


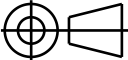
2D CAD drawing

TCPH_BELLOWS_DET

TCPH_BELLOWS_DET

<i>Approval Process</i>			
<i>Author</i>	<i>Name</i>	<i>Action</i>	<i>Affiliation</i>
	Vauquelin J.	24 May 2018:signed	IO/DG/COO/CIO/DO/CAD
<i>Co-Authors</i>			
<i>Reviewers</i>	Beaudoire S.	30 May 2018:recommended	IO/DG/COO/CIO/DO/CAD
	Bhardwaj A.	25 May 2018:recommended	IO/DG/COO/CST/TAD/ICA
	Dube V.	25 May 2018:recommended	IO/DG/COO/CST/TAD/ICA
	More V.	(Fast Track)	IO/DG/COO/CST/TAD/ICA
		29 May 2018:recommended	
<i>Previous Versions</i>	Tailhardat O.	21 Jul 2017:recommended v1.3	IO/DG/COO/CST/TAD/ICA
<i>Reviews</i>			
<i>Approver</i>	Petit P.	31 May 2018:approved	IO/DG/COO/CST/TAD/ICA
<i>Document Security: Internal Use</i>			
<i>RO: Bhardwaj Anil</i>			
<i>Read Access</i>	LG: TCPH task force team, LG: Cryostat IO team, AD: ITER, AD: External Collaborators, AD: IO_Director-General, AD: EMAB, AD: Auditors, AD: ITER Management Assessor, project administrator, RO, GG: CEA Decommissioning Experts, LG: TCPH FDR - Add Rights, LG: CAD , AD: DA-IN		

<i>Change Log</i>			
TCPH_BELLOWS_DET (Q386W5)			
<i>Version</i>	<i>Latest Status</i>	<i>Issue Date</i>	<i>Description of Change</i>
v1.0	Signed	16 Sep 2014	
v1.1	Signed	11 Dec 2015	Design update
v1.2	Signed	29 Mar 2017	Update of the VV interface flange
v1.3	Approved	21 Jul 2017	addition of an adapting cylinder for tolerance compensation
v1.4	Approved	24 May 2018	ADDITION OF THE ITEM 04

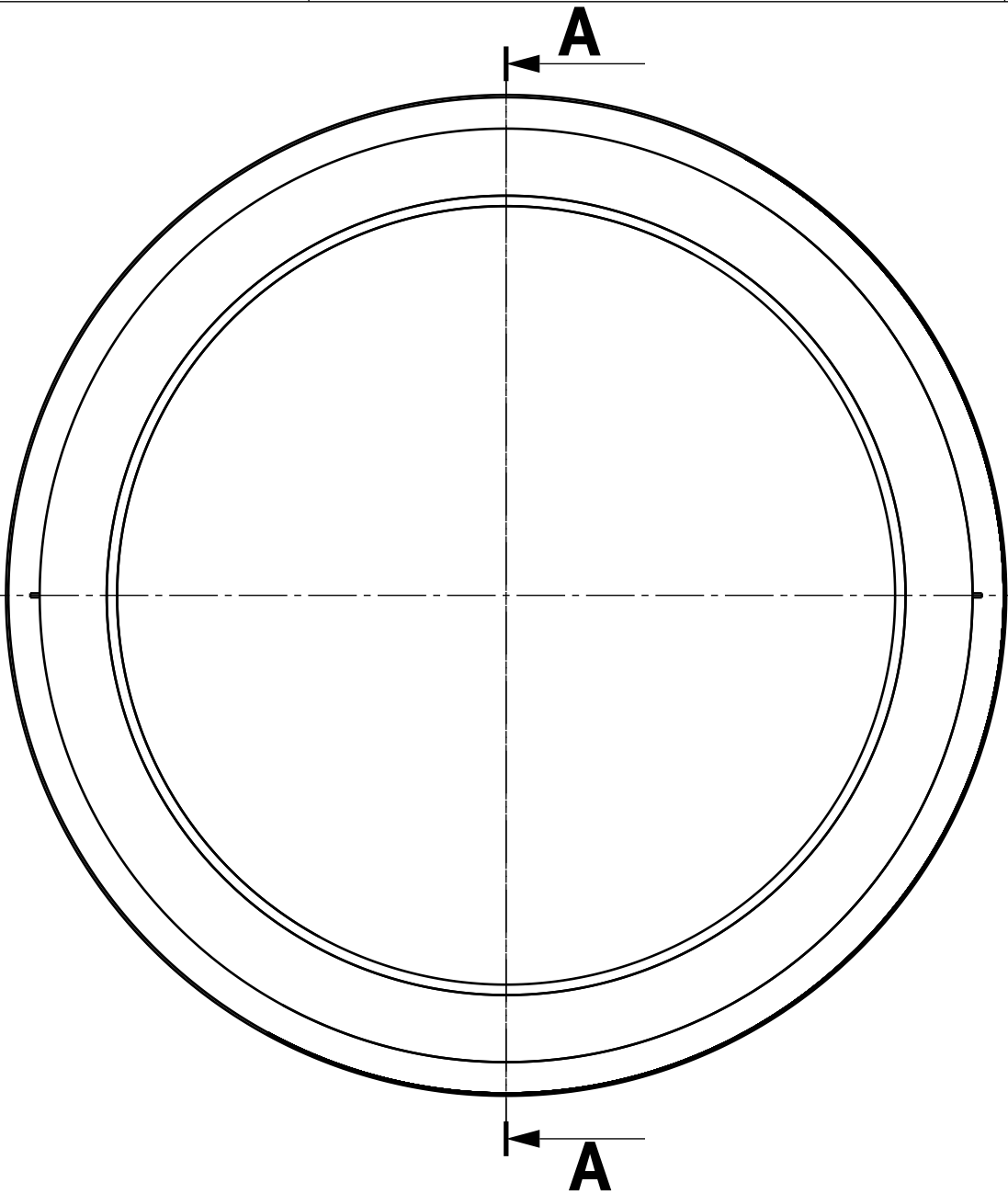
ITER ID_Q386W5 v1.4		2	3	4	5	6	7	8																			
A																											
B																											
C																											
D					--C	ADDITION OF THE ITEM 04		2		24.05.18																	
					--B	FLANGE UPDATE ADDITION OF A BOM				21.07.17																	
					--A	VV INTERFACE UPDATE				02-12-15																	
					---	FIRST ISSUE				18-09-14																	
	REV No.	DETAILS OF MODIFICATION						SHEET No.	GRID REF	DATE	DCR No.																
	DRW DOC ID		PUYRRX		RELEASED BY		ITER Organization																				
	LINKED EV5 PT ID		U2L8RU		APPROVED BY																						
	PBS TITLE		Cryostat & VVPSS Cryostat Lower Cylinder		CHECKED BY																						
	REV DATE		15 May 18		PT MATURITY		CD		PT VERSION			--F															
	SHEET SIZE		420x297		SCALE		1:1		PT Status		D		DRAWN BY		---		DRAWING TITLE		TCPH_BELLOWS MODIFICATIONS SHEET								
THIRD ANGLE PROJECTION				NO.OF SHTS		06		PBS 3 LEVELS		24,CR,LC		DRAWING NUMBER		034352		SHEET		01		REVISION		--C		DR STATUS		D	
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Spacereservation for the banner

