



SYNERGY

INNOVATIVE DIVING EQUIPMENT TRADING LLC

INSPIRING • ENGINEERING • INNOVATION



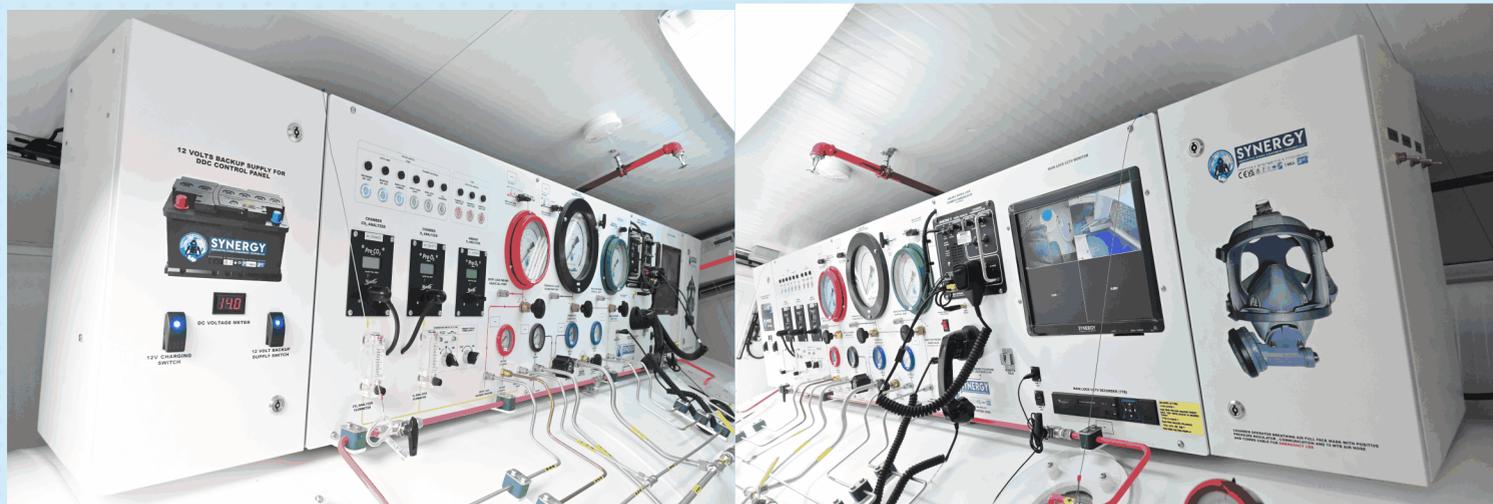
IMCA STANDARD 60" DIVING DECOMPRESSION CHAMBER IN 20FT CONTAINER



IMCA Code:	Description:
IMCA D018:	Code of Practice for the Initial and Periodic Examination, Testing, and Certification of Diving Plant and Equipment
IMCA D023:	Design for Surface Oriented (Air) Diving Systems



IMCA STANDARD 60" DIVING DECOMPRESSION CHAMBER IN 20FT CONTAINER



Feature:	Description:
Diving Chamber	Installed in a 20FT DNV Offshore Container with complete internal and external fit-out
Chamber Control Panel	Includes O ₂ /CO ₂ analyzers and ambient atmosphere O ₂ analyzer
UPS System	Provided for chamber with integrated charger
Breathing Mask	Chamber operator full-face mask with positive pressure regulator
Emergency Communication	10-meter air hose with comms for emergency use
CCTV System	Main Lock CCTV Recorder (1TB) and Main Lock CCTV Monitor
Power Stabilizer	Single Phase Servo Stabilizer – 5 kVA
Fire Safety	Fire Extinguisher included automatic sprinkler system
Safety Valves	Pressure Relief Valves for chamber protection
Penetration Plates	Installed for sealed and safe incoming/outgoing air and gas lines

