FERMILAB Technical Division

QUALITY CONTROL REPORT

DATE=6/25/2008 TIME=3:37:44 PM

PART NAME : PN440004-n ILC 1p3GHZ RF CAVITY ASSEMBLY 180 TB9ACC013 v3 IR
REV NUMBER :
SER NUMBER :
STATS COUNT : 1

440004-n
FNAL 1.3GHZ TESLA
RF CAVITY
ASSEMBLY
@ 180 rotation

'Inspected by ' : Robert Riley
'Cavity Number' : ACCEL TB9ACC013
' ' : 0806251122

BEAM PIPE FLANGE NEAR

| MM | DIM LOC1= LOCATION OF PLANE PL-NEAR-END-FLANGE | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Y | 0.000 | 0.000 | 0.000 | 0.200 | 0.200 | 0.000 |
| V | -0.001 | -1.000 | 0.001 | | | |
| FL | 0.000 | 0.024 | 0.024 | 0.200 | 0.000 | 0.000 |

| // MM | DIM PARL1= PARALLEL OF PLANE PL-NEAR-END-FLANGE,RFS TO WORKPLANE YMINUS EXTEND=0.000 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 0.000 | 0.195 | 0.195 | 0.200 | 0.000 | 0.000 |

| DEG | DIM ANGL1= 3D ANGLE (COMPLEMENT) FROM PLANE PL-NEAR-END-FLANGE TO YAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 0.000 | 0.089 | 0.089 | 0.100 | 0.100 | 0.000 |

| MM | DIM LOC2= LOCATION OF CIRCLE CR-NEAR-END-FLANGE | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| X | 0.000 | -0.144 | -0.144 | 0.200 | 0.200 | 0.000 |
| Z | 0.000 | 0.190 | 0.190 | 0.200 | 0.200 | 0.000 |
| D | 140.000 | 140.077 | 0.077 | 0.300 | 0.300 | 0.000 |
| RN | 0.000 | 0.004 | 0.004 | 0.200 | 0.000 | 0.000 |

| MM | DIM DIST03= 2D DISTANCE FROM PLANE PL-NEAR-END-FLANGE TO PLANE PL-NEAR-END-FLANGE-ORING PAR TO YAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 1.000 | 1.090 | 0.090 | 0.100 | 0.100 | 0.000 |

True Position of 6 Bolt Holes on the
NEAR BEAM PIPE FLANGE
to flange

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| ⊕ MM | DIM TP NBPF BH7= TRUE POSITION OF CIRCLE CR-NEARFLANGE BH 195 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| PR | 60.000 | 59.975 | -0.025 | | | | |
| PA | -165.000 | -164.504 | 0.496 | | | | |
| DF | 8.800 | 8.836 | 0.036 | 0.300 | 0.300 | | 0.000 |
| TP | RFS | | 1.040 | 0.300 | | 0.000 | 0.740 |
| RN | 0.000 | 0.012 | 0.012 | 0.300 | 0.000 | | 0.000 |

| ⊕ MM | DIM TP NBPF BH8= TRUE POSITION OF CIRCLE CR-NEARFLANGE BH 225 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| PR | 60.000 | 59.933 | -0.068 | | | | |
| PA | -135.000 | -134.494 | 0.506 | | | | |
| DF | 8.800 | 8.830 | 0.030 | 0.300 | 0.300 | | 0.000 |
| TP | RFS | | 1.068 | 0.300 | | 0.000 | 0.768 |
| RN | 0.000 | 0.026 | 0.026 | 0.300 | 0.000 | | 0.000 |

| ⊕ MM | DIM TP NBPF BH9= TRUE POSITION OF CIRCLE CR-NEARFLANGE BH 255 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| PR | 60.000 | 59.944 | -0.056 | | | | |
| PA | -105.000 | -104.527 | 0.473 | | | | |
| DF | 8.800 | 8.834 | 0.034 | 0.300 | 0.300 | | 0.000 |
| TP | RFS | | 0.996 | 0.300 | | 0.000 | 0.696 |
| RN | 0.000 | 0.014 | 0.014 | 0.300 | 0.000 | | 0.000 |

| ⊕ MM | DIM TP NBPF BH10= TRUE POSITION OF CIRCLE CR-NEARFLANGE BH 285 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| PR | 60.000 | 59.944 | -0.056 | | | | |
| PA | -75.000 | -74.561 | 0.439 | | | | |
| DF | 8.800 | 8.844 | 0.044 | 0.300 | 0.300 | | 0.000 |
| TP | RFS | | 0.927 | 0.300 | | 0.000 | 0.627 |
| RN | 0.000 | 0.015 | 0.015 | 0.300 | 0.000 | | 0.000 |

| ⊕ MM | DIM TP NBPF BH11= TRUE POSITION OF CIRCLE CR-NEARFLANGE BH315 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| PR | 60.000 | 59.969 | -0.031 | | | | |
| PA | -45.000 | -44.556 | 0.444 | | | | |
| DF | 8.800 | 8.832 | 0.032 | 0.300 | 0.300 | | 0.000 |
| TP | RFS | | 0.933 | 0.300 | | 0.000 | 0.633 |
| RN | 0.000 | 0.009 | 0.009 | 0.300 | 0.000 | | 0.000 |

| ⊕ MM | DIM TP NBPF BH12= TRUE POSITION OF CIRCLE CR-NEARFLANGE BH 345 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| PR | 60.000 | 59.967 | -0.033 | | | | |
| PA | -15.000 | -14.541 | 0.459 | | | | |
| DF | 8.800 | 8.835 | 0.035 | 0.300 | 0.300 | | 0.000 |
| TP | RFS | | 0.963 | 0.300 | | 0.000 | 0.663 |
| RN | 0.000 | 0.019 | 0.019 | 0.300 | 0.000 | | 0.000 |

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BEAM PIPE FLANGE FAR

MM DIM LOC3= LOCATION OF PLANE PL-FAR-END

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| Y | 1247.400 | 1243.750 | -3.650 | 3.000 | 3.000 | 0.650 |
| V | 0.002 | 1.000 | -0.001 | | | |
| FL | 0.000 | 0.021 | 0.021 | 0.200 | 0.000 | 0.000 |

// MM DIM PARL2= PARALLEL OF PLANE PL-FAR-END,RFS TO WORKPLANE YMINUS EXTEND=0.000

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| M | 0.000 | 0.337 | 0.337 | 0.200 | 0.000 | 0.137 |

DEG DIM ANGL2= 3D ANGLE (COMPLEMENT) FROM PLANE PL-FAR-END TO YAXIS

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| A | 0.000 | 0.161 | 0.161 | 0.100 | 0.100 | 0.061 |

MM DIM LOC4= LOCATION OF CIRCLE CR-FAR-END

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.022 | 0.022 | 0.200 | 0.200 | 0.000 |
| Z | 0.000 | -0.218 | -0.218 | 0.200 | 0.200 | 0.018 |
| D | 140.000 | 140.076 | 0.076 | 0.300 | 0.300 | 0.000 |
| RN | 0.000 | 0.007 | 0.007 | 0.200 | 0.000 | 0.000 |

MM DIM DIST04= 2D DISTANCE FROM PLANE PL-FAR-END TO PLANE PL-FAR-END-FLANGE-ORING PAR TO YAXIS

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| M | 1.000 | 1.092 | 0.092 | 0.100 | 0.100 | 0.000 |

True Position of 6 Bolt Holes on the
FAR BEAM PIPE FLANGE
to flange

MM DIM TP FBPF BH7= TRUE POSITION OF CIRCLE CR-FARFLANGE BH 195

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
|---|---|---|---|---|---|---|---|
| PR | 60.000 | 59.970 | -0.030 | | | | |
| PA | -165.000 | -164.860 | 0.140 | | | | |
| DF | 8.800 | 8.833 | 0.033 | 0.300 | 0.300 | | 0.000 |
| TP | RFS | | 0.300 | 0.300 | | 0.000 | 0.000 |
| RN | 0.000 | 0.014 | 0.014 | 0.300 | 0.000 | | 0.000 |

MM DIM TP FBPF BH8= TRUE POSITION OF CIRCLE CR-FARFLANGE BH 225

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
|---|---|---|---|---|---|---|---|
| PR | 60.000 | 60.019 | 0.019 | | | | |
| PA | -135.000 | -134.858 | 0.142 | | | | |
| DF | 8.800 | 8.838 | 0.038 | 0.300 | 0.300 | | 0.000 |
| TP | RFS | | 0.301 | 0.300 | | 0.000 | 0.001 |
| RN | 0.000 | 0.017 | 0.017 | 0.300 | 0.000 | | 0.000 |

