



**IG ZENITH SDN BHD** (480123-H)  
 Lot 6975, Kawasan Perindustrian Balakong Jaya 2,  
 43300 Mukim Kajang, Selangor Darul Ehsan, Malaysia  
 Tel: +603 8962 1060/1 Fax: +603 8962 1062  
 Email: info@ze.com.sg Website: www.ze.com.sg

**SALES QUOTATION**

**Galaxy Aerospace (M) Sdn. Bhd.**  
 Suite 11-14, Helicopter Centre,  
 Malaysia International Aerospace Centre,  
 Sultan Abdul Aziz Shah Airport,  
 47200 Subang, Selangor,  
 Malaysia

Ref : SA200099RM rev 1  
 Date : 15/02/2021  
 Tel : +603 7734 7226  
 Fax : +603 7734 7526

**Attention: Mr. Fazrul / Mr. Rahman / Mr. Yap**

**ZENITH Helicopter Refueler**

We are pleased to submit our quotation as follows;

S/N	Description	Qty	Unit Price	Total Amount
1	To design & supply 14,000 liters aluminum tank barrel mounted onto HINO FL8JW1A (GVW 25,000kgs) rigid 6x2 chassis come with Proflo Industries' 100GPM fuel dispensing system	1	RM 1,400,000.00	RM 1,400,000.00
2	Spare parts package for refueler module (see attached spart part list @ technical specifications sheet)	1	6,000.00	6,000.00

**All the above prices are inclusive 10% SST, Ex- factory Balakong.**

**Terms & Conditions:**

- Price : In Malaysia Ringgit **inclusive** of chassis, PTO, tank, refuel system & piping, JPJ drawing approval, Puspakom inspection, JPJ registration, testing & commissioning at Sabah BUT **excluding** APAD permit (if required), road tax, Insurance and other charges/items not mentioned above.
- Payment : **30% deposit upon order,**  
**25% upon arrival of refuel module system to IGZE**  
**25% upon pre-delivery inspection with client & Navy reps at IGZE**  
**20% upon arrival of tanker to Kota Kinabalu Navy base (before commencing of commissioning)**
- Delivery : Pre-delivery inspection targeted on 3<sup>rd</sup> week Oct 2021 ex-factory Balakong, subject to any unforeseen changes
- Validity : 1 month
- Warranty : **1 year limited warranty on manufacturer defects from date of delivery; to be covered by Banker's Guarantee of 5% contract value for the duration of warranty. [Click here to view warranty T&C](#)**
- Remarks : - Deposit to be paid in two halves, 1<sup>st</sup> half by End Feb 2021, 2<sup>nd</sup> half by Mid March 2021.  
 - All invoices payable 2 weeks from date of issue  
 - Please see attached technical specifications for full details of tanker

*Ramesh*

**Prepared by:**  
**Ramesh Sugan**  
**Sales & Project Engineer**  
**+6012-3197475**

**Confirmed & Accepted By:**  
**Galaxy Aerospace (M) Sdn. Bhd.**  
**Name:**  
**Date:**



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**TECHNICAL SPECIFICATIONS OF HELICOPTER REFUELER**  
**14,000 LITERS Single-compartment Elliptical Aluminum Rigid Tanker with Proflo Industries' 100GPM Refuel Module mounted onto HINO FL8J rigid 6x2 chassis (GVW 25,000kg)**

**1) TANK BARREL & ACCESSORIES SPECIFICATIONS**

Chassis make & model	:	<b>HINO FL8JW1A (6x2 chassis)</b> – approx. wheelbase 5450mm
Rated GVW	:	<b>25,000 kg</b>
Tanker body type	:	Rigid tanker type
Tank Barrel Section	:	Elliptical single walled tank barrel
Tank barrel material	:	<b>Aluminum</b>
Tank heads type	:	Dished heads
Tank barrel thickness	:	<b>Tank shell : min. 5mm</b> <b>Dished heads: min. 7mm</b>
Tank volume	:	<b>14,000 liters inclusive 5% ullage</b>
Payload type	:	<b>Jet A1 fuel</b>
Fuel payload	:	<b>Approx. 11,200 kg (based on density of Jet A1 of 0.8kg/L)</b>
Compartmentation	:	One (1) compartment
Hydrotest pressure	:	5psi
Manhole	:	2 unit 20" CIVACON manhole covers with fill/emergency vapor vents & pressure vacuum valves.
Baffle plate	:	Min. 1 unit internal baffle plate
Vapor vent	:	Sequential type pneumatic control air vent incorporated on manhole covers
Emergency Bottom Valves	:	Pneumatic controlled emergency valve, flanged coupling to discharge pipe
Piping	:	Stainless steel piping from tank barrel to refuel module system
Control system	:	Pneumatic type control system to provide air to vapor vents, emergency foot valves & emergency cut off switches
Ladder	:	Detachable, aluminum fabrication rung with 12" distance between rung mounted at back of tanker with minimum 130mm toehold clearance
Hose carriers	:	2 nos. hose carriers (round tube) to fit 4" x 5m long fuel delivery hoses
Rear bumper / Under run	:	Mild steel heavy duty rear bumper in accordance to local authorities regulations
Earthing	:	1 unit bonding reel installed together with the refueling module
Hazchem signage	:	3 sets of Hazchem stickers on both sides of tanker and rear of tanker
Mudguard	:	Heavy duty plastic mudguards on rear axles
Electrical lightings	:	LED side markers on tank sides, and rear brake lights in accordance to JPJ standards 2 nos. working lamps on refueling area for night operations 1 nos. LED beacon light (amber color) on tank top
Fire extinguishers	:	2 units BOMBA certified 9kg ABC fire extinguishers located at each side of tanker



