Ultimate FX Full Facepiece Reusable Respirator

User Instructions for 3M™ Ultimate FX Full Facepiece FF-401, Small, 3M™ Ultimate FX Full Facepiece FF-402, Medium, 3M™ Ultimate FX Full Facepiece FF-403, Large

IMPORTANT: Before use, the wearer must read and understand these *User Instructions*. Keep these instructions for reference.

This respirator has dual approval as a United States (US) National Institute for Occupational Safety and Health (NIOSH) full facepiece respirator and as Brazil Ministry of Labor full face piece respirator.
Standard specific information is provided where approved.

CAUTION

Failure to properly dispose of spent cartridges, filters, or respirators contaminated by hazardous materials can result in personal exposures as well as environmental harm. Handling, transportation and disposal of spent cartridges, filters, or respirators must comply with all applicable federal, state, provincial, and local laws and regulations.

NIOSH Cautions and Limitations for Negative Pressure Usage

The following restrictions may apply to the NIOSH Approval Label. If you are using the FF-400 series facepiece as part of a Supplied Air Respirator configuration, refer to the *User Instructions* that accompanies your air control device for information on NIOSH Cautions and Limitations.

A - Not for use in atmospheres containing less than 19.5 percent oxygen.
B - Not for use in atmospheres immediately dangerous to life or health.
C - Do not exceed maximum use concentrations established by regulatory standards.
H - Follow established cartridge and canister change schedules or observe ESLO to ensure that cartridges and canisters are replaced before breakthrough occurs.
J - Failure to properly use and maintain this product could result in injury or death.
L - Follow the manufacturer's *User Instructions* for changing cartridges, canister and/or filters.
M - All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA, and other applicable regulations.
N - Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configuration as specified by the manufacturer.
O - Refer to *User's Instructions*; and/or maintenance manuals for information on use and maintenance of these respirators.
P - NIOSH does not evaluate respirators for use as surgical masks.
S - Special or critical *User's Instructions* and/or specific use limitations apply. Refer to *User's Instructions* before donning.

S - Special or Critical *User's Instructions*

3M™ Organic Vapor Service Life Indicator Cartridges (6001 and 60921) and Mercury Vapor Cartridges (60093 and 60926) are equipped with a passive 3M™ End of Service Life Indicator (ESLI). The indicator must be readily seen when wearing the respirator without manipulation. If you cannot readily see the ESLI, use a mirror to observe the ESLI, rely on a co-worker who can see the ESLI, or go to a clean area, remove the respirator and view the ESLI. Do not rely solely on the organic vapor ESLI unless your employer has determined that it is appropriate for your workplace. See 60601 or 60921 *User Instructions* for more information, including *Special Instructions* regarding the ESLI. The mercury vapor cartridges must be discarded when the ESLI changes to the discard color found on the mercury vapor cartridge label; or within 30 days of opening packaging; or when ESLI becomes dirty or damaged; or when odors or irritation occur or gases become noticeable; or according to chlorine service life; whichever occurs first. Mercury vapor has no odor.

Respirator Program Management

Occupational use of respirators must be in compliance with applicable health and safety standards. By law U.S. employers must establish a written respiratory protection program meeting the requirements of the OSHA Respiratory Protection Standard 29 CFR 1910.134 and any applicable OSHA substance specific standards. In Canada, CSA standard Z94.4 requirements must be met and/or requirements of the applicable jurisdiction, as appropriate. In Brazil, follow the Respiratory Protection Program of the Ministry of Labor.

For additional information on this standard contact OSHA at www.OSHA.gov. Consult an industrial hygienist or call 3M Technical Service with questions concerning applicability of these products to your job requirements.

Table 1: Major Sections of OSHA 29 CFR 1910.134

Section	Description
A	Permissible Practice
B	Definitions
C	Respiratory Protection Devices
D	Selection of Respirators
E	Medical Evaluations
F	Fit Testing
G	Use of Respirators
H	Maintenance and Care of Respirators
I	Breathing Air Quality and Use
J	Identification of Cartridges, Filters, and Canisters
K	Training and Information
L	Program Evaluation
M	Recordkeeping

Assigned Protection Factors

Table 2: Assigned Protection Factors

Type of Respirator	APF
Full Facepiece Negative Pressure Air Purifying Respirator	10/50'
Full Facepiece Supplied Air Respirator (SAR) Continuous Flow	1000

The respirator wearer must be fit tested using a quantitative fit test method in order to use an assigned protection factor greater than 10 when used as a negative pressure air purifying respirator.

In Brazil, according to the Respiratory Protection Program of the Ministry of Labor, do not use full face piece respirator when concentrations of contaminants are greater than 100 times the permissible exposure limit in air-purifying mode.

OPERATING INSTRUCTIONS

Unpacking

Inspect the package contents for shipping damage and ensure all components are present (Refer to Fig. 27). The product should be inspected before each use following the procedures in the *Inspection* section of this *User Instructions*.

MISE EN GARDE

Ce respirateur protège contre certains contaminants en suspension dans l'air. **Une mauvaise utilisation peut provoquer des problèmes de santé ou la mort.** Pour tout renseignement sur l'utilisation adéquate de ce produit, consulter son supervisieur, lire les *directives d'utilisation* ou communiquer avec 3M, aux É.-U., au 1 800 243-4630. Au Canada, appeler le service technique au 1 800 267-4414. Au Brésil, composer le 0800-0550705.

AVANT

Ces *directives d'utilisation* fournissent uniquement des renseignements relatifs à l'utilisation des masques. Des renseignements importants sont inclus dans les *directives d'utilisation de chaque système de filtration d'air utilisé* avec les masques complets FF-401, FF-402 et FF-403 3M™. Lire toute les *directives d'utilisation* et les mises en garde avant d'utiliser ce produit. Conserver ces *directives d'utilisation* à titre de référence. Pour toute question sur ces produits, communiquer avec le Service technique de 3M.

Aux États-Unis :
Consulter le site Internet : www.3M.com/PPESafety
Soutien technique : 1 800 243-4630

Au Canada :
Consulter le site Internet : www.3M.com/CA/OccSafety
Soutien technique : 1 800 267-4414

Au Brésil :
Consulter le site Internet : www.3mepi.com.br
Soutien technique : 0800-0550705

Utilisation prévue

Les respirateurs à masque complet réutilisables ultra FX 3M™ de série FF-400 (FF-401, FF-402 et FF-403) sont conçus pour fournir une protection contre certains contaminants en suspension dans l'air lorsqu'on les utilise conformément aux directives d'utilisation fournies. Le respirateur est destiné à des applications sur le lieu de travail. Les masques de série FF-400 sont conformes à la norme 237.1-2003 de l'ANSI en matière de protection oculaire et faciale lentille exigeant une résistance élevée aux chocs.

MISE EN GARDE

Les respirateurs qui sont bien choisis, utilisés et entretenus aident à protéger contre certains contaminants en réduisant les concentrations de contaminants en suspension dans l'air sous la limite d'exposition permise en milieu de travail. Il est essentiel de suivre toutes les directives d'utilisation et les réglementations gouvernementales portant sur l'utilisation de ce produit, qui comprend le port du système de protection respiratoire complet pendant tout le temps d'exposition afin que le produit puisse aider à protéger l'utilisateur. **Une mauvaise utilisation des respirateurs peut résulter en une surexposition de l'utilisateur aux contaminants et causer des problèmes de santé ou la mort.** Pour tout renseignement sur l'utilisation adéquate, consulter son supervisieur, lire les *directives d'utilisation* ou communiquer avec le Service technique de 3M.