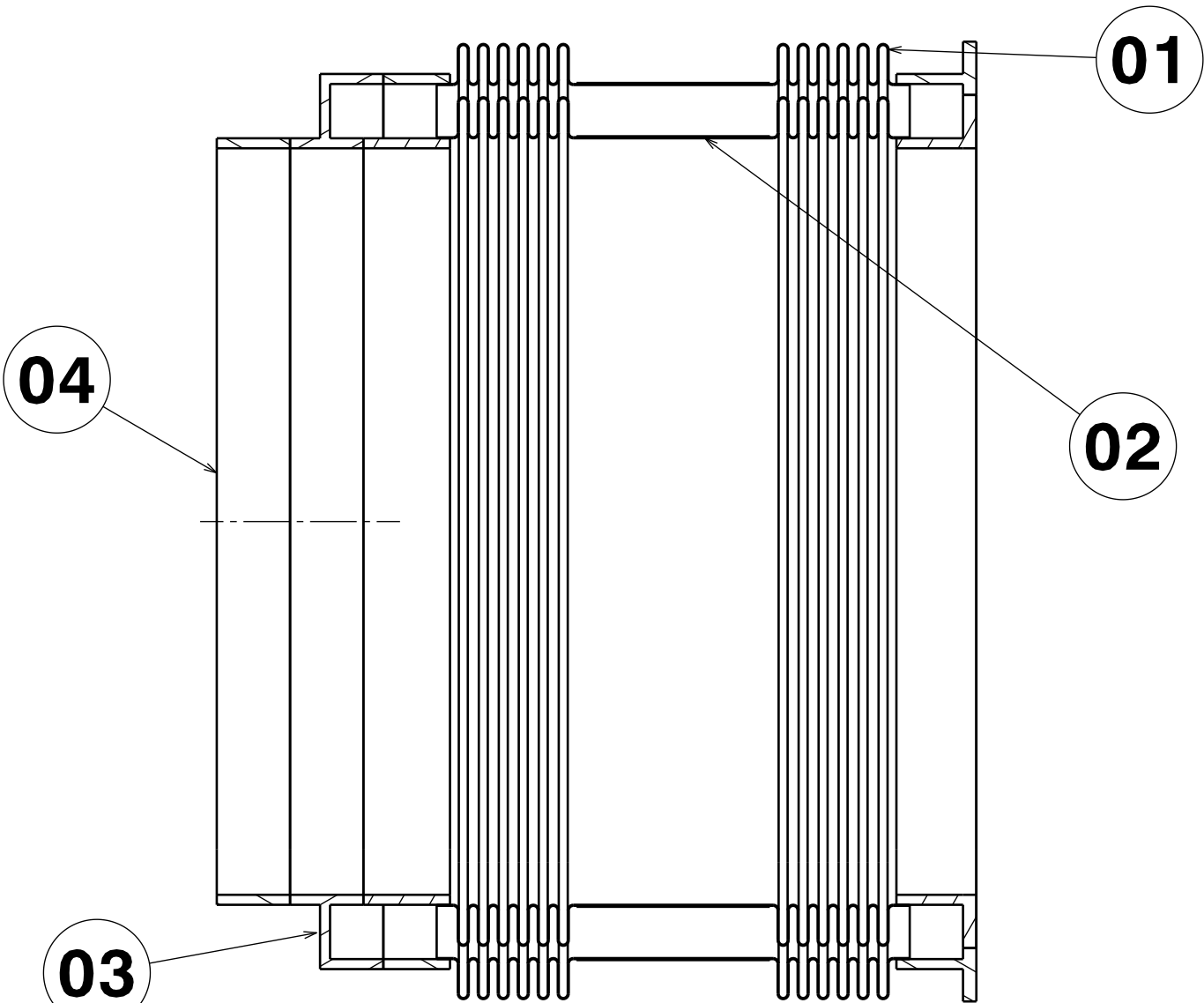
Spacereservation for the banner

Bill of material



Part/Assy Number	Part/Assy reference	Qty	Material	Remarks
01	TCPH_OUTER_BELLOWS	1	SS 304/304L	
02	TCPH_INNER_BELLOWS	1	SS 304/304L	
03	TCPH_BELLOWS_INTERMEDIATE_FLANGE	1	SS 304/304L	
04	TCPH_BELLOWS_ADAPTING_CYLINDER	1	SS 304/304L	To be supplied in loose piece for facilitating assembly of TCPH with VV lower port extension.This piece will be custom machined and welded on both sides onsite by Tokamak assembly contractor.



FRONT VIEW



SECTION VIEW A-A

DRW DOC ID			PUYRRX			RELEASED BY			ITER Organization						 china EU india japan korea russia USA				
LINKED EV5 PT ID			U2L8RU			CHIOCCS													
PBS TITLE						APPROVED BY			DRAWING TITLE										
Cryostat & VVPSS						SBORCHC													
Cryostat						DOMBROI													
Lower Cylinder						CHECKED BY			TCPH_BELLOWS BELLOWS ASSY										
						CONTROLLED BY													
						SEKACHI													
REV DATE		PT MATURITY		PT VERSION		DRAWN BY													
15 May 18		CD		- - F		---													
SHEET FORMAT		SCALE		PT STATUS															
A3		1:10		D															
THIRD ANGLE PROJECTION						SHEET		N° OF SHEETS		PBS 3 LEVELS			DRAWING NUMBER			REVISION		DR STATUS	
						02		06		24 CR LC			034352			- - C		D	

