



FutureFLEX[®]
AIR-BLOWN FIBER[®] SOLUTIONS

BE300 - Blowing Head Kit Instructions

- ❖ **Kit Contents**
- ❖ **Consumable Items**
- ❖ **Technical Support**
- ❖ **Performance Guidelines**

RETURN INSTRUCTIONS

Please Return the Blowing Head Equipment Kit and All associated Non-Consumable items at the time of Rental or when the Lease is about to Expire to the following address:

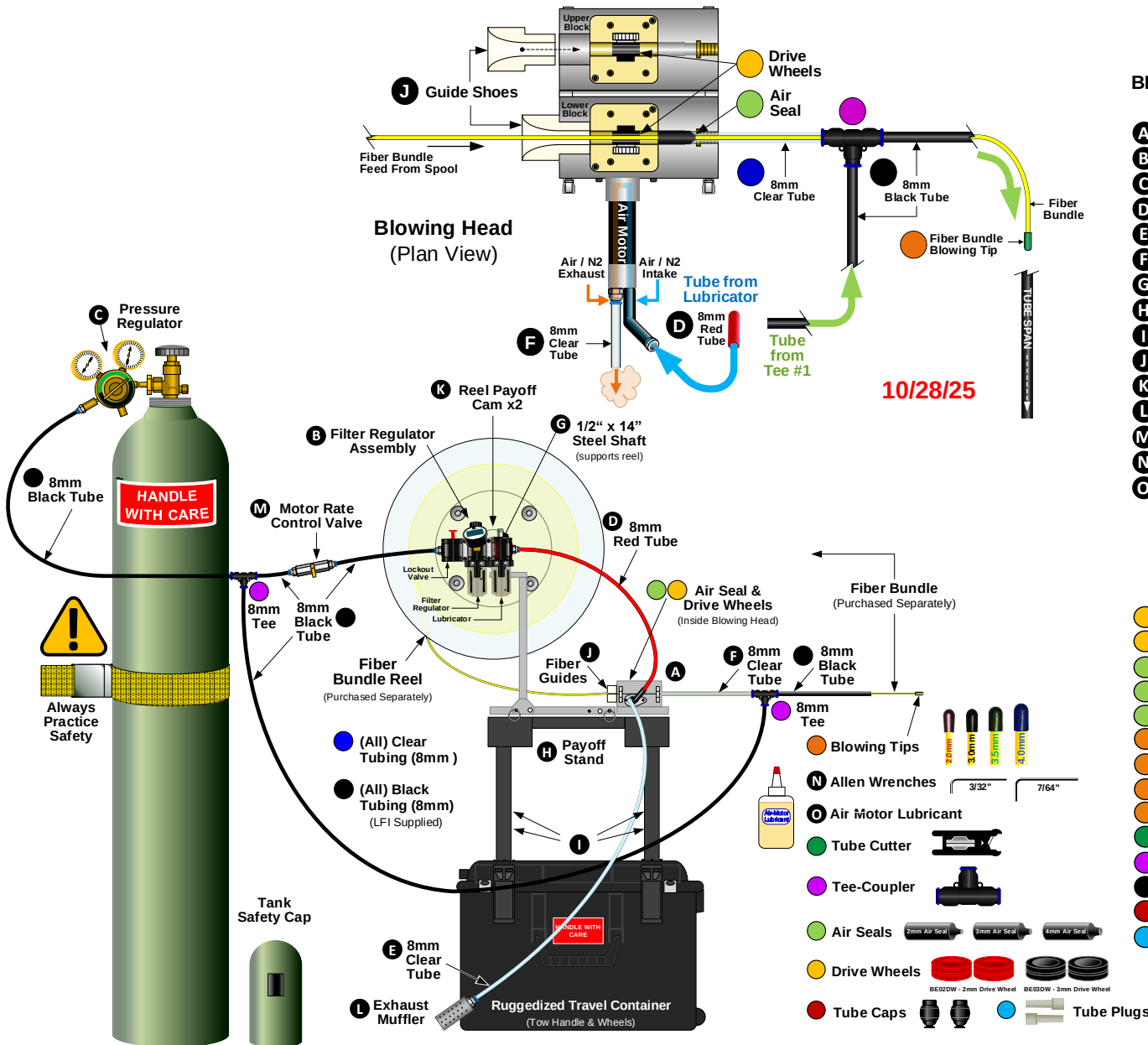
Sumitomo Electric Lightwave
201 S Rogers Lane Suite #201
Raleigh, N.C. 27610
Attn: ABF Inventory Control

