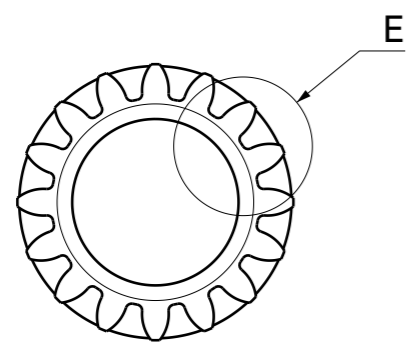
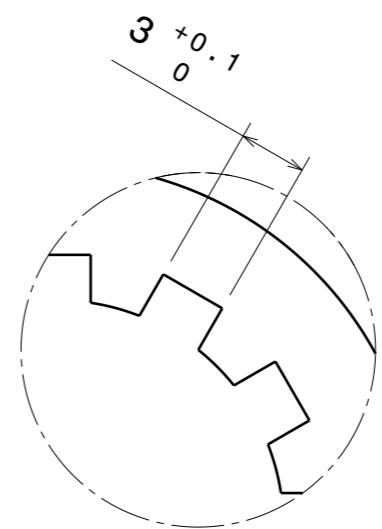


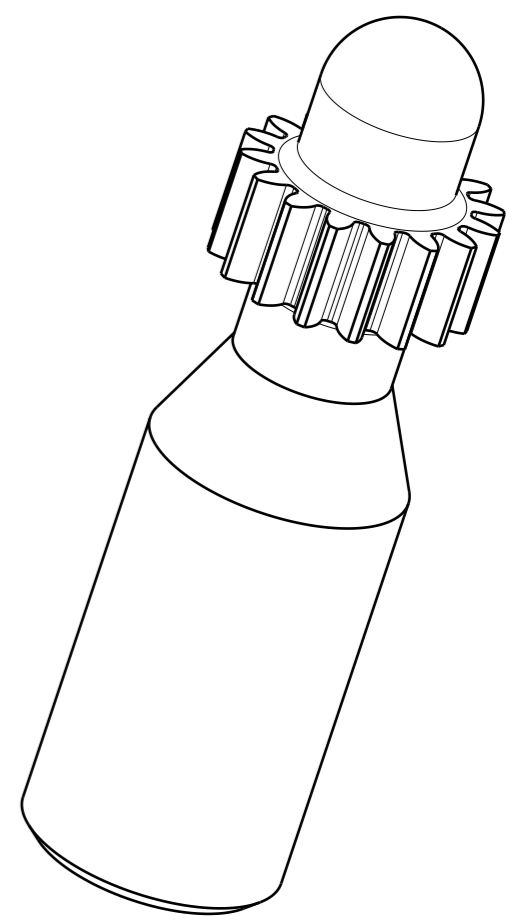
H G F E D C B A



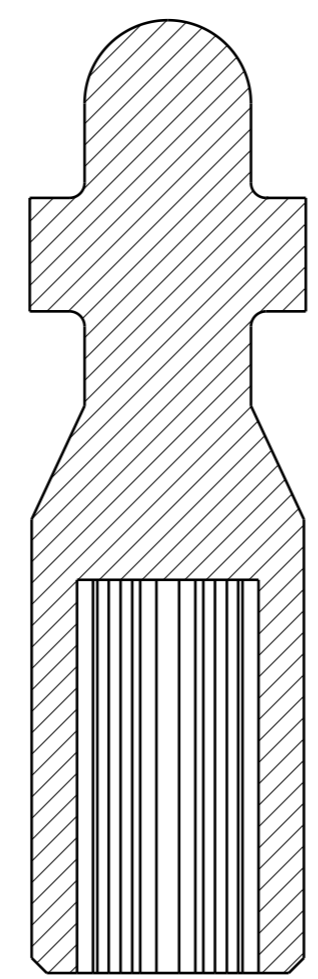
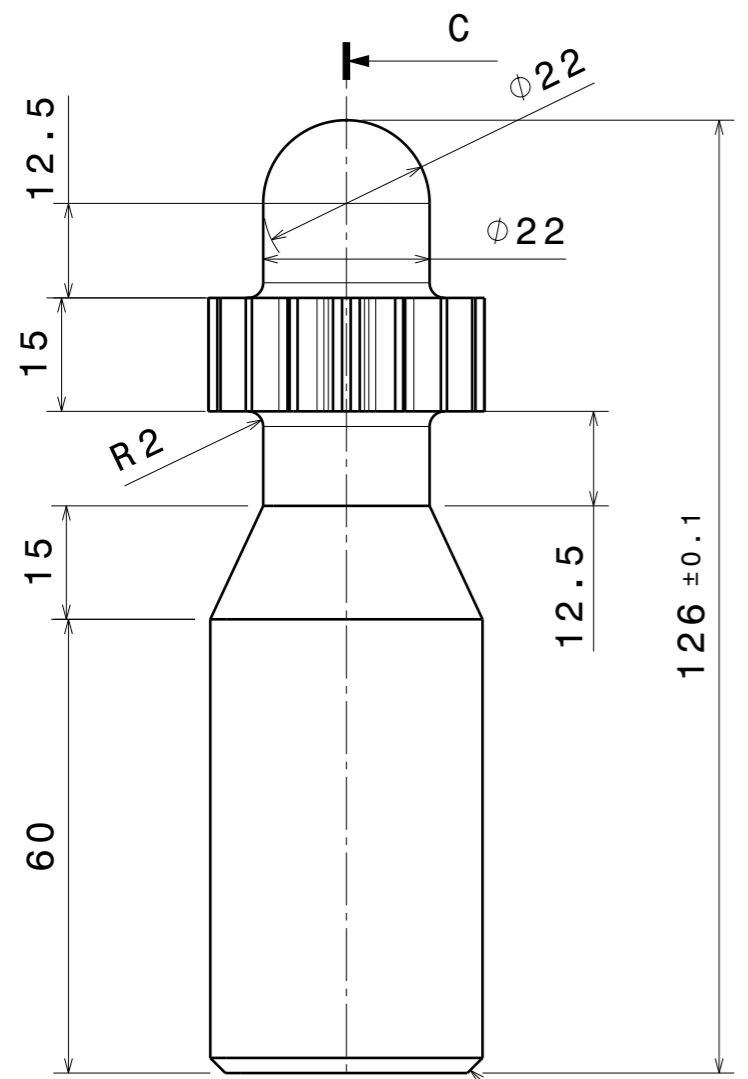
GEAR NOMENCLETURE	VALUE
TEETH TYPE	INVOLUTE
PRESSURE ANGLE	20°
PCD	32.5 mm
MODULE	2
ADDENDUM	1*m
DEDENDUM	1.25*m
FILLET RADIUS	0.3*m
FACE WIDTH	15 mm



Detail D



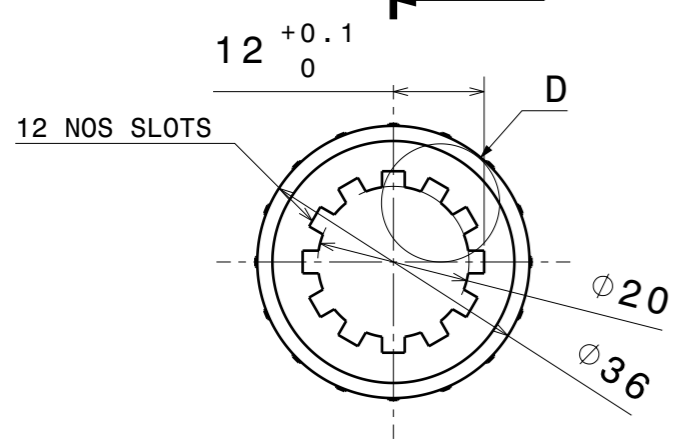
Isometric view



Section view C-C



Detail E



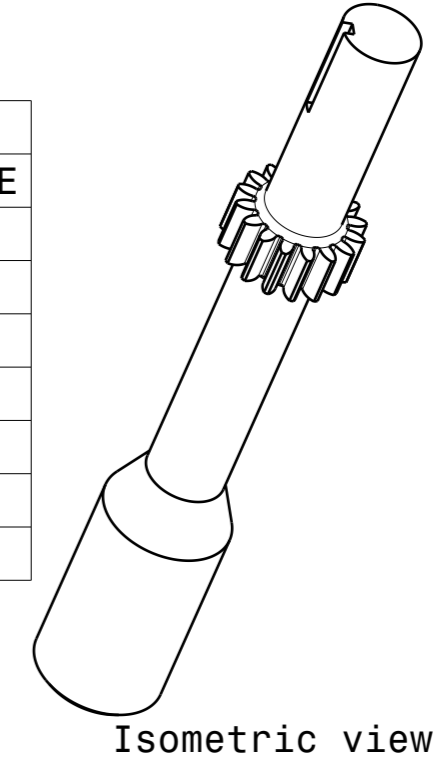
All dimenssions are in mm
 Remove all sharp corners
 Specified tolerances should be followed

MATERIAL	SS304
QTY	1

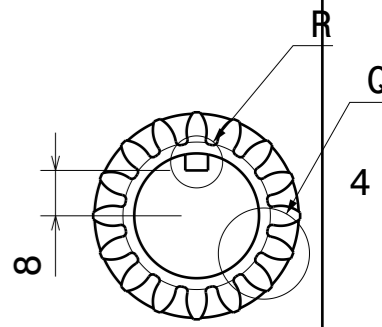
This drawing is our property. It can't be reproduced or communicated without our written agreement.		INSTITUTE FOR PLASMA RESEARCH BHAT, GANDHINAGAR					
DRAWING TITLE						DRIVEN GEAR SHAFT	
DRAWN BY	DATE	SIZE	DRAWING NUMBER	REV			
DEVESH	04/10/2016						
CHECKED BY	DATE	A3	ETPIS-EXTRUDER-004	0			
SAMIRAN	12/10/2016						
DESIGNED BY	DATE	SCALE	NTS	WEIGHT (kg)	0.6	SHEET	4/6
DEVESH	04/05/2016						

H G F E D C B A

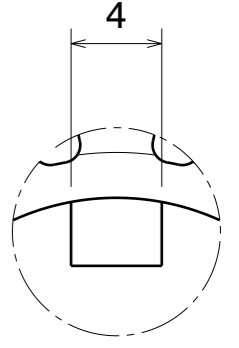
GEAR NOMENCLETURE	VALUE
TEETH TYPE	INVOLUTE
PRESSURE ANGLE	20°
PCD	32.5 mm
MODULE	2
ADDENDUM	1*m
DEDENDUM	1.25*m
FILLET RADIUS	0.3*m
FACE WIDTH	15 mm



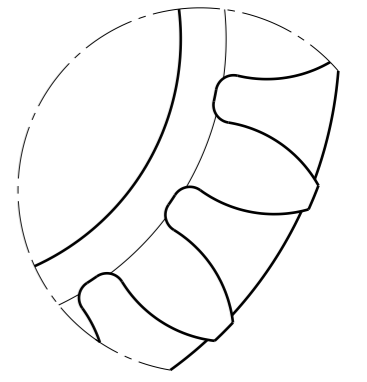
Isometric view



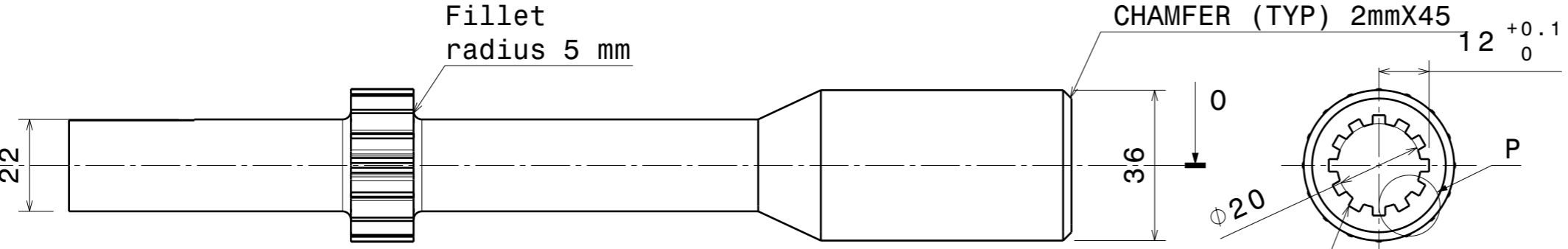
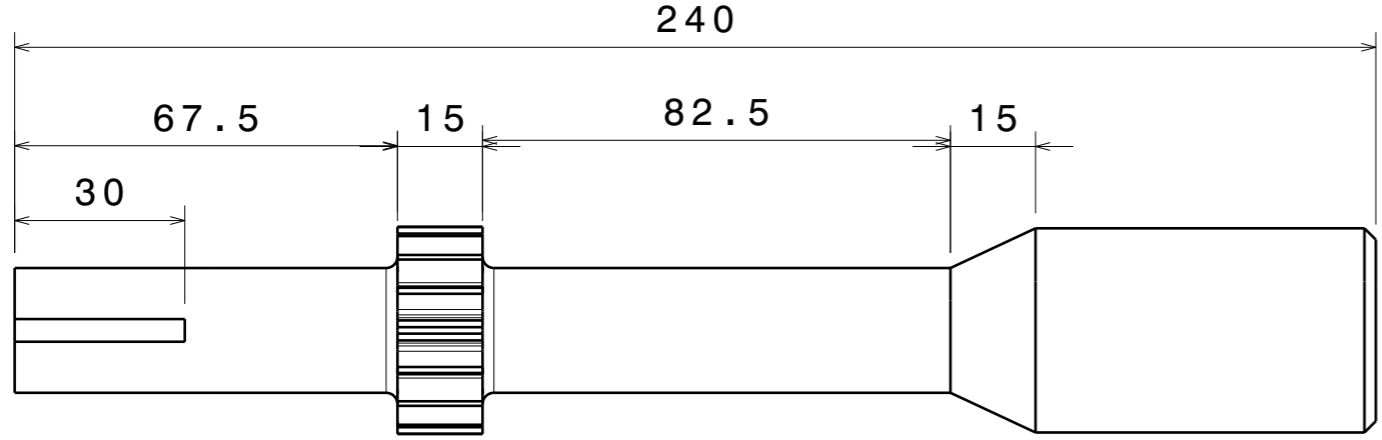
Detail R



