

Equipment “UHV system” (see figure in Annexure II) consists of the following individual parts

1. Vacuum chamber – as per design specification given in **annexure-I**.
The chamber consists of five individual parts - (1) The chamber, (2) DN75 to CF35 reducer flange, (3) SS plates as per drawings for mounting on CF35 flanges, (4) SS plates as per drawing for mounting on the CF16 flanges and (5) lens holder.
Note – 3D CAD drawings for all the parts will be supplied upon request from the vendors
Material - 316LN nonmagnetic SS.
Surface finishing - Electropolishing on the Vacuum exposed surface.
The supplied items need to be cleaned.
Quantity – 1
2. Feed through – CF16 flange, 2 connectors.
Surface finishing - Electropolishing on the Vacuum exposed surface.
The supplied items need to be cleaned.
Quantity – 2
3. I-piece with CF35 flange i.e. full nipple with one rotatable flange.
Material - 316LN nonmagnetic SS.
Surface finishing - Electropolishing on the Vacuum exposed surface.
The supplied items need to be cleaned.
Quantity – 3
4. T-piece with CF35 flange i.e. full nipple with one rotatable flange along the axis.
Material - 316LN nonmagnetic SS.
Surface finishing - Electropolishing on the Vacuum exposed surface.
The supplied items need to be cleaned.
Quantity – 2
5. 6-way cross with CF35 flange with three rotatable flanges each along every axis.
Material - 316LN nonmagnetic SS.
Surface finishing - Electropolishing on the Vacuum exposed surface.
The supplied items need to be cleaned.
Quantity – 1
6. CF35 blank flange.
Material - 316LN nonmagnetic SS.
Surface finishing - Electropolishing on the Vacuum exposed surface.
The supplied items need to be cleaned.
Quantity – 2
7. CF16 Blank flange.
Material - 316LN nonmagnetic SS.
Surface finishing - Electropolishing on the Vacuum exposed surface.
The supplied items need to be cleaned.
Quantity – 2.

8. DN75 Blank flange.
Material - 316LN nonmagnetic SS.
Surface finishing - Electropolishing on the Vacuum exposed surface.
The supplied items need to be cleaned.
Quantity – 2.
9. CF35 to swagelok adapter
The supplied items need to be cleaned.
Quantity – 1
10. All metal right angle valve with CF35 flange.
Quantity – 2
Material – preferably 316LN nonmagnetic SS.
The supplied items need to be cleaned.
11. DN75 OFHC copper gasket.
The supplied items need to be cleaned.
Quantity – 50
12. Pressure gauge for measuring pressure 10^{-11} Torr
- 12a. Ion gauge controller
 - Three (03) Hot Filament Ion Gauge (HFIG) cards
 - Zero (00) Inverted Magnetron Gauge (IMG) cards
 - Zero (00) Dual Convection Gauge (DCG) cards
 - Pressure readings Atmosphere to approx. 10^{-11} Torr via hot filament gauge
 - The controller unit should consists of Display, Keypad/Navigation Keys, Set Point Outputs, Serial Communication Connector, Gauge Board Slots, On/Off Power Switch and AC Power Plug Receptacle, Ground Connection, AC line cord as of Indian standardQuantity – 1
- 12b. Ion gauge
 - Nude gauge
 - 2 Filaments
 - Material - Thoriated Iridium
 - 2.75 in. ConFlat (CF35)
 - Pressure readings up to approx. 10^{-11} Torr
 - Compactable to the Ion gauge controller as specified in SI No 12Quantity – 1
- 12c. Cable for connecting Ion gauge to the controller
 - Bakeable
 - For Nude Ion Gauge connecting to the Gauge Controller as specified in SI. No 12 and 13
 - Length - 25 ftQuantity – 1
13. M4 Plate Nuts and bolt set
Length – 1”
Finishing - Silver plated
Quantity - 50

