Nuclear Power Generation Industry Portfolio

About Us

- A global manufacturer of specialized communication equipment, since 50+ years

- Setting the benchmark – The only company that manufactures a safety rope with a built-in communication wiring, which is now an industry standard.

- A world-renowned and crucial supplier for Air & communication systems in Nuclear Power Plants

- Certified and approved by all major certification agencies around the world

Industries served

- Petrochemical

- Mining

- Military

- Emergency Services

- Power Generation – Nuclear, Oil, Coal, Hydro and Gas

- Aviation, Railways & Marine

- Construction

- Manufacturing

- Shipping & Transportation

Nuclear Industry

Communication Systems

1. Pro Commander™ III – Industrial Communication System
2. Pro Commander™ IV – Maintenance Communication System
3. Pro Commander™ IV Mini
4. AIRS™ – A VoIP based wireless communication system
5. Rescom® Elite™ – Intrinsically Safe, Designed for confined space communications
6. HALO® – Intrinsically Safe VOX and PTT for radios

Station Fittings

1. Multi-Station Combined Air & Communication Header
2. Combined Air/Communication Header™ Connector
3. Air Header Installation Wiring Assembly

Air Distribution Products

1. Cooling Air Harness
2. Ram's Horn Air Supply

Suit Connection Assemblies

1. Header Lock
2. 2ft Whips
3. Breathing Air Supply Hose
4. Combined Air/Communication Hose™

Suit Components

1. Air/Communication Assembly (ACA)
2. Air Only Distribution Assembly (ADA)
3. Air Distribution Interface (ADI/Bobbin)
4. Glove Rings

Other Products

1. Headsets
2. Handsets and Cradles
3. SAU's, Extension Ringer & Annunciators
4. Acoustic Booth
5. Environmental Sensor Case
6. Human Performance trainers
7. Place Keeper Flagging Devices
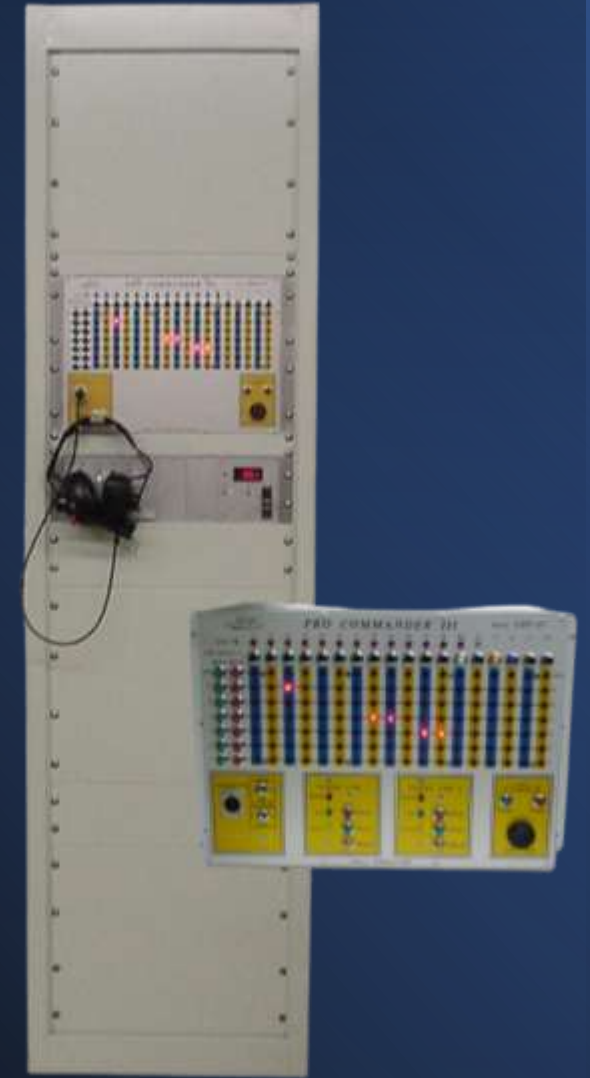8. Quick Disconnect ACA

Communication Systems

Pro Commander™ III – Industrial Communication System

- Crucial in nuclear vault applications, where a plastic suit is necessary for work

- An SED headset can be plugged into a Combined Air/Communication Hose™ which can be connected to the wall-mounted Breathing Air Station