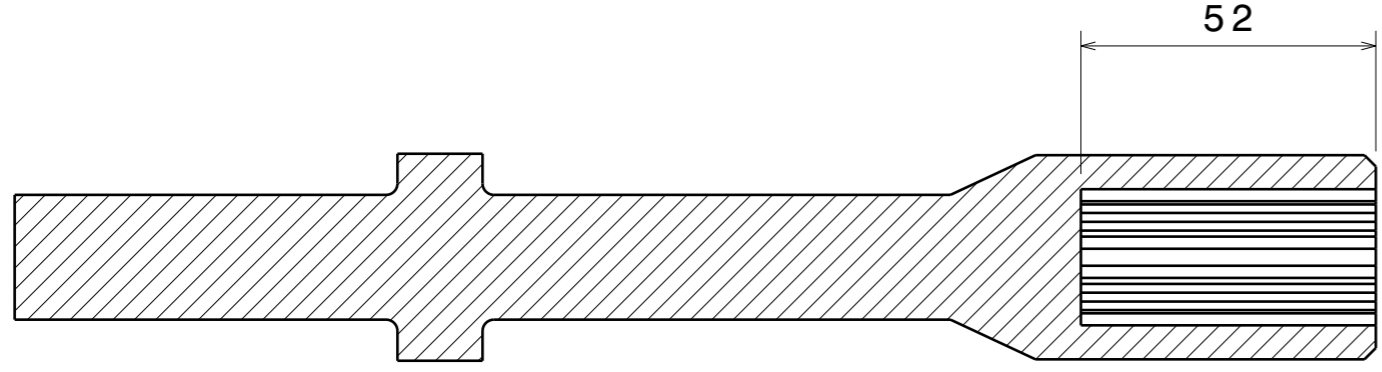
Detail Q



Detail P



12 NOS SLOTS



Section view 0-0

MATERIAL	SS 304
QTY	1

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DRAWING TITLE **DRIVING GEAR SHAFT**

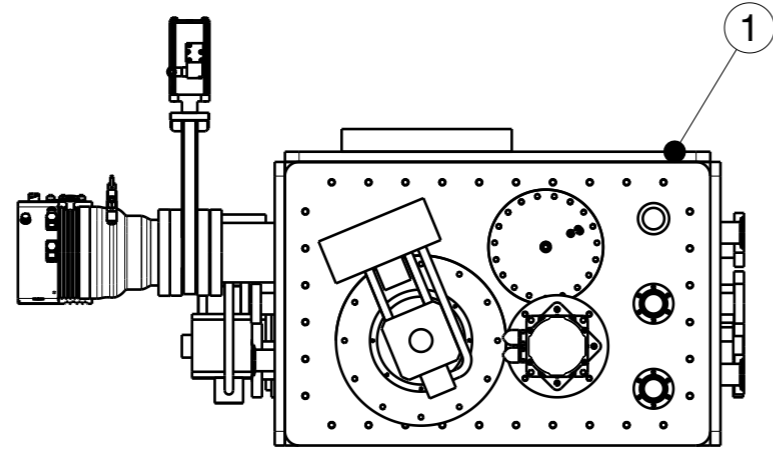
DRAWN BY DEVESH	DATE 04/10/2016
CHECKED BY SAMIRAN	DATE 12/10/2016
DESIGNED BY DEVESH	DATE 04/05/2016

SIZE A3	DRAWING NUMBER ETPIS-EXTRUDER-003	REV 0
SCALE	NTS	WEIGHT (kg) 1
SHEET		5/6

All dimensions are in mm
Remove all sharp corners
Specified tolerances should be followed

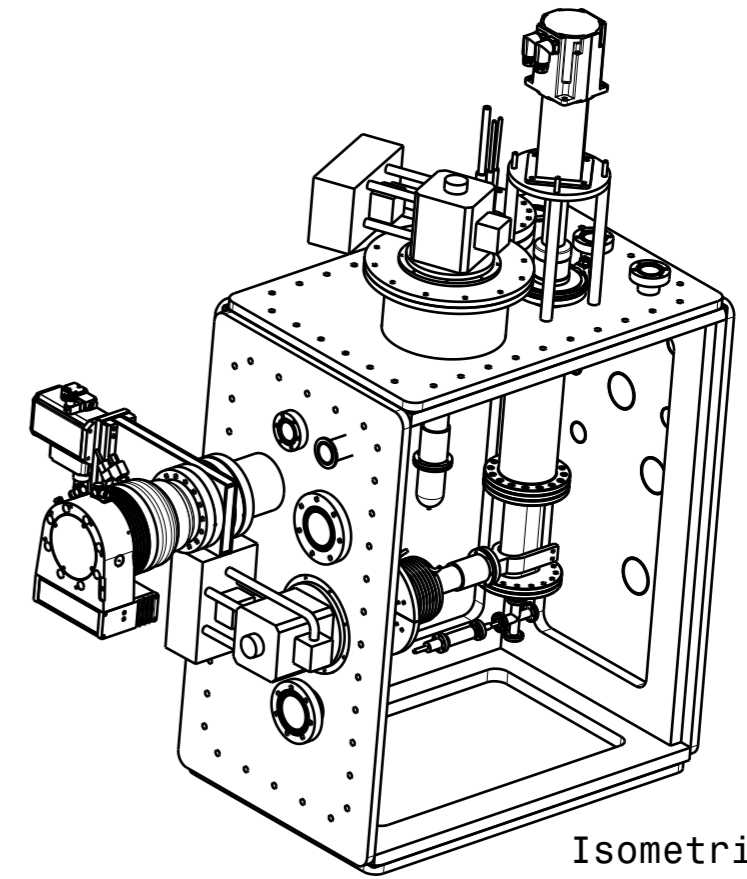
H G F E D C B A

4



4

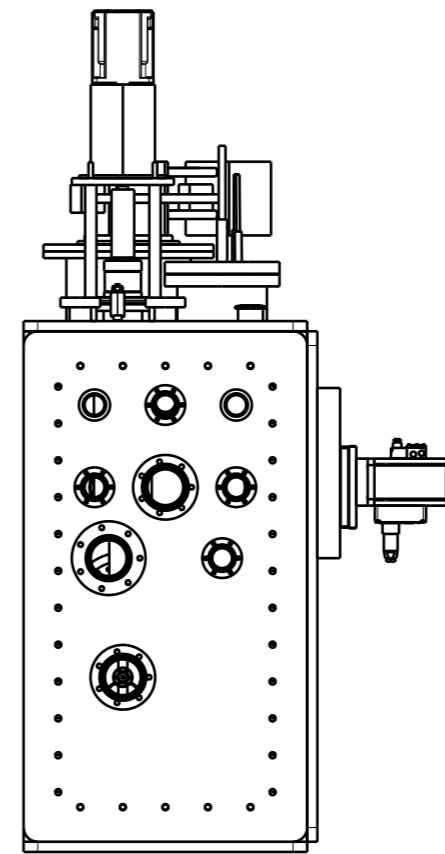
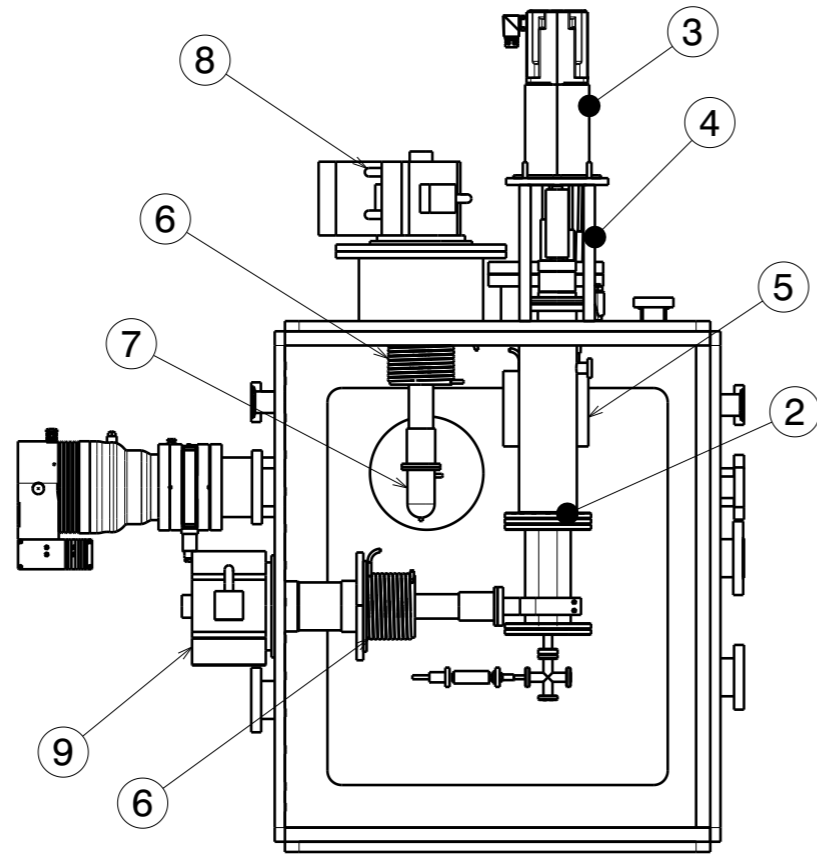
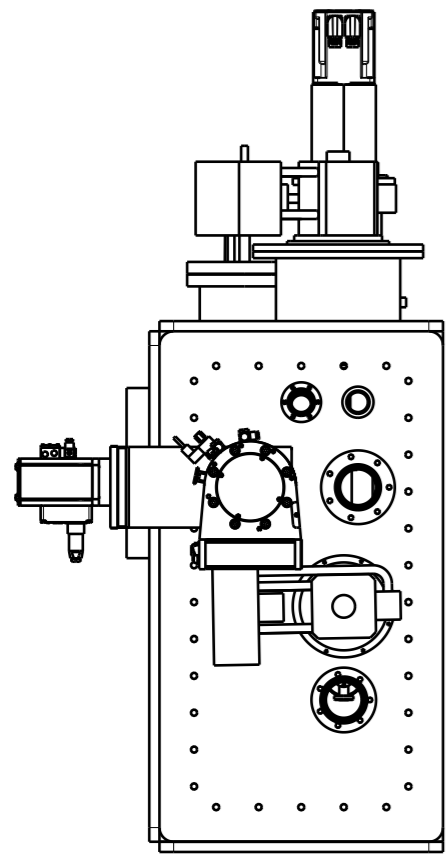
3



Isometric view

3

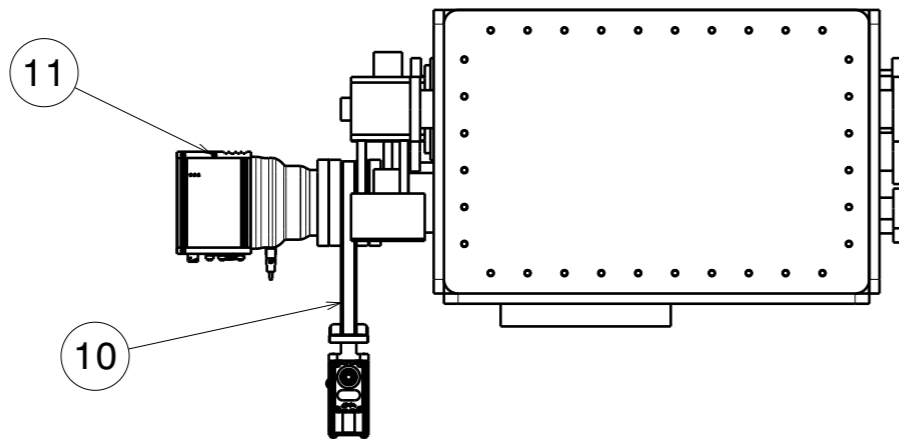
2



COMP. NO.	COMPONENT NAME	QTY
1	VACUUM CRYOSTAT	1
2	HYDROGEN EXTRUDER	1
3	DRIVING MOTOR	1
4	MOTOR MOUNTINGS	1
5	80K PRECOOLER	1
6	40K PRECOOLER	2
7	HYDROGEN LIQUIFIER	1
8	GM CRYOCOOLER_1	1
9	GM CRYOCOOLER_2	1
10	GATE VALVE	1
11	TMP	1

2

1



1

H G F E D C B A

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DRAWN BY DEVESH	DATE 04/10/2016
CHECKED BY SAMIRAN	DATE 12/10/2016
DESIGNED BY DEVESH	DATE 04/05/2016

DRAWING TITLE EXTRUDER TYPE PELLET INJECTION SYSTEM			
SIZE A3	DRAWING NUMBER ETPIS-001	REV 0	
SCALE	NTS	WEIGHT (kg) 900	SHEET 1/6