Liste des mises en garde et des avertissements énoncés dans les présentes *directives d'utilisation*

MISE EN GARDE

Tout manquement à ces directives peut réduire le rendement du respirateur, vous surexposer à des contaminants au-dessus de la limite d'exposition permise en milieu de travail et **peut causer des problèmes de santé ou la mort.**

- Pour aider à maintenir une bonne étanchéité entre le visage et la membrane d'étanchéité faciale, la membrane d'étanchéité faciale doit être exempte de toute obstruction en tout temps. Ne pas utiliser d'un porte la barbe ou des poils susceptibles d'empêcher un contact direct entre le visage et la membrane d'étanchéité faciale. Ne pas utiliser avec des lunettes de correction de la vue. Si l'on doit porter des lunettes, utiliser la trousse pour lunettes 3M™ à l'intérieur du respirateur.
- Ne pas nettoyer le respirateur à l'aide de solvants. Le nettoyage du respirateur avec des solvants peut compromettre certains de ses composants et réduire l'efficacité du produit.
- Inspecter tous les composants du respirateur avant chaque utilisation afin de s'assurer qu'il est en bon état de fonctionnement.
- Ne pas modifier ni utiliser le respirateur de façon abusive ou incorrecte.

AVERTISSEMENT

Le fait de ne pas mettre convenablement au rebut les cartouches, les filtres et les respirateurs usés et contaminés par des substances dangereuses peut entraîner une exposition personnelle de diverses substances dangereuses. La manipulation, le transport et la mise au rebut des cartouches, des filtres et des respirateurs usés doivent être conformes aux lois fédérales, provinciales et municipales applicables.

Avertissements et restrictions du NIOSH pour une utilisation par pression négative

Les restrictions suivantes peuvent s'appliquer. Consulter l'étiquette d'homologation du NIOSH. Lorsqu'on utilise le masque FF-400 comme composante d'une configuration de respirateur à adduction d'air, consulter les *directives d'utilisation* qui accompagnent le dispositif de filtration d'air pour obtenir des renseignements sur les avertissements et les restrictions du NIOSH.

A - Ne pas utiliser lorsque la concentration ambiante en oxygène est inférieure à 19,5%.
B - Ne pas utiliser d'atmosphère présente un danger immédiat pour la vie ou la santé.
C - Ne pas utiliser en présence de concentrations supérieures au taux établi par la réglementation.
H - Se conformer aux horaires de changement établis des cartouches et s'assurer de bien tenir compte de l'indicateur de fin de durée vie (IFDU) pour s'assurer de remplacer la cartouche et les boîtiers filtrants avant la fin de leur durée de protection.
J - L'utilisation et l'entretien inadéquats de ce produit peuvent provoquer des blessures ou la mort.
L - Pour le changement des cartouches, des boîtiers filtrants et/ou des filtres, suivre les directives d'utilisation du fabricant.
M - Tous les respirateurs homologués doivent être sélectionnés, ajustés, portés et entretenus conformément aux règlements de la MSHA, de l'OSHA et à tout autre règlement en vigueur.
N - Ne jamais substituer ou modifier ce produit ni lui ajouter ou lui enlever des pièces. N'utiliser que les pièces de rechange exactes indiquées par le fabricant.
O - Consulter les *directives d'utilisation* et/ou les manuels d'entretien pour obtenir des renseignements sur l'utilisation et l'entretien de ces respirateurs.
P - Le NIOSH n'évalue pas les respirateurs comme masques chirurgicaux.
S - Des *directives d'utilisation* spéciales ou d'importance critique et/ou des restrictions d'utilisation spécifiques s'appliquent. Consulter les *directives d'utilisation* avant de porter ce produit.

Directives d'utilisation spéciales ou d'importance critique

Les cartouches contre les vapeurs organiques 60921 et les cartouches contre les vapeurs de mercure 60093 et 60926 sont munies d'un indicateur de fin de durée de vie passif 3M™. Il doit être facilement visible lorsque l'utilisateur porte le respirateur sans manipulation. Si on ne peut pas voir facilement l'IFDU, utiliser un miroir pour l'observer ou se faire à un collègue qui peut le voir, se diriger dans un endroit propre, retirer le respirateur et observer l'IFDU. Ne pas se fier uniquement à l'IFDU pour les vapeurs organiques à moins que son employeur ait déterminé que cela est approprié pour son lieu de travail. Consulter les *directives d'utilisation* des cartouches 60601 ou 60921 pour obtenir de plus amples renseignements, y compris des *directives spéciales* concernant l'IFDU. Mettre les cartouches contre les vapeurs de mercure au rebut lorsque l'IFDU perd la couleur de produit présent indiqué sur l'étiquette des cartouches, 30 jours après l'ouverture de l'emballage, lorsque l'IFDU devient sale ou endommagé, lorsqu'on commence à percevoir l'odeur des vapeurs ou des gaz ou conformément à la durée utile du chlore, selon la première éventualité Les vapeurs de mercure sont inodores.

Programme de gestion du respirateur

L'utilisation professionnelle des respirateurs doit être conforme avec les normes de santé et de sécurité applicables. Selon la loi, les employeurs américains doivent établir un programme de protection respiratoire écrit qui satisfasse aux exigences de la norme de protection respiratoire 29 CFR 1910.134 de l'OSHA et toute norme de l'OSHA applicable à une substance spécifique. Au Canada, se conformer à la norme Z94.4 de la CSA et/ou aux exigences de l'autorité compétente, tel qu'approprié. Au Brésil, suivre le programme de protection respiratoire du ministère du Travail.

Pour tout renseignement supplémentaire sur cette norme, communiquer avec l'OSHA à l'adresse www.OSHA.gov. Consulter un hygiéniste industriel ou appeler le Service technique de 3M pour toute question concernant l'application de ces produits aux exigences de votre travail.

Tableau 1 : Sections principales de la norme 29 CFR 1910.134 de l'OSHA

Section	Description
A	Pratique admissible
B	Définitions
C	Appareils de protection respiratoire
D	Sélection des respirateurs
E	Évaluations médicales
F	Essai d'ajustement
G	Utilisation des respirateurs
H	Maintenance et soins des respirateurs
I	Qualité de l'air respirable et utilisation
J	Identification des cartouches, filtres et contenants
K	Formation et informations
L	Évaluation du programme
M	Tenue des dossiers

Facteurs de protection caractéristiques

Tableau 2 : Facteurs de protection caractéristiques

Type de respirateur	Facteur de protection assigné
Respirateur à épuration d'air à pression négative avec masque complet	10/50'
Respirateur à alimentation d'air à débit continu avec masque complet	1000

L'utilisateur du respirateur doit subir un essai d'ajustement réalisé à l'aide d'une méthode d'essai d'ajustement quantitatif afin d'obtenir un facteur de protection assigné supérieur à 10 lorsqu'utilisé comme respirateur d'épuration d'air à pression négative.

Au Brésil, conformément au programme de protection respiratoire du ministère du Travail, ne pas utiliser de respirateur à masque complet lorsque les concentrations de contaminants sont supérieures à 100 fois la limite d'exposition admissible en mode d'épuration d'air.

DIRECTIVES D'OPÉRATION

Déballage

Inspecter le contenu de l'emballage pour vérifier s'il y a été endommagé pendant l'expédition et s'assurer que tous les composants sont présents (consulter la Fig. 27). Le produit doit être inspecté avant chaque utilisation conformément aux procédures décrites dans la section *Inspection* de ces *directives d'utilisation*.