CHAMBER ENTRY LOCK WITH ALL FITOUT AS BELOW



Sr.	Part Number	Description	Qty
1	SY-SP-V	Viewport	1
2	SY-350M-01	Amron avox hyperbaric bibs, dual hose ,350 msw rated	2
3	SY-7140-01	Amron led hyperbaric light unit	1
4	SY-3114	Amron internal talk back speaker	1
5	SY-SPT-550RC	Sound powered phone	1
6		Stainless Steel foldable seats	2
7		Aluminum checkered floor plate	1
8		Drain valve connected with flexible hoses for flushing	1
9		All valves and fittings as required	

CHAMBER MAIN LOCK WITH ALL FITOUT AS BELOW

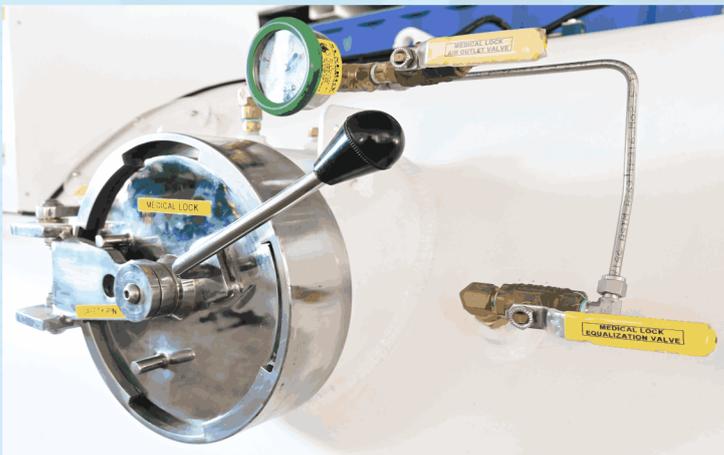


CHAMBER MAIN LOCK WITH ALL FITOUT AS BELOW



Sr.	Part Number	Description	Qty
1	SY-SP-V	Viewport	2
2	SY-SP-VSY-240-FE	Amron Hyperbaric fire extinguisher	1
3	SY-CO2-SCR	Synergy Co2 scrubber unit, 12v, stainless steel	1
4	SY-350M-01	Amron avox hyperbaric bibs, dual hose , 350 msw rated	3
5	SY-7140-01	Amron led hyperbaric light unit	1
6	SY-3114	Amron talk back speaker internal	1
7	SY-CG-230	Internal caisson gauge, 0-230 fsw	1
8	SY-SPT-550RC	Dynalec sound powered phone	1
9	SY-UWC-325/P/E	Internal hyperbaric camera with view of main lock connected to monitor on chamber panel	1
10	SY-EP-4C	Electrical penetration	2
11	SY-FRM	Hyperbaric fire retardant mattress (one for each bed)	1
12	SY-FRP	Fire retardant pillows (one for each bed)	1
13		Stainless Steel foldable beds	2
14		Aluminium checkered floor plate	2
15		Drain valve connected with flexible hoses for flushing	1
16		All valves and fittings as required	1
17		Air - all tubing will be stainless steel with brass fittings	1
18		Oxygen- all tubing will be tungum with brass fittings and O2 approved Teflon tape	