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| ⊕ MM | DIM TP FBPF BH9= TRUE POSITION OF CIRCLE CR-FARFLANGE BH 255 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| PR | 60.000 | 59.946 | -0.055 | | | | |
| PA | -105.000 | -104.889 | 0.111 | | | | |
| DF | 8.800 | 8.819 | 0.019 | 0.300 | 0.300 | | 0.000 |
| TP | RFS | | 0.257 | 0.300 | | 0.000 | 0.000 |
| RN | 0.000 | 0.011 | 0.011 | 0.300 | 0.000 | | 0.000 |

| ⊕ MM | DIM TP FBPF BH10= TRUE POSITION OF CIRCLE CR-FARFLANGE BH 285 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| PR | 60.000 | 59.956 | -0.044 | | | | |
| PA | -75.000 | -74.918 | 0.082 | | | | |
| DF | 8.800 | 8.826 | 0.026 | 0.300 | 0.300 | | 0.000 |
| TP | RFS | | 0.193 | 0.300 | | 0.000 | 0.000 |
| RN | 0.000 | 0.020 | 0.020 | 0.300 | 0.000 | | 0.000 |

| ⊕ MM | DIM TP FBPF BH11= TRUE POSITION OF CIRCLE CR-FARFLANGE BH 315 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| PR | 60.000 | 59.943 | -0.057 | | | | |
| PA | -45.000 | -44.905 | 0.095 | | | | |
| DF | 8.800 | 8.856 | 0.056 | 0.300 | 0.300 | | 0.000 |
| TP | RFS | | 0.229 | 0.300 | | 0.000 | 0.000 |
| RN | 0.000 | 0.016 | 0.016 | 0.300 | 0.000 | | 0.000 |

| ⊕ MM | DIM TP FBPF BH12= TRUE POSITION OF CIRCLE CR-FARFLANGE BH 345 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| PR | 60.000 | 59.972 | -0.028 | | | | |
| PA | -15.000 | -14.910 | 0.090 | | | | |
| DF | 8.800 | 8.819 | 0.019 | 0.300 | 0.300 | | 0.000 |
| TP | RFS | | 0.197 | 0.300 | | 0.000 | 0.000 |
| RN | 0.000 | 0.016 | 0.016 | 0.300 | 0.000 | | 0.000 |

DATUM-1-PLANE

| MM | DIM LOC-DATUM-1-PLANE= LOCATION OF PLANE PLC-DAT-1 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Y | 92.840 | 93.088 | 0.248 | 0.200 | 0.200 | 0.048 |
| V | -0.002 | -1.000 | 0.000 | | | |
| FL | 0.000 | 0.040 | 0.040 | 0.200 | 0.000 | 0.000 |

| // MM | DIM PARL5= PARALLEL OF PLANE PLC-DAT-1,RFS TO WORKPLANE YMINUS EXTEND=0.000 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 0.000 | 0.242 | 0.242 | 0.200 | 0.000 | 0.042 |

| DEG | DIM ANGL7= 3D ANGLE (TRUE) FROM PLANE PLC-DAT-1 TO YAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 0.000 | 0.136 | 0.136 | 0.100 | 0.100 | 0.036 |

DATUM-2-PLANE

| MM | DIM LOC-DATUM-2-PLANE= LOCATION OF PLANE PLC-DAT-2 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Y | 1154.560 | 1150.169 | -4.391 | 0.200 | 0.200 | 4.191 |
| V | -0.003 | 1.000 | -0.002 | | | |
| FL | 0.000 | 0.017 | 0.017 | 0.200 | 0.000 | 0.000 |

| // MM | DIM PARL6= PARALLEL OF PLANE PLC-DAT-2,RFS TO WORKPLANE YMINUS EXTEND=0.000 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 0.000 | 0.364 | 0.364 | 0.200 | 0.000 | 0.164 |

| DEG | DIM ANGL8= 3D ANGLE (TRUE) FROM PLANE PLC-DAT-2 TO YAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 0.000 | 0.218 | 0.218 | 0.100 | 0.100 | 0.118 |

| MM | DIM DIST3= 2D DISTANCE FROM PLANE PLC-DAT-1 TO PLANE PLC-DAT-2 PAR TO YAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 1061.060 | 1057.081 | -3.979 | 0.200 | 0.200 | 3.779 |

| MM | DIM DIST4= 2D DISTANCE FROM PLANE PLC-DAT-2 TO PLANE PL-FAR-END PAR TO YAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 93.500 | 93.581 | 0.081 | 0.200 | 0.200 | 0.000 |

PICKUP ANTENNA FLANGE NW8

| MM | DIM LOC5= LOCATION OF PLANE PL NW8 ANTENNA FLANGE | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| X | -53.800 | -53.872 | -0.073 | 0.200 | 0.200 | 0.000 |
| V | -1.000 | -0.001 | -0.004 | | | |
| FL | 0.000 | 0.004 | 0.004 | 0.200 | 0.000 | 0.000 |

| // MM | DIM PARL3= PARALLEL OF PLANE PL NW8 ANTENNA FLANGE,RFS TO WORKPLANE XMINUS EXTEND=0.000 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 0.000 | 0.097 | 0.097 | 0.200 | 0.000 | 0.000 |

| DEG | DIM ANGL3= 3D ANGLE (TRUE) FROM PLANE PL NW8 ANTENNA FLANGE TO XAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 0.000 | 0.217 | 0.217 | 0.100 | 0.100 | 0.117 |

| MM | DIM LOC6= LOCATION OF CIRCLE CR_NW8_ANTENNA_FLANGE | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Y | 60.600 | 60.694 | 0.094 | 0.200 | 0.200 | 0.000 |
| Z | 0.000 | 0.203 | 0.203 | 0.200 | 0.200 | 0.003 |
| D | 33.800 | 33.841 | 0.041 | 0.150 | 0.000 | 0.000 |
| RN | 0.000 | 0.020 | 0.020 | 0.150 | 0.000 | 0.000 |

| MM | DIM DIST01= 2D DISTANCE FROM PLANE PL NW8 ANTENNA FLANGE TO PLANE PL NW8 ANTENNA FLANGE ORING PAR TO XAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 0.500 | 0.520 | 0.020 | 0.050 | 0.000 | 0.000 |

MAIN COUPLER FLANGE NW40

| MM | DIM LOC7= LOCATION OF PLANE PL NW 40 FLANGE | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| X | 88.000 | 87.698 | -0.302 | 0.200 | 0.200 | 0.102 |
| V | 1.000 | -0.001 | 0.001 | | | |
| FL | 0.000 | 0.030 | 0.030 | 0.200 | 0.000 | 0.000 |

| // MM | DIM PARL4= PARALLEL OF PLANE PL NW 40 FLANGE,RFS TO WORKPLANE XMINUS EXTEND=0.000 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 0.000 | 0.085 | 0.085 | 0.200 | 0.000 | 0.000 |

| DEG | DIM ANGL4= 3D ANGLE (TRUE) FROM PLANE PL NW 40 FLANGE TO XAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 0.000 | 0.058 | 0.058 | 0.100 | 0.100 | 0.000 |

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MM DIM LOC8= LOCATION OF CIRCLE CR_NW_40_FLANGE

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| Y | 1186.800 | 1183.399 | -3.401 | 0.200 | 0.200 | 3.201 |
| Z | 0.000 | 0.000 | 0.000 | 0.200 | 0.200 | 0.000 |
| D | 76.000 | 75.992 | -0.008 | 0.200 | 0.000 | 0.008 |
| RN | 0.000 | 0.011 | 0.011 | 0.200 | 0.000 | 0.000 |

MM DIM DIST1= 2D DISTANCE FROM CIRCLE CR_NW_40_FLANGE TO PLANE PL-FAR-END PAR TO YAXIS

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| M | 60.600 | 60.350 | -0.250 | 0.200 | 0.200 | 0.050 |

MM DIM DIST NW40 MC DEPTH OF ORING GROOVE= 2D DISTANCE FROM PLANE PL NW 40 FLANGE TO PLANE PL NW 40 FLANGE ORING PAR TO XAXIS

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| M | 0.500 | 0.622 | 0.122 | 0.050 | 0.000 | 0.072 |

