



Frontier SCBA

Product: North Frontier™ Series Self-Contained Breathing Apparatus

Product Description

North Frontier™ Series Self-Contained Breathing Apparatus:

The North Frontier™ Series are self-contained, open-circuit, compressed-air breathing apparatus (SCBA) consisting of a harness assembly with first stage reducer, pressure gauge & whistle, a cylinder, demand valve and either a tight fitting facepiece or hood. During use a positive pressure is maintained within the facepiece or hood preventing any inward leakage of contaminated air. Use of optional breathing air hoses will convert this SCBA to a PDAR with escape cylinder.

Certification

The North Frontier™ Series SCBA is approved by the National Institute of Occupational Safety and Health (NIOSH) as:

1. Self Contained Breathing Apparatus (SCBA)
2. Pressure Demand Airline Respirator (PDAR) with escape

NIOSH Approvals:

Visit the North Web site for a listing of NIOSH Approvals

Contact North Safety Products Customer Service for information on North hoses and accessories for use with North Frontier™ Series SCBA or visit our web site at www.northsafety.com.

Protection Type

The North Frontier™ SCBA is intended for use in and/or escape from atmospheres that may be Immediately Dangerous to Life or Health (IDLH). It's intended for use by general industry and may not be used for Fire Fighting.

OSHA & CSA Assigned Protection Factors

Self-Contained Breathing Apparatus:	10,000
Pressure Demand Airline Respirator:	10,000

Temperature Tolerances

	Maximum	Minimum
Elastomeric Facepiece	185° F (85° C)	-25° F (-30° C)
Polyurethane Hood	185° F (85° C)	-25° F (-30° C)
Polyvinyl Chloride (PVC) Hood	185° F (85° C)	20° F (-7° C)

Air Requirements

In United States minimum grade D breathable air as defined by NIOSH and the Compressed Gas Association (CGA), and in Canada as defined by CSA Standard Z180.1.

Shelf Life & Hydrostatic Testing Requirements

Cylinder	Service Life	Hydrostatic Testing
Aluminum	No limitations	every 5 years
Hoop Wrapped Aluminum	15 years	every 3 years
Full Wrapped Aluminum	15 years	every 3 years
Full Wrapped Carbon	15 years	every 5 years

Major Components

FACEPIECE AND HOOD

The North facepiece assembly includes an oral/nasal cup (standard), lens, face seal and four-point adjustable head harness. The facepiece is available in two sizes, medium/large and small.

The North hood includes an oral/nasal cup (standard), visor, neck seal, and external headstraps. The hood is available in two sizes, large/extra-large and small/medium. The hood is available in polyurethane which is best for use in cold temperatures, and polyvinyl chloride (PVC) which has a high chemical resistance.

FACEPIECES

Facepiece

9200 Series basic facepiece	Thermoplastic Elastomer
Lens	Hard coated polycarbonate with anti-fog coating
Lens clamps	Polyethylene
Nut & screw for lens clamp	Stainless steel

Oral Nasal Cup

Oral/nasal cup	Thermoplastic Elastomer
Inhalation valves	Natural rubber
Valve seat	High impact styrene

Demand Valve Seat

CDV Adapter	Polycarbonate
O-Ring	Silicone

Exhalation Valve

Exhalation housing	Polyphenylene oxide
Exhalation valve	Natural rubber
Exhalation valve seat	Polyisoprene

Head Harness Assembly

Headstrap	Thermoplastic Elastomer
Latch	Nylon
Bail	Nickel plated brass
Pin	Nylon

HOODS

Hood

9400 Series basic hood	Polyurethane, Blue
9500 Series basic hood	Polyvinyl Chloride, Clear
Lens	Polycarbonate

Best for protection against following contaminants:

Urethane

Alcohols
Fuels
Mineral oils
Greases, oils

Vinyl

Weak acids
Strong alkali solution
Organic acids

Oral Nasal Cup

Oral/nasal cup Thermoplastic Elastomer

Demand Valve Seat

CDV Adapter Polycarbonate
O-Ring Silicone

Exhalation Valve

Exhalation housing Polycarbonate
Exhalation valve Polyisoprene
Exhalation valve spring ASTMA 313 steel
Exhalation valve seat Polycarbonate
Exhalation nut Polycarbonate

Headstrap Assembly

Headstrap Natural rubber core, braided nylon cover
Latch Acetal

COMPACT DEMAND VALVE (CDV)

The North Frontier demand valve is attached to the facepiece or hood by a threaded connector. On the facepiece it is located on the right side, and on the hoods it is located in the center. The demand valve features an adjustable flow control which also serves as the emergency by-pass. The standard models of Frontier include a First Breath Release and a quick connection on the breathing tube.