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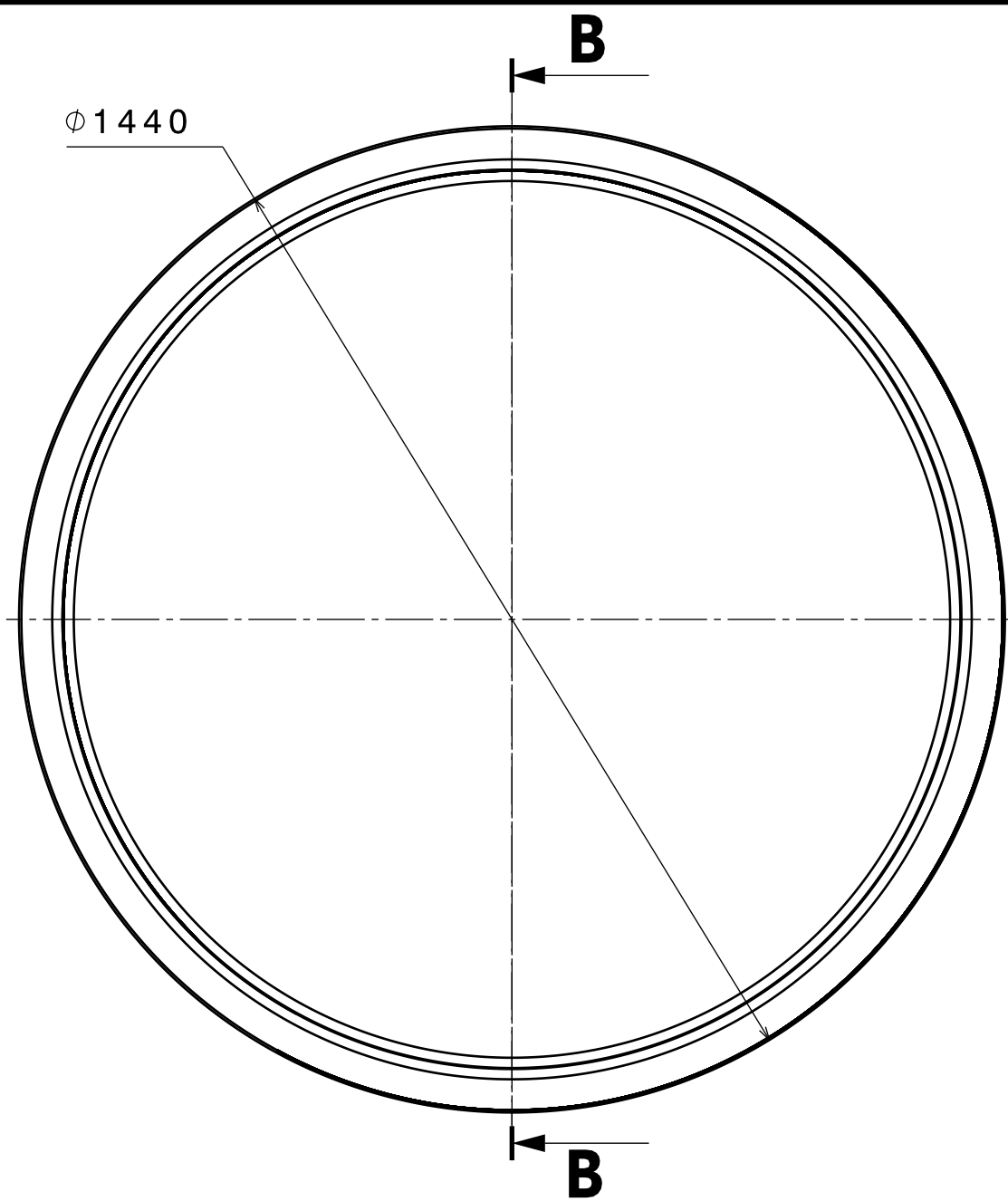
B

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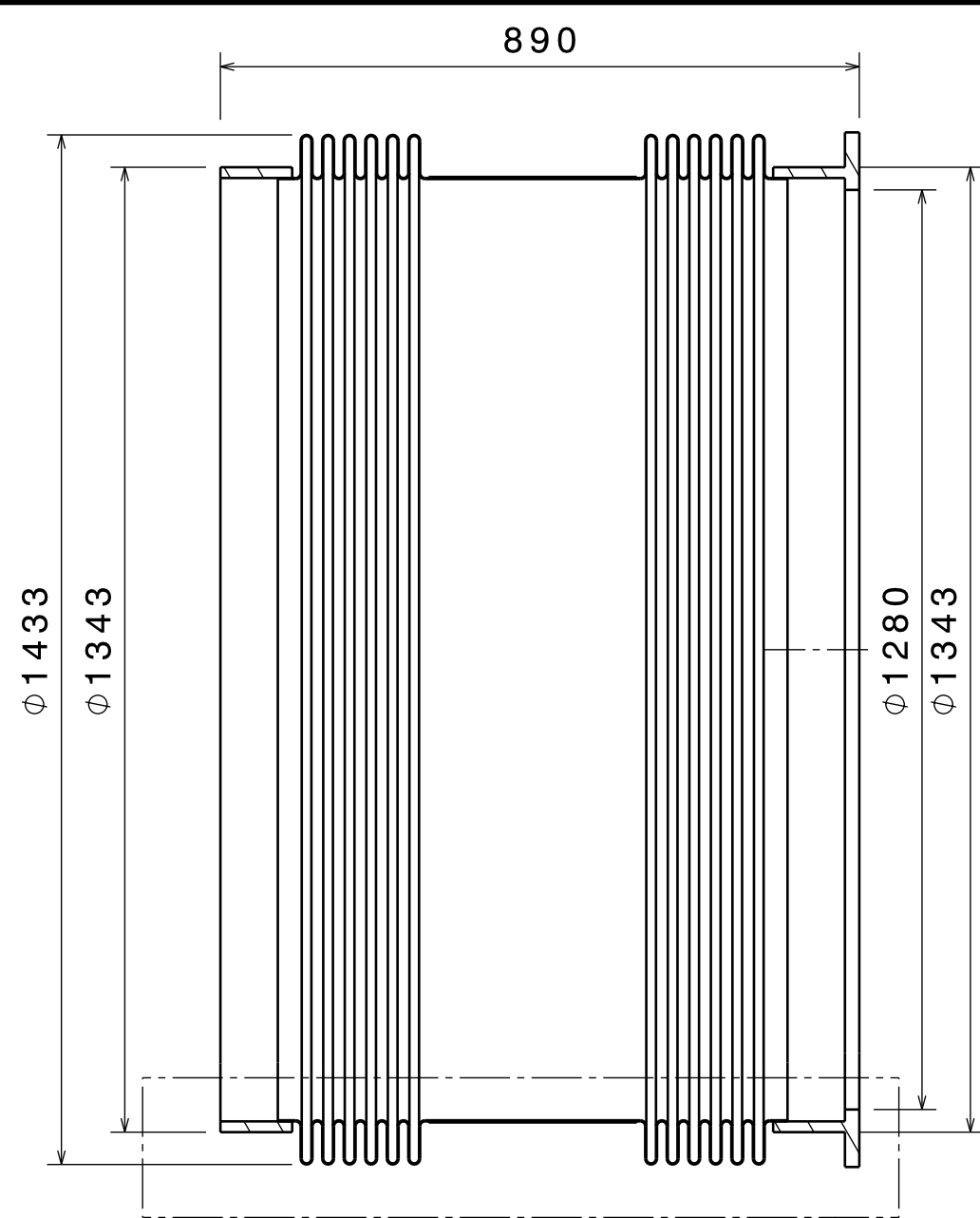
D

