

**THREE DIVER MIX GAS PANEL (BACK PLUMBING) SY-3DMGP-BP-D037-XR-XDV-XM**

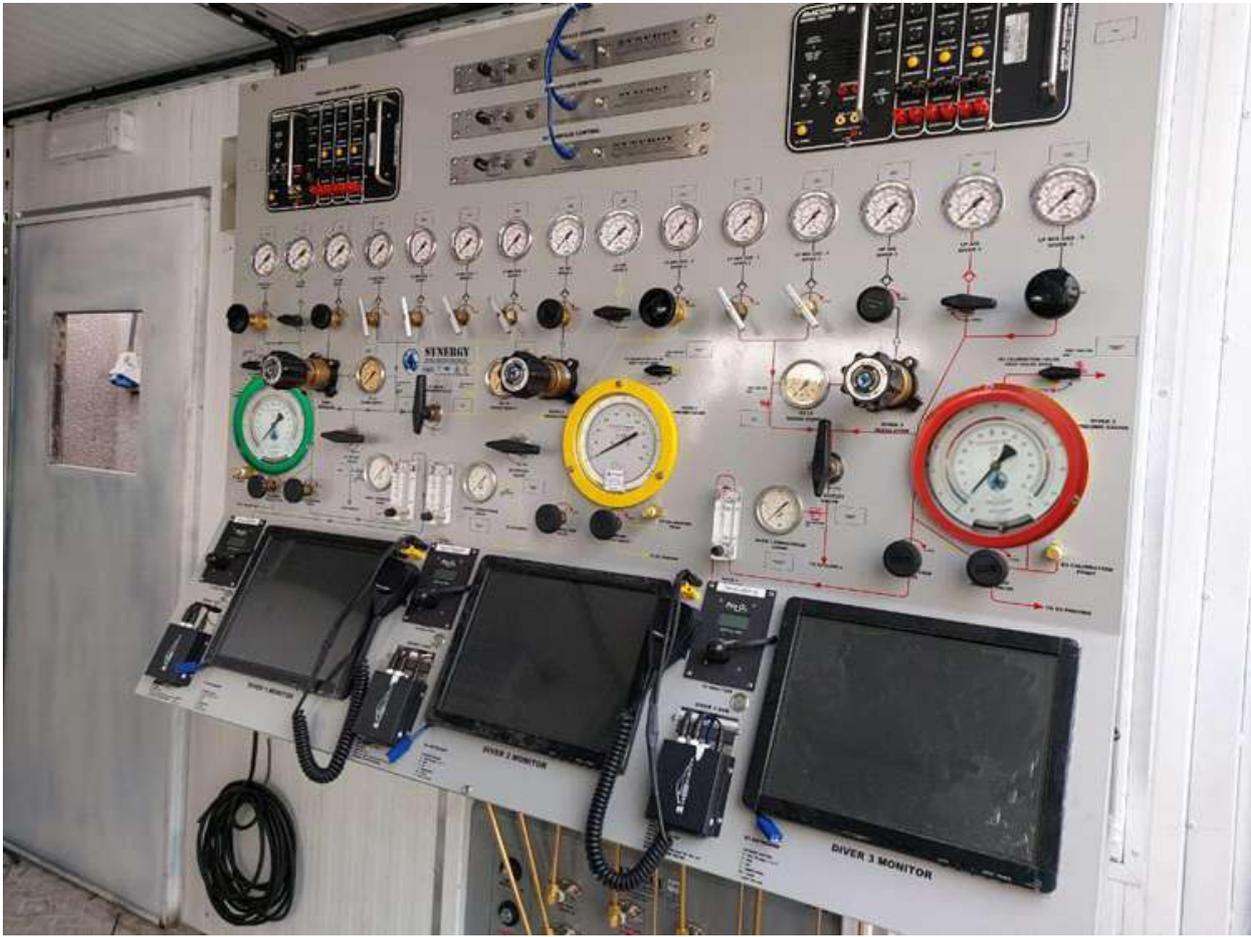


**PART NO : SY-3DMGP-BP-D037-2R-3DV-6M**

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



# THREE DIVER MIX GAS PANEL (BACK PLUMBING) SY-3DMGP-BP-D037-XR-XDV-XM



**PART NO : SY-3DMGP-BP-D037-2R-3DV-3M**

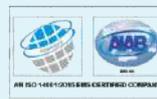
## THREE DIVER MIX GAS PANEL (BACK PLUMBING) SY-3DMGP-BP-D037-XR-XDV-XM

### TECHNICAL SPECIFICATIONS OF THREE DIVER MIX GAS PANEL

Sr.	Description
1	Matt grey fine powder coated aluminum non rust facia
2	All engraved lines with each valve/fitting/regulator etc clearly marked
3	Frame mounted
4	Backside access through window on container, rubber lined to prevent water ingress (enables easy visuals, repairs, maintenance etc as required on the panel, lock provided on windows