H G F E D C B A

4

4

3

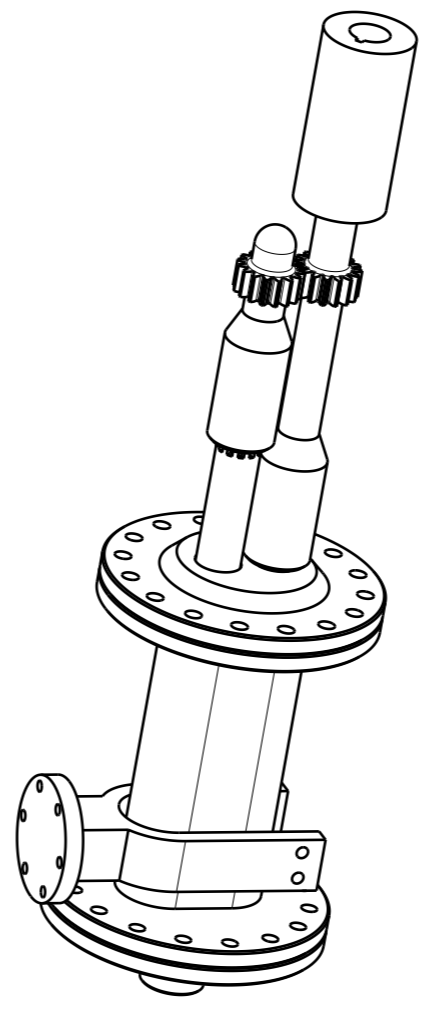
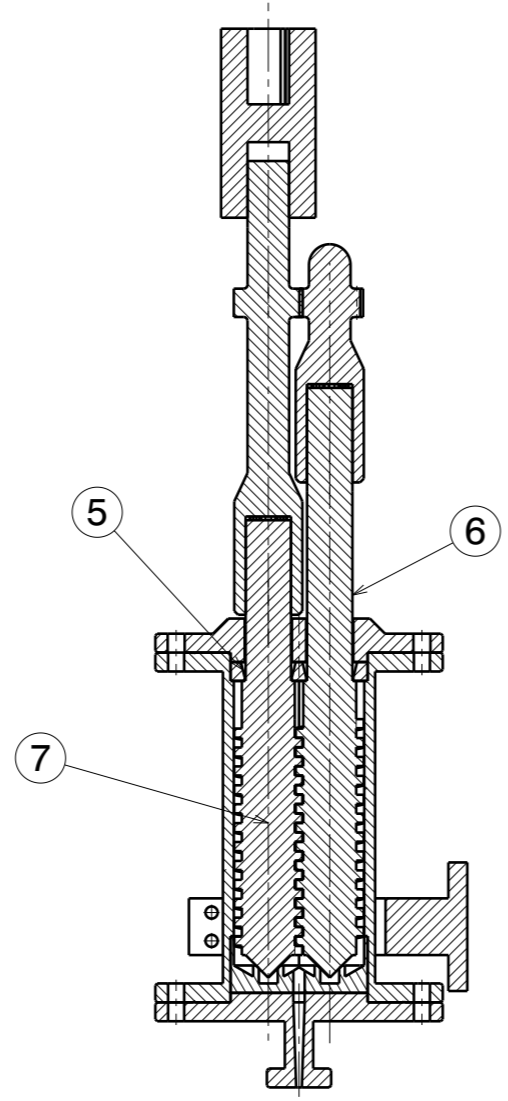
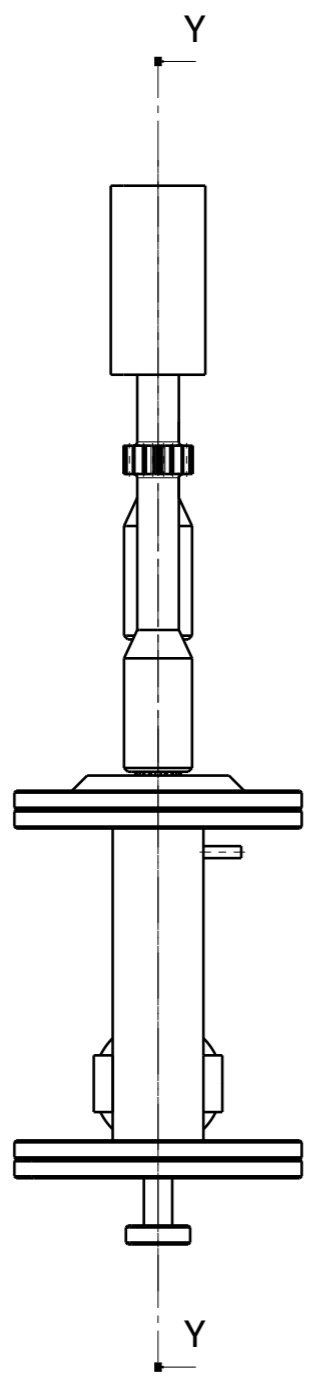
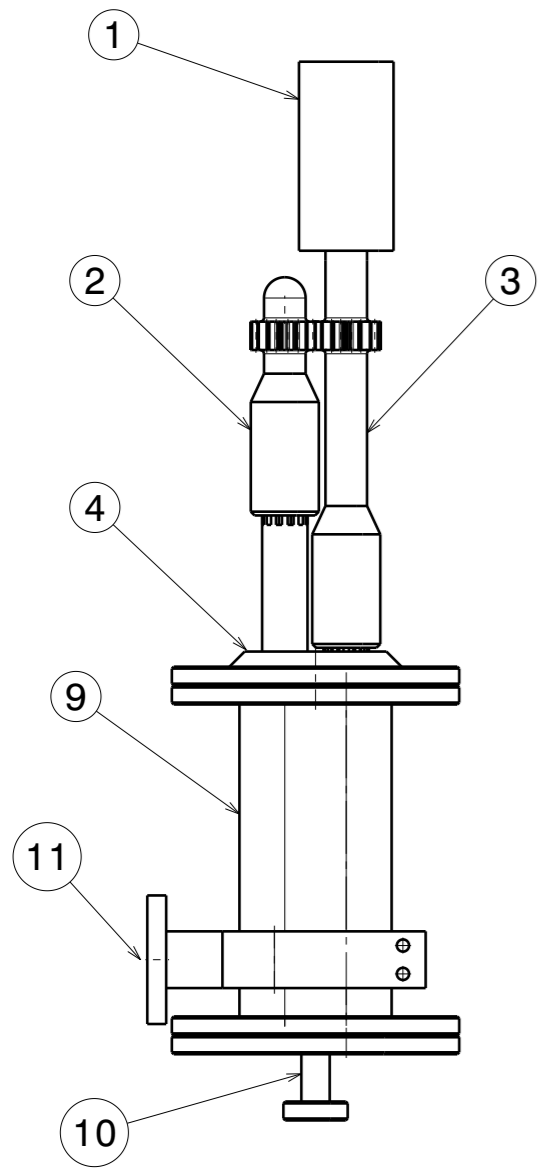
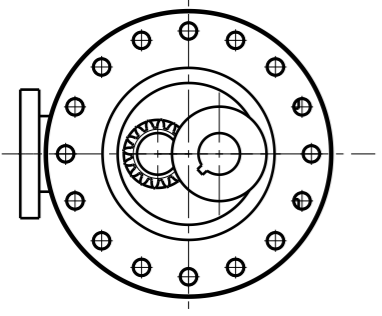
3

2

2

1

1



Isometric view

Section view Y-Y

COMP. NO.	COMPONENT NAME	DRAWING NO.	QTY
1	THERMAL BREAK	ETPIS-EXTRUDER-002	1
2	DRIVING GEAR SHAFT	ETPIS-EXTRUDER-003	1
3	DRIVEN GEAR SHAFT	ETPIS-EXTRUDER-004	1
4	VELSPEL INSULATOR	ETPIS-EXTRUDER-005	1
5	SCREW TOP SUPPORT	ETPIS-EXTRUDER-006	1
6	SCREW(ANTICLOCKWISE)	ETPIS-EXTRUDER-007	1
7	SCREW (CLOCKWISE)	ETPIS-EXTRUDER-008	1
8	EXTRUDER BERREL	ETPIS-EXTRUDER-009	1
9	SCREW BOTTOM SUPPORT	ETPIS-EXTRUDER-010	1
10	EXTRUDER NOZZLE	ETPIS-EXTRUDER-011	1
11	THERMAL LINK	ETPIS-EXTRUDER-012	1

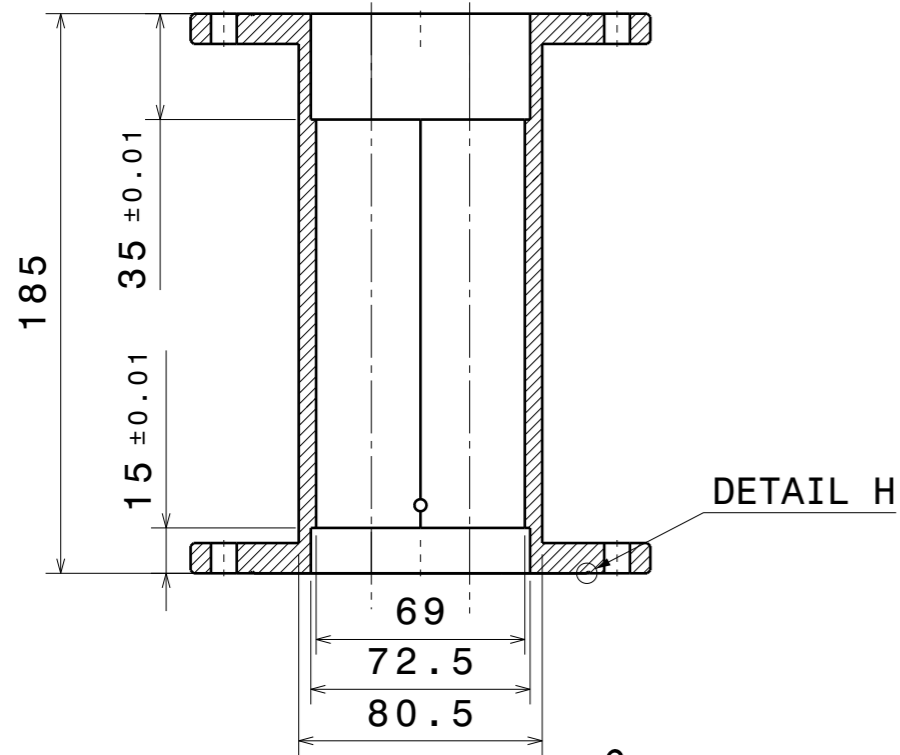
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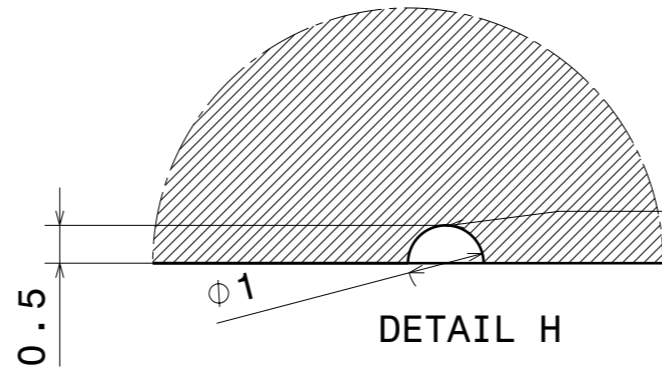
DRAWN BY
DEVESH
DATE
04/10/2016
CHECKED BY
SAMIRAN
DATE
12/10/2016
DESIGNED BY
DEVESH
DATE
04/05/2016

DRAWING TITLE
EXTRUDER ASSEMBLY
SIZE
A3
DRAWING NUMBER
ETPIS-EXTRUDER-001
REV
0
SCALE
NTS
WEIGHT (kg)
15
SHEET
1/6

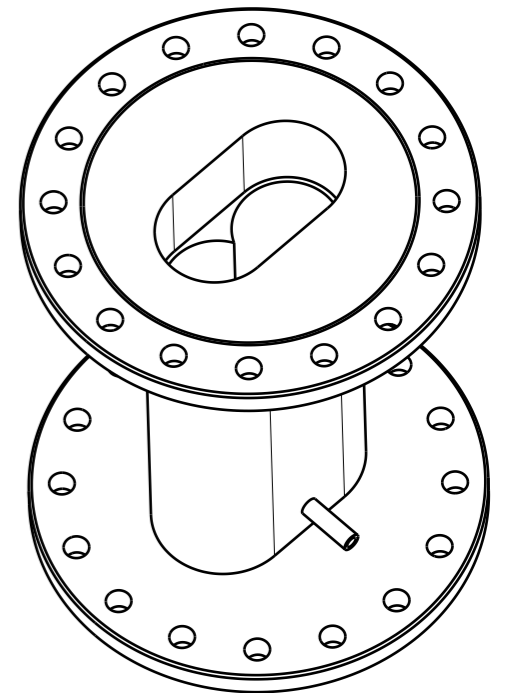
H G F E D C B A



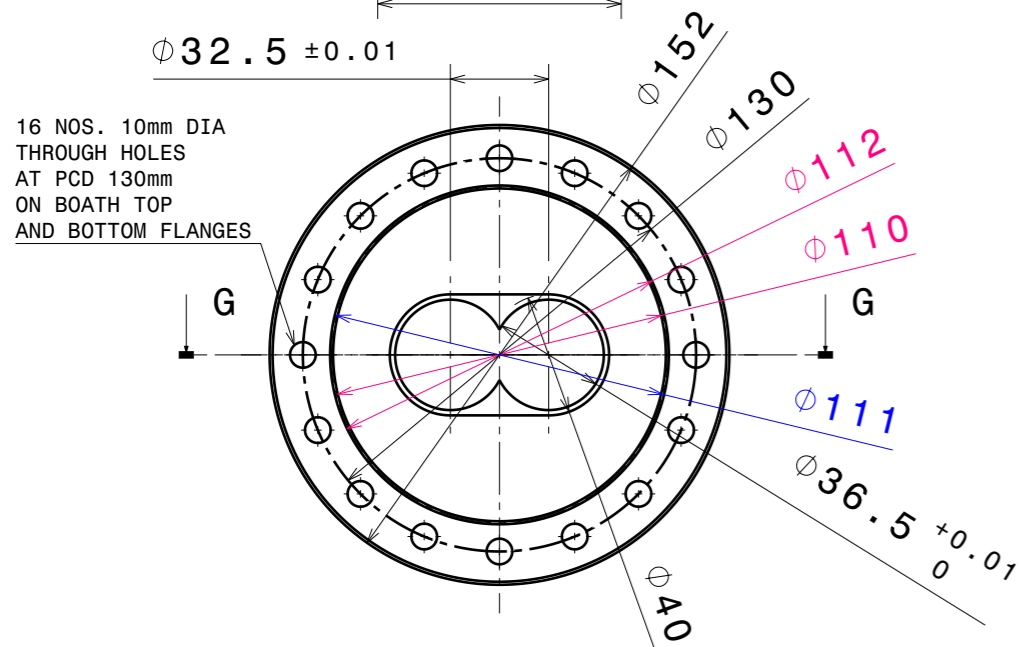
DETAIL H



Semicircular groove $\phi 1$ mm
at PCD 111mm
on both side

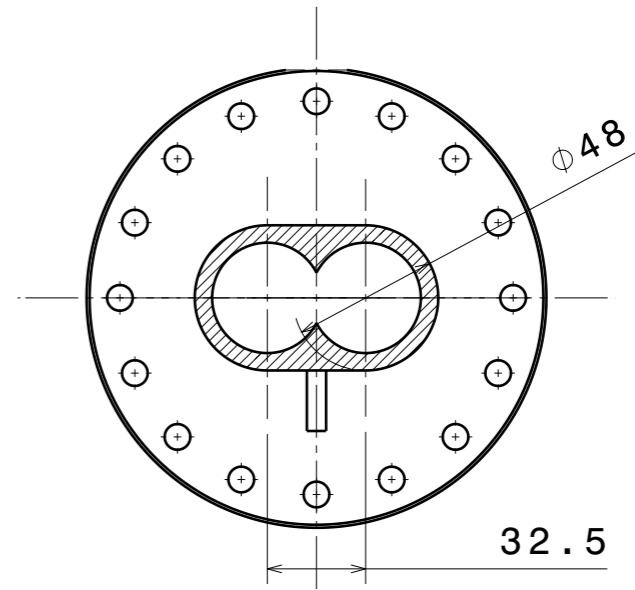
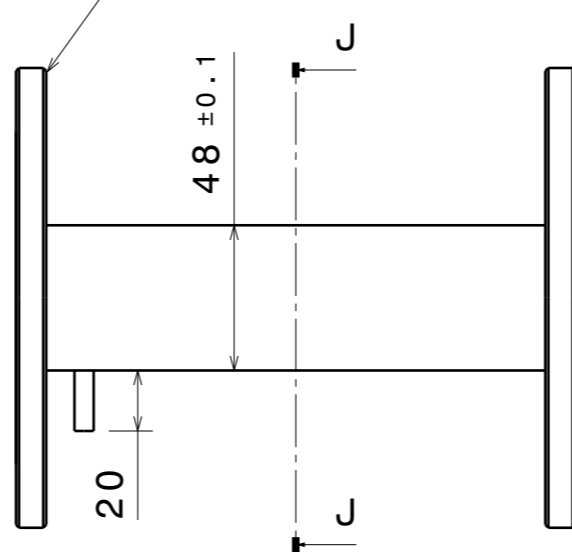