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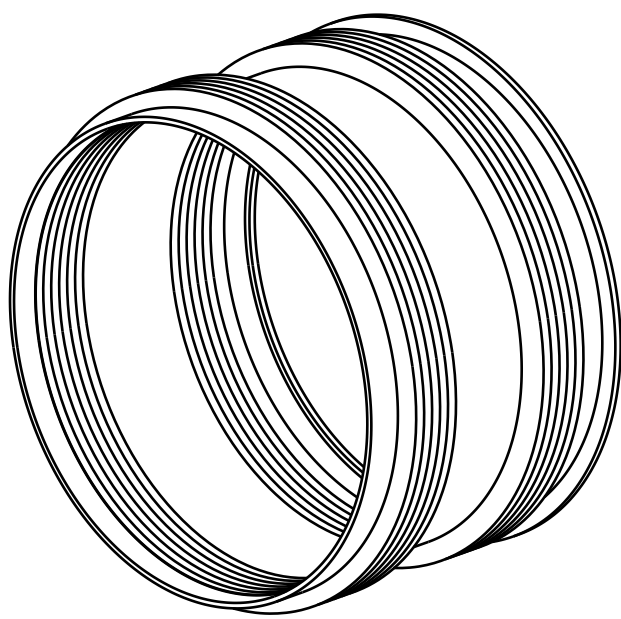
F



Front view



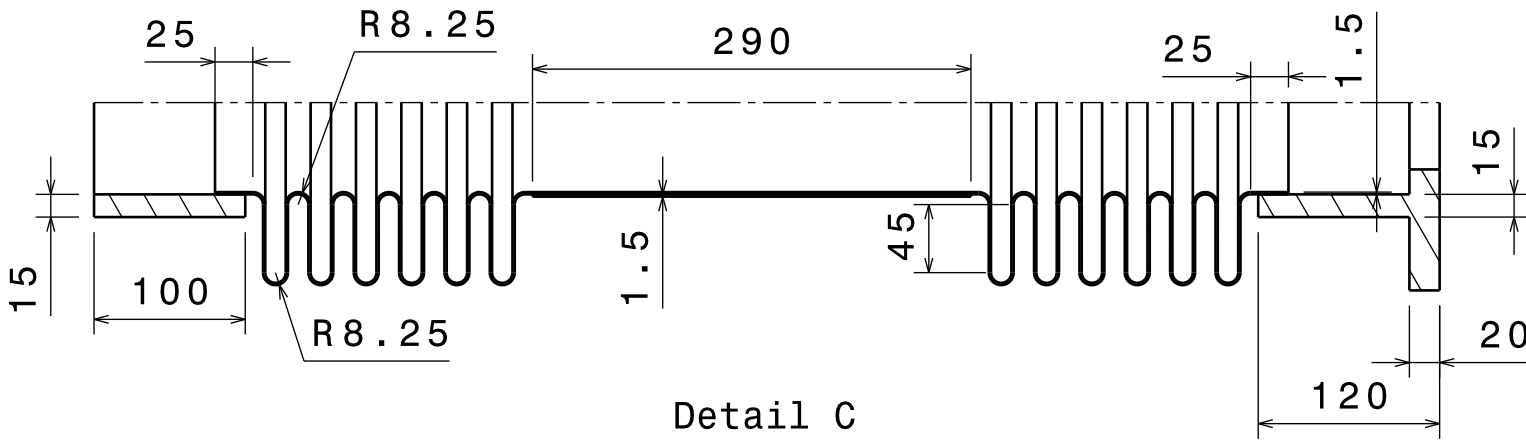
Section view B-B



Mass: 270 kg



Isometric view
Scale: 1:20

SEE DETAIL C



Detail C
Scale: 1:5

Note: ISO 2768 - mK tolerances apply for this sheet unless more stringent tolerances are specified.

DRW DOC ID			PUYRRX		RELEASED BY		ITER Organization			 china EU india japan korea russia USA						
LINKED EV5 PT ID			U2L8RU		CHIOCCS											
PBS TITLE Cryostat & VVPSS Cryostat Lower Cylinder			APPROVED BY		SBORCHC											
			CHECKED BY		DOMBROI											
REV DATE			PT MATURITY		PT VERSION		CONTROLLED BY		DRAWING TITLE TCPH_BELLOWS OUTER BELLOWS							
15 May 18			CD		--F		SEKACHI									
SHEET FORMAT			SCALE		PT STATUS		DRAWN BY									
A3			1:10		D		---									
THIRD ANGLE PROJECTION					SHEET		N° OF SHEETS		PBS 3 LEVELS		DRAWING NUMBER		REVISION		DR STATUS	
					03		06		24		CR,LC		034352		--C	

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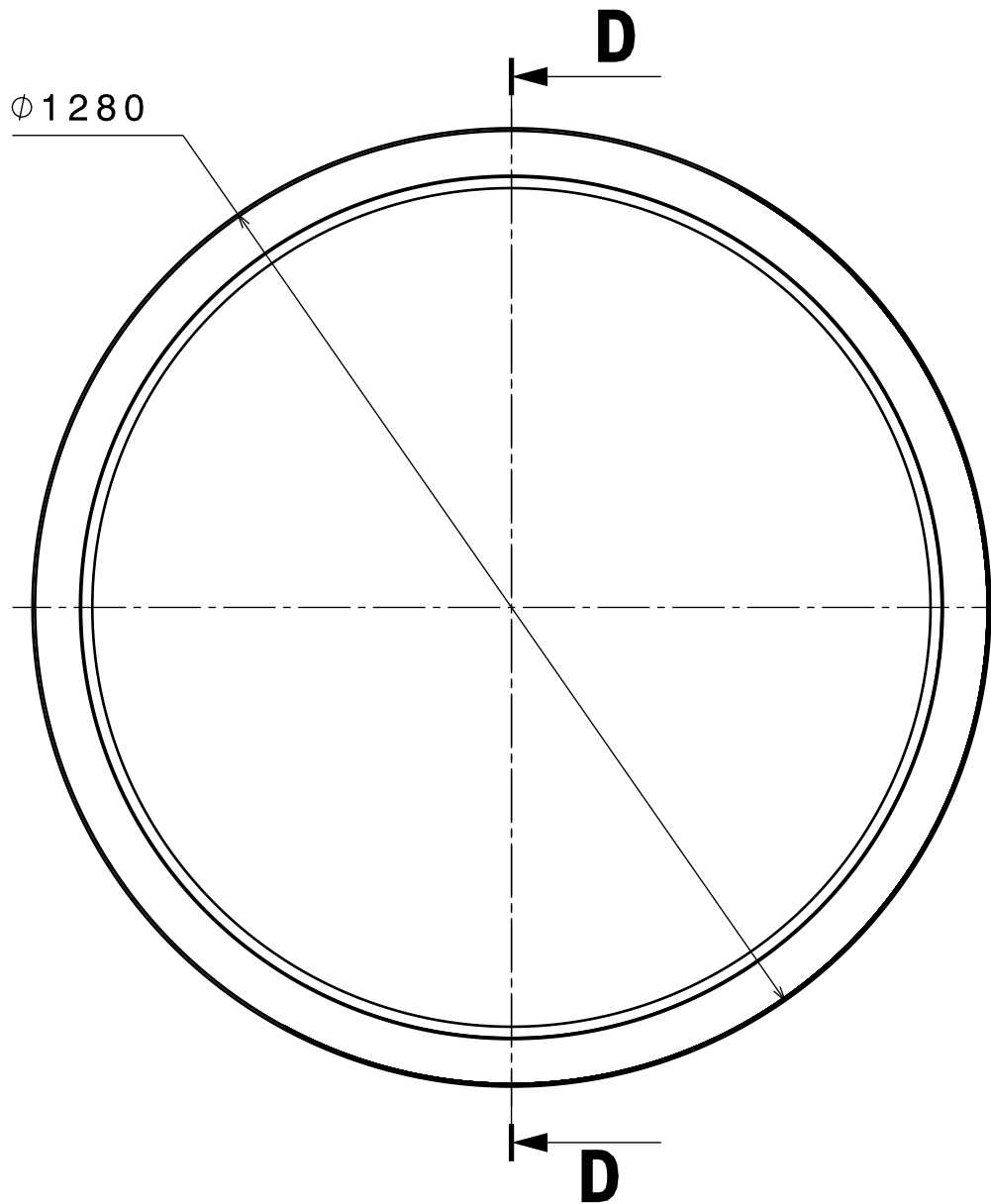
B

