

Installation and Operations Manual

for the

Wall Mounted Delivery Systems

70-892 (AS-1 Dual Purpose)

70-893 (Assistant's)

(229-031)



ENGLE
DENTAL SYSTEMS



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INSTALLATION AND OPERATION MANUAL

Customer Service:

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Warranty

Products sold to and installed by authorized Engle Dental Systems dealers are guaranteed against defects in materials and workmanship for a period of five (5) years after date of purchase. Engle 300 dental chair Electronic Positioning Components have a Limited Warranty of ten (10) years after date of purchase. Upholstery is guaranteed for one (1) year after date of purchase. All hand-piece illumination systems are guaranteed for six (6) months after date of purchase. This warranty does not cover light bulbs of any kind.

Faulty parts as determined by dealer service representative, will be repaired or replaced; no claim for labor or consequential damages will be allowed. Invoices for replacement parts may be subject to adjustment after the manufacturer has inspected the alleged defective parts.

The warranty does not cover normal wear, stains, cuts, or scratches of upholstery surface finishes, or parts sold to O.E.M. customers.

This warranty does not cover damage resulting from the use of cleaning, disinfecting, or sterilization chemicals and processes.

The warranty does not cover damage from improper installation or maintenance, accident, misuse, or accidents incurred in shipping and handling.

In the event of shipping damage, the purchaser must initiate all claims against the freight carrier in writing within twenty-four (24) hours after the damaged items are received. The claim is the responsibility of the customer.

PRODUCT MODIFICATIONS

Engle Dental Systems continually works to better our products. We reserve the right to make modifications without notice or obligation to modify previously manufactured products.

CLEANING AND DISINFECTING ENGLE EQUIPMENT

Infection control in the dental office continues to be a high priority for our customers and end users. O.S.H.A., the A.D.A., and the C.D.C. are also involved in this complex issue.

We will not attempt to specify the required intervals for disinfection nor can we state what is the overall best surface disinfectant. Please refer to the Infection Control Recommendations published by the American Dental Association for further reference.

Barrier Technique

ENGLE strongly advocates the barrier technique be used whenever possible to preserve the finish and appearance of the equipment. Wherever possible disposable barriers should be used and changed between patients. The barrier technique will ensure maximum long term durability of the surfaces and finishes of equipment.

Chemical Disinfection

Regardless of the chemical disinfectant used it is imperative that the equipment be thoroughly washed with mild soap and warm water at least once per day. This wash down will minimize the harmful effects of chemical disinfectant residues being allowed to accumulate on the equipment.

When using a chemical disinfectant, always pay strict attention to the manufacturer's application directions of the disinfectant. When using a concentrated disinfectant, always pay strict attention to the manufacturer's diluting directions of the disinfectant. *"Disinfectant solutions that are relatively harmless to surfaces at their recommended strengths can be corrosive at a higher/purer concentrate."*

Unacceptable Disinfectants

These disinfectants **WILL HARM** the surface finishes of ENGLE equipment and are **NOT RECOMMENDED**.
USE OF THESE PRODUCTS WILL VOID YOUR WARRANTY.

| CHEMICAL COMPOSITION | TRADE NAMES |
|--|---|
| Strong Phenols/Phenol-Alcohol Combinations | Lysol, Lysol 2, Lysol Professional Coe Foam, Coe Spray Pump, Vitaphone, Omni II |
| Sodium Hypochlorite/Household Bleach | Clorox, Ajax, Purex |
| Alcohol | |
| Household Cleaners | |

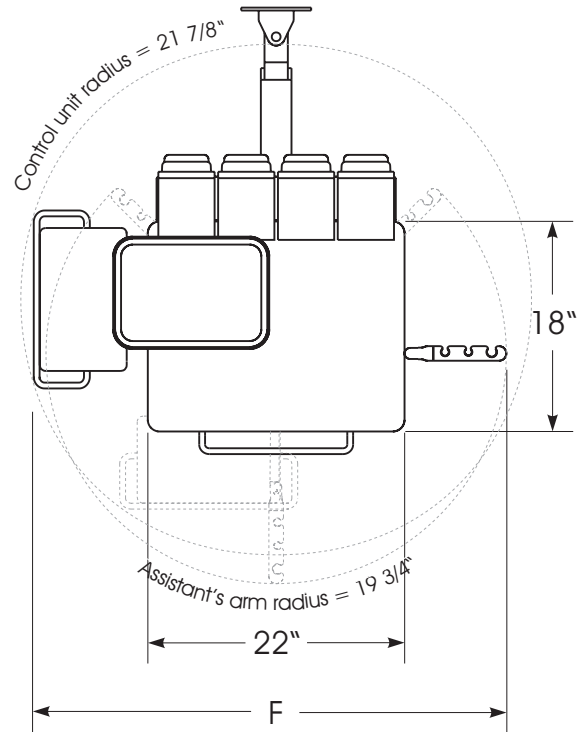
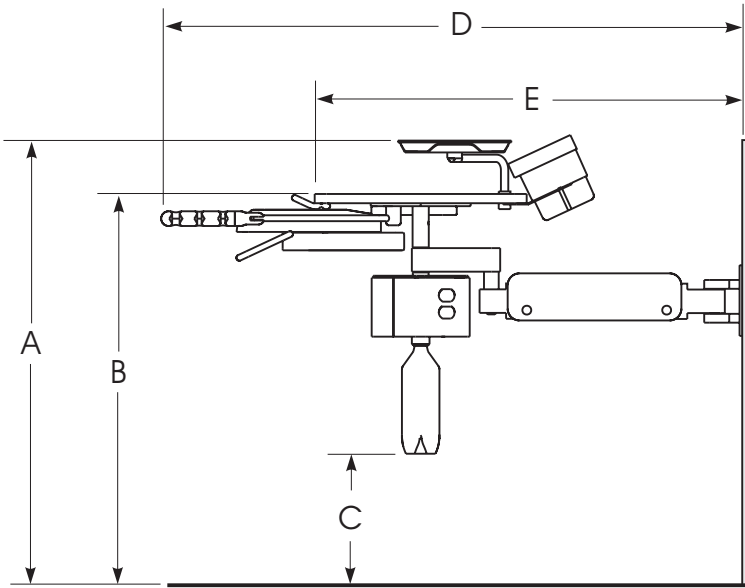
Conditionally Acceptable Disinfectants*

These disinfectants have been found to be the LEAST HARMFUL to the equipment surfaces.
None of these products are recommended for chair upholstery. Use the barrier technique.

