GOLDENVAC WET VACUUM

INSTALLATION, USER, AND SERVICE MANUAL

Revised 6-25

TECH WEST INC.
Manufacturers of Dental Vacuum
and Air Systems

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This manual is for the installation and service of Tech West's GoldenVac Pumps.

CONTENTS

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ENVIRONMENT REQUIREMENTS

Read & Understand Operators Manual Before Using This Machine. Failure To Follow Operating Instructions Could Result In Death Or Serious Injury.

Operating

Indoor use at altitudes up to 6562 ft (2000m).
Ambient temperatures 40° to 105°F (4.4° to 40.5°C).
Supply voltage fluctuation of +/- 10% of nominal voltage.

Storage and Transport:

Temperature, 0° to 150°F (-40° to 65°C)
Relative Humidity, 0 to 90%, non-condensing
Atmosphere pressure range of 50kPA to 106kPA

IEC 60601-1 Classification:

Protection against electric shock (6.2):	Class 1
Applied Parts (5.9.1, 8.3):	There are no Applied Parts.
Protection against harmful ingress of water (6.3):	Ordinary, IPXO
Degree of safety in the presence of flammable anesthetics mixture with air or with oxygen or with nitrous oxide (11.4, 11.5):	Not suitable.

ATTENTION USERS:

Alerts users to important operating and maintenance instruction. Read carefully to avoid any problems.

Warns users that voltage not insulated within the unit may be of sufficient magnitude to cause electric shock.

Warns users of hot surfaces. There is a danger of burns. Work near these surfaces only after they have cooled down.

Tech West Vacuum, Inc.
2657 N Argyle Ave
Fresno, CA 93723

MEDICAL ELECTRICAL EQUIPMENT

WITH RESPECT TO ELECTRICAL SHOCK, FIRE, MECHANICAL AND OTHER SPECIFIED HAZARDS ONLY IN ACCORDANCE WITH ANSI/AAMI ES60601-1: A1:2012, C1:2009/(R)2012 AND A2:2010/(R)2012, CSA CAN/CSA-C22.2 NO.60601.14

I ON
O OFF

Indicates the ON and OFF position for the Equipment power switch.

Indicates protective Earth Ground for the equipment power switch.

INSTALLATION

Your GoldenVac Wet Vacuum should be installed by Qualified Personnel only. Tech West recommends you schedule the installation with the company the unit was purchased from. Tech West Technical Support is available from 7am through 4 pm PST Monday through Friday.

The vacuum should be installed in a location that is level without any grade or slope. The area should be easily accessible, well-ventilated, free from any obstructions and clear of any debris. Ensure the area where the unit is installed has adequate cross ventilation and an exhaust fan. The area needs to be able to safely support the weight of the unit. Please consider sound levels and insulate as needed. Tech West recommends consulting with a professional to ensure compliance with local building codes.

GoldenVac Wet Vacuums require adequate ventilation and protection from extreme temperatures. Ambient temperatures in the location of the vacuum must not fall below 40 degrees Fahrenheit and must not exceed 105 degrees Fahrenheit. Failure to comply with the guidelines outlined in this section will result in all warranties being voided.

Upon receiving your GoldenVac Wet Vacuum, we recommend you complete the following steps:

1. Check for damages. Inspect the shipping material around the unit for holes, cuts, crushed sections, and any other visible damage. Tech West recommends alerting the delivering company and the dealer from which the unit was purchased from of any damage noticed. After inspection remove the shipping material from the unit.

2. Check the unit for visible damage and alert the delivering company along with the dealer from which the unit was purchased from if any damage(s) are noticed. Units are bolted to a pallet for shipping. The pallet can be discarded with the other shipping materials.

3. All units are shipped with an Installation Kit. Inspect the kit to ensure it contains the following:
    a. Three (3) isolation feet (single), Four (4) isolation feet (dual)
    b. Six (6) to Nine (9) feet of flexible PVC hose
    c. Miscellaneous fittings (some or all may not be used)

TECH WEST RECOMMENDS CONTACTING THE COMPANY THE UNIT WAS PURCHASED FROM TO SCHEDULE THE INSTALLATION OF THE UNIT.

4. Isolation feet should be installed on the GoldenVac Wet Vacuum before it is mounted in the desired location.

5. Connect the cold water supply. DO NOT USE HOT WATER CONNECTION(S). Refer to figure 1 on page 5. A separate 1/2” cold water branch is needed for the water intake(s) on GoldenVac units. This is necessary to cool and lubricate the shaft seal. Tech West recommends the water pressure should read between 25 and 55 PSI. Once connected, turn the water supply on to check for leaks in the “Water Connection”. Refer to Figure 2 on page 5.

WATER SUPPLY MUST REMAIN “ON” DURING OPERATION OF UNIT.
FAILURE TO DO SO WILL CAUSE DAMAGE TO THE UNIT AND VOID ALL WARRANTIES.

6. Connect adequate waste disposal line(s) to expel both vapor and liquid waste from the unit. The vent size should be 2” in diameter with a waste drain that conforms to local code(s). Please refer to Figures 3 and 4 on page 6 for additional installation information. If installing a Tech West Exhaust Separator and/or Water Separator, please refer to the applicable installation sheet for detailed installation information.

7. Connect the main vacuum line. For units with a Single motor, connect the flexible hose provided to the pump intake manifold. Refer to Figure 5 on page 7 for additional installation information. For units with Dual or Triple motors, connect the flexible hose provided to the vacuum intake manifold. Refer to Figure 6 on page 7, for additional installation information. Detailed wiring diagrams are located on the inside of each pump relay panel cover plate.

INSTALLATION

8. The GoldenVac Wet Vacuum is controlled by a 24V circuit. If installing a Control Panel, Install one (1) 18/3 jacketed cable for each motor on the unit using wire connectors that ensure a secure mechanical connection. Refer to Figure 8 on page 8 for additional information.

9. Local code(s) may require the installation of a quick disconnect safety switch for each motor. Please consult with a certified electrician.

10. Using the chart in Figure 7 on page 8, ensure the proper wiring connections are completed. Use 12 gauge THHN grade wire and approved conduit for permanent wiring. Refer to Figure 9 on page 9 for additional information.

11. Line voltage must be within the limits described in the chart below. Provide a separate line for each motor on the unit. If the voltage is not within the limits described, a “Buck Boost Transformer” may be required. Please consult with a certified electrician. Circuit breaker switches must be rated for 20 AMP.

VOLTAGE RATING OF UNIT	MINIMUM VOLTAGE RATING ACCEPTABLE (CONSTANT)	MAXIMUM VOLTAGE RATING ACCEPTABLE (CONSTANT)
230V	208V	240V
115V	110V	130V

Refer to pages 10 through 12 for detailed information on how to properly size plumbing, piping, air lines, and make the correct connections.

After completing the required installation steps and ensuring ALL connections are properly secured, turn the unit “ON” and inspect for leaks of any kind.

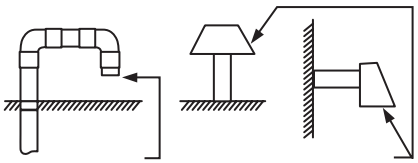
Tech West Recommends following the Weekly Servicing instructions located on Page 15 to keep the unit running efficiently.

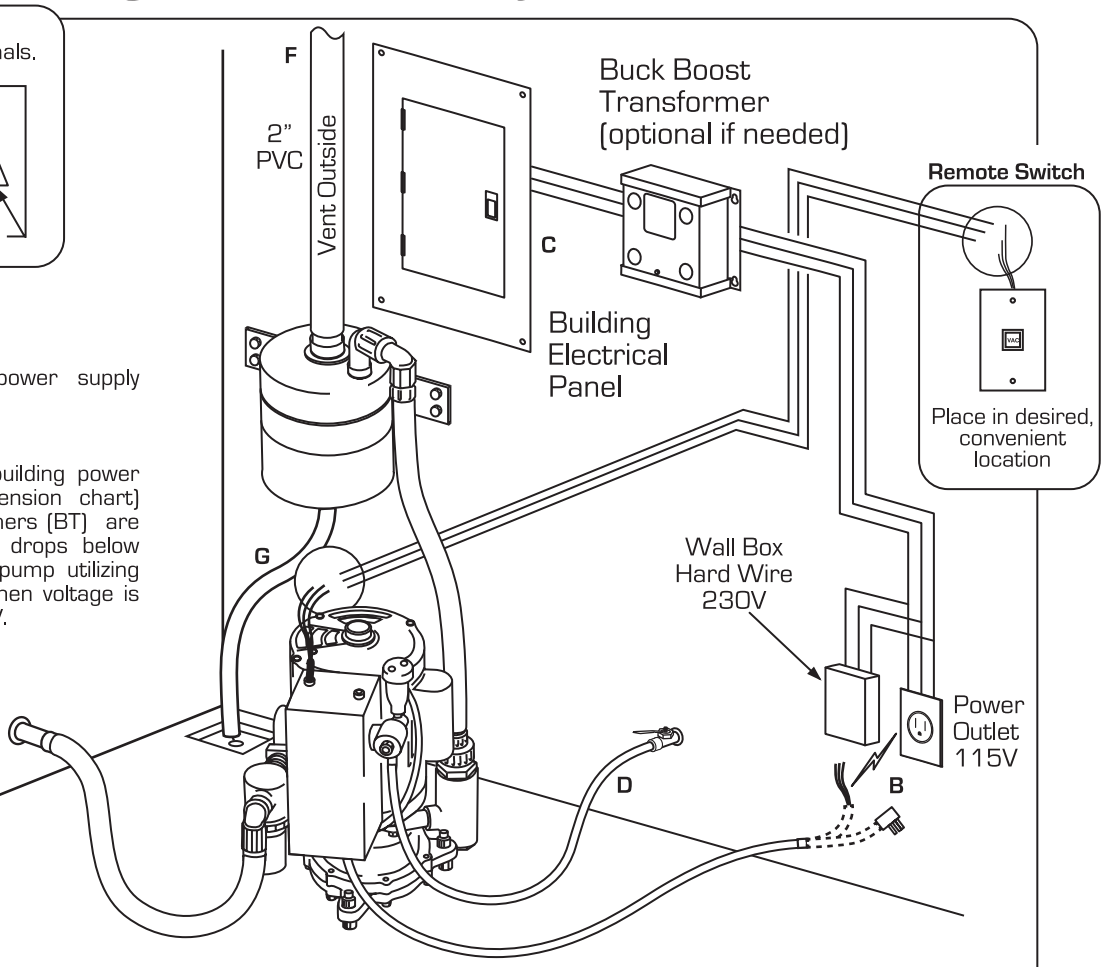
GOLDENVAC WET VACUUMS WITH SINGLE MOTORS MAY OPERATE ON 115V OR 230V. REFER TO THE INSIDE OF THE PUMP RELAY PANEL COVER PLATE FOR DETAILED INSTRUCTIONS ON CHANGING THE VOLTAGE.

Target Room Layout

Outside Air Pipe

2-inch pipe for air intake.
Must be protected from rain and animals.

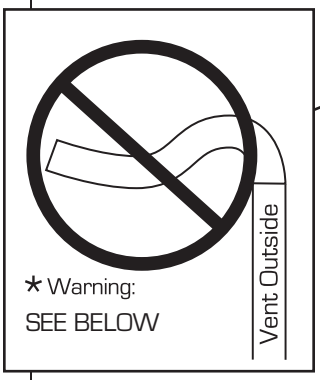




Important Information

A. Safty First -
Always disconnect main power supply before installation.

B. Wire or Plug in -
Wire or plug in outlet to building power supply. (see product deimension chart) NOTE: Buck boost transformers (BT) are only requred when voltage drops below 208V or above 240V. On pump utilizing 115v BT is only required when voltage is below 110V and above 120V.



Main Vacuum Line

Chart A2 **Vacuum Line Pipe Diameter**

Operatories	PVC sch 40	Copper
1	3/4"	3/4"
2	1"	1"
3	1 1/4"	1"
4	1 1/4"	1 1/4"
5	1 1/4"	1 1/2"
6	1 1/4"	1 1/2"
7	1 1/2"	1 1/2"
8	1 1/2"	1 1/2"
9	1 1/2"	2"
10	2"	2"
11	2"	2"
12	2"	2"

Electrical Information

C. All vacuum pumps need to have dedicated circuit breakers. For breaker size and electrical connection type please refer to the product specifications / Dimensions chart on last page.

