



# SYNERGY

INNOVATIVE DIVING EQUIPMENT TRADING LLC

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ISO 45001:2018 OHSMS



## THREE DIVER D023 AIR PANEL, OPEN PLUMBING AND CONTROLS, FRAME MOUNTED SY-3DAPD023-F



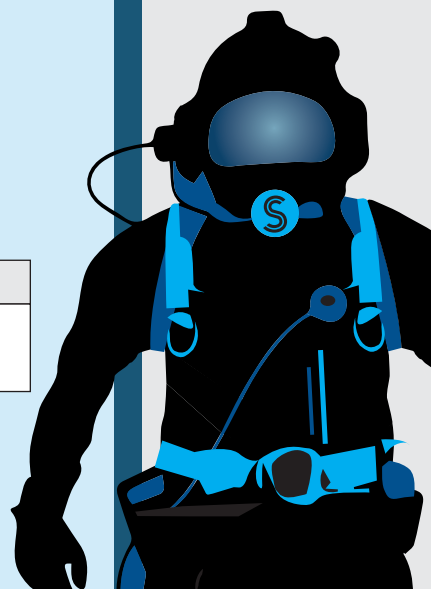
**PART NO : SY-3DAPD023-F**

IMCA D023

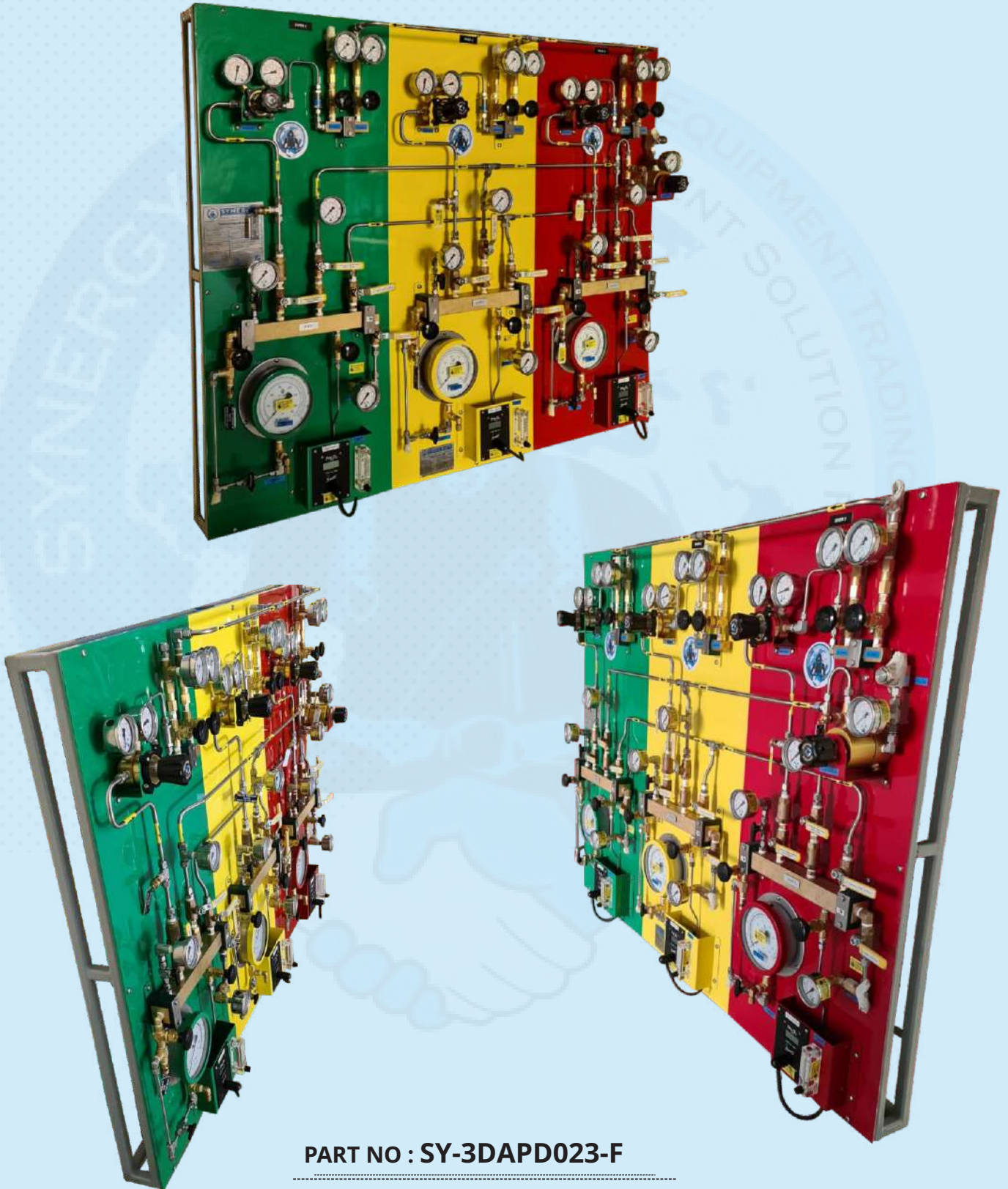
DESIGN for Surface Oriented (Air) Diving Systems