Demand Valve

Demand Valve Housing Polyetherimide
Flow Control Knob Polyetherimide

Breathing Tube

Hose Nitrile
Quick Connection Nickel plated brass

CYLINDERS AND PRESSURE REDUCER ASSEMBLY

Air leaves the cylinder, passes through a sintered bronze filter in the hand wheel assembly, and then continues on to the first-stage pressure reducer where it is reduced to approximately 125 psi. The reducer is a simple piston type that requires no adjustment and incorporates an automatic, self-seating pressure relief valve to protect the downstream low-pressure components. The North Frontier Series includes a range of cylinder types and capacities. The cylinder valve has a frangible disc safety relief device, and a dual-reading pressure gauge. Valve protection is provided by an elastomeric bumper.

CYLINDERS

Rated Duration	Material	Air Capacity	Pressure
30 minute	Aluminum	45.0 cu. ft. (1,287 liters)	2216 psi
30 minute	Aluminum, hoop wrapped	45.5 cu. ft. (1,301 liters)	2216 psi
30 minute*	Carbon, full wrapped	45.5 cu. ft. (1,301 liters)	2216 psi
30 minute*	Aluminum, hoop wrapped	45.0 cu. ft. (1,287 liters)	4500 psi
30 minute	Carbon, full wrapped	45.0 cu. ft. (1,287 liters)	4500 psi
45 minute*	Carbon, full wrapped	66.0 cu. ft. (1,887 liters)	4500 psi
60 minute	Carbon, full wrapped	87.0 cu. ft. (2,516 liters)	4500 psi

* Special Order only

PRESSURE REDUCER ASSEMBLY

Pressure Reducer

Pressure reducer	Aluminum
Pressure Relief Valve	Aluminum

Pressure Hose

Hose	Stainless steel outer jacket
Quick Connection	Material varies depending on coupler brand

Hand Wheel Assembly

Hand Wheel	Anodized aluminum
Sintered Filter	Bronze
Cylinder Valve	Teflon [®] coated aluminum
2266 psi Valve Outlet	CGA-346 Fitting
4500 psi Valve Outlet	CGA-347 Fitting

PRESSURE GAUGE AND WHISTLE ASSEMBLY

The remote pressure gauge and whistle assembly is chest mounted on the right shoulder strap. The gauge display shows the fraction of cylinder pressure remaining. The primary *End-of-Service-Time* indicator is a 90 dB whistle which is set to sound at 23%-27% of rated cylinder pressure per NIOSH requirements.

Pressure Gauge & Whistle

Gauge	Luminous Dial
Gauge Cover	Waterproof Neoprene
Whistle	Anodized aluminum

BACKFRAME AND HARNESS

A quick-release cylinder band fits a wide range of cylinders with an adjustable strap to ensure a tight fitting cylinder.

Backframe	Glass filled polycarbonate
Standard Harness	Nylon
Optional Harness	Kevlar
Buckles	Nylon
Shoulder Pads	Urethane pad, nylon cover

HOSES FOR USE WITH NORTH FRONTIER SERIES SCBA

The North Frontier™ SCBA can be converted to a pressure demand airline with escape cylinder. Hoses are available in 6' to 100' for use in configurations up to 300'. Frontier unit must be ordered with the airline fitting already incorporated in the pneumatics in order to convert to a PDAR. Standard Frontier models include Foster fittings. Other fittings are available as a special order. Contact North Customer Service for information on other fittings.

Pressure Setting: 80 psig – 120 psig

6 foot, 1/4" ID, Foster Fitting	Nitrile
25 foot, 1/4" ID, Foster Fitting	Nitrile
50' foot, 1/4" ID, Foster Fitting	Nitrile
100' foot, 1/4" ID, Foster Fitting	Nitrile

Only use the North hoses listed above which are approved for use with the North Frontier Series. Use of other hoses will void NIOSH approval.

Weights & Dimensions

The following are the most popular SCBA models. Weights for all types of cylinders available, including custom order, are provided as a reference. Weights and dimensions for custom order SCBAs can be provided on request.

