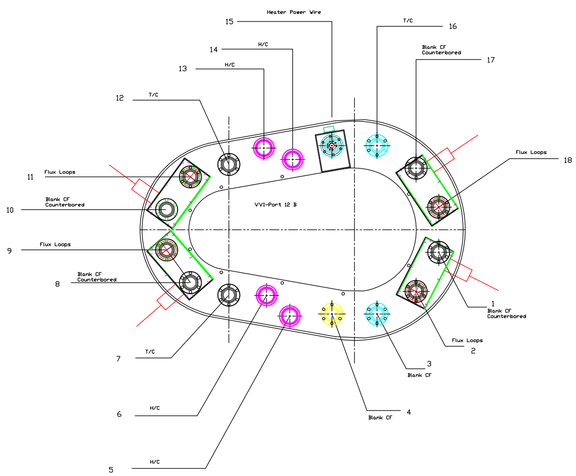


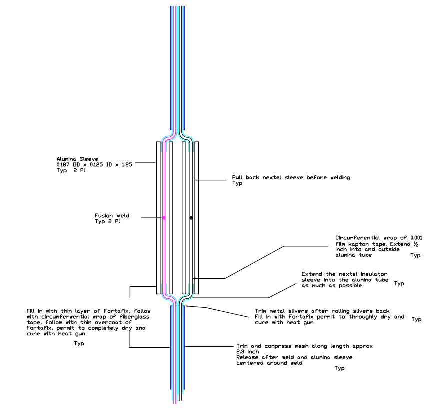
Flange No.	FUNCTION	TAG	FEEDTHROUGH	FITTINGS AND HARDWARE	TERMINATIONS
1	Flux Loops	None	None	Counterbored 2.75 Blind CF Flange	None
2	Flux Loops	JJ2, LL2, NN1, NN3, PP4, TH0-3, TH0-4, TH0-5	Silicone Rubber	Rot Blind 2.75 CF with 0.070 drilled holes	Junction Box
3	None	None	None	Blind 2.75 CF FLANGE	None
4	None	None	None	Blind 2.75 CF FLANGE	None
5	Heating and Cooling Gas		2.75 CF Flange	Bellows	Velded Tube
6	Heating and Cooling Gas		2.75 CF Flange	Bellows	Velded Tube
7	Thermocouples		20 pin Commercial Feedthrough 2.75 CF Flange-ISI	Type E Crimp-Push Pins	MS Style Circular Connector
8	Flux Loops	None	None	Counterbored 2.75 Blind CF Flange	None
9	Flux Loops	II5, II6, II7, II8, II9, KK11, LL4, LL7, MM5, OO8, TH180-1, TH180-2	Silicone Rubber	Rot Blind 2.75 CF with 0.070 drilled holes	Junction Box
10	Flux Loops	None	None	Counterbored 2.75 Blind CF Flange	None
11	Flux Loops	DD5, EE7, FF7, GG10, HH5, HH8, II2, II3, II4	Silicone Rubber	Rot Blind 2.75 CF with 0.070 drilled holes	Junction Box
12	Thermocouples		20 pin Commercial Feedthrough 2.75 CF Flange-ISI	Type E Crimp-Push Pins	MS Style Circular Connector
13	Heating and Cooling Gas		2.75 CF Flange	Bellows	Velded Tube
14	Heating and Cooling Gas		2.75 CF Flange	Bellows	Velded Tube
15	Strip Electric Heaters		Silicone Rubber	Rot Blind 2.75 CF with 0.070 drilled holes	Junction Box with 16 Pin Amphenol Box Receptacle
16	Thermocouples		20 pin Commercial Feedthrough 2.75 CF Flange-ISI	Type E Crimp-Push Pins	MS Style Circular Connector
17	Flux Loops	None	None	Counterbored 2.75 Blind CF Flange	None
18	Flux Loops	AA2, CC4, DD2, FF3, HH2, II1, TH0-1, TH0-2	Silicone Rubber	Rot Blind 2.75 CF with 0.070 drilled holes	Junction Box

Flange No.	TAG No.	Hole Position	D Sub Connector Pin #
2	J1	1	1 and 14
	J2	2	2 and 15
	L1	3	3 and 16
	L3	4	4 and 17
	M4	5	5 and 18
	N2	6	6 and 19
	O7	7	7 and 20
		8	
		9	
		10	
		11	
		12	
		13	
		14	
		15	
		16	