IMCA D018

Code of Practice for The Initial and Periodic Examination, Testing and Certification of Diving Plant and Equipment

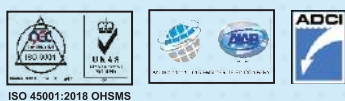


## THREE DIVER D023 AIR PANEL, OPEN PLUMBING AND CONTROLS, FRAME MOUNTED SY-3DAPD023-F



**PART NO : SY-3DAPD023-F**





## THREE DIVER D023 AIR PANEL, OPEN PLUMBING AND CONTROLS, FRAME MOUNTED SY-3DAPD023-F

Sr.	Description
1	Diver 1 Green / Diver 2 Yellow / Diver 3 Red powder coated marine grade aluminum non rust fascia
2	All 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 **Green**



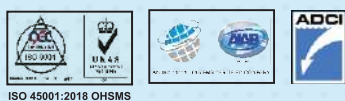
1 x 0-230 fsw/70 msw Depth gauge, 6", 0.25 % accuracy, mirror scale, with calibration point , Diver 2, Color coded **Yellow**



1 x 0-230 fsw/70 msw Depth gauge, 6", 0.25 % accuracy, mirror scale, with calibration point , Diver 3, Color coded **Red**



Sr.	Part Number	Description	Qty
1	SY-PRO O2	Oxygen analyzers with high low alarm (one per diver)	3
2	SY-VFA-BV-23	Flowmeters (per analyzer)	3
3	SY-873-400	Option 1 Aqua Environment high pressure Regulator w/gauges	4
4	SY-44-1315-2081-005	Option 2 Tescom high pressure regulator	4
5	SY-FLR-DS	Flow Restrictor (one per diver)	3
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)	3
9	SY-PG-A-2.5-5000	High pressure gauges (incoming air supply) 0-5000 psi (Hp2)	3
10	SY-PG-A-2.5-500	Low pressure gauge (regulated air supply) 0-500 psi	3
11	SY-PG-A-2.5-500	Low pressure gauge (common low pressure supply) 0-500 psi	3
12	SY-PG-A-2.5-500	Low pressure gauge (downstream for umbilical supply pressure)	3



## THREE DIVER D023 AIR PANEL, OPEN PLUMBING AND CONTROLS, FRAME MOUNTED SY-3DAPD023-F

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 Diver 3 - Independent high pressure line
16	Diver 1 - Common high pressure line Diver 2 - Common high pressure line Diver 3 - Common high pressure line
17	Diver 1 - Common low pressure line Diver 2 - Common low pressure line Diver 3 - 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

### DIVE PANEL COMMUNICATION (Sold Separately)

Sr.	Part Number	Description	Qty
1	2830A-11	Amron 3 diver radio with ac/dc power	2
2	2405-28	Push to talk microphone	2

### 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

## AMRON INTERNATIONAL - MASTER DISTRIBUTOR

### 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.

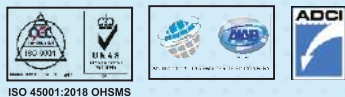
##### Outdoor Rated AC Power Module

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.





## AMRON INTERNATIONAL - MASTER DISTRIBUTOR

### 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.

### 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: 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:

AMCOM™ III 2830A-11 Three-Diver Portable Communicator with AC Power, Internal Charger and Rechargeable

### Battery 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)

### POWER CORD 6.5 FT. OPTIONS:

#### 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.

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**DIVER-VISION 1D**



**DIVER-VISION 1D-R**



**DIVER-VISION 2D**



**DIVER-VISION 2D-R**



**DIVER-VISION 3D**



**DIVER-VISION 3D-R**

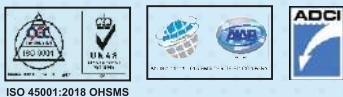


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SPECIFICATIONS	DIVER-VISION	DIVER-VISION	DIVER-VISION	DIVER-VISION	DIVER-VISION	DIVER-VISION
	1D	1D-R	2D	2D-R	3D	3D-R
Surface control unit for video and light	1	1	2	2	3	3
Monitor	1	1	1	1	1	1
Remote	1	1	1	1	1	1
Splitter	-	-	4WAY	4 WAY	4 WAY	4 WAY
1 TB primary recorder	1	1	1	1	1	1
1 tb backup recorder	1	1	1	1	1	1
Amron radio	-	2 DIVER 2820A-11	-	2 DIVER 2820A-11	-	3 DIVER 2830A-11
Flexible keyboard	1	1	2	2	3	3
Uwc-325/p/e camera	1	1	2	2	3	3
Uwl-401 led light	1	1	2	2	3	3
Video cable with end fittings for camera/light	100 MTR/ OR 150 MTR	100 MTR OR 150 MTR	100 MTR OR 150 MTR PER DIVER	100 MTR OR 150 MTR PER DIVER	100 MTR OR 150 MTR PER DIVER	100 MTR OR 150 MTR PER DIVER
Usb out port	1	1	2	2	3	3
Hdmi out port	1	1	2	2	3	3
Pelican box	1550	1600	1550	1600	1600	1600
Maximum Weight	10kg	14kg	14kg	18kg	30kg	34kg





