

**TWO DIVER COMPACT AIR PANEL (BACK HIDDEN PLUMBING) SY-2DCPD023-R-XDV-XM**



**PART NO : SY-2DCPD023-R-XDV-XM**


IMCA D023	DESIGN for Surface Oriented (Air) Diving Systems
IMCA D018	Code of Practice for The Initial and Periodic Examination, Testing and Certification of Diving Plant and Equipment



**TWO DIVER COMPACT AIR PANEL (BACK HIDDEN PLUMBING) SY-2DCPD023-R-XDV-XM**

Sr.	Description
1	Powder coated marine grade aluminum non rust fascia (various colors available)
2	All engraved lines with each valve/fitting/regulator clearly marked
3	DP alarm to connect to bridge with mute button (optional)

**Design criteria for dive panel**

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

1 x 0-230 fsw/70 msw Depth gauge, 6", 0.25 % accuracy, mirror scale, with calibration point , Diver 2, Color coded **Red** 

Sr.	Part Number	Description	Qty
1	SY-PRO O2	Oxygen analyzers with high low alarm (one per diver)	2
2	SY-VFA-BV-23	Flowmeters (per analyzer)	2
3	SY-873-400	Option 1 Aqua Environment high pressure Regulator w/gauges	2
4	SY-44-1315-2081-005	Option 2 Tescom high pressure regulator	2
5	SY-FLR-DS	Flow Restrictor (one per diver)	2
6	SY-DIVMKII-COM (Optional)	Interspiro full face breathing air mask, communications, 10 mtr of Communication cable with end fitting (one end to BA comms/other to chamber comms)	1
7	SY-UPS-DP (Optional)	Emergency power back - UPS for video systems	1
8	SY-PG-A-2.5-5000	High pressure gauges (incoming air supply) 0-5000 psi (Hp1)	2
9	SY-PG-A-2.5-5000	High pressure gauges (incoming air supply) 0-5000 psi (Hp2)	2
10	SY-PG-A-2.5-500	Low pressure gauge (regulated air supply) 0-500 psi	2
11	SY-PG-A-2.5-500	Low pressure gauge (common low pressure supply) 0-500 psi	2
12	SY-PG-A-2.5-500	Low pressure gauge (downstream for umbilical supply pressure)	2
13	All air supply lines (inlet and outlet) are color coded per diver		
14	Pressure gauges		
15	Diver 1 - Independent high pressure line Diver 2 - Independent high pressure line		
16	Diver 1 - Common high pressure line Diver 2 - Common high pressure line		
17	Diver 1 - Common low pressure line Diver 2 - Common low pressure line		
18	All tubing used will be stainless steel high pressure		
19	All valves for incoming air supplies will be brass , high pressure		
20	All valves for regulated supplies will be brass, high pressure		

**TWO DIVER COMPACT AIR PANEL (BACK HIDDEN PLUMBING) SY-2DCPD023-R-XDV-XM**

**DIVE PANEL COMMUNICATION (Sold Separately)**

Sr.	Part Number	Description	Qty
1	2820A-11	Amron 2 diver radio with ac/dc power	1
2	2405-28	Push to talk microphone	1

**DIVE PANEL DIVER CCTV SYSTEMS (Sold Separately)**

Sr.	Part Number	Description	Qty
1	SY-DIVERVISION SERIES	Diver 1/Diver 2 / Diver 3 , surface control unit, Synergy/Outland Technology	3
2	SY-MON-15.5-TFT	Diver 1/Diver 2 / Diver 3 , 15.5"waterproof TFT monitor	1
3	SY-DVR-1TB-HD	Primary Recorder, 1 TB hard drive (simultaneous recording of all diver)	1
4	SY-DVR-1TB-HD	Backup recorder (black box) 1 TB hard drive (simultaneous recording of all dives), USB out for recording to USB sticks, HDMI out for mirror image to be displayed remotely via HDMI cables	1

## TWO DIVER COMPACT AIR PANEL (BACK HIDDEN PLUMBING) SY-2DCPD023-R-XDV-XM SY-2820A-11 AMCOM II TWO-DIVER RECHARGEABLE BASIC PORTABLE COMMUNICATOR



### NEWLY DESIGNED ENHANCEMENTS:

#### High Audio Fidelity

Ultra-low noise circuit combined with noise suppression circuitry produces crystal clear speech. Automatic gain adjustment

will guard audio signal from distortion, enhance speaker protection and audio quality. Increases band width 47%.

#### Extended Battery Operation Time

Audio amplifier card deploys the state-of-the-art Class-D digital audio power amplifier. Has very low power dissipation, produces less heat, and extends battery life up to 32%.

#### Flexible Gain Settings

The audio amplifier card has adjustable gain settings to accommodate different communication applications and environments.

#### Ultra-Low Electromagnetic Interference (EMI)

EMI is achieved through spread-spectrum and de-phase control techniques providing for optimum integration with diving systems.

#### Outdoor Rated AC Power Module

Weather resistant, IP65 rated AC power entry module accommodates country specific AC power cords.

#### Country Specific V-Lock AC Power Cord

At time of order, simply choose the IP54 rated Locking AC power cord you need.

