

THREE DIVER NITROX MIX GAS PANEL - SY-3DNPD037-3DV



PART NO : SY-3DNPD037-3DV
THREE DIVER NITROX MIX PANEL WITH D1/D2/D3 CCTV SYSTEM



THREE DIVER NITROX MIX GAS PANEL - SY-3DNPD037-3DV



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THREE DIVER NITROX MIX PANEL WITH D1/D2/D3
 CCTV SYSTEM

PART NO : SY-3DNPD037


THREE THREE DIVER NITROX MIX PANEL





THREE DIVER NITROX MIX GAS PANEL - SY-3DNPD037-3DV

Information Three Diver Panel

Case	Model 1630, Black, Interior (27.70" L x 20.98" W x 15.50" H), with wheels and handle, water, rust and dust proof), Pelican USA Exterior dimensions: 79.45 x 61.49 x 44.39cm (31.28" x 24.21" x 17.48") Interior dimensions: 70.35 x 53.28 x 39.37cm (27.70" x 20.98" x 15.50")
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1 x 0-230 fsw/70 msw Depth gauge, 3.5", 0.25 % accuracy, mirror scale, with calibration point, Diver 1, Color coded Green 

1 x 0-230 fsw/70 msw Depth gauge, 3.5", 0.25 % accuracy, mirror scale, with calibration point, Diver 2, Color coded Yellow 
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1 x 0-230 fsw/70 msw Depth gauge, 3.5", 0.25 % accuracy, mirror scale, with calibration point, Diver 3, Color coded Red 

Air / Gas Supplies	HP Air- Independent Breathing air line per diver LP Air - Common line for all divers Mix 1 - Common line for all divers Mix 2 - Common line for all divers
Regulator	Tescom 26-1100 series Brass Mini High pressure regulator
Relief valves	0-250 psi on regulated diver supply line, 100 psi on pneumo gauges
Air supply ports	All fittings provided behind the panel, with each line labelled. No hoses or connections criss crossing the front of the panel.
Analysis	Individual Oxygen analyzer with hi low alarm and flow meter per diver
Calibration	Inbuilt calibration points for pneumo gauges
Power supply	Works on 220v with 12v adapter, and on 12v battery, provided with digital amp/voltmeter to check incoming supply

Optional :

Diver CCTV	Can be provided for Diver 1/Diver 2/Diver 3
Supervisor CCTV	Provided with panel (optional)
Monitor	TFT 15.5" (splitter will be provided if diver CCTV options are required)
Surface control unit	Video / light control, patented design, outland/synergy design, usa
Primary recording	1 TB primary hard drive to record all diver video
Backup recording	1 TB backup hard drive to record all diver video simultaneously
USB Out	To retrieve data onto a USB memory drive from hard drives
HDMI Out	To mirror broadcast diving operations work via HDMI cable to remote monitor
Control Switches	Touch button switches with backlight for low visibility weather conditions
Light Control	Dimmer switch, knob type

SY-2830A-11 AMCOM III THREE-DIVER RECHARGEABLE BASIC PORTABLE COMMUNICATOR

SY-2830A-11 AMCOM III THREE-DIVER RECHARGEABLE PORTABLE COMMUNICATOR 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 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:

- 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.
- 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.

SY-2830A-11 AMCOM III THREE-DIVER RECHARGEABLE BASIC PORTABLE COMMUNICATOR

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: 41 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: 17.05 Lbs. (7.73 Kg)

INCLUDED WITH COMMUNICATOR:

SY-2830A-11 AMCOM III Two-Diver Rechargeable Basic Portable Communicator with Outdoor 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:

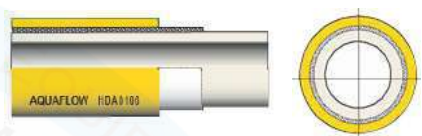
- SY-2460SM-28 Amron Single Muff Operator Headset with Boom Mic and Dual Banana Plugs
- SY-2401-28 Amron Deluxe Headset with Boom Mic
- SY-2822-28 Amron Remote Walk-and-Talk (4-wire mode)
- SY-2821-28 Amron Remote Walk-and-Talk (2-wire mode)

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, topside. 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.

