

## 1. Project background and motivation

We was informed via e-mail about the present project, which is located in Iran. No further details have been provided.

The process was described as:

- P<sub>80</sub>: 75µm
- Feed flowrate: 100m<sup>3</sup>/h

Due to national regulations, it was requested that the cell bodies shall be produced in country, whilst the remaining parts are manufactured in Germany.

We agreed to proceed by supplying the engineering and drawings of the cells.

The cell sizes were selected by the client. These have not yet been designed by us. Therefore, we will begin generating the drawings for fabrication once the project is approved by the client.

## 2. Scope of Supply

Following the description above, we will supply:

Imhoflot circuit 1	
<b>Cell Body</b>	
Size	VM24 (ø2.4m)
Quantity	11
Fabrication	Drawings and Engineering – no manufacturing
<b>Aerator and distributor</b>	
Type	SAA350
Fabrication	Germany

<b>Imhoflot circuit 2</b>	
<b>Cell Body</b>	
<b>Size</b>	VM12 (ø1.2m)
<b>Quantity</b>	9
<b>Fabrication</b>	Drawings and Engineering – no manufacturing by Maelgwyn
<b>Aerator and distributor</b>	
<b>Type</b>	SAA280
<b>Fabrication</b>	Germany
<b>Instruments</b>	<b>See Section 5</b>

The Imhoflot aerator is Self-Aspirated and does not require forced air intake.

It is estimated that a 3-week commissioning period is suitable for this project:

- 5 Days – Site installation, site integration, Cold Commissioning
- 14 Days – Hot Commissioning, Training and Test work (optional)

### 2.1. General Arrangement

Find below an isometric view of the items supplied from Germany.





AY DIŞ TİCARET

A YÜZER OTOMOTİV DIŞ TİCARET İTHALAT İHRACAT LTD. ŞTİ.

## PROFORMA INVOICE

<b>Seller (Name, Address):</b> A YÜZER OTOMOTİV DIŞ İTHALAT İHRACAT LTD. ŞTİ. Mecidiyeköy mah. Büyükdere cd. No.89 iç kapı no.7Ö ŞİŞLİ-İSTANBUL info@ayuzer.com.tr +90 505 987 03 01	<b>Invoice Number:</b> AY-2023- 112	
	<b>Invoice Date:</b> 2023-07-09	<b>Validity Date:</b> 2024-07-09
	<b>Buyer's Commercial Card No:</b> 10102231802	<b>Seller's Reference:</b> Tax office: 0011724333, Zincirlikuyu
<b>Consignee (Name, Address):</b> ZAR MADAN AKHTARAN COMPANY Flat No.3, South Kazeroon St., Mirdamad Blvd., Tehran, Iran, Tel: +98 21-22258090	<b>Buyer's Name &amp; Address:</b> ZAR MADAN AKHTARAN COMPANY Flat No.3, South Kazeroon St., Mirdamad Blvd., Tehran, Iran, Tel: +98 21-22258090 Fax: +98 21-22911234	
<b>Freight Forwarder (Name, Address):</b>	<b>Country of Beneficiary:</b> TURKEY	
	<b>Country of Origin:</b> Germany	<b>Country of Destination:</b> Iran
	<b>Terms of Delivery:</b> CPT-Shahriyar, Tehran, Iran	
<b>Partial Shipment:</b> <input type="radio"/> Allowed <input checked="" type="radio"/> Not Allowed		
<b>Transaction Currency:</b> European Euro	<b>Terms of Payment:</b> TT - 50% in advance, %50 balance prior to delivery	
<b>Transport Mode:</b> Road Transportation	<b>Port/Airport of loading:</b> Germany	
<b>Port/Airport of Discharge:</b> Shahriyar, Tehran, Iran	<b>Final Place of Delivery:</b> Shahriyar, Tehran, Iran	

Item	Item Description	Commodity Code	Quantity	Unit Price (EUR)	Amount (EUR)
1	SAA350 and vertical distributor,	84741000	11.00	58,965.00	648,615.00
2	SAA280 and vertical distributor	84741000	9.00	28,186.00	253,674.00
3	Services - VM24 cells bespoke design, engineering and drawings. 11 units. - VM12 cells bespoke design, engineering and drawings. 09 units	84741000	1.00	94,693.00	94,693.00
4	VM24 circuit	84741000	1.00	119,522.00	119,522.00
5	VM12 circuit	84741000	1.00	84,086.00	84,086.00
6	Set of spares	84741000	1.00	14,929.00	14,929.00
7	VM24 circuit spares - 2 x SAA350 aerator cartridge - 2 x T-pieces - 200 vertical nozzles	84741000	1.00	53,551.00	53,551.00
8	VM12 circuit spares 1 - 2 x SAA280 aerators - 160 vertical nozzles	84741000	1.00	27,144.00	27,144.00