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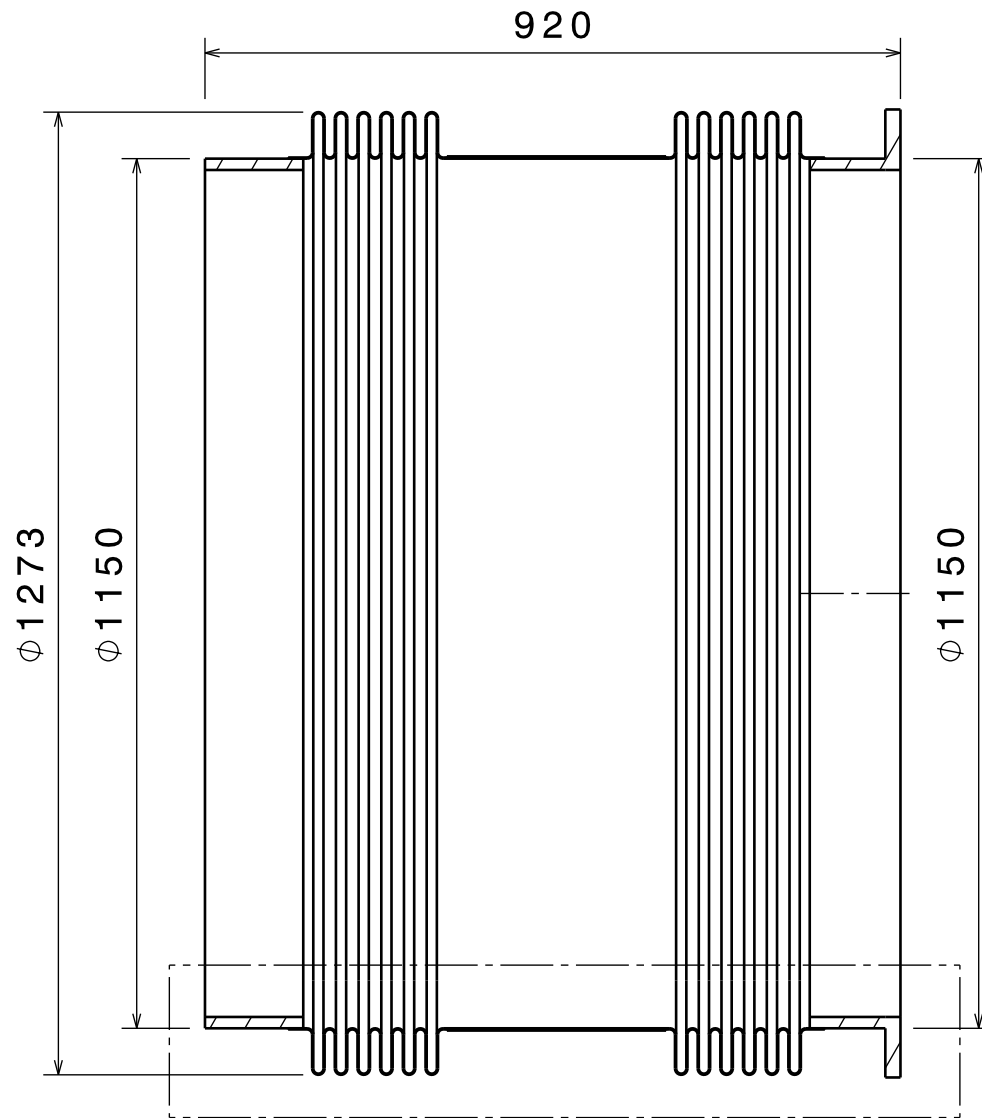
D

