

## WP400 TECHNICAL SPECIFICATIONS



	<b>Isuzu NPR400 Smoother</b>	<b>Isuzu NPR400</b>
<b>ENGINE</b>		
Type	Turbo Intercooled	Turbo Intercooled
Design	4 Cylinder Common Rail	4 Cylinder Common Rail
Displacement	5 193 cc	5 193 cc
Maximum power	110kW @ 2 600 rpm	110kW @ 2 600 rpm
Maximum torque	404 Nm 1 500 rpm	404 Nm 1 500 rpm
Fuel type	Diesel	Diesel
Cooling	Liquid, pump driven circulation	Liquid, pump driven circulation
<b>MAIN TRANSMISSION</b>		
Type	Isuzu MYY6S AMT ASR	Isuzu MYY6S ASR
Number of gear	6 Forward and 1 reverse	6 Forward and 1 reverse
<b>REAR AXLE</b>		
Maximum load	5 000 kg	5 000 kg
<b>FRONT AXLE</b>		
Maximum load	2 900 kg	2 900 kg
<b>STEERING BOX</b>		
Type	Power assisted	Power assisted
<b>BRAKES</b>		
Front and rear	Drums / Hydraulic Brake Booster ABS	Drums / Hydraulic Brake Booster ABS
Parking brake	Mechanical	Mechanical
Auxiliary	Exhaust	Exhaust
<b>SUSPENSION</b>		
Type	Beam axles with leave spring	Beam axles with leave spring
Springs	Semi-elliptic steel leave springs Front Tortion Bar Single action telescopic	Semi-elliptic steel leave springs Front Tortion Bar Single action telescopic
Shock absorbers		
<b>WHEEL BASE</b>		
Wheel base	3 100 mm	3 100 mm
Turning circle	12.6 m	12.6 m
Track width front	1 680 mm	1 680 mm
Track width rear	1 650 mm	1 650 mm
<b>ELECTRICAL SYSTEM</b>		
Battery	2 x 12V 70 Ah - 24V	2 x 12V 70 Ah - 24V
<b>FUEL CAPACITY</b>		
Tank	100 litres	100 litres
<b>VEHICLE DIMENSIONS</b>		
Overall length	5 582 mm	5 582 mm
Body width	2 127 mm	2 127 mm
Overall height	2 145 mm	2 145 mm
Ground clearance	210 mm	210 mm
Approach angle	18°	18°
Departure angle	20°	20°
<b>VEHICLE MASS</b>		
Tare Mass	6 180 kg	6 180 kg
Gross vehicle mass	7 500kg	7 500 kg
<b>VEHICLE PERFORMANCE</b>		
Maximum speed	120+ km/h	120+ km/h
Fuel range	500+ km	500+ km
Grade ability	32 %	32 %
<b>VAULT CAPACITY</b>	4.3m <sup>3</sup> L1476 X W2907 X H1391	4.3m <sup>3</sup> L1476 X W2907 X H1391

### BALLISTIC PROTECTION LEVEL

R4 5.56 x 45mm ball at 30m  
Standard M16, 5.56 x 45mm ball at 30m  
Stanag 4569 Level 1

**Note** : Details and specifications are subject to change without prior notice.



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# WP400

## FULL SPECIFICATIONS



**ISUZU**  
TRUCKS  
For the long run

## CASH IN TRANSIT WP400





## INTRODUCTION

The WP400 was designed and built in the Republic of South Africa.

The vehicle was specifically developed for the ever increasing need for a modular purpose ballistically protected vehicle for the local as well as international Cash in Transit market.

The performance of the new Isuzu chassis with the new WP400 capsule with its spacious interior allows the vehicle to compete with much larger vehicles at a lower cost while still remaining competitive with the smaller vehicles. ISUZU's service and spares infrastructure offers efficient service and parts availability, linked to their proven drive line components.

Utilizing a Isuzu's chassis and **TFM**'s monocoque body, the modular design lends itself to a wide application in the protection of assets and personnel. Various armour options and layouts are also available to cater for various operational requirements in the commercial armour market.

**The critical performance criteria in the development of the WP400 covered some of the following:**

### Reliability:

The CIT Industry is one that requires a high kilometer travelled capability with minimal operational down time. Linked to this operation costs should be as low as possible (cents per kilometer). This was an element in choosing the Isuzu chassis. The choice of the chassis was based on Isuzu's experience in similar high cycle industries with this vehicle range.

