

NEPTUNE SPACE IRON MASK
OWNER'S MANUAL



OCEANREEF[®]
connecting divers

For nearly 60 years, OCEAN REEF has been involved in the underwater diving industry. We have contributed much to this industry, from fins and snorkels to the most modern systems of underwater communication. Through the spirit of intrepid pioneers, brilliant inventors, passionate divers, and dynamic entrepreneurs, OCEAN REEF has been able to turn dreams into reality in the underwater world.



OCEAN REEF USA



OCEAN REEF ITALY

In order to limit our paper consumption, and as a part of our environmental friendly and responsible approach, OCEAN REEF prefers to put user documentation online rather than print them out.

Please refer to our web site:

www.oceanreefgroup.com



© OCEAN REEF 2011

NEPTUNE SPACE IRON MASK OWNER'S MANUAL

TABLE OF CONTENTS

WARNING, CAUTION, NOTES	4
INTRODUCTION	5
GENERAL PRECAUTIONS AND WARNINGS	5
USE OF CONVENTIONAL REGULATOR	7
1 ST STAGE SL 35TX	7
AIR CIRCULATION	8
EQUALIZATION	8
QUICK STEPS	9
PURGING	11
SERIAL NUMBER	11
MAINTENANCE AND CLEANING/STORAGE	12
COMMUNICATION	13
TROUBLESHOOTING	14
Schematic and parts list (Neptune Space IRON MASK)	15
Schematic and parts list (SL 35TX)	17
Warranty	19

The DPIs (Individual Protective Device) scrutinized in these operating instructions have undergone every possible test for design validation by:

Germanisher Lloyd
Vorsetzen 35
20459 Hamburg—Germany
Notified Body n.: 0098

Full face Mask Neptune Space and SL35TX

comply with CE Certification in accordance with 89/689/EEC directives under the UNI EN250:2000 standard rules for underwater activities , including cold water use.

PREMISE

The DPIs in question are a separate part of the self-contained underwater breathing apparatus, commonly known as SCUBA.

They comply to European regulation EN-250:2000. They can be stored at a temperature of between 32° and 140° F. It is necessary that this equipment only be used by fully trained, certified divers.

Operating restrictions: The DPIs in question cannot be used with diving products without the CE mark and the air supply must meet the requirements of EN 12021. Incorrect use, non-original spare parts and insufficient or poor maintenance, besides being dangerous to the health and life of the user, releases **MESTEL Safety** of any responsibility and nullifies the warranty.

The series of DPIs described in the following manual are the following:

NEPTUNE SPACE with 1st stage SL 35TX: full face mask with integrated 2nd stage regulator and SL 35 TX 1st stage.

WARNINGS, CAUTIONS, NOTES

Pay special attention to information provided in warnings, cautions, and notes, that is accompanied by these symbols:



A **WARNING** indicates a procedure or situation that, if not avoided, could result in serious injury or death to the user.



A **CAUTION** indicates any situation or technique that could cause damage to the product, and could subsequently result in injury to the user.



A **NOTE** is used to emphasize important points, tips, and reminders.

NEPTUNE SPACE IRON MASK



INTRODUCTION

The Neptune Space IRON MASK is OCEAN REEF's top of the line mask specifically designed for use in contaminated water. Each external part in direct contact with high amounts of chemicals and aggressive hydrocarbons has been made with special raw materials.

In particular, the IRON Mask has the following unique parts:

- > Inhalation diaphragm, Exhalation valve, Purge button and Face seal composed of FVMQ rubber
- > Stainless steel AISI 316 frame, buckles and adjustment knob
- > Anodized Anticorodal®, Front Cover.

The sturdy feeling of the mask's design allows divers to make sensitive micro adjustments to the airflow, even when using gloves. Surface treatments protect the mask from salt water

damage and tech polymer protection treatments allow the Neptune Space IRON MASK to be used in extreme conditions.

The Glacier strap is composed of HNBR rubber compound for extreme low temperatures. Total weight 1090g (2.40lb) with a positive buoyancy of 172g (0.40lb)

The high quality of the product does not allow the user to ignore the problems connected with the correct use of the product and the rules for safe diving.