Isometric view

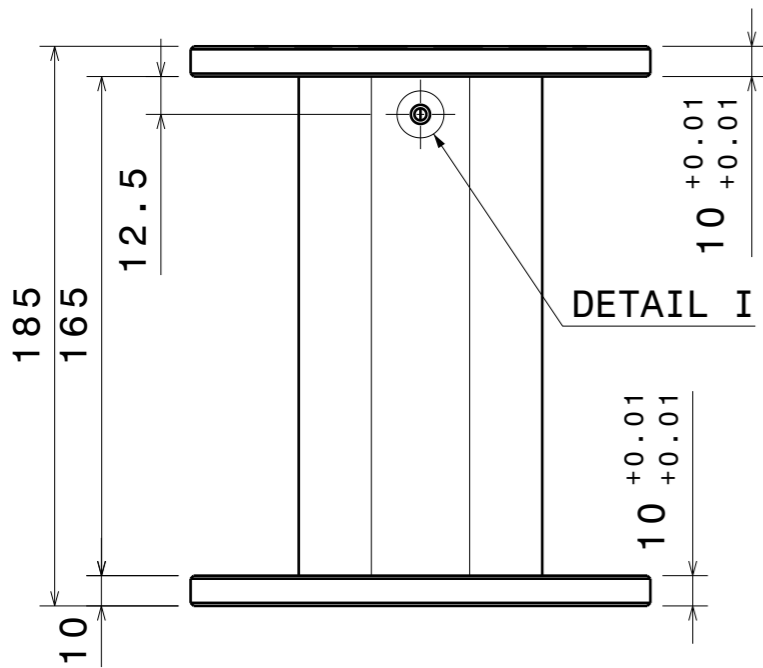


16 NOS. 10mm DIA
THROUGH HOLES
AT PCD 130mm
ON BOATH TOP
AND BOTTOM FLANGES

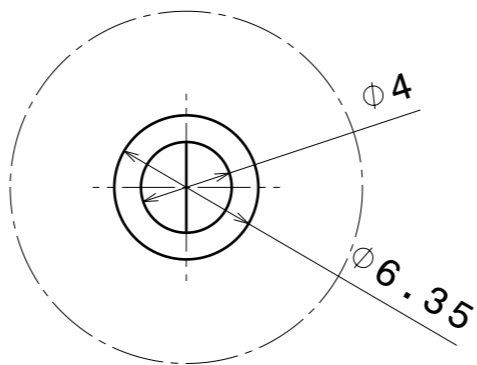
CHAMFER (TYP) 2mmX45



Section view J-J



DETAIL I

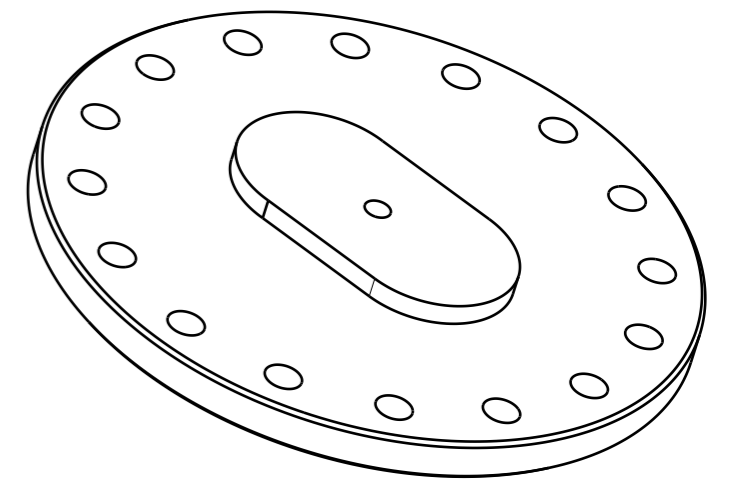
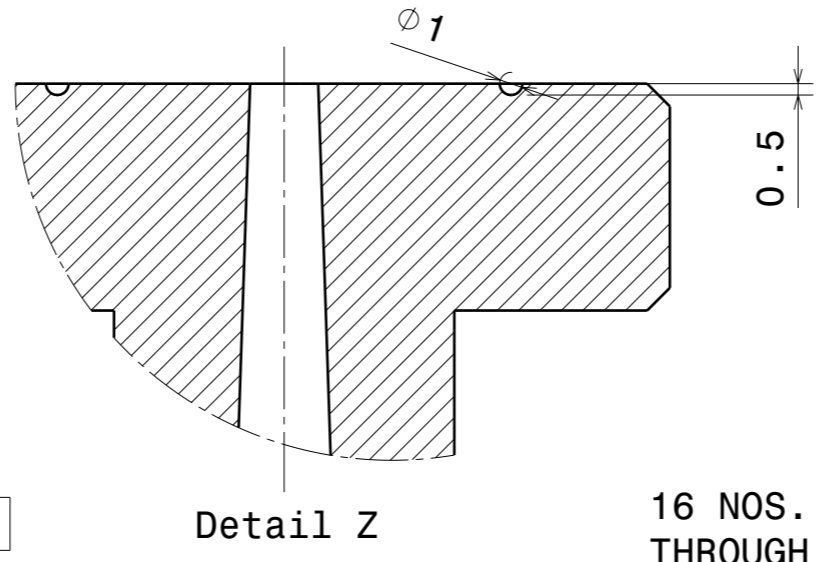
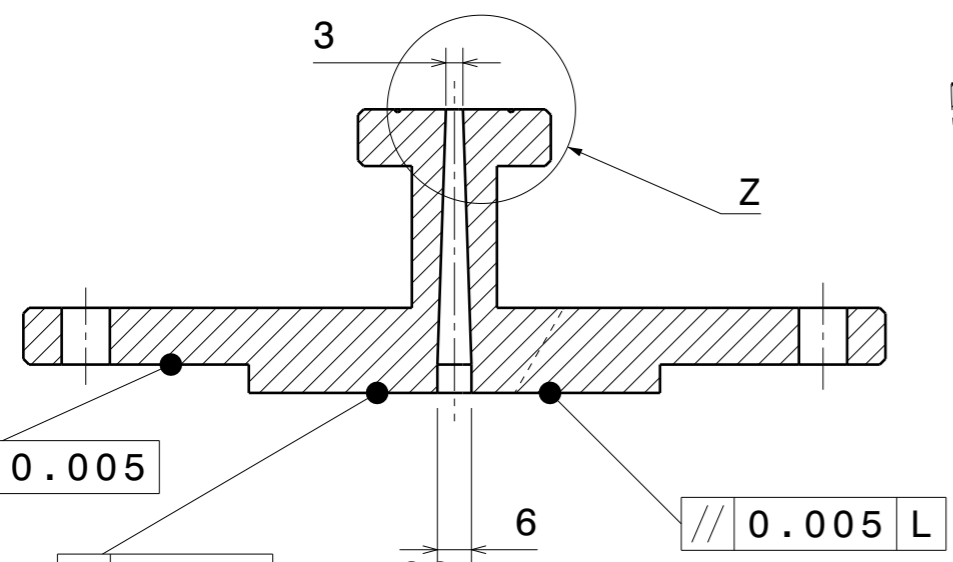


Detail I

All dimenssions are in mm		MATERIAL OFHC COPPER	
Remove all sharp corners		QTY 1	
Specified tolerances should be followed			
This drawing is our property. It can't be reproduced or communicated without our written agreement.		INSTITUTE FOR PLASMA RESEARCH BHAT, GANDHINAGAR	
DRAWN BY DEVESH		DRAWING TITLE EXTRUDER BARREL	
DATE 07/10/2016	CHECKED BY SAMIRAN	SIZE A3	DRAWING NUMBER ETPIS-EXTRUDER-009
DATE 12/10/2016	DESIGNED BY DEVESH	SCALE NTS	REV 0
DATE 10/05/2016	WEIGHT (kg) 4.6	SHEET 1/6	

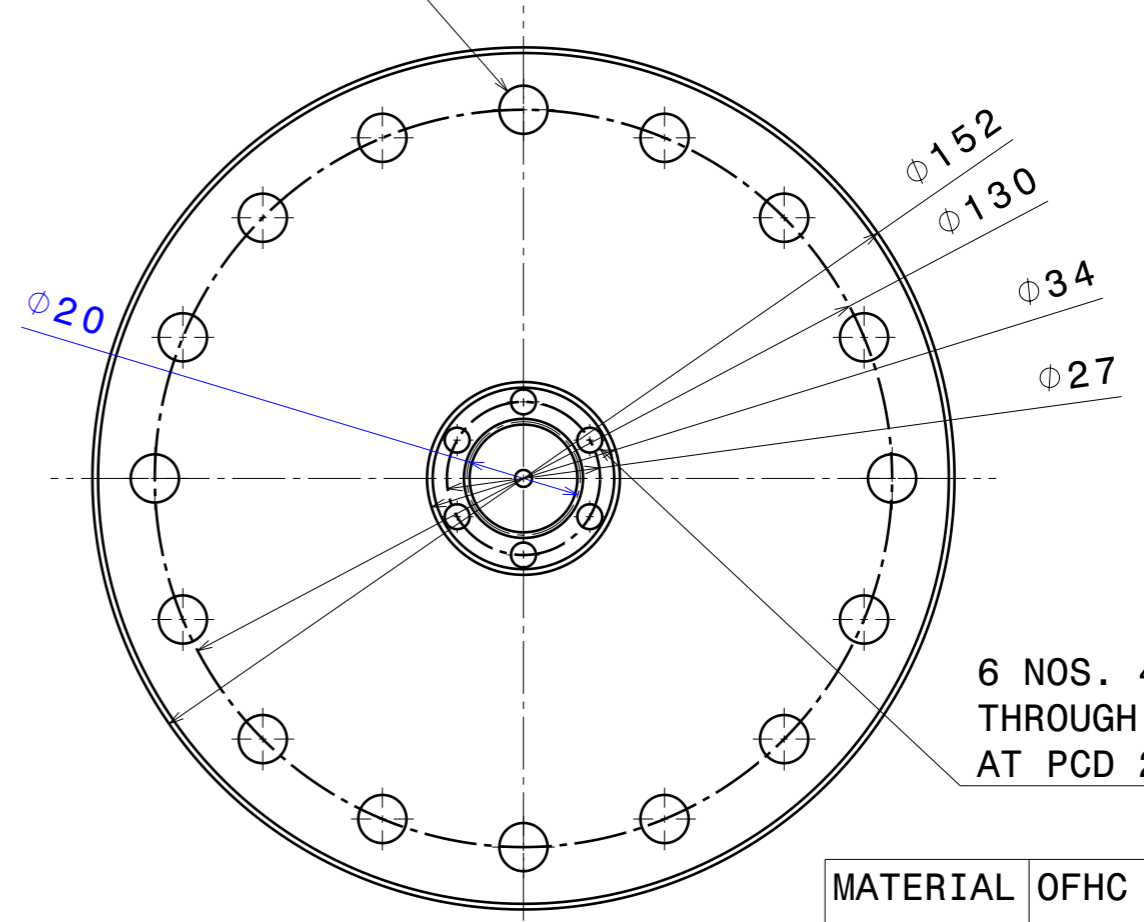
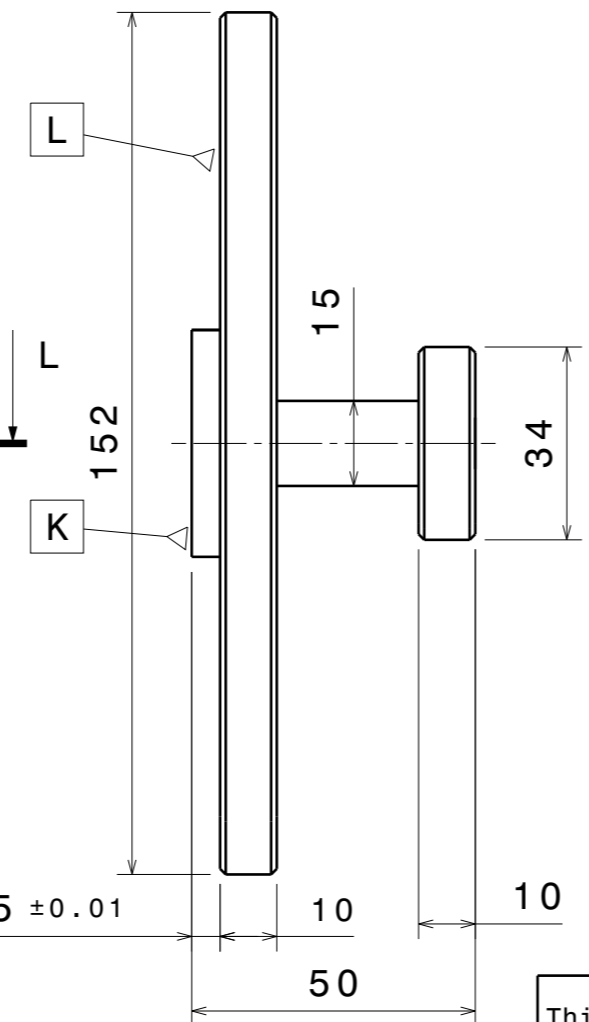
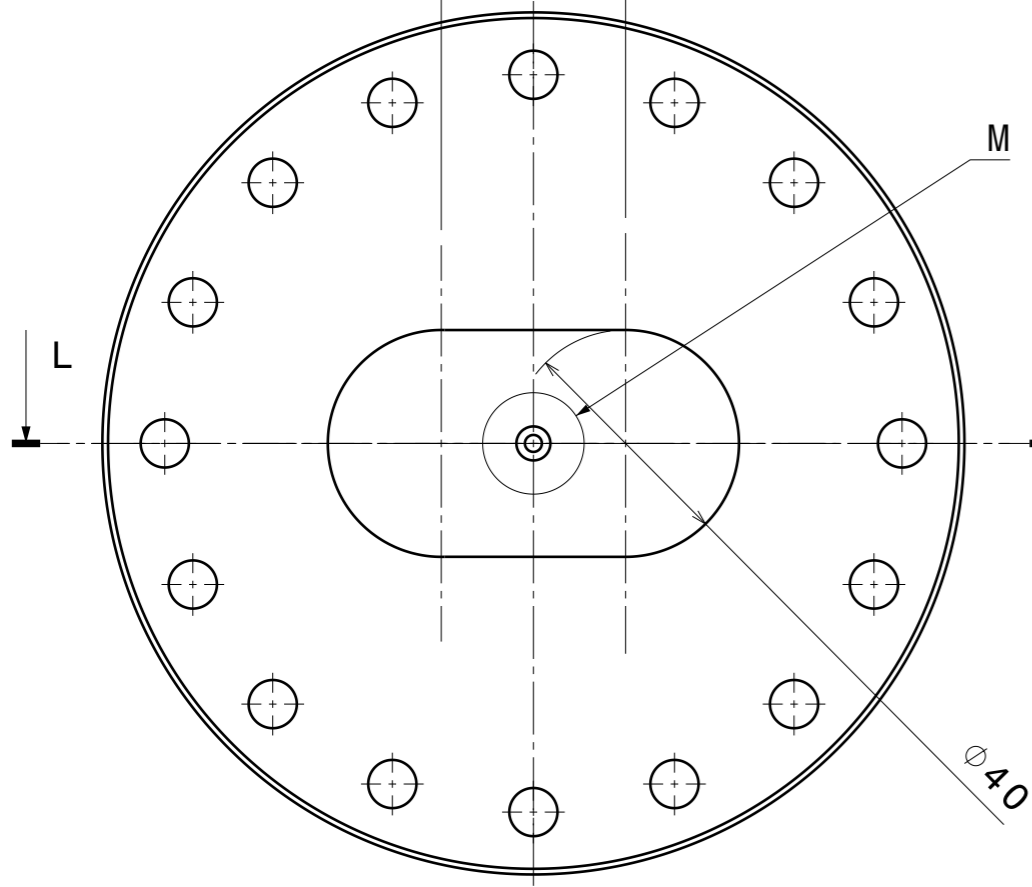
H G F E D C B A