### Other important criteria improvements:

- Elegant appearance.
- Improved ballistic protection.
- Shorter nose to allow for easier manoeuvrability through traffic.
- Shorter over all length allows for easy maneuverability in confined spaces such as shopping malls.
- Improved interior ergonomics to make the driver and crew more comfortable.
- Improved driver visibility, with the various changes to the window layout.
- Accessible engine compartment to reduce servicing cost and to make maintenance easier.
- Larger vault and more spacious interior.
- Single fiber glass bonnet that is easily replaceable to reduce down time after accidents.

### Other important criteria in choosing Isuzu to partner the project were:

- Euro II common rail diesel engine.
- ABS braking system to ensure better handling during braking.
- Engine performance, which is required during long runs.
- Standard automatic transmission option, which reduces running cost, it also makes the vehicle easier to drive in traffic.
- Original manufacture commitment to support the vehicles through national dealer network, with a full 2 year unlimited kilometers OEM warranty on the full vehicle.
- Price acceptance of the donor drive train.
- Well balanced loading on the axles for an armoured vehicle.

### Ballistic capability

When procuring armoured vehicles with a capital write off life of between 5 and 7 years, serious considerations must be given to potential growth in Ballistic Protection as threat levels increase. The level chosen must offer effective protection of personnel and the asset transported over this capital write off period.

It was for this reason that **TFM** decided to use the Stanag specification which gives protection against 5.56 x 45mm. The impact velocities @ zero degree are 940 to 960 meters per second at target.

Our cash in transit industry has shown that the threat level of AK47 is short lived. M16 and R4 became the threat level soon after some of our competitors had marketed their up-armoured cabs on CIT vehicles.



Although the WP400 does offer protection from side blast and Standard hand grenade under the floor. It is not designed as a mine resistant vehicle. The exact blast requirement needs to be specified before we can confirm acceptance should this be a requirement.

### Capsule life cycle cost

The WP400 is designed to be up-gradeable. In real terms the operational life of the chassis dependant on distance travelled would be between 5 and 7 years. Once this target life is achieved, the entire capsule can be removed from the original chassis and be re-mounted on a new chassis.

The hull is currently fully interchangeable with at least 3 different OEM's chassis with small modifications that need to be done on the inside to allow for the alternative models of chassis. This opportunity offers savings on fleet replacement of up to 2 thirds of the purchase price. This ability reduces future capital outlays. The upgrading advantage can be carried out many times in the life of the capsule.

### Ballistic up-grade ability

As and when the threat level moves to Armour Piercing ( API). The WP400 is up gradeable. The unit is already designed to allow the current capsule to be mounted on the heavier chassis and drive train, which will allow for the additional appliqué armour, which can be fitted to the existing capsule. The major advantage is again cost containment.

### Standard configuration

The WP400 offers variants of the interior lay out.

### Standard features offered in the design :

- Single entry to minimize compromising of the vault area in the event of an attack or an optional multi door entry is available.
- Single entry door, pneumatically opened by the driver by means of an air cylinder linked to specific software housed in the vault area.
- Interlocking is pneumatically operated between the outside door and the vault door. As such the vault cannot be opened if the side door is open.
- In addition both the main door and vault door are equipped with a manual safety lock.
- The standard unit can be fitted with run flat tyre system which allows the vehicle to be driven with deflated tyres.
- 12kW air-conditioning system is standard to the driver and crew area.
- Internals are lined with durable heavy duty carpeting.
- Two escape hatches are positioned in the capsule roof.
- Electric rear mirrors are standard.
- Six concealed gun ports are positioned strategically to give 360 degrees field of fire.
- A drivers parcel port.
- All seat are equipped with 4 point safety harness.
- Two fire extinguisher are fitted as standard.
- The entrance gives a working height of 1,7 m to allow easy handling of cash canisters into the vault area.
- A standard FM radio and CD player are fitted as standard.
- Additional lighting is offered as standard to the drivers and crew area as well as the vault.
- Three weapon holders are fitted into the capsule.
- Seating options for up to 4 crew plus a driver.
- Total pay load is 1.4 ton.
- Ballistic glass is Resisto-lite 33 mm fully gasketed with an inside anti- spaulding layer.
- Front spot lights are fitted in the front bumper.

### Other optional extras :

- Pepper gas & fire suppression systems.
- PUDU (Poly urethane dispenser) positioned in the vault operated by the driver or by a tilt sensor in the control unit to protect the asset if under attack.
- Automatic tyre inflation systems.
- CCTV/DVR camera systems.
- Satellite tracking systems.
- Interfaces can be supplied to allow fitment of specific drop safes, CAT III safe options & Mini vaults.
- Biometric fingerprint readers to gain access to vault area & remote control and updates of vehicle sub systems.
- Four working lights are fitted to the rear side and back of the vehicle.