FOR ADDITIONAL INFORMATION

- | | |
|-----------------------------|------------------------------|
| ✓ All Questions | ✓ Report Shipping Damages |
| ✓ Technical Support | ✓ Report Operational Damages |
| ✓ To Extend an Active Lease | ✓ Report Missing Parts |

Please Contact SEL Customer Service at **1-800-358-7378**

BE300 – (Blowing Head Kit Contents & Consumable Items)



BE300 KIT TRAVEL CASE SUPPLIED (MAIN COMPONENTS)

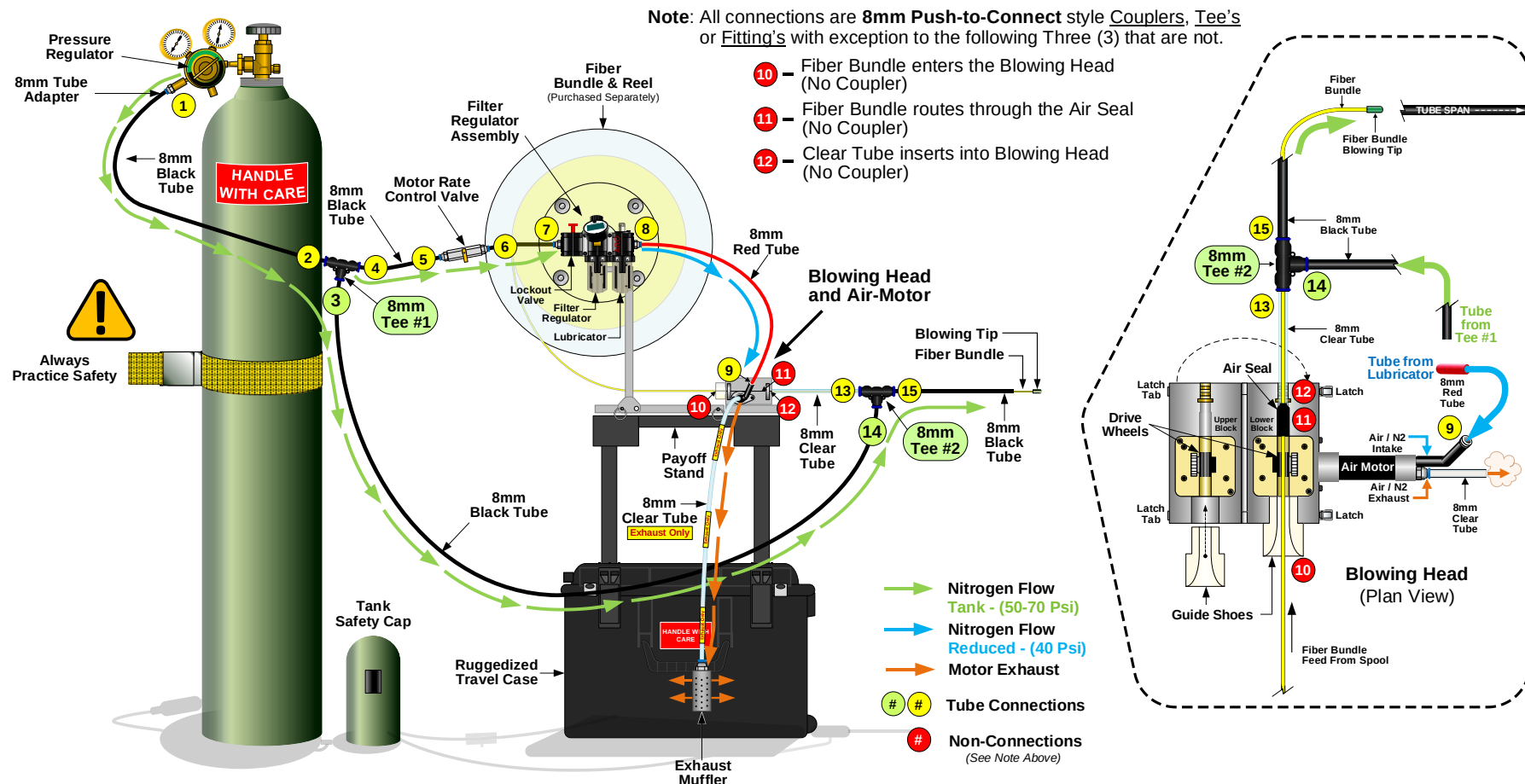
- A**-(1) Blowing Head - Air Motor
- B**-(1) Filter Regulator Assembly
- C**-(1) Pressure Regulator Assembly
- D**-(1) 2ft. 8mm Red Tube
- E**-(1) 3ft. 8mm Clear Tube
- F**-(1) 1ft. 8mm Clear Tube
- G**-(1) 1/2" x 14" Steel Shaft
- H**-(1) Payoff Stand
- I**-(4) Screw in Pegs
- J**-(2) Fiber Bundle Guides
- K**-(2) Reel Payoff Cams
- L**-(1) Exhaust Muffler
- M**-(1) Motor Rate Control Valve
- N**-(2) Allen Wrenches
- O**-(1) Container Air Motor Oil