SYNERGY SURFACE DIVING HOSES AND UMBILICALS SY-AQUAFLOW

Known worldwide for its lightweight and ultra flexible construction, Aquaflow hoses are ideal for surface demand applications. Aquaflow kink resistant construction comprises of an extruded core tube, reinforcement of high strength yarn and a bonded outer cover. Both tube and cover are extruded from high performance thermoplastic polymers which are particularly clean and free from odors often associated with conventional rubber hoses. Coupled with the wide operating temperature range this ensures breathing gas quality is maintained under all conditions from -20°C to +66°C.



Part No.	Nominal Bore		O.D.		Min. bend radius		Working pressure		Nom. burst pressure		Weight in air		Weight in sea water		Typical application
	in	mm	in	mm	in	mm	psi	bar	psi	bar	lb/ft	g/m	lb/ft	g/m	
SY-HDA0104	1/4	6.3	0.50	12.7	1.25	32	300	21	1200	84	0.078	116	-0.009	-14	Pneumo
SY-HDA0106	3/8	9.5	0.66	16.8	2	50	500	35	2000	140	0.119	177	-0.034	-50	Air/Gas
SY-HDA1108	1/2	12.7	0.83	21.0	3	76	300	25	1200	84	0.178	265	-0.054	-80	Hot water

Aquaflow Umbilicals



Lightweight, ultra flexible and kink resistant, Aquaflow Umbilicals are ideal for breathing gas supply, comms and pneumo service for surface demand umbilicals. They can be produced in production runs up to 740 meters long and can be over extruded or braided for additional protection against abrasion and use in contaminated waters.

The unique materials and cabled "rope-like" construction combine to produce the most flexible, controlled buoyancy umbilicals available today. The umbilicals have no need

for tape, the repairs are much reduced and they have a longer life. They keep the professional diver safer and more efficient both while diving and on deck. They will ultimately reduce costs for the operator. The highest quality materials, workmanship with competitive pricing and unmatched service to our clients worldwide. SYNERGY invites you to visit our website or contact us directly so that we can assist you with all your Diving Umbilical needs.

SYNERGY SURFACE DIVING HOSES AND UMBILICALS SY-AQUAFLOW

SY-UDA0103

3 part surface demand



SY-UDA0204

3 part plus video



OUTLAND VIDEO CAMERA / LIGHTS / UMBILICALS

Mechanical	Specification
Weight	6 oz (.2kg) Dry, 3 oz(.06kg) wet
Depth Rating	2000 ft (600m)
Housing	Black delrin
Electrical	
Image Device	1/3" CCD sensor (412k pixel)
Sensitivity	.001 lux @f1.4
Resolution	600 TV lines standard
Video Out	1.2 Vpp
Power	12 VDC @ 110 ma.
Optical	
Lens	3.6mm, Electronic-Iris
Focus	Fixed 4" to infinity
Angle of View	70 horz. (in water)



PART NO : SY-UWC-325/p/e



PART NO : SY-UWL-401

Mechanical	Specification
Weight	7oz(0.2kg) Dry, 3 oz.(.1kg) Wet
Depth Rating	2000 ft (600m)
Housing	6061-16 Anodized Aluminium
Electrical	
Power	12 VDC @ 110 ma.
Wattage	18 watt (Eq to 150 watt halogen)
Output	700 lux at 1 meter

Mechanical	Specification
Conductors	16ea #22 awg 1 RG-59 Coax
Length (mtrs)	100/150/200 as per requirement
Diameter	8.5mm (0.35")
Materials	Orange Polyurethane jacket
Breaking Strength	1200 lbs
End fittings	
Diver End	Moulded Y connection
Camera	Rmk-5-fs with locking sleeve
Light	Rmg-3-fs with locking sleeve
Surface end	Soldered connection
Cable	8 pin amphenol connector



PART NO : SY-VC-150M

SYNERGY PIGTAILS AND CONNECTORS

Connector	SY-RMK-5-FS
Type	5 Female Sockets
Cable	18 in Pigtail of 18 SO AWG Cable
Material	Special Neoprene, Molded
Contacts	Copper Alloy, Hard Gold Plated per ASTM-B-488
Voltage Rating	600 VDC
Pressure Rating, Mated	Up to 20,000 psi
Mates with	SY-XSL-5-BCL on Outland Camera SY-UWC-325/p/e