14. M4 Plate Nuts and bolt set
Length – 1.5”
Finishing - Silver plated
Quantity - 50

15. M6 Plate Nuts and bolt set
Length – 1.5”
Finishing - Silver plated
Quantity - 50

16. M6 Plate Nuts and bolt set
Length – 2”
Finishing - Silver plated
Quantity - 50

17. M8 Plate Nuts and bolt set
Length – 1”
Finishing - Silver plated
Quantity - 50

18. M8 Plate Nuts and bolt set
Length – 2”
Finishing - Silver plated
Quantity - 50

19. M8 Plate Nuts and bolt set
Length – 2”
Finishing - Silver plated
Quantity - 50

20. M4 Nuts and bolt set
Length – 3/4”
Finishing - Silver plated
Quantity - 60

21. M4 Nuts and bolt set
Length – 1”
Finishing - Silver plated
Quantity - 60

22. M6 Nuts and bolt set
Length – 1.5”
Finishing - Silver plated
Quantity – 60

- 23. M6 Nuts and bolt set
Length – 2”
Finishing - Silver plated
Quantity - 60

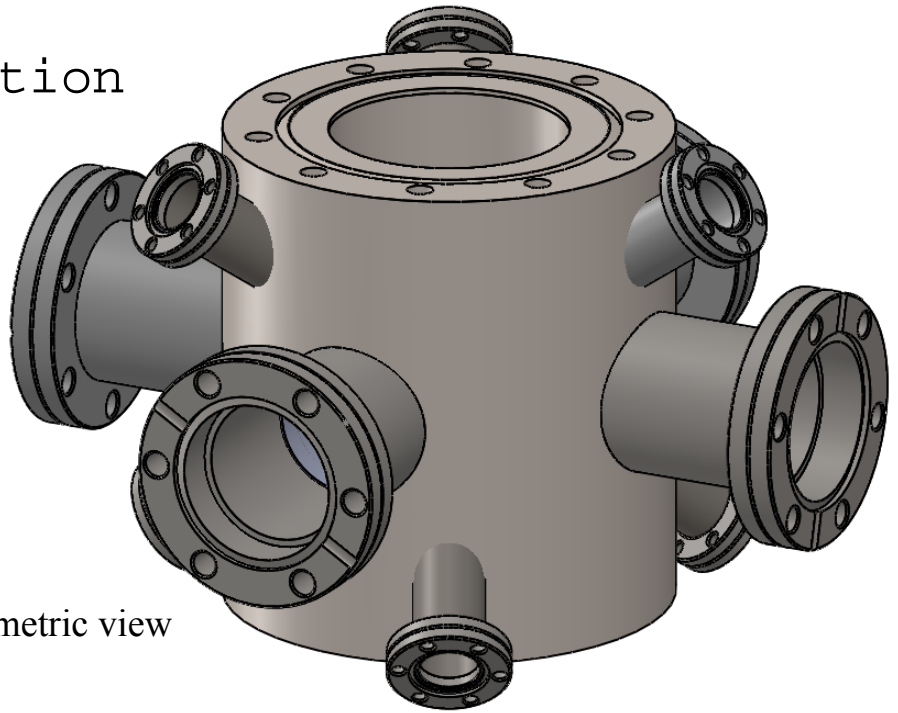
- 24. M8 Nuts and bolt set
Length – 1”
Finishing - Silver plated
Quantity - 60

- 25. M8 Nuts and bolt set
Length – 2”
Finishing - Silver plated
Quantity – 60

Note: We like to procure all the items from single vendor to ensure their compatibility