BE300 KIT TRAVEL CASE SUPPLIED (CONSUMABLE ITEMS)

- A**-(2) Red 2mm Drive Wheels-----P/N: BE02DW
- B**-(2) Black 3mm Drive Wheels----P/N: BE03DW
- C**-(1) Black 2mm Air Seal-----P/N: BE02SL
- D**-(1) Black 3mm Air Seal-----P/N: BE03SL
- E**-(1) Black 4mm Air Seal-----P/N: BE04SL
- F**-(1) Red 2mm Blowing Tip-----P/N: BE2MFT
- G**-(1) Black 3mm Blowing Tip-----P/N: BE3MFT
- H**-(1) Green 3.5mm Blowing Tip---P/N: BE35MFT
- I**-(1) Blue 4mm Blowing Tip-----P/N: BE4MFT
- J**-(1) Tube Cutter-----P/N: BETC001
- K**-(2) (8mm) Tee Couplings-----P/N: DE08MT
- L**-(1) Piece 8mm Black Tube-----P/N: TC01TBX
- M**-(4) Tube End Caps (8mm OD)--P/N: DE08MA
- N**-(4) Tube Plugs (8mm Tubes)---P/N: DE06MP

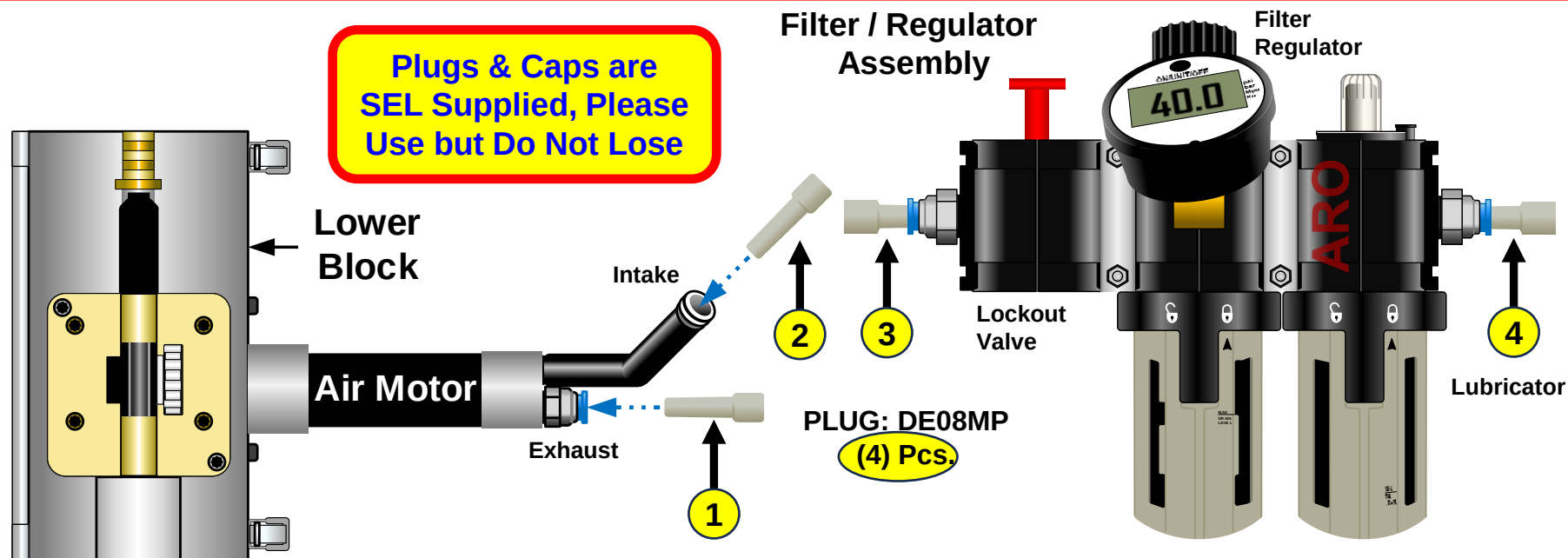
BE300 – (Blowing Head Setup & Tube Connections)