Assemblage

Cartouche 3M™ de série 6000, filtres 7093 et ensemble cartouche/filtre 7093C 3M™ (Fig. 1, 2)

1. Aligner l'encoche de la cartouche ou du filtre avec la patte rigide du raccord du dispositif de verrouillage du masque et les enencrcher en poussant.
2. Tourner le filtre dans le sens des aiguilles d'une montre jusqu'à ce qu'il soit bien inséré et qu'il arrête de tourner (environ 1/4 de tour).
3. Répéter avec le second filtre ou la seconde cartouche.

Filtre 3M™ de série 2000 (Fig. 3)

1. Aligner l'ouverture du filtre avec le dispositif de fixation de filtre situé sur le masque et les enclencher en poussant.
2. Faire tourner le filtre dans le sens des aiguilles d'une montre jusqu'à ce qu'il soit immobilisé et ne puisse tourner davantage.
3. Répéter avec le second filtre au besoin.

Montage des filtres 5N11 et 5P71 3M™(Fig. 4)

1. Placer le filtre dans le dispositif de retenue 501 3M™, côté imprimé face à la cartouche.
2. Enfoncer la cartouche dans le dispositif de retenue jusqu'à ce qu'elle soit parfaitement insérée dans le dispositif de retenue. Lorsqu'il est parfaitement inséré, le filtre couvre entièrement la surface de la cartouche (Fig. 5).
3. Pour replacer le filtre, retirer le dispositif de retenue en soulevant la languette.

Au Brésil, le filtre 5935BR 3M™ peut être utilisé sur le dispositif de retenu 501 3M™ sur le masque complet 3M™ de série FF-400.

Montage de l'adaptateur 502 3M™(Fig. 6)

1. Aligner l'adaptateur sur la cartouche. Enclencher l'encoche avant dans la cartouche en comprimant ensemble l'avant de la cartouche et l'adaptateur. Pour le dégager, tirer sur l'adaptateur. Pour le placer, placer les pouces sur la partie supérieure de l'adaptateur et les doigts le long de la partie inférieure de la cartouche (Fig. 5).
2. Enfoncer l'encoche arrière de la cartouche dans l'ouverture, en plaçant les pouces et les doigts de la même manière. Un déclic se fait entendre lorsque chaque languette est enclenchée (Fig. 6).
3. Inserer le filtre dans le dispositif de retenue de filtre de manière qu'il soit en contact uniforme avec le joint d'étanchéité. Faire tourner le filtre de un quart de tour dans le sens des aiguilles d'une montre jusqu'à ce qu'il soit bien inséré et qu'il ne puisse tourner davantage. Suivre les mêmes directives pour le second filtre.

REMARQUE IMPORTANTE : L'ensemble adaptateur 502 3M™, une fois installé sur une cartouche 3M™ de série 6000, ne doit pas être enlevé ni réutilisé. Le retirer ou le réutiliser peut entraîner des fuites, une surexposition, des problèmes de santé ou la mort.

Ensemble d'adaptateur et de fixation de filtre 603 3M™ (pour filtres 5N11 et 5P71 3M™)

1. Aligner l'encoche sur le bord de l'adaptateur 603 avec la marque du masque comme l'indique l'illustration (Fig. 7).
2. Tourner l'adaptateur d'un quart de tour dans le sens des aiguilles d'une montre jusqu'à ce qu'il soit bien en place. Le mouvement d'un quart de tour dans le sens contraire des aiguilles d'une montre (Fig. 8).
3. Placer le filtre dans le dispositif de retenue 501 en s'assurant que le côté imprimé soit face à l'adaptateur 603. Les enclencher ensemble et s'assurer que le joint du filtre est exempt de plis ou de vides (Fig. 9).

Au Brésil, le filtre 5935BR 3M™ peut être utilisé avec l'adaptateur de filtre 603 et le dispositif de retenue de filtre 501 sur masque complet 3M™ de série FF-400.

Assembly

3M™ Cartridge 6000 Series, Filter 7093, and Cartridge/Filter 7093C Assembly (Fig. 1, 2)

1. Align the cartridge or filter notch with the small solid bayonet lug on faceplate and push together.
2. Turn cartridge or filter clockwise until it is firmly seated and cannot be further turned (about 1/4 turn).
3. Repeat with second cartridge or filter.

3M™ Filter 2000 Series (Fig. 3)

1. Align opening of filter with filter attachment on faceplate and push together.
2. Turn filter clockwise until it is firmly seated and cannot be further turned.
3. Repeat for second filter.

Filter Assembly (for 5N11 and 5P71)

1. Place filter into 3M™ Retainer 501 so printed side of filter faces the cartridge.
2. Press cartridge into retainer. It should snap securely into filter retainer. When correctly installed, filter should completely cover face of cartridge (Fig. 4).
3. To replace filter, remove retainer by lifting on tab.

In Brazil, the 3M™ Filter 5935BR can be used with the 3M™ Filter Retainer 501 on the 3M™ Full Facepiece FF-400 Series.

3M™ Adapter Assembly 502

1. Align adapter over cartridge. Engage front snap by squeezing front of cartridge and adapter together, placing thumbs of both hands over top of adapter and fingers along bottom sides of cartridge (Fig. 5).
2. Engage back snap by squeezing back side of cartridge and adapter together using the same hand positions. An audible click should be heard as each snap is engaged (Fig. 6).
3. Place filter onto the filter holder so that filter comes into even contact with gasket. Twist clockwise a quarter turn until it is firmly seated and filter cannot be turned further. Repeat for second filter.

IMPORTANT: The 3M™ Adapter Assembly 502, once installed on a 3M™ Cartridge 6000 Series, is not to be removed or reused. Removal or reuse may result in leakage, overexposure, sickness or death.

3M™ Filter Adapter 603 Assembly and Filter Attachment (for 3M™ Filters 5N11 and 5P71)

1. Align notch on edge of 603 adapter with faceplate mark as shown (Fig. 7).
2. Turn adapter 1/4 turn clockwise to stop. To remove adapter, turn 1/4 turn counterclockwise (Fig. 8).
3. Place filter into 501 retainer with filter printing facing towards the 603 adapter. Snap together and ensure the filter seal is free from creases or gaps (Fig. 9).

In Brazil, the 3M™ Filter 5935BR can be used with the Filter Adapter 603 and the Filter Retainer 501 on the 3M™ Full Facepiece, FF-400 Series.

3M™ Dual Airline Respirator Assembly

User must follow *Dual Airline Supplied Air Respirator User Instructions* provided with the 3M™ Dual Airline Supplied Air Respirators.

Assembly of Dual Airline Breathing Tubes

1. Hold the facepiece in front of you so that the 3M logo is facing you. Align the two branches of the breathing tube over the two bayonet mounts on facepiece (Fig. 10). For 3M™ Breathing Tubes SA-1500 or SA-5000, make sure that 3M logo on breathing tube and on facepiece are both facing towards you. For 3M™ Breathing Tubes SA-2500 or SA-2600, make sure that the 3M logo on breathing tube is facing in opposite direction to 3M logo on facepiece.
2. Twist each branch of breathing tube clockwise a quarter turn until it is firmly seated in the bayonet and cannot be turned further (Fig. 11 and 12). Do not forcibly overturn as the bayonet could be damaged. SA-1500/SA-2500 shown.
3. Attach airline to approved air regulators per pressure schedules in dual airline, supplied air respirators *User Instructions*.

Assembly of 3M™ Combination Dual Airline Breathing Tubes with Cartridges and/or Filters

The SA-1600 (front-mounted) and SA-2600 (back-mounted) versions of the 3M™ Dual Airline Breathing Tubes allow use of selected 6000series approved 3M™ Cartridge 6000 Series and 3M™ Filter 2000 Series. For the listing of approved cartridges and filters, reference the NIOSH approval label included with 3M™ Dual Airline Adapter kits.