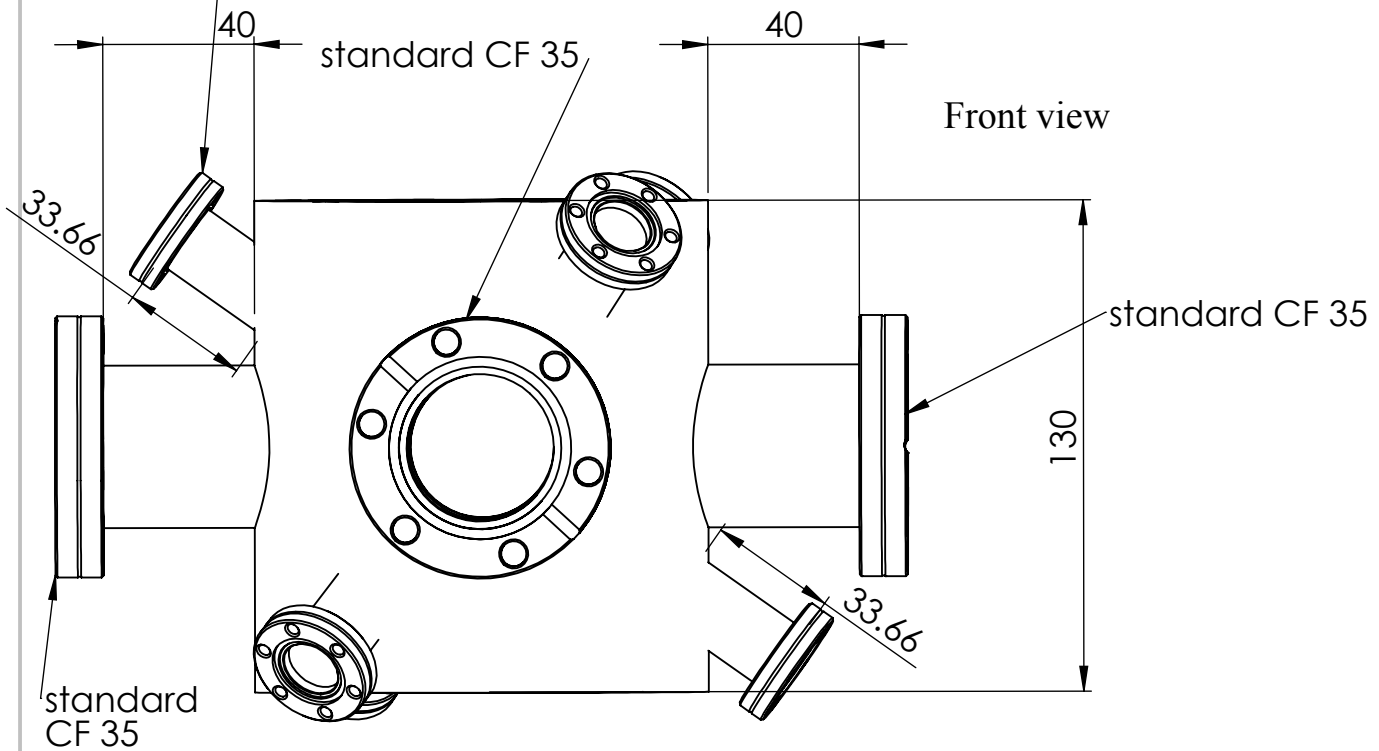
Annexure - I

Design specification of the chamber



Isometric view

There are three pairs of standard CF16 half nipples along three mutually orthogonal directions.



UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
SURFACE FINISH:
TOLERANCES:
LINEAR:
ANGULAR:

FINISH:

