

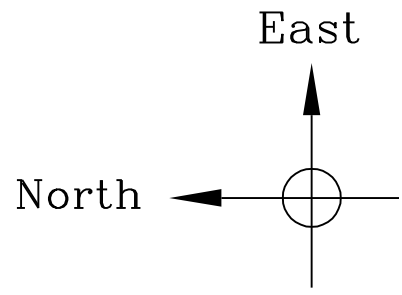
| Item | Part No. | Description | QTY |
|------|-----------------|---|-----|
| 1 | 9698923 | Turbo-V 551 Navigator Pump, 8 in. CF | 5 |
| 2 | 9699544 | Turbo-V 550 Navigator Controller 120/220 V - 50/60 Hz | 5 |
| 3 | 9699304 | Turbo-V 551 Inlet Screen DN 160 | 5 |
| 4 | 9699366 | Pump, Turbo-V70, 4.5"CF | 2 |
| 5 | 9699505 | Controller, Turbo-V70, Rack, 120V | 2 |
| 6 | 9699300 | Inlet Screen, DN 63 | 2 |
| 7 | PTS03001UNIV | Pump, Triscroll 300, 1 Phase, US Cord | 2 |
| 8 | TAR4CS100QF | Filter Trap, Copper Wool Filter, 4" Body, QF25 Flanges | 2 |
| 9 | 12144-PA44-AAN1 | VAT Series 12 Gate Valve, DN160, Pneumatic, ISO Flange, Pos. Ind., NW25 Ports | 4 |
| 10 | 01034-KE41-0001 | VAT Series 10 Gate Valve, DN50, Pneumatic Single Acting, NW50 Flange, Pos. Ind. | 2 |
| 11 | L8281332 | Right-Angle Block Valve - Air-operated - 24VDC - KF25 | 15 |
| 12 | L8350301 | Multi-gauge Basic Unit, 110/115/230 | 1 |
| 13 | L8324301 | PCB Assembly For Multi-gauge, Remote I/O | 1 |
| 14 | L8321301 | PCB Assembly For Multi-gauge, UHV Ion Gauge | 2 |
| 15 | 275196 | 275 Convectron Gauge - KF25 Welded Flange | 8 |
| 16 | 7360 | Convectron Gauge Connector Kit | 8 |
| 17 | KC02000276 | Cross, 4 Way, NW50, 2.76" Clearance, Stainless Steel | 2 |
| 18 | KT02000276 | Tee, NW50, 2.76" Clearance, Stainless Steel | 3 |
| 19 | KE02000277 | Elbow, NW50, 2.76" Clearance, Stainless Steel | 2 |
| 20 | KC50SV | Seal, Centering Ring, NW50, Stainless Steel, Viton O-Ring | 22 |
| 21 | KQ50AW | Clamp, Quick, Wing Nut, NW50, Black | 22 |
| 22 | KC01000197 | Cross, 4 Way, NW25, 1.97" Clearance | 4 |
| 23 | KT01000197 | Tee, NW25, 1.97" Clearance | 4 |
| 24 | KL010003940 | Flexible Coupling, Non-Braided, NW25, 39.4" Long | 5 |
| 25 | KF250000SB | Flange, KF, Blank, NW25, Stainless Steel | 12 |
| 26 | KC25SV | Seal, Centering Ring, NW25, Stainless Steel, Viton O-Ring | 60 |
| 27 | KQ25AW | Clamp, Quick, Wing Nut, NW25, Black | 60 |
| 28 | KC16AV | Seal, Centering Ring, NW16, Aluminum, Buna-N O-Ring | 4 |
| 29 | KQ16AW | Clamp, Quick, Wing Nut, NW16, Black | 4 |
| 30 | KRC1625A | Conical Reducer, NW25 To NW16, Stainless Steel | 4 |
| 31 | FG0800CI | 8" CFF Copper Gaskets, 10/pkg | 1 |
| 32 | FG0450CI | 4.5" CFF Copper Gaskets, 10/pkg | 1 |
| 33 | FG0275CI | 2.75" CFF Copper Gaskets, 10/pkg | 1 |
| 34 | KRC2550S | Conical Reducer, NW50 To NW25, Stainless Steel | 7 |
| 35 | FA0450NW50L | Adapter, 4.5" CFF To NW50, Length = 2", Stainless Steel | 2 |
| 36 | FNH0150S | Half Nipple, 2.75" CFF, 1.5" Tube, Length = 2.46", Stainless Steel | 4 |
| 37 | KS500150BB | Weld Flange, NW50, Bored For 1.5" Tube, Stainless Steel | 10 |
| 38 | QF25-100-SH | Adapter, QF25 To 1" I.D. Tube, Stainless Steel | 2 |

NOTES:

1. THE ISOLATION VALVES (IV) FOR THE MAIN BEAMLINE ARE TO BE SPECIFIED BY THE TRIUMF DESIGN OFFICE.
2. ALL DRY SCROLL PUMP EXHAUST IS TO BE CONNECTED TO A DRY EXHAUST SYSTEM IF POSSIBLE.
3. V70LP TURBO PUMP USED TO BACK BEAMLINE TURBO PUMPS.
4. BACKING VALVE FOR THE V70LP TURBO PUMP IS CLOSED TO ISOLATE THE TURBO PUMP DURING VENTING / ROUGHING PROCEDURES. THE BACKING VALVES OF THE BEAMLINE TURBO PUMPS ARE FOR ROUGHING / BACKING.
5. ROUGHING VALVE POSITIONED ON BACKING LINE FOR EVACUATING THE FORELINE AND/OR THE MAIN BEAMLINE.
6. VENT VALVE POSITIONED ON BACKING LINE FOR VENTING THE FORELINE AND/OR THE MAIN BEAMLINE.