1. Attach SA-1600 or SA-2600 breathing tubes to facepiece per the procedures outlined previously. The procedure is identical to the SA-1500 and SA-2500 models.
2. Make a selection of cartridges and/or filters that meets your respiratory protection requirements, and attach to the breathing tube per the 3M™ Cartridge 6000 Series or 3M™ Filter 2000 Series instructions.
3. Don facepiece per procedures outlined in *Donning Respirator* section of instructions.
4. After being properly fitted, perform a positive and negative pressure user seal check each time the respirator is donned per procedures outlined in *User Seal Check* section of instructions.

If you cannot achieve a proper fit, DO NOT enter contaminated area. See your supervisor.

To assemble 3M™ Dual Airline Combination Breathing Tubes with 3M™ Cartridges/Filters, the facepiece inhalation valves must be removed.

IMPORTANT: If the facepiece is to be used in air-purifying mode (without using the SA-1600 or SA-2600 breathing tubes), the inhalation valves must be replaced in the facepiece before use.

Using the 3M™ Combination Dual Airline Breathing Tubes without Cartridges and/or Filters

To use the 3M™ Combination Dual Airline Breathing Tubes (SA-1600 and SA-2600) without cartridges or filters, attach a 3M™ Bayonet Cap 6880 to each outer bayonet mount on the dual airline breathing tube. When used as a straight, Type C, continuous flow supplied air respirator, the Assigned Protection Factor is 1000 times the PEL, OEL or TLV guidelines for full facepiece respirators.

FITTING INSTRUCTIONS

WARNING

Failure to follow these instructions may reduce respirator performance, expose you to contaminants above the OEL, and **may result in sickness or death.**

- To help maintain a good seal between the face and the facesheet, the respirator facesheet must be clear of obstructions at all times. Do not use with beards or facial hair that prevent direct contact between the face and the respirator facesheet. Do not use with corrective eyeglasses. If corrective eyeglasses are required, a 3M™ Spectacle Kit must be used inside the respirator.

These instructions MUST be followed each time respirator is worn.

Donning Respirator

NOTE: Two key factors in effective donning are placing the nose in the nose cup initially to center the respirator on the face and to tighten the straps following steps 4, 5, & 6. Not to snug the respirator then repeating steps 4, 5, & 6 a second time to secure the facepiece seal. Care must be taken to not over tighten bottom straps on the first turn.

1. Fully loosen all six headstraps.
2. Hold the front of the facepiece with one hand and the straps/comfort cradle away from the facepiece with the other hand, creating an opening for the head. Pull the respirator assembly down over the head and face through the opening. Place the nose in the nose cup and chin in the chin cup area then press the facepiece firmly and evenly against the face (Fig. 13).
3. Pull head harness to back of head (Fig. 13).

NOTE: Repeat the sequence of steps 4-6 twice, once to snug the straps and take up slack and a second time to secure and seal the respirator facepiece to the face.

4. Tighten the bottom straps one at a time. Be careful to tighten both sides equally (Fig. 14).
5. Tighten the middle straps one at a time. Be careful to tighten both sides equally.
6. Tighten the top straps one at a time. Be careful to tighten both sides equally.
7. Recheck all straps to ensure that they are tight and evenly tensioned. Ensure that the head harness is centered on the back of your head. Ensure that the straps and tabs fall against your head.

If possible, have a partner verify that you have donned your respirator properly. Facial hair or improper donning may prevent a good seal.

Initial Selection of Small, Medium or Large Facepieces

More than one facepiece size may need to be donned before you determine the best size for your face.

After donning verify the following:

1. Nothing (e.g. hair, jewelry, etc.) comes between the face and the sealing surface of the respirator. Facial hair or sideburns may have to be trimmed.
2. Both straps and middle straps do not cut into ears.
3. Eyes are looking between center and top 1/3 of the lens.
4. Respirator does not press so tightly against face that eyes are partly closed.
5. Bottom of the mask assembly does not cut into throat.
6. No visible gaps between the face seal and the face.
7. Skin in front of ear is not wrinkled.
8. Nosecup does not obscure vision.
9. Ensure that other safety equipment does not interfere with buckles or fit of respirator.

If any of these criteria are not met, it is possible that the respirator may not fit you adequately. Selecting a different size facepiece may provide you with a more adequate fit. More than one facepiece may need to be donned before you determine the best size for your face. A fit test can confirm adequate fit. If you have further questions, see your supervisor.

User Seal Checks

Always check the seal of the respirator on your face before **entering a contaminated area** according to the instructions provided below for your specific respirator configuration. The positive pressure seal check is the only method for this respirator with Filters 2000 Series. The negative pressure user seal check can also be done for additional verification of a good seal for this respirator with Cartridges 6000 Series and Filters 7093/7093C. Be careful not to distort the respirator seal by pressing too forcefully during negative pressure seal checks.

IMPORTANT: If you cannot achieve a proper seal, DO NOT enter the contaminated area. See your supervisor. Before assigning any respirator to be worn in a contaminated area, a qualitative or quantitative fit test MUST be performed per OSHA Standard 1910.134, CSA Standard Z94.4 or Brazil Respiratory Protection Program of the Ministry of Labor.

Positive Pressure User Seal Check for all approved configurations and required for Filters 2000 Series

1. Remove the exhalation valve cover by depressing bottom of cover with thumb and sliding cover up, parallel with lens (Fig. 18).
2. Place the palm of your hand over the exhalation valve and exhale gently (Fig. 15). Care must be taken to ensure a good seal of the exhalation valve. To do this, cover the entire face of the blue valve with the base of the palm.
3. If the facepiece bulges slightly and no air leaks are detected between the face and the facepiece, a proper seal has been obtained.
4. If facesheet air leakage is detected, reposition the respirator on your face and/or readjust the tension of the straps to eliminate leakage and recheck seal.
5. Replace exhalation valve cover by placing open end at top of exhalation valve assembly, guide tabs underneath valve cover assembly and slide downward until the valve cover snaps in place.

If facesheet air leakage is detected, reposition the respirator on your face and/or readjust the tension of the straps to eliminate the leakage and recheck seal. Care must be taken when performing the positive pressure seal check not to exhale too hard. The aim is to check the seal, not disturb the seal between the mask and the face.

Negative Pressure User Seal Check with Cartridges 6000 Series

1. Place palms of hands to cover face of cartridge or open end of 3M™ Filter Retainer 501and inhale gently. If you feel the facepiece collapse slightly and pull closer to your face with no leaks between the face and facepiece, a proper seal has been obtained (Fig. 16).
2. If facesheet air leakage is detected, reposition the respirator on your face and/or readjust the tension of the straps to eliminate leakage and recheck seal.

Be careful not to distort the respirator seal by pressing too forcefully during negative pressure seal checks.

NOTE: Use of filter retainer 501 may aid respirator wearer in conducting a negative pressure user seal check.

Negative Pressure User Seal Check with Filters 7093/7093C

1. Using hands squeeze or press filter covers because facepiece and inhale gently. If you feel the facepiece collapse slightly and pull closer to your face with no leaks between the face and facepiece a proper seal has been obtained (Fig. 17).
2. If facesheet air leakage is detected, reposition the respirator on your face and/or readjust the tension of the straps to eliminate the leakage and recheck seal.

Be careful not to distribute the respirator seal by pressing too forcefully during negative pressure seal checks.