DEBUR AND
BREAK SHARP
EDGES

DO NOT SCALE DRAWING

REVISION

linear tolerance:0.5mm

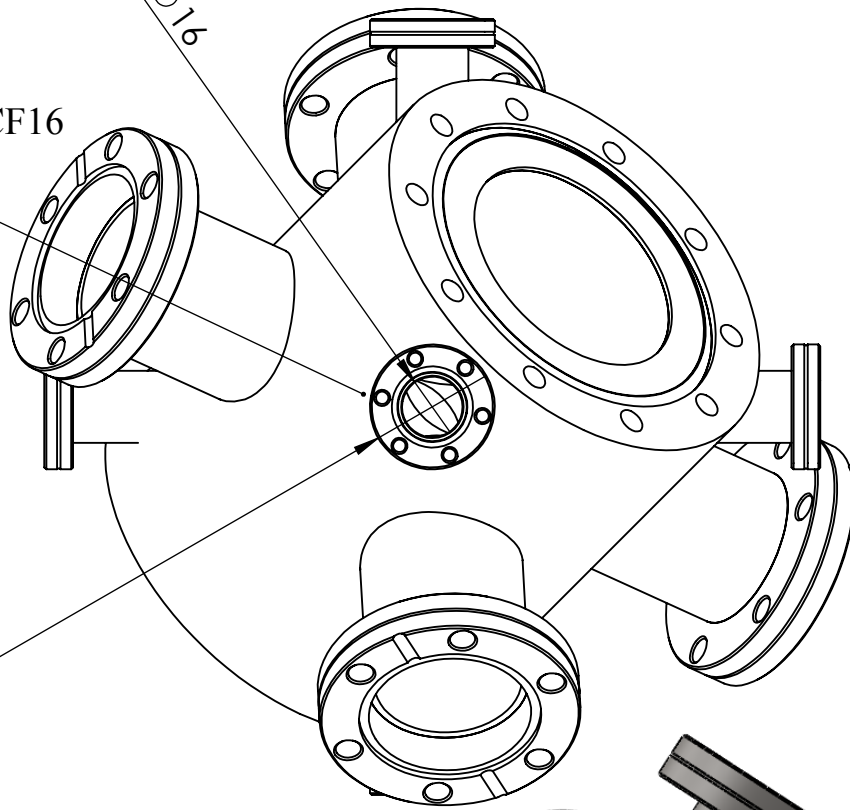
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CHK'D					
APPV'D					
MFG					
Q.A					
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					SS316LN
				WEIGHT:	

TITLE:	
All dimensions are in millimeter	
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Standard CF16

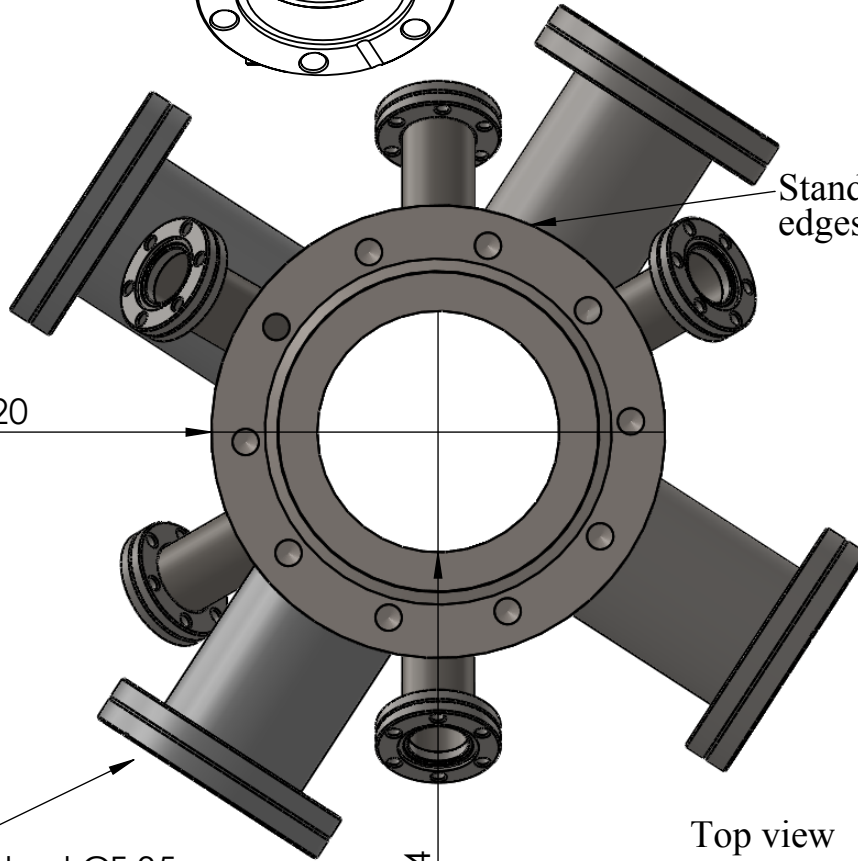
Ø16

Ø33



Standard DN75 size knife edges & tapped holes.