### Design criteria for dive panel

Sr.	Description	Qty
1	Diver pneumo gauges – traffic light system for easy understanding, size 6”	
	Diver 1 – with individual calibration point  GREEN	1
	Diver 2 – With individual calibration point  YELLOW	1
	Diver 3 – With individual calibration point  RED	1
	<b>Each Diver provided with 5 supply lines (all mix gas regulated at source)</b>	
A	Diver 1 – Common mix gas line 1 Diver 2 - Common mix gas line 1 Diver 3 - Common mix gas line 1	
B	Diver 1 – Common mix gas line 2 Diver 2 - Common mix gas line 2 Diver 3 - Common mix gas line 2	
C	Diver 1 – Common mix gas line 3 Diver 2 - Common mix gas line 3 Diver 3 - Common mix gas line 3	
D	Diver 1 – Independent high pressure line 1 Diver 2 – Independent high pressure line 1 Diver 3 – Independent high pressure line 1	
E	Diver 1 – Common low pressure Oxygen line 1 Diver 2 – Common low pressure Oxygen line 1 Diver 3 – Common low pressure Oxygen line 1	
2	All air supply lines (inlet and outlet) are color coded per diver	
3	Oxygen analyzers with high low alarm (one per diver) (for mix gas use)	3
4	Flow meters (per analyzer)	3
5	Pressure gauges Diver 1 hp 1/Diver 1 hp 2/Diver 1 LP Diver 2 hp 1/Diver 2 hp 2/Diver 2 LP Diver 3 hp 1/Diver 3 hp 2/Diver 3 LP	
6	Tescom High pressure regulator, (Inlet 3,750 psi, outlet 1,000 psi) (one per diver)	3
7	Downstream gauges (one per diver) to show umbilical air supply pressure	3
8	Flow Restrictor (one per diver)	3
9	Quick disconnect fitting plumbed into air supply for BA mask	1
10	All tubing used will be tungum tubing , high pressure	
11	All valves for incoming air supplies will be brass , high pressure	
12	All valves for regulated supplies will be brass, high pressure	
13	Diver communication Amron 3 diver helium unscramber Push to talk microphone for above	2 2
14	Diver underwater video system Diver 1/Diver 2 / Diver 3 with individual surface control unit for Video / Light operation Diver 1/Diver 2 / Diver 3 videos recorded on individual Mini Dvr with 32 GB Sd card Backup recorder (black box) 1 TB hard drive (simultaneous recording of all dives) Diver 1/Diver 2 / Diver 3 individual monitor 15”	3 3 1 3



**THREE DIVER MIX GAS PANEL (BACK PLUMBING) SY-3DMGP-BP-D037-XR-XDV-XM**

Sr.	Description	Qty
	<b>Optional</b>	
1	Surface External Camera (mounted on container above chamber entrance) with 15" monitor	1
2	Rov Camera monitor (connected to Rov operations)	1
3	Navigation camera monitor (connected to Bridge navigation)	1

### THREE DIVER MIX GAS PANEL (BACK PLUMBING) SY-3DMGP-BP-D037-XR-XDV-XM



# AMRON INTERNATIONAL

## SY-2830A-12 AMCOM III THREE-DIVER PORTABLE DSP3 HELIUM SPEECH UNSCRAMBLER WITH OUTDOOR AC POWER MODULE AND INTERNATIONAL LOCKING POWER CORD



**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 bandwidth 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:**

- Helium Speech Unscrambler (HSU) is conveniently installed in the option panel of this portable communicator incorporates a state-of-the-art digital signal processor to correct raw helium speech to clear, intelligible voice. The Depth Control can be finely-tuned using a multi-turn potentiometer providing the tender with better speech quality.
- The Noise Reduction Filter (NRF) uses a complex Digital Signal Processor algorithm to capture the background noise and reduce it without affecting the diver's speech. Noise reduction levels can be reduced by up to 17 dB.
- Real-time audio processing uses both frequency and time domain technologies for optimized performance over a wide range of depths and background noise.
- Improved Treble Boost Control feature allows for optimum frequency enhancement and improved intelligible speech from the diver's voice.
- Separate channels and volume controls for each diver and tender to accommodate individual earphone and microphone adjustments, equipment variations and individual comfort levels.
- Divers' umbilicals can be set to 4-wire mode (full duplex) or 2-wire mode (push-to-talk) or any combination of the two modes for any diver.