4
3
2
1

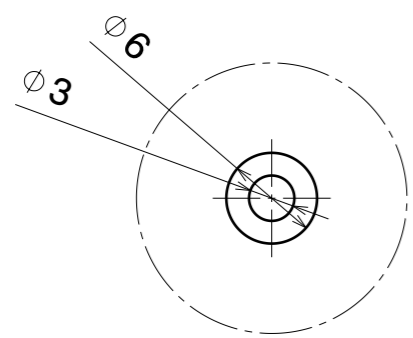


16 NOS. 10mm DIA THROUGH HOLES AT PCD 130mm

Isometric view



6 NOS. 4.4mm DIA THROUGH HOLES AT PCD 27 mm



Detail M

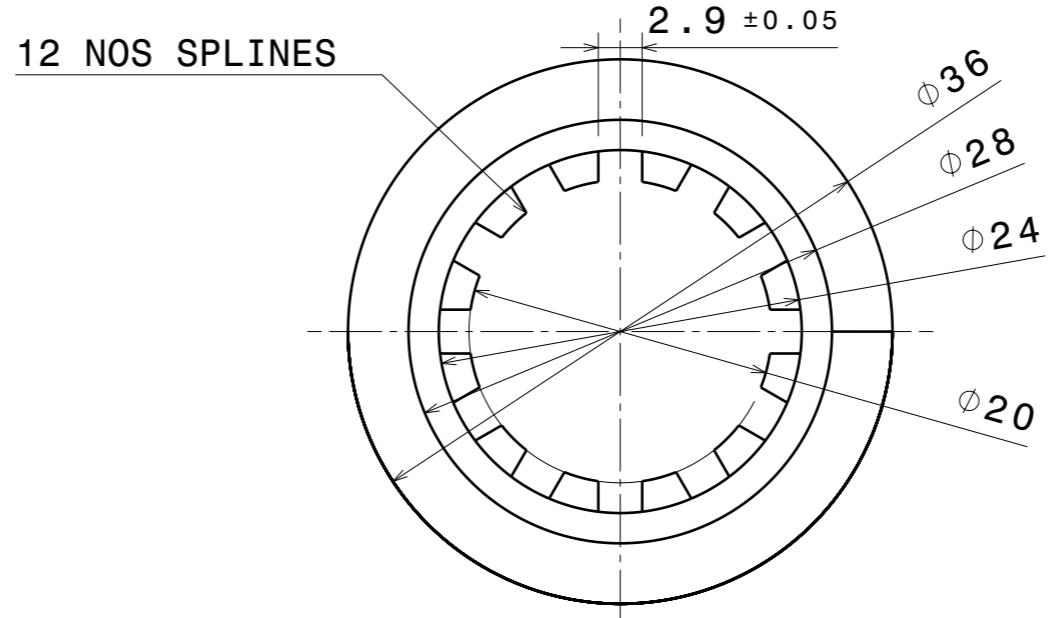
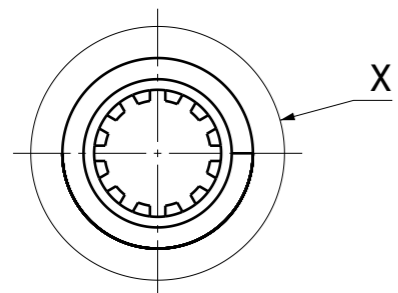
All dimensions are in mm
Remove all sharp corners
Specified tolerances should be followed

MATERIAL	OFHC COPPER
QTY	1

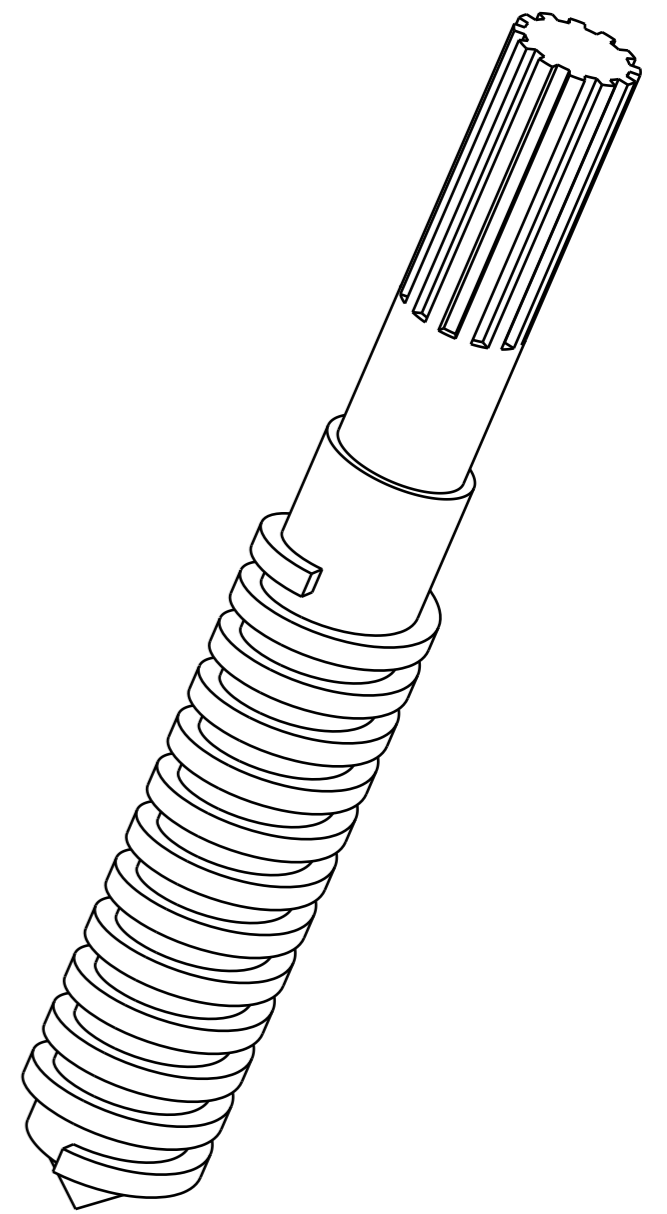
This drawing is our property. It can't be reproduced or communicated without our written agreement.		INSTITUTE FOR PLASMA RESEARCH BHAT, GANDHINAGAR			
DRAWN BY DEVESH		DATE 04/10/2016		DRAWING TITLE EXTRUDER NOZZLE	
CHECKED BY SAMIRAN		DATE 12/10/2016		SIZE A3	DRAWING NUMBER ETPIS-EXTRUDER-011
DESIGNED BY DEVESH		DATE 04/05/2016		SCALE NTS	WEIGHT (kg) 2.1
				SHEET 1/6	REV 0

H G F E D C B A

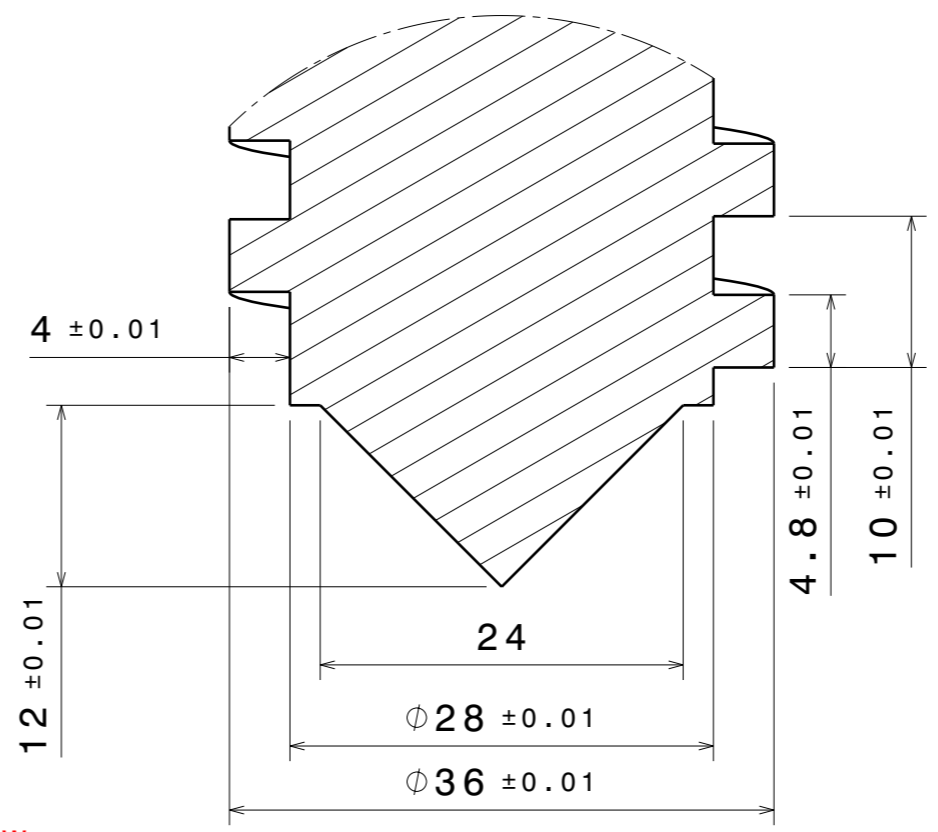
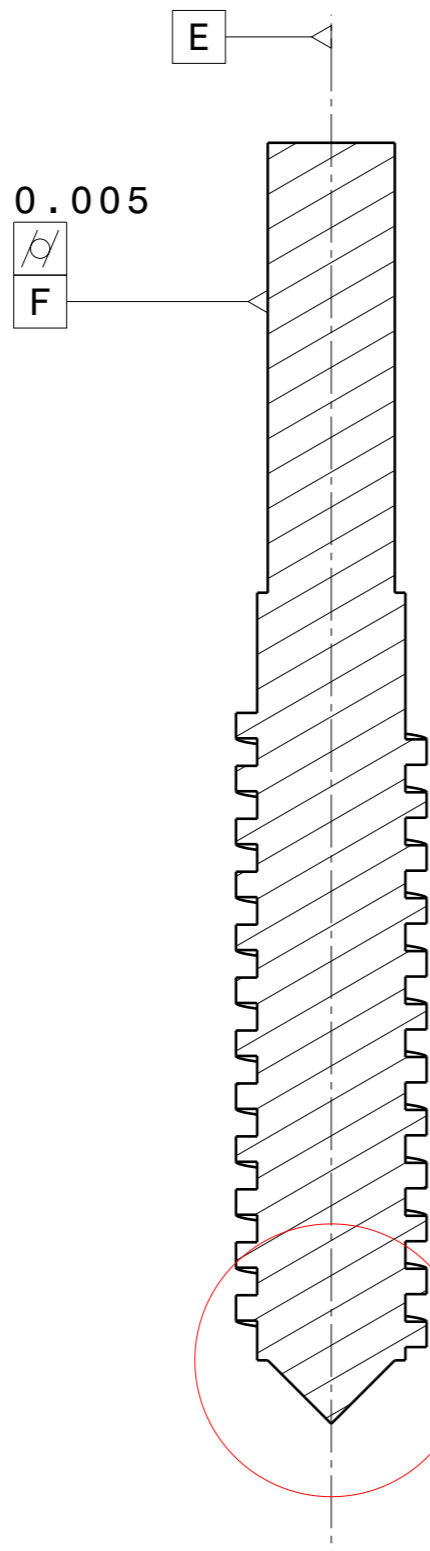
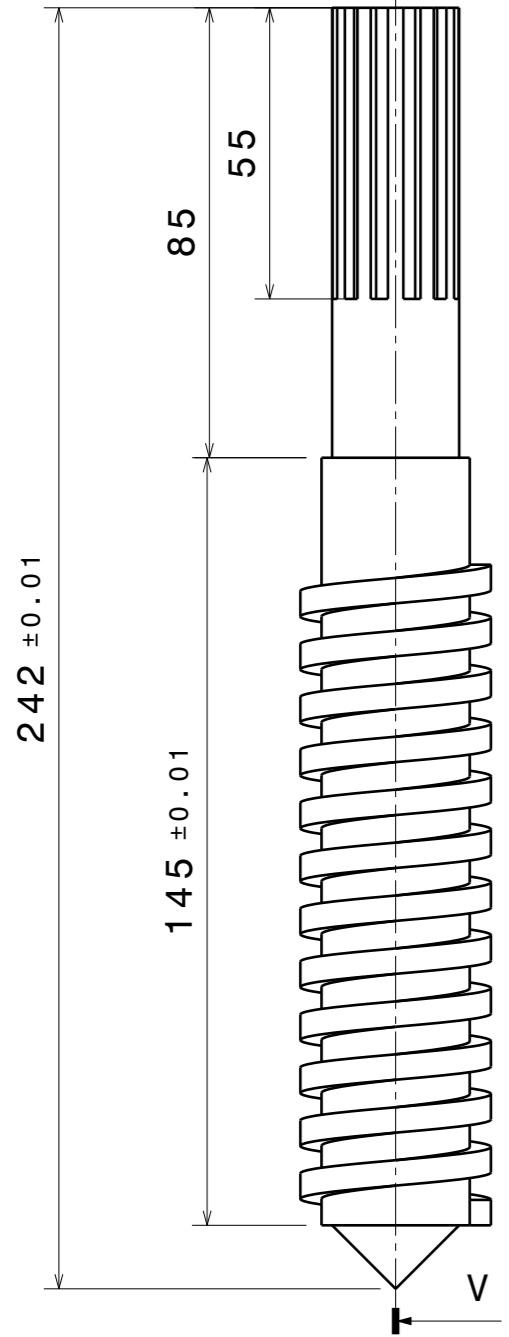
H G F E D C B A



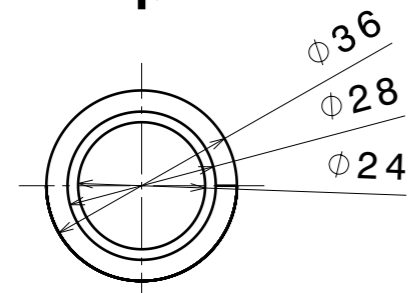
Detail X



Isometric view



Detail W



MATERIAL	SS 304
QTY	1

This drawing is our property. It can't be reproduced or communicated without our written agreement.		INSTITUTE FOR PLASMA RESEARCH BHAT, GANDHINAGAR DRAWING TITLE SCREW (ANTICLOCKWISE)			
DRAWN BY DEVESH	DATE 04/10/2016				
CHECKED BY SAMIRAN	DATE 12/10/2016	SIZE A3	DRAWING NUMBER ETPIS-EXTRUDER-007	REV 0	
DESIGNED BY DEVESH	DATE 04/05/2016	SCALE	NTS	WEIGHT (kg) 1.2	SHEET 1/6

All dimenssions are in mm
 Remove all sharp corners
 Specified tolerances should be followed