The Space IRON MASK is Nitrox compatible up to 40% of oxygen. (NOT valid in the European Countries)

GENERAL PRECAUTIONS AND WARNINGS

Before using this mask, you must have successfully received training and certification in the technique of SCUBA diving from a recognized certification agency (or any U.S. Military or government operated diving school). Use of this equipment by a person who is not certified by a recognized agency shall render all warranties, express or implied, null and void.



Use of SCUBA equipment by uncertified or untrained persons is dangerous and can result in serious injury or death.



This mask is not configured for commercial use with surface supplied air. Always pressurize the Neptune Space RAPTOR gradually by opening the cylinder valve SLOWLY.



NEVER lubricate any part of the Neptune Space IRON MASK or cylinder valve with any lubricant. Lubrication must only be performed by an OCEAN REEF trained technician.



DO NOT apply any type of aerosol spray on the Neptune Space. Doing so may cause permanent damage to certain plastic components, including the second stage housing.





DO NOT leave a cylinder standing unsecured with the Neptune Space IRON MASK attached to the valve. Doing so may cause permanent damage to the Neptune Space and cylinder valve if the cylinder falls over against the first stage.



Factory prescribed service for this product must be performed at least once annually by a factory trained OCEAN REEF Service Technician who is employed by an Authorized OCEAN REEF Dealer. Repair, service, disassembly, or first stage adjustment must not be attempted by persons who are not factory trained and authorized by OCEAN REEF.



Neptune Space IRON MASK is not CE certified to be used with NITROX!



The Neptune SPACE IRON MASK might be used with NITROX gasses up to 40% O₂. It is always recommended to use cleaned air from specified cleaned air source. SL35TX 1st stage can't be used with NITROX. Always use NITROX compatible 1st stages when NITROX is required.

Note: not valid in the European Union.



When diving in cold water (below 45⁰ F, or 7⁰ C), you must have received training and certification in the techniques of cold water diving from a recognized training agency.

Before connecting the regulator to the tank, check the following:



- Check that the O-ring on the tank is in place on the valve and is in perfect working condition (INT WITH Yoke nipple CGA 850 version only). If it is damaged or missing, it should be replaced.
- Verify that the instrumentation and accessories have been installed correctly.

USE OF CONVENTIONAL REGULATORS

A special adaptor allows the connection of several kinds of regulators. The adaptor is available in two sizes, medium (standard) and small. This adaptor fits in place of the surface air valve (code 33020: S, code 33021: M).

USE OF OVER-INJECTED REGULATORS

Over injected regulators have a diaphragm with an inhalation cracking pressure below zero. These regulators “free flow” easily, and as a result, should not be used with the Neptune Space IRON MASK or other Neptune masks.

Changes in regulator performance can also be caused by the different positions assumed during a dive; **the use of a regulator with flow adjustment is recommended.**



When descending the adjustment knob must always be turned on to get the proper air flow. Do not turn off the adjustment knob while descending.

1ST STAGE SL 35 TX



The Neptune Space IRON MASK may be used with this high performance, balanced diaphragm 1st stage with anti-freeze kit. The first stage has adjustable medium pressure and is made of brass with a satin finish body, stainless steel piston, Teflon seat, and stainless steel spring.

It is available with the following characteristics:

- Standard connection 200 bar (code 9922) or
- DIN connection 300 bar (code 9923)
- 2 high pressure ports 7/16 -20 UNF
- 4 Medium pressure ports 3/8-24 UNF
- Flow rate of approx. 4800 l/m at 140 bars

AIR CIRCULATION

The Neptune Space masks air circulation system is designed to minimize fogging and reduce the amount of CO and CO₂ build-up. The silicone oral-nasal pocket is built with two one-way valves through which air is inhaled.



Exhaled air is directed through a valve under the oral-nasal pocket, limiting the mixing of this air (containing high amounts of CO₂) with the fresh air from the regulator. The direction of exhaled air is controlled by a four position exhaust valve. The adjustable valve allows exhaust to flow in four directions:

- A—to the left
- B—to the right
- C—both (direction of least resistance)
- D—no exhaust



Position D, the “off” position is used when the diver is in a “head-down” position which, due to pressure on the second stage, causes the regulator to free flow. Placing the exhaust valve in the off position causes pressure to build in the mask, preventing free flow and returning the system to an “air on demand” situation.