Mnemonics:

BV = Backing Valve
 CCP = Cryopump Compressor
 CG = Convectron Gauge
 CP = Cryopump
 EV = Pump Exhaust Valve
 FG = Flow Gauge
 IG = Ion Gauge
 IP = Ion Pump
 IV = Isolation Valve
 GV = Gate Valve (For Pump)
 HOV = Hand-Operated Valve
 MV = Metering Valve
 PR = Pressure Regulator
 RVC = Rough Valve Cryopump
 RP = Roughing Pump
 SV = Solenoid Valve
 TP = Turbomolecular Pump
 TSP = Ti Sublimation Pump
 VV = Vent Valve
 XO = Cross Over Valve



| REV | DATE | LOC | REVISION DESCRIPTION |
|-----|----------|-------|-----------------------------|
| 1 | 08/06/03 | IS/IM | Updated naming for devices. |
| 0 | 11/06/03 | IS/IM | Original Issue. |

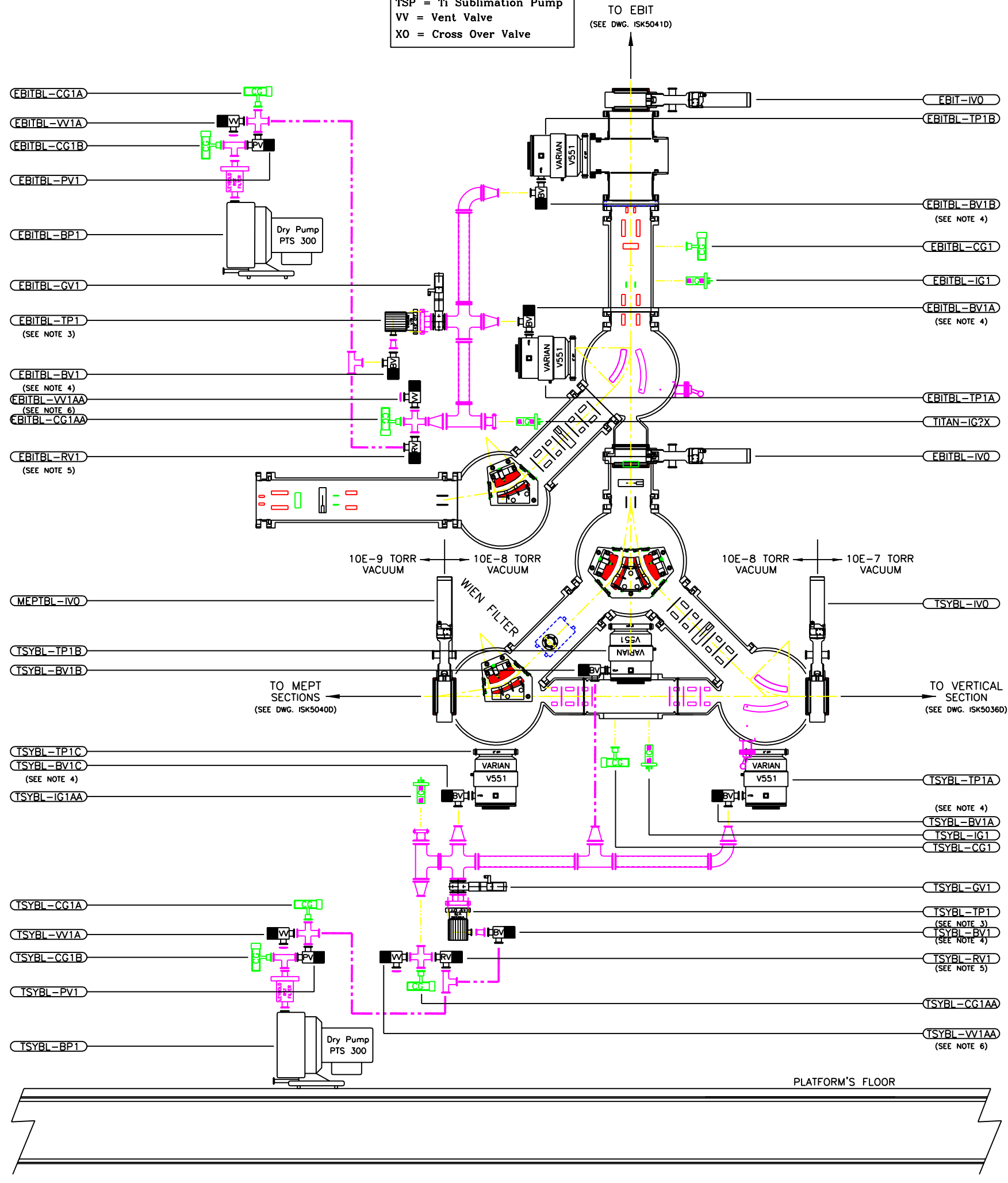
TOLERANCES UNLESS OTHERWISE SPECIFIED
 FRACTIONS XX
 DECIMALS .XX
 ANGULAR XX
 SURFACE FINISH μ in

ALL DIMS IN INCHES
 DESIGNED: BARRY ROSS
 DRAWN: BARRY ROSS
 CHECKED: BARRY ROSS
 REA: BARRY ROSS
 TRI-DW-

TRIUMF
 4004 WESBROOK MALL
 VANCOUVER, BRITISH COLUMBIA
 CANADA V6P 2S3
 CANADA'S NATIONAL MESON FACILITY

VACUUM SYSTEM SCHEMATIC
 TITAN BEAMLINE - WIEN FILTER
 ISAC EXPERIMENT HALL

SCALE: N.T.S.
 DATE: 11/06/03
 DWG NO.: ISK5039D
 REV: 1



PLAN VIEW