### FEATURES:

- Single volume control for both divers.
- Diver's umbilicals can be set up on 4-wire mode (full duplex) or 2-wire mode (push-to-talk) or any combination of the two modes for each diver.
- Ability to use both dynamic and pre-amplified diver microphones with a unique circuit that detects microphone type and automatically adjusts volume levels.
- The divers' connections consist of cross-talk and separate speaker and microphone inputs.
- Internal charger allows for simultaneous charging and operation of the unit while protecting the rechargeable battery from being over-charged. Automatically supplies power to the audio amplifier when AC power is disconnected to allow for continued operation.
- See Tech Note (below) for recommended accessories.

## TWO DIVER COMPACT AIR PANEL (BACK HIDDEN PLUMBING) SY-2DCPD023-R-XDV-XM

**SPECIFICATIONS:**

- Input Impedance (Each Input): 250 Ohms
- Frequency Response: 300 - 10000 Hz
- Common Mode Rejection: 40 dB Minimum
- Current Drain Maximum Full Volume: 3 Amps
- Minimum Quiescent: 0.190 Amps
- Output Impedance: 4 Ohm
- Power Supply Voltage: 12 VDC Nominal (9 Volts Minimum - 16 Volts Maximum)
- AC Power Operating Range: 90-264 VAC, 50-60 Hz
- Sensitivity (Input): 0.5 mV
- Output Power (RMS @ 4 Ohm Load, 12 VDC): 10 Watts Audio
- Battery Life: 45 hours
- Dimensions: 10 in. H x 9 in. W x 14.5 in. L (25.4 cm x 22.9 cm x 36.8 cm)
- Weight: 16.25 Lbs. (7.37 Kg)

**INCLUDED WITH COMMUNICATOR:**

SY-2820A-11AMCOM II Two-Diver Rechargeable Basic Portable Communicator with Outdoor Power Module and International Locking Power Cord includes:

- (1) SY-2890-05 Amron 12 VDC Sealed Lead Acid Gel-Cell Rechargeable Battery with Slide terminals
- (1) SY-282XA-UM Amron Two Diver Portable Communicator User Manual

**AVAILABLE OPTIONS:**

- SY-2460SM-28 Amron Single Muff Operator Headset with Boom Mic and Dual Banana Plugs
- SY-2405-28 Amron Hand-Held Push-to-Talk Microphone
- SY-2401-28 Amron Deluxe Headset with Boom Mic
- SY-2460-28 Amron Standard Headset with Boom Mic
- SY-2822-28 Amron Remote Walk-and-Talk (4-wire mode)
- SY-2821-28 Amron Remote Walk-and-Talk (2-wire mode)

**TECH NOTE:**

All communicators will inherently transfer topside noise to the divers when the tender speaks directly into the communicator’s panel speaker. To eliminate background noise at the surface, we recommend purchasing the 2405-28 Push-to-Talk Microphone (not included with this model). For optimum communications, it is recommended to use the 2401-28 Deluxe Headset with Boom Mic, topside. For tender maneuverability, use the 2401-28 Deluxe Headset with Boom Mic along with the 2822-28 Remote Walk-and-Talk (4-wire mode) or the 2821-28 Remote Walk-and-Talk (2-wire mode). For wireless tender communications, order the 2825A-03 Two Diver Deluxe Portable Communicator with built-in Wireless Tender option.

# TWO DIVER COMPACT AIR PANEL (BACK HIDDEN PLUMBING) SY-2DCPD023-R-XDV-XM

Diving panel	Bureau Veritas
Imca	D018 / D023
Class	Bureau Veritas pressure test witness for entire system
Fmea	As built by Synergy
Fmea stamped by class	As built by Synergy and reviewed by Class (optional)
Warranty	One year Synergy manufacturing warranty

**Industry & Facilities Division**  
Third Party Inspection Report

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INSPECTION REPORT No: D0A.4.26.210 - (R.01) Revision No: 0

Inspection requested by: **M/s. Synergy Diving and Equipment Solutions PTE.**

Inspection performed on: **14.06.2020**

**Project:** Third party Inspection Services  
**PO Ref:** (If applicable) 514819-0001 (If Internal PO)

**Client:** M/s. Synergy Diving and Equipment Solutions PTE.  
**Project:** Final Certification (Refer to PO)

**Manufacturer:** M/s. Synergy Diving and Equipment Solutions PTE.  
**Product:** Final Certification (Refer to Manufacturer)

**Sub-Contractor:** (If applicable) N/A  
**Previous Inspections:** (If applicable) N/A

MATERIAL / SUBJECT OF INSPECTION	ITEM / TAG No	QTY As per PO	QTY Qty for inspection
Two Diver Panel / Pneumatic Test Inspection	TRITON 362	01	01

**A - INSPECTION RESULT**

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

**Inspection Summary:** (For details refer to section E)

- At the request of M/s. SYNERGY INNOVATIVE DIVING EQUIPMENT TRAD witness for the Diver Panel Pneumatic testing was carried out at Synergy AI Quails on 14th June 2020 and results were found satisfactory.
- High Pressure Lines were carried out @ 3300 psi and low pressure @ 330 psi - serial no : TRITON 362