Water Plumbing Connection

D. 1/4 FNPT Shut-off valve and 5ft. pressure hose (supplied)

E. 9ft of Flexible PVC hose 3/4" supplied.

F. Exhause needs to be vented outside with 2" schedule 40 PVC pipe.
* Warning: Avoid any bends resuling in a downward slope. Condensation could cause water to collect in vent pipe. (See diagram above)

G. Open floor sink - use 3/4" flexible PVC hose.

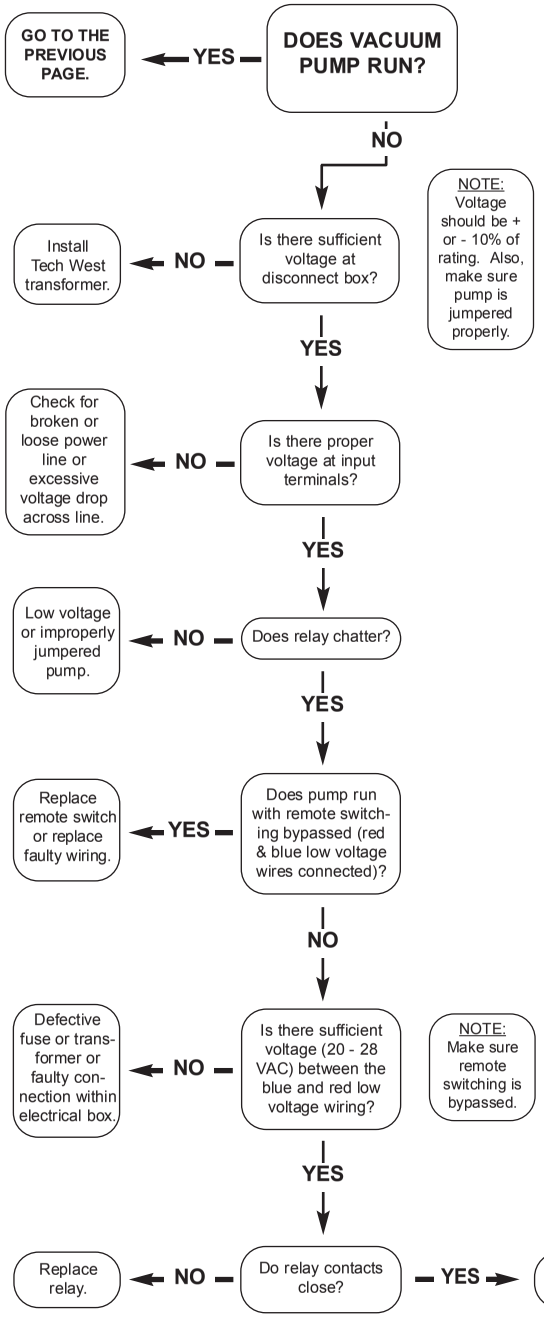
Service Clearances

H. Allow 12" on all sides for all units

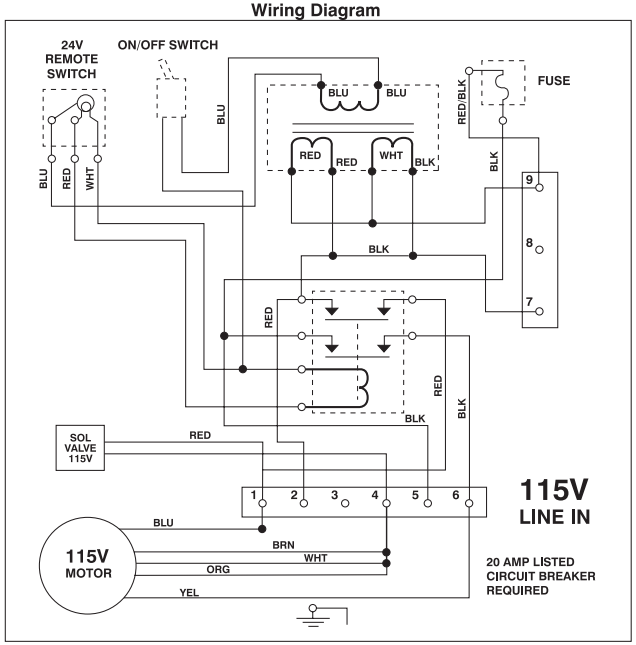
Ambient Tempertures

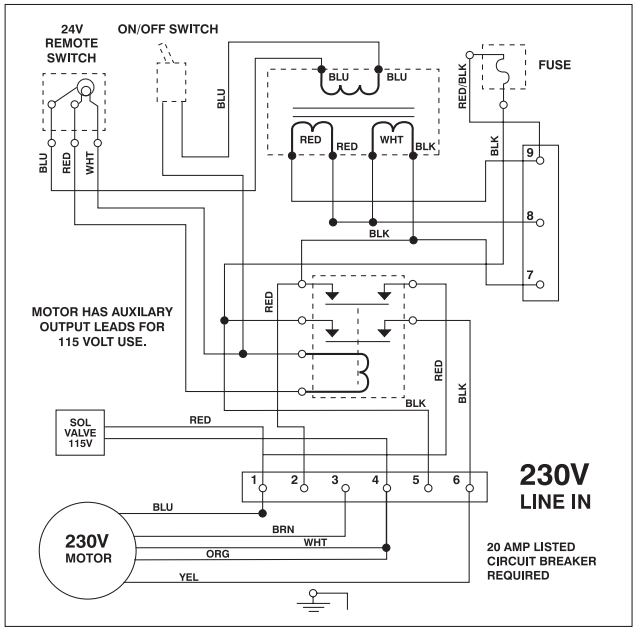
H. Must not exceed 105°F Must remain above 40°F

Vacuum Wiring Diagram
for all GoldenVac Models



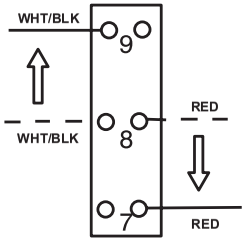
Wiring Diagram





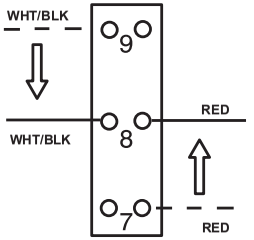
TRANSFORMER LEADS

STEPS TO CHANGE VOLTAGE FROM 230 TO 115 V



MOVE RED WIRE FROM TERMINAL #8 TO TERMINAL #7 AND THE WHITE/BLACK FROM TERMINAL #8 TO #9. THEN MOVE ORANGE FROM #4 TO #1 THEN BROWN FROM #3 TO #4

STEPS TO CHANGE VOLTAGE FROM 115 TO 230 V



MOVE RED WIRE FROM TERMINAL #7 TO TERMINAL #8 AND WHITE/BLACK FROM TERMINAL #9 TO TERMINAL #8 THEN MOVE BROWN FROM #4 TO #3 THEN MOVE THE ORANGE FROM #1 TO #4

Figure 1: Plumbing Schematic

1. Line Filter
2. Cold Water Supply
3. GoldenVac Pump
4. Impeller
5. Solenoid Valve
6. Exhaust Separator
7. Exhaust Vent
8. P-Trap Adapter
9. Waste Line

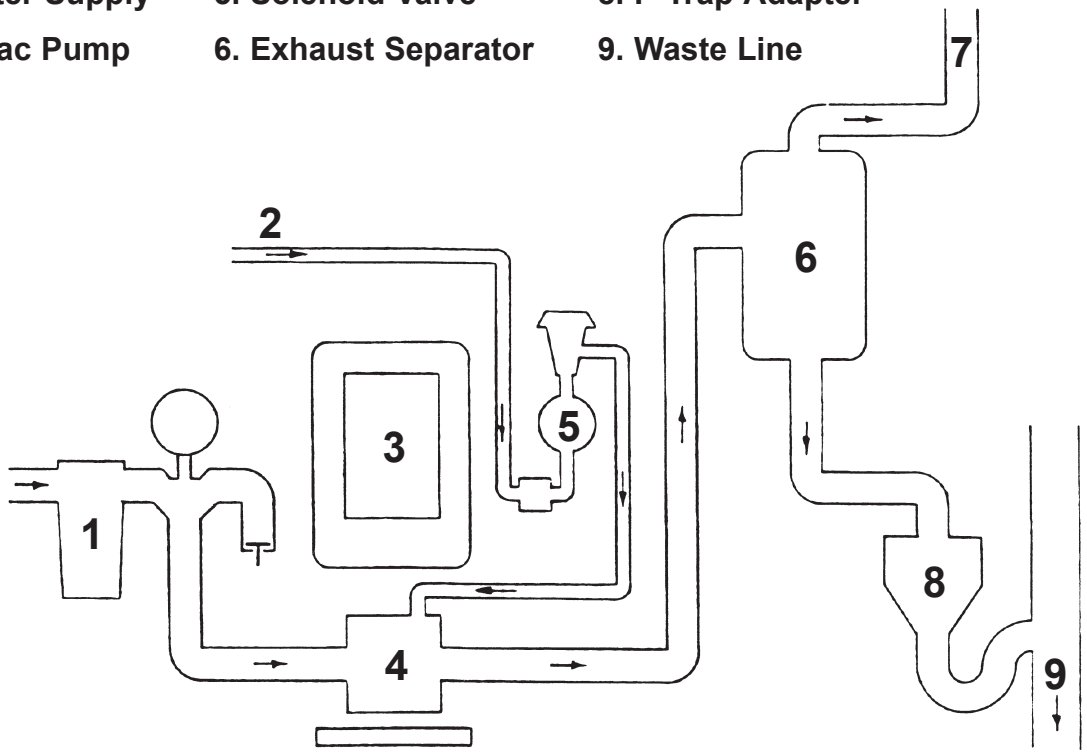
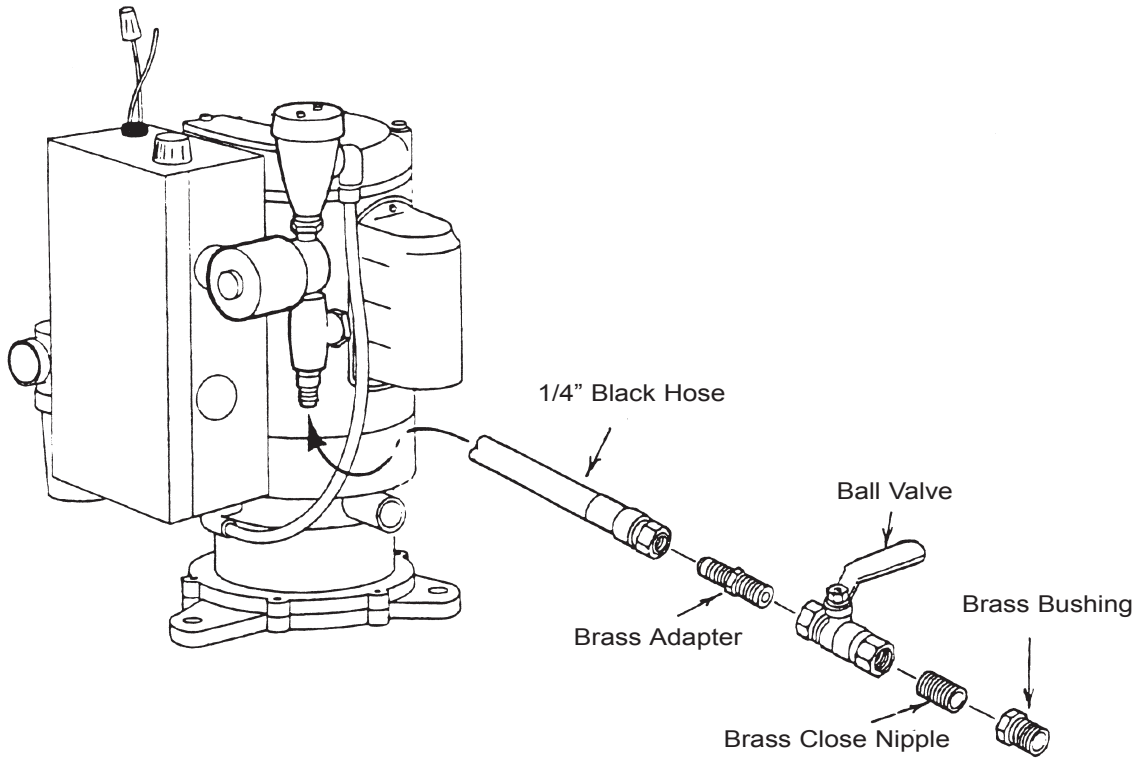


