

Design Manufacturing Supply



Sales Installation Service





AP OMEGA BREATHING APPARATUS

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AP OMEGA is an open circuit, self-contained compressed airbreathing apparatus. The apparatus is designed for professional fire-fighters, factory personnel and emergency response teams at enterprises with hazardous production facilities.

The apparatus enables safe and comfortable operation in smoke-filled and gas-polluted environment when it is impossible to use filtering gas masks. It can also be used when there is a threat of emissions of unpredictable concentration chemistry that can be dangerous for a man for breathing and visual organs.

Backplate

The light-weight backplate is made of composite materials and intended for arranging pneumatics and hoses.

Harness

The harness is available with flame-retardant padded straps as a standard version.

Optionally, for better wearer's comfort, AP OMEGA can be equipped with lumber pad. AP OMEGA can be configured for use with one cylinder or twin cylinders. Single cylinder apparatus can be easily altered by a wearer (no tools required) to twin cylinder apparatus. A kit is available for converting single cylinder apparatus to twin cylinders apparatus.

Reducer

The reducer is a simple, self-regulating, spring-and-piston device that requires no adjustment. It has a pressure relief valve that protects the medium pressure system from overpressure.

Gauge and whistle

A high-pressure hose from the reducer inlet connects air at the cylinder pressure to a warning whistle and pressure gauge mounted on the OMEGA shoulder strap. The warning whistle sounds when pressure in the cylinder falls to 55 5 bar. In case of need wearer can easily adjust whistle actuating pressure.

Demand valves

The demand valve operates in conjunction with the facemask's spring loaded exhale valve to maintain a positive pressure within the facemask.

OMEGA breathing apparatus has two different types of the demand valves:

Demand valve AP-2000 (middle size) screwed into the facemask. It has a lever-diaphragm mechanism, which responds to pressure changes in the facemask to regulate the flow of air to the mask thus ensuring that pressure in the mask remains safely above the ambient pressure.

Demand valve Delta (small size) screwed or plugged into facemask. It has a servo-assisted tilting diaphragm mechanism, which responds to pressure changes in the facemask to regulate the flow of air to the mask thus ensuring that pressure in the mask remains safely above the ambient pressure. The demand valves are activated when wearer takes the first breath.

Demand valve AP-2000



Demand valve Delta

Gauge and whistle

T - joint

Backplate



Delta

Facemask

OMEGA is used with:

Neoprene Delta full facemask with the rubber head harness

Neoprene PM-2000 full facemask with rubber head harness



PM-2000

Attachments

The following options are available:

Hose attachment with male and female connectors joins pneumatic system of the breathing apparatus with a gas-tight chemical suit.

Rescue mask attachment permits the wearer to supply a rescue mask from own air cylinder.

Airline attachment permits AP OMEGA to be used with an airline. The cylinder provides emergency backup.

Quick fill device permits to fill the cylinder(s) with compressed air from transporting cylinders.

Atmospheric valve permits the wearer to breathe with ambient air while keeping the facemask on.

Cylinder type	Number of cylinders	Charging pres- sure (bar)	Water volume (litres)	Total duration (min)	Max weight of complete AP OMEGA with fully charged cylinders (kg)
Steel	1	300	6.8	60	15.7
Composite	1	300	7	60	12
Composite	1	300	6.8	60	10.2
Composite	1	300	9	80	12.6
Composite	2	300	4	68	14.6
Composite	2	300	4.7	80	13.6
Composite	1 or 2	300	6.9	60 or 120	10.2 or 17.2
Composite	1 or 2	300	6.8	60 or 120	10.2 or 17.2
Composite	1	300	10	85	12.3



AP OMEGA-C BREATHING APPARATUS

The apparatus is designed for professional fire-fighters, factory personnel and emergency response teams of enterprises with hazardous production facilities. It can also be used on board seagoing vessels or river boats; airports rescue and fire-fighting services can use it as well.

AP OMEGA-C breathing apparatus is similar to AP OMEGA with a number of distinctive features as follows:

- There is a wider range of cylinders that extend the range of applications.
- The cost can be cut down significantly due to a simplified suspension system.
- There is a wide variety of full-face panoramic masks (Delta, PM-2000, upgraded PMM-88).
- Multipurpose usage.

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VECTOR HOSE BREATHING APPARATUS

VECTOR hose breathing apparatus is used for emergency escape or long work in irrespirable environment with self-contained mobile air station KASKAD.

