

Product Drawing

Dimensions

Coordinate System

Mass properties of PixONE T-60 ASM
Configuration: BFT-MH1-XXX-BD
Coordinate system: MOUNTING FRAME

Mass = 465.05 grams

Volume = 160160.55 cubic millimeters

Surface area = 84447.42 square millimeters

Center of mass: (millimeters)

X = -0.03

Y = -0.03

Z = 19.67

Principal axes of inertia and principal moments of inertia: (grams * square millimeters)

Taken at the center of mass.

I_x = (-0.21, -0.98, 0.00) P_x = 288561.01

I_y = (0.98, -0.21, 0.00) P_y = 289058.66

I_z = (0.00, 0.00, 1.00) P_z = 465309.28

Moments of inertia: (grams * square millimeters)

Taken at the center of mass and aligned with the output coordinate system. (Using positive tensor notation.)

L_{xx} = 289037.92 L_{xy} = 100.47 L_{xz} = -295.78

L_{yx} = 100.47 L_{yy} = 288582.27 L_{yz} = -65.57

L_{zx} = -295.78 L_{zy} = -65.57 L_{zz} = 465308.76

Moments of inertia: (grams * square millimeters)

Taken at the output coordinate system. (Using positive tensor notation.)

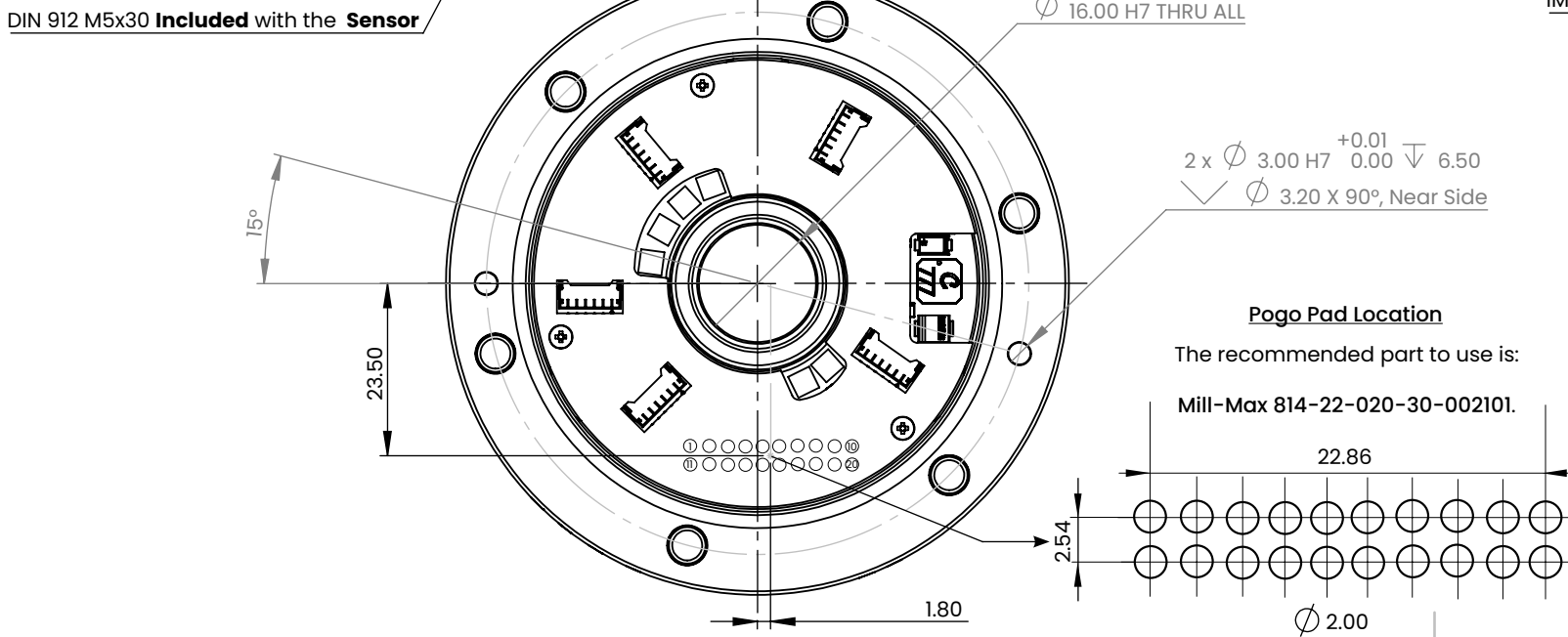
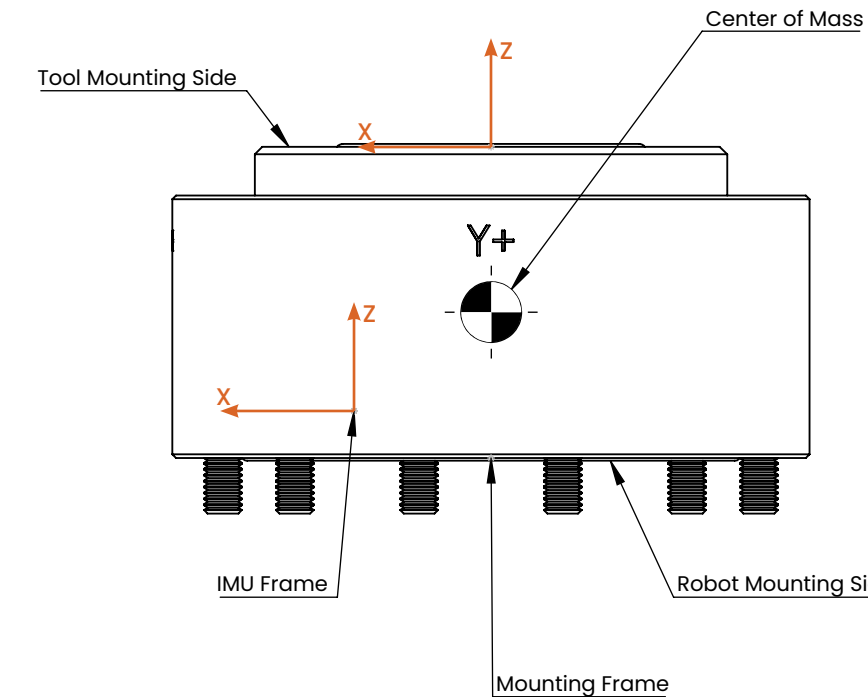
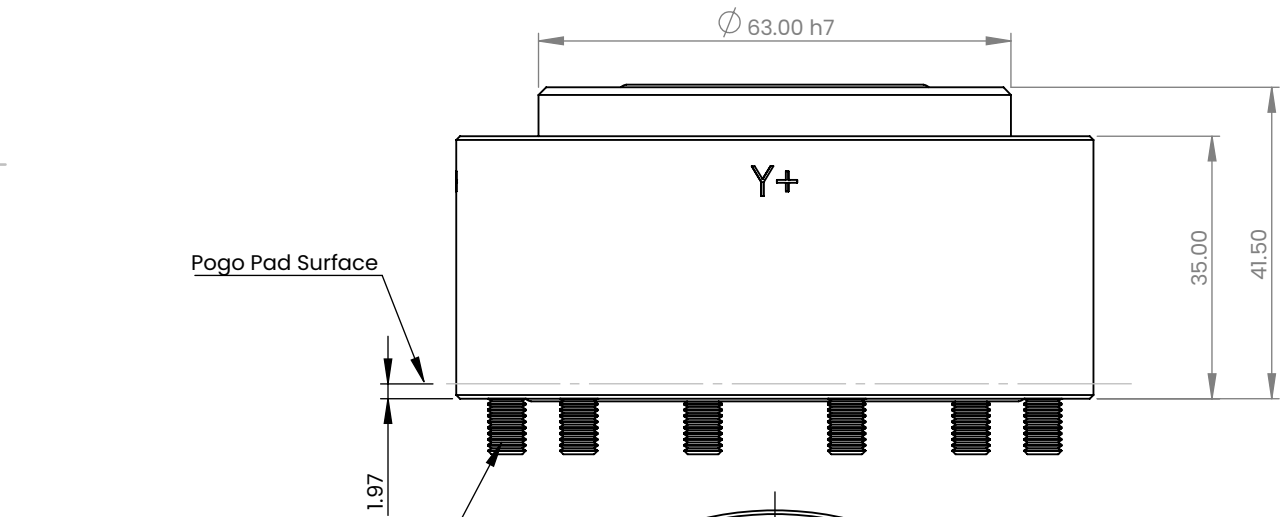
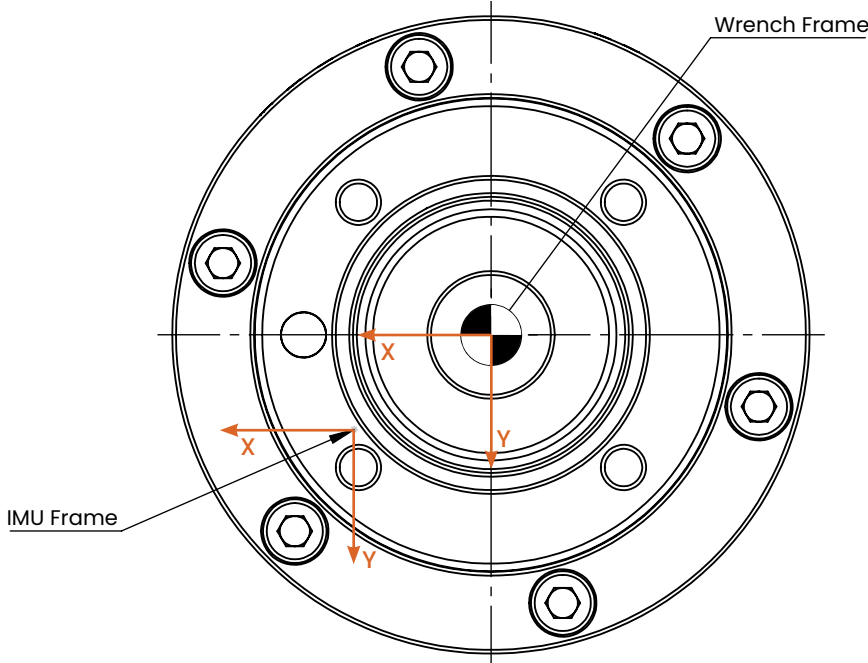
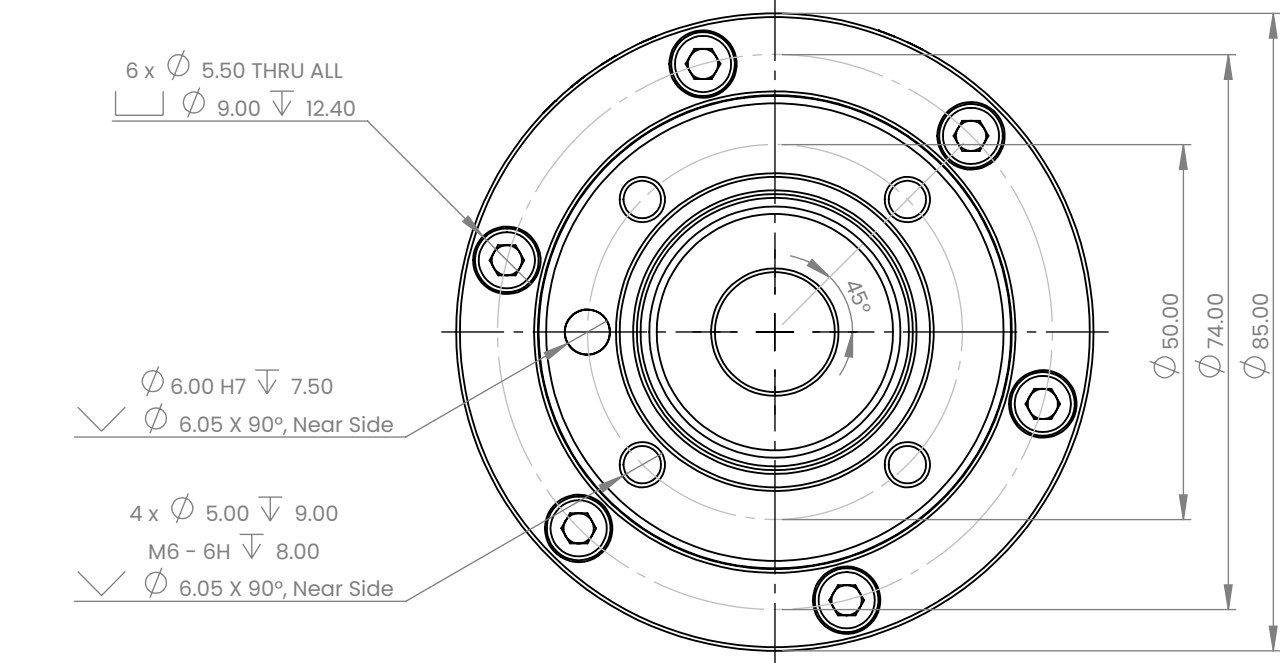
I_{xx} = 468941.99 I_{xy} = 100.86 I_{xz} = -553.12



