/> yes	option
31	8kg fire extinguisher	<input type="checkbox"/> Qty1	<input type="checkbox"/> Qty2	
32	Speak-phone	<input type="checkbox"/> no	<input type="checkbox"/> yes	option

No.	Name	Configuration	Option	Note
33	Structure mode for outrigger	<input type="checkbox"/> H type	<input type="checkbox"/> extensive	
34	GPS system	<input type="checkbox"/> no	<input type="checkbox"/> yes	option
35	Diesel heating system	<input type="checkbox"/> no	<input type="checkbox"/> yes	option
36	Paint color			
37	top van body	<input type="checkbox"/> white	<input type="checkbox"/> yellow	
38	top drive cab	<input type="checkbox"/> yellow	<input type="checkbox"/> white	
39	Ladder stand	<input type="checkbox"/> white	<input type="checkbox"/> yellow	
40	platform	<input type="checkbox"/>	<input type="checkbox"/> white <input type="checkbox"/> yellow	
41	canopy	<input type="checkbox"/>	<input type="checkbox"/> yellow	