



Appendix I: TECHNICAL SPECIFICATIONS

INVITATION TO BID / TENDER No: 2019/FAAFG/FAAFG/101555

VENDORS MUST INDICATE COMPLIANCE OF THE GOODS OFFERED WITH THE FOLLOWING TECHNICAL SPECIFICATIONS.

REQUIRED TECHNICAL SPECIFICATIONS		TECHNICAL SPECIFICATIONS OFFERED	
		PLEASE USE THE SPACES BELOW TO SPECIFY THE EQUIPMENT BEING OFFERED FOR THE OFFER TO BE VALID	
Item Name: Laser Leveller/Laser Levelling		Unit	
Description and purpose of the item: In surveying and construction, the laser level is a control tool consisting of a laser beam projector that can be affixed to a tripod. The tool is levelled according to the accuracy of the device and projects a fixed red or green beam about the horizontal and/or vertical axis. A laser-controlled land levelling system consists of the following five major components: 1-Drag Scraper/Bucket, 2-Laser transmitter, 3-Laser Receiver, 4-Control Box, 5-Hydraulic System.		Total quantity required	
		Total quantity offered	
		Make/brand and model of Item	
		Name and address of the manufacturer of Item	
1.0	Technical Specifications: General		
1.1	Wavelength	635mm (Laser Diode) visible	
1.2	Laser Output	2.4mW	
1.3	Laser Class	CDRH (FDA) Class IIIa, IEC Class 3R	
1.4	Automatic Correction Range	±5°	
1.5	Accuracy	±10" (1mm/20m)	
1.6	Manual Slope Settable range	±5° (When the instrument is installed on the 0° surface). The slope range is increased or decreased according to the tilt of the surface on which the instrument is installed	
1.7	Rotation Speed	600 r.p.m	
1.8	Range	Diameter Approx. 2m to 800m (When using LS-80L)	
1.9	Power Supply	4 x D size dry cell batteries (alkaline)*1 or Ni-MH battery pack BT-74Q (7000mAh)	
1.10	Charging Time	Approx. 13 hours (Using with AD-15)	



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, FAO REPRESENTATION IN AFGHANISTAN

1.11	Operating Time at 68°F (20°C)	Approx. 100 hours (Using with alkaline manganese dry battery Approx. 60 hours (Using with Ni-MH battery pack BT-74Q)	
1.12	Ingress Protection	IP66	
1.13	Operating Temperature	-20°C to +50°C (-4°F to +122°F)	
1.14	Storage Temperature	-30°C to +60°C (-22°F to +144°F)	
1.15	Dimensions	177(L)x196(W)x217(H)mm (7.0 x 7.7 x 8.5 in)	
1.16	Weight	2.4kg [5.3 lbs] (Including dry cell batteries) 2.6kg [5.7 lbs] (Including BT-74Q)	
1.17	Beam detection window	50mm (2.0 in)	
1.18	Beam detection precision	High precision: ±1mm (±0.04 in)/Normal precision: ±2mm (±0.08 in)	
1.19	Beam detection indication	Liquid crystal (both sides) and buzzer	
1.20	Power source	2 x AA size dry cell batteries	
1.21	Operating time:	Approx. 120 hours at +20°C (+68°F) (Using alkaline manganese dry cell batteries)	
1.22	Auto shut-off delay	Approx. 30 minutes without beam detection	
1.23	Protection against water and dust	IP66 (Based on the standard IEC60529)	
1.24	Operating temperature	-20°C to +50°C (-4°F to +122°F)	
1.25	Storage temperature	-30°C to +60°C (-22°F to +140°F)	
1.26	Dimensions	146(L)x76(W)x26(H)mm (5.7x2.9x1.0 in)	
1.27	Weight	0.19 kg [0.41 lbs] (including dry cell batteries)	
2.0	Material Specifications (Bucket)		
2.1	Body made from 2440x720x8mm M.S sheet.	Reinforce at top with Z-type sheet made from 2440x440x8mm M.S sheet.	
2.2	Side Walls (internal); 02 Nos.710x250x10mm	M.S sheet Welded to bucket body.	
2.3	Internal Side Wall: Reinforced at front with 670x605 mm L-key bend.		
2.4	Adjustable side walls (External); 2 Nos, 550x130x10 mm M.S sheet bolted with external side walls adjustable according to scraper angle.		
2.5	Braces 02 Nos, 690x50x10mm M.S flat bolted to external wall and bucked.		
2.6	Cutting Edge Reversible Double Side edge: 2430x150x16-20 mm SAE 1045-1050 with 8 bolts.		
3.0	Draw Bar		



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, FAO REPRESENTATION IN AFGHANISTAN