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Fire shield	:	1 unit aluminum fabricated fire shield at rear of truck cab
Battery cut off	:	1 unit master truck battery cut off switch
Painting	:	Painting on the external of tank barrel, refuel module & truck cabin. Truck will be painted with epoxy primer coating & polyurethane finish paint and as per Navy color scheme
Logo & decals	:	Standard reflective decals as per JPJ requirement, and Navy logo decals on tanker

## 2) REFUELER MODULE SPECIFICATIONS

Manufacturer	:	<b>Proflo Industries, USA</b>
Type of module	:	NFPA 407 Compliant Module with 100USGPM Dispensing System
Dispense rate	:	<b>100 USGPM (approx. 378 liters/min)</b>
Module material of construction	:	Stainless steel
Configuration of module	:	Left hand side of tanker (LHS)
Fuel dispense pump	:	<b>“Blackmer” TXD 2.5A positive displacement pump come with bypass valve</b>
Hose reel type	:	Single wrap hose reel with electric rewind function
Fueling hose type	:	<b>50 ft fuel house come with test certificates</b>
Overwing fueling	:	Overwing nozzle for jet service with swivel inlet, 100-Mesh strainer, Dust cap & Grounding cable
Underwing fueling	:	Underwing nozzle with 45-psi HECV, swivel inlet, 100-Mesh strainer & Dust cap
Quick nozzle change	:	Drybreak installed to facilitate quick nozzle changes
Nozzle holders	:	Brake interlocked nozzle holders
Shut off valves	:	Shut off valves at hose reels & inlet of filter vessel
Filter separator vessel	:	<b>ASME Latest Edition filter separator vessel with air eliminator, pressure relief valves, automatic water defense &amp; spring loaded drain valves</b>
Filter elements	:	<b>Cat. M elements for Jet A1 (Rated at 100USGPM)</b>
Deadman valve	:	1 unit in line deadman valve with electronic controls & deadman timer
Metering system	:	<b>“Total Control Systems” 700-20SPA Positive displacement meter with electronic register head to read in gallons or liters</b>
Control panel	:	Stainless steel control panel with: <ul style="list-style-type: none"> <li>• nozzle pressure gauges,</li> <li>• pump pressure gauge,</li> <li>• differential pressure gauge,</li> <li>• interlock status lights,</li> <li>• In/out Millipore fittings</li> <li>• Etched operation instructions &amp; flow diagram</li> </ul>
Interlock system	:	Refueling module to interlock with truck chassis brake system
Lighting system	:	Full LED lighting system with rotating beacon light & interlock indication lights in driver’s cabin
Loading system	:	Bottom loading system with pre-check & high level shut off configured for driver’s side of unit
Electrical system	:	<b>24V pre wired electrical junction box</b>



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Tank Level system	:	<b>Ultrasonic tank level system supplied for tank barrel (serves as secondary high level shut off as per JIG and NFPA 407 latest edition)</b>
Defuel system	:	Pneumatic controlled defuel system operated via control panel
Product recovery system	:	Product recovery tank with 10* fill lid, contents gauge, spring loaded drain, vent, high level shut off, and indication light
Visual sampling system	:	4-liters Visual sampler with LED lighting
Warranty	:	Proflo Industries' & IG Zenith 1 year warranty on components & workmanship for refueler module & tank barrel HINO Malaysia 2 years warranty (unlimited mileage) for truck chassis

**RECOMMENDED SPARE PARTS LIST (Refueler Module)**

**Quantity: 1 set / 1 unit each item below**

1. Single Point Nozzle rebuild Kit
2. Meter Packing Gland
3. 24V DC Solenoid Valve
4. Interlock Proximity Switch
5. Bottom Load Dust Cap
6. Underwing Dust Cap
7. Overwing Dust Cap
8. 50A Hose Reel Breaker
9. Re-Settable Breaker Kit
10. Flange Gasket Kit
11. Deadman Handle
12. Diode Kit
13. Camlock Fitting Kit
14. 3/4" Spring Loaded Drain Valve
15. Static Grounding Reel Clamp
16. EFSO Switch