Figure 2: Water Connection



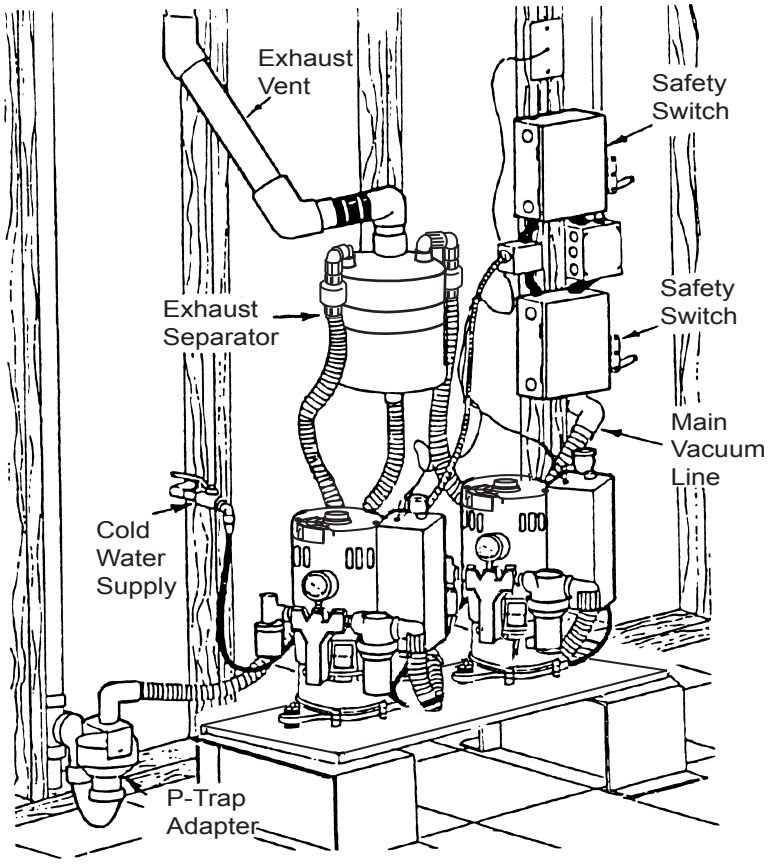


Figure 3: Typical Dual GoldenVac Vacuum Installation

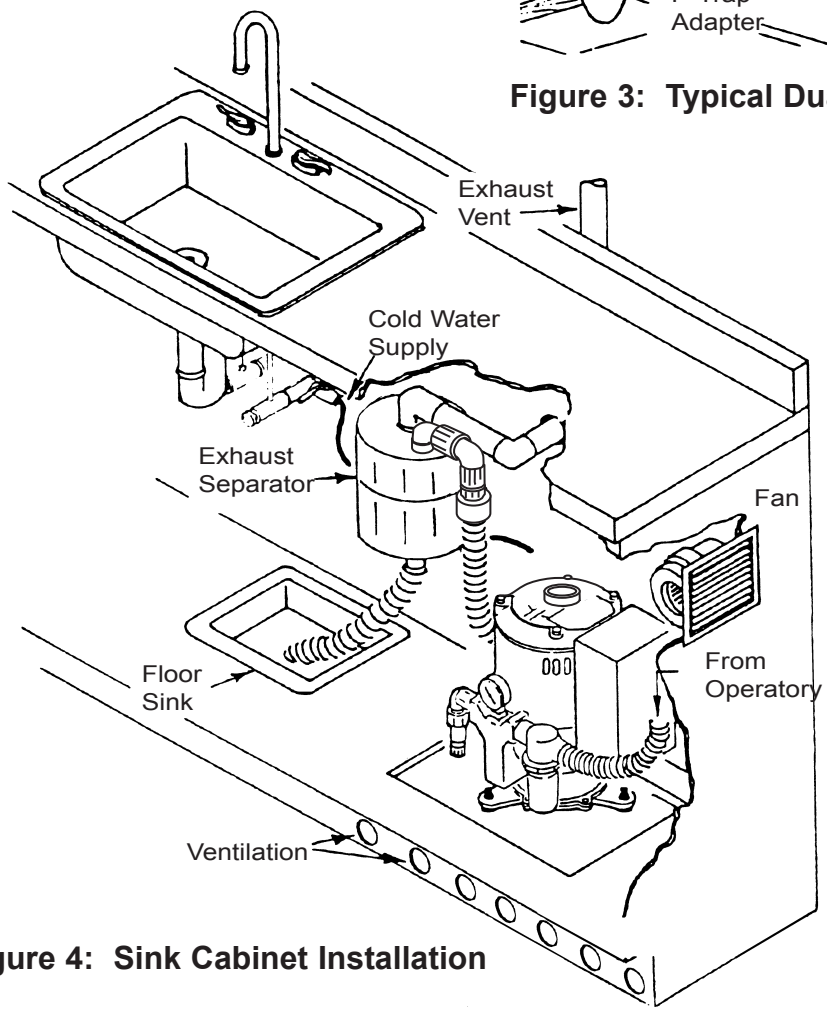


Figure 4: Sink Cabinet Installation

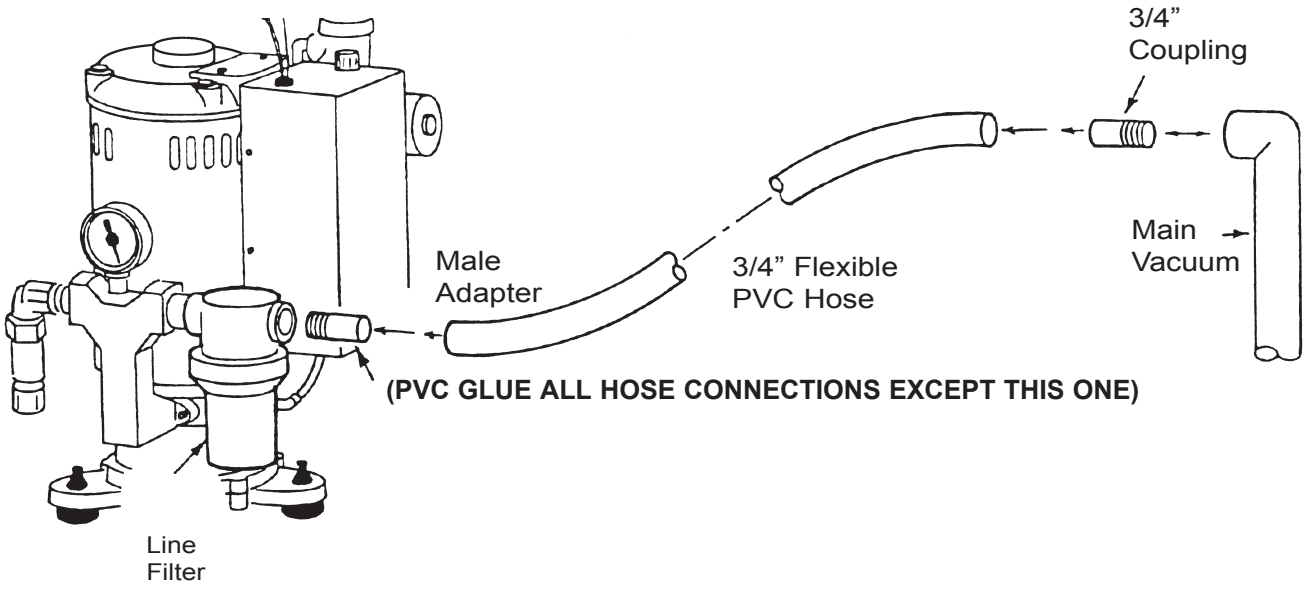
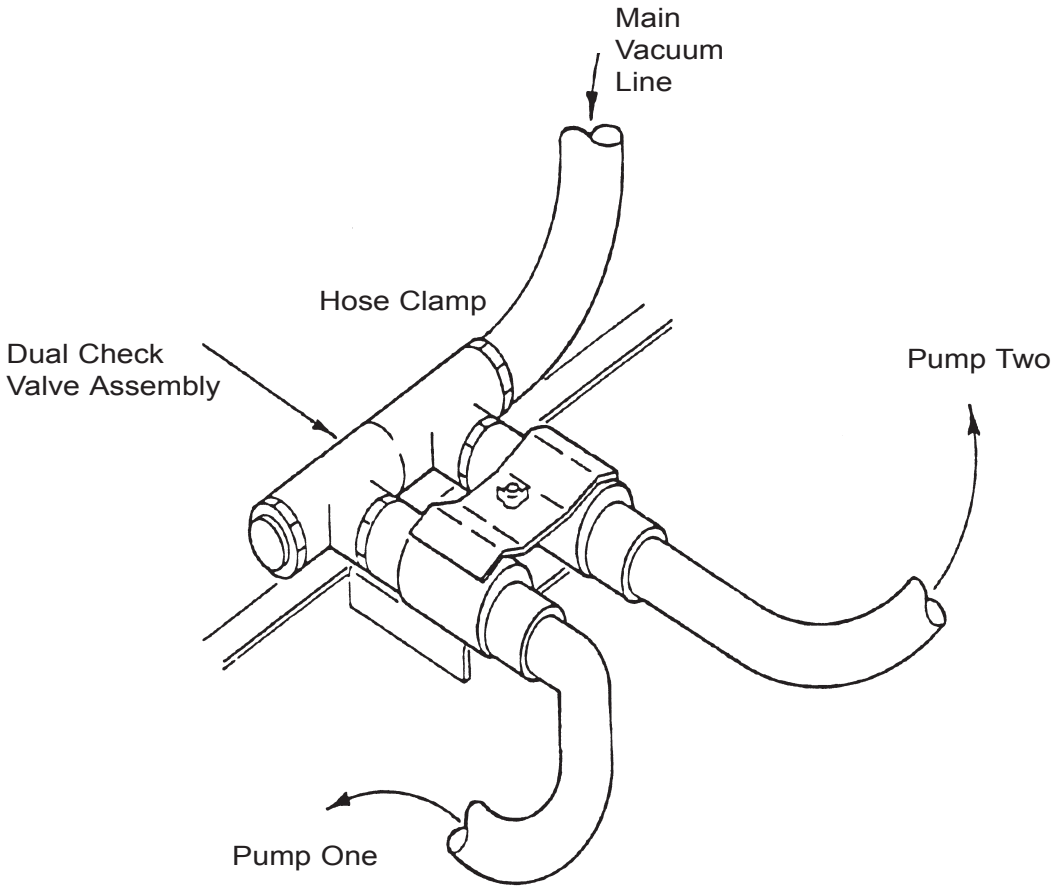