MM DIM TP NW40 MC BH= TRUE POSITION OF CIRCLE CR NW 40 FLANGE BH

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
|---|---|---|---|---|---|---|---|
| PR | 31.750 | 31.705 | -0.045 | | | | |
| PA | 112.500 | 112.460 | -0.040 | | | | |
| DF | 6.700 | 6.816 | 0.116 | 0.200 | 0.200 | | 0.000 |
| TP | RFS | | 0.100 | 0.300 | | 0.000 | 0.000 |
| RN | 0.000 | 0.091 | 0.091 | 0.200 | 0.000 | | 0.000 |

MM DIM TP NW40 MC BH2= TRUE POSITION OF CIRCLE CR NW 40 FLANGE BH2

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
|---|---|---|---|---|---|---|---|
| PR | 31.750 | 31.707 | -0.043 | | | | |
| PA | -67.500 | -67.771 | -0.271 | | | | |
| DF | 6.700 | 6.863 | 0.163 | 0.200 | 0.200 | | 0.000 |
| TP | RFS | | 0.313 | 0.300 | | 0.000 | 0.013 |
| RN | 0.000 | 0.033 | 0.033 | 0.200 | 0.000 | | 0.000 |

HOM-1 FLANGE NW12

MM DIM VECTOR HOM1 FLANGE= LOCATION OF PLANE PL-NW12-FLANGE-HOM1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| V | -0.482 | -0.261 | -0.836 | | | |

MM DIM FLAT1= FLATNESS OF PLANE PL-NW12-FLANGE-HOM1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| M | 0.000 | 0.005 | 0.005 | 0.200 | 0.000 | 0.000 |

DEG DIM ANGL16= 2D ANGLE (TRUE) FROM PLANE PL-NW12-FLANGE-HOM1 TO ZAXIS

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| A | 15.000 | 15.146 | 0.146 | 0.500 | 0.500 | 0.000 |

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| MM | DIM DIST FORMTEIL1 POINT= 2D DISTANCE FROM POINT PT-FORMTEIL1 TO PLANE PL-NW12-FLANGE-HOM1 PERP TO PLANE PL-NW12-FLANGE-HOM1 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 28.420 | 28.629 | 0.209 | 0.100 | 0.100 | 0.109 |

| MM | DIM DIST FORMTEIL1 PLANE= 2D DISTANCE FROM PLANE PL-FORMTEIL1 TO PLANE PL-NW12-FLANGE-HOM1 PERP TO PLANE PL-NW12-FLANGE-HOM1 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 28.420 | 28.629 | 0.209 | 0.100 | 0.100 | 0.109 |

| MM | DIM DIST02= 2D DISTANCE FROM PLANE PL-NW12-FLANGE-HOM1 TO PLANE PL-NW12-FLANGE O-RING PAR TO ZAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 0.500 | 0.505 | 0.005 | 0.050 | 0.000 | 0.000 |

| DEG | DIM ANGL17= 2D ANGLE (COMPLEMENT) FROM PLANE PL-NW12-FLANGE-HOM1 TO ZAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 30.000 | 29.987 | -0.013 | 0.500 | 0.500 | 0.000 |

| MM | DIM LOC= LOCATION OF CIRCLE CR-NW12-FLANGE-HOM1 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| X | 0.000 | 38.164 | 38.164 | 100.000 | 100.000 | 0.000 |
| Y | 0.000 | 57.050 | 57.050 | 100.000 | 100.000 | 0.000 |
| Z | 0.000 | -61.979 | -61.979 | 100.000 | 100.000 | 0.000 |
| D | 33.800 | 33.750 | -0.050 | 0.150 | 0.000 | 0.050 |
| RN | 0.000 | 0.046 | 0.046 | 0.150 | 0.000 | 0.000 |

HOM-2 FLANGE NW12

| MM | DIM VECTOR1= LOCATION OF PLANE PL-NW12-FLANGE-HOM2 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| V | -0.550 | 0.269 | 0.791 | | | |

| MM | DIM FLAT4= FLATNESS OF PLANE PL-NW12-FLANGE-HOM2 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 0.000 | 0.008 | 0.008 | 0.200 | 0.000 | 0.000 |

| DEG | DIM ANGL5= 2D ANGLE (COMPLEMENT) FROM PLANE PL-NW12-FLANGE-HOM2 TO ZAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 15.000 | 15.607 | 0.607 | 0.500 | 0.500 | 0.107 |

| DEG | DIM ANGL6= 2D ANGLE (TRUE) FROM PLANE PL-NW12-FLANGE-HOM2 TO ZAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 35.000 | 34.802 | -0.198 | 0.500 | 0.500 | 0.000 |

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| MM | DIM LOC9= LOCATION OF CIRCLE CR-NW12-FLANGE-HOM2 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| X | 0.000 | -72.271 | -72.271 | 100.000 | 100.000 | 0.000 |
| Y | 0.000 | 1186.335 | 1186.335 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | -8.573 | -8.573 | 100.000 | 100.000 | 0.000 |
| D | 33.800 | 33.822 | 0.022 | 0.150 | 0.000 | 0.000 |
| RN | 0.000 | 0.054 | 0.054 | 0.150 | 0.000 | 0.000 |

HOM 1 LOCATION

| MM | DIM LOC-HOM1= LOCATION OF CYLINDER CY-HOM-1 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| X | 0.000 | 68.611 | 68.611 | 100.000 | 100.000 | 0.000 |
| Y | 60.600 | 60.507 | -0.093 | 0.200 | 0.200 | 0.000 |
| Z | 0.000 | -39.873 | -39.873 | 100.000 | 100.000 | 0.000 |
| D | 44.000 | 43.858 | -0.142 | 0.000 | 0.100 | 0.042 |
| RN | 0.000 | 0.161 | 0.161 | 0.100 | 0.000 | 0.061 |
| V | -0.865 | 0.000 | 0.502 | | | |

| DEG | DIM ANGL9= 2D ANGLE (TRUE) FROM CYLINDER CY-HOM-1 TO XAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 30.000 | 30.126 | 0.126 | 0.500 | 0.500 | 0.000 |

| DEG | DIM ANGL10= 3D ANGLE (TRUE) FROM CYLINDER CY-HOM-1 TO YAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 90.000 | 89.998 | -0.002 | 0.500 | 0.500 | 0.000 |

| DEG | DIM ANGL11= 2D ANGLE (TRUE) FROM CYLINDER CY-HOM-1 TO ZAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 60.000 | 59.874 | -0.126 | 0.500 | 0.500 | 0.000 |

| MM | DIM HOM1 POINT= LOCATION OF POINT PT-RT-HOM-1 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| PR | 116.000 | 115.993 | -0.007 | 0.200 | 0.200 | 0.000 |

| MM | DIM HOM1 PLANE= LOCATION OF PLANE PL HOM-1 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| PR | 111.000 | 110.929 | -0.071 | 0.200 | 0.200 | 0.000 |
| FL | 0.000 | 0.006 | 0.006 | 0.200 | 0.000 | 0.000 |

INTERSECTION OF HOM1 & YZ PLANE

| MM | DIM LOC-HOM1 X PLANE= LOCATION OF POINT PTC-HOM1 X YZ PLANE | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| X | 0.000 | 0.000 | 0.000 | 0.200 | 0.200 | 0.000 |
| Y | 60.600 | 60.509 | -0.091 | 0.200 | 0.200 | 0.000 |
| Z | 0.000 | -0.058 | -0.058 | 0.200 | 0.200 | 0.000 |

HOM 2 LOCATION

| MM | DIM LOC-HOM2= LOCATION OF CYLINDER CY-HOM-2 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| X | 0.000 | -64.770 | -64.770 | 100.000 | 100.000 | 0.000 |
| Y | 1186.800 | 1182.870 | -3.930 | 3.000 | 3.000 | 0.930 |
| Z | 0.000 | -45.182 | -45.182 | 100.000 | 100.000 | 0.000 |
| D | 44.000 | 43.843 | -0.157 | 0.000 | 0.100 | 0.057 |
| RN | 0.000 | 0.070 | 0.070 | 0.100 | 0.000 | 0.000 |
| V | 0.823 | 0.000 | 0.568 | | | |

| MM | DIM DIST2= 2D DISTANCE FROM CYLINDER CY-HOM-2 TO PLANE PL-FAR-END PAR TO YAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| M | 60.600 | 60.880 | 0.280 | 0.200 | 0.200 | 0.080 |

| DEG | DIM ANGL12= 2D ANGLE (TRUE) FROM CYLINDER CY-HOM-2 TO XAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 35.000 | 34.614 | -0.386 | 0.500 | 0.500 | 0.000 |

| DEG | DIM ANGL13= 3D ANGLE (COMPLEMENT) FROM CYLINDER CY-HOM-2 TO YAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 90.000 | 90.005 | 0.005 | 0.500 | 0.500 | 0.000 |

| DEG | DIM ANGL14= 2D ANGLE (TRUE) FROM CYLINDER CY-HOM-2 TO ZAXIS | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| A | 55.000 | 55.386 | 0.386 | 0.500 | 0.500 | 0.000 |

| MM | DIM LOC HOM2= LOCATION OF POINT PT-HOM-2 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| PR | 116.000 | 116.176 | 0.176 | 0.200 | 0.200 | 0.000 |

| MM | DIM HOM2 PLANE= LOCATION OF PLANE PL HOM-2 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| PR | 111.000 | 111.150 | 0.150 | 0.200 | 0.200 | 0.000 |
| FL | 0.000 | 0.019 | 0.019 | 0.200 | 0.000 | 0.000 |