Ø120



Top view

Standard CF 35 on all four sides as shown.

Ø64

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linear tolerance:0.5mm

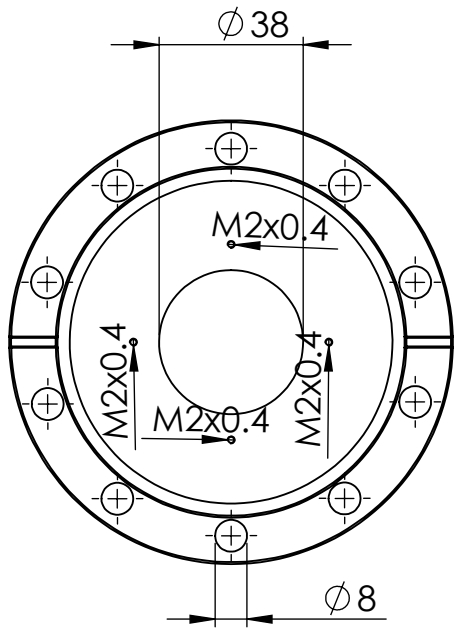
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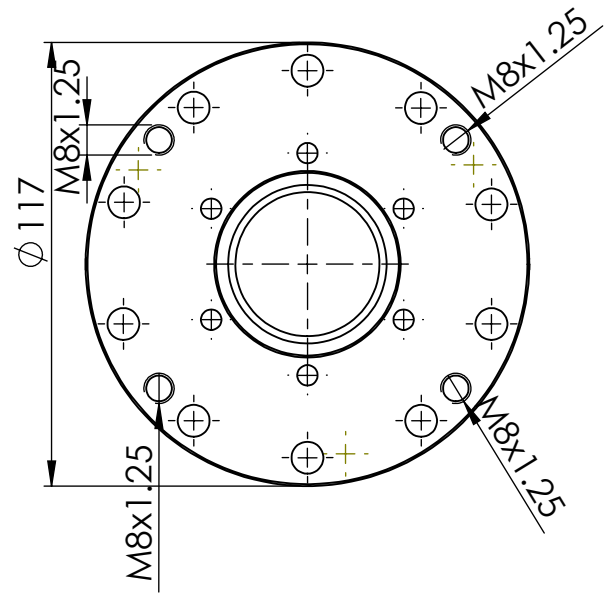
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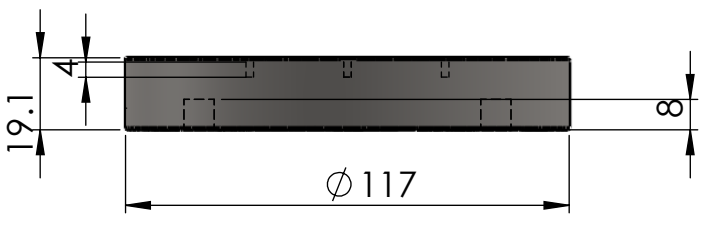
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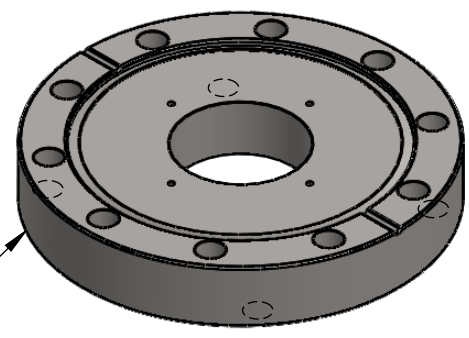
Top view