- Can be tied to PA and telephone systems to ensure workers don't miss critical announcements or evacuation alarms

- Allows conferencing of up to 192/196 headsets

- Communications may be controlled via the main cabinet or remote Call Director consoles

Pro Commander™ IV – Maintenance Communication System

- Primarily used in general industrial maintenance applications

- Rack mounted switching panel to conference three groups of up to eight users

- Provides continuous voice communication for up to 3 x 20 = 60 people

- Wired, two-way communication system

- Receptacles are wall, floor or ceiling mounted

- Standard headsets used in the system offer hearing protection and clear communication

- System may be expanded, if required

- Accessories for portable use let the user expand the application of the headsets to include smaller, private groups away from the main system

Rescom® Elite™ – Intrinsically Safe Rescue Communication System

- Full duplex, Instantly-deployable, Intrinsically Safe, hardline system

- Connects up to 10 Users and 4.8km (3 miles) range per User

- Recognized & certified by major industry Certification Agencies

- Audible signal for low Battery Indicator

- Personal Volume Control for the entire team

- Immune to Radio Frequency (RF) Interference

- Variety of Headsets available to suit various communication needs

- NFPA approved Combined Safety/Communication Rope™ with 10,000lb tensile strength

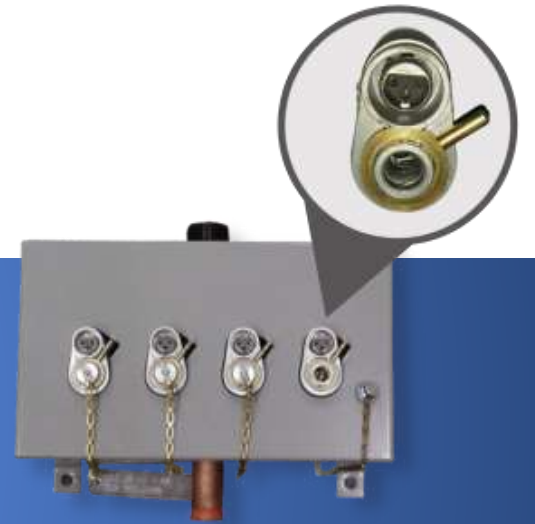- DuraCORE™ Cable with SEDFLEX™ Jacket (Optional)

AIRS™ – Advanced Industrial Radio System

- Unified Communications Hub to integrate all communication systems

- Compact, wireless, portable, instantly-deployable and expandable

- VoIP-based wireless communication system

- Can connect up to 100 Users, Full Duplex Communication

- Encrypted secure communication

- Range of 180m (600ft+) line of sight

- Individual, group or area communications (multiple talk groups)

- Intra-building & dispersed-site communications capability

- 8+ hours of continuous use with Battery-powered Base Kits

- Monitoring software provides centralized control and overview of network connectivity (Optional)

Station Fittings

Multi-Station Combined Air & Communication Header

- Provide Air and Communication connection suitable for Combined Air/Communication Hoses™

- Each Multi-station Header has four Air/Communication™ Connectors (standard)

- Communications receptacle: Canon XLR 3

- Air receptacle: Hansen 2RL

- Rated for 125psi (TSSA registered: CSA B51)

- Copper and brass header manifolds are standard

Combined Air & Communication Header™ Connector

- Provides a parallel supply for Breathing air as well as Communication

  Headsets

- Designed to be used with Air Headers and SED Air/Communication™

  Hose with, or without an electrical wiring tail

- Communications receptacle: Canon® XLR 3

- Air receptacle: Hansen® 2RL

Air Header Installation Wiring Assembly

- Designed for connecting wall-mounted Breathing Air Stations (BAS) to a permanent plant wiring

- Terminated with a hermetically sealed connector for connection to the air and communication header box with wires enclosed in a stainless-steel flexible conduit, (approx. 2m)

- The wall-mounted octagonal wiring box has a labelled barrier block connection strip for ease of installation to station wiring