EQUALIZATION



The Neptune Space IRON MASK is equipped with a simple patented internal device to close the nostrils and allow underwater equalization. By loosening the screw it is possible to move the plate up and down to find the most comfortable position to equalize. The silicone caps may easily be turned. By turning the caps you may adjust them to fit a larger or thinner nose (distance between the nostrils). Two additional plastic inserts are supplied. By removing the silicone cap it is possible to install the insert in the plate (cap post) increasing the distance of the cap from the plate and allowing it to fit closer to the nostril. This is sometimes necessary for flatter noses or when a hood is used under the mask.

To close the nostrils for equalization, simply press the top part of the mask (or push on the regulator front cover especially if using the visor light). The two equalization silicone caps will move upward and close the nostrils.

The silicone caps when correctly positioned should allow breathing through the nose and close the nostrils only when pressing the top part of the mask to equalize

QUICK STEPS

BEFORE DIVING

1. Adjust the equalization system to fit perfectly your need and test it on your face until you feel completely comfortable.



2. Don the mask (make sure surface air valve or octopus port is open to allow air in if installed).
3. Completely pull down the central part of the strap and adjust the 6 straps, middle ones first, than bottom ones and finally the top ones.



4. With the LP hose plugged in press the purge button of the 2nd stage and check that the air flows freely. Release the button and check that air stops flowing.



5. Close surface air valve before descending.



DURING A DIVE

1. Breathe normally through your nose or mouth, whichever is most comfortable.



2. To equalize, press the front part of the regulator or the top of the mask (without pushing the purge button).

For more information watch the tutorial videos on www.oceanreefgroup.com

AFTER DIVING



1. Carefully rinse the regulator with fresh, gently flowing water. **Do not press the purge button.**
2. Make sure the dust cover is firmly in place to keep water out of the first stage.
3. Attach the regulator to the tank after rinsing and press the purge button for 10-15 seconds to purge any water or debris from regulator.
4. When storing equipment, do not tightly loop the hoses and avoid pulling on them when the regulator is attached to the tank. Do not bump the Neptune Space. If you do, check for any damage.
5. When storing the mask, turn the adjustment knob counterclockwise.



OCEAN REEF highly recommends that you practice in a pool before using your mask in open water.

PURGING

The mask can easily be purged in the event that water enters the mask by pressing the exhaust button on the second stage. The water will flow out of the lower valve. The diver should be facing straight ahead, with the exhaust valve being the **LOWEST** part of the system.

SERIAL NUMBER

The regulator housing is marked with a serial number that identifies the product for warranty purposes.



MAINTENANCE AND CLEANING

TYPE OF ACTION	BEFORE A DIVE	AFTER A DIVE	EVERY YEAR	EVERY 2 YEARS
RINSE		X		
GENERAL FUNCTION CHECK	X			
REGULATOR SERVICING			X	
MASK SERVICING				X

For optimum longevity of the mask and the proper functioning of its parts we recommend rinsing the mask thoroughly in fresh water after every use. DO NOT clean the visor with any abrasive materials. We recommend drying the visor, especially the inside parts, with a soft, clean cloth.