Figure 5: Vacuum Connection For Single GoldenVac Pump



GLUE ALL EXHAUST HOSE CONNECTIONS SECURELY WITH PVC GLUE

Figure 6: Vacuum Connection For Dual GoldenVac Pump

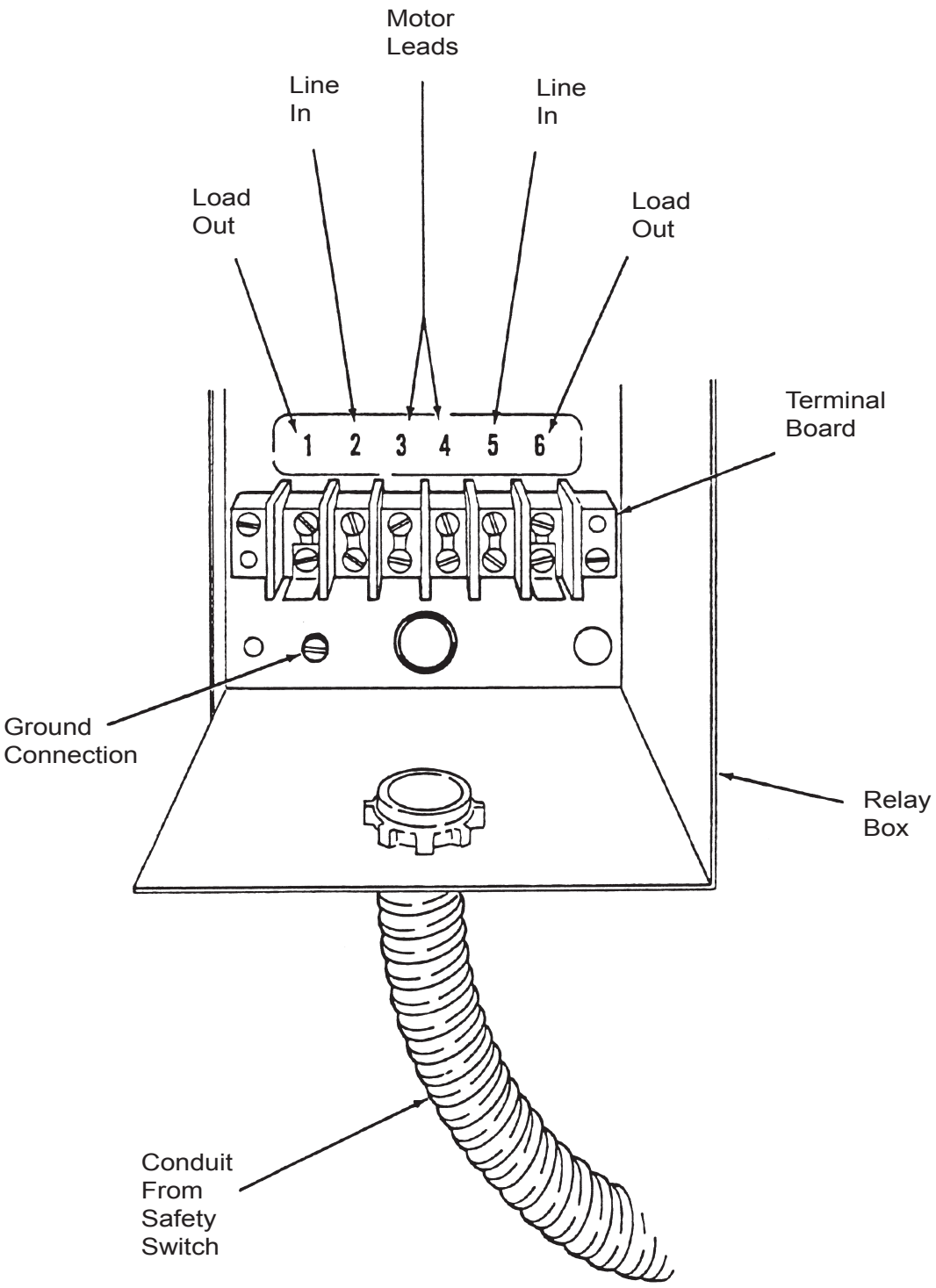


Figure 9: Line Voltage Connections

FIGURE 10. HOW TO SIZE A VACUUM AND AIR SYSTEM

BOTH THE DRAWING AND THE SIZE CHART ARE SIZED TO ACCOMMODATE AN AIR AND VACUUM SYSTEM FOR 100% USE. THIS IS DONE TO PRODUCE GOOD AIR AND VACUUM PRESSURES AND FLOWS AT ALL TIMES, FROM ALL OPERATORIES. YOU ALWAYS USE THIS DESIGN FOR A PROPER SYSTEM IN THE EVENT ALL SIX OPERATORIES ARE USED SIMULTANEOUSLY; YOU WOULD NOT HAVE ANY SUCTION LOSS DUE TO IMPROPERLY SIZED MAIN OR BRANCH LINES.

IMPORTANT: DO NOT FIGURE OR DRAW ANY NITROUS OR SINK EVACUATION TERMINATIONS UNTIL YOU HAVE A COMPLETE SYSTEM SHOWING TERMINATION TO HIGH VOLUME EVACUATION CONNECTIONS NORMALLY FOUND IN DENTAL UNIT JUNCTION BOX.

ADDITIONAL 3/4" VACUUM LINES FOR NITROUS OXIDE SCAVENGE AND EVACUATOR SINKS CAN BE ADDED WITHOUT AFFECTING MAIN OR BRANCH LINE SIZES. SEE FIG. 8. EXCEPT IN AN OVERHEAD SYSTEM, SEE FIG. 5.

STEP 1. COUNT THE TOTAL NUMBER OF OPERATORIES TO BE PLUMBED AND SELECT THE VACUUM LINE SIZE FOR EITHER PVC OR COPPER PIPE. SEE THE LINE SIZING CHART IN FIGURE 2.

STEP 2. THIS PIPE SIZE YOU HAVE SELECTED WILL BE THE STARTING LINE OR MAIN LINE AND BEGINS AT THE EQUIPMENT LOCATION. THE VACUUM LINE WILL USE A MAIN LINE RISER ASSEMBLY AS SHOWN IN FIGURES 1 AND 3.

STEP 3. AFTER FIGURING YOUR MAIN LINE SIZE, YOU MAY SELECT THE BEST LOCATION TO SPLIT YOUR PIPING LINES TO BEST ACCOMMODATE THE OPERATORIES. IN FIGURE 3 WE HAVE SELECTED TO SPLIT THE SYSTEM INTO TWO ZONES; "A" AND "B". EACH ZONE BECOMES ITS OWN SYSTEM FOR PURPOSES ON SIZING THE LINES PROPERLY. IF OPERATORIES ARE IN A STRAIGHT LINE, ZONE SPLITTING WILL NOT BE REQUIRED; SEE NOTE FIG. 2.

STEP 4. STARTING FROM ZONE SPLIT LOCATION, COUNT REMAINING OPERATORIES AND LOOK AT THE SIZING CHART IN FIGURE 2. SELECT CORRECT BRANCH ZONE LINE DIAMETER. IN FIGURE 3, ZONE "B" HAS 3 OPERATORIES REMAINING WHICH CORRESPONDS WITH 1" VACUUM LINE AND 1/2" AIR LINE IN FIGURE 2 LINE SIZING CHART. THIS SIZING LOGIC WILL CONTINUE TO THE LAST INLET ON ALL ZONES.

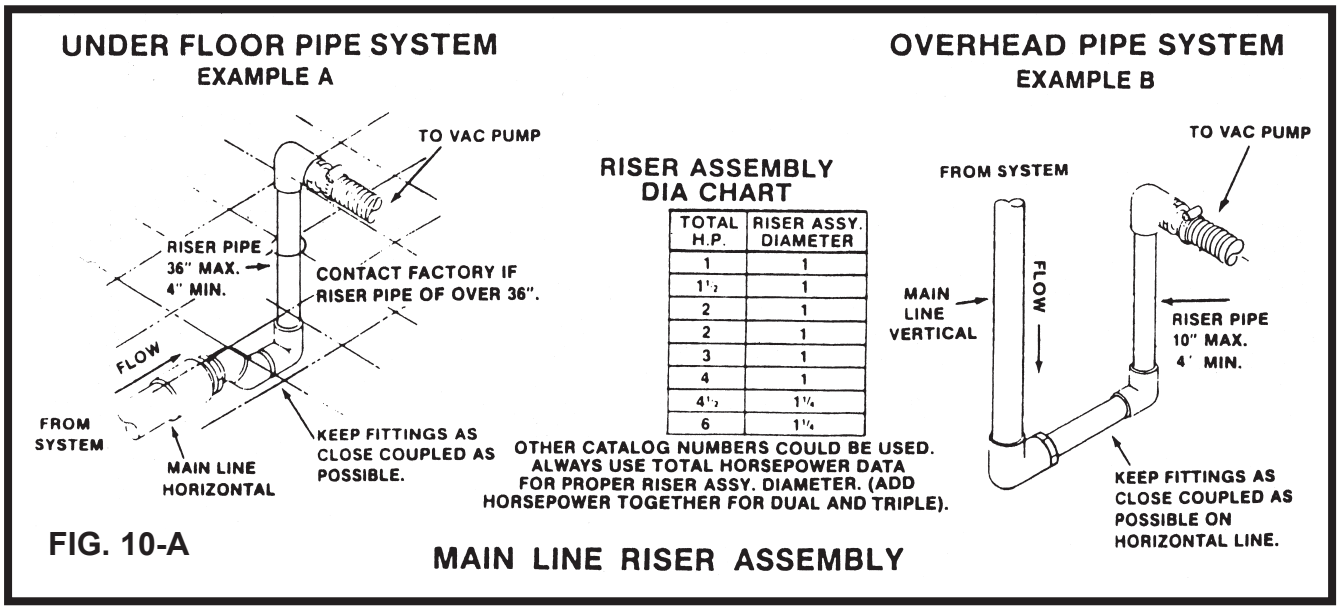


FIG. 10-A MAIN LINE RISER ASSEMBLY

FIG. 10-B VACUUM AND AIR LINE SIZING CHART

ONE TO TWELVE OPERATORIES FOR OVERHEAD SYSTEM SEE FIG. 5.

NUMBER OF OPERATORIES SEE NOTE	VACUUM LINE PIPE DIAMETER	
	PVC sch 40	COPPER TYPE "M"
1	3/4"	3/4"
2	1"	1"
3	1"	1"
4	1 1/4"	1 1/4"
5	1 1/4"	1 1/2"
6	1 1/4"	1 1/2"
7	1 1/2"	1 1/2"
8	1 1/2"	1 1/2"
9	1 1/2"	2"
10	2"	2"
11	2"	2"
12	2"	2"

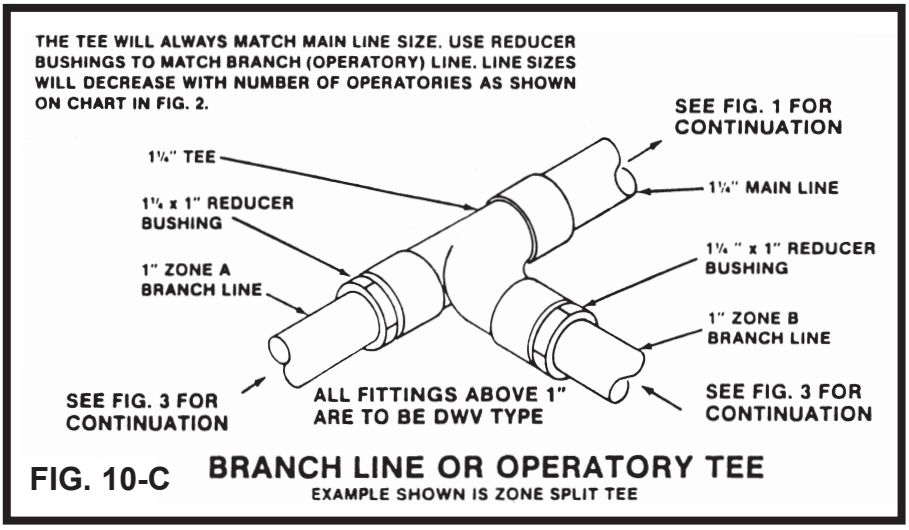


FIG. 10-C **BRANCH LINE OR OPERATORY TEE**
EXAMPLE SHOWN IS ZONE SPLIT TEE

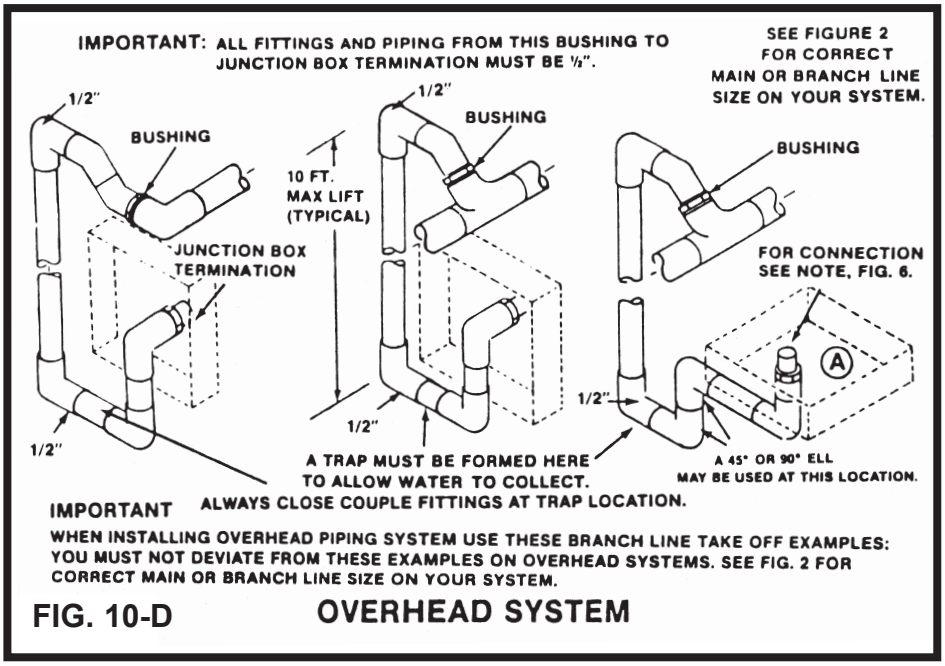


FIG. 10-D **OVERHEAD SYSTEM**

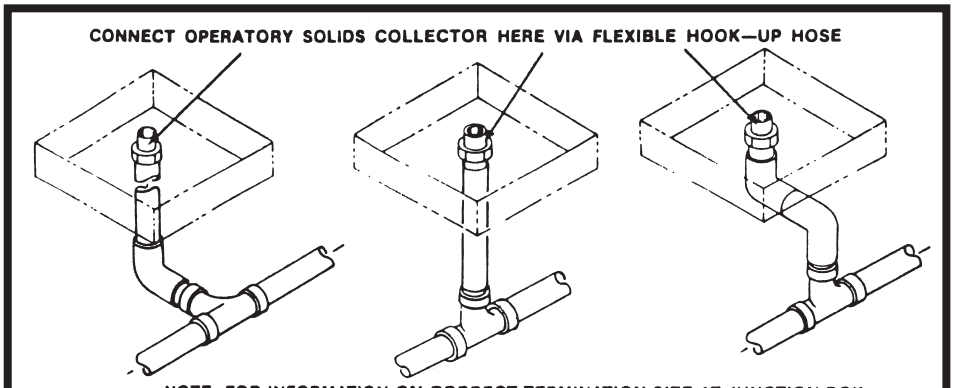


FIG. 10-E **TYPICAL BRANCH LINE TAKE OFF**

DO NOT ALLOW ANY PIPE TO BRANCH OFF ANOTHER PIPE BELOW THE CENTERLINE OF THE MAIN OR BRANCH LINE PIPE. SEE FIG. 6 FOR CORRECT BRANCH LINE TAKE OFF.