I_{yx} = 100.86 I_{yy} = 468486.29 I_{yz} = -338.42

I_{zx} = -553.12 I_{zy} = -338.42 I_{zz} = 465309.54

IMU Location from Wrench Frame	
X	18.27 mm
Y	12.60 mm
Z	-35.30 mm

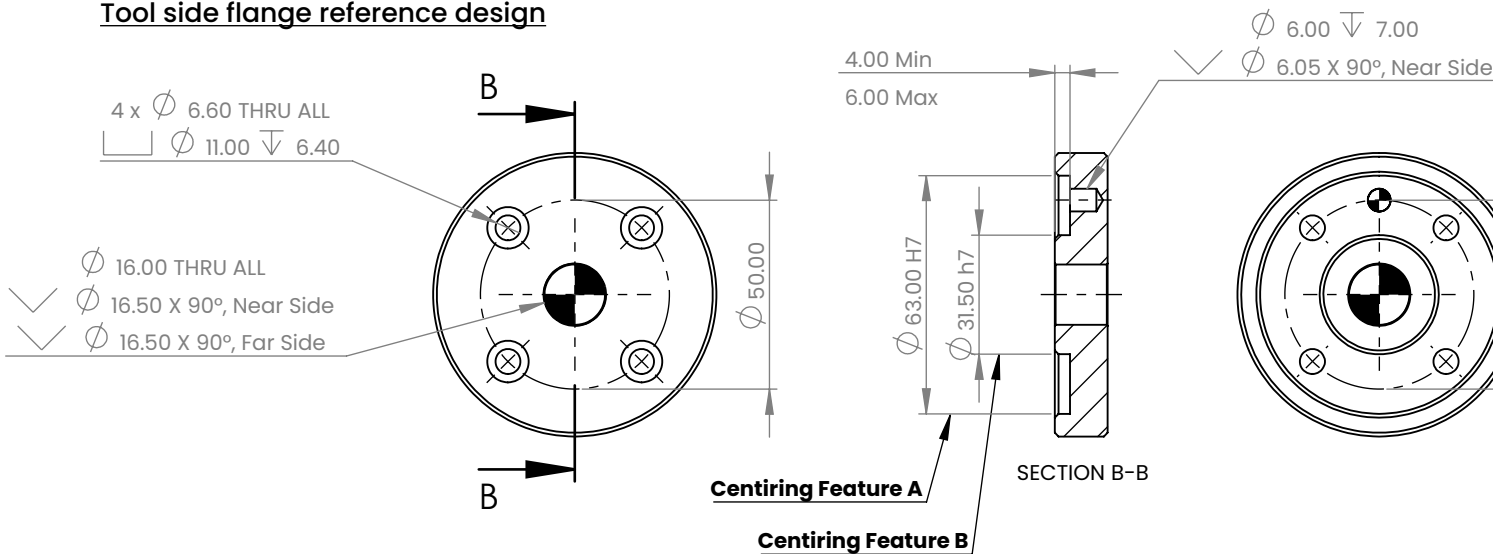
IMU Location from Mounting Frame	
X	18.27 mm
Y	12.60 mm
Z	6.27 mm



		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE Ra: 1.6 GENERAL TOLERANCES: DIN ISO 2768 (fH) BREAK SHARP EDGES		FINISH:				
			NAME	DATE	MODEL DESCRIPTION			
		DRAWN	JC	26/03/2025	PixONE T60 Product Drawing			
Hagenholzstrasse 85, 8050, Zurich, Switzerland Email: info@botasys.com Website: www.botasys.com ©2022 BOTA Systems AG. All rights reserved.		CHECKED			MODEL NUMBER	DRAWING NUMBER	MODEL REVISION	DRAWING REVISION
		APPROVED			BFT-MH1-MLP-BD	BFT-MH1-MLP-BD	A	A
WEIGHT	465.05 grams	MATERIAL			SCALE: 1:2	PAGE: 1 / 3	A3	

Example design for open cavity tool

Tool side flange reference design



It is important that the center part does not touch the sensor. Leave a **0.1mm gap** to ensure proper **O-ring compression of 20%**.