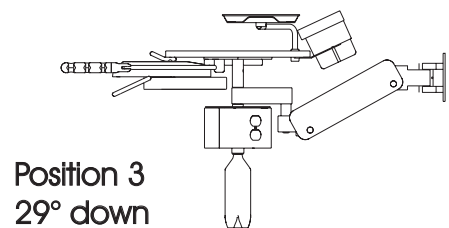
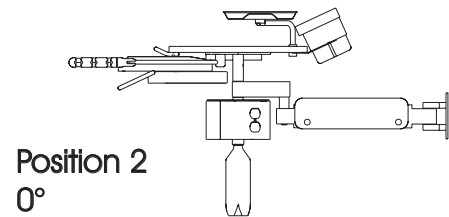
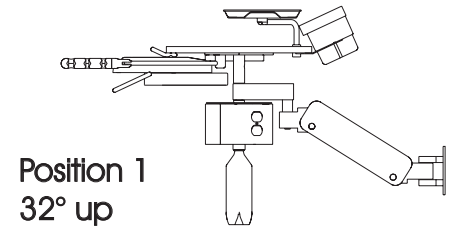
| CHEMICAL COMPOSITION | TRADE NAMES |
|------------------------------|---|
| Iodophors** | Biocide, Aseptic-IDC Wescodyne, SD5, Promedyne, Ido-Five |
| Mild Phenols | Procide ES, Asepti-Steryl Aerosol |
| Glutaraldehyde/Phenol sprays | Sterall Spray, Coldspor |
| Synergized Super Quat | Dis-cide, Cavicide, Kleenaseptic |
| Phenol/Water Sprays | Top-Cide, Sporidicin Pump Spray, Birex se |

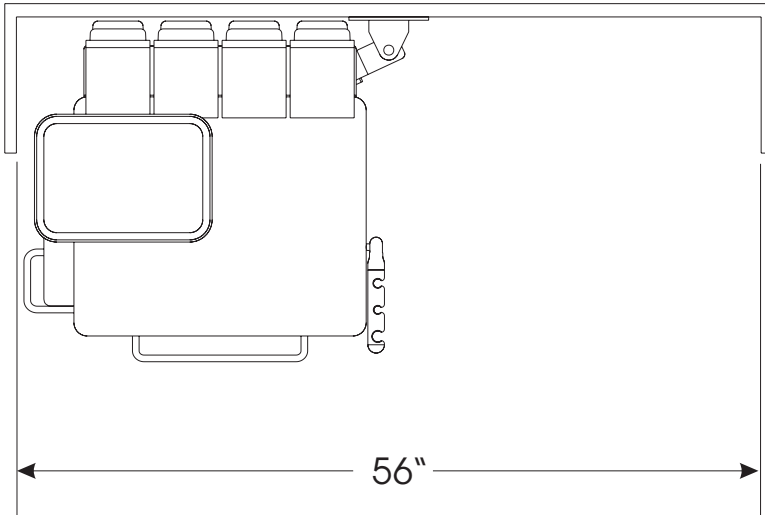
* ENGLE DENTAL SYSTEMS makes no representation as to the disinfectant efficacy of these products. We make no warranty, expressed or implied, that these disinfectants will not damage the surface finishes. Damage and discoloration of the surface finishes is not covered under the warranty.

** Iodophor based disinfectants will cause yellow staining on many surfaces. Regular washing with soap and water will minimize this staining. Iodophor neutralizers such as Promedyne are also available.



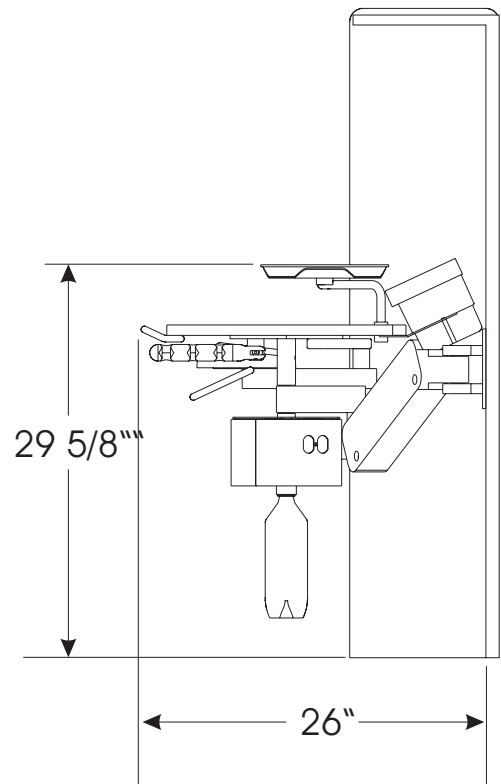
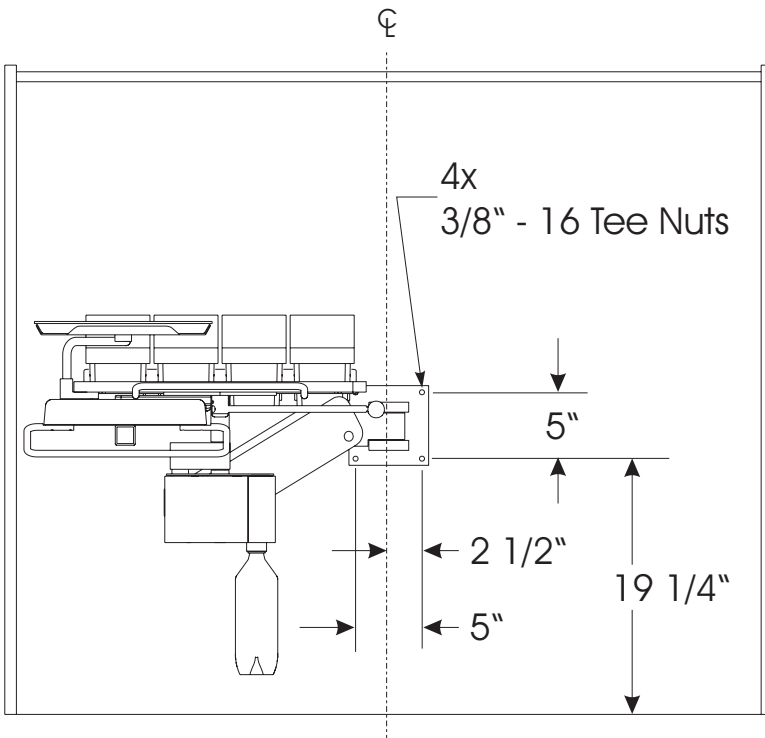
| Dimension | Position 1 | Position 2 | Position 3 |
|-----------|------------------------|------------------------|------------------------|
| A | 41 5/8" | 35 3/8" | 29 5/8" |
| B | 37 1/8" | 30 7/8" | 25 1/8" |
| C | 15" | 8 3/4" | 3" |
| D | 47 1/2" | 49 1/2" | 47 7/8" |
| E | 34 1/2" | 36 1/2" | 34 7/8" |
| F | 40 1/2" max 25" min | 40 1/2" max 25" min | 40 1/2" max 25" min |