<b>*Total Gross Weight (KG):</b> 12,737	<b>*Total Net Weight (KG):</b> 11,029	<b>*Total Amount:</b> 1,296,214.00
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<b>Freight Charges:</b> 80,000.00
<b>Other Expenditures:</b>

<b>Description:</b>	<b>Overall Amount (CPT)</b>	<b>1,376,214.00</b>
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It is hereby certified that this proforma invoice shows the actual price of the goods described, that no other proforma invoice has been or will be issued, and that all particulars are true and correct	<b>Name of Signatory:</b> Ali YÜZER
	<b>Place &amp; Date of Issue:</b> İSTANBUL, 2023-07-09
	<b>Seal &amp; Signature:</b>  A YÜZER OTOMOTİV DIŞ TİC. İTH. İHR. LTD. ŞTİ. Mecidiyeköy Mah. Büyükdere Cad. No: 89 / 7 Şişli / İSTANBUL Zincirlikuyu V.D: 0011724333

# A YÜZER OTOMOTIV DIŞ İTHALAT İHRACAT LTD. ŞTİ.

Mecidiyeköy mah. Büyükdere cd. No.89 iç kapı no.7

ŞİŞLİ/İSTANBUL

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## Instrumentation List for Imhoflot Cells - V.01

TAG	QTY	Designation	Location	Connection	Measurement range	Expected Nominal Value	Unit	Media	Power Supply	Output	Signal use	Model	Remarks	Rev
<b>VM24 CIRCUIT</b>														
	1	Flowmeter Slurry Feed	Pipe Feed Slurry first cell on Circuit	Flange DN250	0 to 420	100	m <sup>3</sup> /h	Slurry	24V DC	4-20 mA	Indication	Krohne Optiflux 4300 C		
	11	Pressure Indicator	Pipe Feed Slurry	G 1½	0 to 10	1,5 - 2,7	bar	Slurry	24V DC	4-20 mA	Indication	Vegabar 82		
	11	Pressure Indicator	Air-Intake Reactor	G ¾	-1 to 1,0	-0,3	bar	Air	24V DC	4-20 mA	Indication and Redundant control	Vegabar 38		
	11	Level indication	Submerged to each cell from top		0 - 100		%	Slurry	24V DC	4-20 mA	Signal to level controller	Vegabar 86		
	11	Flowmeter Air	Air-Pipe Air to Reactor	R2" - DIN 2999	1,6 to 478	200	m <sup>3</sup> /h	Air	24V DC	4-20 mA	Signal to level controller	TA Di 53,1 GE 60 m/s /140/p16 ZG1d		
	11	Air flow control	Air-Pipe Air to Reactor	TBC	0 to 100	50	%	Air	24V DC	4-20 mA	Indication	TBC		
<b>VM12 CIRCUIT</b>														
	1	Flowmeter Slurry Feed	Pipe Feed Slurry first cell on Circuit	Flange DN80	0 to 60		m <sup>3</sup> /h	Slurry	24V DC	4-20 mA	Indication	Krohne Optiflux 4300 C		
	9	Pressure Indicator	Pipe Feed Slurry	G 1½	0 to 10	1,5 - 2,7	bar	Slurry	24V DC	4-20 mA	Indication	Vegabar 82		
	9	Pressure Indicator	Air-Intake Reactor	G ¾	-1 to 1,0	-0,3	bar	Air	24V DC	4-20 mA	Indication and Redundant control	Vegabar 38		
	9	Level Indicator	Submerged to each cell from top		0 - 100		%	Slurry	24V DC	4-20 mA	Signal to level controller	Vegabar 86		
	9	Flowmeter Air	Air-Pipe Air to Reactor	R1" - DIN 2999	0,42 to 125	30	m <sup>3</sup> /h	Air	24V DC	4-20 mA	Signal to level controller	TA Di 27,2 GE 60m/s /140/p16 ZG1d		
	9	Air flow control	Air-Pipe Air to Reactor	TBC	0 to 100	50	%	Air		4-20 mA	Indication	TBC		
<b>SPARES</b>														
Spare	1	Pressure Indicator	Pipe Feed Slurry	G 1½	0 to 10	1,5 - 2,7	bar	Slurry		4-20 mA		VEGA - Vegabar 82		
Spare	1	Level indication	Submerged on VM24		0 to 3760	3500	mm	Slurry		4-20 mA		VEGA - Vegabar 86		
Spare	1	Level indication	Submerged on VM12		0 to 2090	1980	mm	Slurry		4-20 mA		VEGA - Vegabar 86		
Spare	1	Pressure Indicator	Air-pipe Air to Reactor (VM12 or VM24)	G ¾	-1 to 1.0 bar	10	bar	Air		4-20 mA		VEGA - Vegabar 38		
Spare	1	Air flow control	Air-pipe Air to Reactor VM36	G 1½	0 to 100	50	%	%		4-20 mA		TA Di 53,1 GE 60 m/s /140/p16 ZG1d		