INTERSECTION OF HOM2 & YZ PLANE

| MM | DIM LOC-HOM2 X PLANE= LOCATION OF POINT PTC-HOM2 X YZ PLANE | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| X | 0.000 | 0.000 | 0.000 | 0.200 | 0.200 | 0.000 |
| Y | 1186.800 | 1182.877 | -3.923 | 3.000 | 3.000 | 0.923 |
| Z | 0.000 | -0.477 | -0.477 | 0.200 | 0.200 | 0.277 |

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LOCATIONS OF CONSTRUCTED CIRCLES
ON 18 HALF CELLS & 2 DATUM SURFACES & 2 VACUUM SURFACES

MM DIM LOC-CC1= LOCATION OF CIRCLE CRC-DAT-1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.000 | 0.000 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 95.173 | 95.173 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.000 | 0.000 | 0.200 | 0.200 | 0.000 |
| D | 111.000 | 110.921 | -0.079 | 0.050 | 0.050 | 0.029 |
| RN | 0.000 | 0.015 | 0.015 | 0.050 | 0.000 | 0.000 |

MM DIM LOC-CC2= LOCATION OF CIRCLE CRC-VAC-1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.067 | 0.067 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 123.204 | 123.204 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | -0.009 | -0.009 | 0.200 | 0.200 | 0.000 |
| D | 191.200 | 191.258 | 0.058 | 0.200 | 0.200 | 0.000 |
| RN | 0.000 | 0.044 | 0.044 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-CC3= LOCATION OF CIRCLE CRC-CAV-1-1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.125 | 0.125 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 156.613 | 156.613 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.223 | 0.223 | 0.200 | 0.200 | 0.023 |
| D | 210.300 | 210.730 | 0.430 | 0.200 | 0.200 | 0.230 |
| RN | 0.000 | 0.058 | 0.058 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-CC4= LOCATION OF CIRCLE CRC-CAV-1-2

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.116 | 0.116 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 167.500 | 167.500 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.222 | 0.222 | 0.200 | 0.200 | 0.022 |
| D | 210.300 | 210.568 | 0.268 | 0.200 | 0.200 | 0.068 |
| RN | 0.000 | 0.054 | 0.054 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-CC5= LOCATION OF CIRCLE CRC-CAV-2-1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.188 | 0.188 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 270.449 | 270.449 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.446 | 0.446 | 0.200 | 0.200 | 0.246 |
| D | 210.300 | 210.630 | 0.330 | 0.200 | 0.200 | 0.130 |
| RN | 0.000 | 0.228 | 0.228 | 0.200 | 0.000 | 0.028 |

MM DIM LOC-CC6= LOCATION OF CIRCLE CRC-CAV-2-2

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.195 | 0.195 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 282.351 | 282.351 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.469 | 0.469 | 0.200 | 0.200 | 0.269 |
| D | 210.300 | 210.548 | 0.248 | 0.200 | 0.200 | 0.048 |
| RN | 0.000 | 0.163 | 0.163 | 0.200 | 0.000 | 0.000 |

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MM DIM LOC-CC7= LOCATION OF CIRCLE CRC-CAV-3-1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.171 | 0.171 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 385.917 | 385.917 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.656 | 0.656 | 0.200 | 0.200 | 0.456 |
| D | 210.300 | 210.657 | 0.358 | 0.200 | 0.200 | 0.158 |
| RN | 0.000 | 0.166 | 0.166 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-CC8= LOCATION OF CIRCLE CRC-CAV-3-2

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.191 | 0.190 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 397.282 | 397.282 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.631 | 0.631 | 0.200 | 0.200 | 0.431 |
| D | 210.300 | 210.584 | 0.284 | 0.200 | 0.200 | 0.084 |
| RN | 0.000 | 0.187 | 0.187 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-CC9= LOCATION OF CIRCLE CRC-CAV-4-1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.231 | 0.231 | 0.200 | 0.200 | 0.031 |
| Y | 0.000 | 500.610 | 500.610 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.760 | 0.760 | 0.200 | 0.200 | 0.560 |
| D | 210.300 | 210.671 | 0.371 | 0.200 | 0.200 | 0.171 |
| RN | 0.000 | 0.135 | 0.135 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-CC10= LOCATION OF CIRCLE CRC-CAV-4-2

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.246 | 0.246 | 0.200 | 0.200 | 0.046 |
| Y | 0.000 | 512.255 | 512.255 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.742 | 0.742 | 0.200 | 0.200 | 0.542 |
| D | 210.300 | 210.561 | 0.261 | 0.200 | 0.200 | 0.061 |
| RN | 0.000 | 0.193 | 0.193 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-CC11= LOCATION OF CIRCLE CRC-CAV-5-1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.300 | 0.300 | 0.200 | 0.200 | 0.100 |
| Y | 0.000 | 615.940 | 615.940 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.715 | 0.715 | 0.200 | 0.200 | 0.515 |
| D | 210.300 | 210.616 | 0.316 | 0.200 | 0.200 | 0.116 |
| RN | 0.000 | 0.171 | 0.171 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-CC12= LOCATION OF CIRCLE CRC-CAV-5-2

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.316 | 0.316 | 0.200 | 0.200 | 0.116 |
| Y | 0.000 | 627.719 | 627.719 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.722 | 0.722 | 0.200 | 0.200 | 0.522 |
| D | 210.300 | 210.569 | 0.269 | 0.200 | 0.200 | 0.069 |
| RN | 0.000 | 0.173 | 0.173 | 0.200 | 0.000 | 0.000 |

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MM DIM LOC-CC13= LOCATION OF CIRCLE CRC-CAV-6-1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.364 | 0.363 | 0.200 | 0.200 | 0.163 |
| Y | 0.000 | 730.861 | 730.861 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.675 | 0.675 | 0.200 | 0.200 | 0.475 |
| D | 210.300 | 210.641 | 0.341 | 0.200 | 0.200 | 0.141 |
| RN | 0.000 | 0.226 | 0.226 | 0.200 | 0.000 | 0.026 |

MM DIM LOC-CC14= LOCATION OF CIRCLE CRC-CAV-6-2

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.375 | 0.375 | 0.200 | 0.200 | 0.175 |
| Y | 0.000 | 742.389 | 742.389 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.661 | 0.660 | 0.200 | 0.200 | 0.460 |
| D | 210.300 | 210.521 | 0.221 | 0.200 | 0.200 | 0.021 |
| RN | 0.000 | 0.162 | 0.162 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-CC15= LOCATION OF CIRCLE CRC-CAV-7-1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.381 | 0.380 | 0.200 | 0.200 | 0.180 |
| Y | 0.000 | 846.356 | 846.356 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.493 | 0.493 | 0.200 | 0.200 | 0.293 |
| D | 210.300 | 210.601 | 0.301 | 0.200 | 0.200 | 0.101 |
| RN | 0.000 | 0.286 | 0.286 | 0.200 | 0.000 | 0.086 |

MM DIM LOC-CC16= LOCATION OF CIRCLE CRC-CAV-7-2

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.361 | 0.361 | 0.200 | 0.200 | 0.161 |
| Y | 0.000 | 857.786 | 857.786 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.550 | 0.550 | 0.200 | 0.200 | 0.350 |
| D | 210.300 | 210.620 | 0.320 | 0.200 | 0.200 | 0.120 |
| RN | 0.000 | 0.261 | 0.261 | 0.200 | 0.000 | 0.061 |

MM DIM LOC-CC17= LOCATION OF CIRCLE CRC-CAV-8-1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.285 | 0.285 | 0.200 | 0.200 | 0.085 |
| Y | 0.000 | 961.187 | 961.187 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.365 | 0.365 | 0.200 | 0.200 | 0.165 |
| D | 210.300 | 210.647 | 0.347 | 0.200 | 0.200 | 0.147 |
| RN | 0.000 | 0.201 | 0.201 | 0.200 | 0.000 | 0.001 |