STORAGE

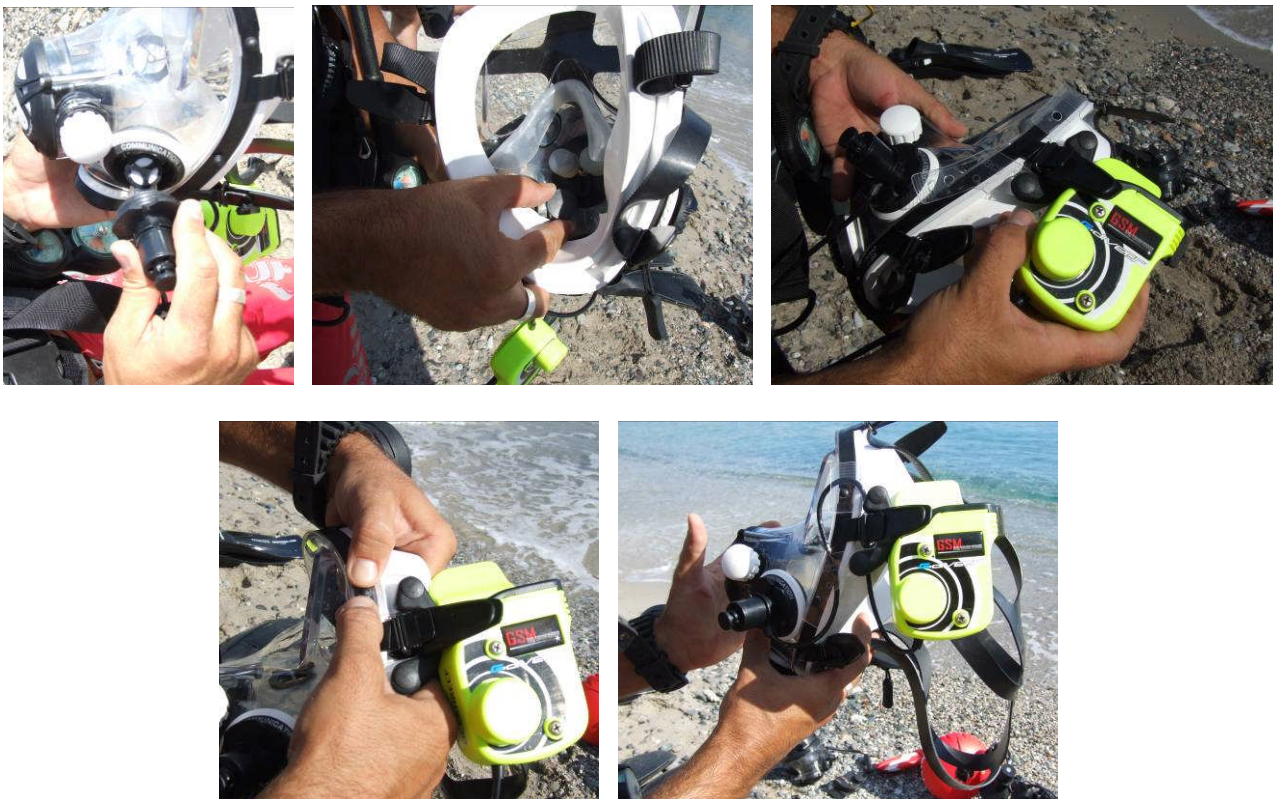
The mask must be stored in a dry place with no direct sunlight and far from sources of heat. Do not store it at temperatures below -4°F (-20°C) or above +122°F (+50°C). We suggest you use the AC-4 visor protector and the carrying bag included in the package when storing the mask to avoid accidental abrasion (see section 2.4.3).

COMMUNICATION

COMMUNICATION APPARATUS

The Neptune Space IRON MASK may be used with various communication systems between divers and/or the surface. It is compatible with most underwater communication systems if supplied with the proper adapter and/or DIN connection. Information may be obtained from your OCEAN REEF dealer.

INSTALLING THE UNDERWATER COMMUNICATION SYSTEM



The microphone support (PTT) is screwed into the connection located on the left side of the mask and identified with the words COMMUNICATION SYSTEM. The COM unit is installed on the left side of the head harness attaching the Neptune Assembly Connection System (NACS) on the 2 visor supports as per NACS/COM unit instructions.

For more information watch the tutorial videos on www.oceanreefgroup.com


USE OF THE UNDERWATER COMMUNICATION SYSTEM

For correct use of the underwater communication system read the specific manual.

TROUBLESHOOTING

VISOR FOGS

Warning: Fogging is a Signal That Mask Is Not Positioned Correctly On Face!

- 
- a) orinasal mask positioned incorrecly or pinched.
 - b) orinasal mask improperly seated—check that it is properly tucked around communication port and exhaust valve.
 - c) Top harness straps pulled too tightly—loosen.
 - d) Bottom harness straps not pulled tight enough.

AIR LEAKS

- a) Hair/hood trapped inside mask skirt.
- b) Sewing on hood—skirt will not necessarily seal on all hoods, especially if sewing on hood is where mask skirt fits.
- c) Straps pulled too tightly or improperly.