- Suitable for use in Nuclear Reactor Vaults

- Flexible stainless-steel tube provides durability
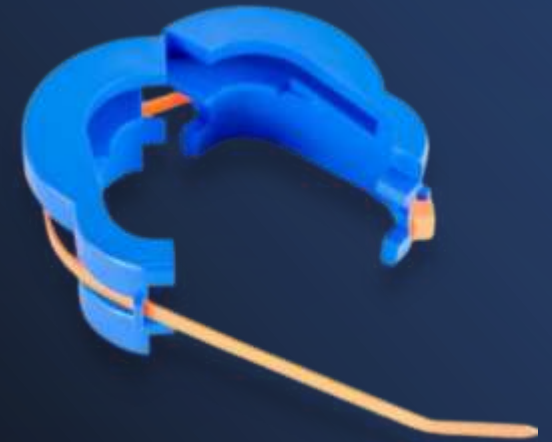
Suit Connection Assemblies

2ft Whips

- Designed to be left connected to the header in order to present an easier connection to hoses of suits

- Extend the life of SED Hoses

- Allow connection to plastic suits with a greater ease

Header Lock

- Designed to lock SED's hoses to the Header

- Provided with High-Viz cable tie

- Prevent unwanted removal of the whip, and helps reduce wear and tear on the header connector

SED®

Breathing Air Supply Hose

- Breathing Air Supply Hoses are used to connect plastic suits to Breathing Air Stations

- Product is supplied with Hansen® 2RL Male Connectors

- A super-tough SEDFLEX™ G-14 Jacket ensures product longevity

- Core tube is made from FDA approved food-grade material

- Used in Nuclear Power Generation

- Can be decontaminated by soap and water

- Rated to 125psi (TSSA registered: CSA B51)

Combined Air/Communication™ Hose

- Supplies breathing and cooling air as well as a connection for communication headsets – All in One!

- Product is supplied with Hansen® 2RL Air Connectors and a Canon® XLR 3 communications connector

- A super-tough SEDFLEX™ G-14 Jacket ensures product longevity

- Core tube is made from FDA approved food-grade material

- Used in Nuclear Power Generation and Pharmaceutical Industry

- Can be decontaminated by soap and water

- Rated to 125psi (TSSA Registered: CSA B51)

Suit Components

Air Distribution Assembly (ADA)

- Air-Only connection for launderable plastic suits

- ADA interface connect Air Only Hose to the ADI (Bobbin)

- Swivel termination at suit fitting allows ADA to align itself to the direction of the hose

- Easy-grip design makes disconnection easier

- Rubberized moldings make it rugged & easy to decontaminate

SED®

Air/Communication Assembly (ACA)

- Provides connectivity for air supply and communication headsets to a Combined Air/Communication™ Hose at the plastic suit

- ACA interface connect Combined Air/Communication™ Hose to the ADI (Bobbin)

- Swivel termination at suit fitting allows ACA to align itself to the direction of the hose

- Easy-grip design makes disconnection easier

- Rubberized moldings make it rugged & easy to decontaminate

SED

Air Distribution Interface (Bobbin)

- Bobbins provide termination point for the ACA or ADA at the suit

- Can be snapped into the plastic suit's outer and inner waistband walls, to provide air supply into the plastic suit air channels for breathing and cooling

- Equipped with: 3/8" NPSF Air Inlet and 3/8" Barbed Male Air outlet

Glove Rings

- A replaceable component that terminates the arms of a plastic suit

- Gloves are fitted in an air-tight fashion to the suit, typical of those used

  in CANDU nuclear power generating stations

- Gloves may be replaced without the use of special tools and are

  generally attached prior to entry into the work area by the User or a

  Dresser

- Strong sealing prevents entry of contaminants into the suit

- Available in two sizes: Small (3.9") and Large (4.9")