MM DIM LOC-CC18= LOCATION OF CIRCLE CRC-CAV-8-2

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.210 | 0.210 | 0.200 | 0.200 | 0.010 |
| Y | 0.000 | 972.969 | 972.969 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.346 | 0.346 | 0.200 | 0.200 | 0.146 |
| D | 210.300 | 210.549 | 0.249 | 0.200 | 0.200 | 0.049 |
| RN | 0.000 | 0.207 | 0.207 | 0.200 | 0.000 | 0.007 |

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MM DIM LOC-CC19= LOCATION OF CIRCLE CRC-CAV-9-1

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.188 | 0.188 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 1076.293 | 1076.293 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.128 | 0.127 | 0.200 | 0.200 | 0.000 |
| D | 210.300 | 210.652 | 0.352 | 0.200 | 0.200 | 0.152 |
| RN | 0.000 | 0.114 | 0.114 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-CC20= LOCATION OF CIRCLE CRC-CAV-9-2

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.146 | 0.146 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 1087.864 | 1087.864 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.117 | 0.117 | 0.200 | 0.200 | 0.000 |
| D | 210.300 | 210.621 | 0.321 | 0.200 | 0.200 | 0.121 |
| RN | 0.000 | 0.146 | 0.146 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-CC21= LOCATION OF CIRCLE CRC-VAC-2

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.115 | 0.115 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 1117.670 | 1117.670 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.056 | 0.056 | 0.200 | 0.200 | 0.000 |
| D | 200.000 | 200.092 | 0.092 | 0.200 | 0.200 | 0.000 |
| RN | 0.000 | 0.036 | 0.036 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-CC22= LOCATION OF CIRCLE CRC-DAT-2

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.000 | 0.000 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 1148.127 | 1148.127 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.000 | 0.000 | 0.200 | 0.200 | 0.000 |
| D | 111.000 | 110.898 | -0.102 | 0.050 | 0.050 | 0.052 |
| RN | 0.000 | 0.017 | 0.017 | 0.050 | 0.000 | 0.000 |

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TRUE POSITIONS OF CONSTRUCTED CIRCLES
ON 18 HALF CELLS & 2 DATUM SURFACES & 2 VACUUM SURFACES

| ⊕ MM | DIM LOC-TP-CC1= TRUE POSITION OF CIRCLE CRC-DAT-1 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.000 | 0.000 | | | | |
| Z | 0.000 | 0.000 | 0.000 | | | | |
| TP | RFS | | 0.000 | 0.400 | | 0.000 | 0.000 |

| ⊕ MM | DIM LOC-TP-CC2= TRUE POSITION OF CIRCLE CRC-VAC-1 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.067 | 0.067 | | | | |
| Z | 0.000 | -0.009 | -0.009 | | | | |
| TP | RFS | | 0.136 | 0.400 | | 0.000 | 0.000 |

| ⊕ MM | DIM LOC-TP-CC3= TRUE POSITION OF CIRCLE CRC-CAV-1-1 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.125 | 0.125 | | | | |
| Z | 0.000 | 0.223 | 0.223 | | | | |
| TP | RFS | | 0.511 | 0.400 | | 0.000 | 0.111 |

| ⊕ MM | DIM LOC-TP-CC4= TRUE POSITION OF CIRCLE CRC-CAV-1-2 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.116 | 0.116 | | | | |
| Z | 0.000 | 0.222 | 0.222 | | | | |
| TP | RFS | | 0.501 | 0.400 | | 0.000 | 0.101 |

| ⊕ MM | DIM LOC-TP-CC5= TRUE POSITION OF CIRCLE CRC-CAV-2-1 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.188 | 0.188 | | | | |
| Z | 0.000 | 0.446 | 0.446 | | | | |
| TP | RFS | | 0.968 | 0.400 | | 0.000 | 0.568 |

| ⊕ MM | DIM LOC-TP-CC6= TRUE POSITION OF CIRCLE CRC-CAV-2-2 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.195 | 0.195 | | | | |
| Z | 0.000 | 0.469 | 0.469 | | | | |
| TP | RFS | | 1.016 | 0.400 | | 0.000 | 0.616 |

| ⊕ MM | DIM LOC-TP-CC7= TRUE POSITION OF CIRCLE CRC-CAV-3-1 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.171 | 0.171 | | | | |
| Z | 0.000 | 0.656 | 0.656 | | | | |
| TP | RFS | | 1.356 | 0.400 | | 0.000 | 0.956 |

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| ⊕ MM | DIM LOC-TP-CC8= TRUE POSITION OF CIRCLE CRC-CAV-3-2 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.191 | 0.190 | | | | |
| Z | 0.000 | 0.631 | 0.631 | | | | |
| TP | RFS | | 1.318 | 0.400 | | 0.000 | 0.918 |

| ⊕ MM | DIM LOC-TP-CC9= TRUE POSITION OF CIRCLE CRC-CAV-4-1 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.231 | 0.231 | | | | |
| Z | 0.000 | 0.760 | 0.760 | | | | |
| TP | RFS | | 1.588 | 0.400 | | 0.000 | 1.188 |

| ⊕ MM | DIM LOC-TP-CC10= TRUE POSITION OF CIRCLE CRC-CAV-4-2 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.246 | 0.246 | | | | |
| Z | 0.000 | 0.742 | 0.742 | | | | |
| TP | RFS | | 1.563 | 0.400 | | 0.000 | 1.163 |

| ⊕ MM | DIM LOC-TP-CC11= TRUE POSITION OF CIRCLE CRC-CAV-5-1 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.300 | 0.300 | | | | |
| Z | 0.000 | 0.715 | 0.715 | | | | |
| TP | RFS | | 1.551 | 0.400 | | 0.000 | 1.151 |

| ⊕ MM | DIM LOC-TP-CC12= TRUE POSITION OF CIRCLE CRC-CAV-5-2 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.316 | 0.316 | | | | |
| Z | 0.000 | 0.722 | 0.722 | | | | |
| TP | RFS | | 1.577 | 0.400 | | 0.000 | 1.177 |

| ⊕ MM | DIM LOC-TP-CC13= TRUE POSITION OF CIRCLE CRC-CAV-6-1 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.364 | 0.363 | | | | |
| Z | 0.000 | 0.675 | 0.675 | | | | |
| TP | RFS | | 1.533 | 0.400 | | 0.000 | 1.133 |

| ⊕ MM | DIM LOC-TP-CC14= TRUE POSITION OF CIRCLE CRC-CAV-6-2 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.375 | 0.375 | | | | |
| Z | 0.000 | 0.661 | 0.660 | | | | |
| TP | RFS | | 1.519 | 0.400 | | 0.000 | 1.119 |

| ⊕ MM | DIM LOC-TP-CC15= TRUE POSITION OF CIRCLE CRC-CAV-7-1 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.381 | 0.380 | | | | |
| Z | 0.000 | 0.493 | 0.493 | | | | |
| TP | RFS | | 1.246 | 0.400 | | 0.000 | 0.846 |

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| ⊕ MM | DIM LOC-TP-CC16= TRUE POSITION OF CIRCLE CRC-CAV-7-2 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.361 | 0.361 | | | | |
| Z | 0.000 | 0.550 | 0.550 | | | | |
| TP | RFS | | 1.315 | 0.400 | | 0.000 | 0.915 |

| ⊕ MM | DIM LOC-TP-CC17= TRUE POSITION OF CIRCLE CRC-CAV-8-1 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.285 | 0.285 | | | | |
| Z | 0.000 | 0.365 | 0.365 | | | | |
| TP | RFS | | 0.926 | 0.400 | | 0.000 | 0.526 |

| ⊕ MM | DIM LOC-TP-CC18= TRUE POSITION OF CIRCLE CRC-CAV-8-2 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.210 | 0.210 | | | | |
| Z | 0.000 | 0.346 | 0.346 | | | | |
| TP | RFS | | 0.809 | 0.400 | | 0.000 | 0.409 |

| ⊕ MM | DIM LOC-TP-CC19= TRUE POSITION OF CIRCLE CRC-CAV-9-1 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.188 | 0.188 | | | | |
| Z | 0.000 | 0.128 | 0.127 | | | | |
| TP | RFS | | 0.454 | 0.400 | | 0.000 | 0.054 |

| ⊕ MM | DIM LOC-TP-CC20= TRUE POSITION OF CIRCLE CRC-CAV-9-2 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.146 | 0.146 | | | | |
| Z | 0.000 | 0.117 | 0.117 | | | | |
| TP | RFS | | 0.373 | 0.400 | | 0.000 | 0.000 |

| ⊕ MM | DIM LOC-TP-CC21= TRUE POSITION OF CIRCLE CRC-VAC-2 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.115 | 0.115 | | | | |
| Z | 0.000 | 0.056 | 0.056 | | | | |
| TP | RFS | | 0.256 | 0.400 | | 0.000 | 0.000 |

| ⊕ MM | DIM LOC-TP-CC22= TRUE POSITION OF CIRCLE CRC-DAT-2 | | | | | | |
|---|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | BONUS | OUTTOL |
| X | 0.000 | 0.000 | 0.000 | | | | |
| Z | 0.000 | 0.000 | 0.000 | | | | |
| TP | RFS | | 0.000 | 0.400 | | 0.000 | 0.000 |