Required Space for Cabling

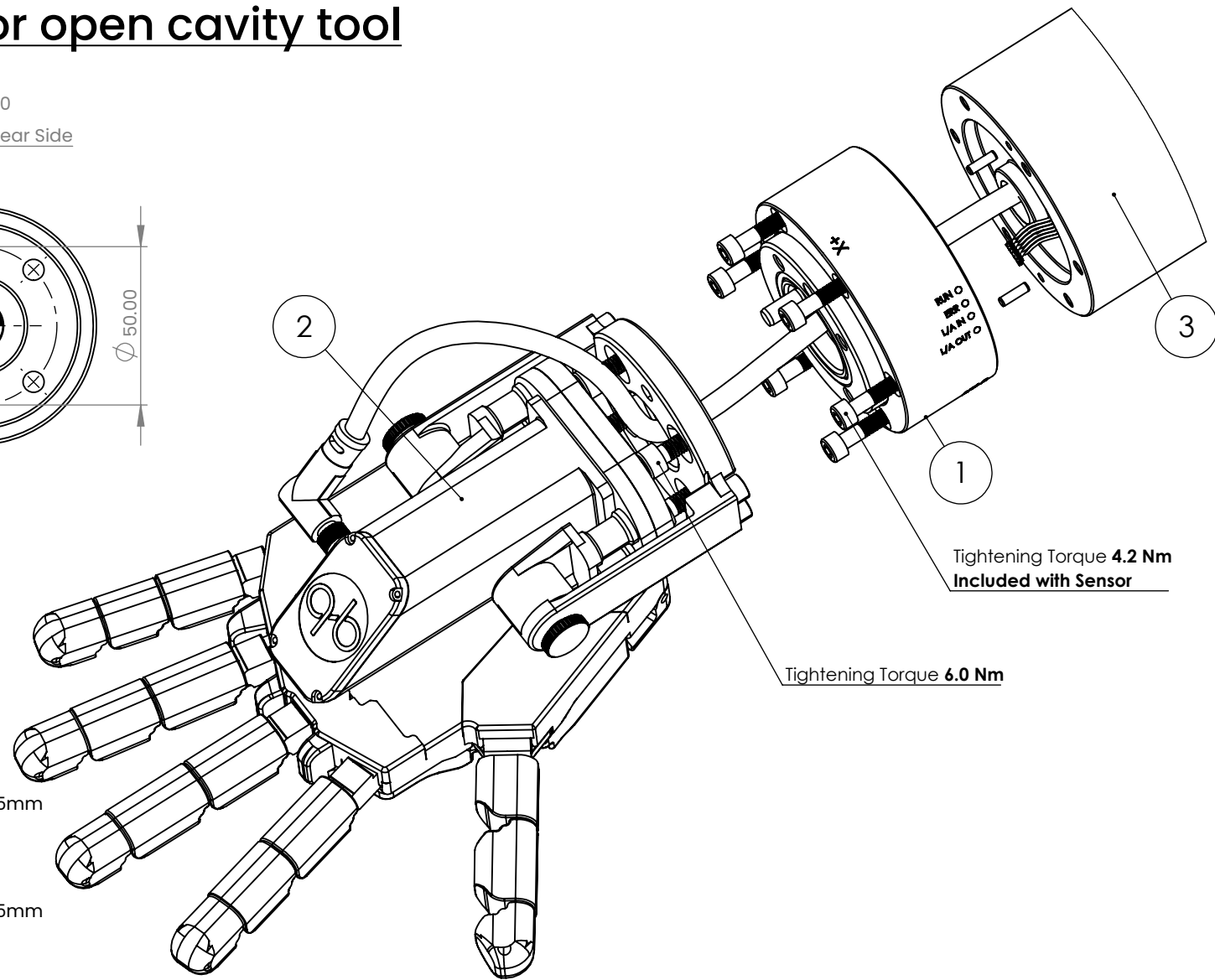
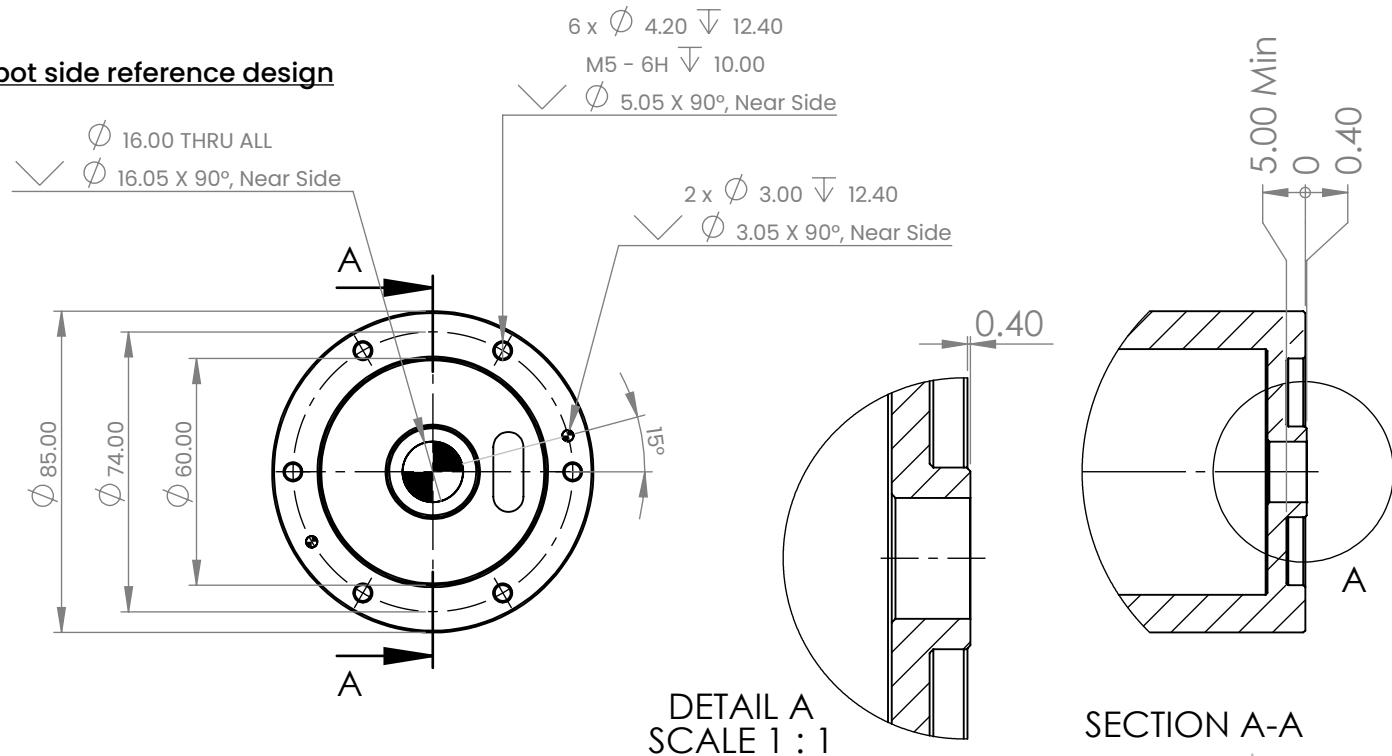
This fixture is not required if the end effector has a **close cavity**.