Air distribution Products
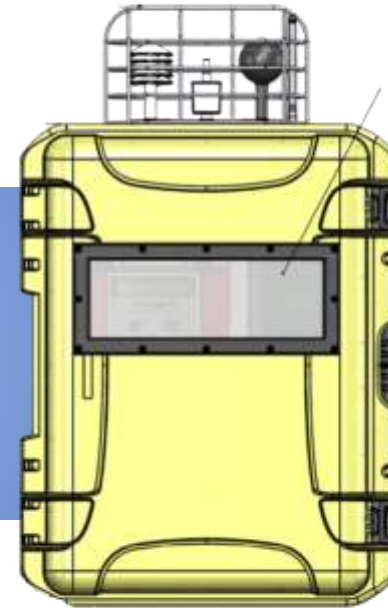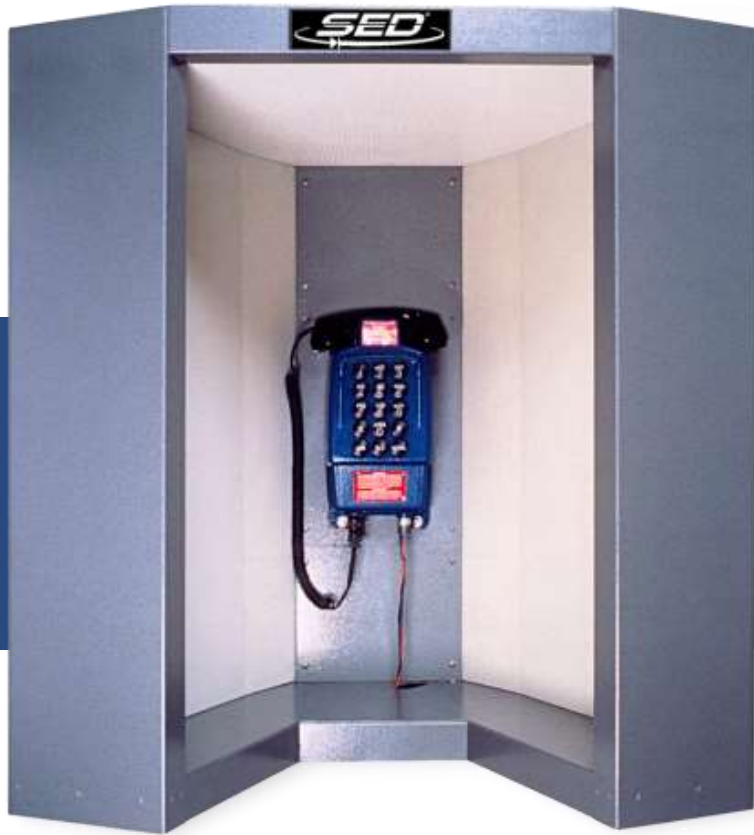
Cooling Air Harness (CAH-02)

- Supplies cool breathing air as well as connection for communication headsets (Optional)

- Made of high-performance materials i.e., PVC on nylon scrim

- Suitable for use in Nuclear Reactor Vaults

- Elasticized straps secure harness to the person

- Integrated hose and cable connection with a valve, allows the worker to adjust level of additional cooling

- Customized for use with Reusable Suits i.e., Mark III & Mark IV suit

- Sealed connectors simplify decontamination

- No modifications are required to the existing suit

- IH Valve connects the Auxiliary Cooling Harness to the existing cooling, air and communications suit

Ram's Horn Air Supply

- Used with nuclear hoods and disposable suits to supply breathing air to personnel in nuclear environments or coal

- Equipped with neck straps and a belt, which supports the connecting air hose

- Due to its unique design, cool breathing air is distributed to the head area for easy breathing while also keeping the User cool

- The maximum sound level within hood is <75dBa

- Made of durable materials

- Suitable for use in Nuclear Reactor Vaults

- Intuitive and easy to use design

- Lightweight design

- Elasticized straps secure the harness to the person

- Neoprene enforced belt

SED®

Other Products

Handsets & Cradles

- Colours: black, white, red

- First in industry, high performance PTT bar switch

- Operating lifetime of the switch 500,000 cycles @ 1Amp, 125VAC

- SED cord anchoring system prevents twisting & pullout of connection cord

- Dynamic amplified microphone with moisture resistance

- Includes pre-connectorized, fork terminals, or blunt cut

- Neoprene or vinyl cord sets are available

- Durable ABS cradle for product longevity

- Positive handset retaining clip: chromed spring-steel (optional)

- Cradle has a toggle switch to mute external speaker (optional)