True Position plots from 3 views
x1000

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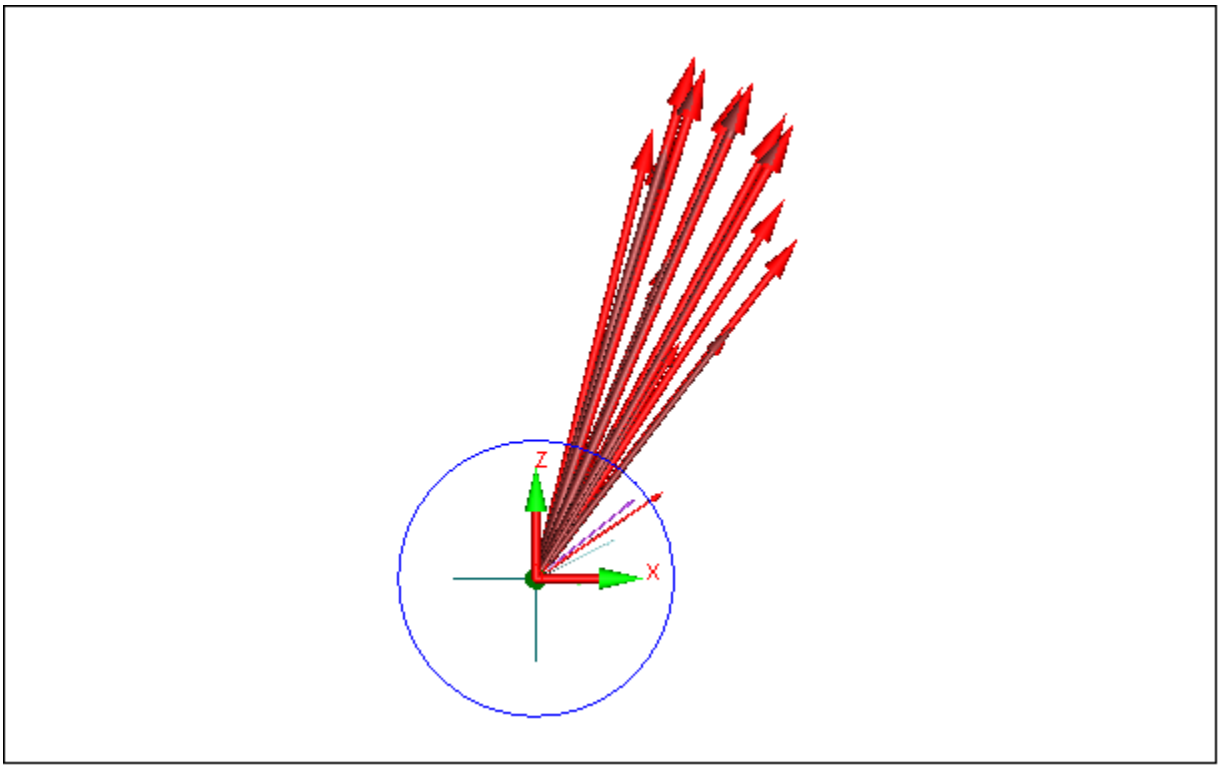
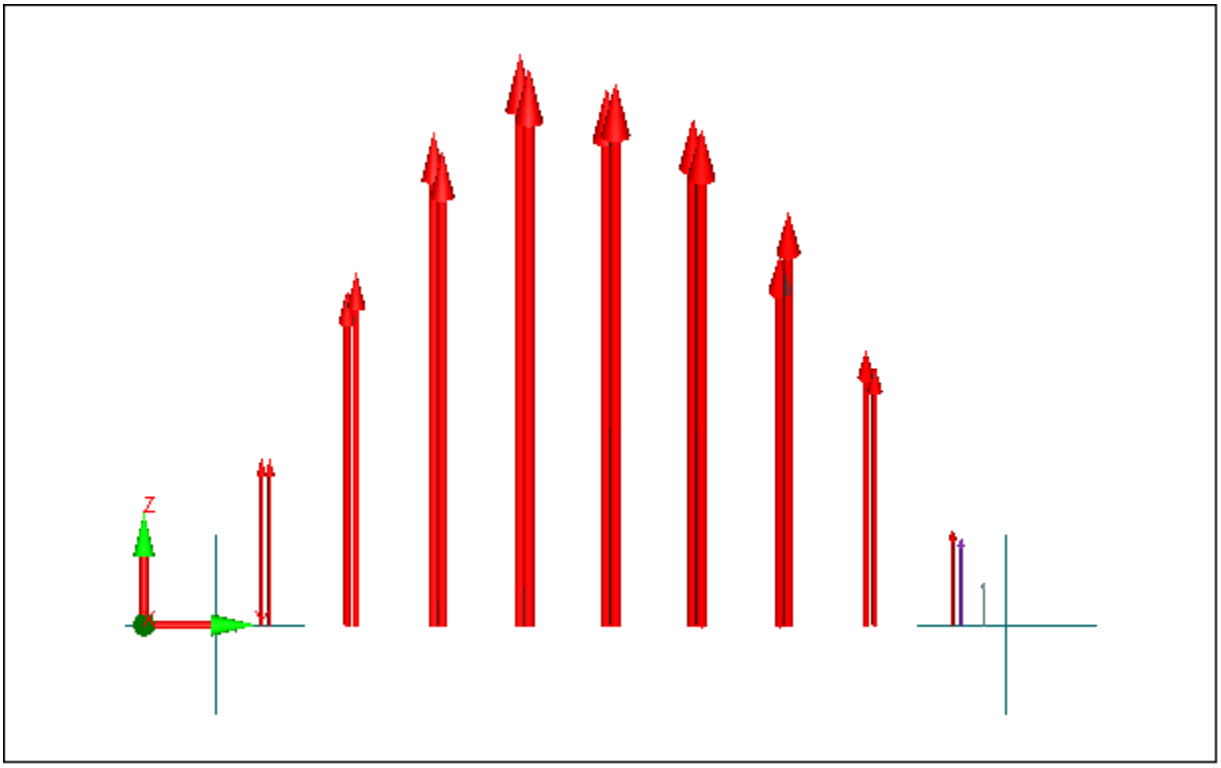
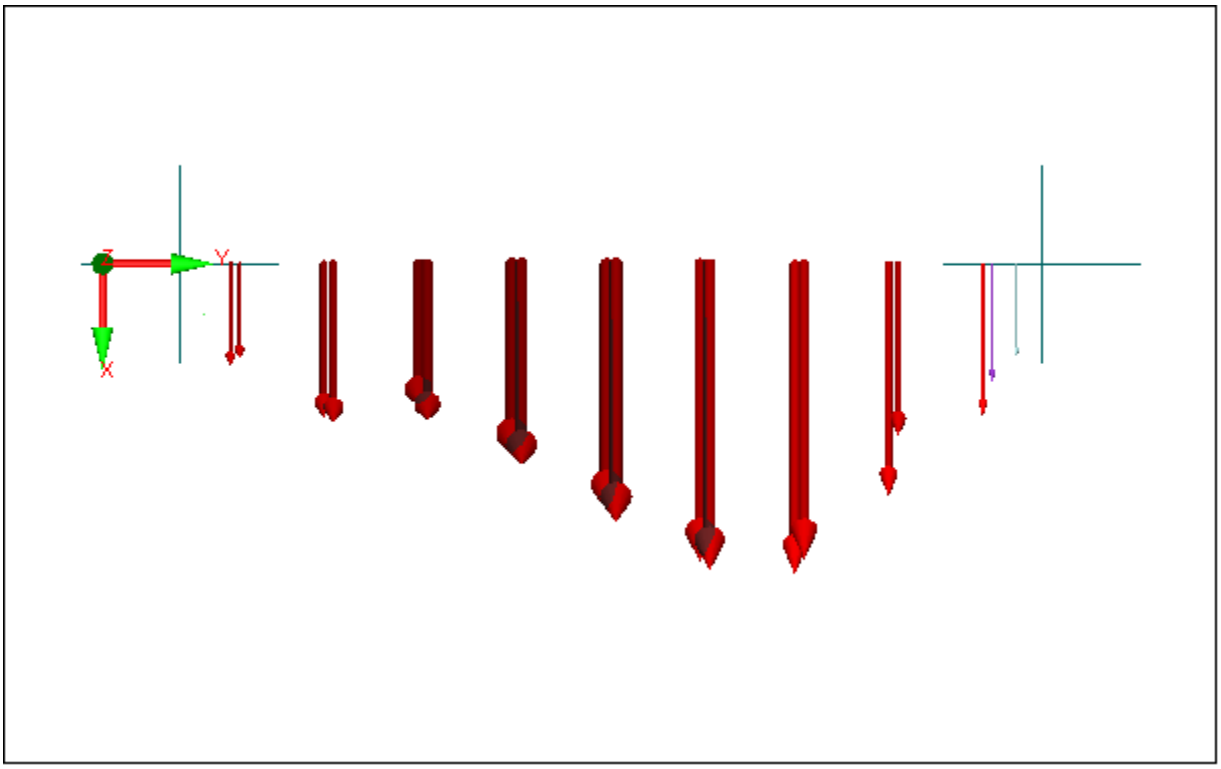