4
3
2
1

4
3
2
1

H G F E D C B A

H G F E D C B A

4

3

2

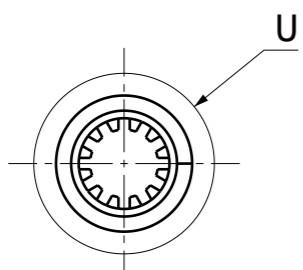
1

4

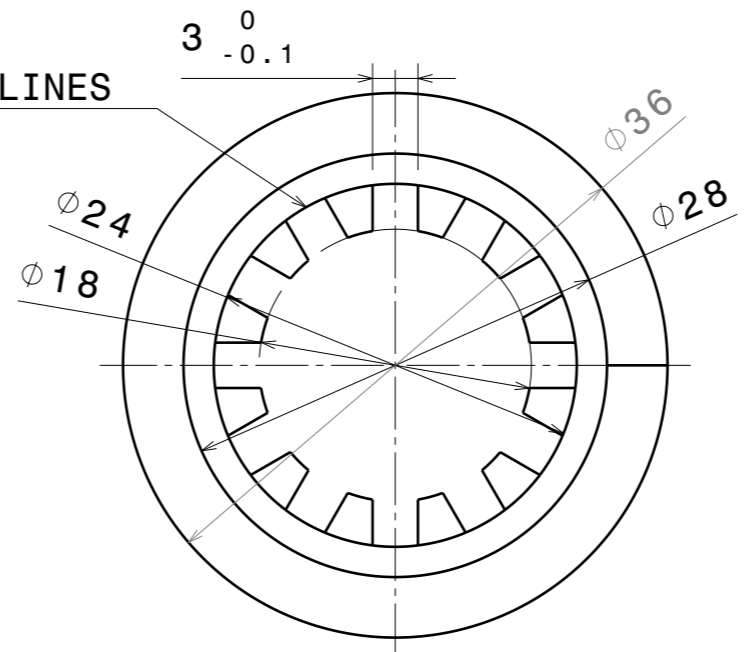
3

2

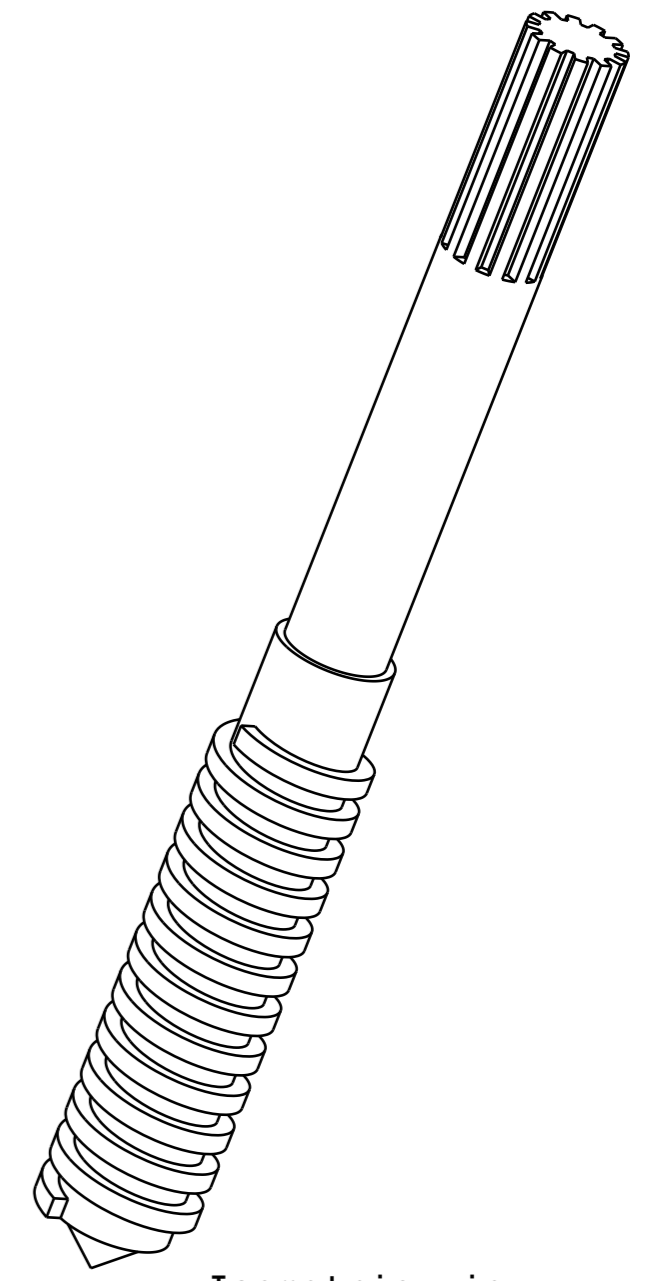
1



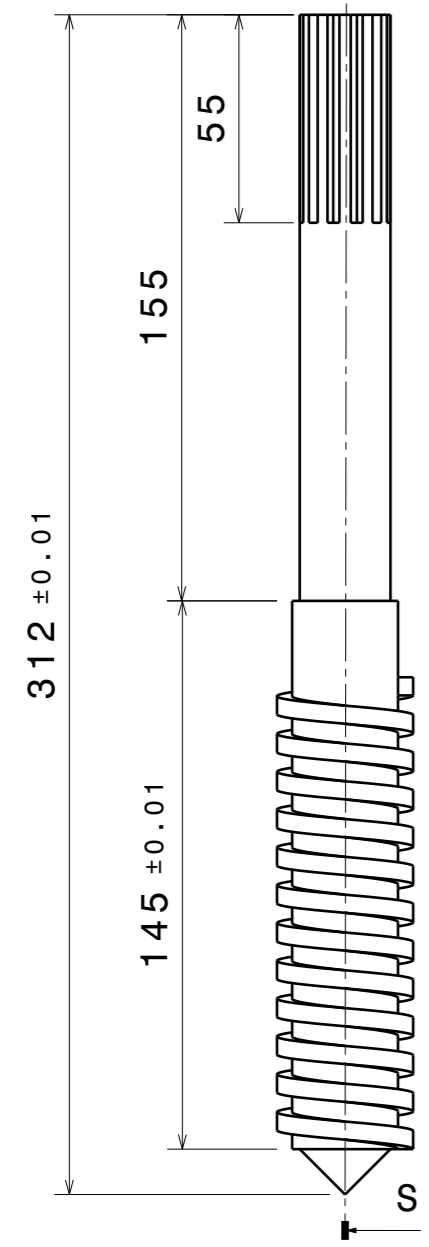
12 NOS SPLINES



Detail U



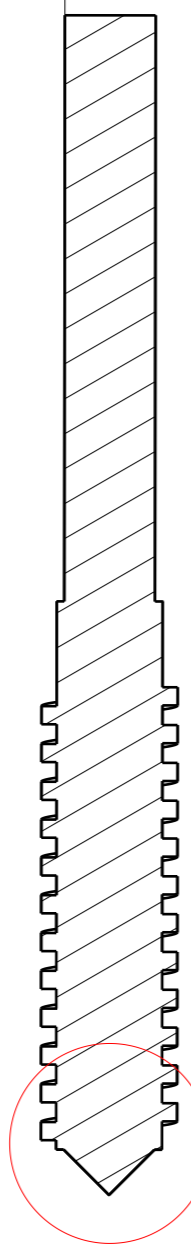
Isometric view



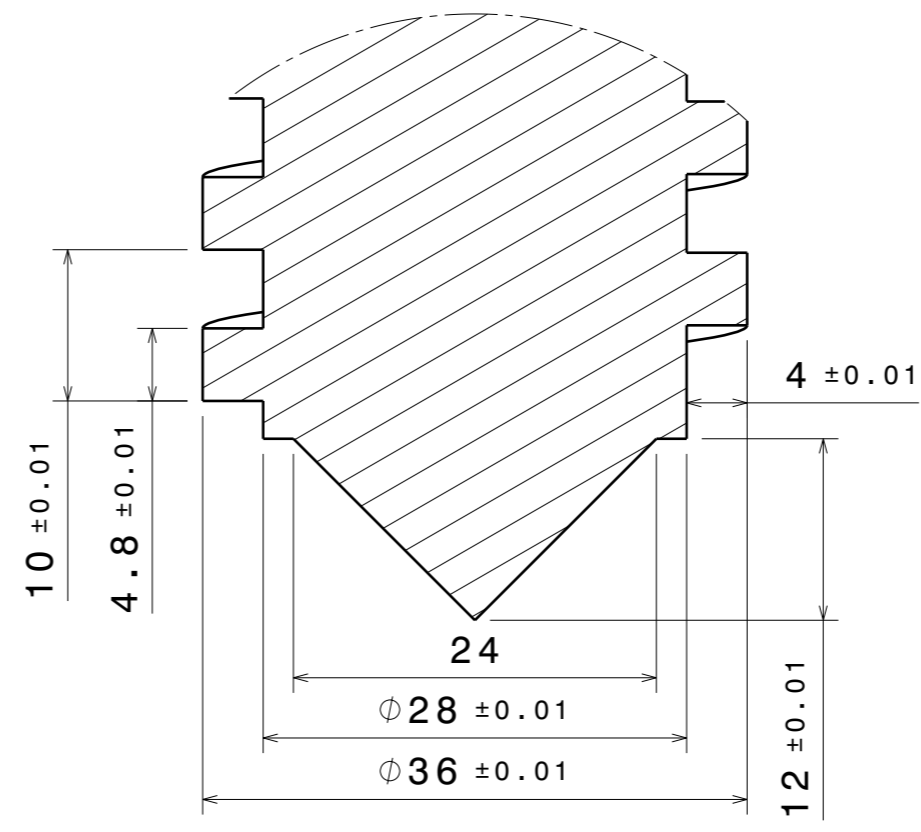
0.005



G



Section view S-S



Detail T

MATERIAL	SS 304
QTY	1

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DRAWN BY DEVESH	DATE 04/10/2016
CHECKED BY SAMIRAN	DATE 12/10/2016
DESIGNED BY DEVESH	DATE 04/05/2016

DRAWING TITLE SCREW (CLOCKWISE)			
SIZE A3	DRAWING NUMBER ETPIS-EXTRUDER-008	REV 0	
SCALE	NTS	WEIGHT (kg) 1.5	SHEET 1/6

All dimenssions are in mm
Remove all sharp corners
Specified tolerances should be followed

H G F E D C B A

CHAMFER 2mmX45

1.8

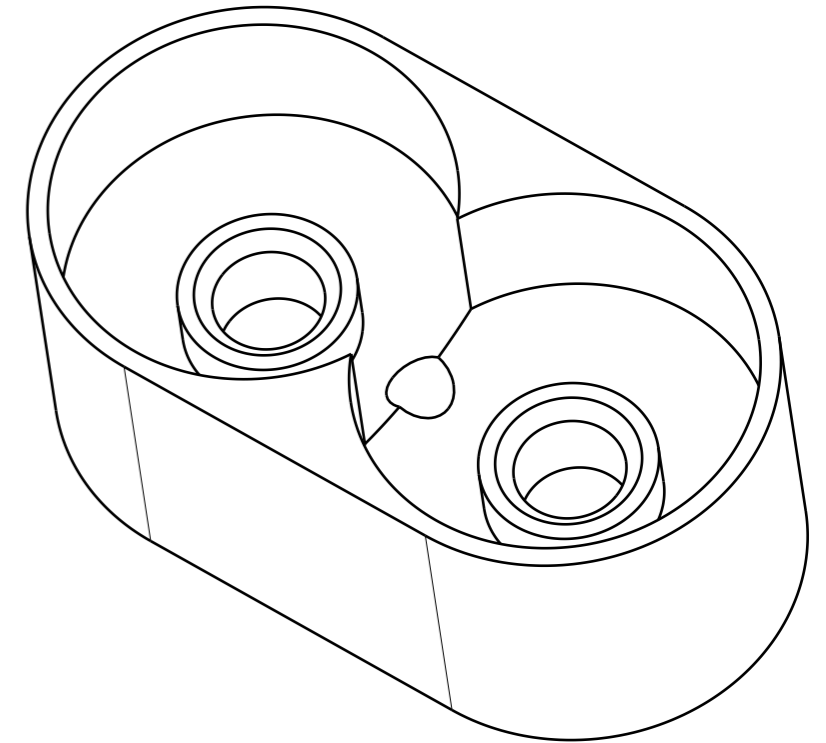
6

5

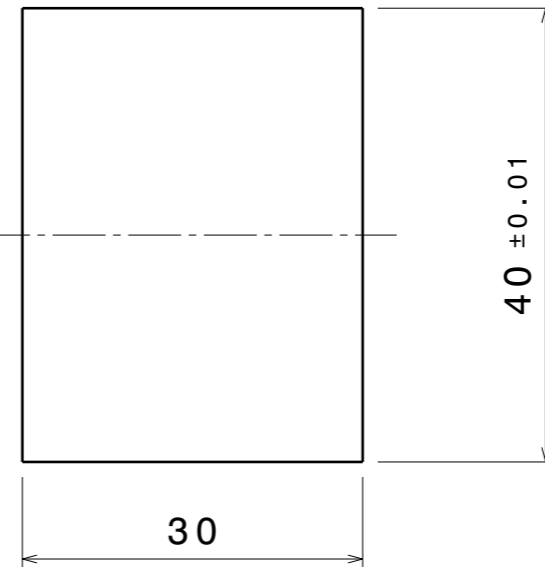
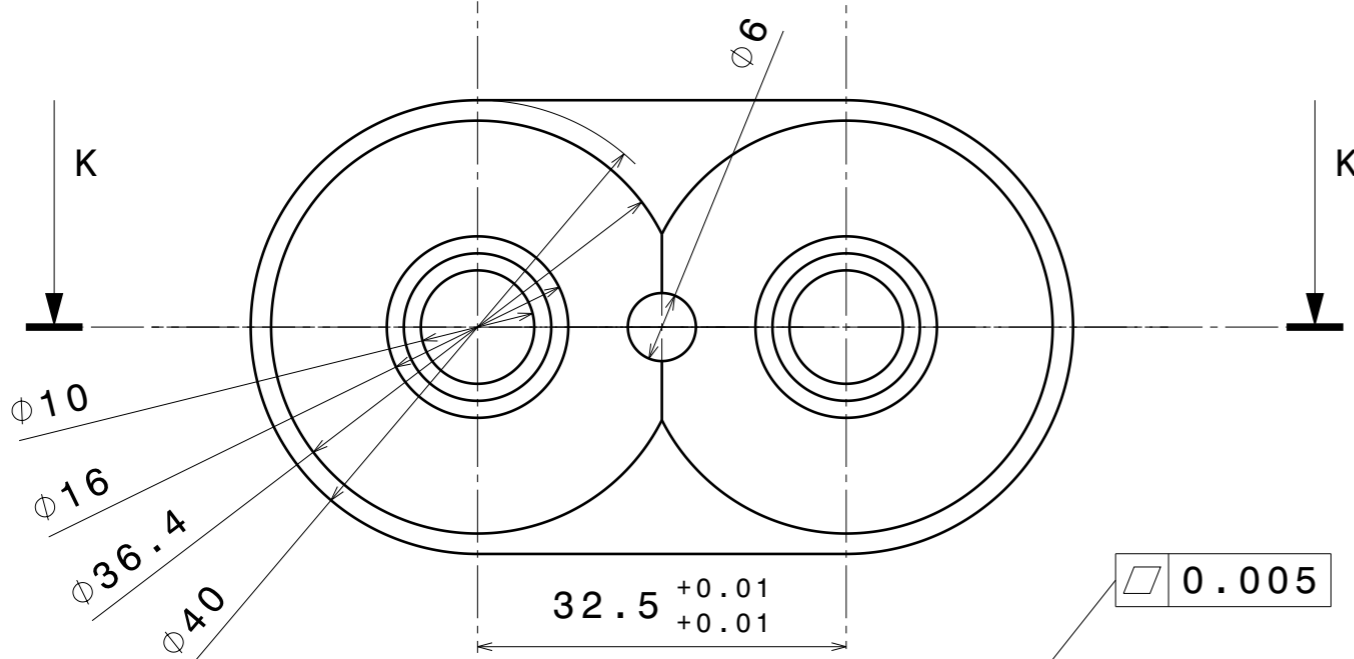
30 ± 0.01