REGULATOR FREE-FLOWS

- a) Adjustment knob opened too much—regulate by closing knob in face-down position.
- b) Purge button has sand/pebbles stuck inside.
- c) Regulator needs servicing *.
- d) 1st stage intermediate pressure not 140 ± 3 psi / 9.5→9.8 bar.

REGULATOR HARD TO BREATHE THROUGH

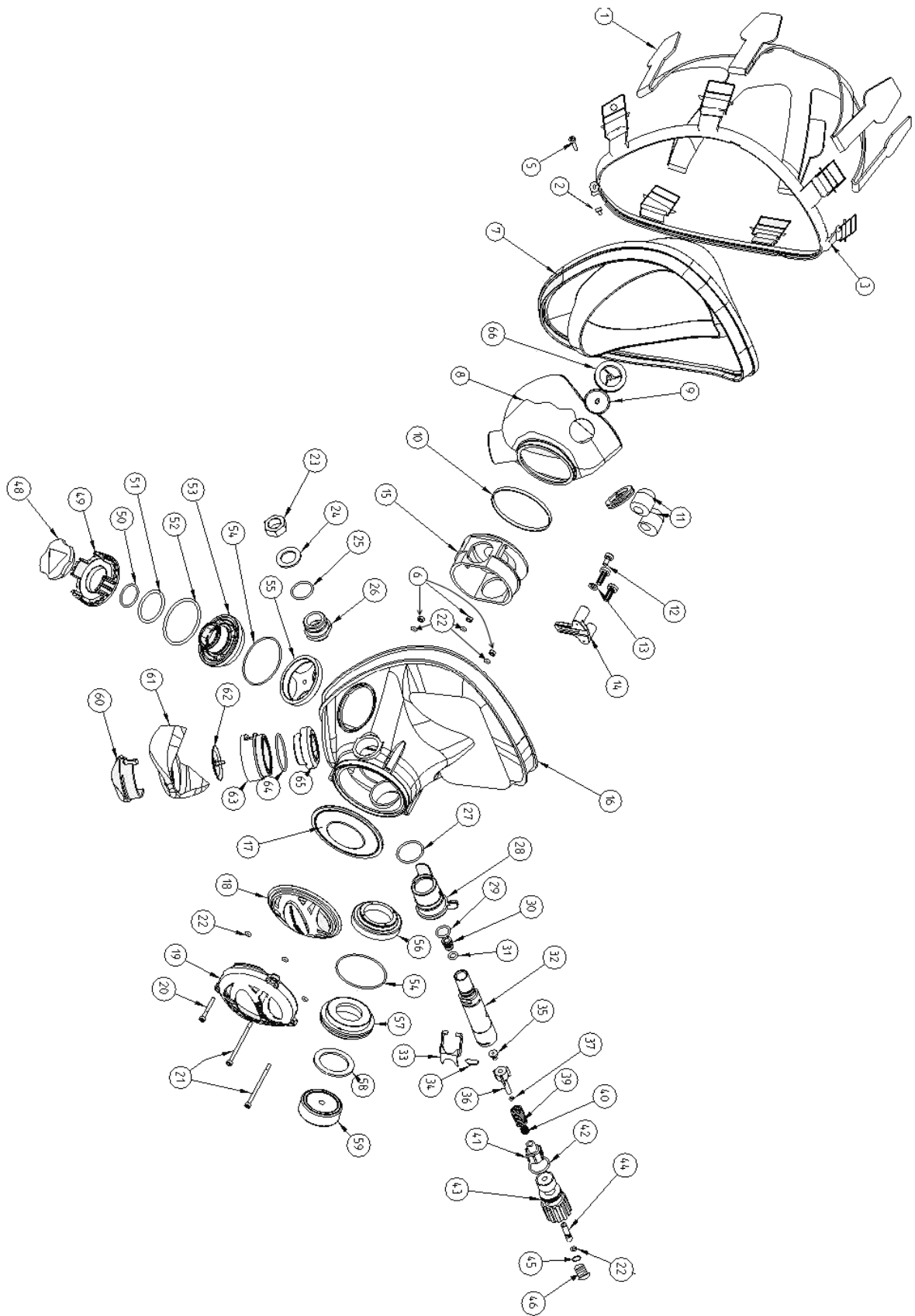
- a) Adjustment knob closed too much—regulate by opening knob in face-down position.
- b) Regulator needs servicing *.
- c) 1st stage intermediate pressure not 140 ± 3 psi / 9.5→9.8 bar.