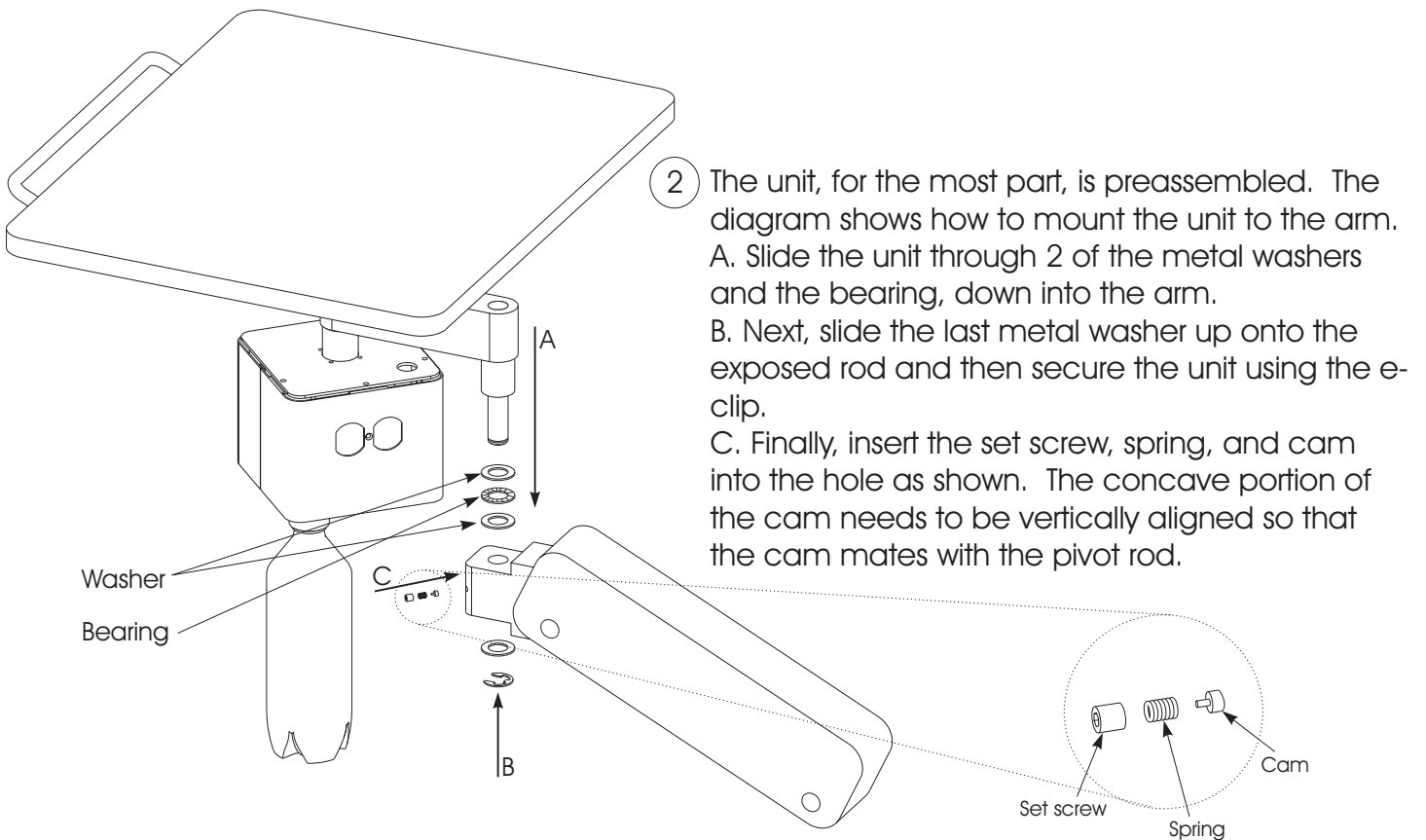
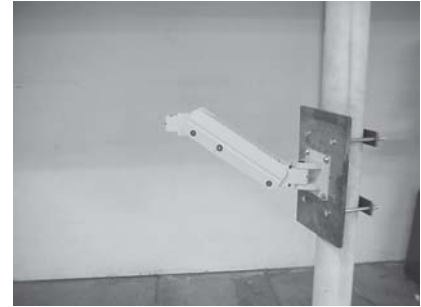


Cabinet dimensions given are the minimum required dimension for the dual purpose system to be used for both left and right side operation.

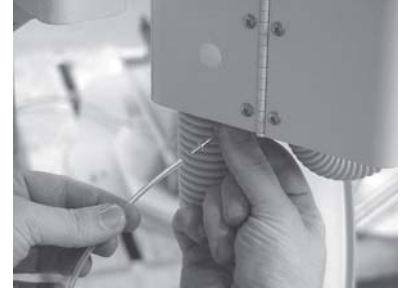
Not adhering to these dimensions may result in the impairment of some and/or all of the versatility designed into this product.



- 1 Begin by installing the wall mounted arm in the location you desire.



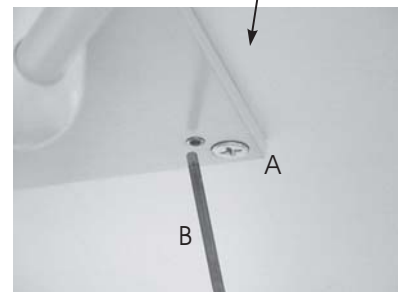
- 3 You should have a piece of clear tubing coming out of the underside of the utility box and out of the unit arm. Connect these two tubings using the brass fitting which should already be installed in one of the tubings. This is the air brake line.



- 4 Now you must install the shelf. Place the shelf on top of the delivery system, with the handle facing towards the front of the unit.

A. Loosely thread the screws into the shelf.

B. Using liquid level and an allen wrench, level the shelf by adjusting the 4 leveling screws.

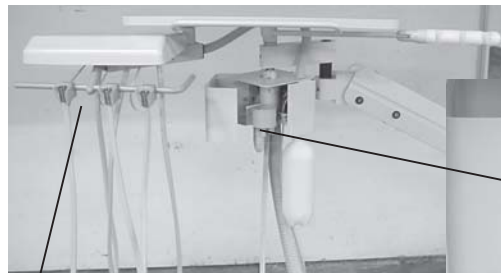


- 5 At this point, you can make all connections between the main umbilical and your utilities (air, water, electricity).

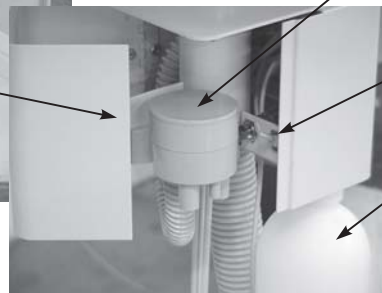
- 6 Installation of your unit is nearly complete. The final step is to adjust the unit arm's spring tension. This step is not typically necessary as the factory setting is normally sufficient. Should you require adjustment, simply rotate the castle nut (located in the top of the arm) using a 3/16" allen wrench.



Description of Functions



Front View



C.V. Canister

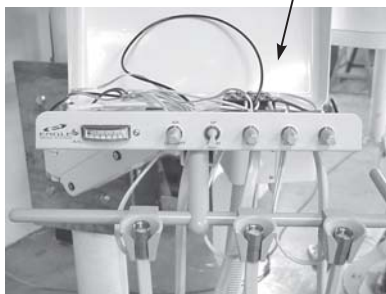
Provides quick access to remove any debris caught in the vacuum system.