15.5 ± 0.01

30°



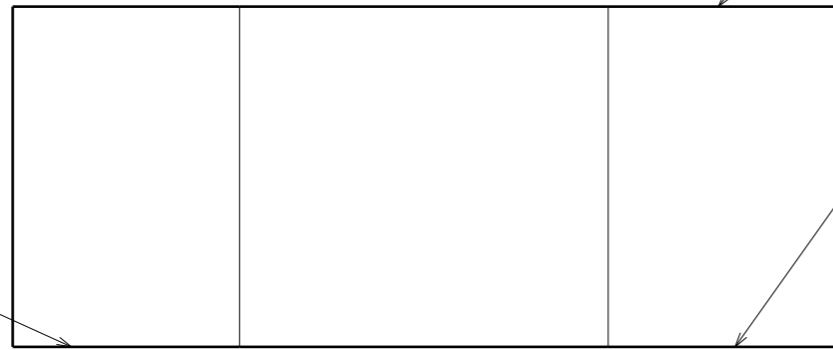
Isometric view



0.005 J

0.005

0.005



72.5

All dimensions are in mm		MATERIAL	BRONZE	
Remove all sharp corners		QTY	3	
Specified tolerances should be followed				
This drawing is our property. It can't be reproduced or communicated without our written agreement.		INSTITUTE FOR PLASMA RESEARCH BHAT, GANDHINAGAR		
DRAWING TITLE		SCREW BOTTOM SUPPORT		
DRAWN BY	DATE	SIZE	DRAWING NUMBER	REV
DEVESH	04/10/2016	A3	ETPIS-EXTRUDER-010	0
CHECKED BY	DATE	SCALE	NTS	WEIGHT (kg)
SAMIRAN	12/10/2016			0.35
DESIGNED BY	DATE	SHEET		1/6
DEVESH	04/05/2016			

D C B A

4

3

2

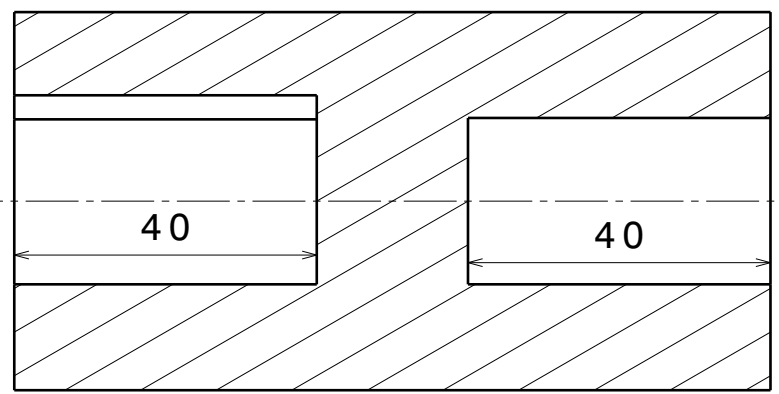
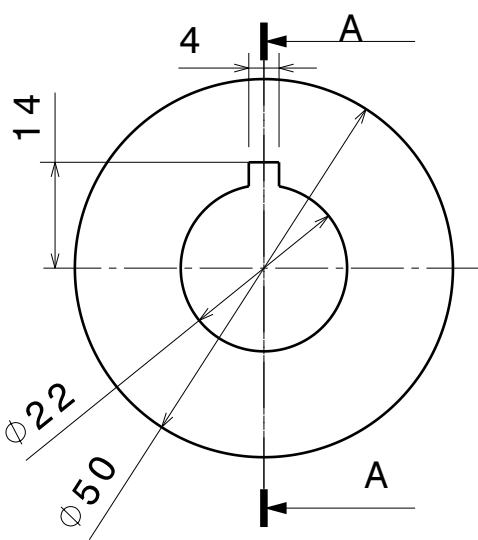
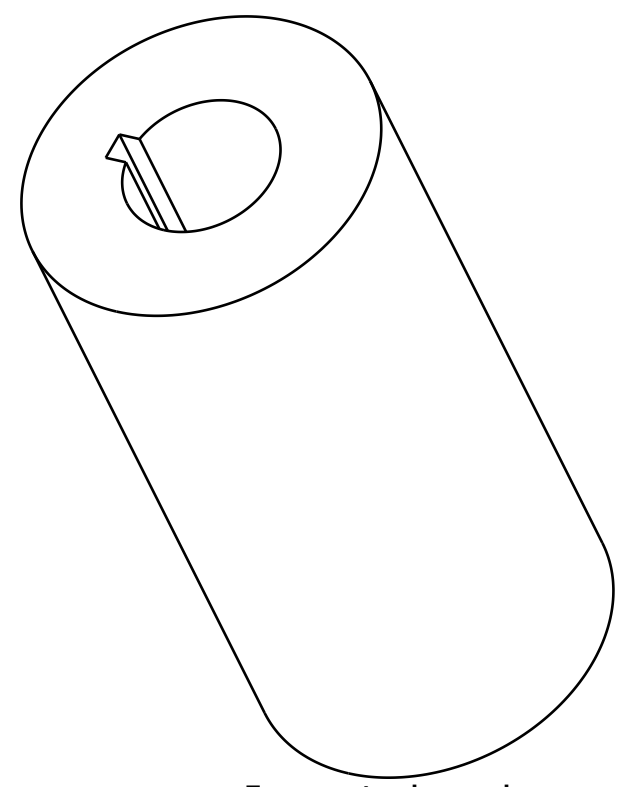
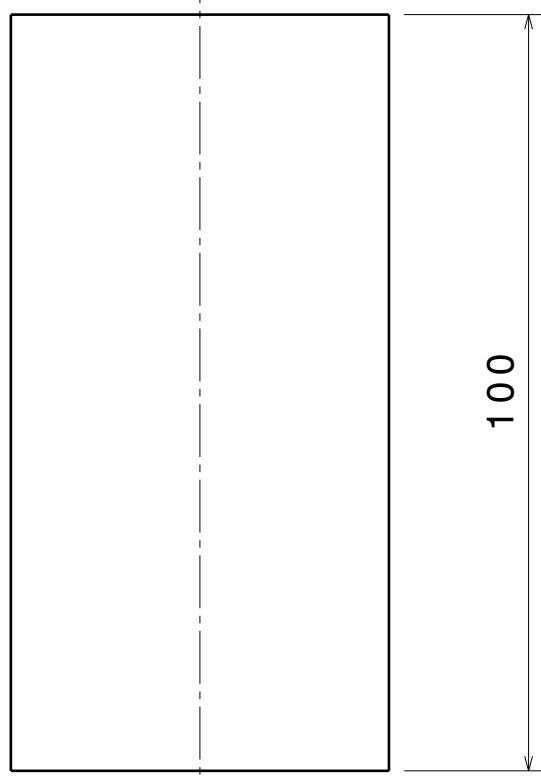
1

4

3

2

1



Section view A-A

MATERIAL	ABS
QTY	2

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**INSTITUTE FOR PLASMA RESEARCH
BHAT, GANDHINAGAR**

DRAWING TITLE **THERMAL BREAK**

DRAWN BY
DEVESH

DATE
04/10/2016

CHECKED BY
SAMIRAN

DATE
12/10/2016

SIZE
A4

DRAWING NUMBER
ETPIS-EXTRUDER-002

REV
0

DESIGNED BY
DEVESH

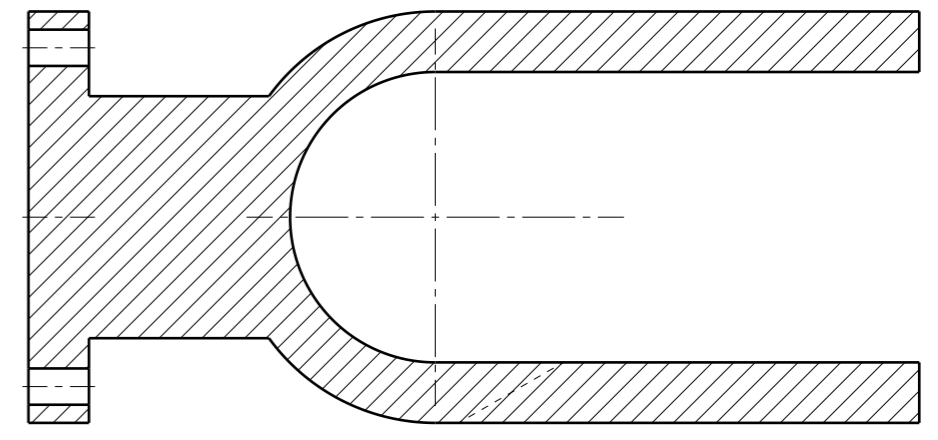
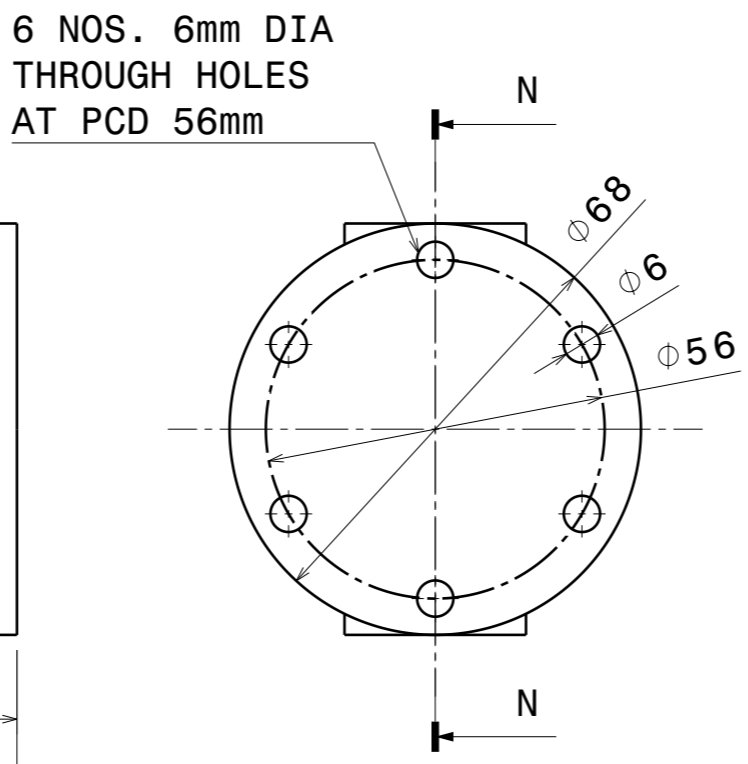
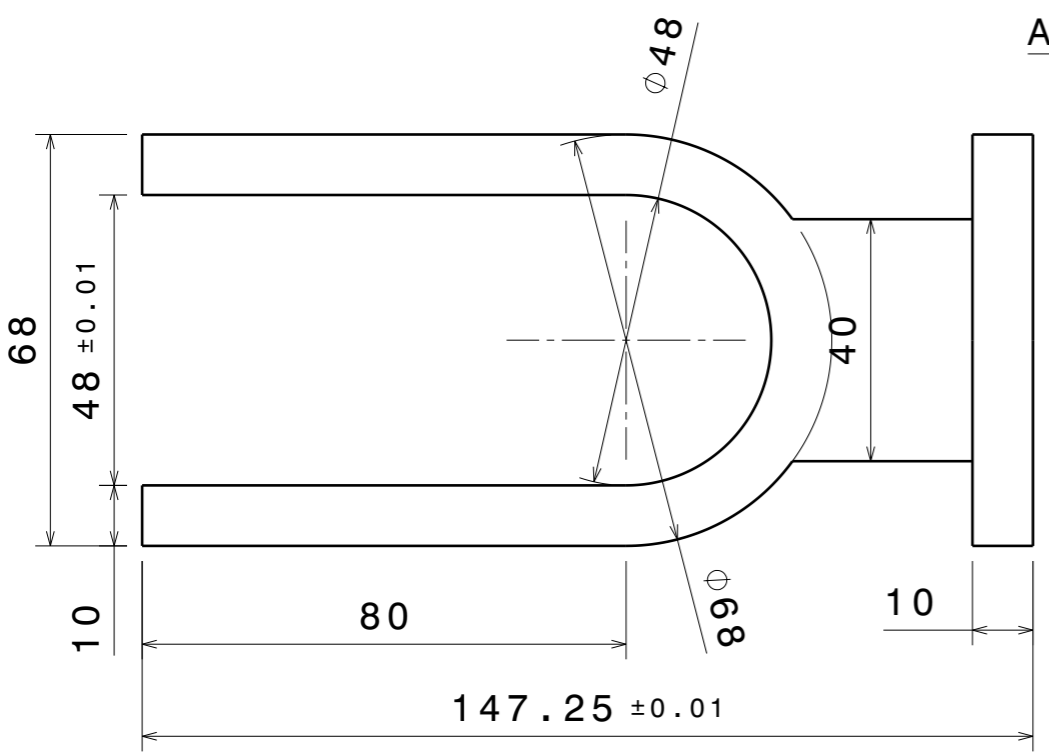
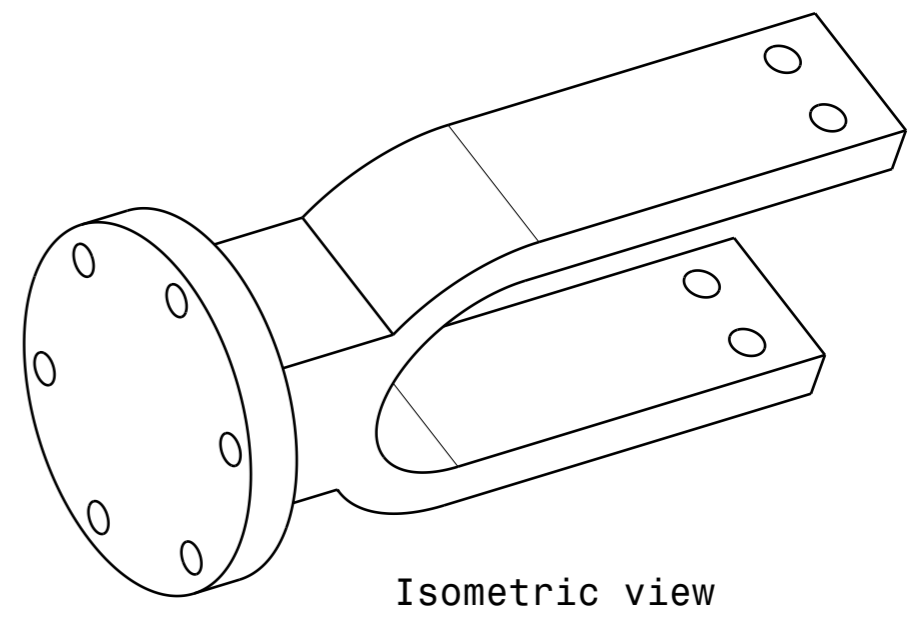
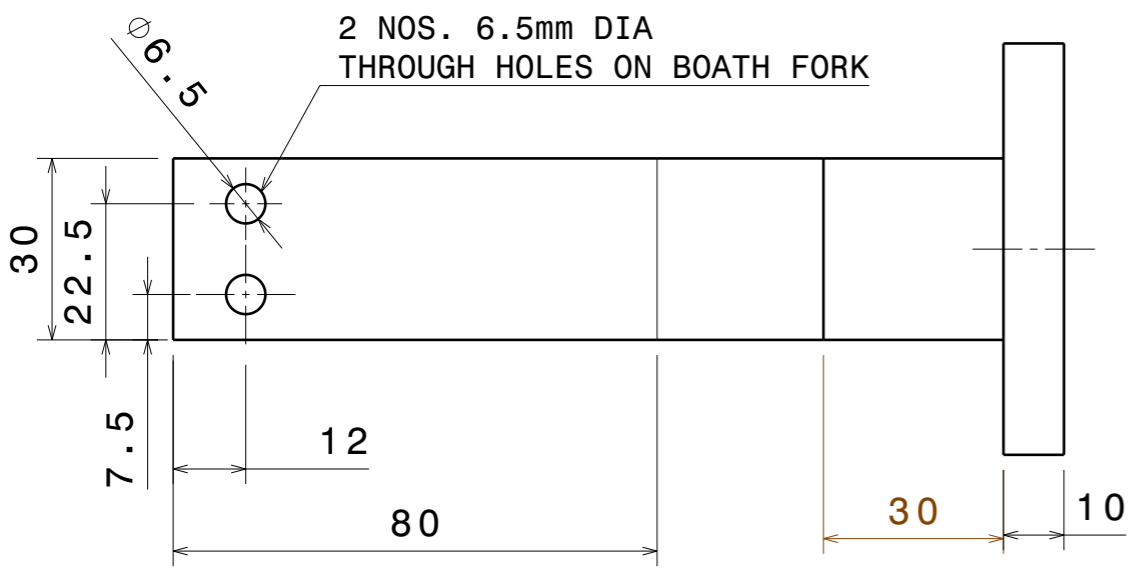
DATE
04/05/2016