FFM VIBRATES

- a) Harness straps not adjusted properly—tighten bottom straps.
- b) Adjustment knob opened too much.
- c) Neptune Space adjustment too soft—make proper adjustment with adjustment tool *.
- d) 1st stage intermediate pressure not 140 ± 3 psi / 9.5→9.8 bar.

*** OCEAN REEF recommends that the regulator be serviced at least once a year, or after 100 dives. This should only be performed by an OCEAN REEF dealer or an authorized OCEAN REEF repair station which uses original spare parts. This also applies to any periodic serving and/or repairs required.**

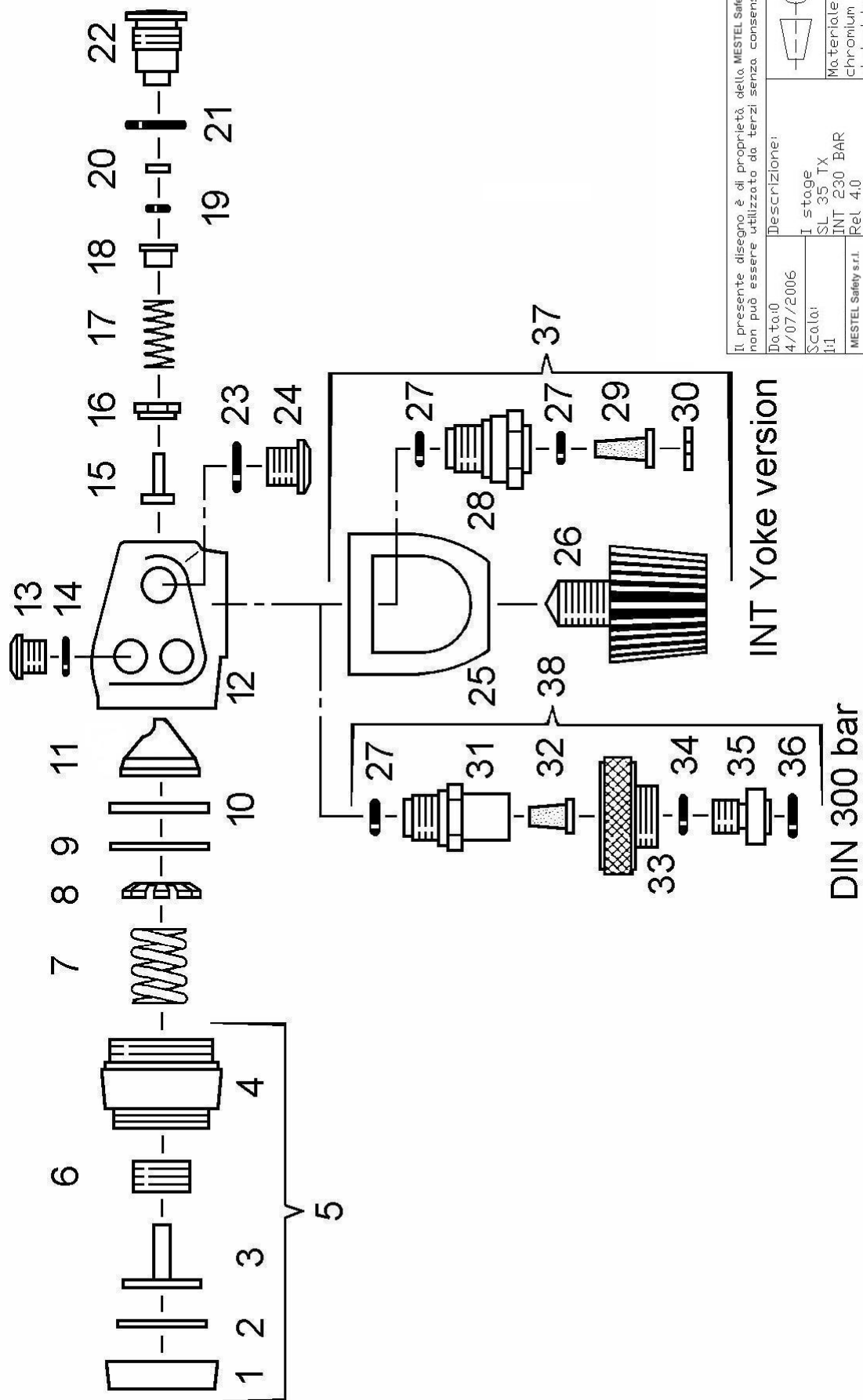
Neptune Space *IRON MASK* rel. 1.0



Neptune Space IRON MASK rel. 1.0

Part	Code	Key	q.ty
Glacier Strap	OR002903	1	1
Clamping band w/buckles-IRON MASK	OR006803	3	1
Screw M4X6	OR006804	5	1
Cap nut M4	OR006805	2	1
NG-24 Nut M3 3mm	6529	6	3
Face seal fluorosilicone medium / large	OR003116	7	1
Orinasal black 22mm holes(2) 28 (1)	1349	8	1
Orinasal valve holder	1377	66	2
Orinasal valve	1376	9	2
MI-14 Orinasal Band	6718	10	1
SB-5C Eccentric Equal. Block (2pcs)	6924	11	2
Equalizer extension ,short (2pcs)	6926		2
Equalizer extension , long (2pcs)	6927		2
Equalizer extension , x-long (2pcs)	6928		2
Screw M4x8	15255	12	1
Washer M4 for screw M4x8	15253	13	1
SB-5A Equalizer	6925	14	1
Regulator housing - Space w/drain. hole	8448	15	1
Visor - Space	7015	16	1
Inhal. Diaphragm fluorosilicone w/logo	OR002899	17	1
PREDATOR reg. front cover Anticorodal gold	20079	19	1
Screw short - Space regulator front cover -M3	6962	20	1
Screw long - Space regulator front cover -M3	6961	21	2