VECTOR is ideal for chemical tank cleaning, toxic spillage response or certain tasks on offshore platforms.

VECTOR can operate under the following conditions:

- From the breathing apparatus cylinder. The operation time depends on type of the cylinder:
- From self-contained mobile air station KASKAD. The operation time depends on the type and number of cylinders.
- From any air source with outlet pressure of 5 to 9 bar.



Cylinder type	Charging pressure (bar)	Water volume (litres)	Total duration (min)	Max weight of complete VECTOR with fully charged cylinders (kg)
Steel	200	2	12	6.5
Composite	300	2	18	5
Composite	300	3	25	5.5

KASKAD MOBILE AIR STATION

KASKAD self-contained mobile air station is designed for compressed air storage, transportation and supply to breathing apparatuses. KASKAD can be used to supply chemical protection suits without a breathing apparatus. KASKAD may have one or two coils.

KASKAD can be used by factory personnel and emergency response teams of enterprises where long-term supply of the breathing air is required.

Total length of a hose: up to 120 meters.

Dimensions (mm): 1300x610x900.



Cylinder type	Number of cyl- inders	Charging pres- sure (bar)	Water volume (litres)	Total duration (min)	Max weight of complete KASKAD with fully charged cylinders w/o coils (kg)
Steel	2	300	6.8	120	60
Composite	2	300	7	120	54
Composite	2	300	6.8	120	51
Composite	2	300	9	160	53
Composite	4	300	6.8	240	80
Composite	4	300	7	240	66
Composite	4	300	6.8	240	60
Composite	4	300	9	320	64



ADA-2 SELF-RESCUE BREATHING APPARATUS

ADA-2 is a self-rescue breathing apparatus with compressed air suitable for untrained users

It is designed for evacuation from building. The apparatus fully protects the respiratory system and eyes. The head is completely covered with a hood, which does not demand any personal adjustment.

Quick and intuitive application.

There is no need in operational replacements during all time of its use. Airline system does not require any adjustment.

ADA-2 requires no more than just a visual inspection.



Culinder tune	Number of cyl-	Charging pres-	Water volume	Total duration	Max weight of complete ADA-2 with fully
Cylinder type	inders	sure (bar)	(litres)	(min)	charged cylinders (kg)
Steel	1	250	2	12	5
Composite	1	250	3	18	4

ADA-PRO SELF-RESCUE BREATHING APPARATUS

ADA-PRO is a self-rescue breathing apparatus with compressed air for professionals. It is used by officers to provide safe evacuation and carry out the first steps for isolating emergency. The apparatus is equipped with a comfortable jacket-like harness that simplifies putting-on and reduces the time before use.

ADA-PRO can be used with a mask or a hood.

There is no need in operational replacements during all time of its use.

Airline system does not require any adjustment.

ADA-PRO requires no more than just a visual inspection.

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Cylinder type	Number of	Charging	Water volume	Total duration	Max weight of complete ADA-PRO with
	cylinders	pressure (bar)	(litres)	(min)	fully charged cylinders (kg)
Composite	1	300	3	25	7

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KIO-1 HYDRAULIC TESTING EQUIPMENT KIT

The Testing Equipment Kit is designed for testing and repairing compressed gas cylinders for SCUBAs and closed-circuit SCUBAs. The kit consists of a number of specific equipment.

Technical data

The kit enables hydraulic testing with a test pressure of up to 500 bar. The volume of cylinders is 1 to 100 L (depending on test models). Adaptors for the neck thread are W19.2 or M18x1.5. Adaptors for another neck threads are available on request.

Separate supply

Each equipment within the kit can be delivered separately.

Simple and easy in use

The kit can be installed by customer on his own.

The kit is designed to minimize electric power, compressed air and water consumption.

Working place for testing and filling cylinders



Cylinder hydraulic testing device Composite cylinder jacket testing station. The measuring principle is based on volumetric expansion





UPO-1 Cylinder Flushing and Cleaning Device



Unit for inspecting internal surface of the cylinder Drilling machine is equipped with a pneumatic clamp

KU-9V TESTING DEVICE



KU-9V Testing Device is designed for checking main technical parameters of breathing apparatuses:

- Positive pressure
- Leak test
- Pressure test (the pressure when the demand valve is normally opened by the wearer's first breath)
- Reduced pressure

The device can produce and measure positive and negative pressures of 0 to 1000 Pa. The device can measure reduced pressure of 0 to 1.5 MPa.

The shockproof, dust-proof and moisture-proof case is equipped with atmospheric valve to assist in opening the cover after a long storage.