Negative Pressure User Seal Check with Dual Airline

1. Disconnect airline from dual airline breathing tubes.
2. With breathing tube still connected to the air control valve inhale gently. If you feel facepiece collapse slightly and pull closer to your face with no leaks between the face and facepiece, a proper seal has been obtained.
3. For combination dual airline where cartridges or filters are attached perform user seal check as described above under the appropriate section of filter that is being used.
4. If facesheet air leakage is detected, reposition the respirator on your face and/or readjust the tension of the straps to eliminate the leakage and recheck seal.

IMPORTANT: If you cannot achieve a proper seal, DO NOT enter the contaminated area. See your supervisor. Before assigning any respirator to be worn in a contaminated area, a qualitative or quantitative fit test MUST be performed per OSHA Standard 1910.134, or CSA Standard Z94.4.

RESPIRATOR REMOVAL

1. Fully loosen all six head straps by lifting up on buckles.
2. Remove respirator by pulling straps over head.

FIT TESTING

The effectiveness of a respirator will be reduced if it is not fitted properly. Therefore, either qualitative or quantitative fit testing must be conducted prior to the respirator being worn in a contaminated atmosphere. **Fit testing is a U.S. Occupational Safety and Health Administration (OSHA), a Canadian CSA and a Brazilian BMOL requirement.** Fit testing should be conducted using the heaviest cartridge, canister, filter or combination that each wearer will use in their work environment. Respirators should also be fit tested while wearing any personal protective equipment (PPE) the wearer may use in their work environment that may affect the fit of the respirator (e.g. hoods, hardhats, hearing protectors, etc.). For further information concerning fit testing, contact 3M PSD Technical Service.

Quantitative Fit Testing

Quantitative Fit Testing (QNFT) can be conducted using a 3M™ Fit Test Adapter 601 and P100 filters such as the 3M™ Particulate Filters 2091 or 7093.

Qualitative Fit Testing

Qualitative Fit Testing (QLFT) with the 3M™ Qualitative Fit Test Apparatus FT-10 or FT-30 can be conducted using any of the NIOSH approved particulate filters.

Entering and Exiting a Contaminated Area

- Airborne contaminants which can be dangerous to your health include those that are so small you may not be able to see or smell them.
- Always conduct a user seal check before entering a contaminated area.
- Leave the contaminated area immediately if any of the following conditions occur:
  - Any part of the respirator becomes damaged.
  - Breathing becomes difficult.
  - Your feel dizzy or your vision is impaired.
  - You taste or smell contaminants.
  - Your face, eyes, nose or mouth become(s) irritated.
  - You suspect that the concentrations of contaminants may have reached levels at which this respirator may no longer provide adequate protection.
- Do not wear this respirator in areas where:
  - Atmosphere-to-oxygen deficient;
  - Contaminant concentrations are unknown.
  - Contaminant concentrations are immediately Dangerous to Life or Health (IDLH).
  - Contaminant concentrations exceed the Maximum Use Concentration (MUC) determined using the Assigned Protection Factor (APF) for the specific respirator system or the APF mandated by specific government standards, whichever is lower.

INSPECTION, CLEANING, AND STORAGE

WARNING

Failure to follow these instructions may reduce respirator performance, expose you to contaminants above the OEL, and **may result in sickness or death.**

- Do not clean respirator with solvents. Cleaning with solvents may degrade some respirator components and reduce respirator effectiveness.
- Inspect all respirator components before each use to ensure proper operating condition.

Inspection Procedure

This respirator must be inspected before each use to ensure that it is in good operating condition. Any damaged or defective parts must be replaced before use. Do not enter a contaminated area with damaged or defective parts. The following inspection procedure is recommended.

1. Check facepiece for cracks, tears and dirt. Be certain facepiece, especially facesal area, is not distorted.
2. Examine inhalation valves for signs of distortion, cracks, tears or leaking.
3. Make sure that head straps are intact and have good elasticity.
4. Examine all parts for signs of contamination or fatiguing. Ensure bayonet gaskets are in good condition.
5. Remove exhalation valve cover and examine exhalation valve and valve seat for signs of dirt, distortion, cracking or tearing. Replace exhalation valve cover.
6. Inspect lens for any damage that may impair respirator performance or vision.

Cleaning and Storage

Cleaning is recommended after each use.

1. Remove cartridges, filters and/or breathing tubes, and nose cup. The exhalation valve cover, exhalation valve assembly, speaking diaphragm, bayonet assembly, lens and faceseal can also be disassembled if necessary.
2. Clean facepiece (excluding filters and cartridges), by immersing in warm cleaning solution, water temperature not to exceed 120°F (49°C), and scrub with soft brush until clean. Add neutral detergent if necessary. Do not use cleaners containing lanolin or other oils.
3. Disinfect facepiece by soaking in a solution of quaternary ammonia disinfectant or sodium hypochlorite (1oz. [30 ml.] household bleach in 2 gallons [7.5 L] of water), or other disinfectant.
4. Rinse in fresh, warm water and air dry in non-contaminated atmosphere. Do not replace nose cup until facepiece is completely dry.
5. Respirator components can be inspected prior to each use. A respirator with any damaged or deteriorated components should be repaired or discarded.
6. The cleaned respirator should be stored away from contaminated areas when not in use.

SPECIFICATIONS

Contact 3M Technical Service for technical specifications (e.g. weight, materials of construction, etc). This product contains no components made from natural rubber latex.

Cartridge and Filter Selection and Approvals

Before using any of these products, the user must read the specific Use For, Use Limitations and Warning information in the *User Instructions* and product documentation or call 3M PSD Technical Service. Do not exceed maximum use concentrations established by local regulatory agencies.

	3M™ 6000 Series Cartridges														
NIOSH Approvals	6001	6003	6002	6004	6005	6006	6057	6059	6051	6052	6054	6055	6056	6058	6095
Certain Organic Vapors	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Chlorine		X	X		X	X		X	X		X	X		X	X
Hydrogen Chloride		X	X		X	X		X	X		X	X		X	X
Sulfur Dioxide		X	X		X	X		X	X		X	X		X	X
Chlorine Dioxide		X	X			X		X	X			X		X	X
Hydrogen Sulfide		X	X			X		X	X			X		X	X
Hydrogen Fluoride			X				X			X			X		
Formaldehyde				X	X		X			X	X		X		
Ammonia				X	X			X			X	X			
Methylamine				X	X			X			X	X			
Mercury Vapor						X			X						
P100 Particulate Filter							X	X	X	X	X	X	X	X	X

* 3M Recommended for use against methylbromide or radiodoine up to 5ppm with daily cartridge replacement.

NOTE: Not NIOSH approved for use against methylbromide or radioiodine.

	3M™ Filters														
Homologations du NIOSH	2071	2075*	2076 KF	2091	2096	2097*	2297	2298	2298	2297**	5911	5971	7093	7093C	5935BR
P100		X	X	X	X	X	X	X	X	X	X	X	X	X	
P95	X	X	X	X											
N95											X				
FFI	X													X	X
Protection contre certains composés nuisibles															
Gaz acides		X	X			X			X						
Vapeurs organiques		X	X			X			X					X	

* Recommended for use against certain organic vapors and acid gases or organic vapors. Nuisance level refers to concentrations not exceeding OSHA PEL or applicable exposure limits, whichever is lower. Do not use for respiratory protection against acid gas/organic vapors.

** 3M Recommended for ozone protection up to 10 times the OSHA PEL or applicable government occupational exposure limits, whichever is lower.

NOTE: Not NIOSH approved for use against ozone.

In Brazil, the 5935BR filter is approved as a NIOSH N95 filter and a BMOL P3 filter.