Bottom view



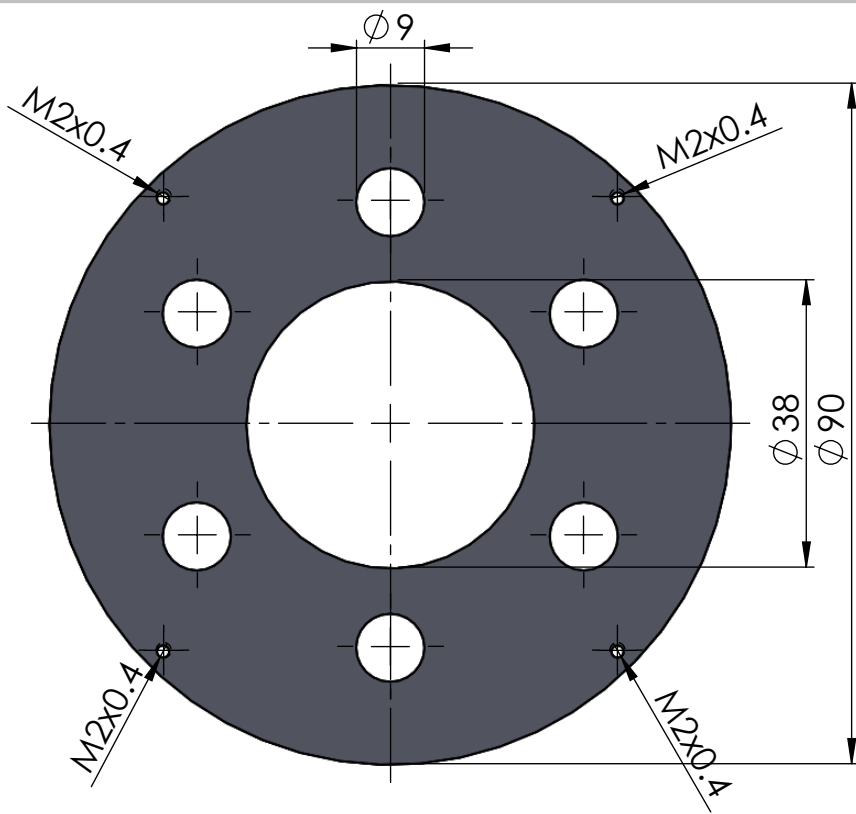
Side view



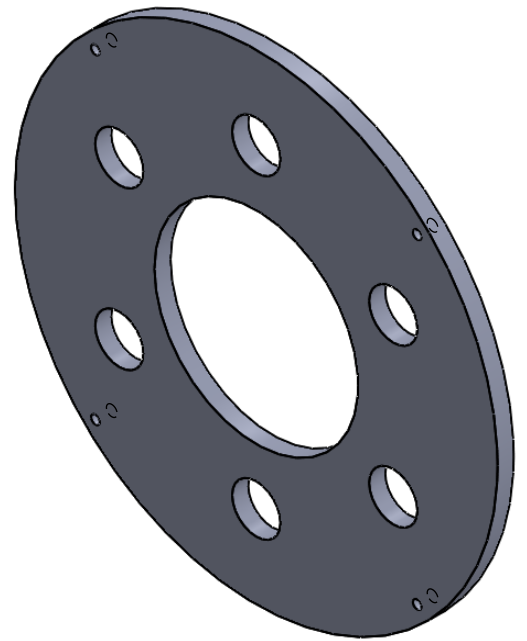
Isometric view

Standard DN75 flange dimensions and tapped holes with inner radius of standard CF35 flange

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APPV'D					
MFG					
Q.A			SS316LN MATERIAL:	DWG NO.	REV.
			WEIGHT:	zero length reducer 4 58to 2 34m	
				SCALE:1:5	SHEET 1 OF 1