**Open Non Conformities:**  Yes (details in section G)  No  
**Open Punch List Items:**  Yes (details in section H)  No  
**Release Note Issued:**  Yes (number)  No  
**BV Testability Stamping:**  Yes  No

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**BV Inspector:** Vilas Rai  
**BV Coordinator:** Santhosh Paul

**BV Office:** Dubai  
**Inspection Report Date:** 14.06.2020

**Distribution:**  
 CLIENT  BV  MANUFACTURER  OTHER

**B - REFERENCE DOCUMENTATION:**

Title	Reference n°	Rev.	Approval status	Approved by	Date
Diving Equipment Service	IMCA D040	01	As Filed	Synergy	July 2015
Pneumatic Pressure Testing Procedure	ISSI/IMCA-01	02	As Filed	Synergy	May 2016

**C - ATTENDEES**

Name	Position	Representing
Mr. Vilas Rai	Mechanical Inspector	Bureau Veritas
Mr. Ajay Siddique	QC Engineer	Synergy Diving and Equipment

**D - MEASURING & TESTING EQUIPMENT USED**

Equipment Type	Equipment Identity n°	Last Calibration Date	Expiry Date
Digital Pressure Gauge	93242	30.11.2019	29.11.2020
Digital Pressure Gauge	9C 2129057	19.03.2019	18.01.2021

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**E - INSPECTION DETAILS**

**E1 - Details of Witness (W & Field 01) Inspection Points**

- Pneumatic test was witnessed for TRITON 362 for High Pressure @ 3300 PSI.
- Pneumatic test was witnessed for TRITON 362 for Low Pressure @ 330 PSI.
- Verification of Calibration Certificates for the measuring instruments and pressure gauges were found in order.

**E2 - Details of Monitoring and Surveillance Points**  This is conducted during the visit

- Visual inspection of two Diver air panel was inspected and found satisfactory at the time of inspection.
- Verification of serial number TRITON 362 was visually inspected to be okay.
- Pneumatic test was witnessed over two diver panels and no pressure drop or leakage was observed and found satisfactory.
- Verification of calibration certificates for the measuring instruments were found in order.

**E3 - Details of Certificates Review**  This is conducted during the visit

- Calibration certificates of all measuring instruments used were verified and found okay.

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

- Take proper safety precautions during inspection period and found satisfactory.

**G - NON CONFORMITIES**

Item	Description	Status	Raised on	Report No.	Closed on	Report No.	Comments
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Third Party Inspection Report

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**ANNEXURE**

**Inspection Details: TRITON 362 Two Diver Panel**

- Witnessed Two diver Panel - Pneumatic Pressure Testing with following details:

**Description:** Two diver Panel  
**Country of Origin:** UAE  
**Manufacturer Serial No:** TRITON 362  
**Year of Manufacture:** June 2020  
**Design Pressure:** LP 300psi / HP 3000 psi  
**Test Pressure:** LP 330 psi / HP 3300 psi  
**Date of Witness for Pneumatic Test:** 14.06.2020

**Pneumatic Test Details**

- Pneumatic pressure test of Two Diver panels (Serial No TRITON 362) was witnessed as per the approved procedure.
- High pressure supplied to the panel was 3300 psi; design pressure being 3000 psi
- Low pressure supplied to the panel was 330 psi; design pressure being 300 psi
- Over Pressure on the panels were held for 30 mins duration, observing no pressure drop or leakages and hence found satisfactory.
- Soap Solution leak test was performed on fittings, valves and piping showing no indications of leakages and hence found satisfactory

**END OF REPORT**

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**ORDERING INFORMATION**









Sr.	Part Number	Description
1	SY-2DCPD023-R-2DV-2M	TWO DIVER AIR PANEL WITH 1 X AMRON RADIOS, D1 / D2 VIDEO SYSTEMS
2	SY-2DCPD023-R-1DV-1M	TWO DIVER AIR PANEL WITH 1 X AMRON RADIOS, D1 VIDEO SYSTEMS
3	SY-2DCPD023-R	TWO DIVER AIR PANEL WITH 1X AMRON RADIOS (NO CCTV)
4	SY-2DCPD023	TWO DIVER AIR PANEL (NO RADIO , NO CCTV)




**BESPOKE DESIGNS – ANY CONFIGURATION AS PER CLIENT REQUIREMENT**

**TWO DIVER COMPACT AIR PANEL (BACK HIDDEN PLUMBING) SY-2DCPD023-R-XDV-XM**

# Contact us

 29th Street, Amman Road, Behind Al Huraiz Est. For Industry,  
Al Qusais, Industrial Area – 1,  
Dubai, United Arab Emirates

-  Tel : 009714 2580533 
-  Fax : 042516664 
-  UAE : 00971505648178 
-  UK : 00447951966260 

-  Website : [www.synergiequipment.com](http://www.synergiequipment.com)
-  Email : [ram@synergiequipment.com](mailto:ram@synergiequipment.com)
-  For Sale : [info@synergiequipment.com](mailto:info@synergiequipment.com)