Water Source Switch

Toggle between water sources (tap and bottled)

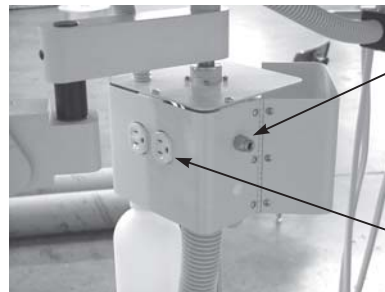
Water Bottle

Provides an alternative to using tap water.



AS-1 Control Unit

Details of the AS-1's operation can be found in IL 35. (70-892 ONLY)



Rear View

Water Outlet

Quick access to your water source.

Electrical Outlet

2 - 120V power outlets

Installation for any of Engle's controls are simple. First you must install the Junction Box:

Junction Box:

Engle Dental Systems has simplified the connection of utilities within the Junction Box.

Templates for layout and elevation accompany this booklet (IL 017). Full size templates are available upon request when a layout is required.

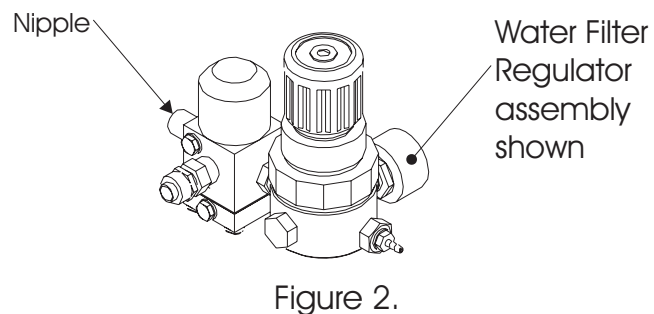
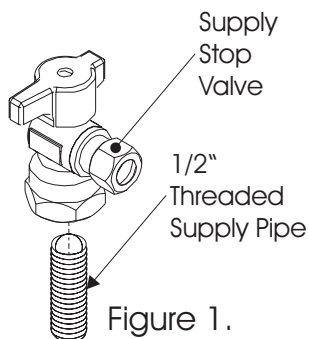
1/2" N.P.T. threaded air and water supply pipes are brought 1" maximum above the finished floor. Supply Stop Valves are supplied for installation to the threaded supply pipes (see Figure 1).

Warning: After installation of the Supply Stop Valves to the threaded supply pipes, both of these Supply Stop Valves should be opened and flushed until the installer is certain that the supply lines and Supply Stop Valves are free of any debris prior to Air and Water Filter Regulator assembly installation.

The Air and Water Filter Regulator assemblies are pre-adjusted at the factory with the Water Regulator at 40 PSI and Air Regulator at 80 PSI. The nipple is inserted into the compression fitting of the Supply Stop Valve and tightened (see Figure 2).

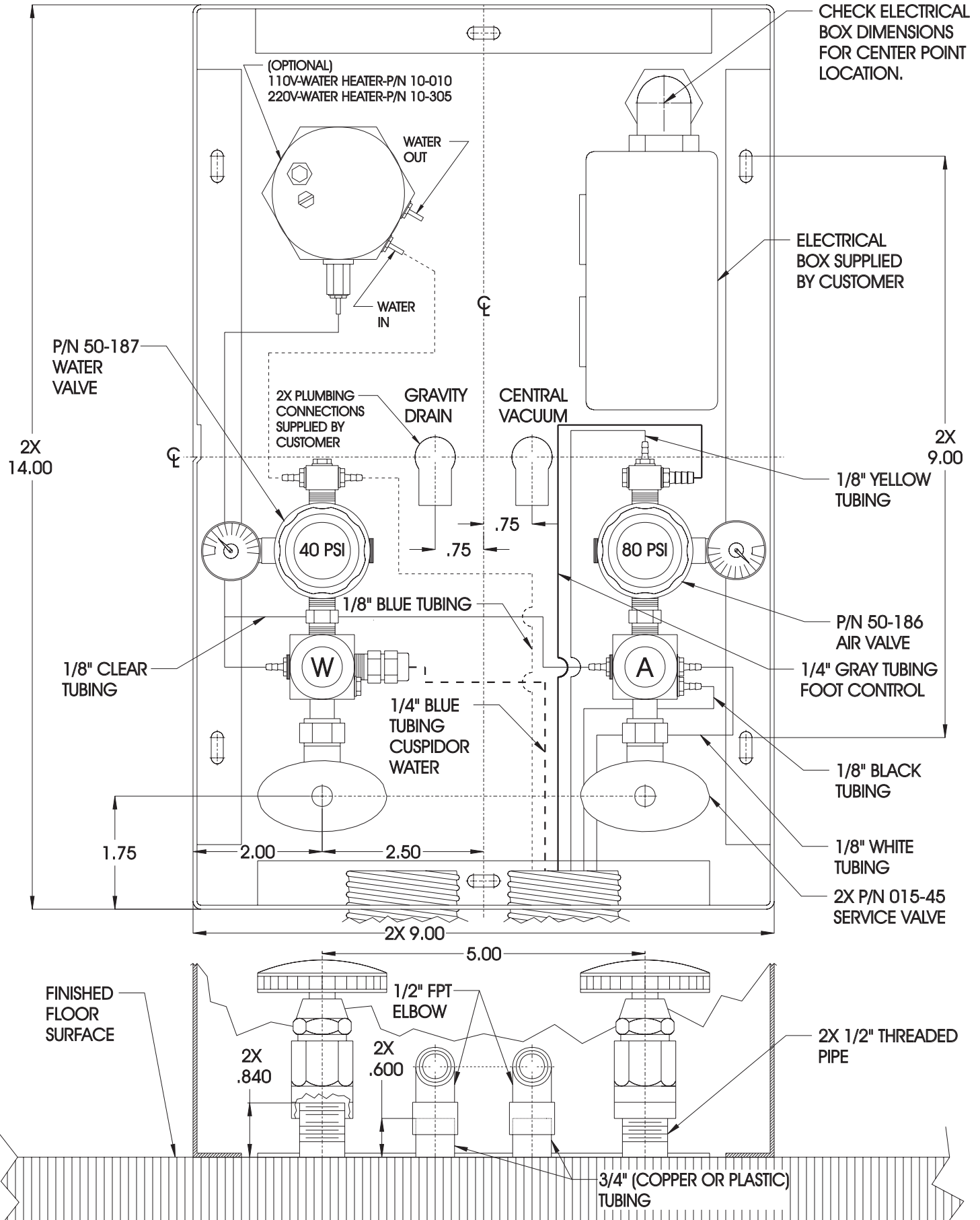
Umbilical to Junction Box:

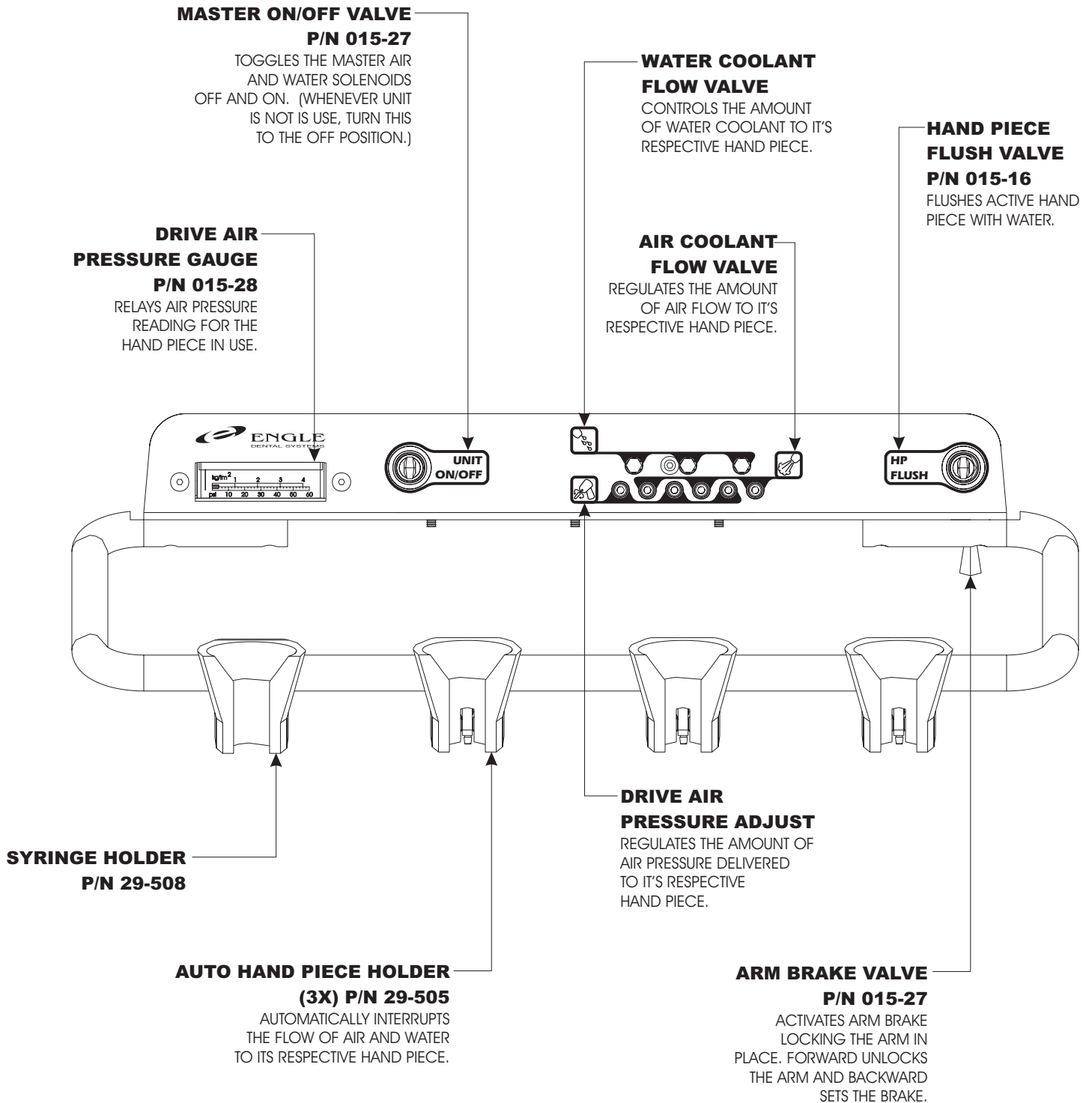
Determine the length required for the Umbilical, to the Junction Box. Cut to length as required and introduce the Umbilical into the desired hole of the Junction Box. Match the colors of the Umbilical tubes with the tubes that are connected to the Water and Air Regulators, then turn and lock the male and female Quick Disconnects together. Fittings are supplied also to connect the Vacuum and Drain lines.

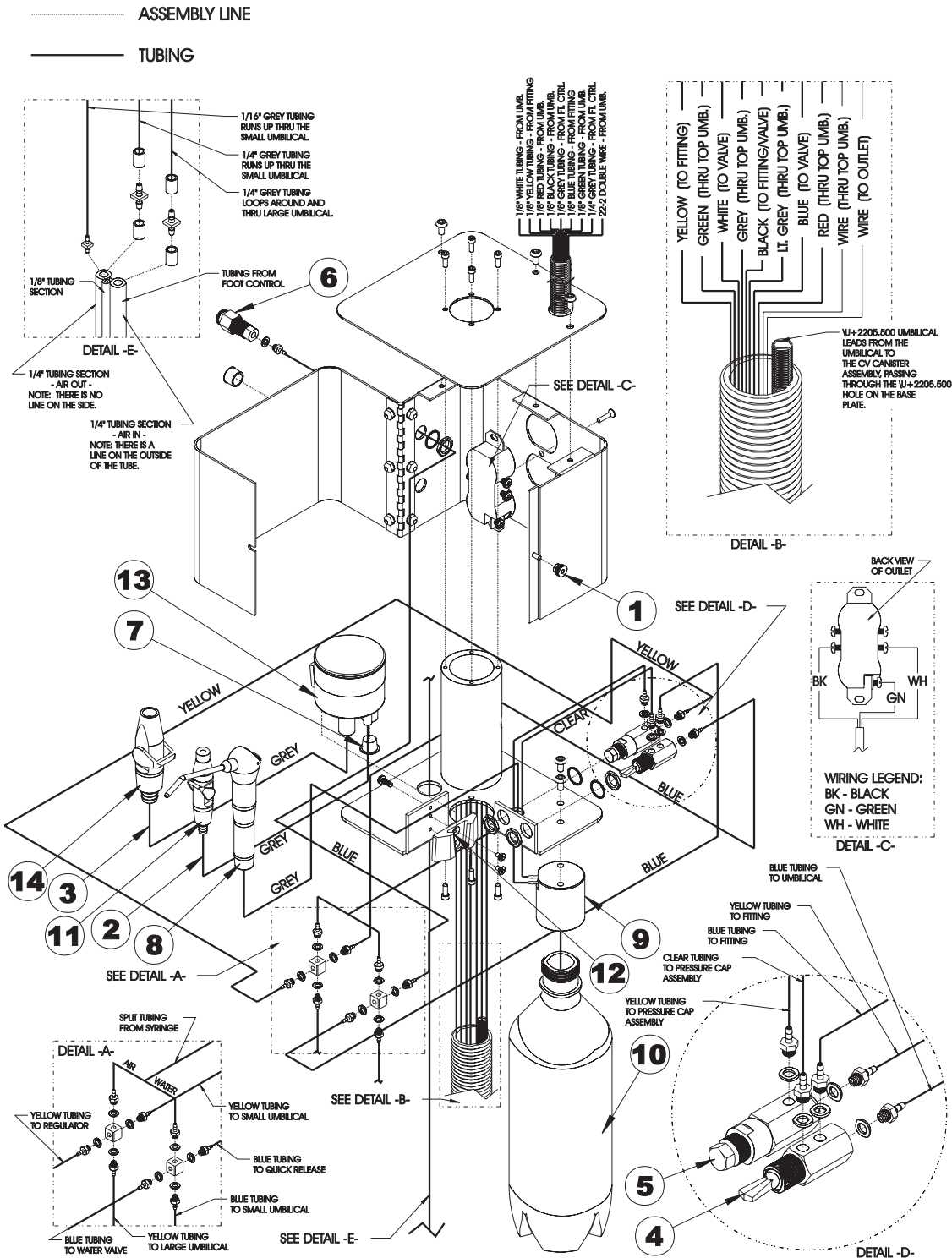


Small Junction Box Installation Diagram (34-000)