Dimensions (mm): 300x250x200. Weight (kg): 4.5.

The plastic head and test disk are designed to test facemask for air-tightness.

PKS-2000-300 MOBILE COMPRESSOR STATION

PKS-2000-300 is designed for the fast filling of breathing apparatus cylinders with operating pressure up to 300 bar. PKS-2000-300 can be used on the place of lingering fires and large-scale man-made disasters.

PKS-2000-300 provides:

- Transportation of a rescue/fire-fighting team to the place of emergency. The team can consist of maximum 7 men including the driver.
- Replaceable breathing apparatus cylinders filled with compressed air.
- Fast filling of breathing apparatus cylinders from stationary cylinders in noxious environment.
- Filling of cylinders by compressor.
- Fast filling of cylinders from stationary cylinders.
- Inspection & maintenance of breathing apparatus on site.
- Illumination of place of emergency.
- Autonomous operation of compressor from vehicle engine or a fixed external electrical network.

Ways of filling

Quick filling of compressed air cylinders from stationary cylinders. This method allows the user to fill cylinders without removing the apparatus and without stopping air flow for breathing. Their filling is carried out with a filling panel connected to the breathing apparatus. A 7 L cylinder can be filled up to the operating pressure for 2 minutes.

The filling of compressed air cylinders from stationary cylinders allows the user to fill cylinders removed from the breathing apparatus. This method of filling is carried out with a filling panel. A 7 L cylinder can be filled to the operating pressure for 2 minutes.

The filling of cylinders by compressor is carried out with a special panel. The rate of filling is 500 L per minute, so a 7 L cylinder can be filled to the operating pressure for 4 minutes.

The booster filling of cylinders by compressor. The compressor run in a booster mode using the air from stationary cylinders. The rate of filling is 900 L per minute, so 7 L cylinder can be filled to the operating pressure for 2 minutes.

The replacement of empty cylinders with filled ones. This method allows us to remove empty cylinders from and attach the filled cylinders to breathing apparatus.



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TD-1 THERMAL AND SMOKY ENVIRONMENT CHAMBER

TD-1 is designed for practical training of firemen and rescuers in working in unbreathable and low-vision environments under conditions simulating a complex situation in a fire, accident or emergency.

TD-1 enables:

- Simultaneous training of fire squad/section.
- Close simulating fire conditions.
- Variable physical load exercises.

TD-1 is arranged in a standard 40-ft shipping container and contains the following: labyrinth (orientation simulator); process zone section with capability of providing thermal load (thermal chamber); control room. TD-1 can be equipped with Flanets Fire Module.





TOK-1 FIRE-FIGHTING TRAINING FACILITY

TOK-1 is designed to practice techniques and methods of extinguishing various simulated seats of fire, to monitor consumption of fire-extinguishing agents, to improve skills in using individual respiratory protection means and special protective clothing.

The fire-fighting training facility is arranged in a standard 40-ft shipping container and contains a control room and fire simulators as follows: "Overhead Fire", "Gas Cylinders on Fire", "Cable Tray on Fire", "Electric Motor on Fire", "Electric Board on Fire", and "Room on Fire".

Fire gas simulators are designed to practice techniques and methods of extinguishing fire on industrial equipment.











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AVTOMOBIL FIRE-FIGHTING SIMULATOR

This simulator is designed to conduct fire extinction and rescuing drills on the motor transport.

The simulator includes:

- Car setting.
- Fixed operating system (controller) .
- Wireless control panel.
- Ignition box with heat control board.
- Gas reservoir.

The car setting is a steel dummy car structure made of stainless steel and duly sized to simulate a real fire situation.

The car setting is equipped with a gas platform to simulate fire inside the car, a gas platform to simulate fire under hood, and gas burners mounted on the fore wheels.

The car setting has arrangements in the form of roller wheels to be moved on an even surface. The fixed operating system (controller) is a main control unit designed to control gas burners. The controller is equipped with a portable control panel so that operator could keep away during exercises while controlling the fire scenario.



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INTEGRATED TRAINING SYSTEM

The Integrated Training System is designed for practical training of firemen and rescuers in operating in unbreathable environments under fire effects and during rescue operations in case of man-made accidents.

The Integrated Training System consists of a training tower, training compartments, and burning simulators of industrial and housing areas.

The Integrated Training System buildings are easily erectable prefabricated structures, which do not require strong foundation and can be mounted on training grounds of fire brigades within a very short time.









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