3M™ Filter Adapters and Retainers

Numéro	Description
501	Filter Retainer for use with Cartridge 6000 Series and Filters 5N11 and 5P71
502	Filter Adapter for use with Cartridge 6000 Series and Filters 2000

⚠ ADVERTÊNCIA

Este respirador ajuda a proteger contra certos contaminantes transportados pelo ar. **O uso incorreto pode resultar em ferimento ou morte.** Para uso adequado, consulte o supervisor, as *Instruções de Uso/Manutenção*, o filme a 3M em EUA de 1-800-243-4630; em Canadá (barre at Services Technical at 1-800-267-4414, en Mexico barre at 01-800-712-5646; em Brasil barre at 0800-0550705. O contato a 3M em su país.

FRENTE

Estas *Instruções* oferecem informação sobre del uso de la pieza facial. En las *Instrucciones* de cada uno de los sistemas de filtración de aire usados con las Piezas faciales de cara completa 3M™ FF-401, FF-402 y FF-403 se incluye información importante. Antes de usar el producto, lea las *Instrucciones* y advertencias. Conserve estas instrucciones para referencia futura. Si tiene alguna duda sobre este producto, póngase en contacto con el Servicio Técnico 3M.

En Estados Unidos:	En Canadá:
Internet: www.3M.com/PPESafety	Internet: www.3M.com/CA/occsafety
Ayuda Técnica: 1-800-243-4630	Ayuda Técnica: 1-800-267-4414
En Brasil:	
Internet: www.3mepi.com.br	
Ayuda Técnica: 0800-0550705	

Aplicación

Uso
Los Respiradores de pieza facial de cara completa 3M™ Utilmate FX Serie FF-400 (FF-401, FF-402 y FF-403) están diseñados para proveer protección respiratoria contra ciertos contaminantes transportados pelo ar quando usados de acordo com todas as instruções e limitações de uso e regulamentações aplicáveis de segurança e saúde. Todas as peças faciais da série FF-400 satisfazem os requisitos de impacto da norma ANSI Z87.1-2003, além disso, possuem uma lente de proteção facial e ocular limitada.

⚠ ADVERTÊNCIA

Los respiradores bien seleccionados, usados y mantenidos ayudan a proteger contra ciertos contaminantes de riesgo. Los respiradores no protegen contra todos los contaminantes. Para uso adecuado, consulte a su supervisor, las *Instrucciones del producto* o contacte al Servicio Técnico de 3M.

Lista de advertencias y precauciones dentro de estas *Instrucciones de Uso*

⚠ ADVERTÊNCIA

O não comprimento destas instruções poderá reduzir o desempenho do respirador, expondo-o a contaminantes acima do OEL, e **pode resultar em doenças ou morte.**

- Para ajustar a manter um bom selo entre la cara y el sello facial, el sello del respirador no debe tener ningna obstrucción. No use con barba u otro vello facial o otra condición que evite el buen sello entre la cara y la superficie del sello facial. No use lentes con aumento. Si requiere utilizar lentes con aumento, debe usar un Kit de anteojos 3M™ en el interior del respirador.
- No limpie el respirador con solventes. Limpiar el respirador con solventes puede degradar los componentes de sitio y reducir su efectividad.
- Antes de cada uso, revise los componentes del respirador para asegurar las condiciones adecuadas de funcionamiento.
- No altere ni maltrate ni haga mal uso de este respirador.

PRECAUCIÓN

No eliminar de manera adecuada los cartuchos, filtros o respiradores usados y contaminados con materiales peligrosos puede causar exposiciones personales, al igual que daño ambiental. El manejo, transporte y la disposición de cartuchos, filtros o respiradores usados debe cumplir con todas las leyes y regulaciones federales, estaduales, provinciales y locales aplicables.

Precauciones y limitaciones NIOSH para uso de presión negativa

Es posible que apliquen las siguientes restricciones. Consulte la etiqueta de aprobación del Instituto Nacional de Seguridad y Salud Ocupacional (NIOSH) por sus siglas en inglés). Lo que sigue se aplica a las piezas faciales FF-400 como parte de una configuración de Respirador con aumento de aire, consulte las *Instrucciones* incluidas con el Dispositivo para control de aire para obtener información sobre las condiciones de uso NIOSH específicas.

- No use en atmósferas con menos de 19.5% de oxígeno.
- No use en atmósferas inmediatamente peligrosas para la vida o salud.
- No exceda el uso máximo de concentraciones establecidas por las normas reguladoras.
- Si los programas de cambio establecidos para cartuchos y cámaras no están en uso o deben ser utilizados por el usuario, el cambio de cartuchos y cámaras debe ser programado de acuerdo con NIOSH, OSHA u otras reglamentaciones aplicables.
- Aplican las *Instrucciones* específicas a importantes limitaciones de uso específicas. Antes del uso del equipo consulte las *Instrucciones*.

5 – Instrucciones específicas o importantes

Los Cartuchos de vapor orgánico con indicador de vida útil (60071) y 60921) y Cartuchos de vapor mercurio (60095 y 60926) están equipados con un indicador de fin de vida útil (ESLI) 3M™. El indicador debe verse cuando use el respirador; si no lo ve, use un equipo o solicite a un compañero de trabajo que lo consulte, o salga a un área limpia y quítese el respirador para ver el ESLI. No confíe solo en el ESLI de vapor orgánico, a menos que su cartuchos haya determinado que es adecuado para su lugar de trabajo. Para obtener mayor información, consulte las *Instrucciones* 60011 o 60921), incluidas las *Instrucciones* especiales de ESLI. Los cartuchos para vapor de mercurio se deben desechar cuando el ESLI cambia de color de eliminación encontrado en la etiqueta del cartucho para vapor de mercurio; o en un lapso de 30 días a partir de la apertura del empaque; o cuando el ESLI se ensucie o dañe; o cuando pueda detectar los olores de vapores o gases, o cuando se vea útil de cloro, lo que ocurra primero. El vapor de mercurio es inodoro.

Administración del programa del respirador

El uso ocupacional de respiradores debe cumplir con las normas de salud y seguridad aplicables. Por ley en Estados Unidos el patrón debe establecer un programa de protección respiratoria por escrito que cumpla con los requisitos de la Norma de protección respiratoria 29 CFR 1910.134 de la Administración de Seguridad y Salud Ocupacional (OSHA) por sus siglas en inglés o cualquier otra norma que sustituya especificada de la misma administración. En Canadá, se debe cumplir con los requisitos de la norma CSA Z94.4, o los requisitos de la jurisdicción aplicable, según corresponda. En Brasil siga el Programa de Protección Respiratoria de la Secretaría del Trabajo.

Para mayores informes sobre esta norma contate a OSHA en www.OSHA.gov Consulte un higienista industrial o llame al Servicio Técnico 3M sobre la aplicación de estos productos a sus requerimientos de trabajo.

Tabla 1: Secciones principales de OSHA 29 CFR 1910.134

Sección	Descripción
A	Práctica permisible
B	Definiciones
C	Dispositivos para protección respiratoria
D	Selección de respiradores
E	Evaluación médica
F	Prueba de ajuste
G	Uso de respiradores
H	Mantenimiento y cuidado de respiradores
I	Calidad y uso del aire respirable
J	Identificación de cartuchos, filtros y cánisters
K	Capacitación e información
L	Evaluación del programa
M	Registros

Factores de protección asignados

Tabla 2: Factores de protección asignados (FPA)

Tipo de respirador	FPA
Respirador Purificador de Aire de Pieza Facial de Cara Completa con Presión Negativa	10/50*
Respirador con Suministro de Aire de (SAR) Pieza Facial de Cara completa, flujo continuo	1000
Respirador con Suministro de Aire de (SAR) Pieza Facial de Cara completa, flujo a presión	1000

* El usuario del respirador debe realizar una prueba de ajuste con un método de prueba de ajuste cuantitativo para usar un factor de protección asignado mayor a 10 cuando se usa como un respirador purificador con presión negativa.