Ingress protection for tool side
O-ring (37.82 x 1.78mm) NBR 70, black color
(Not required in open cavity tools)

Ingress protection for robot side if open cavity.
O-ring (18.77 x 1.78mm) EPDM 70 black color
Oring **compression** ratio between **20-30%**, around 0.5mm

Ingress protection for robot side
O-ring (63.22 x 1.78mm) EPDM 70 black color
Oring **compression** ratio between **20-30%**, around 0.5mm

Robot side reference design



Tightening Torque **4.2 Nm**
Included with Sensor

Tightening Torque **6.0 Nm**

ITEM NO.	PART NUMBER	DESCRIPTION	INCL	QTY.
1	BFT-MH1-MLP-BD	PixONE T60 6-axis F/T sensor with Serial, Ethernet, EtherCAT, USB interface	X	1
2	PIX-REF-DESG-TOOL	Tool reference design		1
3	PIX-REF-DESG-ROBOT	Robot reference design		1

BOTA systems		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE Ra: 1.6 GENERAL TOLERANCES: DIN ISO 2768 (FH) BREAK SHARP EDGES		FINISH:			
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Hagenholzstrasse 85, 8050, Zurich, Switzerland Email: info@botasys.com Website: www.botasys.com ©2022 BOTA Systems AG. All rights reserved.		DRAWN	JC	26/03/2025	PixONE T60 Product Drawing		
CHECKED					MODEL NUMBER	DRAWING NUMBER	MODEL REVISION
APPROVED					BFT-MH1-MLP-BD	BFT-MH1-MLP-BD	A
WEIGHT	465.05 grams	MATERIAL	-	SCALE: 1:2	PAGE: 2 / 3	A3	