There are 15 points where the Tube Cables are connected to fully establish operational connectivity. The associated numbering applied in this diagram does not indicate the order in which they must be installed and are only to help identify each of the connections. Typically the tube section between **Tee #1** Connection # (3) and **Tee #2** Connection # (14) is connected first and it is up to the installers discretion as to what order the remaining connections occur.

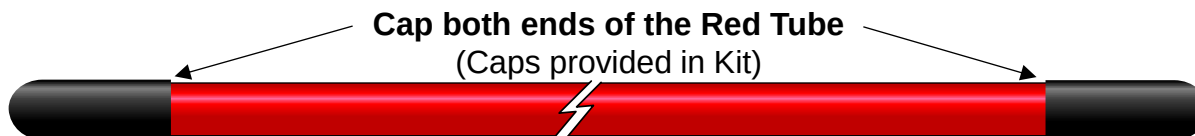


IMPORTANT EQUIPMENT STORAGE PROCEDURES

- ✓ To ensure the Air Motor remains free of contaminants when the equipment is stored inside the Blowing Head Case, install the “Provided” Plugs in both Push-to-Connect Air Motor Fittings, and, in both of the Filter / Regulator Assembly (Lockout Valve and Lubricator) Push-to-Connect Fittings.
- ✓ When setting up the Blowing Head, remove and store the Plugs & Caps in the Plastic Bag provided in the Tool Box. **Note:** *(Extra Plugs are provided in the Plastic Bag in case of loss)*



NOTE: Throughout all stages of Assembly and Disassembly please be sure to Plug the Regulator and Motor and Cap the Red Tube to prevent foreign materials from entering and potentially degrading blowing performance.



Nitrogen or “Dry Grade” Air Consumption Estimates - (Conservative)

Nitrogen or “Dry Grade” Compressed Air: One (1) 300 Cubic Foot Volume Tank typically installs about 3,000 - to - 4,000 feet of Fiber Bundle and lasts about 35 - 45 minutes; *Use our Dual Tank Isolation Valve Kit (SEL P/N BEISOV1) to increase available volume.*

2mm Drive Wheels - One (1) pair of BE02DW Red Fiber Bundle Drive Wheels typically installs about 10,000 feet of 2mm OD Fiber Bundle.

3mm Drive Wheels - One (1) pair of BE03DW Black Fiber Bundle Drive Wheels typically installs about 5,000 feet of 3mm OD Fiber Bundle and less for larger ODs.

The importance of using New Drive Wheels cannot be over emphasized !!!

Typical Pressure Regulator Settings - (Operational Parameters)

Air Motor Pressure - Pressures between 40-50 psi are the most efficient for good Air Motor operation; do not exceed 80 psi. **Note**: The Filter Regulator is pre-set from the factory @ 40 Psi to the Motor.

Air Flow Pressure - Typically, start Blowing Operations with the Pressure Regulator set at:

- Between 60 - 70 psi for tube span runs greater than 500 feet ... start easy and increase later.
- Between 50 - 60 psi for tube span runs less than 500 feet ... to save gas.

Note: During any blowing operation, always make Air Flow Pressure adjustments slowly, only as required and in small 10 psi increments ... to prevent causing “back-pressure” situations.

WARNING: NEVER Exceed 200 psi “Safe Working Pressure Rating” of Tubes and Couplers.

CONSERVATIVE BLOWING DISTANCES

Using One (1) Blowing Head

6 and 12 FIBER BUNDLES (2mm OD)		APPROX. BLOWING DISTANCE
All OSP tube cables All MTIO tube		1500 meters or 5000 feet
TRC (Riser) tube cables		1000 meters or 3300 feet
TGX (General Purpose) single tube and TP2 (Plenum) tube cables		600 meters or 1950 feet

24-FIBER BUNDLES (3mm OD)		APPROX. BLOWING DISTANCE
All OSP tube cables and MTIO tube cables		1200 meters or 4000 feet
TRC (Riser) tube cables		1000 meters or 3300 feet
TGX (General Purpose) single tube and TP2 (Plenum) tube cables		300 meters or 1000 feet