Top view



Isometric view



Side view

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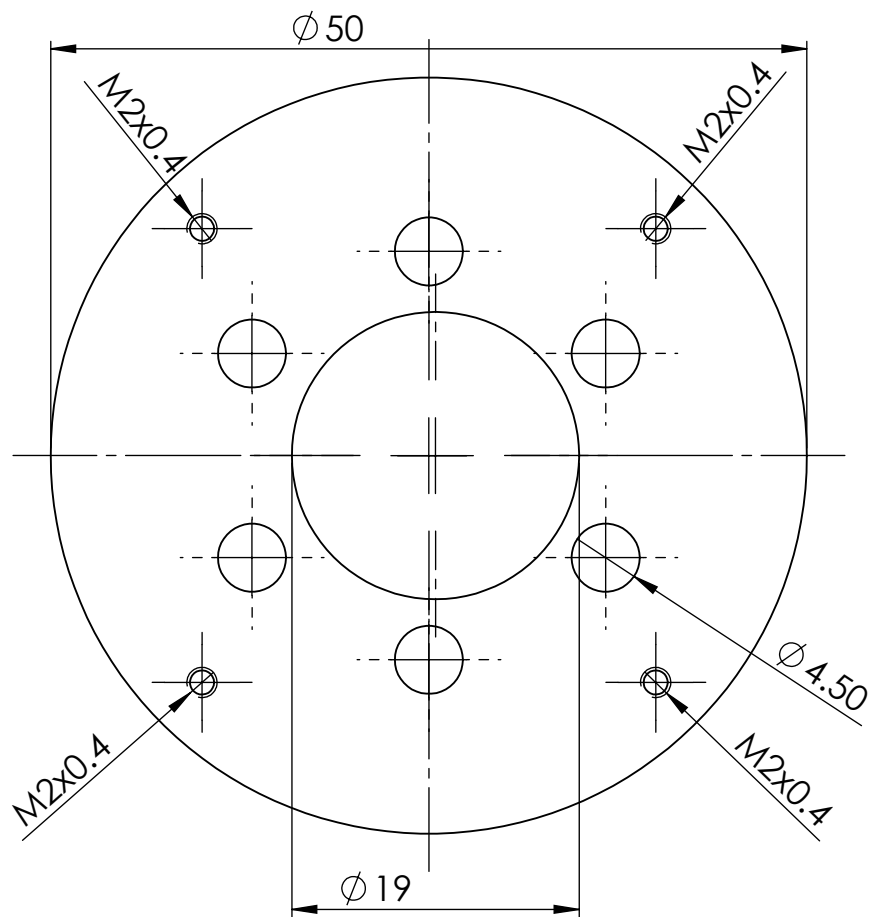
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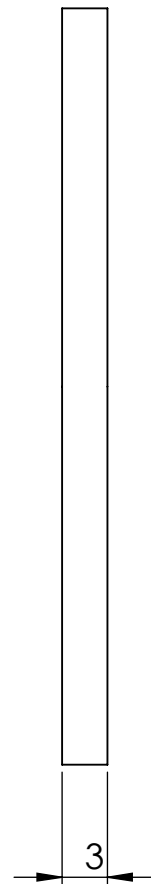
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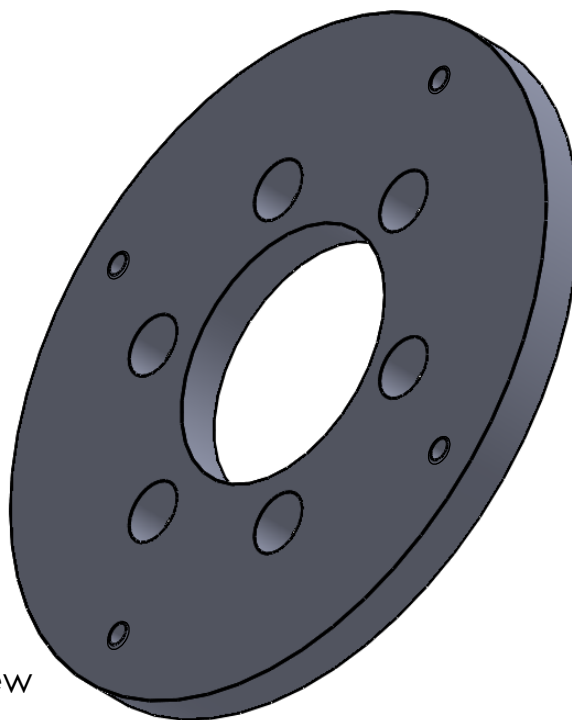
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Front view