SCALE NTS WEIGHT (kg) 0.16

SHEET 2/6

D A

H G F E D C B A



MATERIAL	OFHC COPPER
QTY	1

All dimenssions are in mm
Remove all sharp corners
Specified tolerances should be followed

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DRAWN BY DEVESH	DATE 04/10/2016				
CHECKED BY SAMIRAN	DATE 12/10/2016	SIZE A3	DRAWING NUMBER ETPIS-EXTRUDER-012	REV 0	
DESIGNED BY DEVESH	DATE 04/05/2016	SCALE	NTS	WEIGHT (kg) 1.3	SHEET 1/6

H G B A

D

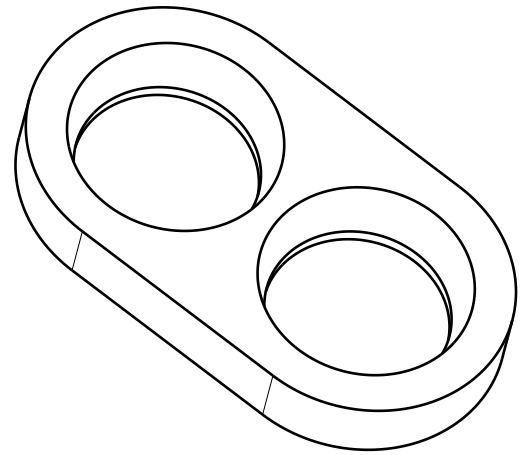
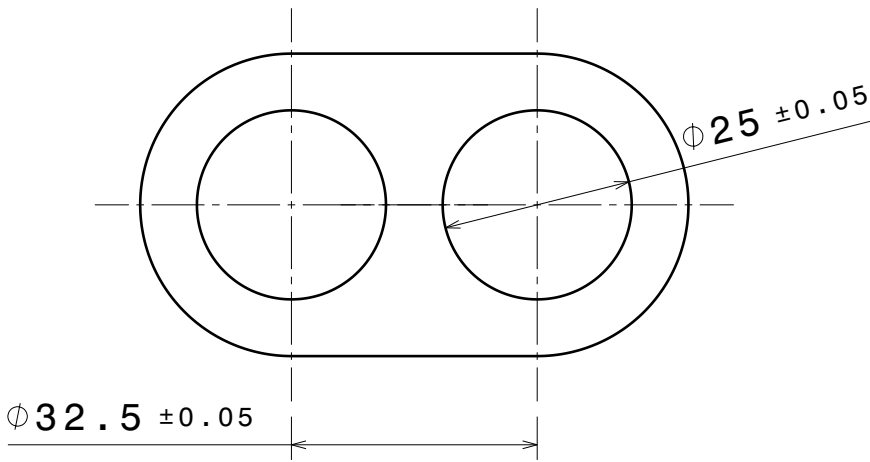
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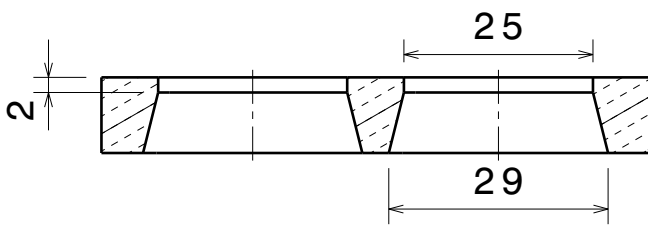
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4



3

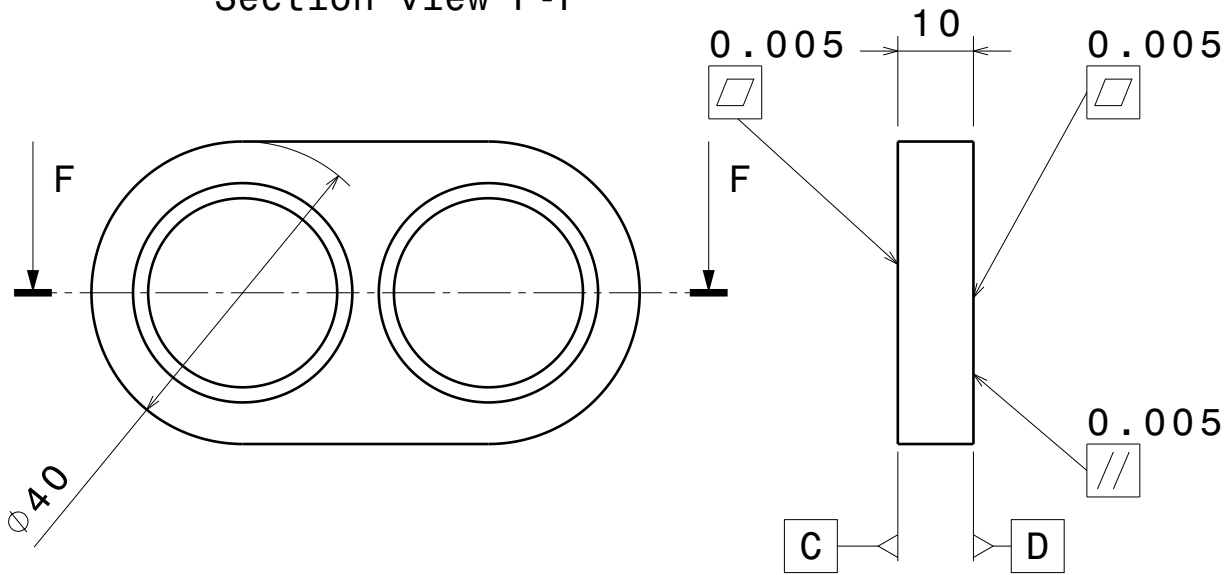
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Section view F-F

2

2



All dimensions are in mm

MATERIAL BRASS

Remove all sharp corners

QTY 3

Specified tolerances should be followed

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**INSTITUTE FOR PLASMA RESEARCH
BHAT, GANDHINAGAR**

DRAWING TITLE
TWIN SCREW TOP SUPPORT

DRAWN BY
DEVESH
DATE
04/10/2016

CHECKED BY
SAMIRAN
DATE
12/10/2016

DESIGNED BY
DEVESH
DATE
04/05/2016

SIZE A4 DRAWING NUMBER ETPIS-EXTRUDER-006 REV 0

SCALE NTS WEIGHT (kg) 0.14 SHEET 6/6

1

1

D

A

D

C

B

A

4

4

3

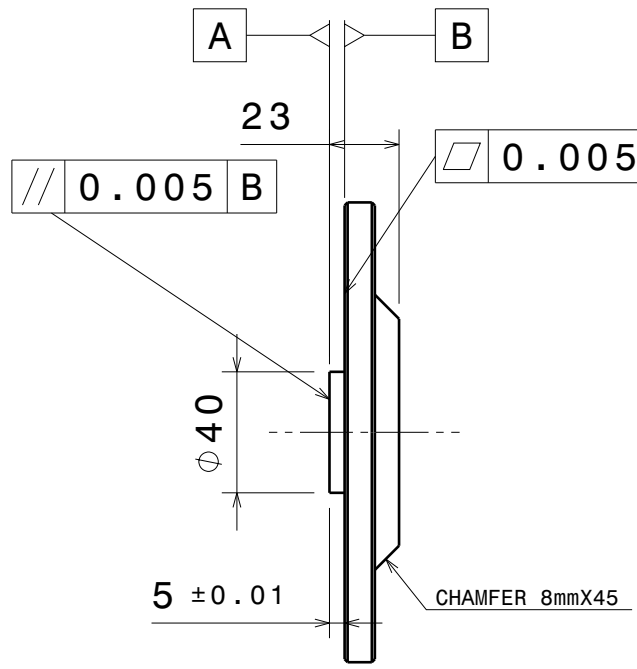
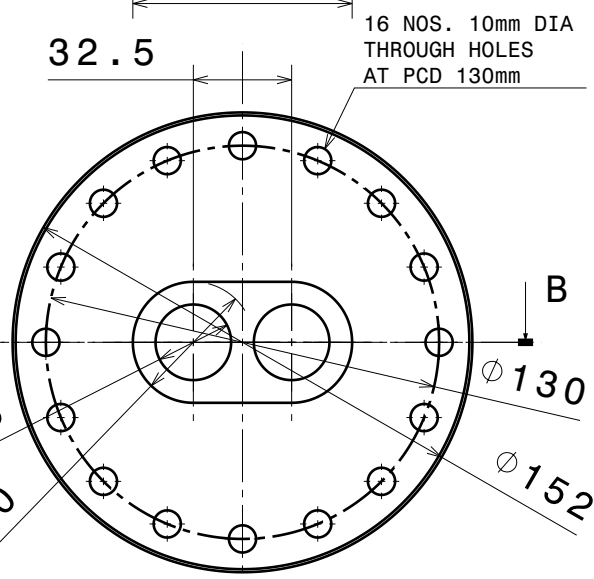
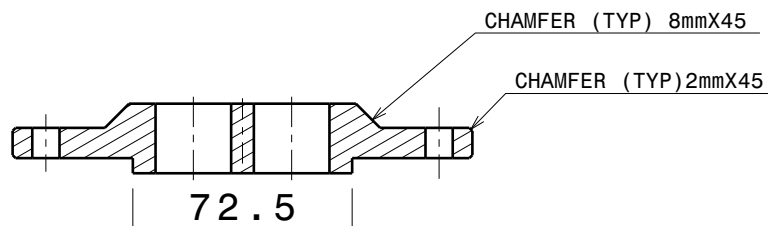
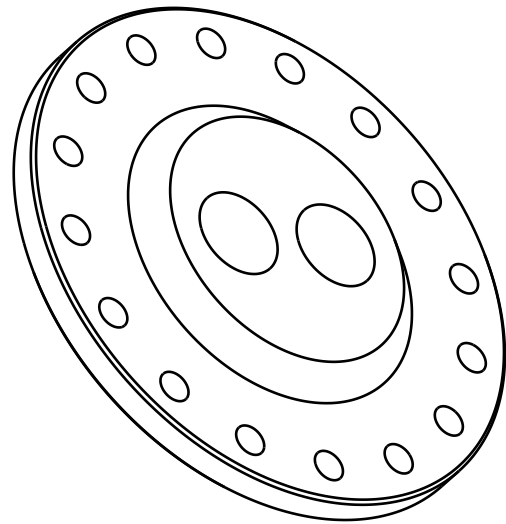
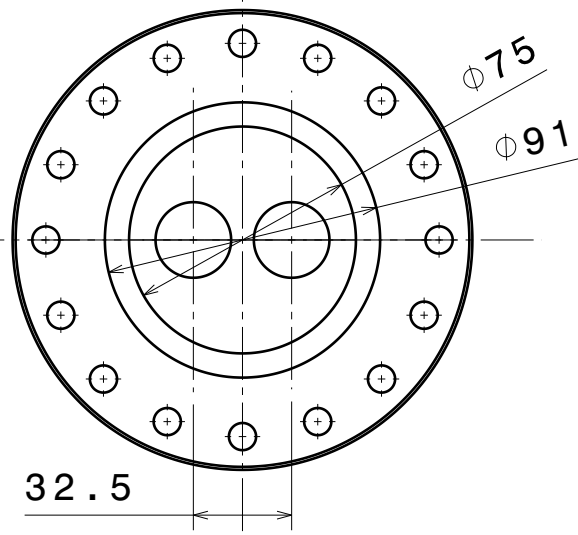
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2

2

1

1



All dimensions are in mm

Remove all sharp corners

Specified tolerances should be followed

MATERIAL VESPEL SP21

QTY 2

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DRAWING TITLE VELSPEL INSULATOR

DRAWN BY DEVESH	DATE 04/10/2016
CHECKED BY SAMIRAN	DATE 12/10/2016
DESIGNED BY DEVESH	DATE 04/05/2016

SIZE A4	DRAWING NUMBER ETPIS-EXTRUDER-005	REV 0
SCALE NTS	WEIGHT (kg) 0.2	SHEET 3/6

D

A