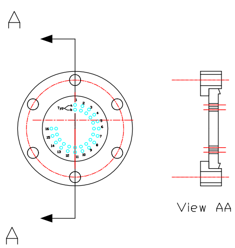
Flange No.	TAG No.	Hole Position	D Sub Connector Pin #
9	J3	1	1 and 14
	J5	2	2 and 15
	J6	3	3 and 16
	J7	4	4 and 17
	J8	5	5 and 18
	J9	6	6 and 19
	K5	7	7 and 20
	L7	8	8 and 21
	N7	9	9 and 22
	O10	10	10 and 23
	TH180-1	11	11 and 24
	TH180-2	12	12 and 25
		13	
		14	
		15	
		16	

Flange No.	TAG No.	Hole Position	D Sub Connector Pin #
11	D5	1	1 and 14
	F8	2	2 and 15
	F11	3	3 and 16
	G9	4	4 and 17
	H5	5	5 and 18
	H10	6	6 and 19
	I4	7	7 and 20
	J4	8	8 and 21
	J10	9	9 and 22
	TH180-3	10	10 and 23
	TH180-4	11	11 and 24
	TH180-5	12	12 and 25
		13	
		14	
		15	
		16	

Flange No.	TAG No.	Hole Position	D Sub Connector Pin #
18	B2	1	1 and 14
	C1	2	2 and 15
	C4	3	3 and 16
	D4	4	4 and 17
	E2	5	5 and 18
	G1	6	6 and 19
	G4	7	7 and 20
		8	
		9	
		10	
		11	
		12	
		13	
		14	
		15	
		16	



TC Extension

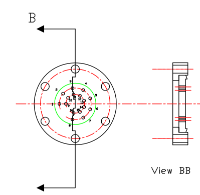


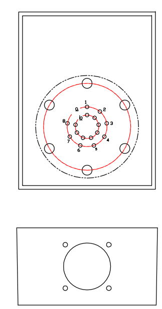
Flange # 2, 9, 11 and 18

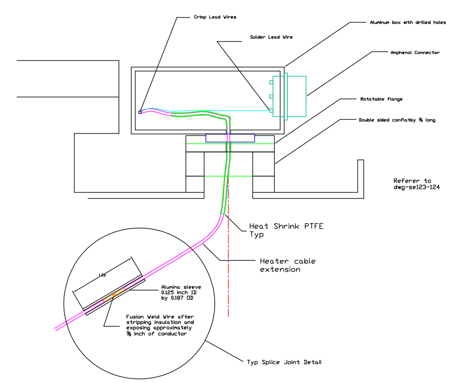
Flange No.	TAG No.	Hole Position	
15	H2B-1-1	1a	
	H2B-1-2	1b	
	H2B-2-1	2a	#1 Spare
	H2B-2-2	2b	
	H2B-3-1	3a	
	H2B-3-2	3b	
	H2B-4-1	4a	#2 Spare
	H2B-4-2	4b	
	H2B-5-1	5a	
	H2B-5-2	5b	
	H2B-6-1	6a	#3 Spare
	H2B-6-2	6b	
	H2B-7-1	7a	
	H2B-7-2	7b	
	H2B-8-1	8a	#4 Spare
	H2B-8-2	8b	

ELECTRIC HEATER STRIPS NUMBERED 1-8
1- NEAREST PORT 12 FLANGE
8- NEAREST VACUUM VESSEL

H- ELECTIC HEATER STRIP
2- V V 2
B- BOTTOM







Flange # 15

George Labik
6 Aug 2007- Rev 1 17Aug 2007

NO.	REVISION	BY	CH	SUP	APPROVED	DATE

03	02	01	PART NO.	NOMENCLATURE OR DESCRIPTION	DRAWING NO.	MATERIAL
			6			
			5			
			4			
			3			
			2			
			1			
				ASSEMBLY		

WELDING ENGINEER
APPVD: ______ DATE ______
APPVD: ______ DATE ______

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED
AutoCAD2000
DO NOT VERIFY INFORMATION BY SCALING DRAWING
SCALE:
NEXT ASSEMBLY
CENTRAL FILES:
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES MACHINE SURFACES 125
BREAK SHARP EDGES .005/.020
TOLERANCES NON-CUMULATIVE

DECIMAL-INCH		FRACTIONS	
.X	± .100	0"-12"	±1/16
.XX	± .030	12"-72"	±1/8
.XXX	± .005	72"-120"	±1/4
ANGULAR	±0°-15'	OVER 120"	±1/2

PRINCETON PLASMA PHYSICS LABORATORY
PRINCETON UNIVERSITY
NATIONAL COMPACT STELLARATOR EXPERIMENT

PORT 12 INTERFACES
VV2 TOP

DIV: FOM
ENG: G.LABIK
DWN: G.LABIK
CHK: G.TCHILINGUIRIAN
DATE: 9MAY2006
APPROVED
CHK: GT
SUPV: JS
CADD FILE:
se 123-124
SHEET 4 OF 8
REV 0
MechEsize1