IL 017

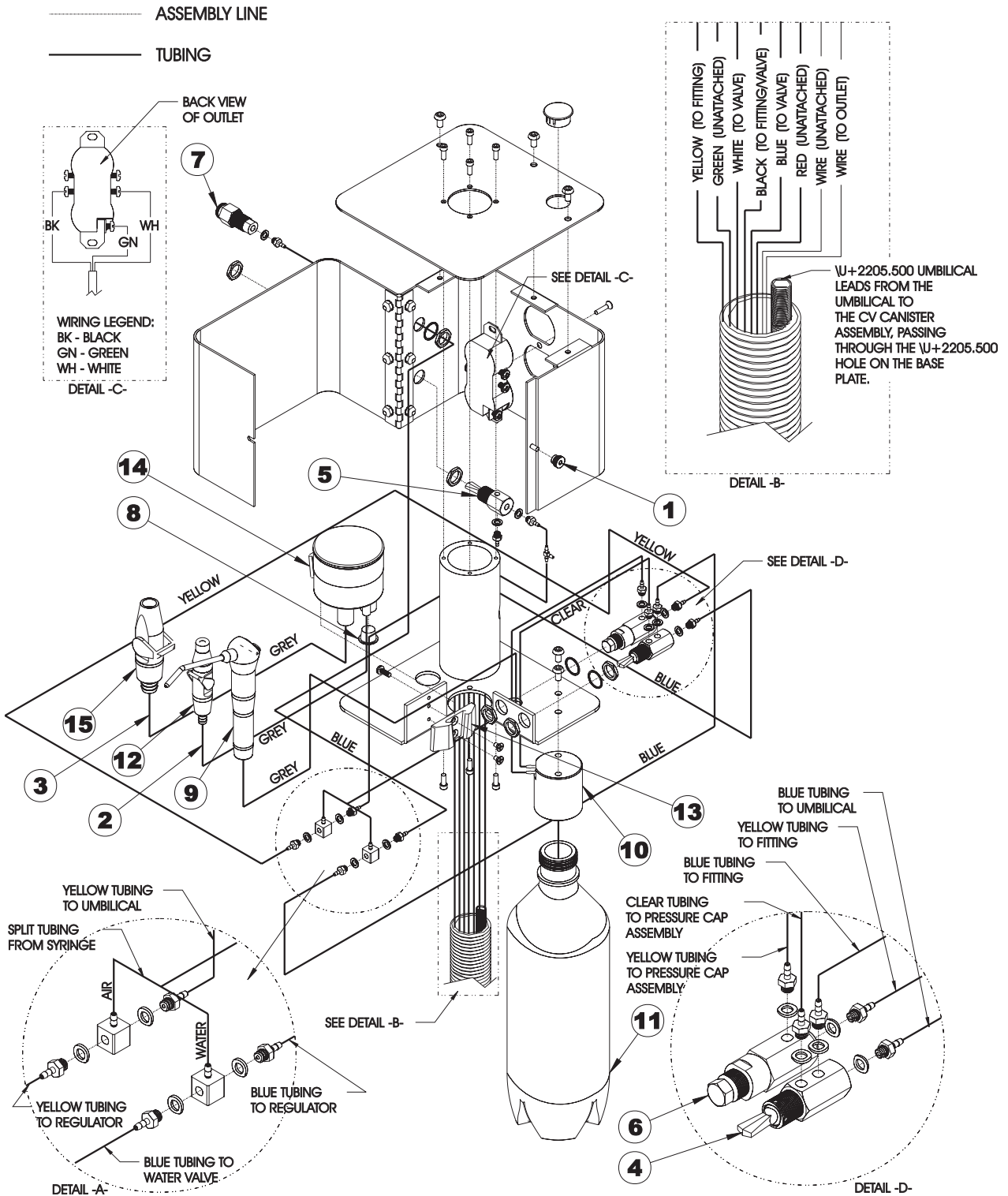






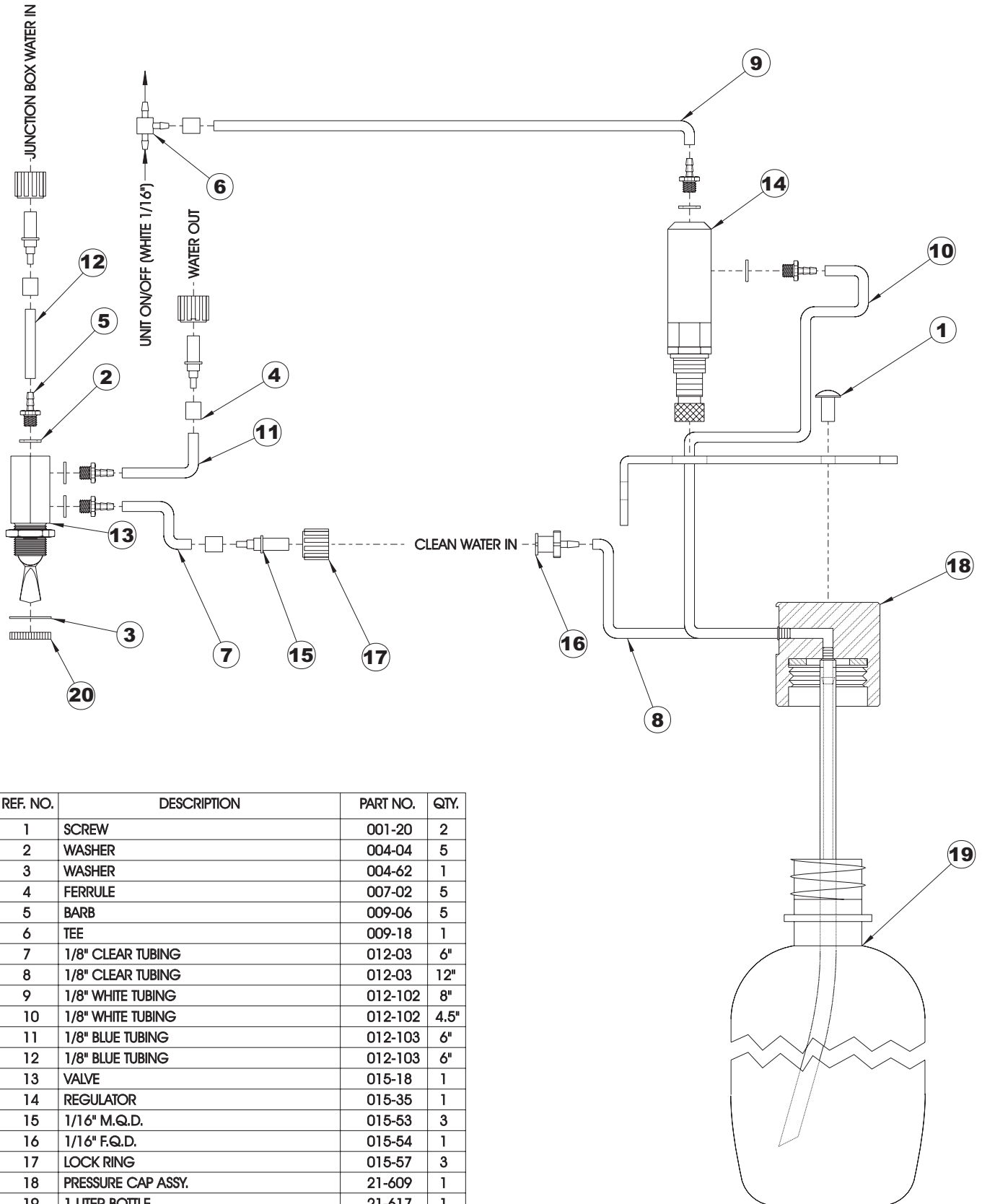
| NO. | QTY. | PART NO. | DESCRIPTION |
|-----|------|----------|--------------------|
| 1 | 1 | 005-57 | #6-32 THUMB NUT |
| 2 | 5' | 012-09 | GRAY SALIVA TUBING |
| 3 | 5' | 012-10 | GRAY HVE TUBING |
| 4 | 1 | 015-18 | VALVE |
| 5 | 1 | 015-35 | REGULATOR |
| 6 | 1 | 015-68 | WATER OUTLET |
| 7 | 1 | 020-09 | PLUG |