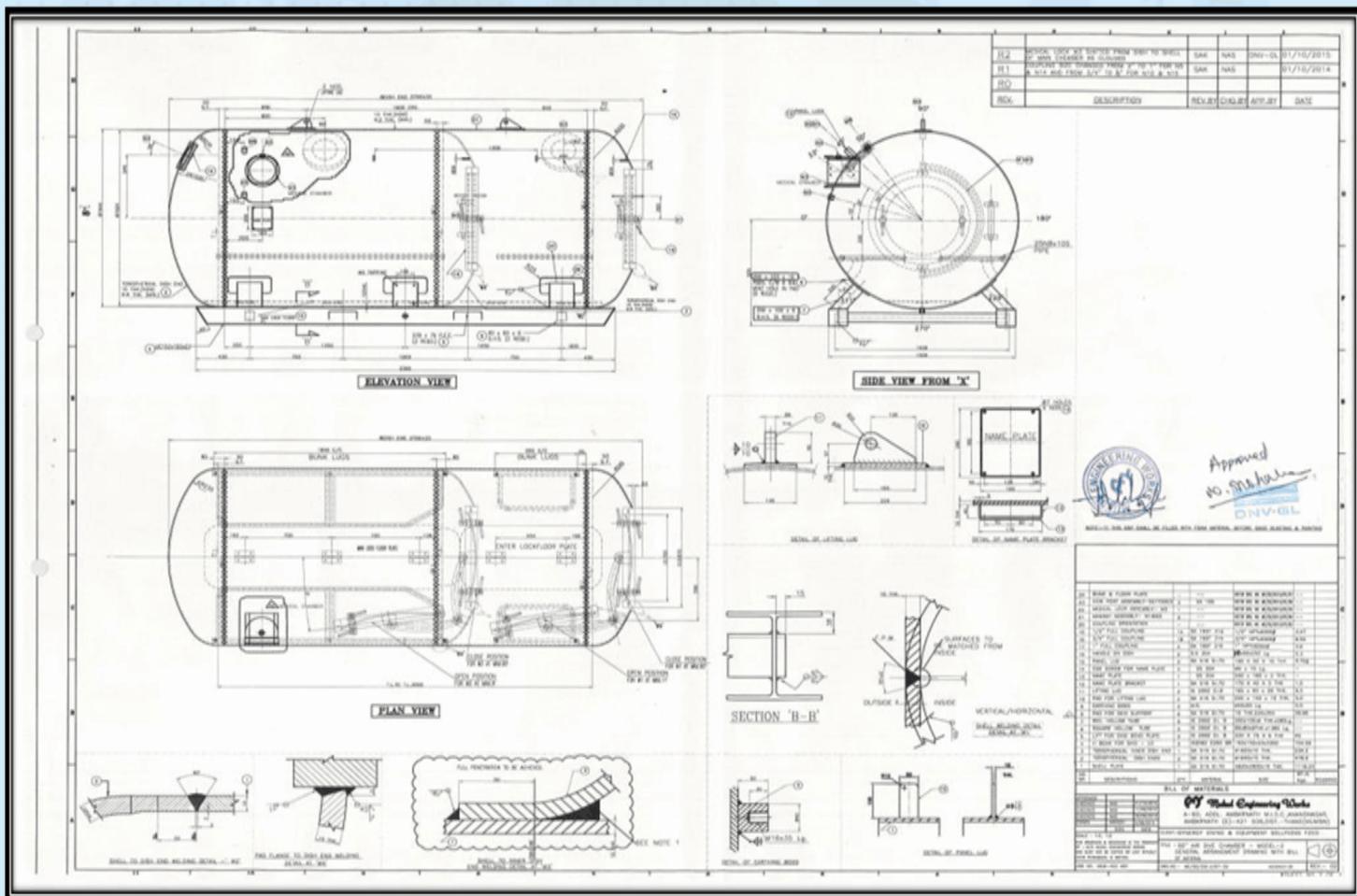
CHAMBER MEDICAL LOCK – STAINLESS STEEL WITH AUTOMATIC INTERLOCK



Sr.	Description	Qty
1	External Medical lock, stainless steel with easy to use handle (for open/ close)	1
2	Internal medical lock door, stainless steel	1
3	Automatic interlock (will lock external door under pressure) (door cannot be opened when interlock is engaged)	1
4	Equilization valve	1
5	Pressure gauge with valve (to show pressure inside medical lock)	1
6	Silencer	1