- Available in a variety of formats including plug and play or provided with

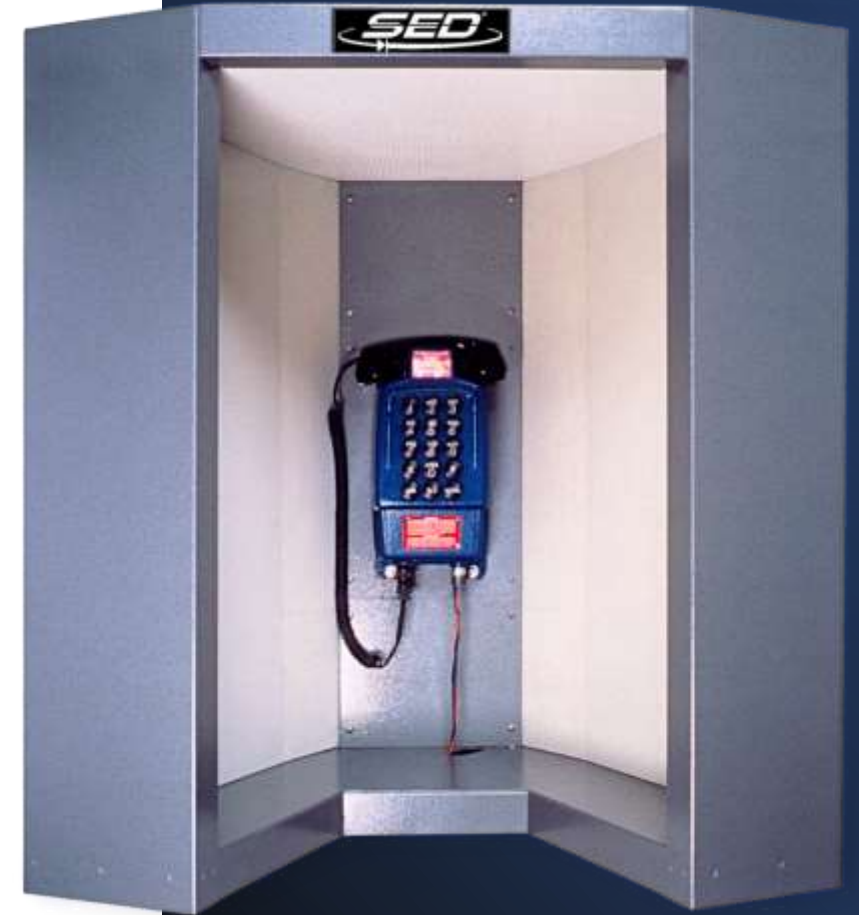 terminal strip for customer installation

Signal Annunciator Units (SAU)

- Additional visual warnings augment the audible alarm

- Can automatically detect the alarm tone, differentiating it from voice and turns on the corresponding light

- Industrial LED strobe light flashes continuously bridging the ring tone cadence

- NEMA rated Enclosure

- *The strobes in SAU-01 may be activated with either a remote switch control or a combination of remote switches and local PA audio presence to provide zone-specific light control*

- *SAU-02 is a high-powered ringer with high-intensity strobe lights to make personnel aware of an incoming call even if they are not directly looking at the Telephone Extension Ringer.*

- *SAU-03 can provide a generic annunciation function for a variety of status indicating equipment such as radiation (tritium) measurement systems, water and fluid levels etc. in noisy industrial environments, providing audio and visual alarm functions*

Acoustic Booth

- Greatly enhances communication in areas with high background noise levels, while providing ultimate privacy

- Acoustic foam & noise-dampening material to greatly reduce the background noise from outside the booth

- A variety of styles are available to best address your working environment

- Durable aluminum or steel construction

- Customizable for lighting, wiring boxes etc

- Can be used indoors or outdoors

- Can be fitted with lights & acrylic doors for additional noise reduction

Environmental Sensor Case

- Designed to protect and organize equipment in harsh environments

- Easy to deploy and monitor internal displays

- Rugged and durable case

- Customizable window size & position for easy viewing of displays for everyday use

- Multiple mounting options: magnetic, stanchion, handrail

- Exceptional value for extending lifespan of contained equipment

- Easy to open double latch mechanism to allow equipment adjustments

- Water-resistant and dustproof design enables use in wet and dirty environments

- Includes a CSA and UL certified electrical interface - SED Inc.'s Power Distribution Box (PDB-C)

Human Performance Trainer (HuPerT-1000)

- Full-size Human Performance Trainer

- Push buttons and control switches, similar to those in Nuclear Power Plants and Process Controls