## AMRON INTERNATIONAL

- Ability to use both dynamic and pre-amplified diver microphones with a unique circuit that detects microphone type and automatically adjusts volume levels.
- Weatherproof push-to-talk microphone for better voice intelligibility topside. For optimum clarity, see Tech Note (below) for other recommended equipment.
- 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.

### 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): 5 mV
- Output Power (RMS @ 4 Ohm Load, 12 VDC): 10 Watts Audio
- Battery Life: 29 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: 17.45 Lbs. (7.92 Kg)

### INCLUDED WITH COMMUNICATOR:

SY-2830A-12 AMCOM™ II Three-Diver Portable DSP3 Helium Speech Unscrambler with Outdoor AC Power Module and International Locking Power Cord includes:

- (1) SY-2405-28 Amron Hand-Held Push-to-Talk Microphone
- (1) SY-2890-05 Amron 12 VDC Sealed Lead Acid Gel-Cell Rechargeable Battery with Slide terminals
- (1) SY-283XA-UM Amron Three-Diver Portable Communicator User Manual

### AVAILABLE OPTIONS:

- SY-2460SM-28 Amron Single Muff Operator Headset with Boom Mic and Dual Banana Plugs
- SY-2401-28 Amron Deluxe 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, use the 2405-28 Push-to-Talk Microphone, included with this model. For optimum communications, we recommend purchasing the 2401-28 Deluxe Headset with Boom Mic for topside operation. For tender mobility, 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 2830A-03 Three-Diver Deluxe Portable Communicator with Wireless Tender Option.

**CERTIFICATES PROVIDED WITH EACH THREE DIVER MIX GAS PANEL**

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: DBA.4.21.324/R022 Revision No: 01

BV Office: DUBAI  
Distribution:  CLIENT  BV  MANUFACTURER  OTHER

Inspection Report Date: 16.07.2021  
Attachment Report:  Yes, details in section J  No

**B - REFERENCE DOCUMENTATION**

Refer to attachment section J enclosed (indicate if separate document list is provided in attachment)

Title	Reference No.	Rev.	Author	Approved by	Date
Diving Equipment System Inspection Checklist	MCA-D017	01	Approved	Synergy	January 2019
Pneumatic Over Pressure Test	SGLL-QUEA-01	02	Approved	Synergy	May 2016

**C - ATTITUDES**

Name	Position	Representing
Mr. Subhish Vaidya	Inspector	Bureau Veritas
Mr. Anil A. Sathyan	QC Engineer	Synergy

**D - MEASURING & TESTING EQUIPMENT USED**

Refer to attachment section J enclosed (indicate if separate document list is provided in attachment)

Equipment Type	Equipment Serial No.	Last Calibration Date	Expiry Date
Pressure Gauge	244403	18/12/2019	17/12/2021

**E - INSPECTION DETAILS**

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

- Visual inspection of Three diver mix gas panel was done and found satisfactory at the time of inspection Serial Number Varied from 140.
- Pneumatic Test was witnessed for the 140444 Three diver mix gas panel for High Pressure @ 330 psi
- Pneumatic Test was witnessed for the 140444 Three diver mix gas panel for Low Pressure @ 330 psi
- No pressure Drop or Leakage (Holding 30 min) was observed and found satisfactory.

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Problems pending / Areas of Concern:

ML

**E2 - Details of Monitoring and Surveillance Points**

Not implemented during the test

No Surveillance Carried out

**E3 - Details of Certificate Review**

Not implemented during the test

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

**F - HEALTH, SAFETY & ENVIRONMENT COMMENTS**

(Comments on Observations and Actions taken during the inspection)

Safety Measures were taken prior to start the work, strict environment based safe and satisfactory.

**G - NON CONFORMITIES**

Refer to attachment section J enclosed (indicate if separate document list is provided in attachment)

Item	Description	Status	Based on	Report No.	Closed on	Report No.	Comments
ML							

**H - PUNCH LIST ITEMS**

Refer to attachment section J enclosed (indicate if separate document list is provided in attachment)

Item	Description	Status	Based on	Report No.	Closed on	Report No.	Comments
ML							

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INSPECTION REPORT No: DBA.4.21.324/R022 Revision No: 01

**J - ATTACHMENTS**

Item	Attachment Name	Total Pages	Description

**Annexure - 01**

Inspection Details: TRITON 440 Three Diver Mix Gas Panel  
Description: Three Diver Mix Gas Panel and BA-Queue-188  
Country of Origin: UAE  
Manufacturing Serial No: TRITON440  
Year of Manufacture: July 2021  
Design Pressure: LP 300psi / HP 330psi  
Test Pressure: LP 330psi / HP 330psi  
Date of Witness of pneumatic test: 16.07.2021  
Container Serial Number: 25R Container: DPW022580473021040

**Test Details:**

- Pneumatic pressure test of Three Diver Mix Gas Panel (serial No: TRITON 440) was witnessed on per approved procedure.
- High pressure supplied to the panel was tested at 330psi, design pressure being 300psi @ 30mins.
- Low pressure supplied to the panel was tested at 330 psi, design pressure being 300 psi for 30mins.
- Seep Solution was not performed on fittings, valves, piping and BA-Queue-188 (no leakage or pressure drop found and hence found satisfactory).