O-ring 2010 Viton	6975	22	7
Hex nut	15433	23	1
Body washer	15257	24	1
OR 2075 Viton	6973	25	1
Insert	6970	26	1
O-ring 24 X 2 Viton	6974	27	1
Dive/prediver	6972	28	1
O-ring 2025 Viton	9683	29	1
Nozzle	9672	30	1
O-ring 114 Viton	9520	31	1
Valve body	15532	32	1
Demand lever	15448	33	1
Wedge	15447	34	1
Seat balanced poppet	8866	35	1
Balanced poppet	9675	36	1

Part	Code	Key	q.ty
O-ring balanced poppet 2.5 x 1 Viton	15449	37	1
Spring l 33-Ø thread 0,9-Ø.int.8,4	6966	39	1
Spring l 8,5-Ø thread 0,9-Ø.int.5,5	6980	40	1
Balance poppet chamber	15470	41	1
O-ring 2068 Viton	15456	42	1
Adjustment knob w/screw for PREDATOR-stainless steel	OR006801	43	1
Trim screw for PREDATOR - stainless steel	OR006802	44	1
OR 2031 Viton	9419	45	1
PREDATOR Adjustment knob plug (LP plug)	9822	46	1
Fluoroilicone button w/ logo	OR003106	18	1
Diamond surface ait valve cup	8902	48	1
Thread locking ring for Diamond surface air valve	8669	49	1
O-ring 2081 Viton	9645	50	1
O-ring 3112 Viton	8689	51	1
O-ring 3168 Viton	8685	52	1
Surface air valve body	8656	53	1
O-ring 47x1,5 Viton	6505	54	2
NG-10 side connector bushing	6514	55	1
MP-2 Com System bushing rel 7.1	6549	56	1
NG-9 Side Connector	6304	57	1
NG-13 Standard seal	1361	58	1
NG-9B Plug	6515	59	1
<i>Directional Exhaust valve cover</i>	<i>OR006511</i>	<i>60</i>	<i>1</i>
<i>Directional Exhaust valve deflector</i>	<i>6504</i>	<i>61</i>	<i>1</i>
Fluorosilicone Exhalation valve	OR002898	62	1
<i>Directional Exhaust valve holder</i>	<i>OR006510</i>	<i>63</i>	<i>1</i>
O ring 2131 Viton	6711	64	1
NG-15 Bushing w/holes	6518	65	1
800 mm standard hose	9950		
Hose protector	9311		