| NO. | QTY. | PART NO. | DESCRIPTION |
|-----|------|----------|----------------------|
| 8 | 1 | 20-336 | SYRINGE - 5' |
| 9 | 1 | 21-609 | PRESSURE CAP ASSY. |
| 10 | 1 | 21-617 | 1 LITRE BOTTLE |
| 11 | 1 | 22-299 | SALIVA EJECTOR |
| 12 | 1 | 22-528 | MOUNTING BRACKET |
| 13 | 1 | 22-535 | CV CANISTER ASSEMBLY |
| 14 | 1 | 22-751 | HVE VALVE |

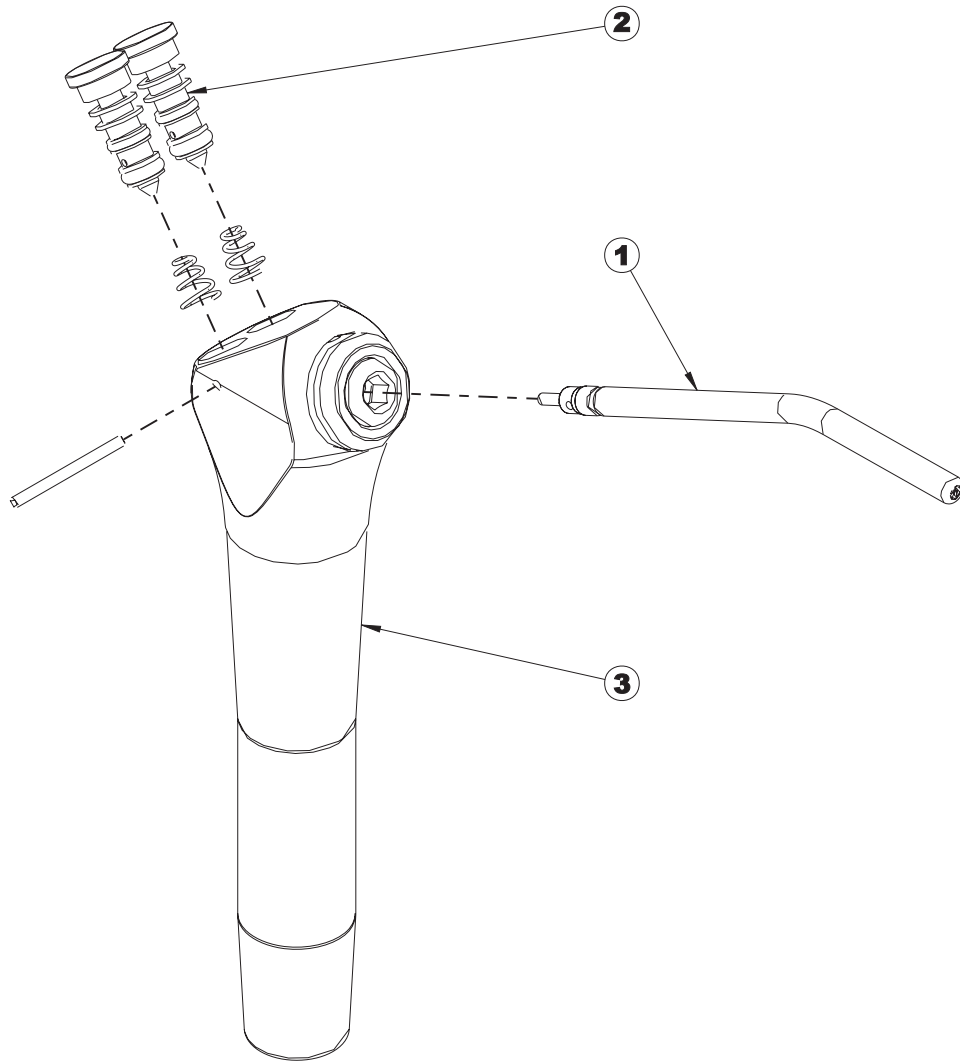


| NO. | QTY. | PART NO. | DESCRIPTION |
|-----|------|----------|--------------------|
| 1 | 1 | 005-57 | #6-32 THUMB NUT |
| 2 | 5' | 012-09 | GRAY SALIVA TUBING |
| 3 | 5' | 012-10 | GRAY HVE TUBING |
| 4 | 1 | 015-18 | VALVE |
| 5 | 2 | 015-27 | VALVE |
| 6 | 1 | 015-35 | REGULATOR |
| 7 | 1 | 015-68 | WATER OUTLET |
| 8 | 1 | 020-09 | PLUG |