CHAMBER SHELL - DESIGN & AS BUILT STANDARDS

Sr.	Description
1	Dnv approved as built drawings
2	Pneumatic test witnessed / stamped by Dnv
3	Hydrostatic test witnessed / stamped by Dnv
4	Design code ASME SEC VIII DIV 1 - PVHO
5	Data plate stamped by Dnv / stamp on chamber lip along with serial number for identification
6	Dimensions of the DDC: (LXWXH) – 3796mm X 1500mm X 1687mm
7	Overall height including lifting eyes - 1798mm
8	Overall width including control panel - 1500mm
9	Material boiler steel working pressure - Shell - SA 516 GR.70 / Skid IS2062 GR.B
10	Test pressure - Hydro - 15 KGF / Pneumo - 11 Bar
11	Design Pressure - Internal - 10 Bar
12	Design Code - ASME SEC. VIII DIV-1, 2007 ADD 08 + ASME PVHO-1,2002



CHAMBER CONTROL PANEL - INCLUDING HP MANAGEMENT PANEL



0-230 fsw/70 msw Depth gauge, 6", 0.25 % accuracy, mirror scale, with calibration point ,
Entry lock, Color coded **Red**



1 x 0-230 fsw/70 msw Depth gauge, 6", 0.25 % accuracy, mirror scale, with calibration point ,
Main lock, Color coded **Green**



1 x 0-70 fsw/21 msw Depth gauge, 8.5", 0.25 % accuracy, mirror scale, with calibration point ,
Therapeutic, Color coded **Black**



Sr.	Part Number	Description	Qty
1	SY-PRO-O2	Oxygen analyzer (O2) with high low alarm connected with a Dwyer VFA 22 BV flow meter to chamber (can read from both entry and main lock by opening valve as required)	1
2	SY-PRO-CO2	Carbon dioxide analyzer (CO2) with high alarm connected with a Dwyer VFA 22 BV flow meter to chamber (can read from both entry and main lock by opening valve as required)	1
3	SY-PG-O2-2.5-500	Gauge for oxygen supply to chamber (oxygen approved gauge)	1
4	SY-PG-A-2.5-500	Gauge for low Pressure air supply to chamber	1
5	SY-2820A-02	chamber communicator, Amron (with push to talk microphone)	1
6	SY-873-400	Option 1 Aqua environment high pressure regulator w/gauges	
7	SY-SPT-550RC	Dynalec sound powered phone (connected to entrance/main lock spt)	1
8	SYTRAN220/24/12	(2 x 24v, 2 x 12v, switch for emergency battery power)	1
9	All inlet and outlet connections provided on the panel frame itself		

CONTAINERIZED BREATHING AIR & O₂ CYLINDER WITH BAUER COMPRESSOR



Feature:	Description:
Compressor Model	BAUER PE 300
Compressor Type	High-Pressure Breathing Air Compressor
Compressor Capacity	300 L/min
Compressor Pressure Rating	330 Bar (Breathing Air Filling Pressure)
Drive Type	Electric Motor Driven
Filtration System	BAUER P-Series P61 Filtration Unit (Breathing Air Compliant to EN 12021)
Breathing Air Quads	12 x 50 Litre Cylinders, 200 Bar, Manifolded
Medical Oxygen Quads	12 x 50 Litre Cylinders, 200 Bar, Manifolded (Recessed)
Filling Panel	Dual Line, High Pressure Filling Panel for Air & Oxygen
Cooling System (Compressor)	Integrated Air-Cooled
Electrical Requirements	400V / 50Hz / 3-Phase
Control Panel (Compressor)	PLC Based Control with Emergency Shutdown System
Lighting & Ventilation	Explosion-Proof LED Lighting, Ventilation Fans
Fire Safety	Fire Extinguisher, Smoke Detectors, Emergency Ventilation
Weight (Approx.)	6,500–7,500 kg (Depending on configuration)
Optional Add-ons	Gas Monitoring System, Data Logger, Remote Alarm Panel