PART NO : SY-RMK-5-FS



PART NO : SY-RMG-3FS



Locking sleeve for Rmg-3-fs

PART NO : SY-G-FLS-D



Locking sleeve for Rmk-5-fs

PART NO : SY-K-FLS-D



Connector	SY-RMG-3-FS
Type	3 Female Sockets
Cable	18 in Pigtail of 18 SO AWG Cable
Material	Special Neoprene, Molded
Contacts	Copper Alloy, Hard Gold Plated per SY-ASTM-B-488
Voltage Rating	600 VDC
Pressure Rating, Mated	Up to 20,000 psi
Mates with	SY-XSG-3-BCL on Outland light SY-UWL-401

PART NO : SY-MS3108B-18-08P



Certifications	Provided with each system
International	IMCA D023
Manufacturer	Synergy Certificates
Electrical	Continuity/Function test



PART NO : SY-CLBRK

SS camera and light bracket with jubilee clamp

Cannon Right Angle Amphenol Connector is used for connecting the video camera umbilical to the surface video console unit.

CLASS WITNESS CERTIFICATES

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INSPECTION REPORT NO: SA-439242/IR-01 Revision No: 6

Inspected by: **MS Synergy Diving & Equip. Solutions PZC Dubai, UAE**
Inspection performed at: **Registered Authority** Yes, No: Yes, No
By: **JABIN, DINA, & S...**

Project: **Third Party Inspection Services** (IPC Del R applicable):
BY Client: **MS Synergy Diving & Equipment Solutions PZC Dubai, UAE** (BY Internal P/pt)
Manufacturer Vendor: **MS Synergy Diving & Equipment Solutions PZC** (Refer to B/C)
Sub-Vendor/ applicable: **N/A** (Refer to manufacturer)
Inspection Location: **At Client, Dubai** (Previous Inspection/ if applicable): **N/A** (Date)
Inspection performed on: **15/11/2023** (Next Inspection/ if applicable): **TBA** (Date)

MATERIAL / SUBJECT OF INSPECTION	ITEM / TAG No	QTY on per P/C	QTY checked for inspection
Witness of pressure over pressure test of Three Drive Max Gas Panel High Pressure Line @ 3300 psi & Low Pressure Line @ 330 psi	Serial No: TR100-006	01 No	01 No

A - INSPECTION RESULT

Satisfactory (Without comments) Satisfactory with comments (Any of missing Parts or Non-Conformity items is still open) Not Satisfactory (RCC raised during the inspection)

Inspection Summary (for details refer to section E)
Witness of pressure over pressure test of Three Drive Max Gas Panel High Pressure Line @ 3300 psi & Low Pressure Line @ 330 psi, Serial No.: **TR100-006**, as per Attachment - A & found satisfactory.

Open Non-Conformities: Yes, details in section D No
Open Punch List Items: Yes, details in section H No
Release Note Issues: Yes, attached (Please Refer attached) No

BY Inspectors/Signatures: Yes No

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INSPECTION REPORT No: SA-439242/IR-01 Revision No: 6

BY Inspector: **Mehraned Sarfaraz** (Phone and Signature) **BY Office: Dubai**
BY Coordinator: **Bilal Lal** (Phone and Signature) **Inspection Report Date: 15/11/2023**

Distribution: CLIENT OEM/Manufacturer OTHER Attachment Report: Yes, details in section J No

B - REFERENCE DOCUMENTATION: (Refer to attachment section J instead (include if separate document for J provided in attachment))

Title	Reference No.	Rev.	Appr. and status	Approved by	Date
Diving Equipment System	IMCA D023	01	Approved	Sarfaraz	22/03
Pressure Over Pressure Test	SHELLQMSM-01	02	Approved	Kurayq	Aug. 2016

C - ATTENDEES

Name	Position	Representing
M. Mehraned Sarfaraz	01 - Inspector	Synergy
M. Ayar & Saadqa	02 - Engineer	Synergy