Product Weights and Dimensions

SCBA, Complete	Wgt. Charged (with air)	Wgt. Empty (without air)
<u>30 Minutes Low Pressure</u>		
Aluminum, w/Facepiece	26.5 lbs (12 kg)	23.2 lbs (10.5 kg)
Aluminum, w/PVC Hood	26.2 lbs (11.9 kg)	22.9 lbs (10.4 kg)
Aluminum, hoop wrapped, w/Facepiece	21.2 lbs (9.6 kg)	17.9 lbs (8.1 kg)
Aluminum, hoop wrapped, w/PVC or PU Hood	20.9 lbs (9.5 kg)	17.6 lbs (8.0 kg)
<u>30 Minutes High Pressure</u>		
Carbon, full wrapped, w/Facepiece	16.0 lbs (7.2 kg)	12.9 lbs (5.8 kg)
Carbon, full wrapped, w/PVC or PU Hood	15.7 lbs (7.1 kg)	12.6 lbs (5.7 kg)
<u>60 Minute High Pressure</u>		
Carbon, full wrapped, w/Facepiece	24.0 lbs (10.9 kg)	17.5 lbs (7.9 kg)
Carbon, full wrapped, w/PVC or PU Hood	23.7 lbs (10.7 kg)	17.2 lbs (7.8 kg)

Carrying Case	Weight	Outside Dimensions Inches (cm)
Carrying Case, without SCBA	6.9 lbs (3.3 kg)	27.5 (70.0) x 11 (28.6) x 16.5 (42.6)

For weight with SCBA add appropriate weight listed above

Cylinder	Wgt. Charged (with air)	Wgt. Empty (without air)	Diameter Inches (cm)	Height Inches (cm)
<u>30 Minutes Low Pressure</u>				
Aluminum	21.0 lbs (9.5 kg)	17.6 lbs (8.0 kg)	6.8 (17.3)	21.1 (53.6)
Aluminum, hoop wrapped	15.2 lbs (6.9 kg)	12.8 lbs (5.8 kg)	6.8 (17.3)	19.9 (50.5)
Carbon, full wrapped*	10.4 lbs (4.7 kg)	7.8 lbs (3.5 kg)	6.5 (16.5)	20.4 (51.8)
<u>30 Minutes High Pressure</u>				
Aluminum, hoop wrapped*	15.9 lbs (7.2 kg)	12.5 lbs (5.8 kg)	5.5 (14.0)	19.5 (49.5)
Carbon, full wrapped	10.0 lbs (4.5 kg)	7.7 lbs (3.5 kg)	5.4 (13.7)	18.4 (46.7)
<u>45 Minute High Pressure</u>				
Carbon, full wrapped*	14.0 lbs (6.7 kg)	9.7 lbs (4.4 kg)	6.3 (16.0)	19.0 (48.2)
<u>60 Minute High Pressure</u>				
Carbon, full wrapped	18.0 lbs (8.2 kg)	12.0 lbs (5.4 kg)	7.0 (17.8)	21.7 (55.1)

* Custom order only

CDV, Facepieces and Hoods	Weight	Window Height	Width
9300 Series Elastomeric Facepiece	0.9 lbs (0.4 kg)	4.25" (10.8 cm)	9.75" (24.8 cm)
		Visor Height	Width
9400 Series Polyurethane Hood	0.5 lbs (0.23 kg)	3.8" (9.7 cm)	7.5" (19.1 cm)
9500 Series PVC Hood	0.52 lbs (0.24 kg)	4.0" (10.2 cm)	8.0" (20.3 cm)
		Diameter	Depth
Compact Demand Valve	0.4 lbs (0.2 kg)	1.5" (3.8 cm)	1.25" (3.9 cm)

Harness Assembly

	Weight
Harness Assembly, w/out shoulder pads	4.6 lbs (2.1 kg)
Harness Assembly with shoulder pads	4.8 lbs (2.2 kg)