BUREAU VERITAS CLASS CERTIFICATE PROVIDED WITH EACH DDC

Industry & Facilities Division
Third Party Inspection Report

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INSPECTION REPORT Nr: DBA 4.21.324/IR-10 Revision Nr: 0

Initial: Interim Final Revisors

Inspection required by: **MS. SYNERGY INNOVATIVE DIVING EQUIPMENT TRADING**

Inspection performed as Recognised Authority: Yes, (Recognition) No

BV Job Nr: DBA 4.21.324

Project: **THIRD PARTY INSPECTION SERVICE** IPO Ref (if applicable): 6121961-1002 (if internal P/O)

BV Client: **MS. SYNERGY INNOVATIVE DIVING EQUIPMENT TRADING** P/O nr: Email Confirmation (client to BV)

Manufacturer/Vendor: **MS. SYNERGY INNOVATIVE DIVING EQUIPMENT TRADING** P/O nr: TBA (client to Manufacturer)

Sub-Vendor (if applicable): n/a

Inspection Location: **SYNERGY INNOVATIVE DIVING EQUIPMENT TRADING, Al Quesia, Dubai** Previous Inspection (if applicable): N/A (Date)

Inspection performed on: **01.04.2021** Next Inspection (if applicable): TBA (Date)

MATERIAL / SUBJECT OF INSPECTION	ITEM / TAG Nr	QTY As per P/O	QTY Offered for inspection
60" Diving decompression chamber / Pneumatic over pressure test	Serial No: MEW/640ADC Model 2	01	01

A - INSPECTION RESULT

Satisfactory (Without comments) Satisfactory with comments (Any of trailing Punch or Non Conformity items is still open) Not Satisfactory (NCR raised during the inspection)

Inspection Summary: (for details refer to section E)

Witness of pneumatic over pressure test of 60" Diving decompression chamber @151 psi Serial No.: MEW/640ADC Model 2 as per Annexure -01 and found satisfactory.

Open Non Conformities: Yes, details in section G No

Open Punch List Items: Yes, details in section H No

Release Note Issued: Yes, number(s): (Release Note number) No

BV Traceability Stamping: Yes, No

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BV Inspector: **Pranav P. Kumar** BV Coordinator: **Santhosh Patil** (Name and Signature)

BV Office: **Dubai** Inspection Report Date: **01.04.2021**

Distribution: CLIENT BV MANUFACTURER OTHER: Attachments Report: Yes, details in section J No

B - REFERENCE DOCUMENTATION: Refer to attachment section J instead (indicate if separate document list is provided in attachment)

Title	Reference n°	Rev.	Approval Status	Approved by	Date
Diving Equipment System Inspection Guidance	IMCA D023	01	Approved	Synergy	January 2014
Pneumatic Over Pressure Test	SSELQMSM-01	02	Approved	Synergy	May 2016

C - ATTENDEES

Name	Position	Representing
Mr. Ajal S Siddiqui	Technical Supervisor	Synergy
Mr. Pranav P. Kumar	Inspector	Bureau Veritas

D - MEASURING & TESTING EQUIPMENT USED Refer to attachment section J instead (indicate if separate equipment list is provided in attachment)

Equipment Type	Equipment Identity n°	Last Calibration Date	Expiry Date
Digital Pressure Gauge	95242	15.12.2020	17.12.2021

E - INSPECTION DETAILS

E1 - Details of Witness (W) & Hold (H) Inspection Points

- Visual Inspection of 60" Diving decompression chamber and found satisfactory.
- Verified the serial No. MEW/640ADC model 2 of 60" Diving decompression chamber.
- Witnessed pneumatic over pressure of 60" Diving decompression chamber @151psi (30 min Holding) and found no leakages and pressure drop and found satisfactory at the time of inspection.
- Soap Solution leak test was performed on piping, fittings, valves, and no leakages found and hence satisfactory.