IMPORTANT

TO PREVENT SUCTION LOSS, DO NOT ALLOW A TRAP TO BE PLUMBED AT ANY LOCATION IN THE SYSTEM EXCEPT MAIN LINE RISER ASSEMBLY (FIG. 1) AND OVERHEAD VERTICAL RISER (FIG. 5).

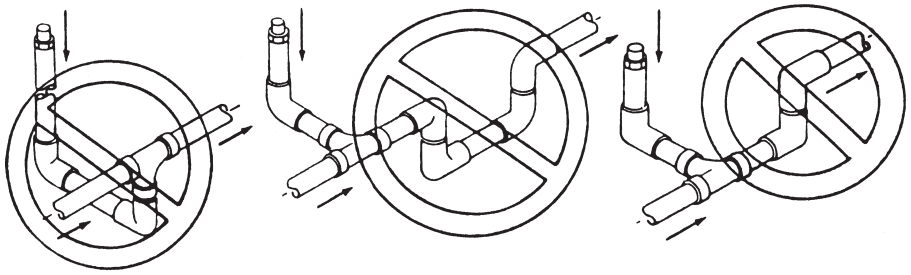
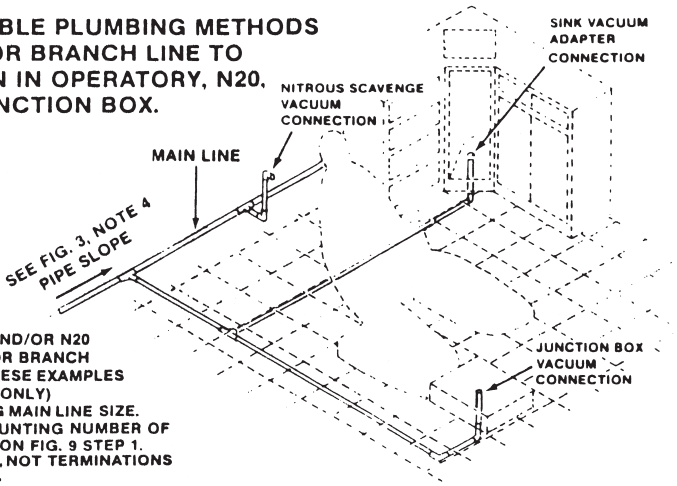


FIG. 10-F MOST COMMON VACUUM PLUMBING ERRORS

THREE POSSIBLE PLUMBING METHODS FROM MAIN OR BRANCH LINE TO TERMINATION IN OPERATORY, N20, SINK AND JUNCTION BOX.



ALWAYS HOOK SINK AND/OR N20 SCAVENGE TO MAIN OR BRANCH LINE AS SHOWN IN THESE EXAMPLES (USING 3/4 INCH PIPE ONLY) WITH OUT AFFECTING MAIN LINE SIZE. REMEMBER WHEN COUNTING NUMBER OF OPERATORIES BASED ON FIG. 9 STEP 1. COUNT OPERATORIES, NOT TERMINATIONS IN THE OPERATORIES.

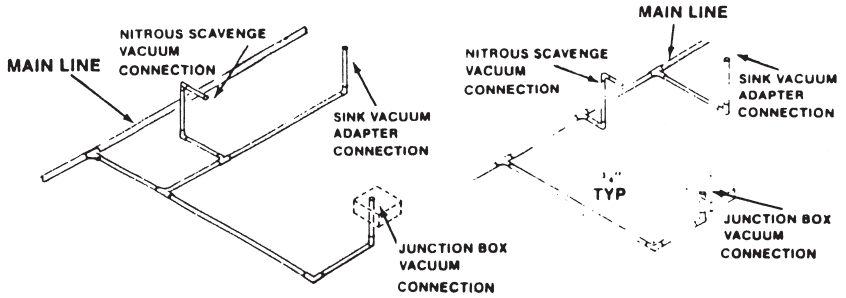
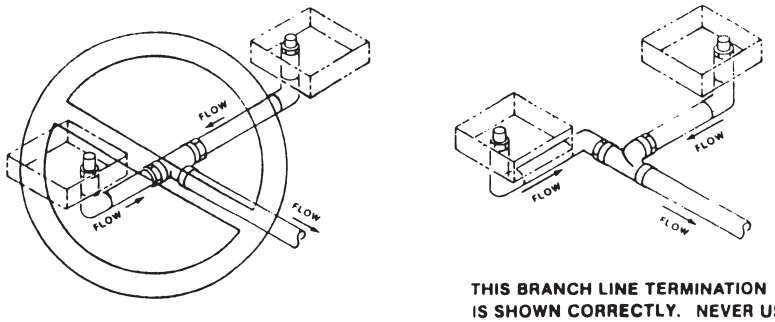


FIG. 10-G N2O AND SINK VACUUM CONNECTIONS

BRANCH LINE TERMINATION TO TWO OPERATORIES



THIS BRANCH LINE TERMINATION IS SHOWN CORRECTLY. NEVER USE THE INCORRECT EXAMPLE SHOWN AT LEFT FOR VACUUM SYSTEMS.

FIG. 10-H

NOTES

1. HANGER SUPPORTS REQUIRED EVERY EIGHT FEET OR TO SUPPORT PIPING WITHOUT SAGS.
2. ALWAYS STUD VACUUM AND AIR LINE INTO WALL OR FLOOR JUNCTION BOX PER MANUFACTURER'S TEMPLATE. IF 1/2" IS REQUIRED, YOU MAY REDUCE PIPE SIZE AS CLOSE AS POSSIBLE TO TERMINATION POINT. IF A LARGER SIZE IS REQUIRED, THIS CHANGE MUST BE MADE WITHIN JUNCTION BOX.
3. ALL VACUUM PIPING ILLUSTRATIONS AND DRAWINGS ARE SHOWN WITH PVC PIPE SCH 40 AND DWV TYPE FITTINGS. ALWAYS USE SWV FITTINGS. NOT AVAILABLE BELOW 1 1/4".
4. ALL VACUUM PIPING SHOULD GRADE TOWARD EQUIPMENT LOCATION 1/4" IN TEN FEET.
5. WHEN INSTALLING AN OVERHEAD SYSTEM, USE THE NEXT LARGER VACUUM PUMP MODEL FOR BEST RESULTS.
6. IF OVERHEAD SUCTION LINE TERMINATES IN A FLOOR JUNCTION BOX, USE THIS EXAMPLE. TRAP MUST BE INSTALLED BEFORE LINE RISES AS SHOWN. SEE FIG. 10-H
7. INSTALL TRAP IN MAIN LINE JUST BEFORE HOOKING THE FLEXIBLE INTAKE HOSE CONNECTION TO PUMPS. FIG. 10-A
8. IN AN OVERHEAD SYSTEM, THE MAIN VACUUM LINE WILL DROP DOWN TO THE SWIRL-VAC LOCATION USING REQUIRED PIPE SIZE. ALL OVERHEAD SYSTEMS ARE SIZED IN THE SAME MANNER AS THE SYSTEM SHOWN HERE.
9. DO NOT RUN POLY FLO TUBING BELOW SLAB. ALWAYS RUN PIPE ABOVE SLAB, THEN MAKE POLY FLO CONNECTION.
10. FIG. 10-B LINE SIZING CHART SHOWS MAIN VACUUM LINE SIZE DIAMETER FOR 4, 5 AND 6 OPERATORIES AS 1 1/4" DIAMETER. IF 1 1/4" DIAMETER IS NOT AVAILABLE, YOU MAY USE 1 1/2" DIAMETER.
11. RISER ASSEMBLY MUST ALWAYS BE USED. SEE FIG. 10-A EXAMPLE A FOR RISER ASSEMBLY SPECIFICATIONS.
12. CONTROL PANEL SUPPLY LINES SHOULD BE CONNECTED CLOSE TO EQUIPMENT ROOM AND MUST ALWAYS CONNECT VERTICALLY TO MAIN LINE AS SHOWN.
13. ALTERNATE CLEAN AIR INTAKE SOURCE SHOULD BE EITHER PVC OR COPPER PIPE, CONNECTED TO HVC. RETURN AIR DUCT. SEE AIR COMPRESSOR DIAGRAM FIG.10-C

GOLDENVAC WET VACUUM
SERVICE AND MAINTENANCE INFORMATION

WEEKLY SERVICING

The steps outlined below are recommended to maximize the life of your GoldenVac Wet Vacuum. Tech West Vacuum recommends servicing your unit once per week.

1. Clean vacuum filter bowl and screen by turning the pump “OFF” and unscrewing the vacuum filter bowl. Rinse bowl and screen under **cold** water. Replace as necessary or if damaged. Ensure the gasket provided is placed correctly in the filter bowl before reassembly.

2. Flush the pump and **ALL** vacuum lines with an approved non-foaming, dental vacuum cleaner. Tech West recommends using our proprietary evacuation system cleaner, EcoStar-eVac Cleaner. **IMPORTANT:** Follow all manufacturer instructions provided on label(s).

3. Perform a visual inspection for water leakage to ensure all clamps and connections are tightly secured.

4. Ensure all gauges are performing adequately by turning the unit “ON” and is aspiring air only. All GoldenVac Wet Vacuums are factory-set per the specifications outlined in the chart below. If the gauge(s) appear to be out of range, turn the unit “OFF” and remove the vacuum relief valve. Use a phillips-head screwdriver to adjust the “tension nut”.

   One (1) complete clock-wise turn will increase the inches of Mercury (hg) by two (2).

   One (1) complete counterclockwise turn will decrease the inches of Mercury (hg) by two (2).

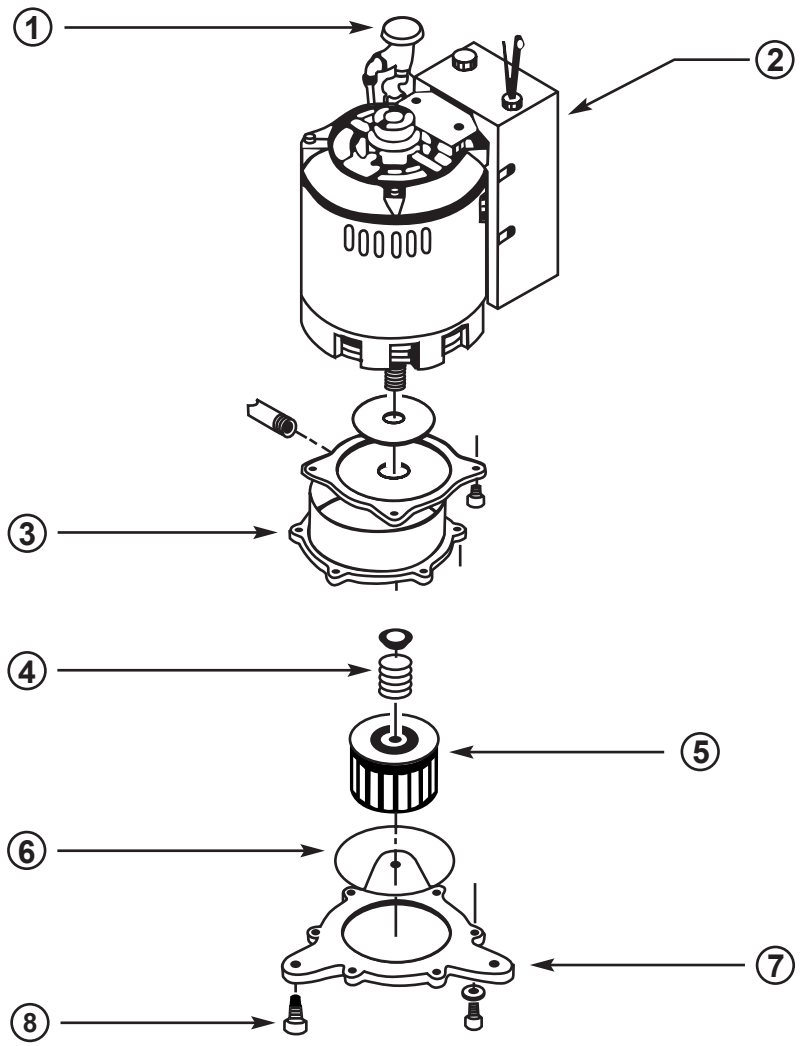
TABLE 3

GOLDENVAC (HORSEPOWER)	**1.5 - 2**
AIR ASPIRATION VACUUM LEVEL (INCHES OF MERCURY)	**12**

WARNING: DO NOT SET VACUUM LEVEL HIGHER THAN INDICATED IN THE CHART ABOVE.