E

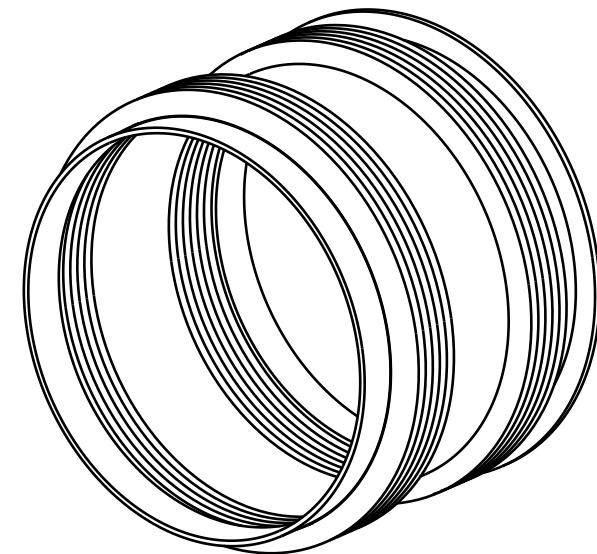
F



Front view



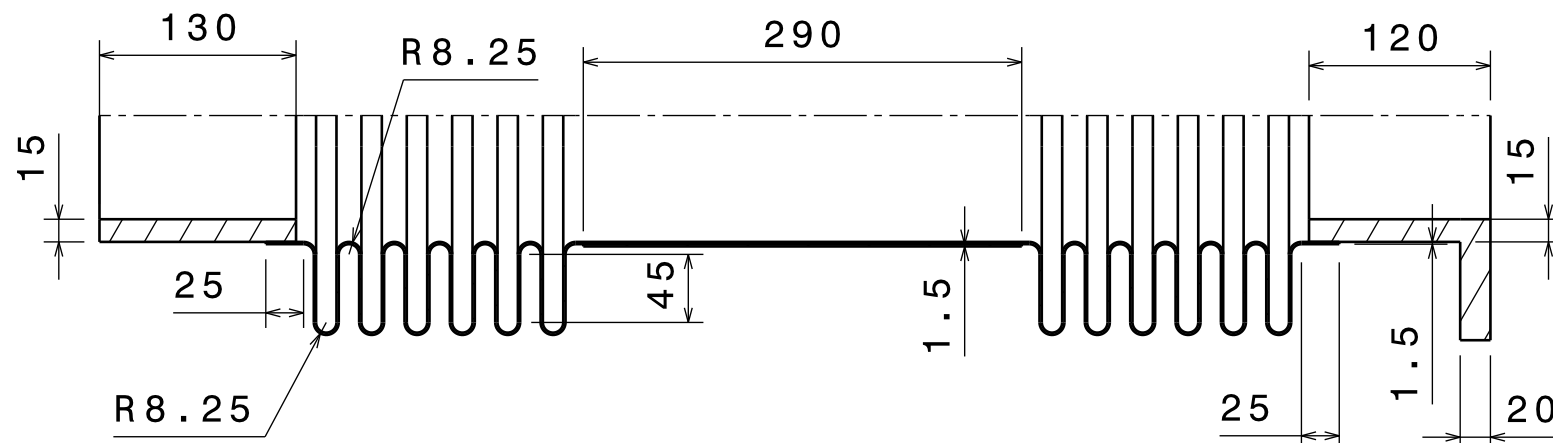
Section view D-D



Mass: 250 kg



Isometric view
Scale: 1:20

SEE DETAIL E



Detail E
Scale: 1:5

Note: ISO 2768 - mK tolerances apply for this sheet unless more stringent tolerances are specified.

DRW DOC ID			PUYRRX		RELEASED BY		CHIOCCS			ITER Organization			 china EU india japan korea russia USA					
LINKED EV5 PT ID			U2L8RU		APPROVED BY		SBORCHC			DRAWING TITLE								
PBS TITLE			Cryostat & VVPSS		CHECKED BY		DOMBROI											
Cryostat			Lower Cylinder		CONTROLLED BY		SEKACHI											
REV DATE		PT MATURITY		PT VERSION		DRAWN BY		---			TCPH_BELLOWS			INNĒR BELLOWS				
15 May 18		CD		-- F														
SHEET FORMAT		SCALE		PT STATUS														
A3		1:10		D														
THIRD ANGLE PROJECTION					SHEET		N° OF SHEETS		PBS 3 LEVELS			DRAWING NUMBER			REVISION		DR STATUS	
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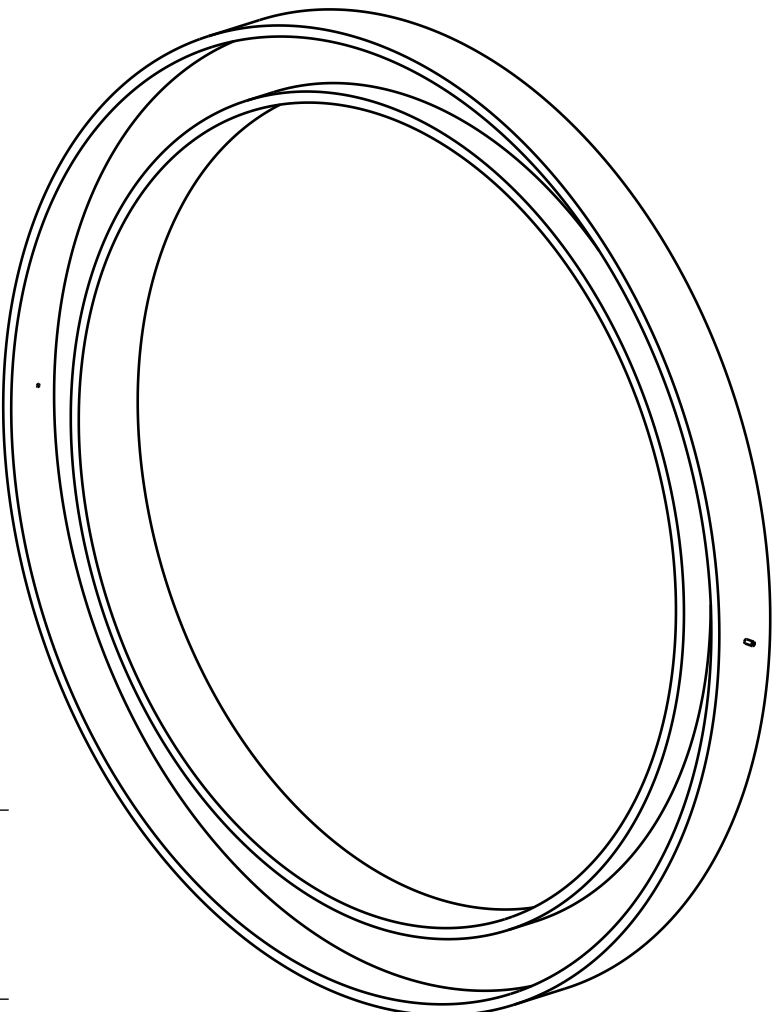
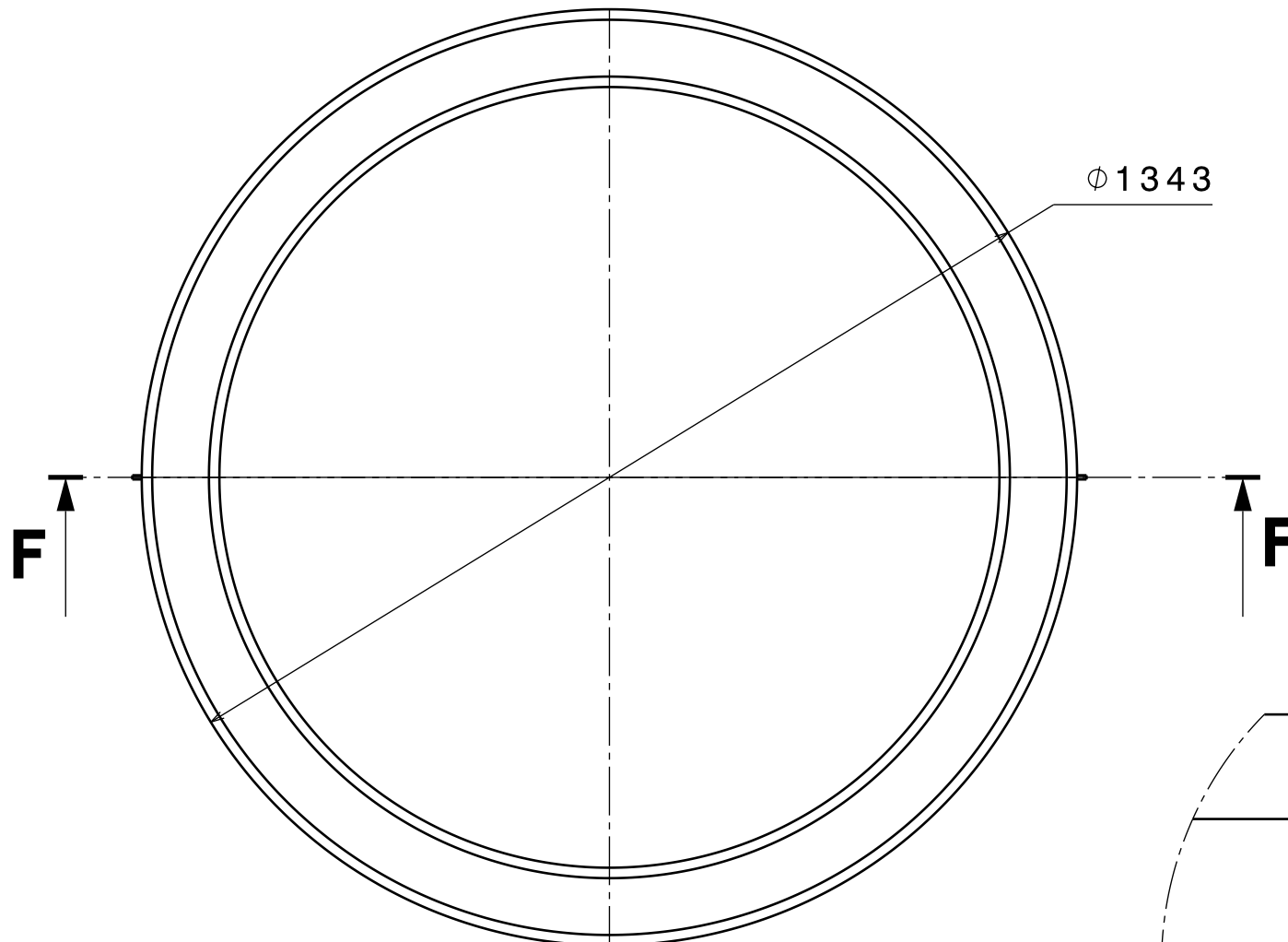
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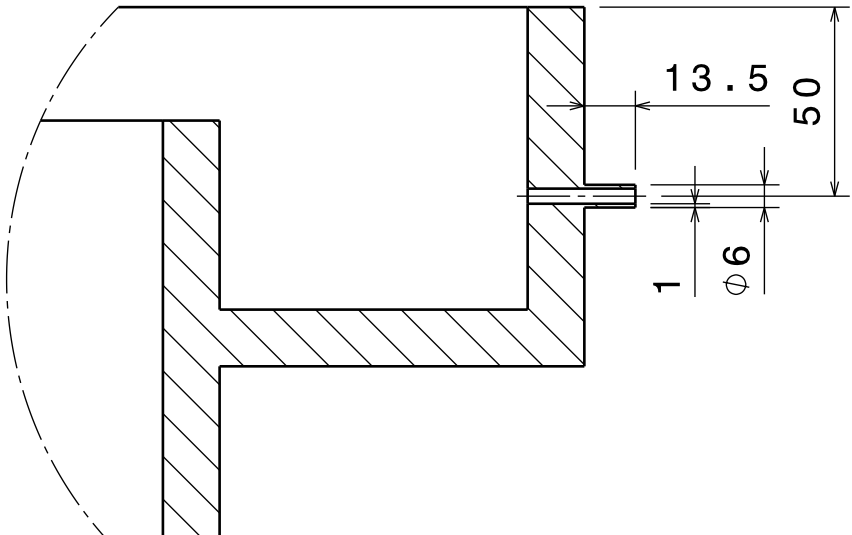
E