D - MEASURING & TESTING EQUIPMENT USED (include if separate equipment list is provided in attachment)

Equipment Type	Equipment identity no.	Last Calibration Date	expiry Date
Digital Pressure Gauge	AG-233006	24-05-2020	24-05-2021
Digital Pressure Gauge	83342	02-11-2018	28-11-2020

E - INSPECTION DETAILS
E1 - Details of Witness (W) & Hold Off Inspection Points

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INSPECTION REPORT No: SA-439242/IR-01 Revision No: 6

Manufacturing Progress Status:
• Nil

Details of Inspection Activities carried out with reference to ITP:
• Visual Inspection of three drive max gas panel & found satisfactory
• Verified the serial No. TR100-006 of three drive max gas panel
• Witnessed pressure over pressure test of three drive max gas panel as per Attachment - A & found satisfactory at the time of inspection

Confirmation of certificates:
• Verified calibration certificates of measuring instruments and found satisfactory

E2 - Details of Monitoring and Surveillance Points Tick if monitored during the test
E3 - Details of Certificate Review Tick if monitored during the test

F - HEALTH, SAFETY & ENVIRONMENT COMMENTS
(Comment on Observations and Actions Taken During the Inspection)
Conducted 2 minutes safety check, all MS Safety Concerns were found at the time of inspection.

G - NON CONFORMITIES (Refer to attachment section J instead (include if separate document for J provided in attachment))

Item	Description	Status	Raised on	Report No.	Closed on	Report No.	Comments
NA							

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

Item	Description	Status	Raised on	Report No.	Closed on	Report No.	Comments
NA							

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DIGITAL PICTURES

Inspector: **Front View of the panel** **Inspector: Side View of the panel**

MS SUBMITTANCE SHEET

Inspector: **Front View - Pressure** **Inspector: Side View - Pressure**

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J - ATTACHMENTS

Item	Attachment Name	Total Pages	Description
1	Spotting the hazard	1	SIGN SAFETY O-ECK LIST

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Annexure-01

Inspection Details:

- Witnessed pressure over pressure test of three drive max gas panel with the following data:

Description	Value
Three Drive Max Gas Panel	UAE
Manufacturer Serial No	TR100-006
Year of Manufacture	Nov 2020
Design pressure	1.2 MPa (psi)
Test pressure	1.2 x 1.6 = 1.92 MPa (psi)
Parameter Test Date	17.11.2023

Pressure Test:

- Pressure over pressure test of three drive max gas panel (Serial No.: TR100-006) has been witnessed as per the approved procedure and found to be following:

- Test Pressure gauge calibration certificate was reviewed and found satisfactory.
- Low Pressure of 330 psi (i.e. 1 times of ROP) was applied to the low pressure piping of Three Drive max gas panel for 20 mins. no leaks found, satisfactory at time of inspection.
- High Pressure of 3300 psi (i.e. 10 times of ROP) was applied to the high pressure piping of Three Drive max gas panel for 20 mins. no leaks found, satisfactory at time of inspection.
- Soap solution leak test was performed on piping, fittings & valves, no leakage found at the time of inspection. Results satisfactory.