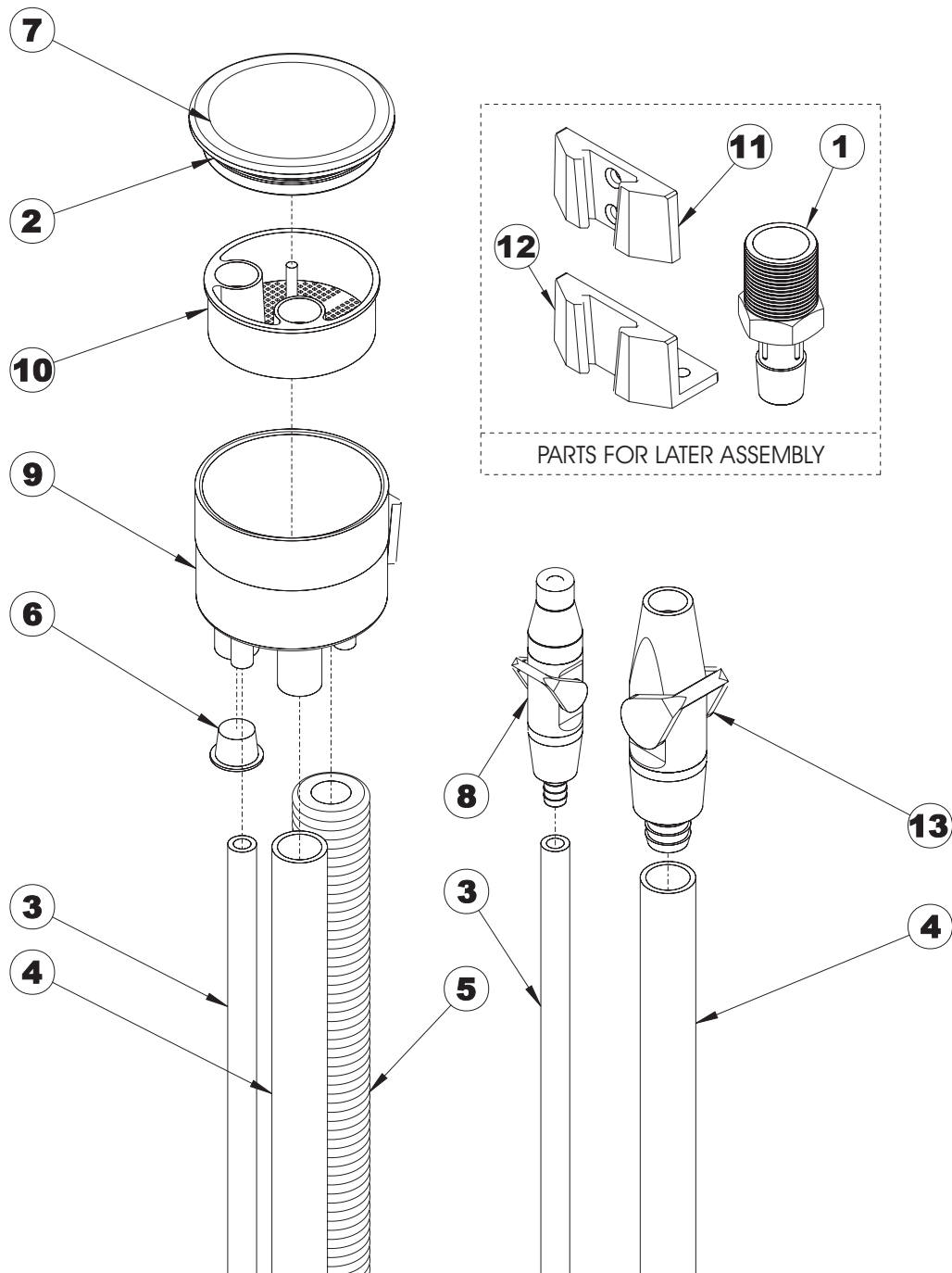
| NO. | QTY. | PART NO. | DESCRIPTION |
|-----|------|----------|----------------------|
| 9 | 1 | 20-336 | SYRINGE - 5' |
| 10 | 1 | 21-609 | PRESSURE CAP ASSY. |
| 11 | 1 | 21-617 | 1 LITRE BOTTLE |
| 12 | 1 | 22-299 | SALIVA EJECTOR |
| 13 | 1 | 22-528 | MOUNTING BRACKET |
| 14 | 1 | 22-535 | CV CANISTER ASSEMBLY |
| 15 | 1 | 22-751 | HVE VALVE |



| REF. NO. | DESCRIPTION | PART NO. | QTY. |
|----------|--------------------|----------|------|
| 1 | SCREW | 001-20 | 2 |
| 2 | WASHER | 004-04 | 5 |
| 3 | WASHER | 004-62 | 1 |
| 4 | FERRULE | 007-02 | 5 |
| 5 | BARB | 009-06 | 5 |
| 6 | TEE | 009-18 | 1 |
| 7 | 1/8" CLEAR TUBING | 012-03 | 6" |
| 8 | 1/8" CLEAR TUBING | 012-03 | 12" |
| 9 | 1/8" WHITE TUBING | 012-102 | 8" |
| 10 | 1/8" WHITE TUBING | 012-102 | 4.5" |
| 11 | 1/8" BLUE TUBING | 012-103 | 6" |
| 12 | 1/8" BLUE TUBING | 012-103 | 6" |
| 13 | VALVE | 015-18 | 1 |
| 14 | REGULATOR | 015-35 | 1 |
| 15 | 1/16" M.Q.D. | 015-53 | 3 |
| 16 | 1/16" F.Q.D. | 015-54 | 1 |
| 17 | LOCK RING | 015-57 | 3 |
| 18 | PRESSURE CAP ASSY. | 21-609 | 1 |
| 19 | 1 LITER BOTTLE | 21-617 | 1 |
| 20 | NUT | 29-240 | 1 |
| 21 | | | |



| NO. | PART NO. | DESCRIPTION | QTY. |
|-----|----------|--------------------|------|
| 1 | 20-390 | TIP | 1 |
| 2 | 20-393 | CARTRIDGE ASSEMBLY | 2 |
| 3 | 20-395 | SYRINGE | 1 |



| NO. | PART NO. | DESCRIPTION | QTY. |
|-----|----------|---------------|------|
| 1 | 009-33 | VACUUM BARB | 1 |
| 2 | 016-31 | O-RING | 1 |
| 3 | 012-09 | S.E. TUBING | 6' |
| 4 | 012-10 | H.V.E. TUBING | 6' |
| 5 | 012-48 | C.V. TUBING | 7' |
| 6 | 020-09 | PLUG | 1 |
| 7 | 22-155 | C.V. COVER | 1 |

| NO. | PART NO. | DESCRIPTION | QTY. |
|-----|----------|-----------------------|------|
| 8 | 22-299 | SALIVA EJECTOR ASSY. | 1 |
| 9 | 22-521 | C.V. CAN BODY | 1 |
| 10 | 22-527 | C.V. SCREEN | 1 |
| 11 | 22-528 | MOUNTING BRKT. WALL | 1 |
| 12 | 22-529 | MOUNTING BRKT. ANGLED | 1 |
| 13 | 22-751 | H.V.E. ASSY. | 1 |