Side view



Isometric view

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linear tolerance:0.5mm

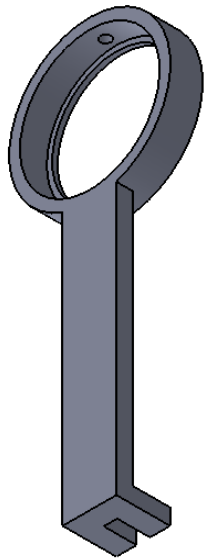
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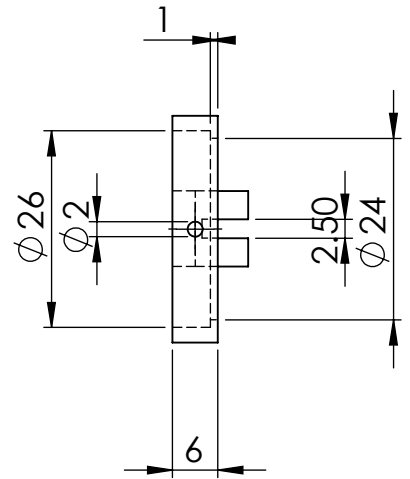
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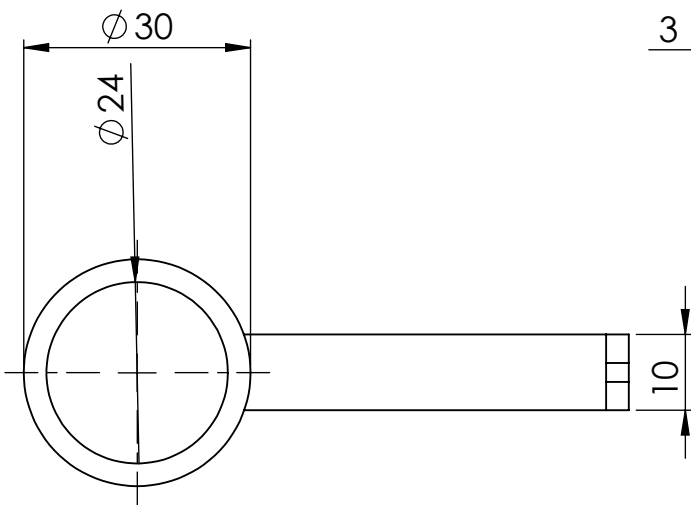
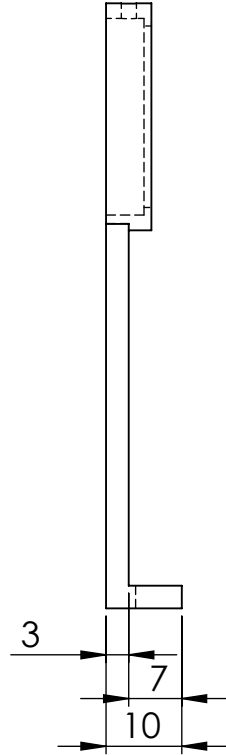
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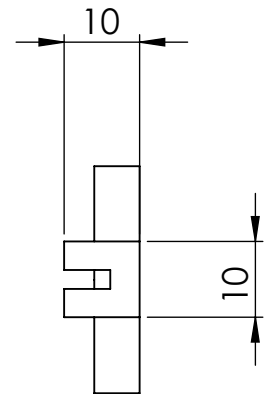
Isometric view



Top view



Side view



Bottom view

UNLESS OTHERWISE SPECIFIED:
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DEBUR AND
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REVISION

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				WEIGHT:	

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lens holderr		A4	
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