Il presente disegno è di proprietà della MESTEL Safety s.r.l. non può essere utilizzato da terzi senza consenso

Data: 0	Descrizione:	
4/07/2006	I stodge	
Scala:	SL 35 TX	
1:1	INT 230 BAR	
MESTEL Safety s.r.l.	Rel 4.0	Materiale: chromium plated brass
Via Europa 6 10041 Salsomaggiore		Tolleranze:
Tel: +39 010 6598611		S/N
Fax: +39 010 6598622		
WWW.mestel.it		

SL35TX 1ST STAGE 4.0

Key	Code	R-DIN	R-YOKE	Designation
1	9810	1	1	Retaining cap
2	9811	1	1	Diaphragm Ø33 x 1.5
3	9812	1	1	Pressure piston
4	9813	1	1	Intermediate ring
5	9814	1	1	Anti freeze kit
6	9815	1	1	Adjusting screw
7	9816	1	1	Spring
8	9817	1	1	Spring Plate
9	9818	1	1	Friction Ring
10	9819	1	1	Diaphragm Ø36.9 x 2
11	9820	1	1	Piston guide
12	9821	1	1	Regulator body
13	9822	3	3	LP plug, 3/8 UNF
14	9823	4	4	O-ring 7,65 x 1,78
15	9824	1	1	Piston
16	9825	1	1	Guide ring
17	9826	1	1	Spring
18	9827	1	1	Retaining cap
19	9620	1	1	O-ring 2,9 x 1,78(2012)
20	9829	1	1	Back pressure ring 3,2 x1,5
21	9411	1	1	O-ring 14,00 x 1,78(2056)
22	9831	1	1	Balancing chamber
23	9832	2	2	O-ring 8,73 x 1,78
24	9833	2	2	HP plug, 7/16 UNF
25	9834		1	Yoke INT, 9/16-18 UNF
26	9835		1	Yoke screw, 9/16-18 UNF
27	7831	1	2	O-ring 9,25 x 1,78 (2037)
28	9837		1	Yoke fastener
29	9838		1	Filter element YOKE
30	9839		1	Retaining ring
31	9840	1		Hand wheel fastener, 300 bar
32	9841	1		Filter element DIN
33	9842	1		Hand wheel DIN, 300 bar
34	9843	1		O-ring 10,82 x 1,78
35	9844	1		Retaining screw DIN, 300 bar
36	9845	1		O-ring 11,00 x 2,5
37	9846			Conversion kit, YOKE
38	9847			Conversion kit DIN, 300 bar

Warranty

1. OCEAN REEF Neptune Space IRON MASK have a limited lifetime warranty to be free of material or manufacturing defects of any component but the regulator ones.
2. Regulator parts are guaranteed to be free of material or manufacturing defects for a period of 24 months from the time the unit is purchased.
3. . For the duration of the guarantee, the Company's responsibility is limited to replacement of any parts that are defective in our opinion, and that have not been used incorrectly or handled negligently. The mask must be returned to the outlet from which it was bought, along with the warranty card. The cost of transport is to be prepaid by the customer.
4. Even during the guarantee period, this guarantee shall not be valid where:
 - Damage was caused by incorrect handling or carelessness.
 - Damage was caused by the mask falling after it was purchased.
 - Damage caused by fire, earthquake, floods, lightning, or other natural disasters.
 - The warranty card is not produced.
 - Our name, the date of purchase, and the seller's name do not appear on the warranty card.

MESTEL Safety s.r.l
Via Arvigo 2, 16010 Genova (Italia)
Phone +39 010 6598 611 Fax +39 010 6598 622
E-mail: ocean.reef@oceanreefgroup.com

OCEAN REEF, Inc.
1699 La Costa Meadows Dr. Suite 101 San Marcos, CA 92078
Phone +1 760 744 9430 Fax +1 760 744 9525
E-mail: operator@oceanreefgroup.com

OCEAN REEF on the Web:
www.oceanreefgroup.com

© OCEAN REEF 2010