- 7 User selected programs based on the degree of difficulty

- Flexible instructor induced and corrected Faults

- 28 LED Indicator Lamps

- Digital readout and speaker for audible notifications

- Magnetic Place Keepers minimize chance of error

- Power Supply – 110-230V AC, 1.2/0.7 amp, 60/50hz

- Stationary or optional wheels for ease of movement

- Dimensions: 63" H, 23" W, 24" D

- 1 Year Limited Warranty
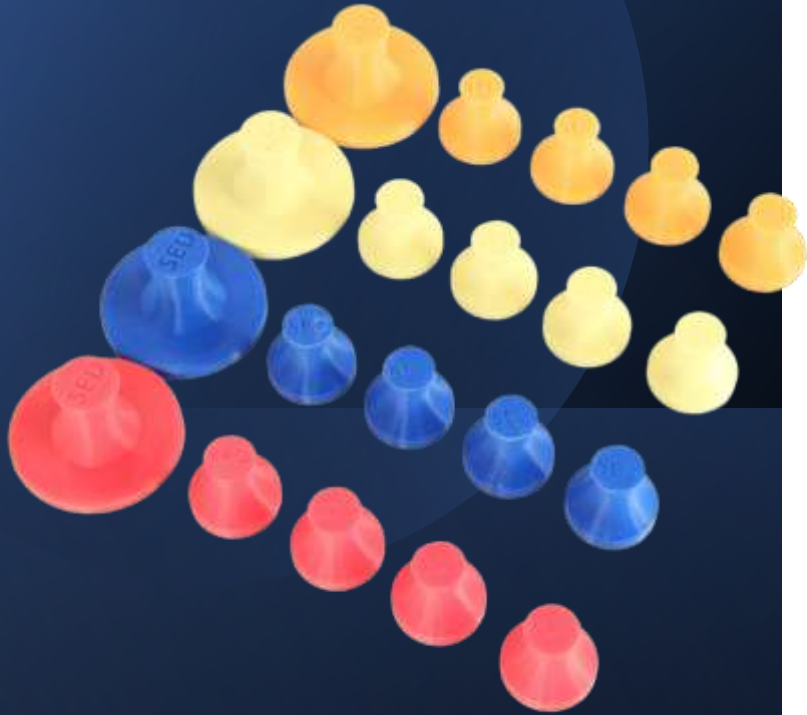
Human Performance Trainer *(HuPerT-2000)*

- Portable Human Performance Trainer with all features of the Full-size Trainer

- Push buttons and control switches, similar to those in Nuclear Power Plants

- 7 User selected programs based on the degree of difficulty

- Flexible instructor induced and corrected Faults

- 28 LED Indicator Lamps

- Digital readout

- Speaker for audible notifications

- Magnetic Place Keepers minimize chance of error

- Power Supply 110-230V AC, 1.2/0.7 amp, 60/50hz

- Durable travel case with extendable handle and wheels

HuPerT Dynamic Learning Activity
(DLA)

- Designed to enhance the scope of human performance training and evaluation programs

- Can be plugged into both HuPerT® models – HuPerT® 1000 and 2000

- Allows Trainers to increase the number of workers being evaluated

- Allows training in locations out of visual contact, reinforcing the importance of good 3-way Communication practices

- Incorporates radio communication training.

- Equipped with 6 LED Indicator Lamps and Control valves

- Magnetic Place Keepers minimize chance of error

- Utilizes pump, valves, level and power indicators

- Durable travel case with extendable handle and wheels

- Dimensions: 12" H, 12" W, 21" D

Place-Keeper Flagging Devices

- Never misplace, forget or get distracted midstream from making a control panel program change or adjustment ever again!

- Just set the magnetic place-keeper beside the control that needs adjustment, and when you are ready to perform the action, you will know exactly which control you had previously selected as it will be highlighted by a Place-Keeper.

- Ideally suited for any application requiring adjustment of process controls using the 2-or 3-way communication method utilizing place keeping and flagging.

- Easy grip magnetic Place-Keeper are also used to flag important panel locations when used in conjunction with our

- Easy-Grip Plastic

- Magnetic, rubberized contact area to protect equipment panel finish

- Available in four (4) bright colors

- Two (2) in-stock sizes available, custom sizes available upon request

SED®

Quick Disconnect ACA for Disposable Suits

- Provides a convenient connection point for the Combined Air/Communication™ Hose to the Ventilated Browns and for Personal Protective Equipment (PPE), i.e., disposable suits.

- The assembly splits the communication connection away from the Combined Air/Communication™ Hose to all the connection of a headset to the station communication system.

- Made of high-quality materials

- Suitable for use in Nuclear Reactor Vaults

- Rubberized moldings make it rugged & easy to clean

- Provides connectivity for communication headsets to an Air/Communication™ Hose at the plastic suit

- Durable construction and secure interconnection

- Intuitive and easy to use design

Thank you