Shipping Weights & Dimensions

SCBA, Complete	Wgt. Charged (with air)	Wgt. Empty (without air)	Package Dimensions LxWxH inches (cm)
30 Minutes Low Pressure, no case			
Aluminum	31 lbs (14.1 kg)	28.0 lbs (12.7 kg)	32.5 (82.5) x 13.6 (34.5) x 11 (27.9)
30 Minutes Low Pressure, case included			
Aluminum, hoop wrapped	26.0 lbs (11.8 kg)	23.0 lbs (10.4 kg)	28 (71) x 11.3 (28.6) x 16.8 (42.6)
30 Minutes High Pressure, case included			
Carbon, full wrapped	21.0 lbs (9.5 kg)	18.0 lbs (8.1 kg)	28 (71) x 11.3 (28.6) x 16.8 (42.6)
60 Minute High Pressure, case included			
Carbon, full wrapped	29.0 lbs (13.1 kg)	23.0 lbs (10.4 kg)	28 (71) x 11.3 (28.6) x 16.8 (42.6)
Replacement Cylinders	Wgt. Charged (with air)	Wgt. Empty (without air)	Package Dimensions LxWxH inches (cm)
30 Minutes Low Pressure,			
Aluminum	21.0 lbs (9.5 kg)	17.7 lbs (8.0 kg)	25.3 (64.3) x 7 (17.8) x 7 (17.8)
30 Minutes Low Pressure			
Aluminum, hoop wrapped	15.2 lbs (6.9 kg)	11.9 lbs (5.4 kg)	25.3 (64.3) x 7 (17.8) x 7 (17.8)
30 Minutes High Pressure,			
Carbon, full wrapped	10.0 lbs (4.5 kg)	6.9 lbs (3.1 kg)	23 (58.4) x 6.8 (17.3) x 6.8 (17.3)
60 Minute High Pressure,			
Carbon, full wrapped	18.0 lbs (8.1 kg)	11.5 lbs (5.2 kg)	25.3 (64.3) x 7 (17.8) x 7 (17.8)
Replacement Facepieces and Hoods	Weight		Package Dimensions LxWxH inches (cm)
9200 Series Elastomeric Facepiece	1.4 lbs (0.6 kg)	7.75 (19.7) x 6.25 (15.9) x 10.0 (25.4)	
9400 Series Polyurethane Hood	0.5 lbs (0.2 kg)	7.75 (19.7) x 6.25 (15.9) x 10.0 (25.4)	
9500 Series PVC Hood	0.5 lbs (0.2 kg)	7.75 (19.7) x 6.25 (15.9) x 10.0 (25.4)	

Country of Origin

United States

Ordering Information

The following are the most popular North Frontier™ SCBA models. Other custom configurations are available on request. Contact your North Territory Manager or North Customer Service for more information for custom configurations.

Part Number	Description	Order Multiple	Case Pack
Basic North Frontier™ SCBA			
SCBA with elastomeric facepiece. Complete assembly, includes cylinder and backframe with nylon harness.			
913200	30 minute SCBA with low pressure aluminum cylinder. Size medium/large	1	1
913200S	30 minute SCBA with low pressure aluminum cylinder. Size small	1	1
SCBA with PVC hood. Complete assembly, includes cylinder and backframe with nylon harness.			
915200	30 minute SCBA with low pressure aluminum cylinder. Size large/extra-large	1	1
915200S	30 minute SCBA with low pressure aluminum cylinder. Size small/medium	1	1
Standard North Frontier™ SCBA			
SCBA with elastomeric facepiece. Complete assembly, includes cylinder, backframe with nylon harness and shoulder pads, quick connect demand valve with first breath, airline adapter with Foster fittings, and carrying case.			
913332FB	30 minute SCBA with low pressure hoop wrapped aluminum cylinder. Size medium/large	1	1
913332SFB	30 minute SCBA with low pressure hoop wrapped aluminum cylinder. Size small	1	1

913632FB	30 minute SCBA with high pressure carbon cylinder. Size medium/large	1	1
913632SFB	30 minute SCBA with high pressure carbon cylinder. Size small	1	1
913132FB	60 minute SCBA with high pressure carbon cylinder. Size medium/large	1	1
913132SFB	60 minute SCBA with high pressure carbon cylinder. Size small	1	1

SCBA with PVC Hood. Complete assembly, includes cylinder, backframe with nylon harness and shoulder pads, quick connect demand valve with first breath, airline adapter with Foster fittings, and carrying case.

915332FB	30 minute SCBA with low pressure hoop wrapped aluminum cylinder. Size large/extra-large	1	1
915332SFB	30 minute SCBA with low pressure hoop wrapped aluminum cylinder. Size small/medium	1	1
915632FB	30 minute SCBA with high pressure carbon cylinder. Size large/extra-large	1	1
915632SFB	30 minute SCBA with high pressure carbon cylinder. Size small/medium	1	1
915132FB	60 minute SCBA with high pressure carbon cylinder. Size large/extra-large	1	1
915132SFB	60 minute SCBA with high pressure carbon cylinder. Size small/medium	1	1

SCBA with polyurethane (PU) Hood. Complete assembly, includes cylinder, backframe with nylon harness and shoulder pads, quick connect demand valve with first breath, airline adapter with Foster fittings, and carrying case.