CONSERVATIVE BLOWING DISTANCES

Using One (1) Blowing Head

48-FIBER BUNDLES (3.1 & 3.7mm OD)		APPROX. BLOWING DISTANCE
All OSP tube cables & MTIO tube cables 		975 meters or 3200 feet
TRC (Riser) tube cables 		800 meters or 2000 feet
TGX (General Purpose) single tube and TP2 (Plenum) tube cables 		223 meters or 750 feet
72-FIBER BUNDLES (3.7 & 4.1mm OD)		APPROX. BLOWING DISTANCE
OSP tube cables (without lubricant) 		450 meters or 1500 feet
OSP tube cables (with lubricant) 		1220 meters or 3500 feet
TRC (Riser) tube cables 		610 meters or 2000 feet
TGX (General Purpose) single tube and TP2 (Plenum) tube cables 		228 meters or 750 feet

BE300 - BLOWING HEAD PREVENTIVE MAINTENANCE REQUIREMENTS

Periodic Cleaning is required to maintain good Blowing Head performance.

General Cleaning:

- ✓ Wipe down entire Blowing Head with a dry, clean soft cloth.

Routine Cleaning:

- ✓ Wipe down entire Blowing Head with damp, clean, soft cloth and denatured alcohol to remove build-ups of dust, dirt, & debris.
- ✓ Remove Upper and Lower Brass Plates and clean inside drive mechanism areas (Gears, Brass Hubs, Bearing Hangers, and Fiber Bundle Drive Wheels) with damp, clean, soft cloth and denatured alcohol; **Note**: denatured alcohol will not harm rubber Drive Wheels.

Lubricator Maintenance:

- ✓ The Lubricator should be wiped down each time “before and after” refilling the reservoir. When blowing operations are completed, the Reservoir should be removed and washed with soap and warm water, thoroughly dried, reassembled and returned to the Travel Case. The Lubricator should be thoroughly wiped down every time the Reservoir is removed. (Always empty the Lubricator reservoir before shipping)

Air Motor Maintenance:

- ✓ The Supplied Air Motor is designed to operate under constant lubrication and requires the operator to add oil to the Lubricator reservoir to maintain normal operation. SEL recommends that when the motor is not in use, a plug is inserted to the air intake fitting and air exhaust fitting to prevent dust and debris from entering into the motor.

PRESSURE AND OBSTRUCTION TESTING

MANDATORY TESTING

- Pressure and Obstruction Test All Tubes after the Tube Cable Installation is complete
 - ✓ All tube cables are installed and secured
 - ✓ All TDU and FTU tube interconnections are complete

STRONGLY RECOMMENDED TESTING

- Pressure and Obstruction Test Individual Tubes just before installing a Fiber Bundle
 - ✓ Always Test All Installed Tubes
 - ✓ “Last Minute” Testing is a highly recommended and smart practice

PRESSURE TEST CRITERIA

- Ref: SRP SP-F04-003 Pressure Test
 - ✓ Test Pressure = 150 psi
 - ✓ Charge the Tube Span – (Pressurize)
 - ✓ Hold 146 - 150 psi for 10 seconds = Pass
 - ✓ Cannot hold 145 psi or less = Fail
- Fill out Test Data Sheets; record the results
- ☐ *Rule of Thumb*: It Takes about 20 - 30 seconds to pressurize 1000 feet of tubing

OBSTRUCTION TEST CRITERIA

- Ref: SRP SP-F04-004 Obstruction Test
 - ✓ Test Pressure = 60 - 80 psi
 - ✓ Time the Bead Travel
 - ✓ Bead exits Tube = Pass
 - ✓ Bead does not exit Tube = Fail
- Fill out Test Data Sheets; record the results
- ☐ *Rule of Thumb*: It takes about 20 - 30 seconds for a Bead to travel about 1000 feet

Tube End Cap
(DE08MA) 8mm

REMINDER: ALWAYS CAP BOTH ENDS OF EACH TESTED TUBE-SPAN WHEN THE TEST IS COMPLETE !!! - P/N: (DE08MA)

Tube End Cap
(DE08MA) 8mm

TUBE TEST KIT - P/N BEPT001 ... Not Provided in the Blowing Head Rental Kit
All Test Kits must be purchased separately from a licensed FutureFLEX® [Distributor](#).

ALWAYS PRACTICE SAFETY AND DOCUMENT ALL TEST RESULTS