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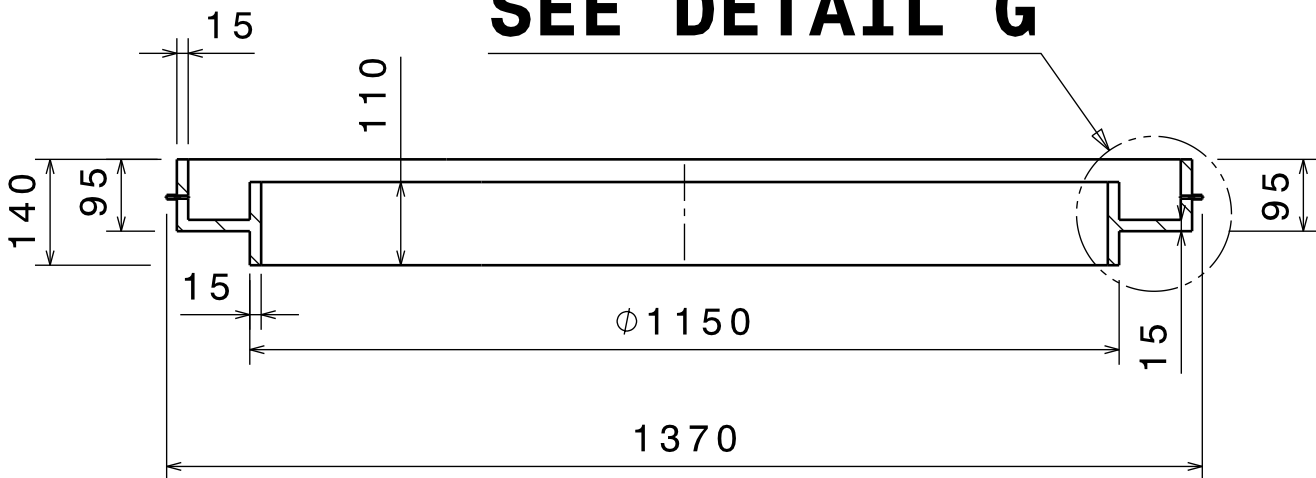


Mass: 133 kg



Isometric view



SEE DETAIL G



Note: ISO 2768 - mK tolerances apply for this sheet unless more stringent tolerances are specified.

DRW DOC ID			PUYRRX			RELEASED BY			ITER Organization			 china EU india japan korea russia USA							
LINKED EV5 PT ID			U2L8RU			CHIOCCS													
PBS TITLE			Cryostat & VVPSS Cryostat Lower Cylinder			APPROVED BY			SBORCHC										
						CHECKED BY			DOMBROI			DRAWING TITLE TCPH_BELLOWS BELLOWS INTERMEDIATE FLANGE							
						CONTROLLED BY			SEKACHI										
						DRAWN BY			---										
REV DATE		PT MATURITY		PT VERSION															
15 May 18		CD		--F															
SHEET FORMAT		SCALE		PT STATUS															
A3		1:10		D															
THIRD ANGLE PROJECTION						SHEET		N° OF SHEETS		PBS 3 LEVELS		DRAWING NUMBER		REVISION		DR STATUS			
						05		06		24		CR LC		034352		--C		D	