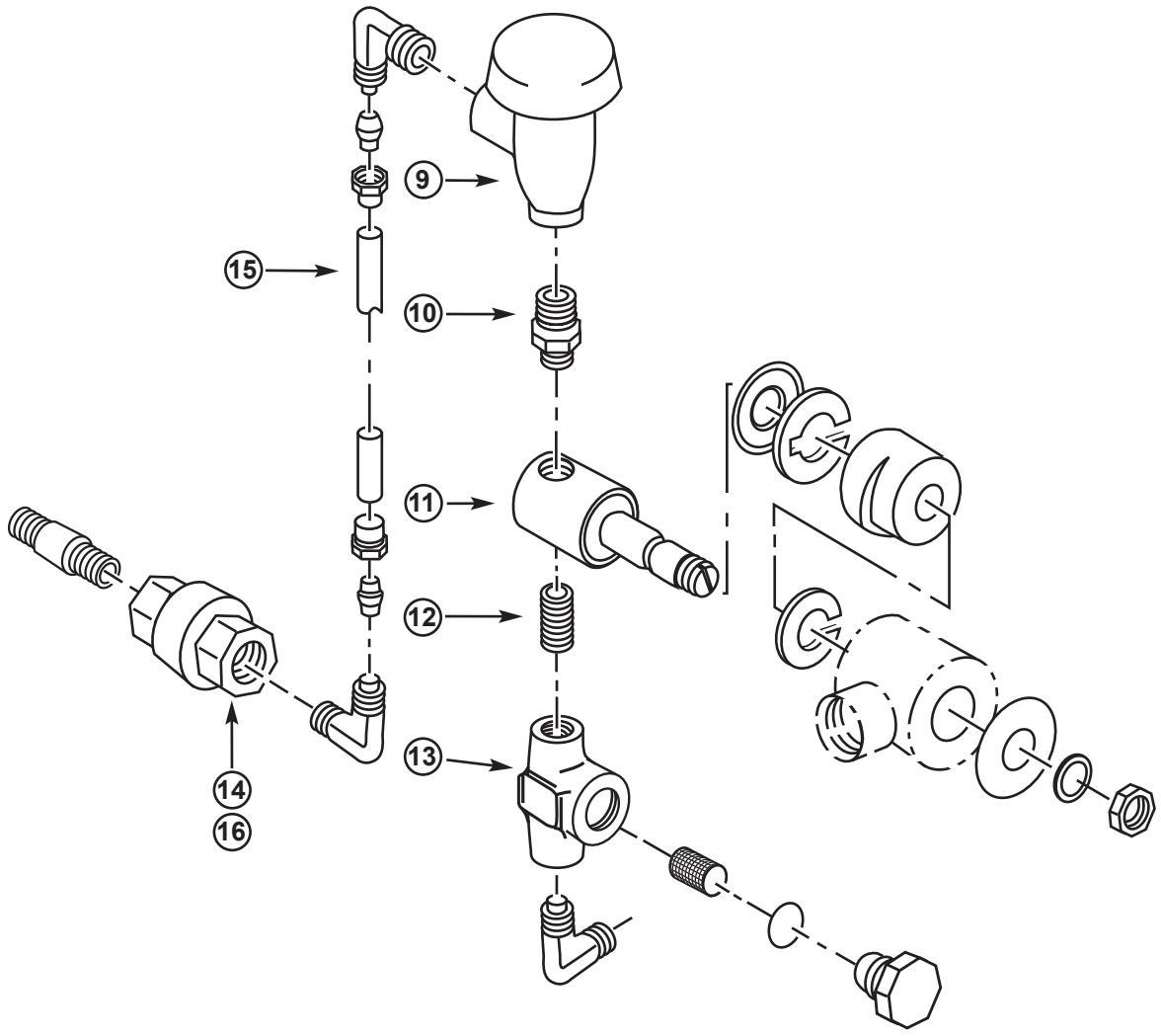
IMPORTANT: WEEKLY FLUSHING OF ALL VACUUM LINES IS RECOMMENDED TO PREVENT BLOCKAGES. BLOCKAGES ARE THE LEADING CAUSE OF FAILURES.

WARNING: DO NOT USE BLEACH, AMMONIA, OR OTHER HARSH CHEMICALS OR CLEANERS TO FLUSH THE UNIT. DOING SO CAN CAUSE DAMAGE AND WILL VOID ALL WARRANTIES.



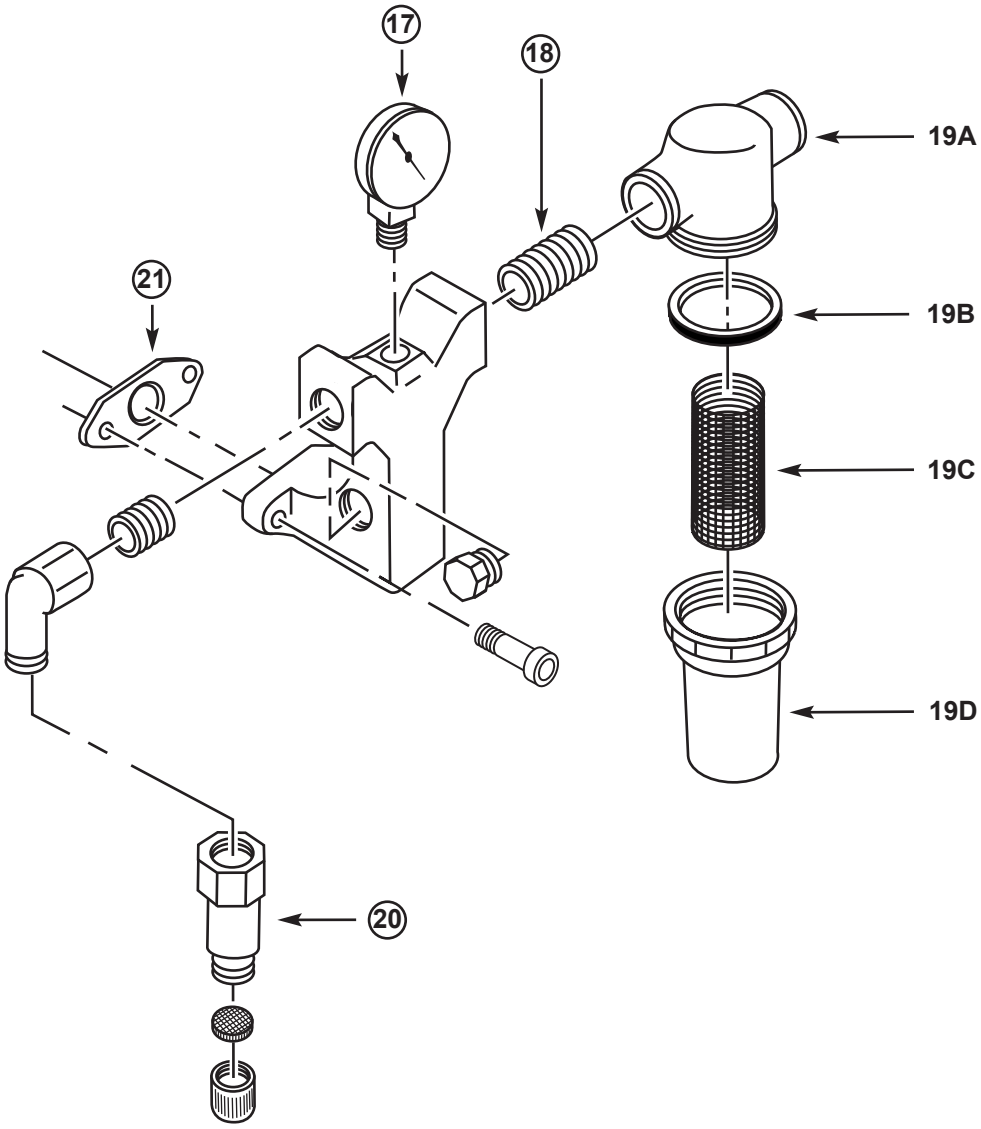
GOLDENVAC WET VACUUM 2 HP

KEY	PART NO.	DESCRIPTION	UNIT
1	WIA-100	WATER INJECTION ASSEMBLY	1
2	PRC-100	115V/230V RELAY CONTROL	1
3	SSPH	STAINLESS STEEL PUMP HOUSING	1
4	PSS-100	PUMP SHAFT SEAL	1
5	SSILP	STAINLESS STEEL IMPELLER	1
6	OR-5	5” RUBBER BASE PLATE O-RING SEAL	1
7	SSBP	STAINLESS STEEL BASE PLATE	1
8	RFVF-100	RUBBER FEET	3



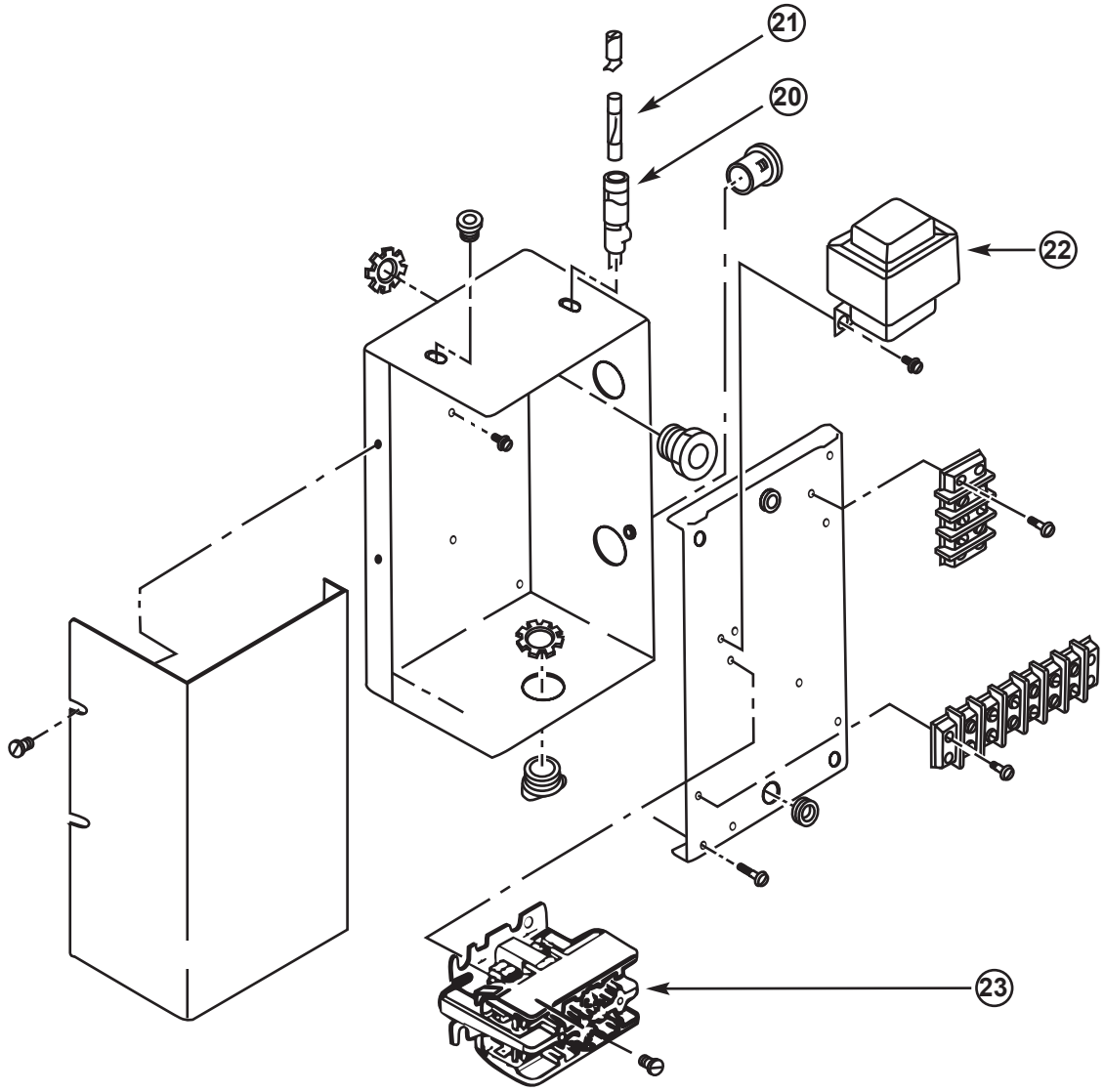
WATER INJECTION ASSEMBLY

KEY	PART NO.	DESCRIPTION	UNIT
9	PVB-100	1/4” VACUUM BREAKER	1
10	BRN-4-2	1/4” MPT x 1/8” MPT NIPPLE	1
11	PSV-115GC	115V 1/8” SOLENOID VALVE/COIL	1
12	BN-125-CL	1/8” BRASS CLOSE NIPPLE	1
13	VPS-125	1/8” WATER STRAINER	1
14	WIN-75-100	1/4” MPT INJECTION NOZZLE (NON-RECYCLERS ONLY)	1
15	PFT-250	1/4” BLUE POLY TUBE	PER. FT
16	WIN-25-100	1/4” MPT INJECTION NOZZLE (FOR RECYCLERS ONLY)	1