3.1	Pipe: 2060 long. 160-180mm outer dia M.S pipe of 8 mm wall thickness. Pipe ends closed with 170x170x20 mm M.S plates.	
3.2	02 Nos, 280x130x15 mm M.S Plates reinforced with 02 Nos. 300x90x15mm M.S plates.	
3.3	Hook. Forged steel 400mm long hook outer dia 120mm, inner hole 55mm. pin dia 35 mm outer pipe dia 80 wall thickness 8mm welded to 02 Nos M.S plate 200x130x10 mm.	
4.0	Diagonal Links	
4.1	Eye all screws 02 Nos left hand threads 38mm dia 02 Nos. right hand threads 38mm dia.	
4.2	Pipe 02 Nos 6 mm wall thickness 1550 mm long outer dia 700-720 mm including eye ball and screw. Eye balls 04 Nos.	
4.3	Pins 04 Nos. 150mm M.S round with safety pins links Brackets (on pipe) upper plate welded to draw bar pipe 02 Nos. 152x100x15 mm M.S lower plate 01 Nos. 390x110x15mm M.S with pin holes.	
4.4	Links Brackets (on bucket) 04 Nos welded to the bucket plate and side walls 130x110x15mm M.S plates with pin holes.	
4.5	Tow bar coupling 02 Nos .M.S plates welded to pipe 500x150 x10 mm.	
4.6	Attachment 02 Nos .M.S plates welded to bucket body 550x250x10 mm with adjustable tow bar height, 04 Nos bolts 30 mm dia 02 Nos. Reinforcement plates 550x100x10 mm from lower side.	
4.7	01 No, 300x230x6 mm M.S plate welded at bucket base for reinforcement of above plate 02 No . Reinforcement plates 750x100x10 mm at top	
5.0	Hydraulic Assembly	
5.1	Mast (Attachment Base) M.S pipe 1000 mm long. 100 mm outer dia 5 mm wall thickness with quick lock at top for rigid mast.	
5.2	Foundation inverted U type 280x250x10mm welded to bucked M.S	
5.3	By screw axis receiver Increment/Decrement.	
5.4	Hydraulic jack frame 02 Nos. 850x100x20mm M.S flat L -shaped or angle that makes right position	
5.5	Of jack welded reinforcement sheet at centre. 01 No bolt/pin 200mm long. 28 mm dia. with spacer pipe 02 No .300x100x20mm M.S flat welded in line with above two pieces below Z reinforcement sheet along bucket curve .02NOS ,200x160x20 mm M.S.plate welded to 400x190x8 mm M.S plate and welded to H-shape.	
5.6	Hydraulic jack 01 No .470mm long .100 mm outer dia	



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, FAO REPRESENTATION IN AFGHANISTAN

5.7	Piston dia 40mm double acting with two jack pins 140mm long .25-32 mm dia M.S round	
5.8	02.Nos, 1000 mm long and dia 24-28 mm, hydraulic pipe .02 Nos. 3500-4000 mm long , dia 24-28mm ,hydraulic pipe connect to jack and tractor.	
5.9	H-frame boxes 02 No .200×200×6-7mm M.S sheet .800 mm long ends closed with 04 No .200×200×8 mm M.S sheet 01 No. Box 200×200×6-7 mm M.S sheet .800mm long. 02,Nos .500×240×10 mm M.S plate bolted with axle and welded to H-frame 01 Nos, Axle, 2300 mm long outer dia 65mm. 02, Nos .hab with 6 bolt .04 Nos .ball bearing connect to axle. 04 , Nos wheel 6-bolte 15 and 04.Nos. tire	
6.0	Training and Operator Manuals:	
4.1	One-day of training must be provided to the operators at delivery including operation and maintenance of the machine. OK	
4.2	Operator's handbook in English and/or local language for each unit OK	
7.0	Spare Parts:	
5.1	A list of manufacturer's recommended, fast-moving spare parts sufficient for 1 year of operation must be submitted for each machine. The list must be individually itemised, costed and submitted with your bid.	
6.0	After Sales Service:	
6.1	Supply name, address and Tel./Fax number of your company and also of your service agents in Afghanistan.	
6.2	State who will be responsible for undertaking the pre-delivery inspection of your equipment upon arrival.	
6.3	A clear statement is required with your bid of the terms and conditions of the product after sales service that will be available with the goods offered.	
6.4	The bid price must include the cost of delivery and installation	
7.0	Warranty:	



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, FAO REPRESENTATION IN AFGHANISTAN

7.1	<p>A clear and comprehensive statement is required with your bid of the terms and conditions of the product warranty that will be available with the goods offered. Minimum one-year warranty.</p> <p>Warranty certificate:</p> <p>a. Supplier shall issue certificate of warranty inclusive to labour and spare parts, warranty card (pre- numbered by the manufacturer): prime mover/engine and spare parts – at least six months;</p> <p>b. Warranty period shall start a day after the unit has been accepted base in the certificate of acceptance.</p>	
8.	Goods not meeting specifications:	
	<p>a) Upon delivery and inspection, if the goods do not meet the technical specification quoted, the Supplier will be responsible for the cost of taking back such items;</p> <p>b) The item not meeting technical specifications will be replaced and delivered within a period of two weeks' time.</p>	

FAILURE TO COMPLY WITH REQUIREMENTS 1 to 3 STATED BELOW WILL RESULT IN YOUR BID BEING REJECTED

1. You **must complete all the empty spaces** in the technical specification sheet to confirm your specifications being offered.
2. Your bid **must include a manufacturer's brochure** or leaflet describing the equipment being offered to enable your specifications to be verified.
3. All brochures and leaflets submitted **must** be written in the English language or a translation into the English language.



Appendix II: FINANCIAL OFFER

#	Item description	Delivery location		Qty (each)	Qty Offered (each)	Unit Price FCA (in US\$*)	Total Cost FCA (in US\$*)	Total Freight Cost / (in US\$*)	Total Insurance Cost (in US\$*)	Total Cost DAP (in US\$*)	Delivery Time (specify in calendar days)	Delivery Mode
		Province	district									
					(1)	(2)	(3) = (1) x (2)	(4)	(5)	(6) = (3) + (4)+(5)		
1	Laser Leveler	Herat	Herat City	5								
TOTAL:												

* If the quote is in a different currency than specified here, FAO will convert prices for the commercial evaluation to the requested currency using the official UN exchange rate corresponding to the date of the offer.

NOTE regarding arithmetical errors and discrepancies:

- If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the total price will be corrected, unless in the opinion of evaluators, there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted will govern and the unit price will be corrected.
- If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals will prevail and the total will be corrected.
- In case of discrepancy between a word and figures, the amount in words will prevail, unless the amount expressed in words is related to an arithmetical error, in which case the amount in figures will prevail subject to the note above.