En Brasil, de acuerdo con el Programa de Protección Respiratoria de la Secretaría del trabajo, no use la pieza de cara completa cuando las concentraciones de los contaminantes sean mayores a 100 veces el límite de exposición permisible en modo purificador de aire.

INSTRUCCIONES DE OPERACIÓN

Desempacado

Revise el contenido del empaque para ver si no está dañado y asegúrese de contar con todos los componentes (Consulte la Figura 1). Antes de cada uso debe revisar el producto de acuerdo con los procedimientos señalados en la sección de *Inspección de estas Instrucciones*.

Armado

Ensamble de Cartucho Serie 6000, Filtro 7093 y Cartucho/Filtro 7093C 3M™ (Fig. 1, 2)

1. Aline el la manera del filtro o cartucho con la pequeña pestaña de la cara. Gire hasta que quede en la pieza facial y presione.
2. Gire el cartucho o filtro en sentido de las manecillas del reloj hasta que quede firmemente asentado y no pueda girar más (encaja de 1/4 de vuelta).
3. Repita la anterior para el segundo filtro.

Filtro 3M™ Serie 2000 (Fig. 3)

1. Alinee la abertura del filtro con el alineo del filtro en la pieza facial.
2. Gire el filtro en sentido de las manecillas del reloj hasta que quede firmemente asentado y no pueda girar más.
3. Repita la anterior para el segundo filtro.

Ensamble de filtro (para Filtros 3M™ 5N11 y 5P71)

1. Coloque el filtro en el Soporte 3M™ 501 de modo que el lado impreso del filtro quede hacia el cartucho.
2. Presione el cartucho en el soporte de filtro. Debe entrar y quedar fijo en el soporte de filtro. Instalado correctamente, el filtro debe cubrir por completo la cara del cartucho (Fig. 4).
3. Para remplazar el filtro, quite el soporte y levante la lengüeta.

En Brasil el filtro 5935BR 3M™ puede usarse con Soporte de filtro 501 3M™ en la Pieza facial de cara completa 3M™ Serie FF-400.

Ensamble de adaptador 3M™ 502

1. Alinee el adaptador en el cartucho. Engancha el broche frontal de presión al apretar juntos el frente del cartucho y adaptador, colocando los pulgares de ambos manos sobre el adaptador y los dedos a lo largo de los lados inferiores del cartucho (Fig. 5).
2. Engancha el broche posterior de presión al apretar juntos el lado posterior del cartucho y adaptador con la misma posición de las manos. Se debe escuchar un clic conforme el broche de presión se engancha (Fig. 6).
3. Coloque el filtro en el portafiltro de modo que el filtro tenga contacto uniforme con el empaque. Gire el filtro en sentido de las manecillas del reloj un cuarto de vuelta hasta que quede firmemente asentado y no pueda girar más. Repita lo anterior para el segundo filtro.

IMPORTANTE: Una vez instalado en un Cartucho 3M™ 502 Serie 6000, no debe quitar o reutilizar el ensamble de adaptador 3M™ 502. La remoción o reutilización puede ocasionar fuga, sobreexposición, enfermedad o incluso la muerte.

Ensamble de Adaptador de filtro 3M™ 603 y Conexión de Filtro (para Filtros 3M™ 5N11 y 5P71)

1. Alinee la muesca en la orilla del adaptador 603 con la marca de la pieza facial, como se muestra (Fig. 7).
2. Empuje el adaptador hacia la pieza facial hasta que quede firmemente asentado y no pueda girar más (aprox. gire 1/4 de vuelta en sentido contrario a las manecillas del reloj) (Fig. 8).
3. Coloque el filtro en el soporte 501 con la impresión del filtro mirando hacia el adaptador 603. Abrócheles y asegúrese que el adaptador de filtro esté alineado y bien enganchado (Fig. 9).

En Brasil, el Filtro 5935BR 3M™ puede usarse con Adaptador de filtro 603 y Soporte de filtro 501 en la Pieza facial de cara completa 3M™ Serie FF-400.

Ensamble de respirador con línea de aire dual 3M™

El usuario debe seguir las *Instrucciones del Respirador* con línea de aire para el ensamble de aire con línea de aire dual incluido con los Respiradores con suministro de aire con línea de aire dual 3M™.

Ensamble de tubos de respiración para línea de aire dual

1. Sostenga la pieza facial frente a usted, de modo que el logotipo de 3M quede mirando hacia usted. Alinee las dos derivaciones del tubo de respiración con las dos derivaciones de la pieza facial (fig. 10). Para los Tubos de respiración 3M™ SA-1500 o SA-1600, asegúrese que el logotipo de 3M en el tubo de respiración y en la pieza facial de media cara quedan mirando hacia usted. Para los Tubos de respiración 3M™ SA-5000 o SA-6000, asegúrese que el logotipo 3M en el tubo de respiración quede mirando en la dirección opuesta al logotipo 3M en la pieza facial.
2. Prenda a línea de air se aplicadores de air respuestas de conformes con exequemas de presión nas *Instruções de Uso dos* respiradores de suprimento de ar, línea de air dupla.

Montagem das Traquéias Duplas de Linha de Ar 3M™ em Combinação com Cartuchos e/ou Filtros

As versões SA-1600 (montagem frontal) e SA-2600 (montagem traseira) das Traquéias Duplas de Linha de Ar 3M™ permitem o uso de Cartuchos Série 6000 e Filtros Série 2000 e 5000 com Máscaras Faciais 3M™. Para instalar os cartuchos e filtros aprovados, consulte a etiqueta de aprovação NIOSH inclusa com os kits de Traquéias Duplas de Linha de Ar 3M™.

1. Conecte as traquéias SA-1600 ou SA-2600 na peça facial de acordo com os procedimentos descritos anteriormente. O procedimento é idêntico aos modelos SA-1500 e SA-2500.
2. Faça uma seleção dos cartuchos e/ou filtros que satisfazem os seus requisitos de proteção respiratória, e prenda nas baionetas externas das traquéias SA-1600 ou SA-2600.
3. Veja a pergunta 6 acordo com os procedimentos descritos na seção de *Colocação do Respirador* nas instruções.
4. Depois que o ajuste tenha sido adequadamente testado, execute um ensaio de vedação com pressão positiva e negativa cada vez que o respirador for usado, de acordo com os procedimentos descritos na seção *Verificação de Vedação* nas instruções.

Se você não conseguir um ajuste adequado, NÃO entre na área contaminada. Consulte o seu supervisor.

Para montar as Traquéias Duplas de Linha de Ar 3M™ em Combinação com Cartuchos/Filtros 3M™, os válvulas de inalação da peça facial devem ser removidas.

1. Remova os cartuchos e/ou filtros do modo no modo de purificação ar de (sem usar as traquéias SA-1600 ou SA-2600), as válvulas de inalação devem ser reocolocadas na peça facial antes do uso.

Uso das Traquéias Duplas de Linha de Ar 3M™ sem Cartuchos ou Filtros

Para usar as Traquéias 3M™ SA-1600 ou SA-2600 sem cartuchos/filtros, prenda uma Tampa de Baionetas 6880 3M™ em cada suprimento de externo de baioneta sobre a traquéia. Quando usado com um respirador de fluxo contínuo 3M™ Série 500, o Filtro Antiruído de Protação 1000 vezes as distrizes PEL, OEL ou TLV para respiradores de pieza facial completa.