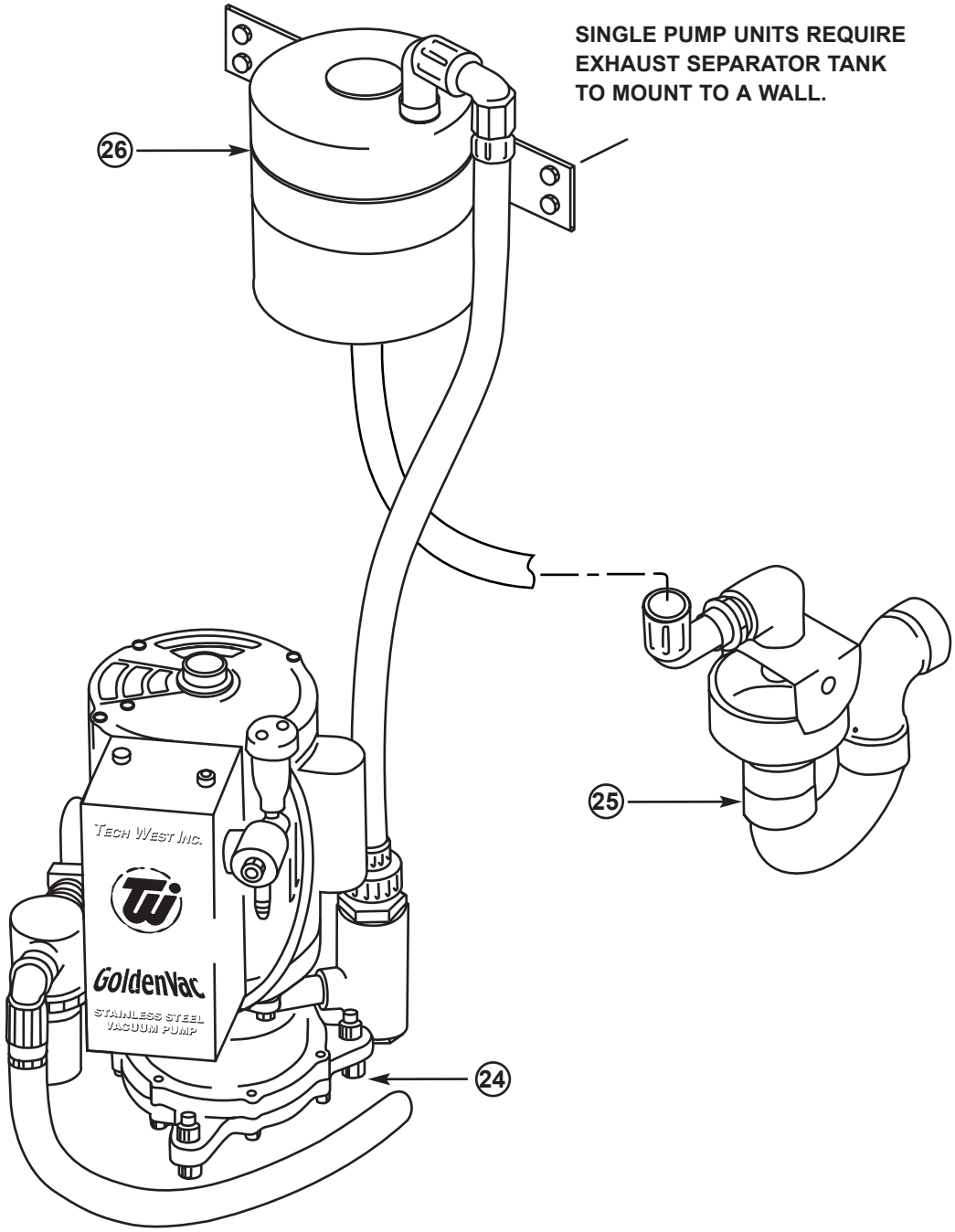
MANIFOLD AND FILTER

KEY	PART NO.	DESCRIPTION	UNIT
17	VPG-100	30” HG GAUGE	1
18	BN-750-CL	3/4” BRASS NIPPLE - CLOSED	1
19A-D	VFA-40	COMPLETE VACUUM FILTER ASSEMBLY	1
19B	VFG-100	3/4” RUBBER GASKET	1
19C	VFS-40S	40 MESH FILTER SCREEN	1
19D	VFB-100S	3/4” FILTER BOWL	1
20	VRV-100	VACUUM RELIEF VALVE	1
21	MG-100	MANIFOLD GASKET	1
17-19	VPMA-100	COMPLETE MANIFOLD ASSEMBLY	1



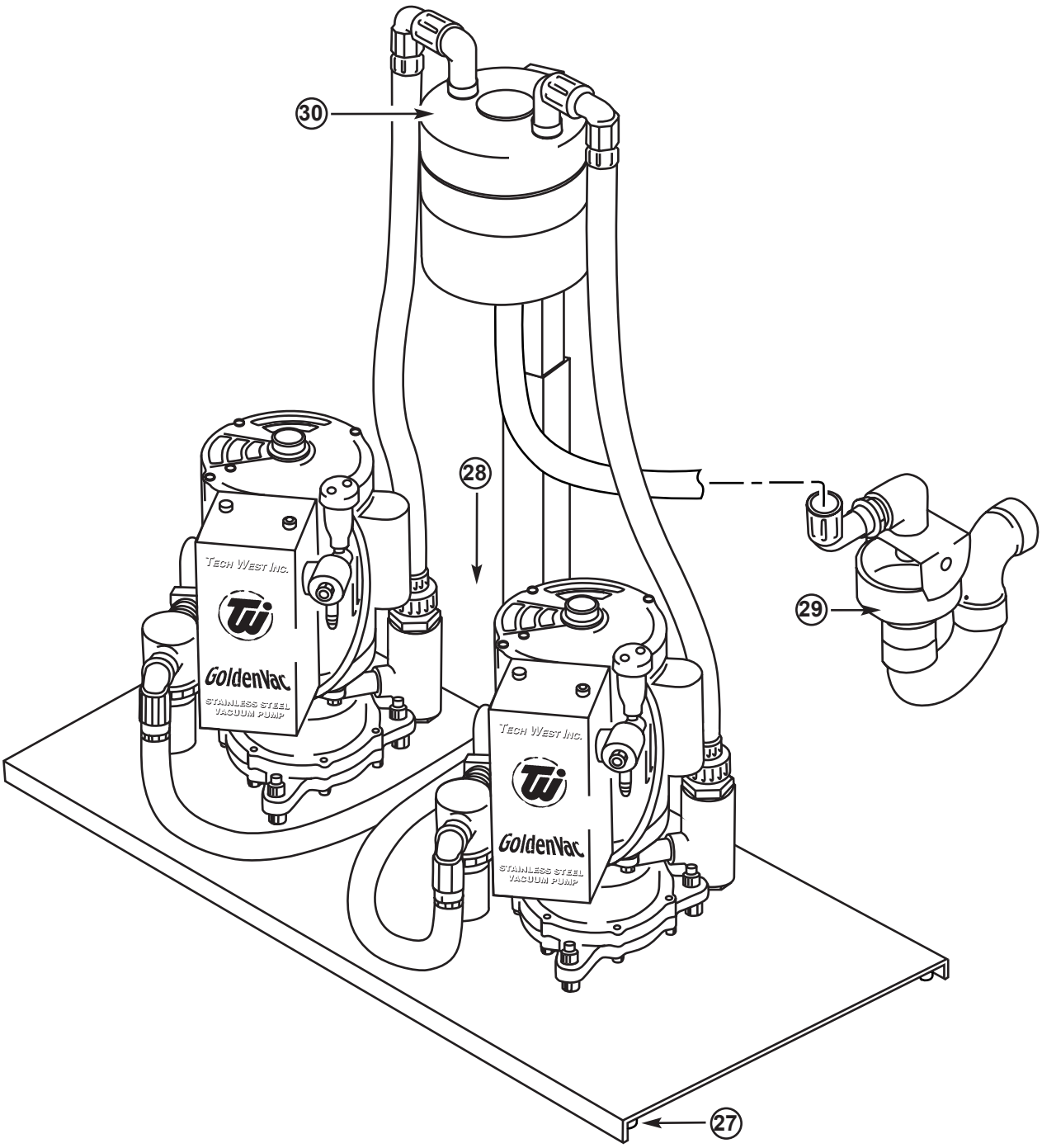
LOW VOLTAGE RELAY CONTROL BOX

KEY	PART NO.	DESCRIPTION	UNIT
20	FH-100	FUSE HOLDER	1
21	SBF-250	1/4 AMP SLOW BLOW FUSE	2
22	PT-100	24V/30A AMP TRANSFORMER	1
23	PR-100	24V RELAY CONTACTOR	1



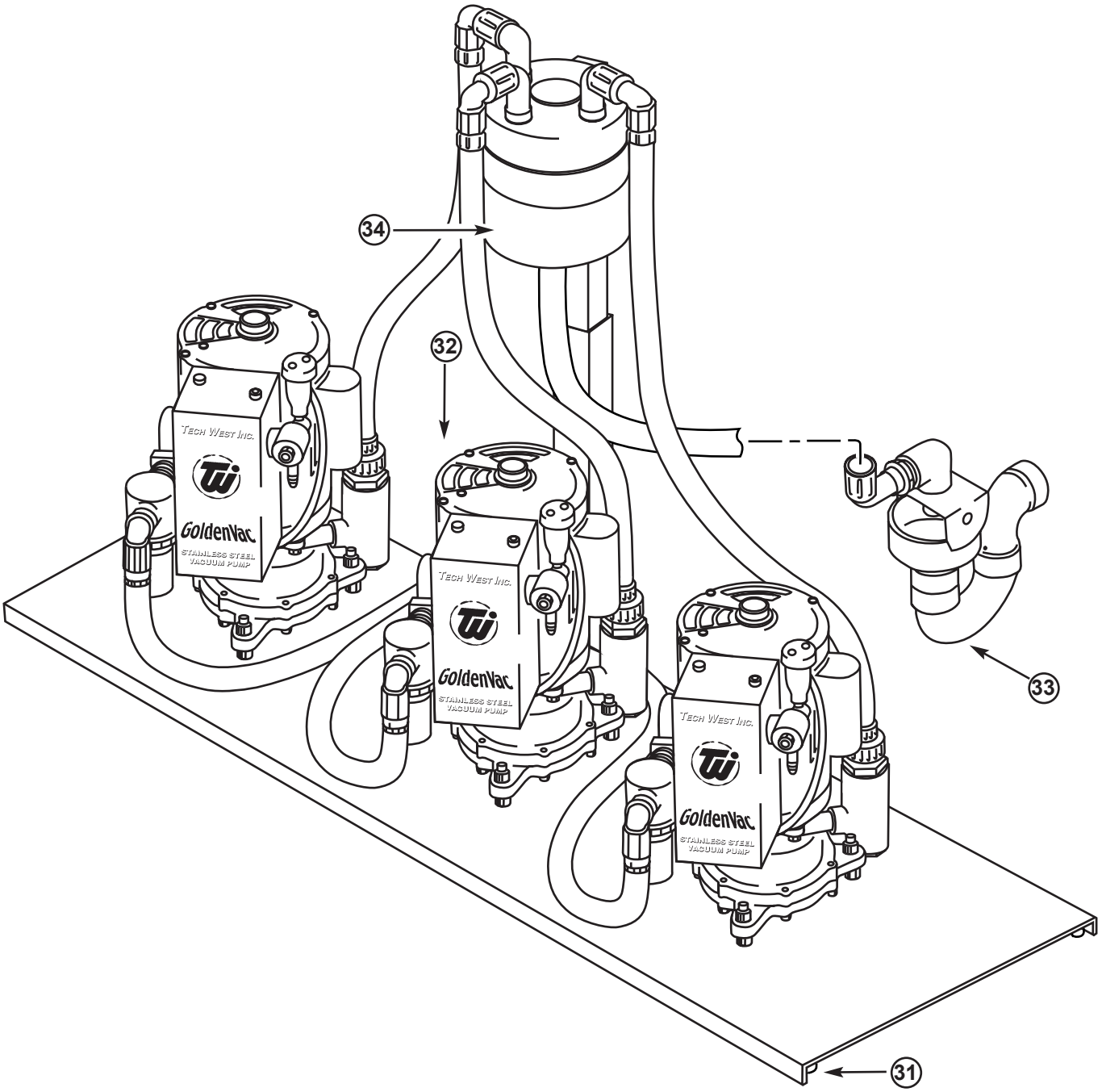
SINGLE GOLDENVAC WET VACUUM

KEY	PART NO.	DESCRIPTION	UNIT
24	RFVF-100	RUBBER FEET FOR VACUUM PUMP	3
25	PTA-100	P-TRAP ASSEMBLY	1
26	ES-1	EXHAUST SEPARATOR TANK	1