-Y View
x1000




+X View
x1000

PART NUMBER=PN440004-n ILC 1p3GHZ RF CAVITY ASSEMBLY 180 TB9ACC013 v3 IR  DATE=6/25/2008




+Z View
x1000

| MM | DIM LOC-BEST FIT CONSTRUCTED LINE= LOCATION OF LINE LNC-BEST-FIT | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| X | 0.000 | 0.208 | 0.208 | 0.200 | 0.200 | 0.008 |
| Y | 0.000 | 621.660 | 621.660 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.408 | 0.408 | 0.200 | 0.200 | 0.208 |
| ST | 0.000 | 0.815 | 0.815 | 0.200 | 0.000 | 0.615 |

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SUPPORT RING CIRCLE LOCATIONS

MM DIM LOC-SUPPORT RING-1= LOCATION OF CIRCLE CR-SUPPORT-RING-T12

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.110 | 0.110 | 0.200 | 0.200 | 0.000 |
| Y | 0.000 | 218.060 | 218.060 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.262 | 0.262 | 0.200 | 0.200 | 0.062 |
| R | 56.500 | 56.387 | -0.113 | 0.200 | 0.200 | 0.000 |
| RN | 0.000 | 0.040 | 0.040 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-SUPPORT RING-2= LOCATION OF CIRCLE CR-SUPPORT-RING-T23

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.281 | 0.281 | 0.200 | 0.200 | 0.081 |
| Y | 0.000 | 333.188 | 333.188 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.537 | 0.537 | 0.200 | 0.200 | 0.337 |
| R | 56.500 | 56.355 | -0.145 | 0.200 | 0.200 | 0.000 |
| RN | 0.000 | 0.060 | 0.060 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-SUPPORT RING-3= LOCATION OF CIRCLE CR-SUPPORT-RING-T34

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.269 | 0.269 | 0.200 | 0.200 | 0.069 |
| Y | 0.000 | 448.519 | 448.519 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.751 | 0.751 | 0.200 | 0.200 | 0.551 |
| R | 56.500 | 56.382 | -0.118 | 0.200 | 0.200 | 0.000 |
| RN | 0.000 | 0.004 | 0.004 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-SUPPORT RING-4= LOCATION OF CIRCLE CR-SUPPORT-RING-T45

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.272 | 0.272 | 0.200 | 0.200 | 0.072 |
| Y | 0.000 | 563.863 | 563.863 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.811 | 0.811 | 0.200 | 0.200 | 0.611 |
| R | 56.500 | 56.406 | -0.094 | 0.200 | 0.200 | 0.000 |
| RN | 0.000 | 0.008 | 0.008 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-SUPPORT RING-5= LOCATION OF CIRCLE CR-SUPPORT-RING-T56

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.323 | 0.323 | 0.200 | 0.200 | 0.123 |
| Y | 0.000 | 678.957 | 678.957 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.759 | 0.759 | 0.200 | 0.200 | 0.559 |
| R | 56.500 | 56.381 | -0.119 | 0.200 | 0.200 | 0.000 |
| RN | 0.000 | 0.022 | 0.022 | 0.200 | 0.000 | 0.000 |

MM DIM LOC-SUPPORT RING-6= LOCATION OF CIRCLE CR-SUPPORT-RING-T67

| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
|---|---|---|---|---|---|---|
| X | 0.000 | 0.387 | 0.387 | 0.200 | 0.200 | 0.187 |
| Y | 0.000 | 794.158 | 794.158 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.611 | 0.611 | 0.200 | 0.200 | 0.411 |
| R | 56.500 | 56.395 | -0.105 | 0.200 | 0.200 | 0.000 |
| RN | 0.000 | 0.003 | 0.003 | 0.200 | 0.000 | 0.000 |

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| MM | DIM LOC-SUPPORT RING-7= LOCATION OF CIRCLE CR-SUPPORT-RING-T78 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| X | 0.000 | 0.384 | 0.384 | 0.200 | 0.200 | 0.184 |
| Y | 0.000 | 909.057 | 909.057 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.434 | 0.433 | 0.200 | 0.200 | 0.233 |
| R | 56.500 | 56.380 | -0.120 | 0.200 | 0.200 | 0.000 |
| RN | 0.000 | 0.011 | 0.011 | 0.200 | 0.000 | 0.000 |

| MM | DIM LOC-SUPPORT RING-8= LOCATION OF CIRCLE CR-SUPPORT-RING-T89 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| X | 0.000 | 0.206 | 0.206 | 0.200 | 0.200 | 0.006 |
| Y | 0.000 | 1024.358 | 1024.358 | 2000.000 | 2000.000 | 0.000 |
| Z | 0.000 | 0.171 | 0.171 | 0.200 | 0.200 | 0.000 |
| R | 56.500 | 56.404 | -0.096 | 0.200 | 0.200 | 0.000 |
| RN | 0.000 | 0.060 | 0.060 | 0.200 | 0.000 | 0.000 |

SUPPORT RING POINT LOCATIONS

SUPPORT RING CIRCLES IN Z

| MM | DIM LOC Z SUPPORT RING CIRCLES 1= LOCATION OF CIRCLE CR-SUPPORT-RING-T1 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | 0.000 | 0.262 | 0.262 | 0.200 | 0.200 | 0.062 |

| MM | DIM LOC Z SUPPORT RING CIRCLES 2= LOCATION OF CIRCLE CR-SUPPORT-RING-T2 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | 0.000 | 0.537 | 0.537 | 0.200 | 0.200 | 0.337 |

| MM | DIM LOC Z SUPPORT RING CIRCLES 3= LOCATION OF CIRCLE CR-SUPPORT-RING-T3 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | 0.000 | 0.751 | 0.751 | 0.200 | 0.200 | 0.551 |

| MM | DIM LOC Z SUPPORT RING CIRCLES 4= LOCATION OF CIRCLE CR-SUPPORT-RING-T4 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | 0.000 | 0.811 | 0.811 | 0.200 | 0.200 | 0.611 |

| MM | DIM LOC Z SUPPORT RING CIRCLES 5= LOCATION OF CIRCLE CR-SUPPORT-RING-T5 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | 0.000 | 0.759 | 0.759 | 0.200 | 0.200 | 0.559 |