INSTRUÇÕES DE AJUSTE

⚠ ADVERTÊNCIA

Falha em seguir estas instruções pode reduzir o desempenho do respirador, expondo-o a contaminantes acima do OEL, e **pode resultar em doenças ou morte.**

- Para ajustar a manter uma boa vedação entre o rosto e a vedação facial, esta deve estar livre de adrugas ou marcas de sujeira. Remova barba ou cabelos que possam interferir com a vedação. Não coloque o direito entre o rosto e a vedação facial do respirador. Não use com óculos de lentes corretivas. Se necessita utilizar lentes corretivas, deve usar um Kit de Óculos 3M™ dentro do respirador.

Estas instruções DEVEM ser seguidas a cada vez em que o respirador for usado.

Colocação do Respirador

NOTA: Dois testers devem ser colocados eficiente são colocar incidentemente o nariz no copa nasal para centralizar o respirador no rosto. Se o respirador não estiver usado corretamente, pode ocasionar fuga e/ou sobreexposição a respirador e a seguir repita as etapas 4, 5, 6 uma segunda vez para fixar a vedação da peça facial. Deve ser tomada cuidado para não deixar que a vedação da boina se mantenha torta.

1. Atrouxe totalmente os seis tirantes da cabeça.
2. Segure a frente da peça facial com uma mão e os tirantes/suporte de conforto longe da peça facial com a outra mão, criando uma abertura para a cabeça. Puxe o conjunto do respirador para baixo sobre a cabeça e faça através da abertura. Coloque o tirante na parte de trás da cabeça, logo abaixo das orelhas e coloque o suporte de conforto e a seguir aperte a peça facial de modo firme e uniforme contra o rosto (Fig. 13).
3. Puxe o suporte de cabeça para a parte de trás da cabeça (Fig. 13).

NOTA: Repita a sequência das etapas 4 a 6 duas vezes, uma vez para acomodar os tirantes e eliminar a folga, e uma segunda vez para prender e seja a peça facial do respirador no rosto.

4. Aperte os tirantes do fundo um por vez. Tenha cuidado para manter ambos os lados de modo igual (Fig. 14).
5. Aperte os tirantes da metade um por vez. Tenha cuidado para manter ambos os lados de modo igual.
6. Aperte os tirantes de cima um por vez. Tenha cuidado para apertar ambos os lados de modo igual.
7. Verifique novamente todos os tirantes para assegurar que estão apertados uniformemente distribuídos de modo que o suporte da cabeça esteja centralizado sobre a parte de trás da cabeça. Assegure-se de que os tirantes e abas permanecem planas contra sua cabeça.

Se possível, peça a um colega para verificar se você colocou seu respirador adequadamente. Execute um teste de vedação como descrito abaixo.

IMPORTANTE: O conjunto do respirador 3M™ 502, uma vez instalado em um Cartucho 3M™ Série 6000, não deverá ser removido ou reutilizado. A remoção ou reutilização pode resultar em vazamento, superexposição, doença ou morte.

Montagem do Adaptador de Filtro 3M™ 603 e Acessório de Filtro (para Filtros 3M™ 5N11 e 5P71)

1. Alinhe a ranhura na borda do adaptador 603 com a marca da peça facial como mostrado (Fig. 7).
2. Gire o adaptador um quarto de volta no sentido horário até parar. Para remover o adaptador, gire um quarto de volta no sentido anti-horário (Fig. 8).
3. Coloque o filtro no retentor 501 com a impressão do filtro voltada para o adaptador 603. Pressione o retentor sobre o adaptador e assegure que o adaptador do filtro está livre de vícios ou folgas (Fig. 9).

No Brasil, o Filtro 5935BR pode ser usado com o Adaptador de Filtro 603 e o Retentor de Filtro 501 na Peça Facial Inteira 3M™, Série FF-400.

Montagem do Respirador de Linha de Ar Dupla 3M™

O usuário deve seguir as Instruções de Uso do Respirador de Ar Duplo de Linha de Ar Dupla, fornecidas junto com os Respiradores de Ar Suprido de Linha de Ar Duplada 3M™.

Montagem das Traquéias Duplas de Linha de Ar

1. Segure a peça facial de modo que o logo 3M fique voltado para você. Alinhe os dois ramos da traquéia sobre os dois suportes de baioneta na peça facial (Fig. 10). Para Traquéias 3M™ SA-1500 ou SA-1600, certifique-se de que o logotipo 3M na traquéia e na peça facial estejam ambos voltados para você. Para Traquéias 3M™ SA-2500 ou SA-2600, certifique-se de que o logotipo 3M na traquéia está virado na direção oposta ao logotipo 3M na peça facial.
2. Torça cada ramo da traquéia um quarto de volta no sentido horário até que fique firmemente assentado na baioneta e não possa ser girado (Fig. 11 e 12). Não force para que a baioneta não encaixe. Para remover a moldá-la: SA-1500/SA-2500.
3. Prenda a linha de ar aos reguladores de ar apropriados conforme os exequemas de presão nas *Instruções de Uso dos* respiradores de suprimento de ar, linha de ar dupla.

Montagem das Traquéias Duplas de Linha de Ar 3M™ em Combinação com Cartuchos e/ou Filtros

As versões SA-1600 (montagem frontal) e SA-2600 (montagem traseira) das Traquéias Duplas de Linha de Ar 3M™ permitem o uso de Cartuchos Série 6000 e Filtros Série 2000 e 5000 com Máscaras Faciais 3M™. Para instalar os cartuchos e filtros aprovados, consulte a etiqueta de aprovação NIOSH inclusa com os kits de Traquéias Duplas de Linha de Ar 3M™.

1. Conecte as traquéias SA-1600 ou SA-2600 na peça facial de acordo com os procedimentos descritos anteriormente. O procedimento é idêntico aos modelos SA-1500 e SA-2500.
2. Faça uma seleção dos cartuchos e/ou filtros que satisfazem os seus requisitos de proteção respiratória, e prenda nas baionetas externas das traquéias SA-1600 ou SA-2600.
3. Veja a pergunta 6 acordo com os procedimentos descritos na seção de *Colocação do Respirador* nas instruções.
4. Depois que o ajuste tenha sido adequadamente testado, execute um ensaio de vedação com pressão positiva e negativa cada vez que o respirador for usado, de acordo com os procedimentos descritos na seção *Verificação de Vedação* nas instruções.

Se você não conseguir um ajuste adequado, NÃO entre na área contaminada. Consulte o seu supervisor.

Para montar as Traquéias Duplas de Linha de Ar 3M™ em Combinação com Cartuchos/Filtros 3M™, as válvulas de inalação da peça facial devem ser removidas.

1. Remova os cartuchos e/ou filtros do modo no modo de purificação ar de (sem usar as traquéias SA-1600 ou SA-2600), as válvulas de inalação devem ser reocolocadas na peça facial antes do uso.

Uso das Traquéias Duplas de Linha de Ar 3M™ sem Cartuchos ou Filtros

Para usar as Traquéias 3M™ SA-1600 ou SA-2600 sem cartuchos/filtros, prenda uma Tampa de Baionetas 6880 3M™ em cada suprimento de externo de baioneta sobre a traquéia. Quando usado com um respirador de fluxo contínuo 3M™ Série 500, o Filtro Antiruído de Proteção 1000 vezes as distrizes PEL, OEL ou TLV para respiradores de peça