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E2 - Details of Monitoring and Surveillance Patrols Tick if conducted during the visit

- Witnessed pneumatic over pressure of 60" Diving decompression chamber as & found Satisfactory at the time of inspection.

E3 - Details of Certificates Review Tick if conducted during the visit

- Verified the calibration certificates of measuring instruments and found in order.

F - HEALTH, SAFETY & ENVIRONMENT COMMENTS (Comment on Observations and Actions Taken During the Inspection)

Two minutes check for my safety was carried out, work location was observed as safe for inspection.

G - NON CONFORMITIES Refer to attachment section J instead (indicate if separate punch list is provided in attachment)

Item	Description	Status	Raised on	Report Nr.	Closed on	Report Nr.	Comments
N/A							

H - PUNCH LIST ITEMS Refer to attachment section J instead (indicate if separate punch list is provided in attachment)

Item	Description	Status	Raised on	Report Nr.	Closed on	Report Nr.	Comments
N/A							

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I - DIGITAL PICTURES

Description: Visual Inspection	Description: Gauge calibration
Description: Visual Inspection	Description: Application of soap solution
Description: Application of soap solution	Description: Name Plate

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INSPECTION REPORT Nr: DBA 4.21.324/IR-10 Revision Nr: 0

Description: Application of soap solution	Description: Gauge Reading

J - ATTACHMENTS

Item	Attachment Name	Total Pages	Description
01	2 Min Safety	01	2 Min Safety checklist
02	Time Sheet	01	Time Sheet

Annexure -01

Inspection Details:

- Witnessed Pneumatic over pressure test of the Diving decompression chamber with the following details:
- Description: 60" Diving decompression chamber
- Design Code: ASME Sec VIII Div-1 PVHO
- Country of origin: India
- Manufacturer: Mukul Engineering Works
- Manufacturer Serial No.: MEW/640ADC Model 02
- Year of Manufacture: 2021
- Design pressure: 135.12 psi / 9.5 Kg/ftq cm (g)
- Max. Pressure: 135.12 psi / 9.5 Kg/ftq cm (g)
- Pneumatic Over pressure test: 149.34 psi / 10.5 Kg/ftq cm (g)
- Pneumatic Test Date: 01.04.2021
- Mini Max. Temperature: 0-50 °C
- Radiography: 100 %

Pneumatic Test:

- Pneumatic over pressure test of Diving decompression chamber (Serial No.: MEW/640ADC model 2) has been witnessed as per the approved procedure and

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Found the following

- Test Pressure gauge calibration certificate was review and found satisfactory
- Chamber was tested for a pressure of 151 psi for 30 minutes and found to be Satisfactory.
- Soap solution leak test was performed for verification of the leakage & found Satisfactory at the time of inspection.

END OF REPORT

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SYNERGY INFRASTRUCTURE





ORDERING INFORMATION

Sr.	Part Number	Description
1	SY-DNV-DDC-D023-MC-2	DNV OFFSHORE CONTAINER WITH INSULATION & AC, INSTALLED WITH TWO MAN DIVING DECOMPRESSION CHAMBER, BREATHING AIR COMPRESSOR, 12 X BA CYLINDER, 12 X OXYGEN CYLINDER RACK RECESSED WITH AIR MANAGEMENT PANEL

Sr.	Part Number	Description
1	SY-ISO-DDC-D023-MC-2	ISO CONTAINER WITH INSULATION & AC, INSTALLED WITH TWO MAN DIVING DECOMPRESSION CHAMBER, BREATHING AIR COMPRESSOR, 12 X BA CYLINDER, 12 X OXYGEN CYLINDER RACK RECESSED WITH AIR MANAGEMENT PANEL

BESPOKE DESIGNS – ANY CONFIGURATION AS PER CLIENT REQUIREMENT



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IMCA STANDARD 60" DIVING DECOMPRESSION CHAMBER IN 20FT CONTAINER

Contact us



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