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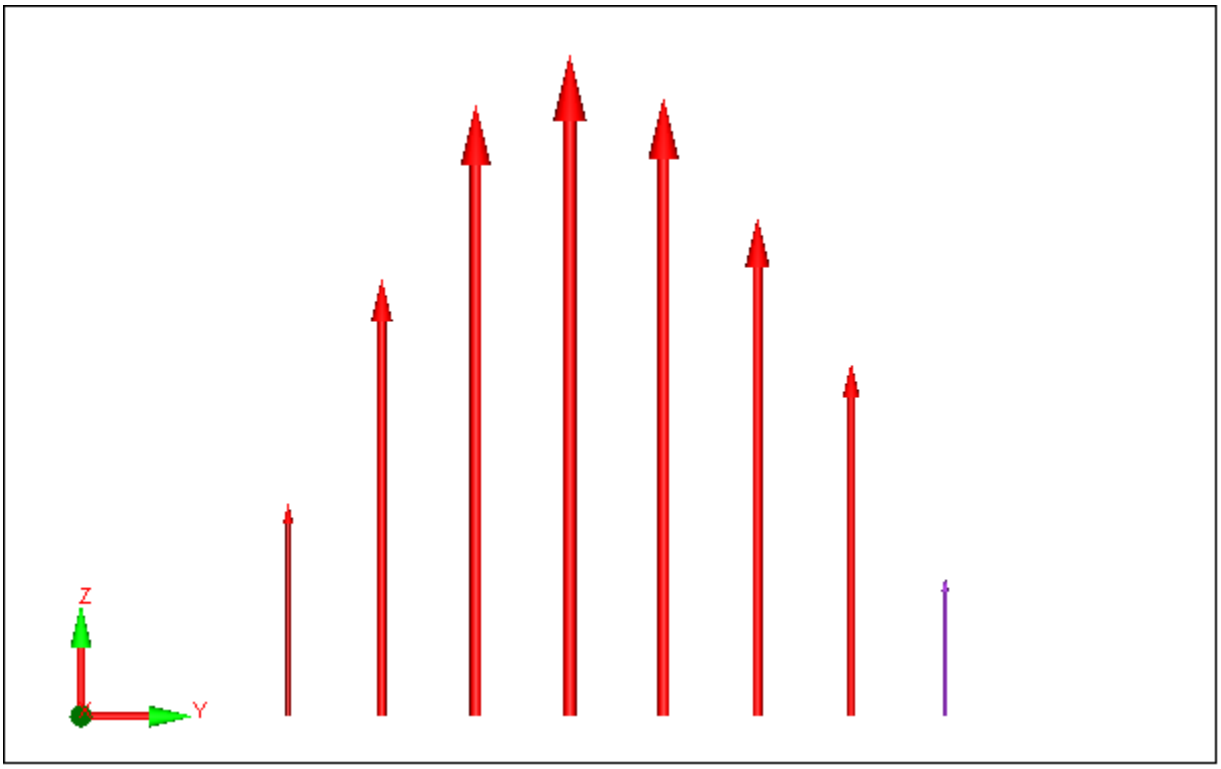
| MM | DIM LOC Z SUPPORT RING CIRCLES 6= LOCATION OF CIRCLE CR-SUPPORT-RING-T6 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | 0.000 | 0.611 | 0.611 | 0.200 | 0.200 | 0.411 |

| MM | DIM LOC Z SUPPORT RING CIRCLES 7= LOCATION OF CIRCLE CR-SUPPORT-RING-T7 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | 0.000 | 0.434 | 0.433 | 0.200 | 0.200 | 0.233 |

| MM | DIM LOC Z SUPPORT RING CIRCLES 8= LOCATION OF CIRCLE CR-SUPPORT-RING-T8 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | 0.000 | 0.171 | 0.171 | 0.200 | 0.200 | 0.000 |




SUPPORT RING CIRCLES IN Z
x1000

SUPPORT RING POINTS IN Z

| MM | DIM LOC Z SUPPORT RING POINTS 1= LOCATION OF POINT PT-SUPPORT-RING-T12 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | -56.500 | -56.092 | 0.408 | 0.200 | 0.200 | 0.208 |

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| MM | DIM LOC Z SUPPORT RING POINTS 2= LOCATION OF POINT PT-SUPPORT-RING-T23 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | -56.500 | -55.765 | 0.735 | 0.200 | 0.200 | 0.535 |

| MM | DIM LOC Z SUPPORT RING POINTS 3= LOCATION OF POINT PT-SUPPORT-RING-T34 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | -56.500 | -55.584 | 0.916 | 0.200 | 0.200 | 0.716 |

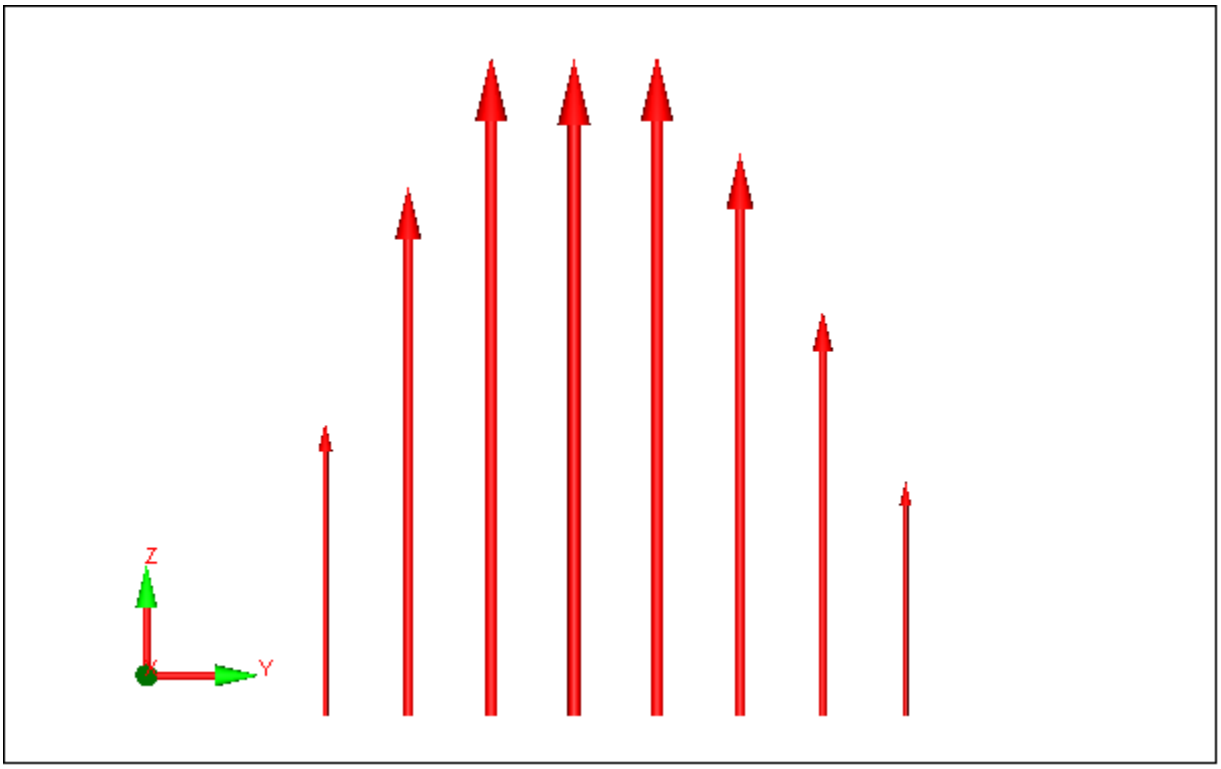
| MM | DIM LOC Z SUPPORT RING POINTS 4= LOCATION OF POINT PT-SUPPORT-RING-T45 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | -56.500 | -55.588 | 0.912 | 0.200 | 0.200 | 0.712 |

| MM | DIM LOC Z SUPPORT RING POINTS 5= LOCATION OF POINT PT-SUPPORT-RING-T56 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | -56.500 | -55.582 | 0.918 | 0.200 | 0.200 | 0.718 |

| MM | DIM LOC Z SUPPORT RING POINTS 6= LOCATION OF POINT PT-SUPPORT-RING-T67 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | -56.500 | -55.719 | 0.781 | 0.200 | 0.200 | 0.581 |

| MM | DIM LOC Z SUPPORT RING POINTS 7= LOCATION OF POINT PT-SUPPORT-RING-T78 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | -56.500 | -55.937 | 0.563 | 0.200 | 0.200 | 0.363 |

| MM | DIM LOC Z SUPPORT RING POINTS 8= LOCATION OF POINT PT-SUPPORT-RING-T89 | | | | | |
|---|---|---|---|---|---|---|
| AX | NOMINAL | MEAS | DEV | +TOL | -TOL | OUTTOL |
| Z | -56.500 | -56.174 | 0.326 | 0.200 | 0.200 | 0.126 |



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SUPPORT RING POINTS IN Z
x1000

END OF MEASUREMENT FOR
PN=PN440004-n ILC 1p3GHZ RF CAVITY ASSEMBLY 180 TB9ACC013 v3 IR D
WG= SN=
TOTAL # OF MEAS =315 # OUT OF TOL =138