**END OF REPORT**

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**DIGITAL PICTURES**

Visual Inspection  
Strip Leak Test  
Pressure Gauge Reading  
Name Plate

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INSPECTION REPORT No: DBA.4.21.324/R022 Revision No: 01

Inspection performed on:  Material  Final  Resident  
Inspection performed by: Mr. SYNERGY INNOVATIVE DIVING EQUIPMENT TRAINING  
Inspection performed on:  Design  Job

Project: Third Party Inspection Services  
BV Class: WA, SYNERGY INNOVATIVE DIVING EQUIPMENT TRAINING  
Manufacturer/Vendor: MR. SYNERGY INNOVATIVE DIVING EQUIPMENT TRAINING  
Sub-Vendor (if applicable): N/A  
Inspection Location: SYNERGY INNOVATIVE DIVING EQUIPMENT TRAINING, Al-Qusais, Dubai  
Inspection performed on: 16.07.2021 (Date)

Item Tag No: TRITON-440  
QTY: 01  
QTY Offered for Inspection: 01

**A - INSPECTION RESULT**

Satisfactory (Where comments are of a minor nature and conformity needs to still open)  
 Satisfactory with comments (Where comments are of a minor nature and conformity needs to still open)  
 Not Satisfactory (Where comments are of a major nature and conformity needs to still open)

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

Pneumatic testing witnessed for Three Diver Mix Gas Panel Serial No: TRITON-440 and results found Satisfactory at the time of inspection

- High Pressure Test was witnessed @ 330psi and low pressure @ 330 psi for 30 minutes as per indication serial No: TRITON 440
- Open Item Confirmed:  Yes, details in section G  No
- Open Punch List Items:  Yes, details in section H  No
- Release Note Issued:  Yes, customer  No
- BV Inspectability:  Yes  No

BV Inspector: Subhish K. Vaidya  
BV Coordinator: Santosh K. Pillai

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## ORDERING INFORMATION

Sr.	Part Number	Description
1	SY-3DMGP-BP-D037-2R-3DV-6M	THREE DIVER MIX GAS PANEL, WITH 2 X AMRON 3 DIVER HELIUM UNSCRAMBLER OR AIR DIVER RADIO D1 / D2 / D3 VIDEO SYSTEMS, EXTERNAL CAMERA MONITOR, ROV MONITOR, NAVIGATION MONITOR
2	SY-3DMGP-BP-D037-2R-3DV-4M	THREE DIVER MIX GAS PANEL, WITH 2 X AMRON 3 DIVER HELIUM UNSCRAMBLER OR AIR DIVER RADIO D1 / D2 / D3 VIDEO SYSTEMS, AND 4TH MONITOR FOR EXTERNAL INPUT
3	SY-3DMGP-BP-D037-2R-3DV-3M	THREE DIVER MIX GAS PANEL WITH 2 X AMRON 3 DIVER HELIUM UNSCRAMBLER OR AIR DIVER RADIO D1 / D2 / D3 VIDEO SYSTEMS
4	SY-3DMGP-BP-D037-2R-2DV-2M	THREE DIVER MIX GAS PANEL WITH 2 X AMRON 3 DIVER HELIUM UNSCRAMBLER OR AIR DIVER RADIO D1 / D2 VIDEO SYSTEMS
5	SY-3DMGP-BP-D037-2R	THREE DIVER MIX GAS PANEL WITH 2 X AMRON 3 DIVER HELIUM UNSCRAMBLER OR AIR DIVER RADIO (NO CCTV)
6	SY-3DMGP-BP-D037	THREE DIVER MIX GAS PANEL (NO RADIO , NO CCTV)
7	SY-2830A-12	THREE-DIVER PORTABLE DSP3 HELIUM SPEECH UNSCRAMBLER WITH OUTDOOR AC POWER MODULE AND INTERNATIONAL LOCKING POWER CORD
8	SY-2830-11	THREE-DIVER PORTABLE AIR RADIO WITH OUTDOOR AC POWER MODULE AND INTERNATIONAL LOCKING POWER CORD

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

**THREE DIVER MIX GAS PANEL (BACK PLUMBING) SY-3DMGP-BP-D037-XR-XDV-XM**

# Contact us



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