END OF REPORT

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Certifications

Provided with each panel

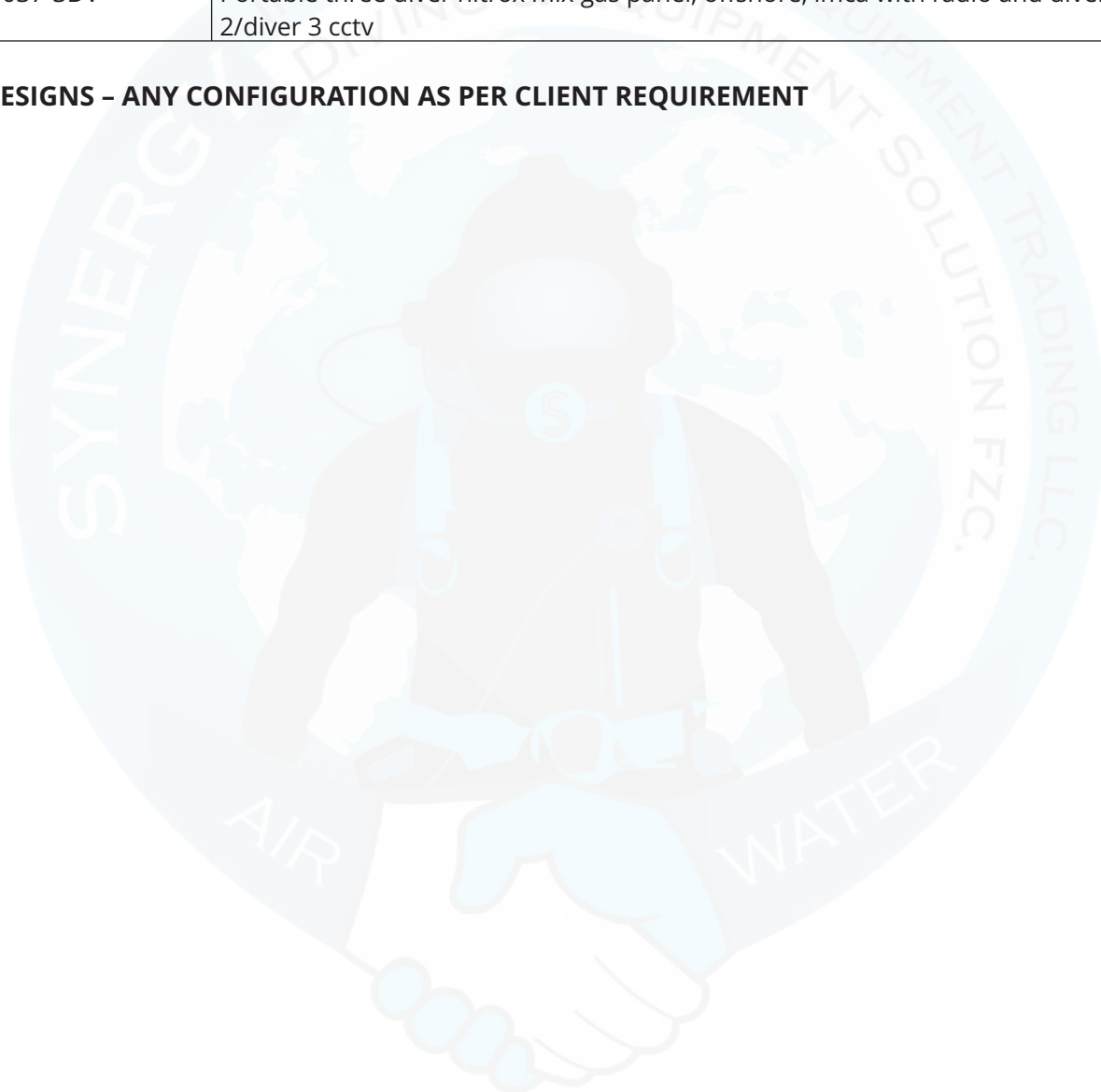
Manufacturer	Synergy certification
International	IMCA D023
Class	Bureau Veritas pressure test certificates
Warranty	1 year international manufacturer warranty
Weight	68 kg

THREE DIVER NITROX MIX GAS PANEL - SY-3DNPD037-3DV

ORDERING INFORMATION

Sr.	Part Number	Description
1	SY-3DNPD037	Portable three diver nitrox mix gas panel, offshore, imca (no radio, no diver cctv)
2	SY-3DNPD037-R	Portable three diver nitrox mix gas panel, offshore, imca with radio (portable radio supplied seperately, not inbuilt)
3	SY-3DNPD037-1DV	Portable three diver nitrox mix gas panel, offshore, imca with radio and diver 1 cctv
4	SY-3DNPD037-2DV	Portable three diver nitrox mix gas panel, offshore, imca with radio and diver 1/diver 2 cctv
5	SY-3DNPD037-3DV	Portable three diver nitrox mix gas panel, offshore, imca with radio and diver 1/diver 2/diver 3 cctv

BESPOKE DESIGNS - ANY CONFIGURATION AS PER CLIENT REQUIREMENT



THREE DIVER NITROX MIX GAS PANEL - SY-3DNPD037-3DV

Contact us



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