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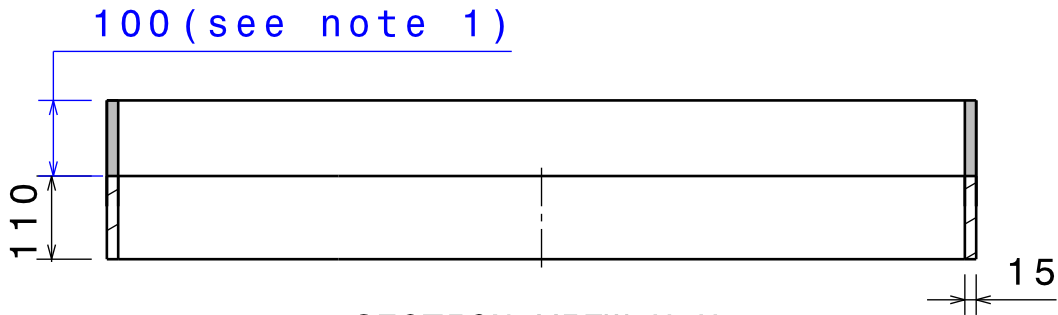
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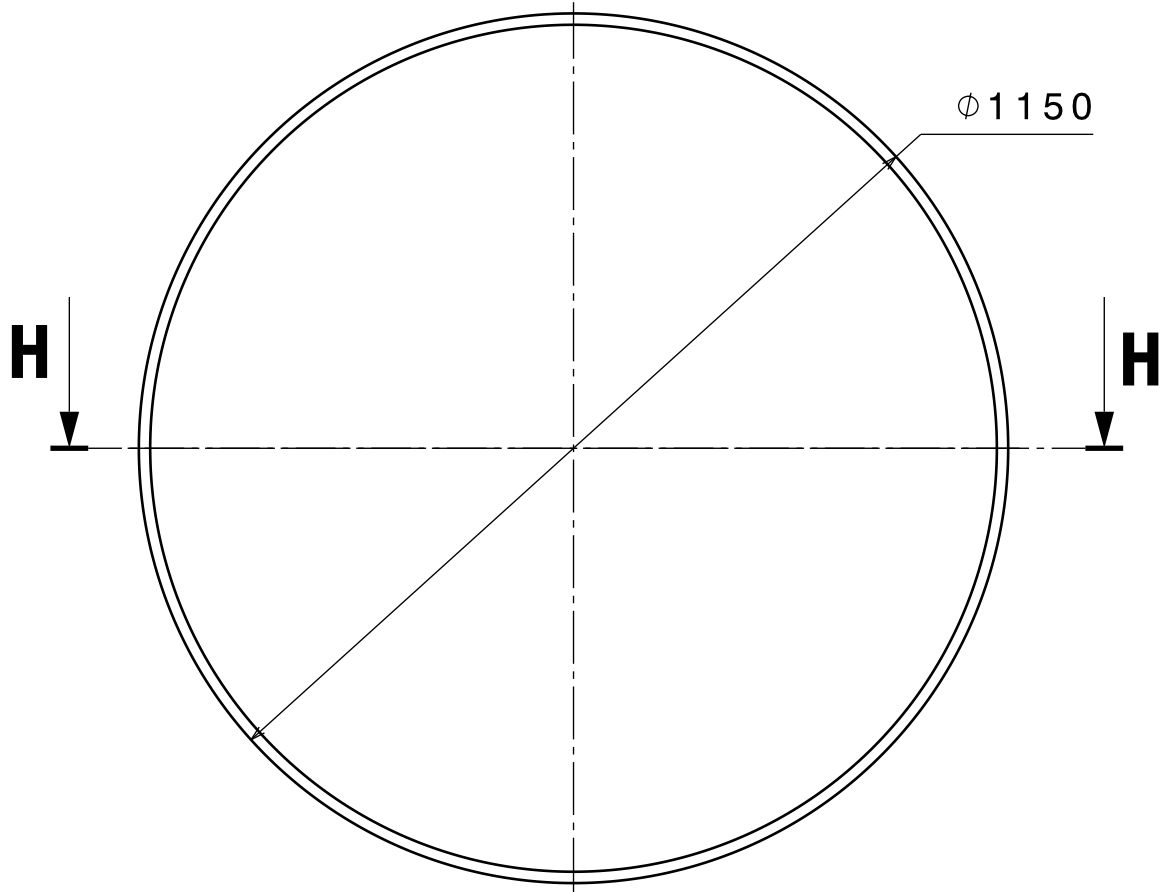
D

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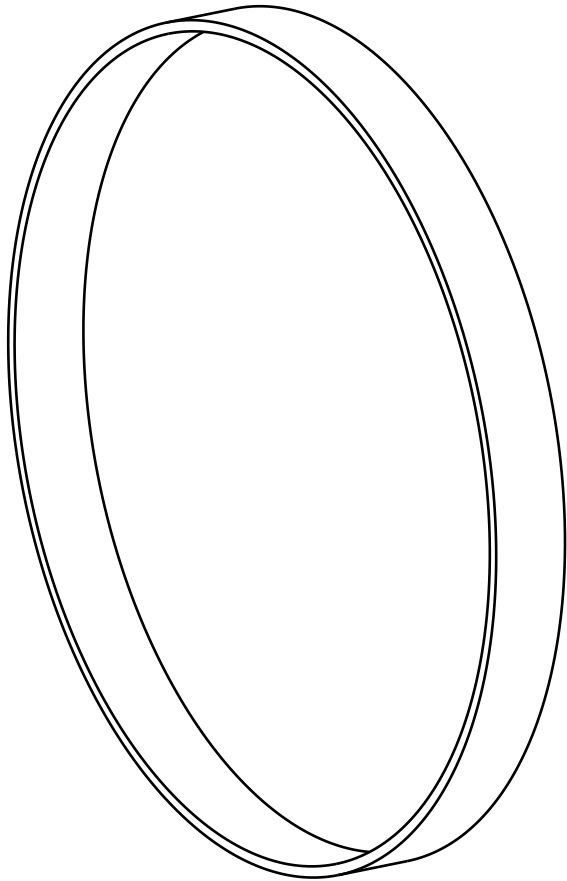
F



SECTION VIEW H-H
Scale: 1:10




FRONT VIEW
Scale: 1:10



Mass: 43 kg

ISOMETRIC VIEW
Scale: 1:10

- Notes: 1. 100mm overlengh is necessary to compensate tolerances at the assembly time.
2. ISO 2768 - mK tolerances apply for this sheet unless more stringent tolerances are specified.

DRW DOC ID			RELEASED BY			ITER Organization			 china EU india japan korea russia USA										
LINKED EV5 PT ID			CHIOCCS																
PBS TITLE			APPROVED BY																
Cryostat & VVPSS Cryostat Lower Cylinder			SBORCHC																
REV DATE			CHECKED BY			DRAWING TITLE TCPH_BELLOWS TCPH_BELLOWS_ADAPTING_CYLINDER													
15 May 18			DOMBROI																
SHEET FORMAT			CONTROLLED BY																
A3			SEKACHI																
SHEET SCALE			DRAWN BY			N° OF SHEETS						PBS 3 LEVELS		DRAWING NUMBER		REVISION		DR STATUS	
1:10			---																
PT STATUS			---																
D			---																
THIRD ANGLE PROJECTION			SHEET			06		06		24		CR,LC		034352		--C		D	