914332FB	30 minute SCBA with low pressure hoop wrapped aluminum cylinder. Size large/extras-large	1	1
914332SFB	30 minute SCBA with low pressure hoop wrapped aluminum cylinder. Size small/medium	1	1
914632FB	30 minute SCBA with high pressure carbon cylinder. Size large/extra-large	1	1
914632SFB	30 minute SCBA with high pressure carbon cylinder. Size small/medium	1	1
914132FB	60 minute SCBA with high pressure carbon cylinder. Size large/extra-large	1	1
914132SFB	60 minute SCBA with high pressure carbon cylinder. Size small/medium	1	1

Part Number	Description	Order Multiple	Case Pack
Replacement Assemblies & Accessories			
903010	Replacement elastomeric facepiece. Size medium/large	1	1
903010S	Replacement elastomeric facepiece. Size small	1	1
905010	Replacement PVC hood. Size large/extra-large	1	1
905010S	Replacement PVC hood. Size small/medium	1	1
904010	Replacement polyurethane hood. Size large/extra-large	1	1
904010S	Replacement polyurethane hood. Size small/medium	1	1
900011	Replacement shoulder pads. 1 pair	1	1
900099	Fit Test Adapter for Frontier facepieces and hoods for use with Porta-Count Quantitative Fit Tester	1	1
900323	Spanner to remove Compact Demand Valve adapter from facepiece	1	1
Hoses for use with North Frontier™ SCBA. Complete with Foster fittings			
900006FB	6 foot, ¼" I.D.	1	1
900025FB	25 foot, ¼" I.D.	1	1
900050FB	50 foot, ¼" I.D.	1	1
900100FB	100 foot, ¼" I.D.	1	1
<i>Hoses may be combined to a maximum of 300'</i>			

Note: SCBAs and replacement cylinders requested to ship overnight or by air will be sent empty.

For more information or any technical data not included with this Tech Data Sheet, please e-mail us at techinfo@northsafety.com (United States) or techinfo@northsafety.ca (Canada).

Warranty

North Safety Products warrants the North Frontier™ SCBA to the original owner to be free from defects in materials and workmanship for a period of three (3) years from the date of original shipment from North's factory. North's obligation under this warranty will be, at North's option, to repair or replace without charge the apparatus or any of its components found by North to have been defective during the warranty period, under the following terms:

1. The warranty claim is made (i) by the owner who purchased the apparatus new from North or an authorized North Distributor, as shown on the completed Warranty & Registration Card returned to North; and (ii) not more than three (3) months after the end of the warranty period.
2. The apparatus or component is found by North to have been defective in normal use and service during the warranty period of three (3) years from the date of purchase by the owner as shown on the Warranty & Registration Card.
3. The apparatus or component is returned freight prepaid to North, either to its factory in Cranston, Rhode Island, or to a North authorized service center, and is thereafter returned to the owner freight collect.
4. This warranty does not apply (i) to any apparatus or component found by North to have become defective as a result of any accident, alteration, misuse, abuse, or servicing with parts not approved by North; or (ii) to deterioration or aging of any component made of rubber or other elastomer since they can be adversely affected by undue exposure to heat, sun, water, chemicals, ozone or other deteriorative elements; (iii) facepiece lens and parts that become defective through normal use.
The decision as to what constitutes normal use shall be made solely by NORTH.
5. To maintain this warranty, the purchaser must perform maintenance and inspections as prescribed in the User's Instructions which shall include prompt replacement or repair of defective parts, and replacement of parts per the maintenance schedule as prescribed in the User's Instructions.
6. To validate this warranty, the Warranty & Registration Card supplied with the apparatus MUST be detached, completed, and returned to NORTH WITHIN 30 DAYS of purchase

THE OWNER ASSUMES ALL OTHER RISKS, IF ANY, SUCH AS THE RISK OF ANY DIRECT, INDIRECT OR CONSEQUENTIAL LOSS OR DAMAGE ARISING OUT OF THE USE OF, OR INABILITY TO USE, THE PRODUCT. SERVICING NORTH RESPIRATORS WITH PARTS NOT APPROVED BY NORTH WILL VOID THIS WARRANTY AND NIOSH APPROVAL FOR THE RESPIRATOR UNIT. THIS WARRANTY IS MADE IN LIEU OF THE WARRANTIES, EXPRESS OR IMPLIED AND MAY NOT BE VARIED OR EXTENDED EXCEPT IN WRITING BY AN AUTHORIZED OFFICIAL OF NORTH.