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# CERTIFICATES PROVIDED WITH EACH THREE DIVER AIR PANEL

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

Industry & Facilities Division  
Third Party Inspection Report  
Page 1 of 6

INSPECTION REPORT No: DA. 429242R-01  
Revision No: 1

Inspector: [Signature]  
Inspector: [Signature]

Project: Third Party Inspection Services  
BY Client: MS. Synergie Diving & Equipment Solution FZC  
BY Office: Dubai  
BY Inspector: [Signature]  
BY Manufacturer: [Signature]

Item / Tag No. QTY. As per PO QTY. Offered for Inspection

Inspection Summary: [Text]

A - INSPECTION RESULT  
Satisfactory (Please comment)  Satisfactory with comments (Key of testing Passes or Non Conformity items to still carry)  Not Satisfactory (NCR raised during the inspection)

Open Non Conformities:  Yes (Detail in section Q)  No  
Open Pressure Test Items:  Yes (Detail in section Q)  No  
Release Non Conformities:  Yes (Number/ID, Location, Issue number)  No  
BY Inspecting/Supervising:  Yes  No

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INSPECTION REPORT No: DA. 429242R-01  
Revision No: 1

BY Inspector: [Signature]  
BY Coordinator: [Signature]

B - REFERENCE DOCUMENTATION

Title	Reference #	Rev.	Approved status	Approved by	Date
Diving Equipment System Inspection - Static	IMCA D023	01	Approved	George	January 2019
Pressure Test Pressure Test	OSSE AQMS-M-01	02	Approved	George	May 2015

C - ATTENDEES

Name	Position	Representing
George	Supervisor	SV
George	QC Engineer	CE

D - MEASURING & TESTING EQUIPMENT USED

Equipment Type	Equipment Identifiers (if applicable)	Last Calibration Date	expiry Date
Digital Pressure Gauge	04566	04/10/2020	07/10/2027

E - INSPECTION DETAILS

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INSPECTION REPORT No: DA. 429242R-01  
Revision No: 1

Manufacturing Progress Status:  Nil

Details of Inspection Activities carried out with reference to ITP:

- Visual inspection of Three diver air panel & found satisfactory
- Verified the serial No. IMCA D023-402 of Three diver air panel
- Witnessed pneumatic cover pressure of Three diver air panel as per Appendix - A & found satisfactory at the time of inspection

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

F - HEALTH, SAFETY & ENVIRONMENT COMMENTS

G - NON CONFORMITIES

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

H - PUNCH LIST ITEMS

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

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Revision No: 1

INSPECTION DETAILS

J - ATTACHMENTS

Item	Attachment Name	Total Pages	Description
1	Sparging the vessel	1	2 MIN SAFETY CHECK LIST

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INSPECTION REPORT No: DA. 429242R-01  
Revision No: 1

Inspection Details:

ABBREVIATION

- Witnessed Pneumatic cover pressure test of Three Diver Air panel (as per the following details):

Description	Three Diver Air panel
Country of origin	U.A.E
Manufacturer Serial No.	TRETON 443
Year of Manufacture	Dec-2019
Design pressure	1.7 MPa (psf: 3100 psf)
Test pressure	1.7 MPa (psf: 3100 psf)
Pneumatic Test Date	16.12.2023

Pneumatic Test:

- Pneumatic cover pressure test of Three Diver Air panel (Serial No: TRETON 443) has been witnessed as per the inspection checklist and found satisfactory
- One Pneumatic cover pressure certificate was generated and found satisfactory
- One Pressure of 310 psf (1.1 bar) of N2 was applied to the low pressure piping of Three Diver Air panel for 30 mins as indicated satisfactory at time of inspection
- High Pressure of 750 psf (5.1 bar) of N2 was applied to the high pressure piping of Three Diver Air panel for 10 mins as per the test report, satisfactory at time of inspection
- One witness test has been performed on sparging through a valve, as per the test report at the time of inspection. Satisfactory

END OF REPORT

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## ORDERING INFORMATION

Sr.	Part Number	Part Number
1	SY-3DAPD023-F	<b>THREE DIVER AIR PANEL, OUTFITTED WITH ALL CONTROLS IN FRONT COMPLIANT TO IMCA D023 AND WITH CLASS TEST CERTIFICATE</b>
2	SY-2830A/11	<b>AMRON THREE DIVER AIR RADIO WITH AC DC POWER SUPPLY (SOLD SEPERATELY)</b>
3	SY-DIVER VISION	<b>SYNERGY OUTLAND DIVER VIDEO SYSTEMS (DIVER 1/DIVER 2/DIVER 3) (SOLD SEPERATELY)</b>

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





## SYNERGY INFRASTRUCTURE







# SYNERGY

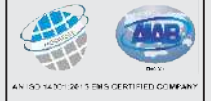
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AIAA ISO 45001:2018 EMS CERTIFIED COMPANY






## THREE DIVER D023 AIR PANEL, OPEN PLUMBING AND CONTROLS, FRAME MOUNTED SY-3DAPD023-F

### Contact us

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