DUAL GOLDENVAC WET VACUUM

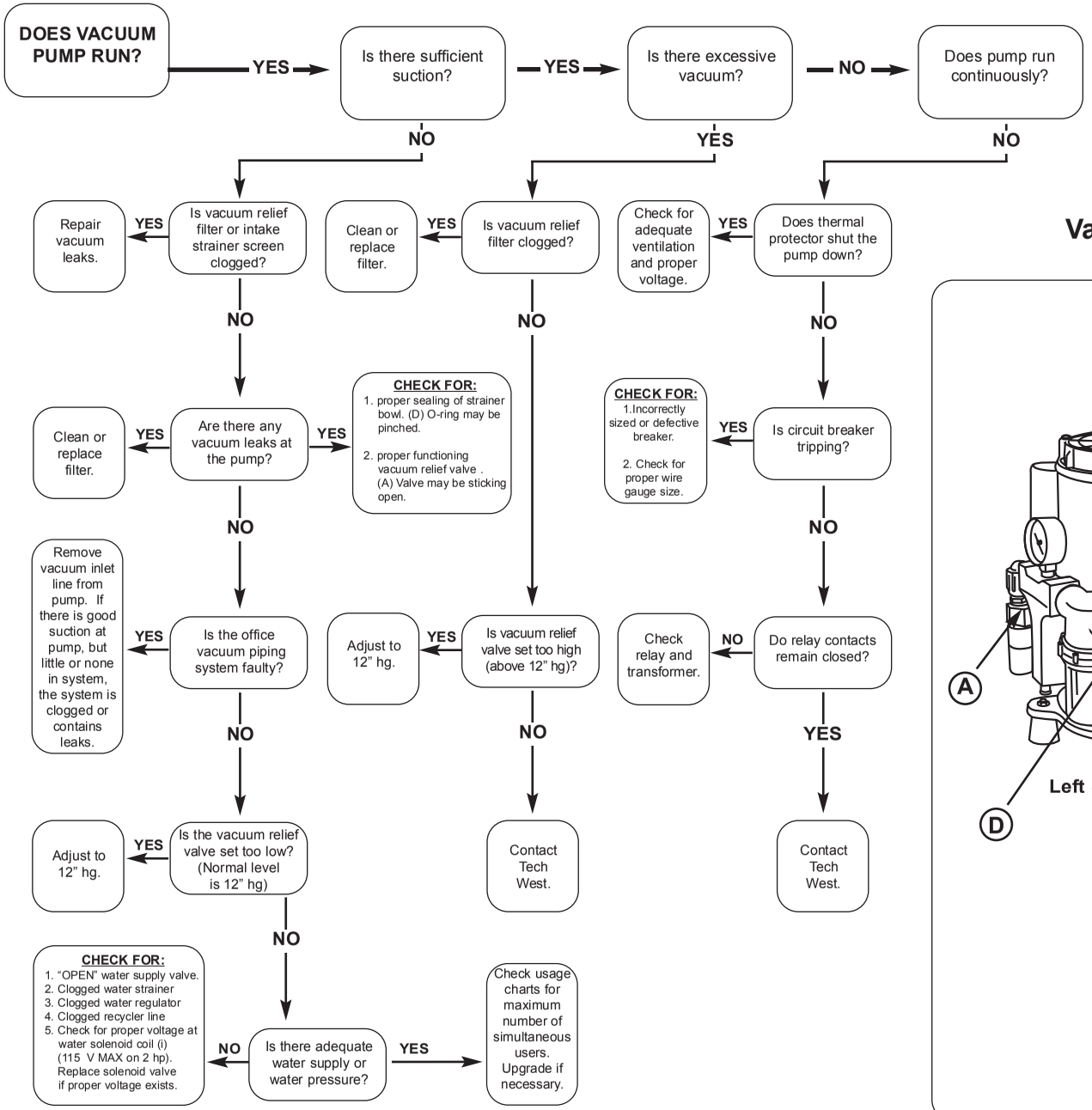
KEY	PART NO.	DESCRIPTION	UNIT
27	RFV-100	RUBBER FEET FOR VACUUM PUMP	4
28	DCV-100	DUAL CHECK VALVE ASSEMBLY	1
29	PTA-100	P-TRAP ASSEMBLY	1
30	ES-2	EXHAUST SEPARATOR TANK	1



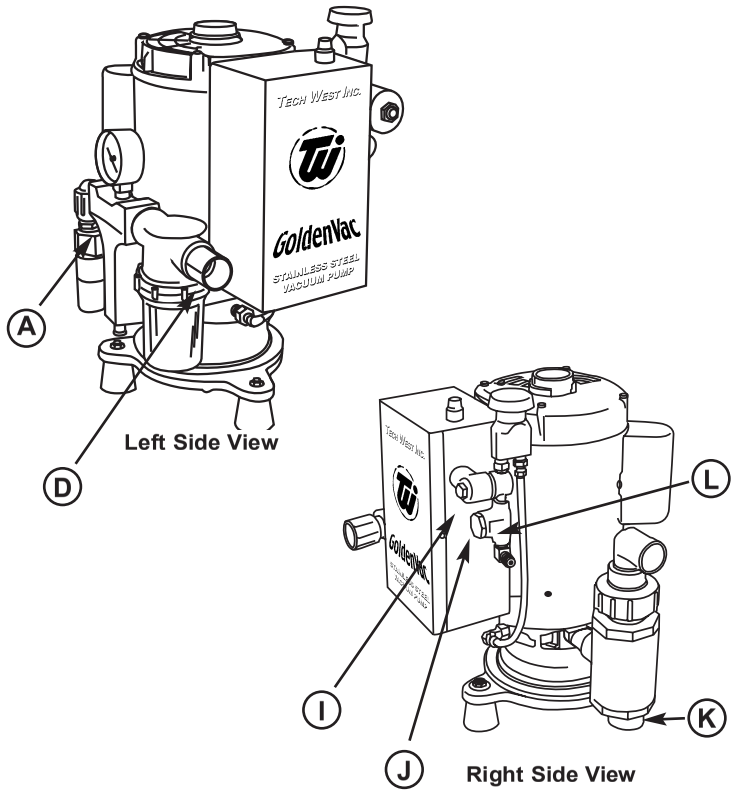
TRIPLE GOLDENVAC WET VACUUM

KEY	PART NO.	DESCRIPTION	UNIT
31	RFV-100	RUBBER FEET FOR VACUUM PUMP	6
32	TCV-100	TRIPLE CHECK VALVE ASSEMBLY	1
33	PTA-100	P-TRAP ASSEMBLY	1
34	ES-3	EXHAUST SEPARATOR TANK	1

Troubleshooting Chart



Vacuum Component Diagram



IMPORTANT SAFETY INFORMATION & WARNINGS

Installation Warnings:

- Manufacturer recommends installation to be performed by qualified service personnel.
- Manufacturer recommends using a forklift or pallet jack to move and set unit(s).

FAILURE TO USE PROPER EQUIPMENT TO MOVE AND INSTALL UNIT(S) COULD RESULT IN INJURY

Potential Hazards:

- Only components meeting IFC safety standards are used to assemble unit(s).
- Manufacturer recommends using appropriate signage to warn of potential hazards.
- Power cord should be routed along the wall and away from walkway to avoid tripping.
- All components are selected and engineered to prevent overloading of any kind to the unit(s) and are within the acceptable industry standard temperature limits.
- Design of the unit(s) ensures that enclosures and other components meet the requirements as mentioned in IEC-60601-1
- See Page 2 of this manuel for information related to Environmental Operating Conditions.
- Humidity testing has been performed asper IEC60601-1
- All components are mounted securely and protected by suitable means such as screws, nuts, bolts, UL approved sheaths, crimping etc. per the assembly instructions.
- Adhere to all manufacturer warning and safety labels located on unit(s).

Vacuum Relief Safety Information:

- Safety Valves and Pressure gauges are calibrated prior to shipping.
- Engage vacuum relief valve to expel stored pressure prior to servicing.
- All units are factory set for 12 inches of Mercury (hg)

DO NOT ADJUST ABOVE 12 INCHES OF HG. FAILURE TO COMPLY CAN RESULT IN INJURY AND DAMAGE TO THE UNIT. DOING SO WILL VOID ALL WARRANTIES.

Tech West recommends contacting a qualified technician for all service inquires. DO NOT ATTEMPT TO SERVICE THE UNITY YOURSELF.

Maintenance:

- Manufacturer recommends maintenance to be performed by qualified service personnel.
- Disconnect power to unit(s) from main power source prior to performing any service or maintenance.
- All detachable parts including accessories require the use of tools and are labeled with the make, model number and dimensions on the packaging.

Electrical Safety Information:

- Electrical safefy testing has been performed per IEC 60601-1
- Disconnect power to unit(s) from main power source prior to performing any service or maintenance.
- All critical components are approved with minimum flammability rating of V2.
- Motors are provided with Class B insulation. Thermal overload protection and current protection.
- Transformer is provided with Class A insulation and is protected with a slow blow 0.25A fuse.
- Temperature tests have been performed and found to be in the acceptable range per IEC 60601-1
- Design tolerates single fault failure and fails in safe mode.
- All terminals are pre-wired to meet electrical specifications at manufacturers warehouse and will not need to be accessed during installation.
- Units are tested to ensure proper connection and grounding before being shipped.
- System is fused to shut off power to unit in the event of excess current draw from a short circuit caused by liquid spill.

FAILURE TO ADHERE TO THE WARNINGS LISTED ABOVE COULD RESULT IN INJURY AND WILL VOID ALL WARRANTIES

WARRANTY & RETURN INFORMATION

Standard Warranty Period

- The GoldenVac Wet Vacuum, comes with the following standard warranties:
  - 10 years on Stainless Steel components
  - 5 years on Motor Shafts
  - 3 years on all other components

Warranty Claims Process

- If you believe the unit is in need of repair, please call your preferred dental dealer and speak with a qualified technician.

Warranty Disclosures

- Improper installation without adequate ventilation will void all manufacturer warranties.
- Improper installation in spaces where temperatures will exceed manufacturers recommendations will void all warranties.
- Improper installation of air and or water lines will void all warranties.
- Improper connections for intake and exhaust will void all warranties.
- Improper installation without adequate voltage and electrical connections will void all warranties.
- Failure to adhere to manufacturers recommendations for installation and service will void all warranties.
- Units purchased in error are subject to a 15% restocking fee plus applicable freight charges.

Return Policy

- No returns are authorized without first acquiring a Returned Merchandise Authorization (R.M.A.)
- All returns are subject to a 15% restocking fee.
- No returns are authorized after 60 days from the date of shipping.

DATE	VACUUM FILTER	VACUUM SCREEN	FLUSH LINES	GAUGE(S)	PERFORMED BY

TECH WEST INC.

Manufacturers of Dental Vacuum
and Air Systems

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